Prüfbericht-Nr.: *Test report no.*:	**CN26R0ID 001**	**Auftrags-Nr.:** *Order no.*:	27223193	Seite 1 von 55 *Page 1 of 55*
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2026-03-10	
Auftraggeber: *Client*:	Shenzhen Guangqun Communication Technology Co., Ltd. FCC: Room 537Z, 5th Floor, Building 522, Bagualing Industrial Zone, Futian District, Shenzhen China Shenzhen Guangqun Communication Technology Co., Ltd. IC: Room 537Z, 5th Floor, Building 522, Bagualing Industrial Zone,Bagua 3rd Road, Hualin Community, Yuanling Sub-district, FutianDistrict Shenzhen China			
Prüfgegenstand: *Test item*:	Tablet			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	P12 Pro (Trademark: POCKAM)			
Auftrags-Inhalt: *Order content*:	SAR Test Report			
Prüfgrundlage: *Test specification*:	FCC 47 CFR § 2.1093 IEEE Std 1528-2013 IC RSS-102 Issue 6: December 2023 IEC/IEEE 62209-1528: 2020 Published RF exposure KDB procedures			
Wareneingangsdatum: *Date of sample receipt*:	2026-01-16			
Prüfmuster-Nr.: *Test sample no:*	IMEI:867400020316722			
Prüfzeitraum: *Testing period*:	2026-02-28 - 2026-03-03			
Ort der Prüfung: *Place of testing*:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: *Test result**:	Pass			

geprüft von: tested by:	x Bell Hu Signed by: Bell Hu	**genehmigt von:** *authorized by*:	X Lin Lin Signed by: Lin Lin
Datum: *Date:* 2026-03-10		**Ausstellungsdatum:** *Issue date:* 2026-03-10	
Stellung / Position:	Sachverständige(r)/Expert	**Stellung** / Position:	Sachverständige(r)/Expert

Sonstiges / *Other*:	FCC ID: 2BTXRP12PRO IC: 35019-P12PRO
Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*:	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Prüfbericht-Nr.: CN26R0ID 001
Test report no.:

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.* *Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the “Zero Guard Band Rule” and “Simple Acceptance” in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.*

Table of Contents

1. General Information

1.1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Equipment Class	Mode	Highest Reported Body SAR_{1g} (0 cm Gap) (W/kg)
PCB	GSM850	0.379
	GSM1900	0.386
	WCDMA II	0.660
	WCDMA IV	0.397
	WCDMA V	0.505
	LTE 2	0.562
	LTE 4	0.689
	LTE 5	0.374
	LTE 25	0.259
	LTE 26	0.242
	LTE 66	0.459
DTS	2.4G WLAN	0.217
NII	5.2G WLAN	0.462
	5.8G WLAN	0.584
DSS	Bluetooth	0.030
Highest Simultaneous Transmission SAR		Body-worn (W/kg)
PCB + DTS		0.906
PCB + NII		**1.273**
PCB + DSS		0.719

Note:
This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg as averaged over any 1 gram of tissue; 10-gram SAR for Product Specific 10g SAR, limit: 4.0W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992/ IC RSS-102 Issue 6:2023, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

1.2. Equipment Under Test (EUT) Information

1.2.1. General Information

Equipment Name	TabletTablet
FCC ID	2BTXRP12PRO
IC	35019-P12PRO
Brand Name	POCKAM
Model Name	P12 Pro
Series Model	P12 Pro Max,P12 Pro Plus,P12 Pro Ultra
Model Difference	The only differences are in model naming, color, and memory, while all other aspects remain the same
IMEI	867400020316722 / 867400020316728
HW Version	T30-T7300-V1.0-251015-QU
SW Version	P12 Pro-EEA-Android16.0-20260202
Antenna Type	PIFA Antenna
EUT Stage	Production Unit

1.2.2. Wireless Technologies

Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 66: 1710.7 MHz ~1779.3 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Uplink Modulations	GSM & GPRS & EDGE: GMSK, 8PSK WCDMA: BPSK, QPSK LTE: QPSK, 16QAM 802.11b: DSSS WLAN 2.4G 802.11g/n (HT20)/HT40: OFDM WLAN 5G 802.11a/n (HT20/HT40) /ac(VHT20/VHT40/VHT80): OFDM Bluetooth® GFSK, π/4-DQPSK, 8-DPSK, LE

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

2. Test Sites

2.1. Test Facilities

Error! Reference source not found.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China

A2LA Cert. No.: 5162.01

FCC Registration No.: 694916

IC Registration No.: 25069

2.2. Ambient Condition

Ambient Temperature	21°C – 22°C
Relative Humidity	50% - 60%

2.3. List of Test and Measurement Instruments

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1109	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D835V2	4d242	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D900V2	1d200	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D1750V2	1166	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D1800V2	2d219	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D1900V2	5d229	Jun. 06, 2024	3 years
System Validation Dipole	SPEAG	D2000V2	1089	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D2300V2	1087	Jun. 07, 2024	3 years
System Validation Dipole	SPEAG	D2450V2	1014	Jun. 06, 2024	3 years
System Validation Dipole	SPEAG	D2600V2	1153	Jun. 06, 2024	3 years
System Validation Dipole	SPEAG	D3500V2	1063	Jun. 06, 2024	3 years
System Validation Dipole	SPEAG	D3700V2	1020	Jun. 06, 2024	3 years
System Validation Dipole	SPEAG	D5GHzV2	1280	Jun. 06, 2024	3 years
Dosimetric E-Field Probe	SPEAG	EX3DV4	7506	Nov. 28, 2025	1 year
Data Acquisition Electronics	SPEAG	DAE4	1557	Nov. 21, 2025	1 year
Wideband Radio Communication Tester	R&S	CMW500	166305	Sep. 23, 2025	1 year
Signal Analyzer	R&S	FSV 7	103665	Sep. 23, 2025	1 year
Vector Network Analyzer	R&S	ZNB 8	107040	Sep. 23, 2025	1 year
Dielectric assessment Kit	SPEAG	DAK-3.5	1269	Oct. 09, 2024	3 years
Signal Generator	R&S	SMB 100A	180840	Sep. 23, 2025	1 year
EPM Series Power Meter	Keysight	N1914A	MY58240005	Oct. 27, 2025	1 year
Power Sensor	Keysight	N8481H	MY58250002	Oct. 27, 2025	1 year
Power Sensor	Keysight	N8481H	MY58250006	Oct. 27, 2025	1 year
DC Power Supply	Topward	3303D	809332	Oct. 27, 2025	1 year
Coaxial Directional Couper	Keysight	773D	MY52180552	Oct. 27, 2025	1 year
Coaxial Directional Couper	shhuaxiang	DTO-0.4/3.9-10	18052101	Oct. 27, 2025	1 year
Coaxial attenuator	Keysight	8491A	MY52463219	Oct. 27, 2025	1 year
Coaxial attenuator	Keysight	8491A	MY52463210	Oct. 27, 2025	1 year
Coaxial attenuator	Keysight	8491A	MY52463222	Oct. 27, 2025	1 year
Digital Thermometer	LKM	DTM3000	3116	Oct. 27, 2025	1 year
Power Amplifier Mini circuit	mini-circuits	ZHL-42W	SN002101809	N/A	N/A
Power Amplifier Mini circuit	mini-circuits	ZVE-8G	SN070501814	N/A	N/A
PHANTOM	SPEAG	ELI V8.0	2094	N/A	N/A
PHANTOM	SPEAG	SAM-Twin V8.0	1961	N/A	N/A

3. Measurement Uncertainty

Source of Uncertainty	Tolerance (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)	Vi Veff
Measurement System Errors								
Probe Calibration	±13.3%	Normal (k=2)	2	1	1	± 6.65 %	± 6.65 %	∞
Probe Calibration Drift	±1.7%	Rectangular	√3	1	1	±1.0%	±1.0%	∞
Probe Linearity	±4.7%	Rectangular	√3	1	1	±2.7%	±2.7%	∞
Broadband Signal	±3.0%	Rectangular	√3	1	1	±1.7%	±1.7%	∞
Probe Isotropy	±7.6%	Rectangular	√3	1	1	±4.4%	±4.4%	∞
Other Probe + Electronic	±0.7%	Normal	1	1	1	±0.7%	±0.7%	∞
RF Ambient	±1.8%	Normal	1	1	1	±1.8%	±1.8%	∞
Probe Positioning	±0.006mm	Normal	1	0.14	0.14	±0.10%	±0.10%	∞
Data Processing	±1.2%	Normal	1	1	1	±1.2%	±1.2%	∞
Phantom and Device Errors								
Conductivity (meas.)^{DAK}	±2.5%	Normal	1	0.78	0.71	±2.0%	±1.8%	100
Conductivity (temp.)^{BB}	±3.3%	Rectangular	√3	0.78	0.71	±1.5%	±1.4%	∞
Phantom Permittivity	±14.0%	Rectangular	√3	0	0	±0%	±0%	∞
Distance DUT – TSL	±2.0%	Normal	1	2	2	±4.0%	±4.0%	∞
Device Positioning	±2.4%/±2.8%	Normal	1	1	1	±2.8%	±2.8%	30
Device Holder	±3.4%/±3.5%	Normal	1	1	1	±3.5%	±3.5%	30
DUT Modulation^{m}	±2.4%	Rectangular	√3	1	1	±1.4%	±1.4%	∞
Time-average SAR	±1.7%	Rectangular	√3	1	1	±1.0%	±1.0%	∞
DUT drift	±2.5%	Normal	1	1	1	±2.5%	±2.5%	30
Val Antenna Unc.^{val}	±0.0%	Normal	1	1	1	±0%	±0%	
Unc. Input Power^{val}	±0.0%	Normal	1	1	1	±0%	±0%	
Correction to the SAR results								
C(ε,σ)	±1.9%	Normal	1	1	0.84	±1.9%	±1.6%	
SAR scaling^{p}	±0.0%	Rectangular	√3	1	1	±0%	±0%	
Combined Standard Uncertainty (K = 1)						±12.54%	±12.44%	
Expanded Uncertainty (K = 2)						**±25.1%**	**±24.9%**	

