

Test report No:
2530770R.708

FCC TEST REPORT

Product Name	Smart Controller
Trademark	N/A
Model and /or type reference	GS-ONE-TS
FCC ID	2BP4Q-GS-ONE-TS
Applicant's name / address	Aerora North America, Inc. 2570 N. First St, Suite 200 San Jose, CA 95131
Test method requested, standard	47 CFR FCC Part 2 (Section 2.1093) IEEE Std 1528-2013 EN IEC/IEEE 62209-1528:2021 ANSI C95.1-2005
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao / Project Manager 
Approved by (name / position & signature)	Frank He / Technical Manager 
Date of issue	2025-09-08
Report Version	V1.0
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COMPETENCES AND GUARANTEES

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In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Mar. 25, 2025
Date (start test)	Apr. 05, 2025
Date (finish test)	May. 30, 2025

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	18 °C – 25 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
Tx	: Transmitter
Rx	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2530770R.708	V1.0	Initial issue of report.	2025-09-08

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with FCC 47CFR §2.1093, IEEE Std. 1528-2013, EN IEC/IEEE 62209-1528:2021, ANSI C95.1-2005.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1 General Information.

STATEMENT OF COMPLIANCE

The maximum results of Specific Absorption Rate (SAR) found during testing for Smart Controller, GS-ONE-TS, are as follows.

Equipment Class	Frequency Band		Highest SAR Summary	
			Body SAR (Separation 0mm)	Simultaneous Transmission
			1g SAR (W/kg)	1g SAR (W/kg)
Licensed	WCDMA	WCDMA II	0.211	0.76
		WCDMA IV	0.232	
		WCDMA V	0.092	
	LTE	LTE Band 7	0.275	
		LTE Band 12	0.078	
		LTE Band 13	0.087	
		LTE Band 14	0.090	
		LTE Band 25/2	0.183	
		LTE Band 26/5	0.109	
		LTE Band 41	0.179	
		LTE Band 48/42/43	0.036	
		LTE Band 66/4	0.225	
		LTE Band 71	0.065	
DSSS	Bluetooth	Bluetooth	0.063	
NII	WLAN	5GHz WLAN	0.556	
DSSS	SRD	SRD 2.4G	0.694	
		SRD 5.8	0.489	

Equipment Class	Frequency Band		Highest SAR Summary	
			Limbs SAR (Separation 0mm)	Simultaneous Transmission
			10g SAR (W/kg)	10g SAR (W/kg)
Licensed	WCDMA	WCDMA II	3.556	3.95
		WCDMA IV	3.632	
		WCDMA V	0.776	
	LTE	LTE Band 7	3.058	
		LTE Band 12	0.508	
		LTE Band 13	1.588	
		LTE Band 14	1.625	
		LTE Band 25/2	3.176	
		LTE Band 26/5	0.806	
		LTE Band 41	1.465	
		LTE Band 48/42/43	0.537	
		LTE Band 66/4	3.653	
		LTE Band 71	0.259	
DSSS	Bluetooth	Bluetooth	0.297	
NII	WLAN	5GHz WLAN	0.802	
DSSS	SRD	SRD 2.4G	1.27	
		SRD 5.8	0.893	

USED EQUIPMENT

SAR Test and Power Density Test / TR6

Instrument	Manufacturer	Model No.	Serial No.	Next Cal. Date
Stäubli Robot TX60L	Stäubli	TX60L	F10/5C90A1/A/01	N/A
Controller	Stäubli	SP1	S-0034	N/A
Dipole Validation Kits	Speag	D750V3	1086	2026.03.20
Dipole Validation Kits	Speag	D835V2	4d094	2028.03.17
Dipole Validation Kits	Speag	D1800V2	2d179	2028.03.17
Dipole Validation Kits	Speag	D1900V2	5d121	2028.03.16
Dipole Validation Kits	Speag	D2450V2	839	2028.03.17
Dipole Validation Kits	Speag	D2600V2	1029	2028.03.12
Dipole Validation Kits	Speag	D3500V2	1026	2028.03.16
Dipole Validation Kits	Speag	D3700V2	1109	2028.03.12
Dipole Validation Kits	Speag	D5GHzV2	1078	2028.03.13
ELI Phantom	Speag	ELI	TP-2106	N/A
Device Holder	Speag	SD 000 H01 HA	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1220	2026.03.13
E-Field Probe	Speag	EX3DV4	7761	2025.09.18
SAR Software	Speag	DASY6	V5.2 Build 162	N/A
Power Amplifier	MVE	MPC1018.50	C30002D	2025.07.03
Dual Directional Coupler	woken	0110A05A82Z-20	CMLC66W1A1	2025.06.29
Tissue fluid test probe	SPEAG	DAK 12.0	1204	N/A
Vector Network	Agilent	E5071C	MY46103316	2025.08.14
Signal Generator	R&S	SMBV100A	263697	2025.06.13
Power Meter	Keysight	N1912A	MY60300004	2025.06.29
Radio Communication Analyzer	Anritsu	MT8821C	6262297906	2025.12.13
Radio Communication Test Station	Anritsu	MT8000A	6272458317	2025.12.13
Temperature/Humidity Meter	Rites	RTS-8S	RF06	2025.07.03
Temperatuer	LKM	DTM3000	3777	2025.07.24

SAR Test and Power Density Test / TR6

Instrument	Manufacturer	Model No.	Serial No.	Firmware Versiom	Software Version
SAR Software	Speag	DASY6	V5.2 Build 162	N/A	V16.2.4.2448
Power Amplifier	MVE	MPC1018.50	C30002D	A.14.03	N/A
Vector Network	Agilent	E5071C	MY46103316	A.11.31	N/A
Signal Generator	R&S	SMBV100A	263697	V4.15.125.49	N/A
Power Meter	Keysight	N1912A	MY60300004	A2.06.01	N/A

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

DASY6 SAR Uncertainty								
Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) v_{eff}
Measurement System								
Probe Calibration	±5.5%	N	1	1	1	±5.5%	±5.5%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.78	0.71	±2.0%	±1.8%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.26	0.26	±0.6%	±0.7%	∞
Combined Std. Uncertainty						±10.6%	±10.5%	361
Expanded STD Uncertainty						±21.2%	±21.1%	

DASY6 SAR Uncertainty								
Measurement uncertainty for 3 GHz to 6 GHz averaged over 1 gram / 10 gram.								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) v _{eff}
Measurement System								
Probe Calibration	±6.65%	N	1	1	1	±6.65%	±6.65%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±2.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Probe Positioning	±6.7%	R	$\sqrt{3}$	1	1	±3.9%	±3.9%	∞
Max. SAR Eval.	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.78	0.71	±2.0%	±1.8%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.26	0.26	±0.6%	±0.7%	∞
Combined Std. Uncertainty						±12.0%	±12.0%	784
Expanded STD Uncertainty						±24.0%	±23.9%	

TEST FACILITY

Tset Location : FCC Designation Number: CN1199

1 GENERAL INFORMATION

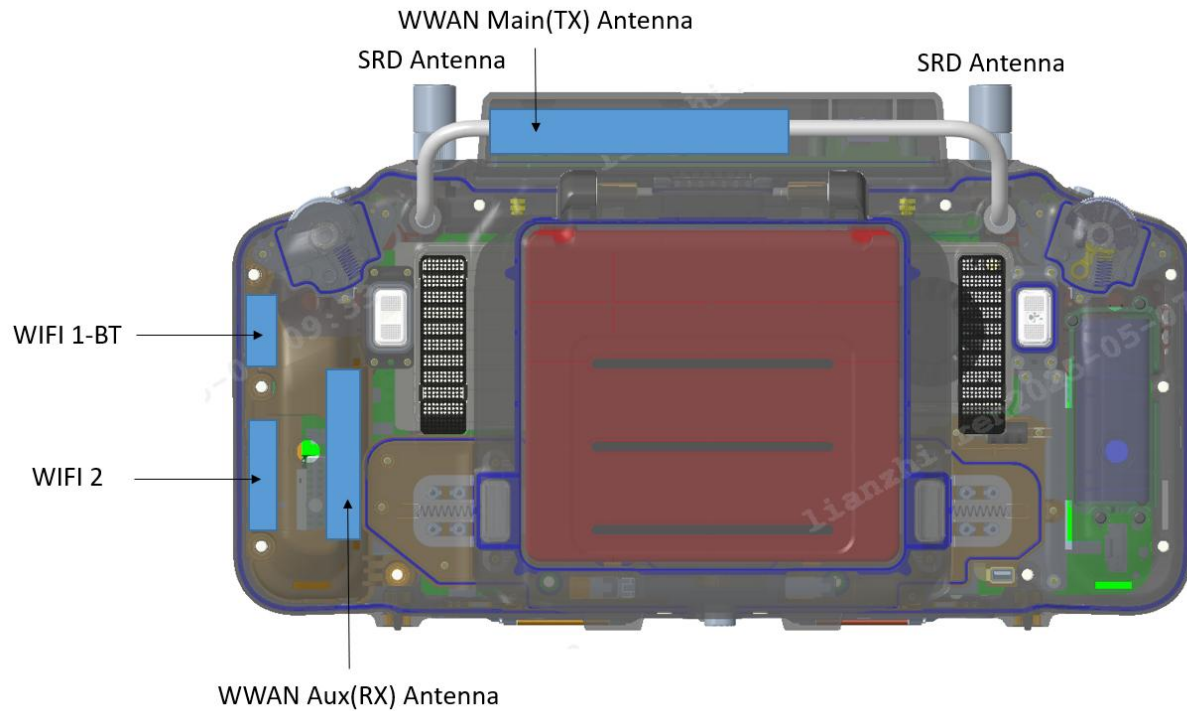
Product Name	Smart Controller				
Trademark	N/A				
Model No.	GS-ONE-TS				
FCC ID.....	2BP4Q-GS-ONE-TS				
Hardware Version.....	V1.3				
Software Version	T05				
Operating Temperature	-40℃ ~ 70℃				
Power Supply	DC 7.4 V, 3 A 22.2 W from internal rechargeable battery which can be charged by AC/DC adapter.				
Manufacturer	Aerora North America, Inc.				
Manufacturer address	2570 N. First St, Suite 200 San Jose, CA 95131				
Factory.....	ROTOTEK VIETNAM CO., LTD				
Factory address.....	House S4_2nd floor, Hap Linh Industrial Park, Bac Ninh City, Vietnam				
Wireless specification	Bluetooth BR/EDR				
Operating frequency range(s) :	2402~2480MHz				
Type of Modulation	GFSK				
PHYs	☒	GFSK	☒	Pi/4 DQPSK	☒ 8DPSK
Data Rate	☒	1Mbit/s	☒	2Mbit/s	☒ 3Mbit/s
Number of channels	79				
Wireless specification	Bluetooth BLE				
Operating frequency range(s) :	2402~2480MHz				
Type of Modulation	GFSK				
PHYs	☒	LE 1M	☒	LE 2M	☒ LE Coded S=2/8
Data Rate	☒	1Mbit/s	☒	2Mbit/s	☒ 500/125 Kbit/s
Number of channels	40				
Wireless specification	802.11a / n / ac / ax				
Frequency Range	U-NII-1: 5150 MHz to 5250 MHz				
	U-NII-3: 5725 MHz to 5850 MHz				
Channel Bandwidth	802.11a 20 MHz 802.11n 20 MHz, 40 MHz 802.11ac 20 MHz, 40 MHz, 80 MHz 802.11ax 20 MHz, 40 MHz, 80 MHz				
Modulation technology	OFDM / OFDMA				
Wireless specification	WCDMA				
Support Band(s)	Band II / Band IV / Band V				
Uplink Frequency	Band II: 1852.4-1907.6 MHz Band IV: 1710-1755 MHz Band V: 826.4-846.6 MHz				
Downlink Frequency	Band II: 1932.4-1987.6 MHz Band IV: 2110-2155 MHz Band V: 871.4-891.6 MHz				
Type of Modulation	QPSK				
Wireless specifiction	LTE				

Support Band(s)	FDD LTE Band 2 / 4 / 5 / 7 / 12 / 13 / 14 / 25 / 26 / 66 / 71 TDD LTE Band 41 / 42 / 43 / 48	
Uplink Frequency	Band 2: 1850-1910 MHz Band 4: 1710-1755 MHz Band 5: 824-849 MHz Band 7: 2500-2570 MHz Band 12: 699-716 MHz Band 13: 777-787 MHz Band 14: 788-798 MHz Band 25: 1850-1915 MHz Band 26: 814-849 MHz Band 66: 1710-1780 MHz Band 71: 663-698 MHz Band 41: 2496-2690 MHz Band 42: 3550-3600 MHz Band 43: 3650-3675 MHz Band 48: 3550-3700 MHz	
Downlink Frequency	Band 2: 1930-1990 MHz Band 4: 2110-2155 MHz Band 5: 869-894 MHz Band 7: 2620-2690 MHz Band 12: 729-746 MHz Band 13: 746-756 MHz Band 14: 758-768 MHz Band 25: 1930-1995 MHz Band 26: 859-894 MHz Band 66: 2110-2200 MHz Band 71: 617-652 MHz Band 41: 2496-2690 MHz Band 42: 3550-3600 MHz Band 43: 3650-3675 MHz Band 48: 3550-3700 MHz	
Channel Bandwidth(MHz)	Band 2:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 4:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 5:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz
	Band 7:	5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 12:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz
	Band 13:	5 MHz / 10 MHz
	Band 14:	5 MHz / 10 MHz
	Band 25:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 26:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz / 15 MHz
	Band 66:	1.4 MHz / 3 MHz / 5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 71:	5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 41:	5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 42:	5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 43:	5 MHz / 10 MHz / 15 MHz / 20 MHz
	Band 48:	5 MHz / 10 MHz / 15 MHz / 20 MHz
Type of Modulation	Downlink modulation: QPSK & 16QAM & 64QAM	



	Uplink modulation: QPSK & 16QAM & 64QAM
UL CA	Intra-Band: 5B, 7C, 41C

1.1 DUT Antenna Locations



According to the distance between WCDMA<E&Wi-Fi antennas and the sides of the EUT we can draw the conclusion that:

EUT Sides for SAR Testing							
Mode	Exposure Condition	Front	Back	Left	Right	Top	Bottom
WWAN Antenna	Product specific 1g/10g SAR	Yes	Yes	No	No	Yes	No
Wi-Fi Antenna	Product specific 1g/10g SAR	Yes	Yes	No	Yes	Yes	No
SAR Antenna	Product specific 1g/10g SAR	Yes	Yes	No	No	Yes	No

Note:

- 1) When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

1.2 LTE CA additional specification

The device supports downlink and intra-band contiguous uplink LTE Carrier Aggregation (CA). When carrier aggregation applies, implementation and measurement details for the following are necessary.

- a) Intra-band carrier aggregation requirements for uplink.
- b) Intra-band and inter-band carrier aggregation requirements for downlink.

The possible downlink and uplink LTE CA combinations supported by this device are as below tables per 3GPP TS 36.101 V15.4.0. The conducted power measurement results of downlink and uplink LTE CA are provided in Section 8 of this report per 3GPP TS 36.521-1 V14.4.0. The downlink LTE CA SAR test is not required since the maximum output power for downlink LTE CA was not more than 0.25dB higher than the maximum output power for without downlink LTE CA.

SAR test procedure for intra-band contiguous UL LTE CA is as below:

1) Maximum output power is measured for each UL CA configuration for the required test channels described in KDB 941225 D05

–UL PCC configuration is determined by the required test channel

–SCC and subsequent CCs are added alternatively to either side of the PCC or within the transmission band for channels at the ends of a frequency band.

2) SAR for UL CA is required in each exposure condition and frequency band combination

3) For this device, as the maximum output for Intra-band uplink LTE CA is $\leq$ standalone LTE mode (without CA),

- PCC is configured according to the highest standalone SAR configuration tested.

- SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC

4) When the reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based)

5) UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level.

Intra-band contiguous CA operating bands :

E-UTRA CA Band	Uplink (UL) operating band			Downlink (DL) operating band			Duplex Mode
	F _{UL_low} – F _{UL_high}			F _{DL_low} – F _{DL_high}			
CA_5B	824 MHz	–	849 MHz	869 MHz	–	894 MHz	FDD
CA_7C	2500 MHz	–	2570 MHz	2620 MHz	–	2690 MHz	FDD
CA_41C	2496 MHz	–	2690 MHz	2496 MHz	–	2690 MHz	TDD

Remark:

As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.

1.3 Test Specification

Identity	Document Title
FCC 47CFR §2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
IEC TR 63170	Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 GHz
IEC/IEEE 63195-1	Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) – Part 1: Measurement procedure
IEC/IEEE 63195-2	Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) – Part 2: Computational procedure
ANSI/IEEE C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.
IEEE 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
EN 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-mounted wireless communication devices - Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz) (IEC/IEEE 62209-1528)
KDB 941225 D05	SAR for LTE Devices v02r05
KDB 941225 D05A	LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06	Hotspot Mode SAR v02r01
KDB 248227 D01	SAR Guidance for IEEE 802.11 Wi-Fi SAR v02r02
KDB 648474 D04	Handset SAR v01r03
KDB447498 D01	General RF Exposure Guidance v06
KDB 865664 D01	SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03
KDB 616217 D04	SAR for laptop and tablets v01r02

1.4 RF exposure limits

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

SAR Exposure Limit		
	General Population / Uncontrolled Exposure ¹ (W/kg)	Occupational / Controlled Exposure ² (W/kg)
Spatial Peak SAR ³ (head or Body)	1.60	8.00
Spatial Peak SAR ⁴ (Whole Body)	0.08	0.40
Spatial Peak SAR ⁵ (Hands / Feet / Ankle / Wrist)	4.00	20.00
Power Density Exposure Limit (1,500 - 100,000 MHz)		
	General Population / Uncontrolled Exposure (mW/cm²) ⁶	Occupational / Controlled Exposure (mW/cm²)
Power Density (S)	1.0	5.0

Notes:

1. **General Population / Uncontrolled Environments** are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.
2. **Occupational / Controlled Environments** are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation).
3. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
4. The Spatial Average value of the SAR averaged over the whole body.
5. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
6. $1 \text{ mW/cm}^2 = 10 \text{ W/m}^2$,

2 SAR MEASUREMENTS SYSTEM CONFIGURATION

SAR Definition

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

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

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

SAR measurement can be related to the electrical field in the tissue by

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

Where:

σ = conductivity of the tissue (S/m)

ρ = mass density of the tissue (kg/m³)

E = RMS electric field strength (V/m)

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

Power Tensity Definition

The power density for an electromagnetic field represents the rate of energy transfer per unit area. The local power density (i.e. Poynting vector) at a given spatial point is deduced from electromagnetic fields by the following formula:

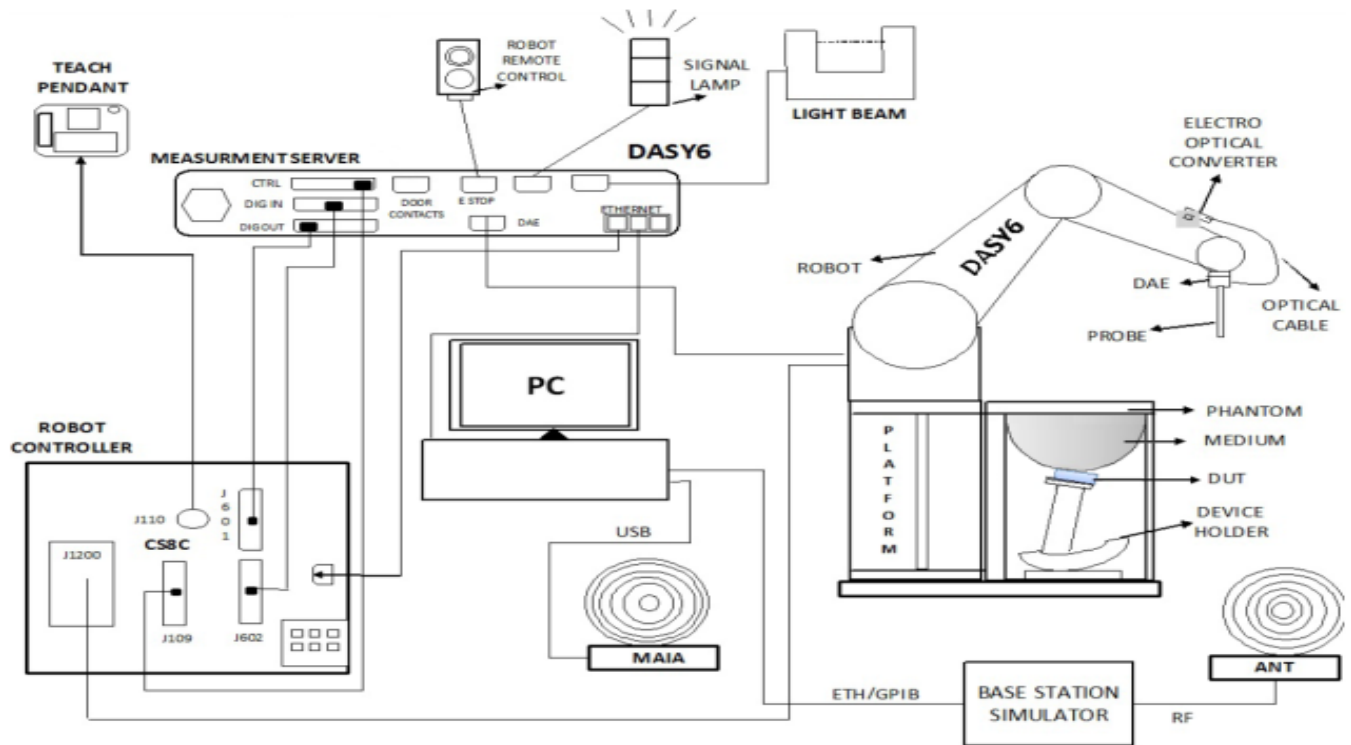
$$S = \frac{1}{2} \text{Re}\{E \times H^*\} \cdot \vec{n}$$

Where: E is the complex electric field peak phasor and H is the complex conjugate magnetic field peak phasor.

The spatial-average power density distribution on the evaluation surface is determined per the IEC TR 63170. The spatial area, A is specified by the applicable exposure limit or regulatory requirements. The circular shape was used.

$$S_{av} = \frac{1}{2A} \Re \left(\int E \times H^* \cdot \hat{n} dA \right)$$

2.1 DASY6 SAR System Description



The DASY6 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. 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.
3. 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.
4. The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
5. A computer running Windows 11 and the DASY6 software.
6. Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
7. The phantom, the device holder and other accessories according to the targeted measurement.

2.2 Applications

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEC/IEEE 62209-1528 others.

2.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures points and step size follow as below. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution. The measure settings are referred in IEEE Std 1528-2013.

			≤3GHz	>3GHz
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: Δx Area , Δy Area			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3–4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom			≤ 2 GHz: ≤ 8 mm 2 –3 GHz: ≤ 5 mm*	3–4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)		≤ 5 mm	3–4 GHz: ≤ 4 mm
				4–5 GHz: ≤ 3 mm
				5–6 GHz: ≤ 2 mm
	graded grid	Δz Zoom (1): between 1st two points closest to phantom surface	≤ 4 mm	3–4 GHz: ≤ 3 mm
				4–5 GHz: ≤ 2.5 mm
		Δz Zoom (n>1): between subsequent points	≤ 1.5·Δz Zoom (n-1)	
Minimum zoom scan volume	x, y, z		≥30 mm	3–4 GHz: ≥ 28 mm
				4–5 GHz: ≥ 25 mm
				5–6 GHz: ≥ 22 mm
Note:				
1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

2.4 Uncertainty of Inter-/Extrapolation and Averaging

To evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Postprocessor, DASY6 allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEC/IEEE 62209-1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = A e^{-\frac{z}{2a}} \cos^2 \left(\frac{\pi}{2} \frac{\sqrt{x'^2 + y'^2}}{5a} \right)$$

$$f_2(x, y, z) = A e^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left(3 - e^{-\frac{2z}{a}} \right) \cos^2 \left(\frac{\pi}{2} \frac{y'}{3a} \right)$$

$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \left(e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2} \right)$$

2.5 DASY6 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEC/IEEE 62209-1528, etc.) under ISO 17025. The calibration data are in Appendix D.

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	4 MHz to 10 GHz Linearity: ± 0.2 dB (30 MHz to 10 GHz)
Directivity	±0.1 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Calibration	ISO/IEC 17025 calibration service available
 	
EX3DV4 E-Field Probe Probe setup on robot	

2.6 Boundary Detection Unit and Probe Mounting Device

The DASY probes use a precise connector and an additional holder for the probe, consisting of a plastic tube and a flexible silicon ring to center the probe. The connector at the DAE is flexibly mounted and held in the default position with magnets and springs. Two switching systems in the connector mount detect frontal and lateral probe collisions and trigger the necessary software response.

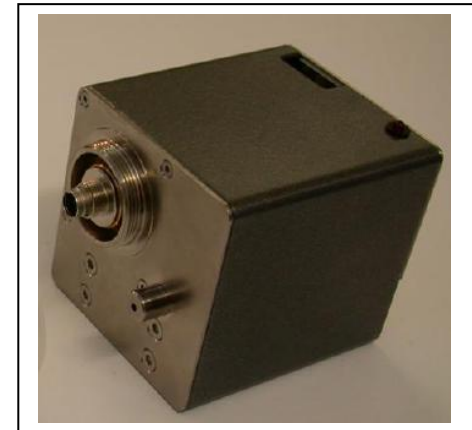


2.7 DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit.

Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.



The DASY6 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with the DAE electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY6 I/O board, which is directly connected to the PC/104 bus of the CPU board



2.8 Robot

The DASY6 system uses the high precision robots TX60 XL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY6 system, the CS8C robot controller version from Stäubli is used. The XL robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller



2.9 Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.



2.10 Device Holder

The DASY6 device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The DASY6 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon_r = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



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

The DASY6 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon_r = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



2.11 SAM Phantom

SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- Left head
- Right head
- Flat phantom

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



ELI Phantom

The SAM phantom is a fiberglass shell phantom with 2mm shell thickness. It has one measurement areas:

- ELI phantom

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



3 TISSUE SIMULATING LIQUID

3.1 The composition of the tissue simulating liquid

Simulate 600MHz~10000MHz liquid, manufactured by SPEAG

Table F.1 – Suggested recipes for achieving target dielectric properties, 30 MHz to 900 MHz

Frequency (MHz)	30	50		144		450		835	900	
Recipe source number	3	3	2	2	3	2	4	2	2	4
Ingredients (% by weight)										
De-ionized water	48,30	48,30	53,53	55,12	48,30	48,53	56	50,36	50,31	56
Tween 20			44,70	43,31		49,51		48,39	48,34	
Oxidized mineral oil							44			44
Diethyleneglycol monoheylether										
Triton X-100										
Diacetin	50,00	50,00			50,00					
DGBE										
NaCl	1,60	1,60	1,77	1,57	1,60	1,96		1,25	1,35	
Additives and salt	0,10	0,10			0,10					
Measured temperature dependence										
Temp. (°C)			21	21		21	20	21	21	20
$\epsilon_{\text{liquid temp. unc.}} (\%)$	0,8	0,1			0,1	0,1		0,04	0,04	
$\sigma_{\text{liquid temp. unc.}} (\%)$	2,8	2,8			2,6	4,2		1,6	1,6	

Table F.2 – Suggested recipes for achieving target dielectric properties, 1 800 MHz to 10 000 MHz

Frequency (MHz)	1 800		2 450	4 000	5 000	5 200	5 800	6 000	8 000	10 000
Recipe source number	2	4	4	4	4	1	1	4	5	5
Ingredients (% by weight)										
De-ionized water	54,23	56	56	56	56	65,53	65,53	56	67,8	66,0
Tween	45,27								31,1	33,0
Oxidized mineral oil		44	44	44	44			44		
Diethyleneglycol monoheylether						17,24	17,24			
Triton X-100						17,24	17,24			
Diacetin										
DGBE										
NaCl	0,50									
Additives and salt										
Measured temperature dependence										
Temp. (°C)	21	20	20	20	20	22	22	20	20	20
$\epsilon_{\text{liquid temp. unc.}} (\%)$	0,4					1,7	1,8			
$\sigma_{\text{liquid temp. unc.}} (\%)$	2,3					2,7	2,6			

NOTE 1 Multiple columns under a single frequency indicate optional recipes.

NOTE 2 Recipe source numbers: 1 verified by different labs, 2 Reference [59], 3 developed by IT'IS Foundation, 4 developed by IT'IS Foundation, 5 Reference [60].

NOTE 3 The values of $\epsilon_{\text{liquid temp. unc.}}$ and $\sigma_{\text{liquid temp. unc.}}$ are liquid temperature uncertainties described in O.9.6, based on measurements of the applicable liquid recipes given above. These are not part of the original publications but have been subsequently developed by the project team.

NOTE 4 The recipes at 8 000 MHz and 10 000 MHz are sufficiently broadband that they cover the frequency range of 6 000 MHz to 10 000 MHz within a tolerance of $\pm 10 \%$ for permittivity and conductivity.

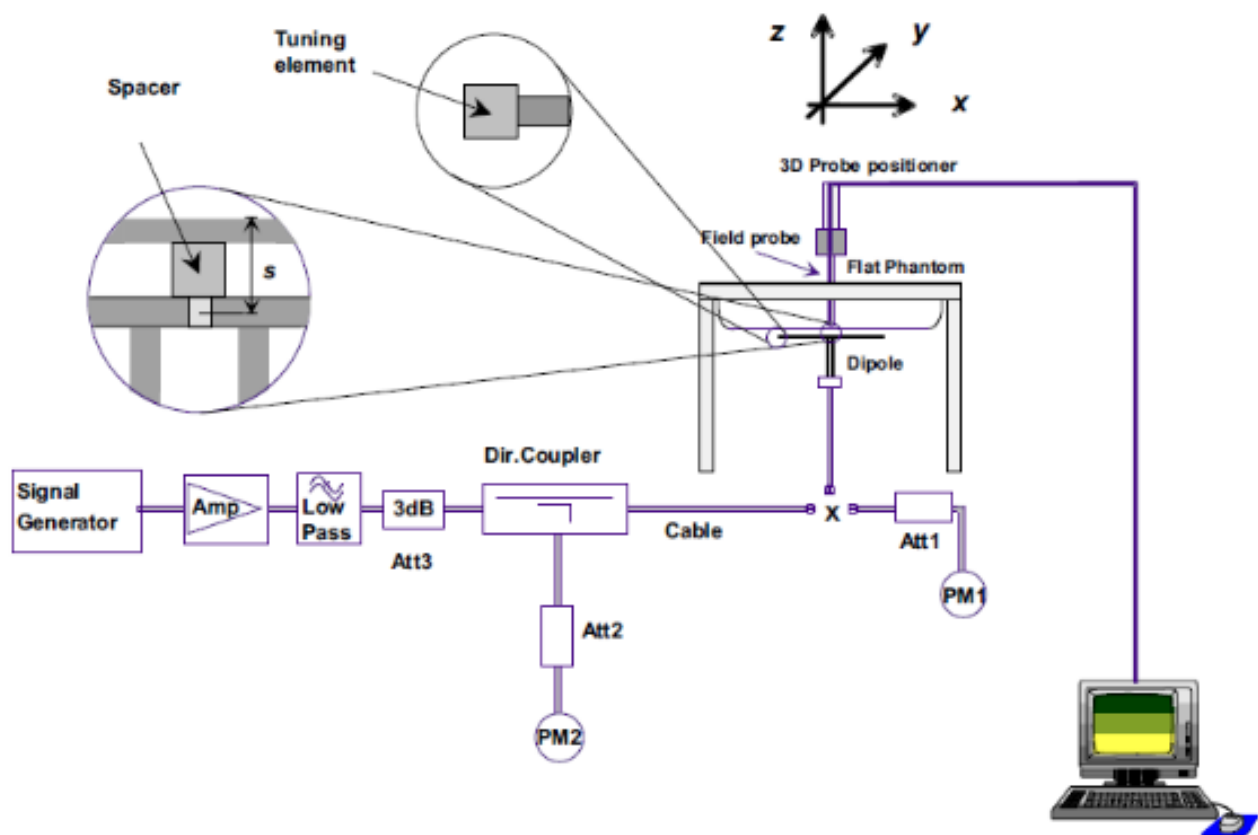
3.2 Measurement for Tissue Simulate Liquid

The dielectric properties for this Tissue Simulate Liquids were measured by using the Agilent E5071C Network Analyzer (600 KHz-10000 MHz). The Conductivity (σ) and Permittivity (ρ) are listed in below table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22 ± 2 °C.

Tissue Type	Measured Frequency (MHz)	Target Tissue ($\pm 5\%$)		Measured Tissue		Liquid Temp.(°C)	Measured Date
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)		
750 Head	750	41.9 (39.81~44)	0.89 (0.85~0.94)	41.73	0.90	22.5	2025.04.08
835 Head	835	41.5 (39.43~43.58)	0.90 (0.86~0.95)	41.17	0.90	22.5	2025.04.10
1800 Head	1900	40.0 (38.00~42.00)	1.40 (1.33~1.47)	38.04	1.37	22.5	2025.04.12
1900 Head	1900	40.0 (38.00~42.00)	1.40 (1.33~1.47)	39.09	1.40	22.5	2025.04.13
2450 Head	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	38.44	1.85	22.5	2025.04.15
2600 Head	2600	39.0 (37.05~40.95)	1.96 (1.86~2.06)	37.94	2.03	22.5	2025.04.16
3500 Head	3500	37.9 (36.01~39.80)	2.91 (2.76~3.06)	39.19	2.98	22.5	2025.04.18
3700 Head	3700	37.7 (35.82~39.59)	3.12 (2.96~3.28)	38.98	3.14	22.5	2025.04.19
5250 Head	5250	35.9 (34.11~37.70)	4.71 (4.47~4.95)	36.38	4.60	22.5	2025.04.20
5750 Head	5750	35.4 (33.63~37.17)	5.22 (4.96~5.48)	35.55	5.17	22.5	2025.04.22

4 SYSTEM CHECK

The microwave circuit arrangement for system Check is sketched in F-12. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within $\pm 10\%$ from the target SAR values. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the following table (A power level of 250mW (below 3GHz) or 100mW (3-6GHz) was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range $22\pm 2^{\circ}\text{C}$, the relative humidity was in the range 60% and the liquid depth above the ear reference points was above $15\pm 0.5\text{ cm}$ in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



F-1. the microwave circuit arrangement used for SAR system check

4.1 Justification for Extended Dipole Calibrations

1) Referring to KDB865664 D01 requirements for dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.

- a) There is no physical damage on the dipole;
- b) System check with specific dipole is within 10% of calibrated value;
- c) Return-loss is within 10% of calibrated measurement;
- d) Impedance is within 5Ω from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

4.2 Measurement for System Check

Validation Kit		Measured SAR 250mW	Measured SAR 250mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W) (±10%)	Liquid Temp. (°C)	Measured Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)		
D750V3	Head	2.27	1.53	9.08	5.84	8.41 (7.57~9.25)	5.50 (4.95~6.05)	22.5	2025.04.08
D835V2	Head	2.53	1.64	10.12	6.56	9.56 (8.60~10.52)	6.36 (5.72~7.00)	22.5	2025.04.10
D1800V2	Head	9.64	5.12	38.56	20.48	38.80 (34.92~42.68)	20.60 (18.54~22.66)	22.5	2025.04.12
D1900V2	Head	10.10	5.24	40.40	20.96	39.50 (35.55~43.45)	20.70 (18.63~22.77)	22.5	2025.04.13
D2450V2	Head	12.6	6.25	50.40	25.00	52.80 (47.52~58.08)	24.60 (22.14~27.06)	22.5	2025.04.15
D2600V2	Head	12.7	6.28	50.80	25.12	55.50 (49.95~61.05)	24.90 (22.41~27.39)	22.5	2025.04.16
Validation Kit		Measured SAR 100mW	Measured SAR 100mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W) (±10%)	Liquid Temp. (°C)	Measured Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)		
D3500V2	Head	7.03	2.56	70.30	25.60	66.30 (59.67~72.93)	25.10 (22.59~27.61)	22.5	2025.04.18
D3700V2	Head	7.01	2.53	70.10	25.30	65.90 (59.31~72.49)	23.90 (21.51~26.29)	22.5	2025.04.19
D5GHzV2	Head (5.25GHz)	7.73	2.19	77.30	21.90	77.60 (69.84~85.36)	21.60 (19.44~23.76)	22.5	2025.04.20
	Head (5.75GHz)	7.47	2.21	75.10	22.10	77.40 (69.66~85.14)	21.30 (19.17~23.43)	22.5	2025.04.22

5 TEST CONFIGURATION

5.1 SAR Test Reduction Procedure

According to KDB 941225D01, in the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. 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. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

5.2 Operation Configurations

5.2.1. GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a base station by air link. Using CMW500 the power lever is set to “5” and “0” in SAR of GSM 850 and GSM 1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

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.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode

5.2.2. WCDMA Test Configuration

1) . Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1's" for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are required in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified.

