



**FCC 47 CFR Parts 1 & 2  
Published RF Exposure KDB Procedures  
IEEE Std 1528-2003 and IEEE Std 1528a-2005**

**SAR EVALUATION REPORT**

*For*  
**iPhone**

**Model: A1453 / A1533**

**FCC ID: BCG-E2642A**

**Report Number: 13U14987-22C  
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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	7/20/2013	Initial Issue	--
A	8/6/2013	Made the following changes: <ol style="list-style-type: none"><li>1. Removed OET 65 supplement C from cover page, Sec. 1, 2 and 10</li><li>2. Sec. 7.3 &amp; 7.4: Corrected some typo</li><li>3. Added justification for SAR test exclusion for HSPA</li></ol>	Sunny Shih
B	8/30/2013	Made the following changes based on reviewer's comments: <ol style="list-style-type: none"><li>1. Sec. 7.1: Added description of detect mode</li><li>2. Sec. 8.2: Added explanation on selected test separation distance for Body-worn accessory test configurations.</li><li>3. Sec. 8.3: Added justification for testing at 5 mm to cover hotspot operation.</li><li>4. Sec. 9.5: Added WLAN channels 12 and 13 and added justification (note 2) why channels 12 and 13 were not tested.</li></ol>	Sunny Shih
C	9/5/2013	Made the following changes based on reviewer's comments: <ol style="list-style-type: none"><li>1. Revised Report No. from 13U14987-9B to 13U14987-22C.</li><li>2. Sec. 7.1: Added Flowchart and descriptions.</li><li>3. Sec. 9: Added note.</li></ol>	Bobby Bayani

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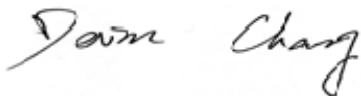
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# 1. Attestation of Test Results

Applicant	Apple Inc.			
DUT description	iPhone			
Model	A1453 / A1533			
Test device is	An identical prototype			
Device category	Portable			
Exposure category	General Population/Uncontrolled Exposure			
Date tested	6/3/2013 – 7/18/2013			
The highest reported SAR values	RF exposure conditions	Licensed	DTS	UNII
	Head	1.180 W/kg	0.564 W/kg	0.560 W/kg
	Body-worn Accessory	1.180 W/kg	0.579 W/kg	0.589 W/kg
	Wireless Router (Hotspot)	1.197 W/kg	0.514 W/kg	N/A
	Simultaneous Transmission	1.582 W/kg	1.582 W/kg	1.578 W/kg
Applicable Standards	FCC 47 CFR Parts 1 & 2 Published RF Exposure KDB Procedures, and TCB workshop updates IEEE Std 1528-2003 and IEEE Std 1528a-2005			
Test Results	Pass			
<p>UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p><b>Note:</b> The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government (NIST Handbook 150, Annex A). This report is written to support regulatory compliance of the applicable standards stated above.</p>				
Approved & Released By:		Prepared By:		
				
Sunny Shih WiSE Operations Manager UL Verification Services Inc.		Devin Chang WiSE Engineer UL Verification Services Inc.		



## 2. Test Methodology

The tests documented in this report were performed in accordance with FCC 47 CFR Parts 1 & 2, IEEE STD 1528-2003, IEEE Std 1528a-2005, the following FCC Published RF exposure KDB procedures, and TCB workshop updates:

- 447498 D01 General RF Exposure Guidance v05r01
- 648474 D04 SAR Handsets Multi Xmitter and Ant v01r01
- 941225 D01 SAR test for 3G devices v02
- 941225 D02 HSPA and 1x Advanced v02r02
- 941225 D03 SAR Test Reduction GSM GPRS EDGE v01
- 941225 D04 SAR for GSM E GPRS Dual Xfer Mode v01
- 941225 D05 SAR for LTE Devices v02r02
- 941225 D06 Hot Spot SAR v01r01
- 248227 D01 SAR Meas for 802 11abg v01r02
- 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r01
- 865664 D02 SAR Reporting v01r01
- 690783 D01 SAR Listings on Grants v01r02

## 3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. Calibration and Uncertainty

### 4.1. Measuring Instrument Calibration

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

#### Tissue Dielectric Properties

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	E5071B	MY42100131	2/21/2014
Dielectronic Probe kit	SPEAG	DAK-3.5	1087	10/16/2013
Dielectronic Probe kit	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	Control Company	4242	122529163	9/19/2013

#### System Performance Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Synthesized Signal Generator	HP	8665B	3546A00784	3/26/2014
Power Meter	HP	438A	3513U04320	9/24/2013
Power Sensor	HP	8481A	2237A31744	9/24/2013
Power Sensor	HP	8481A	2702A76223	8/21/2013
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795093	N/A
Directional coupler	Werlatone	C8060-102	2711	N/A
DC Power Supply	AMETEK	XHR60-18	1308A01935	N/A
Synthesized Signal Generator	HP	8665B	3744A01155	3/6/2014
Power Meter	HP	438A	2822A05684	10/7/2013
Power Sensor	HP	8481A	2702A66876	9/24/2013
Power Sensor	HP	8482A	2349A08568	9/26/2013
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1622052	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	EKNWOOD	PA36-3A	7060074	N/A
Thermometer	TRACEABLE	4242	122529162	9/19/2013
E-Field Probe	SPEAG	EX3DV4	3749	1/15/2014
E-Field Probe	SPEAG	EX3DV4	3751	12/15/2013
E-Field Probe	SPEAG	EX3DV4	3772	2/20/2014
E-Field Probe	SPEAG	EX3DV4	3686	3/12/2014
E-Field Probe	SPEAG	EX3DV4	3901	2/13/2014
E-Field Probe	SPEAG	EX3DV4	3885	10/9/2013
Data Acquisition Electronics	SPEAG	DAE4	1343	8/20/2013
Data Acquisition Electronics	SPEAG	DAE4	1239	4/19/2014
Data Acquisition Electronics	SPEAG	DAE3	427	1/9/2014
Data Acquisition Electronics	SPEAG	DAE4	1258	3/6/2014
Data Acquisition Electronics	SPEAG	DAE4	1257	8/28/2013
Data Acquisition Electronics	SPEAG	DAE4	1357	2/5/2014
Data Acquisition Electronics	SPEAG	DAE4	1352	10/8/2013
Data Acquisition Electronics	SPEAG	DAE4	1360	2/7/2014
System Validation Dipole	SPEAG	D750V3	1071	10/5/2013
System Validation Dipole	SPEAG	D835V2	4d002	10/24/2013
System Validation Dipole	SPEAG	D835V2	4d142	10/4/2013
System Validation Dipole	SPEAG	D1750V2	1050	4/20/2014
System Validation Dipole	SPEAG	D1750V2	1053	8/15/2013
System Validation Dipole	SPEAG	D1900V2	5d043	11/6/2013
System Validation Dipole	SPEAG	D1900V2	5d163	10/4/2013
System Validation Dipole	SPEAG	D2450V2	899	10/5/2013
System Validation Dipole	SPEAG	D5GHzV2	1138	10/9/2013

**Others**

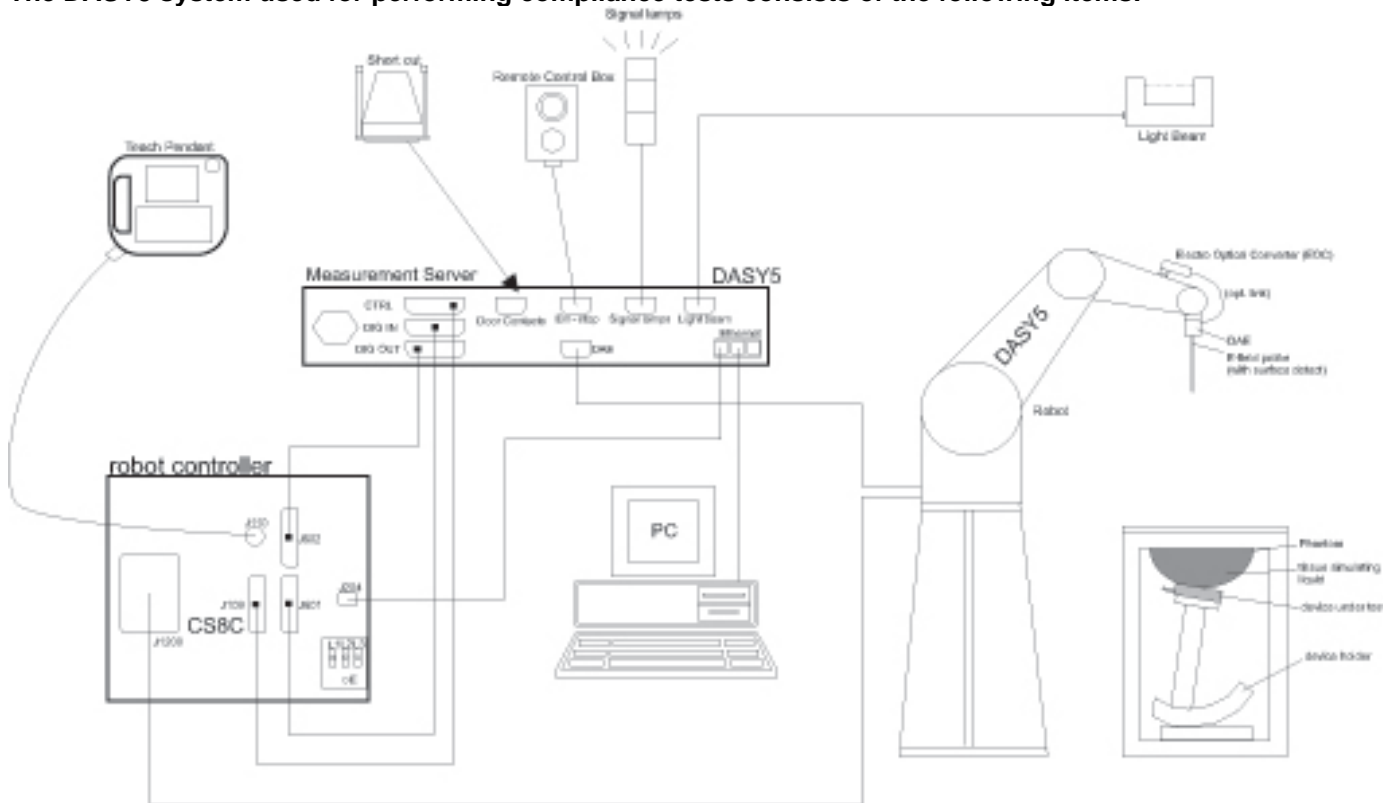
Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	Agilent	8960	MY48360200	3/20/2014
Base Station Simulator	R & S	CMU200	106291	8/8/2013
Base Station Simulator	R & S	CMU200	117455	5/20/2014
Base Station Simulator	R & S	CMU200	118715	5/20/2014
Base Station Simulator	R & S	CMW500	132910-cp	2/19/2014
Base Station Simulator	R & S	CMW500	132909-bp	2/19/2014
Base Station Simulator	R & S	CMW500	103764-dn	8/16/2014
Base Station Simulator	R & S	CMW500	103766-ly	8/19/2014
Base Station Simulator	R & S	CMW500	107513-be	7/26/2014
Power Meter	Agilent	N1912A	MY50001018	8/10/2013
Power Sensor	Agilent	N1921A	MY52020011	5/13/2014
Power Sensor	Agilent	N1921A	MY52200012	7/24/2013

**4.2. Measurement Uncertainty**

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r01 Section 2.8.1., when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2003 is not required in SAR reports submitted for equipment approval.

## 5. Measurement System Description and Setup

The DASY5 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.

## 6. SAR Measurement Procedure

### 6.1. Normal SAR Measurement Procedure

#### Step 1: 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. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

#### Step 2: 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 locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) 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 KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r01

	≤ 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° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{Area}$ , $\Delta y_{Area}$	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

**Step 3: Zoom Scan**

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

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r01

		$\leq 3$ GHz	$> 3$ GHz
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		$\leq 2$ GHz: $\leq 8$ mm 2 – 3 GHz: $\leq 5$ mm*	3 – 4 GHz: $\leq 5$ mm* 4 – 6 GHz: $\leq 4$ mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	$\leq 5$ mm	3 – 4 GHz: $\leq 4$ mm 4 – 5 GHz: $\leq 3$ mm 5 – 6 GHz: $\leq 2$ mm
	graded grid	$\Delta z_{Zoom}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4$ mm
		$\Delta z_{Zoom}(n>1)$ : between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$
Minimum zoom scan volume	x, y, z	$\geq 30$ mm	3 – 4 GHz: $\geq 28$ mm 4 – 5 GHz: $\geq 25$ mm 5 – 6 GHz: $\geq 22$ mm
Note: $\delta$ 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 area scan based <i>1-g SAR estimation</i> procedures of KDB 447498 is $\leq 1.4$ W/kg, $\leq 8$ mm, $\leq 7$ mm and $\leq 5$ 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.			

**Step 4: Power drift measurement**

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

**Step 5: Z-Scan (FCC only)**

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z-direction.

---

## 6.2. Volume Scan Procedures

### Step 1: Repeat Step 1-4 in Section 6.1

### Step 2: Volume Scan

Volume Scans are used to assess peak SAR and averaged SAR measurements in largely extended 3-dimensional volumes within any phantom. This measurement does not need any previous area scan. The grid can be anchored to a user specific point or to the current probe location.

### Step 3: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

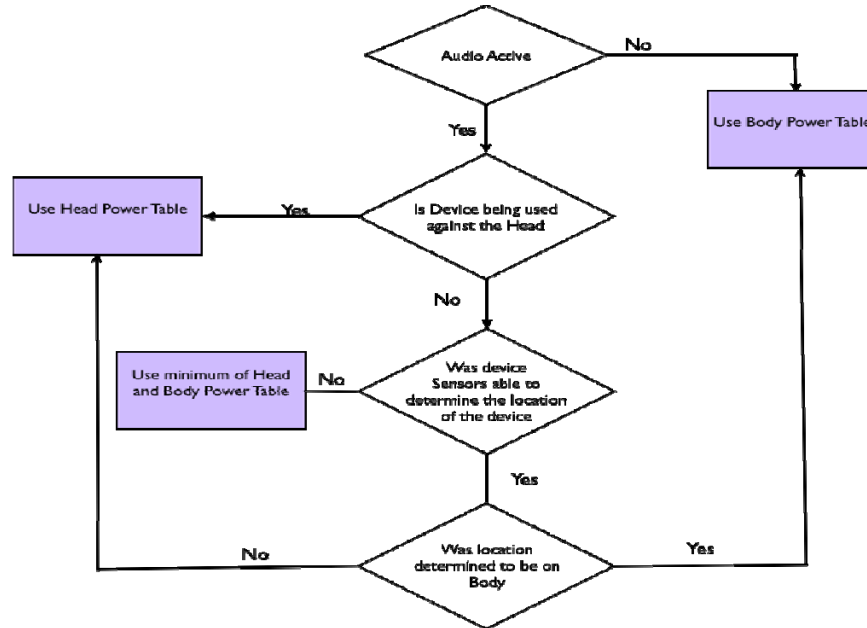
## 7. Device Under Test

### 7.1. General Information

iPhone

Model: A1453 / A1533

The FCC ID: BCG-E2642A device uses sensors present in it to determine if the device is against the user's body so that the correct power table can be chosen to address RF exposure compliance.



Device uses 2 different power tables to meet RF exposure compliance:

- Head Power Table : Head Power Table is used when device is used against the head.
- Body Power Table : Body Power Table is used when device is used against the body. Device uses sensors to determine if the device is against the user's body or not.

The sensors used for this detection are a part of the device. The measurements from the sensors are processed to produce a metric. The device is declared to be on the body if the computed metric exceeds a priori specified threshold. When the device is identified to be on the body, the "body power table" is used. When the device is identified as not on the body, the "head power table" is used.

Operating Configuration(s)	Held to head and Body-worn (Voice call)
Mobile Hotspot	WiFi Hotspot mode permits the device to share its cellular data connection with other WiFi-enabled devices. <input checked="" type="checkbox"/> Mobile Hotspot (WiFi 2.4 GHz) <input type="checkbox"/> Mobile Hotspot (WiFi 5 GHz)
SV-LTE & SV-DO	Not Supported
AirPlay	AirPlay mode enabled devices transfer data directly between each other <input checked="" type="checkbox"/> AirPlay (WiFi 2.4 GHz) <input checked="" type="checkbox"/> AirPlay (WiFi 5 GHz)
RF Exposure Condition(s)	Head, Body-worn Accessory, Hotspot (wireless router)
Device dimension	Overall (Length x Width): 124.0 mm x 58.5 mm Overall Diagonal: 130.4 mm Display Diagonal: 103.0 mm
Accessory	Headset
Battery Options	<input checked="" type="checkbox"/> Standard – Lithium-ion battery, Rating 3.8 Vdc, 5.96 Wh <input type="checkbox"/> Extended (large capacity)



## 7.2. Wireless Technologies

Wireless Technology and Frequency Bands	GSM: 850 / 1900 W-CDMA Band: 2 / 4 / 5 CDMA BC 0 / 1 / 10 / 15 LTE Band 2 / 4 / 5 / 13 / 17 / 25 / 26 WiFi: 2.4 / 5 GHz Bluetooth: 2.4 GHz.
Mode	GSM - <input checked="" type="checkbox"/> Voice (GMSK) - <input checked="" type="checkbox"/> GPRS (GMSK) - <input checked="" type="checkbox"/> EGPRS (8PSK) W-CDMA - <input checked="" type="checkbox"/> UMTS Rel. 99 (Voice & Data) - <input checked="" type="checkbox"/> HSDPA (Rel. 7, CAT 14) - <input checked="" type="checkbox"/> HSUPA (Rel. 6, CAT 6) - <input checked="" type="checkbox"/> DC-HSDPA (Rel. 8, CAT 24) - <input checked="" type="checkbox"/> HSPA+ (Rel. 6, CAT 6) CDMA2000 - <input checked="" type="checkbox"/> 1xRTT (Voice & Data) - <input checked="" type="checkbox"/> 1xEVDO Rel. 0 - <input checked="" type="checkbox"/> 1xEVDO Rev. A - <input checked="" type="checkbox"/> 1xAdvanced - <input checked="" type="checkbox"/> 1xEVDO Rev. B (BC0 only) LTE - <input checked="" type="checkbox"/> QPSK - <input checked="" type="checkbox"/> 16QAM WiFi 2.4GHz (802.11b/g/n) - <input checked="" type="checkbox"/> 802.11b - <input checked="" type="checkbox"/> 802.11g - <input checked="" type="checkbox"/> 802.11n (20MHz) - <input type="checkbox"/> 802.11n (40MHz) WiFi 5GHz - <input checked="" type="checkbox"/> 802.11a - <input checked="" type="checkbox"/> 802.11n (20MHz) - <input checked="" type="checkbox"/> 802.11n (40MHz) Bluetooth Ver. 4.0 (LE)
Duty Cycle	GSM Voice: 12.5%; GPRS 1 Slot: 12.5%; 2 Slots: 25% W-CDMA: 100% CDMA: 100% LTE: 100% WiFi 802.11a/b/g/n: 100% Bluetooth: 32.25% (DH1), 66.68% (DH3), 77.52% (DH5)
GPRS Multi-Slot Class	<input type="checkbox"/> Class 8 - One Up <input checked="" type="checkbox"/> Class 10 - Two Up <input type="checkbox"/> Class 12 - Four Up
Mobile Phone Capability	<input type="checkbox"/> Class A - Mobile phones can be connected to both GPRS and GSM services simultaneously. <input checked="" type="checkbox"/> Class B - Mobile phones can be attached to both GPRS and GSM services, using one service at a time. <input type="checkbox"/> Class C - Mobile phones are attached to either GPRS or GSM voice service. You need to switch manually between services
DTM (Dual Transfer Mode)	Not Supported
VoIP	Supported

### 7.3. Simultaneous Transmission Condition

RF Exposure Condition	Capable Transmit Configurations
Head	<ol style="list-style-type: none"> <li>1. GSM 850/1900 Voice + WiFi 2.4/5GHz</li> <li>2. GSM 850/1900 (GPRS/EDGE) + WiFi 2.4/5GHz</li> <li>3. CDMA 1xRTT BC0/BC1/BC10/BC15 + WiFi 2.4/5GHz</li> <li>4. CDMA 1xEVDO BC0/BC1/BC10/BC15 + WiFi 2.4/5GHz</li> <li>5. WCDMA Band 2/4/5 + WiFi 2.4/5GHz</li> <li>6. LTE B2/B4/B5/B13/B17/B25/B26 + WiFi 2.4/5GHz</li> </ol>
Body-worn Accessory	<ol style="list-style-type: none"> <li>1. GSM 850/1900 Voice + WiFi 2.4/5GHz</li> <li>2. GSM 850/1900 Voice + BT</li> <li>3. GSM 850/1900 (GPRS/EDGE) + WiFi 2.4/5GHz</li> <li>4. GSM 850/1900 (GPRS/EDGE) + BT</li> <li>5. CDMA 1xRTT BC0/BC1/BC10/BC15 + WiFi 2.4/5GHz</li> <li>6. CDMA 1xRTT BC0/BC1/BC10/BC15 + BT</li> <li>7. CDMA 1xEVDO BC0/BC1/BC10/BC15 + WiFi 2.4/5GHz</li> <li>8. CDMA 1xEVDO BC0/BC1/BC10/BC15 + BT</li> <li>9. WCDMA Band 2/4/5 + WiFi 2.4/5GHz</li> <li>10. WCDMA Band 2/4/5 + BT</li> <li>11. LTE B2/B4/B5/B13/B17/B25/B26 + WiFi 2.4/5GHz</li> <li>12. LTE B2/B4/B5/B13/B17/B25/B26 + BT</li> </ol>
Wireless Router (Hotspot)	<ol style="list-style-type: none"> <li>1. GSM 850/1900 (GPRS/EDGE) + WiFi 2.4GHz</li> <li>2. CDMA 1xRTT BC0/BC1/BC10/BC15 + WiFi 2.4GHz</li> <li>3. CDMA 1xEVDO BC0/BC1/BC10/BC15 + WiFi 2.4GHz</li> <li>4. WCDMA Band 2/4/5 (850/1900) + WiFi 2.4GHz</li> <li>5. LTE B2/B4/B5/B13/B17/B25/B26 + WiFi 2.4GHz</li> </ol>
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. WiFi only 2.4GHz supports Hotspot.</li> <li>2. GPRS/EDGE, CDMA, WCDMA and LTE support Hotspot.</li> <li>3. VoIP is supported in CDMA, LTE, WCDMA and GPRS.</li> <li>4. WiFi 2.4 GHz Radio cannot transmit simultaneously with Bluetooth Radio.</li> </ol>	

### 7.4. General LTE SAR Test and Reporting Considerations

Item	Description						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	18700/1860	18675/1857.5	18650/1855	18625/1852.5	18615/1851.5	18607/1850.7
	Mid	18900/1880	18900/1880	18900/1880	18900/1880	18900/1880	18900/1880
	High	19100/1900	19125/1902.5	19150/1905	19175/1907.5	19185/1908.5	19193/1909.3
	Band 4	Frequency range: 1710 - 1755 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	20050/1720	20025/1717.5	20000/1715	19975/1712.5	19965/1711.5	19957/1710.7
	Mid	20175/1732.5	20175/1732.5	20175/1732.5	20175/1732.5	20175/1732.5	20175/1732.5
	High	20300/1745	20325/1747.5	20350/1750	20375/1752.5	20385/1753.5	20393/1754.3
	Band 5	Frequency range: 824 - 849 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low			20450/829	20425/826.5	20415/825.5	20407/824.7
	Mid			20525/836.5	20525/836.5	20525/836.5	20525/836.5
	High			20600/844	20625/846.5	20635/847.5	20643/848.3
	Band 13	Frequency range: 777 - 787 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low				23205/779.5			
Mid			23230/782	23230/782			
High				23255/784.5			
Band 17	Frequency range: 704 - 716 MHz						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low				23755/706.5			
Mid			23790/710	23790/710			
High				23825/713.5			

**General LTE SAR Test and Reporting Considerations (continued)**

Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 25	Frequency range: 1850 - 1915 MHz																																										
		Channel Bandwidth																																										
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz																																					
	Low	26140/ 1860	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5	26047/ 1850.7																																					
	Mid	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5																																					
	High	26590/ 1905	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5	26683/ 1914.3																																					
	Band 26	Frequency range: 818.8 – 823.8 MHz (Channels straddle part 24 and part 90 not supported)																																										
		Channel Bandwidth																																										
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz																																					
		Low				26753/ 820.3																																						
Mid				26763/ 821.3	26763/ 821.3																																							
High				26773/ 822.3																																								
LTE transmitter and antenna implementation	LTE can transmit from either UAT (Secondary Antenna) or LAT (Primary Antenna). The antenna switching is implemented with a physical, “break-before-make” switch such that only one antenna can be used for LTE transmission at a time.																																											
Maximum power reduction (MPR)	<p align="center"><b>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3</b></p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>QPSK</td> <td>&gt; 5</td> <td>&gt; 4</td> <td>&gt; 8</td> <td>&gt; 12</td> <td>&gt; 16</td> <td>&gt; 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>&gt; 5</td> <td>&gt; 4</td> <td>&gt; 8</td> <td>&gt; 12</td> <td>&gt; 16</td> <td>&gt; 18</td> <td>≤ 2</td> </tr> </tbody> </table> <p>MPR Built-in by design                      A-MPR (additional MPR) was disabled during SAR testing</p>						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
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																																					
Power reduction	No																																											
Spectrum plots for RB configurations	When a properly configured basestation simulator is not used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration should be included in the SAR report to demonstrate that the tested RB allocations have been correctly established at the maximum output power conditions.																																											

## 8. RF Exposure Conditions

Refer to Section 17 “Antenna Locations and Separation Distances” for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

### 8.1. Head Exposure Conditions

#### For GSM, W-CDMA, CDMA, LTE and WiFi

Test Configurations	SAR Required	Note
Left Touch	Yes	
Left Tilt (15°)	Yes	
Right Touch	Yes	
Right Tilt (15°)	Yes	

### 8.2. Body-worn Accessory Exposure Conditions

The Body-worn accessory test configurations were tested using a conservative minimum test separation distance of 5 mm.

#### For WWAN and LTE (LAT/Primary Antenna)

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	

#### For WWAN and LTE (UAT/Secondary Antenna)

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	

#### For WiFi

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	

### 8.3. Hotspot Exposure Conditions

Per Section 4 of test plan submitted in the manufacturer KDB titled Detect Mode Feature, hotspot operation SAR test cases are covered by worse-cases in Body-worn SAR at 5 mm separation distance.

#### For WWAN and LTE (LAT/Primary Antenna)

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	
Edge 1 (Top)	0 mm	Yes	
Edge 2 (Right)	0 mm	Yes	
Edge 3 (Bottom)	>25 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01r01
Edge 4 (Left)	0 mm	Yes	

#### For WWAN and LTE (UAT/Secondary Antenna)

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	
Edge 1 (Top)	>25 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01r01
Edge 2 (Right)	0 mm	Yes	
Edge 3 (Bottom)	0 mm	Yes	
Edge 4 (Left)	0 mm	Yes	

#### For WiFi

Test Configurations	Antenna-to-edge/surface	SAR Required	Note
Rear	<25 mm	Yes	
Front	<25 mm	Yes	
Edge 1 (Top)	4.7 mm	Yes	
Edge 2 (Right)	35.2 mm	Yes	
Edge 3 (Bottom)	115.4 mm	No	SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR v01r01
Edge 4 (Left)	10.5 mm	Yes	

## 9. RF Output Power Measurement

The proprietary logic is used to determine when head or body power table is used.

### 9.1. GSM

#### GSM (GMSK) - Voice Mode

Band	Ch No.	Freq. (MHz)	Avg Power (dBm)			
			HEAD		BODY	
			UAT	LAT	UAT	LAT
850	128	824.2	33.2	33.3	33.1	33.5
	190	836.6	33.2	33.3	33.1	33.5
	251	848.8	33.2	33.3	33.1	33.5

#### GPRS (GMSK) - Coding Scheme: CS1

Band	Ch No.	Freq. (MHz)	HEAD				BODY			
			UAT		LAT		UAT		LAT	
			1 slot	2 slots	1 slot	2 slots	1 slot	2 slots	1 slot	2 slots
			Burst Power (dBm)				Burst Power (dBm)			
850	128	824.2	33.2	<b>30.7</b>	33.3	<b>32.5</b>	33.1	<b>32.2</b>	33.5	<b>30.8</b>
	190	836.6	33.2	<b>30.7</b>	33.3	<b>32.5</b>	33.1	<b>32.1</b>	33.5	<b>30.9</b>
	251	848.8	33.2	<b>31.0</b>	33.3	<b>32.4</b>	33.1	<b>32.2</b>	33.5	<b>30.8</b>
			Frame Power (dBm)				Frame Power (dBm)			
850	128	824.2	24.2	<b>24.7</b>	24.3	<b>26.5</b>	24.1	<b>26.2</b>	24.5	<b>24.8</b>
	190	836.6	24.2	<b>24.7</b>	24.3	<b>26.5</b>	24.1	<b>26.1</b>	24.5	<b>24.9</b>
	251	848.8	24.2	<b>25.0</b>	24.3	<b>26.4</b>	24.1	<b>26.2</b>	24.5	<b>24.8</b>

#### EGPRS (8PSK) - Coding Scheme: MCS5

Band	Ch No.	Freq. (MHz)	HEAD				BODY			
			UAT		LAT		UAT		LAT	
			1 slot	2 slots	1 slot	2 slots	1 slot	2 slots	1 slot	2 slots
			Burst Power (dBm)				Burst Power (dBm)			
850	128	824.2	28.7	28.1	29.0	29.0	28.7	28.1	29.0	29.0
	190	836.6	28.7	28.2	29.0	29.0	28.7	28.2	29.0	29.0
	251	848.8	28.7	28.1	29.0	28.9	28.7	28.1	29.0	28.9
			Frame Power (dBm)				Frame Power (dBm)			
850	128	824.2	19.7	22.1	20.0	23.0	19.7	22.1	20.0	23.0
	190	836.6	19.7	22.2	20.0	23.0	19.7	22.2	20.0	23.0
	251	848.8	19.6	22.1	20.0	22.9	19.6	22.1	20.0	22.9

#### Notes:

The worst-case configuration and mode for SAR testing is determined to be as follows:

- Head & Body-worn Accessory: GMSK Voice Mode
- Hotspot mode: GMSK (GPRS) mode with 2 time slots, based on the output power measurements above
- SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode

**GSM (GMSK) - Voice Mode**

Band	Ch No.	Freq. (MHz)	Avg Power (dBm)			
			HEAD		BODY	
			UAT	LAT	UAT	LAT
1900	512	1850.2	30.5	30.5	30.5	29.0
	661	1880.0	30.5	30.5	30.5	29.0
	810	1909.8	30.5	30.5	30.5	29.0

**GPRS (GMSK) - Coding Scheme: CS1**

Band	Ch No.	Freq. (MHz)	HEAD				BODY			
			UAT		LAT		UAT		LAT	
			1 slot	2 slots	1 slot	2 slots	1 slot	2 slots	1 slot	2 slots
			Burst Power (dBm)				Burst Power (dBm)			
1900	512	1850.2	30.5	<b>27.5</b>	30.5	<b>28.0</b>	30.5	<b>28.75</b>	29.0	<b>26.0</b>
	661	1880.0	30.5	<b>27.5</b>	30.5	<b>28.0</b>	30.5	<b>28.75</b>	29.0	<b>26.0</b>
	810	1909.8	30.5	<b>27.5</b>	30.5	<b>28.0</b>	30.5	<b>28.75</b>	29.0	<b>26.0</b>
			Frame Power (dBm)				Frame Power (dBm)			
1900	512	1850.2	21.5	21.5	21.5	22.0	21.5	22.73	20.0	20.0
	661	1880.0	21.5	21.5	21.5	22.0	21.5	22.73	20.0	20.0
	810	1909.8	21.5	21.5	21.5	22.0	21.5	22.73	20.0	20.0

**EGPRS (8PSK) - Coding Scheme: MCS5**

Band	Ch No.	Freq. (MHz)	HEAD				BODY			
			UAT		LAT		UAT		LAT	
			1 slot	2 slots	1 slot	2 slots	1 slot	2 slots	1 slot	2 slots
			Burst Power (dBm)				Burst Power (dBm)			
1900	512	1850.2	27.1	27.4	27.6	27.8	27.1	27.4	27.6	<b>27.0</b>
	661	1880.0	27.4	27.3	27.9	27.9	27.4	27.3	27.9	<b>27.0</b>
	810	1909.8	27.4	27.4	28.0	28.0	27.4	27.4	28.0	<b>27.0</b>
			Frame Power (dBm)				Frame Power (dBm)			
1900	512	1850.2	18.1	21.4	18.6	21.8	18.1	21.4	18.6	21.0
	661	1880.0	18.4	21.3	18.9	21.9	18.4	21.3	18.9	21.0
	810	1909.8	18.4	21.4	19.0	22.0	18.4	21.4	19.0	21.0

**Notes:**

The worst-case configuration and mode for SAR testing is determined to be as follows:

- Head & Body-worn Accessory: GMSK Voice Mode
- Hotspot mode: GMSK (GPRS) mode with 2 time slots, and EGPRS 2 time slots (LAT) based on the output power measurements above



## 9.2. W-CDMA

### Release 99

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	$\beta_c/\beta_d$	8/15

### Measured Results

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
W-CDMA Band 2	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	22.5	23.0	22.5	20.0
		9400	1880.0	22.5	23.0	22.5	20.0
		9538	1907.6	22.5	23.0	22.5	20.0
W-CDMA Band 4	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	23.0	22.9	23.8	19.4
		1413	1732.6	23.0	23.0	23.8	19.5
		1513	1752.6	23.0	22.9	23.9	19.5
W-CDMA Band 5	Rel 99 (RMC, 12.2 kbps)	4132	826.4	23.9	24.5	24.0	24.20
		4183	836.6	23.9	24.4	23.9	24.11
		4233	846.6	23.7	24.4	23.8	24.00

**HSDPA**

The following 4 Sub-tests were completed according to Release 7 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
W-CDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm 2			
	$\beta_c$	2/15	12/15	15/15	15/15
	$\beta_d$	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	$\beta_c/\beta_d$	2/15	12/15	15/8	15/4
	$\beta_{hs}$	4/15	24/15	30/15	30/15
MPR (dB)	0	1	1.5	1.5	
HSDPA Specific Settings	$D_{ACK}$	8			
	$D_{NAK}$	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	Ahs = $\beta_{hs}/\beta_c$	30/15			

**Measured Results**

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
W-CDMA Band 2	Subtest 1	9262	1852.4	21.9	21.9	21.9	19.9
		9400	1880.0	22.2	21.8	22.2	20.0
		9538	1907.6	22.1	22.0	22.1	19.8
	Subtest 2	9262	1852.4	21.9	21.9	21.9	19.0
		9400	1880.0	22.2	22.0	22.2	18.8
		9538	1907.6	22.1	22.0	22.1	18.9
	Subtest 3	9262	1852.4	21.9	21.8	21.9	18.6
		9400	1880.0	22.2	22.0	22.2	18.5
		9538	1907.6	22.1	22.0	22.1	18.6
	Subtest 4	9262	1852.4	21.9	21.8	21.9	18.6
		9400	1880.0	22.2	22.0	22.2	18.6
		9538	1907.6	22.1	22.0	22.1	18.6
W-CDMA Band 4	Subtest 1	1312	1712.4	23.0	21.8	21.8	19.4
		1413	1732.6	22.8	22.0	22.1	19.1
		1513	1752.6	22.9	22.0	22.0	19.1
	Subtest 2	1312	1712.4	22.1	21.9	21.9	17.9
		1413	1732.6	22.0	22.0	22.2	17.5
		1513	1752.6	22.0	22.0	22.0	17.4
	Subtest 3	1312	1712.4	21.7	21.8	21.8	18.1
		1413	1732.6	21.6	22.2	22.2	18.0
		1513	1752.6	21.8	22.0	22.0	18.1
	Subtest 4	1312	1712.4	21.8	21.8	21.8	18.3
		1413	1732.6	21.7	22.0	22.2	17.9
		1513	1752.6	21.7	21.9	21.9	18.0
W-CDMA Band 5	Subtest 1	4132	826.4	23.8	23.4	22.7	24.00
		4183	836.6	23.7	23.5	22.6	24.20
		4233	846.6	23.7	23.5	22.6	24.10
	Subtest 2	4132	826.4	22.8	23.5	22.7	21.60
		4183	836.6	22.8	23.4	22.7	21.70
		4233	846.6	22.8	23.4	22.6	21.60
	Subtest 3	4132	826.4	22.5	23.4	22.7	20.50
		4183	836.6	22.5	23.4	22.7	20.50
		4233	846.6	22.4	23.4	22.6	20.40
	Subtest 4	4132	826.4	22.6	23.4	22.7	20.30
		4183	836.6	22.5	23.4	22.7	20.40
		4233	846.6	22.5	23.4	22.6	20.10

Maximum output power levels that are possible for all subtests reported.

**HSPA (HSDPA & HSUPA)**

The following 5 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	HSPA	HSPA	HSPA	HSPA	HSPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	$\beta_c$	11/15	6/15	15/15	2/15	15/15
	$\beta_d$	15/15	15/15	9/15	15/15	15/15
	$\beta_{ec}$	209/225	12/15	30/15	2/15	24/15
	$\beta_c/\beta_d$	11/15	6/15	15/9	2/15	15/15
	$\beta_{hs}$	22/15	12/15	30/15	4/15	30/15
	$\beta_{ed}$	1309/225	94/75	47/15	56/75	134/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
MPR (dB)	0	2	1	2	0	
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
Ahs = $\beta_{hs}/\beta_c$	30/15					
HSUPA Specific Settings	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_TFCIs	E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO 4 E-TFCI 92 E-TFCI PO 18		E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27

**Measured Results**

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
W-CDMA Band 2	Subtest 1	9262	1852.4	22.4	22.5	22.4	19.9
		9400	1880.0	22.5	22.8	22.5	20.0
		9538	1907.6	22.4	22.7	22.4	20.0
	Subtest 2	9262	1852.4	20.0	21.6	20.0	18.0
		9400	1880.0	20.0	21.9	20.0	18.3
		9538	1907.6	19.9	21.8	19.9	18.3
	Subtest 3	9262	1852.4	21.4	21.7	21.4	18.8
		9400	1880.0	21.4	21.9	21.4	18.9
		9538	1907.6	21.0	21.6	21.0	18.6
	Subtest 4	9262	1852.4	21.2	22.2	21.2	18.8
		9400	1880.0	21.2	22.1	21.2	18.8
		9538	1907.6	21.2	22.3	21.2	18.8
	Subtest 5	9262	1852.4	22.3	22.5	22.3	19.8
		9400	1880.0	22.5	22.6	22.5	19.8
		9538	1907.6	22.4	22.7	22.4	19.8
W-CDMA Band 4	Subtest 1	1312	1712.4	23.0	22.0	23.9	18.5
		1413	1732.6	23.0	22.2	23.9	18.7
		1513	1752.6	22.9	21.1	23.8	18.6
	Subtest 2	1312	1712.4	21.2	21.2	22.0	17.8
		1413	1732.6	21.0	21.0	21.9	17.7
		1513	1752.6	21.1	20.8	21.8	17.9
	Subtest 3	1312	1712.4	22.2	21.0	23.0	18.3
		1413	1732.6	22.1	21.3	23.0	18.2
		1513	1752.6	22.1	21.1	22.9	18.2
	Subtest 4	1312	1712.4	21.2	21.5	21.9	17.9
		1413	1732.6	21.1	21.2	21.9	17.7
		1513	1752.6	21.0	21.8	21.8	17.8
	Subtest 5	1312	1712.4	23.0	22.1	23.9	19.0
		1413	1732.6	23.0	21.9	23.9	18.9
		1513	1752.6	22.8	22.0	23.8	18.8
W-CDMA Band 5	Subtest 1	4132	826.4	23.9	23.2	22.6	24.10
		4183	836.6	23.8	23.7	24.0	24.00
		4233	846.6	23.8	23.5	23.2	24.00
	Subtest 2	4132	826.4	22.1	22.8	22.2	22.20
		4183	836.6	22.0	22.4	22.1	22.10
		4233	846.6	21.9	22.8	22.1	22.10
	Subtest 3	4132	826.4	22.9	21.8	23.1	23.10
		4183	836.6	22.8	22.1	22.9	23.00
		4233	846.6	22.7	22.7	23.0	23.10
	Subtest 4	4132	826.4	22.0	23.2	22.1	21.50
		4183	836.6	21.9	22.7	22.1	21.80
		4233	846.6	21.9	23.0	22.0	21.70
	Subtest 5	4132	826.4	23.9	22.9	23.8	22.20
		4183	836.6	23.8	22.8	23.7	22.30
		4233	846.6	23.7	22.9	23.8	22.10

Maximum output power levels that are possible for all subtests reported.

**DC-HSDPA**

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

**Table E.5.0: Levels for HSDPA connection setup**

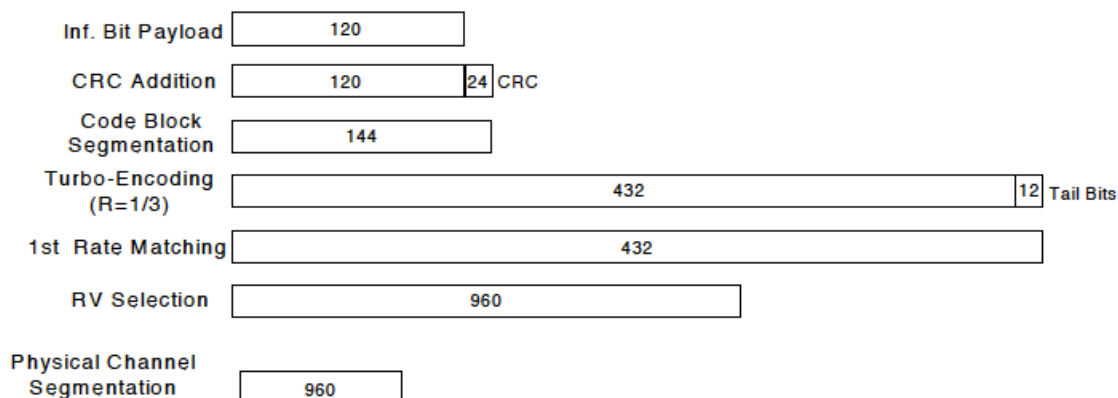
Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH_Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

**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)**

The following 4 Sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121. A summary of subtest settings are illustrated below:

Mode	HSDPA	HSDPA	HSDPA	HSDPA
Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode			
	Test Mode 1			
	Rel99 RMC			
	12.2kbps RMC			
	HSDPA FRC			
	H-Set1			
	Power Control Algorithm			
	Algorithm2			
	$\beta_c$	2/15	12/15	15/15
$\beta_d$	15/15	15/15	8/15	4/15
$\beta_d$ (SF)	64			
$\beta_c/\beta_d$	2/15	12/15	15/8	15/4
$\beta_{hs}$	4/15	24/15	30/15	30/15
MPR (dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK			
	8			
	DNAK			
	8			
	DCQI			
	8			
	Ack-Nack Repetition factor			
3				
CQI Feedback				
4ms				
CQI Repetition Factor				
2				
Ahs = $\beta_{hs}/\beta_c$				
30/15				

Up commands are set continuously to set the UE to Max power.

**Measured Results**

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
W-CDMA Band 2	Subtest 1	9262	1852.4	22.1	22.9	22.1	19.9
		9400	1880.0	22.3	23.0	22.3	19.8
		9538	1907.6	22.3	22.9	22.3	19.7
	Subtest 2	9262	1852.4	22.2	22.9	22.2	19.9
		9400	1880.0	22.3	23.0	22.3	19.9
		9538	1907.6	22.3	23.0	22.3	19.7
	Subtest 3	9262	1852.4	21.6	22.9	21.6	18.2
		9400	1880.0	22.0	22.8	22.0	18.3
		9538	1907.6	21.9	22.9	21.9	18.5
	Subtest 4	9262	1852.4	21.6	22.9	21.6	18.2
		9400	1880.0	22.1	22.8	22.1	18.4
		9538	1907.6	21.9	22.5	21.9	18.4
W-CDMA Band 4	Subtest 1	1312	1712.4	22.8	22.2	23.2	19.5
		1413	1732.6	22.7	22.1	23.1	19.5
		1513	1752.6	22.7	22.1	23.2	19.5
	Subtest 2	1312	1712.4	22.7	22.2	23.2	19.4
		1413	1732.6	22.8	22.1	23.1	19.4
		1513	1752.6	22.8	22.1	23.1	19.3
	Subtest 3	1312	1712.4	22.2	21.8	22.7	18.7
		1413	1732.6	22.3	21.6	22.6	18.7
		1513	1752.6	22.5	21.5	22.7	18.7
	Subtest 4	1312	1712.4	22.3	21.6	22.7	18.7
		1413	1732.6	22.3	21.6	22.7	18.8
		1513	1752.6	22.2	21.5	22.6	18.8
W-CDMA Band 5	Subtest 1	4132	826.4	23.8	23.3	22.6	24.10
		4183	836.6	23.7	23.4	22.6	24.10
		4233	846.6	23.6	23.3	22.6	24.10
	Subtest 2	4132	826.4	23.7	23.3	22.7	23.30
		4183	836.6	23.6	23.4	22.6	23.10
		4233	846.6	23.6	23.3	22.6	23.20
	Subtest 3	4132	826.4	23.2	22.8	22.2	22.80
		4183	836.6	23.3	22.8	22.1	22.70
		4233	846.6	23.4	22.8	22.0	22.60
	Subtest 4	4132	826.4	23.3	22.8	22.1	22.70
		4183	836.6	23.2	22.8	22.1	22.60
		4233	846.6	23.2	22.7	22.0	22.70

Maximum output power levels that are possible for all subtests reported.

**HSPA+**

Since 16QAM is not used for uplink, the uplink Category and release is same as HSUPA, i.e., CAT 6 Rel 6. Therefore, the RF conducted power is not measured.



### 9.3. CDMA

#### 1xRTT Measured Results

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
BC 0	RC1 SO55 (Loopback)	1013	824.70	24.2	24.5	23.9	24.20
		384	836.52	24.1	24.5	23.8	24.10
		777	848.31	24.1	24.5	23.8	24.10
	RC3 SO55 (Loopback)	1013	824.70	24.5	24.5	23.9	24.25
		384	836.52	24.5	24.5	23.9	24.20
		777	848.31	24.3	24.4	23.8	24.20
	RC3 SO32 (+F-SCH)	1013	824.70	24.5	24.5	23.9	24.20
		384	836.52	24.4	24.5	23.8	24.25
		777	848.31	24.4	24.5	23.8	24.25
BC 1	RC1 SO55 (Loopback)	25	1851.25	22.5	22.7	22.10	20.0
		600	1880.00	22.5	22.7	22.10	19.9
		1175	1908.75	22.5	23.0	22.00	19.9
	RC3 SO55 (Loopback)	25	1851.25	22.4	23.0	22.20	20.0
		600	1880.00	22.5	22.8	22.25	20.0
		1175	1908.75	22.5	22.9	22.15	20.0
	RC3 SO32 (+F-SCH)	25	1851.25	22.5	22.7	21.15	20.0
		600	1880.00	22.5	22.7	22.25	20.0
		1175	1908.75	22.5	23.0	22.25	19.9
BC 10	RC1 SO55 (Loopback)	476	817.9	23.8	24.5	24.1	24.20
		580	820.5	23.8	24.5	24.1	24.10
		684	823.1	23.7	24.5	24.1	24.10
	RC3 SO55 (Loopback)	476	817.9	23.9	24.4	24.0	24.20
		580	820.5	23.9	24.4	23.9	24.20
		684	823.1	23.9	24.4	24.1	24.10
	RC3 SO32 (+F-SCH)	476	817.9	23.9	24.5	23.9	24.20
		580	820.5	23.9	24.5	23.8	24.10
		684	823.1	23.9	24.5	23.7	24.10
BC 15	RC1 SO55 (Loopback)	25	1711.25	22.8	23.0	24.2	19.4
		450	1732.50	22.9	23.0	24.3	19.2
		875	1753.75	23.0	22.7	24.4	19.3
	RC3 SO55 (Loopback)	25	1711.25	23.0	22.9	24.2	19.5
		450	1732.50	23.0	23.0	24.1	19.5
		875	1753.75	23.0	23.0	24.4	19.5
	RC3 SO32 (+F-SCH)	25	1711.25	22.9	23.0	24.0	19.5
		450	1732.50	23.0	23.0	24.2	19.5
		875	1753.75	22.9	22.7	24.1	19.5

**1x Advanced**

**Call box setup procedure**

- Protocol Rev > 6 (IS-2000-0)
- System ID: 331; NID: 65535, Reg. Ch. #.:
- Radio Config (RC) > Fwd11,Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

**Measured Results**

Band	Mode	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
BC 0	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.2	24.2	24.1	24.20
		384	836.52	24.2	24.3	24.1	24.25
		777	848.31	24.2	24.4	24.1	24.10
BC 1	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	22.5	22.8	22.20	19.9
		600	1880.00	22.5	22.7	22.25	19.9
		1175	1908.75	22.4	22.9	22.25	19.8
BC 10	Fwd11/Rvs8 SO75 (Loopback)	476	817.9	23.8	24.5	24.0	24.10
		580	820.5	23.9	24.5	24.2	24.10
		684	823.1	23.7	24.5	24.0	24.20
BC 15	Fwd11/Rvs8 SO75 (Loopback)	25	1711.25	23.0	23.0	24.3	19.4
		450	1732.50	23.0	23.0	24.2	19.5
		875	1753.75	22.9	22.8	24.3	19.5

**1xEv-Do Rel. 0 Measured Results**

Band	FTAP Rate	RTAP Rate	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
					HEAD		BODY	
					UAT	LAT	UAT	LAT
BC 0	307.2 kbps (2 slot, QPSK)	153.6 kbps	1013	824.70	24.5	24.5	23.9	24.20
			384	836.52	24.5	24.5	23.8	24.25
			777	848.31	24.3	24.4	23.8	24.25
BC1	307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1851.25	22.4	23.0	21.15	20.0
			600	1880.00	22.5	22.8	22.25	20.0
			1175	1908.75	22.5	22.9	22.25	19.9
BC10	307.2 kbps (2 slot, QPSK)	153.6 kbps	476	817.9	23.9	24.4	23.9	24.20
			580	820.5	23.9	24.4	23.8	24.10
			684	823.1	23.9	24.4	23.7	24.10
BC15	307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1711.25	23.0	22.9	24.0	19.5
			450	1732.50	23.0	23.0	24.2	19.5
			875	1753.75	23.0	23.0	24.1	19.5

**1xEv-Do Rev. A Measured Results**

Band	FETAP Traffic Format	RETAP Data Payload Size	UL Ch No.	Freq. (MHz)	Avg Pwr (dBm)			
					HEAD		BODY	
					UAT	LAT	UAT	LAT
BC 0	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	1013	824.70	24.5	24.5	24.0	24.10
			384	836.52	24.5	24.5	24.1	24.20
			777	848.31	24.3	24.5	24.2	24.00
BC1	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1851.25	22.3	22.8	22.20	19.8
			600	1880.00	22.5	22.7	22.25	20.0
			1175	1908.75	22.5	23.0	22.25	19.9
BC10	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	476	817.9	23.7	24.5	23.8	24.25
			580	820.5	23.7	24.5	23.8	24.20
			684	823.1	23.8	24.5	23.8	24.20
BC15	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1711.25	22.8	22.8	24.4	19.3
			450	1732.50	22.9	22.9	24.4	19.3
			875	1753.75	22.8	23.0	24.4	19.5

**1xEV-DO Rev. B**

Call box setup procedure

1xEV-DO Release B

- CMW 500 Signal Generator > 1xEV-DO Taskbar Enable
- CMW 500 1xEV-DO Signaling Configuration Window >
- 1xEV-DO Signaling On Window:  
 Under Access Network Control:  
 Band Class: BC0: US Cellular  
 RF Channel: 31  
 1xEV-DO Power: -70 dBm  
 Release B
- 1xEV-DO Signaling Configuration Window

Under RF Frequency Band / Channel: Enter Ch. Frequency

- Under Carrier Configuration: RF Frequency  
 For Two Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	31	0
Carrier [1]	1013	982

- Under Carrier Configuration: RF Pilot

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
	CA/S1	✓	✓

For Three Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	72	0
Carrier [1]	31	-41
Carrier [2]	1013	941

- Under Carrier Configuration: RF Pilot

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
Pilot [1]	C1/S1	✓	✓
Pilot [2]	C2/S2	✓	✓

- Rvs Power Ctrl > All Up bits (to get the maximum power)

**Measured Results**

Band	Test Set #	Channel	f (MHz)	Avg Pwr (dBm)			
				HEAD		BODY	
				UAT	LAT	UAT	LAT
BC0	Two Carrier Mini Separation	1013+31	824.70+825.93	21.7	21.7	21.7	21.7
		384+425	836.52+837.75	21.6	21.8	21.6	21.8
		736+777	847.08+848.31	21.7	22.0	21.7	22.0
	Two Carrier Max Separation	1013+156	824.70+829.68	21.6	21.7	21.6	21.7
		384+550	836.52+841.50	21.7	21.9	21.7	21.9
		611+777	843.33+848.31	21.6	21.7	21.6	21.7
	Three Carrier Max Separation	1013+31+72	824.70+825.93+827.16	21.7	21.8	21.7	21.8
		384+425+466	836.52+837.75+838.98	21.8	21.9	21.8	21.9
		695+736+777	845.85+847.08+848.31	21.7	21.7	21.7	21.7

### 9.4. LTE

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

**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

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signalling Value of "NS\_01".3

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

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks ( $N_{RB}$ )	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10, 15, 20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3	13	10	Table 6.2.4-2	Table 6.2.4-2
	6.6.3.3.2				
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
				Table 6.2.4-3	
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23 <sup>1</sup>	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

**9.4.1. LTE Band 2**

**Measured Results**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
20	18700	1860.0	QPSK	1	0	0	22.5	23.0	22.20	19.25
				1	49	0	22.5	23.0	22.20	19.25
				1	99	0	22.5	23.0	22.20	19.25
				50	0	1	21.5	22.3	21.10	18.25
				50	24	1	21.5	22.3	21.10	18.25
				50	49	1	21.3	22.2	21.10	18.25
				100	0	1	21.4	22.1	21.00	18.25
			16QAM	1	0	1	21.5	22.2	21.10	18.20
				1	49	1	21.1	22.3	21.20	18.10
				1	99	1	21.1	22.1	21.20	18.10
				50	0	2	20.2	22.5	20.20	17.20
				50	24	2	20.1	21.3	20.20	17.20
				50	49	2	20.0	21.5	20.10	17.10
				100	0	2	20.0	21.1	20.10	17.00
	18900	1880.0	QPSK	1	0	0	22.5	23.0	22.25	19.25
				1	49	0	22.5	23.0	22.25	19.25
				1	99	0	22.5	23.0	22.25	19.25
				50	0	1	21.3	22.3	21.20	18.25
				50	24	1	21.3	22.3	21.25	18.25
				50	49	1	21.3	22.0	21.25	18.25
				100	0	1	21.4	22.1	21.10	18.25
			16QAM	1	0	1	21.1	22.2	21.20	18.10
				1	49	1	21.3	22.2	21.20	18.20
				1	99	1	21.0	22.2	21.20	18.20
				50	0	2	20.1	22.2	20.20	17.20
				50	24	2	20.2	21.2	20.30	17.30
				50	49	2	19.9	21.4	20.30	17.20
				100	0	2	20.0	21.2	20.20	17.10
	19100	1900.0	QPSK	1	0	0	22.5	23.0	22.25	19.10
				1	49	0	22.5	23.0	22.25	19.25
1				99	0	22.5	22.9	22.25	18.95	
50				0	1	21.3	22.1	21.20	18.20	
50				24	1	21.2	22.1	21.25	18.20	
50				49	1	21.3	22.1	21.25	18.20	
100				0	1	21.3	21.9	21.20	18.20	
16QAM			1	0	1	21.1	22.2	21.10	18.20	
			1	49	1	21.3	22.0	21.10	18.10	
			1	99	1	21.4	22.1	21.20	18.10	
			50	0	2	19.9	21.8	20.10	17.20	
			50	24	2	20.2	21.1	20.30	17.30	
			50	49	2	20.4	21.1	20.20	17.10	
			100	0	2	20.1	20.8	20.10	17.10	

**LTE Band 2 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
15	18675	1857.5	QPSK	1	0	0	22.4	23.0	22.10	19.25
				1	37	0	22.4	22.9	22.00	19.25
				1	74	0	22.0	23.0	22.20	19.25
				36	0	1	21.2	22.1	21.00	18.25
				36	16	1	21.1	21.9	21.10	18.25
				36	35	1	20.9	22.0	21.10	18.25
				75	0	1	21.0	21.9	21.00	18.25
			16QAM	1	0	1	21.3	22.2	21.20	18.20
				1	37	1	21.4	22.6	21.20	18.10
				1	74	1	21.0	22.1	21.10	18.10
				36	0	2	20.2	22.2	20.10	17.20
				36	16	2	20.2	21.0	20.10	17.20
				36	35	2	20.0	21.1	20.00	17.10
				75	0	2	20.0	20.9	20.10	17.00
	18900	1880.0	QPSK	1	0	0	22.4	23.0	21.10	19.25
				1	37	0	22.4	22.9	22.25	19.25
				1	74	0	22.1	23.0	22.20	19.25
				36	0	1	21.0	22.9	21.10	18.25
				36	16	1	20.9	21.9	21.25	18.25
				36	35	1	21.0	22.0	21.20	18.25
				75	0	1	21.0	21.9	21.20	18.25
			16QAM	1	0	1	21.1	22.1	21.10	18.10
				1	37	1	21.3	22.3	21.20	18.20
				1	74	1	21.2	22.2	21.00	18.20
				36	0	2	20.1	22.3	20.10	17.20
				36	16	2	19.8	20.9	20.20	17.30
				36	35	2	19.9	21.0	20.20	17.20
				75	0	2	20.0	20.8	20.20	17.10
	19125	1902.5	QPSK	1	0	0	22.3	23.0	22.25	19.10
				1	37	0	22.5	22.9	22.25	19.25
1				74	0	22.3	23.0	22.25	18.95	
36				0	1	21.1	22.8	21.20	18.20	
36				16	1	21.3	21.8	21.25	18.20	
36				35	1	21.4	22.0	21.25	18.20	
75				0	1	21.2	21.7	21.20	18.20	
16QAM			1	0	1	21.2	22.2	21.10	18.20	
			1	37	1	21.3	22.1	21.10	18.10	
			1	74	1	21.4	22.2	21.20	18.10	
			36	0	2	20.2	22.3	20.10	17.20	
			36	16	2	20.4	20.9	20.30	17.30	
			36	35	2	20.4	21.0	20.20	17.10	
			75	0	2	20.3	20.8	20.10	17.10	

**LTE Band 2 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	18650	1855.0	QPSK	1	0	0	22.5	23.0	22.10	19.10
				1	24	0	22.5	22.9	21.00	19.20
				1	49	0	22.1	23.0	22.10	19.10
				25	0	1	21.1	22.8	21.00	18.25
				25	12	1	21.1	22.1	21.10	18.25
				25	24	1	21.1	22.4	21.10	18.25
				50	0	1	21.1	22.0	21.00	18.10
			16QAM	1	0	1	21.1	22.2	21.20	18.20
				1	24	1	21.4	22.2	21.20	18.10
				1	49	1	21.2	22.2	21.10	18.10
				25	0	2	20.3	22.4	20.10	17.20
				25	12	2	20.2	21.2	20.10	17.20
				25	24	2	20.2	21.2	20.00	17.10
				50	0	2	20.0	21.1	20.10	17.00
	18900	1880.0	QPSK	1	0	0	22.5	23.0	21.10	19.20
				1	24	0	22.2	22.9	22.20	19.20
				1	49	0	22.1	23.0	22.10	19.10
				25	0	1	21.1	22.8	21.10	18.20
				25	12	1	20.9	22.1	21.20	18.25
				25	24	1	21.0	22.2	21.00	18.20
				50	0	1	21.0	22.0	21.10	18.20
			16QAM	1	0	1	21.3	22.3	21.10	18.10
				1	24	1	21.1	22.1	21.20	18.20
				1	49	1	21.2	22.3	21.00	18.20
				25	0	2	20.0	22.3	20.10	17.20
				25	12	2	19.9	21.0	20.30	17.30
				25	24	2	20.0	21.1	20.20	17.20
				50	0	2	20.1	21.0	20.20	17.10
	19150	1905.0	QPSK	1	0	0	22.4	23.0	22.10	19.10
				1	24	0	22.5	22.8	22.20	19.20
1				49	0	22.1	23.0	22.20	18.95	
25				0	1	21.3	22.8	21.20	18.10	
25				12	1	21.2	21.7	21.25	18.20	
25				24	1	21.2	21.6	21.25	18.10	
50				0	1	21.2	21.7	21.20	18.20	
16QAM			1	0	1	21.5	22.1	21.10	18.10	
			1	24	1	21.4	22.0	21.10	18.10	
			1	49	1	21.4	22.2	21.20	18.10	
			25	0	2	20.3	22.1	20.10	17.10	
			25	12	2	20.2	20.8	20.30	17.20	
			25	24	2	20.5	21.0	20.20	17.10	
			50	0	2	20.0	20.6	20.10	17.10	



**LTE Band 2 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)						
							HEAD		BODY				
							UAT	LAT	UAT	LAT			
5	18625	1855.0	QPSK	1	0	0	22.4	23.0	22.10	19.20			
				1	12	0	22.5	22.9	22.00	19.21			
				1	24	0	22.4	23.0	22.20	19.10			
				12	0	1	21.2	22.2	21.00	18.25			
				12	6	1	21.4	22.2	21.10	18.20			
				12	11	1	21.4	22.4	21.10	18.20			
				25	0	1	21.3	22.2	21.00	18.10			
			16QAM	1	0	1	21.1	22.1	21.20	18.20			
				1	12	1	21.6	22.2	21.20	18.20			
				1	24	1	21.5	22.2	21.10	18.20			
				12	0	2	20.5	21.5	20.10	17.10			
				12	6	2	20.5	21.3	20.10	17.10			
				12	11	2	20.5	21.1	20.00	17.10			
				25	0	2	20.4	21.1	20.10	17.00			
	18900	1880.0	QPSK	1	0	0	22.3	23.0	21.10	19.20			
				1	12	0	22.4	22.9	22.25	19.25			
				1	24	0	22.1	23.0	22.20	19.20			
				12	0	1	21.2	22.7	21.10	18.20			
				12	6	1	21.1	22.1	21.25	18.20			
				12	11	1	21.1	22.0	21.20	18.21			
				25	0	1	21.0	22.0	21.20	18.30			
			16QAM	1	0	1	21.4	22.0	21.10	18.10			
				1	12	1	21.5	22.3	21.20	18.20			
				1	24	1	21.4	22.0	21.00	18.10			
				12	0	2	20.3	21.2	20.10	17.20			
				12	6	2	20.1	21.0	20.20	17.30			
				12	11	2	20.1	21.3	20.20	17.20			
				25	0	2	20.0	21.1	20.20	17.10			
				19175	1907.5	QPSK	1	0	0	22.5	23.0	22.25	19.10
							1	12	0	22.5	22.9	22.25	19.20
1	24	0	22.2				23.0	22.25	18.95				
12	0	1	21.6				22.9	21.20	18.10				
12	6	1	21.5				21.9	21.25	18.00				
12	11	1	21.3				22.0	21.25	18.30				
25	0	1	21.5				21.9	21.20	18.20				
16QAM	1	0	1			21.7	22.3	21.10	18.20				
	1	12	1			21.4	22.1	21.10	18.10				
			1	24	1	21.3	22.2	21.20	18.10				
			12	0	2	20.7	22.1	20.10	17.20				
			12	6	2	20.7	21.0	20.30	17.30				
			12	11	2	20.3	21.0	20.20	17.10				
			25	0	2	20.4	20.9	20.10	17.10				

**LTE Band 2 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
3	18615	1851.5	QPSK	1	0	0	22.3	23.0	22.10	19.10
				1	7	0	22.5	22.9	22.00	19.20
				1	14	0	22.4	23.0	22.20	19.10
				8	0	1	21.2	22.1	21.00	18.10
				8	4	1	21.3	22.1	21.10	18.20
				8	7	1	21.4	22.4	21.10	18.20
				15	0	1	21.3	22.1	21.00	18.21
			16QAM	1	0	1	21.4	22.4	21.20	18.10
				1	7	1	21.5	22.4	21.20	18.20
				1	14	1	21.5	22.4	21.10	18.10
				8	0	2	20.3	22.1	20.10	17.20
				8	4	2	20.4	21.2	20.10	17.20
				8	7	2	20.4	21.3	20.00	17.10
				15	0	2	20.5	21.2	20.10	17.10
				18900	1880.0	QPSK	1	0	0	22.5
	1	7	0				22.2	22.9	22.25	19.10
	1	14	0				22.2	23.0	22.20	19.20
	8	0	1				21.2	23.0	21.10	18.25
	8	4	1				21.1	22.1	21.25	18.25
	8	7	1				21.2	22.5	21.20	18.20
	15	0	1				21.2	22.1	21.20	18.20
	16QAM	1	0			1	21.4	22.2	21.10	18.10
		1	7			1	21.3	22.3	21.20	18.20
		1	14			1	21.3	22.4	21.00	18.20
		8	0			2	20.1	21.3	20.10	17.20
		8	4			2	20.1	21.1	20.20	17.20
		8	7			2	20.1	21.1	20.20	17.20
		15	0			2	20.1	21.0	20.20	17.10
		19185	1908.5			QPSK	1	0	0	22.5
	1			7	0		22.4	22.9	22.25	19.25
1	14			0	22.2		23.0	22.25	18.95	
8	0			1	21.3		22.1	21.20	18.20	
8	4			1	21.3		21.8	21.25	18.20	
8	7			1	21.2		22.0	21.25	18.20	
15	0			1	21.4		21.9	21.20	18.20	
16QAM	1			0	1	21.5	22.3	21.10	18.20	
	1			7	1	21.7	22.2	21.10	18.10	
	1			14	1	21.4	22.3	21.20	18.10	
	8			0	2	20.4	22.1	20.10	17.20	
	8			4	2	20.5	20.8	20.30	17.30	
	8			7	2	20.2	21.0	20.20	17.10	
	15			0	2	20.3	21.0	20.10	17.00	

