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SAR TEST REPORT

Applicant Name: **SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	**Date of Issue: Nov. 9, 2023** **Test Report No.: HCT-SR-2311-FC001-R1** **Test Site: HCT CO., LTD.**

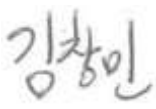
FCC ID: A3LSMA155M

Equipment Type:	**Mobile Phone**
Application Type	**Certification**
FCC Rule Part(s):	**CFR §2.1093**
Model Name:	**SM-A155M/DSN**
Additional Model:	**SM-A155M/N**
Date of Test:	**Oct. 07, 2023 ~ Nov. 01, 2023**

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in FCC KDB procedures and had been tested in accordance with the measurement procedures specified in FCC KDB procedures.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By



Chang Min, Kim
Test Engineer
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Reviewed By

Yun Jeang, Heo
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REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	Nov. 07, 2023	Initial Release
1	Nov. 09, 2023	Revised Sec. 14.4

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

Table of Contents

1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 WLAN SAR v02r02
- FCC KDB Publication 447498 D01 General SAR Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 616217 D04 v01r02 (Proximity Sensor)
- FCC KDB Publication 865664 D01 SAR Measurement 100 ㎒ to 6 ㎓ v01r04.
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

In Addition to the above, the following information was used.

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)

2. Test Location

2.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Telephone	031-645-6300
Fax.	031-645-6401

2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-A155M/DSN
Equipment Type	Mobile Phone
FCC ID	A3LSMA155M
Additional Model	SM-A155M/N
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

The Highest Reported SAR						
Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)			
			1g Head	1g Body-Worn	1g Hotspot	10g Extremity
GSM/GPRS/EDGE 850	824.2 ㎒ ~ 848.8 ㎒	PCE	0.37	0.37	0.78	N/A
GSM/GPRS/EDGE 1900	1 850.2 ㎒ ~ 1 909.8 ㎒	PCE	0.14	0.40	0.42	N/A
UMTS Band 2	1 852.4 ㎒ ~ 1 907.6 ㎒	PCE	0.20	0.48	0.40	N/A
UMTS Band 4	1 712.4 ㎒ ~ 1 752.6 ㎒	PCE	0.15	0.33	0.53	N/A
UMTS Band 5	826.4 ㎒ ~ 846.6 ㎒	PCE	0.30	0.74	0.74	N/A
LTE Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒	PCE	0.30	0.80	0.58	N/A
LTE Band 4 (AWS)	1 710.7 ㎒ ~ 1 754.3 ㎒	PCE	0.25	**0.98**	0.72	N/A
LTE Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒	PCE	0.29	0.27	0.44	N/A
LTE Band 12	699.7 ㎒ ~ 715.3 ㎒	PCE	0.18	0.53	0.53	N/A
LTE Band 13	779.5 ㎒ ~ 784.5 ㎒	PCE	0.19	0.57	0.57	N/A
LTE Band 17	706.5 ㎒ ~ 713.5 ㎒	PCE	N/A	N/A	N/A	N/A
LTE Band 26 (Cell)	814.7 ㎒ ~ 848.3 ㎒	PCE	0.24	0.62	0.62	N/A
LTE Band 66 (AWS)	1 710.7 ㎒ ~ 1 779.3 ㎒	PCE	0.32	0.93	0.76	N/A
LTE Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒	PCE	0.32	0.56	0.47	N/A
802.11b	2 412 ㎒ ~ 2 472 ㎒	DTS	0.34	0.28	0.30	N/A
U-NII-1	5 180 ㎒ ~ 5 240 ㎒	NII	N/A	N/A	N/A	N/A
U-NII-2A	5 260 ㎒ ~ 5 320 ㎒	NII	**0.60**	0.50	N/A	0.93
U-NII-2C	5 500 ㎒ ~ 5 720 ㎒	NII	0.13	0.69	N/A	**1.40**
U-NII-3	5 745 ㎒ ~ 5 825 ㎒	NII	0.19	0.61	**1.06**	N/A
Bluetooth/LE	2 402 ㎒ ~ 2 480 ㎒	DSS	0.16	<0.1	<0.1	N/A
NFC	13.56 ㎒	DXX	N/A	N/A	N/A	<0.1
Simultaneous SAR per KDB 690783 D01v01r03			**0.99**	**1.48**	**1.44**	**1.40**
Date(s) of Tests:	Oct. 07, 2023 ~ Nov. 01, 2023					

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band& Mode	**Operating Mode**	**Tx Frequency**
GSM/GPRS/EDGE 850	Voice / Data	824.2 ㎒ ~ 848.8 ㎒
GSM/GPRS/EDGE 1900	Voice / Data	1 850.2 ㎒ ~ 1 909.8 ㎒
UMTS Band 2	Voice / Data	1 852.4 ㎒ ~ 1 907.6 ㎒
UMTS Band 4	Voice / Data	1 712.4 ㎒ ~ 1 752.6 ㎒
UMTS Band 5	Voice / Data	826.4 ㎒ ~ 846.6 ㎒
LTE Band 2 (PCS)	Voice / Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE Band 5 (Cell)	Voice / Data	824.7 ㎒ ~ 848.3 ㎒
LTE Band 12	Voice / Data	699.7 ㎒ ~ 715.3 ㎒
LTE Band 13	Voice / Data	779.5 ㎒ ~ 784.5 ㎒
LTE Band 17	Voice / Data	706.5 ㎒ ~ 713.5 ㎒
LTE Band 26	Voice / Data	814.7 ㎒ ~ 848.3 ㎒
LTE Band 66 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 779.3 ㎒
LTE TDD Band 41	Voice / Data	2 498.5 ㎒ ~ 2 687.5 ㎒
U-NII-1	Voice / Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Voice / Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Voice / Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Voice / Data	5 745 ㎒ ~ 5 825 ㎒
2.4 ㎓ WLAN	Voice / Data	2 412 ㎒ ~ 2 472 ㎒
Bluetooth / LE 5.3	Data	2 402 ㎒ ~ 2 480 ㎒
NFC	Data	13.56 ㎒

Device Description		
Device Serial Numbers	**Mode**	**Serial Number**
	GSM 850, UMTS B5	WIR2664M
	GSM 1900, UMTS B2, UMTS B4	WIR2901M
	LTE B2, LTE B4, LTE B26, LTE B66	WIR2878M
	LTE B5, LTE B12, LTE B13, LTE B41, NFC	WIR2874M
	Bluetooth, 2.4 ㎓ WLAN, 5 ㎓ WLAN,	WIR3515M
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Power Reduction for SAR

This device utilizes power reduction mechanisms for some wireless modes and bands for SAR compliance under hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when Hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device when being used in phablet use conditions.

This device uses an independent fixed level power reduction mechanism for WLAN operations when during all voice or VoIP held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013.
Detailed descriptions of the power reduction mechanism are included in the operational description.
The reduced powers for the power reduction mechanisms were conformed via conducted power measurements at the RF Port.

4.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

4.3.1 2G/3G/4G Nominal and Maximum Output Power

A. GSM Modes
Maximum Output Power

Mode / Band		Voice	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot
GSM/GPRS/EDGE 850	Maximum	34.0	34.0	32.0	30.0	29.0	27.0	26.0	24.0	23.0
	Nominal	33.0	33.0	31.0	29.0	28.0	26.0	25.0	23.0	22.0
GSM/GPRS/EDGE1900	Maximum	31.0	31.0	29.0	27.0	26.0	25.5	24.5	22.5	21.5
	Nominal	30.0	30.0	28.0	26.0	25.0	24.5	23.5	21.5	20.5

(Tolerance: Nominal +1 dB ~-1.5 dB)

B. UMTS Modes

Maximum Output Power

Mode/Band		Modulated Average(dBm)				
		3GPP RMC Rel 99	3GPP AMR Rel 99	3GPP Cat.5 HSDPA	3GPP Cat.6 HSUPA	3GPP Cat.8 DC-HSDPA
UMTS Band 2 (1 900 ㎒)	Maximum	24.0	24.0	23.0	21.5	23.0
	Nominal	23.0	23.0	22.0	20.5	22.0
UMTS Band 4 (1 800 ㎒)	Maximum	24.0	24.0	23.0	21.5	23.0
	Nominal	23.0	23.0	22.0	20.5	22.0
UMTS Band 5 (850 ㎒)	Maximum	25.5	25.5	24.5	23.0	24.5
	Nominal	24.5	24.5	23.5	22.0	23.5

(Tolerance: Nominal +1 dB ~-1.5 dB)

Reduced Output Power(Earphone/Grip/Hotspot)

Mode/Band		Modulated Average(dBm)				
		3GPP RMC Rel 99	3GPP AMR Rel 99	3GPP Cat.5 HSDPA	3GPP Cat.6 HSUPA	3GPP Cat.8 DC-HSDPA
UMTS Band 2 (1 900 ㎒)	Maximum	21.0	21.0	20.0	18.5	20.0
	Nominal	20.0	20.0	19.0	17.5	19.0
UMTS Band 4 (1 800 ㎒)	Maximum	23.0	23.0	22.0	20.5	22.0
	Nominal	22.0	22.0	21.0	19.5	21.0

(Tolerance: Nominal +1 dB ~-1.5 dB)

C. LTE Modes

Mode / Band		Modulated Average (dBm)			
		Max.	Grip	Hotspot	Earjack
LTE Band 2	Maximum	24.5	21.5	21.5	21.5
	Nominal	23.5	20.5	20.5	20.5
LTE Band 4	Maximum	25.3	24.3	24.3	24.3
	Nominal	24.3	23.3	23.3	23.3
LTE Band 5	Maximum	25.5			
	Nominal	24.5			
LTE Band 12	Maximum	25.0			
	Nominal	24.0			
LTE Band 13	Maximum	25.0			
	Nominal	24.0			
LTE Band 17	Maximum	25.0			
	Nominal	24.0			
LTE Band 26	Maximum	25.0			
	Nominal	24.0			
LTE Band 66	Maximum	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
LTE Band 41	Maximum	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0

(Tolerance: Nominal +1 dB ~-1.5 dB)

4.3.2 Maximum output power

2.4 GHz, 5 GHz WIFI

Mode	Band	2.4 GHz, 5 GHz WIFI (in dBm)				
		a	b	g	n	ac
2.4 GHz	2.45 GHz		19 Ch12:5 Ch13:1	17 Ch12:5 Ch13:1	17 Ch12:5 Ch13:1	
5 GHz (20 MHz)	5200 MHz	17			17	17
	5300 MHz	17			17	17
	5500 MHz	16			16	16
	5800 MHz	15			15	15
5 GHz (40 MHz)	5200 MHz				15	15
	5300 MHz				15	15
	5500 MHz				14	14
	5800 MHz				13	13
5 GHz (80 MHz)	5200 MHz					14
	5300 MHz					14
	5500 MHz					13
	5800 MHz					12

(Tolerance: Target +1 dB)

4.3.3 Reduced output power

2.4 GHz, 5 GHz WIFI (RCV On)

Mode	Band	2.4 GHz, 5 GHz WIFI (in dBm)				
		a	b	g	n	ac
2.4 GHz	2.45 GHz		15 Ch12:5 Ch13:1	15 Ch12:5 Ch13:1	15 Ch12:5 Ch13:1	
5 GHz (20 MHz)	5200 MHz	14			14	14
	5300 MHz	14			14	14
	5500 MHz	14			14	14
	5800 MHz	14			14	14
5 GHz (40 MHz)	5200 MHz				14	14
	5300 MHz				14	14
	5500 MHz				14	14
	5800 MHz				13	13
5 GHz (80 MHz)	5200 MHz					14
	5300 MHz					14
	5500 MHz					13
	5800 MHz					12

(Tolerance: Target +1 dB)

4.3.4 Maximum Bluetooth Power

Mode	BT (in dBm)
Bluetooth(1Mbps)	15.5
Bluetooth (EDR)	12
Bluetooth LE Legacy	5
Bluetooth LE Audio	5

(Tolerance: Target +1 dB)

4.4 LTE Information

Item.		Description
Frequency Range	LTE Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒
	LTE Band 4 (AWS)	1 710.7 ㎒ ~ 1 754.3 ㎒
	LTE Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒
	LTE Band 12	699.7 ㎒ ~ 715.3 ㎒
	LTE Band 13	779.5 ㎒ ~ 784.5 ㎒
	LTE Band 17	706.5 ㎒ ~ 713.5 ㎒
	LTE Band 26 (Cell)	814.7 ㎒ ~ 848.3 ㎒
	LTE Band 66 (AWS)	1 710.7 ㎒ ~ 1 779.3 ㎒
	LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒
Channel Bandwidths	LTE Band 2 (PCS)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 4 (AWS)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE Band 5 (Cell)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒
	LTE Band 12	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒
	LTE Band 13	5 ㎒, 10 ㎒
	LTE Band 17	5 ㎒, 10 ㎒
	LTE Band 26 (Cell)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒
	LTE Band 66 (AWS)	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒
	LTE TDD Band 41	5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒

Ch. No.& Freq.(㎒)		Low	Mid	High
LTE Band 2 (PCS)	1.4 ㎒	1 850.7 (18607)	1 880.0 (18900)	1 909.3 (19193)
	3 ㎒	1 851.5 (18615)	1 880.0 (18900)	1 908.5 (19185)
	5 ㎒	1 852.5 (18625)	1 880.0 (18900)	1 907.5 (19175)
	10 ㎒	1 855.0 (18650)	1 880.0 (18900)	1 905.0 (19150)
	15 ㎒	1 857.5 (18675)	1 880.0 (18900)	1 902.5 (19125)
	20 ㎒	1 860.0 (18700)	1 880.0 (18900)	1 900.0 (19100)
LTE Band 4 (AWS)	1.4 ㎒	1 710.7 (19957)	1 732.5 (20175)	1 754.3 (20393)
	3 ㎒	1 711.5 (19965)	1 732.5 (20175)	1 753.5 (20385)
	5 ㎒	1 712.5 (19975)	1 732.5 (20175)	1 752.5 (20375)
	10 ㎒	1 715.0 (20000)	1 732.5 (20175)	1 750.0 (20350)
	15 ㎒	1 717.5 (20025)	1 732.5 (20175)	1 747.5 (20325)
	20 ㎒		1 732.5 (20175)	
LTE Band 5 (Cell)	1.4 ㎒	824.7 (20407)	836.5 (20525)	848.3 (20643)
	3 ㎒	825.5 (20415)	836.5 (20525)	847.5 (20635)
	5 ㎒	826.5 (20425)	836.5 (20525)	846.5 (20625)
	10 ㎒		836.5 (20525)	
LTE Band 12	1.4 ㎒	699.7 (23017)	707.5 (23095)	715.3 (23173)
	3 ㎒	700.5 (23025)	707.5 (23095)	714.5 (23165)
	5 ㎒	701.5 (23035)	707.5 (23095)	713.5 (23155)
	10 ㎒		707.5 (23095)	
LTE Band 13	5 ㎒	779.5 (23205)	782 (23230)	784.5 (23255)
	10 ㎒		782 (23230)	
LTE Band 17	5 ㎒		710.0(23790)	
	10 ㎒		710.0(23790)	

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid	Mid-High / High	
LTE Band 26 (Cell)	1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
	3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
	5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
	10 MHz	819.0 (26740)		831.5 (26865)	844.0 (26990)	
	15 MHz			831.5 (26865)		
LTE Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)	1 779.3 (132665)	
	3 MHz	1 711.5 (131987)		1 745 (132322)	1 778.5 (132657)	
	5 MHz	1 712.5 (131997)		1 745 (132322)	1 777.5 (132647)	
	10 MHz	1 715.0 (132022)		1 745 (132322)	1 775.0 (132622)	
	15 MHz	1 717.5 (132047)		1 745 (132322)	1 772.5 (132597)	
	20 MHz	1 720.0 (132072)		1 745 (132322)	1 770.0 (132572)	
LTE TDD Band 41	5 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	10 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	15 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)
	20 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)

UE Category	LTE Rel. 15, DL: Category 4, UL: Category 5
HPUE Power Class	LTE TDD 41 Power Class 3 :(Duty: 63.3%)
Modulations Supported in UL	QPSK, 16QAM, 64QAM
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3	Yes
A-MPR disabled for SAR Testing.	Yes
LTE Carrier Aggregation	This device does not support Inter-Band & Intra-Band DL-link Carrier aggregations.
LTE Release information	This device does not support full CA features on 3GPP Release 15. It supports carrieraggregation, downlink MIMO. All other uplink communications are identical to the release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.

4.5 DUT Antenna Locations

The overall dimensions of this device are > 9 X 5 cm. A diagram showing device antenna can be found in SAR_setup_photos. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering. Therefore, SAR test was performed for additional simultaneous transmissions.
Head and Bluetooth Tethering SAR were evaluated for BT BDR tethering applications.

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
MAIN 1	GSM/GPRS/EDGE 850	Yes	Yes	Yes	Yes	Yes	No
MAIN 2	GSM/GPRS/EDGE 1900	Yes	Yes	Yes	No	Yes	No
MAIN 2	UMTS Band 2	Yes	Yes	Yes	No	Yes	No
MAIN 2	UMTS Band 4	Yes	Yes	Yes	No	Yes	No
MAIN 1	UMTS Band 5	Yes	Yes	Yes	Yes	Yes	No
MAIN 2	LTE Band 2	Yes	Yes	Yes	No	Yes	No
MAIN 2	LTE Band 4	Yes	Yes	Yes	No	Yes	No
MAIN 1	LTE Band 5	Yes	Yes	Yes	Yes	Yes	No
MAIN 1	LTE Band 12	Yes	Yes	Yes	Yes	Yes	No
MAIN 1	LTE Band 13	Yes	Yes	Yes	Yes	Yes	No
MAIN 1	LTE Band 17	Yes	Yes	Yes	Yes	Yes	No
MAIN 1	LTE Band 26	Yes	Yes	Yes	Yes	Yes	No
MAIN 2	LTE Band 66	Yes	Yes	Yes	No	Yes	No
MAIN 2	LTE TDD Band 41	Yes	Yes	Yes	No	Yes	No
SUB 2	2.4 ㎓ WLAN SISO	Yes	Yes	Yes	No	No	Yes
SUB 2	5 ㎓ WLAN SISO	Yes	Yes	Yes	No	No	Yes
SUB 2	Bluetooth	Yes	Yes	Yes	No	No	Yes
NFC	NFC	Yes	Yes	Yes	No	No	Yes

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 ㎜ from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.
The distance between the transmit antennas and the edges of the device are included in the filing.
- Note: All test configurations are based on front view position.

4.6 Near Field Communications (NFC) Antenna

This EUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in SAR _ Setup_ photos.

4.7 SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.
This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06.

Simultaneous Transmission Scenarios				
Applicable Combination	Head	BodyWorn	Hotspot	Extremity
GSM Voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes
GSM Voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes
GSM Voice + 2.4GHz Bluetooth	Yes^	Yes	N/A	Yes
GSM Voice + 5 GHz WI-FI + 2.4GHz Bluetooth	Yes^	Yes	N/A	Yes
GPRS/EDGE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes
GPRS/EDGE + 5 GHz WI-FI	Yes	Yes	Yes	Yes
GPRS/EDGE + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
GPRS/EDGE + 5 GHz WI-FI + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes
UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes
UMTS + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
UMTS + 5 GHz WI-FI + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes
LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes
LTE + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
LTE + 5 GHz WI-FI+ 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes

Note:
1. Bluetooth cannot transmit simultaneously with 2.4GHz WLAN.
2. 5GHz WLAN can transmit simultaneously with Bluetooth.
3. UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
4. VoIP is supported in GPRS/EDGE.
5. The highest reported SAR for each exposure condition is used for SAR summation purpose.
6. WLAN Hotspot is supported for 2.4 GHz/UNII-3 of 5 GHz WLAN.
7. Per the manufacture, WIFI Direct is not expected to be used in conjunction with a held to ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
8. This device supports Bluetooth tethering. ^ Bluetooth Tethering is considered.
9. Pre-installed VOIP applications are considered.
10. This device supports VoLTE/ VoWiFi.
11. NFC was evaluated for phablet based on epected usage conditions.

4.8 SAR Test Considerations

4.8.1 WiFi

Since wireless router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WiFi, WiFi Hotspot SAR test and combinations are considered only 2.4 GHz and U-NII-3 for SAR with respected to wireless router configurations according to FCC KDB 941225 D06v02r01.
Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg for 1g SAR and is less than 3.0 W/kg for 10g SAR, SAR is not required for U-NII-1 band according to FCC KDB 248227D01v02r02.
This device supports IEEE 802.11 ac with the following features:

a) Up to 80MHz Bandwidth only for 5 GHz
b) Up to 256 QAM is supported
c) TDWR and Band gap channels are supported for 5 GHz
d) Straddle channels are supported.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

4.8.2 Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US Bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower Bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest Bandwidth; and the reported LTE SAR for the highest Bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r05.

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

This Device supports 64QAM on the uplink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM sins the highest maximum output power for 64QAM is ≤ 0.5dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is ≤1.45 W/Kg, per section 5.2.4 for FCC KDB941225 D05v02r05.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an LTE Band with a larger transmission frequency range, both LTE bands have the same target power or the band with the larger transmission frequency range has a higher target power and both LTE bands share the same transmission path and signal characteristics, SAR was only tested for the band with the larger transmission frequency range.
LTE capabilities with overlapping transmission frequency ranges were applied to LTE Band 17(706.5 ㎒~ 713.5 ㎒) is covered by LTE Band 12(699.7 ㎒~ 715.3 ㎒) of this model each both LTE bands have the same target powers.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.
Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

$$Adjusted\ SAR = Highest\ Reported\ SAR\ x \frac{Secondary\ Max\ tune-up\ (mW)}{Primary\ Max\ tune\ tune-up(mW)} \leq 1.2\ \mathrm{W/kg}.$$

Based on the highest Reported SAR, the secondary mode is not required.
Per FCC KDB 690783 1 D01 SAR Listings on Grants v01r03 and KDB 447498 D01 General RF Exposure Guidance v06 The SAR numbers listed must be consistent with the highest reported test results required by the published RF exposure KDB procedures. When the measured SAR is not at the maximum tune-up tolerance limit or maximum output power allowed for production units, the measured results are scaled to the maximum conditions to determine compliance; the scaled results are referred to as the reported SAR.

The Reported SAR = The Measured SAR x-$\frac{Maximumtune-up(mW)}{Measured\ Conducted\ Power(mW)}$

The Reported SAR for WLAN and Bluetooth
The Reported SAR = The Measured SAR x-$\frac{Maximumtune-up(mW)}{Measured\ Conducted\ Power(mW)}$ x Duty factor

5. Introduction

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (d*W*) absorbed by (dissipated in) an incremental mass (d*m*) contained in a volume element (d*V*) of a given density (*r*). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right)$$

Figure 1. SAR Mathematical Equation
SAR is expressed in units of Watts per Kilogram (W/kg)

Where:
= conductivity of the tissue-simulant material (S/m)
= mass density of the tissue-simulant material (kg/m³)
= Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

6. Description of test equipment

6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid& Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 is working with SAR Measurement system DASY4 & DASY5, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

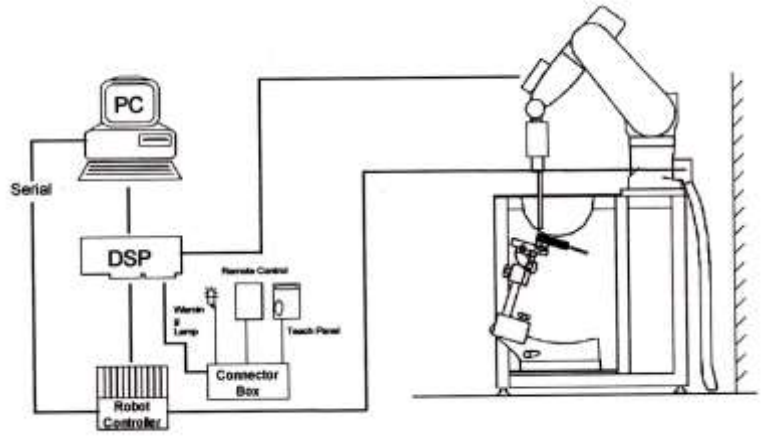


Figure 2. HCT SAR Lab. Test Measurement Set-up

The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

7. SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013.

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.

2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.

3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)

   a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

   b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Area scan and zoom scan resolution setting follow KDB 865664 D01v01r04 quoted below.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum areascan Spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤15 mm
2-3 GHz: ≤12 mm</td><td>3-4 GHz: ≤12 mm
4-6 GHz: ≤10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan Spatial resolution: Δx_{zoom}, Δy_{zoom}</td><td>≤ 2 GHz: ≤8mm
2-3 GHz: ≤5mm*</td><td>3-4 GHz: ≤5 mm*
4-6 GHz: ≤4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan Spatial resolution normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{zoom}(n)$</td><td>≤ 5 mm</td><td>3-4 GHz: ≤4 mm
4-5 GHz: ≤3 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{zoom}(1)$: between 1st two Points closest to phantom surface</td><td>≤ 4 mm</td><td>3-4 GHz: ≤3 mm
4-5 GHz: ≤2.5 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td>$\Delta z_{zoom}(n>1)$: between subsequent Points</td><td colspan="2">≤1.5·$\Delta z_{zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3-4 GHz: ≥28 mm
4-5 GHz: ≥25 mm
5-6 GHz: ≥22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

8. Description of Test Position

8.1 EAR REFERENCE POINT

Figure 8-2 shows the front, back and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE.” Each ERP is on the B-M (back-mouth) line located 15 mm behind the entrance-to-ear-canal (EEC) point, as shown in Figure 6-1. The Reference Plane is defined as passing through the two ears reference point and point M. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (See Figure 5-1), Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

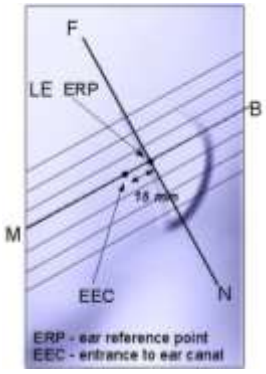


Figure 8-1
Close-up side view of ERP

8.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The device under test was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point” (see Figure 8-3). The acoustic output was than located at the same level as the center of the ear reference point. The device under test was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.

Figure 8-2
Front, back and side views of SAM Twin Phantom

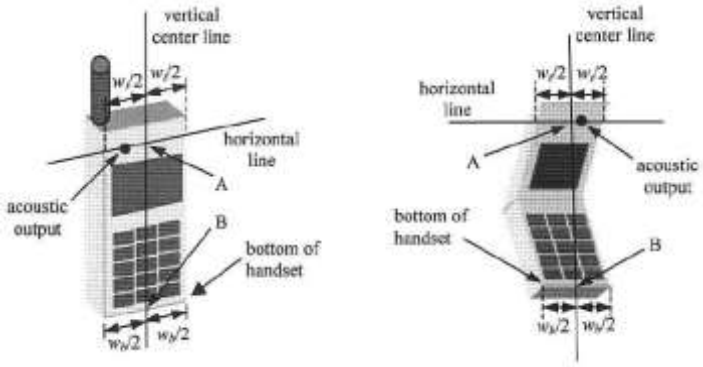


Figure 6-3. Handset vertical and horizontal reference lines

8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity ε=3 and loss tangent σ =0.02.

8.4 Position for cheek

Figure 6.4. shows cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

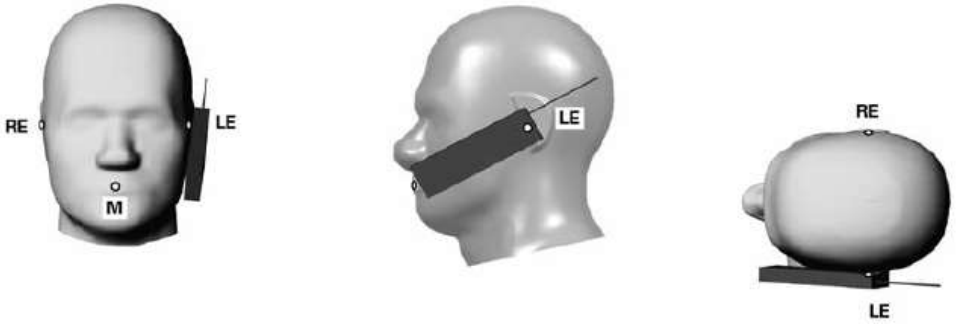


Figure 8.4 Cheek/ Touch position of the wireless device

8.5 Definition of the “tilted” position

Figure 6.5. shows tilted position. Place the device in the cheek position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.

Figure 8.5. Tilt 15°position of the wireless device

8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-6). Per FCC KDB Publication 648474 D04v01r03 Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in Body-worn accessories. The Body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it. When the reported SAR for a body- worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency Band should be repeated for that body-worn accessory with a headset attached to the handset.

Figure 8-6
Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-dip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on *a* composite test separation distance of 10 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mix used conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The Portable Hotspot feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear. the phablets procedures outlined in KDB Publication 648474 D04 v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worm accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1-g SAR > 1.2 W/kg.

8.9 Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce output powers in extremity (hand-held) use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm, was used as the test separation distance for SAR testing. Sensor triggering distance summary data is included in below table.

Wireless technologies	Position	§6.2 Triggering Distance (㎜)	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Phablet SAR (㎜)
UMTS 2,4, LTE 2,4,66,41 (MAIN 2 Ant.)	Rear	13	N/A	N/A	12
	Bottom	8	N/A	N/A	7

8.10 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop documents, when Bluetooth tethering applies, simultaneous transmission SAR needs consideration.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering.
Therefore, SAR test was performed for additional simultaneous transmissions.
Head and Bluetooth tethering SAR were evaluated for BT BDR tethering applications.

9. RF Exposure Limits

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Partial Body)	1.6	8.0
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.4
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.0	20.0

NOTES:

* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

** The Spatial Average value of the SAR averaged over the whole-body.

*** The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be mad fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e.as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

10. FCC SAR General Measurement Procedures

Power Measurements for licensed transmitters are performed using a base simulator under digital average power.

10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

10.2 3G SAR Test Reduction Procedure

10.2.1 GSM, GPRS AND EDGE

The following procedures may be considered for each frequency Band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 time-slot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi-slot class implemented in a device.

10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency Band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.
SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures.
The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Cheek for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

10.3 SAR Measurement Conditions for UMTS

10.3.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

10.3.2 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2kbps RMC.

10.3.3 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

10.3.4 SAR Measurements with Rel. 6 HSUPA

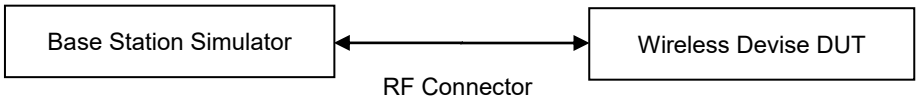
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

10.3.5 DC-HSDPA

SAR is required for Rel.8 DC-HSDPA when SAR is required for Rel.5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in table C.8.1.12 of 3GPP TS34.121-1 to determine SAR test reduction. Primary and secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

DC-HSDPA Configurations

- 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



10.4 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

10.4.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

10.4.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

10.4.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

a. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest Bandwidth
   i. The required channel and offset combination with the highest maximum output power is required for SAR.
   ii. When the reported SAR is ≤ 0.8 W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
   iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest Bandwidth following the same procedures outlined in Sec 4.2.1.
c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower Band widths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

10.4.5 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6. LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Calculated Duty Cycle – Extended cyclic prefix in uplink x (T_s) x no of S + no of U

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

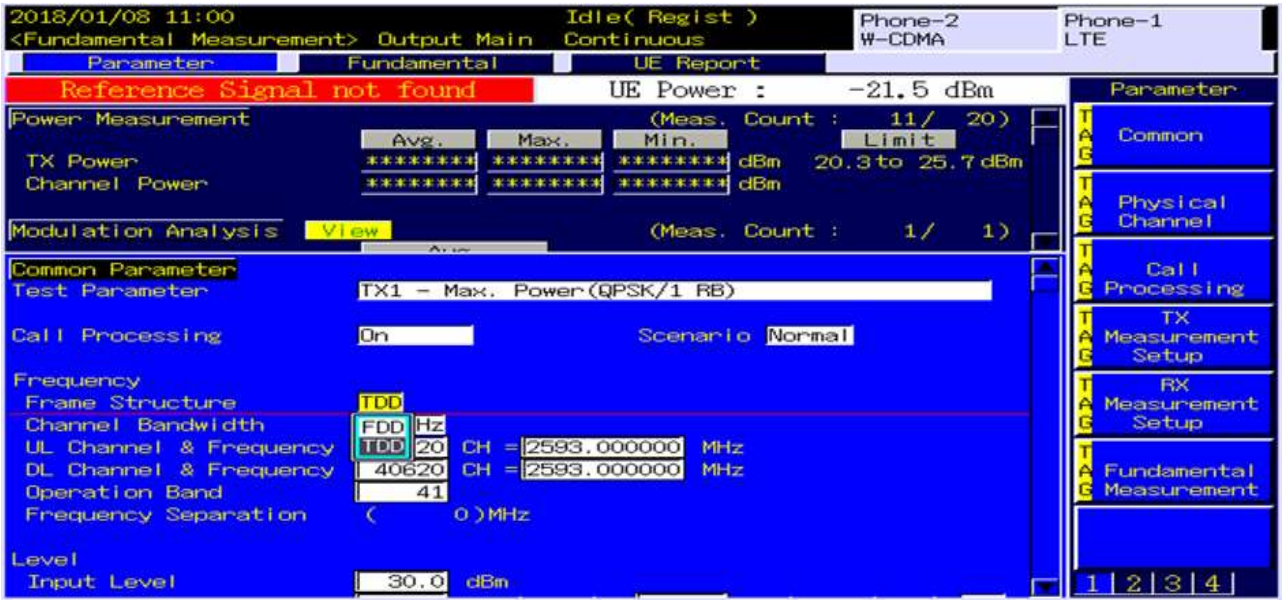
Calculated Duty Cycle = (5120 x (1/(15000 x 2048)) x 2 + 0.006)/0.01 = 63.33 %

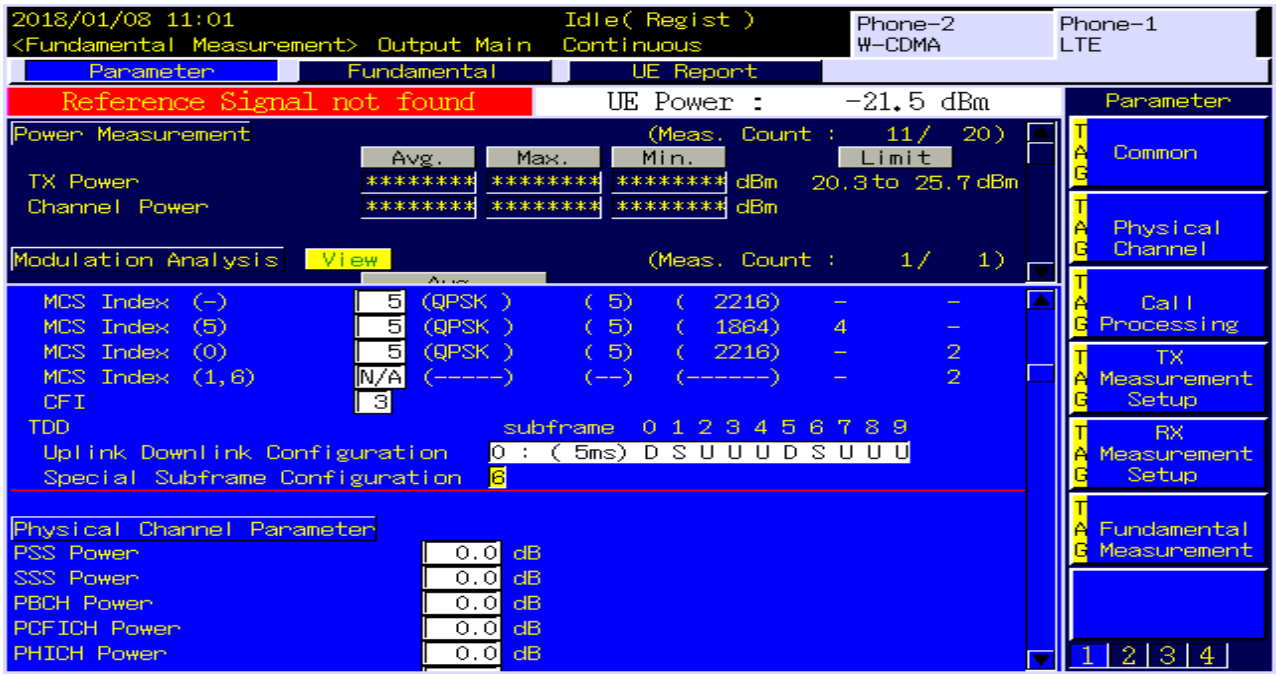
Where

T_s = 1/(15000 x 2048) seconds

10.4.7 The Call Box Setup for LTE(TDD)

When you Want to Test for LTE TDD, Please Change Frame Structure TDD and TDD Uplink Downlink Configuration 0 and Special Subframe Configuration 6.





10.5 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipsetbased test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

10.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.
A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

10.5.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII2A Bands, when the same maximum output power is specified for both Bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg for 1g SAR or > 3.0 W/kg for 10g SAR. When different maximum output powers are specified for the Bands, SAR measurement for the U-NII Band with the lower maximum output power is not required unless the highest reported SAR for the U-NII Band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two Bands, is > 1.2 W/kg for 1g SAR or > 3.0 W/kg for 10g SAR.

10.5.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 ㎒ (5.47 ㎓ – 5.85 ㎓), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 ㎓ – 5.65 ㎓ in U-NII-2C Band must be disabled with acceptable mechanisms and documented in the equipment certification.
Unless Band gap channels are permanently disabled, SAR must be considered for these channels.

10.5.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating nest to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test positions are measured.

10.5.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:
1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is >1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz Band, the Initial Test Configuration Procedures should be followed.

10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz Bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency Band or aggregated Band, SAR is measured using the configuration with the largest channel Bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel Bandwidth, modulation and data rate etc., the lower order 802.11 mode i.2., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power is the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency Band or aggregated Band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

10.5.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 GHz and 5 GHz Bands, an initial test configuration is determined for each frequency Band and aggregated Band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency Band or aggregated Band, SAR is measured using the configuration(s) with the largest channel Bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

10.5.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency Band and aggregated Band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg for 1g SAR and ≤ 3.0 W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

Licensed Bands

Test Description	Test Procedure Used
Conducted Output Power	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2

Test Overview

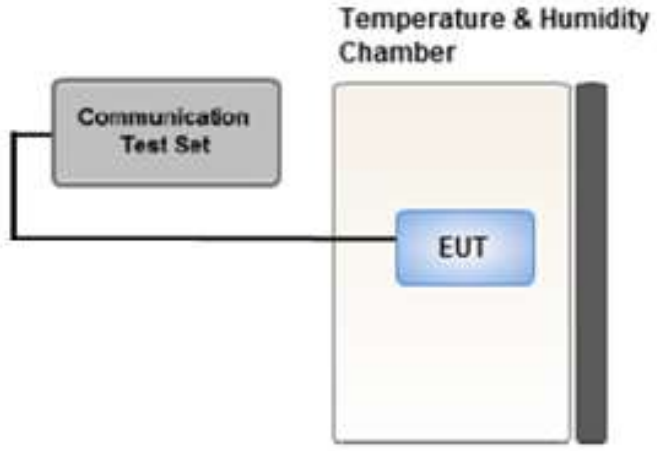
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

Test setup



11.1 GSM

11.1.1 GSM Maximum Conducted Output Power

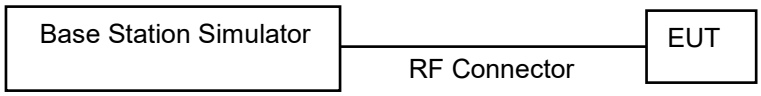
Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**34.00**	**34.00**	**32.00**	**30.00**	**29.00**	**27.0**	**26.0**	**24.0**	**23.0**
Nominal		**33.00**	**33.00**	**31.00**	**29.00**	**28.00**	**26.0**	**25.0**	**23.0**	**22.0**
GSM 850	128	33.31	33.12	30.60	28.55	27.56	26.64	25.60	23.66	22.61
	190	33.37	33.36	30.81	28.80	27.74	26.44	25.39	23.59	22.30
	251	33.37	33.23	30.76	28.70	27.68	26.56	25.49	23.67	22.49
Maximum		**31.00**	**31.00**	**29.00**	**27.00**	**26.00**	**25.50**	**24.50**	**22.50**	**21.50**
Nominal		**30.00**	**30.00**	**28.00**	**26.00**	**25.00**	**24.50**	**23.50**	**21.50**	**20.50**
GSM 1900	512	30.55	30.57	28.06	26.04	25.02	25.13	24.00	21.98	20.72
	661	30.61	30.64	28.10	26.03	25.01	25.18	24.05	22.09	20.79
	810	30.47	30.48	28.00	25.93	24.94	25.16	24.04	22.00	20.80

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**24.97**	**24.97**	**25.98**	**25.74**	**25.99**	**17.97**	**19.98**	**19.74**	**19.99**
Nominal		**23.97**	**23.97**	**24.98**	**24.74**	**24.99**	**16.97**	**18.98**	**18.74**	**18.99**
GSM 850	128	24.28	24.09	24.58	24.29	24.55	17.61	19.58	19.40	19.60
	190	24.34	24.33	24.79	24.54	24.73	17.41	19.37	19.33	19.29
	251	24.34	24.20	24.74	24.44	24.67	17.53	19.47	19.41	19.48
Maximum		**21.97**	**21.97**	**22.98**	**22.74**	**22.99**	**16.47**	**18.48**	**18.24**	**18.49**
Nominal		**20.97**	**20.97**	**21.98**	**21.74**	**21.99**	**15.47**	**17.48**	**17.24**	**17.49**
GSM 1900	512	21.52	21.54	22.04	21.78	22.01	16.10	17.98	17.72	17.71
	661	21.58	21.61	22.08	21.77	22.00	16.15	18.03	17.83	17.78
	810	21.44	21.45	21.98	21.67	21.93	16.13	18.02	17.74	17.79

GSM Conducted output powers (Frame-Average)

Note:
Time slot average factor is as follows:
1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



11.2 UMTS

HSPA+
This DUT is capable of HSPA+ in downlink. Therefore, the RF conducted power is not measured according to 941225 D01v03r01 3G SAR.

