SAR TEST REPORT

Applicant	TCL Communication Ltd.
FCC ID	2ACCJB239
Product	LTE/WCDMA/GSM mobile phone
Brand	Alcatel
Model	T322E
Report No.	EFTA25022164-IE-01-S3V2
Issue Date	April 8, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528-2013, ANSI C95.1: 1992, IEEE C95.1: 1991.** The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	April 2, 2025
Rev.1	Update description.	April 7, 2025
Rev.2	Update description.	April 8, 2025
Note: This revised report (Report No.: EFTA25022164-IE-01-S3V2) supersedes and replaces the previously issued report (Report No.: EFTA25022164-IE-01-S3V1). Please discard or destroy the previously issued report and dispose of it accordingly.		

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)	
	1g SAR Head	1g SAR Body (Separation 10mm)
GSM 850	0.53	1.05
GSM 1900	0.54	0.64
WCDMA Band II	1.37	1.39
WCDMA Band IV	0.76	0.99
WCDMA Band V	0.31	0.92
LTE FDD 2	0.98	1.26
LTE FDD 4	0.61	0.84
LTE FDD 5	0.35	1.30
LTE FDD 7	1.25	0.70
LTE FDD 13	0.55	1.12
LTE FDD 26	0.44	1.09
LTE TDD 38/41	0.34	1.20
Bluetooth	< 0.1	0.17 (Estimated SAR)
Date of Testing: March 8, 2025 ~ March 25, 2025 Date of Sample Received: March 5, 2025		
Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013. 2. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.		

Note:

1) Stand-alone SAR evaluation is not required for Bluetooth, more details information see section 10.2.
2) For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 10mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

3) According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands):
   a) Main Antenna SAR for LTE Band 38 (Frequency range: 2570 ~ 2620 MHz) is covered by LTE Band 41 (Frequency range 2496 ~ 2690 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	**1g SAR Head**	**1g SAR Body (Separation 10mm)**
Highest Simultaneous Transmission SAR (W/kg)	1.37 (Right Cheek, WCDMA II + Bluetooth)	1.56 (Back Side; WCDMA II + Bluetooth)
Note: The detail for simultaneous transmission consideration is described in chapter 10.4.		

3 Description of Equipment Under Test

Client Information

Applicant	TCL Communication Ltd.
Applicant address	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Manufacturer	TCL Communication Ltd.
Manufacturer address	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong

General Technologies

EUT Stage	Identical Prototype
Model	T322E
IMEI	IMEI 1: 350791720002971 IMEI 2: 350791720002989
Hardware Version	2010_MB_V1.00
Software Version	T322E_V2.1_20250328_UNLOCK
Antenna Type	Internal Antenna
Power Class	GSM 850: 4 GSM 1900: 1 WCDMA Band II/IV/V: 3 LTE FDD 2/4/5/7/13/26: 3 LTE TDD 38/41: 3
Power Level	GSM 850: level 5 GSM 1900: level 0 WCDMA Band II/IV/V: all up bits LTE FDD 2/4/5/7/13/26: max power LTE TDD 38/41: max power
EUT Accessory	
Battery 1	Manufacturer: ShenzhenAerospaceElectronic Co.,Ltd. Model: Tli010FB
Battery 2	Manufacturer: SHEN ZHEN UTILITY ENERGY CO.,LTD. Model: TLi010F5
Earphone	Manufacturer: JWEP1277-C02R Model: HUIZHOU JUWEI ELECTRONICS CO.,LTD.
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.	

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)	Rx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK)	☐Multi-slot Class:8-1UP ☐Multi-slot Class:10-2UP ☒Multi-slot Class:12-4UP ☐Multi-slot Class:33-4UP	824 ~ 849	869 ~ 894
	1900			1850 ~ 1910	1930 ~ 1990
	Does this device support DTM (Dual Transfer Mode)? ☐Yes ☒No				
WCDMA	Band II	QPSK	HSDPA UE Category: 8 HSUPA UE Category: 5	1850 ~ 1910	1930 ~ 1990
	Band IV			1710 ~ 1755	2110 ~ 2155
	Band V			824 ~ 849	869 ~ 894
LTE	FDD 2	QPSK, 16QAM	Category 1	1850 ~ 1910	1930 ~ 1990
	FDD 4			1710 ~ 1755	2110 ~ 2155
	FDD 5			824 ~ 849	869 ~ 894
	FDD 7			2500 ~ 2570	2620 ~ 2690
	FDD 13			777 ~ 787	746 ~ 756
	FDD 26			814 ~ 849	859 ~ 894
	TDD 38			2570 ~ 2620	2570 ~ 2620
	TDD 41			2496 ~ 2690	2496 ~ 2690
	Does this device support Carrier Aggregation (CA) ☐Yes ☒No				
	Does this device support SV-LTE (1xRTT-LTE)? ☐Yes ☒No				
Bluetooth	2.4GHz	Version 5.0 BR/EDR		2402 ~2480	2402 ~2480

4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991, the following FCC Published RF exposure KDB procedures:

KDB 447498 D01 General RF Exposure Guidance v06
KDB 648474 D04 Handset SAR v01r03
KDB 690783 D01 SAR Listings on Grants v01r03
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02 RF Exposure Reporting v01r02
KDB 941225 D01 3G SAR Procedures v03r01
KDB 941225 D05 SAR for LTE Devices v02r05
KDB 941225 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 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".

5.1.2 Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 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 a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

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

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person’s face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

5.2 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:
1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

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.

5.3 Test Configuration

5.3.1 GSM Test Configuration

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Output power of reductions:

Table 3: The allowed power reduction in the multi-slot configuration

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power (dB)
1	0
2	0 to 3,0
3	1,8 to 4,8
4	3,0 to 6,0

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

5.3.2 WCDMA Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations modes according to output power, exposure conditions and device operating capabilities. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121.

5.3.2.2 Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest SAR configuration in 12.2 kbps RMC for head exposure.

5.3.2.3 Body-worn Accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the EUT with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the EUT, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC

5.3.2.4 Release 5 HSDPA Test Configuration

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest SAR body-worn accessory exposure configuration in 12.2 kbps RMC. EUT with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Table 4: Subtests for WCDMA Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
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}= 8⇔A_{hs} = β_{hs}/β_c=30/15⇔β_{hs}=30/15*β_c

Note 2: CM=1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.

Note 3: 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 signaled gain factors for the reference TFC (TFC1, TF1) to β_c=11/15 and β_d=15/15.

5.3.2.5 Release 6 HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the ‘WCDMA EUT’ and ‘Release 5 HSDPA Data Devices’ sections of this document

Table 5: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	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_{ed1}:47/15 β_{ed2}:47/15	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(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, ΔNACK and Δ_{CQI} = 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 30/15 ⇔β_{hs}= 30/15 *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 signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 6: HSUPA UE Category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592

4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	11484	5.76
	4	4	10		20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	22996	?
	4	4	10		20000	?
NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4. UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM. (TS25.306-7.3.0)						

5.3.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The R&S CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

A) Spectrum Plots for RB Configurations

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

B) MPR

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

C) A-MPR

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

D) Largest Channel Bandwidth Standalone SAR Test Requirements

1) QPSK with 1 RB allocation

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. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

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 in 1) and 2) 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) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other Channel Bandwidth Standalone SAR Test Requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

5.3.4 Additional Requirements for TDD LTE Specification

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

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

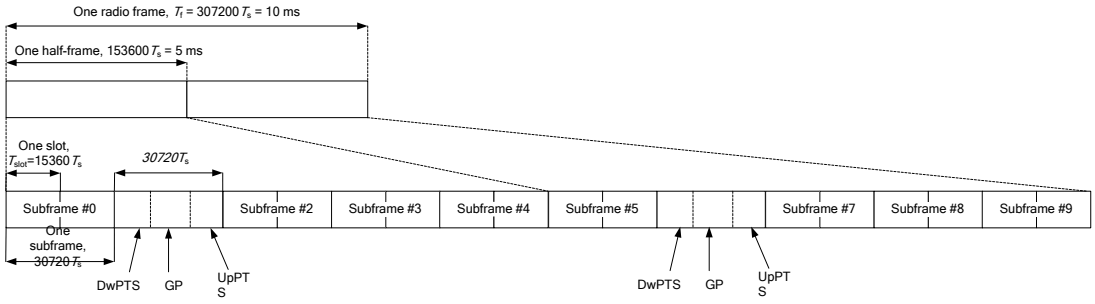


Figure 1: Frame structure type 2

Table 7: 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	$13168 \cdot T_s$			-	-	-

Table 8: 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

According to Figure 1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table: Uplink-downlink configurations:

Duty cycle = (30720Ts*Ups + Uplink Component*Specials)/(307200Ts)

About the uplink component of Special subframes, we can figure out by Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS):

Uplink Component = UpPTS

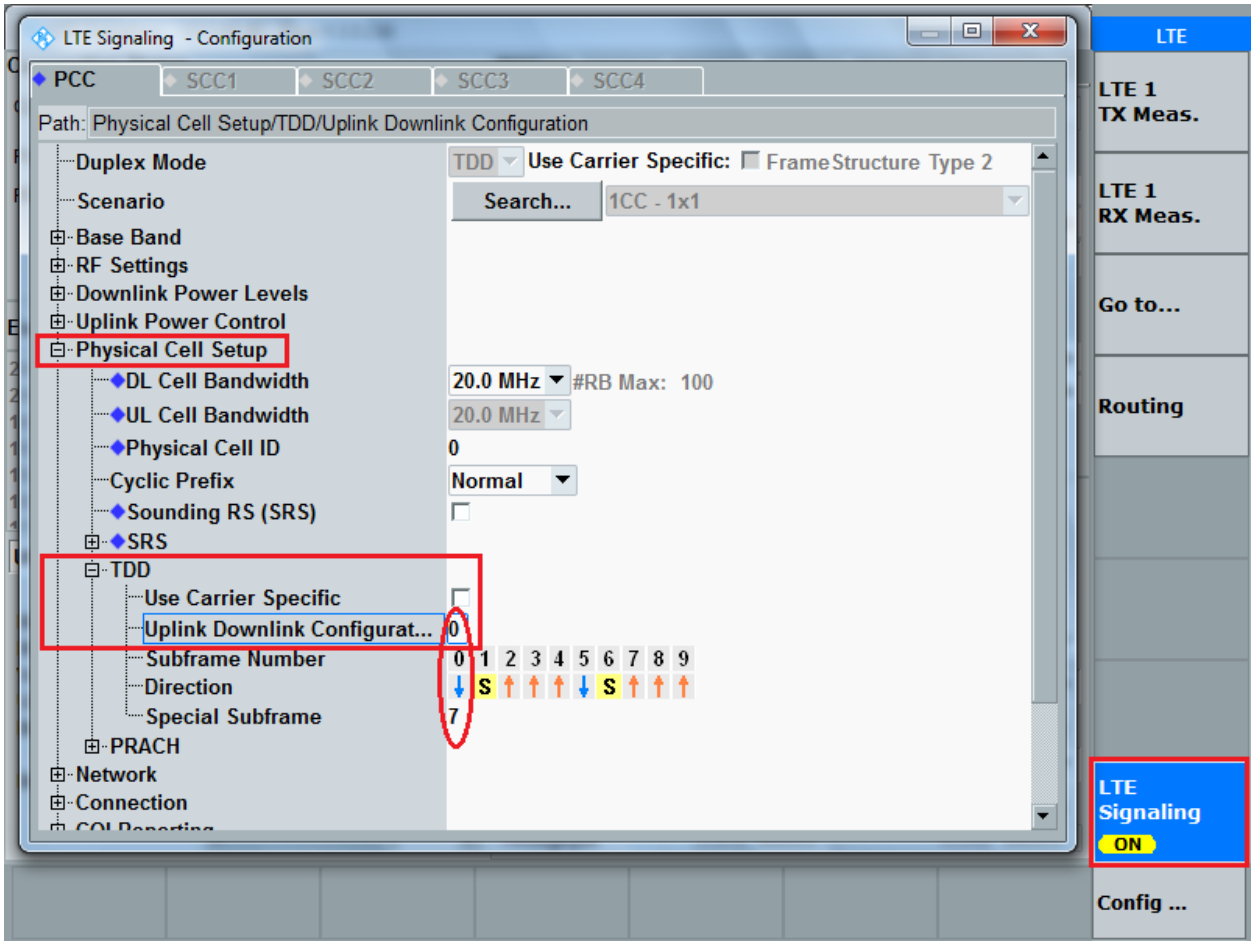
In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

Duty cycle = [(30720Ts*Ups) + UpPTS *Specials]/(307200Ts)

And we can get different Duty cycles under different configurations:

Uplink-downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
				Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
	D	S	U	configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

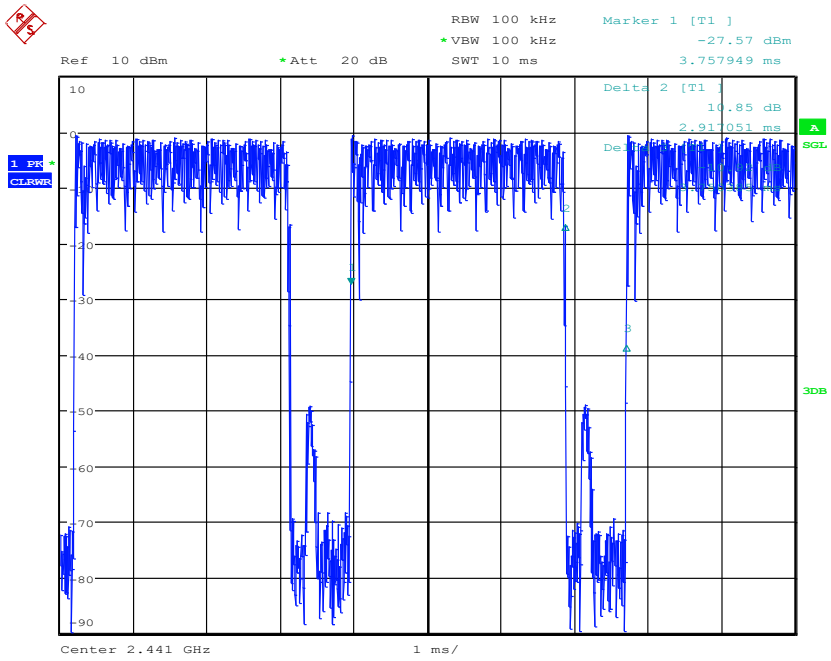
SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type



5.3.5 Bluetooth Test Configuration

For Bluetooth SAR testing, Bluetooth engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hoping off and data rate set for DH5.

The SAR measurement takes full account of the Bluetooth duty cycle and is reflected in the report, and the duty factor of the device is as follow:



Note: Duty factor= Ton (ms)/ T(on+off) (ms)= 77%

5.3.6 SAR Detection Mechanism Specification

This device support the receiver detection mechanism, the main purpose is to minimize triggering associated with power reduction scenarios and provide enhanced user experience.

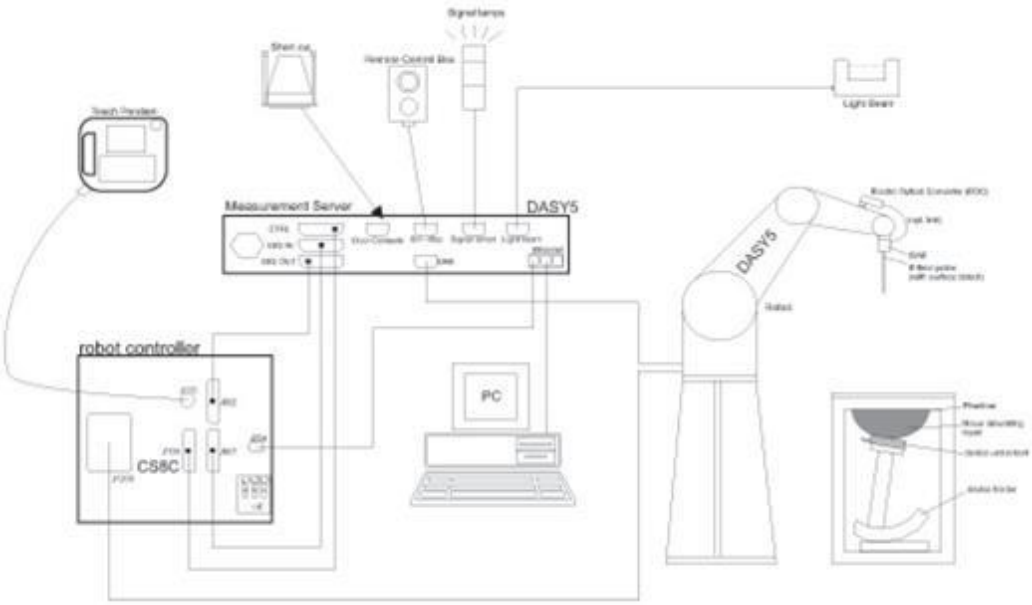
More details information followings:

Main Antenna		Power Reduction Level Amount (dB)												
Power Reduction Scenario	Receiver	GSM850	PCS 1900	WCDMA B2	WCDMA B4	WCDMA B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B13	LTE B26	LTE B38	LTE B41
Full power	Full power	33.50	31.00	24.00	24.00	24.00	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
Standalone	Receiver on	0.00	0.00	1.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Receiver off	0.50	0.50	3.00	2.50	0.00	3.00	2.50	0.00	6.50	0.00	0.00	0.00	3.00

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

The DASY system 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 DASY 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.

6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR=C\Delta T/\Delta t$$

Where: Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

Or

$$SAR=|E|^2\sigma/\rho$$

Where: σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

6.3 SAR Measurement Procedure

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.

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 dB) 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 D01 SAR measurement 100 MHz to 6 GHz.

<table>
<tr><td></td><td>≤3 GHz</td><td>> 3 GHz</td></tr>
<tr><td>Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td>Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td rowspan="2">Maximum area scan spatial resolution: ΔxArea, ΔyArea</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
</table>

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 D01 SAR measurement 100 MHz to 6 GHz.

			≤3GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\triangle x_{zoom} \triangle y_{zoom}$			≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\triangle z_{zoom}(n)$		≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid	$\triangle z_{zoom}(1)$: between 1st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
		$\triangle z_{zoom}(n>1)$: between subsequent points	≤1.5•$\triangle z_{zoom}(n-1)$	
Minimum zoom scan volume	X, y, z		≥30mm	3 – 4GHz: ≥28mm 4 – 5GHz: ≥25mm 5 – 6GHz: ≥22mm
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 ≤ 1.4W/kg, ≤8mm, ≤7mm and ≤5mm zoom scan resolution may be applied, respectively, for 2GHz to 3GHz, 3GHz to 4GHz and 4GHz to 6GHz.				

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.

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.

7 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Software Version	Last Cal.	Cal. Due Date
Network Analyzer	Agilent	E5071B	MY42404014	/	2024-05-07	2025-05-06
Dielectric Probe Kit	SPEAG	DAK-3.5	1332	/	2024-07-15	2025-07-14
Power Meter	Agilent	E4417A	GB41291714	/	2024-05-07	2025-05-06
Power Sensor	Agilent	N8481H	MY50350004	/	2024-05-07	2025-05-06
Power Sensor	Agilent	E9327A	US40441622	/	2024-05-07	2025-05-06
Signal Generator	KEYSIGHT	N5182B-X07	MY51350303	/	2024-12-02	2025-12-01
Dual Directional Coupler	UCL	UCL-DDC056G-S	20010600118	/	/	/
Amplifier	R&S	SCU18F	101022	/	2024-05-08	2025-05-07
Wireless Communication Tester	Anritsu	MT8820C	6201342015	/	2024-12-03	2025-12-02
Wireless Communication Tester	Agilent	E5515C	MY48360988	/	2024-12-03	2025-12-02
Wireless Communication Tester	R&S	CMW 500	146734	/	2024-05-07	2025-05-06
E-field Probe	SPEAG	EX3DV4	7689	/	2024-06-04	2025-06-03
DAE	SPEAG	DAE4	1317	/	2024-09-10	2025-09-09
Validation Kit 750MHz	SPEAG	D750V3	1045	/	2023-09-12	2026-09-11
Validation Kit 835MHz	SPEAG	D835V2	4d020	/	2023-09-15	2026-09-14
Validation Kit 1750MHz	SPEAG	D1750V2	1033	/	2023-03-23	2026-03-22
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	/	2023-09-12	2026-09-11
Validation Kit 2450MHz	SPEAG	D2450V2	786	/	2023-09-12	2026-09-11
Validation Kit 2600MHz	SPEAG	D2600V2	1025	/	2024-05-08	2027-05-07
Software for Tissue	SPEAG	DAK 3.0.4.1	/	3.0.4.1	/	/
Temperature Probe	Auden	DTM3000	3905	/	2024-12-03	2025-12-02
Twin SAM Phantom	SPEAG	SAM1	1667	/	/	/
Twin SAM Phantom	SPEAG	SAM2	1666	/	/	/
Hygrothermograph	Anymetr	HTC - 1	TA2024A031	/	2024-05-06	2025-05-05
Test System	SPEAG	TX90 XLspeag	F08/5AH5A1/A/01	52.10.4.1527	/	/

8 Tissue Dielectric Parameter Measurements & System Check

8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

Target values

Frequency (MHz)	ε_r	σ(s/m)
750	42.0	0.90
835	41.5	0.90
1750	40.1	1.37
1900	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96

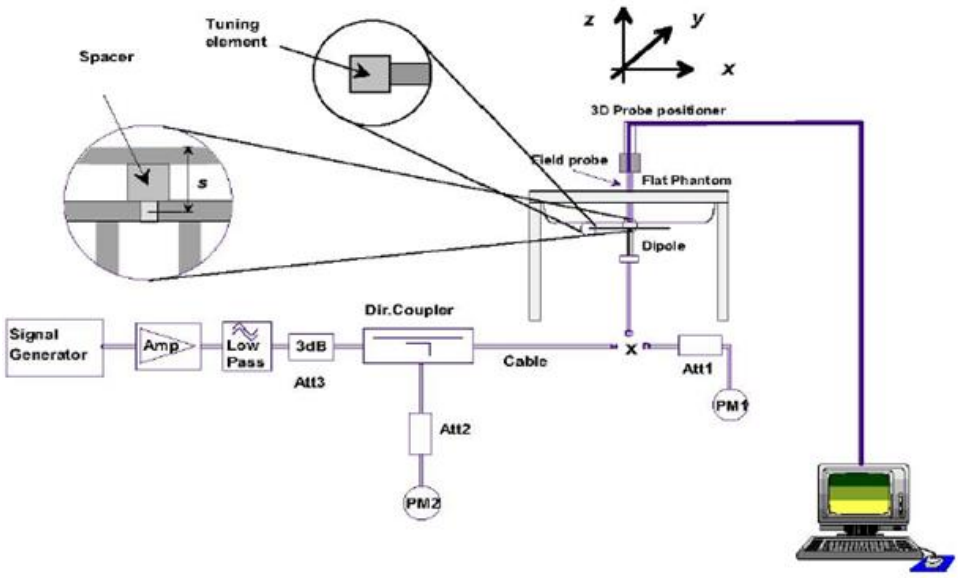
Measurements results

Frequency (MHz)	Test Date	Temp ℃	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ε_r	σ(s/m)	ε_r	σ(s/m)	Dev ε_r(%)	Dev σ(%)
750	2025/3/18	21.5	42.3	0.88	42.0	0.90	0.71	-2.22
835	2025/3/20	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
	2025/3/21	21.5	41.4	0.92	41.5	0.90	-0.24	2.22
1750	2025/3/8	21.5	40.1	1.34	40.1	1.37	0.00	-2.19
	2025/3/9	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
1900	2025/3/21	21.5	40.2	1.43	40.0	1.40	0.50	2.14
	2025/3/22	21.5	40.0	1.40	40.0	1.40	0.00	0.00
2450	2025/3/25	21.5	38.7	1.82	39.2	1.80	-1.28	1.11
2600	2025/3/24	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	2025/3/25	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm.								

