FCC SAR Test Report

APPLICANT	:	vivo Mobile Communication Co., Ltd.
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	vivo
MODEL NAME	:	V2203, V2204
FCC ID	:	2AUCY-V2203
STANDARD	:	FCC 47 CFR PART 2 (2.1093)

We, Sporton International Inc. (Shenzhen), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Shenzhen), the test report shall not be reproduced except in full.

Si Zhang

Approved by: Si Zhang

ACCREDITED Cert #5145.01

Sporton International Inc. (Shenzhen)
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People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA260913	Rev. 01	Initial issue of report	Jul. 22, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **vivo Mobile Communication Co., Ltd. , Mobile Phone, V2203,** V2204**,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 15mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	850	0.76	0.48	0.19	1.37
		1900	0.92	0.66	0.25	
	WCDMA	Band II	0.90	0.70	0.70	
		Band IV	**0.97**	**0.84**	0.68	
		Band V	0.87	0.43	0.22	
	LTE	Band 2	0.94	0.64	0.88	
		Band 4	0.89	**0.84**	0.74	
		Band 7	0.68	0.50	**0.93**	
		Band 13	0.61	0.42	0.24	
		Band 26/5/19/18	0.85	0.40	0.25	
		Band 66	0.71	**0.84**	0.74	
		Band 38	**0.97**	0.48	0.61	
		Band 41	**0.97**	0.47	0.63	
DTS	WLAN	2.4GHz WLAN	0.55	0.28	0.13	1.22
NII		5GHz WLAN	0.48	0.74	0.51	1.37
DSS	Bluetooth	2.4GHz Bluetooth	0.15	<0.10	<0.10	1.37

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	Band II	2.04	3.34
		Band IV	1.94	
	LTE	Band 2	2.24	
		Band 7	**2.69**	
		Band 66/4	2.13	
		Band 38	2.26	
		Band 41	2.38	
NII	WLAN	5GHz WLAN	1.35	3.34
Date of Testing:			2022/07/02~2022/07/13	

Remark:

1. This device supports LTE B5 / B18 / B19 and B26. Since the supported frequency span for LTE B5 / B18 / B19 falls completely within the supported frequency span for LTE B26, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B26 at all exposure conditions.
2. This device supports LTE B4 / and B66. Since the supported frequency span for LTE B4 falls completely within the supported frequency span for LTE B66 at hotspot/body-worn/extremity exposure condition for all antennas and at head exposure condition for antenna 0, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 except for head exposure condition antenna 1.
3. This device supports LTE B38 and B41. Since the supported frequency span for LTE B38 falls completely within the supported frequency span for LTE B41 at head exposure condition for all antennas and at hotspot/body-worn/extremity exposure conditions for antenna 0, both LTE bands have the same target power, and both LTE bands share the same

transmission path; therefore, SAR was only assessed for LTE B41 at head exposure condition for all antennas and hotspot/body-worn/extremity for antenna 0.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory			
Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR04-SZ	CN1256	421272

Applicant	
Company Name	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan,Guangdong,China

Manufacturer	
Company Name	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan,Guangdong,China

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Phone
Brand Name	vivo
Model Name	V2203, V2204
FCC ID	2AUCY-V2203
IMEI Code	Sample 1 SIM1: 867315060002346 SIM2: 867315060002353 Sample 2 SIM1: 865254060002042 SIM2: 865254060002059
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 18: 815 MHz ~ 830 MHz LTE Band 19: 830 MHz ~ 845 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2535 MHz ~ 2655 MHz LTE Band 66: 1710 MHz ~ 1780 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink) LTE: QPSK/ 16QAM / 64QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	MP_0.1
SW Version	PD2216CF_EX_A_12.0.1.38.W30.V00L1
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Production Unit

Remark:

1. 802.11n-HT40 is not supported in 2.4GHz WLAN.
2. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
3. This device does not support DTM operation and support GRPS/EGRPS mode up to multi-slot class 12.
4. This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
5. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
6. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result

of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.

7. The device implements Proximity sensors/receiver/hotspot detect mechanism trigger reduced power for the power management for SAR compliance at different exposure conditions (head, hotspot, body, and extremity). It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G and Wi-Fi antennas accordingly. The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E and the detail DSI descriptions of below table.

DSI	Trigger Conditions	Antenna No.	Exposure conditions	
DSI0	Default power	Ant 0/ Ant 1	Full power	-
DSI1	Receiver on	Ant 0/ Ant 1	Head Standalone/Simultaneous	Head all Position
DSI2	Receiver off/Sensor off	Ant 0/ Ant 1	Body-worn/Extremity Standalone	Body all Position
DSI3	Receiver off/Sensor on	Ant 0	Extremity Standalone	See by section 5
DSI4	Receiver off/Sensor on	Ant 1	Extremity Standalone	See by section 5
DSI6	Hotspot on	Ant 0/ Ant 1	Hotspot	Body all Position
	Receiver off + WLAN	Ant 0/ Ant 1	Body-worn/Extremity Simultaneous	Body all Position

8. For WLAN transmitter, while the device WWAN is transmitting simultaneously with the WLAN/Bluetooth antenna, the device power will be reduced power at head, body-worn, Hotspot and extremity conditions.
9. There are two samples, the difference between them refer to the V2203, V2204_Operational Description of Product Equality Declaration which is exhibit separately. According to the difference, sample 1 perform full test and sample 2 verify the worst case.

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	2AUCY-V2203
Equipment Name	Mobile Phone
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 18: 815 MHz ~ 830 MHz LTE Band 19: 830 MHz ~ 845 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2535 MHz ~ 2655 MHz LTE Band 66: 1710 MHz ~ 1780 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 13: 5MHz, 10MHz LTE Band 18: 5MHz, 10MHz, 15MHz LTE Band 19: 5MHz, 10MHz, 15MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
Uplink Modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE Release Version	R9, category 4
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	Yes, when operating in Proximity sensors/receiver/hotspot detect mechanism trigger reduction power applied to satisfy SAR compliance the detail please referred to section 13.

Transmission (H, M, L) channel numbers and frequencies in each LTE band

LTE Band 2

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900

LTE Band 4

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745

LTE Band 5

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844

LTE Band 7

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560

LTE Band 13

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

LTE Band 18

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23875	817.5	23900	820		
M	23925	822.5	23925	822.5	23925	822.5
H	23975	827.5	23950	825		

LTE Band 19

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	24025	832.5	24050	835		
M	24075	837.5	24075	837.5	24075	837.5
H	24125	842.5	24100	840		

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 38								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	40065	2537.5	40090	2540	40115	2542.5	40140	2545
LM	40385	2569.5	40390	2570	40395	2570.5	40400	2571
HM	40705	2601.5	40690	2600	40685	2599.5	40670	2598
H	41215	2652.5	41190	2650	41165	2647.5	41140	2645

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq.(MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 18			Yes	Yes	Yes	
LTE Band 19			Yes	Yes	Yes	
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

TX. freq.	Ant	DSI0 (Default)	DSI1	DSI2	DSI3	DSI6
		max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)
LTE Band 5	0	25.00	25.00	25.00	25.00	25.00
LTE Band 18	0	25.00	25.00	25.00	25.00	25.00
LTE Band 19	0	25.00	25.00	25.00	25.00	25.00
LTE Band 26	0	25.00	25.00	25.00	25.00	25.00
LTE Band 4	0	24.50	24.50	24.50	21.50	20.50
LTE Band 66	0	24.50	24.50	24.50	21.50	21.00
LTE Band 38	0	24.50	24.50	24.50	22.50	21.50
LTE Band 41	0	24.50	24.50	24.50	22.50	21.50

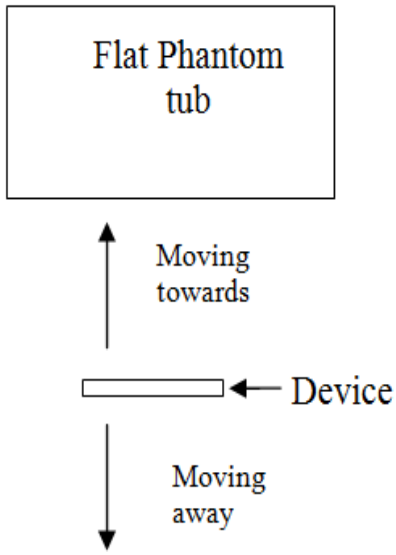
TX. freq.	Ant	DSI0 (Default)	DSI1	DSI2	DSI4	DSI6
		max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)	max. tune up limit (dBm)
LTE Band 5	1	25.00	22.50	25.00	25.00	25.00
LTE Band 18	1	25.00	23.00	25.00	25.00	25.00
LTE Band 19	1	25.00	23.00	25.00	25.00	25.00
LTE Band 26	1	25.00	23.00	25.00	25.00	25.00
LTE Band 4	1	24.50	19.00	24.50	22.50	20.50
LTE Band 66	1	24.50	18.00	24.50	22.50	20.50
LTE Band 38	1	24.50	21.00	24.50	20.50	19.50
LTE Band 41	1	24.50	21.00	24.50	20.50	19.00

Note: LTE Band 5 / 18 / 19 SAR test was covered by Band 26 at all exposure conditions; LTE Band 38 SAR test was covered by Band 41 at head exposure condition for all antennas and at hotspot/body-worn/extremity exposure conditions for antenna 0; LTE Band 4 SAR test was covered by Band 66 at hotspot/body-worn/extremity exposure condition for all antennas and at head exposure condition for antenna 0.

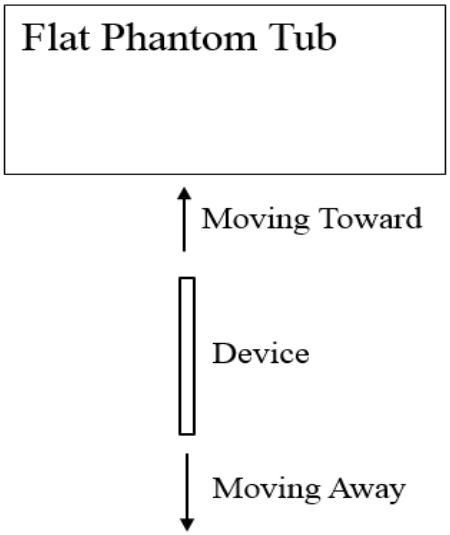
5. Proximity Sensor Triggering Test

5.1 Proximity sensor triggering distances(Per KDB616217§6.2)

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (2600MHz) and lowest (1750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the top and bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back or top or bottom or left side of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna..
3. The device employs proximity sensors that detect the presence of the user's body at the front, back, top, bottom left sides of the device. When front, back, top, bottom, left sides of body condition is detected, reduced power will be active. The data shown in the sections below shows the distance(s).
4. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.



Sensor detection test set-up, front and back sides



Sensor detection test set-up, top/bottom /left sides

<P-Sensor>

Antenna 0:

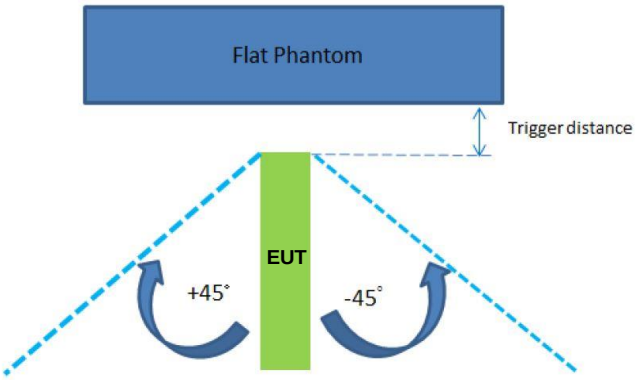
Proximity Sensor Trigger Distance (mm)								
Position	Front		Back		Bottom Side		Left Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	3	3	12	12	12	12	5	5

Antenna 1:

Proximity Sensor Trigger Distance (mm)								
Position	Front		Back		Top Side		Left Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	3	3	12	12	12	12	5	5

5.2 proximity sensor triggering (KDB 616217 D04 section 6.4):

The influence of Phone tilt angles to proximity sensor triggering was determined by positioning each Phone edge that contains a transmitting antenna, perpendicular to the flat phantom, at above separation distance.
Rotating the Phone around the edge next to the phantom in ≤ 10° increments until the Phone is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.



Antenna 0&1:

The Sensor Trigger Distance (mm)			
Position	Left Side	Top Side	Bottom Side
Minimum	5	12	12

6. RF Exposure Limits

6.1 Uncontrolled Environment

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 made 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.

6.2 Controlled Environment

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. The 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.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

7. Specific Absorption Rate (SAR)

7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

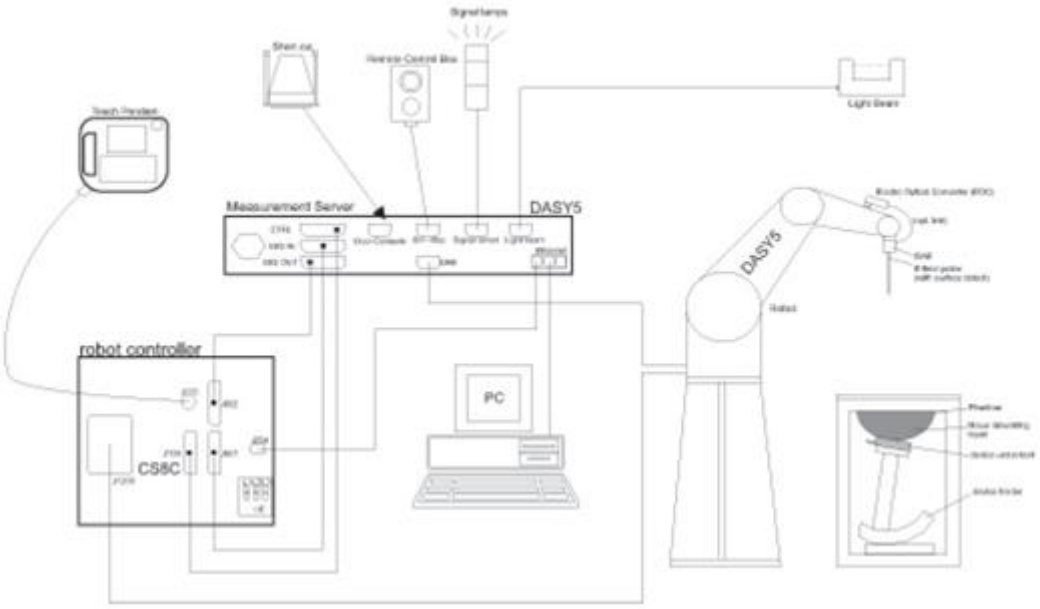
SAR is expressed in units of Watts per kilogram (W/kg)

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^{\mathbf{2}}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

8. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm

8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (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 measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

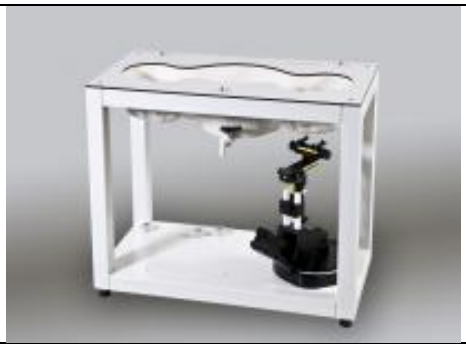
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

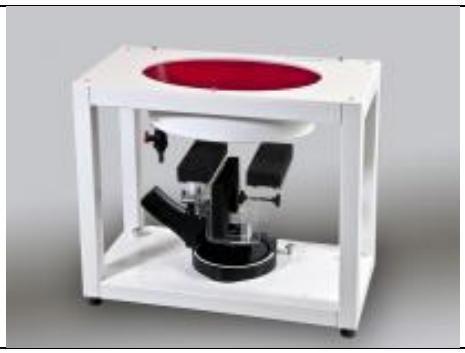
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm



The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	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.	

9.4 Zoom Scan

Zoom scans are used assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube shoes base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

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.

9.5 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

9.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1099	Dec. 15, 2021	Dec. 14, 2022
SPEAG	835MHz System Validation Kit	D835V2	4d162	Dec. 17, 2021	Dec. 16, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1137	Oct. 19, 2021	Oct. 18, 2022
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	Dec. 20, 2021	Dec. 19, 2022
SPEAG	2450MHz System Validation Kit	D2450V2	924	Sep. 02, 2020	Sep. 01, 2023
SPEAG	2600MHz System Validation Kit	D2600V2	1070	Dec. 20, 2021	Dec. 19, 2022
SPEAG	5000MHz System Validation Kit	D5GHzV2	1341	Dec. 13, 2021	Dec. 12, 2022
SPEAG	Data Acquisition Electronics	DAE4	715	Dec. 29, 2021	Dec. 28, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3819	May 30, 2022	May 29, 2023
SPEAG	SAM Twin Phantom	QD 000 P40 CC	TP-1500	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio communication analyzer	MT8820C	6201300653	Jul. 14, 2021	Jul. 13, 2022
Anritsu	Radio communication analyzer	MT8821C	6272416863	Apr. 06, 2022	Apr. 05, 2023
Agilent	Wireless Communication Test Set	E5515C	MY50267224	Jul. 14, 2021	Jul. 13, 2022
Keysight	Network Analyzer	E5071C	MY46523671	Oct. 25, 2021	Oct. 24, 2022
Speag	Dielectric Assessment KIT	DAK-3.5	1071	Jan. 24, 2022	Jan. 23, 2023
Agilent	Signal Generator	N5181A	MY50145381	Dec. 28, 2021	Dec. 27, 2022
Anritsu	Power Senor	MA2411B	1306099	Sep. 29, 2021	Sep. 28, 2022
Anritsu	Power Meter	ML2495A	1349001	Sep. 29, 2021	Sep. 28, 2022
R&S	CBT BLUETOOTH TESTER	CBT	100963	Dec. 28, 2021	Dec. 27, 2022
R&S	Spectrum Analyzer	FSP7	100818	Jul. 14, 2021	Jul. 13, 2022
TES	Hygrometer	1310	200505600	Jul. 17, 2021	Jul. 16, 2022
Anymetre	Thermo-Hygrometer	JR593	2015030904	Jul. 17, 2021	Jul. 16, 2022
SPEAG	Device Holder	N/A	N/A	N/A	N/A
AR	Amplifier	5S1G4	0333096	Note 1	
mini-circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
Weinschel	Attenuator 1	3M-10	N/A	Note 1	
Weinschel	Attenuator 2	3M-20	N/A	Note 1	

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

11. System Verification

11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.2.

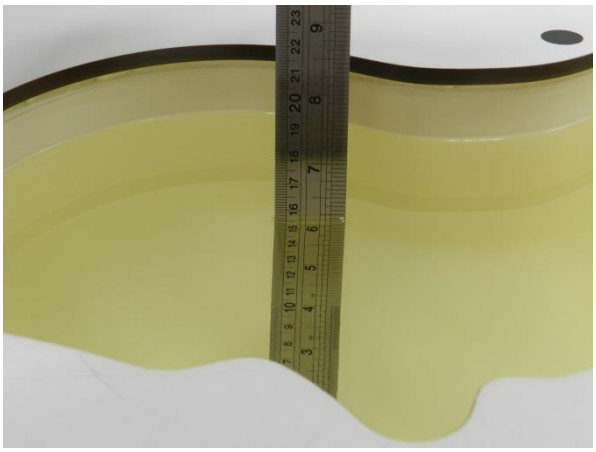


Fig 10.1Photo of Liquid Height for Head SAR

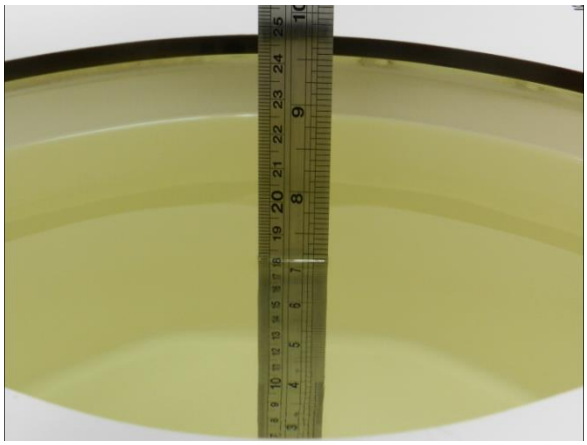


Fig 10.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.5	0.882	40.803	0.89	41.90	-0.90	-2.62	±5	2022/7/2
835	Head	22.3	0.913	40.859	0.90	41.50	1.44	-1.54	±5	2022/7/3
1750	Head	22.7	1.407	41.718	1.37	40.10	2.70	4.03	±5	2022/7/5
1750	Head	22.2	1.383	39.897	1.37	40.10	0.95	-0.51	±5	2022/7/12
1900	Head	22.4	1.455	40.068	1.40	40.00	3.93	0.17	±5	2022/7/4
1900	Head	22.5	1.445	41.028	1.40	40.00	3.21	2.57	±5	2022/7/9
2450	Head	22.6	1.871	38.124	1.80	39.20	3.94	-2.74	±5	2022/7/12
2600	Head	22.2	1.935	38.814	1.96	39.00	-1.28	-0.48	±5	2022/7/8
2600	Head	22.7	2.055	37.597	1.96	39.00	4.85	-3.60	±5	2022/7/13
5250	Head	22.5	4.744	36.854	4.71	35.95	0.72	2.51	±5	2022/7/10
5600	Head	22.6	5.182	36.105	5.07	35.50	2.21	1.70	±5	2022/7/13
5750	Head	22.3	5.357	35.815	5.22	35.35	2.62	1.32	±5	2022/7/11

11.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<1g>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2022/7/2	750	Head	250	1099	3819	715	2.110	8.54	8.44	-1.17
2022/7/3	835	Head	250	4d162	3819	715	2.490	9.64	9.96	3.32
2022/7/5	1750	Head	250	1137	3819	715	9.190	36.50	36.76	0.71
2022/7/12	1750	Head	250	1137	3819	715	9.650	36.50	38.6	5.75
2022/7/4	1900	Head	250	5d182	3819	715	10.400	39.60	41.6	5.05
2022/7/9	1900	Head	250	5d182	3819	715	10.100	39.60	40.4	2.02
2022/7/12	2450	Head	250	924	3819	715	13.800	51.40	55.2	7.39
2022/7/8	2600	Head	250	1070	3819	715	13.300	56.20	53.2	-5.34
2022/7/13	2600	Head	250	1070	3819	715	14.100	56.20	56.4	0.36
2022/7/10	5250	Head	100	1341	3819	715	8.610	80.70	86.1	6.69
2022/7/13	5600	Head	100	1341	3819	715	9.010	84.50	90.1	6.63
2022/7/11	5750	Head	100	1341	3819	715	8.550	80.60	85.5	6.08

<10g>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)2	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2022/7/2	750	Head	250	1099	3819	715	1.410	5.65	5.64	-0.18
2022/7/3	835	Head	250	4d162	3819	715	1.640	6.26	6.56	4.79
2022/7/5	1750	Head	250	1137	3819	715	4.860	19.20	19.44	1.25
2022/7/12	1750	Head	250	1137	3819	715	5.150	19.20	20.6	7.29
2022/7/4	1900	Head	250	5d182	3819	715	5.340	20.20	21.36	5.74
2022/7/9	1900	Head	250	5d182	3819	715	5.270	20.20	21.08	4.36
2022/7/12	2450	Head	250	924	3819	715	6.390	24.00	25.56	6.50
2022/7/8	2600	Head	250	1070	3819	715	5.960	24.60	23.84	-3.09
2022/7/13	2600	Head	250	1070	3819	715	6.330	24.60	25.32	2.93
2022/7/10	5250	Head	100	1341	3819	715	2.420	23.10	24.2	4.76
2022/7/13	5600	Head	100	1341	3819	715	2.550	24.00	25.5	6.25
2022/7/11	5750	Head	100	1341	3819	715	2.380	22.70	23.8	4.85

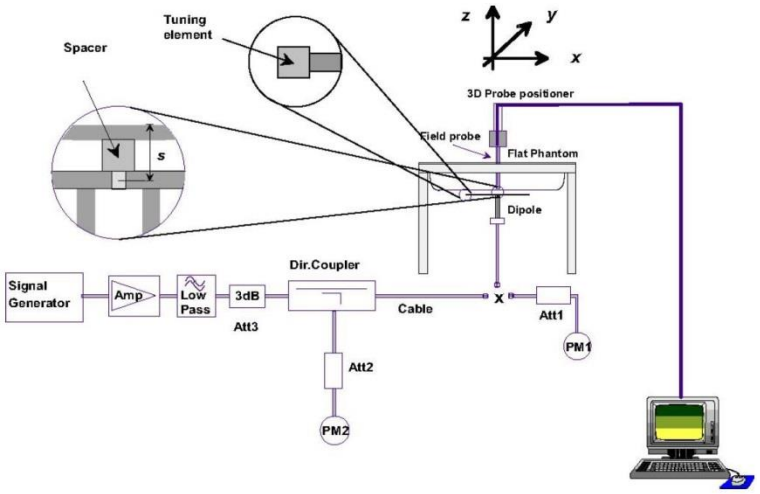


Fig 10.3.1 System Performance Check Setup

Fig 10.3.2 Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

Figure 11.1.1 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 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 11.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 11.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 11.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

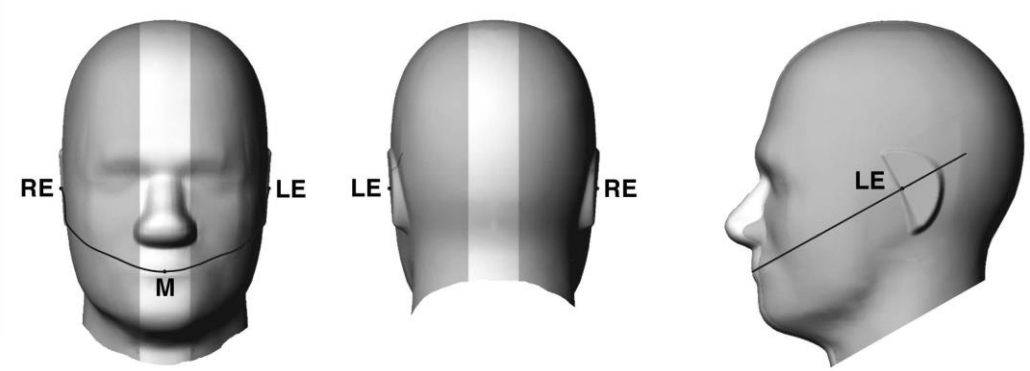


Fig 11.1.1 Front, back, and side views of SAM twin phantom

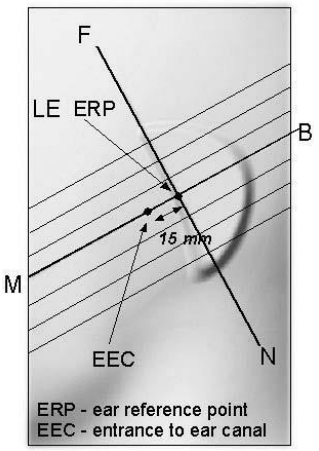


Fig 11.1.2 Close-up side view of phantom showing the ear region.

