

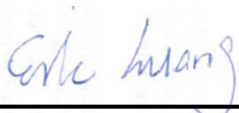
FCC SAR Test Report

APPLICANT : Sierra Wireless Inc
EQUIPMENT : PCIe wireless WAN card
BRAND NAME : SIERRA WIRELESS
MODEL NAME : EM7355
FCC ID : N7NEM7355-D6
STANDARD : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2013

The product was installed into Portable NoteBook (Brand Name DELL, Regulatory Model Name: P58G, Regulatory Type: P58G001) during test.

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA593038	Rev. 01	Initial issue of report	Oct. 29, 2015
FA593038	Rev. 02	Revised note1 in section4.1 and section16.	Nov. 20, 2015

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Sierra Wireless Inc, PCIe wireless WAN card, EM7355, are as follows.

Equipment Class	Wireless Operated	Highest SAR Summary	
		Body 1g SAR (W/kg)	Simultaneous Transmission 1g SAR (W/kg)
Licensed	WWAN	1.45	1.57
Date of Testing:		2014/7/30 ~ 2015/10/21	

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications

2. Administration Data

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978

Applicant	
Company Name	Sierra Wireless Inc
Address	13811 Wireless Way, Richmond, BC, N/A V6V 3A4, Canada

Manufacturer	
Company Name	Sierra Wireless Inc
Address	13811 Wireless Way, Richmond, BC, N/A V6V 3A4, Canada

3. Guidance Standard

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r04

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	PCIe wireless WAN card
Brand Name	SIERRA WIRELESS
Model Name	EM7355
FCC ID	N7NEM7355-D6
IMEI Code	353376060380844
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA 2000 BC10: 817.9 MHz ~ 823.1 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz
Mode	· GPRS/EGPRS · RMC 12.2Kbps · HSDPA · HSUPA · DC-HSDPA · CDMA2000 : 1xRTT/1xEv-Do(Rev.0)/1xEv-Do(Rev.A) · LTE: QPSK, 16QAM
EUT Stage	Production Unit
Remark: 1. The WLAN/Bluetooth module (FCC ID: PD97265NGU, Report No: SAR.20140709, granted on 2014/09/30) is also integrated into this host, the Bluetooth SAR result is referred to original report to determined simultaneous transmission analysis, for 2.4GHz WLAN SAR results, due to the simultaneous transmission analysis is higher than 1.6W/kg with original SAR values, but cannot further assessment SPLSR analysis, so in this report, added original report 2.4GHz WLAN worst case to determine the simultaneous transmission analysis and SPLSR analysis. 2. The Docking brand name: Dell, Model 74XCR can be combined or separated with this host, combined the functionality becomes a notebook computer, whereas, separated functionality of the host is a tablet computer.	

Host Information	
Host Name	Portable NoteBook
Brand Name	DELL
Regulatory Model Name	P58G
Regulatory Type	P58G001
Integrated WLAN Module	Brand Name: Intel Model Name: 7265NGW
Wireless Technology	· 802.11b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 · Bluetooth v3.0+EDR · Bluetooth v4.0-LE · NFC

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r04																																																						
FCC ID	N7NEM7355-D6																																																					
Equipment Name	PCIe wireless WAN card																																																					
Operating Frequency Range of each LTE transmission band	LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 05: 824.7 MHz ~ 848.3 MHz LTE Band 04: 1710.7 MHz ~ 1754.3 MHz LTE Band 02: 1850.7 MHz ~ 1909.3 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz																																																					
Channel Bandwidth	LTE Band 17: 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 05: 5MHz, 10MHz LTE Band 04: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 02: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 25: 5MHz, 10MHz, 15MHz, 20MHz																																																					
uplink modulations used	QPSK, and 16QAM																																																					
LTE Voice / Data requirements	Data only																																																					
LTE MPR permanently built-in by design	<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (RB)</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr></table>								Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3								Modulation	Channel bandwidth / Transmission bandwidth (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
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3																																																						
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	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																																															
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																					
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																					
Power reduction applied to satisfy SAR compliance	Yes, Proximity Sensor.																																																					
Transmission (H, M, L) channel numbers and frequencies in each LTE band																																																						
LTE Band 2																																																						
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																														
L	18625	1852.5	18650	1855	18675	1857.5	18700	1860																																														
M	18900	1880	18900	1880	18900	1880	18900	1880																																														
H	19175	1907.5	19150	1905	19125	1902.5	19100	1900																																														
LTE Band 4																																																						
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																														
L	19975	1712.5	20000	1715	20025	1717.5	20050	1720																																														
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5																																														
H	20375	1752.5	20350	1750	20325	1747.5	20300	1745																																														
LTE Band 5																																																						
	Bandwidth 5 MHz				Bandwidth 10 MHz																																																	
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)																																															
L	20425		826.5		20450		829																																															
M	20525		836.5		20525		836.5																																															
H	20625		846.5		20600		844																																															



LTE Band 13								
	Bandwidth 5 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782	
M	23230		782					
H	23255		784.5					
LTE Band 17								
	Bandwidth 5 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709	
M	23790		710		23790		710	
H	23825		713.5		23800		711	
LTE Band 25								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880
H	26665	1912.5	26640	1910	26615	1907.5	26590	1905

5. Proximity Sensor Triggering Test

Proximity sensor power reduction

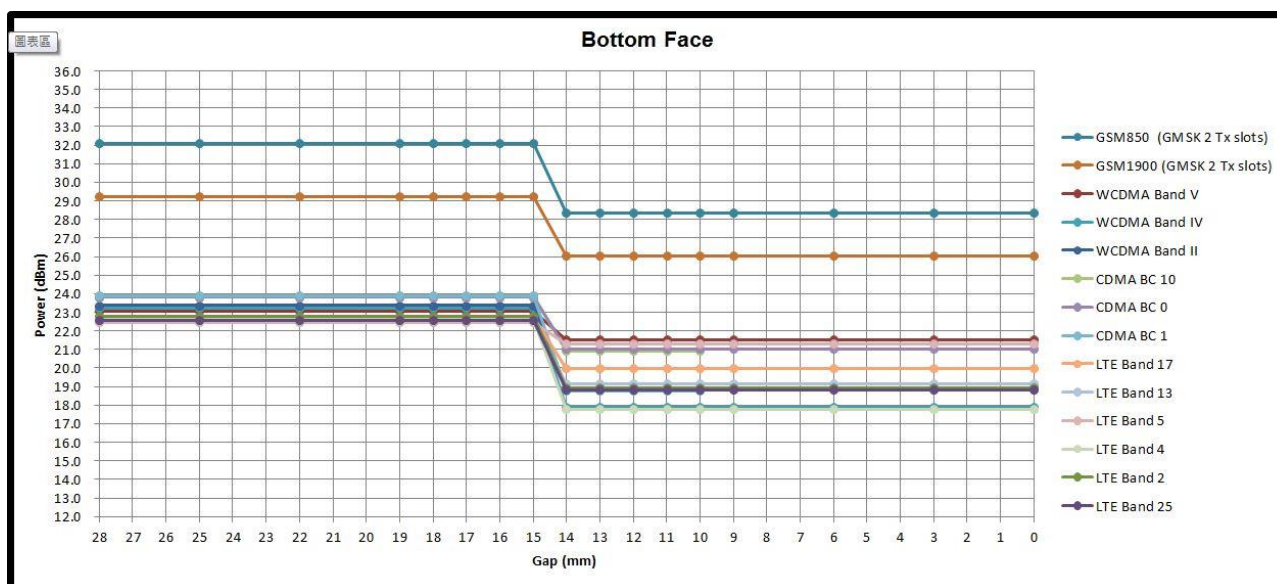
Exposure Position / wireless mode	Bottom Face ⁽¹⁾	Curved surface of Edge1 ⁽¹⁾	Edge 1 ⁽¹⁾	Edge 2	Edge 3	Edge 4
GSM850 GPRS (GMSK 1 Tx slot) - CS1	5.0 dB	3.0 dB	5.0 dB	0 dB	0 dB	0 dB
GSM850 GPRS (GMSK 2 Tx slot) - CS1	5.0 dB	4.0 Db	5.0 dB			
GSM850 EDGE (8PSK 1 Tx slot) - MCS5	0.0 dB	0.0 dB	0.0 dB			
GSM850 EDGE (8PSK 2 Tx slot) - MCS5	0.0 dB	0.0 dB	0.0 dB			
GSM850 EDGE (8PSK 3 Tx slot) - MCS5	1.0 dB	0.0 dB	1.0 dB			
GSM850 EDGE (8PSK 4 Tx slot) - MCS5	3.0 dB	1.5 dB	3.0 dB			
GSM1900 GPRS (GMSK 1 Tx slot) - CS1	3.0 dB	1.5 dB	3.0 dB			
GSM1900 GPRS (GMSK 2 Tx slot) - CS1	3.0 dB	3.0 dB	3.0 dB			
GSM1900 EDGE (8PSK 1 Tx slot) - MCS5	0.0 dB	0.0 dB	0.0 dB			
GSM1900 EDGE (8PSK 2 Tx slot) - MCS5	0.0 dB	0.0 dB	0.0 dB			
GSM1900 EDGE (8PSK 3 Tx slot) - MCS5	1.0 dB	1.5 dB	1.0 dB			
GSM1900 EDGE (8PSK 4 Tx slot) - MCS5	3.0 dB	2.5 dB	3.0 dB			
WCDMA Band V	3.0 dB	2.0 dB	3.0 dB			
WCDMA Band II	4.0 dB	4.0 dB	4.0 dB			
WCDMA Band IV	5.0 dB	5.0 dB	5.0 dB			
CDMA2000 BC10	3.0 dB	2.5 dB	3.0 dB			
CDMA2000 BC0	3.0 dB	2.5 dB	3.0 dB			
CDMA2000 BC1	4.0 dB	5.0 dB	4.0 dB			
LTE Band 17	1.0 dB	3.5 dB	1.0 dB			
LTE Band 13	2.0 dB	3.5 dB	2.0 dB			
LTE Band 5	3.0 dB	2.0 dB	3.0 dB			
LTE Band 4	5.0 dB	5.5 dB	5.0 dB			
LTE Band 2	4.0 dB	4.5 dB	4.0 dB			
LTE Band 25	4.0 dB	4.5 dB	4.0 dB			

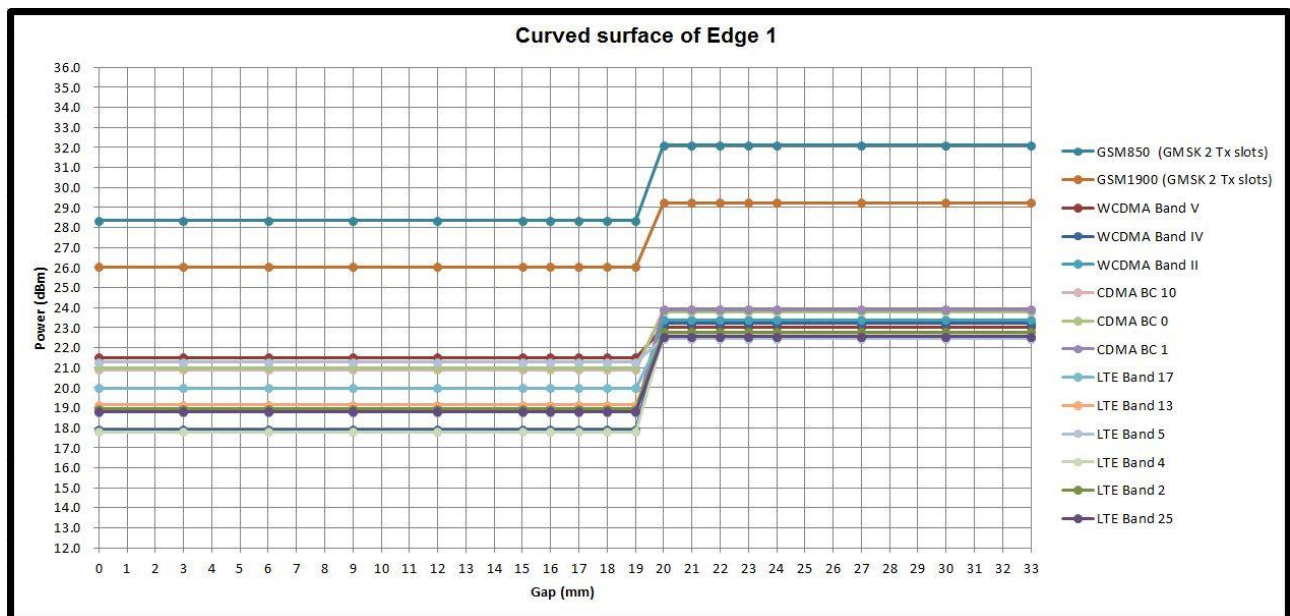
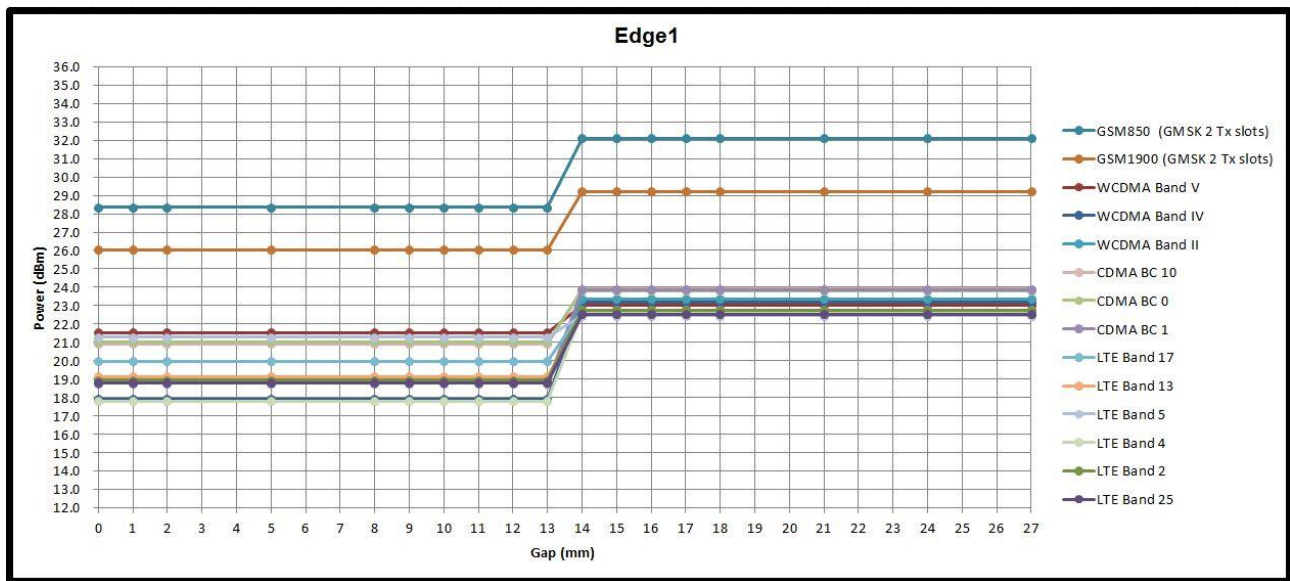
Remark:

- ⁽¹⁾: Reduced maximum limit applied by activation of proximity sensor.
- Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown and described in exhibit "P-Sensor operational description"
- For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
 - Bottom Face: [7 mm](#)
 - Edge1: [10 mm](#)
 - Curved surface of Edge1: [12 mm](#)

Power Measurement during Sensor Trigger distance testing

Band/Mode	Ch #	Measured power reduction (dBm)		Reduction Levels (dB)
		w/o power back-off	w/ power back-off	
GSM850	128	32.10	28.34	3.76
GSM1900	810	29.22	26.03	3.19
WCDMA Band V	4182	23.04	21.51	1.53
WCDMA Band IV	1413	23.20	17.90	5.30
WCDMA Band II	9538	23.36	18.90	4.46
CDMA BC10	580	23.89	20.90	2.99
CDMA BC0	384	23.80	21.00	2.80
CDMA BC1	1175	23.87	18.77	5.10
LTE Band 17	23790	22.74	19.96	2.78
LTE Band 13	23230	22.51	19.13	3.38
LTE Band 5	20525	22.44	21.27	1.17
LTE Band 4	20175	22.62	17.78	4.84
LTE Band 2	18900	22.77	18.93	3.84
LTE Band 25	26340	22.54	18.81	3.73





6. RF Exposure Limits

6.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

6.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

7. Specific Absorption Rate (SAR)

7.1 Introduction

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

7.2 SAR Definition

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

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

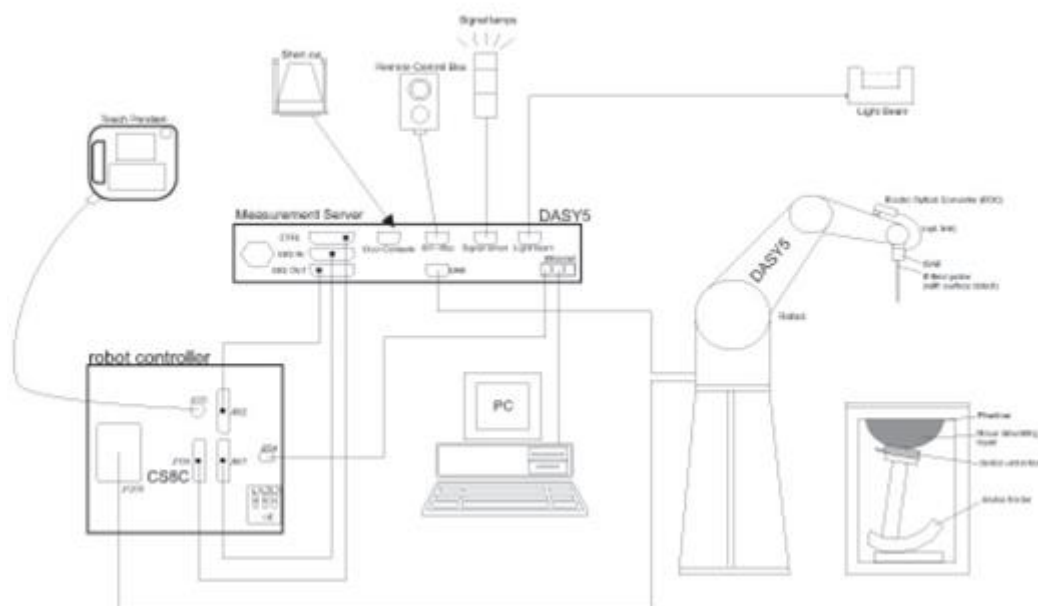
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 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.

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

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

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

9.1 Spatial Peak SAR Evaluation

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

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

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

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

9.2 Power Reference Measurement

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

9.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

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

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

9.5 Volume Scan Procedures

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

9.6 Power Drift Monitoring

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



10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1012	May. 28, 2015	May. 27, 2016
SPEAG	835MHz System Validation Kit	D835V2	499	Mar. 20, 2015	Mar. 19, 2016
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 14, 2014	Nov. 13, 2015
SPEAG	1900MHz System Validation Kit	D1900V2	5d018	Jun. 23, 2015	Jun. 22, 2016
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Feb. 18, 2015	Feb. 17, 2016
SPEAG	2450MHz System Validation Kit	D2450V2	924	Nov. 13, 2013	Nov. 12, 2014
SPEAG	Data Acquisition Electronics	DAE4	778	Aug. 25, 2015	Aug. 24, 2016
SPEAG	Data Acquisition Electronics	DAE4	915	Jun. 11, 2015	Jun. 10, 2016
SPEAG	Data Acquisition Electronics	DAE3	495	May. 22, 2015	May. 21, 2016
SPEAG	Data Acquisition Electronics	DAE4	1338	Nov. 05, 2013	Nov. 04, 2014
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 28, 2015	Sep. 27, 2016
SPEAG	Dosimetric E-Field Probe	EX3DV4	3943	Jan. 29, 2015	Jan. 28, 2016
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	May. 27, 2015	May. 26, 2016
SPEAG	Dosimetric E-Field Probe	EX3DV4	3955	Nov. 21, 2014	Nov. 20, 2015
SPEAG	Dosimetric E-Field Probe	EX3DV4	3935	Nov. 04, 2013	Nov. 03, 2014
WonDer	Thermometer	WD-5015	TM685	Oct. 21, 2014	Oct. 20, 2015
Wisewind	Thermometer	HTC-1	TM642	Oct. 21, 2014	Oct. 20, 2015
H.M.IRIS	Thermometer	TH-08	TM658	Oct. 21, 2014	Oct. 20, 2015
Wisewind	Thermometer	ETP-101	TM225	Oct. 21, 2014	Oct. 20, 2015
Wisewind	Thermometer	ETP-101	TM560	Oct. 22, 2013	Oct. 21, 2014
Anritsu	Radio Communication Analyzer	MT8820C	6201074414	Feb. 06, 2015	Feb. 05, 2016
Agilent	Wireless Communication Test Set	E5515C	MY50266977	May. 14, 2015	May. 13, 2016
R&S	Radio communication Tester	CMW500	149638	Aug. 04, 2015	Aug. 03, 2016
SPEAG	Device Holder	N/A	N/A	N/A	N/A
R&S	Signal Generator	MG3710A	6201502524	May. 25, 2015	May. 24, 2016
Agilent	Signal Generator	E4438C	MY49070755	Oct. 08, 2013	Oct. 07, 2014
Agilent	ENA Network Analyzer	E5071C	MY46316648	Feb. 11, 2015	Feb. 10, 2016
Agilent	ENA Network Analyzer	E5071C	MY46316648	Feb. 07, 2014	Feb. 06, 2015
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Jul. 21, 2015	Jul. 20, 2016
SPEAG	Dielectric Probe Kit	DAKS-3.5	0004	Mar. 04, 2014	Mar. 03, 2015
Anritsu	Power Meter	ML2495A	1419002	May. 13, 2015	May. 12, 2016
Anritsu	Power Sensor	MA2411B	1339124	May. 13, 2015	May. 12, 2016
Anritsu	Power Meter	ML2495A	1349001	Dec. 04, 2013	Dec. 03, 2014
Anritsu	Power Sensor	MA2411B	1306099	Dec. 03, 2013	Dec. 02, 2014
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 24, 2015	Aug. 23, 2016
R&S	Spectrum Analyzer	FSP30	101067	Nov. 20, 2013	Nov. 19, 2014
Agilent	Dual Directional Coupler	778D	50422	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	
AR	Power Amplifier	5S1G4M2	0328767	Note 1	
Mini-Circuits	Power Amplifier	ZVE-3W	162601250	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.

11. System Verification

11.1 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0
For Body								
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	68.1	0	0	0.1	0	31.8	2.16	52.5

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	MSL	22.6	0.969	55.277	0.96	55.50	0.94	-0.40	±5	2015/10/8
750	MSL	22.1	0.970	54.699	0.96	55.50	1.04	-1.44	±5	2015/10/15
750	MSL	22.6	0.974	55.018	0.96	55.50	1.46	-0.87	±5	2015/10/21
835	MSL	22.6	0.987	56.808	0.97	55.20	1.75	2.91	±5	2015/10/8
835	MSL	22.5	0.986	56.013	0.97	55.20	1.65	1.47	±5	2015/10/12
835	MSL	22.2	0.977	56.783	0.97	55.20	0.72	2.87	±5	2015/10/13
835	MSL	22.4	0.992	56.313	0.97	55.20	2.27	2.02	±5	2015/10/14
835	MSL	22.1	0.992	54.880	0.97	55.20	2.27	-0.58	±5	2015/10/21
1750	MSL	22.5	1.492	53.182	1.49	53.40	0.13	-0.41	±5	2015/10/8
1750	MSL	22.2	1.496	55.604	1.49	53.40	0.40	4.13	±5	2015/10/16
1750	MSL	22.3	1.464	55.657	1.49	53.40	-1.74	4.23	±5	2015/10/21
1900	MSL	22.5	1.527	54.259	1.52	53.30	0.46	1.80	±5	2015/10/7
1900	MSL	22.5	1.559	53.837	1.52	53.30	2.57	1.01	±5	2015/10/17
1900	MSL	22.6	1.562	53.953	1.52	53.30	2.76	1.23	±5	2015/10/19
1900	MSL	22.6	1.562	53.953	1.52	53.30	2.76	1.23	±5	2015/10/19
1900	MSL	22	1.580	52.579	1.52	53.30	3.95	-1.35	±5	2015/10/20
2450	MSL	22.5	1.930	53.269	1.95	52.70	-1.03	1.08	±5	2014/7/30

11.2 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2015/10/8	750	MSL	250	D750V3-1012	EX3DV4 - SN3943	DAE4 Sn778	2.22	8.61	8.88	3.14
2015/10/15	750	MSL	250	D750V3-1012	EX3DV4 - SN3925	DAE3 Sn495	2.31	8.61	9.24	7.32
2015/10/21	750	MSL	250	D750V3-1012	ES3DV3 - SN3270	DAE4 Sn778	2.30	8.61	9.20	6.85
2015/10/8	835	MSL	250	D835V2-499	EX3DV4 - SN3943	DAE4 Sn778	2.24	9.30	8.96	-3.66
2015/10/12	835	MSL	250	D835V2-499	EX3DV4 - SN3955	DAE4 Sn915	2.35	9.30	9.40	1.08
2015/10/13	835	MSL	250	D835V2-499	EX3DV4 - SN3955	DAE4 Sn915	2.42	9.30	9.68	4.09
2015/10/14	835	MSL	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.44	9.30	9.76	4.95
2015/10/21	835	MSL	250	D835V2-499	ES3DV3 - SN3270	DAE4 Sn778	2.50	9.30	10.00	7.53
2015/10/8	1750	MSL	250	D1750V2-1068	EX3DV4 - SN3943	DAE4 Sn778	9.30	38.00	37.20	-2.11
2015/10/16	1750	MSL	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	10.30	38.00	41.20	8.42
2015/10/21	1750	MSL	250	D1750V2-1068	ES3DV3 - SN3270	DAE4 Sn778	9.16	38.00	36.64	-3.58
2015/10/7	1900	MSL	250	D1900V2-5d185	EX3DV4 - SN3943	DAE4 Sn778	10.70	39.80	42.80	7.54
2015/10/17	1900	MSL	250	D1900V2-5d185	EX3DV4 - SN3925	DAE3 Sn495	9.93	39.80	39.72	-0.20
2015/10/19	1900	MSL	250	D1900V2-5d018	EX3DV4 - SN3925	DAE3 Sn495	10.20	40.10	40.80	1.75
2015/10/19	1900	MSL	250	D1900V2-5d018	ES3DV3 - SN3270	DAE4 Sn778	9.44	40.10	37.76	-5.84
2015/10/20	1900	MSL	250	D1900V2-5d018	ES3DV3 - SN3270	DAE4 Sn778	9.55	40.10	38.20	-4.74
2014/7/30	2450	MSL	250	D2450V2-924	EX3DV4 - SN3935	DAE4 Sn1338	13.30	50.20	53.20	5.98

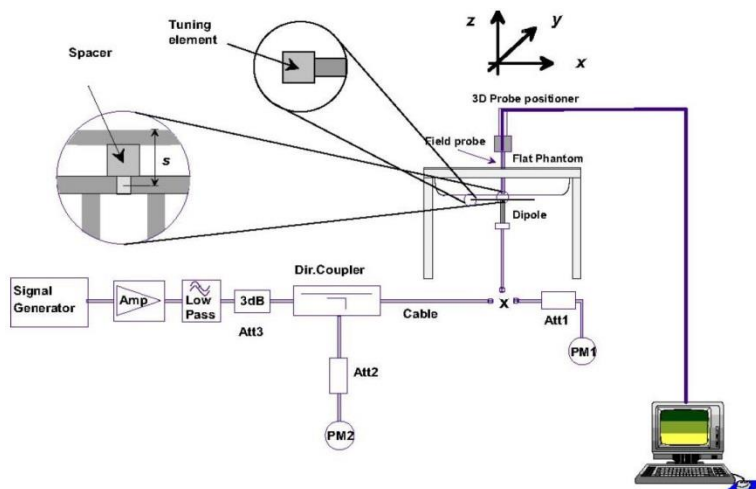


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

12. RF Exposure Positions

12.1 SAR Testing for Tablet

This device can be used also in full sized tablet exposure conditions, due to its size. Per FCC KDB 616217, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR exclusion threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

13. Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for Body SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance, for modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested, therefore, the GPRS 2Tx slots modes was selected when EUT operating without power back-off, the GPRS 2Tx slots modes was selected when EUT operating with power back-off, according to the highest source-based time-averaged output power.

Maximum Average RF Power (Proximity Sensor Inactive)

Band GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GPRS 1 Tx slot	32.22	32.20	32.10	33.50	23.22	23.20	23.10	24.50
GPRS 2 Tx slots	32.10	32.06	32.04	33.00	26.10	26.06	26.04	27.00
EDGE 1 Tx slot	26.93	26.94	26.97	28.00	17.93	17.94	17.97	19.00
EDGE 2 Tx slots	26.91	26.84	26.91	27.00	20.91	20.84	20.91	21.00
EDGE 3 Tx slots	26.80	26.75	26.74	27.00	22.54	22.49	22.48	22.74
EDGE 4 Tx slots	26.58	26.62	26.65	27.00	23.58	23.62	23.65	24.00

Band GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GPRS 1 Tx slot	29.18	29.34	29.13	30.50	20.18	20.34	20.13	21.50
GPRS 2 Tx slots	29.02	29.19	29.22	30.00	23.02	23.19	23.22	24.00
EDGE 1 Tx slot	25.64	25.65	25.62	27.00	16.64	16.65	16.62	18.00
EDGE 2 Tx slots	25.58	25.59	25.56	26.00	19.58	19.59	19.56	20.00
EDGE 3 Tx slots	25.53	25.50	25.46	26.00	21.27	21.24	21.20	21.74
EDGE 4 Tx slots	25.44	25.46	25.38	26.00	22.44	22.46	22.38	23.00

Reduced Average RF Power (Proximity Sensor active)

Band GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GPRS 1 Tx slot	30.21	30.20	30.16	30.50	21.21	21.20	21.16	21.50
GPRS 2 Tx slots	28.34	28.22	28.33	29.00	22.34	22.22	22.33	23.00
EDGE 1 Tx slot	26.93	26.94	26.97	28.00	17.93	17.94	17.97	19.00
EDGE 2 Tx slots	26.91	26.84	26.91	27.00	20.91	20.84	20.91	21.00
EDGE 3 Tx slots	26.80	26.75	26.74	27.00	22.54	22.49	22.48	22.74
EDGE 4 Tx slots	25.18	25.16	25.13	25.50	22.18	22.16	22.13	22.50

Band GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GPRS 1 Tx slot	28.53	28.44	28.40	29.00	19.53	19.44	19.40	20.00
GPRS 2 Tx slots	26.00	26.01	26.03	27.00	20.00	20.01	20.03	21.00
EDGE 1 Tx slot	25.64	25.65	25.62	27.00	16.64	16.65	16.62	18.00
EDGE 2 Tx slots	25.58	25.59	25.56	26.00	19.58	19.59	19.56	20.00
EDGE 3 Tx slots	24.07	24.11	24.06	24.50	19.81	19.85	19.80	20.24
EDGE 4 Tx slots	23.02	22.96	23.01	23.50	20.02	19.96	20.01	20.50

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - iii. Set RMC 12.2Kbps + HSDPA mode.
 - iv. Set Cell Power = -86 dBm
 - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - vi. Select HSDPA Uplink Parameters
 - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - viii. Set Ack-Nack Repetition Factor to 3
 - ix. Set CQI Feedback Cycle (k) to 4 ms
 - x. Set CQI Repetition Factor to 2
 - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

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

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
 - iii. Set Cell Power = -86 dBm
 - iv. Set Channel Type = 12.2k + HSPA
 - v. Set UE Target Power
 - vi. Power Ctrl Mode= Alternating bits
 - vii. Set and observe the E-TFCI
 - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.