2) . Head SAR

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

3) . Body SAR

SAR for body 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 handset 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 handset, 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.

4) . HSDPA / HSUPA / DC-HSDPA

According to KDB 941225 D01v03, RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

a) HSDPA

HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH/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 and 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}) are set according to values indicated in the following table. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	Bd	β_d (SF)	β_c/β_d	β_{hs}	CM(dB)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	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

Note1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8$ Ahs = $\beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

Note2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector

Magnitude(EVM) with HS-DPCCH test in clause 5.13.1.A, and HSDPA EVM with phase

discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 8$ (Ahs=30/15) with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} =$

7 (Ahs=24/15) with $\beta_{hs} = 24/15 * \beta_c$.

Note3: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Parameter	Value
Nominal average inf. bit rate	534 kbit/s
Inter-TTI Distance	3 TTI"s
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

settings of required H-Set 1 QPSK acc. to 3GPP 34.121

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	Maximum H S-DSCH Transport Block Bits/HS-DSCH TTI	Total Soft Channel Bits
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

HSDPA UE category

b) HSUPA

Due to inner loop power control requirements in HSUPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSUPA should be configured according to the values indicated below as well as other applicable procedures described in the „WCDMA Handset“ and „Release 5 HSUPA Data Device“ sections of 3G device.

Sub-test ^o	β_c ^o	β_d ^o	β_d (SF) ^o	β_o/β_d ^o	β_{hs} (1) ^o	β_{ac} ^o	β_{ad} ^o	β_c (SF) ^o	β_{ad} (code) ^o	CM (2) ^o (dB) ^o	MP R ^o (dB) ^o	AG ⁽⁴⁾ Index ^o	E-TFC I ^o
1 ^o	11/15 ⁽³⁾ ^o	15/15 ⁽³⁾ ^o	64 ^o	11/15 ⁽³⁾ ^o	22/15 ^o	209/225 ^o	1039/225 ^o	4 ^o	1 ^o	1.0 ^o	0.0 ^o	20 ^o	75 ^o
2 ^o	6/15 ^o	15/15 ^o	64 ^o	6/15 ^o	12/15 ^o	12/15 ^o	94/75 ^o	4 ^o	1 ^o	3.0 ^o	2.0 ^o	12 ^o	67 ^o
3 ^o	15/15 ^o	9/15 ^o	64 ^o	15/9 ^o	30/15 ^o	30/15 ^o	$\beta_{ad1}:47/15$ ^o $\beta_{ad2}:47/15$ ^o	4 ^o	2 ^o	2.0 ^o	1.0 ^o	15 ^o	92 ^o
4 ^o	2/15 ^o	15/15 ^o	64 ^o	2/15 ^o	4/15 ^o	2/15 ^o	56/75 ^o	4 ^o	1 ^o	3.0 ^o	2.0 ^o	17 ^o	71 ^o
5 ^o	15/15 ⁽⁴⁾ ^o	15/15 ⁽⁴⁾ ^o	64 ^o	15/15 ⁽⁴⁾ ^o	30/15 ^o	24/15 ^o	134/15 ^o	4 ^o	1 ^o	1.0 ^o	0.0 ^o	21 ^o	81 ^o
Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI=8$ $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$ 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 signalled 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 signalled 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 Table 5.1g Note 6: β_{ad} can not be set directly; it is set by Absolute Grant Value.													

Subtests for UMTS Release 6 HSUPA

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(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	10	2SF2&2SF	11484	5.76
	4	4	2	4	20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF	22996	?
	4	4	10	4	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 support QPSK only. UE category 7 supports QPSK and 16QAM. (TS25.306-7.3.0).						

HSUPA UE category

c) DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a Second serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0.

A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/lor	dB	-10
P-CCPCH and SCH_Ec/lor	dB	-12
PICH_Ec/lor	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/lor	dB	-5
OCNS_Ec/lor	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13.

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK.

Parameter	Value
Nominal average inf. bit rate	60 kbit/s
Inter-TTI Distance	1 TTI's
Number of HARQ Processes	6 Processes
Information Bit Payload	120 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	960 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	3200 SMLs
Coding Rate	0.15
Number of Physical Channel Codes	1

settings of required H-Set 12 QPSK acc. to 3GPP 34.121

Note:

1. The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.
2. Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

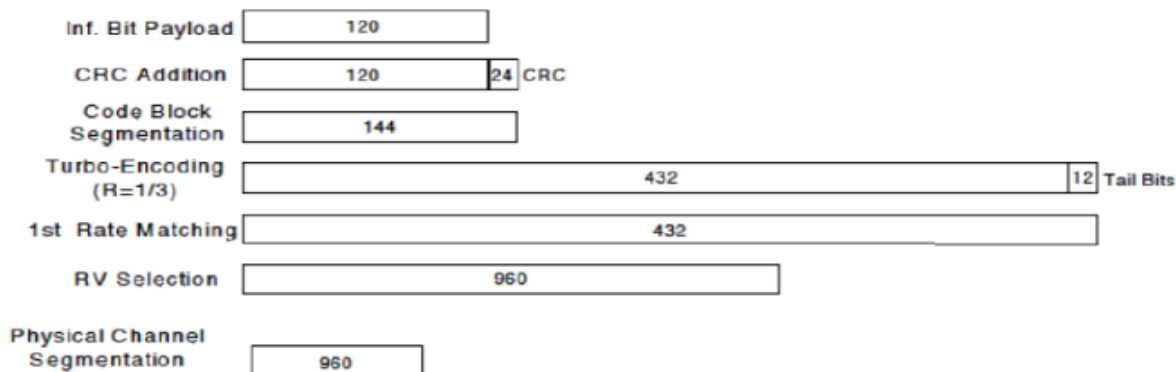


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

Sub-test [Ⓢ]	β_c [Ⓢ]	β_d [Ⓢ]	β_d (SF) [Ⓢ]	β_c/β_d [Ⓢ]	$\beta_{hs}(1)$ [Ⓢ]	CM(dB)(2) [Ⓢ]	MPR (dB) [Ⓢ]
1 [Ⓢ]	2/15 [Ⓢ]	15/15 [Ⓢ]	64 [Ⓢ]	2/15 [Ⓢ]	4/15 [Ⓢ]	0.0 [Ⓢ]	0 [Ⓢ]
2 [Ⓢ]	12/15(3) [Ⓢ]	15/15(3) [Ⓢ]	64 [Ⓢ]	12/15(3) [Ⓢ]	24/15 [Ⓢ]	1.0 [Ⓢ]	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 [Ⓢ]
Note1: ΔACK , $\Delta NACK$ and $\Delta CQI=8$ $A_{hs}=\beta_{hs}/\beta_c=30/15$ $\beta_{hs}=30/15 * \beta_c$ Note2: CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases. Note3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c=11/15$ and $\beta_d=15/15$							

Up commands are set continuously to set the UE to Max power.

Note:

1. The Dual Carriers transmission only applies to HSDPA physical channels
2. The Dual Carriers belong to the same Node and are on adjacent carriers.
3. The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation
4. The Dual Carriers operate in the same frequency band.
5. The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.
6. The device doesn't support carrier aggregation for it just can operate in Release 8.

d) HSPA+

Per KDB941225D01, SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

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

Sub-test [Ⓢ]	β_c [Ⓢ] (Note3) [Ⓢ]	β_d [Ⓢ]	β_{hs} [Ⓢ] (Note1) [Ⓢ]	β_{ec} [Ⓢ]	β_{ed2} [Ⓢ] (2xSF2) [Ⓢ] (Note 4) [Ⓢ]	β_{ed4} [Ⓢ] (2xSF4) [Ⓢ] (Note 4) [Ⓢ]	CM [Ⓢ] (dB) [Ⓢ] (Note 2) [Ⓢ]	MPR [Ⓢ] (dB) [Ⓢ] (Note 2) [Ⓢ]	AG [Ⓢ] Index [Ⓢ] (Note 4) [Ⓢ]	E-TFCI [Ⓢ] (Note 5) [Ⓢ]	E-TFCI [Ⓢ] (boost) [Ⓢ]
1 [Ⓢ]	1 [Ⓢ]	0 [Ⓢ]	30/15 [Ⓢ]	30/15 [Ⓢ]	β_{ed1} : 30/15 [Ⓢ] β_{ed2} : 30/15 [Ⓢ]	β_{ed3} : 24/15 [Ⓢ] β_{ed4} : 24/15 [Ⓢ]	3.5 [Ⓢ]	2.5 [Ⓢ]	14 [Ⓢ]	105 [Ⓢ]	105 [Ⓢ]
Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$ Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0). Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default. Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value. Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.											

5.2.3. 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 [4]. The Anritsu MT8821C 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.

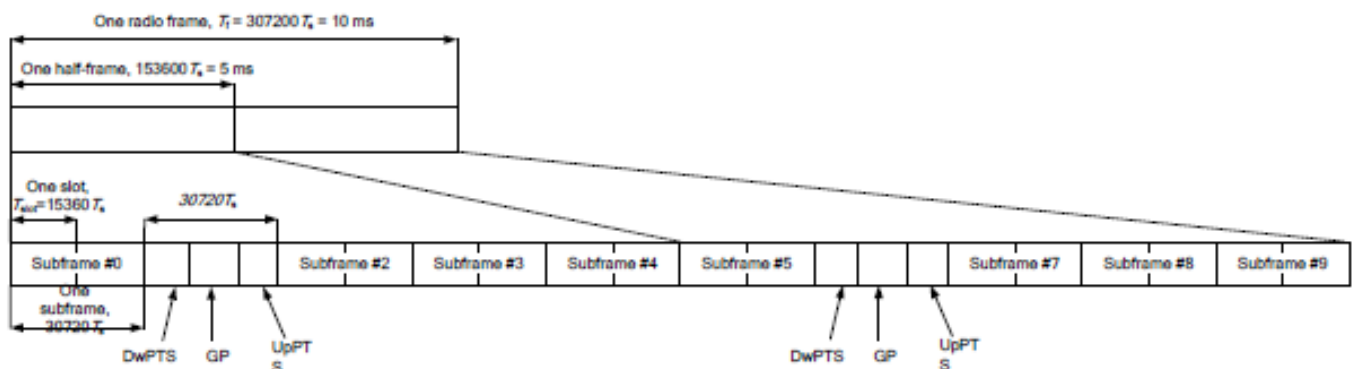
TDD LTE test consideration

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

SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.

LTE TDD Band support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Frame structure type 2:



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.Ts	2192.Ts	2560.Ts	7680.Ts	2192.Ts	2560.Ts
1	19760.Ts			20480.Ts		
2	21952.Ts			23040.Ts		
3	24144.Ts			25600.Ts		
4	26336.Ts	4384.Ts	5120.Ts	7680.Ts	4384.Ts	5120.Ts
5	6592.Ts			20480.Ts		
6	19760.Ts			23040.Ts		
7	21952.Ts			25600.Ts		
8	24144.Ts			-	-	-
9	13168.Ts			-	-	-

Uplink-downlink configurations.

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

Calculated Duty Cycle=[Extended cyclic prefix in uplink x (Ts) x # of S + # of U]/10ms

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

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.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

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

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.

LTE Downlink CA consideration

The device supports the carrier aggregation in the downlink. Uplink maximum output power is measured with downlink carrier aggregation active only for the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than % dB higher than the maximum output power measured when downlink carrier aggregation inactive. The downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements. The nominal channel spacing is determined by $[BW1 + BW2 - 0.1 \cdot |BW1 - BW2|]$ MHz where BW1 and BW2 are the channel bandwidths of the CC in a 2-CC aggregation configuration. The downlink PCC channel should be paired with the uplink channel according to normal configurations, as if there is no carrier aggregation. The downlink SCC should be adjacent to the PCC and remain within the downlink transmission band for contiguous intra-band CA. For non-contiguous intra-band CA, the SCC should be selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band. For inter-band CA, the SCC should be near the middle of its transmission band. When downlink carrier aggregation is active uplink maximum output power remain within the specified tune-up tolerance limits and not more than $\frac{1}{4}$ dB higher than the maximum output power measured when downlink carrier aggregation inactive, so SAR evaluation is not required for downlink carrier aggregation.

LTE intra-band UL CA(contiguous)

The device supports LTE intra-band contiguous UL CA. The maximum output power is measured for each UL Configuration for the required test channels. UL PCC configuration is determined by the required test channel. SCC and subsequent CCs are added alternatively to either side of the PCC or within the transmission band for channels at the ends of frequency band. SAR for UL CA is required in highest standalone head/body test position and frequency band combination. Since the maximum output for UL CA is < standalone LTE mode (without CA), PCC is configured according to the highest standalone SAR configuration tested, SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC.

5.2.4. Wi-Fi Test Configuration

DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures. The initial test position procedure is described in the following:

- 1) . When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).
- 2) . When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.
- 3) . For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested. a) Additional power measurements may be required for this step, which should be limited to those necessary for identifying the subsequent highest output power channels.

Initial Test Configuration Procedures

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required. SAR test reduction for subsequent highest output test channels is determined according to *reported* SAR of the initial test configuration.

For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration. When the *reported* SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for subsequent next highest measured output power channel(s) in the initial test configuration until *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

Subsequent Test Configuration Procedures

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. The initial test position procedure is applied to next to the ear, UMPC mini-tablet and hotspot mode configurations. When the same maximum output power is specified for multiple transmission modes, additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. The subsequent test configuration and SAR measurement procedures are described in the following.

- 1) . When SAR test exclusion provisions of KDB Publication 447498 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and

exposure configuration.

- 2) . When the highest *reported* SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.
- 3) . The number of channels in the initial test configuration and subsequent test configuration can be different due to differences in channel bandwidth. When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel. This step requires additional power measurement to identify the highest maximum output power channel in the subsequent test configuration to determine SAR test reduction.
 - a) SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.
 - b) SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the *reported* SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2 W/kg or until all required channels are tested. i) For channels with the same measured maximum output power, SAR should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.
- 4) . SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration (highest maximum output) or subsequent test configuration(s) (subsequent next highest maximum output power) is determined by recursively applying the subsequent test configuration procedures in this section to the remaining configurations according to the following:
 - a) replace "subsequent test configuration" with "next subsequent test configuration" (i.e., subsequent next highest specified maximum output power configuration)
 - b) replace "initial test configuration" with "all tested higher output power configurations"

2.4 GHz WiFi SAR Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions. When SAR measurement is required for an OFDM configuration, the initial test configuration, subsequent test configuration and initial test position procedures are applied. The SAR test exclusion requirements for 802.11g/n OFDM configurations are described in following.

• 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) . When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2) . When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

• 2.4 GHz 802.11g/n OFDM&OFDMA SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3, including sub-sections). SAR is not required for the following 2.4 GHz OFDM conditions.

- 1) . When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
- 2) . When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum

output power and the adjusted SAR is ≤ 1.2 W/kg.

- **SAR Test Requirements for OFDM&OFDMA configurations**

When SAR measurement is required for 802.11 g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

5 GHz WiFi SAR Procedures

- **U-NII-1 and U-NII-2A Bands**

For devices that operate in only one of the U-NII-1 and U-NII-2A bands, the normally required SAR procedures for OFDM configurations are applied. For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following :

- 1) 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, both bands are tested independently for SAR.
- 2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.
- 3) The two U-NII bands may be aggregated to support a 160 MHz channel on channel number 50. Without additional testing, the maximum output power for this is limited to the lower of the maximum output power certified for the two bands. When SAR measurement is required for at least one of the bands and the highest reported SAR adjusted by the ratio of specified maximum output power of aggregated to standalone band is > 1.2 W/kg, SAR is required for the 160 MHz channel. This procedure does not apply to an aggregated band with maximum output higher than the standalone band(s); the aggregated band must be tested independently for SAR. SAR is not required when the 160 MHz channel is operating at a reduced maximum power and also qualifies for SAR test exclusion.

- **U-NII-2C and U-NII-3 Bands**

The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. when Terminal Doppler Weather Radar (TDWR) restriction applies, all channels that operate at 5.60 – 5.65 GHz must be included to apply the SAR test reduction and measurement procedures.

When the same transmitter and antenna(s) are used for U-NII-2C band and U-NII-3 band or 5.8 GHz band of §15.247, the bands may be aggregated to enable additional channels with 20, 40 or 80 MHz bandwidth to span across the band gap, as illustrated in Appendix B. The maximum output power for the additional band gap channels is limited to the lower of those certified for the bands. Unless band gap channels are permanently disabled, they must be considered for SAR testing. The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. To maintain SAR measurement accuracy and to facilitate test reduction, the channels in U-NII-2C band above 5.65 GHz may be grouped with the 5.8 GHz channels in U-NII-3 or §15.247 band to enable two SAR probe calibration frequency points to cover the bands, including the band gap channels. When band gap channels are supported and the bands are not aggregated for SAR testing, band gap channels must be considered independently in each band according to the normally required OFDM SAR measurement and probe

calibration frequency points requirements.

- **OFDM&OFDMA Transmission Mode SAR Test Configuration and Channel Selection Requirements**

The initial test configuration for 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined according to the following steps applied sequentially.

- 1) The largest channel bandwidth configuration is selected among the multiple configurations with the same specified maximum output power.
- 2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
- 3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
- 4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n. After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following. These channel selection procedures apply to both the initial test configuration and subsequent test configuration(s), with respect to the default power measurement procedures or additional power measurements required for further SAR test reduction. The same procedures also apply to subsequent highest output power channel(s) selection.
 - a) The channel closest to mid-band frequency is selected for SAR measurement.
 - b) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

- **SAR Test Requirements for OFDM&OFDMA configurations**

When SAR measurement is required for 802.11 a/n/ac OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. When the same transmitter and antenna(s) are used for U-NII-1 and U-NII-2A bands, additional SAR test reduction applies. When band gap channels between U-NII-2C band and 5.8 GHz U-NII-3 or §15.247 band are supported, the highest maximum output power transmission mode configuration and maximum output power channel across the bands must be used to determine SAR test reduction, according to the initial test configuration and subsequent test configuration requirements. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

6 DESCRIPTION OF TEST POSITION

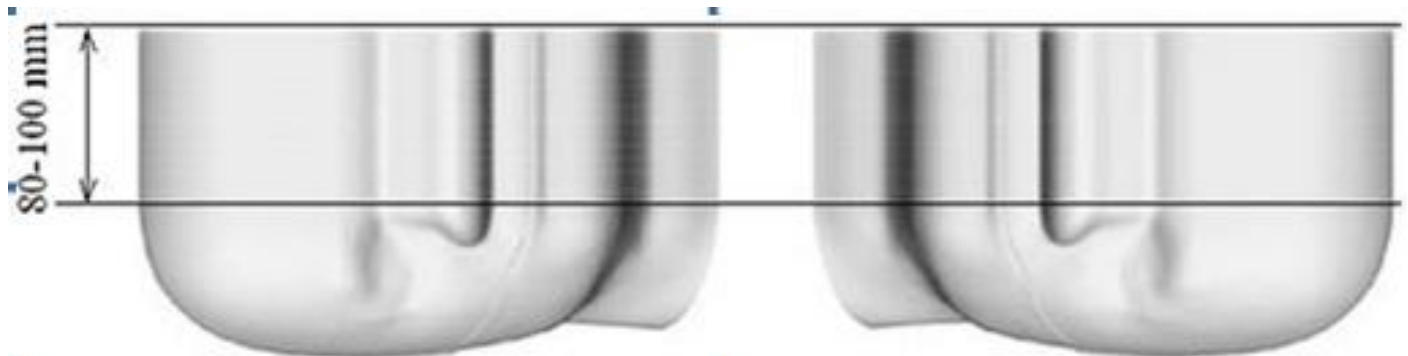
6.1 SAR Test Reduction Procedure

6.1.1. Head Test Position Conditions

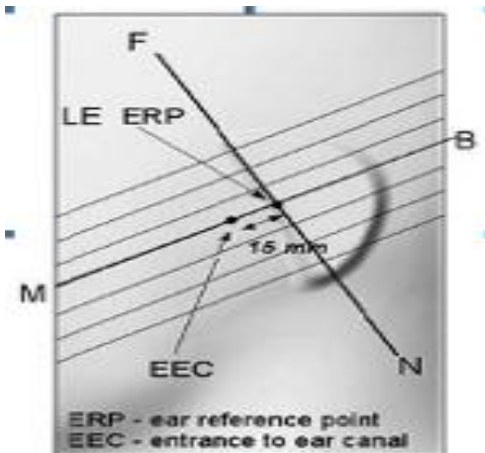


Front, back, and side views of SAM (model for the phantom shell). Full-head model is for illustration purposes only—procedures in this recommended practice are intended primarily for the phantom setup.

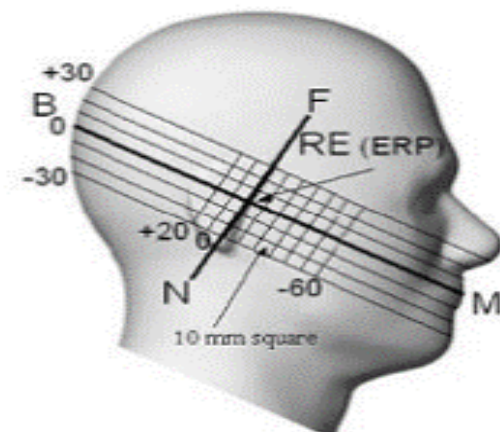
Note: The centre strip including the nose region has a different thickness tolerance.



Sagittally bisected phantom with extended perimeter (shown placed on its side as used for SAR measurements)



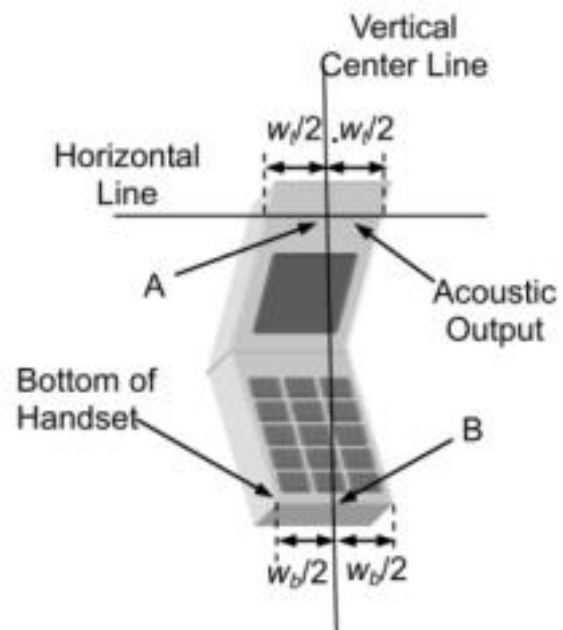
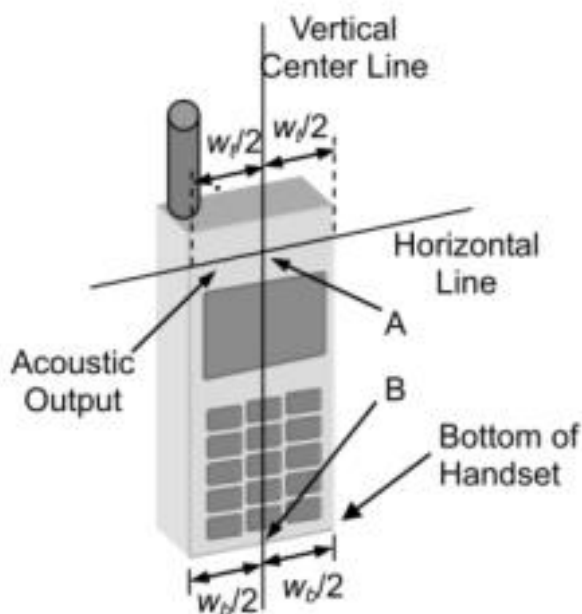
Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations



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

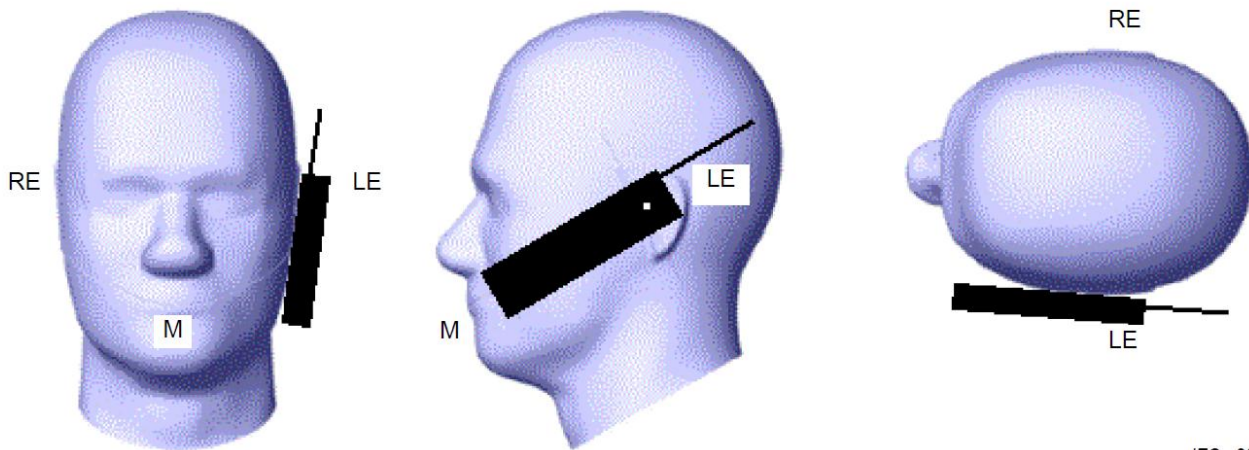
EUT constructions

- (a) The vertical center line passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- (b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- (c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



Cheek Position

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



IEC 226/05

Tilted Position

- To position the device in the “cheek” position described above.
- While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

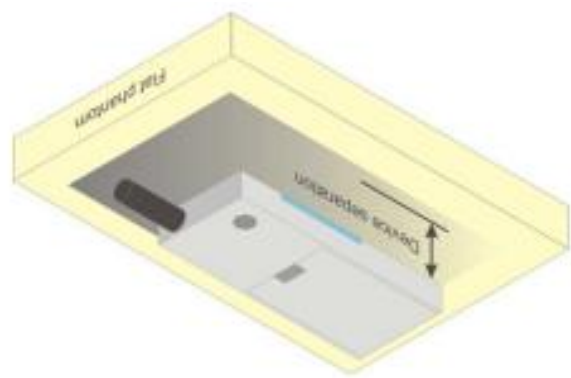
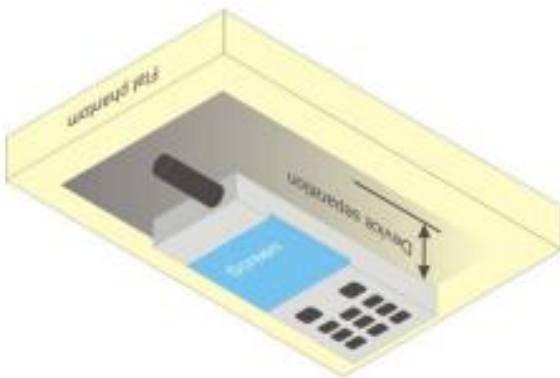


6.1.2. Body-worn Test Position Conditions

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 KDB 447498 are 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 the reported SAR for a body-worn accessory.

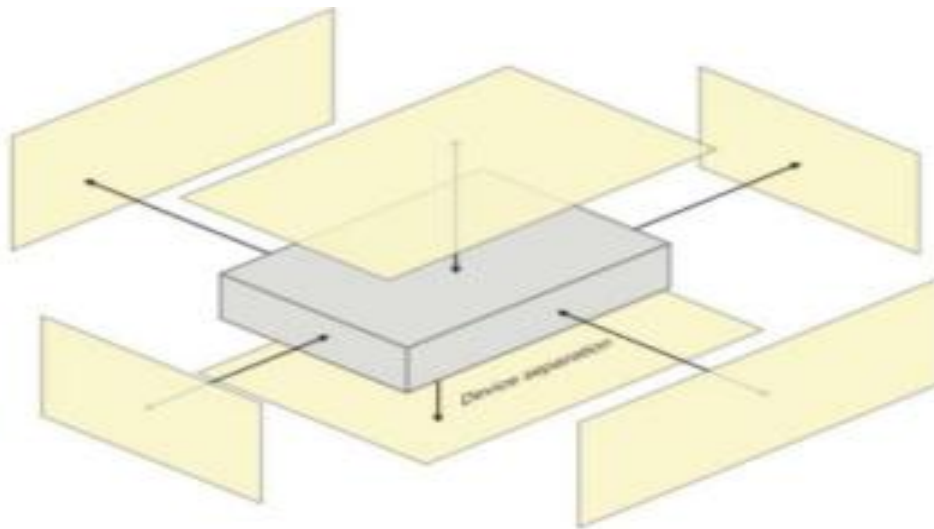
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance ≤ 5 mm to support compliance.



6.1.3. Hotspot Mode Test Position Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).

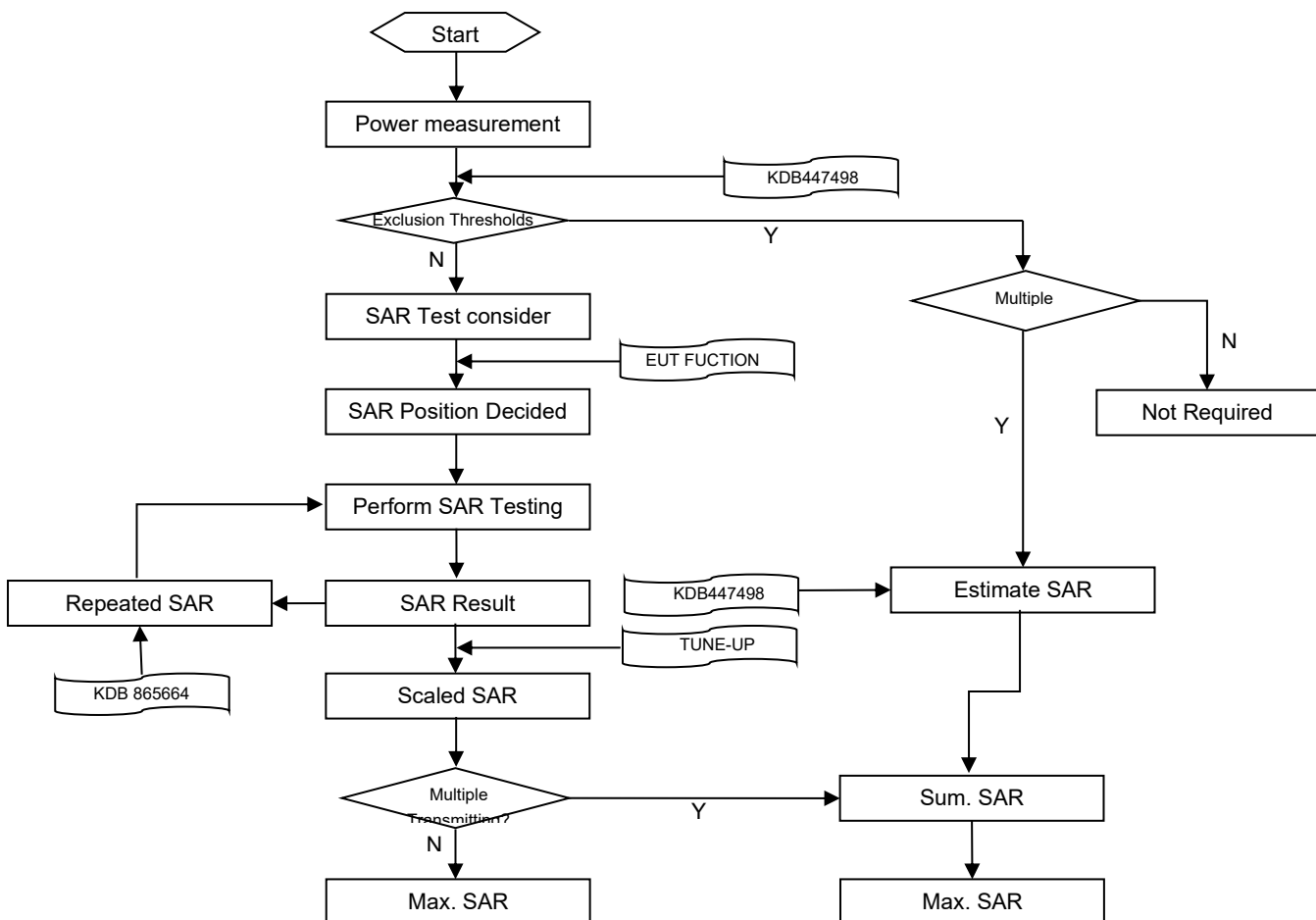


6.2 Product Specific 10g Exposure Consideration

According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modems and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

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

6.3 Measurement Process Diagram



7 TEST RESULT

7.1 Measurement of RF Conducted Power

Band		WCDMA II			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	RMC 12.2Kbps	22.77	22.96	22.75	23.50
3GPP Rel 6	HSDPA Subtest-1	21.88	22.01	22.14	23.00
3GPP Rel 6	HSDPA Subtest-2	21.80	22.14	21.72	23.00
3GPP Rel 6	HSDPA Subtest-3	21.43	21.44	21.27	22.50
3GPP Rel 6	HSDPA Subtest-4	21.29	21.71	21.49	22.50
3GPP Rel 6	HSUPA Subtest-1	21.56	21.61	21.63	22.00
3GPP Rel 6	HSUPA Subtest-2	20.30	20.57	20.33	22.00
3GPP Rel 6	HSUPA Subtest-3	20.93	21.07	20.98	22.00
3GPP Rel 6	HSUPA Subtest-4	20.35	20.79	20.62	22.00
3GPP Rel 6	HSUPA Subtest-5	20.88	20.93	21.12	22.00

Band		WCDMA IV			Tune-up Limit (dBm)
TX Channel		1312	1413	1513	
Frequency (MHz)		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	22.74	22.99	22.60	23.50
3GPP Rel 6	HSDPA Subtest-1	21.79	21.93	22.11	23.00
3GPP Rel 6	HSDPA Subtest-2	21.77	22.05	21.58	23.00
3GPP Rel 6	HSDPA Subtest-3	21.33	21.37	21.08	22.50
3GPP Rel 6	HSDPA Subtest-4	21.10	21.86	21.45	22.50
3GPP Rel 6	HSUPA Subtest-1	21.75	21.41	21.55	22.00
3GPP Rel 6	HSUPA Subtest-2	20.37	20.48	20.45	22.00
3GPP Rel 6	HSUPA Subtest-3	20.75	20.97	20.87	22.00
3GPP Rel 6	HSUPA Subtest-4	20.34	21.01	20.57	22.00
3GPP Rel 6	HSUPA Subtest-5	20.83	20.98	21.07	22.00

Band		WCDMA V			Tune-up Limit (dBm)
TX Channel		4132	4182	4233	
Frequency (MHz)		826.4	836.4	846.6	
3GPP Rel 99	RMC 12.2Kbps	23.02	23.17	22.89	24.00
3GPP Rel 6	HSDPA Subtest-1	22.30	22.19	22.16	23.00
3GPP Rel 6	HSDPA Subtest-2	22.11	22.27	22.14	23.00
3GPP Rel 6	HSDPA Subtest-3	21.47	21.85	21.36	22.50
3GPP Rel 6	HSDPA Subtest-4	21.68	22.14	21.71	22.50
3GPP Rel 6	HSUPA Subtest-1	21.81	21.97	21.83	22.00
3GPP Rel 6	HSUPA Subtest-2	20.53	20.96	20.51	22.00
3GPP Rel 6	HSUPA Subtest-3	21.27	21.48	21.28	22.00
3GPP Rel 6	HSUPA Subtest-4	20.71	21.21	20.62	22.00
3GPP Rel 6	HSUPA Subtest-5	21.12	21.00	21.31	22.00