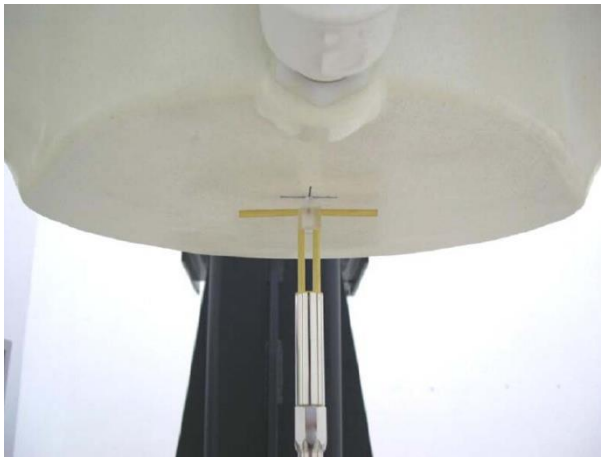
8.2 System Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Check setup



Picture 2 Setup Photo

Justification for Extended SAR Dipole Calibrations

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (＞20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

Dipole		Date of Measurement	Return Loss (dB)	Δ %	Impedance (Ω)			
					Real	ΔΩ	Imaginary	ΔΩ
Dipole D750V3 SN: 1045	Head Liquid	2023-09-12	30.4	/	51.9	/	-2.47	/
		2024-09-11	30.12	-0.9	52.3	0.4	-2.46	0.01
Dipole D835V2 SN: 4d020	Head Liquid	2023-09-15	28.3	/	50.6	/	-3.80	/
		2024-09-14	28.9	2.0	51.4	0.8	-3.66	0.14
Dipole D1750V2 SN: 1033	Head Liquid	2023-03-23	36.2	/	51.2	/	-0.98	/
		2024-03-22	35.4	-2.2	51.6	0.4	-1.28	-0.3
Dipole D1900V2 SN: 5d060	Head Liquid	2023-09-12	24.0	/	50.5	/	6.32	/
		2024-09-11	24.1	0.6	50.9	0.4	6.83	0.51
Dipole D2450V2 SN: 786	Head Liquid	2023-09-12	28.2	/	52.2	/	3.34	/
		2024-09-11	28.6	1.4	52.8	0.6	3.43	0.09

System Check Results

Frequency (MHz)	Test Date	Temp ℃	250mW Measured SAR_{1g} (W/kg)	1W Normalized SAR_{1g} (W/kg)	1W Target SAR_{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2025/3/18	21.5	2.13	8.52	8.47	0.59	1
835	2025/3/20	21.5	2.46	9.84	9.75	0.92	2
	2025/3/21	21.5	2.43	9.72	9.75	-0.31	3
1750	2025/3/8	21.5	9.11	36.44	36.80	-0.98	4
	2025/3/9	21.5	8.95	35.80	36.80	-2.72	5
1900	2025/3/21	21.5	9.85	39.40	40.40	-2.48	6
	2025/3/22	21.5	9.55	38.20	40.40	-5.45	7
2450	2025/3/25	21.5	13.52	54.08	52.60	2.81	8
2600	2025/3/24	21.5	13.88	55.52	56.10	-1.03	9
	2025/3/25	21.5	13.94	55.76	56.10	-0.61	10
Note: Target Values used derive from the calibration certificate data storage and evaluation.							

9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1 GSM Mode

GSM 850 Full Power& Receiver on		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.50	33.38	33.39	33.41	9.03	24.47	24.35	24.36	24.38
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.50	32.93	32.92	32.97	9.03	24.47	23.90	23.89	23.94
	2 Tx Slots	31.50	31.06	31.02	31.02	6.02	**25.48**	25.04	25.00	25.00
	3 Tx Slots	29.50	29.30	29.23	29.21	4.26	25.24	25.04	24.97	24.95
	4 Tx Slots	28.00	27.27	27.18	27.17	3.01	24.99	24.26	24.17	24.16
GSM 850 Receiver off		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.00	32.59	32.60	32.62	9.03	23.97	23.56	23.57	23.59
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.00	32.60	32.60	32.63	9.03	23.97	23.57	23.57	23.60
	2 Tx Slots	30.00	29.45	29.44	29.46	6.02	**23.98**	23.43	23.42	23.44
	3 Tx Slots	28.00	27.91	27.87	27.94	4.26	23.74	23.65	23.61	23.68
	4 Tx Slots	26.50	25.66	25.62	25.65	3.01	23.49	22.65	22.61	22.64
GSM 1900 Full Power& Receiver on		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	31.00	29.99	29.97	29.89	9.03	21.97	20.96	20.94	20.86
GPRS/ EGPRS (GMSK)	1 Tx Slot	31.00	30.00	29.95	29.89	9.03	21.97	20.97	20.92	20.86
	2 Tx Slots	28.50	27.67	27.64	27.59	6.02	**22.48**	21.65	21.62	21.57
	3 Tx Slots	26.50	26.24	26.21	26.17	4.26	22.24	21.98	21.95	21.91
	4 Tx Slots	25.00	24.20	24.19	24.15	3.01	21.99	21.19	21.18	21.14
GSM 1900 Receiver off		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	30.50	30.25	30.30	30.32	9.03	21.47	21.22	21.27	21.29
GPRS/	1 Tx Slot	30.50	30.34	30.43	30.44	9.03	21.47	21.31	21.40	21.41

EGPRS (GMSK)	2 Tx Slots	27.50	27.12	27.21	27.27	6.02	21.48	21.10	21.19	21.25
	3 Tx Slots	25.00	24.68	24.77	24.85	4.26	20.74	20.42	20.51	20.59
	4 Tx Slots	24.50	24.06	24.16	24.24	3.01	**21.49**	21.05	21.15	21.23
Notes: The worst-case configuration and mode for SAR testing is determined to be as follows: Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, GSM 1900 GMSK (GPRS) mode with 2 time slots / 4 time slots for Max power, based on the output power measurements above.										

9.2 WCDMA Mode

The following tests were completed according to the test requirements outlined in the 3GPP TS34.121 specification.

WCDMA		Band II(dBm) Full Power				Band II(dBm) Receiver on				Band II(dBm) Receiver off			
Tx Channel		9262	9400	9538	Tune-up Limit	9262	9400	9538	Tune-up Limit	9262	9400	9538	Tune-up Limit
Frequency(MHz)		1852.4	1880	1907.6		1852.4	1880	1907.6		1852.4	1880	1907.6	
RMC	12.2kbps	22.91	23.01	23.07	24.00	22.40	22.33	22.42	22.40	19.91	19.95	19.84	21.00
AMR	12.2kbps	22.75	23.17	22.97	24.00	22.36	22.26	22.71	22.36	19.89	19.86	19.84	21.00
HSDPA	Sub 1	22.27	22.35	22.43	23.50	21.45	21.78	22.09	21.45	20.67	20.64	20.64	21.00
	Sub 2	22.57	22.67	22.65	23.50	21.41	21.58	22.21	21.41	20.41	20.50	20.34	21.00
	Sub 3	21.57	21.55	21.73	22.50	20.45	20.84	20.89	20.45	19.53	19.30	19.30	20.50
	Sub 4	21.45	21.35	21.41	22.50	20.25	20.60	21.13	20.25	19.39	19.40	19.30	20.50
HSUPA	Sub 1	21.77	21.85	21.91	23.00	20.67	21.08	21.41	20.67	18.83	18.96	18.78	20.00
	Sub 2	22.05	22.07	22.15	23.00	20.63	21.08	21.45	20.63	19.43	19.30	19.48	20.50
	Sub 3	21.97	22.03	22.11	23.00	20.73	21.08	21.53	20.73	19.59	19.42	19.48	20.50
	Sub 4	21.97	22.17	22.11	23.00	20.91	21.26	21.65	20.91	19.43	19.56	19.38	21.00
	Sub 5	22.77	22.89	22.91	24.00	21.77	22.30	22.51	21.77	20.87	20.67	20.82	21.00
Note: Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".													

WCDMA		Band IV(dBm) Full Power&Receiver on				Band IV(dBm) Receiver off				Band V(dBm) Full Power&Receiver on& Receiver off			
Tx Channel		1312	1413	1513	Tune-up Limit	1312	1413	1513	Tune-up Limit	4132	4183	4233	Tune-up Limit
Frequency(MHz)		1712.4	1732.6	1752.6		1712.4	1732.6	1752.6		826.4	836.6	846.6	
RMC	12.2kbps	23.19	**23.39**	23.27	24.00	20.05	**20.11**	19.97	21.50	23.18	**23.19**	23.25	24.00
AMR	12.2kbps	23.64	23.30	23.03	24.00	20.05	19.99	20.07	21.50	23.30	23.07	23.11	24.00
HSDPA	Sub 1	23.37	23.39	23.18	24.00	20.63	20.61	20.61	21.50	22.74	22.77	22.91	23.50
	Sub 2	23.12	23.18	22.95	24.00	20.55	20.61	20.77	21.50	22.72	22.57	22.63	23.50
	Sub 3	23.02	23.10	22.89	24.00	20.01	20.23	19.97	21.00	21.56	21.75	21.89	22.50
	Sub 4	23.05	23.15	22.93	24.00	20.17	20.09	19.85	21.00	21.80	21.79	21.85	22.50
HSUPA	Sub 1	22.66	22.74	22.38	23.50	20.04	19.80	19.84	20.50	20.06	20.25	20.23	21.00
	Sub 2	22.62	22.74	22.40	23.50	19.98	19.88	19.96	21.00	20.28	20.25	20.27	21.00
	Sub 3	22.84	22.93	22.58	23.50	19.86	19.96	19.72	21.00	20.32	20.35	20.21	21.00
	Sub 4	23.10	23.22	23.03	24.00	20.19	20.27	20.01	21.50	20.10	20.23	20.37	21.00
	Sub 5	23.46	23.55	23.35	24.00	20.99	20.89	20.81	21.50	22.64	22.71	22.85	23.50
Note: Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".													

9.3 LTE Mode

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 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

LTE B2							
Full Power				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	23.51	23.79	23.94	24.50
		1	2	23.42	23.78	23.92	24.50
		1	5	23.48	23.77	23.93	24.50
		3	0	23.53	23.63	23.74	24.50
		3	2	23.62	23.67	23.74	24.50
		3	3	23.57	23.60	23.76	24.50
		6	0	22.55	22.56	22.64	23.50
	16QAM	1	0	22.52	22.11	22.72	23.50
		1	2	22.47	22.13	22.73	23.50
		1	5	22.46	22.12	22.76	23.50
		3	0	22.67	22.51	22.88	23.50
		3	2	22.71	22.51	22.90	23.50
		3	3	22.68	22.55	22.92	23.50
		6	0	21.46	21.53	21.58	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	23.58	23.69	23.76	24.50
		1	7	23.56	23.73	23.73	24.50
		1	14	23.57	23.69	23.70	24.50
		8	0	22.53	22.53	22.73	23.50
		8	4	22.51	22.67	22.70	23.50
		8	7	22.50	22.61	22.67	23.50
		15	0	22.47	22.64	22.65	23.50
	16QAM	1	0	23.11	22.78	23.28	23.50
		1	7	23.08	22.81	23.27	23.50
		1	14	23.04	22.78	23.24	23.50

		8	0	21.72	21.75	21.88	22.50
		8	4	21.70	21.75	21.87	22.50
		8	7	21.71	21.70	21.87	22.50
		15	0	21.62	21.77	21.84	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	23.84	23.57	23.77	24.50
		1	13	23.80	23.62	23.79	24.50
		1	24	23.77	23.70	23.77	24.50
		12	0	22.53	22.51	22.74	23.50
		12	6	22.57	22.61	22.70	23.50
		12	13	22.52	22.68	22.67	23.50
		25	0	22.50	22.54	22.72	23.50
	16QAM	1	0	22.61	23.17	23.24	23.50
		1	13	22.55	23.15	23.27	23.50
		1	24	22.51	23.15	23.28	23.50
		12	0	21.63	21.73	21.82	22.50
		12	6	21.65	21.75	21.82	22.50
		12	13	21.56	21.73	21.82	22.50
		25	0	21.82	21.62	21.76	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	23.64	23.66	23.78	24.50
		1	25	23.60	23.62	23.76	24.50
		1	49	23.66	23.66	23.81	24.50
		25	0	22.60	22.64	22.75	23.50
		25	13	22.61	22.65	22.72	23.50
		25	25	22.55	22.67	22.71	23.50
		50	0	22.51	22.62	22.75	23.50
	16QAM	1	0	23.17	23.24	23.31	23.50
		1	25	23.13	23.15	23.27	23.50
		1	49	23.04	23.24	23.35	23.50
		25	0	21.59	21.58	21.69	22.50
		25	13	21.59	21.72	21.74	22.50
		25	25	21.62	21.68	21.76	22.50
		50	0	21.59	21.64	21.73	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	23.89	23.84	24.00	24.50
		1	38	23.82	23.81	24.04	24.50
		1	74	23.77	23.84	24.05	24.50
		36	0	22.58	22.60	22.77	23.50
		36	18	22.55	22.68	22.71	23.50

		36	39	22.65	22.63	22.77	23.50
		75	0	22.49	22.65	22.76	23.50
	16QAM	1	0	22.71	22.70	22.71	23.50
		1	38	22.64	22.77	22.72	23.50
		1	74	22.64	22.77	22.77	23.50
		36	0	21.73	21.80	21.86	22.50
		36	18	21.71	21.87	21.93	22.50
		36	39	21.76	21.89	21.89	22.50
		75	0	21.65	21.78	21.75	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	**23.90**	23.86	23.97	24.50
		1	50	23.82	23.83	23.95	24.50
		1	99	**23.90**	**23.92**	**24.07**	24.50
		50	0	**22.60**	**22.74**	22.70	23.50
		50	25	22.59	22.68	22.67	23.50
		50	50	22.53	22.65	**22.78**	23.50
		100	0	22.50	22.61	**22.73**	23.50
	16QAM	1	0	22.60	22.20	22.84	23.50
		1	50	22.59	22.22	22.78	23.50
		1	99	22.58	22.30	22.78	23.50
		50	0	21.68	21.68	21.80	22.50
		50	25	21.72	21.77	21.81	22.50
		50	50	21.71	21.77	21.86	22.50
		100	0	21.74	21.83	21.82	22.50

LTE B2							
Receiver on				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	20.94	20.74	21.21	22.00
		1	2	21.00	21.05	20.95	22.00
		1	5	20.84	20.82	20.95	22.00
		3	0	20.60	20.64	20.72	22.00
		3	2	20.53	20.62	20.75	22.00
		3	3	20.31	20.39	20.86	22.00
		6	0	19.56	19.67	19.65	21.00
	16QAM	1	0	19.82	19.46	19.76	21.00
		1	2	19.53	19.12	19.94	21.00
		1	5	19.78	19.38	19.74	21.00
		3	0	19.44	19.74	19.68	21.00
		3	2	19.54	19.53	19.83	21.00
		3	3	19.73	19.85	19.78	21.00

		6	0	18.92	19.07	18.80	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	21.20	20.76	20.77	22.00
		1	7	20.62	20.87	21.13	22.00
		1	14	20.78	21.10	21.13	22.00
		8	0	19.50	19.70	19.86	21.00
		8	4	19.57	19.52	19.85	21.00
		8	7	19.43	19.79	19.74	21.00
		15	0	19.30	19.65	19.83	21.00
	16QAM	1	0	19.54	19.12	19.80	21.00
		1	7	19.69	19.04	19.50	21.00
		1	14	19.44	19.26	19.84	21.00
		8	0	18.74	18.68	18.68	20.00
		8	4	18.54	18.71	18.95	20.00
		8	7	18.55	18.85	18.74	20.00
		15	0	18.88	18.75	18.82	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	21.08	20.98	21.17	22.00
		1	13	20.86	20.77	21.11	22.00
		1	24	20.98	20.96	21.01	22.00
		12	0	19.62	19.70	19.76	21.00
		12	6	19.69	19.66	19.77	21.00
		12	13	19.73	19.59	19.88	21.00
		25	0	19.70	19.55	19.79	21.00
	16QAM	1	0	19.76	19.14	19.92	21.00
		1	13	19.73	19.30	19.96	21.00
		1	24	19.76	19.26	19.72	21.00
		12	0	18.76	18.80	18.74	20.00
		12	6	18.76	18.83	18.93	20.00
		12	13	18.73	18.87	18.94	20.00
		25	0	18.94	18.85	19.00	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	20.92	20.80	21.05	22.00
		1	25	20.88	20.81	20.85	22.00
		1	49	20.94	21.00	20.95	22.00
		25	0	19.62	19.66	19.60	21.00
		25	13	19.45	19.58	19.75	21.00
		25	25	19.51	19.73	19.92	21.00
		50	0	19.40	19.51	19.59	21.00
	16QAM	1	0	19.74	19.10	19.68	21.00

		1	25	19.63	19.34	19.62	21.00
		1	49	19.68	19.24	19.76	21.00
		25	0	18.70	18.70	18.68	20.00
		25	13	18.60	18.67	18.79	20.00
		25	25	18.67	18.91	18.76	20.00
		50	0	18.66	18.89	18.86	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	20.92	20.86	21.11	22.00
		1	38	20.80	20.73	20.95	22.00
		1	74	21.12	20.90	21.27	22.00
		36	0	19.76	19.86	19.80	21.00
		36	18	19.63	19.92	19.59	21.00
		36	39	19.65	19.51	19.92	21.00
		75	0	19.60	19.73	19.99	21.00
	16QAM	1	0	19.56	19.34	20.10	21.00
		1	38	19.67	19.22	19.84	21.00
		1	74	19.52	19.46	19.64	21.00
		36	0	18.90	18.66	18.68	20.00
		36	18	18.78	18.73	19.01	20.00
		36	39	18.61	18.93	18.92	20.00
		75	0	18.92	18.75	19.02	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	**21.00**	**21.06**	**21.11**	22.00
		1	50	20.98	20.85	21.09	22.00
		1	99	20.90	20.84	21.01	22.00
		50	0	19.66	**19.66**	**19.88**	21.00
		50	25	**19.75**	19.62	19.81	21.00
		50	50	19.55	19.65	19.80	21.00
		100	0	19.72	**19.77**	19.65	21.00
	16QAM	1	0	19.54	19.24	20.06	21.00
		1	50	19.77	19.42	19.92	21.00
		1	99	19.50	19.26	19.82	21.00
		50	0	18.82	18.62	18.92	20.00
		50	25	18.68	18.71	18.99	20.00
		50	50	18.83	18.99	18.78	20.00
		100	0	18.80	18.93	18.94	20.00