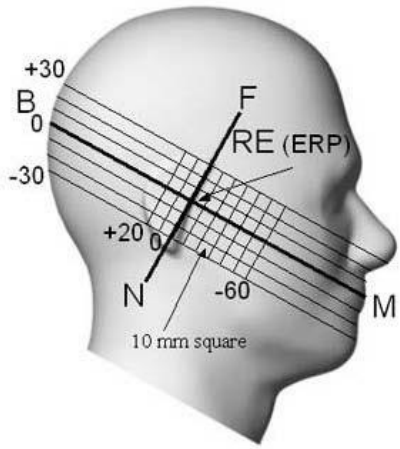


Fig 11.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 11.2.1 and Figure 11.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 11.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 11.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 11.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 11.2.3. The actual rotation angles should be documented in the test report.

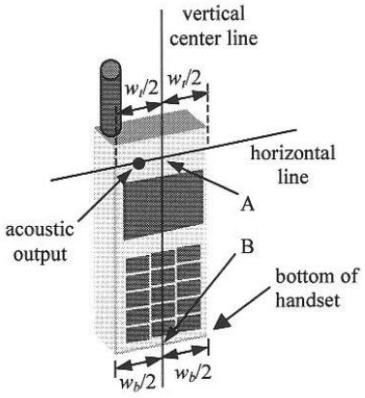


Fig 11.2.1 Handset vertical and horizontal reference lines—"fixed case

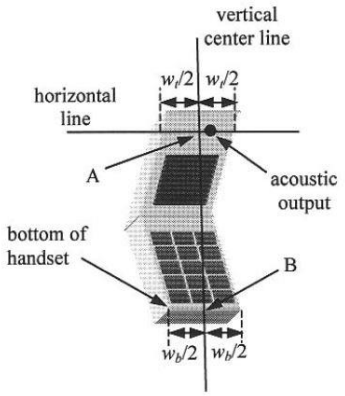


Fig 11.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

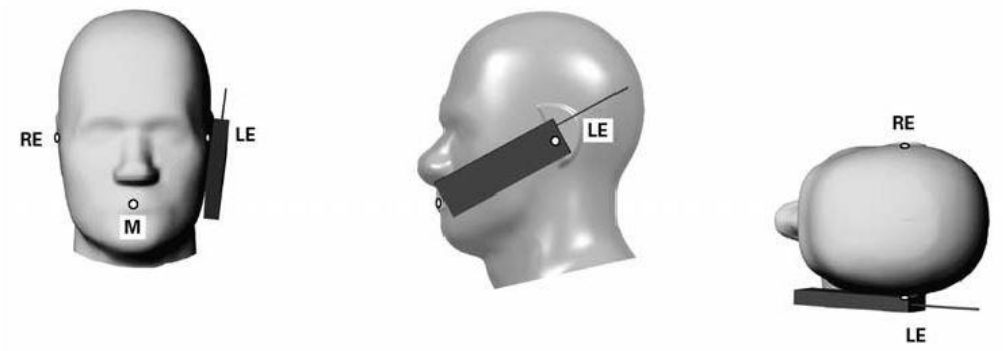


Fig 11.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 11.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

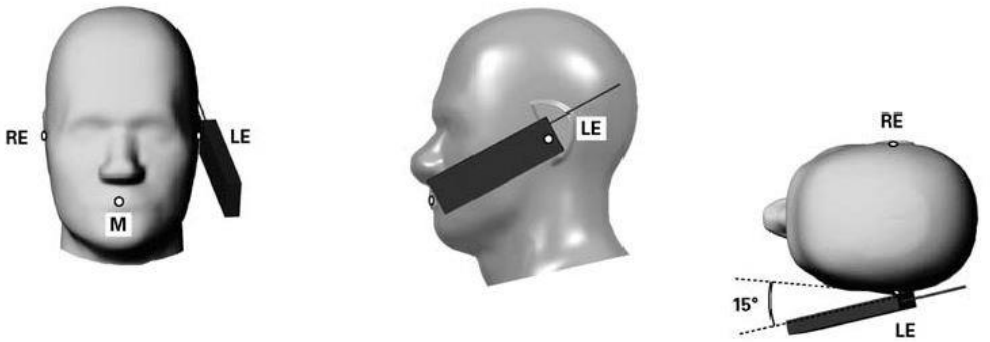


Fig 11.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 11.4). Per KDB648474 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 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for 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 handset attached to the handset.

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 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 test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

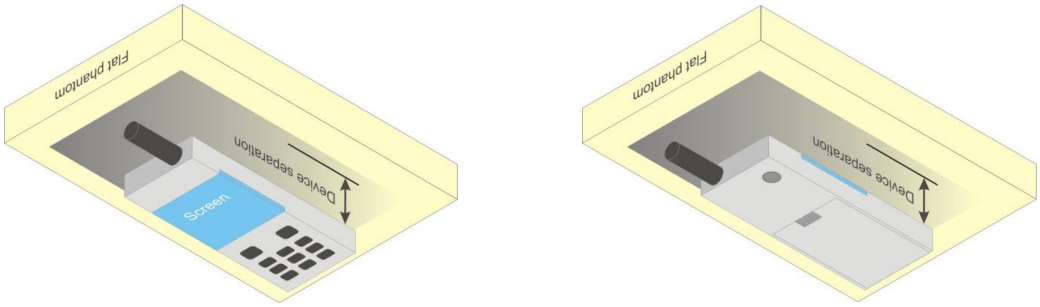


Fig 11.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

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, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

12.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use 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.

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

General Note:

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The 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.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set RMC 12.2Kbps + HSDPA mode.
   ii. Set Cell Power = -25 dBm
   iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   iv. Select HSDPA Uplink Parameters
   v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_d=15/4
   vi. Set Delta ACK, Delta NACK and Delta CQI = 8
   vii. Set Ack-Nack Repetition Factor to 3
   viii. Set CQI Feedback Cycle (k) to 4 ms
   ix. Set CQI Repetition Factor to 2
   x. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Proces ses	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

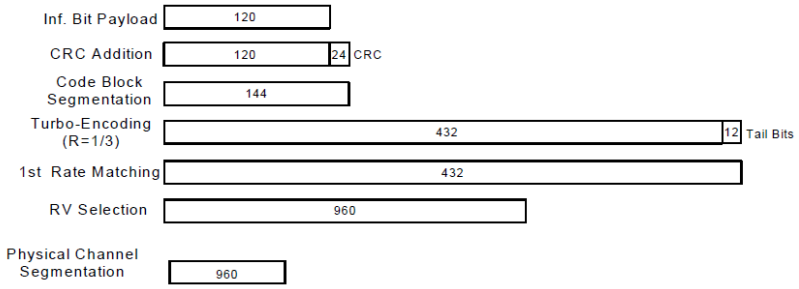


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2E:HSPA+:UL with 16QAM
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.4, quoted from the TS 34.121-1 s5.2E
   iii. Set Channel Parms
   iv. Set Cell Power = -86 dBm
   v. Set Channel Type = HSPA
   vi. Set UE Target Power =21 dBm
   vii. Power Ctrl Mode= All Up Bits
   viii. Set Manual Uplink DPCH Bc/Bd = Manual
   ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
   x. Set HSPA Conn DL Channel Levels
   xi. Set HS-SCCH Configs
   xii. Set RB Test Mode Setup
   xiii. Set Common HSUPA Parameters
   xiv. Set Serving Grant
   xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

Setup Configuration

<WCDMA Conducted Power>

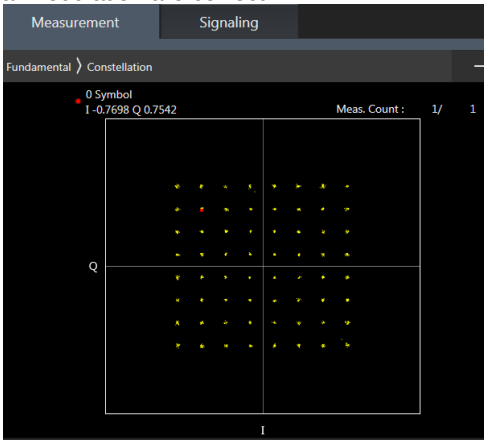
General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

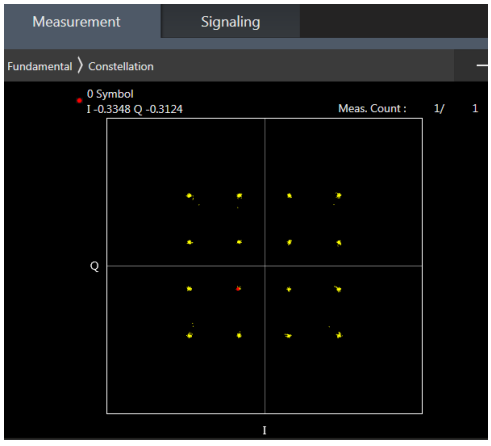
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE Band 5 / 18 / 19 SAR test was covered by Band 26 at all exposure conditions; LTE Band 38 SAR test was covered by Band 41 at head exposure condition for all antennas and at hotspot/body-worn/extremity exposure conditions for antenna 0; LTE Band 4 SAR test was covered by Band 66 at hotspot/body-worn/extremity exposure condition for all antennas and at head exposure condition for antenna 0; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to May 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations

b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS

c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

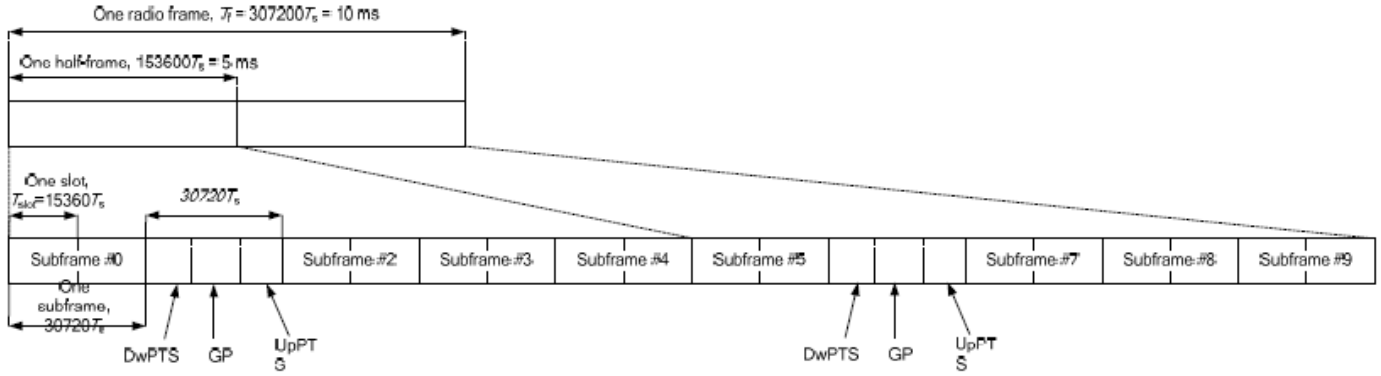


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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

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	$13168 \cdot T_s$			-	-	-

Special subframe (30720·T_s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~4**	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T_s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~3**	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.

ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink

iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%

iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%

v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

<WLAN Conducted Power>

General Note:

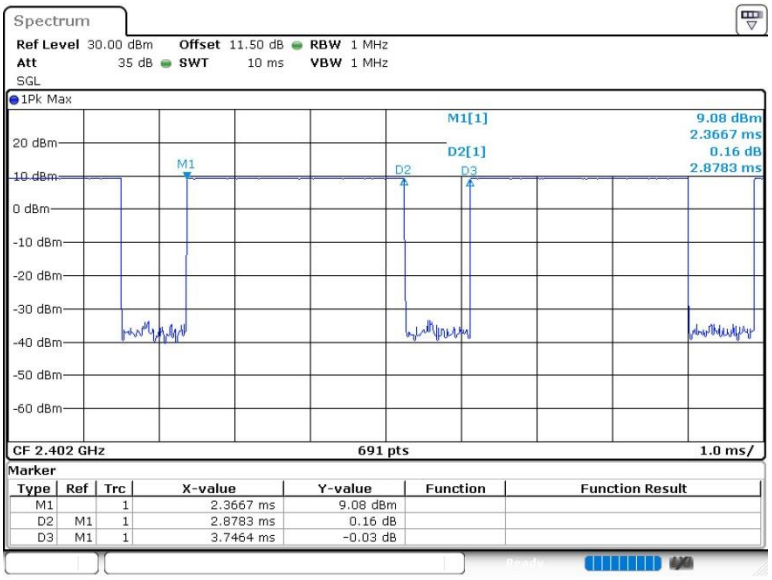
1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 76.83% see as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to100% for Bluetooth reported SAR calculation.

Bluetooth time-domain plot



14. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR (W/kg) = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   · ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   · ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   · ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
4. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15cm or an overall diagonal dimension > 16cm, when hotspot mode applies, 10-g product specific SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, in this report all the hotspot mode results are < 1.2W/kg.
6. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
   a. For this device SAR for WWAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA Band II/IV, LTE Band 2/4/7/66/38/41, and 5.2GHz WIFI, therefore product specific 10g SAR is necessary.
   b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
   c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.
7. For distance SAR and non-distance SAR, always chose higher SAR to do co-located analysis.
8. The following table “n/a” means the measured SAR is too small to find the 1g cube SAR.

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The 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.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE Band 5 / 18 / 19 SAR test was covered by Band 26 at all exposure conditions; LTE Band 38 SAR test was covered by Band 41 at head exposure condition for all antennas and at hotspot/body-worn/extremity exposure conditions for antenna 0; LTE Band 4 SAR test was covered by Band 66 at hotspot/body-worn/extremity exposure condition for all antennas and at head exposure condition for antenna 0.

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

15.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																			
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	1	23230	782	23.71	25.00	1.346	0.03	0.092	0.124
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	1	23230	782	23.71	25.00	1.346	0.1	0.056	0.075
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	1	23230	782	23.71	25.00	1.346	0.03	0.128	0.172
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	1	23230	782	23.71	25.00	1.346	0.02	0.077	0.104
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 1	1	23230	782	22.61	24.00	1.377	-0.02	0.073	0.101
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 1	1	23230	782	22.61	24.00	1.377	-0.01	0.046	0.063
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 1	1	23230	782	22.61	24.00	1.377	-0.05	0.103	0.142
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 1	1	23230	782	22.61	24.00	1.377	-0.04	0.061	0.084
01	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	23230	782	22.81	24.00	1.315	-0.08	0.460	**0.605**
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	23230	782	22.81	24.00	1.315	-0.05	0.450	0.592
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	23230	782	22.81	24.00	1.315	0.19	0.360	0.473
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	23230	782	22.81	24.00	1.315	-0.02	0.336	0.442
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	23230	782	22.80	24.00	1.318	0.15	0.435	0.573
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	23230	782	22.80	24.00	1.318	-0.02	0.444	0.585
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	23230	782	22.80	24.00	1.318	0.07	0.340	0.448
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	23230	782	22.80	24.00	1.318	0.17	0.321	0.423
835MHz																			
	GSM850	-	-	-	-	GPRS 4 Tx slots	Right Cheek	0mm	Ant 0	DSI 1	1	189	836.4	26.83	27.50	1.167	0.09	0.118	0.138
	GSM850	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 0	DSI 1	1	189	836.4	26.83	27.50	1.167	0.02	0.079	0.092
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Cheek	0mm	Ant 0	DSI 1	1	189	836.4	26.83	27.50	1.167	-0.07	0.165	0.193
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Tilted	0mm	Ant 0	DSI 1	1	189	836.4	26.83	27.50	1.167	-0.1	0.088	0.103
02	GSM850	-	-	-	-	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	DSI 1	1	189	836.4	26.01	26.50	1.119	-0.08	0.680	**0.761**
	GSM850	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	189	836.4	26.01	26.50	1.119	0.09	0.628	0.703
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	DSI 1	1	189	836.4	26.01	26.50	1.119	-0.06	0.446	0.499
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Tilted	0mm	Ant 1	DSI 1	1	189	836.4	26.01	26.50	1.119	-0.05	0.441	0.494
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	1	4182	836.4	22.86	24.00	1.300	-0.15	0.092	0.120
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	1	4182	836.4	22.86	24.00	1.300	0.16	0.054	0.070
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	1	4182	836.4	22.86	24.00	1.300	-0.1	0.118	0.153
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	1	4182	836.4	22.86	24.00	1.300	0.1	0.063	0.082
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1	4182	836.4	20.90	22.00	1.288	-0.1	0.631	0.813
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	4182	836.4	20.90	22.00	1.288	-0.19	0.592	0.763
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1	4182	836.4	20.90	22.00	1.288	-0.04	0.441	0.568
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	1	4182	836.4	20.90	22.00	1.288	-0.11	0.370	0.477
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1	4132	826.4	20.88	22.00	1.294	0.15	0.573	0.742
03	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1	4233	846.6	20.79	22.00	1.321	-0.02	0.659	**0.871**
	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 0	DSI 1	1	26865	831.5	23.89	25.00	1.291	0.14	0.108	0.139
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 0	DSI 1	1	26865	831.5	23.89	25.00	1.291	0.05	0.057	0.074
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 0	DSI 1	1	26865	831.5	23.89	25.00	1.291	-0.04	0.133	0.172
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 0	DSI 1	1	26865	831.5	23.89	25.00	1.291	-0.11	0.072	0.093
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 1	1	26865	831.5	22.89	24.00	1.291	0.09	0.085	0.110
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 1	1	26865	831.5	22.89	24.00	1.291	-0.18	0.045	0.058
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 1	1	26865	831.5	22.89	24.00	1.291	-0.13	0.102	0.132
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 1	1	26865	831.5	22.89	24.00	1.291	0.05	0.055	0.071
04	LTE Band 26	15M	QPSK	1	37	-	Right Cheek	0mm	Ant 1	DSI 1	1	26865	831.5	21.88	23.00	1.294	-0.06	0.657	**0.850**
	LTE Band 26	15M	QPSK	1	37	-	Right Tilted	0mm	Ant 1	DSI 1	1	26865	831.5	21.88	23.00	1.294	0.05	0.653	0.845
	LTE Band 26	15M	QPSK	1	37	-	Left Cheek	0mm	Ant 1	DSI 1	1	26865	831.5	21.88	23.00	1.294	-0.08	0.516	0.668
	LTE Band 26	15M	QPSK	1	37	-	Left Tilted	0mm	Ant 1	DSI 1	1	26865	831.5	21.88	23.00	1.294	-0.1	0.485	0.628
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	26865	831.5	21.83	23.00	1.309	-0.11	0.640	0.838
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	26865	831.5	21.83	23.00	1.309	0.06	0.628	0.822
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	26865	831.5	21.83	23.00	1.309	0.1	0.497	0.651
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	26865	831.5	21.83	23.00	1.309	-0.12	0.420	0.550

	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	26865	831.5	21.75	23.00	1.334	-0.18	0.630	0.840
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	26865	831.5	21.75	23.00	1.334	0.11	0.621	0.828
1750MHz																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	1	1413	1732.6	23.13	24.00	1.222	0.18	0.078	0.095
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	1	1413	1732.6	23.13	24.00	1.222	-0.12	0.083	0.101
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	1	1413	1732.6	23.13	24.00	1.222	0.13	0.128	0.156
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	1	1413	1732.6	23.13	24.00	1.222	-0.13	0.054	0.066
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	0.11	0.608	0.714
05	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	-0.03	0.821	**0.965**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	-0.01	0.455	0.535
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	0.12	0.515	0.605
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	1312	1712.4	18.25	19.00	1.189	0.05	0.750	0.891
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	1513	1752.6	18.27	19.00	1.183	0.07	0.744	0.880
	LTE Band 4	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 1	1	20175	1732.5	18.13	19.00	1.222	0.03	0.571	0.698
06	LTE Band 4	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 1	1	20175	1732.5	18.13	19.00	1.222	-0.01	0.729	**0.891**
	LTE Band 4	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 1	1	20175	1732.5	18.13	19.00	1.222	-0.13	0.399	0.487
	LTE Band 4	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 1	1	20175	1732.5	18.13	19.00	1.222	0.09	0.458	0.560
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	20175	1732.5	18.10	19.00	1.230	0.15	0.560	0.689
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	20175	1732.5	18.10	19.00	1.230	-0.11	0.612	0.753
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	20175	1732.5	18.10	19.00	1.230	0.19	0.391	0.481
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	20175	1732.5	18.10	19.00	1.230	-0.15	0.448	0.551
	LTE Band 4	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	20175	1732.5	17.98	19.00	1.265	-0.01	0.606	0.766
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 1	1	132322	1745	23.27	24.50	1.327	0.06	0.083	0.110
	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 1	1	132322	1745	23.27	24.50	1.327	0.06	0.090	0.119
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 1	1	132322	1745	23.27	24.50	1.327	0.06	0.137	0.182
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 1	1	132322	1745	23.27	24.50	1.327	-0.01	0.060	0.080
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 1	1	132322	1745	22.33	23.50	1.309	-0.06	0.066	0.086
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 1	1	132322	1745	22.33	23.50	1.309	-0.19	0.072	0.094
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 1	1	132322	1745	22.33	23.50	1.309	-0.04	0.104	0.136
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 1	1	132322	1745	22.33	23.50	1.309	0.13	0.047	0.062
	LTE Band 66	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 1	1	132322	1745	17.20	18.00	1.202	-0.06	0.455	0.547
07	LTE Band 66	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 1	1	132322	1745	17.20	18.00	1.202	-0.02	0.588	**0.707**
	LTE Band 66	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 1	1	132322	1745	17.20	18.00	1.202	-0.16	0.319	0.384
	LTE Band 66	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 1	1	132322	1745	17.20	18.00	1.202	-0.06	0.362	0.435
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	132322	1745	17.00	18.00	1.259	0.11	0.450	0.567
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	132322	1745	17.00	18.00	1.259	0.08	0.496	0.624
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	132322	1745	17.00	18.00	1.259	-0.03	0.316	0.398
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	132322	1745	17.00	18.00	1.259	-0.05	0.360	0.453
1900MHz																			
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Cheek	0mm	Ant 0	DSI 1	1	661	1880	24.02	24.50	1.117	0.05	0.013	0.015
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 0	DSI 1	1	661	1880	24.02	24.50	1.117	-0.11	0.007	0.008
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Cheek	0mm	Ant 0	DSI 1	1	661	1880	24.02	24.50	1.117	-0.16	0.048	0.054
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Tilted	0mm	Ant 0	DSI 1	1	661	1880	24.02	24.50	1.117	0.04	0.015	0.017
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	0.14	0.530	0.574
08	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	-0.18	0.850	**0.921**
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	-0.05	0.424	0.460
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Tilted	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	0.1	0.508	0.551
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	512	1850.2	22.56	23.00	1.107	0.06	0.770	0.852
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	810	1909.8	22.53	23.00	1.114	0.12	0.735	0.819
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	1	9400	1880	22.97	24.00	1.268	-0.03	0.094	0.119
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	1	9400	1880	22.97	24.00	1.268	0.01	0.074	0.094
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	1	9400	1880	22.97	24.00	1.268	-0.03	0.118	0.150
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	1	9400	1880	22.97	24.00	1.268	-0.05	0.091	0.115
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1	9400	1880	16.05	17.00	1.245	0.13	0.530	0.660
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	9400	1880	16.05	17.00	1.245	0.05	0.652	0.811
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1	9400	1880	16.05	17.00	1.245	0.16	0.342	0.426