Band 2

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.08	22.46	22.09	23.5	0
20	QPSK	1	49	22.17	21.80	21.70		
20	QPSK	1	99	21.90	21.80	21.99		
20	QPSK	50	0	21.23	21.28	21.25	22.5	1
20	QPSK	50	24	21.03	20.91	21.16		
20	QPSK	50	50	21.02	20.91	21.25		
20	QPSK	100	0	21.14	21.22	21.24		
20	16QAM	1	0	21.10	20.63	21.20	22.5	1
20	16QAM	1	49	21.41	20.85	21.06		
20	16QAM	1	99	21.11	20.82	21.05		
20	16QAM	50	0	19.84	20.09	19.94	21.5	2
20	16QAM	50	24	20.02	20.16	20.19		
20	16QAM	50	50	20.01	20.02	20.22		
20	16QAM	100	0	19.96	20.08	20.25		
20	64QAM	1	0	20.30	19.69	20.08	21.5	2
20	64QAM	1	49	20.23	19.80	20.19		
20	64QAM	1	99	20.09	19.99	19.75		
20	64QAM	50	0	18.83	19.17	19.04	20.5	3
20	64QAM	50	24	18.90	18.79	18.87		
20	64QAM	50	50	19.13	19.00	19.50		
20	64QAM	100	0	18.87	19.07	19.12		
Channel				18675	18900	19125		
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	21.89	22.26	22.03	23.5	0
15	QPSK	1	37	22.05	21.62	21.54		
15	QPSK	1	74	21.73	21.72	21.78		
15	QPSK	36	0	21.05	21.17	21.15	22.5	1
15	QPSK	36	20	20.85	20.69	21.07		
15	QPSK	36	39	20.87	20.76	21.15		
15	QPSK	75	0	20.86	21.11	21.00		
15	16QAM	1	0	20.90	20.60	21.01	22.5	1
15	16QAM	1	37	21.21	20.70	20.84		
15	16QAM	1	74	20.86	20.60	20.84		
15	16QAM	36	0	19.76	19.92	19.84	21.5	2
15	16QAM	36	20	19.75	19.98	20.15		
15	16QAM	36	39	19.84	19.91	20.14		
15	16QAM	75	0	19.84	19.94	20.19		
15	64QAM	1	0	20.16	19.58	19.87	21.5	2
15	64QAM	1	37	20.00	19.60	19.94		
15	64QAM	1	74	19.99	19.93	19.53		
15	64QAM	36	0	18.67	19.01	18.95	20.5	3
15	64QAM	36	20	18.77	18.66	18.74		

15	64QAM	36	39	18.98	18.88	19.25		
15	64QAM	75	0	18.73	18.86	18.91		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	21.91	22.31	22.00	23.5	0
10	QPSK	1	25	21.94	21.59	21.53		
10	QPSK	1	49	21.71	21.73	21.92		
10	QPSK	25	0	20.95	21.10	21.01	22.5	1
10	QPSK	25	12	20.85	20.64	21.01		
10	QPSK	25	25	20.89	20.68	21.09		
10	QPSK	50	0	20.97	21.14	21.00		
10	16QAM	1	0	21.04	20.61	20.98	22.5	1
10	16QAM	1	25	21.28	20.62	20.93		
10	16QAM	1	49	20.90	20.72	20.94		
10	16QAM	25	0	19.69	19.97	19.92	21.5	2
10	16QAM	25	12	19.78	20.07	20.11		
10	16QAM	25	25	19.84	19.94	20.04		
10	16QAM	50	0	19.81	19.91	20.12		
10	64QAM	1	0	20.18	19.56	19.98	21.5	2
10	64QAM	1	25	20.11	19.64	20.00		
10	64QAM	1	49	19.98	19.92	19.55		
10	64QAM	25	0	18.72	18.91	19.01	20.5	3
10	64QAM	25	12	18.86	18.75	18.74		
10	64QAM	25	25	19.06	18.87	19.33		
10	64QAM	50	0	18.86	18.95	18.99		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	21.87	22.30	21.91	23.5	0
5	QPSK	1	12	22.02	21.68	21.51		
5	QPSK	1	24	21.73	21.70	21.78		
5	QPSK	12	0	20.96	21.14	21.05	22.5	1
5	QPSK	12	7	20.84	20.67	21.10		
5	QPSK	12	13	20.87	20.76	21.20		
5	QPSK	25	0	20.97	21.09	21.14		
5	16QAM	1	0	20.89	20.49	21.05	22.5	1
5	16QAM	1	12	21.16	20.59	20.90		
5	16QAM	1	24	20.85	20.72	20.86		
5	16QAM	12	0	19.80	20.03	19.78	21.5	2
5	16QAM	12	7	19.78	20.05	20.13		
5	16QAM	12	13	19.89	19.81	20.03		
5	16QAM	25	0	19.82	19.93	20.16		
5	64QAM	1	0	20.19	19.56	19.90	21.5	2
5	64QAM	1	12	20.10	19.60	19.98		
5	64QAM	1	24	20.04	19.83	19.63		
5	64QAM	12	0	18.68	19.06	18.94	20.5	3
5	64QAM	12	7	18.82	18.68	18.80		
5	64QAM	12	13	19.01	18.89	19.38		
5	64QAM	25	0	18.82	18.97	18.86		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		

3	QPSK	1	0	21.90	22.23	21.98	23.5	0
3	QPSK	1	8	21.94	21.59	21.57		
3	QPSK	1	14	21.76	21.67	21.82		
3	QPSK	8	0	21.00	21.09	21.05	22.5	1
3	QPSK	8	4	20.96	20.69	20.98		
3	QPSK	8	7	20.95	20.66	21.10		
3	QPSK	15	0	20.86	21.16	21.03	22.5	1
3	16QAM	1	0	21.02	20.59	21.02		
3	16QAM	1	8	21.19	20.72	20.82		
3	16QAM	1	14	20.98	20.62	20.89	21.5	2
3	16QAM	8	0	19.72	19.95	19.93		
3	16QAM	8	4	19.82	20.09	20.00		
3	16QAM	8	7	19.93	19.94	20.03	21.5	2
3	16QAM	15	0	19.80	19.93	20.13		
3	64QAM	1	0	20.17	19.64	19.96		
3	64QAM	1	8	20.03	19.59	19.97	21.5	2
3	64QAM	1	14	19.93	19.85	19.52		
3	64QAM	8	0	18.64	18.92	18.97		
3	64QAM	8	4	18.73	18.65	18.76	20.5	3
3	64QAM	8	7	18.99	18.84	19.30		
3	64QAM	15	0	18.77	18.89	18.93		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	21.90	22.18	22.02	23.5	0
1.4	QPSK	1	3	22.08	21.78	22.14		
1.4	QPSK	1	5	21.83	21.96	22.05		
1.4	QPSK	3	0	21.88	22.19	22.01		
1.4	QPSK	3	1	22.10	21.86	22.11		
1.4	QPSK	3	3	21.74	22.11	22.01	22.5	1
1.4	QPSK	6	0	21.13	21.08	21.14		
1.4	16QAM	1	0	21.27	20.91	21.10	22.5	1
1.4	16QAM	1	3	21.08	20.70	21.16		
1.4	16QAM	1	5	20.97	21.08	21.16		
1.4	16QAM	3	0	21.32	21.11	21.14		
1.4	16QAM	3	1	21.20	20.87	20.89		
1.4	16QAM	3	3	20.98	21.00	21.30	21.5	2
1.4	16QAM	6	0	20.18	20.19	20.45		
1.4	64QAM	1	0	20.29	19.97	20.13	21.5	2
1.4	64QAM	1	3	20.33	19.70	20.19		
1.4	64QAM	1	5	20.46	19.90	20.04		
1.4	64QAM	3	0	20.22	19.96	20.17		
1.4	64QAM	3	1	20.35	19.87	20.32		
1.4	64QAM	3	3	20.34	19.82	20.01	20.5	3
1.4	64QAM	6	0	19.08	19.05	19.13		

Band4

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	22.08	22.41	22.07		
20	QPSK	1	49	22.07	21.84	21.70	23.5	0
20	QPSK	1	99	21.91	21.84	22.01		
20	QPSK	50	0	21.16	21.34	21.24		
20	QPSK	50	24	21.08	20.93	21.17	22.5	1
20	QPSK	50	50	20.96	20.88	21.37		
20	QPSK	100	0	21.12	21.25	21.16		
20	16QAM	1	0	21.10	20.69	21.18	22.5	1
20	16QAM	1	49	21.33	20.81	21.10		
20	16QAM	1	99	21.06	20.87	21.13		
20	16QAM	50	0	19.90	20.20	19.97	21.5	2
20	16QAM	50	24	19.93	20.12	20.16		
20	16QAM	50	50	20.06	20.02	20.29		
20	16QAM	100	0	19.95	20.17	20.29	21.5	2
20	64QAM	1	0	20.23	19.75	20.05		
20	64QAM	1	49	20.26	19.85	20.10		
20	64QAM	1	99	20.13	19.98	19.75	20.5	3
20	64QAM	50	0	18.79	19.07	19.06		
20	64QAM	50	24	19.02	18.89	18.94		
20	64QAM	50	50	19.10	18.95	19.41	20.5	3
20	64QAM	100	0	18.94	19.09	19.09		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	21.98	22.31	21.96		
15	QPSK	1	37	22.01	21.67	21.46	23.5	0
15	QPSK	1	74	21.70	21.71	21.80		
15	QPSK	36	0	21.08	21.09	21.01	22.5	1
15	QPSK	36	20	20.98	20.63	20.96		
15	QPSK	36	39	20.85	20.64	21.12		
15	QPSK	75	0	21.01	21.01	21.08	22.5	1
15	16QAM	1	0	21.02	20.54	21.07		
15	16QAM	1	37	21.20	20.60	20.81		
15	16QAM	1	74	20.95	20.67	20.88	21.5	2
15	16QAM	36	0	19.83	20.06	19.87		
15	16QAM	36	20	19.87	20.06	20.03		
15	16QAM	36	39	19.96	19.90	20.11	21.5	2
15	16QAM	75	0	19.77	19.88	20.17		
15	64QAM	1	0	20.17	19.63	19.98		
15	64QAM	1	37	20.05	19.71	19.92	20.5	3
15	64QAM	1	74	20.05	19.96	19.53		
15	64QAM	36	0	18.65	18.91	18.90		
15	64QAM	36	20	18.88	18.64	18.80	20.5	3
15	64QAM	36	39	19.06	18.94	19.29		
15	64QAM	75	0	18.78	18.97	18.94		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		

10	QPSK	1	0	21.90	22.29	22.02	23.5	0
10	QPSK	1	25	21.97	21.68	21.51		
10	QPSK	1	49	21.65	21.75	21.85		
10	QPSK	25	0	20.95	21.11	21.00	22.5	1
10	QPSK	25	12	20.83	20.71	20.99		
10	QPSK	25	25	20.84	20.75	21.06		
10	QPSK	50	0	20.87	21.11	21.07	22.5	1
10	16QAM	1	0	20.95	20.60	21.03		
10	16QAM	1	25	21.20	20.59	20.86		
10	16QAM	1	49	20.86	20.62	20.86	21.5	2
10	16QAM	25	0	19.77	20.06	19.91		
10	16QAM	25	12	19.82	19.96	20.15		
10	16QAM	25	25	19.87	19.95	20.03	21.5	2
10	16QAM	50	0	19.81	20.01	20.13		
10	64QAM	1	0	20.15	19.52	19.85		
10	64QAM	1	25	20.02	19.68	19.95	20.5	3
10	64QAM	1	49	19.99	19.90	19.50		
10	64QAM	25	0	18.68	18.95	18.97		
10	64QAM	25	12	18.88	18.70	18.79	21.5	2
10	64QAM	25	25	19.08	18.92	19.31		
10	64QAM	50	0	18.86	18.89	18.95		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	21.84	22.21	22.03	23.5	0
5	QPSK	1	12	22.06	21.68	21.46		
5	QPSK	1	24	21.64	21.77	21.92		
5	QPSK	12	0	21.06	21.17	21.02	22.5	1
5	QPSK	12	7	20.84	20.67	21.00		
5	QPSK	12	13	20.88	20.70	21.22		
5	QPSK	25	0	20.90	21.09	21.11	22.5	1
5	16QAM	1	0	20.99	20.48	21.02		
5	16QAM	1	12	21.32	20.65	20.84		
5	16QAM	1	24	20.95	20.58	20.97	21.5	2
5	16QAM	12	0	19.73	20.06	19.88		
5	16QAM	12	7	19.73	20.09	20.08		
5	16QAM	12	13	19.94	19.92	20.11	21.5	2
5	16QAM	25	0	19.92	20.00	20.15		
5	64QAM	1	0	20.17	19.57	19.96		
5	64QAM	1	12	20.13	19.71	19.98	20.5	3
5	64QAM	1	24	20.03	19.82	19.59		
5	64QAM	12	0	18.64	18.97	19.00		
5	64QAM	12	7	18.83	18.74	18.68	21.5	2
5	64QAM	12	13	19.01	18.95	19.25		
5	64QAM	25	0	18.86	18.88	18.93		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	21.86	22.28	21.96	23.5	0
3	QPSK	1	8	22.02	21.65	21.47		
3	QPSK	1	14	21.63	21.66	21.86		
3	QPSK	8	0	21.00	21.19	21.08	22.5	1

3	QPSK	8	4	20.98	20.67	21.01		
3	QPSK	8	7	20.81	20.73	21.21		
3	QPSK	15	0	20.98	21.10	21.13		
3	16QAM	1	0	20.93	20.61	20.99	22.5	1
3	16QAM	1	8	21.22	20.70	20.93		
3	16QAM	1	14	20.94	20.72	20.86		
3	16QAM	8	0	19.79	19.92	19.80	21.5	2
3	16QAM	8	4	19.76	20.03	20.04		
3	16QAM	8	7	19.88	19.96	20.10		
3	16QAM	15	0	19.84	19.94	20.18	21.5	2
3	64QAM	1	0	20.14	19.61	19.96		
3	64QAM	1	8	20.13	19.57	20.00		
3	64QAM	1	14	20.04	19.87	19.60	20.5	3
3	64QAM	8	0	18.73	18.95	18.87		
3	64QAM	8	4	18.79	18.71	18.77		
3	64QAM	8	7	19.03	18.85	19.36	20.5	3
3	64QAM	15	0	18.83	18.94	18.93		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	21.91	22.17	22.00	23.5	0
1.4	QPSK	1	3	22.06	21.75	22.12		
1.4	QPSK	1	5	21.96	21.88	22.06		
1.4	QPSK	3	0	21.78	22.18	21.96		
1.4	QPSK	3	1	22.13	21.77	22.13		
1.4	QPSK	3	3	21.87	22.12	21.91	22.5	1
1.4	QPSK	6	0	21.22	21.09	21.08		
1.4	16QAM	1	0	21.19	20.91	21.24	22.5	1
1.4	16QAM	1	3	21.04	20.71	21.11		
1.4	16QAM	1	5	20.98	21.00	21.21		
1.4	16QAM	3	0	21.44	21.00	21.23		
1.4	16QAM	3	1	21.04	20.93	20.89		
1.4	16QAM	3	3	21.08	21.10	21.27	21.5	2
1.4	16QAM	6	0	20.31	20.21	20.33		
1.4	64QAM	1	0	20.37	19.96	20.18	21.5	2
1.4	64QAM	1	3	20.38	19.66	20.17		
1.4	64QAM	1	5	20.45	19.99	19.97		
1.4	64QAM	3	0	20.28	19.98	20.08		
1.4	64QAM	3	1	20.36	19.87	20.44		
1.4	64QAM	3	3	20.41	19.81	19.98	20.5	3
1.4	64QAM	6	0	19.17	18.91	19.23		

Band5

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.65	23.08	22.85	24	0

10	QPSK	1	25	22.86	22.66	22.61	23	1
10	QPSK	1	49	22.77	22.82	22.80		
10	QPSK	25	0	22.06	22.12	21.87		
10	QPSK	25	12	22.01	21.89	22.12		
10	QPSK	25	25	22.04	22.00	22.07		
10	QPSK	50	0	21.75	21.75	21.70	23	1
10	16QAM	1	0	21.95	21.53	22.03		
10	16QAM	1	25	22.34	21.49	21.76		
10	16QAM	1	49	21.74	21.68	21.71	22	2
10	16QAM	25	0	20.72	20.86	21.14		
10	16QAM	25	12	20.78	20.91	20.95		
10	16QAM	25	25	20.97	20.93	21.01		
10	16QAM	50	0	20.96	20.95	21.01		
10	64QAM	1	0	21.10	20.61	20.90	22	2
10	64QAM	1	25	21.11	20.65	21.15		
10	64QAM	1	49	21.02	20.81	20.74		
10	64QAM	25	0	19.84	19.87	19.89	21	3
10	64QAM	25	12	19.77	19.68	19.97		
10	64QAM	25	25	20.02	19.73	20.32		
10	64QAM	50	0	19.94	20.00	19.77		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.67	23.06	22.80	24	0
5	QPSK	1	12	22.75	22.61	22.63		
5	QPSK	1	24	22.81	22.75	22.84		
5	QPSK	12	0	22.01	22.11	21.89	23	1
5	QPSK	12	7	22.08	21.94	22.08		
5	QPSK	12	13	22.01	21.86	22.09		
5	QPSK	25	0	21.74	21.76	21.78		
5	16QAM	1	0	21.94	21.47	21.94	23	1
5	16QAM	1	12	22.28	21.46	21.75		
5	16QAM	1	24	21.72	21.59	21.75		
5	16QAM	12	0	20.82	20.91	21.19	22	2
5	16QAM	12	7	20.83	20.92	20.92		
5	16QAM	12	13	20.94	21.03	20.96		
5	16QAM	25	0	20.92	20.83	20.93		
5	64QAM	1	0	21.06	20.70	21.02	22	2
5	64QAM	1	12	21.03	20.58	21.15		
5	64QAM	1	24	20.99	20.83	20.77		
5	64QAM	12	0	19.80	19.82	19.88	21	3
5	64QAM	12	7	19.81	19.69	19.98		
5	64QAM	12	13	20.05	19.71	20.27		
5	64QAM	25	0	19.94	19.90	19.65		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	22.68	23.06	22.85	24	0
3	QPSK	1	8	22.80	22.71	22.56		
3	QPSK	1	14	22.84	22.82	22.86		
3	QPSK	8	0	21.94	22.10	21.76	23	1
3	QPSK	8	4	22.08	21.96	22.17		

3	QPSK	8	7	22.02	22.01	21.96	23	1
3	QPSK	15	0	21.73	21.68	21.79		
3	16QAM	1	0	21.91	21.60	22.07		
3	16QAM	1	8	22.23	21.54	21.83		
3	16QAM	1	14	21.72	21.57	21.78		
3	16QAM	8	0	20.70	20.88	21.12	22	2
3	16QAM	8	4	20.76	21.05	20.93		
3	16QAM	8	7	20.90	20.98	20.98		
3	16QAM	15	0	20.94	20.94	20.95		
3	64QAM	1	0	20.94	20.67	21.05	22	2
3	64QAM	1	8	21.06	20.66	21.14		
3	64QAM	1	14	20.90	20.85	20.69		
3	64QAM	8	0	19.84	19.80	19.84	21	3
3	64QAM	8	4	19.85	19.77	19.88		
3	64QAM	8	7	20.13	19.81	20.30		
3	64QAM	15	0	19.95	19.89	19.67		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	22.22	22.44	22.42	24	0
1.4	QPSK	1	3	22.23	22.08	22.41		
1.4	QPSK	1	5	22.16	22.25	22.23		
1.4	QPSK	3	0	22.12	22.51	22.23		
1.4	QPSK	3	1	22.47	22.16	22.43		
1.4	QPSK	3	3	22.15	22.37	22.20		
1.4	QPSK	6	0	21.46	21.43	21.41	23	1
1.4	16QAM	1	0	21.58	21.25	21.47	23	1
1.4	16QAM	1	3	21.49	21.08	21.31		
1.4	16QAM	1	5	21.38	21.37	21.56		
1.4	16QAM	3	0	21.62	21.26	21.48		
1.4	16QAM	3	1	21.46	21.17	21.29		
1.4	16QAM	3	3	21.33	21.38	21.65		
1.4	16QAM	6	0	20.53	20.47	20.70	22	2
1.4	64QAM	1	0	20.64	20.32	20.54	22	2
1.4	64QAM	1	3	20.67	19.99	20.58		
1.4	64QAM	1	5	20.74	20.19	20.23		
1.4	64QAM	3	0	20.52	20.39	20.44		
1.4	64QAM	3	1	20.56	20.06	20.70		
1.4	64QAM	3	3	20.55	20.21	20.31		
1.4	64QAM	6	0	19.41	19.31	19.44	21	3

Band7

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	22.05	22.14	21.97	23.5	0
20	QPSK	1	49	22.24	21.99	21.70		

20	QPSK	1	99	21.89	21.88	22.01	22.5	1
20	QPSK	50	0	21.04	21.25	21.06		
20	QPSK	50	24	21.22	21.01	21.03		
20	QPSK	50	50	21.19	20.95	21.24		
20	QPSK	100	0	20.77	20.99	20.98		
20	16QAM	1	0	21.00	20.80	20.99	22.5	1
20	16QAM	1	49	21.28	20.71	20.93		
20	16QAM	1	99	21.04	20.81	21.06		
20	16QAM	50	0	20.02	20.15	20.37	21.5	2
20	16QAM	50	24	19.76	20.36	20.12		
20	16QAM	50	50	20.03	19.93	20.12		
20	16QAM	100	0	20.14	19.96	20.17		
20	64QAM	1	0	20.23	19.87	20.12	21.5	2
20	64QAM	1	49	20.08	19.86	20.27		
20	64QAM	1	99	20.32	20.02	20.11		
20	64QAM	50	0	18.87	19.06	18.96	20.5	3
20	64QAM	50	24	19.13	18.93	19.19		
20	64QAM	50	50	19.12	19.10	19.44		
20	64QAM	100	0	19.03	19.21	19.12		
Channel				20825	21100	21375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	21.86	22.05	21.75	23.5	0
15	QPSK	1	37	21.98	21.64	21.57		
15	QPSK	1	74	21.79	21.60	21.80		
15	QPSK	36	0	20.87	21.01	20.80	22.5	1
15	QPSK	36	20	20.89	20.82	20.91		
15	QPSK	36	39	20.93	20.89	20.94		
15	QPSK	75	0	20.59	20.81	20.83		
15	16QAM	1	0	20.85	20.65	20.80	22.5	1
15	16QAM	1	37	21.18	20.55	20.67		
15	16QAM	1	74	20.73	20.57	20.84		
15	16QAM	36	0	19.88	19.92	20.10	21.5	2
15	16QAM	36	20	19.47	20.16	19.88		
15	16QAM	36	39	19.96	19.74	19.90		
15	16QAM	75	0	19.86	19.85	19.94		
15	64QAM	1	0	19.93	19.56	19.79	21.5	2
15	64QAM	1	37	19.94	19.67	20.09		
15	64QAM	1	74	19.98	19.86	19.83		
15	64QAM	36	0	18.68	18.76	18.69	20.5	3
15	64QAM	36	20	18.84	18.60	19.01		
15	64QAM	36	39	18.99	18.88	19.22		
15	64QAM	75	0	18.92	18.95	18.84		
Channel				20800	21100	21400	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	21.82	21.95	21.67	23.5	0
10	QPSK	1	25	21.93	21.76	21.52		
10	QPSK	1	49	21.67	21.76	21.75		
10	QPSK	25	0	20.87	20.99	20.86	22.5	1
10	QPSK	25	12	21.03	20.92	20.95		
10	QPSK	25	25	20.91	20.82	20.98		

10	QPSK	50	0	20.55	20.71	20.88	22.5	1
10	16QAM	1	0	20.79	20.57	20.86		
10	16QAM	1	25	21.15	20.47	20.69		
10	16QAM	1	49	20.75	20.60	20.85		
10	16QAM	25	0	19.85	20.01	20.16	21.5	2
10	16QAM	25	12	19.50	20.01	19.94		
10	16QAM	25	25	19.93	19.79	19.98		
10	16QAM	50	0	19.90	19.73	19.94		
10	64QAM	1	0	19.99	19.67	19.91	21.5	2
10	64QAM	1	25	19.86	19.67	20.09		
10	64QAM	1	49	20.09	19.83	19.88		
10	64QAM	25	0	18.75	18.78	18.75	20.5	3
10	64QAM	25	12	18.94	18.69	18.93		
10	64QAM	25	25	18.96	18.83	19.26		
10	64QAM	50	0	18.86	18.97	18.91		
Channel				20775	21100	21425	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	21.82	22.03	21.74	23.5	0
5	QPSK	1	12	21.97	21.69	21.64		
5	QPSK	1	24	21.80	21.71	21.84		
5	QPSK	12	0	20.79	21.04	20.77	22.5	1
5	QPSK	12	7	20.93	20.83	20.96		
5	QPSK	12	13	21.01	20.83	20.94		
5	QPSK	25	0	20.52	20.79	20.82		
5	16QAM	1	0	20.89	20.68	20.88	22.5	1
5	16QAM	1	12	21.13	20.50	20.73		
5	16QAM	1	24	20.78	20.57	20.74		
5	16QAM	12	0	19.81	19.86	20.10	21.5	2
5	16QAM	12	7	19.56	20.13	19.84		
5	16QAM	12	13	19.92	19.86	19.99		
5	16QAM	25	0	19.88	19.80	19.93		
5	64QAM	1	0	19.98	19.58	19.90	21.5	2
5	64QAM	1	12	19.92	19.71	20.06		
5	64QAM	1	24	19.99	19.85	19.93		
5	64QAM	12	0	18.70	18.87	18.73	20.5	3
5	64QAM	12	7	18.80	18.65	18.95		
5	64QAM	12	13	18.98	18.93	19.21		
5	64QAM	25	0	18.84	18.93	18.79		

Band12

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23060	23095	23130		
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	22.49	22.73	22.40	24	0
10	QPSK	1	25	22.71	22.45	22.35		
10	QPSK	1	49	22.68	22.31	22.70		

10	QPSK	25	0	21.69	21.89	21.79	23	1
10	QPSK	25	12	21.67	21.71	21.69		
10	QPSK	25	25	21.69	21.74	21.85		
10	QPSK	50	0	21.43	21.67	21.76		
10	16QAM	1	0	21.57	21.42	21.68	23	1
10	16QAM	1	25	21.91	21.38	21.62		
10	16QAM	1	49	21.57	21.35	21.60		
10	16QAM	25	0	20.53	20.56	20.79	22	2
10	16QAM	25	12	20.35	20.72	20.72		
10	16QAM	25	25	20.70	20.44	20.89		
10	16QAM	50	0	20.67	20.48	20.79		
10	64QAM	1	0	20.85	20.44	20.74	22	2
10	64QAM	1	25	20.80	20.53	20.95		
10	64QAM	1	49	20.82	20.42	20.45		
10	64QAM	25	0	19.70	19.66	19.62	21	3
10	64QAM	25	12	19.53	19.30	19.79		
10	64QAM	25	25	19.87	19.44	19.93		
10	64QAM	50	0	19.70	19.80	19.54		
Channel				23035	23095	23155	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	22.31	22.66	22.25	24	0
5	QPSK	1	12	22.49	22.19	22.18		
5	QPSK	1	24	22.37	22.08	22.49		
5	QPSK	12	0	21.52	21.78	21.53	23	1
5	QPSK	12	7	21.48	21.40	21.46		
5	QPSK	12	13	21.44	21.55	21.69		
5	QPSK	25	0	21.37	21.43	21.56		
5	16QAM	1	0	21.45	21.26	21.42	23	1
5	16QAM	1	12	21.72	21.25	21.48		
5	16QAM	1	24	21.39	21.08	21.38		
5	16QAM	12	0	20.38	20.38	20.57	22	2
5	16QAM	12	7	20.21	20.50	20.60		
5	16QAM	12	13	20.43	20.34	20.72		
5	16QAM	25	0	20.40	20.28	20.64		
5	64QAM	1	0	20.60	20.30	20.48	22	2
5	64QAM	1	12	20.55	20.27	20.76		
5	64QAM	1	24	20.77	20.28	20.21		
5	64QAM	12	0	19.44	19.46	19.47	21	3
5	64QAM	12	7	19.36	19.19	19.65		
5	64QAM	12	13	19.56	19.30	19.80		
5	64QAM	25	0	19.49	19.67	19.37		
Channel				23025	23095	23165	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	22.36	22.57	22.25	24	0
3	QPSK	1	8	22.51	22.24	22.13		
3	QPSK	1	14	22.42	22.11	22.41		
3	QPSK	8	0	21.56	21.68	21.48	23	1
3	QPSK	8	4	21.45	21.47	21.45		
3	QPSK	8	7	21.50	21.58	21.69		
3	QPSK	15	0	21.23	21.34	21.45		

3	16QAM	1	0	21.47	21.18	21.40	23	1
3	16QAM	1	8	21.57	21.12	21.37		
3	16QAM	1	14	21.41	21.04	21.45		
3	16QAM	8	0	20.39	20.43	20.65	22	2
3	16QAM	8	4	20.26	20.53	20.49		
3	16QAM	8	7	20.44	20.30	20.59		
3	16QAM	15	0	20.34	20.35	20.64	22	2
3	64QAM	1	0	20.59	20.38	20.43		
3	64QAM	1	8	20.54	20.27	20.73		
3	64QAM	1	14	20.64	20.33	20.27	21	3
3	64QAM	8	0	19.44	19.49	19.36		
3	64QAM	8	4	19.34	19.19	19.71		
3	64QAM	8	7	19.66	19.27	19.83	21	3
3	64QAM	15	0	19.46	19.72	19.33		
Channel				23017	23095	23173	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	22.21	22.49	22.31	24	0
1.4	QPSK	1	3	22.37	22.02	22.37		
1.4	QPSK	1	5	22.18	22.25	22.25		
1.4	QPSK	3	0	22.13	22.50	22.33		
1.4	QPSK	3	1	22.42	22.08	22.54		
1.4	QPSK	3	3	22.06	22.47	22.27		
1.4	QPSK	6	0	21.48	21.43	21.51	23	1
1.4	16QAM	1	0	21.58	21.13	21.42	23	1
1.4	16QAM	1	3	21.38	20.94	21.40		
1.4	16QAM	1	5	21.35	21.28	21.56		
1.4	16QAM	3	0	21.73	21.35	21.47		
1.4	16QAM	3	1	21.41	21.13	21.33		
1.4	16QAM	3	3	21.31	21.37	21.61		
1.4	16QAM	6	0	20.48	20.47	20.68	22	2
1.4	64QAM	1	0	20.60	20.23	20.52	22	2
1.4	64QAM	1	3	20.54	19.98	20.53		
1.4	64QAM	1	5	20.74	20.28	20.33		
1.4	64QAM	3	0	20.45	20.25	20.46		
1.4	64QAM	3	1	20.52	20.03	20.65		
1.4	64QAM	3	3	20.58	20.11	20.37		
1.4	64QAM	6	0	19.43	19.24	19.56	21	3

Band13

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230				
Frequency (MHz)				782				
10	QPSK	1	0		22.89		24	0
10	QPSK	1	25		22.60			
10	QPSK	1	49		22.48			
10	QPSK	25	0		22.04		23	1

10	QPSK	25	12		21.70			
10	QPSK	25	25		21.94			
10	QPSK	50	0		21.70			
10	16QAM	1	0		21.58		23	1
10	16QAM	1	25		21.44			
10	16QAM	1	49		21.47			
10	16QAM	25	0		20.74		22	2
10	16QAM	25	12		20.91			
10	16QAM	25	25		20.70			
10	16QAM	50	0		20.59		22	2
10	64QAM	1	0		20.64			
10	64QAM	1	25		20.61			
10	64QAM	1	49		20.53		21	3
10	64QAM	25	0		19.83			
10	64QAM	25	12		19.48			
10	64QAM	25	25		19.56		21	3
10	64QAM	50	0		19.97			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.31	22.63	22.19	24	0
5	QPSK	1	12	22.53	22.32	22.18		
5	QPSK	1	24	22.38	22.16	22.53		
5	QPSK	12	0	21.54	21.74	21.56	23	1
5	QPSK	12	7	21.42	21.39	21.55		
5	QPSK	12	13	21.48	21.60	21.77		
5	QPSK	25	0	21.34	21.41	21.53	23	1
5	16QAM	1	0	21.46	21.27	21.46		
5	16QAM	1	12	21.67	21.15	21.34		
5	16QAM	1	24	21.43	21.07	21.43	22	2
5	16QAM	12	0	20.36	20.39	20.70		
5	16QAM	12	7	20.27	20.55	20.55		
5	16QAM	12	13	20.42	20.34	20.68	22	2
5	16QAM	25	0	20.42	20.36	20.61		
5	64QAM	1	0	20.70	20.24	20.47		
5	64QAM	1	12	20.58	20.26	20.63	22	2
5	64QAM	1	24	20.69	20.36	20.26		
5	64QAM	12	0	19.38	19.53	19.41		
5	64QAM	12	7	19.38	19.21	19.58	21	3
5	64QAM	12	13	19.67	19.32	19.82		
5	64QAM	25	0	19.47	19.69	19.31		

Band14

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23330				
Frequency (MHz)				793				
10	QPSK	1	0		22.93		24	0

10	QPSK	1	25		22.52		23	1
10	QPSK	1	49		22.37			
10	QPSK	25	0		22.05			
10	QPSK	25	12		21.77			
10	QPSK	25	25		21.88			
10	QPSK	50	0		21.76		23	1
10	16QAM	1	0		21.56			
10	16QAM	1	25		21.54			
10	16QAM	1	49		21.48		22	2
10	16QAM	25	0		20.71			
10	16QAM	25	12		20.91			
10	16QAM	25	25		20.69			
10	16QAM	50	0		20.66			
10	64QAM	1	0		20.67		22	2
10	64QAM	1	25		20.63			
10	64QAM	1	49		20.60			
10	64QAM	25	0		19.78		21	3
10	64QAM	25	12		19.46			
10	64QAM	25	25		19.53			
10	64QAM	50	0		19.93			
Channel				23305	23330	23355	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				790.5	793	795.5		
5	QPSK	1	0	22.30	22.59	22.23	24	0
5	QPSK	1	12	22.59	22.20	22.23		
5	QPSK	1	24	22.35	22.17	22.47		
5	QPSK	12	0	21.56	21.77	21.51	23	1
5	QPSK	12	7	21.49	21.37	21.55		
5	QPSK	12	13	21.51	21.58	21.70		
5	QPSK	25	0	21.34	21.45	21.47		
5	16QAM	1	0	21.38	21.24	21.45		
5	16QAM	1	12	21.67	21.11	21.42	23	1
5	16QAM	1	24	21.49	21.19	21.38		
5	16QAM	12	0	20.32	20.32	20.64		
5	16QAM	12	7	20.22	20.52	20.54	22	2
5	16QAM	12	13	20.51	20.39	20.74		
5	16QAM	25	0	20.35	20.33	20.61		
5	64QAM	1	0	20.60	20.35	20.57		
5	64QAM	1	12	20.60	20.26	20.72		
5	64QAM	1	24	20.70	20.28	20.23	21	3
5	64QAM	12	0	19.42	19.46	19.46		
5	64QAM	12	7	19.32	19.16	19.60		
5	64QAM	12	13	19.67	19.32	19.72		
5	64QAM	25	0	19.49	19.67	19.30		

Band25

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
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Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	22.22	22.53	22.27	23.5	0
20	QPSK	1	49	22.32	21.93	21.74		
20	QPSK	1	99	21.99	22.01	22.16		
20	QPSK	50	0	21.22	21.38	21.35	22.5	1
20	QPSK	50	24	21.23	21.04	21.32		
20	QPSK	50	50	21.15	21.01	21.33		
20	QPSK	100	0	21.25	21.39	21.26		
20	16QAM	1	0	21.19	20.79	21.28	22.5	1
20	16QAM	1	49	21.49	20.87	21.08		
20	16QAM	1	99	21.13	20.91	21.18		
20	16QAM	50	0	19.94	20.26	20.05	21.5	2
20	16QAM	50	24	20.04	20.33	20.30		
20	16QAM	50	50	20.07	20.12	20.33		
20	16QAM	100	0	20.17	20.26	20.42		
20	64QAM	1	0	20.36	19.92	20.19	21.5	2
20	64QAM	1	49	20.27	19.96	20.19		
20	64QAM	1	99	20.26	20.19	19.85		
20	64QAM	50	0	18.93	19.27	19.18	20.5	3
20	64QAM	50	24	19.07	18.92	18.99		
20	64QAM	50	50	19.20	19.18	19.55		
20	64QAM	100	0	18.98	19.23	19.10		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	22.08	22.43	22.04	23.5	0
15	QPSK	1	37	22.07	21.75	21.56		
15	QPSK	1	74	21.79	21.83	21.97		
15	QPSK	36	0	21.17	21.28	21.15	22.5	1
15	QPSK	36	20	20.96	20.88	21.12		
15	QPSK	36	39	21.00	20.83	21.26		
15	QPSK	75	0	21.00	21.10	21.10		
15	16QAM	1	0	21.01	20.61	21.10	22.5	1
15	16QAM	1	37	21.32	20.71	20.95		
15	16QAM	1	74	21.08	20.78	21.06		
15	16QAM	36	0	19.83	20.03	20.03	21.5	2
15	16QAM	36	20	19.85	20.21	20.22		
15	16QAM	36	39	20.01	19.96	20.15		
15	16QAM	75	0	20.01	20.09	20.32		
15	64QAM	1	0	20.30	19.64	20.07	21.5	2
15	64QAM	1	37	20.19	19.82	20.00		
15	64QAM	1	74	20.14	19.93	19.66		
15	64QAM	36	0	18.83	19.07	19.02	20.5	3
15	64QAM	36	20	18.96	18.89	18.79		
15	64QAM	36	39	19.15	19.03	19.49		
15	64QAM	75	0	18.92	19.09	19.04		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	21.95	22.35	22.05	23.5	0
10	QPSK	1	25	22.08	21.77	21.59		

