FCC SAR TEST REPORT

Application No.:	SUCR2411000490AT
Applicant:	Fujian Newland Payment Technology Co.,Ltd.
Manufacturer:	Fujian Newland Payment Technology Co.,Ltd.
Product Name:	POS Terminal
Model No.(EUT):	N950S
Trade Mark:	Newland
FCC ID:	2AM6U-NA950SU
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2024-11-20
Date of Test:	2024-12-03 to 2024-12-19
Date of Issue:	2024-12-19
Test conclusion:	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Prepared by：Leon Liu/ Project Manager

Approved by：Nick HU/ Technical Manager

Revision Record			
Version	**Description**	**Date**	**Remark**
01	Original	2024/12/19	

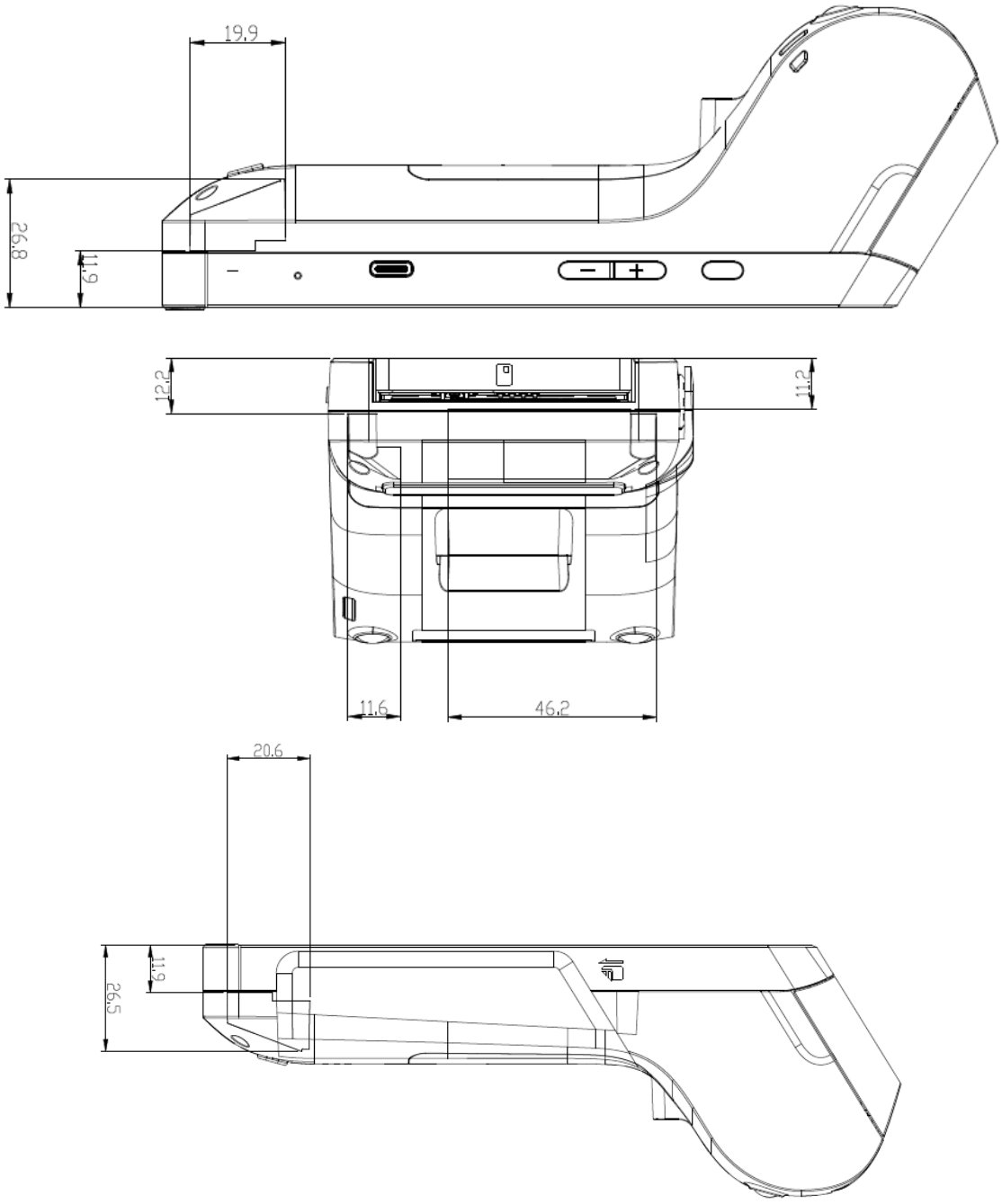
TEST SUMMARY

Frequency Band	Maximum Reported SAR(W/kg)	
	Body 10mm 1g SAR	Limbs10g SAR
LTE Band 7	0.70	1.17
LTE Band 12(17)	0.17	0.92
LTE Band 13	0.44	0.67
LTE Band 25(2)	0.63	1.30
LTE Band 26(5)	0.39	0.51
LTE Band 41	1.04	2.02
LTE Band 66(4)	1.04	1.59
LTE Band 71	0.23	0.87
WI-FI (2.4GHz)	0.30	0.77
WI-FI (5GHz)	1.06	1.93
BT	0.02	0.01
SAR Limited(W/kg)	1.6	4.0
Maximum Simultaneous Transmission SAR (W/kg)		
Scenario	Body 10mm 1g SAR	Limbs 10g SAR
Sum SAR	1.51	3.28
SPLSR	/	/
SPLSR Limited	0.04	0.1

Note:
According to TCB workshop October,2014 RF Exposure Procedures Update (Overlapping Bands): SAR for LTE Band2(Frequency range:1850 -1910 MHz)/LTE Band4(Frequency range:1710-1755 MHz)/LTE Band 5 (Frequency range:824 - 849 MHz)/LTE Band 17 (Frequency range:704 - 716 MHz) is respectively covered by LTE Band 25 (Frequency range:1850 - 1915 MHz)/LTE Band 66 (Frequency range:1710~1770 MHz)/LTE Band 26 (Frequency range:814 - 849 MHz)/ LTE Band 12 (Frequency range:699 - 716 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

CONTENTS

1 DUT Antenna Locations (Back View)



2 General Information

2.1 Details of Client

Applicant:	Fujian Newland Payment Technology Co.,Ltd.
Address:	(in the Pilot Free Trade Zone) No. B602, Building #1, Haixia Jingmao Plaza, Fuzhou Bonded Area 350015, Fujian, China
Manufacturer:	Fujian Newland Payment Technology Co.,Ltd.
Address:	(in the Pilot Free Trade Zone) No. B602, Building #1, Haixia Jingmao Plaza, Fuzhou Bonded Area 350015, Fujian, China

2.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test Engineer:	Alan Zhang

2.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

2.4 General Description of EUT

Product Name:	POS Terminal		
Model No.(EUT):	N950S		
Trade Mark:	Newland		
Product Phase:	Production Unit		
Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Hardware Version:	V1.0		
Software Version:	NDroid 6		
IMEI:	861534074005493		
Antenna Type:	Internal Antenna		
Device Operating Configurations:			
Modulation Mode:	**LTE:** QPSK, 16QAM; **WIFI:** DSSS, OFDM; **BT:** GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
Power Class	3, tested with power control Max Power(LTE Band)		
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	LTE Band 2	1850 - 1910	1930 - 1990
	LTE Band 4	1710 - 1755	2110 - 2155
	LTE Band 5	824 - 849	869 - 894
	LTE Band 7	2500 - 2570	2620 - 2690
	LTE Band 12	699 - 716	729 - 746
	LTE Band 13	777 - 787	746 - 756
	LTE Band 17	704 - 716	734 - 746
	LTE Band 25	1850~1915	1930~1995
	LTE Band 26	814 – 849	859 – 894
	LTE Band 41	2496 - 2690	2496 - 2690
	LTE Band 66	1710 – 1780	2110 – 2200
	LTE Band 71	663 – 698	617 – 652
	Bluetooth	2400 - 2483.5	2400 - 2483.5
	Wi-Fi 2.4G	2402 - 2462	2402 - 2462
	Wi-Fi 5G	5150 - 5250	5150 - 5250
		5250 - 5350	5250 - 5350
		5470 - 5725	5470 - 5725
		5725 - 5850	5725 - 5850
RF Cable:	☒ Provided by the aplicant ☐ Provided by the laboratory		
#1 Battery Information:	Model:	NL7226B	
	Normal Voltage:	7.2V	
	Rated capacity:	2600mAh	
	Manufacturer:	Zhuhai Gushine Electronic Technology Co.,Ltd.	
	Model:	NL7233B	

#2 Battery Information:	Normal Voltage:	7.2V
	Rated capacity:	3300mAh
	Manufacturer:	Zhuhai Gushine Electronic Technology Co.,Ltd.
#3 Battery Information:	Model:	NL7226B
	Normal Voltage:	7.2V
	Rated capacity:	2600mAh
	Manufacturer:	Made by EVE Energy Co.,Ltd.
Note: *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion. As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.		

2.5 Test Specification

Identity	Document Title
FCC 47CFR §2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.
IEC/IEEE 62209-1528:2020	Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)
KDB 941225 D05	SAR for LTE Devices v02r05
KDB 941225 D05A	LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06	Hotspot SAR v02r01
KDB 248227 D01	SAR Guidance for IEEE 802 11 Wi-Fi SAR v02r02
KDB 447498 D04	General RF Exposure Guidance v01
KDB 865664 D01	SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03

2.6 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Brain*Trunk)	**1.60 mW/g**	8.00 mW/g
Spatial Average SAR** (Whole Body)	0.08 mW/g	0.40 mW/g
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	**4.00 mW/g**	20.00 mW/g

Notes:

* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time

** The Spatial Average value of the SAR averaged over the whole body.

*** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

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

3 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

Table 1： The Ambient Conditions

4 SAR Measurements System Configuration

4.1 The SAR Measurement System

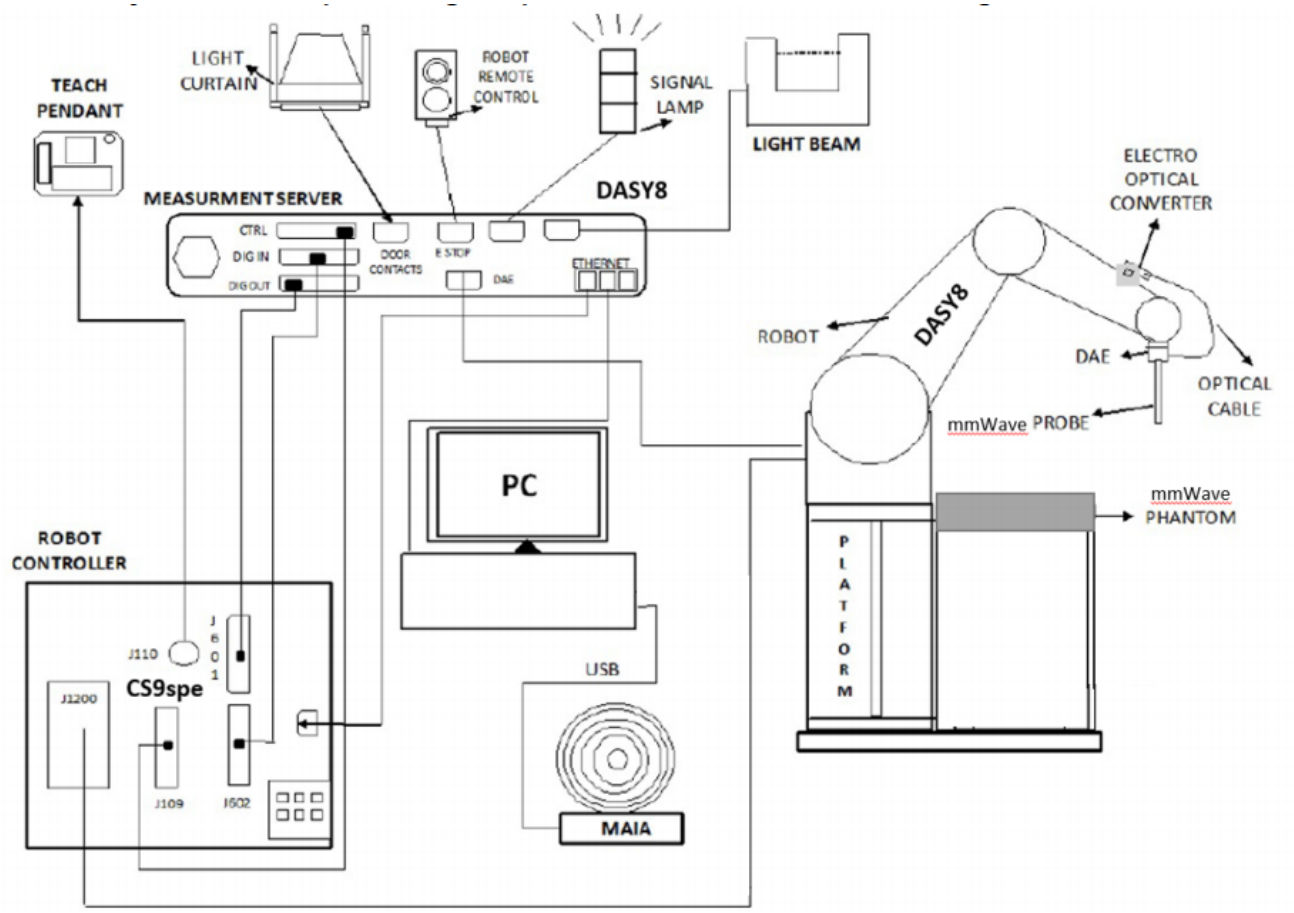
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-Simulate.

The DASY system for performing compliance tests consists of the following items:
A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software. An arm extension for accommodation the data acquisition electronics (DAE).

A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.



F-1. SAR Measurement System Configuration

- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 7.
- DASY5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand, right-hand and Body Worn usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validating the proper functioning of the system.

4.2 Isotropic E-field Probe EX3DV4

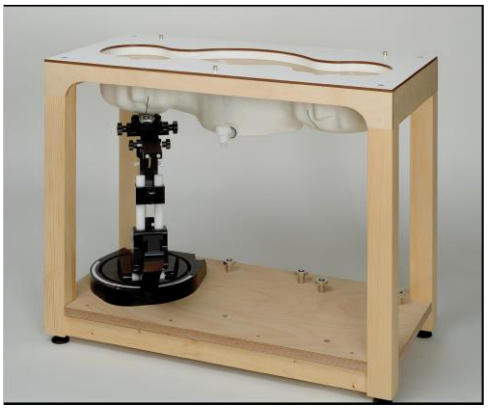
	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY52 SAR and higher, EASY4/MRI

4.3 Data Acquisition Electronics (DAE)

Model	DAE
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 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 f A
Dimensions	60 x 60 x 68 mm

4.4 SAM Twin Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions (incl. Wooden Support)	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx. 25 liters
Wooden Support	SPEAG standard phantom table

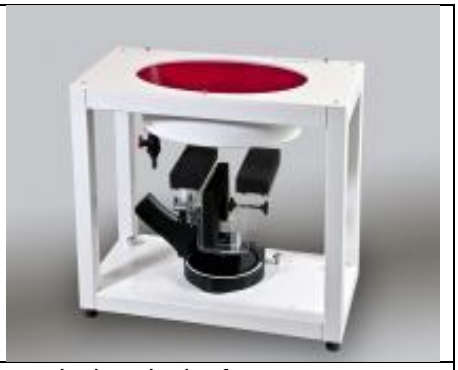


The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the 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.

Twin SAM V5.0 has the same shell geometry and is manufactured from the same material as Twin SAM V4.0, but has reinforced top structure.

4.5 ELI Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 600 mm Minor axis: 400 mm
Filling Volume	approx. 30 liters
Wooden Support	SPEAG standard phantom table



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.

ELI V5.0 has the same shell geometry and is manufactured from the same material as ELI4, but has reinforced top structure.

4.6 Device Holder for Transmitters

F-2. **Device Holder for Transmitters**

- The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation centres for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.
- The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ=0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

4.7 Measurement procedure

4.7.1 Scanning procedure

Step 1: Power reference measurement

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure.

Step 2: Area scan

The SAR distribution at the exposed side of the head was measured at a distance of 4mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15mm*15mm or 12mm*12mm or 10mm*10mm.Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Zoom scan

Around this point, a volume of 32mm*32mm*30mm (f≤2GHz), 30mm*30mm*30mm (f for 2-3GHz) and 24mm*24mm*22mm (f for 5-6GHz) was assessed by measuring 5x5x7 points (f≤2GHz), 7x7x7 points (f for 2-3GHz) and 7x7x12 points (f for 5-6GHz). On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

The data at the surface was extrapolated, since the centre of the dipoles is 2.0mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. (This can be variable. Refer to the probe specification).The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The volume was integrated with the trapezoidal algorithm. One thousand points were interpolated to calculate the average. All neighbouring volumes were evaluated until no neighboring volume with a higher average value was found.