11.2.1 UMTS Maximum Conducted Output Power

UMTS Band 2 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	23.10	23.15	23.19	-
99		12.2 kbps AMR	23.08	23.15	23.10	-
2	HSDPA	Subtest 1	22.09	22.14	22.15	0
5		Subtest 2	21.99	22.12	22.02	0
5		Subtest 3	21.59	21.61	21.57	0.5
5		Subtest 4	21.56	21.56	21.55	0.5
6	HSUPA	Subtest 1	20.03	20.13	20.09	0
6		Subtest 2	20.03	20.09	20.08	1
6		Subtest 3	21.00	21.09	21.05	0
6		Subtest 4	19.55	19.62	19.62	1
6		Subtest 5	21.01	21.08	21.07	0
8	DC-HSDPA	Subtest1	21.41	21.49	21.44	0
8		Subtest2	21.42	21.47	21.42	0
8		Subtest3	20.89	20.93	20.89	0.5
8		Subtest4	20.86	20.92	20.90	0.5

UMTS Average Conducted output powers

UMTS Band 4 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL1312 DL1537	UL1412 DL1637	UL1513 DL1738	
99	UMTS	12.2 kbps RMC	23.18	23.18	23.09	-
99		12.2 kbps AMR	23.17	23.15	23.08	-
2	HSDPA	Subtest 1	22.17	22.19	22.08	0
5		Subtest 2	22.14	22.18	22.07	0
5		Subtest 3	21.66	21.65	21.55	0.5
5		Subtest 4	21.65	21.66	21.56	0.5
6	HSUPA	Subtest 1	20.16	20.17	20.05	0
6		Subtest 2	20.13	20.20	20.05	1
6		Subtest 3	21.17	21.14	21.04	0
6		Subtest 4	19.69	19.67	19.53	1
6		Subtest 5	21.15	21.17	21.05	0
8	DC-HSDPA	Subtest1	21.85	21.91	21.83	0
8		Subtest2	21.17	21.21	21.24	0
8		Subtest3	20.62	20.84	20.66	0.5
8		Subtest4	20.55	20.86	20.61	0.5

UMTS Average Conducted output powers

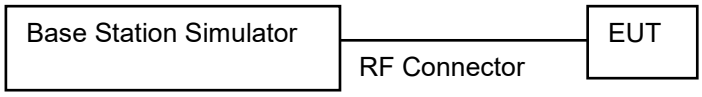
UMTS Band 5 Maximum Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 5 [dBm] UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	3GPP MPR
99	UMTS	12.2 kbps RMC	24.33	24.32	24.38	-
99		12.2 kbps AMR	24.30	24.25	24.36	-
2	HSDPA	Subtest 1	23.36	23.30	23.38	0
5		Subtest 2	23.29	23.29	23.38	0
5		Subtest 3	22.79	22.88	22.88	0.5
5		Subtest 4	22.80	22.79	22.82	0.5
6	HSUPA	Subtest 1	21.30	21.31	21.32	0
6		Subtest 2	21.33	21.33	21.37	1
6		Subtest 3	22.32	22.35	22.37	0
6		Subtest 4	20.81	20.82	20.85	1
6		Subtest 5	22.29	22.31	22.33	0
8	DC-HSDPA	Subtest1	22.72	22.61	22.64	0
8		Subtest2	22.69	22.59	22.61	0
8		Subtest3	22.15	22.05	22.11	0.5
8		Subtest4	22.15	22.04	22.10	0.5

UMTS Average Conducted output powers

DC-HSDPA Configurations

- 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



11.2.2 UMTS Reduced Conducted Output Power(Grip/Hotspot/Earjack)

UMTS Band 2 Reduced Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 2 [dBm] UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	3GPP MPR
99	UMTS	12.2 kbps RMC	20.06	20.11	20.16	-
99		12.2 kbps AMR	20.06	20.04	20.15	-
2	HSDPA	Subtest 1	19.08	19.16	19.11	0
5		Subtest 2	19.03	19.10	19.02	0
5		Subtest 3	18.57	18.61	18.54	0.5
5		Subtest 4	18.54	18.60	18.57	0.5
6	HSUPA	Subtest 1	17.07	17.14	17.08	0
6		Subtest 2	17.05	17.11	17.08	1
6		Subtest 3	18.06	18.14	18.08	0
6		Subtest 4	16.58	16.64	16.62	1
6		Subtest 5	18.05	18.12	18.07	0
8	DC-HSDPA	Subtest1	18.53	18.53	18.44	0
8		Subtest2	18.51	18.50	18.44	0
8		Subtest3	17.91	17.99	17.89	0.5
8		Subtest4	17.92	17.94	17.91	0.5

UMTS Average Conducted output powers

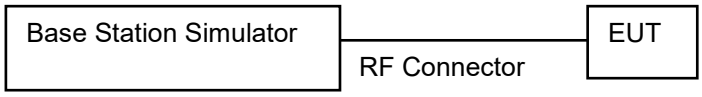
UMTS Band 4 Reduced Conducted Output Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 4 [dBm] UL1312 DL1537	UL1412 DL1637	UL1513 DL1738	3GPP MPR
99	UMTS	12.2 kbps RMC	22.20	22.19	22.10	-
99		12.2 kbps AMR	22.16	22.17	22.01	-
2	HSDPA	Subtest 1	21.18	21.18	21.07	0
5		Subtest 2	21.12	21.20	21.04	0
5		Subtest 3	20.66	20.69	20.61	0.5
5		Subtest 4	20.60	20.64	20.59	0.5
6	HSUPA	Subtest 1	19.16	19.18	19.07	0
6		Subtest 2	19.17	19.17	19.05	1
6		Subtest 3	20.17	20.16	20.05	0
6		Subtest 4	18.71	18.71	18.63	1
6		Subtest 5	20.14	20.18	20.03	0
8	DC-HSDPA	Subtest1	20.83	20.85	20.76	0
8		Subtest2	20.26	20.18	20.14	0
8		Subtest3	19.68	19.54	19.56	0.5
8		Subtest4	19.62	19.58	19.52	0.5

UMTS Average Conducted output powers

DC-HSDPA Configurations

- 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



11.3 LTE Maximum Output Power

LTE B5/B12/B26 does not support three non-overlapping channels at each supported max bandwidth. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

11.3.1 LTE Maximum Conducted Power

[LTE Band 2 Conducted Power]

LTE Band 2 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	23.22	23.23	23.14	0	0
		1	3	23.29	23.34	23.24	0	0
		1	5	23.21	23.26	23.15	0	0
		3	0	23.32	23.35	23.27	0	0
		3	1	23.36	23.38	23.29	0	0
		3	3	23.36	23.36	23.26	0	0
		6	0	22.47	22.48	22.39	0-1	1
	16QAM	1	0	22.40	22.58	22.41	0-1	1
		1	3	22.56	22.60	22.55	0-1	1
		1	5	22.45	22.56	22.46	0-1	1
		3	0	22.30	22.35	22.29	0-1	1
		3	1	22.35	22.36	22.30	0-1	1
		3	3	22.29	22.38	22.23	0-1	1
		6	0	21.58	21.59	21.52	0-2	2
	64QAM	1	0	21.55	21.61	21.52	0-2	2
		1	3	21.62	21.71	21.55	0-2	2
		1	5	21.51	21.60	21.50	0-2	2
		3	0	21.56	21.61	21.52	0-2	2
		3	1	21.60	21.61	21.52	0-2	2
		3	3	21.60	21.62	21.53	0-2	2
		6	0	20.53	20.53	20.45	0-3	3

LTE Band 2 _ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 MHz	18900 Ch. 1880 MHz	19185 Ch. 1908.5 MHz		
3 MHz	QPSK	1	0	23.06	23.09	23.02	0	0
		1	7	23.17	23.25	23.13	0	0
		1	14	23.07	23.13	23.01	0	0
		8	0	22.31	22.34	22.26	0-1	1
		8	3	22.38	22.40	22.32	0-1	1
		8	7	22.33	22.39	22.26	0-1	1
		15	0	22.36	22.37	22.30	0-1	1
	16QAM	1	0	22.37	22.36	22.33	0-1	1
		1	7	22.46	22.58	22.42	0-1	1
		1	14	22.40	22.42	22.25	0-1	1
		8	0	21.40	21.43	21.37	0-2	2
		8	3	21.47	21.51	21.43	0-2	2
		8	7	21.42	21.49	21.35	0-2	2
		15	0	21.37	21.40	21.31	0-2	2
	64QAM	1	0	21.39	21.48	21.34	0-2	2
		1	7	21.50	21.59	21.50	0-2	2
		1	14	21.39	21.49	21.36	0-2	2
		8	0	20.40	20.46	20.37	0-3	3
		8	3	20.48	20.51	20.41	0-3	3
		8	7	20.44	20.50	20.39	0-3	3
		15	0	20.38	20.41	20.34	0-3	3

LTE Band 2 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 MHz	18900 Ch. 1880 MHz	19175 Ch. 1907.5 MHz		
5 MHz	QPSK	1	0	23.28	23.34	23.22	0	0
		1	12	23.41	23.50	23.38	0	0
		1	24	23.29	23.36	23.25	0	0
		12	0	22.39	22.43	22.38	0-1	1
		12	6	22.45	22.50	22.42	0-1	1
		12	11	22.45	22.47	22.38	0-1	1
		25	0	22.44	22.47	22.38	0-1	1
	16QAM	1	0	22.54	22.65	22.55	0-1	1
		1	12	22.64	22.78	22.69	0-1	1
		1	24	22.60	22.62	22.53	0-1	1
		12	0	21.40	21.45	21.42	0-2	2
		12	6	21.48	21.52	21.47	0-2	2
		12	11	21.46	21.51	21.40	0-2	2
		25	0	21.48	21.51	21.44	0-2	2
	64QAM	1	0	21.53	21.56	21.51	0-2	2
		1	12	21.66	21.78	21.66	0-2	2
		1	24	21.55	21.61	21.52	0-2	2
		12	0	20.48	20.51	20.47	0-3	3
		12	6	20.57	20.57	20.53	0-3	3
		12	11	20.52	20.55	20.46	0-3	3
		25	0	20.50	20.53	20.46	0-3	3

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	23.34	23.41	23.35	0	0
		1	24	23.43	23.47	23.40	0	0
		1	49	23.39	23.45	23.34	0	0
		25	0	22.36	22.41	22.42	0-1	1
		25	12	22.46	22.50	22.45	0-1	1
		25	24	22.46	22.44	22.35	0-1	1
		50	0	22.45	22.47	22.42	0-1	1
	16QAM	1	0	22.59	22.70	22.68	0-1	1
		1	24	22.76	22.76	22.70	0-1	1
		1	49	22.71	22.77	22.57	0-1	1
		25	0	21.42	21.46	21.45	0-2	2
		25	12	21.51	21.55	21.48	0-2	2
		25	24	21.50	21.47	21.38	0-2	2
		50	0	21.45	21.47	21.43	0-2	2
	64QAM	1	0	21.58	21.70	21.59	0-2	2
		1	24	21.64	21.73	21.67	0-2	2
		1	49	21.62	21.69	21.63	0-2	2
		25	0	20.43	20.48	20.49	0-3	3
		25	12	20.54	20.57	20.53	0-3	3
		25	24	20.54	20.52	20.42	0-3	3
		50	0	20.48	20.50	20.45	0-3	3

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	23.29	23.39	23.34	0	0
		1	36	23.42	23.51	23.40	0	0
		1	74	23.41	23.42	23.33	0	0
		36	0	22.37	22.44	22.44	0-1	1
		36	18	22.44	22.49	22.45	0-1	1
		36	39	22.44	22.50	22.37	0-1	1
		75	0	22.43	22.48	22.43	0-1	1
	16QAM	1	0	22.49	22.64	22.60	0-1	1
		1	36	22.76	22.79	22.71	0-1	1
		1	74	22.72	22.69	22.59	0-1	1
		36	0	21.40	21.45	21.46	0-2	2
		36	18	21.46	21.52	21.47	0-2	2
		36	39	21.48	21.53	21.41	0-2	2
		75	0	21.45	21.48	21.44	0-2	2
	64QAM	1	0	21.55	21.66	21.59	0-2	2
		1	36	21.66	21.78	21.65	0-2	2
		1	74	21.65	21.63	21.62	0-2	2
		36	0	20.47	20.52	20.51	0-3	3
		36	18	20.53	20.58	20.54	0-3	3
		36	39	20.53	20.58	20.46	0-3	3
		75	0	20.46	20.50	20.47	0-3	3

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	23.19	23.26	23.27	0	0
		1	49	23.44	23.48	23.44	0	0
		1	99	23.35	23.36	23.26	0	0
		50	0	22.37	22.41	22.49	0-1	1
		50	25	22.50	22.54	22.53	0-1	1
		50	49	22.54	22.56	22.40	0-1	1
		100	0	22.44	22.46	22.42	0-1	1
	16QAM	1	0	22.49	22.61	22.56	0-1	1
		1	49	22.71	22.75	22.75	0-1	1
		1	99	22.65	22.65	22.54	0-1	1
		50	0	21.37	21.42	21.50	0-2	2
		50	25	21.52	21.54	21.54	0-2	2
		50	49	21.55	21.55	21.42	0-2	2
		100	0	21.45	21.47	21.43	0-2	2
	64QAM	1	0	21.45	21.54	21.55	0-2	2
		1	49	21.73	21.71	21.72	0-2	2
		1	99	21.55	21.62	21.53	0-2	2
		50	0	20.41	20.44	20.53	0-3	3
		50	25	20.54	20.57	20.57	0-3	3
		50	49	20.57	20.57	20.43	0-3	3
		100	0	20.48	20.48	20.46	0-3	3

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	23.78	23.82	23.66	0	0
		1	3	23.83	23.88	23.69	0	0
		1	5	23.78	23.81	23.64	0	0
		3	0	23.90	23.89	23.75	0	0
		3	1	23.93	23.93	23.77	0	0
		3	3	23.90	23.91	23.75	0	0
		6	0	23.02	23.05	22.89	0-1	1
	16QAM	1	0	22.94	23.09	22.85	0-1	1
		1	3	22.94	23.11	22.91	0-1	1
		1	5	22.96	23.08	22.87	0-1	1
		3	0	22.77	22.87	22.75	0-1	1
		3	1	22.78	22.95	22.73	0-1	1
		3	3	22.79	22.90	22.72	0-1	1
		6	0	22.07	22.16	22.00	0-2	2
	64QAM	1	0	22.02	22.17	22.01	0-2	2
		1	3	22.06	22.22	22.04	0-2	2
		1	5	22.01	22.17	21.98	0-2	2
		3	0	22.03	22.13	22.00	0-2	2
		3	1	22.06	22.12	22.00	0-2	2
		3	3	22.03	22.12	22.01	0-2	2
		6	0	21.02	21.10	20.92	0-3	3

LTE Band 4 _ 3 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 MHz	20175 Ch. 1732.5 MHz	20385 Ch. 1753.5 MHz		
3 MHz	QPSK	1	0	23.71	23.71	23.60	0	0
		1	7	23.85	23.87	23.73	0	0
		1	14	23.73	23.74	23.59	0	0
		8	0	22.94	22.96	22.84	0-1	1
		8	3	23.00	23.03	22.88	0-1	1
		8	7	22.94	22.99	22.83	0-1	1
		15	0	23.00	23.00	22.86	0-1	1
	16QAM	1	0	22.77	22.97	22.82	0-1	1
		1	7	23.00	23.13	22.93	0-1	1
		1	14	22.92	23.03	22.82	0-1	1
		8	0	21.95	22.05	21.93	0-2	2
		8	3	22.02	22.11	21.94	0-2	2
		8	7	21.96	22.06	21.90	0-2	2
		15	0	21.94	22.02	21.86	0-2	2
	64QAM	1	0	21.94	22.08	21.91	0-2	2
		1	7	22.04	22.19	22.04	0-2	2
		1	14	21.92	22.05	21.92	0-2	2
		8	0	20.97	21.07	20.92	0-3	3
		8	3	21.03	21.11	20.98	0-3	3
		8	7	20.99	21.08	20.92	0-3	3
		15	0	20.97	21.03	20.87	0-3	3

LTE Band 4 _ 5 MHz Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 MHz	20175 Ch. 1732.5 MHz	20375 Ch. 1752.5 MHz		
5 MHz	QPSK	1	0	23.91	23.90	23.86	0	0
		1	12	24.05	24.10	23.97	0	0
		1	24	23.90	24.02	23.82	0	0
		12	0	23.01	23.00	22.91	0-1	1
		12	6	23.05	23.12	23.00	0-1	1
		12	11	23.04	23.11	22.94	0-1	1
		25	0	23.04	23.08	22.95	0-1	1
	16QAM	1	0	23.05	23.16	23.13	0-1	1
		1	12	23.24	23.39	23.20	0-1	1
		1	24	23.05	23.25	23.05	0-1	1
		12	0	21.97	22.00	21.92	0-2	2
		12	6	22.01	22.13	22.00	0-2	2
		12	11	22.02	22.11	21.96	0-2	2
		25	0	22.03	22.11	21.99	0-2	2
	64QAM	1	0	22.06	22.15	22.13	0-2	2
		1	12	22.21	22.33	22.21	0-2	2
		1	24	22.09	22.23	22.05	0-2	2
		12	0	21.06	21.09	21.00	0-3	3
		12	6	21.10	21.19	21.08	0-3	3
		12	11	21.08	21.20	21.02	0-3	3
		25	0	21.06	21.15	21.03	0-3	3

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	23.98	23.98	24.00	0	0
		1	24	24.02	24.10	24.01	0	0
		1	49	24.02	24.12	23.92	0	0
		25	0	22.97	23.00	22.98	0-1	1
		25	12	23.08	23.13	23.05	0-1	1
		25	24	23.04	23.11	22.98	0-1	1
		50	0	23.04	23.12	23.03	0-1	1
	16QAM	1	0	23.08	23.20	23.27	0-1	1
		1	24	23.24	23.36	23.25	0-1	1
		1	49	23.19	23.42	23.14	0-1	1
		25	0	21.95	22.02	22.00	0-2	2
		25	12	22.08	22.16	22.08	0-2	2
		25	24	22.04	22.14	21.99	0-2	2
		50	0	22.01	22.10	22.01	0-2	2
	64QAM	1	0	22.11	22.20	22.21	0-2	2
		1	24	22.15	22.30	22.25	0-2	2
		1	49	22.16	22.34	22.14	0-2	2
		25	0	20.99	21.05	21.03	0-3	3
		25	12	21.11	21.21	21.12	0-3	3
		25	24	21.07	21.19	21.05	0-3	3
		50	0	21.04	21.14	21.04	0-3	3

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	23.90	23.90	23.96	0	0
		1	36	24.02	24.10	24.05	0	0
		1	74	24.01	24.08	23.91	0	0
		36	0	22.98	22.98	23.00	0-1	1
		36	18	23.06	23.11	23.08	0-1	1
		36	39	23.05	23.16	22.99	0-1	1
		75	0	23.05	23.12	23.04	0-1	1
	16QAM	1	0	23.07	23.13	23.23	0-1	1
		1	36	23.18	23.39	23.29	0-1	1
		1	74	23.23	23.33	23.15	0-1	1
		36	0	21.94	21.99	22.04	0-2	2
		36	18	22.04	22.13	22.11	0-2	2
		36	39	22.03	22.18	22.03	0-2	2
		75	0	22.02	22.12	22.03	0-2	2
	64QAM	1	0	22.08	22.17	22.23	0-2	2
		1	36	22.18	22.32	22.30	0-2	2
		1	74	22.18	22.30	22.16	0-2	2
		36	0	21.02	21.06	21.08	0-3	3
		36	18	21.11	21.19	21.16	0-3	3
		36	39	21.11	21.24	21.08	0-3	3
		75	0	21.05	21.15	21.07	0-3	3

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	23.79	0	0
		1	49	24.10	0	0
		1	99	23.99	0	0
		50	0	23.00	0-1	1
		50	25	23.19	0-1	1
		50	49	23.25	0-1	1
		100	0	23.12	0-1	1
	16QAM	1	0	23.03	0-1	1
		1	49	23.37	0-1	1
		1	99	23.21	0-1	1
		50	0	21.98	0-2	2
		50	25	22.18	0-2	2
		50	49	22.24	0-2	2
		100	0	22.10	0-2	2
	64QAM	1	0	21.97	0-2	2
		1	49	22.29	0-2	2
		1	99	22.22	0-2	2
		50	0	21.00	0-3	3
		50	25	21.21	0-3	3
		50	49	21.28	0-3	3
		100	0	21.15	0-3	3

[LTE Band 5 Conducted Power]

LTE Band 5 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20407 Ch. 824.7 ㎒	20525 Ch. 836.5 ㎒	20643 Ch. 848.3 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
1.4 ㎒	QPSK	1	0	23.78	23.81	23.80	0	0
		1	3	23.86	23.85	23.90	0	0
		1	5	23.82	23.78	23.84	0	0
		3	0	23.89	23.92	23.95	0	0
		3	1	23.90	23.92	23.98	0	0
		3	3	23.87	23.91	23.95	0	0
		6	0	23.02	23.03	23.10	0-1	1
	16QAM	1	0	23.06	22.96	22.99	0-1	1
		1	3	23.15	23.11	23.09	0-1	1
		1	5	23.05	22.89	23.05	0-1	1
		3	0	22.93	22.84	22.85	0-1	1
		3	1	22.88	22.83	22.96	0-1	1
		3	3	22.87	22.79	22.87	0-1	1
		6	0	22.12	22.11	22.14	0-2	2
	64QAM	1	0	22.11	22.02	22.07	0-2	2
		1	3	22.14	22.13	22.13	0-2	2
		1	5	22.15	22.04	22.08	0-2	2
		3	0	22.14	22.11	22.12	0-2	2
		3	1	22.10	22.12	22.17	0-2	2
		3	3	22.10	22.09	22.10	0-2	2
		6	0	21.07	21.05	21.08	0-3	3

LTE Band 5 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20415 Ch. 825.5 ㎒	20525 Ch. 836.5 ㎒	20635 Ch. 847.5 ㎒		
3 ㎒	QPSK	1	0	23.72	23.71	23.72	0	0
		1	7	23.84	23.83	23.83	0	0
		1	14	23.75	23.70	23.74	0	0
		8	0	22.93	22.90	22.98	0-1	1
		8	3	23.00	22.98	23.03	0-1	1
		8	7	22.97	22.92	23.00	0-1	1
		15	0	22.98	22.96	23.02	0-1	1
	16QAM	1	0	22.96	22.83	22.96	0-1	1
		1	7	23.09	23.05	23.04	0-1	1
		1	14	22.97	22.93	22.97	0-1	1
		8	0	22.01	21.94	22.02	0-2	2
		8	3	22.04	22.03	22.07	0-2	2
		8	7	22.03	21.96	22.03	0-2	2
		15	0	21.99	21.93	21.97	0-2	2
	64QAM	1	0	21.99	21.94	22.01	0-2	2
		1	7	22.17	22.08	22.10	0-2	2
		1	14	22.08	22.00	21.99	0-2	2
		8	0	21.02	20.95	21.04	0-3	3
		8	3	21.08	21.06	21.08	0-3	3
		8	7	21.03	20.99	21.04	0-3	3
		15	0	20.98	20.95	21.01	0-3	3

LTE Band 5 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20425 Ch. 826.5 ㎒	20525 Ch. 836.5 ㎒	20625 Ch. 846.5 ㎒		
5 ㎒	QPSK	1	0	23.95	23.92	23.93	0	0
		1	12	24.05	24.05	24.10	0	0
		1	24	23.94	23.93	23.96	0	0
		12	0	23.04	22.97	23.02	0-1	1
		12	6	23.10	23.09	23.11	0-1	1
		12	11	23.09	23.02	23.08	0-1	1
		25	0	23.10	23.03	23.10	0-1	1
	16QAM	1	0	23.18	23.18	23.11	0-1	1
		1	12	23.28	23.23	23.30	0-1	1
		1	24	23.20	23.15	23.17	0-1	1
		12	0	22.05	21.95	22.01	0-2	2
		12	6	22.12	22.07	22.08	0-2	2
		12	11	22.09	22.02	22.05	0-2	2
		25	0	22.13	22.03	22.09	0-2	2
	64QAM	1	0	22.21	22.11	22.14	0-2	2
		1	12	22.33	22.23	22.25	0-2	2
		1	24	22.16	22.10	22.15	0-2	2
		12	0	21.11	21.01	21.07	0-3	3
		12	6	21.17	21.12	21.16	0-3	3
		12	11	21.14	21.06	21.11	0-3	3
		25	0	21.14	21.07	21.13	0-3	3

LTE Band 5 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20525 Ch. 836.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.08	0	0
		1	24	24.07	0	0
		1	49	24.04	0	0
		25	0	22.92	0-1	1
		25	12	23.11	0-1	1
		25	24	23.02	0-1	1
		50	0	23.02	0-1	1
	16QAM	1	0	23.24	0-1	1
		1	24	23.26	0-1	1
		1	49	23.28	0-1	1
		25	0	21.92	0-2	2
		25	12	22.10	0-2	2
		25	24	22.03	0-2	2
		50	0	21.98	0-2	2
	64QAM	1	0	22.19	0-2	2
		1	24	22.23	0-2	2
		1	49	22.27	0-2	2
		25	0	20.95	0-3	3
		25	12	21.12	0-3	3
		25	24	21.06	0-3	3
		50	0	21.02	0-3	3

[LTE Band 12 Conducted Power]

LTE Band 12 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23017 Ch. 699.7 ㎒	23095 Ch. 707.5 ㎒	23173 Ch. 715.3 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
1.4 ㎒	QPSK	1	0	23.69	23.76	23.83	0	0
		1	3	23.77	23.87	23.90	0	0
		1	5	23.70	23.79	23.85	0	0
		3	0	23.82	23.88	23.97	0	0
		3	1	23.83	23.90	23.98	0	0
		3	3	23.81	23.91	23.99	0	0
		6	0	22.96	23.03	23.10	0-1	1
	16QAM	1	0	22.97	23.03	23.11	0-1	1
		1	3	22.99	23.09	23.11	0-1	1
		1	5	22.96	22.99	23.00	0-1	1
		3	0	22.77	22.91	22.92	0-1	1
		3	1	22.83	22.88	22.97	0-1	1
		3	3	22.80	22.92	22.91	0-1	1
		6	0	22.04	22.15	22.17	0-2	2
	64QAM	1	0	21.97	22.13	22.12	0-2	2
		1	3	22.07	22.22	22.16	0-2	2
		1	5	22.00	22.18	22.18	0-2	2
		3	0	22.03	22.16	22.16	0-2	2
		3	1	22.04	22.16	22.19	0-2	2
		3	3	22.05	22.20	22.17	0-2	2
		6	0	21.00	21.06	21.12	0-3	3

LTE Band 12 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23025 Ch. 700.5 ㎒	23095 Ch. 707.5 ㎒	23165 Ch. 714.5 ㎒		
3 ㎒	QPSK	1	0	23.61	23.68	23.72	0	0
		1	7	23.74	23.81	23.83	0	0
		1	14	23.61	23.68	23.73	0	0
		8	0	22.84	22.92	22.95	0-1	1
		8	3	22.89	22.99	23.04	0-1	1
		8	7	22.87	22.98	22.97	0-1	1
		15	0	22.88	22.96	23.01	0-1	1
	16QAM	1	0	22.83	22.92	22.90	0-1	1
		1	7	23.00	23.07	23.02	0-1	1
		1	14	22.81	22.96	22.98	0-1	1
		8	0	21.91	22.01	22.04	0-2	2
		8	3	21.97	22.06	22.10	0-2	2
		8	7	21.92	22.05	22.04	0-2	2
		15	0	21.88	21.97	22.00	0-2	2
	64QAM	1	0	21.94	22.04	22.00	0-2	2
		1	7	22.06	22.15	22.15	0-2	2
		1	14	21.92	22.00	22.04	0-2	2
		8	0	20.94	21.01	21.07	0-3	3
		8	3	20.99	21.07	21.13	0-3	3
		8	7	20.94	21.05	21.07	0-3	3
		15	0	20.91	20.97	21.03	0-3	3

LTE Band 12 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23035 Ch. 701.5 ㎒	23095 Ch. 707.5 ㎒	23155 Ch. 713.5 ㎒		
5 ㎒	QPSK	1	0	23.84	23.91	23.92	0	0
		1	12	23.96	24.06	24.02	0	0
		1	24	23.88	23.94	23.97	0	0
		12	0	22.96	22.97	23.01	0-1	1
		12	6	23.01	23.06	23.08	0-1	1
		12	11	22.97	23.08	23.07	0-1	1
		25	0	22.99	23.09	23.05	0-1	1
	16QAM	1	0	23.12	23.17	23.17	0-1	1
		1	12	23.18	23.31	23.30	0-1	1
		1	24	23.15	23.18	23.16	0-1	1
		12	0	21.95	22.02	22.01	0-2	2
		12	6	22.02	22.09	22.09	0-2	2
		12	11	21.97	22.09	22.07	0-2	2
		25	0	22.00	22.13	22.09	0-2	2
	64QAM	1	0	22.05	22.14	22.16	0-2	2
		1	12	22.19	22.30	22.26	0-2	2
		1	24	22.12	22.23	22.17	0-2	2
		12	0	21.03	21.05	21.09	0-3	3
		12	6	21.11	21.16	21.17	0-3	3
		12	11	21.06	21.17	21.14	0-3	3
		25	0	21.05	21.15	21.12	0-3	3

LTE Band 12 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23095 Ch. 707.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.99	0	0
		1	24	24.04	0	0
		1	49	23.99	0	0
		25	0	22.99	0-1	1
		25	12	23.09	0-1	1
		25	24	23.20	0-1	1
		50	0	23.12	0-1	1
	16QAM	1	0	23.18	0-1	1
		1	24	23.32	0-1	1
		1	49	23.25	0-1	1
		25	0	22.02	0-2	2
		25	12	22.12	0-2	2
		25	24	22.22	0-2	2
		50	0	22.12	0-2	2
	64QAM	1	0	22.21	0-2	2
		1	24	22.29	0-2	2
		1	49	22.27	0-2	2
		25	0	21.04	0-3	3
		25	12	21.16	0-3	3
		25	24	21.26	0-3	3
		50	0	21.15	0-3	3

[LTE Band 13 Conducted Power]

LTE Band 13 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
5 ㎒	QPSK	1	0	23.83	0	0
		1	12	23.77	0	0
		1	24	23.62	0	0
		12	0	22.77	0-1	1
		12	6	22.80	0-1	1
		12	11	22.87	0-1	1
		25	0	22.80	0-1	1
	16QAM	1	0	22.99	0-1	1
		1	12	23.04	0-1	1
		1	24	22.81	0-1	1
		12	0	21.80	0-2	2
		12	6	21.79	0-2	2
		12	11	21.87	0-2	2
		25	0	21.84	0-2	2
	64QAM	1	0	22.01	0-2	2
		1	12	22.00	0-2	2
		1	24	21.79	0-2	2
		12	0	20.88	0-3	3
		12	6	20.86	0-3	3
		12	11	20.92	0-3	3
		25	0	20.87	0-3	3

LTE Band 13 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.82	0	0
		1	24	23.81	0	0
		1	49	23.64	0	0
		25	0	22.85	0-1	1
		25	12	22.83	0-1	1
		25	24	22.82	0-1	1
		50	0	22.80	0-1	1
	16QAM	1	0	23.05	0-1	1
		1	24	23.06	0-1	1
		1	49	22.64	0-1	1
		25	0	21.84	0-2	2
		25	12	21.86	0-2	2
		25	24	21.83	0-2	2
		50	0	21.76	0-2	2
	64QAM	1	0	21.96	0-2	2
		1	24	22.04	0-2	2
		1	49	21.67	0-2	2
		25	0	20.84	0-3	3
		25	12	20.88	0-3	3
		25	24	20.88	0-3	3
		50	0	20.82	0-3	3

[LTE Band 17 Conducted Power]

LTE Band 17 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23790 710 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
5 ㎒	QPSK	1	0	23.95	0	0
		1	12	24.11	0	0
		1	24	23.95	0	0
		12	0	22.96	0-1	1
		12	6	23.11	0-1	1
		12	11	23.15	0-1	1
		25	0	23.08	0-1	1
	16QAM	1	0	23.22	0-1	1
		1	12	23.35	0-1	1
		1	24	23.18	0-1	1
		12	0	21.98	0-2	2
		12	6	22.13	0-2	2
		12	11	22.17	0-2	2
		25	0	22.12	0-2	2
	64QAM	1	0	22.22	0-2	2
		1	12	22.36	0-2	2
		1	24	22.19	0-2	2
		12	0	21.05	0-3	3
		12	6	21.20	0-3	3
		12	11	21.23	0-3	3
		25	0	21.15	0-3	3

LTE Band 17 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23790 710 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.02	0	0
		1	24	24.10	0	0
		1	49	24.06	0	0
		25	0	22.95	0-1	1
		25	12	23.12	0-1	1
		25	24	23.17	0-1	1
		50	0	23.07	0-1	1
	16QAM	1	0	23.25	0-1	1
		1	24	23.40	0-1	1
		1	49	23.26	0-1	1
		25	0	21.97	0-2	2
		25	12	22.15	0-2	2
		25	24	22.19	0-2	2
		50	0	22.06	0-2	2
	64QAM	1	0	22.26	0-2	2
		1	24	22.34	0-2	2
		1	49	22.28	0-2	2
		25	0	21.01	0-3	3
		25	12	21.20	0-3	3
		25	24	21.23	0-3	3
		50	0	21.10	0-3	3

[LTE Band 26 Conducted Power]

LTE Band 26 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26697 Ch. 814.7 ㎒	26865 Ch. 831.5 ㎒	27033 Ch. 848.3 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
1.4 ㎒	QPSK	1	0	23.65	23.88	23.87	0	0
		1	3	23.72	23.97	23.92	0	0
		1	5	23.69	23.88	23.85	0	0
		3	0	23.75	23.97	23.95	0	0
		3	1	23.76	23.99	23.96	0	0
		3	3	23.76	24.01	23.94	0	0
		6	0	22.86	23.09	23.12	0-1	1
	16QAM	1	0	23.00	23.20	23.15	0-1	1
		1	3	22.93	23.25	23.23	0-1	1
		1	5	22.97	23.16	23.13	0-1	1
		3	0	22.69	22.98	23.00	0-1	1
		3	1	22.72	22.99	23.00	0-1	1
		3	3	22.73	22.94	22.97	0-1	1
		6	0	21.99	22.20	22.21	0-2	2
	64QAM	1	0	21.99	22.21	22.15	0-2	2
		1	3	22.06	22.28	22.24	0-2	2
		1	5	22.01	22.16	22.21	0-2	2
		3	0	22.03	22.21	22.21	0-2	2
		3	1	22.02	22.22	22.23	0-2	2
		3	3	21.99	22.21	22.20	0-2	2
		6	0	20.91	21.12	21.16	0-3	3

LTE Band 26 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26705 Ch. 815.5 ㎒	26865 Ch. 831.5 ㎒	27025 Ch. 847.5 ㎒		
3 ㎒	QPSK	1	0	23.55	23.77	23.75	0	0
		1	7	23.70	23.90	23.89	0	0
		1	14	23.59	23.75	23.75	0	0
		8	0	22.76	22.99	22.97	0-1	1
		8	3	22.84	23.05	23.05	0-1	1
		8	7	22.82	23.03	23.01	0-1	1
		15	0	22.82	23.01	23.01	0-1	1
	16QAM	1	0	22.84	23.03	22.97	0-1	1
		1	7	23.00	23.14	23.13	0-1	1
		1	14	22.81	23.05	23.02	0-1	1
		8	0	21.85	22.06	22.05	0-2	2
		8	3	21.90	22.11	22.11	0-2	2
		8	7	21.87	22.08	22.07	0-2	2
		15	0	21.82	22.01	21.99	0-2	2
	64QAM	1	0	21.90	22.07	22.07	0-2	2
		1	7	22.05	22.18	22.18	0-2	2
		1	14	21.90	22.09	22.12	0-2	2
		8	0	20.82	21.07	21.07	0-3	3
		8	3	20.91	21.13	21.12	0-3	3
		8	7	20.88	21.09	21.08	0-3	3
		15	0	20.83	21.04	21.02	0-3	3

LTE Band 26 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26715 Ch. 816.5 ㎒	26865 Ch. 831.5 ㎒	27015 Ch. 846.5 ㎒		
5 ㎒	QPSK	1	0	23.80	24.04	23.98	0	0
		1	12	23.97	24.16	24.11	0	0
		1	24	23.91	24.00	23.99	0	0
		12	0	22.83	23.05	23.04	0-1	1
		12	6	22.95	23.13	23.11	0-1	1
		12	11	22.95	23.12	23.11	0-1	1
		25	0	22.87	23.07	23.06	0-1	1
	16QAM	1	0	23.12	23.27	23.26	0-1	1
		1	12	23.22	23.43	23.40	0-1	1
		1	24	23.14	23.27	23.29	0-1	1
		12	0	21.85	22.04	22.02	0-2	2
		12	6	21.95	22.14	22.13	0-2	2
		12	11	21.97	22.14	22.08	0-2	2
		25	0	21.93	22.12	22.09	0-2	2
	64QAM	1	0	22.01	22.22	22.19	0-2	2
		1	12	22.21	22.37	22.32	0-2	2
		1	24	22.11	22.22	22.21	0-2	2
		12	0	20.88	21.12	21.10	0-3	3
		12	6	21.01	21.18	21.20	0-3	3
		12	11	21.01	21.19	21.16	0-3	3
		25	0	20.93	21.15	21.10	0-3	3

LTE Band 26 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26740 Ch. 819 ㎒	26865 Ch. 831.5 ㎒	26990 Ch. 844 ㎒		
10 ㎒	QPSK	1	0	23.89	24.13	24.06	0	0
		1	24	24.06	24.14	24.12	0	0
		1	49	24.06	24.07	24.07	0	0
		25	0	22.85	23.03	23.15	0-1	1
		25	12	23.02	23.15	23.13	0-1	1
		25	24	22.94	23.16	23.06	0-1	1
		50	0	22.93	23.13	23.12	0-1	1
	16QAM	1	0	23.10	23.46	23.36	0-1	1
		1	24	23.32	23.46	23.48	0-1	1
		1	49	23.36	23.33	23.35	0-1	1
		25	0	21.89	22.07	22.17	0-2	2
		25	12	22.06	22.17	22.15	0-2	2
		25	24	22.00	22.20	22.11	0-2	2
		50	0	21.95	22.11	22.12	0-2	2
	64QAM	1	0	22.06	22.38	22.33	0-2	2
		1	24	22.24	22.35	22.37	0-2	2
		1	49	22.31	22.30	22.33	0-2	2
		25	0	20.90	21.09	21.21	0-3	3
		25	12	21.09	21.19	21.19	0-3	3
		25	24	21.01	21.22	21.13	0-3	3
		50	0	20.96	21.14	21.14	0-3	3

LTE Band 26 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 ㎒		
15 ㎒	QPSK	1	0	24.08	0	0
		1	36	24.16	0	0
		1	74	24.05	0	0
		36	0	23.07	0-1	1
		36	18	23.18	0-1	1
		36	39	23.16	0-1	1
		75	0	23.12	0-1	1
	16QAM	1	0	23.37	0-1	1
		1	36	23.39	0-1	1
		1	74	23.27	0-1	1
		36	0	22.09	0-2	2
		36	18	22.12	0-2	2
		36	39	22.17	0-2	2
		75	0	22.13	0-2	2
	64QAM	1	0	22.31	0-2	2
		1	36	22.39	0-2	2
		1	74	22.28	0-2	2
		36	0	21.14	0-3	3
		36	18	21.19	0-3	3
		36	39	21.23	0-3	3
		75	0	21.15	0-3	3

[LTE Band 66 Conducted Power]

LTE Band 66 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	23.91	23.87	23.49	0	0
		1	3	23.97	23.90	23.57	0	0
		1	5	23.90	23.82	23.49	0	0
		3	0	24.01	23.97	23.60	0	0
		3	1	24.05	24.00	23.63	0	0
		3	3	24.02	23.94	23.62	0	0
		6	0	23.14	23.09	22.75	0-1	1
	16QAM	1	0	23.01	23.09	22.69	0-1	1
		1	3	23.08	23.15	22.85	0-1	1
		1	5	23.09	23.11	22.74	0-1	1
		3	0	22.87	22.95	22.60	0-1	1
		3	1	22.90	22.97	22.57	0-1	1
		3	3	22.92	22.95	22.56	0-1	1
		6	0	22.16	22.18	21.85	0-2	2
	64QAM	1	0	22.07	22.21	21.86	0-2	2
		1	3	22.24	22.21	21.88	0-2	2
		1	5	22.13	22.14	21.86	0-2	2
		3	0	22.13	22.19	21.81	0-2	2
		3	1	22.18	22.20	21.83	0-2	2
		3	3	22.12	22.18	21.83	0-2	2
		6	0	21.12	21.13	20.80	0-3	3

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	23.77	23.72	23.36	0	0
		1	7	23.90	23.82	23.49	0	0
		1	14	23.78	23.70	23.38	0	0
		8	0	22.99	22.95	22.61	0-1	1
		8	3	23.06	23.02	22.66	0-1	1
		8	7	23.01	22.94	22.62	0-1	1
		15	0	23.05	22.99	22.65	0-1	1
	16QAM	1	0	22.85	22.93	22.62	0-1	1
		1	7	23.04	23.05	22.71	0-1	1
		1	14	22.91	22.90	22.64	0-1	1
		8	0	21.99	22.03	21.70	0-2	2
		8	3	22.07	22.10	21.74	0-2	2
		8	7	22.02	22.02	21.70	0-2	2
		15	0	21.99	21.99	21.65	0-2	2
	64QAM	1	0	21.99	22.02	21.70	0-2	2
		1	7	22.07	22.12	21.84	0-2	2
		1	14	22.01	22.03	21.68	0-2	2
		8	0	21.03	21.05	20.71	0-3	3
		8	3	21.09	21.12	20.76	0-3	3
		8	7	21.04	21.03	20.73	0-3	3
		15	0	21.01	21.00	20.66	0-3	3

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	23.95	23.95	23.58	0	0
		1	12	24.12	24.05	23.73	0	0
		1	24	23.99	23.92	23.60	0	0
		12	0	23.06	23.04	22.71	0-1	1
		12	6	23.14	23.11	22.76	0-1	1
		12	11	23.13	23.11	22.73	0-1	1
		25	0	23.11	23.09	22.71	0-1	1
	16QAM	1	0	23.13	23.22	22.82	0-1	1
		1	12	23.24	23.32	22.92	0-1	1
		1	24	23.14	23.17	22.83	0-1	1
		12	0	22.00	22.05	21.72	0-2	2
		12	6	22.11	22.12	21.78	0-2	2
		12	11	22.09	22.10	21.72	0-2	2
		25	0	22.10	22.12	21.76	0-2	2
	64QAM	1	0	22.09	22.18	21.85	0-2	2
		1	12	22.26	22.29	21.95	0-2	2
		1	24	22.13	22.16	21.81	0-2	2
		12	0	21.08	21.12	20.78	0-3	3
		12	6	21.16	21.20	20.85	0-3	3
		12	11	21.17	21.17	20.81	0-3	3
		25	0	21.12	21.14	20.79	0-3	3

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	24.02	24.03	23.69	0	0
		1	24	24.09	24.11	23.76	0	0
		1	49	24.06	24.05	23.70	0	0
		25	0	23.04	23.02	22.70	0-1	1
		25	12	23.15	23.15	22.78	0-1	1
		25	24	23.11	23.13	22.73	0-1	1
		50	0	23.11	23.11	22.75	0-1	1
	16QAM	1	0	23.18	23.28	22.98	0-1	1
		1	24	23.27	23.27	23.02	0-1	1
		1	49	23.23	23.25	22.96	0-1	1
		25	0	22.02	22.04	21.73	0-2	2
		25	12	22.12	22.15	21.81	0-2	2
		25	24	22.10	22.13	21.75	0-2	2
		50	0	22.06	22.11	21.74	0-2	2
	64QAM	1	0	22.18	22.25	21.93	0-2	2
		1	24	22.23	22.32	21.99	0-2	2
		1	49	22.21	22.29	21.98	0-2	2
		25	0	21.01	21.07	20.75	0-3	3
		25	12	21.15	21.19	20.84	0-3	3
		25	24	21.13	21.18	20.78	0-3	3
		50	0	21.08	21.12	20.76	0-3	3

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	23.97	23.97	23.69	0	0
		1	36	24.09	24.07	23.78	0	0
		1	74	24.04	23.98	23.69	0	0
		36	0	23.06	23.04	22.76	0-1	1
		36	18	23.14	23.13	22.78	0-1	1
		36	39	23.13	23.08	22.76	0-1	1
		75	0	23.12	23.11	22.79	0-1	1
	16QAM	1	0	23.13	23.18	22.97	0-1	1
		1	36	23.24	23.30	23.03	0-1	1
		1	74	23.26	23.24	22.95	0-1	1
		36	0	22.01	22.06	21.78	0-2	2
		36	18	22.09	22.13	21.79	0-2	2
		36	39	22.10	22.09	21.78	0-2	2
		75	0	22.08	22.11	21.79	0-2	2
	64QAM	1	0	22.10	22.19	21.93	0-2	2
		1	36	22.23	22.30	22.02	0-2	2
		1	74	22.21	22.21	21.87	0-2	2
		36	0	21.07	21.10	20.84	0-3	3
		36	18	21.17	21.19	20.84	0-3	3
		36	39	21.17	21.14	20.82	0-3	3
		75	0	21.11	21.12	20.81	0-3	3

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	23.87	23.88	23.63	0	0
		1	49	24.08	24.12	23.80	0	0
		1	99	23.99	23.86	23.62	0	0
		50	0	23.08	23.03	22.84	0-1	1
		50	25	23.20	23.20	22.87	0-1	1
		50	49	23.19	23.16	22.81	0-1	1
		100	0	23.11	23.09	22.81	0-1	1
	16QAM	1	0	23.02	23.16	22.86	0-1	1
		1	49	23.34	23.39	23.02	0-1	1
		1	99	23.26	23.17	22.87	0-1	1
		50	0	22.03	22.01	21.82	0-2	2
		50	25	22.15	22.20	21.86	0-2	2
		50	49	22.15	22.13	21.80	0-2	2
		100	0	22.06	22.07	21.78	0-2	2
	64QAM	1	0	22.01	22.14	21.83	0-2	2
		1	49	22.26	22.34	22.03	0-2	2
		1	99	22.24	22.08	21.84	0-2	2
		50	0	21.04	21.04	20.86	0-3	3
		50	25	21.18	21.20	20.88	0-3	3
		50	49	21.19	21.15	20.81	0-3	3
		100	0	21.10	21.09	20.82	0-3	3

[LTE Band 41 Conducted Power]

LTE Band 41 _ 5 ㎒ Bandwidth

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
5 ㎒	QPSK	1	0	22.06	22.44	22.53	22.21	22.40	0	0
		1	12	22.16	22.55	22.63	22.32	22.53	0	0
		1	24	22.09	22.46	22.49	22.23	22.40	0	0
		12	0	21.18	21.58	21.61	21.31	21.59	0-1	1
		12	6	21.23	21.63	21.64	21.35	21.62	0-1	1
		12	11	21.21	21.61	21.61	21.32	21.61	0-1	1
		25	0	21.17	21.59	21.60	21.32	21.58	0-1	1
	16QAM	1	0	21.24	21.66	21.74	21.43	21.62	0-1	1
		1	12	21.33	21.75	21.84	21.53	21.74	0-1	1
		1	24	21.27	21.68	21.71	21.46	21.61	0-1	1
		12	0	20.18	20.61	20.62	20.33	20.62	0-2	2
		12	6	20.22	20.66	20.67	20.36	20.63	0-2	2
		12	11	20.20	20.63	20.63	20.33	20.63	0-2	2
		25	0	20.24	20.66	20.66	20.37	20.64	0-2	2
	64QAM	1	0	20.11	20.53	20.58	20.27	20.51	0-2	2
		1	12	20.22	20.63	20.68	20.37	20.62	0-2	2
		1	24	20.14	20.54	20.52	20.29	20.49	0-2	2
		12	0	19.25	19.67	19.68	19.36	19.69	0-3	3
		12	6	19.31	19.73	19.70	19.40	19.71	0-3	3
		12	11	19.28	19.69	19.69	19.38	19.70	0-3	3
		25	0	19.32	19.73	19.69	19.39	19.72	0-3	3