Uncertainty budget for frequency range 300 MHz to 3 GHz

Source of Uncertainty	Tolerance (± %)	Probability Distribution	Diviso r	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)	Vi Veff
Measurement System Errors								
Probe Calibration	±13.1%	Normal (k=2)	2	1	1	± 6.55 %	± 6.55 %	∞
Probe Calibration Drift	±1.7%	Rectangular	√3	1	1	±1.0%	±1.0%	∞
Probe Linearity	±4.7%	Rectangular	√3	1	1	±2.7%	±2.7%	∞
Broadband Signal	±2.6%	Rectangular	√3	1	1	±1.5%	±1.5%	∞
Probe Isotropy	±7.6%	Rectangular	√3	1	1	±4.4%	±4.4%	∞
Other Probe + Electronic	±1.2%	Normal	1	1	1	±1.2%	±1.2%	∞
RF Ambient	±1.8%	Normal	1	1	1	±1.8%	±1.8%	∞
Probe Positioning	±0.005mm	Normal	1	0.29	0.29	±0.15%	±0.15%	∞
Data Processing	±2.3%	Normal	1	1	1	±2.3%	±2.3%	∞
Phantom and Device Errors								
Conductivity (meas.)^{DAK}	±2.5%	Normal	1	0.78	0.71	±2.0%	±1.8%	60
Conductivity (temp.)^{BB}	±3.3%	Rectangular	√3	0.78	0.71	±1.5%	±1.4%	∞
Phantom Permittivity	±14.0%	Rectangular	√3	0.25	0.25	±2%	±2%	∞
Distance DUT – TSL	±2.0%	Normal	1	2	2	±4.0%	±4.0%	∞
Device Positioning	±2.4%/±2.8%	Normal	1	1	1	±2.8%	±2.8%	30
Device Holder	±3.4%/±3.5%	Normal	1	1	1	±3.5%	±3.5%	30
DUT Modulation^{m}	±2.4%	Rectangular	√3	1	1	±1.4%	±1.4%	∞
Time-average SAR	±1.7%	Rectangular	√3	1	1	±1.0%	±1.0%	∞
DUT drift	±2.5%	Normal	1	1	1	±2.5%	±2.5%	30
Val Antenna Unc.^{val}	±0.0%	Normal	1	1	1	±0%	±0%	
Unc. Input Power^{val}	±0.0%	Normal	1	1	1	±0%	±0%	
Correction to the SAR results								
Deviation to Target	±1.9%	Normal	1	1	0.84	±1.9%	±1.6%	
SAR scaling^{p}	±0.0%	Rectangular	√3	1	1	±0%	±0%	
Combined Standard Uncertainty (K = 1)						±12.8%	±12.7%	
Expanded Uncertainty (K = 2)						**±25.6%**	**±25.4%**	

Uncertainty budget for frequency range 3 GHz to 6 GHz

4. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528- 2013, the following FCC Published RF exposure KDB procedures & manufacturer KDB inquiries:

- KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- KDB 865664 D02 RF Exposure Reporting v01r02
- KDB 248227 D01 802 11 Wi-Fi SAR v02r02
- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 447498 D04 Interim General RF Exposure Guidance v01
- KDB 616217 D04 SAR for laptop and tablets v01r02
- KDB 941225 D01 3G SAR Procedures v03r01
- KDB 941225 D05 SAR for LTE Devices v02r05
- IC RSS-102 Issue 6: December 2023 Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
- 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)

In addition to the above, the following information was used:

- TCB workshop October, 2014; Page 36, RF Exposure Procedures Update (Overlapping LTE Bands)
- TCB workshop April, 2019; Page 19, Tissue Simulating Liquids(TSL)

5. SAR Measurement System

5.1. Definition of Specific Absorption Rate (SAR)

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

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

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

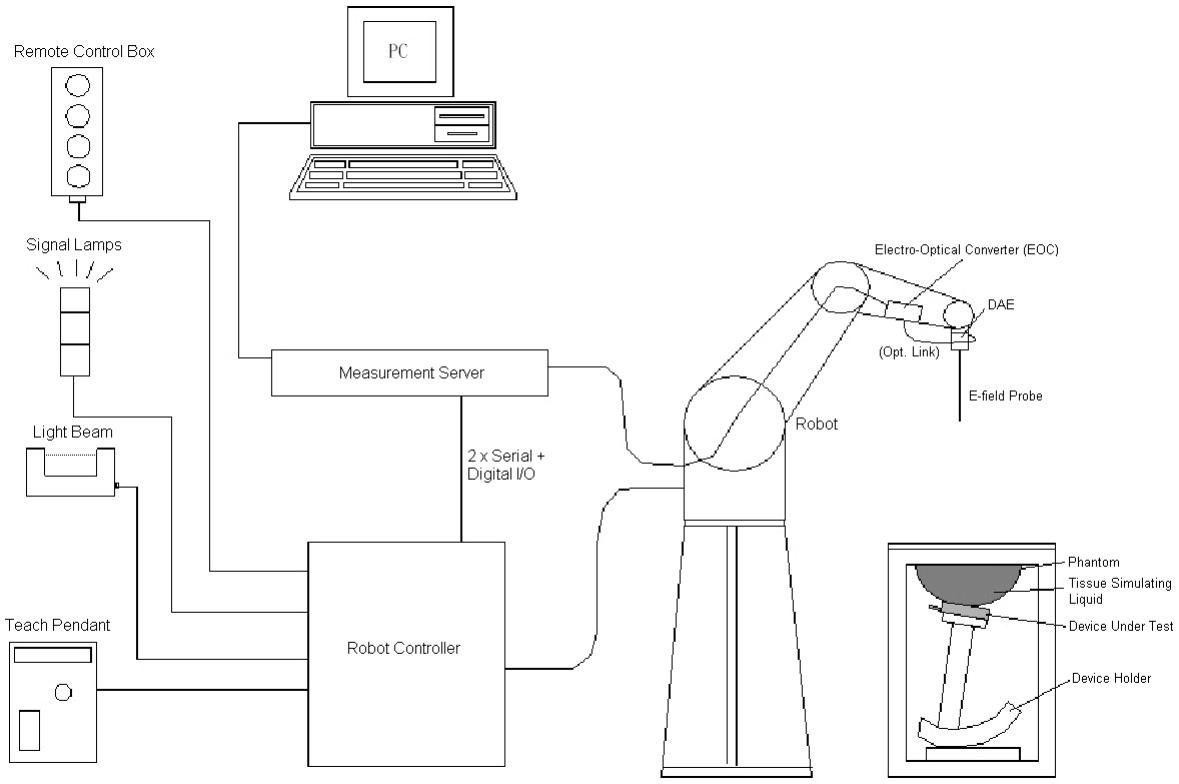
SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be related to the electrical field in the tissue by

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

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

5.2. SPEAG DASY System

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

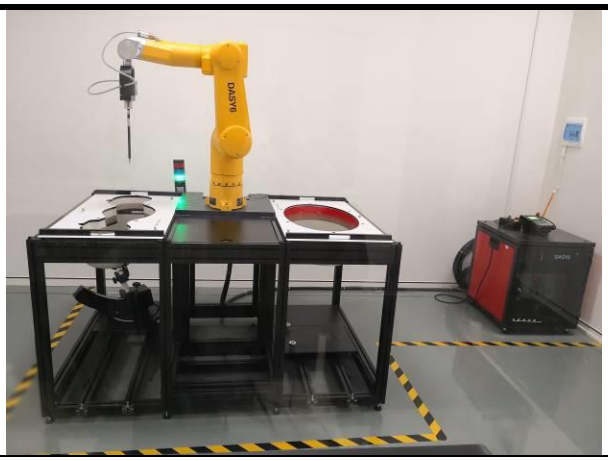


DASY System Setup

5.2.1.Robot

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

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



DASY6

5.2.2. Probes

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

Model	EX3DV4
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).
Frequency	4 MHz – 10 GHz Linearity: ±0.2 dB (30 MHz – 10 GHz)
Directivity	±0.1 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g – >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

5.2.3.Data Acquisition Electronics (DAE)

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

5.2.4. Phantoms

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

Model	ELI	
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 4 MHz to 10 GHz. ELI is fully compatible with the IEC/IEEE 62209-1528 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 of SPEAG's dosimetric probes and dipoles.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	

5.2.5. Device Holder

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

Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-1528 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, Foam	

5.2.6.System Validation Dipoles

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

5.2.7. Tissue Simulating Liquids

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

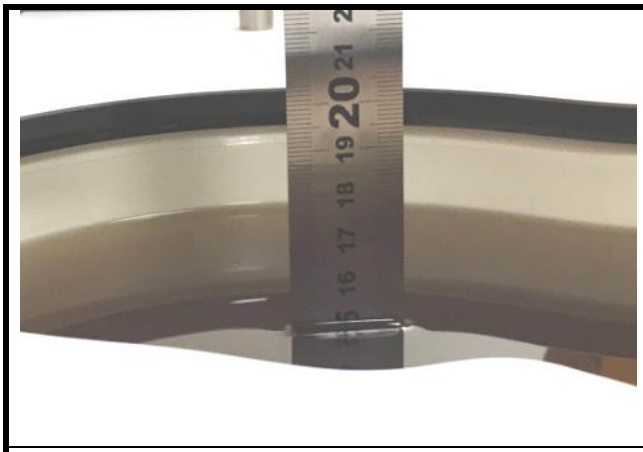
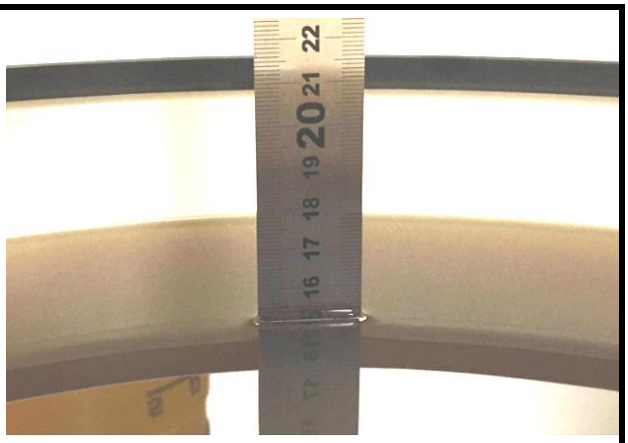
	

Photo of Liquid Height for Head Position	**Photo of Liquid Height for Body Position**

The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

Targets of Tissue Simulating Liquid

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

The following table gives the recipes for tissue simulating liquids.

Recipes of Tissue Simulating Liquid

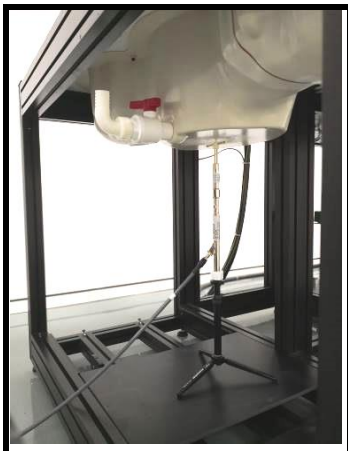
Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5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

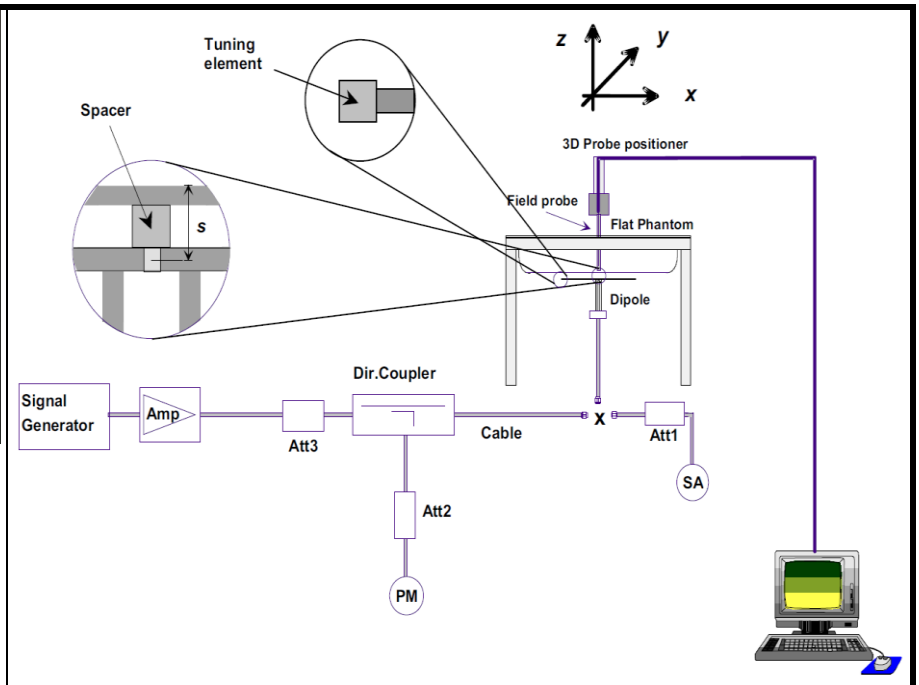
Simulating Head Liquid (HBBL600-6000MHz), Manufactured by SPEAG:

Water (% by weight)	Esters, Emulsifiers, Inhibitors (% by weight)	Sodium salt (% by weight)
50 - 65%	10 - 30%	8 - 25%

5.2.8.SAR System Verification

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





System Verification Setup

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The spectrum analyzer measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.50 GHz to 6 GHz) at the dipole connector and the power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter.

