TEST REPORT

Product Name : Tablet
Model Number : xTablet T1195
FCC ID : O86-T1195

Prepared for	:	MobileDemand, LC
Address	:	1501 Boyson Square Drive, Suite 101, Hiawatha, IA 52233, USA
Prepared by	:	EMTEK (SHENZHEN) CO., LTD.
Address	:	Building 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China Tel: (0755) 26954280 Fax: (0755) 26954282
Report Number	:	ENS2406030047W00208R
Date(s) of Tests	:	July 8, 2024 to July 19, 2024
Date of Issue	:	July 22, 2024

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Modified Information

Version	Report No.	Revision Date	Summary
Ver.1.0	ENS2406030047W00208R	/	Original Report

1. TEST RESULT CERTIFICATION

Applicant	:	MobileDemand, LC
Address	:	1501 Boyson Square Drive, Suite 101, Hiawatha, IA 52233, USA
Manufacturer	:	MobileDemand, LC
Address	:	No.88 East Qianjin Road, Kunshan city, Jiangsu province, China
EUT	:	Tablet
Model Name	:	xTablet T1195
Trademark	:	MobileDemand

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 2 (2.1093) , IEEE/ANSI C95.1:2006, IEEE 1528:2013 (KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, KDB 248227 D01 v02r02 KDB 447498 D01 v06, KDB 616217 D04 v01r02)	PASS

CERTIFICATION: The above equipment have been tested by EMTEK (SHENZHEN) CO., LTD.Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. This report shall not be reproduced, except in full, without the written approval of EMTEK (SHENZHEN) CO., LTD.

Date of Test	:	July 8, 2024 to July 19, 2024
Prepared by	:	Jim Cai/Editor
Reviewer	:	Joe Xia/Supervisor
Approved & Authorized Signer	:	Lisa Wang/Manager

EMTEK (SHENZHEN) CO., LTD. TESTING

Maximum SAR Summary:

Equipment Class	Mode	Highest Reported Body SAR_{1g} (W/kg)
	LTE 2	0.778
	LTE 4	0.770
	LTE 5	0.833
	LTE 7	0.961
	LTE 12	0.936
	LTE 13	0.767
	LTE 26	0.846
	LTE 41	0.652
	LTE 66	0.828
DTS	2.4G WLAN	0.386
NII	5.2G WLAN	0.462
	5.3G WLAN	0.637
	5.6G WLAN	0.595
	5.8G WLAN	0.512
DSS	Bluetooth	N/A
DXX	NFC	N/A
Highest Simultaneous Transmission SAR		Body (W/kg)
PCB +WLAN		1.598
PCB +BT		0.960
WLAN+BT		0.386
2.4GWLAN+5GWLAN		1.023
PCB+6GWLAN		0.961
2.4GWLAN+6GWLAN		0.409
5GWLAN+6GWLAN		0.660
6GWLAN+BT		0.023

Note:

1. The 2.4G WLAN and 5G WLAN can transmit simultaneously.
2. The 2.4G WLAN and 6G WLAN can transmit simultaneously.
3. The 5G WLAN and 6G WLAN can transmit simultaneously.
4. The WLAN and Bluetooth can transmit simultaneously
5. The SAR limit **(Head & Body: SAR_{1g}1.6 W/kg, Extremity: SAR_{10g} 4.0 W/kg)**for general population/uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2006.
6. The results of this report do not take into account the uncertainty.

2. Description of Equipment Under Test

EUT Type	Tablet
Trade Mark	MobileDemand
Model Name	xTablet T1195
Tx Frequency Bands (Unit: MHz)	BT: 2402~2480MHz BLE: 2402~2480MHz WIFI 2.4G: 2412~2472MHz WIFI 5G: 5150~5250MHz WIFI 5G: 5250~5350MHz WIFI 5G: 5470~5725MHz WIFI 5G: 5725~5850MHz WIFI 6E: 5945~6425 MHz LTE Band 2: Tx: 1850~1910MHz/ Rx: 1930~1990MHz LTE Band 4: Tx:1710~1755MHz/ Rx: 2110~2155MHz LTE Band 5: Tx: 824~849MHz/ Rx: 869~894MHz LTE Band 7: Tx: 2500~2570MHz/ Rx: 2620~2690MHz LTE Band 12: Tx: 699~716MHz/ Rx: 729~746MHz LTE Band 13: Tx: 777~787MHz/ Rx: 746~756MHz LTE Band 26: Tx: 814~824MHz/ Rx: 859~869MHz LTE Band 26: Tx: 824~849MHz/ Rx: 869~894MHz LTE Band 41: Tx/Rx: 2496~2690MHz LTE Band 66: Tx/Rx: 1710~1780MHz
Uplink Modulations	GFSK, π/4DQPSK, 8DPSK for BT GFSK for BT DSSS, OFDM for WIFI 2.4G OFDM, OFDMA for WIFI 5G OFDM, OFDMA for WIFI 6E UL: QPSK/16QAM for LTE DL: QPSK/16QAM/64QAM for LTE
Maximum Tune-up Conducted Power (Unit: dBm)	LTE Band 2 :24.5 LTE Band 4 :24.5 LTE Band 5 :24.5 LTE Band 7 :23.0 LTE Band 12 :24.5 LTE Band 13 :24.5 LTE Band 26 :24.5 LTE Band 41 :23.0 LTE Band 66 :24.5 WLAN 2.4G :26.00 WLAN 5.2G :16.00 WLAN 5.3G :16.50 WLAN 5.6G :16.00 WLAN 5.8G :16.00 BT:6.50
Power Supply	Rechargeable Li-Polymer Battery 7.68V, 4300mAh AC 120V/60Hz by Adapter Adapter 1: Model: A20-065N3A Input: 100-240V~1.6A, 50/60Hz Output: 5V, 3A, 15W; 9V, 3A; 12V, 3A; 15V, 3A; 20V, 3.25A, 65W Adapter 2: Model: ADP-65JH HB Input: 100-240V~1.5A, 50/60Hz Output: 19V, 3.42A, 65W (Note: The EUT has two power supplies, Pre testing all power supplies, and find the adapter model: A20-065N3A is the worst, so only the worst data is shown in the report.)
Antenna Type	Integrated Antenna
EUT Stage	Identical Prototype

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be related to the electrical field in the tissue by

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

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

3.2 SPEAG DASY System

DASY system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY5 software defined. The DASYsoftware can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion form the optical into digital electric signal of the DAE and transfers data to the PC.

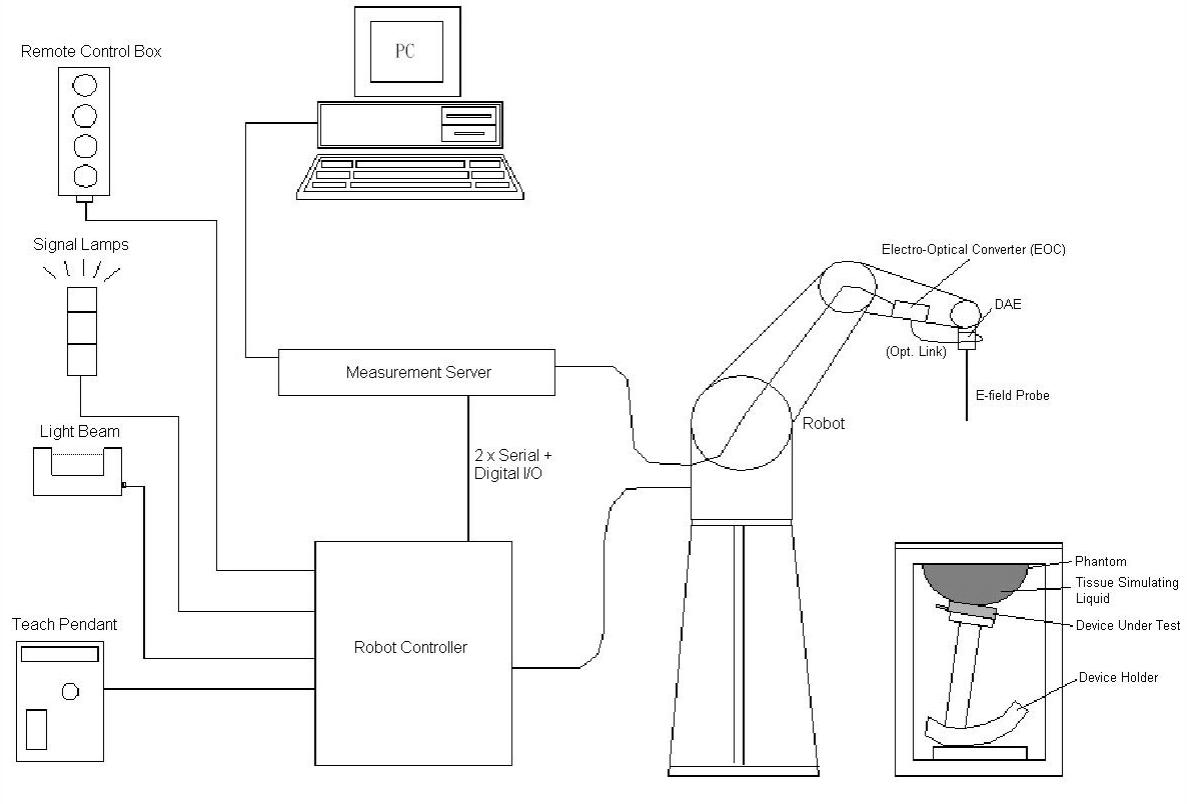


Fig-3.1 DASY System Setup

3.2.1 Robot

The DASYsystem uses the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ±0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

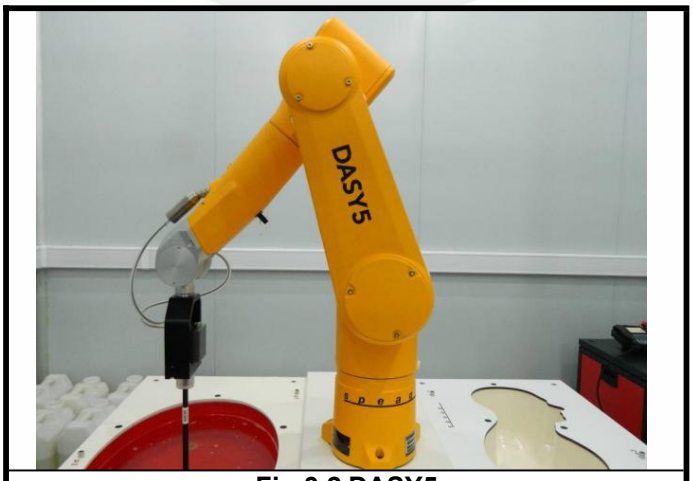


Fig-3.2 DASY5

3.2.2 Probes

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

Model	EX3DV4
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to 100 mW/g Linearity: ± 0.2 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

3.2.3 Data Acquisition Electronics (DAE)

Model	DAE4
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset Voltage	< 5µV (with auto zero)
Input Bias Current	< 50 fA
Dimensions	60 x 60 x 68 mm

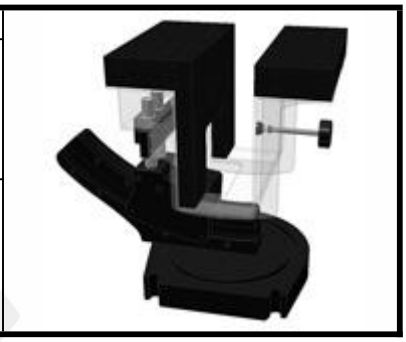
3.2.4 Phantoms

Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI	
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	

3.2.5 Device Holder

Model	Mounting Device	
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).	
Material	POM	

Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, Foam	

3.2.6 System Validation Dipoles

Model	D-Serial	
Construction	Symmetrical dipole with l/4 balun. Enables measurement of feedpoint impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.	
Frequency	750 MHz to 5800 MHz	
Return Loss	> 20 dB	
Power Capability	> 100 W (f < 1GHz),> 40 W (f > 1GHz)	

3.2.7 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm.For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in Table-3.1.

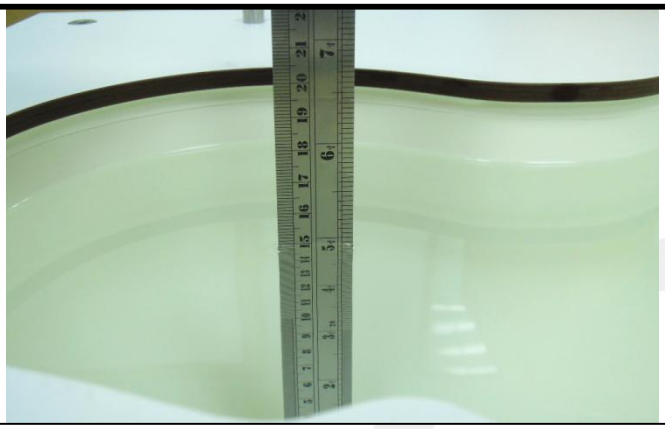
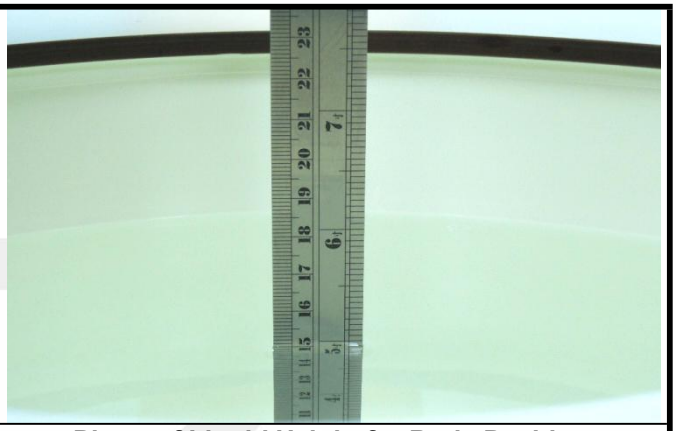
	

Photo of Liquid Height for Head Position	**Photo of Liquid Height for Body Position**

The dielectric properties of the head tissue simulating liquids are defined in IEEE1528,and KDB 865664 D01 Appendix A. For the body tissue simulating liquids, the dielectric properties are defined in KDB 865664 D01 Appendix A. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

Table-3.1Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of ±5%	Target Conductivity	Range of ±5%
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
900	41.5	39.4 ~ 43.6	0.97	0.92 ~ 1.02
1450	40.5	38.5 ~ 42.5	1.20	1.14 ~ 1.26
1640	40.3	38.3 ~ 42.3	1.29	1.23 ~ 1.35
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1800	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2000	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2300	39.5	37.5 ~ 41.5	1.67	1.59 ~ 1.75
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
2600	39.0	37.1 ~ 41.0	1.96	1.86 ~ 2.06
3500	37.9	36.0 ~ 39.8	2.91	2.76 ~ 3.06
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5500	35.6	33.8 ~ 37.4	4.96	4.71 ~ 5.21
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53

The following table gives the recipes for tissue simulating liquids.