Setup Configuration

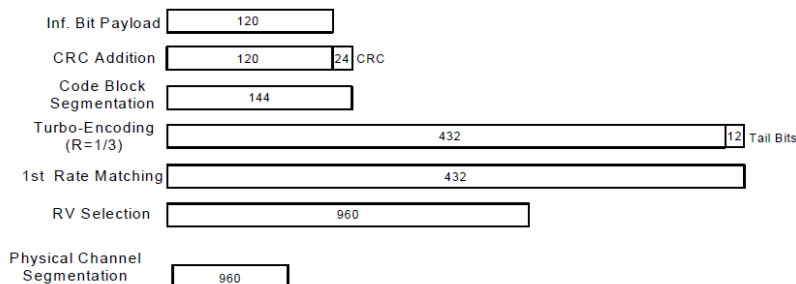
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12
Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)
Setup Configuration


<WCDMA Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, SAR for Body exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

Maximum Average RF Power (Proximity Sensor Inactive)

Band		WCDMA V			Tune-up Limit (dBm)	WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)
TX Channel		4132	4182	4233		9262	9400	9538		1312	1413	1513	
Rx Channel		4357	4407	4458		9662	9800	9938		1537	1638	1738	
Frequency (MHz)		826.4	836.4	846.6		1852.4	1880	1907.6		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	22.87	23.04	22.98	24.00	23.21	23.18	23.36	24.00	23.14	23.20	23.11	24.00
3GPP Rel 6	HSDPA Subtest-1	22.34	22.42	22.43	24.00	22.68	22.77	22.80	24.00	22.60	22.69	22.68	24.00
3GPP Rel 6	HSDPA Subtest-2	22.33	22.41	22.42	24.00	22.67	22.70	22.79	24.00	22.56	22.68	22.59	24.00
3GPP Rel 6	HSDPA Subtest-3	21.95	22.03	22.04	23.50	22.26	22.25	22.35	23.50	22.10	22.20	22.17	23.50
3GPP Rel 6	HSDPA Subtest-4	21.94	22.02	21.97	23.50	22.21	22.24	22.34	23.50	22.09	22.19	22.15	23.50
3GPP Rel 8	DC-HSDPA Subtest-1	22.33	22.41	22.42	24.00	22.67	22.75	22.77	24.00	22.59	22.65	22.63	24.00
3GPP Rel 8	DC-HSDPA Subtest-2	22.32	22.40	22.39	24.00	22.66	22.74	22.76	24.00	22.49	22.64	22.60	24.00
3GPP Rel 8	DC-HSDPA Subtest-3	21.94	21.99	21.96	23.50	22.24	22.23	22.34	23.50	22.09	22.15	22.16	23.50
3GPP Rel 8	DC-HSDPA Subtest-4	21.91	21.98	21.95	23.50	22.23	22.22	22.33	23.50	22.06	22.14	22.15	23.50
3GPP Rel 6	HSUPA Subtest-1	22.02	22.15	22.17	24.00	22.46	22.48	22.60	24.00	22.41	22.03	22.29	24.00
3GPP Rel 6	HSUPA Subtest-2	20.97	20.93	21.07	22.00	21.30	21.29	21.46	22.00	21.08	21.09	21.15	22.00
3GPP Rel 6	HSUPA Subtest-3	21.16	21.23	21.34	23.00	21.59	21.50	21.69	23.00	21.14	21.28	21.37	23.00
3GPP Rel 6	HSUPA Subtest-4	21.64	21.65	21.62	22.00	21.69	21.95	21.75	22.00	21.67	21.86	21.53	22.00
3GPP Rel 6	HSUPA Subtest-5	22.11	22.20	22.15	24.00	22.23	22.30	22.41	24.00	22.12	22.22	22.11	24.00

Reduced Average RF Power (Proximity Sensor active)

Band		WCDMA V			Tune-up Limit (dBm)	WCDMA II			Tune-up Limit (dBm)	WCDMA IV			Tune-up Limit (dBm)
TX Channel		4132	4182	4233		9262	9400	9538		1312	1413	1513	
Rx Channel		4357	4407	4458		9662	9800	9938		1537	1638	1738	
Frequency (MHz)		826.4	836.4	846.6		1852.4	1880	1907.6		1712.4	1732.6	1752.6	
3GPP Rel 99	RMC 12.2Kbps	21.45	21.51	21.49	22.00	18.73	18.78	18.90	20.00	17.74	17.90	17.76	19.00
3GPP Rel 6	HSDPA Subtest-1	20.86	21.07	21.01	22.00	18.29	18.30	18.47	20.00	17.30	17.25	17.20	19.00
3GPP Rel 6	HSDPA Subtest-2	20.85	20.97	21.00	22.00	18.28	18.29	18.42	20.00	17.29	17.24	17.19	19.00
3GPP Rel 6	HSDPA Subtest-3	20.44	20.53	20.64	21.50	17.71	17.98	17.83	19.50	16.81	16.86	16.81	18.50
3GPP Rel 6	HSDPA Subtest-4	20.43	20.52	20.54	21.50	17.70	17.95	17.82	19.50	16.89	16.96	16.88	18.50
3GPP Rel 8	DC-HSDPA Subtest-1	20.83	21.04	20.98	22.00	18.27	18.29	18.45	20.00	17.29	17.23	17.18	19.00
3GPP Rel 8	DC-HSDPA Subtest-2	20.81	21.02	20.97	22.00	18.26	18.28	18.40	20.00	17.27	17.20	17.17	19.00
3GPP Rel 8	DC-HSDPA Subtest-3	20.43	20.51	20.63	21.50	17.70	17.97	17.81	19.50	16.80	16.84	16.79	18.50
3GPP Rel 8	DC-HSDPA Subtest-4	20.41	20.50	20.52	21.50	17.68	17.94	17.80	19.50	16.87	16.94	16.86	18.50
3GPP Rel 6	HSUPA Subtest-1	20.83	20.80	20.98	22.00	18.08	18.04	18.07	20.00	17.02	17.18	17.19	19.00
3GPP Rel 6	HSUPA Subtest-2	19.53	19.58	19.71	20.00	17.38	17.33	17.27	18.00	15.83	15.95	16.05	17.00
3GPP Rel 6	HSUPA Subtest-3	19.78	19.77	19.95	21.00	17.68	17.65	17.61	19.00	16.16	16.23	16.27	18.00
3GPP Rel 6	HSUPA Subtest-4	19.91	19.72	19.99	20.00	17.14	17.35	17.33	18.00	15.80	15.86	15.91	17.00
3GPP Rel 6	HSUPA Subtest-5	20.45	20.57	20.61	22.00	18.03	18.12	18.18	20.00	17.33	17.36	17.25	19.00

<CDMA2000 Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, in Body SAR tested, the EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.

Maximum Average RF Power (Proximity Sensor Inactive)

Band	CDMA2000 BC10			Tune-up Limit (dBm)	CDMA2000 BC0			Tune-up Limit (dBm)	CDMA2000 BC1			Tune-up Limit (dBm)
TX Channel	476	580	684		1013	384	777		25	600	1175	
Frequency (MHz)	817.9	820.5	823.1		824.7	836.52	848.31		1851.25	1880	1908.75	
1xRTT RC1 SO55	23.73	23.83	23.66	24.50	23.69	23.77	23.52	24.50	23.78	23.74	23.85	24.50
1xRTT RC3 SO55	23.78	23.84	23.66	24.50	23.62	23.75	23.54	24.50	23.83	23.75	23.84	24.50
1xEVDO RTAP 153.6Kbps	23.78	23.89	23.75	24.50	23.71	23.80	23.57	24.50	23.83	23.82	23.87	24.50
1xEVDO RETAP 4096Bits	23.78	23.86	23.69	24.50	23.65	23.74	23.52	24.50	23.79	23.72	23.81	24.50

Reduced Average RF Power (Proximity Sensor active)

Band	CDMA2000 BC10			Tune-up Limit (dBm)	CDMA2000 BC0			Tune-up Limit (dBm)	CDMA2000 BC1			Tune-up Limit (dBm)
TX Channel	476	580	684		1013	384	777		25	600	1175	
Frequency (MHz)	817.9	820.5	823.1		824.7	836.52	848.31		1851.25	1880	1908.75	
1xRTT RC1 SO55	20.82	20.88	20.70	22.00	20.84	20.94	20.66	22.00	18.52	18.74	18.68	19.50
1xRTT RC3 SO55	20.87	20.84	20.79	22.00	20.88	20.91	20.73	22.00	18.53	18.68	18.71	19.50
1xEVDO RTAP 153.6Kbps	20.88	20.90	20.80	22.00	20.98	21.00	20.73	22.00	18.62	18.77	18.73	19.50
1xEVDO RETAP 4096Bits	20.88	20.89	20.71	22.00	20.85	20.91	20.65	22.00	18.57	18.75	18.66	19.50

<LTE Conducted Power>**General Note:**

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r04, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r04, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r04, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r04, 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. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r04, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r04, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r04, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r04, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B17 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r04, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2 SAR test was covered by Band 25 ; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band



Maximum Average RF Power (Proximity Sensor Inactive)

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.58	22.77	22.62	24	0
20	QPSK	1	49	22.31	22.67	22.53		
20	QPSK	1	99	22.48	22.65	22.44		
20	QPSK	50	0	21.53	21.72	21.60	23	1
20	QPSK	50	24	21.50	21.67	21.58		
20	QPSK	50	50	21.45	21.70	21.50		
20	QPSK	100	0	21.32	21.53	21.40	23	1
20	16QAM	1	0	21.34	21.70	21.63		
20	16QAM	1	49	21.51	21.73	21.56		
20	16QAM	1	99	21.53	21.70	21.49	22	2
20	16QAM	50	0	20.42	20.66	20.49		
20	16QAM	50	24	20.48	20.65	20.56		
20	16QAM	50	50	20.56	20.64	20.49	22	2
20	16QAM	100	0	20.31	20.51	20.41		
Channel				18675	18900	19125		
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.52	22.76	22.60	24	0
15	QPSK	1	37	22.30	22.61	22.44		
15	QPSK	1	74	22.42	22.63	22.41		
15	QPSK	36	0	21.47	21.64	21.56	23	1
15	QPSK	36	20	21.48	21.58	21.51		
15	QPSK	36	39	21.36	21.65	21.46		
15	QPSK	75	0	21.22	21.50	21.39	23	1
15	16QAM	1	0	21.25	21.61	21.58		
15	16QAM	1	37	21.48	21.72	21.55		
15	16QAM	1	74	21.44	21.64	21.49	22	2
15	16QAM	36	0	20.40	20.64	20.42		
15	16QAM	36	20	20.39	20.61	20.54		
15	16QAM	36	39	20.51	20.60	20.39	22	2
15	16QAM	75	0	20.24	20.50	20.32		
Channel				18650	18900	19150		
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.50	22.74	22.53	24	0
10	QPSK	1	25	22.28	22.54	22.43		
10	QPSK	1	49	22.37	22.53	22.36		
10	QPSK	25	0	21.37	21.62	21.51	23	1
10	QPSK	25	12	21.48	21.56	21.44		
10	QPSK	25	25	21.27	21.59	21.39		
10	QPSK	50	0	21.19	21.43	21.31	23	1
10	16QAM	1	0	21.15	21.61	21.48		
10	16QAM	1	25	21.45	21.66	21.45		
10	16QAM	1	49	21.39	21.57	21.49	22	2
10	16QAM	25	0	20.34	20.55	20.35		
10	16QAM	25	12	20.36	20.56	20.46		
10	16QAM	25	25	20.50	20.57	20.38	22	2
10	16QAM	50	0	20.14	20.46	20.32		



Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.44	22.71	22.44	24	0
5	QPSK	1	12	22.25	22.53	22.33		
5	QPSK	1	24	22.31	22.46	22.32		
5	QPSK	12	0	21.28	21.57	21.46	23	1
5	QPSK	12	7	21.38	21.55	21.34		
5	QPSK	12	13	21.23	21.52	21.38		
5	QPSK	25	0	21.18	21.43	21.24		
5	16QAM	1	0	21.14	21.60	21.38	23	1
5	16QAM	1	12	21.41	21.59	21.35		
5	16QAM	1	24	21.35	21.54	21.42		
5	16QAM	12	0	20.28	20.53	20.34	22	2
5	16QAM	12	7	20.28	20.50	20.36		
5	16QAM	12	13	20.47	20.50	20.28		
5	16QAM	25	0	20.04	20.37	20.30		

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	22.50	22.62	22.52	24	0
20	QPSK	1	49	22.47	22.55	22.43		
20	QPSK	1	99	22.45	22.58	22.41		
20	QPSK	50	0	21.40	21.61	21.47	23	1
20	QPSK	50	24	21.41	21.62	21.48		
20	QPSK	50	50	21.38	21.55	21.36		
20	QPSK	100	0	21.25	21.48	21.32	23	1
20	16QAM	1	0	21.49	21.59	21.39		
20	16QAM	1	49	21.44	21.67	21.47		
20	16QAM	1	99	21.51	21.58	21.50	22	2
20	16QAM	50	0	20.36	20.57	20.41		
20	16QAM	50	24	20.38	20.60	20.50		
20	16QAM	50	50	20.36	20.51	20.34	22	2
20	16QAM	100	0	20.22	20.34	20.21		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	22.42	22.57	22.45	24	0
15	QPSK	1	37	22.40	22.47	22.40		
15	QPSK	1	74	22.41	22.53	22.41		
15	QPSK	36	0	21.33	21.54	21.37	23	1
15	QPSK	36	20	21.31	21.62	21.44		
15	QPSK	36	39	21.29	21.51	21.26		
15	QPSK	75	0	21.15	21.47	21.27	23	1
15	16QAM	1	0	21.41	21.57	21.34		
15	16QAM	1	37	21.34	21.58	21.39		
15	16QAM	1	74	21.46	21.52	21.42	22	2
15	16QAM	36	0	20.36	20.54	20.41		
15	16QAM	36	20	20.38	20.54	20.43		
15	16QAM	36	39	20.26	20.47	20.31	22	2
15	16QAM	75	0	20.19	20.32	20.18		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	22.32	22.47	22.39	24	0
10	QPSK	1	25	22.36	22.45	22.30		
10	QPSK	1	49	22.32	22.43	22.41		
10	QPSK	25	0	21.29	21.46	21.32	23	1
10	QPSK	25	12	21.23	21.62	21.39		
10	QPSK	25	25	21.19	21.42	21.25		
10	QPSK	50	0	21.11	21.39	21.25	23	1
10	16QAM	1	0	21.36	21.49	21.34		
10	16QAM	1	25	21.34	21.56	21.31		
10	16QAM	1	49	21.38	21.44	21.39	22	2
10	16QAM	25	0	20.34	20.44	20.39		
10	16QAM	25	12	20.30	20.51	20.43		
10	16QAM	25	25	20.19	20.45	20.22	22	2
10	16QAM	50	0	20.17	20.32	20.18		



Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	22.23	22.41	22.39	24	0
5	QPSK	1	12	22.31	22.38	22.25		
5	QPSK	1	24	22.28	22.34	22.35		
5	QPSK	12	0	21.21	21.39	21.23	23	1
5	QPSK	12	7	21.14	21.57	21.33		
5	QPSK	12	13	21.17	21.37	21.24		
5	QPSK	25	0	21.10	21.31	21.25		
5	16QAM	1	0	21.34	21.47	21.32	23	1
5	16QAM	1	12	21.26	21.52	21.29		
5	16QAM	1	24	21.32	21.43	21.39		
5	16QAM	12	0	20.24	20.44	20.29	22	2
5	16QAM	12	7	20.22	20.42	20.35		
5	16QAM	12	13	20.14	20.36	20.15		
5	16QAM	25	0	20.13	20.30	20.16		

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.26	22.44	22.40	24	0
10	QPSK	1	25	22.19	22.35	22.15		
10	QPSK	1	49	22.16	22.41	22.18		
10	QPSK	25	0	21.25	21.44	21.35	23	1
10	QPSK	25	12	21.20	21.40	21.13		
10	QPSK	25	25	21.24	21.43	21.10		
10	QPSK	50	0	21.09	21.27	21.16		
10	16QAM	1	0	21.19	21.47	21.27	23	1
10	16QAM	1	25	21.27	21.44	21.26		
10	16QAM	1	49	21.33	21.41	21.65		
10	16QAM	25	0	20.18	20.40	20.18	22	2
10	16QAM	25	12	20.23	20.44	20.13		
10	16QAM	25	25	20.24	20.44	20.18		
10	16QAM	50	0	20.10	20.33	20.10		
Channel				20425	20525	20625		
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.26	22.41	22.33	24	0
5	QPSK	1	12	22.18	22.32	22.15		
5	QPSK	1	24	22.10	22.40	22.08		
5	QPSK	12	0	21.23	21.43	21.25	23	1
5	QPSK	12	7	21.12	21.32	21.07		
5	QPSK	12	13	21.18	21.40	21.04		
5	QPSK	25	0	21.02	21.19	21.11		
5	16QAM	1	0	21.18	21.45	21.24	23	1
5	16QAM	1	12	21.27	21.38	21.19		
5	16QAM	1	24	21.29	21.38	21.57		
5	16QAM	12	0	20.13	20.36	20.11	22	2
5	16QAM	12	7	20.22	20.34	20.12		
5	16QAM	12	13	20.22	20.39	20.17		
5	16QAM	25	0	20.06	20.26	20.08		

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230				
Frequency (MHz)				782				
10	QPSK	1	0		22.51		24	0
10	QPSK	1	25		22.27			
10	QPSK	1	49		22.41			
10	QPSK	25	0		21.63		23	1
10	QPSK	25	12		21.48			
10	QPSK	25	25		21.54			
10	QPSK	50	0		21.44		23	1
10	16QAM	1	0		21.20			
10	16QAM	1	25		21.58			
10	16QAM	1	49		21.39		22	2
10	16QAM	25	0		20.44			
10	16QAM	25	12		20.59			
10	16QAM	25	25		20.55		22	2
10	16QAM	50	0		20.40			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.42	22.48	22.46	24	0
5	QPSK	1	12	22.20	22.23	22.27		
5	QPSK	1	24	22.37	22.32	22.36		
5	QPSK	12	0	21.56	21.62	21.62	23	1
5	QPSK	12	7	21.38	21.41	21.47		
5	QPSK	12	13	21.45	21.50	21.51		
5	QPSK	25	0	21.35	21.41	21.41	23	1
5	16QAM	1	0	21.10	21.13	21.14		
5	16QAM	1	12	21.48	21.50	21.48		
5	16QAM	1	24	21.36	21.37	21.37	22	2
5	16QAM	12	0	20.37	20.36	20.36		
5	16QAM	12	7	20.49	20.55	20.54		
5	16QAM	12	13	20.55	20.51	20.46		
5	16QAM	25	0	20.35	20.40	20.31		

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	22.61	22.74	22.60	24	0
10	QPSK	1	25	22.36	22.64	22.53		
10	QPSK	1	49	22.38	22.51	22.27		
10	QPSK	25	0	21.70	21.78	21.69	23	1
10	QPSK	25	12	21.59	21.71	21.66		
10	QPSK	25	25	21.69	21.74	21.48		
10	QPSK	50	0	21.49	21.66	21.50	23	1
10	16QAM	1	0	21.38	21.62	21.54		
10	16QAM	1	25	21.66	21.88	21.66		
10	16QAM	1	49	21.41	21.58	21.29	22	2
10	16QAM	25	0	20.61	20.78	20.68		
10	16QAM	25	12	20.65	20.81	20.76		
10	16QAM	25	25	20.66	20.76	20.55	22	2
10	16QAM	50	0	20.46	20.65	20.56		
Channel				23755	23790	23825		
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	22.54	22.66	22.57	24	0
5	QPSK	1	12	22.29	22.56	22.51		
5	QPSK	1	24	22.36	22.50	22.21		
5	QPSK	12	0	21.62	21.76	21.67	23	1
5	QPSK	12	7	21.53	21.71	21.64		
5	QPSK	12	13	21.61	21.72	21.39		
5	QPSK	25	0	21.46	21.65	21.47	23	1
5	16QAM	1	0	21.36	21.62	21.46		
5	16QAM	1	12	21.64	21.79	21.65		
5	16QAM	1	24	21.32	21.56	21.23	22	2
5	16QAM	12	0	20.56	20.70	20.67		
5	16QAM	12	7	20.55	20.75	20.71		
5	16QAM	12	13	20.59	20.71	20.55	22	2
5	16QAM	25	0	20.41	20.56	20.46		



<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	22.48	22.54	22.42	24	0
20	QPSK	1	49	22.46	22.53	22.39		
20	QPSK	1	99	22.46	22.47	22.39		
20	QPSK	50	0	21.41	21.53	21.35	23	1
20	QPSK	50	24	21.47	21.54	21.36		
20	QPSK	50	50	21.44	21.47	21.33		
20	QPSK	100	0	21.30	21.34	21.22	23	1
20	16QAM	1	0	21.46	21.55	21.41		
20	16QAM	1	49	21.46	21.56	21.45		
20	16QAM	1	99	21.44	21.50	21.44	22	2
20	16QAM	50	0	20.32	20.47	20.30		
20	16QAM	50	24	20.42	20.45	20.34		
20	16QAM	50	50	20.36	20.44	20.36	22	2
20	16QAM	100	0	20.27	20.33	20.21		
Channel				26115	26340	26615		
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	22.41	22.44	22.34	24	0
15	QPSK	1	37	22.36	22.50	22.35		
15	QPSK	1	74	22.43	22.45	22.35		
15	QPSK	36	0	21.40	21.50	21.35	23	1
15	QPSK	36	20	21.38	21.51	21.33		
15	QPSK	36	39	21.43	21.41	21.32		
15	QPSK	75	0	21.24	21.27	21.20	23	1
15	16QAM	1	0	21.39	21.50	21.31		
15	16QAM	1	37	21.46	21.47	21.44		
15	16QAM	1	74	21.41	21.45	21.43	22	2
15	16QAM	36	0	20.24	20.42	20.24		
15	16QAM	36	20	20.33	20.35	20.31		
15	16QAM	36	39	20.27	20.43	20.31	22	2
15	16QAM	75	0	20.19	20.24	20.15		
Channel				26090	26340	26640		
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	22.36	22.48	22.30	24	0
10	QPSK	1	25	22.35	22.47	22.34		
10	QPSK	1	49	22.37	22.37	22.25		
10	QPSK	25	0	21.39	21.46	21.35	23	1
10	QPSK	25	12	21.29	21.47	21.26		
10	QPSK	25	25	21.40	21.38	21.22		
10	QPSK	50	0	21.20	21.19	21.16	23	1
10	16QAM	1	0	21.39	21.43	21.27		
10	16QAM	1	25	21.36	21.38	21.36		
10	16QAM	1	49	21.32	21.36	21.42	22	2
10	16QAM	25	0	20.22	20.39	20.18		
10	16QAM	25	12	20.27	20.35	20.27		
10	16QAM	25	25	20.22	20.42	20.25	22	2
10	16QAM	50	0	20.16	20.22	20.14		



Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.36	22.43	22.25	24	0
5	QPSK	1	12	22.25	22.42	22.29		
5	QPSK	1	24	22.30	22.32	22.17		
5	QPSK	12	0	21.33	21.37	21.25	23	1
5	QPSK	12	7	21.29	21.42	21.25		
5	QPSK	12	13	21.38	21.31	21.22		
5	QPSK	25	0	21.11	21.13	21.12		
5	16QAM	1	0	21.29	21.43	21.21	23	1
5	16QAM	1	12	21.29	21.36	21.31		
5	16QAM	1	24	21.26	21.28	21.39		
5	16QAM	12	0	20.15	20.37	20.08	22	2
5	16QAM	12	7	20.21	20.35	20.26		
5	16QAM	12	13	20.22	20.34	20.25		
5	16QAM	25	0	20.12	20.19	20.14		



Reduced Average RF Power (Proximity Sensor active)

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	18.87	18.93	18.92	19.5	0
20	QPSK	1	49	18.64	18.70	18.60		
20	QPSK	1	99	18.46	18.63	18.78		
20	QPSK	50	0	18.47	18.52	18.51	19.5	0
20	QPSK	50	24	18.40	18.45	18.50		
20	QPSK	50	50	18.46	18.45	18.48		
20	QPSK	100	0	18.48	18.55	18.53		
20	16QAM	1	0	18.55	18.54	18.66	19.5	0
20	16QAM	1	49	18.59	18.72	18.65		
20	16QAM	1	99	18.47	18.61	18.77		
20	16QAM	50	0	18.42	18.51	18.46	19.5	0
20	16QAM	50	24	18.39	18.40	18.48		
20	16QAM	50	50	18.40	18.44	18.45		
20	16QAM	100	0	18.48	18.47	18.48		
Channel				18675	18900	19125		
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	18.85	18.92	18.85	19.5	0
15	QPSK	1	37	18.56	18.69	18.52		
15	QPSK	1	74	18.38	18.60	18.71		
15	QPSK	36	0	18.41	18.51	18.45	19.5	0
15	QPSK	36	20	18.32	18.44	18.45		
15	QPSK	36	39	18.39	18.42	18.44		
15	QPSK	75	0	18.39	18.52	18.45		
15	16QAM	1	0	18.52	18.46	18.62	19.5	0
15	16QAM	1	37	18.56	18.64	18.55		
15	16QAM	1	74	18.42	18.52	18.73		
15	16QAM	36	0	18.41	18.47	18.45	19.5	0
15	16QAM	36	20	18.34	18.37	18.41		
15	16QAM	36	39	18.36	18.34	18.35		
15	16QAM	75	0	18.44	18.39	18.43		
Channel				18650	18900	19150		
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	18.84	18.84	18.85	19.5	0
10	QPSK	1	25	18.55	18.65	18.45		
10	QPSK	1	49	18.35	18.60	18.64		
10	QPSK	25	0	18.33	18.48	18.43	19.5	0
10	QPSK	25	12	18.29	18.44	18.45		
10	QPSK	25	25	18.34	18.40	18.41		
10	QPSK	50	0	18.36	18.46	18.44		
10	16QAM	1	0	18.43	18.43	18.57	19.5	0
10	16QAM	1	25	18.51	18.61	18.55		
10	16QAM	1	49	18.35	18.51	18.72		
10	16QAM	25	0	18.34	18.41	18.40	19.5	0
10	16QAM	25	12	18.31	18.37	18.40		
10	16QAM	25	25	18.31	18.32	18.28		
10	16QAM	50	0	18.36	18.38	18.42		



Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	18.77	18.79	18.80	19.5	0
5	QPSK	1	12	18.46	18.64	18.39		
5	QPSK	1	24	18.35	18.54	18.55		
5	QPSK	12	0	18.25	18.45	18.39	19.5	0
5	QPSK	12	7	18.22	18.42	18.41		
5	QPSK	12	13	18.32	18.34	18.35		
5	QPSK	25	0	18.32	18.36	18.35		
5	16QAM	1	0	18.34	18.40	18.56	19.5	0
5	16QAM	1	12	18.46	18.60	18.46		
5	16QAM	1	24	18.32	18.42	18.68		
5	16QAM	12	0	18.26	18.36	18.38	19.5	0
5	16QAM	12	7	18.29	18.27	18.37		
5	16QAM	12	13	18.27	18.30	18.23		
5	16QAM	25	0	18.28	18.34	18.38		

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	17.72	17.78	17.76	18.5	0
20	QPSK	1	49	17.50	17.65	17.70		
20	QPSK	1	99	17.49	17.57	17.64		
20	QPSK	50	0	17.43	17.75	17.61	18.5	0
20	QPSK	50	24	17.35	17.51	17.53		
20	QPSK	50	50	17.37	17.49	17.51		
20	QPSK	100	0	17.32	17.57	17.55		
20	16QAM	1	0	17.54	17.72	17.68	18.5	0
20	16QAM	1	49	17.51	17.69	17.71		
20	16QAM	1	99	17.50	17.58	17.69		
20	16QAM	50	0	17.34	17.42	17.59	18.5	0
20	16QAM	50	24	17.36	17.47	17.56		
20	16QAM	50	50	17.36	17.48	17.59		
20	16QAM	100	0	17.29	17.49	17.56		
Channel				20025	20175	20325		
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	17.70	17.71	17.68	18.5	0
15	QPSK	1	37	17.48	17.61	17.67		
15	QPSK	1	74	17.45	17.51	17.64		
15	QPSK	36	0	17.35	17.65	17.50	18.5	0
15	QPSK	36	20	17.33	17.43	17.44		
15	QPSK	36	39	17.27	17.43	17.52		
15	QPSK	75	0	17.22	17.55	17.51		
15	16QAM	1	0	17.44	17.67	17.64	18.5	0
15	16QAM	1	37	17.44	17.62	17.62		
15	16QAM	1	74	17.48	17.50	17.68		
15	16QAM	36	0	17.27	17.32	17.52	18.5	0
15	16QAM	36	20	17.34	17.39	17.56		
15	16QAM	36	39	17.31	17.41	17.56		
15	16QAM	75	0	17.29	17.48	17.56		
Channel				20000	20175	20350		
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	17.68	17.68	17.61	18.5	0
10	QPSK	1	25	17.47	17.57	17.67		
10	QPSK	1	49	17.39	17.46	17.63		
10	QPSK	25	0	17.26	17.57	17.40	18.5	0
10	QPSK	25	12	17.31	17.39	17.34		
10	QPSK	25	25	17.18	17.34	17.50		
10	QPSK	50	0	17.16	17.54	17.48		
10	16QAM	1	0	17.35	17.59	17.61	18.5	0
10	16QAM	1	25	17.34	17.59	17.52		
10	16QAM	1	49	17.44	17.48	17.66		
10	16QAM	25	0	17.24	17.28	17.43	18.5	0
10	16QAM	25	12	17.24	17.35	17.54		
10	16QAM	25	25	17.21	17.36	17.54		
10	16QAM	50	0	17.23	17.43	17.52		



Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	17.63	17.62	17.58	18.5	0
5	QPSK	1	12	17.45	17.50	17.65		
5	QPSK	1	24	17.36	17.40	17.56		
5	QPSK	12	0	17.21	17.48	17.37	18.5	0
5	QPSK	12	7	17.27	17.30	17.30		
5	QPSK	12	13	17.10	17.24	17.47		
5	QPSK	25	0	17.09	17.53	17.46		
5	16QAM	1	0	17.28	17.49	17.54	18.5	0
5	16QAM	1	12	17.31	17.53	17.46		
5	16QAM	1	24	17.34	17.40	17.61		
5	16QAM	12	0	17.19	17.25	17.42	18.5	0
5	16QAM	12	7	17.23	17.31	17.50		
5	16QAM	12	13	17.20	17.27	17.54		
5	16QAM	25	0	17.23	17.39	17.48		

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23230				
Frequency (MHz)				782				
10	QPSK	1	0		19.13		20.5	0
10	QPSK	1	25		19.09			
10	QPSK	1	49		19.08			
10	QPSK	25	0		19.12		20.5	0
10	QPSK	25	12		19.03			
10	QPSK	25	25		19.08			
10	QPSK	50	0		19.10		20.5	0
10	16QAM	1	0		19.00			
10	16QAM	1	25		19.02			
10	16QAM	1	49		19.07		20.5	0
10	16QAM	25	0		19.02			
10	16QAM	25	12		19.03			
10	16QAM	25	25		19.12		20.5	0
10	16QAM	50	0		19.01			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	19.04	19.08	19.06	20.5	0
5	QPSK	1	12	19.05	19.06	19.06		
5	QPSK	1	24	18.98	19.00	18.99		
5	QPSK	12	0	18.90	18.95	18.92	20.5	0
5	QPSK	12	7	18.78	18.83	18.83		
5	QPSK	12	13	18.99	19.04	19.01		
5	QPSK	25	0	18.81	18.86	18.83	20.5	0
5	16QAM	1	0	18.92	18.97	18.94		
5	16QAM	1	12	19.02	19.07	19.06		
5	16QAM	1	24	19.00	19.05	19.02	20.5	0
5	16QAM	12	0	18.88	18.93	18.90		
5	16QAM	12	7	18.99	19.04	19.01		
5	16QAM	12	13	18.97	19.02	19.01	20.5	0
5	16QAM	25	0	18.87	18.92	18.89		



<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	19.93	19.96	19.90	20.5	0
10	QPSK	1	25	19.90	19.89	19.83		
10	QPSK	1	49	19.91	19.80	19.72		
10	QPSK	25	0	19.91	19.95	19.89	20.5	0
10	QPSK	25	12	19.90	19.94	19.88		
10	QPSK	25	25	19.90	19.89	19.88		
10	QPSK	50	0	19.88	19.91	19.78		
10	16QAM	1	0	19.90	19.75	19.74	20.5	0
10	16QAM	1	25	19.90	19.89	19.86		
10	16QAM	1	49	19.89	19.81	19.64		
10	16QAM	25	0	19.91	19.90	19.90	20.5	0
10	16QAM	25	12	19.85	19.95	19.89		
10	16QAM	25	25	19.92	19.86	19.89		
10	16QAM	50	0	19.84	19.83	19.79		
Channel				23755	23790	23825		
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	19.90	19.88	19.80	20.5	0
5	QPSK	1	12	19.84	19.88	19.73		
5	QPSK	1	24	19.87	19.76	19.65		
5	QPSK	12	0	19.85	19.87	19.83	20.5	0
5	QPSK	12	7	19.87	19.85	19.81		
5	QPSK	12	13	19.89	19.86	19.84		
5	QPSK	25	0	19.85	19.87	19.70	20.5	0
5	16QAM	1	0	19.84	19.68	19.66		
5	16QAM	1	12	19.85	19.88	19.86		
5	16QAM	1	24	19.89	19.71	19.58	20.5	0
5	16QAM	12	0	19.86	19.84	19.87		
5	16QAM	12	7	19.76	19.92	19.86		
5	16QAM	12	13	19.82	19.86	19.84		
5	16QAM	25	0	19.76	19.76	19.78		



