SAR EVALUATION REPORT
(Part 1: Test in Static Transmission Condition)

IEEE Std 1528-2013

For
GSM/WCDMA/LTE/5G NR Tablet + BT/BLE, DTS/UNII a/b/g/n/ac/ax and WPT

FCC ID: A3LSMX716B

Report Number: R14720550-S1 v3
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ACCREDITED
CERT #0751.06

(RTP, NC Location)

ACCREDITED
Testing Laboratory TL-637

(Suwon-si, Korea. Noted testing only)

Revision History

Rev.	Date	Revisions	Revised By
V1	5/20/2023	Initial Issue	--
V2	5/22/2023	Updated §6.8 to include 5G NR n5 and n66. Revised tune-up table in §9.8	Richard Jankovics
V3	5/25/2023	Updated §12 Simultaneous Transmission Conditions to include WWAN + DTS and WWAN + UNII MIMO; added §12.2, 12.3, 12.6, and 12.7 tables. Updated typo in §10.16 table.	Lindsay Ryan

Table of Contents

1. Attestation of Test Results

Applicant Name	SAMSUNG ELECTRONICS CO., LTD.			
FCC ID	A3LSMX716B			
Applicable Standards	Published RF exposure KDB procedures IEEE Std 1528-2013			
Exposure Category	SAR Limits (W/Kg)			
	Peak spatial-average (1g of tissue)		Extremities (hands, wrists, ankles, etc.) (10g of tissue)	
General population / Uncontrolled exposure	1.6		4	
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)			
	PCB	DTS	NII	DSS
Body	1.20	0.71	1.17	0.27
Simultaneous TX	1.57	1.57	1.48	1.48
Date Tested	4/4/2023 to 5/19/2023			
Test Results	Pass			

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

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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 A2LA, NIST, or any agency of the U.S. Government, or any agency of the U.S. government.

Approved & Released By:	Prepared By:
	
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory	Richard Jankovics Operations Leader UL LLC

2. Test Specification, Methods and Procedures

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

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 616217 D04 SAR for laptop and tablets v01r02
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01

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

- TCB Workshop October 2014; RF Exposure Procedures (Other LTE Considerations)
- TCB Workshop April 2015; RF Exposure Procedures (Overlapping LTE Bands)
- TCB Workshop October 2015; RF Exposure Procedures (KDB 941225 D05A)
- TCB Workshop April 2016; RF Exposure Procedures (LTE Carrier Aggregation for DL)
- TCB Workshop October 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- TCB Workshop October 2016; RF Exposure Procedures (DUT Holder Perturbations)
- TCB Workshop May 2017; RF Exposure Procedures (Broadband Liquid Above 3 GHz)
- TCB Workshop May 2017; RF Exposure Procedures (LTE Band 41 Power Class 2)
- TCB Workshop April 2018; RF Exposure Procedures (LTE DL CA SAR Test Exclusion)
- TCB Workshop April 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))
- TCB Workshop April 2019; RF Exposure Procedures (802.11ax SAR Testing)
- TCB Workshop November 2019; RF Exposure Policy Updates (5G NR FR1 NSA EN-DCUE SAR Evaluations)

3. Facilities and Accreditation

UL LLC is accredited by A2LA, cert. # 0751.06 for all testing performed within the scope of this report. Testing was performed at the locations noted below.

The test sites and measurement facilities used to collect data are located at 2800 Perimeter Park Dr, Morrisville, NC, USA.

- SAR Lab 1A
- SAR Lab 2A
- SAR Lab 2B

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A	US0067	27265	825374

The test sites and measurement facilities used to collect data for WWAN maximum output power and Bluetooth reduced output power (§ 9) are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building: 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea	KR0161	2324L	836224

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

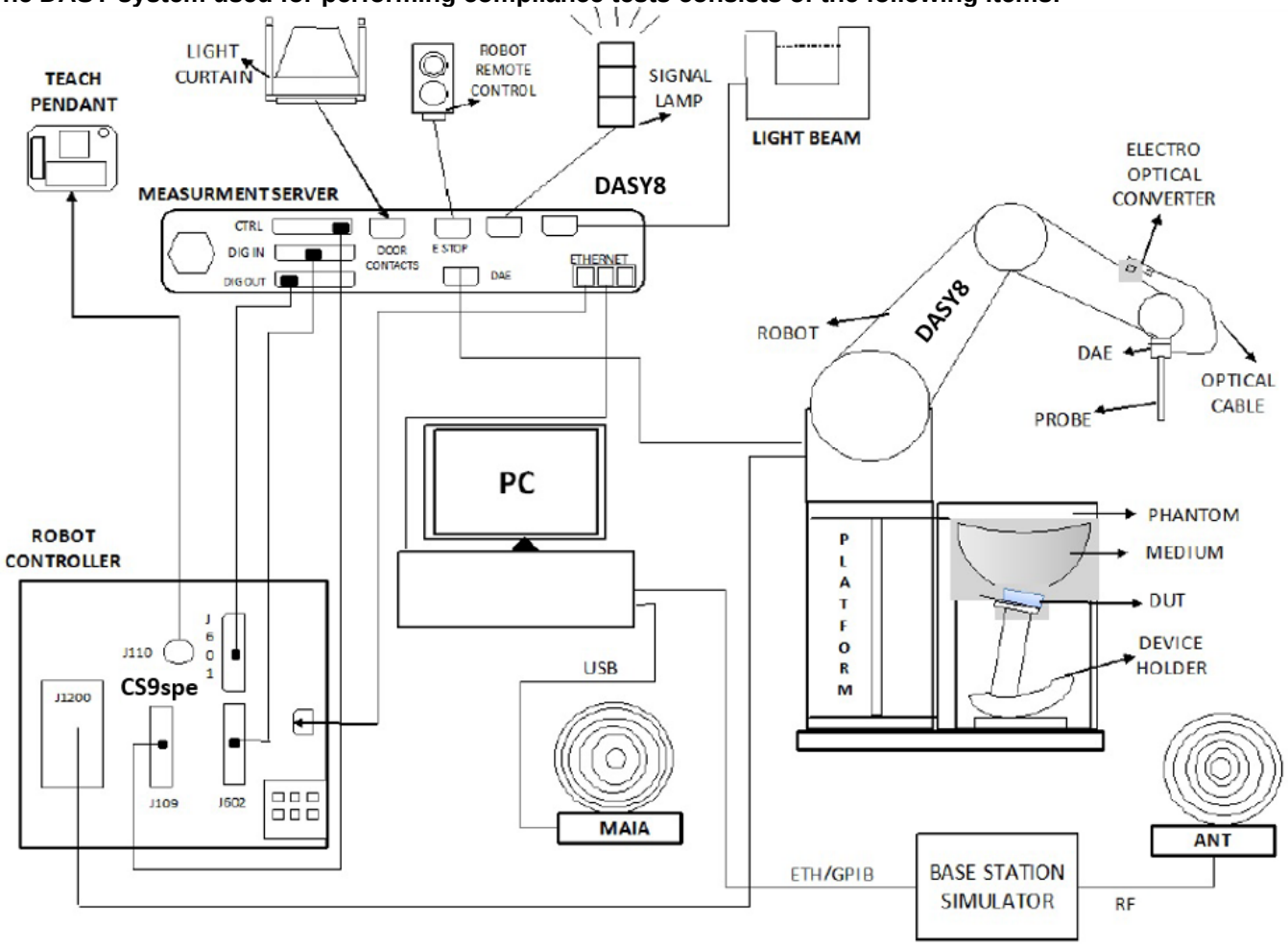
The full scope of accreditation can be viewed at;

https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win10 and the DASY8[1] 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.

[1] DASY8 software used: DASY16.0.2.83 and older generations.

4.2. SAR Scan Procedures

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 IEC/IEEE 62209-1528, 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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 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: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ 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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

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.

4.3. Test Equipment

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.

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Keysight	E5063A	MY54100681	9/30/2023
Dielectric Probe	SPEAG	DAKS-3.5	1051	10/17/2023
Shorting Block	SPEAG	DAK-3.5 Short	SMDAK 200 DA	10/17/2023
Thermometer	Fisher Scientific	15-078-181	1817705017	3/30/2024

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Generator	Keysight	N5181A	MY50140788	1/31/2024
Power Meter	Keysight	N1912A	MY55136012	8/30/2023
Power Sensor [1]	Keysight	N1921A	MY55090023	4/03/2023
Power Sensor	Keysight	N1921A	MY55090047	2/02/2024
Signal Generator [1]	Rohde & Schwarz	SMA100B	105115	4/30/2023
3-Path Diode Power Sensor	Rohde & Schwarz	NRP8S	112236	5/31/2023
3-Path Diode Power Sensor	Rohde & Schwarz	NRP8S	112237	5/31/2023
Amplifier	MITEQ	AMF-4D-00400600-50-30P	N/A	N/A
Directional coupler	Mini-Circuits	ZUDC10-183+	1438	N/A
DC Power Supply	Miteq	PS 15V1	1990186	N/A
RF Power Source	Speag	PowerSource1	4278	6/21/2023

Note(s):

1. Equipment not used for calibrated measurements past calibration due date.

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe	SPEAG	EX3DV4	7709	12/12/2023
E-Field Probe	SPEAG	EX3DV4	7710	2/3/2024
E-Field Probe	SPEAG	EX3DV4	7711	3/29/2024
Data Acquisition Electronics	SPEAG	DAE4	1714	11/23/2023
Data Acquisition Electronics	SPEAG	DAE4	1715	1/23/2024
Data Acquisition Electronics	SPEAG	DAE4	1716	3/16/2024
System Validation Dipole	SPEAG	D750V3	1139	10/12/2023
System Validation Dipole	SPEAG	D900V2	1d180	10/12/2023
System Validation Dipole	SPEAG	D1750V2	1136	10/17/2023
System Validation Dipole	SPEAG	D1900V2	5d202	10/12/2023
System Validation Dipole	SPEAG	D2450V2	963	10/18/2023
System Validation Dipole	SPEAG	D2600V2	1104	10/21/2023
System Validation Dipole	SPEAG	D5GHzV2	1213	10/11/2023
System Validation Dipole	SPEAG	D6.5GHzV2	1068	12/1/2023
Environmental Indicator	Control Company	06-662-4	200037610	2/24/2024
Environmental Indicator	Control Company	06-662-4	200037635	2/24/2024

Other

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
3-Path Diode Power Sensor	Rohde & Schwarz	NRP8S	112236	5/31/2023
3-Path Diode Power Sensor	Rohde & Schwarz	NRP8S	112237	5/31/2023
RF Power Meter	Keysight	N1911a	MY55116001	7/07/2023
RF Power Meter	Keysight	N1911a	MY55116002	9/10/2023
RF Power Meter	Keysight	N1912a	MY55116004	9/2/2023
RF Power Sensor	Keysight	N1921a	MY55090025	9/27/2023
RF Power Sensor	Keysight	N1921a	MY55090030	6/15/2023
RF Power Sensor	Keysight	E9323A	MY55110006	6/15/2023
Base Station Simulator	R & S	CMW 500	170733	12/14/2023
Base Station Simulator	R & S	CMW 500	170732	12/8/2023
Base Station Simulator [1]	R & S	CMW 500	170193	5/2/2023
Base Station Simulator [1]	R & S	CMW 500	170194	5/5/2023
Base Station Simulator	Anritsu	MT8821C	6262116751	5/14/2023
Base Station Simulator [1]	Anritsu	MT8000A	6272354129	4/28/2023
Bluetooth Tester	R & S	CBT	1153.9000K35-100913-Xm	N/A

Note(s):

1. Equipment not used for calibrated measurements past calibration due date.

Test equipment used by Suwon, Korea

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	8/2/2023
Spectrum Analyzer	Agilent / HP	N9030A	MY54170614	8/3/2023
Power Splitter	Mini-Circuits	WA1534	UL003	1/9/2024
Attenuator	Pasternack	PE7087-10	A009	8/3/2023
Base Station Simulator	Anritsu	MT8000A	6272466165	9/3/2023
Base Station Simulator	R & S	CMW500	169800	8/2/2023
Base Station Simulator	R & S	CMW500	169797	8/2/2023

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Overall (Length x Width): 254 mm x 167 mm Overall Diagonal: 296 mm Display Diagonal: 277 mm This is a Tablet device (overall diagonal dimension of the display section of a laptop or tablet is > 20 cm)
Back Cover	The Back Cover is not removable
Battery Options	The rechargeable battery is not user accessible.
Accessory	Keyboard
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☒ Mobile Hotspot (Wi-Fi 5.2 GHz & 5.8 GHz)
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other Per Manufacturer, the DUT support only as a group client and not support as a group owner.
Test sample information	**S/N** / **IMEI** / **Notes** R32W3004EEZ / 353439960019720 / Conducted WWAN R32W30042YD / 353439960015934 / Conducted WWAN R32W30044JD / 353439960016460 / Conducted WWAN R32W3003EJL / 353439960019761 / Conducted WWAN R32W3004EFK / 353439960019738 / Conducted WWAN R32W300443Z / 353439960016312 / Conducted WLAN R32W30043RW / 353439960016205 / Conducted WLAN R32W300404N / 353439960015009 / Conducted WLAN R32W300FRYJ / 353439960108317 / Conducted BT R32W300FP4W / 353439960107384 / Conducted BT R32W3004BSB / 353439960018854 / Radiated WWAN R32W3004EDY / 353439960018854 / Radiated WWAN R32W3004E9X / 353439960019670 / Radiated WWAN R32W300401R / 353469960014978 / Radiated WLAN R32W300454A / 353439930016650 / Radiated WLAN R32W30044QB / 353439960016528 / Radiated WLAN R32W300CASZ / 353439960070640 / Radiated BT
Hardware Version	REV0.1
Software Version	X716B.001

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EDGE (8PSK)	GSM Class : B Multi-Slot Class: Class 12 - 4 Up, 4 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☒ Yes ☒ No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Cat. 24) HSUPA (Cat. 6) DC-HSDPA (Cat. 24)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 TDD Band 41[1] FDD Band 66	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (1 Uplink and 5 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3 43.3% (TDD)Power Class 2
5G NR (FR1)	FDD band n5 FDD band n66	DFT-S-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM		100% (FDD)
Wi-Fi	2.4 GHz	802.11b 802.11g 802.11n (HT20) 802.11n (HT40) 802.11ax (VHT160)		98.8% (802.11b) [2]
	5 GHz	802.11a 802.11n (HT20) 802.11n (HT40) 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80) 802.11ac (VHT160) 802.11ax (HE20) 802.11ax (HE40) 802.11ax (HE80) 802.11ax (HE160)		86.4% (802.11n 40MHz BW) [2] 97.4% (802.11ac 80MHz BW) [2] 97.4% (802.11ac 160MHz BW) [2]
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No			
	6 GHz	802.11a 802.11ax (HE20) 802.11ax (HE40) 802.11ax (HE80) 802.11ax (HE160)		99.7%(802.11ax 160MHz BW)[2]
Bluetooth	2.4 GHz	BR, EDR, LE		76.5%[2]

Notes:

1. This device supports Power Class 2 and Power Class 3 for LTE Band 41.
2. Duty cycle is referenced from the Section 9.

6.3. Time-Averaging feature

The equipment under test (EUT) contains the Qualcomm modems supporting 2G/3G/4G technologies and 5G NR bands. these modem is enabled with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement. Refer to Compliance Summary document for detailed description of Qualcomm Smart Transmit feature.
The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-average power limit, for each characterized technology and band.
Smart Transmit allows the device to transmit at higher power instantaneously as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to PLimit. Below table shows PLimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (DSI Device State Index).
The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G NR WWAN technology band, and DSI = minimum of " PLimit EFS" and "Maximum tune up output power Pmax" + 1 dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB 447498 D01.
The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

SAR Characterizations

Exposure condition		Standalone (Proximity Sensor Off)	Standalone (Proximity Sensor On)	Pmax (Maximum tune-up Power) (dBm)
Averaging Volume		1g	1g	
test distance		21/26/11/0 mm	0 mm	
DSI:		0	1	
RF Air Interface	Antenna	Plimit corresponding to 1.0 W/kg (SAR_design_target)	Plimit corresponding to 1.0 W/kg (SAR_design_target)	
GSM 850	Main.1	34.76	13.54	24.98
GSM 1900	Main.1	34.64	11.04	21.98
WCDMA Band II	Main.1	26.65	14.00	23.50
WCDMA Band IV	Main.1	28.25	14.50	23.50
WCDMA Band V	Main.1	28.63	14.00	23.50
LTE Band 12/17	Main.1	30.80	14.00	23.50
LTE Band 13	Main.1	28.38	14.00	23.50
LTE Band 25/2	Main.1	27.20	14.00	23.50
LTE Band 26/5	Main.1	28.40	14.00	23.50
LTE Band 41-PC3	Main.1	33.14	13.00	21.50
LTE Band 41-PC2	Main.1	33.56		21.40
LTE Band 66/4	Main.1	28.46	14.00	23.50
NR Band n5	Main.1	28.40	14.00	24.00
NR Band n66	Main.1	28.27	14.00	23.50

Notes:

1. All P_{Limit} EFS and maximum tune up output P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of LTE TDD modulation schemes.
2. Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedures. The maximum allowed output power is equal to maximum tune up output power + 1dB device design uncertainty.
3. Measurement Condition : All conducted power and SAR measurements in this report (Part 1 test) were performed by setting *Reserve_power_margin* (Smart Transmit EFS entry) to 0 dB.
4. If P_{Limit} is higher than P_{max} for some modes / bands, The modes/bands will operate at a power level up to P_{max}.

6.4. DSI (Device State Index) Scenarios

This device supports multiple DSI Scenarios and Each DSIs operate to each RF exposure Conditions.

Please below table;

RF exposure Conditions	Technologuies Supported	Supported Power Back-off mode	DSI conditions	Description
Body	All WWAN bands	Proximity sensor -Not triggering-	DSI = 0	When Device is not within certain distance of user. Proximity sensor is not triggered.
	All WWAN bands	Proximity sensor -Triggering-	DSI = 1	When Device is within certain distance of user. Proximity sensor is not triggered.

Notes:

This devices uses different Deice State Index (DSI) to configure different time averaged power levels based on exposure scenarios for WWAN Bands.

6.5. General LTE SAR Test and Reporting Considerations

Item	Description						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 MHz (BW = 60 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 (BW = 45 MHz)					
		Channel Bandwidth					
		20 MHz [1]	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 (BW = 25 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	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 12	Frequency range: 699 – 716 MHz (BW = 17 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz	3 MHz	1.4 MHz
	Low			23060/ 704	23035/ 701.5	23025/ 700.5	23017/ 699.7
	Mid			**23095/ 707.5**	23095/ 707.5	23095/ 707.5	23095/ 707.5
	High			23130/ 711	23155/ 713.5	23165/ 714.5	23173/ 715.3
	Band 13	Frequency range: 777 - 787 MHz (BW = 10 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz [1]	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 (BW = 12 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz [1]	5 MHz [1]	3 MHz	1.4 MHz
	Low			23780/ 709	23755/ 706.5		
	Mid			**23790/ 710**	23790/ 710		
	High			23800/ 711	23825/ 713.5		

	Band 25	Frequency range: 1850 - 1915 MHz (BW = 65 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: 814 - 849 MHz (BW = 35 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz [1]	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low		26765/ 821.5	26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7
	Mid		**26865/ 831.5**	26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
	High		26965/ 841.5	26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3
	Band 41[2]	Frequency range: 2496 - 2690 MHz (BW = 194 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**39750 / 2506.0**					
	Mid- Low	**40185 / 2549.5**					
	Mid	**40620 / 2593.0**					
	Mid-High	**41055 / 2636.5**					
	High	**41490 / 2680.0**					
	Band 66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	**132072/ 1720**	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5	131979/ 1710.7
	Mid	**132322/ 1745**	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745
	High	**132572/ 1770**	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5	132665/ 1779.3

LTE transmitter and antenna implementation	Refer to Appendix A.
Maximum power reduction (MPR)	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

MPR Built-in by design
The manufacturer MPR values are always within the 3GPP maximum MPR allowance but may not follow the default MPR values.
A-MPR (additional MPR) was disabled during SAR testing

Power reduction	Yes. Power reduction based on proximity sensor for WWAN and WLAN/BT.
Spectrum plots for RB configurations	A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.

Notes:

1. Maximum bandwidth 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 KDB 941225 D05 SAR for LTE Devices.
2. LTE band 41 test channels in accordance with October 2014 TCB workshop for all channels bandwidths.
3. SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

6.6. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

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

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
5	$6592 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-
10	$13168 \cdot T_s$	$13152 \cdot T_s$	$12800 \cdot T_s$	-	-	-

Table 4.2-2: Uplink-downlink configurations & Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.3%
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.3%
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.3%
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.7%
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.7%
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.7%
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.3%

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

Note(s):

This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3% duty cycle.

6.7. General NR(FR1) SAR Test and Reporting Considerations

Item	Description												
	n5	Frequency range: 824 - 849 MHz (BW = 25 MHz)											
		Channel Bandwidth (MHz)											
		100	90	80	70	60	50	40	30	25	20[1]	15[1]	10[1]	5
	Low										166800 /834	166300 /831.5	165800 /829	165300 /826.5
	Mid										167300 /836.5	167300 /836.5	167300 /836.5	167300 /836.5
	High										167800 /839	168300 841.5	168800 /844	169300 /846.5
	n66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)											
		Channel Bandwidth (MHz)											
		100	90	80	70	60	50	40[1]	30[1]	25[1]	20	15	10	5
	Low							346000 /1730	345000 /1725	344500 /1722.5	344000 /1720	343500 /1717.5	343000 /1715	342500 /1712.5
	Mid							349000 /1745	349000 /1745	349000 /1745	349000 /1745	349000 /1745	349000 /1745	349000 /1745
	High							352000 /1760	353000 /1765	353500 /1767.5	354000 /1770	354500 /1772.5	355000 /1775	355500 /1777.5
SCS	15 kHz (n5, 66)													
NR(FR1) transmitter and antenna implementation	Refer to Appendix A.													
A-MPR(Additional MPR) disabled for SAR testing?	Yes													
EN-DC Carrier Aggregation Possible Combinations[2]	LTE B2 + NR n5 LTE B2 + NR n66 LTE B5 + NR n66 LTE B12 + NR n66 LTE B13 + NR n66 LTE B66 + NR n5													

Notes:

1. Maximum bandwidth 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 FCC Guidance.
2. SAR test for NR bands and LTE anchor Bands were performed separately due to limitations in SAR probe calibration factors.

6.8. Dynamic Antenna Tuning Test Considerations & Procedure

This device applies Qualcomm chipset solution's Dynamic Antenna tuning technology to some 3G / 4G / 5G sub6 bands. (Main1 Antenna: GSM850, PCS1900, UMTS II, IV, V, LTE 2, 4, 5, 12, 13, 17, 25, 26, 41 and 66, and 5G NR n5 and n66). Dynamic antenna tuning was tested in accordance with the April 2019 FCC TCBC Workshop notes.

Per 2019, April TCBC Workshop document:

- SAR is measured according to required procedures with the dynamic tuner active, allowing the device to automatically tune. The auto-tune state determined by the device during normal SAR measurement is verified and listed alongside the reported SAR results.
- Additional single point SAR (time-sweep) measurements are evaluated for other tuner states to determine that the other configurations would result in equivalent or lower SAR values.
- Single point measurements are performed at the peak SAR location of the highest measured SAR configuration for each combination. The SAR probe remains stationary throughout the entire series of single point measurements for each combination.
- The total number of tuner states is divided evenly among each supported band/air interface and exposure condition combination. If any single point SAR measurement result is > ½ W/kg for a band/exposure condition combination, all supported tuner states are evaluated with single point SAR measurements for the combination. Tuner state is established remotely so that the device is not moved for the entire series of single point SAR measurements for the tuner states in each combination.

The following test procedures were followed to demonstrate that the SAR results in Section 10 represent appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuning active to allow the device to automatically tune the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode, and exposure combinations so that each combination was evaluated for at least 14 tuner states and so that at least 1 single point SAR measurement was made for every available tuner state. Single point time-sweep measurements were performed at the peak SAR location, as determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR scans for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1-g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, single point SAR measurements were made for all 144 tuner states.

This device supports LTE capabilities with overlapping transmission frequency ranges.

- LTE Band 2 (1850 – 1910 MHz) is covered by LTE Band 25 (1850 – 1915 MHz)
- LTE Band 4 (1710 – 1755 MHz) is covered by LTE Band 66 (1710 – 1780 MHz)
- LTE Band 5 (824 – 849 MHz) is covered by LTE Band 26 (814 – 849 MHz)
- LTE Band 17 (704 – 716 MHz) is covered by LTE Band 12 (699 – 716 MHz)

Each covered LTE band has the same transmission path and signal characteristics as the band by which it is covered. The dynamic antenna tuner was only evaluated for the band with the larger transmission frequency range. The operational description contains more information about the design and implementation of the dynamic antenna tuning.

Notes:

All test results are in Appendix H "Dynamic Antenna Tuner Testing".

6.9. Power Reduction by Proximity Sensing

Refer to Appendix G for details on the manufacturer's declared proximity sensing.

7. RF Exposure Conditions (Test Configurations)

Refer to Appendix A for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

7.1. Standalone SAR Test Exclusion Considerations

Since the *Dedicated Host Approach* is applied, the standalone SAR test exclusion procedure in KDB 447498 § 4.3.1 is applied in conjunction with KDB 616217 § 4.3 to determine the minimum test separation distance:

- When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
- When the separation distance from the antenna to an adjacent edge is > 5 mm, the actual antenna-to-edge separation distance is applied to determine SAR test exclusion.

SAR Test Exclusion Calculations for WWAN

Antennas < 50mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
Full Power, Proximity Sensor Off																
Main1 ANT	GSM850	848.8	33.5	1399	0	0	47		47		257.8 -MEASURE-	257.8 -MEASURE-	27.4 -MEASURE-		27.4 -MEASURE-	
Main1 ANT	GSM1900	1909.8	30.5	1262	0	0	47		47		348.8 -MEASURE-	348.8 -MEASURE-	37.1 -MEASURE-		37.1 -MEASURE-	
Main1 ANT	WCDMA II	1907.6	24.5	282	0	0	47		47		77.9 -MEASURE-	77.9 -MEASURE-	8.3 -MEASURE-		8.3 -MEASURE-	
Main1 ANT	WCDMA IV	1752.6	24.5	282	0	0	47		47		74.7 -MEASURE-	74.7 -MEASURE-	7.9 -MEASURE-		7.9 -MEASURE-	
Main1 ANT	WCDMA V	846.6	24.5	282	0	0	47		47		519 -MEASURE-	519 -MEASURE-	5.5 -MEASURE-		5.5 -MEASURE-	
Main1 ANT	LTE 2	1910	24.5	282	0	0	47		47		77.9 -MEASURE-	77.9 -MEASURE-	8.3 -MEASURE-		8.3 -MEASURE-	
Main1 ANT	LTE 4	1755	24.5	282	0	0	47		47		74.7 -MEASURE-	74.7 -MEASURE-	7.9 -MEASURE-		7.9 -MEASURE-	
Main1 ANT	LTE 5	849	24.5	282	0	0	47		47		52 -MEASURE-	52 -MEASURE-	5.5 -MEASURE-		5.5 -MEASURE-	
Main1 ANT	LTE 12	716	24.5	282	0	0	47		47		47.7 -MEASURE-	47.7 -MEASURE-	5.1 -MEASURE-		5.1 -MEASURE-	
Main1 ANT	LTE 13	787	24.5	282	0	0	47		47		50 -MEASURE-	50 -MEASURE-	5.3 -MEASURE-		5.3 -MEASURE-	
Main1 ANT	LTE 17	716	24.5	282	0	0	47		47		47.7 -MEASURE-	47.7 -MEASURE-	5.1 -MEASURE-		5.1 -MEASURE-	
Main1 ANT	LTE 25	1915	24.5	282	0	0	47		47		78 -MEASURE-	78 -MEASURE-	8.3 -MEASURE-		8.3 -MEASURE-	
Main1 ANT	LTE 26	849	24.5	282	0	0	47		47		52 -MEASURE-	52 -MEASURE-	5.5 -MEASURE-		5.5 -MEASURE-	
Main1 ANT	LTE 41 PC2	2690	26	398	0	0	47		47		130.6 -MEASURE-	130.6 -MEASURE-	13.9 -MEASURE-		13.9 -MEASURE-	
Main1 ANT	LTE 41 PC3	2690	24.5	282	0	0	47		47		92.5 -MEASURE-	92.5 -MEASURE-	9.8 -MEASURE-		9.8 -MEASURE-	
Main1 ANT	LTE 66	1780	24.5	282	0	0	47		47		75.2 -MEASURE-	75.2 -MEASURE-	8 -MEASURE-		8 -MEASURE-	
Main1 ANT	5G n5	846.5	25	316	0	0	47		47		58.1 -MEASURE-	58.1 -MEASURE-	6.2 -MEASURE-		6.2 -MEASURE-	
Main1 ANT	5G n66	2197.5	24.5	282	0	0	47		47		83.6 -MEASURE-	83.6 -MEASURE-	8.9 -MEASURE-		8.9 -MEASURE-	
Power Back-off, Proximity Sensor On																
Main1 ANT	GSM850	848.8	23.5	140	0	0	47		47		25.8 -MEASURE-	25.8 -MEASURE-	3 -EXEMPT-		3 -EXEMPT-	
Main1 ANT	GSM1900	1909.8	21	142	0	0	47		47		39.2 -MEASURE-	39.2 -MEASURE-	4.2 -MEASURE-		4.2 -MEASURE-	
Main1 ANT	WCDMA II	1907.6	15	32	0	0	47		47		8.8 -MEASURE-	8.8 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	WCDMA IV	1752.6	15.5	35	0	0	47		47		9.3 -MEASURE-	9.3 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	WCDMA V	846.6	15	32	0	0	47		47		5.9 -MEASURE-	5.9 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 2	1910	15	32	0	0	47		47		8.8 -MEASURE-	8.8 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 4	1755	15	32	0	0	47		47		8.5 -MEASURE-	8.5 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 5	849	15	32	0	0	47		47		5.9 -MEASURE-	5.9 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 12	716	15	32	0	0	47		47		5.4 -MEASURE-	5.4 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 13	787	15	32	0	0	47		47		5.7 -MEASURE-	5.7 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 17	716	15	32	0	0	47		47		5.4 -MEASURE-	5.4 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 25	1915	15	32	0	0	47		47		8.9 -MEASURE-	8.9 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 26	849	15	32	0	0	47		47		5.9 -MEASURE-	5.9 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 41	2690	16	40	0	0	47		47		13.1 -MEASURE-	13.1 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	LTE 66	1780	15	32	0	0	47		47		8.5 -MEASURE-	8.5 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	5G n5	846.5	15	32	0	0	47		47		5.9 -MEASURE-	5.9 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	
Main1 ANT	5G n66	2197.5	15	32	0	0	47		47		9.5 -MEASURE-	9.5 -MEASURE-	1 -EXEMPT-		1 -EXEMPT-	

Note(s):