**LTE Band 2 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
1.4	18607	1850.7	QPSK	1	0	0	22.3	23.0	22.20	19.10
				1	2	0	22.4	23.0	22.20	19.20
				1	5	0	22.4	23.0	22.25	19.20
				3	0	0	22.2	22.9	22.10	19.10
				3	1	0	22.2	22.9	22.20	19.00
				3	2	0	22.3	23.0	22.20	19.00
			6	0	1	21.3	22.3	21.30	18.20	
			16QAM	1	0	1	20.8	22.5	21.20	18.20
				1	2	1	20.8	22.5	21.30	18.20
				1	5	1	20.9	22.4	21.30	18.20
				3	0	1	21.1	22.4	21.10	18.20
				3	1	1	21.5	22.2	21.10	18.20
	3	2		1	21.6	22.2	21.20	18.10		
	6	0	2	20.4	21.1	20.20	17.30			
	18900	1880.0	QPSK	1	0	0	22.5	23.0	22.20	19.10
				1	2	0	22.4	22.9	22.25	19.20
				1	5	0	22.3	23.0	22.10	19.10
				3	0	0	22.2	22.8	22.10	19.10
				3	1	0	22.2	22.7	22.20	19.10
				3	2	0	22.2	23.0	22.10	19.10
			6	0	1	21.2	22.1	21.30	18.30	
			16QAM	1	0	1	21.3	22.3	21.10	18.10
				1	2	1	21.2	22.3	21.20	18.25
				1	5	1	21.3	22.4	21.20	18.20
				3	0	1	21.1	22.3	21.10	18.10
				3	1	1	21.0	22.1	21.10	18.20
	3	2		1	21.1	22.0	21.20	18.10		
	6	0	2	19.9	20.9	20.20	17.30			
	19193	1909.3	QPSK	1	0	0	22.5	22.9	22.20	19.20
				1	2	0	22.4	22.8	22.10	19.10
1				5	0	22.3	22.9	22.10	19.10	
3				0	0	22.3	22.8	22.10	19.10	
3				1	0	22.3	22.7	22.20	19.20	
3				2	0	22.2	23.0	22.20	18.20	
6			0	1	21.3	21.9	21.30	17.00		
16QAM			1	0	1	21.5	21.5	21.20	18.20	
			1	2	1	21.4	21.5	21.10	18.20	
			1	5	1	21.3	21.7	21.10	18.10	
			3	0	1	21.1	21.8	21.20	18.10	
			3	1	1	21.1	21.9	21.10	18.20	
	3	2	1	21.1	21.9	21.10	18.20			
6	0	2	21.1	21.2	20.10	17.20				

### 9.4.2. LTE Band 4

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)						
							HEAD		BODY				
							UAT	LAT	UAT	LAT			
20	20050	1720.0	QPSK	1	0	0	21.5	23.0	22.5	18.9			
				1	49	0	21.5	23.0	22.5	19.0			
				1	99	0	21.5	23.0	22.4	19.0			
				50	0	1	20.5	22.6	21.4	18.0			
				50	24	1	20.5	21.9	21.5	18.0			
				50	49	1	20.5	22.2	21.4	18.0			
			16QAM	100	0	1	20.5	22.1	21.3	18.0			
				1	0	1	20.7	22.5	21.5	17.9			
				1	49	1	20.7	22.5	22.4	18.0			
				1	99	1	20.6	22.2	21.5	18.0			
				50	0	2	19.6	22.0	20.5	17.2			
				50	24	2	19.6	21.0	20.4	17.2			
	20175	1732.5	QPSK	50	49	2	19.5	21.2	20.4	17.1			
				100	0	2	19.5	21.0	20.3	17.1			
				1	0	0	21.5	23.0	22.5	19.0			
				1	49	0	21.5	23.0	22.5	19.0			
				1	99	0	21.5	23.0	22.4	19.0			
				50	0	1	20.5	22.8	21.4	18.0			
			16QAM	50	24	1	20.5	22.1	21.4	18.0			
				50	49	1	20.5	22.5	21.4	18.0			
				100	0	1	20.5	22.1	21.3	17.9			
				1	0	1	20.7	22.1	21.6	18.0			
				1	49	1	20.8	22.1	21.7	18.1			
				1	99	1	20.8	22.2	21.5	18.0			
				50	0	2	19.6	21.6	20.5	17.1			
				50	24	2	19.7	21.2	20.5	17.2			
				50	49	2	19.7	21.3	20.3	17.2			
				100	0	2	19.6	21.0	20.4	17.3			
				20300	1745.0	QPSK	1	0	0	21.4	23.0	22.5	18.9
							1	49	0	21.5	23.0	22.5	19.0
1	99	0	21.5				23.0	22.5	19.0				
50	0	1	20.5				22.7	21.4	18.0				
50	24	1	20.5				22.1	21.5	18.0				
50	49	1	20.5				22.3	21.4	18.0				
16QAM	100	0	1			20.5	22.0	21.4	18.0				
	1	0	1			20.7	22.1	21.6	18.0				
	1	49	1			20.7	22.1	21.4	18.0				
	1	99	1			20.7	22.1	21.6	18.0				
	50	0	2			19.6	21.6	20.2	17.0				
	50	24	2			19.6	21.1	20.2	17.1				
	50	49	2			19.7	21.3	20.3	17.1				
	100	0	2			19.6	20.9	20.3	17.1				

**LTE Band 4 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
15	20025	1717.5	QPSK	1	0	0	21.4	23.0	22.5	18.8
				1	37	0	21.4	22.9	22.5	18.8
				1	74	0	21.5	23.0	22.5	18.9
				36	0	1	20.5	22.8	21.3	18.1
				36	16	1	20.5	22.1	21.4	18.1
				36	35	1	20.5	22.2	21.2	18.0
				75	0	1	20.5	22.0	21.3	18.0
			16QAM	1	0	1	20.6	22.3	21.7	17.8
				1	37	1	20.6	22.2	21.7	17.9
				1	74	1	20.6	22.3	21.7	17.9
				36	0	2	19.6	22.2	20.5	17.1
				36	16	2	19.6	21.1	20.5	17.2
				36	35	2	19.5	21.5	20.4	17.1
				75	0	2	19.6	21.1	20.4	17.1
	20175	1732.5	QPSK	1	0	0	21.5	23.0	22.5	19.0
				1	37	0	21.5	22.9	22.5	19.0
				1	74	0	21.4	23.0	22.4	19.0
				36	0	1	20.5	22.5	21.4	18.1
				36	16	1	20.5	22.0	21.4	18.1
				36	35	1	20.4	22.3	21.3	18.0
				75	0	1	20.4	21.9	21.3	18.0
			16QAM	1	0	1	20.8	22.1	21.6	18.0
				1	37	1	20.7	22.1	21.5	18.1
				1	74	1	20.8	22.3	21.5	18.0
				36	0	2	19.7	22.1	20.4	17.1
				36	16	2	19.8	21.1	20.5	17.2
				36	35	2	19.7	21.25	20.4	17.2
				75	0	2	19.6	20.9	20.3	17.3
	20325	1747.5	QPSK	1	0	0	21.4	23.0	22.5	18.9
				1	37	0	21.4	23.0	22.4	19.0
1				74	0	21.4	23.0	22.5	19.0	
36				0	1	20.5	22.5	21.3	18.0	
36				16	1	20.5	22.1	21.2	18.0	
36				35	1	20.5	22.4	21.3	18.0	
75				0	1	20.4	22.1	21.3	18.0	
16QAM			1	0	1	20.8	22.2	21.5	18.0	
			1	37	1	20.7	22.1	21.6	18.0	
			1	74	1	20.7	22.1	22.4	18.0	
			36	0	2	19.6	22.0	20.3	17.0	
			36	16	2	19.6	21.1	20.2	17.1	
			36	35	2	19.7	21.8	20.4	17.1	
			75	0	2	19.5	21.0	20.3	17.1	

**LTE Band 4 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	20000	1715.0	QPSK	1	0	0	21.4	23.0	22.5	18.9
				1	24	0	21.4	22.8	22.5	19.0
				1	49	0	21.4	23.0	22.5	19.0
				25	0	1	20.5	22.4	21.2	18.0
				25	12	1	20.5	22.0	21.3	18.0
				25	24	1	20.5	22.1	21.3	18.0
				50	0	1	20.5	21.9	21.3	18.0
			16QAM	1	0	1	20.5	22.3	21.5	17.9
				1	24	1	20.5	22.3	21.8	18.0
				1	49	1	20.6	22.3	21.6	18.0
				25	0	2	19.5	22.0	20.4	17.2
				25	12	2	19.6	21.1	20.3	17.2
				25	24	2	19.6	21.3	20.5	17.1
				50	0	2	19.6	20.8	20.3	17.1
	20175	1732.5	QPSK	1	0	0	21.5	23.0	22.4	19.0
				1	24	0	21.5	23.0	22.5	19.0
				1	49	0	21.5	23.0	22.3	19.0
				25	0	1	20.5	22.7	21.4	18.0
				25	12	1	20.6	22.1	21.5	18.0
				25	24	1	20.5	22.4	21.5	18.0
				50	0	1	20.6	22.0	21.4	17.9
			16QAM	1	0	1	20.7	22.3	21.6	18.0
				1	24	1	20.8	22.2	21.7	18.1
				1	49	1	20.8	22.3	21.4	18.0
				25	0	2	19.7	21.5	20.5	17.1
				25	12	2	19.7	21.2	20.5	17.2
				25	24	2	19.7	21.3	20.6	17.2
				50	0	2	19.7	21.1	20.4	17.3
	20350	1750.0	QPSK	1	0	0	21.4	23.0	22.4	18.9
				1	24	0	21.5	23.0	22.5	19.0
1				49	0	21.5	23.0	22.5	19.0	
25				0	1	20.5	22.6	21.1	18.0	
25				12	1	20.5	21.9	21.3	18.0	
25				24	1	20.5	22.2	21.6	18.0	
50				0	1	20.5	21.9	21.3	18.0	
16QAM			1	0	1	20.6	22.2	21.5	18.0	
			1	24	1	20.6	22.2	21.7	18.0	
			1	49	1	20.6	22.3	21.6	18.0	
			25	0	2	19.6	21.1	20.4	17.0	
			25	12	2	19.6	21.0	20.5	17.1	
			25	24	2	19.7	21.3	20.7	17.1	
			50	0	2	19.6	21.0	20.2	17.1	

**LTE Band 4 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
5	19975	1712.5	QPSK	1	0	0	21.4	23.0	22.5	18.7
				1	12	0	21.4	22.9	22.4	18.7
				1	24	0	21.5	23.0	22.4	18.9
				12	0	1	20.5	23.0	21.4	18.0
				12	6	1	20.5	22.1	21.3	18.0
				12	11	1	20.5	22.2	21.3	18.0
				25	0	1	20.5	22.0	21.2	18.1
			16QAM	1	0	1	20.6	22.1	21.4	17.9
				1	12	1	20.6	22.1	21.7	17.7
				1	24	1	20.6	22.0	21.5	17.8
				12	0	2	19.6	21.7	20.5	17.1
				12	6	2	19.6	21.3	20.5	17.2
				12	11	2	19.5	21.4	20.5	17.1
				25	0	2	19.6	20.9	20.4	17.2
	20175	1732.5	QPSK	1	0	0	21.4	23.0	22.5	18.9
				1	12	0	21.5	22.9	22.5	19.0
				1	24	0	21.3	23.0	22.5	18.9
				12	0	1	20.5	22.7	21.5	18.2
				12	6	1	20.4	22.3	21.5	18.2
				12	11	1	20.4	22.4	22.6	18.2
				25	0	1	20.5	22.0	21.4	18.2
			16QAM	1	0	1	20.7	22.2	21.5	18.1
				1	12	1	20.7	22.1	21.8	18.1
				1	24	1	20.8	22.1	21.8	18.0
				12	0	2	19.7	22.1	20.5	17.1
				12	6	2	19.8	21.3	20.6	17.2
				12	11	2	19.7	21.5	20.7	17.2
				25	0	2	19.5	21.2	20.5	17.3
	20375	1752.5	QPSK	1	0	0	21.4	23.0	22.5	18.7
				1	12	0	21.5	23.0	22.5	18.8
1				24	0	21.4	23.0	22.5	18.9	
12				0	1	20.5	22.8	21.8	17.9	
12				6	1	20.5	22.0	21.6	18.1	
12				11	1	20.5	22.3	21.5	18.1	
25				0	1	20.4	21.9	21.5	18.0	
16QAM			1	0	1	20.8	22.2	21.3	18.0	
			1	12	1	20.7	22.4	21.6	18.1	
			1	24	1	20.7	22.0	21.6	18.1	
			12	0	2	19.6	22.2	20.5	17.0	
			12	6	2	19.6	21.1	20.8	17.1	
			12	11	2	19.7	21.2	20.7	17.0	
			25	0	2	19.5	21.0	20.6	17.1	

**LTE Band 4 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
3	19965	1711.5	QPSK	1	0	0	21.4	23.0	22.5	18.8
				1	7	0	21.4	22.8	22.5	18.8
				1	14	0	21.5	23.0	22.5	18.9
				8	0	1	20.5	22.7	21.4	18.1
				8	4	1	20.5	22.5	21.3	18.1
				8	7	1	20.5	22.5	21.4	18.0
			15	0	1	20.5	22.2	21.3	18.0	
			16QAM	1	0	1	20.6	22.4	21.7	17.8
				1	7	1	20.6	22.1	21.6	17.9
				1	14	1	20.6	22.0	21.5	17.9
				8	0	2	19.6	22.1	20.3	17.1
				8	4	2	19.6	21.1	20.5	17.2
	8	7		2	19.5	21.7	20.5	17.1		
	15	0	2	19.6	21.2	20.5	17.1			
	20175	1732.5	QPSK	1	0	0	21.5	23.0	22.5	19.0
				1	7	0	21.5	23.0	22.5	19.0
				1	14	0	21.4	23.0	22.5	19.0
				8	0	1	20.5	22.5	21.6	18.1
				8	4	1	20.5	22.3	21.5	18.1
				8	7	1	20.4	22.4	21.5	18.0
			15	0	1	20.4	22.2	21.5	18.0	
			16QAM	1	0	1	20.8	22.5	21.6	18.0
				1	7	1	20.7	22.1	21.7	18.1
				1	14	1	20.8	22.1	21.7	18.0
				8	0	2	19.7	22.0	20.6	17.1
				8	4	2	19.8	21.2	20.5	17.2
	8	7		2	19.7	21.2	20.6	17.2		
	15	0	2	19.6	21.3	20.6	17.3			
	20385	1753.5	QPSK	1	0	0	21.4	23.0	22.5	18.9
				1	7	0	21.4	22.7	22.5	19.0
				1	14	0	21.4	23.0	22.4	19.0
				8	0	1	20.5	22.8	21.6	18.0
				8	4	1	20.5	22.0	21.5	18.0
				8	7	1	20.5	21.8	21.6	18.0
			15	0	1	20.4	22.0	21.5	18.0	
			16QAM	1	0	1	20.8	22.2	21.7	18.0
1				7	1	20.7	22.0	21.8	18.0	
1				14	1	20.7	22.1	21.7	18.0	
8				0	2	19.6	22.2	20.7	17.0	
8				4	2	19.6	21.0	20.6	17.1	
8	7	2		19.7	21.4	20.7	17.1			
15	0	2	19.5	21.1	20.7	17.1				



**LTE Band 4 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
1.4	19957	1710.7	QPSK	1	0	0	21.3	23.0	22.5	18.8
				1	2	0	21.4	22.8	22.5	18.8
				1	5	0	21.3	23.0	22.4	18.8
				3	0	0	21.3	22.7	22.4	18.8
				3	1	0	21.3	22.7	22.4	18.8
				3	2	0	21.2	22.9	22.4	18.7
			6	0	1	21.3	22.4	21.4	17.8	
			16QAM	1	0	1	20.3	22.2	21.6	17.9
				1	2	1	20.4	22.3	21.6	17.9
				1	5	1	20.3	22.3	21.6	17.8
				3	0	1	20.4	22.1	21.3	17.8
				3	1	1	20.3	22.5	21.3	17.9
	3	2		1	20.3	22.3	21.3	17.8		
	6	0	2	20.5	21.2	20.4	17.0			
	20175	1732.5	QPSK	1	0	0	21.4	23.0	22.5	18.9
				1	2	0	21.5	23.0	22.5	19.0
				1	5	0	21.3	23.0	22.5	18.8
				3	0	0	21.4	22.8	22.6	18.9
				3	1	0	21.4	23.0	22.4	18.9
				3	2	0	21.4	23.0	22.5	18.8
			6	0	1	21.4	22.4	21.5	18.9	
			16QAM	1	0	1	20.5	22.3	21.7	17.8
				1	2	1	20.7	22.2	21.7	18.0
				1	5	1	20.4	22.2	21.7	17.9
				3	0	1	20.6	22.3	21.5	17.8
				3	1	1	20.5	22.2	21.5	17.8
	3	2		1	20.5	22.3	21.6	17.7		
	6	0	2	20.6	21.2	20.4	17.1			
	20393	1754.3	QPSK	1	0	0	21.4	23.0	22.5	18.7
				1	2	0	21.3	22.9	22.5	18.8
				1	5	0	21.3	23.0	22.4	18.8
				3	0	0	21.4	22.7	22.5	18.8
				3	1	0	21.3	22.5	22.5	18.9
				3	2	0	21.4	23.0	22.5	18.7
			6	0	1	21.4	22.1	21.7	18.7	
			16QAM	1	0	1	20.5	22.3	21.7	17.8
1				2	1	20.5	22.4	21.8	17.9	
1				5	1	20.4	22.2	21.7	17.7	
3				0	1	20.4	22.5	21.6	17.7	
3				1	1	20.5	22.0	21.5	17.8	
3	2	1		20.6	22.0	21.5	17.7			
6	0	2	20.5	21.2	21.1	17.7				

### 9.4.3. LTE Band 5

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	20450	829.0	QPSK	1	0	0	23.2	23.9	23.5	23.8
				1	24	0	23.1	23.8	23.6	23.9
				1	49	0	23.3	23.8	23.6	23.9
				25	0	1	23.6	22.9	22.5	22.8
				25	12	1	22.5	22.9	22.5	22.9
				25	24	1	22.6	22.9	22.5	22.8
			16QAM	1	0	1	22.5	22.9	22.3	22.6
				1	24	1	22.7	22.8	22.7	22.8
				1	49	1	22.6	22.7	22.6	22.7
				25	0	2	22.0	22.6	22.0	22.6
				25	12	2	21.8	21.8	21.8	21.8
				25	24	2	21.8	22.0	21.8	22.0
	20525	836.5	QPSK	50	0	2	21.8	21.8	21.8	21.8
				1	0	0	23.5	23.9	23.6	24.0
				1	24	0	23.6	24.0	23.7	24.0
				1	49	0	23.6	24.0	23.7	23.9
				25	0	1	22.7	23.0	22.7	22.9
				25	12	1	22.7	23.0	22.7	22.9
			16QAM	25	24	1	22.7	23.0	22.7	22.9
				50	0	1	22.6	23.0	22.6	22.8
				1	0	1	22.6	23.1	22.6	23.1
				1	24	1	22.6	23.1	22.6	23.1
				1	49	1	22.7	23.1	22.7	23.1
				25	0	2	21.9	22.4	21.9	22.4
				25	12	2	21.9	22.2	21.9	22.2
				25	24	2	21.8	22.3	21.8	22.3
				50	0	2	21.8	22.0	21.8	22.0
20600	844.0	QPSK	1	0	0	23.3	23.9	23.6	24.0	
			1	24	0	23.2	23.9	23.7	24.0	
			1	49	0	23.3	23.8	23.6	24.0	
			25	0	1	22.7	23.0	22.6	23.0	
			25	12	1	22.2	23.0	22.6	23.0	
			25	24	1	22.6	23.0	22.5	23.0	
			50	0	1	22.5	22.9	22.5	23.0	
		16QAM	1	0	1	22.7	23.0	22.7	23.0	
			1	24	1	22.6	23.0	22.6	23.0	
			1	49	1	22.7	22.3	22.7	22.3	
			25	0	2	21.8	22.4	21.8	22.4	
			25	12	2	21.7	21.9	21.7	21.9	
			25	24	2	21.7	22.1	21.7	22.1	
			50	0	2	21.7	21.8	21.7	21.8	

**LTE Band 5 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
5	20425	826.5	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	12	0	23.7	24.0	23.7	24.0
				1	24	0	23.7	24.0	23.7	24.0
				12	0	1	22.9	23.6	22.9	23.6
				12	6	1	22.9	23.3	22.9	23.3
				12	11	1	22.9	23.5	22.9	23.5
				25	0	1	22.8	23.3	22.8	23.3
			16QAM	1	0	1	22.7	23.4	22.7	23.4
				1	12	1	22.6	23.3	22.6	23.3
				1	24	1	22.7	23.2	22.7	23.2
				12	0	2	21.9	23.2	21.9	23.2
				12	6	2	22.0	22.4	22.0	22.4
				12	11	2	22.0	22.5	22.0	22.5
				25	0	2	21.9	22.3	21.9	22.3
	20525	836.5	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	12	0	23.7	24.0	23.7	24.0
				1	24	0	23.7	24.0	23.7	24.0
				12	0	1	22.9	23.5	22.9	23.5
				12	6	1	22.9	23.4	22.9	23.4
				12	11	1	22.8	23.1	22.8	23.1
				25	0	1	22.9	23.4	22.9	23.4
			16QAM	1	0	1	22.8	23.2	22.8	23.2
				1	12	1	22.7	23.0	22.7	23.0
				1	24	1	22.7	23.1	22.7	23.1
				12	0	2	22.0	23.4	22.0	23.4
				12	6	2	22.0	22.5	22.0	22.5
				12	11	2	22.0	22.5	22.0	22.5
				25	0	2	21.9	22.4	21.9	22.4
	20625	846.5	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	12	0	23.7	24.0	23.7	24.0
1				24	0	23.7	24.0	23.7	24.0	
12				0	1	22.7	23.6	22.7	23.6	
12				6	1	22.8	23.3	22.8	23.3	
12				11	1	22.9	23.6	22.9	23.6	
25				0	1	22.6	23.2	22.6	23.2	
16QAM			1	0	1	22.7	23.2	22.7	23.2	
			1	12	1	22.5	23.3	22.5	23.3	
			1	24	1	22.9	23.2	22.9	23.2	
			12	0	2	21.8	22.8	21.8	22.8	
			12	6	2	21.9	22.4	21.9	22.4	
			12	11	2	22.0	22.5	22.0	22.5	
			25	0	2	21.7	22.3	21.7	22.3	

**LTE Band 5 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
3	20415	825.5	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	7	0	23.7	23.9	23.7	23.9
				1	14	0	23.7	24.0	23.7	24.0
				8	0	1	23.0	23.6	23.0	23.6
				8	4	1	22.9	23.3	22.9	23.3
				8	7	1	23.0	23.5	23.0	23.5
			16QAM	15	0	1	22.9	23.3	22.9	23.3
				1	0	1	22.7	23.2	22.7	23.2
				1	7	1	22.6	23.2	22.6	23.2
				1	14	1	22.6	23.2	22.6	23.2
				8	0	2	21.8	22.6	21.8	22.6
				8	4	2	22.0	22.3	22.0	22.3
	20525	836.5	QPSK	8	7	2	22.0	22.5	22.0	22.5
				15	0	2	21.9	22.4	21.9	22.4
				1	0	0	23.7	24.0	23.7	24.0
				1	7	0	23.7	24.0	23.7	24.0
				1	14	0	23.7	24.0	23.7	24.0
				8	0	1	22.9	23.5	22.9	23.5
			16QAM	8	4	1	22.8	23.4	22.8	23.4
				8	7	1	23.0	23.4	23.0	23.4
				15	0	1	22.5	23.4	22.5	23.4
				1	0	1	22.5	23.2	22.5	23.2
				1	7	1	22.5	23.2	22.5	23.2
				1	14	1	22.7	23.2	22.7	23.2
	20635	847.5	QPSK	8	0	2	21.9	23.2	21.9	23.2
				8	4	2	21.9	22.2	21.9	22.2
				8	7	2	21.8	22.4	21.8	22.4
				15	0	2	21.9	22.5	21.9	22.5
				1	0	0	23.6	24.0	23.6	24.0
				1	7	0	23.7	24.0	23.7	24.0
			16QAM	1	14	0	23.7	24.0	23.7	24.0
				8	0	1	22.7	23.5	22.7	23.5
				8	4	1	22.8	23.3	22.8	23.3
				8	7	1	22.9	23.1	22.9	23.1
				15	0	1	22.7	23.2	22.7	23.2
				1	0	1	22.6	23.3	22.6	23.3
16QAM	1	7	1	22.5	23.3	22.5	23.3			
	1	14	1	22.7	23.2	22.7	23.2			
	8	0	2	21.7	23.4	21.7	23.4			
	8	4	2	21.9	23.2	21.9	23.2			
	8	7	2	22.0	23.3	22.0	23.3			
	15	0	2	21.9	23.2	21.9	23.2			

**LTE Band 5 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
1.4	20407	824.7	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	2	0	23.7	23.7	23.7	23.7
				1	5	0	23.7	24.0	23.7	24.0
				3	0	0	23.7	23.6	23.7	23.6
				3	1	0	23.7	23.4	23.7	23.4
				3	2	0	23.7	24.0	23.7	24.0
			6	0	1	23.1	23.4	23.1	23.4	
			16QAM	1	0	1	22.0	23.6	22.0	23.6
				1	2	1	22.0	23.5	22.0	23.5
				1	5	1	21.8	23.5	21.8	23.5
				3	0	1	21.9	22.9	21.9	22.9
				3	1	1	22.0	23.0	22.0	23.0
	3	2		1	22.1	23.3	22.1	23.3		
	20525	836.5	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	2	0	23.7	23.9	23.7	23.9
				1	5	0	23.7	24.0	23.7	24.0
				3	0	0	23.6	23.7	23.6	23.7
				3	1	0	23.9	23.8	23.9	23.8
				3	2	0	23.8	24.0	23.8	24.0
			6	0	1	22.8	23.4	22.8	23.4	
			16QAM	1	0	1	22.3	22.9	22.3	22.9
				1	2	1	22.2	22.8	22.2	22.8
				1	5	1	22.1	23.0	22.1	23.0
				3	0	1	21.9	22.8	21.9	22.8
				3	1	1	22.9	22.9	22.9	22.9
	3	2		1	22.0	23.5	22.0	23.5		
	20643	848.3	QPSK	1	0	0	23.6	24.0	23.6	24.0
				1	2	0	23.7	24.0	23.7	24.0
				1	5	0	23.7	24.0	23.7	24.0
				3	0	0	23.9	23.8	23.9	23.8
				3	1	0	23.9	23.6	23.9	23.6
				3	2	0	23.9	23.3	23.9	23.3
			6	0	1	22.9	23.3	22.9	23.3	
			16QAM	1	0	1	22.2	23.5	22.2	23.5
				1	2	1	22.2	23.4	22.2	23.4
				1	5	1	22.1	23.3	22.1	23.3
3				0	1	22.0	23.1	22.0	23.1	
3				1	1	22.0	22.9	22.0	22.9	
3	2	1		22.1	23.2	22.1	23.2			
6	0	2	21.8	22.1	21.8	22.1				

### 9.4.4. LTE Band 13

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	23230	782.0	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	24	0	23.7	24.0	23.7	24.0
				1	49	0	23.7	24.0	23.7	23.8
				25	0	1	22.6	23.0	22.7	22.9
				25	12	1	22.6	23.0	22.7	22.9
				25	24	1	22.5	22.9	22.7	22.8
			16QAM	1	0	1	22.7	22.9	22.7	22.9
				1	24	1	22.7	23.0	22.6	22.8
				1	49	1	22.7	23.0	22.6	22.8
				25	0	2	21.5	22.0	21.5	21.7
				25	12	2	21.6	22.0	21.6	21.7
				25	24	2	21.6	21.9	21.6	21.6
				50	0	2	21.4	22.0	21.4	21.6
				50	0	2	21.4	22.0	21.4	21.6
5	23230	782.0	QPSK	1	0	0	23.7	23.7	24.0	23.7
				1	12	0	23.7	23.7	23.9	23.7
				1	24	0	23.7	23.7	24.0	23.7
				12	0	1	22.7	22.7	23.0	22.7
				12	6	1	22.5	22.5	23.0	22.5
				12	11	1	22.7	22.7	23.0	22.7
			16QAM	25	0	1	22.5	22.5	23.0	22.5
				1	0	1	22.5	22.5	23.0	22.5
				1	12	1	22.7	22.7	23.0	22.7
				1	24	1	22.7	22.7	23.0	22.7
				12	0	2	21.7	21.7	22.0	21.6
				12	6	2	21.7	21.7	21.8	21.7
				12	11	2	21.7	21.7	21.9	21.7
				25	0	2	21.6	21.6	21.8	21.6

**Note(s):**

10/5 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB941225 D05 SAR for LTE Devices v02r02

### 9.4.5. LTE Band 17

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	23790	710.0	QPSK	1	0	0	23.7	24.0	23.6	24.0
				1	24	0	23.7	24.0	23.7	24.0
				1	49	0	23.7	23.9	23.7	24.0
				25	0	1	22.5	22.8	22.7	22.9
				25	12	1	22.6	22.8	22.7	23.0
				25	24	1	22.5	22.8	22.7	23.0
			16QAM	1	0	1	22.6	22.9	22.6	23.0
				1	24	1	22.6	22.9	22.6	23.0
				1	49	1	22.4	22.6	22.6	22.6
				25	0	2	21.7	22.0	21.6	21.9
				25	12	2	21.7	21.9	21.7	21.9
				25	24	2	21.7	21.9	21.7	21.9
				50	0	2	21.6	22.0	21.6	22.0
				50	0	2	21.6	22.0	21.6	22.0
5	23790	710.0	QPSK	1	0	0	23.7	24.0	23.7	24.0
				1	12	0	23.7	23.9	23.7	23.9
				1	24	0	23.7	24.0	23.7	24.0
				12	0	1	22.7	22.9	22.7	23.0
				12	6	1	22.7	22.9	22.7	22.9
				12	11	1	22.7	23.0	22.7	23.0
			16QAM	25	0	1	22.6	22.9	22.6	22.9
				1	0	1	22.6	23.0	22.6	23.0
				1	12	1	22.6	22.9	22.7	22.9
				1	24	1	22.6	22.9	22.6	22.9
				12	0	2	21.6	22.0	21.6	21.8
				12	6	2	21.6	22.0	21.6	21.9
				12	11	2	21.7	21.9	21.7	21.9
				25	0	2	21.7	21.9	21.6	21.9

**Note(s):**

10/5 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB941225 D05 SAR for LTE Devices v02r02

### 9.4.6. LTE Band 25

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)					
							HEAD		BODY			
							UAT	LAT	UAT	LAT		
20	26140	1860.0	QPSK	1	0	0	22.5	23.0	23.10	19.25		
				1	49	0	22.5	23.0	23.20	19.25		
				1	99	0	22.4	23.0	23.20	19.25		
				50	0	1	21.5	22.7	21.90	18.25		
				50	24	1	21.5	22.7	21.84	18.25		
				50	49	1	21.5	22.4	21.85	18.25		
			16QAM	100	0	1	21.5	22.4	21.90	18.25		
				1	0	1	21.6	22.1	22.19	18.20		
				1	49	1	21.5	22.1	22.04	18.20		
				1	99	1	21.5	22.0	22.13	18.20		
				50	0	2	20.6	21.9	21.07	17.20		
				50	24	2	20.5	21.8	21.03	17.10		
	26365	1882.5	QPSK	50	49	2	20.5	21.5	20.94	17.10		
				100	0	2	20.5	21.0	21.02	17.10		
				1	0	0	22.5	23.0	23.25	19.25		
				1	49	0	22.5	23.0	23.25	19.25		
				1	99	0	22.5	23.0	23.20	19.25		
				50	0	1	21.5	22.7	22.21	18.25		
			16QAM	50	24	1	21.5	22.5	22.07	18.25		
				50	49	1	21.4	22.4	21.76	18.25		
				100	0	1	21.4	22.1	21.98	18.25		
				1	0	1	21.5	22.1	22.29	18.10		
				1	49	1	21.6	22.0	22.28	18.30		
				1	99	1	21.6	21.7	21.77	18.20		
			26590	1905.0	QPSK	50	0	2	20.5	21.8	21.08	17.10
						50	24	2	20.6	21.5	21.02	17.20
						50	49	2	20.5	21.1	20.79	17.20
						100	0	2	20.6	21.1	20.89	17.20
						1	0	0	22.2	23.0	23.20	19.10
						1	49	0	22.4	23.0	23.20	19.10
16QAM	1	99			0	22.2	23.0	23.20	19.10			
	50	0			1	21.3	22.9	21.88	18.25			
	50	24			1	21.3	22.5	22.38	18.25			
	50	49			1	21.3	22.4	22.21	18.10			
	100	0			1	21.4	22.4	21.97	18.20			
	1	0			1	21.4	22.1	22.25	18.10			
16QAM	1	49	1	21.4	22.0	22.30	18.20					
	1	99	1	21.4	22.1	21.85	18.20					
	50	0	2	20.5	22.0	21.82	17.20					
	50	24	2	20.5	21.4	21.42	17.20					
	50	49	2	20.5	21.3	21.25	17.10					
	100	0	2	20.5	21.0	21.08	17.20					



**LTE Band 25 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)						
							HEAD		BODY				
							UAT	LAT	UAT	LAT			
15	26115	1857.5	QPSK	1	0	0	22.5	23.0	23.23	19.20			
				1	37	0	22.5	23.0	23.20	19.20			
				1	74	0	22.4	23.0	23.01	19.20			
				36	0	1	21.5	22.6	22.04	18.10			
				36	16	1	21.5	22.7	21.94	18.10			
				36	35	1	21.5	22.5	21.84	18.10			
				75	0	1	21.5	22.8	21.84	18.20			
			16QAM	1	0	1	21.6	22.1	22.14	18.30			
				1	37	1	21.5	22.0	22.06	18.20			
				1	74	1	21.5	21.9	22.14	18.30			
				36	0	2	20.6	21.7	21.09	17.20			
				36	16	2	20.5	21.7	21.07	17.20			
				36	35	2	20.5	21.5	20.91	17.20			
				75	0	2	20.5	20.9	20.98	17.10			
	26365	1882.5	QPSK	1	0	0	22.5	23.0	23.25	19.20			
				1	37	0	22.5	23.0	23.23	19.25			
				1	74	0	22.5	23.0	22.75	19.10			
				36	0	1	21.5	22.9	22.13	18.20			
				36	16	1	21.5	22.6	22.05	18.25			
				36	35	1	21.4	22.3	21.88	18.20			
				75	0	1	21.4	22.5	21.93	18.25			
			16QAM	1	0	1	21.5	22.2	22.21	18.10			
				1	37	1	21.6	22.1	22.33	18.20			
				1	74	1	21.6	22.1	21.98	18.20			
				36	0	2	20.5	22.0	21.18	17.20			
				36	16	2	20.6	22.0	21.11	17.20			
				36	35	2	20.5	21.8	20.92	17.10			
				75	0	2	20.6	20.8	20.95	17.20			
				26615	1907.5	QPSK	1	0	0	22.2	23.0	23.25	19.20
							1	37	0	22.4	23.0	23.24	19.20
1	74	0	22.2				23.0	22.06	19.20				
36	0	1	21.3				22.5	22.33	18.10				
36	16	1	21.3				22.5	22.51	18.20				
36	35	1	21.3				22.3	22.15	18.20				
75	0	1	21.4			22.2	22.26	18.20					
16QAM	1	0	1			21.4	22.1	22.13	18.10				
	1	37	1			21.4	22.0	22.32	18.20				
	1	74	1	21.4	22.0	21.12	18.20						
			36	0	2	20.5	21.7	21.38	17.20				
			36	16	2	20.5	21.6	21.65	17.20				
			36	35	2	20.5	21.2	21.26	17.20				
			75	0	2	20.5	20.9	21.27	17.20				

**LTE Band 25 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
10	26090	1855.0	QPSK	1	0	0	22.3	23.0	23.25	19.20
				1	24	0	22.4	23.0	23.25	19.10
				1	49	0	22.3	23.0	23.00	19.10
				25	0	1	21.3	22.5	22.06	18.10
				25	12	1	21.4	22.9	21.99	18.10
				25	24	1	21.5	22.2	21.94	18.10
				50	0	1	21.3	22.6	21.93	18.20
			16QAM	1	0	1	21.5	22.1	22.24	18.30
				1	24	1	21.5	22.1	22.32	18.20
				1	49	1	21.4	22.1	21.98	18.30
				25	0	2	20.4	22.0	21.11	17.20
				25	12	2	20.5	22.0	21.14	17.20
				25	24	2	20.5	21.8	21.11	17.20
				50	0	2	20.4	21.0	21.00	17.10
	26365	1882.5	QPSK	1	0	0	22.4	23.0	23.25	19.20
				1	24	0	22.4	22.9	23.24	19.20
				1	49	0	22.3	23.0	23.01	19.20
				25	0	1	21.4	22.5	22.16	18.30
				25	12	1	21.5	23.0	22.12	18.20
				25	24	1	21.3	22.2	21.92	18.20
				50	0	1	21.3	22.3	22.11	18.20
			16QAM	1	0	1	21.6	22.1	22.30	18.10
				1	24	1	21.4	22.0	22.32	18.10
				1	49	1	21.4	22.0	22.04	18.20
				25	0	2	20.5	22.0	21.22	17.30
				25	12	2	20.7	21.9	21.11	17.20
				25	24	2	20.6	21.7	20.96	17.10
				50	0	2	20.6	20.8	21.09	17.20
	26640	1910.0	QPSK	1	0	0	22.2	22.9	23.25	19.20
				1	24	0	22.3	23.0	23.24	19.30
1				49	0	22.2	23.0	21.96	19.20	
25				0	1	21.2	22.6	22.63	18.20	
25				12	1	21.4	22.8	22.34	18.20	
25				24	1	21.3	22.5	21.70	18.20	
50				0	1	21.4	22.3	22.08	18.10	
16QAM			1	0	1	21.3	22.1	22.35	18.10	
			1	24	1	21.5	22.0	22.33	18.20	
			1	49	1	21.4	22.0	21.14	18.20	
			25	0	2	20.5	21.8	21.69	17.20	
			25	12	2	20.5	21.7	21.39	17.20	
			25	24	2	20.6	21.6	20.71	17.20	
			50	0	2	20.5	20.8	21.04	17.20	

**LTE Band 25 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
5	26065	1852.5	QPSK	1	0	0	22.3	23.0	23.25	19.10
				1	12	0	22.5	23.0	23.23	19.10
				1	24	0	22.4	23.0	23.11	19.20
				12	0	1	21.4	22.6	21.94	18.30
				12	6	1	21.5	22.9	21.97	18.20
				12	11	1	21.3	22.6	22.13	18.30
				25	0	1	21.5	22.5	22.04	18.20
			16QAM	1	0	1	21.5	22.2	22.38	18.30
				1	12	1	21.4	22.1	22.45	18.20
				1	24	1	21.5	22.1	22.05	18.10
				12	0	2	20.5	22.0	20.94	17.30
				12	6	2	20.5	22.0	21.02	17.30
				12	11	2	20.6	21.8	21.14	17.20
				25	0	2	20.5	20.9	21.03	17.20
	26365	1882.5	QPSK	1	0	0	22.5	23.0	23.24	19.20
				1	12	0	22.5	23.0	23.24	19.25
				1	24	0	22.5	23.0	23.00	19.10
				12	0	1	21.5	22.5	22.26	18.20
				12	6	1	21.6	22.8	22.13	18.25
				12	11	1	21.4	22.1	22.12	18.20
				25	0	1	21.4	22.2	22.13	18.25
			16QAM	1	0	1	21.4	22.1	22.16	18.10
				1	12	1	21.4	22.0	22.46	18.20
				1	24	1	21.6	22.0	21.96	18.20
				12	0	2	20.4	21.8	21.29	17.20
				12	6	2	20.5	21.9	21.16	17.20
				12	11	2	20.4	21.7	21.23	17.20
				25	0	2	20.4	20.8	21.01	17.20
	26665	1912.5	QPSK	1	0	0	22.2	23.0	23.25	19.25
				1	12	0	22.3	23.0	22.85	19.25
1				24	0	22.2	23.0	21.92	19.20	
12				0	1	21.3	22.5	22.06	18.25	
12				6	1	21.5	22.5	21.67	18.30	
12				11	1	21.3	22.3	21.37	18.20	
25				0	1	21.4	22.4	21.59	18.20	
16QAM			1	0	1	21.4	22.1	22.67	18.10	
			1	12	1	21.6	22.0	22.00	18.20	
			1	24	1	21.4	22.0	21.26	18.20	
			12	0	2	20.5	21.7	21.30	17.20	
			12	6	2	20.5	21.7	20.74	17.10	
			12	11	2	20.5	21.5	20.43	17.25	
			25	0	2	20.5	20.9	20.74	17.20	

**LTE Band 25 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
3	26055	1851.5	QPSK	1	0	0	22.3	23.0	23.25	19.20
				1	7	0	22.4	22.9	23.25	19.10
				1	14	0	22.4	23.0	23.21	19.00
				8	0	1	21.5	22.9	22.12	18.20
				8	4	1	21.6	22.7	22.07	18.10
				8	7	1	21.5	22.7	22.04	18.20
			15	0	1	21.4	22.3	22.02	18.10	
			16QAM	1	0	1	21.4	22.2	22.29	18.20
				1	7	1	21.4	22.1	22.40	18.10
				1	14	1	21.5	22.1	22.33	18.30
				8	0	2	20.5	22.1	21.04	17.10
				8	4	2	20.3	22.0	21.06	17.10
	8	7		2	20.3	21.9	21.07	17.20		
	15	0	2	20.4	20.9	21.15	17.10			
	26365	1882.5	QPSK	1	0	0	22.5	23.0	23.25	19.20
				1	7	0	22.5	23.0	23.24	19.25
				1	14	0	22.4	23.0	23.12	19.10
				8	0	1	21.5	22.7	22.21	18.25
				8	4	1	21.5	23.0	22.12	18.00
				8	7	1	21.3	22.6	22.11	18.10
			15	0	1	21.3	22.7	22.09	18.30	
			16QAM	1	0	1	21.4	22.1	22.44	18.20
				1	7	1	21.5	22.1	22.27	18.30
				1	14	1	21.6	22.1	22.27	18.20
				8	0	2	20.6	22.0	21.06	17.10
				8	4	2	20.4	21.9	21.02	17.20
	8	7		2	20.5	21.5	21.16	17.30		
	15	0	2	20.5	20.9	21.16	17.40			
	26675	1913.5	QPSK	1	0	0	22.2	23.0	23.10	19.20
				1	7	0	22.3	23.0	22.40	19.10
				1	14	0	22.3	23.0	21.85	19.10
				8	0	1	21.3	22.6	21.53	18.25
				8	4	1	21.4	22.5	21.26	18.20
				8	7	1	21.3	22.5	21.06	18.20
			15	0	1	21.4	22.4	21.31	18.30	
			16QAM	1	0	1	21.4	22.1	22.00	18.30
1				7	1	21.4	22.0	22.42	18.20	
1				14	1	21.4	22.0	21.06	18.10	
8				0	2	20.3	21.9	20.71	17.10	
8				4	2	20.5	21.5	20.31	17.20	
8	7	2		20.4	21.4	20.06	17.30			
15	0	2	20.5	20.7	20.38	17.50				

**LTE Band 25 Measured Results (continued)**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
1.4	26047	1850.7	QPSK	1	0	0	22.3	23.0	23.19	19.20
				1	2	0	22.4	22.9	23.25	19.20
				1	5	0	22.4	23.0	23.23	19.00
				3	0	0	22.4	22.6	23.13	19.00
				3	1	0	22.3	22.5	23.10	19.10
				3	2	0	22.3	22.6	23.14	19.10
			6	0	1	21.3	22.6	22.16	18.20	
			16QAM	1	0	1	21.4	22.2	22.34	18.10
				1	2	1	21.3	22.4	22.35	18.20
				1	5	1	21.3	22.0	22.21	18.10
				3	0	1	21.3	21.9	22.14	18.20
				3	1	1	21.3	21.8	22.15	18.20
	3	2		1	21.2	21.7	21.93	19.10		
	6	0	2	20.4	20.9	20.94	17.30			
	26365	1882.5	QPSK	1	0	0	22.4	23.0	23.25	19.10
				1	2	0	22.5	22.9	23.17	19.25
				1	5	0	22.3	23.0	23.25	19.20
				3	0	0	22.4	22.7	23.14	19.20
				3	1	0	22.4	22.6	23.19	19.20
				3	2	0	22.3	22.8	23.20	19.20
			6	0	1	21.5	22.7	22.15	18.20	
			16QAM	1	0	1	21.4	22.1	21.64	18.20
				1	2	1	21.3	22.3	21.79	18.20
				1	5	1	21.5	22.1	21.93	18.20
				3	0	1	21.5	22.0	22.52	18.10
				3	1	1	21.3	21.8	22.45	18.20
	3	2		1	21.3	21.7	22.44	18.20		
	6	0	2	20.5	20.9	21.28	17.30			
	16683	1914.3	QPSK	1	0	0	22.3	23.0	23.22	19.00
				1	2	0	22.3	23.0	22.63	19.10
				1	5	0	22.4	23.0	21.91	19.10
				3	0	0	22.3	22.6	22.11	19.10
				3	1	0	22.3	22.5	22.08	19.00
				3	2	0	22.3	22.4	22.05	19.00
			6	0	1	21.3	22.4	21.07	18.20	
			16QAM	1	0	1	21.4	22.1	22.28	18.10
1				2	1	21.4	22.0	22.31	18.00	
1				5	1	21.2	22.0	22.12	18.00	
3				0	1	21.4	21.9	22.28	18.00	
3				1	1	21.2	21.8	21.90	18.00	
3	2	1		21.3	21.9	22.09	18.10			
6	0	2	20.4	20.8	20.88	17.10				

### 9.4.7. LTE Band 26

#### Measured Results

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
5	26763	821.3	QPSK	1	0	0	23.7	24.0	23.6	23.8
				1	12	0	23.7	24.0	23.7	24.0
				1	24	0	23.6	23.9	23.7	23.9
				12	0	1	23.2	23.2	23.2	23.2
				12	6	1	23.1	23.2	23.1	23.0
				12	11	1	23.0	23.1	23.1	23.0
			16QAM	25	0	1	23.0	23.0	23.1	23.0
				1	0	1	23.4	23.2	23.3	23.2
				1	12	1	23.2	23.2	23.3	23.2
				1	24	1	23.4	23.3	23.2	23.3
				12	0	2	22.3	23.3	22.2	22.1
				12	6	2	22.3	22.4	22.3	22.2
				12	11	2	22.2	22.3	22.1	22.2
				25	0	2	22.2	22.2	22.1	22.1
BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Start	MPR	Avg Pwr (dBm)			
							HEAD		BODY	
							UAT	LAT	UAT	LAT
3	26725	817.5	QPSK	1	0	0	23.6	23.9	23.6	23.8
				1	7	0	23.6	23.9	23.6	23.9
				1	14	0	23.5	23.8	23.5	23.9
				8	0	1	23.0	23.1	23.2	23.1
				8	4	1	23.2	23.3	23.2	23.2
				8	7	1	23.1	23.2	23.2	23.1
			16QAM	15	0	1	23.1	23.0	23.0	23.0
				1	0	1	23.4	23.1	23.3	23.3
				1	7	1	23.3	23.2	23.2	23.2
				1	14	1	23.3	23.0	23.2	23.1
				8	0	2	22.1	22.2	22.3	22.2
				8	4	2	22.2	22.3	22.2	22.3
				8	7	2	22.2	22.1	22.2	22.3
				15	0	2	22.1	22.1	22.0	22.0

**Note(s):**

10/5 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB941225 D05 SAR for LTE Devices v02r02

### 9.5. WiFi (2.4 GHz Band)

Required Test Channels per KDB 248227 D01

Mode	Band	GHz	Channel	"Default Test Channels"	
				802.11b	802.11g
802.11b/g	2.4 GHz	2.412	1 <sup>#</sup>	√	∇
		2.437	6	√	∇
		2.462	11 <sup>#</sup>	√	∇

**Notes:**

√ = "default test channels"

∇ = possible 802.11g channels with maximum average output 1/4 dB ≥ the "default test channels"

<sup>#</sup> = when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

#### Measured Results

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)		
				Vendor A	Vendor B	Vendor C
2.4 (DTS)	802.11b	1	2412	14.5	14.5	14.4
		6	2437	14.5	14.5	14.5
		11	2462	14.5	14.4	14.5
		12	2467	14.5	14.4	14.4
		13	2472	14.5	14.4	14.4
	802.11g	1	2412	14.4	14.4	14.5
		6	2437	14.5	14.5	14.5
		11	2462	14.5	14.5	14.5
		12	2467	12.0	12.0	12.0
		13	2472	5.0	5.0	5.0
	802.11n (HT20)	1	2412	14.3	14.4	14.4
		6	2437	14.5	14.5	14.5
		11	2462	14.4	14.3	14.4
		12	2467	12.0	12.0	12.0
		13	2472	5.0	5.0	5.0

**Note(s):**

- Per KDB 248227 D01, SAR is not required for 802.11g/HT20 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.
- Additionally, SAR is not required for Channels 12 and 13 because the tune-up limit and the measured output power for these two channels are no greater than those for the default test channels.

### 9.6. WiFi (5 GHz Bands)

#### Required Test Channels per KDB 248227 D01

Mode		Band	GHz	Channel	"Default Test Channels"	
					802.11a	
802.11a	UNII (15.407)	5.2 GHz	5.180	36	√	
			5.200	40		*
			2.220	44		*
			5.240	48	√	
		5.3 GHz	5.260	52	√	
			5.280	56		*
			5.300	60		*
			5.320	64	√	
		5.5 GHz	5.500	100		
			5.520	104	√	
			5.540	108		*
			5.560	112		*
	5.580		116	√		
	5.600		120		*	
	5.620		124	√		
	5.640		128		*	
	5.8 GHz	5.660	132		*	
		5.680	136	√		
		5.700	140		*	
		5.745	149	√		
DTS (15.247)	5.8 GHz	5.765	153		*	
		5.785	157	√		
		5.805	161		*	
		5.825	165	√		

√ = "default test channels"

\* = possible 802.11a channels with maximum average output > the "default test channels"

# = when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.



**Measured Results**

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)		
				Vendor A	Vendor B	Vendor C
5.2 (UNII)	802.11a	36	5180	14.0	13.9	13.9
		40	5200	13.9	14.0	13.9
		44	5220	14.0	14.0	14.0
		48	5240	14.0	14.0	14.0
	802.11n (HT20)	36	5180	14.0	13.9	13.9
		40	5200	14.0	14.0	14.0
		48	5240	13.9	13.9	14.0
	802.11n (HT40)	38	5190	14.0	14.0	14.0
		46	5230	13.9	13.8	13.9
5.3 (UNII)	802.11a	52	5260	15.0	15.0	15.0
		56	5280	15.0	15.0	15.0
		60	5300	15.0	15.0	14.9
		64	5320	15.0	15.0	15.0
	802.11n (HT20)	52	5260	14.8	15.0	14.9
		60	5300	14.8	15.0	15.0
		64	5320	15.0	14.9	14.8
	802.11n (HT40)	54	5270	14.9	14.8	15.0
		62	5310	15.0	14.8	14.9
5.5 (UNII)	802.11a	100	5500	15.5	14.3	15.5
		104	5520	15.5	15.5	15.5
		108	5540	15.5	14.3	15.5
		112	5560	14.4	14.4	14.3
		116	5580	15.5	15.5	15.5
		120	5600	15.5	15.5	14.4
		124	5620	15.5	15.5	15.5
		128	5640	14.4	14.3	14.3
		132	5660	14.3	15.5	14.4
		136	5680	15.5	15.5	15.5
	140	5700	15.5	14.4	15.5	
	802.11n (HT20)	100	5500	15.5	15.5	15.5
		116	5580	15.5	15.5	15.5
		140	5700	15.5	15.5	15.5
	802.11n (HT40)	102	5510	14.4	14.3	14.3
		118	5590	15.5	15.5	14.4
		134	5670	15.5	14.4	15.5
		149	5745	14.9	15.0	15.0
5.8 (DTS)	802.11a	153	5765	15.0	14.9	14.8
		157	5785	15.0	15.0	15.0
		161	5805	15.0	14.8	15.0
		165	5825	15.0	15.0	14.9
		149	5745	15.0	15.0	15.0
	802.11n (HT20)	157	5785	15.0	15.0	14.9
		165	5825	15.0	14.8	15.0
		151	5755	14.8	14.9	14.9
	802.11n (HT40)	159	5795	15.0	15.0	14.8

**Note(s):**

- SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels. As per KDB 248227

## 9.7. Bluetooth

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)		
				Vendor A	Vendor B	Vendor C
2.4	V3.0 + EDR, GFSK	0	2402	11.4	11.4	11.3
		39	2441	11.6	11.7	11.4
		78	2480	11.7	11.5	11.1
	V3.0 + EDR, 8-DPSK	0	2402	10.3	10.4	10.5
		39	2441	10.3	10.3	10.3
		78	2480	10.0	10.1	10.2
	V4.0 LE, GFSK	0	2402	7.4	7.6	7.3
		19	2440	7.9	7.9	7.9
		39	2480	7.5	7.6	7.4

## 10. Tissue Dielectric Properties

IEEE Std 1528-2003 Table 2

Target Frequency (MHz)	Head	
	$\epsilon_r$	$\sigma$ (S/m)
300	45.3	0.87
450	43.5	0.87
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 – 2000	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r01

Target Frequency (MHz)	Head		Body	
	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00



## 10.2. Tissue Dielectric Parameter Check Results

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

### SAR Room A

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
6/17/2013	Head 2450	e'	38.6900	Relative Permittivity ( $\epsilon_r$ ):	38.69	39.20	-1.30	5
		e"	13.0300	Conductivity ( $\sigma$ ):	1.78	1.80	-1.39	5
	Head 2410	e'	38.8300	Relative Permittivity ( $\epsilon_r$ ):	38.83	39.28	-1.14	5
		e"	12.9000	Conductivity ( $\sigma$ ):	1.73	1.76	-1.81	5
	Head 2475	e'	38.5800	Relative Permittivity ( $\epsilon_r$ ):	38.58	39.17	-1.50	5
		e"	13.0900	Conductivity ( $\sigma$ ):	1.80	1.83	-1.40	5
6/17/2013	Body 2450	e'	51.2300	Relative Permittivity ( $\epsilon_r$ ):	51.23	52.70	-2.79	5
		e"	14.8200	Conductivity ( $\sigma$ ):	2.02	1.95	3.53	5
	Body 2410	e'	51.3100	Relative Permittivity ( $\epsilon_r$ ):	51.31	52.76	-2.75	5
		e"	14.7100	Conductivity ( $\sigma$ ):	1.97	1.91	3.34	5
	Body 2475	e'	51.1500	Relative Permittivity ( $\epsilon_r$ ):	51.15	52.67	-2.88	5
		e"	14.8800	Conductivity ( $\sigma$ ):	2.05	1.99	3.15	5
6/20/2013	Body 2450	e'	51.3600	Relative Permittivity ( $\epsilon_r$ ):	51.36	52.70	-2.54	5
		e"	13.7200	Conductivity ( $\sigma$ ):	1.87	1.95	-4.15	5
	Body 2410	e'	51.5100	Relative Permittivity ( $\epsilon_r$ ):	51.51	52.76	-2.37	5
		e"	13.6500	Conductivity ( $\sigma$ ):	1.83	1.91	-4.11	5
	Body 2475	e'	51.2700	Relative Permittivity ( $\epsilon_r$ ):	51.27	52.67	-2.66	5
		e"	13.8400	Conductivity ( $\sigma$ ):	1.90	1.99	-4.06	5
6/24/2013	Head 1750	e'	40.4600	Relative Permittivity ( $\epsilon_r$ ):	40.46	40.08	0.94	5
		e"	14.1000	Conductivity ( $\sigma$ ):	1.37	1.37	0.22	5
	Head 1710	e'	40.6000	Relative Permittivity ( $\epsilon_r$ ):	40.60	40.15	1.13	5
		e"	13.9500	Conductivity ( $\sigma$ ):	1.33	1.35	-1.49	5
	Head 1755	e'	40.4400	Relative Permittivity ( $\epsilon_r$ ):	40.44	40.08	0.91	5
		e"	14.0900	Conductivity ( $\sigma$ ):	1.37	1.37	0.23	5
6/24/2013	Body 1750	e'	52.3800	Relative Permittivity ( $\epsilon_r$ ):	52.38	53.44	-1.99	5
		e"	15.0800	Conductivity ( $\sigma$ ):	1.47	1.49	-1.26	5
	Body 1710	e'	52.4900	Relative Permittivity ( $\epsilon_r$ ):	52.49	53.54	-1.97	5
		e"	14.9200	Conductivity ( $\sigma$ ):	1.42	1.46	-2.94	5
	Body 1755	e'	52.3700	Relative Permittivity ( $\epsilon_r$ ):	52.37	53.43	-1.98	5
		e"	15.0900	Conductivity ( $\sigma$ ):	1.47	1.49	-1.12	5
6/27/2013	Head 750	e'	40.5600	Relative Permittivity ( $\epsilon_r$ ):	40.56	41.96	-3.34	5
		e"	21.6100	Conductivity ( $\sigma$ ):	0.90	0.89	0.91	5
	Head 700	e'	41.2800	Relative Permittivity ( $\epsilon_r$ ):	41.28	42.22	-2.22	5
		e"	21.9100	Conductivity ( $\sigma$ ):	0.85	0.89	-4.10	5
	Head 790	e'	40.0400	Relative Permittivity ( $\epsilon_r$ ):	40.04	41.76	-4.11	5
		e"	21.3800	Conductivity ( $\sigma$ ):	0.94	0.90	4.80	5
6/27/2013	Body 750	e'	53.6600	Relative Permittivity ( $\epsilon_r$ ):	53.66	55.55	-3.40	5
		e"	23.2400	Conductivity ( $\sigma$ ):	0.97	0.96	0.63	5
	Body 700	e'	54.1900	Relative Permittivity ( $\epsilon_r$ ):	54.19	55.74	-2.78	5
		e"	23.6400	Conductivity ( $\sigma$ ):	0.92	0.96	-4.08	5
	Body 790	e'	53.2300	Relative Permittivity ( $\epsilon_r$ ):	53.23	55.39	-3.90	5
		e"	22.9600	Conductivity ( $\sigma$ ):	1.01	0.97	4.39	5

**Tissue Dielectric Parameter Check Results (SAR Room A continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
7/1/2013	Head 1750	e'	41.2900	Relative Permittivity ( $\epsilon_r$ ):	41.29	40.08	3.01	5
		e"	14.0400	Conductivity ( $\sigma$ ):	1.37	1.37	-0.20	5
	Head 1710	e'	41.4100	Relative Permittivity ( $\epsilon_r$ ):	41.41	40.15	3.15	5
		e"	13.9300	Conductivity ( $\sigma$ ):	1.32	1.35	-1.63	5
	Head 1755	e'	41.2700	Relative Permittivity ( $\epsilon_r$ ):	41.27	40.08	2.98	5
		e"	14.0600	Conductivity ( $\sigma$ ):	1.37	1.37	0.02	5
7/1/2013	Body 1750	e'	52.6500	Relative Permittivity ( $\epsilon_r$ ):	52.65	53.44	-1.48	5
		e"	14.9500	Conductivity ( $\sigma$ ):	1.45	1.49	-2.12	5
	Body 1710	e'	52.7400	Relative Permittivity ( $\epsilon_r$ ):	52.74	53.54	-1.50	5
		e"	14.8400	Conductivity ( $\sigma$ ):	1.41	1.46	-3.46	5
	Body 1755	e'	52.6300	Relative Permittivity ( $\epsilon_r$ ):	52.63	53.43	-1.49	5
		e"	14.9700	Conductivity ( $\sigma$ ):	1.46	1.49	-1.91	5
7/6/2013	Body 1750	e'	51.9200	Relative Permittivity ( $\epsilon_r$ ):	51.92	53.44	-2.85	5
		e"	15.3700	Conductivity ( $\sigma$ ):	1.50	1.49	0.63	5
	Body 1710	e'	52.0200	Relative Permittivity ( $\epsilon_r$ ):	52.02	53.54	-2.85	5
		e"	15.2700	Conductivity ( $\sigma$ ):	1.45	1.46	-0.66	5
	Body 1755	e'	51.9100	Relative Permittivity ( $\epsilon_r$ ):	51.91	53.43	-2.84	5
		e"	15.3800	Conductivity ( $\sigma$ ):	1.50	1.49	0.78	5
7/10/2013	Head 1750	e'	39.1800	Relative Permittivity ( $\epsilon_r$ ):	39.18	40.08	-2.26	5
		e"	13.9900	Conductivity ( $\sigma$ ):	1.36	1.37	-0.56	5
	Head 1710	e'	39.4700	Relative Permittivity ( $\epsilon_r$ ):	39.47	40.15	-1.68	5
		e"	13.9100	Conductivity ( $\sigma$ ):	1.32	1.35	-1.77	5
	Head 1755	e'	39.1700	Relative Permittivity ( $\epsilon_r$ ):	39.17	40.08	-2.26	5
		e"	14.0000	Conductivity ( $\sigma$ ):	1.37	1.37	-0.41	5
7/10/2013	Body 750	e'	53.9200	Relative Permittivity ( $\epsilon_r$ ):	53.92	55.55	-2.93	5
		e"	23.2700	Conductivity ( $\sigma$ ):	0.97	0.96	0.76	5
	Body 700	e'	54.2900	Relative Permittivity ( $\epsilon_r$ ):	54.29	55.74	-2.60	5
		e"	23.5900	Conductivity ( $\sigma$ ):	0.92	0.96	-4.28	5
	Body 790	e'	53.4400	Relative Permittivity ( $\epsilon_r$ ):	53.44	55.39	-3.52	5
		e"	22.8800	Conductivity ( $\sigma$ ):	1.01	0.97	4.02	5
7/12/2013	Head 835	e'	43.0800	Relative Permittivity ( $\epsilon_r$ ):	43.08	41.50	3.81	5
		e"	19.9300	Conductivity ( $\sigma$ ):	0.93	0.90	2.81	5
	Head 820	e'	43.2700	Relative Permittivity ( $\epsilon_r$ ):	43.27	41.60	4.01	5
		e"	19.9900	Conductivity ( $\sigma$ ):	0.91	0.90	1.44	5
	Head 850	e'	42.9000	Relative Permittivity ( $\epsilon_r$ ):	42.90	41.50	3.37	5
		e"	19.8700	Conductivity ( $\sigma$ ):	0.94	0.92	2.63	5
7/15/2013	Head 835	e'	41.7800	Relative Permittivity ( $\epsilon_r$ ):	41.78	41.50	0.67	5
		e"	19.8700	Conductivity ( $\sigma$ ):	0.92	0.90	2.50	5
	Head 820	e'	41.9300	Relative Permittivity ( $\epsilon_r$ ):	41.93	41.60	0.79	5
		e"	19.9200	Conductivity ( $\sigma$ ):	0.91	0.90	1.09	5
	Head 850	e'	41.6200	Relative Permittivity ( $\epsilon_r$ ):	41.62	41.50	0.29	5
		e"	19.8300	Conductivity ( $\sigma$ ):	0.94	0.92	2.43	5

**SAR Room B**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
6/17/2013	Head 1900	e'	39.2500	Relative Permittivity ( $\epsilon_r$ ):	39.25	40.00	-1.88	5
		e"	13.5700	Conductivity ( $\sigma$ ):	1.43	1.40	2.40	5
	Head 1850	e'	39.4700	Relative Permittivity ( $\epsilon_r$ ):	39.47	40.00	-1.33	5
		e"	13.4900	Conductivity ( $\sigma$ ):	1.39	1.40	-0.88	5
	Head 1910	e'	39.2300	Relative Permittivity ( $\epsilon_r$ ):	39.23	40.00	-1.93	5
		e"	13.5800	Conductivity ( $\sigma$ ):	1.44	1.40	3.02	5
6/17/2013	Body 1900	e'	52.1000	Relative Permittivity ( $\epsilon_r$ ):	52.10	53.30	-2.25	5
		e"	14.4500	Conductivity ( $\sigma$ ):	1.53	1.52	0.43	5
	Body 1850	e'	52.2700	Relative Permittivity ( $\epsilon_r$ ):	52.27	53.30	-1.93	5
		e"	14.3600	Conductivity ( $\sigma$ ):	1.48	1.52	-2.82	5
	Body 1910	e'	52.0900	Relative Permittivity ( $\epsilon_r$ ):	52.09	53.30	-2.27	5
		e"	14.4600	Conductivity ( $\sigma$ ):	1.54	1.52	1.03	5
6/20/2013	Head 1900	e'	39.6500	Relative Permittivity ( $\epsilon_r$ ):	39.65	40.00	-0.88	5
		e"	13.3300	Conductivity ( $\sigma$ ):	1.41	1.40	0.59	5
	Head 1850	e'	39.8800	Relative Permittivity ( $\epsilon_r$ ):	39.88	40.00	-0.30	5
		e"	13.1400	Conductivity ( $\sigma$ ):	1.35	1.40	-3.45	5
	Head 1910	e'	39.6200	Relative Permittivity ( $\epsilon_r$ ):	39.62	40.00	-0.95	5
		e"	13.3700	Conductivity ( $\sigma$ ):	1.42	1.40	1.42	5
6/20/2013	Body 1900	e'	52.5600	Relative Permittivity ( $\epsilon_r$ ):	52.56	53.30	-1.39	5
		e"	14.3500	Conductivity ( $\sigma$ ):	1.52	1.52	-0.26	5
	Body 1850	e'	52.7700	Relative Permittivity ( $\epsilon_r$ ):	52.77	53.30	-0.99	5
		e"	14.1000	Conductivity ( $\sigma$ ):	1.45	1.52	-4.58	5
	Body 1910	e'	52.5100	Relative Permittivity ( $\epsilon_r$ ):	52.51	53.30	-1.48	5
		e"	14.4000	Conductivity ( $\sigma$ ):	1.53	1.52	0.61	5
6/24/2013	Head 1900	e'	40.6700	Relative Permittivity ( $\epsilon_r$ ):	40.67	40.00	1.68	5
		e"	13.6200	Conductivity ( $\sigma$ ):	1.44	1.40	2.78	5
	Head 1850	e'	40.8800	Relative Permittivity ( $\epsilon_r$ ):	40.88	40.00	2.20	5
		e"	13.5200	Conductivity ( $\sigma$ ):	1.39	1.40	-0.66	5
	Head 1910	e'	40.6300	Relative Permittivity ( $\epsilon_r$ ):	40.63	40.00	1.58	5
		e"	13.6500	Conductivity ( $\sigma$ ):	1.45	1.40	3.55	5
6/24/2013	Body 1900	e'	52.1800	Relative Permittivity ( $\epsilon_r$ ):	52.18	53.30	-2.10	5
		e"	14.3700	Conductivity ( $\sigma$ ):	1.52	1.52	-0.12	5
	Body 1850	e'	52.3700	Relative Permittivity ( $\epsilon_r$ ):	52.37	53.30	-1.74	5
		e"	14.2500	Conductivity ( $\sigma$ ):	1.47	1.52	-3.56	5
	Body 1910	e'	52.1600	Relative Permittivity ( $\epsilon_r$ ):	52.16	53.30	-2.14	5
		e"	14.3800	Conductivity ( $\sigma$ ):	1.53	1.52	0.47	5
7/1/2013	Head 1900	e'	38.5400	Relative Permittivity ( $\epsilon_r$ ):	38.54	40.00	-3.65	5
		e"	13.2600	Conductivity ( $\sigma$ ):	1.40	1.40	0.06	5
	Head 1850	e'	38.3200	Relative Permittivity ( $\epsilon_r$ ):	38.32	40.00	-4.20	5
		e"	13.3500	Conductivity ( $\sigma$ ):	1.37	1.40	-1.91	5
	Head 1910	e'	38.2600	Relative Permittivity ( $\epsilon_r$ ):	38.26	40.00	-4.35	5
		e"	13.3800	Conductivity ( $\sigma$ ):	1.42	1.40	1.50	5
7/1/2013	Body 1900	e'	51.9300	Relative Permittivity ( $\epsilon_r$ ):	51.93	53.30	-2.57	5
		e"	14.1600	Conductivity ( $\sigma$ ):	1.50	1.52	-1.58	5
	Body 1850	e'	52.1100	Relative Permittivity ( $\epsilon_r$ ):	52.11	53.30	-2.23	5
		e"	14.0500	Conductivity ( $\sigma$ ):	1.45	1.52	-4.92	5
	Body 1910	e'	51.8800	Relative Permittivity ( $\epsilon_r$ ):	51.88	53.30	-2.66	5
		e"	14.1900	Conductivity ( $\sigma$ ):	1.51	1.52	-0.85	5