LTE Band 41 _ 10 ㎒ Bandwidth

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
10 ㎒	QPSK	1	0	22.12	22.51	22.63	22.32	22.50	0	0
		1	24	22.16	22.56	22.64	22.34	22.54	0	0
		1	49	22.15	22.56	22.54	22.32	22.49	0	0
		25	0	21.14	21.54	21.62	21.35	21.62	0-1	1
		25	12	21.21	21.65	21.66	21.36	21.62	0-1	1
		25	24	21.18	21.65	21.61	21.30	21.62	0-1	1
		50	0	21.25	21.65	21.64	21.35	21.69	0-1	1
	16QAM	1	0	21.32	21.75	21.88	21.54	21.73	0-1	1
		1	24	21.35	21.78	21.86	21.56	21.73	0-1	1
		1	49	21.35	21.80	21.78	21.54	21.74	0-1	1
		25	0	20.20	20.61	20.67	20.38	20.69	0-2	2
		25	12	20.28	20.70	20.71	20.41	20.68	0-2	2
		25	24	20.25	20.71	20.67	20.36	20.69	0-2	2
		50	0	20.26	20.68	20.69	20.39	20.69	0-2	2
	64QAM	1	0	20.19	20.60	20.70	20.36	20.59	0-2	2
		1	24	20.22	20.64	20.68	20.39	20.62	0-2	2
		1	49	20.21	20.65	20.60	20.38	20.60	0-2	2
		25	0	19.28	19.69	19.73	19.43	19.77	0-3	3
		25	12	19.37	19.79	19.75	19.46	19.77	0-3	3
		25	24	19.32	19.79	19.72	19.41	19.78	0-3	3
		50	0	19.24	19.68	19.68	19.37	19.70	0-3	3

LTE Band 41 _ 15 ㎒ Bandwidth

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
15 ㎒	QPSK	1	0	22.07	22.45	22.59	22.29	22.45	0	0
		1	36	22.17	22.56	22.63	22.33	22.55	0	0
		1	74	22.13	22.53	22.47	22.29	22.49	0	0
		36	0	21.15	21.57	21.63	21.32	21.64	0-1	1
		36	18	21.24	21.65	21.65	21.35	21.64	0-1	1
		36	39	21.22	21.63	21.57	21.29	21.63	0-1	1
		75	0	21.21	21.64	21.62	21.33	21.62	0-1	1
	16QAM	1	0	21.27	21.69	21.83	21.52	21.67	0-1	1
		1	36	21.34	21.76	21.84	21.54	21.74	0-1	1
		1	74	21.34	21.75	21.71	21.50	21.69	0-1	1
		36	0	20.14	20.55	20.61	20.31	20.63	0-2	2
		36	18	20.23	20.62	20.65	20.37	20.61	0-2	2
		36	39	20.21	20.64	20.58	20.28	20.59	0-2	2
		75	0	20.22	20.62	20.64	20.34	20.63	0-2	2
	64QAM	1	0	20.12	20.55	20.66	20.35	20.54	0-2	2
		1	36	20.23	20.66	20.69	20.38	20.64	0-2	2
		1	74	20.19	20.61	20.52	20.33	20.57	0-2	2
		36	0	19.19	19.59	19.66	19.34	19.67	0-3	3
		36	18	19.25	19.68	19.66	19.38	19.68	0-3	3
		36	39	19.26	19.68	19.60	19.31	19.66	0-3	3
		75	0	19.25	19.66	19.65	19.35	19.67	0-3	3

LTE Band 41 _ 20 ㎒ Bandwidth

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.99	22.35	22.55	22.23	22.36	0	0
		1	49	22.17	22.57	22.62	22.35	22.54	0	0
		1	99	22.03	22.46	22.36	22.20	22.41	0	0
		50	0	21.17	21.56	21.63	21.34	21.67	0-1	1
		50	25	21.29	21.68	21.72	21.39	21.70	0-1	1
		50	49	21.28	21.66	21.60	21.32	21.64	0-1	1
		100	0	21.25	21.65	21.61	21.36	21.69	0-1	1
	16QAM	1	0	21.18	21.58	21.77	21.45	21.57	0-1	1
		1	49	21.37	21.79	21.86	21.58	21.74	0-1	1
		1	99	21.26	21.69	21.59	21.45	21.62	0-1	1
		50	0	20.19	20.59	20.66	20.38	20.69	0-2	2
		50	25	20.30	20.72	20.72	20.43	20.71	0-2	2
		50	49	20.28	20.70	20.62	20.35	20.65	0-2	2
		100	0	20.24	20.64	20.63	20.37	20.67	0-2	2
	64QAM	1	0	20.02	20.44	20.60	20.27	20.44	0-2	2
		1	49	20.24	20.67	20.70	20.41	20.64	0-2	2
		1	99	20.11	20.54	20.40	20.26	20.49	0-2	2
		50	0	19.20	19.59	19.67	19.36	19.69	0-3	3
		50	25	19.31	19.72	19.71	19.41	19.74	0-3	3
		50	49	19.28	19.71	19.62	19.34	19.67	0-3	3
		100	0	19.24	19.65	19.63	19.37	19.68	0-3	3

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.
he EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

11.3.2 LTE Reduced Conducted Power(Grip, Hotspot, Earjack)

[LTE Band 2 Conducted Power]

LTE Band 2 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18607 Ch. 1850.7 ㎒	18900 Ch. 1880 ㎒	19193 Ch. 1909.3 ㎒		
1.4 ㎒	QPSK	1	0	20.50	20.56	20.51	0	0
		1	3	20.62	20.68	20.62	0	0
		1	5	20.58	20.60	20.54	0	0
		3	0	20.51	20.57	20.56	0	0
		3	1	20.58	20.61	20.59	0	0
		3	3	20.57	20.62	20.51	0	0
		6	0	20.57	20.61	20.57	0-1	0
	16QAM	1	0	20.81	20.95	20.87	0-1	0
		1	3	20.99	20.99	21.02	0-1	0
		1	5	20.90	20.96	20.94	0-1	0
		3	0	20.56	20.62	20.63	0-1	0
		3	1	20.63	20.67	20.65	0-1	0
		3	3	20.63	20.68	20.57	0-1	0
		6	0	20.62	20.65	20.60	0-2	0
	64QAM	1	0	20.72	20.82	20.77	0-2	0
		1	3	20.90	20.94	20.84	0-2	0
		1	5	20.82	20.83	20.78	0-2	0
		3	0	20.62	20.68	20.67	0-2	0
		3	1	20.68	20.72	20.70	0-2	0
		3	3	20.67	20.73	20.62	0-2	0
		6	0	20.63	20.66	20.62	0-3	0

LTE Band 2 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18615 Ch. 1851.5 ㎒	18900 Ch. 1880 ㎒	19185 Ch. 1908.5 ㎒		
3 ㎒	QPSK	1	0	20.25	20.29	20.20	0	0
		1	7	20.37	20.44	20.32	0	0
		1	14	20.25	20.29	20.19	0	0
		8	0	20.47	20.49	20.42	0-1	0
		8	3	20.52	20.55	20.47	0-1	0
		8	7	20.47	20.54	20.42	0-1	0
		15	0	20.51	20.51	20.43	0-1	0
	16QAM	1	0	20.57	20.62	20.55	0-1	0
		1	7	20.68	20.77	20.61	0-1	0
		1	14	20.61	20.66	20.58	0-1	0
		8	0	20.59	20.63	20.54	0-2	0
		8	3	20.63	20.65	20.59	0-2	0
		8	7	20.59	20.65	20.53	0-2	0
		15	0	20.54	20.57	20.47	0-2	0
	64QAM	1	0	20.58	20.64	20.56	0-2	0
		1	7	20.74	20.82	20.69	0-2	0
		1	14	20.64	20.60	20.63	0-2	0
		8	0	20.57	20.61	20.54	0-3	0
		8	3	20.65	20.67	20.59	0-3	0
		8	7	20.60	20.65	20.53	0-3	0
		15	0	20.54	20.56	20.49	0-3	0

LTE Band 2 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18625 Ch. 1852.5 ㎒	18900 Ch. 1880 ㎒	19175 Ch. 1907.5 ㎒		
5 ㎒	QPSK	1	0	20.48	20.53	20.45	0	0
		1	12	20.62	20.70	20.57	0	0
		1	24	20.49	20.56	20.45	0	0
		12	0	20.53	20.56	20.52	0-1	0
		12	6	20.61	20.64	20.56	0-1	0
		12	11	20.59	20.61	20.52	0-1	0
		25	0	20.58	20.60	20.52	0-1	0
	16QAM	1	0	20.85	20.86	20.77	0-1	0
		1	12	20.97	21.09	21.00	0-1	0
		1	24	20.87	20.97	20.80	0-1	0
		12	0	20.58	20.63	20.58	0-2	0
		12	6	20.65	20.69	20.61	0-2	0
		12	11	20.65	20.64	20.56	0-2	0
		25	0	20.63	20.67	20.60	0-2	0
	64QAM	1	0	20.76	20.81	20.73	0-2	0
		1	12	20.88	20.98	20.86	0-2	0
		1	24	20.73	20.80	20.66	0-2	0
		12	0	20.63	20.66	20.63	0-3	0
		12	6	20.70	20.75	20.68	0-3	0
		12	11	20.68	20.71	20.62	0-3	0
		25	0	20.65	20.68	20.61	0-3	0

LTE Band 2 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18650 Ch. 1855 ㎒	18900 Ch. 1880 ㎒	19150 Ch. 1905 ㎒		
10 ㎒	QPSK	1	0	20.55	20.63	20.54	0	0
		1	24	20.64	20.68	20.61	0	0
		1	49	20.59	20.63	20.53	0	0
		25	0	20.51	20.56	20.54	0-1	0
		25	12	20.61	20.64	20.59	0-1	0
		25	24	20.58	20.58	20.48	0-1	0
		50	0	20.59	20.60	20.55	0-1	0
	16QAM	1	0	20.87	21.01	20.89	0-1	0
		1	24	20.95	20.99	21.01	0-1	0
		1	49	21.00	20.95	20.97	0-1	0
		25	0	20.58	20.62	20.62	0-2	0
		25	12	20.68	20.72	20.67	0-2	0
		25	24	20.67	20.65	20.55	0-2	0
		50	0	20.62	20.63	20.58	0-2	0
	64QAM	1	0	20.78	20.86	20.84	0-2	0
		1	24	20.90	20.88	20.85	0-2	0
		1	49	20.86	20.88	20.78	0-2	0
		25	0	20.59	20.64	20.64	0-3	0
		25	12	20.70	20.72	20.68	0-3	0
		25	24	20.69	20.68	20.58	0-3	0
		50	0	20.64	20.65	20.61	0-3	0

LTE Band 2 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18675 Ch. 1857.5 ㎒	18900 Ch. 1880 ㎒	19125 Ch. 1902.5 ㎒		
15 ㎒	QPSK	1	0	20.50	20.56	20.51	0	0
		1	36	20.62	20.68	20.62	0	0
		1	74	20.58	20.60	20.54	0	0
		36	0	20.51	20.57	20.56	0-1	0
		36	18	20.58	20.61	20.59	0-1	0
		36	39	20.57	20.62	20.51	0-1	0
		75	0	20.57	20.61	20.57	0-1	0
	16QAM	1	0	20.81	20.95	20.87	0-1	0
		1	36	20.99	20.99	21.02	0-1	0
		1	74	20.90	20.96	20.94	0-1	0
		36	0	20.56	20.62	20.63	0-2	0
		36	18	20.63	20.67	20.65	0-2	0
		36	39	20.63	20.68	20.57	0-2	0
		75	0	20.62	20.65	20.60	0-2	0
	64QAM	1	0	20.72	20.82	20.77	0-2	0
		1	36	20.90	20.94	20.84	0-2	0
		1	74	20.82	20.83	20.78	0-2	0
		36	0	20.62	20.68	20.67	0-3	0
		36	18	20.68	20.72	20.70	0-3	0
		36	39	20.67	20.73	20.62	0-3	0
		75	0	20.63	20.66	20.62	0-3	0

LTE Band 2 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	20.40	20.47	20.45	0	0
		1	49	20.63	20.68	20.67	0	0
		1	99	20.51	20.55	20.46	0	0
		50	0	20.50	20.54	20.63	0-1	0
		50	25	20.63	20.68	20.66	0-1	0
		50	49	20.67	20.67	20.53	0-1	0
		100	0	20.57	20.57	20.55	0-1	0
	16QAM	1	0	20.80	20.78	20.81	0-1	0
		1	49	21.00	20.99	20.98	0-1	0
		1	99	20.89	20.86	20.80	0-1	0
		50	0	20.54	20.57	20.65	0-2	0
		50	25	20.67	20.70	20.70	0-2	0
		50	49	20.70	20.71	20.57	0-2	0
		100	0	20.62	20.62	20.61	0-2	0
	64QAM	1	0	20.69	20.71	20.73	0-2	0
		1	49	20.95	20.92	20.92	0-2	0
		1	99	20.78	20.77	20.75	0-2	0
		50	0	20.56	20.59	20.68	0-3	0
		50	25	20.69	20.72	20.73	0-3	0
		50	49	20.72	20.73	20.58	0-3	0
		100	0	20.64	20.65	20.62	0-3	0

[LTE Band 4 Conducted Power]

LTE Band 4 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19957 Ch. 1710.7 ㎒	20175 Ch. 1732.5 ㎒	20393 Ch. 1754.3 ㎒		
1.4 ㎒	QPSK	1	0	22.94	22.98	22.84	0	0
		1	3	23.01	23.05	22.90	0	0
		1	5	22.96	23.00	22.84	0	0
		3	0	23.05	23.08	22.92	0-1	0
		3	1	23.06	23.10	22.95	0-1	0
		3	3	23.06	23.08	22.94	0-1	0
		6	0	23.19	23.21	23.05	0-1	0
	16QAM	1	0	23.07	23.21	23.02	0-1	0
		1	3	23.11	23.31	23.06	0-1	0
		1	5	23.12	23.26	23.02	0-1	0
		3	0	22.96	23.06	22.87	0-2	0
		3	1	22.93	23.10	22.93	0-2	0
		3	3	23.00	23.07	22.89	0-2	0
		6	0	22.23	22.32	22.14	0-2	0
	64QAM	1	0	22.17	22.32	22.14	0-2	0
		1	3	22.23	22.32	22.16	0-2	0
		1	5	22.15	22.32	22.18	0-2	0
		3	0	22.20	22.30	22.17	0-3	0
		3	1	22.25	22.32	22.15	0-3	0
		3	3	22.19	22.30	22.16	0-3	0
		6	0	21.17	21.27	21.11	0-3	0

LTE Band 4 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19965 Ch. 1711.5 ㎒	20175 Ch. 1732.5 ㎒	20385 Ch. 1753.5 ㎒		
3 ㎒	QPSK	1	0	22.88	22.93	22.77	0	0
		1	7	23.01	23.04	22.92	0	0
		1	14	22.88	22.93	22.76	0	0
		8	0	23.09	23.13	23.02	0-1	0
		8	3	23.17	23.20	23.04	0-1	0
		8	7	23.12	23.15	23.00	0-1	0
		15	0	23.15	23.17	23.02	0-1	0
	16QAM	1	0	23.01	23.11	23.06	0-1	0
		1	7	23.13	23.24	23.12	0-1	0
		1	14	23.00	23.18	23.03	0-1	0
		8	0	22.11	22.20	22.09	0-2	0
		8	3	22.18	22.26	22.10	0-2	0
		8	7	22.13	22.22	22.06	0-2	0
		15	0	22.10	22.17	22.03	0-2	0
	64QAM	1	0	22.07	22.23	22.05	0-2	0
		1	7	22.21	22.40	22.21	0-2	0
		1	14	22.10	22.22	22.10	0-2	0
		8	0	21.15	21.23	21.10	0-3	0
		8	3	21.21	21.29	21.15	0-3	0
		8	7	21.16	21.26	21.08	0-3	0
		15	0	21.15	21.20	21.05	0-3	0

LTE Band 4 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				19975 Ch. 1712.5 ㎒	20175 Ch. 1732.5 ㎒	20375 Ch. 1752.5 ㎒		
5 ㎒	QPSK	1	0	23.10	23.10	23.06	0	0
		1	12	23.22	23.29	23.16	0	0
		1	24	23.08	23.20	23.03	0	0
		12	0	23.18	23.17	23.08	0-1	0
		12	6	23.22	23.28	23.16	0-1	0
		12	11	23.20	23.27	23.11	0-1	0
		25	0	23.20	23.25	23.13	0-1	0
	16QAM	1	0	23.21	23.32	23.29	0-1	0
		1	12	23.37	23.52	23.42	0-1	0
		1	24	23.25	23.48	23.22	0-1	0
		12	0	22.14	22.18	22.10	0-2	1
		12	6	22.17	22.29	22.17	0-2	1
		12	11	22.17	22.28	22.11	0-2	1
		25	0	22.19	22.27	22.16	0-2	1
	64QAM	1	0	22.29	22.36	22.26	0-2	1
		1	12	22.41	22.50	22.35	0-2	1
		1	24	22.26	22.42	22.25	0-2	1
		12	0	21.21	21.24	21.17	0-3	2
		12	6	21.27	21.36	21.24	0-3	2
		12	11	21.25	21.36	21.20	0-3	2
		25	0	21.23	21.31	21.19	0-3	2

LTE Band 4 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20000 Ch. 1715 ㎒	20175 Ch. 1732.5 ㎒	20350 Ch. 1750 ㎒		
10 ㎒	QPSK	1	0	23.16	23.18	23.19	0	0
		1	24	23.21	23.29	23.22	0	0
		1	49	23.19	23.31	23.11	0	0
		25	0	23.14	23.16	23.15	0-1	0
		25	12	23.25	23.30	23.22	0-1	0
		25	24	23.20	23.29	23.15	0-1	0
		50	0	23.21	23.28	23.20	0-1	0
	16QAM	1	0	23.29	23.43	23.36	0-1	0
		1	24	23.38	23.53	23.41	0-1	0
		1	49	23.30	23.54	23.35	0-1	0
		25	0	22.11	22.19	22.17	0-2	1
		25	12	22.23	22.33	22.25	0-2	1
		25	24	22.19	22.33	22.18	0-2	1
		50	0	22.17	22.27	22.19	0-2	1
	64QAM	1	0	22.28	22.38	22.37	0-2	1
		1	24	22.35	22.51	22.39	0-2	1
		1	49	22.34	22.52	22.35	0-2	1
		25	0	21.15	21.22	21.19	0-3	2
		25	12	21.26	21.36	21.29	0-3	2
		25	24	21.23	21.35	21.22	0-3	2
		50	0	21.20	21.31	21.21	0-3	2

LTE Band 4 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20025 Ch. 1717.5 ㎒	20175 Ch. 1732.5 ㎒	20325 Ch. 1747.5 ㎒		
15 ㎒	QPSK	1	0	23.09	23.08	23.19	0	0
		1	36	23.22	23.29	23.26	0	0
		1	74	23.21	23.30	23.11	0	0
		36	0	23.15	23.14	23.17	0-1	0
		36	18	23.22	23.28	23.25	0-1	0
		36	39	23.21	23.33	23.18	0-1	0
		75	0	23.22	23.28	23.20	0-1	0
	16QAM	1	0	23.23	23.33	23.46	0-1	0
		1	36	23.35	23.59	23.44	0-1	0
		1	74	23.40	23.54	23.33	0-1	0
		36	0	22.13	22.16	22.18	0-2	1
		36	18	22.20	22.31	22.26	0-2	1
		36	39	22.21	22.35	22.20	0-2	1
		75	0	22.18	22.28	22.21	0-2	1
	64QAM	1	0	22.18	22.29	22.38	0-2	1
		1	36	22.36	22.49	22.45	0-2	1
		1	74	22.32	22.47	22.30	0-2	1
		36	0	21.19	21.23	21.27	0-3	2
		36	18	21.27	21.37	21.33	0-3	2
		36	39	21.27	21.41	21.25	0-3	2
		75	0	21.21	21.31	21.24	0-3	2

LTE Band 4 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 ㎒		
20 ㎒	QPSK	1	0	23.01	0	0
		1	49	23.31	0	0
		1	99	23.21	0	0
		50	0	23.17	0-1	0
		50	25	23.35	0-1	0
		50	49	23.43	0-1	0
		100	0	23.29	0-1	0
	16QAM	1	0	23.22	0-1	0
		1	49	23.56	0-1	0
		1	99	23.44	0-1	0
		50	0	22.16	0-2	1
		50	25	22.35	0-2	1
		50	49	22.42	0-2	1
		100	0	22.28	0-2	1
	64QAM	1	0	22.16	0-2	1
		1	49	22.51	0-2	1
		1	99	22.44	0-2	1
		50	0	21.18	0-3	2
		50	25	21.38	0-3	2
		50	49	21.44	0-3	2
		100	0	21.32	0-3	2

[LTE Band 66 Conducted Power]

LTE Band 66 _ 1.4 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979Ch. 1710.7 ㎒	132322 Ch. 1745 ㎒	132665 Ch. 1779.3 ㎒		
1.4 ㎒	QPSK	1	0	22.95	22.96	22.57	0	0
		1	3	23.05	23.01	22.65	0	0
		1	5	22.97	22.96	22.59	0	0
		3	0	23.07	23.07	22.69	0	0
		3	1	23.09	23.09	22.71	0	0
		3	3	23.08	23.05	22.71	0	0
		6	0	23.19	23.20	22.84	0-1	0
	16QAM	1	0	23.11	23.18	22.80	0-1	0
		1	3	23.20	23.19	22.82	0-1	0
		1	5	23.11	23.17	22.83	0-1	0
		3	0	23.00	23.00	22.69	0-1	1
		3	1	23.03	23.07	22.67	0-1	1
		3	3	23.00	23.01	22.68	0-1	1
		6	0	22.24	22.30	21.94	0-2	1
	64QAM	1	0	22.17	22.23	21.88	0-2	1
		1	3	22.21	22.30	21.99	0-2	1
		1	5	22.18	22.23	21.90	0-2	1
		3	0	22.20	22.29	21.92	0-2	2
		3	1	22.22	22.33	21.94	0-2	2
		3	3	22.22	22.29	21.93	0-2	2
		6	0	21.19	21.25	20.86	0-3	2

LTE Band 66 _ 3 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 ㎒	132322 Ch. 1745 ㎒	132657 Ch. 1778.5 ㎒		
3 ㎒	QPSK	1	0	22.87	22.86	22.51	0	0
		1	7	23.01	22.96	22.64	0	0
		1	14	22.89	22.83	22.51	0	0
		8	0	23.09	23.07	22.72	0-1	0
		8	3	23.17	23.15	22.78	0-1	0
		8	7	23.10	23.07	22.74	0-1	0
		15	0	23.15	23.11	22.76	0-1	0
	16QAM	1	0	22.97	23.10	22.65	0-1	0
		1	7	23.17	23.18	22.87	0-1	0
		1	14	23.00	23.06	22.73	0-1	0
		8	0	22.11	22.15	21.82	0-2	1
		8	3	22.17	22.23	21.85	0-2	1
		8	7	22.13	22.14	21.82	0-2	1
		15	0	22.09	22.11	21.76	0-2	1
	64QAM	1	0	22.08	22.19	21.81	0-2	1
		1	7	22.24	22.29	21.98	0-2	1
		1	14	22.10	22.12	21.87	0-2	1
		8	0	21.13	21.17	20.84	0-3	2
		8	3	21.21	21.24	20.89	0-3	2
		8	7	21.16	21.17	20.85	0-3	2
		15	0	21.12	21.14	20.79	0-3	2

LTE Band 66 _ 5 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 ㎒	132322Ch. 1745 ㎒	132647 Ch. 1777.5 ㎒		
5 ㎒	QPSK	1	0	23.09	23.11	22.75	0	0
		1	12	23.25	23.23	22.89	0	0
		1	24	23.15	23.08	22.77	0	0
		12	0	23.18	23.18	22.83	0-1	0
		12	6	23.27	23.25	22.90	0-1	0
		12	11	23.26	23.24	22.86	0-1	0
		25	0	23.24	23.22	22.85	0-1	0
	16QAM	1	0	23.22	23.41	23.01	0-1	0
		1	12	23.33	23.47	23.10	0-1	0
		1	24	23.22	23.33	23.01	0-1	0
		12	0	22.15	22.20	21.85	0-2	1
		12	6	22.22	22.25	21.90	0-2	1
		12	11	22.24	22.27	21.86	0-2	1
		25	0	22.22	22.24	21.89	0-2	1
	64QAM	1	0	22.23	22.31	21.96	0-2	1
		1	12	22.35	22.45	22.05	0-2	1
		1	24	22.28	22.28	21.98	0-2	1
		12	0	21.20	21.25	20.93	0-3	2
		12	6	21.30	21.33	20.99	0-3	2
		12	11	21.29	21.32	20.94	0-3	2
		25	0	21.24	21.28	20.92	0-3	2

LTE Band 66 _ 10 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 ㎒	132322 Ch. 1745 ㎒	132622 Ch. 1775 ㎒		
10 ㎒	QPSK	1	0	23.20	23.21	22.86	0	0
		1	24	23.25	23.29	22.93	0	0
		1	49	23.21	23.22	22.90	0	0
		25	0	23.17	23.17	22.84	0-1	0
		25	12	23.29	23.29	22.93	0-1	0
		25	24	23.25	23.27	22.87	0-1	0
		50	0	23.25	23.26	22.89	0-1	0
	16QAM	1	0	23.28	23.44	23.09	0-1	0
		1	24	23.41	23.50	23.15	0-1	0
		1	49	23.40	23.42	23.09	0-1	0
		25	0	22.15	22.19	21.87	0-2	1
		25	12	22.27	22.32	21.96	0-2	1
		25	24	22.23	22.29	21.90	0-2	1
		50	0	22.20	22.26	21.88	0-2	1
	64QAM	1	0	22.30	22.38	22.04	0-2	1
		1	24	22.37	22.48	22.13	0-2	1
		1	49	22.37	22.44	22.08	0-2	1
		25	0	21.17	21.22	20.90	0-3	2
		25	12	21.30	21.34	21.00	0-3	2
		25	24	21.27	21.33	20.93	0-3	2
		50	0	21.22	21.28	20.92	0-3	2

LTE Band 66 _ 15 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 ㎒	132322 Ch. 1745 ㎒	132597 Ch. 1772.5 ㎒		
15 ㎒	QPSK	1	0	23.14	23.16	22.87	0	0
		1	36	23.26	23.26	22.95	0	0
		1	74	23.23	23.17	22.88	0	0
		36	0	23.20	23.18	22.92	0-1	0
		36	18	23.27	23.29	22.92	0-1	0
		36	39	23.28	23.25	22.91	0-1	0
		75	0	23.28	23.26	22.94	0-1	0
	16QAM	1	0	23.28	23.37	23.11	0-1	0
		1	36	23.37	23.49	23.17	0-1	0
		1	74	23.42	23.35	23.10	0-1	0
		36	0	22.17	22.21	21.95	0-2	1
		36	18	22.26	22.29	21.94	0-2	1
		36	39	22.25	22.26	21.91	0-2	1
		75	0	22.23	22.27	21.94	0-2	1
	64QAM	1	0	22.27	22.35	22.01	0-2	1
		1	36	22.38	22.43	22.16	0-2	1
		1	74	22.37	22.32	22.08	0-2	1
		36	0	21.22	21.26	20.99	0-3	2
		36	18	21.30	21.34	20.99	0-3	2
		36	39	21.32	21.31	20.98	0-3	2
		75	0	21.26	21.28	20.96	0-3	2

LTE Band 66 _ 20 ㎒ Bandwidth

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	23.06	23.09	22.83	0	0
		1	49	23.26	23.33	22.98	0	0
		1	99	23.20	23.08	22.83	0	0
		50	0	23.23	23.19	23.01	0-1	0
		50	25	23.35	23.35	23.03	0-1	0
		50	49	23.35	23.32	22.97	0-1	0
		100	0	23.27	23.25	22.96	0-1	0
	16QAM	1	0	23.18	23.29	23.04	0-1	0
		1	49	23.48	23.50	23.21	0-1	0
		1	99	23.42	23.20	23.02	0-1	0
		50	0	22.18	22.17	21.99	0-2	1
		50	25	22.31	22.33	22.01	0-2	1
		50	49	22.32	22.31	21.96	0-2	1
		100	0	22.24	22.24	21.94	0-2	1
	64QAM	1	0	22.18	22.26	22.03	0-2	1
		1	49	22.46	22.50	22.15	0-2	1
		1	99	22.32	22.26	22.02	0-2	1
		50	0	21.20	21.20	21.02	0-3	2
		50	25	21.35	21.38	21.04	0-3	2
		50	49	21.36	21.32	20.98	0-3	2
		100	0	21.26	21.27	20.97	0-3	2

[LTE Band 41 Conducted Power]

LTE Band 41 _ 5 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
5 ㎒	QPSK	1	0	21.31	21.66	21.85	21.52	21.72	0	0
		1	12	21.39	21.75	21.95	21.64	21.82	0	0
		1	24	21.30	21.69	21.78	21.54	21.71	0	0
		12	0	21.41	21.81	21.91	21.63	21.92	0-1	1
		12	6	21.48	21.87	21.96	21.70	21.97	0-1	1
		12	11	21.44	21.85	21.91	21.65	21.93	0-1	1
		25	0	21.32	21.72	21.86	21.57	21.78	0-1	1
	16QAM	1	0	21.34	21.72	21.91	21.61	21.72	0-1	1
		1	12	21.42	21.82	21.91	21.71	21.76	0-1	1
		1	24	21.32	21.75	21.87	21.64	21.72	0-1	1
		12	0	20.91	20.73	20.81	20.59	20.79	0-2	2
		12	6	20.98	20.81	20.87	20.64	20.82	0-2	2
		12	11	20.94	20.75	20.82	20.54	20.80	0-2	2
		25	0	20.89	20.74	20.90	20.58	20.81	0-2	2
	64QAM	1	0	19.98	20.37	20.57	20.25	20.43	0-2	2
		1	12	20.12	20.47	20.66	20.34	20.56	0-2	2
		1	24	19.98	20.39	20.48	20.24	20.43	0-2	2
		12	0	19.36	19.76	19.89	19.61	19.91	0-3	3
		12	6	19.44	19.85	19.99	19.71	19.94	0-3	3
		12	11	19.38	19.80	19.91	19.62	19.85	0-3	3
		25	0	19.36	19.80	19.92	19.60	19.92	0-3	3

LTE Band 41 _ 10 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
10 ㎒	QPSK	1	0	21.40	21.76	21.99	21.67	21.83	0	0
		1	24	21.43	21.81	21.98	21.66	21.82	0	0
		1	49	21.41	21.84	21.88	21.66	21.82	0	0
		25	0	21.33	21.71	21.88	21.63	21.83	0-1	1
		25	12	21.40	21.81	21.92	21.65	21.82	0-1	1
		25	24	21.35	21.80	21.90	21.58	21.83	0-1	1
		50	0	21.30	21.68	21.84	21.60	21.79	0-1	1
	16QAM	1	0	21.43	21.80	21.95	21.70	21.82	0-1	1
		1	24	21.46	21.84	21.94	21.74	21.86	0-1	1
		1	49	21.44	21.88	21.90	21.69	21.83	0-1	1
		25	0	20.37	20.75	20.97	20.67	20.85	0-2	2
		25	12	20.44	20.84	20.98	20.69	20.87	0-2	2
		25	24	20.41	20.85	20.90	20.64	20.84	0-2	2
		50	0	20.35	20.74	20.92	20.57	20.83	0-2	2
	64QAM	1	0	20.09	20.45	20.69	20.36	20.56	0-2	2
		1	24	20.15	20.52	20.67	20.36	20.55	0-2	2
		1	49	20.11	20.54	20.56	20.34	20.52	0-2	2
		25	0	19.41	19.82	19.99	19.72	19.96	0-3	3
		25	12	19.47	19.88	19.92	19.72	19.94	0-3	3
		25	24	19.43	19.89	19.96	19.66	19.93	0-3	3
		50	0	19.44	19.78	19.93	19.58	19.87	0-3	3

LTE Band 41 _ 15 ㎒ Bandwidth- Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
15 ㎒	QPSK	1	0	21.32	21.68	21.93	21.65	21.77	0	0
		1	36	21.43	21.78	21.95	21.64	21.84	0	0
		1	74	21.39	21.79	21.81	21.61	21.76	0	0
		36	0	21.42	21.82	21.96	21.65	21.99	0-1	1
		36	18	21.50	21.89	21.96	21.70	21.91	0-1	1
		36	39	21.47	21.87	21.89	21.57	21.97	0-1	1
		75	0	21.35	21.73	21.90	21.58	21.85	0-1	1
	16QAM	1	0	21.36	21.71	21.99	21.69	21.81	0-1	1
		1	36	21.47	21.81	21.90	21.71	21.83	0-1	1
		1	74	21.42	21.82	21.87	21.64	21.79	0-1	1
		36	0	20.31	20.69	20.87	20.58	20.92	0-2	2
		36	18	20.40	20.78	20.92	20.62	20.87	0-2	2
		36	39	20.37	20.78	20.85	20.59	20.87	0-2	2
		75	0	20.33	20.75	20.90	20.57	20.84	0-2	2
	64QAM	1	0	20.02	20.40	20.64	20.32	20.51	0-2	2
		1	36	20.15	20.50	20.68	20.33	20.57	0-2	2
		1	74	20.10	20.49	20.50	20.30	20.50	0-2	2
		36	0	19.34	19.72	19.91	19.64	19.93	0-3	3
		36	18	19.37	19.82	19.93	19.64	19.88	0-3	3
		36	39	19.35	19.80	19.86	19.59	19.87	0-3	3
		75	0	19.41	19.80	19.91	19.59	19.82	0-3	3

LTE Band 41 _ 20 ㎒ Bandwidth - Power Class 3

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.24	21.59	21.87	21.58	21.66	0	0
		1	49	21.43	21.83	22.08	21.68	21.83	0	0
		1	99	21.28	21.69	21.68	21.54	21.71	0	0
		50	0	21.23	21.63	21.87	21.60	21.83	0-1	1
		50	25	21.36	21.74	21.88	21.60	21.80	0-1	1
		50	49	21.33	21.76	21.81	21.50	21.77	0-1	1
		100	0	21.42	21.78	21.87	21.64	21.96	0-1	1
	16QAM	1	0	21.28	21.62	21.95	21.64	21.73	0-1	1
		1	49	21.48	21.86	21.95	21.74	21.87	0-1	1
		1	99	21.33	21.75	21.74	21.59	21.68	0-1	1
		50	0	20.30	20.66	20.91	20.62	20.84	0-2	2
		50	25	20.38	20.80	20.94	20.63	20.84	0-2	2
		50	49	20.36	20.79	20.82	20.53	20.76	0-2	2
		100	0	20.38	20.76	20.88	20.62	20.87	0-2	2
	64QAM	1	0	19.92	20.28	20.59	20.26	20.39	0-2	2
		1	49	20.12	20.54	20.69	20.38	20.58	0-2	2
		1	99	19.99	20.42	20.38	20.20	20.43	0-2	2
		50	0	19.36	19.73	19.89	19.63	19.88	0-3	3
		50	25	19.48	19.84	19.97	19.62	19.89	0-3	3
		50	49	19.40	19.83	19.87	19.55	19.82	0-3	3
		100	0	19.42	19.77	19.91	19.63	19.87	0-3	3

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

11.5 WIFI Conducted Power measurement method

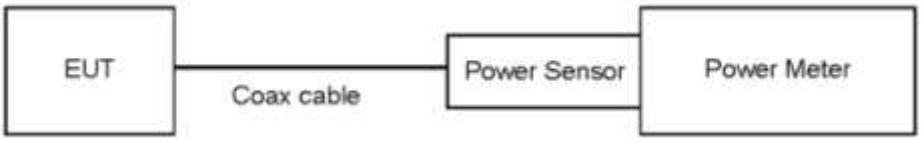
Un-Licensed Bands (DTS Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 558074 v05 - Section 8.3.2.3 - ANSI 63.10-2013 - Section 11.9.2.3

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



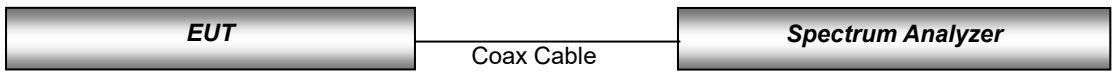
Un-Licensed Bands (NII Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 789033 D02 v02r01 - Section E.3.a

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



11.5.1 IEEE 802.11 (2.4 ㎓) Maximum Conducted Power

Mode	Frequency [㎒]	Channel	IEEE 802.11 (2.4 ㎓) Average RF Conducted Power [dBm]
			SISO
			Ant.1
802.11b	2 412	1	19.33
	2 437	6	19.45
	2 462	11	19.94
	2 467	12	5.68
	2 472	13	1.14
802.11g	2 412	1	17.28
	2 437	6	17.07
	2 462	11	17.74
	2 467	12	5.79
	2 472	13	1.56
802.11n (HT20)	2 412	1	16.70
	2 437	6	17.20
	2 462	11	16.98
	2 467	12	5.79
	2 472	13	1.90

11.5.2 IEEE 802.11 (2.4 ㎓) Reduced Conducted Power

Mode	Frequency [㎒]	Channel	IEEE 802.11 (2.4 ㎓) Average RF Conducted Power [dBm]
			SISO
			Ant.1
802.11b	2 412	1	15.14
	2 437	6	15.15
	2 462	11	15.46
802.11g	2 412	1	15.05
	2 437	6	15.03
	2 462	11	15.21
802.11n (HT20)	2 412	1	15.07
	2 437	6	15.02
	2 462	11	15.15

11.5.3 IEEE 802.11 (5 ㎓) Maximum Conducted Power

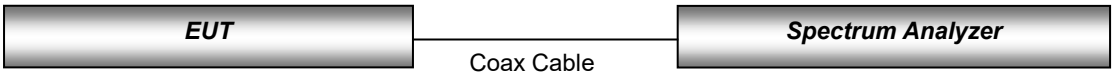
Mode	Frequency [㎒]	Channel	IEEE 802.11 (5 ㎓) Average RF Conducted Power [dBm]
			SISO
			Ant.1
802.11a (20 ㎒ BW)	5 180	36	16.25
	5 200	40	16.39
	5 240	48	16.85
	5 260	52	17.00
	5 300	60	17.24
	5 320	64	17.28
	5 500	100	16.42
	5 600	120	16.19
	5 720	144	16.61
	5 745	149	15.88
	5 785	157	15.89
	5 825	165	15.78

11.5.4 IEEE 802.11 (5 ㎓) Reduced Conducted Power

Mode	Frequency [㎒]	Channel	IEEE 802.11 (5 ㎓) Average Conducted Power [dBm]
			SISO
			Ant.1
802.11ac (80 ㎒ BW)	5 210	42	13.00
	5 290	58	13.01
802.11n (40 ㎒ BW)	5 510	102	14.72
	5 590	118	14.19
	5 710	142	14.43
802.11a (20 ㎒ BW)	5 745	149	14.62
	5 785	157	14.52
	5 825	165	14.39

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:
▪ Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
▪ For transmission mode with the same maximum output power specification, powers were measured for the largest channel Bandwidth, lowest order modulation and lowest data rate.
▪ For transmission modes with identical maximum specified output power, channel Bandwidth, modulation and data rates, power measurements were required for all identical configurations.
▪ For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-Band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-Band channels, due to an even number of channels, both channels were measured.

Test Configuration



11.6 Bluetooth

Maximum Conducted Power

The Burst averaged-conducted power

Mode	Frequency [MHz]	Channel	Bluetooth Power [dBm]
DH5	2 402	0	15.36
	2 441	39	14.79
	2 480	78	16.01
2-DH5	2 402	0	12.10
	2 441	39	11.72
	2 480	78	12.96
3-DH5	2 402	0	11.99
	2 441	39	11.42
	2 480	78	12.72

Per October 2016 TCB Workshop Notes:
When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.
Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth DH5 mode.