According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

SAR Test Exclusion Calculations for WLAN

Antennas < 50mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
Full Power, Proximity Sensor Off																
BT/WIFI1 Antenna	Wi-Fi 2.4 GHz	2462	19.0	79	0	0	0		116		24.8 -MEASURE-	24.8 -MEASURE-	24.8 -MEASURE-		> 50 mm	
	Wi-Fi 5.2 GHz	5240	20.0	100	0	0	0		116		45.8 -MEASURE-	45.8 -MEASURE-	45.8 -MEASURE-		> 50 mm	
	Wi-Fi 5.3 GHz	5320	20.0	100	0	0	0		116		46.1 -MEASURE-	46.1 -MEASURE-	46.1 -MEASURE-		> 50 mm	
	Wi-Fi 5.5 GHz	5700	20.0	100	0	0	0		116		47.7 -MEASURE-	47.7 -MEASURE-	47.7 -MEASURE-		> 50 mm	
	Wi-Fi 5.8 GHz	5825	20.0	100	0	0	0		116		48.3 -MEASURE-	48.3 -MEASURE-	48.3 -MEASURE-		> 50 mm	
	Wi-Fi 5.9 GHz	5895	20.0	100	0	0	0		116		48.6 -MEASURE-	48.6 -MEASURE-	48.6 -MEASURE-		> 50 mm	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	0		116		6.9 -MEASURE-	6.9 -MEASURE-	6.9 -MEASURE-		> 50 mm	
	Bluetooth	2480	18.0	63	0	0	0		116		19.8 -MEASURE-	19.8 -MEASURE-	19.8 -MEASURE-		> 50 mm	
BT/WIFI2 Antenna	Wi-Fi 2.4 GHz	2462	19.0	79	0	0	116		0		24.8 -MEASURE-	24.8 -MEASURE-	> 50 mm		24.8 -MEASURE-	
	Wi-Fi 5.2 GHz	5240	20.0	100	0	0	116		0		45.8 -MEASURE-	45.8 -MEASURE-	> 50 mm		45.8 -MEASURE-	
	Wi-Fi 5.3 GHz	5320	20.0	100	0	0	116		0		46.1 -MEASURE-	46.1 -MEASURE-	> 50 mm		46.1 -MEASURE-	
	Wi-Fi 5.5 GHz	5700	20.0	100	0	0	116		0		47.7 -MEASURE-	47.7 -MEASURE-	> 50 mm		47.7 -MEASURE-	
	Wi-Fi 5.8 GHz	5825	20.0	100	0	0	116		0		48.3 -MEASURE-	48.3 -MEASURE-	> 50 mm		48.3 -MEASURE-	
	Wi-Fi 5.9 GHz	5895	20.0	100	0	0	116		0		48.6 -MEASURE-	48.6 -MEASURE-	> 50 mm		48.6 -MEASURE-	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	116		0		6.9 -MEASURE-	6.9 -MEASURE-	> 50 mm		6.9 -MEASURE-	
	Bluetooth	2480	18.0	63	0	0	116		0		19.8 -MEASURE-	19.8 -MEASURE-	> 50 mm		19.8 -MEASURE-	
Power Back-off, Proximity Sensor On																
BT/WIFI1 Antenna	Wi-Fi 2.4 GHz	2462	12.0	16	0	0	0		116		5 -MEASURE-	5 -MEASURE-	5 -MEASURE-		> 50 mm	
	Wi-Fi 5.2 GHz	5240	11.5	14	0	0	0		116		6.4 -MEASURE-	6.4 -MEASURE-	6.4 -MEASURE-		> 50 mm	
	Wi-Fi 5.3 GHz	5320	11.5	14	0	0	0		116		6.5 -MEASURE-	6.5 -MEASURE-	6.5 -MEASURE-		> 50 mm	
	Wi-Fi 5.5 GHz	5700	11.5	14	0	0	0		116		6.7 -MEASURE-	6.7 -MEASURE-	6.7 -MEASURE-		> 50 mm	
	Wi-Fi 5.8 GHz	5825	11.5	14	0	0	0		116		6.8 -MEASURE-	6.8 -MEASURE-	6.8 -MEASURE-		> 50 mm	
	Wi-Fi 5.9 GHz	5895	11.5	14	0	0	0		116		6.8 -MEASURE-	6.8 -MEASURE-	6.8 -MEASURE-		> 50 mm	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	0		116		6.9 -MEASURE-	6.9 -MEASURE-	6.9 -MEASURE-		> 50 mm	
	Bluetooth	2480	10.0	10	0	0	0		116		3.1 -MEASURE-	3.1 -MEASURE-	3.1 -MEASURE-		> 50 mm	
BT/WIFI2 Antenna	Wi-Fi 2.4 GHz	2462	12.0	16	0	0	116		0		5 -MEASURE-	5 -MEASURE-	> 50 mm		5 -MEASURE-	
	Wi-Fi 5.2 GHz	5240	11.5	14	0	0	116		0		6.4 -MEASURE-	6.4 -MEASURE-	> 50 mm		6.4 -MEASURE-	
	Wi-Fi 5.3 GHz	5320	11.5	14	0	0	116		0		6.5 -MEASURE-	6.5 -MEASURE-	> 50 mm		6.5 -MEASURE-	
	Wi-Fi 5.5 GHz	5700	11.5	14	0	0	116		0		6.7 -MEASURE-	6.7 -MEASURE-	> 50 mm		6.7 -MEASURE-	
	Wi-Fi 5.8 GHz	5825	11.5	14	0	0	116		0		6.8 -MEASURE-	6.8 -MEASURE-	> 50 mm		6.8 -MEASURE-	
	Wi-Fi 5.9 GHz	5895	11.5	14	0	0	116		0		6.8 -MEASURE-	6.8 -MEASURE-	> 50 mm		6.8 -MEASURE-	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	116		0		6.9 -MEASURE-	6.9 -MEASURE-	> 50 mm		6.9 -MEASURE-	
	Bluetooth	2480	10.0	10	0	0	116		0		3.1 -MEASURE-	3.1 -MEASURE-	> 50 mm		3.1 -MEASURE-	

Note(s):

According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
			dBm	mW	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front	Back	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
Full Power, Proximity Sensor Off																
BT/WIFI1 Antenna	Wi-Fi 2.4 GHz	2462	19.0	79	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		755.6 mW -EXEMPT-	
	Wi-Fi 5.2 GHz	5240	20.0	100	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		725.5 mW -EXEMPT-	
	Wi-Fi 5.3 GHz	5320	20.0	100	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		725 mW -EXEMPT-	
	Wi-Fi 5.5 GHz	5700	20.0	100	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		722.8 mW -EXEMPT-	
	Wi-Fi 5.8 GHz	5825	20.0	100	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		722.2 mW -EXEMPT-	
	Wi-Fi 5.9 GHz	5895	20.0	100	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		7218 mW -EXEMPT-	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		716.2 mW -EXEMPT-	
	Bluetooth	2480	18.0	63	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		755.3 mW -EXEMPT-	
BT/WIFI2 Antenna	Wi-Fi 2.4 GHz	2462	19.0	79	0	0	116		0		< 50 mm	< 50 mm	755.6 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.2 GHz	5240	20.0	100	0	0	116		0		< 50 mm	< 50 mm	725.5 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.3 GHz	5320	20.0	100	0	0	116		0		< 50 mm	< 50 mm	725 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.5 GHz	5700	20.0	100	0	0	116		0		< 50 mm	< 50 mm	722.8 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.8 GHz	5825	20.0	100	0	0	116		0		< 50 mm	< 50 mm	722.2 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.9 GHz	5895	20.0	100	0	0	116		0		< 50 mm	< 50 mm	7218 mW -EXEMPT-		< 50 mm	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	116		0		< 50 mm	< 50 mm	716.2 mW -EXEMPT-		< 50 mm	
	Bluetooth	2480	18.0	63	0	0	116		0		< 50 mm	< 50 mm	755.3 mW -EXEMPT-		< 50 mm	
Power Back-off, Proximity Sensor On																
BT/WIFI1 Antenna	Wi-Fi 2.4 GHz	2462	12.0	16	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		755.6 mW -EXEMPT-	
	Wi-Fi 5.2 GHz	5240	11.5	14	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		725.5 mW -EXEMPT-	
	Wi-Fi 5.3 GHz	5320	11.5	14	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		725 mW -EXEMPT-	
	Wi-Fi 5.5 GHz	5700	11.5	14	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		722.8 mW -EXEMPT-	
	Wi-Fi 5.8 GHz	5825	11.5	14	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		722.2 mW -EXEMPT-	
	Wi-Fi 5.9 GHz	5895	11.5	14	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		7218 mW -EXEMPT-	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		716.2 mW -EXEMPT-	
	Bluetooth	2480	10.0	10	0	0	0		116		< 50 mm	< 50 mm	< 50 mm		755.3 mW -EXEMPT-	
BT/WIFI2 Antenna	Wi-Fi 2.4 GHz	2462	12.0	16	0	0	116		0		< 50 mm	< 50 mm	755.6 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.2 GHz	5240	11.5	14	0	0	116		0		< 50 mm	< 50 mm	725.5 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.3 GHz	5320	11.5	14	0	0	116		0		< 50 mm	< 50 mm	725 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.5 GHz	5700	11.5	14	0	0	116		0		< 50 mm	< 50 mm	722.8 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.8 GHz	5825	11.5	14	0	0	116		0		< 50 mm	< 50 mm	722.2 mW -EXEMPT-		< 50 mm	
	Wi-Fi 5.9 GHz	5895	11.5	14	0	0	116		0		< 50 mm	< 50 mm	7218 mW -EXEMPT-		< 50 mm	
	Wi-Fi 6 GHz	7125	11.0	13	0	0	116		0		< 50 mm	< 50 mm	716.2 mW -EXEMPT-		< 50 mm	
	Bluetooth	2480	10.0	10	0	0	116		0		< 50 mm	< 50 mm	755.3 mW -EXEMPT-		< 50 mm	

Note(s):

According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.2. Required Test Configurations

The tables below identify the standalone test configurations required for this device according to the findings in Section 7.1:

Antenna	Test Configurations	Rear	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
Main1 ANT	GSM850 Full Power	Yes	Yes	Yes	No	Yes	No
	GSM1900 Full Power	Yes	Yes	Yes	No	Yes	No
	W-CDMA Band 2 Full Power	Yes	Yes	Yes	No	Yes	No
	W-CDMA Band 4 Full Power	Yes	Yes	Yes	No	Yes	No
	W-CDMA Band 5 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 2 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 4 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 5 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 12 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 13 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 17 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 25 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 26 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 41 PC3 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 41 PC2 Full Power	Yes	Yes	Yes	No	Yes	No
	LTE Band 66 Full Power	Yes	Yes	Yes	No	Yes	No

Note(s):

1. Yes = Testing is required. No = Testing is not required
2. The laptop configuration with the accessory keyboard connected was not evaluated as this was considered to be covered by the edge left tests.

Antenna	Test Configurations	Rear	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
Main1 ANT	GSM850 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	GSM1900 Power Reduction	Yes	Yes	Yes	No	Yes[1]	No
	W-CDMA Band 2 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	W-CDMA Band 4 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	W-CDMA Band 5 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 2 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 4 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 5 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 12 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 13 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 17 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 25 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 26 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 41 PC3 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No
	LTE Band 41 PC2 Power Reduction	Yes	Yes	Yes[1]	No	Yes[1]	No

Note(s):

1. Yes = Testing is required No = Testing is not required.
2. Additional configurations were tested to support simultaneous transmission considerations. The distance was measured at max power due to sensor back-off, 0 mm was measured at reduce power.
3. The laptop configuration with the accessory keyboard connected was not evaluated as this was considered to be covered by the edge left tests.

Antenna	Test Configurations	Rear	Edge Top	Edge Right	Edge Bottom	Edge Left	Front
BT/WIFI1 Antenna	Wi-Fi 2.4 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 5.2 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 5.3 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 5.5 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 5.8 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 5.9 GHz	Yes	Yes	Yes	No	No	No
	Wi-Fi 6 GHz	Yes	Yes	Yes	No	No	No
	Bluetooth	Yes	Yes	Yes	No	No	No
BT/WIFI2 Antenna	Wi-Fi 2.4 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 5.2 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 5.3 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 5.5 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 5.8 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 5.9 GHz	Yes	Yes	No	No	Yes	No
	Wi-Fi 6 GHz	Yes	Yes	No	No	Yes	No
	Bluetooth	Yes	Yes	No	No	Yes	No

Note(s):

1. Yes = Testing is required. No = Testing is not required.
2. Some additional configurations were tested to support simultaneous transmission considerations.
3. The laptop configuration with the accessory keyboard connected was not evaluated as this was considered to be covered by the edge left tests.

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

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.
The dielectric constant (εr) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within ± 5% of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528-2013, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for εr and σ may be relaxed to ± 10%. This is limited to frequencies ≤ 3 GHz.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ε_r	σ (S/m)	ε_r	σ (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

Dielectric Property Measurements Results:

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
1A	2023-04-18	5850	Head	5850	34.76	35.30	-1.53	5.27	5.32	-1.02
				5900	34.68	35.20	-1.48	5.33	5.38	-0.99
				5925	34.65	35.20	-1.56	5.36	5.40	-0.76
1A	2023-04-24	5250	Head	5250	35.74	35.93	-0.54	4.65	4.70	-1.11
				5150	35.94	36.05	-0.30	4.54	4.60	-1.34
				5350	35.54	35.82	-0.78	4.76	4.80	-0.88
1A	2023-04-24	5850	Head	5850	34.65	35.30	-1.84	5.33	5.32	0.17
				5900	34.57	35.20	-1.79	5.39	5.38	0.13
				5925	34.53	35.20	-1.90	5.42	5.40	0.30
1A	2023-04-24	6500	Head	6500	33.49	34.50	-2.93	6.08	6.07	0.23
				5925	34.53	35.20	-1.90	5.42	5.40	0.30
				7125	32.41	33.80	-4.11	6.83	6.80	0.49
1A	2023-04-28	5750	Head	5750	33.99	35.36	-3.88	5.16	5.21	-1.01
				5700	34.10	35.42	-3.73	5.10	5.16	-1.21
				5850	33.81	35.30	-4.22	5.27	5.32	-0.90
1A	2023-05-02	6500	Head	6500	33.62	34.50	-2.55	6.04	6.07	-0.43
				5925	34.61	35.20	-1.68	5.38	5.40	-0.33
				7125	32.55	33.80	-3.70	6.78	6.80	-0.26
2A	2023-04-04	750	Head	750	43.54	41.96	3.76	0.91	0.89	1.66
				660	43.80	42.42	3.25	0.88	0.89	-1.11
				800	43.41	41.71	4.09	0.92	0.90	2.68
2A	2023-04-04	900	Head	900	43.12	41.50	3.90	0.96	0.97	-1.32
				820	43.30	41.60	4.08	0.93	0.90	3.54
				915	43.08	41.50	3.81	0.96	0.98	-2.33
2A	2023-04-10	750	Head	750	43.10	41.96	2.71	0.90	0.89	1.30
				660	43.38	42.42	2.26	0.87	0.89	-1.38
				800	42.96	41.71	3.01	0.92	0.90	2.33
2A	2023-04-10	900	Head	900	42.69	41.50	2.87	0.95	0.97	-1.58
				825	42.84	41.58	3.04	0.93	0.90	3.47
				915	42.66	41.50	2.80	0.96	0.98	-1.69
2A	2023-04-13	1750	Head	1750	39.57	40.08	-1.28	1.38	1.37	0.81
				1710	39.61	40.15	-1.34	1.36	1.35	0.64
				1755	39.56	40.08	-1.29	1.38	1.37	0.82
2A	2023-04-13	2600	Head	2600	38.19	39.01	-2.10	1.97	1.96	0.30
				2495	38.38	39.14	-1.95	1.88	1.85	1.70
				2690	38.02	38.90	-2.26	2.04	2.06	-0.80
2A	2023-04-18	1750	Head	1750	38.79	40.08	-3.23	1.34	1.37	-2.41
				1710	38.84	40.15	-3.25	1.31	1.35	-2.56
				1755	38.78	40.08	-3.24	1.34	1.37	-2.39
2A	2023-04-18	2600	Head	2600	37.39	39.01	-4.15	1.92	1.96	-2.30
				2495	37.59	39.14	-3.97	1.83	1.85	-1.01
				2690	37.22	38.90	-4.31	1.99	2.06	-3.57
2A	2023-04-24	900	Head	900	39.91	41.50	-3.83	0.94	0.97	-3.00
				825	40.11	41.58	-3.53	0.92	0.90	1.88
				915	39.88	41.50	-3.90	0.95	0.98	-3.18

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
2A	2023-04-24	750	Head	750	40.38	41.96	-3.77	0.89	0.89	-0.36
				660	40.66	42.42	-4.16	0.86	0.89	-3.15
				800	40.22	41.71	-3.56	0.90	0.90	0.73
2A	2023-04-24	1750	Head	1750	38.16	40.08	-4.80	1.35	1.37	-1.39
				1710	38.19	40.15	-4.87	1.33	1.35	-1.44
				1785	38.09	40.03	-4.85	1.37	1.39	-1.35
2A	2023-05-01	1900	Head	1900	38.84	40.00	-2.90	1.43	1.40	1.93
				1850	38.92	40.00	-2.70	1.40	1.40	-0.21
				1920	38.83	40.00	-2.93	1.44	1.40	2.86
2A	2023-05-08	1900	Head	1900	40.22	40.00	0.55	1.42	1.40	1.21
				1850	40.32	40.00	0.80	1.39	1.40	-0.93
				1920	40.22	40.00	0.55	1.43	1.40	2.07
2B	2023-04-11	1900	Head	1900	41.97	40.00	4.93	1.48	1.40	6.00
				1850	42.08	40.00	5.20	1.45	1.40	3.57
				1920	41.95	40.00	4.88	1.50	1.40	6.93
2B	2023-04-12	1900	Head	1900	41.62	40.00	4.05	1.49	1.40	6.36
				1840	41.71	40.00	4.28	1.45	1.40	3.57
				1920	41.61	40.00	4.03	1.50	1.40	7.29
2B	2023-04-13	1900	Head	1900	41.47	40.00	3.68	1.49	1.40	6.50
				1840	41.59	40.00	3.98	1.45	1.40	3.71
				1920	41.46	40.00	3.65	1.50	1.40	7.43
2B	2023-04-14	1900	Head	1900	40.80	40.00	2.00	1.49	1.40	6.14
				1840	40.92	40.00	2.30	1.45	1.40	3.86
				1920	40.78	40.00	1.95	1.50	1.40	7.00
2B	2023-04-17	2450	Head	2450	39.79	39.20	1.51	1.89	1.80	4.72
				2400	39.89	39.30	1.51	1.84	1.75	5.10
				2480	39.75	39.16	1.50	1.91	1.83	3.96
2B	2023-04-18	5250	Head	5250	35.07	35.93	-2.40	4.55	4.70	-3.19
				5150	35.25	36.05	-2.21	4.44	4.60	-3.39
				5350	34.88	35.82	-2.62	4.66	4.80	-3.03
2B	2023-04-18	5600	Head	5600	34.48	35.53	-2.97	4.93	5.06	-2.57
				5500	34.69	35.65	-2.69	4.82	4.96	-2.80
				5725	34.21	35.39	-3.34	5.07	5.19	-2.28
2B	2023-04-18	5750	Head	5750	34.15	35.36	-3.43	5.11	5.21	-2.09
				5700	34.30	35.42	-3.16	5.04	5.16	-2.32
				5850	34.00	35.30	-3.68	5.21	5.32	-2.12
2B	2023-04-25	1900	Head	1900	39.42	40.00	-1.45	1.49	1.40	6.71
				1850	39.51	40.00	-1.23	1.46	1.40	4.50
				1920	39.41	40.00	-1.48	1.51	1.40	7.71
2B	2023-04-25	2600	Head	2600	38.26	39.01	-1.92	2.00	1.96	1.93
				2495	38.45	39.14	-1.77	1.91	1.85	3.43
				2690	38.09	38.90	-2.08	2.08	2.06	0.75
2B	2023-04-26	5250	Head	5250	35.02	35.93	-2.54	4.62	4.70	-1.83
				5150	35.21	36.05	-2.32	4.50	4.60	-2.08
				5350	34.83	35.82	-2.76	4.73	4.80	-1.57
2B	2023-04-26	5600	Head	5600	34.36	35.53	-3.30	5.01	5.06	-1.05
				5500	34.55	35.65	-3.08	4.89	4.96	-1.41
				5725	34.12	35.39	-3.59	5.16	5.19	-0.50

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
2B	2023-04-27	2450	Head	2450	39.43	39.20	0.59	1.85	1.80	2.61
				2400	39.50	39.30	0.52	1.81	1.75	3.05
				2480	39.40	39.16	0.61	1.87	1.83	1.89
2B	2023-04-28	2600	Head	2600	38.79	39.01	-0.57	1.99	1.96	1.16
				2495	38.96	39.14	-0.47	1.90	1.85	2.83
				2690	38.65	38.90	-0.64	2.06	2.06	-0.12
2B	2023-04-28	5250	Head	5250	34.22	35.93	-4.77	4.52	4.70	-3.94
				5150	34.40	36.05	-4.57	4.41	4.60	-4.10
				5350	34.03	35.82	-4.99	4.62	4.80	-3.76
2B	2023-04-28	2450	Head	2450	39.04	39.20	-0.41	1.87	1.80	3.83
				2400	39.11	39.30	-0.48	1.83	1.75	4.36
				2480	39.00	39.16	-0.41	1.89	1.83	3.14
2B	2023-05-02	5750	Head	5750	34.17	35.36	-3.37	5.20	5.21	-0.26
				5700	34.26	35.42	-3.27	5.13	5.16	-0.57
				5850	34.01	35.30	-3.65	5.31	5.32	-0.23
2B	2023-05-03	1750	Head	1750	41.58	40.08	3.73	1.39	1.37	1.32
				1710	41.60	40.15	3.62	1.36	1.35	1.16
				1755	41.58	40.08	3.75	1.39	1.37	1.33
2B	2023-05-05	2450	Head	2450	39.46	39.20	0.66	1.86	1.80	3.11
				2400	39.52	39.30	0.57	1.81	1.75	3.50
				2480	39.41	39.16	0.63	1.88	1.83	2.38
2B	2023-05-09	2450	Head	2450	38.10	39.20	-2.81	1.84	1.80	2.39
				2400	38.18	39.30	-2.84	1.80	1.75	2.82
				2480	38.07	39.16	-2.79	1.86	1.83	1.67
2B	2023-05-19	1900	Head	1900	40.16	40.00	0.40	1.47	1.40	4.79
				1850	40.24	40.00	0.60	1.47	1.40	4.79
				1920	40.15	40.00	0.37	1.48	1.40	5.71

8.2. System 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 re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±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 ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 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 5 mm (above 6 GHz), 10 mm (1-6 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 recorded and the results are normalized to 1 W input power.

System 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. Refer to Appendix B for the SAR System Check Plots.

SAR Lab	Date	Tissue Type	Dipole Type_Serial #	Dipole Cal. Due Data	Dipole Power (dBm)	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
						Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
1A	4/18/2023	Head	D5GHzV2 SN: 1213 (5.85 GHz)	10/11/2023	17.00	3.860	77.02	81.40	-5.38	1.090	21.75	23.10	-5.85	1
1A	4/24/2023	Head	D5GHzV2 SN: 1213 (5.25 GHz)	10/11/2023	17.00	3.710	74.02	79.40	-6.77	1.050	20.95	22.70	-7.71	2
1A	4/24/2023	Head	D5GHzV2 SN: 1213 (5.85 GHz)	10/11/2023	17.00	3.920	78.21	81.40	-3.91	1.110	22.15	23.10	-4.12	
1A	4/24/2023	Head	D6.5GHzV2 SN: 1068	12/1/2023	17.00	14.900	297.29	293.00	1.47	2.770	55.27	54.60	1.22	3
1A	4/28/2023	Head	D5GHzV2 SN: 1213 (5.75 GHz)	10/11/2023	17.00	3.750	74.82	78.80	-5.05	1.060	21.15	22.40	-5.58	4
1A	5/2/2023	Head	D6.5GHzV2 SN: 1068	12/1/2023	17.00	14.800	295.30	293.00	0.78	2.730	54.47	54.60	-0.24	
2A	4/4/2023	Head	D750V3 SN: 1139	10/12/2023	17.00	0.413	8.24	8.51	-3.17	0.274	5.47	5.58	-2.02	5
2A	4/4/2023	Head	D900V2 SN: 1d180	10/12/2023	17.00	0.532	10.61	10.90	-2.62	0.347	6.92	6.99	-0.95	
2A	4/10/2023	Head	D750V3 SN: 1139	10/12/2023	17.00	0.420	8.38	8.51	-1.53	0.277	5.53	5.58	-0.95	
2A	4/10/2023	Head	D900V2 SN: 1d180	10/12/2023	17.00	0.540	10.77	10.90	-1.15	0.352	7.02	6.99	0.48	
2A	4/13/2023	Head	D1750V2 SN: 1136	10/17/2023	17.00	1.820	36.31	36.10	0.59	0.968	19.31	19.10	1.12	
2A	4/13/2023	Head	D2600V2 SN: 1104	10/21/2023	17.00	2.680	53.47	56.70	-5.69	1.200	23.94	25.30	-5.36	
2A	4/18/2023	Head	D1750V2 SN: 1136	10/17/2023	17.00	1.780	35.52	36.10	-1.62	0.949	18.94	19.10	-0.86	6
2A	4/18/2023	Head	D2600V2 SN: 1104	10/21/2023	17.00	2.620	52.28	56.70	-7.80	1.180	23.54	25.30	-6.94	7
2A	4/24/2023	Head	D900V2 SN: 1d180	10/12/2023	17.00	0.530	10.57	10.90	-2.98	0.345	6.88	6.99	-1.52	8
2A	4/24/2023	Head	D750V3 SN: 1139	10/12/2023	17.00	0.419	8.36	8.51	-1.76	0.277	5.53	5.58	-0.95	
2A	4/24/2023	Head	D1750V2 SN: 1136	10/17/2023	17.00	1.780	35.52	36.10	-1.62	0.949	18.94	19.10	-0.86	
2A	5/1/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.990	39.71	39.20	1.29	1.040	20.75	20.40	1.72	9
2A	5/8/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.940	38.71	39.20	-1.25	1.010	20.15	20.40	-1.21	
2B	4/11/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.970	39.31	39.20	0.27	1.030	20.55	20.40	0.74	
2B	4/12/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.970	39.31	39.20	0.27	1.030	20.55	20.40	0.74	
2B	4/13/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	2.000	39.91	39.20	1.80	1.040	20.75	20.40	1.72	10
2B	4/14/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.970	39.31	39.20	0.27	1.020	20.35	20.40	-0.24	
2B	4/17/2023	Head	D2450V2 SN: 963	10/18/2023	17.00	2.400	47.89	52.40	-8.61	1.120	22.35	24.50	-8.79	11
2B	4/18/2023	Head	D5GHzV2 SN: 1213 (5.25 GHz)	10/11/2023	17.00	3.710	74.02	79.40	-6.77	1.060	21.15	22.70	-6.83	12
2B	4/18/2023	Head	D5GHzV2 SN: 1213 (5.60 GHz)	10/11/2023	17.00	4.140	82.60	82.40	0.25	1.160	23.15	23.50	-1.51	
2B	4/18/2023	Head	D5GHzV2 SN: 1213 (5.75 GHz)	10/11/2023	17.00	3.620	72.23	78.80	-8.34	1.020	20.35	22.40	-9.14	13
2B	4/25/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.980	39.51	39.20	0.78	1.020	20.35	20.40	-0.24	
2B	4/25/2023	Head	D2600V2 SN: 1104	10/21/2023	17.00	2.640	52.67	56.70	-7.10	1.170	23.34	25.30	-7.73	14
2B	4/26/2023	Head	D5GHzV2 SN: 1213 (5.25 GHz)	10/11/2023	17.00	3.720	74.22	79.40	-6.52	1.070	21.35	22.70	-5.95	
2B	4/26/2023	Head	D5GHzV2 SN: 1213 (5.60 GHz)	10/11/2023	17.00	4.180	83.40	82.40	1.22	1.170	23.34	23.50	-0.66	15
2B	4/27/2023	Head	D2450V2 SN: 963	10/18/2023	17.00	2.410	48.09	52.40	-8.23	1.120	22.35	24.50	-8.79	
2B	4/28/2023	Head	D2600V2 SN: 1104	10/21/2023	17.00	2.660	53.07	56.70	-6.40	1.190	23.74	25.30	-6.15	
2B	4/28/2023	Head	D5GHzV2 SN: 1213 (5.25 GHz)	10/11/2023	17.00	3.760	75.02	79.40	-5.51	1.070	21.35	22.70	-5.95	
2B	4/28/2023	Head	D2450V2 SN: 963	10/18/2023	17.00	2.480	49.48	52.40	-5.57	1.140	22.75	24.50	-7.16	
2B	5/2/2023	Head	D5GHzV2 SN: 1213 (5.75 GHz)	10/11/2023	17.00	3.760	75.02	78.80	-4.79	1.060	21.15	22.40	-5.58	
2B	5/3/2023	Head	D1750V2 SN: 1136	10/17/2023	17.00	1.730	34.52	36.10	-4.38	0.920	18.36	19.10	-3.89	16
2B	5/5/2023	Head	D2450V2 SN: 963	10/18/2023	17.00	2.450	48.88	52.40	-6.71	1.140	22.75	24.50	-7.16	
2B	5/9/2023	Head	D2450V2 SN: 963	10/18/2023	17.00	2.480	49.48	52.40	-5.57	1.160	23.15	24.50	-5.53	
2B	5/19/2023	Head	D1900V2 SN: 5d202	10/12/2023	17.00	1.980	39.51	39.20	0.78	1.020	20.35	20.40	-0.24	

9. Conducted Output Power Measurements

Tune-Up Power Limits provided by the manufacturer are used to scale measured SAR values.

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

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

When different maximum output power applies to GSM voice or GPRS/EDGE time slots, GSM voice and GPRS/EDGE time slots should be tested separately to determine compliance by summing the corresponding reported SAR.

The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance

Per October 2013 TCB Workshop:
When the maximum frame-averaged powers levels are within 0.25 dB of each other, test the configuration with the most number of time slots.

Maximum Output Power (Tune-up Limit) for GSM

SAR is not required for EDGE (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is ≤ 1.2W/kg.