<LTE Band 25>

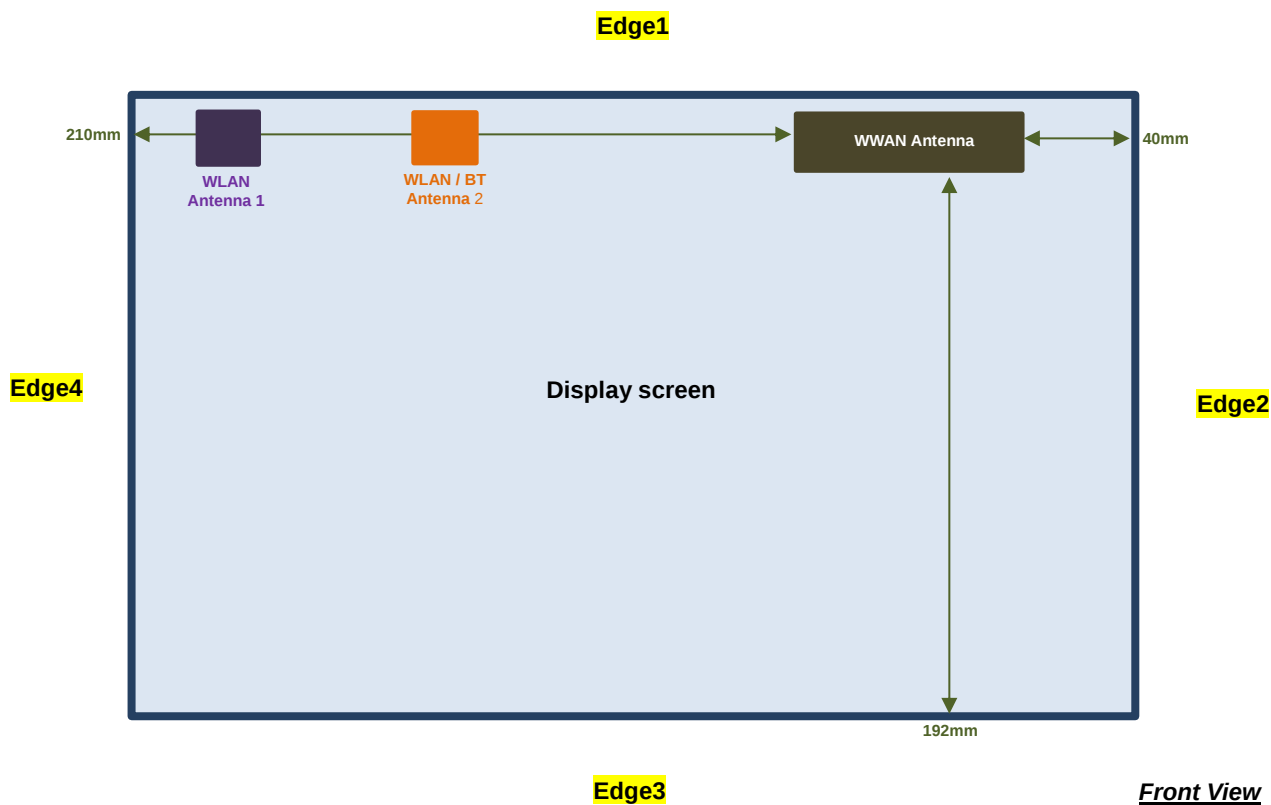
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	18.80	18.81	18.75	19.5	0
20	QPSK	1	49	18.72	18.78	18.72		
20	QPSK	1	99	18.64	18.60	18.70		
20	QPSK	50	0	18.66	18.77	18.76	19.5	0
20	QPSK	50	24	18.53	18.53	18.60		
20	QPSK	50	50	18.54	18.56	18.73		
20	QPSK	100	0	18.60	18.65	18.64		
20	16QAM	1	0	18.64	18.77	18.72	19.5	0
20	16QAM	1	49	18.70	18.84	18.80		
20	16QAM	1	99	18.60	18.64	18.79		
20	16QAM	50	0	18.62	18.63	18.50	19.5	0
20	16QAM	50	24	18.56	18.48	18.63		
20	16QAM	50	50	18.50	18.55	18.71		
20	16QAM	100	0	18.51	18.59	18.60		
Channel				26115	26340	26615		
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	18.77	18.79	18.75	19.5	0
15	QPSK	1	37	18.63	18.69	18.67		
15	QPSK	1	74	18.64	18.52	18.61		
15	QPSK	36	0	18.56	18.73	18.75	19.5	0
15	QPSK	36	20	18.47	18.44	18.58		
15	QPSK	36	39	18.47	18.54	18.68		
15	QPSK	75	0	18.54	18.65	18.62		
15	16QAM	1	0	18.58	18.71	18.64	19.5	0
15	16QAM	1	37	18.69	18.79	18.78		
15	16QAM	1	74	18.59	18.58	18.72		
15	16QAM	36	0	18.56	18.57	18.50	19.5	0
15	16QAM	36	20	18.46	18.38	18.53		
15	16QAM	36	39	18.44	18.46	18.63		
15	16QAM	75	0	18.49	18.58	18.57		
Channel				26090	26340	26640		
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	18.70	18.75	18.67	19.5	0
10	QPSK	1	25	18.63	18.69	18.64		
10	QPSK	1	49	18.57	18.48	18.53		
10	QPSK	25	0	18.50	18.73	18.72	19.5	0
10	QPSK	25	12	18.42	18.34	18.55		
10	QPSK	25	25	18.45	18.51	18.61		
10	QPSK	50	0	18.53	18.57	18.62		
10	16QAM	1	0	18.55	18.70	18.59	19.5	0
10	16QAM	1	25	18.69	18.79	18.68		
10	16QAM	1	49	18.49	18.52	18.63		
10	16QAM	25	0	18.50	18.50	18.44	19.5	0
10	16QAM	25	12	18.46	18.33	18.44		
10	16QAM	25	25	18.39	18.44	18.57		
10	16QAM	50	0	18.47	18.51	18.47		



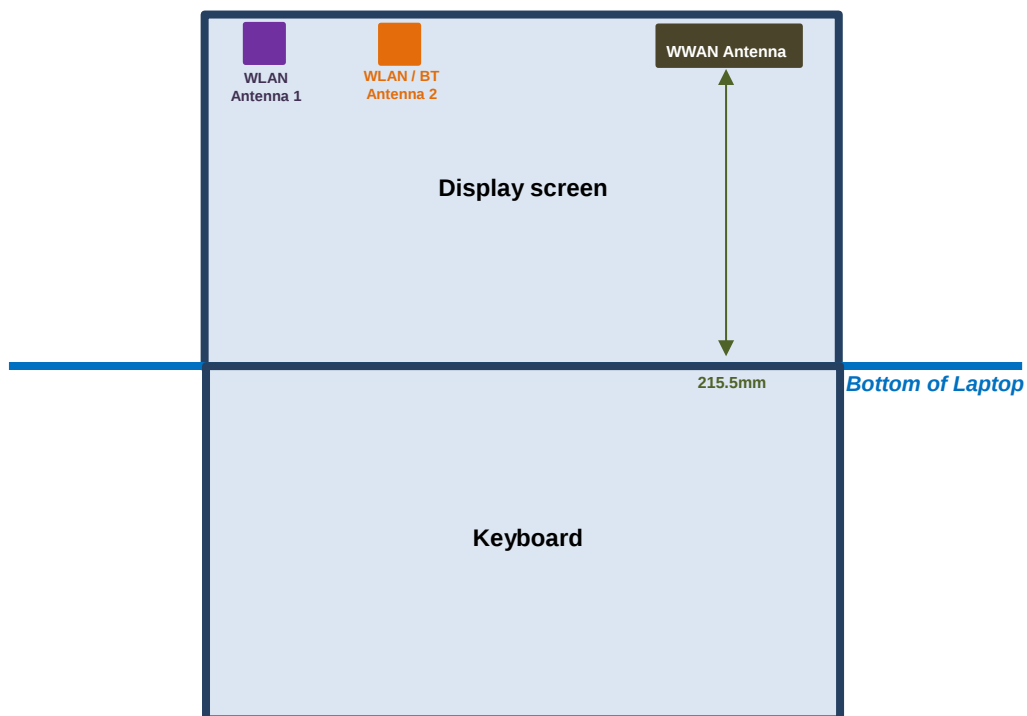
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	18.62	18.68	18.60	19.5	0
5	QPSK	1	12	18.60	18.65	18.63		
5	QPSK	1	24	18.57	18.46	18.46		
5	QPSK	12	0	18.40	18.66	18.68	19.5	0
5	QPSK	12	7	18.41	18.25	18.52		
5	QPSK	12	13	18.40	18.50	18.51		
5	QPSK	25	0	18.50	18.48	18.53		
5	16QAM	1	0	18.48	18.67	18.51	19.5	0
5	16QAM	1	12	18.66	18.70	18.59		
5	16QAM	1	24	18.39	18.42	18.55		
5	16QAM	12	0	18.48	18.42	18.36	19.5	0
5	16QAM	12	7	18.44	18.29	18.43		
5	16QAM	12	13	18.33	18.40	18.47		
5	16QAM	25	0	18.37	18.47	18.43		

14. Antenna Location

<Tablet PC>



<Laptop Mode>





<SAR test exclusion table>

General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
- Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Exposure Position	Wireless Interface	GPRS 850 Class 10	GPRS 1900 Class 10	WCDMA Band V	WCDMA Band IV	WCDMA Band II	CDMA BC10	CDMA BC0	CDMA BC1	LTE Band 17	LTE Band 13	LTE Band 5	LTE Band 4	LTE Band 2	LTE Band 25
	Calculated Frequency	848MHz	1909MHz	846MHz	1750MHz	1907MHz	846MHz	848MHz	1907MHz	713MHz	784MHz	848MHz	1754MHz	1909MHz	1914MHz
	Maximum power (dBm)	27	24	24.00	24	24	24.5	24.5	24.5	24	24	24	24	24	24
	Maximum rated power(mW)	501.0	251.0	251.0	251.0	251.0	282.0	282.0	282.0	251.0	251.0	251.0	251.0	251.0	251.0
Bottom Face	Separation distance(mm)	5.0													
	exclusion threshold	92.3	69.4	46.2	66.4	69.3	51.9	51.9	77.9	42.4	44.5	46.2	66.5	69.4	69.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	5.0													
	exclusion threshold	92.3	69.4	46.2	66.4	69.3	51.9	51.9	77.9	42.4	44.5	46.2	66.5	69.4	69.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	40.0													
	exclusion threshold	11.5	8.7	5.8	8.3	8.7	6.5	6.5	9.7	5.3	5.6	5.8	8.3	8.7	8.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 3	Separation distance(mm)	192.0													
	exclusion threshold	966.0	1529.0	964.0	1533.0	1529.0	964.0	966.0	1529.0	853.0	912.0	966.0	1533.0	1529.0	1528.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	210.0													
	exclusion threshold	1067.0	1709.0	1065.0	1713.0	1709.0	1065.0	1067.0	1709.0	938.0	1006.0	1067.0	1713.0	1709.0	1708.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in normal mode was performed; 0.7cm for Bottom Face, 1cm for Edge 1 and 1.2cm for Curved surface of Edge 1.
4. Per KDB 616217 D04v01r01, if the minimum distance between antenna and device edge along the curve is less than antenna to the bottom face or edge distance a curved or contoured back surface or edge SAR is necessary, more detail information please refer to the setup photo.
5. For SAR testing of the curved region of the device, the device was placed directly against the phantom at the point where the distance between the antenna and device exterior is a minimum.
6. Per KDB 941225 D01v03r01, for Body SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance, for modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested, therefore, the GPRS 2Tx slots modes was selected when EUT operating without power back-off, the GPRS 2Tx slots modes was selected when EUT operating with power back-off, according to the highest source-based time-averaged output power
7. Per KDB 941225 D01v03r01, SAR for Head / Hotspot / Body-worn exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
8. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.
9. Per KDB 941225 D01v03r01, in Body SAR test, the EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
10. Per KDB 941225 D05v02r04, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
11. Per KDB 941225 D05v02r04, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
12. Per KDB 941225 D05v02r04, 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. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
13. Per KDB 941225 D05v02r04, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r04, 16QAM SAR testing is not required.
14. Per KDB 941225 D05v02r04, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r04, smaller bandwidth SAR testing is not required.
15. For LTE B4 / B5 / B17 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r04, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
16. LTE band 2 SAR test was covered by Band 25; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. The maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

**15.1 Body SAR****<GSM SAR>**

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850	GPRS (2 Tx slots)	Bottom Face	0mm	ON	128	824.2	28.34	29.00	1.164	-0.01	0.929	1.081
	GSM850	GPRS (2 Tx slots)	Bottom Face	0mm	ON	189	836.4	28.22	29.00	1.197	-0.1	0.972	1.163
	GSM850	GPRS (2 Tx slots)	Bottom Face	0mm	ON	251	848.8	28.33	29.00	1.167	0	0.955	1.114
	GSM850	GPRS (2 Tx slots)	Edge 1	0mm	ON	128	824.2	28.34	29.00	1.164	-0.01	0.668	0.778
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	128	824.2	28.34	29.00	1.164	-0.03	0.953	1.109
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	189	836.4	28.22	29.00	1.197	0.05	0.986	1.180
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	251	848.8	28.33	29.00	1.167	0.01	1.020	1.190
	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	128	824.2	32.10	33.00	1.230	-0.04	1.010	1.243
	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	189	836.4	32.06	33.00	1.242	-0.01	1.110	1.378
01	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	251	848.8	32.04	33.00	1.247	-0.01	1.160	1.447
	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	251	848.8	32.04	33.00	1.247	0.08	1.130	1.410
	GSM850	GPRS (2 Tx slots)	Edge 1	10mm	OFF	128	824.2	32.10	33.00	1.230	0.1	0.897	1.104
	GSM850	GPRS (2 Tx slots)	Edge 1	10mm	OFF	189	836.4	32.06	33.00	1.242	0.19	1.050	1.304
	GSM850	GPRS (2 Tx slots)	Edge 1	10mm	OFF	251	848.8	32.04	33.00	1.247	0.1	1.150	1.434
	GSM850	GPRS (2 Tx slots)	Edge 2	0mm	OFF	128	824.2	32.10	33.00	1.230	-0.13	0.293	0.360
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	12mm	OFF	128	824.2	32.10	33.00	1.230	0.02	0.782	0.962
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	12mm	OFF	189	836.4	32.06	33.00	1.242	-0.14	0.840	1.043
	GSM850	GPRS (2 Tx slots)	Curved surface of Edge1	12mm	OFF	251	848.8	32.04	33.00	1.247	-0.1	0.913	1.139
	GSM1900	GPRS (2 Tx slots)	Bottom Face	0mm	ON	810	1909.8	26.03	27.00	1.250	-0.13	0.890	1.113
02	GSM1900	GPRS (2 Tx slots)	Bottom Face	0mm	ON	512	1850.2	26.00	27.00	1.259	-0.04	0.908	1.143
	GSM1900	GPRS (2 Tx slots)	Bottom Face	0mm	ON	661	1880	26.01	27.00	1.256	-0.04	0.897	1.127
	GSM1900	GPRS (2 Tx slots)	Edge 1	0mm	ON	810	1909.8	26.03	27.00	1.250	0.18	0.673	0.841
	GSM1900	GPRS (2 Tx slots)	Edge 1	0mm	ON	512	1850.2	26.00	27.00	1.259	0.11	0.667	0.840
	GSM1900	GPRS (2 Tx slots)	Edge 1	0mm	ON	661	1880	26.01	27.00	1.256	0.11	0.633	0.795
	GSM1900	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	810	1909.8	26.03	27.00	1.250	-0.15	0.786	0.983
	GSM1900	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	512	1850.2	26.00	27.00	1.259	-0.13	0.863	1.086
	GSM1900	GPRS (2 Tx slots)	Curved surface of Edge1	0mm	ON	661	1880	26.01	27.00	1.256	-0.13	0.829	1.041
	GSM1900	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	810	1909.8	29.22	30.00	1.197	-0.08	0.680	0.814
	GSM1900	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	512	1850.2	29.02	30.00	1.253	-0.06	0.680	0.852
	GSM1900	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	661	1880	29.19	30.00	1.205	-0.03	0.734	0.884
	GSM1900	GPRS (2 Tx slots)	Edge 1	10mm	OFF	810	1909.8	29.22	30.00	1.197	-0.14	0.379	0.454
	GSM1900	GPRS (2 Tx slots)	Edge 2	0mm	OFF	810	1909.8	29.22	30.00	1.197	-0.12	0.353	0.422
	GSM1900	GPRS (2 Tx slots)	Curved surface of Edge1	12mm	OFF	810	1909.8	29.22	30.00	1.197	-0.11	0.378	0.452

**<WCDMA SAR>**

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
03	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	ON	9538	1907.6	18.90	20.00	1.288	-0.01	0.920	1.185
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	ON	9262	1852.4	18.73	20.00	1.340	0	0.805	1.078
	WCDMA II	RMC 12.2Kbps	Bottom Face	0mm	ON	9400	1880	18.78	20.00	1.324	-0.03	0.866	1.147
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	ON	9538	1907.6	18.90	20.00	1.288	-0.15	0.621	0.800
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	ON	9262	1852.4	18.73	20.00	1.340	-0.08	0.637	0.853
	WCDMA II	RMC 12.2Kbps	Edge 1	0mm	ON	9400	1880	18.78	20.00	1.324	-0.13	0.605	0.801
	WCDMA II	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	9538	1907.6	18.90	20.00	1.288	0.02	0.819	1.055
	WCDMA II	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	9262	1852.4	18.73	20.00	1.340	0	0.814	1.090
	WCDMA II	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	9400	1880	18.78	20.00	1.324	0.09	0.808	1.070
	WCDMA II	RMC 12.2Kbps	Bottom Face	7mm	OFF	9538	1907.6	23.36	24.00	1.159	0	0.861	0.998
	WCDMA II	RMC 12.2Kbps	Bottom Face	7mm	OFF	9262	1852.4	23.21	24.00	1.199	0.01	0.801	0.961
	WCDMA II	RMC 12.2Kbps	Bottom Face	7mm	OFF	9400	1880	23.18	24.00	1.208	0.1	0.824	0.995
	WCDMA II	RMC 12.2Kbps	Edge 1	10mm	OFF	9538	1907.6	23.36	24.00	1.159	0.1	0.437	0.506
	WCDMA II	RMC 12.2Kbps	Edge 2	0mm	OFF	9538	1907.6	23.36	24.00	1.159	0.19	0.529	0.613
	WCDMA II	RMC 12.2Kbps	Curved surface of Edge1	12mm	OFF	9538	1907.6	23.36	24.00	1.159	0.02	0.531	0.615
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	ON	1413	1732.6	17.90	19.00	1.288	0.06	0.804	1.036
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	ON	1312	1712.4	17.74	19.00	1.337	0.06	0.806	1.077
	WCDMA IV	RMC 12.2Kbps	Bottom Face	0mm	ON	1513	1752.6	17.76	19.00	1.330	-0.01	0.744	0.990
	WCDMA IV	RMC 12.2Kbps	Edge 1	0mm	ON	1413	1732.6	17.90	19.00	1.288	-0.01	0.581	0.748
	WCDMA IV	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	1413	1732.6	17.90	19.00	1.288	0.13	0.775	0.998
04	WCDMA IV	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	1312	1712.4	17.74	19.00	1.337	0.04	0.843	1.127
	WCDMA IV	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	1513	1752.6	17.76	19.00	1.330	0	0.774	1.030
	WCDMA IV	RMC 12.2Kbps	Bottom Face	7mm	OFF	1413	1732.6	23.20	24.00	1.202	-0.07	0.853	1.026
	WCDMA IV	RMC 12.2Kbps	Bottom Face	7mm	OFF	1312	1712.4	23.14	24.00	1.219	0.04	0.845	1.030
	WCDMA IV	RMC 12.2Kbps	Bottom Face	7mm	OFF	1513	1752.6	23.11	24.00	1.227	-0.01	0.856	1.051
	WCDMA IV	RMC 12.2Kbps	Edge 1	10mm	OFF	1413	1732.6	23.20	24.00	1.202	0.02	0.774	0.931
	WCDMA IV	RMC 12.2Kbps	Edge 1	10mm	OFF	1312	1712.4	23.14	24.00	1.219	-0.02	0.827	1.008
	WCDMA IV	RMC 12.2Kbps	Edge 1	10mm	OFF	1513	1752.6	23.11	24.00	1.227	0	0.732	0.898
	WCDMA IV	RMC 12.2Kbps	Edge 2	0mm	OFF	1413	1732.6	23.20	24.00	1.202	-0.06	0.416	0.500
	WCDMA IV	RMC 12.2Kbps	Curved surface of Edge1	12mm	OFF	1413	1732.6	23.20	24.00	1.202	-0.05	0.649	0.780
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	ON	4182	836.4	21.51	22.00	1.119	-0.05	0.999	1.118
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	ON	4132	826.4	21.45	22.00	1.135	-0.07	1.030	1.169
	WCDMA V	RMC 12.2Kbps	Bottom Face	0mm	ON	4233	846.6	21.49	22.00	1.125	0	1.000	1.125
	WCDMA V	RMC 12.2Kbps	Edge 1	0mm	ON	4182	836.4	21.51	22.00	1.119	0.14	0.750	0.840
	WCDMA V	RMC 12.2Kbps	Edge 1	0mm	ON	4132	826.4	21.45	22.00	1.135	-0.17	0.769	0.873
	WCDMA V	RMC 12.2Kbps	Edge 1	0mm	ON	4233	846.6	21.49	22.00	1.125	0.12	0.737	0.829
	WCDMA V	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	4182	836.4	21.51	22.00	1.119	-0.12	1.040	1.164
	WCDMA V	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	4132	826.4	21.45	22.00	1.135	-0.11	1.030	1.169
05	WCDMA V	RMC 12.2Kbps	Curved surface of Edge1	0mm	ON	4233	846.6	21.49	22.00	1.125	-0.12	1.050	1.181
	WCDMA V	RMC 12.2Kbps	Bottom Face	7mm	OFF	4182	836.4	23.04	24.00	1.247	0.02	0.678	0.846
	WCDMA V	RMC 12.2Kbps	Bottom Face	7mm	OFF	4132	826.4	22.87	24.00	1.297	-0.02	0.670	0.869
	WCDMA V	RMC 12.2Kbps	Bottom Face	7mm	OFF	4233	846.6	22.98	24.00	1.265	-0.13	0.678	0.857
	WCDMA V	RMC 12.2Kbps	Edge 1	10mm	OFF	4182	836.4	23.04	24.00	1.247	0.03	0.713	0.889
	WCDMA V	RMC 12.2Kbps	Edge 1	10mm	OFF	4132	826.4	22.87	24.00	1.297	-0.05	0.675	0.876
	WCDMA V	RMC 12.2Kbps	Edge 1	10mm	OFF	4233	846.6	22.98	24.00	1.265	0.1	0.725	0.917
	WCDMA V	RMC 12.2Kbps	Edge 2	0mm	OFF	4182	836.4	23.04	24.00	1.247	0.03	0.107	0.133
	WCDMA V	RMC 12.2Kbps	Curved surface of Edge1	12mm	OFF	4182	836.4	23.04	24.00	1.247	-0.03	0.588	0.733



<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Face	0mm	ON	580	820.5	20.90	22.00	1.288	0.04	0.902	1.162
	CDMA2000 BC10	RTAP 153.6Kbps	Edge 1	0mm	ON	580	820.5	20.90	22.00	1.288	-0.04	0.667	0.859
	CDMA2000 BC10	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	580	820.5	20.90	22.00	1.288	-0.02	0.891	1.148
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Face	7mm	OFF	580	820.5	23.89	24.50	1.151	-0.04	0.764	0.879
	CDMA2000 BC10	RTAP 153.6Kbps	Edge 1	10mm	OFF	580	820.5	23.89	24.50	1.151	-0.13	0.689	0.793
	CDMA2000 BC10	RTAP 153.6Kbps	Edge 2	0mm	OFF	580	820.5	23.89	24.50	1.151	-0.13	0.205	0.236
	CDMA2000 BC10	RTAP 153.6Kbps	Curved surface of Edge1	12mm	OFF	580	820.5	23.89	24.50	1.151	-0.03	0.573	0.659
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	0mm	ON	384	836.52	21.00	22.00	1.259	0.05	0.922	1.161
07	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	0mm	ON	1013	824.7	20.98	22.00	1.265	0.06	0.946	1.196
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	0mm	ON	777	848.31	20.73	22.00	1.340	0.06	0.871	1.167
	CDMA2000 BC0	RTAP 153.6Kbps	Edge 1	0mm	ON	384	836.52	21.00	22.00	1.259	-0.1	0.623	0.784
	CDMA2000 BC0	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	384	836.52	21.00	22.00	1.259	0.02	0.889	1.119
	CDMA2000 BC0	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	1013	824.7	20.98	22.00	1.265	-0.12	0.941	1.190
	CDMA2000 BC0	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	777	848.31	20.73	22.00	1.340	-0.17	0.879	1.178
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	7mm	OFF	384	836.52	23.80	24.50	1.175	-0.04	0.718	0.844
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	7mm	OFF	1013	824.7	23.71	24.50	1.199	0.07	0.681	0.817
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Face	7mm	OFF	777	848.31	23.57	24.50	1.239	-0.01	0.711	0.881
	CDMA2000 BC0	RTAP 153.6Kbps	Edge 1	10mm	OFF	384	836.52	23.80	24.50	1.175	0.1	0.716	0.841
	CDMA2000 BC0	RTAP 153.6Kbps	Edge 1	10mm	OFF	1013	824.7	23.71	24.50	1.199	0.01	0.697	0.836
	CDMA2000 BC0	RTAP 153.6Kbps	Edge 1	10mm	OFF	777	848.31	23.57	24.50	1.239	-0.12	0.734	0.909
	CDMA2000 BC0	RTAP 153.6Kbps	Edge 2	0mm	OFF	384	836.52	23.80	24.50	1.175	0.13	0.199	0.234
	CDMA2000 BC0	RTAP 153.6Kbps	Curved surface of Edge1	12mm	OFF	384	836.52	23.80	24.50	1.175	-0.07	0.609	0.716
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	0mm	ON	600	1880	18.77	19.50	1.183	-0.09	0.848	1.003
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	0mm	ON	25	1851.25	18.62	19.50	1.225	-0.01	0.837	1.025
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	0mm	ON	1175	1908.75	18.73	19.50	1.194	-0.04	0.894	1.067
	CDMA2000 BC1	RTAP 153.6Kbps	Edge 1	0mm	ON	600	1880	18.77	19.50	1.183	-0.04	0.556	0.658
	CDMA2000 BC1	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	600	1880	18.77	19.50	1.183	-0.06	0.719	0.851
	CDMA2000 BC1	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	25	1851.25	18.62	19.50	1.225	0.01	0.695	0.851
	CDMA2000 BC1	RTAP 153.6Kbps	Curved surface of Edge1	0mm	ON	1175	1908.75	18.73	19.50	1.194	0.04	0.742	0.886
08	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	7mm	OFF	1175	1908.75	23.87	24.50	1.156	0	0.953	1.102
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	7mm	OFF	25	1851.25	23.83	24.50	1.167	0	0.908	1.059
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Face	7mm	OFF	600	1880	23.82	24.50	1.169	0.02	0.937	1.096
	CDMA2000 BC1	RTAP 153.6Kbps	Edge 1	10mm	OFF	1175	1908.75	23.87	24.50	1.156	-0.01	0.549	0.635
	CDMA2000 BC1	RTAP 153.6Kbps	Edge 2	0mm	OFF	1175	1908.75	23.87	24.50	1.156	-0.1	0.485	0.561
	CDMA2000 BC1	RTAP 153.6Kbps	Curved surface of Edge1	12mm	OFF	1175	1908.75	23.87	24.50	1.156	-0.14	0.592	0.684

**<LTE SAR>**

Plot No.	Band	Modulation	BW (MHz)	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 4	QPSK	20M	1	0	Bottom Face	0mm	ON	20175	1732.5	17.78	18.50	1.180	-0.04	0.990	1.169
	LTE Band 4	QPSK	20M	1	0	Bottom Face	0mm	ON	20175	1732.5	17.78	18.50	1.180	0.05	0.959	1.132
	LTE Band 4	QPSK	20M	50	0	Bottom Face	0mm	ON	20175	1732.5	17.75	18.50	1.189	-0.11	0.841	1.000
	LTE Band 4	QPSK	20M	100	0	Bottom Face	0mm	ON	20175	1732.5	17.57	18.50	1.239	0.04	0.862	1.068
	LTE Band 4	QPSK	20M	1	0	Edge 1	0mm	ON	20175	1732.5	17.78	18.50	1.180	0.19	0.673	0.794
	LTE Band 4	QPSK	20M	50	0	Edge 1	0mm	ON	20175	1732.5	17.75	18.50	1.189	0.16	0.636	0.756
	LTE Band 4	QPSK	20M	1	0	Curved surface of Edge1	0mm	ON	20175	1732.5	17.78	18.50	1.180	-0.17	0.915	1.080
	LTE Band 4	QPSK	20M	50	0	Curved surface of Edge1	0mm	ON	20175	1732.5	17.75	18.50	1.189	-0.15	0.861	1.023
	LTE Band 4	QPSK	20M	100	0	Curved surface of Edge1	0mm	ON	20175	1732.5	17.57	18.50	1.239	-0.16	0.875	1.084
09	LTE Band 4	QPSK	20M	1	0	Bottom Face	7mm	OFF	20175	1732.5	22.62	24.00	1.374	-0.04	0.945	1.298
	LTE Band 4	QPSK	20M	50	24	Bottom Face	7mm	OFF	20175	1732.5	21.62	23.00	1.374	-0.02	0.709	0.974
	LTE Band 4	QPSK	20M	100	0	Bottom Face	7mm	OFF	20175	1732.5	21.48	23.00	1.419	0	0.728	1.033
	LTE Band 4	QPSK	20M	1	0	Edge 1	10mm	OFF	20175	1732.5	22.62	24.00	1.374	0	0.845	1.161
	LTE Band 4	QPSK	20M	50	24	Edge 1	10mm	OFF	20175	1732.5	21.62	23.00	1.374	0.03	0.638	0.877
	LTE Band 4	QPSK	20M	100	0	Edge 1	10mm	OFF	20175	1732.5	21.48	23.00	1.419	0.03	0.648	0.920
	LTE Band 4	QPSK	20M	1	0	Edge 2	0mm	OFF	20175	1732.5	22.62	24.00	1.374	0.11	0.147	0.202
	LTE Band 4	QPSK	20M	50	24	Edge 2	0mm	OFF	20175	1732.5	21.62	23.00	1.374	0.15	0.144	0.198
	LTE Band 4	QPSK	20M	1	0	Curved surface of Edge1	12mm	OFF	20175	1732.5	22.62	24.00	1.374	0.04	0.654	0.899
	LTE Band 4	QPSK	20M	50	24	Curved surface of Edge1	12mm	OFF	20175	1732.5	21.62	23.00	1.374	-0.1	0.493	0.677
	LTE Band 4	QPSK	20M	100	0	Curved surface of Edge1	12mm	OFF	20175	1732.5	21.48	23.00	1.419	-0.01	0.501	0.711
	LTE Band 5	QPSK	10M	1	0	Bottom Face	0mm	ON	20525	836.5	21.27	22.00	1.183	-0.05	0.990	1.171
	LTE Band 5	QPSK	10M	25	0	Bottom Face	0mm	ON	20525	836.5	21.26	22.00	1.186	0.02	0.990	1.174
	LTE Band 5	QPSK	10M	50	0	Bottom Face	0mm	ON	20525	836.5	21.21	22.00	1.199	-0.07	0.980	1.176
	LTE Band 5	QPSK	10M	1	0	Edge 1	0mm	ON	20525	836.5	21.27	22.00	1.183	0.13	0.762	0.901
	LTE Band 5	QPSK	10M	25	0	Edge 1	0mm	ON	20525	836.5	21.26	22.00	1.186	0.15	0.757	0.898
	LTE Band 5	QPSK	10M	50	0	Edge 1	0mm	ON	20525	836.5	21.21	22.00	1.199	0.11	0.725	0.870
	LTE Band 5	QPSK	10M	1	0	Curved surface of Edge1	0mm	ON	20525	836.5	21.27	22.00	1.183	-0.01	0.989	1.170
	LTE Band 5	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	20525	836.5	21.26	22.00	1.186	0.03	1.010	1.198
10	LTE Band 5	QPSK	10M	50	0	Curved surface of Edge1	0mm	ON	20525	836.5	21.21	22.00	1.199	-0.12	1.000	1.199
	LTE Band 5	QPSK	10M	1	0	Bottom Face	7mm	OFF	20525	836.5	22.44	24.00	1.432	0.01	0.688	0.985
	LTE Band 5	QPSK	10M	25	0	Bottom Face	7mm	OFF	20525	836.5	21.44	23.00	1.432	-0.01	0.557	0.798
	LTE Band 5	QPSK	10M	50	0	Bottom Face	7mm	OFF	20525	836.5	21.27	23.00	1.489	0.02	0.552	0.822
	LTE Band 5	QPSK	10M	1	0	Edge 1	10mm	OFF	20525	836.5	22.44	24.00	1.432	0	0.638	0.914
	LTE Band 5	QPSK	10M	25	0	Edge 1	10mm	OFF	20525	836.5	21.44	23.00	1.432	-0.01	0.522	0.748
	LTE Band 5	QPSK	10M	50	0	Edge 1	10mm	OFF	20525	836.5	21.27	23.00	1.489	0	0.520	0.774
	LTE Band 5	QPSK	10M	1	0	Edge 2	0mm	OFF	20525	836.5	22.44	24.00	1.432	-0.14	0.169	0.242
	LTE Band 5	QPSK	10M	25	0	Edge 2	0mm	OFF	20525	836.5	21.44	23.00	1.432	-0.15	0.135	0.193
	LTE Band 5	QPSK	10M	1	0	Curved surface of Edge1	12mm	OFF	20525	836.5	22.44	24.00	1.432	0.02	0.535	0.766
	LTE Band 5	QPSK	10M	25	0	Curved surface of Edge1	12mm	OFF	20525	836.5	21.44	23.00	1.432	-0.02	0.439	0.629