	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	1	9400	1880	16.05	17.00	1.245	0.03	0.392	0.488
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	9262	1852.4	16.00	17.00	1.259	-0.12	0.619	0.779
09	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	9538	1907.6	16.02	17.00	1.253	0.1	0.721	**0.904**
	LTE Band 2	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	DSI 1	1	18900	1880	23.38	24.50	1.294	0.13	0.104	0.135
	LTE Band 2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 0	DSI 1	1	18900	1880	23.38	24.50	1.294	-0.08	0.076	0.098
	LTE Band 2	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	DSI 1	1	18900	1880	23.38	24.50	1.294	-0.02	0.129	0.167
	LTE Band 2	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 0	DSI 1	1	18900	1880	23.38	24.50	1.294	-0.05	0.098	0.127
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSI 1	1	18900	1880	22.63	23.50	1.222	-0.1	0.079	0.097
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSI 1	1	18900	1880	22.63	23.50	1.222	-0.13	0.065	0.079
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSI 1	1	18900	1880	22.63	23.50	1.222	0.03	0.096	0.117
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSI 1	1	18900	1880	22.63	23.50	1.222	0.09	0.077	0.094
	LTE Band 2	20M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	DSI 1	1	18900	1880	17.27	18.00	1.183	0.16	0.568	0.672
10	LTE Band 2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.27	18.00	1.183	-0.02	0.797	**0.943**
	LTE Band 2	20M	QPSK	1	49	-	Left Cheek	0mm	Ant 1	DSI 1	1	18900	1880	17.27	18.00	1.183	0.08	0.404	0.478
	LTE Band 2	20M	QPSK	1	49	-	Left Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.27	18.00	1.183	-0.11	0.456	0.539
	LTE Band 2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.15	18.00	1.216	-0.08	0.593	0.721
	LTE Band 2	20M	QPSK	1	49	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.18	18.00	1.208	-0.16	0.635	0.767
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	1	18900	1880	17.20	18.00	1.202	-0.17	0.543	0.653
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.20	18.00	1.202	-0.02	0.700	0.842
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	1	18900	1880	17.20	18.00	1.202	0.04	0.389	0.468
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.20	18.00	1.202	0.16	0.441	0.530
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.08	18.00	1.236	0.05	0.561	0.693
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.17	18.00	1.211	0.01	0.590	0.714
	LTE Band 2	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 1	1	18900	1880	17.16	18.00	1.213	-0.15	0.593	0.720

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	Right Cheek	0mm	Ant 0	DSI 1	1	21100	2535	23.37	24.50	1.297	-	-	-0.18	0.239	0.310
	LTE Band 7	20M	QPSK	1	49	Right Tilted	0mm	Ant 0	DSI 1	1	21100	2535	23.37	24.50	1.297	-	-	0.04	0.135	0.175
	LTE Band 7	20M	QPSK	1	49	Left Cheek	0mm	Ant 0	DSI 1	1	21100	2535	23.37	24.50	1.297	-	-	0.01	0.101	0.131
	LTE Band 7	20M	QPSK	1	49	Left Tilted	0mm	Ant 0	DSI 1	1	21100	2535	23.37	24.50	1.297	-	-	0.08	0.100	0.130
	LTE Band 7	20M	QPSK	50	0	Right Cheek	0mm	Ant 0	DSI 1	1	21100	2535	22.36	23.50	1.300	-	-	0.07	0.179	0.233
	LTE Band 7	20M	QPSK	50	0	Right Tilted	0mm	Ant 0	DSI 1	1	21100	2535	22.36	23.50	1.300	-	-	0.12	0.102	0.133
	LTE Band 7	20M	QPSK	50	0	Left Cheek	0mm	Ant 0	DSI 1	1	21100	2535	22.36	23.50	1.300	-	-	0.14	0.075	0.098
	LTE Band 7	20M	QPSK	50	0	Left Tilted	0mm	Ant 0	DSI 1	1	21100	2535	22.36	23.50	1.300	-	-	-0.18	0.076	0.099
	LTE Band 7	20M	QPSK	1	49	Right Cheek	0mm	Ant 1	DSI 1	1	21100	2535	17.29	18.50	1.321	-	-	0.04	0.463	0.612
11	LTE Band 7	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	1	21100	2535	17.29	18.50	1.321	-	-	0.06	0.513	**0.678**
	LTE Band 7	20M	QPSK	1	49	Left Cheek	0mm	Ant 1	DSI 1	1	21100	2535	17.29	18.50	1.321	-	-	-0.14	0.166	0.219
	LTE Band 7	20M	QPSK	1	49	Left Tilted	0mm	Ant 1	DSI 1	1	21100	2535	17.29	18.50	1.321	-	-	-0.01	0.233	0.308
	LTE Band 7	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	1	21100	2535	17.25	18.50	1.334	-	-	-0.06	0.447	0.596
	LTE Band 7	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	1	21100	2535	17.25	18.50	1.334	-	-	-0.02	0.495	0.660
	LTE Band 7	20M	QPSK	50	0	Left Cheek	0mm	Ant 1	DSI 1	1	21100	2535	17.25	18.50	1.334	-	-	-0.07	0.160	0.213
	LTE Band 7	20M	QPSK	50	0	Left Tilted	0mm	Ant 1	DSI 1	1	21100	2535	17.25	18.50	1.334	-	-	0.03	0.224	0.299
	LTE Band 41	20M	QPSK	1	49	Right Cheek	0mm	Ant 0	DSI 1	1	41140	2645	23.88	24.50	1.153	62.9	1.006	0.15	0.245	0.284
	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 0	DSI 1	1	41140	2645	23.88	24.50	1.153	62.9	1.006	0.05	0.092	0.107
	LTE Band 41	20M	QPSK	1	49	Left Cheek	0mm	Ant 0	DSI 1	1	41140	2645	23.88	24.50	1.153	62.9	1.006	0.08	0.104	0.121
	LTE Band 41	20M	QPSK	1	49	Left Tilted	0mm	Ant 0	DSI 1	1	41140	2645	23.88	24.50	1.153	62.9	1.006	-0.12	0.106	0.123
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 0	DSI 1	1	41140	2645	22.85	23.50	1.161	62.9	1.006	-0.04	0.195	0.228
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 0	DSI 1	1	41140	2645	22.85	23.50	1.161	62.9	1.006	-0.05	0.076	0.089
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 0	DSI 1	1	41140	2645	22.85	23.50	1.161	62.9	1.006	0.18	0.081	0.095
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 0	DSI 1	1	41140	2645	22.85	23.50	1.161	62.9	1.006	0.12	0.083	0.097
	LTE Band 41	20M	QPSK	1	49	Right Cheek	0mm	Ant 1	DSI 1	1	41140	2645	20.15	21.00	1.216	62.9	1.006	-0.16	0.646	0.790
12	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	1	41140	2645	20.15	21.00	1.216	62.9	1.006	-0.18	0.792	**0.969**
	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	2	41140	2645	20.15	21.00	1.216	62.9	1.006	-0.04	0.690	0.844
	LTE Band 41	20M	QPSK	1	49	Left Cheek	0mm	Ant 1	DSI 1	1	41140	2645	20.15	21.00	1.216	62.9	1.006	-0.18	0.242	0.296

	LTE Band 41	20M	QPSK	1	49	Left Tilted	0mm	Ant 1	DSI 1	1	41140	2645	20.15	21.00	1.216	62.9	1.006	-0.15	0.327	0.400
	LTE Band 41	20M	QPSK	1	49	Right Cheek	0mm	Ant 1	DSI 1	1	40140	2545	19.59	21.00	1.384	62.9	1.006	0.02	0.484	0.674
	LTE Band 41	20M	QPSK	1	49	Right Cheek	0mm	Ant 1	DSI 1	1	40400	2571	19.69	21.00	1.352	62.9	1.006	-0.09	0.521	0.709
	LTE Band 41	20M	QPSK	1	49	Right Cheek	0mm	Ant 1	DSI 1	1	40670	2598	19.88	21.00	1.294	62.9	1.006	-0.17	0.565	0.736
	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	1	40140	2545	19.59	21.00	1.384	62.9	1.006	-0.02	0.600	0.835
	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	1	40400	2571	19.69	21.00	1.352	62.9	1.006	-0.03	0.634	0.862
	LTE Band 41	20M	QPSK	1	49	Right Tilted	0mm	Ant 1	DSI 1	1	40670	2598	19.88	21.00	1.294	62.9	1.006	-0.17	0.690	0.898
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	1	41140	2645	20.05	21.00	1.245	62.9	1.006	0.15	0.607	0.760
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	1	41140	2645	20.05	21.00	1.245	62.9	1.006	0.11	0.725	0.908
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 1	DSI 1	1	41140	2645	20.05	21.00	1.245	62.9	1.006	0.03	0.229	0.287
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 1	DSI 1	1	41140	2645	20.05	21.00	1.245	62.9	1.006	-0.06	0.310	0.388
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	1	40140	2545	19.49	21.00	1.416	62.9	1.006	-0.13	0.477	0.679
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	1	40400	2571	19.42	21.00	1.439	62.9	1.006	-0.08	0.493	0.714
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	1	40670	2598	20.04	21.00	1.247	62.9	1.006	0.09	0.575	0.722
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	1	40140	2545	19.49	21.00	1.416	62.9	1.006	-0.03	0.592	0.843
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	1	40400	2571	19.42	21.00	1.439	62.9	1.006	-0.06	0.603	0.873
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	1	40670	2598	20.04	21.00	1.247	62.9	1.006	-0.07	0.764	0.959
	LTE Band 41	20M	QPSK	100	0	Right Cheek	0mm	Ant 1	DSI 1	1	41140	2645	20.00	21.00	1.259	62.9	1.006	0.05	0.618	0.783
	LTE Band 41	20M	QPSK	100	0	Right Tilted	0mm	Ant 1	DSI 1	1	41140	2645	20.00	21.00	1.259	62.9	1.006	0.01	0.742	0.940

Plot No.	Band	Mode	Test Position	Gap (mm)	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
BT/WLAN																
	Bluetooth	DH5 1Mbps	Right Cheek	0mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.1	0.043	0.064
	Bluetooth	DH5 1Mbps	Right Tilted	0mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.03	0.011	0.016
13	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.12	0.101	**0.151**
	Bluetooth	DH5 1Mbps	Left Tilted	0mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	-0.05	0.076	0.114
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Reduced	1	1	2412	14.20	16.00	1.514	99.31	1.007	-0.03	0.122	0.186
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Reduced	1	1	2412	14.20	16.00	1.514	99.31	1.007	0.05	0.124	0.189
14	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Reduced	1	1	2412	14.20	16.00	1.514	99.31	1.007	-0.19	0.359	**0.547**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Reduced	1	1	2412	14.20	16.00	1.514	99.31	1.007	0.01	0.212	0.323
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Reduced	1	58	5290	10.46	12.00	1.426	87.84	1.138	-0.12	0.120	0.195
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Reduced	1	58	5290	10.46	12.00	1.426	87.84	1.138	-0.05	0.155	0.251
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Reduced	1	58	5290	10.46	12.00	1.426	87.84	1.138	-0.1	0.198	0.321
15	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Reduced	1	58	5290	10.46	12.00	1.426	87.84	1.138	-0.05	0.293	**0.475**
	WLAN5.5GHz	802.11a 6Mbps	Right Cheek	0mm	Reduced	1	144	5720	12.46	14.00	1.426	96.87	1.032	0.14	0.090	0.132
	WLAN5.5GHz	802.11a 6Mbps	Right Tilted	0mm	Reduced	1	144	5720	12.46	14.00	1.426	96.87	1.032	0.03	0.108	0.159
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	0mm	Reduced	1	144	5720	12.46	14.00	1.426	96.87	1.032	0.14	0.145	0.213
16	WLAN5.5GHz	802.11a 6Mbps	Left Tilted	0mm	Reduced	1	144	5720	12.46	14.00	1.426	96.87	1.032	-0.02	0.203	**0.299**
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	0mm	Reduced	1	149	5745	12.14	14.00	1.535	96.87	1.032	-0.03	0.080	0.127
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	0mm	Reduced	1	149	5745	12.14	14.00	1.535	96.87	1.032	-0.01	0.098	0.155
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	0mm	Reduced	1	149	5745	12.14	14.00	1.535	96.87	1.032	0.06	0.129	0.204
17	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	0mm	Reduced	1	149	5745	12.14	14.00	1.535	96.87	1.032	0.03	0.192	**0.304**

15.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																			
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 6	1	23230	782	23.71	25.00	1.346	-0.18	0.119	0.160
18	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 6	1	23230	782	23.71	25.00	1.346	-0.05	0.309	**0.416**
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 6	1	23230	782	23.71	25.00	1.346	-0.18	0.194	0.261
	LTE Band 13	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 6	1	23230	782	23.71	25.00	1.346	-0.01	0.086	0.116
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	23230	782	23.71	25.00	1.346	0.05	0.180	0.242
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 6	1	23230	782	22.61	24.00	1.377	0.08	0.093	0.128
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 6	1	23230	782	22.61	24.00	1.377	-0.17	0.196	0.270
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 0	DSI 6	1	23230	782	22.61	24.00	1.377	-0.05	0.163	0.224
	LTE Band 13	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 6	1	23230	782	22.61	24.00	1.377	-0.11	0.067	0.092
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	23230	782	22.61	24.00	1.377	-0.14	0.146	0.201
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 6	1	23230	782	23.63	25.00	1.371	0.03	0.104	0.143
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 6	1	23230	782	23.63	25.00	1.371	-0.07	0.163	0.223
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 6	1	23230	782	23.63	25.00	1.371	0.04	0.121	0.166
	LTE Band 13	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 6	1	23230	782	23.63	25.00	1.371	0.02	0.106	0.145
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 6	1	23230	782	22.52	24.00	1.406	0.04	0.077	0.108
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 6	1	23230	782	22.52	24.00	1.406	0.16	0.127	0.179
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 6	1	23230	782	22.52	24.00	1.406	0.11	0.086	0.121
	LTE Band 13	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 6	1	23230	782	22.52	24.00	1.406	-0.06	0.080	0.112
835MHz																			
	GSM850	-	-	-	-	GPRS 4 Tx slots	Front	10mm	Ant 0	DSI 6	1	189	836.4	26.83	27.50	1.167	-0.14	0.146	0.170
19	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	10mm	Ant 0	DSI 6	1	189	836.4	26.83	27.50	1.167	0.16	0.409	**0.477**
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Side	10mm	Ant 0	DSI 6	1	189	836.4	26.83	27.50	1.167	-0.13	0.161	0.188
	GSM850	-	-	-	-	GPRS 4 Tx slots	Right Side	10mm	Ant 0	DSI 6	1	189	836.4	26.83	27.50	1.167	-0.1	0.091	0.106
	GSM850	-	-	-	-	GPRS 4 Tx slots	Bottom Side	10mm	Ant 0	DSI 6	1	189	836.4	26.83	27.50	1.167	-0.05	0.202	0.236
	GSM850	-	-	-	-	GPRS 4 Tx slots	Front	10mm	Ant 1	DSI 6	1	189	836.4	26.89	27.50	1.151	0.03	0.122	0.140
	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	10mm	Ant 1	DSI 6	1	189	836.4	26.89	27.50	1.151	-0.06	0.233	0.268
	GSM850	-	-	-	-	GPRS 4 Tx slots	Left Side	10mm	Ant 1	DSI 6	1	189	836.4	26.89	27.50	1.151	-0.01	0.080	0.092
	GSM850	-	-	-	-	GPRS 4 Tx slots	Top Side	10mm	Ant 1	DSI 6	1	189	836.4	26.89	27.50	1.151	-0.08	0.143	0.165
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 6	1	4182	836.4	22.86	24.00	1.300	0	0.111	0.144
20	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 6	1	4182	836.4	22.86	24.00	1.300	-0.07	0.330	**0.429**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 6	1	4182	836.4	22.86	24.00	1.300	-0.1	0.119	0.155
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 6	1	4182	836.4	22.86	24.00	1.300	0.11	0.064	0.083
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	1	4182	836.4	22.86	24.00	1.300	0.01	0.147	0.191
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 6	1	4182	836.4	22.84	24.00	1.306	0.12	0.139	0.182
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	1	4182	836.4	22.84	24.00	1.306	0.02	0.225	0.294
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 6	1	4182	836.4	22.84	24.00	1.306	0.06	0.108	0.141
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 6	1	4182	836.4	22.84	24.00	1.306	0.15	0.181	0.236
	LTE Band 26	15M	QPSK	1	37	-	Front	10mm	Ant 0	DSI 6	1	26865	831.5	23.89	25.00	1.291	0.18	0.121	0.156
21	LTE Band 26	15M	QPSK	1	37	-	Back	10mm	Ant 0	DSI 6	1	26865	831.5	23.89	25.00	1.291	-0.06	0.310	**0.400**
	LTE Band 26	15M	QPSK	1	37	-	Left Side	10mm	Ant 0	DSI 6	1	26865	831.5	23.89	25.00	1.291	0.19	0.134	0.173
	LTE Band 26	15M	QPSK	1	37	-	Right Side	10mm	Ant 0	DSI 6	1	26865	831.5	23.89	25.00	1.291	0.03	0.073	0.094
	LTE Band 26	15M	QPSK	1	37	-	Bottom Side	10mm	Ant 0	DSI 6	1	26865	831.5	23.89	25.00	1.291	-0.08	0.172	0.222
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 0	DSI 6	1	26865	831.5	22.89	24.00	1.291	0.11	0.095	0.123
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 6	1	26865	831.5	22.89	24.00	1.291	0.06	0.206	0.266
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 0	DSI 6	1	26865	831.5	22.89	24.00	1.291	0.15	0.115	0.148
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 0	DSI 6	1	26865	831.5	22.89	24.00	1.291	-0.06	0.060	0.077
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	26865	831.5	22.89	24.00	1.291	0.02	0.136	0.176
	LTE Band 26	15M	QPSK	1	37	-	Front	10mm	Ant 1	DSI 6	1	26865	831.5	23.83	25.00	1.309	0.06	0.164	0.215
	LTE Band 26	15M	QPSK	1	37	-	Back	10mm	Ant 1	DSI 6	1	26865	831.5	23.83	25.00	1.309	0.18	0.249	0.326
	LTE Band 26	15M	QPSK	1	37	-	Left Side	10mm	Ant 1	DSI 6	1	26865	831.5	23.83	25.00	1.309	0.05	0.128	0.168
	LTE Band 26	15M	QPSK	1	37	-	Top Side	10mm	Ant 1	DSI 6	1	26865	831.5	23.83	25.00	1.309	-0.09	0.189	0.247

	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 1	DSI 6	1	26865	831.5	22.54	24.00	1.400	-0.19	0.124	0.174
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 1	DSI 6	1	26865	831.5	22.54	24.00	1.400	-0.17	0.175	0.245
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 1	DSI 6	1	26865	831.5	22.54	24.00	1.400	-0.16	0.097	0.136
	LTE Band 26	15M	QPSK	36	0	-	Top Side	10mm	Ant 1	DSI 6	1	26865	831.5	22.54	24.00	1.400	-0.1	0.138	0.193
1750MHz																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.15	0.252	0.308
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.08	0.423	0.517
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.11	0.064	0.078
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.02	0.133	0.162
22	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.11	0.685	**0.837**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	2	1413	1732.6	20.13	21.00	1.222	0.02	0.509	0.622
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	1	1312	1712.4	20.06	21.00	1.242	0.05	0.580	0.720
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	1	1513	1752.6	20.11	21.00	1.227	0.09	0.600	0.736
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 6	1	1413	1732.6	20.23	21.00	1.194	0.16	0.258	0.308
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	1	1413	1732.6	20.23	21.00	1.194	0.05	0.400	0.478
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 6	1	1413	1732.6	20.23	21.00	1.194	-0.14	0.105	0.125
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 6	1	1413	1732.6	20.23	21.00	1.194	-0.1	0.352	0.420
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	0.16	0.242	0.312
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	-0.04	0.384	0.496
	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	0.04	0.063	0.081
	LTE Band 66	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	-0.16	0.133	0.172
23	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	0.05	0.647	**0.835**
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 6	1	132072	1720	19.50	21.00	1.413	-0.03	0.546	0.771
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 6	1	132572	1770	19.72	21.00	1.343	0.09	0.537	0.721
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	0.19	0.240	0.311
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	0.17	0.384	0.498
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	-0.01	0.065	0.084
	LTE Band 66	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	-0.17	0.132	0.171
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	-0.1	0.493	0.640
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	132322	1745	19.76	21.00	1.330	0.02	0.535	0.712
	LTE Band 66	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 6	1	132322	1745	19.60	20.50	1.230	0.15	0.266	0.327
	LTE Band 66	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 6	1	132322	1745	19.60	20.50	1.230	0.11	0.384	0.472
	LTE Band 66	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 6	1	132322	1745	19.60	20.50	1.230	-0.03	0.099	0.122
	LTE Band 66	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 6	1	132322	1745	19.60	20.50	1.230	-0.16	0.369	0.454
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 6	1	132322	1745	19.44	20.50	1.276	0.09	0.259	0.331
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 6	1	132322	1745	19.44	20.50	1.276	-0.02	0.370	0.472
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 6	1	132322	1745	19.44	20.50	1.276	-0.1	0.098	0.125
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI 6	1	132322	1745	19.44	20.50	1.276	-0.05	0.357	0.456
1900MHz																			
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Front	10mm	Ant 0	DSI 6	1	661	1880	21.23	21.50	1.064	0.1	0.079	0.084
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Back	10mm	Ant 0	DSI 6	1	661	1880	21.23	21.50	1.064	-0.16	0.157	0.167
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Side	10mm	Ant 0	DSI 6	1	661	1880	21.23	21.50	1.064	-0.12	0.060	0.064
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Right Side	10mm	Ant 0	DSI 6	1	661	1880	21.23	21.50	1.064	-0.11	0.042	0.045
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Bottom Side	10mm	Ant 0	DSI 6	1	661	1880	21.23	21.50	1.064	0.02	0.275	0.293
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Front	10mm	Ant 1	DSI 6	1	661	1880	24.06	24.50	1.107	0.09	0.202	0.224
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Back	10mm	Ant 1	DSI 6	1	661	1880	24.06	24.50	1.107	-0.09	0.370	0.409
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Left Side	10mm	Ant 1	DSI 6	1	661	1880	24.06	24.50	1.107	-0.08	0.082	0.091
24	GSM1900	-	-	-	-	GPRS 4 Tx slots	Top Side	10mm	Ant 1	DSI 6	1	661	1880	24.06	24.50	1.107	0.12	0.592	**0.655**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 6	1	9400	1880	19.95	21.00	1.274	-0.13	0.183	0.233
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 6	1	9400	1880	19.95	21.00	1.274	-0.12	0.339	0.432
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 6	1	9400	1880	19.95	21.00	1.274	-0.15	0.064	0.082
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 6	1	9400	1880	19.95	21.00	1.274	-0.11	0.102	0.130
25	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 6	1	9400	1880	19.95	21.00	1.274	0.07	0.546	**0.695**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.04	0.183	0.228
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.07	0.319	0.397
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.01	0.076	0.095