RF Air interface	Mode	GSM Burst Power Tune-up Limit (dBm)	
		Main1 ANT	
		Max	Reduced
GSM850	Voice/GPRS (1 slot)	33.5	23.5
	GPRS 2 slots	32.0	20.5
	GPRS 3 slots	30.0	18.8
	GPRS 4 slots	28.0	17.5
	EGPRS 1 slot	28.0	23.0
	EGPRS 2 slot	26.0	20.5
	EGPRS 3 slot	24.0	17.8
	EGPRS 4 slots	23.0	16.5
GSM1900	Voice/GPRS (1 slot)	30.5	21.0
	GPRS 2 slots	29.0	18.0
	GPRS 3 slots	27.0	16.3
	GPRS 4 slots	25.0	15.0
	EGPRS 1 slot	27.0	21.0
	EGPRS 2 slot	25.0	17.5
	EGPRS 3 slot	23.0	15.3
	EGPRS 4 slots	22.0	15.0

GSM850 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max Average Power (dBm) DSI = 0				Reduced Average Power (dBm) DSI = 1			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	32.7	23.6	33.5	24.5	22.5	13.4	23.5	14.5
			190	836.6	31.7	22.7			22.4	13.3		
			251	848.8	33.1	24.1			22.3	13.3		
		2	128	824.2	31.7	25.7	32.0	**26.0**	19.5	13.5	20.5	14.5
			190	836.6	31.7	25.7			19.5	13.5		
			251	848.8	31.8	25.7			19.5	13.5		
		3	128	824.2	29.5	25.3	30.0	25.7	17.7	13.4	18.8	**14.5**
			190	836.6	27.9	23.6			17.7	13.4		
			251	848.8	29.8	25.5			17.7	13.4		
		4	128	824.2	27.7	24.7	28.0	25.0	16.5	13.5	17.5	14.5
			190	836.6	27.9	24.9			16.6	13.5		
			251	848.8	27.8	24.8			16.5	13.5		
EDGE (8PSK)	MCS5	1	128	824.2	27.0	17.9	28.0	19.0	22.3	13.3	23.0	14.0
			190	836.6	26.8	17.8			22.5	13.5		
			251	848.8	27.7	18.7			22.5	13.5		
		2	128	824.2	25.3	19.3	26.0	20.0	19.4	13.3	20.5	14.5
			190	836.6	25.3	19.3			19.4	13.3		
			251	848.8	25.4	19.4			19.4	13.3		
		3	128	824.2	23.5	19.2	24.0	19.7	17.7	13.4	17.8	13.5
			190	836.6	22.7	18.4			17.7	13.4		
			251	848.8	23.4	19.1			17.6	13.4		
		4	128	824.2	22.5	19.5	23.0	20.0	16.5	13.4	16.5	13.5
			190	836.6	22.5	19.5			16.4	13.4		
			251	848.8	22.7	19.7			16.5	13.5		

GSM1900 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max Average Power (dBm) DSI = 0				Reduced Average Power (dBm) DSI = 1			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	29.5	20.5	30.5	21.5	19.9	10.8	21.0	12.0
			661	1880.0	29.2	20.2			19.9	10.8		
			810	1909.8	29.5	20.5			20.1	11.1		
		2	512	1850.2	27.4	21.4	29.0	**23.0**	16.9	10.9	18.0	12.0
			661	1880.0	27.4	21.3			16.9	10.9		
			810	1909.8	27.9	21.9			17.1	11.0		
		3	512	1850.2	26.7	22.4	27.0	22.7	15.2	10.9	16.3	**12.0**
			661	1880.0	24.8	20.6			15.2	11.0		
			810	1909.8	26.4	22.2			15.4	11.2		
		4	512	1850.2	24.1	21.1	25.0	22.0	13.5	10.5	15.0	12.0
			661	1880.0	24.3	21.3			13.9	10.9		
			810	1909.8	24.9	21.9			14.1	11.1		
EDGE (8PSK)	MCS5	1	512	1850.2	25.9	16.8	27.0	18.0	20.4	11.4	21.0	12.0
			661	1880.0	26.1	17.0			20.4	11.4		
			810	1909.8	26.3	17.2			20.5	11.5		
		2	512	1850.2	24.3	18.2	25.0	19.0	16.8	10.8	17.5	11.5
			661	1880.0	24.2	18.2			16.8	10.8		
			810	1909.8	24.2	18.2			17.0	11.0		
		3	512	1850.2	22.3	18.0	23.0	18.7	15.1	10.9	15.3	11.0
			661	1880.0	21.4	17.1			14.4	10.1		
			810	1909.8	22.4	18.1			14.6	10.3		
		4	512	1850.2	21.4	18.4	22.0	19.0	14.6	11.5	15.0	12.0
			661	1880.0	21.3	18.3			14.0	11.0		
			810	1909.8	21.5	18.5			14.2	11.2		

9.2. W-CDMA

Per KDB 941225 D01 3G SAR Procedures for W-CDMA:

Maximum output power is verified on the high, middle and low channels and using the appropriate 12.2 kbps RMC with TPC (transmit power control) set to all "1's"

Release 99 Setup Procedures used to establish the test signals

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1. A summary of these settings is illustrated below:

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 2
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	βc/βd	8/15

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to procedures in table C.10.1.4 of 3GPP TS 34.121-1
A summary of these settings is illustrated below:

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

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

HSUPA Setup Procedures used to establish the test signals

The following 5 Sub-tests were completed according to procedures in table C.11.1.3 of 3GPP TS 34.121-1. A summary of these settings is illustrated below:

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

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

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

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

DC-HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests for DC-HSDPA were completed according to procedures in table C08.1.12 of 3GPP TS 34.121-1. A summary of subtest settings is illustrated below:

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	Proces ses	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.		

HSPA+ Setup Procedures used to establish the test signals

The following 1 Sub-test was completed according to procedures in table C.11.1.4 of 3GPP TS34.121. A summary of these settings is illustrated below:

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

Maximum Output Power (Tune-up Limit) for W-CDMA

SAR measurement is not required for the HSDPA, HSUPA. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is ≤ ¼ dB higher than the primary mode

RF Air interface	Mode	Tune-up Pow erLimit (dBm)	
		Main Antenna	
		Normal	Reduced
W-CDMA Band 2	R99	24.5	15.0
	HSDPA	23.5	14.0
	HSUPA	23.5	14.0
	DC-HSDPA	23.5	14.0
W-CDMA Band 4	R99	24.5	15.5
	HSDPA	23.5	14.5
	HSUPA	23.5	14.5
	DC-HSDPA	23.5	14.5
W-CDMA Band 5	R99	24.5	15.0
	HSDPA	23.5	14.0
	HSUPA	23.5	14.0
	DC-HSDPA	23.5	14.0

W-CDMA Band II Measured Results

Mode		UL Ch No.	Freq. (MHz)	Max Average Power (dBm) DSI = 0			Reduced Average Power (dBm) DSI = 1		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	24.4	N/A	24.5	14.7	N/A	15.0
		9400	1880.0	24.1			14.7		
		9538	1907.6	24.3			14.9		
HSDPA	Subtest 1	9262	1852.4	23.4	0	23.5	13.7	0	14.0
		9400	1880.0	23.1			13.7		
		9538	1907.6	23.3			13.9		
	Subtest 2	9262	1852.4	23.4	0	23.5	13.7	0	14.0
		9400	1880.0	23.1			13.7		
		9538	1907.6	23.3			13.9		
	Subtest 3	9262	1852.4	22.9	0.5	23.0	13.2	0.5	13.5
		9400	1880.0	22.6			13.2		
		9538	1907.6	22.8			13.4		
	Subtest 4	9262	1852.4	22.9	0.5	23.0	13.2	0.5	13.5
		9400	1880.0	22.6			13.2		
		9538	1907.6	22.8			13.4		
HSUPA	Subtest 1	9262	1852.4	23.4	0	23.5	13.7	0	14.0
		9400	1880.0	23.1			13.7		
		9538	1907.6	23.3			13.9		
	Subtest 2	9262	1852.4	21.4	2	21.5	11.8	2	12.0
		9400	1880.0	21.1			11.7		
		9538	1907.6	21.3			11.9		
	Subtest 3	9262	1852.4	22.4	1	22.5	12.7	1	13.0
		9400	1880.0	22.2			12.7		
		9538	1907.6	22.3			12.9		
	Subtest 4	9262	1852.4	21.4	2	21.5	11.7	2	12.0
		9400	1880.0	21.2			11.7		
		9538	1907.6	21.3			11.9		
	Subtest 5	9262	1852.4	23.0	0	23.5	13.7	0	14.0
		9400	1880.0	22.7			13.7		
		9538	1907.6	22.9			13.9		
DC-HSDPA	Subtest 1	9262	1852.4	23.4	0	23.5	13.8	0	14.0
		9400	1880.0	23.1			13.7		
		9538	1907.6	23.3			13.9		
	Subtest 2	9262	1852.4	23.4	0	23.5	13.7	0	14.0
		9400	1880.0	23.1			13.7		
		9538	1907.6	23.3			13.9		
	Subtest 3	9262	1852.4	22.9	0.5	23.0	13.2	0.5	13.5
		9400	1880.0	22.6			13.2		
		9538	1907.6	22.8			13.4		
	Subtest 4	9262	1852.4	22.9	0.5	23.0	13.2	0.5	13.5
		9400	1880.0	22.6			13.2		
		9538	1907.6	22.8			13.4		

W-CDMA Band IV Measured Results

Mode		UL Ch No.	Freq. (MHz)	Max Average Power (dBm) DSI - 0			Reduced Average Power (dBm) DSI = 1		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	24.1	N/A	24.5	14.9	N/A	15.5
		1413	1732.6	24.1			14.9		
		1513	1752.6	24.4			15.1		
HSDPA	Subtest 1	1312	1712.4	23.1	0	23.5	13.9	0	14.5
		1413	1732.6	23.1			13.9		
		1513	1752.6	23.4			14.1		
	Subtest 2	1312	1712.4	23.1	0	23.5	13.9	0	14.5
		1413	1732.6	23.1			13.9		
		1513	1752.6	23.4			14.1		
	Subtest 3	1312	1712.4	22.6	0.5	23.0	13.4	0.5	14.0
		1413	1732.6	22.6			13.3		
		1513	1752.6	22.8			13.6		
	Subtest 4	1312	1712.4	22.6	0.5	23.0	13.3	0.5	14.0
		1413	1732.6	22.6			13.3		
		1513	1752.6	22.9			13.6		
HSUPA	Subtest 1	1312	1712.4	23.1	0	23.5	13.9	0	14.5
		1413	1732.6	23.2			13.8		
		1513	1752.6	23.4			14.1		
	Subtest 2	1312	1712.4	21.1	2	21.5	11.8	2	12.5
		1413	1732.6	21.2			11.9		
		1513	1752.6	21.4			12.1		
	Subtest 3	1312	1712.4	22.1	1	22.5	12.8	1	13.5
		1413	1732.6	22.2			12.8		
		1513	1752.6	22.4			13.1		
	Subtest 4	1312	1712.4	21.1	2	21.5	11.8	2	12.5
		1413	1732.6	21.1			11.8		
		1513	1752.6	21.4			12.1		
	Subtest 5	1312	1712.4	22.7	0	23.5	13.9	0	14.5
		1413	1732.6	22.7			13.9		
		1513	1752.6	23.0			14.1		
DC-HSDPA	Subtest 1	1312	1712.4	23.1	0	23.5	13.9	0	14.5
		1413	1732.6	23.2			13.9		
		1513	1752.6	23.4			14.1		
	Subtest 2	1312	1712.4	23.2	0	23.5	13.9	0	14.5
		1413	1732.6	23.2			13.9		
		1513	1752.6	23.4			14.1		
	Subtest 3	1312	1712.4	22.6	0.5	23.0	13.4	0.5	14.0
		1413	1732.6	22.6			13.4		
		1513	1752.6	22.9			13.6		
	Subtest 4	1312	1712.4	22.6	0.5	23.0	13.3	0.5	14.0
		1413	1732.6	22.6			13.3		
		1513	1752.6	22.9			13.6		

W-CDMA Band V Measured Results

Mode		UL Ch No.	Freq. (MHz)	Max Average Power (dBm) DSI = 0			Reduced Average Power (dBm) DSI = 1		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	23.9	N/A	24.5	14.4	N/A	15.0
		4183	836.6	24.0			14.5		
		4233	846.6	23.9			14.3		
HSDPA	Subtest 1	4132	826.4	22.9	0	23.5	13.4	0	14.0
		4183	836.6	23.1			13.5		
		4233	846.6	22.9			13.3		
	Subtest 2	4132	826.4	22.9	0	23.5	13.4	0	14.0
		4183	836.6	23.1			13.5		
		4233	846.6	22.9			13.3		
	Subtest 3	4132	826.4	22.4	0.5	23.0	12.9	0.5	13.5
		4183	836.6	22.6			13.0		
		4233	846.6	22.4			12.8		
	Subtest 4	4132	826.4	22.4	0.5	23.0	12.9	0.5	13.5
		4183	836.6	22.6			13.0		
		4233	846.6	22.4			12.8		
HSUPA	Subtest 1	4132	826.4	22.9	0	23.5	13.5	0	14.0
		4183	836.6	23.1			13.6		
		4233	846.6	23.0			13.5		
	Subtest 2	4132	826.4	20.9	2	21.5	11.5	2	12.0
		4183	836.6	21.1			11.6		
		4233	846.6	21.0			11.5		
	Subtest 3	4132	826.4	21.9	1	22.5	12.5	1	13.0
		4183	836.6	22.1			12.6		
		4233	846.6	22.0			12.5		
	Subtest 4	4132	826.4	21.0	2	21.5	11.6	2	12.0
		4183	836.6	21.1			11.6		
		4233	846.6	21.0			11.5		
	Subtest 5	4132	826.4	22.5	0	23.5	13.5	0	14.0
		4183	836.6	22.6			13.6		
		4233	846.6	22.5			13.5		
DC-HSDPA	Subtest 1	4132	826.4	23.0	0	23.5	13.5	0	14.0
		4183	836.6	23.1			13.6		
		4233	846.6	22.9			13.5		
	Subtest 2	4132	826.4	22.9	0	23.5	13.5	0	14.0
		4183	836.6	23.1			13.6		
		4233	846.6	22.9			13.5		
	Subtest 3	4132	826.4	22.4	0.5	23.0	13.0	0.5	13.5
		4183	836.6	22.6			13.1		
		4233	846.6	22.4			13.0		
	Subtest 4	4132	826.4	22.4	0.5	23.0	13.0	0.5	13.5
		4183	836.6	22.6			13.1		
		4233	846.6	22.4			13.0		

9.3. 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 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

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 Signaling Value of “NS_01”.

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

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A

Maximum Output Power (Tune-up Limit) for LTE

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows:

a) The maximum output power, including tolerance, for the smaller band must be ≤ the larger band to qualify for the SAR test exclusion.
b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
   - LTE Band 2 (1850-1910 MHz) is covered by LTE Band 25 (1850-1915 MHz)
   - LTE Band 4 (1710-1755 MHz) is covered by LTE Band 66 (1710-1780 MHz)
   - LTE Band 5 (824-849 MHz) is covered by LTE Band 26 (814-849 MHz)
   - LTE Band 17 (704-716 MHz) is covered by LTE Band 12 (699-716 MHz)

For some LTE Bands, certain channel bandwidths do not support at least three non-overlapping channels. When a device supports overlapping channel assignments in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices. Please refer to section 6.3. for a detailed list of LTE test channels

- LTE Band 4 (1710-1755 MHz)
- LTE Band 5 (824-849 MHz)
- LTE Band 12 (699-716 MHz)
- LTE Band 13 (777-787 MHz)

LTE QPSK configuration has the highest maximum average output power per 3GPP standard.

SAR measurement is not required for the 16QAM, 64QAM, and 256QAM. When the highest maximum output power for 16QAM, 64QAM, and 256QAM is ≤ ½ dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

RF Air interface	Mode	Tune-up Power Limit (dBm)	
		Main Antenna	
		Normal	Reduced
LTE Band 2	QPSK	24.5	15.0
LTE Band 4	QPSK	24.5	15.0
LTE Band 5	QPSK	24.5	15.0
LTE Band 12	QPSK	24.5	15.0
LTE Band 13	QPSK	24.5	15.0
LTE Band 17	QPSK	24.5	15.0
LTE Band 25	QPSK	24.5	15.0
LTE Band 26	QPSK	24.5	15.0
LTE Band 41 (PC 3)	QPSK	24.5	16.0
LTE Band 41 (PC 2)	QPSK	26.0	
LTE Band 66	QPSK	24.5	15.0

LTE Band 2 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				18700	18900	19100	MPR	Tune-up Limit	18700	18900	19100	MPR	Tune-up Limit
				1860 MHz	1880 MHz	1900 MHz			1860 MHz	1880 MHz	1900 MHz		
20 MHz	QPSK	1	0	23.7	23.5	23.6	0	24.5	14.2	14.3	14.3	0	15.0
		1	49	23.6	23.6	23.7	0	24.5	14.3	14.3	14.3	0	15.0
		1	99	23.5	23.6	23.8	0	24.5	14.3	14.3	14.3	0	15.0
		50	0	22.6	22.6	22.7	1	23.5	14.3	14.3	14.3	0	15.0
		50	24	22.7	22.7	22.8	1	23.5	14.4	14.3	14.3	0	15.0
		50	50	22.7	22.7	22.9	1	23.5	14.4	14.4	14.4	0	15.0
		100	0	22.7	22.7	22.8	1	23.5	14.4	14.3	14.3	0	15.0
	16QAM	1	0	22.9	22.9	23.0	1	23.5	14.5	14.7	14.6	0	15.0
		1	49	22.9	22.9	23.2	1	23.5	14.6	14.7	14.7	0	15.0
		1	99	22.9	22.8	23.2	1	23.5	14.6	14.8	14.6	0	15.0
		50	0	21.6	21.6	21.7	2	22.5	14.3	14.3	14.3	0	15.0
		50	24	21.7	21.7	21.8	2	22.5	14.4	14.3	14.4	0	15.0
		50	50	21.7	21.7	21.9	2	22.5	14.4	14.4	14.4	0	15.0
		100	0	21.7	21.7	21.8	2	22.5	14.4	14.3	14.4	0	15.0
	64QAM	1	0	21.5	21.9	21.9	2	22.5	14.4	14.5	14.4	0	15.0
		1	49	21.8	21.7	21.9	2	22.5	14.5	14.6	14.5	0	15.0
		1	99	21.8	21.8	21.9	2	22.5	14.5	14.5	14.4	0	15.0
		50	0	20.7	20.6	20.8	3	21.5	14.2	14.1	14.2	0	15.0
		50	24	20.7	20.7	20.9	3	21.5	14.3	14.2	14.3	0	15.0
		50	50	20.8	20.8	21.0	3	21.5	14.3	14.2	14.2	0	15.0
		100	0	20.7	20.7	20.8	3	21.5	14.3	14.1	14.2	0	15.0
	256QAM	1	0	18.9	18.8	18.9	5	19.5	14.2	14.3	14.4	0	15.0
		1	49	18.8	18.8	19.0	5	19.5	14.3	14.3	14.4	0	15.0
		1	99	19.0	19.0	19.0	5	19.5	14.3	14.4	14.4	0	15.0
		50	0	18.7	18.7	18.8	5	19.5	14.1	14.1	14.2	0	15.0
		50	24	18.8	18.7	18.9	5	19.5	14.2	14.1	14.2	0	15.0
		50	50	18.8	18.7	18.9	5	19.5	14.2	14.2	14.3	0	15.0
		100	0	18.7	18.7	18.8	5	19.5	14.2	14.1	14.2	0	15.0

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				18675	18900	19125	MPR	Tune-up Limit	18675	18900	19125	MPR	Tune-up Limit
				1857.5 MHz	1880 MHz	1902.5 MHz			1857.5 MHz	1880 MHz	1902.5 MHz		
15 MHz	QPSK	1	0	23.5	23.5	23.6	0	24.5	14.3	14.2	14.3	0	15
		1	37	23.6	23.6	23.7	0	24.5	14.3	14.3	14.4	0	15
		1	74	23.7	23.5	23.7	0	24.5	14.4	14.3	14.3	0	15
		36	0	22.6	22.5	22.7	1	23.5	14.3	14.3	14.3	0	15
		36	20	22.6	22.6	22.7	1	23.5	14.4	14.3	14.3	0	15
		36	39	22.7	22.6	22.8	1	23.5	14.4	14.4	14.4	0	15
		75	0	22.6	22.6	22.7	1	23.5	14.4	14.3	14.3	0	15
	16QAM	1	0	22.9	22.8	23.0	1	23.5	14.6	14.5	14.6	0	15
		1	37	23.0	22.8	23.0	1	23.5	14.7	14.7	14.7	0	15
		1	74	23.0	22.7	23.0	1	23.5	14.7	14.7	14.7	0	15
		36	0	21.6	21.6	21.8	2	22.5	14.3	14.3	14.4	0	15
		36	20	21.7	21.7	21.7	2	22.5	14.4	14.3	14.3	0	15
		36	39	21.6	21.6	21.8	2	22.5	14.4	14.4	14.4	0	15
		75	0	21.7	21.7	21.7	2	22.5	14.4	14.3	14.3	0	15
	64QAM	1	0	21.7	21.8	22.0	2	22.5	14.5	14.3	14.3	0	15
		1	37	21.8	21.7	22.1	2	22.5	14.5	14.4	14.3	0	15
		1	74	21.9	21.8	22.0	2	22.5	14.6	14.3	14.3	0	15
		36	0	20.7	20.7	20.8	3	21.5	14.2	14.1	14.1	0	15
		36	20	20.7	20.7	20.8	3	21.5	14.3	14.1	14.1	0	15
		36	39	20.7	20.8	20.9	3	21.5	14.3	14.2	14.2	0	15
		75	0	20.7	20.7	20.8	3	21.5	14.3	14.1	14.1	0	15
	256QAM	1	0	18.5	18.9	18.9	5	19.5	14.2	14.1	14.2	0	15
		1	37	18.6	19.0	18.9	5	19.5	14.3	14.2	14.4	0	15
		1	74	18.8	19.0	19.1	5	19.5	14.4	14.3	14.5	0	15
		36	0	18.7	18.7	18.8	5	19.5	14.2	14.1	14.2	0	15
		36	20	18.8	18.7	18.9	5	19.5	14.2	14.1	14.2	0	15
		36	39	18.7	18.7	18.9	5	19.5	14.2	14.2	14.3	0	15
		75	0	18.7	18.7	18.8	5	19.5	14.2	14.1	14.3	0	15

LTE Band 2 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				18650	18900	19150	MPR	Tune-up Limit	18650	18900	19150	MPR	Tune-up Limit
				1855 MHz	1880 MHz	1905 MHz			1855 MHz	1880 MHz	1905 MHz		
10 MHz	QPSK	1	0	23.8	23.7	23.9	0	24.5	14.5	14.4	14.5	0	15
		1	25	23.9	23.8	24.0	0	24.5	14.6	14.5	14.5	0	15
		1	49	23.8	23.7	23.9	0	24.5	14.6	14.5	14.5	0	15
		25	0	22.7	22.7	22.8	1	23.5	14.5	14.4	14.4	0	15
		25	12	22.8	22.8	23.0	1	23.5	14.6	14.5	14.5	0	15
		25	25	22.8	22.8	22.9	1	23.5	14.6	14.5	14.5	0	15
		50	0	22.8	22.8	22.9	1	23.5	14.6	14.5	14.5	0	15
	16QAM	1	0	23.1	23.1	23.3	1	23.5	14.7	14.9	14.8	0	15
		1	25	23.1	23.1	23.2	1	23.5	14.8	14.9	14.9	0	15
		1	49	23.1	23.1	23.4	1	23.5	14.8	14.9	14.8	0	15
		25	0	21.7	21.7	21.9	2	22.5	14.5	14.4	14.5	0	15
		25	12	21.8	21.9	22.0	2	22.5	14.6	14.5	14.5	0	15
		25	25	21.7	21.8	21.9	2	22.5	14.6	14.5	14.6	0	15
		50	0	21.8	21.8	21.9	2	22.5	14.6	14.5	14.5	0	15
	64QAM	1	0	21.8	21.9	22.3	2	22.5	14.7	14.5	14.4	0	15
		1	25	22.1	22.0	22.2	2	22.5	14.7	14.6	14.5	0	15
		1	49	22.1	21.9	22.2	2	22.5	14.7	14.6	14.5	0	15
		25	0	20.8	20.7	20.9	3	21.5	14.5	14.3	14.3	0	15
		25	12	21.0	20.9	21.0	3	21.5	14.5	14.3	14.4	0	15
		25	25	20.9	20.9	21.0	3	21.5	14.5	14.4	14.4	0	15
		50	0	20.9	20.9	21.0	3	21.5	14.4	14.3	14.3	0	15
	256QAM	1	0	18.8	18.9	19.0	5	19.5	14.4	14.4	14.4	0	15
		1	25	19.0	19.0	19.2	5	19.5	14.5	14.6	14.6	0	15
		1	49	18.9	19.1	19.1	5	19.5	14.5	14.6	14.5	0	15
		25	0	18.8	18.8	19.0	5	19.5	14.3	14.3	14.4	0	15
		25	12	18.9	18.9	19.1	5	19.5	14.4	14.3	14.5	0	15
		25	25	18.9	18.9	19.1	5	19.5	14.4	14.4	14.5	0	15
		50	0	18.9	18.9	19.0	5	19.5	14.4	14.3	14.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				18625	18900	19175	MPR	Tune-up Limit	18625	18900	19175	MPR	Tune-up Limit
				1852.5 MHz	1880 MHz	1907.5 MHz			1852.5 MHz	1880 MHz	1907.5 MHz		
5 MHz	QPSK	1	0	23.7	23.7	23.9	0	24.5	14.5	14.4	14.4	0	15
		1	12	23.9	23.9	24.0	0	24.5	14.6	14.5	14.5	0	15
		1	24	23.8	23.7	23.9	0	24.5	14.5	14.5	14.5	0	15
		12	0	22.8	22.7	22.8	1	23.5	14.6	14.4	14.5	0	15
		12	7	22.8	22.8	22.9	1	23.5	14.6	14.5	14.5	0	15
		12	13	22.8	22.7	22.9	1	23.5	14.6	14.6	14.5	0	15
		25	0	22.8	22.8	22.8	1	23.5	14.5	14.5	14.5	0	15
	16QAM	1	0	23.4	23.1	23.1	1	23.5	14.9	14.8	14.9	0	15
		1	12	23.3	23.3	23.4	1	23.5	15.0	14.9	15.0	0	15
		1	24	23.3	23.2	23.2	1	23.5	14.9	14.8	14.9	0	15
		12	0	21.8	21.7	21.8	2	22.5	14.6	14.5	14.7	0	15
		12	7	21.9	21.8	21.9	2	22.5	14.6	14.7	14.7	0	15
		12	13	21.9	21.8	21.9	2	22.5	14.6	14.6	14.6	0	15
		25	0	21.8	21.8	21.8	2	22.5	14.6	14.5	14.5	0	15
	64QAM	1	0	21.7	22.1	22.1	2	22.5	14.6	14.6	14.6	0	15
		1	12	22.0	22.2	22.1	2	22.5	14.6	14.6	14.7	0	15
		1	24	21.9	22.1	22.0	2	22.5	14.7	14.5	14.7	0	15
		12	0	21.0	20.8	20.9	3	21.5	14.4	14.3	14.2	0	15
		12	7	21.0	20.9	20.9	3	21.5	14.5	14.4	14.2	0	15
		12	13	20.9	20.9	21.0	3	21.5	14.5	14.4	14.3	0	15
		25	0	20.9	20.9	20.9	3	21.5	14.4	14.3	14.2	0	15
	256QAM	1	0	18.8	18.8	19.1	5	19.5	14.4	14.3	14.6	0	15
		1	12	19.0	19.0	19.4	5	19.5	14.6	14.5	14.6	0	15
		1	24	18.9	18.9	19.3	5	19.5	14.5	14.4	14.6	0	15
		12	0	18.9	18.8	19.0	5	19.5	14.3	14.3	14.4	0	15
		12	7	18.9	18.9	19.0	5	19.5	14.3	14.4	14.5	0	15
		12	13	18.9	18.8	19.1	5	19.5	14.4	14.4	14.5	0	15
		25	0	18.9	18.9	18.9	5	19.5	14.3	14.3	14.4	0	15

LTE Band 2 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				18615	18900	19185	MPR	Tune-up Limit	18615	18900	19185	MPR	Tune-up Limit
				1851.5 MHz	1880 MHz	1908.5 MHz			1851.5 MHz	1880 MHz	1908.5 MHz		
3 MHz	QPSK	1	0	23.8	23.6	23.9	0	24.5	14.5	14.4	14.4	0	15
		1	8	23.8	23.8	24.0	0	24.5	14.6	14.5	14.5	0	15
		1	14	23.8	23.8	23.8	0	24.5	14.5	14.5	14.5	0	15
		8	0	22.8	22.7	22.9	1	23.5	14.5	14.4	14.4	0	15
		8	4	22.8	22.8	22.9	1	23.5	14.6	14.6	14.5	0	15
		8	7	22.8	22.8	22.9	1	23.5	14.6	14.5	14.5	0	15
		15	0	22.8	22.8	22.9	1	23.5	14.5	14.4	14.4	0	15
	16QAM	1	0	23.0	23.1	23.3	1	23.5	14.8	14.8	14.8	0	15
		1	8	23.2	23.3	23.3	1	23.5	14.8	14.9	14.8	0	15
		1	14	23.1	23.0	23.2	1	23.5	14.7	14.8	14.8	0	15
		8	0	21.8	21.7	22.0	2	22.5	14.6	14.5	14.5	0	15
		8	4	21.9	21.9	22.0	2	22.5	14.7	14.6	14.6	0	15
		8	7	21.9	21.8	22.0	2	22.5	14.7	14.6	14.6	0	15
		15	0	21.8	21.8	21.9	2	22.5	14.6	14.5	14.5	0	15
	64QAM	1	0	21.9	21.9	22.0	2	22.5	14.7	14.5	14.4	0	15
		1	8	22.1	22.0	22.2	2	22.5	14.8	14.7	14.5	0	15
		1	14	22.1	21.9	22.1	2	22.5	14.7	14.6	14.4	0	15
		8	0	20.9	20.8	20.9	3	21.5	14.5	14.4	14.4	0	15
		8	4	21.0	20.9	21.0	3	21.5	14.5	14.4	14.4	0	15
		8	7	21.0	20.9	21.0	3	21.5	14.5	14.4	14.4	0	15
		15	0	20.9	20.8	20.9	3	21.5	14.5	14.4	14.3	0	15
	256QAM	1	0	18.9	18.9	19.0	5	19.5	14.5	14.4	14.5	0	15
		1	8	19.0	19.0	19.2	5	19.5	14.5	14.6	14.6	0	15
		1	14	19.0	18.9	19.0	5	19.5	14.5	14.4	14.5	0	15
		8	0	18.9	18.8	18.9	5	19.5	14.4	14.4	14.5	0	15
		8	4	19.0	18.9	19.0	5	19.5	14.4	14.4	14.5	0	15
		8	7	18.9	18.9	19.0	5	19.5	14.4	14.4	14.5	0	15
		15	0	18.9	18.9	18.9	5	19.5	14.4	14.4	14.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				18607	18900	19193	MPR	Tune-up Limit	18607	18900	19193	MPR	Tune-up Limit
				1850.7 MHz	1880 MHz	1909.3 MHz			1850.7 MHz	1880 MHz	1909.3 MHz		
1.4 MHz	QPSK	1	0	23.9	23.8	23.9	0	24.5	14.2	14.4	14.5	0	15
		1	3	23.7	23.8	24.0	0	24.5	14.5	14.5	14.5	0	15
		1	5	23.8	23.7	23.8	0	24.5	14.5	14.5	14.5	0	15
		3	0	23.8	23.8	23.9	0	24.5	14.5	14.5	14.5	0	15
		3	1	23.8	23.8	23.9	0	24.5	14.5	14.5	14.5	0	15
		3	3	23.8	23.8	23.9	0	24.5	14.5	14.5	14.5	0	15
		6	0	22.8	22.7	22.9	1	23.5	14.5	14.5	14.4	0	15
	16QAM	1	0	22.9	23.1	23.2	1	23.5	14.8	14.7	14.8	0	15
		1	3	23.1	23.1	23.3	1	23.5	14.9	14.7	14.8	0	15
		1	5	23.0	23.1	23.3	1	23.5	14.8	14.7	14.8	0	15
		3	0	23.0	23.0	23.1	1	23.5	14.6	14.6	14.7	0	15
		3	1	23.0	22.9	23.1	1	23.5	14.7	14.7	14.6	0	15
		3	3	23.0	22.9	23.1	1	23.5	14.7	14.6	14.6	0	15
		6	0	21.8	21.7	22.0	2	22.5	14.6	14.6	14.5	0	15
	64QAM	1	0	21.8	21.9	22.1	2	22.5	14.7	14.6	14.6	0	15
		1	3	22.1	22.0	22.1	2	22.5	14.7	14.6	14.6	0	15
		1	5	22.1	21.9	22.2	2	22.5	14.7	14.6	14.6	0	15
		3	0	21.9	22.0	22.1	2	22.5	14.5	14.5	14.4	0	15
		3	1	22.0	22.0	22.0	2	22.5	14.6	14.5	14.5	0	15
		3	3	22.0	22.0	22.0	2	22.5	14.6	14.5	14.5	0	15
		6	0	20.9	20.8	21.0	3	21.5	14.5	14.4	14.4	0	15
	256QAM	1	0	18.8	18.8	19.0	5	19.5	14.3	14.4	14.5	0	15
		1	3	18.8	18.8	19.0	5	19.5	14.5	14.5	14.6	0	15
		1	5	18.8	18.8	19.0	5	19.5	14.4	14.4	14.5	0	15
		3	0	18.9	18.9	19.1	5	19.5	14.5	14.4	14.5	0	15
		3	1	18.9	18.9	19.0	5	19.5	14.5	14.4	14.5	0	15
		3	3	18.9	18.8	19.1	5	19.5	14.5	14.4	14.5	0	15
		6	0	18.9	18.8	18.9	5	19.5	14.3	14.3	14.5	0	15