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std. 1528-2013.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Step 4: Power reference measurement (drift)

The Power Drift Measurement job measures the field at the same location as the most recent power reference measurement job within the same procedure, and with the same settings. The indicated drift is mainly the variation of the DUT's output power and should vary max. ± 5 %

4.7.2 Data Storage

The DASY software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [m W/g], [m W/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

4.7.3 Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Normi, ai0, ai1, ai2
	- Conversion factor	ConvFi
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	ε
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcp_i$$

With Vi = compensated signal of channel i (i = x, y, z)
Ui = input signal of channel i (i = x, y, z)
cf = crest factor of exciting field (DASY parameter)
dcp i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes:

$$E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$$

H-field probes:

$$H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$$

With Vi = compensated signal of channel i (i = x, y, z)
Normi = sensor sensitivity of channel I (i = x, y, z)
[mV/(V/m)2] for E-field Probes
ConvF = sensitivity enhancement in solution
aij = sensor sensitivity factors for H-field probes
f = carrier frequency [GHz]
Ei = electric field strength of channel i in V/m
Hi = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (Etot^2 \cdot \sigma) / (\varepsilon \cdot 1000)$$

with SAR = local specific absorption rate in mW/g
Etot = total field strength in V/m
σ= conductivity in [mho/m] or [Siemens/m]
ε= equivalent tissue density in g/cm3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}{}^2{}_2 / 3770 \text{ or } \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with Ppwe = equivalent power density of a plane wave in mW/cm2
Etot = total electric field strength in V/m
Htot = total magnetic field strength in A/m

5 SAR measurement variability and uncertainty

5.1 SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ⩾ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ⩾ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ⩾1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

5.2 SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

IEC- 62209-1528 sets out the general test methods to be followed when carrying out an RF exposure compliance assessment of wireless devices implementing device-based time-averaging methods for the management and/or mitigation of specific absorption rate (SAR) in the 4 MHz to 6 GHz frequency band. It does not cover requirements that are based on power density above 6 GHz or requirements to protect against nerve stimulation for the frequency range from 3 kHz to 10MHz.

Measurements and results are all in compliance with the standards listed. All measurements and results are recorded and maintained at the laboratory performing the tests and measurement uncertainties are taken into account when comparing measurements to pass/ fail criteria. The Expanded uncertainty (95% CONFIDENCE INTERVAL) is **23.34%**.

a	b	c	d	e = f(d,k)	g	i = C*g/e	K
Uncertainty Component	Section in P1528	Tol (%)	Prob.Dist.	Div.	Ci (1g)	1g ui (%)	Vi(Veff)
Measurement system							

Probe calibration	7.2.2.1	7.4	N	1	1	7.40	∞
Axial isotropy	7.2.2.2	1.2	R	$\sqrt{3}$	1	0.69	∞
hemispherical isotropy	7.2.2.2	3.2	R	$\sqrt{3}$	1	1.85	∞
Linearity	7.2.2.3	0.9	R	$\sqrt{3}$	1	0.52	∞
Probe modulation response	7.2.2.4	0	R	$\sqrt{3}$	1	0.00	∞
Detection limits	7.2.2.5	0.25	R	$\sqrt{3}$	1	0.14	∞
Boundary effect	7.2.2.6	1.0	R	$\sqrt{3}$	1	0.58	∞
Readout electronics	7.2.2.7	0.3	N	1	1	0.30	∞
Response time	7.2.2.8	0	R	$\sqrt{3}$	1	0.00	∞
Integration time	7.2.2.9	2.6	R	$\sqrt{3}$	1	1.50	∞
RF ambient conditions – noise	7.2.4.5	3	R	$\sqrt{3}$	1	1.73	∞
RF ambient conditions – reflections	7.2.4.5	3	R	$\sqrt{3}$	1	1.73	∞
Probe positioner mech. restrictions	7.2.3.1	1.5	R	$\sqrt{3}$	1	0.87	∞
Probe positioning with respect to phantom shell	7.2.3.3	2.9	R	$\sqrt{3}$	1	1.67	∞
Post-processing	7.2.5	1	R	$\sqrt{3}$	1	0.58	∞
Test sample related							
Device holder uncertainty	7.2.3.4.2	3.6	N	1	1	3.60	∞
Test sample positioning	7.2.3.4.3	3.7	N	1	1	3.70	9
Power scaling	L.3	5.0	R	$\sqrt{3}$	1	2.89	∞
Drift of output power (measured SAR drift)	7.2.2.10	5	R	$\sqrt{3}$	1	2.89	∞
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	7.2.3.2	4	R	$\sqrt{3}$	1	2.31	∞
Algorithm for correcting SAR for deviations in permittivity and conductivity	7.2.4.3	1.9	N	1	1	1.90	∞
Liquid conductivity (meas.)	7.2.4.3	5.78	N	1	0.78	4.51	4
Liquid permittivity (meas.)	7.2.4.3	0.62	N	1	0.23	0.14	5
Liquid permittivity –temperature uncertainty	7.2.4.4	0.2	R	$\sqrt{3}$	0.78	0.09	∞
Liquid conductivity –temperature uncertainty	7.2.4.4	5.37	R	$\sqrt{3}$	0.23	0.71	∞

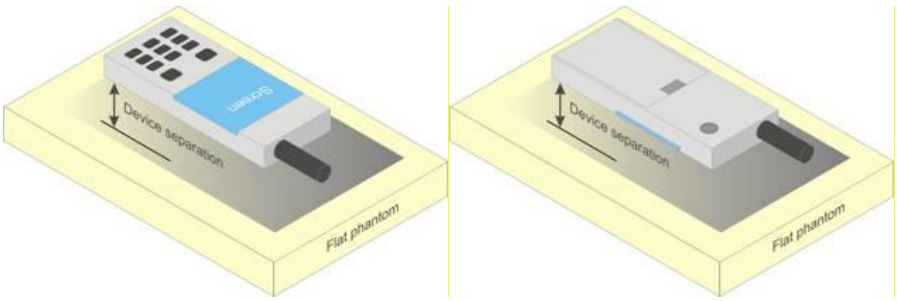
Combined standard uncertainty	**RSS**	11.67	417
Expanded uncertainty (95% CONFIDENCE INTERVAL)	**K=2**	**23.34**	

6 Description of Test Position

6.1 Body Exposure Condition

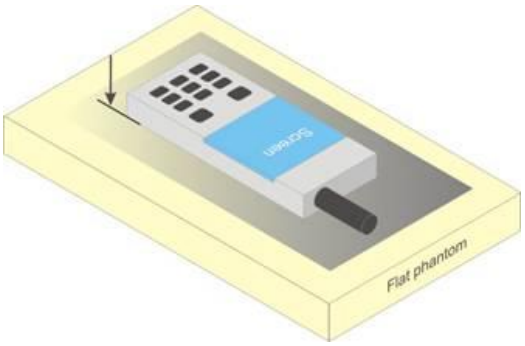
6.1.1 Body accessory exposure conditions

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed-use conditions for this type of devices.



F-3. **Test positions for body devices.**

When SAR measurement is necessary for hand-held devices that do not transmit while at the head or torso, a flat phantom may be used. To assess this type of device, the device shall be placed directly against the flat phantom as shown in Figure 11, for the sides of the device that are in contact with the hand for the intended use.



F-4. **Test position for hand-held devices.**

7 SAR System Verification Procedure

7.1 Tissue Simulate Liquid

7.1.1 Recipes for Tissue Simulate Liquid

The bellowing tables give the recipes for tissue simulating liquids to be used in different frequency bands：

Ingredients (% by weight)	Frequency (MHz)				
	450	700-900	1750-2000	2300-2500	2500-2700
Water	38.56	40.30	55.24	55.00	54.92
Salt (NaCl)	3.95	1.38	0.31	0.2	0.23
Sucrose	56.32	57.90	0	0	0
HEC	0.98	0.24	0	0	0
Bactericide	0.19	0.18	0	0	0
Tween	0	0	44.45	44.80	44.85
Salt: 99+% Pure Sodium Chloride Water: De-ionized, 16 MΩ+ resistivity Tween: Polyoxyethylene (20) sorbitan monolaurate			Sucrose: 98+% Pure Sucrose HEC: Hydroxyethyl Cellulose		
HSL5GHz is composed of the following ingredients： Water：50-65% Mineral oil：10-30% Emulsifiers：8-25% Sodium salt：0-1.5%					

Table 2： Recipe of Tissue Simulate Liquid

7.1.2 Measurement for Tissue Simulate Liquid

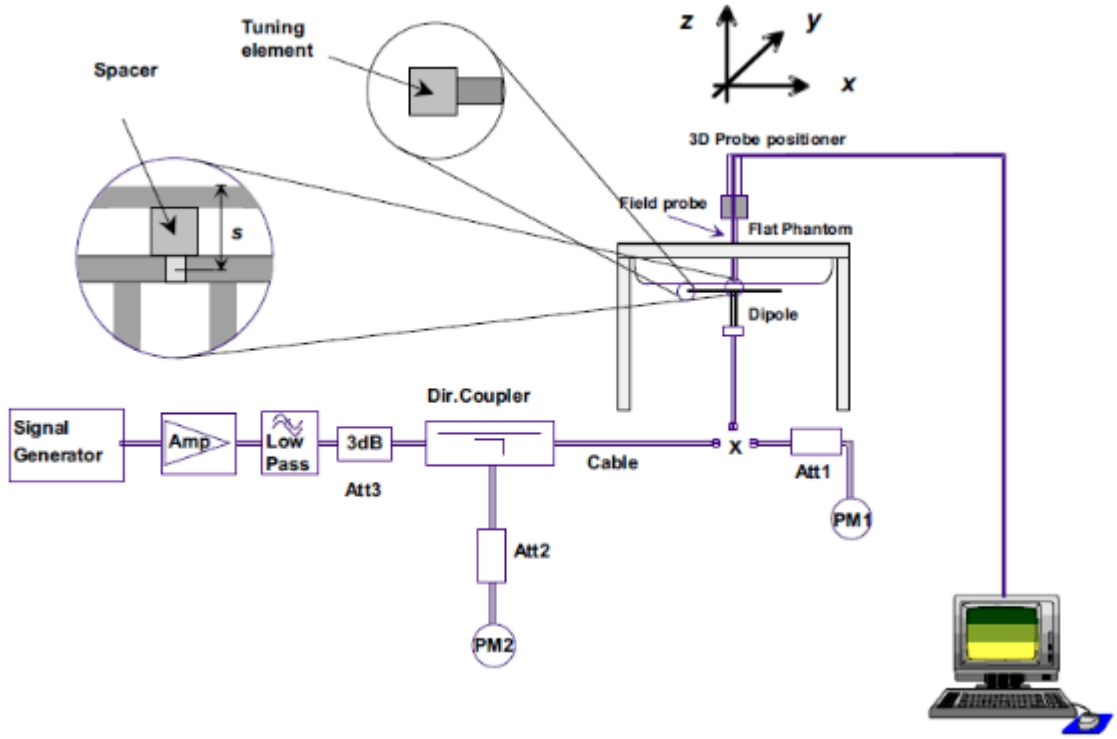
The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Measurement for Tissue Simulate Liquid							
Tissue Type	Measured Frequency (MHz)	Target Tissue (±5%)		Measured Tissue		Liquid Temp. (℃)	Test Date
		ε_r	σ(S/m)	ε_r	σ(S/m)		
750 Head	750	41.90	0.89	42.886	0.884	22.7	2024/12/3
835 Head	835	41.50	0.90	41.580	0.913	22.8	2024/12/5
1750 Head	1750	40.10	1.37	40.318	1.375	22.9	2024/12/6
1950 Head	1950	40.00	1.40	40.561	1.427	22.9	2024/12/7
2450 Head	2450	39.20	1.80	38.744	1.809	22.9	2024/12/11
2600 Head	2600	39.00	1.96	38.183	2.026	23.0	2024/12/19
5250 Head	5250	35.90	4.71	36.853	4.844	23.0	2024/12/12
5600 Head	5600	35.50	5.07	35.950	5.260	23.0	2024/12/12
5750 Head	5750	35.40	5.22	35.523	5.424	23.0	2024/12/12

Table 3： Measurement result of Tissue electric parameters.

7.2 SAR System Check

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



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

7.2.1 Justification for Extended SAR Dipole Calibrations

1) Referring to KDB865664 D01 requirements for dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.
a) There is no physical damage on the dipole;
b) System check with specific dipole is within 10% of calibrated value;
c) Return-loss is within 10% of calibrated measurement;
d) Impedance is within 5Ω from the previous measurement.

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

7.2.2 Summary System Check Result(s)

SAR System Validation Result(s)											
Validation Kit		Measured SAR 250mW	Measured SAR 250mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W) (±10%)	Deviation (Within ±10%)		Liquid Temp. (℃)	Test Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)	1-g(W/kg)	10-g(W/kg)		
D750V3	Head	1.93	1.27	7.72	5.08	8.4	5.52	-8.10%	-7.97%	22.7	2024/12/3
D835V2	Head	2.23	1.50	8.92	6.00	9.6	6.16	-7.08%	-2.60%	22.8	2024/12/5
D1750V2	Head	8.46	4.52	33.84	18.08	37	19.3	-8.54%	-6.32%	22.9	2024/12/6
D1950V3	Head	9.24	4.73	36.96	18.92	40.4	20.8	-8.51%	-9.04%	22.9	2024/12/7
D2450V2	Head	13.00	6.08	52.00	24.32	52.7	24.6	-1.33%	-1.14%	22.9	2024/12/11
D2600V2	Head	14.50	6.46	58.00	25.84	57.3	25.4	1.22%	1.73%	23.0	2024/12/19
Validation Kit		Measured SAR 100mW	Measured SAR 100mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W) (±10%)	Deviation (Within ±10%)		Liquid Temp. (℃)	Test Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)	1-g(W/kg)	10-g(W/kg)		
D5GHzV2	Head(5.25GHz)	8.17	2.36	81.70	23.60	77.2	21.9	5.83%	7.76%	23.0	2024/12/12
	Head(5.6GHz)	8.31	2.30	83.10	23.00	81.1	22.8	2.47%	0.88%	23.0	2024/12/12
	Head(5.75GHz)	8.04	2.30	80.40	23.00	77.8	21.7	3.34%	5.99%	23.0	2024/12/12

Table 4： SAR System Check Result.

7.2.3 Detailed System Check Results

Please see the Appendix A

8 Test Configuration

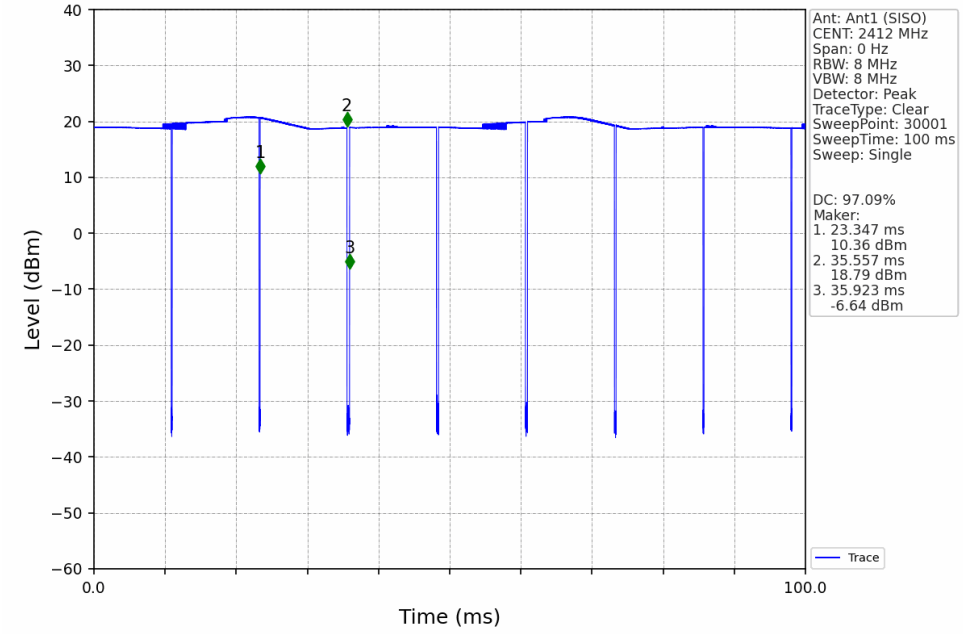
8.1 Operation Configurations

8.1.1 WiFi Test Configuration

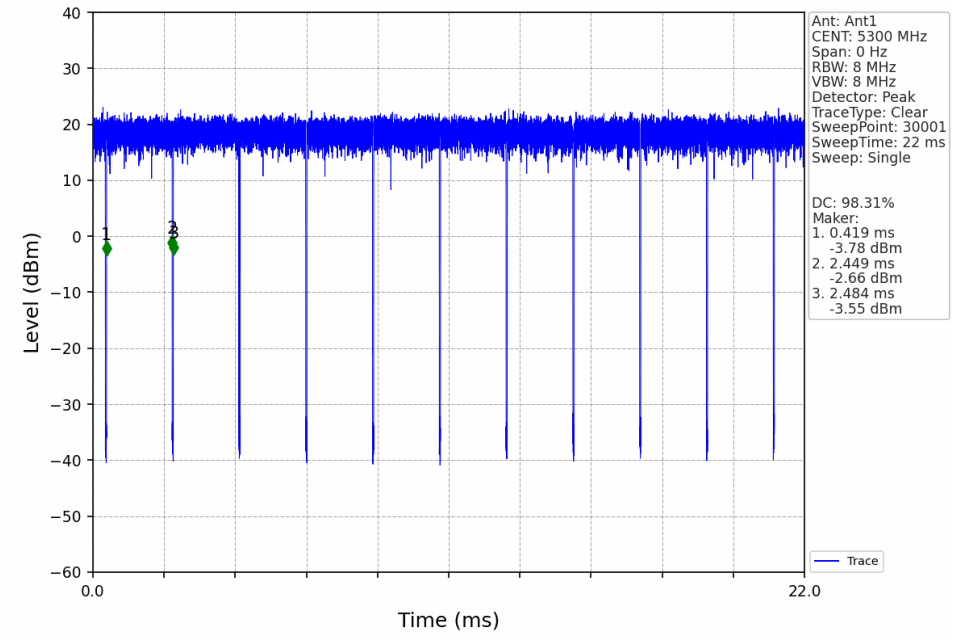
A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

