TEST REPORT

Applicant Name :	Franklin Technology Inc.
Address :	906 JEI Platz, 186, Gasan digital 1-ro, Gumcheon-Gu Seoul, South Korea
Report Number :	RA221101-50847E-SA
FCC ID:	XHG-RG2102

Test Standard (s)
FCC Part 2.1093

Sample Description

Product Type:	Mobile Hotspot
Model No.:	RG2102
Multiple Models:	N/A
Trade Mark:	N/A
Date Received:	2022/11/03
Date of Test:	2022/12/26~2022/12/29, 2023/01/30
Report Date:	2023/01/31

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Lance Li
EMC Engineer

Approved By:

Candy Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".
Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

Attestation of Test Results			
MODE		**Max. SAR Level(s) Reported(W/kg)**	**Limit (W/kg)**
WCDMA Band 2	1g Body SAR	0.98	1.6
WCDMA Band 5	1g Body SAR	0.78	
LTE Band 2	1g Body SAR	0.79	
LTE Band 5	1g Body SAR	0.62	
LTE Band 7	1g Body SAR	0.70	
LTE Band 12	1g Body SAR	0.69	
LTE Band 14	1g Body SAR	0.84	
LTE Band 30	1g Body SAR	**1.03**	
LTE Band 48	1g Body SAR	0.12	
LTE Band 66&4	1g Body SAR	0.79	
5G FR1 n2	1g Body SAR	0.73	
5G FR1 n5	1g Body SAR	0.54	
5G FR1 n66	1g Body SAR	0.76	
5G FR1 n77	1g Body SAR	0.23	
2.4G Wi-Fi	1g Body SAR	0.32	
5.2G Wi-Fi	1g Body SAR	0.27	
5.8G Wi-Fi	1g Body SAR	0.48	
Simultaneous	1g Body SAR	**1.59**	
	1g Body SAR	**1.59 (Hotspot)**	
Applicable Standards	**FCC 47 CFR part 2.1093** Radiofrequency radiation exposure evaluation: portable devices		
	RF Exposure Procedures: TCB Workshop April 2015(Overlapping LTE Bands)		
	IEEE1528:2013 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques		
	IEC 62209-1:2016 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 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz)		
	KDB procedures KDB 447498 D04 Interim General RF Exposure Guidance v01 KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 KDB 865664 D02 RF Exposure Reporting v01r02 KDB 941225 D01 3G SAR Procedures v03r01 KDB 941225 D05 SAR for LTE Devices v02r05 KDB 941225 D06 Hotspot Mode v02r01 KDB 248227 D01 802.11 Wi-Fi SAR v02r02		
Note: This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in **FCC 47 CFR part 2.1093** and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures. **The results and statements contained in this report pertain only to the device(s) evaluated.**			

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA221101-50847E-SA	Original Report	2023/01/03
1	RA221101-50847E-SA	Updated the EN-DC mode SAR test	2023/01/31

EUT DESCRIPTION

This report has been prepared on behalf of ***Franklin Technology Inc..*** and their product ***Mobile Hotspot***, Model: ***RG2102***, FCC ID: ***XHG-RG2102*** or the EUT (Equipment under Test) as referred to in the rest of this report.

Technical Specification

Device Type:	Portable
Device Size:	Overall: 162mm x 75mm x 9mm Overall Diagonal: 172mm
Exposure Category:	Population / Uncontrolled
Antenna Type(s):	Internal Antenna
DTM Type:	Class B
Body-Worn Accessories:	None
Face-Head Accessories:	None
Proximity Sensor:	None
Carrier Aggregation:	None
EN-DC Combinations:	2A-n5A;5A-n66A; 5A-n2A; 2A-n66A;66A-n2A
Operation Mode :	WCDMA(RMC, HSDPA/HSUPA/ HSPA+), FDD-LTE, TDD-LTE, SA, NSA and Wi-Fi
Frequency Band:	WCDMA Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) WCDMA Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) LTE Band 4: 1710-1755 MHz(TX) ; 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 7: 2500-2570 MHz(TX); 2620-2690 MHz(RX) LTE Band 12: 699-716 MHz(TX); 729-746 MHz(RX) LTE Band 14: 788-798MHz(TX); 758-768MHz(RX) LTE Band 30: 2305-2315MHz(TX); 2350-2360MHz(RX) LTE Band 48: 3550-3700MHz (TX/RX) LTE Band 66: 1710-1780 MHz(TX); 2110-2180 MHz(RX) 5G NR n2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) 5G NR n5: 824-849 MHz(TX); 869-894 MHz(RX) 5G NR n66: 1710-1780 MHz(TX); 2110-2180 MHz(RX) 5G NR n77: 3450-3550MHz&3700-3980MHz(TX/RX) Wi-Fi 2.4G: 2412 -2462 MHz(TX&RX) Wi-Fi 5.2G: 5150 -5250 MHz(TX&RX) Wi-Fi 5.8G: 5725 -5850 MHz(TX&RX)
Power Source:	Rechargeable Battery
Normal Operation:	Body-worn

Note:
1. This device supports 5GNR FR1 bands, including NSA mode and SA mode.
2. SAR test for NR bands and LTE anchor Bands were performed separately due to limitations in SAR probe calibration factors. And, due to test setup limitations, SAR testing for NR was performed using test mode software to establish the connection.
3. For 5G NR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
4. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-S-OFDM power table and chose DFT-s-OFDM to perform SAR testing.

REFERENCE, STANDARDS, AND GUIDELINES

FCC:

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1-1992 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 “Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under “worst-case” conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

SAR Limits

FCC Limit (1g Tissue)

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	**1.6**	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2 W/kg (CE) applied to the EUT.

FACILITIES

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358,the FCC Designation No.: CN1189.
Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01 .

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

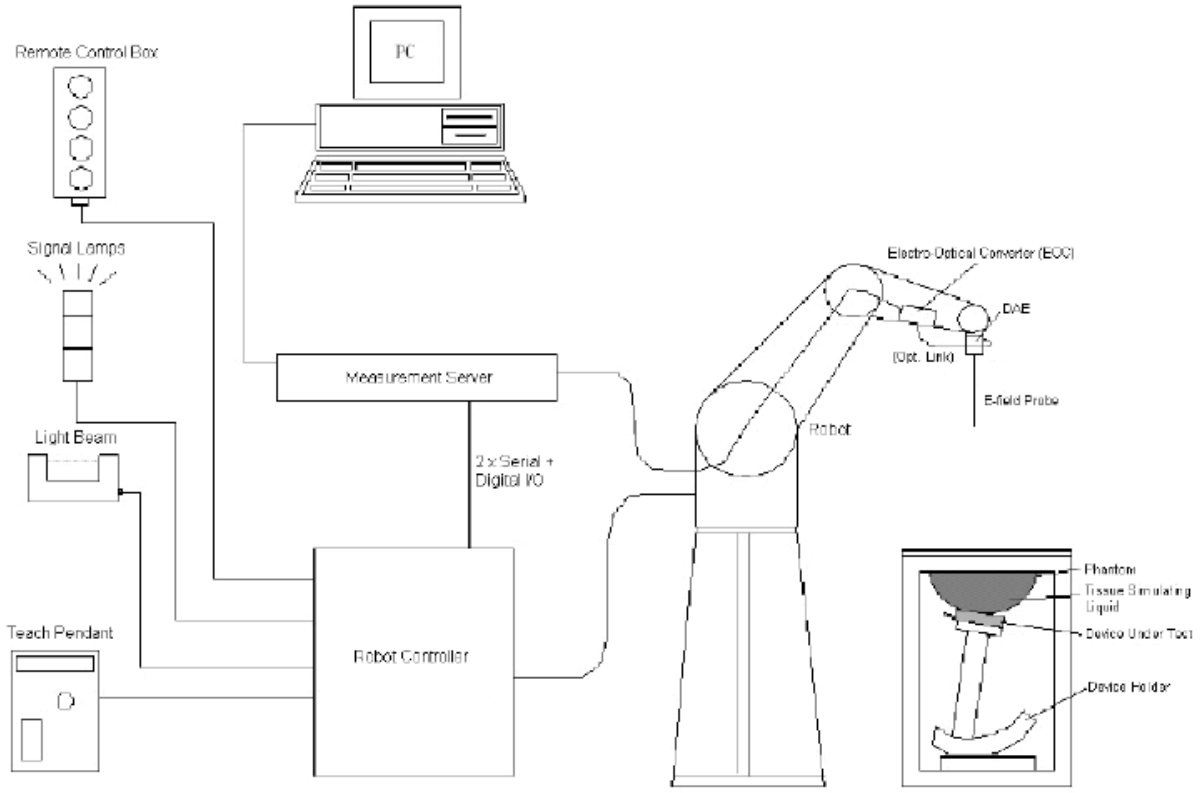
The test site has been registered with ISED Canada under ISED Canada Registration Number CN0016.

DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:

DASY5 System Description

The DASY5 system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY5 Measurement Server

The DASY5 measurement server is based on a PC/104 CPU board with a 400 MHz Intel ULV Celeron, 128 MB chip-disk and 128 MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) 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.

The measurement server performs all real-time data evaluations of field measurements and surface detection, controls robot movements, and handles safety operations. The PC operating system cannot interfere with these time-critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program- controlled robot movements. Furthermore, the measurement server is equipped with an expansion port, which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Connection of devices from any other supplier could seriously damage the measurement server.

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist 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 with a 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 mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

EX3DV4 E-Field Probes

Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 μW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

SAM Twin Phantom

The SAM Twin Phantom (shown in front of DASY5) is a fiberglass shell phantom with shell thickness 2 mm, except in the ear region where the thickness is increased to 6 mm..

When the phantom is mounted inside allocated slot of the DASY5 platform, phantom reference points can be taught directly in the DASY5 V5.2 software. When the DASY5 platform is used to mount the

Phantom, some of the phantom teaching points cannot be reached by the robot in DASY5 V5.2. A special tool called P1a-P2aX-Former is provided to transform two of the three points, P1 and P2, to reachable locations. To use these new teaching points, a revised phantom configuration file is required.
In addition to our standard broadband liquids, the phantom can be used with the following tissue simulating liquids:

Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.
DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).

Do not use other organic solvents without previously testing the solvent resistivity of the phantom.
Approximately 25 liters of liquid is required to fill the SAM Twin phantom.

Calibration Frequency Points for EX3DV4 E-Field Probes SN: 7441 Calibrated: 2022/05/16

Calibration Frequency Point(MHz)	Frequency Range(MHz)		Conversion Factor		
	From	To	X	Y	Z
750 Head	650	850	10.04	10.04	10.04
900 Head	850	1000	9.61	9.61	9.61
1450 Head	1350	1550	8.52	8.52	8.52
1750 Head	1650	1850	8.32	8.32	8.32
1900 Head	1850	1950	7.94	7.94	7.94
2000 Head	1950	2100	7.99	7.99	7.99
2300 Head	2200	2400	7.78	7.78	7.78
2450 Head	2400	2550	7.54	7.54	7.54
2600 Head	2550	2700	7.30	7.30	7.30
3300 Head	3200	3400	7.09	7.09	7.09
3500 Head	3400	3600	6.89	6.89	6.89
3700 Head	3600	3800	6.55	6.55	6.55
3900 Head	3800	4000	6.60	6.60	6.60
4400 Head	4300	4500	6.34	6.34	6.34
4600 Head	4500	4700	6.26	6.26	6.26
4800 Head	4700	4900	6.16	6.16	6.16
4950 Head	4900	5050	5.85	5.85	5.85
5250 Head	5140	5360	5.35	5.35	5.35
5600 Head	5490	5700	4.85	4.85	4.85
5750 Head	5700	5860	4.83	4.83	4.83

Area Scans

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 mm ± 1 mm	½·δ·ln(2) mm ± 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.	

Zoom Scan

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

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB Publication 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1:2016

Recommended Tissue Dielectric Parameters for Head

Table A.3 – Dielectric properties of the head tissue-equivalent liquid

Frequency MHz	Relative permittivity ε_r	Conductivity (σ) S/m
300	45,3	0,87
450	43,5	0,87
750	*41,9*	*0,89*
835	41,5	0,90
900	41,5	0,97
1 450	40,5	1,20
1 500	*40,4*	*1,23*
1 640	*40,2*	*1,31*
1 750	*40,1*	*1,37*
1 800	40,0	1,40
1 900	40,0	1,40
2 000	40,0	1,40
2 100	*39,8*	*1,49*
2 300	*39,5*	*1,67*
2 450	39,2	1,80
2 600	*39,0*	*1,96*
3 000	38,5	2,40
3 500	*37,9*	*2,91*
4 000	*37,4*	*3,43*
4 500	*36,8*	*3,94*
5 000	*36,2*	*4,45*
5 200	*36,0*	*4,66*
5 400	*35,8*	*4,86*
5 600	*35,5*	*5,07*
5 800	*35,3*	*5,27*
6 000	*35,1*	*5,48*

NOTE For convenience, permittivity and conductivity values at those frequencies which are not part of the original data provided by Drossos et al. [33] or the extension to 5 800 MHz are provided (i.e. the values shown *in italics*). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6 000 MHz that were linearly extrapolated from the values at 3 000 MHz and 5 800 MHz.

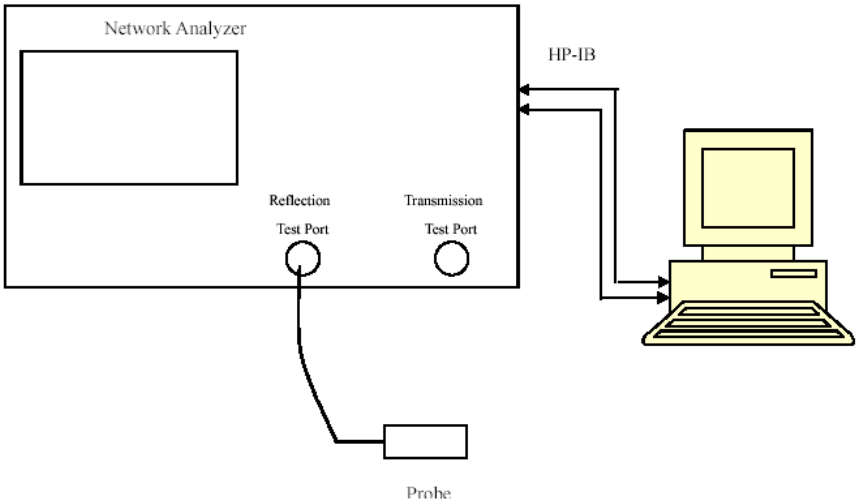
EQUIPMENT LIST AND CALIBRATION

Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
DASY5 Test Software	DASY52 52.10.4	N/A	NCR	NCR
DASY5 Measurement Server	DASY5 6.0.31	N/A	NCR	NCR
Data Acquisition Electronics	DAE4	1211	2022/03/01	2023/02/28
E-Field Probe	EX3DV4	7441	2022/05/16	2023/05/15
Mounting Device	MD4HHTV5	SD 000 H01 KA	NCR	NCR
SAM Twin Phantom	SAM-Twin V5.0	1744	NCR	NCR
Dipole, 750MHz	D750V3	1194	2020/1/13	2023/1/12
Dipole,835MHz	D835V2	4d103	2021/10/27	2024/10/26
Dipole,1800MHz	D1800V2	2d018	2020/10/15	2023/10/14
Dipole,1900MHz	D1900V2	5d128	2021/10/27	2024/10/26
Dipole, 2300MHz	D2300V2	1103	2020/01/13	2023/01/12
Dipole,2450MHz	D2450V2	751	2020/10/13	2023/10/12
Dipole,2600MHz	D2600V2	1162	2022/08/22	2025/08/24
Dipole, 3500MHz	D3500V2	1113	2020/11/11	2023/11/10
Dipole, 3700MHz	D3700V2	1084	2020/11/12	2023/11/11
Dipole, 3900MHz	D3900V2	1058	2020/11/13	2023/11/12
Dipole,5GHz	D5GHZV2	1301	2020/01/10	2023/01/09
Simulated Tissue Liquid Head	HBBL600-10000V6	SL AAH U16 BC	Each Time	/
Network Analyzer	8753D	3410A08288	2022/07/05	2023/07/04
Dielectric Assessment Kit	DAK-3.5	1320	NCR	NCR
Signal Generator	SMB100A	108362	2022/12/13	2023/12/12
USB wideband power sensor	U2021XA	MY52350001	2022/12/13	2023/12/12
Power Amplifier	CBA 1G-070	T44328	2022/12/13	2023/12/12
Linear Power Amplifier	AS0860-40/45	1060913	2022/12/13	2023/12/12
Directional Coupler	4223-20	3.113.277	2022/12/13	2023/12/12
6dB Attenuator	8493B	2708A 04769	2022/12/13	2023/12/12
Spectrum Analyzer	FSV40	101949	2022/11/25	2023/11/24
Wideband Radio Communication Tester	CMW500	143458	2022/02/27	2023/02/26
Radio Communication Test Station	MT8000A	6262309799	2022/04/25	2023/04/24

SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
704	Simulated Tissue Liquid Head	40.928	0.904	42.18	0.89	-2.97	1.57	±5
707.5	Simulated Tissue Liquid Head	40.776	0.905	42.16	0.89	-3.28	1.69	±5
711	Simulated Tissue Liquid Head	40.894	0.913	42.14	0.89	-2.96	2.58	±5
750	Simulated Tissue Liquid Head	40.815	0.905	41.94	0.89	-2.68	1.69	±5
793	Simulated Tissue Liquid Head	40.432	0.921	41.72	0.90	-3.09	2.33	±5

**Liquid Verification above was performed on 2022/12/26.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
826.4	Simulated Tissue Liquid Head	42.838	0.886	41.54	0.90	3.12	-1.56	±5
829	Simulated Tissue Liquid Head	42.733	0.889	41.53	0.90	2.9	-1.22	±5
834	Simulated Tissue Liquid Head	42.681	0.891	41.51	0.90	2.82	-1	±5
835	Simulated Tissue Liquid Head	42.819	0.894	41.50	0.90	3.18	-0.67	±5
836.5	Simulated Tissue Liquid Head	42.798	0.893	41.50	0.90	3.13	-0.78	±5
836.6	Simulated Tissue Liquid Head	42.714	0.894	41.50	0.90	2.93	-0.67	±5
839	Simulated Tissue Liquid Head	42.791	0.891	41.50	0.90	3.11	-1	±5
844	Simulated Tissue Liquid Head	42.718	0.896	41.50	0.91	2.93	-1.54	±5
846.6	Simulated Tissue Liquid Head	42.857	0.906	41.50	0.91	3.27	-0.44	±5