**Tissue Dielectric Parameter Check Results (SAR Room B continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
7/5/2013	Head 1900	e'	38.1100	Relative Permittivity ( $\epsilon_r$ ):	38.11	40.00	-4.73	5
		e"	13.5900	Conductivity ( $\sigma$ ):	1.44	1.40	2.55	5
	Head 1850	e'	38.3500	Relative Permittivity ( $\epsilon_r$ ):	38.35	40.00	-4.13	5
		e"	13.4900	Conductivity ( $\sigma$ ):	1.39	1.40	-0.88	5
	Head 1910	e'	38.0600	Relative Permittivity ( $\epsilon_r$ ):	38.06	40.00	-4.85	5
		e"	13.6000	Conductivity ( $\sigma$ ):	1.44	1.40	3.17	5
7/12/2013	Head 1900	e'	41.1800	Relative Permittivity ( $\epsilon_r$ ):	41.18	40.00	2.95	5
		e"	13.3100	Conductivity ( $\sigma$ ):	1.41	1.40	0.44	5
	Head 1850	e'	41.3800	Relative Permittivity ( $\epsilon_r$ ):	41.38	40.00	3.45	5
		e"	13.2100	Conductivity ( $\sigma$ ):	1.36	1.40	-2.94	5
	Head 1910	e'	41.1400	Relative Permittivity ( $\epsilon_r$ ):	41.14	40.00	2.85	5
		e"	13.3300	Conductivity ( $\sigma$ ):	1.42	1.40	1.12	5



**SAR Room C**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/3/2013	Head 5180	e'	37.0700	Relative Permittivity ( $\epsilon_r$ ):	37.07	36.01	2.94	5	
		e"	15.9900	Conductivity ( $\sigma$ ):	4.61	4.63	-0.54	5	
	Head 5200	e'	37.0200	Relative Permittivity ( $\epsilon_r$ ):	37.02	35.99	2.86	5	
		e"	16.0100	Conductivity ( $\sigma$ ):	4.63	4.65	-0.47	5	
	Head 5600	e'	36.4400	Relative Permittivity ( $\epsilon_r$ ):	36.44	35.53	2.55	5	
		e"	16.2800	Conductivity ( $\sigma$ ):	5.07	5.06	0.18	5	
	Head 5800	e'	36.1000	Relative Permittivity ( $\epsilon_r$ ):	36.10	35.30	2.27	5	
		e"	16.3900	Conductivity ( $\sigma$ ):	5.29	5.27	0.30	5	
	Head 5825	e'	36.0700	Relative Permittivity ( $\epsilon_r$ ):	36.07	35.30	2.18	5	
		e"	16.3900	Conductivity ( $\sigma$ ):	5.31	5.27	0.73	5	
	6/3/2013	Body 5180	e'	48.0200	Relative Permittivity ( $\epsilon_r$ ):	48.02	49.05	-2.09	5
			e"	18.4400	Conductivity ( $\sigma$ ):	5.31	5.27	0.75	5
Body 5200		e'	47.9900	Relative Permittivity ( $\epsilon_r$ ):	47.99	49.02	-2.10	5	
		e"	18.4400	Conductivity ( $\sigma$ ):	5.33	5.29	0.70	5	
Body 5600		e'	47.3200	Relative Permittivity ( $\epsilon_r$ ):	47.32	48.48	-2.39	5	
		e"	18.9100	Conductivity ( $\sigma$ ):	5.89	5.76	2.21	5	
Body 5800		e'	46.9700	Relative Permittivity ( $\epsilon_r$ ):	46.97	48.20	-2.55	5	
		e"	19.1100	Conductivity ( $\sigma$ ):	6.16	6.00	2.72	5	
Body 5825		e'	46.9500	Relative Permittivity ( $\epsilon_r$ ):	46.95	48.20	-2.59	5	
		e"	19.1200	Conductivity ( $\sigma$ ):	6.19	6.00	3.21	5	
6/6/2013		Head 5180	e'	35.6200	Relative Permittivity ( $\epsilon_r$ ):	35.62	36.01	-1.09	5
			e"	15.5400	Conductivity ( $\sigma$ ):	4.48	4.63	-3.34	5
	Head 5200	e'	35.5900	Relative Permittivity ( $\epsilon_r$ ):	35.59	35.99	-1.11	5	
		e"	15.5500	Conductivity ( $\sigma$ ):	4.50	4.65	-3.33	5	
	Head 5600	e'	35.0600	Relative Permittivity ( $\epsilon_r$ ):	35.06	35.53	-1.33	5	
		e"	15.7600	Conductivity ( $\sigma$ ):	4.91	5.06	-3.02	5	
	Head 5800	e'	34.8100	Relative Permittivity ( $\epsilon_r$ ):	34.81	35.30	-1.39	5	
		e"	15.8400	Conductivity ( $\sigma$ ):	5.11	5.27	-3.07	5	
	Head 5825	e'	34.7400	Relative Permittivity ( $\epsilon_r$ ):	34.74	35.30	-1.59	5	
		e"	15.9100	Conductivity ( $\sigma$ ):	5.15	5.27	-2.22	5	
	6/6/2013	Body 5180	e'	49.2700	Relative Permittivity ( $\epsilon_r$ ):	49.27	49.05	0.46	5
			e"	18.5900	Conductivity ( $\sigma$ ):	5.35	5.27	1.57	5
Body 5200		e'	49.2800	Relative Permittivity ( $\epsilon_r$ ):	49.28	49.02	0.53	5	
		e"	18.6500	Conductivity ( $\sigma$ ):	5.39	5.29	1.84	5	
Body 5600		e'	48.6400	Relative Permittivity ( $\epsilon_r$ ):	48.64	48.48	0.33	5	
		e"	18.9900	Conductivity ( $\sigma$ ):	5.91	5.76	2.64	5	
Body 5800		e'	48.3900	Relative Permittivity ( $\epsilon_r$ ):	48.39	48.20	0.39	5	
		e"	19.1800	Conductivity ( $\sigma$ ):	6.19	6.00	3.09	5	
Body 5825		e'	48.3000	Relative Permittivity ( $\epsilon_r$ ):	48.30	48.20	0.21	5	
		e"	19.2800	Conductivity ( $\sigma$ ):	6.24	6.00	4.08	5	
6/10/2013		Head 5180	e'	36.6100	Relative Permittivity ( $\epsilon_r$ ):	36.61	36.01	1.66	5
			e"	15.7800	Conductivity ( $\sigma$ ):	4.55	4.63	-1.85	5
	Head 5200	e'	36.6100	Relative Permittivity ( $\epsilon_r$ ):	36.61	35.99	1.72	5	
		e"	15.6400	Conductivity ( $\sigma$ ):	4.52	4.65	-2.77	5	
	Head 5600	e'	35.7800	Relative Permittivity ( $\epsilon_r$ ):	35.78	35.53	0.69	5	
		e"	15.6100	Conductivity ( $\sigma$ ):	4.86	5.06	-3.95	5	
	Head 5800	e'	35.8500	Relative Permittivity ( $\epsilon_r$ ):	35.85	35.30	1.56	5	
		e"	16.0500	Conductivity ( $\sigma$ ):	5.18	5.27	-1.78	5	
	Head 5825	e'	35.6800	Relative Permittivity ( $\epsilon_r$ ):	35.68	35.30	1.08	5	
		e"	15.7800	Conductivity ( $\sigma$ ):	5.11	5.27	-3.02	5	

**Tissue Dielectric Parameter Check Results (SAR Room C continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/10/2013	Body 5180	e'	47.2000	Relative Permittivity ( $\epsilon_r$ ):	47.20	49.05	-3.77	5	
		e"	18.6700	Conductivity ( $\sigma$ ):	5.38	5.27	2.01	5	
	Body 5200	e'	47.1400	Relative Permittivity ( $\epsilon_r$ ):	47.14	49.02	-3.83	5	
		e"	18.4400	Conductivity ( $\sigma$ ):	5.33	5.29	0.70	5	
	Body 5600	e'	46.1100	Relative Permittivity ( $\epsilon_r$ ):	46.11	48.48	-4.88	5	
		e"	18.5300	Conductivity ( $\sigma$ ):	5.77	5.76	0.15	5	
	Body 5800	e'	46.2900	Relative Permittivity ( $\epsilon_r$ ):	46.29	48.20	-3.96	5	
		e"	19.1600	Conductivity ( $\sigma$ ):	6.18	6.00	2.98	5	
	Body 5825	e'	45.9800	Relative Permittivity ( $\epsilon_r$ ):	45.98	48.20	-4.61	5	
		e"	18.7700	Conductivity ( $\sigma$ ):	6.08	6.00	1.32	5	
	6/13/2013	Head 5180	e'	37.2400	Relative Permittivity ( $\epsilon_r$ ):	37.24	36.01	3.41	5
			e"	16.1300	Conductivity ( $\sigma$ ):	4.65	4.63	0.33	5
Head 5200		e'	37.2100	Relative Permittivity ( $\epsilon_r$ ):	37.21	35.99	3.39	5	
		e"	16.1400	Conductivity ( $\sigma$ ):	4.67	4.65	0.34	5	
Head 5600		e'	36.6300	Relative Permittivity ( $\epsilon_r$ ):	36.63	35.53	3.08	5	
		e"	16.3400	Conductivity ( $\sigma$ ):	5.09	5.06	0.55	5	
Head 5800		e'	36.3300	Relative Permittivity ( $\epsilon_r$ ):	36.33	35.30	2.92	5	
		e"	16.4900	Conductivity ( $\sigma$ ):	5.32	5.27	0.91	5	
Head 5825		e'	36.3300	Relative Permittivity ( $\epsilon_r$ ):	36.33	35.30	2.92	5	
		e"	16.4700	Conductivity ( $\sigma$ ):	5.33	5.27	1.22	5	
6/13/2013		Body 5180	e'	48.4500	Relative Permittivity ( $\epsilon_r$ ):	48.45	49.05	-1.22	5
			e"	18.4200	Conductivity ( $\sigma$ ):	5.31	5.27	0.65	5
	Body 5200	e'	48.4100	Relative Permittivity ( $\epsilon_r$ ):	48.41	49.02	-1.24	5	
		e"	18.4100	Conductivity ( $\sigma$ ):	5.32	5.29	0.53	5	
	Body 5600	e'	47.7700	Relative Permittivity ( $\epsilon_r$ ):	47.77	48.48	-1.46	5	
		e"	18.8100	Conductivity ( $\sigma$ ):	5.86	5.76	1.67	5	
	Body 5800	e'	47.4400	Relative Permittivity ( $\epsilon_r$ ):	47.44	48.20	-1.58	5	
		e"	19.0700	Conductivity ( $\sigma$ ):	6.15	6.00	2.50	5	
	Body 5825	e'	47.4000	Relative Permittivity ( $\epsilon_r$ ):	47.40	48.20	-1.66	5	
		e"	19.0500	Conductivity ( $\sigma$ ):	6.17	6.00	2.83	5	
	6/17/2013	Head 5180	e'	36.7800	Relative Permittivity ( $\epsilon_r$ ):	36.78	36.01	2.13	5
			e"	15.3400	Conductivity ( $\sigma$ ):	4.42	4.63	-4.58	5
Head 5200		e'	36.7200	Relative Permittivity ( $\epsilon_r$ ):	36.72	35.99	2.03	5	
		e"	15.3400	Conductivity ( $\sigma$ ):	4.44	4.65	-4.64	5	
Head 5600		e'	36.2000	Relative Permittivity ( $\epsilon_r$ ):	36.20	35.53	1.87	5	
		e"	15.5500	Conductivity ( $\sigma$ ):	4.84	5.06	-4.31	5	
Head 5800		e'	35.9300	Relative Permittivity ( $\epsilon_r$ ):	35.93	35.30	1.78	5	
		e"	15.6600	Conductivity ( $\sigma$ ):	5.05	5.27	-4.17	5	
Head 5825		e'	35.9100	Relative Permittivity ( $\epsilon_r$ ):	35.91	35.30	1.73	5	
		e"	15.6700	Conductivity ( $\sigma$ ):	5.08	5.27	-3.69	5	
6/17/2013		Body 5180	e'	48.3900	Relative Permittivity ( $\epsilon_r$ ):	48.39	49.05	-1.34	5
			e"	18.3500	Conductivity ( $\sigma$ ):	5.29	5.27	0.26	5
	Body 5200	e'	48.3500	Relative Permittivity ( $\epsilon_r$ ):	48.35	49.02	-1.37	5	
		e"	18.3500	Conductivity ( $\sigma$ ):	5.31	5.29	0.21	5	
	Body 5600	e'	47.7300	Relative Permittivity ( $\epsilon_r$ ):	47.73	48.48	-1.54	5	
		e"	18.7600	Conductivity ( $\sigma$ ):	5.84	5.76	1.40	5	
	Body 5800	e'	47.3800	Relative Permittivity ( $\epsilon_r$ ):	47.38	48.20	-1.70	5	
		e"	18.9800	Conductivity ( $\sigma$ ):	6.12	6.00	2.02	5	
	Body 5825	e'	47.3200	Relative Permittivity ( $\epsilon_r$ ):	47.32	48.20	-1.83	5	
		e"	18.9700	Conductivity ( $\sigma$ ):	6.14	6.00	2.40	5	

**Tissue Dielectric Parameter Check Results (SAR Room C continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/20/2013	Head 5180	e'	34.8200	Relative Permittivity ( $\epsilon_r$ ):	34.82	36.01	-3.31	5	
		e"	15.5200	Conductivity ( $\sigma$ ):	4.47	4.63	-3.46	5	
	Head 5200	e'	34.7600	Relative Permittivity ( $\epsilon_r$ ):	34.76	35.99	-3.42	5	
		e"	15.4700	Conductivity ( $\sigma$ ):	4.47	4.65	-3.83	5	
	Head 5600	e'	34.2200	Relative Permittivity ( $\epsilon_r$ ):	34.22	35.53	-3.70	5	
		e"	15.6000	Conductivity ( $\sigma$ ):	4.86	5.06	-4.01	5	
	Head 5800	e'	33.8500	Relative Permittivity ( $\epsilon_r$ ):	33.85	35.30	-4.11	5	
		e"	15.7700	Conductivity ( $\sigma$ ):	5.09	5.27	-3.50	5	
	Head 5825	e'	33.8100	Relative Permittivity ( $\epsilon_r$ ):	33.81	35.30	-4.22	5	
		e"	15.7200	Conductivity ( $\sigma$ ):	5.09	5.27	-3.39	5	
	6/20/2013	Body 5180	e'	48.2200	Relative Permittivity ( $\epsilon_r$ ):	48.22	49.05	-1.69	5
			e"	18.0000	Conductivity ( $\sigma$ ):	5.18	5.27	-1.65	5
Body 5200		e'	48.1700	Relative Permittivity ( $\epsilon_r$ ):	48.17	49.02	-1.73	5	
		e"	17.9700	Conductivity ( $\sigma$ ):	5.20	5.29	-1.87	5	
Body 5600		e'	47.5300	Relative Permittivity ( $\epsilon_r$ ):	47.53	48.48	-1.95	5	
		e"	18.1800	Conductivity ( $\sigma$ ):	5.66	5.76	-1.74	5	
Body 5800		e'	47.1300	Relative Permittivity ( $\epsilon_r$ ):	47.13	48.20	-2.22	5	
		e"	18.5200	Conductivity ( $\sigma$ ):	5.97	6.00	-0.46	5	
Body 5825		e'	47.0800	Relative Permittivity ( $\epsilon_r$ ):	47.08	48.20	-2.32	5	
		e"	18.4600	Conductivity ( $\sigma$ ):	5.98	6.00	-0.35	5	
6/24/2013		Head 5180	e'	36.7400	Relative Permittivity ( $\epsilon_r$ ):	36.74	36.01	2.02	5
			e"	15.5300	Conductivity ( $\sigma$ ):	4.47	4.63	-3.40	5
	Head 5200	e'	36.7100	Relative Permittivity ( $\epsilon_r$ ):	36.71	35.99	2.00	5	
		e"	15.5200	Conductivity ( $\sigma$ ):	4.49	4.65	-3.52	5	
	Head 5600	e'	36.1400	Relative Permittivity ( $\epsilon_r$ ):	36.14	35.53	1.71	5	
		e"	15.7400	Conductivity ( $\sigma$ ):	4.90	5.06	-3.15	5	
	Head 5800	e'	35.8800	Relative Permittivity ( $\epsilon_r$ ):	35.88	35.30	1.64	5	
		e"	15.8500	Conductivity ( $\sigma$ ):	5.11	5.27	-3.01	5	
	Head 5825	e'	35.8700	Relative Permittivity ( $\epsilon_r$ ):	35.87	35.30	1.61	5	
		e"	15.8600	Conductivity ( $\sigma$ ):	5.14	5.27	-2.53	5	
	6/24/2013	Body 5180	e'	49.0500	Relative Permittivity ( $\epsilon_r$ ):	49.05	49.05	0.01	5
			e"	18.8100	Conductivity ( $\sigma$ ):	5.42	5.27	2.78	5
Body 5200		e'	49.0400	Relative Permittivity ( $\epsilon_r$ ):	49.04	49.02	0.04	5	
		e"	18.8400	Conductivity ( $\sigma$ ):	5.45	5.29	2.88	5	
Body 5600		e'	48.3300	Relative Permittivity ( $\epsilon_r$ ):	48.33	48.48	-0.30	5	
		e"	19.2000	Conductivity ( $\sigma$ ):	5.98	5.76	3.77	5	
Body 5800		e'	48.0200	Relative Permittivity ( $\epsilon_r$ ):	48.02	48.20	-0.37	5	
		e"	19.4400	Conductivity ( $\sigma$ ):	6.27	6.00	4.49	5	
Body 5825		e'	47.9700	Relative Permittivity ( $\epsilon_r$ ):	47.97	48.20	-0.48	5	
		e"	19.4200	Conductivity ( $\sigma$ ):	6.29	6.00	4.83	5	
6/27/2013		Body 5180	e'	47.7700	Relative Permittivity ( $\epsilon_r$ ):	47.77	49.05	-2.60	5
			e"	18.3800	Conductivity ( $\sigma$ ):	5.29	5.27	0.43	5
	Body 5200	e'	47.7200	Relative Permittivity ( $\epsilon_r$ ):	47.72	49.02	-2.65	5	
		e"	18.4300	Conductivity ( $\sigma$ ):	5.33	5.29	0.64	5	
	Body 5600	e'	47.1000	Relative Permittivity ( $\epsilon_r$ ):	47.10	48.48	-2.84	5	
		e"	18.7700	Conductivity ( $\sigma$ ):	5.84	5.76	1.45	5	
	Body 5800	e'	46.8100	Relative Permittivity ( $\epsilon_r$ ):	46.81	48.20	-2.88	5	
		e"	19.0100	Conductivity ( $\sigma$ ):	6.13	6.00	2.18	5	
	Body 5825	e'	46.7400	Relative Permittivity ( $\epsilon_r$ ):	46.74	48.20	-3.03	5	
		e"	18.9800	Conductivity ( $\sigma$ ):	6.15	6.00	2.46	5	

**Tissue Dielectric Parameter Check Results (SAR Room C continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/28/2013	Head 5180	e'	35.5000	Relative Permittivity ( $\epsilon_r$ ):	35.50	36.01	-1.42	5	
		e"	16.3900	Conductivity ( $\sigma$ ):	4.72	4.63	1.95	5	
	Head 5200	e'	35.4600	Relative Permittivity ( $\epsilon_r$ ):	35.46	35.99	-1.47	5	
		e"	16.4000	Conductivity ( $\sigma$ ):	4.74	4.65	1.95	5	
	Head 5600	e'	34.7700	Relative Permittivity ( $\epsilon_r$ ):	34.77	35.53	-2.15	5	
		e"	16.5800	Conductivity ( $\sigma$ ):	5.16	5.06	2.02	5	
	Head 5800	e'	34.4600	Relative Permittivity ( $\epsilon_r$ ):	34.46	35.30	-2.38	5	
		e"	16.6800	Conductivity ( $\sigma$ ):	5.38	5.27	2.07	5	
	Head 5825	e'	34.4200	Relative Permittivity ( $\epsilon_r$ ):	34.42	35.30	-2.49	5	
		e"	16.6900	Conductivity ( $\sigma$ ):	5.41	5.27	2.57	5	
	7/1/2013	Head 5180	e'	37.0000	Relative Permittivity ( $\epsilon_r$ ):	37.00	36.01	2.74	5
			e"	15.9900	Conductivity ( $\sigma$ ):	4.61	4.63	-0.54	5
Head 5200		e'	36.9300	Relative Permittivity ( $\epsilon_r$ ):	36.93	35.99	2.61	5	
		e"	16.0000	Conductivity ( $\sigma$ ):	4.63	4.65	-0.53	5	
Head 5600		e'	36.3100	Relative Permittivity ( $\epsilon_r$ ):	36.31	35.53	2.18	5	
		e"	16.2800	Conductivity ( $\sigma$ ):	5.07	5.06	0.18	5	
Head 5800		e'	36.0200	Relative Permittivity ( $\epsilon_r$ ):	36.02	35.30	2.04	5	
		e"	16.3700	Conductivity ( $\sigma$ ):	5.28	5.27	0.18	5	
Head 5825		e'	35.9600	Relative Permittivity ( $\epsilon_r$ ):	35.96	35.30	1.87	5	
		e"	16.3900	Conductivity ( $\sigma$ ):	5.31	5.27	0.73	5	
7/1/2013		Body 5180	e'	46.8100	Relative Permittivity ( $\epsilon_r$ ):	46.81	49.05	-4.56	5
			e"	18.2300	Conductivity ( $\sigma$ ):	5.25	5.27	-0.39	5
	Body 5200	e'	46.7700	Relative Permittivity ( $\epsilon_r$ ):	46.77	49.02	-4.59	5	
		e"	18.2600	Conductivity ( $\sigma$ ):	5.28	5.29	-0.28	5	
	Body 5600	e'	46.1300	Relative Permittivity ( $\epsilon_r$ ):	46.13	48.48	-4.84	5	
		e"	18.5800	Conductivity ( $\sigma$ ):	5.79	5.76	0.42	5	
	Body 5800	e'	45.8000	Relative Permittivity ( $\epsilon_r$ ):	45.80	48.20	-4.98	5	
		e"	18.7400	Conductivity ( $\sigma$ ):	6.04	6.00	0.73	5	
	Body 5825	e'	45.9700	Relative Permittivity ( $\epsilon_r$ ):	45.97	48.20	-4.63	5	
		e"	18.7900	Conductivity ( $\sigma$ ):	6.09	6.00	1.43	5	

**SAR Room D**

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
6/27/2013	Head 835	e'	42.2100	Relative Permittivity ( $\epsilon_r$ ):	42.21	41.50	1.71	5
		e"	20.0600	Conductivity ( $\sigma$ ):	0.93	0.90	3.48	5
	Head 820	e'	42.4100	Relative Permittivity ( $\epsilon_r$ ):	42.41	41.60	1.94	5
		e"	20.1400	Conductivity ( $\sigma$ ):	0.92	0.90	2.21	5
	Head 850	e'	42.0200	Relative Permittivity ( $\epsilon_r$ ):	42.02	41.50	1.25	5
		e"	19.9900	Conductivity ( $\sigma$ ):	0.94	0.92	3.25	5
6/27/2013	Body 835	e'	53.6600	Relative Permittivity ( $\epsilon_r$ ):	53.66	55.20	-2.79	5
		e"	21.6000	Conductivity ( $\sigma$ ):	1.00	0.97	3.39	5
	Body 820	e'	53.8100	Relative Permittivity ( $\epsilon_r$ ):	53.81	55.28	-2.65	5
		e"	21.6900	Conductivity ( $\sigma$ ):	0.99	0.97	2.12	5
	Body 850	e'	53.4900	Relative Permittivity ( $\epsilon_r$ ):	53.49	55.16	-3.02	5
		e"	21.5700	Conductivity ( $\sigma$ ):	1.02	0.99	3.27	5
7/1/2013	Head 835	e'	42.5800	Relative Permittivity ( $\epsilon_r$ ):	42.58	41.50	2.60	5
		e"	19.8900	Conductivity ( $\sigma$ ):	0.92	0.90	2.61	5
	Head 820	e'	42.7600	Relative Permittivity ( $\epsilon_r$ ):	42.76	41.60	2.78	5
		e"	19.9300	Conductivity ( $\sigma$ ):	0.91	0.90	1.14	5
	Head 850	e'	42.4000	Relative Permittivity ( $\epsilon_r$ ):	42.40	41.50	2.17	5
		e"	19.8400	Conductivity ( $\sigma$ ):	0.94	0.92	2.48	5
7/1/2013	Body 835	e'	56.2800	Relative Permittivity ( $\epsilon_r$ ):	56.28	55.20	1.96	5
		e"	21.6100	Conductivity ( $\sigma$ ):	1.00	0.97	3.44	5
	Body 820	e'	56.4000	Relative Permittivity ( $\epsilon_r$ ):	56.40	55.28	2.03	5
		e"	21.6900	Conductivity ( $\sigma$ ):	0.99	0.97	2.12	5
	Body 850	e'	56.1400	Relative Permittivity ( $\epsilon_r$ ):	56.14	55.16	1.78	5
		e"	21.5400	Conductivity ( $\sigma$ ):	1.02	0.99	3.13	5
7/5/2013	Head 835	e'	39.8200	Relative Permittivity ( $\epsilon_r$ ):	39.82	41.50	-4.05	5
		e"	19.5500	Conductivity ( $\sigma$ ):	0.91	0.90	0.85	5
	Head 820	e'	40.0000	Relative Permittivity ( $\epsilon_r$ ):	40.00	41.60	-3.85	5
		e"	19.6300	Conductivity ( $\sigma$ ):	0.90	0.90	-0.38	5
	Head 850	e'	39.6900	Relative Permittivity ( $\epsilon_r$ ):	39.69	41.50	-4.36	5
		e"	19.4800	Conductivity ( $\sigma$ ):	0.92	0.92	0.62	5
7/5/2013	Body 835	e'	52.6600	Relative Permittivity ( $\epsilon_r$ ):	52.66	55.20	-4.60	5
		e"	21.6800	Conductivity ( $\sigma$ ):	1.01	0.97	3.77	5
	Body 820	e'	52.8100	Relative Permittivity ( $\epsilon_r$ ):	52.81	55.28	-4.46	5
		e"	21.7800	Conductivity ( $\sigma$ ):	0.99	0.97	2.54	5
	Body 850	e'	52.5500	Relative Permittivity ( $\epsilon_r$ ):	52.55	55.16	-4.73	5
		e"	21.6000	Conductivity ( $\sigma$ ):	1.02	0.99	3.42	5
7/9/2013	Body 835	e'	53.7700	Relative Permittivity ( $\epsilon_r$ ):	53.77	55.20	-2.59	5
		e"	21.2600	Conductivity ( $\sigma$ ):	0.99	0.97	1.76	5
	Body 820	e'	53.9200	Relative Permittivity ( $\epsilon_r$ ):	53.92	55.28	-2.45	5
		e"	21.3200	Conductivity ( $\sigma$ ):	0.97	0.97	0.37	5
	Body 850	e'	53.6200	Relative Permittivity ( $\epsilon_r$ ):	53.62	55.16	-2.79	5
		e"	21.2100	Conductivity ( $\sigma$ ):	1.00	0.99	1.55	5
7/15/2013	Body 835	e'	52.9900	Relative Permittivity ( $\epsilon_r$ ):	52.99	55.20	-4.00	5
		e"	21.5200	Conductivity ( $\sigma$ ):	1.00	0.97	3.00	5
	Body 820	e'	53.1000	Relative Permittivity ( $\epsilon_r$ ):	53.10	55.28	-3.94	5
		e"	21.5800	Conductivity ( $\sigma$ ):	0.98	0.97	1.60	5
	Body 850	e'	52.8400	Relative Permittivity ( $\epsilon_r$ ):	52.84	55.16	-4.20	5
		e"	21.4700	Conductivity ( $\sigma$ ):	1.01	0.99	2.79	5

**SAR Room E**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/3/2013	Head 5180	e'	35.5700	Relative Permittivity ( $\epsilon_r$ ):	35.57	36.01	-1.23	5	
		e"	15.3300	Conductivity ( $\sigma$ ):	4.42	4.63	-4.65	5	
	Head 5200	e'	35.5300	Relative Permittivity ( $\epsilon_r$ ):	35.53	35.99	-1.28	5	
		e"	15.3200	Conductivity ( $\sigma$ ):	4.43	4.65	-4.76	5	
	Head 5600	e'	35.0400	Relative Permittivity ( $\epsilon_r$ ):	35.04	35.53	-1.39	5	
		e"	15.5700	Conductivity ( $\sigma$ ):	4.85	5.06	-4.19	5	
	Head 5800	e'	34.7400	Relative Permittivity ( $\epsilon_r$ ):	34.74	35.30	-1.59	5	
		e"	15.6400	Conductivity ( $\sigma$ ):	5.04	5.27	-4.29	5	
	Head 5825	e'	34.6800	Relative Permittivity ( $\epsilon_r$ ):	34.68	35.30	-1.76	5	
		e"	15.6600	Conductivity ( $\sigma$ ):	5.07	5.27	-3.76	5	
	6/3/2013	Body 5180	e'	47.9600	Relative Permittivity ( $\epsilon_r$ ):	47.96	49.05	-2.22	5
			e"	18.3500	Conductivity ( $\sigma$ ):	5.29	5.27	0.26	5
Body 5200		e'	47.9200	Relative Permittivity ( $\epsilon_r$ ):	47.92	49.02	-2.24	5	
		e"	18.3700	Conductivity ( $\sigma$ ):	5.31	5.29	0.32	5	
Body 5600		e'	47.2900	Relative Permittivity ( $\epsilon_r$ ):	47.29	48.48	-2.45	5	
		e"	18.8100	Conductivity ( $\sigma$ ):	5.86	5.76	1.67	5	
Body 5800		e'	46.9000	Relative Permittivity ( $\epsilon_r$ ):	46.90	48.20	-2.70	5	
		e"	18.9800	Conductivity ( $\sigma$ ):	6.12	6.00	2.02	5	
Body 5825		e'	46.8900	Relative Permittivity ( $\epsilon_r$ ):	46.89	48.20	-2.72	5	
		e"	19.0000	Conductivity ( $\sigma$ ):	6.15	6.00	2.56	5	
6/6/2013		Head 5180	e'	34.9000	Relative Permittivity ( $\epsilon_r$ ):	34.90	36.01	-3.09	5
			e"	16.0100	Conductivity ( $\sigma$ ):	4.61	4.63	-0.42	5
	Head 5200	e'	34.8700	Relative Permittivity ( $\epsilon_r$ ):	34.87	35.99	-3.11	5	
		e"	16.0200	Conductivity ( $\sigma$ ):	4.63	4.65	-0.41	5	
	Head 5600	e'	34.2900	Relative Permittivity ( $\epsilon_r$ ):	34.29	35.53	-3.50	5	
		e"	16.2300	Conductivity ( $\sigma$ ):	5.05	5.06	-0.13	5	
	Head 5800	e'	33.9700	Relative Permittivity ( $\epsilon_r$ ):	33.97	35.30	-3.77	5	
		e"	16.3300	Conductivity ( $\sigma$ ):	5.27	5.27	-0.07	5	
	Head 5825	e'	33.9400	Relative Permittivity ( $\epsilon_r$ ):	33.94	35.30	-3.85	5	
		e"	16.3600	Conductivity ( $\sigma$ ):	5.30	5.27	0.55	5	
	6/6/2013	Body 5180	e'	47.6100	Relative Permittivity ( $\epsilon_r$ ):	47.61	49.05	-2.93	5
			e"	18.1900	Conductivity ( $\sigma$ ):	5.24	5.27	-0.61	5
Body 5200		e'	47.5500	Relative Permittivity ( $\epsilon_r$ ):	47.55	49.02	-3.00	5	
		e"	18.2300	Conductivity ( $\sigma$ ):	5.27	5.29	-0.45	5	
Body 5600		e'	46.9800	Relative Permittivity ( $\epsilon_r$ ):	46.98	48.48	-3.09	5	
		e"	18.5900	Conductivity ( $\sigma$ ):	5.79	5.76	0.48	5	
Body 5800		e'	46.6900	Relative Permittivity ( $\epsilon_r$ ):	46.69	48.20	-3.13	5	
		e"	18.7900	Conductivity ( $\sigma$ ):	6.06	6.00	1.00	5	
Body 5825		e'	46.6500	Relative Permittivity ( $\epsilon_r$ ):	46.65	48.20	-3.22	5	
		e"	18.8100	Conductivity ( $\sigma$ ):	6.09	6.00	1.54	5	
6/10/2013		Head 5180	e'	37.2600	Relative Permittivity ( $\epsilon_r$ ):	37.26	36.01	3.46	5
			e"	15.9500	Conductivity ( $\sigma$ ):	4.59	4.63	-0.79	5
	Head 5200	e'	37.2500	Relative Permittivity ( $\epsilon_r$ ):	37.25	35.99	3.50	5	
		e"	15.7900	Conductivity ( $\sigma$ ):	4.57	4.65	-1.84	5	
	Head 5600	e'	36.4200	Relative Permittivity ( $\epsilon_r$ ):	36.42	35.53	2.49	5	
		e"	15.7300	Conductivity ( $\sigma$ ):	4.90	5.06	-3.21	5	
	Head 5800	e'	36.4900	Relative Permittivity ( $\epsilon_r$ ):	36.49	35.30	3.37	5	
		e"	16.2100	Conductivity ( $\sigma$ ):	5.23	5.27	-0.80	5	
	Head 5825	e'	36.3100	Relative Permittivity ( $\epsilon_r$ ):	36.31	35.30	2.86	5	
		e"	15.9200	Conductivity ( $\sigma$ ):	5.16	5.27	-2.16	5	

**Tissue Dielectric Parameter Check Results (SAR Room E continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/10/2013	Body 5180	e'	48.5400	Relative Permittivity ( $\epsilon_r$ ):	48.54	49.05	-1.03	5	
		e"	18.6900	Conductivity ( $\sigma$ ):	5.38	5.27	2.12	5	
	Body 5200	e'	48.5000	Relative Permittivity ( $\epsilon_r$ ):	48.50	49.02	-1.06	5	
		e"	18.4500	Conductivity ( $\sigma$ ):	5.33	5.29	0.75	5	
	Body 5600	e'	47.4500	Relative Permittivity ( $\epsilon_r$ ):	47.45	48.48	-2.12	5	
		e"	18.5300	Conductivity ( $\sigma$ ):	5.77	5.76	0.15	5	
	Body 5800	e'	47.6400	Relative Permittivity ( $\epsilon_r$ ):	47.64	48.20	-1.16	5	
		e"	19.1800	Conductivity ( $\sigma$ ):	6.19	6.00	3.09	5	
	Body 5825	e'	47.3200	Relative Permittivity ( $\epsilon_r$ ):	47.32	48.20	-1.83	5	
		e"	18.7900	Conductivity ( $\sigma$ ):	6.09	6.00	1.43	5	
	6/13/2013	Head 5180	e'	37.6400	Relative Permittivity ( $\epsilon_r$ ):	37.64	36.01	4.52	5
			e"	16.2400	Conductivity ( $\sigma$ ):	4.68	4.63	1.01	5
Head 5200		e'	37.6000	Relative Permittivity ( $\epsilon_r$ ):	37.60	35.99	4.47	5	
		e"	16.2400	Conductivity ( $\sigma$ ):	4.70	4.65	0.96	5	
Head 5600		e'	37.1000	Relative Permittivity ( $\epsilon_r$ ):	37.10	35.53	4.41	5	
		e"	16.4100	Conductivity ( $\sigma$ ):	5.11	5.06	0.98	5	
Head 5800		e'	36.8100	Relative Permittivity ( $\epsilon_r$ ):	36.81	35.30	4.28	5	
		e"	16.5500	Conductivity ( $\sigma$ ):	5.34	5.27	1.28	5	
Head 5825		e'	36.7900	Relative Permittivity ( $\epsilon_r$ ):	36.79	35.30	4.22	5	
		e"	16.5000	Conductivity ( $\sigma$ ):	5.34	5.27	1.41	5	
6/13/2013		Body 5180	e'	49.5900	Relative Permittivity ( $\epsilon_r$ ):	49.59	49.05	1.11	5
			e"	18.6600	Conductivity ( $\sigma$ ):	5.37	5.27	1.96	5
	Body 5200	e'	49.5300	Relative Permittivity ( $\epsilon_r$ ):	49.53	49.02	1.04	5	
		e"	18.6900	Conductivity ( $\sigma$ ):	5.40	5.29	2.06	5	
	Body 5600	e'	48.8900	Relative Permittivity ( $\epsilon_r$ ):	48.89	48.48	0.85	5	
		e"	19.0800	Conductivity ( $\sigma$ ):	5.94	5.76	3.13	5	
	Body 5800	e'	48.5500	Relative Permittivity ( $\epsilon_r$ ):	48.55	48.20	0.73	5	
		e"	19.3700	Conductivity ( $\sigma$ ):	6.25	6.00	4.11	5	
	Body 5825	e'	48.5100	Relative Permittivity ( $\epsilon_r$ ):	48.51	48.20	0.64	5	
		e"	19.3100	Conductivity ( $\sigma$ ):	6.25	6.00	4.24	5	
	6/17/2013	Head 5180	e'	36.2200	Relative Permittivity ( $\epsilon_r$ ):	36.22	36.01	0.57	5
			e"	16.5100	Conductivity ( $\sigma$ ):	4.76	4.63	2.69	5
Head 5200		e'	36.1600	Relative Permittivity ( $\epsilon_r$ ):	36.16	35.99	0.47	5	
		e"	16.5200	Conductivity ( $\sigma$ ):	4.78	4.65	2.70	5	
Head 5600		e'	35.5600	Relative Permittivity ( $\epsilon_r$ ):	35.56	35.53	0.07	5	
		e"	16.7100	Conductivity ( $\sigma$ ):	5.20	5.06	2.82	5	
Head 5800		e'	35.2500	Relative Permittivity ( $\epsilon_r$ ):	35.25	35.30	-0.14	5	
		e"	16.7900	Conductivity ( $\sigma$ ):	5.41	5.27	2.75	5	
Head 5825		e'	35.2300	Relative Permittivity ( $\epsilon_r$ ):	35.23	35.30	-0.20	5	
		e"	16.8000	Conductivity ( $\sigma$ ):	5.44	5.27	3.25	5	
6/17/2013		Body 5180	e'	47.2800	Relative Permittivity ( $\epsilon_r$ ):	47.28	49.05	-3.60	5
			e"	18.2600	Conductivity ( $\sigma$ ):	5.26	5.27	-0.23	5
	Body 5200	e'	47.2500	Relative Permittivity ( $\epsilon_r$ ):	47.25	49.02	-3.61	5	
		e"	18.2900	Conductivity ( $\sigma$ ):	5.29	5.29	-0.12	5	
	Body 5600	e'	46.6300	Relative Permittivity ( $\epsilon_r$ ):	46.63	48.48	-3.81	5	
		e"	18.6100	Conductivity ( $\sigma$ ):	5.79	5.76	0.59	5	
	Body 5800	e'	46.3400	Relative Permittivity ( $\epsilon_r$ ):	46.34	48.20	-3.86	5	
		e"	18.7700	Conductivity ( $\sigma$ ):	6.05	6.00	0.89	5	
	Body 5825	e'	46.2900	Relative Permittivity ( $\epsilon_r$ ):	46.29	48.20	-3.96	5	
		e"	18.7800	Conductivity ( $\sigma$ ):	6.08	6.00	1.38	5	

**Tissue Dielectric Parameter Check Results (SAR Room E continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/20/2013	Head 5180	e'	35.9400	Relative Permittivity ( $\epsilon_r$ ):	35.94	36.01	-0.20	5	
		e"	16.3000	Conductivity ( $\sigma$ ):	4.69	4.63	1.39	5	
	Head 5200	e'	35.8900	Relative Permittivity ( $\epsilon_r$ ):	35.89	35.99	-0.28	5	
		e"	16.3000	Conductivity ( $\sigma$ ):	4.71	4.65	1.33	5	
	Head 5600	e'	35.2700	Relative Permittivity ( $\epsilon_r$ ):	35.27	35.53	-0.74	5	
		e"	16.5400	Conductivity ( $\sigma$ ):	5.15	5.06	1.78	5	
	Head 5800	e'	34.9900	Relative Permittivity ( $\epsilon_r$ ):	34.99	35.30	-0.88	5	
		e"	16.6400	Conductivity ( $\sigma$ ):	5.37	5.27	1.83	5	
	Head 5825	e'	34.9100	Relative Permittivity ( $\epsilon_r$ ):	34.91	35.30	-1.10	5	
		e"	16.6400	Conductivity ( $\sigma$ ):	5.39	5.27	2.27	5	
	6/20/2013	Body 5180	e'	48.1000	Relative Permittivity ( $\epsilon_r$ ):	48.10	49.05	-1.93	5
			e"	18.4800	Conductivity ( $\sigma$ ):	5.32	5.27	0.97	5
Body 5200		e'	48.0200	Relative Permittivity ( $\epsilon_r$ ):	48.02	49.02	-2.04	5	
		e"	18.4900	Conductivity ( $\sigma$ ):	5.35	5.29	0.97	5	
Body 5600		e'	47.4200	Relative Permittivity ( $\epsilon_r$ ):	47.42	48.48	-2.18	5	
		e"	18.9200	Conductivity ( $\sigma$ ):	5.89	5.76	2.26	5	
Body 5800		e'	47.1000	Relative Permittivity ( $\epsilon_r$ ):	47.10	48.20	-2.28	5	
		e"	19.1000	Conductivity ( $\sigma$ ):	6.16	6.00	2.66	5	
Body 5825		e'	47.0100	Relative Permittivity ( $\epsilon_r$ ):	47.01	48.20	-2.47	5	
		e"	19.1100	Conductivity ( $\sigma$ ):	6.19	6.00	3.16	5	
6/24/2013		Head 5180	e'	36.9900	Relative Permittivity ( $\epsilon_r$ ):	36.99	36.01	2.71	5
			e"	15.8500	Conductivity ( $\sigma$ ):	4.57	4.63	-1.41	5
	Head 5200	e'	36.9700	Relative Permittivity ( $\epsilon_r$ ):	36.97	35.99	2.72	5	
		e"	15.8600	Conductivity ( $\sigma$ ):	4.59	4.65	-1.40	5	
	Head 5600	e'	36.4100	Relative Permittivity ( $\epsilon_r$ ):	36.41	35.53	2.47	5	
		e"	16.0400	Conductivity ( $\sigma$ ):	4.99	5.06	-1.30	5	
	Head 5800	e'	36.1300	Relative Permittivity ( $\epsilon_r$ ):	36.13	35.30	2.35	5	
		e"	16.1500	Conductivity ( $\sigma$ ):	5.21	5.27	-1.17	5	
	Head 5825	e'	36.1100	Relative Permittivity ( $\epsilon_r$ ):	36.11	35.30	2.29	5	
		e"	16.1500	Conductivity ( $\sigma$ ):	5.23	5.27	-0.74	5	
	6/24/2013	Body 5180	e'	47.6900	Relative Permittivity ( $\epsilon_r$ ):	47.69	49.05	-2.77	5
			e"	18.6000	Conductivity ( $\sigma$ ):	5.36	5.27	1.63	5
Body 5200		e'	47.6900	Relative Permittivity ( $\epsilon_r$ ):	47.69	49.02	-2.71	5	
		e"	18.6100	Conductivity ( $\sigma$ ):	5.38	5.29	1.63	5	
Body 5600		e'	47.0000	Relative Permittivity ( $\epsilon_r$ ):	47.00	48.48	-3.05	5	
		e"	18.9500	Conductivity ( $\sigma$ ):	5.90	5.76	2.42	5	
Body 5800		e'	46.6800	Relative Permittivity ( $\epsilon_r$ ):	46.68	48.20	-3.15	5	
		e"	19.1200	Conductivity ( $\sigma$ ):	6.17	6.00	2.77	5	
Body 5825		e'	46.6800	Relative Permittivity ( $\epsilon_r$ ):	46.68	48.20	-3.15	5	
		e"	19.1400	Conductivity ( $\sigma$ ):	6.20	6.00	3.32	5	
6/27/2013		Head 5180	e'	37.7100	Relative Permittivity ( $\epsilon_r$ ):	37.71	36.01	4.71	5
			e"	16.0300	Conductivity ( $\sigma$ ):	4.62	4.63	-0.29	5
	Head 5200	e'	37.6800	Relative Permittivity ( $\epsilon_r$ ):	37.68	35.99	4.70	5	
		e"	16.0500	Conductivity ( $\sigma$ ):	4.64	4.65	-0.22	5	
	Head 5600	e'	37.1700	Relative Permittivity ( $\epsilon_r$ ):	37.17	35.53	4.60	5	
		e"	16.2500	Conductivity ( $\sigma$ ):	5.06	5.06	-0.01	5	
	Head 5800	e'	36.8800	Relative Permittivity ( $\epsilon_r$ ):	36.88	35.30	4.48	5	
		e"	16.3400	Conductivity ( $\sigma$ ):	5.27	5.27	-0.01	5	
	Head 5825	e'	36.8600	Relative Permittivity ( $\epsilon_r$ ):	36.86	35.30	4.42	5	
		e"	16.3600	Conductivity ( $\sigma$ ):	5.30	5.27	0.55	5	



**Tissue Dielectric Parameter Check Results (SAR Room E continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/27/2013	Body 5180	e'	47.7400	Relative Permittivity ( $\epsilon_r$ ):	47.74	49.05	-2.66	5	
		e"	18.6200	Conductivity ( $\sigma$ ):	5.36	5.27	1.74	5	
	Body 5200	e'	47.7100	Relative Permittivity ( $\epsilon_r$ ):	47.71	49.02	-2.67	5	
		e"	18.6500	Conductivity ( $\sigma$ ):	5.39	5.29	1.84	5	
	Body 5600	e'	47.1000	Relative Permittivity ( $\epsilon_r$ ):	47.10	48.48	-2.84	5	
		e"	19.0000	Conductivity ( $\sigma$ ):	5.92	5.76	2.69	5	
	Body 5800	e'	46.7500	Relative Permittivity ( $\epsilon_r$ ):	46.75	48.20	-3.01	5	
		e"	19.1900	Conductivity ( $\sigma$ ):	6.19	6.00	3.15	5	
	Body 5825	e'	46.7100	Relative Permittivity ( $\epsilon_r$ ):	46.71	48.20	-3.09	5	
		e"	19.2000	Conductivity ( $\sigma$ ):	6.22	6.00	3.64	5	
	7/12/2013	Body 1900	e'	51.7100	Relative Permittivity ( $\epsilon_r$ ):	51.71	53.30	-2.98	5
			e"	14.7300	Conductivity ( $\sigma$ ):	1.56	1.52	2.38	5
Body 1850		e'	51.8700	Relative Permittivity ( $\epsilon_r$ ):	51.87	53.30	-2.68	5	
		e"	14.6700	Conductivity ( $\sigma$ ):	1.51	1.52	-0.72	5	
Body 1910		e'	51.6800	Relative Permittivity ( $\epsilon_r$ ):	51.68	53.30	-3.04	5	
		e"	14.7600	Conductivity ( $\sigma$ ):	1.57	1.52	3.13	5	

**SAR Room F**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/3/2013	Head 5180	e'	35.6000	Relative Permittivity ( $\epsilon_r$ ):	35.60	36.01	-1.15	5	
		e"	16.0800	Conductivity ( $\sigma$ ):	4.63	4.63	0.02	5	
	Head 5200	e'	35.5400	Relative Permittivity ( $\epsilon_r$ ):	35.54	35.99	-1.25	5	
		e"	16.1000	Conductivity ( $\sigma$ ):	4.66	4.65	0.09	5	
	Head 5600	e'	34.8400	Relative Permittivity ( $\epsilon_r$ ):	34.84	35.53	-1.95	5	
		e"	16.3500	Conductivity ( $\sigma$ ):	5.09	5.06	0.61	5	
	Head 5800	e'	34.4500	Relative Permittivity ( $\epsilon_r$ ):	34.45	35.30	-2.41	5	
		e"	16.3900	Conductivity ( $\sigma$ ):	5.29	5.27	0.30	5	
	Head 5825	e'	34.4000	Relative Permittivity ( $\epsilon_r$ ):	34.40	35.30	-2.55	5	
		e"	16.4100	Conductivity ( $\sigma$ ):	5.32	5.27	0.85	5	
	6/3/2013	Body 5180	e'	46.7700	Relative Permittivity ( $\epsilon_r$ ):	46.77	49.05	-4.64	5
			e"	18.4700	Conductivity ( $\sigma$ ):	5.32	5.27	0.92	5
Body 5200		e'	46.7200	Relative Permittivity ( $\epsilon_r$ ):	46.72	49.02	-4.69	5	
		e"	18.4900	Conductivity ( $\sigma$ ):	5.35	5.29	0.97	5	
Body 5600		e'	46.1000	Relative Permittivity ( $\epsilon_r$ ):	46.10	48.48	-4.90	5	
		e"	18.8800	Conductivity ( $\sigma$ ):	5.88	5.76	2.04	5	
Body 5800		e'	46.7100	Relative Permittivity ( $\epsilon_r$ ):	46.71	48.20	-3.09	5	
		e"	18.9900	Conductivity ( $\sigma$ ):	6.12	6.00	2.07	5	
Body 5825		e'	46.7000	Relative Permittivity ( $\epsilon_r$ ):	46.70	48.20	-3.11	5	
		e"	19.0000	Conductivity ( $\sigma$ ):	6.15	6.00	2.56	5	
6/6/2013		Head 5180	e'	35.3200	Relative Permittivity ( $\epsilon_r$ ):	35.32	36.01	-1.92	5
			e"	16.2200	Conductivity ( $\sigma$ ):	4.67	4.63	0.89	5
	Head 5200	e'	35.2800	Relative Permittivity ( $\epsilon_r$ ):	35.28	35.99	-1.97	5	
		e"	16.2100	Conductivity ( $\sigma$ ):	4.69	4.65	0.77	5	
	Head 5600	e'	34.6200	Relative Permittivity ( $\epsilon_r$ ):	34.62	35.53	-2.57	5	
		e"	16.4500	Conductivity ( $\sigma$ ):	5.12	5.06	1.22	5	
	Head 5800	e'	34.2700	Relative Permittivity ( $\epsilon_r$ ):	34.27	35.30	-2.92	5	
		e"	16.5400	Conductivity ( $\sigma$ ):	5.33	5.27	1.22	5	
	Head 5825	e'	34.2000	Relative Permittivity ( $\epsilon_r$ ):	34.20	35.30	-3.12	5	
		e"	16.5800	Conductivity ( $\sigma$ ):	5.37	5.27	1.90	5	
	6/6/2013	Body 5180	e'	46.8000	Relative Permittivity ( $\epsilon_r$ ):	46.80	49.05	-4.58	5
			e"	18.1100	Conductivity ( $\sigma$ ):	5.22	5.27	-1.05	5
Body 5200		e'	46.7200	Relative Permittivity ( $\epsilon_r$ ):	46.72	49.02	-4.69	5	
		e"	18.2900	Conductivity ( $\sigma$ ):	5.29	5.29	-0.12	5	
Body 5600		e'	46.4000	Relative Permittivity ( $\epsilon_r$ ):	46.40	48.48	-4.29	5	
		e"	19.0600	Conductivity ( $\sigma$ ):	5.93	5.76	3.02	5	
Body 5800		e'	45.8800	Relative Permittivity ( $\epsilon_r$ ):	45.88	48.20	-4.81	5	
		e"	18.9200	Conductivity ( $\sigma$ ):	6.10	6.00	1.69	5	
Body 5825		e'	46.1000	Relative Permittivity ( $\epsilon_r$ ):	46.10	48.20	-4.36	5	
		e"	19.2000	Conductivity ( $\sigma$ ):	6.22	6.00	3.64	5	
6/10/2013		Head 5180	e'	37.0700	Relative Permittivity ( $\epsilon_r$ ):	37.07	36.01	2.94	5
			e"	15.7000	Conductivity ( $\sigma$ ):	4.52	4.63	-2.34	5
	Head 5200	e'	37.0600	Relative Permittivity ( $\epsilon_r$ ):	37.06	35.99	2.97	5	
		e"	15.5700	Conductivity ( $\sigma$ ):	4.50	4.65	-3.21	5	
	Head 5600	e'	36.2300	Relative Permittivity ( $\epsilon_r$ ):	36.23	35.53	1.96	5	
		e"	15.5700	Conductivity ( $\sigma$ ):	4.85	5.06	-4.19	5	
	Head 5800	e'	36.3400	Relative Permittivity ( $\epsilon_r$ ):	36.34	35.30	2.95	5	
		e"	16.0000	Conductivity ( $\sigma$ ):	5.16	5.27	-2.09	5	
	Head 5825	e'	36.1400	Relative Permittivity ( $\epsilon_r$ ):	36.14	35.30	2.38	5	
		e"	15.7500	Conductivity ( $\sigma$ ):	5.10	5.27	-3.20	5	

**Tissue Dielectric Parameter Check Results (SAR Room F continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/20/2013	Head 5180	e'	36.2700	Relative Permittivity ( $\epsilon_r$ ):	36.27	36.01	0.71	5	
		e"	16.0400	Conductivity ( $\sigma$ ):	4.62	4.63	-0.23	5	
	Head 5200	e'	36.2400	Relative Permittivity ( $\epsilon_r$ ):	36.24	35.99	0.69	5	
		e"	16.0000	Conductivity ( $\sigma$ ):	4.63	4.65	-0.53	5	
	Head 5600	e'	35.6400	Relative Permittivity ( $\epsilon_r$ ):	35.64	35.53	0.30	5	
		e"	16.1400	Conductivity ( $\sigma$ ):	5.03	5.06	-0.68	5	
	Head 5800	e'	35.2600	Relative Permittivity ( $\epsilon_r$ ):	35.26	35.30	-0.11	5	
		e"	16.3300	Conductivity ( $\sigma$ ):	5.27	5.27	-0.07	5	
	Head 5825	e'	35.2200	Relative Permittivity ( $\epsilon_r$ ):	35.22	35.30	-0.23	5	
		e"	16.2800	Conductivity ( $\sigma$ ):	5.27	5.27	0.06	5	
	6/20/2013	Body 5180	e'	48.0000	Relative Permittivity ( $\epsilon_r$ ):	48.00	49.05	-2.13	5
			e"	18.2100	Conductivity ( $\sigma$ ):	5.24	5.27	-0.50	5
Body 5200		e'	47.9500	Relative Permittivity ( $\epsilon_r$ ):	47.95	49.02	-2.18	5	
		e"	18.1400	Conductivity ( $\sigma$ ):	5.24	5.29	-0.94	5	
Body 5600		e'	47.2800	Relative Permittivity ( $\epsilon_r$ ):	47.28	48.48	-2.47	5	
		e"	18.3500	Conductivity ( $\sigma$ ):	5.71	5.76	-0.82	5	
Body 5800		e'	46.8700	Relative Permittivity ( $\epsilon_r$ ):	46.87	48.20	-2.76	5	
		e"	18.6900	Conductivity ( $\sigma$ ):	6.03	6.00	0.46	5	
Body 5825		e'	46.8200	Relative Permittivity ( $\epsilon_r$ ):	46.82	48.20	-2.86	5	
		e"	18.6000	Conductivity ( $\sigma$ ):	6.02	6.00	0.41	5	
6/24/2013		Head 5180	e'	35.9300	Relative Permittivity ( $\epsilon_r$ ):	35.93	36.01	-0.23	5
			e"	15.4300	Conductivity ( $\sigma$ ):	4.44	4.63	-4.02	5
	Head 5200	e'	35.9200	Relative Permittivity ( $\epsilon_r$ ):	35.92	35.99	-0.20	5	
		e"	15.4400	Conductivity ( $\sigma$ ):	4.46	4.65	-4.01	5	
	Head 5600	e'	35.3800	Relative Permittivity ( $\epsilon_r$ ):	35.38	35.53	-0.43	5	
		e"	15.6200	Conductivity ( $\sigma$ ):	4.86	5.06	-3.88	5	
	Head 5800	e'	35.1000	Relative Permittivity ( $\epsilon_r$ ):	35.10	35.30	-0.57	5	
		e"	15.7300	Conductivity ( $\sigma$ ):	5.07	5.27	-3.74	5	
	Head 5825	e'	35.0900	Relative Permittivity ( $\epsilon_r$ ):	35.09	35.30	-0.59	5	
		e"	15.7300	Conductivity ( $\sigma$ ):	5.09	5.27	-3.33	5	
	6/24/2013	Body 5180	e'	49.0900	Relative Permittivity ( $\epsilon_r$ ):	49.09	49.05	0.09	5
			e"	18.7600	Conductivity ( $\sigma$ ):	5.40	5.27	2.50	5
Body 5200		e'	49.0600	Relative Permittivity ( $\epsilon_r$ ):	49.06	49.02	0.08	5	
		e"	18.7600	Conductivity ( $\sigma$ ):	5.42	5.29	2.45	5	
Body 5600		e'	48.3500	Relative Permittivity ( $\epsilon_r$ ):	48.35	48.48	-0.26	5	
		e"	19.1300	Conductivity ( $\sigma$ ):	5.96	5.76	3.40	5	
Body 5800		e'	48.0400	Relative Permittivity ( $\epsilon_r$ ):	48.04	48.20	-0.33	5	
		e"	19.3600	Conductivity ( $\sigma$ ):	6.24	6.00	4.06	5	
Body 5825		e'	48.0100	Relative Permittivity ( $\epsilon_r$ ):	48.01	48.20	-0.39	5	
		e"	19.3800	Conductivity ( $\sigma$ ):	6.28	6.00	4.62	5	
6/27/2013		Head 5180	e'	35.8900	Relative Permittivity ( $\epsilon_r$ ):	35.89	36.01	-0.34	5
			e"	15.8400	Conductivity ( $\sigma$ ):	4.56	4.63	-1.47	5
	Head 5200	e'	35.8800	Relative Permittivity ( $\epsilon_r$ ):	35.88	35.99	-0.31	5	
		e"	15.8700	Conductivity ( $\sigma$ ):	4.59	4.65	-1.34	5	
	Head 5600	e'	35.3300	Relative Permittivity ( $\epsilon_r$ ):	35.33	35.53	-0.57	5	
		e"	16.0200	Conductivity ( $\sigma$ ):	4.99	5.06	-1.42	5	
	Head 5800	e'	35.0600	Relative Permittivity ( $\epsilon_r$ ):	35.06	35.30	-0.68	5	
		e"	16.1200	Conductivity ( $\sigma$ ):	5.20	5.27	-1.35	5	
	Head 5825	e'	34.9900	Relative Permittivity ( $\epsilon_r$ ):	34.99	35.30	-0.88	5	
		e"	16.1400	Conductivity ( $\sigma$ ):	5.23	5.27	-0.81	5	

**Tissue Dielectric Parameter Check Results (SAR Room F continued)**

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
6/27/2013	Body 5180	e'	48.4800	Relative Permittivity ( $\epsilon_r$ ):	48.48	49.05	-1.16	5	
		e"	18.5200	Conductivity ( $\sigma$ ):	5.33	5.27	1.19	5	
	Body 5200	e'	48.4200	Relative Permittivity ( $\epsilon_r$ ):	48.42	49.02	-1.22	5	
		e"	18.5500	Conductivity ( $\sigma$ ):	5.36	5.29	1.30	5	
	Body 5600	e'	47.8200	Relative Permittivity ( $\epsilon_r$ ):	47.82	48.48	-1.36	5	
		e"	18.9100	Conductivity ( $\sigma$ ):	5.89	5.76	2.21	5	
	Body 5800	e'	47.5000	Relative Permittivity ( $\epsilon_r$ ):	47.50	48.20	-1.45	5	
		e"	19.1600	Conductivity ( $\sigma$ ):	6.18	6.00	2.98	5	
	Body 5825	e'	47.4300	Relative Permittivity ( $\epsilon_r$ ):	47.43	48.20	-1.60	5	
		e"	19.1300	Conductivity ( $\sigma$ ):	6.20	6.00	3.27	5	
	7/5/2013	Head 5180	e'	36.8100	Relative Permittivity ( $\epsilon_r$ ):	36.81	36.01	2.21	5
			e"	15.6400	Conductivity ( $\sigma$ ):	4.50	4.63	-2.72	5
Head 5200		e'	36.7700	Relative Permittivity ( $\epsilon_r$ ):	36.77	35.99	2.17	5	
		e"	15.6500	Conductivity ( $\sigma$ ):	4.52	4.65	-2.71	5	
Head 5600		e'	36.1600	Relative Permittivity ( $\epsilon_r$ ):	36.16	35.53	1.76	5	
		e"	15.8500	Conductivity ( $\sigma$ ):	4.94	5.06	-2.47	5	
Head 5800		e'	35.8800	Relative Permittivity ( $\epsilon_r$ ):	35.88	35.30	1.64	5	
		e"	15.9400	Conductivity ( $\sigma$ ):	5.14	5.27	-2.46	5	
Head 5825		e'	35.8500	Relative Permittivity ( $\epsilon_r$ ):	35.85	35.30	1.56	5	
		e"	15.9500	Conductivity ( $\sigma$ ):	5.17	5.27	-1.97	5	
7/5/2013		Body 5180	e'	49.4100	Relative Permittivity ( $\epsilon_r$ ):	49.41	49.05	0.74	5
			e"	18.2500	Conductivity ( $\sigma$ ):	5.26	5.27	-0.28	5
	Body 5200	e'	49.3700	Relative Permittivity ( $\epsilon_r$ ):	49.37	49.02	0.71	5	
		e"	18.2600	Conductivity ( $\sigma$ ):	5.28	5.29	-0.28	5	
	Body 5600	e'	48.7200	Relative Permittivity ( $\epsilon_r$ ):	48.72	48.48	0.50	5	
		e"	18.6500	Conductivity ( $\sigma$ ):	5.81	5.76	0.80	5	
	Body 5800	e'	48.4100	Relative Permittivity ( $\epsilon_r$ ):	48.41	48.20	0.44	5	
		e"	18.8700	Conductivity ( $\sigma$ ):	6.09	6.00	1.43	5	
	Body 5825	e'	48.3800	Relative Permittivity ( $\epsilon_r$ ):	48.38	48.20	0.37	5	
		e"	18.9000	Conductivity ( $\sigma$ ):	6.12	6.00	2.02	5	
	7/9/2013	Body 5180	e'	47.2300	Relative Permittivity ( $\epsilon_r$ ):	47.23	49.05	-3.70	5
			e"	18.1500	Conductivity ( $\sigma$ ):	5.23	5.27	-0.83	5
Body 5200		e'	47.2100	Relative Permittivity ( $\epsilon_r$ ):	47.21	49.02	-3.69	5	
		e"	18.1500	Conductivity ( $\sigma$ ):	5.25	5.29	-0.89	5	
Body 5600		e'	46.5700	Relative Permittivity ( $\epsilon_r$ ):	46.57	48.48	-3.94	5	
		e"	18.4800	Conductivity ( $\sigma$ ):	5.75	5.76	-0.12	5	
Body 5800		e'	46.2700	Relative Permittivity ( $\epsilon_r$ ):	46.27	48.20	-4.00	5	
		e"	18.6700	Conductivity ( $\sigma$ ):	6.02	6.00	0.35	5	
Body 5825		e'	46.2400	Relative Permittivity ( $\epsilon_r$ ):	46.24	48.20	-4.07	5	
		e"	18.6800	Conductivity ( $\sigma$ ):	6.05	6.00	0.84	5	

## 11. System Performance Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

### 11.1. System Performance Check Measurement Conditions

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness:  $2.0 \pm 0.2$  mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be  $\geq 15.0$  cm  $\pm 0.5$  cm for SAR measurements  $\leq 3$  GHz and  $\geq 10.0$  cm  $\pm 0.5$  cm for measurements  $> 3$  GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.  
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.  
For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

## 11.2. Reference SAR Values for System Performance Check

The reference SAR values can be obtained from the calibration certificate of system validation dipoles

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (mW/g)		
				1g/10g	Head	Body
D750V3	1071	10/05/12	750	1g	8.29	8.79
				10g	5.49	5.82
D835V2	4d002	10/24/2012	835	1g	9.58	9.48
				10g	6.28	6.26
D835V2	4d142	10/04/2012	835	1g	9.45	9.5
				10g	6.23	6.29
D1750V2	1050	4/20/2013	1750	1g	36.5	37.1
				10g	19.4	20.1
D1750V2	1053	8/15/2012	1750	1g	35.9	37.5
				10g	19.1	20.2
D1900V2	5d043	11/06/2012	1900	1g	39.9	40.9
				10g	20.9	21.6
D1900V2	5d163	10/04/2012	1900	1g	39.4	39.6
				10g	20.7	21.1
D2450V2	899	10/5/12	2450	1g	53.6	51.7
				10g	25.0	24.3
D5GHV2	1138	10/9/2012	5200	1g	79.5	73.2
				10g	22.8	20.4
			5500	1g	83.6	77.9
				10g	23.8	21.7
			5800	1g	78.7	72.8
				10g	22.4	20.1
D5GHV2	1003	9/18/2012	5200	1g	76.5	74.8
				10g	21.9	20.9
			5600	1g	82.8	79.0
				10g	23.6	22.0
			5800	1g	76.9	77.0
				10g	22.0	21.4

### 11.3. System Performance Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the manufacturer calibrated dipole SAR target.