8.1.2 Duty cycle

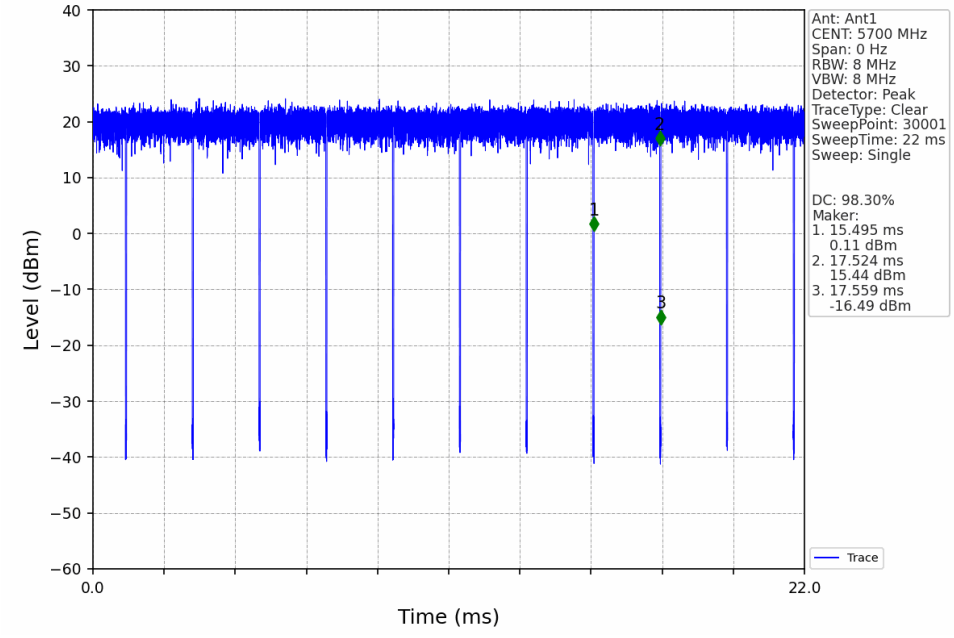
Wi-Fi 2.4GHz 802.11b:
Duty cycle= 97.09%



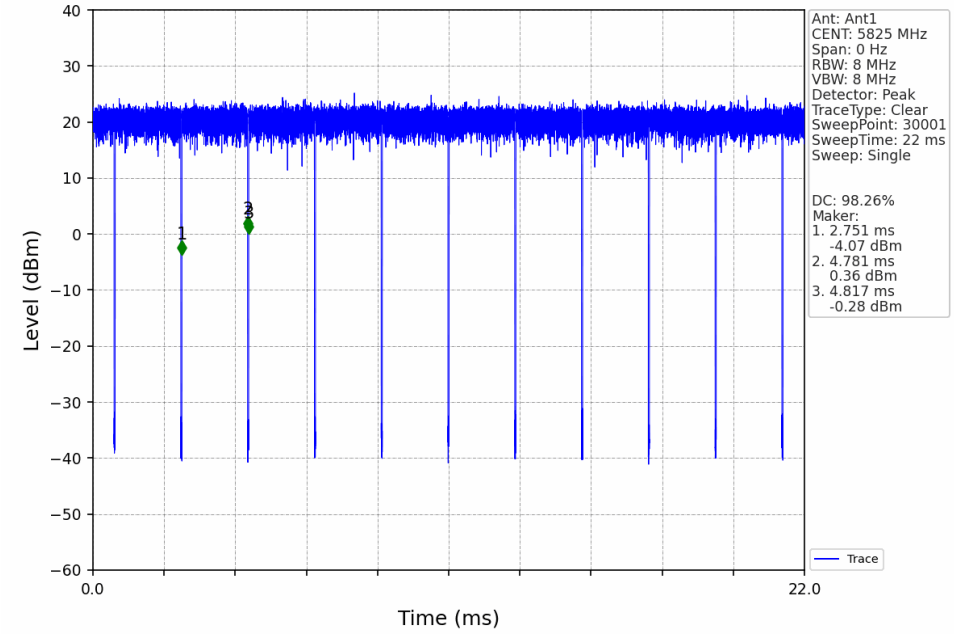
Wi-Fi 5GHz 802.11a:
Duty cycle=98.31%



Wi-Fi 5GHz 802.11a:
Duty cycle=98.30%



Wi-Fi 5GHz 802.11a:
Duty cycle=98.26%



8.1.2.1 Initial Test Position SAR Test Reduction Procedure

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

1）. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).

2）. When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.

3）. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested. a) Additional power measurements may be required for this step, which should be limited to those necessary for identifying the subsequent highest output power channels.

8.1.2.2 Initial Test Configuration Procedures

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required. SAR test reduction for subsequent highest output test channels is determined according to *reported* SAR of the initial test configuration.
For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration.
When the *reported* SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for subsequent next highest measured output power channel(s) in the initial test configuration until *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

8.1.2.3 Subsequent Test Configuration Procedures

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

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

2）. When the highest *reported* SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

3）. The number of channels in the initial test configuration and subsequent test configuration can be different due to differences in channel bandwidth. When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel. This step requires additional power measurement to identify the highest maximum output power channel in the subsequent test configuration to determine SAR test reduction.

a) SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.

b) SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the *reported* SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2 W/kg or until all required channels are tested. i) For channels with the same measured maximum output power, SAR

should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.

4）. SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration (highest maximum output) or subsequent test configuration(s) (subsequent next highest maximum output power) is determined by recursively applying the subsequent test configuration procedures in this section to the remaining configurations according to the following:

a) replace “subsequent test configuration” with “next subsequent test configuration” (i.e., subsequent next highest specified maximum output power configuration)

b) replace “initial test configuration” with “all tested higher output power configurations”

8.1.2.4 2.4 GHz WiFi SAR Procedures

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

- **802.11b DSSS SAR Test Requirements**

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

1）. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

2）. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

- **2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

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

1）. When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.

2）. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

- **SAR Test Requirements for OFDM configurations**

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

8.1.2.5 WiFi 5G SAR Test Procedures

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

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

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest *reported* SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, both bands are tested independently for SAR.
2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest *reported* SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.
3) The two U-NII bands may be aggregated to support a 160 MHz channel on channel number 50. Without additional testing, the maximum output power for this is limited to the lower of the maximum output power certified for the two bands. When SAR measurement is required for at least one of the bands and the highest *reported* SAR adjusted by the ratio of specified maximum output power of aggregated to standalone band is > 1.2 W/kg, SAR is required for the 160 MHz channel. This procedure does not apply to an aggregated band with maximum output higher than the standalone band(s); the aggregated band must be tested independently for SAR. SAR is not required when the 160 MHz channel is operating at a reduced maximum power and also qualifies for SAR test exclusion.

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

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

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

8.1.2.5.3 OFDM Transmission Mode SAR Test Configuration and Channel Selection Requirements

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

1) The largest channel bandwidth configuration is selected among the multiple configurations with the same specified maximum output power.
2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.

4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n. After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following. These channel selection procedures apply to both the initial test configuration and subsequent test configuration(s), with respect to the default power measurement procedures or additional power measurements required for further SAR test reduction. The same procedures also apply to subsequent highest output power channel(s) selection.
   - 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.

8.1.2.5.4 SAR Test Requirements for OFDM configurations

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

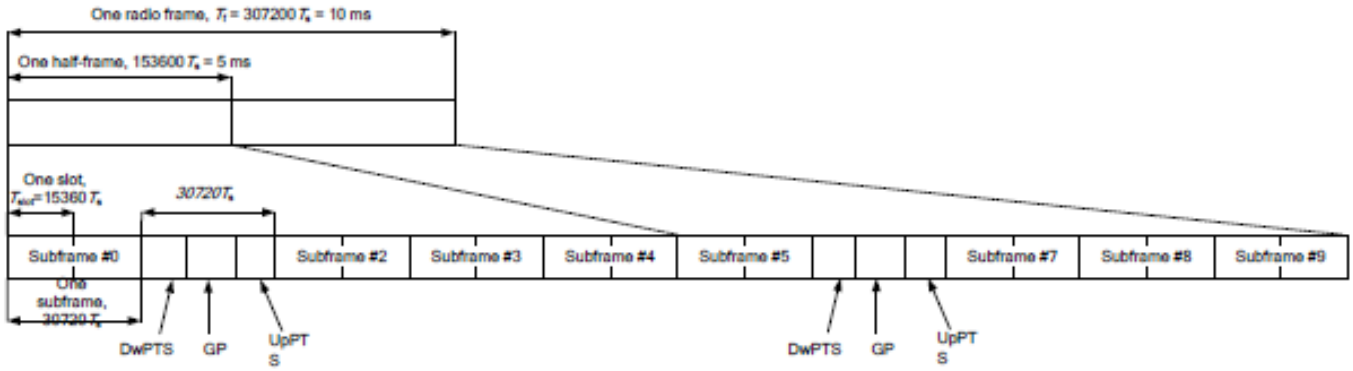
8.1.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The Anritsu MT8820C was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

TDD LTE test consideration

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.
LTE TDD Band support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Frame structure type 2:



Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

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

Uplink-downlink configurations.

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

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

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

A) Spectrum Plots for RB Configurations

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

B) MPR

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

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

C) A-MPR

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

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4) Higher order modulations

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

E) Other channel bandwidth standalone SAR test requirements

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

9 Test Result

9.1 Measurement of RF Conducted Power

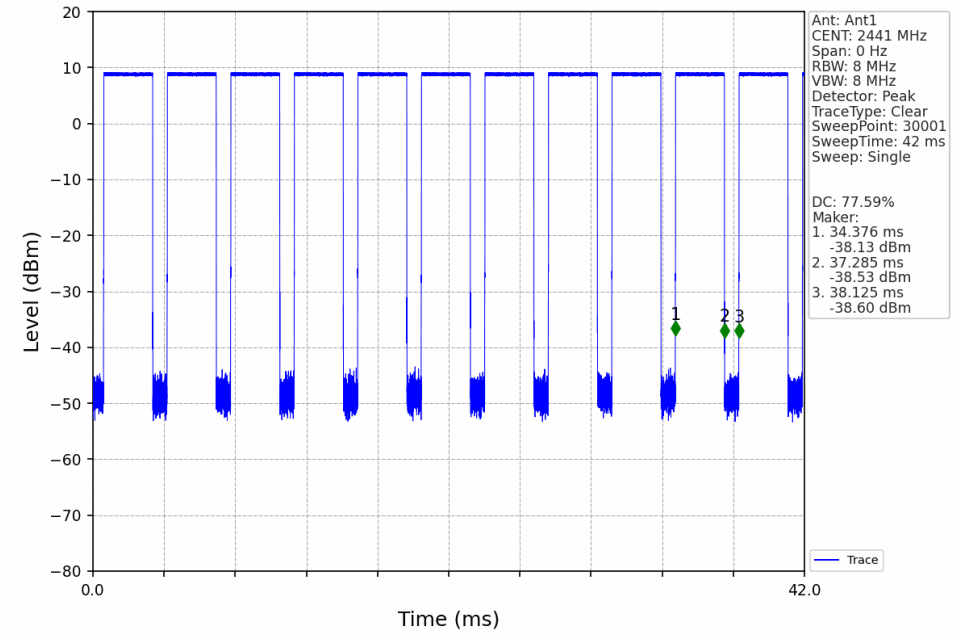
Note:

1）. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8.

2）. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

3）. For conducted power of WIFI must be measured at each transmit antenna port according to the DSSS and OFDM transmission configurations in each standalone and aggregated frequency band. For each transmission mode configuration, power must be measured for the highest and lowest channels; and at the mid-band channel(s) when there are at least 3 channels. For configurations with multiple mid-band channels, due to an even number of channels, both channels should be measured. Power measurement is required for the transmission mode configuration with the highest maximum output power specified for production units.
1) When the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured.
2) When the same highest maximum output power is specified for multiple largest channel bandwidth configurations with the same lowest order modulation or lowest order modulation and lowest data rate, power measurement is required for all equivalent 802.11 configurations with the same maximum output power.

4）. The conducted power of BT is measured with RMS detector.
BT DH5 Duty Cycle=77.59%



9.1.1 Conducted Power of LTE

LTE Band 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 18607	Channel 18900	Channel 19193	Tune up
1.4MHz	QPSK	1	0	25.02	**25.36**	25.03	26.00
		1	2	25.13	25.11	25.10	26.00
		1	5	25.18	25.06	25.10	26.00
		3	0	25.21	25.18	24.87	26.00
		3	2	25.20	25.31	25.06	26.00
		3	3	25.17	25.35	24.95	26.00
		6	0	23.96	24.12	24.11	25.00
	16QAM	1	0	23.99	24.45	24.06	25.00
		1	2	24.24	24.66	24.20	25.00
		1	5	23.99	24.42	24.08	25.00
		3	0	23.99	24.23	24.08	25.00
		3	2	24.20	24.30	24.18	25.00
		3	3	24.05	24.25	24.07	25.00
		6	0	22.89	23.28	23.14	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 18615	Channel 18900	Channel 19185	Tune up
3MHz	QPSK	1	0	24.02	24.30	25.06	26.00
		1	7	25.23	**25.61**	25.03	26.00
		1	14	24.53	25.11	24.26	26.00
		8	0	24.29	24.28	24.24	25.00
		8	4	24.10	24.27	24.33	25.00
		8	7	24.08	24.20	24.27	25.00
		15	0	24.09	24.14	24.33	25.00
	16QAM	1	0	23.29	23.56	24.60	25.00
		1	7	24.44	24.44	24.60	25.00
		1	14	23.80	24.18	23.90	25.00
		8	0	23.13	23.13	23.15	24.00
		8	4	23.19	23.24	23.03	24.00
		8	7	23.27	23.22	23.00	24.00
		15	0	23.02	23.18	23.28	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 18625	Channel 18900	Channel 19175	Tune up
5MHz	QPSK	1	0	24.02	24.32	25.04	26.00
		1	13	25.27	**25.66**	25.02	26.00
		1	24	24.56	25.20	24.19	26.00
		12	0	24.20	24.24	24.20	25.00

		12	6	24.19	24.30	24.23	25.00
		12	13	24.22	24.29	24.20	25.00
		25	0	24.08	24.12	24.31	25.00
	16QAM	1	0	23.32	23.52	24.61	25.00
		1	13	24.32	24.41	24.61	25.00
		1	24	23.85	24.18	23.81	25.00
		12	0	23.12	23.25	23.27	24.00
		12	6	23.18	23.24	23.00	24.00
		12	13	23.18	23.20	23.12	24.00
		25	0	22.99	23.26	23.29	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 18650	Channel 18900	Channel 19150	Tune up
10MHz	QPSK	1	0	24.03	24.35	25.14	26.00
		1	25	25.27	**25.59**	25.01	26.00
		1	49	24.55	25.23	24.27	26.00
		25	0	24.26	24.20	24.21	25.00
		25	13	24.13	24.19	24.27	25.00
		25	25	24.13	24.19	24.22	25.00
		50	0	24.08	24.15	24.27	25.00
	16QAM	1	0	23.31	23.49	24.72	25.00
		1	25	24.33	24.35	24.64	25.00
		1	49	23.82	24.33	23.86	25.00
		25	0	23.05	23.20	23.27	24.00
		25	13	23.14	23.26	23.08	24.00
		25	25	23.21	23.28	23.10	24.00
		50	0	23.05	23.21	23.31	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 18675	Channel 18900	Channel 19125	Tune up
15MHz	QPSK	1	0	24.25	24.27	25.13	26.00
		1	38	25.19	**25.69**	24.98	26.00
		1	74	24.44	25.10	24.28	26.00
		36	0	24.16	24.25	24.25	25.00
		36	18	24.19	24.29	24.28	25.00
		36	39	24.22	24.29	24.24	25.00
		75	0	24.11	24.11	24.34	25.00
	16QAM	1	0	23.21	23.49	24.73	25.00
		1	38	24.32	24.47	24.66	25.00
		1	74	23.81	24.24	23.86	25.00
		36	0	23.12	23.25	23.26	24.00
		36	18	23.08	23.20	23.12	24.00
		36	39	23.20	23.32	23.13	24.00
		75	0	23.09	23.19	23.21	24.00

Bandwidth	Modulation	RB size	RB offset	Channel 18700	Channel 18900	Channel 19100	Tune up
20MHz	QPSK	1	0	24.15	24.45	25.25	26.00
		1	50	25.40	**25.79**	25.18	26.00
		1	99	24.66	25.33	24.43	26.00
		50	0	24.39	24.41	24.42	25.00
		50	25	24.31	24.41	24.45	25.00
		50	50	24.33	24.43	24.41	25.00
		100	0	24.32	24.35	24.47	25.00
	16QAM	1	0	23.45	23.71	24.85	25.00
		1	50	24.55	24.59	24.78	25.00
		1	99	24.04	24.43	24.03	25.00
		50	0	23.28	23.35	23.40	24.00
		50	25	23.33	23.44	23.24	24.00
		50	50	23.37	23.45	23.24	24.00
		100	0	23.19	23.36	23.42	24.00