LTE Band 5 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				20450	20525	20600	MPR	Tune-up Limit	20450	20525	20600	MPR	Tune-up Limit
				829 MHz	836.5 MHz	844 MHz			829 MHz	836.5 MHz	844 MHz		
10 MHz	QPSK	1	0	23.7	23.8	23.8	0	24.5	14.1	14.0	14.1	0	15
		1	25	23.8	23.8	23.8	0	24.5	14.1	14.2	14.0	0	15
		1	49	23.8	23.8	23.7	0	24.5	14.1	14.1	13.9	0	15
		25	0	22.7	22.8	22.7	1	23.5	14.0	14.1	14.0	0	15
		25	12	22.8	22.8	22.7	1	23.5	14.1	14.1	14.0	0	15
		25	25	22.8	22.8	22.7	1	23.5	14.1	14.1	14.0	0	15
		50	0	22.8	22.8	22.7	1	23.5	14.1	14.1	14.0	0	15
	16QAM	1	0	23.0	23.3	23.0	1	23.5	14.3	14.5	14.3	0	15
		1	25	23.1	23.3	23.1	1	23.5	14.3	14.4	14.3	0	15
		1	49	23.1	23.2	23.0	1	23.5	14.3	14.4	14.2	0	15
		25	0	21.7	21.8	21.7	2	22.5	14.0	14.0	14.0	0	15
		25	12	21.8	21.9	21.7	2	22.5	14.0	14.1	14.0	0	15
		25	25	21.8	21.9	21.7	2	22.5	14.0	14.1	14.0	0	15
		50	0	21.8	21.8	21.7	2	22.5	14.1	14.0	14.0	0	15
	64QAM	1	0	22.0	21.9	21.9	2	22.5	14.3	14.3	14.2	0	15
		1	25	22.2	22.1	22.0	2	22.5	14.3	14.3	14.2	0	15
		1	49	22.0	22.0	21.9	2	22.5	14.3	14.2	14.1	0	15
		25	0	20.8	20.8	20.8	3	21.5	14.0	14.1	14.0	0	15
		25	12	20.9	20.9	20.8	3	21.5	14.1	14.1	14.0	0	15
		25	25	20.8	20.8	20.8	3	21.5	14.1	14.1	14.0	0	15
		50	0	20.8	20.8	20.7	3	21.5	14.1	14.0	14.0	0	15
	256QAM	1	0	18.8	18.9	18.9	5	19.5	14.1	14.1	14.1	0	15
		1	25	19.0	19.1	18.9	5	19.5	14.1	14.2	14.2	0	15
		1	49	19.0	18.9	18.8	5	19.5	14.1	14.1	14.1	0	15
		25	0	18.7	18.8	18.8	5	19.5	14.0	14.0	14.0	0	15
		25	12	18.8	18.9	18.8	5	19.5	14.1	14.0	14.1	0	15
		25	25	18.8	18.9	18.8	5	19.5	14.0	14.1	14.0	0	15
		50	0	18.8	18.8	18.8	5	19.5	14.0	14.0	14.0	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				20425	20525	20625	MPR	Tune-up Limit	20425	20525	20625	MPR	Tune-up Limit
				826.5 MHz	836.5 MHz	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.7	23.8	23.7	0	24.5	13.9	14.1	13.9	0	15
		1	12	23.8	23.9	23.7	0	24.5	14.0	14.2	14.0	0	15
		1	24	23.8	23.7	23.7	0	24.5	14.0	14.1	13.9	0	15
		12	0	22.7	22.8	22.6	1	23.5	14.0	14.1	13.9	0	15
		12	7	22.8	22.8	22.8	1	23.5	14.1	14.1	14.0	0	15
		12	13	22.7	22.8	22.7	1	23.5	14.1	14.2	14.0	0	15
		25	0	22.7	22.7	22.7	1	23.5	14.0	14.1	13.9	0	15
	16QAM	1	0	23.0	23.2	23.3	1	23.5	14.4	14.4	14.4	0	15
		1	12	23.2	23.2	23.3	1	23.5	14.4	14.5	14.4	0	15
		1	24	23.1	23.2	23.3	1	23.5	14.4	14.4	14.3	0	15
		12	0	21.7	21.8	21.8	2	22.5	13.9	14.0	14.0	0	15
		12	7	21.8	21.8	21.9	2	22.5	14.1	14.1	14.1	0	15
		12	13	21.8	21.9	21.8	2	22.5	14.0	14.1	14.1	0	15
		25	0	21.8	21.7	21.7	2	22.5	14.0	14.0	13.9	0	15
	64QAM	1	0	21.8	22.0	21.9	2	22.5	14.2	14.2	14.3	0	15
		1	12	21.9	22.2	21.9	2	22.5	14.3	14.3	14.3	0	15
		1	24	21.9	22.1	21.9	2	22.5	14.2	14.2	14.2	0	15
		12	0	20.7	20.8	20.7	3	21.5	14.0	14.0	13.9	0	15
		12	7	20.8	20.8	20.8	3	21.5	14.1	14.0	13.9	0	15
		12	13	20.8	20.9	20.8	3	21.5	14.1	14.1	13.9	0	15
		25	0	20.8	20.8	20.8	3	21.5	14.0	14.0	13.9	0	15
	256QAM	1	0	18.7	19.0	18.8	5	19.5	14.0	14.0	14.0	0	15
		1	12	18.9	19.1	18.9	5	19.5	14.2	14.2	14.1	0	15
		1	24	18.8	18.9	18.9	5	19.5	14.1	14.1	14.1	0	15
		12	0	18.7	18.8	18.7	5	19.5	14.0	14.0	13.9	0	15
		12	7	18.8	18.8	18.8	5	19.5	14.1	14.1	13.9	0	15
		12	13	18.7	18.8	18.8	5	19.5	14.0	14.1	14.0	0	15
		25	0	18.8	18.8	18.8	5	19.5	14.0	14.0	13.9	0	15

LTE Band 5 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				20415	20525	20635	MPR	Tune-up Limit	20415	20525	20635	MPR	Tune-up Limit
				825.5 MHz	836.5 MHz	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.7	23.8	23.7	0	24.5	14.0	14.1	13.9	0	15
		1	8	23.8	23.9	23.8	0	24.5	14.1	14.2	14.0	0	15
		1	14	23.6	23.8	23.7	0	24.5	13.9	14.1	13.9	0	15
		8	0	22.7	22.7	22.6	1	23.5	14.1	14.1	14.0	0	15
		8	4	22.7	22.8	22.7	1	23.5	14.1	14.1	14.0	0	15
		8	7	22.7	22.8	22.7	1	23.5	14.1	14.1	14.0	0	15
		15	0	22.7	22.7	22.6	1	23.5	14.1	14.1	14.0	0	15
	16QAM	1	0	23.0	23.1	23.0	1	23.5	14.2	14.4	14.3	0	15
		1	8	23.1	23.3	23.1	1	23.5	14.3	14.5	14.4	0	15
		1	14	23.1	23.2	22.9	1	23.5	14.2	14.4	14.3	0	15
		8	0	21.8	21.8	21.7	2	22.5	14.1	14.1	14.0	0	15
		8	4	21.8	21.8	21.8	2	22.5	14.1	14.1	14.0	0	15
		8	7	21.8	21.8	21.9	2	22.5	14.1	14.2	14.0	0	15
		15	0	21.8	21.8	21.7	2	22.5	14.1	14.0	13.9	0	15
	64QAM	1	0	22.0	22.1	21.8	2	22.5	14.3	14.2	14.1	0	15
		1	8	22.0	22.0	22.0	2	22.5	14.4	14.4	14.2	0	15
		1	14	21.9	21.8	21.9	2	22.5	14.3	14.2	14.1	0	15
		8	0	20.8	20.8	20.6	3	21.5	14.1	14.0	14.0	0	15
		8	4	20.8	20.8	20.7	3	21.5	14.1	14.1	14.0	0	15
		8	7	20.9	20.8	20.7	3	21.5	14.2	14.1	14.0	0	15
		15	0	20.8	20.8	20.6	3	21.5	14.1	14.0	13.9	0	15
	256QAM	1	0	18.7	18.8	18.8	5	19.5	14.0	14.1	14.0	0	15
		1	8	18.8	19.1	18.9	5	19.5	14.1	14.3	14.2	0	15
		1	14	18.8	19.0	18.8	5	19.5	14.1	14.2	14.0	0	15
		8	0	18.8	18.8	18.7	5	19.5	14.1	14.0	13.9	0	15
		8	4	18.8	18.8	18.7	5	19.5	14.1	14.1	14.0	0	15
		8	7	18.8	18.8	18.8	5	19.5	14.1	14.1	13.9	0	15
		15	0	18.8	18.8	18.7	5	19.5	14.0	14.0	13.9	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				20407	20525	20643	MPR	Tune-up Limit	20407	20525	20643	MPR	Tune-up Limit
				824.7 MHz	836.5 MHz	848.3 MHz			824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.7	23.8	23.6	0	24.5	14.0	14.1	13.9	0	15
		1	3	23.8	23.8	23.7	0	24.5	14.0	14.2	14.0	0	15
		1	5	23.7	23.7	23.6	0	24.5	14.0	14.1	13.9	0	15
		3	0	23.7	23.7	23.7	0	24.5	14.0	14.1	14.0	0	15
		3	1	23.7	23.8	23.7	0	24.5	14.0	14.1	13.9	0	15
		3	3	23.7	23.8	23.7	0	24.5	14.0	14.1	14.0	0	15
		6	0	22.7	22.7	22.7	1	23.5	14.0	14.0	13.9	0	15
	16QAM	1	0	23.0	23.0	23.1	1	23.5	14.3	14.3	14.1	0	15
		1	3	23.1	23.1	23.1	1	23.5	14.4	14.4	14.1	0	15
		1	5	23.1	23.0	23.0	1	23.5	14.3	14.4	14.2	0	15
		3	0	22.9	22.9	22.8	1	23.5	14.2	14.2	14.1	0	15
		3	1	22.9	22.9	22.8	1	23.5	14.2	14.2	14.1	0	15
		3	3	22.9	23.0	22.8	1	23.5	14.2	14.2	14.1	0	15
		6	0	21.9	21.8	21.7	2	22.5	14.0	14.1	13.9	0	15
	64QAM	1	0	21.8	22.0	21.8	2	22.5	14.2	14.1	14.2	0	15
		1	3	21.7	22.0	21.9	2	22.5	14.3	14.3	14.2	0	15
		1	5	21.8	21.9	21.9	2	22.5	14.2	14.2	14.2	0	15
		3	0	21.8	21.9	21.8	2	22.5	14.1	14.2	14.0	0	15
		3	1	21.8	21.9	21.8	2	22.5	14.1	14.2	14.0	0	15
		3	3	21.7	21.9	21.8	2	22.5	14.1	14.1	14.1	0	15
		6	0	20.7	20.8	20.7	3	21.5	14.1	13.9	14.0	0	15
	256QAM	1	0	18.8	18.8	18.9	5	19.5	14.1	14.1	14.0	0	15
		1	3	18.8	18.9	18.9	5	19.5	14.1	14.2	14.1	0	15
		1	5	18.8	18.9	18.9	5	19.5	14.0	14.2	14.0	0	15
		3	0	18.8	18.8	18.9	5	19.5	14.1	14.0	14.0	0	15
		3	1	18.8	18.9	18.8	5	19.5	14.1	14.1	14.0	0	15
		3	3	18.8	19.0	18.7	5	19.5	14.1	14.1	14.0	0	15
		6	0	18.6	18.7	18.7	5	19.5	13.9	13.9	13.9	0	15

LTE Band 12 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				23060	23095	23130	MPR	Tune-up Limit	23060	23095	23130	MPR	Tune-up Limit
				704 MHz	707.5 MHz	711 MHz			704 MHz	707.5 MHz	711 MHz		
10 MHz	QPSK	1	0	23.9	24.0	24.2	0	24.5	14.3	14.4	14.5	0	15
		1	25	24.1	24.2	24.3	0	24.5	14.4	14.5	14.5	0	15
		1	49	24.1	24.3	24.3	0	24.5	14.4	14.4	14.4	0	15
		25	0	23.0	23.0	23.2	1	23.5	14.3	14.4	14.4	0	15
		25	12	23.1	23.2	23.3	1	23.5	14.5	14.4	14.4	0	15
		25	25	23.2	23.2	23.2	1	23.5	14.4	14.5	14.4	0	15
		50	0	23.1	23.1	23.3	1	23.5	14.4	14.4	14.4	0	15
	16QAM	1	0	23.3	23.4	23.4	1	23.5	14.7	14.7	14.9	0	15
		1	25	23.3	23.3	23.2	1	23.5	14.8	14.8	14.9	0	15
		1	49	23.1	23.2	23.0	1	23.5	14.8	14.7	14.8	0	15
		25	0	22.0	22.1	22.2	2	22.5	14.4	14.5	14.5	0	15
		25	12	22.2	22.2	22.3	2	22.5	14.5	14.5	14.5	0	15
		25	25	22.2	22.2	22.3	2	22.5	14.4	14.5	14.5	0	15
		50	0	22.1	22.2	22.3	2	22.5	14.5	14.5	14.4	0	15
	64QAM	1	0	22.0	22.1	22.2	2	22.5	14.7	14.8	14.7	0	15
		1	25	22.2	22.4	22.3	2	22.5	14.8	14.8	14.7	0	15
		1	49	22.2	22.3	22.1	2	22.5	14.8	14.8	14.6	0	15
		25	0	20.9	21.0	21.0	3	21.5	14.4	14.5	14.5	0	15
		25	12	21.0	21.0	21.0	3	21.5	14.5	14.5	14.5	0	15
		25	25	21.0	21.1	21.0	3	21.5	14.5	14.5	14.5	0	15
		50	0	21.0	21.0	21.0	3	21.5	14.5	14.5	14.5	0	15
	256QAM	1	0	18.9	19.0	19.2	5	19.5	14.5	14.6	14.6	0	15
		1	25	19.1	19.1	19.3	5	19.5	14.6	14.7	14.7	0	15
		1	49	19.0	19.1	19.1	5	19.5	14.6	14.6	14.6	0	15
		25	0	18.9	19.0	19.1	5	19.5	14.4	14.5	14.5	0	15
		25	12	19.1	19.0	19.1	5	19.5	14.5	14.6	14.5	0	15
		25	25	19.0	19.1	19.0	5	19.5	14.5	14.6	14.5	0	15
		50	0	19.0	19.0	18.9	5	19.5	14.5	14.5	14.5	0	15
BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				23035	23095	23155	MPR	Tune-up Limit	23035	23095	23155	MPR	Tune-up Limit
				701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz		
5 MHz	QPSK	1	0	23.9	24.1	24.2	0	24.5	14.3	14.4	14.4	0	15
		1	12	24.0	24.2	24.3	0	24.5	14.4	14.5	14.5	0	15
		1	24	24.0	24.2	24.3	0	24.5	14.3	14.4	14.4	0	15
		12	0	22.9	23.1	23.2	1	23.5	14.3	14.4	14.4	0	15
		12	7	23.0	23.2	23.3	1	23.5	14.4	14.4	14.4	0	15
		12	13	23.0	23.2	23.3	1	23.5	14.4	14.5	14.4	0	15
		25	0	23.0	23.1	23.3	1	23.5	14.4	14.4	14.4	0	15
	16QAM	1	0	23.4	23.1	23.0	1	23.5	14.8	14.8	14.8	0	15
		1	12	23.3	23.2	23.1	1	23.5	14.9	14.9	14.9	0	15
		1	24	23.4	23.5	23.0	1	23.5	14.8	14.8	14.8	0	15
		12	0	22.0	22.1	22.4	2	22.5	14.3	14.5	14.6	0	15
		12	7	22.1	22.2	22.5	2	22.5	14.4	14.6	14.6	0	15
		12	13	22.1	22.3	22.4	2	22.5	14.4	14.6	14.6	0	15
		25	0	22.0	22.1	22.3	2	22.5	14.4	14.5	14.4	0	15
	64QAM	1	0	22.2	22.0	22.2	2	22.5	14.7	14.8	14.8	0	15
		1	12	22.2	22.1	22.2	2	22.5	14.8	14.9	14.9	0	15
		1	24	22.1	22.1	22.2	2	22.5	14.7	14.7	14.8	0	15
		12	0	20.9	21.0	21.0	3	21.5	14.4	14.5	14.5	0	15
		12	7	21.0	21.1	21.0	3	21.5	14.5	14.5	14.6	0	15
		12	13	21.0	21.1	21.0	3	21.5	14.5	14.6	14.6	0	15
		25	0	20.9	21.0	21.0	3	21.5	14.5	14.5	14.4	0	15
	256QAM	1	0	18.9	19.2	19.1	5	19.5	14.5	14.5	14.6	0	15
		1	12	19.1	19.4	19.2	5	19.5	14.6	14.7	14.8	0	15
		1	24	19.1	19.3	19.1	5	19.5	14.6	14.6	14.7	0	15
		12	0	18.9	18.9	18.9	5	19.5	14.4	14.5	14.5	0	15
		12	7	19.0	19.0	18.9	5	19.5	14.6	14.5	14.5	0	15
		12	13	18.9	19.1	19.0	5	19.5	14.5	14.5	14.5	0	15
		25	0	19.0	19.0	19.0	5	19.5	14.5	14.5	14.4	0	15

LTE Band 12 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				23025	23095	23165	MPR	Tune-up Limit	23025	23095	23165	MPR	Tune-up Limit
				700.5 MHz	707.5 MHz	714.5 MHz			700.5 MHz	707.5 MHz	714.5 MHz		
3 MHz	QPSK	1	0	23.9	24.0	24.2	0	24.5	14.3	14.4	14.3	0	15
		1	8	23.9	24.2	24.3	0	24.5	14.4	14.5	14.5	0	15
		1	14	23.9	24.1	24.2	0	24.5	14.3	14.4	14.3	0	15
		8	0	22.9	23.1	23.2	1	23.5	14.3	14.4	14.4	0	15
		8	4	23.0	23.2	23.3	1	23.5	14.4	14.5	14.4	0	15
		8	7	22.9	23.3	23.3	1	23.5	14.4	14.5	14.4	0	15
		15	0	23.0	23.1	23.2	1	23.5	14.4	14.4	14.3	0	15
	16QAM	1	0	23.3	23.5	23.3	1	23.5	14.7	14.8	14.8	0	15
		1	8	23.4	23.4	23.4	1	23.5	14.7	15.0	14.8	0	15
		1	14	23.3	23.5	23.4	1	23.5	14.7	14.8	14.7	0	15
		8	0	22.0	22.1	22.3	2	22.5	14.4	14.5	14.5	0	15
		8	4	22.1	22.2	22.3	2	22.5	14.5	14.6	14.5	0	15
		8	7	22.1	22.3	22.4	2	22.5	14.5	14.6	14.5	0	15
		15	0	21.9	22.1	22.2	2	22.5	14.4	14.5	14.4	0	15
	64QAM	1	0	22.1	22.3	22.1	2	22.5	14.8	14.7	14.5	0	15
		1	8	22.1	22.4	22.2	2	22.5	14.8	14.8	14.6	0	15
		1	14	22.0	22.4	22.1	2	22.5	14.8	14.7	14.6	0	15
		8	0	20.9	21.1	21.0	3	21.5	14.4	14.5	14.5	0	15
		8	4	21.0	21.1	21.0	3	21.5	14.6	14.6	14.5	0	15
		8	7	21.0	21.1	21.0	3	21.5	14.5	14.6	14.5	0	15
		15	0	20.9	21.0	21.0	3	21.5	14.5	14.5	14.4	0	15
	256QAM	1	0	19.0	19.0	19.1	5	19.5	14.5	14.6	14.4	0	15
		1	8	19.0	19.2	19.3	5	19.5	14.6	14.7	14.6	0	15
		1	14	18.9	19.1	19.2	5	19.5	14.5	14.6	14.5	0	15
		8	0	18.8	19.0	19.0	5	19.5	14.4	14.5	14.4	0	15
		8	4	19.0	19.1	19.0	5	19.5	14.5	14.5	14.5	0	15
		8	7	19.0	19.1	19.0	5	19.5	14.5	14.6	14.4	0	15
		15	0	18.9	19.0	18.9	5	19.5	14.5	14.5	14.4	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				23017	23095	23173	MPR	Tune-up Limit	23017	23095	23173	MPR	Tune-up Limit
				699.7 MHz	707.5 MHz	715.3 MHz			699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	23.9	24.2	24.3	0	24.5	14.4	14.4	14.4	0	15
		1	3	23.9	24.2	24.2	0	24.5	14.4	14.5	14.4	0	15
		1	5	23.9	24.1	24.2	0	24.5	14.4	14.4	14.3	0	15
		3	0	23.9	24.2	24.2	0	24.5	14.4	14.4	14.3	0	15
		3	1	23.9	24.2	24.3	0	24.5	14.4	14.4	14.3	0	15
		3	3	23.9	24.2	24.2	0	24.5	14.4	14.5	14.3	0	15
		6	0	22.9	23.1	23.2	1	23.5	14.4	14.4	14.3	0	15
	16QAM	1	0	23.2	23.4	23.1	1	23.5	14.6	14.6	14.8	0	15
		1	3	23.1	23.2	23.0	1	23.5	14.7	14.7	14.8	0	15
		1	5	23.2	23.4	23.0	1	23.5	14.6	14.6	14.7	0	15
		3	0	23.0	23.3	23.4	1	23.5	14.5	14.6	14.6	0	15
		3	1	23.0	23.3	23.1	1	23.5	14.6	14.6	14.6	0	15
		3	3	23.0	23.3	23.5	1	23.5	14.4	14.6	14.5	0	15
		6	0	22.0	22.1	22.4	2	22.5	14.4	14.5	14.5	0	15
	64QAM	1	0	22.0	22.2	22.1	2	22.5	14.7	14.7	14.8	0	15
		1	3	22.0	22.4	22.1	2	22.5	14.7	14.7	14.8	0	15
		1	5	21.8	22.2	22.2	2	22.5	14.7	14.6	14.7	0	15
		3	0	22.0	22.2	22.1	2	22.5	14.5	14.6	14.5	0	15
		3	1	22.1	22.2	22.1	2	22.5	14.5	14.6	14.6	0	15
		3	3	22.1	22.2	22.1	2	22.5	14.5	14.7	14.5	0	15
		6	0	20.9	21.1	21.0	3	21.5	14.4	14.6	14.5	0	15
	256QAM	1	0	19.0	19.2	19.0	5	19.5	14.5	14.6	14.5	0	15
		1	3	19.1	19.3	19.1	5	19.5	14.6	14.8	14.5	0	15
		1	5	19.0	19.2	19.1	5	19.5	14.6	14.7	14.5	0	15
		3	0	18.9	19.0	19.1	5	19.5	14.5	14.5	14.5	0	15
		3	1	19.0	19.0	19.1	5	19.5	14.4	14.5	14.6	0	15
		3	3	18.9	19.0	19.1	5	19.5	14.5	14.6	14.5	0	15
		6	0	18.9	19.0	18.9	5	19.5	14.5	14.5	14.4	0	15

LTE Band 13 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0			Reduced Average Power (dBm) DSI = 1				
				23230	MPR	Tune-up Limit	23230	MPR	Tune-up Limit		
				782 MHz			782 MHz				
10 MHz	QPSK	1	0	23.5	0	24.5	13.7	0	15		
		1	25	23.5	0	24.5	13.7	0	15		
		1	49	23.3	0	24.5	13.6	0	15		
		25	0	22.5	1	23.5	13.7	0	15		
		25	12	22.4	1	23.5	13.7	0	15		
		25	25	22.3	1	23.5	13.7	0	15		
		50	0	22.4	1	23.5	13.6	0	15		
	16QAM	1	0	22.8	1	23.5	14.1	0	15		
		1	25	22.7	1	23.5	14.0	0	15		
		1	49	22.6	1	23.5	14.0	0	15		
		25	0	21.5	2	22.5	13.8	0	15		
		25	12	21.4	2	22.5	13.8	0	15		
		25	25	21.4	2	22.5	13.8	0	15		
		50	0	21.4	2	22.5	13.6	0	15		
	64QAM	1	0	21.7	2	22.5	14.2	0	15		
		1	25	21.7	2	22.5	14.2	0	15		
		1	49	21.6	2	22.5	14.1	0	15		
		25	0	20.4	3	21.5	14.0	0	15		
		25	12	20.4	3	21.5	13.9	0	15		
		25	25	20.4	3	21.5	14.0	0	15		
		50	0	20.5	3	21.5	13.9	0	15		
	256QAM	1	0	18.6	5	19.5	14.0	0	15		
		1	25	18.7	5	19.5	14.1	0	15		
		1	49	18.5	5	19.5	14.1	0	15		
		25	0	18.5	5	19.5	13.9	0	15		
		25	12	18.4	5	19.5	13.9	0	15		
		25	25	18.4	5	19.5	14.0	0	15		
		50	0	18.4	5	19.5	13.9	0	15		

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				23205	23230	23255	MPR	Tune-up Limit	23205	23230	23255	MPR	Tune-up Limit
				779.5 MHz	782 MHz	784.5 MHz			779.5 MHz	782 MHz	784.5 MHz		
5 MHz	QPSK	1	0	23.4	23.5	23.4	0	24.5	13.7	13.7	13.7	0	15
		1	12	23.4	23.4	23.4	0	24.5	13.8	13.7	13.7	0	15
		1	24	23.4	23.3	23.4	0	24.5	13.7	13.6	13.6	0	15
		12	0	22.5	22.4	22.4	1	23.5	13.6	13.6	13.6	0	15
		12	7	22.5	22.5	22.4	1	23.5	13.8	13.7	13.6	0	15
		12	13	22.5	22.5	22.4	1	23.5	13.7	13.7	13.7	0	15
		25	0	22.5	22.3	22.4	1	23.5	13.7	13.6	13.6	0	15
	16QAM	1	0	22.8	22.8	22.9	1	23.5	14.1	14.1	14.1	0	15
		1	12	22.8	22.9	22.9	1	23.5	14.1	14.2	14.1	0	15
		1	24	22.7	22.7	22.8	1	23.5	14.0	14.2	14.0	0	15
		12	0	21.5	21.4	21.5	2	22.5	13.7	13.8	13.7	0	15
		12	7	21.5	21.5	21.5	2	22.5	13.9	13.8	13.7	0	15
		12	13	21.5	21.4	21.5	2	22.5	13.8	13.9	13.8	0	15
		25	0	21.5	21.4	21.4	2	22.5	13.7	13.7	13.7	0	15
	64QAM	1	0	21.6	21.7	21.4	2	22.5	14.1	14.3	14.1	0	15
		1	12	21.6	21.6	21.6	2	22.5	14.2	14.3	14.2	0	15
		1	24	21.6	21.5	21.5	2	22.5	14.2	14.3	14.1	0	15
		12	0	20.5	20.4	20.4	3	21.5	13.9	13.9	13.8	0	15
		12	7	20.6	20.5	20.5	3	21.5	14.0	13.9	13.9	0	15
		12	13	20.5	20.4	20.4	3	21.5	14.0	14.0	13.9	0	15
		25	0	20.5	20.4	20.5	3	21.5	14.0	13.9	13.8	0	15
	256QAM	1	0	18.6	18.6	18.5	5	19.5	14.0	14.0	14.0	0	15
		1	12	18.7	18.7	18.5	5	19.5	14.1	14.1	14.2	0	15
		1	24	18.6	18.5	18.4	5	19.5	14.0	14.0	14.1	0	15
		12	0	18.5	18.5	18.4	5	19.5	13.9	13.9	13.9	0	15
		12	7	18.5	18.6	18.4	5	19.5	14.0	13.9	13.9	0	15
		12	13	18.5	18.5	18.4	5	19.5	14.0	13.9	14.0	0	15
		25	0	18.5	18.4	18.4	5	19.5	14.0	13.9	13.9	0	15

LTE Band 25 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	23.8	23.7	23.6	0	24.5	14.2	13.9	14.1	0	15
		1	49	23.7	23.7	23.7	0	24.5	14.1	13.9	14.1	0	15
		1	99	23.7	23.7	23.6	0	24.5	14.0	13.9	14.1	0	15
		50	0	22.9	22.8	22.7	1	23.5	14.3	14.3	14.2	0	15
		50	24	22.9	22.8	22.8	1	23.5	14.2	14.0	14.1	0	15
		50	50	22.8	22.8	22.8	1	23.5	14.1	14.1	14.2	0	15
		100	0	22.8	22.8	22.8	1	23.5	14.1	14.0	14.1	0	15
	16QAM	1	0	23.0	23.1	23.1	1	23.5	14.4	14.4	14.4	0	15
		1	49	23.0	23.3	23.0	1	23.5	14.4	14.4	14.6	0	15
		1	99	23.0	23.0	23.0	1	23.5	14.4	14.4	14.5	0	15
		50	0	21.9	21.8	21.7	2	22.5	14.2	14.1	14.1	0	15
		50	24	21.9	21.8	21.8	2	22.5	14.3	14.1	14.1	0	15
		50	50	21.9	21.8	21.7	2	22.5	14.2	14.1	14.2	0	15
		100	0	21.8	21.8	21.8	2	22.5	14.1	14.0	14.1	0	15
	64QAM	1	0	22.0	21.9	21.9	2	22.5	14.2	14.2	14.3	0	15
		1	49	22.0	22.0	21.8	2	22.5	14.5	14.2	14.4	0	15
		1	99	22.1	22.0	22.1	2	22.5	14.3	14.1	14.3	0	15
		50	0	21.0	20.9	20.8	3	21.5	14.2	14.0	14.0	0	15
		50	24	21.0	20.9	20.9	3	21.5	14.2	14.0	14.1	0	15
		50	50	20.9	20.8	20.8	3	21.5	14.1	14.0	14.1	0	15
		100	0	21.0	20.9	20.9	3	21.5	14.1	13.9	14.0	0	15
	256QAM	1	0	18.9	19.1	18.9	5	19.5	14.2	14.1	14.0	0	15
		1	49	19.0	19.0	18.9	5	19.5	14.2	14.1	14.2	0	15
		1	99	19.0	19.1	18.9	5	19.5	14.1	14.2	14.2	0	15
		50	0	19.0	18.9	18.8	5	19.5	14.2	13.9	13.9	0	15
		50	24	19.0	18.9	18.8	5	19.5	14.2	14.0	14.0	0	15
		50	50	18.9	18.9	18.8	5	19.5	14.1	14.0	14.0	0	15
		100	0	18.9	18.9	18.8	5	19.5	14.1	14.0	14.0	0	15
BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26115	26365	26615	MPR	Tune-up Limit	26115	26365	26615	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	23.9	23.7	23.6	0	24.5	14.2	13.9	14.0	0	15
		1	37	23.8	23.8	23.6	0	24.5	14.2	14.0	14.1	0	15
		1	74	23.8	23.7	23.6	0	24.5	14.2	13.9	14.1	0	15
		36	0	22.9	22.8	22.7	1	23.5	14.2	14.0	14.1	0	15
		36	20	22.9	22.8	22.7	1	23.5	14.2	14.0	14.1	0	15
		36	39	22.9	22.8	22.7	1	23.5	14.1	14.0	14.1	0	15
		75	0	22.9	22.7	22.7	1	23.5	14.2	14.0	14.2	0	15
	16QAM	1	0	23.1	23.0	22.9	1	23.5	14.4	14.3	14.3	0	15
		1	37	23.2	23.1	23.1	1	23.5	14.4	14.3	14.4	0	15
		1	74	23.1	23.0	23.1	1	23.5	14.4	14.3	14.4	0	15
		36	0	21.9	21.8	21.7	2	22.5	14.2	14.0	14.1	0	15
		36	20	21.9	21.8	21.7	2	22.5	14.2	14.0	14.1	0	15
		36	39	21.9	21.8	21.7	2	22.5	14.2	14.0	14.2	0	15
		75	0	21.9	21.8	21.7	2	22.5	14.2	14.0	14.2	0	15
	64QAM	1	0	22.1	22.0	21.8	2	22.5	14.0	14.2	14.2	0	15
		1	37	22.1	22.0	21.9	2	22.5	14.3	14.3	14.2	0	15
		1	74	22.1	21.9	21.9	2	22.5	14.3	14.2	14.2	0	15
		36	0	21.0	20.8	20.8	3	21.5	14.2	14.0	14.0	0	15
		36	20	20.9	20.9	20.8	3	21.5	14.2	14.0	14.0	0	15
		36	39	21.0	20.9	20.8	3	21.5	14.1	14.0	14.1	0	15
		75	0	20.9	20.9	20.8	3	21.5	14.1	14.0	14.0	0	15
	256QAM	1	0	19.0	18.8	18.9	5	19.5	14.3	14.0	14.1	0	15
		1	37	19.1	18.8	19.0	5	19.5	14.2	14.1	14.1	0	15
		1	74	19.1	18.9	19.0	5	19.5	14.2	14.1	14.2	0	15
		36	0	18.9	18.9	18.7	5	19.5	14.2	14.0	13.9	0	15
		36	20	18.9	18.8	18.8	5	19.5	14.2	13.9	14.0	0	15
		36	39	19.0	18.9	18.8	5	19.5	14.1	14.0	14.0	0	15
		75	0	18.9	18.9	18.8	5	19.5	14.1	14.0	14.0	0	15