Table-3.2Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5	-	0.3	-	-	55.2	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2000	-	44.5	-	0.1	-	-	55.4	-
H2300	-	44.9	-	0.1	-	-	55.0	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H2600	-	45.1	-	0.1	-	-	54.8	-
H3500	-	8.0	-	0.2	-	20.0	71.8	-
H5G	-	-	-	-	-	17.2	65.5	17.3

3.3 SAR System Verification

The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.

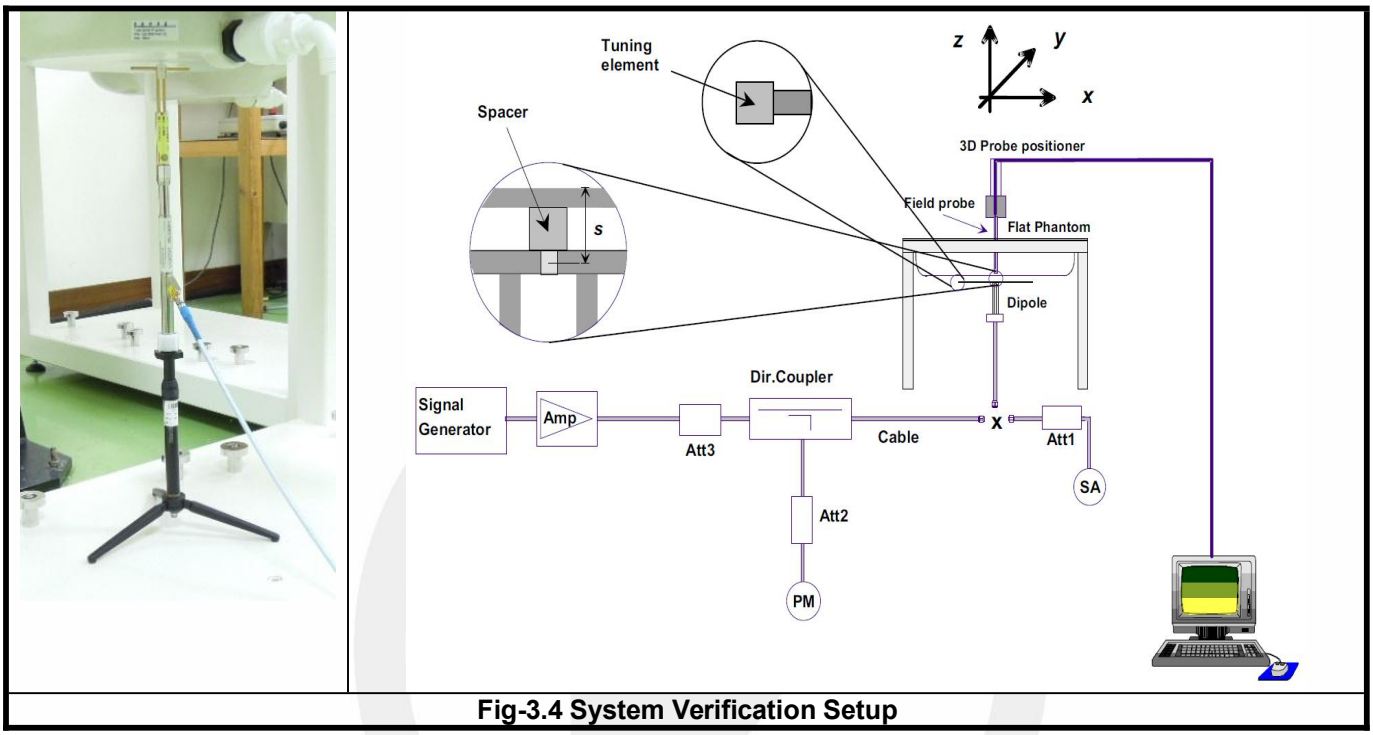


Fig-3.4 System Verification Setup

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The spectrum analyzer measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4 SAR Measurement Procedure

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

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

The SAR measurement procedures for each of test conditions are as follows:

(a) Make EUT to transmit maximum output power
(b) Measure conducted output power through RF cable
(c) Place the EUT in the specific position of phantom
(d) Perform SAR testing steps on the DASY system
(e) Record the SAR value

3.4.1 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. According to KDB 865664D01, the resolution for Area and Zoom scan is specified in the table below.

Items	≤ 2 GHz	2-3 GHz	3-4 GHz	4-5 GHz	5-6 GHz
Area Scan (Δx, Δy)	≤ 15 mm	≤ 12 mm	≤ 12 mm	≤ 10 mm	≤ 10 mm
Zoom Scan (Δx, Δy)	≤ 8 mm	≤ 5 mm	≤ 5 mm	≤ 4 mm	≤ 4 mm
Zoom Scan (Δz)	≤ 5 mm	≤ 5 mm	≤ 4 mm	≤ 3 mm	≤ 2 mm
Zoom Scan Volume	≥ 30 mm	≥ 30 mm	≥ 28 mm	≥ 25 mm	≥ 22 mm

Note:

When zoom scan is required and report SAR is ≤1.4 W/kg, the zoom scan resolution of Δx / Δy (2-3GHz: ≤ 8 mm, 3-4GHz: ≤ 7 mm, 4-6GHz: ≤ 5 mm) may be applied.

3.4.2 Volume Scan Procedure

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

3.4.3 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for

monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

3.4.4 Spatial Peak SAR Evaluation

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

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

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

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

3.4.5 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

4. SAR Measurement Evaluation

4.1 Applicable Standards

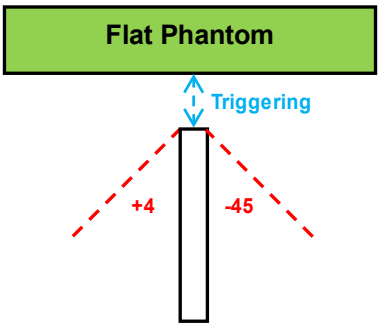
KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02 RF Exposure Reporting v01r02
KDB 248227 D01 802.11 Wi-Fi SAR v02r02
KDB 447498 D01 General RF Exposure Guidance v06
FCC 47 CFR Part 2 (2.1093)

4.2 EUT Configuration and Setting

<Considerations Related to Proximity Sensor>
The device supports WWAN, WLAN, and Bluetooth capabilities. It is designed with a proximity sensor which can trigger/not trigger power reduction for WCDMA and LTE on Rear Face and Left Side of EUT for SAR compliance.Others RF capability (WLAN and Bluetooth) have no power reduction. The power levels for all wireless technologies and the power reduction please refer to section 4.6 of this report.
Proximity Sensor Triggering Distances (KDB 616217 D04 §6.2)
The proximity sensor triggering distance was determined per KDB 616217 for rear face and applicable edge. Summary for power verification per distance was tabulated in the below table.

Output Power Verification in dBm for EUT Rear Face											
Distance (mm)	6	7	8	9	10	11	12	13	14	15	16
LTE 2	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 4	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 5	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 7	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
LTE 12	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 13	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 26	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 41	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
LTE 66	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
Output Power Verification in dBm for EUT RightSide											
Distance (mm)	6	7	8	9	10	11	12	13	14	15	16
LTE 2	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 4	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 5	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 7	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
LTE 12	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 13	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 26	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50
LTE 41	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
LTE 66	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50	24.50

Proximity Sensor Coverage (KDB 616217 D04 §6.3)
Since the proximity sensor is collocated with antenna in one component, the procedure for proximity sensor coverage is not required.
Proximity Sensor Tilt Angle Influences (KDB 616217 D04 §6.4)
The proximity sensor tilt angle influence was determined per KDB 616217 for applicable edge. Summary for proximity sensor tilt angle influence is shown in below.



Orientation	Separation Distance (mm)	Tilt Angle										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
Left Side	11	On	On	On	On	On	On	On	On	On	On	On

Summary for Proximity Sensor Triggering Test

According to the procedures noticed in KDB 616217 D04, the proximity sensor triggering distance is 16 mm for EUT Rear Face, and 11 mm for Left Side. The separation distance of 11 mm determined by the smallest triggering distance on Left Side is used to access the tilt angle influence and the sensor does not release during ±45 degree. Therefore, the smallest separation distance for tilt angle influence is 11 mm for the Left Side. The conservation triggering distances based on the separation distance for the sensor trigger / not triggered as EUT with power reduction at 0 mm, and EUT without power reduction at 15 mm for EUT Rear Face, and10 mm for Left Side were used to test SAR.

The power reduction is depends on the proximity sensor input. For a steady SAR test, the power reduction was enabled or disabled manually by engineering software during SAR testing.

<Connections between EUT and System Simulator>

For WWAN SAR testing, the EUT was linked and controlled by base station emulator (R&S CMW500). Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

<Considerations Related to WCDMA for Setup and Testing>

WCDMA Handsets Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

WCDMA Handsets Body-worn SAR

SAR for body-worn configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode.

Handsets with Release 5 HSDPA

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

Handsets with Release 6 HSUPA

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

Release 5 HSDPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA.HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) are set according to values indicated in below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs} (1)	CM (dB) (2)	MPR
1	2 / 15	15 / 15	64	2 / 15	4 / 15	0.0	0
2	12 / 15 (3)	15 / 15 (3)	64	12 / 15 (3)	24 / 15	1.0	0
3	15 / 15	8 / 15	64	15 / 8	30 / 15	1.5	0.5
4	15 / 15	4 / 15	64	15 / 4	30 / 15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 $\Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d = 12 / 15, β_{hs}/β_c = 24 / 15.
Note 3: For subtest 2 the β_c/β_d ratio of 12 / 15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11 / 15 and β_d = 15 / 15.

Release 6 HSUPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode.Otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in below.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM(2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}: 47/15 β_{ed2}: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 $\Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCHthe MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

<Considerations Related to LTE for Setup and Testing>

This device contains LTE transmitter which follows 3GPP standards, is category 3, supports both QPSK and 16QAM modulations, and supported LTE band and channel bandwidth is listed in below. The output power was tested per 3GPP TS 36.521-1 maximum transmit procedures for both QPSK and 16QAM modulation. The results please refer to section 4.6 of this report.

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz
2	√	√	√	√	√	√
4	√	√	√	√	√	√
5	√	√	√	√		
7			√	√	√	√
12	√	√	√	√		
13			√	√		
26	√	√	√	√	√	
41			√	√	√	√
66			√	√	√	√

The LTE maximum power reduction (MPR) in accordance with 3GPP TS 36.101 is active all times during LTE operation. The allowed MPR for the maximum output power is specified in below.

Modulation	Channel Bandwidth / RB Configurations						LTE MPR Setting (dB)
	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2

Note: MPR is according to the standard and implemented in the circuit (mandatory).

In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

During LTE SAR testing, the related parameters of operating band, channel bandwidth, uplink channel number, modulation type, and RB was set in base station simulator. When the EUT has registered and communicated to base station simulator, the simulator set to make EUT transmitting the maximum radiated power.

For LTE B4 / B5 / B12 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

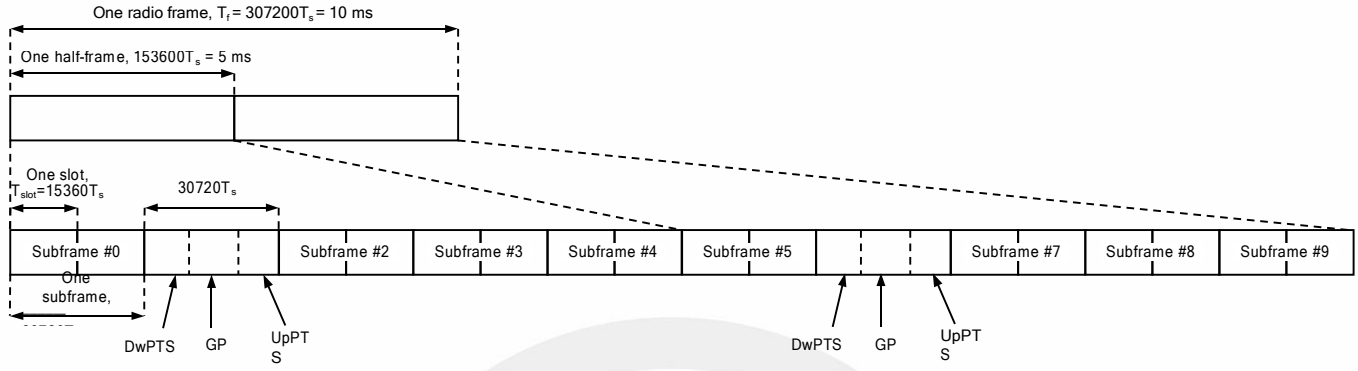
LTE band 2 SAR test was covered by Band 25; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if

a. the maximum output power, including tolerance, for the smaller band is = the larger band to qualify for the SAR test exclusion

b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

TDD-LTE Setup Configurations

According to KDB 941225 D05, SAR testing for TDD-LTE device must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP TDD-LTE configurations.The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be referred to below.



3GPP TS 36.211 Figure 4.2-1: Frame Structure Type 2

Special Subframe Configuration	Normal Cyclic Prefix in Downlink			Extended Cyclic Prefix in Downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink
0	6592·Ts	2192·Ts	2560·Ts	7680·Ts	2192·Ts	2560·Ts
1	19760·Ts			20480·Ts		
2	21952·Ts			23040·Ts		
3	24144·Ts			25600·Ts		
4	26336·Ts			7680·Ts	4384·Ts	5120·Ts
5	6592·Ts	4384·Ts	5120·Ts	20480·Ts		
6	19760·Ts			23040·Ts		
7	21952·Ts			12800·Ts		
8	24144·Ts			-	-	-
9	13168·Ts			-	-	-

3GPP TS 36.211 Table 4.2-1: Configuration of Special Subframe

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

3GPP TS 36.211 Table 4.2-2: Uplink-Downlink Configurations

The variety of different TD-LTE uplink-downlink configurations allows a network operator to allocate the network's capacity between uplink and downlink traffic to meet the needs of the network. The uplink duty cycle of these seven configurations can readily be computed and shown in below.