LTE Band 4				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 19957	Channel 20175	Channel 20393	Tune up
1.4MHz	QPSK	1	0	24.91	25.33	25.09	26.00
		1	2	24.96	25.38	25.19	26.00
		1	5	24.94	25.35	25.34	26.00
		3	0	25.01	25.29	25.09	26.00
		3	2	25.00	**25.43**	25.06	26.00
		3	3	24.97	25.37	25.20	26.00
		6	0	23.81	24.26	24.02	25.00
	16QAM	1	0	24.71	24.26	24.30	25.00
		1	2	24.77	24.41	24.30	25.00
		1	5	24.27	24.26	24.31	25.00
		3	0	24.10	24.35	24.11	25.00
		3	2	24.06	24.27	24.17	25.00
		3	3	24.12	24.29	24.14	25.00
		6	0	23.22	23.20	22.92	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 19965	Channel 20175	Channel 20385	Tune up
3MHz	QPSK	1	0	24.20	24.12	24.86	26.00
		1	7	25.08	**25.46**	24.81	26.00
		1	14	24.33	24.93	24.09	26.00
		8	0	24.04	24.09	24.01	25.00
		8	4	23.86	24.12	24.13	25.00
		8	7	23.95	23.96	24.10	25.00
		15	0	23.85	23.95	24.16	25.00
	16QAM	1	0	23.18	23.41	24.45	25.00
		1	7	24.19	24.27	24.37	25.00
		1	14	23.59	23.94	23.71	25.00
		8	0	22.90	23.00	22.93	24.00
		8	4	22.99	23.03	22.90	24.00
		8	7	23.12	23.10	22.76	24.00
		15	0	22.91	22.95	23.04	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 19975	Channel 20175	Channel 20375	Tune up
5MHz	QPSK	1	0	24.05	24.11	24.90	26.00
		1	13	25.12	**25.42**	24.90	26.00
		1	24	24.36	24.95	24.15	26.00
		12	0	24.17	24.16	24.00	25.00
		12	6	23.92	24.11	24.09	25.00

		12	13	23.96	24.03	24.04	25.00
		25	0	23.95	23.92	24.13	25.00
		1	0	23.11	23.43	24.42	25.00
		1	13	24.32	24.23	24.36	25.00
		1	24	23.60	24.03	23.75	25.00
	16QAM	12	0	22.94	22.93	22.99	24.00
		12	6	22.96	22.99	22.90	24.00
		12	13	23.06	23.02	22.84	24.00
		25	0	22.80	23.02	23.14	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	
		1	0	24.10	24.14	24.85	26.00
		1	25	25.03	**25.44**	24.80	26.00
		1	49	24.34	24.88	24.13	26.00
	QPSK	25	0	24.16	24.08	24.09	25.00
		25	13	23.89	24.07	24.09	25.00
		25	25	23.91	24.03	24.09	25.00
10MHz		50	0	23.97	23.94	24.08	25.00
		1	0	23.05	23.41	24.48	25.00
		1	25	24.30	24.33	24.43	25.00
		1	49	23.68	23.97	23.69	25.00
	16QAM	25	0	22.99	22.92	22.97	24.00
		25	13	22.95	23.01	22.82	24.00
		25	25	23.11	23.12	22.75	24.00
		50	0	22.84	22.99	23.04	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	
		1	0	24.01	24.07	24.84	26.00
		1	38	24.99	**25.38**	24.79	26.00
		1	74	24.34	24.98	24.14	26.00
	QPSK	36	0	24.15	24.07	24.09	25.00
		36	18	23.94	24.06	24.13	25.00
		36	39	23.94	24.05	24.15	25.00
		75	0	23.88	23.95	24.20	25.00
15MHz		1	0	23.06	23.42	24.46	25.00
		1	38	24.19	24.33	24.46	25.00
		1	74	23.66	23.98	23.76	25.00
	16QAM	36	0	22.95	22.97	22.93	24.00
		36	18	23.08	23.03	22.90	24.00
		36	39	23.16	23.10	22.80	24.00
		75	0	22.79	22.95	23.15	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up

				20050	20175	20300	
20MHz	QPSK	1	0	24.00	24.17	24.93	26.00
		1	50	25.02	**25.46**	24.92	26.00
		1	99	24.40	24.98	24.10	26.00
		50	0	24.17	24.14	24.06	25.00
		50	25	23.90	24.13	24.22	25.00
		50	50	23.90	23.96	24.12	25.00
		100	0	23.88	24.01	24.17	25.00
	16QAM	1	0	23.07	23.44	24.39	25.00
		1	50	24.24	24.21	24.41	25.00
		1	99	23.63	23.96	23.72	25.00
		50	0	22.98	22.97	23.03	24.00
		50	25	23.03	23.09	22.93	24.00
		50	50	23.14	23.01	22.89	24.00
		100	0	22.88	23.00	23.11	24.00

LTE Band 5				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20407	Channel 20525	Channel 20643	Tune up
1.4MHz	QPSK	1	0	24.33	24.38	24.17	25.00
		1	2	**24.62**	24.24	24.61	25.00
		1	5	24.13	24.22	24.44	25.00
		3	0	24.13	24.11	24.28	25.00
		3	2	24.24	24.16	24.27	25.00
		3	3	24.27	24.23	24.39	25.00
		6	0	23.08	23.29	23.26	24.00
	16QAM	1	0	22.93	23.85	23.20	24.00
		1	2	23.79	23.48	23.47	24.00
		1	5	23.12	23.17	23.26	24.00
		3	0	23.20	23.46	23.22	24.00
		3	2	23.03	23.38	23.47	24.00
		3	3	22.92	23.57	23.43	24.00
		6	0	22.10	22.31	22.21	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20415	Channel 20525	Channel 20635	Tune up
3MHz	QPSK	1	0	24.28	**24.73**	24.03	25.00
		1	7	24.31	24.66	23.96	25.00
		1	14	23.59	24.30	23.21	25.00
		8	0	23.17	23.34	23.11	24.00
		8	4	23.25	23.21	23.29	24.00
		8	7	23.18	23.26	23.26	24.00
		15	0	23.32	23.29	23.38	24.00
	16QAM	1	0	22.29	22.54	23.71	24.00
		1	7	23.29	23.60	23.73	24.00
		1	14	22.93	23.37	23.03	24.00
		8	0	22.32	22.20	22.34	23.00
		8	4	22.23	22.39	22.03	23.00
		8	7	22.25	22.34	22.34	23.00
		15	0	22.04	22.21	22.33	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20425	Channel 20525	Channel 20625	Tune up
5MHz	QPSK	1	0	24.32	**24.74**	24.15	25.00
		1	13	24.30	24.56	23.86	25.00
		1	24	23.59	24.24	23.20	25.00
		12	0	23.19	23.31	23.21	24.00
		12	6	23.16	23.23	23.26	24.00

		12	13	23.05	23.29	23.35	24.00
		25	0	23.26	23.31	23.29	24.00
	16QAM	1	0	22.34	22.50	23.74	24.00
		1	13	23.42	23.54	23.79	24.00
		1	24	23.02	23.39	23.10	24.00
		12	0	22.25	22.23	22.26	23.00
		12	6	22.15	22.40	22.07	23.00
		12	13	22.26	22.35	22.24	23.00
		25	0	22.06	22.19	22.45	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20450	20525	20600	
10MHz	QPSK	1	0	24.49	**24.86**	24.21	25.00
		1	25	24.63	24.74	24.19	25.00
		1	49	23.73	24.49	23.43	25.00
		25	0	23.35	23.54	23.36	24.00
		25	13	23.45	23.47	23.39	24.00
		25	25	23.30	23.43	23.53	24.00
		50	0	23.53	23.47	23.50	24.00
	16QAM	1	0	22.54	22.78	23.87	24.00
		1	25	23.63	23.79	23.94	24.00
		1	49	23.23	23.54	23.29	24.00
		25	0	22.49	22.39	22.49	23.00
		25	13	22.35	22.54	22.23	23.00
		25	25	22.39	22.46	22.54	23.00
		50	0	22.17	22.41	22.61	23.00

LTE Band 7				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20775	Channel 21100	Channel 21425	Tune up
5MHz	QPSK	1	0	20.16	20.11	19.11	21.00
		1	13	19.85	**20.35**	19.22	21.00
		1	24	20.22	20.07	19.22	21.00
		12	0	19.26	19.44	19.10	20.00
		12	6	19.33	19.37	19.07	20.00
		12	13	19.17	19.37	18.89	20.00
		25	0	19.26	19.12	18.85	20.00
	16QAM	1	0	19.07	19.36	18.12	20.00
		1	13	18.97	19.30	18.55	20.00
		1	24	18.57	18.99	18.27	20.00
		12	0	18.29	18.30	18.39	19.00
		12	6	18.36	18.01	18.50	19.00
		12	13	18.31	18.04	18.17	19.00
		25	0	18.43	18.20	18.17	19.00
Bandwidth	Modulation	RB size	RB offset	Channel 20800	Channel 21100	Channel 21400	Tune up
10MHz	QPSK	1	0	20.22	20.10	19.07	21.00
		1	25	19.96	**20.38**	19.16	21.00
		1	49	20.16	20.01	19.22	21.00
		25	0	19.31	19.52	19.08	20.00
		25	13	19.32	19.46	19.14	20.00
		25	25	19.08	19.32	18.83	20.00
		50	0	19.30	19.15	18.90	20.00
	16QAM	1	0	19.07	19.33	18.02	20.00
		1	25	19.03	19.25	18.52	20.00
		1	49	18.60	18.98	18.21	20.00
		25	0	18.32	18.32	18.26	19.00
		25	13	18.39	18.13	18.45	19.00
		25	25	18.27	18.06	18.22	19.00
		50	0	18.47	18.14	18.22	19.00
Bandwidth	Modulation	RB size	RB offset	Channel 20825	Channel 21100	Channel 21375	Tune up
15MHz	QPSK	1	0	20.14	20.05	19.07	21.00
		1	38	19.91	**20.36**	19.15	21.00
		1	74	20.27	19.96	19.13	21.00
		36	0	19.36	19.45	19.10	20.00
		36	18	19.30	19.43	19.04	20.00

		36	39	19.11	19.27	18.82	20.00
		75	0	19.33	19.24	18.82	20.00
	16QAM	1	0	19.07	19.26	18.09	20.00
		1	38	18.98	19.26	18.59	20.00
		1	74	18.51	18.96	18.25	20.00
		36	0	18.30	18.35	18.28	19.00
		36	18	18.40	18.02	18.47	19.00
		36	39	18.26	18.17	18.12	19.00
		75	0	18.41	18.24	18.17	19.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	20.16	**20.46**	19.07	21.00
		1	50	19.97	20.40	19.25	21.00
		1	99	20.18	20.08	19.21	21.00
		50	0	19.30	19.42	19.16	20.00
		50	25	19.24	19.38	19.12	20.00
		50	50	19.10	19.31	18.83	20.00
		100	0	19.32	19.12	18.94	20.00
	16QAM	1	0	18.95	19.36	18.10	20.00
		1	50	18.91	19.31	18.46	20.00
		1	99	18.47	19.03	18.21	20.00
		50	0	18.36	18.28	18.34	19.00
		50	25	18.42	18.08	18.50	19.00
		50	50	18.29	18.10	18.23	19.00
		100	0	18.45	18.28	18.20	19.00

LTE FDD Band 12				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 23017	Channel 23095	Channel 23173	Tune up
1.4MHz	QPSK	1	0	24.62	24.71	24.47	25.00
		1	2	24.26	24.66	24.45	25.00
		1	5	24.16	**24.72**	24.54	25.00
		3	0	24.41	24.62	24.63	25.00
		3	2	24.54	24.57	24.61	25.00
		3	3	24.28	24.45	24.49	25.00
		6	0	23.28	23.66	23.58	24.00
	16QAM	1	0	23.82	23.84	23.95	24.00
		1	2	23.79	23.90	23.81	24.00
		1	5	23.99	23.87	23.61	24.00
		3	0	23.45	23.75	23.54	24.00
		3	2	23.09	23.85	23.64	24.00
		3	3	22.85	23.73	23.64	24.00
		6	0	22.54	22.42	22.44	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 23025	Channel 23095	Channel 23165	Tune up
3MHz	QPSK	1	0	24.61	24.60	**24.75**	25.00
		1	7	24.25	24.67	24.69	25.00
		1	14	24.28	24.44	24.74	25.00
		8	0	23.32	23.70	23.79	24.00
		8	4	23.26	23.70	23.66	24.00
		8	7	23.31	23.60	23.71	24.00
		15	0	23.38	23.60	23.58	24.00
	16QAM	1	0	23.76	23.72	23.69	24.00
		1	7	23.62	23.66	23.50	24.00
		1	14	22.99	23.88	23.49	24.00
		8	0	22.60	22.64	22.66	23.00
		8	4	22.25	22.58	22.72	23.00
		8	7	22.21	22.56	22.81	23.00
		15	0	22.51	22.37	22.76	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 23035	Channel 23095	Channel 23155	Tune up
5MHz	QPSK	1	0	24.38	24.41	24.51	25.00
		1	13	24.12	24.52	**24.68**	25.00
		1	24	24.08	24.28	24.59	25.00
		12	0	23.13	23.49	23.65	24.00
		12	6	23.02	23.50	23.43	24.00

		12	13	23.13	23.40	23.58	24.00
		25	0	23.16	23.44	23.47	24.00
	16QAM	1	0	23.59	23.56	23.45	24.00
		1	13	23.46	23.55	23.32	24.00
		1	24	22.84	23.72	23.29	24.00
		12	0	22.40	22.48	22.49	23.00
		12	6	22.07	22.40	22.60	23.00
		12	13	22.07	22.33	22.58	23.00
		25	0	22.30	22.26	22.63	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23060	23095	23130	
10MHz	QPSK	1	0	24.49	**24.85**	24.58	25.00
		1	25	24.14	24.52	24.73	25.00
		1	49	24.12	24.33	24.58	25.00
		25	0	23.10	23.65	23.63	24.00
		25	13	23.03	23.55	23.42	24.00
		25	25	23.08	23.42	23.48	24.00
		50	0	23.24	23.46	23.38	24.00
	16QAM	1	0	23.56	23.52	23.53	24.00
		1	25	23.38	23.51	23.33	24.00
		1	49	22.83	23.65	23.34	24.00
		25	0	22.48	22.47	22.54	23.00
		25	13	22.06	22.47	22.50	23.00
		25	25	22.00	22.43	22.59	23.00
		50	0	22.28	22.13	22.53	23.00

LTE FDD Band 13				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 23205	Channel 23230	Channel 23255	Tune up
5MHz	QPSK	1	0	24.44	24.45	**24.55**	25.00
		1	13	24.05	24.48	24.53	25.00
		1	24	24.16	24.19	24.50	25.00
		12	0	23.20	23.47	23.68	24.00
		12	6	23.09	23.50	23.42	24.00
		12	13	23.10	23.49	23.48	24.00
		25	0	23.20	23.41	23.36	24.00
	16QAM	1	0	23.64	23.60	23.56	24.00
		1	13	23.48	23.49	23.34	24.00
		1	24	22.88	23.78	23.30	24.00
		12	0	22.36	22.39	22.43	23.00
		12	6	22.08	22.44	22.60	23.00
		12	13	21.99	22.39	22.70	23.00
		25	0	22.40	22.23	22.61	23.00
Bandwidth	Modulation	RB size	RB offset	Channel /	Channel 23230	Channel /	Tune up
10MHz	QPSK	1	0	/	**24.8**	/	25.00
		1	25	/	24.76	/	25.00
		1	49	/	24.74	/	25.00
		25	0	/	23.9	/	24.00
		25	13	/	23.88	/	24.00
		25	25	/	23.88	/	24.00
		50	0	/	23.86	/	24.00
	16QAM	1	0	/	24	/	24.00
		1	25	/	23.96	/	24.00
		1	49	/	23.66	/	24.00
		25	0	/	22.8	/	23.00
		25	13	/	22.86	/	23.00
		25	25	/	22.76	/	23.00
		50	0	/	22.63	/	23.00

LTE FDD Band 17				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 23755	Channel 23790	Channel 23825	Tune up
5MHz	QPSK	1	0	24.45	24.50	**24.57**	25.00
		1	13	24.02	24.44	24.51	25.00
		1	24	24.15	24.19	24.52	25.00
		12	0	23.07	23.51	23.66	24.00
		12	6	23.15	23.60	23.46	24.00
		12	13	23.12	23.48	23.46	24.00
		25	0	23.26	23.46	23.43	24.00
	16QAM	1	0	23.63	23.52	23.56	24.00
		1	13	23.52	23.44	23.34	24.00
		1	24	22.83	23.66	23.35	24.00
		12	0	22.38	22.43	22.43	23.00
		12	6	22.01	22.44	22.61	23.00
		12	13	22.02	22.32	22.70	23.00
		25	0	22.30	22.16	22.62	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 23780	Channel 23790	Channel 23800	Tune up
10MHz	QPSK	1	0	24.78	24.81	24.77	25.00
		1	25	24.54	24.76	24.66	25.00
		1	49	24.48	24.62	**24.82**	25.00
		25	0	23.62	23.94	23.60	24.00
		25	13	23.55	23.94	23.94	24.00
		25	25	23.57	23.84	23.94	24.00
		50	0	23.54	23.89	23.83	24.00
	16QAM	1	0	23.91	23.95	23.91	24.00
		1	25	23.87	23.85	23.67	24.00
		1	49	23.25	23.88	23.78	24.00
		25	0	22.83	22.82	22.95	23.00
		25	13	22.45	22.79	22.91	23.00
		25	25	22.40	22.85	22.76	23.00
		50	0	22.72	22.64	22.71	23.00