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

6. SAR Measurement Procedure

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

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

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

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

6.1. Area & Zoom Scan Procedure

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

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

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

6.2. Volume Scan Procedure

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

6.3. Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

6.4. Spatial Peak SAR Evaluation

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

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

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

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

6.5. SAR Averaged Methods

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

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

7. SAR Measurement Evaluation

7.1. EUT Configuration and Setting

<Connections between EUT and System Simulator>

For WWAN SAR testing, the EUT was linked and controlled by base station emulator (R&S_CMW500). Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

<Considerations Related to GSM / GPRS / EDGE for Setup and Testing>

The maximum multi-slot capability supported by this device is as below.

1. This EUT is class B device
2. This EUT supports GPRS multi-slot class 12 (max. uplink: 4, max. downlink: 4, total timeslots: 5)
3. This EUT supports EDGE multi-slot class 12 (max. uplink: 4, max. downlink: 4, total timeslots: 5)

For GSM850 frequency band, the power control level is set to 5 for GSM mode and GPRS (GMSK: CS1), and set to 8 for EDGE (GMSK: MCS1, 8PSK: MCS9). For GSM1900 frequency band, the power control level is set to 0 for GSM mode and GPRS (GMSK: CS1), and set to 2 for EDGE (GMSK: MCS1, 8PSK: MCS9).

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

<Considerations Related to WCDMA for Setup and Testing>

WCDMA Handsets Body-worn SAR

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

Handsets with Release 5 HSDPA

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

Handsets with Release 6 HSUPA

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

Release 5 HSDPA Data Devices

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

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

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

Release 6 HSUPA Data Devices

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

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

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

<Considerations Related to LTE for Setup and Testing>

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

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	**BW 1.4 MHz**	**BW 3 MHz**	**BW 5 MHz**	**BW 10 MHz**	**BW 15 MHz**	**BW 20 MHz**
2	**V**	**V**	**V**	**V**	**V**	**V**
4	**V**	**V**	**V**	**V**	**V**	**V**
5	**V**	**V**	**V**	**V**		
25	**V**	**V**	**V**	**V**	**V**	**V**
26	**V**	**V**	**V**	**V**	**V**	
66	**V**	**V**	**V**	**V**	**V**	**V**

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

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

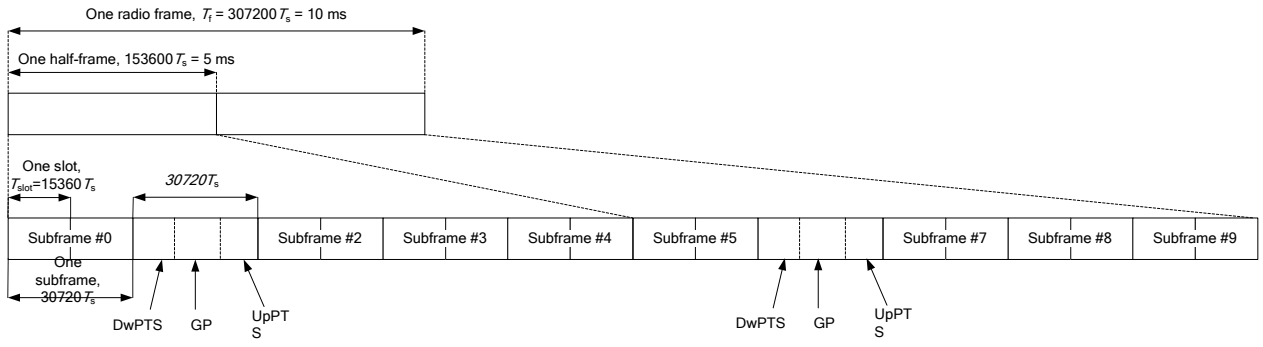
Note: MPR is according to the standard and implemented in the circuit (mandatory).

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

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

TDD-LTE Setup Configurations

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



3GPP TS 36.211 Frame Structure Type 2

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

3GPP TS 36.211 Configuration of Special Subframe

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-Point Periodicity	Subframe Number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

3GPP TS 36.211 Uplink-Downlink Configurations

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

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

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

<Considerations Related to WLAN for Setup and Testing>

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

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

Initial Test Configuration

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

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. When the highest reported SAR for the initial test configuration according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

SAR Test Configuration and Channel Selection

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is using largest channel bandwidth, lowest order modulation, lowest data rate, and lowest order 802.11 mode (i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n). After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

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

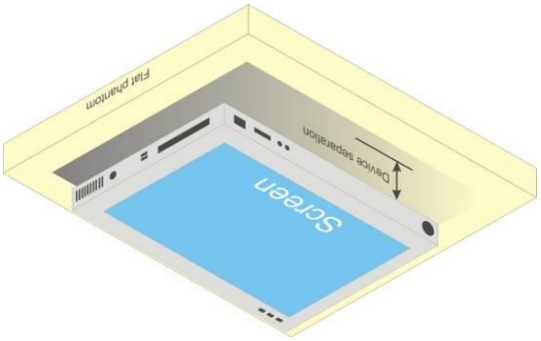
Test Reduction for U-NII-1 (5.2 GHz) and U-NII-2A (5.3 GHz) Bands
For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following.
1) When the same maximum output power is specified for both bands, begin SAR measurement 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).
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.

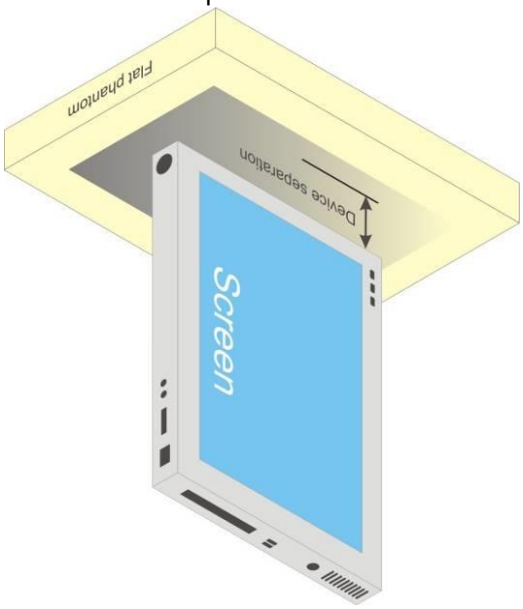
<Considerations Related to Bluetooth for Setup and Testing>
This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

7.2. EUT Testing Position

7.2.1. Body Exposure Conditions

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





7.3. SAR Test Exclusion Evaluations

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

1. For the test separation distance <= 50 mm

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

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

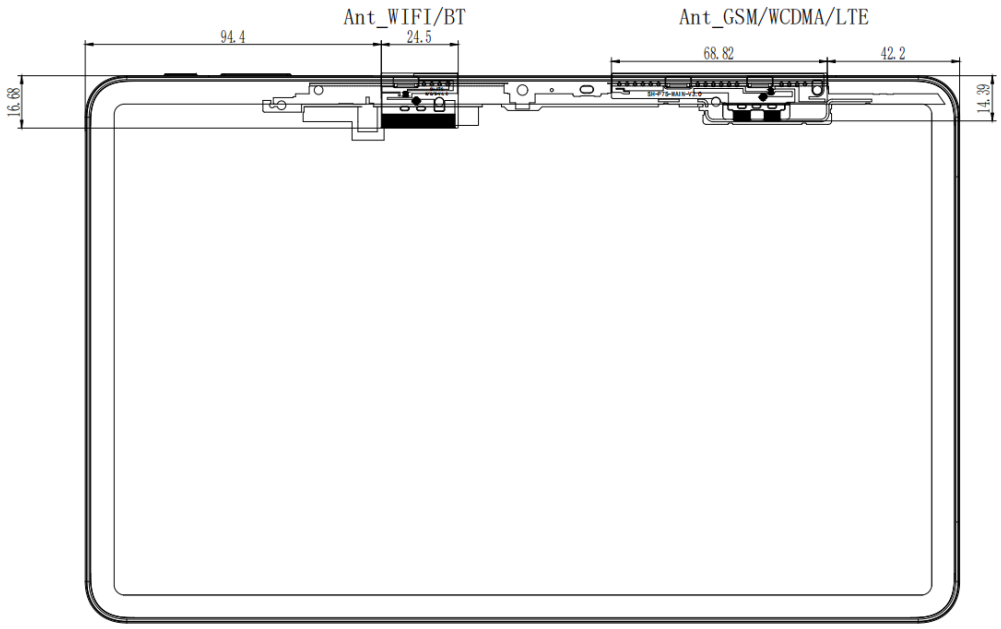
2. For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

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

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

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

The location of the antennas inside EUT is shown as below picture:(The Front View)



Unit: mm

The SAR measurement positions of each antenna are as below:

Antenna	Front Face	Rear Face	Left Side	Right Side	Top Side	Bottom Side
Ant (GSM/UMTS/LTE)	No	Yes	No	Yes	Yes	No
Ant (WIFI/BT)	No	Yes	No	No	Yes	No

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Top Side			Bottom Side			Left Side			Right Side		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
GSM 850	25.37	344.35	5	63.45	Yes	5	63.45	Yes	160	785.27	No	175	870.15	No	5	63.45	Yes
GSM 1900	20.87	122.18	5	33.24	Yes	5	33.24	Yes	160	1210.28	No	175	1360.28	No	5	33.24	Yes
WCDMA II	21.5	141.25	5	38.45	Yes	5	38.45	Yes	160	1210.21	No	175	1360.21	No	5	38.45	Yes
WCDMA IV	22.5	177.83	5	47.08	Yes	5	47.08	Yes	160	1213.31	No	175	1363.31	No	5	47.08	Yes
WCDMA V	23	199.53	5	36.50	Yes	5	36.50	Yes	160	777.38	No	175	861.02	No	5	36.50	Yes
LTE 2	22.5	177.83	5	49.02	Yes	5	49.02	Yes	160	1208.82	No	175	1358.82	No	5	49.02	Yes
LTE 4	23	199.53	5	52.71	Yes	5	52.71	Yes	160	1213.55	No	175	1363.55	No	5	52.71	Yes
LTE 5	23.5	223.87	5	40.95	Yes	5	40.95	Yes	160	1264.01	No	175	1414.01	No	5	40.95	Yes
LTE 25	23	199.53	5	55.08	Yes	5	55.08	Yes	160	1208.68	No	175	1358.68	No	5	55.08	Yes
LTE 26	24	251.19	5	46.08	Yes	5	46.08	Yes	160	1263.52	No	175	1413.52	No	5	46.08	Yes
LTE 66	23	199.53	5	52.71	Yes	5	52.71	Yes	160	1193.75	No	175	1343.75	No	5	52.71	Yes
WLAN 2.4G	17	50.12	5	15.60	Yes	5	15.60	Yes	160	1196.38	No	94.4	540.78	No	167	1266.38	No
WLAN 5.2G	14.5	28.18	5	12.83	Yes	5	12.83	Yes	160	1165.91	No	94.4	509.91	No	167	1235.91	No
WLAN 5.8G	14	25.12	5	12.05	Yes	5	12.05	Yes	160	1162.53	No	94.4	506.53	No	167	1232.53	No
BT	3	2.00	5	0.62	No	5	0.62	No	160	1196.78	No	94.4	540.78	No	167	1266.78	No

Note:

1. When separation distance <= 50 mm and the calculated result shown in above table is <= 3.0 for SAR-1g exposure condition, or <= 7.5 for SAR-10g exposure condition, the SAR testing exclusion is applied.
2. When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.
3. Since GSM has multi-slot operation, the maximum tune-up power shown in above table for GSM is source-based time-averaged maximum power.