10	QPSK	1	49	21.80	21.78	21.99	22.5	1
10	QPSK	25	0	21.12	21.22	21.24		
10	QPSK	25	12	20.94	20.89	21.18		
10	QPSK	25	25	20.91	20.85	21.30		
10	QPSK	50	0	21.05	21.21	21.15		
10	16QAM	1	0	21.11	20.61	21.18	22.5	1
10	16QAM	1	25	21.36	20.80	21.05		
10	16QAM	1	49	21.09	20.75	20.95		
10	16QAM	25	0	19.91	20.15	19.94	21.5	2
10	16QAM	25	12	19.90	20.06	20.16		
10	16QAM	25	25	20.04	19.96	20.18		
10	16QAM	50	0	19.97	20.03	20.23		
10	64QAM	1	0	20.29	19.70	20.05	21.5	2
10	64QAM	1	25	20.15	19.80	20.04		
10	64QAM	1	49	20.15	19.94	19.72		
10	64QAM	25	0	18.74	19.04	19.10	20.5	3
10	64QAM	25	12	18.99	18.76	18.81		
10	64QAM	25	25	19.08	18.93	19.45		
10	64QAM	50	0	18.89	19.08	19.05		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.01	22.35	22.10	23.5	0
5	QPSK	1	12	22.11	21.71	21.56		
5	QPSK	1	24	21.80	21.89	21.86		
5	QPSK	12	0	21.15	21.23	21.20	22.5	1
5	QPSK	12	7	20.95	20.81	21.06		
5	QPSK	12	13	20.91	20.86	21.20		
5	QPSK	25	0	21.11	21.24	21.16		
5	16QAM	1	0	21.09	20.65	21.17	22.5	1
5	16QAM	1	12	21.34	20.79	21.00		
5	16QAM	1	24	21.01	20.69	20.98		
5	16QAM	12	0	19.81	20.11	20.04	21.5	2
5	16QAM	12	7	19.84	20.22	20.24		
5	16QAM	12	13	19.93	20.01	20.27		
5	16QAM	25	0	19.89	20.05	20.26		
5	64QAM	1	0	20.27	19.66	20.00	21.5	2
5	64QAM	1	12	20.15	19.79	20.04		
5	64QAM	1	24	20.06	20.01	19.75		
5	64QAM	12	0	18.78	19.16	19.03	20.5	3
5	64QAM	12	7	18.94	18.84	18.89		
5	64QAM	12	13	19.19	18.99	19.44		
5	64QAM	25	0	18.94	19.09	19.07		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	21.99	22.42	22.04	23.5	0
3	QPSK	1	8	22.06	21.83	21.61		
3	QPSK	1	14	21.83	21.77	21.97		
3	QPSK	8	0	21.18	21.29	21.24	22.5	1
3	QPSK	8	4	20.97	20.83	21.08		
3	QPSK	8	7	20.96	20.74	21.23		

3	QPSK	15	0	21.10	21.14	21.21		
3	16QAM	1	0	21.04	20.62	21.02	22.5	1
3	16QAM	1	8	21.38	20.69	20.91		
3	16QAM	1	14	21.07	20.78	21.05		
3	16QAM	8	0	19.93	20.08	19.96	21.5	2
3	16QAM	8	4	19.82	20.13	20.22		
3	16QAM	8	7	19.98	20.03	20.14		
3	16QAM	15	0	19.92	20.07	20.27	21.5	2
3	64QAM	1	0	20.23	19.75	19.95		
3	64QAM	1	8	20.19	19.76	20.15		
3	64QAM	1	14	20.11	20.03	19.69	20.5	3
3	64QAM	8	0	18.84	19.08	19.09		
3	64QAM	8	4	18.95	18.78	18.89		
3	64QAM	8	7	19.17	18.92	19.48	20.5	3
3	64QAM	15	0	18.89	18.99	19.08		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	21.90	22.19	22.09	23.5	0
1.4	QPSK	1	3	22.03	21.72	22.14		
1.4	QPSK	1	5	21.85	21.96	21.92		
1.4	QPSK	3	0	21.77	22.12	22.02		
1.4	QPSK	3	1	22.07	21.82	22.21		
1.4	QPSK	3	3	21.81	22.17	22.00	22.5	1
1.4	QPSK	6	0	21.15	21.15	21.09		
1.4	16QAM	1	0	21.21	20.86	21.22	22.5	1
1.4	16QAM	1	3	21.12	20.71	21.01		
1.4	16QAM	1	5	21.06	21.06	21.17		
1.4	16QAM	3	0	21.42	21.02	21.12		
1.4	16QAM	3	1	21.08	20.92	20.95		
1.4	16QAM	3	3	20.97	21.07	21.32	21.5	2
1.4	16QAM	6	0	20.17	20.09	20.45		
1.4	64QAM	1	0	20.44	20.01	20.14	21.5	2
1.4	64QAM	1	3	20.24	19.66	20.31		
1.4	64QAM	1	5	20.45	19.90	20.02		
1.4	64QAM	3	0	20.20	20.05	20.18		
1.4	64QAM	3	1	20.34	19.78	20.34		
1.4	64QAM	3	3	20.32	19.87	20.03	20.5	3
1.4	64QAM	6	0	19.10	19.02	19.21		

Band 26

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					26740		24	0
Frequency (MHz)					819			
10	QPSK	1	0		23.06			
10	QPSK	1	25		22.54		24	0
10	QPSK	1	49		22.71			

10	QPSK	25	0		22.03		23	1
10	QPSK	25	12		21.92			
10	QPSK	25	25		21.81			
10	QPSK	50	0		21.63			
10	16QAM	1	0		21.48		23	1
10	16QAM	1	25		21.40			
10	16QAM	1	49		21.56			
10	16QAM	25	0		20.79		22	2
10	16QAM	25	12		20.91			
10	16QAM	25	25		20.92			
10	16QAM	50	0		20.79			
10	64QAM	1	0		20.45		22	2
10	64QAM	1	25		20.51			
10	64QAM	1	49		20.77			
10	64QAM	25	0		19.58		21	3
10	64QAM	25	12		19.75			
10	64QAM	25	25		19.70			
10	64QAM	50	0		19.82			
Channel				26715	26740	26765	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	819	821.5		
5	QPSK	1	0	22.60	23.07	22.84	24	0
5	QPSK	1	12	22.80	22.55	22.46		
5	QPSK	1	24	22.66	22.69	22.91		
5	QPSK	12	0	21.87	22.04	21.78	23	1
5	QPSK	12	7	21.83	21.80	22.16		
5	QPSK	12	13	21.97	21.89	22.02		
5	QPSK	25	0	21.82	21.69	21.56		
5	16QAM	1	0	21.81	21.50	21.93	23	1
5	16QAM	1	12	22.19	21.41	21.71		
5	16QAM	1	24	21.67	21.59	21.66		
5	16QAM	12	0	20.59	20.87	20.94	22	2
5	16QAM	12	7	20.65	20.82	20.89		
5	16QAM	12	13	20.84	20.92	20.90		
5	16QAM	25	0	20.85	20.89	20.85		
5	64QAM	1	0	21.02	20.63	20.82	22	2
5	64QAM	1	12	20.93	20.38	21.00		
5	64QAM	1	24	20.75	20.71	20.64		
5	64QAM	12	0	19.77	19.60	19.86	21	3
5	64QAM	12	7	19.69	19.53	19.87		
5	64QAM	12	13	19.86	19.79	20.15		
5	64QAM	25	0	19.72	19.86	19.52		
Channel				26705	26740	26775	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	819	822.5		
3	QPSK	1	0	22.51	22.94	22.68	24	0
3	QPSK	1	8	22.82	22.51	22.49		
3	QPSK	1	14	22.70	22.75	22.66		
3	QPSK	8	0	22.03	21.97	21.70	23	1
3	QPSK	8	4	21.87	21.86	22.05		
3	QPSK	8	7	21.94	21.91	21.96		
3	QPSK	15	0	21.70	21.61	21.56		

3	16QAM	1	0	21.79	21.43	21.90	23	1
3	16QAM	1	8	22.25	21.47	21.65		
3	16QAM	1	14	21.57	21.50	21.67		
3	16QAM	8	0	20.67	20.75	21.02	22	2
3	16QAM	8	4	20.66	20.87	20.92		
3	16QAM	8	7	20.94	20.90	20.93		
3	16QAM	15	0	20.84	20.92	20.95	22	2
3	64QAM	1	0	21.06	20.50	20.85		
3	64QAM	1	8	21.00	20.57	21.06		
3	64QAM	1	14	20.98	20.70	20.59	21	3
3	64QAM	8	0	19.78	19.82	19.75		
3	64QAM	8	4	19.66	19.55	19.88		
3	64QAM	8	7	19.94	19.62	20.26	21	3
3	64QAM	15	0	19.90	19.93	19.73		
Channel				26697	26740	26783	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	819	823.3		
1.4	QPSK	1	0	22.10	22.34	22.19	24	0
1.4	QPSK	1	3	22.16	22.13	22.42		
1.4	QPSK	1	5	22.18	22.08	22.20		
1.4	QPSK	3	0	22.01	22.38	22.18		
1.4	QPSK	3	1	22.31	22.01	22.26		
1.4	QPSK	3	3	22.00	22.42	22.21		
1.4	QPSK	6	0	21.39	21.26	21.26	23	1
1.4	16QAM	1	0	21.45	21.15	21.41	23	1
1.4	16QAM	1	3	21.29	20.89	21.26		
1.4	16QAM	1	5	21.21	21.19	21.51		
1.4	16QAM	3	0	21.71	21.19	21.45		
1.4	16QAM	3	1	21.29	20.97	21.12		
1.4	16QAM	3	3	21.23	21.32	21.50		
1.4	16QAM	6	0	20.53	20.33	20.68	22	2
1.4	64QAM	1	0	20.54	20.05	20.29	22	2
1.4	64QAM	1	3	20.43	19.76	20.47		
1.4	64QAM	1	5	20.56	20.13	20.27		
1.4	64QAM	3	0	20.53	20.25	20.47		
1.4	64QAM	3	1	20.51	20.04	20.51		
1.4	64QAM	3	3	20.50	20.13	20.13		
1.4	64QAM	6	0	19.31	19.23	19.47	21	3

Band 26

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26765	26815	26865		
Frequency (MHz)				831.5	836.5	841.5	24	0
15	QPSK	1	0	22.83	23.27	23.00		
15	QPSK	1	37	22.93	22.81	22.62		
15	QPSK	1	74	22.96	22.85	23.04	23	1
15	QPSK	36	0	22.05	22.31	21.87		

15	QPSK	36	20	22.11	22.04	22.29		
15	QPSK	36	39	22.12	22.10	22.09		
15	QPSK	75	0	21.94	21.88	21.92		
15	16QAM	1	0	21.94	21.58	22.12	23	1
15	16QAM	1	37	22.34	21.65	21.85		
15	16QAM	1	74	21.78	21.75	21.84		
15	16QAM	36	0	20.91	21.03	21.19	22	2
15	16QAM	36	20	20.91	21.12	21.00		
15	16QAM	36	39	20.99	21.01	21.10		
15	16QAM	75	0	21.09	21.00	21.11	22	2
15	64QAM	1	0	21.10	20.73	21.16		
15	64QAM	1	37	21.13	20.74	21.29		
15	64QAM	1	74	21.02	20.89	20.85	21	3
15	64QAM	36	0	19.83	19.85	19.99		
15	64QAM	36	20	19.89	19.88	20.09		
15	64QAM	36	39	20.09	19.92	20.28	21	3
15	64QAM	75	0	20.04	20.01	19.80		
Channel				26740	26815	26890	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.72	23.09	22.75	24	0
10	QPSK	1	25	22.81	22.65	22.60		
10	QPSK	1	49	22.86	22.83	22.94		
10	QPSK	25	0	22.01	22.18	21.83	23	1
10	QPSK	25	12	21.98	22.03	22.17		
10	QPSK	25	25	21.96	21.91	22.09		
10	QPSK	50	0	21.86	21.68	21.75	23	1
10	16QAM	1	0	21.95	21.52	21.96		
10	16QAM	1	25	22.34	21.54	21.79		
10	16QAM	1	49	21.80	21.65	21.70	22	2
10	16QAM	25	0	20.75	20.84	21.20		
10	16QAM	25	12	20.83	21.04	20.97		
10	16QAM	25	25	21.01	20.97	20.96	22	2
10	16QAM	50	0	20.90	20.89	20.94		
10	64QAM	1	0	21.00	20.62	20.92		
10	64QAM	1	25	21.09	20.67	21.17	22	2
10	64QAM	1	49	21.00	20.89	20.74		
10	64QAM	25	0	19.76	19.75	19.83		
10	64QAM	25	12	19.86	19.81	19.85	21	3
10	64QAM	25	25	20.08	19.81	20.25		
10	64QAM	50	0	19.88	20.00	19.74		
Channel				26715	26815	26915	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.68	23.12	22.87	24	0
5	QPSK	1	12	22.86	22.66	22.56		
5	QPSK	1	24	22.82	22.79	22.93		
5	QPSK	12	0	21.96	22.14	21.86	23	1
5	QPSK	12	7	22.01	21.97	22.20		
5	QPSK	12	13	22.00	21.94	22.07		
5	QPSK	25	0	21.86	21.73	21.72	23	1
5	16QAM	1	0	21.86	21.53	22.01		

5	16QAM	1	12	22.26	21.52	21.83	22	2
5	16QAM	1	24	21.76	21.67	21.69		
5	16QAM	12	0	20.75	20.92	21.11		
5	16QAM	12	7	20.71	20.93	21.05		
5	16QAM	12	13	20.93	21.00	21.00		
5	16QAM	25	0	21.00	20.92	21.02	22	2
5	64QAM	1	0	21.07	20.70	20.96		
5	64QAM	1	12	21.08	20.54	21.06		
5	64QAM	1	24	20.92	20.89	20.76	21	3
5	64QAM	12	0	19.85	19.76	19.91		
5	64QAM	12	7	19.80	19.70	19.89		
5	64QAM	12	13	20.01	19.83	20.19		
5	64QAM	25	0	19.87	19.93	19.69		
Channel				26705	26815	26925	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	22.65	23.08	22.85	24	0
3	QPSK	1	8	22.86	22.66	22.61		
3	QPSK	1	14	22.77	22.82	22.80		
3	QPSK	8	0	22.06	22.12	21.87	23	1
3	QPSK	8	4	22.01	21.89	22.12		
3	QPSK	8	7	22.04	22.00	22.07		
3	QPSK	15	0	21.75	21.75	21.70		
3	16QAM	1	0	21.95	21.53	22.03	23	1
3	16QAM	1	8	22.34	21.49	21.76		
3	16QAM	1	14	21.74	21.68	21.71		
3	16QAM	8	0	20.72	20.86	21.14	22	2
3	16QAM	8	4	20.78	20.91	20.95		
3	16QAM	8	7	20.97	20.93	21.01		
3	16QAM	15	0	20.96	20.95	21.01		
3	64QAM	1	0	21.10	20.61	20.90	22	2
3	64QAM	1	8	21.11	20.65	21.15		
3	64QAM	1	14	21.02	20.81	20.74		
3	64QAM	8	0	19.84	19.87	19.89	21	3
3	64QAM	8	4	19.77	19.68	19.97		
3	64QAM	8	7	20.02	19.73	20.32		
3	64QAM	15	0	19.94	20.00	19.77		
Channel				26697	26815	26933	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	22.27	22.42	22.32	24	0
1.4	QPSK	1	3	22.33	22.16	22.47		
1.4	QPSK	1	5	22.24	22.20	22.29		
1.4	QPSK	3	0	22.18	22.56	22.23		
1.4	QPSK	3	1	22.35	22.12	22.44		
1.4	QPSK	3	3	22.04	22.47	22.23		
1.4	QPSK	6	0	21.52	21.44	21.43	23	1
1.4	16QAM	1	0	21.49	21.25	21.48	23	1
1.4	16QAM	1	3	21.44	21.06	21.33		
1.4	16QAM	1	5	21.30	21.28	21.55		
1.4	16QAM	3	0	21.75	21.37	21.53		
1.4	16QAM	3	1	21.36	21.08	21.24		

1.4	16QAM	3	3	21.34	21.38	21.66		
1.4	16QAM	6	0	20.60	20.43	20.74	22	2
1.4	64QAM	1	0	20.61	20.21	20.43	22	2
1.4	64QAM	1	3	20.56	19.93	20.51		
1.4	64QAM	1	5	20.71	20.17	20.35		
1.4	64QAM	3	0	20.56	20.39	20.52		
1.4	64QAM	3	1	20.62	20.07	20.62		
1.4	64QAM	3	3	20.57	20.21	20.28		
1.4	64QAM	6	0	19.38	19.31	19.57	21	3

Band66

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572	23.5	0
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	22.26	22.63	22.34		
20	QPSK	1	49	22.35	22.00	21.85	22.5	1
20	QPSK	1	99	22.05	22.08	22.19		
20	QPSK	50	0	21.37	21.51	21.43		
20	QPSK	50	24	21.26	21.06	21.37		
20	QPSK	50	50	21.23	21.06	21.49		
20	QPSK	100	0	21.28	21.43	21.42		
20	16QAM	1	0	21.31	20.89	21.35	22.5	1
20	16QAM	1	49	21.59	21.01	21.23		
20	16QAM	1	99	21.27	21.00	21.26		
20	16QAM	50	0	20.11	20.34	20.21	21.5	2
20	16QAM	50	24	20.15	20.39	20.42		
20	16QAM	50	50	20.23	20.24	20.45		
20	16QAM	100	0	20.19	20.30	20.52		
20	64QAM	1	0	20.49	19.95	20.26		
20	64QAM	1	49	20.41	19.99	20.33		
20	64QAM	1	99	20.34	20.25	19.93	21.5	2
20	64QAM	50	0	19.05	19.33	19.28		
20	64QAM	50	24	19.16	19.06	19.10		
20	64QAM	50	50	19.37	19.23	19.68	20.5	3
20	64QAM	100	0	19.14	19.28	19.27		
Channel				132047	132322	132597	23.5	0
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	22.21	22.45	22.33		
15	QPSK	1	37	22.27	21.85	21.80	22.5	1
15	QPSK	1	74	21.86	21.87	22.07		
15	QPSK	36	0	21.15	21.27	21.36		
15	QPSK	36	20	21.12	20.95	21.19		
15	QPSK	36	39	21.12	21.48	21.49		
15	QPSK	75	0	21.17	21.27	21.29		
15	16QAM	1	0	21.28	20.82	21.11	22.5	1
15	16QAM	1	37	21.52	20.82	21.08		

15	16QAM	1	74	21.17	21.04	21.22		
15	16QAM	36	0	20.07	20.17	20.17	21.5	2
15	16QAM	36	20	19.94	20.22	20.26		
15	16QAM	36	39	20.06	20.18	20.28		
15	16QAM	75	0	20.03	20.21	20.41		
15	64QAM	1	0	20.37	19.98	20.13		
15	64QAM	1	37	20.38	19.92	20.24	21.5	2
15	64QAM	1	74	20.19	20.08	19.91		
15	64QAM	36	0	18.88	19.26	19.27		
15	64QAM	36	20	19.12	18.90	19.07	20.5	3
15	64QAM	36	39	19.39	19.12	19.53		
15	64QAM	75	0	18.91	19.19	19.14		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	22.20	22.43	22.33	23.5	0
10	QPSK	1	25	22.25	21.93	21.83		
10	QPSK	1	49	21.96	21.87	22.10		
10	QPSK	25	0	21.14	21.22	21.27	22.5	1
10	QPSK	25	12	21.19	20.97	21.32		
10	QPSK	25	25	21.10	21.47	21.44		
10	QPSK	50	0	21.15	21.31	21.20		
10	16QAM	1	0	21.25	20.77	21.21	22.5	1
10	16QAM	1	25	21.45	20.81	21.06		
10	16QAM	1	49	21.30	20.94	21.16		
10	16QAM	25	0	20.09	20.17	20.19	21.5	2
10	16QAM	25	12	20.08	20.26	20.29		
10	16QAM	25	25	20.12	20.14	20.31		
10	16QAM	50	0	20.04	20.22	20.39		
10	64QAM	1	0	20.38	19.94	20.22	21.5	2
10	64QAM	1	25	20.32	19.91	20.23		
10	64QAM	1	49	20.27	20.15	19.81		
10	64QAM	25	0	18.84	19.32	19.27	20.5	3
10	64QAM	25	12	19.11	19.03	19.15		
10	64QAM	25	25	19.27	19.04	19.49		
10	64QAM	50	0	19.06	19.18	19.13		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	22.17	22.50	22.35	23.5	0
5	QPSK	1	12	22.26	21.96	21.85		
5	QPSK	1	24	21.90	21.99	22.19		
5	QPSK	12	0	21.23	21.17	21.40	22.5	1
5	QPSK	12	7	21.10	21.03	21.23		
5	QPSK	12	13	21.11	21.45	21.48		
5	QPSK	25	0	21.13	21.24	21.22		
5	16QAM	1	0	21.19	20.71	21.12	22.5	1
5	16QAM	1	12	21.43	20.92	21.08		
5	16QAM	1	24	21.16	20.95	21.11		
5	16QAM	12	0	20.12	20.24	20.18	21.5	2
5	16QAM	12	7	20.05	20.37	20.32		
5	16QAM	12	13	20.11	20.13	20.34		

5	16QAM	25	0	20.05	20.22	20.42		
5	64QAM	1	0	20.37	19.93	20.23	21.5	2
5	64QAM	1	12	20.34	19.95	20.31		
5	64QAM	1	24	20.24	20.02	19.80		
5	64QAM	12	0	18.86	19.24	19.29	20.5	3
5	64QAM	12	7	19.10	19.04	19.12		
5	64QAM	12	13	19.25	19.13	19.57		
5	64QAM	25	0	19.05	19.24	19.28		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	22.29	22.49	22.36	23.5	0
3	QPSK	1	8	22.34	21.99	21.78		
3	QPSK	1	14	21.84	21.94	22.14		
3	QPSK	8	0	21.20	21.24	21.31	22.5	1
3	QPSK	8	4	21.15	20.97	21.33		
3	QPSK	8	7	21.16	21.39	21.45		
3	QPSK	15	0	21.24	21.28	21.29		
3	16QAM	1	0	21.30	20.79	21.22	22.5	1
3	16QAM	1	8	21.39	20.85	21.07		
3	16QAM	1	14	21.29	21.06	21.19		
3	16QAM	8	0	20.03	20.25	20.23	21.5	2
3	16QAM	8	4	19.99	20.36	20.36		
3	16QAM	8	7	20.07	20.24	20.34		
3	16QAM	15	0	20.08	20.21	20.34		
3	64QAM	1	0	20.42	19.82	20.09	21.5	2
3	64QAM	1	8	20.31	19.85	20.29		
3	64QAM	1	14	20.25	20.12	19.93		
3	64QAM	8	0	18.91	19.22	19.13	20.5	3
3	64QAM	8	4	19.19	18.90	19.12		
3	64QAM	8	7	19.33	19.10	19.54		
3	64QAM	15	0	19.06	19.17	19.23		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	22.10	22.16	22.11	23.5	0
1.4	QPSK	1	3	22.17	21.85	22.30		
1.4	QPSK	1	5	22.06	21.94	22.09		
1.4	QPSK	3	0	21.91	22.35	22.05		
1.4	QPSK	3	1	22.25	21.89	22.29		
1.4	QPSK	3	3	21.96	22.20	22.11		
1.4	QPSK	6	0	21.26	21.19	21.25	22.5	1
1.4	16QAM	1	0	21.29	21.03	21.22	22.5	1
1.4	16QAM	1	3	21.19	20.79	21.25		
1.4	16QAM	1	5	21.10	21.22	21.26		
1.4	16QAM	3	0	21.50	21.08	21.32		
1.4	16QAM	3	1	21.15	21.03	21.10		
1.4	16QAM	3	3	21.06	21.22	21.40		
1.4	16QAM	6	0	20.30	20.27	20.52	21.5	2
1.4	64QAM	1	0	20.44	20.10	20.24	21.5	2
1.4	64QAM	1	3	20.38	19.80	20.41		
1.4	64QAM	1	5	20.59	20.04	20.09		

1.4	64QAM	3	0	20.29	20.09	20.20	20.5	3
1.4	64QAM	3	1	20.41	19.91	20.50		
1.4	64QAM	3	3	20.40	19.94	20.04		
1.4	64QAM	6	0	19.18	19.08	19.31		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				133222	133322	133372	24	0
Frequency (MHz)				673	683	688		
20	QPSK	1	0	22.88	23.05	22.76		
20	QPSK	1	49	22.98	22.72	22.63	23	1
20	QPSK	1	99	22.73	22.68	22.87		
20	QPSK	50	0	21.94	22.17	22.10		
20	QPSK	50	24	21.93	21.81	22.12	23	1
20	QPSK	50	50	21.97	21.83	22.14		
20	QPSK	100	0	21.78	21.96	21.85		
20	16QAM	1	0	21.96	21.56	22.16	23	1
20	16QAM	1	49	22.25	21.53	21.88		
20	16QAM	1	99	22.05	21.74	21.99		
20	16QAM	50	0	20.85	21.03	21.04	22	2
20	16QAM	50	24	20.84	21.06	21.05		
20	16QAM	50	50	20.91	20.88	21.05		
20	16QAM	100	0	20.86	20.84	21.14	22	2
20	64QAM	1	0	21.22	20.68	21.11		
20	64QAM	1	49	21.04	20.61	21.24		
20	64QAM	1	99	21.15	20.90	20.67	21	3
20	64QAM	50	0	19.65	20.03	19.83		
20	64QAM	50	24	19.88	19.72	19.82		
20	64QAM	50	50	19.99	19.95	20.30	21	3
20	64QAM	50	50	19.99	19.95	20.30		
20	64QAM	100	0	20.00	20.06	20.07		
Channel				133197	133297	133397	24	0
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	22.66	22.92	22.59		
15	QPSK	1	37	22.87	22.60	22.47	23	1
15	QPSK	1	74	22.48	22.47	22.66		
15	QPSK	36	0	21.72	21.96	21.79		
15	QPSK	36	20	21.69	21.66	21.86	23	1
15	QPSK	36	39	21.84	21.68	21.97		
15	QPSK	75	0	21.61	21.75	21.55		
15	16QAM	1	0	21.85	21.40	21.97	23	1
15	16QAM	1	37	22.02	21.31	21.68		
15	16QAM	1	74	21.88	21.54	21.87		
15	16QAM	36	0	20.63	20.77	20.98	22	2
15	16QAM	36	20	20.60	20.96	20.87		
15	16QAM	36	39	20.78	20.57	20.78		
15	16QAM	75	0	20.69	20.72	20.93	22	2
15	16QAM	75	0	20.69	20.72	20.93		
15	16QAM	75	0	20.69	20.72	20.93		

15	64QAM	1	0	20.98	20.47	20.78	22	2
15	64QAM	1	37	20.92	20.39	21.11		
15	64QAM	1	74	20.94	20.62	20.43		
15	64QAM	36	0	19.51	19.77	19.56	21	3
15	64QAM	36	20	19.77	19.51	19.71		
15	64QAM	36	39	19.87	19.70	19.99		
15	64QAM	75	0	19.79	19.78	19.82		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	22.72	22.88	22.66	24	0
10	QPSK	1	25	22.84	22.57	22.44		
10	QPSK	1	49	22.61	22.43	22.75		
10	QPSK	25	0	21.63	21.96	21.88	23	1
10	QPSK	25	12	21.70	21.75	21.89		
10	QPSK	25	25	21.76	21.66	21.91		
10	QPSK	50	0	21.68	21.82	21.66		
10	16QAM	1	0	21.79	21.38	21.90	23	1
10	16QAM	1	25	22.07	21.32	21.69		
10	16QAM	1	49	21.85	21.58	21.80		
10	16QAM	25	0	20.75	20.78	20.87	22	2
10	16QAM	25	12	20.61	20.97	20.92		
10	16QAM	25	25	20.79	20.65	20.76		
10	16QAM	50	0	20.71	20.66	20.89		
10	64QAM	1	0	21.05	20.48	20.79	22	2
10	64QAM	1	25	20.92	20.40	21.10		
10	64QAM	1	49	20.95	20.66	20.44		
10	64QAM	25	0	19.56	19.76	19.56	21	3
10	64QAM	25	12	19.73	19.55	19.69		
10	64QAM	25	25	19.87	19.82	20.12		
10	64QAM	50	0	19.70	19.87	19.87		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	22.70	22.83	22.53	24	0
5	QPSK	1	12	22.89	22.52	22.52		
5	QPSK	1	24	22.52	22.41	22.73		
5	QPSK	12	0	21.74	21.99	21.81	23	1
5	QPSK	12	7	21.61	21.66	21.91		
5	QPSK	12	13	21.76	21.70	21.84		
5	QPSK	25	0	21.57	21.73	21.65		
5	16QAM	1	0	21.83	21.44	21.85	23	1
5	16QAM	1	12	22.11	21.38	21.72		
5	16QAM	1	24	21.86	21.61	21.78		
5	16QAM	12	0	20.76	20.77	20.87	22	2
5	16QAM	12	7	20.60	20.98	20.84		
5	16QAM	12	13	20.69	20.64	20.78		
5	16QAM	25	0	20.70	20.68	20.91		
5	64QAM	1	0	21.08	20.46	20.79	22	2
5	64QAM	1	12	20.98	20.48	21.03		
5	64QAM	1	24	20.87	20.64	20.43		
5	64QAM	12	0	19.44	19.76	19.67	21	3

5	64QAM	12	7	19.70	19.54	19.72		
5	64QAM	12	13	19.93	19.82	20.03		
5	64QAM	25	0	19.70	19.92	19.84		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	23.07	23.17	23.24	23.06	23.10	24	0
20	QPSK	1	49	22.92	22.90	22.81	22.63	22.98		
20	QPSK	1	99	22.70	22.95	23.04	22.83	22.80		
20	QPSK	50	0	21.97	22.13	22.37	22.09	22.13	23	1
20	QPSK	50	24	22.02	22.18	22.26	22.07	21.94		
20	QPSK	50	50	22.04	22.03	22.13	21.85	21.99		
20	QPSK	100	0	21.87	22.12	21.94	21.87	21.92	23	1
20	16QAM	1	0	21.74	21.78	21.84	21.73	21.66		
20	16QAM	1	49	21.62	21.78	21.88	21.85	21.66		
20	16QAM	1	99	22.02	22.02	22.00	22.09	22.02	22	2
20	16QAM	50	0	21.14	21.24	21.21	20.91	21.26		
20	16QAM	50	24	21.09	21.17	21.11	21.10	21.21		
20	16QAM	50	50	20.93	21.18	21.08	20.89	21.02	22	2
20	16QAM	100	0	20.94	21.00	20.98	21.19	20.86		
20	64QAM	1	0	20.86	21.07	20.98	20.73	20.95		
20	64QAM	1	49	20.85	20.88	20.88	20.70	20.85	22	2
20	64QAM	1	99	20.85	20.84	20.99	20.87	20.92		
20	64QAM	50	0	19.99	20.20	20.24	20.20	20.06		
20	64QAM	50	24	19.92	19.98	20.09	19.82	19.80	21	3
20	64QAM	50	50	19.92	20.13	20.05	19.96	20.10		
20	64QAM	100	0	20.00	20.18	20.34	20.13	20.00		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	22.82	23.01	23.15	22.92	23.01	24.00	0
15	QPSK	1	37	22.76	22.82	22.62	22.54	22.81		
15	QPSK	1	74	22.68	22.75	22.80	22.73	22.68		
15	QPSK	36	0	21.87	22.09	21.99	21.96	21.88	23	1
15	QPSK	36	20	21.83	21.96	22.11	21.94	21.74		
15	QPSK	36	39	21.88	21.88	22.00	21.77	21.79		
15	QPSK	75	0	21.82	21.85	21.89	21.73	21.79	23	1
15	16QAM	1	0	21.53	21.68	21.58	21.63	21.52		
15	16QAM	1	37	21.53	21.70	21.75	21.57	21.52		
15	16QAM	1	74	21.74	21.88	21.90	21.82	21.93	22	2
15	16QAM	36	0	21.02	21.17	21.09	20.73	21.07		
15	16QAM	36	20	21.03	21.14	20.99	20.92	20.98		
15	16QAM	36	39	20.80	21.06	20.83	20.73	20.97	22	2
15	16QAM	75	0	20.78	20.89	20.85	21.04	20.77		
15	64QAM	1	0	20.70	20.90	20.86	20.71	20.79	22	2

15	64QAM	1	37	20.68	20.69	20.69	20.61	20.65	21	3
15	64QAM	1	74	20.78	20.69	20.84	20.63	20.66		
15	64QAM	36	0	19.90	20.00	20.00	20.07	19.91		
15	64QAM	36	20	19.80	19.82	19.93	19.62	19.75		
15	64QAM	36	39	19.87	19.97	19.84	19.72	19.84		
15	64QAM	75	0	19.77	19.94	20.14	19.90	19.96		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	22.91	23.14	23.12	22.91	23.05	24.00	0
10	QPSK	1	25	22.71	22.83	22.57	22.45	22.77		
10	QPSK	1	49	22.53	22.78	22.78	22.65	22.78		
10	QPSK	25	0	21.84	22.08	21.94	21.94	21.90	23	1
10	QPSK	25	12	21.90	21.94	22.04	22.04	21.79		
10	QPSK	25	25	21.75	21.81	22.10	21.73	21.88		
10	QPSK	50	0	21.77	21.92	21.86	21.81	21.79		
10	16QAM	1	0	21.58	21.58	21.65	21.68	21.51	23	1
10	16QAM	1	25	21.50	21.69	21.71	21.65	21.46		
10	16QAM	1	49	21.89	21.87	21.92	21.88	21.81		
10	16QAM	25	0	20.94	21.05	21.06	20.83	21.11	22	2
10	16QAM	25	12	20.98	21.07	21.05	20.97	21.01		
10	16QAM	25	25	20.79	21.03	20.84	20.71	20.86		
10	16QAM	50	0	20.81	20.85	20.89	20.92	20.75		
10	64QAM	1	0	20.81	20.84	20.85	20.68	20.85	22	2
10	64QAM	1	25	20.76	20.67	20.70	20.59	20.60		
10	64QAM	1	49	20.70	20.84	20.76	20.57	20.76		
10	64QAM	25	0	19.83	20.02	19.98	20.06	19.95	21	3
10	64QAM	25	12	19.84	19.87	19.84	19.75	19.68		
10	64QAM	25	25	19.83	19.97	19.85	19.75	19.91		
10	64QAM	50	0	19.75	19.91	20.07	19.94	19.84		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	22.83	23.00	23.06	22.91	23.00	24.00	0
5	QPSK	1	12	22.72	22.75	22.59	22.41	22.69		
5	QPSK	1	24	22.67	22.81	22.86	22.67	22.70		
5	QPSK	12	0	21.92	22.02	21.97	21.89	21.82	23	1
5	QPSK	12	7	21.82	21.94	22.11	21.94	21.83		
5	QPSK	12	13	21.84	21.85	21.99	21.75	21.83		
5	QPSK	25	0	21.76	21.90	21.90	21.75	21.77		
5	16QAM	1	0	21.53	21.69	21.57	21.61	21.53	23	1
5	16QAM	1	12	21.52	21.64	21.76	21.60	21.46		
5	16QAM	1	24	21.85	21.95	21.90	21.84	21.94		
5	16QAM	12	0	21.01	21.10	21.14	20.82	21.02	22	2
5	16QAM	12	7	21.08	21.14	21.00	20.86	21.12		
5	16QAM	12	13	20.81	20.99	20.84	20.78	20.87		
5	16QAM	25	0	20.81	20.92	20.88	20.88	20.75		
5	64QAM	1	0	20.78	20.92	20.84	20.69	20.78	22	2
5	64QAM	1	12	20.67	20.72	20.67	20.54	20.64		
5	64QAM	1	24	20.73	20.82	20.86	20.63	20.80		
5	64QAM	12	0	19.95	19.96	20.04	20.01	19.92	21	3
5	64QAM	12	7	19.82	19.95	19.93	19.75	19.64		
5	64QAM	12	13	19.75	19.94	19.82	19.83	19.95		