LTE Band 25 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26090	26365	26640	MPR	Tune-up Limit	26090	26365	26640	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	24.0	23.9	23.8	0	24.5	14.3	14.1	14.2	0	15
		1	25	24.0	23.9	23.9	0	24.5	14.4	14.1	14.3	0	15
		1	49	23.9	23.9	23.8	0	24.5	14.3	14.1	14.3	0	15
		25	0	23.0	22.9	22.8	1	23.5	14.4	14.1	14.2	0	15
		25	12	23.1	22.9	22.8	1	23.5	14.4	14.2	14.4	0	15
		25	25	23.0	22.9	22.8	1	23.5	14.3	14.1	14.3	0	15
		50	0	23.0	22.9	22.8	1	23.5	14.3	14.1	14.3	0	15
	16QAM	1	0	23.4	23.3	23.1	1	23.5	14.6	14.6	14.6	0	15
		1	25	23.3	23.3	23.2	1	23.5	14.7	14.5	14.7	0	15
		1	49	23.4	23.2	23.1	1	23.5	14.6	14.5	14.7	0	15
		25	0	22.1	21.9	21.8	2	22.5	14.4	14.1	14.3	0	15
		25	12	22.1	21.9	21.8	2	22.5	14.4	14.2	14.4	0	15
		25	25	22.0	21.9	21.9	2	22.5	14.3	14.2	14.4	0	15
		50	0	22.0	21.9	21.8	2	22.5	14.3	14.2	14.3	0	15
	64QAM	1	0	22.3	22.3	22.0	2	22.5	14.1	14.4	14.3	0	15
		1	25	22.3	22.2	22.1	2	22.5	14.5	14.4	14.4	0	15
		1	49	22.2	22.1	22.1	2	22.5	14.5	14.3	14.4	0	15
		25	0	21.1	21.0	20.9	3	21.5	14.3	14.1	14.1	0	15
		25	12	21.2	21.0	20.9	3	21.5	14.3	14.1	14.2	0	15
		25	25	21.1	21.0	20.9	3	21.5	14.3	14.1	14.2	0	15
		50	0	21.1	21.0	20.8	3	21.5	14.2	14.1	14.2	0	15
	256QAM	1	0	19.3	19.1	19.0	5	19.5	14.5	14.1	14.2	0	15
		1	25	19.3	19.0	19.2	5	19.5	14.5	14.3	14.4	0	15
		1	49	19.2	19.0	18.9	5	19.5	14.4	14.2	14.3	0	15
		25	0	19.1	19.0	18.9	5	19.5	14.4	14.1	14.1	0	15
		25	12	19.2	19.0	18.9	5	19.5	14.3	14.1	14.2	0	15
		25	25	19.1	19.0	19.0	5	19.5	14.3	14.1	14.2	0	15
		50	0	19.1	19.0	18.9	5	19.5	14.2	14.1	14.2	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26065	26365	26665	MPR	Tune-up Limit	26065	26365	26665	MPR	Tune-up Limit
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	24.0	23.8	23.8	0	24.5	14.3	14.1	14.2	0	15
		1	12	24.1	24.0	23.9	0	24.5	14.4	14.2	14.4	0	15
		1	24	24.0	23.9	23.8	0	24.5	14.3	14.1	14.3	0	15
		12	0	23.0	22.9	22.8	1	23.5	14.4	14.1	14.3	0	15
		12	7	23.1	22.9	22.8	1	23.5	14.4	14.2	14.3	0	15
		12	13	23.0	22.9	22.9	1	23.5	14.4	14.1	14.3	0	15
		25	0	23.0	22.9	22.8	1	23.5	14.3	14.1	14.3	0	15
	16QAM	1	0	23.3	23.3	23.3	1	23.5	14.7	14.4	14.7	0	15
		1	12	23.5	23.3	23.4	1	23.5	14.8	14.5	14.8	0	15
		1	24	23.4	23.2	23.3	1	23.5	14.7	14.4	14.8	0	15
		12	0	22.0	21.9	21.8	2	22.5	14.4	14.2	14.3	0	15
		12	7	22.0	22.0	21.9	2	22.5	14.5	14.3	14.3	0	15
		12	13	21.9	21.9	22.0	2	22.5	14.4	14.2	14.4	0	15
		25	0	22.1	21.9	21.8	2	22.5	14.4	14.2	14.3	0	15
	64QAM	1	0	22.2	22.0	22.0	2	22.5	14.3	14.2	14.3	0	15
		1	12	22.3	22.1	22.0	2	22.5	14.7	14.4	14.4	0	15
		1	24	22.2	22.1	22.0	2	22.5	14.6	14.3	14.3	0	15
		12	0	21.1	21.0	20.9	3	21.5	14.3	14.1	14.2	0	15
		12	7	21.2	21.0	20.9	3	21.5	14.4	14.1	14.2	0	15
		12	13	21.1	21.0	21.0	3	21.5	14.3	14.1	14.2	0	15
		25	0	21.1	21.0	20.9	3	21.5	14.3	14.1	14.1	0	15
	256QAM	1	0	19.2	19.1	19.1	5	19.5	14.5	14.1	14.2	0	15
		1	12	19.3	19.2	19.2	5	19.5	14.5	14.2	14.4	0	15
		1	24	19.3	19.0	19.1	5	19.5	14.4	14.2	14.3	0	15
		12	0	19.2	19.0	18.9	5	19.5	14.4	14.1	14.1	0	15
		12	7	19.2	19.1	18.9	5	19.5	14.4	14.1	14.2	0	15
		12	13	19.1	19.0	18.9	5	19.5	14.4	14.1	14.2	0	15
		25	0	19.1	19.0	18.8	5	19.5	14.4	14.1	14.1	0	15

LTE Band 25 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26055	26365	26675	MPR	Tune-up Limit	26055	26365	26675	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	24.0	23.9	23.8	0	24.5	14.3	14.0	14.3	0	15
		1	8	24.1	23.9	23.9	0	24.5	14.4	14.1	14.4	0	15
		1	14	24.0	23.8	23.9	0	24.5	14.3	14.0	14.3	0	15
		8	0	23.0	22.9	22.8	1	23.5	14.4	14.1	14.3	0	15
		8	4	23.0	22.9	22.9	1	23.5	14.4	14.1	14.3	0	15
		8	7	23.0	22.9	22.9	1	23.5	14.4	14.2	14.3	0	15
		15	0	23.0	22.9	22.8	1	23.5	14.4	14.1	14.3	0	15
	16QAM	1	0	23.4	23.3	23.1	1	23.5	14.6	14.5	14.6	0	15
		1	8	23.4	23.4	23.2	1	23.5	14.8	14.5	14.7	0	15
		1	14	23.3	23.2	23.1	1	23.5	14.6	14.4	14.6	0	15
		8	0	22.0	22.0	21.8	2	22.5	14.5	14.2	14.3	0	15
		8	4	22.1	22.0	21.9	2	22.5	14.5	14.2	14.3	0	15
		8	7	22.1	22.0	22.0	2	22.5	14.5	14.2	14.4	0	15
		15	0	22.0	21.9	21.8	2	22.5	14.4	14.1	14.3	0	15
	64QAM	1	0	22.1	22.1	22.0	2	22.5	14.1	14.2	14.3	0	15
		1	8	22.4	22.3	22.1	2	22.5	14.5	14.4	14.4	0	15
		1	14	22.4	22.1	21.9	2	22.5	14.4	14.3	14.3	0	15
		8	0	21.1	21.0	20.9	3	21.5	14.3	14.1	14.1	0	15
		8	4	21.2	21.0	21.0	3	21.5	14.4	14.1	14.2	0	15
		8	7	21.2	21.0	21.0	3	21.5	14.4	14.1	14.2	0	15
		15	0	21.2	21.0	20.8	3	21.5	14.4	14.1	14.1	0	15
	256QAM	1	0	19.3	19.1	18.8	5	19.5	14.4	14.1	14.2	0	15
		1	8	19.3	19.1	19.0	5	19.5	14.5	14.2	14.3	0	15
		1	14	19.2	18.9	18.9	5	19.5	14.5	14.1	14.3	0	15
		8	0	19.2	19.0	18.8	5	19.5	14.4	14.1	14.1	0	15
		8	4	19.2	19.0	18.9	5	19.5	14.4	14.1	14.2	0	15
		8	7	19.2	19.0	19.0	5	19.5	14.4	14.1	14.1	0	15
		15	0	19.2	19.0	18.8	5	19.5	14.3	14.1	14.1	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26047	26365	26683	MPR	Tune-up Limit	26047	26365	26683	MPR	Tune-up Limit
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	23.6	23.9	23.8	0	24.5	14.0	14.1	14.3	0	15
		1	3	23.9	24.0	23.8	0	24.5	14.4	14.1	14.3	0	15
		1	5	24.0	23.9	23.8	0	24.5	14.4	14.1	14.3	0	15
		3	0	24.1	23.9	23.8	0	24.5	14.4	14.1	14.3	0	15
		3	1	24.0	23.9	23.8	0	24.5	14.4	14.1	14.3	0	15
		3	3	24.0	23.9	23.8	0	24.5	14.4	14.1	14.3	0	15
		6	0	23.0	22.8	22.8	1	23.5	14.4	14.1	14.3	0	15
	16QAM	1	0	23.2	23.3	23.1	1	23.5	14.7	14.4	14.6	0	15
		1	3	23.2	23.3	23.3	1	23.5	14.7	14.4	14.6	0	15
		1	5	23.2	23.2	23.2	1	23.5	14.6	14.4	14.6	0	15
		3	0	23.2	23.1	23.0	1	23.5	14.5	14.2	14.4	0	15
		3	1	23.2	23.0	23.0	1	23.5	14.5	14.3	14.5	0	15
		3	3	23.2	23.1	23.0	1	23.5	14.5	14.3	14.5	0	15
		6	0	22.1	21.9	21.9	2	22.5	14.4	14.1	14.4	0	15
	64QAM	1	0	21.9	22.1	22.1	2	22.5	14.2	14.2	14.4	0	15
		1	3	22.5	22.2	22.3	2	22.5	14.6	14.2	14.4	0	15
		1	5	22.3	22.0	22.2	2	22.5	14.5	14.1	14.4	0	15
		3	0	22.2	22.1	22.0	2	22.5	14.4	14.1	14.3	0	15
		3	1	22.2	22.1	22.0	2	22.5	14.5	14.1	14.2	0	15
		3	3	22.2	22.1	22.0	2	22.5	14.4	14.1	14.2	0	15
		6	0	21.1	21.0	20.9	3	21.5	14.3	14.0	14.2	0	15
	256QAM	1	0	19.2	19.0	18.9	5	19.5	14.4	14.1	14.2	0	15
		1	3	19.2	19.1	18.9	5	19.5	14.5	14.1	14.3	0	15
		1	5	19.2	19.0	19.0	5	19.5	14.4	14.1	14.2	0	15
		3	0	19.2	19.0	18.9	5	19.5	14.4	14.1	14.2	0	15
		3	1	19.2	18.9	19.0	5	19.5	14.4	14.1	14.2	0	15
		3	3	19.2	19.0	18.9	5	19.5	14.4	14.1	14.2	0	15
		6	0	19.2	19.0	18.8	5	19.5	14.6	14.0	14.1	0	15

LTE Band 26 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				26765	26865	26965	MPR	Tune-up Limit	26765	26865	26965	MPR	Tune-up Limit
				821.5 MHz	831.5 MHz	841.5 MHz			821.5 MHz	831.5 MHz	841.5 MHz		
15 MHz	QPSK	1	0	23.4	23.4	23.7	0	24.5	13.6	13.5	13.5	0	15
		1	37	23.5	23.6	23.5	0	24.5	13.6	13.5	13.4	0	15
		1	74	23.5	23.5	23.5	0	24.5	13.6	13.4	13.3	0	15
		36	0	22.5	22.6	22.6	1	23.5	13.7	13.6	13.5	0	15
		36	20	22.6	22.6	22.5	1	23.5	13.7	13.6	13.5	0	15
		36	39	22.5	22.7	22.6	1	23.5	13.7	13.5	13.4	0	15
		75	0	22.5	22.6	22.5	1	23.5	13.7	13.6	13.5	0	15
	16QAM	1	0	22.7	22.9	23.0	1	23.5	13.8	13.8	13.7	0	15
		1	37	22.8	22.9	22.8	1	23.5	13.8	13.8	13.7	0	15
		1	74	22.8	22.9	22.8	1	23.5	13.7	13.7	13.5	0	15
		36	0	21.5	21.6	21.6	2	22.5	13.6	13.5	13.4	0	15
		36	20	21.6	21.6	21.5	2	22.5	13.6	13.4	13.4	0	15
		36	39	21.6	21.7	21.6	2	22.5	13.6	13.4	13.3	0	15
		75	0	21.5	21.6	21.6	2	22.5	13.6	13.5	13.4	0	15
	64QAM	1	0	21.7	21.8	21.8	2	22.5	13.9	13.7	13.6	0	15
		1	37	21.6	21.8	21.8	2	22.5	13.9	13.7	13.5	0	15
		1	74	21.8	21.7	21.8	2	22.5	13.9	13.6	13.4	0	15
		36	0	20.5	20.6	20.6	3	21.5	13.7	13.5	13.5	0	15
		36	20	20.6	20.7	20.6	3	21.5	13.7	13.5	13.5	0	15
		36	39	20.6	20.7	20.6	3	21.5	13.6	13.5	13.4	0	15
		75	0	20.6	20.7	20.6	3	21.5	13.7	13.5	13.5	0	15
	256QAM	1	0	18.5	18.7	18.8	5	19.5	13.7	13.7	13.6	0	15
		1	37	18.6	18.8	18.7	5	19.5	13.7	13.7	13.5	0	15
		1	74	18.7	18.9	18.7	5	19.5	13.7	13.7	13.5	0	15
		36	0	18.5	18.6	18.6	5	19.5	13.7	13.5	13.5	0	15
		36	20	18.6	18.6	18.6	5	19.5	13.7	13.5	13.4	0	15
		36	39	18.6	18.7	18.6	5	19.5	13.7	13.5	13.3	0	15
		75	0	18.6	18.6	18.6	5	19.5	13.7	13.5	13.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26740	26865	26990	MPR	Tune-up Limit	26740	26865	26990	MPR	Tune-up Limit
				819 MHz	831.5 MHz	844 MHz			819 MHz	831.5 MHz	844 MHz		
10 MHz	QPSK	1	0	23.6	23.7	23.9	0	24.5	13.9	13.7	13.6	0	15
		1	25	23.6	23.8	23.8	0	24.5	13.9	13.8	13.6	0	15
		1	49	23.6	23.7	23.6	0	24.5	13.8	13.7	13.5	0	15
		25	0	22.6	22.7	22.7	1	23.5	13.8	13.7	13.6	0	15
		25	12	22.7	22.7	22.7	1	23.5	13.9	13.7	13.7	0	15
		25	25	22.6	22.8	22.7	1	23.5	13.9	13.7	13.6	0	15
		50	0	22.7	22.7	22.7	1	23.5	13.9	13.7	13.6	0	15
	16QAM	1	0	22.9	23.1	23.0	1	23.5	14.1	14.0	13.9	0	15
		1	25	23.0	23.2	23.1	1	23.5	14.1	14.1	13.9	0	15
		1	49	23.0	23.2	22.8	1	23.5	14.1	14.0	13.8	0	15
		25	0	21.6	21.7	21.7	2	22.5	13.9	13.7	13.5	0	15
		25	12	21.7	21.8	21.8	2	22.5	13.9	13.7	13.6	0	15
		25	25	21.6	21.8	21.8	2	22.5	13.9	13.7	13.4	0	15
		50	0	21.7	21.7	21.8	2	22.5	13.8	13.6	13.5	0	15
	64QAM	1	0	21.9	21.9	22.0	2	22.5	14.2	13.9	13.8	0	15
		1	25	21.8	22.0	21.9	2	22.5	14.2	13.9	13.7	0	15
		1	49	21.8	21.9	21.8	2	22.5	14.1	13.9	13.6	0	15
		25	0	20.7	20.7	20.7	3	21.5	13.9	13.7	13.6	0	15
		25	12	20.7	20.8	20.8	3	21.5	13.9	13.7	13.6	0	15
		25	25	20.7	20.8	20.7	3	21.5	13.9	13.7	13.5	0	15
		50	0	20.7	20.8	20.8	3	21.5	13.9	13.7	13.6	0	15
	256QAM	1	0	18.8	18.8	18.7	5	19.5	13.9	13.8	13.7	0	15
		1	25	18.8	19.0	18.8	5	19.5	14.0	14.0	13.7	0	15
		1	49	18.9	18.9	18.8	5	19.5	14.0	13.8	13.5	0	15
		25	0	18.7	18.8	18.7	5	19.5	13.9	13.7	13.6	0	15
		25	12	18.8	18.8	18.7	5	19.5	13.9	13.7	13.6	0	15
		25	25	18.7	18.8	18.7	5	19.5	13.9	13.7	13.5	0	15
		50	0	18.7	18.8	18.7	5	19.5	13.9	13.7	13.6	0	15

LTE Band 26 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26715	26865	27015	MPR	Tune-up Limit	26715	26865	27015	MPR	Tune-up Limit
				816.5 MHz	831.5 MHz	846.5 MHz			816.5 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.5	23.7	23.8	0	24.5	13.8	13.7	13.5	0	15
		1	12	23.7	23.8	23.7	0	24.5	13.9	13.8	13.6	0	15
		1	24	23.6	23.7	23.7	0	24.5	13.8	13.7	13.5	0	15
		12	0	22.6	22.7	22.6	1	23.5	13.9	13.7	13.6	0	15
		12	7	22.7	22.7	22.7	1	23.5	13.9	13.8	13.6	0	15
		12	13	22.6	22.8	22.7	1	23.5	13.9	13.7	13.6	0	15
		25	0	22.6	22.7	22.6	1	23.5	13.9	13.7	13.6	0	15
	16QAM	1	0	22.8	23.2	23.1	1	23.5	14.1	14.0	13.8	0	15
		1	12	23.0	23.3	23.3	1	23.5	14.2	14.1	14.0	0	15
		1	24	22.8	23.0	23.2	1	23.5	14.1	14.0	13.8	0	15
		12	0	21.6	21.7	21.6	2	22.5	13.8	13.6	13.6	0	15
		12	7	21.8	21.8	21.6	2	22.5	13.9	13.7	13.6	0	15
		12	13	21.7	21.8	21.7	2	22.5	13.9	13.6	13.6	0	15
		25	0	21.7	21.7	21.7	2	22.5	13.8	13.6	13.5	0	15
	64QAM	1	0	21.7	22.0	21.9	2	22.5	14.1	14.0	13.9	0	15
		1	12	21.8	22.1	21.9	2	22.5	14.2	14.0	13.9	0	15
		1	24	21.7	22.0	21.8	2	22.5	14.1	14.0	13.8	0	15
		12	0	20.6	20.8	20.7	3	21.5	14.0	13.8	13.5	0	15
		12	7	20.8	20.9	20.7	3	21.5	14.0	13.8	13.6	0	15
		12	13	20.7	20.9	20.8	3	21.5	14.0	13.7	13.6	0	15
		25	0	20.7	20.8	20.7	3	21.5	13.9	13.7	13.5	0	15
	256QAM	1	0	18.8	18.9	18.7	5	19.5	13.9	13.8	13.7	0	15
		1	12	19.0	19.0	18.9	5	19.5	14.0	13.9	13.8	0	15
		1	24	18.8	19.0	18.9	5	19.5	14.0	13.8	13.6	0	15
		12	0	18.6	18.8	18.7	5	19.5	13.9	13.7	13.6	0	15
		12	7	18.7	18.8	18.7	5	19.5	13.9	13.8	13.6	0	15
		12	13	18.7	18.9	18.8	5	19.5	13.9	13.7	13.6	0	15
		25	0	18.7	18.8	18.7	5	19.5	13.9	13.7	13.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26705	26865	27025	MPR	Tune-up Limit	26705	26865	27025	MPR	Tune-up Limit
				815.5 MHz	831.5 MHz	847.5 MHz			815.5 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.6	23.6	23.7	0	24.5	13.8	13.7	13.5	0	15
		1	8	23.7	23.7	23.7	0	24.5	13.9	13.8	13.6	0	15
		1	14	23.5	23.7	23.6	0	24.5	13.8	13.7	13.5	0	15
		8	0	22.6	22.7	22.6	1	23.5	13.9	13.7	13.5	0	15
		8	4	22.7	22.7	22.6	1	23.5	13.9	13.8	13.6	0	15
		8	7	22.7	22.8	22.6	1	23.5	13.9	13.8	13.6	0	15
		15	0	22.6	22.7	22.6	1	23.5	13.9	13.7	13.5	0	15
	16QAM	1	0	22.9	23.1	23.0	1	23.5	14.1	14.0	13.8	0	15
		1	8	22.9	23.2	23.1	1	23.5	14.2	14.1	13.8	0	15
		1	14	22.9	23.1	23.0	1	23.5	14.0	14.0	13.7	0	15
		8	0	21.7	21.7	21.6	2	22.5	14.0	13.7	13.5	0	15
		8	4	21.7	21.8	21.7	2	22.5	14.0	13.8	13.5	0	15
		8	7	21.7	21.8	21.7	2	22.5	14.0	13.7	13.5	0	15
		15	0	21.7	21.7	21.7	2	22.5	13.9	13.6	13.5	0	15
	64QAM	1	0	21.9	21.8	21.8	2	22.5	14.2	14.0	13.6	0	15
		1	8	21.9	21.9	21.9	2	22.5	14.2	14.0	13.7	0	15
		1	14	21.8	21.9	21.8	2	22.5	14.1	13.9	13.5	0	15
		8	0	20.7	20.7	20.7	3	21.5	13.9	13.8	13.6	0	15
		8	4	20.7	20.8	20.7	3	21.5	14.0	13.9	13.6	0	15
		8	7	20.7	20.8	20.7	3	21.5	14.0	13.9	13.6	0	15
		15	0	20.7	20.7	20.6	3	21.5	13.9	13.7	13.5	0	15
	256QAM	1	0	18.7	18.8	18.6	5	19.5	14.0	13.9	13.5	0	15
		1	8	18.9	19.0	18.7	5	19.5	14.1	14.0	13.7	0	15
		1	14	18.7	18.9	18.6	5	19.5	14.0	13.8	13.6	0	15
		8	0	18.6	18.7	18.7	5	19.5	13.9	13.7	13.6	0	15
		8	4	18.8	18.8	18.7	5	19.5	13.9	13.8	13.6	0	15
		8	7	18.7	18.9	18.7	5	19.5	14.0	13.8	13.5	0	15
		15	0	18.7	18.7	18.6	5	19.5	13.9	13.7	13.5	0	15

LTE Band 26 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				26697	26865	27033	MPR	Tune-up Limit	26697	26865	27033	MPR	Tune-up Limit
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.6	23.5	23.7	0	24.5	13.8	13.7	13.5	0	15
		1	3	23.6	23.7	23.7	0	24.5	13.8	13.8	13.5	0	15
		1	5	23.6	23.7	23.7	0	24.5	13.8	13.7	13.5	0	15
		3	0	23.6	23.6	23.7	0	24.5	13.9	13.8	13.5	0	15
		3	1	23.5	23.6	23.7	0	24.5	13.9	13.8	13.5	0	15
		3	3	23.6	23.7	23.7	0	24.5	13.9	13.7	13.5	0	15
		6	0	22.1	22.2	22.1	1	23.5	13.8	13.8	13.5	0	15
	16QAM	1	0	22.9	22.8	23.1	1	23.5	14.0	14.0	13.6	0	15
		1	3	22.9	22.9	23.0	1	23.5	14.0	14.1	13.6	0	15
		1	5	22.9	22.9	23.1	1	23.5	14.0	14.0	13.6	0	15
		3	0	22.7	22.8	22.9	1	23.5	13.9	13.8	13.5	0	15
		3	1	22.7	22.8	22.9	1	23.5	14.0	13.8	13.5	0	15
		3	3	22.7	22.8	22.8	1	23.5	14.0	13.8	13.6	0	15
		6	0	21.7	21.7	21.7	2	22.5	13.9	13.7	13.5	0	15
	64QAM	1	0	21.8	21.8	21.9	2	22.5	14.2	13.8	13.7	0	15
		1	3	21.8	21.9	21.8	2	22.5	14.2	13.9	13.8	0	15
		1	5	21.6	21.9	21.9	2	22.5	14.2	13.9	13.8	0	15
		3	0	21.7	21.8	21.8	2	22.5	13.9	13.8	13.5	0	15
		3	1	21.8	21.8	21.8	2	22.5	14.0	13.8	13.5	0	15
		3	3	21.8	21.8	21.9	2	22.5	14.0	13.8	13.6	0	15
		6	0	20.7	20.8	20.7	3	21.5	14.0	13.7	13.5	0	15
	256QAM	1	0	18.6	18.9	18.9	5	19.5	13.9	13.8	13.5	0	15
		1	3	18.7	19.0	18.9	5	19.5	14.0	13.9	13.6	0	15
		1	5	18.6	18.9	18.8	5	19.5	13.9	13.8	13.6	0	15
		3	0	18.7	18.7	18.7	5	19.5	13.9	13.7	13.5	0	15
		3	1	18.7	18.7	18.8	5	19.5	13.9	13.8	13.5	0	15
		3	3	18.7	18.9	18.7	5	19.5	13.9	13.8	13.5	0	15
		6	0	18.7	18.8	18.8	5	19.5	13.8	13.7	13.4	0	15

LTE Band 41 (Power Class 3) Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) PSI = 0							Reduced Average Power (dBm) PSI = 1						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	23.9	23.4	23.5	23.8	23.7	0	24.5	15.4	15.2	15.3	15.4	15.3	0	16
		1	49	23.9	23.4	23.6	23.8	23.6	0	24.5	15.4	15.3	15.4	15.4	15.3	0	16
		1	99	23.7	23.3	23.7	23.8	23.7	0	24.5	15.4	15.3	15.4	15.4	15.4	0	16
		50	0	22.9	22.5	22.6	22.8	22.6	1	23.5	15.5	15.3	15.4	15.4	15.3	0	16
		50	24	22.9	22.5	22.7	22.8	22.7	1	23.5	15.5	15.3	15.4	15.5	15.3	0	16
		50	50	22.8	22.4	22.6	22.8	22.6	1	23.5	15.5	15.3	15.4	15.4	15.3	0	16
		100	0	22.9	22.5	22.6	22.9	22.7	1	23.5	15.4	15.3	15.4	15.5	15.3	0	16
	16QAM	1	0	23.0	22.4	22.7	23.0	22.5	1	23.5	15.4	15.4	15.4	15.5	15.4	0	16
		1	49	23.0	22.3	22.7	22.9	22.5	1	23.5	15.5	15.4	15.4	15.5	15.5	0	16
		1	99	22.9	22.3	22.8	23.0	22.6	1	23.5	15.4	15.3	15.5	15.5	15.5	0	16
		50	0	21.9	21.5	21.6	21.8	21.7	2	22.5	15.5	15.3	15.4	15.4	15.3	0	16
		50	24	21.9	21.5	21.6	21.8	21.7	2	22.5	15.4	15.3	15.4	15.5	15.3	0	16
		50	50	21.8	21.4	21.6	21.8	21.7	2	22.5	15.4	15.2	15.4	15.4	15.3	0	16
		100	0	21.9	21.5	21.6	21.9	21.7	2	22.5	15.4	15.2	15.4	15.4	15.3	0	16
	64QAM	1	0	21.9	21.5	21.6	22.0	21.8	2	22.5	15.2	15.4	15.1	14.5	15.1	0	16
		1	49	22.0	21.7	21.7	21.9	21.7	2	22.5	15.2	15.4	15.0	14.6	15.1	0	16
		1	99	21.8	21.4	21.7	21.9	21.8	2	22.5	15.3	15.4	15.0	14.8	15.2	0	16
		50	0	21.0	20.5	20.7	20.8	20.7	3	21.5	15.2	15.5	15.1	14.5	15.2	0	16
		50	24	20.9	20.5	20.7	20.8	20.7	3	21.5	15.2	15.5	15.1	14.5	15.2	0	16
		50	50	20.8	20.4	20.7	20.8	20.7	3	21.5	15.2	15.4	15.0	14.7	15.2	0	16
		100	0	20.9	20.5	20.7	20.8	20.7	3	21.5	15.2	15.5	15.0	14.6	15.2	0	16
	256QAM	1	0	18.9	18.5	18.6	18.9	18.6	5	19.5	15.3	15.5	15.0	14.4	15.3	0	16
		1	49	18.8	18.5	18.6	18.7	18.5	5	19.5	15.2	15.5	14.9	14.6	15.2	0	16
		1	99	18.8	18.4	18.7	18.8	18.5	5	19.5	15.2	15.5	14.9	14.8	15.2	0	16
		50	0	18.9	18.4	18.6	18.8	18.7	5	19.5	15.2	15.4	15.1	14.5	15.2	0	16
		50	24	18.8	18.5	18.7	18.8	18.7	5	19.5	15.2	15.5	15.1	14.6	15.2	0	16
		50	50	18.9	18.4	18.6	18.7	18.6	5	19.5	15.2	15.4	14.9	14.7	15.2	0	16
		100	0	18.9	18.5	18.6	18.8	18.7	5	19.5	15.2	15.5	15.1	14.6	15.2	0	16

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)							Reduced Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	23.9	23.4	23.6	23.8	23.8	0	24.5	15.4	15.2	15.3	15.4	15.3	0	16
		1	37	23.9	23.5	23.7	23.8	23.6	0	24.5	15.4	15.3	15.3	15.4	15.3	0	16
		1	74	23.8	23.5	23.7	23.9	23.7	0	24.5	15.4	15.3	15.4	15.4	15.3	0	16
		36	0	23.0	22.5	22.6	22.8	22.7	1	23.5	15.5	15.3	15.4	15.4	15.3	0	16
		36	20	22.9	22.5	22.7	22.9	22.7	1	23.5	15.5	15.3	15.4	15.4	15.3	0	16
		36	39	22.8	22.4	22.7	22.8	22.6	1	23.5	15.4	15.3	15.4	15.4	15.3	0	16
		75	0	22.9	22.5	22.6	22.9	22.7	1	23.5	15.4	15.3	15.4	15.4	15.3	0	16
	16QAM	1	0	23.0	22.4	22.6	22.8	22.6	1	23.5	15.3	15.2	15.2	15.4	15.2	0	16
		1	37	22.9	22.6	22.6	22.9	22.6	1	23.5	15.4	15.2	15.2	15.4	15.1	0	16
		1	74	22.8	22.5	22.8	23.0	22.9	1	23.5	15.4	15.3	15.3	15.4	15.3	0	16
		36	0	21.9	21.5	21.6	21.9	21.7	2	22.5	15.4	15.3	15.4	15.4	15.3	0	16
		36	20	21.9	21.5	21.7	21.9	21.7	2	22.5	15.4	15.3	15.4	15.4	15.3	0	16
		36	39	21.8	21.4	21.7	21.8	21.6	2	22.5	15.4	15.2	15.4	15.4	15.2	0	16
		75	0	21.9	21.5	21.7	21.9	21.7	2	22.5	15.4	15.3	15.4	15.5	15.3	0	16
	64QAM	1	0	21.8	21.3	21.5	21.8	21.7	2	22.5	15.3	15.4	15.0	14.4	15.2	0	16
		1	37	21.8	21.2	21.5	21.6	21.6	2	22.5	15.5	15.6	15.0	14.6	15.2	0	16
		1	74	21.8	21.4	21.7	22.0	21.5	2	22.5	15.4	15.6	14.9	14.8	15.3	0	16
		36	0	20.9	20.5	20.6	20.8	20.7	3	21.5	15.5	15.5	15.1	14.5	15.2	0	16
		36	20	20.9	20.5	20.6	20.8	20.7	3	21.5	15.4	15.5	15.1	14.6	15.2	0	16
		36	39	20.8	20.4	20.7	20.8	20.6	3	21.5	15.4	15.5	15.0	14.7	15.2	0	16
		75	0	20.8	20.5	20.7	20.9	20.7	3	21.5	15.4	15.5	15.1	14.6	15.2	0	16
	256QAM	1	0	18.9	18.4	18.5	18.8	18.6	5	19.5	15.4	15.4	15.0	14.3	15.3	0	16
		1	37	18.8	18.3	18.7	18.9	18.7	5	19.5	15.4	15.5	14.9	14.6	15.2	0	16
		1	74	18.8	18.4	18.8	18.8	18.7	5	19.5	15.4	15.5	14.8	14.8	15.2	0	16
		36	0	18.9	18.5	18.6	18.8	18.7	5	19.5	15.4	15.5	15.1	14.5	15.2	0	16
		36	20	18.9	18.5	18.7	18.9	18.7	5	19.5	15.4	15.5	15.0	14.6	15.2	0	16
		36	39	18.9	18.4	18.7	18.8	18.6	5	19.5	15.4	15.4	15.0	14.7	15.2	0	16
		75	0	18.8	18.5	18.6	18.8	18.7	5	19.5	15.4	15.5	15.1	14.6	15.2	0	16

