SAR EVALUATION REPORT

For

Hytera Communications Corporation Limited

Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, China

FCC ID:YAMPDC760UXB1

Report Type:	**Product Type:**
Original Report	Multi-mode Advanced Radio

Report Number: RDG170313007-20A

Report Date: 2017-12-12

Reviewed By: Oscar Ye Engineer

Prepared By: Bay Area Compliance Laboratories Corp. (Kunshan)
No.248 Chenghu Road,Kunshan,Jiangsu province,China
Tel: +86-0512-86175000
Fax: +86-0512-88934268
www.baclcorp.com.cn

Attestation of Test Results			
EUT Information	EUT Description	Multi-mode Advanced Radio	
	Tested Model	PDC760 UxB1	
	Multiple Model	PDC760 UxB1, PDC760 U1B1, PDC760 U2B1	
	FCC ID	YAMPDC760UXB1	
	Serial Number	17031300820	
	Test Date	2017-03-21 ~ 2017-08-28	
MODE		Max. SAR Level(s) Reported(W/kg)	Limit
GSM 850	1g Head SAR	0.38	1.6 W/kg
	1g Body SAR	0.38	
PCS 1900	1g Head SAR	0.37	
	1g Body SAR	0.25	
LTE Band 2	1g Head SAR	0.62	
	1g Body SAR	0.46	
LTE Band 4	1g Head SAR	0.46	
	1g Body SAR	**0.94**	
LTE Band 5	1g Head SAR	0.40	
	1g Body SAR	0.30	
LTE Band 7	1g Head SAR	**1.08**	
	1g Body SAR	0.35	
LTE Band 26	1g Head SAR	0.43	
	1g Body SAR	0.25	
LTE Band 38	1g Head SAR	0.48	
	1g Body SAR	0.31	
LTE Band 41	1g Head SAR	0.41	
	1g Body SAR	0.54	
CDMA 850	1g Head SAR	0.58	
	1g Body SAR	0.27	
WLAN	1g Head SAR	0.11	
	1g Body SAR	0.08	
Bluetooth	1g Head SAR	0.04	
	1g Body SAR	0.05	
PTT (350-400 MHz)	1g Head SAR	5.22	8.0 W/kg
	1g Body SAR	4.88	
PTT (400-470 MHz)	1g Head SAR	**6.14**	
	1g Body SAR	**6.14**	
PTT (450-512 MHz)	1g Head SAR	4.69	
	1g Body SAR	4.45	
Simultaneous	1g Head SAR	**1.18**	8.0 W/kg
	1g Body SAR	**6.50**	
	1g Body SAR	**0.68 (Hotspot)**	1.6 W/kg

Applicable Standards	**ANSI / IEEE C95.1 : 2005** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fileds,3 kHz to 300 GHz.
	ANSI / IEEE C95.3 : 2002 IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to SuchFields,100 kHz—300 GHz.
	FCC 47 CFR part 2.1093 Radiofrequency radiation exposure evaluation: portable devices
	IEEE1528:2013 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
	IEC 62209-2:2010 Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices-Human models, instrumentation, and procedures-Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)
	KDB procedures KDB 447498 D01 General RF Exposure Guidance v06 KDB 648474 D04 Handset SAR v01r03 KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 KDB 865664 D02 RF Exposure Reporting v01r02 KDB 941225 D01 3G SAR Procedures v03r01 KDB 941225 D05 SAR for LTE Devices v02r05 KDB 248227 D01 802 11 Wi-Fi SAR v02r02 KDB 941225 D06 Hotspot Mode v02r01 KDB 643646 D01 SAR test Reduction Considerations for Occupational PTT Radios v01r03.
Note: This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for Occupational/Controlled Exposure limits specified in **FCC 47 CFR part 2.1093** and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures. **The results and statements contained in this report pertain only to the device(s) evaluated.**	

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	RDG170313007-20A	Original Report	2017-12-12

EUT DESCRIPTION

This report has been prepared on behalf of *Hytera Communications Corporation Limited* and their product *Multi-mode Advanced Radio*, Model: *PDC760 UxB1*, FCC ID:YAMPDC760UXB1 or the EUT (Equipment under Test) as referred to in the rest of this report.

Notes: This series products model: PDC760 U1B1, PDC760 U2B1 and PDC760 UxB1 are identical; they have the identical schematics, only named and frequency differently. Model PDC760 UxB1 was selected for fully testing, the detailed information can be referred to the declaration which was stated and guaranteed by the applicant.

** All measurement and test data in this report was gathered from production sample serial number: 17031300820 (Assigned by BACL, Kunshan). The EUT supplied by the applicant was received on 2017-03-13.*

Technical Specification

Device Type:	Portable
Exposure Category:	Occupational/Controlled Exposure
Antenna Type(s):	Internal Antenna and External Antenna
DTM Type:	Class B
Multi-slot Class:	GPRS(Class 33); EGPRS(Class 33)
Body-Worn Accessories:	Belt Clip
Face-Head Accessories:	None
Operation Mode :	GSM Voice, GPRS/EDGE Data, FDD-LTE, TDD-LTE, CDMA 1xRTT, 1xEVDO WLAN, Bluetooth, PTT_FM, PTT_4FSK
Frequency Band:	GSM 850: 824-849 MHz(TX); 869-894 MHz(RX) PCS 1900: 1850-1910 MHz(TX); 1930-1990 MHz(RX) LTE Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) LTE Band 4: 1710-1755 MHz(TX) ; 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 7: 2500-2570 MHz(TX) ; 2620-2690 MHz(RX) LTE Band 26: 814-824 MHz(TX) ; 859-869 MHz(RX) LTE Band 38: 2570-2620 MHz(TX) ; 2570-2620 MHz(RX) LTE Band 41: 2496-2690 MHz(TX) ; 2496-2690 MHz(RX) CDMA 850(BC0): 824-849 MHz(TX); 869-894 MHz(RX) WLAN: 2412 -2472 MHz Bluetooth : 2402 MHz-2480 MHz PTT_FM/PTT_4FSK: 350-512 MHz; 400-470 MHz; 450-512 MHz
Conducted RF Power:	GSM 850 : 32.29 dBm; PCS 1900: 29.67 dBm LTE Band 2: 23.90 dBm; LTE Band 4: 23.62 dBm LTE Band 5: 23.29 dBm; LTE Band 7: 22.99 dBm LTE Band 26: 23.81 dBm; LTE Band 38: 23.26 dBm LTE Band 41: 23.68 dBm CDMA 850(BC0): 22.35 dBm WLAN: 18.73 dBm ; Bluetooth(BDR/EDR): 11.52 dBm;BLE: 2.94 dBm PTT_FM/PTT_4FSK(350-512 MHz): 4.764 W PTT_FM/PTT_4FSK(400-470 MHz): 4.753 W PTT_FM/PTT_4FSK(450-512 MHz): 4.764 W
Dimensions (L*W*H):	15.01 cm (L) × 6.8 cm (W) × 2.53 cm (H)
Power Source:	7.4 VDC Rechargeable Battery
Normal Operation:	Head, Face Up and Body-worn

REFERENCE, STANDARDS, AND GUILDELINES

FCC:

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, ANSI/IEEE standard C95.1-1992 [6], limit the whole-body-averaged SAR to 0.4 and 0.08 W/kg for the controlled and uncontrolled environments. According to the Supplement C of OET Bulletin 65 “Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under “worst-case” conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

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

SAR Limits

FCC Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	**1.60**	**8.0**
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

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

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

FACILITIES

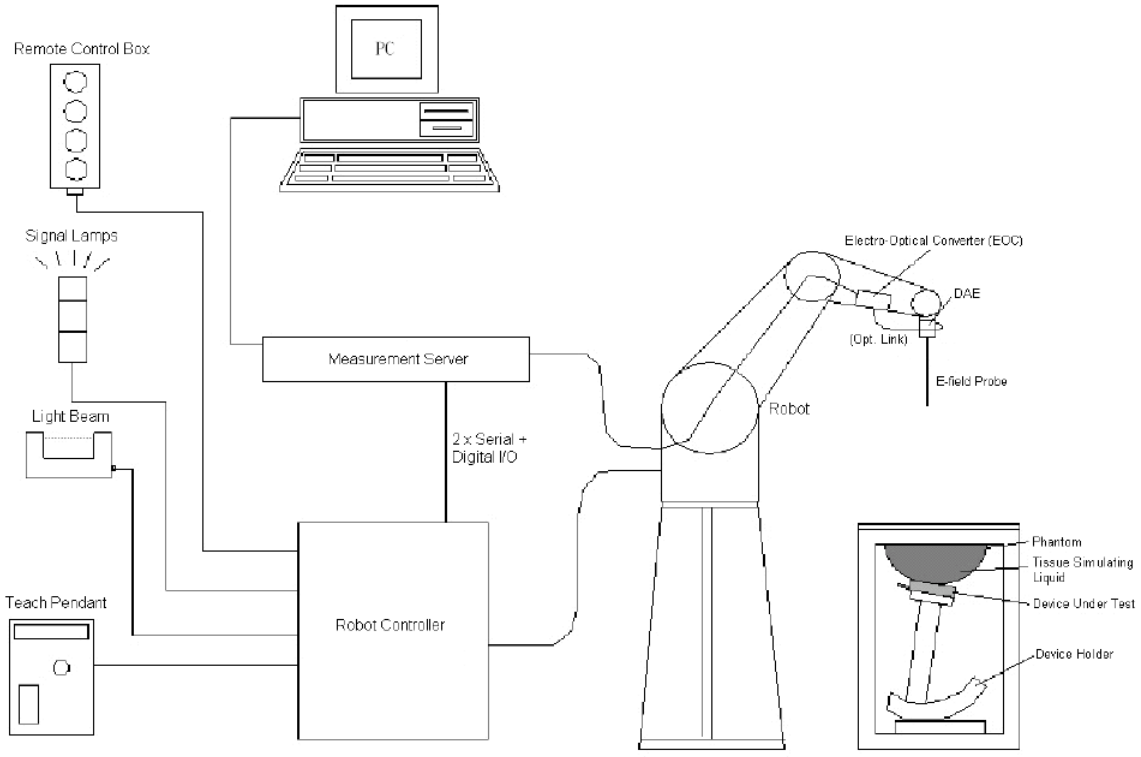
The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on No.248 Chenghu Road,Kunshan,Jiangsu province,China.

DESCRIPTION OF TEST SYSTEM

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

DASY5 System Description

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



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

DASY5 Measurement Server

The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz Intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16 bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.

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

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

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

EX3DV4 E-Field Probes

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

SAM Twin Phantom

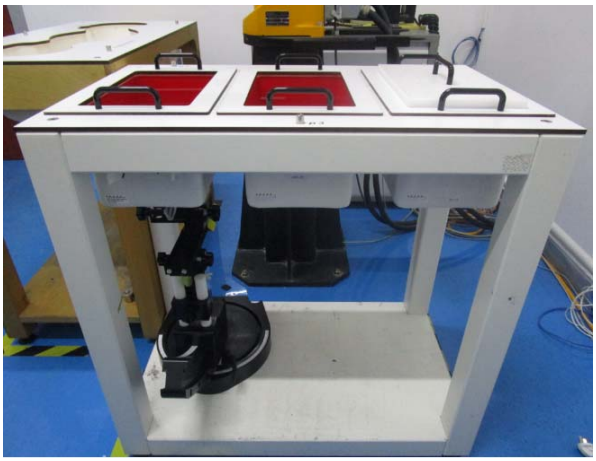
The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness
increases to 6 mm). The phantom has three measurement areas:
_ Left Head
_ Right Head
_ Flat phantom

The phantom table for the DASY systems based on the robots have the size of 100 x 50 x 85 cm (L x W x H).
For easy dislocation these tables have fork lift cut outs at the bottom.
The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible. Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

Triple Flat Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm(± 0.2 mm) shell thickness . The phantom shell is compatible with SPEAG tissue simulating liquids (sugar and oil based). Use of other liquids may render the phantom warranty void (see note or consult SPEAG support).



The phantom table have the size of 100 x 75 x 91 cm (L x W x H).
For easy dislocation these tables have fork lift cut outs at the bottom.
The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible.
Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

Robots

The DASY5 system uses the high precision industrial robot. The robot offers the same features important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchrony motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

The above mentioned robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is contained on the CDs delivered along with the robot. Paper manuals are available upon request direct from Staubli.

Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm 2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m^3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm,with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Recommended Tissue Dielectric Parameters for Head and Body

Frequency (MHz)	Head Tissue		Body Tissue	
	εr	Ơ (S/m)	εr	Ơ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

EQUIPMENT LIST AND CALIBRATION

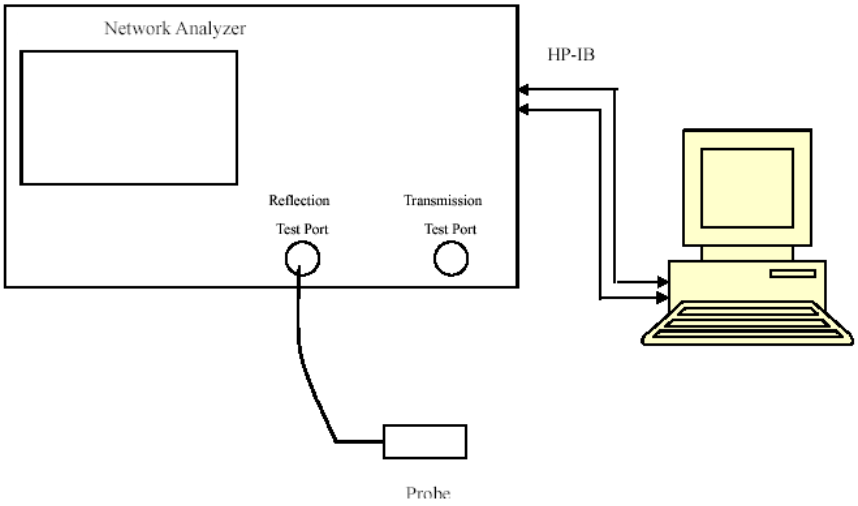
Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
DASY5 Test Software	DASY52.8	N/A	N/A	N/A
DASY5 Measurement Server	DASY5 4.5.12	1567	N/A	N/A
Data Acquisition Electronics	DAE3	379	2016/10/04	2017/10/3
E-Field Probe	EX3DV4	7441	2016/11/15	2017/11/14
Dipole, 450MHz	D450V3	1096	2016/11/07	2019/11/06
Dipole, 835 MHz	D835V2	453	2015/08/17	2018/08/16
Dipole, 1750 MHz	D1750V2	1140	2015/07/09	2018/07/08
Dipole, 1900 MHz	D1900V2	5d206	2015/07/14	2018/07/13
Dipole,2450MHz	D2450V2	970	2015/7/8	2018/7/7
Dipole, 2600 MHz	D2600V2	1132	2016/11/10	2019/11/9
R&S, universal Radio Communication Tester	CMU200	110605	2016/11/25	2017/11/24
Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY	2016/10/08	2017/10/07
Mounting Device	MD4HHTV5	BJPCTC0152	N/A	N/A
Twin SAM	Twin SAM V5.0	1412	N/A	N/A
Triple Flat Phantom 5.1C	QD 000 P51 CA	1130	N/A	N/A
Oval Flat Phantom	ELI V8.0	2051	N/A	N/A
Simulated Tissue 450 MHz Head	TS-450-H	1610045001	Each Time	/
Simulated Tissue 450 MHz Body	TS-450-B	1610045002	Each Time	/
Simulated Tissue 835 MHz Head	TS-835-H	1610083501	Each Time	/
Simulated Tissue 835 MHz Body	TS-835-B	1610083502	Each Time	/
Simulated Tissue 1750 MHz Head	TS-1750-H	1610175001	Each Time	/
Simulated Tissue 1750 MHz Body	TS-1750-B	1610175002	Each Time	/
Simulated Tissue 1900 MHz Head	TS-1900-H	1610190001	Each Time	/
Simulated Tissue 1900 MHz Body	TS-1900-B	1610190002	Each Time	/
Simulated Tissue 2450 MHz Head	TS-2450-H	1610245001	Each Time	/
Simulated Tissue 2450 MHz Body	TS-2450-B	1610245002	Each Time	/
Simulated Tissue 2600 MHz Head	TS-2600-H	1610260001	Each Time	/
Simulated Tissue 2600 MHz Body	TS-2600-B	1610260002	Each Time	/
Network Analyzer	8753B	2625A00809	2016/10/6	2017/10/5
S-Parameter Test Set	85047A	3033A02428	2016/10/6	2017/10/5
Dielectric probe kit	85070B	US33020324	N/A	N/A
Signal Generator	SMBV100A	261558	2016/7/4	2017/7/4
Signal Generator	E4421B	US38440505	2016/11/25	2017/11/25
Power Meter	E4419B	MY41291878	2017/1/7	2018/1/6

Equipment	Model	S/N	Calibration Date	Calibration Due Date
Power Amplifier	10S1G4M1	18060	N/A	N/A
Directional Coupler	488Z	N/A	N/A	N/A
Attenuator	20dB, 100W	N/A	N/A	N/A
Attenuator	3dB, 150W	N/A	N/A	N/A

SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

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Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
2506	Simulated Tissue 2600 MHz Body	53.117	2.07	52.63	2.03	0.93	1.97	±5
2510	Simulated Tissue 2600 MHz Body	52.736	1.969	52.62	2.04	0.22	-3.48	±5
2535	Simulated Tissue 2600 MHz Body	51.414	2.105	52.59	2.07	-2.24	1.69	±5
2560	Simulated Tissue 2600 MHz Body	52.624	2.136	52.56	2.11	0.12	1.23	±5
2580	Simulated Tissue 2600 MHz Body	54.179	2.17	52.53	2.13	3.14	1.88	±5
2593	Simulated Tissue 2600 MHz Body	54.513	2.15	52.52	2.15	3.79	0	±5
2595	Simulated Tissue 2600 MHz Body	54.445	2.136	52.52	2.16	3.67	-1.11	±5
2600	Simulated Tissue 2600 MHz Body	54.281	2.115	52.51	2.16	3.37	-2.08	±5
2610	Simulated Tissue 2600 MHz Body	53.675	2.098	52.5	2.18	2.24	-3.76	±5
2680	Simulated Tissue 2600 MHz Body	51.578	2.238	52.41	2.28	-1.59	-1.84	±5

**Liquid Verification above was performed on 2017/03/21.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
2506	Simulated Tissue 2600 MHz Head	39.356	1.81	39.13	1.86	0.58	-2.69	±5
2510	Simulated Tissue 2600 MHz Head	39.075	1.815	39.12	1.87	-0.12	-2.94	±5
2535	Simulated Tissue 2600 MHz Head	38.084	1.918	39.09	1.89	-2.57	1.48	±5
2560	Simulated Tissue 2600 MHz Head	38.986	1.949	39.06	1.92	-0.19	1.51	±5
2580	Simulated Tissue 2600 MHz Head	40.158	1.974	39.03	1.94	2.89	1.75	±5
2593	Simulated Tissue 2600 MHz Head	40.38	1.916	39.02	1.96	3.49	-2.24	±5
2595	Simulated Tissue 2600 MHz Head	40.261	1.905	39.02	1.96	3.18	-2.81	±5
2600	Simulated Tissue 2600 MHz Head	40.22	1.893	39.01	1.96	3.1	-3.42	±5
2610	Simulated Tissue 2600 MHz Head	39.778	1.936	39	1.97	1.99	-1.73	±5
2680	Simulated Tissue 2600 MHz Head	38.14	2.025	38.91	2.05	-1.98	-1.22	±5

**Liquid Verification above was performed on 2017/03/22.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1850.2	Simulated Tissue 1900 MHz Body	53.221	1.481	53.3	1.52	-0.15	-2.57	±5
1860	Simulated Tissue 1900 MHz Body	53.012	1.488	53.3	1.52	-0.54	-2.11	±5
1880	Simulated Tissue 1900 MHz Body	52.666	1.506	53.3	1.52	-1.19	-0.92	±5
1900	Simulated Tissue 1900 MHz Body	52.781	1.535	53.3	1.52	-0.97	0.99	±5
1909.8	Simulated Tissue 1900 MHz Body	52.755	1.538	53.3	1.52	-1.02	1.18	±5

**Liquid Verification above was performed on 2017/03/26.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1850.2	Simulated Tissue 1900 MHz Head	39.442	1.367	40	1.4	-1.4	-2.36	±5
1860	Simulated Tissue 1900 MHz Head	39.318	1.374	40	1.4	-1.71	-1.86	±5
1880	Simulated Tissue 1900 MHz Head	39.033	1.391	40	1.4	-2.42	-0.64	±5
1900	Simulated Tissue 1900 MHz Head	39.097	1.414	40	1.4	-2.26	1	±5
1909.8	Simulated Tissue 1900 MHz Head	39.035	1.417	40	1.4	-2.41	1.21	±5

**Liquid Verification above was performed on 2017/03/26.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1720	Simulated Tissue 1750 MHz Head	40.973	1.338	40.13	1.35	2.1	-0.89	±5
1732.5	Simulated Tissue 1750 MHz Head	41.117	1.345	40.11	1.36	2.51	-1.1	±5
1745	Simulated Tissue 1750 MHz Head	41.056	1.361	40.09	1.37	2.41	-0.66	±5
1750	Simulated Tissue 1750 MHz Head	40.956	1.356	40.08	1.37	2.19	-1.02	±5

**Liquid Verification above was performed on 2017/03/28.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
824.2	Simulated Tissue 835 MHz Body	54.664	0.968	55.24	0.97	-1.04	-0.21	±5
829	Simulated Tissue 835 MHz Body	55.028	0.972	55.22	0.97	-0.35	0.21	±5
835	Simulated Tissue 835 MHz Body	55.127	0.98	55.2	0.97	-0.13	1.03	±5
836.5	Simulated Tissue 835 MHz Body	55.081	0.982	55.2	0.97	-0.22	1.24	±5
836.52	Simulated Tissue 835 MHz Body	55.081	0.982	55.2	0.97	-0.22	1.24	±5
836.6	Simulated Tissue 835 MHz Body	55.082	0.983	55.2	0.97	-0.21	1.34	±5
844	Simulated Tissue 835 MHz Body	55.252	0.98	55.17	0.98	0.15	0	±5
848.8	Simulated Tissue 835 MHz Body	54.664	0.968	55.16	0.99	-0.9	-2.22	±5

**Liquid Verification above was performed on 2017/03/28.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
824.2	Simulated Tissue 835 MHz Head	40.633	0.876	41.56	0.9	-2.23	-2.67	±5
829	Simulated Tissue 835 MHz Head	40.948	0.881	41.53	0.9	-1.4	-2.11	±5
835	Simulated Tissue 835 MHz Head	41.036	0.896	41.5	0.9	-1.12	-0.44	±5
836.5	Simulated Tissue 835 MHz Head	40.975	0.894	41.5	0.9	-1.27	-0.67	±5
836.52	Simulated Tissue 835 MHz Head	40.975	0.893	41.5	0.9	-1.27	-0.78	±5
836.6	Simulated Tissue 835 MHz Head	40.974	0.893	41.5	0.9	-1.27	-0.78	±5
844	Simulated Tissue 835 MHz Head	41.138	0.893	41.5	0.91	-0.87	-1.87	±5
848.8	Simulated Tissue 835 MHz Head	40.871	0.887	41.5	0.91	-1.52	-2.53	±5