**Liquid Verification above was performed on 2022/12/26.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1720	Simulated Tissue Liquid Head	39.212	1.402	40.08	1.37	-2.17	2.34	±5
1730	Simulated Tissue Liquid Head	39.176	1.405	40.07	1.37	-2.23	2.55	±5
1745	Simulated Tissue Liquid Head	38.942	1.406	40.06	1.38	-2.79	1.88	±5
1760	Simulated Tissue Liquid Head	38.969	1.411	40.04	1.38	-2.67	2.25	±5
1770	Simulated Tissue Liquid Head	38.927	1.421	40.03	1.39	-2.76	2.23	±5
1800	Simulated Tissue Liquid Head	38.882	1.435	40.00	1.40	-2.8	2.5	±5

**Liquid Verification above was performed on 2022/12/27.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1852.4	Simulated Tissue Liquid Head	41.209	1.357	40.00	1.40	3.02	-3.07	±5
1860	Simulated Tissue Liquid Head	41.032	1.357	40.00	1.40	2.58	-3.07	±5
1880	Simulated Tissue Liquid Head	41.058	1.358	40.00	1.40	2.65	-3	±5
1900	Simulated Tissue Liquid Head	41.028	1.357	40.00	1.40	2.57	-3.07	±5
1907.6	Simulated Tissue Liquid Head	41.016	1.358	40.00	1.40	2.54	-3	±5

**Liquid Verification above was performed on 2022/12/27.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$	
2300	Simulated Tissue Liquid Head	37.846	1.699	39.47	1.67	-4.11	1.74	±5
2310	Simulated Tissue Liquid Head	37.885	1.711	39.45	1.68	-3.97	1.85	±5

**Liquid Verification above was performed on 2022/12/28*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$	
2402	Simulated Tissue Liquid Head	38.467	1.817	39.29	1.76	-2.09	3.24	±5
2412	Simulated Tissue Liquid Head	38.391	1.829	39.27	1.77	-2.24	3.33	±5
2437	Simulated Tissue Liquid Head	38.219	1.841	39.22	1.79	-2.55	2.85	±5
2441	Simulated Tissue Liquid Head	38.428	1.844	39.22	1.79	-2.02	3.02	±5
2450	Simulated Tissue Liquid Head	38.239	1.854	39.20	1.80	-2.45	3	±5
2462	Simulated Tissue Liquid Head	38.312	1.868	39.18	1.81	-2.22	3.2	±5
2480	Simulated Tissue Liquid Head	38.226	1.891	39.16	1.83	-2.39	3.33	±5

**Liquid Verification above was performed on 2022/12/29.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$	
2510	Simulated Tissue Liquid Head	37.846	1.849	39.12	1.86	-3.26	-0.59	±5
2535	Simulated Tissue Liquid Head	37.885	1.851	39.09	1.89	-3.08	-2.06	±5
2560	Simulated Tissue Liquid Head	37.912	1.867	39.05	1.92	-2.91	-2.76	±5
2600	Simulated Tissue Liquid Head	37.927	1.892	39.00	1.96	-2.75	-3.47	±5

**Liquid Verification above was performed on 2022/12/29.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$	
3500	Simulated Tissue Liquid Head	39.452	2.801	37.93	2.91	4.01	-3.75	±5
3500.01	Simulated Tissue Liquid Head	39.455	2.802	37.93	2.91	4.02	-3.71	±5
3560.3	Simulated Tissue Liquid Head	39.423	2.861	37.86	2.97	4.13	-3.67	±5
3646.7	Simulated Tissue Liquid Head	39.411	2.948	37.76	3.06	4.37	-3.66	±5
3603.3	Simulated Tissue Liquid Head	39.312	2.908	37.81	3.02	3.97	-3.71	±5
3700	Simulated Tissue Liquid Head	39.379	3.001	37.70	3.12	4.45	-3.81	±5
3750	Simulated Tissue Liquid Head	39.265	3.053	37.64	3.17	4.32	-3.69	±5
3795	Simulated Tissue Liquid Head	39.227	3.083	37.59	3.21	4.35	-3.96	±5
3840	Simulated Tissue Liquid Head	39.04	3.134	37.54	3.26	4	-3.87	±5
3885	Simulated Tissue Liquid Head	38.919	3.181	37.49	3.31	3.81	-3.9	±5
3900	Simulated Tissue Liquid Head	38.938	3.191	37.47	3.32	3.92	-3.89	±5
3930	Simulated Tissue Liquid Head	38.878	3.224	37.44	3.35	3.84	-3.76	±5

**Liquid Verification above was performed on 2022/12/28.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$	
5180	Simulated Tissue Liquid Head	37.494	4.426	36.01	4.63	4.12	-4.41	±5
5200	Simulated Tissue Liquid Head	37.473	4.459	35.99	4.66	4.12	-4.31	±5
5240	Simulated Tissue Liquid Head	37.536	4.494	35.94	4.70	4.44	-4.38	±5
5250	Simulated Tissue Liquid Head	37.616	4.502	35.93	4.71	4.69	-4.42	±5
5745	Simulated Tissue Liquid Head	36.768	4.979	35.36	5.21	3.98	-4.43	±5
5785	Simulated Tissue Liquid Head	36.874	5.023	35.32	5.25	4.4	-4.32	±5
5800	Simulated Tissue Liquid Head	36.757	5.041	35.30	5.27	4.13	-4.35	±5
5825	Simulated Tissue Liquid Head	36.858	5.067	35.27	5.30	4.5	-4.4	±5

**Liquid Verification above was performed on 2022/12/29*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1730	Simulated Tissue Liquid Head	39.352	1.384	40.07	1.37	-1.79	1.02	±5
1745	Simulated Tissue Liquid Head	39.188	1.409	40.06	1.38	-2.18	2.10	±5
1760	Simulated Tissue Liquid Head	38.723	1.437	40.04	1.38	-3.29	4.13	±5
1800	Simulated Tissue Liquid Head	38.346	1.465	40.00	1.40	-4.14	4.64	±5

**Liquid Verification above was performed on 2023/01/30.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1860	Simulated Tissue Liquid Head	41.201	1.377	40.00	1.40	3	-1.64	±5
1880	Simulated Tissue Liquid Head	40.975	1.402	40.00	1.40	2.44	0.14	±5
1900	Simulated Tissue Liquid Head	40.842	1.433	40.00	1.40	2.11	2.36	±5

**Liquid Verification above was performed on 2023/01/30.*

System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of ±10%. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

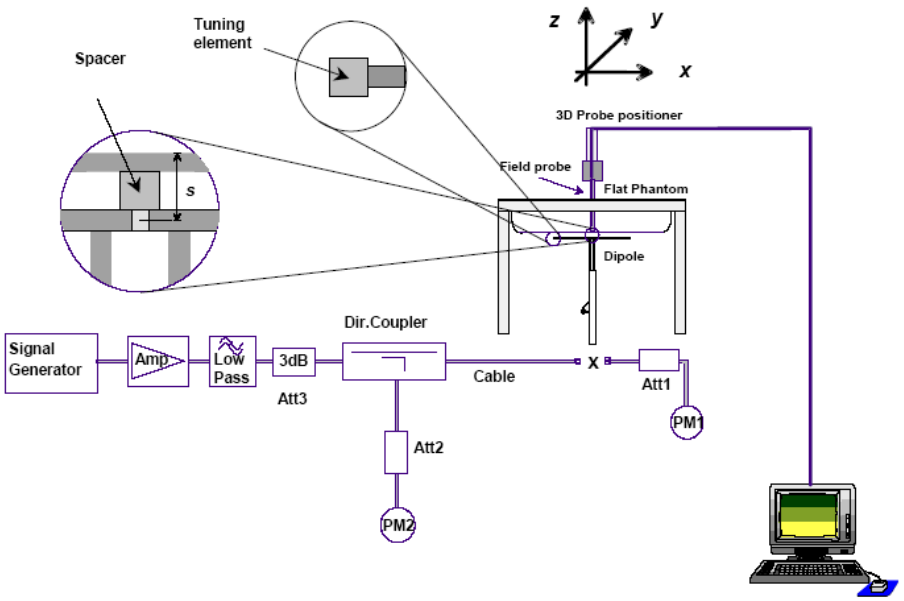
The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

a) s = 15 mm ±0.2 mm for 300 MHz ≤ f ≤ 1 000 MHz;

b) s = 10 mm ±0.2 mm for 1 000 MHz < f ≤ 6 000 MHz;

c) s = 5 mm ±0.1 mm for 6 000 MHz < f ≤ 10 000 MHz.

System Verification Setup Block Diagram



System Accuracy Check Results

Date	Frequency Band(MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/kg)	Delta (%)	Tolerance (%)
2022/12/26	750	Head	100	1g	0.813	8.13	8.55	-4.912	±10
2022/12/26	835	Head	100	1g	0.932	9.32	9.65	-3.420	±10
2022/12/27	1800	Head	100	1g	4.16	41.6	39.3	5.852	±10
2022/12/27	1900	Head	100	1g	4.21	42.1	40.0	5.250	±10
2022/12/28	2300	Head	100	1g	4.62	46.2	47.1	-1.911	±10
2022/12/29	2450	Head	100	1g	5.12	51.2	53	-3.396	±10
2022/12/29	2600	Head	100	1g	5.62	56.2	54.9	2.368	±10
2022/12/28	3500	Head	100	1g	6.19	61.9	65.8	-5.927	±10
2022/12/28	3700	Head	100	1g	6.25	62.5	65.8	-5.015	±10
2022/12/28	3900	Head	100	1g	6.44	64.4	69.2	-6.936	±10
2022/12/29	5250	Head	100	1g	7.76	77.6	80.7	-3.841	±10
2022/12/29	5800	Head	100	1g	7.72	77.2	80.2	-3.741	±10

*The SAR values above are normalized to 1 Watt forward power.

Date	Frequency Band(MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/kg)	Delta (%)	Tolerance (%)
2023/01/30	1800	Head	100	1g	4.05	40.5	39.3	3.053	±10
2023/01/30	1900	Head	100	1g	4.17	41.7	40.0	4.25	±10

*The SAR values above are normalized to 1 Watt forward power.

SAR SYSTEM VALIDATION DATA

System Performance 750 MHz

DUT: D750V3; Type: 750 MHz; Serial: 1194

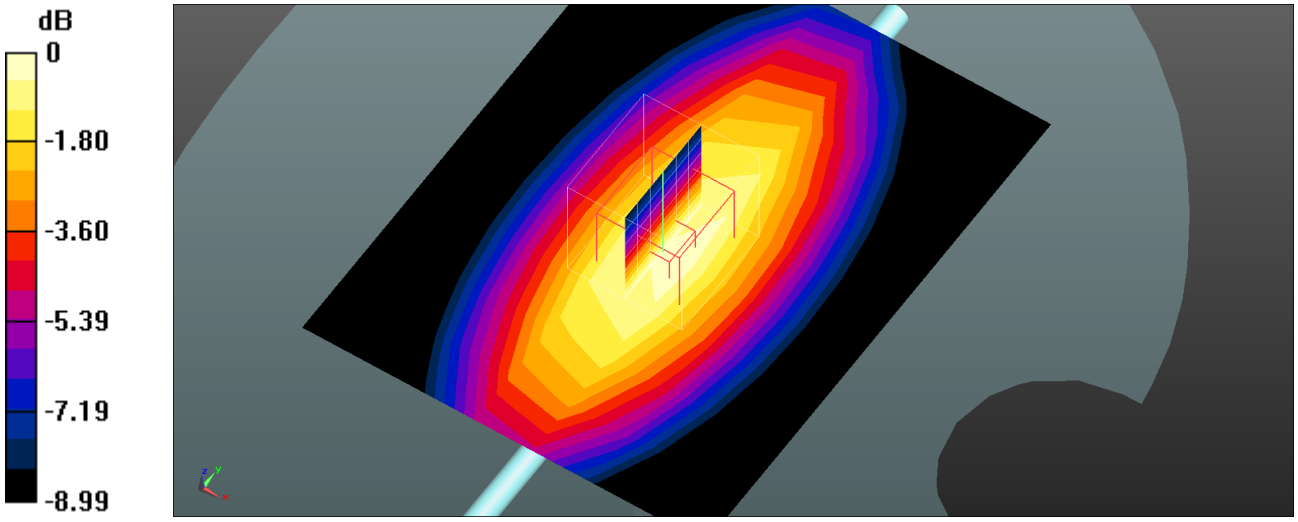
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.905 S/m; ε_r = 40.815; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(10.04, 10.04, 10.04); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (7x9x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.845 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.59 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.813 W/kg; SAR(10 g) = 0.522 W/kg
Maximum value of SAR (measured) = 0.841 W/kg



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

System Performance 835 MHz

DUT: Dipole D835V2; Type: 835MHz; Serial: 4d013

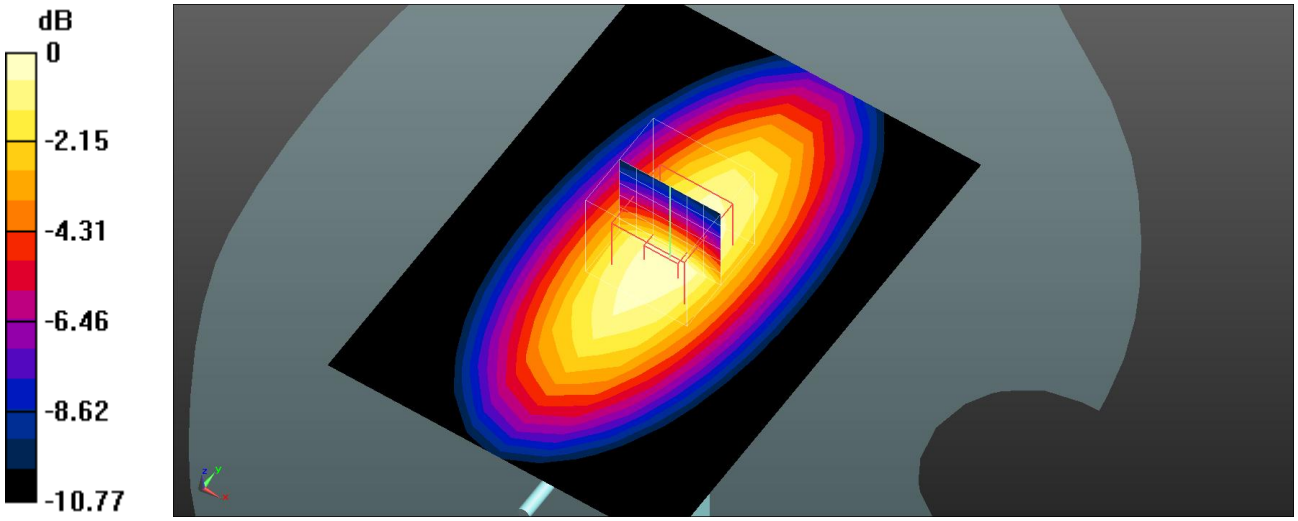
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.894 S/m; ε_r = 42.819; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(10.04, 10.04, 10.04); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (7x9x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.967 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.28 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.932 W/kg; SAR(10 g) = 0.605 W/kg
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

System Performance 1800 MHz was performed on 2022/12/27.

DUT: D1800V2; Type: 1800MHz; Serial: 2d018

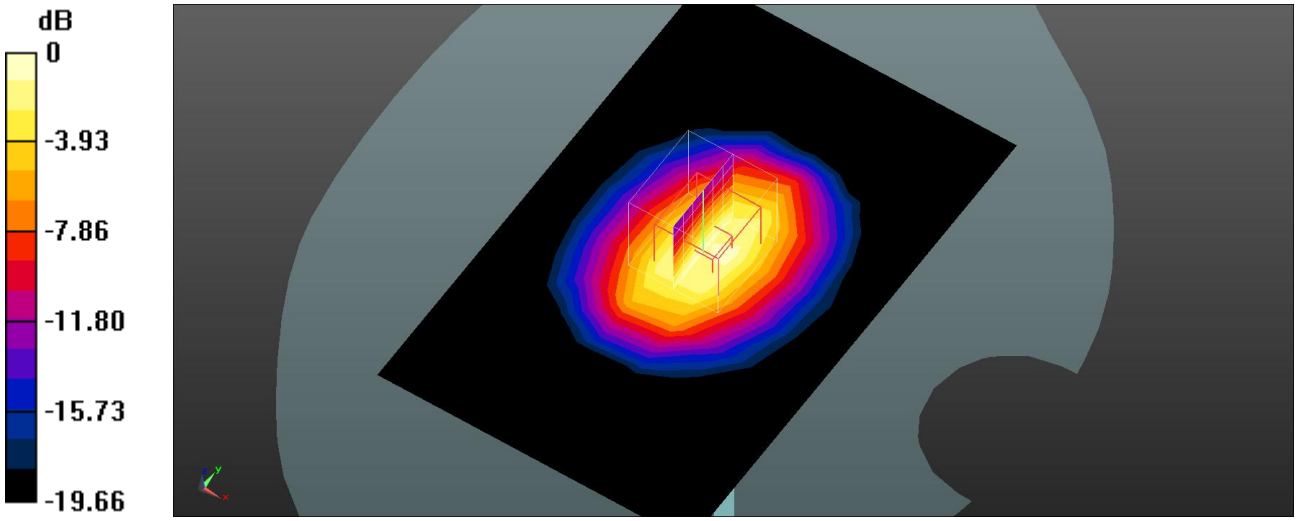
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.435 S/m; ε_r = 38.882; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (7x11x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 4.45 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.42 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 5.31 W/kg
SAR(1 g) = 4.16 W/kg; SAR(10 g) = 2.34 W/kg
Maximum value of SAR (measured) = 4.58 W/kg



0 dB = 4.58 W/kg = 6.61 dBW/kg

System Performance 1900MHz was performed on 2022/12/27.