LTE B2							
Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	20.05	20.32	20.29	21.50
		1	2	20.26	20.48	20.39	21.50
		1	5	20.14	20.30	20.14	21.50
		3	0	20.19	20.42	20.36	21.50
		3	2	20.28	20.46	20.36	21.50
		3	3	20.23	20.39	20.27	21.50
		6	0	19.32	19.57	19.41	20.50
	16QAM	1	0	19.30	19.66	19.60	20.50
		1	2	19.52	19.82	19.68	20.50
		1	5	19.44	19.64	19.45	20.50
		3	0	19.22	19.59	19.45	20.50
		3	2	19.32	19.62	19.46	20.50
		3	3	19.28	19.55	19.37	20.50
		6	0	18.30	18.48	18.39	19.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	20.04	20.32	20.37	21.50
		1	7	20.23	20.38	20.39	21.50
		1	14	20.21	20.23	20.12	21.50
		8	0	19.38	19.57	19.53	20.50
		8	4	19.47	19.59	19.52	20.50
		8	7	19.47	19.54	19.43	20.50
		15	0	19.43	19.57	19.47	20.50
	16QAM	1	0	19.39	19.66	19.63	20.50
		1	7	19.69	19.73	19.67	20.50
		1	14	19.64	19.60	19.42	20.50
		8	0	18.37	18.46	18.52	19.50
		8	4	18.47	18.48	18.52	19.50
		8	7	18.47	18.43	18.42	19.50
		15	0	18.39	18.43	18.45	19.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	19.75	20.12	20.19	21.50
		1	13	20.32	20.53	20.45	21.50
		1	24	19.96	20.01	19.79	21.50
		12	0	19.32	19.55	19.50	20.50
		12	6	19.53	19.66	19.55	20.50
		12	13	19.43	19.48	19.36	20.50

		25	0	19.38	19.53	19.43	20.50
	16QAM	1	0	19.11	19.47	19.51	20.50
		1	13	19.72	19.88	19.79	20.50
		1	24	19.32	19.36	19.14	20.50
		12	0	18.26	18.39	18.43	19.50
		12	6	18.47	18.52	18.51	19.50
		12	13	18.38	18.32	18.29	19.50
		25	0	18.32	18.37	18.35	19.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	20.07	20.32	20.91	21.50
		1	25	20.37	20.49	20.60	21.50
		1	49	20.79	20.57	20.58	21.50
		25	0	19.48	19.62	20.00	20.50
		25	13	19.62	19.66	19.80	20.50
		25	25	19.82	19.75	19.79	20.50
		50	0	19.64	19.69	19.89	20.50
	16QAM	1	0	19.39	19.68	20.26	20.50
		1	25	19.77	19.82	19.93	20.50
		1	49	20.14	19.94	19.96	20.50
		25	0	18.42	18.45	18.91	19.50
		25	13	18.57	18.50	18.73	19.50
		25	25	18.76	18.57	18.69	19.50
		50	0	18.57	18.51	18.80	19.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	20.26	20.50	20.73	21.50
		1	38	20.35	20.39	20.16	21.50
		1	74	20.63	20.14	19.73	21.50
		36	0	19.60	19.70	19.64	20.50
		36	18	19.59	19.57	19.28	20.50
		36	39	19.71	19.53	19.03	20.50
		75	0	19.64	19.62	19.35	20.50
	16QAM	1	0	19.64	19.82	20.04	20.50
		1	38	19.78	19.76	19.50	20.50
		1	74	20.05	19.44	19.04	20.50
		36	0	18.53	18.54	18.55	19.50
		36	18	18.52	18.43	18.19	19.50
		36	39	18.64	18.36	17.94	19.50
		75	0	18.57	18.45	18.26	19.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	20.29	20.87	**20.86**	21.50

		1	50	20.17	20.37	20.32	21.50
		1	99	**21.31**	**21.11**	20.47	21.50
		50	0	19.35	19.67	**19.64**	20.50
		50	25	19.45	19.57	19.45	20.50
		50	50	**19.86**	**19.78**	19.39	20.50
		100	0	19.60	**19.71**	19.51	20.50
	16QAM	1	0	19.55	20.17	20.12	20.50
		1	50	19.61	19.70	19.60	20.50
		1	99	20.20	20.39	19.71	20.50
		50	0	18.32	18.51	18.57	19.50
		50	25	18.42	18.43	18.38	19.50
		50	50	18.82	18.61	18.30	19.50
		100	0	18.55	18.53	18.41	19.50

LTE B4							
Full Power&Receiver on				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.86	23.85	23.88	24.50
		1	2	23.87	23.87	23.88	24.50
		1	5	23.85	23.84	23.85	24.50
		3	0	23.93	23.94	23.80	24.50
		3	2	23.99	23.89	23.72	24.50
		3	3	23.93	23.84	23.68	24.50
		6	0	22.78	22.76	22.82	23.50
	16QAM	1	0	23.21	23.19	22.95	23.50
		1	2	23.21	23.14	22.95	23.50
		1	5	23.15	23.11	22.96	23.50
		3	0	23.17	23.08	23.12	23.50
		3	2	23.21	23.08	23.24	23.50
		3	3	23.18	23.09	23.12	23.50
		6	0	21.72	21.58	21.71	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	23.92	23.89	23.83	24.50
		1	7	23.92	23.89	23.82	24.50
		1	14	23.76	23.84	23.85	24.50
		8	0	22.90	22.71	22.76	23.50
		8	4	22.93	22.77	22.76	23.50
		8	7	22.76	22.75	22.82	23.50
		15	0	22.90	22.74	22.82	23.50
	16QAM	1	0	23.24	23.23	23.16	23.50
		1	7	23.15	23.19	23.13	23.50

		1	14	23.07	23.17	23.11	23.50
		8	0	22.05	22.05	21.98	22.50
		8	4	22.10	22.00	21.97	22.50
		8	7	22.00	22.02	21.96	22.50
		15	0	22.04	21.98	22.04	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	24.17	23.87	23.78	24.50
		1	13	24.11	23.83	23.84	24.50
		1	24	24.13	23.78	23.78	24.50
		12	0	22.91	22.85	22.89	23.50
		12	6	22.84	22.75	22.88	23.50
		12	13	22.92	22.71	22.80	23.50
		25	0	22.80	22.70	22.85	23.50
	16QAM	1	0	22.99	23.22	23.18	23.50
		1	13	22.93	23.13	23.03	23.50
		1	24	22.95	23.44	23.44	23.50
		12	0	22.09	21.95	21.95	22.50
		12	6	21.89	21.93	21.94	22.50
		12	13	21.96	21.94	21.92	22.50
		25	0	22.10	21.92	21.83	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	23.99	23.87	23.81	24.50
		1	25	23.88	23.86	23.73	24.50
		1	49	23.91	23.88	23.71	24.50
		25	0	22.80	22.83	22.76	23.50
		25	13	22.91	22.76	22.76	23.50
		25	25	22.86	22.80	22.84	23.50
		50	0	22.82	22.87	22.80	23.50
	16QAM	1	0	23.28	23.19	23.39	23.50
		1	25	23.24	23.12	23.25	23.50
		1	49	23.17	23.14	23.32	23.50
		25	0	21.93	21.97	21.93	22.50
		25	13	21.88	21.92	21.86	22.50
		25	25	21.91	21.89	21.84	22.50
		50	0	21.96	21.95	21.97	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	24.20	24.24	24.03	24.50
		1	38	24.16	24.14	23.93	24.50
		1	74	24.14	24.06	23.92	24.50
		36	0	22.83	22.90	22.95	23.50

		36	18	22.86	22.74	22.85	23.50
		36	39	22.87	22.82	22.84	23.50
		75	0	22.82	22.80	22.91	23.50
	16QAM	1	0	23.11	23.16	22.90	23.50
		1	38	23.00	22.90	22.83	23.50
		1	74	22.98	22.97	22.87	23.50
		36	0	22.00	22.07	22.11	22.50
		36	18	21.96	21.99	22.03	22.50
		36	39	22.05	22.05	22.04	22.50
		75	0	21.99	21.93	21.88	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	**24.28**	**24.24**	**23.98**	24.50
		1	50	24.16	24.11	23.88	24.50
		1	99	24.13	24.10	23.86	24.50
		50	0	**22.94**	22.82	22.78	23.50
		50	25	**22.94**	**22.89**	**22.86**	23.50
		50	50	22.92	22.77	22.81	23.50
		100	0	22.74	**22.88**	22.81	23.50
	16QAM	1	0	23.10	23.10	23.18	23.50
		1	50	22.93	22.92	23.10	23.50
		1	99	22.90	22.97	23.09	23.50
		50	0	22.06	22.00	22.02	22.50
		50	25	21.99	21.95	21.96	22.50
		50	50	21.96	21.99	21.88	22.50
		100	0	22.06	21.93	22.02	22.50

LTE B4							
Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	20.47	20.61	20.49	22.00
		1	2	20.66	20.79	20.67	22.00
		1	5	20.49	20.62	20.47	22.00
		3	0	20.58	20.72	20.61	22.00
		3	2	20.64	20.78	20.66	22.00
		3	3	20.59	20.74	20.60	22.00
		6	0	19.66	19.77	19.69	21.00
	16QAM	1	0	19.80	19.94	19.85	21.00
		1	2	19.98	20.14	20.05	21.00
		1	5	19.78	19.97	19.84	21.00
		3	0	19.61	19.78	19.69	21.00
		3	2	19.67	19.85	19.75	21.00

		3	3	19.61	19.79	19.68	21.00
		6	0	18.85	18.97	18.84	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	20.55	20.69	20.49	22.00
		1	7	20.66	20.82	20.61	22.00
		1	14	20.57	20.72	20.57	22.00
		8	0	19.80	19.92	19.71	21.00
		8	4	19.85	19.97	19.75	21.00
		8	7	19.82	19.94	19.71	21.00
		15	0	19.82	19.94	19.72	21.00
	16QAM	1	0	19.92	20.07	19.85	21.00
		1	7	20.04	20.20	19.97	21.00
		1	14	19.94	20.11	19.86	21.00
		8	0	18.93	19.04	18.88	20.00
		8	4	18.96	19.09	18.91	20.00
		8	7	18.93	19.05	18.88	20.00
		15	0	18.87	19.02	18.84	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	20.26	20.39	20.42	22.00
		1	13	20.72	20.85	20.68	22.00
		1	24	20.25	20.42	20.26	22.00
		12	0	19.72	19.82	19.72	21.00
		12	6	19.86	19.96	19.77	21.00
		12	13	19.73	19.85	19.64	21.00
		25	0	19.73	19.84	19.68	21.00
	16QAM	1	0	19.55	19.73	19.68	21.00
		1	13	20.01	20.23	19.95	21.00
		1	24	19.55	19.75	19.54	21.00
		12	0	18.78	18.87	18.82	20.00
		12	6	18.92	19.01	18.88	20.00
		12	13	18.79	18.89	18.75	20.00
		25	0	18.78	18.89	18.79	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	20.45	20.65	20.63	22.00
		1	25	20.73	20.89	20.77	22.00
		1	49	21.13	21.25	21.04	22.00
		25	0	19.89	20.04	19.88	21.00
		25	13	19.94	20.05	19.91	21.00
		25	25	20.09	20.27	20.01	21.00
		50	0	19.98	20.12	19.94	21.00

	16QAM	1	0	19.82	20.07	19.91	21.00
		1	25	20.05	20.20	20.07	21.00
		1	49	20.38	20.56	20.32	21.00
		25	0	18.86	19.02	18.96	20.00
		25	13	18.92	19.03	19.00	20.00
		25	25	19.13	19.23	19.11	20.00
		50	0	18.97	19.10	19.05	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	20.66	20.85	20.92	22.00
		1	38	20.75	20.86	20.88	22.00
		1	74	20.79	20.82	20.83	22.00
		36	0	19.97	20.07	20.04	21.00
		36	18	19.94	20.03	19.95	21.00
		36	39	20.03	20.13	19.98	21.00
		75	0	19.98	20.10	20.01	21.00
	16QAM	1	0	20.03	20.21	20.22	21.00
		1	38	20.14	20.22	20.20	21.00
		1	74	20.16	20.18	20.14	21.00
		36	0	18.96	19.07	19.20	20.00
		36	18	18.96	19.07	19.07	20.00
		36	39	19.02	19.12	19.14	20.00
		75	0	18.98	19.10	19.17	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	20.70	20.82	21.19	22.00
		1	50	20.77	20.84	20.71	22.00
		1	99	**21.62**	**21.60**	**21.60**	22.00
		50	0	19.86	19.98	19.97	21.00
		50	25	19.95	20.07	19.97	21.00
		50	50	**20.36**	**20.34**	**20.27**	21.00
		100	0	20.04	**20.14**	20.10	21.00
	16QAM	1	0	20.16	20.23	20.44	21.00
		1	50	20.12	20.20	20.00	21.00
		1	99	20.87	20.89	20.86	21.00
		50	0	18.85	18.98	19.18	20.00
		50	25	18.98	19.13	19.11	20.00
		50	50	19.23	19.34	19.47	20.00
		100	0	19.01	19.10	19.30	20.00

LTE B5							
Full Power&Receiver on&Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.53	23.73	23.67	25.00
		1	2	23.54	23.75	23.65	25.00
		1	5	23.59	23.73	23.63	25.00
		3	0	23.57	23.53	23.64	25.00
		3	2	23.60	23.57	23.58	25.00
		3	3	23.53	23.52	23.53	25.00
		6	0	22.47	22.37	22.56	24.00
	16QAM	1	0	23.18	22.59	22.66	24.00
		1	2	23.16	22.55	22.59	24.00
		1	5	23.17	22.60	22.60	24.00
		3	0	22.87	22.85	22.87	24.00
		3	2	22.90	22.82	22.83	24.00
		3	3	22.99	22.84	22.83	24.00
		6	0	21.36	21.35	21.43	23.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.73	23.54	23.45	24.50
		1	7	23.80	23.46	23.47	24.50
		1	14	23.75	23.50	23.43	24.50
		8	0	22.51	22.49	22.49	23.50
		8	4	22.52	22.44	22.54	23.50
		8	7	22.53	22.40	22.60	23.50
		15	0	22.39	22.41	22.51	23.50
	16QAM	1	0	22.52	23.12	23.37	23.50
		1	7	22.56	23.24	23.38	23.50
		1	14	22.62	23.16	23.30	23.50
		8	0	21.76	21.75	21.75	22.50
		8	4	21.64	21.67	21.75	22.50
		8	7	21.74	21.67	21.69	22.50
		15	0	21.68	21.66	21.72	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.56	23.80	23.83	24.50
		1	13	23.54	23.73	23.82	24.50
		1	24	23.56	23.78	23.79	24.50
		12	0	22.39	22.50	22.47	23.50
		12	6	22.53	22.51	22.50	23.50
		12	13	22.53	22.41	22.50	23.50

		25	0	22.40	22.41	22.52	23.50
	16QAM	1	0	23.22	22.62	22.71	23.50
		1	13	23.21	22.53	22.68	23.50
		1	24	23.18	22.63	22.61	23.50
		12	0	21.59	21.65	21.71	22.50
		12	6	21.61	21.63	21.66	22.50
		12	13	21.67	21.69	21.72	22.50
		25	0	21.60	21.82	21.83	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	23.75	**23.55**	23.46	24.50
		1	25	23.76	23.52	**23.59**	24.50
		1	49	**23.81**	**23.55**	23.54	24.50
		25	0	22.37	**22.50**	22.53	23.50
		25	13	22.36	22.45	**22.56**	23.50
		25	25	**22.45**	22.43	22.53	23.50
		50	0	22.48	**22.55**	22.49	23.50
	16QAM	1	0	22.58	23.16	23.24	23.50
		1	25	22.56	23.12	23.21	23.50
		1	49	22.59	23.26	23.25	23.50
		25	0	21.80	21.54	21.54	22.50
		25	13	21.80	21.53	21.64	22.50
		25	25	21.82	21.62	21.57	22.50
		50	0	21.57	21.63	21.55	22.50

LTE B7							
Full Power&Receiver on				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	23.28	23.32	23.69	24.50
		1	13	23.27	23.34	23.53	24.50
		1	24	23.25	23.26	23.63	24.50
		12	0	22.03	22.48	22.71	23.50
		12	6	22.25	22.27	22.84	23.50
		12	13	22.17	22.26	22.39	23.50
		25	0	22.11	22.45	22.74	23.50
	16QAM	1	0	23.18	23.28	22.97	23.50
		1	13	23.06	23.21	23.25	23.50
		1	24	23.37	23.27	22.86	23.50
		12	0	21.30	21.57	21.90	22.50
		12	6	21.56	21.49	21.84	22.50
		12	13	21.56	21.62	21.60	22.50
		25	0	21.52	21.36	22.05	22.50

Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	23.25	23.24	23.43	24.50
		1	25	23.30	23.39	23.55	24.50
		1	49	23.41	23.64	23.48	24.50
		25	0	22.18	22.46	22.32	23.50
		25	13	22.49	22.27	22.54	23.50
		25	25	22.37	22.41	22.78	23.50
		50	0	22.33	22.37	22.48	23.50
	16QAM	1	0	23.11	23.15	23.32	23.50
		1	25	23.27	23.28	23.36	23.50
		1	49	23.27	22.90	22.85	23.50
		25	0	21.53	21.59	21.71	22.50
		25	13	21.26	21.37	21.51	22.50
		25	25	21.53	21.61	21.84	22.50
		50	0	21.23	21.44	21.51	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	23.30	23.35	23.59	24.50
		1	38	23.29	23.52	23.64	24.50
		1	74	23.35	23.64	23.69	24.50
		36	0	22.37	22.21	22.35	23.50
		36	18	22.28	22.43	22.46	23.50
		36	39	22.55	22.61	22.78	23.50
		75	0	22.29	22.52	22.45	23.50
	16QAM	1	0	23.12	22.50	22.91	23.50
		1	38	23.18	22.75	22.88	23.50
		1	74	23.20	22.98	22.91	23.50
		36	0	21.25	21.23	21.70	22.50
		36	18	21.49	21.55	21.89	22.50
		36	39	21.57	21.70	21.95	22.50
		75	0	21.61	21.41	21.81	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	23.43	23.39	23.00	24.50
		1	50	23.55	23.53	23.05	24.50
		1	99	**23.65**	**23.69**	**23.11**	24.50
		50	0	**22.48**	22.10	**22.10**	23.50
		50	25	22.47	**22.23**	21.60	23.50
		50	50	22.41	22.15	21.58	23.50
		100	0	**22.52**	22.33	21.65	23.50
	16QAM	1	0	22.66	22.96	22.52	23.50
		1	50	22.83	23.05	21.72	23.50

		1	99	22.87	23.25	22.26	23.50
		50	0	21.38	20.53	21.13	22.50
		50	25	21.71	20.84	21.04	22.50
		50	50	21.70	21.42	21.16	22.50
		100	0	21.74	21.03	21.17	22.50

LTE B7							
Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	16.03	16.10	16.08	18.00
		1	13	16.57	16.29	16.39	18.00
		1	24	16.25	16.11	16.03	18.00
		12	0	15.07	14.83	15.15	16.50
		12	6	15.42	15.04	15.33	16.50
		12	13	15.42	14.97	15.22	16.50
		25	0	15.25	14.91	15.16	16.50
	16QAM	1	0	14.87	14.75	15.24	16.50
		1	13	15.74	15.38	15.70	16.50
		1	24	15.46	15.05	15.25	16.50
		12	0	14.17	14.01	14.09	16.00
		12	6	14.53	14.22	14.19	16.00
		12	13	14.54	14.14	14.06	16.00
		25	0	14.36	14.08	14.07	16.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	16.11	16.05	16.64	18.00
		1	25	16.22	16.29	16.53	18.00
		1	49	16.67	17.05	16.88	18.00
		25	0	15.02	14.87	15.56	16.50
		25	13	15.37	15.15	15.50	16.50
		25	25	15.63	15.56	15.64	16.50
		50	0	15.35	15.23	15.60	16.50
	16QAM	1	0	14.72	14.93	15.88	16.50
		1	25	15.59	15.38	15.67	16.50
		1	49	15.96	16.14	16.02	16.50
		25	0	14.08	14.05	14.49	16.00
		25	13	14.44	14.29	14.42	16.00
		25	25	14.70	14.66	14.57	16.00
		50	0	14.39	14.34	14.52	16.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	16.02	16.00	17.05	18.00

		1	38	16.42	16.30	16.37	18.00
		1	74	16.07	16.93	16.30	18.00
		36	0	15.31	14.99	15.67	16.50
		36	18	15.46	15.16	15.31	16.50
		36	39	15.48	15.54	15.20	16.50
		75	0	15.40	15.26	15.43	16.50
	16QAM	1	0	15.07	15.07	16.04	16.50
		1	38	15.67	15.41	15.58	16.50
		1	74	15.42	15.98	15.36	16.50
		36	0	14.39	14.10	14.64	16.00
		36	18	14.55	14.27	14.28	16.00
		36	39	14.57	14.66	14.17	16.00
		75	0	14.49	14.40	14.41	16.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	16.13	16.13	**17.52**	18.00
		1	50	**16.67**	16.23	16.57	18.00
		1	99	16.61	**17.70**	17.05	18.00
		50	0	15.47	14.85	**15.78**	16.50
		50	25	**15.62**	15.17	15.53	16.50
		50	50	**15.62**	**15.89**	15.50	16.50
		100	0	15.53	15.38	**15.63**	16.50
	16QAM	1	0	15.42	15.20	16.50	16.50
		1	50	15.94	15.33	15.74	16.50
		1	99	15.90	16.10	16.07	16.50
		50	0	14.55	14.19	14.77	16.00
		50	25	14.72	14.31	14.52	16.00
		50	50	14.69	15.05	14.48	16.00
		100	0	14.61	14.53	14.61	16.00

LTE B13							
Full Power&Receiver on&Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				23205/779.5	23230/782	23255/784.5	
5MHz	QPSK	1	0	23.63	23.82	23.78	24.50
		1	13	23.54	23.84	23.75	24.50
		1	24	23.55	23.83	23.83	24.50
		12	0	22.54	22.46	22.52	23.50
		12	6	22.52	22.54	22.48	23.50
		12	13	22.52	22.63	22.48	23.50
		25	0	22.58	22.43	22.51	23.50
	16QAM	1	0	23.23	22.68	22.67	23.50
		1	13	23.27	22.68	22.65	23.50