Plot No.	Band	Modulation	BW (MHz)	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13	QPSK	10M	1	0	Bottom Face	0mm	ON	23230	782	19.13	20.50	1.371	-0.01	0.746	1.023
	LTE Band 13	QPSK	10M	25	0	Bottom Face	0mm	ON	23230	782	19.12	20.50	1.374	-0.09	0.767	1.054
	LTE Band 13	QPSK	10M	50	0	Bottom Face	0mm	ON	23230	782	19.10	20.50	1.380	-0.04	0.760	1.049
	LTE Band 13	QPSK	10M	1	0	Edge 1	0mm	ON	23230	782	19.13	20.50	1.371	-0.15	0.650	0.891
	LTE Band 13	QPSK	10M	25	0	Edge 1	0mm	ON	23230	782	19.12	20.50	1.374	-0.17	0.712	0.978
	LTE Band 13	QPSK	10M	50	0	Edge 1	0mm	ON	23230	782	19.10	20.50	1.380	-0.15	0.704	0.972
	LTE Band 13	QPSK	10M	1	0	Curved surface of Edge1	0mm	ON	23230	782	19.13	20.50	1.371	0	0.772	1.058
11	LTE Band 13	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	23230	782	19.12	20.50	1.374	-0.16	0.867	1.191
	LTE Band 13	QPSK	10M	50	0	Curved surface of Edge1	0mm	ON	23230	782	19.10	20.50	1.380	-0.18	0.862	1.190
	LTE Band 13	QPSK	10M	1	0	Bottom Face	7mm	OFF	23230	782	22.51	24.00	1.409	0.04	0.563	0.793
	LTE Band 13	QPSK	10M	25	0	Bottom Face	7mm	OFF	23230	782	21.63	23.00	1.371	-0.04	0.443	0.607
	LTE Band 13	QPSK	10M	1	0	Edge 1	10mm	OFF	23230	782	22.51	24.00	1.409	0	0.559	0.788
	LTE Band 13	QPSK	10M	25	0	Edge 1	10mm	OFF	23230	782	21.63	23.00	1.371	0.01	0.462	0.633
	LTE Band 13	QPSK	10M	1	0	Edge 2	0mm	OFF	23230	782	22.51	24.00	1.409	-0.15	0.177	0.249
	LTE Band 13	QPSK	10M	25	0	Edge 2	0mm	OFF	23230	782	21.63	23.00	1.371	-0.19	0.144	0.197
	LTE Band 13	QPSK	10M	1	0	Curved surface of Edge1	12mm	OFF	23230	782	22.51	24.00	1.409	0.03	0.488	0.688
	LTE Band 13	QPSK	10M	25	0	Curved surface of Edge1	12mm	OFF	23230	782	21.63	23.00	1.371	0.03	0.403	0.552
	LTE Band 17	QPSK	10M	1	0	Bottom Face	0mm	ON	23790	710	19.96	20.50	1.132	0.02	0.908	1.028
	LTE Band 17	QPSK	10M	25	0	Bottom Face	0mm	ON	23790	710	19.95	20.50	1.135	0.01	0.846	0.960
	LTE Band 17	QPSK	10M	50	0	Bottom Face	0mm	ON	23790	710	19.91	20.50	1.146	0.05	0.842	0.965
	LTE Band 17	QPSK	10M	1	0	Edge 1	0mm	ON	23790	710	19.96	20.50	1.132	-0.15	0.830	0.940
	LTE Band 17	QPSK	10M	25	0	Edge 1	0mm	ON	23790	710	19.95	20.50	1.135	-0.12	0.863	0.980
	LTE Band 17	QPSK	10M	50	0	Edge 1	0mm	ON	23790	710	19.91	20.50	1.146	-0.11	0.839	0.961
	LTE Band 17	QPSK	10M	1	0	Curved surface of Edge1	0mm	ON	23790	710	19.96	20.50	1.132	-0.13	1.030	1.166
12	LTE Band 17	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	23790	710	19.95	20.50	1.135	-0.16	1.050	1.192
	LTE Band 17	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	23790	710	19.95	20.50	1.135	-0.11	1.030	1.169
	LTE Band 17	QPSK	10M	50	0	Curved surface of Edge1	0mm	ON	23790	710	19.91	20.50	1.146	-0.06	1.040	1.191
	LTE Band 17	QPSK	10M	1	0	Bottom Face	7mm	OFF	23790	710	22.74	24.00	1.337	0.02	0.557	0.744
	LTE Band 17	QPSK	10M	25	0	Bottom Face	7mm	OFF	23790	710	21.78	23.00	1.324	0.03	0.483	0.640
	LTE Band 17	QPSK	10M	1	0	Edge 1	10mm	OFF	23790	710	22.74	24.00	1.337	0.02	0.426	0.569
	LTE Band 17	QPSK	10M	25	0	Edge 1	10mm	OFF	23790	710	21.78	23.00	1.324	0	0.368	0.487
	LTE Band 17	QPSK	10M	1	0	Edge 2	0mm	OFF	23790	710	22.74	24.00	1.337	-0.15	0.099	0.132
	LTE Band 17	QPSK	10M	25	0	Edge 2	0mm	OFF	23790	710	21.78	23.00	1.324	-0.16	0.047	0.062
	LTE Band 17	QPSK	10M	1	0	Curved surface of Edge1	12mm	OFF	23790	710	22.74	24.00	1.337	0.09	0.355	0.474
	LTE Band 17	QPSK	10M	25	0	Curved surface of Edge1	12mm	OFF	23790	710	21.78	23.00	1.324	-0.01	0.306	0.405



Plot No.	Band	Modulation	BW (MHz)	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25	QPSK	20M	1	0	Bottom Face	0mm	ON	26340	1880	18.81	19.50	1.172	-0.04	0.942	1.104
	LTE Band 25	QPSK	20M	1	0	Bottom Face	0mm	ON	26140	1860	18.80	19.50	1.175	0.01	0.907	1.066
	LTE Band 25	QPSK	20M	1	0	Bottom Face	0mm	ON	26590	1905	18.75	19.50	1.189	-0.03	0.986	1.172
	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26340	1880	18.77	19.50	1.183	-0.02	0.994	1.176
	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26140	1860	18.66	19.50	1.213	0.05	0.948	1.150
	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26590	1905	18.76	19.50	1.186	0.08	1.000	1.186
	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26590	1905	18.76	19.50	1.186	-0.07	0.960	1.138
	LTE Band 25	QPSK	20M	100	0	Bottom Face	0mm	ON	26340	1860	18.65	19.50	1.216	-0.08	0.964	1.172
	LTE Band 25	QPSK	20M	1	0	Edge 1	0mm	ON	26340	1880	18.81	19.50	1.172	0	0.692	0.811
	LTE Band 25	QPSK	20M	1	0	Edge 1	0mm	ON	26140	1860	18.80	19.50	1.175	-0.04	0.724	0.851
	LTE Band 25	QPSK	20M	1	0	Edge 1	0mm	ON	26590	1905	18.75	19.50	1.189	0.01	0.663	0.788
	LTE Band 25	QPSK	20M	50	0	Edge 1	0mm	ON	26340	1880	18.77	19.50	1.183	0.01	0.666	0.788
	LTE Band 25	QPSK	20M	100	0	Edge 1	0mm	ON	26340	1880	18.65	19.50	1.216	0.01	0.701	0.853
	LTE Band 25	QPSK	20M	1	0	Curved surface of Edge1	0mm	ON	26340	1880	18.81	19.50	1.172	-0.03	0.887	1.040
	LTE Band 25	QPSK	20M	1	0	Curved surface of Edge1	0mm	ON	26140	1860	18.80	19.50	1.175	-0.01	0.897	1.054
	LTE Band 25	QPSK	20M	1	0	Curved surface of Edge1	0mm	ON	26590	1905	18.75	19.50	1.189	0.07	0.866	1.029
	LTE Band 25	QPSK	20M	50	0	Curved surface of Edge1	0mm	ON	26340	1880	18.77	19.50	1.183	-0.01	0.855	1.012
	LTE Band 25	QPSK	20M	50	0	Curved surface of Edge1	0mm	ON	26140	1860	18.66	19.50	1.213	-0.01	0.897	1.088
	LTE Band 25	QPSK	20M	50	0	Curved surface of Edge1	0mm	ON	26590	1905	18.76	19.50	1.186	-0.01	0.833	0.988
	LTE Band 25	QPSK	20M	100	0	Curved surface of Edge1	0mm	ON	26340	1880	18.65	19.50	1.216	-0.03	0.878	1.068
	LTE Band 25	QPSK	20M	1	0	Bottom Face	7mm	OFF	26340	1880	22.54	24.00	1.400	-0.03	0.832	1.164
	LTE Band 25	QPSK	20M	1	0	Bottom Face	7mm	OFF	26140	1860	22.48	24.00	1.419	0	0.817	1.159
13	LTE Band 25	QPSK	20M	1	0	Bottom Face	7mm	OFF	26590	1905	22.42	24.00	1.439	0.02	0.836	1.203
	LTE Band 25	QPSK	20M	50	24	Bottom Face	7mm	OFF	26340	1880	21.54	23.00	1.400	-0.03	0.653	0.914
	LTE Band 25	QPSK	20M	50	24	Bottom Face	7mm	OFF	26140	1860	21.47	23.00	1.422	-0.12	0.634	0.902
	LTE Band 25	QPSK	20M	50	24	Bottom Face	7mm	OFF	26590	1905	21.36	23.00	1.459	-0.04	0.651	0.950
	LTE Band 25	QPSK	20M	100	0	Bottom Face	7mm	OFF	26340	1880	21.34	23.00	1.466	-0.03	0.651	0.954
	LTE Band 25	QPSK	20M	1	0	Edge 1	10mm	OFF	26340	1880	22.54	24.00	1.400	0.01	0.490	0.686
	LTE Band 25	QPSK	20M	50	24	Edge 1	10mm	OFF	26340	1880	21.54	23.00	1.400	-0.03	0.380	0.532
	LTE Band 25	QPSK	20M	1	0	Edge 2	0mm	OFF	26340	1880	22.54	24.00	1.400	-0.04	0.576	0.806
	LTE Band 25	QPSK	20M	1	0	Edge 2	0mm	OFF	26140	1860	22.48	24.00	1.419	-0.15	0.622	0.883
	LTE Band 25	QPSK	20M	1	0	Edge 2	0mm	OFF	26590	1905	22.42	24.00	1.439	-0.04	0.481	0.692
	LTE Band 25	QPSK	20M	50	24	Edge 2	0mm	OFF	26340	1880	21.54	23.00	1.400	-0.03	0.490	0.686
	LTE Band 25	QPSK	20M	100	0	Edge 2	0mm	OFF	26340	1880	21.34	23.00	1.466	0	0.480	0.703
	LTE Band 25	QPSK	20M	1	0	Curved surface of Edge1	12mm	OFF	26340	1880	22.54	24.00	1.400	-0.03	0.515	0.721
	LTE Band 25	QPSK	20M	25	24	Curved surface of Edge1	12mm	OFF	26340	1880	21.54	23.00	1.400	0.01	0.417	0.584

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0cm	Main	6	2437	17.50	17.50	1.000	-0.06	0.749	0.749
	WLAN2.4GHz	802.11b 1Mbps	Edge 1	0cm	Main	11	2462	17.46	17.50	1.009	-0.07	1.230	1.241
	WLAN2.4GHz	802.11b 1Mbps	Curved surface of Edge1	0cm	Main	11	2462	17.46	17.50	1.009	-0.06	1.140	1.151
	WLAN2.4GHz	802.11b 1Mbps	Bottom Face	0cm	Aux	11	2462	17.36	17.50	1.033	-0.03	1.200	1.239
	WLAN2.4GHz	802.11b 1Mbps	Edge 1	0cm	Aux	6	2437	17.48	17.50	1.005	-0.15	0.646	0.649
14	WLAN2.4GHz	802.11b 1Mbps	Curved surface of Edge1	0cm	Aux	6	2437	17.48	17.50	1.005	-0.12	1.270	1.276

Remark:

1. Additional 2.4GHz WLAN SAR testing was used perform simultaneous transmission calculation and SPLSR analysis.

15.2 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	251	848.8	32.04	33.00	1.247	-0.01	1.160	-	1.447
2nd	GSM850	GPRS (2 Tx slots)	Bottom Face	7mm	OFF	251	848.8	32.04	33.00	1.247	0.08	1.130	1.03	1.410

No.	Band	Modulation	BW (MHz)	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 4	QPSK	20M	1	0	Bottom Face	0mm	ON	20175	1732.5	17.78	18.50	1.180	-0.04	0.990	-	1.169
2nd	LTE Band 4	QPSK	20M	1	0	Bottom Face	0mm	ON	20175	1732.5	17.78	18.50	1.180	0.05	0.959	1.03	1.132
1st	LTE Band 17	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	23790	710	19.95	20.50	1.135	-0.16	1.050	-	1.192
2nd	LTE Band 17	QPSK	10M	25	0	Curved surface of Edge1	0mm	ON	23790	710	19.95	20.50	1.135	-0.11	1.030	1.03	1.169
1st	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26590	1905	18.76	19.50	1.186	0.08	1.000	-	1.186
2nd	LTE Band 25	QPSK	20M	50	0	Bottom Face	0mm	ON	26590	1905	18.76	19.50	1.186	-0.07	0.960	1.04	1.138

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR < 1.45 W/kg, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Portable Note Book
		Body
1.	GPRS/EDGE + WLAN2.4GHz	Yes
2.	WCDMA + WLAN2.4GHz	Yes
3.	LTE + WLAN2.4GHz	Yes
4.	GPRS/EDGE + Bluetooth	Yes
5.	WCDMA+ Bluetooth	Yes
6.	LTE + Bluetooth	Yes
7.	GPRS/EDGE + WLAN5GHz	No
8.	WCDMA + WLAN5GHz	No
9.	LTE + WLAN5GHz	No

General Note:

1. The WLAN/Bluetooth module (FCC ID: PD97265NGU, Report No: SAR.20140709, granted on 2014/09/30) is also integrated into this host, the Bluetooth SAR result is referred to original report to determined simultaneous transmission analysis, for 2.4GHz WLAN SAR results, due to the simultaneous transmission analysis is higher than 1.6W/kg with original SAR values, but cannot further assessment SPLSR analysis, so in this report, added original report 2.4GHz WLAN worst case to determine the simultaneous transmission analysis and SPLSR analysis.
2. This device supports 2.4GHz WLAN hotspot and WiFi direct operation only, therefore when the device operate in 5GHz WLAN transmit cannot be transmitted simultaneously with WWAN
3. For simultaneous transmission analysis for exposure position of Bottom Face 7mm, Curved surface of Edge1 12mm and Edge1 10mm, WLAN SAR tested at 0mm separation is worse and the test data is used for conservative SAR summation.
4. The Scaled SAR summation is calculated based on the same configuration and test position.
5. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - v) The SPLSR calculated results please refer to section 16.2.

16.1 Body Exposure Conditions

WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)	1+2 SPLSR	1+2 Case No
			WWAN	2.4GHz WLAN Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850	Bottom Face at 0mm	1.163	0.749	1.91	0.01	Case 1
		Edge 1 at 0mm	0.778	1.241	2.02	0.01	Case 2
		Curved surface of Edge1 at 0mm	1.190	1.151	2.34	0.02	Case 3
		Bottom Face at 7mm	1.447	0.749	2.20	0.02	Case 4
		Edge 1 at 10mm	1.434	1.241	2.68	0.02	Case 5
		Edge 2 at 0mm	0.360		0.36		
		Curved surface of Edge1 at 12mm	1.139	1.151	2.29	0.02	Case 6
	GSM1900	Bottom Face at 0mm	1.143	0.749	1.89	0.01	Case 7
		Edge 1 at 0mm	0.841	1.241	2.08	0.01	Case 8
		Curved surface of Edge1 at 0mm	1.086	1.151	2.24	0.01	Case 9
		Bottom Face at 7mm	0.884	0.749	1.63	0.01	Case 10
		Edge 1 at 10mm	0.454	1.241	1.70	0.01	Case 11
		Edge 2 at 0mm	0.422		0.42		
		Curved surface of Edge1 at 12mm	0.452	1.151	1.60	0.01	Case 12
WCDMA	WCDMA II	Bottom Face at 0mm	1.185	0.749	1.93	0.01	Case 13
		Edge 1 at 0mm	0.853	1.241	2.09	0.01	Case 14
		Curved surface of Edge1 at 0mm	1.090	1.151	2.24	0.02	Case 15
		Bottom Face at 7mm	0.998	0.749	1.75	0.01	Case 16
		Edge 1 at 10mm	0.506	1.241	1.75	0.01	Case 17
		Edge 2 at 0mm	0.613		0.61		
		Curved surface of Edge1 at 12mm	0.615	1.151	1.77	0.01	Case 18
	WCDMA IV	Bottom Face at 0mm	1.077	0.749	1.83	0.01	Case 19
		Edge 1 at 0mm	0.748	1.241	1.99	0.01	Case 20
		Curved surface of Edge1 at 0mm	1.127	1.151	2.28	0.02	Case 21
		Bottom Face at 7mm	1.051	0.749	1.80	0.01	Case 22
		Edge 1 at 10mm	1.008	1.241	2.25	0.01	Case 23
		Edge 2 at 0mm	0.500		0.50		
		Curved surface of Edge1 at 12mm	0.780	1.151	1.93	0.01	Case 24
	WCDMA V	Bottom Face at 0mm	1.169	0.749	1.92	0.01	Case 25
		Edge 1 at 0mm	0.873	1.241	2.11	0.01	Case 26
		Curved surface of Edge1 at 0mm	1.181	1.151	2.33	0.02	Case 27
		Bottom Face at 7mm	0.869	0.749	1.62	0.01	Case 28
		Edge 1 at 10mm	0.917	1.241	2.16	0.01	Case 29
		Edge 2 at 0mm	0.133		0.13		
		Curved surface of Edge1 at 12mm	0.733	1.151	1.88	0.01	Case 30

WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)	1+2 SPLSR	1+2 Case No
			WWAN	2.4GHz WLAN Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)			
CDMA	CDMA2000 BC10	Bottom Face at 0mm	1.162	0.749	1.91	0.01	Case 31
		Edge 1 at 0mm	0.859	1.241	2.10	0.01	Case 32
		Curved surface of Edge1 at 0mm	1.148	1.151	2.30	0.02	Case 33
		Bottom Face at 7mm	0.879	0.749	1.63	0.01	Case 34
		Edge 1 at 10mm	0.793	1.241	2.03	0.01	Case 35
		Edge 2 at 0mm	0.236		0.24		
		Curved surface of Edge1 at 12mm	0.659	1.151	1.81	0.01	Case 36
	CDMA2000 BC0	Bottom Face at 0mm	1.196	0.749	1.95	0.01	Case 37
		Edge 1 at 0mm	0.784	1.241	2.03	0.01	Case 38
		Curved surface of Edge1 at 0mm	1.190	1.151	2.34	0.02	Case 39
		Bottom Face at 7mm	0.881	0.749	1.63	0.01	Case 40
		Edge 1 at 10mm	0.909	1.241	2.15	0.01	Case 41
		Edge 2 at 0mm	0.234		0.23		
		Curved surface of Edge1 at 12mm	0.716	1.151	1.87	0.01	Case 42
	CDMA2000 BC1	Bottom Face at 0mm	1.067	0.749	1.82	0.01	Case 43
		Edge 1 at 0mm	0.678	1.241	1.92	0.01	Case 44
		Curved surface of Edge1 at 0mm	0.886	1.151	2.04	0.01	Case 45
		Bottom Face at 7mm	1.102	0.749	1.85	0.01	Case 46
		Edge 1 at 10mm	0.635	1.241	1.88	0.01	Case 47
		Edge 2 at 0mm	0.561		0.56		
		Curved surface of Edge1 at 12mm	0.684	1.151	1.84	0.01	Case 48
LTE	LTE Band 4	Bottom Face at 0mm	1.169	0.749	1.92	0.01	Case 49
		Edge 1 at 0mm	0.794	1.241	2.04	0.01	Case 50
		Curved surface of Edge1 at 0mm	1.084	1.151	2.24	0.01	Case 51
		Bottom Face at 7mm	1.298	0.749	2.05	0.01	Case 52
		Edge 1 at 10mm	1.161	1.241	2.40	0.02	Case 53
		Edge 2 at 0mm	0.202		0.20		
		Curved surface of Edge1 at 12mm	0.899	1.151	2.05	0.01	Case 54



WWAN Band		Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)	1+2 SPLSR	1+2 Case No
			WWAN	2.4GHz WLAN Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)			
LTE	LTE Band 5	Bottom Face at 0mm	1.176	0.749	1.93	0.01	Case 55
		Edge 1 at 0mm	0.901	1.241	2.14	0.01	Case 56
		Curved surface of Edge1 at 0mm	1.199	1.151	2.35	0.02	Case 57
		Bottom Face at 7mm	0.985	0.749	1.73	0.01	Case 58
		Edge 1 at 10mm	0.914	1.241	2.16	0.01	Case 59
		Edge 2 at 0mm	0.242		0.24		
	LTE Band 13	Curved surface of Edge1 at 12mm	0.766	1.151	1.92	0.01	Case 60
		Bottom Face at 0mm	1.128	0.749	1.88	0.01	Case 61
		Edge 1 at 0mm	0.978	1.241	2.22	0.02	Case 62
		Curved surface of Edge1 at 0mm	1.191	1.151	2.34	0.02	Case 63
		Bottom Face at 7mm	0.793	0.749	1.54		
		Edge 1 at 10mm	0.788	1.241	2.03	0.01	Case 64
	LTE Band 17	Edge 2 at 0mm	0.249		0.25		
		Curved surface of Edge1 at 12mm	0.688	1.151	1.84	0.01	Case 65
		Bottom Face at 0mm	1.028	0.749	1.78	0.01	Case 66
		Edge 1 at 0mm	0.980	1.241	2.22	0.01	Case 67
		Curved surface of Edge1 at 0mm	1.192	1.151	2.34	0.02	Case 68
		Bottom Face at 7mm	0.744	0.749	1.49		
	LTE Band 25	Edge 1 at 10mm	0.569	1.241	1.81	0.01	Case 69
		Edge 2 at 0mm	0.132		0.13		
		Curved surface of Edge1 at 12mm	0.474	1.151	1.63	0.01	Case 70
		Bottom Face at 0mm	1.186	0.749	1.94	0.01	Case 71
		Edge 1 at 0mm	0.853	1.241	2.09	0.01	Case 72
		Curved surface of Edge1 at 0mm	1.088	1.151	2.24	0.01	Case 73
	LTE Band 25	Bottom Face at 7mm	1.203	0.749	1.95	0.01	Case 74
		Edge 1 at 10mm	0.686	1.241	1.93	0.01	Case 75
		Edge 2 at 0mm	0.883		0.88		
	LTE Band 25	Curved surface of Edge1 at 12mm	0.721	1.151	1.87	0.01	Case 76

WWAN Band		Exposure Position	1	3	1+3 Summed 1g SAR (W/kg)	1+3 SPLSR	1+3 Case No
			WWAN	2.4GHz WLAN Ant 2			
			1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850	Bottom Face at 0mm	1.163	1.239	2.40	0.03	Case 77
		Edge 1 at 0mm	0.778	0.649	1.43		
		Curved surface of Edge1 at 0mm	1.190	1.276	2.47	0.03	Case 78
		Bottom Face at 7mm	1.447	1.239	2.69	0.03	Case 79
		Edge 1 at 10mm	1.434	0.649	2.08	0.03	Case 80
		Edge 2 at 0mm	0.360		0.36		
		Curved surface of Edge1 at 12mm	1.139	1.276	2.42	0.03	Case 81
	GSM1900	Bottom Face at 0mm	1.143	1.239	2.38	0.03	Case 82
		Edge 1 at 0mm	0.841	0.649	1.49		
		Curved surface of Edge1 at 0mm	1.086	1.276	2.36	0.03	Case 83
		Bottom Face at 7mm	0.884	1.239	2.12	0.02	Case 84
		Edge 1 at 10mm	0.454	0.649	1.10		
		Edge 2 at 0mm	0.422		0.42		
		Curved surface of Edge1 at 12mm	0.452	1.276	1.73	0.02	Case 85
WCDMA	WCDMA II	Bottom Face at 0mm	1.185	1.239	2.42	0.03	Case 86
		Edge 1 at 0mm	0.853	0.649	1.50		
		Curved surface of Edge1 at 0mm	1.090	1.276	2.37	0.03	Case 87
		Bottom Face at 7mm	0.998	1.239	2.24	0.03	Case 88
		Edge 1 at 10mm	0.506	0.649	1.16		
		Edge 2 at 0mm	0.613		0.61		
		Curved surface of Edge1 at 12mm	0.615	1.276	1.89	0.02	Case 89
	WCDMA IV	Bottom Face at 0mm	1.077	1.239	2.32	0.03	Case 90
		Edge 1 at 0mm	0.748	0.649	1.40		
		Curved surface of Edge1 at 0mm	1.127	1.276	2.40	0.03	Case 91
		Bottom Face at 7mm	1.051	1.239	2.29	0.03	Case 92
		Edge 1 at 10mm	1.008	0.649	1.66	0.02	Case 93
		Edge 2 at 0mm	0.500		0.50		
		Curved surface of Edge1 at 12mm	0.780	1.276	2.06	0.02	Case 94
	WCDMA V	Bottom Face at 0mm	1.169	1.239	2.41	0.03	Case 95
		Edge 1 at 0mm	0.873	0.649	1.52		
		Curved surface of Edge1 at 0mm	1.181	1.276	2.46	0.03	Case 96
		Bottom Face at 7mm	0.869	1.239	2.11	0.02	Case 97
		Edge 1 at 10mm	0.917	0.649	1.57		
		Edge 2 at 0mm	0.133		0.13		
		Curved surface of Edge1 at 12mm	0.733	1.276	2.01	0.02	Case 98

WWAN Band		Exposure Position	1	3	1+3 Summed 1g SAR (W/kg)	1+3 SPLSR	1+3 Case No
			WWAN 1g SAR (W/kg)	2.4GHz WLAN Ant 2 1g SAR (W/kg)			
CDMA	CDMA2000 BC10	Bottom Face at 0mm	1.162	1.239	2.40	0.03	Case 99
		Edge 1 at 0mm	0.859	0.649	1.51		
		Curved surface of Edge1 at 0mm	1.148	1.276	2.42	0.03	Case 100
		Bottom Face at 7mm	0.879	1.239	2.12	0.02	Case 101
		Edge 1 at 10mm	0.793	0.649	1.44		
		Edge 2 at 0mm	0.236		0.24		
		Curved surface of Edge1 at 12mm	0.659	1.276	1.94	0.02	Case 102
	CDMA2000 BC0	Bottom Face at 0mm	1.196	1.239	2.44	0.03	Case 103
		Edge 1 at 0mm	0.784	0.649	1.43		
		Curved surface of Edge1 at 0mm	1.190	1.276	2.47	0.03	Case 104
		Bottom Face at 7mm	0.881	1.239	2.12	0.02	Case 105
		Edge 1 at 10mm	0.909	0.649	1.56		
		Edge 2 at 0mm	0.234		0.23		
		Curved surface of Edge1 at 12mm	0.716	1.276	1.99	0.02	Case 106
	CDMA2000 BC1	Bottom Face at 0mm	1.067	1.239	2.31	0.03	Case 107
		Edge 1 at 0mm	0.678	0.649	1.33		
		Curved surface of Edge1 at 0mm	0.886	1.276	2.16	0.02	Case 108
		Bottom Face at 7mm	1.102	1.239	2.34	0.03	Case 109
		Edge 1 at 10mm	0.635	0.649	1.28		
		Edge 2 at 0mm	0.561		0.56		
		Curved surface of Edge1 at 12mm	0.684	1.276	1.96	0.02	Case 110
LTE	LTE Band 4	Bottom Face at 0mm	1.169	1.239	2.41	0.03	Case 111
		Edge 1 at 0mm	0.794	0.649	1.44		
		Curved surface of Edge1 at 0mm	1.084	1.276	2.36	0.03	Case 112
		Bottom Face at 7mm	1.298	1.239	2.54	0.03	Case 113
		Edge 1 at 10mm	1.161	0.649	1.81	0.02	Case 114
		Edge 2 at 0mm	0.202		0.20		
		Curved surface of Edge1 at 12mm	0.899	1.276	2.18	0.02	Case 115
	LTE Band 5	Bottom Face at 0mm	1.176	1.239	2.42	0.03	Case 116
		Edge 1 at 0mm	0.901	0.649	1.55		
		Curved surface of Edge1 at 0mm	1.199	1.276	2.48	0.03	Case 117
		Bottom Face at 7mm	0.985	1.239	2.22	0.02	Case 118
		Edge 1 at 10mm	0.914	0.649	1.56		
		Edge 2 at 0mm	0.242		0.24		
		Curved surface of Edge1 at 12mm	0.766	1.276	2.04	0.02	Case 119

WWAN Band		Exposure Position	1	3	1+3 Summed 1g SAR (W/kg)	1+3 SPLSR	1+3 Case No
			WWAN	2.4GHz WLAN Ant 2			
			1g SAR (W/kg)	1g SAR (W/kg)			
LTE	LTE Band 13	Bottom Face at 0mm	1.128	1.239	2.37	0.03	Case 120
		Edge 1 at 0mm	0.978	0.649	1.63	0.02	Case 121
		Curved surface of Edge1 at 0mm	1.191	1.276	2.47	0.03	Case 122
		Bottom Face at 7mm	0.793	1.239	2.03	0.02	Case 123
		Edge 1 at 10mm	0.788	0.649	1.44		
		Edge 2 at 0mm	0.249		0.25		
		Curved surface of Edge1 at 12mm	0.688	1.276	1.96	0.02	Case 124
	LTE Band 17	Bottom Face at 0mm	1.028	1.239	2.27	0.02	Case 125
		Edge 1 at 0mm	0.980	0.649	1.63	0.02	Case 126
		Curved surface of Edge1 at 0mm	1.192	1.276	2.47	0.03	Case 127
		Bottom Face at 7mm	0.744	1.239	1.98	0.02	Case 128
		Edge 1 at 10mm	0.569	0.649	1.22		
		Edge 2 at 0mm	0.132		0.13		
		Curved surface of Edge1 at 12mm	0.474	1.276	1.75	0.02	Case 129
	LTE Band 25	Bottom Face at 0mm	1.186	1.239	2.43	0.03	Case 130
		Edge 1 at 0mm	0.853	0.649	1.50		
		Curved surface of Edge1 at 0mm	1.088	1.276	2.36	0.03	Case 131
		Bottom Face at 7mm	1.203	1.239	2.44	0.03	Case 132
		Edge 1 at 10mm	0.686	0.649	1.34		
		Edge 2 at 0mm	0.883		0.88		
		Curved surface of Edge1 at 12mm	0.721	1.276	2.00	0.02	Case 133

WWAN Band		Exposure Position	1	4	1+4 Summed 1g SAR (W/kg)	1+4 SPLSR	1+4 Case No
			WWAN	Bluetooth Ant 2			
			1g SAR (W/kg)	Estimated 1g SAR (W/kg)			
GSM	GSM850	Bottom Face at 0mm	1.163	0.010	1.17		
		Edge 1 at 0mm	0.778	0.010	0.79		
		Curved surface of Edge1 at 0mm	1.190	0.010	1.20		
		Bottom Face at 7mm	1.447	0.010	1.46		
		Edge 1 at 10mm	1.434	0.010	1.44		
		Edge 2 at 0mm	0.360		0.36		
		Curved surface of Edge1 at 12mm	1.139	0.010	1.15		
	GSM1900	Bottom Face at 0mm	1.143	0.010	1.15		
		Edge 1 at 0mm	0.841	0.010	0.85		
		Curved surface of Edge1 at 0mm	1.086	0.010	1.10		
		Bottom Face at 7mm	0.884	0.010	0.89		
		Edge 1 at 10mm	0.454	0.010	0.46		
		Edge 2 at 0mm	0.422		0.42		
		Curved surface of Edge1 at 12mm	0.452	0.010	0.46		
WCDMA	WCDMA II	Bottom Face at 0mm	1.185	0.010	1.20		
		Edge 1 at 0mm	0.853	0.010	0.86		
		Curved surface of Edge1 at 0mm	1.090	0.010	1.10		
		Bottom Face at 7mm	0.998	0.010	1.01		
		Edge 1 at 10mm	0.506	0.010	0.52		
		Edge 2 at 0mm	0.613		0.61		
		Curved surface of Edge1 at 12mm	0.615	0.010	0.63		
	WCDMA IV	Bottom Face at 0mm	1.077	0.010	1.09		
		Edge 1 at 0mm	0.748	0.010	0.76		
		Curved surface of Edge1 at 0mm	1.127	0.010	1.14		
		Bottom Face at 7mm	1.051	0.010	1.06		
		Edge 1 at 10mm	1.008	0.010	1.02		
		Edge 2 at 0mm	0.500		0.50		
		Curved surface of Edge1 at 12mm	0.780	0.010	0.79		
	WCDMA V	Bottom Face at 0mm	1.169	0.010	1.18		
		Edge 1 at 0mm	0.873	0.010	0.88		
		Curved surface of Edge1 at 0mm	1.181	0.010	1.19		
		Bottom Face at 7mm	0.869	0.010	0.88		
		Edge 1 at 10mm	0.917	0.010	0.93		
		Edge 2 at 0mm	0.133		0.13		
		Curved surface of Edge1 at 12mm	0.733	0.010	0.74		



WWAN Band		Exposure Position	1	7	1+7 Summed 1g SAR (W/kg)	1+4 SPLSR	1+4 Case No
			WWAN	Bluetooth Ant 2			
			1g SAR (W/kg)	Estimated 1g SAR (W/kg)			
CDMA	CDMA2000 BC10	Bottom Face at 0mm	1.162	0.010	1.17		
		Edge 1 at 0mm	0.859	0.010	0.87		
		Curved surface of Edge1 at 0mm	1.148	0.010	1.16		
		Bottom Face at 7mm	0.879	0.010	0.89		
		Edge 1 at 10mm	0.793	0.010	0.80		
		Edge 2 at 0mm	0.236		0.24		
		Curved surface of Edge1 at 12mm	0.659	0.010	0.67		
	CDMA2000 BC0	Bottom Face at 0mm	1.196	0.010	1.21		
		Edge 1 at 0mm	0.784	0.010	0.79		
		Curved surface of Edge1 at 0mm	1.190	0.010	1.20		
		Bottom Face at 7mm	0.881	0.010	0.89		
		Edge 1 at 10mm	0.909	0.010	0.92		
		Edge 2 at 0mm	0.234		0.23		
		Curved surface of Edge1 at 12mm	0.716	0.010	0.73		
	CDMA2000 BC1	Bottom Face at 0mm	1.067	0.010	1.08		
		Edge 1 at 0mm	0.678	0.010	0.69		
		Curved surface of Edge1 at 0mm	0.886	0.010	0.90		
		Bottom Face at 7mm	1.102	0.010	1.11		
		Edge 1 at 10mm	0.635	0.010	0.65		
		Edge 2 at 0mm	0.561		0.56		
		Curved surface of Edge1 at 12mm	0.684	0.010	0.69		
LTE	LTE Band 4	Bottom Face at 0mm	1.169	0.010	1.18		
		Edge 1 at 0mm	0.794	0.010	0.80		
		Curved surface of Edge1 at 0mm	1.084	0.010	1.09		
		Bottom Face at 7mm	1.298	0.010	1.31		
		Edge 1 at 10mm	1.161	0.010	1.17		
		Edge 2 at 0mm	0.202		0.20		
		Curved surface of Edge1 at 12mm	0.899	0.010	0.91		
	LTE Band 5	Bottom Face at 0mm	1.176	0.010	1.19		
		Edge 1 at 0mm	0.901	0.010	0.91		
		Curved surface of Edge1 at 0mm	1.199	0.010	1.21		
		Bottom Face at 7mm	0.985	0.010	1.00		
		Edge 1 at 10mm	0.914	0.010	0.92		
		Edge 2 at 0mm	0.242		0.24		
		Curved surface of Edge1 at 12mm	0.766	0.010	0.78		

