

SAR TEST REPORT

Applicant Dreamtek Intelligent Technology Co., Ltd.
FCC ID 2BOUAD1
Product D1
Brand Dreamtek
Model D1
Report No. EFTA25040106-IE-03-S1
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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 can demonstrate compliance with the requirements as documented in this report.

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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 Hotspot (Separation 10mm)	10g SAR Extremity (Separation 0mm)
GSM 850	1.40	2.96
GSM 1900	0.93	2.04
WCDMA Band V	0.54	1.30
LTE FDD 2	0.90	2.26
LTE FDD 5	0.66	1.54
LTE FDD 7	0.54	1.20
LTE TDD 38/41	0.39	0.85
Wi-Fi (2.4G)	0.46	1.15
Wi-Fi (5G)	1.01	1.08
BT	< 0.10	0.14
Date of Testing: May 15, 2025 ~May 20, 2025		
Date of Sample Received: April 26, 2025		
Note: - The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 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. - 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. - According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands): - Main Antenna SAR for LTE Band 38 (Frequency range: 2570 ~ 2620MHz) is covered by LTE Band 41 (Frequency range 2496 ~ 2690MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.		

Table 1: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Hotspot (Separation 10mm)	10g SAR Extremity (Separation 0mm)
Highest Simultaneous Transmission SAR (W/kg)	1.40	2.96
Note: The detail for simultaneous transmission consideration is described in chapter 10.3.		

3 Description of Equipment under Test

Client Information

Applicant	Dreamtek Intelligent Technology Co., Ltd.
Applicant address	Room 508, Building A2, Area one of Zhongan Chuanggu Science Park, No. 900 of Wangjiang West Road, High-tech Zone, Hefei, Anhui, China
Manufacturer	Dreamtek Intelligent Technology Co., Ltd.
Manufacturer address	Room 508, Building A2, Area one of Zhongan Chuanggu Science Park, No. 900 of Wangjiang West Road, High-tech Zone, Hefei, Anhui, China

General Technologies

Application Purpose	Original Grant
EUT Stage	Identical Prototype
Model	D1
IMEI	IMEI1:354209290017820; IMEI2:354209290020428
Hardware Version	H554-07-DC-0N4-32C-A1; H554-07-DC-0N5-32C-A1
Software Version	1A.1.3(202503171200 INTL)
Antenna Type	Internal Antenna
Wi-Fi Hotspot	Wi-Fi 2.4G
Power Class	GSM 850: 4 GSM 1900: 1 WCDMA Band V: 3 LTE FDD 2/5/7: 3 LTE TDD 38/41: 3
Power Level	GSM 850: level 5 GSM 1900: level 0 WCDMA Band V: all up bits LTE FDD 2/5/7: max power LTE TDD 38/41: max power
EUT Accessory	
Battery 1	Manufacturer: Dongguan HongDe Battery Co.,Ltd. Model: BPK550-026-72-A
Battery 2	Manufacturer: Guangdong Fenghua New Energy Co.,Ltd. Model: BPK550-026-74-B
Adapter 1	Manufacturer: SHENZHEN TIANYIN ELECTRONICS CO.,LTD. Model: TPA-418G050200UU01
Adapter 2	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: LM-603U-050200U02UL

Adapter 3	Manufacturer: SHENZHEN TIANYIN ELECTRONICS CO.,LTD. Model: TPA-418G050200VU01
Adapter 4	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: LM-603E-050200U02CE
USB Cable 1	Manufacturer: Shanghai Wangxing Electronic Technology Co.,Ltd. Model: 809.001.0010
USB Cable 2	Manufacturer: Chongqing Lianmao Electronics Co.,Ltd. Model: 809.001.0012
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.	

Difference Configuration Statement				
Configuration	Configuration 1	Configuration 2	Configuration 3	Configuration 4
Version	D1+ Token Version with the 1st supply of main materials	D1A Token Version with the 1st supply of main materials	D1+ Token Version with the 2nd supply of main materials	D1A Standard Version with the 1st supply of main materials
HWID	H554-07-DC-0N5-32C-A1	H554-07-DC-0N4-32C-A1	H554-07-DC-0N5-32C-A1	H554-07-DC-0N4-32C-A1
Screen	6.517-inch	5-inch	6.517-inch	5-inch
Front Camera	2M FF	0.3M FF	2M FF	0.3M FF
Rear Camera	The 1st supplier	The 1st supplier	The 2nd supplier	The 1st supplier
Printer	The 1st supplier	The 1st supplier	The 2nd supplier	The 1st supplier
MSR	The 1st supplier	The 1st supplier	The 2nd supplier	The 1st supplier
Button Cell CR2032	The 1st supplier	The 1st supplier	The 2nd supplier	The 1st supplier
Configuration	Configuration 5	Configuration 6	Configuration 7	Configuration 8
Version	D1A Standard Version with the 2nd supply of main materials	D1A Token Version with the 2nd supply of main materials	D1+ Standard Version with the 2nd supply of main materials	D1+ Standard Version with the 1st supply of main materials
HWID	H554-07-DC-0N4-32C-A1	H554-07-DC-0N4-32C-A1	H554-07-DC-0N5-32C-A1	H554-07-DC-0N5-32C-A1
Screen	5-inch	5-inch	6.517-inch	6.517-inch
Front Camera	0.3M FF	0.3M FF	2M FF	2M FF
Rear Camera	The 2nd supplier	The 2nd supplier	The 2nd supplier	The 1st supplier
Printer	The 2nd supplier	The 2nd supplier	The 2nd supplier	The 1st supplier
MSR	The 2nd supplier	The 2nd supplier	The 2nd supplier	The 1st supplier
Button Cell CR2032	The 2nd supplier	The 2nd supplier	The 2nd supplier	The 1st supplier
Configuration 1 is the main test configuration, and other configurations only test the worst-case scenarios.				

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK)	☐ Multi-slot Class:8-1UP ☐ Multi-slot Class:10-2UP	824 ~ 849
	1900	EGPRS(GMSK,8PSK)	☒ Multi-slot Class:12-4UP ☐ Multi-slot Class:33-4UP	1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
WCDMA	Band V	QPSK, 16QAM	HSDPA UE Category:14 HSUPA UE Category:6 DC-HSDPA UE Category:21	824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.11 /Category 4	1850 ~ 1910
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	TDD 38			2570 ~ 2620
	TDD 41			2496 ~ 2690
	Does this device support Carrier Aggregation (CA) ☐ Yes downlink only ☒ No			
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
BT	2.4G	Version 5.0 BR/EDR + LE		2402 ~2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20	2412 ~ 2462
		OFDM	802.11n HT40	2422 ~ 2452
	5G	OFDM	802.11a/n HT20/ HT40/ ac VHT20/ VHT40/ VHT80	5150 ~ 5250
				5250 ~ 5350
				5470 ~ 5600 5650 ~ 5825
Does this device support MIMO ☐ Yes ☒ No				
NFC	13.56MHz			

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:

Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02
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
KDB 447498 D01 General RF Exposure Guidance v06

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 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 D04 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 $> 1.2 \text{ W/kg}$, 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 performed 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 ($\sim 10\%$ 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 2: 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 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

5.3.2.3 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 (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) 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 3: 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 $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$ Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.							

5.3.2.4 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 4: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	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} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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 $\beta_c = 10/15$ and $\beta_d = 15/15$.

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 $\beta_c = 14/15$ and $\beta_d = 15/15$.

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 5: 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	4	8	2	2 SF2 & 2	22996	?

(No DPDCH)				SF4		
	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)

5.3.2.5 HSPA and DC-HSDPA Test Configuration

SAR test exclusion may apply to 3GPP Rel. 6 HSPA and Rel. 8 DC-HSDPA. When SAR measurement is required for HSPA or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements. Without prior KDB confirmation to determine the SAR results are acceptable, a PAG is required for equipment approval.

SAR test exclusion for HSPA and DC-HSDPA is determined according to the following:

- 1) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.
- 2) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.
- 3) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA or DC-HSDPA:
 - a) The output power measurement results and applicable release version(s) of 3GPP TS 34.121. Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.
 - b) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.
 - c) The UE category, operating parameters, such as the β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.
- 4) When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

Table 6: HS-DSCH UE category

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI NOTE 1	Total number of soft channel bits	Supported modulations without MIMO operation or dual cell operation	Supported modulations with MIMO operation and without dual cell operation	Supported modulations with dual cell operation
Category 1	5	3	7298	19200	QPSK, 16QAM	Not applicable (MIMO not supported)	Not applicable (dual cell operation not supported)
Category 2	5	3	7298	28800			
Category 3	5	2	7298	28800			
Category 4	5	2	7298	38400			
Category 5	5	1	7298	57600			
Category 6	5	1	7298	67200			
Category 7	10	1	14411	115200			
Category 8	10	1	14411	134400			
Category 9	15	1	20251	172800			
Category 10	15	1	27952	172800			
Category 11	5	2	3630	14400	QPSK		
Category 12	5	1	3630	28800			
Category 13	15	1	35280	259200	QPSK, 16QAM, 64QAM		
Category 14	15	1	42192	259200			
Category 15	15	1	23370	345600	QPSK, 16QAM		
Category 16	15	1	27952	345600			
Category 17 NOTE 2	15	1	35280	259200	QPSK, 16QAM, 64QAM	–	
			23370	345600	–	QPSK, 16QAM	
Category 18 NOTE 3	15	1	42192	259200	QPSK, 16QAM, 64QAM	–	
			27952	345600	–	QPSK, 16QAM	
Category 19	15	1	35280	518400	QPSK, 16QAM, 64QAM		
Category 20	15	1	42192	518400			
Category 21	15	1	23370	345600	-	-	QPSK, 16QAM
Category 22	15	1	27952	345600			QPSK, 16QAM, 64QAM
Category 23	15	1	35280	518400			QPSK, 16QAM, 64QAM
Category 24	15	1	42192	518400			

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 $> \frac{1}{2}$ 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 $> \frac{1}{2}$ 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.

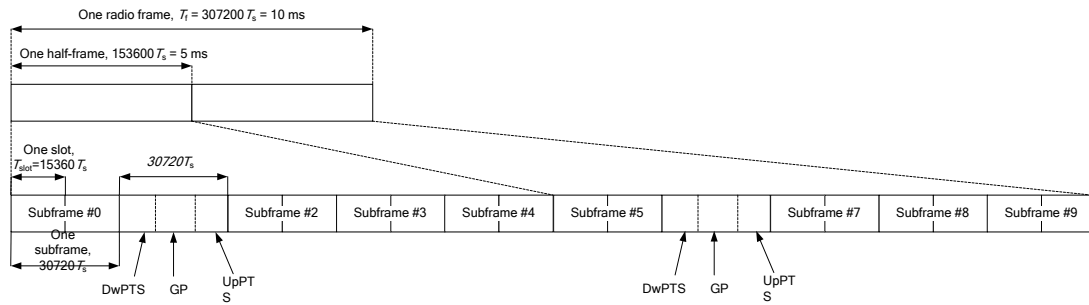


Figure 1: Frame structure type 2

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	-	-	-
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:

$$\text{Duty cycle} = (30720T_s \cdot \text{Ups} + \text{Uplink Component} \cdot \text{Specials}) / (307200T_s)$$

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

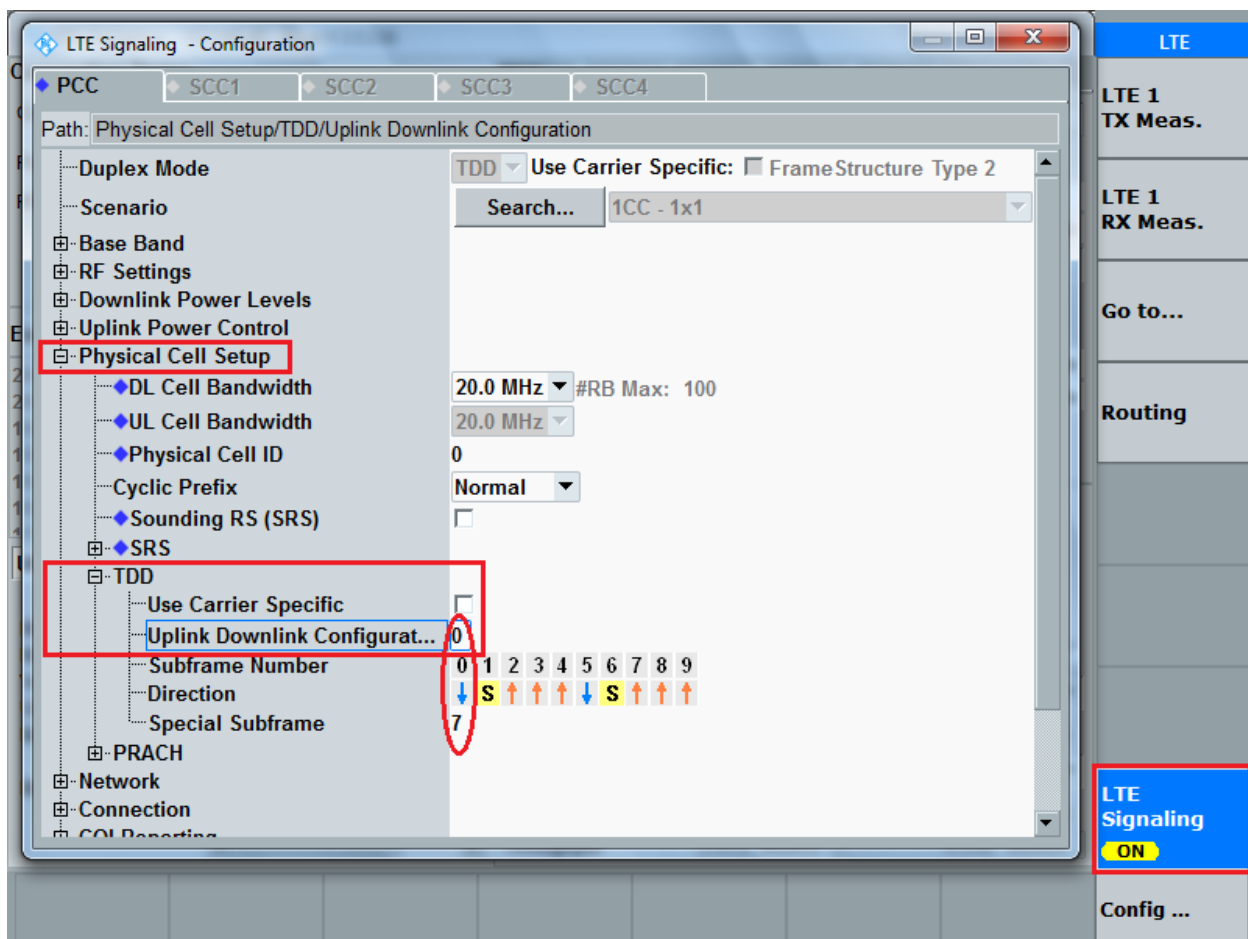
In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(30720\text{Ts} * \text{Ups}) + \text{UpPTS} * \text{Specials}] / (30720\text{Ts})$$

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 Wi-Fi Test Configuration

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for

DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; These are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported SAR* for the *initial test position* is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported SAR* is ≤ 0.8 W/kg or all required test positions are tested.
 - ✧ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - ✧ When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported SAR* is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported SAR* is ≤ 1.2 W/kg or all required test channels are considered.
 - ✧ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

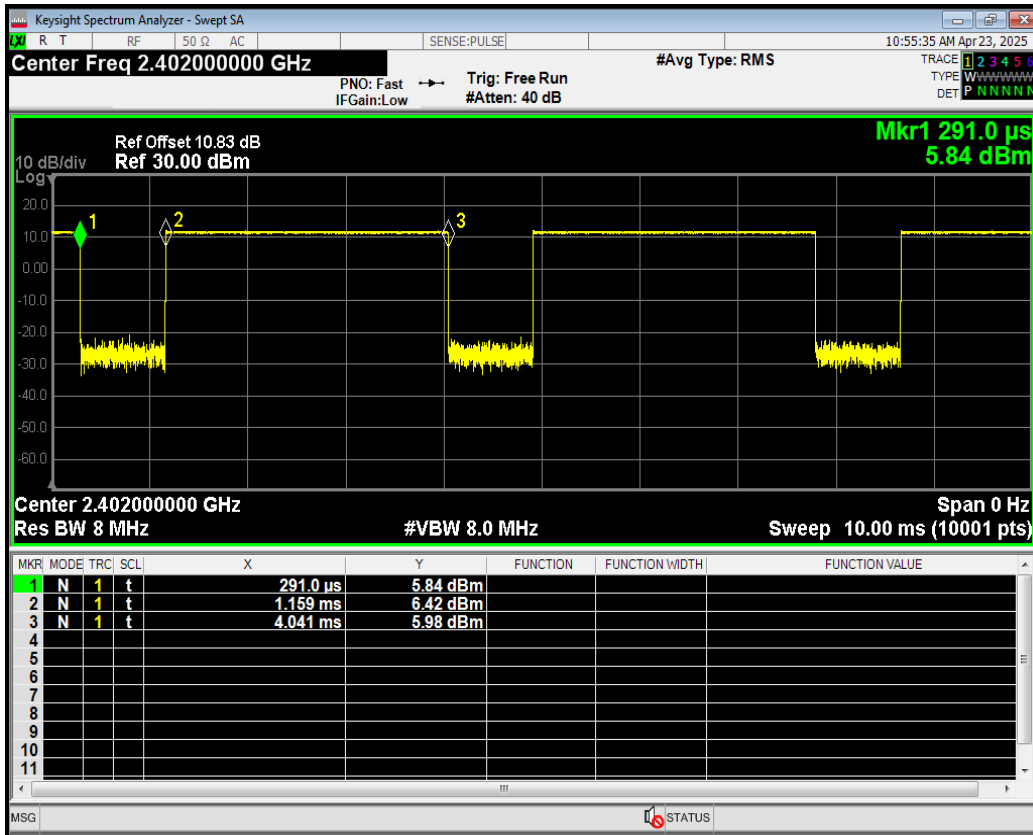
A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

5.3.6 BT Test Configuration

For BT SAR testing, BT 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 hopping off and data rate set for DH5.

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

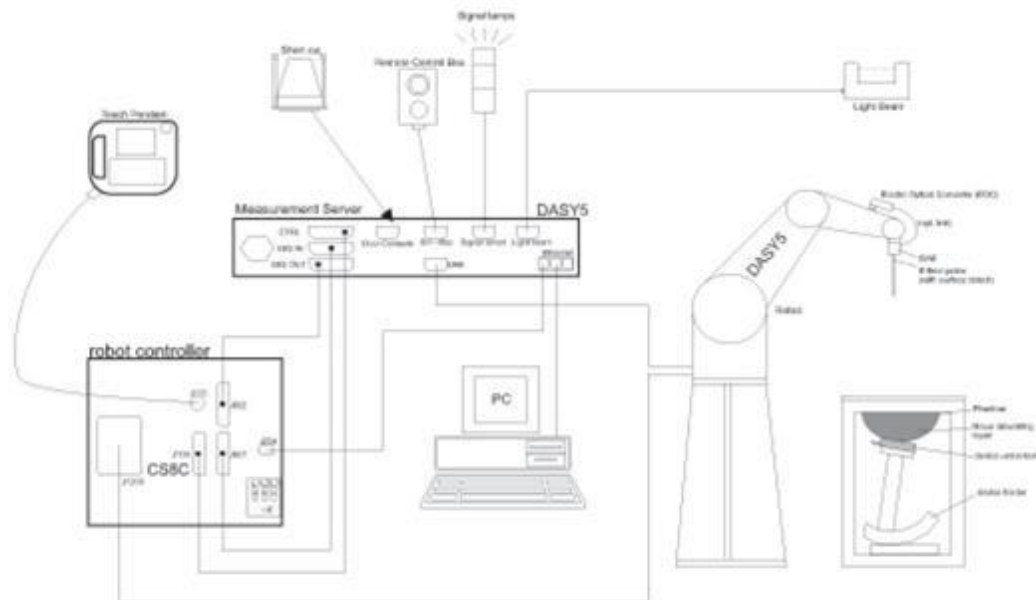


Note: Duty factor= Ton (ms)/ T(on+off) (ms) =76.9%

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 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/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 $\pm 10\%$. The spherical isotropy was evaluated and found to be better than ± 0.25 dB. 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 below 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.

$$\text{SAR} = C \Delta T / \Delta t$$

Where: Δt = Exposure time (30 seconds),
 C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.

Or

$$\text{SAR} = I E I^2 \sigma / \rho$$

Where: σ = Simulated tissue conductivity,
 ρ = Tissue density (kg/m³).

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.

	≤3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Zoom Scan

Zoom scans are used to 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 whose 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: $\Delta x_{\text{zoom}} \Delta y_{\text{zoom}}$			≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\Delta z_{\text{zoom}}(n)$		≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid	$\Delta z_{\text{zoom}}(1)$: between 1 st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
		$\Delta z_{\text{zoom}}(n > 1)$: between subsequent points	≤1.5• $\Delta z_{\text{zoom}}(n-1)$	
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 <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> 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 to 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	/	2025-01-06	2026-01-05
Dielectric Probe Kit	SPEAG	DAK-3.5	1332	/	2024-07-15	2025-07-14
Power Meter	Agilent	E4417A	GB41291714	/	2025-05-06	2026-05-05
Power Sensor	Agilent	N8481H	MY50350004	/	2025-05-06	2026-05-05
Power Sensor	Agilent	E9327A	US40441622	/	2025-05-06	2026-05-05
Signal Generator	KEYSIGHT	N5182B-X07	MY51350303	/	2025-05-06	2026-05-05
Dual Directional Coupler	UCL	UCL-DDC056 G-S	20010600118	/	/	/
Amplifier	R&S	SCU18F	101022	/	/	/
Wireless Communication Tester	Anritsu	MT8820C	6201274381	/	2024-12-03	2025-12-02
Wireless Communication Tester	Agilent	E5515C	MY48360988	/	2024-12-03	2025-12-02
E-field Probe	SPEAG	EX3DV4	7689	/	2024-06-04	2025-06-03
DAE	SPEAG	DAE4	1317	/	2024-09-10	2025-09-09
Validation Kit 835MHz	SPEAG	D835V2	4d020	/	2023-09-15	2026-09-14
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
Validation Kit 5GHz	SPEAG	D5GHzV2	1203	/	2022-12-09	2025-12-08
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	SAM2	1666	/	/	/
Hygrothermograph	Anymetr	HTC - 1	TA2025A041	/	2025-05-14	2026-05-13
Test System	SPEAG	TX90 XLspeag	F11/5H7CA1/ A/01	52.10.4.15 27	/	/

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 $\pm 2^\circ\text{C}$ 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	$\sigma(\text{s/m})$
835	41.5	0.90
1900	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
5250	35.9	4.71
5600	35.5	5.07
5750	35.4	5.22

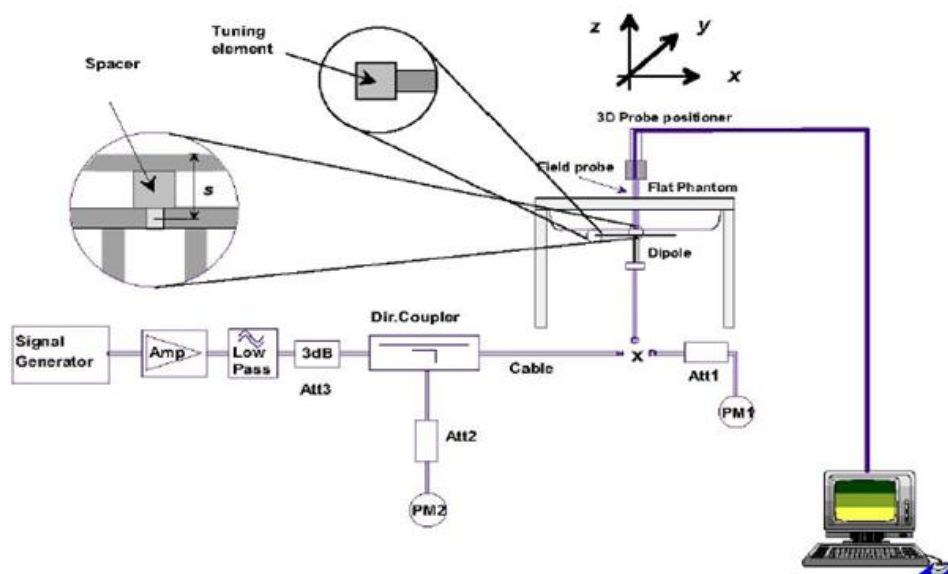
Measurements results

Frequency (MHz)	Test Date	Temp °C	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within $\pm 5\%$)	
			ϵ_r	$\sigma(\text{s/m})$	ϵ_r	$\sigma(\text{s/m})$	Dev $\epsilon_r(\%)$	Dev $\sigma(\%)$
835	5/16/2025	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	5/17/2025	21.5	41.3	0.89	41.5	0.90	-0.48	-1.11
1900	5/18/2025	21.5	40.5	1.34	40.0	1.40	1.25	-4.29
2450	5/15/2025	21.5	38.5	1.84	39.2	1.80	-1.79	2.22
2600	5/20/2025	21.5	39.0	1.98	39.0	1.96	0.00	1.02
5250	5/19/2025	21.5	35.3	4.88	35.9	4.71	-1.67	3.61
5600	5/19/2025	21.5	35.5	5.19	35.5	5.07	0.00	2.37
5750	5/19/2025	21.5	35.0	5.28	35.4	5.22	-1.13	1.15
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 Performance 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	$\Delta\Omega$	Imaginary	$\Delta\Omega$
Dipole D835V2 SN: 4d020	Head	9/15/2023	28.3	/	50.6	/	-3.80	/
	Liquid	9/14/2024	28.9	2.0	51.4	0.8	-3.66	0.14
Dipole D1900V2 SN: 5d060	Head	9/12/2023	24.0	/	50.5	/	6.32	/
	Liquid	9/11/2024	24.1	0.6	50.9	0.4	6.83	0.51
Dipole D2450V2 SN:786	Head	9/12/2023	28.2	/	52.2	/	3.34	/
	Liquid	9/11/2024	28.6	1.4	52.8	0.6	3.43	0.09
Dipole D5GHzV2 (5250 MHz) SN: 1203	Head	12/9/2022	29.0	/	48.5	/	-3.20	/
		12/8/2023	28.4	-2.1	48.4	-0.1	-3.4	-0.2
		12/7/2024	28.6	0.7	49.3	0.9	-3.37	0.03
Dipole D5GHzV2 (5600 MHz) SN: 1203	Head	12/9/2022	30.4	/	51.7	/	2.60	/
		12/8/2023	30.5	0.3	51.5	-0.2	2.4	-0.2
		12/7/2024	30.8	1.0	51.9	0.4	2.85	0.45
Dipole D5GHzV2 (5750 MHz) SN: 1203	Head	12/9/2022	25.3	/	53.6	/	4.30	/
		12/8/2023	25.7	1.6	53.1	-0.5	4.7	0.4
		12/7/2024	26.1	1.6	54.5	1.4	4.62	-0.08

System Check results

Frequency (MHz)	Test Date	Temp °C	250mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit $\pm 10\%$)	250mW Measured SAR _{10g} (W/kg)	1W Normalized SAR _{10g} (W/kg)	1W Target SAR _{10g} (W/kg)	Δ % (Limit $\pm 10\%$)	Plot No.
835	5/16/2025	21.5	2.44	9.76	9.65	1.14	1.60	6.40	6.36	0.63	1
	5/17/2025	21.5	2.51	10.04	9.65	4.04	1.54	6.16	6.36	-3.14	2
1900	5/18/2025	21.5	9.60	38.40	39.50	-2.78	4.98	19.92	20.90	-4.69	3
2450	5/15/2025	21.5	13.64	54.56	52.30	4.32	6.15	24.60	24.50	0.41	4
2600	5/20/2025	21.5	13.85	55.40	56.10	-1.25	5.99	23.96	24.50	-2.20	5
Frequency (MHz)	Test Date	Temp °C	100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit $\pm 10\%$)	100mW Measured SAR _{10g} (W/kg)	1W Normalized SAR _{10g} (W/kg)	1W Target SAR _{10g} (W/kg)	Δ % (Limit $\pm 10\%$)	Plot No.
5250	5/19/2025	21.5	7.83	78.30	78.00	0.38	2.30	23.00	22.40	2.68	6
5600	5/19/2025	21.5	7.94	79.40	80.50	-1.37	2.29	22.90	23.00	-0.43	7
5750	5/19/2025	21.5	7.72	77.20	77.40	-0.26	2.12	21.20	22.00	-3.64	8

Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.