7.4. Simultaneous Transmission Possibilities

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

Simultaneous TX Combination	Capable Transmit Configurations	Body
1	GSM (Data) + WLAN (Data)	Yes
2	WCDMA (Data) + WLAN (Data)	Yes
3	LTE (Data) + WLAN (Data)	Yes
4	GSM (Data) + BT (Data)	Yes
5	WCDMA (Data) + BT (Data)	Yes
6	LTE (Data) + BT (Data)	Yes

Note :

1. The 2.4G WLAN and 5G WLAN cannot transmit simultaneously.
2. The WLAN and Bluetooth cannot transmit simultaneously, so there is no co-location test requirement for WLAN and Bluetooth.

7.5. Tissue Verification

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

Tissue Stimulant Measurement for 835MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 41.5 (39.43-43.58)	δ[s/m] 0.90(0.855-0.945)		
Head	821.5	43.118	0.918	22.3	Mar. 01, 2026
	824.2	43.106	0.921		
	826.4	43.092	0.921		
	829	43.081	0.922		
	831.5	43.073	0.923		
	835	43.065	0.926		
	836.5	43.044	0.932		
	836.6	43.043	0.932		
	841.5	43.026	0.935		
	844	43.012	0.937		
	846.6	43.003	0.938		
	848.8	42.992	0.941		
Tissue Stimulant Measurement for 1750MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 40.00 (38.00-42.00)	δ[s/m]1.40(1.33-1.47)		
Head	1712.4	41.527	1.373	22.6	Feb. 28, 2026
	1720	41.510	1.376		
	1732.5	41.484	1.385		
	1732.6	41.482	1.385		
	1745	41.453	1.392		
	1752.6	41.437	1.395		
	1770	41.401	1.402		
	1800	41.369	1.440		
Tissue Stimulant Measurement for 1900MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr40.00(38.00-42.00)	δ[s/m]1.40(1.33-1.47)		
Head	1850.2	41.244	1.436	22.4	Mar. 02, 2026
	1852.4	41.240	1.437		
	1860	41.226	1.441		
	1880	41.192	1.452		
	1882.5	41.191	1.453		
	1900	41.119	1.459		
	1905	41.112	1.462		
	1907.6	41.110	1.463		
	1909.8	41.108	1.464		
Tissue Stimulant Measurement for 2450MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr39.2(37.24-41.16)	δ[s/m]1.80(1.71-1.89)		

	2402	40.487	1.813	21.1	Mar. 03, 2026
	2422	40.396	1.822		
	2437	40.294	1.837		
	2441	40.235	1.844		
	2450	40.120	1.860		
	2452	40.066	1.863		
	2480	39.641	1.872		
Tissue Stimulant Measurement for 5250MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 35.9(34.2-37.8)	δ[s/m] 4.71(4.427-4.893)		
	5180	35.272	4.457	21.1	Mar. 03, 2026
	5200	35.264	4.463		
	5240	35.261	4.471		
	5250	35.260	4.500		
Tissue Stimulant Measurement for 5800MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 35.3 (33.54-37.07)	δ[s/m] 5.27 (5.007-5.534)		
	5775	34.385	5.216	21.1	Mar. 03, 2026
	5800	34.381	5.231		

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

7.6. System Validation

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

Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ε_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
Mar. 01, 2026	7506	Head	835	0.926	43.065	Pass	Pass	Pass	GMSK	Pass	N/A
Feb. 28, 2026	7506	Head	1750	1.440	41.369	Pass	Pass	Pass	N/A	N/A	N/A
Mar. 02, 2026	7506	Head	1900	1.459	41.119	Pass	Pass	Pass	GMSK	Pass	N/A
Mar. 03, 2026	7506	Head	2450	1.860	40.120	Pass	Pass	Pass	OFDM	N/A	Pass
Mar. 03, 2026	7506	Head	5250	4.500	35.260	Pass	Pass	Pass	OFDM	N/A	Pass
Mar. 03, 2026	7506	Head	5800	5.231	34.381	Pass	Pass	Pass	OFDM	N/A	Pass

7.7. System Verification

The measuring result for system verification is tabulated as below.

Test Date	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Mar. 01, 2026	835	9.58	2.41	9.64	0.63	4d242	7506	1557
Feb. 28, 2026	1750	39.20	9.92	39.68	1.22	1166	7506	1557
Mar. 02, 2026	1900	40.30	9.72	38.88	-3.52	5d229	7506	1557
Mar. 03, 2026	2450	52.70	12.80	51.20	-2.85	1014	7506	1557
Mar. 03, 2026	5250	76.90	7.92	79.20	2.99	1280	7506	1557
Mar. 03, 2026	5800	76.80	7.84	78.40	2.08	1280	7506	1557

Note:

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

8. SAR Measurement Evaluation

8.1. Maximum Conducted Power

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

Mode	GSM850	GSM1900
GSM (GMSK, 1Tx-slot)	33.5	29.0
GPRS (GMSK, 1Tx-slot)	33.5	29.0
GPRS (GMSK, 2Tx-slot)	31.5	27.0
GPRS (GMSK, 3Tx-slot)	29.5	25.0
GPRS (GMSK, 4Tx-slot)	27.5	23.0
EDGE (8PSK, 1Tx-slot)	26.0	26.5
EDGE (8PSK, 2Tx-slot)	25.0	25.0
EDGE (8PSK, 3Tx-slot)	22.0	23.0
EDGE (8PSK, 4Tx-slot)	20.0	21.0

Mode	WCDMA Band II	WCDMA Band IV	WCDMA Band V
RMC 12.2K	21.5	22.5	23.0
HSDPA	21.0	22.0	22.0
HSUPA	21.0	22.0	23.0

Mode	LTE 2	LTE 4	LTE 5
QPSK / 16QAM	22.5	23.0	23.5

Mode	LTE 25	LTE 26	LTE 66
QPSK / 16QAM	23.0	24.0	23.0

Mode	2.4G WLAN	5.2G WLAN	5.8G WLAN
802.11b	16.5	N/A	N/A
802.11g	16.5	N/A	N/A
802.11a	N/A	14.5	13.0
802.11n HT20	16.5	14.5	13.0
802.11n HT40	17.0	13.0	13.0
802.11ac VHT20	N/A	14.5	13.0
802.11ac VHT40	N/A	13.0	13.0
802.11ac VHT80	N/A	13.0	14.0

Mode	2.4G Bluetooth
GFSK	3.0
π/4-DQPSK	3.0
8DPSK	3.0
LE	-0.5

8.2. Measured Conducted Power Result

Band	GSM850			GSM1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
Maximum Burst-Averaged Output Power						
GSM (GMSK, 1Tx-slot)	33.12	33.13	33.06	27.95	28.13	28.45
GPRS (GMSK, 1Tx-slot)	33.12	33.13	33.06	27.95	28.13	28.45
GPRS (GMSK, 2Tx-slot)	**31.02**	**31.09**	**31.09**	**25.92**	**26.00**	**26.15**
GPRS (GMSK, 3Tx-slot)	29.05	29.22	29.23	24.39	24.44	24.56
GPRS (GMSK, 4Tx-slot)	26.90	27.10	27.17	22.41	22.44	22.58
EDGE (8PSK, 1Tx-slot)	24.70	25.44	25.42	26.26	25.41	25.08
EDGE (8PSK, 2Tx-slot)	24.06	24.46	24.17	24.28	23.77	23.17
EDGE (8PSK, 3Tx-slot)	21.37	21.53	21.66	22.57	21.86	22.60
EDGE (8PSK, 4Tx-slot)	19.39	19.77	19.92	20.45	19.73	19.54
Maximum Frame-Averaged Output Power						
GSM (GMSK, 1Tx-slot)	23.93	23.94	23.87	18.76	18.94	19.26
GPRS (GMSK, 1Tx-slot)	23.93	23.94	23.87	18.76	18.94	19.26
GPRS (GMSK, 2Tx-slot)	24.89	24.96	24.96	19.79	19.87	20.02
GPRS (GMSK, 3Tx-slot)	24.63	24.80	24.81	19.97	20.02	20.14
GPRS (GMSK, 4Tx-slot)	23.72	23.92	23.99	19.23	19.26	19.40
EDGE (8PSK, 1Tx-slot)	15.51	16.25	16.23	17.07	16.22	15.89
EDGE (8PSK, 2Tx-slot)	17.93	18.33	18.04	18.15	17.64	17.04
EDGE (8PSK, 3Tx-slot)	16.95	17.11	17.24	18.15	17.44	18.18
EDGE (8PSK, 4Tx-slot)	16.21	16.59	16.74	17.27	16.55	16.36

Note:

1. SAR testing was performed on the maximum frame-averaged power mode.
2. 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)
3. The configuration of time-slot for GSM has transmitting signal in one time-slot during one frame (8 time-slots).