DUT: D1900V2; Type: 1900 MHz; Serial: 5d128

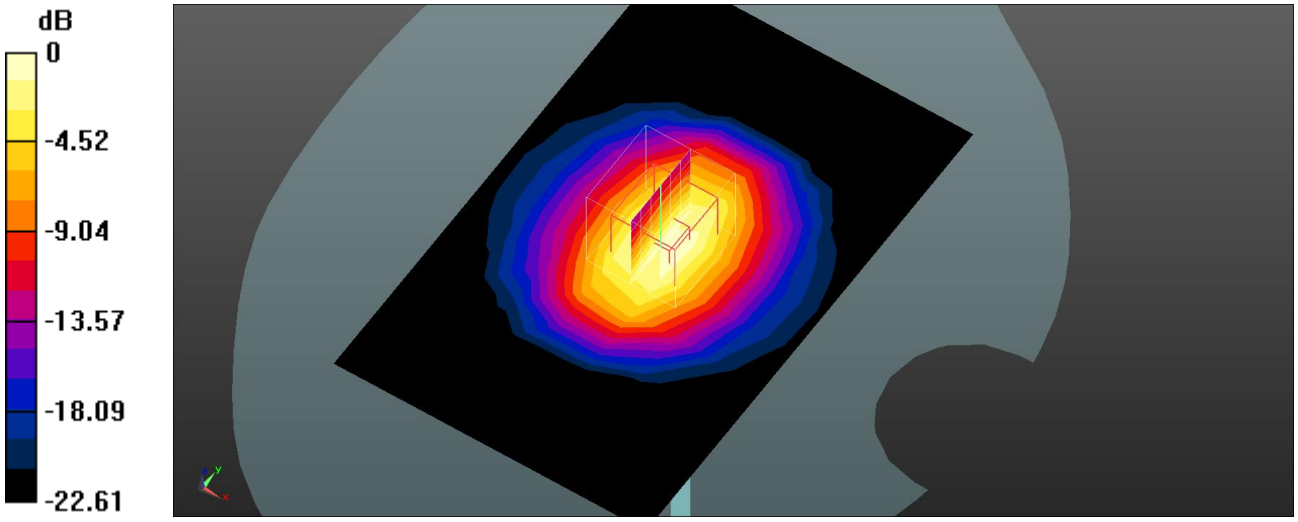
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.357 S/m; ε_r =41.028; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(7.94, 7.94, 7.94); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (7x11x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 4.59 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.65 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 5.61 W/kg
SAR(1 g) = 4.21 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 4.39 W/kg



0 dB = 4.39 W/kg = 6.42 dBW/kg

System Performance 2300MHz

DUT: D2300V2; Type: 2300 MHz; Serial: 1103

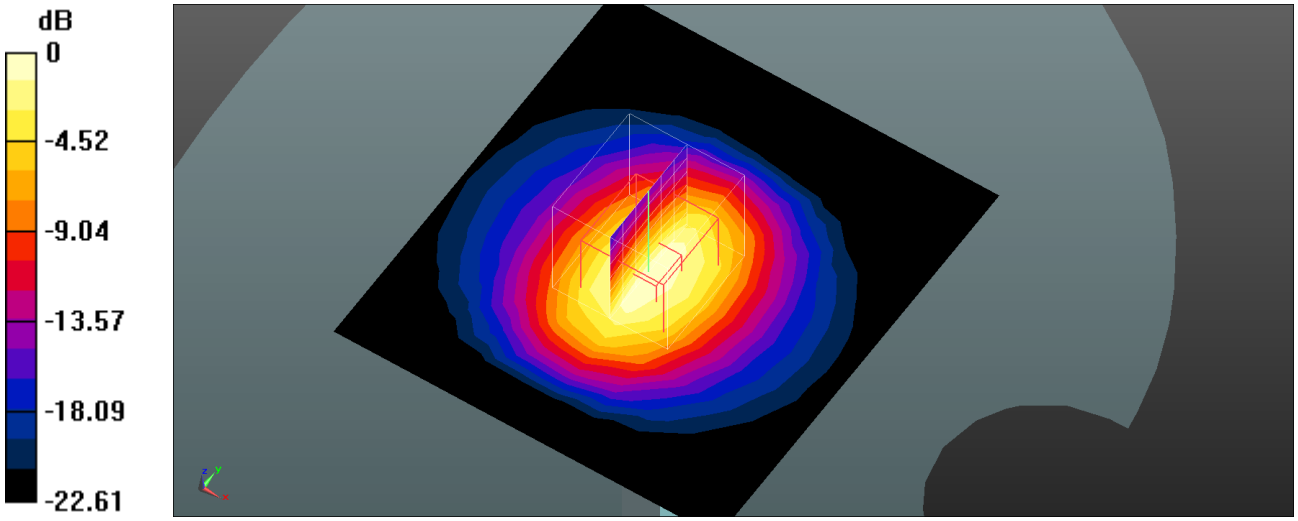
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.854 S/m; ε_r = 38.239; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(7.78, 7.78, 7.78); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (10x11x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 5.44 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.26 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 5.11 W/kg
SAR(1 g) = 4.62 W/kg; SAR(10 g) = 2.21 W/kg
Maximum value of SAR (measured) = 5.06 W/kg



0 dB = 5.06 W/kg = 7.04 dBW/kg

System Performance 2450MHz

DUT: D2450V2; Type: 2450 MHz; Serial: 751

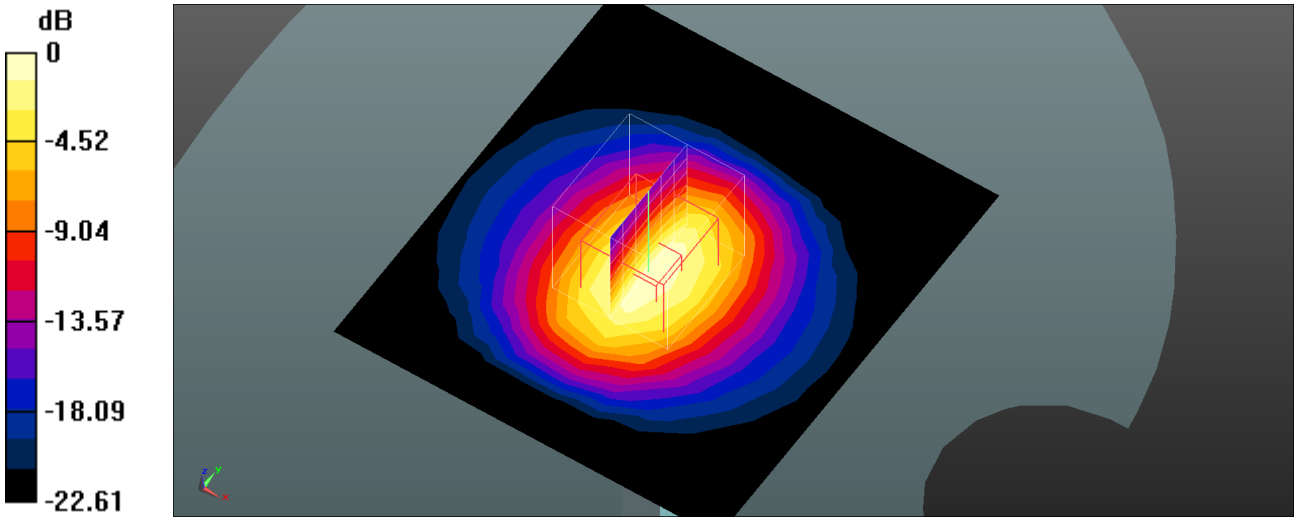
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.854 S/m; ε_r = 38.239; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(7.54, 7.54, 7.54); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (10x11x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 5.44 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.67 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.17 W/kg
SAR(1 g) = 5.12 W/kg; SAR(10 g) = 2.55 W/kg
Maximum value of SAR (measured) = 5.48 W/kg



0 dB = 5.48 W/kg = 7.39 dBW/kg

System Performance 2600MHz

DUT: D2600V2; Type: 2600 MHz; Serial: 1162

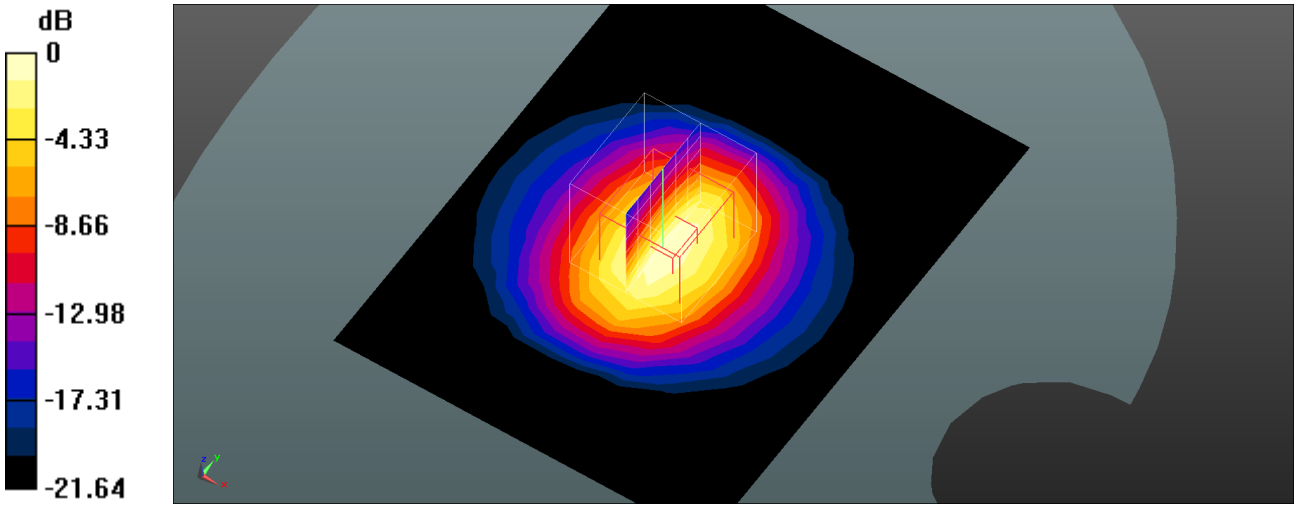
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.892 S/m; ε_r = 37.927; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(7.3, 7.3, 7.3); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (10x13x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 6.06 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 61.53 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 10.6 W/kg
SAR(1 g) = 5.62 W/kg; SAR(10 g) = 2.54 W/kg
Maximum value of SAR (measured) = 7.37 W/kg



0 dB = 7.37 W/kg = 8.67 dBW/kg

System Performance 3500MHz Head

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1113

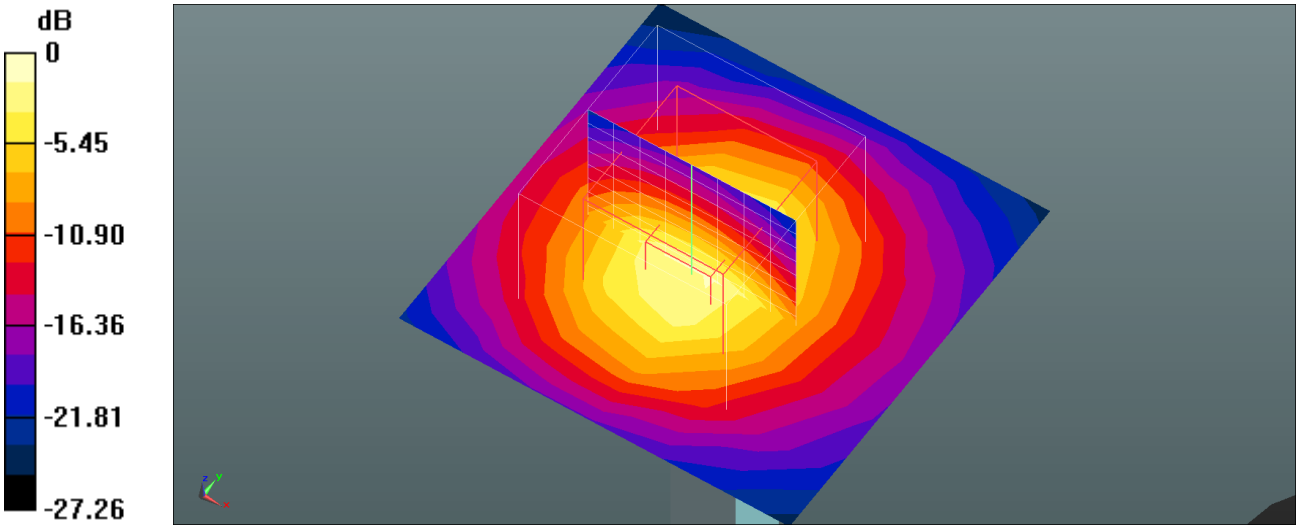
Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3500 MHz; σ = 2.801 S/m; ε_r = 39.452; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(6.89, 6.89, 6.89) @ 3500 MHz;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 SN1562; Calibrated: 12/13/2021
- Phantom: SAM-Twin V8.0 P1aP2a; Type: QD 000 P41 AA ; Serial: 1962
- Measurement SW: DASY52, Version 52.10 (2);

Pin=100mw/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.41 W/kg

Pin=100mw/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=3mm
Reference Value = 49.12 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 6.19 W/kg; SAR(10 g) = 2.37 W/kg
Maximum value of SAR (measured) = 8.44 W/kg



0 dB = 8.44 W/kg = 9.26 dBW/kg

System Performance 3700MHz Head

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1084

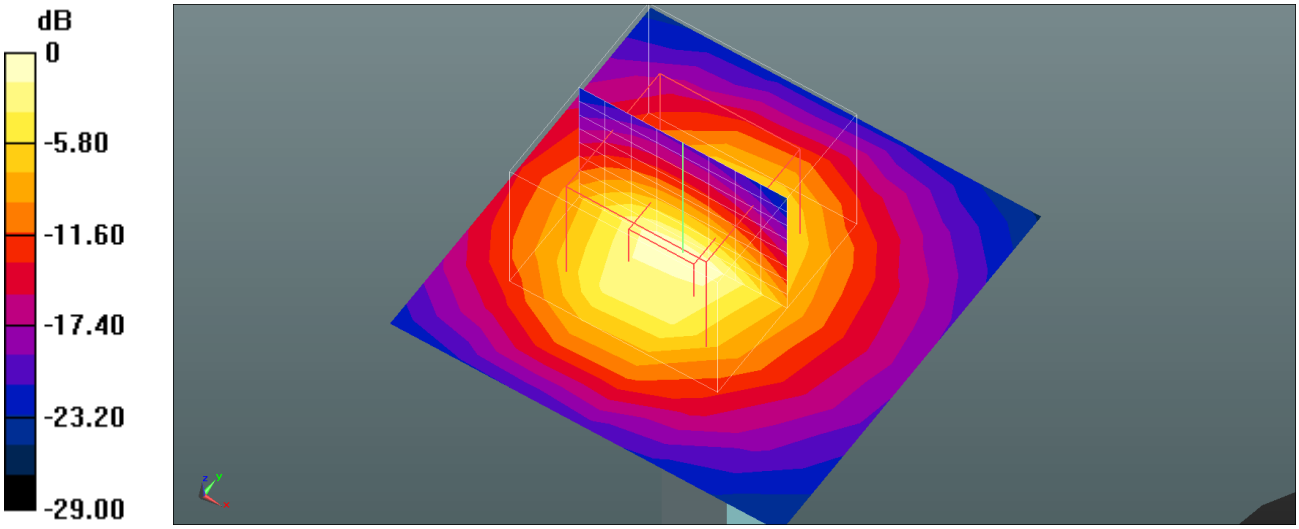
Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.001 S/m; ε_r = 39.379; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(6.55, 6.55, 6.55) @ 3700 MHz;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 SN1562; Calibrated: 12/13/2021
- Phantom: SAM-Twin V8.0 P1aP2a; Type: QD 000 P41 AA ; Serial: 1962
- Measurement SW: DASY52, Version 52.10 (2);

Pin=100mw/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.89 W/kg

Pin=100mw/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=3mm
Reference Value = 43.63 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 16.3 W/kg
SAR(1 g) = 6.25 W/kg; SAR(10 g) = 2.3 W/kg
Maximum value of SAR (measured) = 8.75 W/kg



0 dB = 8.75 W/kg = 9.42 dBW/kg

System Performance 3900MHz Head

DUT: Dipole 3900 MHz; Type: D3900V2; Serial: 1058

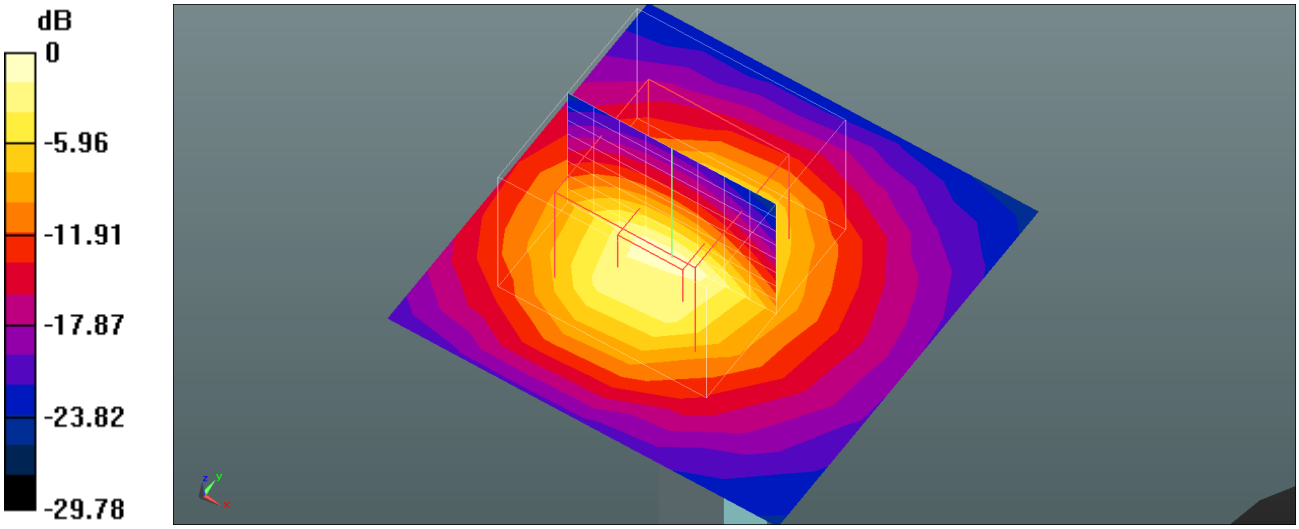
Communication System: UID 0, CW (0); Frequency: 3900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3900 MHz; σ = 3.191 S/m; ε_r = 38.938; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(6.6, 6.6, 6.6) @ 3900 MHz;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 SN1562; Calibrated: 12/13/2021
- Phantom: SAM-Twin V8.0 P1aP2a; Type: QD 000 P41 AA ; Serial: 1962
- Measurement SW: DASY52, Version 52.10 (2);

