FCC SAR Test Report

Applicant:	Shenzhen Eview GPS Technology
EUT Description:	Personal Mobile Alarm System
Model:	EC-W212X-V
FCC ID:	2AUMJEC-W212X-V
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2026/09/03
Date of Test:	2026/09/09 to 2026/09/15
Date of Issue:	2026/09/15

TOWE tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of the model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. Without written approval of TOWE, the test report shall not be reproduced except in full.

SUSHI TOWE WIRELESS TESTING (SHENZHEN) CO., LTD
检验检测专用章
Testing Services

Jim Huang	**Jack Li**
Approved By:	**Reviewed By:**

Revision History

Rev.	Issue Date	Description	Revised by
01	2026/09/15	Original	Jack Li

Table of Contents

1 Summary of Test Results

Band	Highest SAR(W/kg)	
	Next to the Mouth 1g (10mm)	**Extremity 10g (0mm)**
LTE Band 4	1.42	1.66
LTE Band 13	0.32	0.39
WIFI 2.4G	0.13	0.18
BLE	-	-
Simultaneous Transmission SAR	1.55	1.84
SAR Limited(W/kg)	1.6	4.0

2 Guidance Applied

FCC 47CFR §2.1093
ANSI/IEEE C95.1-1992
IEC/IEEE 62209-1528:2020
FCC KDB 941225 D05 SAR for LTE Devices v02r05
FCC KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
FCC KDB 447498 D01 General RF Exposure Guidance v06
FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
FCC KDB 865664 D02 RF Exposure Reporting v01r02

3 Lab Information

3.1 Testing Location

These measurement tests were conducted at the Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. facility located at F 401 and F 101, Building E, Hongwei Industrial Zone,No. 6, Liuxian 3rd Road, Zone 70, Xingdong Community, Xin'an Street, Bao'an District, Shenzhen, People's Republic of China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014
Tel.: +86-755-27212361
Contact Email: info@towewireless.com

3.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353
Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. has been recognized as an accredited testing laboratory.
Test Firm Registration Number: 684095
Designation Number: CN1353.

ISED CAB identifier: CN0152
Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. has been recognized by ISED as an accredited testing laboratory.
CAB identifier: CN0152
Company Number: 31000

3.3 Ambient Condition

Temperature: 18°C~25°C
Relative Humidity: 30%~75%

4 Client Information

4.1 Applicant

Applicant:	Shenzhen Eview GPS Technology
Address:	Rm 201, building 1-A, Nankechuang Yuangu, Dalang, Longhua District, Shenzhen, China

4.2 Manufacturer

Manufacturer:	Shenzhen Eview GPS Technology
Address:	Rm 201, building 1-A, Nankechuang Yuangu, Dalang, Longhua District, Shenzhen, China

5 Product Information

EUT Description	Personal Mobile Alarm System	
Model	EC-W212X-V	
Hardware Version	EV-W212-V1.0-20260525	
Software Version	v1.1.0.108	
Device Capabilities:		
Band	Frequency Range (MHz)	Modulation Type
LTE Band 4	1710~1755	QPSK, 16QAM
LTE Band 13	777~787	
Wi-Fi 2.4G	2400~2483.5	802.11b/g/n
BLE	2400 ~ 2483.5	GFSK
Antenna Type	Integrated antenna	
Remark: The above EUT's information was declared by applicant, please refer to the specifications or user manual for more detailed description.		

Antenna Locations:

Please see Appendix D.

6 RF Exposure Limits

Human Exposure	Uncontrolled Environment General Population (W/kg) or (mW/g)	Controlled Environment Occupational (W/kg) or (mW/g)
Spatial Peak SAR[1] (Brain/Trunk)	1.6	8.0
Spatial Average SAR[2] (Whole Body)	0.08	0.4
Spatial Peak SAR[3] (Hands/Feet/Ankle/Wrist)	4.0	20.0

Note:

1, 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.

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

3, 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. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

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). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

7 Introduction

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

7.1 SAR Definition

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

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

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

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

Where:

σ is the conductivity of the tissue material (S/m)