5	64QAM	25	0	19.78	19.98	20.18	19.96	19.92		
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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				43190	43340	43490		
Frequency (MHz)				3560	3575	3590		
20	QPSK	1	0	17.12	17.39	17.17	19	0
20	QPSK	1	49	16.93	16.80	16.63		
20	QPSK	1	99	17.11	17.04	16.83		
20	QPSK	50	0	16.25	16.43	16.19	18	1
20	QPSK	50	24	16.28	16.39	16.23		
20	QPSK	50	50	16.05	16.36	15.86		
20	QPSK	100	0	16.28	16.05	15.84		
20	16QAM	1	0	15.93	15.96	15.84	18	1
20	16QAM	1	49	15.96	15.96	16.11		
20	16QAM	1	99	16.15	16.17	16.09		
20	16QAM	50	0	15.34	15.38	15.04	17	2
20	16QAM	50	24	15.36	15.28	15.23		
20	16QAM	50	50	15.20	15.15	14.95		
20	16QAM	100	0	15.08	15.19	15.19		
20	64QAM	1	0	15.21	15.03	14.82	17	2
20	64QAM	1	49	14.97	14.93	14.80		
20	64QAM	1	99	14.93	14.98	15.02		
20	64QAM	50	0	14.30	14.39	14.31	16	3
20	64QAM	50	24	14.06	14.24	13.91		
20	64QAM	50	50	14.27	14.13	13.92		
20	64QAM	100	0	14.24	14.56	14.34		
Channel				43165	43340	43515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3575	3592.5		
15	QPSK	1	0	17.02	17.18	16.96	19	0
15	QPSK	1	37	16.82	16.72	16.57		
15	QPSK	1	74	16.86	16.91	16.73		
15	QPSK	36	0	16.06	16.29	15.95	18	1
15	QPSK	36	20	16.12	16.23	16.04		
15	QPSK	36	39	15.89	16.03	15.76		
15	QPSK	75	0	15.98	15.93	15.67		
15	16QAM	1	0	15.77	15.78	15.64	18	1
15	16QAM	1	37	15.65	15.69	15.87		
15	16QAM	1	74	15.95	15.84	15.96		
15	16QAM	36	0	15.04	15.15	14.89	17	2
15	16QAM	36	20	15.15	14.97	14.93		
15	16QAM	36	39	15.08	15.06	14.80		
15	16QAM	75	0	14.98	14.85	14.97		
15	64QAM	1	0	14.87	14.83	14.68	17	2
15	64QAM	1	37	14.79	14.80	14.59		
15	64QAM	1	74	14.63	14.84	14.82		
15	64QAM	36	0	14.18	14.14	14.17	16	3

15	64QAM	36	20	13.90	14.01	13.74		
15	64QAM	36	39	14.09	14.06	13.73		
15	64QAM	75	0	14.01	14.38	14.15		
Channel				43140	43340	43540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3575	3595		
10	QPSK	1	0	16.96	17.13	16.98	19	0
10	QPSK	1	25	16.82	16.66	16.48		
10	QPSK	1	49	16.84	16.82	16.72		
10	QPSK	25	0	16.17	16.26	15.92	18	1
10	QPSK	25	12	16.04	16.13	16.08		
10	QPSK	25	25	15.92	16.02	15.76		
10	QPSK	50	0	16.01	15.86	15.62		
10	16QAM	1	0	15.67	15.76	15.67	18	1
10	16QAM	1	25	15.65	15.74	15.90		
10	16QAM	1	49	16.01	15.86	15.91		
10	16QAM	25	0	15.14	15.06	14.81	17	2
10	16QAM	25	12	15.13	15.04	14.94		
10	16QAM	25	25	15.04	15.02	14.76		
10	16QAM	50	0	14.86	14.94	15.05		
10	64QAM	1	0	14.91	14.82	14.73	17	2
10	64QAM	1	25	14.74	14.73	14.71		
10	64QAM	1	49	14.66	14.78	14.71		
10	64QAM	25	0	14.21	14.22	14.16	16	3
10	64QAM	25	12	13.86	13.97	13.79		
10	64QAM	25	25	14.07	13.94	13.79		
10	64QAM	50	0	14.03	14.36	14.07		
Channel				43115	43340	43565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3575	3597.5		
5	QPSK	1	0	17.01	17.21	16.99	19	0
5	QPSK	1	12	16.76	16.74	16.46		
5	QPSK	1	24	16.91	16.85	16.64		
5	QPSK	12	0	16.13	16.17	15.96	18	1
5	QPSK	12	7	16.00	16.23	16.01		
5	QPSK	12	13	15.88	16.12	15.77		
5	QPSK	25	0	16.07	15.95	15.69		
5	16QAM	1	0	15.69	15.76	15.62	18	1
5	16QAM	1	12	15.72	15.72	15.87		
5	16QAM	1	24	15.90	15.95	15.90		
5	16QAM	12	0	15.02	15.17	14.81	17	2
5	16QAM	12	7	15.05	15.02	14.92		
5	16QAM	12	13	15.02	15.06	14.71		
5	16QAM	25	0	15.00	14.85	15.05		
5	64QAM	1	0	14.89	14.79	14.71	17	2
5	64QAM	1	12	14.80	14.83	14.68		
5	64QAM	1	24	14.73	14.91	14.72		
5	64QAM	12	0	14.16	14.12	14.14	16	3
5	64QAM	12	7	13.91	13.96	13.70		
5	64QAM	12	13	13.97	14.03	13.76		
5	64QAM	25	0	13.94	14.34	14.12		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				44190	44215	44240		
Frequency (MHz)				3660	3662.5	3665		
20	QPSK	1	0	17.27	17.46	17.20	19	0
20	QPSK	1	49	17.03	16.91	16.75		
20	QPSK	1	99	17.24	17.15	16.99		
20	QPSK	50	0	16.42	16.54	16.17	18	1
20	QPSK	50	24	16.32	16.53	16.26		
20	QPSK	50	50	16.26	16.40	16.02		
20	QPSK	100	0	16.31	16.25	16.00		
20	16QAM	1	0	16.12	16.05	15.87	18	1
20	16QAM	1	49	16.06	15.99	16.11		
20	16QAM	1	99	16.23	16.18	16.33		
20	16QAM	50	0	15.41	15.48	15.07	17	2
20	16QAM	50	24	15.50	15.28	15.36		
20	16QAM	50	50	15.30	15.28	15.07		
20	16QAM	100	0	15.17	15.27	15.30		
20	64QAM	1	0	15.23	15.07	14.93	17	2
20	64QAM	1	49	15.03	15.07	15.01		
20	64QAM	1	99	15.01	15.11	15.03		
20	64QAM	50	0	14.44	14.42	14.38	16	3
20	64QAM	50	24	14.06	14.30	14.09		
20	64QAM	50	50	14.35	14.23	14.13		
20	64QAM	100	0	14.28	14.58	14.36		
Channel				44165	44215	44265	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3657.5	3662.5	3667.5		
15	QPSK	1	0	16.94	17.26	16.98	19	0
15	QPSK	1	37	16.73	16.70	16.57		
15	QPSK	1	74	16.85	16.90	16.72		
15	QPSK	36	0	16.04	16.25	15.95	18	1
15	QPSK	36	20	16.11	16.18	15.93		
15	QPSK	36	39	15.89	16.06	15.73		
15	QPSK	75	0	16.01	15.96	15.76		
15	16QAM	1	0	15.76	15.79	15.57	18	1
15	16QAM	1	37	15.67	15.71	15.90		
15	16QAM	1	74	16.01	15.87	16.01		
15	16QAM	36	0	14.98	15.20	14.85	17	2
15	16QAM	36	20	15.10	14.97	15.03		
15	16QAM	36	39	15.11	15.02	14.78		
15	16QAM	75	0	14.89	14.89	15.02		
15	64QAM	1	0	15.01	14.87	14.71	17	2
15	64QAM	1	37	14.73	14.73	14.58		
15	64QAM	1	74	14.74	14.80	14.74		
15	64QAM	36	0	14.21	14.13	14.12	16	3
15	64QAM	36	20	13.77	14.08	13.76		
15	64QAM	36	39	14.04	14.05	13.84		

15	64QAM	75	0	13.98	14.38	14.04		
Channel				44140	44215	44290	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3655	3662.5	3670		
10	QPSK	1	0	16.92	17.16	16.95	19	0
10	QPSK	1	25	16.87	16.63	16.43		
10	QPSK	1	49	16.93	16.94	16.61		
10	QPSK	25	0	16.10	16.16	15.86	18	1
10	QPSK	25	12	16.02	16.21	16.03		
10	QPSK	25	25	15.89	16.04	15.82		
10	QPSK	50	0	16.03	15.91	15.73		
10	16QAM	1	0	15.71	15.73	15.70	18	1
10	16QAM	1	25	15.68	15.73	15.87		
10	16QAM	1	49	15.94	15.89	15.94		
10	16QAM	25	0	15.04	15.14	14.86	17	2
10	16QAM	25	12	15.13	15.02	14.96		
10	16QAM	25	25	15.12	15.09	14.70		
10	16QAM	50	0	14.95	14.96	14.98		
10	64QAM	1	0	14.95	14.86	14.74	17	2
10	64QAM	1	25	14.84	14.78	14.70		
10	64QAM	1	49	14.67	14.78	14.80		
10	64QAM	25	0	14.22	14.15	14.05	16	3
10	64QAM	25	12	13.83	13.98	13.64		
10	64QAM	25	25	13.97	13.98	13.85		
10	64QAM	50	0	14.00	14.28	14.11		
Channel				44115	44215	44315	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3652.5	3662.5	3672.5		
5	QPSK	1	0	16.93	17.23	16.96	19	0
5	QPSK	1	12	16.72	16.66	16.45		
5	QPSK	1	24	16.85	16.82	16.66		
5	QPSK	12	0	16.13	16.26	15.98	18	1
5	QPSK	12	7	16.15	16.24	15.95		
5	QPSK	12	13	15.89	16.07	15.72		
5	QPSK	25	0	16.10	15.83	15.72		
5	16QAM	1	0	15.71	15.75	15.57	18	1
5	16QAM	1	12	15.70	15.66	15.79		
5	16QAM	1	24	16.02	15.92	15.94		
5	16QAM	12	0	15.00	15.12	14.85	17	2
5	16QAM	12	7	15.16	15.00	14.98		
5	16QAM	12	13	15.09	14.98	14.77		
5	16QAM	25	0	15.00	14.93	15.00		
5	64QAM	1	0	14.91	14.84	14.66	17	2
5	64QAM	1	12	14.82	14.70	14.70		
5	64QAM	1	24	14.69	14.88	14.86		
5	64QAM	12	0	14.18	14.10	14.11	16	3
5	64QAM	12	7	13.82	14.05	13.75		
5	64QAM	12	13	14.01	14.00	13.77		
5	64QAM	25	0	14.06	14.24	14.12		

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	for EMC Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				55340	55830	55990	56150	56640		
Frequency (MHz)				3560	3609	3625	3641	3690		
20	QPSK	1	0	18.21	18.22	18.45	18.18	18.19	19	0
20	QPSK	1	49	18.06	17.96	17.81	17.68	18.20		
20	QPSK	1	99	17.81	18.09	18.12	17.93	17.98		
20	QPSK	50	0	16.98	17.31	17.35	17.15	17.15	18	1
20	QPSK	50	24	17.06	17.29	17.41	17.17	17.00		
20	QPSK	50	50	16.99	17.19	17.23	17.00	17.07		
20	QPSK	100	0	16.97	17.31	17.13	16.87	17.10		
20	16QAM	1	0	16.82	17.00	16.95	16.77	16.73	18	1
20	16QAM	1	49	16.61	16.97	16.88	17.01	16.76		
20	16QAM	1	99	17.01	17.11	17.08	17.10	17.00		
20	16QAM	50	0	16.25	16.26	16.40	16.04	16.31	17	2
20	16QAM	50	24	16.25	16.26	16.27	16.21	16.24		
20	16QAM	50	50	16.11	16.29	16.24	15.91	16.02		
20	16QAM	100	0	16.03	16.15	16.13	16.24	15.94		
20	64QAM	1	0	15.88	16.19	15.98	15.84	16.11	17	2
20	64QAM	1	49	15.95	15.97	15.97	15.90	15.83		
20	64QAM	1	99	15.97	15.96	15.99	15.91	15.98		
20	64QAM	50	0	15.15	15.38	15.36	15.34	15.13	16	3
20	64QAM	50	24	14.93	15.08	15.30	14.87	15.01		
20	64QAM	50	50	15.01	15.19	15.15	15.02	15.17		
20	64QAM	100	0	15.02	15.26	15.50	15.34	15.07		
Channel				55315	55820	55990	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5		
15	QPSK	1	0	17.92	18.03	18.16	18.01	18.10	19	0
15	QPSK	1	37	17.94	17.76	17.63	17.54	17.94		
15	QPSK	1	74	17.72	17.99	17.86	17.73	17.69		
15	QPSK	36	0	16.76	17.07	17.27	16.96	17.05	18	1
15	QPSK	36	20	16.85	17.14	17.12	16.97	16.73		
15	QPSK	36	39	16.79	16.86	17.01	16.67	16.88		
15	QPSK	75	0	16.79	17.11	16.80	16.68	16.81		
15	16QAM	1	0	16.65	16.79	16.85	16.62	16.53	18	1
15	16QAM	1	37	16.40	16.74	16.64	16.90	16.55		
15	16QAM	1	74	16.80	16.99	16.86	16.88	16.93		
15	16QAM	36	0	16.04	16.11	16.18	15.76	16.19	17	2
15	16QAM	36	20	15.99	16.20	16.09	15.96	16.03		
15	16QAM	36	39	15.89	16.13	16.04	15.78	15.92		
15	16QAM	75	0	15.87	15.91	16.00	16.00	15.80		
15	64QAM	1	0	15.71	15.96	15.81	15.59	15.89	17	2
15	64QAM	1	37	15.77	15.87	15.79	15.60	15.69		
15	64QAM	1	74	15.83	15.73	15.85	15.71	15.77		
15	64QAM	36	0	14.93	15.08	15.18	15.19	14.93	16	3
15	64QAM	36	20	14.81	14.77	14.95	14.63	14.81		
15	64QAM	36	39	14.78	14.96	14.96	14.80	14.94		
15	64QAM	75	0	14.85	15.07	15.31	15.09	14.88		
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695		

10	QPSK	1	0	17.99	17.94	18.18	17.94	18.06	19	0
10	QPSK	1	25	17.89	17.82	17.67	17.56	17.99		
10	QPSK	1	49	17.71	17.95	17.84	17.73	17.67		
10	QPSK	25	0	16.77	17.04	17.26	17.00	17.07	18	1
10	QPSK	25	12	16.91	17.12	17.23	16.98	16.82		
10	QPSK	25	25	16.86	16.84	17.06	16.79	16.85		
10	QPSK	50	0	16.74	17.08	16.84	16.74	16.78		
10	16QAM	1	0	16.62	16.74	16.87	16.69	16.58	18	1
10	16QAM	1	25	16.41	16.68	16.78	16.88	16.71		
10	16QAM	1	49	16.88	16.94	16.84	17.00	16.95		
10	16QAM	25	0	15.96	16.04	16.20	15.82	16.23	17	2
10	16QAM	25	12	16.11	16.15	16.06	15.93	16.09		
10	16QAM	25	25	15.82	16.08	16.04	15.73	15.84		
10	16QAM	50	0	15.84	15.90	16.01	15.98	15.84		
10	64QAM	1	0	15.79	15.97	15.89	15.74	15.87	17	2
10	64QAM	1	25	15.79	15.79	15.71	15.67	15.69		
10	64QAM	1	49	15.88	15.71	15.90	15.74	15.82		
10	64QAM	25	0	14.93	15.13	15.16	15.11	14.94	16	3
10	64QAM	25	12	14.72	14.87	15.07	14.74	14.79		
10	64QAM	25	25	14.71	15.09	14.97	14.73	14.92		
10	64QAM	50	0	14.78	15.06	15.34	15.16	14.96		
Channel				55265	55810	55990	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5		
5	QPSK	1	0	17.94	18.00	18.26	17.99	18.10	19	0
5	QPSK	1	12	17.87	17.83	17.71	17.52	18.02		
5	QPSK	1	24	17.71	17.85	17.92	17.62	17.80		
5	QPSK	12	0	16.78	17.08	17.24	16.99	16.98	18	1
5	QPSK	12	7	16.83	17.04	17.15	17.07	16.84		
5	QPSK	12	13	16.91	16.97	17.09	16.82	16.96		
5	QPSK	25	0	16.85	17.08	16.86	16.69	16.89		
5	16QAM	1	0	16.58	16.80	16.83	16.57	16.58	18	1
5	16QAM	1	12	16.39	16.70	16.75	16.89	16.58		
5	16QAM	1	24	16.80	16.98	16.90	16.94	16.81		
5	16QAM	12	0	15.97	16.11	16.09	15.82	16.19	17	2
5	16QAM	12	7	16.02	16.17	16.01	15.95	15.97		
5	16QAM	12	13	15.89	16.04	16.07	15.80	15.95		
5	16QAM	25	0	15.95	15.95	15.91	16.03	15.76		
5	64QAM	1	0	15.79	15.93	15.77	15.63	15.81	17	2
5	64QAM	1	12	15.79	15.82	15.74	15.65	15.61		
5	64QAM	1	24	15.79	15.77	15.89	15.83	15.87		
5	64QAM	12	0	14.91	15.15	15.20	15.10	15.06	16	3
5	64QAM	12	7	14.74	14.75	14.97	14.77	14.69		
5	64QAM	12	13	14.78	15.08	14.94	14.72	14.89		
5	64QAM	25	0	14.81	14.95	15.26	15.10	14.88		

UL CA_5B

Combination 5MHz+10MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20428	20500	QPSK	1	0	0	0	22.23	24	0
		16QAM	1	0	0	0	21.01	23	1
		64QAM	1	0	0	0	20.13	22	2
20478	20550	QPSK	1	0	0	0	22.19	24	0
		16QAM	1	0	0	0	21.16	23	1
		64QAM	1	0	0	0	20.17	22	2
20528	20600	QPSK	1	0	0	0	22.15	24	0
		16QAM	1	0	0	0	21.09	23	0
		64QAM	1	0	0	0	20.22	22	1

Combination 10MHz+10MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20450	20549	QPSK	1	0	0	0	22.24	24	0
		16QAM	1	0	0	0	21.03	23	1
		64QAM	1	0	0	0	20.12	22	2
20476	20575	QPSK	1	0	0	0	22.12	24	0
		16QAM	1	0	0	0	21.01	23	1
		64QAM	1	0	0	0	20.15	22	2
20501	20600	QPSK	1	0	0	0	22.18	24	0
		16QAM	1	0	0	0	21.23	23	0
		64QAM	1	0	0	0	20.20	22	1

Combination 10MHz+5MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20450	20522	QPSK	1	0	0	0	22.14	24	0
		16QAM	1	0	0	0	20.91	23	1
		64QAM	1	0	0	0	20.03	22	2
20500	20572	QPSK	1	0	0	0	21.80	24	0
		16QAM	1	0	0	0	20.85	23	1
		64QAM	1	0	0	0	19.92	22	2
20550	20622	QPSK	1	0	0	0	21.99	24	0
		16QAM	1	0	0	0	20.93	23	0

		64QAM	1	0	0	0	19.90	22	1
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UL CA_7C

Combination 10MHz+20MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20805	20949	QPSK	1	0	0	0	22.03	24	0
		16QAM	1	0	0	0	21.56	23	1
		64QAM	1	0	0	0	20.57	22	2
21006	21150	QPSK	1	0	0	0	22.00	24	0
		16QAM	1	0	0	0	21.39	23	1
		64QAM	1	0	0	0	20.54	22	2
21206	21350	QPSK	1	0	0	0	22.12	24	0
		16QAM	1	0	0	0	21.49	23	0
		64QAM	1	0	0	0	20.61	22	1

Combination 15MHz+15MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20825	20975	QPSK	1	0	0	0	22.07	24	0
		16QAM	1	0	0	0	21.60	23	1
		64QAM	1	0	0	0	20.60	22	2
21025	21175	QPSK	1	0	0	0	22.11	24	0
		16QAM	1	0	0	0	21.54	23	1
		64QAM	1	0	0	0	20.61	22	2
21225	21375	QPSK	1	0	0	0	22.08	24	0
		16QAM	1	0	0	0	21.50	23	0
		64QAM	1	0	0	0	20.59	22	1

Combination 15MHz+20MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
21808	21979	QPSK	1	0	0	0	21.98	24	0
		16QAM	1	0	0	0	21.51	23	1
		64QAM	1	0	0	0	20.54	22	2
21003	21174	QPSK	1	0	0	0	21.99	24	0
		16QAM	1	0	0	0	21.53	23	1

		64QAM	1	0	0	0	20.52	22	2
21179	21350	QPSK	1	0	0	0	21.89	24	0
		16QAM	1	0	0	0	21.46	23	0
		64QAM	1	0	0	0	20.62	22	1
Combination 20MHz+10MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20850	20994	QPSK	1	0	0	0	22.01	24	0
		16QAM	1	0	0	0	21.46	23	1
		64QAM	1	0	0	0	20.63	22	2
18851	18995	QPSK	1	0	0	0	21.97	24	0
		16QAM	1	0	0	0	21.46	23	1
		64QAM	1	0	0	0	20.55	22	2
19001	19145	QPSK	1	0	0	0	21.94	24	0
		16QAM	1	0	0	0	21.05	23	0
		64QAM	1	0	0	0	20.63	22	1
Combination 20MHz+15MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20850	21021	QPSK	1	0	0	0	22.03	24	0
		16QAM	1	0	0	0	21.51	23	1
		64QAM	1	0	0	0	20.58	22	2
21026	21197	QPSK	1	0	0	0	22.01	24	0
		16QAM	1	0	0	0	21.53	23	1
		64QAM	1	0	0	0	20.47	22	2
21201	21372	QPSK	1	0	0	0	22.11	24	0
		16QAM	1	0	0	0	21.51	23	0
		64QAM	1	0	0	0	20.72	22	1
Combination 20MHz+20MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
20850	21048	QPSK	1	0	0	0	22.13	24	0
		16QAM	1	0	0	0	21.60	23	1
		64QAM	1	0	0	0	20.56	22	2
21001	21199	QPSK	1	0	0	0	22.03	24	0
		16QAM	1	0	0	0	21.42	23	1
		64QAM	1	0	0	0	20.49	22	2

21152	21350	QPSK	1	0	0	0	22.11	24	0
		16QAM	1	0	0	0	21.57	23	0
		64QAM	1	0	0	0	20.61	22	1

UL CA_41C

Combination 5MHz+20MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39683	39800	QPSK	1	0	0	0	22.45	24	0
		16QAM	1	0	0	0	21.54	23	1
		64QAM	1	0	0	0	20.60	22	2
40528	40645	QPSK	1	0	0	0	22.49	24	0
		16QAM	1	0	0	0	21.47	23	1
		64QAM	1	0	0	0	20.59	22	2
41373	41490	QPSK	1	0	0	0	22.51	24	0
		16QAM	1	0	0	0	21.46	23	0
		64QAM	1	0	0	0	20.49	22	1

Combination 10MHz+20MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39705	39849	QPSK	1	0	0	0	22.48	24	0
		16QAM	1	0	0	0	21.46	23	1
		64QAM	1	0	0	0	20.55	22	2
40526	40670	QPSK	1	0	0	0	22.62	24	0
		16QAM	1	0	0	0	21.55	23	1
		64QAM	1	0	0	0	20.62	22	2
41346	41490	QPSK	1	0	0	0	22.56	24	0
		16QAM	1	0	0	0	21.56	23	0
		64QAM	1	0	0	0	20.61	22	1

Combination 15MHz+15MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39725	39875	QPSK	1	0	0	0	22.49	24	0
		16QAM	1	0	0	0	21.41	23	1
		64QAM	1	0	0	0	20.63	22	2
40545	40695	QPSK	1	0	0	0	22.62	24	0
		16QAM	1	0	0	0	21.52	23	1

		64QAM	1	0	0	0	20.60	22	2
41365	41515	QPSK	1	0	0	0	22.48	24	0
		16QAM	1	0	0	0	21.42	23	0
		64QAM	1	0	0	0	20.47	22	1
Combination 15MHz+20MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39728	39899	QPSK	1	0	0	0	22.45	24	0
		16QAM	1	0	0	0	21.51	23	1
		64QAM	1	0	0	0	20.60	22	2
40523	40694	QPSK	1	0	0	0	22.50	24	0
		16QAM	1	0	0	0	21.53	23	1
		64QAM	1	0	0	0	20.65	22	2
41319	41490	QPSK	1	0	0	0	22.49	24	0
		16QAM	1	0	0	0	21.45	23	0
		64QAM	1	0	0	0	20.53	22	1
Combination 20MHz+5MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39750	39867	QPSK	1	0	0	0	22.55	24	0
		16QAM	1	0	0	0	21.43	23	1
		64QAM	1	0	0	0	20.59	22	2
40595	40712	QPSK	1	0	0	0	22.49	24	0
		16QAM	1	0	0	0	21.45	23	1
		64QAM	1	0	0	0	20.64	22	2
41440	41557	QPSK	1	0	0	0	22.53	24	0
		16QAM	1	0	0	0	21.51	23	0
		64QAM	1	0	0	0	20.46	22	1
Combination 20MHz+10MHz									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39750	39894	QPSK	1	0	0	0	22.44	24	0
		16QAM	1	0	0	0	21.47	23	1
		64QAM	1	0	0	0	20.57	22	2
40571	40715	QPSK	1	0	0	0	22.59	24	0
		16QAM	1	0	0	0	21.54	23	1
		64QAM	1	0	0	0	20.58	22	2

41391	41535	QPSK	1	0	0	0	22.52	24	0
		16QAM	1	0	0	0	21.46	23	0
		64QAM	1	0	0	0	20.47	22	1

Combination 20MHz+15MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39750	39921	QPSK	1	0	0	0	22.55	24	0
		16QAM	1	0	0	0	21.52	23	1
		64QAM	1	0	0	0	20.60	22	2
40546	40717	QPSK	1	0	0	0	22.54	24	0
		16QAM	1	0	0	0	21.43	23	1
		64QAM	1	0	0	0	20.65	22	2
41341	41512	QPSK	1	0	0	0	22.53	24	0
		16QAM	1	0	0	0	21.54	23	0
		64QAM	1	0	0	0	20.48	22	1

Combination 20MHz+20MHz

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)	MPR (dB)
			RB Size	RB offset	RB Size	RB offset			
39750	39948	QPSK	1	0	0	0	22.71	24	0
		16QAM	1	0	0	0	21.45	23	1
		64QAM	1	0	0	0	20.62	22	2
40521	40719	QPSK	1	0	0	0	22.50	24	0
		16QAM	1	0	0	0	21.55	23	1
		64QAM	1	0	0	0	20.55	22	2
41292	41490	QPSK	1	0	0	0	22.55	24	0
		16QAM	1	0	0	0	21.56	23	0
		64QAM	1	0	0	0	20.48	22	1

	Mode	Channel	Frequency (MHz)	Average Power (dBm)			SISO	MIMO
				Ant 1	Ant 2	Ant 1+2	Tune-Up Limit	Tune-Up Limit
5.2GHz WLAN	802.11a 6Mbps	36	5180	15.33	14.89	N/A	16.00	N/A
		44	5220	15.07	14.71		16.00	
		48	5240	15.47	14.91		16.00	
	802.11n-HT20 MCS0	36	5180	11.87	11.85	14.87	13.00	15.50
		44	5220	12.10	11.94	15.03	13.00	15.50
		48	5240	11.94	11.70	14.83	13.00	15.50
		38	5190	12.12	12.02	15.08	13.00	15.50

	802.11n-HT40 MCS0	46	5230	12.21	11.87	15.05	13.00	15.50
	802.11ac-VHT20 MCS0	36	5180	11.93	11.90	14.93	13.00	15.50
		44	5220	11.99	11.94	14.98	13.00	15.50
		48	5240	12.21	11.97	15.10	13.00	15.50
	802.11ac-VHT40 MCS0	38	5190	12.15	11.70	14.94	13.00	15.50
		46	5230	12.17	11.91	15.05	13.00	15.50
	802.11ac-VHT80 MCS0	42	5210	12.08	11.83	14.97	13.00	15.50
	802.11ax-HE20 MCS0	36	5180	11.87	11.63	14.76	13.00	15.50
		44	5220	12.13	11.82	14.99	13.00	15.50
		48	5240	11.90	11.80	14.86	13.00	15.50
	802.11ax-HE40 MCS0	38	5190	12.07	11.76	14.93	13.00	15.50
		46	5230	12.14	12.12	15.14	13.00	15.50
	802.11ax-HE80 MCS0	42	5210	12.07	11.90	15.00	13.00	15.50

	Mode	Channel	Frequency (MHz)	Average power (dBm)			SISO	MIMO
				Ant 1	Ant 2	Ant 1+2	Tune-Up Limit	Tune-Up Limit
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.33	14.01	N/A	16.00	N/A
		157	5785	15.39	14.34		16.00	
		165	5825	15.25	14.29		16.00	
	802.11n-HT20 MCS0	149	5745	11.43	11.25	14.35	13.00	15.50
		157	5785	11.75	11.21	14.50	13.00	15.50
		165	5825	11.74	10.89	14.35	13.00	15.50
	802.11n-HT40 MCS0	151	5755	11.71	11.15	14.45	13.00	15.50
		159	5795	11.88	11.08	14.51	13.00	15.50
	802.11ac-VHT20 MCS0	149	5745	11.76	11.00	14.41	13.00	15.50
		157	5785	11.59	11.25	14.43	13.00	15.50
		165	5825	11.71	11.35	14.54	13.00	15.50
	802.11ac-VHT40 MCS0	151	5755	12.04	10.78	14.47	13.00	15.50
		159	5795	11.97	11.27	14.64	13.00	15.50
	802.11ac-VHT80 MCS0	155	5775	11.82	11.12	14.49	13.00	15.50
	802.11ax-HE20 MCS0	149	5745	11.71	10.81	14.29	13.00	15.50
		157	5785	11.67	11.27	14.48	13.00	15.50
		165	5825	11.38	11.00	14.20	13.00	15.50
	802.11ax-HE40 MCS0	151	5755	11.66	11.03	14.37	13.00	15.50
		159	5795	11.94	11.23	14.61	13.00	15.50
	802.11ax-HE80 MCS0	155	5775	11.63	11.00	14.34	13.00	15.50

Mode	Channel	Frequency (MHz)	Average Power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	11.20	9.70	10.05
	CH 39	2441	11.31	9.72	10.21
	CH 78	2480	12.71	11.74	12.16
Tune-up Limit			13.00	13.00	13.00

Mode	Channel	Frequency (MHz)	Average Power (dBm)			
			1Mbps	2Mbps	125k	500k
LE	CH 00	2402	6.36	7.89	7.87	7.85
	CH 19	2440	7.62	8.94	8.91	8.92
	CH 39	2480	5.58	9.17	9.03	9.14
Tune-up Limit			8.00	10.00	10.00	10.00

SRD	Mode	Channel	Frequency (MHz)	Average Power (dBm)		Tune-Up Limit
	SRD 2.4G			Ant 1	Ant 2	
	SRD 2.4G	1	2412	24.76	24.26	26.00
		2	2444	24.98	24.32	26.00
		3	2470	20.01	19.66	21.00

SRD	Mode	Channel	Frequency (MHz)	Average Power (dBm)		Tune-Up Limit
	SRD 5G			Ant 1	Ant 2	
	SRD 5G	1	5731	21.89	22.64	24.00
		2	5765	22.13	22.95	24.00
		3	5782	22.09	22.89	24.00

7.2 Measurement of SAR Test Results

7.2.1. Measurement of SAR Test Data

W B2 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	RMC	9400/1880	1:1	0.186	0.03	22.96	23.50	1.132	0.211	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	RMC	9400/1880	1:1	0.986	0.01	22.96	23.50	1.132	1.117	23.5
Back side	RMC	9400/1880	1:1	0.122	0.03	22.96	23.50	1.132	0.138	23.5
Left side	RMC	9400/1880	1:1	0.023	0.01	22.96	23.50	1.132	0.026	23.5
Right side	RMC	9400/1880	1:1	0.061	-0.12	22.96	23.50	1.132	0.069	23.5
Top side	RMC	9400/1880	1:1	3.140	-0.19	22.96	23.50	1.132	3.556	23.5
Top side	RMC	9262/1852.4	1:1	2.910	0.01	22.77	23.50	1.183	3.443	23.5
Top side	RMC	9538/1907.6	1:1	2.890	-0.04	22.76	23.50	1.186	3.427	23.5
Bottom side	RMC	9400/1880	1:1	0.000	0.00	22.96	23.50	1.132	0	23.5

W B4 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	RMC	1412/1732.4	1:1	0.206	0.03	22.99	23.50	1.125	0.232	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	RMC	1412/1732.4	1:1	1.330	0.01	22.99	23.50	1.125	1.496	23.5
Back side	RMC	1412/1732.4	1:1	0.136	0.03	22.99	23.50	1.125	0.153	23.5
Left side	RMC	1412/1732.4	1:1	0.031	0.01	22.99	23.50	1.125	0.035	23.5
Right side	RMC	1412/1732.4	1:1	0.052	0.08	22.99	23.50	1.125	0.058	23.5
Top side	RMC	1412/1732.4	1:1	3.230	-0.19	22.99	23.50	1.125	3.632	23.5
Top side	RMC	1312/1712.4	1:1	2.890	-0.01	22.74	23.50	1.191	3.443	23.5
Top side	RMC	1513/1752.6	1:1	2.830	0.01	22.60	23.50	1.230	3.482	23.5
Bottom side	RMC	1412/1732.4	1:1	0.000	0.00	22.99	23.50	1.125	0	23.5

W B5 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	RMC	4182/836.4	1:1	0.076	0.01	23.17	24.00	1.211	0.092	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	RMC	4182/836.4	1:1	0.492	-0.04	23.17	24.00	1.211	0.596	23.5
Back side	RMC	4182/836.4	1:1	0.056	0.01	23.17	24.00	1.211	0.068	23.5
Left side	RMC	4182/836.4	1:1	0.019	-0.03	23.17	24.00	1.211	0.023	23.5
Right side	RMC	4182/836.4	1:1	0.078	0.01	23.17	24.00	1.211	0.094	23.5
Top side	RMC	4182/836.4	1:1	0.641	-0.18	23.17	24.00	1.211	0.776	23.5
Bottom side	RMC	4182/836.4	1:1	0.000	0.00	23.17	24.00	1.211	0	23.5

LTE 7 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	21100/2535	1:1	0.201	0.06	22.14	23.50	1.368	0.275	23.5
Back side	QPSK 50_0	21100/2535	1:1	0.145	-0.05	21.25	22.50	1.334	0.193	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	21100/2535	1:1	0.419	0.01	22.14	23.50	1.368	0.573	23.5
Front side	QPSK 50_0	21100/2535	1:1	0.270	0.02	21.25	22.50	1.334	0.36	23.5
Back side	QPSK 1_0	21100/2535	1:1	0.120	0.06	22.14	23.50	1.368	0.164	23.5
Back side	QPSK 50_0	21100/2535	1:1	0.080	-0.05	21.25	22.50	1.334	0.107	23.5
Left side	QPSK 1_0	21100/2535	1:1	0.023	-0.03	22.14	23.50	1.368	0.031	23.5
Left side	QPSK 50_0	21100/2535	1:1	0.017	0.02	21.25	22.50	1.334	0.023	23.5
Right side	QPSK 1_0	21100/2535	1:1	0.061	0.12	22.14	23.50	1.368	0.083	23.5
Right side	QPSK 50_0	21100/2535	1:1	0.054	0.03	21.25	22.50	1.334	0.072	23.5
Top side	QPSK 1_0	21100/2535	1:1	2.140	-0.03	22.14	23.50	1.368	2.927	23.5
Top side	QPSK 1_0	20850/2510	1:1	2.190	0.09	22.05	23.50	1.396	3.058	23.5
Top side	QPSK 1_0	21350/2560	1:1	2.070	0.04	21.97	23.50	1.422	2.944	23.5
Top side	QPSK 50_0	21100/2535	1:1	1.530	-0.03	21.25	22.50	1.334	2.04	23.5
Top side	QPSK 50_0	20850/2510	1:1	1.420	0.07	21.04	22.50	1.400	1.987	23.5
Top side	QPSK 50_0	21350/2560	1:1	1.370	-0.06	21.06	22.50	1.393	1.909	23.5
Top side	QPSK 100_0	21100/2535	1:1	1.310	0.02	20.99	22.50	1.416	1.855	23.5
Bottom side	QPSK 1_0	21100/2535	1:1	0.000	0.00	22.14	23.50	1.368	0	23.5
Bottom side	QPSK 50_0	21100/2535	1:1	0.000	0.00	21.25	22.50	1.334	0	23.5
UL CA_7C_20M+20M_Lmibs Test data(Separate 0mm)										
Top side	QPSK 1_0	20850+21048	1:1	1.670	0.04	22.13	23.50	1.371	2.289	23.5