**Liquid Verification above was performed on 2017/03/31.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1720	Simulated Tissue 1750 MHz Body	52.758	1.508	53.51	1.47	-1.41	2.59	±5
1732.5	Simulated Tissue 1750 MHz Body	52.941	1.524	53.48	1.48	-1.01	2.97	±5
1745	Simulated Tissue 1750 MHz Body	52.846	1.546	53.44	1.49	-1.11	3.76	±5
1750	Simulated Tissue 1750 MHz Body	52.794	1.539	53.43	1.49	-1.19	3.29	±5

**Liquid Verification above was performed on 2017/04/09.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
819	Simulated Tissue 835 MHz Head	40.717	0.915	41.56	0.9	-2.03	1.67	±5
835	Simulated Tissue 835 MHz Head	41.036	0.923	41.5	0.9	-1.12	2.56	±5
836.5	Simulated Tissue 835 MHz Head	40.987	0.926	41.5	0.9	-1.22	2.89	±5
836.52	Simulated Tissue 835 MHz Head	40.971	0.926	41.5	0.9	-1.29	2.89	±5
836.6	Simulated Tissue 835 MHz Head	40.974	0.927	41.5	0.9	-1.27	3	±5

**Liquid Verification above was performed on 2017/08/22.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
819	Simulated Tissue 835 MHz Body	55.01	0.976	55.26	0.97	-0.45	0.62	±5
835	Simulated Tissue 835 MHz Body	54.32	0.984	55.2	0.97	-1.59	1.44	±5

**Liquid Verification above was performed on 2017/08/22.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1732.5	Simulated Tissue 1750 MHz Head	40.008	1.365	40.11	1.36	-0.25	0.37	±5
1750	Simulated Tissue 1750 MHz Head	39.956	1.378	40.08	1.37	-0.31	0.58	±5

**Liquid Verification above was performed on 2017/08/22.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
819	Simulated Tissue 835 MHz Head	40.751	0.89	41.52	0.9	-1.85	-1.11	±5
835	Simulated Tissue 835 MHz Head	40.103	0.922	41.5	0.9	-3.37	2.44	±5

**Liquid Verification above was performed on 2017/08/23.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
1880	Simulated Tissue 1900 MHz Head	39.036	1.421	40	1.4	-2.41	1.5	±5
1900	Simulated Tissue 1900 MHz Head	39.097	1.428	40	1.4	-2.26	2	±5

**Liquid Verification above was performed on 2017/08/23.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
2535	Simulated Tissue 2600 MHz Head	39.075	1.882	39.12	1.87	-0.12	0.64	±5
2593	Simulated Tissue 2600 MHz Head	38.938	1.976	39.02	1.96	-0.21	0.82	±5
2595	Simulated Tissue 2600 MHz Head	38.921	1.985	39.02	1.96	-0.25	1.28	±5
2600	Simulated Tissue 2600 MHz Head	38.915	1.993	39.01	1.96	-0.24	1.68	±5

**Liquid Verification above was performed on 2017/08/23.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
2441	Simulated Tissue 2450 MHz Head	39.106	1.812	39.22	1.79	-0.29	1.23	±5
2442	Simulated Tissue 2450 MHz Head	40.331	1.797	39.22	1.79	2.83	0.39	±5
2450	Simulated Tissue 2450 MHz Head	40.168	1.767	39.2	1.8	2.47	-1.83	±5

**Liquid Verification above was performed on 2017/08/28.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
2441	Simulated Tissue 2450 MHz Body	52.442	1.949	52.71	1.94	-0.51	0.46	±5
2442	Simulated Tissue 2450 MHz Body	54.401	1.955	52.72	1.94	3.19	0.77	±5
2450	Simulated Tissue 2450 MHz Body	54.23	1.94	52.7	1.95	2.9	-0.51	±5

**Liquid Verification above was performed on 2017/08/28.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
350.025	Simulated Tissue 450 MHz Body	57.52	0.932	57.7	0.93	-0.31	0.22	±5
362.5	Simulated Tissue 450 MHz Body	56.965	0.957	57.58	0.93	-1.07	2.9	±5
375	Simulated Tissue 450 MHz Body	57.057	0.97	57.45	0.93	-0.68	4.3	±5
382.5	Simulated Tissue 450 MHz Body	56.568	0.939	57.38	0.93	-1.42	0.97	±5
399.975	Simulated Tissue 450 MHz Body	56.102	0.965	57.2	0.93	-1.92	3.76	±5
450	Simulated Tissue 450 MHz Body	56.105	0.968	56.7	0.94	-1.05	2.98	±5

**Liquid Verification above was performed on 2017/04/05.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
400.025	Simulated Tissue 450 MHz Body	56.534	0.939	57.2	0.93	-1.16	0.97	±5
418	Simulated Tissue 450 MHz Body	56.388	0.963	57.02	0.94	-1.11	2.45	±5
435.525	Simulated Tissue 450 MHz Body	56.131	0.962	56.84	0.94	-1.25	2.34	±5
449.975	Simulated Tissue 450 MHz Body	56.38	0.971	56.7	0.94	-0.56	3.3	±5
450	Simulated Tissue 450 MHz Body	56.105	0.968	56.7	0.94	-1.05	2.98	±5
469.975	Simulated Tissue 450 MHz Body	55.853	0.943	56.62	0.94	-1.35	0.32	±5

**Liquid Verification above was performed on 2017/04/05.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
350.025	Simulated Tissue 450 MHz Head	44.583	0.9	44.7	0.87	-0.26	3.45	±5
362.5	Simulated Tissue 450 MHz Head	44.099	0.885	44.55	0.87	-1.01	1.72	±5
375	Simulated Tissue 450 MHz Head	44.179	0.898	44.4	0.87	-0.5	3.22	±5
382.5	Simulated Tissue 450 MHz Head	43.701	0.882	44.31	0.87	-1.37	1.38	±5
399.975	Simulated Tissue 450 MHz Head	43.004	0.883	44.1	0.87	-2.49	1.49	±5
450	Simulated Tissue 450 MHz Head	42.999	0.883	43.5	0.87	-1.15	1.49	±5

**Liquid Verification above was performed on 2017/04/06.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
400.025	Simulated Tissue 450 MHz Head	43.413	0.899	44.1	0.87	-1.56	3.33	±5
418	Simulated Tissue 450 MHz Head	43.143	0.884	43.88	0.87	-1.68	1.61	±5
435.525	Simulated Tissue 450 MHz Head	43.424	0.911	43.67	0.87	-0.56	4.71	±5
449.975	Simulated Tissue 450 MHz Head	42.753	0.894	43.5	0.87	-1.72	2.76	±5
450	Simulated Tissue 450 MHz Head	42.952	0.875	43.5	0.87	-1.26	0.57	±5
469.975	Simulated Tissue 450 MHz Head	42.741	0.905	43.4	0.87	-1.52	4.02	±5

**Liquid Verification above was performed on 2017/04/07.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
450	Simulated Tissue 450 MHz Head	43.299	0.877	43.5	0.87	-0.46	0.8	±5
450.025	Simulated Tissue 450 MHz Head	43.294	0.881	43.5	0.87	-0.47	1.26	±5
469.975	Simulated Tissue 450 MHz Head	42.673	0.88	43.4	0.87	-1.68	1.15	±5
485	Simulated Tissue 450 MHz Head	42.569	0.888	43.32	0.87	-1.73	2.07	±5
500.025	Simulated Tissue 450 MHz Head	42.681	0.903	43.24	0.87	-1.29	3.79	±5
511.975	Simulated Tissue 450 MHz Head	42.558	0.911	43.1	0.88	-1.26	3.52	±5

**Liquid Verification above was performed on 2017/04/08.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	$\Delta\sigma$ (S/m)	
450	Simulated Tissue 450 MHz Body	55.881	0.959	56.7	0.94	-1.44	2.02	±5
450.025	Simulated Tissue 450 MHz Body	55.877	0.974	56.7	0.94	-1.45	3.62	±5
469.975	Simulated Tissue 450 MHz Body	56.282	0.98	56.62	0.94	-0.6	4.26	±5
485	Simulated Tissue 450 MHz Body	56.288	0.963	56.56	0.94	-0.48	2.45	±5
500.025	Simulated Tissue 450 MHz Body	56.184	0.98	56.51	0.94	-0.58	4.26	±5
511.975	Simulated Tissue 450 MHz Body	56.065	0.976	56.4	0.95	-0.59	2.74	±5

**Liquid Verification above was performed on 2017/04/09.*

System Accuracy Verification

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

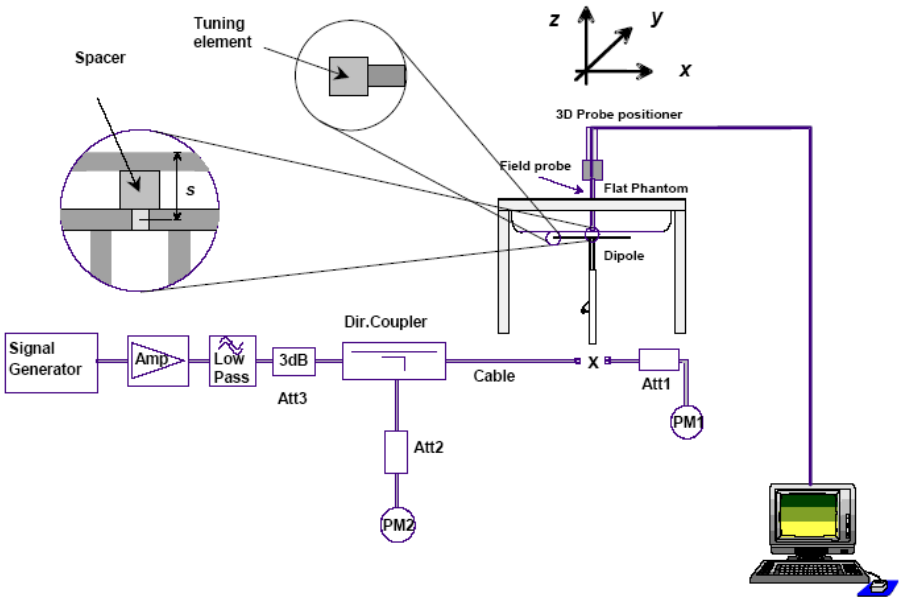
For the reference dipoles described in the spacing distance s is given by:

a) s = 15 mm ± 0,2 mm for 300 MHz ≤ f ≤ 1 000 MHz;

b) s = 10 mm ± 0,2 mm for 1 000 MHz < f ≤ 3 000 MHz;

c) s = 10 mm ± 0,2 mm for 3 000 MHz < f ≤ 6 000 MHz.

System Verification Setup Block Diagram



System Accuracy Check Results

Date	Frequency Band	Liquid Type	Measured SAR (W/kg)		Target Value (W/kg)	Delta (%)	Tolerance (%)
2017/03/31	835 MHz	835MHz Head	1g	9.63	9.43	2.12	±10
2017/03/28	835 MHz	835MHz Body	1g	10	9.55	4.71	±10
2017/03/28	1750 MHz	1750MHz Head	1g	37.7	36.8	2.45	±10
2017/04/09	1750 MHz	1750MHz Body	1g	39	37.2	4.84	±10
2017/03/26	1900 MHz	1900MHz Head	1g	42	40.7	3.19	±10
2017/03/26	1900 MHz	1900MHz Body	1g	42.4	40.8	3.92	±10
2017/03/22	2600 MHz	2600MHz Head	1g	54.2	56.1	-3.39	±10
2017/03/21	2600 MHz	2600MHz Body	1g	56.6	52.7	7.40	±10
2017/08/22	835 MHz	835MHz Head	1g	9.26	9.43	-1.80	±10
2017/08/22	835 MHz	835MHz Body	1g	9.86	9.55	3.25	±10
2017/08/22	1750 MHz	1750MHz Head	1g	38.3	36.8	4.08	±10
2017/08/23	835 MHz	835MHz Head	1g	9.67	9.43	2.55	±10
2017/08/23	1900 MHz	1900MHz Head	1g	39.6	40.7	-2.70	±10
2017/08/23	2600 MHz	2600MHz Head	1g	54.4	56.1	-3.03	±10
2017/08/28	2450 MHz	2450MHz Head	1g	51.6	53.3	-3.19	±10
2017/08/28	2450 MHz	2450MHz Body	1g	52.4	51.3	2.14	±10

Date	Frequency Band	Liquid Type	Measured SAR (W/kg)		Target Value(W/kg)	Delta (%)	Tolerance (%)
2017/04/05	450 MHz	450MHz Body	1g	4.60	4.55	1.10	±10
2017/04/06	450 MHz	450MHz Head	1g	4.68	4.53	3.31	±10
2017/04/07	450 MHz	450MHz Head	1g	4.62	4.53	1.99	±10
2017/04/08	450 MHz	450MHz Head	1g	4.73	4.53	4.42	±10
2017/04/09	450 MHz	450MHz Body	1g	4.62	4.55	1.54	±10

SAR SYSTEM VALIDATION DATA

System Performance 835 MHz Head 2017/03/31

DUT: D835V2; Type: 835 MHz; Serial: 453

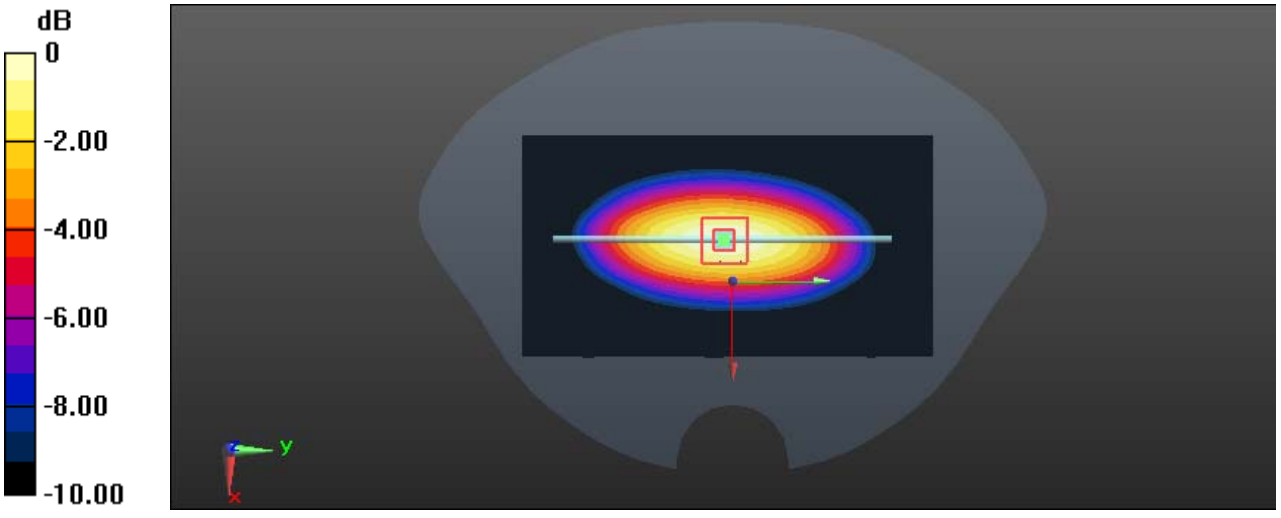
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.896 S/m; ε_r = 41.036; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.22, 10.22, 10.22); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 10.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 107.2 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 9.63 W/kg; SAR(10 g) = 6.1 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

System Performance 835 MHz Body 2017/03/28

D UT: D835V2; Type: 835 MHz; Serial: 453

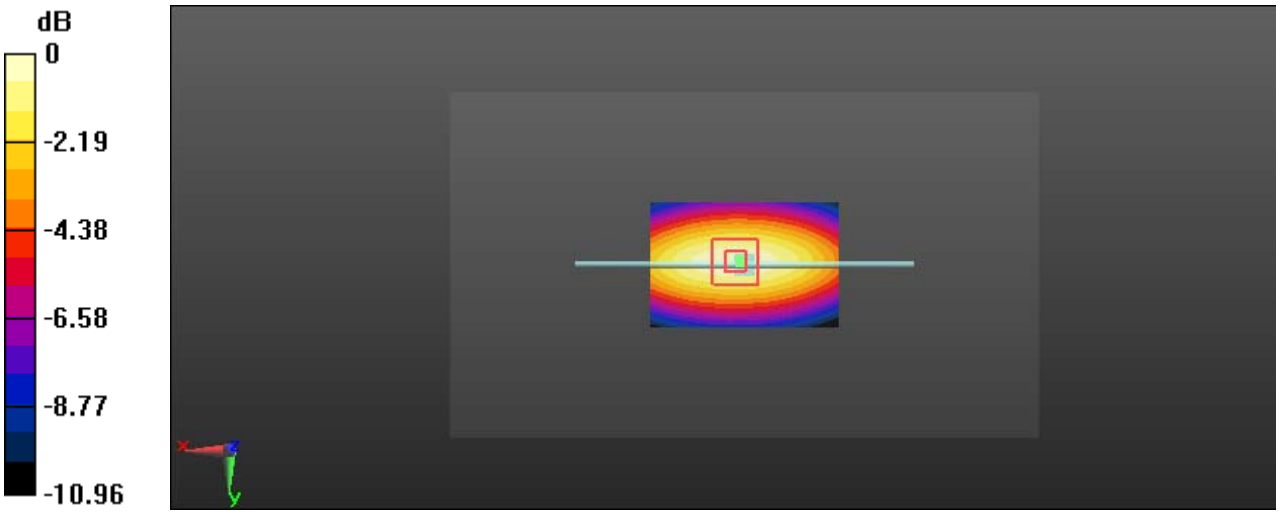
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.98 S/m; ε_r = 55.127; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(9.85, 9.85, 9.85); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x41x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 104.3 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 14.8 W/kg
SAR(1 g) = 10 W/kg; SAR(10 g) = 6.48 W/kg
Maximum value of SAR (measured) = 12.9 W/kg



0 dB = 12.9 W/kg = 11.11 dBW/kg

System Performance 1750 MHz Head 2017/03/28

DUT: D1750V2; Type: 1750 MHz; Serial: 1140

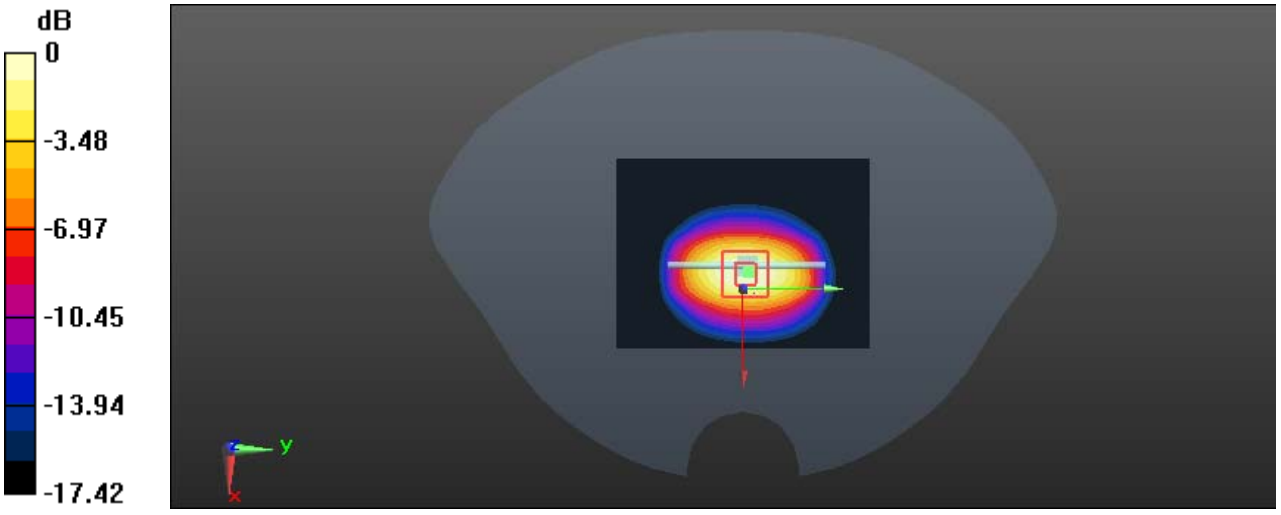
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.356 S/m; ε_r = 40.956; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(8.92, 8.92, 8.92); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 43.6 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 158.2 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 69.9 W/kg
SAR(1 g) = 37.7 W/kg; SAR(10 g) = 20.1 W/kg
Maximum value of SAR (measured) = 42.5 W/kg



0 dB = 42.5 W/kg = 16.28 dBW/kg

System Performance 1750 MHz Body 2017/04/09

DUT: D1750V2; Type: 1750 MHz; Serial: 1140

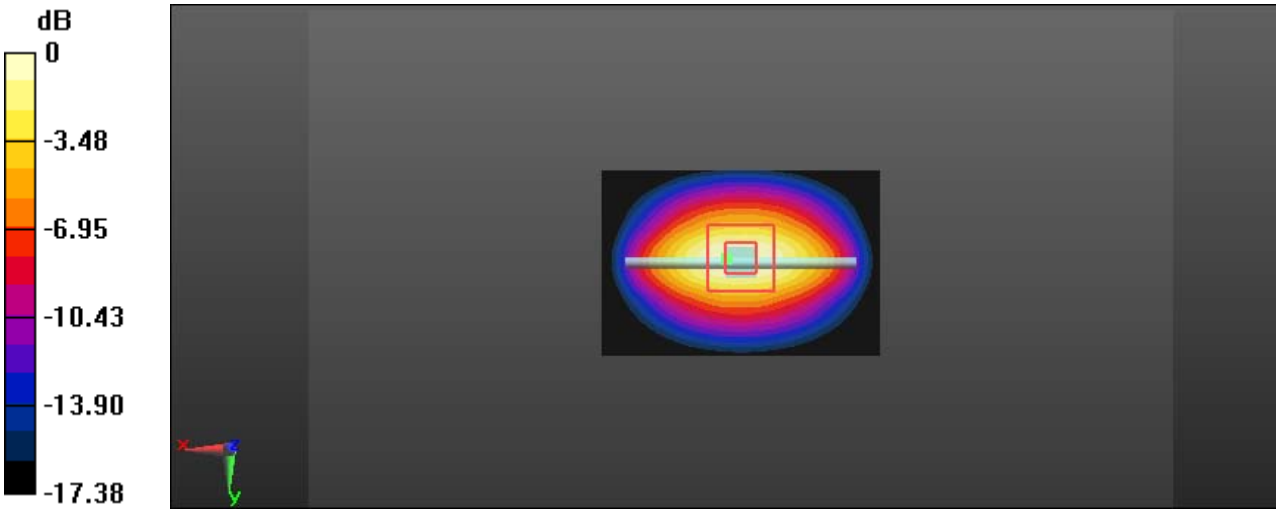
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.539 S/m; ε_r = 52.794; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(8.25, 8.25, 8.25); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x41x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 57.4 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 173.5 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 70.3 W/kg
SAR(1 g) = 39 W/kg; SAR(10 g) = 21.6 W/kg
Maximum value of SAR (measured) = 56.4 W/kg