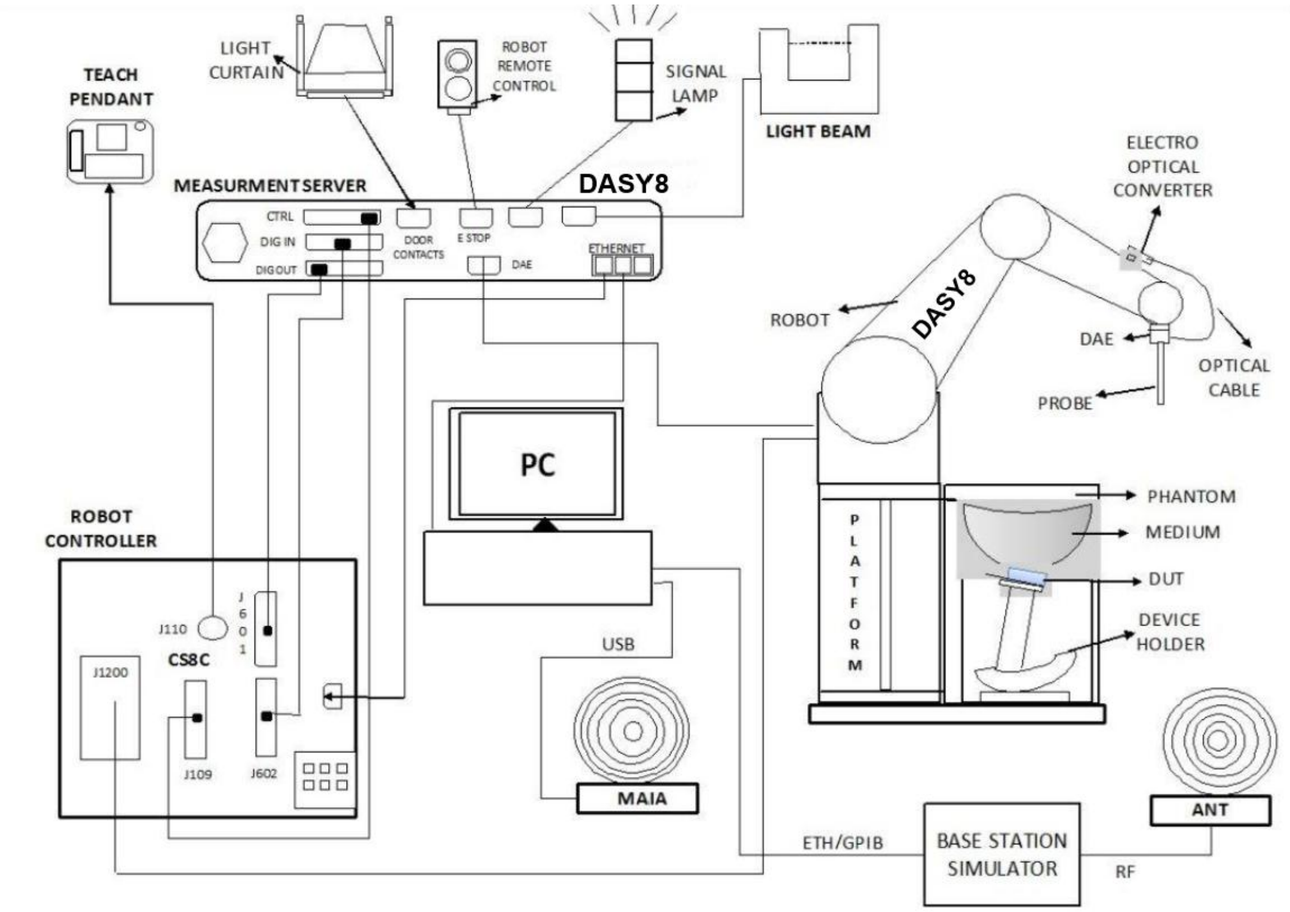
ρ is the mass density of the tissue material (kg/m^3)

E is the RMS electrical field strength (V/m)

8 SAR Measurements System

8.1 The SAR Measurement Set-up

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



- ➢ A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- ➢ An isotropic Field probe optimized and calibrated for the targeted measurement.
- ➢ A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- ➢ The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- ➢ The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- ➢ The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- ➢ A computer running Windows 11 and the DASY8 software.
- ➢ Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- ➢ The phantom, the device holder and other accessories according to the targeted measurement.

8.2 E-Field Probe

	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

8.3 Data Acquisition Electronics (DAE)

	The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

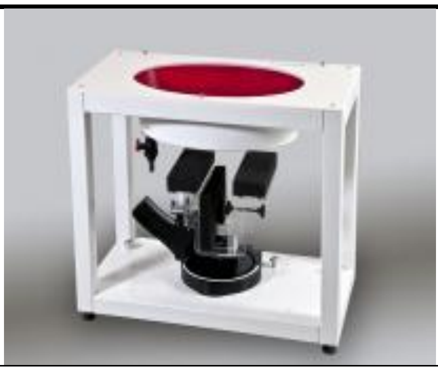
8.4 Phantom

SAM Twin Phantom:

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

ELI Phantom:

Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	
Wooden Support	SPEAG standard phantom table	

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

8.5 Device Holder

The SAR measured in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce uncertainty in the SAR of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions at which the devices must be measured are defined by the standards. The DASY8 device holder along with the associated adaptors / options is designed to accommodate different types & sizes (laptops, tablets, phones) of test devices and yet provide accurate and repeatable positioning as described in the test standards.

The device holder is available in two configurations (see Figure 3.13.1): for hand held transmitters (mobile phones) – MD4HHTV5 – Mounting Device for Hand-Held Transmitters and for Body-Worn transmitters – MD4LAP5 – Mounting Device for laptops and other body worn transmitters.