LTE 12 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	23095/707.5	1:1	0.058	0.19	22.73	24.00	1.340	0.078	23.5
Back side	QPSK 25_0	23095/707.5	1:1	0.046	0.07	21.89	23.00	1.291	0.059	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	23095/707.5	1:1	0.113	-0.08	22.73	24.00	1.340	0.151	23.5
Front side	QPSK 25_0	23095/707.5	1:1	0.080	0.03	21.89	23.00	1.291	0.103	23.5
Back side	QPSK 1_0	23095/707.5	1:1	0.042	0.19	22.73	24.00	1.340	0.056	23.5
Back side	QPSK 25_0	23095/707.5	1:1	0.033	0.07	21.89	23.00	1.291	0.043	23.5
Left side	QPSK 1_0	23095/707.5	1:1	0.023	0.03	22.73	24.00	1.340	0.031	23.5
Left side	QPSK 25_0	23095/707.5	1:1	0.015	0.40	21.89	23.00	1.291	0.019	23.5
Right side	QPSK 1_0	23095/707.5	1:1	0.099	-0.13	22.73	24.00	1.340	0.132	23.5
Right side	QPSK 25_0	23095/707.5	1:1	0.062	-0.03	21.89	23.00	1.291	0.08	23.5
Top side	QPSK 1_0	23095/707.5	1:1	0.379	-0.06	22.73	24.00	1.340	0.508	23.5
Top side	QPSK 25_0	23095/707.5	1:1	0.281	-0.09	21.89	23.00	1.291	0.363	23.5
Bottom side	QPSK 1_0	23095/707.5	1:1	0.000	0.00	22.73	24.00	1.340	0	23.5
Bottom side	QPSK 25_0	23095/707.5	1:1	0.000	0.00	21.89	23.00	1.291	0	23.5

LTE 13 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	23230/782	1:1	0.067	0.02	22.89	24.00	1.291	0.087	23.5
Back side	QPSK 25_0	23230/782	1:1	0.052	0.04	22.04	23.00	1.247	0.065	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	23230/782	1:1	0.376	-0.04	22.89	24.00	1.291	0.485	23.5
Front side	QPSK 25_0	23230/782	1:1	0.308	0.03	22.04	23.00	1.247	0.384	23.5
Back side	QPSK 1_0	23230/782	1:1	0.049	0.02	22.89	24.00	1.291	0.063	23.5
Back side	QPSK 25_0	23230/782	1:1	0.038	0.04	22.04	23.00	1.247	0.047	23.5
Left side	QPSK 1_0	23230/782	1:1	0.015	0.06	22.89	24.00	1.291	0.019	23.5
Left side	QPSK 25_0	23230/782	1:1	0.012	0.12	22.04	23.00	1.247	0.015	23.5
Right side	QPSK 1_0	23230/782	1:1	0.084	0.02	22.89	24.00	1.291	0.108	23.5
Right side	QPSK 25_0	23230/782	1:1	0.061	0.02	22.04	23.00	1.247	0.076	23.5
Top side	QPSK 1_0	23230/782	1:1	1.230	-0.17	22.89	24.00	1.291	1.588	23.5
Top side	QPSK 25_0	23230/782	1:1	1.040	0.05	22.04	23.00	1.247	1.297	23.5
Bottom side	QPSK 1_0	23230/782	1:1	0.000	0.00	22.89	24.00	1.291	0	23.5
Bottom side	QPSK 25_0	23230/782	1:1	0.000	0.00	22.04	23.00	1.247	0	23.5

LTE 14 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	23330/793	1:1	0.070	0.12	22.93	24.00	1.279	0.09	23.5
Back side	QPSK 25_0	23330/793	1:1	0.058	0.03	22.05	23.00	1.245	0.072	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	23330/793	1:1	0.445	-0.06	22.93	24.00	1.279	0.569	23.5
Front side	QPSK 25_0	23330/793	1:1	0.412	0.06	22.05	23.00	1.245	0.513	23.5
Back side	QPSK 1_0	23330/793	1:1	0.052	0.12	22.93	24.00	1.279	0.066	23.5
Back side	QPSK 25_0	23330/793	1:1	0.041	0.03	22.05	23.00	1.245	0.051	23.5
Left side	QPSK 1_0	23330/793	1:1	0.015	0.03	22.93	24.00	1.279	0.019	23.5
Left side	QPSK 25_0	23330/793	1:1	0.012	0.02	22.05	23.00	1.245	0.015	23.5
Right side	QPSK 1_0	23330/793	1:1	0.091	0.06	22.93	24.00	1.279	0.107	23.5
Right side	QPSK 25_0	23330/793	1:1	0.075	0.12	22.05	23.00	1.245	0.093	23.5
Top side	QPSK 1_0	23330/793	1:1	1.270	-0.08	22.93	24.00	1.279	1.625	23.5
Top side	QPSK 25_0	23330/793	1:1	1.020	0.03	22.05	23.00	1.245	1.269	23.5
Bottom side	QPSK 1_0	23330/793	1:1	0.000	0.00	22.93	24.00	1.279	0	23.5
Bottom side	QPSK 25_0	23330/793	1:1	0.000	0.00	22.05	23.00	1.245	0	23.5

LTE 25 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	26340/1880	1:1	0.146	0.02	22.53	23.50	1.250	0.183	23.5
Back side	QPSK 50_0	26340/1880	1:1	0.123	0.03	21.38	22.50	1.294	0.159	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	26340/1880	1:1	0.792	0.01	22.53	23.50	1.250	0.99	23.5
Front side	QPSK 50_0	26340/1880	1:1	0.659	0.09	21.38	22.50	1.294	0.853	23.5
Back side	QPSK 1_0	26340/1880	1:1	0.095	0.02	22.53	23.50	1.250	0.119	23.5
Back side	QPSK 50_0	26340/1880	1:1	0.081	0.03	21.38	22.50	1.294	0.105	23.5
Left side	QPSK 1_0	26340/1880	1:1	0.031	0.03	22.53	23.50	1.250	0.039	23.5
Left side	QPSK 50_0	26340/1880	1:1	0.025	0.02	21.38	22.50	1.294	0.032	23.5
Right side	QPSK 1_0	26340/1880	1:1	0.075	-0.01	22.53	23.50	1.250	0.094	23.5
Right side	QPSK 50_0	26340/1880	1:1	0.071	0.02	21.38	22.50	1.294	0.092	23.5
Top side	QPSK 1_0	26340/1880	1:1	2.540	-0.12	22.53	23.50	1.250	3.176	23.5
Top side	QPSK 1_0	26140/1860	1:1	2.310	0.04	22.22	23.50	1.343	3.102	23.5
Top side	QPSK 1_0	26590/1905	1:1	2.280	0.06	22.27	23.50	1.327	3.026	23.5
Top side	QPSK 50_0	26340/1880	1:1	1.850	0.05	21.38	22.50	1.294	2.394	23.5
Top side	QPSK 50_0	26140/1860	1:1	1.930	0.03	21.22	22.50	1.343	2.592	23.5
Top side	QPSK 50_0	26590/1905	1:1	1.880	0.12	21.35	22.50	1.303	2.45	23.5
Top side	QPSK 100_0	26340/1880	1:1	1.890	0.01	21.39	22.50	1.291	2.44	23.5
Bottom side	QPSK 1_0	26340/1880	1:1	0.000	0.00	22.53	23.50	1.250	0	23.5
Bottom side	QPSK 50_0	26340/1880	1:1	0.000	0.00	21.38	22.50	1.294	0	23.5

LTE 26 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	26865/831.5	1:1	0.092	0.02	23.27	24.00	1.183	0.109	23.5
Back side	QPSK 36_0	26865/831.5	1:1	0.085	0.03	22.31	23.00	1.172	0.1	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	26865/831.5	1:1	0.578	-0.06	23.27	24.00	1.183	0.684	23.5
Front side	QPSK 36_0	26865/831.5	1:1	0.523	0.03	22.31	23.00	1.172	0.613	23.5
Back side	QPSK 1_0	26865/831.5	1:1	0.068	0.02	23.27	24.00	1.183	0.081	23.5
Back side	QPSK 36_0	26865/831.5	1:1	0.056	0.03	22.31	23.00	1.172	0.066	23.5
Left side	QPSK 1_0	26865/831.5	1:1	0.034	-0.12	23.27	24.00	1.183	0.04	23.5
Left side	QPSK 36_0	26865/831.5	1:1	0.030	0.06	22.31	23.00	1.172	0.035	23.5
Right side	QPSK 1_0	26865/831.5	1:1	0.085	0.04	23.27	24.00	1.183	0.101	23.5
Right side	QPSK 36_0	26865/831.5	1:1	0.078	0.12	22.31	23.00	1.172	0.091	23.5
Top side	QPSK 1_0	26865/831.5	1:1	0.681	-0.17	23.27	24.00	1.183	0.806	23.5
Top side	QPSK 36_0	26865/831.5	1:1	0.621	0.03	22.31	23.00	1.172	0.728	23.5
Bottom side	QPSK 1_0	26865/831.5	1:1	0.000	0.00	23.27	24.00	1.183	0	23.5
Bottom side	QPSK 36_0	26865/831.5	1:1	0.000	0.00	22.31	23.00	1.172	0	23.5
UL CA_5B_10M+10M_Lmibs Test data(Separate 0mm)										
Top side	QPSK 1_0	20450+20549	1:1	0.431	-0.03	22.24	24.00	1.500	0.646	23.5

LTE 41 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	40620/2593	1:1	0.15	0.08	23.24	24.00	1.191	0.179	23.5
Back side	QPSK 50_0	40620/2593	1:1	0.123	0.03	22.37	23.00	1.156	0.142	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	40620/2593	1:1	0.389	-0.02	23.24	24.00	1.191	0.463	23.5
Front side	QPSK 50_0	40620/2593	1:1	0.312	0.09	22.37	23.00	1.156	0.361	23.5
Back side	QPSK 1_0	40620/2593	1:1	0.088	0.08	23.24	24.00	1.191	0.105	23.5
Back side	QPSK 50_0	40620/2593	1:1	0.075	0.03	22.37	23.00	1.156	0.087	23.5
Left side	QPSK 1_0	40620/2593	1:1	0.033	-0.12	23.24	24.00	1.191	0.039	23.5
Left side	QPSK 50_0	40620/2593	1:1	0.027	0.06	22.37	23.00	1.156	0.031	23.5
Right side	QPSK 1_0	40620/2593	1:1	0.081	0.01	23.24	24.00	1.191	0.096	23.5
Right side	QPSK 50_0	40620/2593	1:1	0.075	0.07	22.37	23.00	1.156	0.087	23.5
Top side	QPSK 1_0	40620/2593	1:1	1.230	-0.17	23.24	24.00	1.191	1.465	23.5
Top side	QPSK 50_0	40620/2593	1:1	1.150	-0.03	22.37	23.00	1.156	1.33	23.5
Bottom side	QPSK 1_0	40620/2593	1:1	0.000	0.00	23.24	24.00	1.191	0	23.5
Bottom side	QPSK 50_0	40620/2593	1:1	0.000	0.00	22.37	23.00	1.156	0	23.5
UL CA_41C_20M+20M_Lmibs Test data(Separate 0mm)										
Top side	QPSK 1_0	20850+21048	1:1	1.010	0.03	22.71	24.00	1.346	1.359	23.5

LTE 48 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	55990/3625	1:1	0.032	0.03	23.41	24.00	1.146	0.036	23.5
Back side	QPSK 50_0	55990/3625	1:1	0.025	-0.01	22.42	23.00	1.143	0.029	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	55990/3625	1:1	0.120	0.04	23.41	24.00	1.146	0.137	23.5
Front side	QPSK 50_0	55990/3625	1:1	0.109	-0.04	22.42	23.00	1.143	0.125	23.5
Back side	QPSK 1_0	55990/3625	1:1	0.011	0.03	23.41	24.00	1.146	0.012	23.5
Back side	QPSK 50_0	55990/3625	1:1	0.009	-0.01	22.42	23.00	1.143	0.01	23.5
Left side	QPSK 1_0	55990/3625	1:1	0.000	0.00	23.41	24.00	1.146	0	23.5
Left side	QPSK 50_0	55990/3625	1:1	0.000	0.00	22.42	23.00	1.143	0	23.5
Right side	QPSK 1_0	55990/3625	1:1	0.041	-0.01	23.41	24.00	1.146	0.047	23.5
Right side	QPSK 50_0	55990/3625	1:1	0.034	0.04	22.42	23.00	1.143	0.039	23.5
Top side	QPSK 1_0	55990/3625	1:1	0.469	0.02	23.41	24.00	1.146	0.537	23.5
Top side	QPSK 50_0	55990/3625	1:1	0.345	0.04	22.42	23.00	1.143	0.394	23.5
Bottom side	QPSK 1_0	55990/3625	1:1	0.000	0.00	23.41	24.00	1.146	0	23.5
Bottom side	QPSK 50_0	55990/3625	1:1	0.000	0.00	22.42	23.00	1.143	0	23.5

LTE 66 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	132322/1745	1:1	0.184	0.11	22.63	23.50	1.222	0.225	23.5
Back side	QPSK 50_0	132322/1745	1:1	0.174	-0.04	21.51	22.50	1.256	0.219	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	132322/1745	1:1	1.210	-0.14	22.63	23.50	1.222	1.478	23.5
Front side	QPSK 50_0	132322/1745	1:1	1.080	0.03	21.51	22.50	1.256	1.357	23.5
Back side	QPSK 1_0	132322/1745	1:1	0.122	0.11	22.63	23.50	1.222	0.149	23.5
Back side	QPSK 50_0	132322/1745	1:1	0.111	-0.04	21.51	22.50	1.256	0.139	23.5
Left side	QPSK 1_0	132322/1745	1:1	0.023	-0.03	22.63	23.50	1.222	0.028	23.5
Left side	QPSK 50_0	132322/1745	1:1	0.018	0.02	21.51	22.50	1.256	0.023	23.5
Right side	QPSK 1_0	132322/1745	1:1	0.075	0.12	22.63	23.50	1.222	0.092	23.5
Right side	QPSK 50_0	132322/1745	1:1	0.066	0.07	21.51	22.50	1.256	0.083	23.5
Top side	QPSK 1_0	132322/1745	1:1	2.990	-0.05	22.63	23.50	1.222	3.653	23.5
Top side	QPSK 1_0	132072/1720	1:1	2.640	0.11	22.26	23.50	1.330	3.512	23.5
Top side	QPSK 1_0	132572/1770	1:1	2.680	-0.13	22.34	23.50	1.306	3.501	23.5
Top side	QPSK 50_0	132322/1745	1:1	2.610	-0.15	21.51	22.50	1.256	3.278	23.5
Top side	QPSK 50_0	132072/1720	1:1	2.580	0.03	21.37	22.50	1.297	3.347	23.5
Top side	QPSK 50_0	132572/1770	1:1	2.510	0.01	21.43	22.50	1.279	3.211	23.5
Top side	QPSK 100_0	132322/1745	1:1	2.480	0.09	21.43	22.50	1.279	3.173	23.5
Bottom side	QPSK 1_0	132322/1745	1:1	0.000	0.00	22.63	23.50	1.222	0	23.5
Bottom side	QPSK 50_0	132322/1745	1:1	0.000	0.00	21.51	22.50	1.256	0	23.5

LTE 71 SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	QPSK 1_0	133322/683	1:1	0.052	0.12	23.05	24.00	1.245	0.065	23.5
Back side	QPSK 50_0	133322/683	1:1	0.043	0.15	22.17	23.00	1.211	0.052	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducte d Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	QPSK 1_0	133322/683	1:1	0.101	-0.09	23.05	24.00	1.245	0.126	23.5
Front side	QPSK 50_0	133322/683	1:1	0.085	0.01	22.17	23.00	1.211	0.103	23.5
Back side	QPSK 1_0	133322/683	1:1	0.037	0.12	23.05	24.00	1.245	0.046	23.5
Back side	QPSK 50_0	133322/683	1:1	0.032	0.15	22.17	23.00	1.211	0.039	23.5
Left side	QPSK 1_0	133322/683	1:1	0.034	0.03	23.05	24.00	1.245	0.042	23.5
Left side	QPSK 50_0	133322/683	1:1	0.028	0.01	22.17	23.00	1.211	0.034	23.5
Right side	QPSK 1_0	133322/683	1:1	0.081	0.07	23.05	24.00	1.245	0.101	23.5
Right side	QPSK 50_0	133322/683	1:1	0.074	0.06	22.17	23.00	1.211	0.09	23.5
Top side	QPSK 1_0	133322/683	1:1	0.249	0.08	23.05	24.00	1.245	0.31	23.5
Top side	QPSK 50_0	133322/683	1:1	0.214	-0.03	22.17	23.00	1.211	0.259	23.5
Bottom side	QPSK 1_0	133322/683	1:1	0.000	0.00	23.05	24.00	1.245	0	23.5
Bottom side	QPSK 50_0	133322/683	1:1	0.000	0.00	22.17	23.00	1.211	0	23.5

Bluetooth SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm)										
Back side	DH5	78/2480	1:1.075	0.059	0.06	12.71	13.00	1.069	0.063	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm)										
Front side	DH5	78/2480	1:1.075	0.002	0.02	12.71	13.00	1.069	0.002	23.5
Back side	DH5	78/2480	1:1.075	0.029	0.06	12.71	13.00	1.069	0.031	23.5
Left side	DH5	78/2480	1:1.075	0.000	0.00	12.71	13.00	1.069	0	23.5
Right side	DH5	78/2480	1:1.075	0.278	0.01	12.71	13.00	1.069	0.297	23.5
Top side	DH5	78/2480	1:1.075	0.004	0.03	12.71	13.00	1.069	0.004	23.5
Bottom side	DH5	78/2480	1:1.075	0.000	0.00	12.71	13.00	1.069	0	23.5

WLAN SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm) Ant 1										
Back side	802.11a	48/5240	1:1	0.271	0.09	15.47	16.00	1.130	0.306	23.5
Body worn Test data(Separate 0mm) Ant 2										
Back side	802.11a	48/5240	1:1	0.145	0.06	14.91	16.00	1.285	0.186	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm) Ant 1										
Front side	802.11a	48/5240	1:1	0.010	0.01	15.47	16.00	1.130	0.011	23.5
Back side	802.11a	48/5240	1:1	0.104	0.09	15.47	16.00	1.130	0.117	23.5
Left side	802.11a	48/5240	1:1	0.000	0.00	15.47	16.00	1.130	0	23.5
Right side	802.11a	48/5240	1:1	0.260	0.07	15.47	16.00	1.130	0.294	23.5
Top side	802.11a	48/5240	1:1	0.013	-0.03	15.47	16.00	1.130	0.015	23.5
Bottom side	802.11a	48/5240	1:1	0.000	0.00	15.47	16.00	1.130	0	23.5
Lmibs Test data(Separate 0mm) Ant 2										
Front side	802.11a	48/5240	1:1	0.012	0.05	14.91	16.00	1.285	0.016	23.5
Back side	802.11a	48/5240	1:1	0.047	0.06	14.91	16.00	1.285	0.061	23.5
Left side	802.11a	48/5240	1:1	0.000	0.00	14.91	16.00	1.285	0	23.5
Right side	802.11a	48/5240	1:1	0.271	-0.05	14.91	16.00	1.285	0.348	23.5
Top side	802.11a	48/5240	1:1	0.000	0.00	14.91	16.00	1.285	0	23.5
Bottom side	802.11a	48/5240	1:1	0.014	0.07	14.91	16.00	1.285	0.017	23.5

WLAN SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm) Ant 1										
Back side	802.11a	157/5785	1:1	0.483	0.03	15.39	16.00	1.151	0.556	23.5
Body worn Test data(Separate 0mm) Ant 2										
Back side	802.11a	157/5785	1:1	0.317	0.01	14.34	16.00	1.466	0.465	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm) Ant 1										
Front side	802.11a	157/5785	1:1	0.041	0.02	15.39	16.00	1.151	0.048	23.5
Back side	802.11a	157/5785	1:1	0.178	0.03	15.39	16.00	1.151	0.205	23.5
Left side	802.11a	157/5785	1:1	0.000	0.00	15.39	16.00	1.151	0	23.5
Right side	802.11a	157/5785	1:1	0.697	-0.08	15.39	16.00	1.151	0.802	23.5
Top side	802.11a	157/5785	1:1	0.013	-0.01	15.39	16.00	1.151	0.015	23.5
Bottom side	802.11a	157/5785	1:1	0.000	0.00	15.39	16.00	1.151	0	23.5
Lmibs Test data(Separate 0mm) Ant 2										
Front side	802.11a	157/5785	1:1	0.011	0.03	14.34	16.00	1.466	0.016	23.5
Back side	802.11a	157/5785	1:1	0.103	0.01	14.34	16.00	1.466	0.151	23.5
Left side	802.11a	157/5785	1:1	0.000	0.00	14.34	16.00	1.466	0	23.5
Right side	802.11a	157/5785	1:1	0.545	0.19	14.34	16.00	1.466	0.799	23.5
Top side	802.11a	157/5785	1:1	0.000	0.00	14.34	16.00	1.466	0	23.5
Bottom side	802.11a	157/5785	1:1	0.052	-0.04	14.34	16.00	1.466	0.077	23.5

SRD 2.4G SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm) Ant 1										
Back side	SRD2.4G	2/2444	1:0.19	1.680	0.04	24.98	26.00	1.265	0.404	23.5
Body worn Test data(Separate 0mm) Ant 2										
Back side	SRD2.4G	2/2444	1:0.19	2.480	-0.07	24.32	26.00	1.472	0.694	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm) Ant 1										
Front side	SRD2.4G	2/2444	1:0.19	2.170	-0.02	24.98	26.00	1.265	0.521	23.5
Front side	SRD2.4G	1/2412	1:0.19	2.030	0.01	24.76	26.00	1.330	0.513	23.5
Front side	SRD2.4G	3/2470	1:0.19	0.971	0.08	20.01	21.00	1.256	0.232	23.5
Back side	SRD2.4G	2/2444	1:0.19	0.890	0.04	24.98	26.00	1.265	0.214	23.5
Left side	SRD2.4G	2/2444	1:0.19	0.312	0.01	24.98	26.00	1.265	0.075	23.5
Right side	SRD2.4G	2/2444	1:0.19	0.019	0.04	24.98	26.00	1.265	0.005	23.5
Top side	SRD2.4G	2/2444	1:0.19	4.160	0.10	24.98	26.00	1.265	1	23.5
Top side	SRD2.4G	1/2412	1:0.19	3.450	0.03	24.76	26.00	1.330	0.872	23.5
Top side	SRD2.4G	3/2470	1:0.19	1.420	0.12	20.01	21.00	1.256	0.339	23.5
Bottom side	SRD2.4G	2/2444	1:0.19	0.000	0.00	24.98	26.00	1.265	0	23.5
Lmibs Test data(Separate 0mm) Ant 2										
Front side	SRD2.4G	2/2444	1:0.19	0.119	0.03	24.32	26.00	1.472	0.033	23.5
Back side	SRD2.4G	2/2444	1:0.19	1.210	-0.07	24.32	26.00	1.472	0.338	23.5
Left side	SRD2.4G	2/2444	1:0.19	0.023	-0.02	24.32	26.00	1.472	0.006	23.5
Right side	SRD2.4G	2/2444	1:0.19	0.423	0.04	24.32	26.00	1.472	0.118	23.5
Top side	SRD2.4G	2/2444	1:0.19	4.540	0.09	24.32	26.00	1.472	1.27	23.5
Top side	SRD2.4G	1/2412	1:0.19	4.010	0.04	24.26	26.00	1.493	1.137	23.5
Top side	SRD2.4G	3/2470	1:0.19	2.190	0.07	19.66	21.00	1.361	0.566	23.5
Bottom side	SRD2.4G	2/2444	1:0.19	0.000	0.00	24.32	26.00	1.472	0	23.5

SRD 5.8G SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 1-g(W/kg)	Liquid Temp.(°C)
Body worn Test data(Separate 0mm) Ant 1										
Back side	SRD5.8G	2/5765	1:0.19	0.928	0.19	22.13	24.00	1.538	0.271	23.5
Body worn Test data(Separate 0mm) Ant 2										
Back side	SRD5.8G	2/5765	1:0.19	2.020	0.02	22.95	24.00	1.274	0.489	23.5
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power (dBm)	Tune up Limit (dBm)	Scaled factor	Scaled SAR 10-g(W/kg)	Liquid Temp.(°C)
Lmibs Test data(Separate 0mm) Ant 1										
Front side	SRD5.8G	2/5765	1:0.19	0.780	0.12	22.13	24.00	1.538	0.228	23.5
Back side	SRD5.8G	2/5765	1:0.19	0.401	0.19	22.13	24.00	1.538	0.117	23.5
Left side	SRD5.8G	2/5765	1:0.19	0.085	-0.01	22.13	24.00	1.538	0.025	23.5
Right side	SRD5.8G	2/5765	1:0.19	0.000	0.00	22.13	24.00	1.538	0	23.5
Top side	SRD5.8G	2/5765	1:0.19	2.420	0.08	22.13	24.00	1.538	0.707	23.5
Top side	SRD5.8G	1/5731	1:0.19	2.230	-0.03	21.89	24.00	1.626	0.689	23.5
Top side	SRD5.8G	3/5782	1:0.19	2.190	-0.12	22.09	24.00	1.552	0.646	23.5
Bottom side	SRD5.8G	2/5765	1:0.19	0.000	0.00	22.13	24.00	1.538	0	23.5
Lmibs Test data(Separate 0mm) Ant 2										
Front side	SRD5.8G	2/5765	1:0.19	0.472	0.05	22.95	24.00	1.274	0.114	23.5
Back side	SRD5.8G	2/5765	1:0.19	0.758	0.02	22.95	24.00	1.274	0.183	23.5
Left side	SRD5.8G	2/5765	1:0.19	0.000	0.00	22.95	24.00	1.274	0	23.5
Right side	SRD5.8G	2/5765	1:0.19	0.064	0.03	22.95	24.00	1.274	0.015	23.5
Top side	SRD5.8G	2/5765	1:0.19	3.690	0.09	22.95	24.00	1.274	0.893	23.5
Top side	SRD5.8G	1/5731	1:0.19	3.230	-0.03	22.64	24.00	1.368	0.839	23.5
Top side	SRD5.8G	3/5782	1:0.19	3.470	0.08	22.89	24.00	1.291	0.851	23.5
Bottom side	SRD5.8G	2/5765	1:0.19	0.000	0.00	22.95	24.00	1.274	0	23.5

SAR Test Note:

- Per KDB648474 D04y01r03, this device is considered a phablet since the display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm. Therefore, phablet SAR tests are required when wireless mode does not apply or if wireless router 1g SAR > 1.2W/kg.
- Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
- Considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg) * scaling factor for extended cyclic prefix.
- LTE Band 2/4/5/42/43 SAR test was covered by LTE Band 25/66/48, due to the output power level and have duplicate frequency range.
- The Wi-Fi duty cycle is 95~100%, Wi-Fi SAR scaling need further consideration and the theoretical duty cycle is 100%, therefore the actual duty cycle will be scaled up to the theoretical value of Wi-Fi reported SAR calculation.
- The Bluetooth duty cycle is 75.0%, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 100%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.
- The ratio is the difference in percentage between original and repeated measured SAR.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.
- Regarding the SRD Functionality In practical usage scenarios, the remote controller (GND) is paired with devices such as the aerial camera (AIR). The AIR and GND modules share identical hardware configurations. However, their firmware differs. Under firmware control, the system performs Time-Division Duplex (TDD) switching between transmission (Tx) and reception (Rx). The switching timing is as follows:
 - Cycle duration: 21 ms
 - AIR transmission (Tx): 15 ms
 - GND transmission (Tx): 4 ms
 - Idle interval (Rx for both): 2 ms (used for channel condition measurement)

Tx Duty Cycle Calculation:

$$\text{Tx occupancy} = (4 \text{ ms}) / (15 \text{ ms} + 4 \text{ ms} + 2 \text{ ms}) * 100 = 19.0\%$$

7.3 Multiple Transmitter Evaluation

7.3.1. Simultaneous SAR test evaluation

- Simultaneous Transmission Possibilities**

Simultaneous TX Combination	Body SAR	Limbs SAR
WWAN + Bluetooth	Y	Y
Wi-Fi 5G + Bluetooth	Y	Y
SRD 2.4G + Bluetooth	Y	Y
SRD 5.8G + Bluetooth	Y	Y

7.3.2. Simultaneous Transmission SAR Summation Scenario

Simultaneous Transmission SAR Summation Scenario for Worse case WWAN + Bluetooth:

Mode	Reported SAR		Simultaneous transmission
	1	2	1+2
Body SAR	WWAN	Bluetooth	1g SAR (W/kg)
	1g SAR (W/kg)	1g SAR (W/kg)	
	0.275	0.063	0.34
Limbs SAR	WWAN	Bluetooth	10g SAR (W/kg)
	10g SAR (W/kg)	10g SAR (W/kg)	
	3.653	0.297	3.95

Simultaneous Transmission SAR Summation Scenario for Worse case Wi-Fi 5G + Bluetooth:

Mode	Reported SAR		Simultaneous transmission
	1	2	1+2
Body SAR	WLAN	Bluetooth	1g SAR (W/kg)
	1g SAR (W/kg)	1g SAR (W/kg)	
	0.556	0.063	0.62
Limbs SAR	WLAN	Bluetooth	10g SAR (W/kg)
	10g SAR (W/kg)	10g SAR (W/kg)	
	0.802	0.297	1.57

Simultaneous Transmission SAR Summation Scenario for Worse case SRD 2.4G + Bluetooth:

Mode	Reported SAR		Simultaneous transmission
	1	2	1+2
Body SAR	WWAN	Bluetooth	1g SAR (W/kg)
	1g SAR (W/kg)	1g SAR (W/kg)	
	0.694	0.063	0.76
Limbs SAR	WWAN	Bluetooth	10g SAR (W/kg)
	10g SAR (W/kg)	10g SAR (W/kg)	
	1.270	0.297	1.57

Simultaneous Transmission SAR Summation Scenario for Worse case SRD 5.8G + Bluetooth:

Mode	Reported SAR		Simultaneous transmission
	1	2	1+2
Body SAR	WWAN	Bluetooth	1g SAR (W/kg)
	1g SAR (W/kg)	1g SAR (W/kg)	
	0.489	0.063	0.55
Limbs SAR	WWAN	Bluetooth	10g SAR (W/kg)
	10g SAR (W/kg)	10g SAR (W/kg)	
	0.893	0.297	1.19

Note :

1. The maximum SAR summation is calculated based on the same configuration and test position.
2. If 1g-SAR scalar summation < 1.6 W/kg, simultaneous SAR measurement is not necessary.
3. If 10g-SAR scalar summation < 4.0 W/kg, simultaneous SAR measurement is not necessary.

8 SAR VALIDATION DATA

Date: 4/8/2025

System Check Head 750MHz

Communication System: UID 0, CW (0); Communication System Band: D750MHz; Duty Cycle: 1:1; Frequency: 750 MHz; Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.896 \text{ S/m}$; $\epsilon_r = 41.73$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.13 W/kg

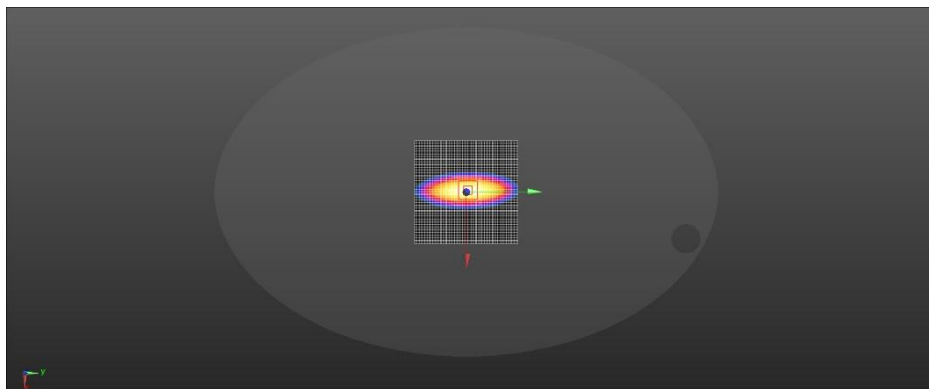
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 63.10 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.63 W/kg

SAR(1 g) = 2.27 W/kg; SAR(10 g) = 1.53 W/kg

Maximum value of SAR (measured) = 3.17 W/kg



0 dB = 3.17 W/kg = 5.01 dBW/kg

Date: 4/10/2025

System Check Head 835MHz

Communication System: UID 0, CW (0); Communication System Band: D835MHz; Duty Cycle: 1:1; Frequency: 835 MHz; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.901 \text{ S/m}$; $\epsilon_r = 41.167$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.11, 8.85, 8.95); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.67 W/kg

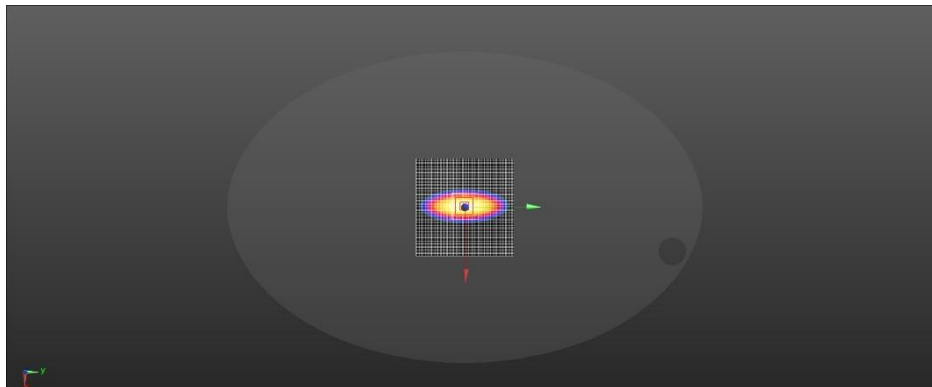
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 67.29 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 4.23 W/kg

SAR(1 g) = 2.53 W/kg; SAR(10 g) = 1.64 W/kg

Maximum value of SAR (measured) = 3.71 W/kg



$$0 \text{ dB} = 3.71 \text{ W/kg} = 5.69 \text{ dBW/kg}$$

Date: 4/12/2025

System Check Head 1800MHz

Communication System: UID 0, CW (0); Communication System Band: D1800MHz; Duty Cycle: 1:1; Frequency: 1800 MHz;
Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.374 \text{ S/m}$; $\epsilon_r = 38.035$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.72, 7.5, 7.59); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 14.4 W/kg

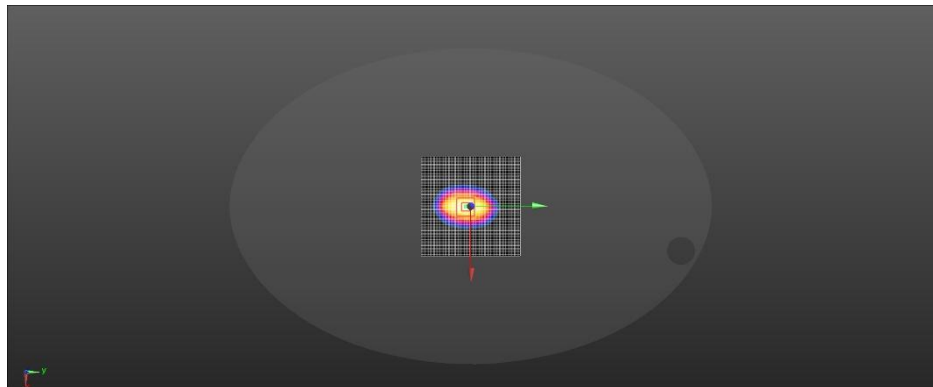
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 105.5 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 9.64 W/kg; SAR(10 g) = 5.12 W/kg

Maximum value of SAR (measured) = 14.5 W/kg



0 dB = 14.5 W/kg = 11.61 dBW/kg

Date: 6/5/2025

System Check Head 1900MHz

Communication System: UID 0, CW (0); Communication System Band: D1900MHz; Duty Cycle: 1:1; Frequency: 1900 MHz;
Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.403 \text{ S/m}$; $\epsilon_r = 39.091$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.45, 7.25, 7.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 15.4 W/kg