#### SAR Room A

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/17/2013	D2450V2	899	Head	1g	5.52	5.43	54.3	53.6	1.31	1.63	
				10g	2.38	2.47	24.7	25.0	-1.20		
6/17/2013	D2450V2	899	Body	1g	5.26	5.36	53.6	51.7	3.68	-1.90	1,2
				10g	2.27	2.47	24.7	24.3	1.65		
6/20/2013	D2450V2	899	Body	1g	5.28	5.20	52.0	51.7	0.58	1.52	
				10g	2.31	2.36	23.6	24.3	-2.88		
6/24/2013	D1750V2	1050	Head	1g	3.82	3.75	37.5	37.1	1.08	1.83	
				10g	2.04	1.98	19.8	20.1	-1.49		
6/24/2013	D1750V2	1050	Body	1g	4.06	3.98	39.8	36.5	9.04	1.97	
				10g	2.11	2.11	21.1	19.4	8.76		
6/27/2013	D750V2	1071	Head	1g	0.811	0.776	7.76	8.29	-6.39	4.32	
				10g	0.550	0.510	5.10	5.49	-7.10		
6/27/2013	D750V2	1071	Body	1g	0.818	0.805	8.05	8.79	-8.42	1.59	3,4
				10g	0.553	0.537	5.37	5.82	-7.73		
7/1/2013	D1750V2	1050	Head	1g	3.76	3.60	36.0	37.1	-2.96	4.26	
				10g	2.01	1.89	18.9	20.1	-5.97		
7/1/2013	D1750V2	1050	Body	1g	3.91	3.88	38.8	36.5	6.30	0.77	
				10g	2.04	2.06	20.6	19.4	6.19		
7/6/2013	D1750V2	1050	Body	1g	3.95	3.89	38.9	36.5	6.58	1.52	5,6
				10g	2.06	2.07	20.7	19.4	6.70		
7/10/2013	D1750V2	1053	Head	1g	3.72	3.65	36.50	35.9	1.67	1.88	7,8
				10g	2.02	1.92	19.20	19.1	0.52		
7/10/2013	D750V2	1071	Body	1g	0.915	0.904	9.04	8.79	2.84	1.20	
				10g	0.621	0.601	6.01	5.82	3.26		
7/12/2013	D835V2	4d002	Head	1g	1.02	1.00	10.00	9.58	4.38	1.96	9,10
				10g	0.69	0.66	6.55	6.28	4.30		
7/15/2013	D835V2	4d142	Head	1g	1.01	1.00	10.00	9.45	5.82	0.99	11,12
				10g	0.68	0.65	6.53	6.23	4.82		

**SAR Room B**

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/17/2013	D1900V2	5d163	Head	1g	4.22	4.10	41.00	39.4	4.06	2.84	
				10g	2.22	2.11	21.10	20.7	1.93		
6/17/2013	D1900V2	5d163	Body	1g	4.20	4.18	41.80	39.6	5.56	0.48	
				10g	2.15	2.16	21.60	21.1	2.37		
6/20/2013	D1900V2	5d163	Head	1g	4.26	4.17	41.70	39.4	5.84	2.11	
				10g	2.24	2.16	21.60	20.7	4.35		
6/20/2013	D1900V2	5d163	Body	1g	4.22	4.16	41.60	39.6	5.05	1.42	
				10g	2.13	2.16	21.60	21.1	2.37		
6/24/2013	D1900V2	5d163	Head	1g	4.20	4.21	42.10	39.4	6.85	-0.24	13,14
				10g	2.22	2.17	21.70	20.7	4.83		
6/24/2013	D1900V2	5d163	Body	1g	4.20	4.18	41.80	39.6	5.56	0.48	
				10g	2.14	2.16	21.60	21.1	2.37		
6/27/2013	D1900V2	5d163	Head	1g	4.09	4.03	40.30	39.4	2.28	1.47	
				10g	2.14	2.09	20.90	20.7	0.97		
6/27/2013	D1900V2	5d163	Body	1g	3.93	3.92	39.20	39.6	-1.01	0.25	
				10g	2.02	2.03	20.30	21.1	-3.79		
7/1/2013	D1900V2	5d163	Head	1g	4.03	4.00	40.00	39.4	1.52	0.74	
				10g	2.13	2.06	20.60	20.7	-0.48		
7/1/2013	D1900V2	5d163	Body	1g	4.11	4.05	40.50	39.6	2.27	1.46	
				10g	2.08	2.09	20.90	21.1	-0.95		
7/5/2013	D1900V2	5d163	Head	1g	4.26	4.16	41.60	39.4	5.58	2.35	
				10g	2.25	2.13	21.30	20.7	2.90		
7/5/2013	D1900V2	5d163	Body	1g	4.18	4.14	41.40	39.6	4.55	0.96	
				10g	2.17	2.14	21.40	21.1	1.42		
7/12/2013	D1900V2	5d163	Head	1g	4.35	4.13	41.30	39.40	4.82	5.06	
				10g	2.29	2.14	21.40	21.10	1.42		



**SAR Room C**

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/3/2013	D5GHzV2 (5.8GHz)	1138	Head	1g	7.25	7.60	76.00	78.7	-3.43	-4.83	
				10g	2.03	2.16	21.60	22.4	-3.57		
6/3/2013	D5GHzV2 (5.8GHz)	1138	Body	1g	6.68	7.34	73.40	72.8	0.82	-9.88	
				10g	1.84	2.05	20.50	20.1	1.99		
6/6/2013	D5GHzV2 (5.8GHz)	1138	Head	1g	7.19	7.50	75.00	78.7	-4.70	-4.31	
				10g	2.03	2.14	21.40	22.4	-4.46		
6/6/2013	D5GHzV2 (5.8GHz)	1138	Body	1g	6.49	6.95	69.50	72.8	-4.53	-7.09	
				10g	1.77	1.94	19.40	20.1	-3.48		
6/10/2013	D5GHzV2 (5.8GHz)	1138	Head	1g	6.83	7.84	78.40	78.7	-0.38	-14.79	
				10g	1.95	2.24	22.40	22.4	0.00		
6/10/2013	D5GHzV2 (5.8GHz)	1138	Body	1g	6.36	7.07	70.70	72.8	-2.88	-11.16	
				10g	1.72	1.96	19.60	20.1	-2.49		
6/13/2013	D5GHzV2 (5.8GHz)	1138	Head	1g	7.52	8.13	81.30	78.7	3.30	-8.11	
				10g	2.08	2.32	23.20	22.4	3.57		
6/13/2013	D5GHzV2 (5.8GHz)	1138	Body	1g	6.24	6.83	68.30	72.8	-6.18	-9.46	15,16
				10g	1.71	1.90	19.00	20.1	-5.47		
6/17/2013	D5GHzV2 (5.8GHz)	1003	Head	1g	7.09	7.68	76.80	76.9	-0.13	-8.32	
				10g	1.97	2.21	22.10	22.0	0.45		
6/17/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	7.03	7.62	76.20	77.0	-1.04	-8.39	
				10g	1.90	2.13	21.30	21.4	-0.47		
6/20/2013	D5GHzV2 (5.8GHz)	1003	Head	1g	6.35	7.66	76.60	76.9	-0.39	-20.63	
				10g	1.81	2.20	22.00	22.0	0.00		
6/20/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	6.77	7.30	73.00	77.0	-5.19	-7.83	
				10g	1.82	2.03	20.30	21.4	-5.14		
6/24/2013	D5GHzV2 (5.8GHz)	1003	Head	1g	6.63	7.17	71.70	76.9	-6.76	-8.14	17,18
				10g	1.88	2.06	20.60	22.0	-6.36		
6/24/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	7.27	7.82	78.20	77.0	1.56	-7.57	
				10g	1.95	2.18	21.80	21.4	1.87		
6/27/2013	D5GHzV2 (5.8GHz)	1138	Body	1g	6.75	7.36	73.60	72.8	1.10	-9.04	
				10g	1.84	2.06	20.60	20.1	2.49		
6/28/2013	D5GHzV2 (5.8GHz)	1138	Head	1g	7.00	7.62	76.20	78.7	-3.18	-8.86	
				10g	2.00	2.18	21.80	22.4	-2.68		
7/1/2013	D5GHzV2 (5.8GHz)	1003	Head	1g	7.16	7.95	79.50	78.7	1.02	-11.03	
				10g	2.04	2.28	22.80	22.4	1.79		
7/1/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	6.67	7.48	74.80	72.8	2.75	-12.14	
				10g	1.86	2.10	21.00	20.1	4.48		

**SAR Room D**

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/27/2013	D835V2	4d002	Head	1g	1.00	0.97	9.68	9.58	1.04	3.10	
				10g	0.67	0.63	6.34	6.28	0.96		
6/27/2013	D835V2	4d002	Body	1g	1.01	0.98	9.84	9.48	3.80	2.57	19,20
				10g	0.68	0.65	6.48	6.26	3.51		
7/1/2013	D835V2	4d142	Head	1g	0.90	0.91	9.08	9.45	-3.92	-0.67	
				10g	0.61	0.60	5.95	6.23	-4.49		
7/1/2013	D835V2	4d142	Body	1g	0.97	0.92	9.24	9.50	-2.74	5.13	
				10g	0.65	0.61	6.09	6.29	-3.18		
7/5/2013	D835V2	4d142	Head	1g	0.98	0.94	9.36	9.45	-0.95	4.68	
				10g	0.66	0.61	6.14	6.23	-1.44		
7/5/2013	D835V2	4d142	Body	1g	1.01	1.00	10.0	9.50	5.26	0.99	21,22
				10g	0.68	0.66	6.57	6.29	4.45		
7/9/2013	D835V2	4d142	Body	1g	0.96	0.95	9.45	9.50	-0.53	1.15	
				10g	0.64	0.62	6.22	6.29	-1.11		
7/15/2013	D835V2	4d002	Body	1g	0.97	0.96	9.57	9.48	0.95	1.24	
				10g	0.65	0.63	6.30	6.26	0.64		

**SAR Room E**

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta $\pm 10\%$	Est./Zoom Ratio $\pm 3\%$	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/3/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.32	7.38	73.80	79.5	-7.17	-0.82	
				10g	2.00	2.09	20.90	22.8	-8.33		
6/3/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.14	7.46	74.60	73.2	1.91	-4.48	
				10g	1.97	2.13	21.30	20.4	4.41		
6/6/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.87	8.15	81.50	79.5	2.52	-3.56	
				10g	2.17	2.31	23.10	22.8	1.32		
6/6/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.54	7.69	76.90	73.2	5.05	-1.99	
				10g	2.08	2.18	21.80	20.4	6.86		
6/10/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	6.97	7.34	73.40	79.5	-7.67	-5.31	23,24
				10g	1.91	2.08	20.80	22.8	-8.77		
6/10/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.22	7.65	76.50	73.2	4.51	-5.96	
				10g	2.00	2.18	21.80	20.4	6.86		
6/13/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.80	7.48	74.80	79.5	-5.91	4.10	
				10g	2.15	2.12	21.20	22.8	-7.02		
6/13/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.41	7.70	77.00	73.2	5.19	-3.91	
				10g	2.03	2.19	21.90	20.4	7.35		
6/17/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.33	7.81	78.10	79.5	-1.76	-6.55	
				10g	2.00	2.22	22.20	22.8	-2.63		
6/17/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.59	7.62	76.20	73.2	4.10	-0.40	
				10g	2.12	2.18	21.80	20.4	6.86		
6/20/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	8.24	8.02	80.20	79.5	0.88	2.67	
				10g	2.25	2.28	22.80	22.8	0.00		
6/20/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	6.85	7.34	73.40	73.2	0.27	-7.15	
				10g	1.89	2.09	20.90	20.4	2.45		
6/24/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.25	7.52	75.20	79.5	-5.41	-3.72	
				10g	1.99	2.13	21.30	22.8	-6.58		
6/24/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	7.34	7.68	76.80	73.2	4.92	-4.63	
				10g	2.04	2.19	21.90	20.4	7.35		
6/27/2013	D5GHzV2 (5.2GHz)	1138	Head	1g	7.45	7.39	73.90	79.5	-7.04	0.81	
				10g	2.04	2.10	21.00	22.8	-7.89		
6/27/2013	D5GHzV2 (5.2GHz)	1138	Body	1g	6.96	7.41	74.10	73.2	1.23	-6.47	
				10g	1.93	2.12	21.20	20.4	3.92		
7/12/2013	D1900V2	5d043	Body	1g	4.01	3.98	39.80	40.90	-2.69	0.75	25,26
				10g	2.00	2.09	20.90	21.60	-3.24		

**SAR Room F**

Date Tested	System Dipole		T.S. Liquid	Measured Results			Target (Ref. Value)	Delta ±10 %	Est./Zoom Ratio ±3 %	Plots No.	
	Type	Serial #		Area Scan	Zoom Scan	Normalize to 1 W					
6/3/2013	D5GHzV2 (5.5GHz)	1138	Head	1g	7.61	8.07	80.70	83.6	-3.47	-6.04	
				10g	2.11	2.31	23.10	23.8	-2.94		
6/3/2013	D5GHzV2 (5.6GHz)	1138	Head	1g	7.37	8.48	84.80	83.6	1.44	-15.06	
				10g	2.03	2.42	24.20	23.8	1.68		
6/3/2013	D5GHzV2 (5.5GHz)	1138	Body	1g	7.53	7.68	76.80	77.9	-1.41	-1.99	
				10g	2.06	2.18	21.80	21.7	0.46		
6/3/2013	D5GHzV2 (5.6GHz)	1138	Body	1g	7.65	7.77	77.70	77.9	-0.26	-1.57	
				10g	2.08	2.20	22.00	21.7	1.38		
6/6/2013	D5GHzV2 (5.5GHz)	1138	Head	1g	9.20	8.70	87.00	83.6	4.07	5.43	27,28
				10g	2.57	2.52	25.20	23.8	5.88		
6/6/2013	D5GHzV2 (5.6GHz)	1138	Head	1g	7.68	8.13	81.30	83.6	-2.75	-5.86	
				10g	2.13	2.34	23.40	23.8	-1.68		
6/6/2013	D5GHzV2 (5.5GHz)	1138	Body	1g	7.63	7.74	77.40	77.9	-0.64	-1.44	
				10g	2.09	2.21	22.10	21.7	1.84		
6/6/2013	D5GHzV2 (5.6GHz)	1138	Body	1g	7.96	8.03	80.30	77.9	3.08	-0.88	29,30
				10g	2.16	2.27	22.70	21.7	4.61		
6/10/2013	D5GHzV2 (5.6GHz)	1003	Head	1g	7.55	8.01	80.10	82.8	-3.26	-6.85	
				10g	2.09	2.27	22.70	23.6	-3.81		
6/20/2013	D5GHzV2 (5.6GHz)	1003	Head	1g	8.17	8.73	87.30	82.8	5.43	-6.85	
				10g	2.24	2.51	25.10	23.6	6.36		
6/20/2013	D5GHzV2 (5.6GHz)	1003	Body	1g	7.65	7.65	76.50	79.0	-3.16	0.00	
				10g	2.08	2.15	21.50	22.0	-2.27		
6/24/2013	D5GHzV2 (5.6GHz)	1003	Head	1g	7.70	7.89	78.90	82.8	-4.71	-2.47	31,32
				10g	2.12	2.27	22.70	23.6	-3.81		
6/24/2013	D5GHzV2 (5.6GHz)	1003	Body	1g	7.75	7.72	77.20	79.0	-2.28	0.39	
				10g	2.10	2.16	21.60	22.0	-1.82		
6/27/2013	D5GHzV2 (5.6GHz)	1003	Head	1g	7.78	8.34	83.40	82.8	0.72	-7.20	
				10g	2.16	2.38	23.80	23.6	0.85		
6/27/2013	D5GHzV2 (5.6GHz)	1003	Body	1g	7.93	7.99	79.90	79.0	1.14	-0.76	
				10g	2.14	2.25	22.50	22.0	2.27		
7/5/2013	D5GHzV2 (5.8GHz)	1003	Head	1g	7.46	7.83	78.30	76.9	1.82	-4.96	
				10g	2.05	2.27	22.70	22.0	3.18		
7/5/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	8.28	7.96	79.60	77.0	3.38	3.86	
				10g	2.29	2.25	22.50	21.4	5.14		
7/9/2013	D5GHzV2 (5.8GHz)	1003	Body	1g	7.41	7.62	76.20	77.0	-1.04	-2.83	
				10g	2.05	2.19	21.90	21.4	2.34		

## 12. SAR Test Results

### 12.1. GSM850

#### 12.1.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	Voice	190	836.6	33.2	33.2	0.575	0.575	0.412	0.412	
Left Tilt	UAT	Voice	190	836.6	33.2	33.2	0.485	0.485	0.270	0.270	
Right Touch	UAT	Voice	190	836.6	33.2	33.2	0.466	0.466	0.298	0.298	
Right Tilt	UAT	Voice	190	836.6	33.2	33.2	0.385	0.385	0.216	0.216	
Left Touch	UAT	GPRS 2 slots	190	836.6	31.0	30.7	0.648	0.694	0.418	0.448	
Left Tilt	UAT	GPRS 2 slots	190	836.6	31.0	30.7	0.552	0.591	0.307	0.329	
Right Touch	UAT	GPRS 2 slots	190	836.6	31.0	30.7	0.542	0.581	0.348	0.373	
Right Tilt	UAT	GPRS 2 slots	190	836.6	31.0	30.7	0.435	0.466	0.247	0.265	
Left Touch	LAT	Voice	190	836.6	33.5	33.3	0.589	0.617	0.447	0.468	
Left Tilt	LAT	Voice	190	836.6	33.5	33.3	0.430	0.450	0.329	0.345	
Right Touch	LAT	Voice	190	836.6	33.5	33.3	0.553	0.579	0.415	0.435	
Right Tilt	LAT	Voice	190	836.6	33.5	33.3	0.408	0.427	0.311	0.326	
Left Touch	LAT	GPRS 2 slots	128	824.2	32.5	32.5	1.010	1.010	0.760	0.760	
Left Touch	LAT	GPRS 2 slots	190	836.6	32.5	32.5	0.991	0.991	0.752	0.752	
Left Touch	LAT	GPRS 2 slots	251	848.8	32.5	32.4	1.000	1.023	0.755	0.773	
Left Tilt	LAT	GPRS 2 slots	190	836.6	32.5	32.5	0.751	0.751	0.567	0.567	
Right Touch	LAT	GPRS 2 slots	128	824.2	32.5	32.5	1.000	1.000	0.750	0.750	
Right Touch	LAT	GPRS 2 slots	190	836.6	32.5	32.5	0.965	0.965	0.721	0.721	
Right Touch	LAT	GPRS 2 slots	251	848.8	32.5	32.4	1.100	1.126	0.810	0.829	1
Right Tilt	LAT	GPRS 2 slots	190	836.6	32.5	32.5	0.558	0.558	0.420	0.420	

#### 12.1.2. Body-worn Accessory Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	Voice	5	190	836.6	33.2	33.1	0.369	0.378	0.210	0.215	
Front	UAT	Voice	5	190	836.6	33.2	33.1	0.256	0.262	0.149	0.152	
Rear	LAT	Voice	5	190	836.6	33.5	33.5	1.030	1.030	0.678	0.678	2
Rear	LAT	Voice	5	128	824.2	33.5	33.5	0.983	0.983	0.645	0.645	
Rear	LAT	Voice	5	190	836.6	33.5	33.5	0.938	0.938	0.611	0.611	
Front	LAT	Voice	5	251	848.8	33.5	33.5	0.842	0.842	0.638	0.638	
Front	LAT	Voice	5	128	824.2	33.5	33.5	0.830	0.830	0.628	0.628	
Front	LAT	Voice	5	190	836.6	33.5	33.5	0.760	0.760	0.574	0.574	

### 12.1.3. Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	GPRS 2 slots	5	190	836.6	32.2	32.1	0.676	0.692	0.385	0.394	
Front	UAT	GPRS 2 slots	5	190	836.6	32.2	32.1	0.467	0.478	0.273	0.279	
Edge 1	UAT	GPRS 2 slots	5	190	836.6	32.2	32.1	0.428	0.438	0.197	0.202	
Edge 2	UAT	GPRS 2 slots	5	190	836.6	32.2	32.1	0.632	0.647	0.417	0.427	
Edge 4	UAT	GPRS 2 slots	5	190	836.6	32.2	32.1	0.206	0.211	0.131	0.134	
Rear	LAT	GPRS 2 slots	5	128	824.2	31.0	30.8	1.130	1.183	0.751	0.786	
Rear	LAT	GPRS 2 slots	5	190	836.6	31.0	30.9	1.170	<b>1.197</b>	0.774	0.792	3
Rear	LAT	GPRS 2 slots	5	251	848.8	31.0	30.8	1.120	1.173	0.746	0.781	
Front	LAT	GPRS 2 slots	5	128	824.2	31.0	30.8	0.903	0.946	0.682	0.714	
Front	LAT	GPRS 2 slots	5	190	836.6	31.0	30.9	0.944	0.966	0.710	0.727	
Front	LAT	GPRS 2 slots	5	251	848.8	31.0	30.8	0.980	1.026	0.737	0.772	
Edge 2	LAT	GPRS 2 slots	5	128	824.2	31.0	30.8	0.744	0.779	0.481	0.504	
Edge 2	LAT	GPRS 2 slots	5	190	836.6	31.0	30.9	0.814	0.833	0.526	0.538	
Edge 2	LAT	GPRS 2 slots	5	251	848.8	31.0	30.8	0.765	0.801	0.490	0.513	
Edge 3	LAT	GPRS 2 slots	5	190	836.6	31.0	30.9	0.326	0.334	0.162	0.166	
Edge 4	LAT	GPRS 2 slots	5	190	836.6	31.0	30.9	0.749	0.766	0.484	0.495	

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.2. GSM1900

### 12.2.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	Voice	661	1880.0	30.5	30.5	0.596	0.596	0.316	0.316	
Left Tilt	UAT	Voice	661	1880.0	30.5	30.5	0.642	0.642	0.339	0.339	
Right Touch	UAT	Voice	512	1850.2	30.5	30.5	0.795	0.795	0.418	0.418	
Right Touch	UAT	Voice	661	1880.0	30.5	30.5	0.930	0.930	0.487	0.487	
Right Touch	UAT	Voice	810	1909.8	30.5	30.5	0.943	0.943	0.492	0.492	
Right Tilt	UAT	Voice	512	1850.2	30.5	30.5	0.741	0.741	0.388	0.388	
Right Tilt	UAT	Voice	661	1880.0	30.5	30.5	0.874	0.874	0.453	0.453	
Right Tilt	UAT	Voice	810	1909.8	30.5	30.5	0.922	0.922	0.468	0.468	
Left Touch	UAT	GPRS 2 slots	661	1880.0	27.5	27.5	0.585	0.585	0.308	0.308	
Left Tilt	UAT	GPRS 2 slots	661	1880.0	27.5	27.5	0.574	0.574	0.303	0.303	
Right Touch	UAT	GPRS 2 slots	512	1850.2	27.5	27.5	0.835	0.835	0.440	0.440	
Right Touch	UAT	GPRS 2 slots	661	1880.0	27.5	27.5	0.911	0.911	0.478	0.478	
Right Touch	UAT	GPRS 2 slots	810	1909.8	27.5	27.5	0.911	0.911	0.479	0.479	
Right Tilt	UAT	GPRS 2 slots	661	1880.0	27.5	27.5	0.779	0.779	0.409	0.409	
Left Touch	LAT	Voice	661	1880.0	30.5	30.5	0.534	0.534	0.348	0.348	
Left Tilt	LAT	Voice	661	1880.0	30.5	30.5	0.265	0.265	0.156	0.156	
Right Touch	LAT	Voice	661	1880.0	30.5	30.5	0.723	0.723	0.442	0.442	
Right Tilt	LAT	Voice	661	1880.0	30.5	30.5	0.221	0.221	0.137	0.137	
Left Touch	LAT	GPRS 2 slots	661	1880.0	28.0	28.0	0.654	0.654	0.417	0.417	
Left Tilt	LAT	GPRS 2 slots	661	1880.0	28.0	28.0	0.332	0.332	0.188	0.188	
Right Touch	LAT	GPRS 2 slots	512	1850.2	28.0	28.0	1.170	1.170	0.715	0.715	4
Right Touch	LAT	GPRS 2 slots	661	1880.0	28.0	28.0	1.060	1.060	0.641	0.641	
Right Touch	LAT	GPRS 2 slots	810	1909.8	28.0	28.0	1.040	1.040	0.622	0.622	
Right Tilt	LAT	GPRS 2 slots	661	1880.0	28.0	28.0	0.316	0.316	0.188	0.188	

### 12.2.2. Body-worn Accessory Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	Voice	5	661	1880.0	30.5	30.5	0.559	0.559	0.294	0.294	
Front	UAT	Voice	5	661	1880.0	30.5	30.5	0.405	0.405	0.228	0.228	
Rear	LAT	Voice	5	512	1850.2	29.0	29.0	0.980	0.980	0.492	0.492	5
Rear	LAT	Voice	5	661	1880.0	29.0	29.0	0.930	0.930	0.462	0.462	
Rear	LAT	Voice	5	810	1909.8	29.0	29.0	0.936	0.936	0.459	0.459	
Front	LAT	Voice	5	661	1880.0	29.0	29.0	0.553	0.553	0.308	0.308	

### 12.2.3. Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	GPRS 2 slots	5	512	1850.2	28.75	28.75	0.908	0.908	0.479	0.479	
Rear	UAT	GPRS 2 slots	5	661	1880.0	28.75	28.75	0.986	0.986	0.517	0.517	
Rear	UAT	GPRS 2 slots	5	810	1909.8	28.75	28.75	0.971	0.971	0.511	0.511	
Front	UAT	GPRS 2 slots	5	661	1880.0	28.75	28.75	0.761	0.761	0.414	0.414	
Edge 1	UAT	GPRS 2 slots	5	661	1880.0	28.75	28.75	0.577	0.577	0.237	0.237	
Edge 2	UAT	GPRS 2 slots	5	661	1880.0	28.75	28.75	0.223	0.223	0.121	0.121	
Edge 4	UAT	GPRS 2 slots	5	661	1880.0	28.75	28.75	0.616	0.616	0.324	0.324	
Rear	LAT	GPRS 2 slots	5	512	1850.2	26.0	26.0	0.925	0.925	0.463	0.463	
Rear	LAT	GPRS 2 slots	5	661	1880.0	26.0	26.0	0.899	0.899	0.448	0.448	
Rear	LAT	GPRS 2 slots	5	810	1909.8	26.0	26.0	0.960	0.960	0.472	0.472	
Front	LAT	GPRS 2 slots	5	661	1880.0	26.0	26.0	0.530	0.530	0.311	0.311	
Edge 2	LAT	GPRS 2 slots	5	661	1880.0	26.0	26.0	0.685	0.685	0.367	0.367	
Edge 3	LAT	GPRS 2 slots	5	661	1880.0	26.0	26.0	0.468	0.468	0.226	0.226	
Edge 4	LAT	GPRS 2 slots	5	661	1880.0	26.0	26.0	0.193	0.193	0.104	0.104	
Rear	LAT	EGPRS 2 slots	5	512	1850.2	27.0	27.0	1.010	1.010	0.500	0.500	
Rear	LAT	EGPRS 2 slots	5	661	1880.0	27.0	27.0	0.941	0.941	0.463	0.463	
Rear	LAT	EGPRS 2 slots	5	810	1909.8	27.0	27.0	1.040	1.040	0.509	0.509	6
Front	LAT	EGPRS 2 slots	5	661	1880.0	27.0	27.0	0.658	0.658	0.358	0.358	
Edge 2	LAT	EGPRS 2 slots	5	512	1850.2	27.0	27.0	0.790	0.790	0.420	0.420	
Edge 2	LAT	EGPRS 2 slots	5	661	1880.0	27.0	27.0	0.821	0.821	0.437	0.437	
Edge 2	LAT	EGPRS 2 slots	5	810	1909.8	27.0	27.0	0.904	0.904	0.477	0.477	
Edge 3	LAT	EGPRS 2 slots	5	512	1850.2	27.0	27.0	0.873	0.873	0.434	0.434	
Edge 3	LAT	EGPRS 2 slots	5	661	1880.0	27.0	27.0	0.819	0.819	0.404	0.404	
Edge 3	LAT	EGPRS 2 slots	5	810	1909.8	27.0	27.0	0.682	0.682	0.325	0.325	
Edge 4	LAT	EGPRS 2 slots	5	661	1880.0	27.0	27.0	0.055	0.055	0.028	0.028	

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.



## 12.3. W-CDMA Band 2

### 12.3.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	Rel. 99 RMC	9400	1880.0	22.5	22.5	0.595	0.595	0.314	0.314	
Left Tilt	UAT	Rel. 99 RMC	9400	1880.0	22.5	22.5	0.532	0.532	0.279	0.279	
Right Touch	UAT	Rel. 99 RMC	9262	1852.4	22.5	22.5	0.939	0.939	0.491	0.491	
Right Touch	UAT	Rel. 99 RMC	9400	1880.0	22.5	22.5	0.986	0.986	0.522	0.522	
Right Touch	UAT	Rel. 99 RMC	9538	1907.6	22.5	22.5	0.949	0.949	0.506	0.506	
Right Tilt	UAT	Rel. 99 RMC	9400	1880.0	22.5	22.5	0.673	0.673	0.347	0.347	
Left Touch	LAT	Rel. 99 RMC	9262	1852.4	23.0	23.0	0.795	0.795	0.528	0.528	
Left Touch	LAT	Rel. 99 RMC	9400	1880.0	23.0	23.0	0.824	0.824	0.547	0.547	
Left Touch	LAT	Rel. 99 RMC	9538	1907.6	23.0	23.0	0.730	0.730	0.474	0.474	
Left Tilt	LAT	Rel. 99 RMC	9400	1880.0	23.0	23.0	0.431	0.431	0.257	0.257	
Right Touch	LAT	Rel. 99 RMC	9262	1852.4	23.0	23.0	1.180	1.180	0.737	0.737	7
Right Touch	LAT	Rel. 99 RMC	9400	1880.0	23.0	23.0	1.150	1.150	0.715	0.715	
Right Touch	LAT	Rel. 99 RMC	9538	1907.6	23.0	23.0	1.110	1.110	0.680	0.680	
Right Tilt	LAT	Rel. 99 RMC	9400	1880.0	23.0	23.0	0.390	0.390	0.241	0.241	

#### Note(s):

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is  $> 1.2$  W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

### 12.3.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

KDB 941225 D01 – Body SAR is not required for handsets with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than ¼ dB higher than that measured without HSUPA/HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2kbps RMC is ≤ 75% of the SAR limit. (pg.12)

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	Rel. 99 RMC	5	9262	1852.4	22.5	22.5	0.915	0.915	0.485	0.485	
Rear	UAT	Rel. 99 RMC	5	9400	1880.0	22.5	22.5	0.850	0.850	0.449	0.449	
Rear	UAT	Rel. 99 RMC	5	9538	1907.6	22.5	22.5	0.755	0.755	0.396	0.396	
Front	UAT	Rel. 99 RMC	5	9400	1880.0	22.5	22.5	0.631	0.631	0.347	0.347	
Rear	LAT	Rel. 99 RMC	5	9262	1852.4	20.0	20.0	1.150	1.150	0.584	0.584	8
Rear	LAT	Rel. 99 RMC	5	9400	1880.0	20.0	20.0	1.040	1.040	0.524	0.524	
Rear	LAT	Rel. 99 RMC	5	9538	1907.6	20.0	20.0	1.000	1.000	0.495	0.495	
Front	LAT	Rel. 99 RMC	5	9400	1880.0	20.0	20.0	0.662	0.662	0.371	0.371	

#### Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	Rel. 99 RMC	5	9400	1880.0	22.5	22.5	0.427	0.427	0.171	0.171	
Edge 2	UAT	Rel. 99 RMC	5	9400	1880.0	22.5	22.5	0.323	0.323	0.169	0.169	
Edge 4	UAT	Rel. 99 RMC	5	9400	1880.0	22.5	22.5	0.685	0.685	0.362	0.362	
Edge 2	LAT	Rel. 99 RMC	5	9400	1880.0	20.0	20.0	0.697	0.697	0.371	0.371	
Edge 3	LAT	Rel. 99 RMC	5	9400	1880.0	20.0	20.0	0.581	0.581	0.278	0.278	
Edge 4	LAT	Rel. 99 RMC	5	9400	1880.0	20.0	20.0	0.120	0.120	0.067	0.067	

#### Note(s):

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.4. W-CDMA Band 4

### 12.4.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	0.526	0.526	0.288	0.288	
Left Tilt	UAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	0.569	0.569	0.304	0.304	
Right Touch	UAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	0.760	0.760	0.405	0.405	
Right Tilt	UAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	0.631	0.631	0.338	0.338	
Left Touch	LAT	Rel. 99 RMC	1312	1712.4	23.0	22.9	0.723	0.740	0.487	0.498	
Left Touch	LAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	0.793	0.793	0.526	0.526	
Left Touch	LAT	Rel. 99 RMC	1513	1752.6	23.0	22.9	0.838	0.858	0.558	0.571	
Left Tilt	LAT	Rel. 99 RMC	1413	1732.6	23.0	22.9	0.498	0.510	0.302	0.309	
Right Touch	LAT	Rel. 99 RMC	1312	1712.4	23.0	22.9	1.080	1.105	0.673	0.689	
Right Touch	LAT	Rel. 99 RMC	1413	1732.6	23.0	23.0	1.170	1.170	0.731	0.731	9
Right Touch	LAT	Rel. 99 RMC	1513	1752.6	23.0	22.9	1.140	1.167	0.705	0.721	
Right Tilt	LAT	Rel. 99 RMC	1413	1732.6	23.0	22.9	0.533	0.545	0.325	0.333	

#### Note(s):

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is  $> 1.2$  W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

### 12.4.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

KDB 941225 D01 – Body SAR is not required for handsets with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than ¼ dB higher than that measured without HSUPA/HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2kbps RMC is ≤ 75% of the SAR limit. (pg.12)

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	Rel. 99 RMC	5	1413	1732.6	23.9	23.8	0.582	0.596	0.326	0.334	
Front	UAT	Rel. 99 RMC	5	1413	1732.6	23.9	23.8	0.344	0.352	0.203	0.208	
Rear	LAT	Rel. 99 RMC	5	1312	1712.4	19.5	19.4	0.883	0.904	0.459	0.470	
Rear	LAT	Rel. 99 RMC	5	1413	1732.6	19.5	19.5	1.020	1.020	0.521	0.521	
Rear	LAT	Rel. 99 RMC	5	1513	1752.6	19.5	19.5	1.130	1.130	0.567	0.567	10
Front	LAT	Rel. 99 RMC	5	1413	1732.6	19.5	19.5	0.732	0.732	0.412	0.412	

#### Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	Rel. 99 RMC	5	1413	1732.6	23.9	23.8	0.349	0.357	0.159	0.163	
Edge 2	UAT	Rel. 99 RMC	5	1413	1732.6	23.9	23.8	0.070	0.072	0.038	0.039	
Edge 4	UAT	Rel. 99 RMC	5	1413	1732.6	23.9	23.8	0.290	0.297	0.155	0.159	
Edge 2	LAT	Rel. 99 RMC	5	1413	1732.6	19.5	19.5	0.709	0.709	0.374	0.374	
Edge 3	LAT	Rel. 99 RMC	5	1413	1732.6	19.5	19.5	0.683	0.683	0.336	0.336	
Edge 4	LAT	Rel. 99 RMC	5	1413	1732.6	19.5	19.5	0.065	0.065	0.033	0.033	

#### Note(s):

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.5. W-CDMA Band 5

### 12.5.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	Rel. 99 RMC	4183	836.6	23.9	23.9	0.529	0.529	0.329	0.329	
Left Tilt	UAT	Rel. 99 RMC	4183	836.6	23.9	23.9	0.450	0.450	0.243	0.243	
Right Touch	UAT	Rel. 99 RMC	4183	836.6	23.9	23.9	0.383	0.383	0.240	0.240	
Right Tilt	UAT	Rel. 99 RMC	4183	836.6	23.9	23.9	0.302	0.302	0.170	0.170	
Left Touch	LAT	Rel. 99 RMC	4183	836.6	24.5	24.4	0.609	0.623	0.461	0.472	11
Left Tilt	LAT	Rel. 99 RMC	4183	836.6	24.5	24.4	0.363	0.371	0.275	0.281	
Right Touch	LAT	Rel. 99 RMC	4183	836.6	24.5	24.4	0.560	0.573	0.420	0.430	
Right Tilt	LAT	Rel. 99 RMC	4183	836.6	24.5	24.4	0.324	0.332	0.246	0.252	

#### Note(s):

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is  $> 1.2$  W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

### 12.5.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

KDB 941225 D01 – Body SAR is not required for handsets with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than ¼ dB higher than that measured without HSUPA/HSDPA using 12.2 kbps RMC and the maximum SAR for 12.2kbps RMC is ≤ 75% of the SAR limit. (pg.12)

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	Rel. 99 RMC	5	4183	836.6	24.2	23.9	0.336	0.360	0.189	0.203	
Front	UAT	Rel. 99 RMC	5	4183	836.6	24.2	23.9	0.253	0.271	0.145	0.155	
Rear	LAT	Rel. 99 RMC	5	4132	826.4	24.25	24.20	1.010	1.022	0.635	0.642	
Rear	LAT	Rel. 99 RMC	5	4183	836.6	24.25	24.11	1.090	1.126	0.681	0.703	12
Rear	LAT	Rel. 99 RMC	5	4233	846.6	24.25	24.00	1.000	1.059	0.631	0.668	
Front	LAT	Rel. 99 RMC	5	4132	826.4	24.25	24.20	0.769	0.778	0.578	0.585	
Front	LAT	Rel. 99 RMC	5	4183	836.6	24.25	24.11	0.822	0.849	0.609	0.629	
Front	LAT	Rel. 99 RMC	5	4233	846.6	24.25	24.00	0.755	0.800	0.559	0.592	

#### Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	Rel. 99 RMC	5	4183	836.6	24.2	23.9	0.211	0.226	0.096	0.103	
Edge 2	UAT	Rel. 99 RMC	5	4183	836.6	24.2	23.9	0.358	0.384	0.232	0.249	
Edge 4	UAT	Rel. 99 RMC	5	4183	836.6	24.2	23.9	0.076	0.082	0.049	0.052	
Edge 2	LAT	Rel. 99 RMC	5	4183	836.6	24.25	24.11	0.599	0.619	0.387	0.400	
Edge 3	LAT	Rel. 99 RMC	5	4183	836.6	24.25	24.11	0.310	0.320	0.152	0.157	
Edge 4	LAT	Rel. 99 RMC	5	4183	836.6	24.25	24.11	0.625	0.645	0.404	0.417	

#### Note(s):

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.6. CDMA BC0

### 12.6.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.565	0.565	0.366	0.366	
Left Tilt	UAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.525	0.525	0.293	0.293	
Right Touch	UAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.459	0.459	0.301	0.301	
Right Tilt	UAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.408	0.408	0.248	0.248	
Left Touch	UAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.590	0.590	0.374	0.374	13
Left Tilt	UAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.524	0.524	0.292	0.292	
Right Touch	UAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.476	0.476	0.312	0.312	
Right Tilt	UAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.412	0.412	0.249	0.249	
Left Touch	LAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.547	0.547	0.412	0.412	
Left Tilt	LAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.418	0.418	0.317	0.317	
Right Touch	LAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.544	0.544	0.408	0.408	
Right Tilt	LAT	1xRTT(RC3, SO55)	384	836.52	24.5	24.5	0.446	0.446	0.339	0.339	
Left Touch	LAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.577	0.577	0.433	0.433	
Left Tilt	LAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.429	0.429	0.324	0.324	
Right Touch	LAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.571	0.571	0.426	0.426	
Right Tilt	LAT	1xEVDO(Rel. 0)	384	836.52	24.5	24.5	0.402	0.402	0.305	0.305	

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	1xEVDO (Rev. B) Two Carrier Mini.	384+425	836.52+837.75	22.0	21.6	0.235	0.258	0.158	0.173	
Left Tilt	UAT		384+425	836.52+837.75	22.0	21.6	0.181	0.198	0.100	0.110	
Right Touch	UAT		384+425	836.52+837.75	22.0	21.6	0.155	0.170	0.092	0.100	
Right Tilt	UAT		384+425	836.52+837.75	22.0	21.6	0.135	0.148	0.071	0.078	
Left Touch	LAT		384+425	836.52+837.75	22.0	21.8	0.298	0.312	0.228	0.239	
Left Tilt	LAT		384+425	836.52+837.75	22.0	21.8	0.150	0.157	0.116	0.121	
Right Touch	LAT		384+425	836.52+837.75	22.0	21.8	0.256	0.268	0.190	0.199	
Right Tilt	LAT		384+425	836.52+837.75	22.0	21.8	0.154	0.161	0.118	0.124	
Left Touch	UAT	1xEVDO (Rev. B) Three Carrier Mini.	384+425+466	836.52+837.75+838.98	22.0	21.8	0.236	0.247	0.158	0.165	
Left Tilt	UAT		384+425+466	836.52+837.75+838.98	22.0	21.8	0.180	0.188	0.100	0.105	
Right Touch	UAT		384+425+466	836.52+837.75+838.98	22.0	21.8	0.155	0.162	0.091	0.095	
Right Tilt	UAT		384+425+466	836.52+837.75+838.98	22.0	21.8	0.134	0.140	0.072	0.076	
Left Touch	LAT		384+425+468	836.52+837.75+838.100	22.0	21.9	0.298	0.305	0.227	0.232	
Left Tilt	LAT		384+425+469	836.52+837.75+838.101	22.0	21.9	0.188	0.192	0.106	0.108	
Right Touch	LAT		384+425+470	836.52+837.75+838.102	22.0	21.9	0.285	0.292	0.210	0.215	
Right Tilt	LAT		384+425+471	836.52+837.75+838.103	22.0	21.9	0.152	0.156	0.115	0.118	

### 12.6.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	1xRTT(RC3, SO32)	5	384	836.52	24.2	23.8	0.376	0.412	0.262	0.287	
Front	UAT	1xRTT(RC3, SO32)	5	384	836.52	24.2	23.8	0.332	0.364	0.232	0.254	
Rear	LAT	1xRTT(RC3, SO32)	5	1013	824.70	24.25	24.20	0.860	0.870	0.558	0.564	
Rear	LAT	1xRTT(RC3, SO32)	5	384	836.52	24.25	24.25	0.913	0.913	0.591	0.591	
Rear	LAT	1xRTT(RC3, SO32)	5	777	848.31	24.25	24.25	0.950	0.950	0.610	0.610	14
Front	LAT	1xRTT(RC3, SO32)	5	1013	824.70	24.25	24.25	0.651	0.651	0.490	0.490	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	1xRTT(RC3, SO32)	5	384	836.52	24.2	23.8	0.216	0.237	0.100	0.110	
Edge 2	UAT	1xRTT(RC3, SO32)	5	384	836.52	24.2	23.8	0.366	0.401	0.241	0.264	
Edge 4	UAT	1xRTT(RC3, SO32)	5	384	836.52	24.2	23.8	0.181	0.198	0.115	0.126	
Rear	UAT	1xEVDO(Rel. 0)	5	384	836.52	24.2	23.8	0.385	0.422	0.268	0.294	
Front	UAT	1xEVDO(Rel. 0)	5	384	836.52	24.2	23.8	0.338	0.371	0.235	0.258	
Edge 1	UAT	1xEVDO(Rel. 0)	5	384	836.52	24.2	23.8	0.244	0.268	0.110	0.121	
Edge 2	UAT	1xEVDO(Rel. 0)	5	384	836.52	24.2	23.8	0.390	0.428	0.256	0.281	
Edge 4	UAT	1xEVDO(Rel. 0)	5	384	836.52	24.2	23.8	0.186	0.204	0.118	0.129	
Edge 2	LAT	1xRTT(RC3, SO32)	5	384	836.52	24.25	24.25	0.555	0.555	0.360	0.360	
Edge 3	LAT	1xRTT(RC3, SO32)	5	384	836.52	24.25	24.25	0.219	0.219	0.108	0.108	
Edge 4	LAT	1xRTT(RC3, SO32)	5	384	836.52	24.25	24.25	0.710	0.710	0.468	0.468	
Rear	LAT	1xEVDO(Rel. 0)	5	1013	824.70	24.25	24.20	0.873	0.883	0.558	0.564	
Rear	LAT	1xEVDO(Rel. 0)	5	384	836.52	24.25	24.25	0.907	0.907	0.576	0.576	
Rear	LAT	1xEVDO(Rel. 0)	5	777	848.31	24.25	24.25	0.954	0.954	0.598	0.598	15
Front	LAT	1xEVDO(Rel. 0)	5	384	836.52	24.25	24.25	0.690	0.690	0.522	0.522	
Edge 2	LAT	1xEVDO(Rel. 0)	5	384	836.52	24.25	24.25	0.521	0.521	0.336	0.336	
Edge 3	LAT	1xEVDO(Rel. 0)	5	384	836.52	24.25	24.25	0.232	0.232	0.113	0.113	
Edge 4	LAT	1xEVDO(Rel. 0)	5	384	836.52	24.25	24.25	0.776	0.776	0.507	0.507	

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	1xEVDO (Rev. B) Two Carrier Mini.	5	384+425	836.52+837.75	22.0	21.6	0.186	0.204	0.100	0.110	
Front	UAT		5	384+425	836.52+837.75	22.0	21.6	0.147	0.161	0.080	0.088	
Edge 1	UAT		5	384+425	836.52+837.75	22.0	21.6	0.115	0.126	0.051	0.056	
Edge 2	UAT		5	384+425	836.52+837.75	22.0	21.6	0.191	0.209	0.121	0.133	
Edge 4	UAT		5	384+425	836.52+837.75	22.0	21.6	0.036	0.039	0.021	0.023	
Rear	LAT		5	384+425	836.52+837.75	22.0	21.8	0.680	0.712	0.391	0.409	
Front	LAT		5	384+425	836.52+837.75	22.0	21.8	0.486	0.509	0.316	0.331	
Edge 2	LAT		5	384+425	836.52+837.75	22.0	21.8	0.301	0.315	0.190	0.199	
Edge 3	LAT		5	384+425	836.52+837.75	22.0	21.8	0.190	0.199	0.088	0.092	
Edge 4	LAT		5	384+425	836.52+837.75	22.0	21.8	0.601	0.629	0.385	0.403	
Rear	UAT	1xEVDO (Rev. B) Three Carrier Mini.	5	384+425+466	836.52+837.75+838.98	22.0	21.8	0.191	0.200	0.102	0.107	
Front	UAT		5	384+425+466	836.52+837.75+838.98	22.0	21.8	0.148	0.155	0.081	0.085	
Edge 1	UAT		5	384+425+466	836.52+837.75+838.98	22.0	21.8	0.117	0.123	0.052	0.054	
Edge 2	UAT		5	384+425+466	836.52+837.75+838.98	22.0	21.8	0.192	0.201	0.121	0.127	
Edge 4	UAT		5	384+425+466	836.52+837.75+838.98	22.0	21.8	0.036	0.038	0.021	0.022	
Rear	LAT		5	384+425+467	836.52+837.75+838.99	22.0	21.9	0.692	0.708	0.398	0.407	
Front	LAT		5	384+425+468	836.52+837.75+838.100	22.0	21.9	0.495	0.507	0.325	0.333	
Edge 2	LAT		5	384+425+469	836.52+837.75+838.101	22.0	21.9	0.339	0.347	0.212	0.217	
Edge 3	LAT		5	384+425+470	836.52+837.75+838.102	22.0	21.9	0.251	0.257	0.112	0.115	
Edge 4	LAT		5	384+425+471	836.52+837.75+838.103	22.0	21.9	0.599	0.613	0.382	0.391	

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.



## 12.7. CDMA BC1

### 12.7.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	1xRTT(RC3, SO55)	600	1880.00	22.5	22.5	0.701	0.701	0.373	0.373	
Left Tilt	UAT	1xRTT(RC3, SO55)	600	1880.00	22.5	22.5	0.689	0.689	0.364	0.364	
Right Touch	UAT	1xRTT(RC3, SO55)	25	1851.25	22.5	22.4	0.995	1.018	0.527	0.539	
Right Touch	UAT	1xRTT(RC3, SO55)	600	1880.00	22.5	22.5	0.989	0.989	0.526	0.526	
Right Touch	UAT	1xRTT(RC3, SO55)	1175	1908.75	22.5	22.5	0.913	0.913	0.487	0.487	
Right Tilt	UAT	1xRTT(RC3, SO55)	25	1851.25	22.5	22.4	0.846	0.866	0.447	0.457	
Right Tilt	UAT	1xRTT(RC3, SO55)	600	1880.00	22.5	22.5	0.790	0.790	0.419	0.419	
Right Tilt	UAT	1xRTT(RC3, SO55)	1175	1908.75	22.5	22.5	0.683	0.683	0.356	0.356	
Left Touch	UAT	1xEVDO(Rel. 0)	600	1880.00	22.5	22.5	0.697	0.697	0.374	0.374	
Left Tilt	UAT	1xEVDO(Rel. 0)	600	1880.00	22.5	22.5	0.691	0.691	0.364	0.364	
Right Touch	UAT	1xEVDO(Rel. 0)	25	1851.25	22.5	22.4	0.962	0.984	0.503	0.515	
Right Touch	UAT	1xEVDO(Rel. 0)	600	1880.00	22.5	22.5	0.985	0.985	0.522	0.522	
Right Touch	UAT	1xEVDO(Rel. 0)	1175	1908.75	22.5	22.5	0.907	0.907	0.486	0.486	
Right Tilt	UAT	1xEVDO(Rel. 0)	25	1851.25	22.5	22.4	0.857	0.877	0.452	0.463	
Right Tilt	UAT	1xEVDO(Rel. 0)	600	1880.00	22.5	22.5	0.739	0.739	0.371	0.371	
Right Tilt	UAT	1xEVDO(Rel. 0)	1175	1908.75	22.5	22.5	0.648	0.648	0.321	0.321	
Left Touch	LAT	1xRTT(RC3, SO55)	600	1880.00	23.0	22.8	0.666	0.697	0.393	0.412	
Left Tilt	LAT	1xRTT(RC3, SO55)	600	1880.00	23.0	22.8	0.359	0.376	0.213	0.223	
Right Touch	LAT	1xRTT(RC3, SO55)	25	1851.25	23.0	23.0	1.110	1.110	0.685	0.685	
Right Touch	LAT	1xRTT(RC3, SO55)	600	1880.00	23.0	22.8	1.020	1.068	0.626	0.656	
Right Touch	LAT	1xRTT(RC3, SO55)	1175	1908.75	23.0	22.9	1.050	1.074	0.637	0.652	
Right Tilt	LAT	1xRTT(RC3, SO55)	600	1880.00	23.0	22.8	0.298	0.312	0.189	0.198	
Left Touch	LAT	1xEVDO(Rel. 0)	600	1880.00	23.0	22.8	0.625	0.654	0.405	0.424	
Left Tilt	LAT	1xEVDO(Rel. 0)	600	1880.00	23.0	22.8	0.373	0.391	0.215	0.225	
Right Touch	LAT	1xEVDO(Rel. 0)	25	1851.25	23.0	23.0	1.170	1.170	0.722	0.722	16
Right Touch	LAT	1xEVDO(Rel. 0)	600	1880.00	23.0	22.8	1.080	1.131	0.659	0.690	
Right Touch	LAT	1xEVDO(Rel. 0)	1175	1908.75	23.0	22.9	1.130	1.156	0.674	0.690	
Right Tilt	LAT	1xEVDO(Rel. 0)	600	1880.00	23.0	22.8	0.310	0.325	0.190	0.199	

### 12.7.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	1xRTT(RC3, SO32)	5	600	1880.00	22.25	22.25	0.634	0.634	0.376	0.376	
Front	UAT	1xRTT(RC3, SO32)	5	600	1880.00	22.25	22.25	0.440	0.440	0.253	0.253	
Rear	LAT	1xRTT(RC3, SO32)	5	25	1851.25	20.0	20.0	1.160	1.160	0.572	0.572	
Rear	LAT	1xRTT(RC3, SO32)	5	600	1880.00	20.0	20.0	1.180	1.180	0.578	0.578	17
Rear	LAT	1xRTT(RC3, SO32)	5	1175	1908.75	20.0	19.9	1.120	1.146	0.562	0.575	
Front	LAT	1xRTT(RC3, SO32)	5	600	1880.00	20.0	20.0	0.758	0.758	0.423	0.423	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	1xRTT(RC3, SO32)	5	600	1880.00	22.25	22.25	0.309	0.309	0.128	0.128	
Edge 2	UAT	1xRTT(RC3, SO32)	5	600	1880.00	22.25	22.25	0.182	0.182	0.100	0.100	
Edge 4	UAT	1xRTT(RC3, SO32)	5	600	1880.00	22.25	22.25	0.435	0.435	0.230	0.230	
Rear	UAT	1xEVDO(Rel. 0)	5	600	1880.00	22.25	22.25	0.642	0.642	0.376	0.376	
Front	UAT	1xEVDO(Rel. 0)	5	600	1880.00	22.25	22.25	0.412	0.412	0.237	0.237	
Edge 1	UAT	1xEVDO(Rel. 0)	5	600	1880.00	22.25	22.25	0.366	0.366	0.149	0.149	
Edge 2	UAT	1xEVDO(Rel. 0)	5	600	1880.00	22.25	22.25	0.263	0.263	0.140	0.140	
Edge 4	UAT	1xEVDO(Rel. 0)	5	600	1880.00	22.25	22.25	0.430	0.430	0.227	0.227	
Edge 2	LAT	1xRTT(RC3, SO32)	5	25	1851.25	20.0	20.0	0.864	0.864	0.463	0.463	
Edge 2	LAT	1xRTT(RC3, SO32)	5	600	1880.00	20.0	20.0	0.796	0.796	0.427	0.427	
Edge 2	LAT	1xRTT(RC3, SO32)	5	1175	1908.75	20.0	19.9	0.677	0.693	0.361	0.369	
Edge 3	LAT	1xRTT(RC3, SO32)	5	600	1880.00	20.0	20.0	0.605	0.605	0.284	0.284	
Edge 4	LAT	1xRTT(RC3, SO32)	5	600	1880.00	20.0	20.0	0.157	0.157	0.085	0.085	
Rear	LAT	1xEVDO(Rel. 0)	5	25	1851.25	20.0	20.0	1.130	1.130	0.566	0.566	
Rear	LAT	1xEVDO(Rel. 0)	5	600	1880.00	20.0	20.0	1.120	1.120	0.555	0.555	
Rear	LAT	1xEVDO(Rel. 0)	5	1175	1908.75	20.0	19.9	1.130	1.156	0.562	0.575	
Front	LAT	1xEVDO(Rel. 0)	5	600	1880.00	20.0	20.0	0.755	0.755	0.424	0.424	
Edge 2	LAT	1xEVDO(Rel. 0)	5	25	1851.25	20.0	20.0	0.863	0.863	0.465	0.465	
Edge 2	LAT	1xEVDO(Rel. 0)	5	600	1880.00	20.0	20.0	0.793	0.793	0.425	0.425	
Edge 2	LAT	1xEVDO(Rel. 0)	5	1175	1908.75	20.0	19.9	0.679	0.695	0.362	0.370	
Edge 3	LAT	1xEVDO(Rel. 0)	5	600	1880.00	20.0	20.0	0.603	0.603	0.283	0.283	
Edge 4	LAT	1xEVDO(Rel. 0)	5	600	1880.00	20.0	20.0	0.157	0.157	0.085	0.085	

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.8. CDMA BC10

### 12.8.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	1xRTT(RC3, SO55)	580	820.5	23.9	23.9	0.549	0.549	0.354	0.354	
Left Tilt	UAT	1xRTT(RC3, SO55)	580	820.5	23.9	23.9	0.546	0.546	0.303	0.303	
Right Touch	UAT	1xRTT(RC3, SO55)	580	820.5	23.9	23.9	0.467	0.467	0.305	0.305	
Right Tilt	UAT	1xRTT(RC3, SO55)	580	820.5	23.9	23.9	0.448	0.448	0.266	0.266	
Left Touch	UAT	1xEVDO(Rel. 0)	580	820.5	23.9	23.9	0.569	0.569	0.368	0.368	18
Left Tilt	UAT	1xEVDO(Rel. 0)	580	820.5	23.9	23.9	0.548	0.548	0.304	0.304	
Right Touch	UAT	1xEVDO(Rel. 0)	580	820.5	23.9	23.9	0.499	0.499	0.329	0.329	
Right Tilt	UAT	1xEVDO(Rel. 0)	580	820.5	23.9	23.9	0.453	0.453	0.269	0.269	
Left Touch	LAT	1xRTT(RC3, SO55)	580	820.5	24.5	24.4	0.517	0.529	0.390	0.399	
Left Tilt	LAT	1xRTT(RC3, SO55)	580	820.5	24.5	24.4	0.385	0.394	0.294	0.301	
Right Touch	LAT	1xRTT(RC3, SO55)	580	820.5	24.5	24.4	0.488	0.499	0.366	0.375	
Right Tilt	LAT	1xRTT(RC3, SO55)	580	820.5	24.5	24.4	0.348	0.356	0.266	0.272	
Left Touch	LAT	1xEVDO(Rel. 0)	580	820.5	24.5	24.4	0.553	0.566	0.418	0.428	
Left Tilt	LAT	1xEVDO(Rel. 0)	580	820.5	24.5	24.4	0.398	0.407	0.302	0.309	
Right Touch	LAT	1xEVDO(Rel. 0)	580	820.5	24.5	24.4	0.489	0.500	0.365	0.374	
Right Tilt	LAT	1xEVDO(Rel. 0)	580	820.5	24.5	24.4	0.352	0.360	0.268	0.274	

### 12.8.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	1xRTT(RC3, SO32)	5	580	820.5	24.2	23.8	0.394	0.432	0.273	0.299	
Front	UAT	1xRTT(RC3, SO32)	5	580	820.5	24.2	23.8	0.346	0.379	0.237	0.260	
Rear	LAT	1xRTT(RC3, SO32)	5	476	817.9	24.25	24.10	0.892	0.923	0.569	0.589	
Rear	LAT	1xRTT(RC3, SO32)	5	580	820.5	24.25	24.10	0.874	0.905	0.558	0.578	
Rear	LAT	1xRTT(RC3, SO32)	5	684	823.1	24.25	24.10	0.898	0.930	0.572	0.592	19
Front	LAT	1xRTT(RC3, SO32)	5	580	820.5	24.25	24.10	0.654	0.677	0.495	0.512	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	1xRTT(RC3, SO32)	5	580	820.5	24.2	23.8	0.262	0.287	0.120	0.132	
Edge 2	UAT	1xRTT(RC3, SO32)	5	580	820.5	24.2	23.8	0.343	0.376	0.228	0.250	
Edge 4	UAT	1xRTT(RC3, SO32)	5	580	820.5	24.2	23.8	0.158	0.173	0.099	0.108	
Rear	UAT	1xEVDO(Rel. 0)	5	580	820.5	24.2	23.8	0.395	0.433	0.273	0.299	
Front	UAT	1xEVDO(Rel. 0)	5	580	820.5	24.2	23.8	0.353	0.387	0.242	0.265	
Edge 1	UAT	1xEVDO(Rel. 0)	5	580	820.5	24.2	23.8	0.286	0.314	0.129	0.141	
Edge 2	UAT	1xEVDO(Rel. 0)	5	580	820.5	24.2	23.8	0.351	0.385	0.233	0.255	
Edge 4	UAT	1xEVDO(Rel. 0)	5	580	820.5	24.2	23.8	0.162	0.178	0.102	0.112	
Edge 2	LAT	1xRTT(RC3, SO32)	5	580	820.5	24.25	24.10	0.529	0.548	0.345	0.357	
Edge 3	LAT	1xRTT(RC3, SO32)	5	580	820.5	24.25	24.10	0.181	0.187	0.090	0.093	
Edge 4	LAT	1xRTT(RC3, SO32)	5	476	817.9	24.25	24.20	0.831	0.841	0.550	0.556	
Edge 4	LAT	1xRTT(RC3, SO32)	5	580	820.5	24.25	24.10	0.811	0.840	0.538	0.557	
Edge 4	LAT	1xRTT(RC3, SO32)	5	684	823.1	24.25	24.10	0.827	0.856	0.547	0.566	
Rear	LAT	1xEVDO(Rel. 0)	5	476	817.9	24.25	24.20	0.883	0.893	0.550	0.556	
Rear	LAT	1xEVDO(Rel. 0)	5	580	820.5	24.25	24.10	0.867	0.897	0.541	0.560	
Rear	LAT	1xEVDO(Rel. 0)	5	684	823.1	24.25	24.10	0.887	0.918	0.554	0.573	
Front	LAT	1xEVDO(Rel. 0)	5	580	820.5	24.25	24.10	0.666	0.689	0.504	0.522	
Edge 2	LAT	1xEVDO(Rel. 0)	5	580	820.5	24.25	24.10	0.545	0.564	0.354	0.366	
Edge 3	LAT	1xEVDO(Rel. 0)	5	580	820.5	24.25	24.10	0.183	0.189	0.091	0.094	
Edge 4	LAT	1xEVDO(Rel. 0)	5	476	817.9	24.25	24.20	0.963	0.974	0.637	0.644	
Edge 4	LAT	1xEVDO(Rel. 0)	5	580	820.5	24.25	24.10	0.954	0.988	0.630	0.652	
Edge 4	LAT	1xEVDO(Rel. 0)	5	684	823.1	24.25	24.10	0.974	1.008	0.644	0.667	20

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.9. CDMA BC15

### 12.9.1. Head Exposure Conditions

Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.512	0.512	0.282	0.282	
Left Tilt	UAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.581	0.581	0.308	0.308	
Right Touch	UAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.787	0.787	0.415	0.415	
Right Tilt	UAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.680	0.680	0.363	0.363	
Left Touch	UAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.518	0.518	0.283	0.283	
Left Tilt	UAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.579	0.579	0.308	0.308	
Right Touch	UAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.778	0.778	0.412	0.412	
Right Tilt	UAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.678	0.678	0.362	0.362	
Left Touch	LAT	1xRTT(RC3, SO55)	25	1711.25	23.0	22.9	0.740	0.757	0.495	0.507	
Left Touch	LAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.865	0.865	0.580	0.580	
Left Touch	LAT	1xRTT(RC3, SO55)	875	1753.75	23.0	23.0	0.926	0.926	0.616	0.616	
Left Tilt	LAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.559	0.559	0.336	0.336	
Right Touch	LAT	1xRTT(RC3, SO55)	25	1711.25	23.0	22.9	1.050	1.074	0.676	0.692	
Right Touch	LAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	1.160	1.160	0.740	0.740	
Right Touch	LAT	1xRTT(RC3, SO55)	875	1753.75	23.0	23.0	1.160	1.160	0.744	0.744	
Right Tilt	LAT	1xRTT(RC3, SO55)	450	1732.50	23.0	23.0	0.603	0.603	0.376	0.376	
Left Touch	LAT	1xEVDO(Rel. 0)	25	1711.25	23.0	22.9	0.719	0.736	0.485	0.496	
Left Touch	LAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.857	0.857	0.571	0.571	
Left Touch	LAT	1xEVDO(Rel. 0)	875	1753.75	23.0	23.0	0.987	0.987	0.646	0.646	
Left Tilt	LAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.572	0.572	0.345	0.345	
Right Touch	LAT	1xEVDO(Rel. 0)	25	1711.25	23.0	22.9	1.070	1.095	0.688	0.704	
Right Touch	LAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	1.180	1.180	0.749	0.749	21
Right Touch	LAT	1xEVDO(Rel. 0)	875	1753.75	23.0	23.0	1.170	1.170	0.748	0.748	
Right Tilt	LAT	1xEVDO(Rel. 0)	450	1732.50	23.0	23.0	0.541	0.541	0.339	0.339	

### 12.9.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rear	UAT	1xRTT(RC3, SO32)	5	450	1732.50	24.4	24.2	0.748	0.783	0.415	0.435	
Front	UAT	1xRTT(RC3, SO32)	5	450	1732.50	24.4	24.2	0.530	0.555	0.309	0.324	
Rear	LAT	1xRTT(RC3, SO32)	5	25	1711.25	19.5	19.5	0.993	0.993	0.521	0.521	
Rear	LAT	1xRTT(RC3, SO32)	5	450	1732.50	19.5	19.5	1.120	1.120	0.577	0.577	
Rear	LAT	1xRTT(RC3, SO32)	5	875	1753.75	19.5	19.5	1.170	1.170	0.591	0.591	22
Front	LAT	1xRTT(RC3, SO32)	5	25	1711.25	19.5	19.5	0.777	0.777	0.430	0.430	
Front	LAT	1xRTT(RC3, SO32)	5	450	1732.50	19.5	19.5	0.815	0.815	0.453	0.453	
Front	LAT	1xRTT(RC3, SO32)	5	875	1753.75	19.5	19.5	0.754	0.754	0.421	0.421	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	1xRTT(RC3, SO32)	5	450	1732.50	24.4	24.2	0.490	0.513	0.217	0.227	
Edge 2	UAT	1xRTT(RC3, SO32)	5	450	1732.50	24.4	24.2	0.112	0.117	0.061	0.064	
Edge 4	UAT	1xRTT(RC3, SO32)	5	450	1732.50	24.4	24.2	0.447	0.468	0.236	0.247	
Rear	UAT	1xEVDO(Rel. 0)	5	450	1732.50	24.4	24.2	0.696	0.729	0.388	0.406	
Front	UAT	1xEVDO(Rel. 0)	5	450	1732.50	24.4	24.2	0.500	0.524	0.294	0.308	
Edge 1	UAT	1xEVDO(Rel. 0)	5	450	1732.50	24.4	24.2	0.475	0.497	0.214	0.224	
Edge 2	UAT	1xEVDO(Rel. 0)	5	450	1732.50	24.4	24.2	0.112	0.117	0.060	0.063	
Edge 4	UAT	1xEVDO(Rel. 0)	5	450	1732.50	24.4	24.2	0.437	0.458	0.231	0.242	
Edge 2	LAT	1xRTT(RC3, SO32)	5	25	1711.25	19.5	19.5	0.796	0.796	0.421	0.421	
Edge 2	LAT	1xRTT(RC3, SO32)	5	450	1732.50	19.5	19.5	0.846	0.846	0.448	0.448	
Edge 2	LAT	1xRTT(RC3, SO32)	5	875	1753.75	19.5	19.5	0.844	0.844	0.446	0.446	
Edge 3	LAT	1xRTT(RC3, SO32)	5	25	1711.25	19.5	19.5	0.725	0.725	0.355	0.355	
Edge 3	LAT	1xRTT(RC3, SO32)	5	450	1732.50	19.5	19.5	0.791	0.791	0.388	0.388	
Edge 3	LAT	1xRTT(RC3, SO32)	5	875	1753.75	19.5	19.5	0.826	0.826	0.406	0.406	
Edge 4	LAT	1xRTT(RC3, SO32)	5	450	1732.50	19.5	19.5	0.059	0.059	0.031	0.031	
Rear	LAT	1xEVDO(Rel. 0)	5	25	1711.25	19.5	19.5	0.992	0.992	0.518	0.518	
Rear	LAT	1xEVDO(Rel. 0)	5	450	1732.50	19.5	19.5	1.030	1.030	0.537	0.537	
Rear	LAT	1xEVDO(Rel. 0)	5	875	1753.75	19.5	19.5	1.070	1.070	0.548	0.548	
Front	LAT	1xEVDO(Rel. 0)	5	25	1711.25	19.5	19.5	0.785	0.785	0.434	0.434	
Front	LAT	1xEVDO(Rel. 0)	5	450	1732.50	19.5	19.5	0.802	0.802	0.447	0.447	
Front	LAT	1xEVDO(Rel. 0)	5	875	1753.75	19.5	19.5	0.769	0.769	0.429	0.429	
Edge 2	LAT	1xEVDO(Rel. 0)	5	25	1711.25	19.5	19.5	0.789	0.789	0.420	0.420	
Edge 2	LAT	1xEVDO(Rel. 0)	5	450	1732.50	19.5	19.5	0.844	0.844	0.449	0.449	
Edge 2	LAT	1xEVDO(Rel. 0)	5	875	1753.75	19.5	19.5	0.849	0.849	0.447	0.447	
Edge 3	LAT	1xEVDO(Rel. 0)	5	25	1711.25	19.5	19.5	0.719	0.719	0.352	0.352	
Edge 3	LAT	1xEVDO(Rel. 0)	5	450	1732.50	19.5	19.5	0.787	0.787	0.385	0.385	
Edge 3	LAT	1xEVDO(Rel. 0)	5	875	1753.75	19.5	19.5	0.834	0.834	0.407	0.407	
Edge 4	LAT	1xEVDO(Rel. 0)	5	450	1732.50	19.5	19.5	0.061	0.061	0.030	0.030	

**Note(s):**

- 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
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.10. LTE Band 2 (20MHz Bandwidth)

### 12.10.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	18900	1880.0	1	49	22.5	0.698	0.698	0.367	0.367	
					50	24	21.3	0.548	0.548	0.289	0.289	
Left Tilt	UAT	QPSK	18900	1880.0	1	49	22.5	0.613	0.613	0.319	0.319	
					50	24	21.3	0.485	0.485	0.251	0.251	
Right Touch	UAT	QPSK	18700	1860.0	1	49	22.5	0.964	0.964	0.489	0.489	
			18900	1880.0	1	49	22.5	0.936	0.936	0.478	0.478	
					50	24	21.3	0.739	0.739	0.376	0.376	
					100	0	21.4	0.751	0.734	0.381	0.372	
19100	1900.0	1	49	22.5	0.962	0.962	0.486	0.486				
Right Tilt	UAT	QPSK	18900	1880.0	1	49	22.5	0.778	0.778	0.389	0.389	
					50	24	21.5	0.613	0.585	0.305	0.291	
Left Touch	LAT	QPSK	18900	1880.0	1	49	23.0	0.672	0.672	0.438	0.438	
					50	24	22.3	0.524	0.524	0.339	0.339	
Left Tilt	LAT	QPSK	18900	1880.0	1	49	23.0	0.341	0.341	0.205	0.205	
					50	24	22.3	0.266	0.266	0.161	0.161	
Right Touch	LAT	QPSK	18700	1860.0	1	49	23.0	1.180	1.180	0.710	0.710	23
					50	24	22.3	0.934	0.934	0.560	0.560	
			18900	1880.0	1	49	23.0	1.130	1.130	0.675	0.675	
					50	24	22.3	0.891	0.891	0.530	0.530	
					100	0	22.1	0.884	0.884	0.527	0.527	
			19100	1900.0	1	49	23.0	1.180	1.180	0.695	0.695	
50	24	22.1			0.957	0.957	0.565	0.565				
Right Tilt	LAT	QPSK	18900	1880.0	1	49	23.0	0.311	0.311	0.195	0.195	
					50	24	22.3	0.248	0.248	0.157	0.157	

### 12.10.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Rear	UAT	QPSK	5	18700	1860.0	1	49	22.20	0.931	0.942	0.484	0.490	
				18900	1880.0	1	49	22.25	0.812	0.812	0.413	0.413	
						50	24	21.25	0.633	0.633	0.322	0.322	
						100	0	21.25	0.641	0.641	0.327	0.327	
19100	1900.0	1	49	22.25	0.785	0.785	0.401	0.401					
Front	UAT	QPSK	5	18700	1860.0	1	49	22.20	0.793	0.802	0.436	0.441	
				18900	1880.0	1	49	22.25	0.925	0.925	0.509	0.509	
						50	24	21.25	0.727	0.727	0.401	0.401	
						100	0	21.25	0.720	0.720	0.398	0.398	
19100	1900.0	1	49	22.25	0.839	0.839	0.467	0.467					
Rear	LAT	QPSK	5	18700	1860.0	1	49	19.25	1.010	1.010	0.512	0.512	24
				18900	1880.0	1	49	19.25	0.957	0.957	0.486	0.486	
						50	24	18.25	0.773	0.773	0.388	0.388	
						100	0	18.25	0.778	0.778	0.393	0.393	
19100	1900.0	1	49	19.25	0.978	0.978	0.491	0.491					
Front	LAT	QPSK	5	18900	1880.0	1	49	19.25	0.590	0.590	0.361	0.361	
						50	24	18.25	0.469	0.469	0.288	0.288	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	18900	1880.0	1	49	22.3	0.619	0.619	0.257	0.257	
									50	24	21.3	0.497	0.497
Edge 2	UAT	QPSK	5	18900	1880.0	1	49	22.3	0.294	0.294	0.160	0.160	
									50	24	21.3	0.232	0.232
Edge 4	UAT	QPSK	5	18900	1880.0	1	49	22.3	0.775	0.775	0.413	0.413	
									50	24	21.3	0.647	0.647
Edge 2	LAT	QPSK	5	18900	1880.0	1	49	19.25	0.760	0.760	0.410	0.410	
									50	24	18.25	0.611	0.611
Edge 3	LAT	QPSK	5	18900	1880.0	1	49	19.25	0.485	0.485	0.228	0.228	
									50	24	18.25	0.387	0.387
Edge 4	LAT	QPSK	5	18900	1880.0	1	49	19.25	0.274	0.274	0.146	0.146	
									50	24	18.25	0.137	0.137

**Note(s):**

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.