9 Normal and Maximum Output Power

KDB 447498 D04 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

Main-Antenna

GSM 850		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
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.50	32.47	32.45	32.42	9.03	24.47	23.44	23.42	23.39
	2 Tx Slots	32.50	31.74	31.74	31.74	6.02	26.48	25.72	25.72	25.72
	3 Tx Slots	31.00	29.97	30.00	30.03	4.26	26.74	25.71	25.74	25.77
	4 Tx Slots	30.00	28.86	28.92	28.94	3.01	26.99	25.85	25.91	25.93
EGPRS (8PSK)	1 Tx Slot	28.50	27.62	27.52	27.63	9.03	19.47	18.59	18.49	18.60
	2 Tx Slots	27.00	25.78	26.30	26.16	6.02	20.98	19.76	20.28	20.14
	3 Tx Slots	24.50	23.78	23.76	23.69	4.26	20.24	19.52	19.50	19.43
	4 Tx Slots	23.50	22.17	22.65	22.58	3.01	20.49	19.16	19.64	19.57
GSM 1900		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
GPRS/ EGPRS (GMSK)	1 Tx Slot	30.50	29.51	29.61	29.40	9.03	21.47	20.48	20.58	20.37
	2 Tx Slots	29.50	28.78	28.88	28.74	6.02	23.48	22.76	22.86	22.72
	3 Tx Slots	28.00	26.93	27.10	27.01	4.26	23.74	22.67	22.84	22.75
	4 Tx Slots	27.00	25.83	26.04	25.99	3.01	23.99	22.82	23.03	22.98
EGPRS (8PSK)	1 Tx Slot	26.50	25.93	25.74	25.63	9.03	17.47	16.90	16.71	16.60
	2 Tx Slots	25.50	25.00	24.74	24.57	6.02	19.48	18.98	18.72	18.55
	3 Tx Slots	23.00	22.16	22.13	22.47	4.26	18.74	17.90	17.87	18.21
	4 Tx Slots	22.00	21.19	21.34	20.71	3.01	18.99	18.18	18.33	17.70

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

Standalone: GSM 850 GMSK (GPRS) mode with 4 time slots for Max power, GSM 1900 GMSK (GPRS) mode with 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.

Main-Antenna

WCDMA		Band V(dBm)			
Tx Channel		4132	4183	4233	Tune-up Limit
Frequency(MHz)		826.4	836.6	846.6	
RMC	12.2kbps	23.29	23.28	23.34	24.00
HSDPA	Sub 1	22.37	22.32	22.37	23.00
	Sub 2	22.36	22.31	22.36	23.00
	Sub 3	21.85	21.80	21.85	22.00
	Sub 4	21.84	21.79	21.84	22.00
HSUPA	Sub 1	21.33	21.28	21.33	22.00
	Sub 2	19.32	19.27	19.32	20.00
	Sub 3	20.30	20.26	20.31	21.00
	Sub 4	19.29	19.25	19.30	20.00
	Sub 5	22.78	22.74	22.79	23.00
DC-HSDPA	Sub 1	22.29	22.26	22.29	23.00
	Sub 2	22.28	22.25	22.28	23.00
	Sub 3	21.86	21.74	21.79	22.00
	Sub 4	21.85	21.73	21.78	22.00
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".					

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
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3

Main-Antenna

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	22.97	22.94	22.99	24.00
		1	2	23.13	23.03	23.12	24.00
		1	5	23.01	22.92	22.99	24.00
		3	0	23.09	23.02	23.10	24.00
		3	2	23.14	23.04	23.15	24.00
		3	3	23.08	23.03	23.08	24.00
		6	0	22.09	22.08	22.08	23.00
	16QAM	1	0	22.32	22.30	22.32	23.00
		1	2	22.46	22.39	22.41	23.00
		1	5	22.31	22.29	22.26	23.00
		3	0	22.08	22.02	22.11	23.00
		3	2	22.12	22.06	22.17	23.00
		3	3	21.58	22.05	22.13	23.00
		6	0	21.20	21.15	21.23	22.00
	64QAM	1	0	21.17	21.12	21.19	22.00
		1	2	21.27	21.28	21.25	22.00
		1	5	21.17	21.17	21.20	22.00
		3	0	21.25	21.19	21.22	22.00
		3	2	21.26	21.18	21.27	22.00
		3	3	21.25	21.16	21.22	22.00
		6	0	20.09	20.05	20.14	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	

3MHz	QPSK	1	0	23.07	23.02	23.08	24.00
		1	7	23.08	23.01	23.07	24.00
		1	14	23.06	23.00	23.07	24.00
		8	0	22.11	22.06	22.08	23.00
		8	4	22.13	22.06	22.12	23.00
		8	7	22.09	22.05	22.09	23.00
		15	0	22.07	22.08	22.12	23.00
	16QAM	1	0	22.36	22.29	22.32	23.00
		1	7	22.38	22.31	22.41	23.00
		1	14	22.37	22.32	22.34	23.00
		8	0	21.17	21.12	21.16	22.00
		8	4	21.20	21.14	21.21	22.00
		8	7	21.15	21.12	21.18	22.00
		15	0	21.06	21.10	21.12	22.00
	64QAM	1	0	21.22	21.24	21.27	22.00
		1	7	21.24	21.26	21.32	22.00
		1	14	21.24	21.26	21.29	22.00
		8	0	20.12	20.11	20.17	21.00
		8	4	20.16	20.14	20.20	21.00
		8	7	20.12	20.13	20.21	21.00
		15	0	20.12	20.05	20.13	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	22.97	22.91	22.94	24.00
		1	13	23.08	23.03	23.07	24.00
		1	24	22.95	22.88	22.93	24.00
		12	0	22.10	22.09	22.12	23.00
		12	6	22.13	22.11	22.16	23.00
		12	13	22.08	22.02	22.08	23.00
		25	0	22.08	22.07	22.07	23.00
	16QAM	1	0	22.30	22.20	22.20	23.00
		1	13	22.44	22.29	22.37	23.00
		1	24	22.30	22.20	22.22	23.00
		12	0	21.12	21.08	21.15	22.00
		12	6	21.16	21.10	21.16	22.00
		12	13	21.07	21.05	21.07	22.00
		25	0	21.09	21.06	21.12	22.00
	64QAM	1	0	21.18	21.11	21.09	22.00
		1	13	21.32	21.26	21.26	22.00
		1	24	21.18	21.07	21.13	22.00
		12	0	20.13	20.12	20.16	21.00
		12	6	20.14	20.14	20.21	21.00
		12	13	20.05	20.05	20.12	21.00

		25	0	20.09	20.07	20.12	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	23.06	22.97	23.05	24.00
		1	25	23.17	23.16	23.15	24.00
		1	49	23.07	23.03	23.09	24.00
		25	0	22.21	22.08	22.23	23.00
		25	13	22.15	22.11	22.10	23.00
		25	25	22.15	22.06	22.07	23.00
		50	0	22.18	22.06	22.17	23.00
	16QAM	1	0	22.42	22.24	22.30	23.00
		1	25	22.49	22.41	22.47	23.00
		1	49	22.35	22.31	22.33	23.00
		25	0	21.23	21.08	21.22	22.00
		25	13	21.18	21.12	21.13	22.00
		25	25	21.20	21.07	21.09	22.00
		50	0	21.21	21.07	21.17	22.00
	64QAM	1	0	21.31	21.20	21.24	22.00
		1	25	21.38	21.32	21.29	22.00
		1	49	21.25	21.19	21.26	22.00
		25	0	20.19	20.04	20.22	21.00
		25	13	20.14	20.13	20.14	21.00
		25	25	20.18	20.07	20.10	21.00
		50	0	20.14	20.04	20.13	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	23.04	22.95	22.94	24.00
		1	38	23.05	23.02	23.05	24.00
		1	74	22.97	22.95	22.99	24.00
		36	0	22.18	22.06	22.17	23.00
		36	18	22.15	22.13	22.12	23.00
		36	39	22.14	22.05	22.05	23.00
		75	0	22.16	22.08	22.09	23.00
	16QAM	1	0	22.33	22.22	22.31	23.00
		1	38	22.37	22.30	22.37	23.00
		1	74	22.24	22.22	22.30	23.00
		36	0	21.18	21.02	21.16	22.00
		36	18	21.15	21.07	21.09	22.00
		36	39	21.16	21.03	21.03	22.00
		75	0	21.16	21.07	21.12	22.00
	64QAM	1	0	21.29	21.20	21.17	22.00
		1	38	21.32	21.30	21.27	22.00
		1	74	21.21	21.34	21.16	22.00

		36	0	20.18	20.07	20.16	21.00
		36	18	20.14	20.14	20.09	21.00
		36	39	20.10	20.07	20.09	21.00
		75	0	20.14	20.09	20.05	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	22.89	22.86	22.82	24.00
		1	50	23.16	23.09	23.11	24.00
		1	99	22.76	22.82	22.83	24.00
		50	0	22.18	22.10	22.20	23.00
		50	25	22.13	22.11	22.12	23.00
		50	50	22.21	22.03	21.90	23.00
		100	0	22.23	22.07	22.06	23.00
	16QAM	1	0	22.21	22.16	22.08	23.00
		1	50	22.57	22.44	22.40	23.00
		1	99	22.10	22.14	22.21	23.00
		50	0	21.24	21.06	21.19	22.00
		50	25	21.16	21.11	21.12	22.00
		50	50	21.21	21.04	20.94	22.00
		100	0	21.24	21.07	21.06	22.00
	64QAM	1	0	20.94	21.02	21.03	22.00
		1	50	21.28	21.30	21.39	22.00
		1	99	20.85	20.95	21.09	22.00
		50	0	20.23	20.05	20.19	21.00
		50	25	20.18	20.10	20.10	21.00
		50	50	20.21	20.07	19.93	21.00
		100	0	20.25	20.05	20.09	21.00
LTE B5							
Full Power				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	23.37	23.42	23.41	24.00
		1	2	23.52	23.54	23.53	24.00
		1	5	23.38	23.41	23.44	24.00
		3	0	23.49	23.50	23.54	24.00
		3	2	23.52	23.51	23.54	24.00
		3	3	23.50	23.50	23.53	24.00
		6	0	22.59	22.57	22.53	23.00
	16QAM	1	0	22.68	22.78	22.79	23.00
		1	2	22.78	22.91	22.95	23.00
		1	5	22.68	22.73	22.80	23.00
		3	0	22.54	22.54	22.52	23.00
		3	2	22.57	22.59	22.54	23.00

		3	3	22.54	22.56	22.53	23.00
		6	0	21.62	21.63	21.65	22.00
	64QAM	1	0	21.69	21.63	21.59	22.00
		1	2	21.79	21.75	21.75	22.00
		1	5	21.66	21.57	21.62	22.00
		3	0	21.62	21.67	21.68	22.00
		3	2	21.67	21.67	21.70	22.00
		3	3	21.63	21.63	21.64	22.00
		6	0	20.56	20.54	20.57	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.43	23.48	23.43	24.00
		1	7	23.40	23.46	23.46	24.00
		1	14	23.41	23.51	23.49	24.00
		8	0	22.50	22.52	22.54	23.00
		8	4	22.52	22.58	22.58	23.00
		8	7	22.51	22.55	22.56	23.00
		15	0	22.53	22.56	22.56	23.00
	16QAM	1	0	22.70	22.84	22.79	23.00
		1	7	22.72	22.80	22.79	23.00
		1	14	22.76	22.80	22.80	23.00
		8	0	21.56	21.61	21.61	22.00
		8	4	21.59	21.68	21.64	22.00
		8	7	21.53	21.62	21.63	22.00
		15	0	21.52	21.54	21.59	22.00
	64QAM	1	0	21.59	21.65	21.68	22.00
		1	7	21.63	21.66	21.71	22.00
		1	14	21.66	21.70	21.75	22.00
		8	0	20.54	20.55	20.57	21.00
		8	4	20.62	20.62	20.65	21.00
		8	7	20.56	20.62	20.60	21.00
		15	0	20.53	20.56	20.54	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.35	23.37	23.34	24.00
		1	13	23.46	23.47	23.45	24.00
		1	24	23.39	23.38	23.35	24.00
		12	0	22.47	22.49	22.58	23.00
		12	6	22.54	22.59	22.57	23.00
		12	13	22.52	22.57	22.54	23.00
		25	0	22.50	22.56	22.57	23.00
	16QAM	1	0	22.56	22.71	22.66	23.00
		1	13	22.71	22.82	22.78	23.00

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		12	6	21.48	21.56	21.51	22.00
		12	13	21.46	21.54	21.38	22.00
		25	0	21.44	21.52	21.45	22.00
	16QAM	1	0	21.52	21.61	21.53	22.00
		1	13	21.67	21.76	21.72	22.00
		1	24	21.58	21.63	21.57	22.00
		12	0	20.39	20.49	20.46	21.00
		12	6	20.46	20.52	20.46	21.00
		12	13	20.42	20.54	20.39	21.00
		25	0	20.47	20.53	20.45	21.00
	64QAM	1	0	20.45	20.54	20.44	21.00
		1	13	20.63	20.66	20.61	21.00
		1	24	20.51	20.59	20.43	21.00
		12	0	19.47	19.55	19.48	20.00
		12	6	19.48	19.59	19.52	20.00
		12	13	19.50	19.51	19.45	20.00
		25	0	19.47	19.52	19.47	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	22.44	22.45	22.33	23.00
		1	25	22.57	22.57	22.42	23.00
		1	49	22.51	22.55	22.20	23.00
		25	0	21.55	21.49	21.07	22.00
		25	13	21.57	21.29	21.37	22.00
		25	25	21.64	21.44	21.39	22.00
		50	0	21.58	21.26	21.50	22.00
	16QAM	1	0	21.72	21.28	21.46	22.00
		1	25	21.84	21.38	21.38	22.00
		1	49	21.84	21.36	21.40	22.00
		25	0	20.42	20.14	19.98	21.00
		25	13	20.54	20.30	20.23	21.00
		25	25	20.61	20.41	20.18	21.00
		50	0	20.53	20.26	20.32	21.00
	64QAM	1	0	20.61	20.13	20.32	21.00
		1	25	20.70	20.39	20.60	21.00
		1	49	20.69	20.29	20.51	21.00
		25	0	19.47	19.38	19.14	20.00
		25	13	19.55	19.51	19.41	20.00
		25	25	19.63	19.59	19.47	20.00
		50	0	19.55	19.48	19.39	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	22.38	22.39	22.17	23.00

		1	38	22.17	22.10	21.98	23.00
		1	74	22.35	22.01	21.91	23.00
		36	0	21.23	21.23	21.03	22.00
		36	18	21.34	21.51	21.14	22.00
		36	39	21.49	21.43	21.03	22.00
		75	0	21.41	21.34	21.11	22.00
		1	0	21.35	21.20	21.39	22.00
		1	38	21.38	21.34	21.33	22.00
		1	74	21.56	21.31	21.27	22.00
		36	0	20.12	19.98	19.96	21.00
		36	18	20.50	20.05	20.10	21.00
		36	39	20.45	20.03	20.25	21.00
		75	0	20.49	20.21	20.23	21.00
	16QAM	1	0	20.66	20.11	20.17	21.00
		1	38	20.54	20.28	20.39	21.00
		1	74	20.57	20.25	20.39	21.00
		36	0	19.39	19.32	19.16	20.00
		36	18	19.48	19.12	19.42	20.00
		36	39	19.57	19.21	19.25	20.00
		75	0	19.53	19.26	19.44	20.00
	64QAM	1	0	20.66	20.11	20.17	21.00
		1	38	20.54	20.28	20.39	21.00
		1	74	20.57	20.25	20.39	21.00
		36	0	19.39	19.32	19.16	20.00
		36	18	19.48	19.12	19.42	20.00
		36	39	19.57	19.21	19.25	20.00
		75	0	19.53	19.26	19.44	20.00
		75	0	19.53	19.26	19.44	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	21.92	21.92	21.65	23.00
		1	50	22.24	22.19	22.02	23.00
		1	99	22.01	21.88	21.78	23.00
		50	0	21.05	21.08	20.96	22.00
		50	25	21.44	21.11	21.04	22.00
		50	50	21.53	21.20	20.98	22.00
		100	0	21.39	21.16	21.00	22.00
		100	0	21.39	21.16	21.00	22.00
	16QAM	1	0	21.07	21.08	20.97	22.00
		1	50	21.39	21.43	21.36	22.00
		1	99	21.20	21.19	21.08	22.00
		50	0	19.95	20.09	19.98	21.00
		50	25	20.26	20.09	20.03	21.00
		50	50	20.47	20.18	20.00	21.00
		100	0	20.28	20.14	19.97	21.00
		100	0	20.28	20.14	19.97	21.00
	64QAM	1	0	19.88	19.98	20.00	21.00
		1	50	20.30	20.32	20.38	21.00
		1	99	20.32	20.09	20.04	21.00
		50	0	19.30	19.05	18.94	20.00
		50	25	19.42	19.10	19.02	20.00
		50	50	19.61	19.23	18.95	20.00
		100	0	19.48	19.14	19.03	20.00
		100	0	19.48	19.14	19.03	20.00

LTE B38							
Full Power				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	22.42	22.33	22.32	23.00
		1	13	22.53	22.44	22.44	23.00
		1	24	22.41	22.32	22.32	23.00
		12	0	21.53	21.47	21.45	22.00
		12	6	21.54	21.55	21.53	22.00
		12	13	21.38	21.46	21.46	22.00
		25	0	21.47	21.43	21.46	22.00
	16QAM	1	0	21.48	21.46	21.48	22.00
		1	13	21.65	21.58	21.53	22.00
		1	24	21.51	21.45	21.42	22.00
		12	0	20.49	20.42	20.41	21.00
		12	6	20.51	20.48	20.49	21.00
		12	13	20.39	20.44	20.45	21.00
		25	0	20.50	20.49	20.45	21.00
	64QAM	1	0	20.26	20.20	20.19	21.00
		1	13	20.27	20.30	20.23	21.00
		1	24	20.20	20.18	20.14	21.00
		12	0	19.54	19.48	19.48	20.00
		12	6	19.54	19.48	19.53	20.00
		12	13	19.48	19.39	19.50	20.00
		25	0	19.59	19.47	19.46	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	22.52	22.47	22.42	23.00
		1	25	22.43	22.34	22.35	23.00
		1	49	22.49	22.44	22.42	23.00
		25	0	21.63	21.58	21.52	22.00
		25	13	21.53	21.49	21.51	22.00
		25	25	21.53	21.54	21.53	22.00
		50	0	21.54	21.53	21.55	22.00
	16QAM	1	0	21.63	21.56	21.54	22.00
		1	25	21.53	21.45	21.47	22.00
		1	49	21.56	21.55	21.55	22.00
		25	0	20.63	20.57	20.59	21.00
		25	13	20.64	20.49	20.54	21.00
		25	25	20.57	20.57	20.54	21.00
		50	0	20.63	20.59	20.61	21.00
	64QAM	1	0	20.32	20.28	20.22	21.00
		1	25	20.29	20.17	20.18	21.00

		1	49	20.30	20.26	20.25	21.00
		25	0	19.59	19.51	19.61	20.00
		25	13	19.57	19.51	19.54	20.00
		25	25	19.54	19.53	19.57	20.00
		50	0	19.54	19.51	19.62	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	22.43	22.36	22.31	23.00
		1	38	22.48	22.44	22.42	23.00
		1	74	22.38	22.35	22.34	23.00
		36	0	21.48	21.51	21.48	22.00
		36	18	21.40	21.52	21.47	22.00
		36	39	21.51	21.50	21.48	22.00
		75	0	21.51	21.53	21.45	22.00
	16QAM	1	0	21.57	21.46	21.45	22.00
		1	38	21.54	21.55	21.55	22.00
		1	74	21.51	21.48	21.45	22.00
		36	0	20.45	20.48	20.44	21.00
		36	18	20.48	20.41	20.48	21.00
		36	39	20.44	20.45	20.42	21.00
		75	0	20.56	20.56	20.56	21.00
	64QAM	1	0	20.28	20.17	20.16	21.00
		1	38	20.20	20.28	20.23	21.00
		1	74	20.20	20.21	20.17	21.00
		36	0	19.53	19.42	19.43	20.00
		36	18	19.51	19.47	19.50	20.00
		36	39	19.45	19.46	19.51	20.00
		75	0	19.48	19.47	19.57	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	22.26	22.18	22.15	23.00
		1	50	22.54	22.49	22.48	23.00
		1	99	22.20	22.17	22.18	23.00
		50	0	21.54	21.51	21.43	22.00
		50	25	21.50	21.49	21.48	22.00
		50	50	21.50	21.49	21.50	22.00
		100	0	21.50	21.47	21.42	22.00
	16QAM	1	0	21.40	21.34	21.29	22.00
		1	50	21.65	21.64	21.58	22.00
		1	99	21.32	21.29	21.30	22.00
		50	0	20.62	20.54	20.52	21.00
		50	25	20.58	20.58	20.55	21.00
		50	50	20.55	20.54	20.55	21.00

		100	0	20.52	20.51	20.48	21.00
	64QAM	1	0	20.05	20.02	20.00	21.00
		1	50	20.35	20.34	20.32	21.00
		1	99	20.05	20.00	20.01	21.00
		50	0	19.59	19.54	19.50	20.00
		50	25	19.53	19.51	19.55	20.00
		50	50	19.52	19.43	19.54	20.00
		100	0	19.45	19.48	19.48	20.00

LTE B41									
Full Power				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	22.52	22.45	22.36	22.30	22.33	23.00
		1	13	22.58	22.60	22.44	22.40	22.46	23.00
		1	24	22.52	22.26	22.36	22.33	22.36	23.00
		12	0	21.62	21.62	21.47	21.42	21.50	22.00
		12	6	21.68	21.62	21.54	21.54	21.57	22.00
		12	13	21.57	21.54	21.43	21.46	21.48	22.00
		25	0	21.66	21.61	21.43	21.49	21.50	22.00
	16QAM	1	0	21.59	21.57	21.47	21.43	21.49	22.00
		1	13	21.70	21.65	21.61	21.52	21.59	22.00
		1	24	21.58	21.60	21.49	21.42	21.47	22.00
		12	0	20.56	20.52	20.46	20.41	20.48	21.00
		12	6	20.62	20.57	20.50	20.48	20.55	21.00
		12	13	20.57	20.53	20.41	20.46	20.46	21.00
		25	0	20.64	20.62	20.51	20.50	20.56	21.00
	64QAM	1	0	20.34	20.30	20.19	20.14	20.22	21.00
		1	13	20.44	20.37	20.27	20.26	20.32	21.00
		1	24	20.30	20.30	20.11	20.17	20.21	21.00
		12	0	19.64	19.57	19.48	19.45	19.53	20.00
		12	6	19.64	19.57	19.54	19.53	19.57	20.00
		12	13	19.59	19.57	19.46	19.54	19.51	20.00
		25	0	19.64	19.61	19.48	19.47	19.61	20.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	22.65	22.58	22.47	22.42	22.46	23.00
		1	25	22.57	22.55	22.38	22.33	22.41	23.00
		1	49	22.66	22.57	22.49	22.45	22.48	23.00
		25	0	21.65	21.62	21.46	21.50	21.63	22.00
		25	13	21.72	21.72	21.51	21.51	21.55	22.00
		25	25	21.67	21.63	21.44	21.53	21.56	22.00
		50	0	21.61	21.60	21.50	21.58	21.62	22.00

	16QAM	1	0	21.73	21.70	21.58	21.54	21.62	22.00
		1	25	21.66	21.64	21.48	21.44	21.55	22.00
		1	49	21.70	21.66	21.59	21.58	21.64	22.00
		25	0	20.70	20.65	20.50	20.54	20.67	21.00
		25	13	20.70	20.64	20.55	20.53	20.61	21.00
		25	25	20.68	20.62	20.51	20.62	20.64	21.00
		50	0	20.64	20.61	20.53	20.61	20.71	21.00
	64QAM	1	0	20.36	20.37	20.30	20.25	20.30	21.00
		1	25	20.35	20.32	20.19	20.19	20.28	21.00
		1	49	20.41	20.35	20.29	20.26	20.35	21.00
		25	0	19.70	19.66	19.55	19.53	19.70	20.00
		25	13	19.70	19.64	19.54	19.51	19.57	20.00
		25	25	19.71	19.64	19.55	19.59	19.62	20.00
		50	0	19.63	19.61	19.55	19.63	19.70	20.00
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	22.54	22.51	22.39	22.29	22.33	23.00
		1	38	22.65	22.58	22.43	22.37	22.42	23.00
		1	74	22.56	22.46	22.37	22.32	22.34	23.00
		36	0	21.67	21.58	21.51	21.43	21.52	22.00
		36	18	21.72	21.64	21.54	21.45	21.50	22.00
		36	39	21.64	21.61	21.42	21.49	21.47	22.00
		75	0	21.58	21.55	21.46	21.53	21.57	22.00
	16QAM	1	0	21.64	21.57	21.46	21.43	21.41	22.00
		1	38	21.75	21.66	21.58	21.51	21.58	22.00
		1	74	21.66	21.48	21.46	21.44	21.49	22.00
		36	0	20.60	20.55	20.44	20.43	20.47	21.00
		36	18	20.65	20.53	20.49	20.45	20.54	21.00
		36	39	20.57	20.53	20.46	20.47	20.46	21.00
		75	0	20.60	20.54	20.50	20.56	20.62	21.00
	64QAM	1	0	20.30	20.30	20.29	20.17	20.18	21.00
		1	38	20.44	20.36	20.27	20.20	20.26	21.00
		1	74	20.36	20.27	20.19	20.17	20.21	21.00
		36	0	19.57	19.55	19.44	19.32	19.47	20.00
		36	18	19.62	19.57	19.47	19.46	19.55	20.00
		36	39	19.64	19.53	19.46	19.32	19.46	20.00
		75	0	19.62	19.55	19.46	19.47	19.61	20.00
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	22.39	22.35	22.20	22.14	22.17	23.00
		1	50	22.70	22.67	22.52	22.46	22.54	23.00
		1	99	22.39	22.23	22.21	22.17	22.17	23.00
		50	0	21.56	21.53	21.51	21.49	21.55	22.00

		50	25	21.61	21.54	21.44	21.49	21.54	22.00
		50	50	21.65	21.56	21.46	21.53	21.50	22.00
		100	0	21.66	21.57	21.49	21.48	21.50	22.00
	16QAM	1	0	21.51	21.45	21.32	21.27	21.34	22.00
		1	50	21.79	21.77	21.57	21.58	21.64	22.00
		1	99	21.48	21.39	21.29	21.31	21.33	22.00
		50	0	20.60	20.55	20.54	20.53	20.59	21.00
		50	25	20.62	20.56	20.53	20.55	20.63	21.00
		50	50	20.65	20.58	20.54	20.60	20.53	21.00
		100	0	20.68	20.60	20.51	20.56	20.55	21.00
	64QAM	1	0	20.19	20.13	20.03	20.01	20.03	21.00
		1	50	20.52	20.44	20.30	20.26	20.32	21.00
		1	99	20.16	20.05	20.03	19.98	20.03	21.00
		50	0	19.61	19.59	19.54	19.51	19.62	20.00
		50	25	19.66	19.53	19.53	19.51	19.62	20.00
		50	50	19.70	19.59	19.51	19.59	19.57	20.00
		100	0	19.69	19.59	19.48	19.54	19.55	20.00

9.4 WLAN Mode

Wi-Fi 2.4G Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b(1M)	1/2412	19.00	17.53
	6/2437	19.00	17.87
	11/2462	19.00	17.14
802.11g(6M)	1/2412	17.00	15.55
	6/2437	17.00	15.82
	11/2462	17.00	15.26
802.11n(HT20,800ns) (MCS0)	1/2412	17.00	15.02
	6/2437	17.00	15.60
	11/2462	17.00	15.02

Note: Initial test configuration is 802.11b mode.