(a) MD4HHTV5 (b) MD4LAPV5

Figure 3.13.1: Mounting Device for Hand-Held Devices and Laptop / Body-Worn Devices

8.6 Measurement procedure

8.6.1 Power reference measurement

The Power Reference Measurement and Power Drift Measurement jobs are useful jobs for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

8.6.2 Area scan

Measurement procedures for evaluating SAR from wireless handsets typically start with a coarse measurement grid to determine the approximate location of the local peak SAR values. This is known as the area-scan procedure. In addition, identify the positions of any local maxima with SAR values within 2 dB of the maximum value, and that will not be within the zoom scan of other peaks. Additional zoom scans shall be measured for such peaks only when the primary peak is within 2 dB of the SAR compliance limit.

Area scan parameters SAR measurement as below:

Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	3 GHz < $f \leq 10$ GHz
Maximum distance between the measured points (geometric centre of the sensors) and the inner phantom surface (z_{M1} in Figure 20 in mm)	5 ± 1	δ ln(2)/2 ± 0,5 [a]
Maximum spacing between adjacent measured points in mm (see O.8.3.1)[b]	20, or half of the corresponding zoom scan length, whichever is smaller	60 / f, or half of the corresponding zoom scan length, whichever is smaller
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20)[c]	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Tolerance in the probe angle	1°	1°

[a] δ is the penetration depth for a plane-wave incident normally on a planar half-space.

[b] See Clause O.8 on how Δx and Δy may be selected for individual area scan requirements.

[c] The probe angle relative to the phantom surface normal is restricted due to the degradation in the measurement accuracy in fields with steep spatial gradients. The measurement accuracy decreases with increasing probe angle and increasing frequency. This is the reason for the tighter probe angle restriction at frequencies above 3 GHz.

8.6.3 Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the average SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan parameters SAR measurement as below:

Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	3 GHz < $f \leq 10$ GHz
Maximum distance between the closest measured points and the phantom surface (z_{M1} in Figure 20 and Table 3, in mm)	5	$\delta \ln(2)/2$ [a]
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20)	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Maximum spacing between measured points in the x- and y-directions (Δx and Δy, in mm)	8	$24 / f$ [b]
For uniform grids: Maximum spacing between measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	5	$10 / (f - 1)$
For graded grids: Maximum spacing between the two closest measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	4	$12 / f$
For graded grids: Maximum incremental increase in the spacing between measured points in the direction normal to the phantom shell ($R_z = \Delta z_2 / \Delta z_1$ in Figure 20)	1,5	1,5
Minimum edge length of the zoom scan volume in the x- and y-directions (L_z in O.8.3.2, in mm)	30	22
Minimum edge length of the zoom scan volume in the direction normal to the phantom shell (L_h in O.8.3.2 in mm)	30	22
Tolerance in the probe angle	1°	1°
[a] δ is the penetration depth for a plane-wave incident normally on a planar half-space. [b] This is the maximum spacing allowed, which might not work for all circumstances.		

8.6.4 Power Drift Measurement

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 Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. Several drift measurements are possible for one reference measurement. This allows a user to monitor the power drift of the device under test that must remain within a maximum variation of ±5%. Detail power drift measurement refer to appendix B.

9 Test Equipment list

Manufacturer	Equipment Name	Model	Serial Number	Calibration Date	Due Date of calibration
SPEAG	Twin Phantom	SAM	2168	NCR	NCR
SPEAG	E-Field Probe	EX3DV4	7858	2026/02/20	2027/02/19
SPEAG	E-Field Probe	EX3DV4	7812	2026/01/19	2027/01/18
SPEAG	Data Acquisition Electronics	DAE4	1846	2026/01/07	2027/01/06
SPEAG	System Validation Kits	D750V3	1231	2026/05/18	2029/05/17
SPEAG	System Validation Kits	D1750V2	1115	2026/02/05	2029/02/04
SPEAG	System Validation Kits	D2450V2	1099	2026/02/05	2029/02/04
SPEAG	Dielectric parameter probes	DAK3.5	1341	2026/07/06	2027/07/05
Agilent	Network Analyzer	E5071B	MY42302220	2026/03/05	2027/03/04
Talent Microwave	Directional Coupler	TC-05180-10S	220420003	NCR	NCR
R&S	Signal Generator	SMR20	100648	2026/03/05	2027/03/04
QiJi	Preamplifier	YX28982302	TOWE-EQ-SR-020	NCR	NCR
QiJi	Preamplifier	YX28982301	TOWE-EQ-SR-021	NCR	NCR
R&S	Power Sensor	NRP-Z21	101651	2026/03/05	2027/03/04
R&S	Power Sensor	NRP-Z21	104189	2026/03/05	2027/03/04
HiSiDiKe	Thermometer	TP300	TOWE-EQ-SR-023	2026/03/09	2027/03/08
BingYu	Temperature and Humidity Indicator	HTC-1	TOWE-EQ-SR-024	2026/03/09	2027/03/08

Note:

1. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged or repaired during the interval.