## 12.11. LTE Band 4 (20MHz Bandwidth)

### 12.11.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	20175	1732.5	1	49	21.5	0.427	0.427	0.235	0.235	
								50	24	20.5	0.328	0.328
Left Tilt	UAT	QPSK	20175	1732.5	1	49	21.5	0.443	0.443	0.238	0.238	
								50	24	20.5	0.344	0.344
Right Touch	UAT	QPSK	20050	1720.0	1	49	21.5	0.682	0.682	0.361	0.361	
								50	24	20.5	0.532	0.532
Right Tilt	UAT	QPSK	20175	1732.5	1	49	21.5	0.494	0.494	0.261	0.261	
								50	24	20.5	0.383	0.383
Left Touch	LAT	QPSK	20050	1720.0	1	49	23.0	0.791	0.791	0.536	0.536	
					50	24	22.5	0.613	0.613	0.417	0.417	
			20175	1732.5	1	49	23.0	0.872	0.872	0.591	0.591	
					50	24	22.1	0.660	0.660	0.445	0.445	
			20300	1745.0	1	49	23.0	0.777	0.777	0.522	0.522	
					50	24	22.1	0.580	0.580	0.390	0.390	
Left Tilt	LAT	QPSK	20175	1732.5	1	49	23.0	0.542	0.542	0.322	0.322	
					50	24	22.1	0.415	0.415	0.246	0.246	
Right Touch	LAT	QPSK	20050	1720.0	1	49	23.0	0.936	0.936	0.584	0.584	
					50	24	21.9	0.786	0.786	0.487	0.487	
			20175	1732.5	1	49	23.0	1.100	1.100	0.690	0.690	25
					50	24	22.1	0.847	0.847	0.530	0.530	
			20300	1745.0	1	49	23.0	1.070	1.070	0.664	0.664	
					50	24	22.1	0.976	0.976	0.623	0.623	
Right Tilt	LAT	QPSK	20175	1732.5	1	49	23.0	0.554	0.554	0.343	0.343	
					50	24	22.1	0.422	0.422	0.259	0.259	

### 12.11.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Rear	UAT	QPSK	5	20175	1732.5	1	49	22.5	0.316	0.316	0.178	0.178	
									50	24	21.4	0.263	0.263
Front	UAT	QPSK	5	20175	1732.5	1	49	22.5	0.245	0.245	0.138	0.138	
									50	24	21.4	0.192	0.192
Rear	LAT	QPSK	5	20050	1720.0	1	49	19.0	0.969	0.969	0.516	0.516	
						50	24	18.0	0.758	0.758	0.402	0.402	
				20175	1732.5	1	49	19.0	1.080	1.080	0.575	0.575	
						50	24	18.0	0.832	0.832	0.441	0.441	
				20300	1745.0	1	49	19.0	1.140	1.140	0.602	0.602	26
						50	24	18.0	0.864	0.864	0.455	0.455	
Front	LAT	QPSK	5	20050	1720.0	1	49	19.0	0.810	0.810	0.455	0.455	
						50	24	18.0	0.640	0.640	0.358	0.358	
				20175	1732.5	1	49	19.0	0.926	0.926	0.524	0.524	
						50	24	18.0	0.659	0.659	0.371	0.371	
				20300	1745.0	1	49	19.0	0.802	0.802	0.457	0.457	
						50	24	18.0	0.628	0.628	0.357	0.357	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	20175	1732.5	1	49	22.5	0.252	0.252	0.114	0.114	
						50	24	21.4	0.203	0.203	0.092	0.092	
Edge 2	UAT	QPSK	5	20175	1732.5	1	49	22.5	0.032	0.032	0.017	0.017	
						50	24	21.4	0.024	0.024	0.013	0.013	
Edge 4	UAT	QPSK	5	20175	1732.5	1	49	22.5	0.259	0.259	0.137	0.137	
						50	24	21.4	0.200	0.200	0.105	0.105	
Edge 2	LAT	QPSK	5	20050	1720.0	1	49	19.0	0.761	0.761	0.409	0.409	
						50	24	18.0	0.585	0.585	0.313	0.313	
				20175	1732.5	1	49	19.0	0.900	0.900	0.480	0.480	
						50	24	18.0	0.677	0.677	0.362	0.362	
				20300	1745.0	1	49	19.0	0.824	0.824	0.442	0.442	
						50	24	18.0	0.644	0.644	0.345	0.345	
				20050	1720.0	1	49	19.0	0.773	0.773	0.381	0.381	
						50	24	18.0	0.599	0.599	0.294	0.294	
20175	1732.5	1	49	19.0	0.826	0.826	0.409	0.409					
		50	24	18.0	0.639	0.639	0.314	0.314					
20300	1745.0	1	49	19.0	0.815	0.815	0.403	0.403					
		50	24	18.0	0.613	0.613	0.303	0.303					
Edge 4	LAT	QPSK	5	20175	1732.5	1	49	19.0	0.099	0.099	0.053	0.053	
						50	24	18.0	0.078	0.078	0.042	0.042	

Note(s):

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.12. LTE Band 5 (10MHz Bandwidth)

### 12.12.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	20525	836.6	1	24	23.6	0.466	0.477	0.293	0.300	27
								25	12	22.7	0.363	
Left Tilt	UAT	QPSK	20525	836.6	1	24	23.6	0.399	0.408	0.215	0.220	
								25	12	22.7	0.317	
Right Touch	UAT	QPSK	20525	836.6	1	24	23.6	0.396	0.405	0.248	0.254	
								25	12	22.7	0.308	
Right Tilt	UAT	QPSK	20525	836.6	1	24	23.6	0.300	0.307	0.167	0.171	
								25	12	22.7	0.235	
Left Touch	LAT	QPSK	20525	836.6	1	24	24.0	0.425	0.425	0.324	0.324	
								25	12	23.0	0.342	
Left Tilt	LAT	QPSK	20525	836.6	1	24	24.0	0.220	0.220	0.167	0.167	
								25	12	23.0	0.176	
Right Touch	LAT	QPSK	20525	836.6	1	24	24.0	0.402	0.402	0.296	0.296	
								25	12	23.0	0.324	
Right Tilt	LAT	QPSK	20525	836.6	1	24	24.0	0.232	0.232	0.176	0.176	
								25	12	23.0	0.186	

### 12.12.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Rear	UAT	QPSK	5	20525	836.6	1	24	23.7	0.282	0.282	0.158	0.158	
									25	12	22.6	0.221	
Front	UAT	QPSK	5	20525	836.6	1	24	23.7	0.211	0.211	0.120	0.120	
									25	12	22.6	0.175	
Front	LAT	QPSK	5	20525	836.6	1	24	24.0	0.774	0.774	0.482	0.482	28
									25	12	23.0	0.613	
Front	LAT	QPSK	5	20525	836.6	1	24	24.0	0.606	0.606	0.453	0.453	
									25	12	23.0	0.484	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	20525	836.6	1	24	23.7	0.171	0.171	0.078	0.078	
						25	12	22.6	0.130	0.130	0.060	0.060	
Edge 2	UAT	QPSK	5	20525	836.6	1	24	23.7	0.079	0.079	0.050	0.050	
						25	12	22.6	0.062	0.062	0.039	0.039	
Edge 4	UAT	QPSK	5	20525	836.6	1	24	23.7	0.252	0.252	0.165	0.165	
						25	12	22.6	0.200	0.200	0.131	0.131	
Edge 2	LAT	QPSK	5	20525	836.6	1	24	24.0	0.379	0.379	0.242	0.242	
						25	12	23.0	0.297	0.297	0.190	0.190	
Edge 3	LAT	QPSK	5	20525	836.6	1	24	24.0	0.215	0.215	0.107	0.107	
						25	12	23.0	0.169	0.169	0.084	0.084	
Edge 4	LAT	QPSK	5	20525	836.6	1	24	24.0	0.710	0.710	0.469	0.469	
						25	12	23.0	0.565	0.565	0.372	0.372	

**Note(s):**

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are  $\geq 0.8$  W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation  $< 1.45$  W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is  $< 1.45$  W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is  $< 1.45$  W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is  $> 1.2$  W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

### 12.13. LTE Band 13 (10MHz Bandwidth)

#### 12.13.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	23230	782.0	1	24	23.7	0.467	0.467	0.337	0.337	
								25	12	22.6	0.360	0.360
Left Tilt	UAT	QPSK	23230	782.0	1	24	23.7	0.418	0.418	0.258	0.258	
								25	12	22.6	0.328	0.328
Right Touch	UAT	QPSK	23230	782.0	1	24	23.7	0.326	0.326	0.204	0.204	
								25	12	22.6	0.257	0.257
Right Tilt	UAT	QPSK	23230	782.0	1	24	23.7	0.321	0.321	0.191	0.191	
								25	12	22.6	0.253	0.253
Left Touch	LAT	QPSK	23230	782.0	1	24	24.0	0.467	0.467	0.353	0.353	
								25	12	23.0	0.359	0.359
Left Tilt	LAT	QPSK	23230	782.0	1	24	24.0	0.322	0.322	0.242	0.242	
								25	12	23.0	0.246	0.246
Right Touch	LAT	QPSK	23230	782.0	1	24	24.0	0.536	0.536	0.375	0.375	29
								25	12	23.0	0.414	0.414
Right Tilt	LAT	QPSK	23230	782.0	1	24	24.0	0.338	0.338	0.254	0.254	
								25	12	23.0	0.263	0.263

#### 12.13.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

##### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.			
									Meas.	Scaled	Meas.	Scaled				
Rear	UAT	QPSK	5	23230	782.0	1	24	23.7	0.286	0.286	0.165	0.165				
									25	12	22.7	0.225	0.225	0.131	0.131	
Front	UAT	QPSK	5	23230	782.0	1	24	23.7	0.262	0.262	0.149	0.149				
									25	12	22.7	0.205	0.205	0.116	0.116	
Rear	LAT	QPSK	5	23230	782.0	1	24	24.0	0.932	0.932	0.567	0.567	30			
									25	12	22.9	0.718	0.718	0.436	0.436	
									50	0	22.9	0.710	0.710	0.433	0.433	
Front	LAT	QPSK	5	23230	782.0	1	24	24.0	0.633	0.633	0.458	0.458				
									25	12	22.9	0.489	0.489	0.350	0.350	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	23230	782.0	1	24	23.7	0.267	0.267	0.126	0.126	
						25	12	22.7	0.209	0.209	0.099	0.099	
Edge 2	UAT	QPSK	5	23230	782.0	1	24	23.7	0.368	0.368	0.242	0.242	
						25	12	22.7	0.290	0.290	0.190	0.190	
Edge 4	UAT	QPSK	5	23230	782.0	1	24	23.7	0.075	0.075	0.042	0.042	
						25	12	22.7	0.058	0.058	0.032	0.032	
Edge 2	LAT	QPSK	5	23230	782.0	1	24	24.0	0.345	0.345	0.225	0.225	
						25	12	22.9	0.266	0.266	0.173	0.173	
Edge 3	LAT	QPSK	5	23230	782.0	1	24	24.0	0.342	0.342	0.169	0.169	
						25	12	22.9	0.270	0.270	0.134	0.134	
Edge 4	LAT	QPSK	5	23230	782.0	1	24	24.0	0.736	0.736	0.489	0.489	
						25	12	22.9	0.569	0.569	0.377	0.377	

**Note(s):**

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.14. LTE Band 17 (10MHz Bandwidth)

### 12.14.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	23790	710.0	1	24	23.7	0.578	0.578	0.425	0.425	31
								25	12	22.6	0.457	
Left Tilt	UAT	QPSK	23790	710.0	1	24	23.7	0.469	0.469	0.269	0.269	
								25	12	22.6	0.376	
Right Touch	UAT	QPSK	23790	710.0	1	24	23.7	0.524	0.524	0.314	0.314	
								25	12	22.6	0.421	
Right Tilt	UAT	QPSK	23790	710.0	1	24	23.7	0.497	0.497	0.277	0.277	
								25	12	22.6	0.396	
Left Touch	LAT	QPSK	23790	710.0	1	24	24.0	0.385	0.385	0.295	0.295	
								25	12	22.8	0.365	
Left Tilt	LAT	QPSK	23790	710.0	1	24	24.0	0.215	0.215	0.165	0.165	
								25	12	22.8	0.205	
Right Touch	LAT	QPSK	23790	710.0	1	24	24.0	0.423	0.423	0.303	0.303	
								25	12	22.8	0.398	
Right Tilt	LAT	QPSK	23790	710.0	1	24	24.0	0.217	0.217	0.168	0.168	
								25	12	22.8	0.208	

### 12.14.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.			
									Meas.	Scaled	Meas.	Scaled				
Rear	UAT	QPSK	5	23790	710.0	1	24	23.7	0.289	0.289	0.169	0.169				
									25	12	22.7	0.258		0.258	0.175	0.175
Front	UAT	QPSK	5	23790	710.0	1	24	23.7	0.266	0.266	0.157	0.157				
									25	12	22.7	0.206		0.206	0.121	0.121
Rear	LAT	QPSK	5	23790	710.0	1	24	24.0	0.830	0.830	0.529	0.529	32			
									25	12	23.0	0.651		0.651	0.414	0.414
									50	0	22.9	0.641		0.656	0.401	0.410
Front	LAT	QPSK	5	23790	710.0	1	24	24.0	0.569	0.569	0.422	0.422				
									25	12	23.0	0.447		0.447	0.331	0.331

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	23790	710.0	1	24	23.7	0.211	0.211	0.102	0.102	
						25	12	22.7	0.163	0.163	0.079	0.079	
Edge 2	UAT	QPSK	5	23790	710.0	1	24	23.7	0.209	0.209	0.136	0.136	
						25	12	22.7	0.165	0.165	0.108	0.108	
Edge 4	UAT	QPSK	5	23790	710.0	1	24	23.7	0.110	0.110	0.068	0.068	
						25	12	22.7	0.085	0.085	0.053	0.053	
Edge 2	LAT	QPSK	5	23790	710.0	1	24	24.0	0.438	0.438	0.286	0.286	
						25	12	23.0	0.346	0.346	0.226	0.226	
Edge 3	LAT	QPSK	5	23790	710.0	1	24	24.0	0.329	0.329	0.163	0.163	
						25	12	23.0	0.255	0.255	0.126	0.126	
Edge 4	LAT	QPSK	5	23790	710.0	1	24	24.0	0.585	0.585	0.397	0.397	
						25	12	23.0	0.459	0.459	0.311	0.311	

**Note(s):**

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.



## 12.15. LTE Band 25 (20MHz Bandwidth)

### 12.15.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	26365	1882.5	1	49	22.5	0.488	0.488	0.254	0.254	
					50	24	21.5	0.418	0.418	0.216	0.216	
Left Tilt	UAT	QPSK	26365	1882.5	1	49	22.5	0.508	0.508	0.262	0.262	
					50	24	21.5	0.407	0.407	0.209	0.209	
Right Touch	UAT	QPSK	26140	1860.0	1	49	22.5	0.805	0.805	0.416	0.416	
			26365	1882.5	1	49	22.5	0.855	0.855	0.440	0.440	
					50	24	21.5	0.675	0.675	0.347	0.347	
			100	0	21.4	0.674	0.690	0.346	0.354			
26590	1905.0	1	49	22.4	0.856	0.876	0.444	0.454				
		1	49	22.5	0.657	0.657	0.340	0.340				
Right Tilt	UAT	QPSK	26365	1882.5	1	49	22.5	0.657	0.657	0.340	0.340	
					50	24	21.5	0.517	0.517	0.269	0.269	
Left Touch	LAT	QPSK	26365	1882.5	1	49	23.0	0.585	0.585	0.309	0.309	
					50	24	22.5	0.444	0.444	0.236	0.236	
Left Tilt	LAT	QPSK	26365	1882.5	1	49	23.0	0.487	0.487	0.259	0.259	
					50	24	22.5	0.376	0.376	0.199	0.199	
Right Touch	LAT	QPSK	26140	1860.0	1	49	23.0	1.180	1.180	0.731	0.731	33
					50	24	22.7	0.991	0.991	0.613	0.613	
			26365	1882.5	1	49	23.0	1.140	1.140	0.704	0.704	
					50	24	22.5	0.955	0.955	0.586	0.586	
			100	0	22.1	0.914	0.914	0.564	0.564			
					1	49	23.0	1.150	1.150	0.695	0.695	
26590	1905.0	50	24	22.5	0.931	0.931	0.565	0.565				
		1	49	23.0	0.637	0.637	0.315	0.315				
Right Tilt	LAT	QPSK	26365	1882.5	1	49	23.0	0.637	0.637	0.315	0.315	
					50	24	22.5	0.486	0.486	0.241	0.241	

### 12.15.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Rear	UAT	QPSK	5	26140	1860.0	1	49	23.20	0.946	0.957	0.506	0.512	
				26365	1882.5	1	49	23.25	0.819	0.819	0.435	0.435	
						50	24	22.01	0.657	0.657	0.346	0.346	
				100	0	21.98	0.648	0.648	0.344	0.344			
26590	1905.0	1	49	23.20	0.954	0.965	0.510	0.516					
		1	49	23.25	0.608	0.608	0.331	0.331					
Front	UAT	QPSK	5	26365	1882.5	1	49	23.25	0.608	0.608	0.331	0.331	
						50	24	22.01	0.438	0.438	0.239	0.239	
Rear	LAT	QPSK	5	26140	1860.0	1	49	19.25	1.100	1.100	0.559	0.559	34
						1	49	19.25	0.955	0.955	0.486	0.486	
				26365	1882.5	50	24	18.25	0.789	0.789	0.402	0.402	
						100	0	18.25	0.788	0.788	0.398	0.398	
26590	1905.0	1	49	19.10	0.916	0.948	0.465	0.481					
		1	49	19.25	0.489	0.489	0.297	0.297					
Front	LAT	QPSK	5	26365	1882.5	1	49	19.25	0.489	0.489	0.297	0.297	
						50	24	18.25	0.407	0.407	0.248	0.248	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	26365	1882.5	1	49	23.25	0.777	0.777	0.325	0.325	
						50	24	22.01	0.599	0.599	0.250	0.250	
Edge 2	UAT	QPSK	5	26365	1882.5	1	49	23.25	0.332	0.332	0.179	0.179	
						50	24	22.01	0.245	0.245	0.134	0.134	
Edge 4	UAT	QPSK	5	26140	1860.0	1	49	23.20	0.812	0.821	0.418	0.423	
				26365	1882.5	1	49	23.25	0.853	0.853	0.453	0.453	
						50	24	22.01	0.672	0.672	0.354	0.354	
				26590	1905.0	1	49	23.20	0.788	0.797	0.416	0.421	
Edge 2	LAT	QPSK	5	26365	1882.5	1	49	19.25	0.535	0.535	0.289	0.289	
						50	24	18.25	0.449	0.449	0.240	0.240	
Edge 3	LAT	QPSK	5	26365	1882.5	1	49	19.25	0.465	0.465	0.220	0.220	
						50	24	18.25	0.289	0.289	0.137	0.137	
Edge 4	LAT	QPSK	5	26365	1882.5	1	49	19.25	0.144	0.144	0.079	0.079	
						50	24	18.25	0.119	0.119	0.064	0.064	

**Note(s):**

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.16. LTE Band 26 (15MHz Bandwidth)

### 12.16.1. Head Exposure Conditions

Test Position	Antenna	Mode	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Meas.	Scaled	Meas.	Scaled	
Left Touch	UAT	QPSK	26763	821.3	1	12	23.7	0.582	0.582	0.417	0.417	35
								0.467	0.467	0.334	0.334	
Left Tilt	UAT	QPSK	26763	821.3	1	12	23.7	0.403	0.403	0.229	0.229	
								0.317	0.317	0.180	0.180	
Right Touch	UAT	QPSK	26763	821.3	1	12	23.7	0.293	0.293	0.175	0.175	
								0.239	0.239	0.142	0.142	
Right Tilt	UAT	QPSK	26763	821.3	1	12	23.7	0.229	0.229	0.125	0.125	
								0.185	0.185	0.101	0.101	
Left Touch	LAT	QPSK	26763	821.3	1	12	24.0	0.409	0.409	0.308	0.308	
								0.399	0.399	0.300	0.300	
Left Tilt	LAT	QPSK	26763	821.3	1	12	24.0	0.283	0.283	0.215	0.215	
								0.242	0.242	0.184	0.184	
Right Touch	LAT	QPSK	26763	821.3	1	12	24.0	0.435	0.435	0.319	0.319	
								0.416	0.416	0.305	0.305	
Right Tilt	LAT	QPSK	26763	821.3	1	12	24.0	0.278	0.278	0.209	0.209	
								0.268	0.268	0.202	0.202	

### 12.16.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Rear	UAT	QPSK	5	26763	821.3	1	12	23.7	0.289	0.289	0.163	0.163	
									0.230	0.230	0.130	0.130	
Front	UAT	QPSK	5	26763	821.3	1	12	23.7	0.220	0.220	0.125	0.125	
									0.174	0.174	0.099	0.099	
Rear	LAT	QPSK	5	26763	821.3	1	12	24.0	0.609	0.609	0.403	0.403	36
									0.493	0.493	0.302	0.302	
Front	LAT	QPSK	5	26763	821.3	1	37	24.0	0.516	0.516	0.398	0.398	
									0.424	0.424	0.328	0.328	

Hotspot Mode Exposure Conditions

Test Position	Antenna	Mode	Dist. (mm)	UL Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Meas. Pwr (dBm)	1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Meas.	Scaled	Meas.	Scaled	
Edge 1	UAT	QPSK	5	26763	821.3	1	12	23.7	0.183	0.183	0.086	0.086	
									12	6	23.1	0.174	0.174
Edge 2	UAT	QPSK	5	26763	821.3	1	12	23.7	0.328	0.328	0.219	0.219	
									12	6	23.1	0.264	0.264
Edge 4	UAT	QPSK	5	26763	821.3	1	12	23.7	0.119	0.119	0.076	0.076	
									12	6	23.1	0.099	0.099
Edge 2	LAT	QPSK	5	26763	821.3	1	12	24.0	0.461	0.461	0.299	0.299	
									12	6	23.0	0.378	0.378
Edge 3	LAT	QPSK	5	26763	821.3	1	12	24.0	0.155	0.155	0.077	0.077	
									12	6	23.0	0.133	0.133
Edge 4	LAT	QPSK	5	26763	821.3	1	12	24.0	0.691	0.691	0.455	0.455	37
									12	6	23.0	0.539	0.539

**Note(s):**

- 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
- Per KDB 941225 D05 SAR for LTE Devices v02, SAR test reduction is applied using the following criteria:
  - Testing for Low and High Channel is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
  - Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are ≥ 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
  - Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
  - Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- With headset attached. According to KDB 648474 Section 2.3, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

## 12.17. Wi-Fi (DTS Band)

### 12.17.1. Head Exposure Conditions

WiFi Vendor	Band	Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	2.4GHz	Left Touch	802.11b	6	2437	14.5	14.5	0.194	0.194	0.099	0.099	38
		Left Tilt	802.11b	6	2437	14.5	14.5	0.137	0.137	0.066	0.066	
		Right Touch	802.11b	6	2437	14.5	14.5	0.564	<b>0.564</b>	0.255	0.255	
		Right Tilt	802.11b	6	2437	14.5	14.5	0.386	0.386	0.171	0.171	
Vendor B	2.4GHz	Left Touch	802.11b	6	2437	14.5	14.5	0.200	0.200	0.103	0.103	
		Left Tilt	802.11b	6	2437	14.5	14.5	0.132	0.132	0.064	0.064	
		Right Touch	802.11b	6	2437	14.5	14.5	0.517	0.517	0.240	0.240	
		Right Tilt	802.11b	6	2437	14.5	14.5	0.336	0.336	0.154	0.154	
Vendor C	2.4GHz	Left Touch	802.11b	6	2437	14.5	14.5	0.194	0.194	0.101	0.101	
		Left Tilt	802.11b	6	2437	14.5	14.5	0.121	0.121	0.060	0.060	
		Right Touch	802.11b	6	2437	14.5	14.5	0.519	0.519	0.237	0.237	
		Right Tilt	802.11b	6	2437	14.5	14.5	0.313	0.313	0.142	0.142	
Vendor A	5.8GHz	Left Touch	802.11a	157	5785	15.0	15.0	0.310	0.310	0.096	0.096	
		Left Tilt	802.11a	157	5785	15.0	15.0	0.339	0.339	0.101	0.101	
		Right Touch	802.11a	157	5785	15.0	15.0	0.272	0.272	0.072	0.072	
		Right Tilt	802.11a	157	5785	15.0	15.0	0.307	0.307	0.063	0.063	
Vendor B	5.8GHz	Left Touch	802.11a	157	5785	15.0	15.0	0.339	0.339	0.086	0.086	
		Left Tilt	802.11a	157	5785	15.0	15.0	0.327	0.327	0.082	0.082	
		Right Touch	802.11a	157	5785	15.0	15.0	0.432	0.432	0.111	0.111	
		Right Tilt	802.11a	157	5785	15.0	15.0	0.407	0.407	0.098	0.098	
Vendor C	5.8GHz	Left Touch	802.11a	157	5785	15.0	15.0	0.242	0.242	0.059	0.059	
		Left Tilt	802.11a	157	5785	15.0	15.0	0.263	0.263	0.064	0.064	
		Right Touch	802.11a	157	5785	15.0	15.0	0.295	0.295	0.066	0.066	
		Right Tilt	802.11a	157	5785	15.0	15.0	0.273	0.273	0.069	0.069	

### 12.17.2. Body-worn Accessory & Hotspot Mode Exposure Conditions

#### Body-worn Accessory & Hotspot Mode Exposure Conditions

WiFi Vendor	Band	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	2.4GHz	Rear	802.11b	5	6	2437	14.5	14.5	0.503	0.503	0.220	0.220	
		Front	802.11b	5	6	2437	14.5	14.5	0.270	0.270	0.129	0.129	
Vendor B	2.4GHz	Rear	802.11b	5	6	2437	14.5	14.5	0.514	<b>0.514</b>	0.223	0.223	40
		Front	802.11b	5	6	2437	14.5	14.5	0.200	0.200	0.103	0.103	
Vendor C	2.4GHz	Rear	802.11b	5	6	2437	14.5	14.5	0.509	0.509	0.217	0.217	
		Front	802.11b	5	6	2437	14.5	14.5	0.233	0.233	0.112	0.112	

#### Body-worn Accessory Exposure Conditions

WiFi Vendor	Band	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	5.8GHz	Rear	802.11a	5	157	5785	15.0	15.0	0.579	<b>0.579</b>	0.165	0.165	41
		Front	802.11a	5	157	5785	15.0	15.0	0.123	0.123	0.035	0.035	
Vendor B	5.8GHz	Rear	802.11a	5	157	5785	15.0	15.0	0.556	0.556	0.143	0.143	
		Front	802.11a	5	157	5785	15.0	15.0	0.123	0.123	0.322	0.322	
Vendor C	5.8GHz	Rear	802.11a	5	157	5785	15.0	15.0	0.497	0.497	0.133	0.133	
		Front	802.11a	5	157	5785	15.0	15.0	0.121	0.121	0.033	0.033	

Hotspot Mode Exposure Conditions

WiFi Vendor	Band	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	2.4GHz	Edge 1	802.11b	5	6	2437	14.5	14.5	0.155	0.155	0.070	0.070	
		Edge 2	802.11b	5	6	2437	14.5	14.5	0.019	0.019	0.007	0.007	
		Edge 4	802.11b	5	6	2437	14.5	14.5	0.317	0.317	0.153	0.153	
Vendor B	2.4GHz	Edge 1	802.11b	5	6	2437	14.5	14.5	0.123	0.123	0.056	0.056	
		Edge 2	802.11b	5	6	2437	14.5	14.5	0.024	0.024	0.008	0.008	
		Edge 4	802.11b	5	6	2437	14.5	14.5	0.310	0.310	0.150	0.150	
Vendor C	2.4GHz	Edge 1	802.11b	5	6	2437	14.5	14.5	0.144	0.144	0.066	0.066	
		Edge 2	802.11b	5	6	2437	14.5	14.5	0.016	0.016	0.005	0.005	
		Edge 4	802.11b	5	6	2437	14.5	14.5	0.322	0.322	0.159	0.159	

**Note(s):**

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz

## 12.18. Wi-Fi (UNII Band)

### 12.18.1. Head Exposure Conditions

WiFi Vendor	Band	Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	5.2GHz	Left Touch	802.11a	48	5240	14.0	14.0	0.117	0.117	0.034	0.034	
		Left Tilt	802.11a	48	5240	14.0	14.0	0.104	0.104	0.028	0.028	
		Right Touch	802.11a	48	5240	14.0	14.0	0.341	0.341	0.079	0.079	42
		Right Tilt	802.11a	48	5240	14.0	14.0	0.180	0.180	0.041	0.041	
	5.3GHz	Left Touch	802.11a	52	5260	15.0	15.0	0.181	0.181	0.055	0.055	
		Left Tilt	802.11a	52	5260	15.0	15.0	0.138	0.138	0.038	0.038	
		Right Touch	802.11a	52	5260	15.0	15.0	0.381	0.381	0.096	0.096	43
		Right Tilt	802.11a	52	5260	15.0	15.0	0.296	0.296	0.067	0.067	
	5.5GHz	Left Touch	802.11a	104	5520	15.5	15.5	0.412	0.412	0.116	0.116	
				116	5580	15.5	15.5	0.225	0.225	0.084	0.084	
				124	5620	15.5	15.5	0.285	0.285	0.085	0.085	
				136	5680	15.5	15.5	0.260	0.260	0.077	0.077	
		Left Tilt	802.11a	104	5520	15.5	15.5	0.452	0.452	0.134	0.134	
				116	5580	15.5	15.5	0.320	0.320	0.097	0.097	
				124	5620	15.5	15.5	0.419	0.419	0.124	0.124	
				136	5680	15.5	15.5	0.384	0.384	0.111	0.111	
		Right Touch	802.11a	104	5520	15.5	15.5	0.560	<b>0.560</b>	0.128	0.128	44
				116	5580	15.5	15.5	0.521	0.521	0.120	0.120	
				124	5620	15.5	15.5	0.472	0.472	0.113	0.113	
				136	5680	15.5	15.5	0.429	0.429	0.107	0.107	
		Right Tilt	802.11a	104	5520	15.5	15.5	0.515	0.515	0.147	0.147	
				116	5580	15.5	15.5	0.556	0.556	0.127	0.127	
				124	5620	15.5	15.5	0.471	0.471	0.121	0.121	
				136	5680	15.5	15.5	0.350	0.350	0.095	0.095	

WiFi Vendor	Band	Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor B	5.2GHz	Left Touch	802.11a	48	5240	14.0	14.0	0.206	0.206	0.052	0.052	
		Left Tilt	802.11a	48	5240	14.0	14.0	0.102	0.102	0.024	0.024	
		Right Touch	802.11a	48	5240	14.0	14.0	0.207	0.207	0.057	0.057	
		Right Tilt	802.11a	48	5240	14.0	14.0	0.144	0.144	0.037	0.037	
	5.3GHz	Left Touch	802.11a	52	5260	15.0	15.0	0.328	0.328	0.091	0.091	
		Left Tilt	802.11a	52	5260	15.0	15.0	0.240	0.240	0.061	0.061	
		Right Touch	802.11a	52	5260	15.0	15.0	0.339	0.339	0.108	0.108	
		Right Tilt	802.11a	52	5260	15.0	15.0	0.217	0.217	0.058	0.058	
	5.5GHz	Left Touch	802.11a	104	5520	15.5	15.5	0.249	0.249	0.070	0.070	
				116	5580	15.5	15.5	0.339	0.339	0.100	0.100	
				124	5620	15.5	15.5	0.394	0.394	0.115	0.115	
				136	5680	15.5	15.5	0.359	0.359	0.095	0.095	
		Left Tilt	802.11a	104	5520	15.5	15.5	0.317	0.317	0.092	0.092	
				116	5580	15.5	15.5	0.233	0.233	0.068	0.068	
				124	5620	15.5	15.5	0.291	0.291	0.086	0.086	
				136	5680	15.5	15.5	0.387	0.387	0.110	0.110	
		Right Touch	802.11a	104	5520	15.5	15.5	0.315	0.315	0.092	0.092	
				116	5580	15.5	15.5	0.398	0.398	0.101	0.101	
				124	5620	15.5	15.5	0.476	0.476	0.129	0.129	
				136	5680	15.5	15.5	0.368	0.368	0.102	0.102	
Right Tilt	802.11a	104	5520	15.5	15.5	0.365	0.365	0.099	0.099			
		116	5580	15.5	15.5	0.421	0.421	0.114	0.114			
		124	5620	15.5	15.5	0.427	0.427	0.114	0.114			
		136	5680	15.5	15.5	0.359	0.359	0.095	0.095			
WiFi Vendor	Band	Test Position	Mode	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor C	5.2GHz	Left Touch	802.11a	48	5240	14.0	14.0	0.150	0.150	0.040	0.040	
		Left Tilt	802.11a	48	5240	14.0	14.0	0.123	0.123	0.031	0.031	
		Right Touch	802.11a	48	5240	14.0	14.0	0.304	0.304	0.069	0.069	
		Right Tilt	802.11a	48	5240	14.0	14.0	0.179	0.179	0.041	0.041	
	5.3GHz	Left Touch	802.11a	52	5260	15.0	15.0	0.114	0.114	0.031	0.031	
		Left Tilt	802.11a	52	5260	15.0	15.0	0.147	0.147	0.036	0.036	
		Right Touch	802.11a	52	5260	15.0	15.0	0.330	0.330	0.073	0.073	
		Right Tilt	802.11a	52	5260	15.0	15.0	0.197	0.197	0.044	0.044	
	5.5GHz	Left Touch	802.11a	104	5520	15.5	15.5	0.451	0.451	0.129	0.129	
				116	5580	15.5	15.5	0.434	0.434	0.116	0.116	
				124	5620	15.5	15.5	0.456	0.456	0.124	0.124	
				136	5680	15.5	15.5	0.477	0.477	0.135	0.135	
		Left Tilt	802.11a	104	5520	15.5	15.5	0.409	0.409	0.112	0.112	
				116	5580	15.5	15.5	0.444	0.444	0.124	0.124	
				124	5620	15.5	15.5	0.429	0.429	0.120	0.120	
				136	5680	15.5	15.5	0.397	0.397	0.113	0.113	
		Right Touch	802.11a	104	5520	15.5	15.5	0.492	0.492	0.137	0.137	
				116	5580	15.5	15.5	0.437	0.437	0.123	0.123	
				124	5620	15.5	15.5	0.439	0.439	0.120	0.120	
				136	5680	15.5	15.5	0.447	0.447	0.121	0.121	
Right Tilt	802.11a	104	5520	15.5	15.5	0.440	0.440	0.114	0.114			
		116	5580	15.5	15.5	0.445	0.445	0.120	0.120			
		124	5620	15.5	15.5	0.388	0.388	0.108	0.108			
		136	5680	15.5	15.5	0.327	0.327	0.091	0.091			



**12.18.2. Body-worn Accessory Exposure Conditions**

WiFi Vendor	Band	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	5.2GHz	Rear	802.11a	5	48	5240	14.0	14.0	0.421	0.421	0.104	0.104	45
		Front	802.11a	5	48	5240	14.0	14.0	0.082	0.082	0.021	0.021	
	5.3GHz	Rear	802.11a	5	52	5260	15.0	15.0	0.450	0.450	0.118	0.118	46
		Front	802.11a	5	52	5260	15.0	15.0	0.094	0.094	0.027	0.027	
	5.5GHz	Rear	802.11a	5	104	5520	15.5	15.5	0.437	0.437	0.141	0.141	
					116	5580	15.5	15.5	0.523	0.523	0.163	0.163	
					124	5620	15.5	15.5	0.453	0.453	0.153	0.153	
					136	5680	15.5	15.5	0.580	0.580	0.172	0.172	
	Front	802.11a	5	124	5620	15.5	15.5	0.197	0.197	0.076	0.076		
	Vendor B	5.2GHz	Rear	802.11a	5	48	5240	14.0	14.0	0.259	0.259	0.064	0.064
Front			802.11a	5	48	5240	14.0	14.0	0.056	0.056	0.016	0.016	
5.3GHz		Rear	802.11a	5	52	5260	15.0	15.0	0.394	0.394	0.100	0.100	
		Front	802.11a	5	52	5260	15.0	15.0	0.109	0.109	0.031	0.031	
5.5GHz		Rear	802.11a	5	104	5520	15.5	15.5	0.407	0.407	0.133	0.133	
					116	5580	15.5	15.5	0.399	0.399	0.132	0.132	
					124	5620	15.5	15.5	0.499	0.499	0.156	0.156	
					136	5680	15.5	15.5	0.473	0.473	0.146	0.146	
Front	802.11a	5	124	5620	15.5	15.5	0.174	0.174	0.063	0.063			
Vendor C	5.2GHz	Rear	802.11a	5	48	5240	14.0	14.0	0.362	0.362	0.097	0.097	
		Front	802.11a	5	48	5240	14.0	14.0	0.073	0.073	0.017	0.017	
	5.3GHz	Rear	802.11a	5	52	5260	15.0	15.0	0.390	0.390	0.107	0.107	
		Front	802.11a	5	52	5260	15.0	15.0	0.101	0.101	0.024	0.024	
	5.5GHz	Rear	802.11a	5	104	5520	15.5	15.5	0.459	0.459	0.144	0.144	
					116	5580	15.5	15.5	0.539	0.539	0.172	0.172	
					124	5620	15.5	15.5	0.521	0.521	0.163	0.163	
					136	5680	15.5	15.5	0.589	<b>0.589</b>	0.178	0.178	47
Front	802.11a	5	124	5620	15.5	15.5	0.151	0.151	0.053	0.053			

**Note(s):**

- 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

## 12.19. Bluetooth (DTS Band)

### 12.19.1. Body-worn Accessory Exposure Considerations

WiFi Vendor	Test Position	Mode	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Vendor A	Rear	GFSK	5	39	2441	12.0	11.6	0.016	0.018	0.004	0.005	
	Front	GFSK	5	39	2441	12.0	11.6	0.011	0.012	0.004	0.004	
Vendor B	Rear	GFSK	5	39	2441	12.0	11.7	0.015	0.016	0.005	0.005	
	Front	GFSK	5	39	2441	12.0	11.7	0.011	0.012	0.004	0.004	
Vendor C	Rear	GFSK	5	39	2441	12.0	11.4	0.016	0.018	0.004	0.005	48
	Front	GFSK	5	39	2441	12.0	11.4	0.012	0.014	0.004	0.004	

#### Note(s):

- 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:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  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
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz

### 13. SAR Measurement Variability

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

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

#### 13.1. The Highest Measured SAR Configuration in Each Frequency Band

Freq. Band (MHz)	Air Interface	Head	Body-worn Accessory	Hotspot
850	GSM 850			1.170 W/kg
	CDMA BC0			
	CDMA BC10			
	W-CDMA Band 5			
	LTE Band 5			
	LTE Band 26			
1900	GSM 1900			
	CDMA BC1		1.180 W/kg	
	W-CDMA Band 2	1.180 W/kg		
	LTE Band 2	1.180 W/kg		
1700	LTE Band 25	1.180 W/kg		
	CDMA BC15	1.180 W/kg		
	W-CDMA Band 4			
700	LTE Band 4			
	LTE Band 13		0.932 W/kg	
2400	LTE Band 17			
	WiFi 802.11b/g/n	< 0.80 W/kg	< 0.80 W/kg	< 0.80 W/kg
5000	Bluetooth	< 0.80 W/kg	< 0.80 W/kg	< 0.80 W/kg
	WiFi 802.11a/n	< 0.80 W/kg	< 0.80 W/kg	< 0.80 W/kg

### 13.2. Repeated Measurement Results

#### Head Exposure Condition

Frequency band	Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio	Note
						Original	Repeated		
WCDMA Band 2	Right Touch	LAT	Rel. 99 RMC	9262	1852.4	1.180	1.080	1.09	1
LTE Band 2	Right Touch	LAT	QPSK RB1/49	18700	1860.0	1.180	1.090	1.08	1
LTE Band 25	Right Touch	LAT	QPSK RB1/49	26140	1860.0	1.180	1.170	1.01	1
CDMA BC15	Right Touch	LAT	1xEVDO Rel. 0	450	1732.5	1.180	1.120	1.05	1

#### Body-worn Accessory Exposure Condition

Frequency band	Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio	Note
						Original	Repeated		
CDMA BC1	Rear	LAT	1xRTT (RC3, SO32)	600	1880.0	1.180	1.140	1.04	1
LTE Band 13	Rear	LAT	QPSK RB1/24	23230	782.0	0.932	0.911	1.02	1

#### Hotspot Mode Exposure Conditions

Frequency band	Test Position	Antenna	Mode	Ch #.	Freq. (MHz)	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio	Note
						Original	Repeated		
GSM850	Rear	LAT	GPRS 2slots	190	836.6	1.170	1.120	1.04	1

#### Note(s):

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.

## 14. Simultaneous Transmission SAR Analysis

KDB 447498 D01 General RF Exposure Guidance v05, introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

**SAR<sub>1</sub>** is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

**SAR<sub>2</sub>** is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

**Ri** is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of  $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

A new threshold of 0.04 is also introduced in the draft KDB. Thus, in order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri < 0.04$$

**14.1. Sum of the SAR for GSM850 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		GSM 850	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.694	0.339			1.033	No
		0.694		0.477		1.171	No
	Left Tilt	0.591	0.339			0.930	No
		0.591		0.452		1.043	No
	Right Touch	0.581	0.564			1.145	No
		0.581		0.560		1.141	No
Right Tilt	0.466	0.407			0.873	No	
	0.466		0.556		1.022	No	
Body-worn Accessory & Hotspot	Rear	0.692	0.579			1.271	No
		0.692		0.589		1.281	No
		0.692			0.018	0.710	No
	Front	0.478	0.270			0.748	No
		0.478		0.197		0.675	No
		0.478			0.014	0.492	No
Hotspot	Edge 1	0.428	0.155			0.583	No
	Edge 2	0.647	0.024			0.671	No
	Edge 3	0	0			0.000	No
	Edge 4	0.211	0.322			0.533	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

### 14.2. Sum of the SAR for GSM850 (LAT) + WiFi DTS & UNII Band & BT

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		GSM 850	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	1.023	0.339			1.362	No
		1.023		0.477		1.500	No
	Left Tilt	0.751	0.339			1.090	No
		0.751		0.452		1.203	No
	Right Touch	1.126	0.564			1.690	Yes
		1.126		0.560		1.686	Yes
Right Tilt	0.558	0.407			0.965	No	
	0.558		0.556		1.114	No	
Body-worn Accessory & Hotspot	Rear	1.197	0.579			1.776	Yes
		1.197		0.589		1.786	Yes
		1.197			0.018	1.215	No
	Front	1.026	0.270			1.296	No
		1.026		0.197		1.223	No
		1.026			0.014	1.040	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.833	0.024			0.857	No
	Edge 3	0.334	0			0.334	No
	Edge 4	0.766	0.322			1.088	No

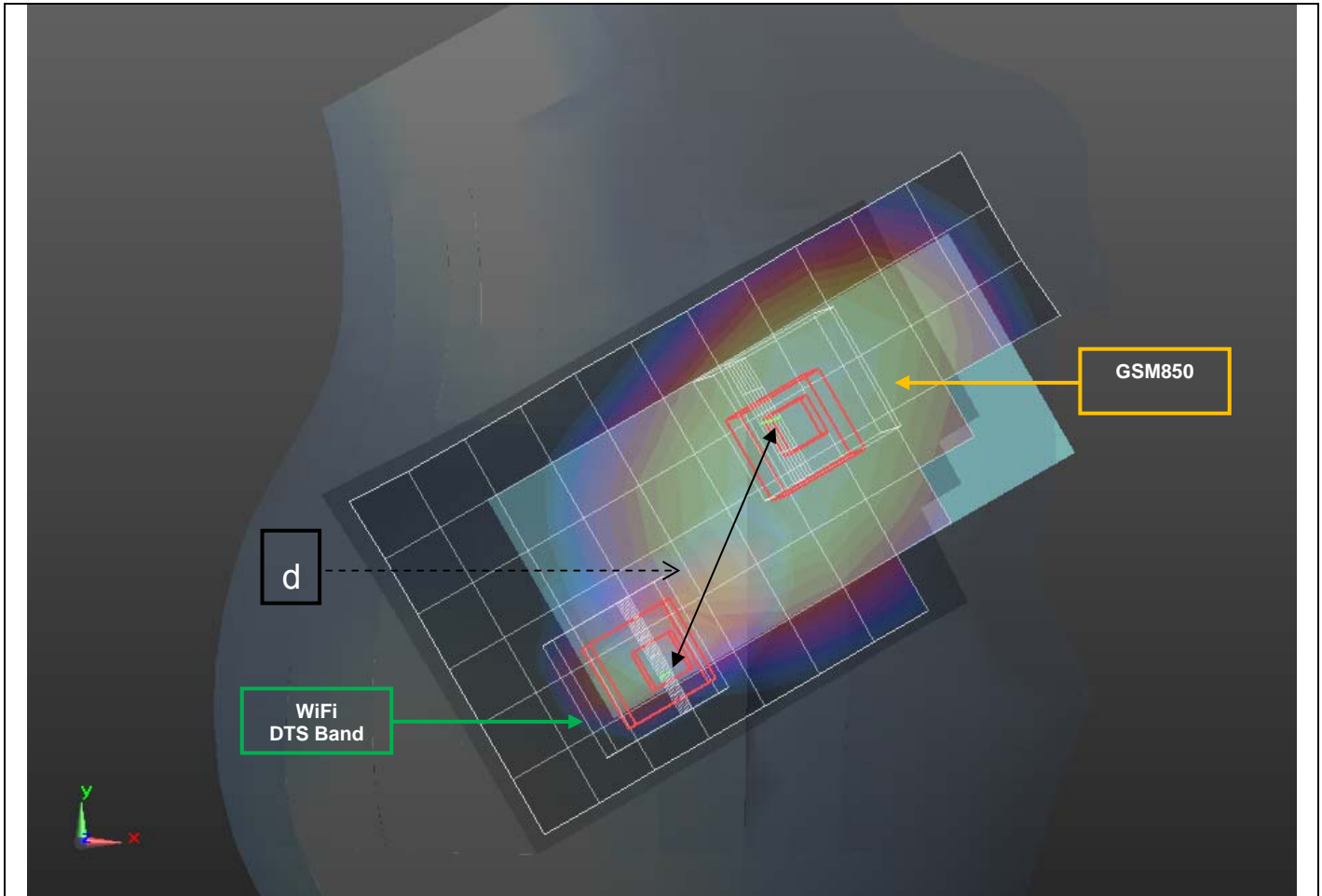
#### SAR to Peak Location Separation Ratio (SPLSR)

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			GSM 850	WiFi DTS Band	WiFi UNII Band					
1	Head	Right Touch	1.126	0.564		1.690	68.0	0.032	No	1
			1.126		0.560	1.686	69.4	0.032	No	2
	Body-worn Accessory & Hotspot	Rear	1.197	0.579		1.776	118.4	0.020	No	3
			1.197		0.589	1.786	114.9	0.021	No	4

#### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



Mode	Peak SAR mW/g	X m	Y m	Z m
GSM850	1.41	0.0614	-0.272	-0.176
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

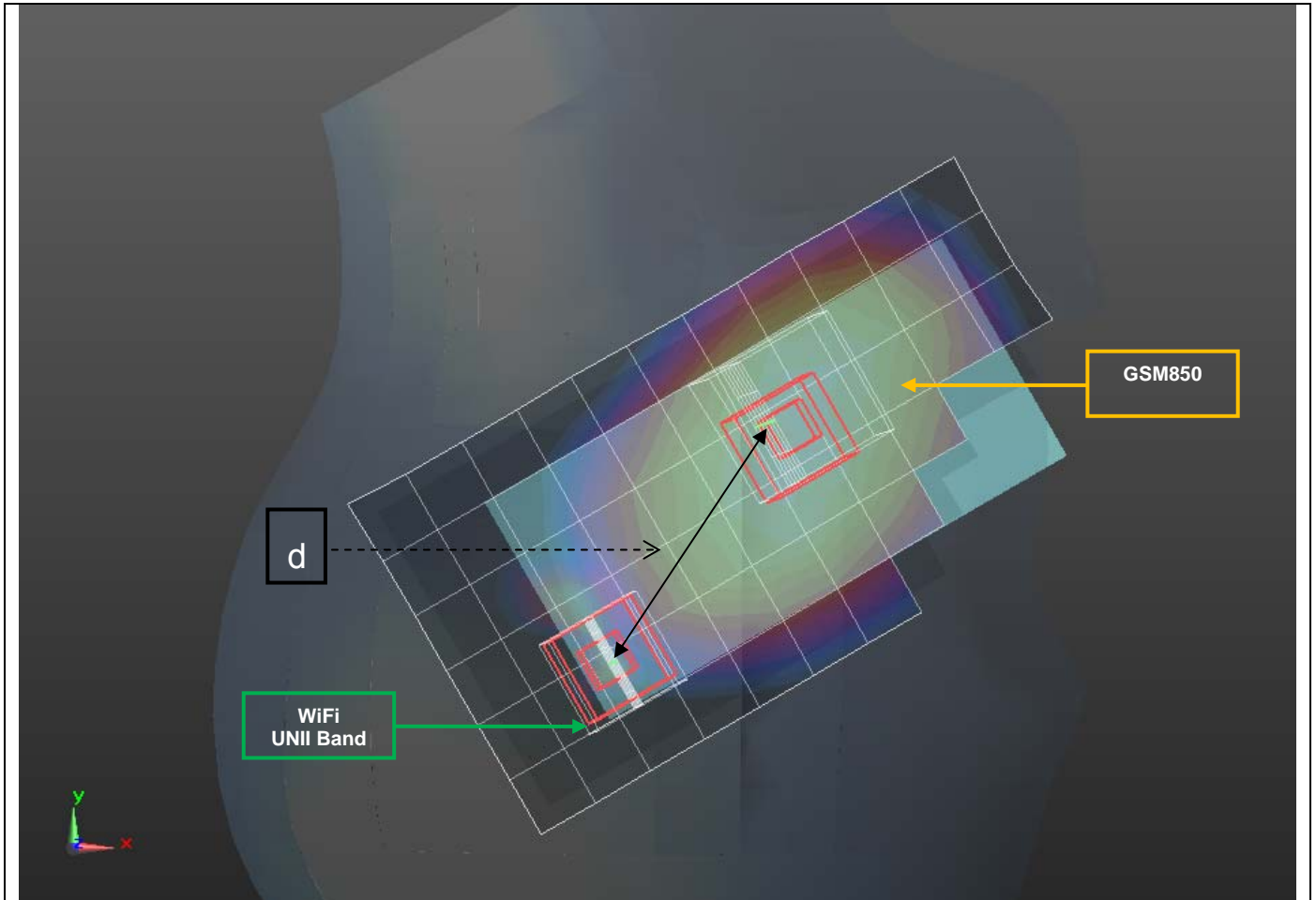
d: Calculated distance (mm)
68.0

The Peak Location Separation Distance is computed by using the formula below:  

$$\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$$



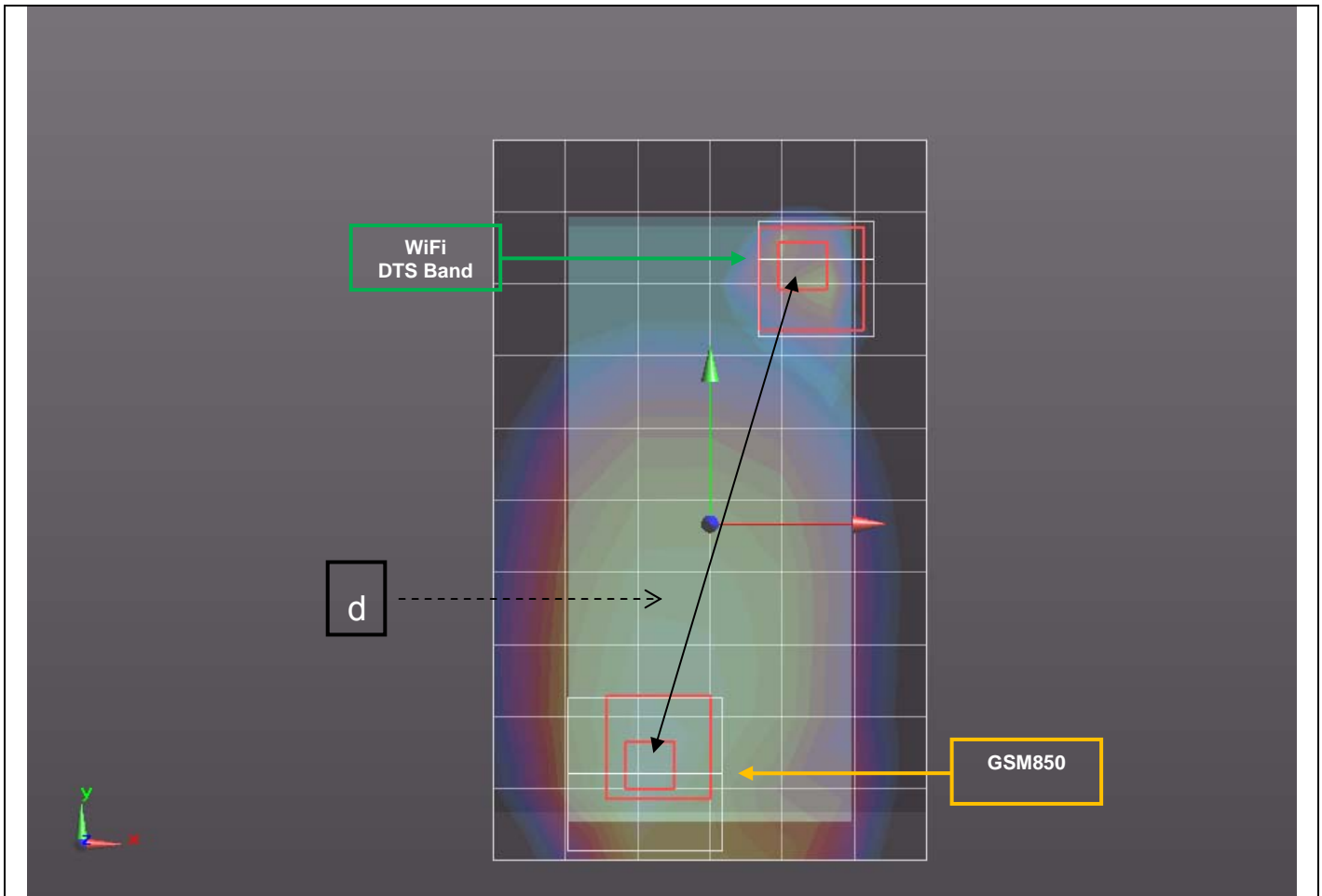
Figure (2)



Mode	Peak SAR mW/g	X m	Y m	Z m
GSM850	1.41	0.0614	-0.272	-0.176
WiFi UNII Band	3.27	0.0179	-0.326	-0.174
d: Calculated distance (mm)				
69.4				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (3)



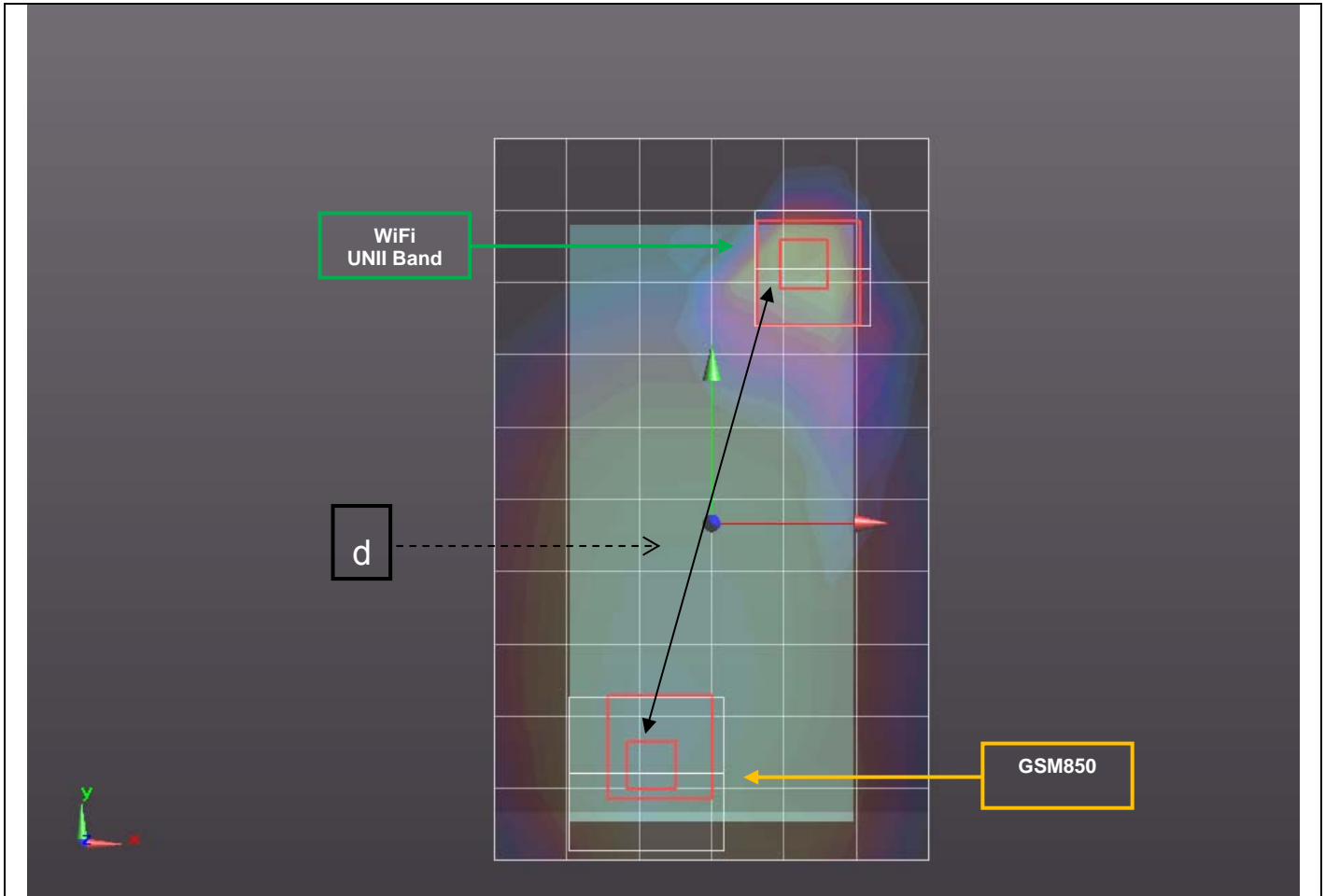
Mode	Peak SAR mW/g	X m	Y m	Z m
GSM850	1.77	-0.0119	-0.0568	-0.192
WiFi DTS Band	3.98	0.0116	0.059	-0.184

d: Calculated distance (mm)
118.4

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
GSM850	1.77	-0.0119	-0.0568	-0.192
WiFi UNII Band	3.39	0.021	0.053	-0.184

d: Calculated distance (mm)
114.9

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

**14.3. Sum of the SAR for GSM1900 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		GSM 1900	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.596	0.339			0.935	No
		0.596		0.477		1.073	No
	Left Tilt	0.642	0.339			0.981	No
		0.642		0.452		1.094	No
	Right Touch	0.943	0.564			1.507	No
		0.943		0.560		1.503	No
Right Tilt	0.922	0.407			1.329	No	
	0.922		0.556		1.478	No	
Body-worn Accessory & Hotspot	Rear	0.986	0.579			1.565	No
		0.986		0.589		1.575	No
		0.986			0.018	1.004	No
	Front	0.761	0.270			1.031	No
		0.761		0.197		0.958	No
		0.761			0.014	0.775	No
Hotspot	Edge 1	0.577	0.155			0.732	No
	Edge 2	0.223	0.024			0.247	No
	Edge 3	0	0			0.000	No
	Edge 4	0.616	0.322			0.938	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.4. Sum of the SAR for GSM1900 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		GSM 1900	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.654	0.339			0.993	No
		0.654		0.477		1.131	No
	Left Tilt	0.332	0.339			0.671	No
		0.332		0.452		0.784	No
	Right Touch	1.170	0.564			1.734	Yes
		1.170		0.560		1.730	Yes
Right Tilt	0.316	0.407			0.723	No	
	0.316		0.556		0.872	No	
Body-worn Accessory & Hotspot	Rear	1.040	0.579			1.619	Yes
		1.040		0.589		1.629	Yes
		1.040			0.018	1.058	No
	Front	0.658	0.270			0.928	No
		0.658		0.197		0.855	No
		0.658			0.014	0.672	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.904	0.024			0.928	No
	Edge 3	0.873	0			0.873	No
	Edge 4	0.055	0.322			0.377	No