		1	24	23.27	22.57	22.68	23.50
		12	0	21.70	21.60	21.67	22.50
		12	6	21.65	21.72	21.66	22.50
		12	13	21.62	21.80	21.68	22.50
		25	0	21.57	21.84	21.85	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				/	23230/782	/	
10MHz	QPSK	1	0	/	**23.63**	/	24.50
		1	25	/	23.53	/	24.50
		1	49	/	23.58	/	24.50
		25	0	/	22.42	/	23.50
		25	13	/	22.43	/	23.50
		25	25	/	**22.46**	/	23.50
		50	0	/	**22.50**	/	23.50
	16QAM	1	0	/	23.21	/	23.50
		1	25	/	23.22	/	23.50
		1	49	/	23.17	/	23.50
		25	0	/	21.60	/	22.50
		25	13	/	21.60	/	22.50
		25	25	/	21.62	/	22.50
		50	0	/	21.59	/	22.50

LTE B26							
Full Power&Receiver on&Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	23.44	23.67	23.58	24.50
		1	2	23.49	23.72	23.61	24.50
		1	5	23.41	23.70	23.60	24.50
		3	0	23.53	23.48	23.53	24.50
		3	2	23.60	23.48	23.58	24.50
		3	3	23.54	23.54	23.49	24.50
		6	0	22.42	22.43	22.40	23.50
	16QAM	1	0	23.24	22.49	22.61	23.50
		1	2	23.26	22.47	22.52	23.50
		1	5	23.30	22.48	22.61	23.50
		3	0	22.86	22.78	22.77	23.50
		3	2	22.86	22.82	22.73	23.50
		3	3	22.88	22.83	22.73	23.50
		6	0	21.37	21.34	21.34	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	23.36	23.40	23.42	24.50

		1	7	23.37	23.48	23.43	24.50
		1	14	23.41	23.50	23.38	24.50
		8	0	22.45	22.35	22.46	23.50
		8	4	22.46	22.43	22.39	23.50
		8	7	22.49	22.50	22.54	23.50
		15	0	22.47	22.42	22.52	23.50
	16QAM	1	0	23.20	23.09	23.23	23.50
		1	7	23.24	23.04	23.26	23.50
		1	14	23.16	23.04	23.31	23.50
		8	0	21.71	21.67	21.69	22.50
		8	4	21.72	21.71	21.63	22.50
		8	7	21.74	21.64	21.66	22.50
		15	0	21.67	21.68	21.77	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	23.73	23.74	23.72	24.50
		1	13	23.71	23.72	23.68	24.50
		1	24	23.71	23.75	23.73	24.50
		12	0	22.46	22.44	22.55	23.50
		12	6	22.47	22.53	22.51	23.50
		12	13	22.40	22.53	22.58	23.50
		25	0	22.35	22.41	22.40	23.50
	16QAM	1	0	22.52	22.56	22.57	23.50
		1	13	22.49	22.50	22.57	23.50
		1	24	22.56	22.54	22.58	23.50
		12	0	21.62	21.58	21.69	22.50
		12	6	21.69	21.62	21.71	22.50
		12	13	21.60	21.67	21.68	22.50
		25	0	21.84	21.76	21.81	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26740/819	26865/831.5	26990/844	
10MHz	QPSK	1	0	23.45	23.45	23.46	24.50
		1	25	23.46	23.47	23.48	24.50
		1	49	23.48	23.55	23.59	24.50
		25	0	22.37	22.36	22.50	23.50
		25	13	22.42	22.39	22.53	23.50
		25	25	22.38	22.38	22.43	23.50
		50	0	22.34	22.44	22.37	23.50
	16QAM	1	0	23.10	23.10	23.08	23.50
		1	25	23.15	23.10	23.14	23.50
		1	49	23.22	23.19	23.17	23.50
		25	0	21.55	21.53	21.52	22.50
		25	13	21.48	21.46	21.47	22.50

		25	25	21.54	21.45	21.59	22.50
		50	0	21.55	21.52	21.54	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26765/821.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	23.33	23.49	23.75	24.50
		1	38	23.31	23.52	23.73	24.50
		1	74	**23.43**	**23.63**	**23.91**	24.50
		36	0	22.50	22.45	22.53	23.50
		36	18	**22.54**	22.43	22.51	23.50
		36	39	22.50	**22.56**	**22.58**	23.50
		75	0	22.41	**22.44**	**22.44**	23.50
	16QAM	1	0	22.58	23.12	22.63	23.50
		1	38	22.53	23.10	22.65	23.50
		1	74	22.60	23.18	22.66	23.50
		36	0	21.68	21.55	21.62	22.50
		36	18	21.73	21.60	21.63	22.50
		36	39	21.68	21.61	21.72	22.50
		75	0	21.59	21.67	21.56	22.50

LTE B38							
Full Power&Receiver on&Receiver off				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	23.30	23.34	23.33	24.50
		1	13	23.16	23.30	23.59	24.50
		1	24	23.25	23.43	23.23	24.50
		12	0	22.13	22.26	22.42	23.50
		12	6	22.21	22.31	22.45	23.50
		12	13	22.29	22.47	22.38	23.50
		25	0	22.23	22.30	22.46	23.50
	16QAM	1	0	22.46	22.60	22.16	23.50
		1	13	22.46	22.61	22.81	23.50
		1	24	22.61	22.76	22.68	23.50
		12	0	21.09	21.23	21.38	22.50
		12	6	21.22	21.35	21.43	22.50
		12	13	21.23	21.58	21.32	22.50
		25	0	21.20	21.41	21.44	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	23.62	23.63	23.51	24.50
		1	25	23.05	23.35	23.33	24.50
		1	49	23.69	23.41	23.36	24.50
		25	0	22.32	22.32	22.11	23.50

		25	13	22.49	22.35	22.43	23.50
		25	25	22.35	22.50	22.53	23.50
		50	0	22.47	22.37	22.37	23.50
	16QAM	1	0	22.60	22.78	22.69	23.50
		1	25	22.77	22.66	22.66	23.50
		1	49	22.65	22.55	22.67	23.50
		25	0	21.39	21.38	21.02	22.50
		25	13	21.27	21.39	21.35	22.50
		25	25	21.39	21.77	21.48	22.50
		50	0	21.34	21.44	21.42	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	23.53	23.45	23.45	24.50
		1	38	23.58	23.35	23.34	24.50
		1	74	23.55	23.41	23.31	24.50
		36	0	22.47	22.39	22.27	23.50
		36	18	22.36	22.37	22.14	23.50
		36	39	22.36	22.35	22.56	23.50
		75	0	22.38	22.32	22.19	23.50
	16QAM	1	0	22.61	22.72	22.74	23.50
		1	38	22.61	22.62	22.49	23.50
		1	74	22.63	22.82	22.70	23.50
		36	0	21.28	21.38	20.85	22.50
		36	18	21.32	21.39	20.98	22.50
		36	39	21.14	21.39	21.41	22.50
		75	0	21.50	21.53	21.13	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	23.56	**23.41**	**23.33**	24.50
		1	50	23.59	**23.41**	23.29	24.50
		1	99	**23.62**	23.40	23.29	24.50
		50	0	**22.52**	**22.43**	**22.40**	23.50
		50	25	22.34	22.39	22.36	23.50
		50	50	22.38	22.37	22.35	23.50
		100	0	22.33	22.39	**22.41**	23.50
	16QAM	1	0	22.55	22.15	22.70	23.50
		1	50	22.64	22.69	22.68	23.50
		1	99	22.67	22.67	22.70	23.50
		50	0	21.37	21.42	21.59	22.50
		50	25	21.23	21.47	21.45	22.50
		50	50	21.42	21.42	21.42	22.50
		100	0	21.28	21.44	21.43	22.50

LTE B41									
Full Power&Receiver on				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	23.13	23.16	23.58	23.56	23.29	24.50
		1	13	23.21	23.23	23.44	23.36	23.44	24.50
		1	24	22.59	23.16	23.38	23.39	23.28	24.50
		12	0	22.11	22.29	22.39	22.08	22.67	23.50
		12	6	22.20	22.29	22.35	22.30	22.63	23.50
		12	13	22.23	22.17	22.37	22.34	22.15	23.50
		25	0	22.19	22.39	22.38	22.38	22.62	23.50
	16QAM	1	0	22.39	22.30	22.78	22.78	22.57	23.50
		1	13	22.45	22.53	22.54	22.58	22.89	23.50
		1	24	22.33	22.42	22.64	22.42	22.65	23.50
		12	0	21.01	21.13	21.32	21.26	21.25	22.50
		12	6	20.98	21.14	21.25	21.25	21.23	22.50
		12	13	21.02	21.25	21.32	21.27	21.26	22.50
		25	0	21.07	21.28	21.32	21.32	21.35	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	23.20	23.17	23.49	23.50	23.40	24.50
		1	25	23.17	23.19	23.46	23.61	23.35	24.50
		1	49	23.14	23.41	23.53	23.50	23.40	24.50
		25	0	22.32	22.36	22.39	22.44	22.43	23.50
		25	13	22.02	22.26	22.36	22.58	22.28	23.50
		25	25	22.07	22.22	22.32	22.31	22.72	23.50
		50	0	22.02	22.15	22.37	22.63	22.27	23.50
	16QAM	1	0	22.45	22.27	22.65	22.67	22.62	23.50
		1	25	22.29	22.36	22.63	22.75	22.51	23.50
		1	49	22.35	22.51	22.85	22.43	22.58	23.50
		25	0	21.07	21.27	21.38	21.29	21.30	22.50
		25	13	21.04	21.32	21.39	21.32	21.27	22.50
		25	25	20.93	21.14	21.42	21.29	21.35	22.50
		50	0	21.09	21.34	21.41	21.37	21.26	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	23.10	23.12	23.45	23.43	23.43	24.50
		1	38	22.98	23.26	23.43	23.42	23.61	24.50
		1	74	23.15	23.32	23.43	23.52	23.47	24.50
		36	0	22.03	22.32	22.41	22.42	22.32	23.50
		36	18	22.01	22.22	22.36	22.35	22.37	23.50
		36	39	22.08	22.13	22.55	22.36	22.76	23.50
		75	0	21.98	22.23	22.31	22.37	22.47	23.50

	16QAM	1	0	22.43	22.34	22.62	22.51	22.72	23.50
		1	38	22.34	22.45	22.63	22.71	22.63	23.50
		1	74	22.38	22.62	22.57	22.55	22.64	23.50
		36	0	21.02	21.22	21.38	21.66	21.30	22.50
		36	18	20.88	21.14	21.30	21.27	21.19	22.50
		36	39	21.04	21.14	21.74	21.32	21.30	22.50
		75	0	21.00	21.26	21.49	21.43	21.41	22.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	23.09	23.19	23.29	23.51	23.32	24.50
		1	50	**23.23**	23.37	23.41	23.35	23.28	24.50
		1	99	23.03	**23.48**	**23.42**	**23.60**	**23.33**	24.50
		50	0	22.09	**22.42**	22.36	22.19	**22.63**	23.50
		50	25	22.06	22.19	22.40	22.36	22.28	23.50
		50	50	**22.23**	22.30	**22.64**	**22.37**	22.16	23.50
		100	0	22.06	22.22	22.30	**22.37**	**22.34**	23.50
	16QAM	1	0	22.46	22.49	22.47	22.74	22.55	23.50
		1	50	22.44	22.44	22.64	22.67	22.62	23.50
		1	99	22.27	22.41	22.82	22.60	22.62	23.50
		50	0	21.07	21.32	21.37	21.36	21.76	22.50
		50	25	21.10	21.32	21.29	21.32	21.34	22.50
		50	50	21.26	21.22	21.78	21.37	21.29	22.50
		100	0	21.21	21.32	21.48	21.36	21.34	22.50

LTE B41									
Receiver off				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	20.69	20.82	21.02	21.10	20.91	21.50
		1	13	20.70	20.87	21.07	21.14	21.06	21.50
		1	24	20.74	20.86	21.05	21.16	21.08	21.50
		12	0	21.36	21.59	21.80	21.58	21.59	22.50
		12	6	21.59	21.71	21.96	21.67	21.67	22.50
		12	13	21.53	21.55	21.81	21.51	21.48	22.50
		25	0	21.44	21.57	21.81	21.54	21.54	22.50
	16QAM	1	0	20.97	21.32	21.50	21.33	21.35	22.50
		1	13	21.64	21.76	22.04	21.73	21.74	22.50
		1	24	21.34	21.26	21.54	21.21	21.16	22.50
		12	0	20.60	20.86	20.97	20.89	20.66	21.50
		12	6	20.86	21.02	21.15	21.02	20.76	21.50
		12	13	20.82	20.87	21.00	20.86	20.58	21.50
		25	0	20.78	20.94	21.05	20.95	20.69	21.50
Bandwidth	Modulation	RB	Offset	Channel/Frequency(MHz)					Tune-up

		Allocation		39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	20.66	20.78	21.03	21.47	20.99	21.50
		1	25	20.68	20.81	20.95	21.11	20.90	21.50
		1	49	20.76	20.90	21.24	21.15	21.07	21.50
		25	0	21.22	21.82	21.89	21.75	21.64	22.50
		25	13	21.48	21.86	21.98	21.75	21.64	22.50
		25	25	21.78	22.00	22.15	21.87	21.73	22.50
		50	0	21.49	21.89	22.02	21.80	21.68	22.50
	16QAM	1	0	20.87	21.70	21.71	21.72	21.55	22.50
		1	25	21.43	21.82	21.99	21.71	21.62	22.50
		1	49	21.98	22.10	22.24	21.94	21.74	22.50
		25	0	20.46	20.97	21.09	21.09	20.89	21.50
		25	13	20.75	21.08	20.62	21.13	20.93	21.50
		25	25	21.07	21.22	21.39	21.25	21.02	21.50
		50	0	20.79	21.12	21.26	21.20	20.98	21.50

Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	20.64	20.78	20.95	21.04	21.20	21.50
		1	38	20.53	20.18	20.93	20.95	20.74	21.50
		1	74	20.77	20.94	21.07	21.04	21.08	21.50
		36	0	21.42	21.91	21.97	21.93	21.69	22.50
		36	18	21.58	21.78	21.90	21.70	21.59	22.50
		36	39	21.87	21.86	22.00	21.73	21.52	22.50
		75	0	21.63	21.87	21.97	21.82	21.60	22.50
	16QAM	1	0	21.13	21.93	21.93	22.04	21.59	22.50
		1	38	21.59	21.77	21.93	21.68	21.62	22.50
		1	74	22.02	21.89	21.97	21.73	21.28	22.50
		36	0	20.60	21.01	21.11	21.23	20.99	21.50
		36	18	20.80	20.94	21.06	21.04	20.85	21.50
		36	39	21.08	21.01	21.17	21.07	20.86	21.50
		75	0	20.90	21.07	21.20	21.21	20.99	21.50

Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	20.68	**20.86**	20.99	20.95	20.98	21.50
		1	50	**20.71**	20.78	20.99	20.94	20.89	21.50
		1	99	20.70	20.58	**21.09**	**20.99**	**21.04**	21.50
		50	0	21.22	21.80	21.85	21.89	21.58	22.50
		50	25	21.53	21.77	21.91	21.76	21.55	22.50
		50	50	**22.03**	**22.07**	**22.23**	**21.97**	**21.76**	22.50
		100	0	21.62	21.90	**22.02**	21.90	**21.65**	22.50
	16QAM	1	0	21.04	22.08	21.99	22.30	21.81	22.50
		1	50	21.51	21.70	21.88	21.68	21.49	22.50
		1	99	22.10	22.32	22.16	22.42	22.07	22.50

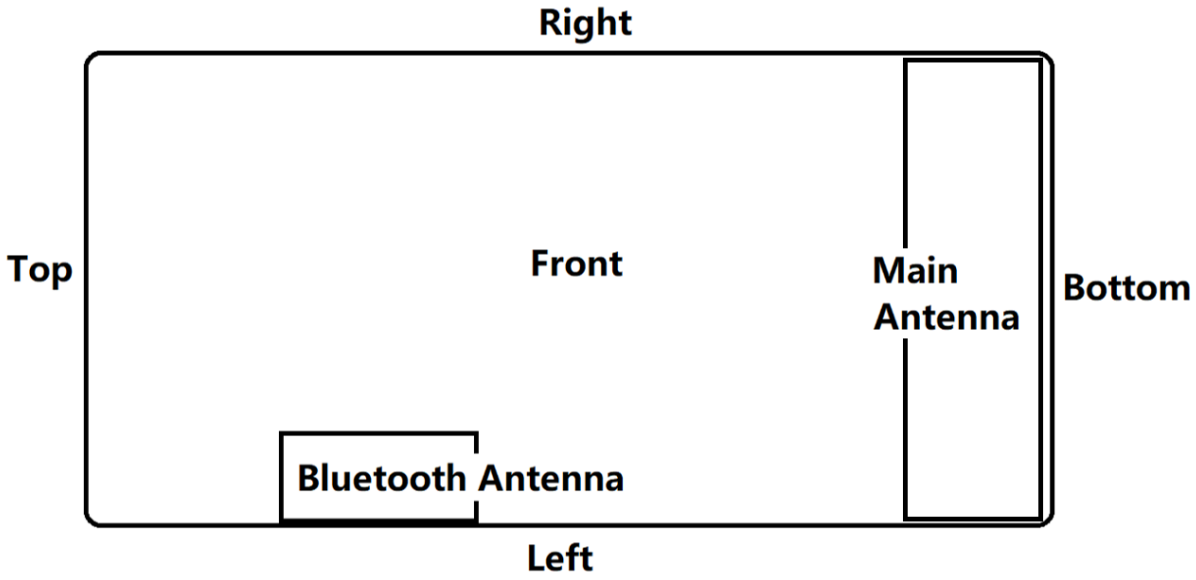
		50	0	20.30	20.94	21.04	21.23	20.96	21.50
		50	25	20.65	20.99	21.13	21.15	20.95	21.50
		50	50	21.17	21.29	21.45	21.39	21.18	21.50
		100	0	20.76	21.12	21.25	21.31	21.07	21.50

9.4 Bluetooth Mode

Bluetooth	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	8.74	8.83	8.05	9.00
π/4DQPSK	8.49	8.59	7.81	9.00
8DPSK	8.45	8.60	7.81	9.00

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



Overall (Length x Width): 113 mm x 47.5 mm Overall Diagonal: 117 mm						
Distance of the Antenna to the EUT Surface/Edge						
Antenna	Back Side	Front Side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Antenna	＜25mm	＜25mm	＜25mm	＜25mm	＞25mm	＜25mm
Bluetooth Antenna	＜25mm	＜25mm	＜25mm	＞25mm	＞25mm	＞25mm
Hotspot mode, Positions for SAR Tests						
Mode	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Antenna	Yes	Yes	Yes	Yes	N/A	Yes
Bluetooth Antenna	Yes	Yes	Yes	N/A	N/A	N/A

Note:
1. Per KDB 941225 D06, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
2. Per FCC KDB 447498 D01, for each exposure position, testing of other requised 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:
a) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100MHz
b) ≤ 0.6 W/kg or 1.5 W/kg, for1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
c) ≤ 0.4 W/kg or 1.0 Wkg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.
3. When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
4. Per FCC KDB Publication 648474 D04, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

10.2 Standalone SAR Test Exclusion Considerations

Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for product specific 10-g SAR

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Per KDB 447498 D01, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Bluetooth	Distance (mm)	MAX Power (dBm)	Frequency (MHz)	Ratio	Evaluation
Head	5	9.00	2480	2.50	No
Body	10	9.00	2480	1.25	No

10.3 Measured SAR Results

Note:

1. The value with blue color is the maximum SAR Value of each test band.
1. For GSM, when multiple slots are used, SAR should be tested to account for the maximum source-based time-averaged output power.
2. For WCDMA, 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 or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.
3. For LTE, QPSK with 100% RB allocation, SAR is required when and the highest reported SAR for 1 RB and 50% RB allocation in are≥ 50% limit(1g).
4. Accessories that do not contain RF transmitters and have been proven to increase the peak SAR by less than 5 %, such as hands-free kits, do not need SAR tests separate from the SAR tests attached to a main EUT configuration.