2. The justification data of dipole can be found in Appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

10 SAR measurement variability

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. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 or 2 W/kg (1-g or 10-g respectively); steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.

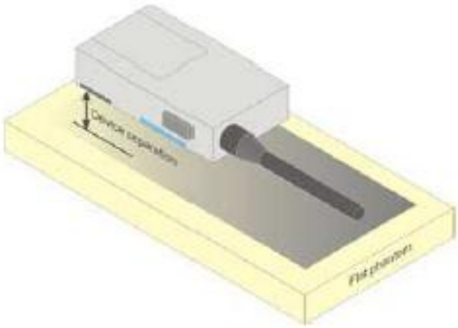
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6W/kg (~ 10% from the 1-g or 10-g respective SAR limit).

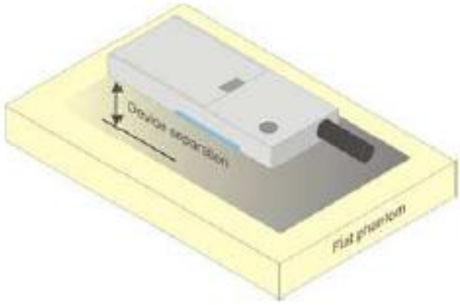
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

11 Description of Test Position

11.1 Next to the Mouth Exposure Condition

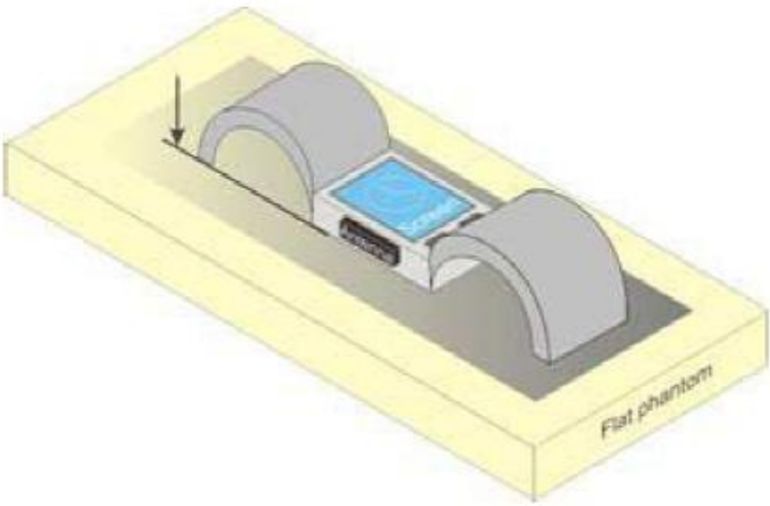
Transmitters that are built-in within a wrist watch or similar wrist-worn devices typically operate in speaker mode for voice communication, with the device worn on the wrist and positioned next to the mouth. When SAR evaluation is required, next to the mouth use is evaluated with the front of the device positioned at 10 mm from a flat phantom filled with head tissue-equivalent medium. The wrist bands should be strapped together to represent normal use conditions.





11.2 Extremity Exposure Condition

A limb-worn device is a unit whose intended use includes being strapped to the arm or leg of the user while transmitting (except in idle mode). The strap shall be opened so that it is divided into two parts as shown in the following. The device shall be positioned directly against the phantom surface with the strap straightened as much as possible and the back of the device towards the phantom. If the strap cannot normally be opened to allow placing in direct contact with the phantom surface, it may be necessary to break the strap of the device but ensuring to not damage the antenna.
The wrist bands should be strapped together to represent normal use conditions. SAR for wrist exposure is evaluated with the back of the device positioned in direct contact against a flat phantom filled with body tissue-equivalent medium. The wrist bands should be unstrapped and touching the phantom. The space introduced by the watch or wrist bands and the phantom must be representative of actual use conditions; otherwise, if applicable, the neck or a curved head region of the SAM phantom may be used, provided the device positioning and SAR probe access issues have been addressed through a KDB inquiry. When other device positioning and SAR measurement considerations are necessary, a KDB inquiry is also required for the test results to be acceptable; for example, devices with rigid wrist bands or electronic circuitry and/or antenna(s) incorporated in the wrist bands. These test configurations are applicable only to devices that are worn on the wrist and cannot support other use conditions; therefore, the operating restrictions must be fully demonstrated in both the test reports and user manuals.



12 System Verification

12.1 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		

12.2 Tissue Verification

The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. The temperature variation of the Tissue Simulate Liquids was 22±2°C, the liquid depth of the ear reference point or the flat phantom was at least 15 cm (which is shown in Figure 12-1).