Pin=100mw/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.06 W/kg

Pin=100mw/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=3mm
Reference Value = 42.09 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 17.2 W/kg
SAR(1 g) = 6.44 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 9.33 W/kg



0 dB = 9.33 W/kg = 9.70 dBW/kg

System Performance 5250 MHz

DUT: Dipole 5GHz Type: D5GHZV2; Serial: 1301

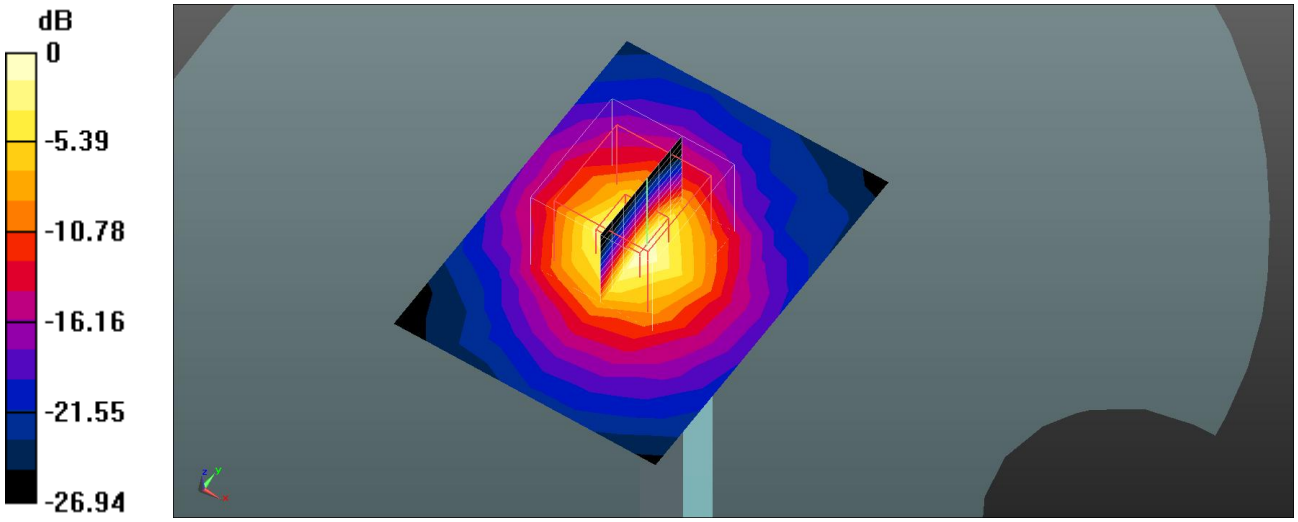
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.502 S/m; ε_r = 37.616; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(5.35, 5.35, 5.35); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (6x8x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 15.4 W/kg

Pin=100mw/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 43.21 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 24.5 W/kg
SAR(1 g) = 7.76 W/kg; SAR(10 g) = 2.37 W/kg
Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg = 11.55 dBW/kg

System Performance 5800 MHz

DUT: Dipole 5GHz Type: D5GHZV2; Serial: 1301

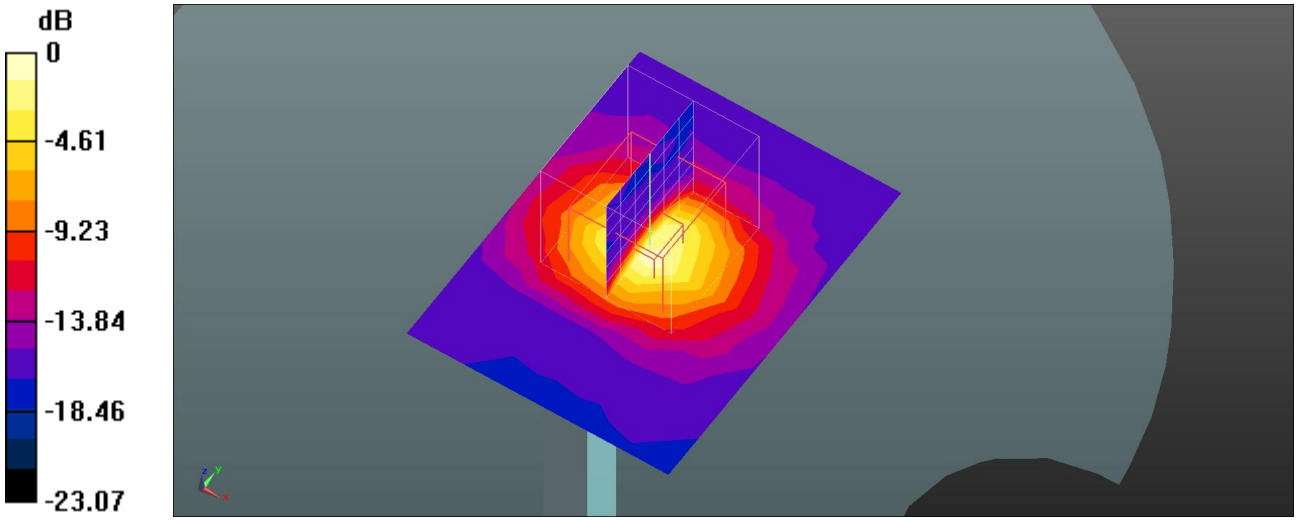
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.041 S/m; ε_r = 36.757; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(4.83, 4.83, 4.83); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (6x8x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 9.3 W/kg

Pin=100mw/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.15 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 20.4 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.45 W/kg
Maximum value of SAR (measured) = 9.43 W/kg



0 dB = 9.43 W/kg = 9.75 dBW/kg

System Performance 1800 MHz was performed on 2023/01/30.

DUT: D1800V2; Type: 1800MHz; Serial: 2d018

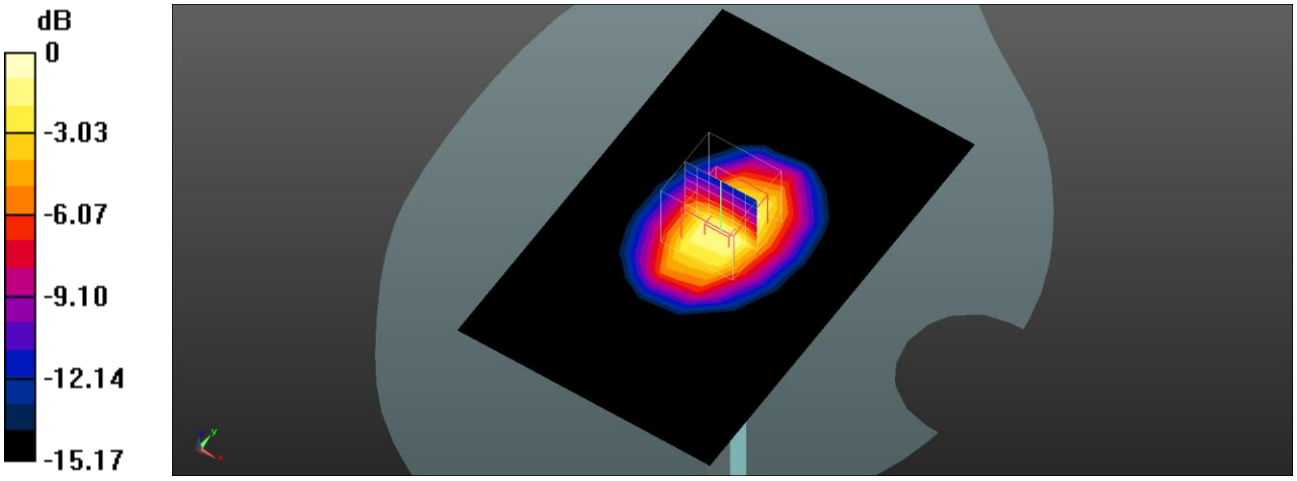
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.465 S/m; ε_r = 38.346; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(8.32, 8.32, 8.32); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (8x12x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.76 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.26 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 5.16 W/kg
SAR(1 g) = 4.05 W/kg; SAR(10 g) = 2.19 W/kg
Maximum value of SAR (measured) = 4.41 W/kg



0 dB = 4.41 W/kg = 6.44 dBW/kg

System Performance 1900MHz was performed on 2023/01/30.

DUT: D1900V2; Type: 1900 MHz; Serial: 5d128

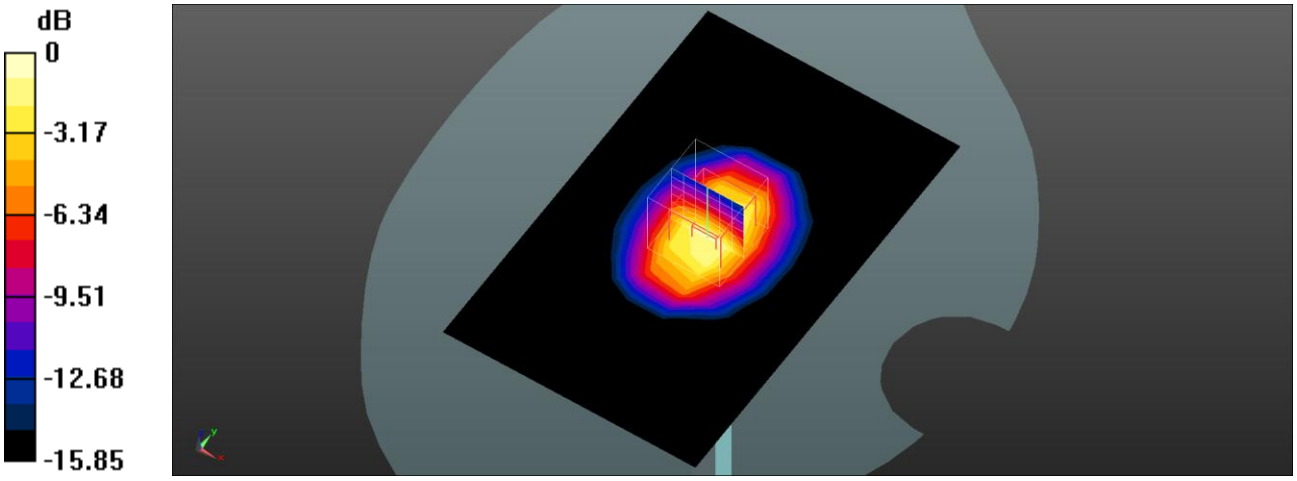
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.433 S/m; ε_r =40.842; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4- SN7441; ConvF(7.94, 7.94, 7.94); Calibrated: 2022/05/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1211; Calibrated: 2022/03/01
- Phantom: Twin SAM; Type: QD000P40CD; Serial: 1744
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mw/Area Scan (8x12x1): Measurement grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.84 W/kg

Pin=100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.34 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 5.39 W/kg
SAR(1 g) = 4.17 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 4.63 W/kg



0 dB = 4.63 W/kg = 6.66 dBW/kg

EUT TEST STRATEGY AND METHODOLOGY

Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

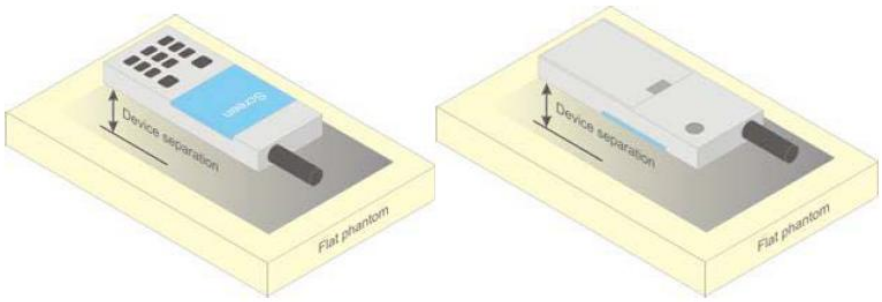


Figure 5 – Test positions for body-worn devices

Test Distance for SAR Evaluation

For this case the EUT(Equipment Under Test) is set 10mm away from the phantom, the test distance is 10mm.

SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

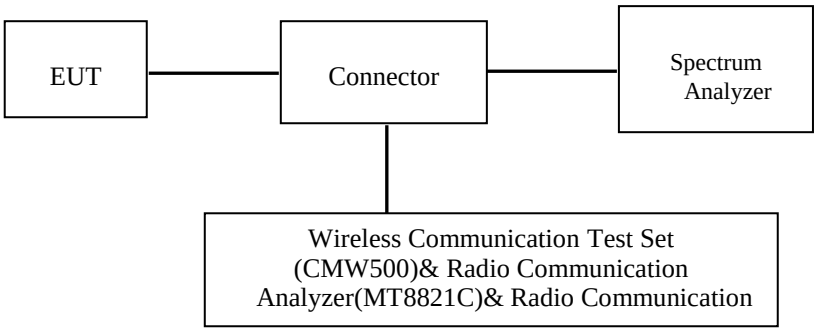
2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the “Not a knot"-condition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

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

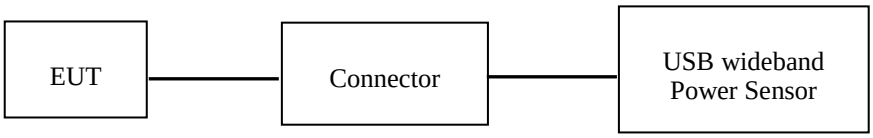
Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

CONDUCTED OUTPUT POWER MEASUREMENT

Test Procedure



WCDMA/LTE/5G NR



WLAN

Radio Configuration

The power measurement was configured by the Wireless Communication Test Set.

WCDMA Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c/β_d	8/15

HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d(SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs=βhs/ βc	30/15			

HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	**1**	**2**	**3**	**4**	**5**
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	CM(dB)	1.0	3.0	2.0	3.0	1.0
	MPR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	Ahs=β_{hs}/β_c	30/15				
HSUPA Specific Settings	DE-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_FCls	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

HSPA+

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

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

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

FDD-LTE

For UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2-1due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1.

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

For UE Power Class 1 and 3 the specific requirements and identified sub clauses are specified in Table 6.2.4-1 along with the allowed A-MPR values that may be used to meet these requirements. The allowed A-MPR values specified below in Table 6.2.4.-1 to 6.2.4-15 are in addition to the allowed MPR requirements specified in sub clause 6.2.3.

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	N/A
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	
NS_11	6.6.2.2.1	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4-6	
NS_13	6.6.3.3.6	26	5	Table 6.2.4-7	
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4-8	
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4-9 Table 6.2.4-10	
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4-11, Table 6.2.4-12, Table 6.2.4-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.6-1	N/A
NS_18	6.6.3.3.11	28	5	≥ 2	≤ 1
			10, 15, 20	≥ 1	≤ 4
NS_19	6.6.3.3.12	44	10, 15, 20	Table 6.2.4-14	
NS_20	6.2.2 6.6.2.2.1 6.6.3.2	23	5, 10, 15, 20	Table 6.2.4-15	
...					
NS_32	-	-	-	-	-

TDD-LTE

LTE TDD Band 41 supports 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.

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

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

Table 4.2-2: Uplink-downlink configurations.

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

Calculated Duty Cycle

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

Note: This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.33% duty cycle.

5G NR

Mode	Band	Duplex	SCS(KHz)	Bandwidths(MHz)
SA	n2	FDD	15	5,10,15,20
	n5	FDD	15	5,10,15,20
	n66	FDD	15	5,10,15,20,30,40
	n77	TDD	30	10,15,20,30,40,50,60,70,80,90,100
NSA	n2	FDD	15	5,10,15,20
	n5	FDD	15	5,10,15,20
	n66	FDD	15	5,10,15,20,30,40
	n77	TDD	30	10,15,20,30,40,50,60,70,80,90,100

Remark:

5G NR bands supports SA n2/5/66/77 and NSA 2A-n5A;5A-n66A; 5A-n2A; 2A-n66A;66A-n2A.