Wi-Fi 5G (U-NII-1) Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	16.00	15.00
	40/5200	16.00	14.99
	48/5240	16.00	15.11
802.11nHT20(MCS0)	36/5180	16.00	15.01
	40/5200	16.00	14.93
	48/5240	16.00	14.98
802.11nHT40(MCS0)	38/5190	16.00	14.85
	46/5230	16.00	14.94
802.11ac-VHT20(MCS0)	36/5180	16.00	15.01
	40/5200	16.00	14.93
	48/5240	16.00	15.06
802.11ac-VHT40(MCS0)	38/5190	16.00	15.04
	46/5230	16.00	15.10
802.11ac-VHT80(MCS0)	42/5210	16.00	14.69

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.

Wi-Fi 5G (U-NII-2A)	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Mode			
802.11a(6M)	52/5260	16.00	14.94
	60/5300	16.00	15.23
	64/5320	16.00	15.15
802.11nHT20(MCS0)	52/5260	16.00	14.89
	60/5300	16.00	15.08
	64/5320	16.00	15.06
802.11nHT40(MCS0)	54/5270	16.00	14.76
	62/5310	16.00	14.89
802.11ac-VHT20(MCS0)	52/5260	16.00	14.81
	60/5300	16.00	14.91
	64/5320	16.00	14.85
802.11ac-VHT40(MCS0)	54/5270	16.00	15.00
	62/5310	16.00	14.88
802.11ac-VHT80(MCS0)	58/5290	16.00	14.48
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Wi-Fi 5G (U-NII-2C)	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Mode			
802.11a(6M)	100/5500	16.00	15.21
	116/5580	16.00	15.24
	140/5700	16.00	15.20
802.11nHT20(MCS0)	100/5500	16.00	14.99
	116/5580	16.00	15.02
	140/5700	16.00	15.13
802.11nHT40(MCS0)	102/5510	16.00	14.82
	110/5550	16.00	14.95
	134/5670	16.00	14.71
802.11ac-VHT20(MCS0)	100/5500	16.00	15.15
	116/5580	16.00	14.94
	140/5700	16.00	14.96
802.11ac-VHT40(MCS0)	102/5510	16.00	14.89
	110/5550	16.00	15.01
	134/5670	16.00	14.89
802.11ac-VHT80(MCS0)	106/5530	16.00	14.53
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Wi-Fi 5G (U-NII-3)	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Mode			
802.11a(6M)	149/5745	16.00	15.07
	157/5785	16.00	15.02
	165/5825	16.00	15.11
802.11nHT20(MCS0)	149/5745	16.00	14.97
	157/5785	16.00	14.85
	165/5825	16.00	14.88
802.11nHT40(MCS0)	151/5755	16.00	14.65
	159/5795	16.00	14.77
802.11ac-VHT20(MCS0)	149/5745	16.00	14.95
	157/5785	16.00	14.84
	165/5825	16.00	14.93
802.11ac-VHT40(MCS0)	151/5755	16.00	14.98
	159/5795	16.00	15.02
802.11ac-VHT80(MCS0)	155/5775	16.00	14.61
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

9.5 Bluetooth Mode

BT	Conducted Power(dBm)				
	Tune-up Limit (dBm)				
	Channel/Frequency(MHz)				
	Ch 0/2402 MHz	Ch 39/2441 MHz	Tune-up Limit (dBm)	Ch 78/2480 MHz	Tune-up Limit (dBm)
GFSK	8.01	9.13	10.00	4.79	6.50
$\pi/4$ DQPSK	6.46	7.30	8.00	2.33	4.00
8DPSK	6.48	7.27	8.00	2.26	4.00
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	/	Ch 39/2480 MHz	/
GFSK	-4.69	-3.54	0.00	-5.18	0.00

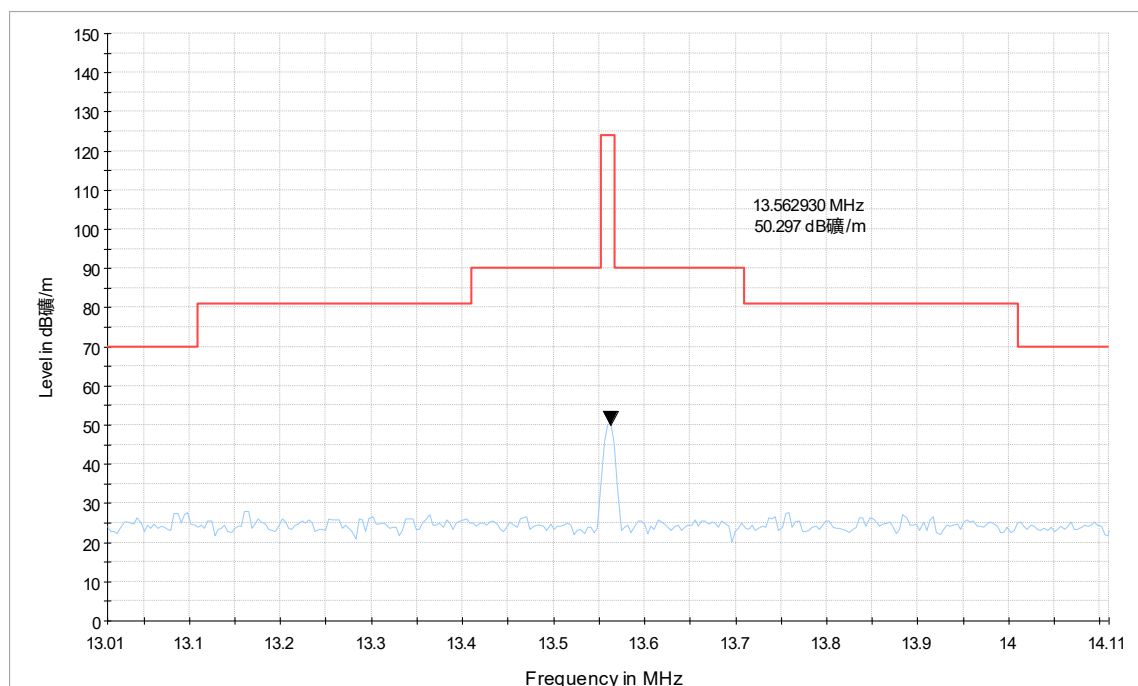
9.6 NFC Mode

Frequency(MHz)	dB μ V/m @3m	EIRP (dBm)	Tune-up Limit (dBm)	Tune-up Limit (mW)
13.56	50.30	-44.90	-43.00	<0.01

Note1: EIRP = Max.H-field strength @ 3m – 95.2

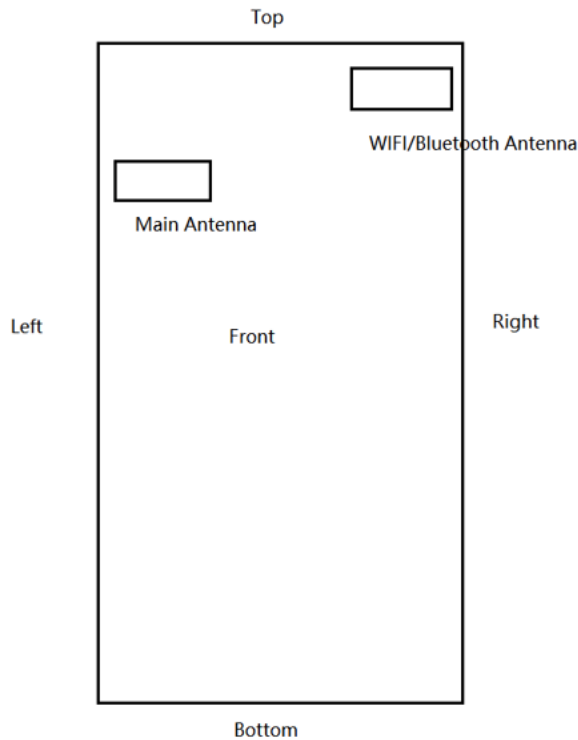
Note2: Tune-up < 1mW According to Section 4.2.4 of KDB 447498 D01 V06, there is an exemption from SAR testing.

The test is in transmitting all modes, NFC-A was selected as the worst condition. The test data of the worst-case condition was recorded in this report. A symbol ($\text{dB}\mu\text{V/m}$) in the test plot below means (dB μ V/m)



10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



Overall (Length x Width): 166 mm x 78 mm						
Overall Diagonal: 177 mm/Display Diagonal: 172mm						
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
BT/Wi-Fi 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	N/A	Yes	N/A
BT/Wi-Fi Antenna	Yes	Yes	N/A	Yes	Yes	N/A

Note: 1. Per KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, 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. For smart phones with an overall diagonal dimension is 177 mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension $> 15.0\text{ cm}$ or an overall diagonal dimension $> 16.0\text{ cm}$, product specific 10-g SAR must be tested as a phablet to determine SAR compliance.

3. Per FCC KDB 447498 D04, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- a) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - b) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - c) ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.
4. When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
5. 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 Measured SAR Results

Note:

- The value with blue color is the maximum SAR Value of each test band.
- For GSM, when multiple slots are used, SAR should be tested to account for the maximum source-based time-averaged output power.
- For WCDMA, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ 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.
- 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 $\geq 50\%$ limit(1g).
- Per 248227, for band U-NII-1 and U-NII-2A, when the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

Hotspot SAR

Band	Test Position	Dist. (mm)	Mode	RB	Offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Power Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Back Side	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.219	0.010	1.28	0.281	/
	Back Side2	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.083	0.049	1.28	0.106	/
	Back Side3	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.296	0.031	1.28	0.380	/
	Front Side	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.203	-0.090	1.28	0.260	/
	Left Edge	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.858	0.032	1.28	1.100	/
	Left Edge	10	4TX Slots	N/A	N/A	128/824.2	30.00	28.86	0.841	0.170	1.30	1.093	/
	Left Edge	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.864	0.060	1.28	1.103	/
	Left Edge Repeat	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.830	-0.023	1.28	1.059	/
	Left Edge SIM2	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.020	0.050	1.28	1.302	/
	Left Edge Battery2	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.060	0.016	1.28	1.353	/
	Left Edge Confing2	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.840	0.090	1.28	1.072	/
	Left Edge Confing3	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.020	0.036	1.28	1.302	/
	Left Edge Confing4	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.775	-0.190	1.28	0.989	/
	Left Edge Confing5	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.926	0.011	1.28	1.182	/
	Left Edge Confing6	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.844	0.080	1.28	1.077	/

	Left Edge Config7	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.100	0.029	1.28	1.404	9
	Left Edge Config8	10	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	0.912	0.077	1.28	1.164	/
	Right Edge	10	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	10	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.088	0.024	1.28	0.113	/
	Bottom Edge	10	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
GSM 1900	Back Side	10	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.098	0.013	1.25	0.122	/
	Front Side	10	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.113	0.028	1.25	0.141	/
	Left Edge	10	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.743	0.041	1.25	0.927	10
	Left Edge	10	4TX Slots	N/A	N/A	512/1850.2	27.00	25.83	0.569	0.040	1.31	0.745	/
	Left Edge	10	4TX Slots	N/A	N/A	810/1909.8	27.00	25.99	0.689	0.050	1.26	0.869	/
	Right Edge	10	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	10	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.105	0.140	1.25	0.131	/
	Bottom Edge	10	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
WCDMA V	Back Side	10	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.119	0.030	1.18	0.140	/
	Front Side	10	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.121	0.029	1.18	0.143	/
	Left Edge	10	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.454	-0.042	1.18	0.536	11
	Right Edge	10	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	10	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.063	0.120	1.18	0.074	/
	Bottom Edge	10	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 2	Back Side	10	QPSK	1	50	18700/1860	24.00	23.16	0.081	0.040	1.21	0.098	/
		10	QPSK	50%	50	18700/1860	24.00	22.21	0.060	0.027	1.51	0.091	/
	Front Side	10	QPSK	1	50	18700/1860	24.00	23.16	0.136	0.063	1.21	0.165	/
		10	QPSK	50%	50	18700/1860	24.00	22.21	0.099	0.048	1.51	0.149	/
	Left Edge	10	QPSK	1	50	18700/1860	24.00	23.16	0.734	-0.010	1.21	0.891	12
		10	QPSK	1	50	18900/1880	24.00	23.09	0.733	-0.030	1.23	0.904	/
		10	QPSK	1	50	19100/1900	24.00	23.11	0.672	0.029	1.23	0.825	/
		10	QPSK	50%	50	18700/1860	24.00	22.21	0.516	0.075	1.51	0.779	/
		10	QPSK	100%	0	18700/1860	23.00	22.23	0.614	0.062	1.19	0.733	/
	Right Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	10	QPSK	1	50	18700/1860	24.00	23.16	0.086	0.039	1.21	0.104	/
		10	QPSK	50%	50	18700/1860	24.00	22.21	0.061	0.018	1.51	0.092	/
	Bottom Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 5	Back Side	10	QPSK	1	25	20450/829	24.00	23.57	0.127	0.022	1.10	0.140	/
		10	QPSK	50%	25	20525/836.5	23.00	22.64	0.112	-0.061	1.09	0.122	/
	Front Side	10	QPSK	1	25	20450/829	24.00	23.57	0.130	0.050	1.10	0.144	/
		10	QPSK	50%	25	20525/836.5	23.00	22.64	0.102	0.071	1.09	0.111	/
	Left Edge	10	QPSK	1	25	20450/829	24.00	23.57	0.596	-0.085	1.10	0.658	13
		10	QPSK	50%	25	20525/836.5	23.00	22.64	0.441	0.040	1.09	0.479	/
	Right Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

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		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
	Top Edge	10	QPSK	1	25	20450/829	24.00	23.57	0.057	0.130	1.10	0.063	/	
		10	QPSK	50%	25	20525/836.5	23.00	22.64	0.059	0.027	1.09	0.064	/	
	Bottom Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
LTE 7	Back Side	10	QPSK	1	50	20850/2510	23.00	22.24	0.112	0.120	1.19	0.133	/	
		10	QPSK	50%	50	20850/2510	22.00	21.53	0.121	0.048	1.11	0.135	/	
	Front Side	10	QPSK	1	50	20850/2510	23.00	22.24	0.041	0.041	1.19	0.049	/	
		10	QPSK	50%	50	20850/2510	22.00	21.53	0.045	-0.090	1.11	0.050	/	
	Left Edge	10	QPSK	1	50	20850/2510	23.00	22.24	0.447	0.026	1.19	0.532	/	
		10	QPSK	50%	50	20850/2510	22.00	21.53	0.482	0.037	1.11	0.537	14	
	Right Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
	Top Edge	10	QPSK	1	50	20850/2510	23.00	22.24	0.041	0.150	1.19	0.049	/	
		10	QPSK	50%	50	20850/2510	22.00	21.53	0.045	0.031	1.11	0.050	/	
		Bottom Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 41	Back Side	10	QPSK	1	50	39750/2506	23.00	22.70	0.079	0.015	1.07	0.085	/	
		10	QPSK	50%	50	39750/2506	22.00	21.65	0.067	0.060	1.08	0.073	/	
	Front Side	10	QPSK	1	50	39750/2506	23.00	22.70	0.031	0.022	1.07	0.033	/	
		10	QPSK	50%	50	39750/2506	22.00	21.65	0.025	0.080	1.08	0.027	/	
	Left Edge	10	QPSK	1	50	39750/2506	23.00	22.70	0.361	0.090	1.07	0.387	15	
		10	QPSK	50%	50	39750/2506	22.00	21.65	0.312	0.014	1.08	0.338	/	
	Right Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
	Top Edge	10	QPSK	1	50	39750/2506	23.00	22.70	0.023	0.035	1.07	0.025	/	
		10	QPSK	50%	50	39750/2506	22.00	21.65	0.021	0.100	1.08	0.023	/	
	Bottom Edge	10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		10	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	

Band	Test Position	Dist. (mm)	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Power Scaling Factor	Report SAR1g (W/Kg)	Plot No.
Wi-Fi 2.4G	Back Side	10	802.11b	100.0%	6/2437	19.00	17.87	0.132	-0.083	1.30	0.171	/
	Front Side	10	802.11b	100.0%	6/2437	19.00	17.87	0.104	0.021	1.30	0.135	/
	Left Edge	10	802.11b	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	10	802.11b	100.0%	6/2437	19.00	17.87	0.355	-0.033	1.30	0.460	16
	Top Edge	10	802.11b	100.0%	6/2437	19.00	17.87	0.183	0.015	1.30	0.237	/
	Bottom Edge	10	802.11b	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-2A	Back Side	10	802.11a	100.0%	60/5300	16.00	15.23	0.162	0.087	1.19	0.193	/
	Front Side	10	802.11a	100.0%	60/5300	16.00	15.23	0.104	-0.050	1.19	0.124	/
	Left Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	10	802.11a	100.0%	60/5300	16.00	15.23	0.772	-0.023	1.19	0.922	/

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	Right Edge	10	802.11a	100.0%	52/5260	16.00	14.94	0.793	0.074	1.28	1.012	17
	Right Edge	10	802.11a	100.0%	64/5320	16.00	15.50	0.792	-0.062	1.12	0.889	/
	Top Edge	10	802.11a	100.0%	60/5300	16.00	15.23	0.211	0.041	1.19	0.252	/
	Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-2C	Back Side	10	802.11a	100.0%	116/5580	16.00	15.24	0.180	0.010	1.19	0.214	/
	Front Side	10	802.11a	100.0%	116/5580	16.00	15.24	0.097	0.060	1.19	0.116	/
	Left Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	10	802.11a	100.0%	116/5580	16.00	15.24	0.638	0.023	1.19	0.760	/
	Right Edge	10	802.11a	100.0%	100/5500	16.00	15.21	0.632	-0.030	1.20	0.758	/
	Right Edge	10	802.11a	100.0%	140/5700	16.00	15.20	0.548	0.014	1.20	0.659	/
	Top Edge	10	802.11a	100.0%	116/5580	16.00	15.24	0.246	0.070	1.19	0.293	/
	Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-3	Back Side	10	802.11a	100.0%	165/5825	16.00	15.11	0.184	0.016	1.23	0.226	/
	Front Side	10	802.11a	100.0%	165/5825	16.00	15.11	0.108	0.080	1.23	0.133	/
	Left Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	10	802.11a	100.0%	165/5825	16.00	15.11	0.566	0.027	1.23	0.695	/
	Right Edge	10	802.11a	100.0%	149/5745	16.00	15.07	0.618	0.186	1.24	0.766	/
	Right Edge	10	802.11a	100.0%	157/5785	16.00	15.02	0.576	-0.039	1.25	0.722	/
	Top Edge	10	802.11a	100.0%	165/5825	16.00	15.11	0.262	0.020	1.23	0.322	/
	Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Bluetooth	Back Side	10	DH5	76.9%	39/2441	10.00	9.13	0.001	0.070	1.59	0.002	/
	Front Side	10	DH5	76.9%	39/2441	10.00	9.13	0.001	0.024	1.59	0.002	/
	Left Edge	10	DH5	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	10	DH5	76.9%	39/2441	10.00	9.13	0.038	-0.110	1.59	0.060	18
	Top Edge	10	DH5	76.9%	39/2441	10.00	9.13	0.001	0.030	1.59	0.002	/
	Bottom Edge	10	DH5	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

Extremity SAR

Band	Test Position	Dist. (mm)	Mode	RB	Offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g (W/Kg)	Power Drift (dB)	Power Scaling Factor	Report SAR10g (W/kg)	Plot No.
GSM 850	Back Side	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.167	-0.025	1.28	0.214	/
	Back Side2	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.053	0.026	1.28	0.068	/
	Back Side3	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.273	-0.010	1.28	0.350	/
	Front Side	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.226	-0.020	1.28	0.290	/
	Left Edge	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	1.540	0.010	1.28	1.975	/
	Left Edge	0	4TX Slots	N/A	N/A	128/824.2	30.00	28.86	1.460	0.069	1.30	1.898	/
	Left Edge	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.820	0.120	1.28	2.323	/
	Left Edge SIM2	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.940	-0.130	1.28	2.476	/
	Left Edge Battery2	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.310	0.022	1.28	2.949	/
	Left Edge Config2	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.680	0.070	1.28	2.144	/

	Left Edge Config3	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.040	0.090	1.28	2.604	/
	Left Edge Config4	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.310	-0.032	1.28	2.949	/
	Left Edge Config5	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.090	0.050	1.28	2.668	/
	Left Edge Config6	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	1.910	0.046	1.28	2.438	/
	Left Edge Config7	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.160	0.020	1.28	2.757	/
	Left Edge Config8	0	4TX Slots	N/A	N/A	251/848.8	30.00	28.94	2.320	0.071	1.28	2.961	19
	Right Edge	0	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	4TX Slots	N/A	N/A	190/836.6	30.00	28.92	0.162	0.036	1.28	0.208	/
	Bottom Edge	0	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
GSM 1900	Back Side	0	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.095	0.120	1.25	0.119	/
	Front Side	0	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.158	0.035	1.25	0.197	/
	Left Edge	0	4TX Slots	N/A	N/A	661/1880	27.00	26.04	1.530	0.016	1.25	1.908	/
	Left Edge	0	4TX Slots	N/A	N/A	512/1850.2	27.00	25.83	1.560	-0.090	1.31	2.042	20
	Left Edge	0	4TX Slots	N/A	N/A	810/1909.8	27.00	25.99	1.520	-0.024	1.26	1.918	/
	Right Edge	0	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	4TX Slots	N/A	N/A	661/1880	27.00	26.04	0.100	0.070	1.25	0.125	/
	Bottom Edge	0	4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
WCDMA V	Back Side	0	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.145	0.030	1.18	0.171	/
	Front Side	0	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.194	0.016	1.18	0.229	/
	Left Edge	0	RMC	N/A	N/A	4183/836.6	24.00	23.28	1.100	-0.030	1.18	1.298	21
	Right Edge	0	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	RMC	N/A	N/A	4183/836.6	24.00	23.28	0.175	0.048	1.18	0.207	/
	Bottom Edge	0	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 2	Back Side	0	QPSK	1	50	18700/1860	24.00	23.16	0.073	0.010	1.21	0.089	/
		0	QPSK	50%	50	18700/1860	24.00	22.21	0.053	0.026	1.51	0.080	/
	Front Side	0	QPSK	1	50	18700/1860	24.00	23.16	0.142	-0.032	1.21	0.172	/
		0	QPSK	50%	50	18700/1860	24.00	22.21	0.114	0.015	1.51	0.172	/
	Left Edge	0	QPSK	1	50	18700/1860	24.00	23.16	1.780	0.080	1.21	2.160	/
		0	QPSK	1	50	18900/1880	24.00	23.09	1.830	0.027	1.23	2.257	/
		0	QPSK	1	50	19100/1900	24.00	23.11	1.840	-0.160	1.23	2.258	22
		0	QPSK	50%	50	18700/1860	24.00	22.21	1.430	0.021	1.51	2.159	/
		0	QPSK	50%	25	18900/1880	23.00	22.11	1.540	0.041	1.23	1.890	/
		0	QPSK	50%	0	19100/1900	23.00	22.20	1.550	0.060	1.20	1.864	/
		0	QPSK	100%	0	18700/1860	23.00	22.23	1.610	0.150	1.19	1.922	/
		0	QPSK	100%	0	18900/1880	23.00	22.07	1.460	0.029	1.24	1.809	/