UL-DL Configuration	0	1	2	3	4	5	6
Highest Duty-Cycle	63.33%	43.33%	23.33%	31.67%	21.67%	11.67%	53.33%

Considering the highest transmission duty cycle, TDD-LTE was tested using Uplink-Downlink Configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 7 using extended cyclic prefix uplink. Therefore, SAR testing for TDD-LTE was performed at the maximum output power with highest transmission duty cycle of 63.33%.

<Considerations Related to WLAN for Setup and Testing>

In general, various vendor specific external test software and chipset based internal test modes are typically used for SAR measurement. These chipset based test mode utilities are generally hardware and manufacturer dependent, and often include substantial flexibility to reconfigure or reprogram a device. A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

According to KDB 248227 D01,this device has installed WLAN engineering testing software which can provide continuous transmitting RF signal. During WLAN SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

Initial Test Configuration

An initial test configuration is determined for OFDM transmission modes in 2.4 GHz and 5 GHz bands according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. When the highest reported SAR for the initial test configuration according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤

1.2 W/kg, SAR is not required for that subsequent test configuration.

SAR Test Configuration and Channel Selection

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is using largest channel bandwidth, lowest order modulation, lowest data rate, and lowest order 802.11 mode (i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over

802.11n).After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

The channel closest to mid-band frequency is selected for SAR measurement.

For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

Test Reduction for U-NII-1 (5.2 GHz) and U-NII-2A (5.3 GHz) Bands

For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following.

When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition).

When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

4.3 EUT Testing Position

4.3.1 Body Exposure Conditions

For full-size tablet, according to KDB 616217 D04, SAR evaluation is required for back surface and edges of the devices. The back surface and edges of the tablet are tested with the tablet touching the phantom. Exposures from antennas through the front surface of the display section of a tablet are generally limited to the user's hands. Exposures to hands for typical consumer transmitters used in tablets are not expected to exceed the extremity SAR limit; therefore, SAR evaluation for the front surface of tablet display screens are generally not necessary. When voice mode is supported on a tablet and it is limited to speaker mode or headset operations only, additional SAR testing for this type of voice use is not required.

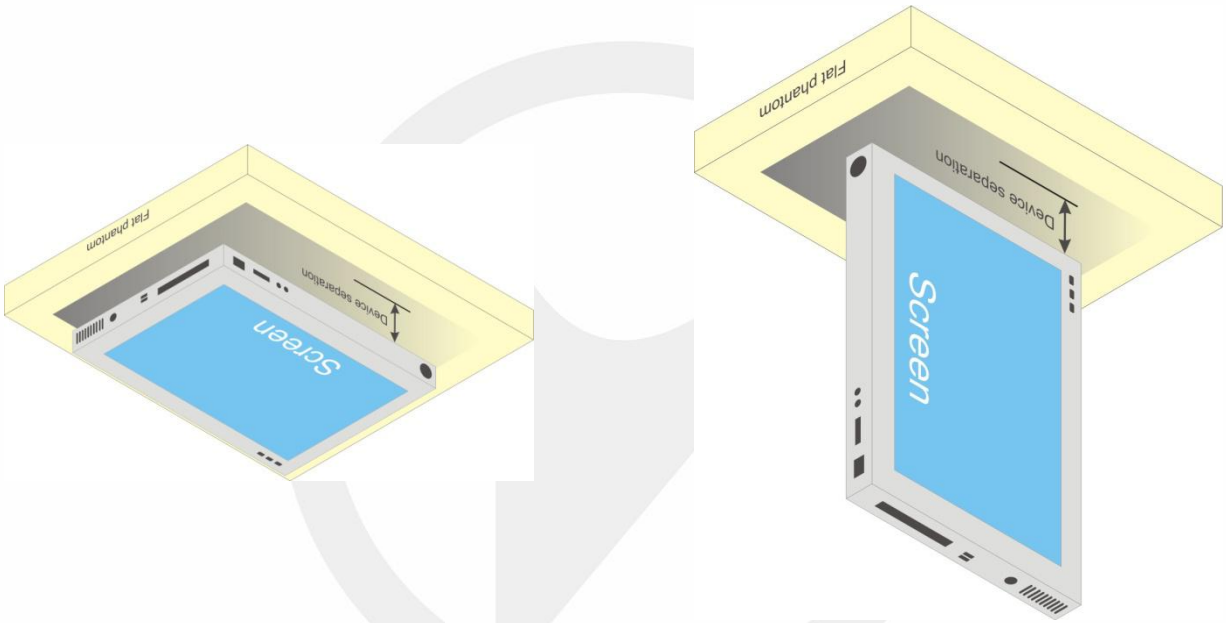
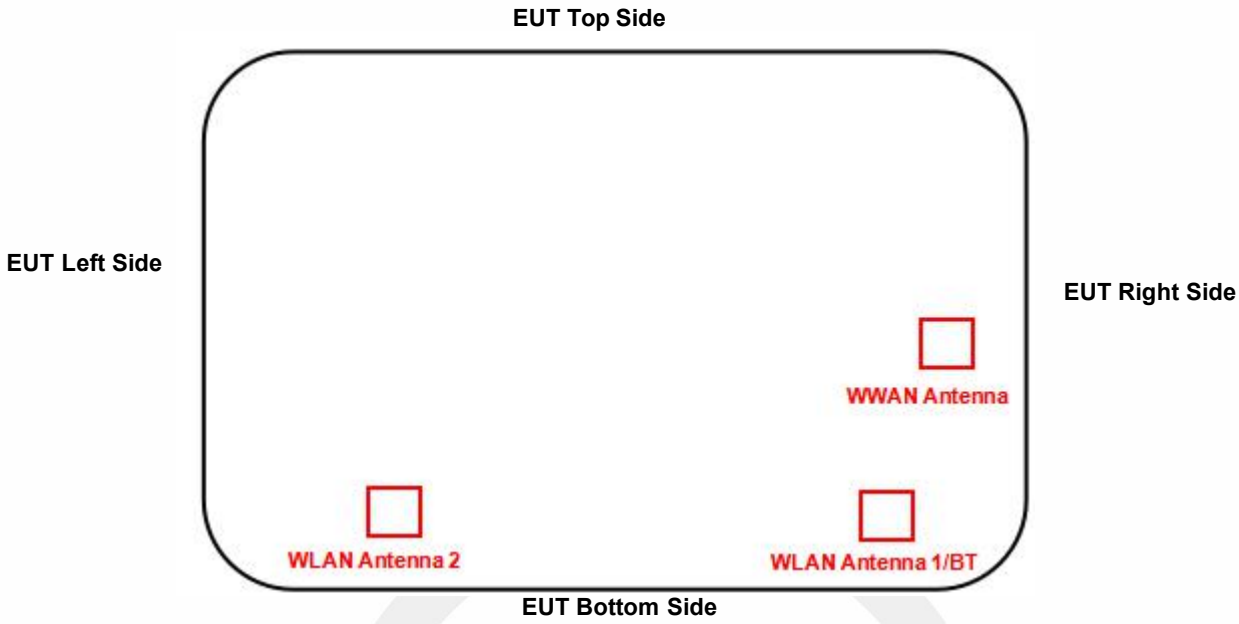


Fig-4.1 Illustration for Tablet Setup

<Antenna Location>



<EUT Front View>

The separation distance for antenna to edge:

Antenna	To Left Side (mm)	To Right Side (mm)	To Top Side (mm)	To Bottom Side (mm)	To Front Face (mm)	To Rear Face (mm)
WLAN Antenna 1	234	50	182	10	5	10
WLAN Antenna 2	50	234	182	10	5	10
BT	234	50	182	10	5	10
WWAN	274	10	102	90	5	10

4.3.2 SAR Test Exclusion Evaluations

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximumconducted output power, adjusted for tune-up tolerance, and theminimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

1. For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(mW)}}{\text{Min. Test Separation Distance}_{(mm)}} \times \sqrt{f_{(GHz)}} \leq 3.0 \text{ for SAR-1g, } \leq 7.5 \text{ for SAR-10g}$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2. For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50\ \text{mm}) \times \left(\frac{f_{(MHz)}}{150}\right)\right]_{(mW)}$$

3. For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50\ \text{mm}) \times 10]_{(mW)}$$

<For WWAN>

Mode	Max. Tune-up Power	Max. Tune-up Power (mW)	RearFace			LeftSide			RightSide			TopSide			BottomSide		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?
LTE 2	24.5	281.84	10	38.9	Yes	274	2349 mW	No	10	38.9	Yes	102	629 mW	No	90	509 mW	No
LTE 4	24.5	281.84	10	37.1	Yes	274	2354 mW	No	10	37.1	Yes	102	634 mW	No	90	514 mW	No
LTE 5	24.5	281.84	10	25.8	Yes	274	1413 mW	No	10	25.8	Yes	102	454 mW	No	90	387 mW	No
LTE 7	23.0	199.53	10	31.8	Yes	274	2334 mW	No	10	31.8	Yes	102	614 mW	No	90	494 mW	No
LTE 12	24.5	281.84	10	23.7	Yes	274	1235 mW	No	10	23.7	Yes	102	424 mW	No	90	367 mW	No
LTE 13	24.5	281.84	10	24.9	Yes	274	1337 mW	No	10	24.9	Yes	102	441 mW	No	90	378 mW	No
LTE 26	24.5	281.84	10	25.8	Yes	274	1413 mW	No	10	25.8	Yes	102	454 mW	No	90	387 mW	No
LTE41	23.0	199.53	10	31.5	Yes	274	2335 mW	No	10	31.5	Yes	102	615 mW	No	90	495 mW	No
LTE 66	24.5	281.84	10	37.2	Yes	274	2354 mW	No	10	37.2	Yes	102	634 mW	No	90	514 mW	No

<Antenna 1 for WLAN >

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	RearFace			LeftSide			RightSide			TopSide			BottomSide		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?
WLAN 2.4G	23.0	199.53	10	31.1	Yes	234	1936 mW	No	50	6.2	Yes	182	1416 mW	No	10	31.1	Yes
WLAN 5.2G	13.5	22.39	10	5.1	Yes	234	1906 mW	No	50	1.0	No	182	1386 mW	No	10	5.1	Yes
WLAN 5.3G	13.0	19.95	10	4.6	Yes	234	1905 mW	No	50	0.9	No	182	1385 mW	No	10	4.6	Yes
WLAN 5.6G	13.0	19.95	10	4.7	Yes	234	1904 mW	No	50	0.9	No	182	1384 mW	No	10	4.7	Yes
WLAN 5.8G	13.0	19.95	10	4.8	Yes	234	1902 mW	No	50	1.0	No	182	1382 mW	No	10	4.8	Yes

<For Antenna 2 for WLAN >

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	RearFace			LeftSide			RightSide			TopSide			BottomSide		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?
WLAN 2.4G	23.0	199.53	10	31.1	Yes	50	6.2	Yes	234	1936 mW	No	182	1416 mW	No	10	31.1	Yes
WLAN 5.2G	13.0	19.95	10	4.6	Yes	50	0.9	No	234	1906 mW	No	182	1386 mW	No	10	4.6	Yes
WLAN 5.3G	13.0	19.95	10	4.6	Yes	50	0.9	No	234	1905 mW	No	182	1385 mW	No	10	4.6	Yes
WLAN 5.6G	13.0	19.95	10	4.7	Yes	50	0.9	No	234	1904 mW	No	182	1384 mW	No	10	4.7	Yes
WLAN 5.8G	12.5	17.78	10	4.3	Yes	50	0.9	No	234	1902 mW	No	182	1382 mW	No	10	4.3	Yes

<For Antenna 1+2 for WLAN >

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	RearFace			LeftSide			RightSide			TopSide			BottomSide		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing ?
WLAN 2.4G	26.0	398.11	10	62.1	Yes	50	6.2	Yes	50	12.4	Yes	182	1416 mW	No	10	62.1	Yes
WLAN 5.2G	16.0	39.81	10	9.1	Yes	234	1906 mW	No	50	1.8	No	182	1386 mW	No	10	9.1	Yes
WLAN 5.3G	16.5	44.67	10	10.3	Yes	234	1905 mW	No	50	2.1	No	182	1385 mW	No	10	10.3	Yes
WLAN 5.6G	16.0	39.81	10	9.4	Yes	234	1904 mW	No	50	1.9	No	182	1384 mW	No	10	9.4	Yes
WLAN 5.8G	16.0	39.81	10	9.6	Yes	234	1902 mW	No	50	1.9	No	182	1382 mW	No	10	9.6	Yes

<For BT >

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Left Side			Right Side			Top Side			Bottom Side		
			Ant. to Surface (mm)	Pth(mW)	Require SAR Testing?	Ant. to Surface (mm)	Pth(mW)	Require SAR Testing?	Ant. to Surface (mm)	Pth(mW)	Require SAR Testing?	Ant. to Surface (mm)	Pth(mW)	Require SAR Testing ?	Ant. to Surface (mm)	Pth(mW)	Require SAR Testing ?
BT	6.5	4.47	10	0.7	No	234	1936 mW	No	50	0.1	No	182	1416 mW	No	10	0.7	No

Note:

1. When separation distance ≤ 50 mm and the calculated result shown in above table is ≤ 3.0 for SAR-1g exposure condition, or ≤ 7.5 for SAR-10g exposure condition, the SAR testing exclusion is applied.
2. When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.
3. Display diagonal size greater than 20cm, reference KDB 616217, test distance 0mm (no needn to test face up)