Band	WCDMA Band II			WCDMA Band IV			WCDMA Band V			3GPP MPR (dB)
Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233	
Frequency (MHz)	1852.4	1880.0	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6	
RMC 12.2K	21.38	21.10	21.01	21.83	21.80	21.96	22.30	22.67	22.23	-
HSDPA Subtest-1	**21.38**	**21.10**	**21.01**	**21.83**	**21.80**	**21.96**	**22.30**	**22.67**	**22.23**	0
HSDPA Subtest-2	20.43	20.01	19.17	21.62	21.35	21.46	21.24	21.69	21.46	0
HSDPA Subtest-3	20.26	19.71	19.60	21.85	21.92	21.68	21.09	21.57	21.23	0.5
HSDPA Subtest-4	19.51	19.29	19.04	21.84	21.91	21.65	20.67	21.17	20.88	0.5
HSUPA Subtest-1	20.15	19.55	19.40	21.85	21.93	21.65	20.57	21.05	20.78	0
HSUPA Subtest-2	20.54	20.10	19.94	21.87	21.75	21.64	22.15	22.60	22.28	2
HSUPA Subtest-3	20.42	19.98	19.84	21.74	21.80	21.56	22.06	22.55	22.25	1
HSUPA Subtest-4	20.48	20.02	19.89	21.79	21.91	21.63	22.11	22.61	22.25	2
HSUPA Subtest-5	20.36	19.92	19.74	21.63	21.76	21.49	22.01	22.48	22.15	0