		0	QPSK	100%	0	19100/1900	23.00	22.06	1.550	0.100	1.24	1.925	/
	Right Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	QPSK	1	50	18700/1860	24.00	23.16	0.116	-0.090	1.21	0.141	/
		0	QPSK	50%	50	18700/1860	24.00	22.21	0.092	0.023	1.51	0.139	/
	Bottom Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 5	Back Side	0	QPSK	1	25	20450/829	24.00	23.57	0.150	0.070	1.10	0.166	/
		0	QPSK	50%	25	20525/836.5	23.00	22.64	0.119	0.020	1.09	0.129	/
	Front Side	0	QPSK	1	25	20450/829	24.00	23.57	0.201	0.018	1.10	0.222	/
		0	QPSK	50%	25	20525/836.5	23.00	22.64	0.153	-0.060	1.09	0.166	/
	Left Edge	0	QPSK	1	25	20450/829	24.00	23.57	1.390	-0.039	1.10	1.535	23
		0	QPSK	50%	25	20525/836.5	23.00	22.64	1.040	0.031	1.09	1.130	/
	Right Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	QPSK	1	25	20450/829	24.00	23.57	0.155	0.021	1.10	0.171	/
		0	QPSK	50%	25	20525/836.5	23.00	22.64	0.152	0.040	1.09	0.165	/
	Bottom Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 7	Back Side	0	QPSK	1	50	20850/2510	23.00	22.24	0.073	0.069	1.19	0.087	/
		0	QPSK	50%	50	20850/2510	23.00	21.53	0.084	0.024	1.40	0.118	/
	Front Side	0	QPSK	1	50	20850/2510	23.00	22.24	0.092	0.033	1.19	0.110	/
		0	QPSK	50%	50	20850/2510	23.00	21.53	0.092	0.060	1.40	0.129	/
	Left Edge	0	QPSK	1	50	20850/2510	23.00	22.24	1.010	-0.078	1.19	1.203	24
		0	QPSK	1	50	21100/2535	23.00	22.19	0.987	0.080	1.21	1.189	/
	Right Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	QPSK	1	50	20850/2510	23.00	22.24	0.073	-0.120	1.19	0.087	/
		0	QPSK	50%	50	20850/2510	23.00	21.53	0.089	0.041	1.40	0.125	/
	Bottom Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
LTE 41	Back Side	0	QPSK	1	50	39750/2506	23.00	22.70	0.052	0.037	1.07	0.056	/
		0	QPSK	50%	50	39750/2506	22.00	21.65	0.047	-0.060	1.08	0.051	/
	Front Side	0	QPSK	1	50	39750/2506	23.00	22.70	0.073	0.022	1.07	0.078	/
		0	QPSK	50%	50	39750/2506	22.00	21.65	0.060	0.019	1.08	0.065	/
	Left Edge	0	QPSK	1	50	39750/2506	23.00	22.70	0.794	-0.078	1.07	0.851	25
		0	QPSK	50%	50	39750/2506	22.00	21.65	0.662	0.021	1.08	0.718	/
	Right Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Top Edge	0	QPSK	1	50	39750/2506	23.00	22.70	0.071	0.037	1.07	0.076	/
		0	QPSK	50%	50	39750/2506	22.00	21.65	0.059	0.015	1.08	0.064	/
	Bottom Edge	0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		0	QPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

Band	Test Position	Dist. (mm)	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g (W/Kg)	Power Drift (dB)	Power Scaling Factor	Report SAR10g (W/kg)	Plot No.
Wi-Fi 2.4G	Back Side	0	802.11b	100.0%	6/2437	19.00	17.87	0.108	0.015	1.30	0.140	/
	Front Side	0	802.11b	100.0%	6/2437	19.00	17.87	0.112	0.080	1.30	0.145	/
	Left Edge	0	802.11b	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	0	802.11b	100.0%	6/2437	19.00	17.87	0.887	-0.031	1.30	1.151	26
	Top Edge	0	802.11b	100.0%	6/2437	19.00	17.87	0.254	0.019	1.30	0.329	/
	Bottom Edge	0	802.11b	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-2A	Back Side	0	802.11a	100.0%	60/5300	16.00	15.23	0.065	0.130	1.19	0.078	/
	Front Side	0	802.11a	100.0%	60/5300	16.00	15.23	0.068	0.024	1.19	0.081	/
	Left Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	0	802.11a	100.0%	60/5300	16.00	15.23	0.904	0.022	1.19	1.079	27
	Top Edge	0	802.11a	100.0%	60/5300	16.00	15.23	0.119	0.049	1.19	0.142	/
	Bottom Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-2C	Back Side	0	802.11a	100.0%	116/5580	16.00	15.24	0.042	0.060	1.19	0.050	/
	Front Side	0	802.11a	100.0%	116/5580	16.00	15.24	0.098	0.080	1.19	0.117	/
	Left Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	0	802.11a	100.0%	116/5580	16.00	15.24	0.731	-0.077	1.19	0.871	/
	Top Edge	0	802.11a	100.0%	116/5580	16.00	15.24	0.169	0.070	1.19	0.201	/
	Bottom Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-3	Back Side	0	802.11a	100.0%	165/5825	16.00	15.11	0.058	0.010	1.23	0.071	/
	Front Side	0	802.11a	100.0%	165/5825	16.00	15.11	0.102	0.024	1.23	0.125	/
	Left Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	0	802.11a	100.0%	165/5825	16.00	15.11	0.726	0.078	1.23	0.891	/
	Top Edge	0	802.11a	100.0%	165/5825	16.00	15.11	0.155	0.030	1.23	0.190	/
	Bottom Edge	0	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Bluetooth	Back Side	0	DH5	76.9%	39/2441	10.00	9.13	0.001	0.060	1.59	0.002	/
	Front Side	0	DH5	76.9%	39/2441	10.00	9.13	0.004	0.027	1.59	0.006	/
	Left Edge	0	DH5	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
	Right Edge	0	DH5	76.9%	39/2441	10.00	9.13	0.086	-0.120	1.59	0.136	28
	Top Edge	0	DH5	76.9%	39/2441	10.00	9.13	0.031	0.041	1.59	0.049	/
	Bottom Edge	0	DH5	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

10.3 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Hotspot	Extremity
GSM + Bluetooth	Yes	Yes
WCDMA + Bluetooth	Yes	Yes
LTE + Bluetooth	Yes	Yes
GSM + Wi-Fi 2.4GHz+ Bluetooth	Yes	Yes

WCDMA + Wi-Fi 2.4GHz+ Bluetooth	Yes	Yes
LTE + Wi-Fi 2.4GHz+ Bluetooth	Yes	Yes
GSM + Wi-Fi 5GHz+ Bluetooth	Yes	Yes
WCDMA + Wi-Fi 5GHz+ Bluetooth	Yes	Yes
LTE + Wi-Fi 5GHz+ Bluetooth	Yes	Yes
Wi-Fi 2.4GHz + Bluetooth	Yes	Yes
Wi-Fi 5GHz + Bluetooth	Yes	Yes

General Note:

- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation $< 1.6\text{W/kg}$, simultaneously transmission SAR measurement is not necessary.
 - $\text{SPLSR} = (\text{SAR1} + \text{SAR2})^{1.5} / (\text{min. separation distance, mm})$, 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.
 - If $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

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

SAR _{1g/10g} (W/kg)		GSM 850	GSM 1900	WCDMA Band V	LTE FDD 2	LTE FDD 5	LTE FDD 7	LTE TDD 38/41	MAX. SAR _{1g/10g}
Test Position									
Hotspot	Back Side	0.281	0.122	0.140	0.098	0.140	0.135	0.085	0.281
	Front Side	0.260	0.141	0.143	0.165	0.144	0.050	0.033	0.260
	Left Edge	1.404	0.927	0.536	0.904	0.658	0.537	0.387	1.404
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Top Edge	0.113	0.131	0.074	0.104	0.064	0.050	0.025	0.113
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Extremity	Back Side	0.214	0.119	0.171	0.089	0.166	0.118	0.056	0.214
	Front Side	0.290	0.197	0.229	0.172	0.222	0.129	0.078	0.290
	Left Edge	2.961	2.042	1.298	2.258	1.535	1.203	0.851	2.961
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Top Edge	0.208	0.125	0.207	0.141	0.171	0.125	0.076	0.208
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000

About Bluetooth, Wi-Fi and Main-Antenna

SAR _{1g/10g} (W/kg)		Main-Antenna	Wi-Fi 2.4G	Wi-Fi (U-NII-2A)	Wi-Fi (U-NII-2C)	Wi-Fi (U-NII-3)	Bluetooth	MAX. Σ SAR _{1g/10g}
Test Position								
Hotspot	Back Side	0.281	0.171	0.193	0.214	0.226	0.002	0.509
	Front Side	0.260	0.135	0.124	0.116	0.133	0.002	0.397
	Left Edge	1.404	0.000	0.000	0.000	0.000	0.000	1.404
	Right Edge	N/A	0.460	1.012	0.760	0.766	0.060	1.072
	Top Edge	0.113	0.237	0.252	0.293	0.322	0.002	0.437
	Bottom Edge	N/A	0.000	0.000	0.000	0.000	0.000	0.000
Extremity	Back Side	0.214	0.140	0.078	0.050	0.071	0.002	0.356
	Front Side	0.290	0.145	0.081	0.117	0.125	0.006	0.441
	Left Edge	2.961	0.000	0.000	0.000	0.000	0.000	2.961
	Right Edge	0.000	1.151	1.079	0.871	0.891	0.136	1.287
	Top Edge	0.208	0.329	0.142	0.201	0.190	0.049	0.586
	Bottom Edge	0.000	0.000	0.000	0.000	0.000	0.000	0.000

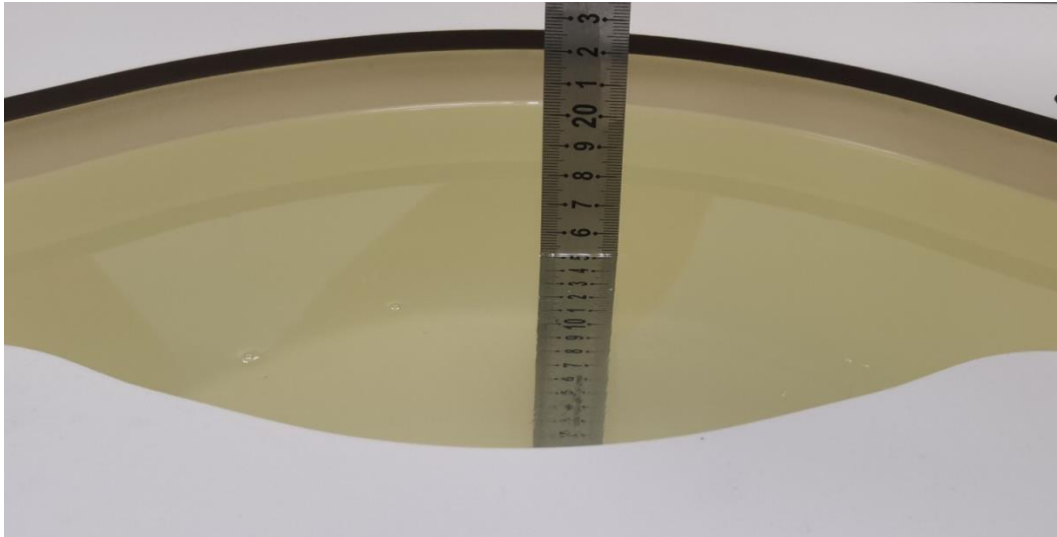
MAX. Σ SAR_{1g} = 1.404 W/kg < 1.6W/kg and MAX. Σ SAR_{10g} = 2.961 W/kg < 4 W/kg, so the Simultaneous transmission SAR with volume scan is not required for Wi-Fi and Main-Antenna.

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 flat Phantom

ANNEX B: System Check Results

Plot 1 System Performance Check at 835 MHz TSL

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

Date: 2025/5/16

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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 (1); SEMCAD X Version 14.6.11 (7439)

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

Maximum value of SAR (measured) = 2.58 W/kg

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

Reference Value = 53.241 V/m; Power Drift = -0.076 dB

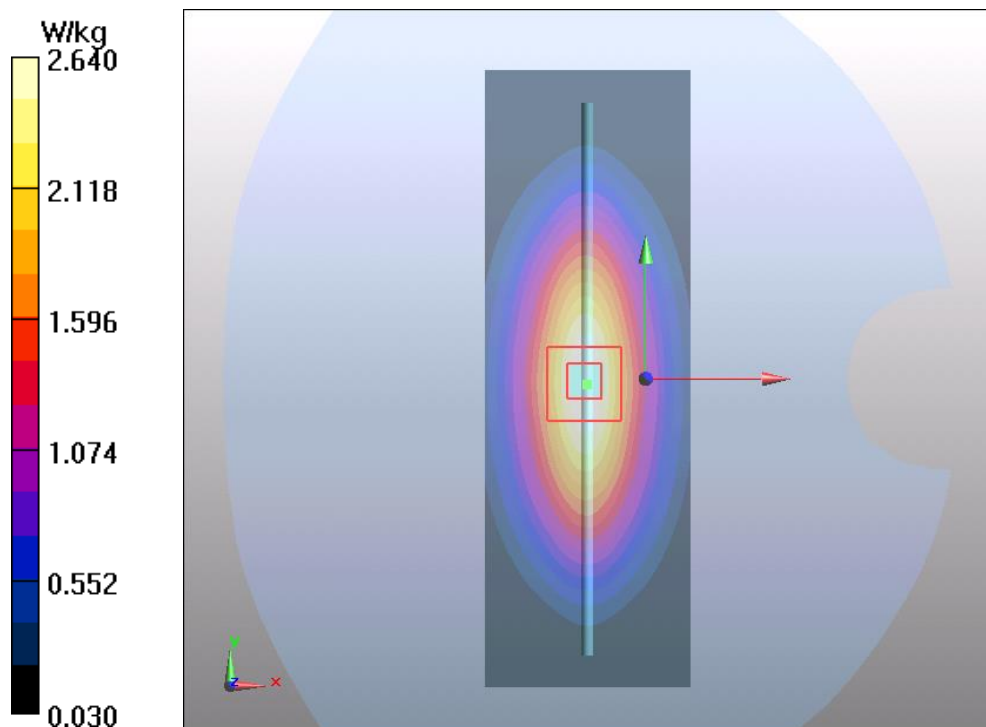
Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.6 W/kg

Smallest distance from peaks to all points 3 dB below = 16.6 mm

Ratio of SAR at M2 to SAR at M1 = 68.1%

Maximum value of SAR (measured) = 2.64 W/kg



Plot 2 System Performance Check at 835 MHz TSL

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

Date: 2025/5/17

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.89 \text{ S/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

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: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.61 W/kg

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

Reference Value = 55.249 V/m ; Power Drift = -0.021 dB

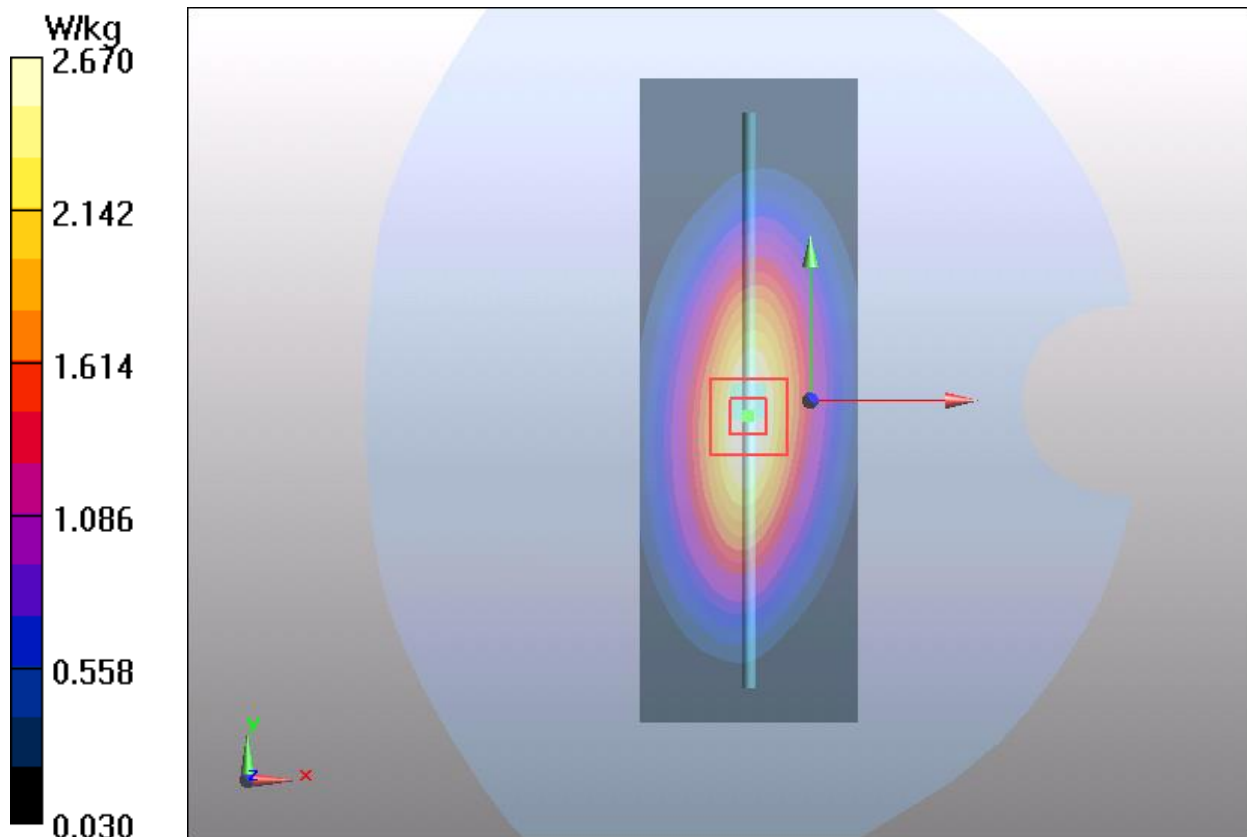
Peak SAR (extrapolated) = 3.94 W/kg

SAR(1 g) = 2.51 W/kg ; SAR(10 g) = 1.54 W/kg

Smallest distance from peaks to all points 3 dB below = 14.7 mm

Ratio of SAR at M2 to SAR at M1 = 69.4%

Maximum value of SAR (measured) = 2.67 W/kg



Plot 3 System Performance Check at 1900 MHz

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

Date: 2025/5/18

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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 (interpolated) = 11.21 W/kg

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

Reference Value = 86.253 V/m; Power Drift = 0.017 dB

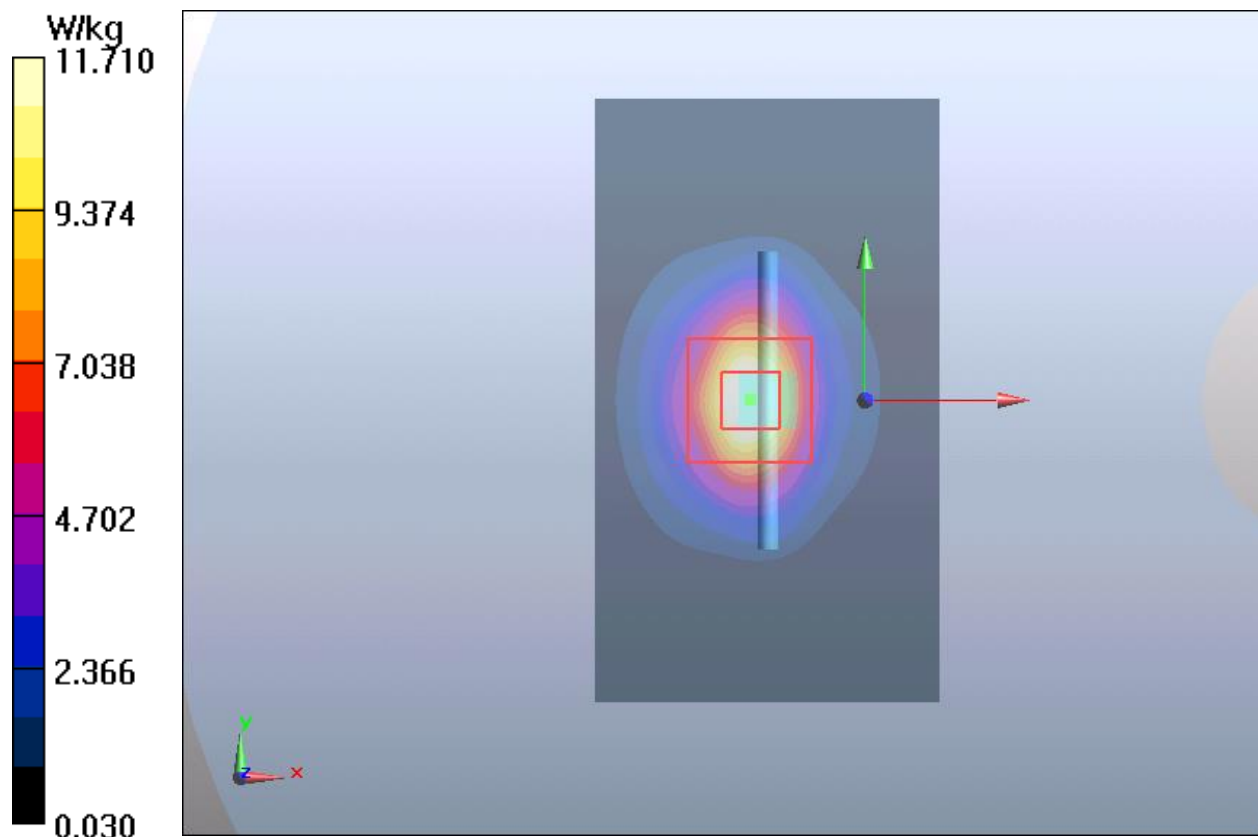
Peak SAR (extrapolated) = 20.05 W/kg

SAR(1 g) = 9.60 W/kg; SAR(10 g) = 4.98 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3mm

Ratio of SAR at M2 to SAR at M1 = 54.5%

Maximum value of SAR (measured) = 11.71 W/kg



Plot 4 System Performance Check at 2450 MHz TSL

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

Date: 2025/5/15

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.84$ S/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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) = 14.24 W/kg

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

Reference Value = 79.154 V/m; Power Drift = 0.104 dB

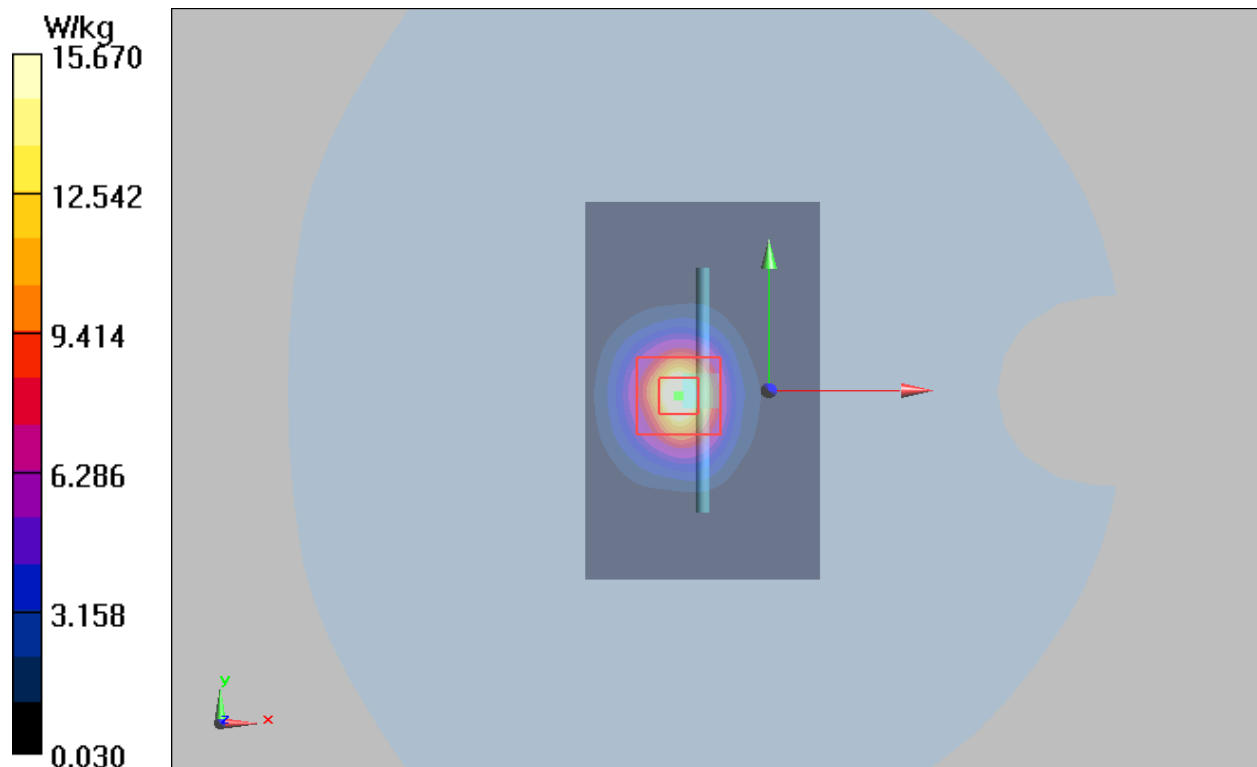
Peak SAR (extrapolated) = 29.32 W/kg

SAR(1 g) = 13.64 W/kg; SAR(10 g) = 6.15 W/kg

Smallest distance from peaks to all points 3 dB below = 8.5 mm

Ratio of SAR at M2 to SAR at M1 = 49.2%

Maximum value of SAR (measured) = 15.67 W/kg



Plot 5 System Performance Check at 2600 MHz TSL

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

Date: 2025/5/20

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

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.98$ S/m; $\epsilon_r = 39.0$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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 (interpolated) = 14.27 W/kg