LTE Band 41 (Power Class 3) Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)							Reduced Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	24.0	23.6	23.7	24.0	23.7	0	24.5	15.6	15.4	15.5	15.5	15.4	0	16
		1	25	24.0	23.6	23.8	24.0	23.9	0	24.5	15.7	15.5	15.5	15.6	15.5	0	16
		1	49	24.0	23.6	23.8	24.0	23.8	0	24.5	15.6	15.4	15.5	15.6	15.4	0	16
		25	0	23.0	22.6	22.8	23.0	22.8	1	23.5	15.7	15.5	15.5	15.6	15.5	0	16
		25	12	23.1	22.6	22.8	23.0	22.9	1	23.5	15.6	15.5	15.6	15.6	15.5	0	16
		25	25	23.0	22.6	22.8	23.0	22.8	1	23.5	15.6	15.4	15.6	15.5	15.4	0	16
		50	0	23.0	22.6	22.8	23.0	22.8	1	23.5	15.6	15.5	15.6	15.6	15.5	0	16
	16QAM	1	0	23.0	22.6	22.7	22.9	22.7	1	23.5	15.7	15.5	15.4	15.6	15.3	0	16
		1	25	23.1	22.6	22.8	22.9	22.8	1	23.5	15.7	15.5	15.5	15.6	15.3	0	16
		1	49	22.8	22.6	22.8	22.9	22.7	1	23.5	15.6	15.4	15.4	15.6	15.3	0	16
		25	0	22.0	21.6	21.8	22.0	21.8	2	22.5	15.6	15.4	15.5	15.6	15.5	0	16
		25	12	22.1	21.7	21.8	22.0	21.8	2	22.5	15.6	15.5	15.6	15.6	15.5	0	16
		25	25	22.0	21.5	21.8	22.0	21.7	2	22.5	15.6	15.4	15.6	15.5	15.4	0	16
		50	0	22.0	21.7	21.8	22.0	21.8	2	22.5	15.5	15.5	15.6	15.6	15.4	0	16
	64QAM	1	0	22.0	21.4	21.7	22.0	21.8	2	22.5	15.5	15.6	15.2	14.6	15.3	0	16
		1	25	21.9	21.6	21.8	22.1	21.8	2	22.5	15.6	15.7	15.3	14.7	15.4	0	16
		1	49	21.8	21.4	21.8	22.0	21.7	2	22.5	15.5	15.6	15.2	14.7	15.3	0	16
		25	0	21.1	20.6	20.8	21.0	20.9	3	21.5	15.7	15.6	15.2	14.7	15.4	0	16
		25	12	21.1	20.6	20.8	21.1	20.8	3	21.5	15.6	15.7	15.2	14.8	15.4	0	16
		25	25	21.0	20.5	20.8	21.0	20.8	3	21.5	15.6	15.6	15.1	14.9	15.3	0	16
		50	0	21.0	20.6	20.8	21.0	20.8	3	21.5	15.5	15.7	15.2	14.8	15.4	0	16
	256QAM	1	0	19.0	18.5	18.6	18.8	18.7	5	19.5	15.5	15.4	15.1	14.5	15.2	0	16
		1	25	19.1	18.5	18.7	18.9	18.7	5	19.5	15.6	15.5	15.1	14.7	15.4	0	16
		1	49	18.9	18.4	18.8	18.8	18.7	5	19.5	15.6	15.6	15.0	14.8	15.3	0	16
		25	0	19.1	18.6	18.8	19.0	18.8	5	19.5	15.7	15.7	15.2	14.7	15.4	0	16
		25	12	19.1	18.7	18.9	19.1	18.9	5	19.5	15.6	15.7	15.2	14.8	15.4	0	16
		25	25	19.0	18.5	18.9	18.9	18.8	5	19.5	15.6	15.6	15.1	14.8	15.3	0	16
		50	0	18.9	18.6	18.8	19.0	18.8	5	19.5	15.6	15.7	15.2	14.7	15.4	0	16

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)							Reduced Average Power (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	24.0	23.5	23.7	23.9	23.7	0	24.5	15.6	15.4	15.5	15.5	15.4	0	16
		1	12	24.0	23.6	23.7	24.0	23.8	0	24.5	15.7	15.5	15.6	15.6	15.5	0	16
		1	24	23.9	23.5	23.7	23.9	23.7	0	24.5	15.6	15.4	15.5	15.5	15.4	0	16
		12	0	23.0	22.6	22.8	23.0	22.8	1	23.5	15.7	15.5	15.5	15.6	15.4	0	16
		12	7	23.1	22.6	22.8	23.0	22.8	1	23.5	15.6	15.5	15.6	15.6	15.5	0	16
		12	13	22.9	22.6	22.8	23.0	22.8	1	23.5	15.6	15.5	15.6	15.5	15.4	0	16
		25	0	22.9	22.6	22.8	23.0	22.8	1	23.5	15.6	15.5	15.5	15.6	15.5	0	16
	16QAM	1	0	23.0	22.5	22.6	22.9	22.8	1	23.5	15.6	15.4	15.5	15.6	15.4	0	16
		1	12	22.9	22.6	22.8	23.0	22.9	1	23.5	15.7	15.5	15.6	15.7	15.5	0	16
		1	24	22.9	22.5	22.6	22.9	22.6	1	23.5	15.6	15.4	15.5	15.7	15.4	0	16
		12	0	22.0	21.6	21.8	21.9	21.8	2	22.5	15.6	15.4	15.6	15.7	15.5	0	16
		12	7	22.0	21.6	21.8	21.9	21.8	2	22.5	15.6	15.4	15.7	15.7	15.6	0	16
		12	13	21.9	21.5	21.8	21.9	21.8	2	22.5	15.6	15.3	15.6	15.6	15.5	0	16
		25	0	21.9	21.6	21.8	22.0	21.8	2	22.5	15.5	15.4	15.6	15.6	15.4	0	16
	64QAM	1	0	22.1	21.6	21.8	22.1	21.8	2	22.5	15.6	15.6	15.2	14.7	15.3	0	16
		1	12	22.0	21.6	21.8	22.1	21.8	2	22.5	15.7	15.7	15.2	14.8	15.4	0	16
		1	24	21.9	21.5	21.7	22.0	21.9	2	22.5	15.6	15.6	15.1	14.8	15.3	0	16
		12	0	21.0	20.6	20.8	20.9	20.8	3	21.5	15.6	15.6	15.2	14.6	15.4	0	16
		12	7	21.1	20.6	20.8	21.0	20.8	3	21.5	15.6	15.6	15.2	14.7	15.4	0	16
		12	13	20.9	20.6	20.8	21.0	20.8	3	21.5	15.6	15.6	15.1	14.7	15.3	0	16
		25	0	20.9	20.6	20.8	21.0	20.8	3	21.5	15.5	15.7	15.2	14.7	15.4	0	16
	256QAM	1	0	19.1	18.5	18.6	19.0	18.8	5	19.5	15.6	15.6	15.2	14.6	15.3	0	16
		1	12	19.2	18.6	18.7	19.0	19.0	5	19.5	15.7	15.7	15.2	14.8	15.4	0	16
		1	24	19.0	18.4	18.7	18.8	18.8	5	19.5	15.5	15.5	15.1	14.7	15.2	0	16
		12	0	19.0	18.5	18.8	19.0	18.7	5	19.5	15.6	15.6	15.2	14.7	15.3	0	16
		12	7	19.0	18.6	18.8	19.0	18.8	5	19.5	15.6	15.7	15.2	14.7	15.4	0	16
		12	13	18.9	18.6	18.8	19.0	18.8	5	19.5	15.6	15.6	15.1	14.7	15.3	0	16
		25	0	18.9	18.6	18.7	19.0	18.8	5	19.5	15.6	15.7	15.2	14.7	15.4	0	16

LTE Band 41 (Power Class 2) Meaured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
20 MHz	QPSK	1	0	24.1	24.7	24.4	24.3	24.5	0	26
		1	49	24.2	24.8	24.3	24.4	24.6	0	26
		1	99	24.4	24.8	24.2	24.5	24.8	0	26
		50	0	23.2	23.8	23.4	23.4	23.5	1	25
		50	24	23.4	23.8	23.4	23.5	23.6	1	25
		50	50	23.4	23.8	23.3	23.5	23.7	1	25
		100	0	23.3	23.8	23.4	23.5	23.6	1	25
	16QAM	1	0	23.4	24.1	23.8	23.8	23.8	1	25
		1	49	23.7	24.2	23.8	23.9	24.0	1	25
		1	99	23.7	24.2	23.7	24.0	24.1	1	25
		50	0	22.2	22.8	22.4	22.4	22.5	2	24
		50	24	22.3	22.8	22.4	22.5	22.6	2	24
		50	50	22.4	22.8	22.3	22.5	22.7	2	24
		100	0	22.3	22.8	22.4	22.5	22.6	2	24
	64QAM	1	0	22.3	23.0	22.7	22.6	22.7	2	24
		1	49	22.4	23.0	22.6	22.7	22.8	2	24
		1	99	22.6	22.9	22.5	22.8	23.0	2	24
		50	0	21.1	21.8	21.4	21.4	21.5	3	23
		50	24	21.3	21.8	21.4	21.5	21.6	3	23
		50	50	21.4	21.7	21.3	21.5	21.7	3	23
		100	0	21.3	21.8	21.4	21.5	21.6	3	23
	256QAM	1	0	19.2	20.0	19.6	19.4	19.6	5	21
		1	49	19.4	20.0	19.4	19.5	19.8	5	21
		1	99	19.7	20.1	19.4	19.6	19.9	5	21
		50	0	19.1	19.8	19.4	19.4	19.5	5	21
		50	24	19.3	19.8	19.4	19.5	19.6	5	21
		50	50	19.4	19.8	19.3	19.0	19.7	5	21
		100	0	19.3	19.8	19.4	19.5	19.5	5	21

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
15 MHz	QPSK	1	0	24.1	24.8	24.3	24.3	24.5	0	26
		1	37	24.3	24.8	24.3	24.4	24.6	0	26
		1	74	24.4	24.9	24.2	24.5	24.7	0	26
		36	0	23.2	23.8	23.3	23.5	23.5	1	25
		36	20	23.4	23.8	23.4	23.5	23.6	1	25
		36	39	23.3	23.7	23.3	23.4	23.7	1	25
		75	0	23.3	23.8	23.3	23.5	23.6	1	25
	16QAM	1	0	23.5	24.1	23.7	23.7	23.8	1	25
		1	37	23.7	24.2	23.7	23.7	24.0	1	25
		1	74	23.8	24.2	23.6	23.9	24.1	1	25
		36	0	22.2	22.8	22.4	22.5	22.5	2	24
		36	20	22.3	22.8	22.4	22.5	22.6	2	24
		36	39	22.3	22.8	22.3	22.4	22.7	2	24
		75	0	22.3	22.8	22.4	22.5	22.6	2	24
	64QAM	1	0	22.4	23.0	22.6	22.6	22.7	2	24
		1	37	22.6	23.1	22.5	22.7	22.8	2	24
		1	74	22.6	23.1	22.5	22.8	23.0	2	24
		36	0	21.1	21.8	21.4	21.4	21.5	3	23
		36	20	21.3	21.8	21.4	21.5	21.6	3	23
		36	39	21.3	21.7	21.3	21.4	21.7	3	23
		75	0	21.3	21.8	21.4	21.5	21.6	3	23
	256QAM	1	0	19.2	19.8	19.5	19.5	19.5	5	21
		1	37	19.4	19.8	19.5	19.7	19.7	5	21
		1	74	19.7	19.8	19.4	19.7	19.7	5	21
		36	0	19.2	19.8	19.4	19.4	19.5	5	21
		36	20	19.3	19.8	19.4	19.5	19.5	5	21
		36	39	19.3	19.8	19.3	19.4	19.6	5	21
		75	0	19.3	19.8	19.4	19.5	19.5	5	21

LTE Band 41 (Power Class 2) Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
10 MHz	QPSK	1	0	24.3	24.9	24.5	24.4	24.7	0	26
		1	25	24.5	25.0	24.5	24.6	24.8	0	26
		1	49	24.5	25.0	24.4	24.5	24.8	0	26
		25	0	23.4	24.0	23.5	23.6	23.7	1	25
		25	12	23.5	24.0	23.6	23.6	23.8	1	25
		25	25	23.5	23.9	23.5	23.5	23.9	1	25
		50	0	23.5	24.0	23.5	23.6	23.7	1	25
	16QAM	1	0	23.7	24.2	23.8	23.8	24.1	1	25
		1	25	23.8	24.3	23.7	23.9	24.2	1	25
		1	49	23.9	24.3	23.7	23.9	24.2	1	25
		25	0	22.4	23.0	22.6	22.6	22.8	2	24
		25	12	22.5	23.1	22.6	22.6	22.8	2	24
		25	25	22.6	23.0	22.5	22.5	22.9	2	24
		50	0	22.5	23.0	22.5	22.6	22.8	2	24
	64QAM	1	0	22.5	23.1	22.7	22.6	22.8	2	24
		1	25	22.7	23.2	22.8	22.7	23.0	2	24
		1	49	22.7	23.2	22.7	22.8	23.0	2	24
		25	0	21.3	22.0	21.6	21.6	21.7	3	23
		25	12	21.5	22.0	21.6	21.7	21.8	3	23
		25	25	21.5	21.9	21.5	21.6	21.8	3	23
		50	0	21.5	22.0	21.5	21.6	21.7	3	23
	256QAM	1	0	19.3	19.9	19.6	19.6	19.8	5	21
		1	25	19.5	20.1	19.7	19.8	19.9	5	21
		1	49	19.6	20.0	19.4	19.6	19.9	5	21
		25	0	19.4	20.0	19.8	19.6	19.7	5	21
		25	12	19.5	20.0	19.6	19.6	19.8	5	21
		25	25	19.5	19.9	19.5	19.6	19.8	5	21
		50	0	19.5	20.0	19.5	19.6	19.7	5	21

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					MPR	Tune-up Limit
				39750	40185	40620	41055	41490		
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	24.4	24.9	24.4	24.5	24.7	0	26
		1	12	24.5	25.0	24.5	24.6	24.8	0	26
		1	24	24.5	24.9	24.4	24.5	24.8	0	26
		12	0	23.4	24.0	23.5	23.6	23.8	1	25
		12	7	23.5	24.0	23.5	23.6	23.8	1	25
		12	13	23.5	24.0	23.4	23.6	23.8	1	25
		25	0	23.5	24.0	23.5	23.6	23.7	1	25
	16QAM	1	0	23.9	24.3	23.8	23.6	24.1	1	25
		1	12	23.9	24.4	23.8	23.7	24.3	1	25
		1	24	23.9	24.3	23.8	23.6	24.2	1	25
		12	0	22.5	22.9	22.6	22.6	22.8	2	24
		12	7	22.5	23.0	22.7	22.7	22.7	2	24
		12	13	22.6	23.0	22.5	22.7	22.8	2	24
		25	0	22.5	23.0	22.5	22.6	22.8	2	24
	64QAM	1	0	22.6	23.1	22.7	22.8	22.9	2	24
		1	12	22.8	23.3	22.8	22.9	23.0	2	24
		1	24	22.7	23.2	22.7	22.8	22.9	2	24
		12	0	21.5	22.0	21.7	21.7	21.7	3	23
		12	7	21.7	22.0	21.7	21.7	21.7	3	23
		12	13	21.6	22.0	21.6	21.7	21.7	3	23
		25	0	21.5	22.0	21.5	21.6	21.7	3	23
	256QAM	1	0	19.5	20.0	19.7	19.7	19.6	5	21
		1	12	19.7	20.2	19.7	19.8	19.8	5	21
		1	24	19.7	20.0	19.6	19.7	19.7	5	21
		12	0	19.4	20.0	19.5	19.6	19.7	5	21
		12	7	19.5	20.0	19.6	19.6	19.8	5	21
		12	13	19.5	20.0	19.5	19.6	19.7	5	21
		25	0	19.5	20.0	19.5	19.6	19.7	5	21

LTE Band 66 Measured Results

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm) DSI = 0					Reduced Average Power (dBm) DSI = 1				
				132072	132322	132572	MPR	Tune-up Limit	132072	132322	132572	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	23.6	23.9	24.0	0	24.5	14.0	14.3	14.2	0	15
		1	49	23.6	23.9	24.0	0	24.5	14.1	14.3	14.2	0	15
		1	99	23.8	23.9	23.9	0	24.5	14.3	14.3	14.1	0	15
		50	0	22.7	22.9	23.0	1	23.5	14.1	14.3	14.3	0	15
		50	24	22.8	22.9	23.1	1	23.5	14.2	14.3	14.6	0	15
		50	50	22.8	23.0	23.0	1	23.5	14.3	14.6	14.3	0	15
		100	0	22.8	22.9	23.1	1	23.5	14.2	14.3	14.3	0	15
	16QAM	1	0	22.9	23.2	23.3	1	23.5	14.4	14.7	14.6	0	15
		1	49	23.1	23.4	23.3	1	23.5	14.4	14.8	14.7	0	15
		1	99	23.1	23.3	23.2	1	23.5	14.6	14.8	14.5	0	15
		50	0	21.7	21.9	22.0	2	22.5	14.2	14.3	14.3	0	15
		50	24	21.8	21.9	22.1	2	22.5	14.3	14.4	14.3	0	15
		50	50	21.8	22.0	22.0	2	22.5	14.3	14.4	14.3	0	15
		100	0	21.8	21.9	22.1	2	22.5	14.2	14.3	14.3	0	15
	64QAM	1	0	22.0	22.1	22.2	2	22.5	14.3	14.6	14.5	0	15
		1	49	22.1	22.2	22.4	2	22.5	14.4	14.6	14.6	0	15
		1	99	22.1	22.2	22.4	2	22.5	14.5	14.6	14.5	0	15
		50	0	20.8	21.0	21.1	3	21.5	14.1	14.4	14.2	0	15
		50	24	20.9	21.0	21.2	3	21.5	14.2	14.4	14.2	0	15
		50	50	20.9	21.1	21.2	3	21.5	14.2	14.4	14.3	0	15
		100	0	20.9	21.0	21.2	3	21.5	14.2	14.4	14.2	0	15
	256QAM	1	0	18.9	19.1	19.4	5	19.5	14.1	14.5	14.5	0	15
		1	49	19.1	19.0	19.4	5	19.5	14.3	14.6	14.4	0	15
		1	99	19.1	19.2	19.5	5	19.5	14.4	14.6	14.4	0	15
		50	0	18.8	19.0	19.1	5	19.5	14.1	14.4	14.2	0	15
		50	24	18.9	19.0	19.2	5	19.5	14.2	14.4	14.2	0	15
		50	50	18.9	19.0	19.2	5	19.5	14.2	14.4	14.3	0	15
		100	0	18.9	19.0	19.2	5	19.5	14.2	14.3	14.2	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				132047	132322	132597	MPR	Tune-up Limit	132047	132322	132597	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	23.6	23.9	24.0	0	24.5	14.1	14.3	14.2	0	15
		1	37	23.7	23.9	24.0	0	24.5	14.1	14.3	14.3	0	15
		1	74	23.7	23.9	24.0	0	24.5	14.2	14.3	14.2	0	15
		36	0	22.7	22.9	23.0	1	23.5	14.1	14.3	14.3	0	15
		36	20	22.8	22.9	23.0	1	23.5	14.2	14.3	14.3	0	15
		36	39	22.7	22.9	23.1	1	23.5	14.2	14.4	14.3	0	15
		75	0	22.7	22.9	22.9	1	23.5	14.2	14.3	14.3	0	15
	16QAM	1	0	22.8	23.1	23.4	1	23.5	14.3	14.6	14.6	0	15
		1	37	23.0	23.2	23.4	1	23.5	14.4	14.7	14.6	0	15
		1	74	23.0	23.3	23.2	1	23.5	14.5	14.7	14.5	0	15
		36	0	21.7	21.9	22.0	2	22.5	14.1	14.3	14.4	0	15
		36	20	21.8	21.9	22.0	2	22.5	14.2	14.3	14.3	0	15
		36	39	21.8	21.9	22.0	2	22.5	14.2	14.4	14.3	0	15
		75	0	21.8	21.9	22.0	2	22.5	14.2	14.3	14.3	0	15
	64QAM	1	0	21.8	22.1	22.3	2	22.5	14.2	14.6	14.5	0	15
		1	37	21.9	22.2	22.3	2	22.5	14.3	14.7	14.6	0	15
		1	74	22.1	22.1	22.3	2	22.5	14.4	14.7	14.5	0	15
		36	0	20.8	21.0	21.1	3	21.5	14.1	14.4	14.3	0	15
		36	20	20.9	21.0	21.1	3	21.5	14.2	14.4	14.3	0	15
		36	39	20.8	21.1	21.2	3	21.5	14.2	14.4	14.3	0	15
		75	0	20.8	21.0	21.1	3	21.5	14.2	14.4	14.3	0	15
	256QAM	1	0	18.7	19.2	19.3	5	19.5	14.1	14.3	14.4	0	15
		1	37	18.9	19.1	19.3	5	19.5	14.2	14.4	14.4	0	15
		1	74	18.9	19.2	19.2	5	19.5	14.3	14.5	14.4	0	15
		36	0	18.8	19.0	19.2	5	19.5	14.1	14.4	14.3	0	15
		36	20	18.9	19.0	19.1	5	19.5	14.1	14.4	14.3	0	15
		36	39	18.9	19.1	19.2	5	19.5	14.1	14.4	14.3	0	15
		75	0	18.8	19.0	19.1	5	19.5	14.2	14.4	14.3	0	15

LTE Band 66 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				132022	132322	132622	MPR	Tune-up Limit	132022	132322	132622	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	23.8	24.1	24.2	0	24.5	14.3	14.5	14.4	0	15
		1	25	23.9	24.1	24.2	0	24.5	14.3	14.5	14.5	0	15
		1	49	23.8	24.1	24.2	0	24.5	14.3	14.5	14.4	0	15
		25	0	22.8	23.0	23.1	1	23.5	14.3	14.5	14.4	0	15
		25	12	22.8	23.1	23.1	1	23.5	14.4	14.5	14.5	0	15
		25	25	22.8	23.1	23.2	1	23.5	14.3	14.6	14.4	0	15
		50	0	22.9	23.0	23.2	1	23.5	14.3	14.5	14.4	0	15
	16QAM	1	0	23.2	23.4	23.4	1	23.5	14.7	14.7	14.7	0	15
		1	25	23.1	23.5	23.5	1	23.5	14.7	14.9	14.7	0	15
		1	49	23.0	23.5	23.4	1	23.5	14.7	14.8	14.7	0	15
		25	0	21.7	22.0	22.1	2	22.5	14.3	14.5	14.5	0	15
		25	12	21.9	22.0	22.2	2	22.5	14.4	14.5	14.5	0	15
		25	25	21.8	22.1	22.2	2	22.5	14.4	14.6	14.5	0	15
		50	0	21.9	22.0	22.2	2	22.5	14.3	14.5	14.5	0	15
	64QAM	1	0	22.1	22.3	22.4	2	22.5	14.5	14.8	14.6	0	15
		1	25	22.3	22.3	22.5	2	22.5	14.6	14.9	14.6	0	15
		1	49	22.1	22.3	22.5	2	22.5	14.6	14.8	14.6	0	15
		25	0	20.8	21.1	21.2	3	21.5	14.2	14.5	14.4	0	15
		25	12	20.9	21.1	21.2	3	21.5	14.3	14.5	14.5	0	15
		25	25	20.9	21.2	21.3	3	21.5	14.3	14.6	14.5	0	15
		50	0	21.0	21.1	21.3	3	21.5	14.3	14.5	14.5	0	15
	256QAM	1	0	19.0	19.4	19.3	5	19.5	14.3	14.6	14.5	0	15
		1	25	19.2	19.5	19.5	5	19.5	14.5	14.7	14.7	0	15
		1	49	19.1	19.4	19.4	5	19.5	14.4	14.7	14.6	0	15
		25	0	18.9	19.1	19.3	5	19.5	14.2	14.5	14.4	0	15
		25	12	19.0	19.2	19.3	5	19.5	14.3	14.5	14.5	0	15
		25	25	18.9	19.2	19.3	5	19.5	14.3	14.6	14.5	0	15
		50	0	18.9	19.1	19.4	5	19.5	14.3	14.5	14.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				131997	132322	132647	MPR	Tune-up Limit	131997	132322	132647	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	23.7	24.1	24.1	0	24.5	14.2	14.5	14.4	0	15
		1	12	23.8	24.2	24.3	0	24.5	14.3	14.6	14.5	0	15
		1	24	23.7	24.0	24.1	0	24.5	14.2	14.5	14.4	0	15
		12	0	22.7	23.0	23.0	1	23.5	14.2	14.4	14.4	0	15
		12	7	22.8	23.0	23.2	1	23.5	14.4	14.5	14.4	0	15
		12	13	22.8	23.1	23.1	1	23.5	14.3	14.5	14.4	0	15
		25	0	22.8	23.0	23.1	1	23.5	14.3	14.4	14.4	0	15
	16QAM	1	0	23.1	23.3	23.4	1	23.5	14.6	14.8	14.8	0	15
		1	12	23.2	23.5	23.5	1	23.5	14.7	14.9	14.9	0	15
		1	24	23.1	23.3	23.5	1	23.5	14.7	14.8	14.8	0	15
		12	0	21.8	22.1	22.2	2	22.5	14.3	14.5	14.4	0	15
		12	7	21.9	22.1	22.2	2	22.5	14.4	14.6	14.5	0	15
		12	13	21.9	22.2	22.2	2	22.5	14.4	14.6	14.4	0	15
		25	0	21.8	22.0	22.2	2	22.5	14.3	14.5	14.4	0	15
	64QAM	1	0	21.9	22.3	22.5	2	22.5	14.3	14.8	14.7	0	15
		1	12	22.0	22.4	22.5	2	22.5	14.5	14.9	14.8	0	15
		1	24	21.8	22.4	22.5	2	22.5	14.5	14.9	14.7	0	15
		12	0	20.8	21.1	21.2	3	21.5	14.2	14.6	14.4	0	15
		12	7	20.9	21.1	21.2	3	21.5	14.3	14.7	14.4	0	15
		12	13	20.9	21.2	21.3	3	21.5	14.3	14.7	14.4	0	15
		25	0	20.9	21.1	21.2	3	21.5	14.3	14.5	14.4	0	15
	256QAM	1	0	18.9	19.1	19.3	5	19.5	14.3	14.6	14.4	0	15
		1	12	19.0	19.2	19.5	5	19.5	14.5	14.8	14.6	0	15
		1	24	19.0	19.1	19.5	5	19.5	14.4	14.7	14.5	0	15
		12	0	18.9	19.1	19.3	5	19.5	14.2	14.5	14.3	0	15
		12	7	19.0	19.1	19.3	5	19.5	14.3	14.5	14.4	0	15
		12	13	18.9	19.2	19.3	5	19.5	14.3	14.6	14.5	0	15
		25	0	18.9	19.1	19.3	5	19.5	14.3	14.5	14.4	0	15

LTE Band 66 Measured Results (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				131987	132322	132657	MPR	Tune-up Limit	131987	132322	132657	MPR	Tune-up Limit
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	23.7	24.0	24.1	0	24.5	14.2	14.4	14.3	0	15
		1	8	23.8	24.0	24.3	0	24.5	14.3	14.5	14.4	0	15
		1	14	23.7	24.0	24.2	0	24.5	14.2	14.5	14.3	0	15
		8	0	22.8	23.0	23.1	1	23.5	14.3	14.4	14.4	0	15
		8	4	22.8	23.0	23.1	1	23.5	14.3	14.5	14.4	0	15
		8	7	22.8	23.1	23.1	1	23.5	14.3	14.5	14.4	0	15
		15	0	22.8	22.9	23.1	1	23.5	14.3	14.5	14.4	0	15
	16QAM	1	0	23.0	23.4	23.5	1	23.5	14.5	14.8	14.7	0	15
		1	8	23.0	23.5	23.5	1	23.5	14.6	15.0	14.7	0	15
		1	14	22.9	23.4	23.5	1	23.5	14.5	15.0	14.7	0	15
		8	0	21.8	22.0	22.1	2	22.5	14.4	14.5	14.4	0	15
		8	4	21.9	22.1	22.2	2	22.5	14.4	14.6	14.5	0	15
		8	7	21.9	22.1	22.2	2	22.5	14.4	14.6	14.5	0	15
		15	0	21.8	22.0	22.2	2	22.5	14.3	14.5	14.5	0	15
	64QAM	1	0	22.0	22.2	22.4	2	22.5	14.3	14.8	14.6	0	15
		1	8	22.1	22.3	22.5	2	22.5	14.4	14.8	14.7	0	15
		1	14	22.0	22.3	22.4	2	22.5	14.4	14.8	14.6	0	15
		8	0	20.8	21.1	21.2	3	21.5	14.3	14.6	14.5	0	15
		8	4	20.9	21.1	21.3	3	21.5	14.3	14.6	14.5	0	15
		8	7	20.9	21.2	21.3	3	21.5	14.3	14.6	14.5	0	15
		15	0	20.9	21.1	21.2	3	21.5	14.3	14.5	14.5	0	15
	256QAM	1	0	18.9	19.2	19.3	5	19.5	14.2	14.5	14.5	0	15
		1	8	19.1	19.4	19.5	5	19.5	14.3	14.7	14.6	0	15
		1	14	18.9	19.3	19.3	5	19.5	14.3	14.6	14.5	0	15
		8	0	18.9	19.1	19.3	5	19.5	14.3	14.5	14.5	0	15
		8	4	19.0	19.1	19.3	5	19.5	14.3	14.5	14.5	0	15
		8	7	18.9	19.2	19.3	5	19.5	14.3	14.5	14.5	0	15
		15	0	18.9	19.1	19.3	5	19.5	14.2	14.5	14.5	0	15