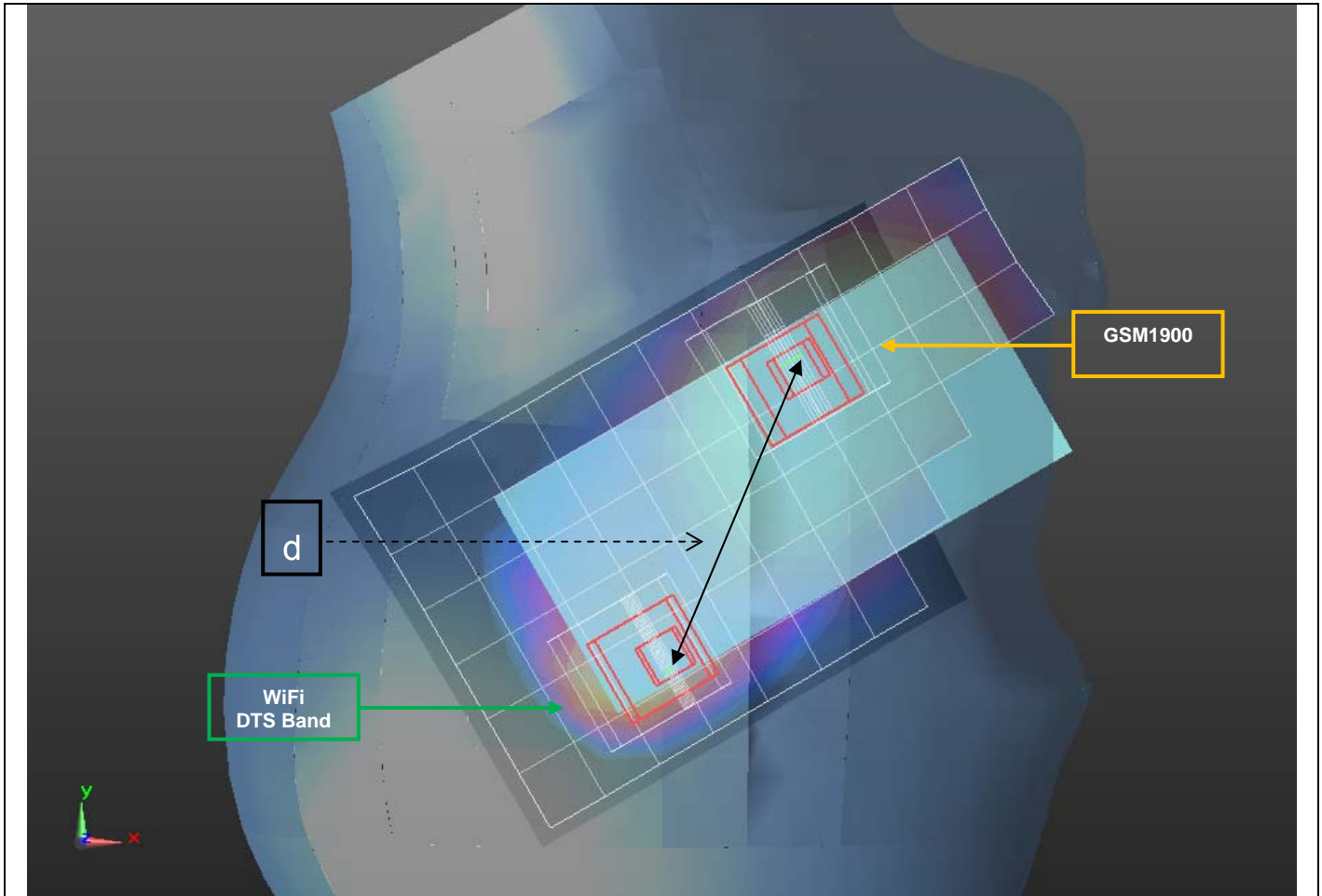
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			GSM 1900	WiFi DTS Band	WiFi UNII Band					
2	Head	Right Touch	1.170	0.564		1.734	80.7	0.028	No	1
			1.170		0.560	1.730	81.1	0.028	No	2
	Body-worn Accessory & Hotspot	Rear	1.040	0.579		1.619	122.4	0.017	No	3
			1.040		0.589	1.629	119.1	0.017	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



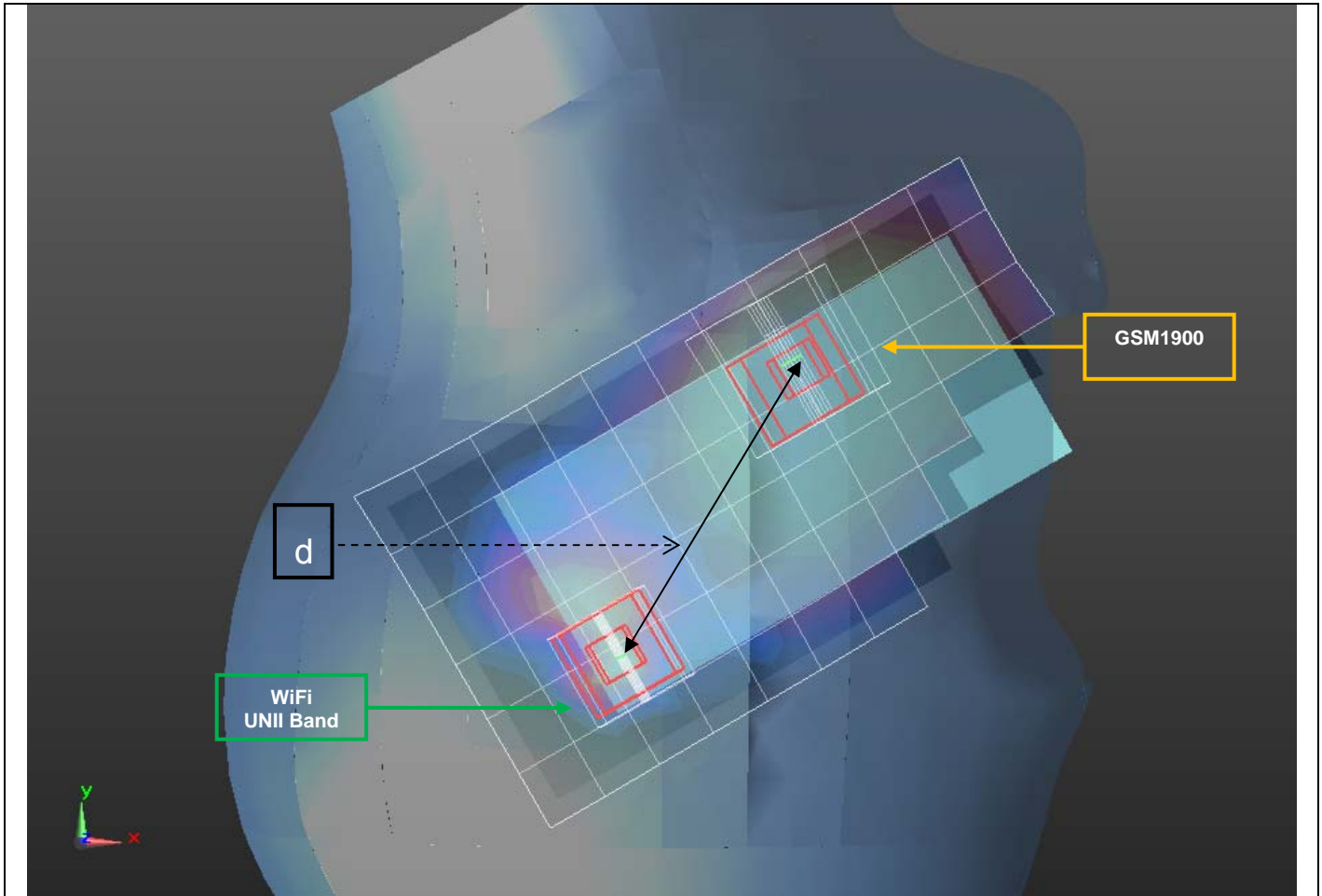
Mode	Peak SAR mW/g	X m	Y m	Z m
GSM1900	1.84	0.062	-0.258	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

d: Calculated distance (mm)
80.7

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

Figure (2)



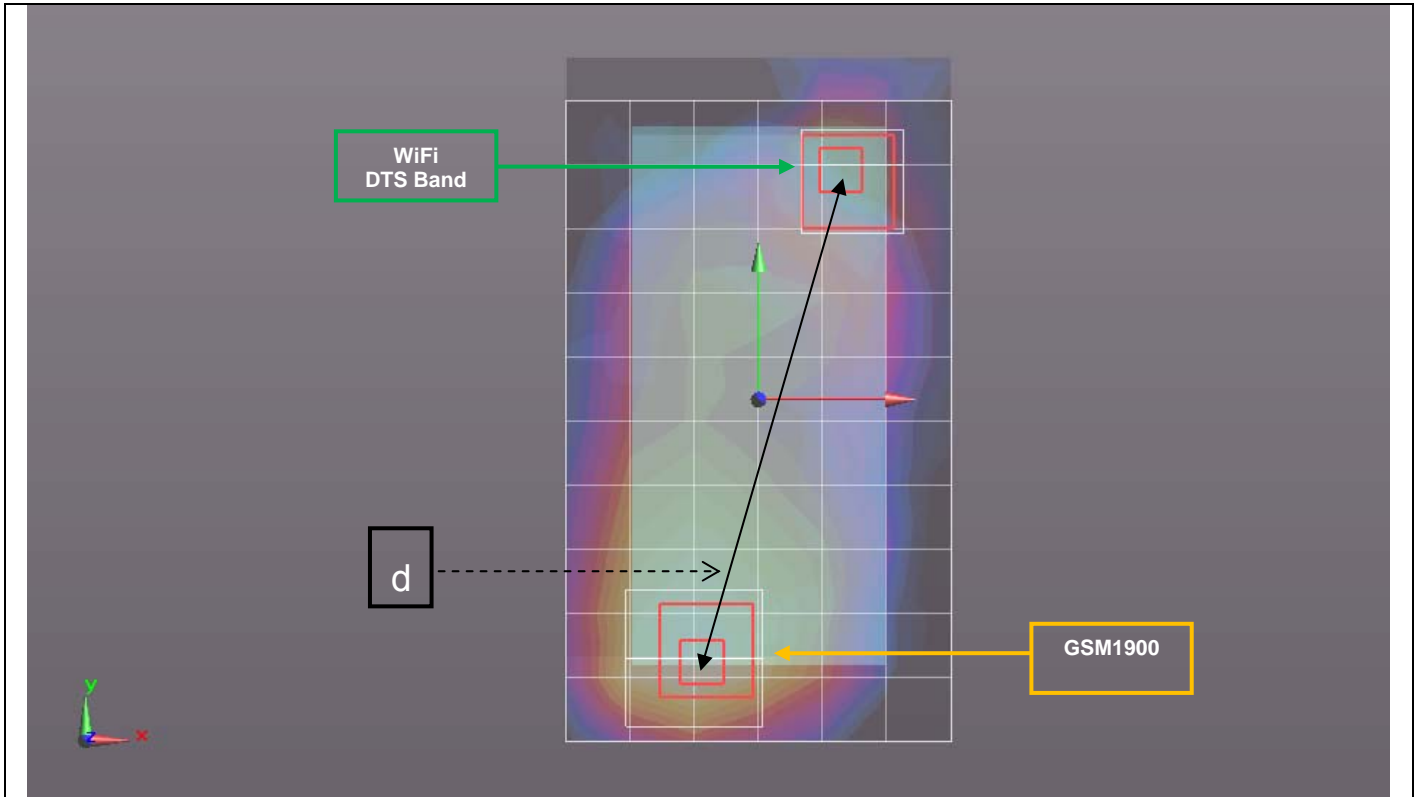
Mode	Peak SAR mW/g	X m	Y m	Z m
GSM1900	1.84	0.062	-0.258	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

d: Calculated distance (mm)
81.1

The Peak Location Separation Distance is computed by using the formula below:  

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

Figure (3)



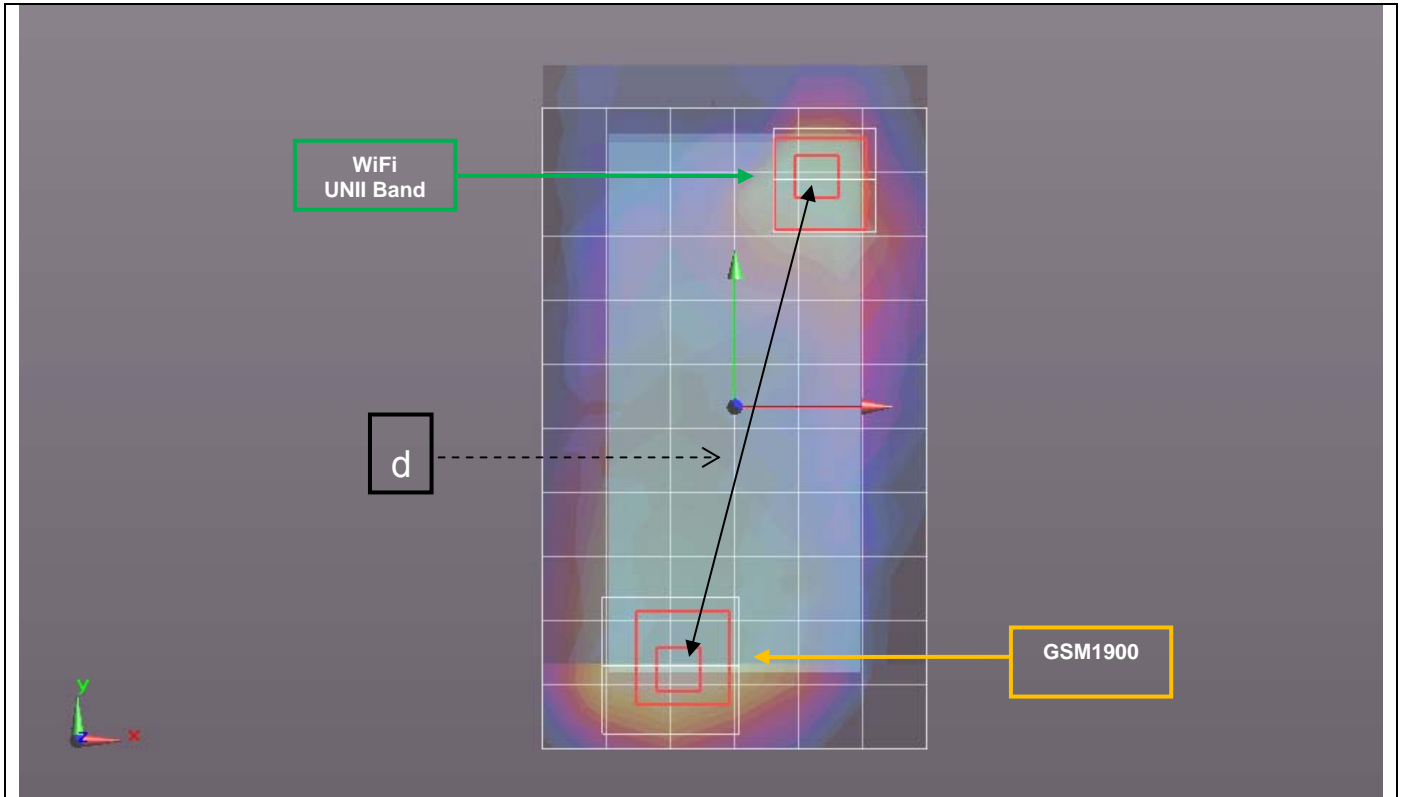
Mode	Peak SAR mW/g	X m	Y m	Z m
GSM1900	1.47	-0.015	-0.0605	-0.183
WiFi DTS Band	3.98	0.0116	0.059	-0.184

d: Calculated distance (mm)
122.4

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$



Figure (4)



Mode	Peak SAR	X	Y	Z
	mW/g	m	m	m
GSM1900	1.47	-0.015	-0.0605	-0.183
WiFi UNII Band	3.39	0.021	0.053	-0.184

d: Calculated distance (mm)
119.1

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.5. Sum of the SAR for W-CDMA Band 2 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 2	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.595	0.339			0.934	No
		0.595		0.477		1.072	No
	Left Tilt	0.532	0.339			0.871	No
		0.532		0.452		0.984	No
	Right Touch	0.986	0.564			1.550	No
		0.986		0.560		1.546	No
Right Tilt	0.673	0.407			1.080	No	
	0.673		0.556		1.229	No	
Body-worn Accessory & Hotspot	Rear	0.915	0.579			1.494	No
		0.915		0.589		1.504	No
		0.915			0.018	0.933	No
	Front	0.631	0.270			0.901	No
		0.631		0.197		0.828	No
		0.631			0.014	0.645	No
Hotspot	Edge 1	0.427	0.155			0.582	No
	Edge 2	0.323	0.024			0.347	No
	Edge 3	0	0			0.000	No
	Edge 4	0.685	0.322			1.007	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.6. Sum of the SAR for W-CDMA Band 2 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 2	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.824	0.339			1.163	No
		0.824		0.477		1.301	No
	Left Tilt	0.431	0.339			0.770	No
		0.431		0.452		0.883	No
	Right Touch	1.180	0.564			1.744	Yes
		1.180		0.560		1.740	Yes
Right Tilt	0.390	0.407			0.797	No	
	0.390		0.556		0.946	No	
Body-worn Accessory & Hotspot	Rear	1.150	0.579			1.729	Yes
		1.150		0.589		1.739	Yes
		1.150			0.018	1.168	No
	Front	0.622	0.270			0.892	No
		0.622		0.197		0.819	No
		0.622			0.014	0.636	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.697	0.024			0.721	No
	Edge 3	0.581	0			0.581	No
	Edge 4	0.120	0.322			0.442	No

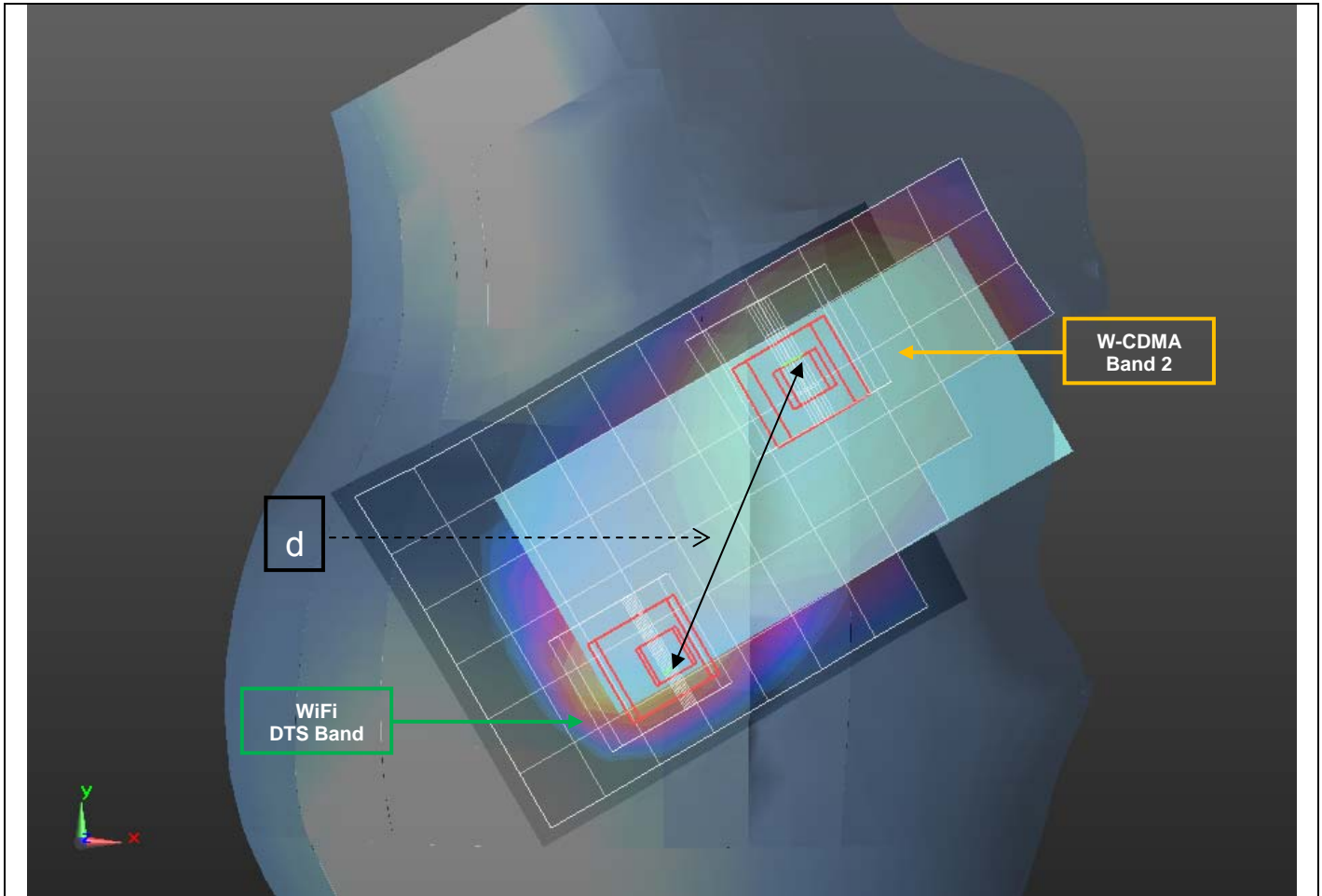
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			W-CDMA Band 2	WiFi DTS Band	WiFi UNII Band					
3	Head	Right Touch	1.180	0.564		1.744	82.2	0.028	No	1
			1.180		0.560	1.740	82.7	0.028	No	2
	Body-worn Accessory & Hotspot	Rear	1.150	0.579		1.729	120.9	0.019	No	3
			1.150		0.589	1.739	117.6	0.020	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)

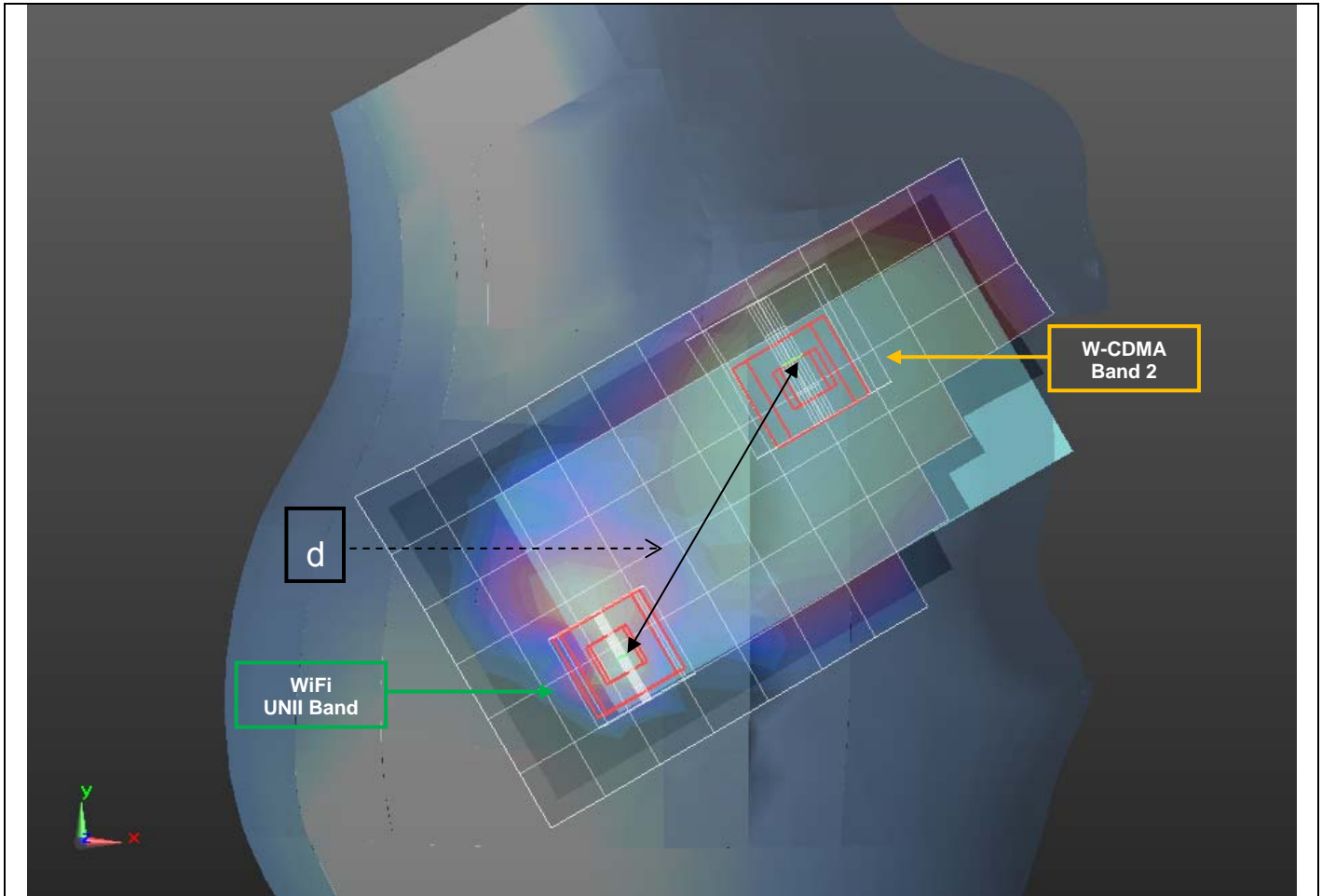


Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 2	1.77	0.0634	-0.257	-0.174
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

d: Calculated distance (mm)
82.2

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (2)



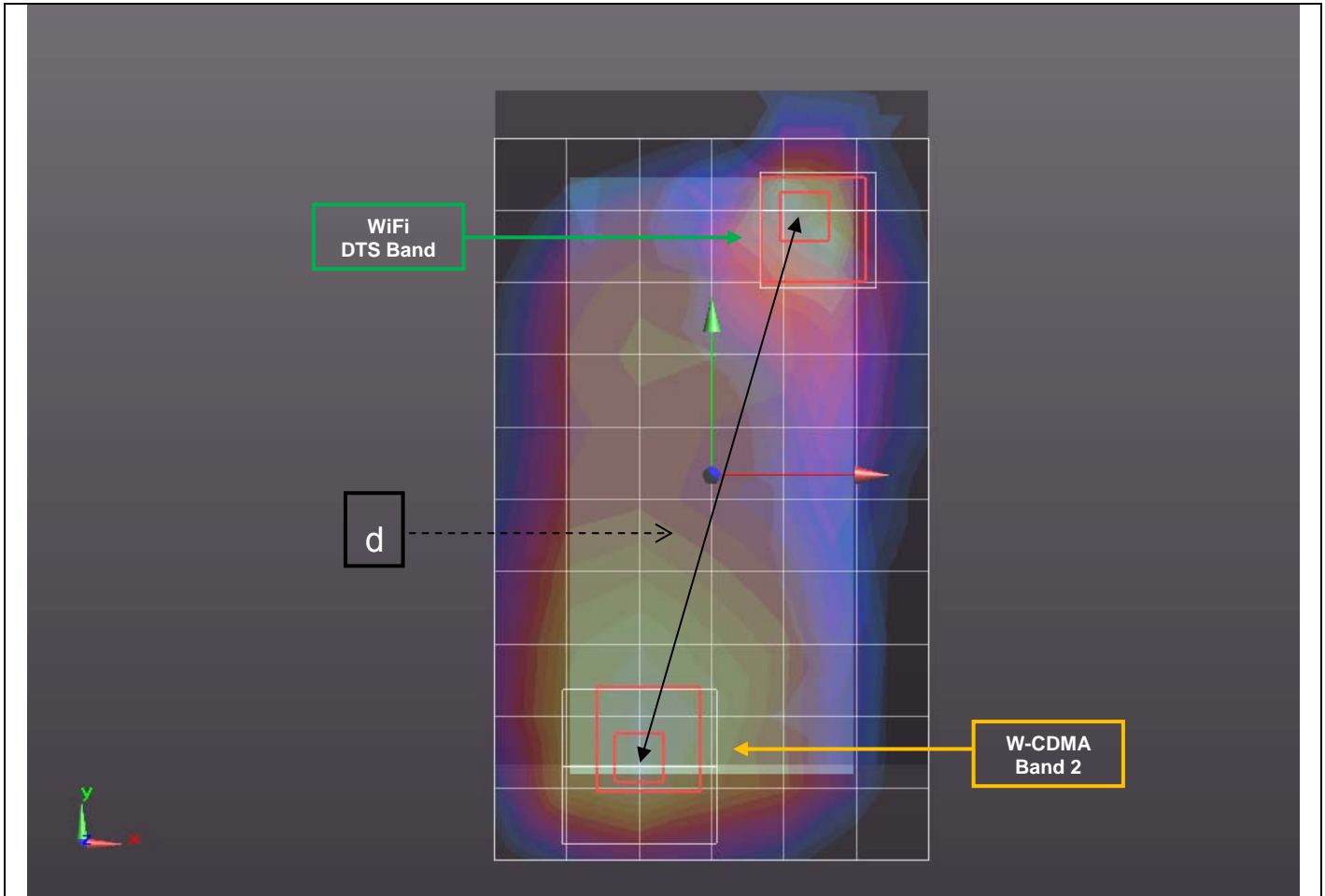
Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 2	1.77	0.0634	-0.257	-0.174
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

d: Calculated distance (mm)
82.7

The Peak Location Separation Distance is computed by using the formula below:  

$$\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$$

Figure (3)



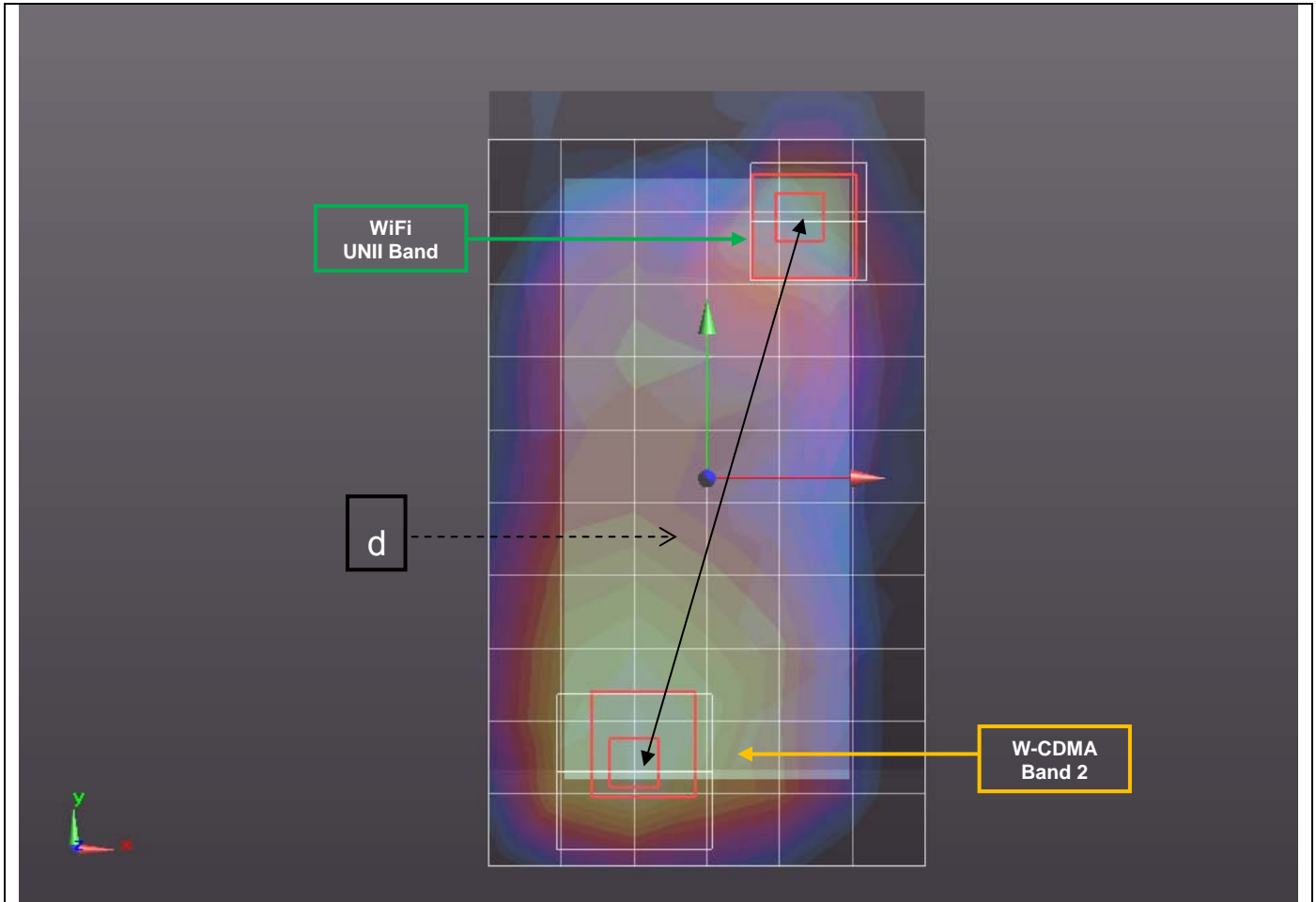
Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 2	2.3	-0.015	-0.0589	-0.186
WiFi DTS Band	3.98	0.0116	0.059	-0.184

d: Calculated distance (mm)
120.9

The Peak Location Separation Distance is computed by using the formula below:  

$$\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 2	2.3	-0.015	-0.0589	-0.186
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
117.6				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.7. Sum of the SAR for W-CDMA Band 4 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 4	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.526	0.339			0.865	No
		0.526		0.477		1.003	No
	Left Tilt	0.569	0.339			0.908	No
		0.569		0.452		1.021	No
	Right Touch	0.760	0.564			1.324	No
		0.760		0.560		1.320	No
Right Tilt	0.631	0.407			1.038	No	
	0.631		0.556		1.187	No	
Body-worn Accessory & Hotspot	Rear	0.596	0.579			1.175	No
		0.596		0.589		1.185	No
		0.596			0.018	0.614	No
	Front	0.352	0.270			0.622	No
		0.352		0.197		0.549	No
		0.352			0.014	0.366	No
Hotspot	Edge 1	0.357	0.155			0.512	No
	Edge 2	0.072	0.024			0.096	No
	Edge 3	0	0			0.000	No
	Edge 4	0.297	0.322			0.619	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.



**14.8. Sum of the SAR for W-CDMA Band 4 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 4	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.858	0.339			1.197	No
		0.858		0.477		1.335	No
	Left Tilt	0.510	0.339			0.849	No
		0.510		0.452		0.962	No
	Right Touch	1.170	0.564			1.734	Yes
		1.170		0.560		1.730	Yes
Right Tilt	0.545	0.407			0.952	No	
	0.545		0.556		1.101	No	
Body-worn Accessory & Hotspot	Rear	1.130	0.579			1.709	Yes
		1.130		0.589		1.719	Yes
		1.130			0.018	1.148	No
	Front	0.732	0.270			1.002	No
		0.732		0.197		0.929	No
		0.732			0.014	0.746	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.709	0.024			0.733	No
	Edge 3	0.683	0			0.683	No
	Edge 4	0.065	0.322			0.387	No

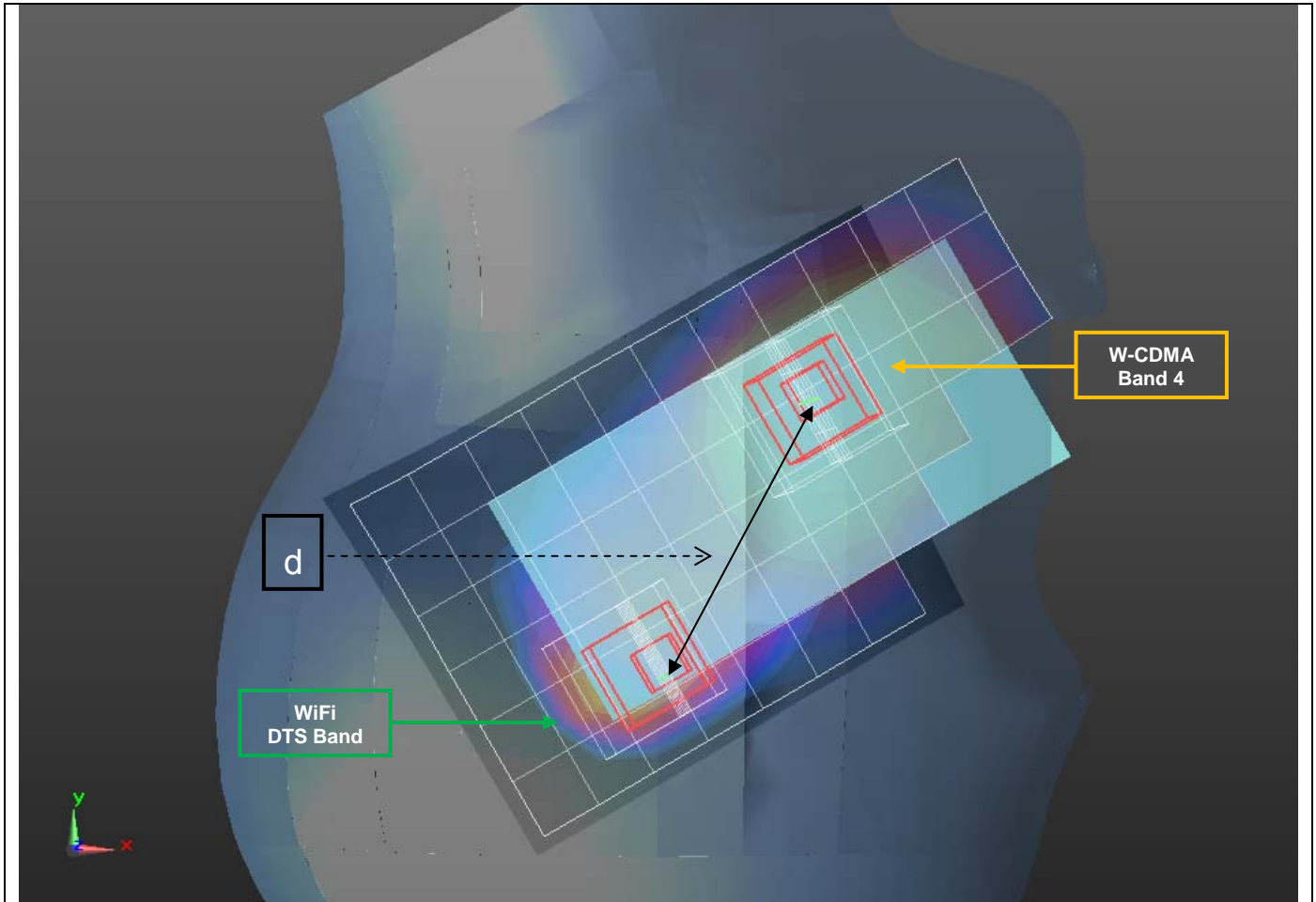
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			W-CDMA Band 4	WiFi DTS Band	WiFi UNII Band					
4	Head	Right Touch	1.170	0.564		1.734	79.0	0.029	No	1
			1.170		0.560	1.730	79.8	0.029	No	2
	Body-worn Accessory & Hotspot	Rear	1.130	0.579		1.709	118.4	0.019	No	3
			1.130		0.589	1.719	114.8	0.020	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

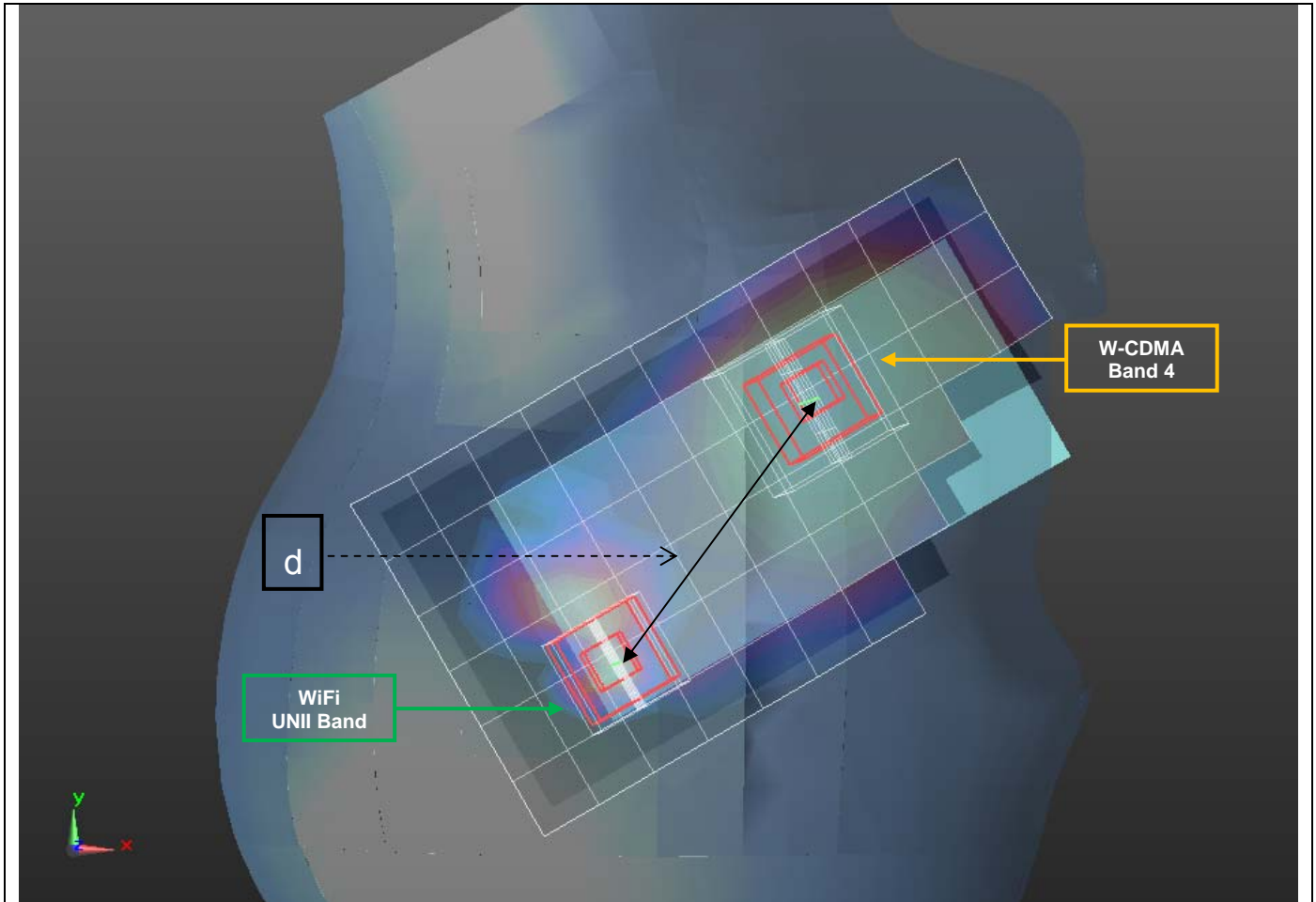
Figure (1)



Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 4	1.75	0.0641	-0.261	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174
d: Calculated distance (mm)				
79.0				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (2)



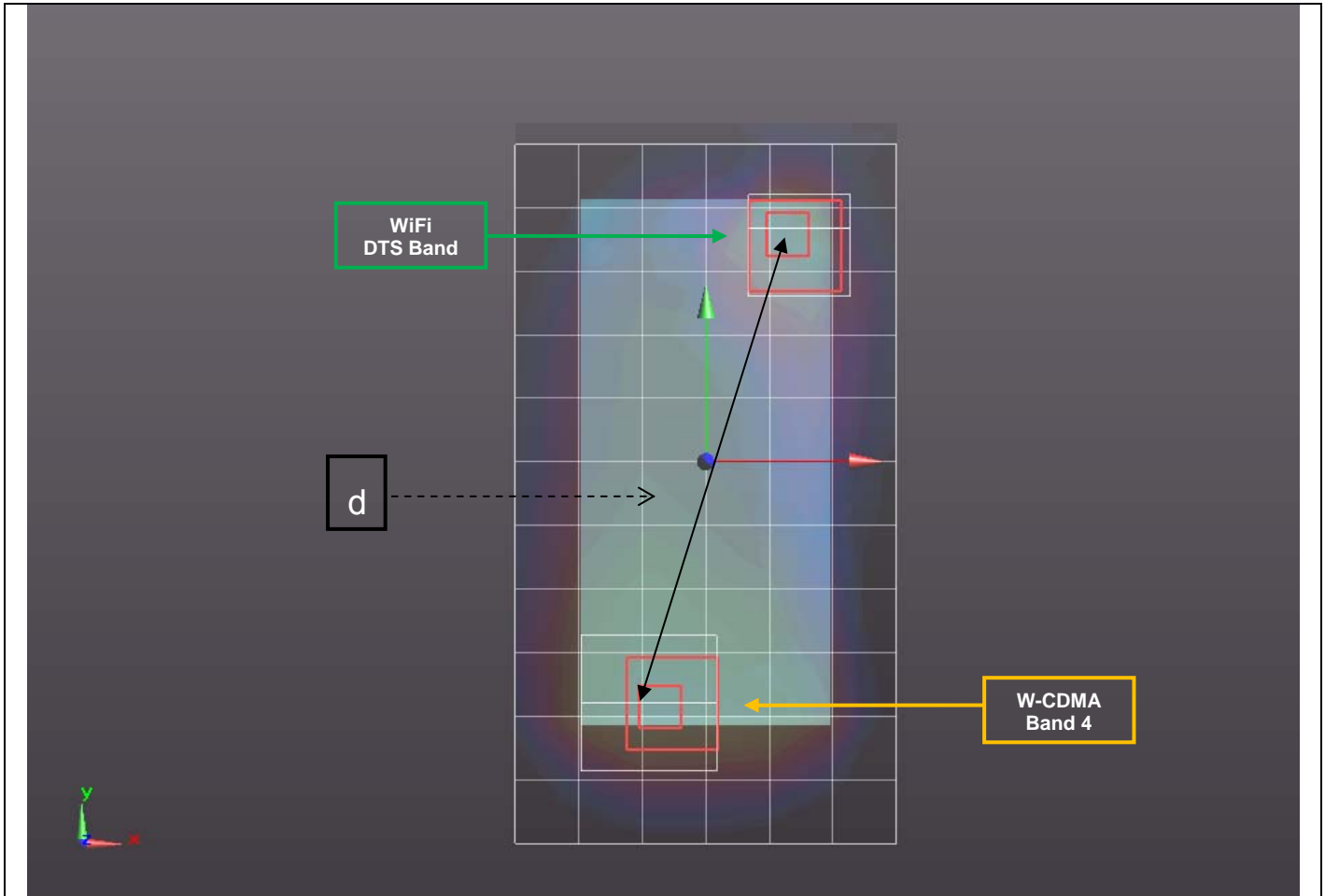
Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 4	1.75	0.0641	-0.261	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

d: Calculated distance (mm)	
79.8	

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$

Figure (3)

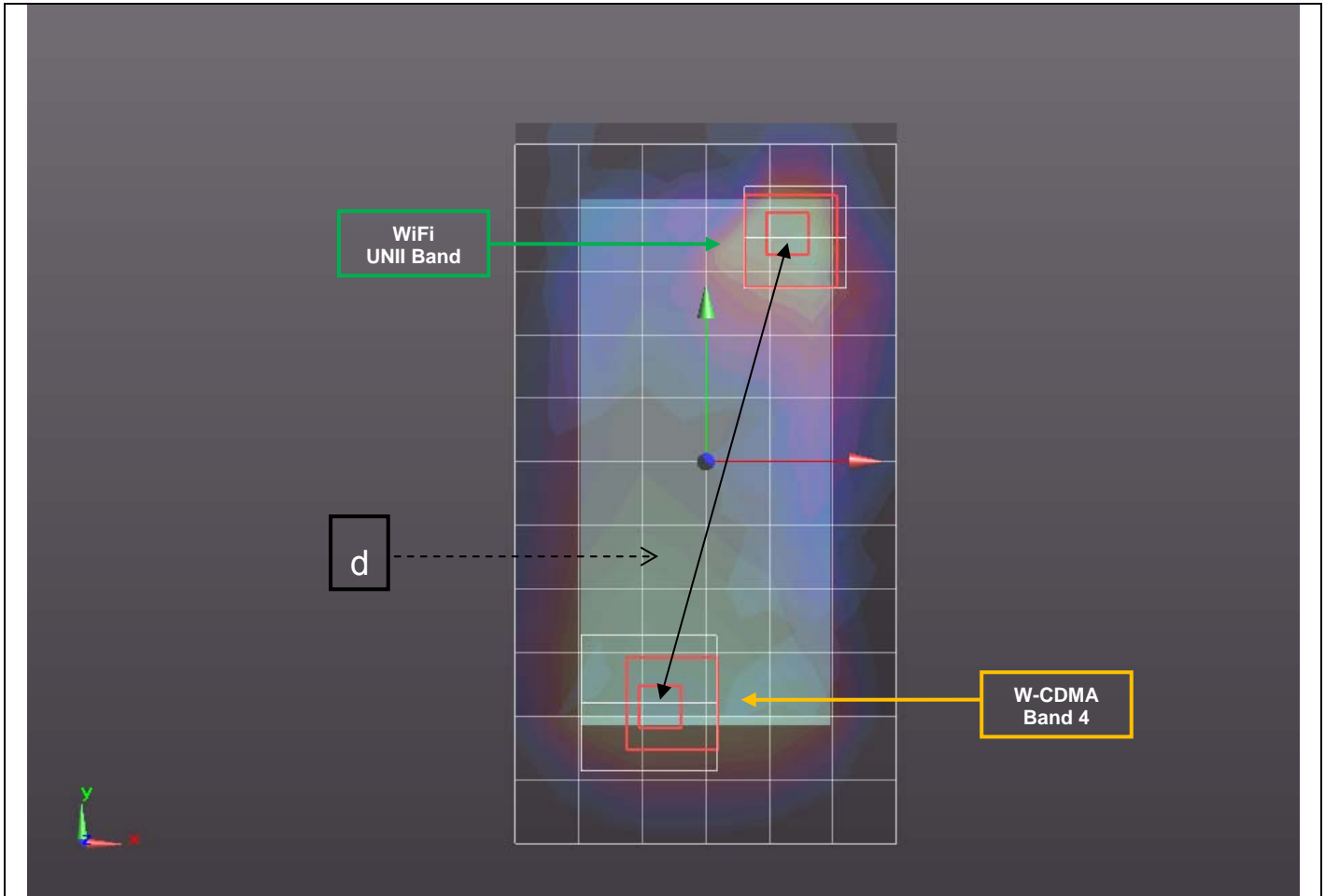


Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 4	2.22	-0.0119	-0.057	-0.185
WiFi DTS Band	3.98	0.0116	0.059	-0.184

d: Calculated distance (mm)
118.4

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
W-CDMA Band 4	2.22	-0.0119	-0.057	-0.185
WiFi UNII Band	3.39	0.021	0.053	-0.184

d: Calculated distance (mm)
114.8

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.9. Sum of the SAR for W-CDMA Band 5 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 5	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.529	0.339			0.868	No
		0.529		0.477		1.006	No
	Left Tilt	0.450	0.339			0.789	No
		0.450		0.452		0.902	No
	Right Touch	0.383	0.564			0.947	No
		0.383		0.560		0.943	No
Right Tilt	0.302	0.407			0.709	No	
	0.302		0.556		0.858	No	
Body-worn Accessory & Hotspot	Rear	0.360	0.579			0.939	No
		0.360		0.589		0.949	No
		0.360			0.018	0.378	No
	Front	0.271	0.270			0.541	No
		0.271		0.197		0.468	No
		0.271			0.014	0.285	No
Hotspot	Edge 1	0.226	0.155			0.381	No
	Edge 2	0.384	0.024			0.408	No
	Edge 3	0	0			0.000	No
	Edge 4	0.082	0.322			0.404	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.10. Sum of the SAR for W-CDMA Band 5 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		W-CDMA Band 5	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.623	0.339			0.962	No
		0.623		0.477		1.100	No
	Left Tilt	0.371	0.339			0.710	No
		0.371		0.452		0.823	No
	Right Touch	0.573	0.564			1.137	No
		0.573		0.560		1.133	No
Right Tilt	0.332	0.407			0.739	No	
	0.332		0.556		0.888	No	
Body-worn Accessory & Hotspot	Rear	1.126	0.579			1.705	Yes
		1.126		0.589		1.715	Yes
		1.126			0.018	1.144	No
	Front	0.849	0.270			1.119	No
		0.849		0.197		1.046	No
		0.849			0.014	0.863	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.619	0.024			0.643	No
	Edge 3	0.152	0			0.152	No
	Edge 4	0.404	0.322			0.726	No

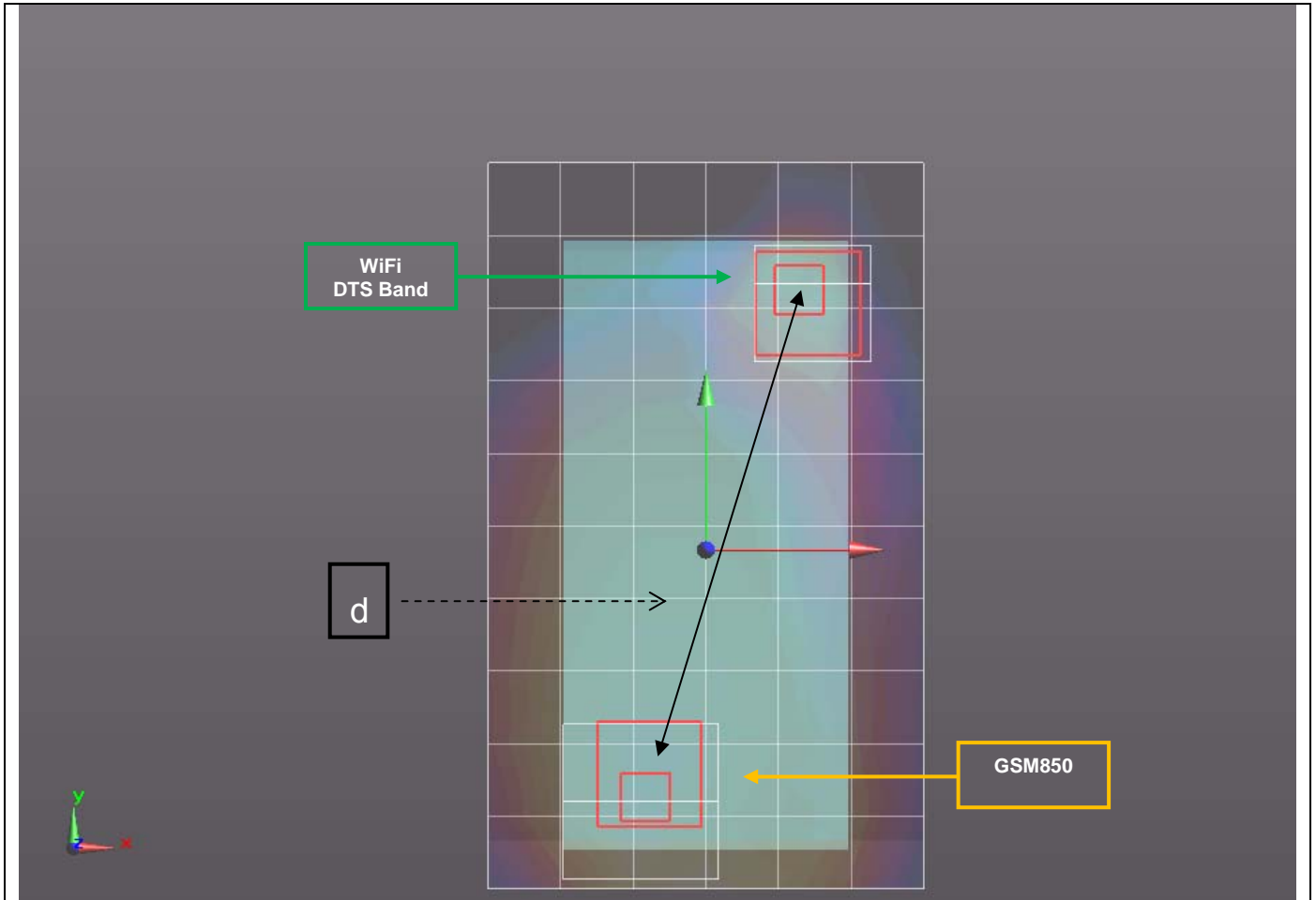
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			W-CDMA Band 5	WiFi DTS Band	WiFi UNII Band					
5	Body-worn Accessory & Hotspot	Rear	1.126	0.579		1.705	118.4	0.019	No	1
			1.126		0.589	1.715	114.9	0.020	No	2

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



Mode	Peak SAR	X	Y	Z
	mW/g	m	m	m
W-CDMA Band 5	1.75	-0.0119	-0.0568	-0.192
WiFi DTS Band	3.98	0.0116	0.059	-0.184

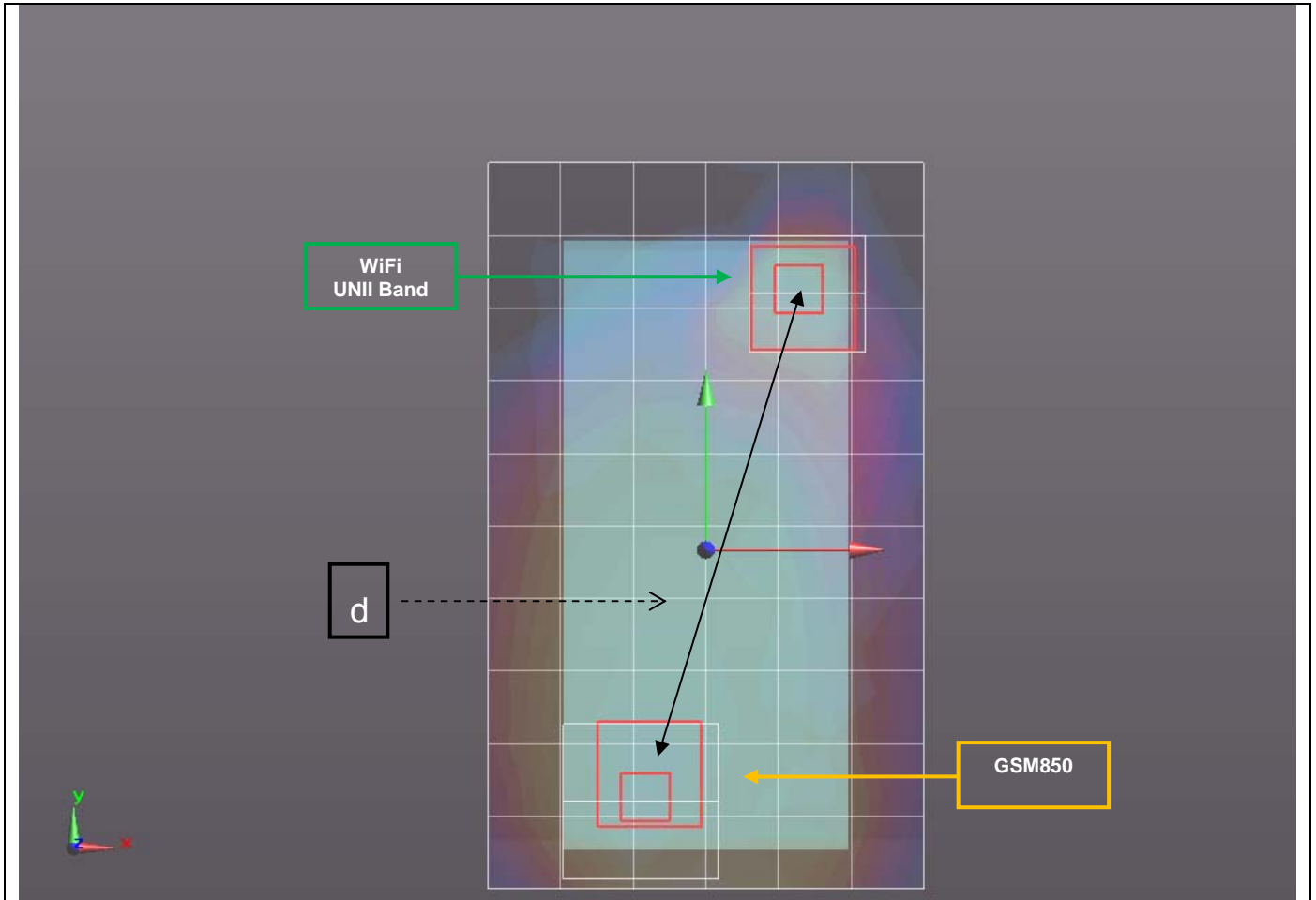
d: Calculated distance (mm)	
118.4	

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$



Figure (2)



Mode	Peak SAR	X	Y	Z
	mW/g	m	m	m
W-CDMA Band 5	1.75	-0.0119	-0.0568	-0.192
WiFi UNII Band	3.39	0.021	0.053	-0.184

d: Calculated distance (mm)	
114.9	

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

**14.11. Sum of the SAR for CDMA BC0 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC0	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.590	0.339			0.929	No
		0.590		0.477		1.067	No
	Left Tilt	0.525	0.339			0.864	No
		0.525		0.452		0.977	No
	Right Touch	0.476	0.564			1.040	No
		0.476		0.560		1.036	No
Right Tilt	0.412	0.407			0.819	No	
	0.412		0.556		0.968	No	
Body-worn Accessory & Hotspot	Rear	0.422	0.579			1.001	No
		0.422		0.589		1.011	No
		0.422			0.018	0.440	No
	Front	0.371	0.270			0.641	No
		0.371		0.197		0.568	No
		0.371			0.014	0.385	No
Hotspot	Edge 1	0.268	0.155			0.423	No
	Edge 2	0.428	0.024			0.452	No
	Edge 3	0	0			0.000	No
	Edge 4	0.204	0.322			0.526	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.12. Sum of the SAR for CDMA BC0 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC0	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.577	0.339			0.916	No
		0.577		0.477		1.054	No
	Left Tilt	0.429	0.339			0.768	No
		0.429		0.452		0.881	No
	Right Touch	0.571	0.564			1.135	No
		0.571		0.560		1.131	No
Right Tilt	0.446	0.407			0.853	No	
	0.446		0.556		1.002	No	
Body-worn Accessory & Hotspot	Rear	0.954	0.579			1.533	No
		0.954		0.589		1.543	No
		0.954			0.018	0.972	No
	Front	0.690	0.270			0.960	No
		0.690		0.197		0.887	No
		0.690			0.014	0.704	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.555	0.024			0.579	No
	Edge 3	0.232	0			0.232	No
	Edge 4	0.776	0.322			1.098	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.13. Sum of the SAR for CDMA BC1 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC1	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.701	0.339			1.040	No
		0.701		0.477		1.178	No
	Left Tilt	0.691	0.339			1.030	No
		0.691		0.452		1.143	No
	Right Touch	1.018	0.564			<b>1.582</b>	No
		1.018		0.560		<b>1.578</b>	No
Right Tilt	0.877	0.407			1.284	No	
	0.877		0.556		1.433	No	
Body-worn Accessory & Hotspot	Rear	0.642	0.579			1.221	No
		0.642		0.589		1.231	No
		0.642			0.018	0.660	No
	Front	0.440	0.270			0.710	No
		0.440		0.197		0.637	No
		0.440			0.014	0.454	No
Hotspot	Edge 1	0.366	0.155			0.521	No
	Edge 2	0.263	0.024			0.287	No
	Edge 3	0	0			0.000	No
	Edge 4	0.435	0.322			0.757	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

### 14.14. Sum of the SAR for CDMA BC1 (LAT) + WiFi DTS & UNII Band & BT

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC1	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.697	0.339			1.036	No
		0.697		0.477		1.174	No
	Left Tilt	0.391	0.339			0.730	No
		0.391		0.452		0.843	No
	Right Touch	1.170	0.564			1.734	Yes
		1.170		0.560		1.730	Yes
Right Tilt	0.325	0.407			0.732	No	
	0.325		0.556		0.881	No	
Body-worn Accessory & Hotspot	Rear	1.180	0.579			1.759	Yes
		1.180		0.589		1.769	Yes
		1.180			0.018	1.198	No
	Front	0.758	0.270			1.028	No
		0.758		0.197		0.955	No
		0.758			0.014	0.772	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.864	0.024			0.888	No
	Edge 3	0.605	0			0.605	No
	Edge 4	0.157	0.322			0.479	No

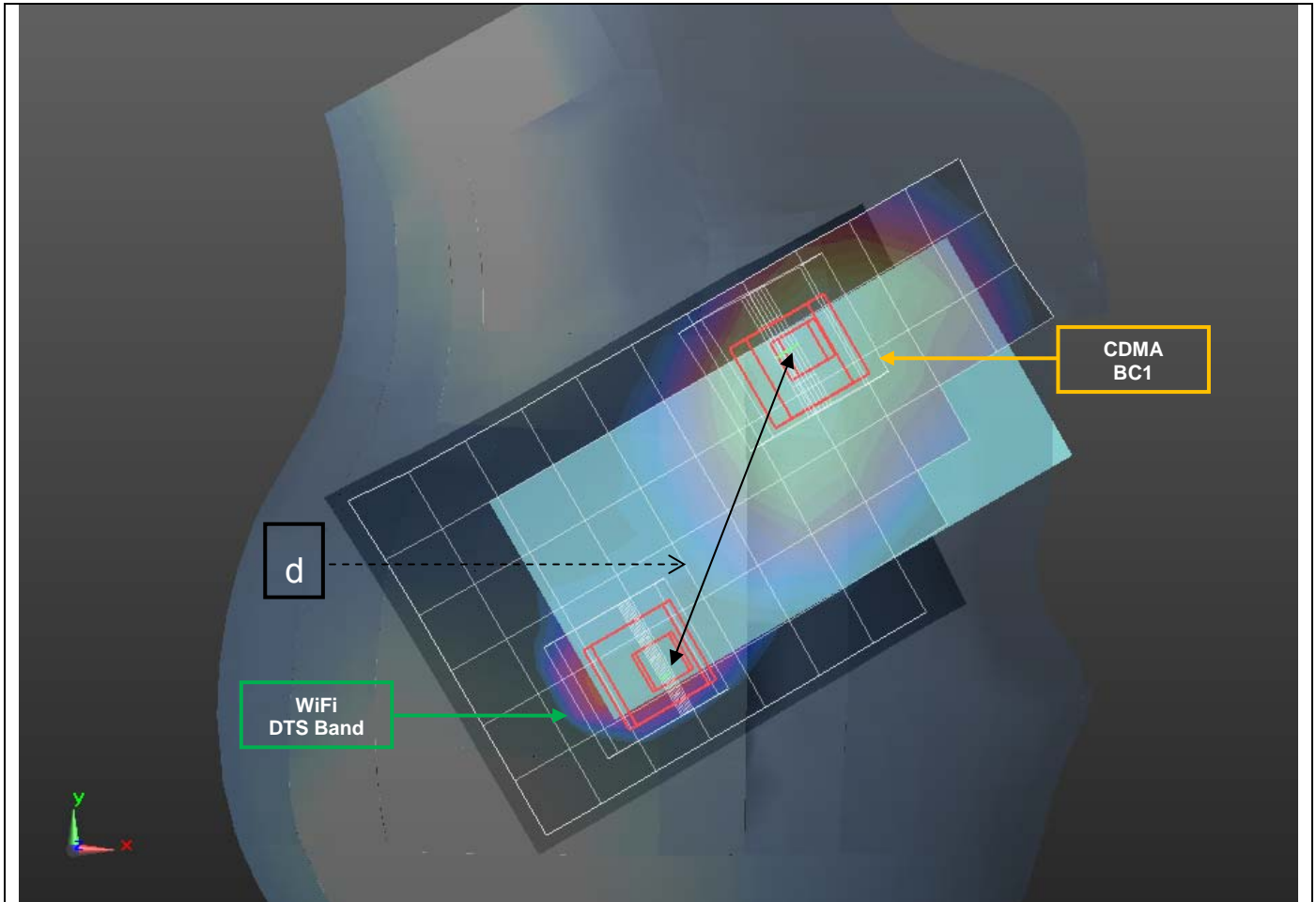
### SAR to Peak Location Separation Ratio (SPLSR)