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

Reference Value = 78.642 V/m; Power Drift = -0.016 dB

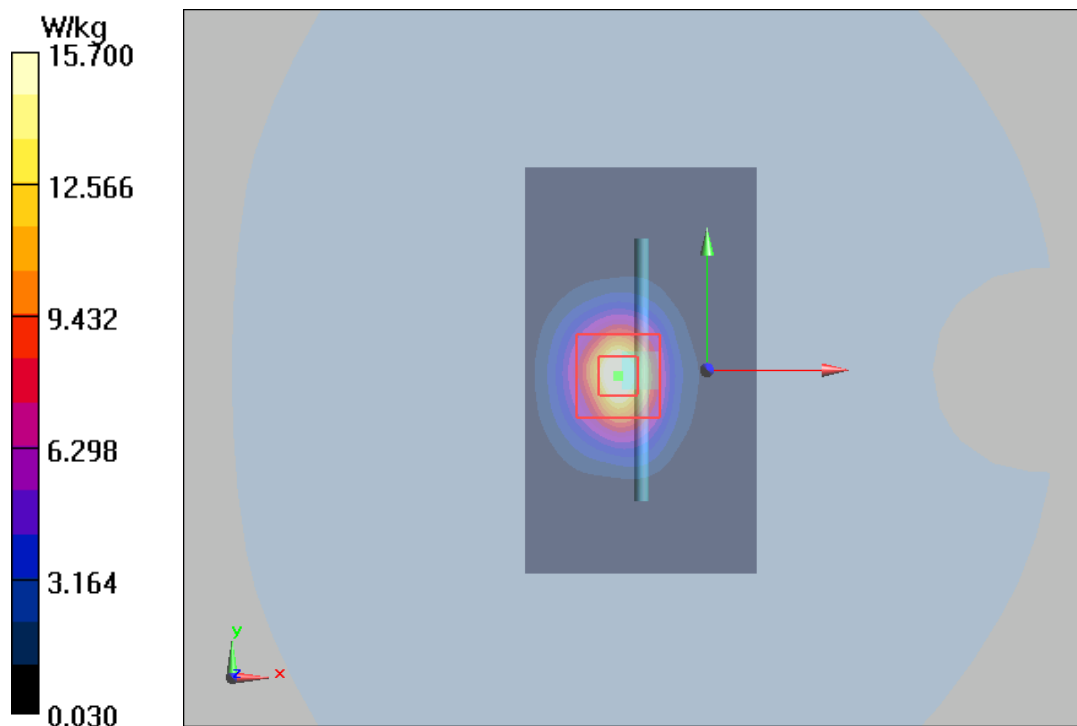
Peak SAR (extrapolated) = 28.95 W/kg

SAR(1 g) = 13.85 W/kg; SAR(10 g) = 5.99 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1= 44%

Maximum value of SAR (measured) = 15.70 W/kg



Plot 6 System Performance Check at 5250 MHz TSL

DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 2025/5/19

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.88$ S/m; $\epsilon_r = 35.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.87, 6.17, 6.27); 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=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 10.72 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 35.862 V/m; Power Drift = -0.011 dB

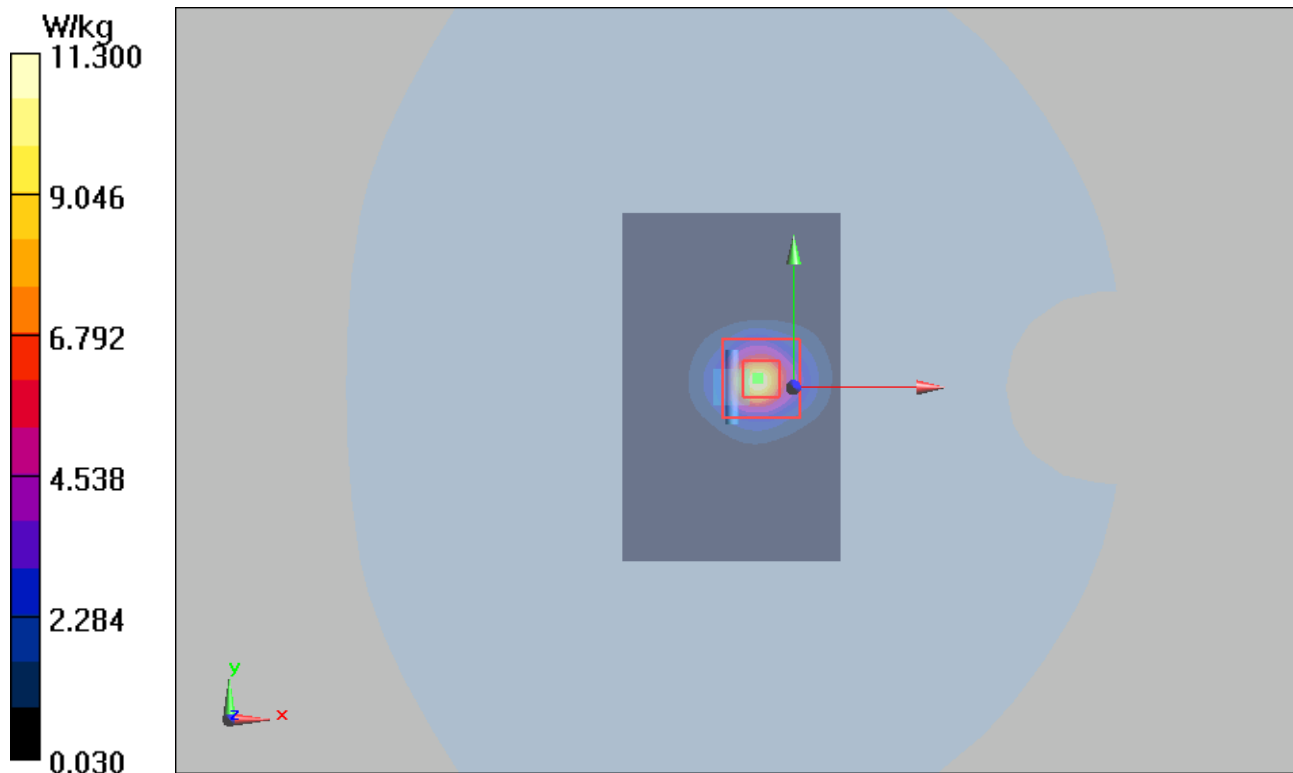
Peak SAR (extrapolated) = 58.48 W/kg

SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.30 W/kg

Smallest distance from peaks to all points 3 dB below = 8.4 mm

Ratio of SAR at M2 to SAR at M1 = 66.3%

Maximum value of SAR (measured) = 11.300 W/kg



Plot 7 System Performance Check at 5600 MHz TSL

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 2025/5/19

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.19$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.33, 5.60, 5.70); 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=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 8.31 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 22.647 V/m; Power Drift = 0.044 dB

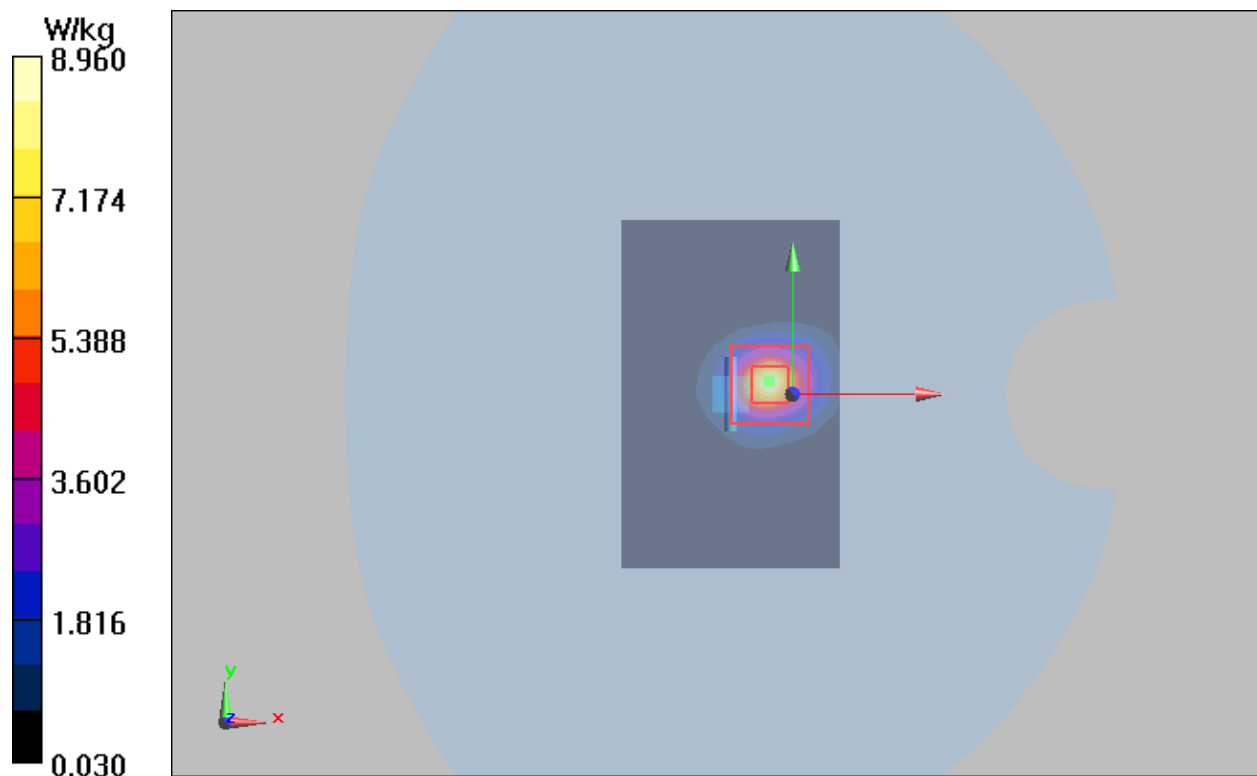
Peak SAR (extrapolated) = 22.6 W/kg

SAR(1 g) = 7.94 W/kg; SAR(10 g) = 2.29 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 62.3%

Maximum value of SAR (measured) = 8.96 W/kg



Plot 8 System Performance Check at 5750 MHz TSL

DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 2025/5/19

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.28$ S/m; $\epsilon_r = 35$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.31, 5.59, 5.68); 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=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 8.52 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 26.758 V/m; Power Drift = -0.080 dB

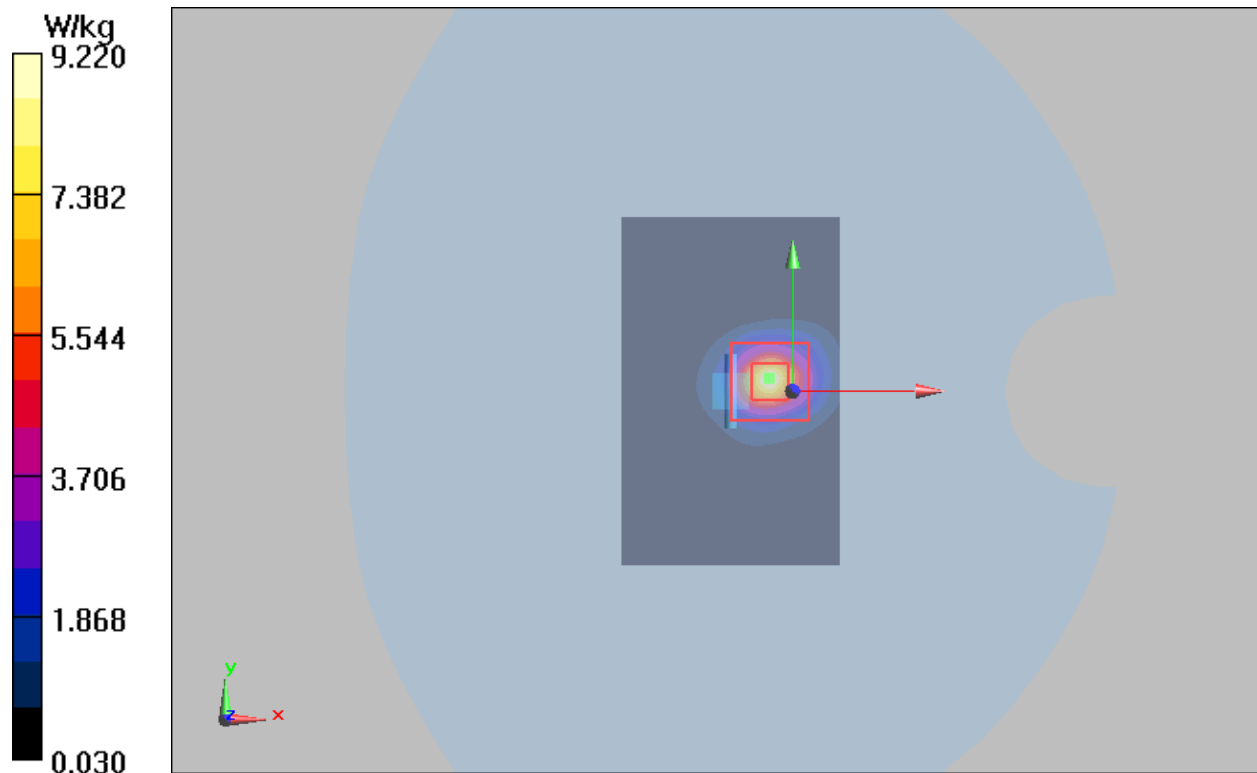
Peak SAR (extrapolated) = 24.52 W/kg

SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.12 W/kg

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.4%

Maximum value of SAR (measured) = 9.22 W/kg



ANNEX C: Highest Graph Results

Plot 9 GSM 850 GPRS(4TX) Left Edge High (Distance 10mm)

Date: 2025/5/16

Communication System: UID 0, GPRS 4TX (0); Frequency: 848.8 MHz; Duty Cycle: 1:2.07

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.957$ S/m; $\epsilon_r = 42.192$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

GSM 850 GPRS(4TX) Left Edge 10mm/High/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.20 W/kg

GSM 850 GPRS(4TX) Left Edge 10mm/High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.79 V/m; Power Drift = 0.029 dB

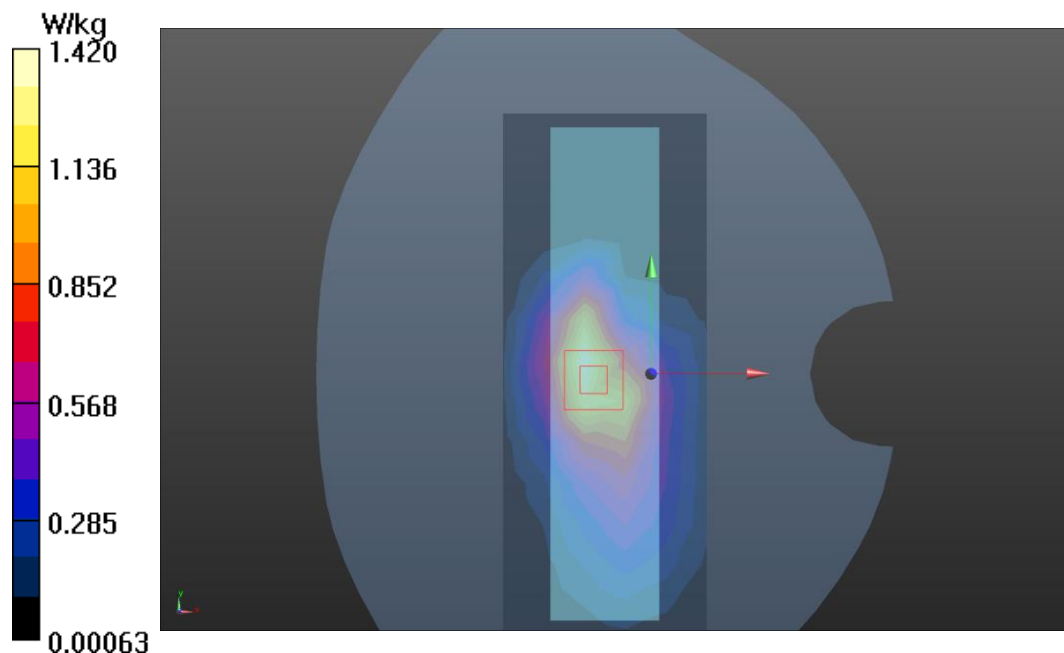
Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 1.10 W/kg; SAR(10 g) = 0.645 W/kg

Smallest distance from peaks to all points 3 dB below = 15.8 mm

Ratio of SAR at M2 to SAR at M1 = 62.9%

Maximum value of SAR (measured) = 1.42 W/kg



Plot 10 GSM 1900 GPRS(4TX) Left Edge Mid (Distance 10mm)

Date: 2025/5/18

Communication System: UID 0, GPRS 4TX (0); Frequency: 1880 MHz; Duty Cycle: 1:2.07

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.406$ S/m; $\epsilon_r = 39.087$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

GSM 1900 GPRS(4TX) Left Edge 10mm/Mid/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.758 W/kg

GSM 1900 GPRS(4TX) Left Edge 10mm/Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.66 V/m; Power Drift = 0.041 dB

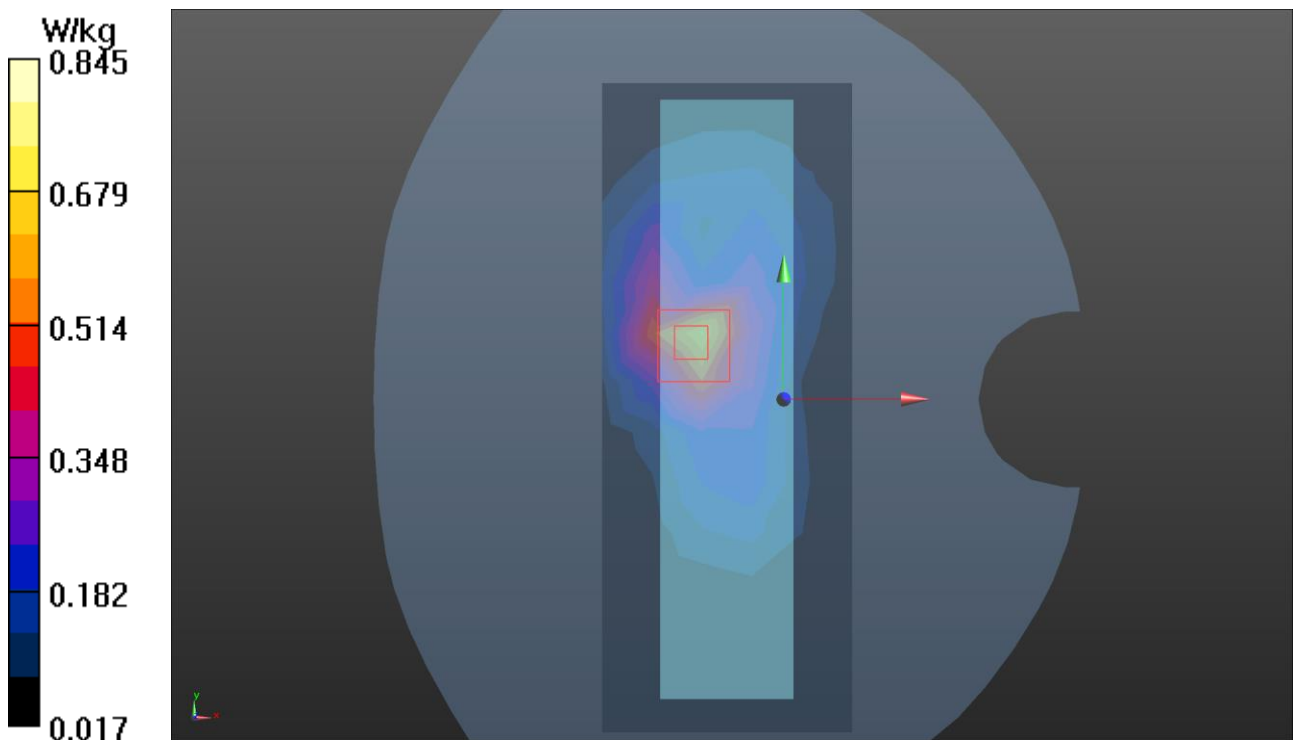
Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.743 W/kg; SAR(10 g) = 0.402 W/kg

Smallest distance from peaks to all points 3 dB below = 13.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.3%

Maximum value of SAR (measured) = 0.845 W/kg



Plot 11 WCDMA B5 Left Edge Mid (Distance 10mm)

Date: 2025/5/16

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

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.948$ S/m; $\epsilon_r = 42.274$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

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)

WCDMA B5 Left Edge 10mm/Mid/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA B5 Left Edge 10mm/Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.16 V/m; Power Drift = -0.042 dB

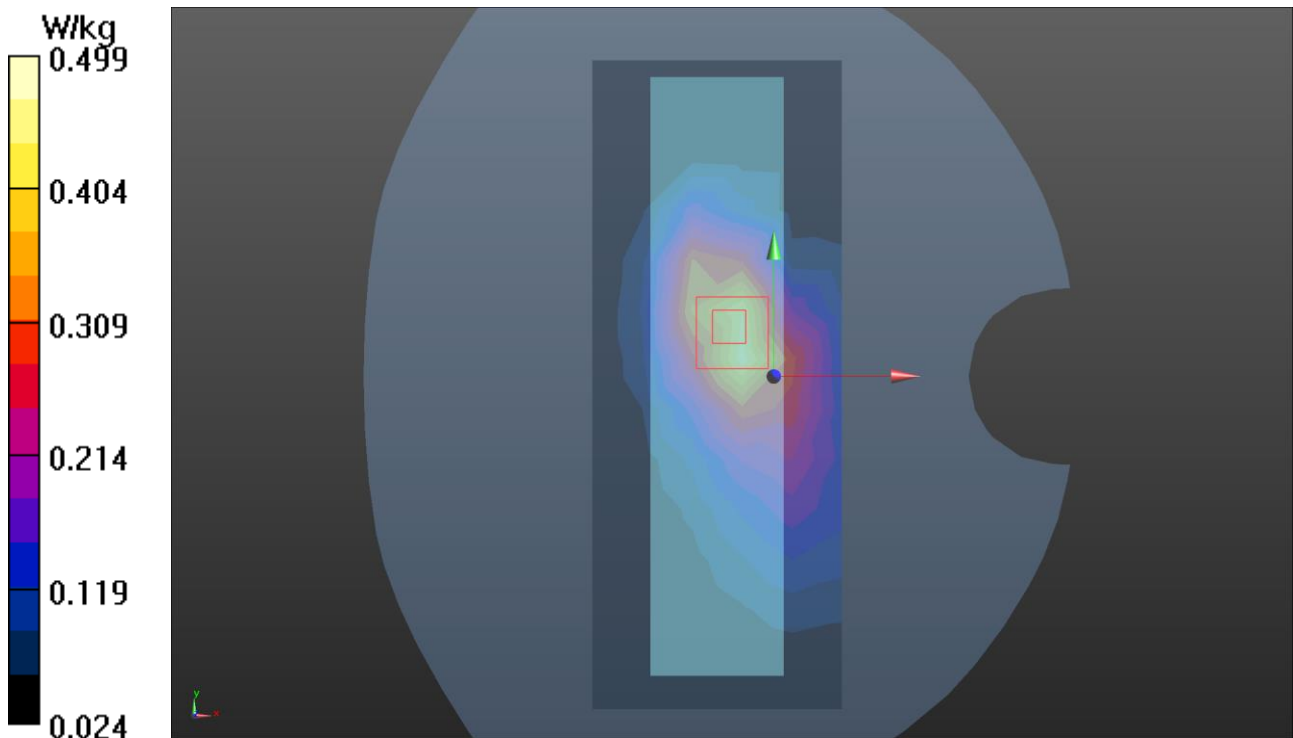
Peak SAR (extrapolated) = 0.745 W/kg

SAR(1 g) = 0.454 W/kg; SAR(10 g) = 0.276 W/kg

Smallest distance from peaks to all points 3 dB below = 14.3 mm

Ratio of SAR at M2 to SAR at M1 = 62.2%

Maximum value of SAR (measured) = 0.499 W/kg



Plot 12 LTE B2 1RB Left Edge Low (Distance 10mm)

Date: 2025/5/18

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

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 39.098$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B2 1RB Left Edge 10mm/Low/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.775 W/kg

LTE B2 1RB Left Edge 10mm/Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.91 V/m; Power Drift = -0.01 dB

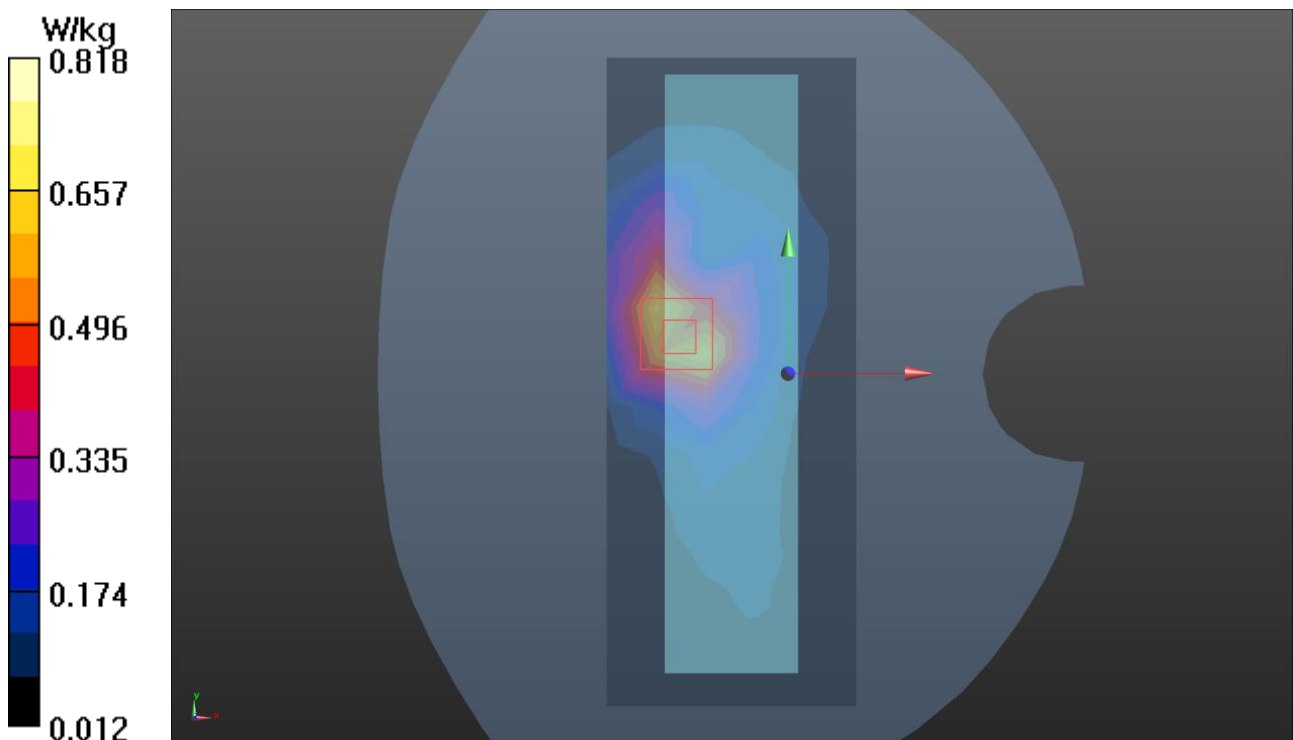
Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.734 W/kg; SAR(10 g) = 0.395 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 57.6%

Maximum value of SAR (measured) = 0.818 W/kg



Plot 13 LTE B5 1RB Left Edge Low (Distance 10mm)

Date: 2025/5/17

Communication System: UID 0, LTE (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 829 \text{ MHz}$; $\sigma = 0.945 \text{ S/m}$; $\epsilon_r = 42.335$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.3°C Liquid Temperature: 21.5°C