Head SAR

Band	Test Position	Dist. (mm)	Mode	Power Reduction	RB	Offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Left Cheek	0	GSM	Receiver On	N/A	N/A	190/836.6	33.50	33.39	0.437	0.012	1.03	0.448	/
	Left Tilt	0	GSM	Receiver On	N/A	N/A	190/836.6	33.50	33.39	0.272	0.029	1.03	0.279	/
	Right Cheek	0	GSM	Receiver On	N/A	N/A	190/836.6	33.50	33.39	0.506	0.030	1.03	0.519	/
	Right Tilt	0	GSM	Receiver On	N/A	N/A	190/836.6	33.50	33.39	0.235	-0.080	1.03	0.241	/
	Right Cheek Battery2	0	GSM	Receiver On	N/A	N/A	190/836.6	33.50	33.39	0.519	0.010	1.03	0.532	11
GSM 1900	Left Cheek	0	GSM	Receiver On	N/A	N/A	661/1880	31.00	29.97	0.424	0.020	1.27	0.537	12
	Left Tilt	0	GSM	Receiver On	N/A	N/A	661/1880	31.00	29.97	0.215	0.017	1.27	0.273	/
	Right Cheek	0	GSM	Receiver On	N/A	N/A	661/1880	31.00	29.97	0.418	0.090	1.27	0.530	/
	Right Tilt	0	GSM	Receiver On	N/A	N/A	661/1880	31.00	29.97	0.242	0.032	1.27	0.307	/
	Left Cheek Battery2	0	GSM	Receiver On	N/A	N/A	661/1880	31.00	29.97	0.340	0.030	1.27	0.431	/
WCDMA II	Left Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	0.166	0.086	1.14	0.188	/
	Left Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	0.103	0.018	1.14	0.117	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	1.210	0.024	1.14	1.373	13
	Right Cheek Repeat	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	1.180	0.052	1.14	1.339	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	9262/1852.4	23.00	22.40	0.798	-0.020	1.15	0.917	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	9538/1907.6	23.00	22.42	1.050	0.010	1.14	1.200	/
	Right Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	0.716	0.070	1.14	0.813	/
	Right Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	9262/1852.4	23.00	22.40	0.635	-0.030	1.15	0.729	/
	Right Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	9538/1907.6	23.00	22.42	0.618	0.052	1.14	0.706	/
	Right Cheek SIM2	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	1.150	0.110	1.14	1.305	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	9400/1880	23.00	22.45	1.110	0.100	1.14	1.260	/

	Battery2													
WCDMA IV	Left Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	1413/1732.6	24.00	23.39	0.382	0.148	1.15	0.439	/
	Left Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	1413/1732.6	24.00	23.39	0.153	-0.020	1.15	0.176	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	1413/1732.6	24.00	23.39	0.661	0.120	1.15	0.761	14
	Right Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	1413/1732.6	24.00	23.39	0.244	0.096	1.15	0.281	/
	Right Cheek Battery2	0	RMC 12.2K	Receiver On	N/A	N/A	1413/1732.6	24.00	23.39	0.640	0.022	1.15	0.737	/
WCDMA V	Left Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	4183/836.6	24.00	23.19	0.237	0.080	1.21	0.286	/
	Left Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	4183/836.6	24.00	23.19	0.114	0.024	1.21	0.137	/
	Right Cheek	0	RMC 12.2K	Receiver On	N/A	N/A	4183/836.6	24.00	23.19	0.209	-0.013	1.21	0.252	/
	Right Tilt	0	RMC 12.2K	Receiver On	N/A	N/A	4183/836.6	24.00	23.19	0.070	-0.020	1.21	0.084	/
	Left Cheek Battery2	0	RMC 12.2K	Receiver On	N/A	N/A	4183/836.6	24.00	23.19	0.257	0.016	1.21	0.310	15
LTE 2	Left Cheek	0	QPSK	Receiver On	1	0	19100/1900	22.00	21.11	0.514	0.040	1.23	0.631	/
		0	QPSK	Receiver On	50%	0	19100/1900	21.00	19.88	0.447	0.022	1.29	0.578	/
	Left Tilt	0	QPSK	Receiver On	1	0	19100/1900	22.00	21.11	0.083	0.049	1.23	0.101	/
		0	QPSK	Receiver On	50%	0	19100/1900	21.00	19.88	0.088	0.070	1.29	0.114	/
	Right Cheek	0	QPSK	Receiver On	1	0	19100/1900	22.00	21.11	0.735	0.025	1.23	0.902	/
		0	QPSK	Receiver On	1	0	18700/1860	22.00	21.00	0.777	-0.180	1.26	0.978	16
		0	QPSK	Receiver On	1	0	18900/1880	22.00	21.06	0.648	0.014	1.24	0.805	/
		0	QPSK	Receiver On	50%	0	19100/1900	21.00	19.88	0.505	0.056	1.29	0.653	/
		0	QPSK	Receiver On	100%	0	19100/1900	21.00	19.77	0.506	0.021	1.33	0.672	/
	Right Tilt	0	QPSK	Receiver On	1	0	19100/1900	22.00	21.11	0.419	0.033	1.23	0.514	/
		0	QPSK	Receiver On	50%	0	19100/1900	21.00	19.88	0.342	0.030	1.29	0.442	/
	Right Cheek Battery2	0	QPSK	Receiver On	1	0	18700/1860	22.00	21.00	0.357	0.018	1.26	0.449	/
LTE 4	Left Cheek	0	QPSK	Receiver On	1	0	20050/1720	24.50	24.28	0.390	0.010	1.05	0.410	/
		0	QPSK	Receiver On	50%	0	20050/1720	23.50	22.94	0.316	0.023	1.14	0.359	/
	Left Tilt	0	QPSK	Receiver On	1	0	20050/1720	24.50	24.28	0.111	0.080	1.05	0.117	/
		0	QPSK	Receiver On	50%	0	20050/1720	23.50	22.94	0.096	0.021	1.14	0.109	/
	Right Cheek	0	QPSK	Receiver On	1	0	20050/1720	24.50	24.28	0.583	0.015	1.05	0.613	17
		0	QPSK	Receiver On	50%	0	20050/1720	23.50	22.94	0.493	-0.090	1.14	0.561	/
	Right Tilt	0	QPSK	Receiver On	1	0	20050/1720	24.50	24.28	0.250	0.017	1.05	0.263	/
		0	QPSK	Receiver On	50%	0	20050/1720	23.50	22.94	0.214	0.030	1.14	0.243	/
	Right Cheek Battery2	0	QPSK	Receiver On	1	0	20050/1720	24.50	24.28	0.327	0.120	1.05	0.344	/
LTE 5	Left Cheek	0	QPSK	Receiver On	1	49	20450/829	24.50	23.81	0.246	0.025	1.17	0.288	/
		0	QPSK	Receiver On	50%	13	20600/844	23.50	22.56	0.270	0.030	1.24	0.335	/
	Left Tilt	0	QPSK	Receiver On	1	49	20450/829	24.50	23.81	0.132	-0.014	1.17	0.155	/
		0	QPSK	Receiver On	50%	13	20600/844	23.50	22.56	0.101	0.026	1.24	0.125	/
	Right Cheek	0	QPSK	Receiver On	1	49	20450/829	24.50	23.81	0.213	0.048	1.17	0.250	/
		0	QPSK	Receiver On	50%	13	20600/844	23.50	22.56	0.285	0.030	1.24	0.354	18
	Right Tilt	0	QPSK	Receiver On	1	49	20450/829	24.50	23.81	0.211	0.011	1.17	0.247	/

		0	QPSK	Receiver On	50%	13	20600/844	23.50	22.56	0.223	0.039	1.24	0.277	/
	Right Cheek Battery2	0	QPSK	Receiver On	50%	13	20600/844	23.50	22.56	0.267	0.026	1.24	0.332	/
LTE 7	Left Cheek	0	QPSK	Receiver On	1	99	21100/2535	24.50	23.69	0.669	0.070	1.21	0.806	/
		0	QPSK	Receiver On	1	99	20850/2510	24.50	23.65	0.848	0.040	1.22	1.031	/
		0	QPSK	Receiver On	1	99	21350/2560	24.50	23.11	0.498	-0.080	1.38	0.686	/
		0	QPSK	Receiver On	50%	0	20850/2510	23.50	22.48	0.733	0.013	1.26	0.927	/
		0	QPSK	Receiver On	50%	25	21100/2535	23.50	22.23	0.601	0.024	1.34	0.805	/
		0	QPSK	Receiver On	50%	0	21350/2560	23.50	22.10	0.483	0.070	1.38	0.667	/
	Left Tilt	0	QPSK	Receiver On	1	99	21100/2535	24.50	23.69	0.279	0.068	1.21	0.336	/
		0	QPSK	Receiver On	50%	0	20850/2510	23.50	22.48	0.265	0.190	1.26	0.335	/
	Right Cheek	0	QPSK	Receiver On	1	99	21100/2535	24.50	23.69	0.777	0.020	1.21	0.936	/
		0	QPSK	Receiver On	1	99	20850/2510	24.50	23.65	0.973	-0.060	1.22	1.183	/
		0	QPSK	Receiver On	1	99	21350/2560	24.50	23.11	0.562	0.076	1.38	0.774	/
		0	QPSK	Receiver On	50%	0	20850/2510	23.50	22.48	0.883	-0.020	1.26	1.117	/
		0	QPSK	Receiver On	50%	25	21100/2535	23.50	22.23	0.710	0.080	1.34	0.951	/
		0	QPSK	Receiver On	50%	0	21350/2560	23.50	22.10	0.551	0.160	1.38	0.761	/
		0	QPSK	Receiver On	100%	0	20850/2510	23.50	22.52	0.942	0.018	1.25	1.180	/
		0	QPSK	Receiver On	100%	0	21100/2535	23.50	22.33	0.804	0.022	1.31	1.053	/
		0	QPSK	Receiver On	100%	0	21350/2560	23.50	21.65	0.651	-0.084	1.53	0.997	/
	Right Cheek Repeat	0	QPSK	Receiver On	1	99	20850/2510	24.50	23.65	1.030	0.029	1.22	1.253	19
	Right Tilt	0	QPSK	Receiver On	1	99	21100/2535	24.50	23.69	0.301	0.019	1.21	0.363	/
		0	QPSK	Receiver On	50%	0	20850/2510	23.50	22.48	0.355	0.020	1.26	0.449	/
	Right Cheek Battery2	0	QPSK	Receiver On	1	99	20850/2510	24.50	23.65	0.386	0.033	1.22	0.469	/
LTE 13	Left Cheek	0	QPSK	Receiver On	1	0	23230/782	24.50	23.63	0.234	0.042	1.22	0.286	/
		0	QPSK	Receiver On	50%	25	23230/782	23.50	22.46	0.328	0.049	1.27	0.417	/
	Left Tilt	0	QPSK	Receiver On	1	0	23230/782	24.50	23.63	0.111	-0.022	1.22	0.136	/
		0	QPSK	Receiver On	50%	25	23230/782	23.50	22.46	0.202	0.069	1.27	0.257	/
	Right Cheek	0	QPSK	Receiver On	1	0	23230/782	24.50	23.63	0.248	0.041	1.22	0.303	/
		0	QPSK	Receiver On	50%	25	23230/782	23.50	22.46	0.362	0.030	1.27	0.460	/
	Right Tilt	0	QPSK	Receiver On	1	0	23230/782	24.50	23.63	0.180	0.012	1.22	0.220	/
		0	QPSK	Receiver On	50%	25	23230/782	23.50	22.46	0.317	0.070	1.27	0.403	/
	Right Cheek Battery2	0	QPSK	Receiver On	50%	25	23230/782	23.50	22.46	0.429	0.047	1.27	0.545	20
LTE 26	Left Cheek	0	QPSK	Receiver On	1	74	26965/841.5	24.50	23.91	0.375	0.016	1.15	0.430	/
		0	QPSK	Receiver On	50%	39	26965/841.5	23.50	22.58	0.293	-0.024	1.24	0.362	/
	Left Tilt	0	QPSK	Receiver On	1	74	26965/841.5	24.50	23.91	0.194	0.013	1.15	0.222	/
		0	QPSK	Receiver On	50%	39	26965/841.5	23.50	22.58	0.144	0.028	1.24	0.178	/
	Right Cheek	0	QPSK	Receiver On	1	74	26965/841.5	24.50	23.91	0.387	0.080	1.15	0.443	21
		0	QPSK	Receiver On	50%	39	26965/841.5	23.50	22.58	0.293	0.070	1.24	0.362	/
	Right Tilt	0	QPSK	Receiver On	1	74	26965/841.5	24.50	23.91	0.294	0.010	1.15	0.337	/

		0	QPSK	Receiver On	50%	39	26965/841.5	23.50	22.58	0.228	0.025	1.24	0.282	/
	Right Cheek Battery2	0	QPSK	Receiver On	1	74	26965/841.5	24.50	23.91	0.380	-0.015	1.15	0.435	/
LTE 41	Left Cheek	0	QPSK	Receiver On	1	99	41055/2636.5	24.50	23.60	0.228	0.030	1.23	0.281	/
		0	QPSK	Receiver On	50%	50	40620/2593	23.50	22.64	0.201	0.058	1.22	0.245	/
	Left Tilt	0	QPSK	Receiver On	1	99	41055/2636.5	24.50	23.60	0.119	0.100	1.23	0.146	/
		0	QPSK	Receiver On	50%	50	40620/2593	23.50	22.64	0.097	0.038	1.22	0.118	/
	Right Cheek	0	QPSK	Receiver On	1	99	41055/2636.5	24.50	23.60	0.275	-0.150	1.23	0.338	22
		0	QPSK	Receiver On	50%	50	40620/2593	23.50	22.64	0.232	0.031	1.22	0.283	/
	Right Tilt	0	QPSK	Receiver On	1	99	41055/2636.5	24.50	23.60	0.113	-0.013	1.23	0.139	/
		0	QPSK	Receiver On	50%	50	40620/2593	23.50	22.64	0.087	0.063	1.22	0.106	/
	Right Cheek Battery2	0	QPSK	Receiver On	1	99	41055/2636.5	24.50	23.60	0.115	0.090	1.23	0.141	/

Band	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
Bluetooth	Right Cheek	0	DH5	77.0%	Full Power	39/2441	9.00	8.83	0.001	0.020	1.35	0.001	/
	Right Cheek Battery2	0	DH5	77.0%	Full Power	39/2441	9.00	8.83	0.001	0.016	1.35	0.001	/

Body SAR

Band	Test Position	Dist. (mm)	Mode	Power Reduction	RB	Offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Back Side	10	2TX Slots	Receiver Off	N/A	N/A	190/836.6	30.00	29.44	0.907	0.070	1.14	1.032	/
	Back Side	10	2TX Slots	Receiver Off	N/A	N/A	128/824.2	30.00	29.45	0.883	0.082	1.14	1.002	/
	Back Side	10	2TX Slots	Receiver Off	N/A	N/A	251/848.8	30.00	29.46	0.923	0.120	1.13	1.045	23
	Back Side Repeat	10	2TX Slots	Receiver Off	N/A	N/A	251/848.8	30.00	29.46	0.876	0.024	1.13	0.992	/
	Front Side	10	2TX Slots	Receiver Off	N/A	N/A	190/836.6	30.00	29.44	0.579	0.150	1.14	0.659	/
	Left Edge	10	2TX Slots	Receiver Off	N/A	N/A	190/836.6	30.00	29.44	0.245	0.032	1.14	0.279	/
	Right Edge	10	2TX Slots	Receiver Off	N/A	N/A	190/836.6	30.00	29.44	0.177	0.010	1.14	0.201	/
	Top Edge	10	2TX Slots	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	2TX Slots	Receiver Off	N/A	N/A	190/836.6	30.00	29.44	0.079	0.022	1.14	0.090	/
	Back Side	10	CS	Receiver Off	N/A	N/A	190/836.6	33.50	33.39	0.915	-0.030	1.03	0.938	/
	Back Side Battery2	10	2TX Slots	Receiver Off	N/A	N/A	251/848.8	30.00	29.46	0.905	0.010	1.13	1.025	/
GSM 1900	Back Side	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.592	0.070	1.08	0.640	24
	Front Side	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.215	0.048	1.08	0.233	/
	Left Edge	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.058	0.120	1.08	0.063	/
	Right Edge	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.217	0.011	1.08	0.235	/
	Top Edge	10	4TX Slots	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.258	0.013	1.08	0.279	/
	Back Side	10	CS	Receiver Off	N/A	N/A	661/1880	31.00	29.97	0.385	0.040	1.27	0.488	/
	Back Side Battery2	10	4TX Slots	Receiver Off	N/A	N/A	661/1880	24.50	24.16	0.441	-0.090	1.08	0.477	/
WCDMA II	Back Side	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.972	0.020	1.27	1.238	/
	Back Side	10	RMC	Receiver Off	N/A	N/A	9262/1852.4	21.00	19.91	0.876	0.140	1.29	1.126	/
	Back Side	10	RMC	Receiver Off	N/A	N/A	9538/1907.6	21.00	19.84	0.921	0.068	1.31	1.203	/
	Back Side Repeat	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	1.090	0.023	1.27	1.388	25
	Front Side	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.384	0.100	1.27	0.489	/
	Left Edge	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.109	0.025	1.27	0.139	/
	Right Edge	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.295	0.086	1.27	0.376	/
	Top Edge	10	RMC	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.456	0.024	1.27	0.581	/
	Back Side Earphone	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.739	0.019	1.27	0.941	/
	Back Side SIM2	10	RMC	Receiver Off	N/A	N/A	9400/1880	21.00	19.95	0.785	0.024	1.27	1.000	/
	Back Side Battery2	10	RMC	Receiver Off	N/A	N/A	9538/1907.6	21.00	19.84	0.673	-0.011	1.31	0.879	/
WCDMA	Back Side	10	RMC	Receiver Off	N/A	N/A	1413/1732.6	21.50	20.11	0.594	0.080	1.38	0.818	/

IV	Back Side	10	RMC	Receiver Off	N/A	N/A	1312/1712.4	21.50	20.05	0.706	0.160	1.40	0.986	26
	Back Side	10	RMC	Receiver Off	N/A	N/A	1513/1752.6	21.50	19.97	0.615	0.020	1.42	0.875	/
	Front Side	10	RMC	Receiver Off	N/A	N/A	1413/1732.6	21.50	20.11	0.184	-0.030	1.38	0.253	/
	Left Edge	10	RMC	Receiver Off	N/A	N/A	1413/1732.6	21.50	20.11	0.054	0.021	1.38	0.074	/
	Right Edge	10	RMC	Receiver Off	N/A	N/A	1413/1732.6	21.50	20.11	0.132	0.014	1.38	0.182	/
	Top Edge	10	RMC	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	RMC	Receiver Off	N/A	N/A	1413/1732.6	21.50	20.11	0.206	0.060	1.38	0.284	/
	Back Side Battery2	10	RMC	Receiver Off	N/A	N/A	1312/1712.4	21.50	20.05	0.616	-0.024	1.40	0.860	/
WCDMA V	Back Side	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.761	-0.010	1.21	0.917	27
	Back Side	10	RMC	Receiver Off	N/A	N/A	4132/826.4	24.00	23.18	0.494	0.025	1.21	0.597	/
	Back Side	10	RMC	Receiver Off	N/A	N/A	4233/846.6	24.00	23.25	0.754	0.044	1.19	0.896	/
	Front Side	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.259	0.038	1.21	0.312	/
	Left Edge	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.227	0.060	1.21	0.274	/
	Right Edge	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.064	0.038	1.21	0.077	/
	Top Edge	10	RMC	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.038	0.100	1.21	0.046	/
	Back Side Battery2	10	RMC	Receiver Off	N/A	N/A	4183/836.6	24.00	23.19	0.616	0.018	1.21	0.742	/
LTE 2	Back Side	10	QPSK	Receiver Off	1	99	18900/1880	21.50	21.11	0.847	0.057	1.09	0.927	/
		10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	1.210	0.064	1.04	1.264	28
		10	QPSK	Receiver Off	1	0	19100/1900	21.50	20.86	0.882	-0.110	1.16	1.022	/
		10	QPSK	Receiver Off	50%	50	18900/1880	20.50	19.78	0.807	0.090	1.18	0.953	/
		10	QPSK	Receiver Off	50%	50	18700/1860	20.50	19.86	0.573	0.085	1.16	0.664	/
		10	QPSK	Receiver Off	50%	0	19100/1900	20.50	19.64	0.676	0.060	1.22	0.824	/
		10	QPSK	Receiver Off	100%	0	18900/1880	20.50	20.93	0.794	0.058	0.91	0.719	/
		10	QPSK	Receiver Off	100%	0	18700/1860	20.50	20.80	0.668	0.028	0.93	0.623	/
		10	QPSK	Receiver Off	100%	0	19100/1900	20.50	20.91	0.813	0.047	0.91	0.740	/
	Back Side Repeat	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	1.160	0.060	1.04	1.212	/
	Front Side	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	0.220	0.032	1.04	0.230	/
		10	QPSK	Receiver Off	50%	50	18700/1860	20.50	19.86	0.227	-0.023	1.16	0.263	/
	Left Edge	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	0.062	0.070	1.04	0.065	/
		10	QPSK	Receiver Off	50%	50	18700/1860	20.50	19.86	0.056	0.025	1.16	0.065	/
	Right Edge	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	0.230	0.047	1.04	0.240	/
		10	QPSK	Receiver Off	50%	50	18700/1860	20.50	19.86	0.239	0.012	1.16	0.277	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	0.391	0.030	1.04	0.408	/
		10	QPSK	Receiver Off	50%	50	18700/1860	20.50	19.86	0.545	0.020	1.16	0.632	/
	Back Side Battery2	10	QPSK	Receiver Off	1	99	18700/1860	21.50	21.31	0.850	0.042	1.04	0.888	/
LTE 4	Back Side	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.358	0.010	1.09	0.391	/