Bluetooth DH 5 Mode

Bluetooth Duty Cycle [BDR]

Duty Cycle = (BT-On time /BT-Full time) = (2.876/3.755) = 0.766 (DH5)

BT DH5 Maximum Duty Factor:
The theoretical maximum duty cycle defined by chipset manufacturer is 78.133 % In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results.The duty cycle of DH5 measured by DUT was 76.59 %, and the duty cycle was compensated by applying test error tolerance 1 %

12. System Verification

12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

Table for Head Tissue Verification

Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	dev σ (%)	dev ε (%)
10/30/2023	20.3	13H	12	0.744	54.319	0.750	55.000	-0.80	-1.24
			13	0.724	54.402	0.750	55.000	-3.47	-1.09
			14	0.756	54.292	0.750	55.000	+0.80	-1.29
10/10/2023	20.5	750H	705	0.878	42.424	0.889	42.174	-1.24	+0.59
			710	0.883	42.351	0.890	42.148	-0.79	+0.48
			750	0.928	41.759	0.893	41.940	+3.81	-0.43
10/11/2023	20.4	750H	750	0.876	42.061	0.893	41.940	-2.02	+0.29
			785	0.712	41.555	0.896	41.758	+1.79	-0.49
10/17/2023	23.9	835H	820	0.905	41.476	0.899	41.577	+0.67	-0.24
			835	0.923	41.243	0.900	41.500	+2.56	-0.62
			850	0.939	41.010	0.916	41.500	+2.51	-1.18
10/16/2023	22.9	835H	820	0.905	40.973	0.899	41.577	+0.67	-1.45
			835	0.923	40.743	0.900	41.500	+2.44	-1.82
			850	0.938	40.518	0.916	41.500	+2.40	-2.37
10/07/2023	20.7	835H	820	0.896	42.057	0.899	41.577	-0.33	+1.15
			835	0.914	41.829	0.900	41.500	+1.44	+0.79
			850	0.929	41.603	0.916	41.500	+1.42	+0.25
11/01/2023	21.8	835H	820	0.887	41.759	0.899	41.577	-1.33	+0.44
			835	0.904	41.530	0.900	41.500	+0.33	+0.07
			850	0.919	41.309	0.916	41.500	+0.33	-0.46
10/17/2023	21.1	1 800H	1 710	1.293	41.336	1.348	40.144	-4.08	+2.97
			1 750	1.333	41.181	1.371	40.080	-2.77	+2.75
			1 800	1.388	40.962	1.400	40.000	-1.00	+2.41
10/27/2023	22.3	1 800H	1 710	1.307	40.886	1.348	40.144	-3.04	+1.85
			1 750	1.353	40.697	1.371	40.080	-1.31	+1.54
			1 800	1.411	40.448	1.400	40.000	+0.64	+1.12
10/19/2023	21.2	1 800H	1 710	1.326	41.087	1.348	40.144	-1.63	+2.35
			1 750	1.372	40.898	1.371	40.080	+0.07	+2.04
			1 800	1.431	40.649	1.400	40.000	+2.07	+1.62
10/18/2023	22.3	1900H	1850	1.365	38.965	1.400	40.000	-2.50	-2.59
			1900	1.413	38.736	1.400	40.000	+0.79	-3.16
			1910	1.419	38.687	1.400	40.000	+1.36	-3.28
10/16/2023	21.0	1900H	1850	1.374	39.173	1.400	40.000	-1.86	-2.07
			1900	1.423	38.960	1.400	40.000	+1.50	-2.60
			1910	1.430	38.913	1.400	40.000	+2.14	-2.72
10/26/2023	20.6	1900H	1850	1.358	40.244	1.400	40.000	-3.00	+0.61
			1900	1.405	40.016	1.400	40.000	+0.29	+0.04
			1910	1.412	39.966	1.400	40.000	+0.86	-0.09
10/17/2023	22.0	2450H	2400	1.791	38.890	1.756	39.290	+1.99	-1.02
			2450	1.851	38.686	1.800	39.200	+2.67	-1.31
			2500	1.907	38.513	1.855	39.140	+2.80	-1.60

11/01/2023	19.8	2450H	2400	1.718	39.474	1.756	39.290	-2.16	+0.47
			2450	1.777	39.266	1.800	39.200	-1.39	+0.17
			2500	1.831	39.089	1.855	39.140	-1.29	-0.13
10/17/2023	20.2	2600H	2500	1.860	39.168	1.855	39.140	+0.27	+0.07
			2550	1.914	38.975	1.909	39.070	+0.26	-0.24
			2600	1.973	38.770	1.964	39.010	+0.36	-0.62
10/24/2023	21.1	5250H	5180	4.599	36.391	4.635	36.010	-0.78	+1.06
			5250	4.738	36.186	4.706	35.930	+0.55	+0.71
			5280	4.781	36.174	4.737	35.894	+0.93	+0.78
			5320	4.832	36.189	4.778	35.846	+1.13	+0.96
10/25/2023	21.2	5600H	5500	5.056	36.234	4.963	35.640	+1.87	+1.67
			5600	5.136	36.001	5.065	35.530	+1.26	+1.33
10/26/2023	21.9	5750H	5750	5.261	35.871	5.219	35.360	+0.67	+1.45
			5800	5.204	35.847	5.270	35.300	-1.25	+1.55
			5825	5.183	35.756	5.296	35.270	-2.13	+1.38

12.2 System Verification

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50 mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	10/10/2023	3076	1014	Head	20.6	20.5	8.71	0.412	8.24	-5.40	± 10
750	10/11/2023	3076		Head	20.5	20.4	8.71	0.395	7.90	-9.30	± 10
835	10/17/2023	7654	4d165	Head	24.0	23.9	9.73	0.494	9.88	+1.54	± 10
835	10/16/2023	7654		Head	23.0	22.9	9.73	0.491	9.82	+0.92	± 10
835	10/07/2023	3076		Head	20.8	20.7	9.73	0.490	9.80	+0.72	± 10
835	11/01/2023	7309		Head	21.9	21.8	9.73	0.513	10.26	+5.45	± 10
1 800	10/17/2023	7702	2d015	Head	21.2	21.1	38.2	1.78	35.6	-6.81	± 10
1 800	10/27/2023	7309		Head	22.4	22.3	38.2	1.98	39.6	+3.66	± 10
1 800	10/19/2023	7309		Head	21.3	21.2	38.2	2.03	40.6	+6.28	± 10
1 900	10/18/2023	7702	5d061	Head	22.4	22.3	38.9	1.97	39.4	+1.29	± 10
1 900	10/16/2023	7702		Head	21.1	21.0	38.9	1.92	38.4	-1.29	± 10
1 900	10/26/2023	7309		Head	20.7	20.6	38.9	2.01	40.2	+3.34	± 10
2 450	10/17/2023	7732	1049	Head	22.1	22.0	53.2	2.61	52.2	-1.88	± 10
2 450	11/01/2023	7654		Head	19.9	19.8	53.2	2.60	52.0	-2.26	± 10
2 600	10/17/2023	3076	1106	Head	20.3	20.2	56.3	2.74	54.8	-2.66	± 10
5 250	10/24/2023	3797	1317	Head	21.2	21.1	80.4	3.89	77.8	-3.23	± 10
5 600	10/25/2023	3797		Head	21.3	21.2	82.1	4.02	80.4	-2.07	± 10
5 750	10/26/2023	3797		Head	22.0	21.9	79.9	3.61	72.2	-9.64	± 10

System Verification Results – Phablet SAR

Input Power: 50 ㎽

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{10g} (SPEAG)	50 ㎽ Measured SAR_{10g}	1 W Normalized SAR_{10g}	Deviation	Limit
[㎒]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
13	10/30/2023	3076	1016	Head	20.4	20.3	0.353	0.018	0.360	+1.98	± 10
5 250	10/24/2023	3797	1317	Head	21.2	21.1	22.9	1.11	22.2	-3.06	± 10
5 600	10/25/2023	3797		Head	21.3	21.2	23.5	1.13	22.6	-3.83	± 10

12.3 System Verification Procedure

SAR measurement was prior to assessment, the system is verified to the ± 10 % of the specifications at each frequency Band by using the system verification kit. (Graphic Plots Attached)
- Cabling the system, using the verification kit equipment.
- Generate about 50 ㎽ Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;
SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

13. SAR Test Data Summary

13.1 SAR Measurement Results

GSM 850 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		(W/kg)	
836.6	190	GSM	34.0	33.37	0.11	Left Cheek	1:8.3	0.042	1.156	0.049	-
836.6	190	GSM	34.0	33.37	0.06	Left Tilt	1:8.3	0.016	1.156	0.018	-
836.6	190	GSM	34.0	33.37	-0.14	Right Cheek	1:8.3	0.046	1.156	0.053	-
836.6	190	GSM	34.0	33.37	-0.10	Right Tilt	1:8.3	0.023	1.156	0.027	-
836.6	190	GPRS 4TX	29.0	27.74	-0.13	Left Cheek	1:2.07	0.220	1.337	0.294	-
836.6	190	GPRS 4TX	29.0	27.74	0.00	Left Tilt	1:2.07	0.115	1.337	0.154	-
836.6	190	GPRS 4TX	29.0	27.74	-0.05	Right Cheek	1:2.07	**0.273**	1.337	**0.365**	A1
836.6	190	GPRS 4TX	29.0	27.74	-0.18	Right Tilt	1:2.07	0.135	1.337	0.180	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

GSM 1900 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		(W/kg)	
1 880	661	GSM	31.0	30.61	0.19	Left Cheek	1:8.3	0.101	1.094	0.110	-
1 880	661	GSM	31.0	30.61	-0.10	Left Tilt	1:8.3	0.082	1.094	0.090	-
1 880	661	GSM	31.0	30.61	0.15	Right Cheek	1:8.3	0.068	1.094	0.074	-
1 880	661	GSM	31.0	30.61	0.10	Right Tilt	1:8.3	0.073	1.094	0.080	-
1 880	661	GPRS 4TX	26.0	25.01	-0.08	Left Cheek	1:2.07	**0.111**	1.256	**0.139**	A2
1 880	661	GPRS 4TX	26.0	25.01	0.14	Left Tilt	1:2.07	0.094	1.256	0.118	-
1 880	661	GPRS 4TX	26.0	25.01	-0.06	Right Cheek	1:2.07	0.078	1.256	0.098	-
1 880	661	GPRS 4TX	26.0	25.01	0.11	Right Tilt	1:2.07	0.087	1.256	0.109	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 2 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		**(W/kg)**	
1880	9400	RMC	24	23.15	0.15	Left Cheek	1:1	**0.161**	1.216	**0.196**	A3
1880	9400	RMC	24	23.15	-0.13	Left Tilt	1:1	0.098	1.216	0.119	-
1880	9400	RMC	24	23.15	0.17	Right Cheek	1:1	0.110	1.216	0.134	-
1880	9400	RMC	24	23.15	0.17	Right Tilt	1:1	0.116	1.216	0.141	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 4 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		**(W/kg)**	
1732.4	1412	RMC	24.0	23.18	-0.12	Left Cheek	1:1	**0.121**	1.208	**0.146**	A4
1732.4	1412	RMC	24.0	23.18	-0.03	Left Tilt	1:1	0.112	1.208	0.135	-
1732.4	1412	RMC	24.0	23.18	-0.18	Right Cheek	1:1	0.103	1.208	0.124	-
1732.4	1412	RMC	24.0	23.18	0.18	Right Tilt	1:1	0.101	1.208	0.122	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 5 Head SAR											
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(W/kg)		**(W/kg)**	
836.6	4183	RMC	25.5	24.32	0.14	Left Cheek	1:1	0.189	1.312	0.248	-
836.6	4183	RMC	25.5	24.32	-0.18	Left Tilt	1:1	0.0092	1.312	0.012	-
836.6	4183	RMC	25.5	24.32	-0.11	Right Cheek	1:1	**0.229**	1.312	**0.300**	A5
836.6	4183	RMC	25.5	24.32	-0.16	Right Tilt	1:1	0.108	1.312	0.142	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Head 1.6 W/kg Averaged over 1 gram					

LTE Band 2 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
1880	18900	QPSK	20	24.5	23.48	-0.15	Left Cheek	0	1	49	1:1	**0.239**	1.265	**0.302**	A6
1880	18900	QPSK	20	23.5	22.56	0.07	Left Cheek	1	50	49	1:1	0.188	1.242	0.233	-
1880	18900	QPSK	20	24.5	23.48	0.14	Left Tilt	0	1	49	1:1	0.147	1.265	0.186	-
1880	18900	QPSK	20	23.5	22.56	0.14	Left Tilt	1	50	49	1:1	0.119	1.242	0.148	-
1880	18900	QPSK	20	24.5	23.48	-0.09	Right Cheek	0	1	49	1:1	0.158	1.265	0.200	-
1880	18900	QPSK	20	23.5	22.56	0.11	Right Cheek	1	50	49	1:1	0.128	1.242	0.159	-
1880	18900	QPSK	20	24.5	23.48	0.05	Right Tilt	0	1	49	1:1	0.137	1.265	0.173	-
1880	18900	QPSK	20	23.5	22.56	0.07	Right Tilt	1	50	49	1:1	0.106	1.242	0.132	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 4 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
1732.5	20175	QPSK	20	25.3	24.10	-0.13	Left Cheek	0	1	49	1:1	0.175	1.318	0.231	-
1732.5	20175	QPSK	20	24.3	23.25	0.10	Left Cheek	1	50	49	1:1	0.188	1.274	0.240	-
1732.5	20175	QPSK	20	25.3	24.10	0.10	Left Tilt	0	1	49	1:1	0.160	1.318	0.211	-
1732.5	20175	QPSK	20	24.3	23.25	-0.08	Left Tilt	1	50	49	1:1	0.124	1.274	0.158	-
1732.5	20175	QPSK	20	25.3	24.10	-0.09	Right Cheek	0	1	49	1:1	**0.193**	1.318	**0.254**	A7
1732.5	20175	QPSK	20	24.3	23.25	0.17	Right Cheek	1	50	49	1:1	0.150	1.274	0.191	-
1732.5	20175	QPSK	20	25.3	24.10	-0.04	Right Tilt	0	1	49	1:1	0.156	1.318	0.206	-
1732.5	20175	QPSK	20	24.3	23.25	0.07	Right Tilt	1	50	49	1:1	0.128	1.274	0.163	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 5 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
836.5	20525	QPSK	10	25.5	24.08	0.11	Left Cheek	0	1	0	1:1	0.183	1.387	0.254	-
836.5	20525	QPSK	10	24.5	23.11	0.11	Left Cheek	1	25	12	1:1	0.148	1.377	0.204	-
836.5	20525	QPSK	10	25.5	24.08	-0.03	Left Tilt	0	1	0	1:1	0.106	1.387	0.147	-
836.5	20525	QPSK	10	24.5	23.11	-0.03	Left Tilt	1	25	12	1:1	0.088	1.377	0.121	-
836.5	20525	QPSK	10	25.5	24.08	-0.13	Right Cheek	0	1	0	1:1	**0.212**	1.387	**0.294**	A8
836.5	20525	QPSK	10	24.5	23.11	-0.07	Right Cheek	1	25	12	1:1	0.169	1.377	0.233	-
836.5	20525	QPSK	10	25.5	24.08	0.07	Right Tilt	0	1	0	1:1	0.022	1.387	0.031	-
836.5	20525	QPSK	10	24.5	23.11	0.16	Right Tilt	1	25	12	1:1	0.018	1.377	0.025	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 12 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
707.5	23095	QPSK	10	25.0	24.04	0.02	Left Cheek	0	1	24	1:1	**0.144**	1.247	**0.180**	A9
707.5	23095	QPSK	10	24.0	23.20	0.17	Left Cheek	1	25	24	1:1	0.110	1.202	0.132	-
707.5	23095	QPSK	10	25.0	24.04	0.06	Left Tilt	0	1	24	1:1	0.080	1.247	0.100	-
707.5	23095	QPSK	10	24.0	23.20	-0.11	Left Tilt	1	25	24	1:1	0.065	1.202	0.078	-
707.5	23095	QPSK	10	25.0	24.04	0.02	Right Cheek	0	1	24	1:1	0.133	1.247	0.166	-
707.5	23095	QPSK	10	24.0	23.20	-0.03	Right Cheek	1	25	24	1:1	0.112	1.202	0.135	-
707.5	23095	QPSK	10	25.0	24.04	-0.05	Right Tilt	0	1	24	1:1	0.066	1.247	0.082	-
707.5	23095	QPSK	10	24.0	23.20	-0.15	Right Tilt	1	25	24	1:1	0.053	1.202	0.064	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 13 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
782	23230	QPSK	10	25.0	23.82	0.15	Left Cheek	0	1	0	1:1	**0.141**	1.312	**0.185**	A10
782	23230	QPSK	10	24.0	22.85	0.12	Left Cheek	1	25	0	1:1	0.119	1.303	0.155	-
782	23230	QPSK	10	25.0	23.82	-0.11	Left Tilt	0	1	0	1:1	0.073	1.312	0.096	-
782	23230	QPSK	10	24.0	22.85	-0.01	Left Tilt	1	25	0	1:1	0.062	1.303	0.081	-
782	23230	QPSK	10	25.0	23.82	0.12	Right Cheek	0	1	0	1:1	0.133	1.312	0.174	-
782	23230	QPSK	10	24.0	22.85	-0.15	Right Cheek	1	25	0	1:1	0.115	1.303	0.150	-
782	23230	QPSK	10	25.0	23.82	-0.14	Right Tilt	0	1	0	1:1	0.072	1.312	0.094	-
782	23230	QPSK	10	24.0	22.85	-0.08	Right Tilt	1	25	0	1:1	0.061	1.303	0.079	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 26 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
831.5	26865	QPSK	15	25.0	24.16	-0.18	Left Cheek	0	1	36	1:1	0.176	1.213	0.213	-
831.5	26865	QPSK	15	24.0	23.18	0.11	Left Cheek	1	36	18	1:1	0.129	1.208	0.156	-
831.5	26865	QPSK	15	25.0	24.16	0.03	Left Tilt	0	1	36	1:1	0.090	1.213	0.109	-
831.5	26865	QPSK	15	24.0	23.18	0.13	Left Tilt	1	36	18	1:1	0.071	1.208	0.086	-
831.5	26865	QPSK	15	25.0	24.16	-0.17	Right Cheek	0	1	36	1:1	**0.198**	1.213	**0.240**	A11
831.5	26865	QPSK	15	24.0	23.18	0.10	Right Cheek	1	36	18	1:1	0.152	1.208	0.184	-
831.5	26865	QPSK	15	25.0	24.16	-0.04	Right Tilt	0	1	36	1:1	0.111	1.213	0.135	-
831.5	26865	QPSK	15	24.0	23.18	-0.16	Right Tilt	1	36	18	1:1	0.089	1.208	0.108	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE TDD Band 41 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
2593	40620	QPSK	20	24.0	22.62	-0.09	Left Cheek	0	1	49	1:1.58	**0.229**	1.374	**0.315**	A12
2593	40620	QPSK	20	23.0	21.72	0.01	Left Cheek	1	50	25	1:1.58	0.186	1.343	0.250	-
2593	40620	QPSK	20	24.0	22.62	0.13	Left Tilt	0	1	49	1:1.58	0.097	1.374	0.133	-
2593	40620	QPSK	20	23.0	21.72	0.12	Left Tilt	1	50	25	1:1.58	0.079	1.343	0.106	-
2593	40620	QPSK	20	24.0	22.62	0.09	Right Cheek	0	1	49	1:1.58	0.132	1.374	0.181	-
2593	40620	QPSK	20	23.0	21.72	0.02	Right Cheek	1	50	25	1:1.58	0.108	1.343	0.145	-
2593	40620	QPSK	20	24.0	22.62	0.11	Right Tilt	0	1	49	1:1.58	0.173	1.374	0.238	-
2593	40620	QPSK	20	23.0	21.72	0.18	Right Tilt	1	50	25	1:1.58	0.141	1.343	0.189	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

LTE Band 66 Head SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
1745	132322	QPSK	20	25.0	24.12	0.04	Left Cheek	0	1	49	1:1	**0.257**	1.225	**0.315**	A13
1745	132322	QPSK	20	24.0	23.20	0.16	Left Cheek	1	50	25	1:1	0.209	1.202	0.251	-
1745	132322	QPSK	20	25.0	24.12	0.08	Left Tilt	0	1	49	1:1	0.180	1.225	0.221	-
1745	132322	QPSK	20	24.0	23.20	0.05	Left Tilt	1	50	25	1:1	0.142	1.202	0.171	-
1745	132322	QPSK	20	25.0	24.12	0.16	Right Cheek	0	1	49	1:1	0.183	1.225	0.224	-
1745	132322	QPSK	20	24.0	23.20	-0.07	Right Cheek	1	50	25	1:1	0.145	1.202	0.174	-
1745	132322	QPSK	20	25.0	24.12	0.03	Right Tilt	0	1	49	1:1	0.167	1.225	0.205	-
1745	132322	QPSK	20	24.0	23.20	0.02	Right Tilt	1	50	25	1:1	0.131	1.202	0.157	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram							

DTS Head SAR - RCV-ON

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(W/kg)	(W/kg)		(Duty)	(W/kg)	
2 462	11	802.11b	20	1	16.0	15.33	0.01	Left Cheek	Ant.1	99.5	0.219	0.123	1.167	1.005	0.144	-
2 462	11	802.11b	20	1	16.0	15.33	-0.01	Left Tilt	Ant.1	99.5	0.195	0.121	1.167	1.005	0.142	-
2 462	11	802.11b	20	1	16.0	15.33	-0.14	Right Cheek	Ant.1	99.5	0.469	0.271	1.167	1.005	0.318	-
2 462	11	802.11b	20	1	16.0	15.33	0.11	Right Tilt	Ant.1	99.5	0.460	**0.290**	1.167	1.005	**0.340**	A14
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram					

NII Head SAR – RCV-ON

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(W/kg)	(W/kg)		(Duty)	(W/kg)	
5 290	58	802.11ac	80	MCS0	15.0	13.01	-0.15	Left Cheek	Ant.1	88.0	0.700	0.258	1.581	1.136	0.464	-
5 290	58	802.11ac	80	MCS0	15.0	13.01	0.18	Left Tilt	Ant.1	88.0	0.827	0.323	1.581	1.136	0.580	-
5 290	58	802.11ac	80	MCS0	15.0	13.01	0.16	Right Check	Ant.1	88.0	0.690	0.274	1.581	1.136	0.492	-
5 290	58	802.11ac	80	MCS0	15.0	13.01	0.14	Right Tilt	Ant.1	88.0	0.835	**0.332**	1.581	1.136	**0.597**	A15
5 510	102	802.11n	40	MCS0	15.0	14.72	0.09	Left Cheek	Ant.1	96.5	0.250	0.090	1.067	1.037	0.100	-
5 510	102	802.11n	40	MCS0	15.0	14.72	-0.09	Left Tilt	Ant.1	96.5	0.307	0.118	1.067	1.037	0.130	-
5 510	102	802.11n	40	MCS0	15.0	14.72	-0.09	Right Check	Ant.1	96.5	0.223	0.078	1.067	1.037	0.086	-
5 510	102	802.11n	40	MCS0	15.0	14.72	0.00	Right Tilt	Ant.1	96.5	0.280	0.110	1.067	1.037	0.122	-
5 745	149	802.11a	20	6	15.0	14.62	-0.09	Left Cheek	Ant.1	96.9	0.358	0.138	1.091	1.032	0.155	-
5 745	149	802.11a	20	6	15.0	14.62	0.00	Left Tilt	Ant.1	96.9	0.382	0.168	1.091	1.032	0.189	-
5 745	149	802.11a	20	6	15.0	14.62	-0.09	Right Check	Ant.1	96.9	0.568	0.126	1.091	1.032	0.142	-
5 745	149	802.11a	20	6	15.0	14.62	0.00	Right Tilt	Ant.1	96.9	0.393	0.163	1.091	1.032	0.184	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram					

DSS Head SAR

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dBm)	(dBm)	(dB)			(W/kg)		(Duty)	(W/kg)	
2 480	78	Bluetooth DH5	16.5	16.01	-0.17	Left Cheek	Ant.1	0.052	1.119	1.010	0.059	-
2 480	78	Bluetooth DH5	16.5	16.01	0.10	Left Tilt	Ant.1	0.087	1.119	1.010	0.098	-
2 480	78	Bluetooth DH5	16.5	16.01	-0.16	Right Cheek	Ant.1	0.116	1.119	1.010	0.131	-
2 480	78	Bluetooth DH5	16.5	16.01	-0.07	Right Tilt	Ant.1	**0.141**	1.119	1.010	**0.159**	A16
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram				

13.2 Body-worn SAR Measurement Results

GSM / UMTS Bodyworn SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
836.6	190	GSM850 | Voice	34.0	33.37	-0.08	Rear	1:8.3	10	**0.319**	1.156	**0.369**	B1
836.6	190		34.0	33.37	-0.13	Front	1:8.3	10	0.222	1.156	0.257	-
1 880	661	GSM1900 | Voice	31.0	30.61	0.04	Rear	1:8.3	10	**0.365**	1.094	**0.399**	B2
1 880	661		31.0	30.61	-0.11	Front	1:8.3	10	0.255	1.094	0.279	-
1 880	9400	UMTS Band 2 | RMC	24.0	23.15	-0.01	Rear	1:1	10	0.359	1.216	0.437	-
1 880	9400		24.0	23.15	0.06	Front	1:1	10	**0.396**	1.216	**0.482**	B3
1 732.4	1412	UMTS Band 4 | RMC	24.0	23.18	0.03	Rear	1:1	10	0.219	1.208	0.265	-
1 732.4	1412		24.0	23.18	0.06	Front	1:1	10	**0.269**	1.208	**0.325**	B4
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

LTE Band Bodyworn SAR															
Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
1880	18900	LTE 2 QPSK	20	24.5	23.48	0.02	Rear	0	1	49	1:1	10	0.547	1.265	0.692	-
1880	18900		20	23.5	22.56	0.03	Rear	1	50	49	1:1	10	0.450	1.242	0.559	-
1880	18900		20	24.5	23.48	0.04	Front	0	1	49	1:1	10	**0.629**	1.265	**0.796**	B5
1880	18900		20	23.5	22.56	0.00	Front	1	50	49	1:1	10	0.536	1.242	0.666	-
1732.5	20175	LTE 4 QPSK	20	25.3	24.10	-0.06	Rear	0	1	49	1:1	10	0.495	1.318	0.652	-
1732.5	20175		20	24.3	23.25	-0.03	Rear	1	50	49	1:1	10	0.405	1.274	0.516	-
1732.5	20175		20	25.3	24.10	0.02	Front	0	1	49	1:1	10	**0.742**	1.318	**0.978**	B6
1732.5	20175		20	24.3	23.25	0.13	Front	1	50	49	1:1	10	0.606	1.274	0.772	-
1732.5	20175		20	24.3	23.12	0.07	Front	1	100	0	1:1	10	0.442	1.312	0.580	-
2593	40620	LTE 41 QPSK	20	24.0	22.62	0.02	Rear	0	1	49	1:1.58	10	**0.409**	1.374	**0.562**	B7
2593	40620		20	23.0	21.72	0.04	Rear	1	50	25	1:1.58	10	0.325	1.343	0.436	-
2593	40620		20	24.0	22.62	0.12	Front	0	1	49	1:1.58	10	0.330	1.374	0.453	-
2593	40620		20	23.0	21.72	0.04	Front	1	50	25	1:1.58	10	0.263	1.343	0.353	-
1745	132322	LTE 66 QPSK	20	25.0	24.12	0.02	Rear	0	1	49	1:1	10	0.500	1.225	0.613	-
1745	132322		20	24.0	23.20	0.01	Rear	1	50	25	1:1	10	0.405	1.202	0.487	-
1745	132322		20	25.0	24.12	0.00	Front	0	1	49	1:1	10	**0.757**	1.225	**0.927**	B8
1720	132072		20	25.0	24.08	-0.11	Front	0	1	49	1:1	10	0.712	1.236	0.880	-
1770	132572		20	25.0	23.80	0.02	Front	0	1	49	1:1	10	0.680	1.318	0.896	
1745	132322		20	25.0	23.20	0.05	Front	0	50	25	1:1	10	0.613	1.202	0.737	-
1720	132072		20	24.0	23.11	0.04	Front	1	100	0	1:1	10	0.452	1.227	0.555	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

Note: *Data entry indicate Variability measurement.

NII Body-Worn SAR																	
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																
5 320	64	802.11a	20	6	18.0	17.28	0.03	Rear	Ant.1	96.9	10	0.924	0.412	1.180	1.032	0.502	-
5 320	64	802.11a	20	6	18.0	17.28	0.00	Front	Ant.1	96.9	10	0.367	0.157	1.180	1.032	0.191	-
5 720	144	802.11a	20	6	17.0	16.61	-0.09	Rear	Ant.1	96.9	10	1.420	**0.614**	1.094	1.032	**0.693**	B9
5 720	144	802.11a	20	6	17.0	16.61	-0.05	Front	Ant.1	96.9	10	0.683	0.278	1.094	1.032	0.314	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

13.3 Hotspot SAR Measurement Results

GSM 850 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)				(W/kg)		(W/kg)	
836.6	190	GPRS 4TX	29.0	27.74	0.12	Rear	1:2.07	10	**0.585**	1.337	**0.782**	C1
836.6	190	GPRS 4TX	29.0	27.74	-0.09	Front	1:2.07	10	0.243	1.337	0.325	-
836.6	190	GPRS 4TX	29.0	27.74	-0.04	Left	1:2.07	10	0.227	1.337	0.303	-
836.6	190	GPRS 4TX	29.0	27.74	-0.07	Right	1:2.07	10	0.416	1.337	0.556	-
836.6	190	GPRS 4TX	29.0	27.74	0.14	Bottom	1:2.07	10	0.416	1.337	0.556	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

GSM 1900 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance (mm)	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)				(W/kg)		(W/kg)	
1 880	661	GPRS 4TX	26.0	25.01	-0.03	Rear	1:2.07	10	**0.331**	1.256	**0.416**	C2
1 880	661	GPRS 4TX	26.0	25.01	-0.01	Front	1:2.07	10	0.237	1.256	0.298	-
1 880	661	GPRS 4TX	26.0	25.01	-0.10	Left	1:2.07	10	0.147	1.256	0.185	-
1 880	661	GPRS 4TX	26.0	25.01	0.01	Bottom	1:2.07	10	0.305	1.256	0.383	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 2 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
1 880	9400	RMC	21.0	20.11	0.05	Rear	1:1	10	0.247	1.227	0.303	-
1 880	9400	RMC	21.0	20.11	-0.14	Front	1:1	10	0.186	1.227	0.228	-
1 880	9400	RMC	21.0	20.11	0.07	Left	1:1	10	0.215	1.227	0.264	-
1 880	9400	RMC	21.0	20.11	0.04	Bottom	1:1	10	**0.328**	1.227	**0.402**	C3
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 4 Hotspot SAR												
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
1 732.4	1412	RMC	23.0	22.19	0.07	Rear	1:1	10	0.254	1.205	0.306	-
1 732.4	1412	RMC	23.0	22.19	0.18	Front	1:1	10	0.248	1.205	0.299	-
1 732.4	1412	RMC	23.0	22.19	0.04	Left	1:1	10	0.187	1.205	0.225	-
1 732.4	1412	RMC	23.0	22.19	-0.01	Bottom	1:1	10	**0.438**	1.205	**0.528**	C4
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 5 Hotspot SAR

Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
836.6	4183	RMC	25.5	24.32	-0.10	Rear	1:1	10	**0.563**	1.312	**0.739**	C5
836.6	4183	RMC	25.5	24.32	-0.14	Front	1:1	10	0.212	1.312	0.278	-
836.6	4183	RMC	25.5	24.32	-0.08	Left	1:1	10	0.139	1.312	0.182	-
836.6	4183	RMC	25.5	24.32	-0.09	Right	1:1	10	0.315	1.312	0.413	-
836.6	4183	RMC	25.5	24.32	0.11	Bottom	1:1	10	0.344	1.312	0.451	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram						

LTE Band 2 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
1880	18900	QPSK	20	21.5	20.68	-0.05	Rear	0	1	49	1:1	10	0.375	1.208	0.453	-
1880	18900	QPSK	20	21.5	20.68	-0.10	Rear	0	50	25	1:1	10	0.375	1.208	0.453	-
1880	18900	QPSK	20	21.5	20.68	0.13	Front	0	1	49	1:1	10	0.418	1.208	0.505	-
1880	18900	QPSK	20	21.5	20.68	0.03	Front	0	50	25	1:1	10	0.416	1.208	0.503	-
1880	18900	QPSK	20	21.5	20.68	0.07	Left	0	1	49	1:1	10	0.151	1.208	0.182	-
1880	18900	QPSK	20	21.5	20.68	0.05	Left	0	50	25	1:1	10	0.151	1.208	0.182	-
1880	18900	QPSK	20	21.5	20.68	0.01	Bottom	0	1	49	1:1	10	0.478	1.208	0.577	-
1880	18900	QPSK	20	21.5	20.68	0.11	Bottom	0	50	25	1:1	10	**0.480**	1.208	**0.580**	C6
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram									

LTE Band 4 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
1732.5	20175	QPSK	20	24.3	23.31	-0.04	Rear	0	1	49	1:1	10	0.569	1.256	0.715	-
1732.5	20175	QPSK	20	24.3	23.43	-0.01	Rear	0	50	49	1:1	10	0.586	1.222	0.716	-
1732.5	20175	QPSK	20	24.3	23.31	0.10	Front	0	1	49	1:1	10	0.572	1.256	**0.718**	C7
1732.5	20175	QPSK	20	24.3	23.43	0.09	Front	0	50	49	1:1	10	0.572	1.222	0.699	-
1732.5	20175	QPSK	20	24.3	23.31	0.05	Left	0	1	49	1:1	10	0.356	1.256	0.447	-
1732.5	20175	QPSK	20	24.3	23.43	0.08	Left	0	50	49	1:1	10	0.357	1.222	0.436	-
1732.5	20175	QPSK	20	24.3	23.31	0.07	Bottom	0	1	49	1:1	10	0.568	1.256	0.713	-
1732.5	20175	QPSK	20	24.3	23.43	0.04	Bottom	0	50	49	1:1	10	0.571	1.222	0.698	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram									

LTE Band 5 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
836.5	20525	QPSK	10	25.5	24.08	0.02	Rear	0	1	0	1:1	10	0.192	1.387	0.266	-
836.5	20525	QPSK	10	24.5	23.11	0.18	Rear	1	25	12	1:1	10	0.170	1.377	0.234	-
836.5	20525	QPSK	10	25.5	24.08	-0.03	Front	0	1	0	1:1	10	0.079	1.387	0.110	-
836.5	20525	QPSK	10	24.5	23.11	0.05	Front	1	25	12	1:1	10	0.067	1.377	0.092	-
836.5	20525	QPSK	10	25.5	24.08	0.10	Left	0	1	0	1:1	10	0.034	1.387	0.047	-
836.5	20525	QPSK	10	24.5	23.11	0.19	Left	1	25	12	1:1	10	0.028	1.377	0.039	-
836.5	20525	QPSK	10	25.5	24.08	0.06	Right	0	1	0	1:1	10	0.219	1.387	0.304	-
836.5	20525	QPSK	10	24.5	23.11	0.12	Right	1	25	12	1:1	10	0.182	1.377	0.251	-
836.5	20525	QPSK	10	25.5	24.08	0.12	Bottom	0	1	0	1:1	10	**0.317**	1.387	**0.440**	C8
836.5	20525	QPSK	10	24.5	23.11	0.14	Bottom	1	25	12	1:1	10	0.267	1.377	0.368	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE Band 12 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
707.5	23095	QPSK	10	25.0	24.04	0.03	Rear	0	1	24	1:1	10	**0.428**	1.247	**0.534**	C9
707.5	23095	QPSK	10	24.0	23.20	0.06	Rear	1	25	24	1:1	10	0.346	1.202	0.416	-
707.5	23095	QPSK	10	25.0	24.04	0.02	Front	0	1	24	1:1	10	0.174	1.247	0.217	-
707.5	23095	QPSK	10	24.0	23.20	0.04	Front	1	25	24	1:1	10	0.142	1.202	0.171	-
707.5	23095	QPSK	10	25.0	24.04	0.08	Left	0	1	24	1:1	10	0.077	1.247	0.096	-
707.5	23095	QPSK	10	24.0	22.99	0.07	Left	1	25	0	1:1	10	0.060	1.262	0.076	-
707.5	23095	QPSK	10	25.0	24.04	0.08	Left	0	1	24	1:1	10	0.139	1.247	0.173	-
707.5	23095	QPSK	10	24.0	23.20	-0.01	Right	1	25	24	1:1	10	0.120	1.202	0.144	-
707.5	23095	QPSK	10	25.0	24.04	0.18	Bottom	0	1	24	1:1	10	0.184	1.247	0.229	-
707.5	23095	QPSK	10	24.0	23.20	0.09	Bottom	1	25	24	1:1	10	0.154	1.202	0.185	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE Band 13 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
782	23230	QPSK	10	25.0	23.82	-0.01	Rear	0	1	0	1:1	10	**0.433**	1.312	**0.568**	C10
782	23230	QPSK	10	24.0	22.85	0.00	Rear	1	25	0	1:1	10	0.370	1.303	0.482	-
782	23230	QPSK	10	25.0	23.82	-0.04	Front	0	1	0	1:1	10	0.243	1.312	0.319	-
782	23230	QPSK	10	24.0	22.85	0.05	Front	1	25	0	1:1	10	0.207	1.303	0.270	-
782	23230	QPSK	10	25.0	23.82	-0.02	Left	0	1	0	1:1	10	0.126	1.312	0.165	-
782	23230	QPSK	10	24.0	22.85	0.11	Left	1	25	0	1:1	10	0.108	1.303	0.141	-
782	23230	QPSK	10	25.0	23.82	0.00	Right	0	1	0	1:1	10	0.194	1.312	0.255	-
782	23230	QPSK	10	24.0	22.85	0.06	Right	1	25	0	1:1	10	0.164	1.303	0.214	-
782	23230	QPSK	10	25.0	23.82	0.02	Bottom	0	1	0	1:1	10	0.237	1.312	0.311	-
782	23230	QPSK	10	24.0	22.85	0.12	Bottom	1	25	0	1:1	10	0.182	1.303	0.237	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE Band 26 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
831.5	26865	QPSK	15	25.0	24.16	0.01	Rear	0	1	36	1:1	10	**0.511**	1.213	**0.620**	C11
831.5	26865	QPSK	15	24.0	23.18	0.01	Rear	1	36	18	1:1	10	0.406	1.208	0.490	-
831.5	26865	QPSK	15	25.0	24.16	-0.03	Front	0	1	36	1:1	10	0.233	1.213	0.283	-
831.5	26865	QPSK	15	24.0	23.18	-0.03	Front	1	36	18	1:1	10	0.184	1.208	0.222	-
831.5	26865	QPSK	15	25.0	24.16	-0.07	Left	0	1	36	1:1	10	0.189	1.213	0.229	-
831.5	26865	QPSK	15	24.0	23.18	0.01	Left	1	36	18	1:1	10	0.149	1.208	0.180	-
831.5	26865	QPSK	15	25.0	24.16	-0.09	Right	0	1	36	1:1	10	0.309	1.213	0.375	-
831.5	26865	QPSK	15	24.0	23.18	-0.01	Right	1	36	18	1:1	10	0.246	1.208	0.297	-
831.5	26865	QPSK	15	25.0	24.16	0.11	Bottom	0	1	36	1:1	10	0.327	1.213	0.397	-
831.5	26865	QPSK	15	24.0	23.18	0.14	Bottom	1	36	18	1:1	10	0.260	1.208	0.314	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE TDD Band 41 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
2593	40620	QPSK	20	23.0	22.08	0.06	Rear	0	1	49	1:1.58	10	0.360	1.236	0.445	-
2593	40620	QPSK	20	23.0	21.88	0.06	Rear	1	50	25	1:1.58	10	**0.363**	1.294	**0.470**	C12
2593	40620	QPSK	20	23.0	22.08	0.09	Front	0	1	49	1:1.58	10	0.321	1.236	0.397	-
2593	40620	QPSK	20	23.0	21.88	0.17	Front	1	50	25	1:1.58	10	0.325	1.294	0.421	-
2593	40620	QPSK	20	23.0	22.08	0.10	Left	0	1	49	1:1.58	10	0.195	1.236	0.241	-
2593	40620	QPSK	20	23.0	21.88	0.19	Left	1	50	25	1:1.58	10	0.198	1.294	0.256	-
2593	40620	QPSK	20	23.0	22.08	-0.01	Bottom	0	1	49	1:1.58	10	0.343	1.236	0.424	-
2593	40620	QPSK	20	23.0	21.88	-0.03	Bottom	1	50	25	1:1.58	10	0.345	1.294	0.446	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

LTE Band 66 Hotspot SAR

Frequency		Mode	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
1745	132322	QPSK	20	24.0	23.33	-0.04	Rear	0	1	49	1:1	10	0.577	1.167	0.673	-
1745	132322	QPSK	20	24.0	23.35	0.01	Rear	0	50	25	1:1	10	0.586	1.161	0.680	-
1745	132322	QPSK	20	24.0	23.33	0.03	Front	0	1	49	1:1	10	0.577	1.167	0.673	-
1745	132322	QPSK	20	24.0	23.35	0.07	Front	0	50	25	1:1	10	0.585	1.161	0.679	-
1745	132322	QPSK	20	24.0	23.33	0.06	Left	0	1	49	1:1	10	0.316	1.167	0.369	-
1745	132322	QPSK	20	24.0	23.35	0.04	Left	0	50	25	1:1	10	0.319	1.161	0.370	-
1745	132322	QPSK	20	24.0	23.33	0.04	Bottom	0	1	49	1:1	10	0.633	1.167	0.739	-
1745	132322	QPSK	20	24.0	23.35	0.05	Bottom	0	50	25	1:1	10	**0.650**	1.161	**0.755**	C13
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram								

DTS Hotspot SAR

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Reported SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(mm)	(W/kg)	(W/kg)		(Duty)	(W/kg)	
2 462	11	802.11b	20	1	20	19.94	-0.15	Rear	Ant.1	99.5	10	0.455	0.273	1.014	1.005	0.278	-
2 462	11	802.11b	20	1	20	19.94	0.02	Front	Ant.1	99.5	10	0.147	0.094	1.014	1.005	0.096	-
2 462	11	802.11b	20	1	20	19.94	0.18	Left	Ant.1	99.5	10	0.079	0.05	1.014	1.005	0.051	-
2 462	11	802.11b	20	1	20	19.94	0.12	Top	Ant.1	99.5	10	0.514	**0.297**	1.014	1.005	**0.303**	C14
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

5 GHz WLAN Hotspot SAR

Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Reported SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(mm)	(W/kg)	(W/kg)		(Duty)	(W/kg)	
5 785	157	802.11a	20	6	16.0	15.89	-0.10	Rear	Ant.1	96.9	10	1.24	0.575	1.026	1.032	0.609	-
5 785	157	802.11a	20	6	16.0	15.89	-0.09	Front	Ant.1	96.9	10	0.286	0.133	1.026	1.032	0.141	-
5 785	157	802.11a	20	6	16.0	15.89	0.14	Left	Ant.1	96.9	10	0.519	0.242	1.026	1.032	0.256	-
5 785	157	802.11a	20	6	16.0	15.89	0.09	Top	Ant.1	96.9	10	1.75	0.998	1.026	1.032	**1.056**	C15
5 745	149	802.11a	20	6	16.0	15.88	0.00	Top	Ant.1	96.9	10	1.55	0.674	1.028	1.032	0.715	-
5 785	157	802.11a	20	6	16.0	15.89	0.11	Top	Ant.1	96.9	10	2.05	0.982	1.026	1.032	1.039	*
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram					

Note: *Data entry indicate Variability measurement.

DSS Tethering SAR													
Frequency		Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Distance	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
㎒	Ch.		(dBm)	(dBm)	(dB)			(mm)	(W/kg)		(Duty)	(W/kg)	
2 480	78	Bluetooth DH5	16.5	16.01	0.00	Rear	Ant.1	10	**0.044**	1.119	1.010	**0.050**	C16
2 480	78	Bluetooth DH5	16.5	16.01	0.00	Front	Ant.1	10	0.016	1.119	1.010	0.018	-
2 480	78	Bluetooth DH5	16.5	16.01	0.00	Left	Ant.1	10	0.00757	1.119	1.010	0.009	-
2 480	78	Bluetooth DH5	16.5	16.01	0.10	Top	Ant.1	10	0.033	1.119	1.010	0.037	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						Body 1.6 W/kg Averaged over 1 gram							

13.4 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

13.5 Phablet SAR Measurement Results

5 GHz WLAN Phablet SAR _10g																	
Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant. Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(mm)	(W/kg)	(W/kg)		(Duty)	(W/kg)	
5 320	64	802.11a	20	6	18.0	17.28	0.00	Rear	Ant.1	96.9	0	5.080	0.473	1.180	1.032	0.576	-
5 320	64	802.11a	20	6	18.0	17.28	0.00	Front	Ant.1	96.9	0	3.270	0.246	1.180	1.032	0.300	-
5 320	64	802.11a	20	6	18.0	17.28	0.15	Left	Ant.1	96.9	0	1.740	0.204	1.180	1.032	0.248	-
5 320	64	802.11a	20	6	18.0	17.28	0.15	Right	Ant.1	96.9	0	0.044	0.005	1.180	1.032	0.006	-
5 320	64	802.11a	20	6	18.0	17.28	0.00	Top	Ant.1	96.9	0	13.80	0.767	1.180	1.032	0.934	-
5 720	144	802.11a	20	6	17.0	16.61	-0.10	Rear	Ant.1	96.9	0	5.090	0.493	1.094	1.032	0.557	-
5 720	144	802.11a	20	6	17.0	16.61	0.00	Front	Ant.1	96.9	0	2.058	0.201	1.094	1.032	0.227	-
5 720	144	802.11a	20	6	17.0	16.61	-0.18	Left	Ant.1	96.9	0	3.220	0.341	1.094	1.032	0.385	-
5 720	144	802.11a	20	6	17.0	16.61	0.00	Right	Ant.1	96.9	0	0.0654	0.00361	1.094	1.032	0.004	-
5 720	144	802.11a	20	6	17.0	16.61	0.10	Top	Ant.1	96.9	0	4.850	**1.240**	1.094	1.032	**1.400**	D1
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Hand 4.0 W/kg Averaged over 10 gram						

NFC Phablet SAR _10g							
Frequency	Mode	Data Rate	Power Drift	Test Position	Distance	Meas. SAR	Plot No.
MHz		(Kbps)	(dB)		(mm)	(W/kg)	
13.56	NFC (Type A)	106	0.00	Rear	0	**0.025**	D2
13.56	NFC (Type A)	106	0.00	Front	0	0	-
13.56	NFC (Type A)	106	0.00	Left	0	0	
13.56	NFC (Type A)	106	0.00	Top	0	0	
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population				Hand 4.0 W/kg Averaged over 10 gram			

13.6 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 10 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was 1.2 W/kg, no additional SAR evaluation using a headset cable were required.
8. Per KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is > 160 mm and < 200 mm. When hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance) is 1 g SAR > 1.2 W/kg.
9. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency Band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis.
10. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
11. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspotoperation (with actual simultaneous transmission of a transmitter with WiFi) was not activated.

GSM/GPRS Test Notes:

1. This EUT’S GSM and GPRS device class is B.
2. This device supports GPRS VOIP in the head and the body-worn configurations therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
4. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:
   When the reported SAR is 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.
   Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0 for some modes.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S subframes using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. SAR test reduction is applied using the following criteria:
   Start with the largest channel Bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the Sub Ant2 edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel Bandwidths is not required because the reported SAR for the highest channel Bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel Bandwidth.

WLAN Notes:

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test position are measured.
2. Per KDB 248227 D01v02r02 justification for test configurations of 2.4 GHzWiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR
3. Per KDB 248227 D01v02r02 justification for test configurations of 5 GHzWiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode was not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel Bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. Per October 2016 TCBC Workshop Notes, the reported SAR was scaled to Bluetooth [BDR] 78.133% transmission duty factor to determine compliance. Please see sec.11.6 for the time-domain plot and calculation for duty factor of the device
2. Head and Bluetooth tethering SAR were evaluated for tethering applications.