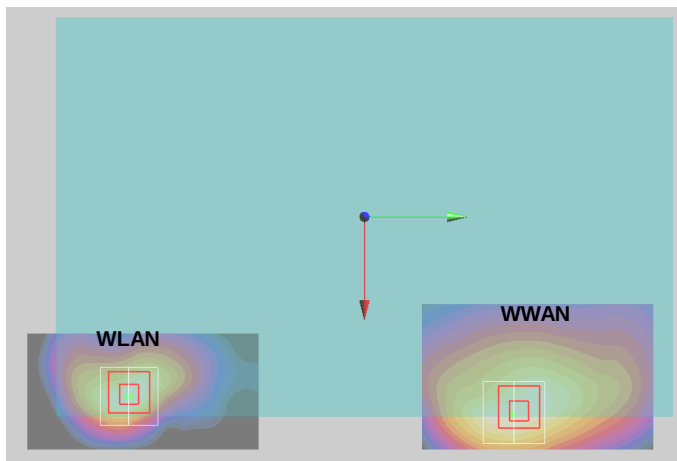
WWAN Band		Exposure Position	1	7	1+7 Summed 1g SAR (W/kg)	1+4 SPLSR	1+4 Case No
			WWAN	Bluetooth Ant 2			
			1g SAR (W/kg)	Estimated 1g SAR (W/kg)			
LTE	LTE Band 13	Bottom Face at 0mm	1.128	0.010	1.14		
		Edge 1 at 0mm	0.978	0.010	0.99		
		Curved surface of Edge1 at 0mm	1.191	0.010	1.20		
		Bottom Face at 7mm	0.793	0.010	0.80		
		Edge 1 at 10mm	0.788	0.010	0.80		
		Edge 2 at 0mm	0.249		0.25		
		Curved surface of Edge1 at 12mm	0.688	0.010	0.70		
	LTE Band 17	Bottom Face at 0mm	1.028	0.010	1.04		
		Edge 1 at 0mm	0.980	0.010	0.99		
		Curved surface of Edge1 at 0mm	1.192	0.010	1.20		
		Bottom Face at 7mm	0.744	0.010	0.75		
		Edge 1 at 10mm	0.569	0.010	0.58		
		Edge 2 at 0mm	0.132		0.13		
		Curved surface of Edge1 at 12mm	0.474	0.010	0.48		
	LTE Band 25	Bottom Face at 0mm	1.186	0.010	1.20		
		Edge 1 at 0mm	0.853	0.010	0.86		
		Curved surface of Edge1 at 0mm	1.088	0.010	1.10		
		Bottom Face at 7mm	1.203	0.010	1.21		
		Edge 1 at 10mm	0.686	0.010	0.70		
		Edge 2 at 0mm	0.883		0.88		
		Curved surface of Edge1 at 12mm	0.721	0.010	0.73		

16.2 SPLSR Evaluation and Analysis

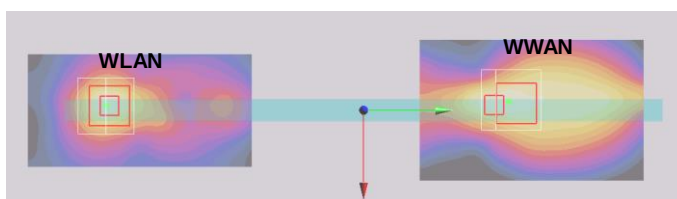
General Note:

1. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

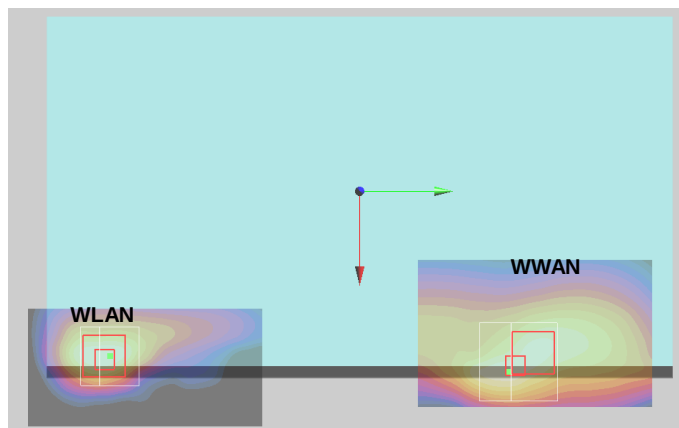
Case 1	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(cm)	X	Y	Z				
	GSM850	Bottom Face	1.163	0mm	0.101	0.0775	-0.181	199.7	1.91	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



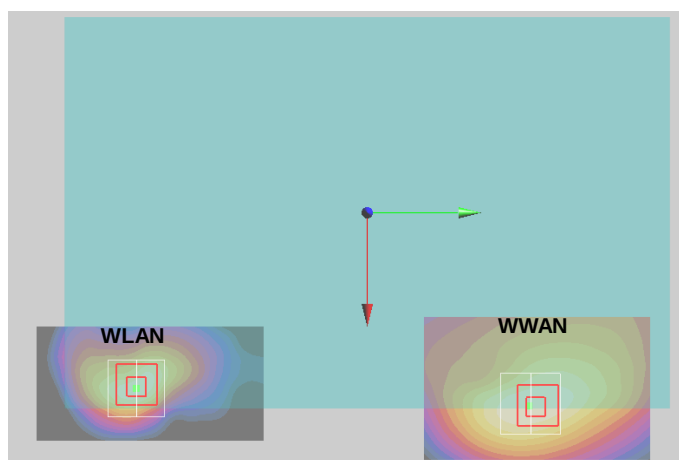
Case 2	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(cm)	X	Y	Z				
	GSM850	Edge 1	0.778	0mm	-0.0055	0.071	-0.178	209.0	2.02	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



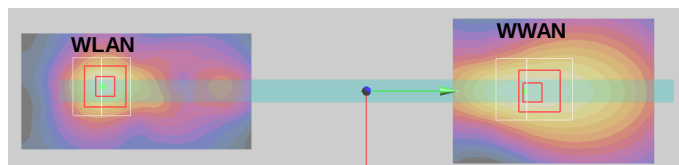
Case 3	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Curved surface of Edge1	1.19	0mm	0.091	0.0775	-0.182	210.5	2.34	0.02	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



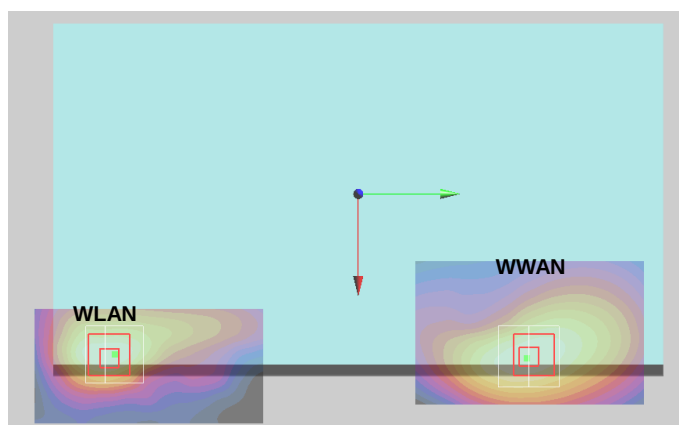
Case 4	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Bottom Face	1.447	7mm	0.101	0.0865	-0.182	208.7	2.20	0.02	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



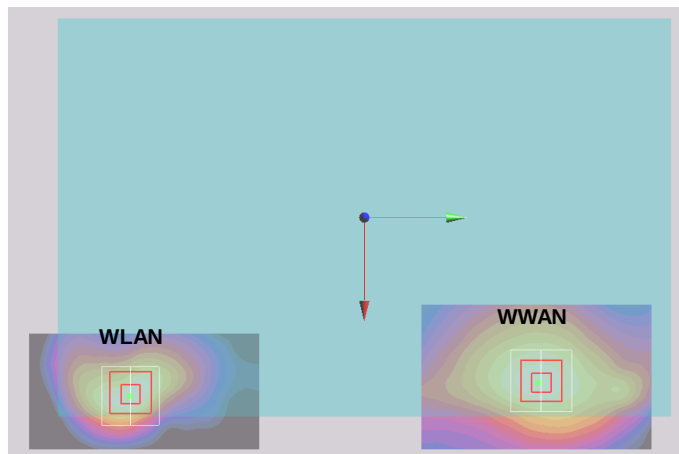
Case 5	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM850	Edge 1	1.434	10mm	X	Y	Z	221.5	2.68	0.02	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



Case 6	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM850	Curved surface of Edge1	1.139	12mm	X	Y	Z	222.6	2.29	0.02	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



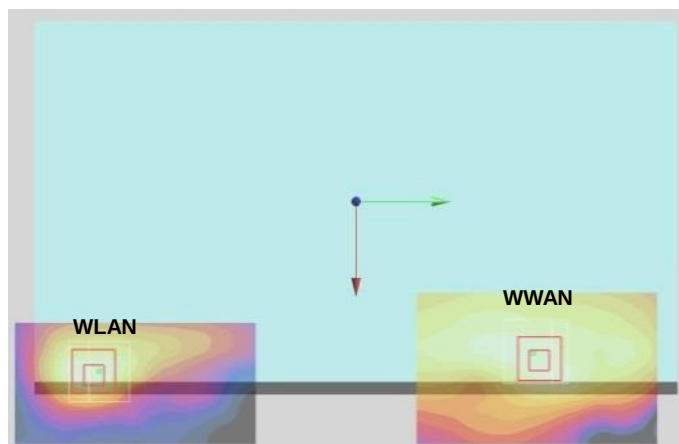
Case 7	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(cm)	X	Y	Z				
	GSM1900	Bottom Face	1.143	0mm	0.0845	0.0925	-0.176	214.7	1.89	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



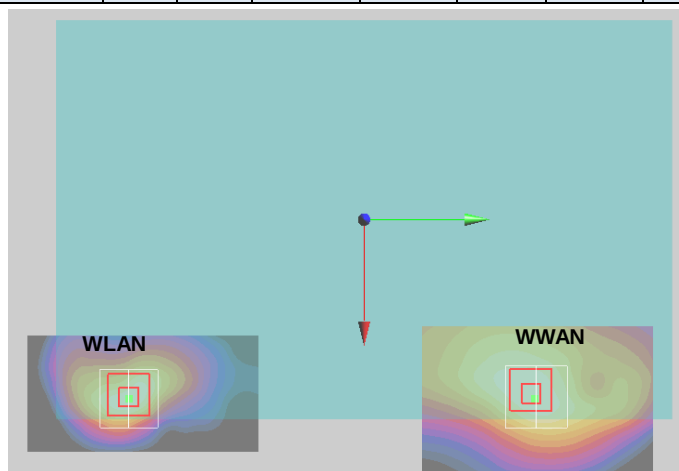
Case 8	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(cm)	X	Y	Z				
	GSM1900	Edge 1	0.841	0mm	-0.0025	0.104	-0.182	242.0	2.08	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



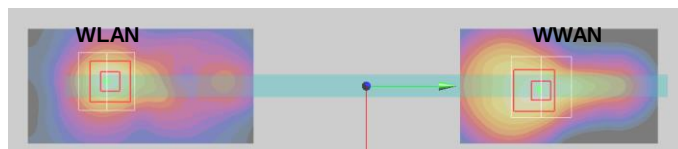
Case 9	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Curved surface of Edge1	1.086	0mm	X	Y	Z	230.6	2.24	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



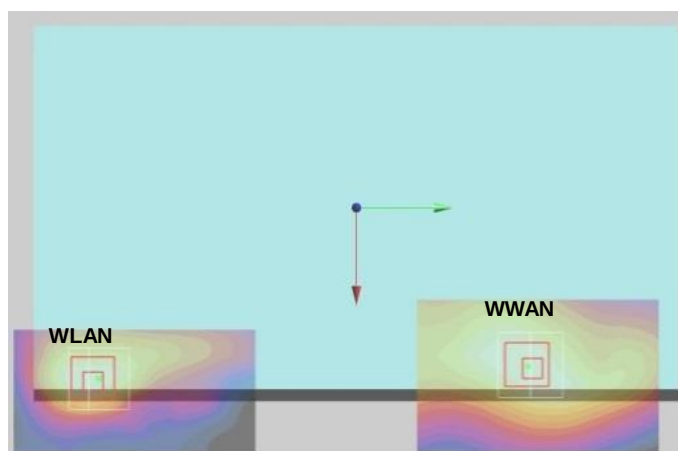
Case 10	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Bottom Face	0.884	7mm	X	Y	Z	211.5	1.63	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



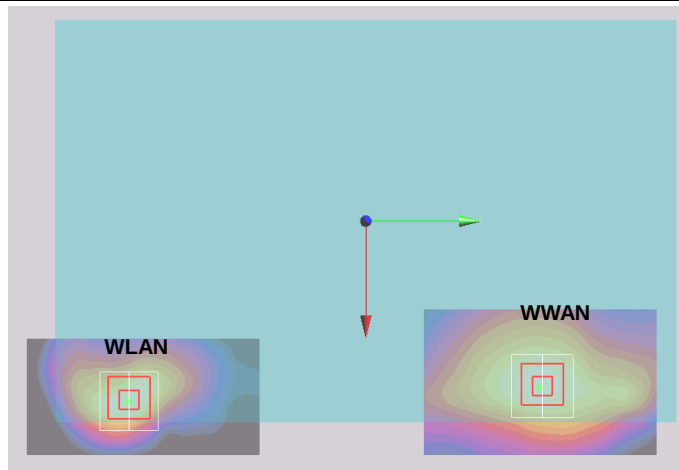
Case 11	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Edge 1	0.454	10mm	X	Y	Z	231.1	1.70	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



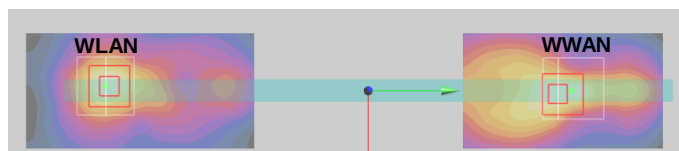
Case 12	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Curved surface of Edge1	0.452	12mm	X	Y	Z	219.8	1.60	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



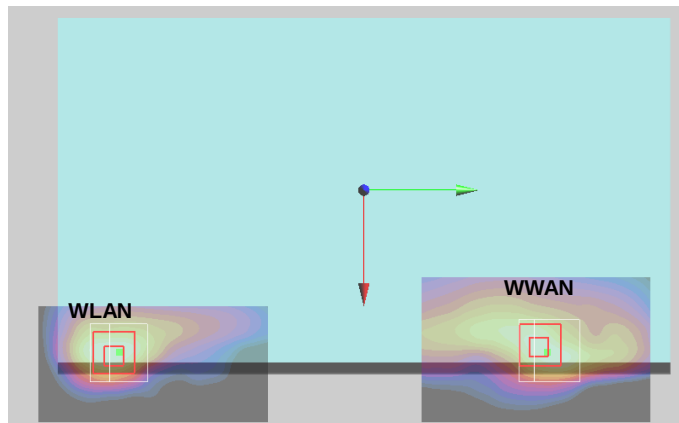
Case 13	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Bottom Face	1.185	0mm	X	Y	Z	213.2	1.93	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



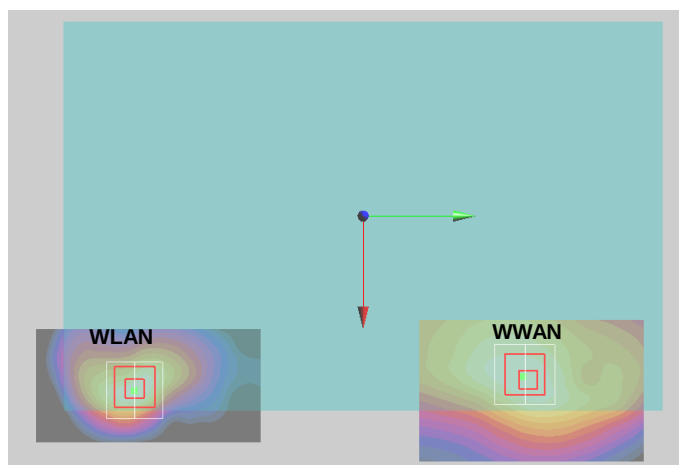
Case 14	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Edge 1	0.853	0mm	X	Y	Z	238.0	2.09	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



Case 15	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Curved surface of Edge1	1.09	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



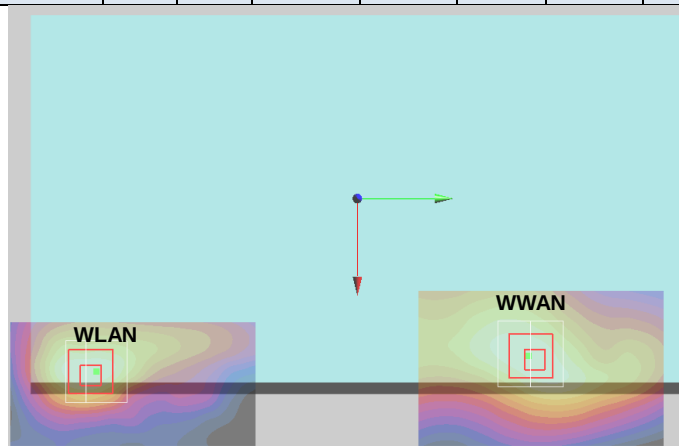
Case 16	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Bottom Face	0.998	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



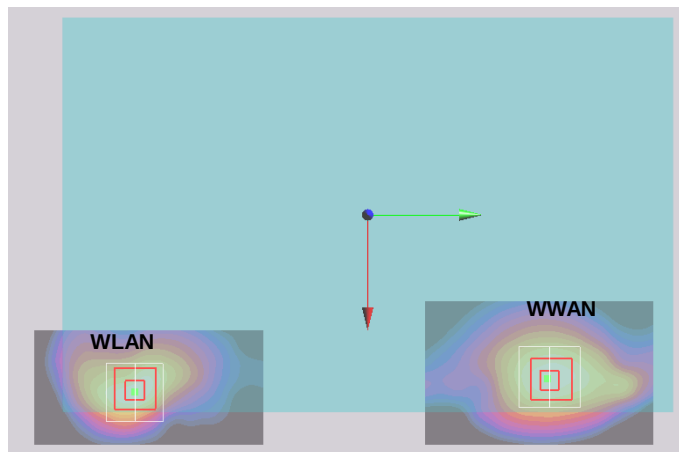
Case 17	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Edge 1	0.506	10mm	X	Y	Z	231.0	1.75	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



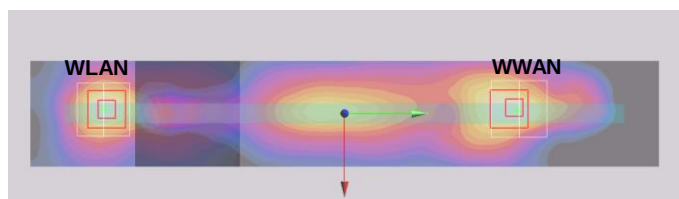
Case 18	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Curved surface of Edge1	0.615	12mm	X	Y	Z	218.4	1.77	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



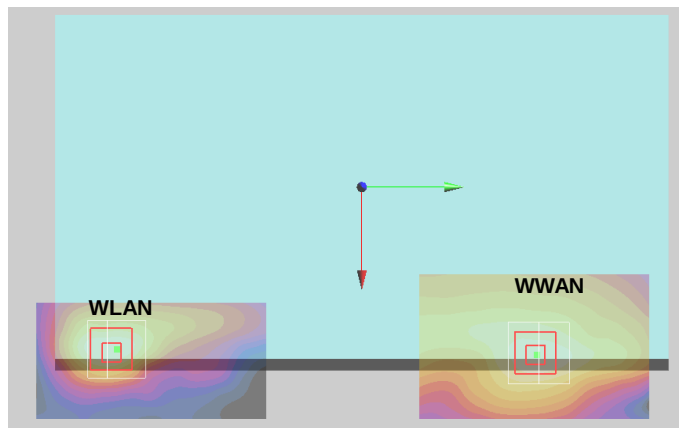
Case 19	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Bottom Face	1.077	0mm	X	Y	Z	217.7	1.83	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



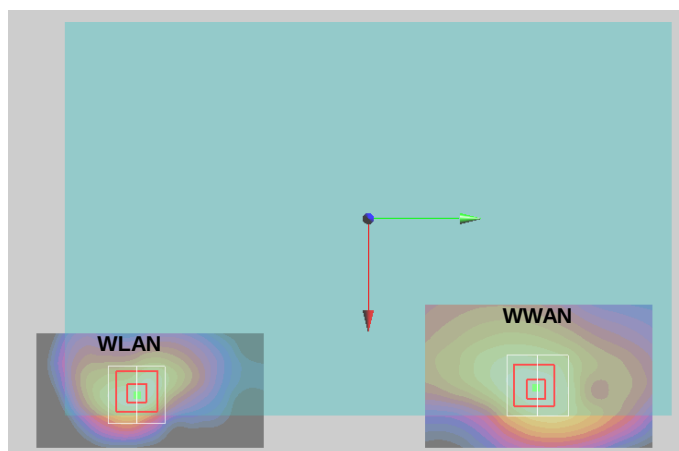
Case 20	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Edge 1	0.748	0mm	X	Y	Z	238.0	1.99	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



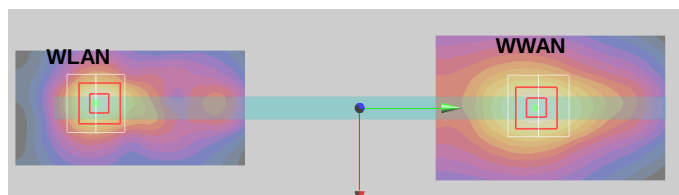
Case 21	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Curved surface of Edge1	1.127	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



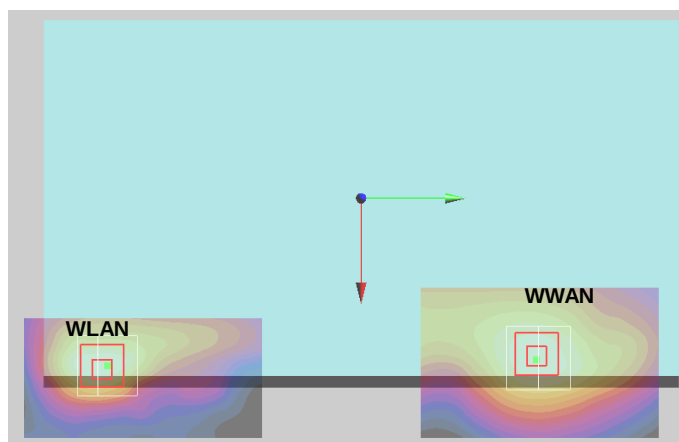
Case 22	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Bottom Face	1.051	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



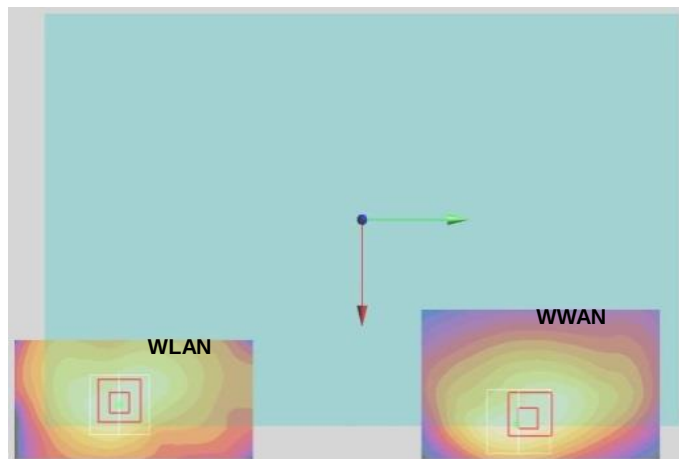
Case 23	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Edge 1	1.008	10mm	X	Y	Z	231.5	2.25	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



Case 24	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Curved surface of Edge1	0.78	12mm	X	Y	Z	222.7	1.93	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



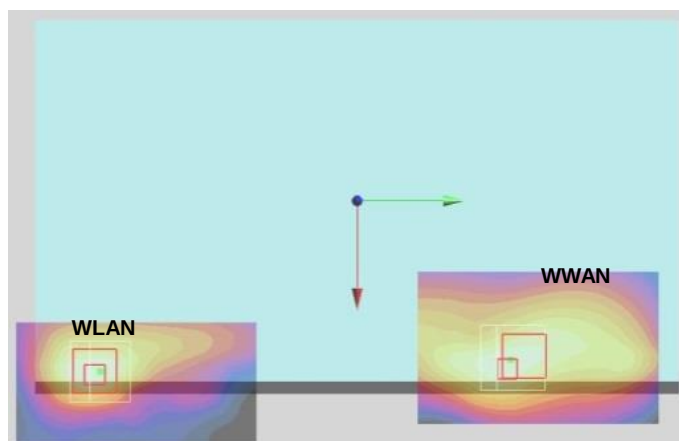
Case 25	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Bottom Face	1.169	0mm	0.101	0.079	-0.181	201.2	1.92	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



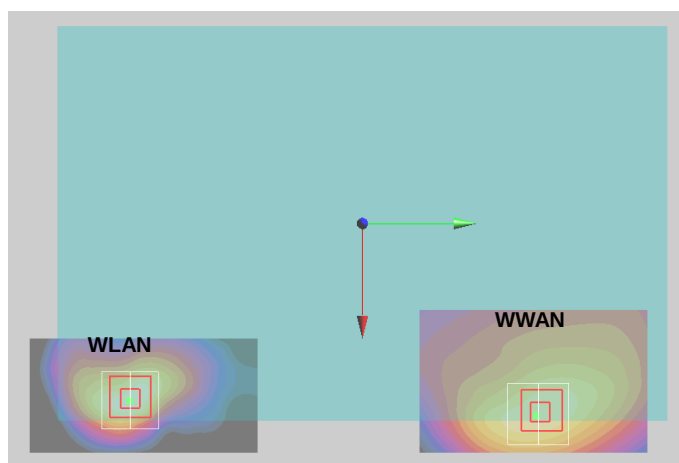
Case 26	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Edge 1	0.873	0mm	0.0005	0.071	-0.183	209.1	2.11	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



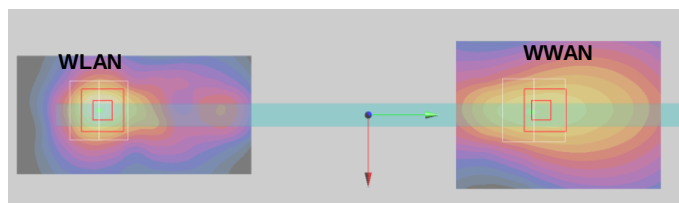
Case 27	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Curved surface of Edge1	1.181	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



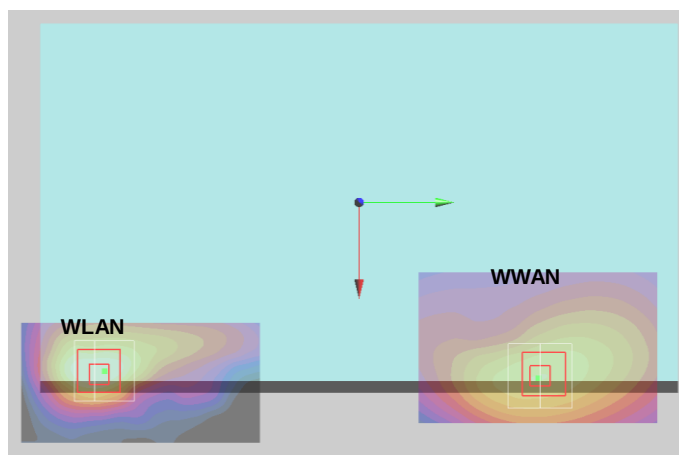
Case 28	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Bottom Face	0.869	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



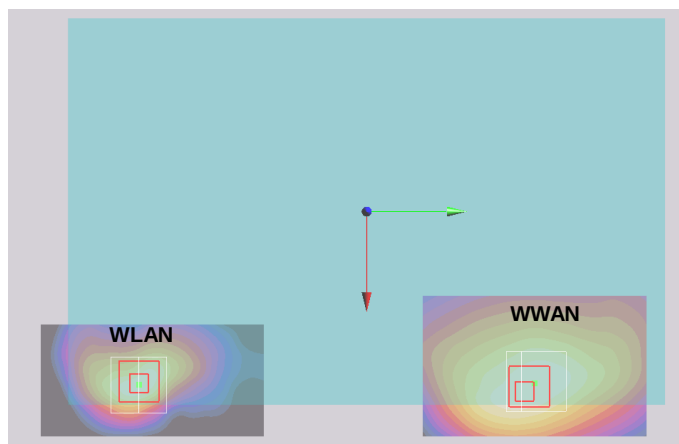
Case 29	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Edge 1	0.917	10mm	X	Y	Z	223.0	2.16	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



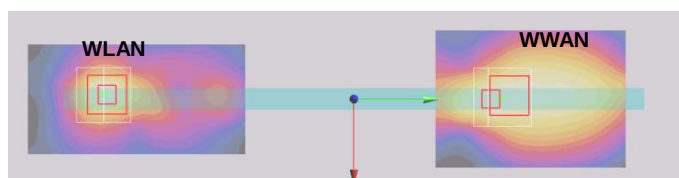
Case 30	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Curved surface of Edge1	0.733	12mm	X	Y	Z	224.0	1.88	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



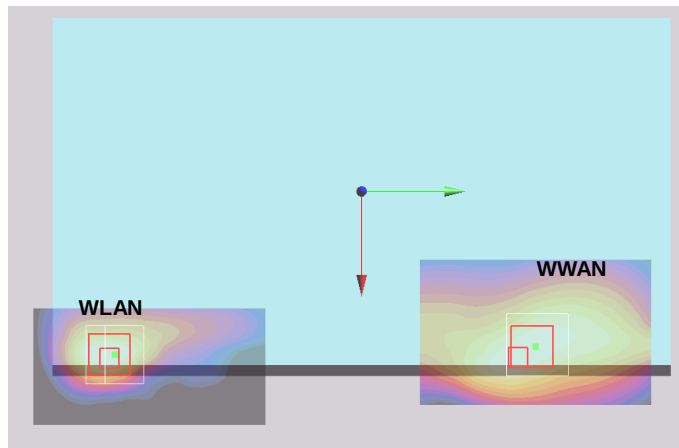
Case 31	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Bottom Face	1.162	0mm	X	Y	Z	205.1	1.91	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



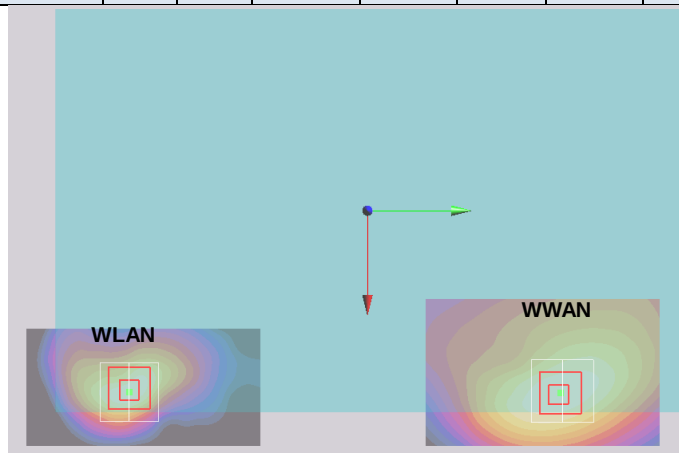
Case 32	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Edge 1	0.859	0mm	X	Y	Z	212.0	2.10	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



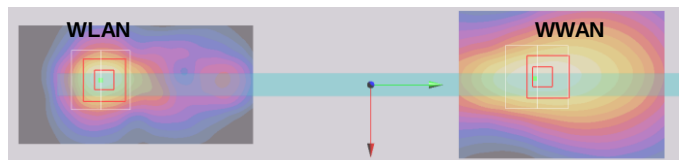
Case 33	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC10	Curved surface of Edge1	1.148	0mm	0.087	0.075	-0.177	208.0	2.30	0.02	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



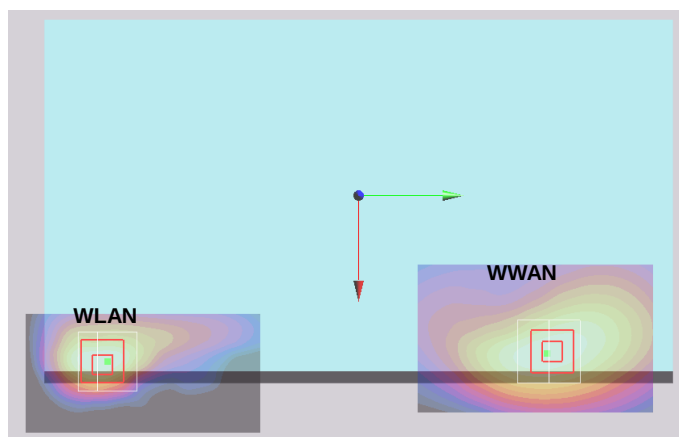
Case 34	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC10	Bottom Face	0.879	7mm	0.092	0.1	-0.181	222.0	1.63	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