		10	QPSK	Receiver Off	50%	50	20050/1720	21.00	20.36	0.312	0.024	1.16	0.362	/
	Front Side	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.119	-0.070	1.09	0.130	/
		10	QPSK	Receiver Off	50%	50	20050/1720	21.00	20.36	0.115	0.093	1.16	0.133	/
	Left Edge	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.041	0.031	1.09	0.045	/
		10	QPSK	Receiver Off	50%	50	20050/1720	21.00	20.36	0.056	0.060	1.16	0.065	/
	Right Edge	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.129	0.040	1.09	0.141	/
		10	QPSK	Receiver Off	50%	50	20050/1720	21.00	20.36	0.105	0.042	1.16	0.122	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.138	0.010	1.09	0.151	/
		10	QPSK	Receiver Off	50%	50	20050/1720	21.00	20.36	0.112	0.018	1.16	0.130	/
	Back Side Battery2	10	QPSK	Receiver Off	1	0	20050/1720	22.00	21.62	0.767	0.027	1.09	0.837	29
LTE 5	Back Side	10	QPSK	Receiver Off	1	49	20450/829	24.50	23.81	0.974	0.061	1.17	1.142	/
		10	QPSK	Receiver Off	1	0	20525/836.5	24.50	23.55	0.831	0.037	1.24	1.034	/
		10	QPSK	Receiver Off	1	25	20600/844	24.50	23.59	1.050	-0.150	1.23	1.295	30
		10	QPSK	Receiver Off	50%	13	20600/844	23.50	22.56	0.878	0.039	1.24	1.090	/
		10	QPSK	Receiver Off	50%	0	20450/829	23.50	22.37	0.586	-0.082	1.30	0.760	/
		10	QPSK	Receiver Off	50%	0	20525/836.5	23.50	22.50	0.678	0.092	1.26	0.854	/
		10	QPSK	Receiver Off	100%	0	20600/844	23.50	22.49	0.835	0.010	1.26	1.054	/
		10	QPSK	Receiver Off	100%	0	20450/829	23.50	22.48	0.629	0.049	1.26	0.796	/
		10	QPSK	Receiver Off	100%	0	20525/836.5	23.50	22.55	0.728	0.025	1.24	0.906	/
	Back Side Repeat	10	QPSK	Receiver Off	1	25	20600/844	24.50	23.59	0.986	0.010	1.23	1.216	/
	Front Side	10	QPSK	Receiver Off	1	49	20450/829	24.50	23.81	0.345	-0.064	1.17	0.404	/
		10	QPSK	Receiver Off	50%	13	20600/844	23.50	22.56	0.329	0.190	1.24	0.409	/
	Left Edge	10	QPSK	Receiver Off	1	49	20450/829	24.50	23.81	0.185	0.080	1.17	0.217	/
		10	QPSK	Receiver Off	50%	13	20600/844	23.50	22.56	0.284	0.084	1.24	0.353	/
	Right Edge	10	QPSK	Receiver Off	1	49	20450/829	24.50	23.81	0.081	0.026	1.17	0.095	/
		10	QPSK	Receiver Off	50%	13	20600/844	23.50	22.56	0.071	0.021	1.24	0.088	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	49	20450/829	24.50	23.81	0.049	0.130	1.17	0.057	/
		10	QPSK	Receiver Off	50%	13	20600/844	23.50	22.56	0.053	0.030	1.24	0.066	/
	Back Side Battery2	10	QPSK	Receiver Off	1	25	20600/844	24.50	23.59	0.855	0.027	1.23	1.054	/
LTE 7	Back Side	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.657	-0.010	1.07	0.704	31
		10	QPSK	Receiver Off	50%	50	21100/2535	16.50	15.89	0.534	0.071	1.15	0.615	/
	Front Side	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.081	-0.035	1.07	0.087	/
		10	QPSK	Receiver Off	50%	50	21100/2535	16.50	15.89	0.075	0.031	1.15	0.086	/
	Left Edge	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.023	0.030	1.07	0.025	/
		10	QPSK	Receiver Off	50%	50	21100/2535	16.50	15.89	0.029	0.026	1.15	0.033	/
	Right Edge	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.158	0.160	1.07	0.169	/

		10	QPSK	Receiver Off	50%	50	21100/2535	16.50	15.89	0.129	0.035	1.15	0.148	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.324	-0.190	1.07	0.347	/
		10	QPSK	Receiver Off	50%	50	21100/2535	16.50	15.89	0.286	0.021	1.15	0.329	/
	Back Side Battery2	10	QPSK	Receiver Off	1	99	21100/2535	18.00	17.70	0.397	0.070	1.07	0.425	/
LTE 13	Back Side	10	QPSK	Receiver Off	1	0	23230/782	24.50	23.63	0.547	0.090	1.22	0.668	/
		10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.680	-0.030	1.27	0.864	/
		10	QPSK	Receiver Off	50%	0	23230/782	23.50	22.42	0.634	0.029	1.28	0.813	/
		10	QPSK	Receiver Off	50%	13	23230/782	23.50	22.43	0.667	-0.070	1.28	0.853	/
		10	QPSK	Receiver Off	100%	0	23230/782	23.50	22.50	0.632	0.046	1.26	0.796	/
	Front Side	10	QPSK	Receiver Off	1	0	23230/782	24.50	23.63	0.214	0.038	1.22	0.261	/
		10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.327	0.026	1.27	0.415	/
	Left Edge	10	QPSK	Receiver Off	1	0	23230/782	24.50	23.63	0.206	0.040	1.22	0.252	/
		10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.242	0.063	1.27	0.307	/
	Right Edge	10	QPSK	Receiver Off	1	0	23230/782	24.50	23.63	0.120	0.095	1.22	0.147	/
		10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.112	0.020	1.27	0.142	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	0	23230/782	24.50	23.63	0.071	0.150	1.22	0.087	/
		10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.106	0.180	1.27	0.135	/
	Back Side Battery2	10	QPSK	Receiver Off	50%	25	23230/782	23.50	22.46	0.879	0.030	1.27	1.117	32
LTE 26	Back Side	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.955	-0.040	1.15	1.094	33
		10	QPSK	Receiver Off	1	74	26765/821.5	24.50	23.43	0.653	0.064	1.28	0.835	/
		10	QPSK	Receiver Off	1	74	26865/831.5	24.50	23.63	0.823	-0.030	1.22	1.006	/
		10	QPSK	Receiver Off	50%	39	26965/841.5	23.50	22.58	0.756	0.027	1.24	0.934	/
		10	QPSK	Receiver Off	50%	39	26765/821.5	23.50	22.54	0.492	0.060	1.25	0.614	/
		10	QPSK	Receiver Off	50%	39	26865/831.5	23.50	22.56	0.635	0.028	1.24	0.788	/
		10	QPSK	Receiver Off	100%	0	26765/821.5	23.50	22.41	0.557	-0.058	1.29	0.716	/
	Back Side Repeat	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.942	-0.029	1.15	1.079	/
	Front Side	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.379	0.051	1.15	0.434	/
		10	QPSK	Receiver Off	50%	39	26965/841.5	23.50	22.58	0.276	0.042	1.24	0.341	/
	Left Edge	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.387	-0.060	1.15	0.443	/
		10	QPSK	Receiver Off	50%	39	26965/841.5	23.50	22.58	0.189	-0.160	1.24	0.234	/
	Right Edge	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.069	0.011	1.15	0.079	/
		10	QPSK	Receiver Off	50%	39	26965/841.5	23.50	22.58	0.068	-0.090	1.24	0.084	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.042	0.015	1.15	0.048	/
		10	QPSK	Receiver Off	50%	39	26965/841.5	23.50	22.58	0.035	0.013	1.24	0.043	/

	Back Side Battery2	10	QPSK	Receiver Off	1	74	26965/841.5	24.50	23.91	0.897	0.018	1.15	1.028	/
LTE 41	Back Side	10	QPSK	Receiver Off	1	99	41055/2636.5	21.50	21.10	1.030	0.024	1.10	1.129	/
		10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	1.130	-0.170	1.06	1.202	34
		10	QPSK	Receiver Off	100%	0	40620/2593	22.50	22.02	0.927	0.040	1.12	1.035	/
		10	QPSK	Receiver Off	1	50	39750/2506	21.50	20.71	0.798	0.080	1.20	0.957	/
		10	QPSK	Receiver Off	1	99	41490/2680	21.50	21.04	0.530	0.050	1.11	0.589	/
		10	QPSK	Receiver Off	50%	50	39750/2506	22.50	22.03	0.664	0.010	1.11	0.740	/
		10	QPSK	Receiver Off	50%	50	41490/2680	22.50	21.76	0.835	0.093	1.19	0.990	/
		10	QPSK	Receiver Off	100%	0	39750/2506	22.50	21.62	0.581	0.033	1.22	0.712	/
		10	QPSK	Receiver Off	100%	0	41490/2680	22.50	21.65	0.887	0.025	1.22	1.079	/
	Back Side Repeat	10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.690	0.100	1.06	0.734	/
	Front Side	10	QPSK	Receiver Off	1	99	41055/2636.5	21.50	21.10	0.106	0.080	1.10	0.116	/
		10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.057	0.024	1.06	0.061	/
	Left Edge	10	QPSK	Receiver Off	1	99	41055/2636.5	21.50	21.10	0.035	-0.010	1.10	0.038	/
		10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.031	0.160	1.06	0.033	/
	Right Edge	10	QPSK	Receiver Off	1	99	41055/2636.5	21.50	21.10	0.195	-0.100	1.10	0.214	/
		10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.190	0.060	1.06	0.202	/
	Top Edge	10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		10	QPSK	Receiver Off	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Bottom Edge	10	QPSK	Receiver Off	1	99	41055/2636.5	21.50	21.10	0.380	0.030	1.10	0.417	/
		10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.320	0.020	1.06	0.341	/
	Back Side Battery2	10	QPSK	Receiver Off	50%	50	40620/2593	22.50	22.23	0.686	0.022	1.06	0.730	/

Estimated SAR

Band	Configuration	Frequency (MHz)	Maximum Power (dBm)	Separation Distance (mm)	Estimated SAR (W/kg)
Bluetooth	Head	2480	9.00	5	0.334
	Body	2480	9.00	10	0.167
For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 based on the formula below. (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm; where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.					

10.4 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body
Main-Antenna + Bluetooth	Yes	Yes

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

i) Scalar SAR summation < 1.6W/kg, simultaneously transmission SAR measurement is not necessary.

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, simultaneously transmission SAR measurement is not necessary.

The Maximum SAR_{1g} Value for Main-Antenna

SAR_{1g}(W/kg) / Test Position		GSM 850	GSM 1900	WCDMA II	WCDMA IV	WCDMA V	LTE 2	LTE 4	LTE 5	LTE 7	LTE 13	LTE 26	LTE 41	MAX. SAR_{1g}
Head	Left Cheek	0.448	0.537	0.188	0.439	0.310	0.631	0.410	0.335	1.031	0.417	0.430	0.281	1.031
	Left Tilt	0.279	0.273	0.117	0.176	0.137	0.114	0.117	0.155	0.336	0.257	0.222	0.146	0.336
	Right Cheek	0.532	0.530	1.373	0.761	0.252	0.978	0.613	0.354	1.253	0.545	0.443	0.338	1.373
	Right Tilt	0.241	0.307	0.813	0.281	0.084	0.514	0.263	0.277	0.449	0.403	0.337	0.139	0.813
Body	Back Side	1.045	0.640	1.388	0.986	0.917	1.264	0.837	1.295	0.704	1.117	1.094	1.202	1.388
	Front Side	0.659	0.233	0.489	0.253	0.312	0.263	0.133	0.409	0.087	0.415	0.434	0.116	0.659
	Left Edge	0.279	0.063	0.139	0.074	0.274	0.065	0.065	0.353	0.033	0.307	0.443	0.038	0.443
	Right Edge	0.201	0.235	0.376	0.182	0.077	0.277	0.141	0.095	0.169	0.147	0.084	0.214	0.376
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom Edge	0.090	0.279	0.581	0.284	0.046	0.632	0.151	0.066	0.347	0.135	0.048	0.417	0.632

About Bluetooth and Main- Antenna

SAR_{1g}(W/kg) Test Position		Main-Antenna	Bluetooth	MAX. ΣSAR_{1g}
Head	Left, Cheek	1.031	0.334	1.365
	Left, Tilt	0.336	0.334	0.670
	Right, Cheek	1.373	0.001	1.374
	Right, Tilt	0.813	0.334	1.147
Body	Back Side	1.388	0.167	1.555
	Front Side	0.659	0.167	0.826
	Left Edge	0.443	0.167	0.610
	Right Edge	0.376	0.167	0.543
	Top Edge	N/A	0.167	0.167
	Bottom Edge	0.632	0.167	0.799

Note:

1. The value with blue color is the maximum ΣSAR_{1g} Value.
2. MAX. ΣSAR_{1g} =Unlicensed SAR_{MAX} +Licensed SAR_{MAX}
3. MAX. ΣSAR_{1g} = 1.555 W/kg<1.6W/kg, so the Simultaneous transmission SAR with volume scan are not required for Bluetooth and Main-Antenna.

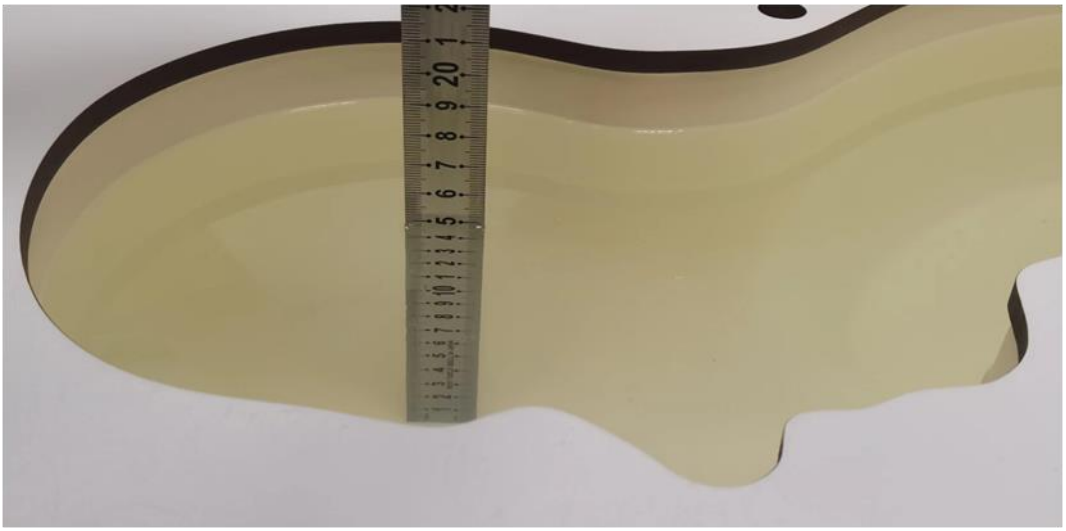
11 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval.

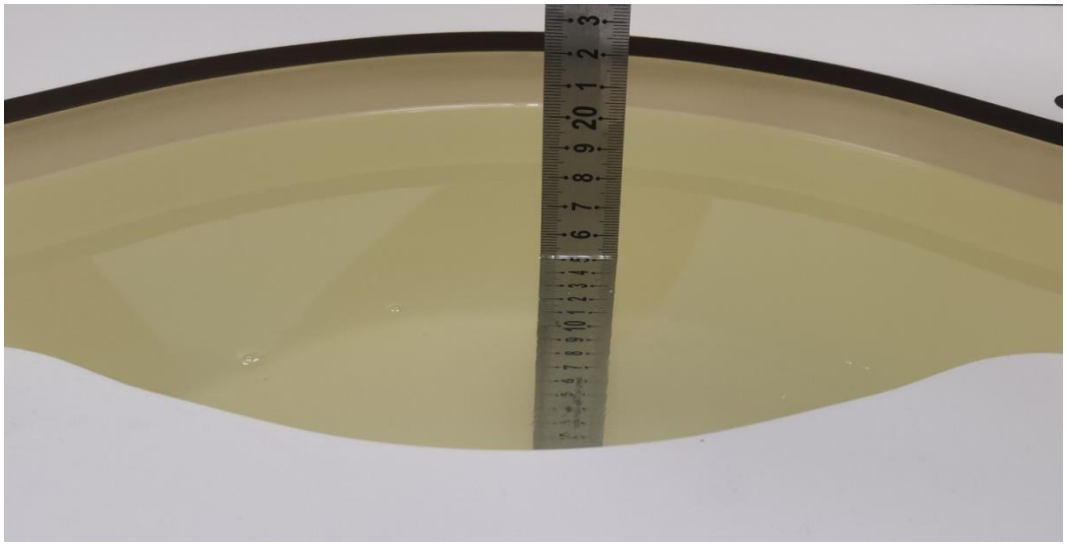
ANNEX A: Test Layout

Tissue Simulating Liquids

For the measurement of the field distribution inside the flat phantom with DASY, the phantom must be filled with around 25 liters of homogeneous tissue simulating liquid. For SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is ≥15 cm, which is shown as below.



Picture 3: liquid depth in the head Phantom

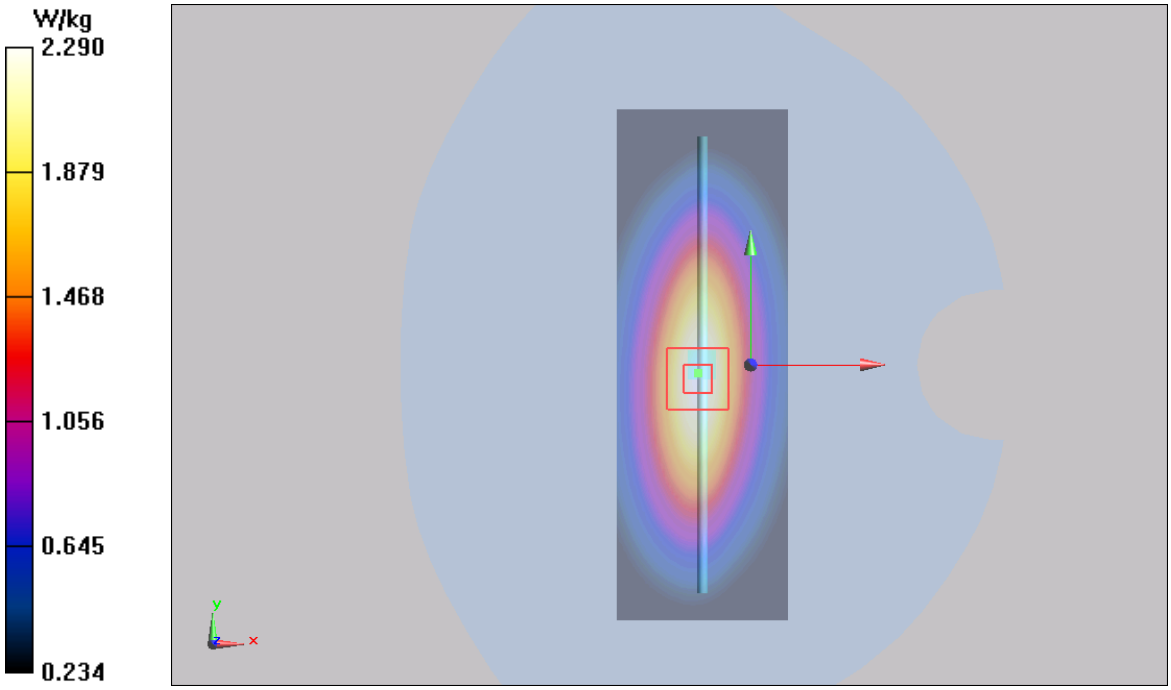


Picture 4: Liquid depth in the flat Phantom

ANNEX B: System Check Results

Plot 1 System Performance Check at 750 MHz TSL
DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3
Date: 2025/3/18
Communication System:CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.88 S/m; ε_r = 42.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Probe: EX3DV4 - SN7689; ConvF(9.58, 10.07, 10.24); Calibrated: 2024/6/4
Electronics: DAE4 Sn1317; Calibrated: 2024/9/10
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm,Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.15 W/kg
d=15mm,Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.165V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 3.16 W/kg
SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg
Smallest distance from peaks to all points 3 dB below = 8.7 mm
Ratio of SAR at M2 to SAR at M1 = 62.5%
Maximum value of SAR (measured) = 2.29 W/kg



Plot 2 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2

Date: 2025/3/20

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ =0.87 S/m; ε_r = 41.3; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(9.44, 9.92, 10.09); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.59 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.023 V/m; Power Drift = -0.06 dB

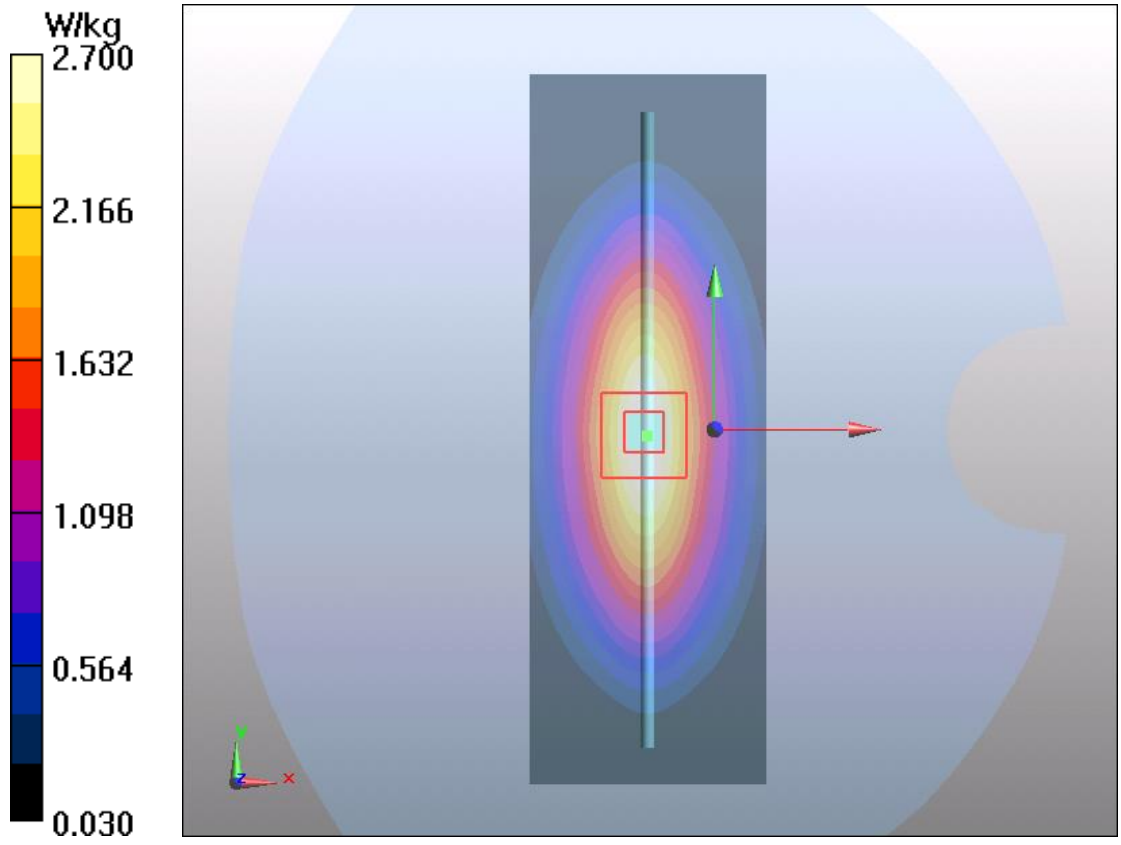
Peak SAR (extrapolated) = 3.25 W/kg

SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.65 W/kg

Smallest distance from peaks to all points 3 dB below = 15.7 mm

Ratio of SAR at M2 to SAR at M1 = 65.4%

Maximum value of SAR (measured) = 2.70 W/kg



Plot 3 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2

Date: 2025/3/21

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.92 S/m; ε_r = 41.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(9.44, 9.92, 10.09); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.52 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.435 V/m; Power Drift = -0.014 dB