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			CDMA BC1	WiFi DTS Band	WiFi UNII Band					
6	Head	Right Touch	1.170	0.564		1.734	88.4	0.026	No	1
			1.170		0.560	1.730	88.3	0.026	No	2
	Body-worn Accessory & Hotspot	Rear	1.180	0.579		1.759	122.8	0.019	No	3
			1.180		0.589	1.769	119.6	0.020	No	4

### Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

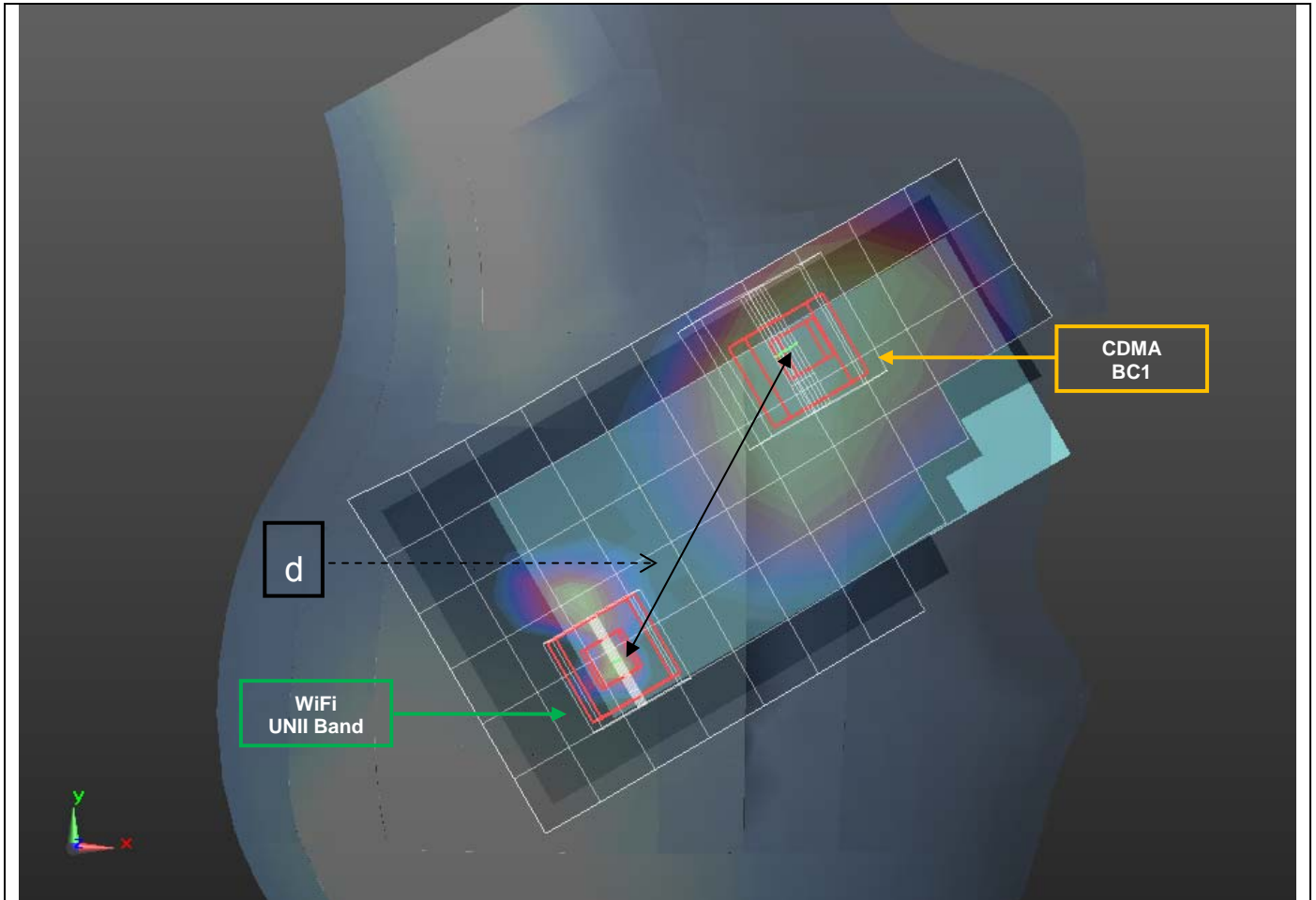
Figure (1)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC1	1.82	0.0629	-0.25	-0.174
WiFi DTS Band	1.18	0.0276	-0.331	-0.174
d: Calculated distance (mm)				
88.4				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (2)



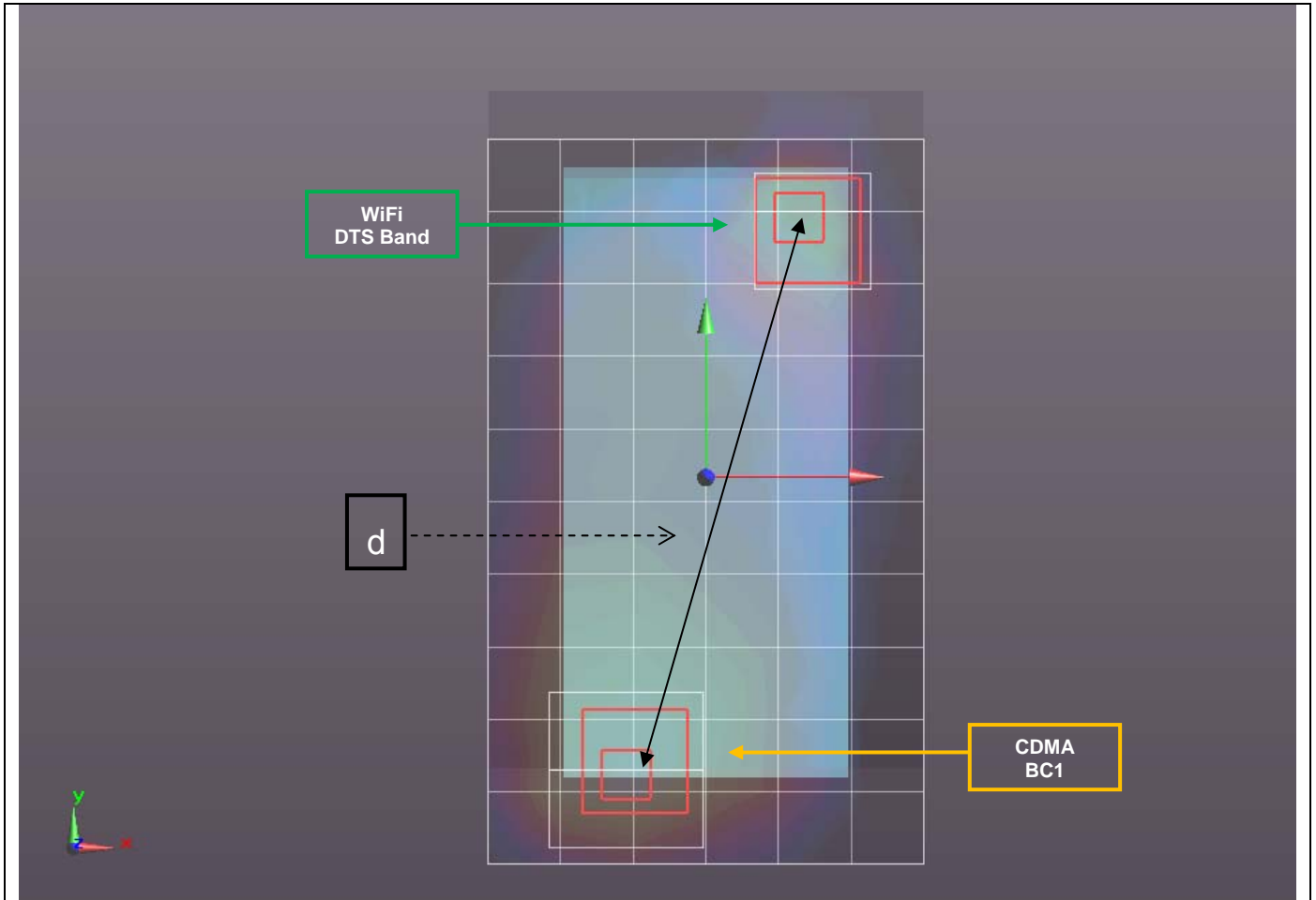
Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC1	1.82	0.0629	-0.25	-0.174
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

d: Calculated distance (mm)	
88.3	

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$

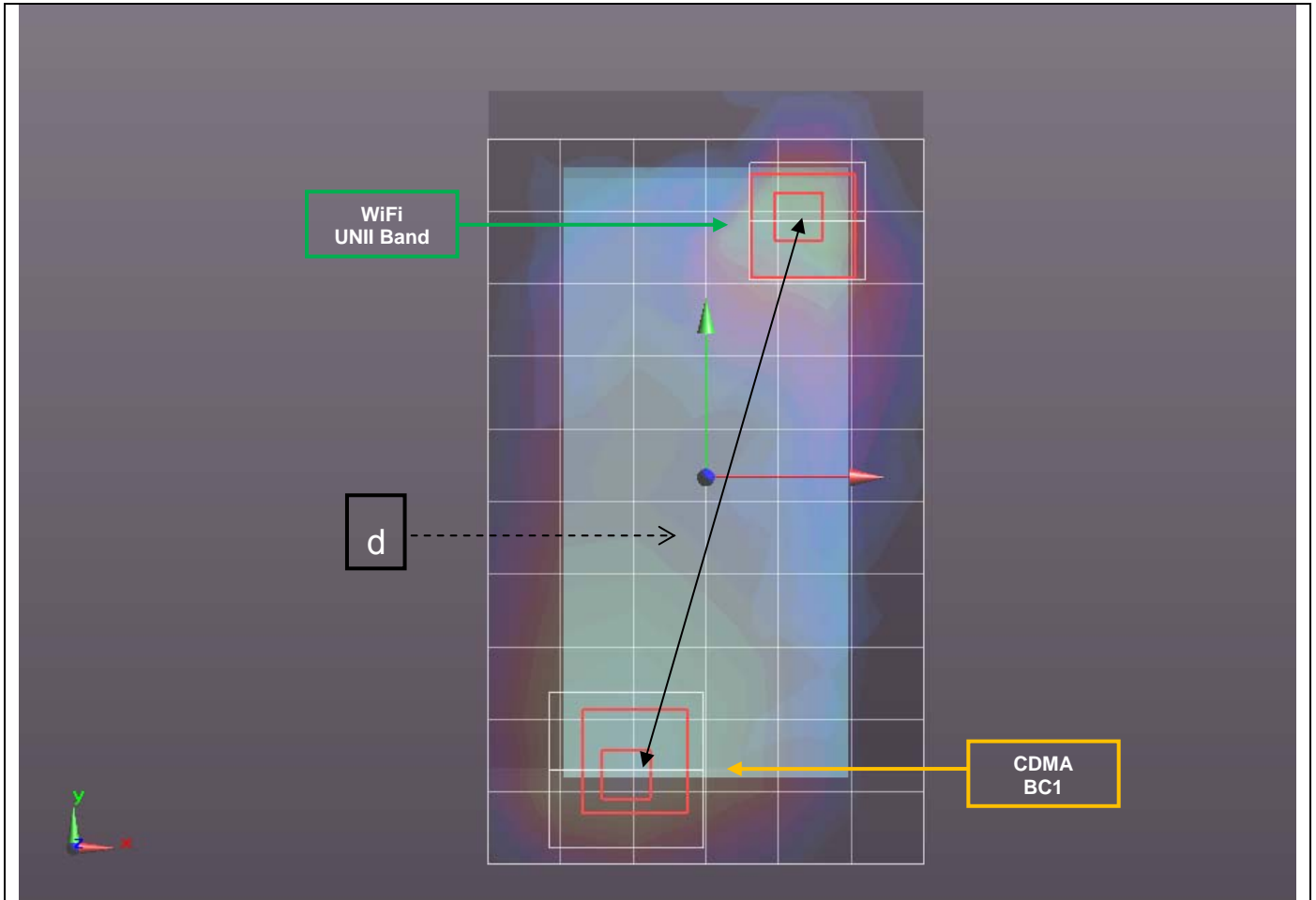
Figure (3)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC1	2.41	-0.0165	-0.0605	-0.186
WiFi DTS Band	3.98	0.0116	0.059	-0.184
d: Calculated distance (mm)				
122.8				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC1	2.41	-0.0165	-0.0605	-0.186
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
119.6				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$



**14.15. Sum of the SAR for CDMA BC10 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC10	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.569	0.339			0.908	No
		0.569		0.477		1.046	No
	Left Tilt	0.548	0.339			0.887	No
		0.548		0.452		1.000	No
	Right Touch	0.499	0.564			1.063	No
		0.499		0.560		1.059	No
Right Tilt	0.453	0.407			0.860	No	
	0.453		0.556		1.009	No	
Body-worn Accessory & Hotspot	Rear	0.433	0.579			1.012	No
		0.433		0.589		1.022	No
		0.433			0.018	0.451	No
	Front	0.387	0.270			0.657	No
		0.387		0.197		0.584	No
		0.387			0.014	0.401	No
Hotspot	Edge 1	0.314	0.155			0.469	No
	Edge 2	0.385	0.024			0.409	No
	Edge 3	0	0			0.000	No
	Edge 4	0.178	0.322			0.500	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.16. Sum of the SAR for CDMA BC10 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC10	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.566	0.339			0.905	No
		0.566		0.477		1.043	No
	Left Tilt	0.407	0.339			0.746	No
		0.407		0.452		0.859	No
	Right Touch	0.500	0.564			1.064	No
		0.500		0.560		1.060	No
Right Tilt	0.360	0.407			0.767	No	
	0.360		0.556		0.916	No	
Body-worn Accessory & Hotspot	Rear	0.930	0.579			1.509	No
		0.930		0.589		1.519	No
		0.930			0.018	0.948	No
	Front	0.689	0.270			0.959	No
		0.689		0.197		0.886	No
		0.689			0.014	0.703	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.564	0.024			0.588	No
	Edge 3	0.189	0			0.189	No
	Edge 4	1.008	0.322			1.330	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.17. Sum of the SAR for CDMA BC15 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC15	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.518	0.339			0.857	No
		0.518		0.477		0.995	No
	Left Tilt	0.581	0.339			0.920	No
		0.581		0.452		1.033	No
	Right Touch	0.787	0.564			1.351	No
		0.787		0.560		1.347	No
Right Tilt	0.680	0.407			1.087	No	
	0.680		0.556		1.236	No	
Body-worn Accessory & Hotspot	Rear	0.783	0.579			1.362	No
		0.783		0.589		1.372	No
		0.783			0.018	0.801	No
	Front	0.555	0.270			0.825	No
		0.555		0.197		0.752	No
		0.555			0.014	0.569	No
Hotspot	Edge 1	0.513	0.155			0.668	No
	Edge 2	0.117	0.024			0.141	No
	Edge 3	0	0			0.000	No
	Edge 4	0.468	0.322			0.790	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.18. Sum of the SAR for CDMA BC15 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		CDMA BC15	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.987	0.339			1.326	No
		0.987		0.477		1.464	No
	Left Tilt	0.572	0.339			0.911	No
		0.572		0.452		1.024	No
	Right Touch	1.180	0.564			1.744	Yes
		1.180		0.560		1.740	Yes
Right Tilt	0.603	0.407			1.010	No	
	0.603		0.556		1.159	No	
Body-worn Accessory & Hotspot	Rear	1.170	0.579			1.749	Yes
		1.170		0.589		1.759	Yes
		1.170			0.018	1.188	No
	Front	0.815	0.270			1.085	No
		0.815		0.197		1.012	No
		0.815			0.014	0.829	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.849	0.024			0.873	No
	Edge 3	0.834	0			0.834	No
	Edge 4	0.061	0.322			0.383	No

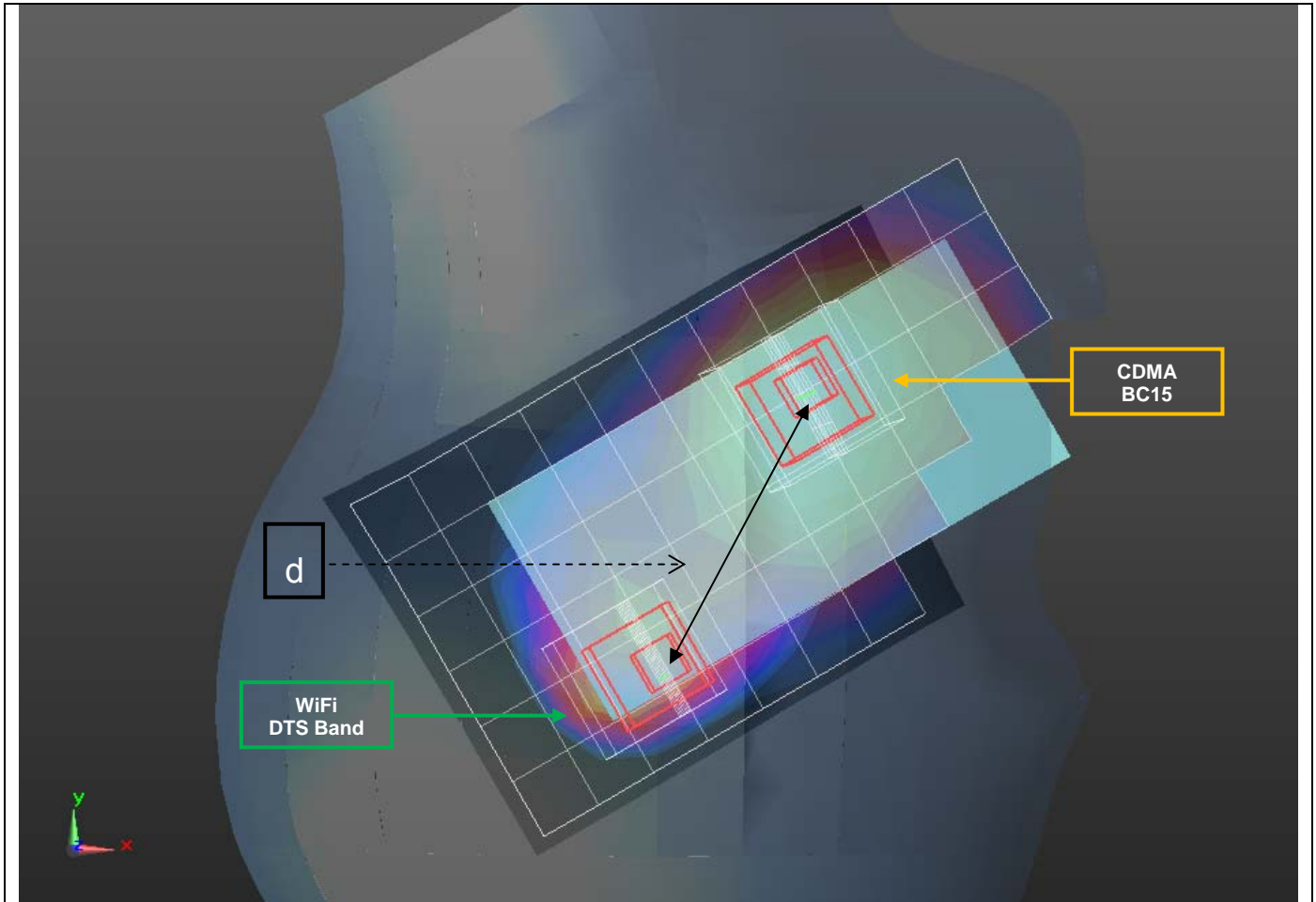
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			CDMA BC15	WiFi DTS Band	WiFi UNII Band					
7	Head	Right Touch	1.180	0.564		1.744	79.5	0.029	No	1
			1.180		0.560	1.740	80.2	0.029	No	2
	Body-worn Accessory & Hotspot	Rear	1.170	0.579		1.749	121.4	0.019	No	3
			1.170		0.589	1.759	117.9	0.020	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC15	1.74	0.0634	-0.26	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

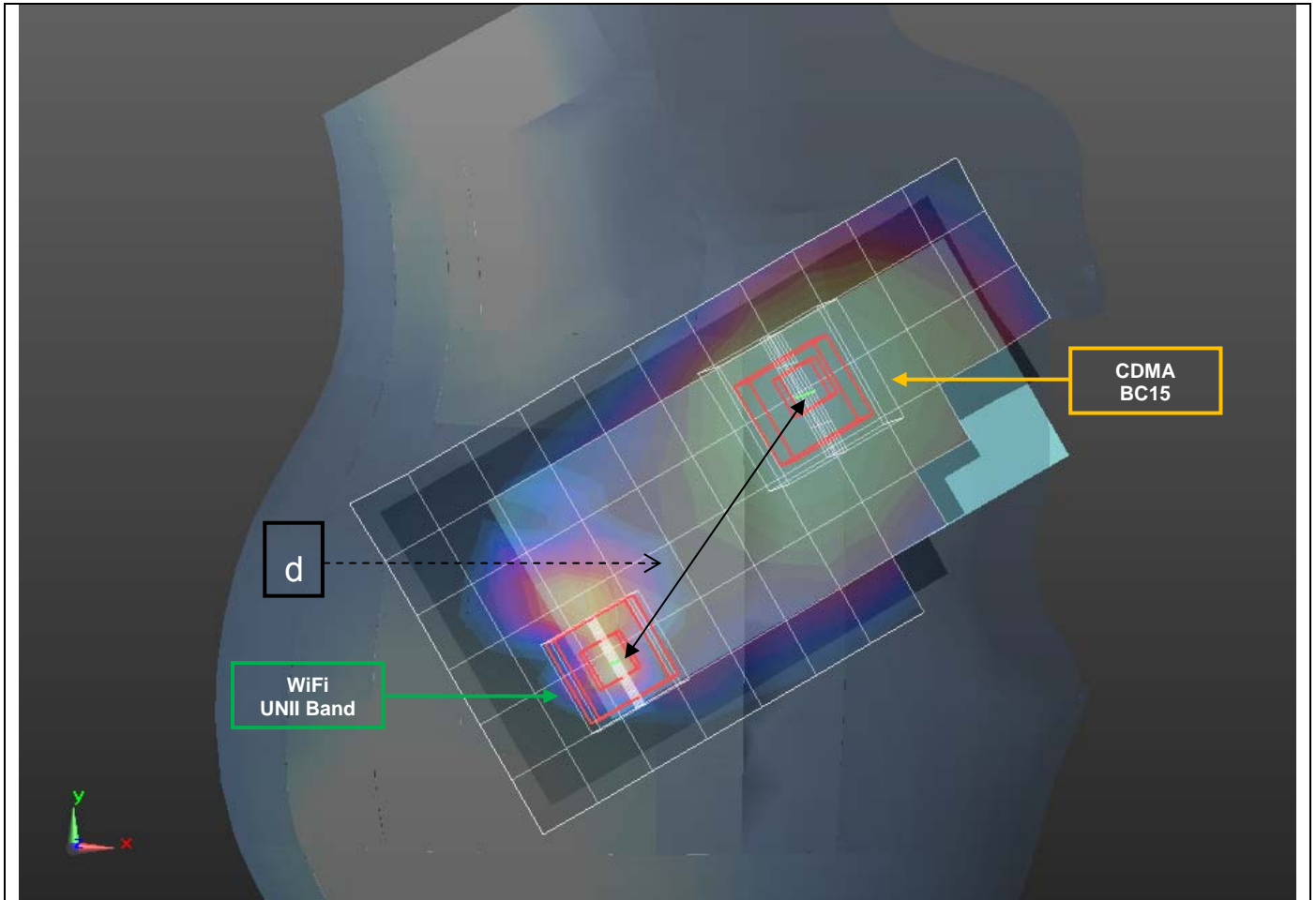
  

d: Calculated distance (mm)	
79.5	

The Peak Location Separation Distance is computed by using the formula below:  

$$\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$$

Figure (2)



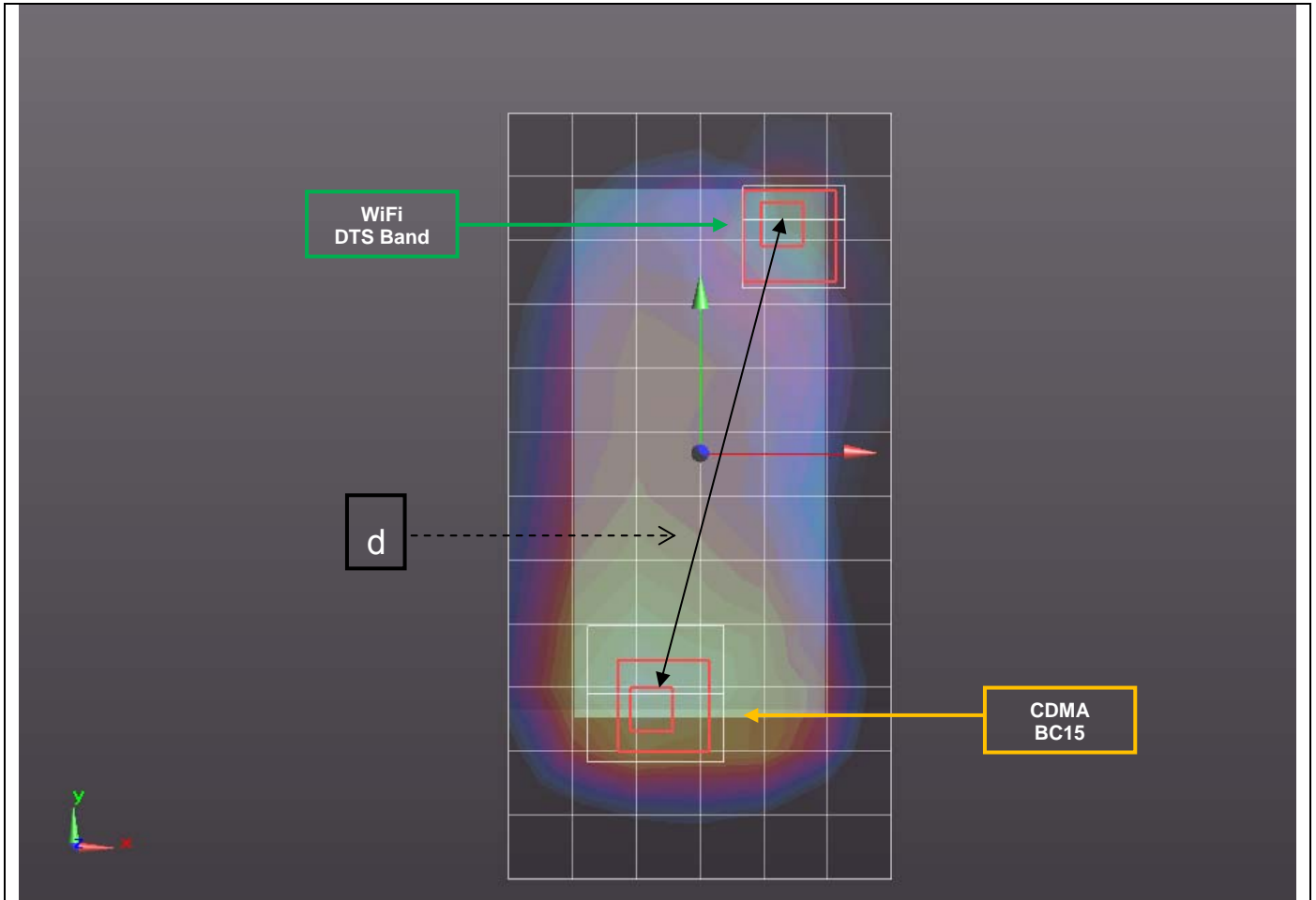
Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC15	1.74	0.0634	-0.26	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

d: Calculated distance (mm)	
80.2	

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

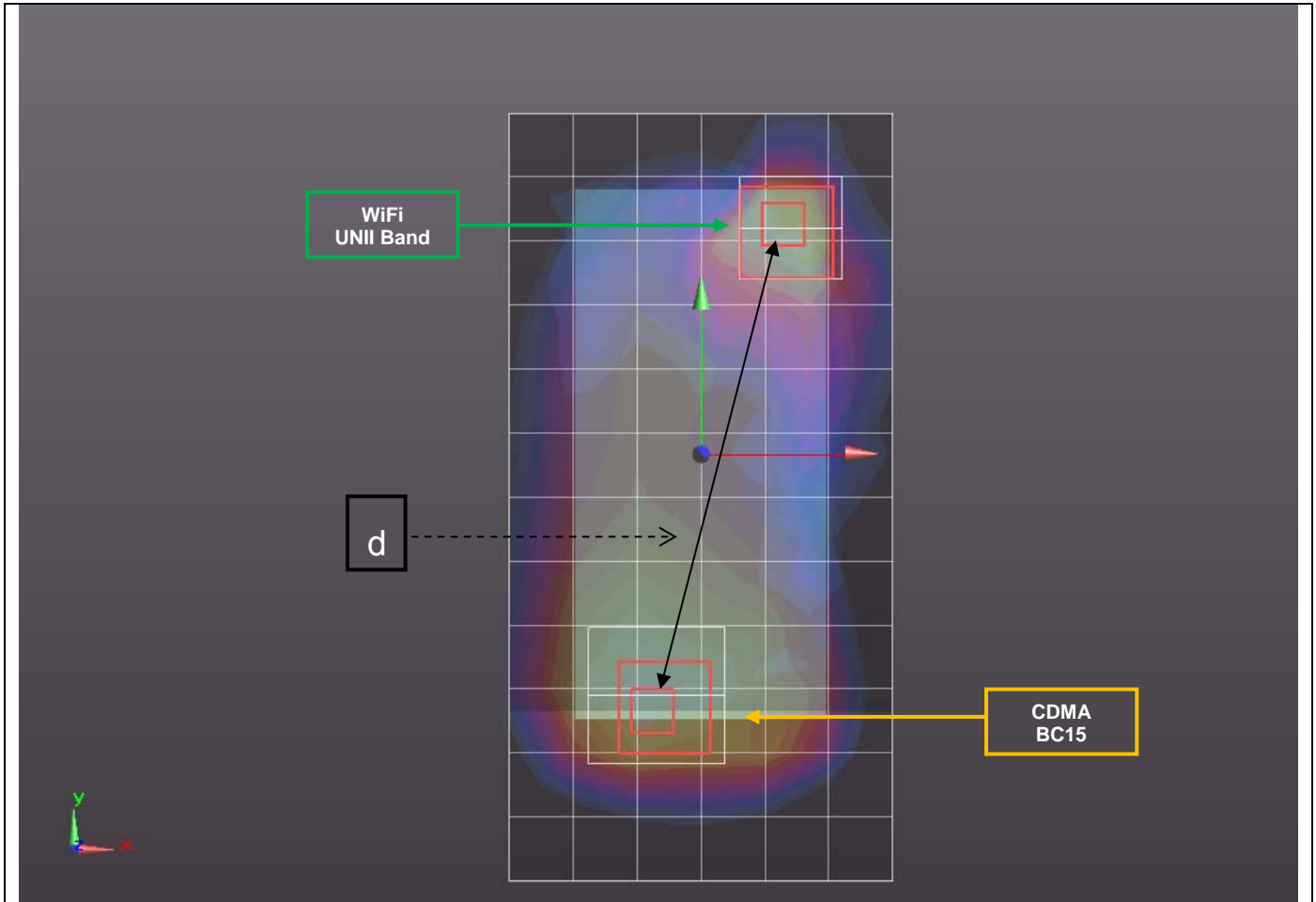
Figure (3)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC15	2.28	-0.0137	-0.0597	-0.185
WiFi DTS Band	3.98	0.0116	0.059	-0.184
d: Calculated distance (mm)				
121.4				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
CDMA BC15	2.28	-0.0137	-0.0597	-0.185
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
117.9				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.19. Sum of the SAR for LTE Band 2 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 2	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.698	0.339			1.037	No
		0.698		0.477		1.175	No
	Left Tilt	0.613	0.339			0.952	No
		0.613		0.452		1.065	No
	Right Touch	0.964	0.564			1.528	No
		0.964		0.560		1.524	No
Right Tilt	0.778	0.407			1.185	No	
	0.778		0.556		1.334	No	
Body-worn Accessory & Hotspot	Rear	0.942	0.579			1.521	No
		0.942		0.589		1.531	No
		0.942			0.018	0.960	No
	Front	0.925	0.270			1.195	No
		0.925		0.197		1.122	No
		0.925			0.014	0.939	No
Hotspot	Edge 1	0.619	0.155			0.774	No
	Edge 2	0.294	0.024			0.318	No
	Edge 3	0	0			0.000	No
	Edge 4	0.775	0.322			1.097	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.



**14.20. Sum of the SAR for LTE Band 2 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 2	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.672	0.339			1.011	No
		0.672		0.477		1.149	No
	Left Tilt	0.341	0.339			0.680	No
		0.341		0.452		0.793	No
	Right Touch	1.180	0.564			1.744	Yes
		1.180		0.560		1.740	Yes
Right Tilt	0.311	0.407			0.718	No	
	0.311		0.556		0.867	No	
Body-worn Accessory & Hotspot	Rear	1.010	0.579			1.589	Yes
		1.010		0.589		1.599	Yes
		1.010			0.018	1.028	No
	Front	0.590	0.270			0.860	No
		0.590		0.197		0.787	No
		0.590			0.014	0.604	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.760	0.024			0.784	No
	Edge 3	0.485	0			0.485	No
	Edge 4	0.274	0.322			0.596	No

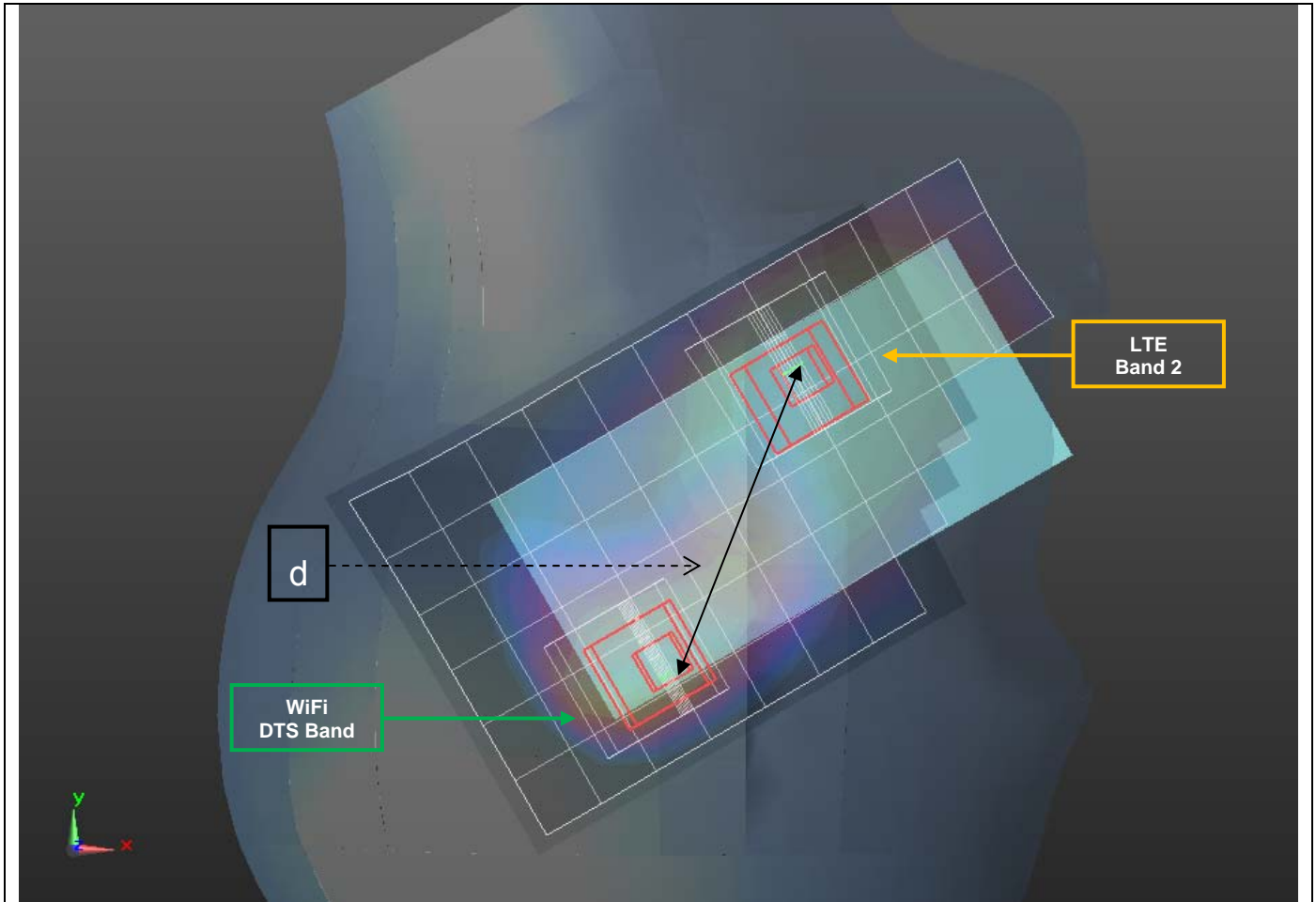
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			LTE Band 2	WiFi DTS Band	WiFi UNII Band					
8	Head	Right Touch	1.180	0.564		1.744	81.6	0.028	No	1
			1.180		0.560	1.740	81.9	0.028	No	2
	Body-worn Accessory & Hotspot	Rear	1.010	0.579		1.589	121.8	0.016	No	3
			1.010		0.589	1.599	118.2	0.017	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 2	1.86	0.062	-0.257	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

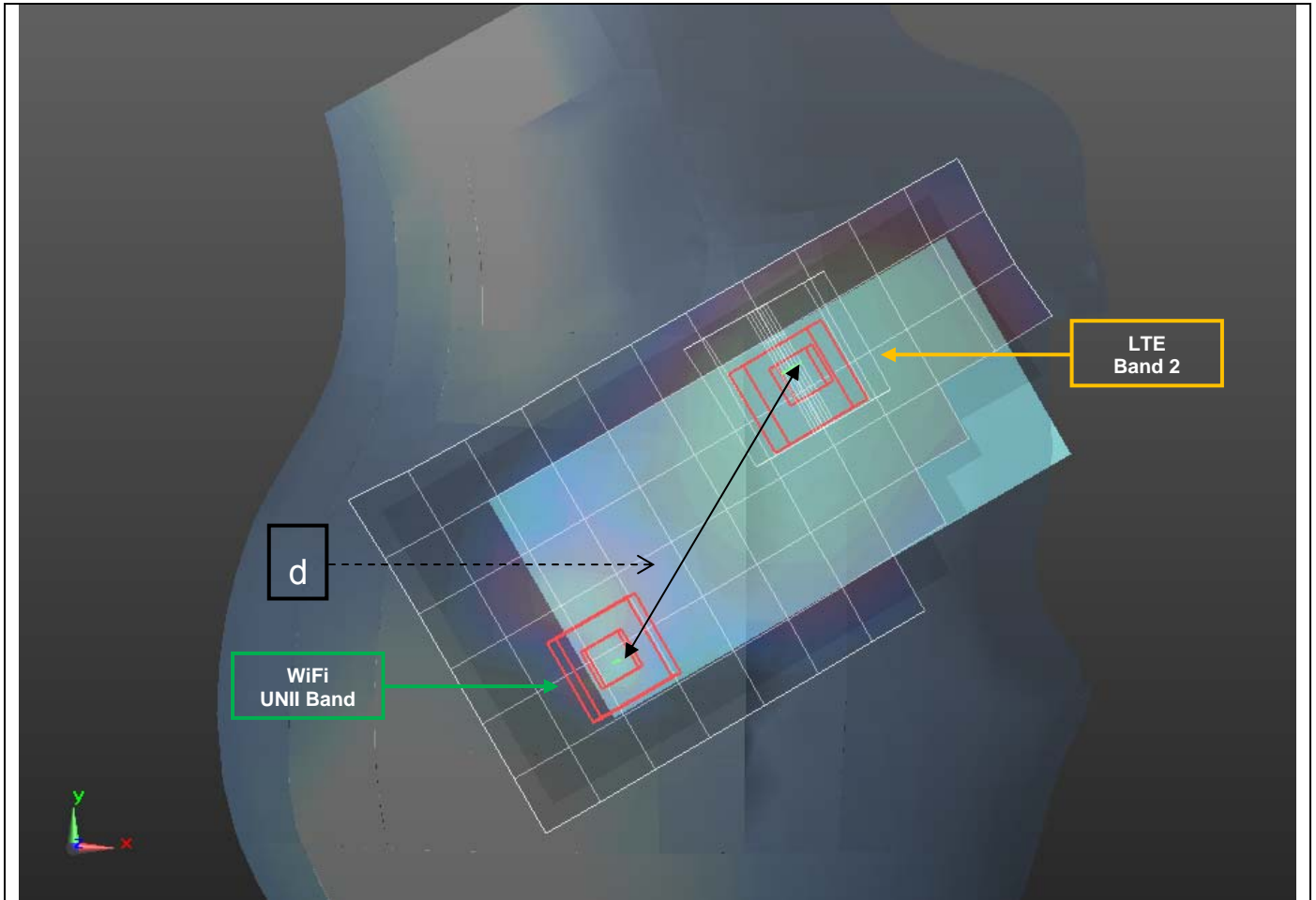
  

d: Calculated distance (mm)	
81.6	

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

Figure (2)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 2	1.86	0.062	-0.257	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174

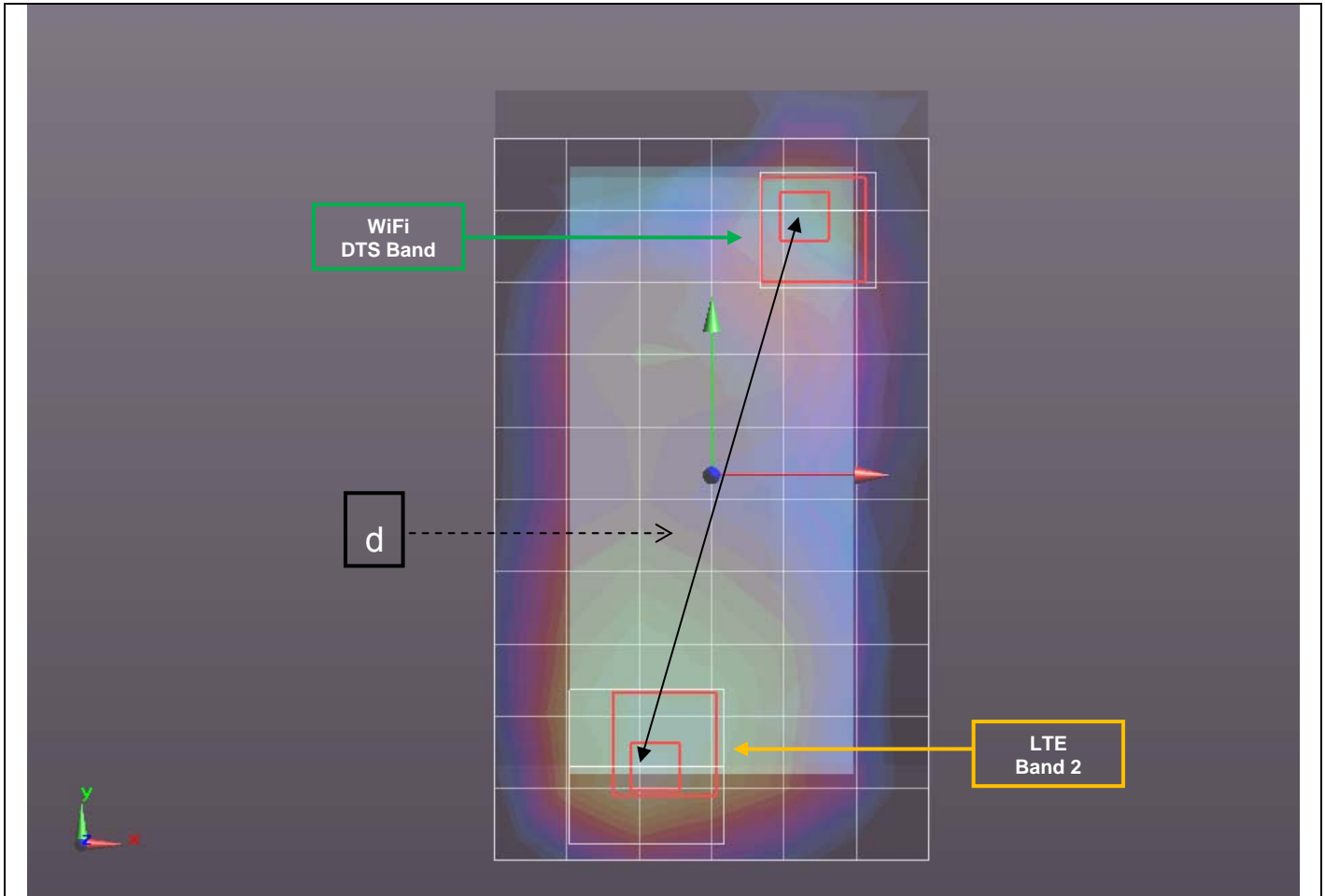
  

d: Calculated distance (mm)	
81.9	

The Peak Location Separation Distance is computed by using the formula below:

$$\text{SQRT}((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)$$

Figure (3)



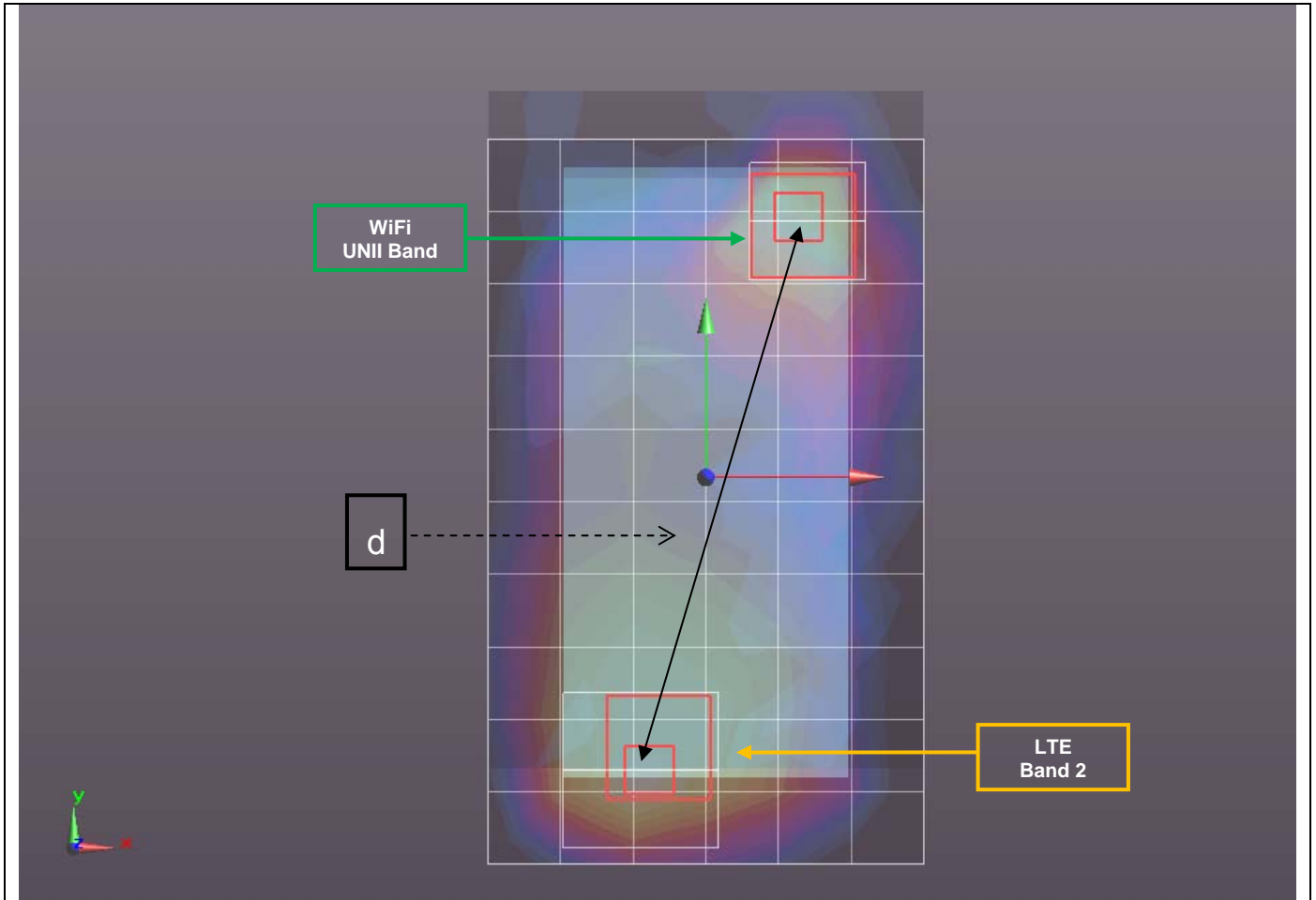
Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 2	2.05	-0.0119	-0.0605	-0.186
WiFi DTS Band	3.98	0.0116	0.059	-0.184

d: Calculated distance (mm)
121.8

The Peak Location Separation Distance is computed by using the formula below:  

$$\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 2	2.05	-0.0119	-0.0605	-0.186
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
118.2				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.21. Sum of the SAR for LTE Band 4 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 4	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.427	0.339			0.766	No
		0.427		0.477		0.904	No
	Left Tilt	0.443	0.339			0.782	No
		0.443		0.452		0.895	No
	Right Touch	0.682	0.564			1.246	No
		0.682		0.560		1.242	No
Right Tilt	0.494	0.407			0.901	No	
	0.494		0.556		1.050	No	
Body-worn Accessory & Hotspot	Rear	0.316	0.579			0.895	No
		0.316		0.589		0.905	No
		0.316			0.018	0.334	No
	Front	0.245	0.270			0.515	No
		0.245		0.197		0.442	No
		0.245			0.014	0.259	No
Hotspot	Edge 1	0.252	0.155			0.407	No
	Edge 2	0.032	0.024			0.056	No
	Edge 3	0	0			0.000	No
	Edge 4	0.259	0.322			0.581	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.22. Sum of the SAR for LTE Band 4 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 4	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.872	0.339			1.211	No
		0.872		0.477		1.349	No
	Left Tilt	0.542	0.339			0.881	No
		0.542		0.452		0.994	No
	Right Touch	1.100	0.564			1.664	Yes
		1.100		0.560		1.660	Yes
Right Tilt	0.554	0.407			0.961	No	
	0.554		0.556		1.110	No	
Body-worn Accessory & Hotspot	Rear	1.140	0.579			1.719	Yes
		1.140		0.589		1.729	Yes
		1.140			0.018	1.158	No
	Front	0.926	0.270			1.196	No
		0.926		0.197		1.123	No
		0.926			0.014	0.940	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.900	0.024			0.924	No
	Edge 3	0.826	0			0.826	No
	Edge 4	0.099	0.322			0.421	No

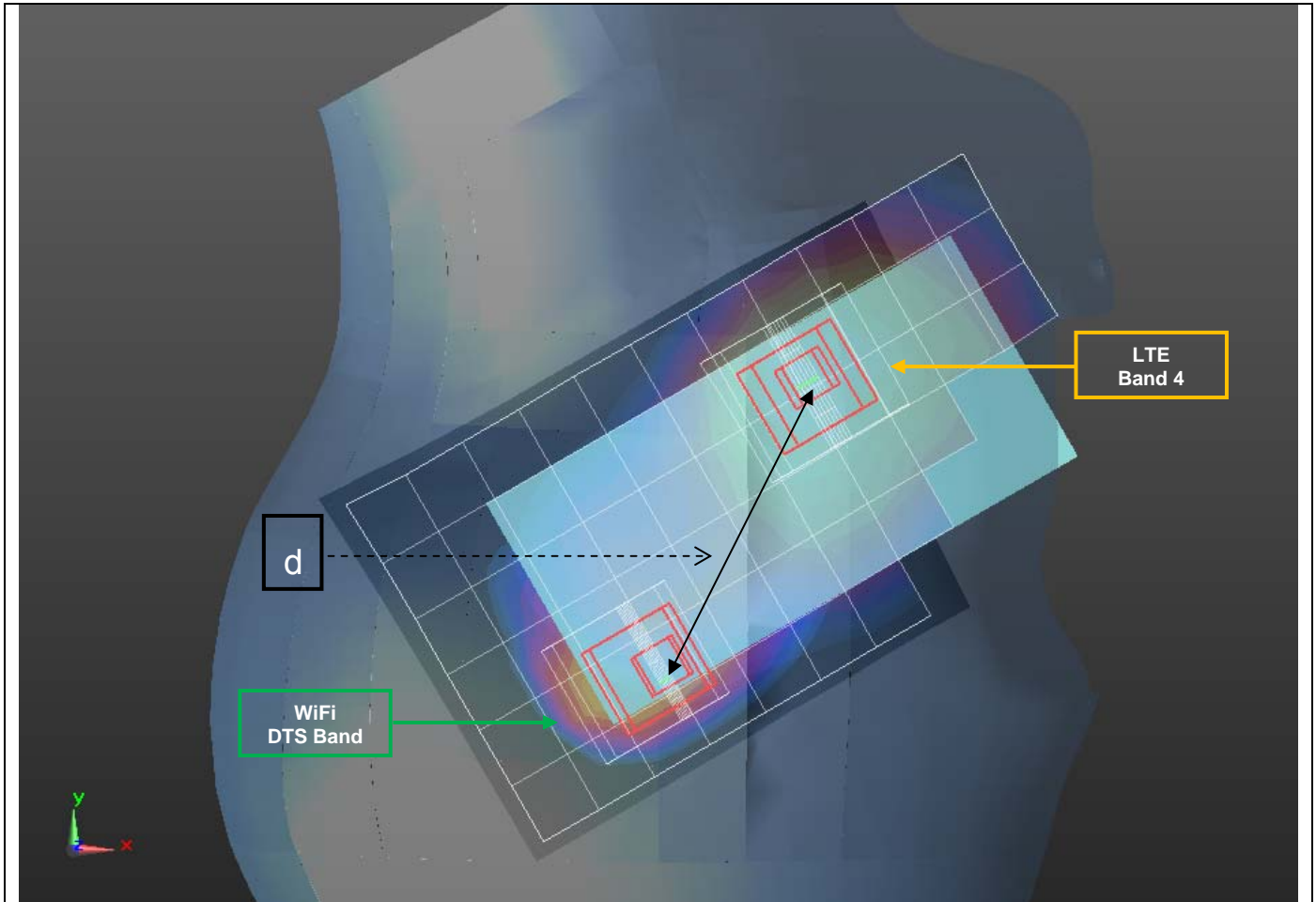
**SAR to Peak Location Separation Ratio (SPLSR)**

Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			LTE Band 4	WiFi DTS Band	WiFi UNII Band					
9	Head	Right Touch	1.100	0.564		1.664	80.1	0.027	No	1
			1.100		0.560	1.660	80.5	0.027	No	2
	Body-worn Accessory & Hotspot	Rear	1.140	0.579		1.719	123.1	0.018	No	3
			1.140		0.589	1.729	119.5	0.019	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Figure (1)

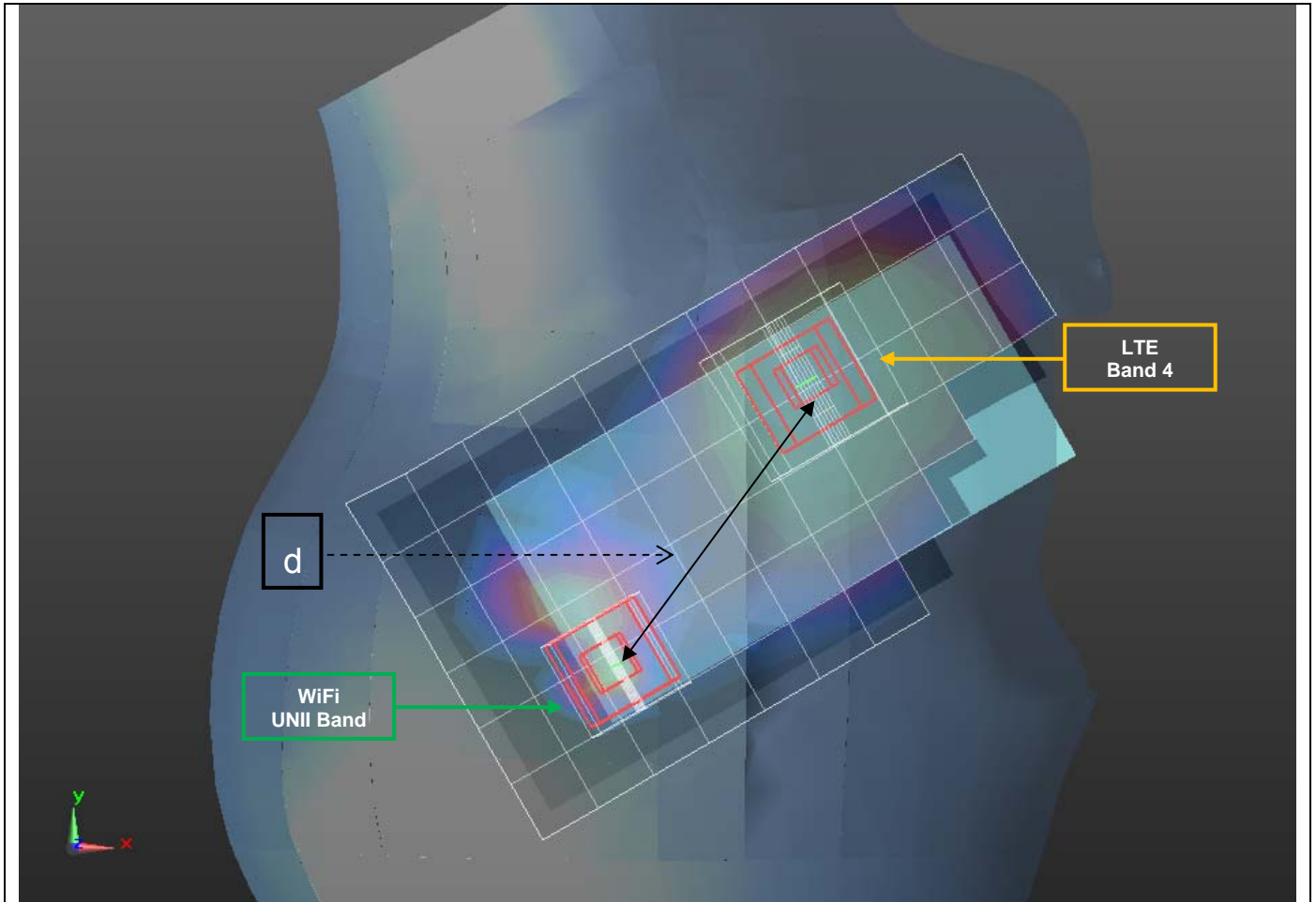


Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 4	1.63	0.0626	-0.259	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174
d: Calculated distance (mm)				
80.1				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$



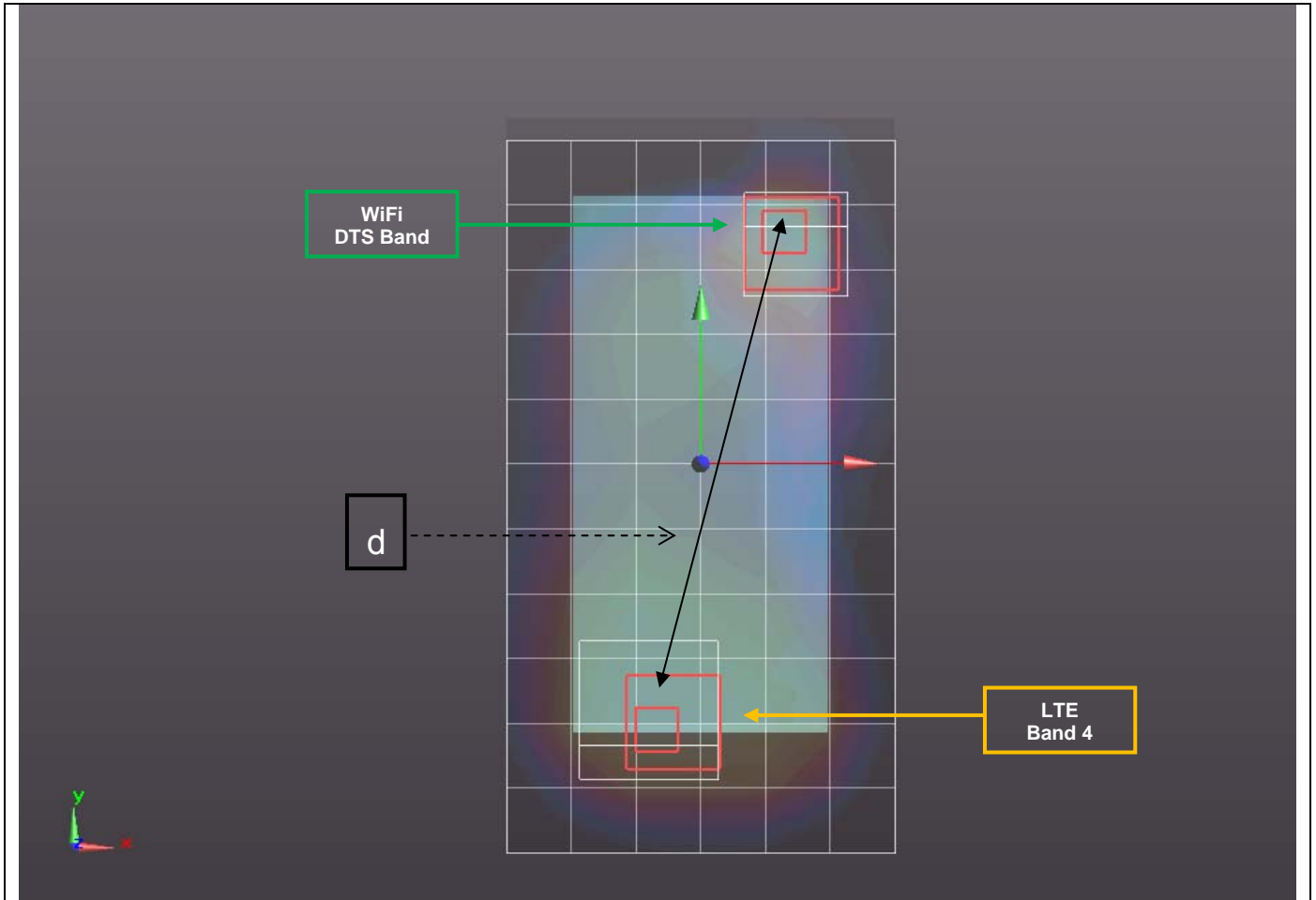
Figure (2)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 4	1.63	0.0626	-0.259	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174
d: Calculated distance (mm)				
80.5				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