14. Simultaneous SAR Analysis

This device is containing transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 4.3.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6W/kg for 1g SAR and ≤4 W/kg for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

14.1 Head SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario (Head SAR)										
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.1	5 GHz WLAN SISO Ant.1	BT	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	1+3+4	
GSM 850	Left Touch	0.294	0.144	0.464	0.059	0.438	0.758	0.353	0.817	No
	Left Tilt	0.154	0.142	0.580	0.098	0.296	0.734	0.252	0.832	No
	Right Touch	0.365	0.318	0.492	0.131	0.683	0.857	0.496	0.988	No
	Right Tilt	0.180	0.340	0.597	0.159	0.520	0.777	0.339	0.936	No
GSM 1900	Left Touch	0.139	0.144	0.464	0.059	0.283	0.603	0.198	0.662	No
	Left Tilt	0.118	0.142	0.580	0.098	0.260	0.698	0.216	0.796	No
	Right Touch	0.098	0.318	0.492	0.131	0.416	0.590	0.229	0.721	No
	Right Tilt	0.109	0.340	0.597	0.159	0.449	0.706	0.268	0.865	No
UMTS Band 2	Left Touch	0.196	0.144	0.464	0.059	0.340	0.660	0.255	0.719	No
	Left Tilt	0.119	0.142	0.580	0.098	0.261	0.699	0.217	0.797	No
	Right Touch	0.134	0.318	0.492	0.131	0.452	0.626	0.265	0.757	No
	Right Tilt	0.141	0.340	0.597	0.159	0.481	0.738	0.300	0.897	No
UMTS Band 4	Left Touch	0.146	0.144	0.464	0.059	0.290	0.610	0.205	0.669	No
	Left Tilt	0.135	0.142	0.580	0.098	0.277	0.715	0.233	0.813	No
	Right Touch	0.124	0.318	0.492	0.131	0.442	0.616	0.255	0.747	No
	Right Tilt	0.122	0.340	0.597	0.159	0.462	0.719	0.281	0.878	No
UMTS Band 5	Left Touch	0.248	0.144	0.464	0.059	0.392	0.712	0.307	0.771	No
	Left Tilt	0.012	0.142	0.580	0.098	0.154	0.592	0.110	0.690	No
	Right Touch	0.300	0.318	0.492	0.131	0.618	0.792	0.431	0.923	No
	Right Tilt	0.142	0.340	0.597	0.159	0.482	0.739	0.301	0.898	No
LTE Band 2	Left Touch	0.302	0.144	0.464	0.059	0.446	0.766	0.361	0.825	No
	Left Tilt	0.186	0.142	0.580	0.098	0.328	0.766	0.284	0.864	No
	Right Touch	0.200	0.318	0.492	0.131	0.518	0.692	0.331	0.823	No
	Right Tilt	0.173	0.340	0.597	0.159	0.513	0.770	0.332	0.929	No
LTE Band 4	Left Touch	0.240	0.144	0.464	0.059	0.384	0.704	0.299	0.763	No
	Left Tilt	0.211	0.142	0.580	0.098	0.353	0.791	0.309	0.889	No
	Right Touch	0.254	0.318	0.492	0.131	0.572	0.746	0.385	0.877	No
	Right Tilt	0.206	0.340	0.597	0.159	0.546	0.803	0.365	0.962	No
LTE Band 5	Left Touch	0.254	0.144	0.464	0.059	0.398	0.718	0.313	0.777	No
	Left Tilt	0.147	0.142	0.580	0.098	0.289	0.727	0.245	0.825	No
	Right Touch	0.294	0.318	0.492	0.131	0.612	0.786	0.425	0.917	No
	Right Tilt	0.031	0.340	0.597	0.159	0.371	0.628	0.190	0.787	No

Simultaneous Transmission Summation Scenario (Head SAR)										
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.1	5 GHz WLAN SISO Ant.1	BT	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	1+3+4	
LTE Band 12	Left Touch	0.180	0.144	0.464	0.059	0.324	0.644	0.239	0.703	No
	Left Tilt	0.100	0.142	0.580	0.098	0.242	0.680	0.198	0.778	No
	Right Touch	0.166	0.318	0.492	0.131	0.484	0.658	0.297	0.789	No
	Right Tilt	0.082	0.340	0.597	0.159	0.422	0.679	0.241	0.838	No
LTE Band 13	Left Touch	0.185	0.144	0.464	0.059	0.329	0.649	0.244	0.708	No
	Left Tilt	0.096	0.142	0.580	0.098	0.238	0.676	0.194	0.774	No
	Right Touch	0.174	0.318	0.492	0.131	0.492	0.666	0.305	0.797	No
	Right Tilt	0.094	0.340	0.597	0.159	0.434	0.691	0.253	0.850	No
LTE Band 26	Left Touch	0.213	0.144	0.464	0.059	0.357	0.677	0.272	0.736	No
	Left Tilt	0.109	0.142	0.580	0.098	0.251	0.689	0.207	0.787	No
	Right Touch	0.240	0.318	0.492	0.131	0.558	0.732	0.371	0.863	No
	Right Tilt	0.135	0.340	0.597	0.159	0.475	0.732	0.294	0.891	No
LTE Band 41	Left Touch	0.315	0.144	0.464	0.059	0.459	0.779	0.374	0.838	No
	Left Tilt	0.133	0.142	0.580	0.098	0.275	0.713	0.231	0.811	No
	Right Touch	0.181	0.318	0.492	0.131	0.499	0.673	0.312	0.804	No
	Right Tilt	0.238	0.340	0.597	0.159	0.578	0.835	0.397	**0.994**	No
LTE Band 66	Left Touch	0.315	0.144	0.464	0.059	0.459	0.779	0.374	0.838	No
	Left Tilt	0.221	0.142	0.580	0.098	0.363	0.801	0.319	0.899	No
	Right Touch	0.224	0.318	0.492	0.131	0.542	0.716	0.355	0.847	No
	Right Tilt	0.205	0.340	0.597	0.159	0.545	0.802	0.364	0.961	No

14.2 Body-Worn SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario (Body-Worn SAR)										
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.1	5 GHz WLAN SISO Ant.1	BT	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	1+3+4	
GSM 850	Rear	0.369	0.278	0.693	0.050	0.647	1.062	0.419	1.112	No
	Front	0.257	0.096	0.314	0.018	0.353	0.571	0.275	0.589	No
GSM 1900	Rear	0.399	0.278	0.693	0.050	0.677	1.092	0.449	1.142	No
	Front	0.279	0.096	0.314	0.018	0.375	0.593	0.297	0.611	No
UMTS Band 2	Rear	0.437	0.278	0.693	0.050	0.715	1.130	0.487	1.180	No
	Front	0.482	0.096	0.314	0.018	0.578	0.796	0.500	0.814	No
UMTS Band 4	Rear	0.265	0.278	0.693	0.050	0.543	0.958	0.315	1.008	No
	Front	0.325	0.096	0.314	0.018	0.421	0.639	0.343	0.657	No
UMTS Band 5	Rear	0.739	0.278	0.693	0.050	1.017	1.432	0.789	**1.482**	No
	Front	0.278	0.096	0.314	0.018	0.374	0.592	0.296	0.610	No
LTE Band 2	Rear	0.692	0.278	0.693	0.050	0.970	1.385	0.742	1.435	No
	Front	0.796	0.096	0.314	0.018	0.892	1.110	0.814	1.128	No
LTE Band 4	Rear	0.652	0.278	0.693	0.050	0.930	1.345	0.702	1.395	No
	Front	0.978	0.096	0.314	0.018	1.074	1.292	0.996	1.310	No
LTE Band 5	Rear	0.266	0.278	0.693	0.050	0.544	0.959	0.316	1.009	No
	Front	0.110	0.096	0.314	0.018	0.206	0.424	0.128	0.442	No
LTE Band 12	Rear	0.534	0.278	0.693	0.050	0.812	1.227	0.584	1.277	No
	Front	0.217	0.096	0.314	0.018	0.313	0.531	0.235	0.549	No
LTE Band 13	Rear	0.568	0.278	0.693	0.050	0.846	1.261	0.618	1.311	No
	Front	0.319	0.096	0.314	0.018	0.415	0.633	0.337	0.651	No
LTE Band 26	Rear	0.620	0.278	0.693	0.050	0.898	1.313	0.670	1.363	No
	Front	0.283	0.096	0.314	0.018	0.379	0.597	0.301	0.615	No
LTE Band 41	Rear	0.562	0.278	0.693	0.050	0.840	1.255	0.612	1.305	No
	Front	0.453	0.096	0.314	0.018	0.549	0.767	0.471	0.785	No
LTE Band 66	Rear	0.613	0.278	0.693	0.050	0.891	1.306	0.663	1.356	No
	Front	0.927	0.096	0.314	0.018	1.023	1.241	0.945	1.259	No

14.3 Hotspot SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario (Hotspot SAR) (10mm)										
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.1	5 GHz WLAN SISO Ant.1	BT	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	1+3+4	
GSM 850	Rear	0.782	0.278	0.609	0.050	1.060	1.391	0.832	**1.441**	No
	Front	0.325	0.096	0.141	0.018	0.421	0.466	0.343	0.484	No
	Left	0.303	0.051	0.256	0.009	0.354	0.559	0.312	0.568	No
	Right	0.556				0.556	0.556	0.556	0.556	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.556				0.556	0.556	0.556	0.556	No
GSM 1900	Rear	0.416	0.278	0.609	0.050	0.694	1.025	0.466	1.075	No
	Front	0.298	0.096	0.141	0.018	0.394	0.439	0.316	0.457	No
	Left	0.185	0.051	0.256	0.009	0.236	0.441	0.194	0.450	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.383				0.383	0.383	0.383	0.383	No
UMTS Band 2	Rear	0.303	0.278	0.609	0.050	0.581	0.912	0.353	0.962	No
	Front	0.228	0.096	0.141	0.018	0.324	0.369	0.246	0.387	No
	Left	0.264	0.051	0.256	0.009	0.315	0.520	0.273	0.529	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.402				0.402	0.402	0.402	0.402	No
UMTS Band 4	Rear	0.306	0.278	0.609	0.050	0.584	0.915	0.356	0.965	No
	Front	0.299	0.096	0.141	0.018	0.395	0.440	0.317	0.458	No
	Left	0.225	0.051	0.256	0.009	0.276	0.481	0.234	0.490	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.528				0.528	0.528	0.528	0.528	No
UMTS Band 5	Rear	0.739	0.278	0.609	0.050	1.017	1.348	0.789	1.398	No
	Front	0.278	0.096	0.141	0.018	0.374	0.419	0.296	0.437	No
	Left	0.182	0.051	0.256	0.009	0.233	0.438	0.191	0.447	No
	Right	0.413				0.413	0.413	0.413	0.413	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.451				0.451	0.451	0.451	0.451	No
LTE Band 2	Rear	0.453	0.278	0.609	0.050	0.731	1.062	0.503	1.112	No
	Front	0.505	0.096	0.141	0.018	0.601	0.646	0.523	0.664	No
	Left	0.182	0.051	0.256	0.009	0.233	0.438	0.191	0.447	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.580				0.580	0.580	0.580	0.580	No

Simultaneous Transmission Summation Scenario (Hotspot SAR) (10mm)										
Band		WWAN SAR	2.4 GHz WLAN SISO Ant.1	5 GHz WLAN SISO Ant.1	BT	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	∑ 1-g SAR	SPLSR
		(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(Yes / No)
		1	2	3	4	1+2	1+3	1+4	1+5	
LTE Band 4	Rear	0.716	0.278	0.609	0.050	0.994	1.325	0.766	1.375	No
	Front	0.718	0.096	0.141	0.018	0.814	0.859	0.736	0.877	No
	Left	0.447	0.051	0.256	0.009	0.498	0.703	0.456	0.712	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.713				0.713	0.713	0.713	0.713	No
LTE Band 5	Rear	0.266	0.278	0.609	0.050	0.544	0.875	0.316	0.925	No
	Front	0.110	0.096	0.141	0.018	0.206	0.251	0.128	0.269	No
	Left	0.047	0.051	0.256	0.009	0.098	0.303	0.056	0.312	No
	Right	0.304				0.304	0.304	0.304	0.304	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.440				0.440	0.440	0.440	0.440	No
LTE Band 12	Rear	0.534	0.278	0.609	0.050	0.812	1.143	0.584	1.193	No
	Front	0.217	0.096	0.141	0.018	0.313	0.358	0.235	0.376	No
	Left	0.096	0.051	0.256	0.009	0.147	0.352	0.105	0.361	No
	Right	0.173				0.173	0.173	0.173	0.173	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.229				0.229	0.229	0.229	0.229	No
LTE Band 13	Rear	0.568	0.278	0.609	0.050	0.846	1.177	0.618	1.227	No
	Front	0.319	0.096	0.141	0.018	0.415	0.460	0.337	0.478	No
	Left	0.165	0.051	0.256	0.009	0.216	0.421	0.174	0.430	No
	Right	0.255				0.255	0.255	0.255	0.255	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.311				0.311	0.311	0.311	0.311	No
LTE Band 26	Rear	0.620	0.278	0.609	0.050	0.898	1.229	0.670	1.279	No
	Front	0.283	0.096	0.141	0.018	0.379	0.424	0.301	0.442	No
	Left	0.229	0.051	0.256	0.009	0.280	0.485	0.238	0.494	No
	Right	0.375				0.375	0.375	0.375	0.375	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.397				0.397	0.397	0.397	0.397	No
LTE Band 41	Rear	0.470	0.278	0.609	0.050	0.748	1.079	0.520	1.129	No
	Front	0.421	0.096	0.141	0.018	0.517	0.562	0.439	0.580	No
	Left	0.256	0.051	0.256	0.009	0.307	0.512	0.265	0.521	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.446				0.446	0.446	0.446	0.446	No
LTE Band 66	Rear	0.680	0.278	0.609	0.050	0.958	1.289	0.730	1.339	No
	Front	0.679	0.096	0.141	0.018	0.775	0.820	0.697	0.838	No
	Left	0.370	0.051	0.256	0.009	0.421	0.626	0.379	0.635	No
	Right					0.000	0.000	0.000	0.000	No
	Top		0.303	1.056	0.037	0.303	1.056	0.037	1.093	No
	Bottom	0.755				0.755	0.755	0.755	0.755	No

14.4 Phablet SAR Simultaneous Transmission Analysis.

Simultaneous Transmission Summation Scenario (Phablet SAR) (0mm)					
Band		5 GHz WLAN (W/kg) 1	NFC SAR (W/kg) 2	∑ 10-g SAR (W/kg) 1+2	SPLSR (Yes / No)
NFC	Rear	0.576	0.025	0.601	No
	Front	0.300	0	0.300	No
	Left	0.385	0	0.385	No
	Right				No
	Top	1.400	0	1.400	No
	Bottom				No

14.5 Simultaneous Transmission Conclusion

The above numerical summed SAR Results are sufficient to determine that simultaneous transmission cases will not exceed the SAR Limit and therefore measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE1528-2013.

15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 ㎒ to 6 ㎓, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency Band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency Band:

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.

2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg for 1g SAR or ≥3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Hotspot SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
㎒	Channel					
5 785	157	UNII 3	Top	0.998	0.982	1.02

16. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg For 10g SAR for all frequency Bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

17. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/55B8A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/56W9A1/C/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	TX90 Xlspeag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F07/55B8A1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F07/56W9A1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D2114210603	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D21142605	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D21143300	S-0008	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D21142605	001729	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D21139902	S-0306	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick) D21142102	S-0602	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331939309	12/29/2022	Annual	12/29/2023
TESTO	175-H1/Thermometer	40332651310	12/29/2022	Annual	12/29/2023
TESTO	175-H1/Thermometer	40331949309	12/29/2022	Annual	12/29/2023
TESTO	608-H1/Thermometer	83348029	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83348021	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83406789	06/29/2023	Annual	06/29/2024
SPEAG	DAE4	504	01/10/2023	Annual	01/10/2024
SPEAG	DAE4	869	03/23/2023	Annual	03/23/2024
SPEAG	DAE4	1686	05/23/2023	Annual	05/23/2024
SPEAG	DAE4	1687	07/18/2023	Annual	07/18/2024
SPEAG	DAE4	652	01/20/2023	Annual	01/20/2024
SPEAG	DAE4	1464	06/16/2023	Annual	06/16/2024
SPEAG	E-Field Probe EX3DV4	3797	01/24/2023	Annual	01/24/2024
SPEAG	E-Field Probe ES3DV3	3076	07/18/2023	Annual	07/18/2024
SPEAG	E-Field Probe EX3DV4	7732	06/20/2023	Annual	06/20/2024
SPEAG	E-Field Probe EX3DV4	7654	05/24/2023	Annual	05/24/2024
SPEAG	E-Field Probe EX3DV4	7309	06/19/2023	Annual	06/19/2024
SPEAG	E-Field Probe EX3DV4	7702	01/26/2023	Annual	01/26/2024
SPEAG	Dipole CLA13	1016	09/21/2023	Annual	09/21/2024
SPEAG	Dipole D750V3	1014	09/22/2023	Annual	09/22/2024
SPEAG	Dipole D835V2	4d165	05/23/2023	Annual	05/23/2024
SPEAG	Dipole D1800V2	2d015	05/17/2023	Annual	05/17/2024
SPEAG	Dipole D1900V2	5d061	01/23/2023	Annual	01/23/2024
SPEAG	Dipole D2450V2	1049	04/25/2023	Annual	04/25/2024
SPEAG	Dipole D2600V2	1106	05/24/2023	Annual	05/24/2024
SPEAG	Dipole D5GHzV2	1317	05/17/2023	Annual	05/17/2024
Agilent	Power Meter E4419B	MY41291386	09/21/2023	Annual	09/21/2024
Agilent	Power Meter N1911A	MY45101406	05/26/2023	Annual	05/26/2024
Agilent	Power Sensor 8481A	SG1091286	09/21/2023	Annual	09/21/2024
Agilent	Power Sensor 8481A	MY41090675	09/21/2023	Annual	09/21/2024
Agilent	Wideband Power Sensor N1921A	MY55220026	07/28/2023	Annual	07/28/2024
SPEAG	DAKS 3.5	1038	01/25/2023	Annual	01/25/2024
SPEAG	Vector Reflectometer	0141013	02/13/2023	Annual	02/13/2024
Agilent	WIRELESS COMMUNICATION E5515C	GB42230619	05/26/2023	Annual	05/26/2024
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/23/2024	Annual	03/23/2024
EMPOWER	RF Power Amplifier	1084	05/26/2023	Annual	05/26/2024
EMPOWER	RF Power Amplifier	1041D/C0508	05/26/2023	Annual	05/26/2024

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
R&S	Wireless Communication Test Set CMW500	115733	03/23/2023	Annual	03/23/2024
MICRO LAB	LP Filter / LA-15N	10453	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-30N	-	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-60N	32011	09/21/2023	Annual	09/21/2024
Agilent	Attenuator (3dB) 8693B	MY39260298	08/22/2023	Annual	08/22/2024
HP	Attenuator (3dB) 33340A	02427	08/22/2023	Annual	08/22/2024
HP	Attenuator (20dB) 8493C	09271	08/22/2023	Annual	08/22/2024
Agilent	Directional Bridge 86205A	3140A04581	04/25/2023	Annual	04/25/2024
OSI	Power Divider	#2	05/26/2023	Annual	05/26/2024
HP	Dual Directional Coupler	16072	09/21/2023	Annual	09/21/2024
Anritsu	Radio Communication Tester MT8820C	6200695605	03/23/2023	Annual	03/23/2024
Anritsu	Radio Communication Tester MT8821C	6201502997	05/26/2023	Annual	05/26/2024
Anritsu	Radio Communication Tester MT8821C	6262044720	12/07/2022	Annual	12/07/2023
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/25/2023	Annual	01/25/2024

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

18. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the abortion and distribution of electromagnetic energy in the body are very complex phenomena the depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

19. References

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Appendix *A.* DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information &setup photo file no. as follows:

Report No.
HCT-SR-2311-FC001-P

Appendix B. – SAR Test Plots

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	23.9 ℃
Ambient Temperature:	24.0 ℃
Test Date:	10/17/2023
Plot No.:	A1

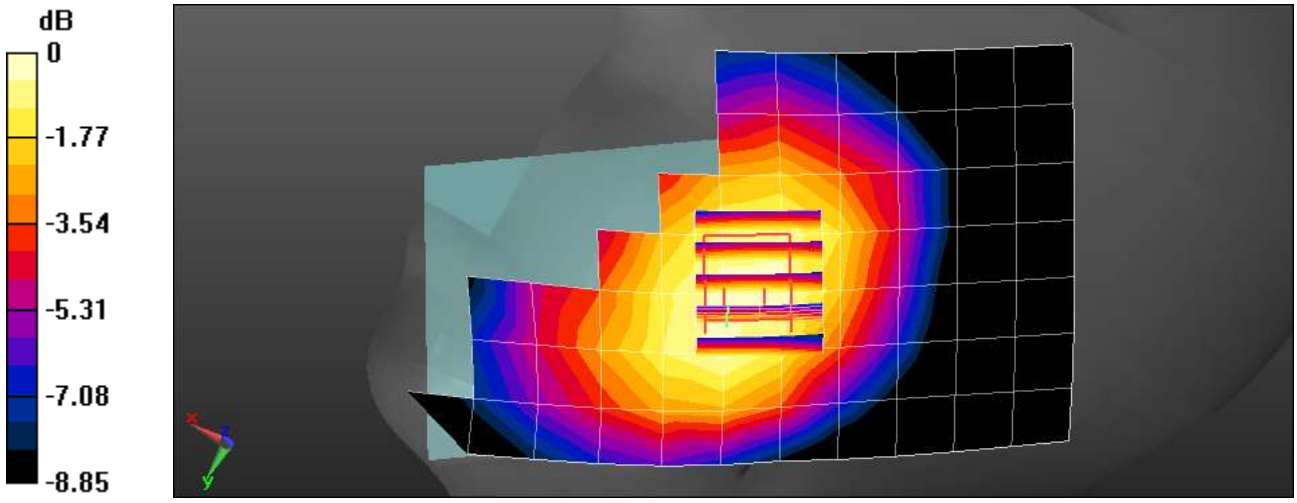
Communication System: UID 0, GSM850 GPRS 4TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:2.07491
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 S/m; ε_r = 41.217; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 836.6 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM850 4Tx Head Right Touch 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.301 W/kg

GSM850 4Tx Head Right Touch 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.128 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.334 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.211 W/kg
Maximum value of SAR (measured) = 0.315 W/kg



0 dB = 0.315 W/kg = -5.02 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/18/2023
Plot No.:	A2

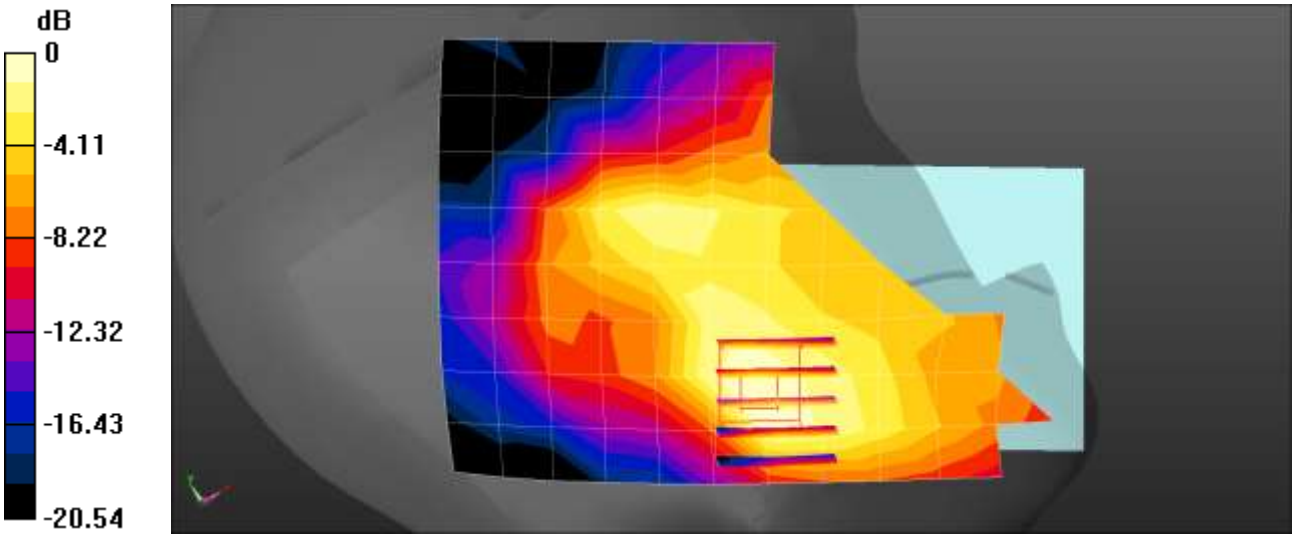
Communication System: UID 0, GSM 1900 4Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.07491
Medium parameters used: f = 1880 MHz; σ = 1.395 S/m; ε_r = 38.834; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM1900 4Tx Left Touch 661ch/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.133 W/kg

GSM1900 4Tx Left Touch 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.590 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.067 W/kg
Maximum value of SAR (measured) = 0.144 W/kg



0 dB = 0.144 W/kg = -8.42 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0 ℃
Ambient Temperature:	21.1 ℃
Test Date:	10/16/2023
Plot No.:	A3

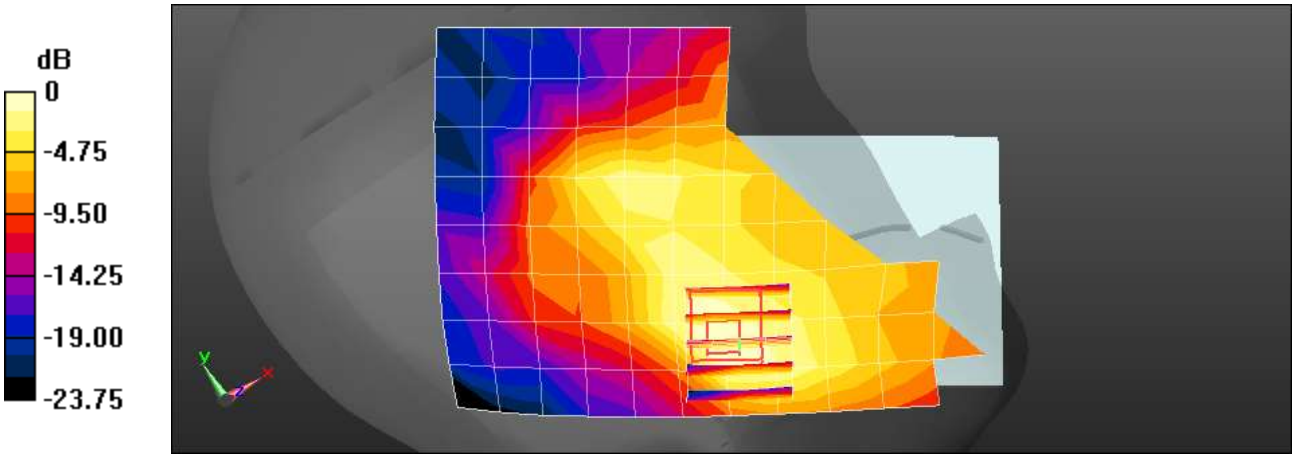
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.405 S/m; ε_r = 39.051; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 2 Head Left Touch 9400ch/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.186 W/kg

UMTS Band 2 Head Left Touch 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.465 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.259 W/kg
SAR(1 g) = 0.161 W/kg; SAR(10 g) = 0.096 W/kg
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg = -6.76 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	10/17/2023
Plot No.:	A4

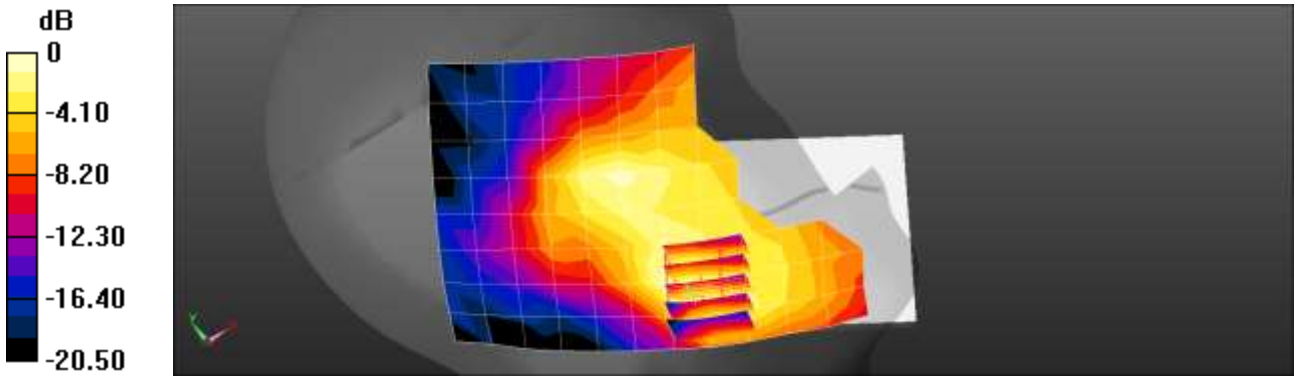
Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.317 S/m; ε_r = 41.249; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(9.1, 9.1, 9.1) @ 1732.4 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 4 Head Left Touch 1412ch/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.136 W/kg

UMTS Band 4 Head Left Touch 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.763 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.188 W/kg
SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 0.155 W/kg



0 dB = 0.155 W/kg = -8.10 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.9 ℃
Ambient Temperature:	23.0 ℃
Test Date:	10/16/2023
Plot No.:	A5

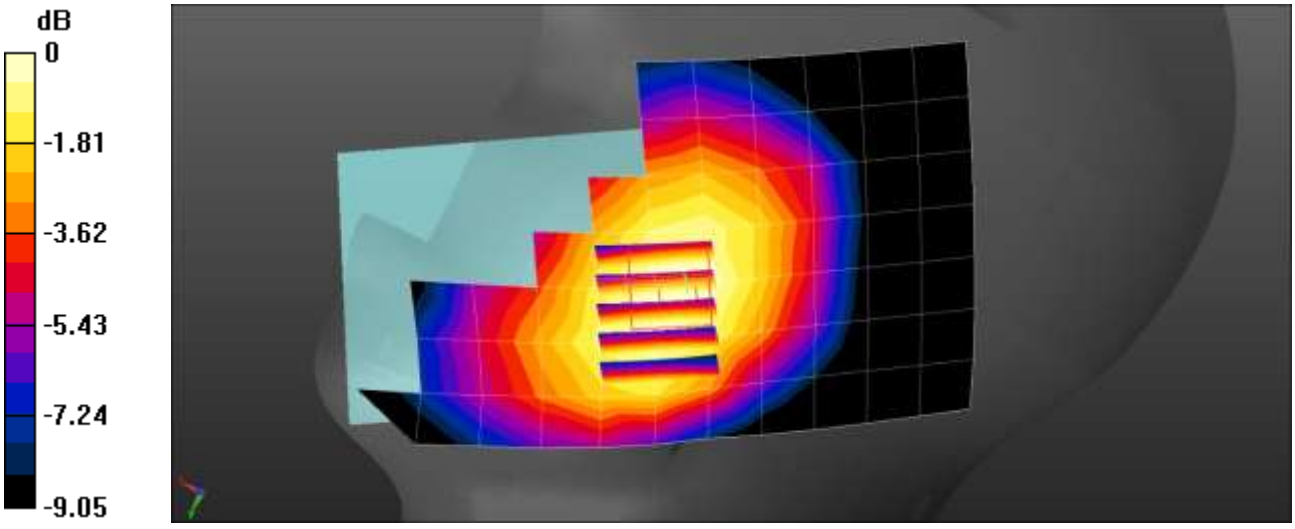
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 S/m; ε_r = 40.718; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 836.6 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

UMTS Band 5 Head Right Touch 4183ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.257 W/kg

UMTS Band 5 Head Right Touch 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.989 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.229 W/kg; SAR(10 g) = 0.177 W/kg
Maximum value of SAR (measured) = 0.261 W/kg



0 dB = 0.261 W/kg = -5.83 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6 ℃
Ambient Temperature:	20.7 ℃
Test Date:	10/26/2023
Plot No.:	A6

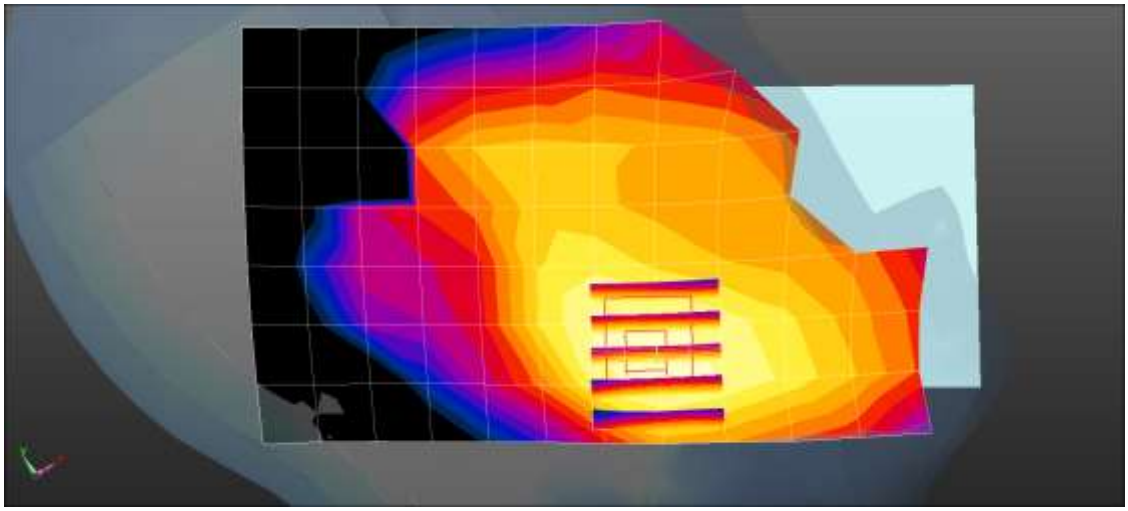
Communication System: UID 0, LTE2 (20MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.388 S/m; ε_r = 40.113; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.19, 7.47, 8.43) @ 1880 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 2 Head Left Touch QPSK 20MHz 1RB 49offset 18900ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.301 W/kg

LTE Band 2 Head Left Touch QPSK 20MHz 1RB 49offset 18900ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.327 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.372 W/kg
SAR(1 g) = 0.239 W/kg; SAR(10 g) = 0.149 W/kg
Maximum value of SAR (measured) = 0.325 W/kg



0 dB = 0.325 W/kg = -4.88 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/27/2023
Plot No.:	A7

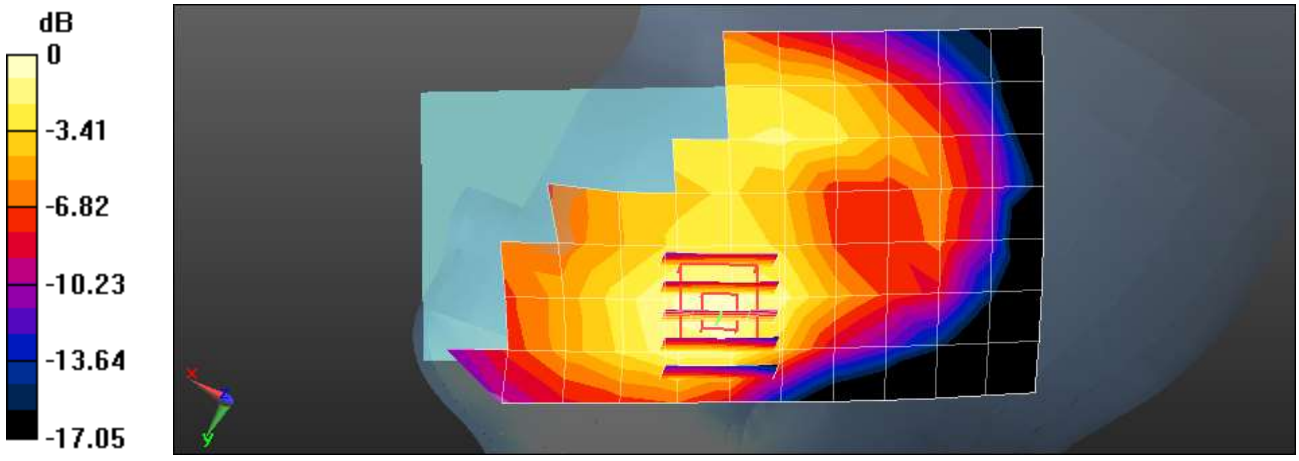
Communication System: UID 0, LTE Band 4 (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.335 S/m; ε_r = 40.778; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1732.5 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 4 Head Right Touch QPSK 20MHz 1RB 49offset 20175ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.229 W/kg

LTE Band 4 Head Right Touch QPSK 20MHz 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.816 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.282 W/kg
SAR(1 g) = 0.193 W/kg; SAR(10 g) = 0.126 W/kg
Maximum value of SAR (measured) = 0.250 W/kg



0 dB = 0.250 W/kg = -6.02 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7 ℃
Ambient Temperature:	20.8 ℃
Test Date:	10/07/2023
Plot No.:	A8

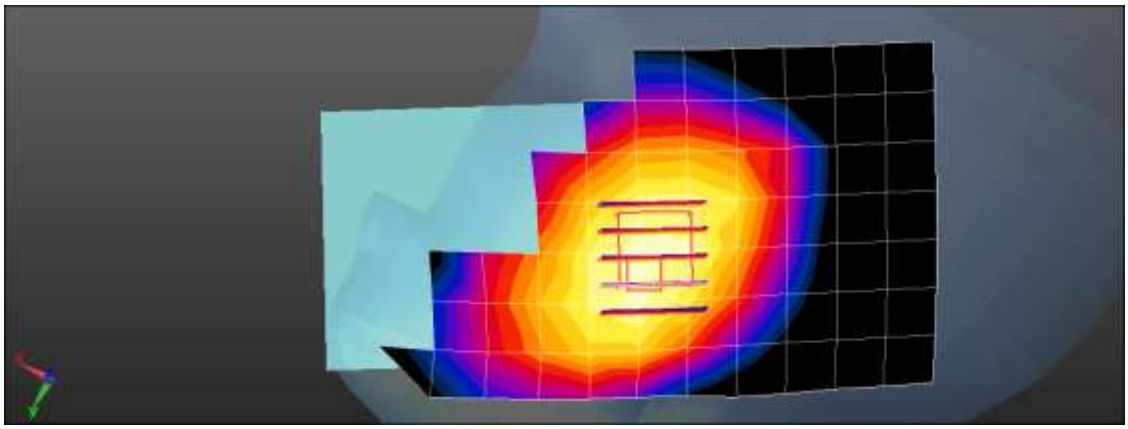
Communication System: UID 0, LTE Band 5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.915 S/m; ε_r = 41.806; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.11, 6.11, 6.11) @ 836.5 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 5 Head Right Touch QPSK 10MHz 1RB 0offset 20525ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.224 W/kg

LTE Band 5 Head Right Touch QPSK 10MHz 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.797 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.264 W/kg
SAR(1 g) = 0.212 W/kg; SAR(10 g) = 0.164 W/kg
Maximum value of SAR (measured) = 0.233 W/kg



0 dB = 0.233 W/kg = -6.33 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5 ℃
Ambient Temperature:	20.6 ℃
Test Date:	10/10/2023
Plot No.:	A9

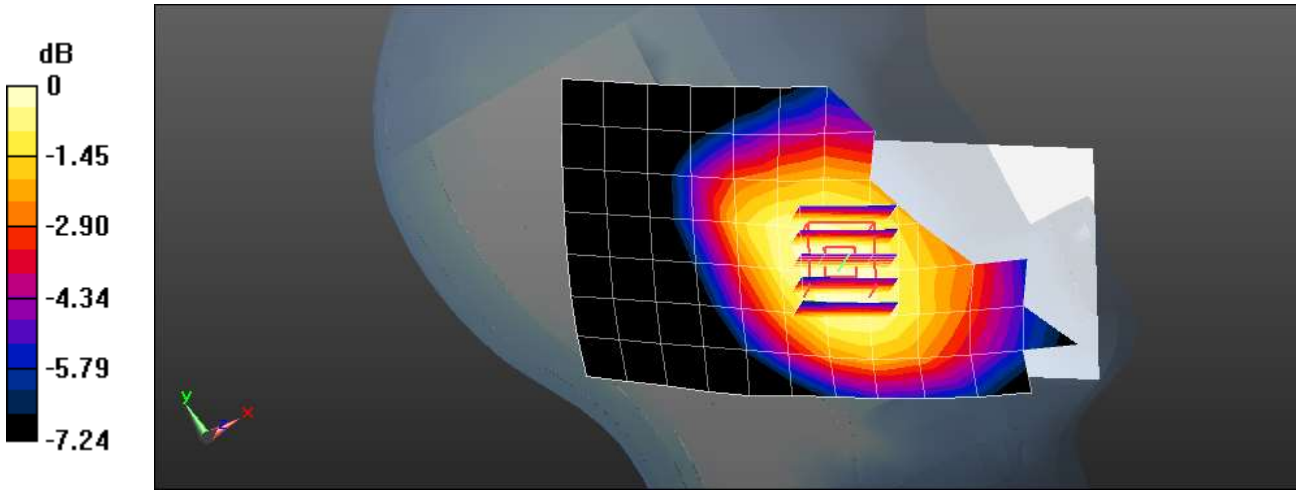
ommunication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.882 S/m; ε_r = 42.388; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 707.5 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 12 Head Left Touch QPSK 10MHz 1RB 24offset 23095ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.151 W/kg

LTE Band 12 Head Left Touch QPSK 10MHz 1RB 24offset 23095ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.333 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.165 W/kg
SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.118 W/kg
Maximum value of SAR (measured) = 0.153 W/kg



0 dB = 0.153 W/kg = -8.15 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4 ℃
Ambient Temperature:	20.5 ℃
Test Date:	10/11/2023
Plot No.:	A10

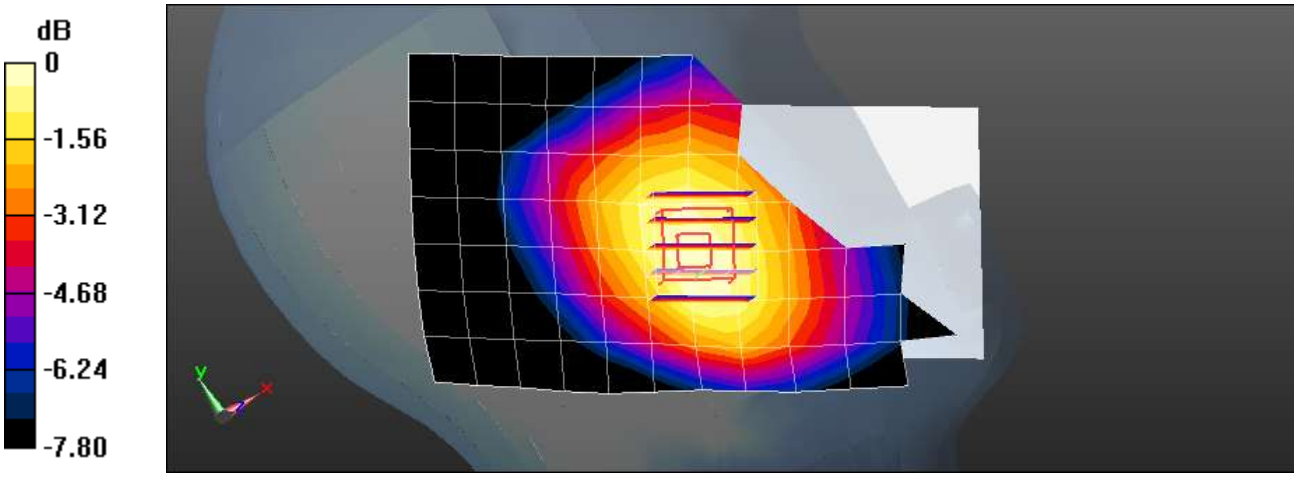
Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.923 S/m; ε_r = 41.597; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 782 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 13 Head Left Touch QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.156 W/kg

LTE Band 13 Head Left Touch QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.708 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.167 W/kg
SAR(1 g) = 0.141 W/kg; SAR(10 g) = 0.110 W/kg
Maximum value of SAR (measured) = 0.152 W/kg



0 dB = 0.152 W/kg = -8.18 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.8 ℃
Ambient Temperature:	21.9 ℃
Test Date:	11/01/2023
Plot No.:	A11

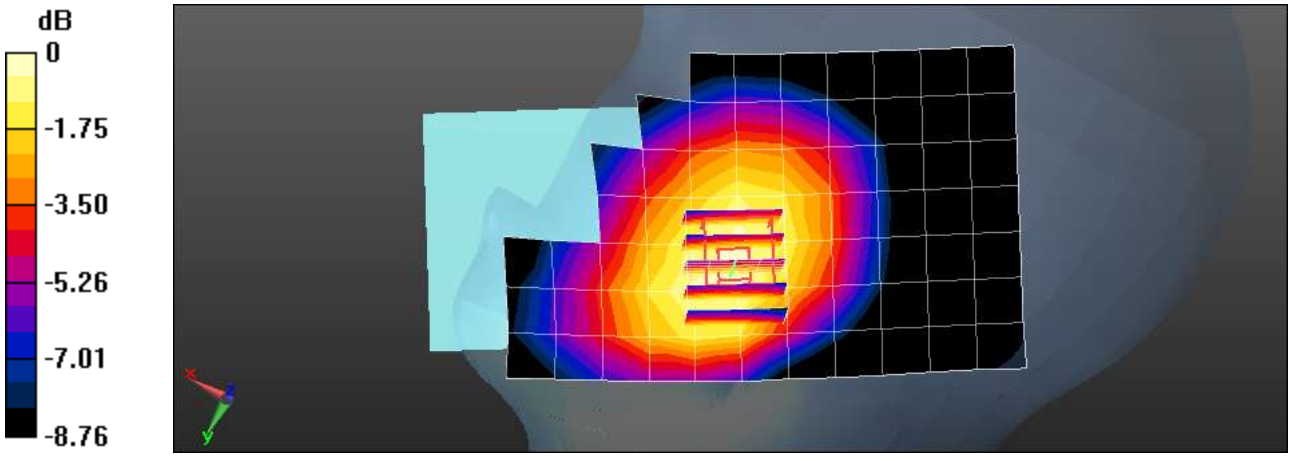
Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.9 S/m; ε_r = 41.584; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(9.82, 8.7, 9.76) @ 831.5 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 26 Head Right Touch QPSK 15MHz 1RB 36offset 26865ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.220 W/kg

LTE Band 26 Head Right Touch QPSK 15MHz 1RB 36offset 26865ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.714 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.152 W/kg
Maximum value of SAR (measured) = 0.230 W/kg



0 dB = 0.230 W/kg = -6.38 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2 ℃
Ambient Temperature:	20.3 ℃
Test Date:	10/17/2023
Plot No.:	A12

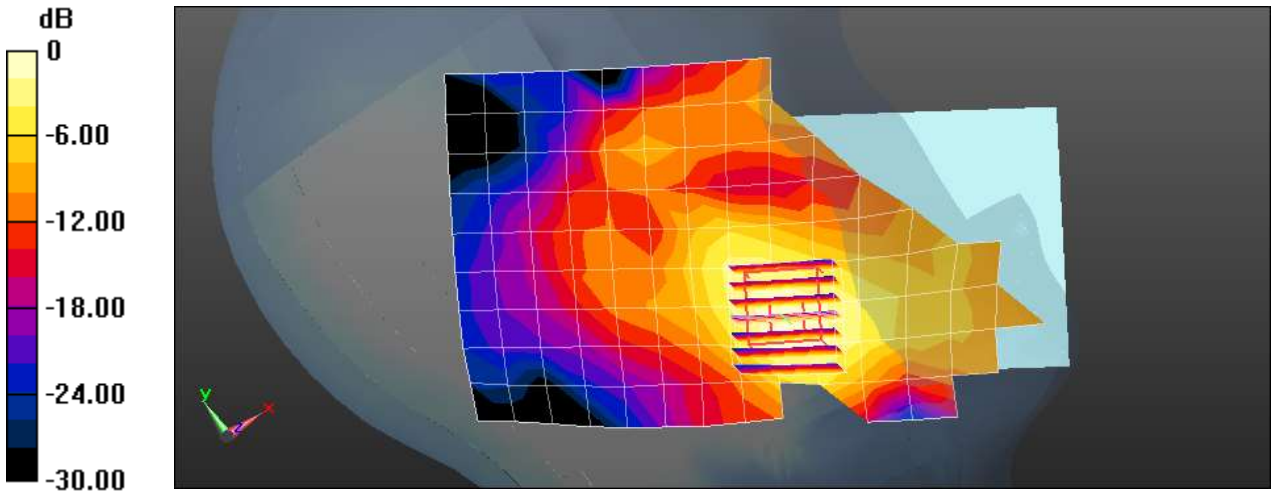
Communication System: UID 0, LTE Band 41 (FCC) (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.965 S/m; ε_r = 38.799; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.59, 4.59, 4.59) @ 2593 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.13 (7474)