	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	-0.19	0.456	0.567
	LTE Band 2	20M	QPSK	1	49	-	Front	10mm	Ant 0	DSI 6	1	18900	1880	19.45	20.50	1.274	0.04	0.168	0.214
	LTE Band 2	20M	QPSK	1	49	-	Back	10mm	Ant 0	DSI 6	1	18900	1880	19.45	20.50	1.274	-0.03	0.303	0.386
	LTE Band 2	20M	QPSK	1	49	-	Left Side	10mm	Ant 0	DSI 6	1	18900	1880	19.45	20.50	1.274	0.15	0.063	0.080
	LTE Band 2	20M	QPSK	1	49	-	Right Side	10mm	Ant 0	DSI 6	1	18900	1880	19.45	20.50	1.274	-0.14	0.100	0.127
26	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	10mm	Ant 0	DSI 6	1	18900	1880	19.45	20.50	1.274	-0.08	0.501	**0.638**
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI 6	1	18900	1880	19.41	20.50	1.285	0.11	0.168	0.216
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI 6	1	18900	1880	19.41	20.50	1.285	-0.03	0.298	0.383
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI 6	1	18900	1880	19.41	20.50	1.285	0.1	0.060	0.077
	LTE Band 2	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI 6	1	18900	1880	19.41	20.50	1.285	0.04	0.099	0.127
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI 6	1	18900	1880	19.41	20.50	1.285	-0.09	0.407	0.523
	LTE Band 2	20M	QPSK	1	49	-	Front	10mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	-0.02	0.197	0.239
	LTE Band 2	20M	QPSK	1	49	-	Back	10mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	-0.19	0.352	0.427
	LTE Band 2	20M	QPSK	1	49	-	Left Side	10mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.12	0.086	0.104
	LTE Band 2	20M	QPSK	1	49	-	Top Side	10mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.06	0.490	0.595
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	0.05	0.186	0.231
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	-0.03	0.334	0.416
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	0.02	0.081	0.101
	LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	-0.02	0.385	0.479

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	Front	10mm	Ant 0	DSI 6	1	21100	2535	20.55	21.50	1.245	-	-	0.11	0.191	0.238
	LTE Band 7	20M	QPSK	1	49	Back	10mm	Ant 0	DSI 6	1	21100	2535	20.55	21.50	1.245	-	-	-0.02	0.280	0.348
	LTE Band 7	20M	QPSK	1	49	Left Side	10mm	Ant 0	DSI 6	1	21100	2535	20.55	21.50	1.245	-	-	0.17	0.044	0.055
	LTE Band 7	20M	QPSK	1	49	Right Side	10mm	Ant 0	DSI 6	1	21100	2535	20.55	21.50	1.245	-	-	0.07	0.101	0.126
	LTE Band 7	20M	QPSK	1	49	Bottom Side	10mm	Ant 0	DSI 6	1	21100	2535	20.55	21.50	1.245	-	-	-0.13	0.101	0.126
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 0	DSI 6	1	21100	2535	20.52	21.50	1.253	-	-	-0.15	0.184	0.231
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 0	DSI 6	1	21100	2535	20.52	21.50	1.253	-	-	0.03	0.256	0.321
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 0	DSI 6	1	21100	2535	20.52	21.50	1.253	-	-	-0.1	0.047	0.059
	LTE Band 7	20M	QPSK	50	0	Right Side	10mm	Ant 0	DSI 6	1	21100	2535	20.52	21.50	1.253	-	-	0.06	0.102	0.128
	LTE Band 7	20M	QPSK	50	0	Bottom Side	10mm	Ant 0	DSI 6	1	21100	2535	20.52	21.50	1.253	-	-	-0.07	0.100	0.125
	LTE Band 7	20M	QPSK	1	49	Front	10mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.11	0.068	0.090
27	LTE Band 7	20M	QPSK	1	49	Back	10mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	-0.03	0.377	**0.498**
	LTE Band 7	20M	QPSK	1	49	Left Side	10mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.03	0.119	0.157
	LTE Band 7	20M	QPSK	1	49	Top Side	10mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.15	0.207	0.274
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	-0.04	0.065	0.087
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.11	0.260	0.348
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.15	0.112	0.150
	LTE Band 7	20M	QPSK	50	0	Top Side	10mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	-0.18	0.200	0.268
	LTE Band 38	20M	QPSK	1	49	Front	10mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.07	0.108	0.132
28	LTE Band 38	20M	QPSK	1	49	Back	10mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.02	0.388	**0.475**
	LTE Band 38	20M	QPSK	1	49	Left Side	10mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.11	0.206	0.252
	LTE Band 38	20M	QPSK	1	49	Top Side	10mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.06	0.323	0.395
	LTE Band 38	20M	QPSK	50	0	Front	10mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	-0.02	0.116	0.147
	LTE Band 38	20M	QPSK	50	0	Back	10mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	0.06	0.368	0.466
	LTE Band 38	20M	QPSK	50	0	Left Side	10mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	-0.11	0.233	0.295
	LTE Band 38	20M	QPSK	50	0	Top Side	10mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	-0.04	0.301	0.381
	LTE Band 41	20M	QPSK	1	49	Front	10mm	Ant 0	DSI 6	1	41140	2645	20.89	21.50	1.151	62.9	1.006	0.15	0.166	0.192
	LTE Band 41	20M	QPSK	1	49	Back	10mm	Ant 0	DSI 6	1	41140	2645	20.89	21.50	1.151	62.9	1.006	0.03	0.232	0.269
	LTE Band 41	20M	QPSK	1	49	Left Side	10mm	Ant 0	DSI 6	1	41140	2645	20.89	21.50	1.151	62.9	1.006	0.05	0.039	0.045
	LTE Band 41	20M	QPSK	1	49	Right Side	10mm	Ant 0	DSI 6	1	41140	2645	20.89	21.50	1.151	62.9	1.006	-0.06	0.089	0.103
	LTE Band 41	20M	QPSK	1	49	Bottom Side	10mm	Ant 0	DSI 6	1	41140	2645	20.89	21.50	1.151	62.9	1.006	0.03	0.109	0.126
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 0	DSI 6	1	41140	2645	20.81	21.50	1.172	62.9	1.006	0.14	0.167	0.197
	LTE Band 41	20M	QPSK	50	0	Back	10mm	Ant 0	DSI 6	1	41140	2645	20.81	21.50	1.172	62.9	1.006	-0.09	0.237	0.279
	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 0	DSI 6	1	41140	2645	20.81	21.50	1.172	62.9	1.006	-0.01	0.033	0.039
	LTE Band 41	20M	QPSK	50	0	Right Side	10mm	Ant 0	DSI 6	1	41140	2645	20.81	21.50	1.172	62.9	1.006	0.02	0.098	0.116
	LTE Band 41	20M	QPSK	50	0	Bottom Side	10mm	Ant 0	DSI 6	1	41140	2645	20.81	21.50	1.172	62.9	1.006	0.09	0.106	0.125
	LTE Band 41	20M	QPSK	1	49	Front	10mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	-0.02	0.152	0.186
29	LTE Band 41	20M	QPSK	1	49	Back	10mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	-0.15	0.387	**0.472**
	LTE Band 41	20M	QPSK	1	49	Left Side	10mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	0.07	0.275	0.336
	LTE Band 41	20M	QPSK	1	49	Top Side	10mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	0.02	0.300	0.366
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	0.09	0.140	0.176
	LTE Band 41	20M	QPSK	50	0	Back	10mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	0.13	0.366	0.460
	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	-0.13	0.246	0.309
	LTE Band 41	20M	QPSK	50	0	Top Side	10mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	-0.17	0.299	0.376

Plot No.	Band	Mode	Test Position	Gap (mm)	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
BT/WLAN																
	Bluetooth	DH5 1Mbps	Front	10mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.12	0.021	0.031
30	Bluetooth	DH5 1Mbps	Back	10mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.05	0.047	**0.070**
	Bluetooth	DH5 1Mbps	Left Side	10mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.17	0.011	0.016
	Bluetooth	DH5 1Mbps	Right Side	10mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.02	0.020	0.030
	Bluetooth	DH5 1Mbps	Top Side	10mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	-0.13	0.026	0.039
	WLAN2.4GHz	802.11b 6Mbps	Front	10mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	-0.02	0.098	0.133
31	WLAN2.4GHz	802.11b 6Mbps	Back	10mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.02	0.205	**0.278**
	WLAN2.4GHz	802.11b 6Mbps	Left Side	10mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.19	0.033	0.045
	WLAN2.4GHz	802.11b 6Mbps	Right Side	10mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.01	0.081	0.110
	WLAN2.4GHz	802.11b 6Mbps	Top Side	10mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.18	0.085	0.115
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	10mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.04	0.039	0.064
32	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	10mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.02	0.454	**0.742**
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.08	0.011	0.018
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	-0.09	0.102	0.167
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.14	0.415	0.678
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.06	0.045	0.071
33	WLAN5.8GHz	802.11a 6Mbps	Back	10mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.04	0.383	**0.608**
	WLAN5.8GHz	802.11a 6Mbps	Left Side	10mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	-0.15	0.010	0.016
	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.11	0.079	0.125
	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.13	0.243	0.386

15.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																			
	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 2	1	23230	782	23.71	25.00	1.346	0.04	0.133	0.179
34	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 2	1	23230	782	23.71	25.00	1.346	-0.04	0.180	**0.242**
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI 2	1	23230	782	22.61	24.00	1.377	-0.18	0.102	0.140
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI 2	1	23230	782	22.61	24.00	1.377	-0.04	0.126	0.174
	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 2	1	23230	782	23.63	25.00	1.371	-0.02	0.116	0.159
	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 2	1	23230	782	23.63	25.00	1.371	-0.12	0.145	0.199
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 2	1	23230	782	22.52	24.00	1.406	0.05	0.084	0.118
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 2	1	23230	782	22.52	24.00	1.406	-0.04	0.113	0.159
835MHz																			
	GSM850	-	-	-	-	GPRS 4 Tx slots	Front	15mm	Ant 0	DSI 2	1	189	836.4	26.83	27.50	1.167	-0.18	0.141	0.165
35	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	15mm	Ant 0	DSI 2	1	189	836.4	26.83	27.50	1.167	0.09	0.165	**0.193**
	GSM850	-	-	-	-	GPRS 4 Tx slots	Front	15mm	Ant 1	DSI 2	1	189	836.4	26.89	27.50	1.151	0.14	0.099	0.114
	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	15mm	Ant 1	DSI 2	1	189	836.4	26.89	27.50	1.151	0.06	0.110	0.127
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 2	1	4182	836.4	22.86	24.00	1.300	0.02	0.096	0.125
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 2	1	4182	836.4	22.86	24.00	1.300	0.18	0.110	0.143
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	1	4182	836.4	22.84	24.00	1.306	-0.12	0.120	0.157
36	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1	4182	836.4	22.84	24.00	1.306	-0.04	0.168	**0.219**
	LTE Band 26	15M	QPSK	1	37	-	Front	15mm	Ant 0	DSI 2	1	26865	831.5	23.89	25.00	1.291	0.19	0.106	0.137
	LTE Band 26	15M	QPSK	1	37	-	Back	15mm	Ant 0	DSI 2	1	26865	831.5	23.89	25.00	1.291	0.11	0.117	0.151
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 0	DSI 2	1	26865	831.5	22.89	24.00	1.291	-0.17	0.086	0.111
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 0	DSI 2	1	26865	831.5	22.89	24.00	1.291	-0.14	0.093	0.120
	LTE Band 26	15M	QPSK	1	37	-	Front	15mm	Ant 1	DSI 2	1	26865	831.5	23.83	25.00	1.309	0.17	0.143	0.187
37	LTE Band 26	15M	QPSK	1	37	-	Back	15mm	Ant 1	DSI 2	1	26865	831.5	23.83	25.00	1.309	0.04	0.194	**0.254**
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 1	DSI 2	1	26865	831.5	22.54	24.00	1.400	-0.05	0.110	0.154
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 1	DSI 2	1	26865	831.5	22.54	24.00	1.400	0.02	0.130	0.182
1750MHz																			
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 2	1	1413	1732.6	23.13	24.00	1.222	-0.04	0.303	0.370
38	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 2	1	1413	1732.6	23.13	24.00	1.222	-0.13	0.556	**0.679**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.05	0.142	0.173
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 6	1	1413	1732.6	20.13	21.00	1.222	0.08	0.232	0.283
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	1	1413	1732.6	22.77	23.50	1.183	-0.12	0.250	0.296
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1	1413	1732.6	22.77	23.50	1.183	0.17	0.358	0.424
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 2	1	132322	1745	23.27	24.50	1.327	-0.16	0.317	0.421
39	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 2	1	132322	1745	23.27	24.50	1.327	0.11	0.556	**0.738**
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 2	1	132322	1745	22.33	23.50	1.309	-0.12	0.251	0.329
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 2	1	132322	1745	22.33	23.50	1.309	0.19	0.399	0.522
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	0.03	0.131	0.169
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 6	1	132322	1745	19.89	21.00	1.291	0.04	0.221	0.285
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	0.05	0.127	0.165
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 6	1	132322	1745	19.87	21.00	1.297	0.03	0.221	0.287
	LTE Band 66	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 2	1	132322	1745	23.57	24.50	1.239	-0.03	0.288	0.357
	LTE Band 66	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 2	1	132322	1745	23.57	24.50	1.239	0.08	0.413	0.512
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	1	132322	1745	22.45	23.50	1.274	-0.04	0.224	0.285
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	1	132322	1745	22.45	23.50	1.274	0.05	0.323	0.411
1900MHz																			
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Front	15mm	Ant 0	DSI 2	1	661	1880	24.02	24.50	1.117	0.19	0.091	0.102
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Back	15mm	Ant 0	DSI 2	1	661	1880	24.02	24.50	1.117	0.11	0.160	0.179
	GSM1900	-	-	-	-	GPRS 4 Tx slots	Front	15mm	Ant 1	DSI 2	1	661	1880	24.06	24.50	1.107	-0.12	0.109	0.121
40	GSM1900	-	-	-	-	GPRS 4 Tx slots	Back	15mm	Ant 1	DSI 2	1	661	1880	24.06	24.50	1.107	0.05	0.223	**0.247**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 2	1	9400	1880	22.97	24.00	1.268	0.01	0.217	0.275
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 2	1	9400	1880	22.97	24.00	1.268	-0.15	0.372	0.472

	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 2	1	9400	1880	22.94	24.00	1.276	-0.08	0.309	0.394
41	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 2	1	9400	1880	22.94	24.00	1.276	0.1	0.549	**0.701**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.07	0.092	0.114
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.02	0.152	0.189
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 0	DSI 2	1	18900	1880	23.38	24.50	1.294	0.04	0.243	0.314
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 0	DSI 2	1	18900	1880	23.38	24.50	1.294	0.11	0.421	0.545
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI 2	1	18900	1880	22.63	23.50	1.222	0.07	0.192	0.235
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI 2	1	18900	1880	22.63	23.50	1.222	0.05	0.335	0.409
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 2	1	18900	1880	23.46	24.50	1.271	0.08	0.347	0.441
42	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 2	1	18900	1880	23.46	24.50	1.271	0.1	0.696	**0.884**
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 2	1	18700	1860	23.35	24.50	1.303	0.05	0.565	0.736
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 2	1	19100	1900	23.40	24.50	1.288	0.11	0.584	0.752
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 2	1	18900	1880	22.55	23.50	1.245	0.12	0.260	0.324
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 2	1	18900	1880	22.55	23.50	1.245	0.02	0.536	0.667
	LTE Band 2	20M	QPSK	100	0	-	Back	15mm	Ant 1	DSI 2	1	18900	1880	22.52	23.50	1.253	0.04	0.494	0.619
	LTE Band 2	20M	QPSK	1	49	-	Front	15mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.03	0.104	0.126
	LTE Band 2	20M	QPSK	1	49	-	Back	15mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.06	0.181	0.220
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	0.09	0.102	0.127
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	0.03	0.172	0.214

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	Front	15mm	Ant 0	DSI 2	1	21100	2535	23.37	24.50	1.297	-	-	0.04	0.202	0.262
	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 0	DSI 2	1	21100	2535	23.37	24.50	1.297	-	-	-0.06	0.246	0.319
	LTE Band 7	20M	QPSK	50	24	Front	15mm	Ant 0	DSI 2	1	21100	2535	22.36	23.50	1.300	-	-	-0.12	0.149	0.194
	LTE Band 7	20M	QPSK	50	24	Back	15mm	Ant 0	DSI 2	1	21100	2535	22.36	23.50	1.300	-	-	0.15	0.185	0.241
	LTE Band 7	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 2	1	21100	2535	22.82	24.00	1.312	-	-	-0.03	0.173	0.227
43	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	21100	2535	22.82	24.00	1.312	-	-	0.06	0.705	**0.925**
	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	2	21100	2535	22.82	24.00	1.312	-	-	0.01	0.604	0.793
	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	20850	2510	22.56	24.00	1.393	-	-	0.02	0.595	0.829
	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	21350	2560	22.73	24.00	1.340	-	-	-0.11	0.622	0.833
	LTE Band 7	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 2	1	21100	2535	22.35	23.50	1.303	-	-	0.12	0.147	0.192
	LTE Band 7	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 2	1	21100	2535	22.35	23.50	1.303	-	-	-0.13	0.481	0.627
	LTE Band 7	20M	QPSK	100	0	Back	15mm	Ant 1	DSI 2	1	21100	2535	22.33	23.50	1.309	-	-	-0.17	0.510	0.668
	LTE Band 7	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.05	0.040	0.053
	LTE Band 7	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.11	0.100	0.132
	LTE Band 7	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.14	0.039	0.052
	LTE Band 7	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.03	0.096	0.129
	LTE Band 38	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 2	1	38000	2595	23.62	24.50	1.225	62.9	1.006	0.05	0.156	0.192
44	LTE Band 38	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	38000	2595	23.62	24.50	1.225	62.9	1.006	-0.04	0.498	**0.614**
	LTE Band 38	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 2	1	38000	2595	22.44	23.50	1.276	62.9	1.006	0.07	0.147	0.189
	LTE Band 38	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 2	1	38000	2595	22.44	23.50	1.276	62.9	1.006	-0.15	0.403	0.517
	LTE Band 38	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.03	0.062	0.076
	LTE Band 38	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 6	1	38000	2595	18.65	19.50	1.216	62.9	1.006	0.17	0.174	0.213
	LTE Band 38	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	0.03	0.064	0.081
	LTE Band 38	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 6	1	38000	2595	18.50	19.50	1.259	62.9	1.006	0.11	0.176	0.223
	LTE Band 41	20M	QPSK	1	49	Front	15mm	Ant 0	DSI 2	1	41140	2645	23.88	24.50	1.153	62.9	1.006	0.12	0.181	0.210
	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 0	DSI 2	1	41140	2645	23.88	24.50	1.153	62.9	1.006	-0.11	0.231	0.268
	LTE Band 41	20M	QPSK	50	0	Front	15mm	Ant 0	DSI 2	1	41140	2645	22.85	23.50	1.161	62.9	1.006	0.17	0.146	0.171
	LTE Band 41	20M	QPSK	50	0	Back	15mm	Ant 0	DSI 2	1	41140	2645	22.85	23.50	1.161	62.9	1.006	0.01	0.183	0.214
	LTE Band 41	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 2	1	41140	2645	23.68	24.50	1.208	62.9	1.006	0.17	0.170	0.207
45	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	41140	2645	23.68	24.50	1.208	62.9	1.006	0.07	0.519	**0.631**
	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	40140	2545	22.99	24.50	1.416	62.9	1.006	0.03	0.420	0.598
	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	40400	2571	23.10	24.50	1.380	62.9	1.006	-0.12	0.411	0.571
	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 2	1	40670	2598	23.33	24.50	1.309	62.9	1.006	0.05	0.454	0.598

	LTE Band 41	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 2	1	41140	2645	22.55	23.50	1.245	62.9	1.006	-0.11	0.136	0.170
	LTE Band 41	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 2	1	41140	2645	22.55	23.50	1.245	62.9	1.006	0.02	0.406	0.508
	LTE Band 41	20M	QPSK	100	0	Back	15mm	Ant 1	DSI 2	1	41140	2645	22.44	23.50	1.276	62.9	1.006	0.03	0.388	0.498
	LTE Band 41	20M	QPSK	1	49	Front	15mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	0.12	0.056	0.068
	LTE Band 41	20M	QPSK	1	49	Back	15mm	Ant 1	DSI 6	1	41140	2645	18.16	19.00	1.213	62.9	1.006	0.17	0.122	0.149
	LTE Band 41	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	0.06	0.053	0.067
	LTE Band 41	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 6	1	41140	2645	18.03	19.00	1.250	62.9	1.006	0.11	0.113	0.142

Plot No.	Band	Mode	Test Position	Gap (mm)	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
BT/WLAN																
	Bluetooth	DH5 1Mbps	Front	15mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	-	n/a	n/a
46	Bluetooth	DH5 1Mbps	Back	15mm	Full	1	39	2441	9.90	10.50	1.148	76.83	1.302	0.06	0.010	**0.015**
	WLAN2.4GHz	802.11b 6Mbps	Front	15mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.01	0.042	0.057
47	WLAN2.4GHz	802.11b 6Mbps	Back	15mm	Full	1	1	2412	15.70	17.00	1.349	99.31	1.007	0.02	0.099	**0.134**
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	15mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.06	0.045	0.074
48	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	15mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.09	0.260	**0.425**
	WLAN5.5GHz	802.11a 6Mbps	Front	15mm	Reduced	1	144	5720	13.87	15.00	1.297	96.87	1.032	-0.06	0.035	0.047
49	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Reduced	1	144	5720	13.87	15.00	1.297	96.87	1.032	0.11	0.380	**0.509**
	WLAN5.8GHz	802.11a 6Mbps	Front	15mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.17	0.025	0.040
50	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Reduced	1	149	5745	13.13	15.00	1.538	96.87	1.032	0.04	0.197	**0.313**

15.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1750MHz																			
51	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DSI 3	1	1413	1732.6	20.13	21.00	1.222	0.03	1.590	**1.943**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 0	DSI 2	1	1413	1732.6	23.13	24.00	1.222	0.02	0.468	0.572
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	0mm	Ant 0	DSI 3	1	132322	1745	20.38	21.50	1.294	0.09	1.600	2.071
52	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	0mm	Ant 0	DSI 3	1	132072	1720	20.10	21.50	1.380	0.08	1.540	**2.126**
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	0mm	Ant 0	DSI 3	1	132572	1770	20.32	21.50	1.312	-0.09	1.470	1.929
	LTE Band 66	20M	QPSK	1	49	-	Bottom Side	11mm	Ant 0	DSI 2	1	132072	1720	23.27	24.50	1.327	0.08	0.499	0.662
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DSI 3	1	132322	1745	20.36	21.50	1.300	0.05	1.450	1.885
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 0	DSI 3	1	132322	1745	20.29	21.50	1.321	0.09	1.380	1.823
1900MHz																			
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DSI 3	1	9400	1880	19.95	21.00	1.274	0.16	1.230	1.566
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	11mm	Ant 0	DSI 2	1	9400	1880	22.97	24.00	1.268	0.1	0.598	0.758
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	DSI 4	1	9400	1880	18.98	20.00	1.265	0.04	1.060	1.341
53	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 1	DSI 4	1	9400	1880	18.98	20.00	1.265	0.06	1.610	**2.036**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 1	DSI 4	1	9262	1852.4	18.95	20.00	1.274	0.05	1.210	1.541
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 1	DSI 4	1	9538	1907.6	18.94	20.00	1.276	0.11	1.350	1.723
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	11mm	Ant 1	DSI 2	1	9400	1880	22.94	24.00	1.276	0.04	0.391	0.499
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	11mm	Ant 1	DSI 2	1	9400	1880	22.94	24.00	1.276	-0.15	0.405	0.517
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.06	0.857	1.067
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 1	DSI 6	1	9400	1880	18.05	19.00	1.245	0.13	1.050	1.307
	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	0mm	Ant 0	DSI 3	1	18900	1880	20.39	21.50	1.291	0.1	1.380	1.782
	LTE Band 2	20M	QPSK	1	49	-	Bottom Side	11mm	Ant 0	DSI 2	1	18900	1880	23.38	24.50	1.294	0.02	0.703	0.910
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DSI 3	1	18900	1880	20.38	21.50	1.294	0.12	1.090	1.411
	LTE Band 2	20M	QPSK	1	49	-	Back	0mm	Ant 1	DSI 4	1	18900	1880	19.63	20.50	1.222	-0.19	1.220	1.491
54	LTE Band 2	20M	QPSK	1	49	-	Top Side	0mm	Ant 1	DSI 4	1	18900	1880	19.63	20.50	1.222	0.06	1.830	**2.236**
	LTE Band 2	20M	QPSK	1	49	-	Top Side	0mm	Ant 1	DSI 4	1	18700	1860	19.49	20.50	1.262	0.08	1.560	1.968
	LTE Band 2	20M	QPSK	1	49	-	Top Side	0mm	Ant 1	DSI 4	1	19100	1900	19.55	20.50	1.245	0.02	1.620	2.016
	LTE Band 2	20M	QPSK	1	49	-	Back	11mm	Ant 1	DSI 2	1	18900	1880	23.46	24.50	1.271	0.03	0.443	0.563
	LTE Band 2	20M	QPSK	1	49	-	Top Side	11mm	Ant 1	DSI 2	1	18900	1880	23.46	24.50	1.271	-0.16	0.488	0.620
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 1	DSI 4	1	18900	1880	19.60	20.50	1.230	-0.08	1.170	1.439
	LTE Band 2	20M	QPSK	50	0	-	Top Side	0mm	Ant 1	DSI 4	1	18900	1880	19.60	20.50	1.230	0.12	1.490	1.833
	LTE Band 2	20M	QPSK	100	0	-	Top Side	0mm	Ant 1	DSI 4	1	18900	1880	19.58	20.50	1.236	0.07	1.370	1.693
	LTE Band 2	20M	QPSK	1	49	-	Back	0mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.02	1.000	1.213
	LTE Band 2	20M	QPSK	1	49	-	Top Side	0mm	Ant 1	DSI 6	1	18900	1880	18.66	19.50	1.213	0.09	1.440	1.747
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	0.12	0.968	1.205
	LTE Band 2	20M	QPSK	50	0	-	Top Side	0mm	Ant 1	DSI 6	1	18900	1880	18.55	19.50	1.245	-0.05	1.250	1.556