4.3 Simultaneous Transmission Possibilities

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition
1	LTE 2 (Data) + WLAN (Data)	Yes
2	LTE 4 (Data) + WLAN (Data)	Yes
3	LTE 5 (Data) + WLAN (Data)	Yes
4	LTE 7 (Data) + WLAN (Data)	Yes
5	LTE 12 (Data) + WLAN (Data)	Yes
6	LTE 13 (Data) + WLAN (Data)	Yes
7	LTE 26 (Data) + WLAN (Data)	Yes
8	LTE 41 (Data) + WLAN (Data)	Yes
9	LTE 66 (Data) + WLAN (Data)	Yes
10	LTE 2 (Data) + BT (Data)	Yes
11	LTE 4 (Data) + BT (Data)	Yes
12	LTE 5 (Data) + BT (Data)	Yes
13	LTE 7 (Data) + BT (Data)	Yes
14	LTE 12 (Data) + BT (Data)	Yes
15	LTE 13 (Data) + BT (Data)	Yes
16	LTE 26 (Data) + BT (Data)	Yes
17	LTE 41 (Data) + BT (Data)	Yes
18	LTE 66 (Data) + BT (Data)	Yes
19	WLAN (Data)+BT (Data)	Yes
20	2.4GWLAN (Data)+5GWLAN (Data)	Yes
21	2.4GWLAN (Data)+6GWLAN (Data)	Yes
22	5GWLAN (Data)+6GWLAN (Data)	Yes
23	BT (Data)+6GWLAN (Data)	Yes

Note :

1. The 2.4G WLAN and 5G WLAN can transmit simultaneously.
2. The 2.4G WLAN and 6G WLAN can transmit simultaneously.
3. The WLAN and Bluetooth can transmit simultaneously

4.4 Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (℃)	Measured Conductivity (σ)	Measured Permittivity (ε_r)	Target Conductivity (σ)	Target Permittivity (ε_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
July.12, 2024	Head	750	22.3	0.87	41.63	0.89	41.90	-2.25	-0.64
July.15, 2024	Head	835	22.1	0.87	41.83	0.90	41.50	-3.33	0.80
July.17 ,2024	Head	1750	22.5	1.34	39.44	1.37	40.10	-2.19	-1.65
July.18, 2024	Head	1950	22.3	1.40	39.59	1.40	40.00	0.00	-1.02
July.8, 2024	Head	2450	21.8	1.78	40.11	1.80	39.20	-1.11	2.32
July.19, 2024	Head	2600	22.5	2.02	38.47	1.96	39.00	3.06	-1.36
July.9, 2024	Head	5250	22.1	4.75	36.87	4.71	35.90	0.85	2.70
July.10, 2024	Head	5600	22.4	5.13	36.14	5.07	35.50	1.18	1.80
July.11, 2024	Head	5750	21.8	5.22	35.61	5.22	35.40	0.00	0.59

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within ±5% of the target values. Liquid temperature during the SAR testing must be within ±2 ℃.

4.5 System Validation

The SAR measurement system was validated according to procedures in KDB 865664 D01. The validation status in tabulated summary is as below.

Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ε_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
July.12, 2024	3970	Head	750	0.87	41.63	Pass	Pass	Pass	OFDM	N/A	Pass
July.15, 2024	3970	Head	835	0.87	41.83	Pass	Pass	Pass	OFDM	N/A	Pass
July.17 ,2024	3970	Head	1750	1.34	39.44	Pass	Pass	Pass	OFDM	N/A	Pass
July.18, 2024	3970	Head	1950	1.40	39.59	Pass	Pass	Pass	OFDM	N/A	Pass
July.8, 2024	3970	Head	2450	1.78	40.11	Pass	Pass	Pass	OFDM	N/A	Pass
July.19, 2024	3970	Head	2600	2.02	38.47	Pass	Pass	Pass	OFDM	N/A	Pass
July.9, 2024	3970	Head	5250	4.75	36.87	Pass	Pass	Pass	OFDM	N/A	Pass
July.10, 2024	3970	Head	5600	5.13	36.14	Pass	Pass	Pass	OFDM	N/A	Pass
July.11, 2024	3970	Head	5750	5.22	35.61	Pass	Pass	Pass	OFDM	N/A	Pass

4.6 System Verification

The measuring result for system verification istabulated as below.

Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
July.12, 2024	Head	750	8.25	2.08	8.32	0.85	1078	3970	1418
July.15, 2024	Head	835	9.40	2.41	9.64	2.55	4d092	3970	1418
July.17 ,2024	Head	1750	36.30	9.22	36.88	1.60	1023	3970	1418
July.18, 2024	Head	1950	40.60	9.67	38.68	-4.73	1151	3970	1418
July.8, 2024	Head	2450	52.10	13.07	52.28	0.35	927	3970	1418
July.19, 2024	Head	2600	55.80	14.21	56.84	1.86	1058	3970	1418
July.9, 2024	Head	5250	76.50	7.93	79.30	3.66	1169	3970	1418
July.10, 2024	Head	5600	78.70	8.17	81.70	3.81	1169	3970	1418
July.11, 2024	Head	5750	75.20	7.61	76.10	1.20	1169	3970	1418

Note:

Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.

4.7 Maximum Output Power

4.7.1 Maximum Conducted Power

The maximum conducted averagepower (Unit: dBm) including tune-up tolerance is shown as below.

Mode	LTE 2 (without Power Reduction)	LTE 2 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 4 (without Power Reduction)	LTE 4 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 5 (without Power Reduction)	LTE 5 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 7 (without Power Reduction)	LTE 7 (with Power Reduction)	Power Reduction (dB)
QPSK	23.00	23.00	0

Mode	LTE 12 (without Power Reduction)	LTE 12 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 13 (without Power Reduction)	LTE 13 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 26 (without Power Reduction)	LTE 26 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

Mode	LTE 41 (without Power Reduction)	LTE 41 (with Power Reduction)	Power Reduction (dB)
QPSK	23.00	23.00	0

Mode	LTE 66 (without Power Reduction)	LTE 66 (with Power Reduction)	Power Reduction (dB)
QPSK	24.50	24.50	0

ANT1:

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b	17.50	N/A	N/A	N/A	N/A
802.11g	22.00	N/A	N/A	N/A	N/A
802.11a	N/A	10.00	10.00	9.50	9.50
802.11n HT20	22.00	9.50	10.00	9.50	9.00
802.11n HT40	22.50	13.00	13.00	12.50	13.00
802.11ac VHT20	N/A	9.50	10.00	9.50	9.50
802.11ac VHT40	N/A	13.50	13.50	13.00	13.00
802.11ac VHT80	N/A	13.00	13.00	13.00	13.00
802.11ac VHT160	N/A	9.50	N/A	13.00	N/A
802.11ax HE20	22.50	10.00	10.00	9.50	9.50
802.11ax HE40	23.00	13.00	13.00	12.50	12.50
802.11ax HE80	N/A	13.00	13.00	12.50	12.50
802.11ax HE160	N/A	9.50	N/A	12.50	N/A

ANT2:

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b	17.50	N/A	N/A	N/A	N/A
802.11g	22.00	N/A	N/A	N/A	N/A
802.11a	N/A	10.00	10.00	10.00	9.50
802.11n HT20	22.50	10.00	10.00	9.50	9.50
802.11n HT40	23.00	13.00	13.00	12.50	12.50
802.11ac VHT20	N/A	9.50	9.50	9.50	9.50
802.11ac VHT40	N/A	13.00	13.00	12.50	12.50
802.11ac VHT80	N/A	13.00	12.50	13.00	13.00
802.11ac VHT160	N/A	10.00	N/A	13.00	N/A
802.11ax HE20	22.50	9.50	10.00	9.50	9.50
802.11ax HE40	23.00	12.50	13.00	12.50	12.50
802.11ax HE80	N/A	13.00	12.50	12.50	12.50
802.11ax HE160	N/A	9.50	N/A	13.00	N/A

ANT1+2:

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b	NA	N/A	N/A	N/A	N/A
802.11g	NA	N/A	N/A	N/A	N/A
802.11a	N/A	NA	NA	NA	NA
802.11n HT20	25.00	13.00	13.00	12.50	12.50
802.11n HT40	26.00	16.00	16.00	15.50	16.00
802.11ac VHT20	N/A	12.50	13.00	12.50	12.50
802.11ac VHT40	N/A	16.00	16.50	16.00	16.00
802.11ac VHT80	N/A	16.00	16.00	16.00	16.00
802.11ac VHT160	N/A	13.00	N/A	16.00	N/A
802.11ax HE20	25.50	13.00	13.00	12.50	12.50
802.11ax HE40	26.00	16.00	16.00	15.50	15.50
802.11ax HE80	N/A	16.00	15.50	15.50	15.50
802.11ax HE160	N/A	12.50	N/A	16.00	N/A

Mode	2.4G Bluetooth
GFSK	6.50
π/4-DQPSK	5.00
8-DPSK	5.50
LE1M	5.00
LE2M	5.00

4.7.2 Measured Conducted Power Result

The measuring conducted power (Unit: dBm) is shown as below.

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18607	Mid CH 18900	High CH 19193		Low CH 18607	Mid CH 18900	High CH 19193	
			1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 1.4M	1	0	23.72	23.82	23.80	0	22.68	22.97	22.97	1
	1	2	23.77	23.89	23.80	0	22.67	23.09	23.06	1
	1	5	23.76	23.80	23.79	0	22.63	22.96	23.04	1
	3	0	23.72	23.83	23.84	0	22.61	22.73	22.77	1
	3	1	23.72	23.83	23.84	0	22.59	22.71	22.80	1
	3	3	23.73	23.84	23.86	0	22.57	22.70	22.83	1
	6	0	22.69	22.84	22.81	1	21.73	21.88	21.72	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18615	Mid CH 18900	High CH 19185		Low CH 18615	Mid CH 18900	High CH 19185	
			1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 3M	1	0	23.76	23.97	23.95	0	22.96	23.03	22.80	1
	1	8	23.79	23.88	23.86	0	22.90	23.06	22.84	1
	1	14	23.73	23.92	23.75	0	22.89	22.98	22.80	1
	8	0	22.79	22.90	22.94	1	21.86	21.95	21.99	2
	8	4	22.81	22.93	22.93	1	21.85	21.95	21.97	2
	8	7	22.80	22.89	22.99	1	21.83	21.90	21.96	2
	15	0	22.75	22.96	22.92	1	21.80	21.83	21.86	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18625	Mid CH 18900	High CH 19175		Low CH 18625	Mid CH 18900	High CH 19175	
			1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 5M	1	0	23.93	24.01	24.04	0	22.94	23.27	23.06	1
	1	12	23.94	24.06	24.07	0	22.99	23.29	23.12	1
	1	24	23.83	23.96	23.92	0	22.91	23.18	23.02	1
	12	0	22.82	22.91	22.94	1	21.82	21.99	21.95	2
	12	6	22.81	22.91	22.90	1	21.84	21.94	21.97	2
	12	13	22.80	22.92	22.95	1	21.79	21.98	22.00	2
	25	0	22.75	22.91	22.93	1	21.86	21.88	21.97	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18650	Mid CH 18900	High CH 19150		Low CH 18650	Mid CH 18900	High CH 19150	
			1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 10M	1	0	23.79	23.89	24.11	0	23.10	23.11	23.01	1
	1	24	23.82	23.94	23.95	0	22.95	23.12	22.88	1
	1	49	23.76	23.84	23.88	0	22.92	22.99	22.88	1
	25	0	22.86	22.94	23.06	1	21.85	22.04	22.10	2
	25	12	22.87	23.03	23.09	1	21.86	22.03	22.09	2
	25	25	22.77	22.87	22.97	1	21.79	21.91	21.96	2
	50	0	22.81	22.92	22.94	1	21.80	21.92	21.93	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18675	Mid CH 18900	High CH 19125		Low CH 18675	Mid CH 18900	High CH 19125	
			1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 15M	1	0	23.90	23.94	24.28	0	23.13	23.15	23.23	1
	1	38	23.82	23.86	24.20	0	22.97	23.16	23.04	1
	1	74	23.92	23.84	24.01	0	23.10	23.12	23.04	1
	38	0	22.78	22.91	23.16	1	22.77	22.88	23.17	2
	38	18	22.78	22.92	23.15	1	22.81	22.89	23.19	2
	38	37	22.79	22.89	23.14	1	22.80	22.91	23.17	2
	75	0	22.81	22.92	23.16	1	21.81	21.92	22.16	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18700	Mid CH 18900	High CH 19100		Low CH 18700	Mid CH 18900	High CH 19100	
			1860.0 MHz	1880.0 MHz	1900.0 MHz		1860.0 MHz	1880.0 MHz	1900.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
2 / 20M	1	0	23.99	23.90	24.25	0	23.14	23.07	23.34	1
	1	49	23.88	23.86	24.22	0	23.04	23.00	23.21	1
	1	99	23.91	23.58	24.13	0	23.03	22.73	23.27	1
	50	0	22.87	22.91	23.26	1	21.93	21.99	22.21	2
	50	25	22.90	22.95	23.26	1	21.89	22.03	22.19	2
	50	50	22.91	22.88	23.07	1	21.90	21.93	22.04	2
	100	0	22.86	22.93	23.23	1	21.81	21.96	22.20	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19957	Mid CH 20175	High CH 20393		Low CH 19957	Mid CH 20175	High CH 20393	
			1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 1.4M	1	0	23.94	23.98	23.81	0	23.05	22.87	22.95	1
	1	2	23.98	24.05	23.85	0	23.16	22.94	23.00	1
	1	5	23.92	24.00	23.78	0	23.04	22.82	22.93	1
	3	0	23.90	23.97	23.80	0	22.83	22.92	22.69	1
	3	1	23.91	24.06	23.79	0	22.83	22.95	22.69	1
	3	3	23.90	24.11	23.80	0	22.80	22.92	22.66	1
	6	0	22.93	23.04	22.82	1	21.81	22.07	21.87	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19965	Mid CH 20175	High CH 20385		Low CH 19965	Mid CH 20175	High CH 20385	
			1711.5 MHz	1732.5 MHz	1753.5 MHz		1711.5 MHz	1732.5 MHz	1753.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 3M	1	0	24.00	24.08	23.84	0	23.17	22.97	23.09	1
	1	8	23.92	24.07	23.88	0	23.19	22.96	23.09	1
	1	14	23.98	24.08	23.90	0	23.12	23.04	23.03	1
	8	0	23.01	23.20	22.87	1	22.03	22.15	21.93	2
	8	4	22.99	23.20	22.89	1	21.99	22.16	21.91	2
	8	7	22.96	23.19	22.86	1	21.97	22.20	21.93	2
	15	0	22.99	23.13	22.89	1	21.89	22.09	21.94	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19975	Mid CH 20175	High CH 20375		Low CH 19975	Mid CH 20175	High CH 20375	
			1712.5 MHz	1732.5 MHz	1752.5 MHz		1712.5 MHz	1732.5 MHz	1752.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 5M	1	0	24.13	24.15	24.01	0	23.30	23.34	23.17	1
	1	12	24.17	24.14	24.00	0	23.30	23.40	23.18	1
	1	24	24.03	24.15	23.93	0	23.24	23.34	23.15	1
	12	0	23.02	23.08	22.90	1	22.04	22.12	21.94	2
	12	6	23.00	23.00	22.84	1	22.06	22.14	21.93	2
	12	13	22.98	22.97	22.84	1	22.03	22.10	21.91	2
	25	0	22.98	23.02	22.84	1	22.04	21.99	21.86	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20000	Mid CH 20175	High CH 20350		Low CH 20000	Mid CH 20175	High CH 20350	
			1715.0 MHz	1732.5 MHz	1750.0 MHz		1715.0 MHz	1732.5 MHz	1750.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 10M	1	0	24.02	24.14	23.94	0	23.28	23.01	23.12	1
	1	24	23.88	24.10	23.87	0	23.25	23.00	23.13	1
	1	49	23.99	24.08	23.84	0	23.24	22.93	23.06	1
	25	0	23.01	23.08	22.95	1	22.05	22.14	21.90	2
	25	12	23.03	23.09	22.94	1	22.01	22.14	21.91	2
	25	25	22.99	23.06	22.89	1	22.00	22.10	21.90	2
	50	0	22.91	23.16	22.91	1	22.02	22.16	21.87	2