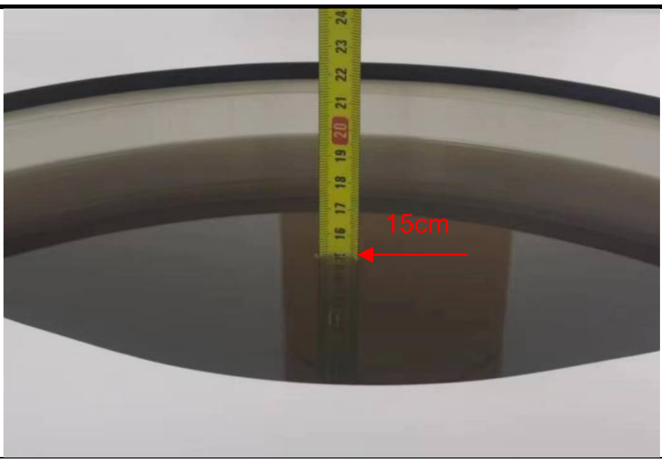


Figure 12-1 Liquid depth in the Flat Phantom

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Target Tissue		Measured Tissue		Deviation (Limit ±5%)		Date
			Permittivity ε_r	Conductivity σ(S/m)	Permittivity ε_r	Conductivity σ(S/m)	$\Delta\varepsilon_r$	Δσ	
750	Head	21.8	41.90	0.89	42.100	0.885	0.48%	-0.56%	2026/09/09
1750	Head	21.8	40.10	1.37	40.000	1.350	-0.25%	-1.46%	2026/09/09
2450	Head	21.6	39.20	1.80	39.200	1.820	0.00%	1.11%	2026/09/15

Table 1： Measurement Tissue Parameters

12.3 SAR System Check

Prior to SAR assessment, a SAR system Check measurement was performed to see if the measured SAR was within ±10% from the target SAR values. The System Performance Check Setup in Figure 12-3.