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18607	Mid CH 18900	High CH 19193		Low CH 18607	Mid CH 18900	High CH 19193	
			1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
2 / 1.4M	1	0	22.29	21.86	22.09	0	21.08	20.93	20.26	1
	1	2	22.03	21.69	22.16	0	21.01	21.04	20.25	1
	1	5	22.01	21.66	22.09	0	20.91	20.94	20.24	1
	3	0	22.25	21.81	22.17	0	20.76	21.05	21	1
	3	1	22.24	21.84	22.14	0	20.78	21.06	20.98	1
	3	3	22.22	21.81	22.11	0	20.77	21.06	21.09	1
	6	0	21.12	20.82	21.17	1	20.17	19.85	20.38	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18615	Mid CH 18900	High CH 19185		Low CH 18615	Mid CH 18900	High CH 19185	
			1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz	
2 / 3M	1	0	21.72	21.69	22	0	21.21	20.91	20.24	1
	1	7	22.08	21.71	22.13	0	21.2	20.94	20.32	1
	1	14	21.93	21.73	22.15	0	21.12	20.94	20.33	1
	8	0	21.02	20.86	21.01	1	20.27	19.95	20.35	2
	8	3	21.04	20.86	21	1	20.3	19.92	20.35	2
	8	7	21.04	20.88	21.28	1	20.26	19.92	20.39	2
	15	0	21.11	20.85	21.23	1	20.21	19.89	20.23	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18625	Mid CH 18900	High CH 19175		Low CH 18625	Mid CH 18900	High CH 19175	
			1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz	
2 / 5M	1	0	22.08	21.98	21.78	0	19.86	21.01	19.92	1
	1	12	22.09	21.87	21.98	0	20.06	20.85	19.88	1
	1	24	22.05	22	22.02	0	19.81	21.06	19.97	1
	12	0	21.24	20.79	21.07	1	20.24	19.6	20.14	2
	12	6	21.37	20.8	20.94	1	20.24	19.79	20.02	2
	12	13	21.19	20.81	20.99	1	20.12	19.77	20.14	2
	25	0	21.03	20.77	21.02	1	20.17	19.78	20.26	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18650	Mid CH 18900	High CH 19150		Low CH 18650	Mid CH 18900	High CH 19150	
			1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz	
2 / 10M	1	0	22.21	21.83	21.68	0	21.13	20.96	20.2	1
	1	24	21.95	21.94	21.79	0	21.31	21.45	20.45	1
	1	49	22.03	21.8	21.95	0	21.16	20.91	20.59	1
	25	0	21.05	20.88	20.83	1	20.15	19.8	20.06	2
	25	12	21.05	20.88	20.89	1	20.15	20.06	20.05	2
	25	25	21.07	20.74	20.85	1	20.3	20.05	20.05	2
	50	0	21.06	20.8	20.97	1	20.12	20.03	20.03	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18675	Mid CH 18900	High CH 19125		Low CH 18675	Mid CH 18900	High CH 19125	
			1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz	
2 / 15M	1	0	22.06	21.77	21.58	0	21.34	21.38	20.63	1
	1	37	22.11	21.84	21.68	0	21.36	21.34	20.78	1
	1	74	22.07	21.73	21.96	0	21.32	21.3	20.91	1
	36	0	21.09	20.82	20.75	1	20.1	19.96	19.78	2
	36	19	21.08	20.85	20.8	1	20.11	19.96	19.83	2
	36	39	21.08	20.86	20.82	1	20.11	19.96	19.85	2
	75	0	20.99	20.8	20.99	1	20.13	19.9	20.05	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 18700	Mid CH 18900	High CH 19100		Low CH 18700	Mid CH 18900	High CH 19100	
			1860.0 MHz	1880.0 MHz	1900.0 MHz		1860.0 MHz	1880.0 MHz	1900.0 MHz	
2 / 20M	1	0	22.3	21.84	21.84	0	21.19	20.75	21.43	1
	1	50	22.12	21.75	21.92	0	21.19	20.63	21.36	1
	1	99	**22.19**	**21.98**	**22.37**	0	20.98	20.66	21.38	1
	50	0	20.92	20.84	20.73	1	20.18	20.04	19.82	2
	50	25	21.11	20.85	20.77	1	20.18	20.03	19.68	2
	50	50	21.1	20.87	**21.17**	1	20.18	19.93	19.71	2
	100	0	21.02	20.83	20.73	1	20.16	19.77	19.85	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19957	Mid CH 20175	High CH 20393		Low CH 19957	Mid CH 20175	High CH 20393	
			1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz	
4 / 1.4M	1	0	22.46	22.31	22.51	0	21.89	21.87	21.53	1
	1	2	22.48	22.34	22.55	0	21.98	21.98	21.48	1
	1	5	22.52	22.35	22.47	0	21.94	21.93	21.46	1
	3	0	22.63	22.5	22.45	0	21.57	21.33	21.42	1
	3	1	22.6	22.49	22.44	0	21.56	21.33	21.34	1
	3	3	22.6	22.49	22.44	0	21.44	21.32	21.44	1
	6	0	21.54	21.56	21.41	1	20.98	20.45	20.7	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19965	Mid CH 20175	High CH 20385		Low CH 19965	Mid CH 20175	High CH 20385	
			1711.5 MHz	1732.5 MHz	1753.5 MHz		1711.5 MHz	1732.5 MHz	1753.5 MHz	
4 / 3M	1	0	22.55	22.26	22.54	0	21.93	21.72	21.29	1
	1	7	22.44	22.45	22.52	0	21.81	21.94	21.47	1
	1	14	22.49	22.36	22.53	0	21.72	21.76	21.26	1
	8	0	21.48	21.33	21.34	1	20.94	20.46	20.7	2
	8	3	21.54	21.33	21.34	1	20.73	20.51	20.78	2
	8	7	21.34	21.4	21.34	1	20.8	20.5	20.69	2
	15	0	21.57	21.24	21.33	1	20.73	20.48	20.38	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 19975	Mid CH 20175	High CH 20375		Low CH 19975	Mid CH 20175	High CH 20375	
			1712.5 MHz	1732.5 MHz	1752.5 MHz		1712.5 MHz	1732.5 MHz	1752.5 MHz	
4 / 5M	1	0	22.54	22.5	22.4	0	20.98	21.98	21.87	1
	1	12	22.4	22.49	22.18	0	20.79	21.77	21.51	1
	1	24	22.39	22.47	22.27	0	20.84	21.93	21.82	1
	12	0	21.48	21.37	21.36	1	20.4	20.3	20.46	2
	12	6	21.5	21.38	21.37	1	20.55	20.22	20.55	2
	12	13	21.47	21.4	21.37	1	20.75	20.34	20.38	2
	25	0	21.5	21.5	21.38	1	20.5	20.32	20.54	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20000	Mid CH 20175	High CH 20350		Low CH 20000	Mid CH 20175	High CH 20350	
			1715.0 MHz	1732.5 MHz	1750.0 MHz		1715.0 MHz	1732.5 MHz	1750.0 MHz	
4 / 10M	1	0	22.39	22.32	22.42	0	21.81	21.72	21.1	1
	1	24	22.28	22.43	22.28	0	21.74	21.72	21.07	1
	1	49	22.37	22.37	22.39	0	21.58	21.7	20.99	1
	25	0	21.44	21.59	21.43	1	20.54	20.43	20.53	2
	25	12	21.41	21.42	21.31	1	20.41	20.56	20.47	2
	25	25	21.38	21.42	21.31	1	20.54	20.6	20.48	2
	50	0	21.37	21.37	21.37	1	20.5	20.38	20.45	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20025	Mid CH 20175	High CH 20325		Low CH 20025	Mid CH 20175	High CH 20325	
			1717.5 MHz	1732.5 MHz	1747.5 MHz		1717.5 MHz	1732.5 MHz	1747.5 MHz	
4 / 15M	1	0	22.39	22.43	22.33	0	21.95	21.73	21.98	1
	1	37	22.39	22.44	22.29	0	21.78	21.72	21.97	1
	1	74	22.26	22.32	22.27	0	21.81	21.62	21.95	1
	36	0	21.36	21.11	21.36	1	20.51	20.55	20.41	2
	36	19	21.35	21.08	21.38	1	20.51	20.67	20.42	2
	36	39	21.35	21.1	21.36	1	20.51	20.44	20.43	2
	75	0	21.44	21.2	21.41	1	20.61	20.46	20.48	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20050	Mid CH 20175	High CH 20300		Low CH 20050	Mid CH 20175	High CH 20300	
			1720.0 MHz	1732.5 MHz	1745.0 MHz		1720.0 MHz	1732.5 MHz	1745.0 MHz	
4 / 20M	1	0	22.58	22.31	22.29	0	21.86	21.82	21.98	1
	1	50	22.55	22.22	22.45	0	21.63	21.76	21.88	1
	1	99	**22.43**	**22.39**	**22.7**	0	21.62	21.77	21.96	1
	50	0	21.38	21.39	21.22	1	20.5	20.48	20.22	2
	50	25	21.3	21.37	**21.42**	1	20.48	20.51	20.26	2
	50	50	21.27	21.37	21.21	1	20.51	20.55	20.26	2
	100	0	21.44	21.3	21.35	1	20.53	20.33	20.38	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20407	Mid CH 20525	High CH 20643		Low CH 20407	Mid CH 20525	High CH 20643	
			824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz	
5 / 1.4M	1	0	22.32	22.48	22.9	0	21.93	22.17	21.66	1
	1	2	22.32	22.71	22.96	0	22.32	22.44	22.03	1
	1	5	22.33	22.51	22.88	0	21.85	22.27	21.82	1
	3	0	22.49	22.65	22.93	0	21.48	21.73	22.03	1
	3	1	22.49	22.77	22.92	0	21.16	22.07	21.69	1
	3	3	22.49	22.64	22.91	0	21.49	21.57	22.16	1
	6	0	21.39	21.66	21.91	1	20.58	21.03	21.23	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20415	Mid CH 20525	High CH 20635		Low CH 20415	Mid CH 20525	High CH 20635	
			825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz	
5 / 3M	1	0	22.38	22.57	22.87	0	22.17	22.38	21.85	1
	1	7	22.5	22.66	22.94	0	22.26	22.42	22.06	1
	1	14	22.42	22.55	22.93	0	22.21	22.48	21.86	1
	8	0	21.55	21.7	21.94	1	20.78	20.76	21.3	2
	8	3	21.39	21.86	21.95	1	20.78	20.76	21.31	2
	8	7	21.52	21.95	21.99	1	20.93	20.87	21.36	2
	15	0	21.55	21.72	21.96	1	20.48	20.85	20.88	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20425	Mid CH 20525	High CH 20625		Low CH 20425	Mid CH 20525	High CH 20625	
			826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz	
5 / 5M	1	0	22.59	22.8	22.93	0	20.92	22.46	22.17	1
	1	12	22.51	22.89	22.98	0	20.95	22.27	22.14	1
	1	24	22.6	22.92	22.97	0	21.03	22.25	22.37	1
	12	0	21.48	21.87	21.99	1	20.61	20.78	20.91	2
	12	6	21.48	21.70	22.00	1	20.61	20.78	20.93	2
	12	13	21.52	21.52	22.00	1	20.62	20.78	20.93	2
	25	0	21.62	21.63	22.03	1	20.82	20.87	21.00	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 20450	Mid CH 20525	High CH 20600		Low CH 20450	Mid CH 20525	High CH 20600	
			829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz	
5 / 10M	1	0	22.37	22.7	22.84	0	22.13	22.2	21.48	1
	1	24	22.56	22.65	22.89	0	22.31	22.44	21.72	1
	1	49	**22.84**	**23.01**	**22.97**	0	22.35	22.44	21.75	1
	25	0	21.51	**21.78**	21.71	1	20.6	20.95	21.03	2
	25	12	21.51	21.67	21.69	1	20.63	20.97	21.04	2
	25	25	21.56	21.67	21.69	1	20.64	20.97	21.05	2
	50	0	21.52	21.8	21.66	1	20.7	20.95	21.06	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26047	Mid CH 26365	High CH 26683		Low CH 26047	Mid CH 26365	High CH 26683	
			1850.7 MHz	1882.5 MHz	1914.3 MHz		1850.7 MHz	1882.5 MHz	1914.3 MHz	
25 / 1.4M	1	0	21.96	21.64	22.26	0	20.95	20.85	20.49	1
	1	2	22.06	21.67	22.39	0	20.92	20.89	20.62	1
	1	5	22.02	21.67	22.37	0	20.91	20.92	20.56	1
	3	0	22.06	21.76	22.24	0	20.75	21.01	21.27	1
	3	1	22.04	21.8	22.35	0	20.82	20.99	21.28	1
	3	3	22.22	21.75	22.35	0	20.66	20.99	21.27	1
	6	0	21.02	20.82	21.3	1	20.1	19.85	20.54	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26055	Mid CH 26365	High CH 26675		Low CH 26055	Mid CH 26365	High CH 26675	
			1851.5 MHz	1882.5 MHz	1913.5 MHz		1851.5 MHz	1882.5 MHz	1913.5 MHz	
25 / 3M	1	0	21.98	21.66	22.35	0	21.1	20.9	20.59	1
	1	7	21.97	21.61	22.31	0	21.11	20.9	20.47	1
	1	14	22.01	21.7	22.38	0	21.07	20.92	20.65	1
	8	0	20.98	20.74	21.26	1	20.3	19.91	20.64	2
	8	3	21	20.77	21.27	1	20.29	19.91	20.63	2
	8	7	20.93	20.8	21.41	1	20.29	19.96	20.73	2
	15	0	21.12	20.78	21.36	1	20.23	19.98	20.44	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26065	Mid CH 26365	High CH 26665		Low CH 26065	Mid CH 26365	High CH 26665	
			1852.5 MHz	1882.5 MHz	1912.5 MHz		1852.5 MHz	1882.5 MHz	1912.5 MHz	
25 / 5M	1	0	21.95	21.94	22.08	0	20.26	20.97	20.86	1
	1	12	22.24	21.83	22.21	0	20.24	20.81	21.29	1
	1	24	21.99	21.91	22.3	0	20.16	21.1	21.06	1
	12	0	21.11	20.79	21.25	1	20.14	19.66	20.27	2
	12	6	21.06	20.79	21.21	1	20.11	19.86	20.08	2
	12	13	21.13	20.8	21.19	1	20.12	19.69	20.29	2
	25	0	21.07	20.82	21.31	1	20.22	19.71	20.33	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26090	Mid CH 26365	High CH 26640		Low CH 26090	Mid CH 26365	High CH 26640	
			1855.0 MHz	1882.5 MHz	1910.0 MHz		1855.0 MHz	1882.5 MHz	1910.0 MHz	
25 / 10M	1	0	22.05	21.69	21.73	0	21.11	20.74	20.37	1
	1	24	22	21.83	21.96	0	21.3	21.5	20.55	1
	1	49	22.06	21.82	22.24	0	21.03	20.74	20.93	1
	25	0	21.05	20.86	21.04	1	20.11	20.14	20.23	2
	25	12	21.11	20.77	21.03	1	20.12	19.94	20.25	2
	25	25	21.12	20.87	21.02	1	20.11	19.95	20.24	2
	50	0	21	20.81	21.05	1	20.16	19.88	20.21	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26115	Mid CH 26365	High CH 26615		Low CH 26115	Mid CH 26365	High CH 26615	
			1857.5 MHz	1882.5 MHz	1907.5 MHz		1857.5 MHz	1882.5 MHz	1907.5 MHz	
25 / 15M	1	0	22.13	21.77	21.5	0	21.36	21.45	20.59	1
	1	37	22	21.73	21.78	0	21.36	21.51	20.81	1
	1	74	21.96	21.76	22.26	0	21.28	21.39	21.22	1
	36	0	21.09	20.82	20.92	1	20.12	19.88	20.01	2
	36	19	21.11	20.83	20.91	1	20.15	19.9	20.02	2
	36	39	20.99	20.83	20.94	1	20.13	19.92	20.02	2
	75	0	21.06	20.75	21	1	20.02	20	20.14	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26140	Mid CH 26365	High CH 26590		Low CH 26140	Mid CH 26365	High CH 26590	
			1860.0 MHz	1882.5 MHz	1905.0 MHz		1860.0 MHz	1882.5 MHz	1905.0 MHz	
25 / 20M	1	0	22.33	22.16	22.26	0	21.25	20.66	21.39	1
	1	50	22.19	22.08	22.32	0	21	20.7	21.68	1
	1	99	**22.46**	**22.27**	**22.55**	0	20.98	20.6	21.86	1
	50	0	20.99	20.75	**21.13**	1	20.22	20.35	19.84	2
	50	25	20.97	20.93	20.97	1	20.12	20.36	19.86	2
	50	50	21.09	20.71	20.73	1	20.13	20.38	19.87	2
	100	0	20.92	20.88	20.98	1	20.07	19.91	20.1	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26697	Mid CH 26865	High CH 27033		Low CH 26697	Mid CH 26865	High CH 27033	
			814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz	
26 / 1.4M	1	0	23.44	23.53	23.21	0	22.82	22.67	22.5	1
	1	2	23.33	23.71	23.34	0	22.68	22.76	22.92	1
	1	5	23.42	23.57	23.18	0	22.69	22.74	22.58	1
	3	0	22.24	22.45	22.67	0	21.55	21.98	22.26	1
	3	1	22.24	22.44	22.67	0	21.75	22.03	21.96	1
	3	3	22.23	22.44	22.66	0	21.4	21.98	22.27	1
	6	0	21.76	21.09	21.23	1	21.03	21.2	21.53	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26705	Mid CH 26865	High CH 27025		Low CH 26705	Mid CH 26865	High CH 27025	
			815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz	
26 / 3M	1	0	23.37	23.65	23.17	0	22.89	22.76	22.48	1
	1	7	23.38	23.67	23.18	0	22.87	22.82	22.6	1
	1	14	23.46	23.62	23.13	0	22.89	22.88	22.75	1
	8	0	21.72	21.92	21.2	1	21.06	21.07	21.4	2
	8	3	21.73	21.92	21.04	1	20.9	21.09	21.42	2
	8	7	21.7	21.95	21.13	1	21.06	21.2	21.45	2
	15	0	21.74	21.88	21.09	1	20.86	21.18	21.11	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26715	Mid CH 26865	High CH 27015		Low CH 26715	Mid CH 26865	High CH 27015	
			816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz	
26 / 5M	1	0	23.47	23.06	23.22	0	21.72	22.84	22.81	1
	1	12	23.52	23.09	23.21	0	21.82	22.62	22.68	1
	1	24	23.46	23.17	23.13	0	21.89	22.79	22.7	1
	12	0	21.81	21	21.17	1	20.87	20.98	21.19	2
	12	6	21.82	21	21.18	1	20.89	20.98	21.21	2
	12	13	21.83	21.01	21.19	1	20.9	20.99	21.23	2
	25	0	21.85	21.06	21.25	1	20.93	21.04	21.24	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26740	Mid CH 26865	High CH 26990		Low CH 26740	Mid CH 26865	High CH 26990	
			819.0 MHz	831.5 MHz	844.0 MHz		819.0 MHz	831.5 MHz	844.0 MHz	
26 / 10M	1	0	23.37	22.93	22.92	0	22.86	22.76	22.18	1
	1	24	23.59	23.07	23.11	0	22.89	22.89	22.37	1
	1	49	23.71	23.12	23.22	0	22.78	22.96	22.51	1
	25	0	21.25	21.4	21.59	1	21.46	21.64	21.67	2
	25	12	21.27	21.4	21.6	1	21.3	21.8	21.86	2
	25	25	21.28	21.41	21.61	1	21.48	21.66	21.87	2
	50	0	21.44	21.54	21.74	1	21.48	21.72	21.72	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 26765	Mid CH 26865	High CH 26965		Low CH 26765	Mid CH 26865	High CH 26965	
			821.5 MHz	831.5 MHz	841.5 MHz		821.5 MHz	831.5 MHz	841.5 MHz	
26 / 15M	1	0	23.48	23.62	23.63	0	22.9	22.91	22.8	1
	1	37	23.59	23.69	23.71	0	22.91	22.6	22.97	1
	1	74	**23.73**	**23.66**	**23.89**	0	22.89	22.69	22.92	1
	36	0	21.29	21.35	21.5	1	21.5	21.73	21.71	2
	36	19	21.31	21.53	**21.71**	1	21.5	21.56	21.71	2
	36	39	21.31	21.36	21.53	1	21.5	21.57	21.72	2
	75	0	21.34	21.54	21.64	1	21.56	21.58	21.65	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 131979	Mid CH 132322	High CH 132665		Low CH 131979	Mid CH 132322	High CH 132665	
			1710.7 MHz	1745 MHz	1779.3 MHz		1710.7 MHz	1745 MHz	1779.3 MHz	
66 / 1.4M	1	0	22.37	22.15	22.29	0	21.3	21.47	20.54	1
	1	2	22.44	22.19	22.32	0	21.35	21.48	20.54	1
	1	5	22.44	22.19	22.41	0	21.5	21.52	20.73	1
	3	0	22.58	22.31	22.41	0	21.11	21.27	21.33	1
	3	1	22.52	22.38	22.4	0	21.12	21.16	21.35	1
	3	3	22.54	22.35	22.39	0	21.12	21.15	21.35	1
	6	0	21.45	21.37	21.28	1	20.52	20.5	20.46	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 131987	Mid CH 132322	High CH 132657		Low CH 131987	Mid CH 132322	High CH 132657	
			1711.5 MHz	1745 MHz	1778.5 MHz		1711.5 MHz	1745 MHz	1778.5 MHz	
66 / 3M	1	0	22.37	22.18	22.46	0	21.84	21.94	20.88	1
	1	7	22.51	22.33	22.33	0	21.52	21.46	20.58	1
	1	14	22.29	22.31	22.34	0	21.63	21.96	20.81	1
	8	0	21.49	21.43	21.36	1	20.7	20.39	20.68	2
	8	3	21.48	21.3	21.36	1	20.7	20.51	20.69	2
	8	7	21.39	21.34	21.38	1	20.63	20.45	20.7	2
	15	0	21.49	21.32	21.43	1	20.67	20.44	20.39	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 131997	Mid CH 132322	High CH 132647		Low CH 131997	Mid CH 132322	High CH 132647	
			1712.5 MHz	1745 MHz	1777.5 MHz		1712.5 MHz	1745 MHz	1777.5 MHz	
66 / 5M	1	0	22.35	22.48	22.22	0	20.28	21.54	20.95	1
	1	12	22.42	22.46	22.29	0	20.3	21.41	21.34	1
	1	24	22.32	22.58	22.24	0	20.3	21.88	21.21	1
	12	0	21.53	21.31	21.45	1	20.55	20.24	20.48	2
	12	6	21.43	21.32	21.47	1	20.56	20.36	20.37	2
	12	13	21.47	21.35	21.46	1	20.56	20.07	20.39	2
	25	0	21.37	21.41	21.43	1	20.53	20.31	20.38	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 132022	Mid CH 132322	High CH 132622		Low CH 132022	Mid CH 132322	High CH 132622	
			1715.0 MHz	1745 MHz	1775.0 MHz		1715.0 MHz	1745 MHz	1775.0 MHz	
66 / 10M	1	0	22.44	22.36	22.38	0	21.8	21.73	20.56	1
	1	24	22.46	22.35	22.40	0	21.75	21.69	20.44	1
	1	49	22.42	22.41	22.43	0	21.69	21.88	20.56	1
	25	0	21.55	21.40	21.40	1	20.57	20.41	20.48	2
	25	12	21.53	21.40	21.42	1	20.55	20.45	20.49	2
	25	25	21.51	21.41	21.38	1	20.59	20.43	20.51	2
	50	0	21.37	21.38	21.39	1	20.52	20.41	20.46	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 132047	Mid CH 132322	High CH 132597		Low CH 132047	Mid CH 132322	High CH 132597	
			1717.5 MHz	1745 MHz	1772.5 MHz		1717.5 MHz	1745 MHz	1772.5 MHz	
66 / 15M	1	0	22.49	22.44	22.19	0	21.89	21.84	21.17	1
	1	37	22.31	22.36	22.19	0	21.74	21.86	21.2	1
	1	74	22.45	22.46	22.18	0	21.59	21.85	21.25	1
	36	0	21.41	21.43	21.44	1	20.46	20.41	20.47	2
	36	19	21.41	21.33	21.45	1	20.47	20.45	20.43	2
	36	39	21.41	21.33	21.45	1	20.47	20.43	20.49	2
	75	0	21.49	21.41	21.34	1	20.56	20.4	20.37	2