LTE Band 25				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 26047	Channel 26340	Channel 26683	Tune up
1.4MHz	QPSK	1	0	24.99	25.23	25.02	26.00
		1	2	25.01	24.96	24.99	26.00
		1	5	25.09	25.02	25.01	26.00
		3	0	25.09	25.11	24.81	26.00
		3	2	25.09	25.23	25.03	26.00
		3	3	25.16	25.27	24.82	26.00
		6	0	23.91	23.98	23.96	25.00
	16QAM	1	0	23.90	24.30	24.05	25.00
		1	2	24.21	24.61	24.13	25.00
		1	5	23.98	24.42	23.98	25.00
		3	0	23.92	24.17	24.05	25.00
		3	2	24.15	24.21	24.12	25.00
		3	3	23.93	24.21	24.05	25.00
		6	0	22.76	23.20	23.09	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 26055	Channel 26340	Channel 26675	Tune up
3MHz	QPSK	1	0	24.11	24.44	25.24	26.00
		1	7	25.29	25.75	25.10	26.00
		1	14	24.51	25.31	24.40	26.00
		8	0	24.28	24.29	24.42	25.00
		8	4	24.27	24.38	24.34	25.00
		8	7	24.26	24.36	24.33	25.00
		15	0	24.30	24.25	24.42	25.00
	16QAM	1	0	23.37	23.60	24.76	25.00
		1	7	24.53	24.48	24.71	25.00
		1	14	23.91	24.41	24.00	25.00
		8	0	23.14	23.21	23.34	24.00
		8	4	23.19	23.38	23.16	24.00
		8	7	23.25	23.42	23.21	24.00
		15	0	23.10	23.29	23.40	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 26065	Channel 26340	Channel 26665	Tune up
5MHz	QPSK	1	0	24.07	24.40	25.24	26.00
		1	13	25.39	**25.77**	25.03	26.00
		1	24	24.56	25.28	24.33	26.00
		12	0	24.25	24.31	24.27	25.00
		12	6	24.31	24.35	24.34	25.00

		12	13	24.27	24.29	24.36	25.00
		25	0	24.26	24.24	24.44	25.00
	16QAM	1	0	23.35	23.59	24.73	25.00
		1	13	24.41	24.51	24.74	25.00
		1	24	24.03	24.35	24.01	25.00
		12	0	23.22	23.25	23.37	24.00
		12	6	23.33	23.39	23.20	24.00
		12	13	23.24	23.35	23.16	24.00
		25	0	23.17	23.34	23.41	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26090	26340	26640	
10MHz	QPSK	1	0	24.04	24.39	25.17	26.00
		1	25	25.33	**25.68**	25.18	26.00
		1	49	24.54	25.29	24.29	26.00
		25	0	24.36	24.29	24.30	25.00
		25	13	24.26	24.38	24.34	25.00
		25	25	24.29	24.35	24.36	25.00
		50	0	24.23	24.31	24.47	25.00
	16QAM	1	0	23.43	23.66	24.71	25.00
		1	25	24.53	24.45	24.78	25.00
		1	49	23.98	24.33	24.00	25.00
		25	0	23.23	23.20	23.40	24.00
		25	13	23.31	23.30	23.17	24.00
		25	25	23.32	23.43	23.10	24.00
		50	0	23.13	23.21	23.33	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26115	26340	26615	
15MHz	QPSK	1	0	24.05	24.38	25.14	26.00
		1	38	25.36	**25.64**	25.08	26.00
		1	74	24.64	25.19	24.31	26.00
		36	0	24.24	24.35	24.37	25.00
		36	18	24.28	24.34	24.44	25.00
		36	39	24.31	24.42	24.39	25.00
		75	0	24.20	24.26	24.41	25.00
	16QAM	1	0	23.32	23.57	24.72	25.00
		1	38	24.53	24.45	24.67	25.00
		1	74	23.92	24.42	23.89	25.00
		36	0	23.15	23.23	23.30	24.00
		36	18	23.27	23.33	23.21	24.00
		36	39	23.35	23.37	23.13	24.00
		75	0	23.15	23.27	23.29	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up

				26140	26340	26590	
20MHz	QPSK	1	0	24.26	24.64	25.42	26.00
		1	50	25.58	**25.90**	25.25	26.00
		1	99	24.80	25.39	24.48	26.00
		50	0	24.50	24.58	24.51	25.00
		50	25	24.38	24.48	24.55	25.00
		50	50	24.44	24.53	24.47	25.00
		100	0	24.39	24.53	24.54	25.00
	16QAM	1	0	23.50	23.88	24.96	25.00
		1	50	24.66	24.76	24.90	25.00
		1	99	24.22	24.57	24.20	25.00
		50	0	23.45	23.42	23.55	24.00
		50	25	23.39	23.51	23.32	24.00
		50	50	23.49	23.59	23.42	24.00
		100	0	23.33	23.46	23.58	24.00

LTE Band 26				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 26697	Channel 26865	Channel 27033	Tune up
1.4MHz	QPSK	1	0	24.60	24.50	24.39	25.00
		1	2	24.73	24.48	24.88	25.00
		1	5	24.38	24.49	24.61	25.00
		3	0	24.32	24.24	24.47	25.00
		3	2	24.41	24.41	24.55	25.00
		3	3	24.42	24.31	24.55	25.00
		6	0	23.20	23.42	23.37	24.00
	16QAM	1	0	23.20	23.40	23.49	24.00
		1	2	23.25	23.76	23.74	24.00
		1	5	23.37	23.37	23.49	24.00
		3	0	23.48	23.57	23.53	24.00
		3	2	23.16	23.51	23.61	24.00
		3	3	23.13	23.79	23.52	24.00
		6	0	22.30	22.49	22.47	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 26705	Channel 26865	Channel 27025	Tune up
3MHz	QPSK	1	0	24.58	**24.76**	24.10	25.00
		1	7	24.54	24.49	24.09	25.00
		1	14	24.15	23.65	23.25	25.00
		8	0	23.35	23.29	23.39	24.00
		8	4	23.18	23.33	23.37	24.00
		8	7	23.33	23.20	23.39	24.00
		15	0	23.45	23.33	23.44	24.00
	16QAM	1	0	22.68	22.38	23.76	24.00
		1	7	23.48	23.45	23.76	24.00
		1	14	23.42	23.11	23.07	24.00
		8	0	22.22	22.34	22.29	23.00
		8	4	22.36	22.18	22.13	23.00
		8	7	22.37	22.25	22.23	23.00
		15	0	22.27	22.10	22.45	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 26715	Channel 26865	Channel 27015	Tune up
5MHz	QPSK	1	0	24.68	**24.78**	24.07	25.00
		1	13	24.57	24.41	24.03	25.00
		1	24	24.06	23.60	23.30	25.00
		12	0	23.43	23.31	23.31	24.00
		12	6	23.21	23.27	23.36	24.00

		12	13	23.28	23.29	23.37	24.00
		25	0	23.31	23.24	23.44	24.00
	16QAM	1	0	22.70	22.33	23.86	24.00
		1	13	23.59	23.46	23.76	24.00
		1	24	23.34	22.99	23.10	24.00
		12	0	22.28	22.34	22.35	23.00
		12	6	22.36	22.15	22.16	23.00
		12	13	22.44	22.29	22.25	23.00
		25	0	22.23	22.14	22.55	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26740	26865	26990	
10MHz	QPSK	1	0	24.61	**24.69**	24.16	25.00
		1	25	24.63	24.46	24.06	25.00
		1	49	24.10	23.65	23.35	25.00
		25	0	23.43	23.32	23.32	24.00
		25	13	23.20	23.36	23.28	24.00
		25	25	23.24	23.26	23.38	24.00
		50	0	23.46	23.24	23.40	24.00
	16QAM	1	0	22.68	22.31	23.83	24.00
		1	25	23.52	23.56	23.78	24.00
		1	49	23.41	22.97	23.10	24.00
		25	0	22.26	22.35	22.36	23.00
		25	13	22.40	22.11	22.14	23.00
		25	25	22.44	22.27	22.38	23.00
		50	0	22.25	22.11	22.51	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26765	26865	26965	
15MHz	QPSK	1	0	24.82	**24.91**	24.31	25.00
		1	38	24.76	24.64	24.22	25.00
		1	74	24.31	23.76	23.50	25.00
		36	0	23.54	23.61	23.50	24.00
		36	18	23.41	23.48	23.52	24.00
		36	39	23.44	23.41	23.55	24.00
		75	0	23.56	23.46	23.61	24.00
	16QAM	1	0	22.83	22.55	24.00	24.00
		1	38	23.71	23.67	24.00	24.00
		1	74	23.59	23.22	23.23	24.00
		36	0	22.45	22.54	22.53	23.00
		36	18	22.53	22.35	22.34	23.00
		36	39	22.58	22.49	22.48	23.00
		75	0	22.45	22.32	22.68	23.00

LTE Band 41				Conducted Power(dBm)					
Bandwidth	Modulation	RB size	RB offset	Channel 39675	Channel 40148	Channel 40620	Channel 41093	Channel 41565	Tune up
5MHz	QPSK	1	0	25.43	25.52	**25.5**	25.56	25.55	26.00
		1	13	25.32	25.3	25.52	25.44	25.47	26.00
		1	24	25.4	25.33	25.55	25.4	25.37	26.00
		12	0	24.61	24.5	24.55	24.64	24.55	25.00
		12	6	24.44	24.45	24.5	24.4	24.38	25.00
		12	13	24.57	24.39	24.51	24.55	24.37	25.00
		25	0	24.49	24.42	24.37	24.55	24.43	25.00
	16QAM	1	0	25.02	25.05	24.84	24.96	24.88	25.00
		1	13	24.87	24.99	24.71	24.84	24.87	25.00
		1	24	25.02	24.89	25.08	25.07	25.16	25.00
		12	0	23.58	23.41	23.53	23.56	23.56	24.00
		12	6	23.61	23.45	23.47	23.68	23.56	24.00
		12	13	23.47	23.33	23.47	23.53	23.43	24.00
		25	0	23.57	23.61	23.63	23.66	23.65	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 39700	Channel 40160	Channel 40620	Channel 41080	Channel 41540	Tune up
10MHz	QPSK	1	0	25.48	25.46	**25.49**	25.57	25.45	26.00
		1	25	25.38	25.24	25.43	25.48	25.48	26.00
		1	49	25.4	25.32	25.44	25.47	25.33	26.00
		25	0	24.59	24.44	24.64	24.58	24.55	25.00
		25	13	24.49	24.47	24.52	24.41	24.48	25.00
		25	25	24.51	24.42	24.48	24.48	24.48	25.00
		50	0	24.42	24.45	24.34	24.42	24.39	25.00
	16QAM	1	0	24.92	24.94	24.9	24.86	24.79	25.00
		1	25	24.93	24.95	24.83	24.75	24.83	25.00
		1	49	25.08	24.83	25.13	25.06	25.08	25.00
		25	0	23.54	23.41	23.61	23.64	23.65	24.00
		25	13	23.54	23.49	23.54	23.61	23.55	24.00
		25	25	23.48	23.47	23.39	23.47	23.34	24.00
		50	0	23.59	23.54	23.73	23.61	23.57	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 39725	Channel 40173	Channel 40620	Channel 41068	Channel 41515	Tune up
15MHz	QPSK	1	0	25.51	25.44	**25.5**	25.54	25.44	26.00
		1	38	25.41	25.34	25.52	25.49	25.45	26.00
		1	74	25.4	25.32	25.43	25.46	25.44	26.00
		36	0	24.67	24.39	24.54	24.6	24.56	25.00
		36	18	24.41	24.43	24.53	24.43	24.37	25.00

		36	39	24.5	24.35	24.46	24.53	24.47	25.00
		75	0	24.4	24.35	24.31	24.5	24.39	25.00
	16QAM	1	0	24.92	25.03	24.87	24.95	24.86	25.00
		1	38	24.81	24.88	24.78	24.87	24.75	25.00
		1	74	25.04	24.85	25.05	25.11	25.12	25.00
		36	0	23.54	23.39	23.49	23.61	23.59	24.00
		36	18	23.6	23.42	23.52	23.68	23.47	24.00
		36	39	23.52	23.39	23.34	23.58	23.34	24.00
		75	0	23.66	23.56	23.71	23.65	23.64	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 39750	Channel 40185	Channel 40620	Channel 41055	Channel 41490	Tune up
20MHz	QPSK	1	0	25.74	25.71	**25.87**	25.78	25.78	26.00
		1	50	25.59	25.65	25.76	25.86	25.76	26.00
		1	99	25.73	25.59	25.71	25.67	25.63	26.00
		50	0	24.88	24.69	24.92	24.88	24.91	25.00
		50	25	24.81	24.71	24.8	24.7	24.71	25.00
		50	50	24.82	24.73	24.77	24.82	24.77	25.00
		100	0	24.75	24.65	24.76	24.75	24.64	25.00
	16QAM	1	0	25.3	25.28	25.22	25.19	25.17	25.00
		1	50	25.21	25.29	25.12	25.12	25.15	25.00
		1	99	25.28	25.21	25.36	25.43	25.35	25.00
		50	0	23.94	23.8	23.79	23.89	23.92	24.00
		50	25	23.88	23.71	23.88	24	23.84	24.00
		50	50	23.8	23.7	23.76	23.88	23.66	24.00
		100	0	23.99	23.88	24.04	23.91	23.92	24.00

LTE Band 66				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 131979	Channel 132322	Channel 132665	Tune up
1.4MHz	QPSK	1	0	24.84	25.21	24.95	26.00
		1	2	24.95	25.37	25.10	26.00
		1	5	24.83	25.25	25.26	26.00
		3	0	24.93	25.19	25.04	26.00
		3	1	25.00	25.32	25.03	26.00
		3	3	24.84	25.31	25.13	26.00
		6	0	23.71	24.20	23.97	25.00
	16QAM	1	0	24.67	24.24	24.28	25.00
		1	2	24.75	24.32	24.27	25.00
		1	5	24.13	24.14	24.20	25.00
		3	0	23.98	24.31	24.02	25.00
		3	1	23.97	24.12	24.10	25.00
		3	3	23.98	24.20	24.00	25.00
		6	0	23.22	23.17	22.81	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 131987	Channel 132322	Channel 132657	Tune up
3MHz	QPSK	1	0	25.11	25.45	24.89	26.00
		1	7	25.16	25.48	24.87	26.00
		1	14	24.41	24.98	24.13	26.00
		8	0	24.10	24.13	23.96	25.00
		8	4	23.93	24.08	24.17	25.00
		8	7	23.96	23.98	24.06	25.00
		15	0	23.90	24.00	24.26	25.00
	16QAM	1	0	23.13	23.51	24.54	25.00
		1	7	24.18	24.24	24.40	25.00
		1	14	23.68	23.92	23.76	25.00
		8	0	22.94	23.07	22.91	24.00
		8	4	23.03	23.11	22.95	24.00
		8	7	23.07	23.13	22.84	24.00
		15	0	22.88	22.94	23.07	24.00
Bandwidth	Modulation	RB size	RB offset	Channel 131997	Channel 132322	Channel 132647	Tune up
5MHz	QPSK	1	0	25.10	25.46	24.88	26.00
		1	13	25.06	**25.47**	24.79	26.00
		1	24	24.38	24.90	24.06	26.00
		12	0	24.10	24.14	24.08	25.00
		12	6	23.85	24.08	24.19	25.00

		12	13	23.98	24.02	24.14	25.00
		25	0	23.87	23.91	24.24	25.00
	16QAM	1	0	23.17	23.48	24.51	25.00
		1	13	24.21	24.34	24.36	25.00
		1	24	23.64	23.97	23.75	25.00
		12	0	23.00	23.00	23.01	24.00
		12	6	23.09	23.07	22.98	24.00
		12	13	23.14	23.13	22.79	24.00
		25	0	22.97	23.04	23.06	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	25.05	**25.50**	24.88	26.00
		1	25	25.16	25.43	24.77	26.00
		1	49	24.38	24.99	24.07	26.00
		25	0	24.00	24.05	24.10	25.00
		25	13	23.87	24.21	24.11	25.00
		25	25	23.91	24.01	24.07	25.00
		50	0	23.82	23.95	24.19	25.00
	16QAM	1	0	23.20	23.44	24.45	25.00
		1	25	24.19	24.28	24.34	25.00
		1	49	23.59	24.01	23.81	25.00
		25	0	22.92	22.99	23.00	24.00
		25	13	23.01	23.12	22.93	24.00
		25	25	23.09	23.10	22.85	24.00
		50	0	22.94	22.92	23.06	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	25.08	**25.45**	24.87	26.00
		1	38	25.15	25.44	24.87	26.00
		1	74	24.29	24.94	24.08	26.00
		36	0	24.01	24.13	24.02	25.00
		36	18	23.91	24.22	24.18	25.00
		36	39	23.90	23.97	24.08	25.00
		75	0	23.90	23.95	24.21	25.00
	16QAM	1	0	23.21	23.44	24.49	25.00
		1	38	24.26	24.35	24.37	25.00
		1	74	23.59	23.91	23.75	25.00
		36	0	22.92	23.05	22.93	24.00
		36	18	22.97	23.07	22.92	24.00
		36	39	23.08	23.08	22.75	24.00
		75	0	22.95	22.97	23.11	24.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up