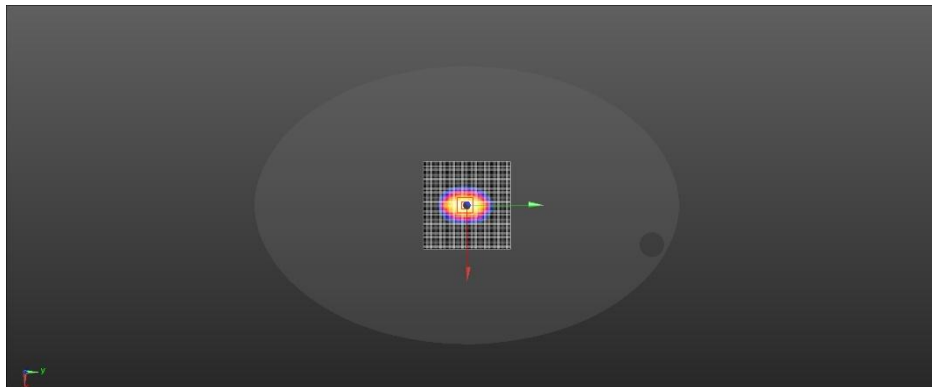
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 110.9 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.24 W/kg

Maximum value of SAR (measured) = 15.5 W/kg



0 dB = 15.5 W/kg = 11.90 dBW/kg

Date: 4/15/2025

System Check Head 2450MHz

Communication System: UID 0, CW; Communication System Band: D2450MHz; Duty Cycle: 1:1; Frequency: 2450 MHz; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.854$ S/m; $\epsilon_r = 38.441$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.03, 6.83, 6.91); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 24.4 W/kg

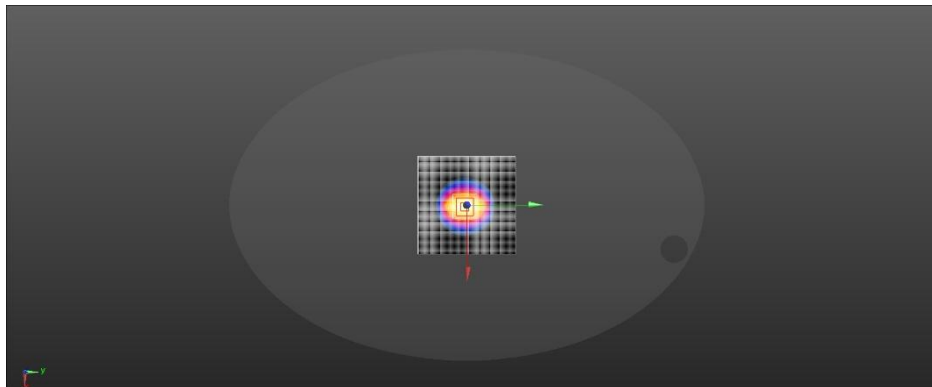
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 95.63 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 29.6 W/kg

SAR(1 g) = 12.6 W/kg; SAR(10 g) = 6.25 W/kg

Maximum value of SAR (measured) = 24.5 W/kg



0 dB = 24.5 W/kg = 13.89 dBW/kg

Date: 4/16/2025

System Check Head 2600MHz

Communication System: UID 0, CW (0); Communication System Band: D2600MHz; Duty Cycle: 1:1; Frequency: 2600 MHz;
Medium parameters used: $f = 2600$ MHz; $\sigma = 2.032$ S/m; $\epsilon_r = 37.935$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.1, 6.9, 6.98); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 28.2 W/kg

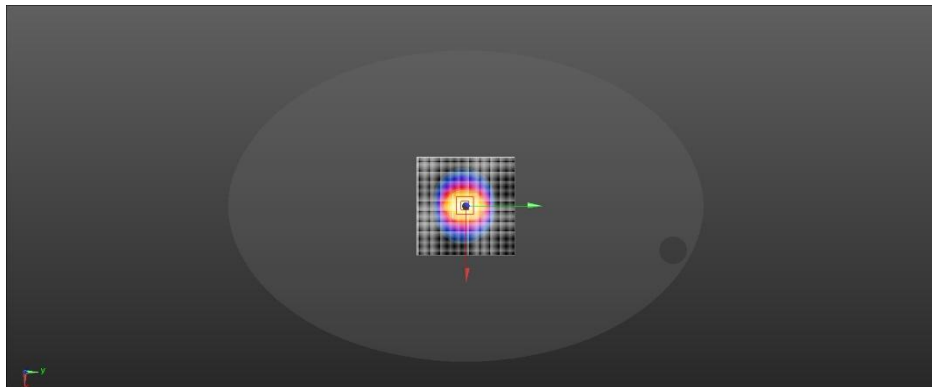
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 98.07 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 34.3 W/kg

SAR(1 g) = 12.7 W/kg; SAR(10 g) = 6.28 W/kg

Maximum value of SAR (measured) = 28.0 W/kg



$$0 \text{ dB} = 28.0 \text{ W/kg} = 14.47 \text{ dBW/kg}$$

Date: 4/18/2025

System Check Head 3500MHz

Communication System: UID 0, CW (0); Communication System Band: D3500MHz; Duty Cycle: 1:1; Frequency: 3500 MHz;
Medium parameters used: $f = 3500 \text{ MHz}$; $\sigma = 2.984 \text{ S/m}$; $\epsilon_r = 39.194$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(6.39, 6.21, 6.28); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 14.7 W/kg

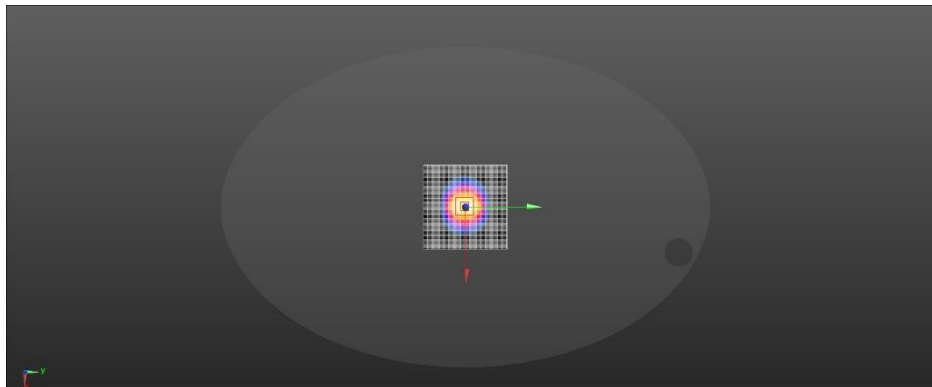
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 74.19 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 21.4 W/kg

SAR(1 g) = 7.03 W/kg; SAR(10 g) = 2.56 W/kg

Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Date: 4/19/2025

System Check Head 3700MHz

Communication System: UID 0, CW (0); Communication System Band: D3700MHz; Duty Cycle: 1:1; Frequency: 3700 MHz;
Medium parameters used: $f = 3700$ MHz; $\sigma = 3.142$ S/m; $\epsilon_r = 38.977$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(6.03, 5.86, 5.93); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 16.4 W/kg

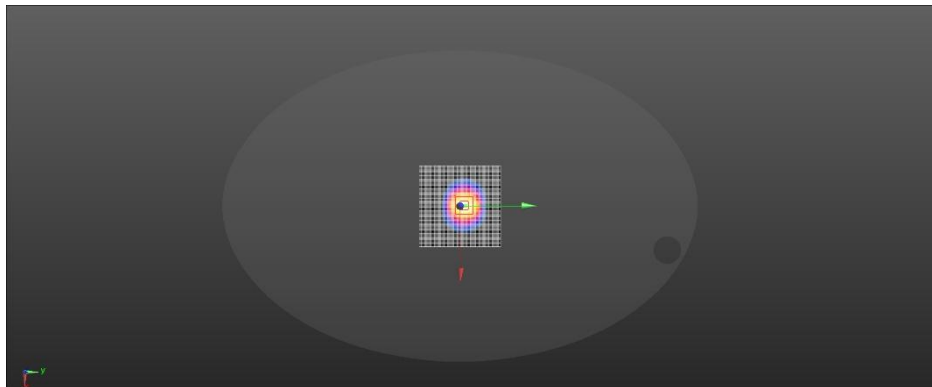
Zoom Scan (9x9x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 69.68 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 22.0 W/kg

SAR(1 g) = 7.01 W/kg; SAR(10 g) = 2.53 W/kg

Maximum value of SAR (measured) = 16.0 W/kg



$$0 \text{ dB} = 16.0 \text{ W/kg} = 12.04 \text{ dBW/kg}$$

Date: 4/20/2025

System Check Head 5250MHz

Communication System: UID 0, CW (0); Communication System Band: 5GHz; Duty Cycle: 1:1; Frequency: 5250 MHz; Medium parameters used: $f = 5250 \text{ MHz}$; $\sigma = 4.6 \text{ S/m}$; $\epsilon_r = 36.383$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.42, 5.27, 5.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/22/2024
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 23.8 W/kg

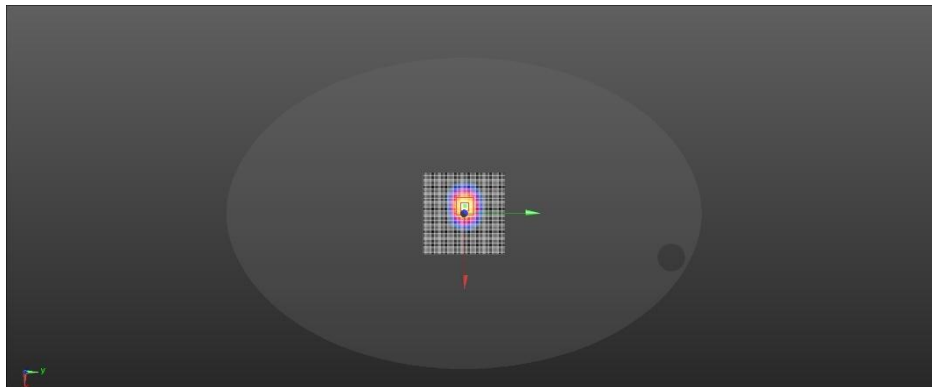
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 31.95 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 41.9 W/kg

SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 24.2 W/kg



$$0 \text{ dB} = 24.2 \text{ W/kg} = 13.84 \text{ dBW/kg}$$

Date: 4/22/2025

System Check Head 5750MHz

Communication System: UID 0, CW (0); Communication System Band: D5GHz; Duty Cycle: 1:1; Frequency: 5750 MHz; Medium parameters used: $f = 5750$ MHz; $\sigma = 5.167$ S/m; $\epsilon_r = 35.547$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.05, 4.91, 4.97); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 22.0 W/kg

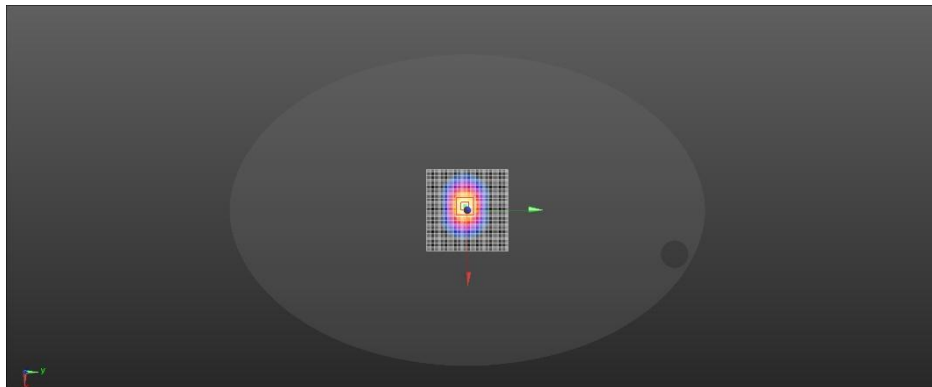
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 35.19 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 47.9 W/kg

SAR(1 g) = 7.47 W/kg; SAR(10 g) = 2.21 W/kg

Maximum value of SAR (measured) = 24.0 W/kg



0 dB = 24.0 W/kg = 13.80 dBW/kg

9 SAR TEST DATA

Date: 4/13/2025

WCDMA Band 2-RMC-Back side-CH9400-1880MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA II; Duty Cycle: 1:1; Frequency: 1880 MHz;
Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.454 \text{ S/m}$; $\epsilon_r = 37.691$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.45, 7.25, 7.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

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

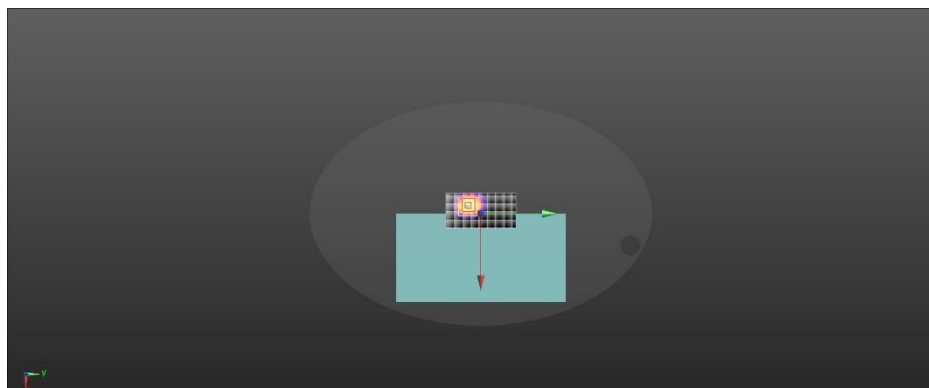
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.840 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.186 W/kg ; SAR(10 g) = 0.122 W/kg

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



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

Date: 4/13/2025

WCDMA Band2-RMC-Top side-CH9400-1880MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA II; Duty Cycle: 1:1; Frequency: 1880 MHz;
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.454$ S/m; $\epsilon_r = 37.691$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.45, 7.25, 7.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x131x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 10.5 W/kg

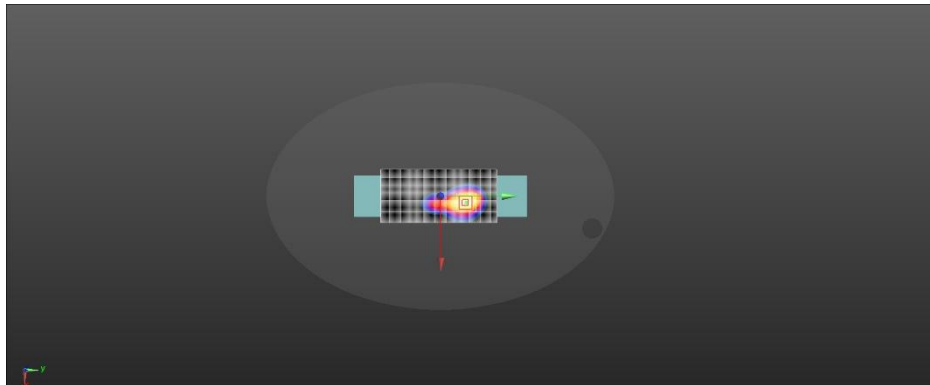
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.85 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 11.1 W/kg

SAR(1 g) = 6.17 W/kg; SAR(10 g) = 3.14 W/kg

Maximum value of SAR (measured) = 9.53 W/kg



0 dB = 9.53 W/kg = 9.79 dBW/kg

Date: 4/13/2025

WCDMA Band 4-RMC-Back side-CH1412-1732.4MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA IV; Duty Cycle: 1:1; Frequency: 1732.4 MHz;
Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.306$ S/m; $\epsilon_r = 38.334$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.72, 7.5, 7.59); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.269 W/kg

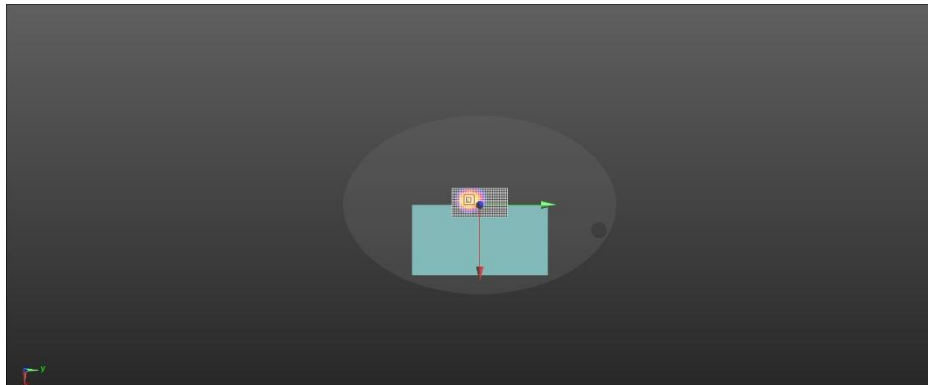
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.97 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.303 W/kg

SAR(1 g) = 0.206 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 0.270 W/kg



0 dB = 0.270 W/kg = -5.69 dBW/kg

Date: 4/13/2025

WCDMA Band4-RMC-Top side-CH1412-1732.4MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA IV; Duty Cycle: 1:1; Frequency: 1732.4 MHz;
Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.306$ S/m; $\epsilon_r = 38.334$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.72, 7.5, 7.59); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x131x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 10.5 W/kg

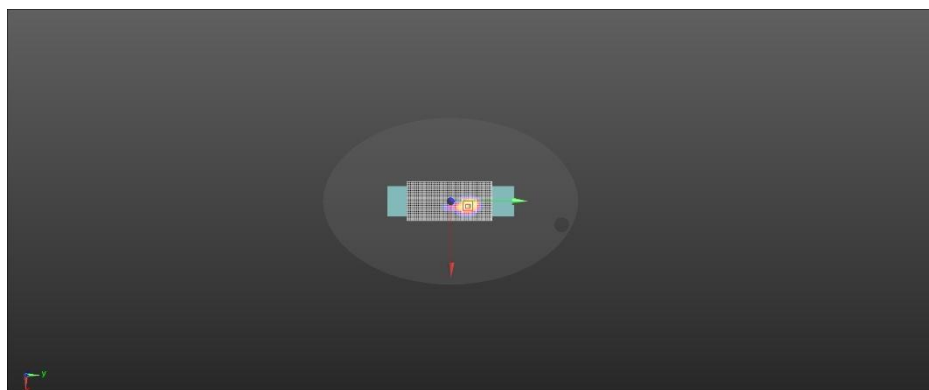
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.53 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 6.36 W/kg; SAR(10 g) = 3.23 W/kg

Maximum value of SAR (measured) = 9.48 W/kg



0 dB = 9.48 W/kg = 9.77 dBW/kg

Date: 4/13/2025

WCDMA Band 5-RMC-Back side-CH4182-836.4MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA V; Duty Cycle: 1:1; Frequency: 836.4 MHz;
Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.906$ S/m; $\epsilon_r = 41.299$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.11, 8.85, 8.95); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0919 W/kg

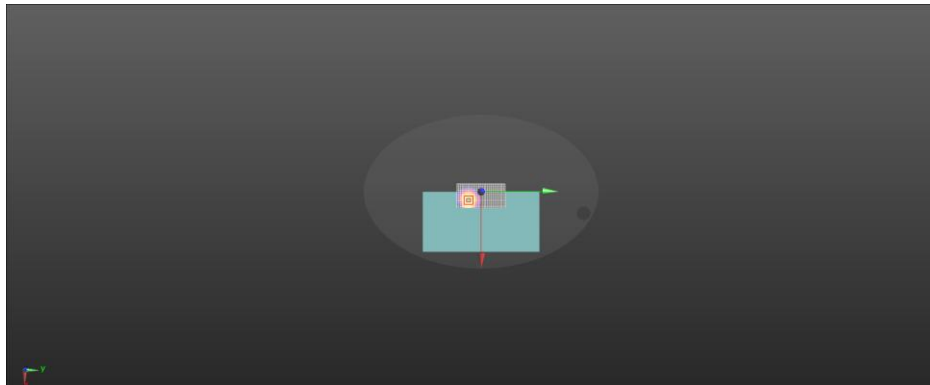
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.871 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.101 W/kg

SAR(1 g) = 0.076 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.0927 W/kg



0 dB = 0.0927 W/kg = -10.33 dBW/kg

Date: 4/13/2025

WCDMA Band5-RMC-Top side-CH4182-836.4MHz

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA V; Duty Cycle: 1:1; Frequency: 836.4 MHz;
Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.906$ S/m; $\epsilon_r = 41.299$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.11, 8.85, 8.95); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.57 W/kg

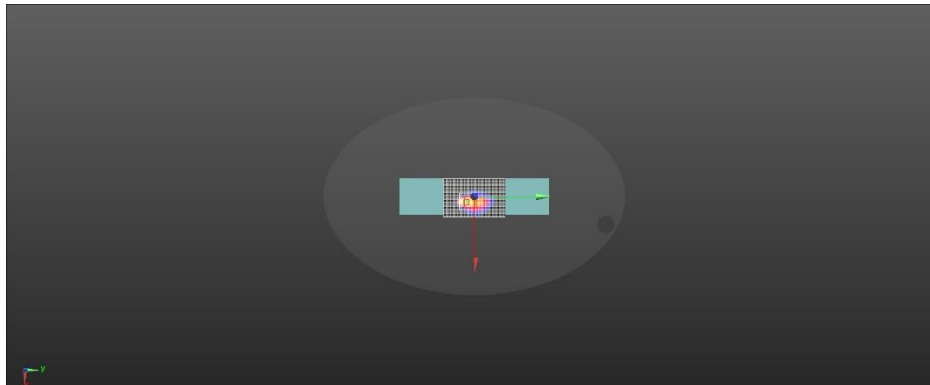
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.94 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 1.24 W/kg; SAR(10 g) = 0.641 W/kg

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



0 dB = 2.64 W/kg = 4.22 dBW/kg

Date: 4/16/2025

LTE Band 7-BW20_QPSK_1RB0Offset-Back side-CH21100-2535MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band7; Duty Cycle: 1:1; Frequency: 2535 MHz;
Medium parameters used: $f = 2535$ MHz; $\sigma = 1.955$ S/m; $\epsilon_r = 38.185$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.1, 6.9, 6.98); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x101x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.293 W/kg

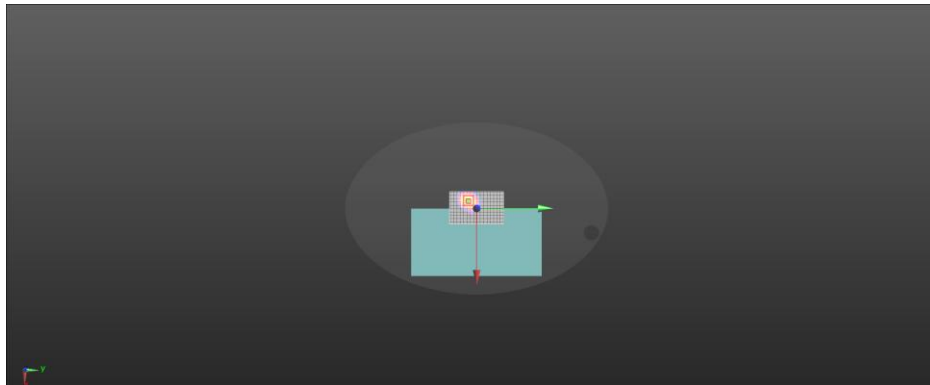
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 9.132 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.201 W/kg; SAR(10 g) = 0.120 W/kg

Maximum value of SAR (measured) = 0.294 W/kg



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

Date: 4/16/2025

LTE Band 7-BW20_QPSK_1RB0Offset-Top side-CH20850-2510MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band7; Duty Cycle: 1:1.0; Frequency: 2510 MHz;
Medium parameters used: $f = 2510$ MHz; $\sigma = 1.926$ S/m; $\epsilon_r = 38.298$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.1, 6.9, 6.98); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x161x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 8.20 W/kg

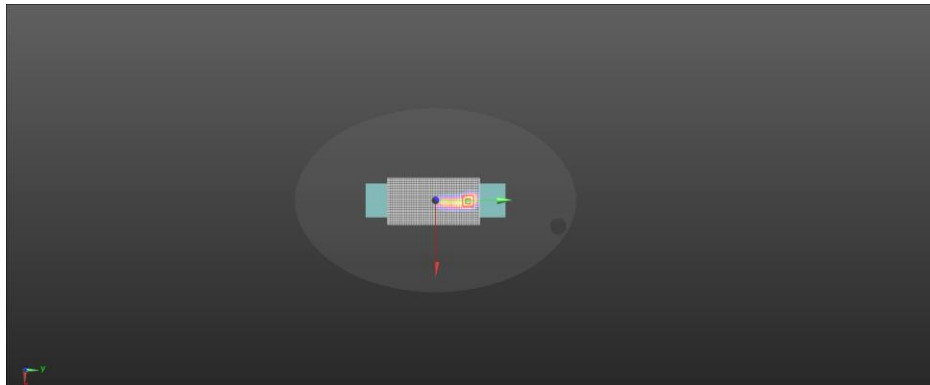
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 15.11 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 10.2 W/kg

SAR(1 g) = 4.93 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 8.19 W/kg



0 dB = 8.19 W/kg = 9.13 dBW/kg

Date: 4/8/2025

LTE Band 12-BW10_QPSK_1RB0Offset-Back side-CH23095-707.5MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band12; Duty Cycle: 1:1; Frequency: 707.5 MHz;
Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.853$ S/m; $\epsilon_r = 42.316$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.0732 W/kg

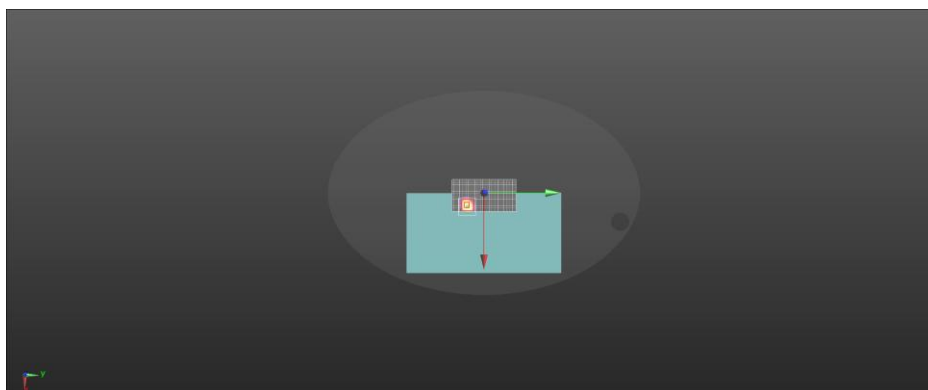
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.087 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.0780 W/kg

SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.042 W/kg

Maximum value of SAR (measured) = 0.0713 W/kg



0 dB = 0.0713 W/kg = -11.47 dBW/kg

Date: 4/8/2025

LTE Band 12-BW10_QPSK_1RB0Offset-Top side-CH23095-707.5MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band12; Duty Cycle: 1:1; Frequency: 707.5 MHz;
Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.853$ S/m; $\epsilon_r = 42.316$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.14 W/kg

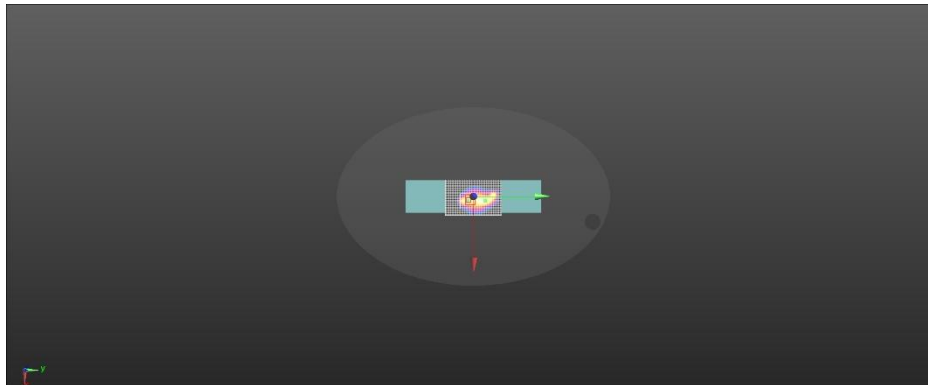
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.67 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.379 W/kg

Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 1.10 W/kg = 0.41 dBW/kg

Date: 4/8/2025

LTE Band 13-BW10_QPSK_1RB0Offset-Back side-CH23230-782MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band13; Duty Cycle: 1:1; Frequency: 782 MHz;
Medium parameters used: $f = 782$ MHz; $\sigma = 0.924$ S/m; $\epsilon_r = 41.333$; $\rho = 1000$ kg/m³; Phantom section: Flat Section; Input
Power=250mW
Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (31x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.0823 W/kg

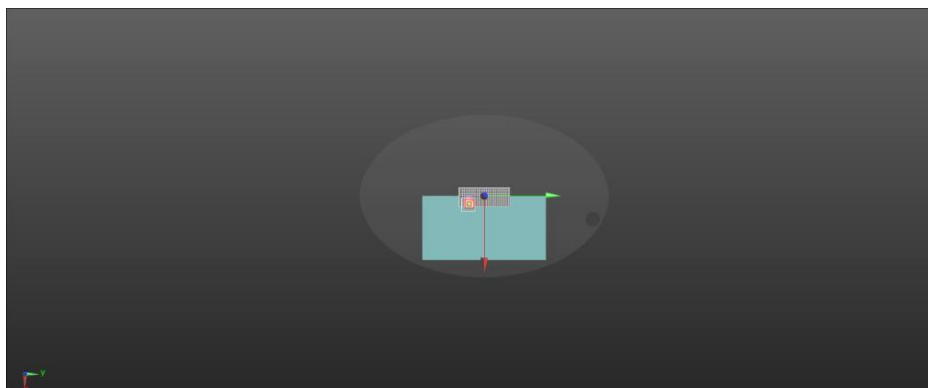
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.091 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.0890 W/kg

SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.0819 W/kg



0 dB = 0.0819 W/kg = -10.87 dBW/kg

Date: 4/8/2025

LTE Band 13-BW10_QPSK_1RB0Offset-Top side-CH23230-782MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band13; Duty Cycle: 1:1; Frequency: 782 MHz;
Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 41.333$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.44 W/kg

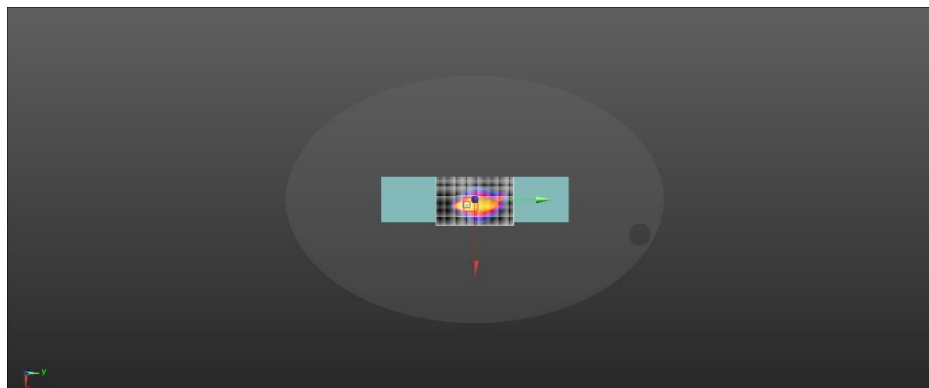
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 42.33 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 6.32 W/kg

SAR(1 g) = 2.28 W/kg; SAR(10 g) = 1.23 W/kg

Maximum value of SAR (measured) = 4.16 W/kg



0 dB = 4.16 W/kg = 6.19 dBW/kg

Date: 4/8/2025

LTE Band 14-BW10_QPSK_1RB0Offset-Back side-CH23330-793MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band14; Duty Cycle: 1:1; Frequency: 793 MHz;
Medium parameters used: $f = 793 \text{ MHz}$; $\sigma = 0.935 \text{ S/m}$; $\epsilon_r = 41.185$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (31x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0847 W/kg

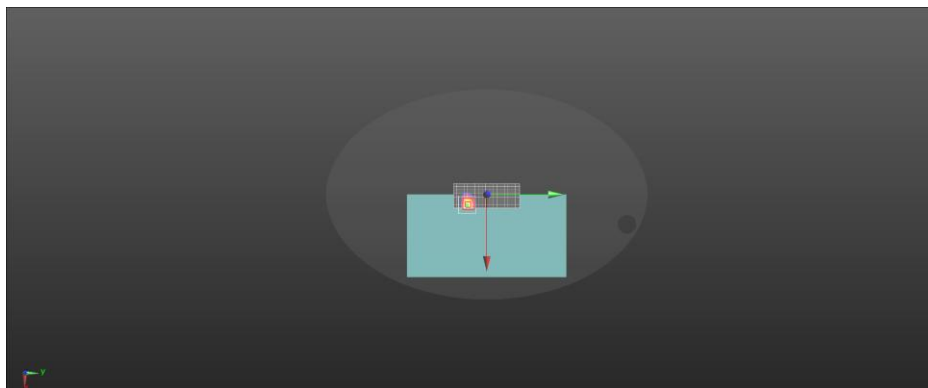
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.530 V/m ; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.0920 W/kg

SAR(1 g) = 0.070 W/kg ; SAR(10 g) = 0.052 W/kg

Maximum value of SAR (measured) = 0.0856 W/kg



0 dB = 0.0856 W/kg = -10.68 dBW/kg

Date: 4/8/2025

LTE Band 14-BW10_QPSK_1RB0Offset-Top side-CH23330-793MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band14; Duty Cycle: 1:1; Frequency: 793 MHz;
Medium parameters used: $f = 793 \text{ MHz}$; $\sigma = 0.935 \text{ S/m}$; $\epsilon_r = 41.185$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.67 W/kg

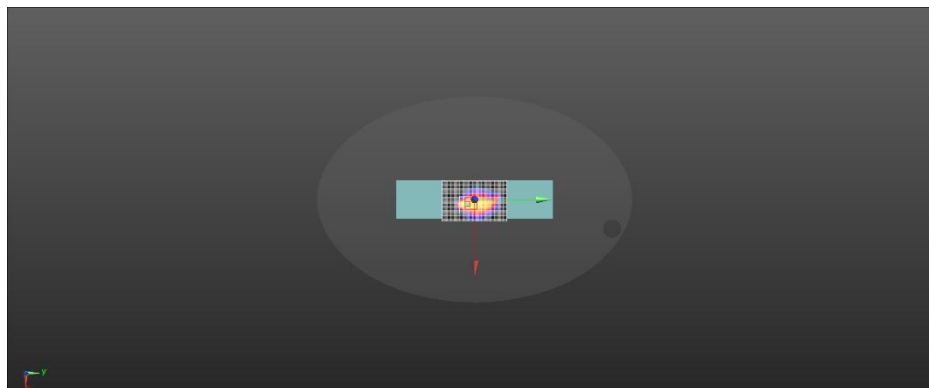
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 42.13 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 6.52 W/kg

SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.27 W/kg

Maximum value of SAR (measured) = 4.34 W/kg



0 dB = 4.34 W/kg = 6.37 dBW/kg

Date: 4/13/2025

LTE Band 25-BW20_QPSK_1RB0Offset-Back side-CH26340-1880MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band25; Duty Cycle: 1:1; Frequency: 1880 MHz;
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ S/m; $\epsilon_r = 39.195$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.45, 7.25, 7.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.194 W/kg

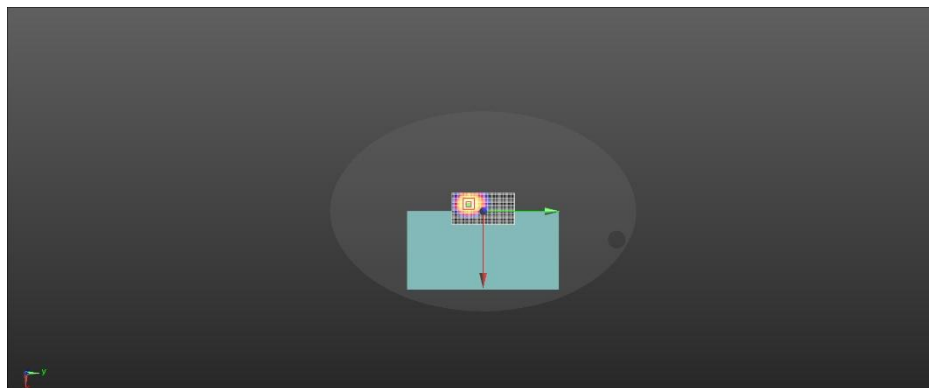
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.515 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.219 W/kg

SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.194 W/kg



0 dB = 0.194 W/kg = -7.12 dBW/kg

Date: 4/13/2025

LTE Band 25-BW20_QPSK_1RB0Offset-Top side-CH26340-1880MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band25; Duty Cycle: 1:1; Frequency: 1880 MHz;
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ S/m; $\epsilon_r = 39.195$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.45, 7.25, 7.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 8.06 W/kg