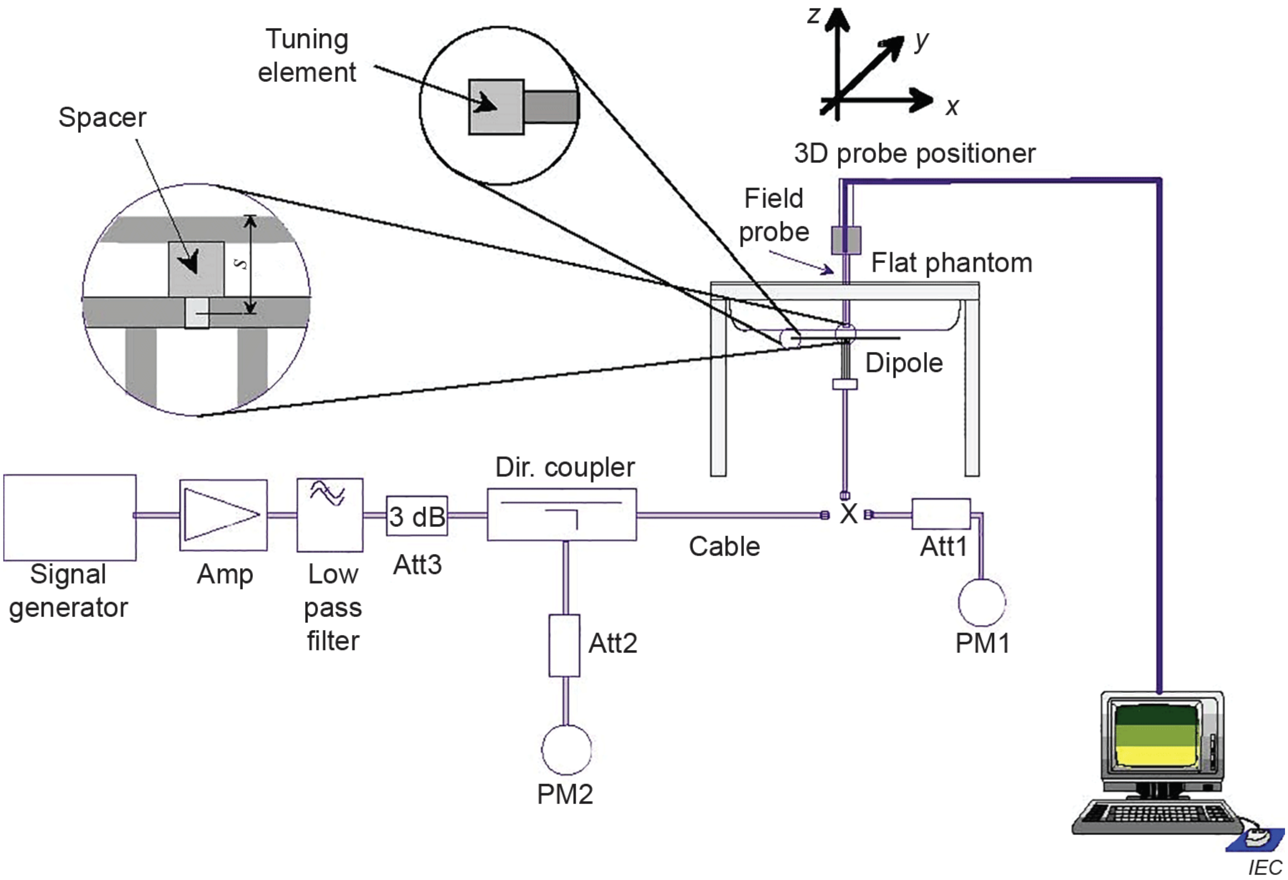


Figure 12-3 System Performance Check Setup

12.3.1 System Check Result

Frequency (MHz)	Tissue Type	Dipole	S/N	Target SAR (1W)		Measured SAR (100mW)		Measured SAR (normalized to 1W)		Deviation (Limit ±10%)		Date
				1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	Δ1g	Δ10g	
750	Head	D750V3	1231	8.54	5.58	0.852	0.561	8.52	5.61	-0.23%	0.54%	2026/09/09
1750	Head	D1750V2	1115	36.70	19.50	3.640	1.940	36.40	19.40	-0.82%	-0.51%	2026/09/09
2450	Head	D2450V2	1099	52.70	24.70	5.550	2.590	55.50	25.90	5.31%	4.86%	2026/09/15

Table 2： SAR System Check Result

12.3.2 Detailed System Check Result

Please see Appendix A

13 SAR General Measurement Procedures

13.1 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 or Anritsu MT8820C/MT8821C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

13.1.1 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.

13.1.2 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						MPR (dB)
	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	2
64QAM	> 5	> 4	> 8	> 12	> 16	> 18	3
256QAM	≥1						5

13.1.3 A-MPR

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

13.1.4 Largest channel bandwidth standalone SAR test requirements

A. 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.

B. QPSK with 50% RB allocation

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

C. 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 A and B 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.

D. Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in A, B, and C 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.

13.1.5 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 13.4.4 to determine the channels and RB configurations that need SAR testing, then 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.

13.2 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01 for more details.

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.

For WiFi SAR testing, a communication link is set up with some command for WiFi mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Per KDB248227 D01, a minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

13.2.1 Initial Test Position 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.

13.2.2 Initial Test Configuration Procedure

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.

13.2.3 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency Band and aggregated Band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ⩽ 1.2 W/kg for 1g SAR and ⩽ 3.0 W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

13.2.4 2.4 GHz 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.

A) 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 is 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.

B) 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 of of KDB248227 D01). 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.

C) 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.

14 Conducted Power

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	22.33	22.74	22.52	24.00
		1	2	22.30	22.64	22.50	24.00
		1	5	22.12	22.30	22.27	24.00
		3	0	22.24	22.44	22.38	24.00
		3	2	22.55	22.77	22.71	24.00
		3	3	22.28	22.59	22.51	24.00
		6	0	21.07	21.21	21.17	23.00
	16QAM	1	0	21.08	21.20	21.00	23.00
		1	2	21.16	21.38	21.26	23.00
		1	5	21.07	21.30	21.18	23.00
		6	0	20.09	20.33	20.24	22.00
Bandwidth	Modulation	RB size	RB offset	Channel 19965	Channel 20175	Channel 20385	Tune up
3MHz	QPSK	1	0	22.39	22.69	22.60	24.00
		1	7	22.32	22.59	22.52	24.00
		1	14	22.08	22.35	22.24	24.00
		8	0	21.26	21.51	21.43	23.00
		8	4	21.51	21.72	21.72	23.00
		8	7	21.13	21.28	21.25	23.00
		15	0	21.01	21.20	21.13	23.00
	16QAM	1	0	21.08	21.19	21.01	23.00
		1	7	21.11	21.34	21.32	23.00
		1	14	21.03	21.27	21.20	23.00
		15	0	20.04	20.31	20.19	22.00
Bandwidth	Modulation	RB size	RB offset	Channel 19975	Channel 20175	Channel 20375	Tune up
5MHz	QPSK	1	0	22.34	22.75	22.54	24.00
		1	13	22.33	22.58	22.51	24.00
		1	24	22.14	22.29	22.26	24.00
		12	0	21.25	21.51	21.46	23.00
		12	6	21.48	21.79	21.68	23.00
		12	13	21.05	21.34	21.26	23.00
		25	0	21.10	21.20	21.14	23.00
	16QAM	1	0	21.06	21.11	21.00	23.00
		1	13	21.15	21.41	21.25	23.00
		1	24	21.05	21.28	21.19	23.00
		25	0	20.03	20.34	20.19	22.00
Bandwidth	Modulation	RB size	RB offset	Channel 20000	Channel 20175	Channel 20350	Tune up
10MHz	QPSK	1	0	22.37	22.69	22.55	24.00
		1	25	22.34	22.56	22.53	24.00
		1	49	22.07	22.31	22.27	24.00
		25	0	21.22	21.49	21.46	23.00
		25	13	21.55	21.79	21.73	23.00
		25	25	21.08	21.28	21.20	23.00
		50	0	21.06	21.26	21.17	23.00
	16QAM	1	0	21.05	21.12	21.16	23.00
		1	25	21.13	21.39	21.31	23.00
		1	49	21.00	21.24	21.15	23.00
		27	0	20.05	20.28	20.22	22.00