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	21100	2535	17.29	18.50	1.321	-	-	0.07	1.610	2.127
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	20850	2510	17.22	18.50	1.343	-	-	0.09	1.530	2.054
55	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	21350	2560	17.24	18.50	1.337	-	-	-0.04	2.010	**2.687**
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	2	21350	2560	17.24	18.50	1.337	-	-	0.05	1.920	2.566
	LTE Band 7	20M	QPSK	1	49	Top Side	0mm	Ant 1	DSI 4	1	21100	2535	17.29	18.50	1.321	-	-	0.06	0.845	1.116
	LTE Band 7	20M	QPSK	1	49	Back	11mm	Ant 1	DSI 2	1	21350	2560	22.73	24.00	1.340	-	-	0.02	0.406	0.544
	LTE Band 7	20M	QPSK	1	49	Top Side	11mm	Ant 1	DSI 2	1	21100	2535	22.82	24.00	1.312	-	-	-0.05	0.329	0.432
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	21100	2535	17.25	18.50	1.334	-	-	-0.03	1.590	2.120
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	20850	2510	17.16	18.50	1.361	-	-	-0.16	1.520	2.069
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	21350	2560	17.22	18.50	1.343	-	-	-0.07	1.700	2.283
	LTE Band 7	20M	QPSK	50	0	Top Side	0mm	Ant 1	DSI 4	1	21100	2535	17.25	18.50	1.334	-	-	0.17	0.822	1.096
	LTE Band 7	20M	QPSK	100	0	Back	0mm	Ant 1	DSI 4	1	21100	2535	17.23	18.50	1.340	-	-	-0.07	1.580	2.117
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.07	1.260	1.665
	LTE Band 7	20M	QPSK	1	49	Top Side	0mm	Ant 1	DSI 6	1	21100	2535	16.29	17.50	1.321	-	-	0.06	0.660	0.872
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.12	1.050	1.407
	LTE Band 7	20M	QPSK	50	0	Top Side	0mm	Ant 1	DSI 6	1	21100	2535	16.23	17.50	1.340	-	-	0.08	0.605	0.811
56	LTE Band 38	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	38000	2595	19.59	20.50	1.233	62.9	1.006	0.11	1.820	**2.258**
	LTE Band 38	20M	QPSK	1	49	Top Side	0mm	Ant 1	DSI 4	1	38000	2595	19.59	20.50	1.233	62.9	1.006	0.05	1.050	1.303
	LTE Band 38	20M	QPSK	1	49	Back	11mm	Ant 1	DSI 2	1	38000	2595	23.62	24.50	1.225	62.9	1.006	-0.06	0.277	0.341
	LTE Band 38	20M	QPSK	1	49	Top Side	11mm	Ant 1	DSI 2	1	38000	2595	23.62	24.50	1.225	62.9	1.006	0.03	0.225	0.277
	LTE Band 38	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	38000	2595	19.51	20.50	1.256	62.9	1.006	0.04	1.770	2.237
	LTE Band 38	20M	QPSK	50	0	Top Side	0mm	Ant 1	DSI 4	1	38000	2595	19.51	20.50	1.256	62.9	1.006	-0.14	0.954	1.205
	LTE Band 38	20M	QPSK	100	0	Back	0mm	Ant 1	DSI 4	1	38000	2595	19.40	20.50	1.288	62.9	1.006	0.02	1.710	2.216
	LTE Band 41	20M	QPSK	1	49	Top Side	0mm	Ant 1	DSI 4	1	41140	2645	19.71	20.50	1.199	62.9	1.006	0.03	1.150	1.388
57	LTE Band 41	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	41140	2645	19.71	20.50	1.199	62.9	1.006	-0.06	1.970	**2.377**
	LTE Band 41	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	40140	2545	19.09	20.50	1.384	62.9	1.006	-0.17	1.420	1.976
	LTE Band 41	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	40400	2571	19.17	20.50	1.358	62.9	1.006	-0.07	1.500	2.050
	LTE Band 41	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	40670	2598	19.42	20.50	1.282	62.9	1.006	-0.13	1.600	2.064
	LTE Band 41	20M	QPSK	1	49	Back	11mm	Ant 1	DSI 2	1	41140	2645	23.68	24.50	1.208	62.9	1.006	0.02	0.279	0.339
	LTE Band 41	20M	QPSK	1	49	Top Side	11mm	Ant 1	DSI 2	1	41140	2645	23.68	24.50	1.208	62.9	1.006	0.02	0.279	0.339
	LTE Band 41	20M	QPSK	50	0	Top Side	0mm	Ant 1	DSI 4	1	41140	2645	19.54	20.50	1.247	62.9	1.006	0.09	1.100	1.380
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	41140	2645	19.54	20.50	1.247	62.9	1.006	-0.12	1.610	2.020
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	40140	2545	18.86	20.50	1.459	62.9	1.006	0.12	1.390	2.040
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	40400	2571	18.99	20.50	1.416	62.9	1.006	0.17	1.460	2.079
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	DSI 4	1	40670	2598	19.21	20.50	1.346	62.9	1.006	0.05	1.620	2.193
	LTE Band 41	20M	QPSK	100	0	Back	0mm	Ant 1	DSI 4	1	41140	2645	19.45	20.50	1.274	62.9	1.006	0.11	1.350	1.730

Plot No.	Band	Mode	Test Position	Gap (mm)	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
WLAN																
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	0mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.02	0.588	0.961
58	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Reduced	1	42	5210	12.43	14.00	1.435	87.84	1.138	0.09	0.707	**1.155**
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	0mm	Reduced	1	58	5290	12.42	14.00	1.439	87.84	1.138	-0.08	0.165	0.270
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	0mm	Reduced	1	58	5290	12.42	14.00	1.439	87.84	1.138	-0.08	0.488	0.799
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Reduced	1	58	5290	12.42	14.00	1.439	87.84	1.138	0.16	0.050	0.082
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Reduced	1	58	5290	12.42	14.00	1.439	87.84	1.138	0.01	0.189	0.309
59	WLAN5.3GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Reduced	1	58	5290	12.42	14.00	1.439	87.84	1.138	0.07	0.822	**1.346**
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Full	1	144	5720	13.87	15.00	1.297	96.87	1.032	-0.01	0.125	0.167
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Full	1	144	5720	13.87	15.00	1.297	96.87	1.032	0.08	0.636	0.851
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	Full	1	144	5720	13.87	15.00	1.297	96.87	1.032	0.03	0.022	0.029
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Full	1	144	5720	13.87	15.00	1.297	96.87	1.032	0.05	0.197	0.264
60	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Full	1	144	5720	13.87	15.00	1.297	96.87	1.032	-0.08	0.994	**1.331**

15.5 Repeated SAR Measurement

<1g>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	-0.03	0.821	1	0.965
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1	1413	1732.6	18.30	19.00	1.175	0.01	0.817	1.005	0.960
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	-0.18	0.850	1	0.921
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	1	661	1880	22.65	23.00	1.084	-0.01	0.822	1.034	0.891

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	21350	2560	17.24	18.50	1.337	-0.04	2.010	1	2.687
	LTE Band 7	20M	QPSK	1	49	Back	0mm	Ant 1	DSI 4	1	21350	2560	17.24	18.50	1.337	0.09	1.970	1.020	2.633

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + 2.4GHz WLAN	Yes	Yes	Yes	Yes
2.	WWAN + 5GHz WLAN	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
5.	WWAN + 5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), and LTE supports VoLTE function.
2. EUT will choose each GSM, WCDM, and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
4. This device 2.4GHz WLAN/ 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
5. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
6. WLAN 2.4GHz and Bluetooth share the same antenna, and cannot transmit simultaneously.
7. According to the EUT characteristic, 5GHz and Bluetooth can transmit simultaneously.
8. According to the EUT characteristic, WLAN 2.4GHz and WLAN 5GHz cannot transmit simultaneously.
9. For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
10. For distance SAR and non-distance SAR, always chose higher SAR to do co-located analysis.
11. The reported SAR summation is calculated based on the same configuration and test position
12. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	4	7	10	1+4	1+7+10
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 13 Ant 0	Right Cheek	0.124	0.186	0.195	0.064	0.31	0.38
	Right Tilted	0.075	0.189	0.251	0.016	0.26	0.34
	Left Cheek	0.172	0.547	0.321	0.151	0.72	0.64
	Left Tilted	0.104	0.323	0.475	0.114	0.43	0.69
LTE Band 13 Ant 1	Right Cheek	0.605	0.186	0.195	0.064	0.79	0.86
	Right Tilted	0.592	0.189	0.251	0.016	0.78	0.86
	Left Cheek	0.473	0.547	0.321	0.151	1.02	0.95
	Left Tilted	0.442	0.323	0.475	0.114	0.77	1.03
GSM850 Ant 0	Right Cheek	0.138	0.186	0.195	0.064	0.32	0.40
	Right Tilted	0.092	0.189	0.251	0.016	0.28	0.36
	Left Cheek	0.193	0.547	0.321	0.151	0.74	0.67
	Left Tilted	0.103	0.323	0.475	0.114	0.43	0.69
GSM850 Ant 1	Right Cheek	0.761	0.186	0.195	0.064	0.95	1.02
	Right Tilted	0.703	0.189	0.251	0.016	0.89	0.97
	Left Cheek	0.499	0.547	0.321	0.151	1.05	0.97
	Left Tilted	0.494	0.323	0.475	0.114	0.82	1.08
WCDMA V Ant 0	Right Cheek	0.120	0.186	0.195	0.064	0.31	0.38
	Right Tilted	0.070	0.189	0.251	0.016	0.26	0.34
	Left Cheek	0.153	0.547	0.321	0.151	0.70	0.63
	Left Tilted	0.082	0.323	0.475	0.114	0.41	0.67
WCDMA V Ant 1	Right Cheek	0.871	0.186	0.195	0.064	1.06	1.13
	Right Tilted	0.763	0.189	0.251	0.016	0.95	1.03
	Left Cheek	0.568	0.547	0.321	0.151	1.12	1.04
	Left Tilted	0.477	0.323	0.475	0.114	0.80	1.07
LTE Band 4 Ant 1	Right Cheek	0.698	0.186	0.195	0.064	0.88	0.96
	Right Tilted	0.891	0.189	0.251	0.016	1.08	1.16
	Left Cheek	0.487	0.547	0.321	0.151	1.03	0.96
	Left Tilted	0.560	0.323	0.475	0.114	0.88	1.15
LTE Band 26 Ant 0	Right Cheek	0.139	0.186	0.195	0.064	0.33	0.40
	Right Tilted	0.074	0.189	0.251	0.016	0.26	0.34
	Left Cheek	0.172	0.547	0.321	0.151	0.72	0.64
	Left Tilted	0.093	0.323	0.475	0.114	0.42	0.68
LTE Band 26 Ant 1	Right Cheek	0.850	0.186	0.195	0.064	1.04	1.11
	Right Tilted	0.845	0.189	0.251	0.016	1.03	1.11
	Left Cheek	0.668	0.547	0.321	0.151	**1.22**	1.14
	Left Tilted	0.628	0.323	0.475	0.114	0.95	1.22
WCDMA IV Ant 0	Right Cheek	0.095	0.186	0.195	0.064	0.28	0.35
	Right Tilted	0.101	0.189	0.251	0.016	0.29	0.37
	Left Cheek	0.156	0.547	0.321	0.151	0.70	0.63
	Left Tilted	0.066	0.323	0.475	0.114	0.39	0.66
WCDMA IV Ant 1	Right Cheek	0.714	0.186	0.195	0.064	0.90	0.97
	Right Tilted	0.965	0.189	0.251	0.016	1.15	1.23
	Left Cheek	0.535	0.547	0.321	0.151	1.08	1.01
	Left Tilted	0.605	0.323	0.475	0.114	0.93	1.19
LTE Band 66 Ant 0	Right Cheek	0.110	0.186	0.195	0.064	0.30	0.37
	Right Tilted	0.119	0.189	0.251	0.016	0.31	0.39
	Left Cheek	0.182	0.547	0.321	0.151	0.73	0.65
	Left Tilted	0.080	0.323	0.475	0.114	0.40	0.67
LTE Band 66 Ant 1	Right Cheek	0.567	0.186	0.195	0.064	0.75	0.83
	Right Tilted	0.707	0.189	0.251	0.016	0.90	0.97
	Left Cheek	0.398	0.547	0.321	0.151	0.95	0.87

	Left Tilted	0.453	0.323	0.475	0.114	0.78	1.04
GSM1900 Ant 0	Right Cheek	0.015	0.186	0.195	0.064	0.20	0.27
	Right Tilted	0.008	0.189	0.251	0.016	0.20	0.28
	Left Cheek	0.054	0.547	0.321	0.151	0.60	0.53
	Left Tilted	0.017	0.323	0.475	0.114	0.34	0.61
GSM1900 Ant 1	Right Cheek	0.574	0.186	0.195	0.064	0.76	0.83
	Right Tilted	0.921	0.189	0.251	0.016	1.11	1.19
	Left Cheek	0.460	0.547	0.321	0.151	1.01	0.93
	Left Tilted	0.551	0.323	0.475	0.114	0.87	1.14
WCDMA II Ant 0	Right Cheek	0.119	0.186	0.195	0.064	0.31	0.38
	Right Tilted	0.094	0.189	0.251	0.016	0.28	0.36
	Left Cheek	0.150	0.547	0.321	0.151	0.70	0.62
	Left Tilted	0.115	0.323	0.475	0.114	0.44	0.70
WCDMA II Ant 1	Right Cheek	0.660	0.186	0.195	0.064	0.85	0.92
	Right Tilted	0.904	0.189	0.251	0.016	1.09	1.17
	Left Cheek	0.426	0.547	0.321	0.151	0.97	0.90
	Left Tilted	0.488	0.323	0.475	0.114	0.81	1.08
LTE Band 2 Ant 0	Right Cheek	0.135	0.186	0.195	0.064	0.32	0.39
	Right Tilted	0.098	0.189	0.251	0.016	0.29	0.37
	Left Cheek	0.167	0.547	0.321	0.151	0.71	0.64
	Left Tilted	0.127	0.323	0.475	0.114	0.45	0.72
LTE Band 2 Ant 1	Right Cheek	0.672	0.186	0.195	0.064	0.86	0.93
	Right Tilted	0.943	0.189	0.251	0.016	1.13	1.21
	Left Cheek	0.478	0.547	0.321	0.151	1.03	0.95
	Left Tilted	0.539	0.323	0.475	0.114	0.86	1.13
LTE Band 7 Ant 0	Right Cheek	0.310	0.186	0.195	0.064	0.50	0.57
	Right Tilted	0.175	0.189	0.251	0.016	0.36	0.44
	Left Cheek	0.131	0.547	0.321	0.151	0.68	0.60
	Left Tilted	0.130	0.323	0.475	0.114	0.45	0.72
LTE Band 7 Ant 1	Right Cheek	0.612	0.186	0.195	0.064	0.80	0.87
	Right Tilted	0.678	0.189	0.251	0.016	0.87	0.95
	Left Cheek	0.219	0.547	0.321	0.151	0.77	0.69
	Left Tilted	0.308	0.323	0.475	0.114	0.63	0.90
LTE Band 41 Ant 0	Right Cheek	0.284	0.186	0.195	0.064	0.47	0.54
	Right Tilted	0.107	0.189	0.251	0.016	0.30	0.37
	Left Cheek	0.121	0.547	0.321	0.151	0.67	0.59
	Left Tilted	0.123	0.323	0.475	0.114	0.45	0.71
LTE Band 41 Ant 1	Right Cheek	0.790	0.186	0.195	0.064	0.98	1.05
	Right Tilted	0.969	0.189	0.251	0.016	1.16	1.24
	Left Cheek	0.296	0.547	0.321	0.151	0.84	0.77
	Left Tilted	0.400	0.323	0.475	0.114	0.72	0.99

16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	4	7	10	1+4	1+7+10
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 13 Ant 0	Front	0.160	0.133	0.071	0.031	0.29	0.26
	Back	0.416	0.278	0.742	0.070	0.69	1.23
	Left side	0.261	0.045	0.018	0.016	0.31	0.30
	Right side	0.116	0.110	0.167	0.030	0.23	0.31
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.242				0.24	0.24
LTE Band 13 Ant 1	Front	0.143	0.133	0.071	0.031	0.28	0.25
	Back	0.223	0.278	0.742	0.070	0.50	1.04
	Left side	0.166	0.045	0.018	0.016	0.21	0.20
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.145	0.115	0.678	0.039	0.26	0.86
	Bottom side					0.00	0.00
GSM850 Ant 0	Front	0.170	0.133	0.071	0.031	0.30	0.27
	Back	0.477	0.278	0.742	0.070	0.76	1.29
	Left side	0.188	0.045	0.018	0.016	0.23	0.22
	Right side	0.106	0.110	0.167	0.030	0.22	0.30
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.236				0.24	0.24
GSM850 Ant 1	Front	0.140	0.133	0.071	0.031	0.27	0.24
	Back	0.268	0.278	0.742	0.070	0.55	1.08
	Left side	0.092	0.045	0.018	0.016	0.14	0.13
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.165	0.115	0.678	0.039	0.28	0.88
	Bottom side					0.00	0.00
WCDMA V Ant 0	Front	0.144	0.133	0.071	0.031	0.28	0.25
	Back	0.429	0.278	0.742	0.070	0.71	1.24
	Left side	0.155	0.045	0.018	0.016	0.20	0.19
	Right side	0.083	0.110	0.167	0.030	0.19	0.28
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.191				0.19	0.19
WCDMA V Ant 1	Front	0.182	0.133	0.071	0.031	0.32	0.28
	Back	0.294	0.278	0.742	0.070	0.57	1.11
	Left side	0.141	0.045	0.018	0.016	0.19	0.18
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.236	0.115	0.678	0.039	0.35	0.95
	Bottom side					0.00	0.00
LTE Band 26 Ant 0	Front	0.156	0.133	0.071	0.031	0.29	0.26
	Back	0.400	0.278	0.742	0.070	0.68	1.21
	Left side	0.173	0.045	0.018	0.016	0.22	0.21
	Right side	0.094	0.110	0.167	0.030	0.20	0.29
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.222				0.22	0.22
LTE Band 26 Ant 1	Front	0.215	0.133	0.071	0.031	0.35	0.32
	Back	0.326	0.278	0.742	0.070	0.60	1.14
	Left side	0.168	0.045	0.018	0.016	0.21	0.20
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.247	0.115	0.678	0.039	0.36	0.96
	Bottom side					0.00	0.00
WCDMA IV Ant 0	Front	0.308	0.133	0.071	0.031	0.44	0.41
	Back	0.517	0.278	0.742	0.070	0.80	1.33
	Left side	0.078	0.045	0.018	0.016	0.12	0.11

	Right side	0.162	0.110	0.167	0.030	0.27	0.36
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.837				0.84	0.84
WCDMA IV Ant 1	Front	0.308	0.133	0.071	0.031	0.44	0.41
	Back	0.478	0.278	0.742	0.070	0.76	1.29
	Left side	0.125	0.045	0.018	0.016	0.17	0.16
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.420	0.115	0.678	0.039	0.54	1.14
	Bottom side					0.00	0.00
LTE Band 66 Ant 0	Front	0.312	0.133	0.071	0.031	0.45	0.41
	Back	0.498	0.278	0.742	0.070	0.78	1.31
	Left side	0.084	0.045	0.018	0.016	0.13	0.12
	Right side	0.172	0.110	0.167	0.030	0.28	0.37
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.835				0.84	0.84
LTE Band 66 Ant 1	Front	0.331	0.133	0.071	0.031	0.46	0.43
	Back	0.472	0.278	0.742	0.070	0.75	1.28
	Left side	0.125	0.045	0.018	0.016	0.17	0.16
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.456	0.115	0.678	0.039	0.57	1.17
	Bottom side					0.00	0.00
GSM1900 Ant 0	Front	0.084	0.133	0.071	0.031	0.22	0.19
	Back	0.167	0.278	0.742	0.070	0.45	0.98
	Left side	0.064	0.045	0.018	0.016	0.11	0.10
	Right side	0.045	0.110	0.167	0.030	0.16	0.24
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.293				0.29	0.29
GSM1900 Ant 1	Front	0.224	0.133	0.071	0.031	0.36	0.33
	Back	0.409	0.278	0.742	0.070	0.69	1.22
	Left side	0.091	0.045	0.018	0.016	0.14	0.13
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.655	0.115	0.678	0.039	0.77	**1.37**
	Bottom side					0.00	0.00
WCDMA II Ant 0	Front	0.233	0.133	0.071	0.031	0.37	0.34
	Back	0.432	0.278	0.742	0.070	0.71	1.24
	Left side	0.082	0.045	0.018	0.016	0.13	0.12
	Right side	0.130	0.110	0.167	0.030	0.24	0.33
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.695				0.70	0.70
WCDMA II Ant 1	Front	0.228	0.133	0.071	0.031	0.36	0.33
	Back	0.397	0.278	0.742	0.070	0.68	1.21
	Left side	0.095	0.045	0.018	0.016	0.14	0.13
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.567	0.115	0.678	0.039	0.68	1.28
	Bottom side					0.00	0.00
LTE Band 2 Ant 0	Front	0.216	0.133	0.071	0.031	0.35	0.32
	Back	0.386	0.278	0.742	0.070	0.66	1.20
	Left side	0.080	0.045	0.018	0.016	0.13	0.11
	Right side	0.127	0.110	0.167	0.030	0.24	0.32
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.638				0.64	0.64
LTE Band 2 Ant 1	Front	0.239	0.133	0.071	0.031	0.37	0.34
	Back	0.427	0.278	0.742	0.070	0.71	1.24
	Left side	0.104	0.045	0.018	0.016	0.15	0.14
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.595	0.115	0.678	0.039	0.71	1.31

	Bottom side					0.00	0.00
LTE Band 7 Ant 0	Front	0.238	0.133	0.071	0.031	0.37	0.34
	Back	0.348	0.278	0.742	0.070	0.63	1.16
	Left side	0.059	0.045	0.018	0.016	0.10	0.09
	Right side	0.128	0.110	0.167	0.030	0.24	0.33
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.126				0.13	0.13
LTE Band 7 Ant 1	Front	0.090	0.133	0.071	0.031	0.22	0.19
	Back	0.498	0.278	0.742	0.070	0.78	1.31
	Left side	0.157	0.045	0.018	0.016	0.20	0.19
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.274	0.115	0.678	0.039	0.39	0.99
	Bottom side					0.00	0.00
LTE Band 41 Ant 0	Front	0.197	0.133	0.071	0.031	0.33	0.30
	Back	0.279	0.278	0.742	0.070	0.56	1.09
	Left side	0.045	0.045	0.018	0.016	0.09	0.08
	Right side	0.116	0.110	0.167	0.030	0.23	0.31
	Top side		0.115	0.678	0.039	0.12	0.72
	Bottom side	0.126				0.13	0.13
LTE Band 41 Ant 1	Front	0.186	0.133	0.071	0.031	0.32	0.29
	Back	0.472	0.278	0.742	0.070	0.75	1.28
	Left side	0.336	0.045	0.018	0.016	0.38	0.37
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.376	0.115	0.678	0.039	0.49	1.09
	Bottom side					0.00	0.00
LTE Band 38 Ant 1	Front	0.147	0.133	0.071	0.031	0.28	0.25
	Back	0.475	0.278	0.742	0.070	0.75	1.29
	Left side	0.295	0.045	0.018	0.016	0.34	0.33
	Right side		0.110	0.167	0.030	0.11	0.20
	Top side	0.395	0.115	0.678	0.039	0.51	1.11
	Bottom side					0.00	0.00