0 dB = 56.4 W/kg = 17.51 dBW/kg

System Performance 1900 MHz Head 2017/03/26

DUT: D1900V2; Type: 1900 MHz; Serial: 5d206

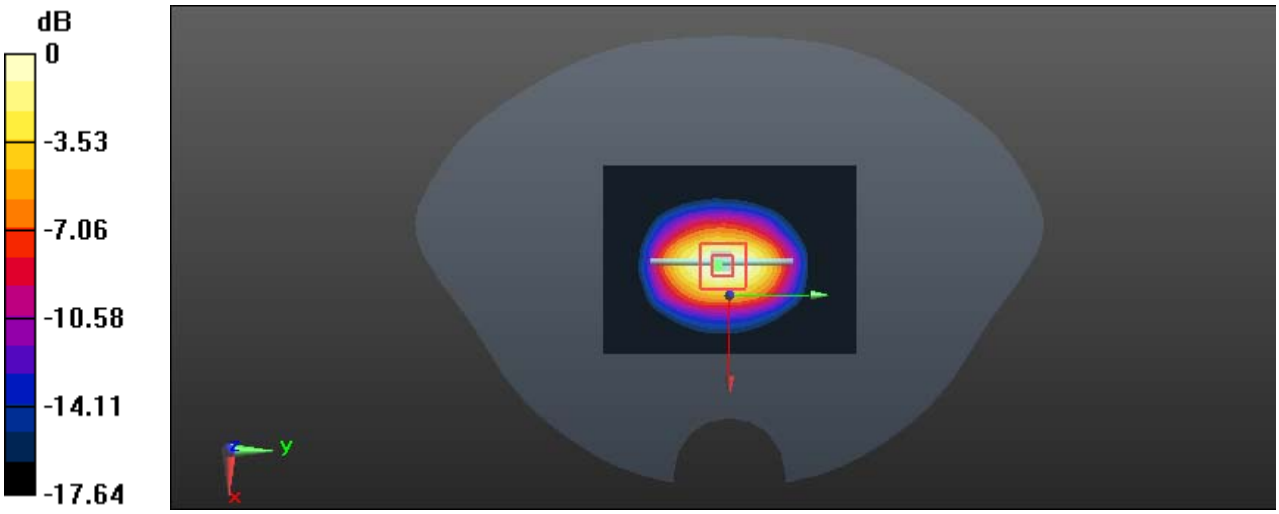
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.414 S/m; ε_r = 39.097; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(8.48, 8.48, 8.48); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 48.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 177.2 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 78.7 W/kg
SAR(1 g) = 42 W/kg; SAR(10 g) = 21.8 W/kg
Maximum value of SAR (measured) = 48.4 W/kg



0 dB = 48.4 W/kg = 16.85 dBW/kg

System Performance 1900 MHz Body 2017/03/26

DUT: D1900V2; Type: 1900 MHz; Serial: 5d206

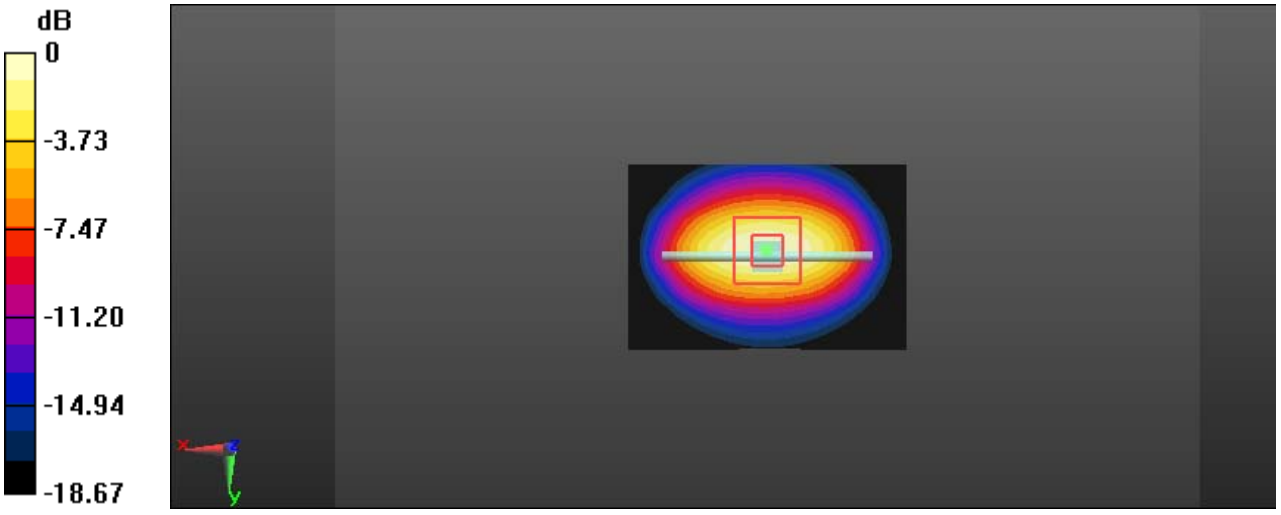
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.535 S/m; ε_r = 52.781; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.95, 7.95, 7.95); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (91x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 61.6 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 174.3 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 81.3 W/kg
SAR(1 g) = 42.4 W/kg; SAR(10 g) = 22.3 W/kg
Maximum value of SAR (measured) = 60.8 W/kg



0 dB = 60.8 W/kg = 17.84 dBW/kg

System Performance 2600 MHz Head 2017/03/22

DUT: D2600V2; Type: 2600 MHz; Serial: 1132

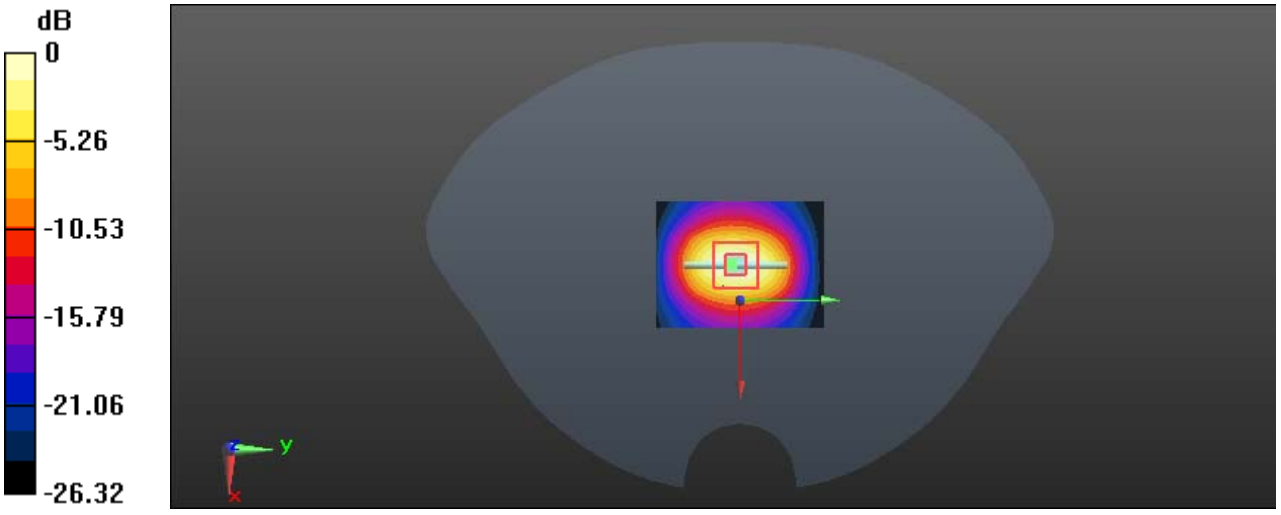
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.893 S/m; ε_r = 40.22; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.53, 7.53, 7.53); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 66.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 185.2 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 113 W/kg
SAR(1 g) = 54.2 W/kg; SAR(10 g) = 24.8 W/kg
Maximum value of SAR (measured) = 63.2 W/kg



0 dB = 63.2 W/kg = 18.01 dBW/kg

System Performance 2600 MHz Body 2017/03/21

DUT: D2600V2; Type: 2600 MHz; Serial: 1132

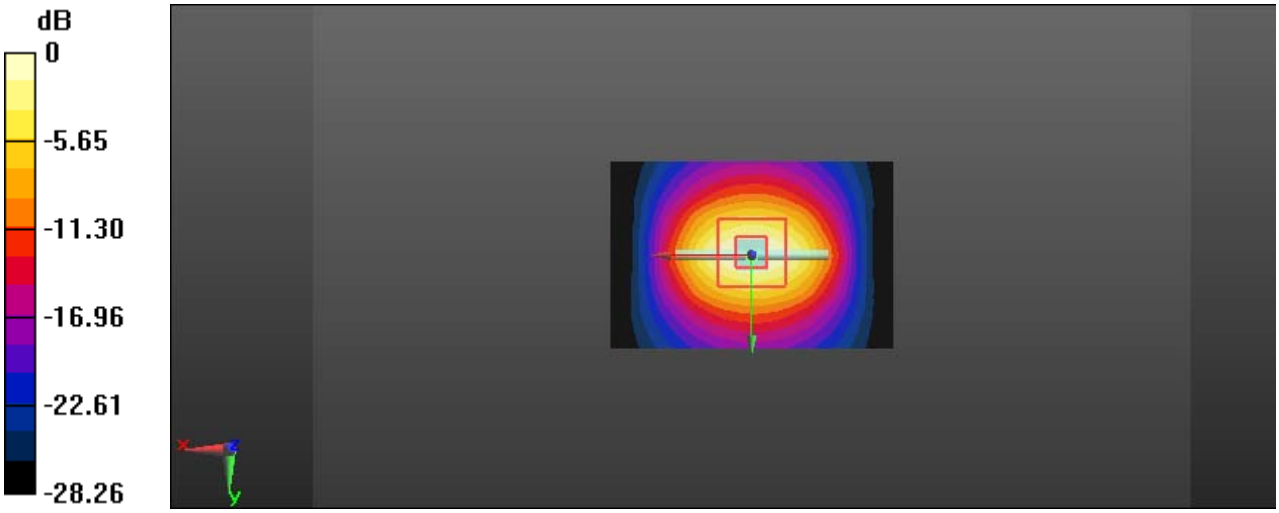
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.115 S/m; ε_r = 54.281; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.39, 7.39, 7.39); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (91x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 103 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 173.2 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 137 W/kg
SAR(1 g) = 56.6 W/kg; SAR(10 g) = 24.8 W/kg
Maximum value of SAR (measured) = 104 W/kg



0 dB = 104 W/kg = 20.17 dBW/kg

System Performance 835 MHz Head 2017/08/22

D UT: D835V2; Type: 835 MHz; Serial: 453

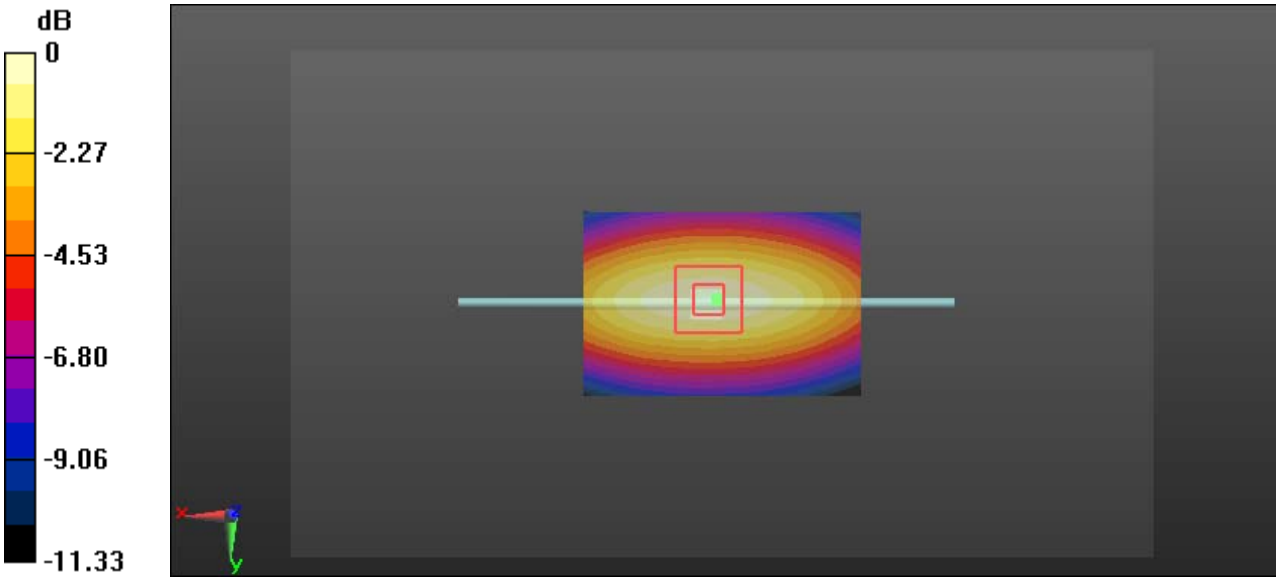
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.923 S/m; ε_r = 41.036; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.22, 10.22, 10.22); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x41x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.4 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 100.2 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 14.3 W/kg
SAR(1 g) = 9.26 W/kg; SAR(10 g) = 6.1 W/kg
Maximum value of SAR (measured) = 12.1 W/kg



0 dB = 12.1 W/kg = 10.83 dBW/kg

System Performance 835 MHz Body 2017/08/22

D UT: D835V2; Type: 835 MHz; Serial: 453

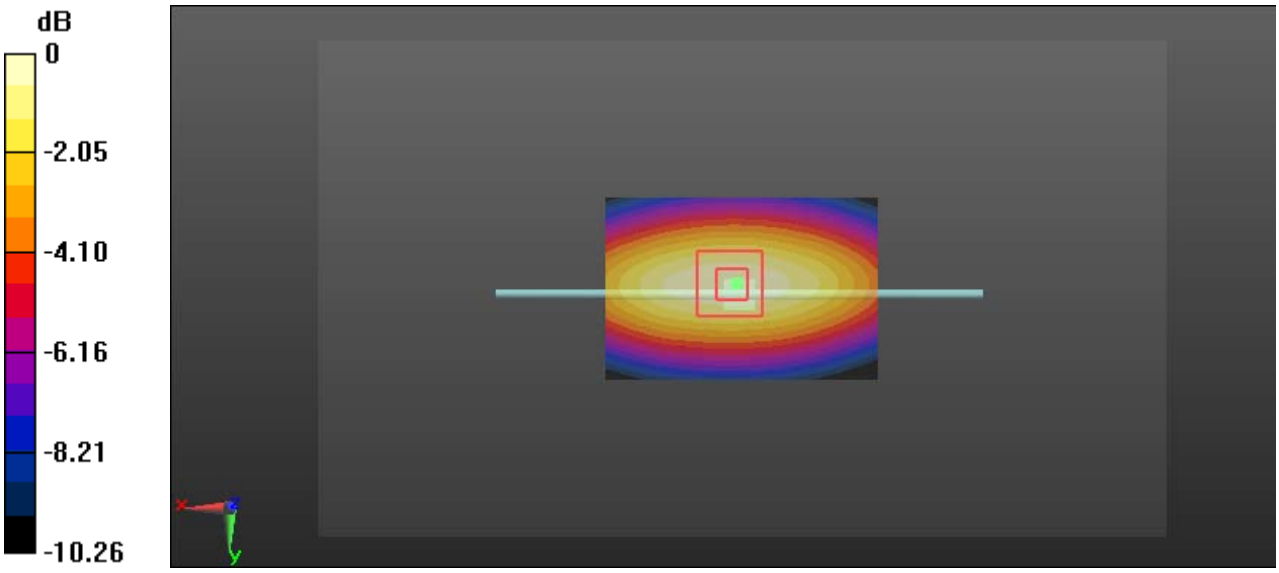
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.984 S/m; ε_r = 54.32; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(9.85, 9.85, 9.85); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x41x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.2 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 103.7 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 14.8 W/kg
SAR(1 g) = 9.86 W/kg; SAR(10 g) = 6.45 W/kg
Maximum value of SAR (measured) = 12.7 W/kg



0 dB = 12.7 W/kg = 11.04 dBW/kg

System Performance 1750 MHz Head 2017/08/22

DUT: D1750V2; Type: 1750 MHz; Serial: 1140

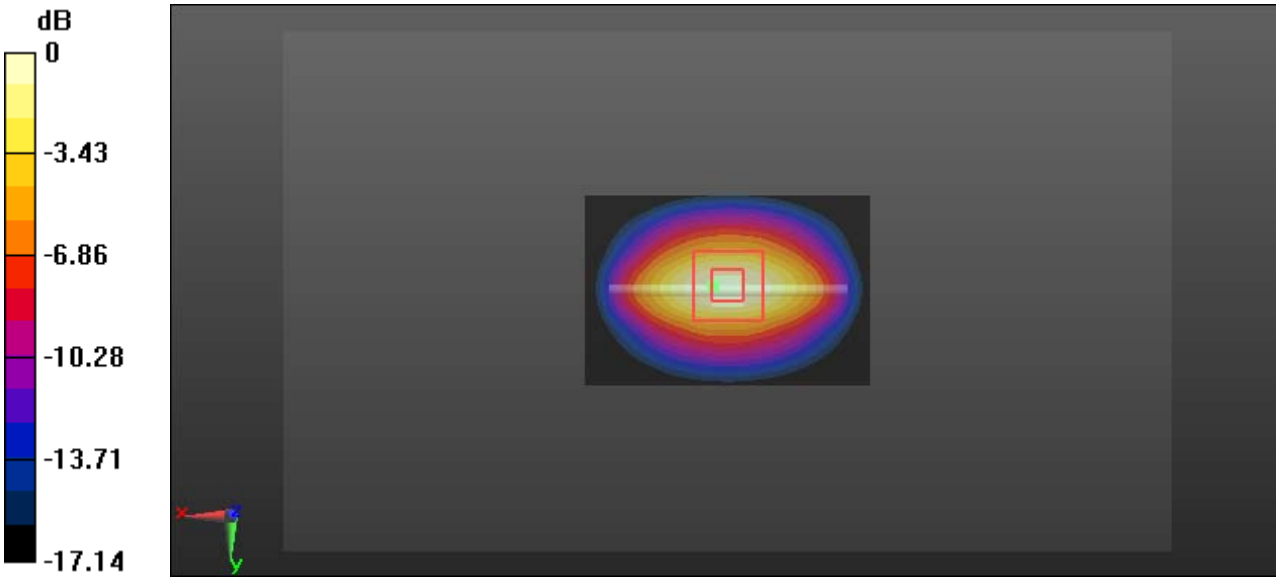
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.378 S/m; ε_r = 39.956; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(8.92, 8.92, 8.92); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x41x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 50.8 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 170.1 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 65.1 W/kg
SAR(1 g) = 38.3 W/kg; SAR(10 g) = 20.9 W/kg
Maximum value of SAR (measured) = 53.4 W/kg



0 dB = 53.4 W/kg = 17.28 dBW/kg

System Performance 835 MHz Head 2017/08/23

DUT: D835V2; Type: 835 MHz; Serial: 453

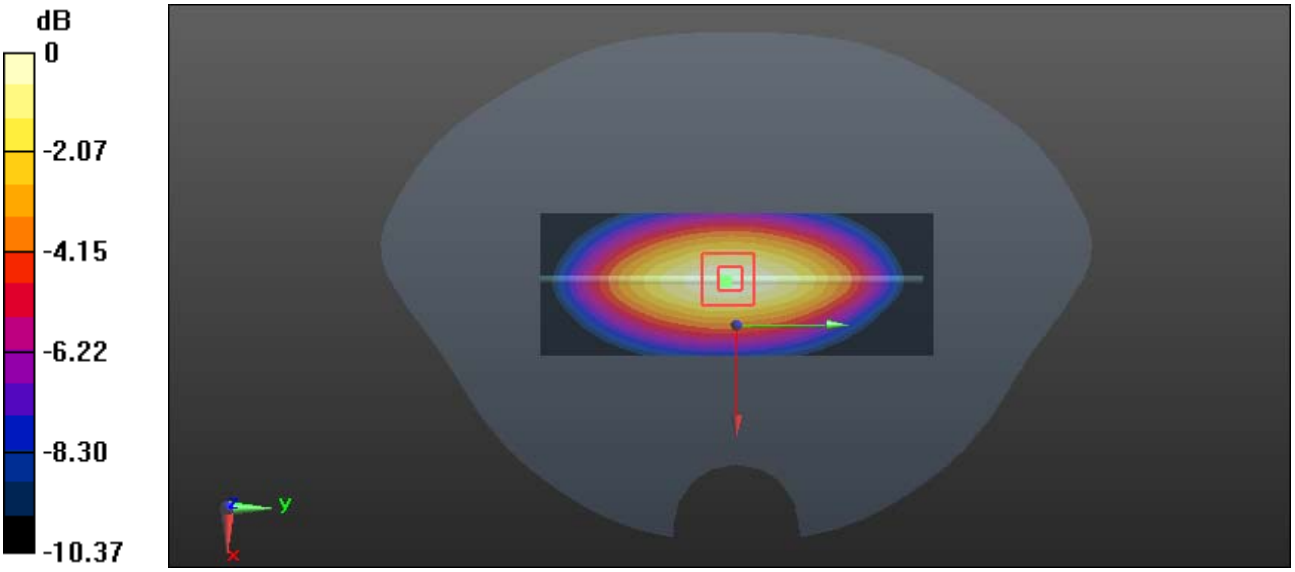
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.922 S/m; ε_r = 40.103; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.22, 10.22, 10.22); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 10.9 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 106.7 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 9.67 W/kg; SAR(10 g) = 6.24 W/kg
Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

System Performance 1900 MHz Head 2017/08/23

DUT: D1900V2; Type: 1900 MHz; Serial: 5d206

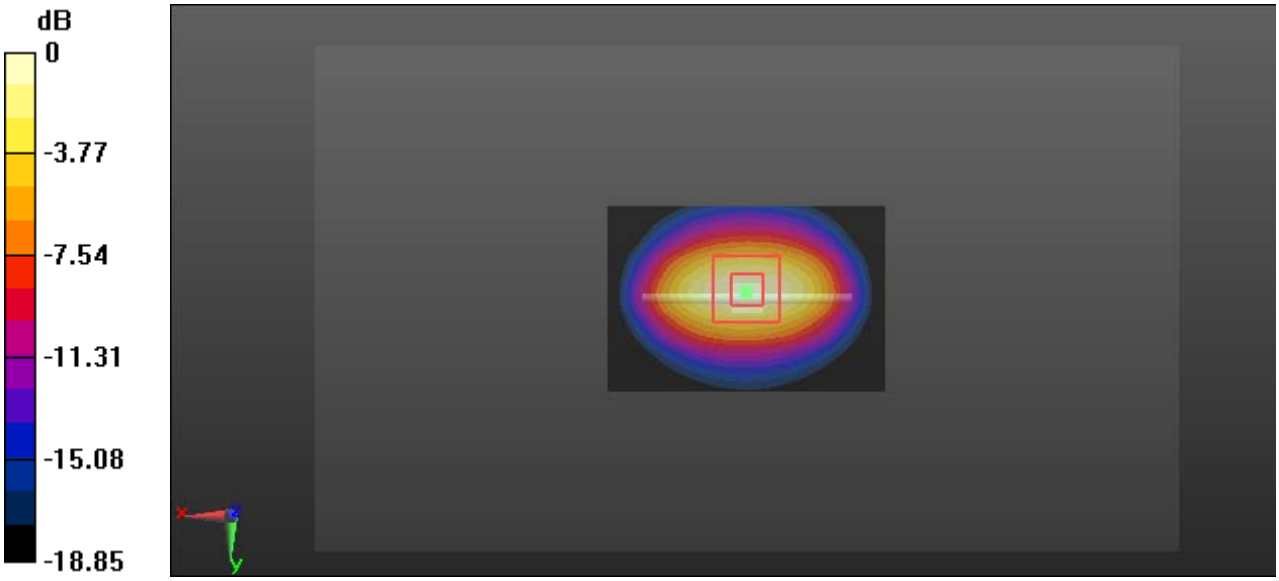
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.428 S/m; ε_r = 39.097; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(8.48, 8.48, 8.48); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (91x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 62.3 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 172.6 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 72.5 W/kg
SAR(1 g) = 39.6 W/kg; SAR(10 g) = 21.1 W/kg
Maximum value of SAR (measured) = 60.4 W/kg