				132072	132322	132572	
20MHz	QPSK	1	0	24.35	25.02	24.19	26.00
		1	50	25.14	**25.68**	24.94	26.00
		1	99	24.37	24.98	24.08	26.00
		50	0	24.10	24.17	24.00	25.00
		50	25	23.92	24.14	24.13	25.00
		50	50	23.97	24.00	24.06	25.00
		100	0	23.87	24.18	24.17	25.00
	16QAM	1	0	23.22	23.36	24.54	25.00
		1	50	24.24	24.36	24.46	25.00
		1	99	23.67	23.98	23.77	25.00
		50	0	22.97	22.98	23.01	24.00
		50	25	23.04	23.10	22.93	24.00
		50	50	23.16	23.12	22.75	24.00
		100	0	22.92	22.92	23.09	24.00

LTE Band 71				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 133147	Channel 133322	Channel 133447	Tune up
5MHz	QPSK	1	0	24.18	**24.60**	23.98	25.00
		1	13	24.20	24.45	23.83	25.00
		1	24	23.43	24.14	23.04	25.00
		12	0	23.06	23.23	23.03	24.00
		12	6	23.09	23.24	23.16	24.00
		12	13	22.99	23.11	23.28	24.00
		25	0	23.18	23.16	23.18	24.00
	16QAM	1	0	22.24	22.42	23.52	24.00
		1	13	23.20	23.54	23.76	24.00
		1	24	22.91	23.24	23.01	24.00
		12	0	22.08	22.11	22.14	23.00
		12	6	22.09	22.21	21.91	23.00
		12	13	22.14	22.17	22.16	23.00
		25	0	21.92	22.06	22.27	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 133172	Channel 133322	Channel 133422	Tune up
10MHz	QPSK	1	0	24.19	**24.50**	24.02	25.00
		1	25	24.34	24.47	23.86	25.00
		1	49	23.41	24.12	23.13	25.00
		25	0	23.14	23.32	23.08	24.00
		25	13	23.15	23.22	23.17	24.00
		25	25	23.00	23.19	23.27	24.00
		50	0	23.20	23.15	23.24	24.00
	16QAM	1	0	22.26	22.51	23.56	24.00
		1	25	23.23	23.42	23.66	24.00
		1	49	22.93	23.22	22.90	24.00
		25	0	22.08	22.07	22.14	23.00
		25	13	22.12	22.25	21.91	23.00
		25	25	22.11	22.25	22.15	23.00
		50	0	21.85	22.04	22.36	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 133197	Channel 133322	Channel 133397	Tune up
15MHz	QPSK	1	0	24.13	**24.58**	23.98	25.00
		1	38	24.28	24.53	23.80	25.00
		1	74	23.47	24.17	23.05	25.00
		36	0	23.10	23.20	23.14	24.00
		36	18	23.07	23.10	23.20	24.00

		36	39	22.98	23.13	23.22	24.00
		75	0	23.23	23.20	23.29	24.00
	16QAM	1	0	22.28	22.47	23.53	24.00
		1	38	23.26	23.46	23.72	24.00
		1	74	22.95	23.16	22.89	24.00
		36	0	22.23	22.06	22.12	23.00
		36	18	22.07	22.34	21.88	23.00
		36	39	22.19	22.24	22.24	23.00
		75	0	21.94	22.12	22.33	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				133222	133322	133372	
20MHz	QPSK	1	0	24.43	**24.81**	24.12	25.00
		1	50	24.52	24.75	24.06	25.00
		1	99	23.57	24.39	23.24	25.00
		50	0	23.33	23.52	23.25	24.00
		50	25	23.33	23.29	23.35	24.00
		50	50	23.20	23.31	23.39	24.00
		100	0	23.44	23.42	23.44	24.00
	16QAM	1	0	22.39	22.65	23.73	24.00
		1	50	23.41	23.72	23.93	24.00
		1	99	23.02	23.38	23.12	24.00
		50	0	22.30	22.24	22.42	23.00
		50	25	22.28	22.45	22.13	23.00
		50	50	22.30	22.38	22.41	23.00
		100	0	22.07	22.27	22.58	23.00

9.1.2 Conducted Power of WIFI

WIFI 2.4G					
Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)	Tune up
802.11b	1	2412	1	17.06	18.00
	6	2437		16.36	18.00
	11	2462		16.36	18.00
802.11g	1	2412	6	14.59	15.00
	6	2437		13.84	15.00
	11	2462		14.12	15.00
802.11n HT20	1	2412	6.5	14.48	15.00
	6	2437		13.71	15.00
	11	2462		13.99	15.00
802.11n HT40	3	2422	13.5	13.71	15.00
	6	2437		14.00	15.00
	9	2452		14.19	15.00

WIFI 5G						
5GHz	mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)	Tune up
802.11a	U-NII-1	36	5180	6	16.84	18.00
		40	5200		16.68	18.00
		48	5240		16.47	18.00
	U-NII-2A	52	5260		16.47	18.00
		60	5300		17.04	18.00
		64	5320		16.71	18.00
	U-NII-2C	100	5500		17.29	18.00
		116	5580		17.18	18.00
		140	5700		18.23	19.00
	U-NII-3	149	5745		18.84	19.50
		157	5785		18.62	19.50
		165	5825		18.96	19.50
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11n-HT20	U-NII-1	36	5180	MCS0	16.61	18.00
		40	5200		16.47	18.00
		48	5240		16.30	18.00
	U-NII-2A	52	5260		16.31	18.00
		60	5300		16.38	18.00
		64	5320		16.55	18.00
	U-NII-2C	100	5500		17.49	18.00
		116	5580		16.98	18.00
		140	5700		18.58	19.00
	U-NII-3	149	5745		18.27	19.50
		157	5785		18.95	19.50
		165	5825		18.40	19.50
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up

802.11n-HT40	U-NII-1	38	5190	MCS0	15.04	16.00
		46	5230		14.99	16.00
	U-NII-2A	54	5270		14.94	16.00
		62	5310		15.02	16.00
	U-NII-2C	102	5510		15.50	16.00
		110	5550		15.53	16.00
		134	5670		16.44	17.50
	U-NII-3	151	5755		17.00	17.50
		159	5795		17.12	17.50
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-20	U-NII-1	36	5180	MCS0	16.61	18.00
		40	5200		16.49	18.00
		48	5240		16.32	18.00
	U-NII-2A	52	5260		16.32	18.00
		60	5300		16.40	18.00
		64	5320		16.57	18.00
	U-NII-2C	100	5500		17.48	18.00
		116	5580		17.45	18.00
		140	5700		18.64	19.00
	U-NII-3	149	5745		18.28	19.50
		157	5785		18.42	19.50
		165	5825		18.80	19.50
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-40	U-NII-1	38	5190	MCS0	15.07	16.00
		46	5230		15.01	16.00
	U-NII-2A	54	5270		14.95	16.00
		62	5310		15.00	16.00
	U-NII-2C	102	5510		15.51	16.00
		110	5550		15.56	16.00
		134	5670		16.44	17.50
	U-NII-3	151	5755		17.03	17.50
		159	5795		16.67	17.50
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac 80M	U-NII-1	42	5210	MCS0	14.45	15.00
	U-NII-2A	58	5290		14.44	15.00
	U-NII-2C	106	5530		14.96	16.00
		122	5610		14.83	16.00
	U-NII-3	155	5775		16.21	17.00

9.1.3 Conducted Power of Bluetooth

BT		Average Conducted Power(dBm)					
Band	Channel	0	Tune up	39	Tune up	78	Tune up
BT	GFSK	7.37	8.00	9.00	10.00	7.58	8.00
	π/4DQPSK	4.96	6.00	6.96	8.00	6.07	7.00
	8DPSK	5.38	6.00	7.28	8.00	6.37	7.00
Band	Channel	0	Tune up	39	Tune up	78	Tune up
BLE 1M	GFSK	-1.72	0.00	-1.73	0.00	-3.52	0.00

9.2 Measurement of SAR Data

Note:

1) The maximum reported SAR value is marked in **bold.** Graph results refer to Appendix B

2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
- ≤ 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.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

3) Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. 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.

WiFi 2.4G:

1) When the highest reported SAR for the initial test configuration 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 test for the other 802.11 modes are not required.

WiFi 5G:

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. As 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.
2) For Wi-Fi 5G, U-NII-2A (5250-5350 MHz) and U-NII-2C (5470-5725 MHz) bands does not support hotspot function.
3) As the 802.11a highest reported SAR is smaller than 1.2 W/kg, and the tune-up of the other 802.11 modes are not higher than 802.11a, therefore the adjusted SAR is ≤ 1.2 W/kg for other 802.11 modes, SAR test for the other 802.11 modes are not required. For Product specific 10gSAR the highest reported SAR is smaller than 3.0 W/kg, SAR test for the other 802.11 modes are also not required.

9.2.1 SAR Result of LTE Band 7

LTE Band 7 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.066	-0.14	20.46	21.00	1.132	0.075	23
Back side	20	QPSK 1_0	21100/2535	1:1	0.616	-0.03	20.46	21.00	1.132	0.698	23
Left side	20	QPSK 1_0	21100/2535	1:1	0.058	-0.15	20.46	21.00	1.132	0.066	23
Right side	20	QPSK 1_0	21100/2535	1:1	0.079	0.18	20.46	21.00	1.132	0.089	23
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.318	-0.15	20.46	21.00	1.132	0.360	23
Back side-Battery2	20	QPSK 1_0	21100/2535	1:1	0.594	0.19	20.46	21.00	1.132	0.673	23
Body Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.047	0.03	19.42	20.00	1.143	0.054	23
Back side	20	QPSK 50_0	21100/2535	1:1	0.456	-0.14	19.42	20.00	1.143	0.521	23
Left side	20	QPSK 50_0	21100/2535	1:1	0.039	-0.06	19.42	20.00	1.143	0.045	23
Rightt side	20	QPSK 50_0	21100/2535	1:1	0.059	0.08	19.42	20.00	1.143	0.067	23
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.254	0.05	19.42	20.00	1.143	0.290	23
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.162	0.19	20.46	21.00	1.132	0.183	23
Back side	20	QPSK 1_0	21100/2535	1:1	1.030	-0.13	20.46	21.00	1.132	1.166	23
Left side	20	QPSK 1_0	21100/2535	1:1	0.084	-0.01	20.46	21.00	1.132	0.095	23
Right side	20	QPSK 1_0	21100/2535	1:1	0.203	-0.16	20.46	21.00	1.132	0.230	23
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.679	0.13	20.46	21.00	1.132	0.769	23
Back side-Battery2	20	QPSK 1_0	21100/2535	1:1	0.977	0.13	20.46	21.00	1.132	1.106	23
Limbs Test data(Separate 0mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.135	0.18	19.42	20.00	1.143	0.154	23
Back side	20	QPSK 50_0	21100/2535	1:1	0.843	0.02	19.42	20.00	1.143	0.963	23
Left side	20	QPSK 50_0	21100/2535	1:1	0.071	-0.07	19.42	20.00	1.143	0.081	23
Right side	20	QPSK 50_0	21100/2535	1:1	0.169	-0.12	19.42	20.00	1.143	0.193	23
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.562	-0.05	19.42	20.00	1.143	0.642	23

Table 5： SAR of LTE Band 7 for Body and Limbs.

9.2.2 SAR Result of LTE Band 12

LTE Band 12 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.039	-0.12	24.85	25.00	1.035	0.040	22.7
Back side	10	QPSK 1_0	23095/707.5	1:1	0.165	-0.11	24.85	25.00	1.035	0.171	22.7
Left side	10	QPSK 1_0	23095/707.5	1:1	0.001	0.15	24.85	25.00	1.035	0.001	22.7
Right side	10	QPSK 1_0	23095/707.5	1:1	0.052	-0.03	24.85	25.00	1.035	0.054	22.7
Bottom side	10	QPSK 1_0	23095/707.5	1:1	0.040	0.13	24.85	25.00	1.035	0.041	22.7
Back side-Battery2	10	QPSK 1_0	23095/707.5	1:1	0.154	0.18	24.85	25.00	1.035	0.159	22.7
Body Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23095/707.5	1:1	0.035	0.04	23.65	24.00	1.084	0.038	22.7
Back side	10	QPSK 25_0	23095/707.5	1:1	0.141	0.06	23.65	24.00	1.084	0.153	22.7
Left side	10	QPSK 25_0	23095/707.5	1:1	0.001	-0.17	23.65	24.00	1.084	0.001	22.7
Right side	10	QPSK 25_0	23095/707.5	1:1	0.044	0.09	23.65	24.00	1.084	0.048	22.7
Bottom side	10	QPSK 25_0	23095/707.5	1:1	0.032	-0.14	23.65	24.00	1.084	0.035	22.7
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.070	0.15	24.85	25.00	1.035	0.072	22.7
Back side	10	QPSK 1_0	23095/707.5	1:1	0.885	0.01	24.85	25.00	1.035	0.916	22.7
Left side	10	QPSK 1_0	23095/707.5	1:1	0.061	0.13	24.85	25.00	1.035	0.063	22.7
Right side	10	QPSK 1_0	23095/707.5	1:1	0.169	-0.10	24.85	25.00	1.035	0.175	22.7
Bottom side	10	QPSK 1_0	23095/707.5	1:1	0.320	-0.01	24.85	25.00	1.035	0.331	22.7
Back side-Battery2	10	QPSK 1_0	23095/707.5	1:1	0.861	-0.07	24.85	25.00	1.035	0.891	22.7
Limbs Test data(Separate 0mm 50%RB)											
Front side	10	QPSK 25_0	23095/707.5	1:1	0.058	0.19	23.65	24.00	1.084	0.063	22.7
Back side	10	QPSK 25_0	23095/707.5	1:1	0.708	-0.10	23.65	24.00	1.084	0.767	22.7
Left side	10	QPSK 25_0	23095/707.5	1:1	0.045	-0.16	23.65	24.00	1.084	0.049	22.7
Right side	10	QPSK 25_0	23095/707.5	1:1	0.145	-0.12	23.65	24.00	1.084	0.157	22.7
Bottom side	10	QPSK 25_0	23095/707.5	1:1	0.269	-0.02	23.65	24.00	1.084	0.292	22.7

Table 6： SAR of LTE Band 12 for Body and Limbs is covering LTE Band 17.

9.2.3 SAR Result of LTE Band 13

LTE Band 13 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.261	-0.02	24.80	25.00	1.047	0.273	22.7
Back side	10	QPSK 1_0	23230/782	1:1	0.418	-0.04	24.80	25.00	1.047	0.438	22.7
Left side	10	QPSK 1_0	23230/782	1:1	0.201	0.12	24.80	25.00	1.047	0.210	22.7
Right side	10	QPSK 1_0	23230/782	1:1	0.216	-0.05	24.80	25.00	1.047	0.226	22.7
Bottom side	10	QPSK 1_0	23230/782	1:1	0.265	0.17	24.80	25.00	1.047	0.277	22.7
Back side-Battery2	10	QPSK 1_0	23230/782	1:1	0.390	-0.13	24.80	25.00	1.047	0.408	22.7
Body Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.190	-0.15	23.90	24.00	1.023	0.194	22.7
Back side	10	QPSK 25_0	23230/782	1:1	0.357	0.05	23.90	24.00	1.023	0.365	22.7
Left side	10	QPSK 25_0	23230/782	1:1	0.190	-0.10	23.90	24.00	1.023	0.194	22.7
Right side	10	QPSK 25_0	23230/782	1:1	0.207	-0.09	23.90	24.00	1.023	0.212	22.7
Bottom side	10	QPSK 25_0	23230/782	1:1	0.221	0.08	23.90	24.00	1.023	0.226	22.7
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.246	-0.05	24.80	25.00	1.047	0.258	22.7
Back side	10	QPSK 1_0	23230/782	1:1	0.512	-0.11	24.80	25.00	1.047	0.536	22.7
Left side	10	QPSK 1_0	23230/782	1:1	0.252	0.12	24.80	25.00	1.047	0.264	22.7
Right side	10	QPSK 1_0	23230/782	1:1	0.382	-0.07	24.80	25.00	1.047	0.400	22.7
Bottom side	10	QPSK 1_0	23230/782	1:1	0.639	-0.02	24.80	25.00	1.047	0.669	22.7
Bottom side-Battery2	10	QPSK 1_0	23230/782	1:1	0.626	0.12	24.80	25.00	1.047	0.656	22.7
Limbs Test data(Separate 0mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.174	0.10	23.90	24.00	1.023	0.178	22.7
Back side	10	QPSK 25_0	23230/782	1:1	0.422	0.15	23.90	24.00	1.023	0.432	22.7
Left side	10	QPSK 25_0	23230/782	1:1	0.182	0.01	23.90	24.00	1.023	0.186	22.7
Right side	10	QPSK 25_0	23230/782	1:1	0.307	0.12	23.90	24.00	1.023	0.314	22.7
Bottom side	10	QPSK 25_0	23230/782	1:1	0.547	-0.13	23.90	24.00	1.023	0.560	22.7

Table 7： SAR of LTE Band 13 for Body and Limbs.