Band / BW	RB Size	RB Offset	QPSK Low CH 20025 1717.5 MHz	QPSK Mid CH 20175 1732.5 MHz	QPSK High CH 20325 1747.5 MHz	3GPP MPR (dB)	16QAM Low CH 20025 1717.5 MHz	16QAM Mid CH 20175 1732.5 MHz	16QAM High CH 20325 1747.5 MHz	3GPP MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 15M	1	0	24.08	24.25	24.10	0	23.33	23.10	23.38	1
	1	38	23.90	24.08	23.87	0	23.21	23.04	23.08	1
	1	74	24.02	24.22	23.92	0	23.30	23.07	23.18	1
	38	0	22.93	23.20	22.99	1	22.95	23.21	22.99	2
	38	18	22.93	23.20	22.98	1	22.91	23.17	22.97	2
	38	37	22.95	23.20	22.96	1	23.01	23.19	22.96	2
	75	0	22.97	23.18	22.95	1	22.01	22.18	21.96	2

Band / BW	RB Size	RB Offset	QPSK Low CH 20050 1720.0 MHz	QPSK Mid CH 20175 1732.5 MHz	QPSK High CH 20300 1745.0 MHz	3GPP MPR (dB)	16QAM Low CH 20050 1720.0 MHz	16QAM Mid CH 20175 1732.5 MHz	16QAM High CH 20300 1745.0 MHz	3GPP MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)										
4 / 20M	1	0	24.16	24.15	24.26	0	23.30	23.28	23.28	1
	1	49	24.08	24.05	24.01	0	23.22	23.20	23.03	1
	1	99	24.06	24.05	24.02	0	23.24	23.19	23.00	1
	50	0	23.08	23.25	23.09	1	22.07	22.30	22.10	2
	50	25	22.99	23.21	23.07	1	22.00	22.29	22.08	2
	50	50	23.03	23.14	22.96	1	22.02	22.22	21.93	2
	100	0	23.04	23.21	22.97	1	22.07	22.25	21.96	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20407	Mid CH 20525	High CH 20643		Low CH 20407	Mid CH 20525	High CH 20643	
			824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
5 / 1.4M	1	0	24.09	24.28	24.13	0	23.23	23.22	23.37	1
	1	2	24.13	24.32	24.16	0	23.31	23.30	23.39	1
	1	5	24.09	24.26	24.15	0	23.23	23.18	23.34	1
	3	0	24.07	24.30	24.11	0	23.04	23.16	23.00	1
	3	1	24.10	24.30	24.13	0	23.03	23.16	23.00	1
	3	3	24.12	24.29	24.14	0	23.04	23.12	22.97	1
	6	0	23.08	23.28	23.12	1	21.98	22.32	22.13	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20415	Mid CH 20525	High CH 20635		Low CH 20415	Mid CH 20525	High CH 20635	
			825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
5 / 3M	1	0	24.10	24.36	24.29	0	23.33	23.57	23.24	1
	1	8	24.14	24.28	24.28	0	23.32	23.56	23.24	1
	1	14	24.07	24.26	24.18	0	23.28	23.42	23.23	1
	8	0	23.20	23.34	23.35	1	22.22	22.38	22.37	2
	8	4	23.19	23.38	23.35	1	22.20	22.38	22.36	2
	8	7	23.16	23.32	23.30	1	22.17	22.39	22.38	2
	15	0	23.19	23.36	23.33	1	22.19	22.28	22.21	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20425	Mid CH 20525	High CH 20625		Low CH 20425	Mid CH 20525	High CH 20625	
			826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
5 / 5M	1	0	24.23	24.40	24.35	0	23.24	23.66	23.34	1
	1	12	24.28	24.46	24.43	0	23.31	23.65	23.50	1
	1	24	24.20	24.31	24.31	0	23.35	23.52	23.34	1
	12	0	23.17	23.37	23.38	1	22.17	22.44	22.42	2
	12	6	23.18	23.39	23.40	1	22.22	22.43	22.42	2
	12	13	23.25	23.34	23.34	1	22.23	22.43	22.39	2
	25	0	23.19	23.33	23.34	1	22.19	22.35	22.45	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20450	Mid CH 20525	High CH 20600		Low CH 20450	Mid CH 20525	High CH 20600	
			829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
5 / 10M	1	0	24.00	24.18	24.14	0	23.20	23.42	23.13	1
	1	24	24.01	24.18	24.10	0	23.19	23.34	23.05	1
	1	49	23.93	24.05	24.11	0	23.20	23.31	23.09	1
	25	0	23.04	23.27	23.13	1	22.00	22.32	22.23	2
	25	12	23.03	23.25	23.17	1	22.06	22.32	22.21	2
	25	25	23.04	23.20	23.21	1	22.06	22.20	22.21	2
	50	0	23.14	23.25	23.18	1	22.10	22.24	22.17	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20775	Mid CH 21100	High CH 21425		Low CH 20775	Mid CH 21100	High CH 21425	
			2502.5 MHz	2535.0 MHz	2567.5 MHz		2502.5 MHz	2535.0 MHz	2567.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
7 / 5M	1	0	22.48	22.61	22.57	0	21.72	21.82	21.79	1
	1	12	22.59	22.70	22.61	0	21.80	21.89	21.83	1
	1	24	22.46	22.61	22.57	0	21.70	21.80	21.73	1
	12	0	21.49	21.52	21.56	1	20.61	20.63	20.60	2
	12	6	21.52	21.54	21.51	1	20.63	20.62	20.63	2
	12	13	21.49	21.55	21.53	1	20.52	20.61	20.55	2
	25	0	21.52	21.54	21.53	1	20.56	20.54	20.52	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20800	Mid CH 21100	High CH 21400		Low CH 20800	Mid CH 21100	High CH 21400	
			2505.0 MHz	2535.0 MHz	2565.0 MHz		2505.0 MHz	2535.0 MHz	2565.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
7 / 10M	1	0	22.61	22.77	22.80	0	21.96	21.99	21.71	1
	1	24	22.64	22.78	22.74	0	21.84	21.98	21.64	1
	1	49	22.63	22.77	22.68	0	21.83	21.99	21.58	1
	25	0	21.73	21.81	21.74	1	20.73	20.83	20.80	2
	25	12	21.75	21.80	21.76	1	20.75	20.81	20.79	2
	25	25	21.69	21.76	21.69	1	20.69	20.82	20.77	2
	50	0	21.72	21.77	21.71	1	20.74	20.81	20.79	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20825	Mid CH 21100	High CH 21375		Low CH 20825	Mid CH 21100	High CH 21375	
			2507.5 MHz	2535.0 MHz	2562.5 MHz		2507.5 MHz	2535.0 MHz	2562.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
7 / 15M	1	0	22.77	22.73	22.90	0	21.91	22.04	21.70	1
	1	38	22.65	22.65	22.73	0	21.81	21.97	21.65	1
	1	74	22.64	22.63	22.67	0	21.83	21.96	21.56	1
	38	0	21.67	21.69	21.74	1	21.67	21.73	21.73	2
	38	18	21.67	21.72	21.76	1	21.67	21.72	21.75	2
	38	37	21.67	21.72	21.72	1	21.68	21.71	21.76	2
	75	0	21.68	21.71	21.75	1	20.66	20.75	20.78	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20850	Mid CH 21100	High CH 21350		Low CH 20850	Mid CH 21100	High CH 21350	
			2510.0 MHz	2535.0 MHz	2560.0 MHz		2510.0 MHz	2535.0 MHz	2560.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
7 / 20M	1	0	22.70	22.82	22.86	0	21.92	21.97	21.96	1
	1	49	22.64	22.75	22.63	0	21.81	21.93	21.76	1
	1	99	22.66	22.67	22.52	0	21.70	21.87	21.66	1
	50	0	21.74	21.77	21.86	1	20.70	20.81	20.91	2
	50	25	21.75	21.75	21.87	1	20.78	20.80	20.90	2
	50	50	21.63	21.73	21.66	1	20.66	20.77	20.75	2
	100	0	21.69	21.76	21.78	1	20.69	20.77	20.84	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 23017	Mid CH 23095	High CH 23173		Low CH 23017	Mid CH 23095	High CH 23173	
			699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
12 / 1.4M	1	0	23.85	24.08	24.06	0	23.14	23.01	23.24	1
	1	2	23.95	24.09	24.11	0	23.17	23.12	23.37	1
	1	5	23.92	24.06	24.06	0	23.06	22.99	23.18	1
	3	0	24.03	24.08	24.05	0	23.03	22.90	22.94	1
	3	1	24.00	24.03	24.10	0	23.08	22.93	22.93	1
	3	3	23.99	24.06	24.08	0	23.07	22.90	22.95	1
	6	0	22.99	23.04	23.01	1	21.93	22.14	22.07	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 23025	Mid CH 23095	High CH 23165		Low CH 23025	Mid CH 23095	High CH 23165	
			700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
12 / 3M	1	0	23.92	24.01	23.99	0	23.17	23.24	22.91	1
	1	8	23.97	24.09	23.98	0	23.11	23.19	22.92	1
	1	14	23.99	24.02	23.95	0	23.13	23.30	22.92	1
	8	0	22.98	23.15	23.09	1	22.18	22.17	22.14	2
	8	4	23.02	23.13	23.07	1	22.13	22.15	22.11	2
	8	7	22.99	23.12	23.10	1	22.11	22.15	22.11	2
	15	0	23.06	23.15	23.13	1	22.11	22.17	21.98	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 23035	Mid CH 23095	High CH 23155		Low CH 23035	Mid CH 23095	High CH 23155	
			701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
12 / 5M	1	0	23.95	24.08	24.17	0	23.09	23.32	23.20	1
	1	12	24.03	24.19	24.15	0	23.19	23.39	23.21	1
	1	24	23.96	24.06	24.04	0	23.06	23.28	23.15	1
	12	0	23.06	23.16	23.12	1	22.08	22.32	22.21	2
	12	6	23.03	23.18	23.11	1	22.13	22.31	22.18	2
	12	13	23.04	23.17	23.06	1	22.05	22.19	22.10	2
	25	0	23.05	23.17	23.08	1	22.08	22.15	22.18	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 23060	Mid CH 23095	High CH 23130		Low CH 23060	Mid CH 23095	High CH 23130	
			704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
12 / 10M	1	0	24.07	24.09	24.13	0	23.45	23.29	22.96	1
	1	24	24.01	24.17	24.02	0	23.19	23.31	22.92	1
	1	49	23.97	24.01	23.93	0	23.34	23.28	22.85	1
	25	0	23.17	23.13	23.06	1	22.20	22.22	22.16	2
	25	12	23.21	23.09	23.08	1	22.24	22.24	22.15	2
	25	25	23.04	23.19	22.99	1	22.10	22.20	22.04	2
	50	0	23.19	23.21	23.03	1	22.13	22.25	22.06	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 23205	Mid CH 23230	High CH 23255		Low CH 23205	Mid CH 23230	High CH 23255	
			779.5 MHz	782.0 MHz	784.5 MHz		779.5 MHz	782.0 MHz	784.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
13 / 5M	1	0	24.14	24.18	24.23	0	23.21	23.35	23.19	1
	1	12	24.29	24.24	24.25	0	23.36	23.40	23.26	1
	1	24	24.13	24.24	24.10	0	23.20	23.44	23.15	1
	12	0	23.21	23.24	23.14	1	22.17	22.31	22.16	2
	12	6	23.19	23.29	23.12	1	22.17	22.25	22.18	2
	12	13	23.25	23.21	23.08	1	22.22	22.25	22.15	2
	25	0	23.11	23.24	23.12	1	22.17	22.23	22.15	2