0 dB = 60.4 W/kg = 17.81 dBW/kg

System Performance 2600 MHz Head 2017/08/23

DUT: D2600V2; Type: 2600 MHz; Serial: 1132

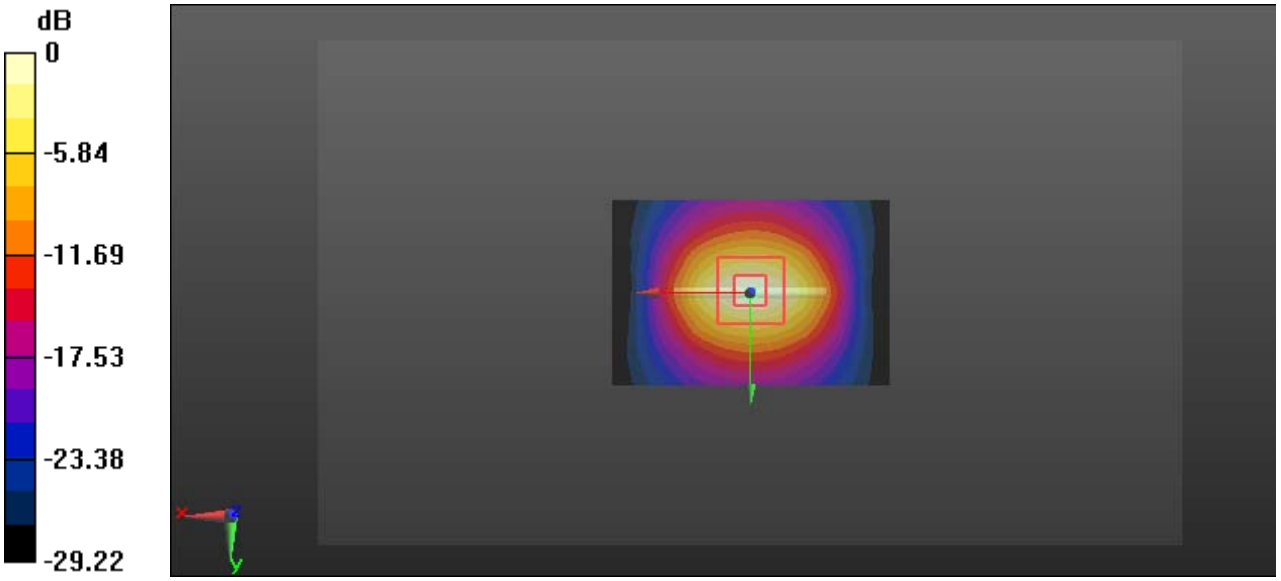
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.993 S/m; ε_r = 38.915; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.53, 7.53, 7.53); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (91x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 100 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 170.7 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 128 W/kg
SAR(1 g) = 54.4 W/kg; SAR(10 g) = 24.6 W/kg
Maximum value of SAR (measured) = 98 W/kg



0 dB = 98 W/kg = 19.91 dBW/kg

System Performance 2450 MHz Head2017/08/28

DUT: D2450V2; Type: 2450 MHz; Serial: 970

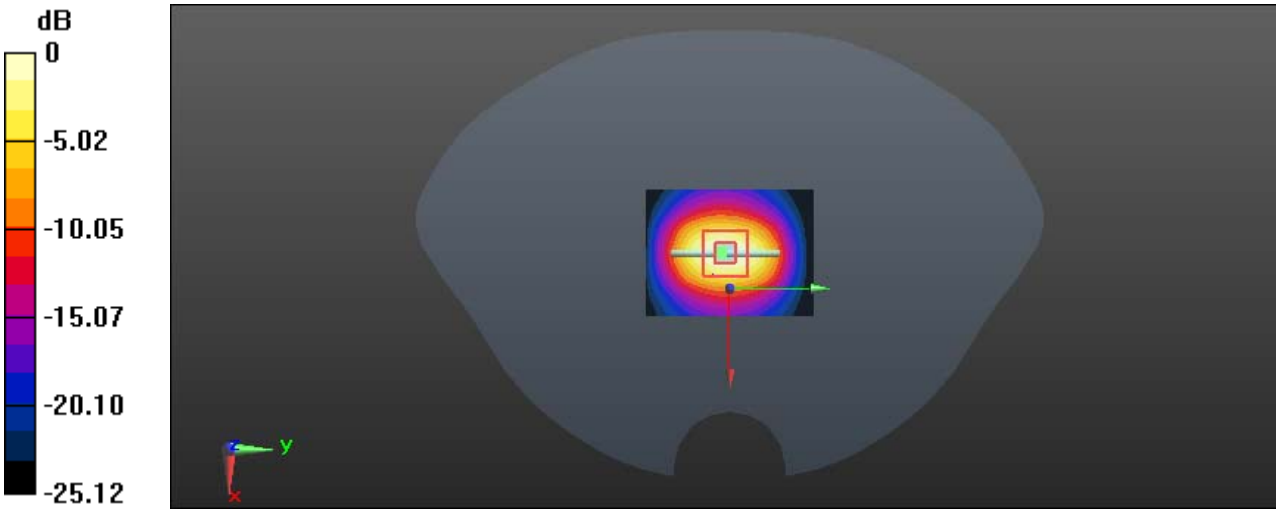
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.767 S/m; ε_r = 40.168; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.85, 7.85, 7.85); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1412
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 64.4 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 181.6 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 106 W/kg
SAR(1 g) = 51.6 W/kg; SAR(10 g) = 23.8 W/kg
Maximum value of SAR (measured) = 60.0 W/kg



0 dB = 60.0 W/kg = 17.78 dBW/kg

System Performance 2450 MHz Body 2017/08/28

DUT: D2450V2; Type: 2450 MHz; Serial: 970

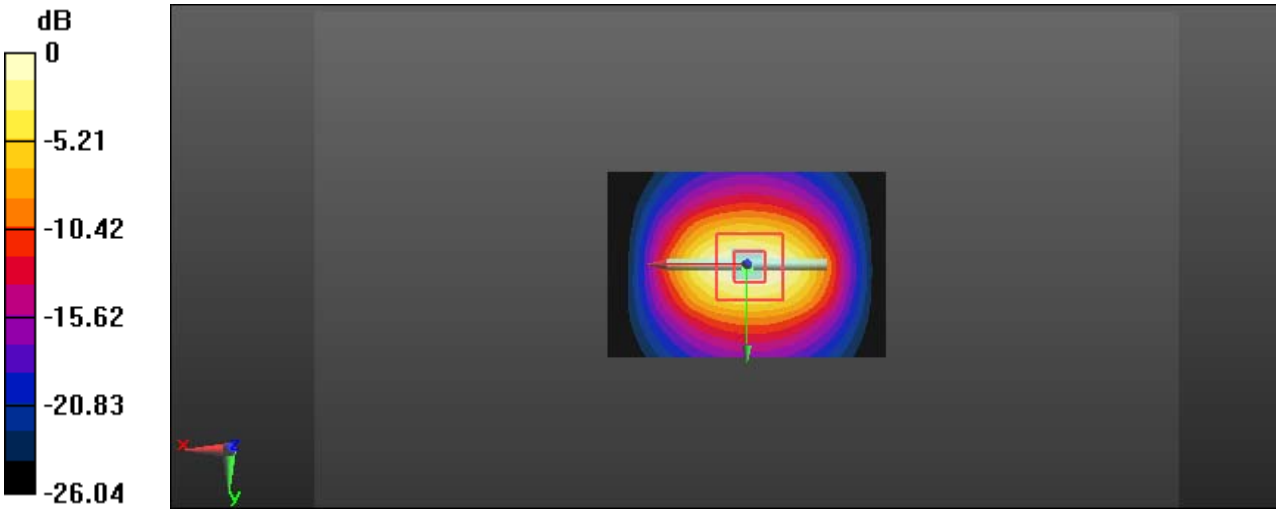
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.94 S/m; ε_r = 54.23; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(7.67, 7.67, 7.67); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1130
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (91x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 89.6 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 175.2 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 114 W/kg
SAR(1 g) = 52.4 W/kg; SAR(10 g) = 24 W/kg
Maximum value of SAR (measured) = 84.5 W/kg



0 dB = 84.5 W/kg = 19.27 dBW/kg

System Performance 450 MHz Body on 2017/04/05

DUT: Dipole 450 MHz; Type: D450V3; Serial: 1096

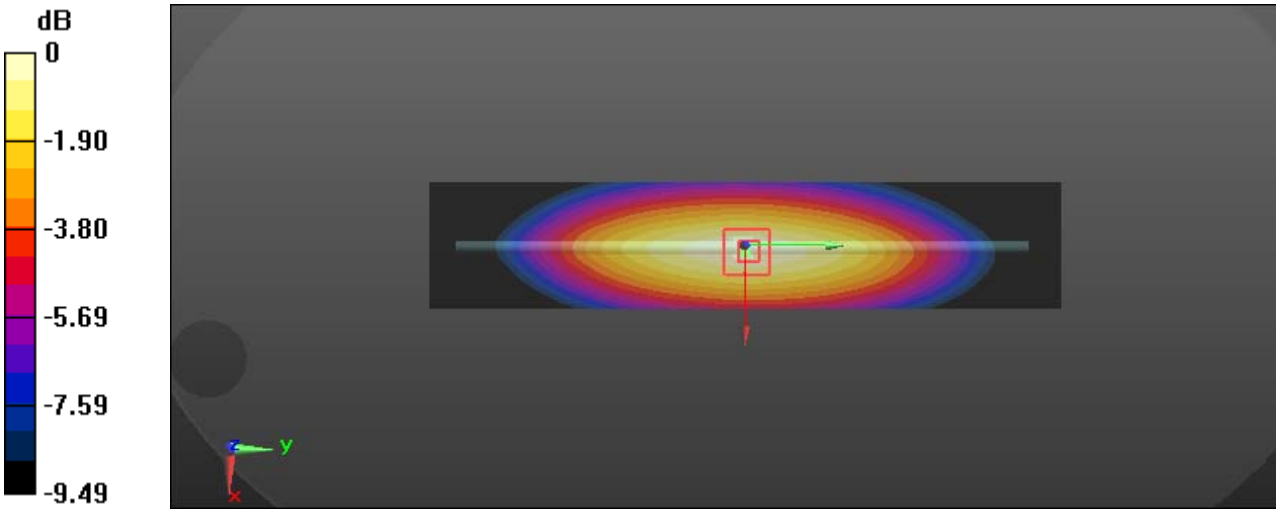
Communication System: CW; Frequency: 450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 450 MHz; σ = 0.968 S/m; ε_r = 56.105; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(12.08, 12.08, 12.08); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: ELI v8.0; Type: QDOVA004AA; Serial: 2051
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x201x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.89 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 71.87 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 6.88 W/kg
SAR(1 g) = 4.6 W/kg; SAR(10 g) = 3.08 W/kg
Maximum value of SAR (measured) = 4.93 W/kg



0 dB = 4.93 W/kg = 6.93 dBW/kg

System Performance 450 MHz Head on 2017/04/06

DUT: Dipole 450 MHz; Type: D450V3; Serial: 1096

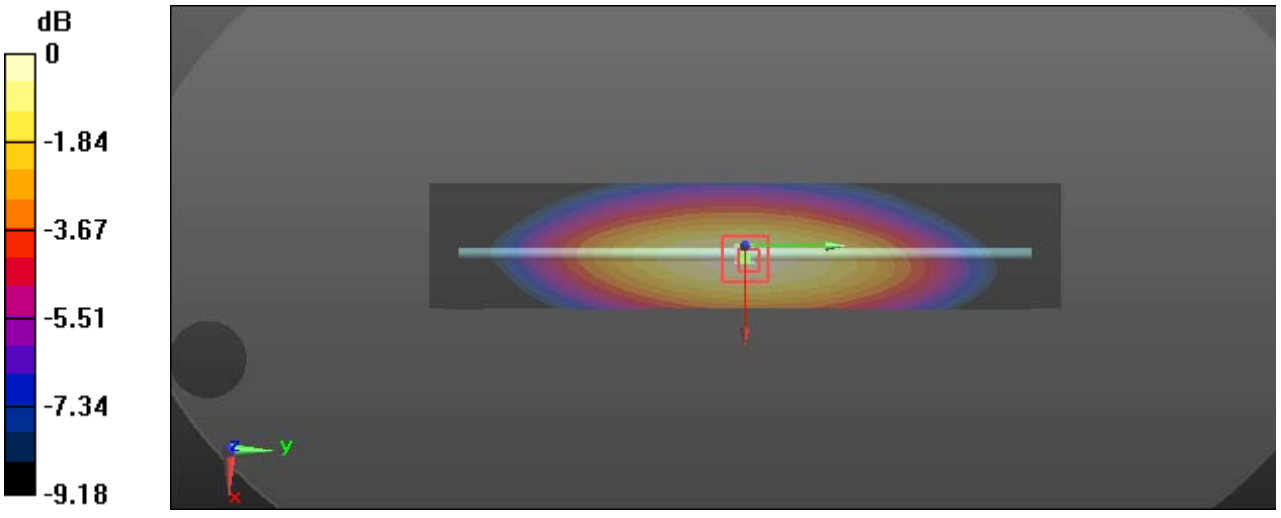
Communication System: CW; Frequency: 450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 450 MHz; σ = 0.883 S/m; ε_r = 42.999; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.98, 10.98, 10.98); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: ELI v8.0; Type: QDOVA004AA; Serial: 2051
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x201x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.93 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 73.11 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.92 W/kg
SAR(1 g) = 4.68 W/kg; SAR(10 g) = 3.15 W/kg
Maximum value of SAR (measured) = 4.97 W/kg



0 dB = 4.97 W/kg = 6.96 dBW/kg

System Performance 450 MHz Head on 2017/04/07

DUT: Dipole 450 MHz; Type: D450V3; Serial: 1096

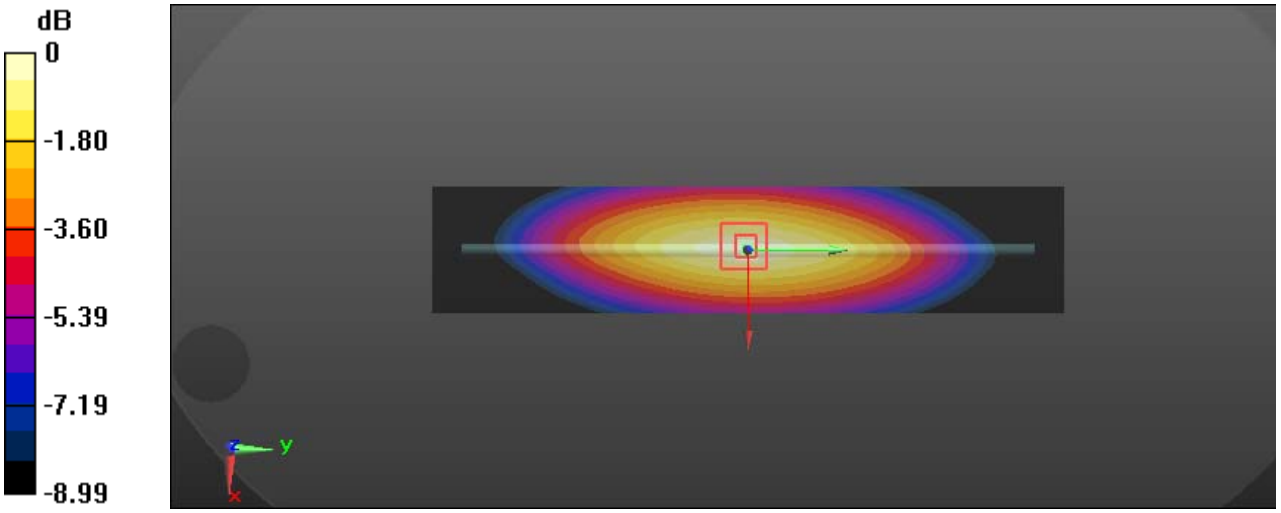
Communication System: CW; Frequency: 450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 450 MHz; σ = 0.875 S/m; ε_r = 42.952; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.98, 10.98, 10.98); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: ELI v8.0; Type: QDOVA004AA; Serial: 2051
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x201x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.99 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 74.39 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 7.08 W/kg
SAR(1 g) = 4.62 W/kg; SAR(10 g) = 3.21 W/kg
Maximum value of SAR (measured) = 4.96 W/kg



0 dB = 4.96 W/kg = 6.95 dBW/kg

System Performance 450 MHz Head on 2017/04/08

DUT: Dipole 450 MHz; Type: D450V3; Serial: 1096

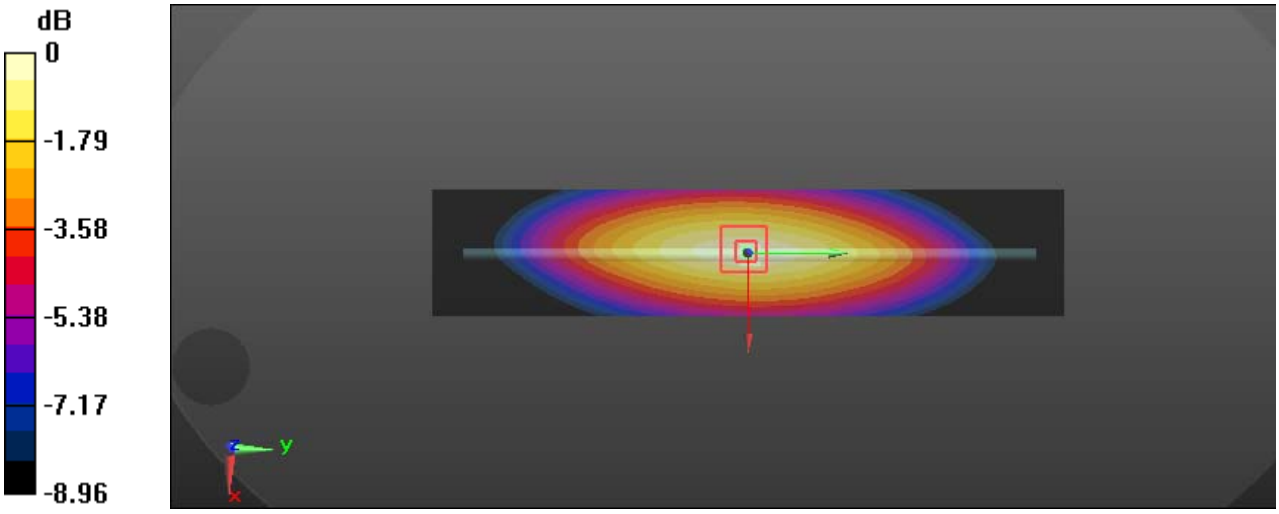
Communication System: CW; Frequency: 450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 450 MHz; σ = 0.877 S/m; ε_r = 43.299; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(10.98, 10.98, 10.98); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: ELI v8.0; Type: QDOVA004AA; Serial: 2051
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x201x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.04 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 78.01 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 7.18 W/kg
SAR(1 g) = 4.73 W/kg; SAR(10 g) = 3.29 W/kg
Maximum value of SAR (measured) = 5.03 W/kg



0 dB = 5.03 W/kg = 7.02 dBW/kg

System Performance 450 MHz Body on 2017/04/09

DUT: Dipole 450 MHz; Type: D450V3; Serial: 1096

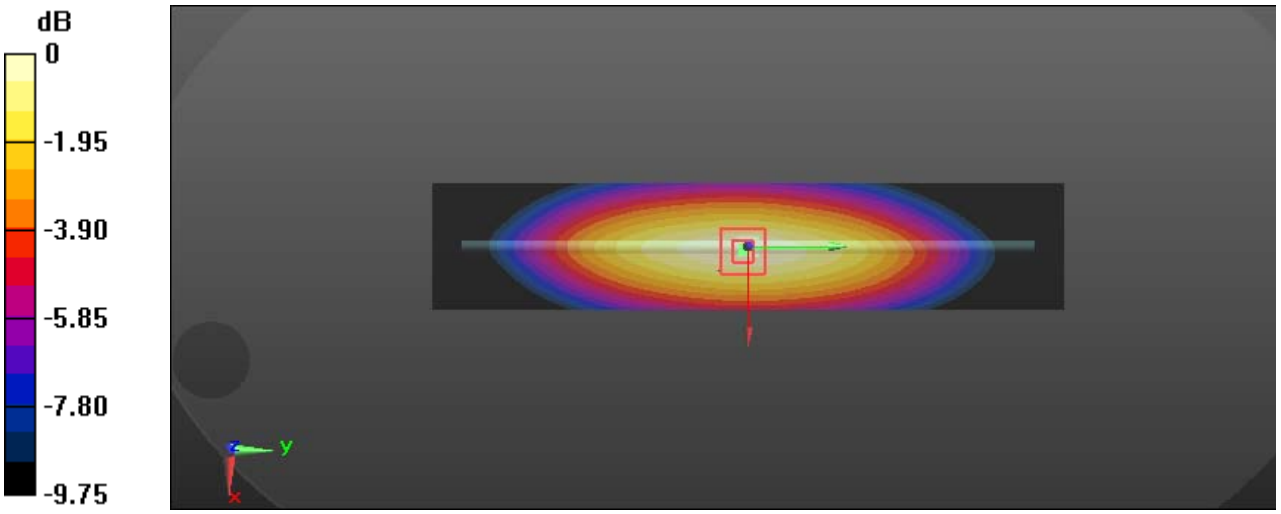
Communication System: CW; Frequency: 450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 450 MHz; σ = 0.959 S/m; ε_r = 55.881; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7441; ConvF(12.08, 12.08, 12.08); Calibrated: 2016/11/15;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn379; Calibrated: 2016/10/4
- Phantom: ELI v8.0; Type: QDOVA004AA; Serial: 2051
- Measurement SW: DASY52, Version 52.8 (8);

Area Scan (41x201x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.92 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 73.31 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 6.88 W/kg
SAR(1 g) = 4.62 W/kg; SAR(10 g) = 3.09 W/kg
Maximum value of SAR (measured) = 4.94 W/kg



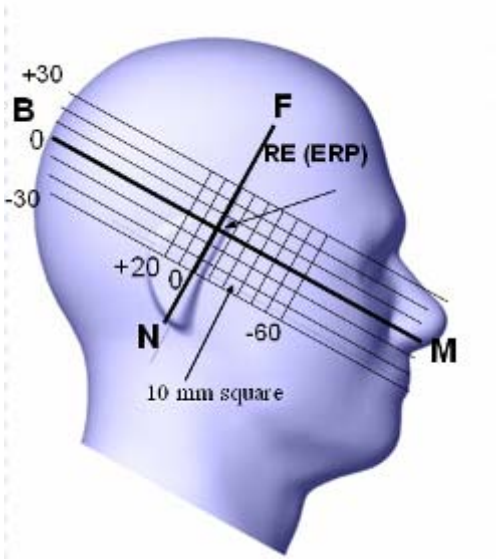
0 dB = 4.94 W/kg = 6.94 dBW/kg

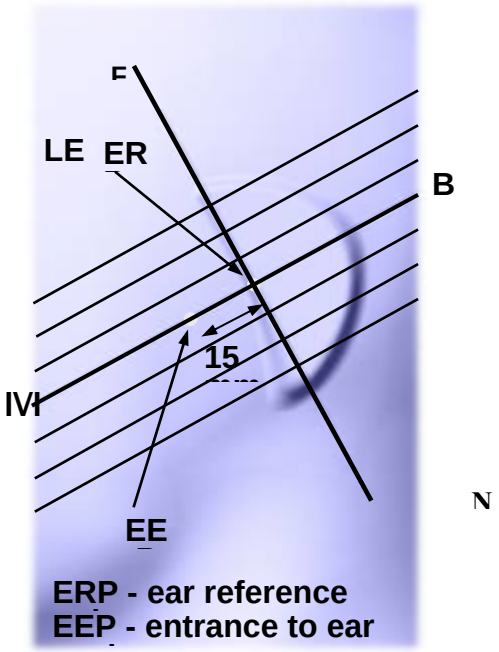
EUT TEST STRATEGY AND METHODOLOGY

Test Positions for Device Operating Next to a Person's Ear

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper ¼ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" should be located at the same level as the center of the earpiece region. The "vertical centerline" should bisect the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the "N-F" line defined along the base of the ear spacer that contains the "ear reference point". For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The "test device reference point" is aligned to the "ear reference point" on the head phantom and the "vertical centerline" is aligned to the "phantom reference plane". This is called the "initial ear position". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:





Cheek/Touch Position

The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

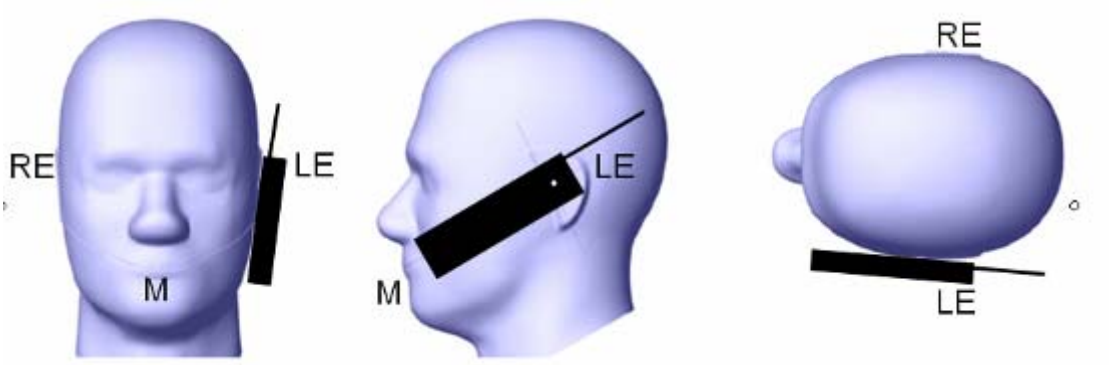
This test position is established:

When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

(or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

Cheek /Touch Position



Ear/Tilt Position

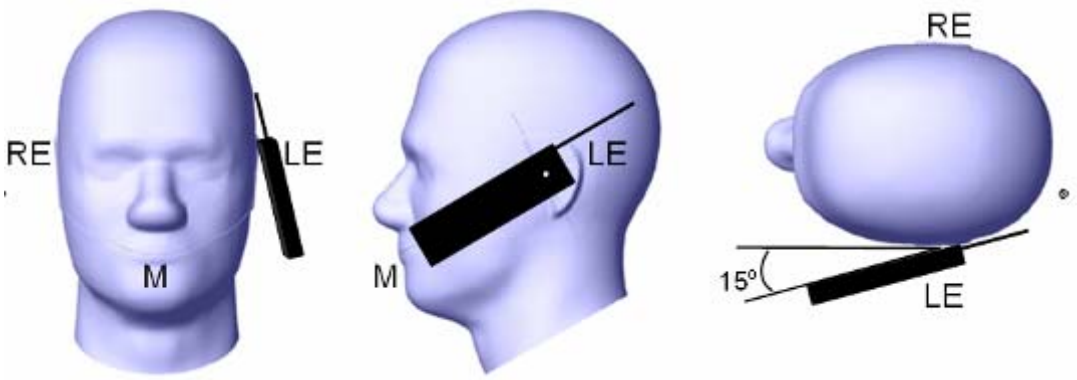
With the handset aligned in the "Cheek/Touch Position":

1) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the "test device reference point" until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point is by 15 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tilt/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

Ear /Tilt 15° Position



Test positions for body-worn and other configurations

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

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

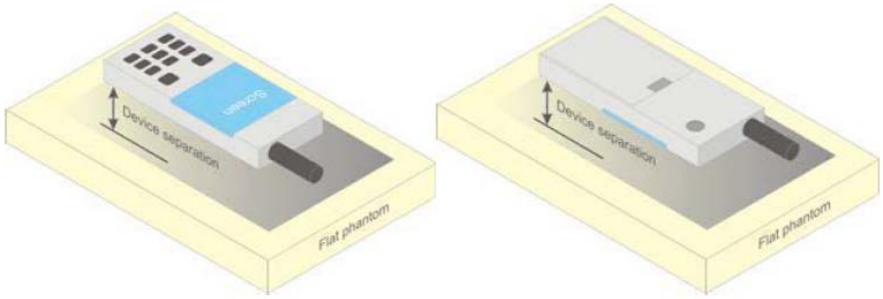


Figure 5 – Test positions for body-worn devices

Test Distance for SAR Evaluation

For this case the DUT(Device Under Test) is set directly against the phantom, the test distance is 0mm for body back mode; for face up mode the distance is 25mm; for hotspot mode the distance is 10mm, except for body back test setup position(0mm).

SAR Evaluation Procedure

The evaluation was performed with the following procedure:

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

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

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

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

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

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

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

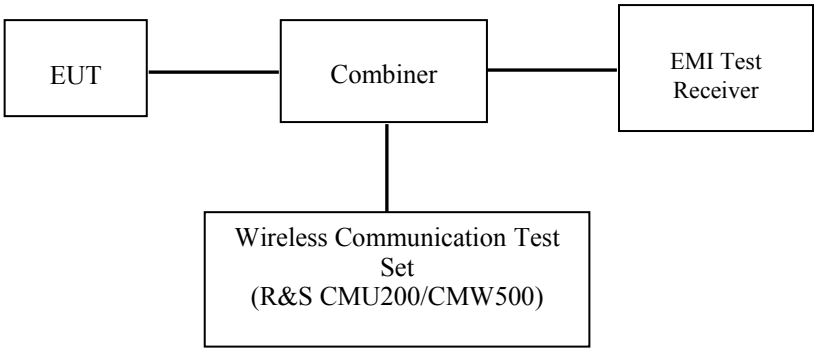
CONDUCTED OUTPUT POWER MEASUREMENT

Provision Applicable

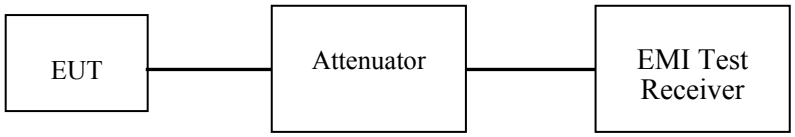
The measured peak output power should be greater and within 5% than EMI measurement.

Test Procedure

The RF output of the transmitter was connected to the input of the EMI Test Receiver through sufficient attenuation.



GSM /LTE/CDMA



PTT

Radio Configuration

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

GSM/GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection Press Signal Off to turn off the signal and change settings
Network Support > GSM + GPRS or GSM + EGSM
Main Service > Packet Data
Service selection > Test Mode A – Auto Slot Config. off
MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting
> Slot configuration > Uplink/Gamma
> 33 dBm for GPRS 850
> 30 dBm for GPRS 1900
> 27 dBm for EGPRS 850
> 26 dBm for EGPRS 1900
BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset > + 0 Hz
Mode > BCCH and TCH
BCCH Level > -85 dBm (May need to adjust if link is not stabe)
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off
P0 > 4 dB
Slot Config >Unchanged (if already set under MS signal)
TCH > choose desired test channel
Hopping > Off

Main Timeslot > 3
Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)
Bit Stream >2E9-1 PSR Bit Stream
AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection Press Signal on to turn on the signal and change settings

FDD-LTE

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

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1 and 3

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

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

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

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

TDD-LTE

3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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

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

Table 4.2-2: Uplink-downlink configurations.

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

Calculated Duty Cycle

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

Calculated Duty Cycle = Extended cyclic prefix in uplink x (T_s) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
T_s = 1/(15000 x 2048) seconds

CDMA 1x RTT

Maximum output power is verified on the high, middle and low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. Steps 3 and 4 are measured using Loopback Service Option SO55 with power control bits in "All Up" condition. Step 10 is measured using TDSO/SO32 with power control bits in the "Bits Hold" condition (i.e. alternative Up/Down Bits).

Table 4.4.5.2-1. Test Parameters for Maximum RF Output Power with a Single Traffic Code Channel, Spreading Rate 1

Parameter	Units	Value
$\hat{I}_{or}$	dBm/1.23 MHz	-104
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

Table 4.4.5.2-2. Test Parameters for Maximum RF Output Power with Multiple Traffic Code Channels, Spreading Rate 1

Parameter	Units	Value
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

EVDO

Maximum output power is verified on the high, middle and low channels according to procedures in section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rev. 0, section 4.3.4 of 3GPP2 C.S0033-A for Rev. A.

Maximum output power is measured for Rev. 0 and Rev. A in Subtype 0/1 and Subtype 2 Physical Layer configurations, respectively.

Maximum Target Output Power

Max Target Power(dBm)			
Mode/Band	Channel		
	Low	Middle	High
GSM 850	32.4	32.4	32.4
GPRS 1 TX Slot	32.4	32.4	32.4
GPRS 2 TX Slot	30.1	30.1	30.1
GPRS 3 TX Slot	28.2	28.2	28.2
GPRS 4 TX Slot	26.8	26.8	26.8
EDGE 1 TX Slot	25.8	25.8	25.8
EDGE 2 TX Slot	24.6	24.6	24.6
EDGE 3 TX Slot	22.9	22.9	22.9
EDGE 4 TX Slot	21.7	21.7	21.7
PCS 1900	29.8	29.8	29.8
GPRS 1 TX Slot	29.7	29.7	29.7
GPRS 2 TX Slot	28.7	28.7	28.7
GPRS 3 TX Slot	27	27	27
GPRS 4 TX Slot	25.2	25.2	25.2
EDGE 1 TX Slot	25.6	25.6	25.6
EDGE 2 TX Slot	24.3	24.3	24.3
EDGE 3 TX Slot	23.1	23.1	23.1
EDGE 4 TX Slot	21.9	21.9	21.9
LTE Band 2	24	24	24
LTE Band 4	23.7	23.7	23.7
LTE Band 5	23.3	23.3	23.3
LTE Band 7	23	23	23
LTE Band 26	23.9	23.9	23.9
LTE Band 38	23.3	23.3	23.3
LTE Band 41	23.7	23.7	23.7
CDMA 850 1xRTT	22.4	22.4	22.4
CDMA 850 EV-DO	21.1	21.1	21.1
WLAN(802.11b)	11.8	11.8	11.8
WLAN(802.11g)	11.8	11.8	11.8
WLAN(802.11n HT20)	11.8	11.8	11.8
Bluetooth BDR/EDR	11.6	11.6	11.6
Bluetooth LE	3	3	3

Max. tune-up tolerance power limit for Production Unit (W)			
PTT/Mode	Frequency (350-400 MHz)	Frequency (400-470 MHz)	Frequency (450-512 MHz)
FM(12.5 kHz)	4.8	4.8	4.8
FM(25 kHz)			
4FSK			

Test Results:

GSM:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
GSM 850	128	824.2	32.00
	190	836.6	32.21
	251	848.8	**32.29**
PCS 1900	512	1850.2	29.39
	661	1880	**29.67**
	810	1909.8	29.22

GPRS:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM 850	128	824.2	32.13	29.93	28.07	26.65
	190	836.6	32.29	29.80	27.99	26.51
	251	848.8	32.29	29.96	27.92	26.46
PCS 1900	512	1850.2	29.33	28.64	26.42	24.82
	661	1880	29.56	28.53	26.43	25.09
	810	1909.8	29.18	28.21	26.85	25.08

EGPRS:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM 850	128	824.2	25.68	24.45	22.78	21.53
	190	836.6	25.45	24.47	22.70	21.48
	251	848.8	25.40	24.31	22.53	21.56
PCS 1900	512	1850.2	25.42	24.18	23.04	21.50
	661	1880	25.45	24.04	22.88	21.76
	810	1909.8	25.31	24.22	22.92	21.70

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

The time based average power for GPRS

Band	Channel No.	Frequency (MHz)	Time based average Power (dBm)			
			1 slot	2 slot	3 slots	4 slots
GSM 850	128	824.2	23.13	23.93	23.82	23.65
	190	836.6	23.29	23.8	23.74	23.51
	251	848.8	23.29	**23.96**	23.67	23.46
PCS 1900	512	1850.2	20.33	**22.64**	22.17	21.82
	661	1880	20.56	22.53	22.18	22.09
	810	1909.8	20.18	22.21	22.6	22.08

The time based average power for EGPRS

Band	Channel No.	Frequency (MHz)	Time based average Power (dBm)			
			1 slot	2 slot	3 slots	4 slots
GSM 850	128	824.2	16.68	18.45	18.53	18.53
	190	836.6	16.45	18.47	18.45	18.48
	251	848.8	16.4	18.31	18.28	18.56
PCS 1900	512	1850.2	16.42	18.18	18.79	18.5
	661	1880	16.45	18.04	18.63	18.76
	810	1909.8	16.31	18.22	18.67	18.7

Note:

1. Rohde & Schwarz Radio Communication Tester (CMU200) was used for the measurement of GSM peak and average output power for active timeslots.
2 .For GSM voice, 1 timeslot has been activated with power level 5 (850 MHz band) and 0 (1900 MHz band).
3 .For GPRS, 1, 2, 3 and 4 timeslots has been activated separately with power level 3(850 MHz band) and 3(1900 MHz band).
4. According to KDB941225D01-SAR for EGPRS mode are not required when the source-based time-averaged output power for data mode is lower than that in the normal GPRS mode.

LTE Band 2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	0	0	23.60	23.69	23.69
		1#3	0	0	23.84	23.76	23.64
		1#5	0	0	23.50	23.45	23.33
		3#0	1	1	23.52	23.42	23.48
		3#1	1	1	23.54	23.50	23.41
		3#3	1	1	23.54	23.51	23.53
		6#0	1	1	22.60	22.50	22.46
	16-QAM	1#0	1	1	22.96	23.00	23.10
		1#3	1	1	23.09	23.11	23.02
		1#5	1	1	**23.90**	23.01	23.01
		3#0	2	2	23.04	22.95	23.03
		3#1	2	2	23.02	22.92	22.94
		3#3	2	2	22.96	22.95	23.11
		6#0	2	2	21.93	21.93	21.90
3M	QPSK	1#0	0	0	23.57	23.42	23.61
		1#7	0	0	23.46	23.28	23.40
		1#14	0	0	23.36	23.19	23.19
		8#0	1	1	22.64	22.53	22.43
		8#4	1	1	22.48	22.44	22.44
		8#7	1	1	22.57	22.39	22.44
		15#0	1	1	22.48	22.58	22.43
	16-QAM	1#0	1	1	21.84	21.82	21.86
		1#7	1	1	21.82	21.92	21.92
		1#14	1	1	21.62	21.50	21.57
		8#0	2	2	22.00	22.04	21.93
		8#4	2	2	22.15	21.92	21.95
		8#7	2	2	22.12	21.93	21.94
		15#0	2	2	21.10	21.14	21.11
5M	QPSK	1#0	0	0	23.25	23.31	23.37
		1#12	0	0	23.74	23.72	23.66
		1#24	0	0	23.67	23.61	23.60
		12#0	1	1	22.57	22.59	22.56
		12#6	1	1	22.54	22.49	22.59
		12#11	1	1	22.60	22.43	22.35
		25#0	1	1	22.06	22.08	22.12
	16-QAM	1#0	1	1	21.87	21.85	22.01
		1#12	1	1	22.54	22.28	22.38
		1#24	1	1	21.89	21.60	21.74
		12#0	2	2	21.31	21.17	21.14
		12#6	2	2	21.29	21.25	21.02
		12#11	2	2	21.16	21.12	21.15
		25#0	2	2	20.86	20.80	20.69

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	1#0	0	0	23.47	23.33	23.29
		1#24	0	0	23.38	23.28	23.21
		1#49	0	0	23.64	23.49	23.46
		25#0	1	1	22.58	22.45	22.57
		25#12	1	1	22.57	22.64	22.41
		25#24	1	1	22.43	22.43	22.53
		50#0	1	1	22.45	22.56	22.60
	16-QAM	1#0	1	1	22.30	22.34	22.35
		1#24	1	1	23.02	23.05	23.00
		1#49	1	1	22.34	22.33	22.33
		25#0	2	2	21.56	21.33	21.32
		25#12	2	2	21.38	21.33	21.45
		25#24	2	2	21.58	21.38	21.38
		50#0	2	2	21.46	21.40	21.29
15M	QPSK	1#0	0	0	22.93	22.90	22.96
		1#37	0	0	23.53	23.47	23.54
		1#74	0	0	23.69	23.61	23.65
		36#0	1	1	22.39	22.35	22.34
		36#17	1	1	22.57	22.43	22.37
		36#35	1	1	22.65	22.47	22.45
		75#0	1	1	22.37	22.41	22.42
	16-QAM	1#0	1	1	22.26	22.20	22.26
		1#37	1	1	23.25	23.07	23.09
		1#74	1	1	22.28	22.27	22.13
		36#0	2	2	20.82	20.79	20.72
		36#17	2	2	20.92	20.85	20.88
		36#35	2	2	20.93	20.95	20.74
		75#0	2	2	21.11	20.87	20.88
20M	QPSK	1#0	0	0	23.58	23.44	23.66
		1#49	0	0	23.81	23.74	23.69
		1#99	0	0	23.29	23.27	23.30
		50#0	1	1	22.39	22.43	22.42
		50#24	1	1	22.38	22.42	22.43
		50#49	1	1	22.51	22.38	22.46
		100#0	1	1	22.49	22.39	22.34
	16-QAM	1#0	1	1	21.24	21.15	21.33
		1#49	1	1	21.38	21.32	21.43
		1#99	1	1	21.66	21.61	21.78
		50#0	2	2	20.94	20.94	20.94
		50#24	2	2	21.22	21.08	21.06
		50#49	2	2	20.89	20.74	20.78
		100#0	2	2	20.95	20.80	20.93

LTE Band 4:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	0	0	23.30	23.14	23.18
		1#3	0	0	23.02	23.11	22.88
		1#5	0	0	23.11	23.03	23.00
		3#0	1	1	23.05	22.87	22.97
		3#1	1	1	23.03	22.90	22.82
		3#3	1	1	23.01	23.02	23.03
		6#0	1	1	22.07	21.98	22.03
	16-QAM	1#0	1	1	22.29	22.35	22.42
		1#3	1	1	22.45	22.34	22.29
		1#5	1	1	22.05	21.99	22.17
		3#0	2	2	22.37	22.28	22.13
		3#1	2	2	22.43	22.26	22.24
		3#3	2	2	22.14	22.24	22.16
		6#0	2	2	21.16	21.10	21.10
3M	QPSK	1#0	0	0	22.93	23.05	22.93
		1#7	0	0	23.08	23.02	22.98
		1#14	0	0	23.08	23.02	22.78
		8#0	1	1	22.24	22.03	22.18
		8#4	1	1	22.05	22.04	21.99
		8#7	1	1	22.03	21.94	21.87
		15#0	1	1	22.20	22.05	22.16
	16-QAM	1#0	1	1	21.89	21.87	21.90
		1#7	1	1	21.99	21.73	21.66
		1#14	1	1	21.72	21.66	21.64
		8#0	2	2	21.53	21.30	21.26
		8#4	2	2	21.14	21.01	21.01
		8#7	2	2	21.07	20.97	20.96
		15#0	2	2	21.08	20.85	20.93
5M	QPSK	1#0	0	0	22.91	22.92	22.90
		1#12	0	0	22.85	22.77	22.72
		1#24	0	0	22.76	22.90	22.76
		12#0	1	1	22.11	22.03	22.09
		12#6	1	1	22.04	22.02	22.11
		12#11	1	1	22.20	21.88	21.84
		25#0	1	1	22.12	21.98	22.17
	16-QAM	1#0	1	1	21.58	21.62	21.76
		1#12	1	1	21.86	21.87	21.98
		1#24	1	1	21.54	21.52	21.50
		12#0	2	2	21.11	21.08	21.17
		12#6	2	2	20.99	21.15	21.07
		12#11	2	2	20.98	21.01	21.11
		25#0	2	2	20.97	20.89	21.12

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	1#0	0	0	23.59	23.48	23.50
		1#24	0	0	23.42	23.47	23.53
		1#49	0	0	23.58	23.60	**23.62**
		25#0	1	1	22.41	22.43	22.55
		25#12	1	1	22.41	22.40	22.53
		25#24	1	1	22.28	22.43	22.54
		50#0	1	1	22.31	22.47	22.50
	16-QAM	1#0	1	1	22.45	22.37	22.42
		1#24	1	1	22.35	22.53	22.75
		1#49	1	1	21.86	21.90	21.90
		25#0	2	2	21.21	21.33	21.33
		25#12	2	2	21.38	21.45	21.58
		25#24	2	2	21.57	21.51	21.39
		50#0	2	2	21.39	21.37	21.43
15M	QPSK	1#0	0	0	23.13	23.01	23.14
		1#37	0	0	22.91	22.86	22.83
		1#74	0	0	23.38	23.32	23.32
		36#0	1	1	22.15	22.01	22.17
		36#17	1	1	22.02	21.97	22.05
		36#35	1	1	22.28	22.16	22.15
		75#0	1	1	22.00	21.93	22.14
	16-QAM	1#0	1	1	21.63	21.62	21.73
		1#37	1	1	22.02	21.70	21.80
		1#74	1	1	21.51	21.46	21.58
		36#0	2	2	21.00	20.99	20.93
		36#17	2	2	20.90	20.98	20.76
		36#35	2	2	20.95	20.83	20.85
		75#0	2	2	20.93	20.97	21.03
20M	QPSK	1#0	0	0	22.23	22.15	22.34
		1#49	0	0	23.34	23.35	23.31
		1#99	0	0	23.26	23.21	23.33
		50#0	1	1	22.38	22.36	22.46
		50#24	1	1	22.44	22.21	22.31
		50#49	1	1	22.49	22.52	22.48
		100#0	1	1	22.43	22.30	22.31
	16-QAM	1#0	1	1	21.57	21.53	21.49
		1#49	1	1	21.79	21.58	21.69
		1#99	1	1	21.67	21.50	21.64
		50#0	2	2	21.41	21.29	21.41
		50#24	2	2	21.36	21.17	21.31
		50#49	2	2	21.23	21.14	21.17
		100#0	2	2	21.27	21.04	21.22