LTE Band 41 Head Left Touch QPSK 20MHz 1RB 49offset 40620ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.258 W/kg

LTE Band 41 Head Left Touch QPSK 20MHz 1RB 49offset 40620ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.655 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.459 W/kg
SAR(1 g) = 0.229 W/kg; SAR(10 g) = 0.112 W/kg
Maximum value of SAR (measured) = 0.293 W/kg



0 dB = 0.293 W/kg = -5.33 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	10/19/2023
Plot No.:	A13

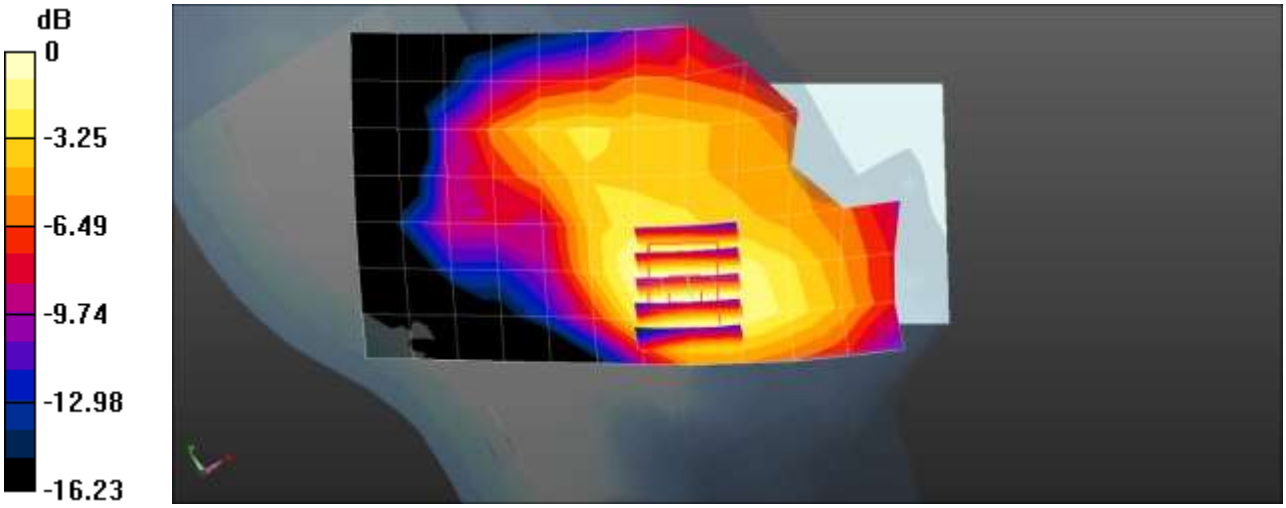
Communication System: UID 0, LTE 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.368 S/m; ε_r = 40.921; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1745 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 49offset 132322ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.308 W/kg

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 49offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.750 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.383 W/kg
SAR(1 g) = 0.257 W/kg; SAR(10 g) = 0.169 W/kg
Maximum value of SAR (measured) = 0.339 W/kg



0 dB = 0.339 W/kg = -4.70 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.0 ℃
Ambient Temperature:	22.1 ℃
Test Date:	10/17/2023
Plot No.:	A14

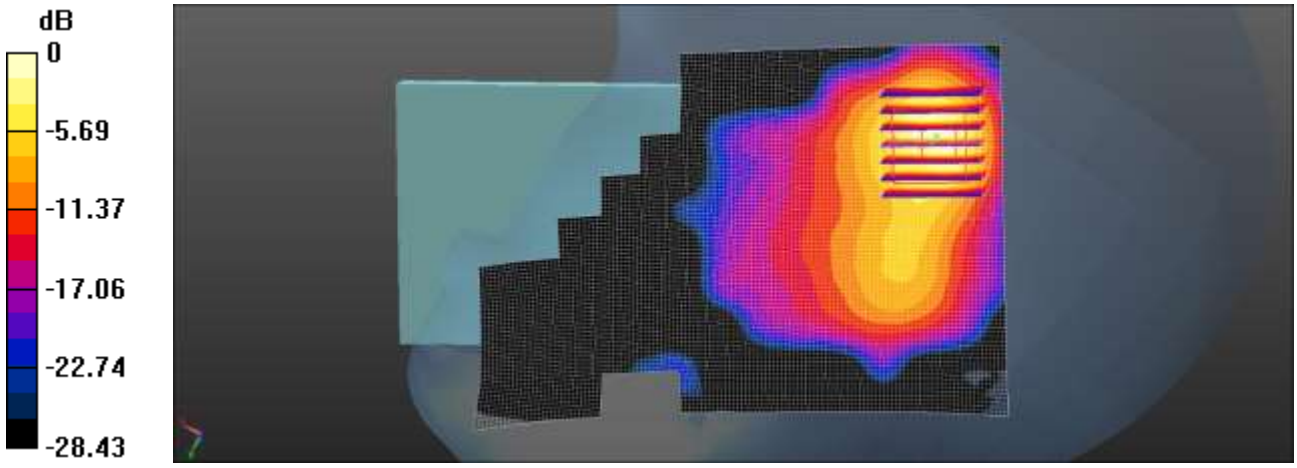
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.865 S/m; ε_r = 38.642; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7732; ConvF(8.5, 8.5, 8.5) @ 2462 MHz; Calibrated: 2023-06-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1687; Calibrated: 2023-07-18
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Head Right Tilt 1Mbps 11ch/Area Scan (91x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.460 W/kg

802.11b Head Right Tilt 1Mbps 11ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.665 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.730 W/kg
SAR(1 g) = 0.290 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 0.556 W/kg



0 dB = 0.556 W/kg = -2.55 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	10/24/2023
Plot No.:	A15

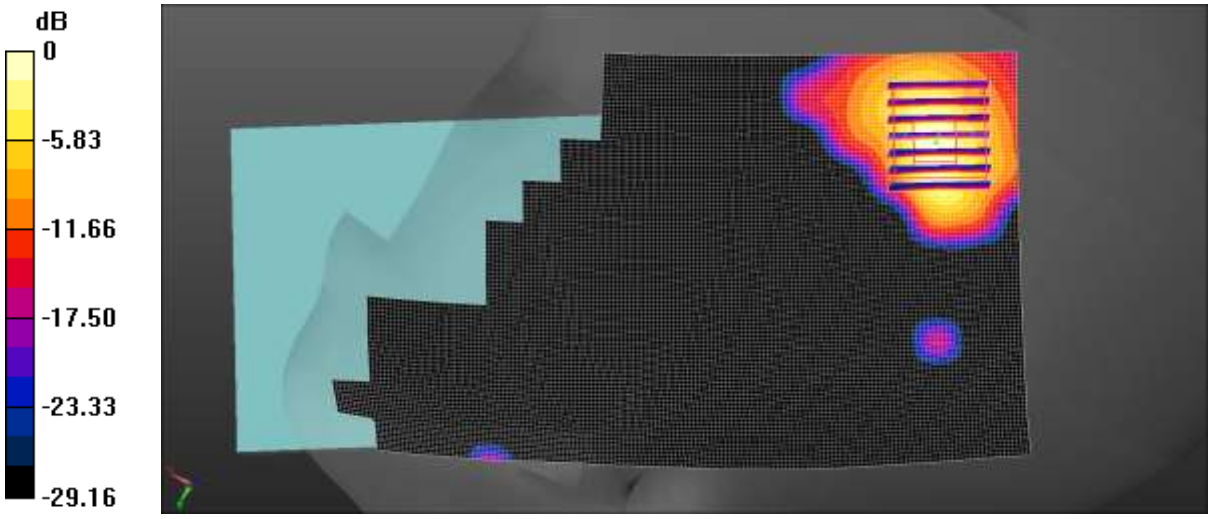
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.803 S/m; ε_r = 36.17; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(5.08, 4.78, 5.04) @ 5290 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11ac80 Head Right Tilt MCS0 58ch/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.835 W/kg

802.11ac80 Head Right Tilt MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.4540 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.332 W/kg; SAR(10 g) = 0.096 W/kg
Maximum value of SAR (measured) = 0.812 W/kg



0 dB = 0.812 W/kg = -0.90 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.8 ℃
Ambient Temperature:	19.9 ℃
Test Date:	11/01/2023
Plot No.:	A16

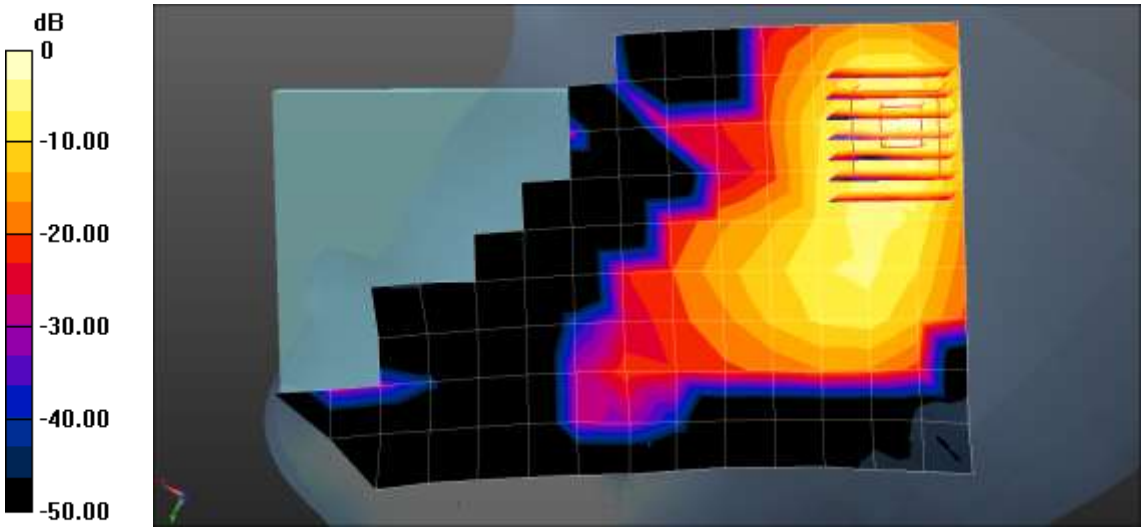
Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2480 MHz; σ = 1.81 S/m; ε_r = 39.152; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(7.94, 7.91, 8.56) @ 2480 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Bluetooth Head Right Tilt DH5 78ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.288 W/kg

Bluetooth Head Right Tilt DH5 78ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.108 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.141 W/kg; SAR(10 g) = 0.050 W/kg
Maximum value of SAR (measured) = 0.294 W/kg



0 dB = 0.294 W/kg = -5.32 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	23.9 ℃
Ambient Temperature:	24.0 ℃
Test Date:	10/17/2023
Plot No.:	B1

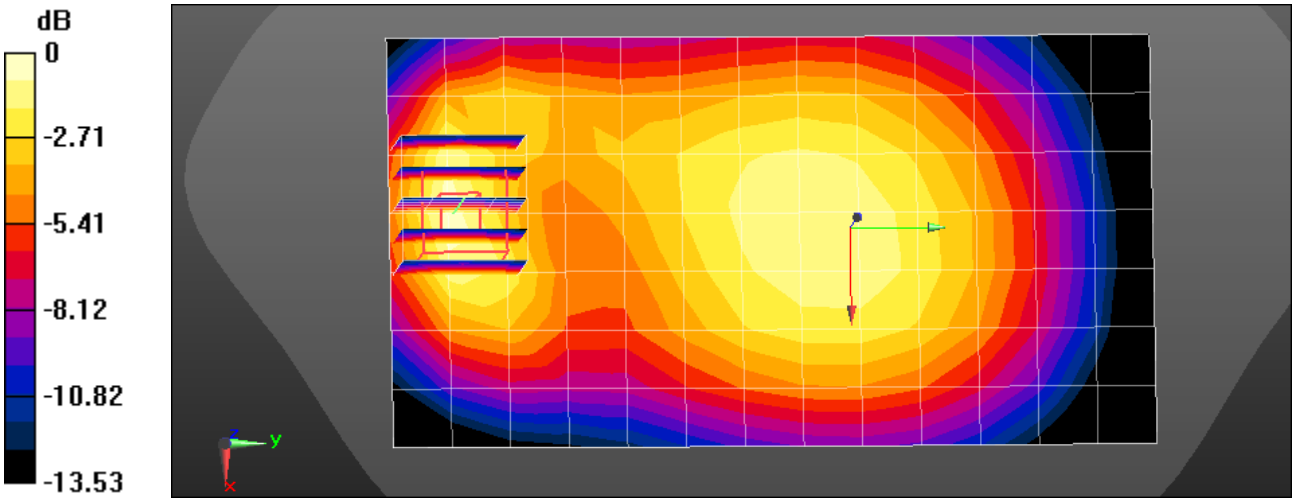
Communication System: UID 0, GSM 850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 S/m; ε_r = 41.217; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 836.6 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM850 BodyWorn Rear 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.441 W/kg

GSM850 BodyWorn Rear 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.46 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.531 W/kg
SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.188 W/kg
Maximum value of SAR (measured) = 0.458 W/kg



0 dB = 0.458 W/kg = -3.39 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/18/2023
Plot No.:	B2

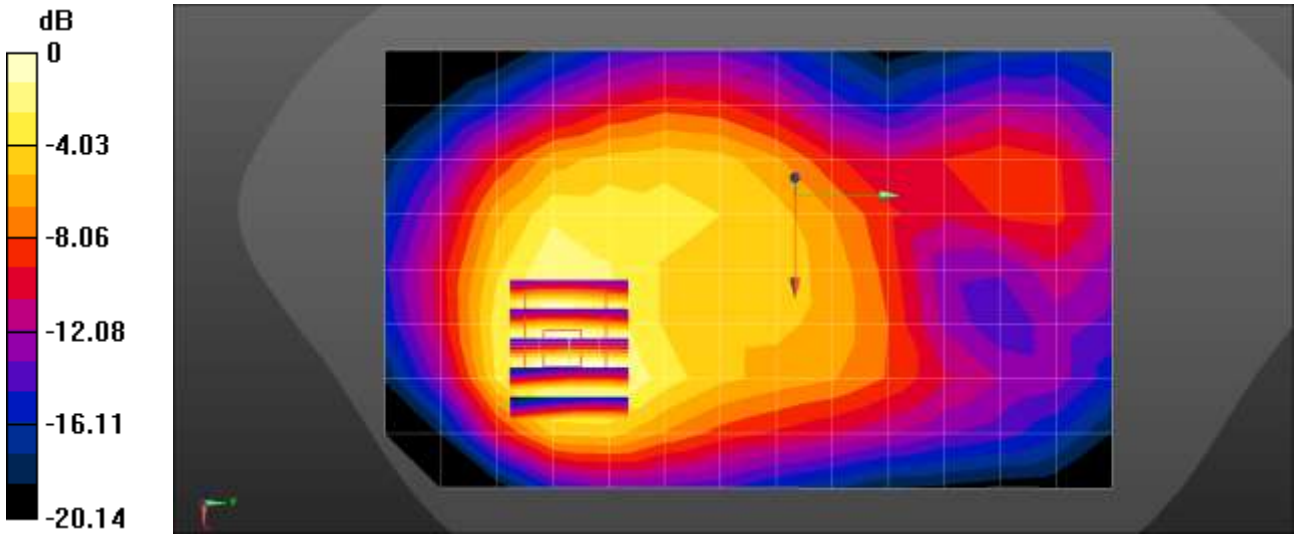
Communication System: UID 0, GSM 1900 (0) (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 1880 MHz; σ = 1.395 S/m; ε_r = 38.834; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM1900 Body Rear 661ch/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.491 W/kg

GSM1900 Body Rear 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.60 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.642 W/kg
SAR(1 g) = 0.365 W/kg; SAR(10 g) = 0.213 W/kg
Maximum value of SAR (measured) = 0.537 W/kg



0 dB = 0.537 W/kg = -2.70 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0 ℃
Ambient Temperature:	21.1 ℃
Test Date:	10/16/2023
Plot No.:	B3

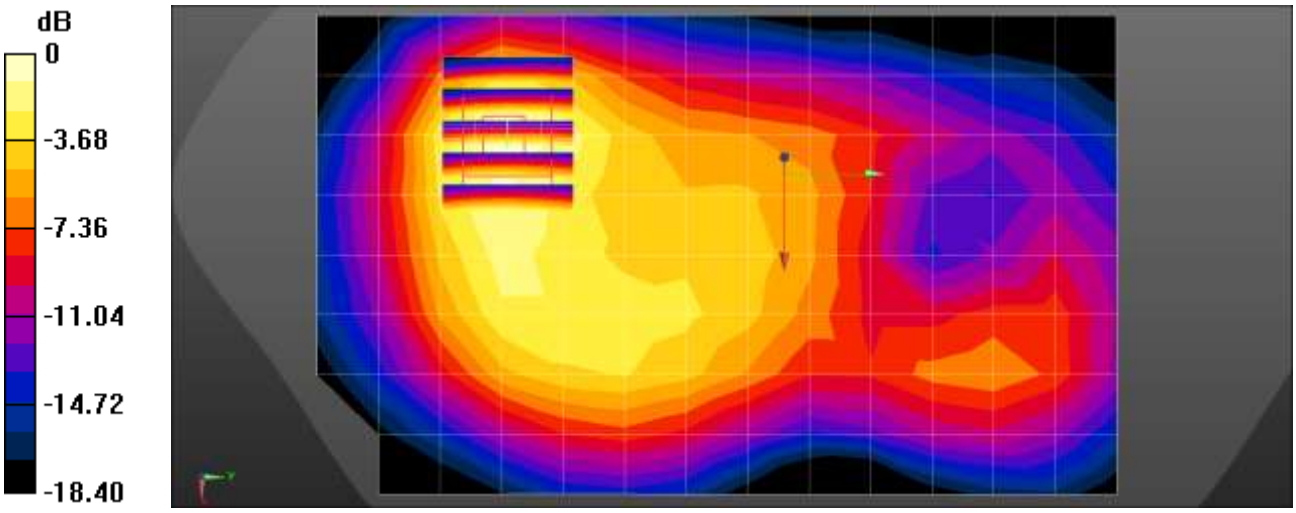
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.405 S/m; ε_r = 39.051; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 2 Bodyworn Front 9400ch/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.584 W/kg

UMTS Band 2 Bodyworn Front 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.84 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.687 W/kg
SAR(1 g) = 0.396 W/kg; SAR(10 g) = 0.225 W/kg
Maximum value of SAR (measured) = 0.571 W/kg



0 dB = 0.571 W/kg = -2.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	10/17/2023
Plot No.:	B4

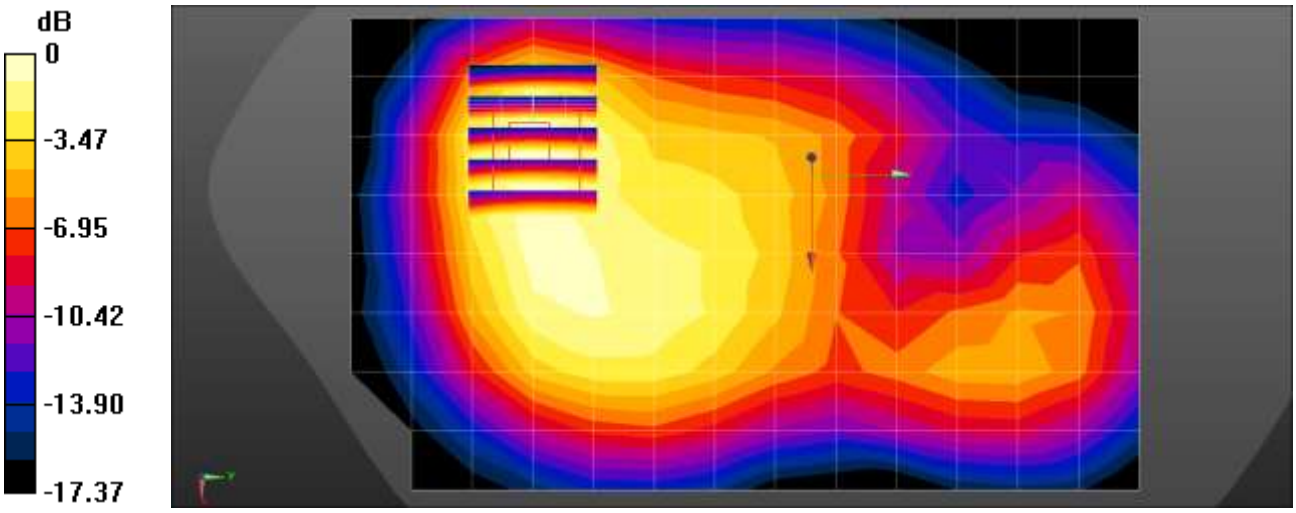
Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.317 S/m; ε_r = 41.249; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(9.1, 9.1, 9.1) @ 1732.4 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 4 Bodyworn Front 1412ch/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.395 W/kg

UMTS Band 4 Bodyworn Front 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.505 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.471 W/kg
SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.161 W/kg
Maximum value of SAR (measured) = 0.383 W/kg



0 dB = 0.383 W/kg = -4.17 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6 ℃
Ambient Temperature:	20.7 ℃
Test Date:	10/26/2023
Plot No.:	B5

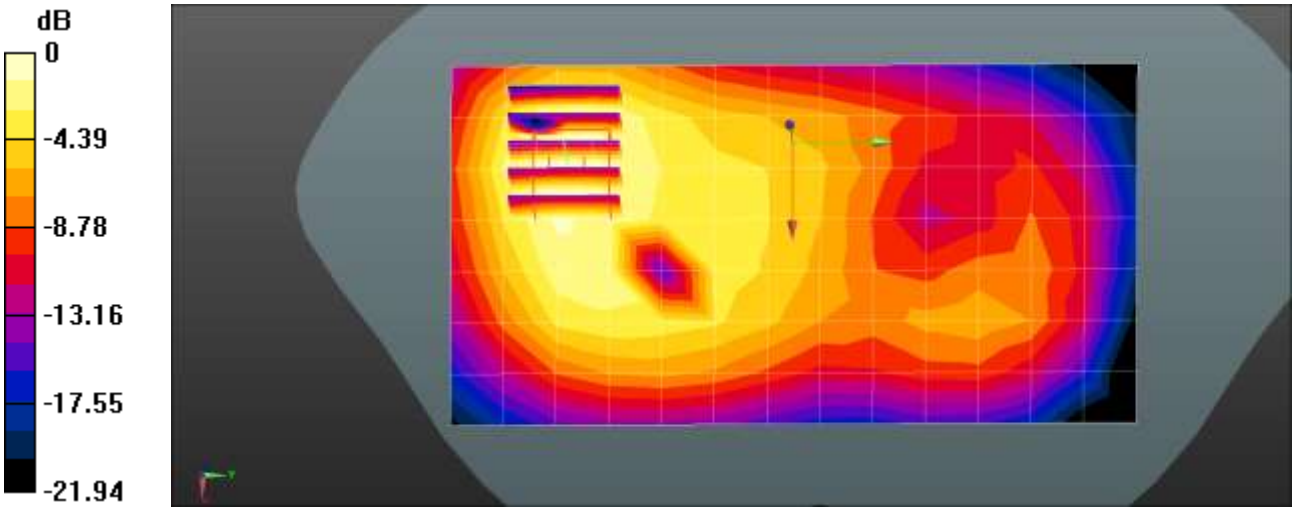
Communication System: UID 0, LTE2 (20MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.388 S/m; ε_r = 40.113; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.19, 7.47, 8.43) @ 1880 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 2 Bodyworn Front QPSK 20MHz 1RB 49offset 18900ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.918 W/kg

LTE Band 2 Bodyworn Front QPSK 20MHz 1RB 49offset 18900ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.35 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.358 W/kg
Maximum value of SAR (measured) = 0.905 W/kg



0 dB = 0.905 W/kg = -0.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/27/2023
Plot No.:	B6

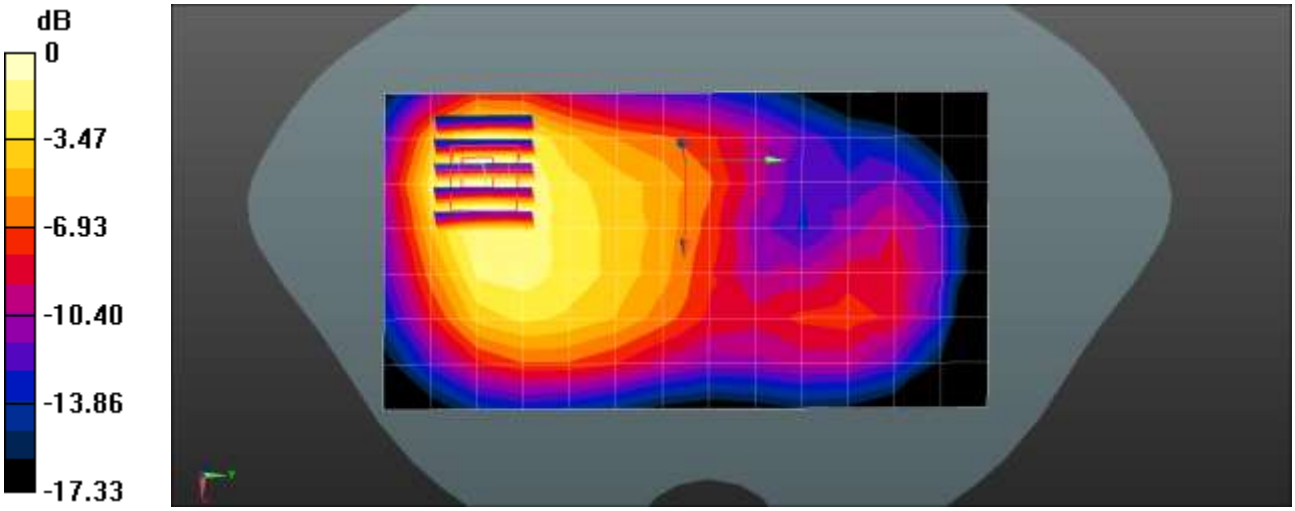
Communication System: UID 0, LTE Band 4 (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.335 S/m; ε_r = 40.778; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1732.5 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 4 BodyWorn Rear QPSK 20MHz 1RB 49offset 20175ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.06 W/kg

LTE Band 4 BodyWorn Rear QPSK 20MHz 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.08 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.433 W/kg
Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2 ℃
Ambient Temperature:	20.3 ℃
Test Date:	10/17/2023
Plot No.:	B7

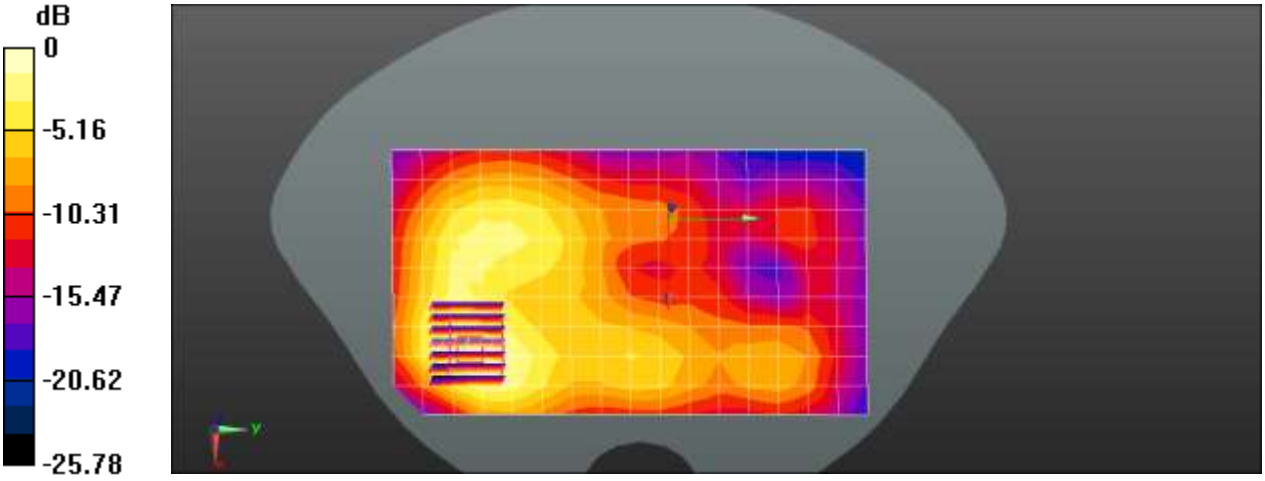
Communication System: UID 0, LTE Band 41 (FCC) (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.965 S/m; ε_r = 38.799; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.59, 4.59, 4.59) @ 2593 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 41 BodyWorn Rear QPSK 20MHz 1RB 49offset 40620ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.490 W/kg

LTE Band 41 BodyWorn Rear QPSK 20MHz 1RB 49offset 40620ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.329 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.867 W/kg
SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.206 W/kg
Maximum value of SAR (measured) = 0.523 W/kg



0 dB = 0.523 W/kg = -2.81 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	10/19/2023
Plot No.:	B8

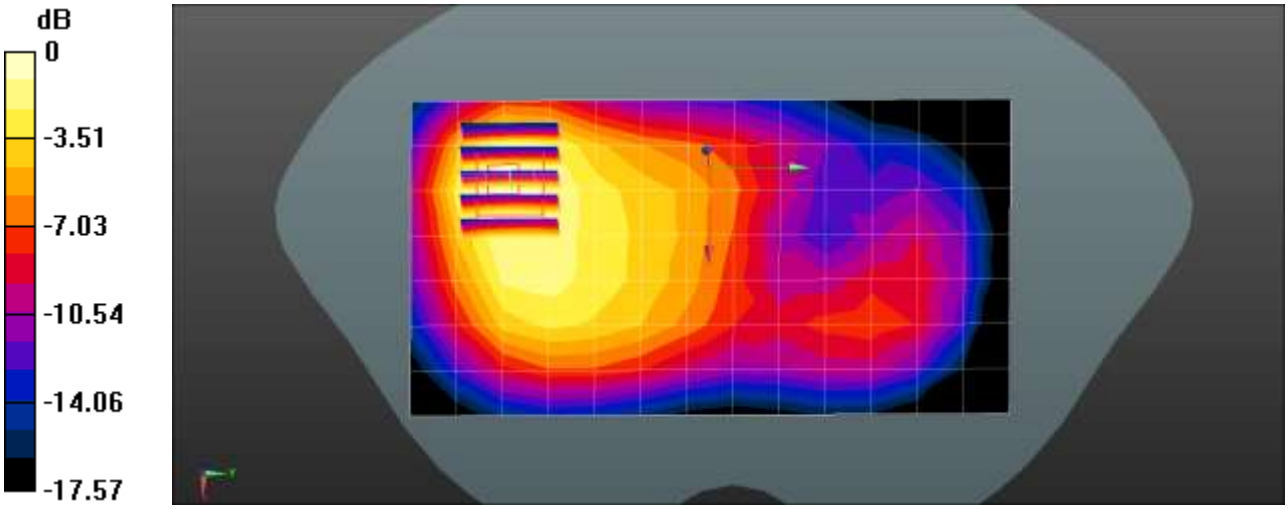
Communication System: UID 0, LTE 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.368 S/m; ε_r = 40.921; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1745 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 66 BodyWorn Front QPSK 20MHz 1RB 49offset 132322ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.10 W/kg

LTE Band 66 BodyWorn Front QPSK 20MHz 1RB 49offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.28 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.757 W/kg; SAR(10 g) = 0.442 W/kg
Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg = 0.21 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	10/25/2023
Plot No.:	B9

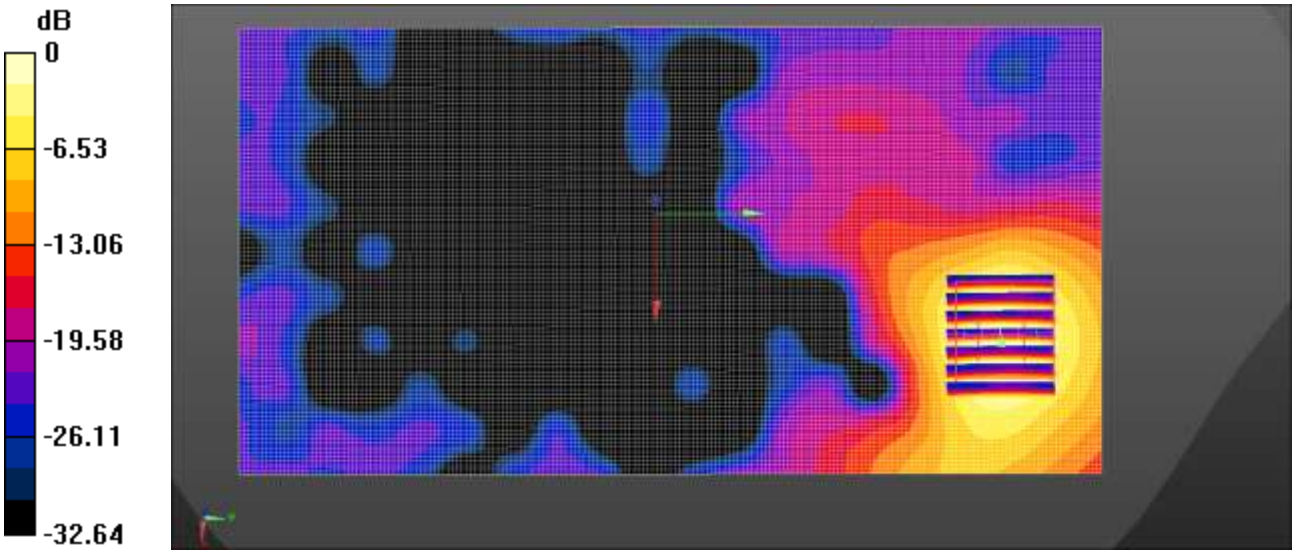
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5720 MHz; σ = 5.343 S/m; ε_r = 35.774; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.53, 4.29, 4.52) @ 5720 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11a Body Rear 6Mbps 144ch/Area Scan (101x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.42 W/kg

802.11a Body Rear 6Mbps 144ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.033 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.58 W/kg
SAR(1 g) = 0.614 W/kg; SAR(10 g) = 0.213 W/kg
Maximum value of SAR (measured) = 1.48 W/kg



0 dB = 1.48 W/kg = 1.70 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	23.9 ℃
Ambient Temperature:	24.0 ℃
Test Date:	10/17/2023
Plot No.:	C1

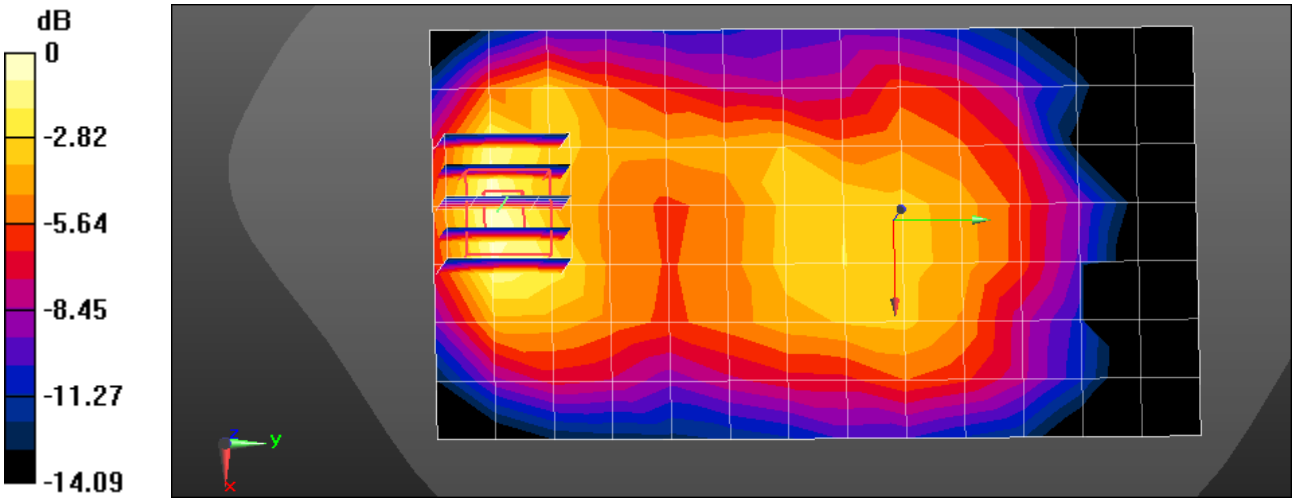
Communication System: UID 0, GSM850 GPRS 4TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:2.07491
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 S/m; ε_r = 41.217; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 836.6 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM850 4Tx Body Rear 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.821 W/kg

GSM850 4Tx Body Rear 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.54 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.334 W/kg
Maximum value of SAR (measured) = 0.849 W/kg



0 dB = 0.849 W/kg = -0.71 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/18/2023
Plot No.:	C2

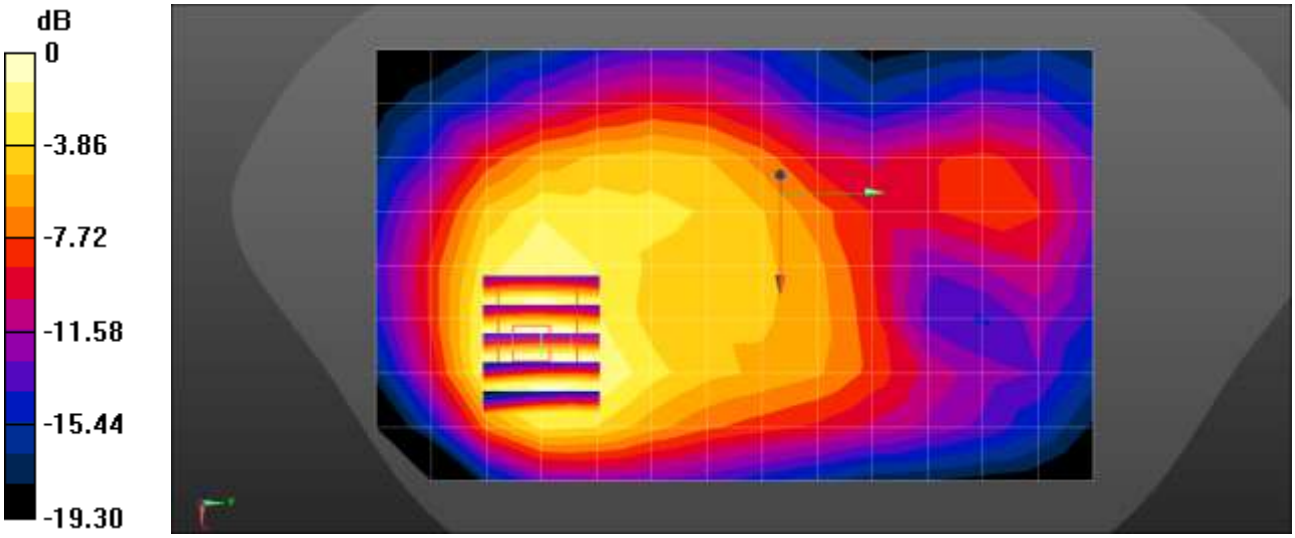
Communication System: UID 0, GSM 1900 4Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.07491
Medium parameters used: f = 1880 MHz; σ = 1.395 S/m; ε_r = 38.834; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM1900 4Tx Body Rear 661ch/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.466 W/kg

GSM1900 4Tx Body Rear 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.59 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.548 W/kg
SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.198 W/kg
Maximum value of SAR (measured) = 0.460 W/kg



0 dB = 0.460 W/kg = -3.37 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0 ℃
Ambient Temperature:	21.1 ℃
Test Date:	10/16/2023
Plot No.:	C3

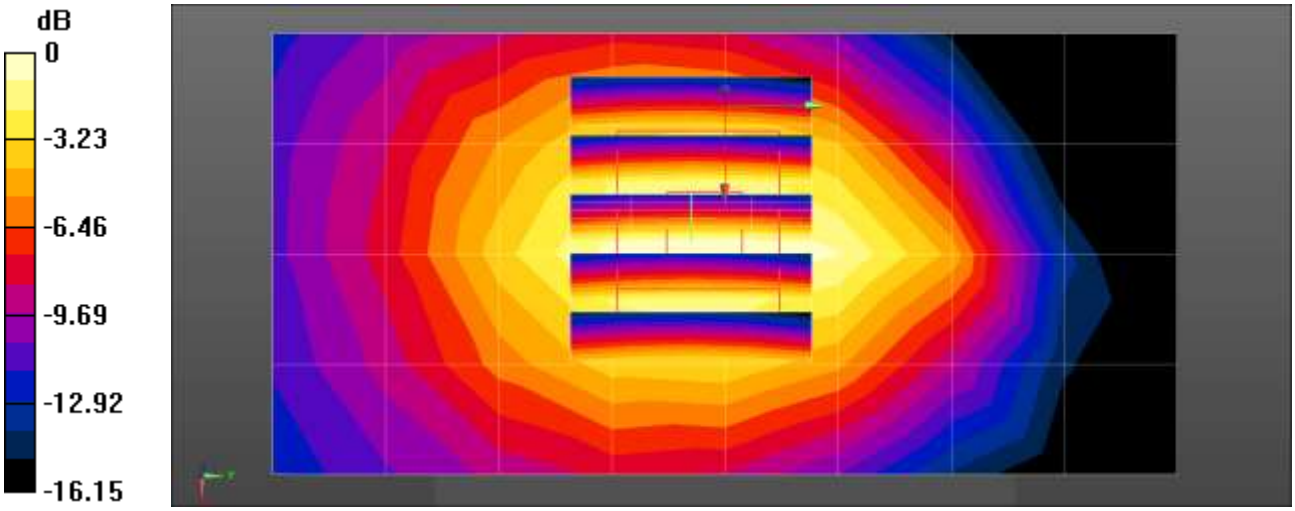
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.405 S/m; ε_r = 39.051; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1880 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 2 Body Bottom 9400ch/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.455 W/kg

UMTS Band 2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.78 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.328 W/kg; SAR(10 g) = 0.194 W/kg
Maximum value of SAR (measured) = 0.460 W/kg



0 dB = 0.460 W/kg = -3.37 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	10/17/2023
Plot No.:	C4

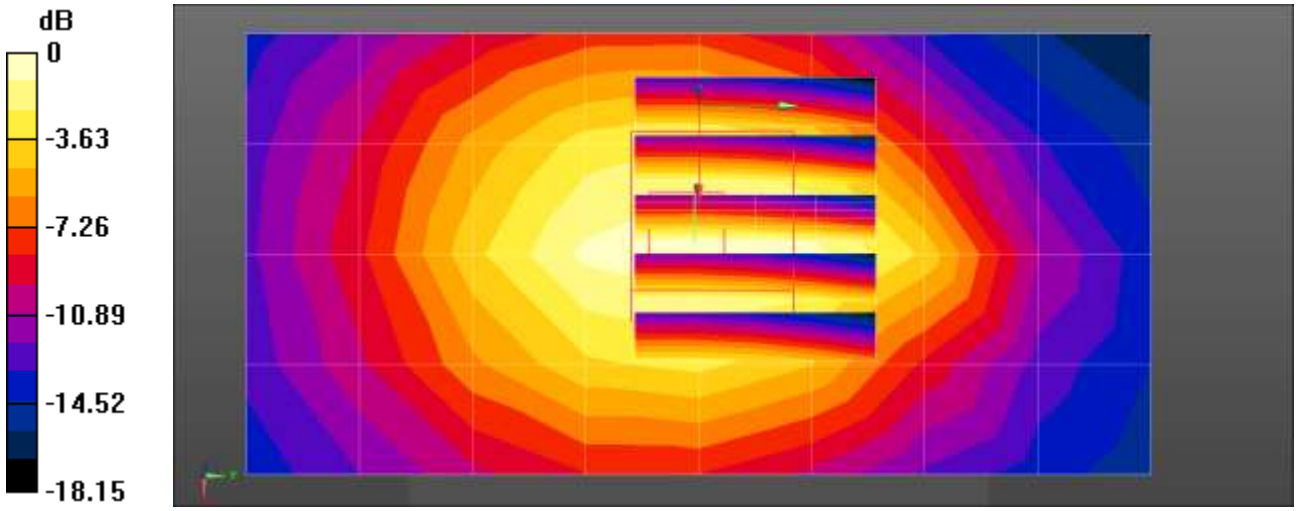
Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.317 S/m; ε_r = 41.249; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(9.1, 9.1, 9.1) @ 1732.4 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 4 Body Bottom 1412ch/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.602 W/kg

UMTS Band 4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.29 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.438 W/kg; SAR(10 g) = 0.261 W/kg
Maximum value of SAR (measured) = 0.610 W/kg



0 dB = 0.610 W/kg = -2.15 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.9 ℃
Ambient Temperature:	23.0 ℃
Test Date:	10/16/2023
Plot No.:	C5