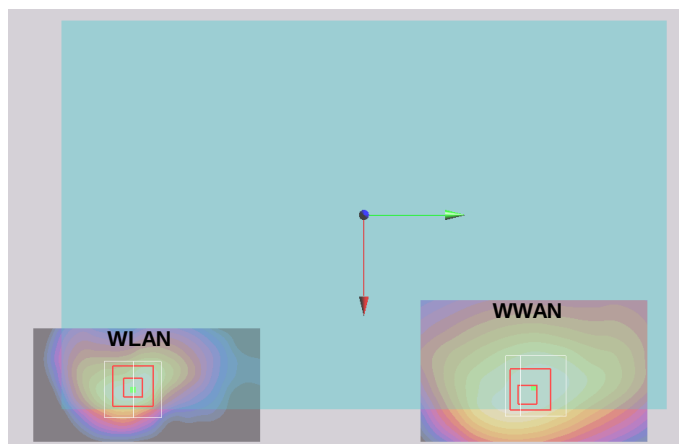
Case 35	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Edge 1	0.793	10mm	X	Y	Z	223.0	2.03	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



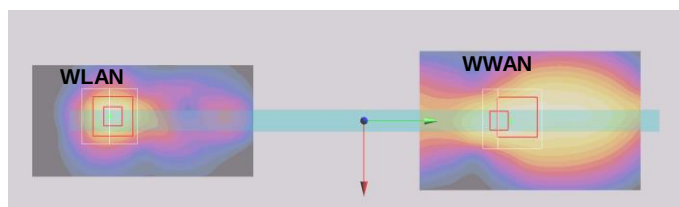
Case 36	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Curved surface of Edge1	0.659	12mm	X	Y	Z	230.2	1.81	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



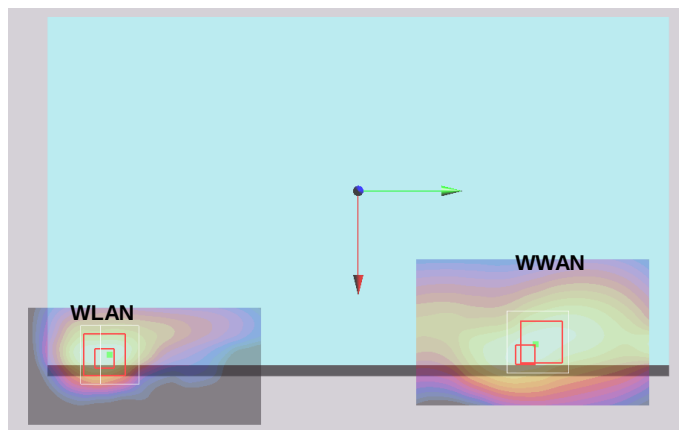
Case 37	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Bottom Face	1.196	0mm	0.0985	0.083	-0.176	205.1	1.95	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



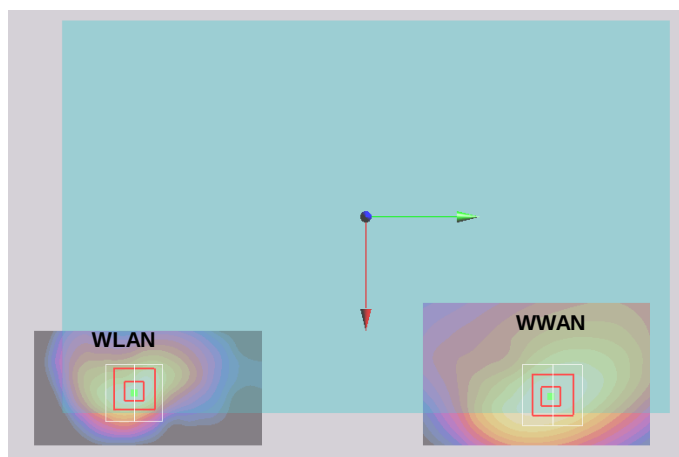
Case 38	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Edge 1	0.784	0mm	-0.001	0.0725	-0.178	210.5	2.03	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



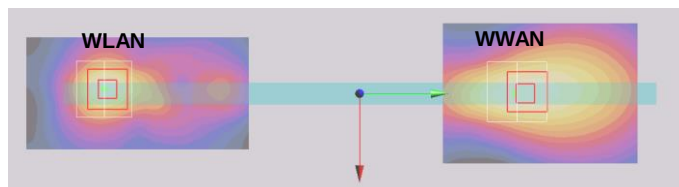
Case 39	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Curved surface of Edge1	1.19	0mm	0.0855	0.0765	-0.181				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179	209.5	2.34	0.02	Not required



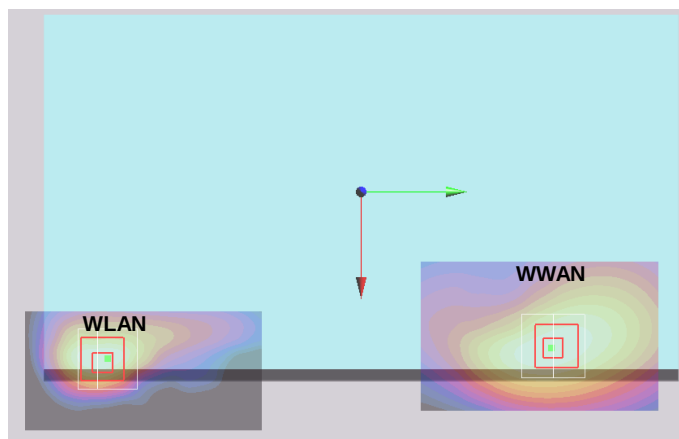
Case 40	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Bottom Face	0.881	7mm	0.0935	0.0985	-0.181				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178	220.5	1.63	0.01	Not required



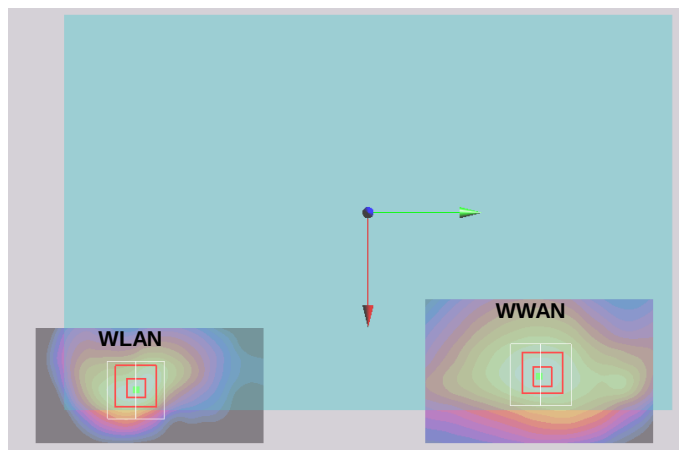
Case 41	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC0	Edge 1	0.909	0mm	X	Y	Z	223.0	2.15	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



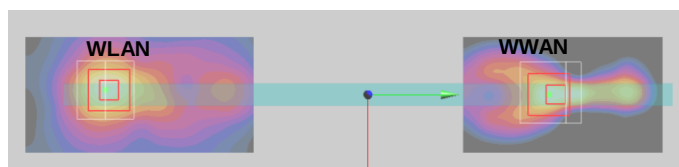
Case 42	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC0	Curved surface of Edge1	0.716	12mm	X	Y	Z	230.3	1.87	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



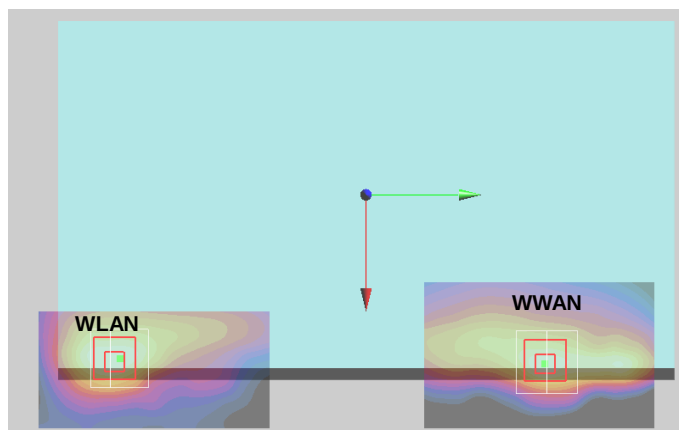
Case 43	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Bottom Face	1.067	0mm	X	Y	Z	213.2	1.82	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0845	0.091	-0.176				



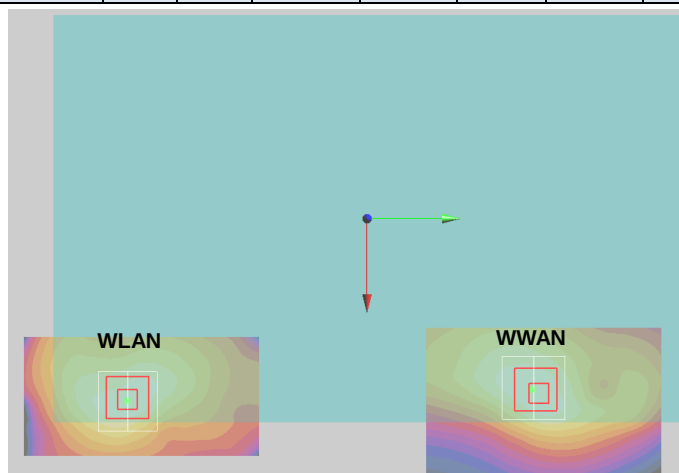
Case 44	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Edge 1	0.678	0mm	X	Y	Z	242.0	1.92	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



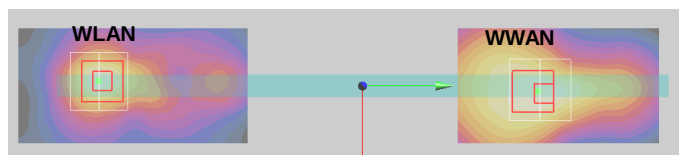
Case 45	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC1	Curved surface of Edge1	0.886	0mm	0.086	0.094	-0.182	227.0	2.04	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



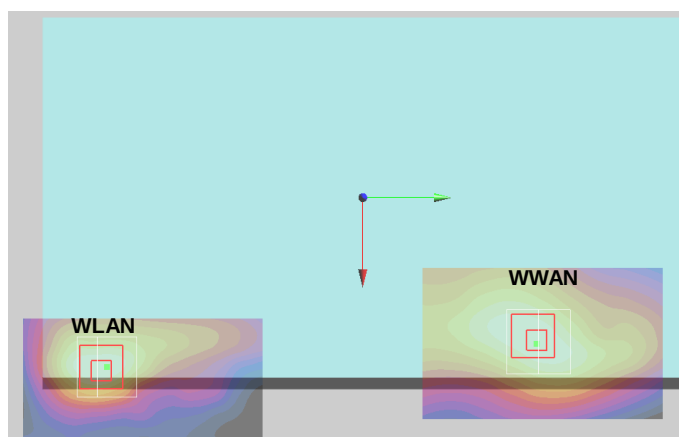
Case 46	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC1	Bottom Face	1.102	7mm	0.0755	0.085	-0.182	207.7	1.85	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



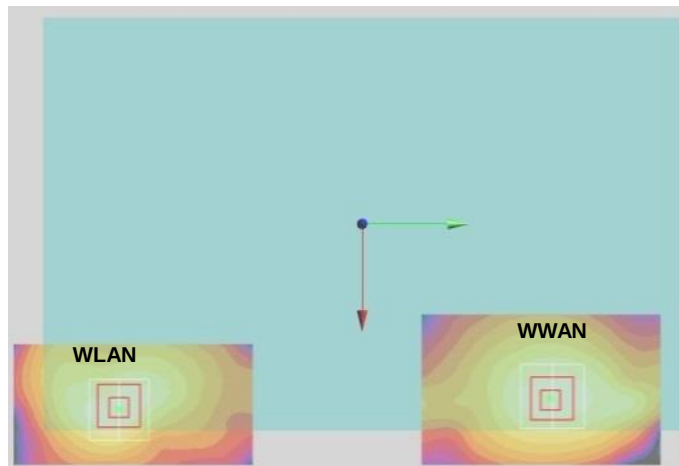
Case 47	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Edge 1	0.635	10mm	X	Y	Z	231.1	1.88	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



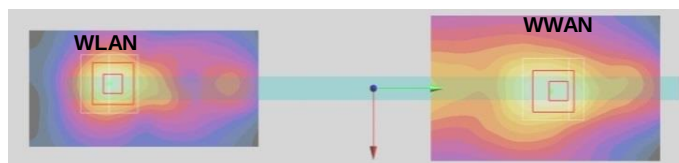
Case 48	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Curved surface of Edge1	0.684	12mm	X	Y	Z	221.7	1.84	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



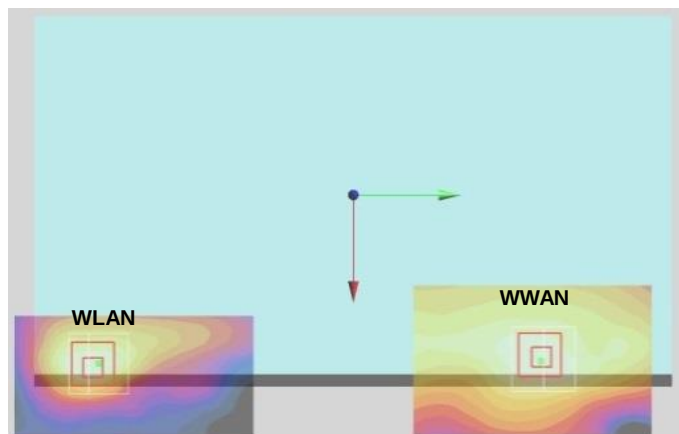
Case 49	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Bottom Face	1.169	0mm	0.086	0.0955	-0.173	217.7	1.92	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



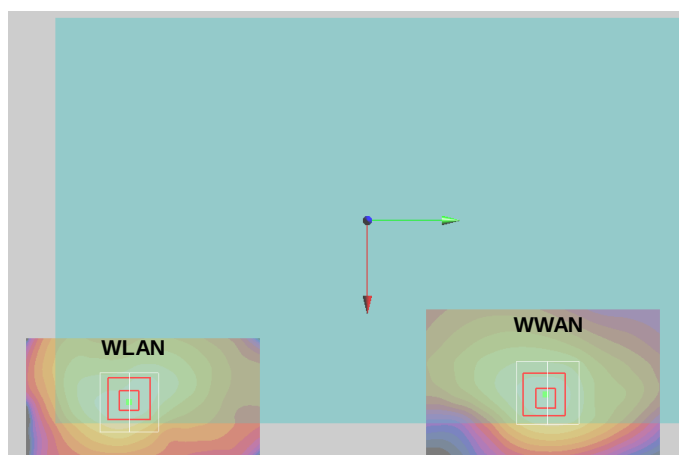
Case 50	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Edge 1	0.794	0mm	0.0005	0.102	-0.183	240.1	2.04	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



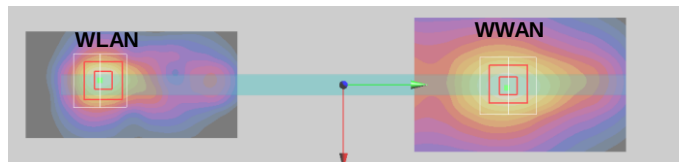
Case 51	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Curved surface of Edge1	1.084	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



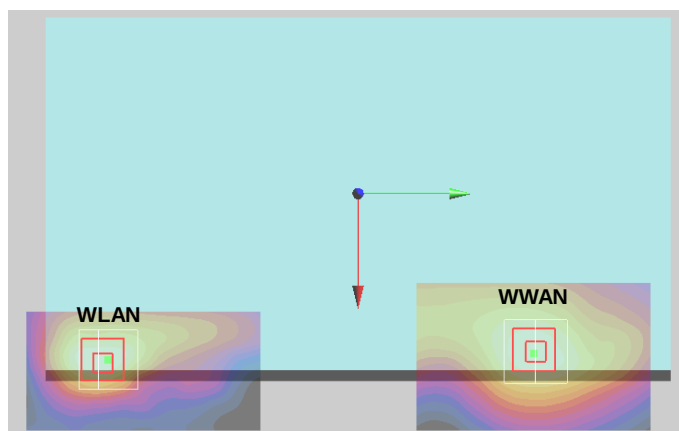
Case 52	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Bottom Face	1.298	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



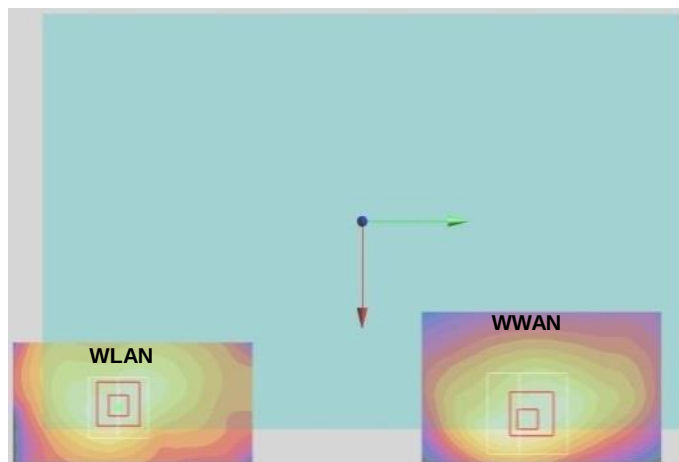
Case 53	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Edge 1	1.161	10mm	X	Y	Z	231.6	2.40	0.02	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



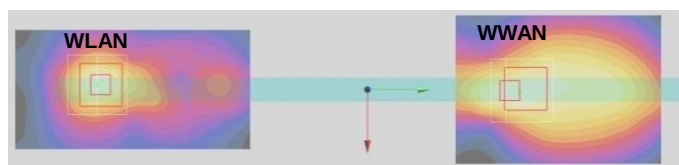
Case 54	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Curved surface of Edge1	0.899	12mm	X	Y	Z	224.2	2.05	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



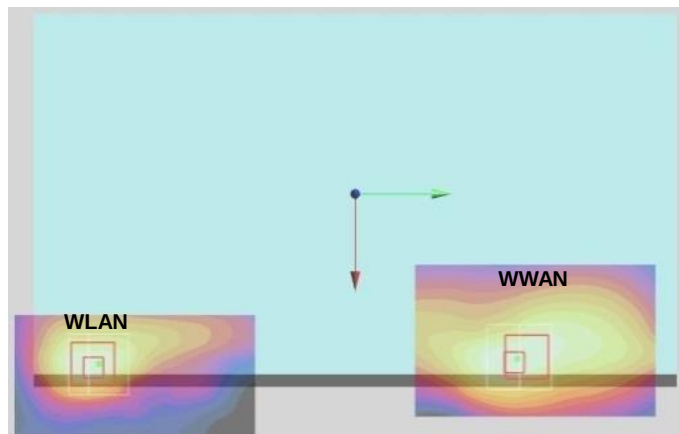
Case 55	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Bottom Face	1.176	0mm	X	Y	Z	201.1	1.93	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



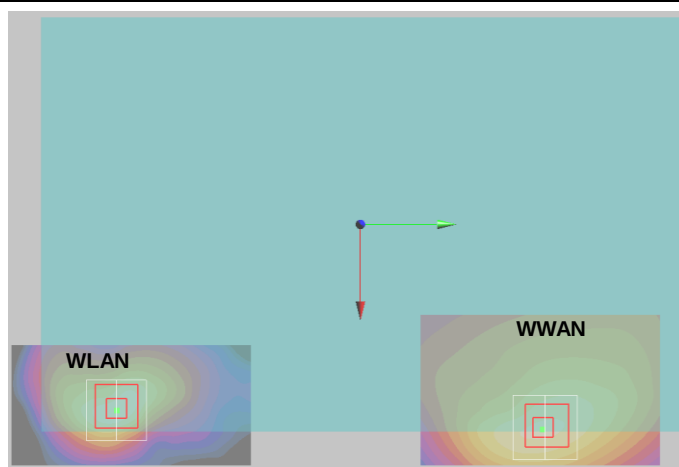
Case 56	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Edge 1	0.901	0mm	X	Y	Z	209.1	2.14	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



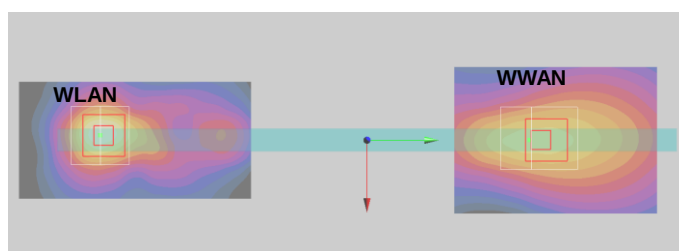
Case 57	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Curved surface of Edge1	1.199	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



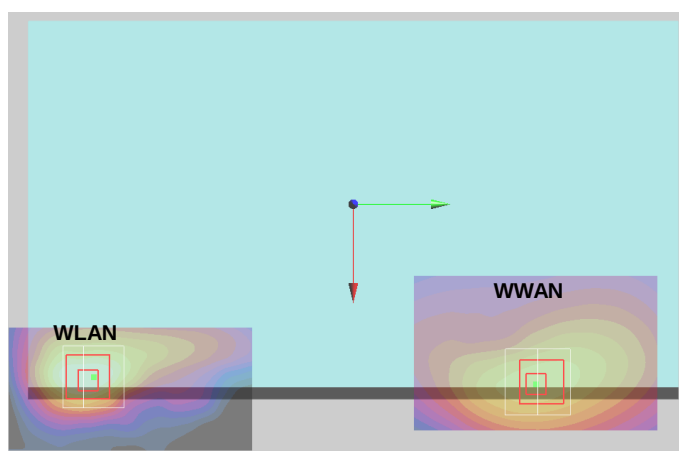
Case 58	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Bottom Face	0.985	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



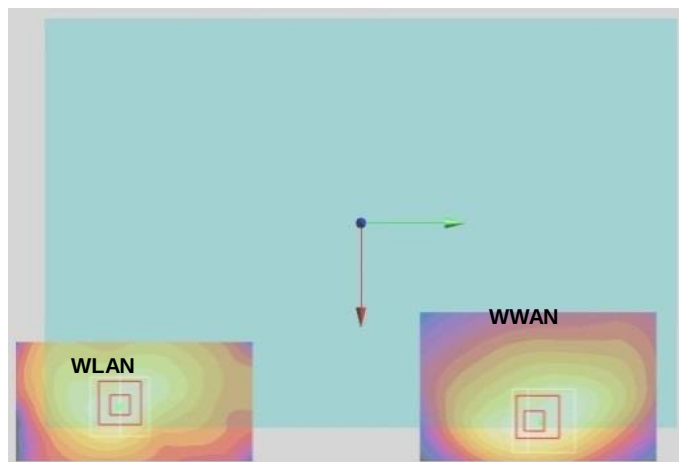
Case 59	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Edge 1	0.914	10mm	X	Y	Z				
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



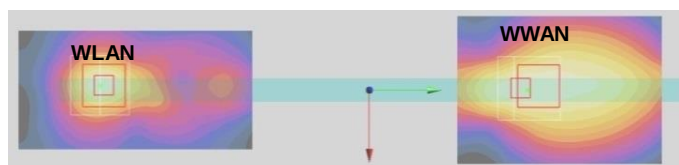
Case 60	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Curved surface of Edge1	0.766	12mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



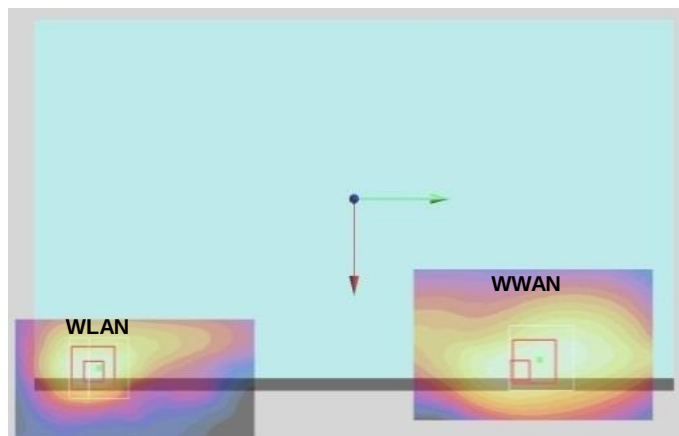
Case 61	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Bottom Face	1.128	0mm	X	Y	Z	206.6	1.88	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



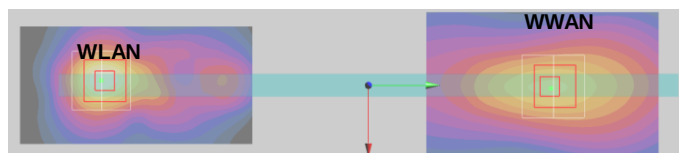
Case 62	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Edge 1	0.978	0mm	X	Y	Z	212.0	2.22	0.02	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



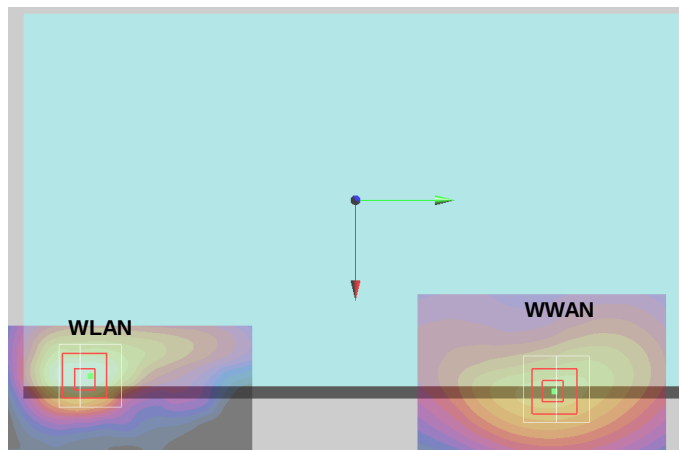
Case 63	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Curved surface of Edge1	1.191	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



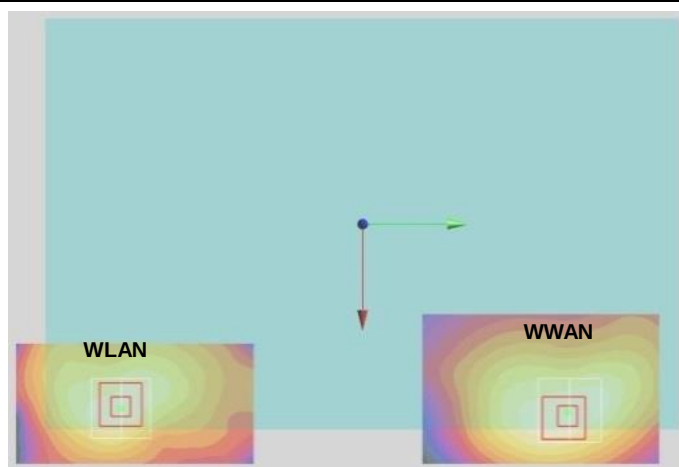
Case 64	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Edge 1	0.788	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



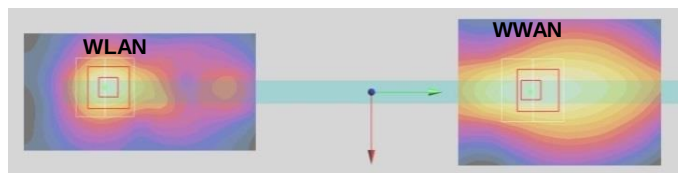
Case 65	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Curved surface of Edge1	0.688	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



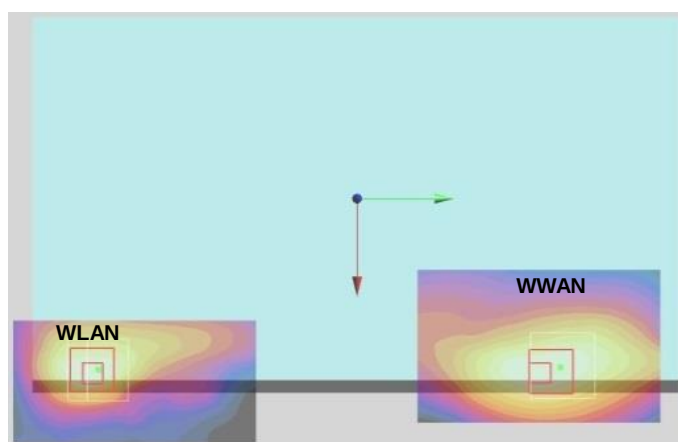
Case 66	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Bottom Face	1.028	0mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



Case 67	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Edge 1	0.98	0mm	X	Y	Z	221.5	2.22	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



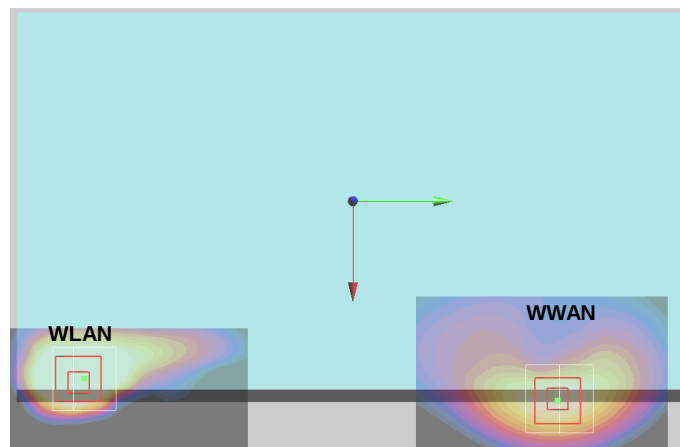
Case 68	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Curved surface of Edge1	1.192	0mm	X	Y	Z	218.6	2.34	0.02	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



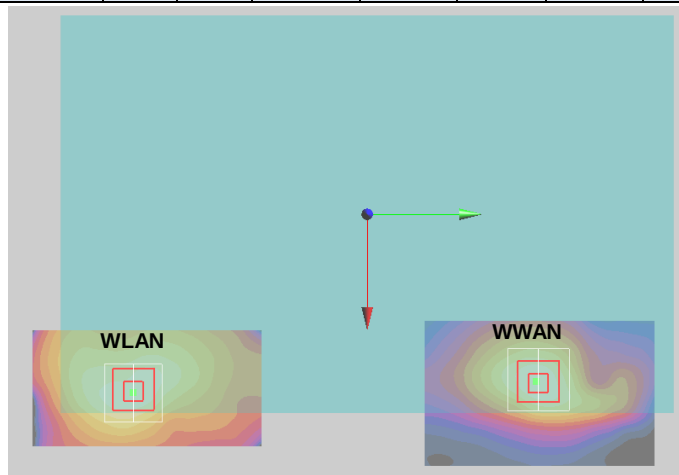
Case 69	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Edge 1	0.569	0mm	X	Y	Z	230.6	1.81	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



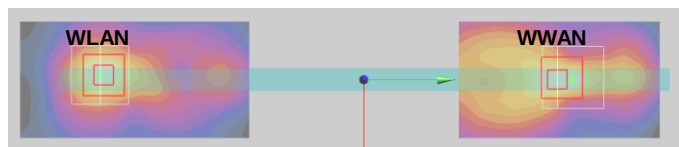
Case 70	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Curved surface of Edge1	0.474	0mm	X	Y	Z	231.5	1.63	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



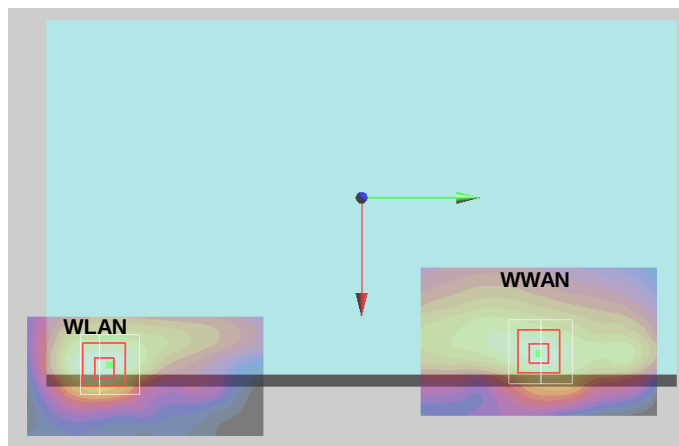
Case 71	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Bnad 25	Bottom Face	1.186	0mm	X	Y	Z	211.6	1.94	0.01	Not required
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



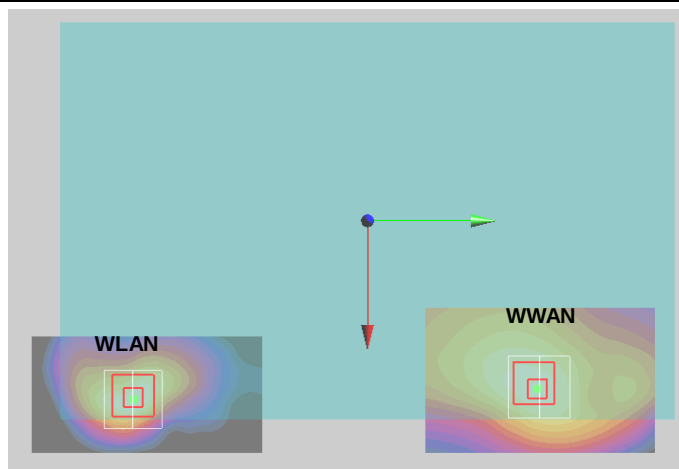
Case 72	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Bnad 25	Edge 1	0.853	0mm	X	Y	Z	240.0	2.09	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



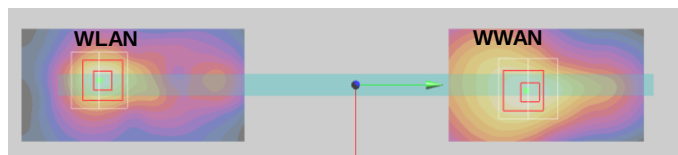
Case 73	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Curved surface of Edge1	1.088	0mm	X	Y	Z				
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