Maximum Target Output Power

Max Target Power(dBm)			
Mode/Band	Channel		
	Low	Middle	High
WCDMA Band 2	24.0	24.0	24.0
WCDMA Band 5	25.0	25.0	25.0
LTE Band 2	23.0	23.0	23.0
LTE Band 4	23.5	23.5	23.5
LTE Band 5	23.5	23.5	23.5
LTE Band 7	24.0	24.0	24.0
LTE Band 12	24.0	24.0	24.0
LTE Band 14	24.0	24.0	24.0
LTE Band 30	24.0	24.0	24.0
LTE Band 48	23.0	23.0	23.0
LTE Band 66	23.5	23.5	23.5
5G NR n2	24.0	24.0	24.0
5G NR n5	24.0	24.0	24.0
5G NR n66	24.0	24.0	24.0
5G NR n77(Block A)	26.0	26.0	26.0
5G NR n77(Block C)	26.0	26.0	26.0
DC_5A_n2A	24.0	24.0	24.0
DC_66A_n2A	24.0	24.0	24.0
DC_2A_n66A	24.0	24.0	24.0
DC_5A_n66A	24.0	24.0	24.0
WLAN 2.4G(ANT6)	14.5	14.5	14.5
WLAN 2.4G(ANT7)	15.5	15.5	15.5
WLAN 2.4G(Total)	18.0	18.0	18.0
WLAN 5.2G(ANT6)	14.0	14.0	14.0
WLAN 5.2G(ANT7)	13.0	14.0	13.0
WLAN 5.2G(Total)	17.0	17.0	17.0
WLAN 5.8G(ANT6)	13.5	13.5	13.5
WLAN 5.8G(ANT7)	13.5	13.5	13.5
WLAN 5.8G(Total)	16.5	16.5	16.5

Test Results:

WCDMA Band 2:

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Frequency	Mid Frequency	High Frequency
Normal	RMC12.2k		22.42	22.62	22.42
	HSDPA	1	19.75	19.81	19.85
		2	20.03	19.90	19.84
		3	19.88	19.70	19.79
		4	19.83	19.73	19.75
	HSUPA	1	21.51	21.06	20.93
		2	21.51	20.83	20.90
		3	21.39	21.00	20.85
		4	21.57	20.93	20.93
		5	21.61	20.88	20.74
	HSPA+	1	21.47	20.85	20.55

WCDMA Band 5:

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Frequency	Mid Frequency	High Frequency
Normal	RMC12.2k		23.59	23.97	24.03
	HSDPA	1	21.02	21.11	21.04
		2	21.10	21.01	21.08
		3	20.98	20.91	21.02
		4	21.04	21.02	20.80
	HSUPA	1	22.64	22.32	22.19
		2	22.72	21.99	22.10
		3	22.57	22.12	22.13
		4	22.77	22.17	22.13
		5	22.74	22.05	22.07
	HSPA+	1	22.71	22.04	21.75

Note:

1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.
2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/ HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

LTE Band 2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	0	0	21.41	21.35	21.12
		RB1#3	0	0	21.25	21.26	21.07
		RB1#5	0	0	21.34	21.27	21.00
		RB3#0	1	1	21.40	21.34	21.11
		RB3#3	1	1	21.24	21.25	21.06
		RB6#0	1	1	21.33	21.26	20.99
	16-QAM	RB1#0	1	1	21.17	20.95	20.78
		RB1#3	1	1	21.08	20.88	20.80
		RB1#5	1	1	21.07	20.90	20.75
		RB3#0	2	2	21.15	20.93	20.76
		RB3#3	2	2	21.06	20.86	20.78
		RB6#0	2	2	21.05	20.88	20.73
3M	QPSK	RB1#0	0	0	21.44	21.38	21.15
		RB1#8	0	0	21.28	21.29	21.10
		RB1#14	0	0	21.37	21.30	21.03
		RB6#0	1	1	21.28	21.05	20.99
		RB6#9	1	1	21.21	21.16	20.98
		RB15#0	1	1	21.08	20.92	20.85
	16-QAM	RB1#0	1	1	21.20	20.98	20.81
		RB1#8	1	1	21.11	20.91	20.83
		RB1#14	1	1	21.10	20.93	20.78
		RB6#0	2	2	21.02	20.82	20.71
		RB6#9	2	2	20.97	20.87	20.71
		RB15#0	2	2	20.92	20.75	20.60
5M	QPSK	RB1#0	0	0	21.47	21.41	21.18
		RB1#13	0	0	21.31	21.32	21.13
		RB1#24	0	0	21.40	21.33	21.06
		RB15#0	1	1	21.31	21.08	21.02
		RB15#10	1	1	21.24	21.19	21.01
		RB25#0	1	1	21.11	20.95	20.88
	16-QAM	RB1#0	1	1	21.23	21.01	20.84
		RB1#13	1	1	21.14	20.94	20.86
		RB1#24	1	1	21.13	20.96	20.81
		RB15#0	2	2	21.05	20.85	20.74
		RB15#10	2	2	21.00	20.90	20.74
		RB25#0	2	2	20.95	20.78	20.63

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	0	0	21.49	21.43	21.20
		RB1#25	0	0	21.33	21.34	21.15
		RB1#49	0	0	21.42	21.35	21.08
		RB25#0	1	1	21.33	21.10	21.04
		RB25#25	1	1	21.26	21.21	21.03
		RB50#0	1	1	21.13	20.97	20.90
	16-QAM	RB1#0	1	1	21.25	21.03	20.86
		RB1#25	1	1	21.16	20.96	20.88
		RB1#49	1	1	21.15	20.98	20.83
		RB25#0	2	2	21.07	20.87	20.76
		RB25#25	2	2	21.02	20.92	20.76
		RB50#0	2	2	20.97	20.80	20.65
15M	QPSK	RB1#0	0	0	21.52	21.46	21.23
		RB1#38	0	0	21.36	21.37	21.18
		RB1#74	0	0	21.45	21.38	21.11
		RB36#0	1	1	21.36	21.13	21.07
		RB36#39	1	1	21.29	21.24	21.06
		RB75#0	1	1	21.16	21.00	20.93
	16-QAM	RB1#0	1	1	21.28	21.06	20.89
		RB1#38	1	1	21.19	20.99	20.91
		RB1#74	1	1	21.18	21.01	20.86
		RB36#0	2	2	21.10	20.90	20.79
		RB36#39	2	2	21.05	20.95	20.79
		RB75#0	2	2	21.00	20.83	20.68
20M	QPSK	RB1#0	0	0	**21.64**	21.58	21.39
		RB1#50	0	0	21.58	21.50	21.32
		RB1#99	0	0	21.52	21.44	21.28
		RB50#0	1	1	21.47	21.35	21.23
		RB50#50	1	1	21.43	21.30	21.15
		RB100#0	1	1	21.39	21.22	21.06
	16-QAM	RB1#0	1	1	21.33	21.16	21.00
		RB1#50	1	1	21.30	21.13	20.97
		RB1#99	1	1	21.29	21.12	20.96
		RB50#0	2	2	21.21	21.04	20.88
		RB50#50	2	2	21.20	21.03	20.87
		RB100#0	2	2	21.15	20.98	20.82

LTE Band 4:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	0	0	22.20	22.29	22.14
		RB1#3	0	0	22.28	22.19	21.98
		RB1#5	0	0	22.18	22.09	21.82
		RB3#0	1	1	22.18	22.27	22.12
		RB3#3	1	1	22.26	22.17	21.96
		RB6#0	1	1	22.16	22.07	21.80
	16-QAM	RB1#0	1	1	22.03	21.90	21.74
		RB1#3	1	1	21.97	21.86	21.64
		RB1#5	1	1	22.00	21.85	21.69
		RB3#0	2	2	22.02	21.89	21.73
		RB3#3	2	2	21.96	21.85	21.63
		RB6#0	2	2	21.99	21.84	21.68
3M	QPSK	RB1#0	0	0	22.21	22.30	22.15
		RB1#8	0	0	22.29	22.20	21.99
		RB1#14	0	0	22.19	22.10	21.83
		RB6#0	1	1	22.09	22.17	21.85
		RB6#9	1	1	22.06	22.05	21.87
		RB15#0	1	1	22.11	21.93	21.81
	16-QAM	RB1#0	1	1	22.04	21.91	21.75
		RB1#8	1	1	21.98	21.87	21.65
		RB1#14	1	1	22.01	21.86	21.70
		RB6#0	2	2	21.86	21.79	21.56
		RB6#9	2	2	21.85	21.77	21.63
		RB15#0	2	2	21.83	21.71	21.53
5M	QPSK	RB1#0	0	0	22.24	22.33	22.18
		RB1#13	0	0	22.32	22.23	22.02
		RB1#24	0	0	22.22	22.13	21.86
		RB15#0	1	1	22.12	22.20	21.88
		RB15#10	1	1	22.09	22.08	21.90
		RB25#0	1	1	22.14	21.96	21.84
	16-QAM	RB1#0	1	1	22.07	21.94	21.78
		RB1#13	1	1	22.01	21.90	21.68
		RB1#24	1	1	22.04	21.89	21.73
		RB15#0	2	2	21.89	21.82	21.59
		RB15#10	2	2	21.88	21.80	21.66
		RB25#0	2	2	21.86	21.74	21.56

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	0	0	22.28	22.37	22.22
		RB1#25	0	0	22.36	22.27	22.06
		RB1#49	0	0	22.26	22.17	21.90
		RB25#0	1	1	22.16	22.24	21.92
		RB25#25	1	1	22.13	22.12	21.94
		RB50#0	1	1	22.18	22.00	21.88
	16-QAM	RB1#0	1	1	22.11	21.98	21.82
		RB1#25	1	1	22.05	21.94	21.72
		RB1#49	1	1	22.08	21.93	21.77
		RB25#0	2	2	21.93	21.86	21.63
		RB25#25	2	2	21.92	21.84	21.70
		RB50#0	2	2	21.90	21.78	21.60
15M	QPSK	RB1#0	0	0	22.34	22.43	22.28
		RB1#38	0	0	22.42	22.33	22.12
		RB1#74	0	0	22.32	22.23	21.96
		RB36#0	1	1	22.22	22.30	21.98
		RB36#39	1	1	22.19	22.18	22.00
		RB75#0	1	1	22.24	22.06	21.94
	16-QAM	RB1#0	1	1	22.17	22.04	21.88
		RB1#38	1	1	22.11	22.00	21.78
		RB1#74	1	1	22.14	21.99	21.83
		RB36#0	2	2	21.99	21.92	21.69
		RB36#39	2	2	21.98	21.90	21.76
		RB75#0	2	2	21.96	21.84	21.66
20M	QPSK	RB1#0	0	0	**22.56**	22.52	22.33
		RB1#50	0	0	22.50	22.47	22.25
		RB1#99	0	0	22.46	22.39	22.18
		RB50#0	1	1	22.40	22.34	22.12
		RB50#50	1	1	22.36	22.29	22.06
		RB100#0	1	1	22.30	22.21	22.00
	16-QAM	RB1#0	1	1	22.25	22.16	21.95
		RB1#50	1	1	22.22	22.13	21.92
		RB1#99	1	1	22.21	22.12	21.91
		RB50#0	2	2	22.13	22.04	21.83
		RB50#50	2	2	22.12	22.03	21.82
		RB100#0	2	2	22.07	21.98	21.77

LTE Band 5:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	0	0	22.58	22.55	22.45
		RB1#3	0	0	22.57	22.48	22.34
		RB1#5	0	0	22.49	22.35	22.28
		RB3#0	1	1	22.56	22.53	22.43
		RB3#3	1	1	22.55	22.46	22.32
		RB6#0	1	1	22.47	22.33	22.26
	16-QAM	RB1#0	1	1	22.31	22.16	22.04
		RB1#3	1	1	22.31	22.20	22.01
		RB1#5	1	1	22.32	22.19	22.07
		RB3#0	2	2	22.30	22.15	22.03
		RB3#3	2	2	22.30	22.19	22.00
		RB6#0	2	2	22.31	22.18	22.06
3M	QPSK	RB1#0	0	0	22.62	22.59	22.49
		RB1#8	0	0	22.61	22.52	22.38
		RB1#14	0	0	22.53	22.39	22.32
		RB6#0	1	1	22.53	22.45	22.28
		RB6#9	1	1	22.45	22.38	22.13
		RB15#0	1	1	22.37	22.27	22.10
	16-QAM	RB1#0	1	1	22.35	22.20	22.08
		RB1#8	1	1	22.35	22.24	22.05
		RB1#14	1	1	22.36	22.23	22.11
		RB6#0	2	2	22.07	21.86	21.77
		RB6#9	2	2	21.96	21.87	21.82
		RB15#0	2	2	21.92	21.87	21.68
5M	QPSK	RB1#0	0	0	22.68	22.65	22.55
		RB1#13	0	0	22.67	22.58	22.44
		RB1#24	0	0	22.59	22.45	22.38
		RB15#0	1	1	22.59	22.51	22.34
		RB15#10	1	1	22.51	22.44	22.19
		RB25#0	1	1	22.43	22.33	22.16
	16-QAM	RB1#0	1	1	22.41	22.26	22.14
		RB1#13	1	1	22.41	22.30	22.11
		RB1#24	1	1	22.42	22.29	22.17
		RB15#0	2	2	22.13	21.92	21.83
		RB15#10	2	2	22.02	21.93	21.88
		RB25#0	2	2	21.98	21.93	21.74

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	0	0	**22.81**	22.75	22.62
		RB1#25	0	0	22.75	22.69	22.54
		RB1#49	0	0	22.70	22.60	22.46
		RB25#0	1	1	22.65	22.57	22.43
		RB25#25	1	1	22.58	22.50	22.34
		RB50#0	1	1	22.55	22.42	22.31
	16-QAM	RB1#0	1	1	22.50	22.37	22.26
		RB1#25	1	1	22.47	22.34	22.23
		RB1#49	1	1	22.46	22.33	22.22
		RB25#0	2	2	22.17	22.04	21.93
		RB25#25	2	2	22.16	22.03	21.92
		RB50#0	2	2	22.11	21.98	21.87

LTE Band 7:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	0	0	23.60	23.52	23.70
		RB1#13	0	0	23.60	23.40	23.70
		RB1#24	1	1	23.59	23.43	23.69
		RB15#0	1	1	23.54	23.38	23.67
		RB15#10	1	1	23.43	23.32	23.65
		RB25#0	1	1	23.39	23.27	23.56
	16-QAM	RB1#0	1	1	23.43	23.28	23.56
		RB1#13	1	1	23.38	23.27	23.55
		RB1#24	2	2	23.40	23.21	23.52
		RB15#0	2	2	23.32	23.15	23.43
		RB15#10	2	2	23.28	23.14	23.43
		RB25#0	2	2	23.24	23.09	23.37
10M	QPSK	RB1#0	0	0	23.64	23.56	23.74
		RB1#25	0	0	23.64	23.44	23.74
		RB1#49	0	0	23.63	23.47	23.73
		RB25#0	1	1	23.58	23.42	23.71
		RB25#25	1	1	23.47	23.36	23.69
		RB50#0	1	1	23.43	23.31	23.60
	16-QAM	RB1#0	1	1	23.47	23.32	23.60
		RB1#25	1	1	23.42	23.31	23.59
		RB1#49	2	2	23.44	23.25	23.56
		RB25#0	2	2	23.36	23.19	23.47
		RB25#25	2	2	23.32	23.18	23.47
		RB50#0	2	2	23.28	23.13	23.41
15M	QPSK	RB1#0	0	0	23.70	23.62	23.80
		RB1#38	0	0	23.70	23.50	23.80
		RB1#74	1	1	23.69	23.53	23.79
		RB36#0	1	1	23.64	23.48	23.77
		RB36#39	1	1	23.53	23.42	23.75
		RB75#0	1	1	23.49	23.37	23.66
	16-QAM	RB1#0	1	1	23.53	23.38	23.66
		RB1#38	1	1	23.48	23.37	23.65
		RB1#74	1	1	23.50	23.31	23.62
		RB36#0	2	2	23.42	23.25	23.53
		RB36#39	2	2	23.38	23.24	23.53
		RB75#0	2	2	23.34	23.19	23.47

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	RB1#0	0	0	23.84	23.67	**23.92**
		RB1#50	0	0	23.77	23.63	23.90
		RB1#99	0	0	23.74	23.58	23.85
		RB50#0	1	1	23.69	23.56	23.83
		RB50#50	1	1	23.66	23.50	23.80
		RB100#0	1	1	23.63	23.48	23.78
	16-QAM	RB1#0	1	1	23.58	23.43	23.73
		RB1#50	1	1	23.55	23.40	23.70
		RB1#99	1	1	23.54	23.39	23.69
		RB50#0	2	2	23.46	23.31	23.61
		RB50#50	2	2	23.45	23.30	23.60
		RB100#0	2	2	23.40	23.25	23.55

LTE Band 12:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	0	0	22.28	22.27	22.18
		RB1#3	0	0	22.14	22.26	22.03
		RB1#5	0	0	22.09	22.15	21.90
		RB3#0	1	1	22.26	22.25	22.16
		RB3#3	1	1	22.12	22.24	22.01
		RB6#0	1	1	22.07	22.13	21.88
	16-QAM	RB1#0	1	1	21.81	21.87	21.62
		RB1#3	1	1	21.75	21.94	21.67
		RB1#5	1	1	21.76	21.87	21.63
		RB3#0	2	2	21.80	21.86	21.61
		RB3#3	2	2	21.74	21.93	21.66
		RB6#0	2	2	21.75	21.86	21.62
3M	QPSK	RB1#0	0	0	22.32	22.31	22.22
		RB1#8	0	0	22.18	22.30	22.07
		RB1#14	0	0	22.13	22.19	21.94
		RB6#0	1	1	22.02	22.13	21.91
		RB6#9	1	1	21.93	22.08	21.80
		RB15#0	1	1	21.87	22.01	21.74
	16-QAM	RB1#0	1	1	21.85	21.91	21.66
		RB1#8	1	1	21.79	21.98	21.71
		RB1#14	1	1	21.80	21.91	21.67
		RB6#0	2	2	21.67	21.80	21.54
		RB6#9	2	2	21.68	21.77	21.53
		RB15#0	2	2	21.57	21.69	21.52
5M	QPSK	RB1#0	0	0	22.38	22.37	22.28
		RB1#13	0	0	22.24	22.36	22.13
		RB1#24	0	0	22.19	22.25	22.00
		RB15#0	1	1	22.08	22.19	21.97
		RB15#10	1	1	21.99	22.14	21.86
		RB25#0	1	1	21.93	22.07	21.80
	16-QAM	RB1#0	1	1	21.91	21.97	21.72
		RB1#13	1	1	21.85	22.04	21.77
		RB1#24	1	1	21.86	21.97	21.73
		RB15#0	2	2	21.73	21.86	21.60
		RB15#10	2	2	21.74	21.83	21.59
		RB25#0	2	2	21.63	21.75	21.58

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	0	0	22.44	**22.52**	22.37
		RB1#25	0	0	22.35	22.42	22.26
		RB1#49	0	0	22.29	22.36	22.16
		RB25#0	1	1	22.23	22.29	22.08
		RB25#25	1	1	22.14	22.24	21.99
		RB50#0	1	1	22.05	22.16	21.90
	16-QAM	RB1#0	1	1	22.00	22.11	21.85
		RB1#25	1	1	21.97	22.08	21.82
		RB1#49	1	1	21.96	22.07	21.81
		RB25#0	2	2	21.83	21.94	21.68
		RB25#25	2	2	21.82	21.93	21.67
		RB50#0	2	2	21.77	21.88	21.62

LTE Band 14:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	0	0	22.92	23.03	22.97
		RB1#13	0	0	22.93	23.02	22.94
		RB1#24	0	0	22.91	22.99	22.90
		RB15#0	1	1	22.01	22.08	22.04
		RB15#10	1	1	21.89	22.06	21.99
		RB25#0	1	1	21.87	22.01	21.93
	16-QAM	RB1#0	1	1	21.83	21.96	21.91
		RB1#13	1	1	21.86	21.93	21.90
		RB1#24	1	1	21.85	21.92	21.88
		RB15#0	2	2	20.95	21.04	21.01
		RB15#10	2	2	20.90	21.03	21.00
		RB25#0	2	2	20.83	20.98	20.91
10M	QPSK	RB1#0	0	0	/	**23.06**	/
		RB1#25	0	0	/	23.05	/
		RB1#49	0	0	/	23.02	/
		RB25#0	1	1	/	23.00	/
		RB25#25	1	1	/	22.98	/
		RB50#0	1	1	/	22.93	/
	16-QAM	RB1#0	1	1	/	21.88	/
		RB1#25	1	1	/	21.85	/
		RB1#49	1	1	/	21.84	/
		RB25#0	2	2	/	20.96	/
		RB25#25	2	2	/	20.95	/
		RB50#0	2	2	/	20.90	/