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	4	7	10	1+4	1+7+10
		WWAN	WLAN2.4GHz	WLAN5GHz	Bluetooth	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 13 Ant 0	Front	0.179	0.057	0.074		0.24	0.25
	Back	0.242	0.134	0.509	0.015	0.38	0.77
LTE Band 13 Ant 1	Front	0.159	0.057	0.074		0.22	0.23
	Back	0.199	0.134	0.509	0.015	0.33	0.72
GSM850 Ant 0	Front	0.165	0.057	0.074		0.22	0.24
	Back	0.193	0.134	0.509	0.015	0.33	0.72
GSM850 Ant 1	Front	0.114	0.057	0.074		0.17	0.19
	Back	0.127	0.134	0.509	0.015	0.26	0.65
WCDMA V Ant 0	Front	0.125	0.057	0.074		0.18	0.20
	Back	0.143	0.134	0.509	0.015	0.28	0.67
WCDMA V Ant 1	Front	0.157	0.057	0.074		0.21	0.23
	Back	0.219	0.134	0.509	0.015	0.35	0.74
LTE Band 26 Ant 0	Front	0.137	0.057	0.074		0.19	0.21
	Back	0.151	0.134	0.509	0.015	0.29	0.68
LTE Band 26 Ant 1	Front	0.187	0.057	0.074		0.24	0.26
	Back	0.254	0.134	0.509	0.015	0.39	0.78
WCDMA IV Ant 0	Front	0.173	0.057	0.074		0.23	0.25
	Back	0.283	0.134	0.509	0.015	0.42	0.81
WCDMA IV Ant 1	Front	0.296	0.057	0.074		0.35	0.37
	Back	0.424	0.134	0.509	0.015	0.56	0.95
LTE Band 66 Ant 0	Front	0.169	0.057	0.074		0.23	0.24
	Back	0.287	0.134	0.509	0.015	0.42	0.81
LTE Band 66 Ant 1	Front	0.357	0.057	0.074		0.41	0.43
	Back	0.512	0.134	0.509	0.015	0.65	1.04
GSM1900 Ant 0	Front	0.102	0.057	0.074		0.16	0.18
	Back	0.179	0.134	0.509	0.015	0.31	0.70
GSM1900 Ant 1	Front	0.121	0.057	0.074		0.18	0.20
	Back	0.247	0.134	0.509	0.015	0.38	0.77
WCDMA II Ant 0	Front	0.275	0.057	0.074		0.33	0.35
	Back	0.472	0.134	0.509	0.015	0.61	1.00
WCDMA II Ant 1	Front	0.114	0.057	0.074		0.17	0.19
	Back	0.189	0.134	0.509	0.015	0.32	0.71
LTE Band 2 Ant 0	Front	0.314	0.057	0.074		0.37	0.39
	Back	0.545	0.134	0.509	0.015	0.68	1.07
LTE Band 2 Ant 1	Front	0.127	0.057	0.074		0.18	0.20
	Back	0.220	0.134	0.509	0.015	0.35	0.74
LTE Band 7 Ant 0	Front	0.262	0.057	0.074		0.32	0.34
	Back	0.319	0.134	0.509	0.015	0.45	0.84
LTE Band 7 Ant 1	Front	0.053	0.057	0.074		0.11	0.13
	Back	0.132	0.134	0.509	0.015	0.27	0.66
LTE Band 41 Ant 0	Front	0.210	0.057	0.074		0.27	0.28
	Back	0.268	0.134	0.509	0.015	0.40	0.79
LTE Band 41 Ant 1	Front	0.068	0.057	0.074		0.13	0.14
	Back	0.149	0.134	0.509	0.015	0.28	0.67
LTE Band 38 Ant 1	Front	0.081	0.057	0.074		0.14	0.16
	Back	0.223	0.134	0.509	0.015	0.36	0.75

16.4 Product specific 10g SAR Exposure Conditions

WWAN Band	Exposure Position	1	7	1+7
		WWAN	WLAN5GHz	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WCDMA IV Ant 0	Front		0.270	0.27
	Back		0.961	0.96
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side		1.346	1.35
	Bottom side	1.943		1.94
LTE Band 66 Ant 0	Front		0.270	0.27
	Back		0.961	0.96
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side		1.346	1.35
	Bottom side	2.126		2.13
WCDMA II Ant 0	Front		0.270	0.27
	Back		0.961	0.96
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side		1.346	1.35
	Bottom side	1.566		1.57
WCDMA II Ant 1	Front		0.270	0.27
	Back	1.067	0.961	2.03
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side	1.307	1.346	2.65
	Bottom side			0.00
LTE Band 2 Ant 0	Front		0.270	0.27
	Back		0.961	0.96
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side		1.346	1.35
	Bottom side	1.782		1.78
LTE Band 2 Ant 1	Front		0.270	0.27
	Back	1.213	0.961	2.17
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side	1.747	1.346	3.09
	Bottom side			0.00
LTE Band 7 Ant 1	Front		0.270	0.27
	Back	1.665	0.961	2.63
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side	0.872	1.346	2.22

	Bottom side			0.00
LTE Band 38 Ant 1	Front		0.270	0.27
	Back	2.258	0.961	3.22
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side	1.303	1.346	2.65
	Bottom side			0.00
LTE Band 41 Ant 1	Front		0.270	0.27
	Back	2.377	0.961	**3.34**
	Left side		0.082	0.08
	Right side		0.309	0.31
	Top side	1.388	1.346	2.73
	Bottom side			0.00

Note: For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

Test Engineer : Hank Huang, Kevin Xu, David Dai, Bin He

17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

18. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[6] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[7] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[8] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[9] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[10] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

[11] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[12] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[13] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

------THE END------

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/7/2

System Check_Head_750MHz

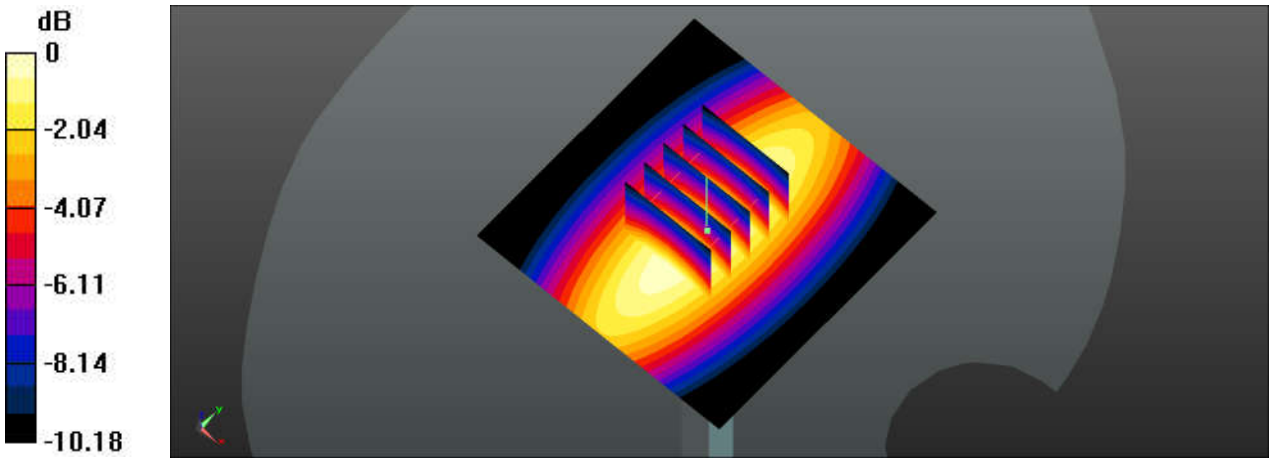
DUT: D750V3-SN:1099

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750_220702 Medium parameters used: f = 750 MHz; σ = 0.882 S/m; ε_r = 40.803; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.82, 9.82, 9.82); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.82 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.96 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.17 W/kg
SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.41 W/kg
Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/7/3

System Check_Head_835MHz

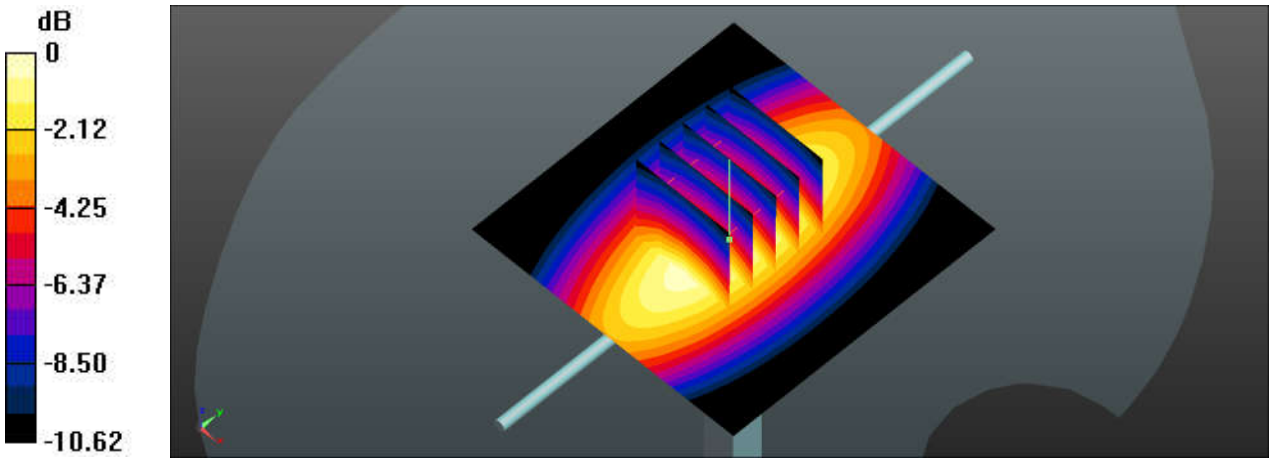
DUT: D835V2-SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_220703 Medium parameters used: f = 835 MHz; σ = 0.913 S/m; ε_r = 40.859; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.51, 9.51, 9.51); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.30 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 63.27 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.64 W/kg
Maximum value of SAR (measured) = 3.30 W/kg



0 dB = 3.30 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022/7/5

System Check_Head_1750MHz

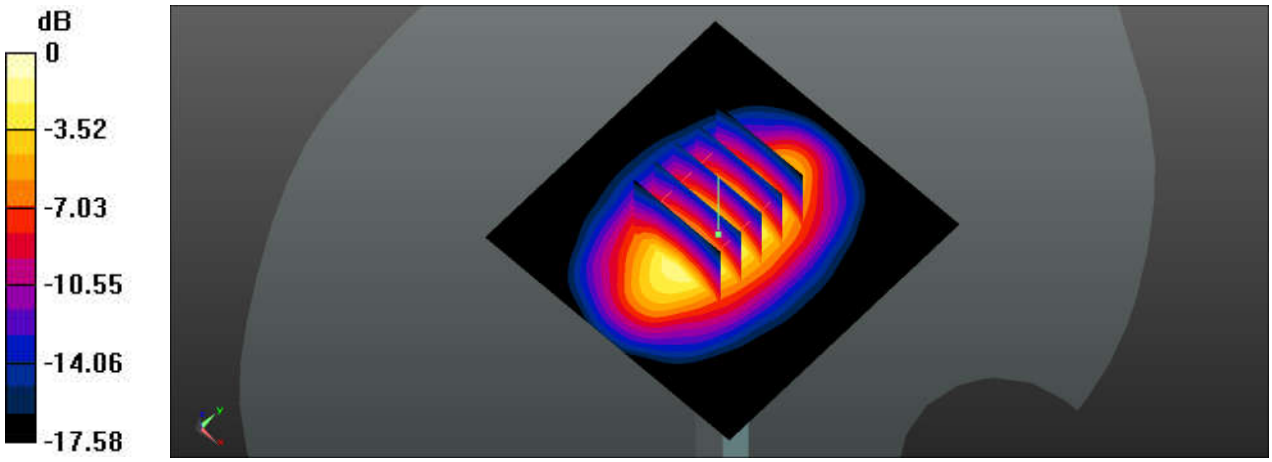
DUT: D1750V2-SN:1137

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_220705 Medium parameters used: f = 1750 MHz; σ = 1.407 S/m; ε_r = 41.718; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.57, 8.57, 8.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.3 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 104.9 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 9.19 W/kg; SAR(10 g) = 4.86 W/kg
Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg

System Check_Head_1750MHz

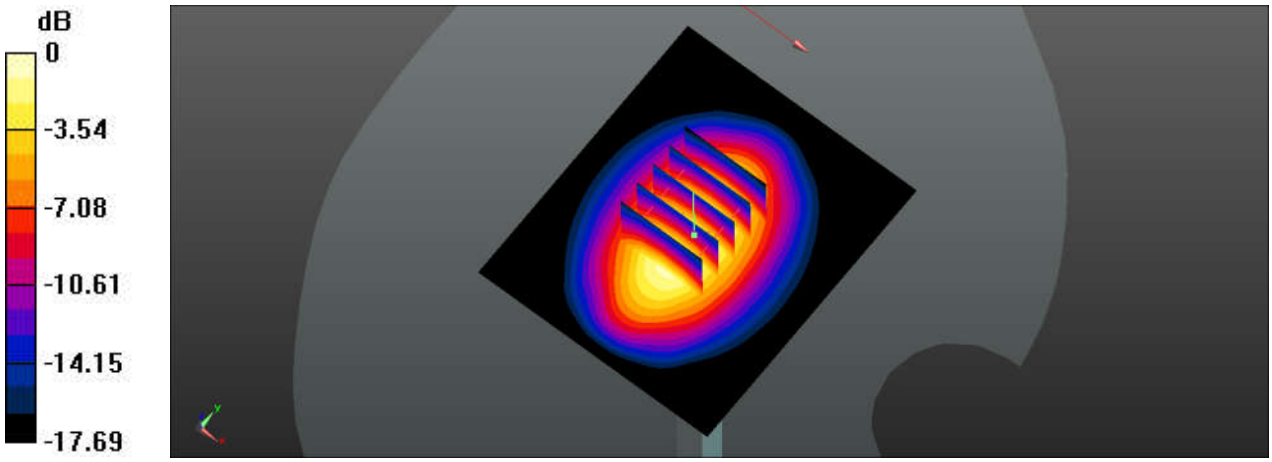
DUT: D1750V2-SN:1137

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_220712 Medium parameters used: f = 1750 MHz; σ = 1.383 S/m; ε_r = 39.897; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.57, 8.57, 8.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.4 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.4 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.65 W/kg; SAR(10 g) = 5.15 W/kg
Maximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg

System Check_Head_1900MHz

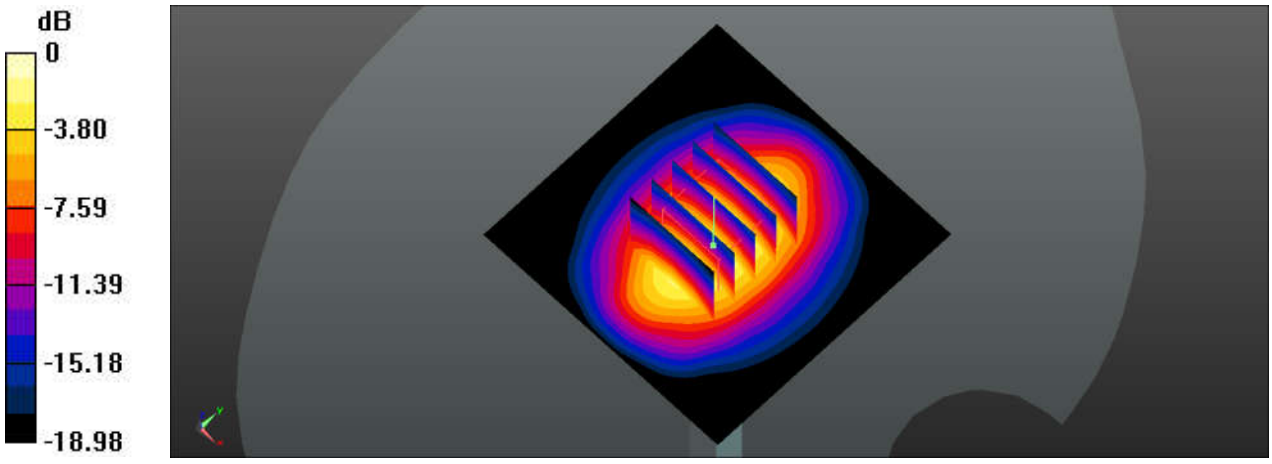
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_220704 Medium parameters used: f = 1900 MHz; σ = 1.455 S/m; ε_r = 40.068; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 15.3 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 103.3 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 19.9 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.34 W/kg
Maximum value of SAR (measured) = 15.1 W/kg



0 dB = 15.1 W/kg

System Check_Head_1900MHz

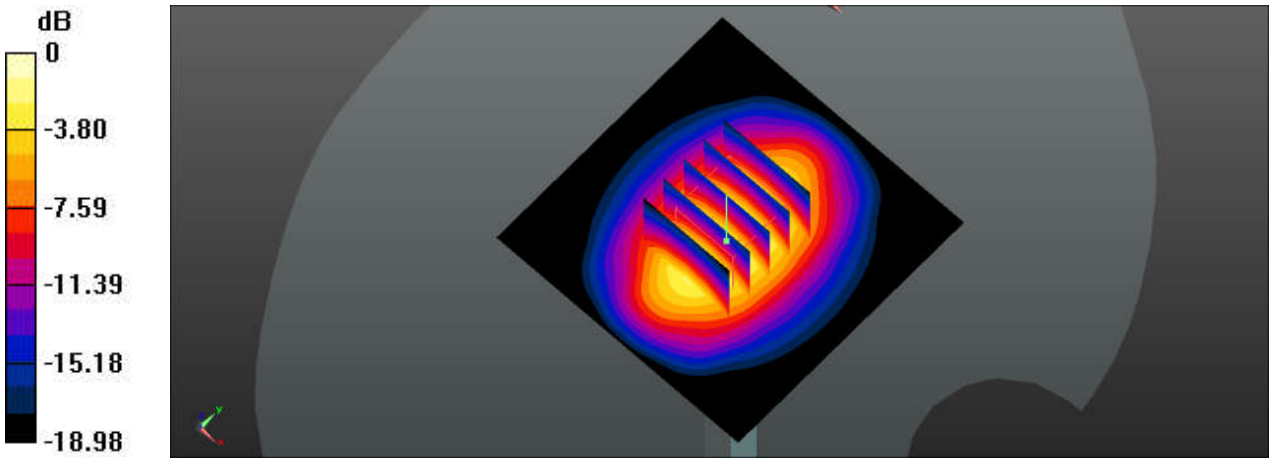
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_220709 Medium parameters used: f = 1900 MHz; σ = 1.445 S/m; ε_r = 41.028; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.8 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.7 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 17.9 W/kg
SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.27 W/kg
Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg

System Check_Head_2450MHz

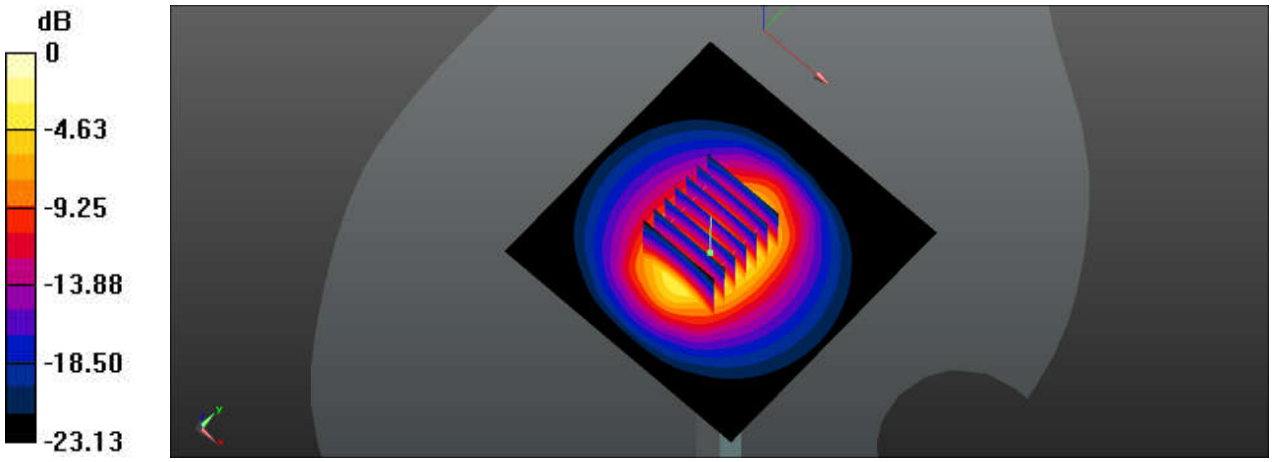
DUT: D2450V2-SN:924

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450_220712 Medium parameters used: f = 2450 MHz; σ = 1.871 S/m; ε_r = 38.124; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.57, 7.57, 7.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.8 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.05 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 29.5 W/kg
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.39 W/kg
Maximum value of SAR (measured) = 21.3 W/kg



0 dB = 21.3 W/kg

System Check_Head_2600MHz

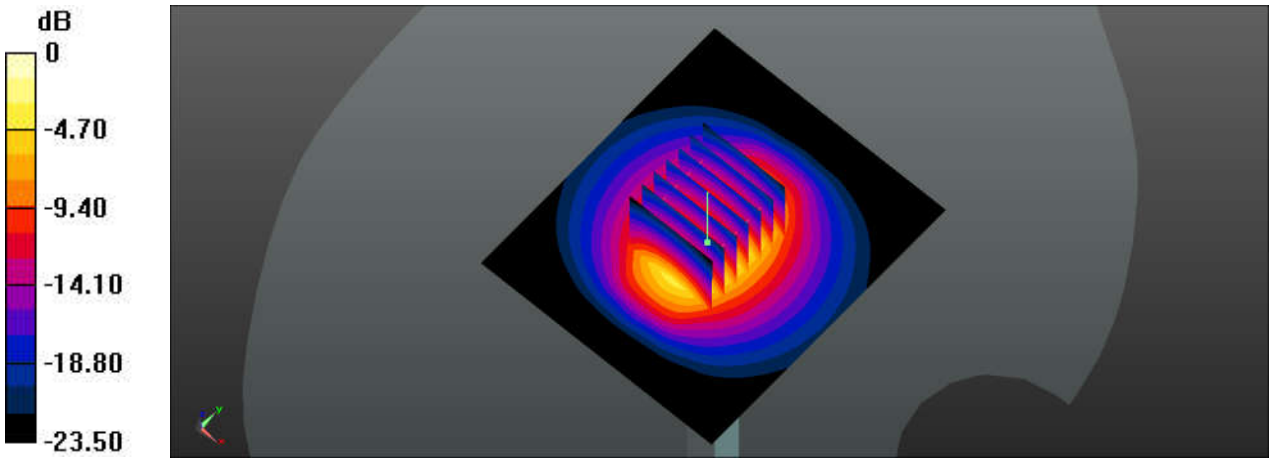
DUT: D2600V2-SN:1070

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600_220708 Medium parameters used: f = 2600 MHz; σ = 1.935 S/m; ε_r = 38.814; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 23.3 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 112.2 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 28.6 W/kg
SAR(1 g) = 13.3 W/kg; SAR(10 g) = 5.96 W/kg
Maximum value of SAR (measured) = 22.8 W/kg