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)

LTE B5 1RB Left Edge 10mm/Low/Area Scan (6x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.623 W/kg

LTE B5 1RB Left Edge 10mm/Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.63 V/m ; Power Drift = -0.085 dB

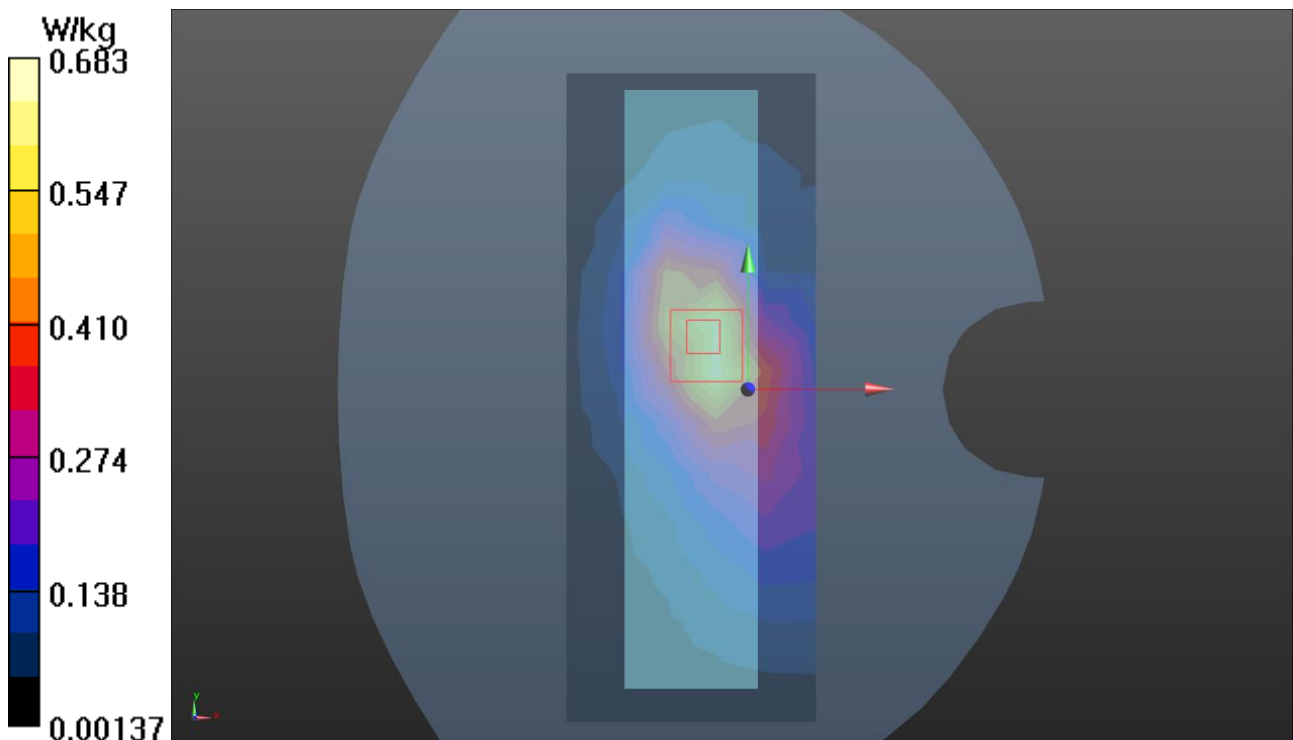
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.596 W/kg ; SAR(10 g) = 0.346 W/kg

Smallest distance from peaks to all points 3 dB below = 14.3 mm

Ratio of SAR at M2 to SAR at M1 = 62.3%

Maximum value of SAR (measured) = 0.683 W/kg



Plot 14 LTE B7 50%RB Left Edge Low (Distance 10mm)

Date: 2025/5/20

Communication System: UID 0, LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.906$ S/m; $\epsilon_r = 38.249$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B7 50%RB Left Edge 10mm/Low/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.499 W/kg

LTE B7 50%RB Left Edge 10mm/Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.976 V/m; Power Drift = 0.037 dB

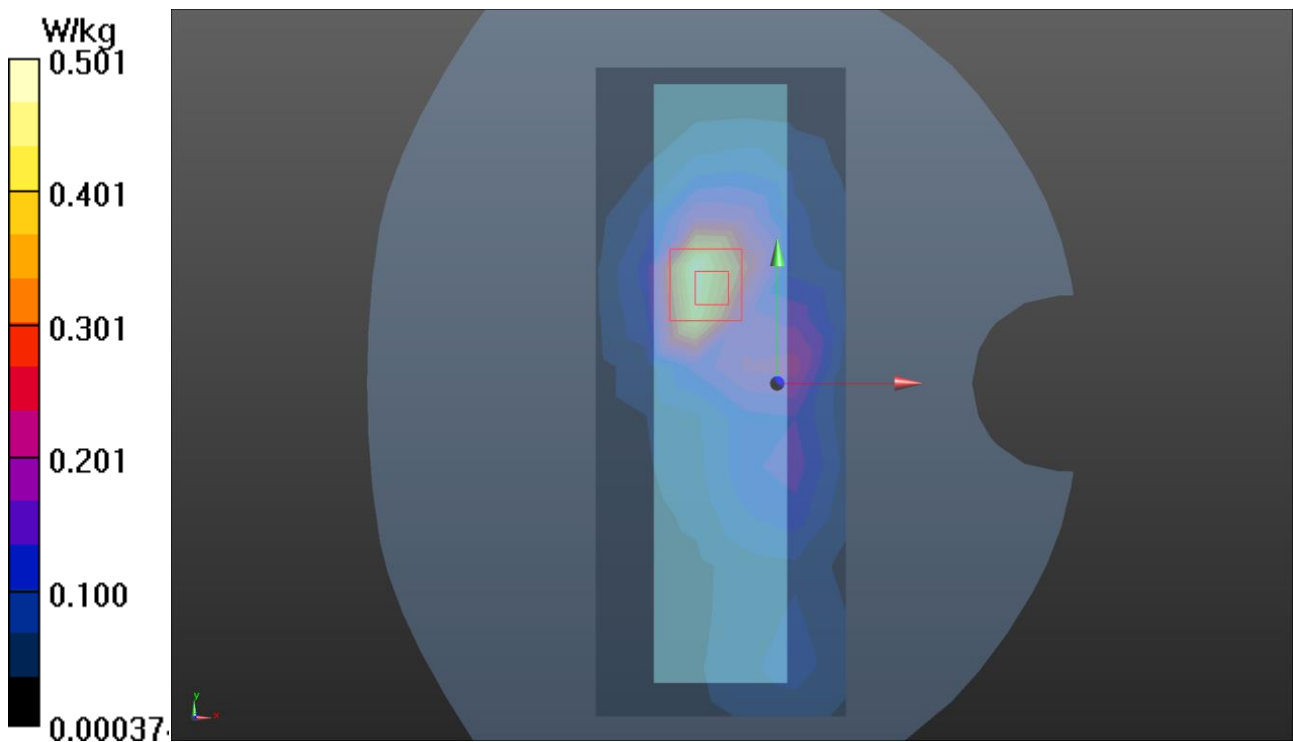
Peak SAR (extrapolated) = 0.853 W/kg

SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.224 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 52.6%

Maximum value of SAR (measured) = 0.501 W/kg



Plot 15 LTE B41 1RB Left Edge Low (Distance 10mm)

Date: 2025/5/20

Communication System: UID 0, LTE (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 1.901$ S/m; $\epsilon_r = 38.266$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B41 1RB Left Edge 0mm/Low/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.369 W/kg

LTE B41 1RB Left Edge 0mm/Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.764 V/m; Power Drift = 0.09 dB

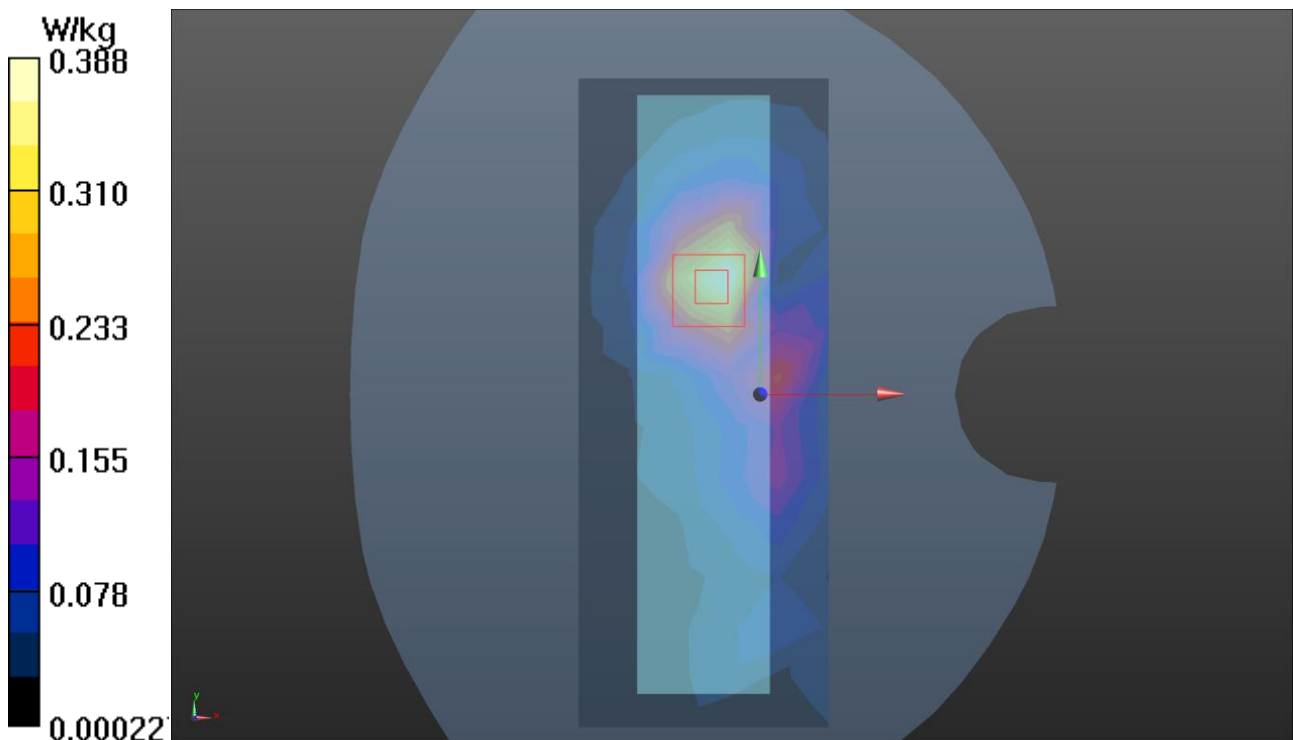
Peak SAR (extrapolated) = 0.815 W/kg

SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.164 W/kg

Smallest distance from peaks to all points 3 dB below = 9.8 mm

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 0.388 W/kg



Plot 16 802.11b Right Edge Mid (Distance 10mm)

Date: 2025/5/15

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.824$ S/m; $\epsilon_r = 38.516$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

802.11b Right Edge 10mm/Mid/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.342 W/kg

802.11b Right Edge 10mm/Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.076 V/m; Power Drift = -0.033 dB

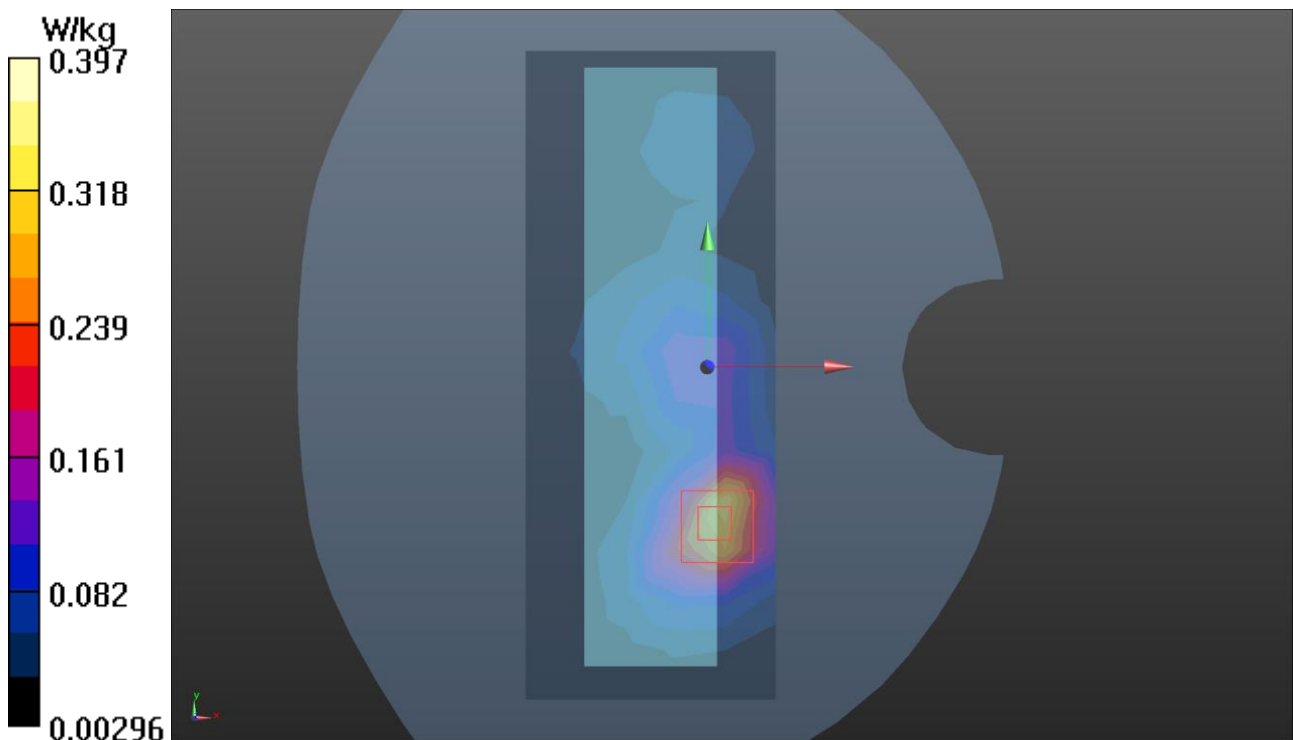
Peak SAR (extrapolated) = 0.756 W/kg

SAR(1 g) = 0.355 W/kg; SAR(10 g) = 0.170 W/kg

Smallest distance from peaks to all points 3 dB below = 12.2 mm

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

Maximum value of SAR (measured) = 0.397 W/kg



Plot 17 802.11a Right Edge Mid (Distance 10mm)

Date: 2025/5/19

Communication System: UID 0, 802.11a (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.774$ S/m; $\epsilon_r = 35.384$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.87, 6.17, 6.27); 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)

802.11a Right Edge 10mm/Mid/Area Scan (9x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.815 W/kg

802.11a Right Edge 10mm/Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.852 V/m; Power Drift = 0.074 dB

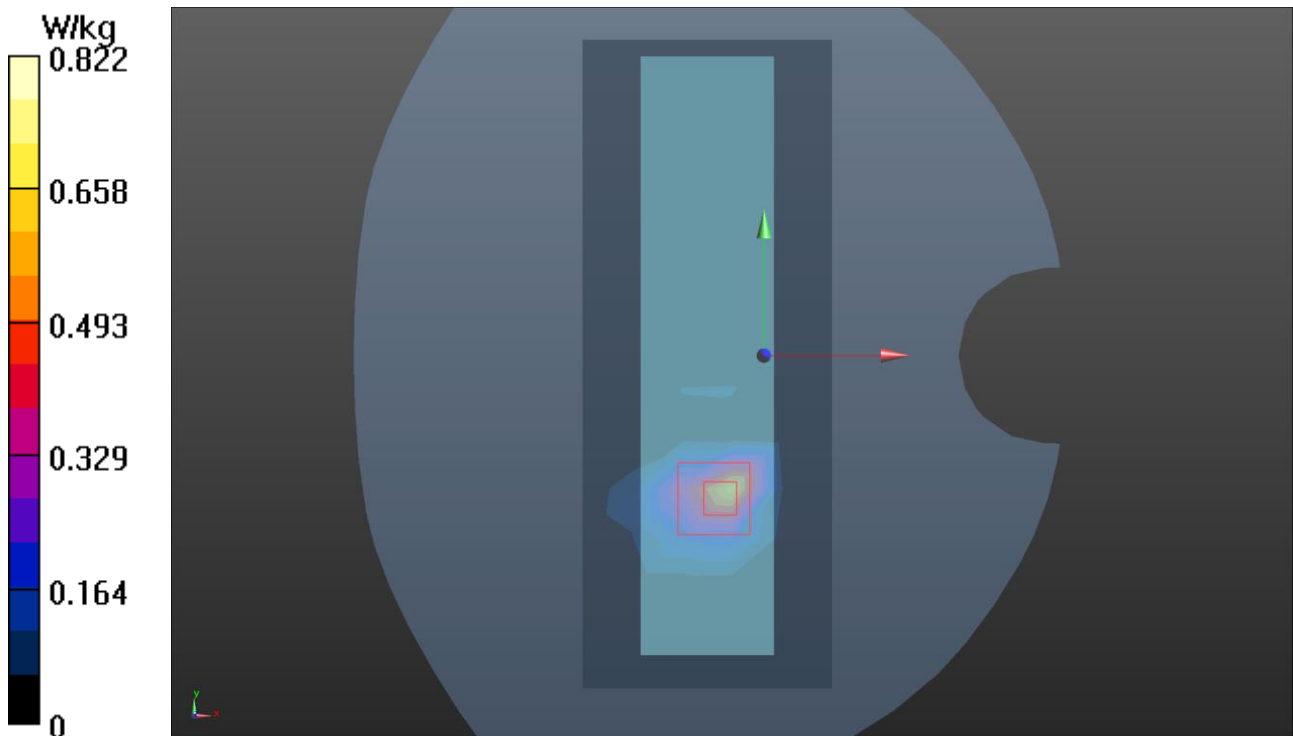
Peak SAR (extrapolated) = 4.16 W/kg

SAR(1 g) = 0.793 W/kg; SAR(10 g) = 0.254 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 50.9%

Maximum value of SAR (measured) = 0.822 W/kg



Plot 18 BT DH5 Right Edge Mid (Distance 10mm)

Date: 2025/5/15

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.30

Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.828$ S/m; $\epsilon_r = 38.503$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

BT DH5 Right Edge 10mm/Mid/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.041 W/kg

BT DH5 Right Edge 10mm/Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.458 V/m; Power Drift = -0.11 dB

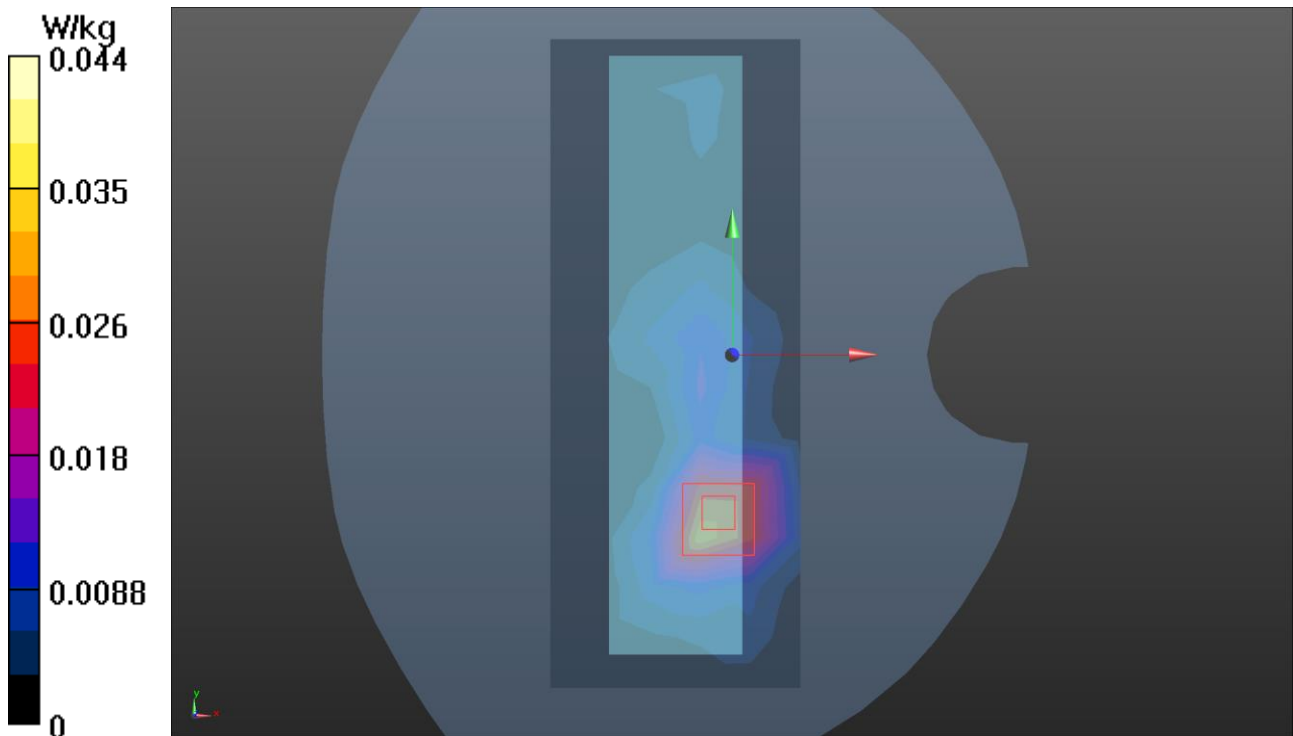
Peak SAR (extrapolated) = 0.084 W/kg

SAR(1 g) = 0.038 W/kg; SAR(10 g) = 0.017 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 44.2%

Maximum value of SAR (measured) = 0.044 W/kg



Plot 19 GSM 850 GPRS(4TX) Left Edg High (Distance 0mm)

Date: 2025/5/16

Communication System: UID 0, GPRS 4TX (0); Frequency: 848.8 MHz; Duty Cycle: 1:2.07

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.957$ S/m; $\epsilon_r = 42.192$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

GSM 850 GPRS(4TX) Left Edge 0mm/High/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.37 W/kg

GSM 850 GPRS(4TX) Left Edge 0mm/High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.53 V/m; Power Drift = 0.071 dB

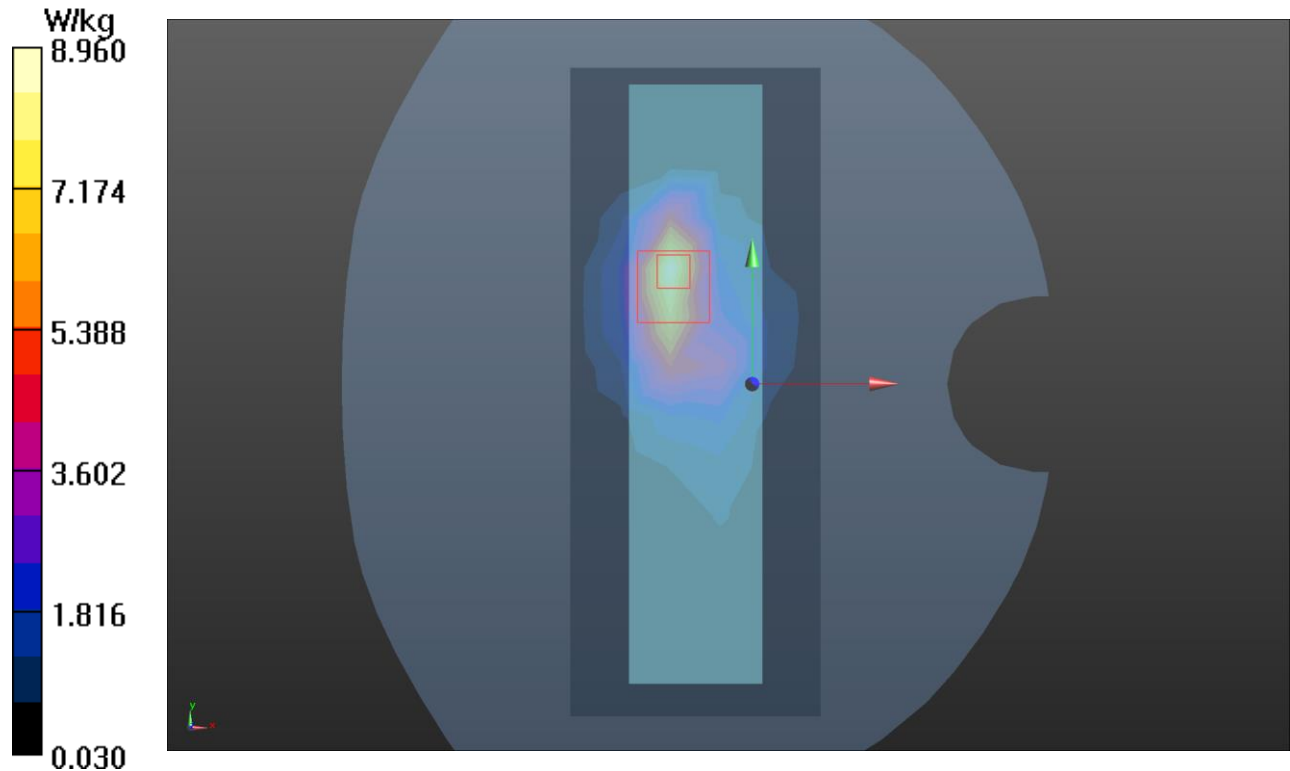
Peak SAR (extrapolated) = 12.99 W/kg

SAR(1 g) = 5.27 W/kg; SAR(10 g) = 2.32 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 50.4%

Maximum value of SAR (measured) = 8.96 W/kg



Plot 20 GSM 1900 GPRS(4TX) Left Edge Low (Distance 0mm)

Date: 2025/5/18

Communication System: UID 0, GPRS 4TX (0); Frequency: 1710.2 MHz; Duty Cycle: 1:2.07

Medium parameters used (interpolated): $f = 1710.2$ MHz; $\sigma = 1.284$ S/m; $\epsilon_r = 39.541$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

GSM 1900 GPRS(4TX) Left Edge 0mm/Low/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.50 W/kg

GSM 1900 GPRS(4TX) Left Edge 0mm/Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.06 V/m; Power Drift = -0.09 dB