LTE Band 30:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	0	0	21.91	21.74	21.64
		RB1#13	0	0	21.99	21.83	21.78
		RB1#24	0	0	22.01	21.94	21.85
		RB15#0	1	1	22.11	22.05	21.88
		RB15#10	1	1	22.23	22.15	22.09
		RB25#0	1	1	22.26	22.21	22.09
	16-QAM	RB1#0	1	1	22.40	22.33	22.24
		RB1#13	1	1	22.50	22.40	22.35
		RB1#24	1	1	22.50	22.46	22.42
		RB15#0	2	2	22.66	22.55	22.48
		RB15#10	2	2	22.72	22.63	22.60
		RB25#0	2	2	22.66	22.75	22.67
10M	QPSK	RB1#0	0	0	/	22.81	/
		RB1#25	0	0	/	22.80	/
		RB1#49	0	0	/	22.77	/
		RB25#0	1	1	/	22.86	/
		RB25#25	1	1	/	22.84	/
		RB50#0	1	1	/	22.79	/
	16-QAM	RB1#0	1	1	/	21.87	/
		RB1#25	1	1	/	21.82	/
		RB1#49	1	1	/	21.79	/
		RB25#0	2	2	/	21.78	/
		RB25#25	2	2	/	20.90	/
		RB50#0	2	2	/	20.89	/

LTE Band 48:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	0	0	20.87	21.06	21.12
		RB1#13	0	0	20.84	20.97	21.11
		RB1#24	0	0	20.79	20.95	21.01
		RB15#0	1	1	20.72	20.90	20.97
		RB15#10	1	1	20.68	20.84	21.01
		RB25#0	1	1	20.68	20.83	20.92
	16-QAM	RB1#0	1	1	20.72	20.76	20.91
		RB1#13	1	1	20.65	20.72	20.91
		RB1#24	1	1	20.63	20.72	20.88
		RB15#0	2	2	20.57	20.66	20.82
		RB15#10	2	2	20.54	20.66	20.83
		RB25#0	2	2	20.49	20.58	20.73
10M	QPSK	RB1#0	0	0	20.91	21.10	21.16
		RB1#25	0	0	20.88	21.01	21.15
		RB1#49	0	0	20.83	20.99	21.05
		RB25#0	1	1	20.76	20.94	21.01
		RB25#25	1	1	20.72	20.88	21.05
		RB50#0	1	1	20.72	20.87	20.96
	16-QAM	RB1#0	1	1	20.76	20.80	20.95
		RB1#25	1	1	20.69	20.76	20.95
		RB1#49	1	1	20.67	20.76	20.92
		RB25#0	2	2	20.61	20.70	20.86
		RB25#25	2	2	20.58	20.70	20.87
		RB50#0	2	2	20.53	20.62	20.77
15M	QPSK	RB1#0	0	0	20.97	21.16	21.22
		RB1#38	0	0	20.94	21.07	21.21
		RB1#74	0	0	20.89	21.05	21.11
		RB36#0	1	1	20.82	21.00	21.07
		RB36#39	1	1	20.78	20.94	21.11
		RB75#0	1	1	20.78	20.93	21.02
	16-QAM	RB1#0	1	1	20.82	20.86	21.01
		RB1#38	1	1	20.75	20.82	21.01
		RB1#74	1	1	20.73	20.82	20.98
		RB36#0	2	2	20.67	20.76	20.92
		RB36#39	2	2	20.64	20.76	20.93
		RB75#0	2	2	20.59	20.68	20.83
		RB1#99	1	1	20.87	21.06	21.12
		RB50#0	2	2	20.84	20.97	21.11
		RB50#50	2	2	20.79	20.95	21.01
		RB100#0	2	2	20.72	20.90	20.97

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	RB1#0	0	0	21.09	21.26	**21.33**
		RB1#50	0	0	21.07	21.19	21.26
		RB1#99	0	0	21.01	21.14	21.23
		RB50#0	1	1	20.95	21.10	21.21
		RB50#50	1	1	20.92	21.05	21.16
		RB100#0	1	1	20.90	20.98	21.14
	16-QAM	RB1#0	1	1	20.85	20.93	21.09
		RB1#50	1	1	20.82	20.90	21.06
		RB1#99	1	1	20.81	20.89	21.05
		RB50#0	2	2	20.73	20.81	20.97
		RB50#50	2	2	20.72	20.80	20.96
		RB100#0	2	2	20.67	20.75	20.91

LTE Band 66:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	0	0	22.41	22.28	22.24
		1#3	0	0	22.26	22.15	22.23
		1#5	0	0	22.39	22.20	22.06
		3#0	1	1	22.39	22.26	22.22
		3#3	1	1	22.24	22.13	22.21
		6#0	1	1	22.37	22.18	22.04
	16-QAM	1#0	1	1	22.21	21.98	22.00
		1#3	1	1	22.12	21.94	21.89
		1#5	1	1	22.15	21.97	21.93
		3#0	2	2	22.20	21.97	21.99
		3#3	2	2	22.11	21.93	21.88
		6#0	2	2	22.14	21.96	21.92
3M	QPSK	1#0	0	0	22.42	22.29	22.25
		1#8	0	0	22.27	22.16	22.24
		1#14	0	0	22.40	22.21	22.07
		6#0	1	1	22.18	22.23	21.95
		6#9	1	1	22.30	22.04	21.96
		15#0	1	1	22.18	22.08	22.08
	16-QAM	1#0	1	1	22.22	21.99	22.01
		1#8	1	1	22.13	21.95	21.90
		1#14	1	1	22.16	21.98	21.94
		6#0	2	2	22.07	21.88	21.84
		6#9	2	2	22.04	21.82	21.79
		15#0	2	2	21.98	21.80	21.79
5M	QPSK	1#0	0	0	22.45	22.32	22.28
		1#13	0	0	22.30	22.19	22.27
		1#24	0	0	22.43	22.24	22.10
		15#0	1	1	22.21	22.26	21.98
		15#10	1	1	22.33	22.07	21.99
		25#0	1	1	22.21	22.11	22.11
	16-QAM	1#0	1	1	22.25	22.02	22.04
		1#13	1	1	22.16	21.98	21.93
		1#24	1	1	22.19	22.01	21.97
		15#0	2	2	22.10	21.91	21.87
		15#10	2	2	22.07	21.85	21.82
		25#0	2	2	22.01	21.83	21.82

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	1#0	0	0	22.49	22.36	22.32
		1#25	0	0	22.34	22.23	22.31
		1#49	0	0	22.47	22.28	22.14
		25#0	1	1	22.25	22.30	22.02
		25#25	1	1	22.37	22.11	22.03
		50#0	1	1	22.25	22.15	22.15
	16-QAM	1#0	1	1	22.29	22.06	22.08
		1#25	1	1	22.20	22.02	21.97
		1#49	1	1	22.23	22.05	22.01
		25#0	2	2	22.14	21.95	21.91
		25#25	2	2	22.11	21.89	21.86
		50#0	2	2	22.05	21.87	21.86
15M	QPSK	1#0	0	0	22.55	22.42	22.38
		1#38	0	0	22.40	22.29	22.37
		1#74	0	0	22.53	22.34	22.20
		36#0	1	1	22.31	22.36	22.08
		36#39	1	1	22.43	22.17	22.09
		75#0	1	1	22.31	22.21	22.21
	16-QAM	1#0	1	1	22.35	22.12	22.14
		1#38	1	1	22.26	22.08	22.03
		1#74	1	1	22.29	22.11	22.07
		36#0	2	2	22.20	22.01	21.97
		36#39	2	2	22.17	21.95	21.92
		75#0	2	2	22.11	21.93	21.92
20M	QPSK	1#0	0	0	**22.62**	22.55	22.47
		1#50	0	0	22.61	22.48	22.41
		1#99	0	0	22.57	22.46	22.36
		50#0	1	1	22.50	22.40	22.29
		50#50	1	1	22.49	22.34	22.26
		100#0	1	1	22.48	22.28	22.25
	16-QAM	1#0	1	1	22.43	22.23	22.20
		1#50	1	1	22.40	22.20	22.17
		1#99	1	1	22.39	22.19	22.16
		50#0	2	2	22.28	22.08	22.05
		50#50	2	2	22.27	22.07	22.04
		100#0	2	2	22.22	22.02	21.99

Frequency Band	Mode	Conducted Average Output Power (dbm)
n2	n2_5MHz_15kHz_1852.5MHz_DFT-s-OFDM PI/2 BPSK_RB12@6	23.01
	n2_10MHz_15kHz_1855MHz_CP-OFDM QPSK_RB26@13	22.94
	n2_15MHz_15kHz_1857.5MHz_CP-OFDM QPSK_RB39@19	23.08
	n2_20MHz_15kHz_1860MHz_DFT-s-OFDM PI/2 BPSK_RB1@1	23.10
n5	n5_5MHz_15kHz_846.5MHz_CP-OFDM QPSK_RB1@1	23.02
	n5_10MHz_15kHz_844MHz_CP-OFDM QPSK_RB1@1	23.48
	n5_15MHz_15kHz_831.5MHz_CP-OFDM QPSK_RB39@19	23.59
	n5_20MHz_15kHz_834MHz_CP-OFDM QPSK_RB1@104	23.06
n66	5MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@1	22.91
	10MHz_15kHz_1775MHz_DFT-s-OFDM QPSK_RB1@1	22.98
	15MHz_15kHz_1772.5MHz_DFT-s-OFDM QPSK_RB1@1	23.06
	20MHz_15kHz_1770MHz_DFT-s-OFDM QPSK_RB1@1	23.13
	30MHz_15kHz_1765MHz_DFT-s-OFDM QPSK_RB1@1	22.99
	40MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@214	23.63
n77 (3450-3550MHz)	10MHz_30kHz_3455.01MHz_DFT-s-OFDM QPSK_RB1@1	24.08
	15MHz_30kHz_3457.5MHz_DFT-s-OFDM QPSK_RB1@1	24.08
	20MHz_30kHz_3460.02MHz_DFT-s-OFDM QPSK_RB1@1	24.21
	30MHz_30kHz_3465MHz_DFT-s-OFDM QPSK_RB1@1	24.53
	40MHz_30kHz_3470.01MHz_DFT-s-OFDM QPSK_RB1@1	24.53
	50MHz_30kHz_3525MHz_DFT-s-OFDM QPSK_RB1@1	24.68
	60MHz_30kHz_3519.99MHz_DFT-s-OFDM QPSK_RB1@1	24.22
	70MHz_30kHz_3514.98MHz_DFT-s-OFDM QPSK_RB1@1	24.04
	80MHz_30kHz_3510MHz_DFT-s-OFDM QPSK_RB1@1	24.10
	90MHz_30kHz_3504.99MHz_DFT-s-OFDM QPSK_RB1@1	23.88
	100MHz_30kHz_3500.01MHz_DFT-s-OFDM QPSK_RB135@67	23.63
n77 (3700-3980MHz)	10MHz_30kHz_3975MHz_DFT-s-OFDM QPSK_RB1@1	24.23
	15MHz_30kHz_3972.48MHz_DFT-s-OFDM QPSK_RB1@1	24.08
	20MHz_30kHz_3969.99MHz_DFT-s-OFDM QPSK_RB1@1	24.14
	30MHz_30kHz_3964.98MHz_DFT-s-OFDM QPSK_RB1@1	24.07
	40MHz_30kHz_3960MHz_DFT-s-OFDM QPSK_RB1@1	24.24
	50MHz_30kHz_3954.99MHz_DFT-s-OFDM QPSK_RB1@1	24.08
	60MHz_30kHz_3949.98MHz_DFT-s-OFDM QPSK_RB1@1	24.30
	70MHz_30kHz_3945MHz_DFT-s-OFDM QPSK_RB1@1	24.35
	80MHz_30kHz_3939.99MHz_DFT-s-OFDM QPSK_RB1@1	24.34
	90MHz_30kHz_3934.98MHz_DFT-s-OFDM QPSK_RB1@1	24.39
	100MHz_30kHz_3930MHz_DFT-s-OFDM-QPSK_RB135@67	23.94

EN-DC mode:

Frequency Band	Mode	Conducted Average Output Power (dbm)
DC_5A_n2A	5MHz_15kHz_1852.5MHz_DFT-s-OFDM PI/2 BPSK_RB12@6	23.86
	10MHz_15kHz_1855MHz_CP-OFDM QPSK_RB26@13	23.91
	15MHz_15kHz_1857.5MHz_CP-OFDM QPSK_RB39@19	23.97
	20MHz_15kHz_1860MHz_DFT-s-OFDM PI/2 BPSK_RB1@1	23.81
DC_66A_n2A	5MHz_15kHz_1852.5MHz_DFT-s-OFDM PI/2 BPSK_RB12@6	23.96
	10MHz_15kHz_1855MHz_CP-OFDM QPSK_RB26@13	23.78
	15MHz_15kHz_1857.5MHz_CP-OFDM QPSK_RB39@19	23.72
	20MHz_15kHz_1860MHz_DFT-s-OFDM PI/2 BPSK_RB1@1	23.87
DC_2A_n66A	5MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@1	23.82
	10MHz_15kHz_1775MHz_DFT-s-OFDM QPSK_RB1@1	23.75
	15MHz_15kHz_1772.5MHz_DFT-s-OFDM QPSK_RB1@1	23.79
	20MHz_15kHz_1770MHz_DFT-s-OFDM QPSK_RB1@1	23.68
	30MHz_15kHz_1765MHz_DFT-s-OFDM QPSK_RB1@1	23.71
	40MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@214	23.85
DC_5A_n66A	5MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@1	23.41
	10MHz_15kHz_1775MHz_DFT-s-OFDM QPSK_RB1@1	23.25
	15MHz_15kHz_1772.5MHz_DFT-s-OFDM QPSK_RB1@1	23.21
	20MHz_15kHz_1770MHz_DFT-s-OFDM QPSK_RB1@1	23.33
	30MHz_15kHz_1765MHz_DFT-s-OFDM QPSK_RB1@1	23.17
	40MHz_15kHz_1745MHz_DFT-s-OFDM QPSK_RB1@214	23.42

Wi-Fi 2.4G(ANT 6):

Mode	Channel frequency (MHz)	Data Rate	Conducted Average Output Power(dBm)
802.11b	2412	1Mbps	13.95
	2437		14.11
	2462		14.01
802.11g	2412	6Mbps	11.11
	2437		11.29
	2462		12.25
802.11n HT20	2412	MCS0	8.85
	2437		8.66
	2462		8.88
802.11ax HT20	2412	MCS0	2.06
	2437		2.12
	2462		1.97

Wi-Fi 2.4G(ANT 7):

Mode	Channel frequency (MHz)	Data Rate	Conducted Average Output Power(dBm)
802.11b	2412	1Mbps	15.11
	2437		15.14
	2462		15.29
802.11g	2412	6Mbps	11.41
	2437		11.79
	2462		11.97
802.11n HT20	2412	MCS0	9.85
	2437		9.95
	2462		9.96
802.11ax HT20	2412	MCS0	3.77
	2437		3.51
	2462		3.53

Wi-Fi 2.4G(Total):

Mode	Channel frequency (MHz)	Data Rate	Conducted Average Output Power(dBm)
802.11b	2412	1Mbps	17.58
	2437		17.67
	2462		17.71
802.11g	2412	6Mbps	14.27
	2437		14.56
	2462		15.12
802.11n HT20	2412	MCS0	12.39
	2437		12.36
	2462		12.46
802.11ax HT20	2412	MCS0	6.01
	2437		5.88
	2462		5.83

Wi-Fi 5.2G(ANT 6):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5180	13.49
5200	13.46
5240	13.46
802.11n40	
5190	13.61
5230	13.88
802.11ac20	
5180	13.56
5200	13.49
5240	13.45
802.11ac40	
5190	13.61
5230	13.89
802.11ac80	
5210	13.13
802.11ax20	
5180	13.65
5200	13.55
5240	13.59
802.11ax40	
5190	13.52
5230	13.93
802.11ax80	
5210	13.31

Wi-Fi 5.2G(ANT 7):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5180	12.62
5200	13.45
5240	12.59
802.11n40	
5190	12.59
5230	13.01
802.11ac20	
5180	12.55
5200	12.49
5240	12.55
802.11ac40	
5190	12.62
5230	12.99
802.11ac80	
5210	12.11
802.11ax20	
5180	12.62
5200	12.52
5240	12.69
802.11ax40	
5190	12.51
5230	12.92
802.11ax80	
5210	12.19

Wi-Fi 5.2G(Total):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5180	16.09
5200	16.47
5240	16.06
802.11n40	
5190	16.14
5230	16.48
802.11ac20	
5180	16.09
5200	16.03
5240	16.03
802.11ac40	
5190	16.15
5230	16.47
802.11ac80	
5210	15.66
802.11ax20	
5180	16.18
5200	16.08
5240	16.17
802.11ax40	
5190	16.05
5230	16.46
802.11ax80	
5210	15.80

Wi-Fi 5.8G(ANT 6):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5745	12.55
5785	12.82
5825	13.11
802.11n40	
5755	11.75
5795	11.72
802.11ac20	
5745	12.63
5785	12.81
5825	13.33
802.11ac40	
5755	11.75
5795	11.72
802.11ac80	
5775	11.74
802.11ax20	
5745	12.62
5785	12.83
5825	13.17
802.11ax40	
5755	11.68
5795	11.73
802.11ax80	
5775	11.78

Wi-Fi 5.8G(ANT 7):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5745	12.77
5785	12.75
5825	13.07
802.11n40	
5755	12.18
5795	11.77
802.11ac20	
5745	12.72
5785	12.75
5825	13.11
802.11ac40	
5755	12.22
5795	12.01
802.11ac80	
5775	12.03
802.11ax20	
5745	12.62
5785	12.83
5825	13.17
802.11ax40	
5755	11.68
5795	11.73
802.11ax80	
5775	11.78

Wi-Fi 5.8G(Total):

Frequency (MHz)	Conducted Average Output Power (dBm)
802.11n20	
5745	15.67
5785	15.80
5825	16.10
802.11n40	
5755	14.98
5795	14.76
802.11ac20	
5745	15.69
5785	15.79
5825	16.23
802.11ac40	
5755	15.00
5795	14.88
802.11ac80	
5775	14.90
802.11ax20	
5745	15.63
5785	15.84
5825	16.18
802.11ax40	
5755	14.69
5795	14.74
802.11ax80	
5775	14.79

Duty Cycle

2.4G Wi-Fi:

Mode	Duty Cycle (%)
802.11b	86.84
802.11g	20.00
802.11n-HT20	94.66
802.11ax-HT20	94.69

5.2G Wi-Fi:

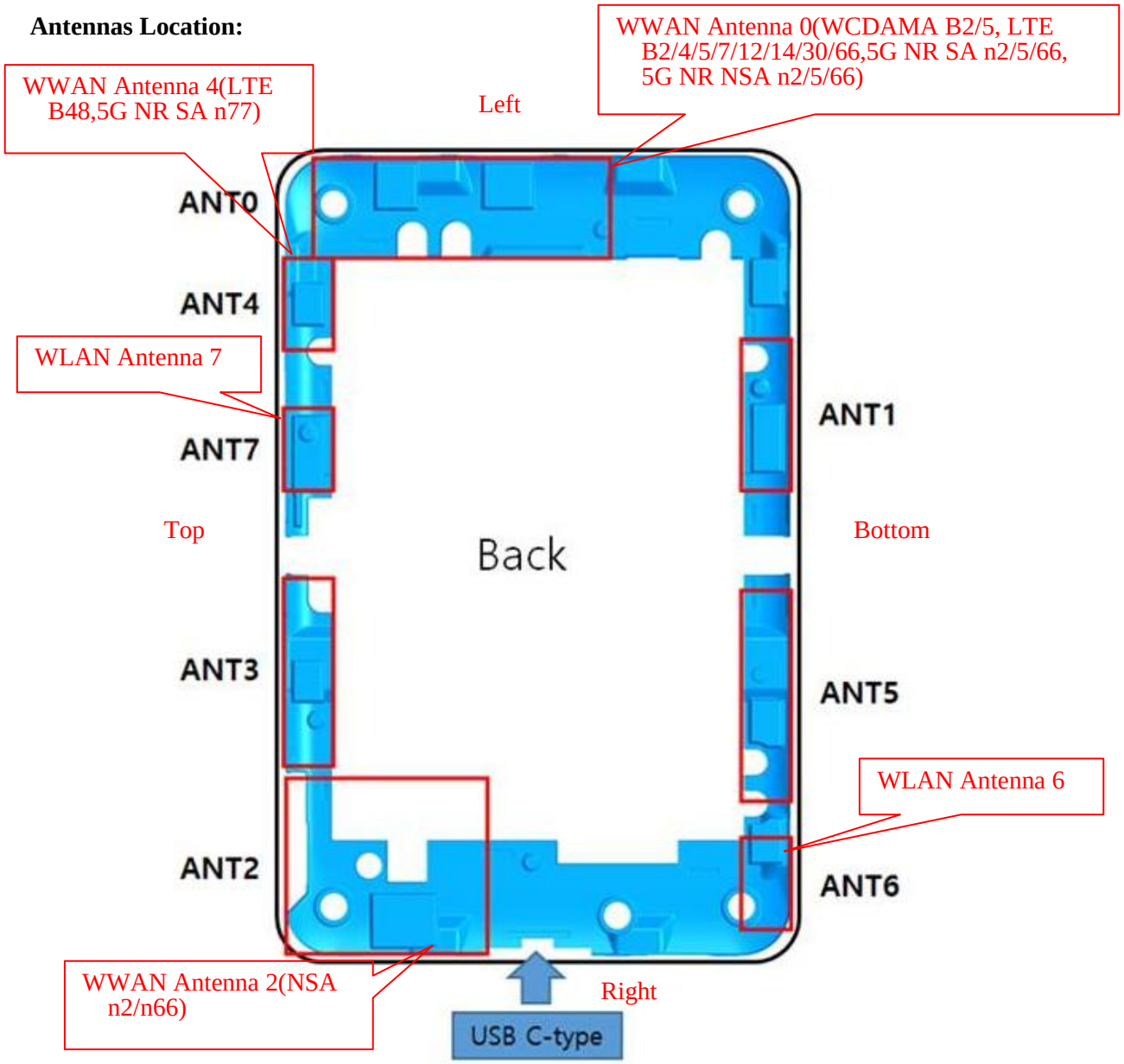
Mode	Duty Cycle (%)
802.11n20	95.12
802.11n40	95.22
802.11ac20	95.15
802.11ac40	95.22
802.11ac80	95.67
802.11ax20	95.15
802.11ax40	95.67
802.11ax80	95.19

5.8G Wi-Fi:

Mode	Duty Cycle (%)
802.11n20	95.61
802.11n40	95.22
802.11ac20	95.12
802.11ac40	95.22
802.11ac80	95.19
802.11ax20	95.15
802.11ax40	95.19
802.11ax80	95.67

Standalone SAR test exclusion considerations

Antennas Location:

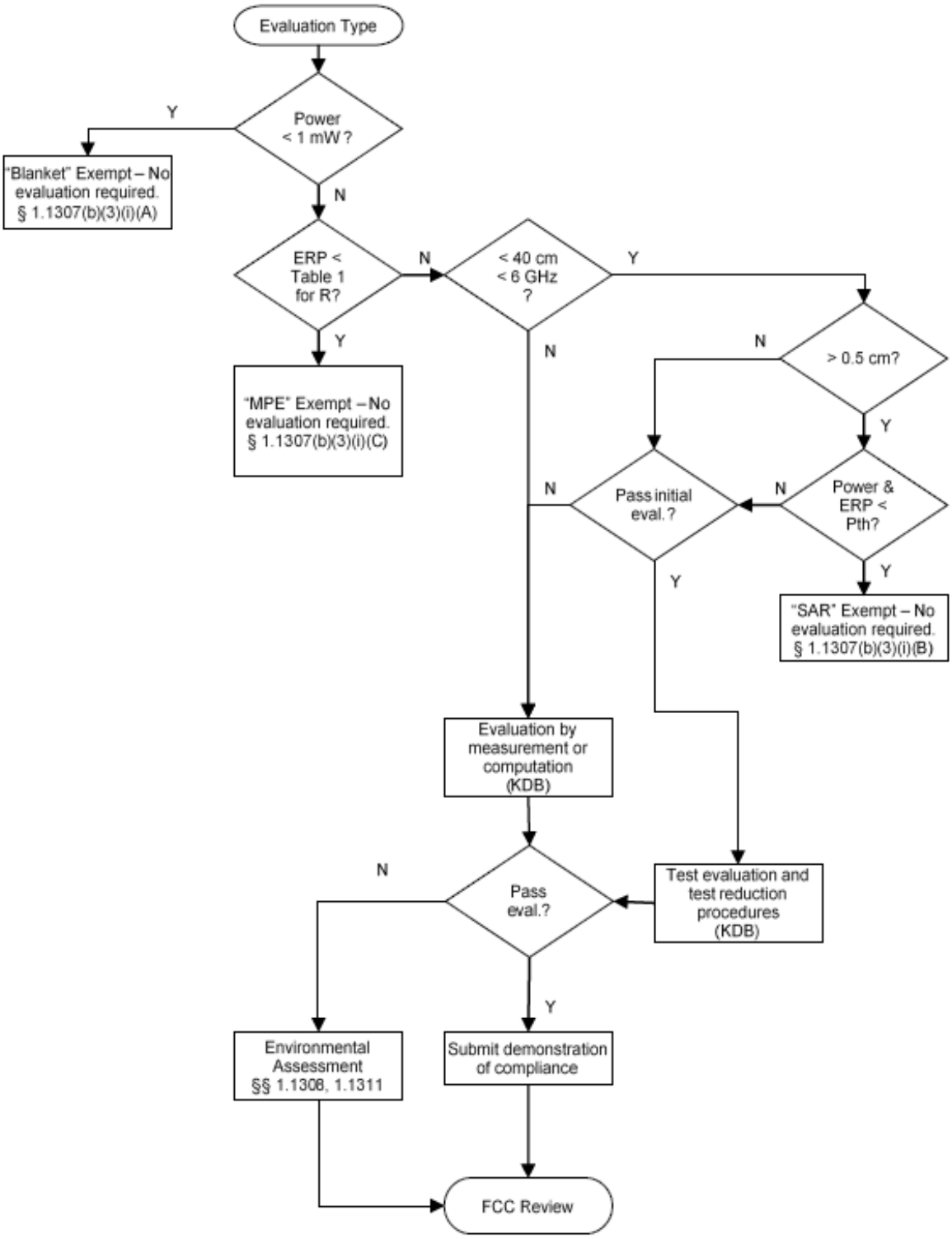


Antenna Distance To Edge

Antenna Distance To Edge(mm)						
Antenna	**Front**	**Back**	**Left**	**Right**	**Top**	**Bottom**
WWAN ANT0	13	< 5	< 5	110	< 5	29
WWAN ANT2	13	< 5	100	< 5	< 5	55
WWAN ANT4	13	< 5	19	95	< 5	73
WLAN ANT6	13	< 5	108	6	73	< 5
WLAN ANT7	13	< 5	44	72	< 5	73

Standalone SAR test exclusion considerations

General Sequence for Determination of Procedure (exemption or evaluation) to Establish Compliance with Exposure Limits for a Single RF Source:



Mode	Frequency (GHz)	Max Target Power (dBm)	Antenna gain (dBi)	P_{Max} (dBm)	P_{Max} (mW)	Distance (cm)	P_{th} (mW)	SAR Test Exclusion
2.4G Wi-Fi(ANT6)	2.462	14.5	-2.21	14.5	28.18	< 0.5	2.72	No
2.4G Wi-Fi(ANT7)	2.462	15.5	-2.41	15.5	35.48	< 0.5	2.72	No
5.2G Wi-Fi(ANT6)	5.24	14.0	-3.0	14.0	25.12	< 0.5	1.49	No
5.2G Wi-Fi(ANT7)	5.20	14.0	-2.84	14.0	25.12	< 0.5	1.50	No
5.8G Wi-Fi(ANT6)	5.825	13.5	-3.0	13.5	22.39	< 0.5	1.37	No
5.8G Wi-Fi(ANT7)	5.825	13.5	-2.84	13.5	22.39	< 0.5	1.37	No

NOTE:
1. ERP= Max Target Power+ Antenna gain-2.15
2. P_{Max} refers to the greater value in the Max Target Power and ERP.
3. The formula for calculating P_{th} is given below, with distances ranging from 20cm to 40cm.

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

4. The formula for calculating P_{th} is given below, with distances ranging from 0.5cm to 40cm.

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula (Note 3).
5. When the separation distance is less than 0.5cm, 0.5cm is used as the calculation distance

SAR test exclusion for the EUT edge considerations Result

Antenna Distance To Edge(mm)						
Mode	**Front**	**Back**	**Left**	**Right**	**Top**	**Bottom**
WWAN ANT0	**Required**	**Required**	**Required**	Exclusion	**Required**	Exclusion
WWAN ANT2	**Required**	**Required**	Exclusion	**Required**	**Required**	Exclusion
WWAN ANT4	**Required**	**Required**	**Required**	Exclusion	**Required**	Exclusion
WLAN ANT6	**Required**	**Required**	Exclusion	**Required**	Exclusion	**Required**
WLAN ANT7	**Required**	**Required**	Exclusion	Exclusion	**Required**	Exclusion

Note:

Required：The distance to Edge is less than 25mm, testing is required.
Exclusion：The distance to Edge is more than 25mm, testing is not required.

SAR MEASUREMENT RESULTS

SAR Test Data

Environmental Conditions

Temperature:	22.0-23.4 ℃	22.3-23.7 ℃	22.3-24.1 ℃	23.3-24.3 ℃	23.1-24.2 ℃
Relative Humidity:	53-62%	40-51 %	40-59 %	43-56 %	41-54 %
ATM Pressure:	101.4 kPa	101.5 kPa	101.6 kPa	101.3 kPa	101 kPa
Test Date:	2022/12/26	2022/12/27	2022/12/28	2022/12/29	2023/01/30

Testing was performed by Seven Liang, Jacky Yang, Ryse Chai.

WCDMA Band 2(ANT0)：

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.62	24.0	1.374	0.512	0.70	1
	1907.6	RMC	/	/	/	/	/	/
Body Back (10mm)	1852.4	RMC	22.42	24.0	1.439	0.684	0.98	2
	1880	RMC	22.62	24.0	1.374	0.712	0.98	3
	1907.6	RMC	22.42	24.0	1.439	0.532	0.77	4
Body Left (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.62	24.0	1.374	0.562	0.77	5
	1907.6	RMC	/	/	/	/	/	/
Body Top (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.62	24.0	1.374	0.098	0.13	6
	1907.6	RMC	/	/	/	/	/	/

WCDMA Band 5(ANT0)：

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	23.97	25.0	1.268	0.589	0.75	7
	846.6	RMC	/	/	/	/	/	/
Body Back (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	23.97	25.0	1.268	0.613	0.78	8
	846.6	RMC	/	/	/	/	/	/
Body Left (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	23.97	25.0	1.268	0.146	0.19	9
	846.6	RMC	/	/	/	/	/	/
Body Top (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	23.97	25.0	1.268	0.57	0.72	10
	846.6	RMC	/	/	/	/	/	/

Note:

1. When the 1-g SAR is≤ 0.8W/Kg, testing for other channels are optional.
2. The EUT transmit and receive through the same antenna while testing SAR.
3. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model.
4. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/ HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

LTE Band 2(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	21.58	23.0	1.387	0.433	0.60	11
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.35	23.0	1.462	0.347	0.51	12
Body Back (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	21.58	23.0	1.387	0.567	0.79	13
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.35	23.0	1.462	0.444	0.65	14
Body Left (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	21.58	23.0	1.387	0.103	0.14	15
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.35	23.0	1.462	0.081	0.12	16
Body Top (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	21.58	23.0	1.387	0.384	0.53	17
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.35	23.0	1.462	0.308	0.45	18

LTE Band 5(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	829	10	1RB	/	/	/	/	/	/
	836.5	10	1RB	22.75	23.5	1.189	0.386	0.46	19
	844	10	1RB	/	/	/	/	/	/
	836.5	10	50%RB	22.57	23.5	1.239	0.32	0.40	20
Body Back (10mm)	829	10	1RB	/	/	/	/	/	/
	836.5	10	1RB	22.75	23.5	1.189	0.524	0.62	21
	844	10	1RB	/	/	/	/	/	/
	836.5	10	50%RB	22.57	23.5	1.239	0.403	0.50	22
Body Left (10mm)	829	10	1RB	/	/	/	/	/	/
	836.5	10	1RB	22.75	23.5	1.189	0.102	0.12	23
	844	10	1RB	/	/	/	/	/	/
	836.5	10	50%RB	22.57	23.5	1.239	0.077	0.10	24
Body Top (10mm)	829	10	1RB	/	/	/	/	/	/
	836.5	10	1RB	22.75	23.5	1.189	0.181	0.22	25
	844	10	1RB	/	/	/	/	/	/
	836.5	10	50%RB	22.57	23.5	1.239	0.152	0.19	26

LTE Band 7(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	23.67	24.0	1.079	0.396	0.43	27
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	23.56	24.0	1.107	0.315	0.35	28
Body Back (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	23.67	24.0	1.079	0.562	0.61	29
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	23.56	24.0	1.107	0.445	0.49	30
Body Left (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	23.67	24.0	1.079	0.65	0.70	31
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	23.56	24.0	1.107	0.509	0.56	32
Body Top (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	23.67	24.0	1.079	0.239	0.26	33
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	23.56	24.0	1.107	0.18	0.20	34

LTE Band 12(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.52	24.0	1.406	0.468	0.66	35
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	22.29	24.0	1.483	0.361	0.54	36
Body Back (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.52	24.0	1.406	0.488	0.69	37
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	22.29	24.0	1.483	0.37	0.55	38
Body Left (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.52	24.0	1.406	0.046	0.06	39
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	22.29	24.0	1.483	0.036	0.05	40
Body Top (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.52	24.0	1.406	0.279	0.39	41
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	22.29	24.0	1.483	0.217	0.32	42

LTE Band 14(ANT0):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	/	/	/	/	/	/	/	/	/
	793	10	1RB	23.06	24.0	1.242	0.514	0.64	43
	/	/	/	/	/	/	/	/	/
	793	10	50%RB	23.00	24.0	1.259	0.411	0.52	44
Body Back (10mm)	/	/	/	/	/	/	/	/	/
	793	10	1RB	23.06	24.0	1.242	0.674	0.84	45
	/	/	/	/	/	/	/	/	/
	793	10	50%RB	23.00	24.0	1.259	0.512	0.64	46
Body Left (10mm)	/	/	/	/	/	/	/	/	/
	793	10	1RB	23.06	24.0	1.242	0.087	0.11	47
	/	/	/	/	/	/	/	/	/
	793	10	50%RB	23.00	24.0	1.259	0.067	0.08	48
Body Top (10mm)	/	/	/	/	/	/	/	/	/
	793	10	1RB	23.06	24.0	1.242	0.113	0.14	49
	/	/	/	/	/	/	/	/	/
	793	10	50%RB	23.00	24.0	1.259	0.083	0.10	50

LTE Band 30(ANT0):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	/	/	/	/	/	/	/	/	/
	2310	10	1RB	22.81	24.0	1.315	0.662	0.87	51
	/	/	/	/	/	/	/	/	/
	2310	10	50%RB	22.86	24.0	1.300	0.526	0.68	52
Body Back (10mm)	/	/	/	/	/	/	/	/	/
	2310	10	1RB	22.81	24.0	1.315	0.783	1.03	53
	/	/	/	/	/	/	/	/	/
	2310	10	50%RB	22.86	24.0	1.300	0.725	0.94	54
	2310	10	100%RB	22.79	24.0	1.321	0.684	0.90	55
Body Left (10mm)	/	/	/	/	/	/	/	/	/
	2310	10	1RB	22.81	24.0	1.315	0.236	0.31	56
	/	/	/	/	/	/	/	/	/
	2310	10	50%RB	22.86	24.0	1.300	0.239	0.31	57
Body Top (10mm)	/	/	/	/	/	/	/	/	/
	2310	10	1RB	22.81	24.0	1.315	0.085	0.11	58
	/	/	/	/	/	/	/	/	/
	2310	10	50%RB	22.86	24.0	1.300	0.082	0.11	59

LTE Band 48(ANT4):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	3560	20	1RB	/	/	/	/	/	/
	3603.3	20	1RB	/	/	/	/	/	/
	3646.7	20	1RB	21.26	23.0	1.493	0.083	0.12	60
	3690	20	1RB	/	/	/	/	/	/
	3646.7	20	50%RB	21.10	23.0	1.549	0.067	0.10	61
Body Back (10mm)	3560	20	1RB	/	/	/	/	/	/
	3603.3	20	1RB	/	/	/	/	/	/
	3646.7	20	1RB	21.26	23.0	1.493	0.077	0.11	62
	3690	20	1RB	/	/	/	/	/	/
	3646.7	20	50%RB	21.10	23.0	1.549	0.07	0.11	63
Body Left (10mm)	3560	20	1RB	/	/	/	/	/	/
	3603.3	20	1RB	/	/	/	/	/	/
	3646.7	20	1RB	21.26	23.0	1.493	0.03	0.04	64
	3690	20	1RB	/	/	/	/	/	/
	3646.7	20	50%RB	21.10	23.0	1.549	0.024	0.04	65
Body Top (10mm)	3560	20	1RB	/	/	/	/	/	/
	3603.3	20	1RB	/	/	/	/	/	/
	3646.7	20	1RB	21.26	23.0	1.493	0.062	0.09	66
	3690	20	1RB	/	/	/	/	/	/
	3646.7	20	50%RB	21.10	23.0	1.549	0.043	0.07	67

Note:*

1. *The frequency range of LTE Band 48 is 3550 ~ 3700MHz. Per KDB 447498 D04, according to the following formula Calculate N_c is 4, We chose to test 4 frequency points.*

   KDB procedures, the following should be applied to determine the number of required test channels. The test channels should be evenly spread across the transmission frequency band of each wireless mode.[14]

   $$N_c = Round\left\{\left[100\left(f_{high} - f_{low}\right)/f_c\right]^{0.5} \times \left(f_c/100\right)^{0.2}\right\},$$

   where

   - N_c is the number of test channels, rounded to the nearest integer,
   - f_{high} and f_{low} are the highest and lowest channel frequencies within the transmission band,
   - f_c is the mid-band channel frequency,
   - all frequencies are in MHz.