9.2.4 SAR Result of LTE Band 25

LTE Band 25 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_50	26365/1882.5	1:1	0.128	0.14	25.90	26.00	1.023	0.131	22.9
Back side	20	QPSK 1_50	26365/1882.5	1:1	0.619	-0.02	25.90	26.00	1.023	0.633	22.9
Left side	20	QPSK 1_50	26365/1882.5	1:1	0.139	0.05	25.90	26.00	1.023	0.142	22.9
Right side	20	QPSK 1_50	26365/1882.5	1:1	0.160	-0.12	25.90	26.00	1.023	0.164	22.9
Bottom side	20	QPSK 1_50	26365/1882.5	1:1	0.510	-0.01	25.90	26.00	1.023	0.522	22.9
Back side-Battery2	20	QPSK 1_50	26365/1882.5	1:1	0.590	0.10	25.90	26.00	1.023	0.604	22.9
Body Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	26365/1882.5	1:1	0.105	-0.12	24.58	25.00	1.102	0.116	22.9
Back side	20	QPSK 50_0	26365/1882.5	1:1	0.496	0.17	24.58	25.00	1.102	0.546	22.9
Left side	20	QPSK 50_0	26365/1882.5	1:1	0.109	-0.04	24.58	25.00	1.102	0.120	22.9
Right side	20	QPSK 50_0	26365/1882.5	1:1	0.138	0.10	24.58	25.00	1.102	0.152	22.9
Bottom side	20	QPSK 50_0	26365/1882.5	1:1	0.408	-0.16	24.58	25.00	1.102	0.449	22.9
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	20	QPSK 1_50	26365/1882.5	1:1	0.281	0.13	25.90	26.00	1.023	0.288	22.9
Back side	20	QPSK 1_50	26365/1882.5	1:1	1.270	-0.03	25.90	26.00	1.023	1.300	22.9
Left side	20	QPSK 1_50	26365/1882.5	1:1	0.183	0.15	25.90	26.00	1.023	0.187	22.9
Right side	20	QPSK 1_50	26365/1882.5	1:1	0.365	0.04	25.90	26.00	1.023	0.374	22.9
Bottom side	20	QPSK 1_50	26365/1882.5	1:1	1.080	0.09	25.90	26.00	1.023	1.105	22.9
Back side-Battery2	20	QPSK 1_50	26365/1882.5	1:1	1.110	0.12	25.90	26.00	1.023	1.136	22.9
Limbs Test data(Separate 0mm 50%RB)											
Front side	20	QPSK 50_0	26365/1882.5	1:1	0.233	0.07	24.58	25.00	1.102	0.257	22.9
Back side	20	QPSK 50_0	26365/1882.5	1:1	1.060	-0.06	24.58	25.00	1.102	1.168	22.9
Left side	20	QPSK 50_0	26365/1882.5	1:1	0.155	0.16	24.58	25.00	1.102	0.171	22.9
Right side	20	QPSK 50_0	26365/1882.5	1:1	0.328	0.09	24.58	25.00	1.102	0.361	22.9
Bottom side	20	QPSK 50_0	26365/1882.5	1:1	0.890	0.16	24.58	25.00	1.102	0.980	22.9

Table 8： SAR of LTE Band 25 for Body and Limbs is covering LTE Band 2.

9.2.5 SAR Result of LTE Band 26

LTE Band 26 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.304	-0.12	24.91	25.00	1.021	0.310	22.8
Back side	15	QPSK 1_0	26865/831.5	1:1	0.381	-0.04	24.91	25.00	1.021	0.389	22.8
Left side	15	QPSK 1_0	26865/831.5	1:1	0.217	0.10	24.91	25.00	1.021	0.222	22.8
Right side	15	QPSK 1_0	26865/831.5	1:1	0.327	0.03	24.91	25.00	1.021	0.334	22.8
Bottom side	15	QPSK 1_0	26865/831.5	1:1	0.366	0.03	24.91	25.00	1.021	0.374	22.8
Back side-Battery2	15	QPSK 1_0	26865/831.5	1:1	0.376	-0.02	24.91	25.00	1.021	0.384	22.8
Body Test data(Separate 10mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.251	-0.11	23.61	24.00	1.094	0.275	22.8
Back side	15	QPSK 36_0	26865/831.5	1:1	0.314	0.17	23.61	24.00	1.094	0.344	22.8
Left side	15	QPSK 36_0	26865/831.5	1:1	0.198	0.16	23.61	24.00	1.094	0.217	22.8
Right side	15	QPSK 36_0	26865/831.5	1:1	0.227	-0.07	23.61	24.00	1.094	0.248	22.8
Bottom side	15	QPSK 36_0	26865/831.5	1:1	0.287	-0.06	23.61	24.00	1.094	0.314	22.8
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.331	-0.10	24.91	25.00	1.021	0.338	22.8
Back side	15	QPSK 1_0	26865/831.5	1:1	0.248	0.00	24.91	25.00	1.021	0.253	22.8
Left side	15	QPSK 1_0	26865/831.5	1:1	0.257	0.04	24.91	25.00	1.021	0.262	22.8
Right side	15	QPSK 1_0	26865/831.5	1:1	0.496	-0.03	24.91	25.00	1.021	0.506	22.8
Bottom side	15	QPSK 1_0	26865/831.5	1:1	0.417	0.04	24.91	25.00	1.021	0.426	22.8
Right side-Battery2	15	QPSK 1_0	26865/831.5	1:1	0.475	-0.13	24.91	25.00	1.021	0.485	22.8
Limbs Test data(Separate 0mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.258	0.19	23.61	24.00	1.094	0.282	22.8
Back side	15	QPSK 36_0	26865/831.5	1:1	0.241	-0.10	23.61	24.00	1.094	0.264	22.8
Left side	15	QPSK 36_0	26865/831.5	1:1	0.195	0.06	23.61	24.00	1.094	0.213	22.8
Right side	15	QPSK 36_0	26865/831.5	1:1	0.355	0.18	23.61	24.00	1.094	0.388	22.8
Bottom side	15	QPSK 36_0	26865/831.5	1:1	0.333	-0.03	23.61	24.00	1.094	0.364	22.8

Table 9： SAR of LTE Band 26 for Body and Limbs is covering LTE Band 5.

9.2.6 SAR Result of LTE Band 41

LTE Band 41 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.120	0.10	25.87	26.00	1.030	0.124	23
Back side	20	QPSK 1_0	40620/2593	1:1.58	1.010	0.02	25.87	26.00	1.030	**1.041**	23
Back side-Repeat SAR	20	QPSK 1_0	40620/2593	1:1.58	1.000	0.08	25.87	26.00	1.030	1.030	23
Back side	20	QPSK 1_0	39750/2506	1:1.58	0.967	-0.02	25.74	26.00	1.062	1.027	23
Back side	20	QPSK 1_0	40185/2549.5	1:1.58	0.955	0.04	25.71	26.00	1.069	1.021	23
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.976	0.15	25.78	26.00	1.052	1.027	23
Back side	20	QPSK 1_0	41490/2680	1:1.58	0.971	0.05	25.78	26.00	1.052	1.021	23
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.088	0.12	25.87	26.00	1.030	0.091	23
Right side	20	QPSK 1_0	40620/2593	1:1.58	0.151	0.18	25.87	26.00	1.030	0.156	23
Bottom side	20	QPSK 1_0	40620/2593	1:1.58	0.514	-0.02	25.87	26.00	1.030	0.530	23
Back side-Battery2	20	QPSK 1_0	40620/2593	1:1.58	0.967	0.16	25.87	26.00	1.030	0.996	23
Body Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.096	-0.19	24.92	25.00	1.019	0.098	23
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.838	0.09	24.92	25.00	1.019	0.854	23
Back side	20	QPSK 50_0	39750/2506	1:1.58	0.809	-0.03	24.88	25.00	1.028	0.832	23
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	0.792	-0.19	24.69	25.00	1.074	0.851	23
Back side	20	QPSK 50_0	41055/2636.5	1:1.58	0.816	0.02	24.88	25.00	1.028	0.839	23
Back side	20	QPSK 50_0	41490/2680	1:1.58	0.805	-0.15	24.91	25.00	1.021	0.822	23
Left side	20	QPSK 50_0	40620/2593	1:1.58	0.074	-0.05	24.92	25.00	1.019	0.075	23
Right side	20	QPSK 50_0	40620/2593	1:1.58	0.116	0.17	24.92	25.00	1.019	0.118	23
Bottom side	20	QPSK 50_0	40620/2593	1:1.58	0.437	-0.01	24.92	25.00	1.019	0.445	23
Body Test data(Separate 10mm 100%RB)											
Back side	20	QPSK 100_0	40620/2593	1:1.58	0.802	0.07	24.76	25.00	1.057	0.848	23
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.363	-0.13	25.87	26.00	1.030	0.374	23
Back side	20	QPSK 1_0	40620/2593	1:1.58	1.960	-0.04	25.87	26.00	1.030	2.020	23
Back side	20	QPSK 1_0	39750/2506	1:1.58	1.760	-0.13	25.74	26.00	1.062	1.869	23
Back side	20	QPSK 1_0	40185/2549.5	1:1.58	1.770	-0.06	25.71	26.00	1.069	1.892	23
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	1.870	-0.16	25.78	26.00	1.052	1.967	23
Back side	20	QPSK 1_0	41490/2680	1:1.58	1.750	0.03	25.78	26.00	1.052	1.841	23
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.158	0.02	25.87	26.00	1.030	0.163	23

Right side	20	QPSK 1_0	40620/2593	1:1.58	0.460	-0.08	25.87	26.00	1.030	0.474	23
Bottom side	20	QPSK 1_0	40620/2593	1:1.58	1.440	-0.13	25.87	26.00	1.030	1.484	23
Back side-Battery2	20	QPSK 1_0	40620/2593	1:1.58	1.840	0.13	25.87	26.00	1.030	1.896	23
Limbs Test data(Separate 0mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.315	0.06	24.92	25.00	1.019	0.321	23
Back side	20	QPSK 50_0	40620/2593	1:1.58	1.850	0.17	24.92	25.00	1.019	1.884	23
Left side	20	QPSK 50_0	40620/2593	1:1.58	0.122	-0.18	24.92	25.00	1.019	0.124	23
Right side	20	QPSK 50_0	40620/2593	1:1.58	0.354	-0.11	24.92	25.00	1.019	0.361	23
Bottom side	20	QPSK 50_0	40620/2593	1:1.58	1.160	0.07	24.92	25.00	1.019	1.182	23
Limbs Test data(Separate 0mm 100%RB)											
Back side	20	QPSK 100_0	40620/2593	1:1.58	1.660	0.17	24.76	25.00	1.057	1.754	23

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Back side	40620/2593	1.06	1.03	1.029126214	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

Table 10： SAR of LTE Band 41 for Body and Limbs.

9.2.7 SAR Result of LTE Band 66

LTE Band 66 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_50	132322/1745	1:1	0.196	-0.10	25.68	26.00	1.076	0.211	22.9
Back side	20	QPSK 1_50	132322/1745	1:1	0.965	-0.01	25.68	26.00	1.076	1.039	22.9
Back side-Repeat SAR	20	QPSK 1_50	132322/1745	1:1	0.958	0.06	25.68	26.00	1.076	1.031	22.9
Back side	20	QPSK 1_50	132072/1720	1:1	0.824	-0.10	25.14	26.00	1.219	1.004	22.9
Back side	20	QPSK 1_50	132572/1770	1:1	0.809	-0.13	24.94	26.00	1.276	1.033	22.9
Left side	20	QPSK 1_50	132322/1745	1:1	0.204	0.16	25.68	26.00	1.076	0.220	22.9
Right side	20	QPSK 1_50	132322/1745	1:1	0.420	-0.01	25.68	26.00	1.076	0.452	22.9
Bottom side	20	QPSK 1_50	132322/1745	1:1	0.736	-0.09	25.68	26.00	1.076	0.792	22.9
Back side-Battery2	20	QPSK 1_50	132322/1745	1:1	0.899	0.16	25.68	26.00	1.076	0.968	22.9
Body Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.189	0.11	24.17	25.00	1.211	0.229	22.9
Back side	20	QPSK 50_0	132322/1745	1:1	0.780	-0.13	24.17	25.00	1.211	0.944	22.9
Back side	20	QPSK 50_0	132072/1720	1:1	0.669	0.15	24.10	25.00	1.230	0.823	22.9
Back side	20	QPSK 50_0	132572/1770	1:1	0.658	0.00	24.00	25.00	1.259	0.828	22.9
Left side	20	QPSK 50_0	132322/1745	1:1	0.152	-0.07	24.17	25.00	1.211	0.184	22.9
Right side	20	QPSK 50_0	132322/1745	1:1	0.302	0.14	24.17	25.00	1.211	0.366	22.9
Bottom side	20	QPSK 50_0	132322/1745	1:1	0.604	0.07	24.17	25.00	1.211	0.731	22.9
Body Test data(Separate 10mm 100%RB)											
Back side	20	QPSK 100_0	132322/1745	1:1	0.751	0.09	24.18	25.00	1.208	0.907	22.9
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	20	QPSK 1_50	132322/1745	1:1	0.427	0.12	25.68	26.00	1.076	0.460	22.9
Back side	20	QPSK 1_50	132322/1745	1:1	1.430	0.12	25.68	26.00	1.076	1.539	22.9
Left side	20	QPSK 1_50	132322/1745	1:1	0.207	0.04	25.68	26.00	1.076	0.223	22.9
Right side	20	QPSK 1_50	132322/1745	1:1	0.764	0.01	25.68	26.00	1.076	0.822	22.9
Bottom side	20	QPSK 1_50	132322/1745	1:1	1.480	0.05	25.68	26.00	1.076	1.593	22.9
Bottom side-Battery2	20	QPSK 1_50	132322/1745	1:1	1.360	0.06	25.68	26.00	1.076	1.464	22.9
Limbs Test data(Separate 0mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.325	0.13	24.17	25.00	1.211	0.393	22.9
Back side	20	QPSK 50_0	132322/1745	1:1	1.150	-0.13	24.17	25.00	1.211	1.392	22.9
Left side	20	QPSK 50_0	132322/1745	1:1	0.196	0.18	24.17	25.00	1.211	0.237	22.9
Right side	20	QPSK 50_0	132322/1745	1:1	0.609	0.16	24.17	25.00	1.211	0.737	22.9
Bottom side	20	QPSK 50_0	132322/1745	1:1	1.180	-0.13	24.17	25.00	1.211	1.429	22.9

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Back side	132322/1745	0.965	0.958	1.007306889	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

Table 11： SAR of LTE Band 66 for Body and Limbs is covering LTE Band 4.

9.2.8 SAR Result of LTE Band 71

LTE Band 71 SAR Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	133322/683	1:1	0.002	-0.01	24.81	25.00	1.045	0.002	22.7
Back side	20	QPSK 1_0	133322/683	1:1	0.223	0.12	24.81	25.00	1.045	0.233	22.7
Left side	20	QPSK 1_0	133322/683	1:1	0.002	0.15	24.81	25.00	1.045	0.002	22.7
Right side	20	QPSK 1_0	133322/683	1:1	0.002	0.10	24.81	25.00	1.045	0.002	22.7
Bottom side	20	QPSK 1_0	133322/683	1:1	0.002	0.12	24.81	25.00	1.045	0.002	22.7
Back side-Battery2	20	QPSK 1_0	133322/683	1:1	0.195	0.11	24.81	25.00	1.045	0.204	22.7
Body Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	133322/683	1:1	0.002	-0.03	23.52	24.00	1.117	0.002	22.7
Back side	20	QPSK 50_0	133322/683	1:1	0.200	0.10	23.52	24.00	1.117	0.223	22.7
Left side	20	QPSK 50_0	133322/683	1:1	0.002	0.15	23.52	24.00	1.117	0.002	22.7
Right side	20	QPSK 50_0	133322/683	1:1	0.002	0.04	23.52	24.00	1.117	0.002	22.7
Bottom side	20	QPSK 50_0	133322/683	1:1	0.002	-0.06	23.52	24.00	1.117	0.002	22.7
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data(Separate 0mm 1RB)											
Front side	20	QPSK 1_0	133322/683	1:1	0.025	-0.15	24.81	25.00	1.045	0.026	22.7
Back side	20	QPSK 1_0	133322/683	1:1	0.832	-0.15	24.81	25.00	1.045	0.869	22.7
Left side	20	QPSK 1_0	133322/683	1:1	0.021	-0.01	24.81	25.00	1.045	0.022	22.7
Right side	20	QPSK 1_0	133322/683	1:1	0.058	0.03	24.81	25.00	1.045	0.061	22.7
Bottom side	20	QPSK 1_0	133322/683	1:1	0.122	0.08	24.81	25.00	1.045	0.127	22.7
Back side-Battery2	20	QPSK 1_0	133322/683	1:1	0.811	0.00	24.81	25.00	1.045	0.847	22.7
Limbs Test data(Separate 0mm 50%RB)											
Front side	20	QPSK 50_0	133322/683	1:1	0.026	0.12	23.52	24.00	1.117	0.029	22.7
Back side	20	QPSK 50_0	133322/683	1:1	0.730	-0.12	23.52	24.00	1.117	0.815	22.7
Left side	20	QPSK 50_0	133322/683	1:1	0.025	-0.07	23.52	24.00	1.117	0.028	22.7
Right side	20	QPSK 50_0	133322/683	1:1	0.049	0.04	23.52	24.00	1.117	0.055	22.7
Bottom side	20	QPSK 50_0	133322/683	1:1	0.141	0.14	23.52	24.00	1.117	0.157	22.7

Table 12： SAR of LTE Band 71 for Body and Limbs.