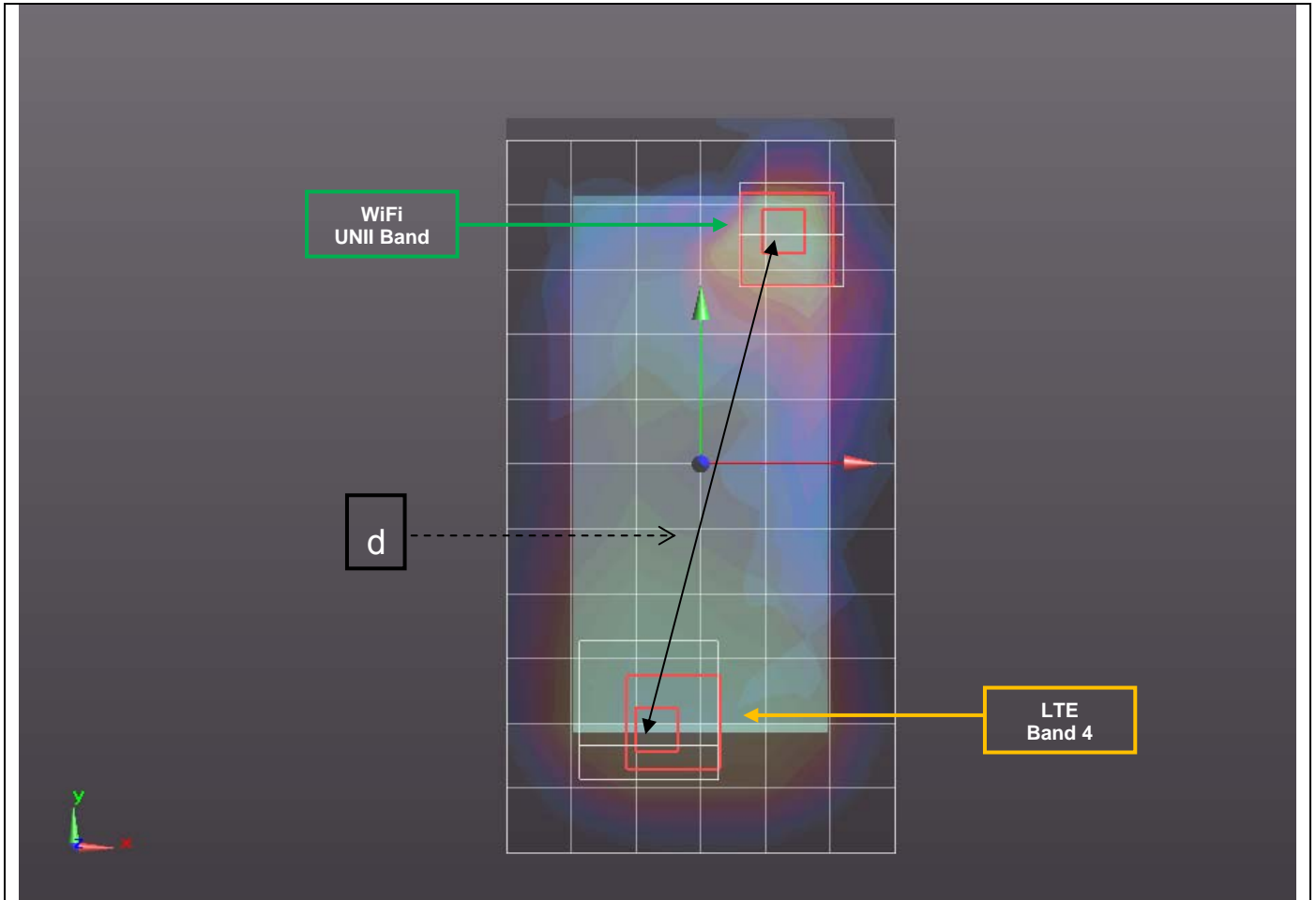
Figure (3)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 4	2.23	-0.012	-0.0618	-0.185
WiFi DTS Band	3.98	0.0116	0.059	-0.184
d: Calculated distance (mm)				
123.1				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 4	2.23	-0.012	-0.0618	-0.185
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
119.5				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.23. Sum of the SAR for LTE Band 5 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 5	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.477	0.339			0.816	No
		0.477		0.477		0.954	No
	Left Tilt	0.408	0.339			0.747	No
		0.408		0.452		0.860	No
	Right Touch	0.405	0.564			0.969	No
		0.405		0.560		0.965	No
Right Tilt	0.307	0.407			0.714	No	
	0.307		0.556		0.863	No	
Body-worn Accessory & Hotspot	Rear	0.282	0.579			0.861	No
		0.282		0.589		0.871	No
		0.282			0.018	0.300	No
	Front	0.211	0.270			0.481	No
		0.211		0.197		0.408	No
		0.211			0.014	0.225	No
Hotspot	Edge 1	0.171	0.155			0.326	No
	Edge 2	0.079	0.024			0.103	No
	Edge 3	0	0			0.000	No
	Edge 4	0.252	0.322			0.574	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.24. Sum of the SAR for LTE Band 5 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 5	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.425	0.339			0.764	No
		0.425		0.477		0.902	No
	Left Tilt	0.220	0.339			0.559	No
		0.220		0.452		0.672	No
	Right Touch	0.402	0.564			0.966	No
		0.402		0.560		0.962	No
Right Tilt	0.232	0.407			0.639	No	
	0.232		0.556		0.788	No	
Body-worn Accessory & Hotspot	Rear	0.774	0.579			1.353	No
		0.774		0.589		1.363	No
		0.774			0.018	0.792	No
	Front	0.606	0.270			0.876	No
		0.606		0.197		0.803	No
		0.606			0.014	0.620	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.379	0.024			0.403	No
	Edge 3	0.215	0			0.215	No
	Edge 4	0.710	0.322			1.032	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.25. Sum of the SAR for LTE Band 13 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 13	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.467	0.339			0.806	No
		0.467		0.477		0.944	No
	Left Tilt	0.418	0.339			0.757	No
		0.418		0.452		0.870	No
	Right Touch	0.326	0.564			0.890	No
		0.326		0.560		0.886	No
Right Tilt	0.321	0.407			0.728	No	
	0.321		0.556		0.877	No	
Body-worn Accessory & Hotspot	Rear	0.286	0.579			0.865	No
		0.286		0.589		0.875	No
		0.286			0.018	0.304	No
	Front	0.262	0.270			0.532	No
		0.262		0.197		0.459	No
		0.262			0.014	0.276	No
Hotspot	Edge 1	0.267	0.155			0.422	No
	Edge 2	0.368	0.024			0.392	No
	Edge 3	0	0			0.000	No
	Edge 4	0.075	0.322			0.397	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.26. Sum of the SAR for LTE Band 13 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 13	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.467	0.339			0.806	No
		0.467		0.477		0.944	No
	Left Tilt	0.322	0.339			0.661	No
		0.322		0.452		0.774	No
	Right Touch	0.536	0.564			1.100	No
		0.536		0.560		1.096	No
Right Tilt	0.338	0.407			0.745	No	
	0.338		0.556		0.894	No	
Body-worn Accessory & Hotspot	Rear	0.932	0.579			1.511	No
		0.932		0.589		1.521	No
		0.932			0.018	0.950	No
	Front	0.633	0.270			0.903	No
		0.633		0.197		0.830	No
		0.633			0.014	0.647	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.345	0.024			0.369	No
	Edge 3	0.342	0			0.342	No
	Edge 4	0.736	0.322			1.058	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.27. Sum of the SAR for LTE Band 17 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 17	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.578	0.339			0.917	No
		0.578		0.477		1.055	No
	Left Tilt	0.469	0.339			0.808	No
		0.469		0.452		0.921	No
	Right Touch	0.524	0.564			1.088	No
		0.524		0.560		1.084	No
Right Tilt	0.497	0.407			0.904	No	
	0.497		0.556		1.053	No	
Body-worn Accessory & Hotspot	Rear	0.289	0.579			0.868	No
		0.289		0.589		0.878	No
		0.289			0.018	0.307	No
	Front	0.266	0.270			0.536	No
		0.266		0.197		0.463	No
		0.266			0.014	0.280	No
Hotspot	Edge 1	0.211	0.155			0.366	No
	Edge 2	0.209	0.024			0.233	No
	Edge 3	0	0			0.000	No
	Edge 4	0.110	0.322			0.432	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.28. Sum of the SAR for LTE Band 17 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 17	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.385	0.339			0.724	No
		0.385		0.477		0.862	No
	Left Tilt	0.215	0.339			0.554	No
		0.215		0.452		0.667	No
	Right Touch	0.423	0.564			0.987	No
		0.423		0.560		0.983	No
Right Tilt	0.218	0.407			0.625	No	
	0.218		0.556		0.774	No	
Body-worn Accessory & Hotspot	Rear	0.830	0.579			1.409	No
		0.830		0.589		1.419	No
		0.830			0.018	0.848	No
	Front	0.569	0.270			0.839	No
		0.569		0.197		0.766	No
		0.569			0.014	0.583	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.438	0.024			0.462	No
	Edge 3	0.329	0			0.329	No
	Edge 4	0.585	0.322			0.907	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.29. Sum of the SAR for LTE Band 25 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 25	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.488	0.339			0.827	No
		0.488		0.477		0.965	No
	Left Tilt	0.508	0.339			0.847	No
		0.508		0.452		0.960	No
	Right Touch	0.856	0.564			1.420	No
		0.856		0.560		1.416	No
Right Tilt	0.657	0.407			1.064	No	
	0.657		0.556		1.213	No	
Body-worn Accessory & Hotspot	Rear	0.965	0.579			1.544	No
		0.965		0.589		1.554	No
		0.965			0.018	0.983	No
	Front	0.608	0.270			0.878	No
		0.608		0.197		0.805	No
		0.608			0.014	0.622	No
Hotspot	Edge 1	0.777	0.155			0.932	No
	Edge 2	0.332	0.024			0.356	No
	Edge 3	0	0			0.000	No
	Edge 4	0.853	0.322			1.175	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.30. Sum of the SAR for LTE Band 25 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 25	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.585	0.339			0.924	No
		0.585		0.477		1.062	No
	Left Tilt	0.487	0.339			0.826	No
		0.487		0.452		0.939	No
	Right Touch	1.180	0.564			1.744	Yes
		1.180		0.560		1.740	Yes
Right Tilt	0.637	0.407			1.044	No	
	0.637		0.556		1.193	No	
Body-worn Accessory & Hotspot	Rear	1.100	0.579			1.679	Yes
		1.100		0.589		1.689	Yes
		1.100			0.018	1.118	No
	Front	0.489	0.270			0.759	No
		0.489		0.197		0.686	No
		0.489			0.014	0.503	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.535	0.024			0.559	No
	Edge 3	0.465	0			0.465	No
	Edge 4	0.144	0.322			0.466	No

**SAR to Peak Location Separation Ratio (SPLSR)**

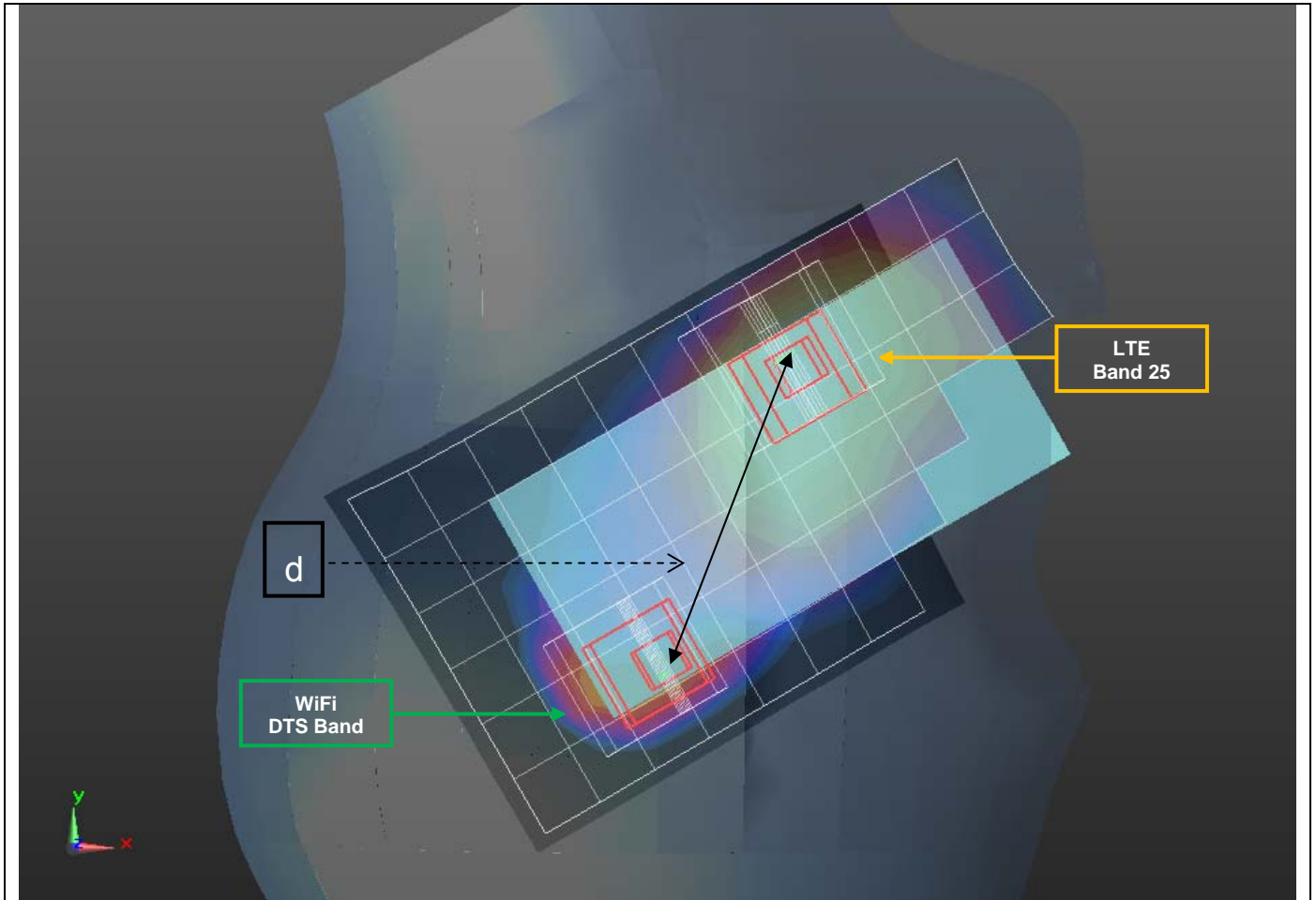
Case #	RF Exposure conditions	Test Position	Worst-case combination			Σ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
			LTE Band 25	WiFi DTS Band	WiFi UNII Band					
10	Head	Right Touch	1.180	0.564		1.744	80.7	0.029	No	1
			1.180		0.560	1.740	80.8	0.028	No	2
	Body-worn Accessory & Hotspot	Rear	1.100	0.579		1.679	122.1	0.018	No	3
			1.100		0.589	1.689	118.6	0.019	No	4

**Conclusion:**

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.



Figure (1)



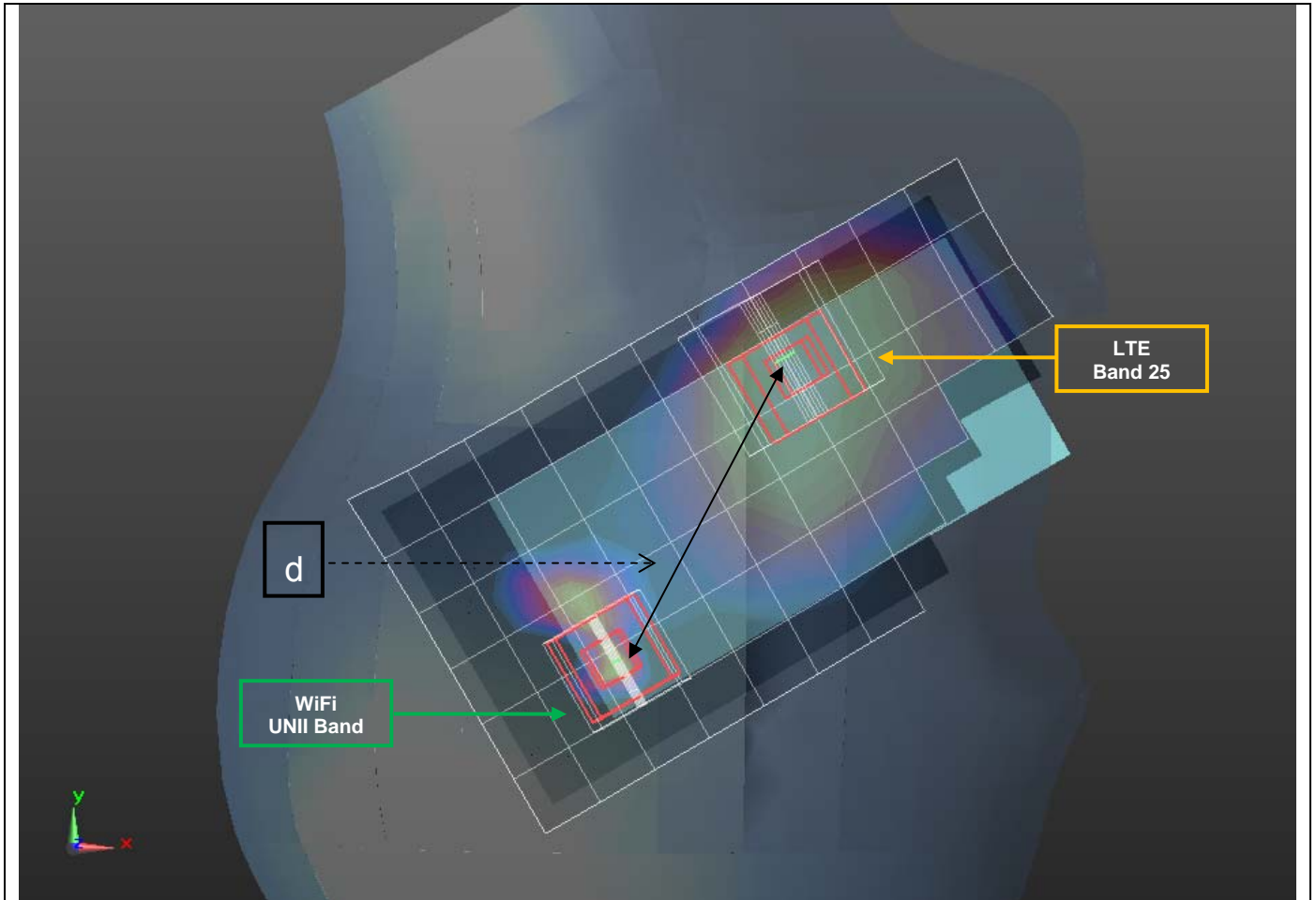
Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 25	1.78	0.0599	-0.257	-0.175
WiFi DTS Band	1.18	0.0276	-0.331	-0.174

d: Calculated distance (mm)	
80.7	

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

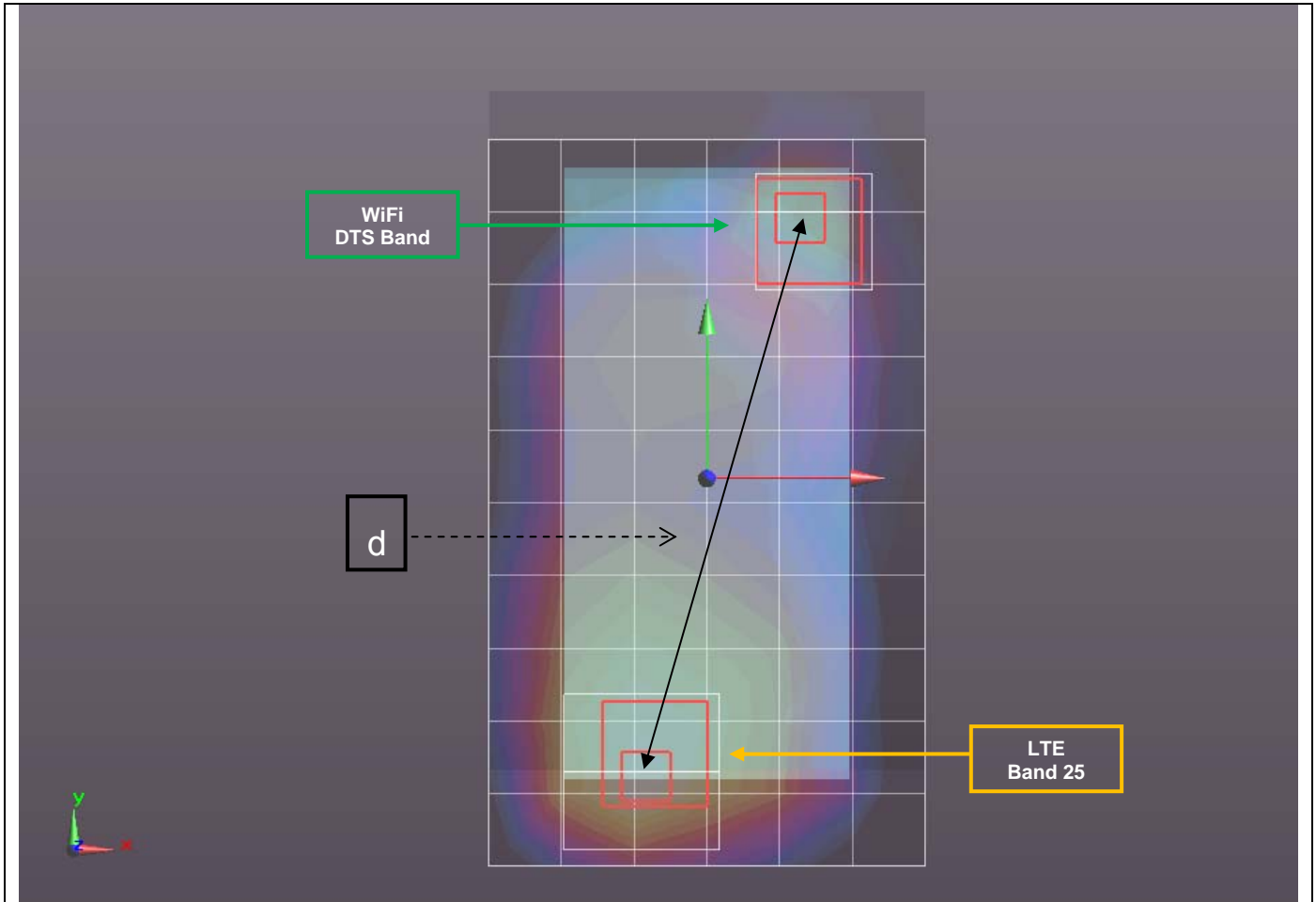
Figure (2)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 25	1.78	0.0599	-0.257	-0.175
WiFi UNII Band	3.27	0.0179	-0.326	-0.174
d: Calculated distance (mm)				
80.8				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$

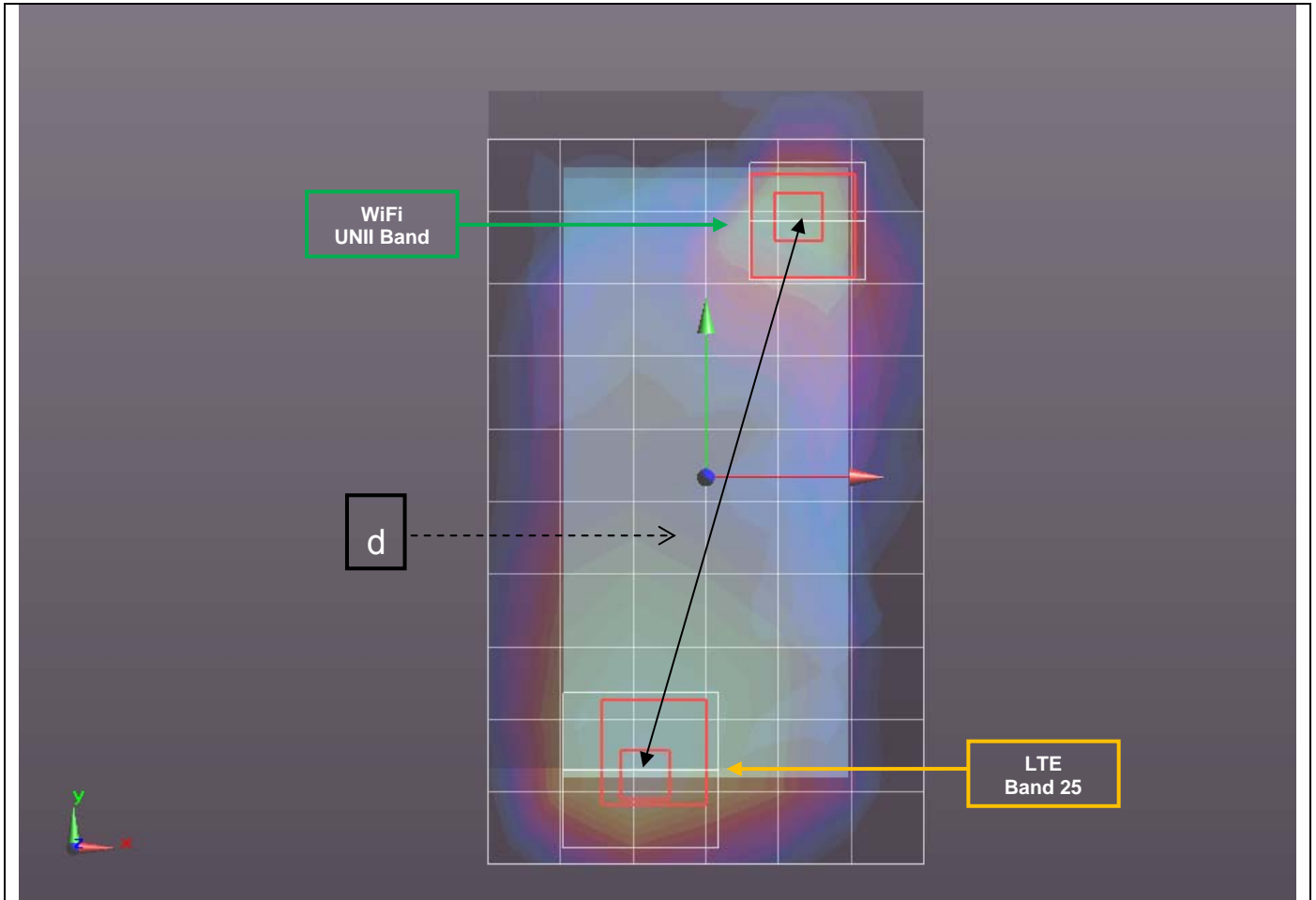
Figure (3)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 25	2.25	-0.0135	-0.0605	-0.186
WiFi DTS Band	3.98	0.0116	0.059	-0.184
d: Calculated distance (mm)				
122.1				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt{((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)}$

Figure (4)



Mode	Peak SAR mW/g	X m	Y m	Z m
LTE Band 25	2.25	-0.0135	-0.0605	-0.186
WiFi UNII Band	3.39	0.021	0.053	-0.184
d: Calculated distance (mm)				
118.6				

The Peak Location Separation Distance is computed by using the formula below:  
 $\sqrt[3]{(X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2}$

**14.31. Sum of the SAR for LTE Band 26 (UAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 26	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.582	0.339			0.921	No
		0.582		0.477		1.059	No
	Left Tilt	0.403	0.339			0.742	No
		0.403		0.452		0.855	No
	Right Touch	0.293	0.564			0.857	No
		0.293		0.560		0.853	No
Right Tilt	0.229	0.407			0.636	No	
	0.229		0.556		0.785	No	
Body-worn Accessory & Hotspot	Rear	0.289	0.579			0.868	No
		0.289		0.589		0.878	No
		0.289			0.018	0.307	No
	Front	0.220	0.270			0.490	No
		0.220		0.197		0.417	No
		0.220			0.014	0.234	No
Hotspot	Edge 1	0.183	0.155			0.338	No
	Edge 2	0.328	0.024			0.352	No
	Edge 3	0	0			0.000	No
	Edge 4	0.119	0.322			0.441	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

**14.32. Sum of the SAR for LTE Band 26 (LAT) + WiFi DTS & UNII Band & BT**

RF Exposure conditions	Test Position	Simultaneous Transmission Scenario				Σ 1-g SAR (mW/g)	SPLSR (Yes/ No)
		LTE Band 26	WiFi DTS Band	WiFi UNII Band	Bluetooth		
Head	Left Touch	0.409	0.339			0.748	No
		0.409		0.477		0.886	No
	Left Tilt	0.283	0.339			0.622	No
		0.283		0.452		0.735	No
	Right Touch	0.435	0.564			0.999	No
		0.435		0.560		0.995	No
Right Tilt	0.278	0.407			0.685	No	
	0.278		0.556		0.834	No	
Body-worn Accessory & Hotspot	Rear	0.609	0.579			1.188	No
		0.609		0.589		1.198	No
		0.609			0.018	0.627	No
	Front	0.516	0.270			0.786	No
		0.516		0.197		0.713	No
		0.516			0.014	0.530	No
Hotspot	Edge 1	0	0.155			0.155	No
	Edge 2	0.461	0.024			0.485	No
	Edge 3	0.155	0			0.155	No
	Edge 4	0.691	0.322			1.013	No

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required.

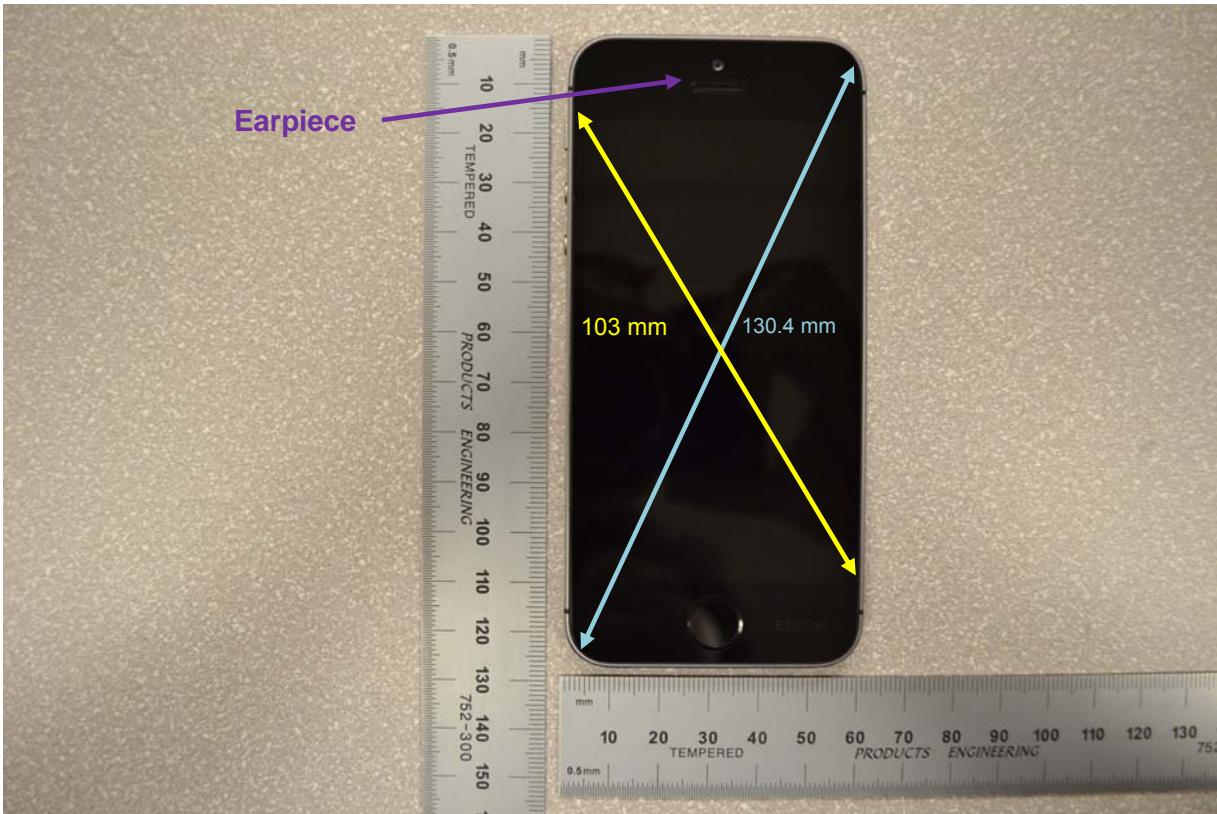
## 15. Appendixes

Refer to separated files for the following appendixes.

- 15.1. System Performance Check Plots
- 15.2. Highest SAR Test Plots
- 15.3. Calibration Certificate for E-Field Probe EX3DV4 - SN 3749
- 15.4. Calibration Certificate for E-Field Probe EX3DV4 - SN 3751
- 15.5. Calibration Certificate for E-Field Probe EX3DV4 - SN 3772
- 15.6. Calibration Certificate for E-Field Probe EX3DV4 - SN 3686
- 15.7. Calibration Certificate for E-Field Probe EX3DV4 - SN 3901
- 15.8. Calibration Certificate for E-Field Probe EX3DV4 - SN 3885
- 15.9. Calibration Certificate for D750V3 - SN 1071
- 15.10. Calibration Certificate for D835V2 - SN 4d002
- 15.11. Calibration Certificate for D835V2 - SN 4d142
- 15.12. Calibration Certificate for D1750V2 - SN 1050
- 15.13. Calibration Certificate for D1750V2 - SN 1053
- 15.14. Calibration Certificate for D1900V2- SN 5d043
- 15.15. Calibration Certificate for D1900V2- SN 5d163
- 15.16. Calibration Certificate for D2450V2 - SN 899
- 15.17. Calibration Certificate for D5GHzV2 - SN 1003
- 15.18. Calibration Certificate for D5GHzV2 - SN 1138

## 16. External Photos

Overall Dimensions



Front View of the DUT

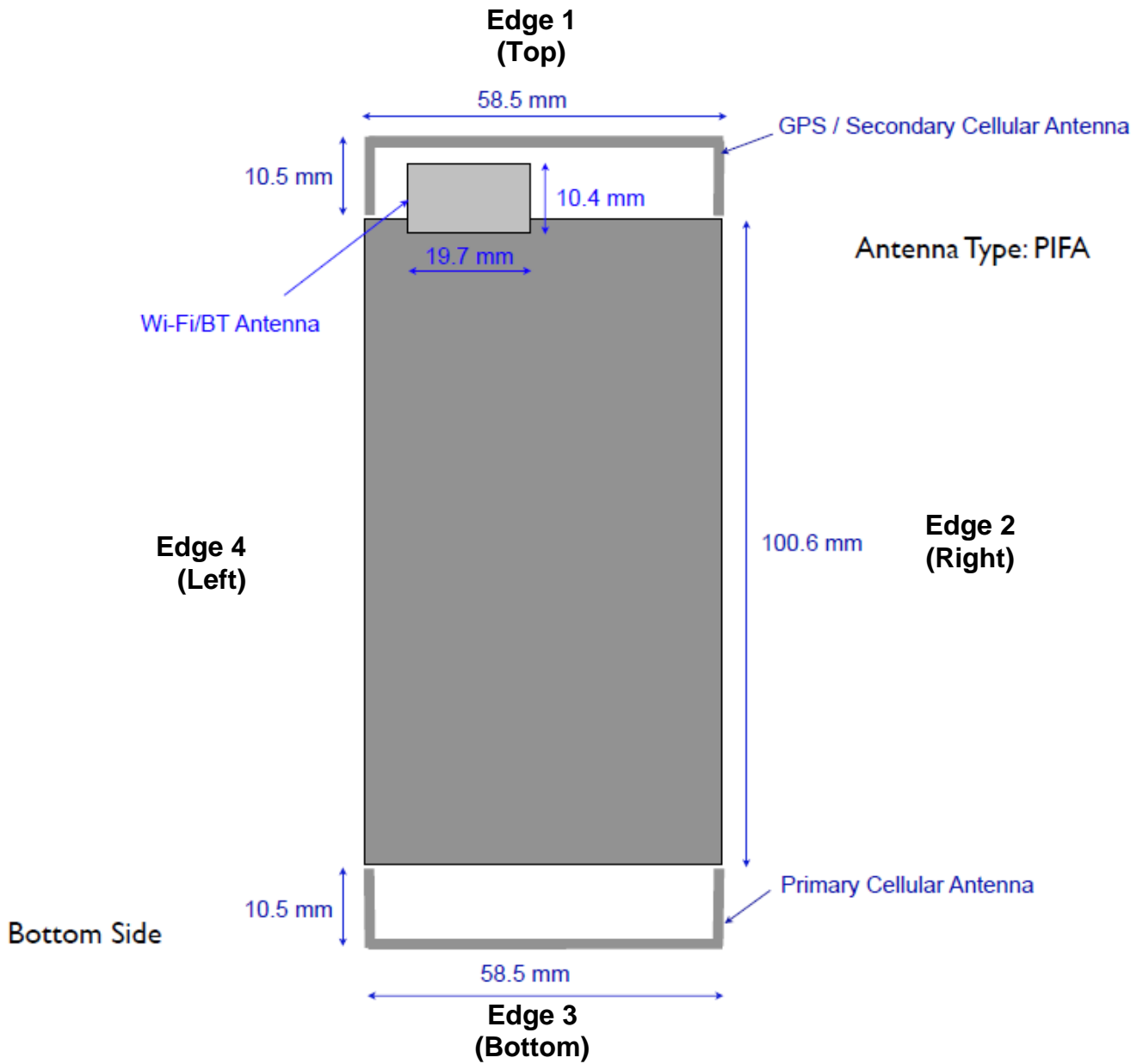


Rear View of the DUT



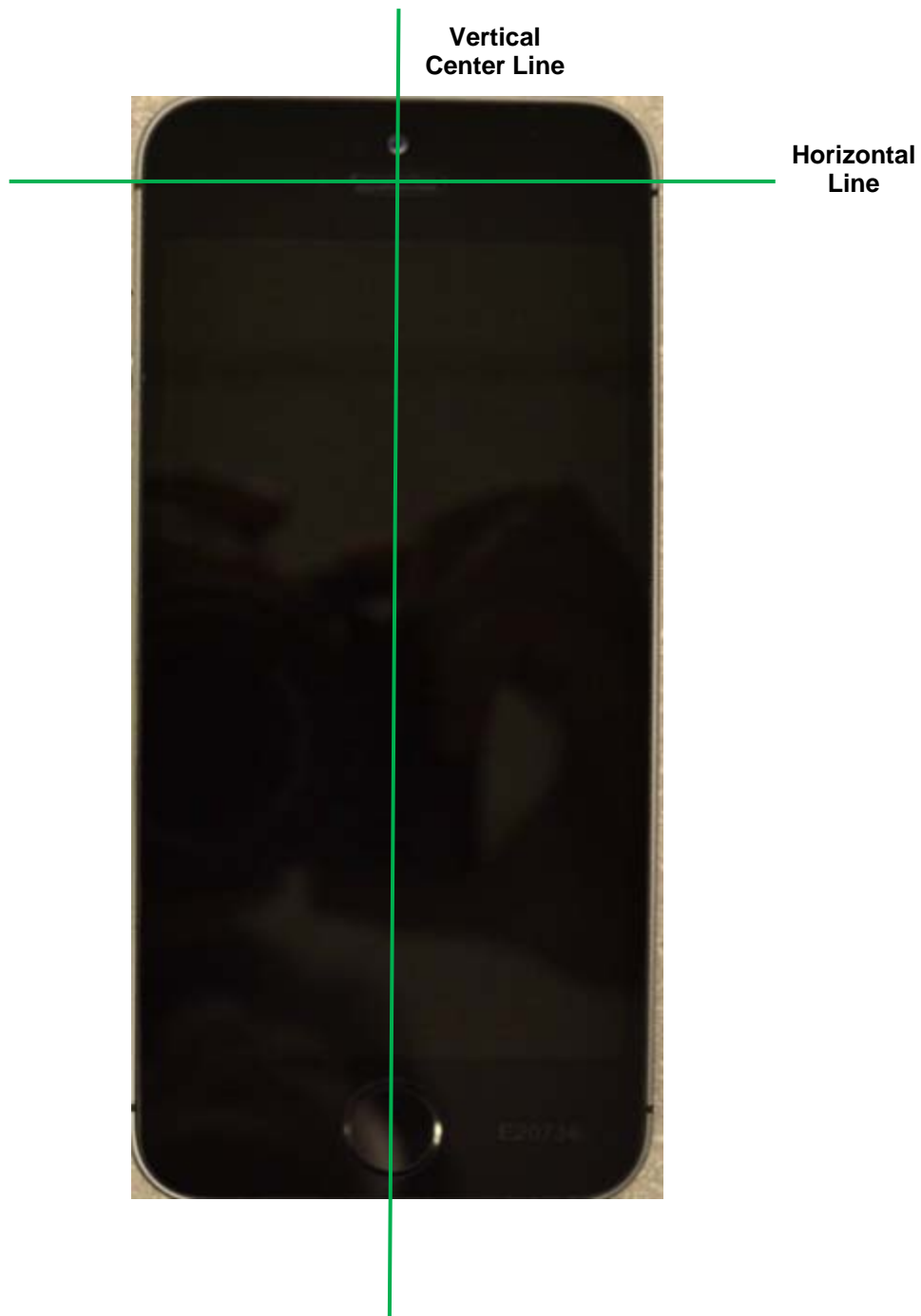


### 17. Antenna Locations & Separation Distances



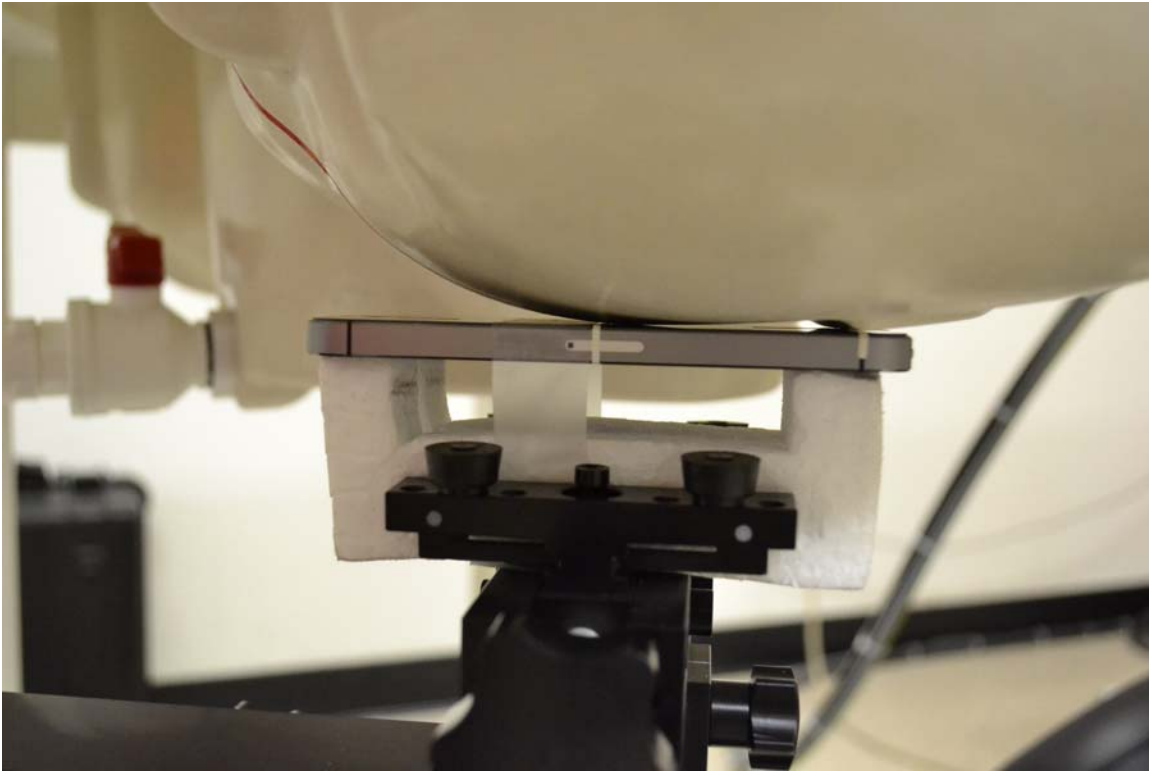
## 18. Setup Photos

Handset Vertical and Horizontal Reference Lines

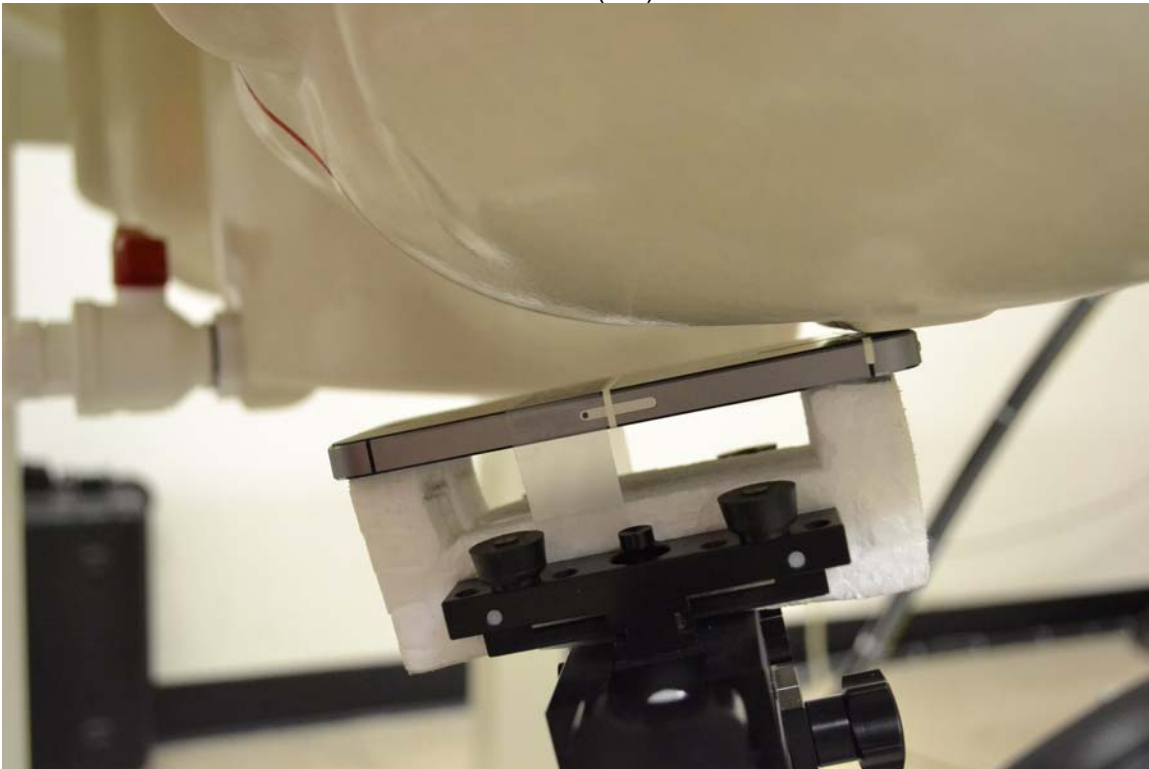


## 18.1. Head Exposure Conditions

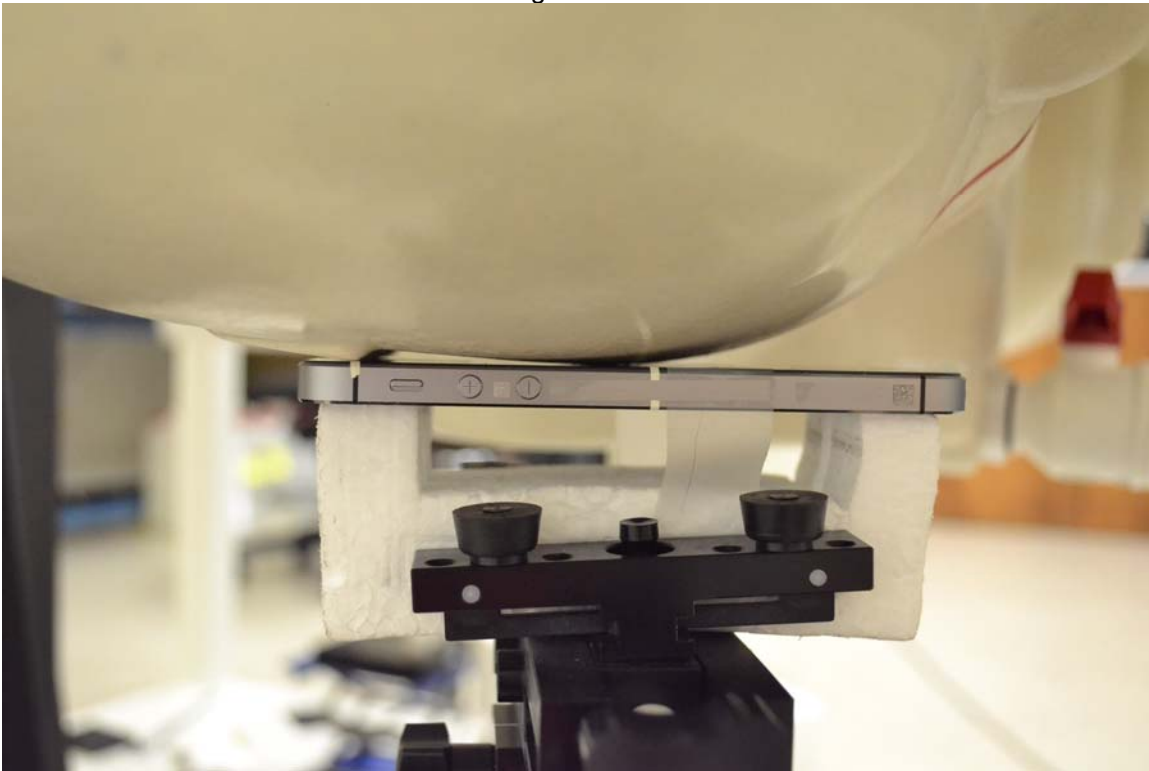
Left Touch



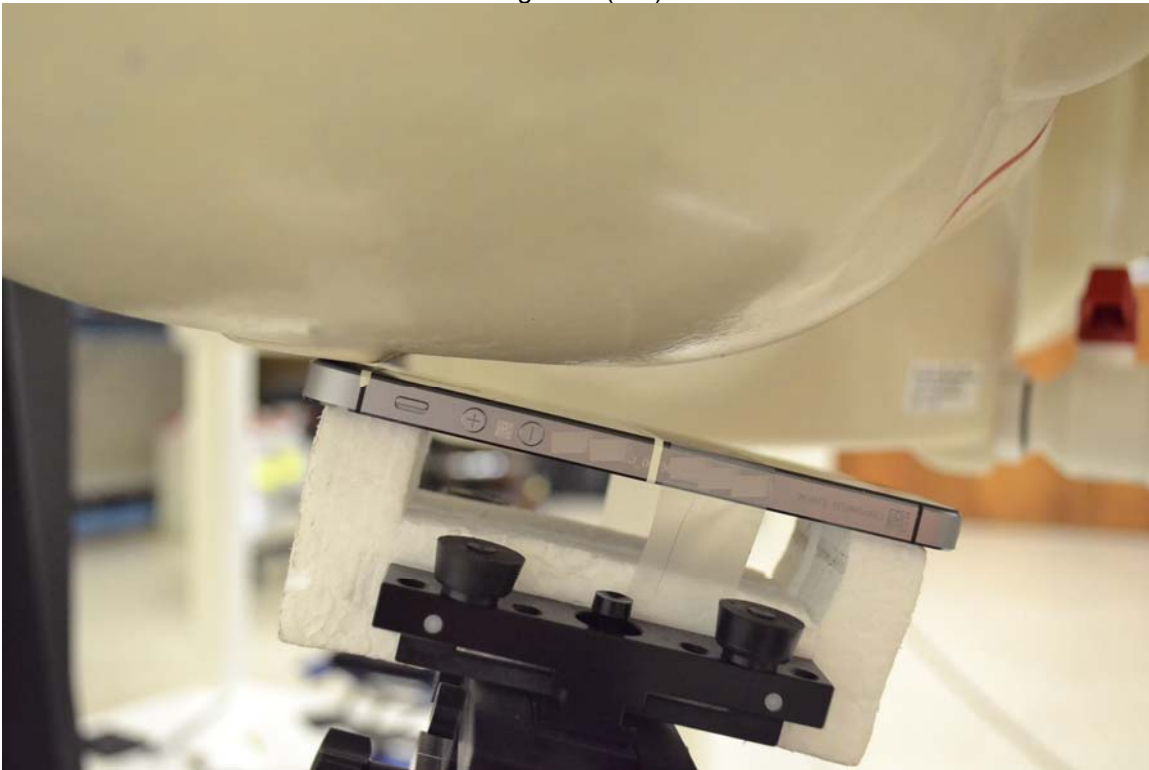
Left Tilt (15°)



Right Touch

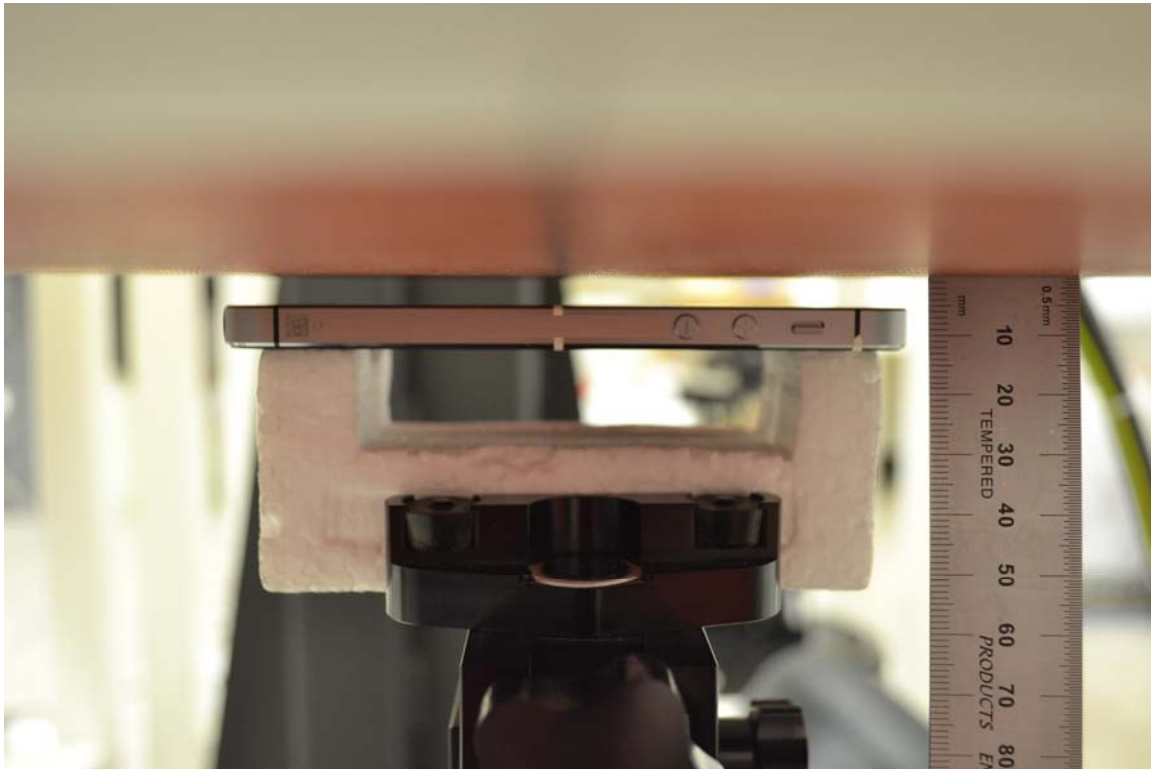


Right Tilt (15°)

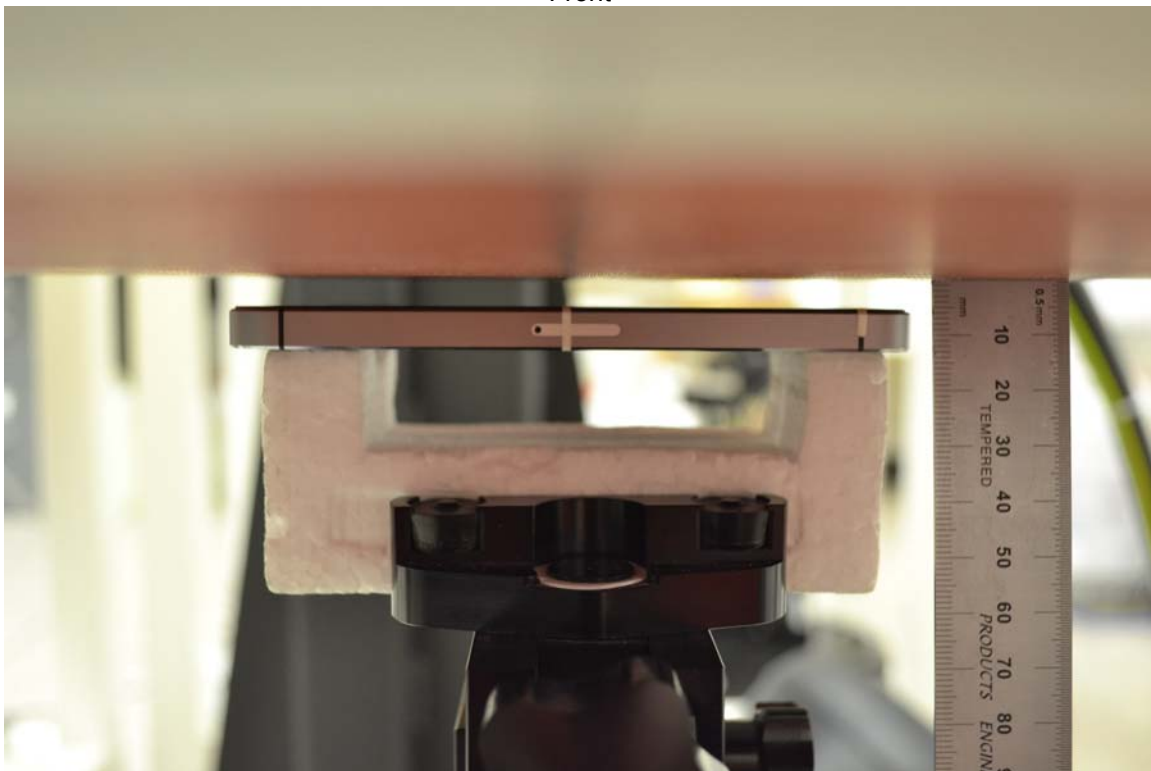


## 18.2. Body-worn Accessory & Hotspot mode Exposure Conditions

Rear

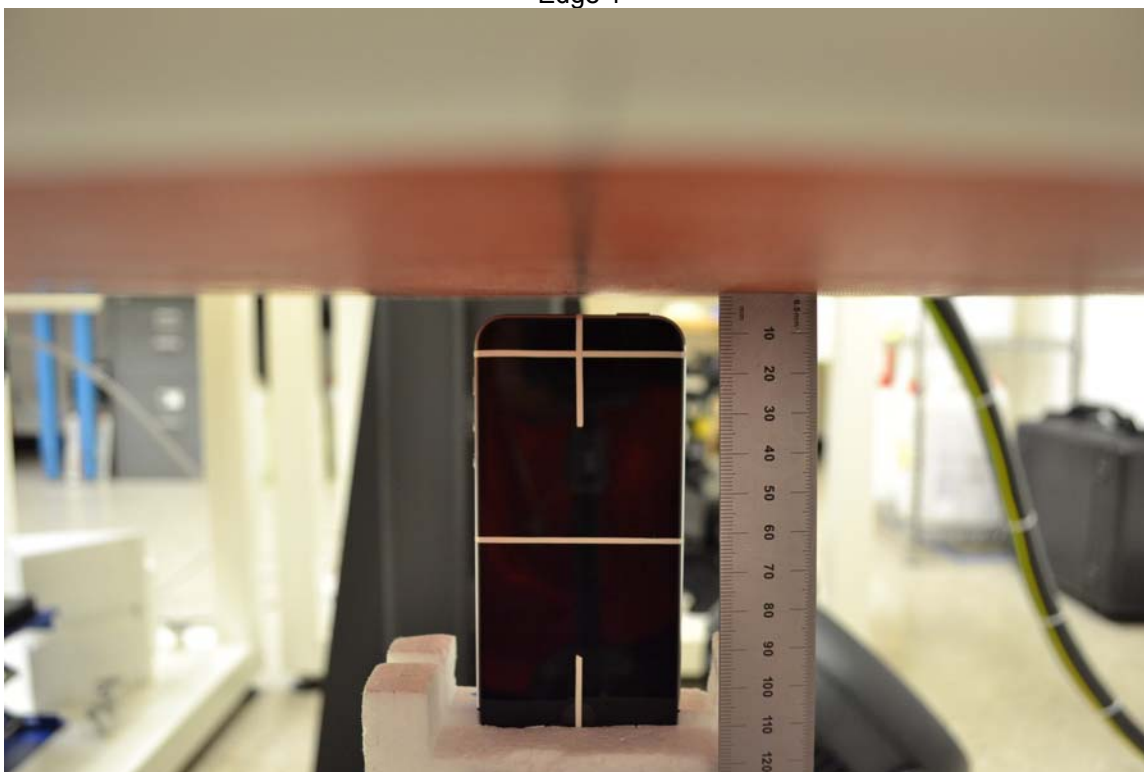


Front

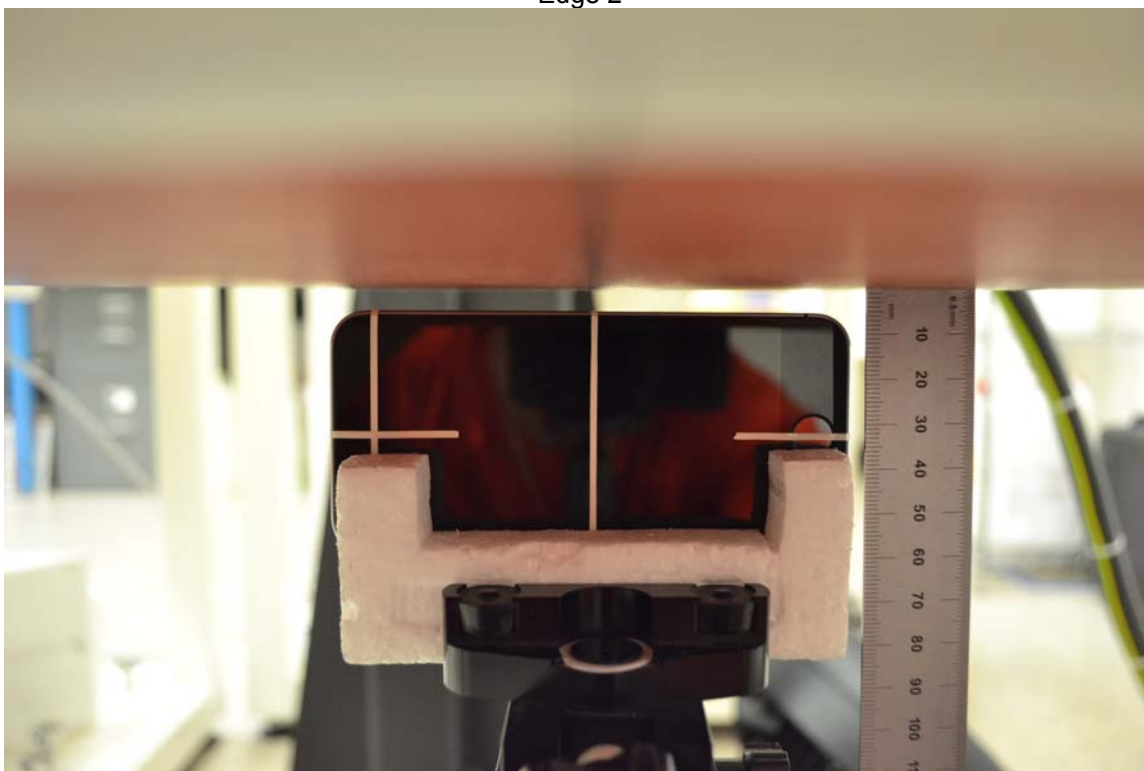


### 18.3. Hotspot Exposure Conditions

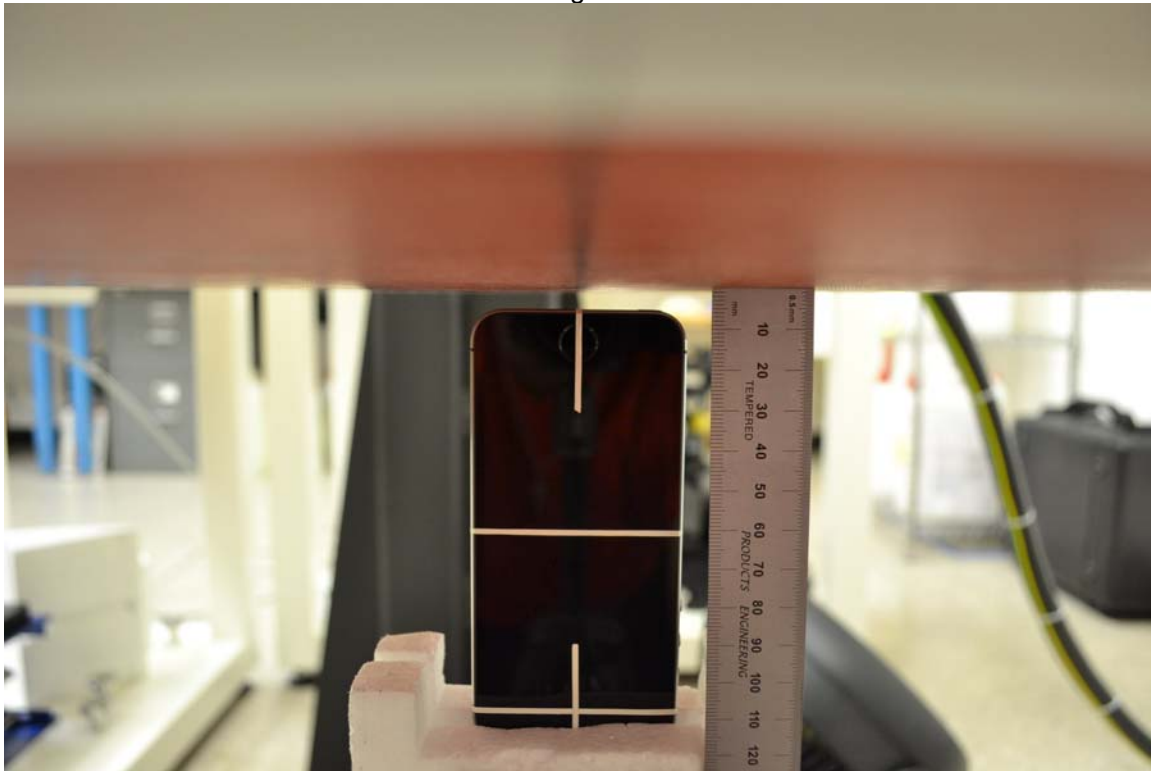
Edge 1



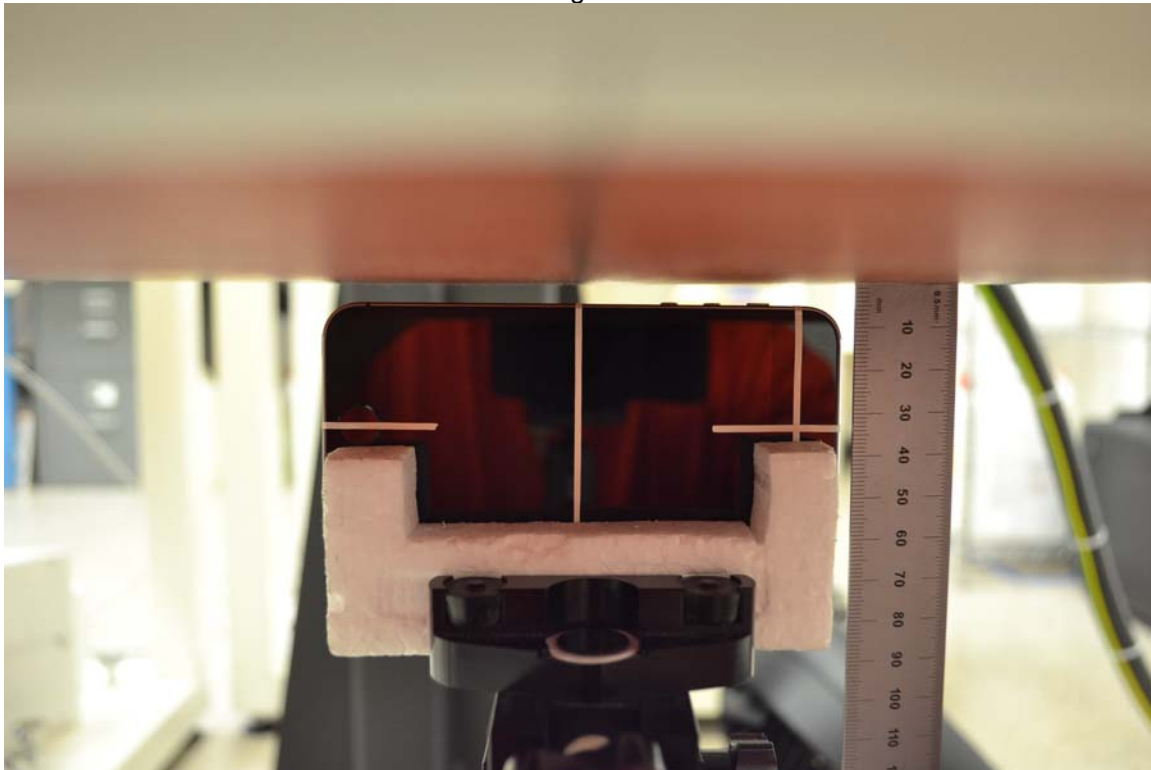
Edge 2



Edge 3



Edge 4



**END OF REPORT**