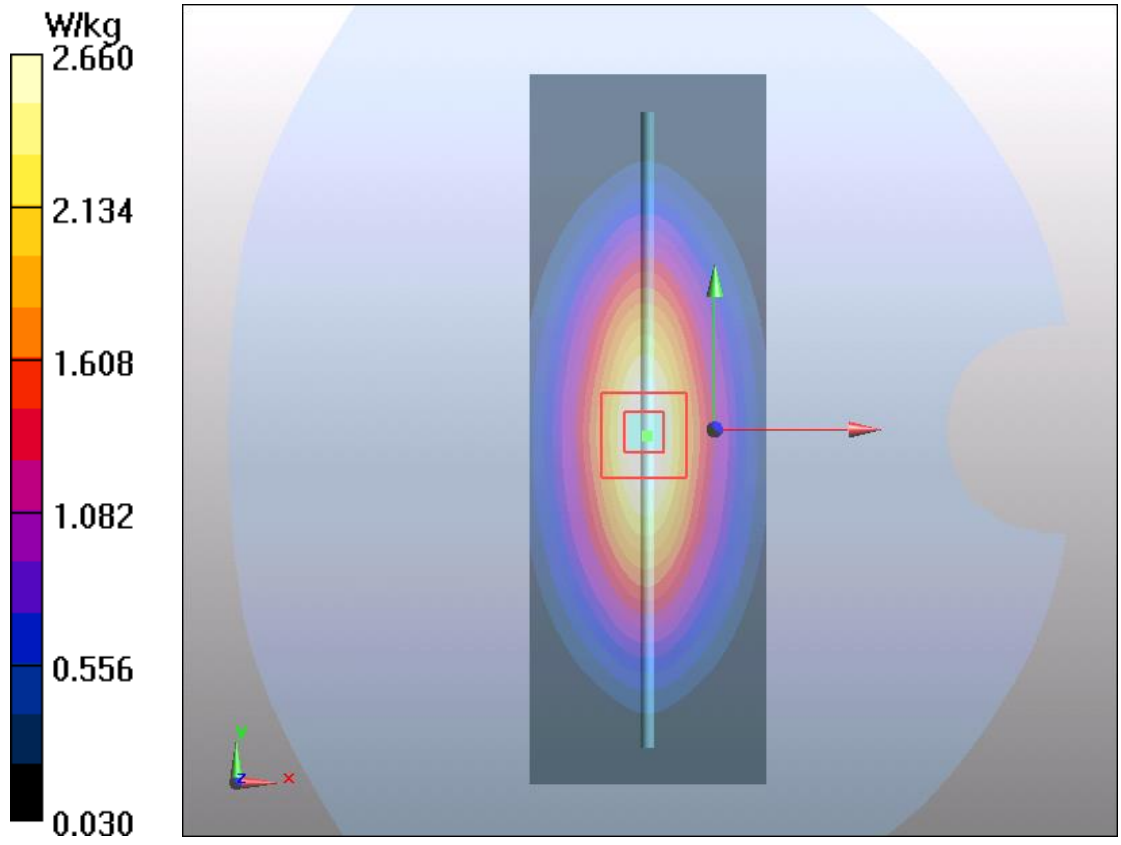
Peak SAR (extrapolated) = 3.18 W/kg

SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.61 W/kg

Smallest distance from peaks to all points 3 dB below = 16.4 mm

Ratio of SAR at M2 to SAR at M1 = 63.8%

Maximum value of SAR (measured) = 2.660 W/kg



Plot 4 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2

Date: 2025/3/8

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; σ = 1.34 S/m; ε_r = 40.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(8.01, 8.42, 8.56); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.77 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 80.134 V/m; Power Drift = 0.055 dB

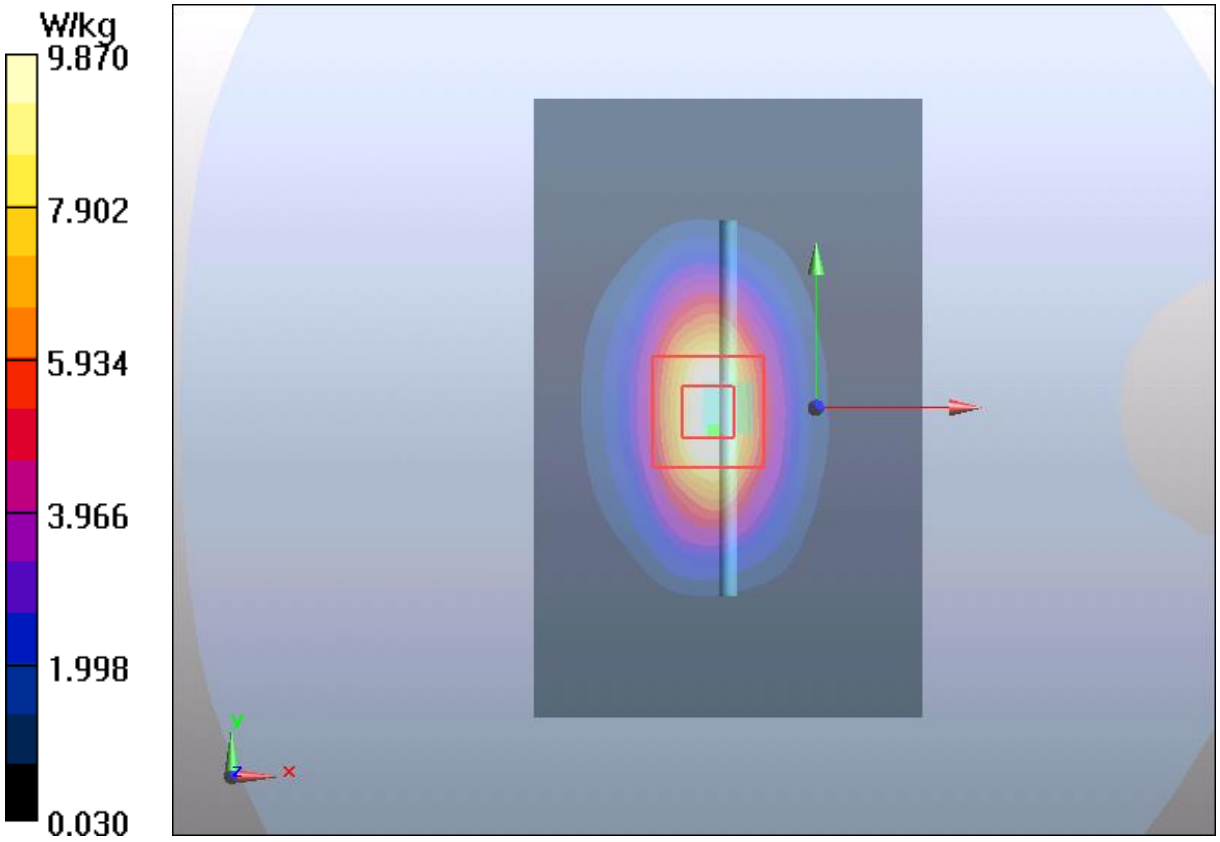
Peak SAR (extrapolated) = 15.81 W/kg

SAR(1 g) = 9.11 W/kg; SAR(10 g) = 4.77 W/kg

Smallest distance from peaks to all points 3 dB below = 8.6mm

Ratio of SAR at M2 to SAR at M1 = 54.6%

Maximum value of SAR (measured) = 9.87 W/kg



Plot 5 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2

Date: 2025/3/9

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; σ = 1.34 S/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(8.01, 8.42, 8.56); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.18 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 80.385 V/m; Power Drift = 0.075 dB

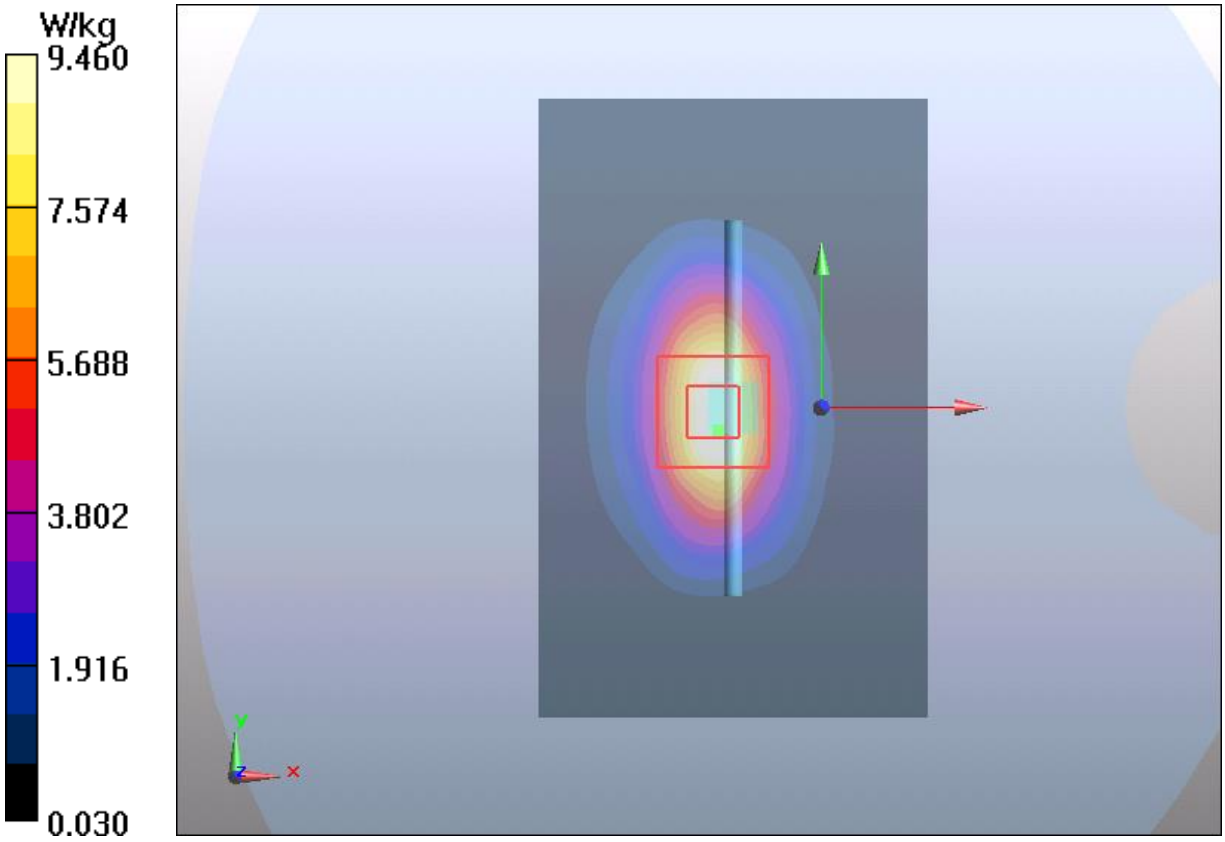
Peak SAR (extrapolated) = 15.5 W/kg

SAR(1 g) = 8.95 W/kg; SAR(10 g) = 4.8 W/kg

Smallest distance from peaks to all points 3 dB below = 10mm

Ratio of SAR at M2 to SAR at M1 = 53.5%

Maximum value of SAR (measured) = 9.46 W/kg



Plot 6 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2

Date: 2025/3/21

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.43 S/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.88, 8.28, 8.42); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.43 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.324 V/m; Power Drift = 0.013 dB

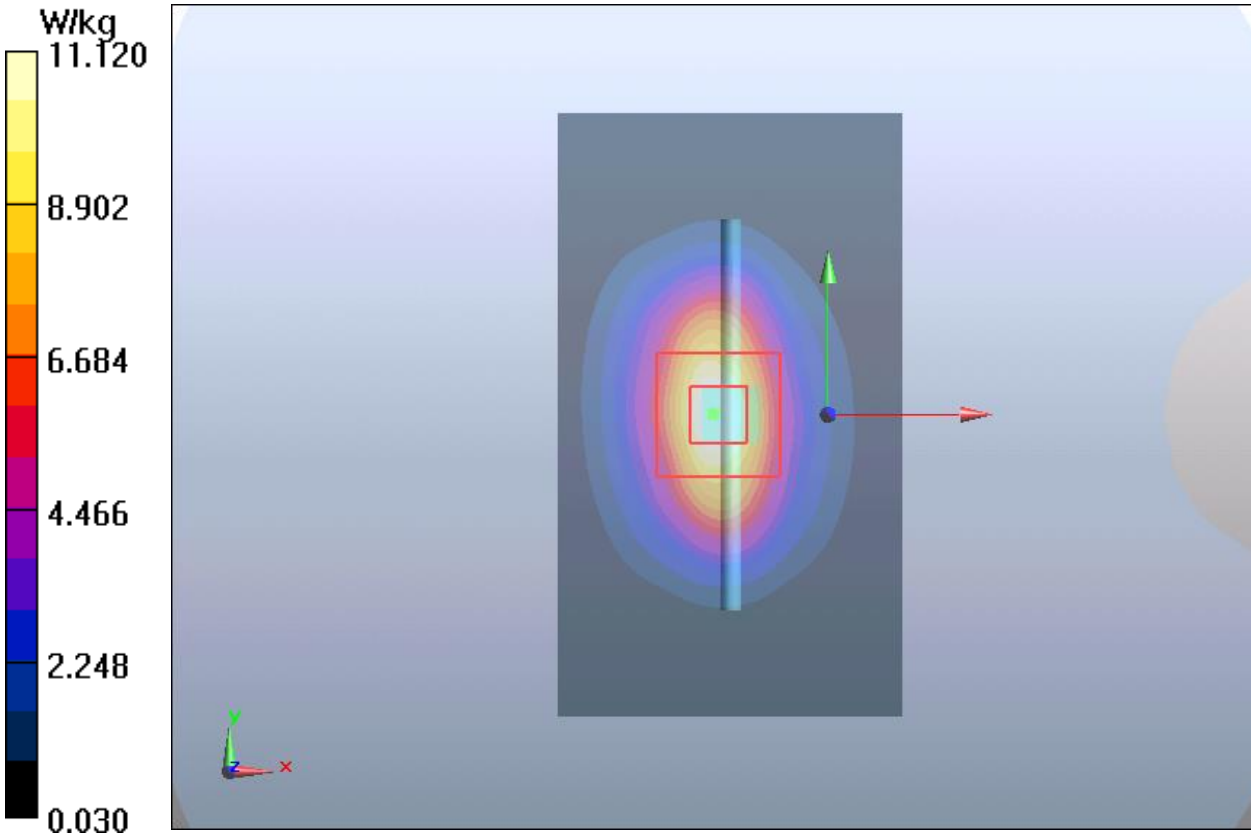
Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 9.85 W/kg; SAR(10 g) = 4.93 W/kg

Smallest distance from peaks to all points 3 dB below = 9.2mm

Ratio of SAR at M2 to SAR at M1 = 56.3%

Maximum value of SAR (measured) = 11.12 W/kg



Plot 7 System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2

Date: 2025/3/22

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.40 S/m; ε_r = 40.0; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.88, 8.28, 8.42); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.86 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.368 V/m; Power Drift = 0.013 dB

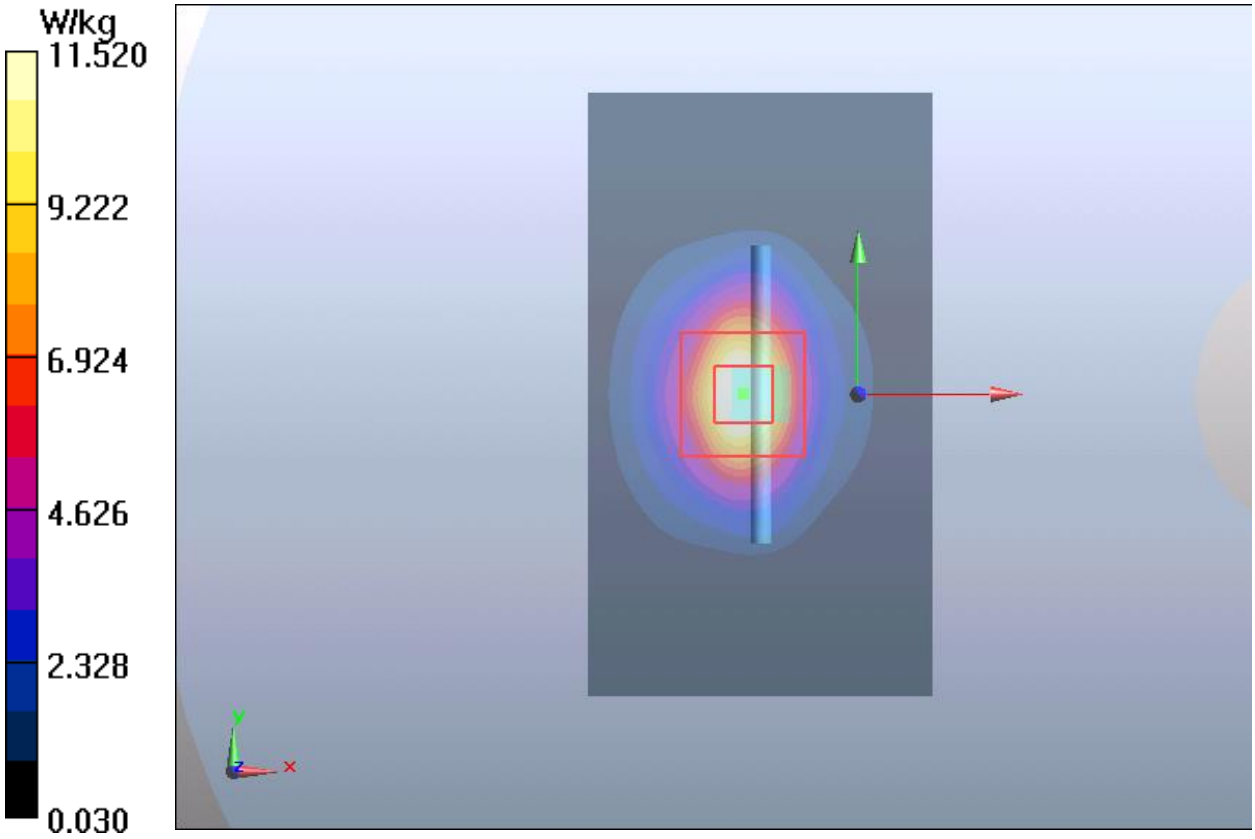
Peak SAR (extrapolated) = 20.12 W/kg

SAR(1 g) = 9.55 W/kg; SAR(10 g) = 4.99 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 52.5%

Maximum value of SAR (measured) = 11.52 W/kg



Plot 8 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2

Date: 2025/3/25

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.82 S/m; ε_r = 38.7; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.62, 8.01, 8.14); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 14.01 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.461V/m; Power Drift = 0.06 dB

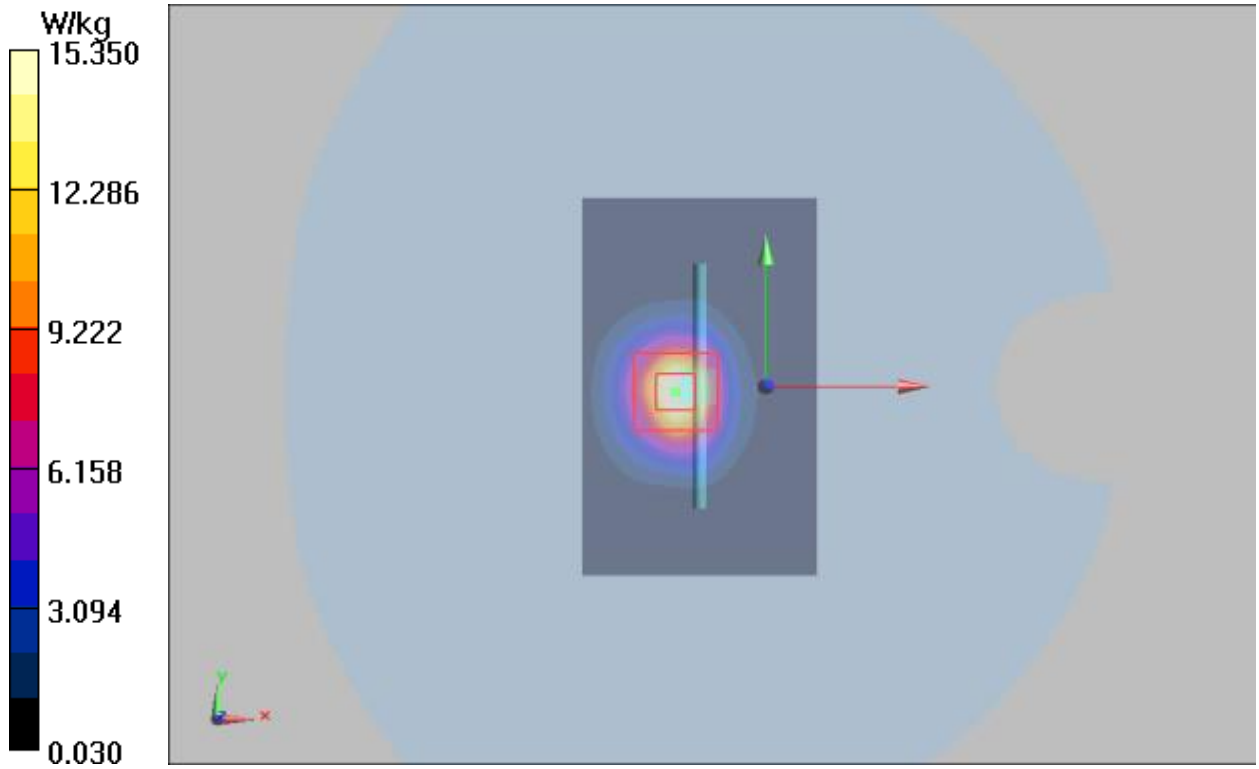
Peak SAR (extrapolated) = 28.46 W/kg

SAR(1 g) = 13.52 W/kg; SAR(10 g) = 6.17 W/kg

Smallest distance from peaks to all points 3 dB below = 9.2 mm

Ratio of SAR at M2 to SAR at M1 = 50.1%

Maximum value of SAR (measured) = 15.35 W/kg



Plot 9 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2

Date: 2025/3/24

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2600 MHz; σ =1.94S/m; ε_r = 38.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.39, 7.77, 7.89); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid:dx=12mm, dy=12mm