LTE Band 5:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	0	0	23.20	23.21	**23.29**
		1#3	0	0	23.04	23.14	23.08
		1#5	0	0	23.17	23.06	23.15
		3#0	1	1	23.00	22.96	22.84
		3#1	1	1	23.14	22.94	22.97
		3#3	1	1	23.08	22.84	23.00
		6#0	1	1	21.96	21.91	22.00
	16-QAM	1#0	1	1	22.44	22.16	22.17
		1#3	1	1	22.36	22.41	22.32
		1#5	1	1	22.21	21.99	22.08
		3#0	2	2	22.19	22.08	22.25
		3#1	2	2	22.30	22.21	22.30
		3#3	2	2	22.35	22.35	22.29
		6#0	2	2	20.36	20.48	20.44
3M	QPSK	1#0	0	0	22.93	22.91	22.81
		1#7	0	0	23.07	22.76	22.81
		1#14	0	0	22.87	22.85	22.86
		8#0	1	1	22.07	21.96	21.91
		8#4	1	1	22.07	21.81	22.07
		8#7	1	1	21.89	21.84	21.90
		15#0	1	1	21.97	21.99	21.91
	16-QAM	1#0	1	1	21.67	21.54	21.54
		1#7	1	1	21.83	21.69	21.70
		1#14	1	1	21.88	21.66	21.54
		8#0	2	2	21.37	21.31	21.31
		8#4	2	2	21.52	21.30	21.18
		8#7	2	2	21.09	21.00	20.97
		15#0	2	2	20.78	20.81	20.88
5M	QPSK	1#0	0	0	23.20	23.07	23.11
		1#12	0	0	22.11	22.16	22.18
		1#24	0	0	23.25	23.08	23.20
		12#0	1	1	21.96	21.90	21.75
		12#6	1	1	22.02	21.91	21.90
		12#11	1	1	22.06	21.89	21.76
		25#0	1	1	22.08	21.90	21.89
	16-QAM	1#0	1	1	21.50	21.33	21.40
		1#12	1	1	21.69	21.64	21.60
		1#24	1	1	21.62	21.65	21.57
		12#0	2	2	20.94	20.80	20.93
		12#6	2	2	21.23	21.10	21.16
		12#11	2	2	21.07	20.98	21.04
		25#0	2	2	20.97	20.96	21.00

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	1#0	0	0	23.01	22.94	22.87
		1#24	0	0	23.00	22.77	22.91
		1#49	0	0	22.94	22.90	22.80
		25#0	1	1	21.93	21.93	21.89
		25#12	1	1	22.00	21.94	22.03
		25#24	1	1	22.21	21.96	21.97
		50#0	1	1	22.05	21.84	21.92
	16-QAM	1#0	1	1	21.83	21.74	21.91
		1#24	1	1	22.57	22.44	22.37
		1#49	1	1	21.43	21.42	21.34
		25#0	2	2	20.93	20.91	21.03
		25#12	2	2	20.93	20.93	21.01
		25#24	2	2	21.06	20.94	21.03
		50#0	2	2	21.07	20.93	21.16

LTE Band 7:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	0	0	22.39	22.16	22.32
		1#12	0	0	22.77	22.55	22.51
		1#24	0	0	22.58	22.51	22.59
		12#0	1	1	21.75	21.49	21.51
		12#6	1	1	21.60	21.57	21.45
		12#11	1	1	21.49	21.46	21.59
		25#0	1	1	21.63	21.55	21.40
	16-QAM	1#0	1	1	21.11	20.99	21.20
		1#12	1	1	21.94	21.72	21.68
		1#24	1	1	21.28	21.18	21.23
		12#0	2	2	20.78	20.69	20.69
		12#6	2	2	20.97	20.87	20.96
		12#11	2	2	20.70	20.64	20.84
		25#0	2	2	20.60	20.63	20.70
10M	QPSK	1#0	0	0	22.37	22.34	22.32
		1#24	0	0	22.73	22.52	22.61
		1#49	0	0	22.58	22.36	22.27
		25#0	1	1	21.72	21.48	21.56
		25#12	1	1	21.69	21.56	21.74
		25#24	1	1	21.76	21.73	21.59
		50#0	1	1	21.74	21.62	21.67
	16-QAM	1#0	1	1	21.07	21.01	21.10
		1#24	1	1	21.73	21.59	21.59
		1#49	1	1	21.03	20.96	20.87
		25#0	2	2	20.70	20.48	20.59
		25#12	2	2	21.02	20.84	20.93
		25#24	2	2	20.96	20.74	20.82
		50#0	2	2	20.73	20.51	20.55
15M	QPSK	1#0	0	0	22.53	22.45	22.64
		1#37	0	0	22.76	22.47	22.67
		1#74	0	0	22.48	22.51	22.50
		36#0	1	1	21.75	21.43	21.44
		36#17	1	1	21.65	21.66	21.67
		36#35	1	1	21.70	21.46	21.59
		75#0	1	1	21.60	21.48	21.60
	16-QAM	1#0	1	1	21.29	21.39	21.40
		1#37	1	1	22.08	21.87	21.86
		1#74	1	1	21.42	21.39	21.30
		36#0	2	2	20.71	20.68	20.62
		36#17	2	2	20.78	20.74	20.81
		36#35	2	2	20.68	20.55	20.55
		75#0	2	2	20.68	20.58	20.62

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	1#0	0	0	22.46	22.50	22.57
		1#49	0	0	22.83	22.84	**22.99**
		1#99	0	0	22.48	22.42	22.56
		50#0	1	1	21.46	21.54	21.71
		50#24	1	1	21.57	21.55	21.66
		50#49	1	1	21.61	21.58	21.74
		100#0	1	1	21.47	21.55	21.62
	16-QAM	1#0	1	1	21.61	21.50	21.63
		1#49	1	1	21.78	21.90	21.94
		1#99	1	1	21.91	21.72	21.87
		50#0	2	2	20.66	20.66	20.80
		50#24	2	2	20.71	20.67	20.75
		50#49	2	2	20.78	20.68	20.79
		100#0	2	2	20.44	20.55	20.73

LTE Band 26:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	0	0	23.63	23.61	23.44
		1#3	0	0	23.71	**23.81**	23.61
		1#5	0	0	23.62	23.53	23.60
		3#0	1	1	23.43	23.46	23.43
		3#1	1	1	23.56	23.57	23.57
		3#3	1	1	23.52	23.34	23.31
		6#0	1	1	22.47	22.55	22.39
	16-QAM	1#0	1	1	22.91	22.93	23.04
		1#3	1	1	23.21	23.02	23.06
		1#5	1	1	22.75	22.85	22.91
		3#0	2	2	22.82	22.97	22.82
		3#1	2	2	22.86	22.89	22.91
		3#3	2	2	22.96	22.99	22.78
		6#0	2	2	22.02	21.90	21.97
3M	QPSK	1#0	0	0	23.45	23.53	23.50
		1#7	0	0	23.21	23.37	23.26
		1#14	0	0	23.22	23.31	23.27
		8#0	1	1	22.36	22.50	22.30
		8#4	1	1	22.47	22.39	22.25
		8#7	1	1	22.36	22.46	22.48
		15#0	1	1	22.36	22.44	22.30
	16-QAM	1#0	1	1	21.92	21.67	21.81
		1#7	1	1	21.68	21.83	21.71
		1#14	1	1	21.70	21.67	21.46
		8#0	2	2	21.86	21.88	21.80
		8#4	2	2	21.88	21.93	21.97
		8#7	2	2	22.08	21.92	21.93
		15#0	2	2	21.02	20.99	20.93
5M	QPSK	1#0	0	0	23.52	23.24	23.27
		1#12	0	0	23.49	23.58	23.51
		1#24	0	0	23.35	23.57	23.53
		12#0	1	1	22.37	22.53	22.58
		12#6	1	1	22.32	22.28	22.29
		12#11	1	1	22.31	22.39	22.42
		25#0	1	1	21.91	21.97	21.79
	16-QAM	1#0	1	1	21.73	21.98	21.91
		1#12	1	1	22.32	22.36	22.31
		1#24	1	1	21.56	21.57	21.60
		12#0	2	2	20.98	20.97	20.91
		12#6	2	2	21.10	21.04	21.09
		12#11	2	2	20.92	21.08	20.99
		25#0	2	2	20.80	20.81	20.82

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	1#0	0	0	23.33	23.24	23.18
		1#24	0	0	23.20	23.20	23.14
		1#49	0	0	23.46	23.58	23.42
		25#0	1	1	22.40	22.34	22.26
		25#12	1	1	22.37	22.39	22.35
		25#24	1	1	22.36	22.38	22.34
		50#0	1	1	22.35	22.47	22.40
	16-QAM	1#0	1	1	22.14	22.09	22.12
		1#24	1	1	22.77	22.82	22.84
		1#49	1	1	22.32	22.37	22.28
		25#0	2	2	21.42	21.46	21.22
		25#12	2	2	21.14	21.25	21.29
		25#24	2	2	21.15	21.32	21.28
		50#0	2	2	21.38	21.35	21.39

LTE Band 38:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	0	0	22.78	22.92	23.02
		1#12	0	0	22.95	22.91	22.83
		1#24	0	0	22.78	22.77	22.90
		12#0	1	1	22.11	21.98	22.14
		12#6	1	1	22.11	22.27	22.26
		12#11	1	1	22.21	22.06	22.09
		25#0	1	1	22.02	21.99	22.04
	16-QAM	1#0	1	1	21.77	21.64	21.66
		1#12	1	1	21.97	22.03	21.95
		1#24	1	1	21.49	21.45	21.47
		12#0	2	2	21.13	21.02	20.87
		12#6	2	2	21.10	20.92	21.02
		12#11	2	2	20.95	20.91	21.13
		25#0	2	2	20.74	20.97	21.00
10M	QPSK	1#0	0	0	22.90	22.39	22.97
		1#24	0	0	22.89	22.37	22.81
		1#49	0	0	22.81	21.89	22.69
		25#0	1	1	22.21	21.25	22.14
		25#12	1	1	21.97	21.40	22.15
		25#24	1	1	21.97	21.39	22.27
		50#0	1	1	22.20	21.44	22.14
	16-QAM	1#0	1	1	21.75	22.54	21.71
		1#24	1	1	22.07	22.70	21.88
		1#49	1	1	21.62	22.30	21.45
		25#0	2	2	21.03	22.41	21.02
		25#12	2	2	21.00	22.21	20.91
		25#24	2	2	21.17	22.28	21.02
		50#0	2	2	20.93	22.48	21.01
15M	QPSK	1#0	0	0	22.94	23.13	22.96
		1#37	0	0	22.78	22.86	22.92
		1#74	0	0	22.78	**23.26**	23.16
		36#0	1	1	22.15	22.00	22.01
		36#17	1	1	22.00	22.01	21.91
		36#35	1	1	22.10	21.94	22.03
		75#0	1	1	22.13	21.80	22.04
	16-QAM	1#0	1	1	21.61	21.74	21.58
		1#37	1	1	21.93	21.77	21.62
		1#74	1	1	21.65	21.51	21.39
		36#0	2	2	21.11	20.81	20.74
		36#17	2	2	20.95	20.84	20.76
		36#35	2	2	21.17	20.99	20.89
		75#0	2	2	20.93	20.96	20.88

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	1#0	0	0	23.00	22.99	22.93
		1#49	0	0	22.90	22.91	22.87
		1#99	0	0	22.82	22.83	22.70
		50#0	1	1	22.26	22.17	22.16
		50#24	1	1	21.92	21.82	22.08
		50#49	1	1	22.05	22.02	22.12
		100#0	1	1	22.31	22.00	22.15
	16-QAM	1#0	1	1	21.76	21.22	21.69
		1#49	1	1	21.93	21.40	21.85
		1#99	1	1	21.53	21.24	21.35
		50#0	2	2	21.02	21.04	20.93
		50#24	2	2	20.93	21.03	20.83
		50#49	2	2	21.16	20.96	20.98
		100#0	2	2	21.01	20.97	21.03

LTE Band 41:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)		Middle Channel (dBm)	High Channel (dBm)	
					2506 MHz	2550 MHz	2593 MHz	2640 MHz	2680 MHz
5M	QPSK	1#0	0	0	23.33	23.27	23.36	23.18	23.23
		1#12	0	0	23.40	23.35	23.59	23.46	23.53
		1#24	0	0	23.46	23.42	23.48	23.33	23.33
		12#0	1	1	22.43	22.40	22.41	22.33	22.38
		12#6	1	1	22.51	22.47	22.56	22.58	22.62
		12#11	1	1	22.51	22.51	22.33	22.26	22.28
		25#0	1	1	22.06	22.00	22.15	22.11	22.17
	16-QAM	1#0	1	1	21.74	21.71	21.97	21.73	21.80
		1#12	1	1	22.22	22.17	22.34	22.06	22.09
		1#24	1	1	21.61	21.58	21.70	21.62	21.71
		12#0	2	2	21.10	21.02	21.01	20.84	20.89
		12#6	2	2	20.84	20.79	20.94	20.85	20.92
		12#11	2	2	21.08	21.07	21.01	20.87	20.97
		25#0	2	2	20.71	20.63	20.64	20.48	20.56
10M	QPSK	1#0	0	0	23.38	23.30	23.55	23.34	23.38
		1#24	0	0	23.43	23.41	23.39	23.11	23.19
		1#49	0	0	23.48	23.46	23.44	23.38	23.47
		25#0	1	1	22.50	22.48	22.53	22.44	22.53
		25#12	1	1	22.61	22.57	22.58	22.57	22.57
		25#24	1	1	22.54	22.47	22.54	22.33	22.37
		50#0	1	1	22.38	22.33	22.48	22.37	22.38
	16-QAM	1#0	1	1	22.21	22.11	22.32	22.37	22.43
		1#24	1	1	23.16	23.06	22.99	23.07	23.15
		1#49	1	1	22.43	22.34	22.42	22.30	22.34
		25#0	2	2	21.61	21.54	21.50	21.23	21.26
		25#12	2	2	21.28	21.25	21.32	21.05	21.13
		25#24	2	2	21.28	21.23	21.39	21.46	21.48
		50#0	2	2	21.37	21.31	21.49	21.18	21.22
15M	QPSK	1#0	0	0	22.79	22.74	22.92	22.91	22.93
		1#37	0	0	23.22	23.16	23.37	23.15	23.19
		1#74	0	0	23.48	23.46	23.44	23.30	23.36
		36#0	1	1	22.35	22.28	22.30	22.16	22.20
		36#17	1	1	22.54	22.50	22.61	22.53	22.55
		36#35	1	1	22.42	22.37	22.43	22.15	22.23
		75#0	1	1	22.16	22.13	22.34	22.15	22.25
	16-QAM	1#0	1	1	21.98	21.95	22.12	22.04	22.14
		1#37	1	1	23.03	23.00	23.04	22.95	22.97
		1#74	1	1	22.04	21.97	22.19	22.45	22.53
		36#0	2	2	20.57	20.56	20.70	20.67	20.70
		36#17	2	2	20.60	20.51	20.76	20.64	20.65
		36#35	2	2	20.69	20.61	20.87	20.79	20.82
		75#0	2	2	20.68	20.63	20.83	20.63	20.72

Test Bandwidth	Test Modulation	Resource Block & RB offset	Target MPR	Meas MPR	Low Channel (dBm)		Middle Channel (dBm)	High Channel (dBm)	
					2506 MHz	2550 MHz	2593 MHz	2640 MHz	2680 MHz
20M	QPSK	1#0	0	0	23.26	23.22	23.46	23.32	23.37
		1#49	0	0	23.58	23.55	**23.68**	23.32	23.37
		1#99	0	0	23.13	23.10	23.17	23.19	23.29
		50#0	1	1	22.50	22.47	22.38	22.40	22.45
		50#24	1	1	22.30	22.21	22.32	22.34	22.41
		50#49	1	1	22.47	22.38	22.52	22.22	22.27
		100#0	1	1	22.22	22.14	22.22	22.21	22.29
	16-QAM	1#0	1	1	21.08	21.04	21.12	20.97	21.06
		1#49	1	1	21.09	21.06	21.29	20.89	20.98
		1#99	1	1	21.50	21.47	21.65	21.42	21.51
		50#0	2	2	20.50	20.43	20.69	20.59	20.68
		50#24	2	2	20.82	20.76	21.02	20.94	20.95
		50#49	2	2	20.67	20.66	20.69	20.77	20.80
		100#0	2	2	20.66	20.65	20.69	20.70	20.70

Note:

1. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
2. The CMW500 Wideband Radio Communication tester is used for LTE output power measurements and SAR testing. Closed loop power control is used to keep the radio transmitters the max output power during the test.
3. KDB941225D05v02- SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg

CDMA 850:

Mode	Channel No.	Frequency (MHz)	RF Output Power (dBm)
1xRTT RC3+SO55(Loopback)	1013	824.7	22.09
	384	836.52	22.22
	777	848.31	**22.35**
EV-DO, RTAP 153.6 kbps	1013	824.7	20.48
	384	836.52	**21.09**
	777	848.31	20.2

WLAN:

Mode	Channel frequency (MHz)	RF Output Power (dBm)
802.11b	2412	13.66
	2442	14.41
	2472	11.60
802.11g	2412	18.55
	2442	16.12
	2472	16.29
802.11n HT20	2412	18.22
	2442	**18.73**
	2472	16.40

Note: The output power was tested under data rate 1Mbps for 802.11b, 6Mbps for 802.11g, and MCS0 for 802.11n HT20.

Bluetooth:

Mode	Channel frequency (MHz)	RF Output Power (dBm)
BDR(GFSK)	2402	9.22
	2441	10.34
	2480	9.07
EDR(4-DQPSK)	2402	10.04
	2441	11.20
	2480	9.82
EDR(8-DPSK)	2402	10.73
	2441	**11.52**
	2480	10.24
Bluetooth LE	2402	1.95
	2440	**2.94**
	2480	1.45

PTT:

Frequency(350-400 MHz)

Mode	Frequency Spacing (kHz)	Frequency (MHz)	Output Power(W)	Power level
FM	12.5	350.025	4.721	High
		362.500	4.406	High
		375.000	4.487	High
		382.500	4.529	High
		399.975	4.375	High
	25	350.025	4.721	High
		362.500	4.406	High
		375.000	4.487	High
		382.500	4.529	High
		399.975	4.375	High
4FSK	12.5	350.025	**4.764**	High
		362.500	4.436	High
		375.000	4.508	High
		382.500	4.529	High
		399.975	4.446	High

Frequency(400-470 MHz)

Mode	Frequency Spacing (kHz)	Frequency (MHz)	Output Power(W)	Power level
FM	12.5	400.025	4.375	High
		418.000	4.246	High
		435.525	4.732	High
		449.975	4.645	High
		469.975	4.246	High
	25	400.025	4.416	High
		418.000	4.266	High
		435.525	**4.753**	High
		449.975	4.688	High
		469.975	4.266	High
4FSK	12.5	400.025	4.477	High
		418.000	4.246	High
		435.525	4.732	High
		449.975	4.71	High
		469.975	4.385	High

Frequency(450-512 MHz)

Mode	Frequency Spacing (kHz)	Frequency (MHz)	Output Power(W)	Power level
FM	12.5	450.025	4.656	High
		469.975	4.246	High
		485.000	4.406	High
		500.025	4.375	High
		511.975	4.732	High
	25	450.025	4.699	High
		469.975	4.266	High
		485.000	4.446	High
		500.025	4.406	High
		511.975	**4.764**	High
4FSK	12.5	450.025	4.656	High
		469.975	4.227	High
		485.000	4.406	High
		500.025	4.416	High
		511.975	4.753	High

SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

SAR Test Data

Environmental Conditions

Temperature:	22.5-23.3 ℃	22.2-23.6 ℃	22.1-23.6 ℃	21.7-23.4 ℃	22.1-23.2 ℃
Relative Humidity:	47 %	46 %	41 %	48 %	51 %
ATM Pressure:	1010 mbar	1008 mbar	1008 mbar	1014 mbar	1010 mbar
Test Date:	2017/03/21	2017/03/22	2017/03/26	2017/03/28	2017/03/31

Temperature:	22.7-23.9 ℃	22.0-23.8 ℃	21.6-23.1 ℃	22.4-23.5 ℃	/
Relative Humidity:	57 %	57 %	58 %	59 %	/
ATM Pressure:	1010 mbar	1007 mbar	1004 mbar	1003 mbar	/
Test Date:	2017/04/05	2017/04/06	2017/04/07	2017/04/08	/

Temperature:	22.2-23.9 ℃	22.3-23.9 ℃	21.6-23.1 ℃	22-23.7 ℃	/
Relative Humidity:	52 %	56 %	47 %	57 %	/
ATM Pressure:	1003 mbar	1002 mbar	989 mbar	1001 mbar	/
Test Date:	2017/04/09	2017/08/22	2017/08/23	2017/08/28	/

Testing was performed by Edison Hu, Zack Huang, Peter Lee.