Bandwidth	Modulation	RB size	RB offset	Channel 20025	Channel 20175	Channel 20325	Tune up
15MHz	QPSK	1	0	22.35	22.69	22.54	24.00
		1	38	22.38	22.62	22.47	24.00
		1	74	22.08	22.32	22.30	24.00
		36	0	21.26	21.48	21.40	23.00
		36	18	21.49	21.72	21.70	23.00
		36	39	21.05	21.32	21.21	23.00
		75	0	21.07	21.25	21.19	23.00
	16QAM	1	0	21.04	21.20	21.18	23.00
		1	38	21.14	21.37	21.30	23.00
		1	74	21.04	21.28	21.18	23.00
		27	0	20.05	20.31	20.19	22.00
Bandwidth	Modulation	RB size	RB offset	Channel 20050	Channel 20175	Channel 20300	Tune up
20MHz	QPSK	1	0	**22.42**	**22.77**	**22.62**	24.00
		1	50	22.35	22.66	22.56	24.00
		1	99	22.16	22.39	22.33	24.00
		50	0	21.30	21.53	21.48	23.00
		50	25	**21.57**	**21.81**	**21.75**	23.00
		50	50	21.15	21.36	21.29	23.00
		100	0	**21.23**	21.21	21.22	23.00
	16QAM	1	0	21.01	21.16	21.04	23.00
		1	50	21.18	21.43	21.35	23.00
		1	99	21.10	21.32	21.24	23.00
		27	0	20.13	20.36	20.27	22.00

LTE Band 13				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel 23205	Channel 23230	Channel 23255	Tune up
5MHz	QPSK	1	0	23.77	23.76	23.80	24.50
		1	13	23.83	23.83	23.86	24.50
		1	24	23.99	24.01	23.97	24.50
		12	0	22.78	22.85	22.80	23.50
		12	6	22.81	22.74	22.76	23.50
		12	13	22.86	22.83	22.89	23.50
		25	0	22.86	22.84	22.82	23.50
	16QAM	1	0	22.36	22.40	22.37	23.50
		1	13	22.61	22.65	22.59	23.50
		1	24	22.43	22.44	22.46	23.50
		25	0	21.99	21.95	21.96	22.50
Bandwidth	Modulation	RB size	RB offset	Channel /	Channel 23230	Channel /	Tune up
10MHz	QPSK	1	0	/	23.82	/	24.50
		1	25	/	23.90	/	24.50
		1	49	/	**24.03**	/	24.50
		25	0	/	22.88	/	23.50
		25	13	/	22.84	/	23.50
		25	25	/	**22.93**	/	23.50
		50	0	/	22.92	/	23.50
	16QAM	1	0	/	22.45	/	23.50
		1	25	/	22.67	/	23.50
		1	49	/	22.52	/	23.50
		27	0	/	22.05	/	22.50

Test Item	Test Mode	Test Channel	Average Power (dBm) (dBm)	Tune-up (dBm)
WIFI 2.4G	11b	2412	8.40	9.50
		2437	8.77	9.50
		2462	**9.06**	9.50
	11g	2412	10.03	10.50
		2437	10.15	10.50
		2462	10.43	10.50
	11n 20M	2412	9.07	10.00
		2437	9.41	10.00
		2462	9.73	10.00

test item	test mode	test channel	Average Power (dBm) (dBm)	Tune-up (dBm)
BLE	1M	2402	-2.51	-2.50
		2440	-2.88	-2.50
		2480	-2.92	-2.50
	2M	2402	-2.61	-2.50
		2440	-2.99	-2.50
		2480	-3.17	-2.50

15 Stand-alone SAR test evaluation

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and Product specific 10g SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

Band	Frequency (GHz)	Max Average Power		Test Separation (mm)	Calculate Value	Exclusion Threshold	Exclusion (Y/N)
		dBm	mW				
WIFI 2.4G	2.4835	10.5	11.22	5	3.53	7.5	Y
BLE	2.4835	-2.5	0.56	5	0.18	7.5	Y
WIFI 2.4G	2.4835	10.5	11.22	10	1.77	3	Y
BLE	2.4835	-2.5	0.56	10	0.09	3	Y

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
• f(GHz) is the RF channel transmit frequency in GHz
• Power and distance are rounded to the nearest mW and mm before calculation
• The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Estimated SAR:
When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:
• (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Estimated SAR Result					
Band	Frequency (GHz)	Test Position	Max. power (dBm)	Test Separation (mm)	Estimated SAR (W/kg)
BLE	2.4835	Body 10mm	-2.5	10	0.012
BLE	2.4835	Body 0mm	-2.5	0	0.009

16 SAR Data Summary

General Notes:

1) The Highest Reported SAR Plot refer to Appendix B.

2) Per KDB 447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1g or 10g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1g or 2.0W/kg for 10g respectively, when the transmission band is ≤ 100MHz.
- ≤ 0.6 W/kg or 1.5 W/kg, for 1g or 10g respectively, when the transmission band is between 100 MHz and 200MHz.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1g or 10g respectively, when the transmission band is ≥ 200MHz.