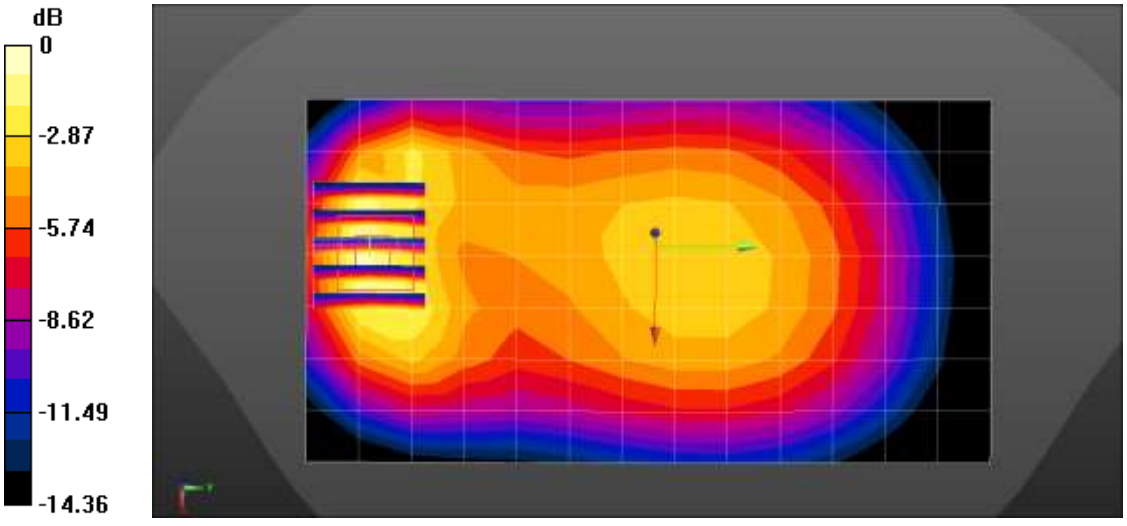
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.925 S/m; ε_r = 40.718; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 836.6 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

UMTS Band 5 Body Rear 4183ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.752 W/kg

UMTS Band 5 Body Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.27 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.563 W/kg; SAR(10 g) = 0.321 W/kg
Maximum value of SAR (measured) = 0.841 W/kg



0 dB = 0.841 W/kg = -0.75 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6 ℃
Ambient Temperature:	20.7 ℃
Test Date:	10/26/2023
Plot No.:	C6

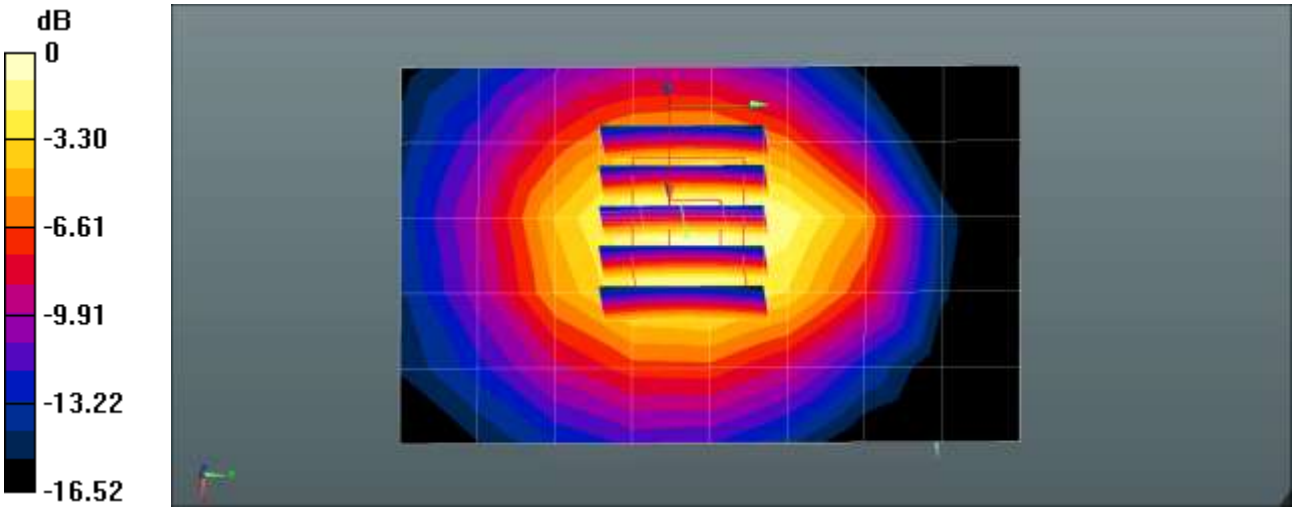
Communication System: UID 0, LTE2 (20MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.388 S/m; ε_r = 40.113; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.19, 7.47, 8.43) @ 1880 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 2 Body Bottom QPSK 20MHz 50RB 25offset 18900ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.647 W/kg

LTE Band 2 Body Bottom QPSK 20MHz 50RB 25offset 18900ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.44 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.787 W/kg
SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.281 W/kg
Maximum value of SAR (measured) = 0.679 W/kg



0 dB = 0.679 W/kg = -1.68 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.3 ℃
Ambient Temperature:	22.4 ℃
Test Date:	10/27/2023
Plot No.:	C7

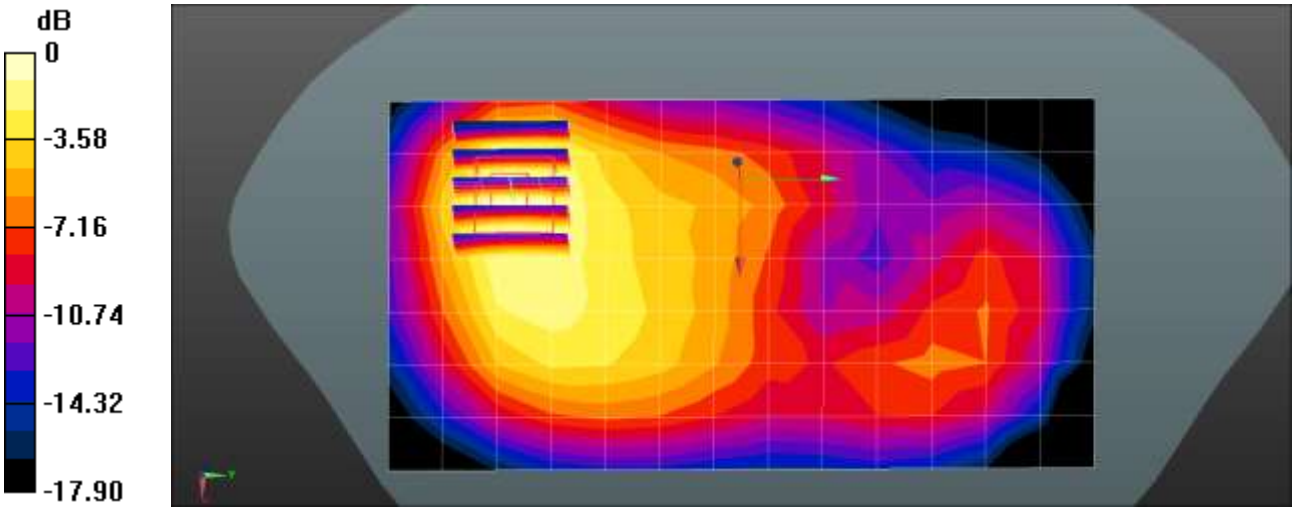
Communication System: UID 0, LTE Band 4 (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.335 S/m; ε_r = 40.778; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1732.5 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 4 Body Front QPSK 20MHz 1RB 49offset 20175ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.809 W/kg

LTE Band 4 Body Front QPSK 20MHz 1RB 49offset 20175ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.58 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.335 W/kg
Maximum value of SAR (measured) = 0.812 W/kg



0 dB = 0.812 W/kg = -0.90 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7 ℃
Ambient Temperature:	20.8 ℃
Test Date:	10/07/2023
Plot No.:	C8

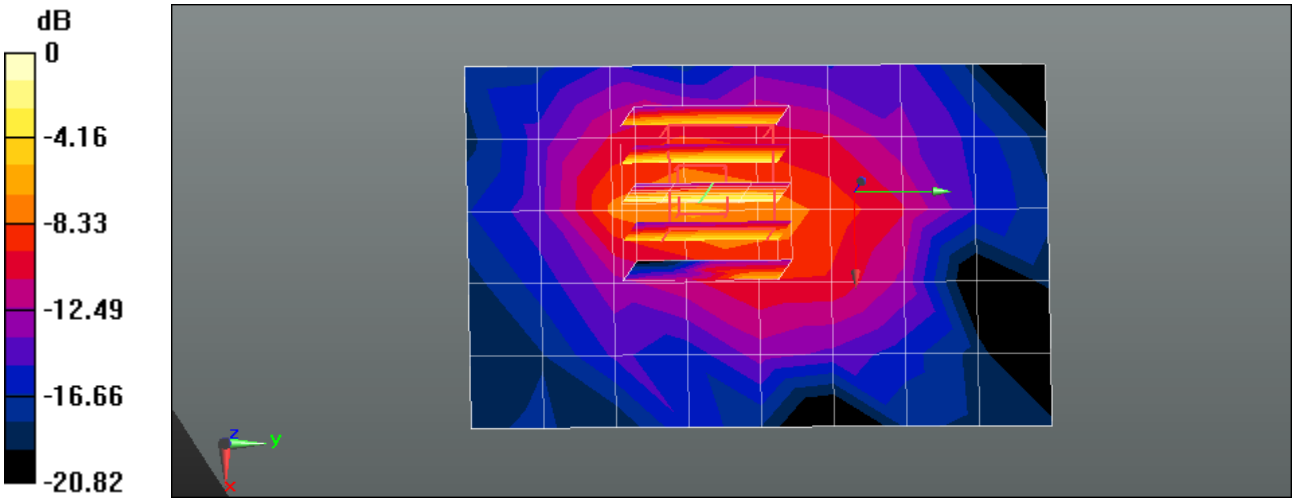
Communication System: UID 0, LTE Band 5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.915 S/m; ε_r = 41.806; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.11, 6.11, 6.11) @ 836.5 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.13 (7474)

LTE Band 5 Body Bottom QPSK 10MHz 1RB 0offset 20525ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0840 W/kg

LTE Band 5 Body Bottom QPSK 10MHz 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.939 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.564 W/kg
SAR(1 g) = 0.317 W/kg; SAR(10 g) = 0.179 W/kg
Maximum value of SAR (measured) = 0.382 W/kg



0 dB = 0.382 W/kg = -4.18 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5 ℃
Ambient Temperature:	20.6 ℃
Test Date:	10/10/2023
Plot No.:	C9

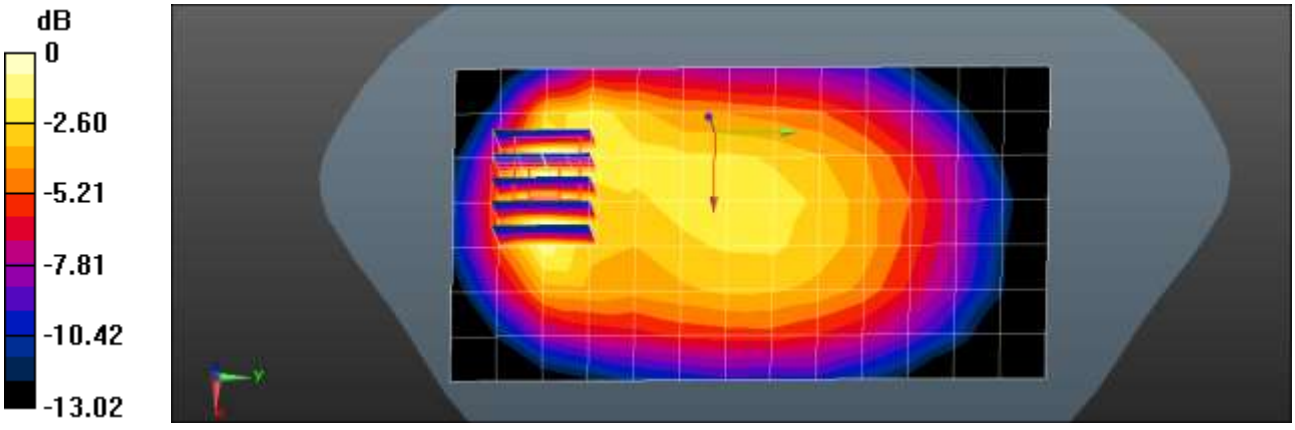
Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.882 S/m; ε_r = 42.388; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 707.5 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.533 W/kg

LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.62 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.779 W/kg
SAR(1 g) = 0.428 W/kg; SAR(10 g) = 0.249 W/kg
Maximum value of SAR (measured) = 0.534 W/kg



0 dB = 0.534 W/kg = -2.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4 ℃
Ambient Temperature:	20.5 ℃
Test Date:	10/11/2023
Plot No.:	C10

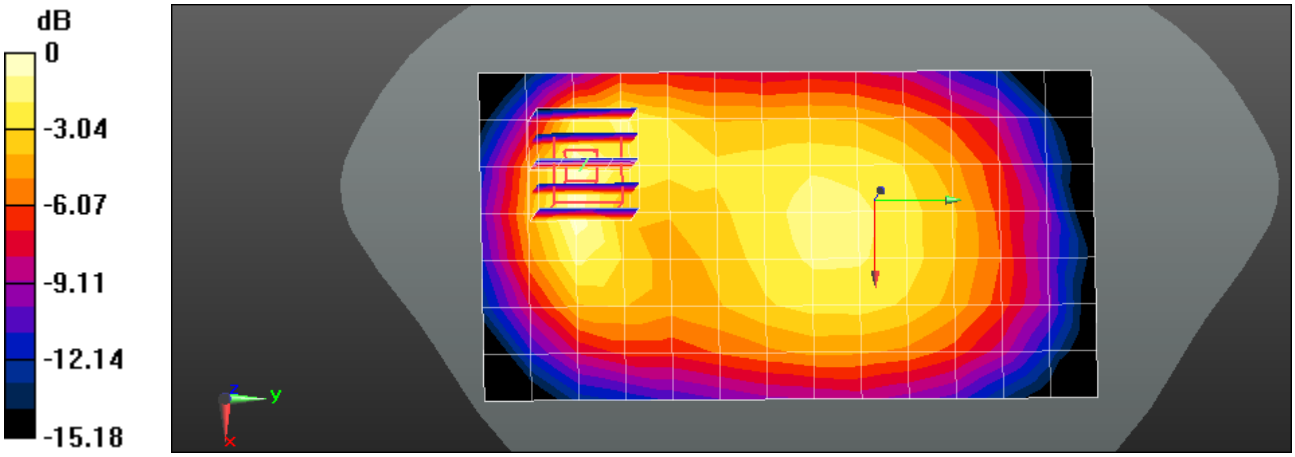
Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.923 S/m; ε_r = 41.597; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 782 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.541 W/kg

LTE Band 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.79 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.433 W/kg; SAR(10 g) = 0.244 W/kg
Maximum value of SAR (measured) = 0.553 W/kg



0 dB = 0.553 W/kg = -2.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.8 ℃
Ambient Temperature:	21.9 ℃
Test Date:	11/01/2023
Plot No.:	C11

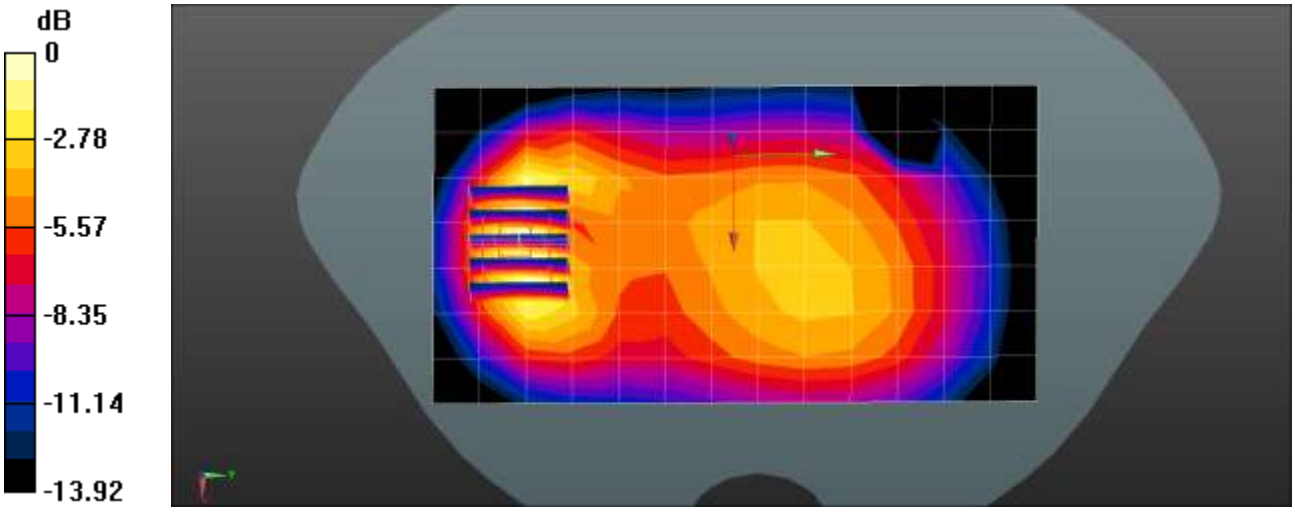
Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.9 S/m; ε_r = 41.584; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(9.82, 8.7, 9.76) @ 831.5 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 26 Body Rear QPSK 15MHz 1RB 36offset 26865ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.731 W/kg

LTE Band 26 Body Rear QPSK 15MHz 1RB 36offset 26865ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.64 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.891 W/kg
SAR(1 g) = 0.511 W/kg; SAR(10 g) = 0.289 W/kg
Maximum value of SAR (measured) = 0.761 W/kg



0 dB = 0.761 W/kg = -1.19 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2 ℃
Ambient Temperature:	20.3 ℃
Test Date:	10/17/2023
Plot No.:	C12

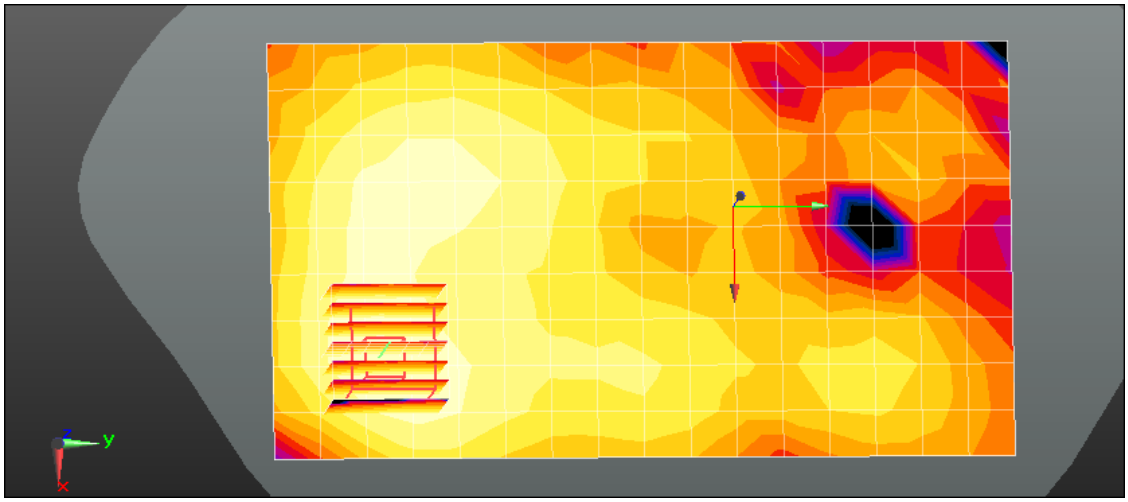
Communication System: UID 0, LTE Band 41 (FCC) (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.965 S/m; ε_r = 38.799; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.59, 4.59, 4.59) @ 2593 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.13 (7474)

LTE Band 41 Body Rear QPSK 20MHz 50RB 25offset 40620ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.440 W/kg

LTE Band 41 Body Rear QPSK 20MHz 50RB 25offset 40620ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.878 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.799 W/kg
SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.178 W/kg
Maximum value of SAR (measured) = 0.468 W/kg



0 dB = 0.468 W/kg = -3.30 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	10/19/2023
Plot No.:	C13

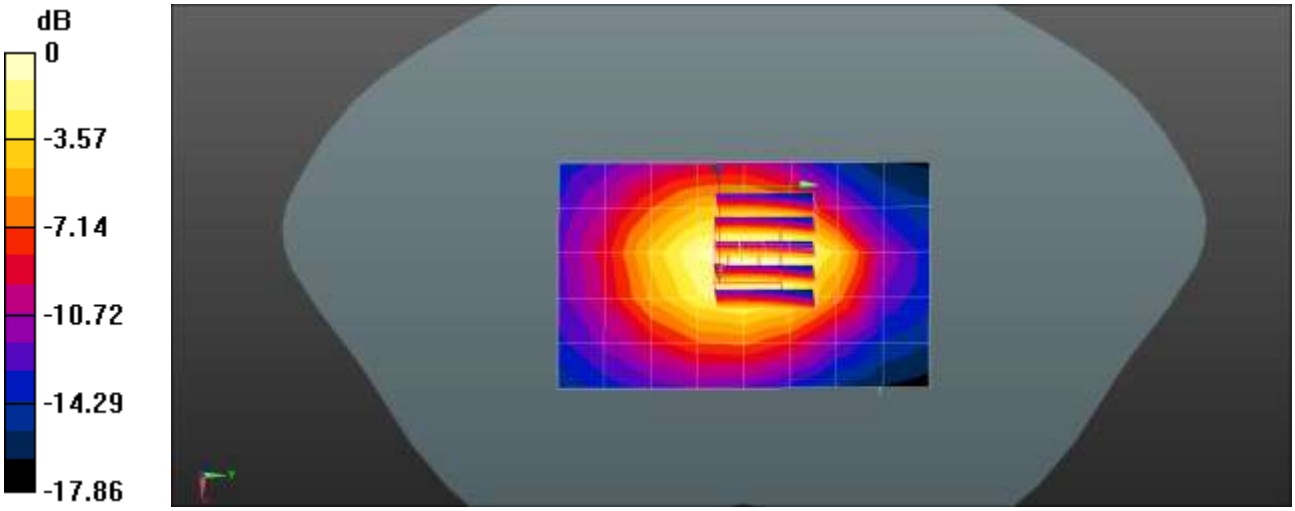
Communication System: UID 0, LTE 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.368 S/m; ε_r = 40.921; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1745 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132322ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.875 W/kg

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.30 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.650 W/kg; SAR(10 g) = 0.390 W/kg
Maximum value of SAR (measured) = 0.910 W/kg



0 dB = 0.910 W/kg = -0.41 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.0 ℃
Ambient Temperature:	22.1 ℃
Test Date:	10/17/2023
Plot No.:	C14

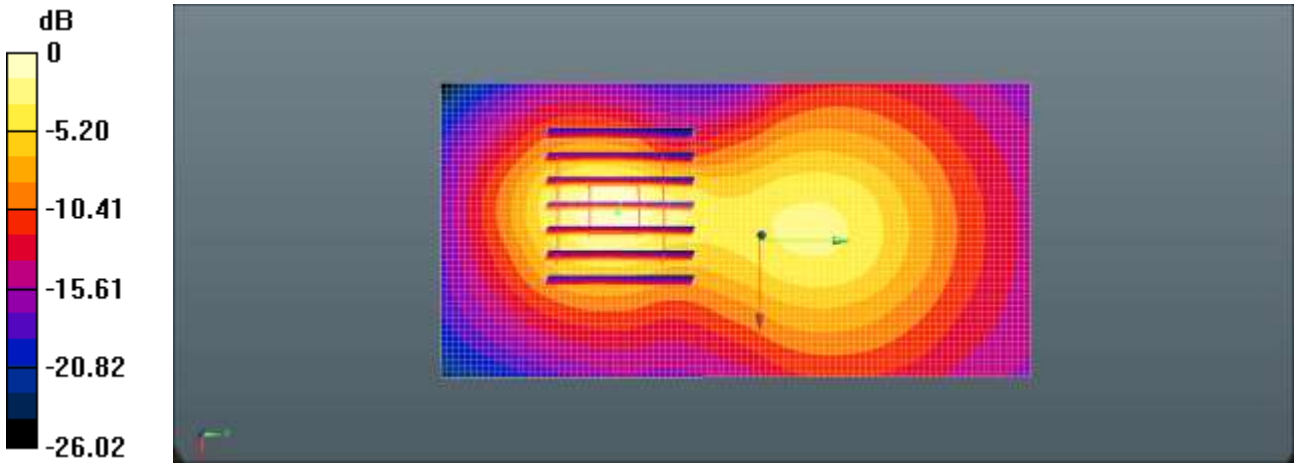
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.865 S/m; ε_r = 38.642; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7732; ConvF(8.5, 8.5, 8.5) @ 2462 MHz; Calibrated: 2023-06-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1687; Calibrated: 2023-07-18
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Top 1Mbps 11ch/Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.514 W/kg

802.11b Body Top 1Mbps 11ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.36 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.660 W/kg
SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.122 W/kg
Maximum value of SAR (measured) = 0.527 W/kg



0 dB = 0.527 W/kg = -2.78 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9 ℃
Ambient Temperature:	22.0 ℃
Test Date:	10/26/2023
Plot No.:	C15

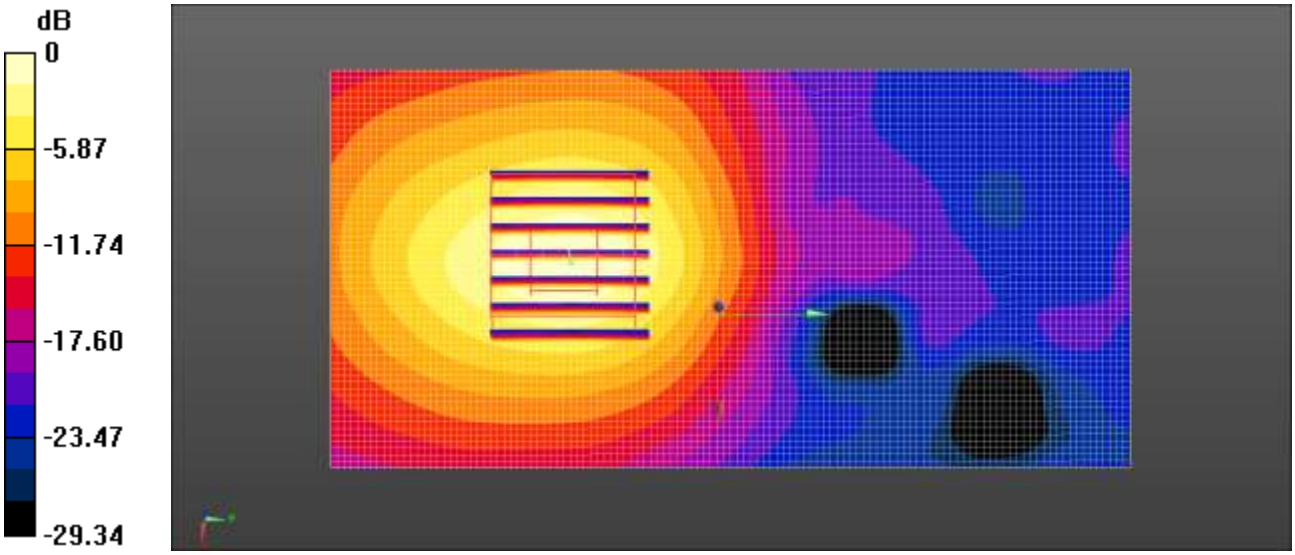
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5785 MHz; σ = 5.219 S/m; ε_r = 35.839; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.52, 4.22, 4.46) @ 5785 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11a Body Top 6Mbps 157ch/Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.05 W/kg

802.11a Body Top 6Mbps 157ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.374 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.09 W/kg
SAR(1 g) = 0.998 W/kg; SAR(10 g) = 0.373 W/kg
Maximum value of SAR (measured) = 2.10 W/kg



0 dB = 2.10 W/kg = 3.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.8 ℃
Ambient Temperature:	19.9 ℃
Test Date:	11/01/2023
Plot No.:	C16

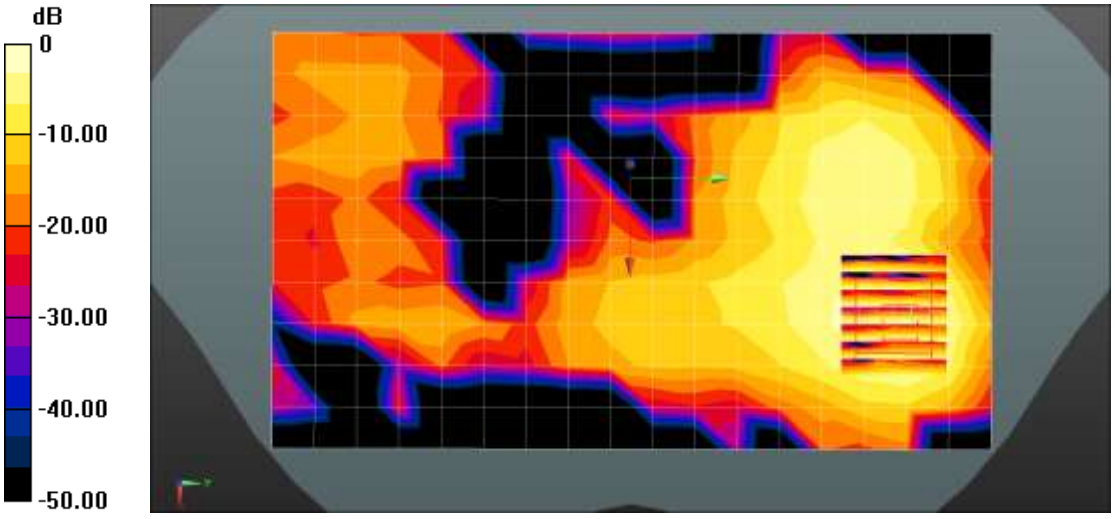
Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2480 MHz; σ = 1.81 S/m; ε_r = 39.152; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(7.94, 7.91, 8.56) @ 2480 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Bluetooth Body Rear DH5 78ch/Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0793 W/kg

Bluetooth Body Rear DH5 78ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.103 W/kg
SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.019 W/kg
Maximum value of SAR (measured) = 0.0783 W/kg



0 dB = 0.0783 W/kg = -11.06 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	10/25/2023
Plot No.:	D1

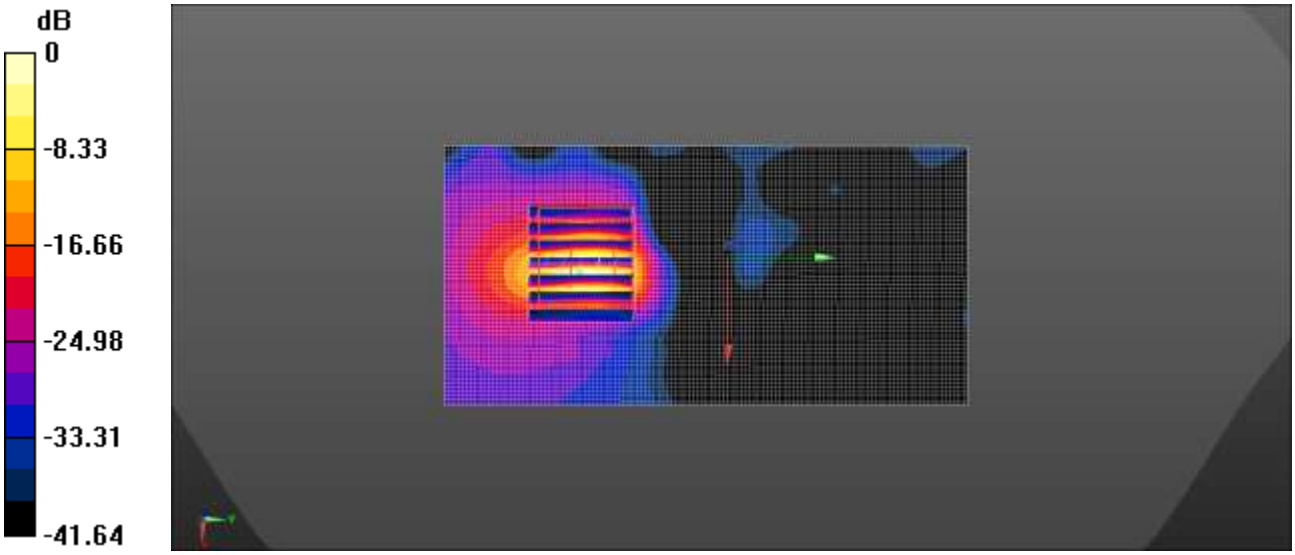
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5720 MHz; σ = 5.343 S/m; ε_r = 35.774; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.53, 4.29, 4.52) @ 5720 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11a Body Top 6Mbps 144ch/Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.5 W/kg

802.11a Body Top 6Mbps 144ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.103 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 70.8 W/kg
SAR(1 g) = 7.57 W/kg; SAR(10 g) = 1.24 W/kg
Maximum value of SAR (measured) = 29.3 W/kg



0 dB = 29.3 W/kg = 14.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.3 ℃
Ambient Temperature:	20.4 ℃
Test Date:	10/30/2023
Plot No.:	D2

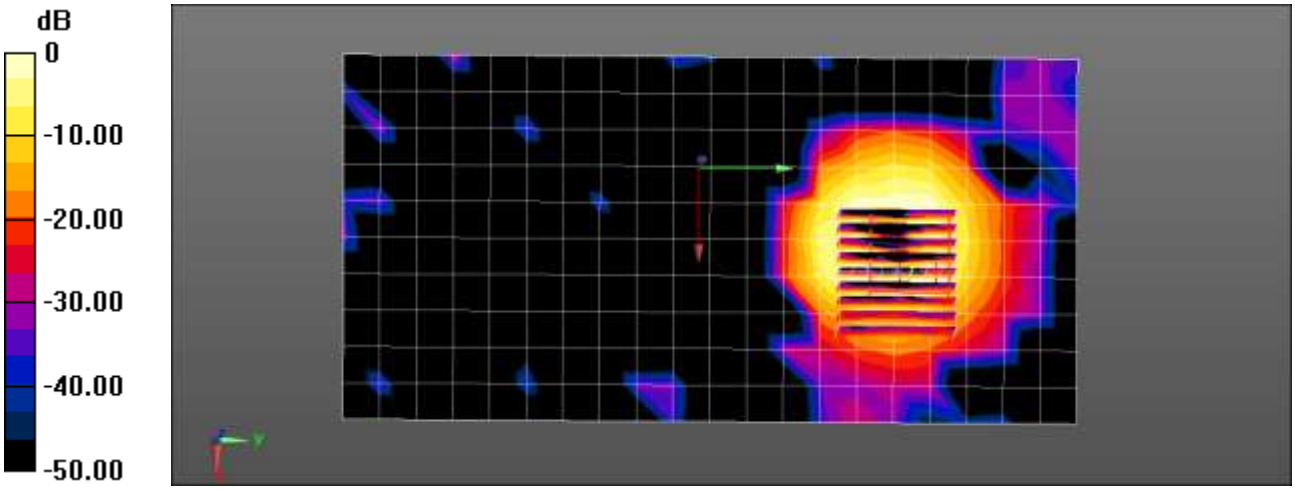
Communication System: UID 0, NFC (0); Frequency: 13.56 MHz;Duty Cycle: 1:1
Medium parameters used: f = 14 MHz; σ = 0.756 S/m; ε_r = 54.292; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.8, 5.8, 5.8) @ 13.56 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: ELI v5.0 Left; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

NFC Phablet Rear Type A 106kbps/Area Scan (11x21x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.102 W/kg

NFC Phablet Rear Type A 106kbps/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.025 W/kg
Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.110 W/kg = -9.59 dBW/kg

Appendix C. – Dipole Verification Plots

■ Verification Data (750 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.5 ℃
Test Date:	10/10/2023

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN: 1014

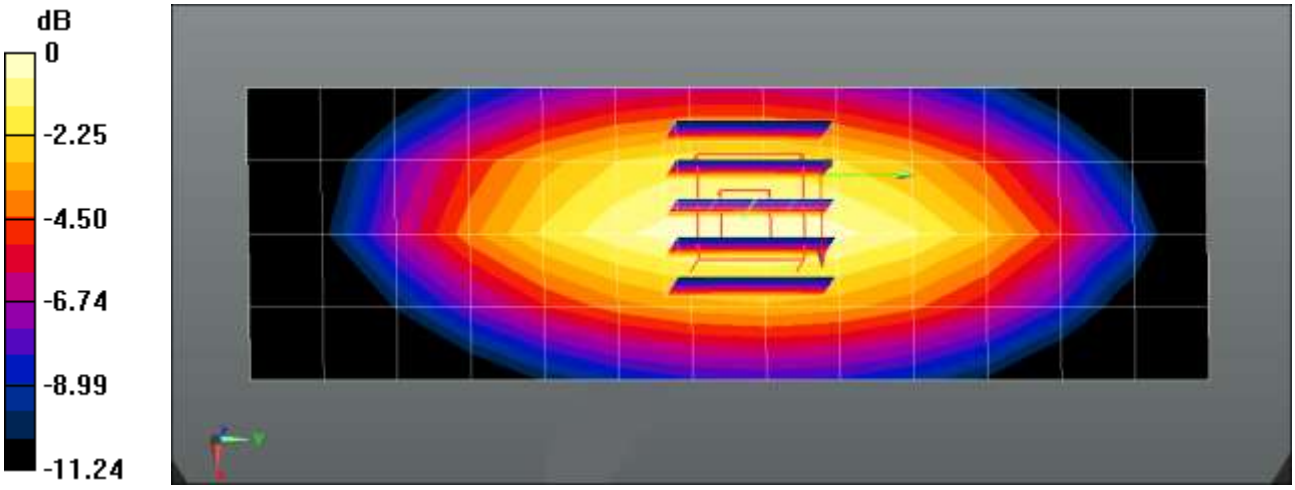
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.928 S/m; ε_r = 41.759; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 750 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

750MHz Head Verification/Area Scan (5x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.474 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.40 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.627 W/kg
SAR(1 g) = 0.412 W/kg; SAR(10 g) = 0.265 W/kg
Maximum value of SAR (measured) = 0.485 W/kg



0 dB = 0.485 W/kg = -3.14 dBW/kg

■ Verification Data (750 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	10/11/2023

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN: 1014

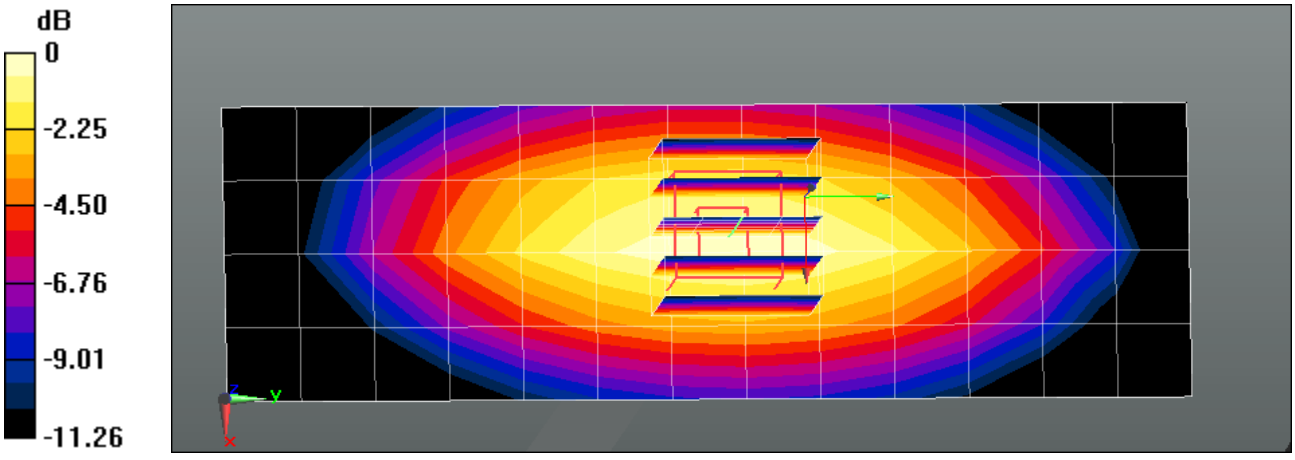
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.889 S/m; ε_r = 42.061; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.37, 6.37, 6.37) @ 750 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

750MHz Head Verification/Area Scan (5x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.455 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.48 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.600 W/kg
SAR(1 g) = 0.395 W/kg; SAR(10 g) = 0.254 W/kg
Maximum value of SAR (measured) = 0.465 W/kg



0 dB = 0.465 W/kg = -3.33 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	23.9 ℃
Test Date:	10/17/2023

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN: 4d165

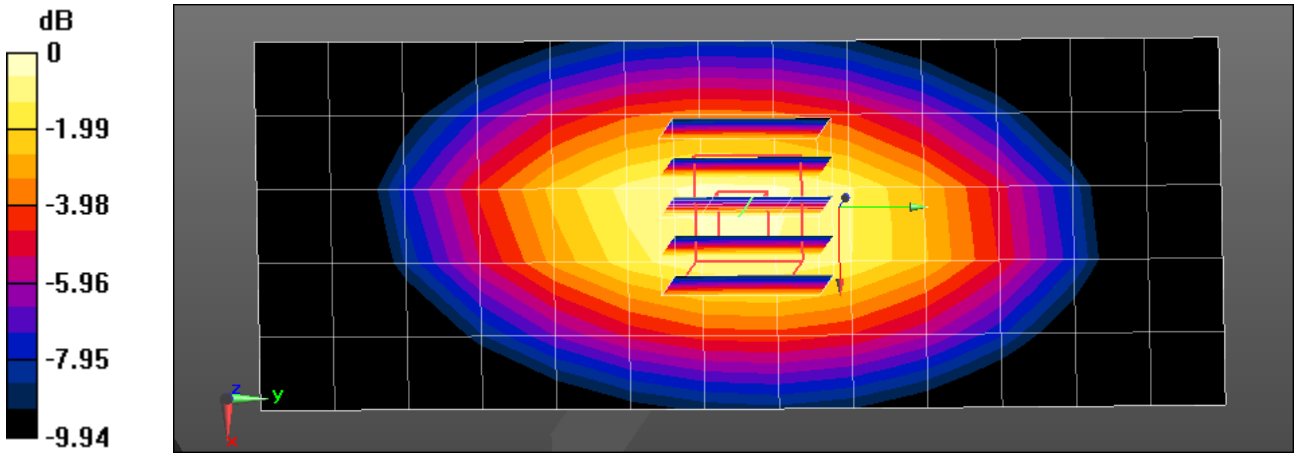
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.923 S/m; ε_r = 41.243; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 835 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.566 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.79 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.689 W/kg
SAR(1 g) = 0.494 W/kg; SAR(10 g) = 0.337 W/kg
Maximum value of SAR (measured) = 0.628 W/kg



0 dB = 0.628 W/kg = -2.02 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.9 ℃
Test Date:	10/16/2023

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN: 4d165

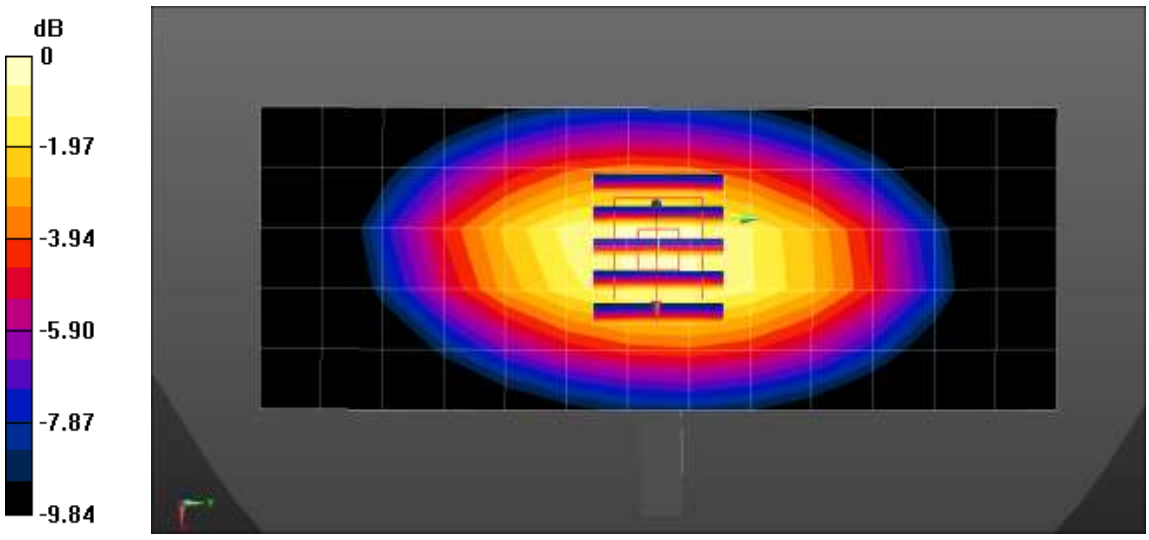
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.923 S/m; ε_r = 40.743; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(9.83, 9.9, 10.74) @ 835 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

835MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.561 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.82 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.677 W/kg
SAR(1 g) = 0.491 W/kg; SAR(10 g) = 0.336 W/kg
Maximum value of SAR (measured) = 0.622 W/kg



0 dB = 0.622 W/kg = -2.06 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	10/07/2023