9.2.9 SAR Result of WIFI 2.4G

Wi-Fi 2.4G SAR Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data (Separate 10mm)											
Front side	802.11b	1/2412	97.09%	1.030	0.065	0.07	17.06	18.00	1.242	0.083	22.9
Back side	802.11b	1/2412	97.09%	1.030	0.051	-0.15	17.06	18.00	1.242	0.065	22.9
Left side	802.11b	1/2412	97.09%	1.030	0.237	0.12	17.06	18.00	1.242	0.303	22.9
Right side	802.11b	1/2412	97.09%	1.030	0.029	-0.14	17.06	18.00	1.242	0.037	22.9
Top side	802.11b	1/2412	97.09%	1.030	0.031	-0.10	17.06	18.00	1.242	0.040	22.9
Bottom side	802.11b	1/2412	97.09%	1.030	0.060	0.05	17.06	18.00	1.242	0.077	22.9
Left side-Battery2	802.11b	1/2412	97.09%	1.030	0.217	-0.14	17.06	18.00	1.242	0.278	22.9
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data (Separate 0mm)											
Front side	802.11b	1/2412	97.09%	1.030	0.129	0.10	17.06	18.00	1.242	0.165	22.9
Back side	802.11b	1/2412	97.09%	1.030	0.126	-0.01	17.06	18.00	1.242	0.161	22.9
Left side	802.11b	1/2412	97.09%	1.030	0.604	0.03	17.06	18.00	1.242	0.772	22.9
Right side	802.11b	1/2412	97.09%	1.030	0.043	0.14	17.06	18.00	1.242	0.055	22.9
Top side	802.11b	1/2412	97.09%	1.030	0.006	-0.14	17.06	18.00	1.242	0.008	22.9
Bottom side	802.11b	1/2412	97.09%	1.030	0.136	0.09	17.06	18.00	1.242	0.174	22.9
Left side-Battery2	802.11b	1/2412	97.09%	1.030	0.586	0.08	17.06	18.00	1.242	0.749	22.9

Table 13： SAR of WIFI 2.4G for Body and Limbs.

9.2.10 SAR Result of WIFI 5G

Wi-Fi 5G SAR Test Record											
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Test data of U-NII-1(Separate 10mm)											
Front side	802.11a	36/5180	98.31%	1.017	0.082	-0.10	16.84	18.00	1.306	0.109	23
Back side	802.11a	36/5180	98.31%	1.017	0.261	0.03	16.84	18.00	1.306	0.347	23
Left side	802.11a	36/5180	98.31%	1.017	0.262	0.09	16.84	18.00	1.306	0.348	23
Right side	802.11a	36/5180	98.31%	1.017	0.064	0.05	16.84	18.00	1.306	0.085	23
Top side	802.11a	36/5180	98.31%	1.017	0.084	0.08	16.84	18.00	1.306	0.112	23
Bottom side	802.11a	36/5180	98.31%	1.017	0.109	0.19	16.84	18.00	1.306	0.145	23
Left side-Battery2	802.11a	36/5180	98.31%	1.017	0.250	0.04	16.84	18.00	1.306	0.332	23
Test data of U-NII-3(Separate 10mm)											
Front side	802.11a	165/5825	98.26%	1.018	0.212	0.04	18.96	19.50	1.132	0.244	23
Back side	802.11a	165/5825	98.26%	1.018	0.401	-0.08	18.96	19.50	1.132	0.462	23
Left side	802.11a	165/5825	98.26%	1.018	**0.918**	-0.04	18.96	19.50	1.132	1.058	23
Left side-Repeat SAR	802.11a	165/5825	98.26%	1.018	0.907	0.03	18.96	19.50	1.132	1.045	23
Left side	802.11a	149/5745	98.26%	1.018	0.719	0.13	18.84	19.50	1.164	0.852	23
Left side	802.11a	157/5785	98.26%	1.018	0.769	-0.04	18.62	19.50	1.225	0.958	23
Right side	802.11a	165/5825	98.26%	1.018	0.106	-0.01	18.96	19.50	1.132	0.122	23
Top side	802.11a	165/5825	98.26%	1.018	0.119	0.16	18.96	19.50	1.132	0.137	23
Bottom side	802.11a	165/5825	98.26%	1.018	0.511	0.13	18.96	19.50	1.132	0.589	23
Left side-Battery2	802.11a	165/5825	98.26%	1.018	0.887	-0.19	18.96	19.50	1.132	1.022	23
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 10-g (W/kg)**	**Liquid Temp.(℃)**
Test data of U-NII-1&2A(Separate 0mm)											
Front side	802.11a	60/5300	98.31%	1.017	0.088	-0.08	17.04	18.00	1.247	0.112	23
Back side	802.11a	60/5300	98.31%	1.017	0.232	0.08	17.04	18.00	1.247	0.294	23
Left side	802.11a	60/5300	98.31%	1.017	**0.414**	0.09	17.04	18.00	1.247	0.525	23
Right side	802.11a	60/5300	98.31%	1.017	0.026	0.05	17.04	18.00	1.247	0.033	23
Top side	802.11a	60/5300	98.31%	1.017	0.018	-0.08	17.04	18.00	1.247	0.023	23
Bottom side	802.11a	60/5300	98.31%	1.017	0.077	-0.11	17.04	18.00	1.247	0.098	23
Left side-Battery2	802.11a	60/5300	98.31%	1.017	0.405	-0.19	17.04	18.00	1.247	0.514	23
Test data of U-NII-2C(Separate 0mm)											
Front side	802.11a	140/5700	98.30%	1.017	0.222	0.01	18.23	19.00	1.194	0.270	23
Back side	802.11a	140/5700	98.30%	1.017	0.837	0.10	18.23	19.00	1.194	1.017	23
Left side	802.11a	140/5700	98.30%	1.017	**1.110**	0.16	18.23	19.00	1.194	1.348	23

Right side	802.11a	140/5700	98.30%	1.017	0.050	-0.12	18.23	19.00	1.194	0.061	23
Top side	802.11a	140/5700	98.30%	1.017	0.027	0.13	18.23	19.00	1.194	0.033	23
Bottom side	802.11a	140/5700	98.30%	1.017	0.246	0.16	18.23	19.00	1.194	0.299	23
Left side-Battery2	802.11a	140/5700	98.30%	1.017	1.040	-0.10	18.23	19.00	1.194	1.263	23
Test data of U-NII-3(Separate 0mm)											
Front side	802.11a	165/5825	98.26%	1.018	0.290	0.17	18.96	19.50	1.132	0.334	23
Back side	802.11a	165/5825	98.26%	1.018	1.090	0.03	18.96	19.50	1.132	1.256	23
Left side	802.11a	165/5825	98.26%	1.018	**1.670**	0.08	18.96	19.50	1.132	1.925	23
Right side	802.11a	165/5825	98.26%	1.018	0.079	0.02	18.96	19.50	1.132	0.091	23
Top side	802.11a	165/5825	98.26%	1.018	0.026	-0.10	18.96	19.50	1.132	0.030	23
Bottom side	802.11a	165/5825	98.26%	1.018	0.378	-0.07	18.96	19.50	1.132	0.436	23
Left side-Battery2	802.11a	165/5825	98.26%	1.018	1.570	-0.08	18.96	19.50	1.132	1.809	23

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Left side	165/5825	0.918	0.907	1.012127894	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

Table 14： SAR of WIFI 5G for Body and Limbs.

9.2.11 SAR Result of BT

Bluetooth SAR Test Record											
Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body Test data (Separate 10mm)											
Front side	DH5	39/2441	77.59%	1.289	0.001	-0.11	9.00	10.00	1.259	0.002	22.9
Back side	DH5	39/2441	77.59%	1.289	0.001	-0.06	9.00	10.00	1.259	0.002	22.9
Left side	DH5	39/2441	77.59%	1.289	0.013	-0.05	9.00	10.00	1.259	0.021	22.9
Right side	DH5	39/2441	77.59%	1.289	0.001	-0.14	9.00	10.00	1.259	0.002	22.9
Top side	DH5	39/2441	77.59%	1.289	0.001	-0.19	9.00	10.00	1.259	0.002	22.9
Bottom side	DH5	39/2441	77.59%	1.289	0.001	-0.11	9.00	10.00	1.259	0.002	22.9
Left side-Battery2	DH5	39/2441	77.59%	1.289	0.010	-0.05	9.00	10.00	1.259	0.016	22.9
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Limbs Test data (Separate 0mm)											
Front side	DH5	39/2441	77.59%	1.289	0.002	-0.06	9.00	10.00	1.259	0.003	22.9
Back side	DH5	39/2441	77.59%	1.289	0.001	0.05	9.00	10.00	1.259	0.002	22.9
Left side	DH5	39/2441	77.59%	1.289	0.005	0.06	9.00	10.00	1.259	0.008	22.9
Right side	DH5	39/2441	77.59%	1.289	0.001	0.06	9.00	10.00	1.259	0.002	22.9
Top side	DH5	39/2441	77.59%	1.289	0.001	0.18	9.00	10.00	1.259	0.002	22.9
Bottom side	DH5	39/2441	77.59%	1.289	0.001	-0.19	9.00	10.00	1.259	0.002	22.9
Left side-Battery2	DH5	39/2441	77.59%	1.289	0.004	-0.12	9.00	10.00	1.259	0.006	22.9

Table 15： SAR of BT for Body and Limbs.

9.3 Multiple Transmitter Evaluation

9.3.1 Simultaneous SAR SAR test evaluation

•Simultaneous Transmission Possibilities

NO	Simultaneous Tx Combination	Head	Limbs
1	WWAN + WLAN2.4GHz	Y	Y
2	WWAN + WLAN5GHz + BT	Y	Y

9.3.2 Simultaneous Transmission SAR Summation Scenario

Body:

Test position		SARmax (W/kg)				Summed SAR	
		WWAN	WiFi 2.4G	WiFi 5G	Bluetooth		
		1	2	3	4	1+2	1+3+4
LTE B7	Front side	0.075	0.083	0.244	0.021	0.158	0.340
	Back side	0.698	0.065	0.462	0.002	0.763	1.162
	Left side	0.066	0.303	1.058	0.021	0.369	1.145
	Right side	0.089	0.037	0.141	0.002	0.126	0.232
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.360	0.077	0.589	0.002	0.437	0.951
LTE B12(17)	Front side	0.040	0.083	0.244	0.021	0.123	0.305
	Back side	0.171	0.065	0.462	0.002	0.236	0.635
	Left side	0.001	0.303	1.058	0.021	0.304	1.080
	Right side	0.054	0.037	0.141	0.002	0.091	0.197
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.041	0.077	0.589	0.002	0.118	0.632
LTE B13	Front side	0.273	0.083	0.244	0.021	0.356	0.538
	Back side	0.438	0.065	0.462	0.002	0.503	0.902
	Left side	0.210	0.303	1.058	0.021	0.513	1.289
	Right side	0.226	0.037	0.141	0.002	0.263	0.369
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.277	0.077	0.589	0.002	0.354	0.868
LTE B25(2)	Front side	0.131	0.083	0.244	0.021	0.214	0.396
	Back side	0.633	0.065	0.462	0.002	0.698	1.097
	Left side	0.142	0.303	1.058	0.021	0.445	1.221
	Right side	0.164	0.037	0.141	0.002	0.201	0.307
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.522	0.077	0.589	0.002	0.599	1.113
LTE B26(5)	Front side	0.310	0.065	0.462	0.002	0.375	0.774
	Back side	0.389	0.065	0.462	0.002	0.454	0.853
	Left side	0.222	0.303	1.058	0.021	0.525	1.301
	Right side	0.334	0.037	0.141	0.002	0.371	0.477
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.374	0.077	0.589	0.002	0.451	0.965
LTE B41	Front side	0.124	0.065	0.462	0.002	0.189	0.588
	Back side	1.041	0.065	0.462	0.002	1.106	1.505
	Left side	0.091	0.303	1.058	0.021	0.394	1.170
	Right side	0.156	0.037	0.141	0.002	0.193	0.299
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.530	0.077	0.589	0.002	0.607	1.121
LTE B66(4)	Front side	0.229	0.065	0.462	0.002	0.294	0.693
	Back side	1.039	0.065	0.462	0.002	1.104	1.503
	Left side	0.220	0.303	1.058	0.021	0.523	1.299
	Right side	0.452	0.037	0.141	0.002	0.489	0.595

	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.792	0.077	0.589	0.002	0.869	1.383
LTE B71	Front side	0.002	0.065	0.462	0.002	0.067	0.466
	Back side	0.233	0.065	0.462	0.002	0.298	0.697
	Left side	0.002	0.303	1.058	0.021	0.305	1.081
	Right side	0.002	0.037	0.141	0.002	0.039	0.145
	Top side	0.000	0.040	0.137	0.002	0.040	0.139
	Bottom side	0.002	0.077	0.589	0.002	0.079	0.593

Limbs:

Test position		SARmax (W/kg)				Summed SAR	
		WWAN	WiFi 2.4G	WiFi 5G	Bluetooth		
		1	2	3	4	1+2	1+3+4
LTE B7	Front side	0.183	0.165	0.334	0.003	0.348	0.520
	Back side	1.166	0.161	1.256	0.002	1.327	2.424
	Left side	0.095	0.772	1.925	0.008	0.867	2.028
	Right side	0.230	0.055	0.091	0.002	0.285	0.323
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	0.769	0.174	0.436	0.002	0.943	1.207
LTE B12(17)	Front side	0.072	0.165	0.334	0.003	0.237	0.409
	Back side	0.916	0.161	1.256	0.002	1.077	2.174
	Left side	0.063	0.772	1.925	0.008	0.835	1.996
	Right side	0.175	0.055	0.091	0.002	0.230	0.268
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	0.331	0.174	0.436	0.002	0.505	0.769
LTE B13	Front side	0.258	0.165	0.334	0.003	0.423	0.595
	Back side	0.536	0.161	1.256	0.002	0.697	1.794
	Left side	0.264	0.772	1.925	0.008	1.036	2.197
	Right side	0.400	0.055	0.091	0.002	0.455	0.493
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	0.669	0.174	0.436	0.002	0.843	1.107
LTE B25(2)	Front side	0.288	0.165	0.334	0.003	0.453	1.794
	Back side	1.300	0.161	1.256	0.002	1.461	2.558
	Left side	0.187	0.772	1.925	0.008	0.959	2.120
	Right side	0.374	0.055	0.091	0.002	0.429	0.467
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	1.105	0.174	0.436	0.002	1.279	1.543
LTE B26(5)	Front side	0.338	0.161	1.256	0.002	0.499	1.596
	Back side	0.264	0.161	1.256	0.002	0.425	1.522
	Left side	0.262	0.772	1.925	0.008	1.034	2.195
	Right side	0.506	0.055	0.091	0.002	0.561	0.599
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	0.426	0.174	0.436	0.002	0.600	0.864
LTE B41	Front side	0.374	0.161	1.256	0.002	0.535	1.632
	Back side	2.020	0.161	1.256	0.002	2.181	3.278
	Left side	0.163	0.772	1.925	0.008	0.935	2.096
	Right side	0.474	0.055	0.091	0.002	0.529	0.567
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	1.484	0.174	0.436	0.002	1.658	1.922
LTE B66(4)	Front side	0.460	0.161	1.256	0.002	0.621	1.718
	Back side	1.539	0.161	1.256	0.002	1.700	2.797
	Left side	0.237	0.772	1.925	0.008	1.009	2.170
	Right side	0.822	0.055	0.091	0.002	0.877	0.915
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	1.593	0.174	0.436	0.002	1.767	2.031

LTE B71	Front side	0.029	0.161	1.256	0.002	0.190	1.287
	Back side	0.869	0.161	1.256	0.002	1.030	2.127
	Left side	0.028	0.772	1.925	0.008	0.800	1.961
	Right side	0.061	0.055	0.091	0.002	0.116	0.154
	Top side	0.000	0.008	0.033	0.002	0.008	0.035
	Bottom side	0.157	0.174	0.436	0.002	0.331	0.595

10 Equipment list

Test Platform	SPEAG DASY5 Professional
Description	SAR Test System (Frequency range 300MHz-6GHz)
Software Reference	DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Hardware Reference

	Equipment	Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	DAE	SPEAG	DAE4	1245	2024/6/5	2025/6/4
☒	Twin Phantom	SPEAG	SAM 7	1702	NCR	NCR
☒	E-Field Probe	SPEAG	EX3DV4	3793	2024/03/04	2025/03/03
☒	Validation Kits	SPEAG	D750V3	1214	2022/2/7	2025/2/6
☒	Validation Kits	SPEAG	D835V2	4d161	2023/8/25	2026/8/24
☒	Validation Kits	SPEAG	D1750V2	1038	2021/12/16	2024/12/15
☒	Validation Kits	SPEAG	D1950V3	1218	2023/5/4	2026/5/3
☒	Validation Kits	SPEAG	D2450V2	922	2023/8/28	2026/8/27
☒	Validation Kits	SPEAG	D2600V2	1187	2022/2/3	2025/2/2
☒	Validation Kits	SPEAG	D5GHzV2	1174	2023/8/23	2026/8/22
☒	DAK-3.5 probe	SPEAG	DAK-3.5	1102	N/A	N/A
☒	Universal Radio Communication Tester	R&S	CMW500	111637	2024/9/10	2025/9/9
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	R&S	SMB100A	182393	2024/2/4	2025/2/3
☒	Preamplifier	Qiji	YX28980933	202104001	NCR	NCR
☒	Power Sensor	Keysight	U2002H	121251	2024/9/10	2025/9/9
☒	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
☒	Coaxial low pass filter	Mini-Circuits	VLF-2500(+)	NA	NCR	NCR
☒	Coaxial low pass filter	Microlab Fxr	LA-F13	NA	NCR	NCR
☒	DC POWER SUPPLY	SAKO	SK1730SL5A	NA	NCR	NCR
☒	Speed reading thermometer	LKM	DTM3000	SUW201-19-02	2024/9/18	2025/9/17
☒	Humidity and Temperature Indicator	MingGao	MingGao	NA	2024/9/18	2025/9/17

Note: All the equipments are within the valid period when the tests are performed.

11 Calibration certificate

Please see the Appendix C

12 Photographs

Please see the Appendix D

Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

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