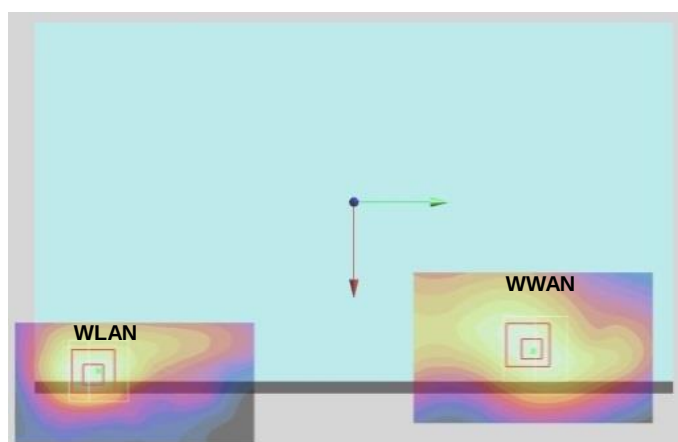
Case 74	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Bnad 25	Bottom Face	1.203	7mm	X	Y	Z				
	2.4GHz WLAN Main		0.749	0mm	0.0924	-0.122	-0.178				



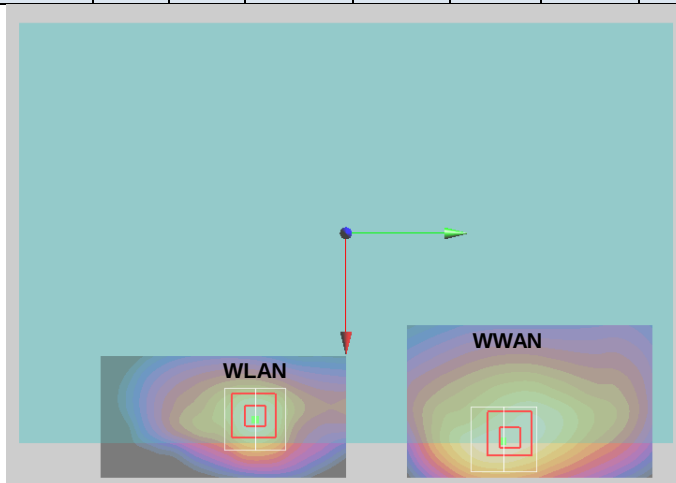
Case 75	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Edge 1	0.686	10mm	X	Y	Z	231.1	1.93	0.01	Not required
	2.4GHz WLAN Main		1.241	0mm	-0.0024	-0.138	-0.179				



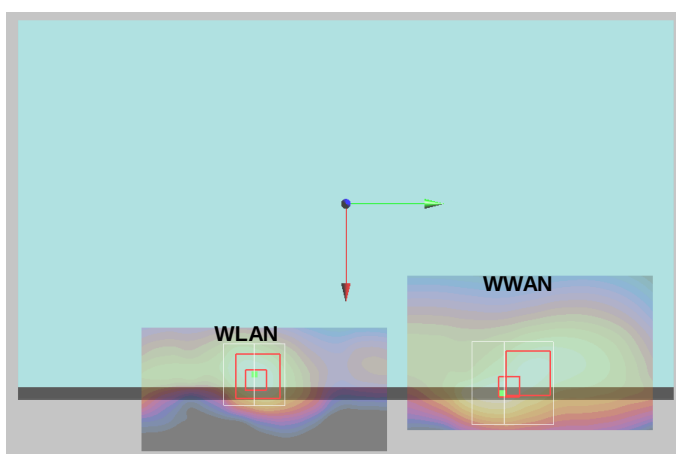
Case 76	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Curved surface of Edge1	0.721	12mm	X	Y	Z	224.6	1.87	0.01	Not required
	2.4GHz WLAN Main		1.151	0mm	0.089	-0.133	-0.179				



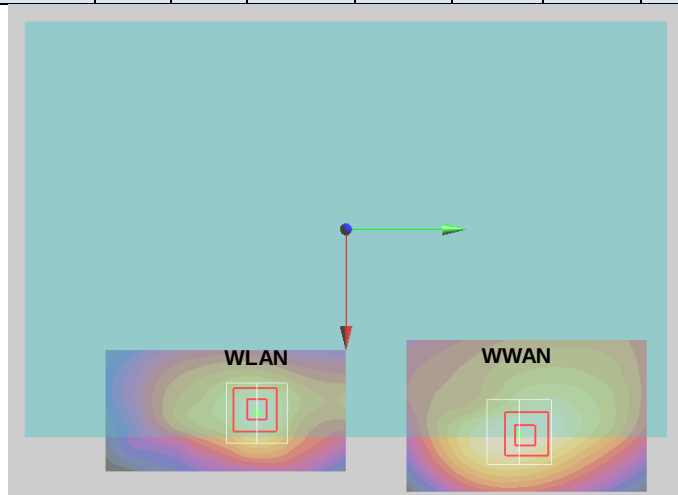
Case 77	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Bottom Face	1.163	0mm	0.101	0.0775	-0.181	122.3	2.40	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



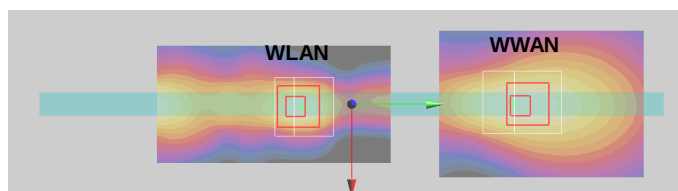
Case 78	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Curved surface of Edge1	1.19	0mm	0.091	0.0775	-0.182	122.4	2.47	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



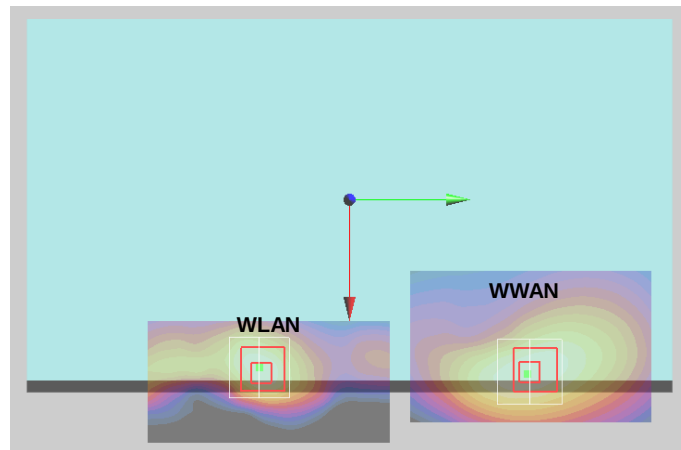
Case 79	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Bottom Face	1.447	7mm	0.101	0.0865	-0.182	131.3	2.69	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



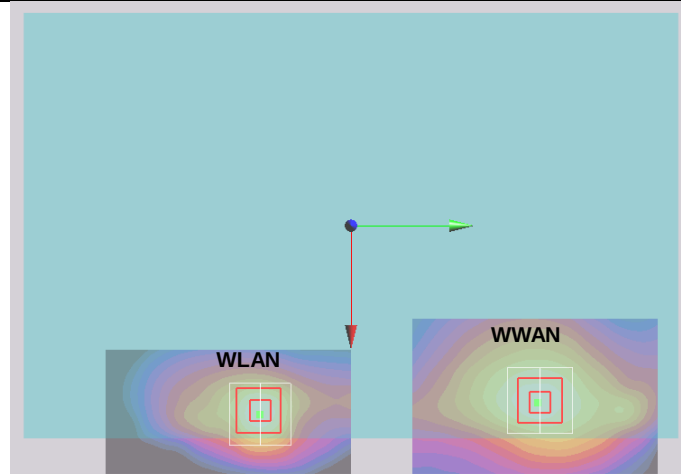
Case 80	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	GSM850	Edge 1	1.434	10mm	-0.001	0.0835	-0.183	113.0	2.08	0.03	Not required
	2.4GHz WLAN Aux		0.649	0mm	0.0012	-0.0294	-0.18				



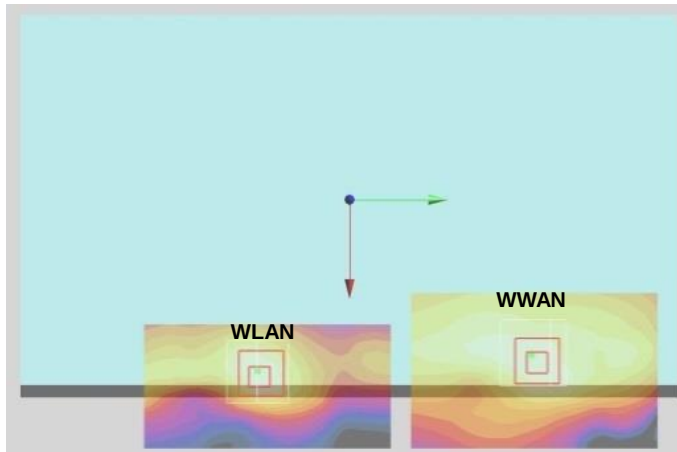
Case 81	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM850	Curved surface of Edge1	1.139	12mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



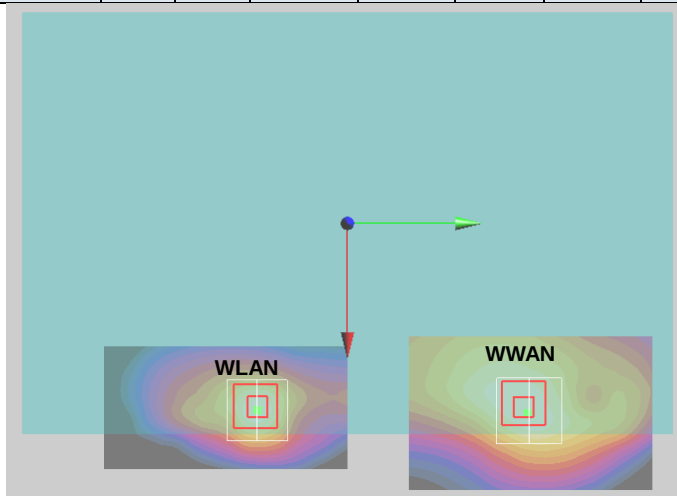
Case 82	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Bottom Face	1.143	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



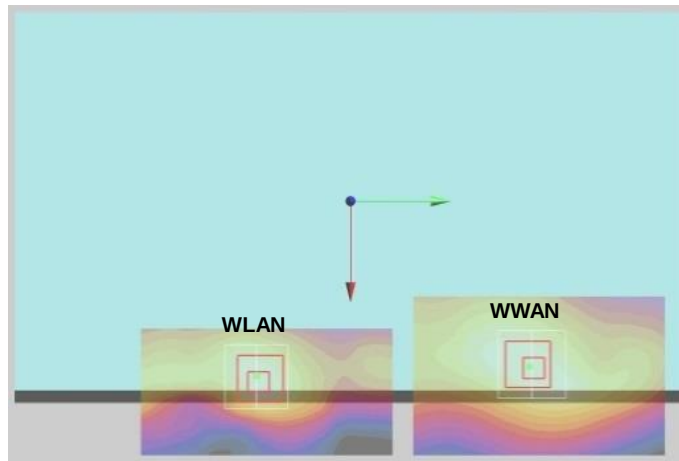
Case 83	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Curved surface of Edge1	1.086	0mm	X	Y	Z	142.4	2.36	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



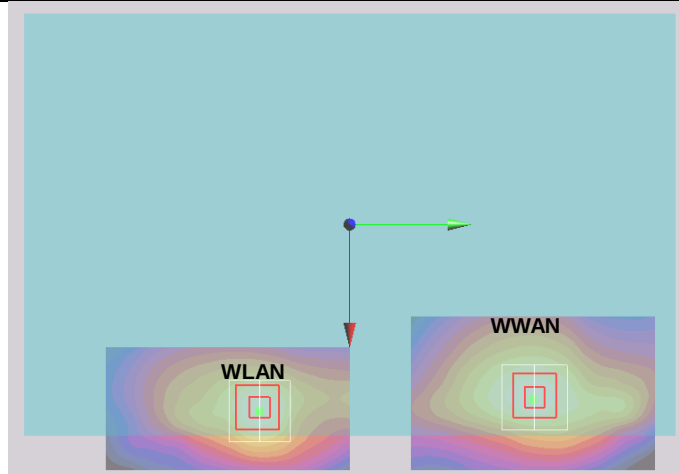
Case 84	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Bottom Face	0.884	7mm	X	Y	Z	134.0	2.12	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



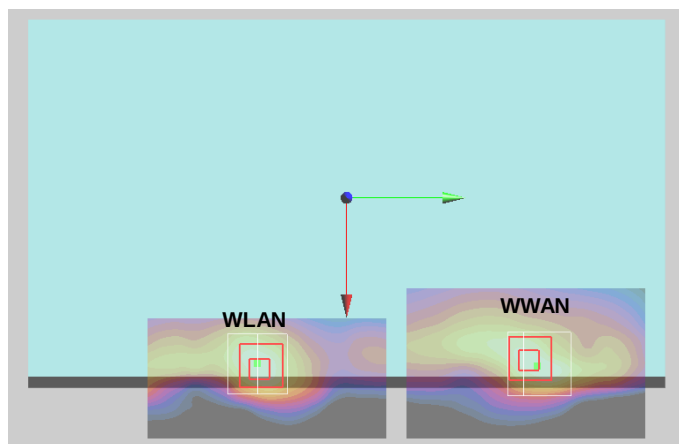
Case 85	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Curved surface of Edge1	0.452	12mm	X	Y	Z	131.8	1.73	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



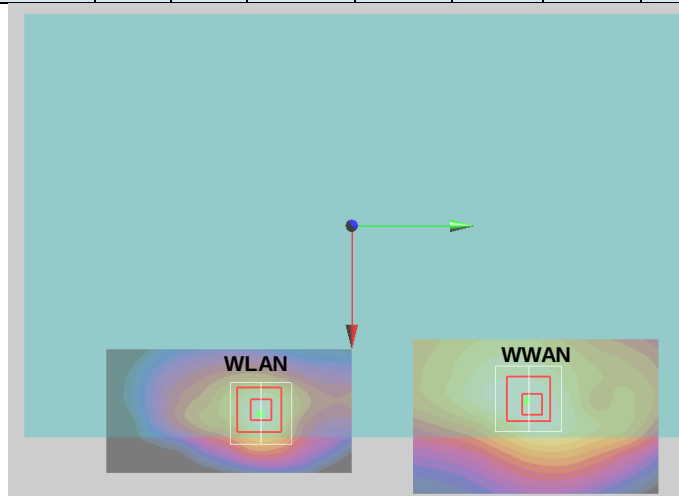
Case 86	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Bottom Face	1.185	0mm	X	Y	Z	135.6	2.42	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



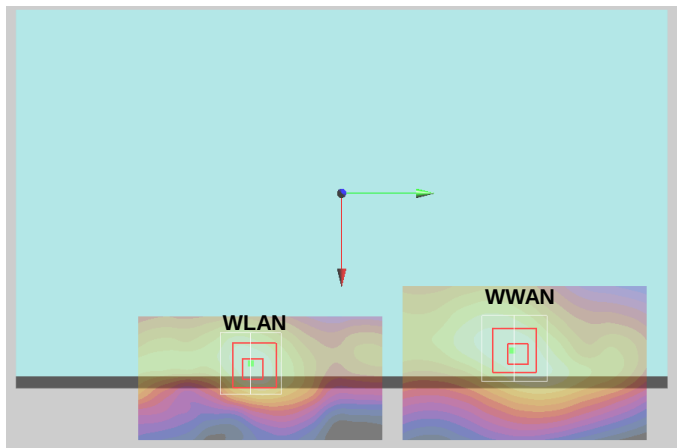
Case 87	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Curved surface of Edge1	1.09	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



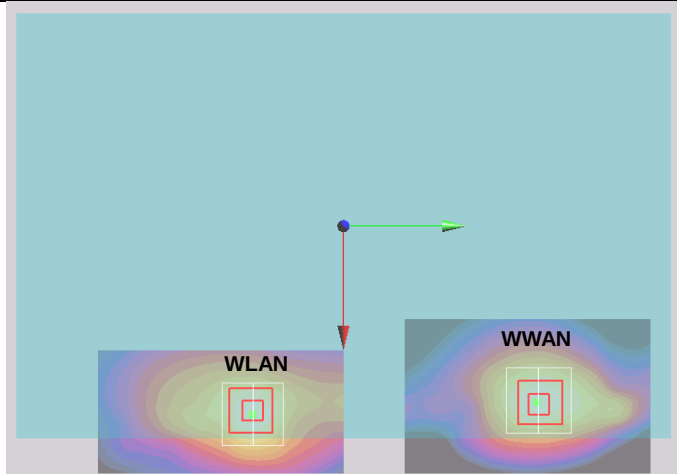
Case 88	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Bottom Face	0.998	7mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



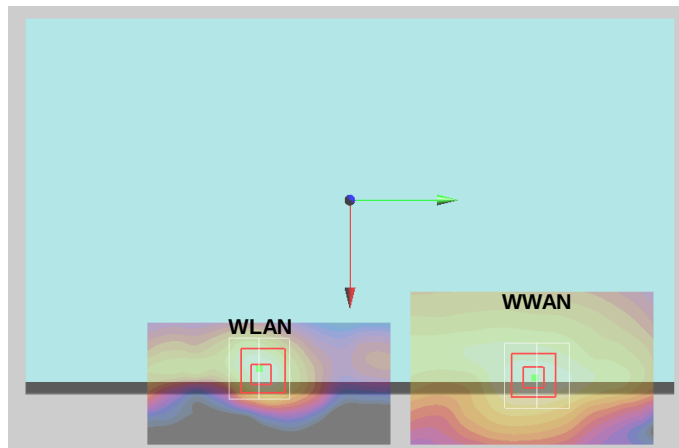
Case 89	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Curved surface of Edge1	0.615	12mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



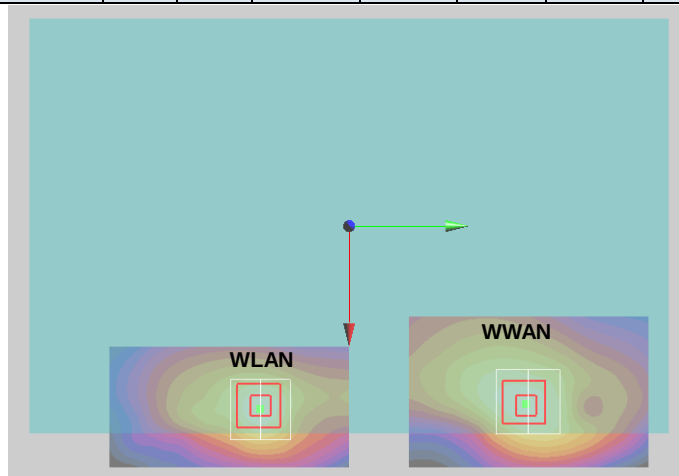
Case 90	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Bottom Face	1.077	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



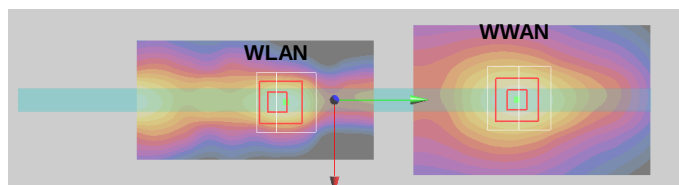
Case 91	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Curved surface of Edge1	1.127	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



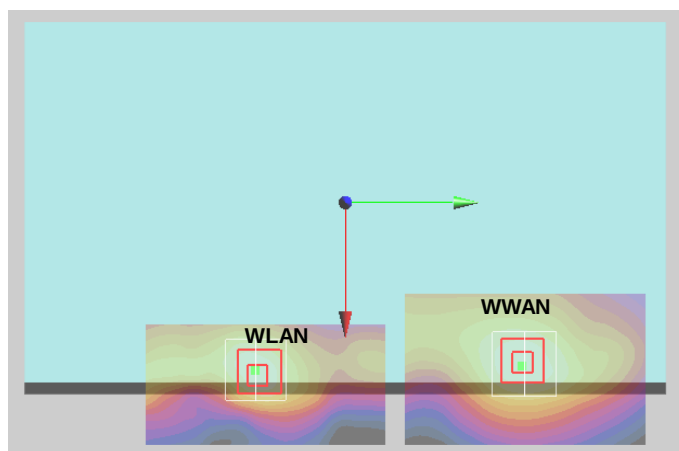
Case 92	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Bottom Face	1.051	7mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



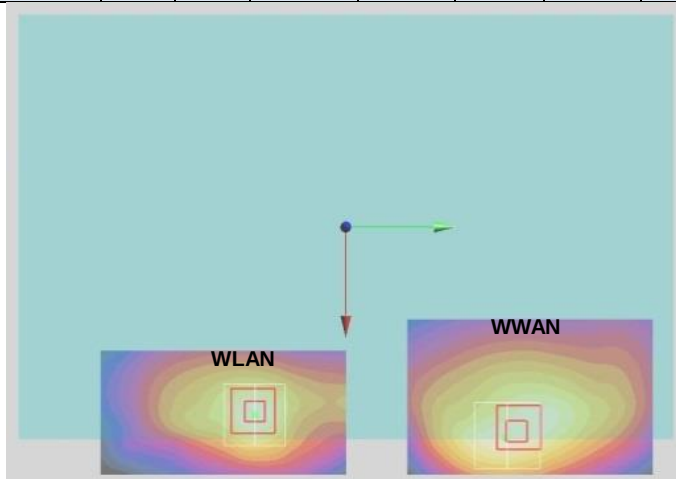
Case 93	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Edge 1	1.008	10mm	X	Y	Z	123.0	1.66	0.02	Not required
	2.4GHz WLAN Aux		0.649	0mm	0.0012	-0.0294	-0.18				



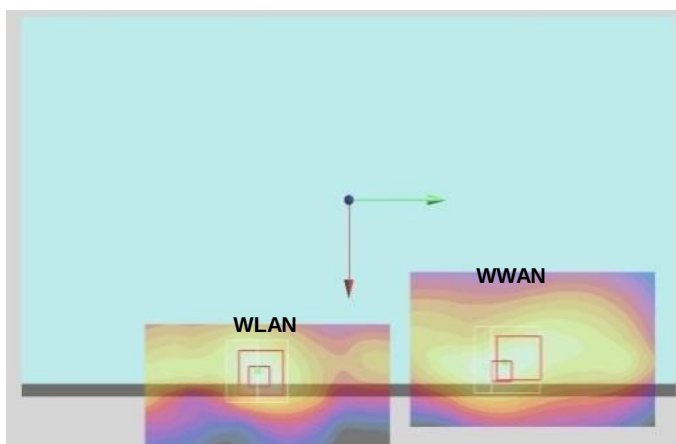
Case 94	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA IV	Curved surface of Edge1	0.78	12mm	X	Y	Z	134.6	2.06	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



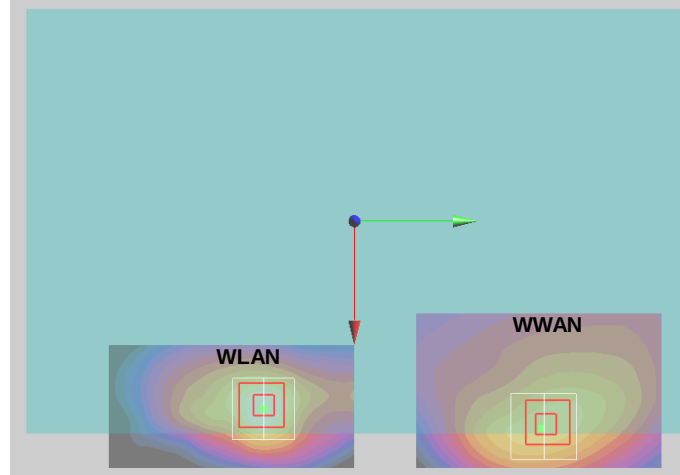
Case 95	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Bottom Face	1.169	0mm	0.101	0.079	-0.181	123.8	2.41	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



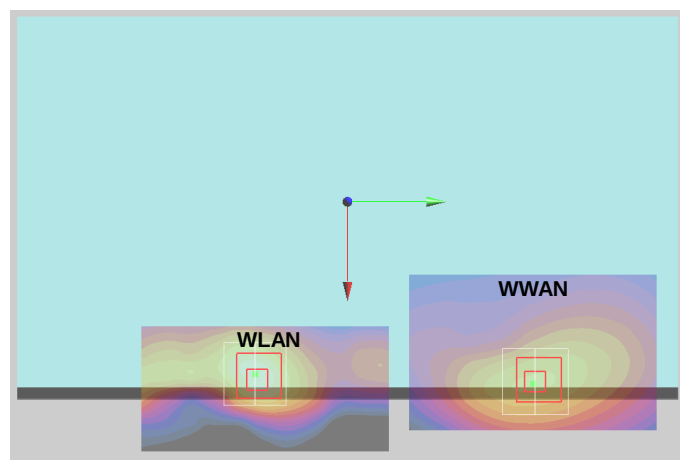
Case 96	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Curved surface of Edge1	1.181	0mm	0.0855	0.0695	-0.182	114.4	2.46	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



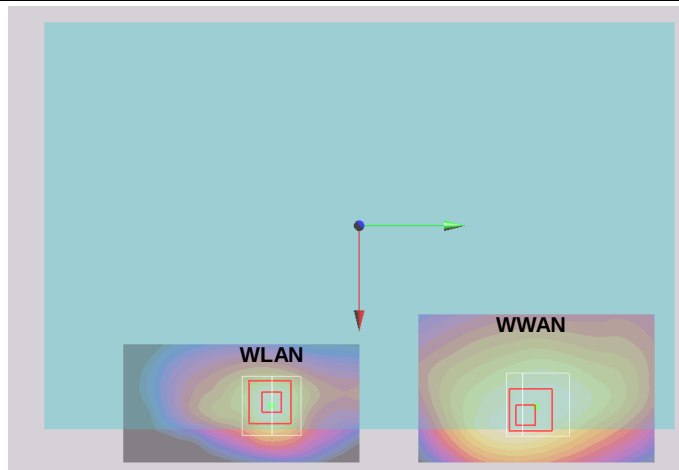
Case 97	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Bottom Face	0.869	7mm	0.0995	0.0925	-0.179	137.2	2.11	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



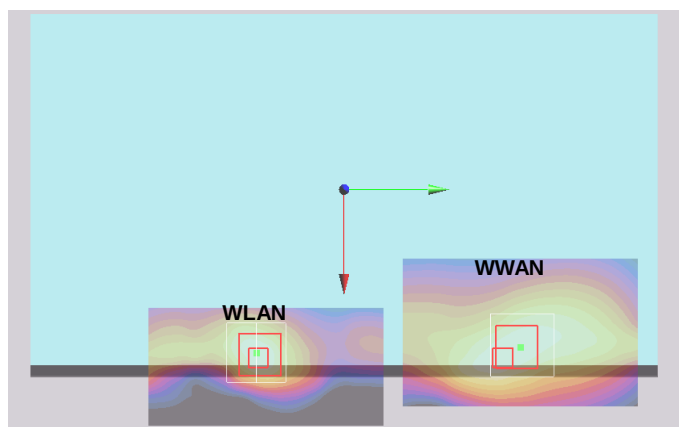
Case 98	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA V	Curved surface of Edge1	0.733	12mm	0.0865	0.091	-0.18	135.8	2.01	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



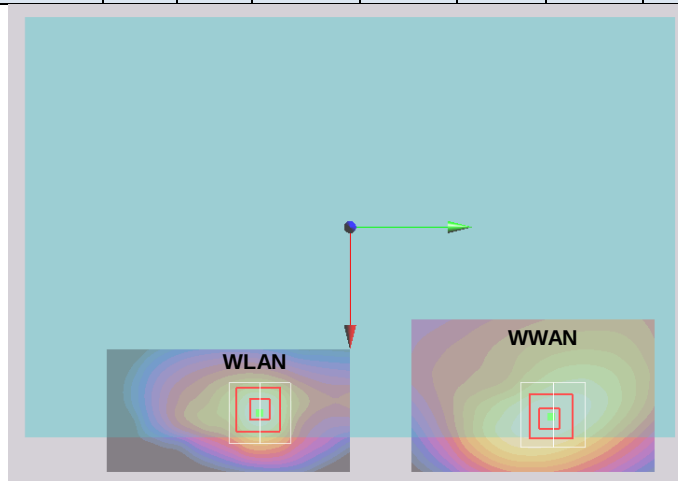
Case 99	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC10	Bottom Face	1.162	0mm	0.0985	0.083	-0.177	127.6	2.40	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



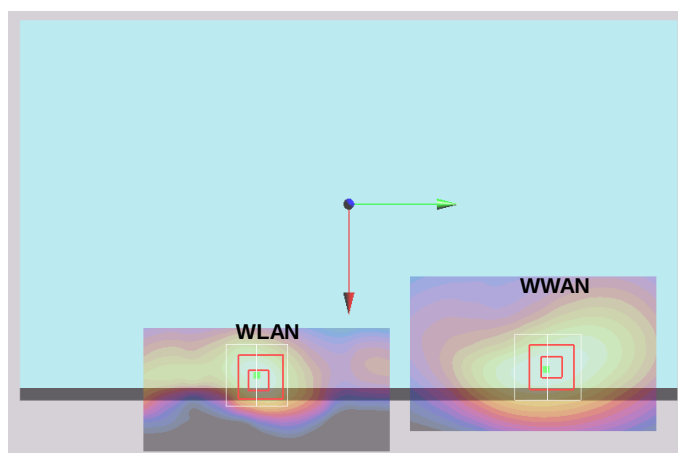
Case 100	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC10	Curved surface of Edge1	1.148	0mm	0.087	0.075	-0.177	119.8	2.42	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



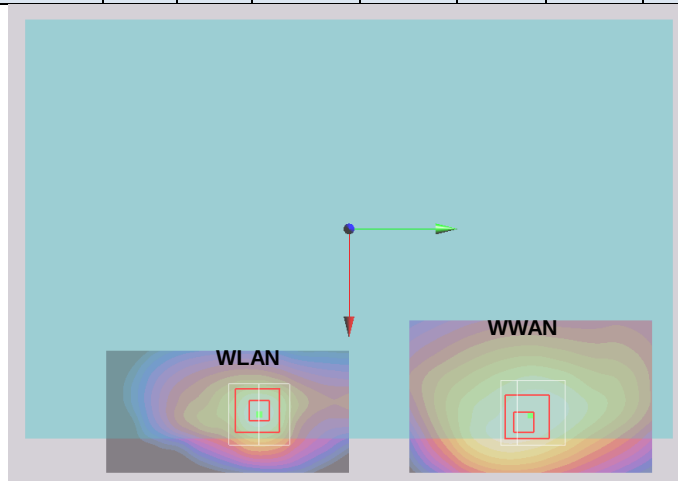
Case 101	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Bottom Face	0.879	7mm	X	Y	Z	144.4	2.12	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



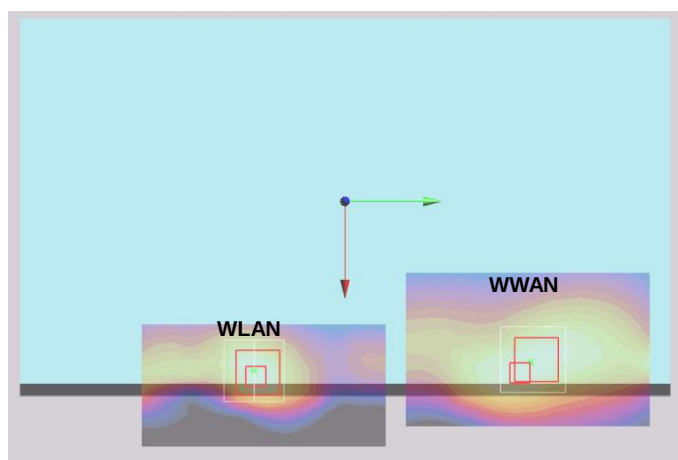
Case 102	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC10	Curved surface of Edge1	0.659	12mm	X	Y	Z	142.1	1.94	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



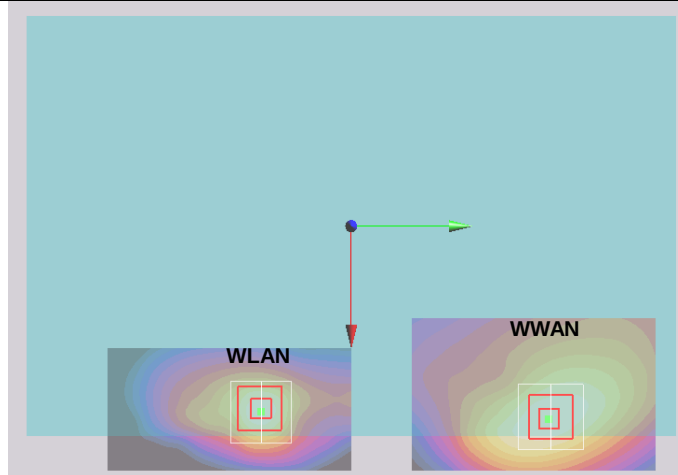
Case 103	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Bottom Face	1.196	0mm	0.0985	0.083	-0.176	127.6	2.44	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



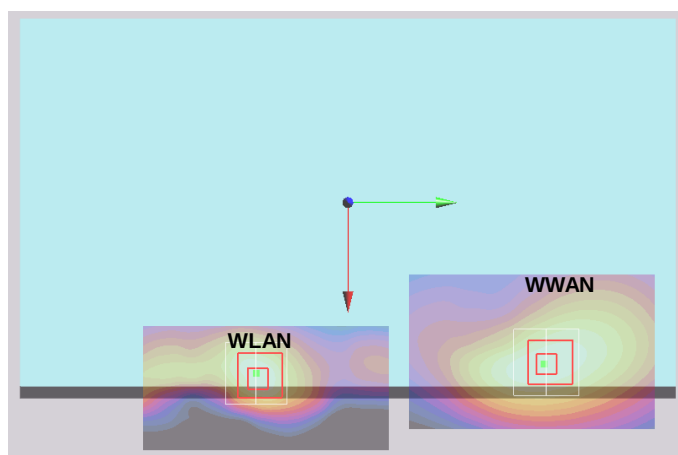
Case 104	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC0	Curved surface of Edge1	1.19	0mm	0.0855	0.0765	-0.181	121.3	2.47	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