BW (MHz)	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
				131979	132322	132665	MPR	Tune-up Limit	131979	132322	132665	MPR	Tune-up Limit
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	23.8	24.0	24.3	0	24.5	14.3	14.5	14.3	0	15
		1	3	23.8	24.1	24.2	0	24.5	14.3	14.6	14.3	0	15
		1	5	23.7	24.0	24.1	0	24.5	14.3	14.5	14.3	0	15
		3	0	23.7	24.0	24.1	0	24.5	14.3	14.5	14.4	0	15
		3	1	23.7	24.1	24.2	0	24.5	14.3	14.5	14.4	0	15
		3	3	23.7	24.1	24.2	0	24.5	14.3	14.5	14.4	0	15
		6	0	22.7	23.0	23.2	1	23.5	14.3	14.4	14.3	0	15
	16QAM	1	0	23.0	23.2	23.5	1	23.5	14.6	14.8	14.5	0	15
		1	3	23.1	23.1	23.5	1	23.5	14.6	14.9	14.5	0	15
		1	5	23.0	23.2	23.5	1	23.5	14.6	14.8	14.6	0	15
		3	0	22.9	23.1	23.3	1	23.5	14.4	14.7	14.5	0	15
		3	1	22.9	23.1	23.4	1	23.5	14.4	14.7	14.5	0	15
		3	3	22.8	23.2	23.4	1	23.5	14.4	14.7	14.5	0	15
		6	0	21.9	22.0	22.1	2	22.5	14.3	14.5	14.5	0	15
	64QAM	1	0	22.1	22.1	22.4	2	22.5	14.3	14.8	14.7	0	15
		1	3	22.0	22.2	22.5	2	22.5	14.4	14.7	14.8	0	15
		1	5	21.9	22.1	22.4	2	22.5	14.4	14.8	14.7	0	15
		3	0	21.9	22.2	22.2	2	22.5	14.3	14.6	14.5	0	15
		3	1	21.9	22.2	22.2	2	22.5	14.3	14.6	14.6	0	15
		3	3	22.0	22.2	22.2	2	22.5	14.3	14.6	14.6	0	15
		6	0	21.0	21.1	21.2	3	21.5	14.3	14.6	14.4	0	15
	256QAM	1	0	19.0	19.1	19.4	5	19.5	14.2	14.5	14.5	0	15
		1	3	19.1	19.2	19.3	5	19.5	14.4	14.7	14.5	0	15
		1	5	19.0	19.2	19.2	5	19.5	14.3	14.6	14.5	0	15
		3	0	19.0	19.0	19.4	5	19.5	14.2	14.4	14.4	0	15
		3	1	19.0	19.2	19.4	5	19.5	14.2	14.6	14.5	0	15
		3	3	18.9	19.1	19.4	5	19.5	14.2	14.6	14.5	0	15
		6	0	18.7	19.0	19.2	5	19.5	14.2	14.4	14.4	0	15

9.4. 5G

n5 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm) PSI = 0					Reduced Average Power (dBm) PSI = 1				
					166800	167300	167800	MPR	Tune-up Limit	166800	167300	167800	MPR	Tune-up Limit
					834 MHz	836.5 MHz	839 MHz			834 MHz	836.5 MHz	839 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.3	24.4	24.4	0.0	25.0	14.3	14.4	14.3	0.0	15.0
			1	53	24.4	24.5	24.4	0.0	25.0	14.3	14.3	14.3	0.0	15.0
			1	104	24.3	24.2	24.2	0.0	25.0	14.4	14.1	14.2	0.0	15.0
			50	0	23.5	23.7	23.6	0.5	24.5	14.1	14.2	14.1	0.0	15.0
			50	28	24.6	24.6	24.6	0.0	25.0	14.4	14.4	14.4	0.0	15.0
			50	56	23.5	23.5	23.5	0.5	24.5	14.3	14.2	14.3	0.0	15.0
			100	0	23.7	23.6	23.6	0.5	24.5	14.2	14.1	14.1	0.0	15.0
		QPSK	1	1	24.5	24.6	24.6	0.0	25.0	14.4	14.5	14.4	0.0	15.0
			1	53	24.6	24.6	24.6	0.0	25.0	14.3	14.4	14.4	0.0	15.0
			1	104	24.4	24.4	24.3	0.0	25.0	14.3	14.3	14.5	0.0	15.0
			50	0	23.6	23.7	23.6	1.0	24.0	13.9	14.0	13.8	0.0	15.0
			50	28	24.6	24.6	24.6	0.0	25.0	13.8	14.2	13.8	0.0	15.0
			50	56	23.5	23.5	23.5	1.0	24.0	13.9	14.0	13.9	0.0	15.0
			100	0	23.7	23.6	23.6	1.0	24.0	13.9	14.0	14.0	0.0	15.0
		16QAM	1	1	23.4	23.4	23.4	1.0	24.0	13.9	14.1	13.8	0.0	15.0
			1	53	23.5	23.5	23.5	1.0	24.0	13.8	14.0	13.8	0.0	15.0
			1	104	23.3	23.2	23.2	1.0	24.0	13.9	13.8	14.0	0.0	15.0
		64QAM	1	1	22.2	22.3	22.3	2.5	22.5	13.7	13.5	13.4	0.0	15.0
		256QAM	1	1	19.5	19.6	19.5	4.5	20.5	13.1	13.1	13.0	0.0	15.0
	CP-OFDM	QPSK	1	1	23.0	23.1	23.1	1.5	23.5	13.4	13.7	13.7	0.0	15.0

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					166300	167300	168300	MPR	Tune-up Limit	166300	167300	168300	MPR	Tune-up Limit
					831.5 MHz	836.5 MHz	841.5 MHz			831.5 MHz	836.5 MHz	841.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.3	24.4	24.4	0.0	25.0	14.4	14.4	14.4	0.0	15.0
			1	40	24.4	24.5	24.3	0.0	25.0	14.3	14.3	14.4	0.0	15.0
			1	77	24.4	24.3	24.2	0.0	25.0	14.4	14.3	14.3	0.0	15.0
			36	0	23.6	23.7	23.6	0.5	24.5	14.1	14.1	14.1	0.0	15.0
			36	22	24.6	24.6	24.5	0.0	25.0	14.4	14.4	14.5	0.0	15.0
			36	43	23.6	23.5	23.5	0.5	24.5	14.1	14.1	14.1	0.0	15.0
			75	0	23.6	23.6	23.5	0.5	24.5	14.1	14.1	14.1	0.0	15.0
		QPSK	1	1	24.5	24.6	24.6	0.0	25.0	14.4	14.4	14.4	0.0	15.0
			1	40	24.6	24.6	24.5	0.0	25.0	14.3	14.3	14.4	0.0	15.0
			1	77	24.5	24.4	24.3	0.0	25.0	14.2	14.3	14.3	0.0	15.0
			36	0	23.6	23.7	23.6	1.0	24.0	14.0	14.0	14.5	0.0	15.0
			36	22	24.7	24.6	24.5	0.0	25.0	14.4	14.4	14.4	0.0	15.0
			36	43	23.6	23.5	23.5	1.0	24.0	14.4	13.9	14.4	0.0	15.0
			75	0	23.6	23.6	23.5	1.0	24.0	13.9	13.9	14.0	0.0	15.0
		16QAM	1	1	23.4	23.4	23.5	1.0	24.0	13.8	13.8	14.0	0.0	15.0
		64QAM	1	1	22.2	22.3	22.3	2.5	22.5	13.3	13.3	13.6	0.0	15.0
		256QAM	1	1	19.5	19.6	19.6	4.5	20.5	13.5	13.2	13.0	0.0	15.0
	CP-OFDM	QPSK	1	1	23.0	23.1	23.1	1.5	23.5	13.5	13.6	13.7	0.0	15.0

n5 Measured Results (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					165800	167300	168800	MPR	Tune-up Limit	165800	167300	168800	MPR	Tune-up Limit
					829 MHz	836.5 MHz	844 MHz			829 MHz	836.5 MHz	844 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.3	24.2	24.3	0.0	25.0	14.3	14.2	14.1	0.0	15.0
			1	26	24.2	24.3	24.2	0.0	25.0	14.3	14.2	14.1	0.0	15.0
			1	50	24.3	24.3	24.1	0.0	25.0	14.2	14.3	14.0	0.0	15.0
			25	0	24.2	23.4	24.2	0.5	24.5	14.1	14.2	14.5	0.0	15.0
			25	14	23.4	24.5	23.4	0.0	25.0	14.4	14.4	14.0	0.0	15.0
			25	27	23.4	23.5	23.3	0.5	24.5	14.6	14.3	14.4	0.0	15.0
			50	0	23.4	23.5	23.4	0.5	24.5	14.1	14.0	14.4	0.0	15.0
		QPSK	1	1	24.4	24.4	24.4	0.0	25.0	14.4	14.3	14.1	0.0	15.0
			1	26	24.4	24.5	24.3	0.0	25.0	14.4	14.2	14.0	0.0	15.0
			1	50	24.4	24.4	24.2	0.0	25.0	14.3	14.2	14.0	0.0	15.0
			25	0	23.4	23.4	23.4	1.0	24.0	13.9	13.8	14.0	0.0	15.0
			25	14	24.4	24.5	24.4	0.0	25.0	14.4	14.4	14.0	0.0	15.0
			25	27	23.4	23.5	23.3	1.0	24.0	13.8	13.9	14.1	0.0	15.0
			50	0	23.4	23.5	23.4	1.0	24.0	13.8	13.8	13.6	0.0	15.0
		16QAM	1	1	23.3	23.3	23.3	1.0	24.0	14.4	14.3	14.0	0.0	15.0
		64QAM	1	1	22.1	22.1	22.1	2.5	22.5	13.8	13.2	13.5	0.0	15.0
		256QAM	1	1	19.4	19.4	19.4	4.5	20.5	13.2	13.3	13.4	0.0	15.0
	CP-OFDM	QPSK	1	1	22.8	22.8	22.8	1.5	23.5	13.6	13.6	13.4	0.0	15.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					165300	167300	169300	MPR	Tune-up Limit	165300	167300	169300	MPR	Tune-up Limit
					826.5 MHz	836.5 MHz	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	24.3	24.3	24.3	0.0	25.0	14.1	14.0	13.9	0.0	15.0
			1	13	24.2	24.3	24.1	0.0	25.0	14.0	14.0	13.9	0.0	15.0
			1	23	24.2	24.4	24.2	0.0	25.0	14.0	14.0	13.8	0.0	15.0
			12	0	23.4	23.5	23.3	0.5	24.5	14.1	14.2	13.9	0.0	15.0
			12	7	24.3	24.4	24.2	0.0	25.0	14.1	14.1	13.9	0.0	15.0
			12	13	23.4	23.5	23.3	0.5	24.5	14.1	14.1	13.9	0.0	15.0
			25	0	23.4	23.5	23.4	0.5	24.5	14.1	14.1	14.0	0.0	15.0
		QPSK	1	1	24.4	24.4	24.4	0.0	25.0	14.2	14.1	14.0	0.0	15.0
			1	13	24.4	24.5	24.3	0.0	25.0	14.1	14.1	13.9	0.0	15.0
			1	23	24.4	24.5	24.3	0.0	25.0	14.1	14.1	13.9	0.0	15.0
			12	0	23.4	23.5	23.3	1.0	24.0	14.1	14.2	14.0	0.0	15.0
			12	7	24.3	24.4	24.2	0.0	25.0	14.1	14.1	13.9	0.0	15.0
			12	13	23.4	23.5	23.3	1.0	24.0	14.1	14.1	13.9	0.0	15.0
			25	0	23.4	23.5	23.3	1.0	24.0	14.1	14.1	13.9	0.0	15.0
		16QAM	1	1	23.4	23.3	23.3	1.0	24.0	14.1	14.1	13.9	0.0	15.0
		64QAM	1	1	22.2	22.2	22.1	2.5	22.5	14.3	14.2	14.1	0.0	15.0
		256QAM	1	1	19.5	19.4	19.3	4.5	20.5	13.7	13.6	13.5	0.0	15.0
	CP-OFDM	QPSK	1	1	22.9	22.9	22.8	1.5	23.5	14.2	14.0	14.0	0.0	15.0

n66 Measured Results

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm) PSI = 0					Reduced Average Power (dBm) PSI = 1				
					346000	349000	352000	MPR	Tune-up Limit	346000	349000	352000	MPR	Tune-up Limit
					1730 MHz	1745 MHz	1760 MHz			1730 MHz	1745 MHz	1760 MHz		
40 MHz	DFT-s-OFDM	π/2 BPSK		1	23.4	23.7	24.0	0.0	24.5	14.2	14.4	14.5	0.0	15.0
			1	108	23.7	24.1	24.0	0.0	24.5	14.4	13.9	14.5	0.0	15.0
			1	214	24.0	24.0	24.0	0.0	24.5	14.3	14.5	14.4	0.0	15.0
			108	0	22.7	23.1	23.2	0.5	24.0	14.5	14.4	14.5	0.0	15.0
			108	54	23.8	24.2	24.2	0.0	24.5	14.0	14.6	14.5	0.0	15.0
			108	108	23.1	23.3	23.3	0.5	24.0	13.9	14.3	14.2	0.0	15.0
			216	0	22.9	23.2	23.2	0.5	24.0	14.0	14.4	14.2	0.0	15.0
		QPSK	1	1	23.5	23.9	24.1	0.0	24.5	14.2	14.4	14.4	0.0	15.0
			1	108	23.9	24.2	24.1	0.0	24.5	14.2	13.8	14.5	0.0	15.0
			1	214	24.1	24.2	24.1	0.0	24.5	14.2	13.9	14.5	0.0	15.0
			108	0	22.7	23.2	23.2	1.0	23.5	13.8	14.1	14.0	0.0	15.0
			108	54	23.9	24.2	24.2	0.0	24.5	14.4	14.6	14.5	0.0	15.0
			108	108	23.2	23.3	23.3	1.0	23.5	13.9	14.1	14.0	0.0	15.0
			216	0	22.9	23.2	23.2	1.0	23.5	14.0	14.3	14.0	0.0	15.0
		16QAM	1	1	22.5	22.9	23.0	1.0	23.5	13.9	14.1	14.0	0.0	15.0
			1	108	22.8	23.2	23.1	1.0	23.5	13.8	14.1	14.0	0.0	15.0
			1	214	23.1	23.2	23.1	1.0	23.5	13.9	14.1	13.9	0.0	15.0
		64QAM	1	1	21.2	21.6	21.8	2.5	22.0	13.3	13.3	13.4	0.0	15.0
		256QAM	1	1	18.5	18.9	19.0	4.5	20.0	13.8	13.4	13.2	0.0	15.0
	CP-OFDM	QPSK	1	1	22.0	22.4	22.6	1.5	23.0	13.3	13.3	13.6	0.0	15.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					345000	349000	353000	MPR	Tune-up Limit	345000	349000	353000	MPR	Tune-up Limit
					1725 MHz	1745 MHz	1765 MHz			1725 MHz	1745 MHz	1765 MHz		
30 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.2	23.5	24.0	0.0	24.5	14.4	14.6	14.5	0.0	15.0
			1	80	23.4	23.9	24.0	0.0	24.5	14.3	14.6	14.6	0.0	15.0
			1	158	23.7	23.9	24.1	0.0	24.5	14.3	14.6	13.8	0.0	15.0
			80	0	22.7	23.0	23.2	0.5	24.0	14.2	14.3	14.3	0.0	15.0
			80	40	23.9	24.1	24.2	0.0	24.5	14.5	14.6	14.6	0.0	15.0
			80	80	23.1	23.3	23.3	0.5	24.0	14.3	14.4	14.4	0.0	15.0
			160	0	22.9	23.2	23.2	0.5	24.0	14.2	14.5	14.4	0.0	15.0
		QPSK	1	1	23.6	24.0	24.2	0.0	24.5	14.2	14.5	14.5	0.0	15.0
			1	80	23.8	24.2	24.2	0.0	24.5	14.2	14.5	14.5	0.0	15.0
			1	158	24.0	24.2	24.2	0.0	24.5	14.3	14.4	13.7	0.0	15.0
			80	0	22.8	23.1	23.2	1.0	23.5	14.0	14.2	14.0	0.0	15.0
			80	40	23.8	24.2	24.2	0.0	24.5	14.4	14.6	14.7	0.0	15.0
			80	80	23.1	23.3	23.3	1.0	23.5	14.0	14.1	14.1	0.0	15.0
			160	0	22.9	23.2	23.2	1.0	23.5	13.9	13.5	14.1	0.0	15.0
		16QAM	1	1	22.6	22.9	23.2	1.0	23.5	13.9	14.0	14.0	0.0	15.0
		64QAM	1	1	21.2	21.7	21.8	2.5	22.0	13.3	13.5	13.5	0.0	15.0
		256QAM	1	1	18.6	19.0	19.2	4.5	20.0	13.0	13.2	13.0	0.0	15.0
	CP-OFDM	QPSK	1	1	22.1	22.5	22.7	1.5	23.0	13.8	13.7	13.9	0.0	15.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					344000	349000	354000	MPR	Tune-up Limit	344000	349000	354000	MPR	Tune-up Limit
					1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.5	24.0	24.0	0.0	24.5	13.6	14.4	14.6	0.0	15.0
			1	53	23.7	24.0	24.0	0.0	24.5	13.7	13.7	13.9	0.0	15.0
			1	104	23.8	24.1	24.0	0.0	24.5	14.1	14.3	14.1	0.0	15.0
			50	0	22.7	23.2	23.1	0.5	24.0	13.9	14.2	14.1	0.0	15.0
			50	28	23.8	24.2	24.2	0.0	24.5	14.0	14.1	14.1	0.0	15.0
			50	56	22.9	23.2	23.2	0.5	24.0	14.0	14.2	14.2	0.0	15.0
			100	0	22.8	23.3	23.2	0.5	24.0	13.9	14.2	14.0	0.0	15.0
		QPSK	1	1	23.6	24.1	24.1	0.0	24.5	13.9	14.1	14.1	0.0	15.0
			1	53	23.8	24.2	24.2	0.0	24.5	13.9	13.8	14.0	0.0	15.0
			1	104	24.0	24.2	24.2	0.0	24.5	14.1	14.4	14.1	0.0	15.0
			50	0	22.7	23.3	23.2	1.0	23.5	14.0	14.0	14.4	0.0	15.0
			50	28	23.8	24.3	24.2	0.0	24.5	13.9	13.8	13.9	0.0	15.0
			50	56	22.9	23.2	23.2	1.0	23.5	14.0	14.0	14.0	0.0	15.0
			100	0	22.8	23.3	23.2	1.0	23.5	13.9	14.0	13.9	0.0	15.0
		16QAM	1	1	22.7	23.1	23.1	1.0	23.5	13.8	13.8	13.9	0.0	15.0
		64QAM	1	1	21.3	21.9	21.8	2.5	22.0	14.0	13.3	13.8	0.0	15.0
		256QAM	1	1	18.7	19.1	19.1	4.5	20.0	13.3	13.2	13.5	0.0	15.0
	CP-OFDM	QPSK	1	1	20.8	22.7	22.6	1.5	23.0	13.9	13.7	13.6	0.0	15.0

n66 Measured Results (continued)

BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					343500	349000	354500	MPR	Tune-up Limit	343500	349000	354500	MPR	Tune-up Limit
					1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.3	23.9	24.0	0.0	24.5	13.7	13.7	13.6	0.0	15.0
			1	40	23.6	24.0	24.0	0.0	24.5	13.5	13.7	13.8	0.0	15.0
			1	77	23.8	24.1	24.1	0.0	24.5	13.6	13.8	13.5	0.0	15.0
			36	0	22.8	23.3	23.2	0.5	24.0	13.7	13.8	13.8	0.0	15.0
			36	22	23.8	24.2	24.2	0.0	24.5	13.8	13.6	13.7	0.0	15.0
			36	43	23.0	23.3	23.2	0.5	24.0	13.9	13.9	13.9	0.0	15.0
			75	0	22.9	23.3	23.2	0.5	24.0	13.8	14.0	14.0	0.0	15.0
		QPSK	1	1	23.6	24.1	24.1	0.0	24.5	13.7	13.8	13.9	0.0	15.0
			1	40	23.8	24.2	24.1	0.0	24.5	13.8	13.7	13.6	0.0	15.0
			1	77	23.9	24.2	24.1	0.0	24.5	13.9	13.8	13.8	0.0	15.0
			36	0	22.8	23.3	23.3	1.0	23.5	13.8	13.9	13.7	0.0	15.0
			36	22	23.8	24.2	24.2	0.0	24.5	13.7	13.7	14.0	0.0	15.0
			36	43	23.0	23.3	23.2	1.0	23.5	13.7	13.8	13.9	0.0	15.0
			75	0	22.9	23.3	23.2	1.0	23.5	13.9	13.8	13.5	0.0	15.0
		16QAM	1	1	22.6	23.1	23.2	1.0	23.5	13.6	13.6	13.9	0.0	15.0
		64QAM	1	1	21.3	21.8	21.8	2.5	22.0	13.5	13.5	13.5	0.0	15.0
		256QAM	1	1	18.6	19.1	19.2	4.5	20.0	13.3	13.3	13.3	0.0	15.0
	CP-OFDM	QPSK	1	1	22.1	22.6	22.7	1.5	23.0	13.1	13.3	13.3	0.0	15.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					343000	349000	355000	MPR	Tune-up Limit	343000	349000	355000	MPR	Tune-up Limit
					1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.6	23.8	24.0	0.0	24.5	13.9	13.8	13.9	0.0	15.0
			1	26	23.6	24.0	24.0	0.0	24.5	13.6	13.9	13.7	0.0	15.0
			1	50	23.7	24.0	24.0	0.0	24.5	13.5	13.9	13.7	0.0	15.0
			25	0	22.7	23.0	23.1	0.5	24.0	13.9	13.8	14.0	0.0	15.0
			25	14	23.7	24.2	24.1	0.0	24.5	13.7	13.8	13.8	0.0	15.0
			25	27	22.8	23.1	23.1	0.5	24.0	13.8	14.0	14.1	0.0	15.0
			50	0	22.7	23.1	23.1	0.5	24.0	13.7	14.0	13.9	0.0	15.0
		QPSK	1	1	23.7	24.0	24.1	0.0	24.5	13.8	14.0	13.9	0.0	15.0
			1	26	23.7	24.1	24.1	0.0	24.5	14.0	14.0	13.8	0.0	15.0
			1	50	23.7	24.1	24.1	0.0	24.5	13.9	13.9	13.9	0.0	15.0
			25	0	22.7	23.0	23.2	1.0	23.5	13.5	13.7	13.8	0.0	15.0
			25	14	23.7	24.1	24.1	0.0	24.5	13.7	13.6	13.7	0.0	15.0
			25	27	22.8	23.1	23.1	1.0	23.5	13.9	13.9	13.6	0.0	15.0
			50	0	22.7	23.1	23.1	1.0	23.5	13.6	13.7	13.7	0.0	15.0
		16QAM	1	1	22.7	23.0	23.1	1.0	23.5	13.3	13.5	13.3	0.0	15.0
		64QAM	1	1	21.4	21.7	21.8	2.5	22.0	13.5	13.4	13.4	0.0	15.0
		256QAM	1	1	18.7	19.0	19.1	4.5	20.0	13.3	13.3	13.0	0.0	15.0
	CP-OFDM	QPSK	1	1	22.2	22.5	22.1	1.5	23.0	13.3	13.2	13.1	0.0	15.0
BW (MHz)	Modulation	Mode	RB Allocation	RB offset	Max Average Power (dBm)					Reduced Average Power (dBm)				
					342500	349000	355500	MPR	Tune-up Limit	342500	349000	355500	MPR	Tune-up Limit
					1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	DFT-s-OFDM	π/2 BPSK	1	1	23.3	23.8	22.9	0.0	24.5	13.7	13.8	13.6	0.0	15.0
			1	13	23.3	24.0	24.0	0.0	24.5	13.8	13.8	13.8	0.0	15.0
			1	23	23.4	23.9	23.9	0.0	24.5	13.8	13.8	13.8	0.0	15.0
			12	0	22.6	23.1	23.1	0.5	24.0	13.9	14.1	13.9	0.0	15.0
			12	7	23.6	24.1	24.1	0.0	24.5	13.9	14.1	14.2	0.0	15.0
			12	13	22.7	23.1	23.1	0.5	24.0	14.0	14.2	14.3	0.0	15.0
			25	0	22.6	23.1	23.1	0.5	24.0	14.0	14.3	14.4	0.0	15.0
		QPSK	1	1	23.6	24.0	24.0	0.0	24.5	14.0	14.3	14.2	0.0	15.0
			1	13	23.6	24.1	24.1	0.0	24.5	14.0	14.4	14.4	0.0	15.0
			1	23	23.6	24.1	24.0	0.0	24.5	13.9	14.3	14.4	0.0	15.0
			12	0	22.7	23.1	23.1	1.0	23.5	13.9	14.4	14.3	0.0	15.0
			12	7	23.6	24.1	24.0	0.0	24.5	14.0	14.4	14.4	0.0	15.0
			12	13	22.7	23.2	23.1	1.0	23.5	14.0	14.4	14.3	0.0	15.0
			25	0	22.6	23.1	23.1	1.0	23.5	13.9	14.4	14.4	0.0	15.0
		16QAM	1	1	22.6	23.0	23.1	1.0	23.5	13.9	14.2	14.1	0.0	15.0
		64QAM	1	1	21.3	21.7	21.8	2.5	22.0	14.1	14.3	14.3	0.0	15.0
		256QAM	1	1	18.6	19.0	18.2	4.5	20.0	13.5	13.8	13.7	0.0	15.0
	CP-OFDM	QPSK	1	1	22.0	22.5	22.5	1.5	23.0	14.0	13.8	14.1	0.0	15.0

9.5. Wi-Fi 2.4GHz (DTS Band)

Maximum Output Power (Tune-up Limit) for Wi-Fi 2.4 GHz

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11b/g/n mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Mode	Tune-up Power Limit (dBm)			
	BT/WIFI1 Antenna		BT/WIFI2 Antenna	
	Max	Reduced	Max	Reduced
802.11b DSSS SISO			19.0	12.0
802.11g/n/ax OFDMA SISO	18.0	12.0	18.0	12.0
802.11b DSSS MIMO	19.0	12.0	19.0	12.0
802.11g/n/ax OFDMA MIMO	18.0	12.0	18.0	12.0

Wi-Fi 2.4GHz Max Power SISO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
DSSS 2.4 GHz	802.11b	1	2412				18.6	19.0	Yes
		6	2437				18.6	19.0	
		11	2462				18.6	19.0	
		12	2467				2.8	3.0	
		13	2472				-0.4	0.0	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

Wi-Fi 2.4GHz Reduced Power SISO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
DSSS 2.4 GHz	802.11b	1	2412				11.6	12.0	Yes
		6	2437				11.9	12.0	
		11	2462				11.5	12.0	
		12	2467				2.7	3.0	
		13	2472				-0.3	0.0	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

Wi-Fi 2.4GHz Max Power MIMO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
DSSS 2.4 GHz	802.11b	1	2412	18.5	19.0	Yes	18.7	19.0	Yes
		6	2437	18.0	19.0		18.6	19.0	
		11	2462	18.4	19.0		19.0	19.0	
		12	2467	0.7	3.0		2.9	3.0	
		13	2472	-2.2	0.0		-0.1	0.0	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

Wi-Fi 2.4GHz Reduced MIMO Power Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
DSSS 2.4 GHz	802.11b	1	2412	11.5	12.0	Yes	11.5	12.0	Yes
		6	2437	11.8	12.0		12.0	12.0	
		11	2462	11.6	12.0		11.8	12.0	
		12	2467	0.7	3.0		2.9	3.0	
		13	2472	-2.2	0.0		-0.1	0.0	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

Duty Factor Measured Results

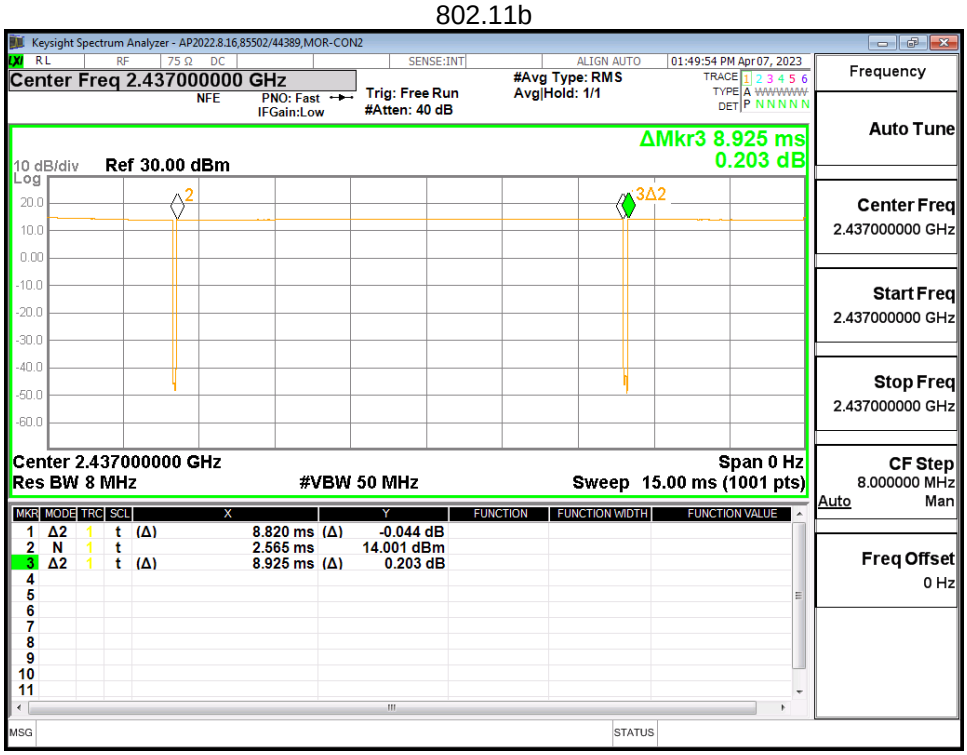
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
802.11b	1 Mbps	8.820	8.925	98.8%	1.01

Note(s):

Duty Cycle = (T on / period) * 100%

WLAN 2.4GHz Duty Cycle

802.11b



9.6. Wi-Fi 5GHz (U-NII Bands)

Maximum Output Power (Tune-up Limit) for Wi-Fi 5 GHz

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 transmission mode is selected.