0 dB = 22.8 W/kg

System Check_Head_2600MHz

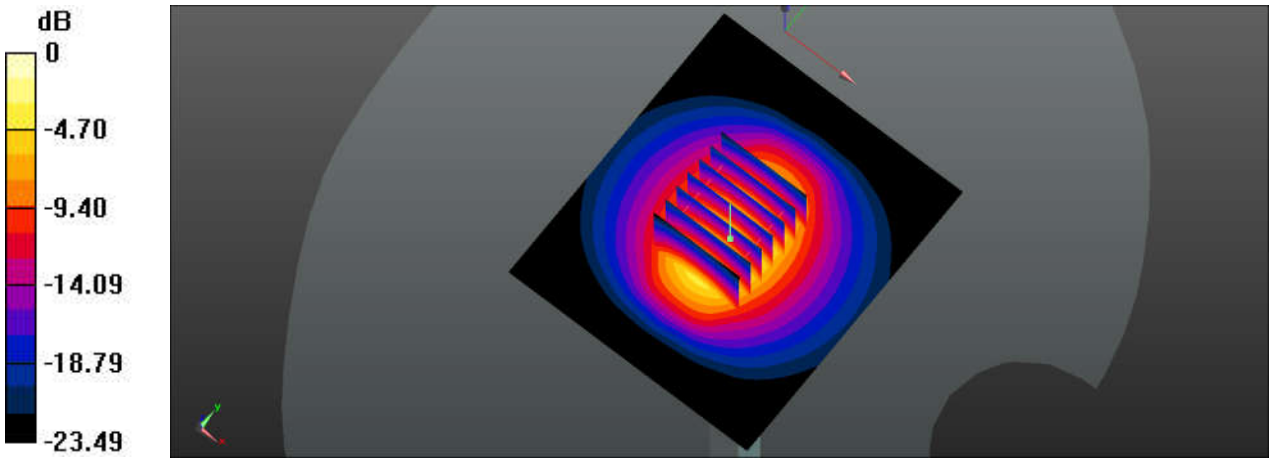
DUT: D2600V2-SN:1070

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600_220713 Medium parameters used: f = 2600 MHz; σ = 2.055 S/m; ε_r = 37.597; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 23.7 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 108.6 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 28.6 W/kg
SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.33 W/kg
Maximum value of SAR (measured) = 24.2 W/kg



0 dB = 24.2 W/kg

System Check_Head_5250MHz

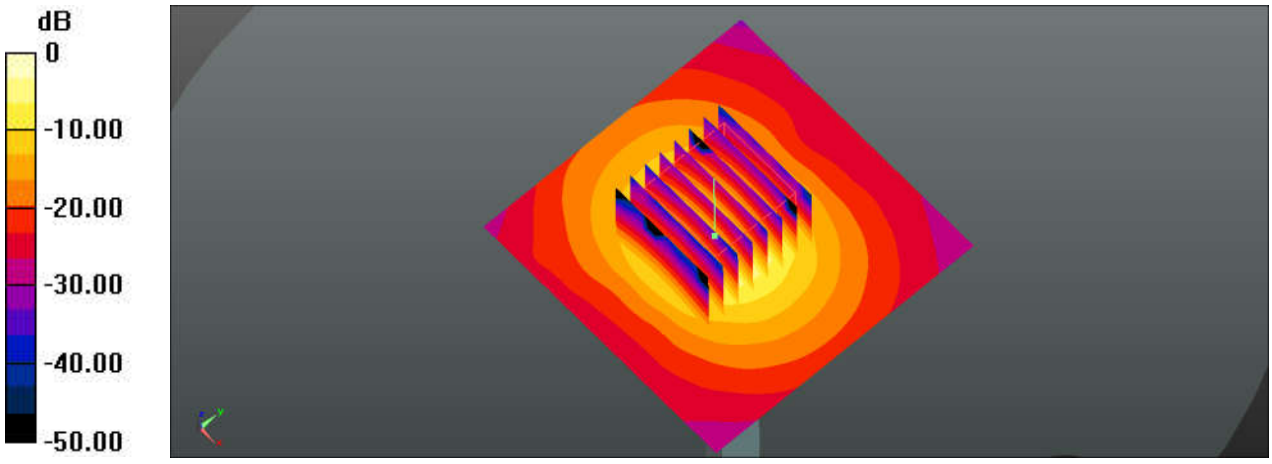
DUT: D5GHzV2-SN:1341

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5250_220710 Medium parameters used: f = 5250 MHz; σ = 4.744 S/m; ε_r = 36.854; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(5.07, 5.07, 5.07); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 22.2 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 71.67 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 8.61 W/kg; SAR(10 g) = 2.42 W/kg
Maximum value of SAR (measured) = 22.0 W/kg



0 dB = 22.0 W/kg

System Check_Head_5600MHz

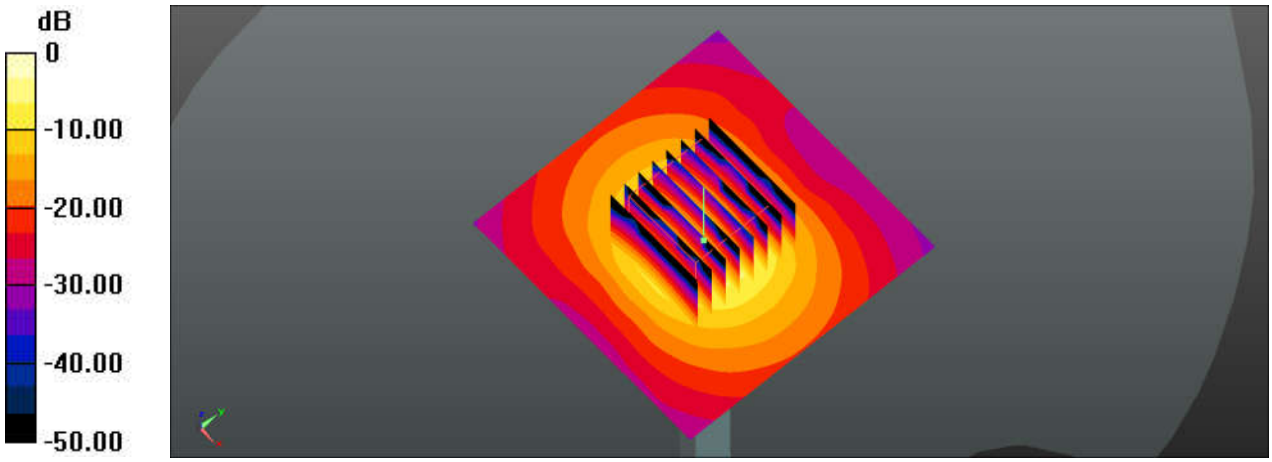
DUT: D5GHzV2-SN:1341

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5600_220713 Medium parameters used: f = 5600 MHz; σ = 5.182 S/m; ε_r = 36.105; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.55, 4.55, 4.55); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 22.1 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 69.23 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 39.6 W/kg
SAR(1 g) = 9.01 W/kg; SAR(10 g) = 2.55 W/kg
Maximum value of SAR (measured) = 22.3 W/kg



0 dB = 22.3 W/kg

System Check_Head_5750MHz

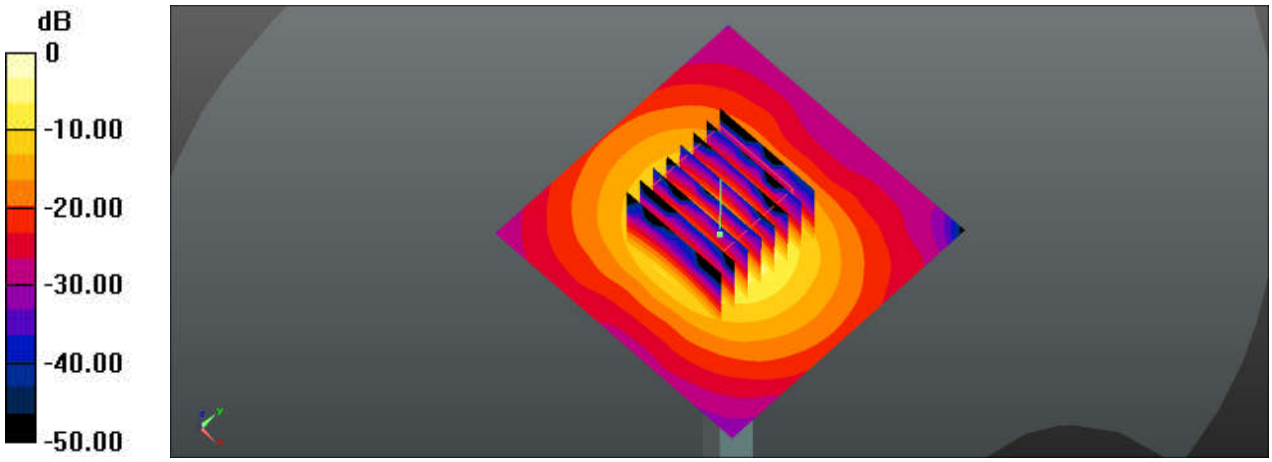
DUT: D5GHzV2-SN:1341

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5750_220711 Medium parameters used: f = 5750 MHz; σ = 5.357 S/m; ε_r = 35.815; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.65, 4.65, 4.65); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 24.0 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 79.29 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 42.2 W/kg
SAR(1 g) = 8.55 W/kg; SAR(10 g) = 2.38 W/kg
Maximum value of SAR (measured) = 23.4 W/kg



0 dB = 23.4 W/kg

Appendix B. Plots of High SAR Measurement

The plots are shown as follows.

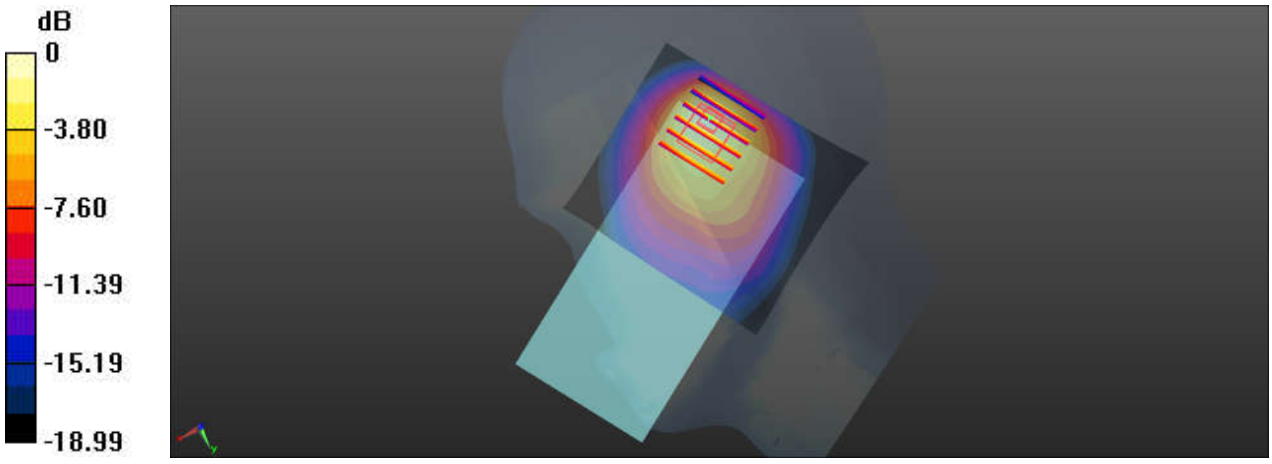
01_LTE Band 13_10M_QPSK_1RB_0Offset_Right Cheek_Ch23230

Communication System: UID 0, Generic LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL_750_220702 Medium parameters used: f = 782 MHz; σ = 0.901 S/m; ε_r = 40.08; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.82, 9.82, 9.82); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch23230/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.749 W/kg

Ch23230/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.95 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.978 W/kg
SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.275 W/kg
Maximum value of SAR (measured) = 0.763 W/kg



0 dB = 0.763 W/kg

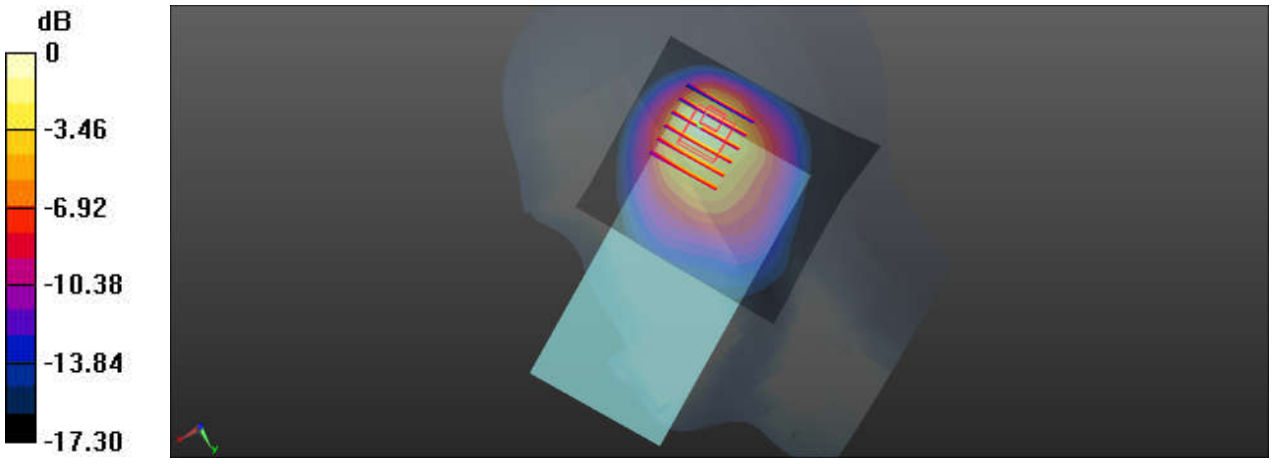
02_GSM850_GPRS 4 Tx slots_Right Cheek_Ch189

Communication System: UID 0, GPRS/EDGE12 (0); Frequency: 836.4 MHz;Duty Cycle: 1:2.08
Medium: HSL_835_220703 Medium parameters used: f = 836.4 MHz; σ = 0.914 S/m; ε_r = 40.842; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.51, 9.51, 9.51); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch189/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

Ch189/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.50 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.680 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg

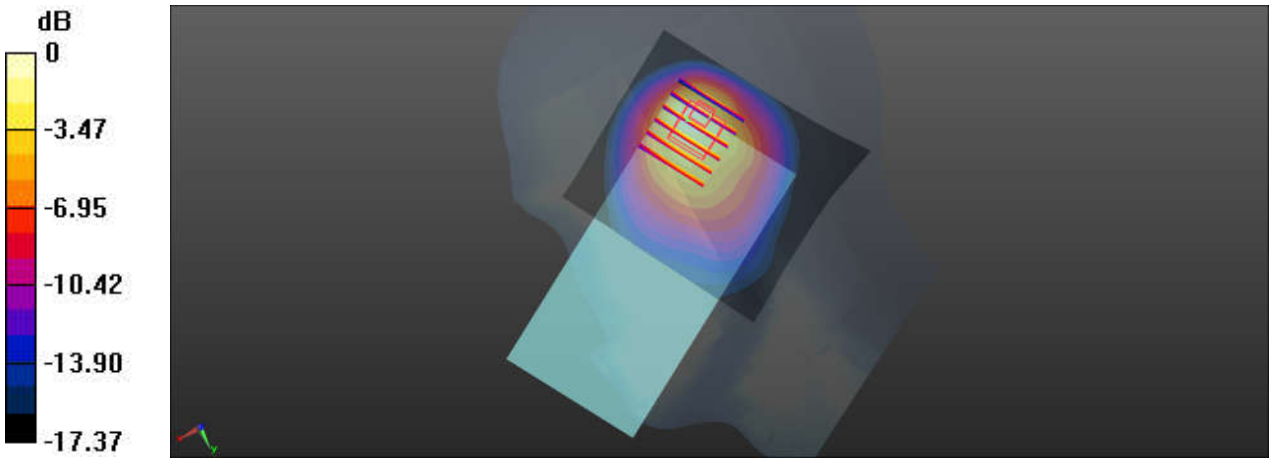
03_WCDMA V_RMC 12.2Kbps_Right Cheek_Ch4233

Communication System: UID 0, Generic WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_835_220703 Medium parameters used: f = 846.6 MHz; σ = 0.923 S/m; ε_r = 40.736; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.51, 9.51, 9.51); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch4233/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

Ch4233/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.46 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.401 W/kg
Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg

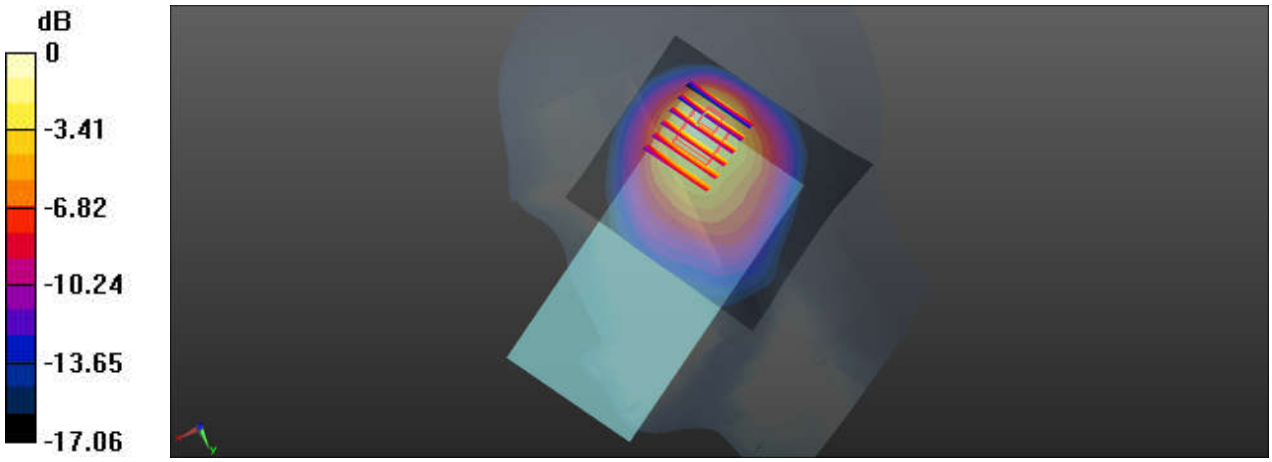
04_LTE Band 26_15M_QPSK_1RB_37Offset_Right Cheek_Ch26865

Communication System: UID 0, Generic LTE (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: HSL_835_220703 Medium parameters used: f = 831.5 MHz; σ = 0.91 S/m; ε_r = 40.896; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.51, 9.51, 9.51); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch26865/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.977 W/kg

Ch26865/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.09 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.657 W/kg; SAR(10 g) = 0.409 W/kg
Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 1.10 W/kg

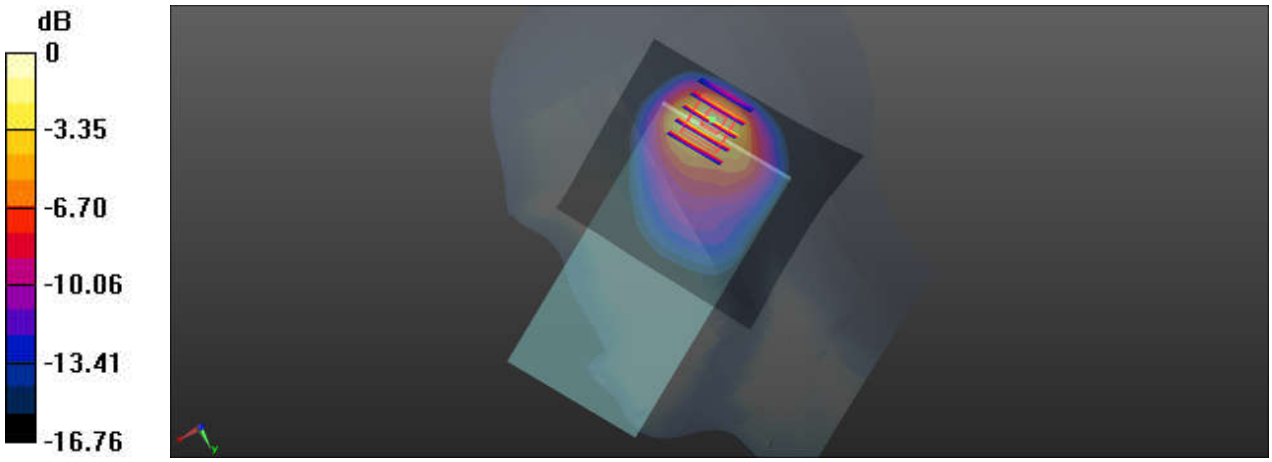
05_WCDMA IV_RMC 12.2Kbps_Right Tilted_Ch1413

Communication System: UID 0, Generic WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750_220705 Medium parameters used: f = 1732.6 MHz; σ = 1.387 S/m; ε_r = 41.785; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.57, 8.57, 8.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch1413/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.09 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.36 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.821 W/kg; SAR(10 g) = 0.427 W/kg
Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg

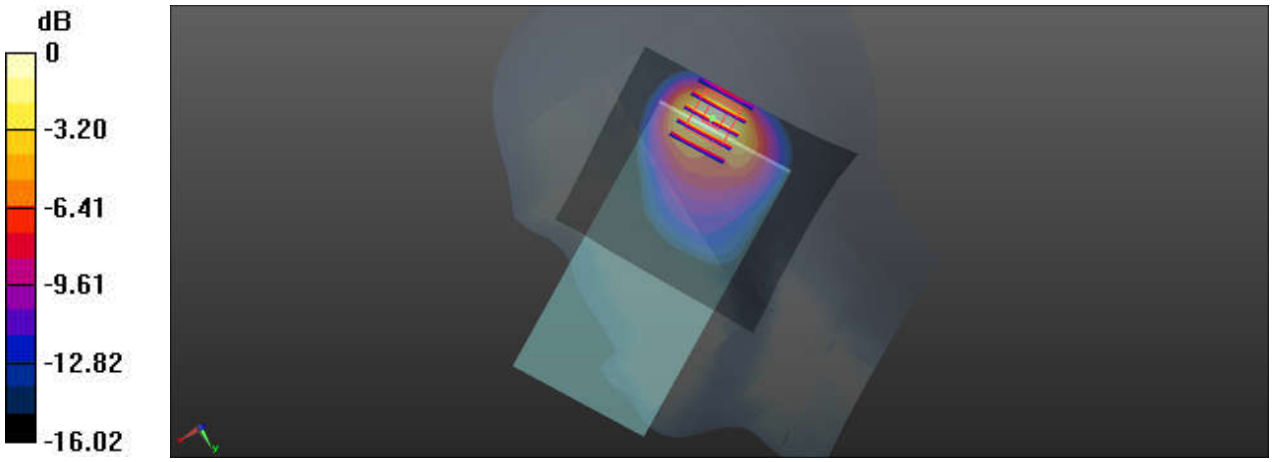
06_LTE Band 4_20M_QPSK_1RB_49Offset_Right Tilted_Ch20175

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: HSL_1750_220705 Medium parameters used: f = 1732.5 MHz; σ = 1.386 S/m; ε_r = 41.788; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.57, 8.57, 8.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch20175/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.41 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.729 W/kg; SAR(10 g) = 0.379 W/kg
Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg

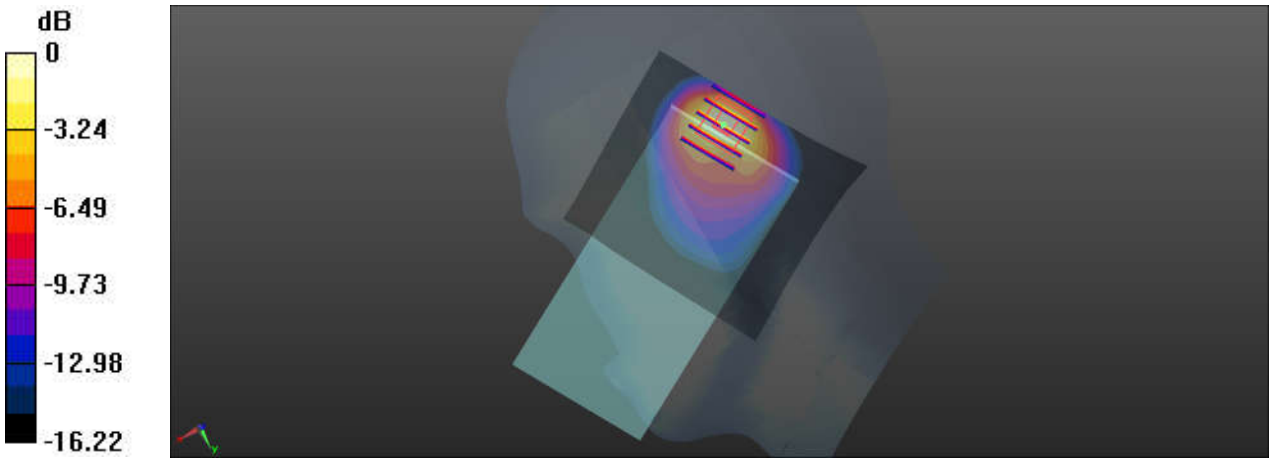
07_LTE Band 66_20M_QPSK_1RB_49Offset_Right Tilted_Ch132322

Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL_1750_220705 Medium parameters used: f = 1745 MHz; σ = 1.401 S/m; ε_r = 41.733; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.57, 8.57, 8.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch132322/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.00 W/kg

Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.59 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.305 W/kg
Maximum value of SAR (measured) = 0.934 W/kg



0 dB = 0.934 W/kg

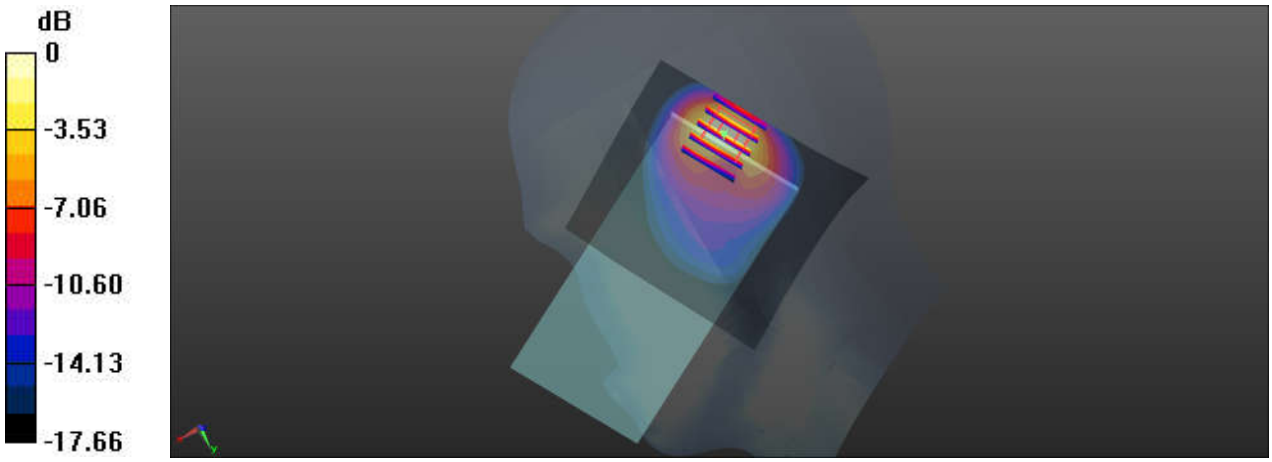
08_GSM1900_GPRS 4 Tx slots_Right Tilted_Ch661

Communication System: UID 0, GPRS/EDGE12 (0); Frequency: 1880 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900_220704 Medium parameters used: f = 1880 MHz; σ = 1.435 S/m; ε_r = 40.161; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch661/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.43 W/kg

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.72 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 0.850 W/kg; SAR(10 g) = 0.418 W/kg
Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg

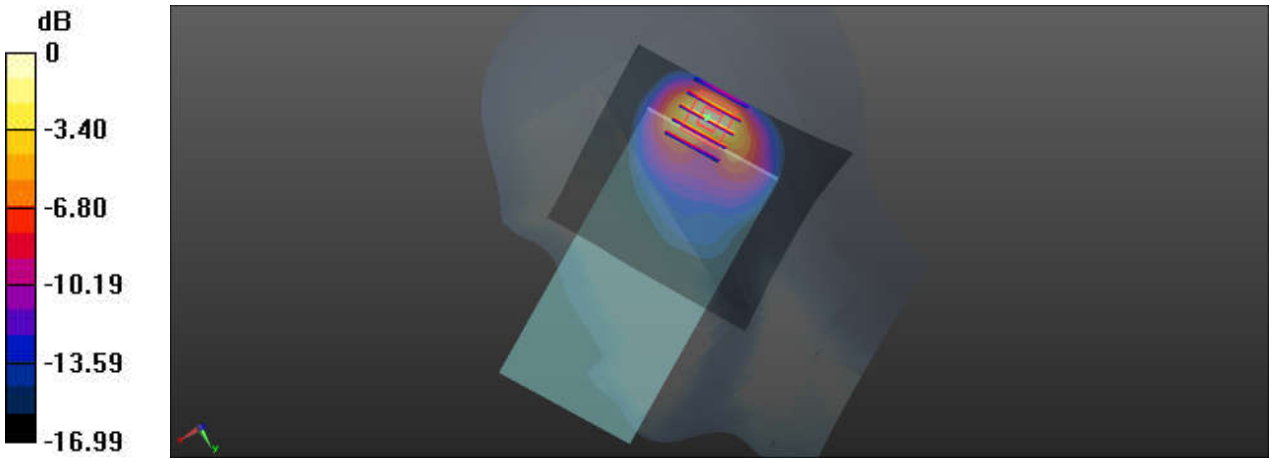
09_WCDMA II_RMC 12.2Kbps_Right Tilted_Ch9538

Communication System: UID 0, Generic WCDMA (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL_1900_220704 Medium parameters used: f = 1907.6 MHz; σ = 1.463 S/m; ε_r = 40.033; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch9538/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.70 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.721 W/kg; SAR(10 g) = 0.361 W/kg
Maximum value of SAR (measured) = 1.17 W/kg



0 dB = 1.17 W/kg

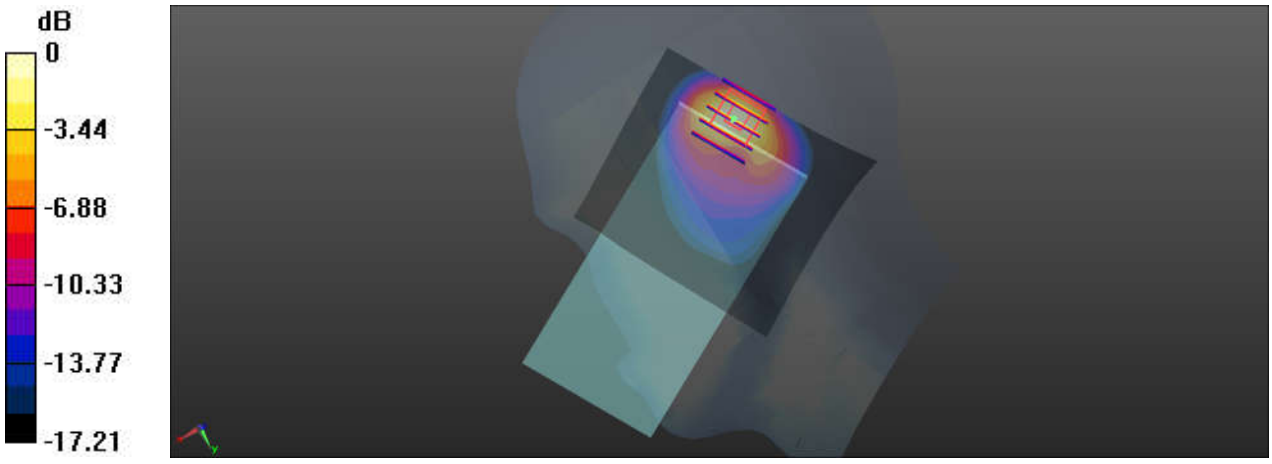
10_LTE Band 2_20M_QPSK_1RB_49Offset_Right Tilted_Ch18900

Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900_220704 Medium parameters used: f = 1880 MHz; σ = 1.435 S/m; ε_r = 40.161; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch18900/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.34 W/kg

Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.17 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.797 W/kg; SAR(10 g) = 0.394 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



0 dB = 1.30 W/kg

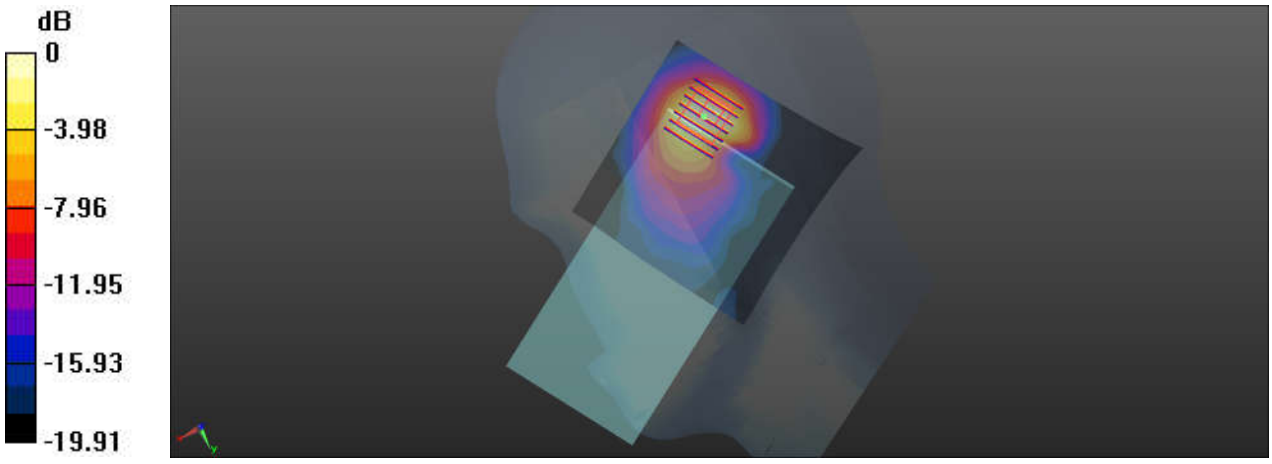
11_LTE Band 7_20M_QPSK_1RB_49Offset_Right Tilted_Ch21100

Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL_2600_220708 Medium parameters used: f = 2535 MHz; σ = 1.866 S/m; ε_r = 39.122; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch21100/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.942 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.341 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.246 W/kg
Maximum value of SAR (measured) = 0.860 W/kg



0 dB = 0.860 W/kg

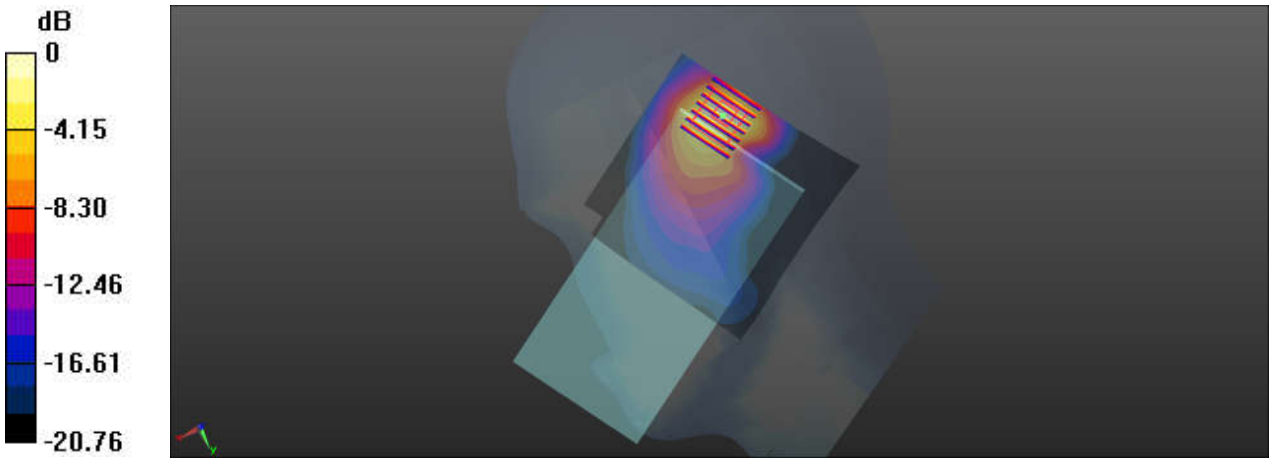
12_LTE Band 41_20M_QPSK_1RB_49Offset_Right Tilted_Ch41140

Communication System: UID 0, Generic LTE (0); Frequency: 2645 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600_220708 Medium parameters used: f = 2645 MHz; σ = 1.978 S/m; ε_r = 38.738; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch41140/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.39 W/kg

Ch41140/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.21 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 0.792 W/kg; SAR(10 g) = 0.382 W/kg
Maximum value of SAR (measured) = 1.39 W/kg



0 dB = 1.39 W/kg

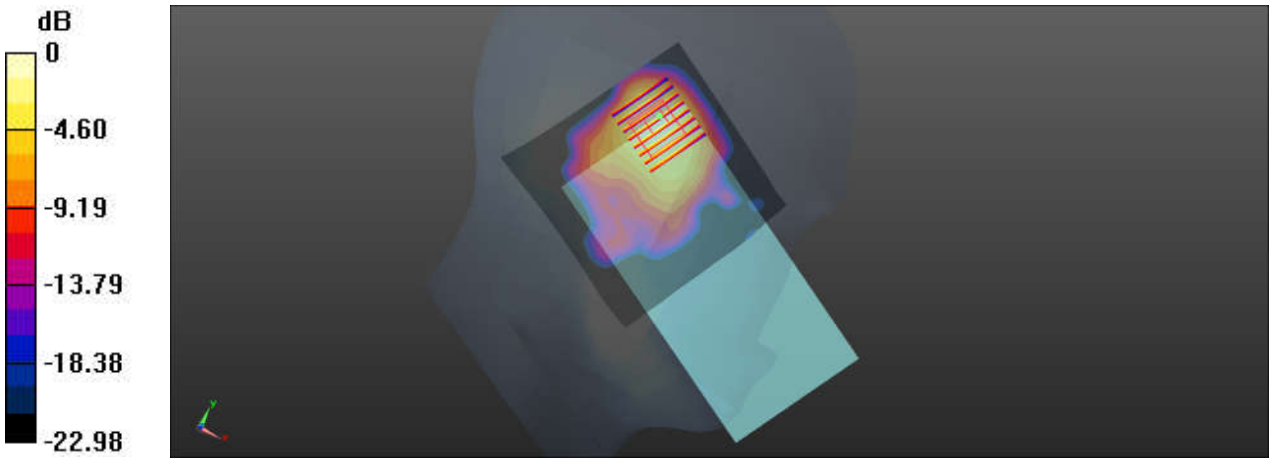
13_Bluetooth_DH5 1Mbps_Left Cheek_Ch39

Communication System: UID 0, BT (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium: HSL_2450_220712 Medium parameters used: f = 2441 MHz; σ = 1.861 S/m; ε_r = 38.158; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.57, 7.57, 7.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch39/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.156 W/kg

Ch39/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.402 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.187 W/kg
SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.147 W/kg



0 dB = 0.147 W/kg

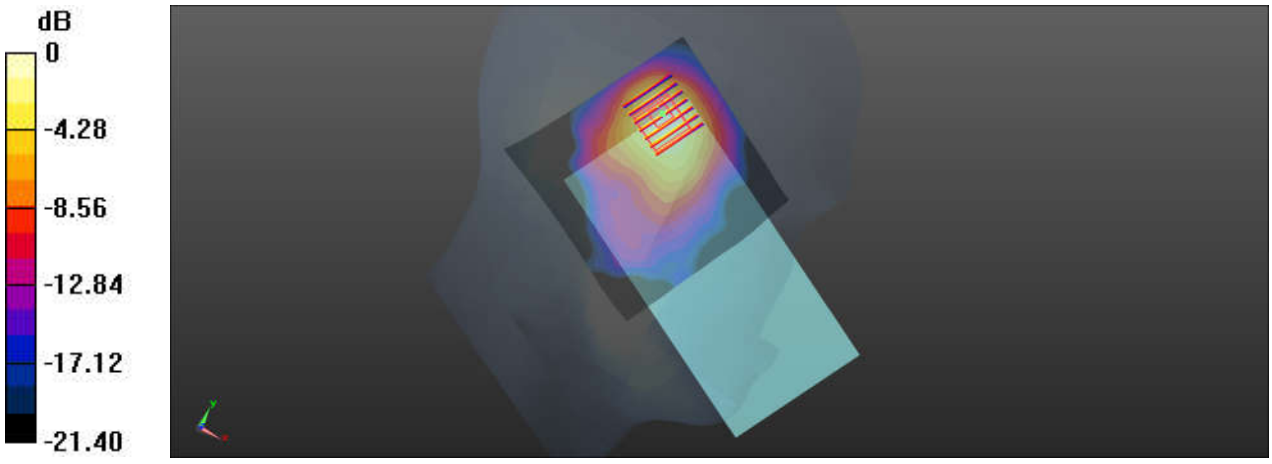
14_WLAN2.4GHz_802.11b 1Mbps_Left Cheek_Ch1

Communication System: UID 0, WIFI (0); Frequency: 2412 MHz;Duty Cycle: 1:1.007
Medium: HSL_2450_220712 Medium parameters used: f = 2412 MHz; σ = 1.827 S/m; ε_r = 38.256; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.57, 7.57, 7.57); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch1/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.613 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.816 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.645 W/kg
SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.200 W/kg
Maximum value of SAR (measured) = 0.528 W/kg



0 dB = 0.528 W/kg

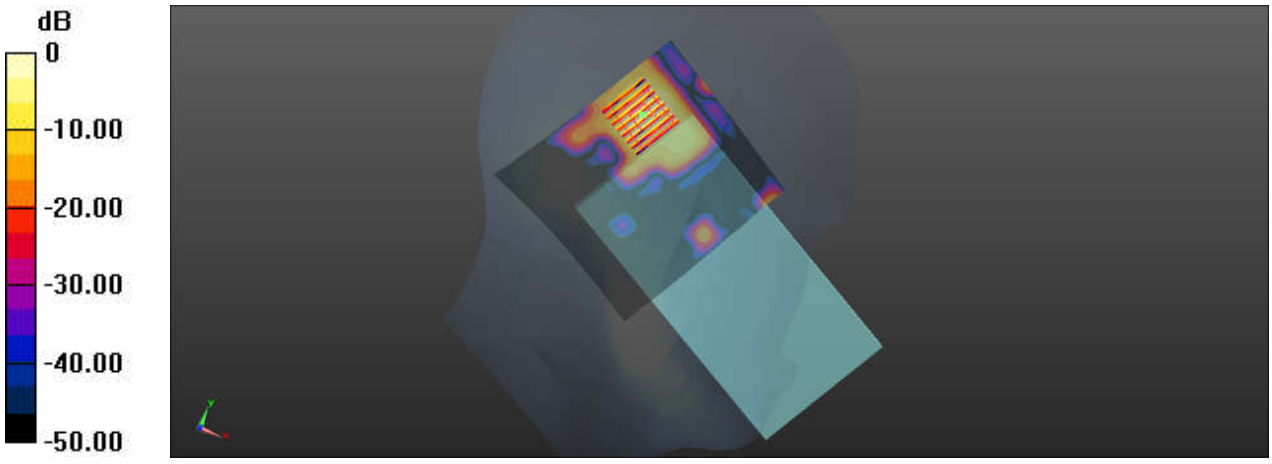
15_WLAN5GHz_802.11ac-VHT80 MCS0_Left Tilted_Ch58

Communication System: UID 0, WIFI (0); Frequency: 5290 MHz;Duty Cycle: 1:1.138
Medium: HSL_5250_220710 Medium parameters used: f = 5290 MHz; σ = 4.796 S/m; ε_r = 36.793; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(5.07, 5.07, 5.07); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch58/Area Scan (111x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.705 W/kg

Ch58/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.512 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.956 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.672 W/kg



0 dB = 0.672 W/kg

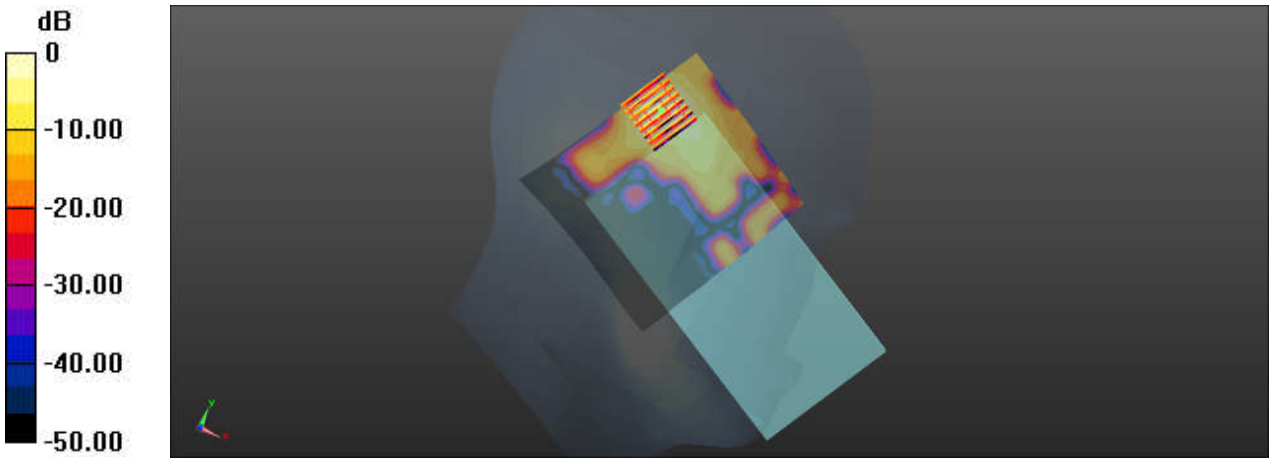
16_WLAN5GHz_802.11a 6Mbps_Left Tilted_Ch144

Communication System: UID 0, WIFI (0); Frequency: 5720 MHz;Duty Cycle: 1:1.032
Medium: HSL_5750_220711 Medium parameters used: f = 5720 MHz; σ = 5.33 S/m; ε_r = 35.865; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.65, 4.65, 4.65); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch144/Area Scan (111x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.486 W/kg

Ch144/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.630 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.723 W/kg
SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.059 W/kg
Maximum value of SAR (measured) = 0.503 W/kg



0 dB = 0.503 W/kg

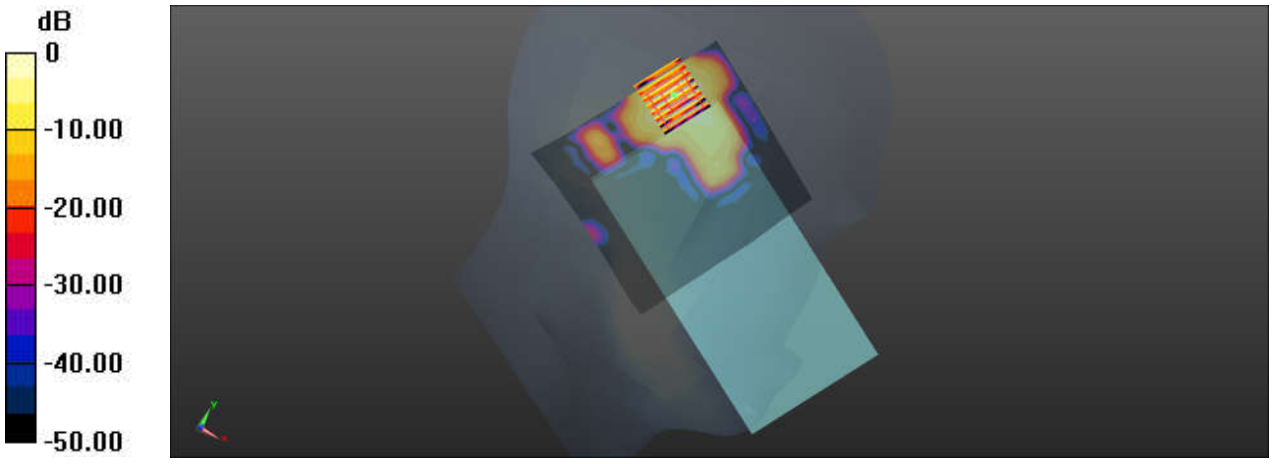
17_WLAN5GHz_802.11a 6Mbps_Left Tilted_Ch149

Communication System: UID 0, WIFI (0); Frequency: 5745 MHz;Duty Cycle: 1:1.032
Medium: HSL_5750_220711 Medium parameters used: f = 5745 MHz; σ = 5.352 S/m; ε_r = 35.824; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.65, 4.65, 4.65); Calibrated: 2022/5/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2021/12/29
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP: 1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Ch149/Area Scan (111x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.459 W/kg

Ch149/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.8000 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.060 W/kg
Maximum value of SAR (measured) = 0.452 W/kg



0 dB = 0.452 W/kg