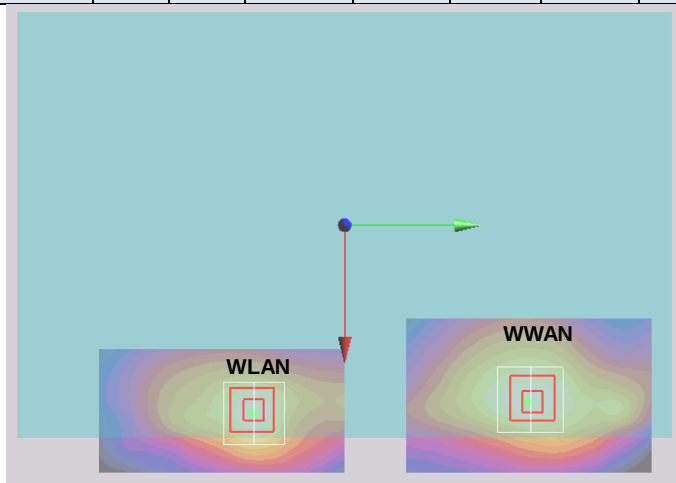
Case 105	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC0	Bottom Face	0.881	7mm	X	Y	Z	142.9	2.12	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



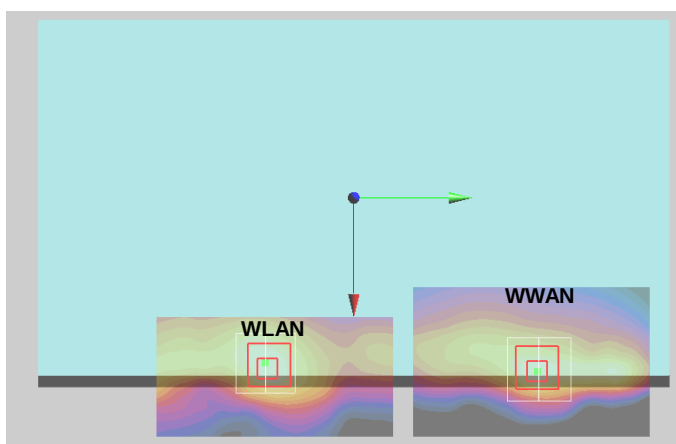
Case 106	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC0	Curved surface of Edge1	0.716	12mm	X	Y	Z	142.2	1.99	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



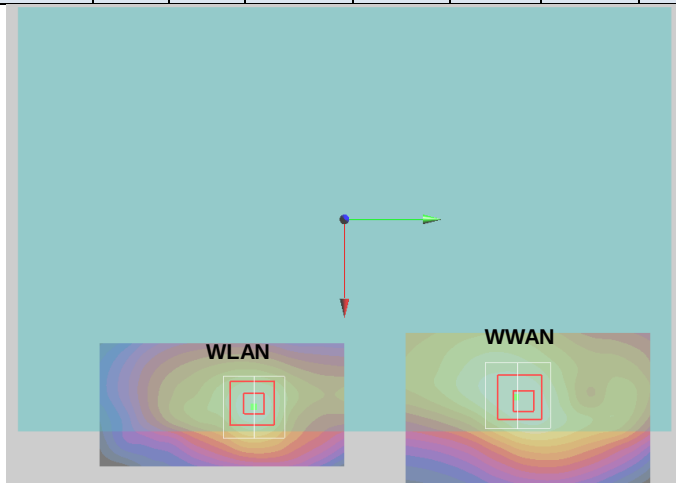
Case 107	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Bottom Face	1.067	0mm	X	Y	Z	135.6	2.31	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



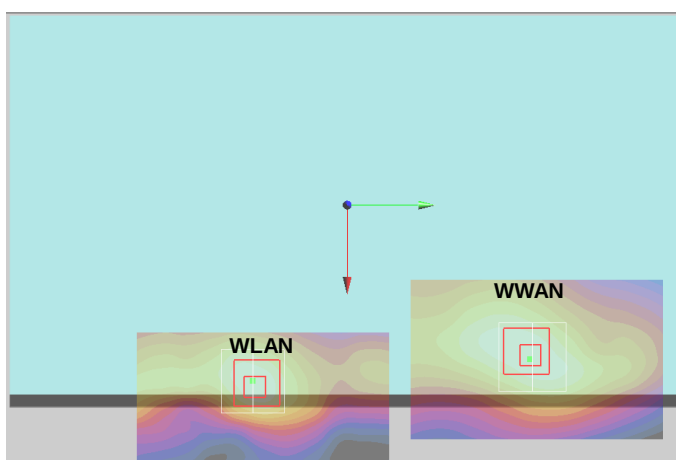
Case 108	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	CDMA2000 BC1	Curved surface of Edge1	0.886	0mm	X	Y	Z	138.8	2.16	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



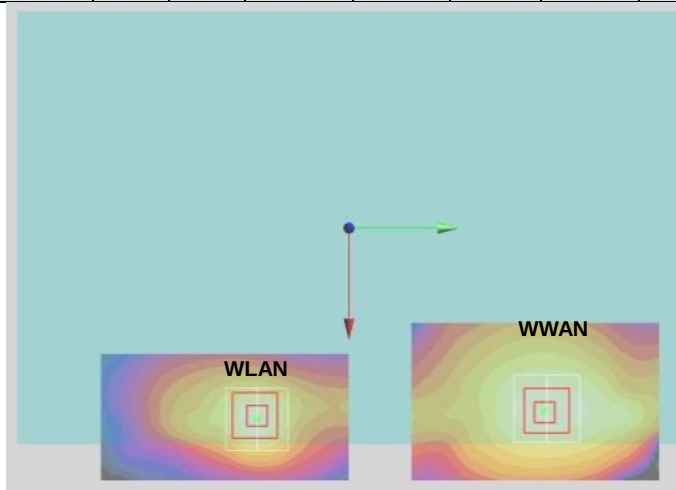
Case 109	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC1	Bottom Face	1.102	7mm	0.0755	0.085	-0.182	130.4	2.34	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



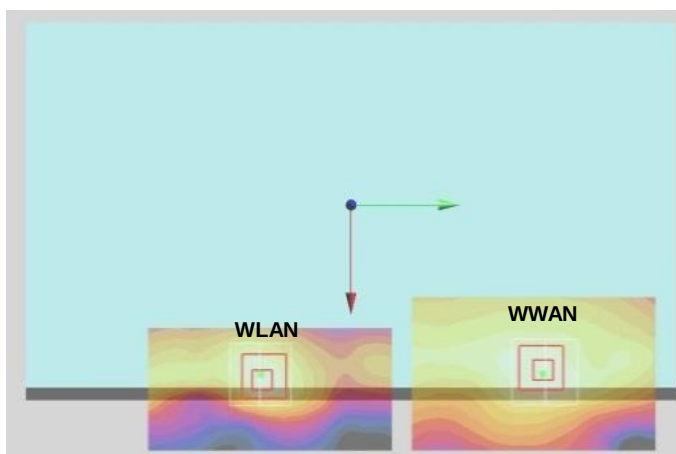
Case 110	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	CDMA2000 BC1	Curved surface of Edge1	0.684	12mm	0.0715	0.088	-0.182	133.8	1.96	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



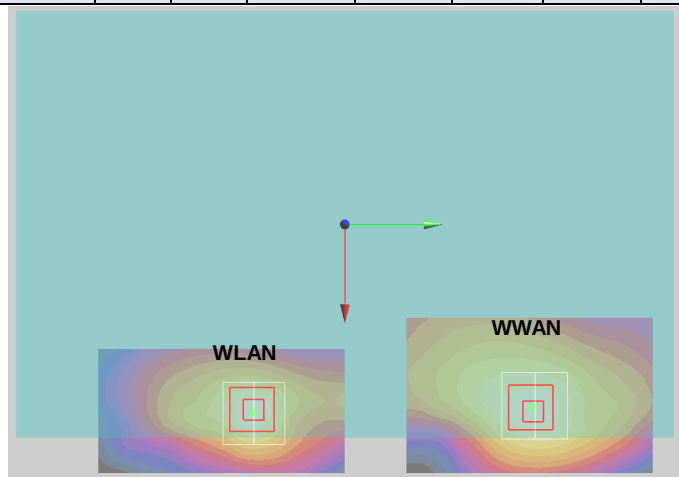
Case 111	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Bottom Face	1.169	0mm	X	Y	Z	140.1	2.41	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



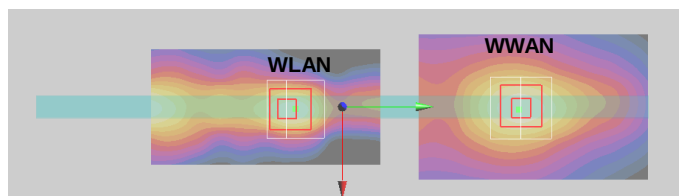
Case 112	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Curved surface of Edge1	1.084	0mm	X	Y	Z	140.5	2.36	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



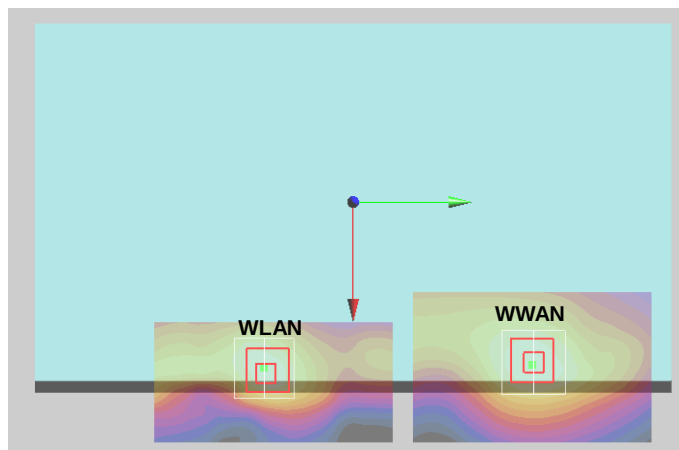
Case 113	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Bottom Face	1.298	7mm	X	Y	Z	137.0	2.54	0.03	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



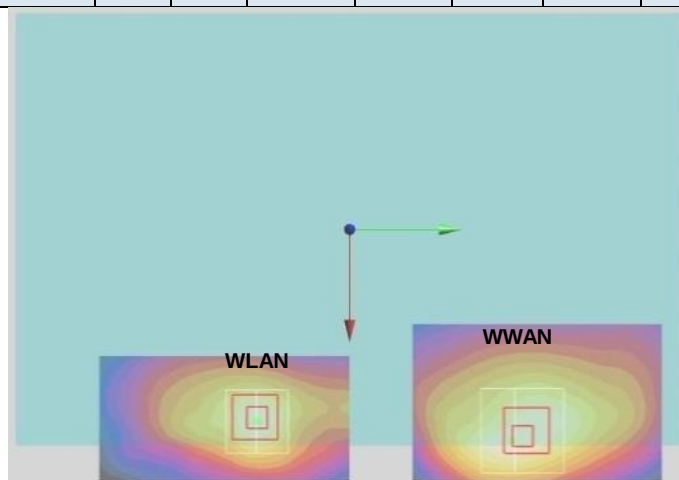
Case 114	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 4	Edge 1	1.161	10mm	X	Y	Z	122.9	1.81	0.02	Not required
	2.4GHz WLAN Aux		0.649	0mm	0.0012	-0.0294	-0.18				



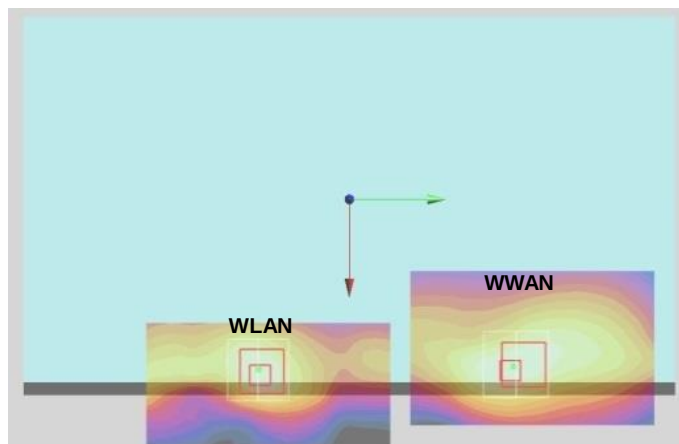
Case 115	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 4	Curved surface of Edge1	0.899	12mm	0.08	0.091	-0.182				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179	136.1	2.18	0.02	Not required



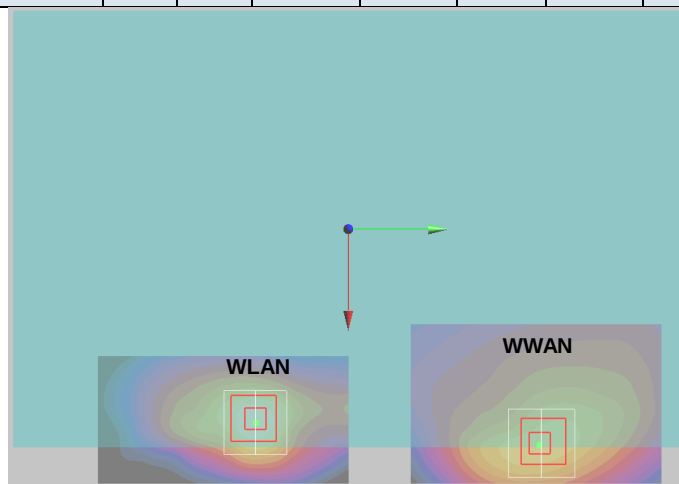
Case 116	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 5	Bottom Face	1.176	0mm	0.0995	0.079	-0.181				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178	123.7	2.42	0.03	Not required



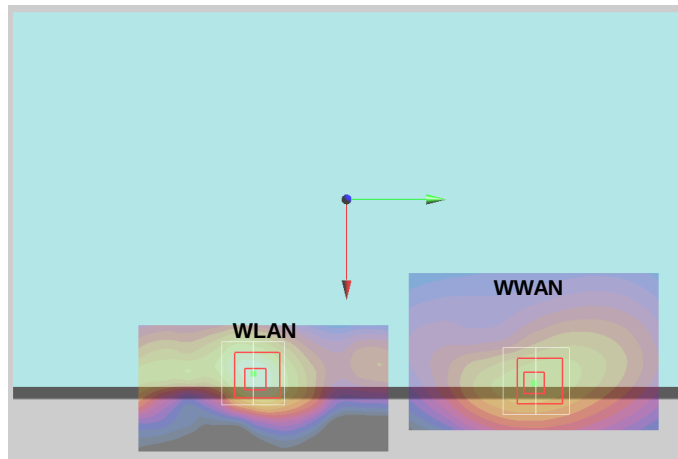
Case 117	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Curved surface of Edge1	1.199	0mm	X	Y	Z	127.0	2.48	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



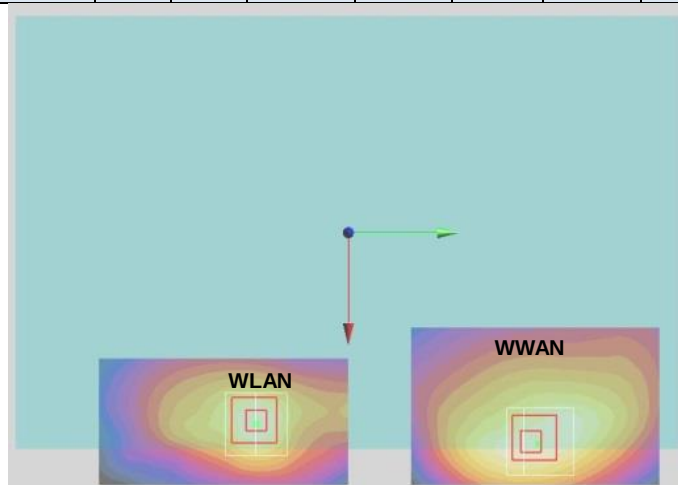
Case 118	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Bottom Face	0.985	7mm	X	Y	Z	137.3	2.22	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



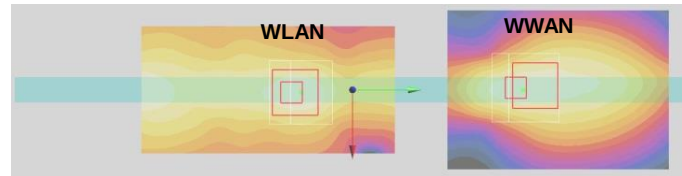
Case 119	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 5	Curved surface of Edge1	0.766	12mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



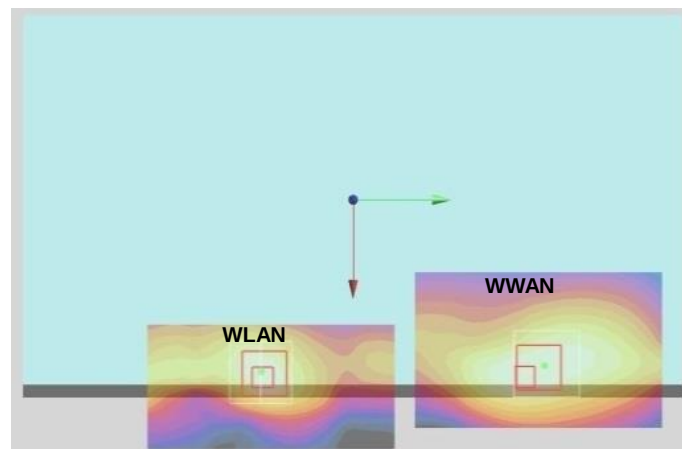
Case 120	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Bottom Face	1.128	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



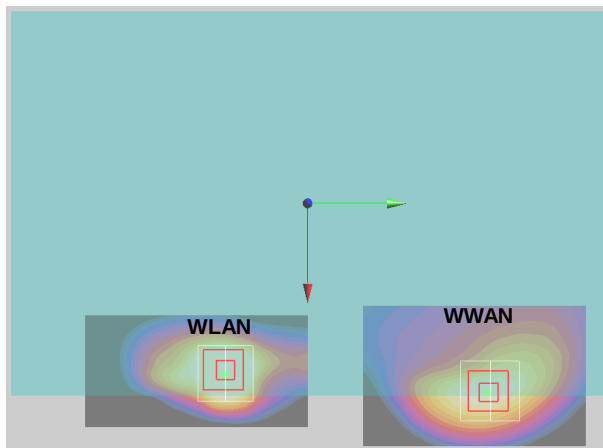
Case 121	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Edge 1	0.978	0mm	X	Y	Z	103.5	1.63	0.02	Not required
	2.4GHz WLAN Aux		0.649	0mm	0.0012	-0.0294	-0.18				



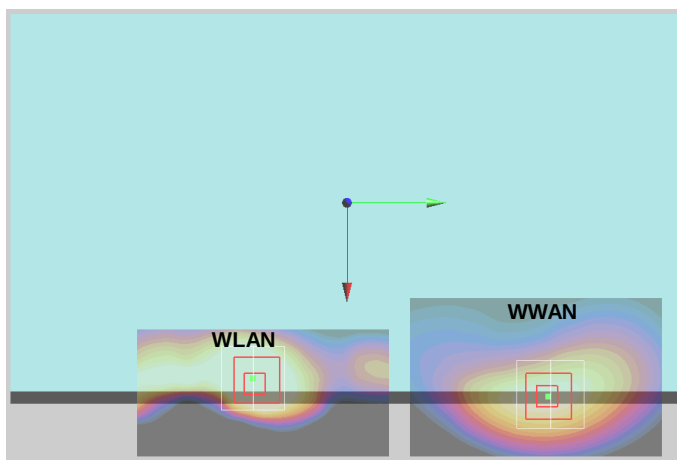
Case 122	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Curved surface of Edge1	1.191	0mm	X	Y	Z	122.8	2.47	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



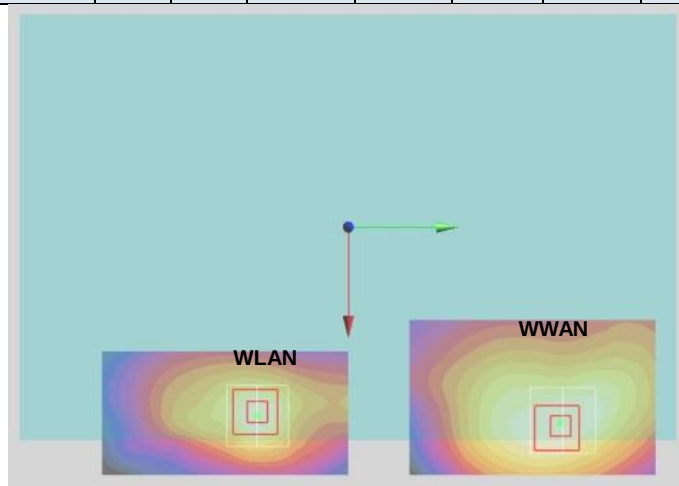
Case 123	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Bottom Face	0.793	7mm	X	Y	Z	143.2	2.03	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



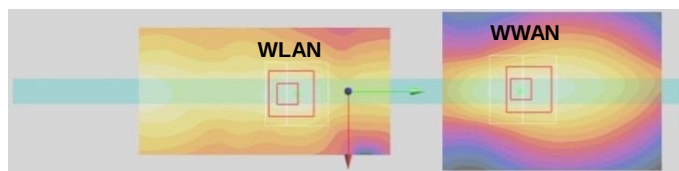
Case 124	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13	Curved surface of Edge1	0.688	0mm	X	Y	Z	141.8	1.96	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



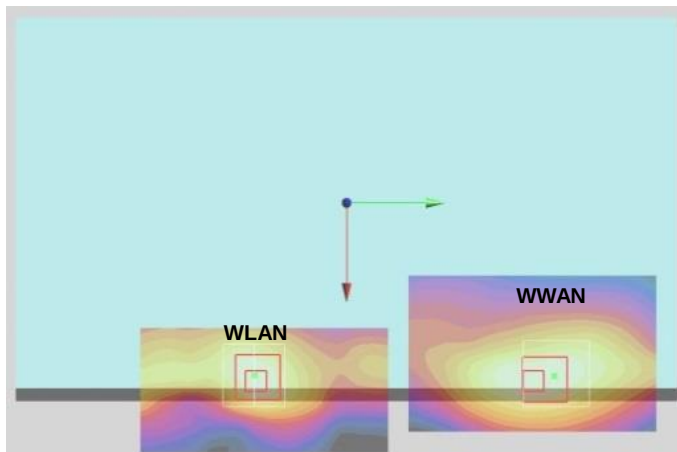
Case 125	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Bottom Face	1.028	0mm	X	Y	Z	149.4	2.27	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



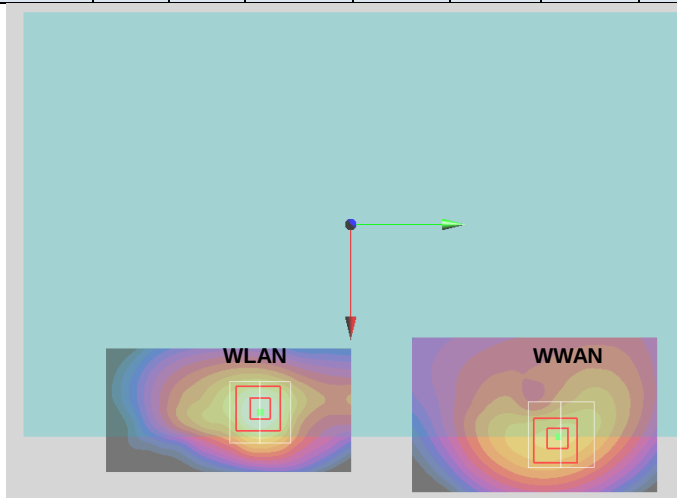
Case 126	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Edge 1	0.98	0mm	X	Y	Z	113.0	1.63	0.02	Not required
	2.4GHz WLAN Aux		0.649	0mm	0.0012	-0.0294	-0.18				



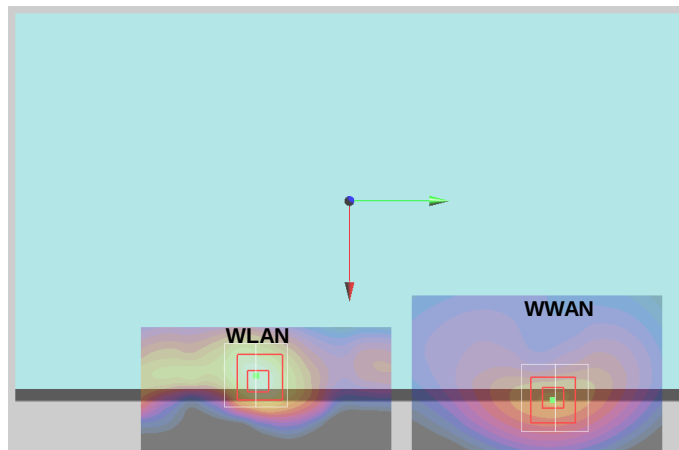
Case 127	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 17	Curved surface of Edge1	1.192	0mm	0.082	0.0855	-0.182	130.5	2.47	0.03	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



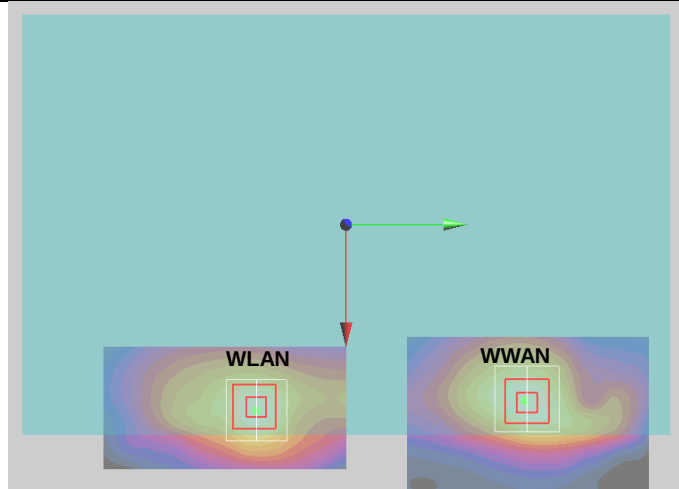
Case 128	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 17	Bottom Face	0.744	7mm	0.102	0.103	-0.179	147.8	1.98	0.02	Not required
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



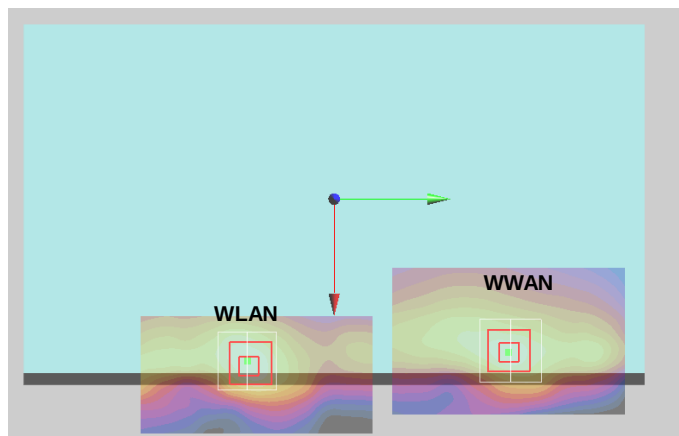
Case 129	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 17	Curved surface of Edge1	0.474	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



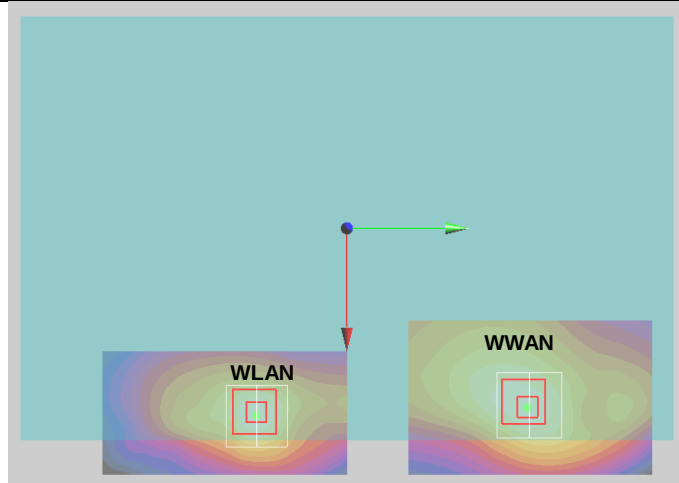
Case 130	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Bnad 25	Bottom Face	1.186	0mm	X	Y	Z				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178				



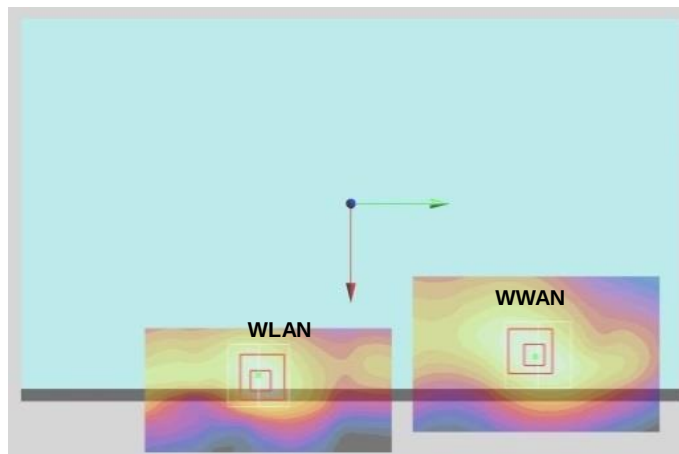
Case 131	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 25	Curved surface of Edge1	1.088	0mm	0.0775	0.091	-0.181				
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179	136.2	2.36	0.03	Not required



Case 132	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 25	Bottom Face	1.203	7mm	0.086	0.0895	-0.181				
	2.4GHz WLAN Aux		1.239	0mm	0.0912	-0.0444	-0.178	134.0	2.44	0.03	Not required



Case 133	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 25	Curved surface of Edge1	0.721	12mm	X	Y	Z	136.6	2.00	0.02	Not required
	2.4GHz WLAN Aux		1.276	0mm	0.0878	-0.0448	-0.179				



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17. Uncertainty Assessment

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Table 16.1. Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	6.0	N	1	1	1	6.0	6.0
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9
Boundary Effects	1.0	R	1.732	1	1	0.6	0.6
Linearity	4.7	R	1.732	1	1	2.7	2.7
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6
Modulation Response	3.2	R	1.732	1	1	1.8	1.8
Readout Electronics	0.3	N	1	1	1	0.3	0.3
Response Time	0.0	R	1.732	1	1	0.0	0.0
Integration Time	2.6	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2
Probe Positioning	2.9	R	1.732	1	1	1.7	1.7
Max. SAR Eval.	2.0	R	1.732	1	1	1.2	1.2
Test Sample Related							
Device Positioning	3.0	N	1	1	1	3.0	3.0
Device Holder	3.6	N	1	1	1	3.6	3.6
Power Drift	5.0	R	1.732	1	1	2.9	2.9
Power Scaling	0.0	R	1.732	1	1	0.0	0.0
Phantom and Setup							
Phantom Uncertainty	6.1	R	1.732	1	1	3.5	3.5
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.2	N	1	0.78	0.71	0.1	0.1
Liquid Conductivity (target)	5.0	R	1.732	0.78	0.71	2.3	2.0
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0
Temp. unc. - Conductivity	3.4	R	1.732	0.78	0.71	1.5	1.4
Liquid Permittivity Repeatability	0.15	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.0	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.83	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						11.4%	11.4%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						22.9%	22.7%

Table 16.2. Uncertainty Budget for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9
Boundary Effects	2.0	R	1.732	1	1	1.2	1.2
Linearity	4.7	R	1.732	1	1	2.7	2.7
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6
Modulation Response	3.2	R	1.732	1	1	1.8	1.8
Readout Electronics	0.3	N	1	1	1	0.3	0.3
Response Time	0.0	R	1.732	1	1	0.0	0.0
Integration Time	2.6	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2
Probe Positioning	6.7	R	1.732	1	1	3.9	3.9
Max. SAR Eval.	4.0	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Positioning	3.0	N	1	1	1	3.0	3.0
Device Holder	3.6	N	1	1	1	3.6	3.6
Power Drift	5.0	R	1.732	1	1	2.9	2.9
Power Scaling	0.0	R	1.732	1	1	0.0	0.0
Phantom and Setup							
Phantom Uncertainty	6.6	R	1.732	1	1	3.8	3.8
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.2	N	1	0.78	0.71	0.1	0.1
Liquid Conductivity (target)	5.0	R	1.732	0.78	0.71	2.3	2.0
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0
Temp. unc. - Conductivity	3.4	R	1.732	0.78	0.71	1.5	1.4
Liquid Permittivity Repeatability	0.15	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.0	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.83	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						12.5%	12.5%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						25.0%	24.9%

Table 16.3. Uncertainty Budget for frequency range 3 GHz to 6 GHz

18. References

- [1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”
- [2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992
- [3] IEEE Std. 1528-2013, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015
- [6] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015
- [7] FCC KDB 941225 D05 v02r04, “SAR Evaluation Considerations for LTE Devices”, Oct 2015
- [8] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015
- [9] FCC KDB 865664 D01 v01r04, “SAR Measurement Requirements for 100 MHz to 6 GHz”, Aug 2015
- [10] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.



Appendix A. Plots of System Performance Check

The plots are shown as follows.



Appendix B. Plots of SAR Measurement

The plots are shown as follows.



Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.