16.1 SAR Measurement Result of LTE Band 4

Test Results								
Test position	**BW. (MHz)**	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 1g**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 1g SAR (W/kg)**
Next to the mouth 10mm 1RB								
Front side	20	QPSK 1_0	20175/1732.5	0.866	22.77	24.00	1.327	1.150
Front side	20	QPSK 1_0	20050/1720	0.732	22.42	24.00	1.439	1.053
Front side	20	QPSK 1_0	20300/1745	1.030	22.62	24.00	1.374	**1.415**
Front side Repeat	20	QPSK 1_0	20300/1745	1.010	22.62	24.00	1.374	1.388
Next to the mouth 10mm 50%RB								
Front side	20	QPSK 50_25	20175/1732.5	0.684	21.81	23.00	1.315	0.900
Front side	20	QPSK 50_25	20050/1720	0.591	21.57	23.00	1.390	0.821
Front side	20	QPSK 50_25	20300/1745	0.692	21.75	23.00	1.334	0.923
Next to the mouth 10mm 100%RB								
Front side	20	QPSK 100_0	20300/1745	0.705	21.23	23.00	1.503	1.060
Test position	**BW. (MHz)**	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 10g**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 10g SAR (W/kg)**
Extremity 0mm 1RB								
Back side	20	QPSK 1_0	20175/1732.5	0.782	22.77	24.00	1.327	1.038
Back side	20	QPSK 1_0	20050/1720	0.665	22.42	24.00	1.439	0.957
Back side	20	QPSK 1_0	20300/1745	1.210	22.62	24.00	1.374	**1.663**
Extremity 0mm 50%RB								
Back side	20	QPSK 50_25	20175/1732.5	0.643	21.81	23.00	1.315	0.846

Table 3： SAR of LTE Band 4.

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Front side	20300/1745	1.030	1.010	1.020	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 performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

16.2 SAR Measurement Result of LTE Band 13

Test Results								
Test position	**BW. (MHz)**	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 1g**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 10g SAR (W/kg)**
Next to the mouth 10mm 1RB								
Front side	10	QPSK 1_49	23230/782	0.288	24.03	24.50	1.114	**0.321**
Next to the mouth 10mm 50%RB								
Front side	10	QPSK 25_25	23230/782	0.195	22.93	23.50	1.140	0.222
Test position	**BW. (MHz)**	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 10g**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 10g SAR (W/kg)**
Extremity 0mm 1RB								
Back side	10	QPSK 1_49	23230/782	0.346	24.03	24.50	1.114	**0.386**
Extremity 0mm 1RB								
Back side	10	QPSK 25_25	23230/782	0.298	22.93	23.50	1.140	0.340

Table 4： SAR of LTE Band 13.

16.3 SAR Measurement Result of WIFI 2.4G

Test Results									
Test position	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 1g**	**Duty Cycle**	**Duty Cycle Scaling Factor**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 1g SAR (W/kg)**
Next to the mouth 10mm									
Front side	802.11b	11/2462	0.111	91.82%	1.089	9.06	9.50	1.107	**0.134**
Test position	**Mode**	**Ch./Freq. (MHz)**	**SAR (W/kg) 10g**	**Duty Cycle**	**Duty Cycle Scaling Factor**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaling Factor**	**Reported 10g SAR (W/kg)**
Extremity 0mm									
Back side	802.11b	11/2462	0.146	91.82%	1.089	9.06	9.50	1.107	**0.176**

Table 5： SAR of WIFI 2.4G.

17 Simultaneous Transmission Analysis

The Simultaneous Transmission Possibilities of this device are as below:

NO.	Simultaneous TX Combination	
1	LTE + WIFI 2.4G	Yes
2	LTE + BLE	Yes
3	WIFI 2.4G + BLE	No
4	LTE + WIFI 2.4G + BLE	No

Next to the mouth 10mm:

Test position		SARmax (W/kg)			Summed SAR	
		Main Ant	WiFi 2.4G	BLE		
		1	2	3	1+2	1+3
LTE B4	Front side	1.415	0.134	0.012	1.549	1.427
LTE B13	Front side	0.321	0.134	0.012	0.455	0.333

Extremity 0mm:

Test position		SARmax (W/kg)			Summed SAR	
		Main Ant	WiFi 2.4G	BLE		
		1	2	3	1+2	1+3
LTE B4	Back side	1.663	0.176	0.009	1.839	1.672
LTE B13	Back side	0.386	0.176	0.009	0.562	0.395

18 Measurement Uncertainty

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEC/IEEE 62209-1528 is not required in SAR reports submitted for equipment approval.

19 Calibration Certificate

Please see the Appendix C

20 Test Setup Photos

Please see the Appendix D

Appendix A: System Check Plots

Appendix B: SAR Test Plots

Appendix C: Calibration certificate

Appendix D: Test Setup Photos

--- The End ---