LTE Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low CH 132072	Mid CH 132322	High CH 132572		Low CH 132072	Mid CH 132322	High CH 132572	
			1720 MHz	1745 MHz	1770.0 MHz		1720 MHz	1745 MHz	1770.0 MHz	
66 / 20M	1	0	22.54	22.39	22.43	0	21.52	21.65	21.79	1
	1	50	22.47	22.37	22.53	0	21.44	21.75	21.72	1
	1	99	**22.43**	**22.68**	**22.61**	0	21.49	21.62	21.61	1
	50	0	21.39	**21.42**	21.30	1	20.67	20.56	20.39	2
	50	25	21.38	21.32	21.32	1	20.52	20.71	20.35	2
	50	50	21.38	21.34	21.28	1	20.55	20.58	20.38	2
	100	0	21.51	21.46	21.33	1	20.55	20.34	20.5	2

All Rate have been tested, the Worst average power (Unit: dBm) is shown as below.

<WLAN 2.4G>

Mode	802.11b (1Mbps)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	15.22	15.51	15.06
Mode	802.11g (6Mbps)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	15.24	15.43	15.41
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	16.22	16.27	15.28
Mode	802.11n (HT40)		
Channel / Frequency (MHz)	3 (2422)	6 (2437)	9 (2452)
Average Power	16.52	16.01	15.45

<WLAN 5.2G>

Mode	802.11a (6Mbps)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power	13.93	13.42	13.23
Mode	802.11n (HT20)(MCS0)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power	13.94	13.33	13.12
Mode	802.11n (HT40)(MCS0)		
Channel / Frequency (MHz)	38 (5190)	46 (5230)	
Average Power	12.42	12.27	
Mode	802.11ac (VHT20) (MCS0)		
Channel / Frequency (MHz)	36 (5180)	40 (5200)	48 (5240)
Average Power	**14.08**	13.53	13.34
Mode	802.11ac (VHT40)(MCS0)		
Channel / Frequency (MHz)	38 (5190)	46 (5230)	
Average Power	12.53	12.34	
Mode	802.11ac (VHT80) (MCS0)		
Channel / Frequency (MHz)	42 (5210)		
Average Power	12.25		

<WLAN 5.8G>

Mode	802.11a (6Mbps)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power	12.57	12.78	12.55
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power	12.87	12.61	12.62
Mode	802.11n (HT40) (MCS0)		
Channel / Frequency (MHz)	151 (5755)	159 (5795)	
Average Power	11.75	11.43	
Mode	802.11ac (VHT20) (MCS0)		
Channel / Frequency (MHz)	149 (5745)	157 (5785)	165 (5825)
Average Power	12.86	12.71	11.95
Mode	802.11ac (VHT40) (MCS0)		
Channel / Frequency (MHz)	151 (5755)	159 (5795)	
Average Power	11.77	11.72	
Mode	802.11ac (VHT80) (MCS0)		
Channel / Frequency (MHz)	155 (5775)		
Average Power	**13.94**		

<Bluetooth>

Mode	Bluetooth GFSK		
Channel / Frequency (MHz)	0 (2402)	39 (2441)	78 (2480)
Average Power	2.05	2.03	0.91
Mode	**Bluetooth π/4-DQPSK**		
Channel / Frequency (MHz)	**0 (2402)**	**39 (2441)**	**78 (2480)**
Average Power	0.90	1.55	0.99
Mode	**Bluetooth 8DPSK**		
Channel / Frequency (MHz)	**0 (2402)**	**39 (2441)**	**78 (2480)**
Average Power	2.62	1.04	2.33
Mode	**Bluetooth LE 1M**		
Channel / Frequency (MHz)	**0 (2402)**	**19 (2440)**	**39 (2480)**
Average Power	-2.03	-0.74	-2.27
Mode	**Bluetooth LE 2M**		
Channel / Frequency (MHz)	**0 (2402)**	**19 (2440)**	**39 (2480)**
Average Power	-1.95	-0.73	-2.26

8.3. SAR Testing Results

8.3.1. SAR Test Reduction Considerations

<KDB 447498 D01, General RF Exposure Guidance>

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

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

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

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

<KDB 941225 D01, 3G SAR Measurement Procedures>

The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ 1/4 dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

<KDB 941225 D05, SAR Evaluation Considerations for LTE Devices>

(1) QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, using the RB offset and required test channel combination with the highest maximum output power among 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; 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 100% RB allocation

SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. 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.

(3) Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

(4) Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is > 1/2 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

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

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

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

8.3.2.SAR Results for Body Exposure Condition (Separation Distance is 0 cm Gap)

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	SIM	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	GSM 850	GPRS2Tx	Rear Face	0	251	1	31.50	31.09	1.099	-0.01	0.342	0.376
	GSM 850	GPRS2Tx	Right Side	0	251	1	31.50	31.09	1.099	-0.07	0.102	0.112
	GSM 850	GPRS2Tx	Top Side	0	251	1	31.50	31.09	1.099	-0.05	0.331	0.364
	GSM 850	GPRS2Tx	Rear Face	0	128	1	31.50	31.02	1.117	-0.03	0.206	0.230
	GSM 850	GPRS2Tx	Rear Face	0	190	1	31.50	31.09	1.099	0.02	0.335	0.368
1	GSM 850	GPRS2Tx	Rear Face	0	251	2	31.50	31.09	1.099	-0.03	**0.345**	**0.379**
	GSM 1900	GPRS2Tx	Rear Face	0	810	1	27.00	26.15	1.216	-0.03	0.298	0.362
	GSM 1900	GPRS2Tx	Right Side	0	810	1	27.00	26.15	1.216	0.03	0.086	0.105
	GSM 1900	GPRS2Tx	Top Side	0	810	1	27.00	26.15	1.216	-0.06	0.296	0.360
2	GSM 1900	GPRS2Tx	Rear Face	0	512	1	27.00	25.92	1.282	-0.08	**0.301**	**0.386**
	GSM 1900	GPRS2Tx	Rear Face	0	661	1	27.00	26.00	1.259	-0.08	0.288	0.363
	GSM 1900	GPRS2Tx	Rear Face	0	512	2	27.00	25.92	1.282	-0.03	0.275	0.353
	UMTS B2	RMC12.2K	Rear Face	0	9262	1	21.50	21.38	1.028	-0.03	0.510	0.524
	UMTS B2	RMC12.2K	Right Side	0	9262	1	21.50	21.38	1.028	-0.08	0.123	0.126
	UMTS B2	RMC12.2K	Top Side	0	9262	1	21.50	21.38	1.028	0.01	0.502	0.516
	UMTS B2	RMC12.2K	Rear Face	0	9400	1	21.50	21.10	1.096	-0.02	0.505	0.554
3	UMTS B2	RMC12.2K	Rear Face	0	9538	1	21.50	21.01	1.119	-0.01	**0.590**	**0.660**
	UMTS B2	RMC12.2K	Rear Face	0	9538	2	21.50	21.01	1.119	-0.03	0.521	0.583
	UMTS B4	RMC12.2K	Rear Face	0	1513	1	22.50	21.96	1.132	0.01	0.331	0.375
	UMTS B4	RMC12.2K	Right Side	0	1513	1	22.50	21.96	1.132	0.02	0.087	0.099
	UMTS B4	RMC12.2K	Top Side	0	1513	1	22.50	21.96	1.132	-0.03	0.320	0.362
4	UMTS B4	RMC12.2K	Rear Face	0	1312	1	22.50	21.83	1.167	-0.03	**0.340**	**0.397**
	UMTS B4	RMC12.2K	Rear Face	0	1413	1	22.50	21.80	1.175	0.05	0.337	0.396
	UMTS B4	RMC12.2K	Rear Face	0	1312	2	22.50	21.83	1.167	0.02	0.334	0.390
	UMTS B5	RMC12.2K	Rear Face	0	4182	1	23.00	22.67	1.079	0.03	0.309	0.333
	UMTS B5	RMC12.2K	Right Side	0	4182	1	23.00	22.67	1.079	0.01	0.077	0.083
	UMTS B5	RMC12.2K	Top Side	0	4182	1	23.00	22.67	1.079	0.05	0.302	0.326
5	UMTS B5	RMC12.2K	Rear Face	0	4132	1	23.00	22.30	1.175	0.09	**0.430**	**0.505**
	UMTS B5	RMC12.2K	Rear Face	0	4233	1	23.00	22.23	1.194	0.05	0.320	0.382
	UMTS B5	RMC12.2K	Rear Face	0	4132	2	23.00	22.30	1.175	0.01	0.313	0.368