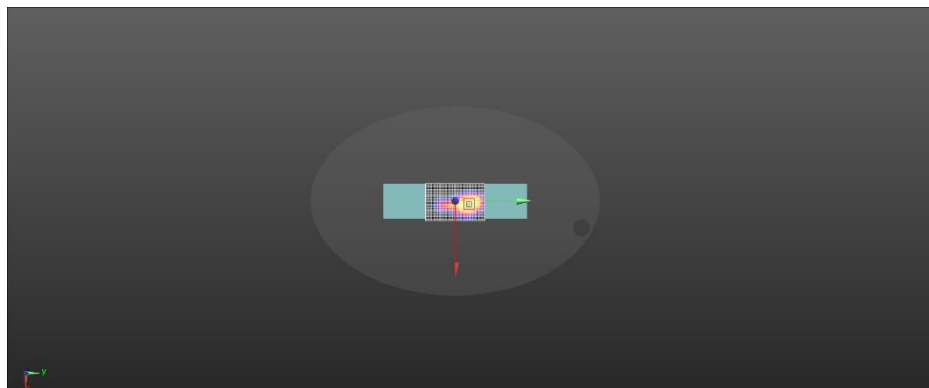
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.60 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 8.97 W/kg

SAR(1 g) = 5 W/kg; SAR(10 g) = 2.54 W/kg

Maximum value of SAR (measured) = 7.72 W/kg



0 dB = 7.72 W/kg = 8.88 dBW/kg

Date: 4/10/2025

LTE Band 26-BW15_QPSK_1RB0Offset-Back side-CH26865-831.5MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band26; Duty Cycle: 1:1; Frequency: 831.5 MHz;
Medium parameters used: $f = 831.5$ MHz; $\sigma = 0.901$ S/m; $\epsilon_r = 41.356$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.11, 8.85, 8.95); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (31x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.110 W/kg

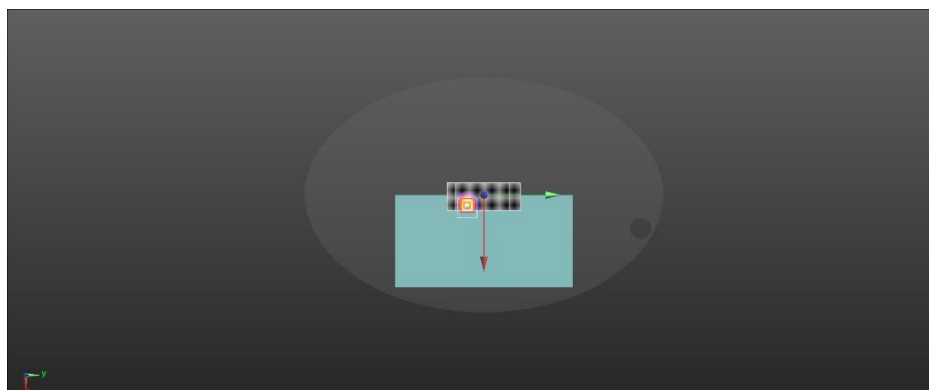
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.950 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.068 W/kg

Maximum value of SAR (measured) = 0.110 W/kg



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

Date: 4/10/2025

LTE Band 26-BW15_QPSK_1RB0Offset-Top side-CH26865-831.5MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band26; Duty Cycle: 1:1; Frequency: 831.5 MHz;
Medium parameters used: $f = 831.5$ MHz; $\sigma = 0.901$ S/m; $\epsilon_r = 41.356$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.11, 8.85, 8.95); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.57 W/kg

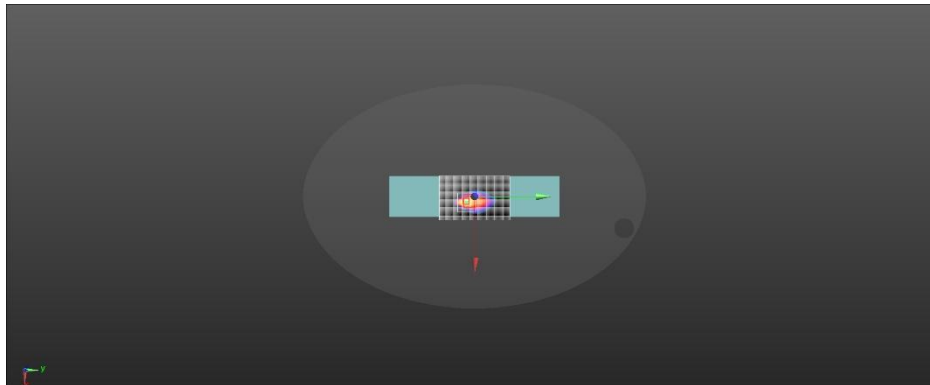
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 31.18 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.681 W/kg

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



0 dB = 2.52 W/kg = 4.01 dBW/kg

Date: 4/16/2025

LTE Band 41-BW20_QPSK_1RB0Offset-Back side-CH40620-2593MHz

Communication System: UID 0, LTE TDD (0); Communication System Band: Band 41; Duty Cycle: 1:1; Frequency: 2593 MHz;
Medium parameters used: $f = 2593 \text{ MHz}$; $\sigma = 2.024 \text{ S/m}$; $\epsilon_r = 37.963$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.1, 6.9, 6.98); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x101x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.221 W/kg

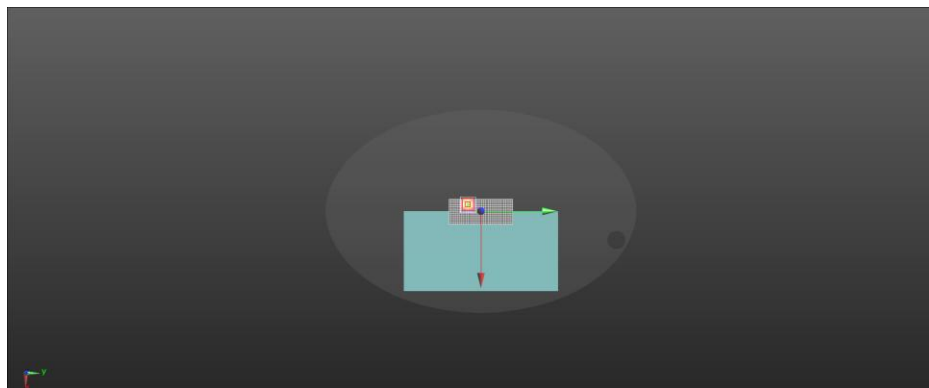
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.011 V/m ; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.260 W/kg

SAR(1 g) = 0.150 W/kg ; SAR(10 g) = 0.088 W/kg

Maximum value of SAR (measured) = 0.220 W/kg



0 dB = 0.220 W/kg = -6.58 dBW/kg

Date: 4/16/2025

LTE Band 41-BW20_QPSK_1RB0Offset-Top side-CH40620-2593MHz

Communication System: UID 0, LTE TDD (0); Communication System Band: Band 41; Duty Cycle: 1:1; Frequency: 2593 MHz;
Medium parameters used: $f = 2593$ MHz; $\sigma = 2.024$ S/m; $\epsilon_r = 37.963$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.1, 6.9, 6.98); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x101x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 4.67 W/kg

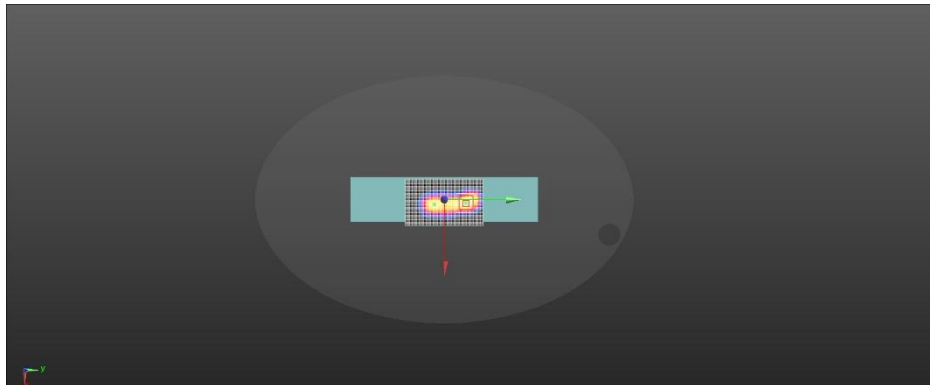
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 23.52 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 5.94 W/kg

SAR(1 g) = 2.8 W/kg; SAR(10 g) = 1.23 W/kg

Maximum value of SAR (measured) = 4.76 W/kg



0 dB = 4.76 W/kg = 6.78 dBW/kg

Date: 4/19/2025

LTE Band 48-BW20_QPSK_1RB0Offset-Back side-CH55990-3625MHz

Communication System: UID 0, LTE TDD (0); Communication System Band: Band 48; Duty Cycle: 1:1; Frequency: 3625 MHz;
Medium parameters used: $f = 3625$ MHz; $\sigma = 3.081$ S/m; $\epsilon_r = 39.06$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(6.03, 5.86, 5.93); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x121x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.147 W/kg

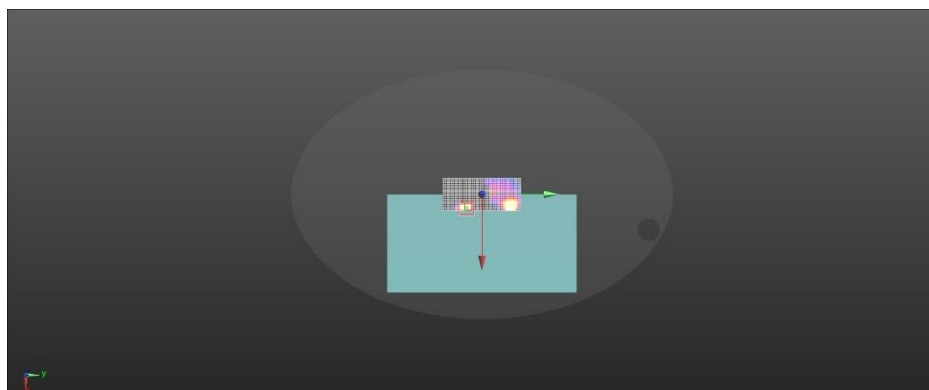
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.298 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.0840 W/kg

SAR(1 g) = 0.032 W/kg; SAR(10 g) = 0.011 W/kg

Maximum value of SAR (measured) = 0.0583 W/kg



0 dB = 0.0583 W/kg = -12.34 dBW/kg

Date: 4/19/2025

LTE Band 48-BW20_QPSK_1RB0Offset-Top side-CH55990-3625MHz

Communication System: UID 0, LTE TDD (0); Communication System Band: Band 48; Duty Cycle: 1:1; Frequency: 3625 MHz;
Medium parameters used: $f = 3625$ MHz; $\sigma = 3.081$ S/m; $\epsilon_r = 39.06$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(6.03, 5.86, 5.93); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x121x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 2.79 W/kg

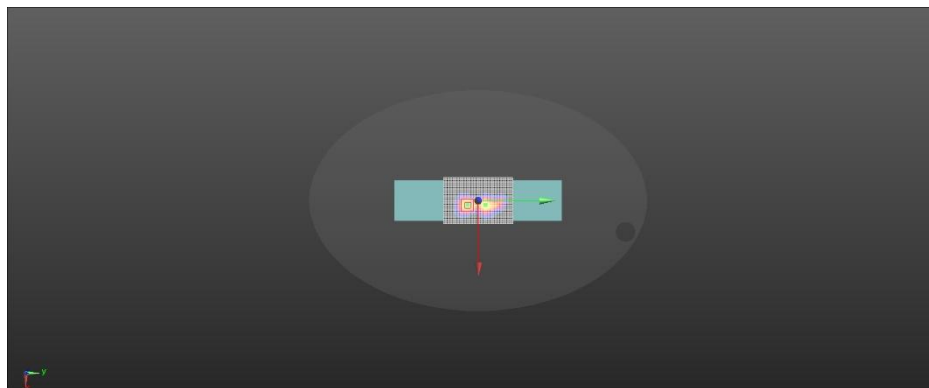
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 8.783 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 1.38 W/kg; SAR(10 g) = 0.469 W/kg

Maximum value of SAR (measured) = 2.86 W/kg



0 dB = 2.86 W/kg = 4.56 dBW/kg

Date: 4/12/2025

LTE Band 66-BW20_QPSK_1RB0Offset-Back side-CH132322-1745MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band66; Duty Cycle: 1:1; Frequency: 1745 MHz;
Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.357 \text{ S/m}$; $\epsilon_r = 39.052$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.72, 7.5, 7.59); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.240 W/kg

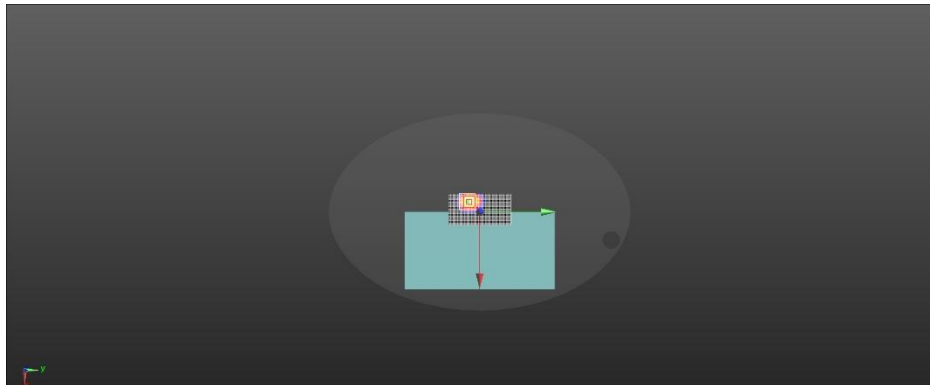
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.333 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.270 W/kg

SAR(1 g) = 0.184 W/kg ; SAR(10 g) = 0.122 W/kg

Maximum value of SAR (measured) = 0.240 W/kg



0 dB = 0.240 W/kg = -6.20 dBW/kg

Date: 4/12/2025

LTE Band 66-BW20_QPSK_1RB0Offset-Top side-CH132322-1745MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band66; Duty Cycle: 1:1; Frequency: 1745 MHz;
Medium parameters used: $f = 1745$ MHz; $\sigma = 1.32$ S/m; $\epsilon_r = 38.278$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.72, 7.5, 7.59); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 8.35 W/kg

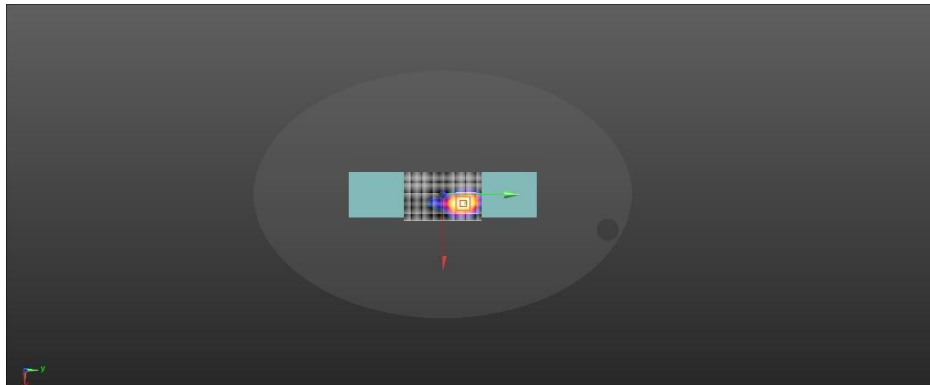
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.98 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 9.66 W/kg

SAR(1 g) = 5.65 W/kg; SAR(10 g) = 2.99 W/kg

Maximum value of SAR (measured) = 8.13 W/kg



0 dB = 8.13 W/kg = 9.10 dBW/kg

Date: 4/8/2025

LTE Band 71-BW20_QPSK_1RB0Offset-Back side-CH133322-683MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band71; Duty Cycle: 1:1; Frequency: 683 MHz;
Medium parameters used: $f = 683 \text{ MHz}$; $\sigma = 0.831 \text{ S/m}$; $\epsilon_r = 42.691$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (31x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0667 W/kg

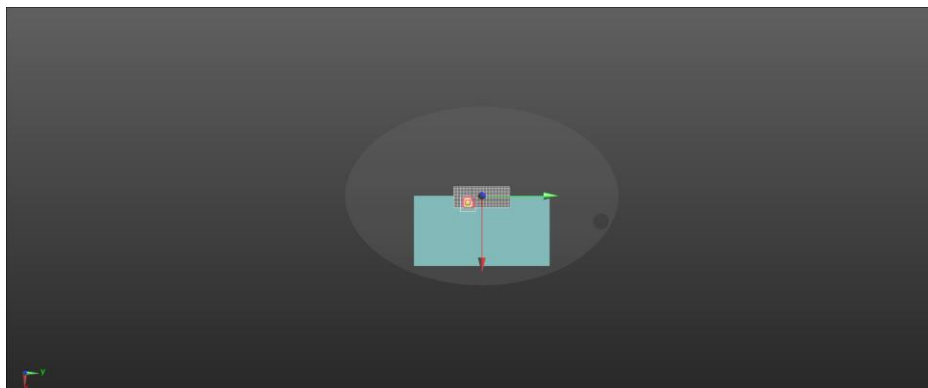
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.478 V/m ; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.0720 W/kg

SAR(1 g) = 0.052 W/kg ; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.0654 W/kg



0 dB = 0.0654 W/kg = -11.84 dBW/kg

Date: 4/8/2025

LTE Band 71-BW20_QPSK_1RB0Offset-Top side-CH133322-683MHz

Communication System: UID 0, LTE FDD (0); Communication System Band: Band71; Duty Cycle: 1:1; Frequency: 683 MHz;
Medium parameters used: $f = 683 \text{ MHz}$; $\sigma = 0.831 \text{ S/m}$; $\epsilon_r = 42.691$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(9.18, 8.93, 9.03); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (51x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.786 W/kg

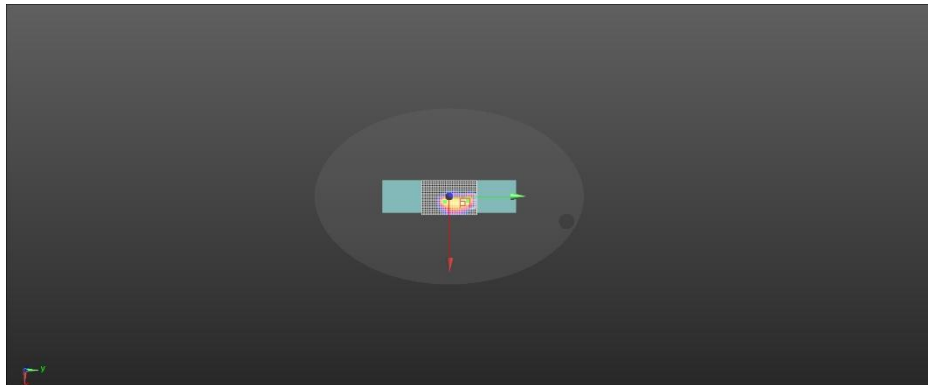
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.97 V/m ; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.496 W/kg ; SAR(10 g) = 0.249 W/kg

Maximum value of SAR (measured) = 0.796 W/kg



0 dB = 0.796 W/kg = -0.99 dBW/kg

Date: 4/15/2025

Back side-Bluetooth DH5-CH78-2480MHz

Communication System: UID 0, Bluetooth (0); Communication System Band: BDR+EDR; Duty Cycle: 1:1; Frequency: 2480 MHz;
Medium parameters used: $f = 2480$ MHz; $\sigma = 1.887$ S/m; $\epsilon_r = 38.345$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.03, 6.83, 6.91); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (131x131x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.130 W/kg

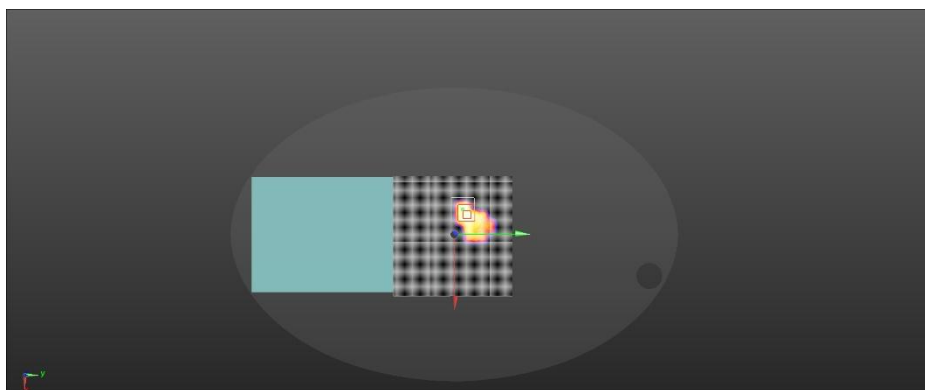
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.610 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.123 W/kg

SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.029 W/kg

Maximum value of SAR (measured) = 0.100 W/kg



0 dB = 0.100 W/kg = -10.00 dBW/kg

Date: 5/15/2025

Right Side-Bluetooth DH5-Ant1-CH78-2480MHz

Communication System: UID 0, Bluetooth (0); Communication System Band: BDR+EDR; Duty Cycle: 1:1; Frequency: 2480 MHz;
Medium parameters used: $f = 2480 \text{ MHz}$; $\sigma = 1.893 \text{ S/m}$; $\epsilon_r = 38.44$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.03, 6.83, 6.91); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x151x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.903 W/kg

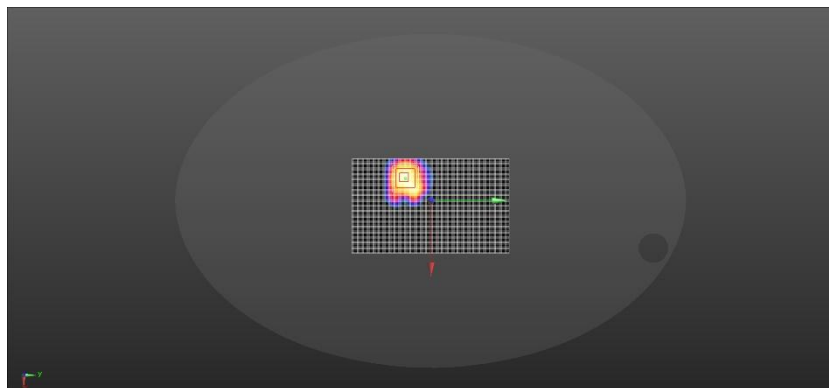
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.813 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.584 W/kg ; SAR(10 g) = 0.278 W/kg

Maximum value of SAR (measured) = 0.890 W/kg



0 dB = 0.890 W/kg = -0.51 dBW/kg

Date: 4/20/2025

Back side-WiFi 5G 802.11a-Ant1-CH48-5240MHz

Communication System: UID 0, WIFI 5G (0); Communication System Band: 802.11a(20M); Duty Cycle: 1:1; Frequency: 5240 MHz;
Medium parameters used: $f = 5240$ MHz; $\sigma = 4.585$ S/m; $\epsilon_r = 36.401$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.42, 5.27, 5.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (161x101x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.652 W/kg

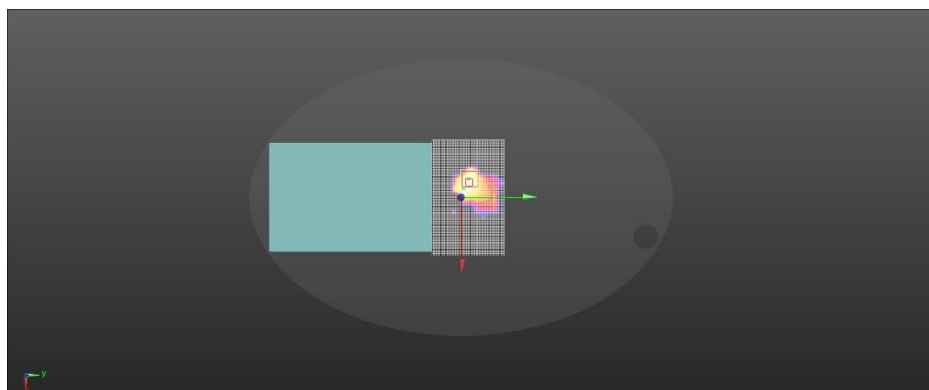
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 4.810 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.964 W/kg

SAR(1 g) = 0.271 W/kg; SAR(10 g) = 0.104 W/kg

Maximum value of SAR (measured) = 0.586 W/kg



0 dB = 0.586 W/kg = -2.32 dBW/kg

Date: 4/20/2025

Right Side-WiFi 5G 802.11a-Ant2-CH48-5240MHz

Communication System: UID 0, WIFI 5G (0); Communication System Band: 802.11a(20M); Duty Cycle: 1:1; Frequency: 5240 MHz;
Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 4.585 \text{ S/m}$; $\epsilon_r = 36.401$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.42, 5.27, 5.33); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/22/2024
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x141x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 2.17 W/kg

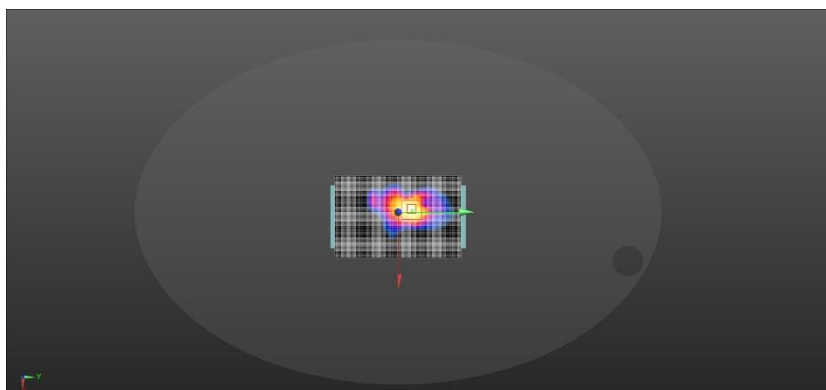
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 9.456 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.76 W/kg

SAR(1 g) = 0.899 W/kg; SAR(10 g) = 0.271 W/kg

Maximum value of SAR (measured) = 2.17 W/kg



0 dB = 2.17 W/kg = 3.36 dBW/kg

Date: 4/22/2025

Back side-WiFi 5G 802.11a-Ant1-CH157-5785MHz

Communication System: UID 0, WIFI 5G (0); Communication System Band: 802.11a(20M); Duty Cycle: 1:1; Frequency: 5785 MHz;
Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.204 \text{ S/m}$; $\epsilon_r = 35.532$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.05, 4.91, 4.97); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (161x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.45 W/kg

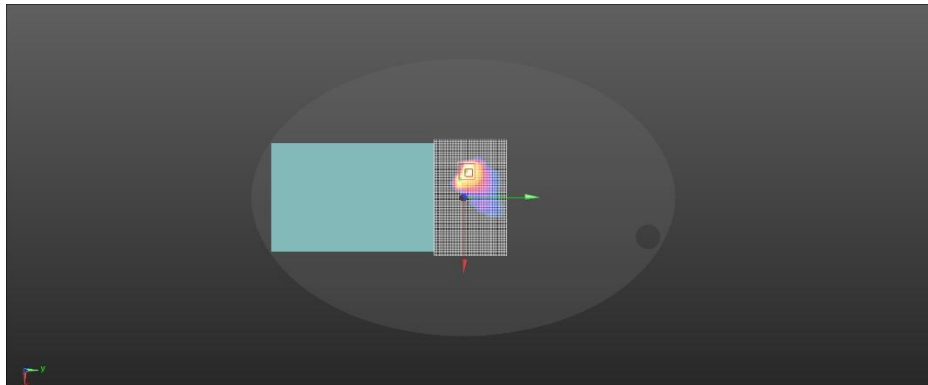
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.747 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.04 W/kg

SAR(1 g) = 0.483 W/kg; SAR(10 g) = 0.178 W/kg

Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

Date: 4/22/2025

Right Side-WiFi 5G 802.11a-Ant1-CH157-5785MHz

Communication System: UID 0, WIFI 5G (0); Communication System Band: 802.11a(20M); Duty Cycle: 1:1; Frequency: 5785 MHz;
Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.204 \text{ S/m}$; $\epsilon_r = 35.532$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.05, 4.91, 4.97); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 6.67 W/kg

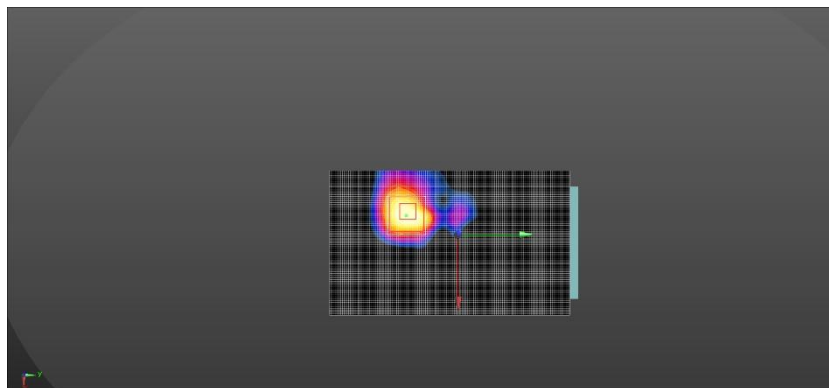
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 6.991 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 2.25 W/kg; SAR(10 g) = 0.697 W/kg

Maximum value of SAR (measured) = 5.41 W/kg



0 dB = 5.41 W/kg = 7.33 dBW/kg

Date: 5/15/2025

SRD2.4G-Back side-Ant2-CH2-2444MHz

Communication System: UID 0, SRD2.4G (0); Communication System Band: 1; Duty Cycle: 1:1; Frequency: 2444 MHz; Medium parameters used: $f = 2444$ MHz; $\sigma = 1.851$ S/m; $\epsilon_r = 38.543$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.03, 6.83, 6.91); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x251x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 4.40 W/kg

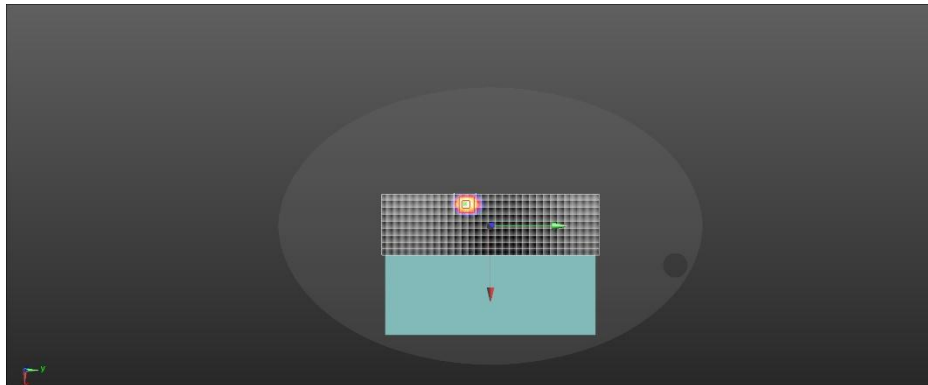
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 7.495 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 5.04 W/kg

SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.25 W/kg

Maximum value of SAR (measured) = 4.18 W/kg



0 dB = 4.18 W/kg = 6.21 dBW/kg

Date: 4/15/2025

SRD2.4G-Top side-Ant2-CH2-2444MHz

Communication System: UID 0, SRD2.4G (0); Communication System Band: 1; Duty Cycle: 1:1; Frequency: 2444 MHz; Medium parameters used: $f = 2444$ MHz; $\sigma = 1.845$ S/m; $\epsilon_r = 38.465$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(7.03, 6.83, 6.91); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x251x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 20.6 W/kg

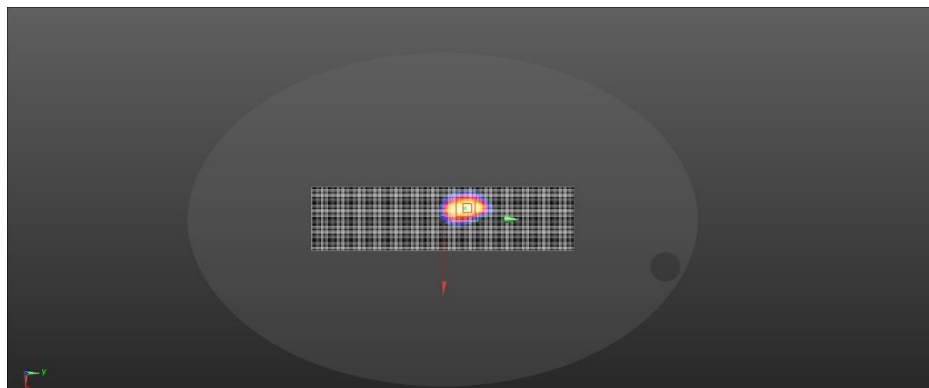
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 19.60 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 25.2 W/kg

SAR(1 g) = 10.8 W/kg; SAR(10 g) = 4.54 W/kg

Maximum value of SAR (measured) = 19.4 W/kg



0 dB = 19.4 W/kg = 12.88 dBW/kg

Date: 4/22/2025

SRD5G-Back side-Ant2-CH2-5765MHz

Communication System: UID 0, SRD5G (0); Communication System Band: 1; Duty Cycle: 1:1; Frequency: 5765 MHz; Medium parameters used: $f = 5765 \text{ MHz}$; $\sigma = 5.192 \text{ S/m}$; $\epsilon_r = 35.532$; $\rho = 1000 \text{ kg/m}^3$

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.05, 4.91, 4.97); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x301x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 4.83 W/kg

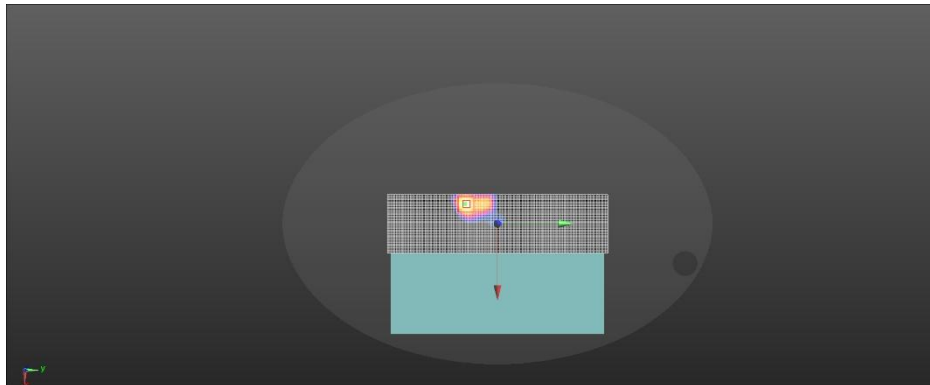
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 9.152 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 8.87 W/kg

SAR(1 g) = 2.02 W/kg; SAR(10 g) = 0.758 W/kg

Maximum value of SAR (measured) = 4.75 W/kg



0 dB = 4.75 W/kg = 6.77 dBW/kg

Date: 4/22/2025

SRD5G-Top side-Ant2-CH2-5765MHz

Communication System: UID 0, SRD5G (0); Communication System Band: 1; Duty Cycle: 1:1; Frequency: 5765 MHz; Medium parameters used: $f = 5765$ MHz; $\sigma = 5.192$ S/m; $\epsilon_r = 35.532$; $\rho = 1000$ kg/m³

Ambient temperature (°C): 23.5, Liquid temperature (°C): 22.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7761; ConvF(5.05, 4.91, 4.97); Calibrated: 9/19/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1220; Calibrated: 3/14/2025
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x301x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 44.4 W/kg

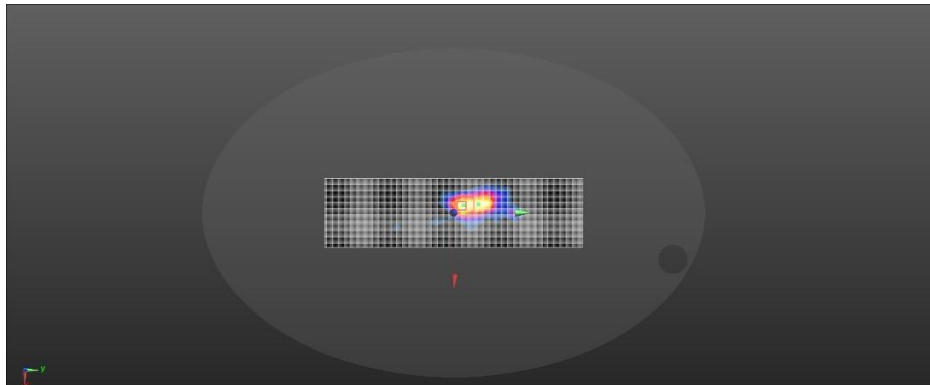
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 14.47 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 87.8 W/kg

SAR(1 g) = 14.5 W/kg; SAR(10 g) = 3.69 W/kg

Maximum value of SAR (measured) = 42.0 W/kg



0 dB = 42.0 W/kg = 16.23 dBW/kg

10 CALIBRATION CERTIFICATE

Note: The detailed calibration certificate can refer to Appendix.

11 TEST SETUP PHOTO

Note: The test setup photo please see appendix.

_____ The End _____