GSM 850:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	824.2	GSM	/	/	/	/	/	/	/
	836.6	GSM	0.02	32.21	32.4	1.045	0.368	**0.38**	**1#**
	848.8	GSM	/	/	/	/	/	/	/
Head Left Tilt	824.2	GSM	/	/	/	/	/	/	/
	836.6	GSM	-0.02	32.21	32.4	1.045	0.197	0.21	**2#**
	848.8	GSM	/	/	/	/	/	/	/
Head Right Cheek	824.2	GSM	/	/	/	/	/	/	/
	836.6	GSM	-0.06	32.21	32.4	1.045	0.353	0.37	**3#**
	848.8	GSM	/	/	/	/	/	/	/
Head Right Tilt	824.2	GSM	/	/	/	/	/	/	/
	836.6	GSM	-0.01	32.21	32.4	1.045	0.214	0.22	**4#**
	848.8	GSM	/	/	/	/	/	/	/
Body Worn Back (0mm)	824.2	GSM	/	/	/	/	/	/	/
	836.6	GSM	-0.10	32.21	32.4	1.045	0.099	0.10	**5#**
	848.8	GSM	/	/	/	/	/	/	/
Face Up (25mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.10	29.8	30.1	1.072	0.224	**0.24**	**6#**Note*
	848.8	GPRS	/	/	/	/	/	/	/
Body Front (10mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.03	29.8	30.1	1.072	0.352	**0.38**	**7#**
	848.8	GPRS	/	/	/	/	/	/	/
Body Back (10mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.06	29.8	30.1	1.072	0.177	0.19	**8#**
	848.8	GPRS	/	/	/	/	/	/	/
Body Left (10mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.06	29.8	30.1	1.072	0.193	0.21	**9#**
	848.8	GPRS	/	/	/	/	/	/	/
Body Right (10mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.04	29.8	30.1	1.072	0.256	0.27	**10#**
	848.8	GPRS	/	/	/	/	/	/	/
Body Bottom (10mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.05	29.8	30.1	1.072	0.134	0.14	**11#**
	848.8	GPRS	/	/	/	/	/	/	/

Note*: Measurement is performed on Date: 2017/8/22

Note:

1. When the 1-g SAR is less than half of the limit, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

Note*: Measurement is performed on Date: 2017/8/22

GSM 1900:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1850.2	GSM	/	/	/	/	/	/	/
	1880	GSM	0.08	29.67	29.8	1.03	0.36	**0.37**	**12#**
	1909.8	GSM	/	/	/	/	/	/	/
Head Left Tilt	1850.2	GSM	/	/	/	/	/	/	/
	1880	GSM	-0.17	29.67	29.8	1.03	0.109	0.11	**13#**
	1909.8	GSM	/	/	/	/	/	/	/
Head Right Cheek	1850.2	GSM	/	/	/	/	/	/	/
	1880	GSM	0.19	29.67	29.8	1.03	0.215	0.22	**14#**
	1909.8	GSM	/	/	/	/	/	/	/
Head Right Tilt	1850.2	GSM	/	/	/	/	/	/	/
	1880	GSM	0.02	29.67	29.8	1.03	0.069	0.07	**15#**
	1909.8	GSM	/	/	/	/	/	/	/
Body Worn Back (0mm)	1850.2	GSM	/	/	/	/	/	/	/
	1880	GSM	-0.02	29.67	29.8	1.03	0.043	0.04	**16#**
	1909.8	GSM	/	/	/	/	/	/	/
Face Up (25mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.15	28.53	28.7	1.04	0.057	0.06	**17#** Note*
	1909.8	GPRS	/	/	/	/	/	/	/
Body Front (10mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.19	28.53	28.7	1.04	0.172	0.18	**18#**
	1909.8	GPRS	/	/	/	/	/	/	/
Body Back (10mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.10	28.53	28.7	1.04	0.089	0.09	**19#**
	1909.8	GPRS	/	/	/	/	/	/	/
Body Left (10mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.18	28.53	28.7	1.04	0.236	**0.25**	**20#**
	1909.8	GPRS	/	/	/	/	/	/	/
Body Right (10mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.01	28.53	28.7	1.04	0.102	0.11	**21#**
	1909.8	GPRS	/	/	/	/	/	/	/
Body Bottom (10mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880	GPRS	-0.13	28.53	28.7	1.04	0.233	0.24	**22#**
	1909.8	GPRS	/	/	/	/	/	/	/

Note:

1. When the 1-g SAR is less than half of the limit, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

Note*: Measurement is performed on Date: 2017/8/23

LTE Band 2:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.17	23.74	24.00	1.06	0.45	0.47	**23#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	0.06	22.43	24.00	1.44	0.43	**0.62**	**24#**
Head Left Tilt	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	0.00	23.74	24.00	1.06	0.16	0.17	**25#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.03	22.43	24.00	1.44	0.15	0.22	**26#**
Head Right Cheek	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.02	23.74	24.00	1.06	0.29	0.31	**27#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.01	22.43	24.00	1.44	0.28	0.40	**28#**
Head Right Tilt	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.03	23.74	24.00	1.06	0.10	0.11	**29#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.08	22.43	24.00	1.44	0.09	0.13	**30#**
Face Up (25mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	0.14	23.74	24.00	1.06	0.126	0.13	**31#** Note*
	1900	20	1RB		/	/	/	/	/	/
	1880	20	50%RB	-0.01	22.43	24.00	1.44	0.099	0.14	**32#** Note*
Body Front (10mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.04	23.74	24.00	1.06	0.34	0.36	**33#**
	1900	20	1RB		/	/	/	/	/	/
	1880	20	50%RB	-0.04	22.43	24.00	1.44	0.27	0.38	**34#**
Body Back (10mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.11	23.74	24.00	1.06	0.14	0.15	**35#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.09	22.43	24.00	1.44	0.11	0.16	**36#**
Body Left (10mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.05	23.74	24.00	1.06	0.39	0.42	**37#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	0.08	22.43	24.00	1.44	0.31	0.45	**38#**
Body Right (10mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.14	23.74	24.00	1.06	0.18	0.19	**39#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.19	22.43	24.00	1.44	0.14	0.20	**40#**
Body Bottom (10mm)	1860	20	1RB	/	/	/	/	/	/	/
	1880	20	1RB	-0.17	23.74	24.00	1.06	0.42	0.45	**41#**
	1900	20	1RB	/	/	/	/	/	/	/
	1880	20	50%RB	-0.07	22.43	24.00	1.44	0.32	**0.46**	**42#**

Note*: Measurement is performed on Date: 2017/8/23

LTE Band 4:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	0.16	23.35	23.7	1.08	0.353	0.38	**43#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.07	22.52	23.7	1.31	0.35	**0.46**	**44#**
Head Left Tilt	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	0.05	23.35	23.7	1.08	0.101	0.11	**45#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	0.06	22.52	23.7	1.31	0.098	0.13	**46#**
Head Right Cheek	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.01	23.35	23.7	1.08	0.235	0.25	**47#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	0.1	22.52	23.7	1.31	0.229	0.30	**48#**
Head Right Tilt	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.08	23.35	23.7	1.08	0.067	0.07	**49#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.03	22.52	23.7	1.31	0.066	0.09	**50#**
Face Up (25mm)	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.05	23.35	23.7	1.08	0.191	0.21	**51#** Note*
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	0.11	22.52	23.7	1.31	0.154	0.20	**52#** Note*
Body Front (10mm)	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.13	23.35	23.7	1.08	0.579	0.63	**53#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.14	22.52	23.7	1.31	0.492	0.65	**54#**
Body Back (10mm)	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.01	23.35	23.7	1.08	0.213	0.23	**55#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.11	22.52	23.7	1.31	0.164	0.21	**56#**
Body Left (10mm)	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	-0.11	23.35	23.7	1.08	0.461	0.50	**57#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.08	22.52	23.7	1.31	0.323	0.42	**58#**
Body Right (10mm)	1720	20	1RB	/	/	/	/	/	/	/
	1732.5	20	1RB	0.03	23.35	23.7	1.08	0.217	0.24	**59#**
	1745	20	1RB	/	/	/	/	/	/	/
	1732.5	20	50%RB	-0.17	22.52	23.7	1.31	0.174	0.23	**60#**
Body Bottom (10mm)	1720	20	1RB	-0.03	23.34	23.7	1.09	0.842	0.91	**61#**
	1732.5	20	1RB	-0.19	23.35	23.7	1.08	0.863	**0.94**	**62#**
	1745	20	1RB	-0.04	23.31	23.7	1.09	0.753	0.82	**63#**
	1732.5	20	50%RB	-0.04	22.52	23.7	1.31	0.667	0.88	**64#**

Note*: Measurement is performed on Date: 2017/8/22

LTE Band 5:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.13	22.94	23.3	1.09	0.362	0.39	**65#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.06	21.96	23.3	1.36	0.274	0.37	**66#**
Head Left Tilt	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	0.09	22.94	23.3	1.09	0.211	0.23	**67#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.06	21.96	23.3	1.36	0.163	0.22	**68#**
Head Right Cheek	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.03	22.94	23.3	1.09	0.366	**0.40**	**69#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.13	21.96	23.3	1.36	0.28	0.38	**70#**
Head Right Tilt	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.02	22.94	23.3	1.09	0.193	0.21	**71#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.04	21.96	23.3	1.36	0.156	0.21	**72#**
Face Up (25mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	0.20	22.94	23.3	1.09	0.227	0.25	**73#** Note*
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.02	21.96	23.3	1.36	0.181	0.25	**74#** Note*
Body Front (10mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	0.14	22.94	23.3	1.09	0.265	0.29	**75#**
	844	10	1RB		/	/	/	/	/	/
	836.5	10	50%RB	-0.07	21.96	23.3	1.36	0.219	**0.30**	**76#**
Body Back (10mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.15	22.94	23.3	1.09	0.12	0.13	**77#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	-0.03	21.96	23.3	1.36	0.094	0.13	**78#**
Body Left (10mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	0.02	22.94	23.3	1.09	0.181	0.20	**79#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	0.03	21.96	23.3	1.36	0.138	0.19	**80#**
Body Right (10mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.01	22.94	23.3	1.09	0.185	0.20	**81#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	-0.07	21.96	23.3	1.36	0.155	0.21	**82#**
Body Bottom (10mm)	829	10	1RB	/	/	/	/	/	/	/
	836.5	10	1RB	-0.13	22.94	23.3	1.09	0.231	0.25	**83#**
	844	10	1RB	/	/	/	/	/	/	/
	836.5	10	50%RB	-0.04	21.96	23.3	1.36	0.181	0.25	**84#**

Note*: Measurement is performed on Date: 2017/8/22

LTE Band 7:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.13	22.84	23	1.04	0.472	0.49	**85#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.19	21.58	23	1.39	0.374	0.52	**86#**
Head Left Tilt	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.11	22.84	23	1.04	0.328	0.34	**87#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.2	21.58	23	1.39	0.266	0.37	**88#**
Head Right Cheek	2510	20	1RB	-0.17	22.83	23	1.04	0.854	0.89	**89#**
	2535	20	1RB	0.04	22.84	23	1.04	1.03	1.07	**90#**
	2560	20	1RB	-0.04	22.99	23	1.00	1.04	1.04	**91#**
	2535	20	50%RB	-0.03	21.58	23	1.39	0.779	**1.08**	**92#**
Head Right Tilt	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	0.04	22.84	23	1.04	0.298	0.31	**93#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.07	21.58	23	1.39	0.239	0.33	**94#**
Face Up (25mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	0.13	22.84	23	1.04	0.117	0.12	**95#** Note*
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.10	21.58	23	1.39	0.095	**0.13**	**96#** Note*
Body Front (10mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.01	22.84	23	1.04	0.318	0.33	**97#**
	2560	20	1RB		/	/	/		/	/
	2535	20	50%RB	0.04	21.58	23	1.39	0.253	**0.35**	**98#**
Body Back (10mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.2	22.84	23	1.04	0.106	0.11	**99#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.16	21.58	23	1.39	0.098	0.14	**100#**
Body Left (10mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.02	22.84	23	1.04	0.272	0.28	**101#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.07	21.58	23	1.39	0.207	0.29	**102#**
Body Right (10mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.1	22.84	23	1.04	0.226	0.23	**103#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.01	21.58	23	1.39	0.181	0.25	**104#**
Body Bottom (10mm)	2510	20	1RB	/	/	/	/	/	/	/
	2535	20	1RB	-0.09	22.84	23	1.04	0.307	0.32	**105#**
	2560	20	1RB	/	/	/	/	/	/	/
	2535	20	50%RB	-0.02	21.58	23	1.39	0.246	0.34	**106#**

Note*: Measurement is performed on Date: 2017/8/23

LTE Band 26:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	819	10	1RB	0.09	23.58	23.9	1.076	0.173	0.19	**107#** Note
	819	10	50%RB	0.16	22.39	23.9	1.416	0.138	0.20	**108#** Note
Head Left Tilt	819	10	1RB	0.10	23.58	23.9	1.076	0.065	0.07	**109#** Note
	819	10	50%RB	-0.02	22.39	23.9	1.416	0.052	0.07	**110#** Note
Head Right Cheek	819	10	1RB	-0.06	23.58	23.9	1.076	0.38	0.41	**111#** Note
	819	10	50%RB	0.13	22.39	23.9	1.416	0.305	**0.43**	**112#** Note
Head Right Tilt	819	10	1RB	-0.15	23.58	23.9	1.076	0.067	0.07	**113#** Note
	819	10	50%RB	-0.12	22.39	23.9	1.416	0.054	0.08	**114#** Note
Head Face Up(25mm)	819	10	1RB	-0.19	23.58	23.9	1.076	0.188	0.20	**115#** Note*
	819	10	50%RB	0.03	22.39	23.9	1.416	0.157	0.22	**116#** Note*
Body Front (10mm)	819	10	1RB	-0.03	23.58	23.9	1.076	0.193	0.21	**117#** Note*
	819	10	50%RB	0.03	22.39	23.9	1.416	0.164	0.23	**118#** Note*
Body Back (10mm)	819	10	1RB	-0.07	23.58	23.9	1.076	0.114	0.12	**119#** Note*
	819	10	50%RB	-0.20	22.39	23.9	1.416	0.087	0.12	**120#** Note*
Body Left (10mm)	819	10	1RB	-0.04	23.58	23.9	1.076	0.138	0.15	**121#** Note*
	819	10	50%RB	0.11	22.39	23.9	1.416	0.101	0.14	**122#** Note*
Body Right (10mm)	819	10	1RB	-0.02	23.58	23.9	1.076	0.236	**0.25**	**123#** Note*
	819	10	50%RB	0.01	22.39	23.9	1.416	0.173	0.24	**124#** Note*
Body Bottom (10mm)	819	10	1RB	0.01	23.58	23.9	1.076	0.134	0.14	**125#** Note*
	819	10	50%RB	0.08	22.39	23.9	1.416	0.104	0.15	**126#** Note*

Note: Measurement is performed on Date: 2017/8/23
Note*: Measurement is performed on Date: 2017/8/22

LTE Band 38:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.02	22.99	23.3	1.07	0.223	0.24	**127#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	0.12	22.17	23.3	1.30	0.194	0.25	**128#**
Head Left Tilt	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.18	22.99	23.3	1.07	0.171	0.18	**129#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	0.01	22.17	23.3	1.30	0.146	0.19	**130#**
Head Right Cheek	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.17	22.99	23.3	1.07	0.444	**0.48**	**131#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.19	22.17	23.3	1.30	0.359	0.47	**132#**
Head Right Tilt	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	0.04	22.99	23.3	1.07	0.118	0.13	**133#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.19	22.17	23.3	1.30	0.107	0.14	**134#**
Face Up (25mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.13	22.99	23.3	1.07	0.056	0.06	**135#** Note*
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.03	22.17	23.3	1.30	0.047	0.05	**136#** Note*
Body Front (10mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.13	22.99	23.3	1.07	0.131	0.14	**137#**
	2610	20	1RB		/	/	/		/	/
	2595	20	50%RB	-0.2	22.17	23.3	1.30	0.111	0.14	**138#**
Body Back (10mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	0.02	22.99	23.3	1.07	0.062	0.07	**139#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.17	22.17	23.3	1.30	0.052	0.07	**140#**
Body Left (10mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.09	22.99	23.3	1.07	0.117	0.13	**141#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.02	22.17	23.3	1.30	0.101	0.13	**142#**
Body Right (10mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.05	22.99	23.3	1.07	0.08	0.09	**143#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.18	22.17	23.3	1.30	0.067	0.09	**144#**
Body Bottom (10mm)	2580	20	1RB	/	/	/	/	/	/	/
	2595	20	1RB	-0.07	22.99	23.3	1.07	0.288	**0.31**	**145#**
	2610	20	1RB	/	/	/	/	/	/	/
	2595	20	50%RB	-0.01	22.17	23.3	1.30	0.235	0.30	**146#**

Note*: Measurement is performed on Date: 2017/8/23

LTE Band 41:

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2593	20	1RB	0.05	23.68	23.7	1.01	0.219	0.22	**147#**
	2593	20	50%RB	-0.15	22.52	23.7	1.31	0.179	0.23	**148#**
Head Left Tilt	2593	20	1RB	-0.04	23.68	23.7	1.01	0.158	0.16	**149#**
	2593	20	50%RB	-0.14	22.52	23.7	1.31	0.129	0.17	**150#**
Head Right Cheek	2593	20	1RB	0.02	23.68	23.7	1.01	0.364	0.37	**151#**
	2593	20	50%RB	-0.11	22.52	23.7	1.31	0.31	**0.41**	**152#**
Head Right Tilt	2593	20	1RB	-0.14	23.68	23.7	1.01	0.109	0.11	**153#**
	2593	20	50%RB	0.05	22.52	23.7	1.31	0.093	0.12	**154#**
Face Up (25mm)	2593	20	1RB	0.05	23.68	23.7	1.01	0.051	0.05	**155#** Note*
	2593	20	50%RB	0.20	22.52	23.7	1.31	0.041	0.04	**156#** Note*
Body Front (10mm)	2593	20	1RB	-0.18	23.68	23.7	1.01	0.206	0.21	**157#**
	2593	20	50%RB	-0.2	22.52	23.7	1.31	0.141	0.18	**158#**
Body Back (10mm)	2593	20	1RB	-0.11	23.68	23.7	1.01	0.056	0.06	**159#**
	2593	20	50%RB	-0.18	22.52	23.7	1.31	0.043	0.06	**160#**
Body Left (10mm)	2593	20	1RB	-0.09	23.68	23.7	1.01	0.096	0.10	**161#**
	2593	20	50%RB	-0.18	22.52	23.7	1.31	0.083	0.11	**162#**
Body Right (10mm)	2593	20	1RB	-0.15	23.68	23.7	1.01	0.04	0.04	**163#**
	2593	20	50%RB	-0.07	22.52	23.7	1.31	0.035	0.05	**164#**
Body Bottom (10mm)	2593	20	1RB	-0.19	23.68	23.7	1.01	0.542	**0.54**	**165#**
	2593	20	50%RB	-0.12	22.52	23.7	1.31	0.418	0.55	**166#**

Note*: Measurement is performed on Date: 2017/8/23

Note:

1. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
2. When the 1-g SAR is less than half of the limit, testing for other channels are optional.
3. KDB941225D05- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offset the upper edge, middle and lower edge of each required test channel.
4. Worst case SAR for 50% RB allocation is selected to be tested.
5. KDB941225D05- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
6. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is <1.45 W/kg, tests for the remaining required test channels are optional.
7. KDB941225D05- SAR test for other channel bandwidth is required when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.
8. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg
9. KDB 648474 D04-When the peak SAR located in regions that probe is unable to access, a flat phantom is used for SAR measurement.

CDMA 850:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	824.7	RC3+SO55	/	/	/	/	/	/	/
	836.52	RC3+SO55	-0.02	22.22	22.4	1.042	0.558	**0.58**	**167#**
	848.31	RC3+SO55	/	/	/	/	/	/	/
Head Left Tilt	824.7	RC3+SO55	/	/	/	/	/	/	/
	836.52	RC3+SO55	0.01	22.22	22.4	1.042	0.384	0.40	**168#**
	848.31	RC3+SO55	/	/	/	/	/	/	/
Head Right Cheek	824.7	RC3+SO55	/	/	/	/	/	/	/
	836.52	RC3+SO55	-0.12	22.22	22.4	1.042	0.385	0.40	**169#**
	848.31	RC3+SO55	/	/	/	/	/	/	/
Head Right Tilt	824.7	RC3+SO55	/	/	/	/	/	/	/
	836.52	RC3+SO55	0.05	22.22	22.4	1.042	0.153	0.16	**170#**
	848.31	RC3+SO55	/	/	/	/	/	/	/
Body Worn Back (0mm)	824.7	RC3+SO55	/	/	/	/	/	/	/
	836.52	RC3+SO55	0.03	22.22	22.4	1.042	0.06	0.06	**171#**
	848.31	RC3+SO55	/	/	/	/	/	/	/
Face UP (25mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	-0.02	21.09	21.1	1.002	0.233	**0.23**	**172#** Note*
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/
Body Front (10mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	-0.12	21.09	21.1	1.002	0.265	**0.27**	**173#**
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/
Body Back (0mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	0.02	22.22	22.4	1.042	0.063	0.07	**174#**
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/
Body Left (10mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	-0.02	21.09	21.1	1.002	0.066	0.07	**175#**
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/
Body Right (10mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	-0.04	21.09	21.1	1.002	0.149	0.15	**176#**
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/
Body Bottom (10mm)	824.7	RTAP 153.6 kbps	/	/	/	/	/	/	/
	836.52	RTAP 153.6 kbps	0.04	21.09	21.1	1.002	0.22	0.22	**177#**
	848.31	RTAP 153.6 kbps	/	/	/	/	/	/	/

Note*: Measurement is performed on Date: 2017/8/23

Note:

1. When the 1-g SAR is ≤ 0.8W/kg, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

WLAN:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	0.11	14.41	14.5	1.02	0.046	0.05	**178#**
	2472	802.11 b	/	/	/	/	/	/	/
Head Left Tilt	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	-0.02	14.41	14.5	1.02	0.079	0.08	**179#**
	2472	802.11 b	/	/	/	/	/	/	/
Head Right Cheek	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	-0.17	14.41	14.5	1.02	0.078	0.08	**180#**
	2472	802.11 b	/	/	/	/	/	/	/
Head Right Tilt	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	0.19	14.41	14.5	1.02	0.105	**0.11**	**181#**
	2472	802.11 b	/	/	/	/	/	/	/
Body(Worn) Back (0mm)	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	-0.2	14.41	14.5	1.02	0.074	**0.08**	**182#**
	2472	802.11 b	/	/	/	/	/	/	/
Face UP (25mm)	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	/	14.41	14.5	1.02	< 0.01	0.01	/
	2472	802.11 b	/	/	/	/	/	/	/
Body Front (10mm)	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	0.00	14.41	14.5	1.02	0.033	0.03	**183#**
	2472	802.11 b	/	/	/	/	/	/	/
Body Left (10mm)	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	-0.17	14.41	14.5	1.02	0.043	0.04	**184#**
	2472	802.11 b	/	/	/	/	/	/	/
Body Right (10mm)	2412	802.11 b	/	/	/	/	/	/	/
	2442	802.11 b	-0.11	14.41	14.5	1.02	0.035	0.04	**185#**
	2472	802.11 b	/	/	/	/	/	/	/

Note:

1. When the 1-g SAR is less than half of the limit value, testing for other channels are optional.
2. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

Bluetooth:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	-0.13	11.52	11.6	1.019	0.038	0.04	**186#**
	2480	8-DPSK	/	/	/	/	/	/	/
Head Left Tilt	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	-0.20	11.52	11.6	1.019	0.014	0.01	**187#**
	2480	8-DPSK	/	/	/	/	/	/	/
Head Right Cheek	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	0.20	11.52	11.6	1.019	0.021	0.02	**188#**
	2480	8-DPSK	/	/	/	/	/	/	/
Head Right Tilt	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	0.01	11.52	11.6	1.019	0.019	0.02	**189#**
	2480	8-DPSK	/	/	/	/	/	/	/
Body(Worn) Back (0mm)	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	0.06	11.52	11.6	1.019	0.047	0.05	**190#**
	2480	8-DPSK	/	/	/	/	/	/	/
Face Up (25mm)	2402	8-DPSK	/	/	/	/	/	/	/
	2441	8-DPSK	/	11.52	11.6	1.019	< 0.01	0.01	/
	2480	8-DPSK	/	/	/	/	/	/	/

Note:

1. When the 1-g SAR is less than half of the limit value, testing for other channels are optional.
2. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

PTT:

Frequency(350-400 MHz)

Test Mode		Frequency (MHz)	Power Drift (dB)	Max. Meas. Power (W)	Max.Rated Power(W)	1 g SAR Value(W/kg)				
						Scaled Factor	Meas. SAR	Scaled SAR	50%	Plot
FM 12.5 kHz	Face Up (25 mm)	350.025	0.00	4.721	4.8	1.017	8.53	8.67	4.34	1*
		362.500	0.01	4.406	4.8	1.089	9.59	10.45	**5.22**	**2***
		375.000	-0.02	4.487	4.8	1.070	7.50	8.02	4.01	3*
		382.500	-0.02	4.529	4.8	1.060	5.93	6.28	3.14	4*
		399.975	-0.01	4.375	4.8	1.097	3.48	3.82	1.91	5*
	Body Back (0 mm)	350.025	-0.11	4.721	4.8	1.017	8.53	8.67	4.34	6*
		362.500	-0.02	4.406	4.8	1.089	8.62	9.39	4.70	7*
		375.000	-0.03	4.487	4.8	1.070	5.78	6.19	3.09	8*
		382.500	-0.03	4.529	4.8	1.060	4.62	4.90	2.45	9*
		399.975	-0.03	4.375	4.8	1.097	3.02	3.31	1.66	10*
FM 25 kHz	Face Up (25 mm)	350.025	-0.03	4.721	4.8	1.017	7.92	8.05	4.03	11*
		362.500	0.01	4.406	4.8	1.089	8.95	9.75	4.88	12*
		375.000	-0.01	4.487	4.8	1.070	7.22	7.73	3.86	13*
		382.500	-0.01	4.529	4.8	1.060	5.79	6.14	3.07	14*
		399.975	0.01	4.375	4.8	1.097	3.46	3.80	1.90	15*
	Body Back (0 mm)	350.025	-0.13	4.721	4.8	1.017	8.72	8.87	4.43	16*
		362.500	-0.02	4.406	4.8	1.089	8.95	9.75	**4.88**	**17***
		375.000	-0.1	4.487	4.8	1.070	5.87	6.28	3.14	18*
		382.500	-0.13	4.529	4.8	1.060	4.82	5.10	2.55	19*
		399.975	-0.0	4.375	4.8	1.097	3.16	3.47	1.73	20*
4FSK 12.5 kHz	Face Up (25 mm)	350.025	/	/	/	/	/	/	/	/
		362.500	-0.16	4.764	4.8	1.008	4.98	5.02	2.51	21*
		375.000	/	/	/	/	/	/	/	/
		382.500	/	/	/	/	/	/	/	/
		399.975	/	/	/	/	/	/	/	/
	Body Back (0 mm)	350.025	/	/	/	/	/	/	/	/
		362.500	-0.01	4.764	4.8	1.008	4.26	4.29	2.15	22*
		375.000	/	/	/	/	/	/	/	/
		382.500	/	/	/	/	/	/	/	/
		399.975	/	/	/	/	/	/	/	/