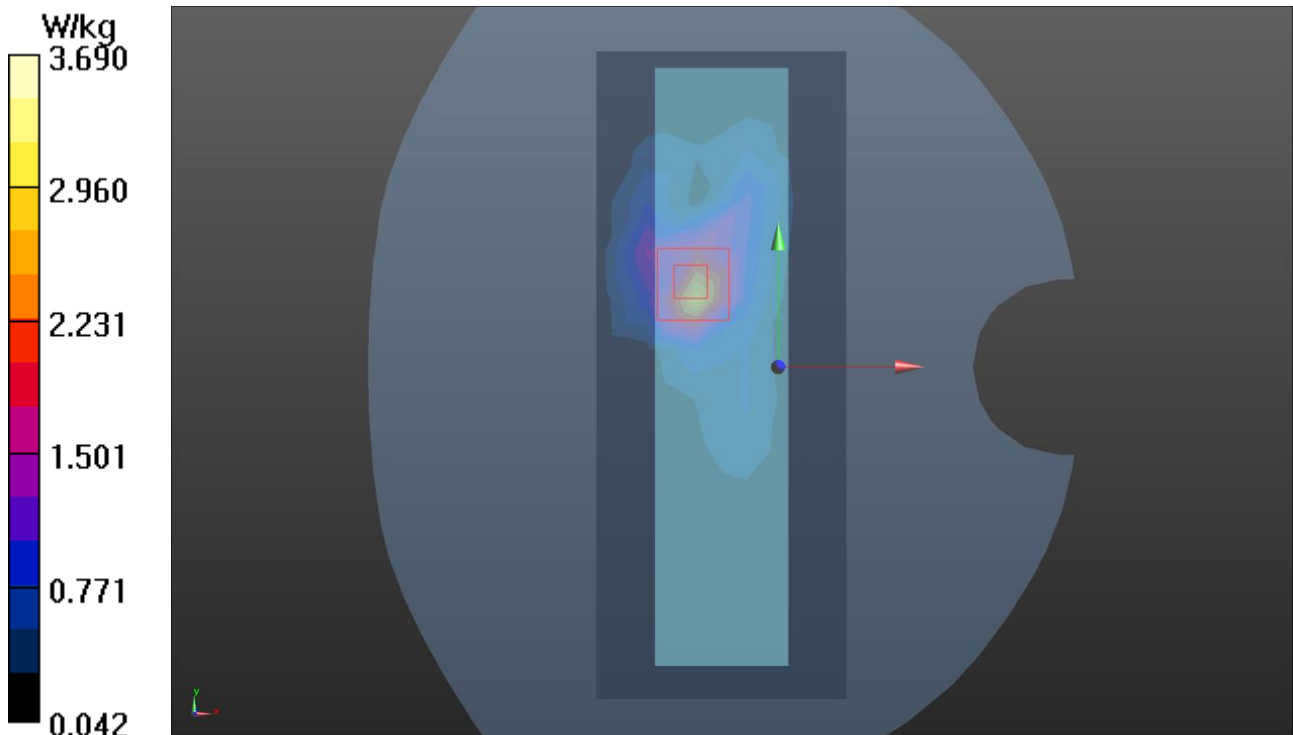
Peak SAR (extrapolated) = 6.20 W/kg

SAR(1 g) = 3.46 W/kg; SAR(10 g) = 1.56 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 49.8%

Maximum value of SAR (measured) = 3.69 W/kg



Plot 21 WCDMA B5 Left Edge Mid (Distance 0mm)

Date: 2025/5/17

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

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.948$ S/m; $\epsilon_r = 42.274$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

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)

WCDMA B5 Left Edge 0mm/Mid/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.39 W/kg

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

Reference Value = 23.90 V/m; Power Drift = -0.030 dB

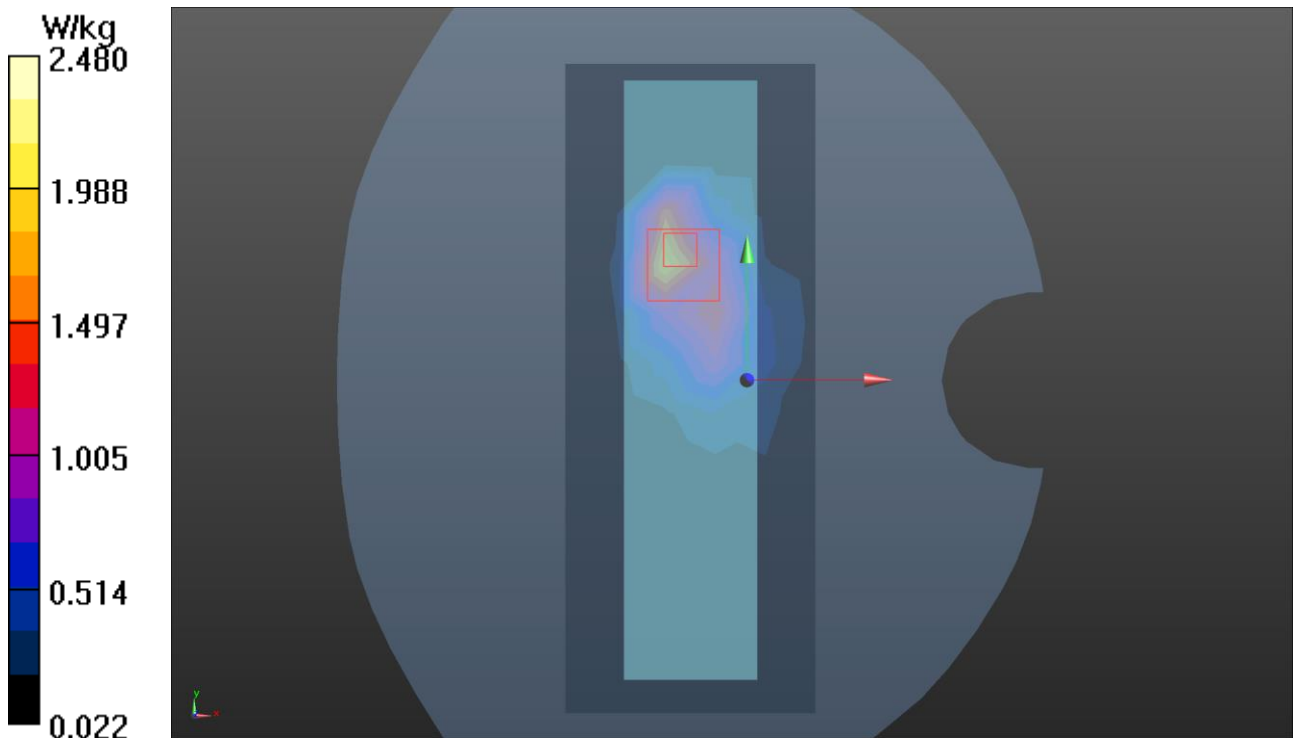
Peak SAR (extrapolated) = 5.73 W/kg

SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.10 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 46.5%

Maximum value of SAR (measured) = 2.48 W/kg



Plot 22 LTE B2 1RB Left Edge High (Distance 0mm)

Date: 2025/5/18

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.422$ S/m; $\epsilon_r = 38.97$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B2 1RB Left Edge 0mm/High/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.24 W/kg

LTE B2 1RB Left Edge 0mm/High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 38.61 V/m; Power Drift = -0.16 dB

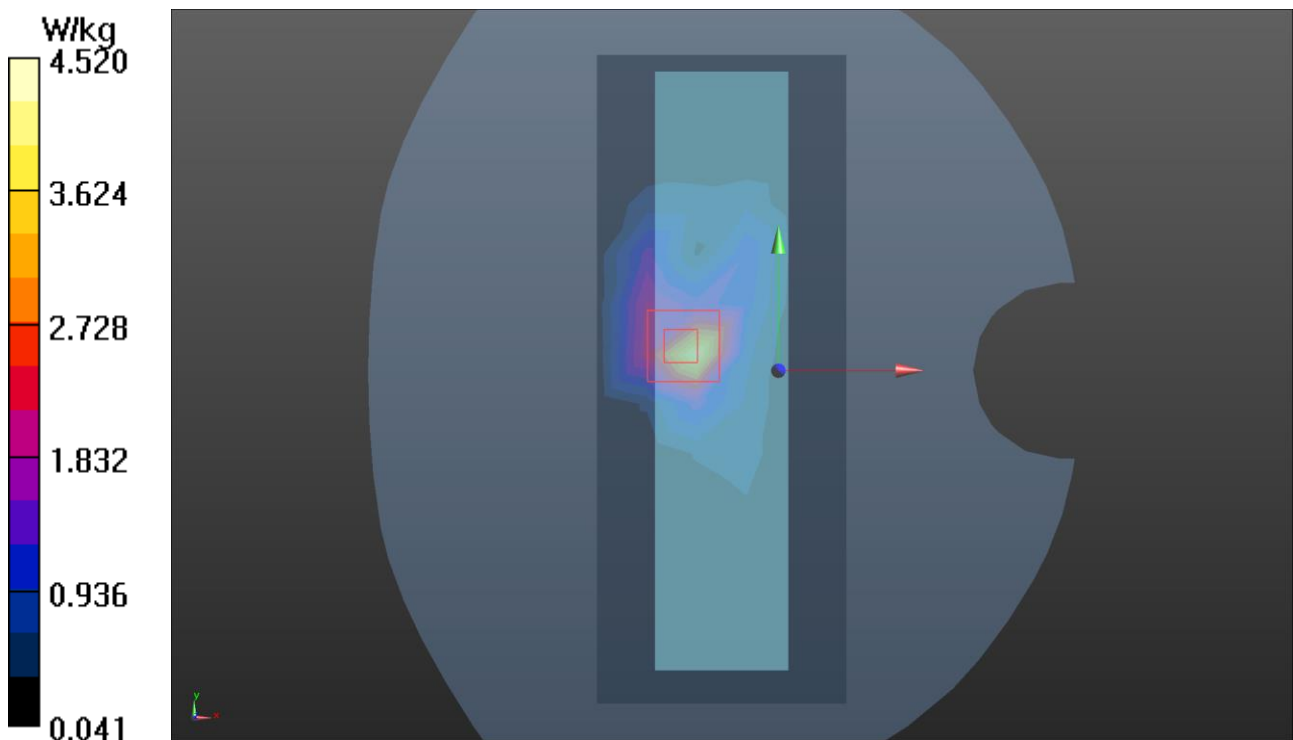
Peak SAR (extrapolated) = 8.68 W/kg

SAR(1 g) = 4.19 W/kg; SAR(10 g) = 1.84 W/kg

Smallest distance from peaks to all points 3 dB below = 9.7 mm

Ratio of SAR at M2 to SAR at M1 = 47.5%

Maximum value of SAR (measured) = 4.52 W/kg



Plot 23 LTE B5 1RB Left Edge Low (Distance 0mm)

Date: 2025/5/17

Communication System: UID 0, LTE (0); Frequency: 829 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 829 \text{ MHz}$; $\sigma = 0.945 \text{ S/m}$; $\epsilon_r = 42.335$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

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)

LTE B5 1RB Left Edge 0mm/Low/Area Scan (6x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.56 W/kg

LTE B5 1RB Left Edge 0mm/Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 28.56 V/m; Power Drift = -0.039 dB

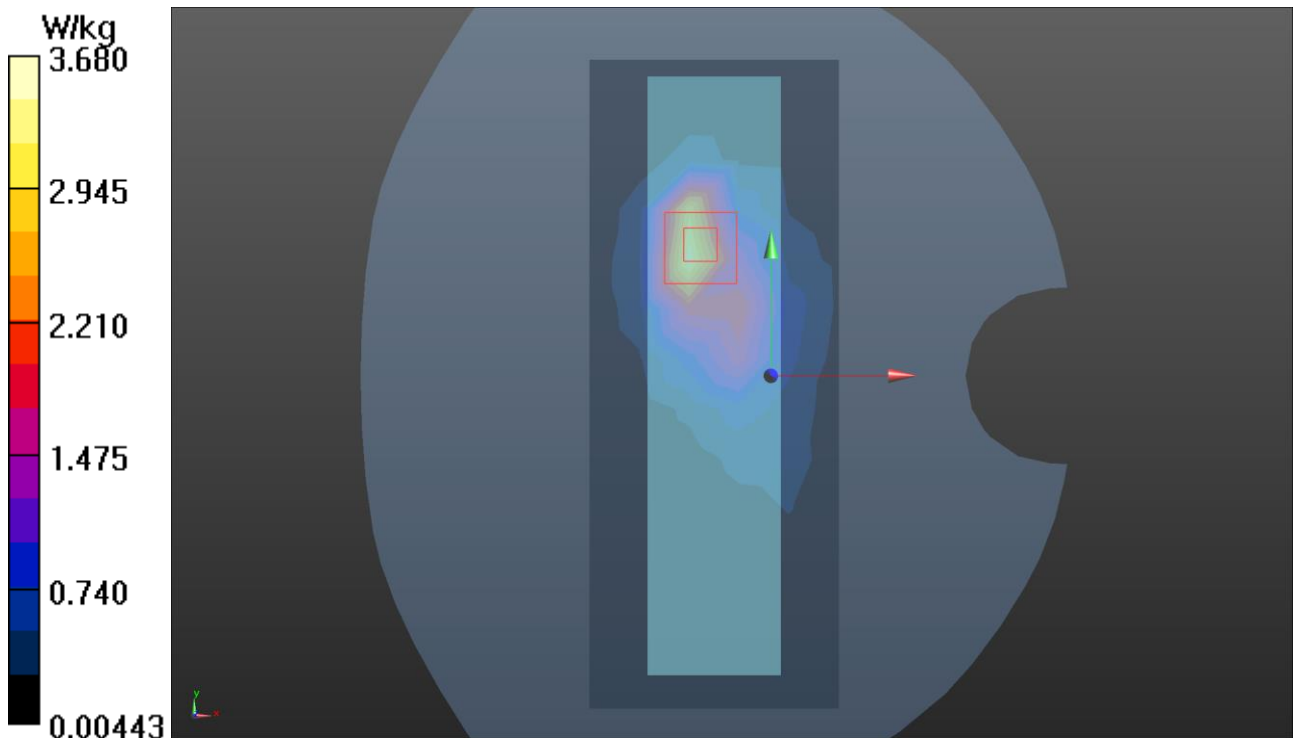
Peak SAR (extrapolated) = 6.44 W/kg

SAR(1 g) = 3.45 W/kg; SAR(10 g) = 1.39 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 49.6%

Maximum value of SAR (measured) = 3.680 W/kg



Plot 24 LTE B7 1RB Left Edge Low (Distance 0mm)

Date: 2025/5/20

Communication System: UID 0, LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.906$ S/m; $\epsilon_r = 38.249$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B7 1RB Left Edge 0mm/Low/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 2.51 W/kg

LTE B7 1RB Left Edge 0mm/Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.85 V/m; Power Drift = -0.078 dB

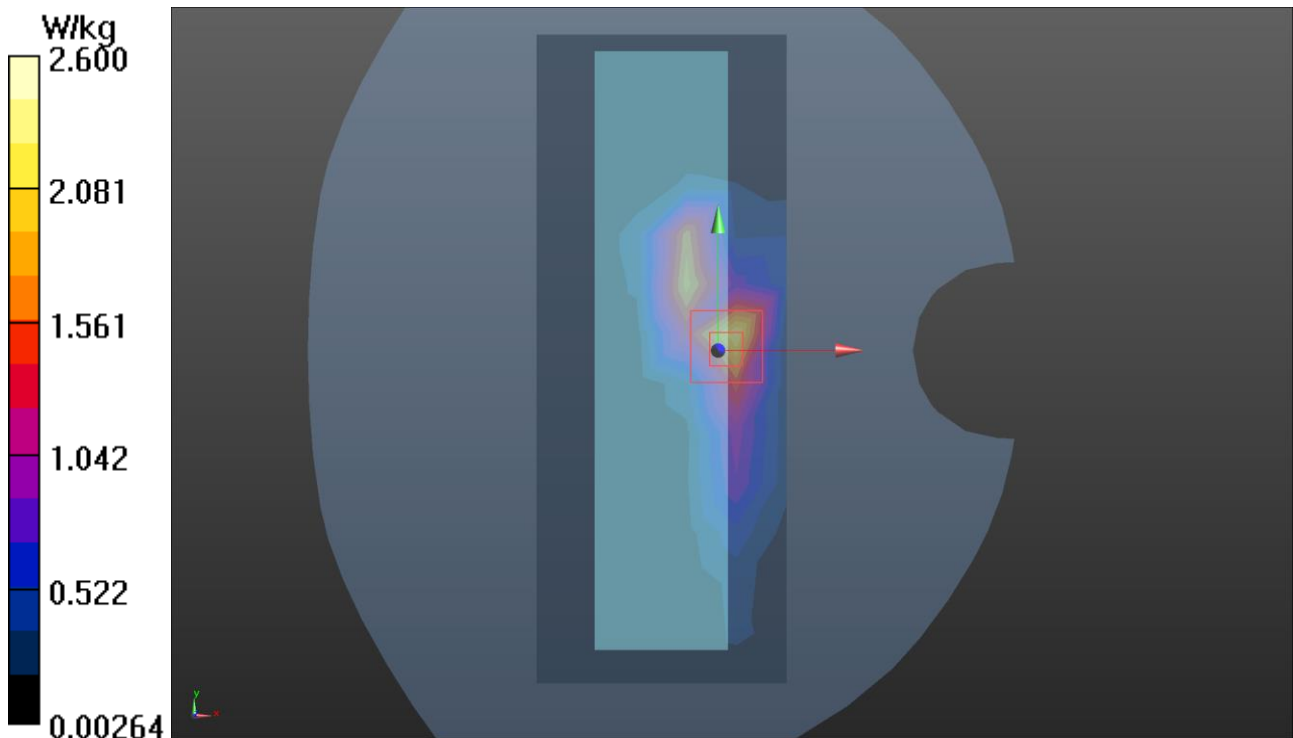
Peak SAR (extrapolated) = 7.10 W/kg

SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.01 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 44.8%

Maximum value of SAR (measured) = 2.60 W/kg



Plot 25 LTE B41 1RB Left Edge Low (Distance 0mm)

Date: 2025/5/20

Communication System: UID 0, LTE (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 1.901$ S/m; $\epsilon_r = 38.266$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

LTE B41 1RB Left Edge 0mm/Low/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.94 W/kg

LTE B41 1RB Left Edge 0mm/Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.85 V/m; Power Drift = -0.078 dB

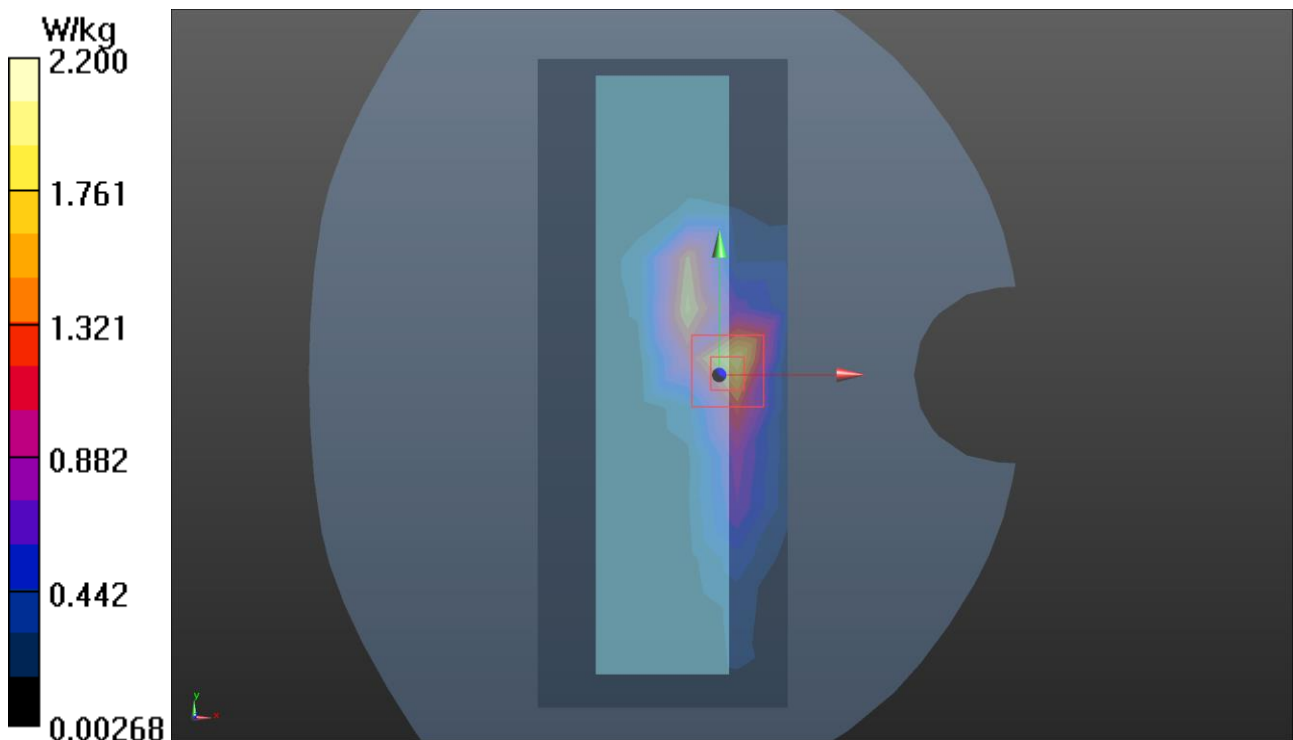
Peak SAR (extrapolated) = 5.88 W/kg

SAR(1 g) = 1.91 W/kg; SAR(10 g) = 0.794 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 35.1%

Maximum value of SAR (measured) = 2.20 W/kg



Plot 26 802.11b Right Edge Mid (Distance 0mm)

Date: 2025/5/15

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.824$ S/m; $\epsilon_r = 38.516$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

802.11b Right Edge 0mm/Mid/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 2.66 W/kg

802.11b Right Edge 0mm/Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.183 V/m; Power Drift = -0.031 dB

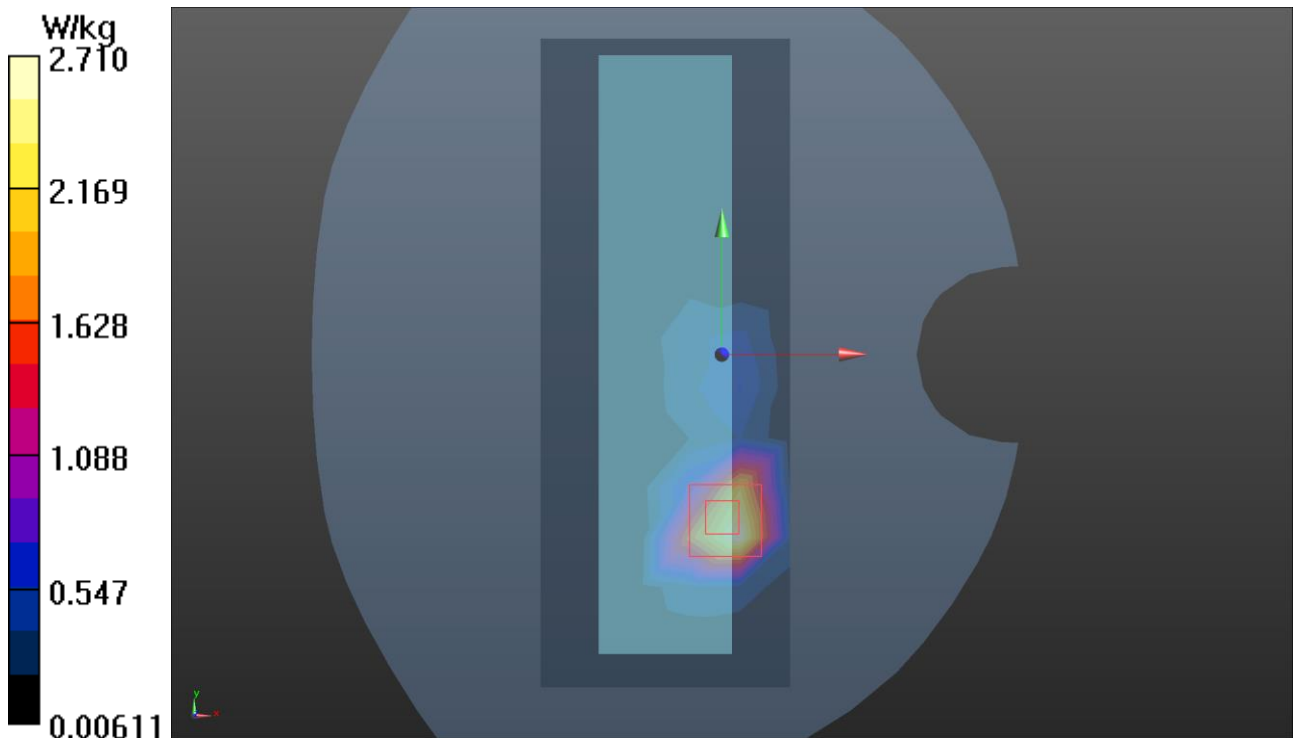
Peak SAR (extrapolated) = 6.73 W/kg

SAR(1 g) = 2.39 W/kg; SAR(10 g) = 0.887 W/kg

Smallest distance from peaks to all points 3 dB below = 8.8 mm

Ratio of SAR at M2 to SAR at M1 = 45.7%

Maximum value of SAR (measured) = 2.71 W/kg



Plot 27 802.11a Right Edge Mid (Distance 0mm)

Date: 2025/5/19

Communication System: UID 0, 802.11a (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5300$ MHz; $\sigma = 4.819$ S/m; $\epsilon_r = 35.285$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7689; ConvF(5.87, 6.17, 6.27); 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)

802.11a Right Edge 0mm/Mid/Area Scan (9x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 3.56 W/kg

802.11a Right Edge 0mm/Mid/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.086 V/m; Power Drift = 0.022 dB