Maximum value of SAR (measured) = 15.02 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 84.359 V/m; Power Drift = -0.015 dB

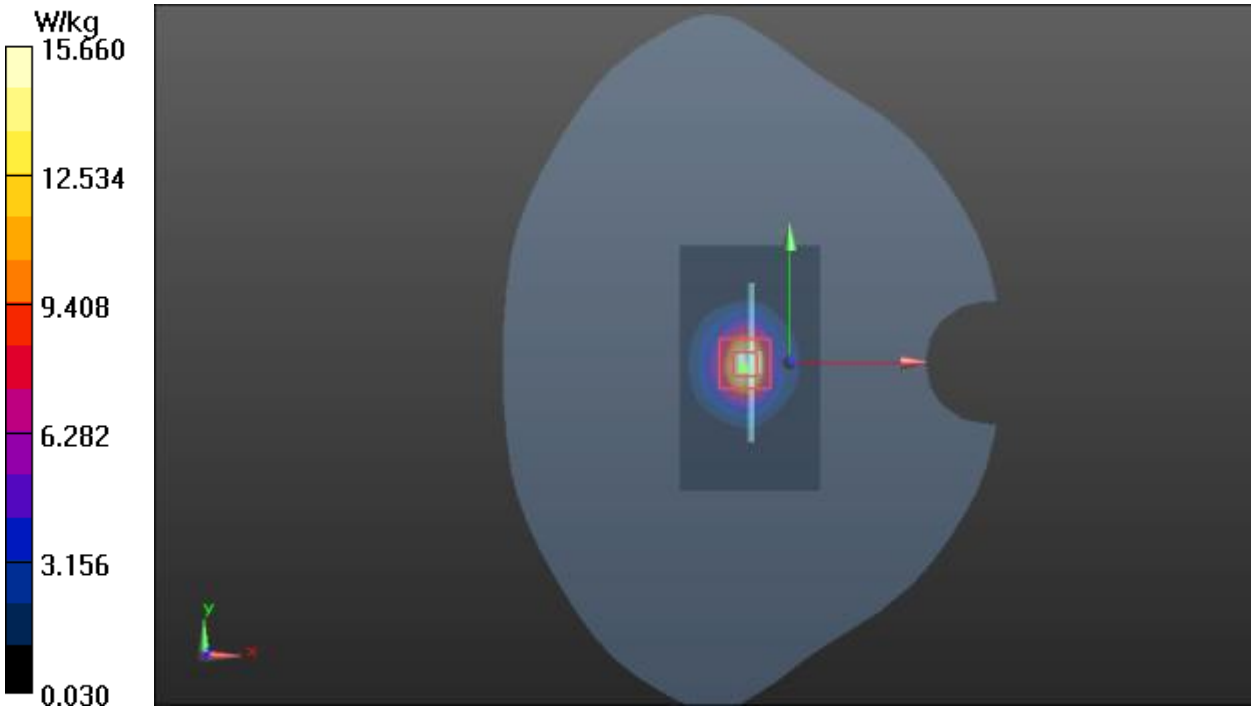
Peak SAR (extrapolated) = 30.62 W/kg

SAR(1 g) = 13.88 W/kg; SAR(10 g) = 6.09 W/kg

Smallest distance from peaks to all points 3 dB below = 10.3 mm

Ratio of SAR at M2 to SAR at M1 = 48.6%

Maximum value of SAR (measured) = 15.66 W/kg



Plot 10 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2

Date: 2025/3/25

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2600 MHz; σ = 1.99 S/m; ε_r = 38.3; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.39, 7.77, 7.89); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 14.20 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.465 V/m; Power Drift = 0.146 dB

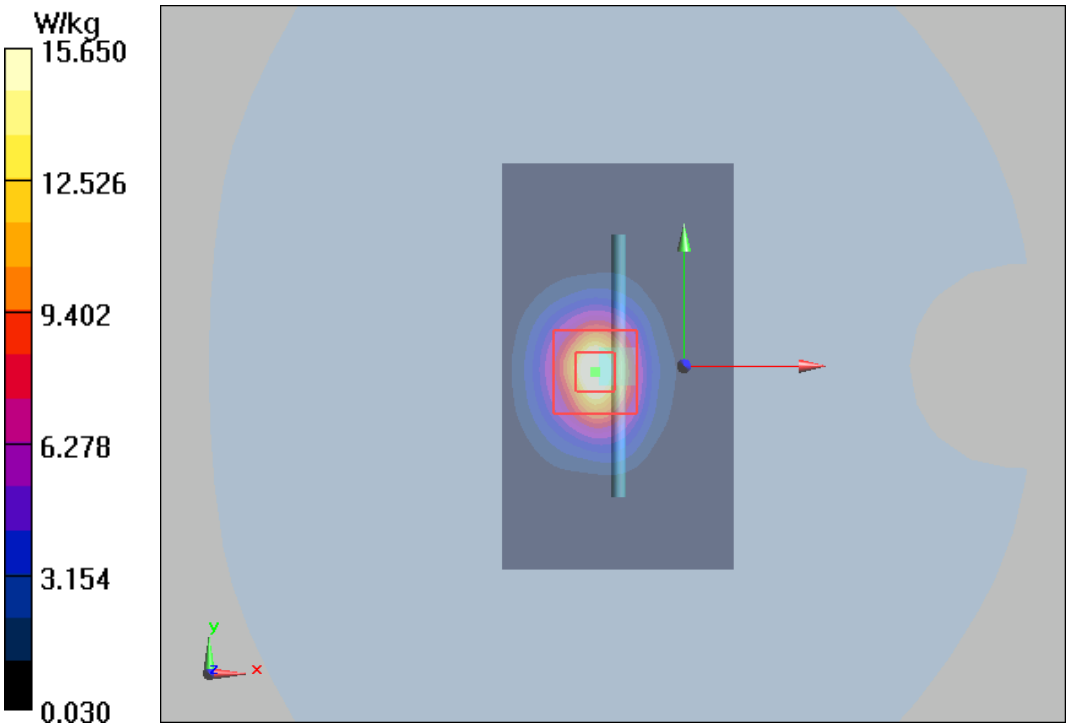
Peak SAR (extrapolated) = 31.85 W/kg

SAR(1 g) = 13.94 W/kg; SAR(10 g) = 6.11 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 47.1%

Maximum value of SAR (measured) = 15.650 W/kg



ANNEX C: Highest Graph Results

Plot 11 GSM 850 Right Cheek Mid

Date: 2025/3/20

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.948 S/m; ε_r = 42.274; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(9.44, 9.92, 10.09); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM 850 Right/Cheek Mid/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.569 W/kg

GSM 850 Right/Cheek Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.055 V/m; Power Drift = 0.10 dB

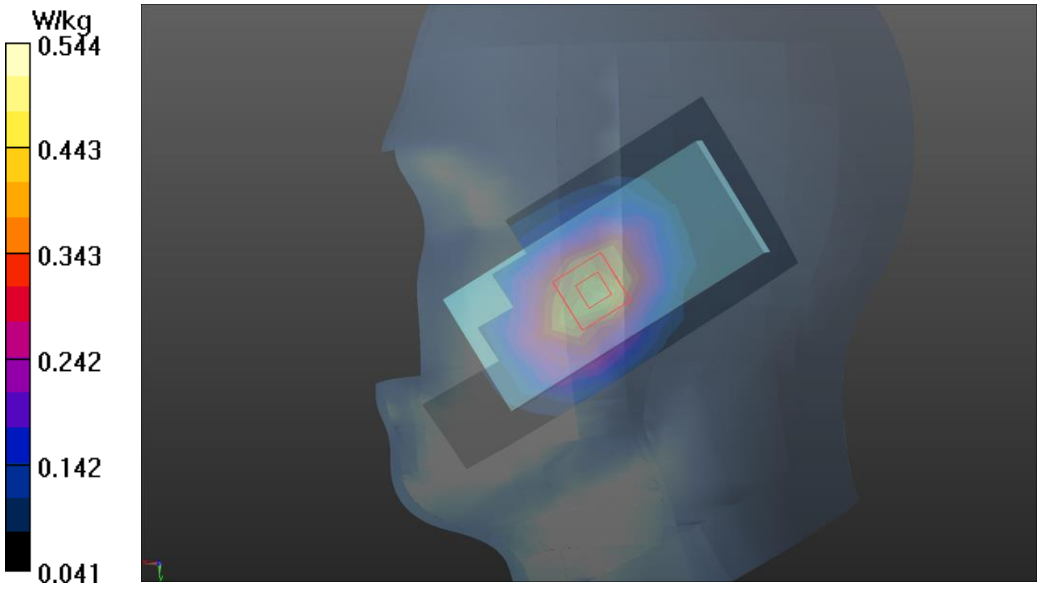
Peak SAR (extrapolated) = 0.604 W/kg

SAR(1 g) = 0.519 W/kg; SAR(10 g) = 0.347 W/kg

Smallest distance from peaks to all points 3 dB below = 19.7 mm

Ratio of SAR at M2 to SAR at M1 = 73.6%

Maximum value of SAR (measured) = 0.544 W/kg



Plot 12 GSM 1900 Left Cheek Mid

Date: 2025/3/22

Communication System: UID 0, GSM (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30042

Medium parameters used: f = 1880 MHz; σ = 1.4 S/m; ε_r = 38.43; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.88, 8.28, 8.42); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM 1900 Left/Cheek Mid/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.457 W/kg

GSM 1900 Left/Cheek Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.788 V/m; Power Drift = 0.020 dB

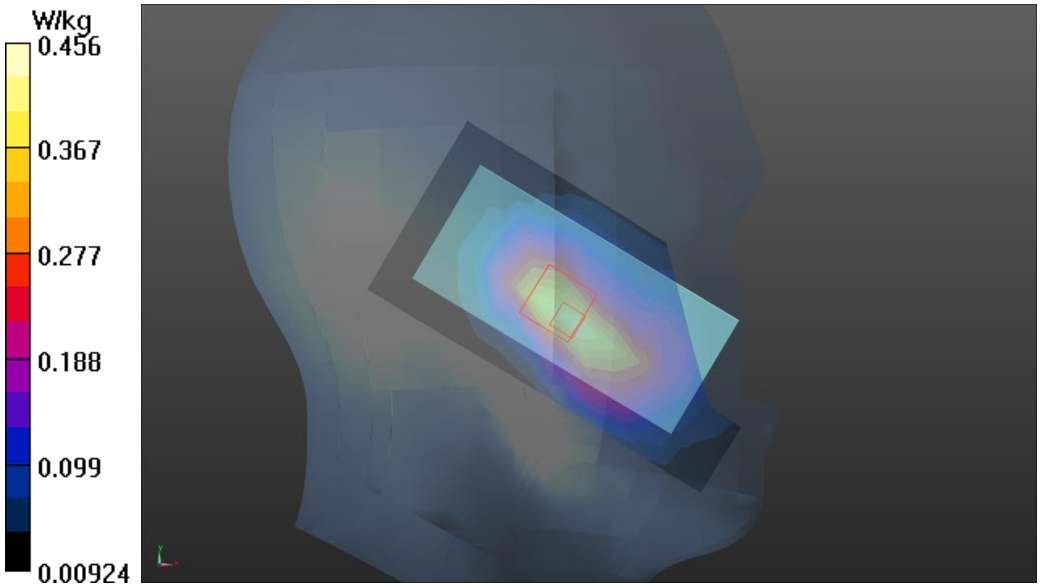
Peak SAR (extrapolated) = 0.612 W/kg

SAR(1 g) = 0.424 W/kg; SAR(10 g) = 0.254 W/kg

Smallest distance from peaks to all points 3 dB below = 10.9 mm

Ratio of SAR at M2 to SAR at M1 = 70.2%

Maximum value of SAR (measured) = 0.456 W/kg



Plot 13 WCDMA B2 Right Cheek Mid

Date: 2025/3/21

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1880 MHz; σ = 1.4 S/m; ε_r = 38.43; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.88, 8.28, 8.42); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA B2 Right/CheekMid/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.39 W/kg

WCDMA B2 Right/CheekMid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.06 V/m; Power Drift = 0.024 dB

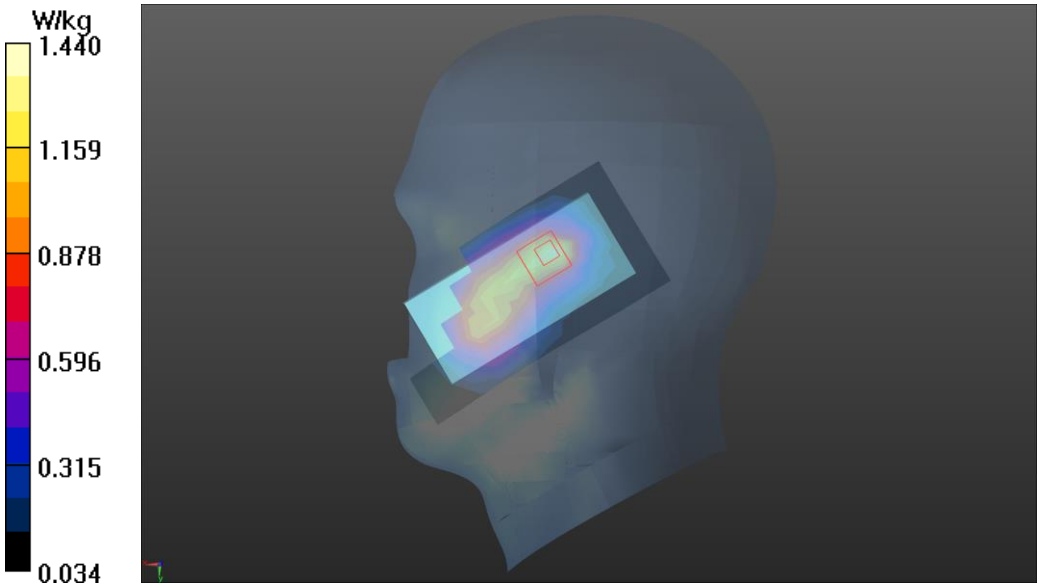
Peak SAR (extrapolated) = 2.05 W/kg

SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.696 W/kg

Smallest distance from peaks to all points 3 dB below = 11.4 mm

Ratio of SAR at M2 to SAR at M1 = 72%

Maximum value of SAR (measured) = 1.44 W/kg



Plot 14 WCDMA B4 Right Cheek Mid

Date: 2025/3/9

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.6 MHz; σ = 1.283 S/m; ε_r = 38.91; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(8.01, 8.42, 8.56); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA B4 Right/Cheek Mid/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.982 W/kg

WCDMA B4 Right/Cheek Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.881 V/m; Power Drift = 0.12 dB

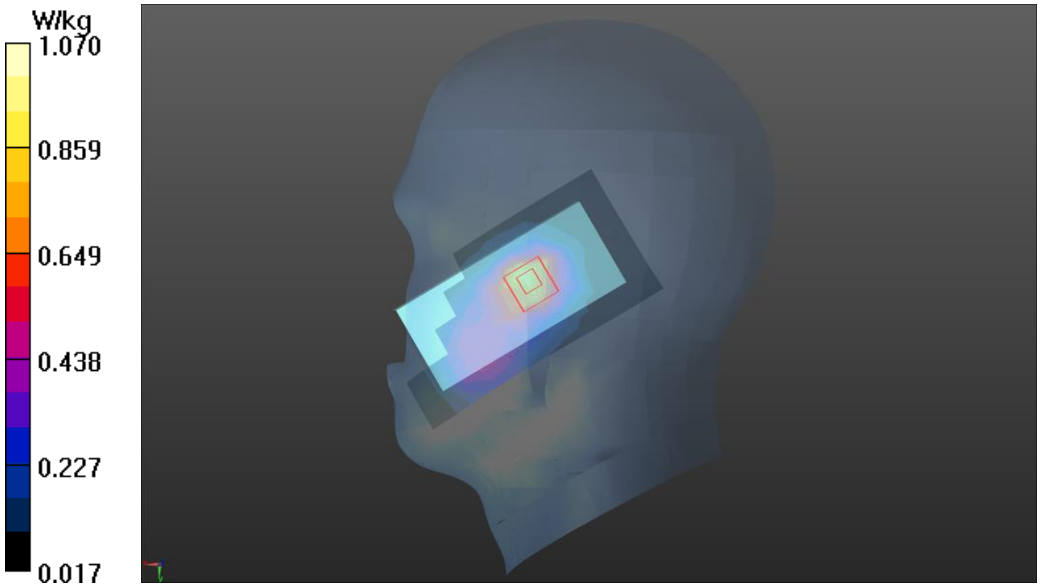
Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.661 W/kg; SAR(10 g) = 0.396 W/kg

Smallest distance from peaks to all points 3 dB below = 12.5 mm

Ratio of SAR at M2 to SAR at M1 = 69.2%

Maximum value of SAR (measured) = 1.07 W/kg



Plot 15 WCDMA B5 Right Cheek Mid

Date: 2025/3/20

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.948 S/m; ε_r = 42.274; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(9.44, 9.92, 10.09); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA B5 Right/Cheek Mid/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.249 W/kg

WCDMA B5 Right/Cheek Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.803 V/m; Power Drift = 0.016 dB

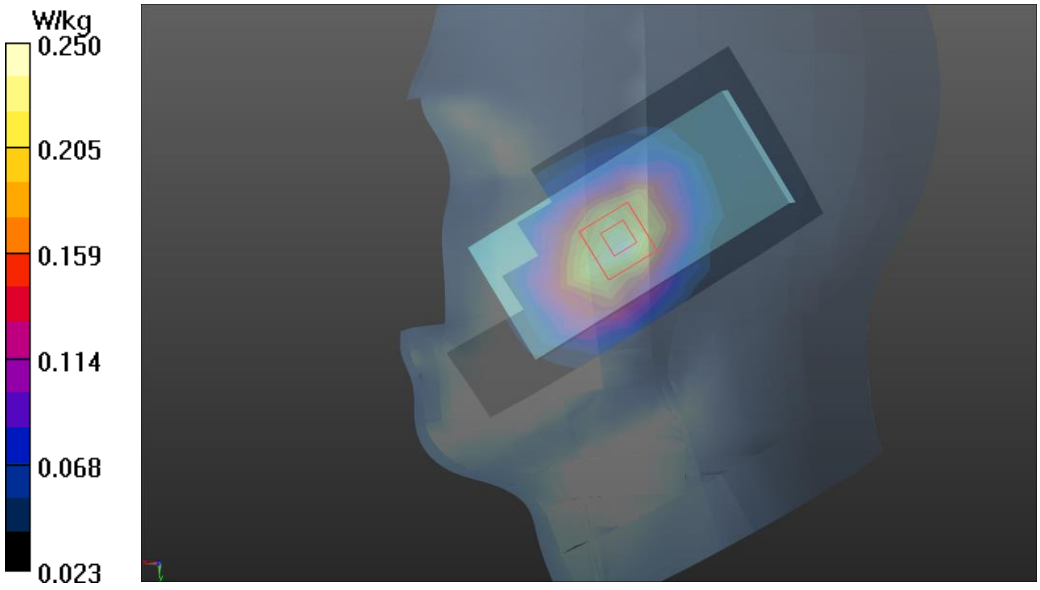
Peak SAR (extrapolated) = 0.319 W/kg

SAR(1 g) = 0.257 W/kg; SAR(10 g) = 0.167 W/kg

Smallest distance from peaks to all points 3 dB below = 17.5 mm

Ratio of SAR at M2 to SAR at M1 = 74.3%

Maximum value of SAR (measured) = 0.250 W/kg



Plot 16 LTE B2 1RB Right Cheek Low

Date: 2025/3/22

Communication System: UID 0, LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.363 S/m; ε_r = 38.557; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(7.88, 8.28, 8.42); Calibrated: 2024/6/4

Electronics: DAE4 Sn1317; Calibrated: 2024/9/10

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE B2 1RB Right/Cheek Low/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.869 W/kg

LTE B2 1RB Right/Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.02 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.777 W/kg; SAR(10 g) = 0.478 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 65.4%

Maximum value of SAR (measured) = 1.28 W/kg