Band / BW	RB Size	RB Offset	QPSK	3GPP MPR (dB)	16QAM	3GPP MPR (dB)
			Mid CH 23230		Mid CH 23230	
			782.0 MHz		782.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)						
13 / 10M	1	0	24.07	0	23.33	1
	1	24	24.20	0	23.45	1
	1	49	24.13	0	23.37	1
	25	0	23.24	1	22.16	2
	25	12	23.18	1	22.20	2
	25	25	23.21	1	22.23	2
	50	0	23.26	1	22.27	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26797	Mid CH 26915	High CH 27033		Low CH 26797	Mid CH 26915	High CH 27033	
			824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
26 / 1.4M	1	0	23.97	24.05	24.02	0	23.13	22.99	23.21	1
	1	2	24.02	24.12	24.10	0	23.25	23.07	23.28	1
	1	5	23.95	24.07	24.02	0	23.13	22.94	23.19	1
	3	0	24.03	24.11	24.04	0	22.96	22.94	22.92	1
	3	1	24.00	24.10	24.06	0	22.98	22.93	22.92	1
	3	3	24.03	24.06	24.03	0	22.95	22.91	22.91	1
	6	0	22.99	23.03	23.00	1	21.86	22.05	22.08	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26805	Mid CH 26915	High CH 27025		Low CH 26805	Mid CH 26865	High CH 27025	
			825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	831.0 MHz	847.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
26 / 3M	1	0	24.00	24.03	24.15	0	23.24	23.22	23.02	1
	1	8	24.07	24.08	24.14	0	23.28	23.35	23.06	1
	1	14	24.01	24.09	24.09	0	23.18	23.23	23.01	1
	8	0	23.08	23.18	23.16	1	22.14	22.12	22.17	2
	8	4	23.05	23.16	23.15	1	22.16	22.16	22.15	2
	8	7	23.09	23.11	23.17	1	22.08	22.13	22.15	2
	15	0	23.06	23.15	23.10	1	22.13	22.06	22.08	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26815	Mid CH 26915	High CH 27015		Low CH 26815	Mid CH 26915	High CH 27015	
			826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
26 / 5M	1	0	24.11	24.11	24.26	0	23.16	23.32	23.22	1
	1	12	24.18	24.25	24.24	0	23.18	23.45	23.26	1
	1	24	24.19	24.14	24.14	0	23.17	23.32	23.14	1
	12	0	23.08	23.07	23.13	1	22.09	22.11	22.18	2
	12	6	23.09	23.08	23.13	1	22.05	22.08	22.16	2
	12	13	23.10	23.13	23.09	1	22.05	22.18	22.10	2
	25	0	23.09	23.20	23.13	1	22.08	22.09	22.14	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26840	Mid CH 26915	High CH 26990		Low CH 26840	Mid CH 26915	High CH 26990	
			829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
26 / 10M	1	0	24.01	23.65	23.41	0	23.29	23.13	23.28	1
	1	24	24.06	23.63	23.39	0	23.33	23.11	23.26	1
	1	49	23.99	23.61	23.37	0	23.17	23.09	23.24	1
	25	0	23.06	23.58	23.34	1	22.02	23.06	23.21	2
	25	12	23.05	23.55	23.31	1	22.08	23.03	23.18	2
	25	25	23.13	22.04	21.98	1	22.11	22.04	21.98	2
	50	0	23.19	21.94	21.88	1	22.13	21.94	21.88	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26865	Mid CH 26915	High CH 26965		Low CH 26865	Mid CH 26915	High CH 26965	
			831.5 MHz	836.5 MHz	841.5 MHz		831.5 MHz	836.5 MHz	841.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
26 / 15M	1	0	24.09	24.03	24.00	0	23.36	22.98	22.95	0
	1	38	24.13	24.01	23.98	0	23.40	22.95	22.92	0
	1	74	24.11	23.99	23.96	0	23.39	22.93	22.90	0
	38	0	23.13	23.96	23.93	1	23.12	22.03	22.00	1
	38	18	23.12	23.93	23.90	1	23.04	22.01	21.98	1
	38	37	23.12	22.04	21.98	1	23.12	21.99	21.96	1
	75	0	23.15	21.94	21.88	1	22.13	22.03	22.00	1

Band / BW	RB Size	RB Offset	QPSK L-CH 39675 2498.5 MHz	QPSK M-CH 40620 2593.0 MHz	QPSK H-CH 41565 2687.5 MHz		16QAM L-CH 39675 2498.5 MHz	16QAM M-CH 40620 2593.0 MHz	16QAM H-CH 41565 2687.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
41 / 5M	1	0	22.41	22.26	22.23	0	21.79	21.65	21.56	1
	1	12	22.45	22.38	22.27	0	21.82	21.72	21.55	1
	1	24	22.34	22.24	22.12	0	21.71	21.60	21.49	1
	12	0	21.46	21.37	21.35	1	20.57	20.44	20.37	2
	12	6	21.50	21.34	21.27	1	20.61	20.46	20.40	2
	12	13	21.49	21.39	21.28	1	20.61	20.44	20.33	2
	25	0	21.53	21.36	21.26	1	20.53	20.39	20.37	2

Band / BW	RB Size	RB Offset	QPSK L-CH 39700 2501.0 MHz	QPSK M-CH 40620 2593.0 MHz	QPSK H-CH 41540 2685.0 MHz		16QAM L-CH 39700 2501.0 MHz	16QAM M-CH 40620 2593.0 MHz	16QAM H-CH 41540 2685.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
41 / 10M	1	0	22.70	22.52	22.52	0	21.75	22.01	21.42	1
	1	24	22.67	22.47	22.41	0	21.65	22.01	21.44	1
	1	49	22.68	22.44	22.34	0	21.77	22.03	21.30	1
	25	0	21.67	21.53	21.47	1	20.74	20.56	20.45	2
	25	12	21.67	21.51	21.43	1	20.71	20.56	20.46	2
	25	25	21.59	21.47	21.41	1	20.70	20.56	20.41	2
	50	0	21.62	21.51	21.50	1	20.60	20.53	20.48	2

Band / BW	RB Size	RB Offset	QPSK L-CH 39725 2503.5 MHz	QPSK M-CH 40620 2593.0 MHz	QPSK H-CH 41515 2682.5 MHz		16QAM L-CH 39725 2503.5 MHz	16QAM M-CH 40620 2593.0 MHz	16QAM H-CH 41515 2682.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
41 / 15M	1	0	22.69	22.72	22.53	0	22.21	21.53	21.62	1
	1	38	22.68	22.70	22.64	0	22.30	21.42	21.64	1
	1	74	22.72	22.71	22.56	0	22.22	21.48	21.45	1
	38	0	21.62	21.58	21.61	1	21.61	21.59	21.61	2
	38	18	21.61	21.59	21.61	1	21.62	21.55	21.61	2
	38	37	21.62	21.59	21.61	1	21.64	21.55	21.56	2
	75	0	21.63	21.59	21.63	1	20.68	20.66	20.64	2

Band / BW	RB Size	RB Offset	QPSK L-CH 39750 2506.0 MHz	QPSK M-CH 40620 2593.0 MHz	QPSK H-CH 41490 2680.0 MHz		16QAM L-CH 39750 2506.0 MHz	16QAM M-CH 40620 2593.0 MHz	16QAM H-CH 41490 2680.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
41 / 20M	1	0	22.67	22.82	22.71	0	21.93	21.36	21.84	1
	1	49	22.74	22.72	22.65	0	21.84	21.25	21.66	1
	1	99	22.66	22.63	22.58	0	21.89	21.33	21.51	1
	50	0	21.80	21.64	21.68	1	20.75	20.66	20.61	2
	50	25	21.65	21.65	21.69	1	20.81	20.71	20.60	2
	50	50	21.68	21.62	21.58	1	20.79	20.69	20.50	2
	100	0	21.75	21.61	21.56	1	20.78	20.65	20.64	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH (131979)	Mid CH (132322)	High CH (132665)		Low CH (131979)	Mid CH (132322)	High CH (132665)	
			Frequency (1710.7) MHz	Frequency (1745)MHz	Frequency (1779.3) MHz		Frequency (1710.7) MHz	Frequency (1745)MHz	Frequency (1779.3) MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 1.4M	1	0	23.77	23.88	23.63	0	22.86	22.99	22.82	1
	1	12	23.78	23.91	23.67	0	22.98	23.09	22.89	1
	1	24	23.74	23.86	23.63	0	22.88	22.99	22.84	1
	12	0	23.76	23.82	23.62	1	22.67	22.76	22.58	2
	12	6	23.73	23.85	23.66	1	22.67	22.76	22.60	2
	12	13	23.72	23.82	23.72	1	22.59	22.79	22.67	2
	25	0	22.73	22.88	22.73	1	21.82	21.75	21.65	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH (131987)	Mid CH (132422)	High CH (132657)		Low CH (131987)	Mid CH (132422)	High CH (132657)	
			Frequency (1711.5) MHz	Frequency (1745)MHz	Frequency (1778.5) MHz		Frequency (1711.5) MHz	Frequency (1745)MHz	Frequency (1778.5) MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 3M	1	0	23.86	23.91	23.76	0	23.00	22.82	22.89	1
	1	8	23.80	23.95	23.68	0	22.99	22.82	22.85	1
	1	14	23.82	23.93	23.75	0	22.96	22.81	22.91	1
	8	0	22.82	22.95	22.82	1	21.82	21.95	21.84	2
	8	4	22.79	22.99	22.79	1	21.86	21.97	21.84	2
	8	7	22.81	22.96	22.83	1	21.80	21.97	21.80	2
	15	0	22.80	22.94	22.81	1	21.76	21.99	21.77	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 131997	Mid CH 132422	High CH 132647		Low CH 131997	Mid CH 132422	High CH 132647	
			1712.5 MHz	1745.0 MHz	1777.5 MHz		1712.5 MHz	1745.0 MHz	1777.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 5M	1	0	23.96	24.07	23.78	0	23.15	23.08	23.03	1
	1	12	23.94	24.07	23.87	0	23.17	23.06	23.06	1
	1	24	23.98	24.00	23.76	0	23.18	23.04	22.97	1
	12	0	22.83	22.97	22.74	1	21.89	21.94	21.81	2
	12	6	22.80	22.89	22.86	1	21.91	21.93	21.94	2
	12	13	22.89	22.90	22.79	1	22.00	21.95	21.87	2
	25	0	22.81	22.95	22.84	1	21.86	21.95	21.82	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 131997	Mid CH 132422	High CH 132647		Low CH 131997	Mid CH 132422	High CH 132647	
			1715.0 MHz	1745.0 MHz	1775.0 MHz		1715.0 MHz	1745.0 MHz	1775.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 10M	1	0	23.92	24.06	23.85	0	23.08	22.94	23.02	1
	1	24	23.94	23.94	23.70	0	23.11	22.83	22.90	1
	1	49	23.91	23.98	23.73	0	23.07	22.84	22.90	1
	25	0	22.90	22.99	22.89	1	21.95	22.01	21.96	2
	25	12	22.92	23.04	22.94	1	21.89	22.06	21.91	2
	25	25	22.97	22.97	22.90	1	21.98	22.12	21.90	2
	50	0	22.94	23.12	22.90	1	21.95	22.10	21.88	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 132047	Mid CH 132422	High CH 132665		Low CH 132047	Mid CH 132422	High CH 132665	
			1717.5 MHz	1745.0 MHz	1772.5 MHz		1717.5 MHz	1745.0 MHz	1772.5 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 15M	1	0	23.88	24.03	23.94	0	23.15	23.27	23.13	1
	1	38	23.81	23.84	23.76	0	23.25	23.12	23.03	1
	1	74	23.92	23.87	23.80	0	23.18	23.17	22.97	1
	38	0	22.89	22.93	22.86	1	22.93	22.93	22.84	2
	38	18	22.93	22.94	22.80	1	22.92	22.92	22.85	2
	38	37	22.91	22.92	22.88	1	22.91	22.93	22.94	2
	75	0	22.89	22.91	22.94	1	21.94	21.91	21.91	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 132072	Mid CH 132422	High CH 132572		Low CH 132072	Mid CH 132422	High CH 132572	
			1720.0 MHz	1745.0 MHz	1770.0 MHz		1720.0 MHz	1745.0 MHz	1770.0 MHz	
EUT without Power Reduction (P-Sensor NOT Triggered)										
66 / 20M	1	0	24.02	24.12	23.90	0	23.01	23.29	23.03	1
	1	49	23.94	23.95	23.73	0	22.91	23.13	22.87	1
	1	99	23.97	23.95	23.71	0	22.94	23.17	22.96	1
	50	0	22.98	23.09	23.05	1	21.95	22.10	22.10	2
	50	25	22.98	23.12	23.03	1	21.98	22.14	22.10	2
	50	50	22.90	23.04	22.93	1	21.84	22.07	21.94	2
	100	0	22.95	23.03	22.97	1	21.91	22.03	22.01	2

<WLAN 2.4G>

Mode	802.11b		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-1)	17.47	17.17	17.28
Average Power (Ant-2)	17.21	17.04	17.15
Mode	802.11g		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-1)	21.91	21.64	21.72
Average Power (Ant-2)	21.82	21.50	21.71
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-1)	21.60	21.05	21.47
Average Power (Ant-2)	22.08	21.66	21.90
Average Power (Ant-1+2)	24.86	24.38	24.70
Mode	802.11n (HT40)		
Channel / Frequency (MHz)	3 (2422)	6 (2437)	9 (2452)
Average Power (Ant-1)	22.41	22.08	21.43
Average Power (Ant-2)	22.72	22.57	21.70
Average Power (Ant-1+2)	25.58	25.34	24.58
Mode	802.11ax (HE20)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-1)	21.87	22.17	21.94
Average Power (Ant-2)	22.37	21.90	21.89
Average Power (Ant-1+2)	25.14	25.05	24.93
Mode	802.11ax (HE40)		
Channel / Frequency (MHz)	3 (2422)	6 (2437)	9 (2452)
Average Power (Ant-1)	22.77	22.75	21.81
Average Power (Ant-2)	22.54	22.62	21.23
Average Power (Ant-1+2)	25.67	25.70	24.54

<WLAN 5.2G>

Mode	802.11a		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power (Ant-1)	9.57	9.38	9.56
Average Power (Ant-2)	9.61	9.61	9.75
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power (Ant-1)	9.44	9.29	9.50
Average Power (Ant-2)	9.58	9.36	9.51
Average Power (Ant-1+2)	12.52	12.34	12.52
Mode	802.11n (HT40)		
Channel / Frequency (MHz)	38 (5190)		46 (5230)
Average Power (Ant-1)	12.60		12.80
Average Power (Ant-2)	12.41		12.58
Average Power (Ant-1+2)	15.52		15.70
Mode	802.11ac (VHT20)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power (Ant-1)	9.39	9.17	9.36
Average Power (Ant-2)	9.31	9.17	9.28
Average Power (Ant-1+2)	12.36	12.18	12.33
Mode	802.11ac (VHT40)		
Channel / Frequency (MHz)	38 (5190)		46 (5230)
Average Power (Ant-1)	12.92		13.11
Average Power (Ant-2)	12.61		12.66
Average Power (Ant-1+2)	15.78		15.90
Mode	802.11ac (VHT80)		
Channel / Frequency (MHz)	42 (5210)		
Average Power (Ant-1)	12.94		
Average Power (Ant-2)	12.75		
Average Power (Ant-1+2)	15.86		
Mode	802.11ac (VHT160)		
Channel / Frequency (MHz)	50 (5250)		
Average Power (Ant-1)	9.45		
Average Power (Ant-2)	9.67		
Average Power (Ant-1+2)	12.57		
Mode	802.11ax (HE20)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power (Ant-1)	9.68	9.56	9.67
Average Power (Ant-2)	9.49	9.40	9.46
Average Power (Ant-1+2)	12.60	12.49	12.58
Mode			
Channel / Frequency (MHz)	38 (5190)		46 (5230)
Average Power (Ant-1)	12.55		12.83
Average Power (Ant-2)	12.35		12.38
Average Power (Ant-1+2)	15.46		15.62
Mode	802.11ax (HE80)		
Channel / Frequency (MHz)	42 (5210)		
Average Power (Ant-1)	12.51		
Average Power (Ant-2)	12.60		
Average Power (Ant-1+2)	15.57		
Mode	802.11ax (HE160)		
Channel / Frequency (MHz)	50 (5250)		
Average Power (Ant-1)	9.37		
Average Power (Ant-2)	9.35		
Average Power (Ant-1+2)	12.37		