LTE Band 66&4(ANT0):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	22.55	23.5	1.245	0.389	0.48	68
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	22.40	23.5	1.288	0.311	0.40	69
Body Back (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	22.55	23.5	1.245	0.632	0.79	70
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	22.40	23.5	1.288	0.603	0.78	71
Body Left (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	22.55	23.5	1.245	0.133	0.17	72
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	22.40	23.5	1.288	0.103	0.13	73
Body Top (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	22.55	23.5	1.245	0.357	0.44	74
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	22.40	23.5	1.288	0.278	0.36	75

Note:

1. When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
2. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
3. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is > 0.5 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg
4. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is <1.45 W/kg, tests for the remaining required test channels are optional.
5. KDB941225D05- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
6. KDB941225D05- 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 among RB offset the upper edge, middle and lower edge of each required test channel.
7. KDB941225D05- other channel bandwidths SAR test is required when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > 0.5 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.
8. Worst case SAR for 50% RB allocation is selected to be tested.
9. KDB 648474 D04-When the peak SAR located in regions that probe is unable to access, a flat phantom is used for SAR measurement.
10. The LTE Operating Band 4 is a subset of band 66, and they are same in modulation type , therefore, they were considered as one frequency band during SAR measurement

5G NR n2(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.10	24.0	1.230	0.341	0.42	76
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.02	24.0	1.253	0.387	0.48	77
Body Back (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.10	24.0	1.230	0.525	0.65	78
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.02	24.0	1.253	0.586	0.73	79
Body Left (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.10	24.0	1.230	0.392	0.48	80
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.02	24.0	1.253	0.441	0.55	81
Body Top (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.10	24.0	1.230	0.078	0.10	82
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.02	24.0	1.253	0.074	0.09	83

5G NR n5(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	834	20	1RB	/	/	/	/	/	/
	836.5	20	1RB	23.06	24.0	1.242	0.331	0.41	84
	839	20	1RB	/	/	/	/	/	/
	836.5	20	50%RB	23.11	24.0	1.227	0.421	0.52	85
Body Back (10mm)	834	20	1RB	/	/	/	/	/	/
	836.5	20	1RB	23.06	24.0	1.242	0.438	0.54	86
	839	20	1RB	/	/	/	/	/	/
	836.5	20	50%RB	23.11	24.0	1.227	0.43	0.53	87
Body Left (10mm)	834	20	1RB	/	/	/	/	/	/
	836.5	20	1RB	23.06	24.0	1.242	0.099	0.12	88
	839	20	1RB	/	/	/	/	/	/
	836.5	20	50%RB	23.11	24.0	1.227	0.098	0.12	89
Body Top (10mm)	834	20	1RB	/	/	/	/	/	/
	836.5	20	1RB	23.06	24.0	1.242	0.143	0.18	90
	839	20	1RB	/	/	/	/	/	/
	836.5	20	50%RB	23.11	24.0	1.227	0.214	0.26	91

5G NR n66(ANT0)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1730	40	1RB	/	/	/	/	/	/
	1745	40	1RB	23.63	24.0	1.089	0.674	0.73	92
	1760	40	1RB	/	/	/	/	/	/
	1745	40	50%RB	23.59	24.0	1.099	0.686	0.75	93
Body Back (10mm)	1730	40	1RB	/	/	/	/	/	/
	1745	40	1RB	23.63	24.0	1.089	0.695	0.76	94
	1760	40	1RB	/	/	/	/	/	/
	1745	40	50%RB	23.59	24.0	1.099	0.645	0.71	95
Body Left (10mm)	1730	40	1RB	/	/	/	/	/	/
	1745	40	1RB	23.63	24.0	1.089	0.474	0.52	96
	1760	40	1RB	/	/	/	/	/	/
	1745	40	50%RB	23.59	24.0	1.099	0.595	0.65	97
Body Top (10mm)	1730	40	1RB	/	/	/	/	/	/
	1745	40	1RB	23.63	24.0	1.089	0.172	0.19	98
	1760	40	1RB	/	/	/	/	/	/
	1745	40	50%RB	23.59	24.0	1.099	0.159	0.17	99

5G NR n77(Block A) (ANT4):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	/	/	/	/	/	/	/	/	/
	3500	100	1RB	23.63	26.0	1.726	0.032	0.06	100
	/	/	/	/	/	/	/	/	/
	3500	100	50%RB	23.72	26.0	1.690	0.028	0.05	101
Body Back (10mm)	/	/	/	/	/	/	/	/	/
	3500	100	1RB	23.63	26.0	1.726	0.082	0.14	102
	/	/	/	/	/	/	/	/	/
	3500	100	50%RB	23.72	26.0	1.690	0.082	0.14	103
Body Left (10mm)	/	/	/	/	/	/	/	/	/
	3500	100	1RB	23.63	26.0	1.726	0.01	0.02	104
	/	/	/	/	/	/	/	/	/
	3500	100	50%RB	23.72	26.0	1.690	0.019	0.03	105
Body Top (10mm)	/	/	/	/	/	/	/	/	/
	3500	100	1RB	23.63	26.0	1.726	0.044	0.08	106
	/	/	/	/	/	/	/	/	/
	3500	100	50%RB	23.72	26.0	1.690	0.041	0.07	107

5G NR n77(Block C) (ANT4):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	3749.97	/	/	/	/	/	/	/	/
	3794.97	/	/	/	/	/	/	/	/
	3840	100	1RB	23.94	26.0	1.607	0.09	0.14	108
	3884.97	/	/	/	/	/	/	/	/
	3929.97	/	/	/	/	/	/	/	/
	3840	100	50%RB	23.92	26.0	1.614	0.145	0.23	109
Body Back (10mm)	3749.97	/	/	/	/	/	/	/	/
	3794.97	/	/	/	/	/	/	/	/
	3840	100	1RB	23.94	26.0	1.607	0.095	0.15	110
	3884.97	/	/	/	/	/	/	/	/
	3929.97	/	/	/	/	/	/	/	/
	3840	100	50%RB	23.92	26.0	1.614	0.098	0.16	111
Body Left (10mm)	3749.97	/	/	/	/	/	/	/	/
	3794.97	/	/	/	/	/	/	/	/
	3840	100	1RB	23.94	26.0	1.607	0.043	0.07	112
	3884.97	/	/	/	/	/	/	/	/
	3929.97	/	/	/	/	/	/	/	/
	3840	100	50%RB	23.92	26.0	1.614	0.075	0.12	113
Body Top (10mm)	3749.97	/	/	/	/	/	/	/	/
	3794.97	/	/	/	/	/	/	/	/
	3840	100	1RB	23.94	26.0	1.607	0.06	0.10	114
	3884.97	/	/	/	/	/	/	/	/
	3929.97	/	/	/	/	/	/	/	/
	3840	100	50%RB	23.92	26.0	1.614	0.102	0.16	115

WLAN 2.4G(ANT6):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	14.11	14.5	1.094	86.84	0.049	0.06	116
	2462	802.11b	/	/	/	/	/	/	/
Body Back (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	14.11	14.5	1.094	86.84	0.089	0.11	117
	2462	802.11b	/	/	/	/	/	/	/
Body Right (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	14.11	14.5	1.094	86.84	0.247	0.31	118
	2462	802.11b	/	/	/	/	/	/	/
Body Bottom (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	14.11	14.5	1.094	86.84	0.166	0.21	119
	2462	802.11b	/	/	/	/	/	/	/

WLAN 2.4G(ANT7):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	15.14	15.5	1.086	86.84	0.091	0.11	120
	2462	802.11b	/	/	/	/	/	/	/
Body Back (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	15.14	15.5	1.086	86.84	0.082	0.10	121
	2462	802.11b	/	/	/	/	/	/	/
Body Top (10mm)	2412	802.11b	/	/	/	/	/	/	/
	2437	802.11b	15.14	15.5	1.086	86.84	0.254	0.32	122
	2462	802.11b	/	/	/	/	/	/	/

Note:
1. When the 1-g SAR is≤ 0.8W/Kg, testing for other channels are optional.
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, OFDM SAR is not required.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. According 2016 Oct. TCB, for SAR testing of 2.4G WIFI 802.11b signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)".

WLAN 5.2G(ANT6):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.46	14.0	1.132	95.12	0.142	0.17	123
	5240	802.11n20	/	/	/	/	/	/	/
Body Back (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.46	14.0	1.132	95.12	0.210	0.25	124
	5240	802.11n20	/	/	/	/	/	/	/
Body Right (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.46	14.0	1.132	95.12	0.226	0.27	125
	5240	802.11n20	/	/	/	/	/	/	/
Body Bottom (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.46	14.0	1.132	95.12	0.223	0.27	126
	5240	802.11n20	/	/	/	/	/	/	/

WLAN 5.2G(ANT7):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.45	14.0	1.135	95.12	0.047	0.06	127
	5240	802.11n20	/	/	/	/	/	/	/
Body Back (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.45	14.0	1.135	95.12	0.066	0.08	128
	5240	802.11n20	/	/	/	/	/	/	/
Body Top (10mm)	5180	802.11n20	/	/	/	/	/	/	/
	5200	802.11n20	13.45	14.0	1.135	95.12	0.069	0.08	129
	5240	802.11n20	/	/	/	/	/	/	/

WLAN 5.8G(ANT6):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.82	13.5	1.169	95.12	0.163	0.20	130
	5825	802.11n20	/	/	/	/	/	/	/
Body Back (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.82	13.5	1.169	95.12	0.376	0.46	131
	5825	802.11n20	/	/	/	/	/	/	/
Body Right (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.82	13.5	1.169	95.12	0.374	0.46	132
	5825	802.11n20	/	/	/	/	/	/	/
Body Bottom (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.82	13.5	1.169	95.12	0.258	0.32	133
	5825	802.11n20	/	/	/	/	/	/	/

WLAN 5.8G(ANT7):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
					Scaled Factor	Duty Cycle (%)	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.75	13.5	1.189	95.12	0.111	0.14	134
	5825	802.11n20	/	/	/	/	/	/	/
Body Back (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.75	13.5	1.189	95.12	0.079	0.10	135
	5825	802.11n20	/	/	/	/	/	/	/
Body Top (10mm)	5745	802.11n20	/	/	/	/	/	/	/
	5785	802.11n20	12.75	13.5	1.189	95.12	0.243	0.30	136
	5825	802.11n20	/	/	/	/	/	/	/

Note:

1.When the SAR value is less than half of the limit, testing for other channels are optional.

2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance

NSA n2(ANT2)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.87	24.0	1.030	0.288	0.30	137
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.81	24.0	1.045	0.306	**0.32**	**138**
Body Back (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.87	24.0	1.030	0.292	0.30	139
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.81	24.0	1.045	0.302	0.32	140
Body Right (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.87	24.0	1.030	0.173	0.18	141
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.81	24.0	1.045	0.172	0.18	142
Body Top (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	23.87	24.0	1.030	0.283	0.29	143
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	23.81	24.0	1.045	0.287	0.30	144

Note:

1. When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
2. In the EN-DC mode, under the combination of LTE Band 66(ANT0) and 5G n2(ANT2), the power of device is maximum, so NSA n2(ANT2) was selected to full test.

NSA n66(ANT2)：

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	1730	20	1RB	/	/	/	/	/	/
	1745	20	1RB	23.85	24	1.035	0.414	0.43	145
	1760	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	23.72	24	1.067	0.428	**0.46**	**146**
Body Back (10mm)	1730	20	1RB	/	/	/	/	/	/
	1745	20	1RB	23.85	24	1.035	0.396	0.41	147
	1760	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	23.72	24	1.067	0.408	0.44	148
Body Right (10mm)	1730	20	1RB	/	/	/	/	/	/
	1745	20	1RB	23.85	24	1.035	0.203	0.21	149
	1760	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	23.72	24	1.067	0.196	0.21	150
Body Top (10mm)	1730	20	1RB	/	/	/	/	/	/
	1745	20	1RB	23.85	24	1.035	0.352	0.36	151
	1760	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	23.72	24	1.067	0.399	0.43	152

Note:

1. When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
2. In the EN-DC mode, under the combination of LTE Band 2(ANT0) and 5G n66(ANT2), the power of device is maximum, so NSA n66(ANT2) was selected to full test.

SAR Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

The Highest Measured SAR Configuration in Each Frequency Band

Body

SAR probe calibration point	Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
				Original	Repeated	
1900MHz (1850-1950MHz)	WCDMA Band 2	1852.4	Body Back	0.829	0.805	1.03
2300MHz (2200-2400MHz)	LTE Band 30	2310	Body Back	0.983	0.952	1.03

Note:

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.
2. The measured SAR results **do not** have to be scaled to the maximum tune-up tolerance to determine if repeated measurements are required.
3. SAR measurement variability must be assessed for each frequency band, which is determined by the **SAR probe calibration point and tissue-equivalent medium** used for the device measurements..

SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	**Simultaneous?**	**Hotspot?**
WWAN + WLAN	√	√

Simultaneous and Hotspot SAR test exclusion considerations:

Mode (SAR1+SAR2+SAR3)	Position	Reported SAR(W/kg)			ΣSAR < 1.6W/kg
		MAX_{SAR1}	ANT6 MAX_{SAR2}	ANT7 MAX_{SAR3}	
WWAN+WLAN 2.4G	Body Front	0.87	0.06	0.11	1.04
WWAN+WLAN 2.4G	Body Back	1.03	0.11	0.10	1.24
WWAN+WLAN 2.4G	Body Left	0.77	/	/	0.77
WWAN+WLAN 2.4G	Body Right	0.21	0.31	/	0.52
WWAN+WLAN 2.4G	Body Top	0.72	/	0.32	1.04
WWAN+WLAN 2.4G	Body Bottom	/	0.21	/	0.21
WWAN+WLAN 5G	Body Front	0.87	0.20	0.14	1.21
WWAN+WLAN5G	Body Back	1.03	0.46	0.10	**1.59**
WWAN+WLAN 5G	Body Left	0.77	/	/	0.77
WWAN+WLAN 5G	Body Right	0.21	0.46	/	0.67
WWAN+WLAN 5G	Body Top	0.72	/	0.30	1.02
WWAN+WLAN 5G	Body Bottom	/	0.32	/	0.32
WWAN+WLAN 2.4G (Hotspts)	Body Front	0.79	0.06	0.11	0.96
WWAN+WLAN 2.4G (Hotspts)	Body Back	1.03	0.11	0.10	1.24
WWAN+WLAN 2.4G (Hotspts)	Body Left	0.70	/	/	0.70
WWAN+WLAN 2.4G (Hotspts)	Body Right	0.21	0.31	/	0.52
WWAN+WLAN 2.4G (Hotspts)	Body Top	0.64	/	0.32	0.96
WWAN+WLAN 2.4G (Hotspts)	Body Bottom	/	0.21	/	0.21

Mode (SAR1+SAR2+SAR3)	Position	Reported SAR(W/kg)			ΣSAR < 1.6W/kg
		MAX_{SAR1}	ANT6 MAX_{SAR2}	ANT7 MAX_{SAR3}	
WWAN+WLAN 5G (Hotspts)	Body Front	0.79	0.20	0.14	1.13
WWAN+WLAN 5G (Hotspts)	Body Back	1.03	0.46	0.10	**1.59**
WWAN+WLAN 5G (Hotspts)	Body Left	0.70	/	/	0.70
WWAN+WLAN 5G (Hotspts)	Body Right	0.21	0.46	/	0.67
WWAN+WLAN 5G (Hotspts)	Body Top	0.64	/	0.30	0.94
WWAN+WLAN 5G (Hotspts)	Body Bottom	/	0.32	/	0.32

Note:

1. Hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge; for the data modes, wireless technologies and frequency bands supporting hotspot mode.
2. Hotspot Mode is not feasible during voice calls.
3. For EN-DC mode, QUALCOMM Smart Transmit algorithm in WWAN adds directly the time averaged RF exposure from4G(LTE) and time averaged RF exposure from 5G NR.Smart Transmit algorithm controls the total RF exposure fromboth4Gand 5G NR to not exceed FCC limit. In this Report. Simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR

Conclusion:

Sum of SAR: **ΣSAR ≤ 1.6 W/kg** therefore simultaneous transmission SAR with SPLSR is **not required**.

SAR Plots

Please Refer to the Attachment.

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528-2013 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Linearity	4.7	R	√3	1	1	2.7	2.7
Detection limits	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	√3	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	√3	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	√3	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
Test sample related							
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	√3	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	√3	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	√3	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	√3	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.3	23.9

APPENDIX B EUT TEST POSITION PHOTOS

Please Refer to the Attachment.

APPENDIX C PROBE CALIBRATION CERTIFICATES

Please Refer to the Attachment.

APPENDIX D DIPOLE CALIBRATION CERTIFICATES

Please Refer to the Attachment.

******* END OF REPORT *******