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN: 4d165

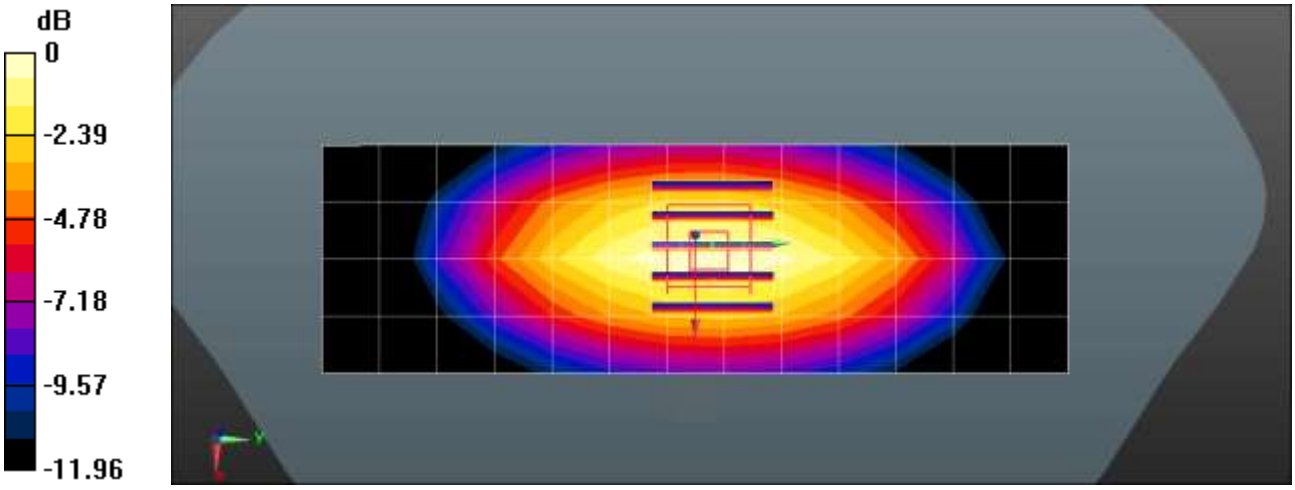
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.914 S/m; ε_r = 41.829; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.11, 6.11, 6.11) @ 835 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

835MHz Head Verification/Area Scan (5x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.579 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.03 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.761 W/kg
SAR(1 g) = 0.490 W/kg; SAR(10 g) = 0.308 W/kg
Maximum value of SAR (measured) = 0.581 W/kg



0 dB = 0.581 W/kg = -2.36 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.8 ℃
Test Date:	11/01/2023

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d165

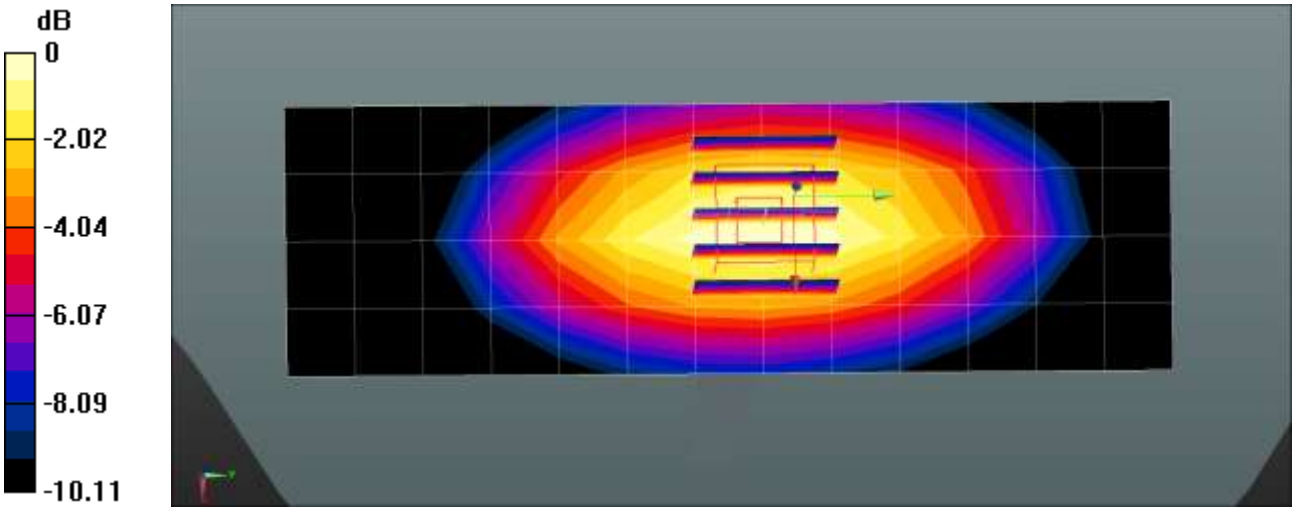
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.904 S/m; ε_r = 41.53; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(9.82, 8.7, 9.76) @ 835 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.647 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.66 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.722 W/kg
SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.346 W/kg
Maximum value of SAR (measured) = 0.660 W/kg



0 dB = 0.660 W/kg = -1.80 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/17/2023

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d015

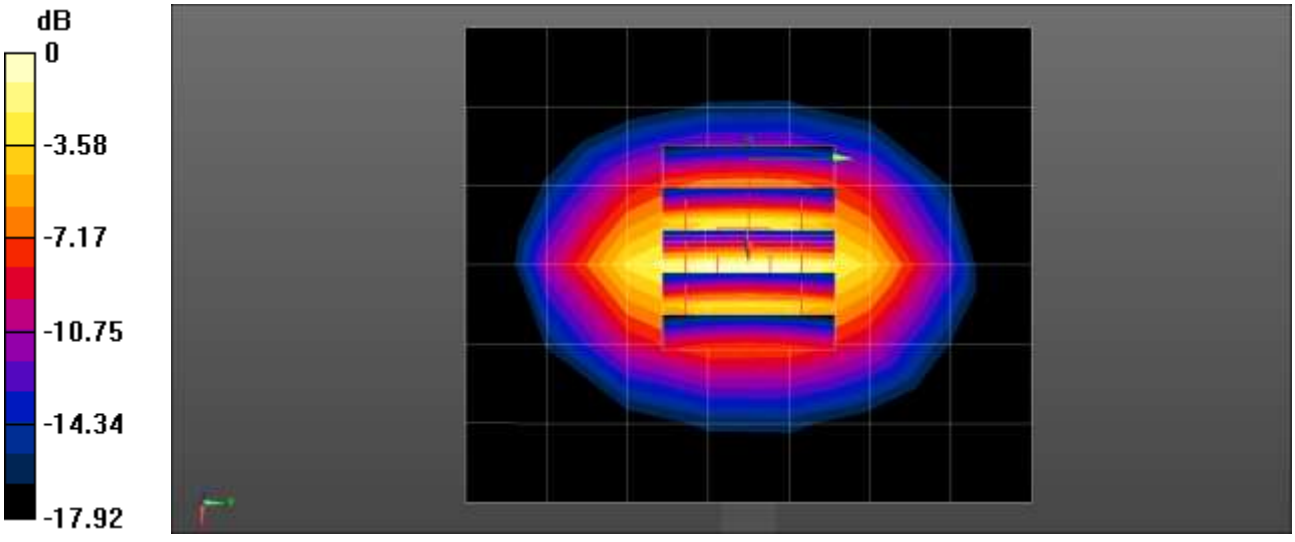
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.388 S/m; ε_r = 40.962; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(9.1, 9.1, 9.1) @ 1800 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1800MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.62 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.82 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.38 W/kg
SAR(1 g) = 1.78 W/kg; SAR(10 g) = 0.922 W/kg
Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.3 ℃
Test Date:	10/27/2023

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d015

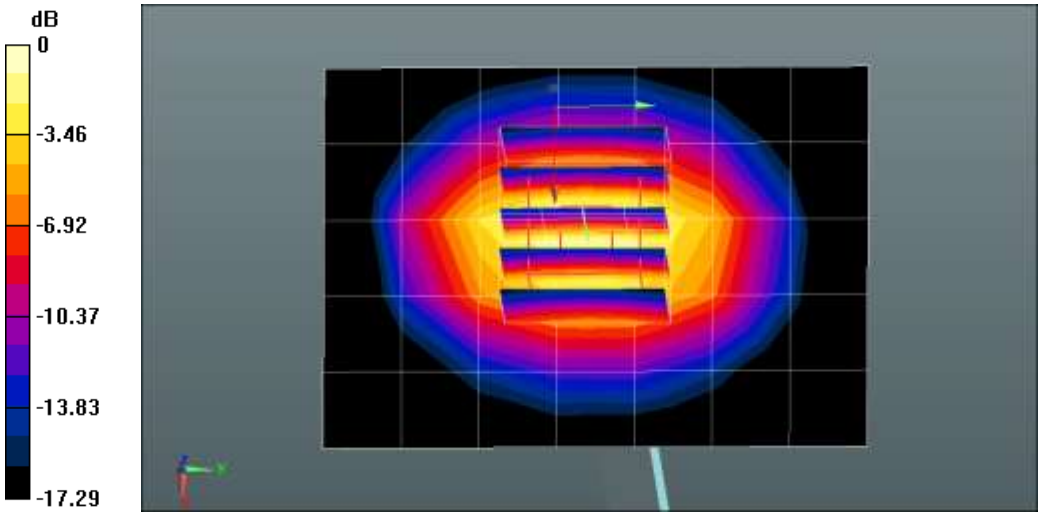
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.411 S/m; ε_r = 40.448; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1800 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1800MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.56 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.24 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.64 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 3.07 W/kg



0 dB = 3.07 W/kg = 4.87 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/19/2023

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d015

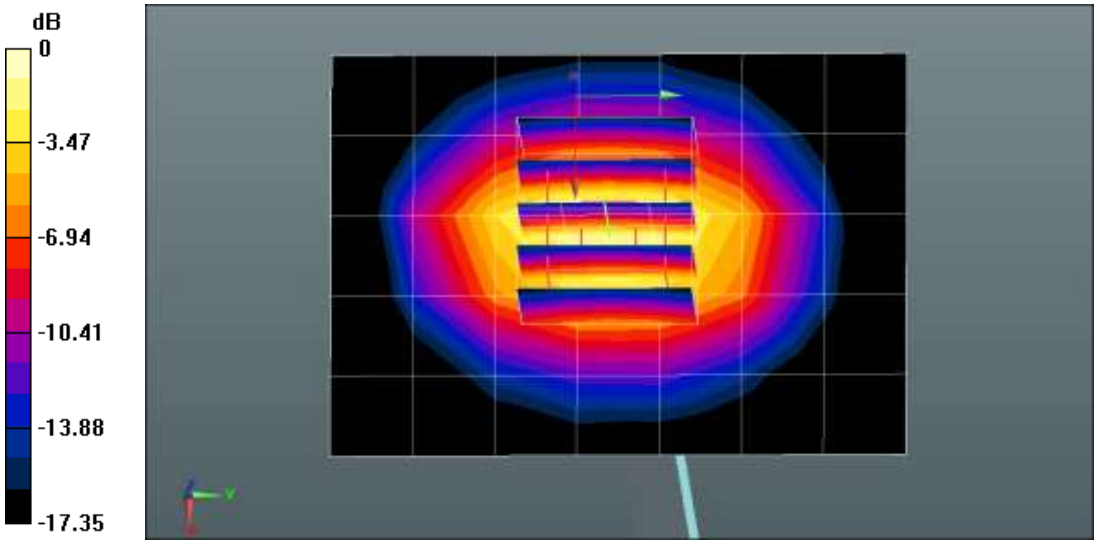
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.431 S/m; ε_r = 40.649; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.36, 7.55, 8.61) @ 1800 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1800MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.60 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.39 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.75 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.08 W/kg
Maximum value of SAR (measured) = 3.15 W/kg



0 dB = 3.15 W/kg = 4.98 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.3 ℃
Test Date:	10/18/2023

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d061

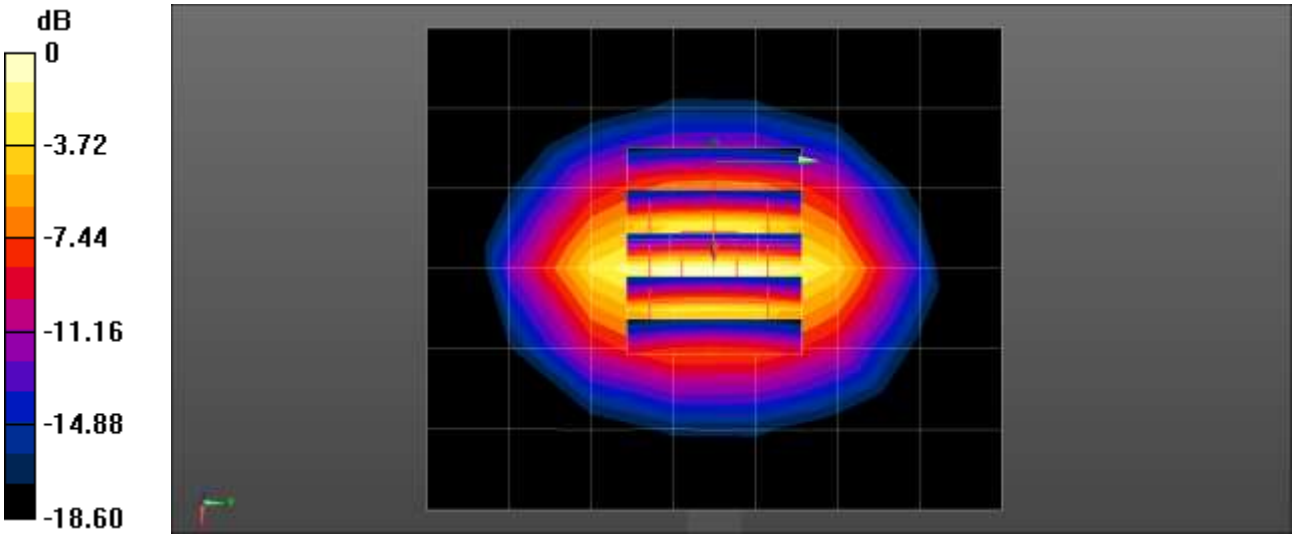
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.413 S/m; ε_r = 38.736; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1900 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.96 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.09 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.69 W/kg
SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.01 W/kg
Maximum value of SAR (measured) = 3.09 W/kg



0 dB = 3.09 W/kg = 4.90 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	10/16/2023

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d061

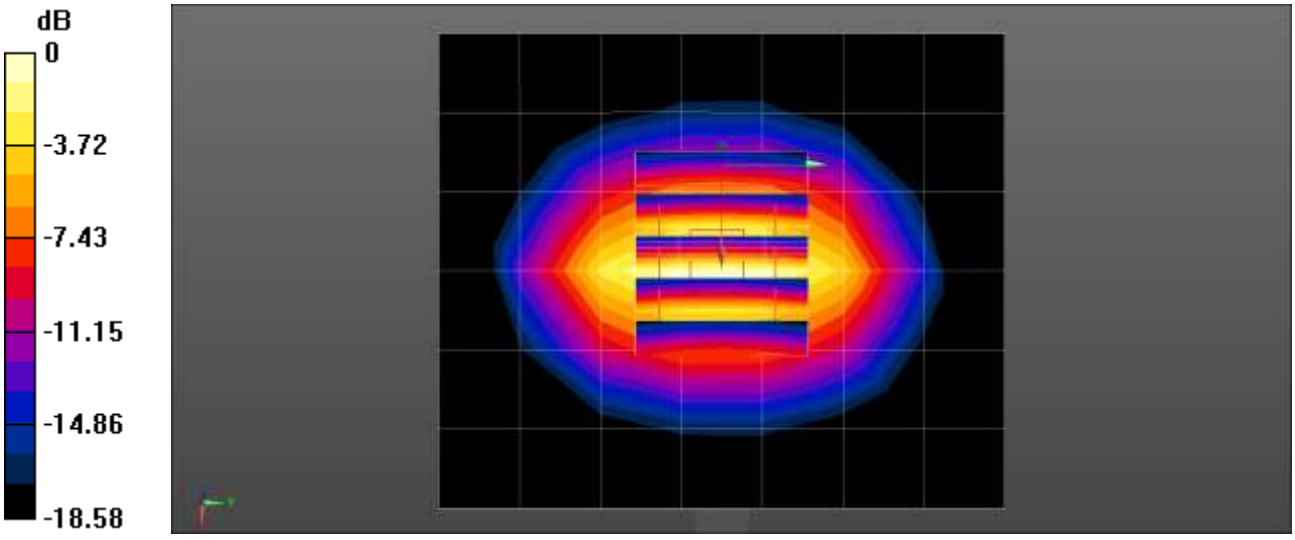
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.423 S/m; ε_r = 38.96; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7702; ConvF(8.72, 8.72, 8.72) @ 1900 MHz; Calibrated: 2023-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2023-01-20
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_Left-Right; Type: QD 000 P40 CC; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.86 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.49 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 3.58 W/kg
SAR(1 g) = 1.92 W/kg; SAR(10 g) = 0.984 W/kg
Maximum value of SAR (measured) = 3.01 W/kg



0 dB = 3.01 W/kg = 4.79 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.6 ℃
Test Date:	10/26/2023

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d061

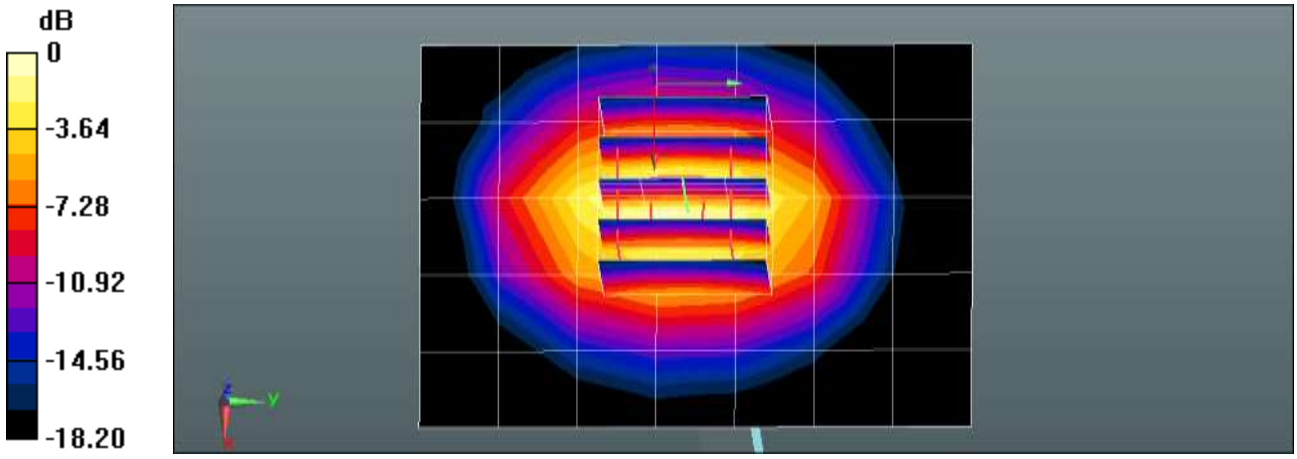
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.405 S/m; ε_r = 40.016; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(8.19, 7.47, 8.43) @ 1900 MHz; Calibrated: 2023-06-19
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1464; Calibrated: 2023-06-16
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.83 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.10 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.71 W/kg
SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 3.10 W/kg



0 dB = 3.10 W/kg = 4.91 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	10/17/2023

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:1049

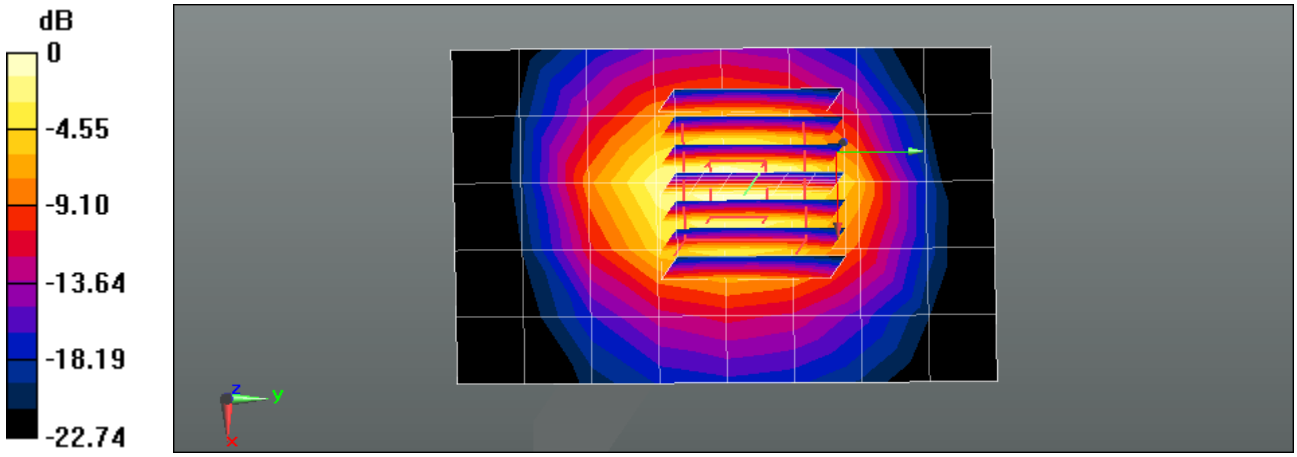
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.851 S/m; ε_r = 38.686; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7732; ConvF(8.5, 8.5, 8.5) @ 2450 MHz; Calibrated: 2023-06-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1687; Calibrated: 2023-07-18
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.13 (7474)

2450MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.40 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.76 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 5.59 W/kg
SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.22 W/kg
Maximum value of SAR (measured) = 4.40 W/kg



0 dB = 4.40 W/kg = 6.43 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	19.8 ℃
Test Date:	11/01/2023

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:1049

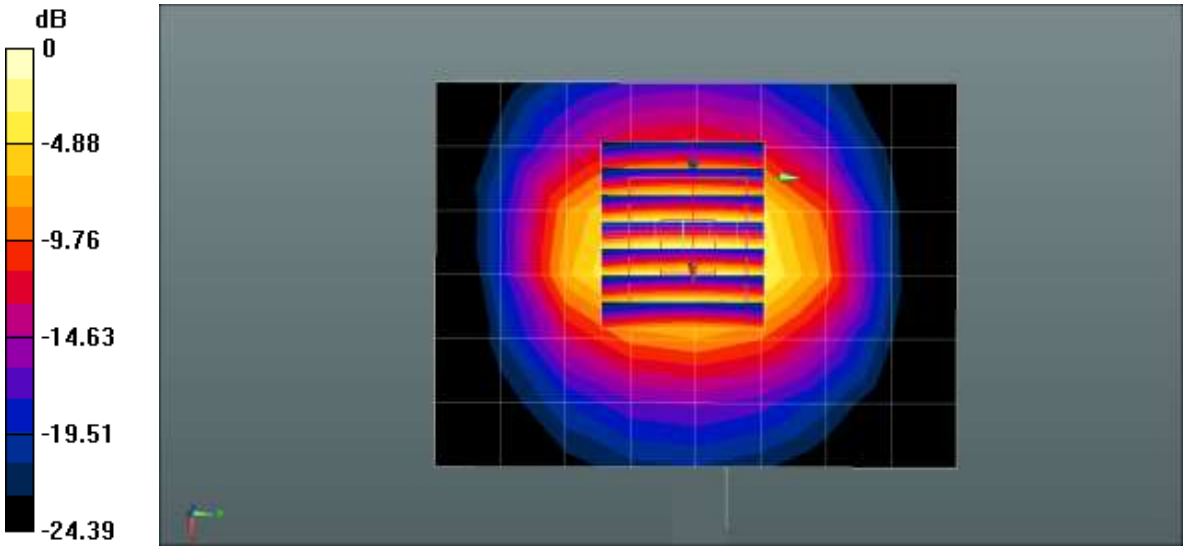
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.777 S/m; ε_r = 39.266; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7654; ConvF(7.94, 7.91, 8.56) @ 2450 MHz; Calibrated: 2023-05-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2023-05-23
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

2450MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.82 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.60 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 5.77 W/kg
SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 4.52 W/kg



0 dB = 4.52 W/kg = 6.55 dBW/kg

■ Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.2 ℃
Test Date:	10/17/2023

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1106

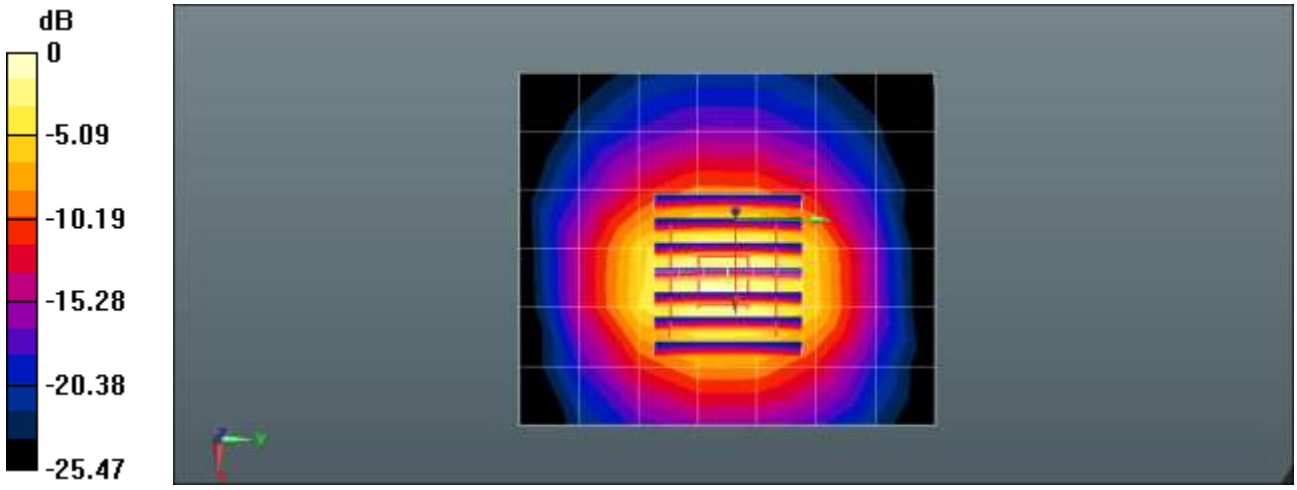
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.973 S/m; ε_r = 38.77; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.59, 4.59, 4.59) @ 2600 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

2600MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.73 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.50 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 6.17 W/kg
SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 3.71 W/kg



0 dB = 3.71 W/kg = 5.69 dBW/kg

■ Verification Data (5 250 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/24/2023

DUT: D5GHzV2 - SN1317; Type: D5GHzV2; Serial: SN1317

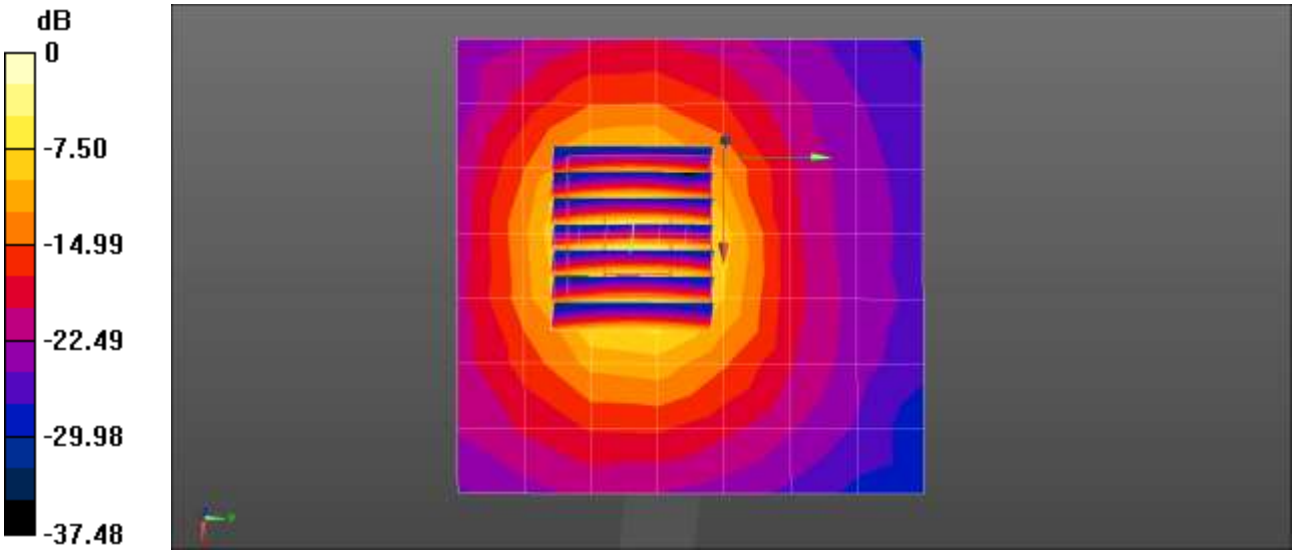
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.738 S/m; ε_r = 36.186; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(5.08, 4.78, 5.04) @ 5250 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

5250MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.03 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 34.34 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 3.89 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

■ Verification Data (5 600 MHz Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/25/2023

DUT: D5GHzV2 - SN1317; Type: D5GHzV2; Serial: SN1317

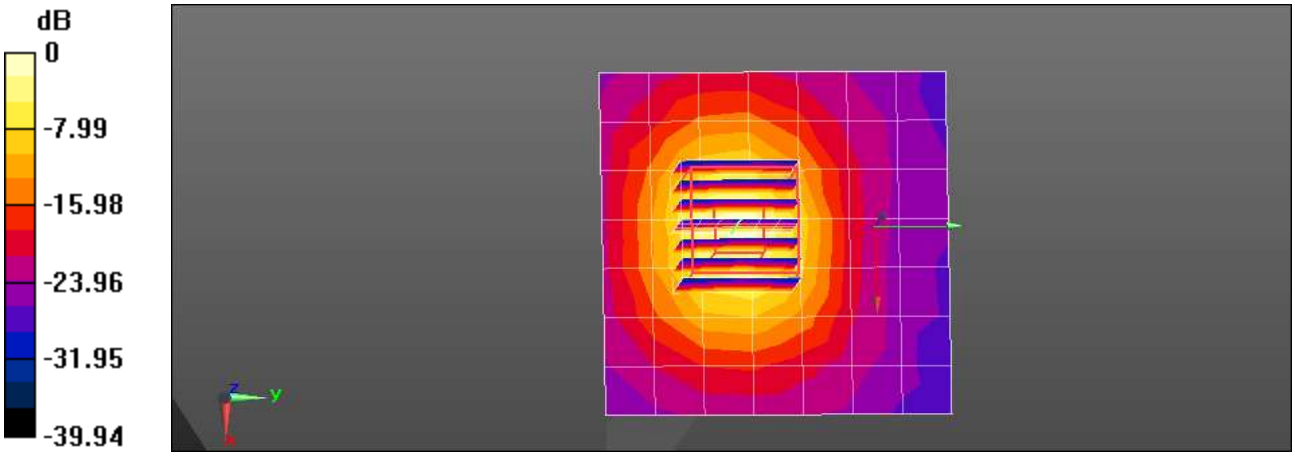
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.136 S/m; ε_r = 36.001; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.37, 4.3, 4.48) @ 5600 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

5600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.15 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 33.62 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 4.02 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

■ Verification Data (5 750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	10/26/2023

DUT: D5GHzV2 - SN1317; Type: D5GHzV2; Serial: SN1317

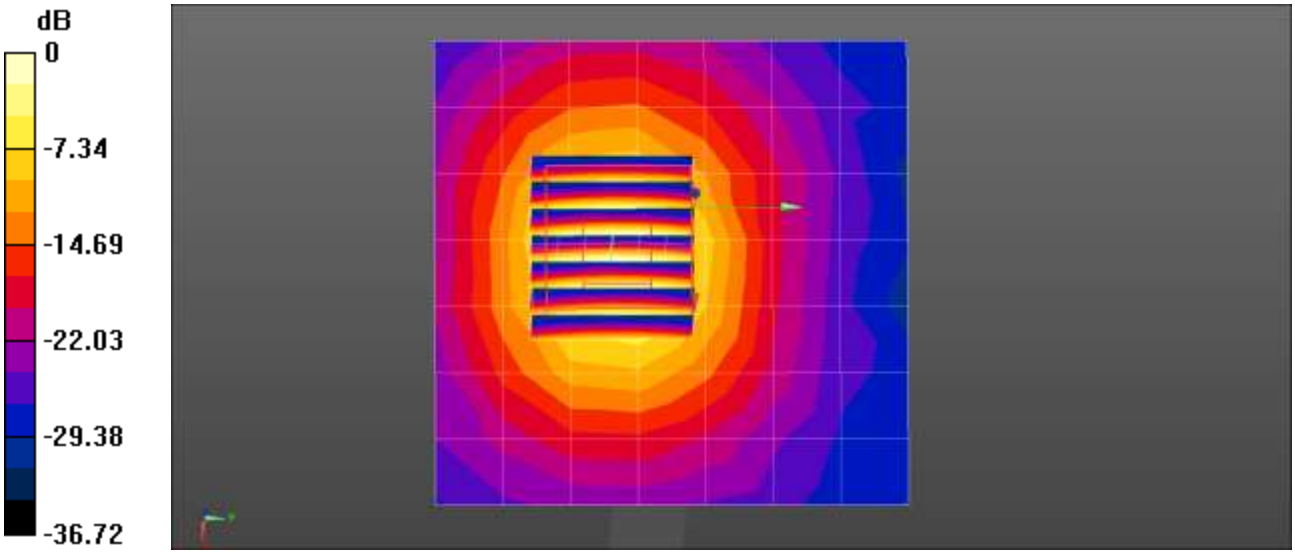
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.261 S/m; ε_r = 35.871; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.53, 4.29, 4.52) @ 5750 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

5750MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.66 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 32.41 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 16.4 W/kg
SAR(1 g) = 3.61 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 9.69 W/kg



0 dB = 9.69 W/kg = 9.86 dBW/kg

■ Verification Data (13 MHz Head) Phablet SAR

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.3 ℃
Test Date:	10/30/2023

DUT: CLA-13; Type: CLA-13; Serial: 1016

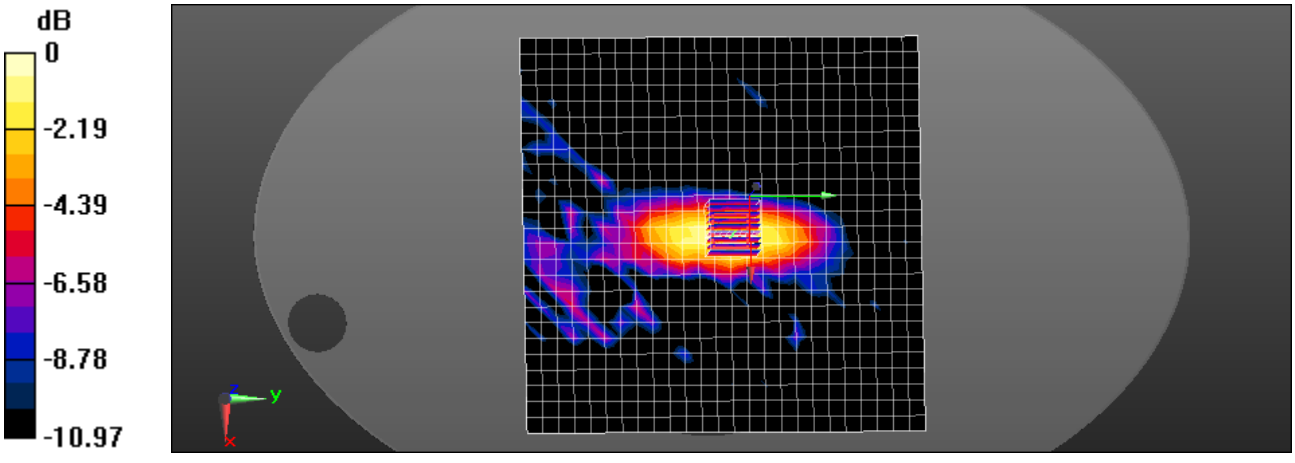
Communication System: UID 0, NFC (0); Frequency: 13 MHz;Duty Cycle: 1:1
Medium parameters used: f = 13 MHz; σ = 0.724 S/m; ε_r = 54.402; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.8, 5.8, 5.8) @ 13 MHz; Calibrated: 2023-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2023-03-23
- Phantom: ELI v5.0 Left; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.13 (7474)

13MHz Verification/Area Scan (26x26x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0286 W/kg

13MHz Verification/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.593 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.0580 W/kg
SAR(1 g) = 0.028 W/kg; SAR(10 g) = 0.018 W/kg
Maximum value of SAR (measured) = 0.0334 W/kg



0 dB = 0.0334 W/kg = -14.76 dBW/kg

■ Verification Data (5 250 ㎒ Head) Phablet SAR

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/24/2023

DUT: D5GHzV2 - SN1317; Type: D5GHzV2; Serial: SN1317

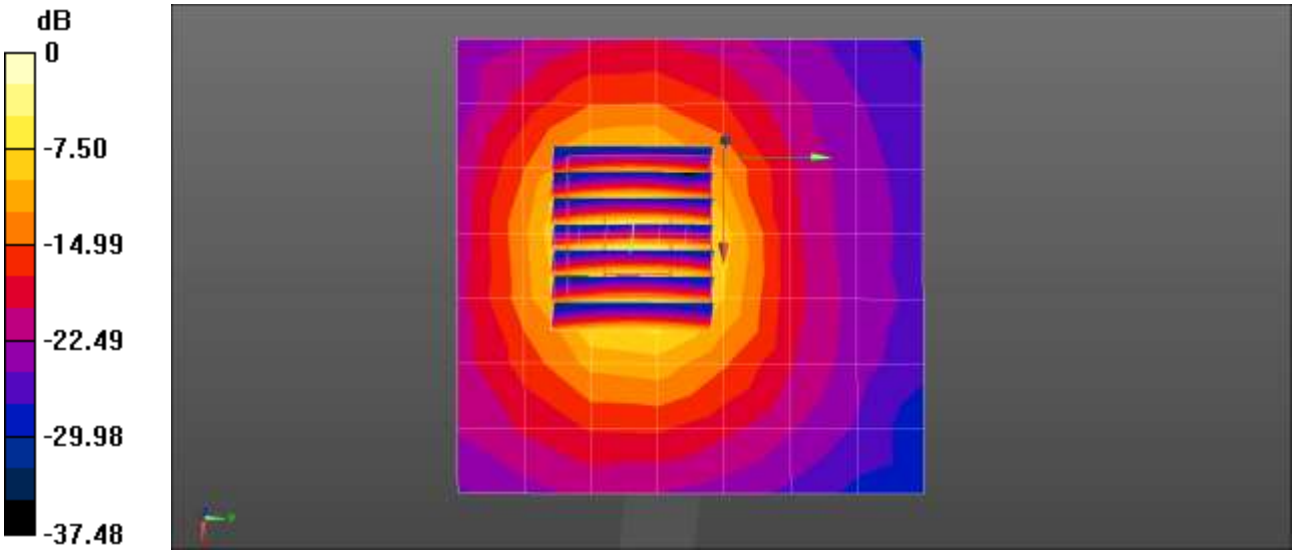
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.738 S/m; ε_r = 36.186; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(5.08, 4.78, 5.04) @ 5250 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

5250MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.03 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 34.34 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 3.89 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

■ Verification Data (5 600 ㎒ Head) Phablet SAR

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/25/2023

DUT: D5GHzV2 - SN1317; Type: D5GHzV2; Serial: SN1317

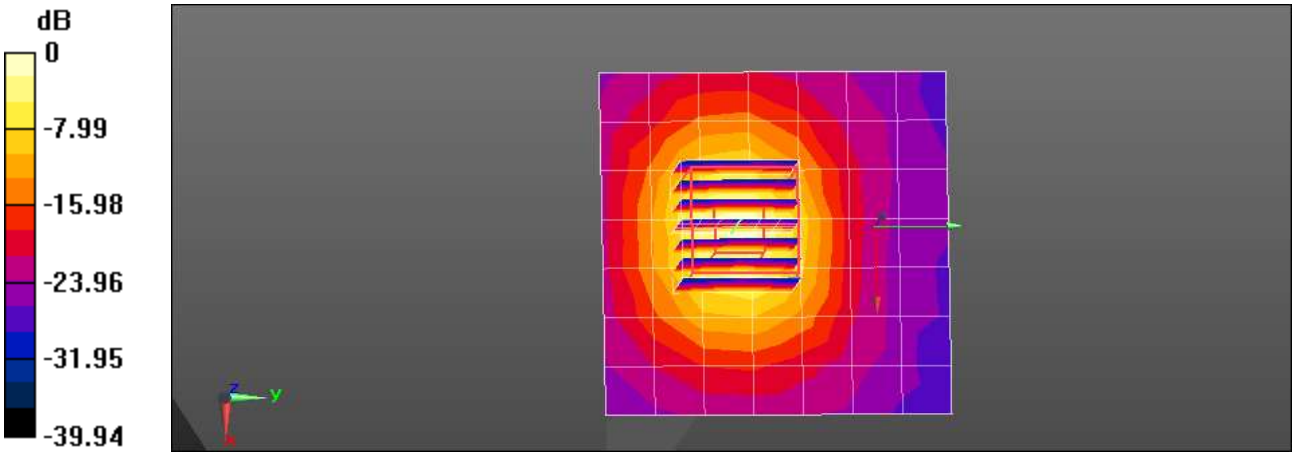
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.136 S/m; ε_r = 36.001; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.37, 4.3, 4.48) @ 5600 MHz; Calibrated: 2023-01-24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2023-01-10
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

5600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.15 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 33.62 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 4.02 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

Appendix D. – SAR Tissue Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bacteriacide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Harts grove.

Ingredients (% by weight)	Frequency (MHz)									
	750		835		1 900		2 450 – 2 700		3500 - 5 800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.1	51.7	40.45	53.06	54.9	70.17	71.88	73.2	65.52	78.66
Salt (NaCl)	1.4	0.9	1.45	0.94	0.18	0.39	0.16	0.1	0.0	0.0
Sugar	57.0	47.2	57.0	44.9	0.0	0	0.0	0.0	0.0	0.0
HEC	0.2	0	1.0	1.0	0.0	0	0.0	0.0	0.0	0.0
Bactericide	0.2	0.1	0.1	0.1	0.0	0	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	19.97	0.0	17.24	10.67
DGBE	0.0	0.0	0.0	0.0	44.92	29.44	7.99	26.7	0.0	0.0
Diethylene glycol hexyl ether	-	-	-	-	-	-	-	-	-	-

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M resistivity	HEC:	Hydroxyethyl Cellulose
DGBE:	99 % Di (ethylene glycol) butyl ether, [2-(2-butoxyethoxy) ethanol]		
Triton X-100(ultra-pure):	Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl) phenyl] ether		

Composition of the Tissue Equivalent Matter

Appendix E. – SAR System Validation

Per FCC KCB 865664 D02v01r02, SAR system validation status should be document to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in IEEE 1528-2013 and FCC KDB 865664 D01v01r04. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.
A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
5	3076	ES3DV3	Head	750	1014	2023-07-28	41.6	0.88	PASS	PASS	PASS	N/A	N/A	N/A
8	7654	EX3DV4	Head	835	4d165	2023-05-25	41.5	0.89	PASS	PASS	PASS	GMSK	PASS	N/A
5	3076	ES3DV3	Head	835	4d165	2023-07-28	41.6	0.91	PASS	PASS	PASS	N/A	N/A	N/A
9	7309	EX3DV4	Head	835	4d165	2023-06-22	41.5	0.89	PASS	PASS	PASS	N/A	N/A	N/A
19	7702	EX3DV4	Head	1900	5d061	2023-02-08	40.1	1.41	PASS	PASS	PASS	N/A	N/A	N/A
9	7309	EX3DV4	Head	1900	5d061	2023-06-22	40.1	1.42	PASS	PASS	PASS	N/A	N/A	N/A
19	7702	EX3DV4	Head	1900	5d061	2023-02-08	40.1	1.41	PASS	PASS	PASS	N/A	N/A	N/A
9	7309	EX3DV4	Head	1900	5d061	2023-06-22	40.1	1.42	PASS	PASS	PASS	N/A	N/A	N/A
19	7702	EX3DV4	Head	1900	5d061	2023-02-08	40.1	1.41	PASS	PASS	PASS	GMSK	PASS	N/A
20	7732	EX3DV4	Head	2450	1049	2023-07-06	39.1	1.83	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	2450	1049	2023-05-30	39.3	1.84	PASS	PASS	PASS	OFDM	N/A	PASS
5	3076	ES3DV3	Head	2600	1106	2023-07-28	38.8	1.96	PASS	PASS	PASS	TDD	PASS	NA
2	3797	EX3DV4	Head	5600	1317	2023-05-19	35.3	5.05	PASS	PASS	PASS	OFDM	N/A	PASS
2	3797	EX3DV4	Head	5750	1317	2023-05-19	35.6	5.24	PASS	PASS	PASS	OFDM	N/A	PASS
2	3797	EX3DV4	Head	5800	1317	2023-05-19	35.1	5.18	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 1g

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
5	3076	ES3DV3	Head	13	1016	2023-09-25	52.5	0.77	PASS	PASS	PASS	N/A	N/A	N/A
2	3797	EX3DV4	Head	5250	1317	2023-05-19	35.7	4.70	PASS	PASS	PASS	OFDM	N/A	PASS
2	3797	EX3DV4	Head	5600	1317	2023-05-19	35.3	5.05	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary – Extremity SAR Considerations

Note;
All measurement were performed using probes calibrated for CW signal only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04. SAR system were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to KDB 865664 D01v01r04.