<WLAN 5.3G>

Mode	802.11a		
Channel / Frequency (MHz)	52 (5260)	60 (5300)	64 (5320)
Average Power (Ant-1)	9.66	9.58	9.56
Average Power (Ant-2)	9.83	9.59	9.70
Mode	**802.11n (HT20)**		
Channel / Frequency (MHz)	**52 (5260)**	**60 (5300)**	**64 (5320)**
Average Power (Ant-1)	9.58	9.51	9.48
Average Power (Ant-2)	9.57	9.34	9.51
Average Power (Ant-1+2)	12.59	12.44	12.51
Mode	**802.11n (HT40)**		
Channel / Frequency (MHz)	**54 (5270)**		**62 (5310)**
Average Power (Ant-1)	12.92		12.74
Average Power (Ant-2)	12.63		12.42
Average Power (Ant-1+2)	15.79		15.59
Mode	**802.11ac (VHT20)**		
Channel / Frequency (MHz)	**52 (5260)**	**60 (5300)**	**64 (5320)**
Average Power (Ant-1)	9.51	9.40	9.65
Average Power (Ant-2)	9.35	9.13	9.43
Average Power (Ant-1+2)	12.44	12.28	12.55
Mode	**802.11ac (VHT40)**		
Channel / Frequency (MHz)	**54 (5270)**		**62 (5310)**
Average Power (Ant-1)	13.26		12.98
Average Power (Ant-2)	12.74		12.57
Average Power (Ant-1+2)	16.02		15.79
Mode	**802.11ac (VHT80)**		
Channel / Frequency (MHz)	**58 (5290)**		
Average Power (Ant-1)	12.89		
Average Power (Ant-2)	12.48		
Average Power (Ant-1+2)	15.70		
Mode	**802.11ax (HE20)**		
Channel / Frequency (MHz)	**52 (5260)**	**60 (5300)**	**64 (5320)**
Average Power (Ant-1)	9.75	9.69	9.69
Average Power (Ant-2)	9.53	9.32	9.52
Average Power (Ant-1+2)	12.65	12.52	12.62
Mode	**802.11ax (HE40)**		
Channel / Frequency (MHz)	**54 (5270)**		**62 (5310)**
Average Power (Ant-1)	12.99		12.82
Average Power (Ant-2)	12.59		12.29
Average Power (Ant-1+2)	15.80		15.57
Mode	**802.11ax (HE80)**		
Channel / Frequency (MHz)	**58 (5290)**		
Average Power (Ant-1)	12.53		
Average Power (Ant-2)	12.36		
Average Power (Ant-1+2)	15.46		

<WLAN 5.6G>

Mode	802.11a		
Channel / Frequency (MHz)	100 (5500)	116 (5580)	140 (5700)
Average Power (Ant-1)	9.32	9.07	9.18
Average Power (Ant-2)	9.53	9.24	9.54
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	100 (5500)	116 (5580)	140 (5700)
Average Power (Ant-1)	9.25	8.94	8.97
Average Power (Ant-2)	9.33	8.91	9.10
Average Power (Ant-1+2)	12.30	11.94	12.05
Mode	802.11n (HT40)		
Channel / Frequency (MHz)	102 (5510)	110 (5550)	134 (5670)
Average Power (Ant-1)	12.23	12.28	12.43
Average Power (Ant-2)	12.37	12.23	12.45
Average Power (Ant-1+2)	15.31	15.27	15.45
Mode	802.11ac (VHT20)		
Channel / Frequency (MHz)	100 (5500)	116 (5580)	140 (5700)
Average Power (Ant-1)	9.38	9.18	9.21
Average Power (Ant-2)	9.27	9.02	9.19
Average Power (Ant-1+2)	12.34	12.11	12.21
Mode	802.11ac (VHT40)		
Channel / Frequency (MHz)	102 (5510)	110 (5550)	134 (5670)
Average Power (Ant-1)	12.42	12.48	12.64
Average Power (Ant-2)	12.48	12.34	12.49
Average Power (Ant-1+2)	15.46	15.42	15.58
Mode	802.11ac (VHT80)		
Channel / Frequency (MHz)	106 (5530)	122 (5610)	
Average Power (Ant-1)	12.57	12.65	
Average Power (Ant-2)	12.57	12.32	
Average Power (Ant-1+2)	15.58	15.50	
Mode	802.11ac (VHT160)		
Channel / Frequency (MHz)	114 (5570)		
Average Power (Ant-1)	12.77		
Average Power (Ant-2)	12.65		
Average Power (Ant-1+2)	15.72		
Mode	802.11ax (HE20)		
Channel / Frequency (MHz)	100 (5500)	116 (5580)	140 (5700)
Average Power (Ant-1)	9.40	9.23	9.29
Average Power (Ant-2)	9.31	9.12	9.26
Average Power (Ant-1+2)	12.37	12.19	12.29
Mode	802.11ax (HE40)		
Channel / Frequency (MHz)	102 (5510)	110 (5550)	134 (5670)
Average Power (Ant-1)	12.25	12.23	12.30
Average Power (Ant-2)	12.24	12.13	12.29
Average Power (Ant-1+2)	15.26	15.19	15.31
Mode	802.11ax (HE80)		
Channel / Frequency (MHz)	106 (5530)	122 (5610)	
Average Power (Ant-1)	12.18	12.21	
Average Power (Ant-2)	12.43	12.18	
Average Power (Ant-1+2)	15.32	15.21	
Mode	802.11ax (HE160)		
Channel / Frequency (MHz)	114 (5570)		
Average Power (Ant-1)	12.44		
Average Power (Ant-2)	12.57		
Average Power (Ant-1+2)	15.52		

<WLAN 5.8G>

Mode	802.11a		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power (Ant-1)	9.05	9.20	8.97
Average Power (Ant-2)	9.25	9.47	9.48
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power (Ant-1)	8.83	8.99	8.81
Average Power (Ant-2)	8.84	9.06	9.00
Average Power (Ant-1+2)	11.85	12.04	11.92
Mode	802.11n (HT40)		
Channel / Frequency (MHz)	151 (5755)		159 (5795)
Average Power (Ant-1)	12.47		12.66
Average Power (Ant-2)	12.18		12.33
Average Power (Ant-1+2)	15.34		15.51
Mode	802.11ac (VHT20)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power (Ant-1)	9.10	9.24	9.07
Average Power (Ant-2)	9.00	9.23	9.11
Average Power (Ant-1+2)	12.06	12.25	12.10
Mode	802.11ac (VHT40)		
Channel / Frequency (MHz)	151 (5755)		159 (5795)
Average Power (Ant-1)	12.77		12.82
Average Power (Ant-2)	12.30		12.50
Average Power (Ant-1+2)	15.55		15.67
Mode	802.11ac (VHT80)		
Channel / Frequency (MHz)	155 (5775)		
Average Power (Ant-1)	12.89		
Average Power (Ant-2)	12.64		
Average Power (Ant-1+2)	15.78		
Mode	802.11ax (HE20)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power (Ant-1)	9.14	9.27	9.13
Average Power (Ant-2)	9.08	9.30	9.23
Average Power (Ant-1+2)	12.12	12.30	12.19
Mode	802.11ax (HE40)		
Channel / Frequency (MHz)	151 (5755)		159 (5795)
Average Power (Ant-1)	12.36		12.47
Average Power (Ant-2)	12.16		12.36
Average Power (Ant-1+2)	15.27		15.43
Mode	802.11ax (HE80)		
Channel / Frequency (MHz)	155 (5775)		
Average Power (Ant-1)	12.46		
Average Power (Ant-2)	12.49		
Average Power (Ant-1+2)	15.49		

<Bluetooth>

Mode	Bluetooth GFSK		
Channel / Frequency (MHz)	0 (2402)	39 (2441)	78 (2480)
conducted power	5.62	6.44	6.34
Mode	Bluetoothπ/4-DQPSK		
Channel / Frequency (MHz)	0 (2402)	39 (2441)	78 (2480)
conducted power	4.05	4.88	4.41
Mode	Bluetooth 8-DPSK		
Channel / Frequency (MHz)	0 (2402)	39 (2441)	78 (2480)
conducted power	4.16	5.03	4.55
Mode	Bluetooth BLE		
Channel / Frequency (1MHz)	0 (2402)	19 (2440)	39 (2480)
conducted power	4.11	4.96	4.70
Mode	Bluetooth BLE		
Channel / Frequency (2MHz)	0 (2402)	19 (2440)	39 (2480)
conducted power	4.11	4.99	4.63

4.8 SAR Testing Results

4.8.1 SAR Test Reduction Considerations

<KDB 447498 D01, General RF Exposure Guidance>

Testing of other required channels within the operating mode of a frequency band is not required when the reported SAR for the mid-band or highest output power channel is:

(1) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz

(2) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz

(3) ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

<KDB 248227 D01, SAR Guidance for Wi-Fi Transmitters>

(1) For handsets operating next to ear,hot spot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is ≤ 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is ≤ 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel.When any reported SAR is >1.2 W/kg, SAR is required for the third channel.For OFDM modes (802.11g/n),SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.

(3) For WLAN 5GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SARis required for the subsequent highest measured output power channel until the reported SAR result is ≤1.2 W/kg or all required channels are measured. For other transmission modes,SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is ≤ 1.2 W/kg.

4.8.2 SAR Results for Body Exposure Condition

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Fr.(MHz)	Power Sensor	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
1	LTE 2	QPSK20M	Rear Face	0	1880	-	1	0	24.00	23.90	-0.02	0.731	1.023	0.748
	LTE 2	QPSK20M	Right Side	0	1880	-	1	0	24.00	23.90	0.07	0.760	1.023	0.778
2	LTE 4	QPSK20M	Rear Face	0	1732.5	-	1	0	24.50	24.15	0.10	0.683	1.084	0.740
	LTE 4	QPSK20M	Right Side	0	1732.5	-	1	0	24.50	24.15	0.07	0.710	1.084	0.770
3	LTE 5	QPSK10M	Rear Face	0	836.5	-	1	0	24.50	24.18	-0.15	0.744	1.076	0.801
	LTE 5	QPSK10M	Right Side	0	836.5	-	1	0	24.50	24.18	0.18	0.774	1.076	0.833
	LTE 5	QPSK10M	Right Side	0	826.5	-	1	0	24.00	24.00	0.06	0.730	1.000	0.730
	LTE 5	QPSK10M	Right Side	0	846.5	-	1	0	24.50	24.14	0.16	0.704	1.086	0.765
	LTE 5	QPSK10M	Right Side(repeated)	0	836.5	-	1	0	24.50	24.18	-0.15	0.770	1.076	0.829
4	LTE 7	QPSK20M	Rear Face	0	2535	-	1	0	23.00	22.82	-0.13	0.887	1.042	0.925
	LTE 7	QPSK20M	Right Side	0	2535	-	1	0	23.00	22.82	0.00	0.922	1.042	0.961
	LTE 7	QPSK20M	Right Side	0	2510	-	1	0	23.00	22.70	0.17	0.870	1.072	0.932
	LTE 7	QPSK20M	Right Side	0	2560	-	1	0	23.00	22.86	-0.12	0.838	1.033	0.865
	LTE 7	QPSK20M	Right Side(repeated)	0	2535	-	1	0	23.00	22.82	0.01	0.920	1.042	0.959

5	LTE 12	QPSK10M	Rear Face	0	707.5	-	1	0	24.50	24.09	0.04	0.815	1.099	0.896
	LTE 12	QPSK10M	Right Side	0	707.5	-	1	0	24.50	24.09	0.01	0.852	1.099	0.936
	LTE 12	QPSK10M	Right Side	0	704	-	1	0	24.50	24.07	-0.01	0.798	1.104	0.881
	LTE 12	QPSK10M	Right Side	0	711	-	1	0	24.50	24.13	-0.05	0.765	1.089	0.833
	LTE 12	QPSK10M	Right Side(repeated)	0	707.5	-	1	0	24.50	24.09	0.04	0.849	1.099	0.933
6	LTE13	QPSK10M	Rear Face	0	782	-	1	0	24.50	24.07	-0.03	0.668	1.104	0.738
	LTE13	QPSK10M	Right Side	0	782	-	1	0	24.50	24.07	0.14	0.695	1.104	0.767
7	LTE 26	QPSK15M	Rear Face	0	836.5	-	1	0	24.50	24.03	-0.02	0.730	1.114	0.813
	LTE 26	QPSK15M	Right Side	0	836.5	-	1	0	24.50	24.03	0.11	0.759	1.114	0.846
	LTE 26	QPSK15M	Right Side (repeated)	0	836.5	-	1	0	24.50	24.03	-0.06	0.751	1.114	0.837
	LTE 26	QPSK15M	Right Side	0	831.5	-	1	0	24.50	24.09	0.10	0.716	1.099	0.787
	LTE 26	QPSK15M	Right Side	0	841.5	-	1	0	24.00	24.00	-0.16	0.690	1.000	0.690
8	LTE 41	QPSK20M	Rear Face	0	2593	-	1	0	23.00	22.82	-0.12	0.602	1.042	0.627
	LTE 41	QPSK20M	Right Side	0	2593	-	1	0	23.00	22.82	0.05	0.626	1.042	0.652
9	LTE66	QPSK20M	Rear Face	0	1745	-	1	0	24.50	24.12	-0.02	0.744	1.091	0.812
	LTE66	QPSK20M	Right Side	0	1745	-	1	0	24.50	24.12	0.12	0.759	1.091	0.828
	LTE66	QPSK20M	Right Side(repeated)	0	1745	-	1	0	24.50	24.12	0.15	0.757	1.091	0.826
	LTE66	QPSK20M	Right Side	0	1720	-	1	0	24.50	24.02	-0.13	0.716	1.117	0.800
	LTE66	QPSK20M	Right Side	0	1770	-	1	0	24.00	23.90	0.15	0.690	1.023	0.706