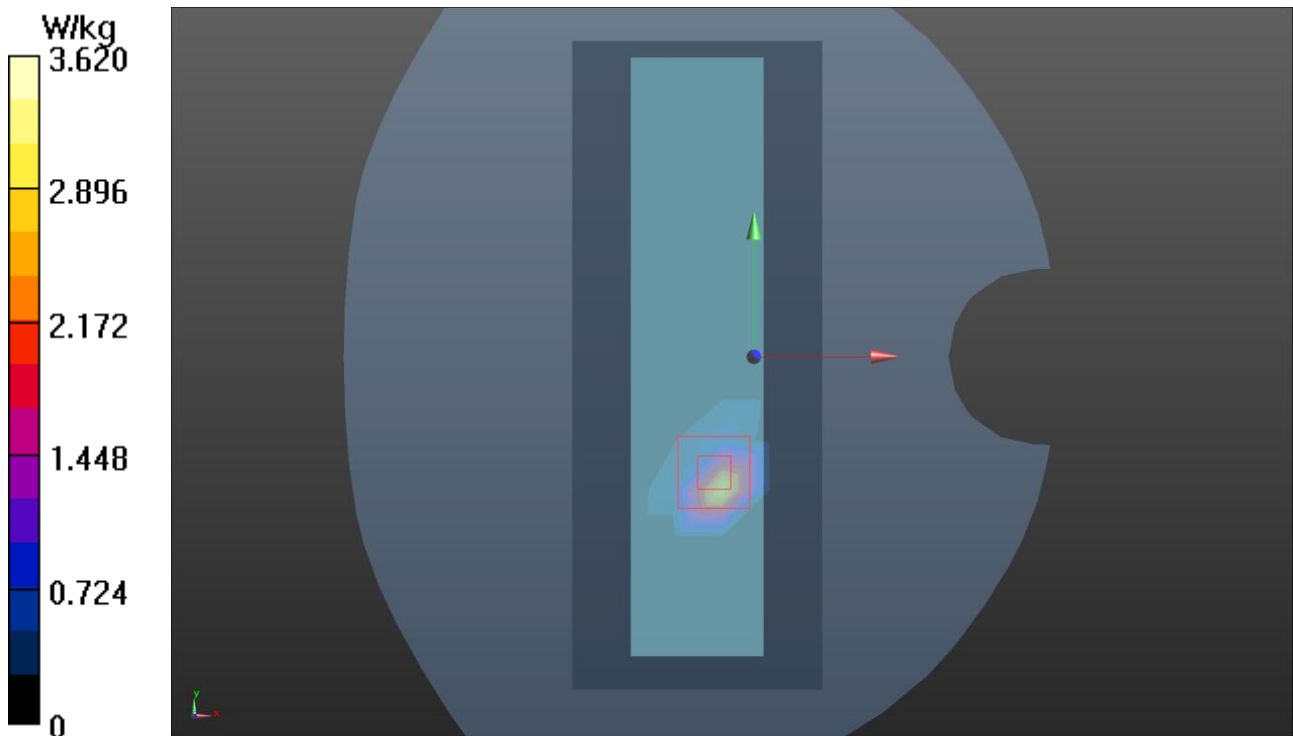
Peak SAR (extrapolated) = 9.85 W/kg

SAR(1 g) = 3.37 W/kg; SAR(10 g) = 0.904 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 51.4%

Maximum value of SAR (measured) = 3.62 W/kg



Plot 28 BT DH5 Right Edge Mid (Distance 0mm)

Date: 2025/5/15

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.30

Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.828$ S/m; $\epsilon_r = 38.503$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

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)

BT DH5 Right Edge 0mm/Mid/Area Scan (8x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.242 W/kg

BT DH5 Right Edge 0mm/Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.609 V/m; Power Drift = -0.12 dB

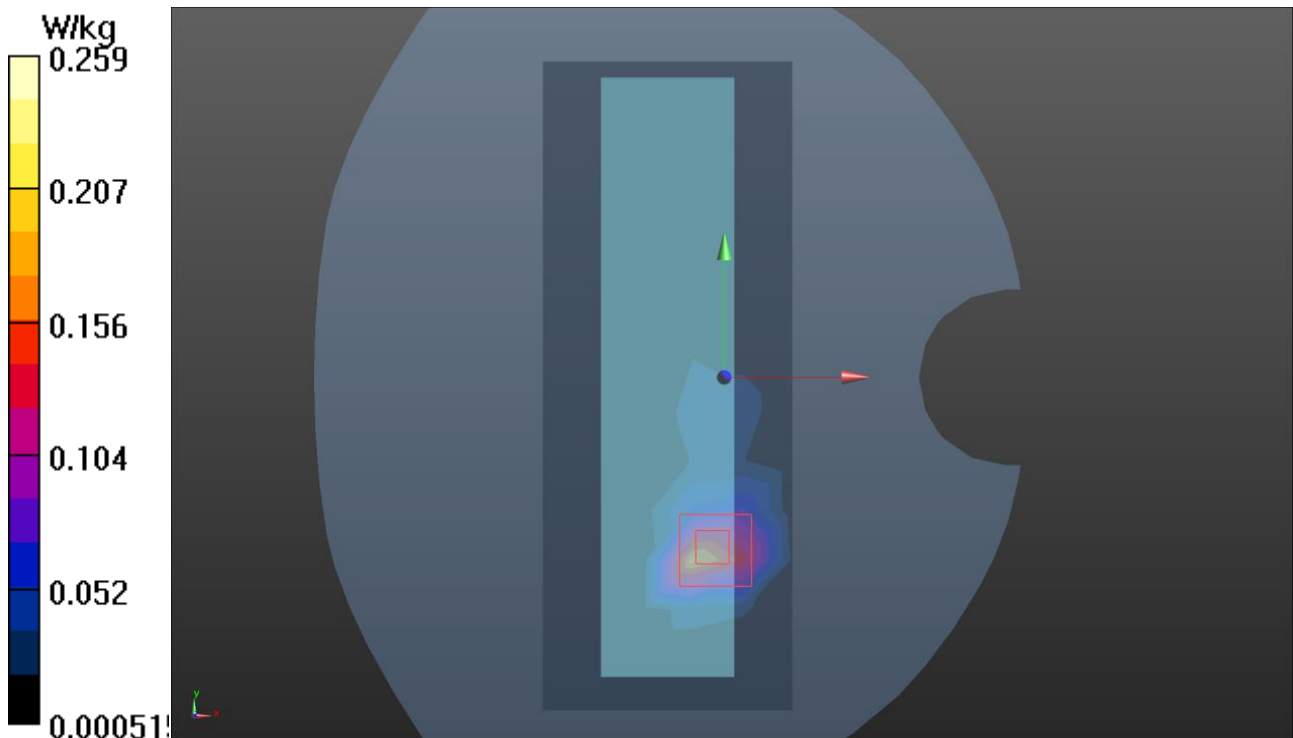
Peak SAR (extrapolated) = 0.656 W/kg

SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.086 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 41.4%

Maximum value of SAR (measured) = 0.259 W/kg



ANNEX D: Probe Calibration Certificate (SN: 7689)

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **TA**
Shanghai

Certificate No. **EX-7689_Jun24**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7689**

Calibration procedure(s) **QA CAL-01.v10, QA CAL-12.v10, QA CAL-14.v7, QA CAL-23.v6,
QA CAL-25.v8
Calibration procedure for dosimetric E-field probes**

Calibration date **June 04, 2024**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3) °C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
OCP DAK-3.5 (weighted)	SN: 1249	05-Oct-23 (OCP-DAK3.5-1249_Oct23)	Oct-24
OCP DAK-12	SN: 1016	05-Oct-23 (OCP-DAK12-1016_Oct23)	Oct-24
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04048)	Mar-25
DAE4	SN: 660	23-Feb-24 (No. DAE4-660_Feb24)	Feb-25
Reference Probe EX3DV4	SN: 7349	03-Nov-23 (No. EX3-7349_Nov23)	Nov-24

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-22)	In house check: Jun-24
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

	Name	Function	Signature
Calibrated by	Joanna Lleshaj	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			Issued: June 4, 2024

Certificate No: EX-7689_Jun24

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Calibration Laboratory of
Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
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S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices – Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

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Parameters of Probe: EX3DV4 - SN:7689

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k = 2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.56	0.61	0.60	$\pm 10.1\%$
DCP (mV) ^B	102.7	103.5	104.8	$\pm 4.7\%$

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B $\text{dB}\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Max Unc ^E k = 2
0	CW	X	0.00	0.00	1.00	0.00	123.5	$\pm 1.1\%$	$\pm 4.7\%$
		Y	0.00	0.00	1.00		119.7		
		Z	0.00	0.00	1.00		140.9		
10352	Pulse Waveform (200Hz, 10%)	X	1.60	61.02	6.64	10.00	60.0	$\pm 2.5\%$	$\pm 9.6\%$
		Y	1.42	60.16	6.02		60.0		
		Z	1.73	61.65	6.95		60.0		
10353	Pulse Waveform (200Hz, 20%)	X	0.79	60.00	4.97	6.99	80.0	$\pm 2.2\%$	$\pm 9.6\%$
		Y	0.82	60.00	4.79		80.0		
		Z	10.00	72.00	9.00		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	0.32	149.82	0.95	3.98	95.0	$\pm 2.8\%$	$\pm 9.6\%$
		Y	20.00	72.00	7.00		95.0		
		Z	0.20	139.27	0.20		95.0		
10355	Pulse Waveform (200Hz, 60%)	X	0.29	60.00	2.80	2.22	120.0	$\pm 1.7\%$	$\pm 9.6\%$
		Y	8.70	158.89	15.99		120.0		
		Z	9.34	158.65	18.11		120.0		
10387	QPSK Waveform, 1 MHz	X	0.72	66.25	13.93	1.00	150.0	$\pm 3.8\%$	$\pm 9.6\%$
		Y	0.59	64.27	12.38		150.0		
		Z	0.79	67.02	14.20		150.0		
10388	QPSK Waveform, 10 MHz	X	1.50	66.93	14.73	0.00	150.0	$\pm 1.3\%$	$\pm 9.6\%$
		Y	1.37	65.88	13.93		150.0		
		Z	1.55	67.15	14.85		150.0		
10396	64-QAM Waveform, 100 kHz	X	1.72	64.78	16.18	3.01	150.0	$\pm 0.9\%$	$\pm 9.6\%$
		Y	1.71	64.79	15.98		150.0		
		Z	1.75	65.00	16.24		150.0		
10399	64-QAM Waveform, 40 MHz	X	2.95	66.69	15.41	0.00	150.0	$\pm 1.6\%$	$\pm 9.6\%$
		Y	2.86	66.30	15.09		150.0		
		Z	2.87	66.14	15.14		150.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.96	66.18	15.49	0.00	150.0	$\pm 3.0\%$	$\pm 9.6\%$
		Y	3.86	65.92	15.26		150.0		
		Z	4.05	66.38	15.59		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Linearization parameter uncertainty for maximum specified field strength.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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Parameters of Probe: EX3DV4 - SN:7689

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 msV^{-2}	T2 msV^{-1}	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
x	10.8	78.12	33.65	2.19	0.00	4.90	0.42	0.00	1.00
y	10.5	76.45	33.69	3.63	0.00	4.91	0.50	0.00	1.00
z	11.2	81.08	33.46	3.12	0.00	4.90	0.41	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle	-2.4°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3–4 mm for an *Area Scan* job.

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Parameters of Probe: EX3DV4 - SN:7689

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc ^H (k = 2)
13	55.0	0.75	14.55	15.41	17.14	0.00	1.25	±13.3%
750	41.9	0.89	9.58	10.07	10.24	0.34	1.27	±11.0%
835	41.5	0.90	9.44	9.92	10.09	0.34	1.27	±11.0%
1750	40.1	1.37	8.01	8.42	8.56	0.35	1.27	±11.0%
1900	40.0	1.40	7.88	8.28	8.42	0.35	1.27	±11.0%
2000	40.0	1.40	7.78	8.18	8.32	0.35	1.27	±11.0%
2300	39.5	1.67	7.65	8.04	8.17	0.35	1.27	±11.0%
2450	39.2	1.80	7.62	8.01	8.14	0.35	1.27	±11.0%
2600	39.0	1.96	7.39	7.77	7.89	0.35	1.27	±11.0%
3300	38.2	2.71	6.80	7.15	7.27	0.36	1.27	±13.1%
3500	37.9	2.91	6.76	7.11	7.22	0.36	1.27	±13.1%
3700	37.7	3.12	6.71	7.05	7.17	0.36	1.27	±13.1%
3900	37.5	3.32	6.51	6.84	6.95	0.37	1.27	±13.1%
4100	37.2	3.53	6.39	6.72	6.83	0.37	1.27	±13.1%
4400	36.9	3.84	6.31	6.63	6.74	0.37	1.27	±13.1%
4600	36.7	4.04	6.28	6.59	6.70	0.37	1.27	±13.1%
4800	36.4	4.25	6.21	6.53	6.64	0.37	1.27	±13.1%
4950	36.3	4.40	6.11	6.42	6.53	0.36	1.27	±13.1%
5250	35.9	4.71	5.87	6.17	6.27	0.33	1.27	±13.1%
5600	35.5	5.07	5.33	5.60	5.70	0.29	1.27	±13.1%
5750	35.4	5.22	5.31	5.59	5.68	0.28	1.27	±13.1%

^C Frequency validity above 300 MHz of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ±110 MHz.

^F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ϵ and σ by less than ±5% from the target values (typically better than ±3%) and are valid for TSL with deviations of up to ±10% if SAR correction is applied.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz and below ±2% for frequencies between 3–6 GHz at any distance larger than half the probe tip diameter from the boundary.

^H The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. Therefore, The uncertainty stated is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

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Parameters of Probe: EX3DV4 - SN:7689

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc ^H (k = 2)
6500	34.5	6.07	6.03	6.33	6.44	0.20	1.27	±18.6%

^C Frequency validity at 6.5 GHz is -600/+700 MHz, and ±700 MHz at or above 7 GHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ϵ and σ by less than ±10% from the target values (typically better than ±6%) and are valid for TSL with deviations of up to ±10%.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz; below ±2% for frequencies between 3–6 GHz; and below ±4% for frequencies between 6–10 GHz at any distance larger than half the probe tip diameter from the boundary.

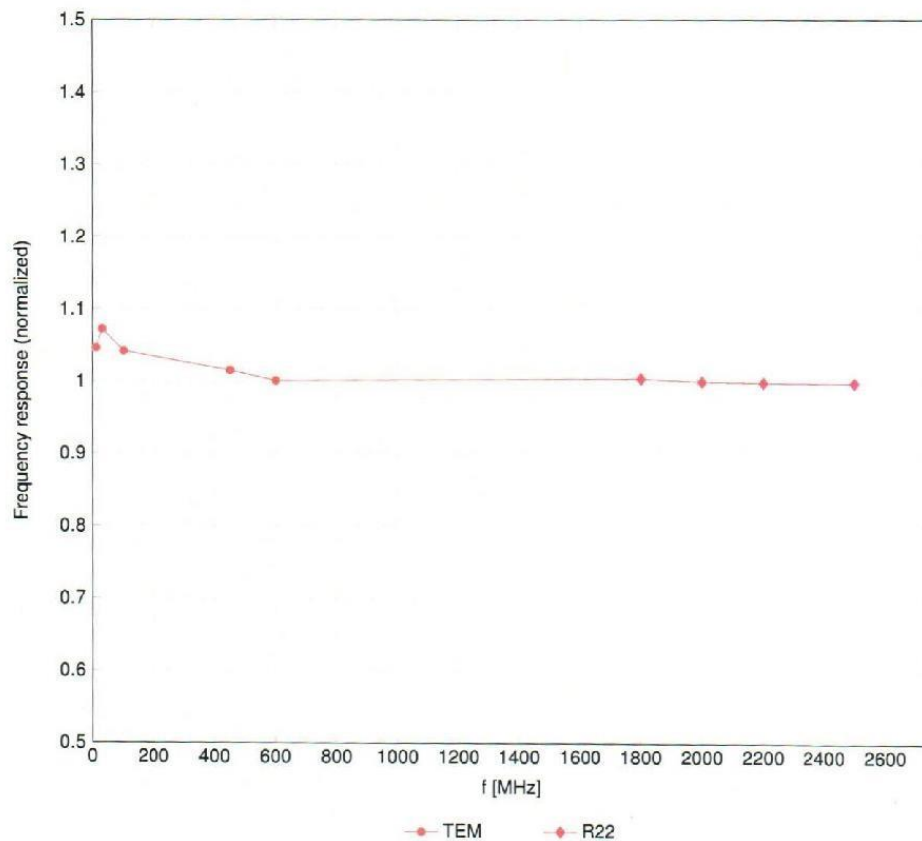
^H The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. Therefore, The uncertainty stated is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

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Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide:R22)

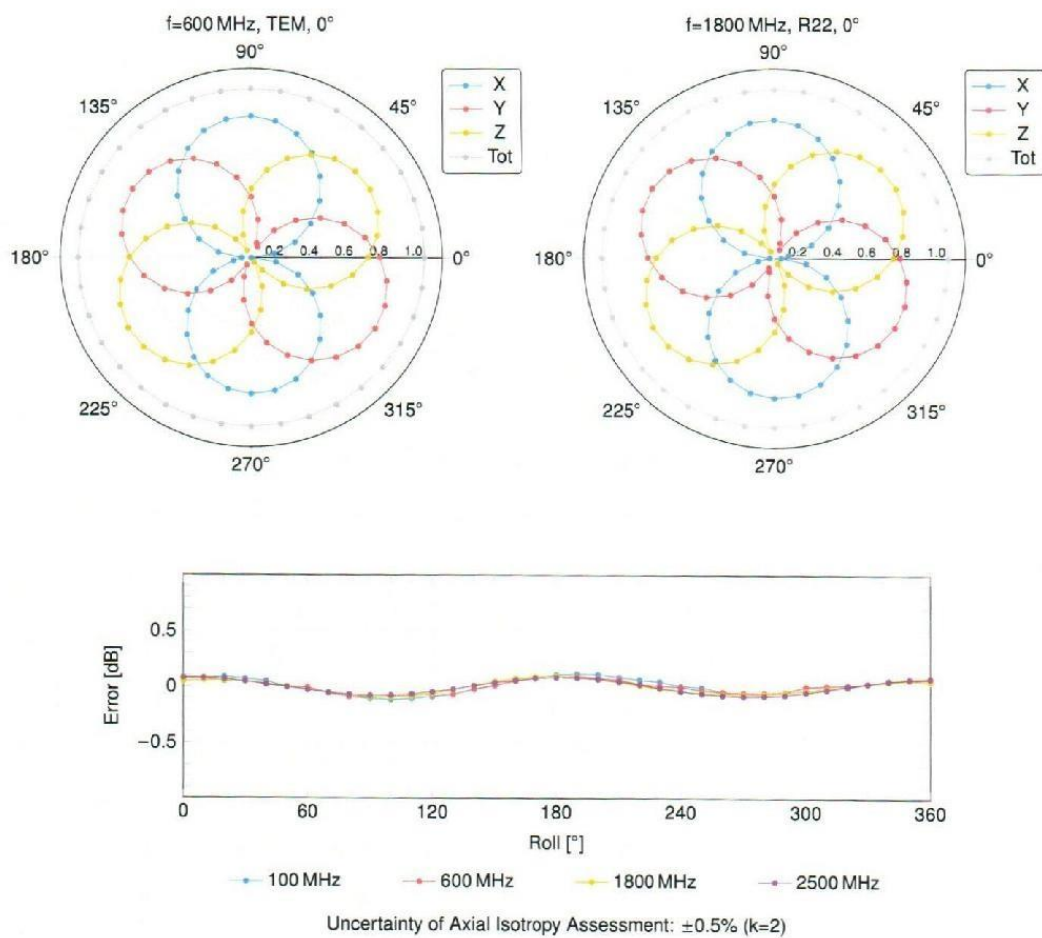


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

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Receiving Pattern (ϕ), $\vartheta = 0^\circ$

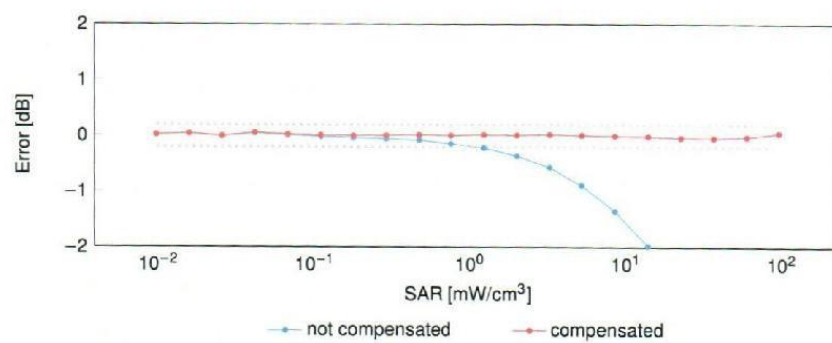
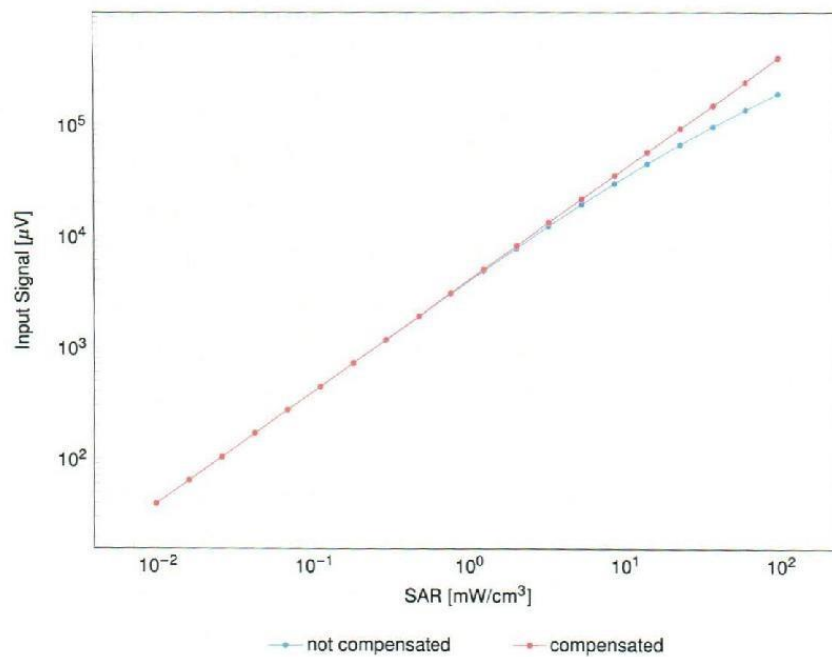


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Dynamic Range $f(\text{SAR}_{\text{head}})$

(TEM cell, $f_{\text{eval}} = 1900\text{MHz}$)

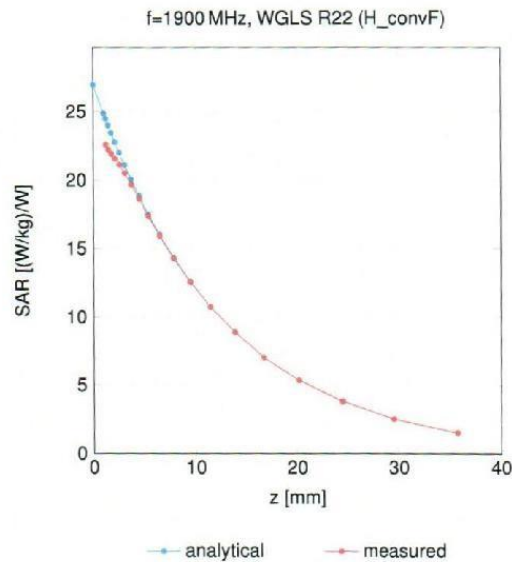


Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

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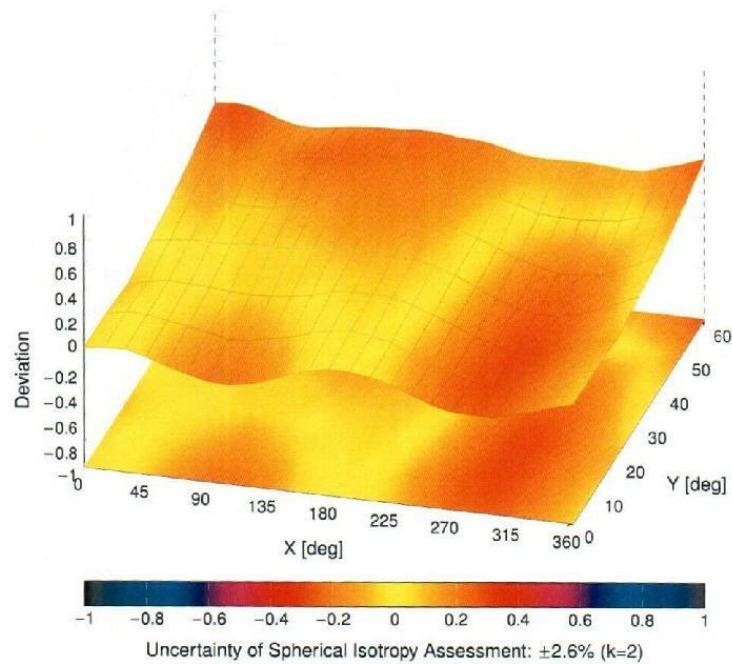
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Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), f = 900 MHz



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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E k = 2
0		CW	CW	0.00	±4.7
10010	CAB	SAR Validation (Square, 100 ms, 10 ms)	Test	10.00	±9.6
10011	CAC	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	±9.6
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	±9.6
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	±9.6
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	±9.6
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	±9.6
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	±9.6
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	±9.6
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	±9.6
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	±9.6
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	±9.6
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10063	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.82	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6
10109	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6
10111	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^F k = 2
10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAE	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10115	CAE	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAE	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAE	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAE	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAE	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10153	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.48	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAJ	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	±9.6
10178	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10180	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	AAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189	AAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6
10194	CAE	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	±9.6
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	±9.6
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6
10197	CAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6
10198	CAE	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	±9.6
10219	CAE	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6
10220	CAE	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAE	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAE	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
10223	CAE	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6
10224	CAE	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E k = 2
10225	CAC	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6
10226	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6
10227	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6
10228	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6
10229	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10230	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10231	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	±9.6
10232	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10233	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10234	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6
10235	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10236	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10237	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6
10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10239	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6
10241	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	±9.6
10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	±9.6
10244	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
10245	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	±9.6
10246	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	±9.6
10247	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	±9.6
10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	±9.6
10249	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6
10250	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	±9.6
10251	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	±9.6
10252	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	±9.6
10253	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6
10254	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	±9.6
10255	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	±9.6
10256	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	±9.6
10257	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	±9.6
10258	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6
10259	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6
10260	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6
10261	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6
10262	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	±9.6
10263	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	±9.6
10264	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	±9.6
10265	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10266	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	±9.6
10267	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	±9.6
10268	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
10269	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.6
10270	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	±9.6
10274	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	±9.6
10275	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	±9.6
10277	CAA	PHS (QPSK)	PHS	11.81	±9.6
10278	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.5)	PHS	11.81	±9.6
10279	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.38)	PHS	12.18	±9.6
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	±9.6
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	±9.6
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.6
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	±9.6
10297	AAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6
10298	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	±9.6
10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6
10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10301	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC)	WiMAX	12.03	±9.6
10302	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols)	WiMAX	12.57	±9.6
10303	AAA	IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC)	WiMAX	12.52	±9.6
10304	AAA	IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC)	WiMAX	11.86	±9.6
10305	AAA	IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	±9.6
10306	AAA	IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	±9.6

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