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	RB#	RB Offset	SIM	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE B2	QPSK20M	Rear Face	0	19100	1	99	1	22.50	22.37	1.030	0.03	0.445	0.459
	LTE B2	QPSK20M	Right Side	0	19100	1	99	1	22.50	22.37	1.030	-0.01	0.077	0.079
	LTE B2	QPSK20M	Top Side	0	19100	1	99	1	22.50	22.37	1.030	-0.02	0.362	0.373
	LTE B2	QPSK20M	Rear Face	0	19100	50	50	1	21.50	21.17	1.079	0.03	0.330	0.356
	LTE B2	QPSK20M	Right Side	0	19100	50	50	1	21.50	21.17	1.079	-0.01	0.053	0.057
	LTE B2	QPSK20M	Top Side	0	19100	50	50	1	21.50	21.17	1.079	-0.01	0.312	0.337
6	LTE B2	QPSK20M	Rear Face	0	18700	1	99	1	22.50	22.19	1.074	0.02	**0.523**	**0.562**
	LTE B2	QPSK20M	Rear Face	0	18900	1	99	1	22.50	21.98	1.127	0.07	0.498	0.561
	LTE B2	QPSK20M	Rear Face	0	18700	1	99	2	22.50	22.19	1.074	0.06	0.452	0.485
7	LTE B4	QPSK20M	Rear Face	0	20300	1	99	1	23.00	22.70	1.072	0.03	**0.643**	**0.689**
	LTE B4	QPSK20M	Right Side	0	20300	1	99	1	23.00	22.70	1.072	-0.01	0.110	0.118
	LTE B4	QPSK20M	Top Side	0	20300	1	99	1	23.00	22.70	1.072	0.02	0.553	0.593
	LTE B4	QPSK20M	Rear Face	0	20300	50	25	1	22.00	21.42	1.143	-0.01	0.312	0.357
	LTE B4	QPSK20M	Right Side	0	20300	50	25	1	22.00	21.42	1.143	-0.03	0.086	0.098
	LTE B4	QPSK20M	Top Side	0	20300	50	25	1	22.00	21.42	1.143	0.07	0.255	0.291
	LTE B4	QPSK20M	Rear Face	0	20050	1	99	1	23.00	22.43	1.140	-0.03	0.581	0.662
	LTE B4	QPSK20M	Rear Face	0	20175	1	99	1	23.00	22.39	1.151	0.01	0.598	0.688
	LTE B4	QPSK20M	Rear Face	0	20300	1	99	2	23.00	22.70	1.072	0.06	0.610	0.654
	LTE B5	QPSK10M	Rear Face	0	20525	1	49	1	23.50	23.01	1.119	0.01	0.300	0.336
	LTE B5	QPSK10M	Right Side	0	20525	1	49	1	23.50	23.01	1.119	-0.03	0.075	0.084
	LTE B5	QPSK10M	Top Side	0	20525	1	49	1	23.50	23.01	1.119	0.03	0.285	0.319
	LTE B5	QPSK10M	Rear Face	0	20525	25	0	1	22.50	21.78	1.180	0.03	0.215	0.254
	LTE B5	QPSK10M	Right Side	0	20525	25	0	1	22.50	21.78	1.180	0.07	0.054	0.064
	LTE B5	QPSK10M	Top Side	0	20525	25	0	1	22.50	21.78	1.180	-0.04	0.251	0.296
8	LTE B5	QPSK10M	Rear Face	0	20450	1	49	1	23.50	22.84	1.164	-0.03	**0.321**	**0.374**
	LTE B5	QPSK10M	Rear Face	0	20600	1	49	1	23.50	22.97	1.130	0.02	0.203	0.229
	LTE B5	QPSK10M	Rear Face	0	20450	1	49	2	23.50	22.84	1.164	0.06	0.210	0.244
	LTE B25	QPSK20M	Rear Face	0	26590	1	99	1	23.00	22.55	1.109	0.02	0.231	0.256
	LTE B25	QPSK20M	Right Side	0	26590	1	99	1	23.00	22.55	1.109	0.04	0.030	0.033
	LTE B25	QPSK20M	Top Side	0	26590	1	99	1	23.00	22.55	1.109	-0.05	0.190	0.211
	LTE B25	QPSK20M	Rear Face	0	26590	50	0	1	22.00	21.13	1.222	-0.01	0.110	0.134

	LTE B25	QPSK20M	Right Side	0	26590	50	0	1	22.00	21.13	1.222	-0.05	0.010	0.012
	LTE B25	QPSK20M	Top Side	0	26590	50	0	1	22.00	21.13	1.222	0.04	0.062	0.076
9	LTE B25	QPSK20M	Rear Face	0	26140	1	99	1	23.00	22.46	1.132	-0.07	**0.229**	**0.259**
	LTE B25	QPSK20M	Rear Face	0	26365	1	99	1	23.00	22.27	1.183	-0.04	0.201	0.238
	LTE B25	QPSK20M	Rear Face	0	26140	1	99	2	23.00	22.46	1.132	0.09	0.223	0.253
10	LTE B26	QPSK15M	Rear Face	0	26965	1	74	1	24.00	23.89	1.026	-0.01	**0.236**	**0.242**
	LTE B26	QPSK15M	Right Side	0	26965	1	74	1	24.00	23.89	1.026	0.03	0.028	0.029
	LTE B26	QPSK15M	Top Side	0	26965	1	74	1	24.00	23.89	1.026	0.03	0.180	0.185
	LTE B26	QPSK15M	Rear Face	0	26965	36	19	1	23.00	21.71	1.346	-0.03	0.166	0.223
	LTE B26	QPSK15M	Right Side	0	26965	36	19	1	23.00	21.71	1.346	0.07	0.010	0.013
	LTE B26	QPSK15M	Top Side	0	26965	36	19	1	23.00	21.71	1.346	0.06	0.123	0.166
	LTE B26	QPSK15M	Rear Face	0	26765	1	74	1	24.00	23.73	1.064	0.04	0.159	0.169
	LTE B26	QPSK15M	Rear Face	0	26865	1	74	1	24.00	23.66	1.081	0.03	0.182	0.197
	LTE B26	QPSK15M	Rear Face	0	26965	1	74	2	24.00	23.89	1.026	0.04	0.180	0.185
11	LTE B66	QPSK20M	Rear Face	0	132322	1	99	1	23.00	22.68	1.076	-0.03	**0.426**	**0.459**
	LTE B66	QPSK20M	Right Side	0	132322	1	99	1	23.00	22.68	1.076	0.07	0.055	0.059
	LTE B66	QPSK20M	Top Side	0	132322	1	99	1	23.00	22.68	1.076	0.05	0.221	0.238
	LTE B66	QPSK20M	Rear Face	0	132322	50	0	1	22.00	21.42	1.143	0.02	0.243	0.278
	LTE B66	QPSK20M	Right Side	0	132322	50	0	1	22.00	21.42	1.143	0.06	0.037	0.042
	LTE B66	QPSK20M	Top Side	0	132322	50	0	1	22.00	21.42	1.143	-0.07	0.130	0.149
	LTE B66	QPSK20M	Rear Face	0	132072	1	99	1	23.00	22.43	1.140	0.06	0.402	0.458
	LTE B66	QPSK20M	Rear Face	0	132572	1	99	1	23.00	22.61	1.094	0.02	0.396	0.433
	LTE B66	QPSK20M	Rear Face	0	132322	1	99	2	23.00	22.68	1.076	0.03	0.399	0.430

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
12	802.11n40	WIFI	Rear Face	0	3	17.00	16.52	1.117	0.09	**0.176**	**0.217**
	802.11n40	WIFI	Top Side	0	3	17.00	16.52	1.117	-0.04	0.050	0.062
	802.11n40	WIFI	Rear Face	0	6	17.00	16.01	1.256	0.03	0.135	0.187
	802.11n40	WIFI	Rear Face	0	9	17.00	15.45	1.429	0.09	0.123	0.194
13	BT_3DH5	BT	Rear Face	0	0	3.00	2.62	1.091	0.01	**0.021**	**0.030**
	BT_3DH5	BT	Top Side	0	0	3.00	2.62	1.091	0.09	0.005	0.007
	BT_3DH5	BT	Rear Face	0	39	3.00	1.04	1.570	0.02	0.014	0.028
	BT_3DH5	BT	Rear Face	0	78	3.00	2.33	1.167	-0.03	0.015	0.023
	802.11ac20	WIFI	Rear Face	0	36	14.50	14.08	1.102	0.03	0.302	0.368
	802.11ac20	WIFI	Top Side	0	36	14.50	14.08	1.102	0.06	0.125	0.152
14	802.11ac20	WIFI	Rear Face	0	40	14.50	13.53	1.250	0.06	**0.334**	**0.462**
	802.11ac20	WIFI	Rear Face	0	48	14.50	13.34	1.306	0.03	0.308	0.445
15	802.11ac80	WIFI	Rear Face	0	155	14.00	13.94	1.014	-0.03	**0.521**	**0.584**
	802.11ac80	WIFI	Top Side	0	155	14.00	13.94	1.014	0.03	0.443	0.497

8.3.3. SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10, the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

Since all the measured SAR are less than 0.8 W/kg, the repeated measurement is not required.

8.3.4. Simultaneous Multi-band Transmission Evaluation

<SAR Summation Analysis>

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR_{1g} of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR_{1g} 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR_{1g} is greater than the SAR limit (SAR_{1g} 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

Position / SAR_{1g}(W/Kg)	Rear Face	Left Side	Right Side	Top Side	Bottom Side
GSM 850	0.379	/	0.112	0.364	/
GSM 1900	0.386	/	0.105	0.360	/
WCDMA II	0.660	/	0.126	0.516	/
WCDMA IV	0.397	/	0.099	0.362	/
WCDMA V	0.505	/	0.083	0.326	/
LTE B2	0.562	/	0.079	0.373	/
LTE B4	0.689	/	0.118	0.593	/
LTE B5	0.374	/	0.084	0.319	/
LTE B25	0.259	/	0.033	0.211	/
LTE B26	0.242	/	0.029	0.185	/
LTE B66	0.459	/	0.059	0.238	/
WIFI 2.4G	0.217	/	/	0.062	/
WIFI 5.2G	0.462	/	/	0.152	/
WIFI 5.8G	0.584	/	/	0.497	/
BT	0.030	/	/	0.007	/
MAX $\sum SAR_{1g}$	**1.273**	-	**0.126**	**1.089**	-

Note: Thus $SAR_{MAX.total}$= **1.273** W/Kg < 1.6 W/Kg, it is compliant with 1999/519/EC.

Appendixes

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: SAR Plots of System Verification

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

Appendix B: SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

Appendix C: Calibration Certificate for probe and Dipole

Appendix D: Photographs of EUT and setup