Frequency(400-470 MHz)

Test Mode		Frequency (MHz)	Power Drift (dB)	Max. Meas. Power (W)	Max.Rated Power(W)	1 g SAR Value(W/kg)				
						Scaled Factor	Meas. SAR	Scaled SAR	50%	Plot
FM 12.5 kHz	Face Up (25 mm)	400.025	0.01	4.375	4.8	1.097	11.20	12.29	**6.14**	**23***
		418.000	-0.01	4.246	4.8	1.130	10.20	11.53	5.77	24*
		435.525	-0.00	4.732	4.8	1.014	9.57	9.71	4.85	25*
		449.975	-0.01	4.645	4.8	1.033	7.73	7.99	3.99	26*
		469.975	-0.02	4.246	4.8	1.130	5.91	6.68	3.34	27*
	Body Back (0 mm)	400.025	-0.09	4.375	4.8	1.097	10.70	11.74	5.87	28*
		418.000	-0.03	4.246	4.8	1.130	8.81	9.96	4.98	29*
		435.525	-0.03	4.732	4.8	1.014	8.60	8.72	4.36	30*
		449.975	-0.04	4.645	4.8	1.033	7.19	7.43	3.71	31*
		469.975	-0.03	4.246	4.8	1.130	5.54	6.26	3.13	32*
FM 25 kHz	Face Up (25 mm)	400.025	-0.06	4.416	4.8	1.087	10.80	11.74	5.87	33*
		418.000	0.01	4.266	4.8	1.125	9.67	10.88	5.44	34*
		435.525	-0.01	4.753	4.8	1.010	9.16	9.25	4.63	35*
		449.975	0.02	4.688	4.8	1.024	7.70	7.88	3.94	36*
		469.975	0.02	4.266	4.8	1.125	6.03	6.78	3.39	37*
	Body Back (0 mm)	400.025	-0.02	4.416	4.8	1.087	11.30	12.28	**6.14**	**38***
		418.000	-0.11	4.266	4.8	1.125	9.07	10.21	5.10	39*
		435.525	-0.09	4.753	4.8	1.010	9.74	9.84	4.92	40*
		449.975	-0.07	4.688	4.8	1.024	7.03	7.19	3.60	41*
		469.975	-0.07	4.266	4.8	1.125	5.97	6.72	3.36	42*
4FSK 12.5 kHz	Face Up (25 mm)	400.025	0.05	4.732	4.8	1.014	4.74	4.81	2.40	43*
		418.000	/	/	/	/	/	/	/	/
		435.525	/	/	/	/	/	/	/	/
		449.975	/	/	/	/	/	/	/	/
		469.975	/	/	/	/	/	/	/	/
	Body Back (0 mm)	400.025	-0.13	4.732	4.8	1.014	5.2	5.27	2.64	44*
		418.000	/	/	/	/	/	/	/	/
		435.525	/	/	/	/	/	/	/	/
		449.975	/	/	/	/	/	/	/	/
		469.975	/	/	/	/	/	/	/	/

Frequency(450-512 MHz)

Test Mode		Frequency (MHz)	Power Drift(dB)	Max. Meas. Power(W)	Max. Rated Power(W)	1 g SAR Value(W/kg)				
						Scaled Factor	Meas. SAR	Scaled SAR	50%	Plot
FM 12.5 kHz	Face Up (25 mm)	450.025	0.00	4.656	4.8	1.031	9.09	9.37	**4.69**	**45***
		469.975	-0.02	4.246	4.8	1.130	6.83	7.72	3.86	46*
		485.000	-0.00	4.406	4.8	1.089	5.74	6.25	3.12	47*
		500.025	0.01	4.375	4.8	1.097	5.38	5.90	2.95	48*
		511.975	0.00	4.732	4.8	1.014	4.50	4.56	2.28	49*
	Body Back (0 mm)	450.025	-0.02	4.656	4.8	1.031	7.91	8.15	4.08	50*
		469.975	-0.03	4.246	4.8	1.130	5.70	6.44	3.22	51*
		485.000	-0.01	4.406	4.8	1.089	5.12	5.58	2.79	52*
		500.025	-0.03	4.375	4.8	1.097	5.56	6.10	3.05	53*
		511.975	-0.03	4.732	4.8	1.014	4.32	4.38	2.19	54*
FM 25 kHz	Face Up (25 mm)	450.025	-0.02	4.699	4.8	1.021	8.20	8.38	4.19	55*
		469.975	-0.00	4.266	4.8	1.125	6.75	7.59	3.80	56*
		485.000	0.00	4.446	4.8	1.080	5.68	6.13	3.06	57*
		500.025	-0.02	4.406	4.8	1.089	5.26	5.73	2.86	58*
		511.975	0.01	4.764	4.8	1.008	4.36	4.39	2.19	59*
	Body Back (0 mm)	450.025	-0.11	4.699	4.8	1.021	8.71	8.90	**4.45**	**60***
		469.975	-0.02	4.266	4.8	1.125	6.41	7.21	3.61	61*
		485.000	-0.03	4.446	4.8	1.080	5.26	5.67	2.84	62*
		500.025	-0.05	4.406	4.8	1.089	5.69	6.20	3.10	63*
		511.975	-0.05	4.764	4.8	1.008	4.10	4.14	2.07	64*
4FSK 12.5 kHz	Face Up (25 mm)	450.025	0.17	4.753	4.8	1.010	3.96	4.00	2.00	65*
		469.975	/	/	/	/	/	/	/	/
		485.000	/	/	/	/	/	/	/	/
		500.025	/	/	/	/	/	/	/	/
		511.975	/	/	/	/	/	/	/	/
	Body Back (0 mm)	450.025	0.07	4.753	4.8	1.010	4.24	4.28	2.14	66*
		469.975	/	/	/	/	/	/	/	/
		485.000	/	/	/	/	/	/	/	/
		500.025	/	/	/	/	/	/	/	/
		511.975	/	/	/	/	/	/	/	/

Note:

1. When the 1-g SAR tested using the default battery and default accessories is ≤ 3.5W/kg (corrected by Multiplying 50% for PTT mode), testing for other channels are optional.
2. KDB 447498 D01 - A duty factor of 50% should be applied to determine compliance for radios with maximum operating duty factors ≤ 50%. The 50% duty factor only applies to exposure conditions where the radio operates with a mechanical PTT button.
3. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios.
4. The whole antenna and radiating structures that may contribute to the measured SAR or influence the SAR distribution has been included in the area scan.

SAR Measurement Variability

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

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

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

The Highest Measured SAR Configuration in Each Frequency Band

Head

Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
			Original	Repeated	
(2500-2700MHz) LTE Band 7	2560	Head Right Cheek	1.04	1	**1.04**
(350-550 MHz) PTT_FM 25kHz	400.025	Face Up	11.20	10.90	1.03

Body

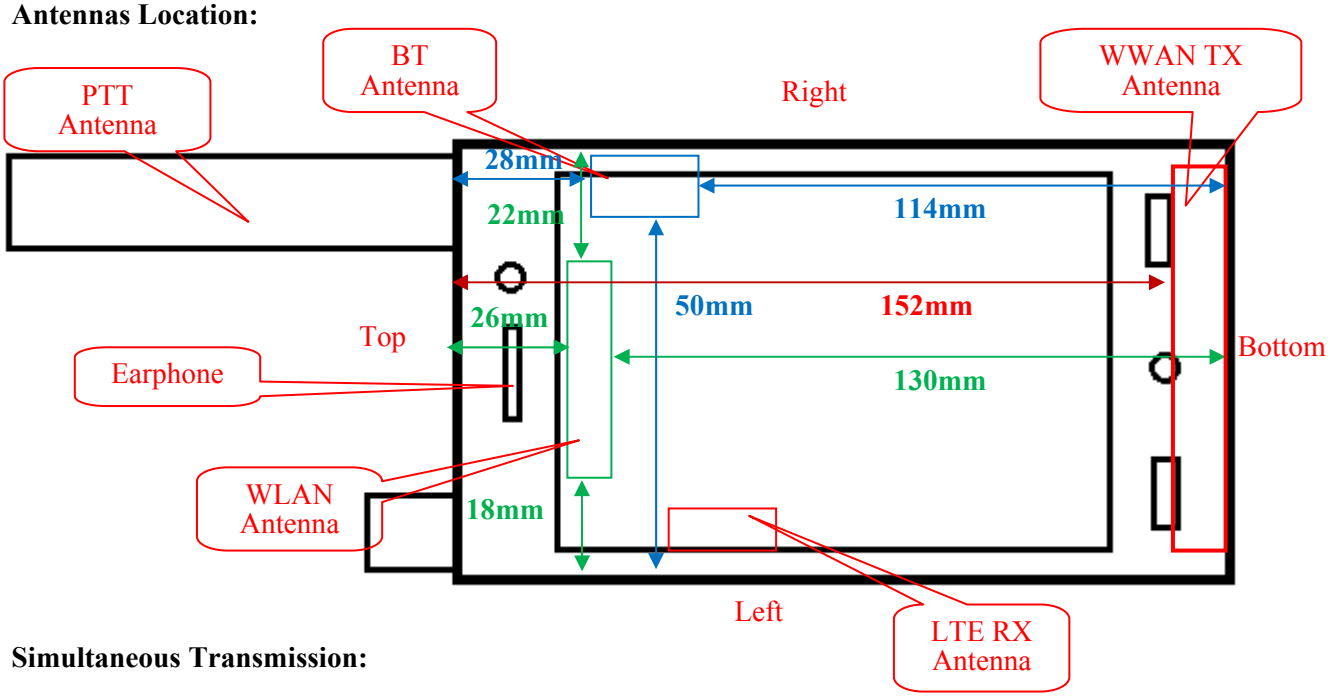
Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
			Original	Repeated	
(1650-1810 MHz) LTE Band 4	1732.5	Body Bottom	0.863	0.831	**1.04**
(350-550 MHz) PTT_FM 25kHz	400.025	Body Back	11.30	11.10	1.02

Note:

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

SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

Antennas Location:



Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	**Simultaneous?**	**Hotspot?**
GSM+LTE	×	×
GSM+CDMA	×	×
GSM + Bluetooth	√	×
GSM(Data) + Bluetooth + PTT	√	×
GSM + WLAN	√	√
GSM(Data) + WLAN+PTT	√	×
CDMA+LTE	×	×
CDMA + Bluetooth	√	×
CDMA(Data) + Bluetooth + PTT	√	×
CDMA + WLAN	√	√
CDMA(Data) + WLAN + PTT	√	×
LTE + Bluetooth	√	×
LTE + Bluetooth + PTT	√	×
LTE + WLAN	√	√
LTE + WLAN + PTT	√	×
WLAN + Bluetooth	√	×
GSM(Data) + Bluetooth + WLAN+PTT	√	×
CDMA(Data) + Bluetooth + WLAN+PTT	√	×
LTE + Bluetooth + WLAN+PTT	√	×

Note: *The PTT mode can't transmit Simultaneously with WWAN Voice mode, and the PTT mode can't work in Earphone speaking.*

Antenna Distance To Edges

Antenna Distance To Edge(mm)						
Mode	**Back**	**Front**	**Left**	**Right**	**Bottom**	**Top**
Bluetooth Antenna	15	14	50	5	114	28
WLAN Antenna	15	14	18	20	130	26
WWAN Antenna	18	< 5	< 5	< 5	< 5	152

SAR test exclusion for the EUT edge considerations Result(Hotspot Mode)

Mode	**Back**	**Left**	**Right**	**Top**	**Bottom**	**Top**
WLAN	Required	Required	Required	Required	**Exclusion**	**Exclusion**
WWAN (GSM/CDMA/LTE)	Required	Required	Required	Required	Required	**Exclusion**

Note:

KDB 941225 D06-Hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.

Required：The distance to Edge is less than 25mm, testing is required.
Exclusion：The distance to Edge is more than 25 mm, testing is not required.
Exclusion*：SAR test exclusion evaluation has been done above**.**

Simultaneous and Hotspot SAR test exclusion considerations:

Simultaneous(Worst Case):

Mode (WWAN+BT+ WLAN+PTT)	Position	Reported SAR(W/kg)				Mixed SAR (Sum of SAR-to-limit ratios)	ΣSAR < 8.0W/kg
		WWAN	BT	WLAN	PTT		
GSM 850+Bluetooth +WLAN+PTT	Head Left Cheek	0.38	0.04	0.05	/	0.29	0.47
	Head Left Tilt	0.21	0.01	0.05	/	0.17	0.27
	Head Right Cheek	0.37	0.02	0.08	/	0.29	0.47
	Head Right Tilt	0.22	0.05	0.11	/	0.24	0.38
	Body Worn Back	0.1	0.05	0.08	/	0.14	0.23
		/	0.05	0.08	6.14	0.85	6.27
	Face Up	0.24	0.01	0.01	6.14	0.93	6.40
	Body Back	0.19	0.05	0.08	6.14	0.97	6.46
PCS1900 +Bluetooth +WLAN +PTT	Head Left Cheek	0.37	0.04	0.05	/	0.29	0.46
	Head Left Tilt	0.11	0.01	0.05	/	0.11	0.17
	Head Right Cheek	0.22	0.02	0.08	/	0.20	0.32
	Head Right Tilt	0.07	0.05	0.11	/	0.14	0.23
	Body Worn Back	0.04	0.05	0.08	/	0.11	0.17
		/	0.05	0.08	6.14	0.85	6.27
	Face Up	0.06	0.01	0.01	6.14	0.82	6.22
	Body Back	0.09	0.05	0.08	6.14	0.91	6.36
CDMA 850(BC0) +Bluetooth +WLAN +PTT	Head Left Cheek	0.58	0.04	0.05	/	0.42	0.67
	Head Left Tilt	0.4	0.01	0.05	/	0.29	0.46
	Head Right Cheek	0.4	0.02	0.08	/	0.31	0.50
	Head Right Tilt	0.16	0.05	0.11	/	0.20	0.32
	Body Worn Back	0.06	0.05	0.08	/	0.12	0.19
		/	0.05	0.08	6.14	0.85	6.27
	Face Up	0.23	0.01	0.01	6.14	0.92	6.39
	Body Back	0.07	0.05	0.08	6.14	0.89	6.34
LTE Band 2+Bluetooth +WLAN +PTT	Head Left Cheek	0.62	0.04	0.05	/	0.44	0.71
	Head Left Tilt	0.22	0.01	0.05	/	0.18	0.28
	Head Right Cheek	0.4	0.02	0.08	/	0.31	0.50
	Head Right Tilt	0.13	0.05	0.11	/	0.18	0.29
	Face Up	0.14	0.01	0.01	6.14	0.87	6.30
	Body Back	0.16	0.05	0.08	6.14	0.95	6.43
LTE Band 4+Bluetooth +WLAN +PTT	Head Left Cheek	0.46	0.04	0.05	/	0.34	0.55
	Head Left Tilt	0.13	0.01	0.05	/	0.12	0.19
	Head Right Cheek	0.3	0.02	0.08	/	0.25	0.40
	Head Right Tilt	0.09	0.05	0.11	/	0.16	0.25
	Face Up	0.21	0.01	0.01	6.14	0.91	6.37
	Body Back	0.23	0.05	0.08	6.14	**0.99**	**6.50**
LTE Band 5+Bluetooth +WLAN +PTT	Head Left Cheek	0.39	0.04	0.05	/	0.30	0.48
	Head Left Tilt	0.23	0.01	0.05	/	0.18	0.29
	Head Right Cheek	0.4	0.02	0.08	/	0.31	0.50
	Head Right Tilt	0.21	0.05	0.11	/	0.23	0.37
	Face Up	0.25	0.01	0.01	6.14	0.94	6.41
	Body Back	0.13	0.05	0.08	6.14	0.93	6.40

Mode (WWAN+BT+ WLAN+PTT)	Position	Reported SAR(W/kg)				Mixed SAR (Sum of SAR-to-limit ratios)	ΣSAR < 8.0W/kg
		WWAN	BT	WLAN	PTT		
LTE Band 7+Bluetooth +WLAN +PTT	Head Left Cheek	0.52	0.04	0.05	/	0.38	0.61
	Head Left Tilt	0.37	0.01	0.05	/	0.27	0.43
	Head Right Cheek	1.08	0.02	0.08	/	**0.74**	**1.18**
	Head Right Tilt	0.33	0.05	0.11	/	0.31	0.49
	Face Up	0.13	0.01	0.01	6.14	0.86	6.29
	Body Back	0.14	0.05	0.08	6.14	0.94	6.41
LTE Band 26+Bluetooth +WLAN +PTT	Head Left Cheek	0.2	0.04	0.05	/	0.18	0.29
	Head Left Tilt	0.07	0.01	0.05	/	0.08	0.13
	Head Right Cheek	0.43	0.02	0.08	/	0.33	0.53
	Head Right Tilt	0.08	0.05	0.11	/	0.15	0.24
	Face Up	0.22	0.01	0.01	6.14	0.92	6.38
	Body Back	0.12	0.05	0.08	6.14	0.92	6.39
LTE Band 38+Bluetooth +WLAN +PTT	Head Left Cheek	0.25	0.04	0.05	/	0.21	0.34
	Head Left Tilt	0.19	0.01	0.05	/	0.16	0.25
	Head Right Cheek	0.48	0.02	0.08	/	0.36	0.58
	Head Right Tilt	0.14	0.05	0.11	/	0.19	0.30
	Face Up	0.14	0.01	0.01	6.14	0.87	6.30
	Body Back	0.07	0.05	0.08	6.14	0.89	6.34
LTE Band 41+Bluetooth +WLAN +PTT	Head Left Cheek	0.23	0.04	0.05	/	0.20	0.32
	Head Left Tilt	0.17	0.01	0.05	/	0.14	0.23
	Head Right Cheek	0.41	0.02	0.08	/	0.32	0.51
	Head Right Tilt	0.12	0.05	0.11	/	0.18	0.28
	Face Up	0.05	0.01	0.01	6.14	0.81	6.21
	Body Back	0.06	0.05	0.08	6.14	0.89	6.33

Note:

1, KDB 447498 D01, Occupational exposure limits do not apply to consumer devices and radio services intended for supporting public networks or Part 15 unlicensed operations, thus the limits is 1.6W/kg for Bluetooth and 8.0W/kg for PTT(PLMRS).
2, The initial simultaneous transmission SAR test exclusion is to be based on ratios of SAR to the applicable limit for each transmit mode (similar to basic concept of ratios for "mixed limits" in 7.2 of KDB Pub. 447498 D01 v06 and FCC-13-39).

Sum of SAR-to-limit ratios= SAR1/1.6+ SAR2/1.6+ SAR3/1.6+ SAR4/8.0

Conclusion:

The **sum of SAR-to-limit ratios** is less than 1.0, thus additional analysis or simultaneous-transmit extended-volume-scan SAR is not needed.

Hotspot:

Mode(WWAN+Wi-Fi)	Position	Reported SAR(W/kg)		ΣSAR < 1.6W/kg
		WWAN	Wi-Fi	
GSM 850+WLAN 2.4G	Body Back	0.19	0.08	0.27
	Body Front	0.38	0.03	0.41
	Body Left	0.21	0.04	0.25
	Body Right	0.27	0.04	0.31
PCS1900 + WLAN 2.4G	Body Back	0.09	0.08	0.17
	Body Front	0.18	0.03	0.21
	Body Left	0.25	0.04	0.29
	Body Right	0.11	0.04	0.15
CDMA 850(BC0) + WLAN 2.4G	Body Back	0.07	0.08	0.15
	Body Front	0.27	0.03	0.30
	Body Left	0.07	0.04	0.11
	Body Right	0.15	0.04	0.19
LTE Band 2+ WLAN 2.4G	Body Back	0.16	0.08	0.24
	Body Front	0.38	0.03	0.41
	Body Left	0.45	0.04	0.49
	Body Right	0.2	0.04	0.24
LTE Band 4+ WLAN 2.4G	Body Back	0.3	0.08	0.38
	Body Front	0.65	0.03	**0.68**
	Body Left	0.5	0.04	0.54
	Body Right	0.24	0.04	0.28
LTE Band 5+ WLAN 2.4G	Body Back	0.13	0.08	0.21
	Body Front	0.3	0.03	0.33
	Body Left	0.2	0.04	0.24
	Body Right	0.21	0.04	0.25
LTE Band 7+ WLAN 2.4G	Body Back	0.14	0.08	0.22
	Body Front	0.35	0.03	0.38
	Body Left	0.29	0.04	0.33
	Body Right	0.25	0.04	0.29
LTE Band 26+ WLAN 2.4G	Body Back	0.12	0.08	0.20
	Body Front	0.2	0.03	0.23
	Body Left	0.15	0.04	0.19
	Body Right	0.25	0.04	0.29
LTE Band 38+ WLAN 2.4G	Body Back	0.07	0.08	0.15
	Body Front	0.14	0.03	0.17
	Body Left	0.13	0.04	0.17
	Body Right	0.09	0.04	0.13
LTE Band 41+ WLAN 2.4G	Body Back	0.06	0.08	0.14
	Body Front	0.21	0.03	0.24
	Body Left	0.11	0.04	0.15
	Body Right	0.05	0.04	0.09

Note:

1. Hotspot mode SAR is only required for the edges within 25mm from the transmitting antenna located.
2. Hotspot Mode is not feasible during voice calls.
3. The PTT mode can't transmit Simultaneously with GSM /LTE/CDMA/WLAN or Bluetooth for head use condition.

Conclusion:

Sum of SAR: **ΣSAR ≤1.6 W/kg(Limit)** therefore simultaneous transmission SAR with Volume Scans is **not required**.

SAR Plots_WWAN&WLAN&BT

Please Refer to the Attachment.

SAR Plots_WWAN&WLAN&BT

Please Refer to the Attachment.

APPENDIX A MEASUREMENT UNCERTAINTY

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

Measurement uncertainty evaluation for IEEE1528-2013 SAR test

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

Measurement uncertainty evaluation for IEC62209-2 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Linearity	4.7	R	√3	1	1	2.7	2.7
Modulation Response	0.0	R	√3	1	1	0.0	0.0
Detection limits	1.0	R	√3	1	1	0.6	0.6
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	√3	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	√3	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	√3	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
Test sample related							
Device holder Uncertainty	6.3	N	1	1	1	6.3	6.3
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Power scaling	4.5	R	√3	1	1	2.6	2.6
Drift of output power	5.0	R	√3	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	√3	1	1	2.3	2.3
Algorithm for correcting SAR for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.1	0.9
Liquid conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Temp. unc. - Conductivity	1.7	R	√3	0.78	0.71	0.8	0.7
Temp. unc. - Permittivity	0.3	R	√3	0.23	0.26	0.0	0.0
Combined standard uncertainty		RSS				12.2	12.1
Expanded uncertainty 95 % confidence interval)						24.5	24.2

APPENDIX B EUT TEST POSITION PHOTOS

Please Refer to the Attachment.

APPENDIX C CALIBRATION CERTIFICATES

Please Refer to the Attachment.

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