Plot No.	Band	Mode	Test Position	Antenna	Ch.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
10	802.11b	-	Rear Face	1	6	17.50	17.17	-0.02	0.344	1.079	0.371
	802.11b	-	Bottom Side	1	6	17.50	17.17	0.03	0.358	1.079	0.386
	802.11b	-	Right Side	1	6	17.50	17.17	0.05	<0.001	1.079	<0.001
	802.11b	-	Rear Face	2	6	17.50	17.04	0.15	0.328	1.112	0.365
	802.11b	-	Bottom Side	2	6	17.50	17.04	-0.13	0.341	1.112	0.379
	802.11b	-	Left Side	2	6	17.50	17.04	0.08	<0.001	1.112	<0.001
	802.11n	HT20	Rear Face	1+2	6	24.50	24.38	0.15	0.318	1.028	0.327
	802.11n	HT20	Bottom Side	1+2	6	24.50	24.38	-0.11	0.325	1.028	0.334
	802.11n	HT20	Left Side	1+2	6	24.50	24.38	0.01	<0.001	1.028	<0.001
	802.11n	HT20	Right Side	1+2	6	24.50	24.38	0.01	<0.001	1.028	<0.001
11	802.11a	-	Rear Face	1	40	9.50	9.38	0.15	0.440	1.028	0.452
	802.11a	-	Bottom Side	1	40	9.50	9.38	0.14	0.449	1.028	0.462
	802.11a	-	Rear Face	2	40	10.00	9.61	0.02	0.419	1.094	0.458
	802.11a	-	Bottom Side	2	40	10.00	9.61	0.01	0.420	1.094	0.459
	802.11n	HT40	Rear Face	1+2	38	16.00	15.52	0.13	0.392	1.117	0.438
	802.11n	HT40	Bottom Side	1+2	38	16.00	15.52	-0.16	0.407	1.117	0.455
12	802.11a	-	Rear Face	1	60	10.00	9.58	0.14	0.556	1.102	0.612
	802.11a	-	Bottom Side	1	60	10.00	9.58	0.19	0.578	1.102	0.637
	802.11a	-	Rear Face	2	60	10.00	9.59	0.08	0.540	1.099	0.593
	802.11a	-	Bottom Side	2	60	10.00	9.59	0.10	0.550	1.099	0.604
	802.11n	HT40	Rear Face	1+2	62	16.00	15.59	0.17	0.504	1.099	0.554
	802.11n	HT40	Bottom Side	1+2	62	16.00	15.59	0.15	0.524	1.099	0.576
13	802.11a	-	Rear Face	1	116	9.50	9.07	-0.01	0.528	1.104	0.583
	802.11a	-	Bottom Side	1	116	9.50	9.07	-0.03	0.539	1.104	0.595
	802.11a	-	Rear Face	2	116	9.50	9.24	-0.04	0.513	1.062	0.545
	802.11a	-	Bottom Side	2	116	9.50	9.24	-0.08	0.484	1.062	0.514
	802.11n	HT40	Rear Face	1+2	110	15.50	15.27	0.17	0.489	1.054	0.516
	802.11n	HT40	Bottom Side	1+2	110	15.50	15.27	0.14	0.492	1.054	0.519
14	802.11a	-	Rear Face	1	157	9.50	9.20	0.09	0.460	1.072	0.493
	802.11a	-	Bottom Side	1	157	9.50	9.20	0.16	0.478	1.072	0.512
	802.11a	-	Rear Face	2	157	9.50	9.47	0.14	0.438	1.007	0.441
	802.11a	-	Bottom Side	2	157	9.50	9.47	0.11	0.445	1.007	0.448
	802.11n	HT40	Rear Face	1+2	159	16.00	15.51	-0.14	0.417	1.119	0.467
	802.11n	HT40	Bottom Side	1+2	159	16.00	15.51	-0.18	0.434	1.119	0.486

Note:

1. SAR tests use the same power level as RF tests.
2. Due the antenna location and antenna performance results much lower SAR result ,and lower than the lowest system limit, then we show “<0.001W/Kg” in the report

4.8.3 2.4GHz 802.11g/n OFDM SAR Test Exclusion Consideration:

Modulation Mode	P_{avg} (dBm)	P_{avg} (mW)	Reported SAR (W/Kg)	Adjusted SAR (W/kg)	Limit (W/Kg)	SAR Test Exclusion
802.11b(DSSS)	17.50	56.23	0.386	/	/	/
802.11g(OFDM)	22.00	158.49	/	1.088	1.2	Yes
802.11n(OFDM)	22.50	158.49	/	1.088	1.2	Yes

Note:

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.

4.8.4 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10, the highest SAR configuration for either head or body tissue-equivalent medium maybe used to perform the repeated measurement. 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.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. 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, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20, and the original, first or second repeated measurement is ≥1.5 W/kg, perform a third repeated measurement.

Band	Test Position	Fr.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
LTE Band5	Right Side	836.5	0.833	0.829	1.005	N/A	N/A	N/A	N/A
LTE Band7	Right Side	2535	0.961	0.959	1.002	N/A	N/A	N/A	N/A
LTE Band12	Right Side	707.5	0.936	0.933	1.003	N/A	N/A	N/A	N/A
LTE Band26	Right Side	836.5	0.846	0.837	1.011	N/A	N/A	N/A	N/A
LTE Band66	Right Side	1745	0.828	0.826	1.002	N/A	N/A	N/A	N/A

4.8.5 Estimated SAR Calculation

According to KDB 447498 D01, when standalone SAR test exclusion applies to an antenna, the standalone SAR was estimated according to following formula to result in substantially conservative SAR values of ≤ 0.4 W/kg to determine SAR test exclusion.

$$\text{Estimated SAR} = \frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \frac{\sqrt{f_{(\text{GHz})}}}{7.5}$$

If the minimum test separation distance is < 5 mm, a distance of 5 mm is used for estimated SAR calculation. When the test separation distance is > 50 mm, the 0.4 W/kg is used for SAR-1g.

Mode / Band	Frequency (GHz)	Max.Tune-up Power (dBm)	Test Position	Separation Distance (mm)	Estimated SAR (W/kg)
BT (DSS)	2.441	6.5	Body	5	0.19

Note:

1. The separation distance is determined from the outer housing of the EUT to the user.
2. When standalone SAR testing is not required, an estimated SAR can be applied to determine simultaneous transmission SAR test exclusion.

4.8.6 <SAR Summation Analysis>

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit(SAR1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR1g is greater than the SAR limit (SAR1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
1	LTE Band7+ WLAN	Body	Right Side	0.961	0.637	1.598	ΣSAR < 1.6, Not required
2	LTE Band7 + BT	Body	Right Side	0.960	na	0.960	ΣSAR < 1.6, Not required
3	2.4GWIFI + 5GWIFI	Body	Bottom Side	0.386	0.637	1.023	ΣSAR < 1.6, Not required
4	WLAN + BT	Body	Bottom Side	0.386	na	0.386	ΣSAR < 1.6, Not required
5	6GWLAN + BT	Body	Bottom Side	0.023	na	0.023	ΣSAR < 1.6, Not required
6	6GWLAN + 2.4GWLAN	Body	Bottom Side	0.023	0.386	0.409	ΣSAR < 1.6, Not required
7	6GWLAN + 5GWLAN	Body	Bottom Side	0.023	0.637	0.660	ΣSAR < 1.6, Not required
8	LTE Band7 +6G WLAN	Body	Right Side	0.960	0.001	0.961	ΣSAR < 1.6, Not required

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1078	Jun. 18, 2022	3 Year
System Validation Dipole	SPEAG	D835V2	4d092	Jun. 18, 2022	3 Year
System Validation Dipole	SPEAG	D900V2	1d162	Feb. 16, 2022	3 Year
System Validation Dipole	SPEAG	D1750V2	1023	Jun. 11, 2022	3 Year
System Validation Dipole	SPEAG	D1950V2	1151	Feb. 16, 2022	3 Year
System Validation Dipole	SPEAG	D2300V2	1004	Jan. 22, 2022	3 Year
System Validation Dipole	SPEAG	D2450V2	927	Feb. 16, 2022	3 Year
System Validation Dipole	SPEAG	D2600V2	1058	Jun. 18, 2022	3 Year
System Validation Dipole	SPEAG	D5GHzV2	1169	Feb. 15, 2022	3 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3970	Jun. 25, 2024	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1418	May. 17, 2024	1 Year
Wideband Radio Communication Tester	R&S	CMW500	140822	May. 10, 2024	1 Year
ENA Series Network Analyzer	Agilent	E5071B	MY42404246	May. 10, 2024	1 Year
Signal Analyzer	Agilent	N9010A	MY53470879	May. 10, 2024	1Year
Signal Generator	Agilent	SMM100A	17-1050100-C	Sep. 16, 2023	1 Year
Power Sensor	Agilent	E9304A H18	MY52050011	May. 17, 2024	1 Year
Power Meter	BOONTON	4232A	10539	May. 11, 2024	1 Year
Power Sensor	BOONTON	51011EMC	36164	May. 11, 2024	1 Year
Electronic Thermometer	Hegao	HTC-1	\	May. 17, 2024	1 Year
Directional Coupler	MILMEGA	DC6180AM1	0340463	May. 14, 2024	1 Year

6. Measurement Uncertainty

Source ofUncertainty	Tolerance (±%)	Probability Distribution	Divisor	Ci 1g	Ci 10g	Standard Uncertainty 1g (±%)	Standard Uncertainty 10g (±%)	Vi Veff
Measurement System								
Probe Calibration	6.71	Normal	1	1	1	6.71	6.71	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effects	1	Rectangular	√3	1	1	0.6	0.6	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.1	0.1	∞
Modulation Response	2.4	Rectangular	√3	1	1	1.4	1.4	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient – Noise	2.9	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient – Reflections	2.9	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning	2.9	Rectangular	√3	1	1	1.7	1.7	∞
Max. SAR Evaluation	2	Rectangular	√3	1	1	1.2	1.2	∞
Test Sample Related								
Device Positioning	2.2 / 2.6	Normal	1	1	1	2.2	2.6	30
Device Holder	3.3 / 3.4	Normal	1	1	1	3.3	3.4	30
Power Drift	5	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	7.5	Rectangular	√3	1	1	4.3	4.3	∞
SAR correction	1.2 / 0.97	Rectangular	√3	1	0.84	0.7	0.5	∞
Liquid Conductivity	2.8	Normal	1	0.78	0.71	2.0	1.8	20
Liquid Permittivity (Meas.)	2.5	Normal	1	0.23	0.26	0.6	0.7	20
Temp. unc. - Conductivity	5.9	Rectangular	√3	0.78	0.71	2.7	2.4	∞
Temp. unc. - Permittivity	0.8	Rectangular	√3	0.23	0.26	0.1	0.1	∞
Combined Standard Uncertainty (K = 1)						11.81	11.83	
Expanded Uncertainty (K = 2)						23.6	23.7	

Uncertainty budget for frequency range 600 MHz to 3 GHz

Source ofUncertainty	Tolerance (±%)	Probability Distribution	Divisor	Ci 1g	Ci 10g	Standard Uncertainty 1g (±%)	Standard Uncertainty 10g (±%)	Vi Veff
Measurement System								
Probe Calibration	6.71	Normal	1	1	1	6.71	6.71	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effects	2	Rectangular	√3	1	1	1.2	1.2	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.1	0.1	∞
Modulation Response	2.4	Rectangular	√3	1	1	1.4	1.4	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient – Noise	2.9	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient – Reflections	2.9	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning	6.7	Rectangular	√3	1	1	3.9	3.9	∞
Max. SAR Evaluation	4	Rectangular	√3	1	1	2.3	2.3	∞
Test Sample Related								
Device Positioning	2.2 / 2.6	Normal	1	1	1	2.2	2.6	30
Device Holder	3.3 / 3.4	Normal	1	1	1	3.3	3.4	30
Power Drift	5	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	7.9	Rectangular	√3	1	1	4.6	4.6	∞
SAR correction	1.2 / 0.97	Rectangular	√3	1	0.84	0.7	0.5	∞
Liquid Conductivity (Meas.)	2.8	Normal	1	0.78	0.71	2.2	2.0	20
Liquid Permittivity (Meas.)	2.8	Normal	1	0.23	0.26	0.6	0.7	20
Temp. unc. - Conductivity	4.7	Rectangular	√3	0.78	0.71	2.1	1.9	∞
Temp. unc. - Permittivity	0.4	Rectangular	√3	0.23	0.26	0.1	0.1	∞
Combined Standard Uncertainty (K = 1)						12.54	12.33	
Expanded Uncertainty (K = 2)						25.1	24.7	

Uncertainty budget for frequency range 3 GHz to 6 GHz

7. Information on the Testing Laboratories

We, EMTEK (SHENZHEN) CO., LTD., were founded in 2000 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Site Description

EMC Lab. : **Accredited by CNAS**
The Certificate Registration Number is L2291
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01 (identical to ISO/IEC 17025:2017)

Accredited by FCC
Designation Number: CN1204
Test Firm Registration Number: 882943

Accredited by A2LA
The Certificate Number is 4321.01

Accredited by Industry Canada
The Conformity Assessment Body Identifier is CN0008

Name of Firm : EMTEK (SHENZHEN) CO., LTD.
Site Location : Building 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

If you have any comments, please feel free to contact us at the following:

Add:Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China
TEL: 86-755-26954280
FAX: 86-755-26954282

Email: csg@emtek.com.cn
Web Site: www.emtek.com.cn

The road map of all our labs can be found in our web site also.

--- End of Report ---

Appendix A. SAR Plots of System Verification

The plots for system verification with largest deviation for each SAR system combination are shown as FCC SAR Appendix A.

Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination are shown as FCC SAR Appendix B.

Appendix C. Calibration Certificate for Probe and Dipole

The calibration certificates are shown as FCC SAR Appendix C.

Appendix D. Photographs of EUT and Setup

The photograohs of EUT and Setup are shown as FCC SAR Appendix D.

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