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

Mode	Bandwidth	Tune-up Power Limit (dBm)			
		BT/WIFI1 Antenna		BT/WIFI2 Antenna	
		Max	Reduced	Max	Reduced
802.11a/n/ac/ax MIMO 5200MHz	20/40 MHz	17.0	8.0	17.0	8.0
	80 MHz	16.0	8.0	16.0	8.0
	160 MHz	15.0	8.0	15.0	8.0
802.11a/n/ac/ax MIMO 5300MHz	20/40 MHz	17.0	8.0	17.0	8.0
	80 MHz	16.0	8.0	16.0	8.0
	160 MHz	15.0	8.0	15.0	8.0
802.11a/n/ac/ax MIMO 5500MHz	20/40 MHz	17.0	8.0	17.0	8.0
	80 MHz	16.0	8.0	16.0	8.0
	160 MHz	15.0	8.0	15.0	8.0
802.11a/n/ac/ax MIMO 5800MHz	20/40 MHz	17.0	9.0	17.0	9.0
	80 MHz	16.0	9.0	16.0	9.0
	160 MHz	15.0	9.0	15.0	9.0
802.11a/n/ac/ax MIMO 5900MHz	20/40 MHz	17.0	8.0	17.0	9.0
	80 MHz	16.0	8.0	16.0	9.0
	160 MHz	15.0	8.0	15.0	9.0

Wi-Fi 5 GHz Max Power MIMO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-2A 5.3 GHz	802.11n (HT40)	54	5270	16.9	17.0	Yes	15.3	17.0	Yes
		62	5310	16.9	17.0		15.6	17.0	
Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-2C 5.5 GHz	802.11n (HT40)	102	5510	17.0	17.0	Yes	16.1	17.0	Yes
		118	5590	17.0	17.0		16.2	17.0	
		126	5630	16.9	17.0		16.2	17.0	
		142	5710	16.7	17.0		15.8	17.0	
Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-3 5.8 GHz	802.11n (HT40)	151	5755	15.7	17.0	Yes	17.0	17.0	Yes
		159	5795	15.4	17.0		17.0	17.0	
UNII-3 & 4	802.11n (HT40)	167	5835	15.5	17.0	Yes	16.8	17.0	Yes
Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-4 5.9 GHz	802.11n (HT40)	175	5875	15.6	17.0	Yes	17.0	17.0	Yes

Wi-Fi 5 GHz Reduced Power MIMO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-1 & 2A	802.11ac (VHT160)	50	5250	7.9	8.0	Yes	7.0	8.0	Yes
Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-2C 5.5 GHz	802.11ac (VHT160)	114	5570	8.0	8.0	Yes	7.2	8.0	Yes
Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-3 5.8 GHz	802.11ac (VHT80)	155	5775	8.8	9.0	Yes	8.5	9.0	Yes
UNII-3 & 4	802.11ac (VHT160)	163	5815	7.3	8.0	Yes	9.0	9.0	Yes

Duty Factor Measured Results

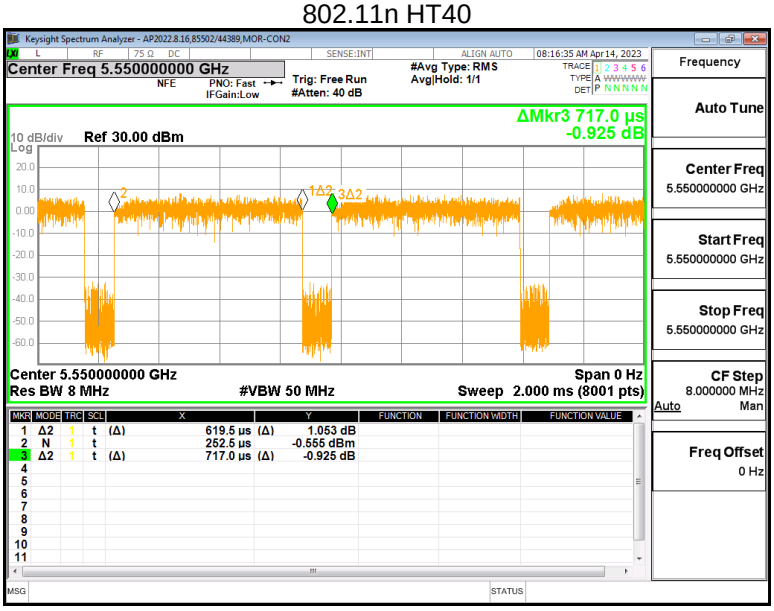
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
802.11n HT40	MCS0	0.6195	0.717	86.4%	1.16
802.11ac VHT80	MCS0	3.62	3.716	97.4%	1.03
802.11ac VHT160	MCS0	3.624	3.720	97.4%	1.03

Note(s):

Duty Cycle = (T on / period) * 100%

WLAN 5GHz Duty Cycle

802.11n HT40



802.11ac VHT80

802.11ac VHT160

9.7. Wi-Fi 6 GHz Band (U-NII Bands)

Maximum Output Power (Tune-up Limit) for Wi-Fi 6 GHz

Mode	Bandwidth	Tune-up Power Limit (dBm)			
		BT/WIFI1 Antenna		BT/WIFI2 Antenna	
		Max	Reduced	Max	Reduced
802.11a/ax MIMO	20 MHz	10.0	8.0	10.0	8.0
802.11ax MIMO	40 MHz	10.0	8.0	10.0	8.0
802.11ax MIMO	80 MHz	10.0	8.0	10.0	8.0
802.11ax MIMO	160 MHz	10.0	8.0	10.0	8.0

Wi-Fi 6 GHz Max Power MIMO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-5 & 6 & 7 & 8	802.11ax (HE160)	15	6025	8.1	10.0	Yes	9.8	10.0	Yes
		47	6185	9.9	10.0		9.5	10.0	
		111	6505	8.0	10.0		10.0	10.0	
		143	6665	8.0	10.0		9.8	10.0	
		207	6985	10.0	10.0		9.1	10.0	

Wi-Fi 6 GHz Reduced Power MIMO Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-5 & 6 & 7 & 8	802.11ax (HE160)	15	6025	7.1	8.0	Yes	8.0	8.0	Yes
		47	6185	7.8	8.0		7.1	8.0	
		111	6505	6.8	8.0		8.0	8.0	
		143	6665	7.8	8.0		8.0	8.0	
		207	6985	7.8	8.0		6.9	8.0	

Duty Factor Measured Results

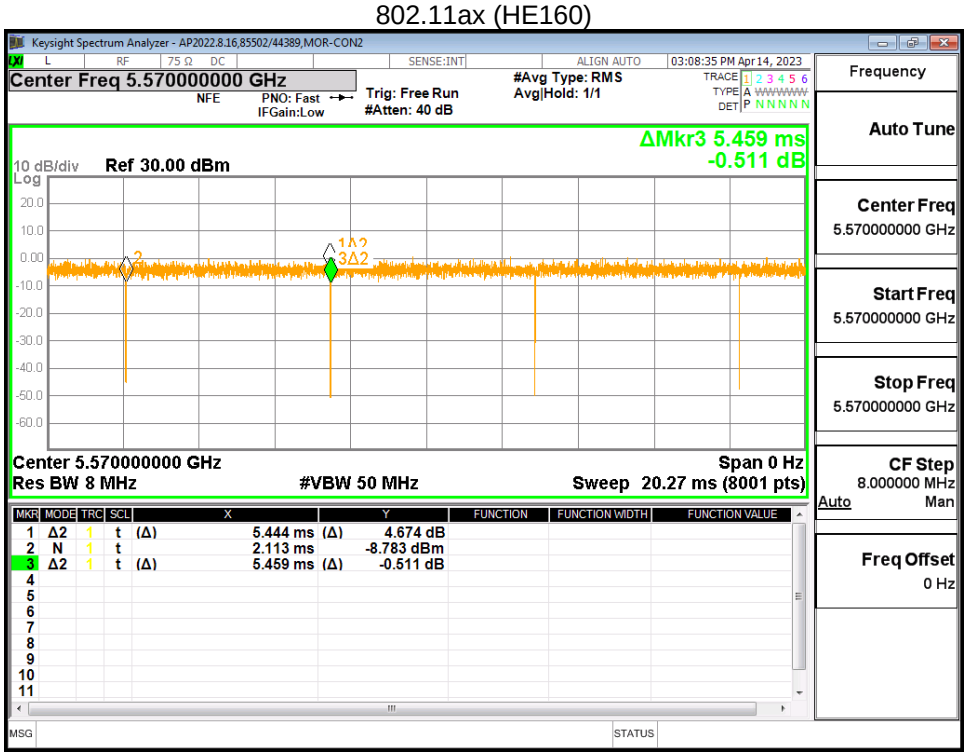
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
802.11ax	MCS0	5.444	5.459	99.7%	1.00

Note(s):

Duty Cycle = (T on / period) * 100%

WLAN 6GHz Duty Cycle

802.11ax (HE160)



9.8. Bluetooth

Maximum Output Power (Tune-up Limit) for Bluetooth

From October 2016 TCB workshop, Power and SAR were measured with the device connected to a call box with hopping disabled using DH5 modulation. The duty cycle value from the device is taken from the Duty Cycle plot below.

SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

Band	Mode	Freq.	Tune-up Power Limit (dBm)			
			BT/WIFI1 Antenna		BT/WIFI2 Antenna	
			Max	Reduced	Max	Reduced
2.4	BR	2402	18.0	17.0	11.0	9.0
		2440	18.0	17.0	11.0	9.0
		2480	17.0	16.0	10.0	8.0
	EDR	2402	16.5	15.0	11.0	9.0
		2440	16.5	15.0	11.0	9.0
		2480	15.5	14.0	10.0	8.0
	BLE (1M, 2M)	2402	14.0	13.0	10.0	8.0
		2440	14.0	13.0	10.0	8.0
		2480	13.0	12.0	9.0	7.0
	BLE (125k, 500k)	2402	10.0	8.0	10.0	8.0
		2440	10.0	8.0	10.0	8.0
		2480	9.0	7.0	9.0	7.0

Bluetooth Max Power Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
2.4	BR GFSK	0	2402	16.2	18.0	Yes	15.0	17.0	Yes
		39	2441	16.5	18.0		15.2	17.0	
		78	2480	15.2	17.0		14.3	16.0	

Bluetooth Reduced Power Measured Results

Band	Mode	Ch #	Freq. (MHz)	BT/WIFI1 Average Power (dBm)			BT/WIFI2 Average Power (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
2.4	BR GFSK	0	2402	9.1	11.0	Yes	7.2	9.0	Yes
		39	2441	9.3	11.0		7.1	9.0	
		78	2480	8.2	10.0		6.6	8.0	

Duty Factor Measured Results

Mode	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
BR GFSK	2.87	3.750	76.5%	1.31

Note(s):

Duty Cycle = (T on / period) * 100%

Bluetooth Duty Cycle

BT BR GFSK

10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for WWAN and Bluetooth = Measured SAR *Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi = Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 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

KDB 648474 D04 Handset SAR:

With headset attached, 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.

KDB 648474 D04 Handset SAR (Phablet Only):

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm.
When hotspot mode does not apply, 10-g Extremity SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is > 0.8 W/kg, testing for other Channels 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.
- For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. 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; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported* SAR for the *initial test position* is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported* SAR is ≤ 0.8 W/kg or all required test positions are tested.
  - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.
  - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the *initial test position*, Area Scans were performed to determine the position with the *Maximum Value of SAR (measured)*. The position that produced the highest *Maximum Value of SAR* is considered the worst case position; thus used as the *initial test position*.

10.1. GSM850

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	GPRS 2 Slots	Main1	Max	21	Back	190	836.6	32.0	31.7	0.494	0.529	1
				26	Edge Top	190	836.6	32.0	31.7	0.346	0.371	
				11	Edge Right	190	836.6	32.0	31.7	0.121	0.130	
				0	Edge Left	190	836.6	32.0	31.7	0.186	0.199	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	GPRS 3 Slots	Main1	Reduced	0	Back	190	836.6	18.8	17.7	0.212	0.273	
					Edge Top	190	836.6	18.8	17.7	0.275	0.354	2
					Edge Right	190	836.6	18.8	17.7	0.025	0.032	
					Edge Left	190	836.6	18.8	17.7	0.065	0.084	

10.2. GSM1900

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	GPRS 2 Slots	Main1	Max	21	Back	810	1909.8	29.0	27.9	0.180	0.232	
				26	Edge Top	810	1909.8	29.0	27.9	0.169	0.218	
				11	Edge Right	810	1909.8	29.0	27.9	0.051	0.066	
				0	Edge Left	810	1909.8	29.0	27.9	0.212	0.273	3
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	GPRS 3 Slots	Main1	Reduced	0	Back	661	1880.0	16.3	15.2	0.323	0.416	
					Edge Top	661	1880.0	16.3	15.2	0.327	0.421	4
					Edge Right	661	1880.0	16.3	15.2	0.022	0.028	
					Edge Left	661	1880.0	16.3	15.2	0.005	0.006	

10.3. W-CDMA Band II

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Max	21	Back	9262	1852.4	24.5	24.4	0.596	0.610	5
				26	Edge Top	9262	1852.4	24.5	24.4	0.394	0.403	
				11	Edge Right	9262	1852.4	24.5	24.4	0.122	0.125	
				0	Edge Left	9262	1852.4	24.5	24.4	0.297	0.304	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Reduced	0	Back	9262	1852.4	15.0	14.7	0.879	0.942	
						9400	1880.0	15.0	14.7	0.862	0.924	
						9538	1907.6	15.0	14.9	0.866	0.886	
					Edge Top	9262	1852.4	15.0	14.7	1.010	1.082	6
						9400	1880.0	15.0	14.7	0.906	0.971	
						9538	1907.6	15.0	14.9	0.924	0.946	
					Edge Right	9400	1880.0	15.0	14.7	0.075	0.080	
					Edge Left	9400	1880.0	15.0	14.7	0.016	0.017	

10.4. W-CDMA Band IV

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Max	21	Back	1513	1752.6	24.5	24.4	0.356	0.364	
				26	Edge Top	1513	1752.6	24.5	24.4	0.254	0.260	
				11	Edge Right	1513	1752.6	24.5	24.4	0.137	0.140	
				0	Edge Left	1513	1752.6	24.5	24.4	0.412	0.422	7
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Reduced	0	Back	1413	1732.6	15.5	14.9	0.630	0.723	
					Edge Top	1312	1712.4	15.5	14.9	0.835	0.959	
						1413	1732.6	15.5	14.9	0.880	1.010	
						1513	1752.6	15.5	15.1	1.090	**1.195**	8
					Edge Right	1413	1732.6	15.5	14.9	0.039	0.045	
					Edge Left	1413	1732.6	15.5	14.9	0.031	0.036	

10.5. W-CDMA Band V

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Max	21	Back	4183	836.6	24.5	24.0	0.344	0.386	9
				26	Edge Top	4183	836.6	24.5	24.0	0.215	0.241	
				11	Edge Right	4183	836.6	24.5	24.0	0.097	0.109	
				0	Edge Left	4183	836.6	24.5	24.0	0.130	0.146	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	Rel 99 RMC 12.2 kbps	Main1	Reduced	0	Back	4183	836.6	15.0	14.5	0.462	0.518	
					Edge Top	4183	836.6	15.0	14.5	0.515	0.578	10
					Edge Right	4183	836.6	15.0	14.5	0.026	0.029	
					Edge Left	4183	836.6	15.0	14.5	0.017	0.019	

10.6. LTE Band 2 (20MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	19100	1900.0	1	99	24.5	23.8	0.415	0.488	11
								50	50	23.5	22.9	0.348	0.400	
				26	Edge Top	19100	1900.0	1	99	24.5	23.8	0.370	0.435	
								50	50	23.5	22.9	0.312	0.358	
				11	Edge Right	19100	1900.0	1	99	24.5	23.8	0.107	0.126	
								50	50	23.5	22.9	0.090	0.103	
				0	Edge Left	19100	1900.0	1	99	24.5	23.8	0.175	0.206	
								50	50	23.5	22.9	0.143	0.164	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	18700	1860.0	1	49	15.0	14.3	0.779	0.915	12
								50	24	15.0	14.4	0.754	0.866	
								100	0	15.0	14.4	0.781	0.897	
						18900	1880.0	1	0	15.0	14.3	0.755	0.887	
								50	0	15.0	14.3	0.776	0.912	
						19100	1900.0	1	0	15.0	14.3	0.760	0.893	
								50	50	15.0	14.4	0.728	0.836	
					Edge Top	18700	1860.0	1	49	15.0	14.3	0.731	0.859	
								50	24	15.0	14.4	0.763	0.876	
								100	0	15.0	14.4	0.715	0.821	
						18900	1880.0	1	0	15.0	14.3	0.712	0.837	
								50	0	15.0	14.3	0.698	0.820	
						19100	1900.0	1	0	15.0	14.3	0.760	0.893	
								50	50	15.0	14.4	0.728	0.836	
					Edge Right	18900	1880.0	1	0	15.0	14.3	0.085	0.100	
						19100	1900.0	50	50	15.0	14.4	0.089	0.102	
					Edge Left	18900	1880.0	1	0	15.0	14.3	0.021	0.025	
						19100	1900.0	50	50	15.0	14.4	0.016	0.018	

10.7. LTE Band 5 (10MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	20525	836.5	1	0	24.5	23.8	0.337	0.396	13
								25	0	23.5	22.8	0.273	0.321	
				26	Edge Top	20525	836.5	1	0	24.5	23.8	0.201	0.236	
								25	0	23.5	22.8	0.168	0.197	
				11	Edge Right	20525	836.5	1	0	24.5	23.8	0.072	0.085	
								25	0	23.5	22.8	0.060	0.070	
				0	Edge Left	20525	836.5	1	0	24.5	23.8	0.065	0.076	
								25	0	23.5	22.8	0.049	0.058	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	20525	836.5	1	25	15.0	14.2	0.426	0.512	
								25	0	15.0	14.1	0.411	0.506	
					Edge Top	20525	836.5	1	25	15.0	14.2	0.525	0.631	14
								25	0	15.0	14.1	0.509	0.626	
					Edge Right	20525	836.5	1	25	15.0	14.2	0.026	0.031	
								25	0	15.0	14.1	0.025	0.031	
					Edge Left	20525	836.5	1	25	15.0	14.2	0.060	0.072	
								25	0	15.0	14.1	0.044	0.054	

10.8. LTE Band 12 (10MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	23095	707.5	1	49	24.5	24.3	0.224	0.235	15
								25	12	23.5	23.2	0.213	0.228	
				26	Edge Top	23095	707.5	1	49	24.5	24.3	0.159	0.166	
								25	12	23.5	23.2	0.129	0.138	
				11	Edge Right	23095	707.5	1	49	24.5	24.3	0.052	0.054	
								25	12	23.5	23.2	0.039	0.042	
				0	Edge Left	23095	707.5	1	49	24.5	24.3	0.137	0.143	
								25	12	23.5	23.2	0.107	0.115	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	23095	707.5	1	25	15.0	14.5	0.420	0.471	16
								25	25	15.0	14.5	0.406	0.456	
					Edge Top	23095	707.5	1	25	15.0	14.5	0.403	0.452	
								25	25	15.0	14.5	0.395	0.443	
					Edge Right	23095	707.5	1	25	15.0	14.5	0.019	0.021	
								25	25	15.0	14.5	0.019	0.021	
					Edge Left	23095	707.5	1	25	15.0	14.5	0.029	0.033	
								25	25	15.0	14.5	0.029	0.033	

10.9. LTE Band 13 (10MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	23230	782.0	1	0	24.5	23.5	0.325	0.409	17
								25	12	23.5	22.4	0.258	0.332	
				26	Edge Top	23230	782.0	1	0	24.5	23.5	0.260	0.327	
								25	12	23.5	22.4	0.208	0.268	
				11	Edge Right	23230	782.0	1	0	24.5	23.5	0.053	0.067	
								25	12	23.5	22.4	0.044	0.057	
				0	Edge Left	23230	782.0	1	0	24.5	23.5	0.257	0.324	
								25	12	23.5	22.4	0.212	0.273	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	23230	782.0	1	0	15.0	13.7	0.352	0.475	
								25	0	15.0	13.7	0.353	0.476	18
					Edge Top	23230	782.0	1	0	15.0	13.7	0.349	0.471	
								25	0	15.0	13.7	0.350	0.472	
					Edge Right	23230	782.0	1	0	15.0	13.7	0.019	0.026	
								25	0	15.0	13.7	0.019	0.026	
					Edge Left	23230	782.0	1	0	15.0	13.7	0.050	0.067	
								25	0	15.0	13.7	0.050	0.067	

10.10. LTE Band 25 (20MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	26140	1860.0	1	0	24.5	23.8	0.457	0.537	19
								50	0	23.5	22.9	0.395	0.454	
				26	Edge Top	26140	1860.0	1	0	24.5	23.8	0.351	0.412	
								50	0	23.5	22.9	0.272	0.312	
				11	Edge Right	26140	1860.0	1	0	24.5	23.8	0.099	0.116	
								50	0	23.5	22.9	0.085	0.098	
				0	Edge Left	26140	1860.0	1	0	24.5	23.8	0.256	0.301	
								50	0	23.5	22.9	0.200	0.230	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	26140	1860.0	1	0	15.0	14.2	0.702	0.844	
								50	0	15.0	14.3	0.717	0.839	
					Edge Top	26140	1860.0	1	0	15.0	14.2	0.906	1.089	
								50	0	15.0	14.3	0.892	1.043	
								100	0	15.0	14.1	0.876	1.078	
						26365	1882.5	1	0	15.0	13.9	0.845	1.089	
								50	0	15.0	14.3	0.980	1.162	
						26590	1905.0	1	0	15.0	14.1	0.947	1.165	20
								50	0	15.0	14.2	0.964	1.159	
					Edge Right	26140	1860.0	1	0	15.0	14.2	0.041	0.049	
								50	0	15.0	14.2	0.041	0.049	
					Edge Left	26140	1860.0	1	0	15.0	14.2	0.021	0.025	
								50	0	15.0	14.2	0.027	0.032	

10.11. LTE Band 26 (15MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	26865	831.5	1	37	24.5	23.6	0.331	0.407	21
								36	39	23.5	22.7	0.280	0.337	
				26	Edge Top	26865	831.5	1	37	24.5	23.6	0.190	0.234	
								36	39	23.5	22.7	0.167	0.201	
				11	Edge Right	26865	831.5	1	37	24.5	23.6	0.080	0.098	
								36	39	23.5	22.7	0.069	0.083	
				0	Edge Left	26865	831.5	1	37	24.5	23.6	0.105	0.129	
								36	39	23.5	22.7	0.091	0.109	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	26865	831.5	1	0	15.0	13.5	0.373	0.527	
								36	0	15.0	13.6	0.384	0.530	
					Edge Top	26865	831.5	1	0	15.0	13.5	0.528	0.746	22
								36	0	15.0	13.6	0.540	0.745	
					Edge Right	26865	831.5	1	0	15.0	13.5	0.020	0.028	
								36	0	15.0	13.6	0.019	0.026	
					Edge Left	26865	831.5	1	0	15.0	13.5	0.021	0.030	
								36	0	15.0	13.6	0.018	0.025	

10.12. LTE Band 41 (20MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK PC 3	Main1	Max	21	Back	39750	2506.0	1	0	24.5	23.9	0.083	0.095	
								50	0	23.5	22.9	0.070	0.080	
				26	Edge Top	39750	2506.0	1	0	24.5	23.9	0.108	0.124	
								50	0	23.5	22.9	0.089	0.102	
				11	Edge Right	39750	2506.0	1	0	24.5	23.9	0.042	0.048	
								50	0	23.5	22.9	0.033	0.038	
				0	Edge Left	39750	2506.0	1	0	24.5	23.9	0.119	0.137	23
								50	0	23.5	22.9	0.097	0.111	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK PC 2 (HPUE)	Main1	Max	21	Back	40185	2549.5	1	49	26.0	24.8	0.095	0.125	
								50	0	25.0	23.8	0.075	0.099	
				26	Edge Top	40185	2549.5	1	49	26.0	24.8	0.133	0.175	24
								50	0	25.0	23.8	0.103	0.136	
				11	Edge Right	40185	2549.5	1	49	26.0	24.8	0.040	0.053	
								50	0	25.0	23.8	0.031	0.041	
				0	Edge Left	40185	2549.5	1	49	26.0	24.8	0.105	0.138	
								50	0	25.0	23.8	0.086	0.113	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK PC 3	Main1	Reduced	0	Back	39750	2506.0	1	49	16.0	15.4	0.556	0.638	
								50	0	16.0	15.5	0.567	0.636	
						40185	2549.5	1	49	16.0	15.3	0.567	0.666	
								50	24	16.0	15.3	0.586	0.688	
						40620	2593.0	1	99	16.0	15.4	0.538	0.618	
								50	24	16.0	15.4	0.688	0.790	
						41055	2636.5	1	99	16.0	15.4	0.520	0.597	
								50	24	16.0	15.5	0.571	0.641	
						41490	2680.0	1	99	16.0	15.4	0.529	0.607	
								50	24	16.0	15.3	0.527	0.619	
					Edge Top	39750	2506.0	1	49	16.0	15.4	0.797	0.915	
								50	0	16.0	15.5	0.906	1.017	
						40185	2549.5	1	49	16.0	15.3	0.906	1.064	
								50	24	16.0	15.3	0.836	0.982	
						40620	2593.0	1	99	16.0	15.4	0.890	1.022	
								50	24	16.0	15.4	0.871	1.000	
						41055	2636.5	1	99	16.0	15.4	0.946	1.086	25
								50	24	16.0	15.5	0.959	1.076	
								100	0	16.0	15.5	0.876	0.983	
						41490	2680.0	1	99	16.0	15.4	0.849	0.975	
								50	24	16.0	15.3	0.842	0.989	
					Edge Right	40620	2593.0	1	99	16.0	15.4	0.033	0.038	
						41055	2636.5	50	24	16.0	15.5	0.036	0.040	
					Edge Left	40620	2593.0	1	99	16.0	15.4	0.021	0.024	
						41055	2636.5	50	24	16.0	15.5	0.025	0.028	

10.13. LTE Band 66 (20MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Max	21	Back	132572	1770.0	1	0	24.5	24.0	0.310	0.348	
								50	24	23.5	23.1	0.255	0.280	
				26	Edge Top	132572	1770.0	1	0	24.5	24.0	0.332	0.373	
								50	24	23.5	23.1	0.272	0.298	
				11	Edge Right	132572	1770.0	1	0	24.5	24.0	0.097	0.109	
								50	24	23.5	23.1	0.081	0.089	
				0	Edge Left	132572	1770.0	1	0	24.5	24.0	0.358	0.402	26
								50	24	23.5	23.1	0.284	0.311	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	QPSK	Main1	Reduced	0	Back	132072	1720.0	1	99	15.0	14.3	0.737	0.868	
								50	50	15.0	14.3	0.738	0.877	
						132322	1745.0	1	99	15.0	14.3	0.743	0.865	
								50	50	15.0	14.6	0.746	0.818	
								100	0	15.0	14.3	0.767	0.899	
						132572	1770.0	1	49	15.0	14.2	0.852	1.017	
								50	24	15.0	14.6	0.844	0.925	
					Edge Top	132072	1720.0	50	50	15.0	14.3	0.818	0.972	
						132322	1745.0	1	99	15.0	14.3	0.660	0.768	
								50	50	15.0	14.6	0.735	0.806	
								100	0	15.0	14.3	0.732	0.858	
						132572	1770.0	50	24	15.0	14.6	1.060	1.162	27
					Edge Right	132322	1745.0	1	99	15.0	14.3	0.133	0.155	
								50	50	15.0	14.6	0.133	0.146	
					Edge Left	132322	1745.0	1	99	15.0	14.3	0.033	0.038	
								50	50	15.0	14.6	0.033	0.036	

10.14. NR Band 5 (20MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	DFT-s-OFDM QPSK	Main1	Max	21	Back	167300	836.5	1	1	25.0	24.6	0.382	0.419	
								50	28	25.0	24.6	0.417	0.457	28
				26	Edge Top	167300	836.5	1	1	25.0	24.6	0.205	0.225	
								50	28	25.0	24.6	0.229	0.251	
				11	Edge Right	167300	836.5	1	1	25.0	24.6	0.074	0.081	
								50	28	25.0	24.6	0.085	0.093	
				0	Edge Left	167300	836.5	1	1	25.0	24.6	0.224	0.246	
								50	28	25.0	24.6	0.168	0.184	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	DFT-s-OFDM QPSK	Main1	Reduced	0	Back	167300	836.5	1	1	15.0	14.5	0.409	0.459	
								50	28	15.0	14.2	0.368	0.442	
					Edge Top	167300	836.5	1	1	15.0	14.5	0.485	0.544	
								50	28	15.0	14.2	0.517	0.622	29
					Edge Right	167300	836.5	1	1	15.0	14.5	0.019	0.021	
								50	28	15.0	14.2	0.022	0.026	
					Edge Left	167300	836.5	1	1	15.0	14.5	0.02	0.022	
								50	28	15.0	14.2	0.017	0.020	

10.15. NR Band 66 (40MHz Bandwidth)

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	DFT-s-OFDM QPSK	Main1	Max	21	Back	349000	1745.0	1	108	24.5	24.2	0.387	0.415	
								108	54	24.5	24.2	0.377	0.404	
				26	Edge Top	349000	1745.0	1	108	24.5	24.2	0.308	0.330	
								108	54	24.5	24.2	0.307	0.329	
				11	Edge Right	349000	1745.0	1	108	24.5	24.2	0.128	0.137	
								108	54	24.5	24.2	0.128	0.137	
				0	Edge Left	349000	1745.0	1	108	24.5	24.2	0.391	0.419	
								108	54	24.5	24.2	0.392	0.420	30
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	DFT-s-OFDM QPSK	Main1	Reduced	0	Back	346000	1730.0	1	1	15.0	14.2	0.733	0.881	
								108	54	15.0	14.4	0.759	0.871	
						349000	1745.0	1	1	15.0	14.4	0.760	0.873	
								108	54	15.0	14.6	0.789	0.865	
								216	0	15.0	14.3	0.789	0.927	
						352000	1760.0	1	108	15.0	14.5	0.878	0.985	
								108	54	15.0	14.5	0.883	0.991	
					Edge Top	349000	1745.0	108	54	15.0	14.6	0.662	0.726	
						352000	1760.0	1	108	15.0	14.5	0.901	1.011	31
					Edge Right	349000	1745.0	108	54	15.0	14.6	0.054	0.059	
						352000	1760.0	1	108	15.0	14.5	0.046	0.052	
					Edge Left	349000	1745.0	108	54	15.0	14.6	0.043	0.047	
						352000	1760.0	1	108	15.0	14.5	0.044	0.049	

10.16. Wi-Fi (DTS Band)

When the 802.11b reported SAR of the highest measured maximum output power channel is ≤ 0.8 W/kg, no further SAR testing is required. If SAR is > 0.8 W/kg and ≤ 1.2 W/kg, SAR is required for the next highest measured output power channel. Finally, if SAR is > 1.2 W/kg, SAR is required for the third channel.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b MIMO	BT/WIFI1	Max	18	Back	11	2462	0.063	98.8%	19.0	18.4	0.062	0.072	
				22	Edge Top	11	2462	0.090	98.8%	19.0	18.4	0.091	0.106	
				11	Edge Right	11	2462	0.216	98.8%	19.0	18.4	0.217	0.252	32
				0	Edge Left	11	2462	-	98.8%	19.0	19.0			
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b SISO	BT/WIFI2	Max	18	Back	11	2462	0.060	98.8%	19.0	18.6	0.060	0.067	
				22	Edge Top	11	2462	0.022	98.8%	19.0	18.6	0.021	0.023	
				0	Edge Right	11	2462	-	98.8%	19.0	18.6			
				10	Edge Left	11	2462	0.201	98.8%	19.0	18.6	0.201	0.223	33
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b MIMO	BT/WIFI2	Max	18	Back	11	2462	0.063	98.8%	19.0	19.0	0.062	0.063	
				25	Edge Top	11	2462	0.069	98.8%	19.0	19.0	0.069	0.070	
				0	Edge Right	11	2462	-	98.8%	19.0	19.0			
				10	Edge Left	11	2462	0.229	98.8%	19.0	19.0	0.231	0.234	34
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b MIMO	BT/WIFI1	Reduced	0	Back	6	2437	0.717	98.8%	12.0	11.8	0.665	**0.705**	35
					Edge Top	6	2437	0.327	98.8%	12.0	11.8	0.356	0.377	
					Edge Right	6	2437	0.582	98.8%	12.0	11.8	0.562	0.596	
					Edge Left	6	2437	-	98.8%	12.0	11.8			
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b SISO	BT/WIFI2	Reduced	0	Back	6	2437	0.333	98.8%	12.0	11.9	0.344	0.356	36
					Edge Top	6	2437	0.131	98.8%	12.0	11.9	0.137	0.142	
					Edge Right	6	2437	-	98.8%	12.0	11.9			
					Edge Left	6	2437	0.226	98.8%	12.0	11.9	0.215	0.223	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11b MIMO	BT/WIFI2	Reduced	0	Back	6	2437	0.376	98.8%	12.0	12.0	0.400	0.405	37
					Edge Top	6	2437	0.147	98.8%	12.0	12.0	0.141	0.143	
					Edge Right	6	2437	-	98.8%	12.0	12.0			
					Edge Left	6	2437	0.244	98.8%	12.0	12.0	0.238	0.241	

Note(s):

For results listed with "-", the SAR result is less than 0.001 W/kg.

10.17. Wi-Fi (U-NII Band)

UNII-1 & 2A

When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest *reported* SAR for UNII band 2A is

- ≤ 1.2 W/kg, SAR is not required for UNII band I
- > 1.2 W/kg, both bands should be tested independently for SAR.

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40 MIMO	BT/WIFI1	Max	18	Back	62	5310	0.066	86.4%	17.0	16.9	0.059	0.070	
				22	Edge Top	62	5310	0.044	86.4%	17.0	16.9	0.041	0.049	
				11	Edge Right	62	5310	0.426	86.4%	17.0	16.9	0.425	0.503	38
				10	Edge Left	62	5310	-	86.4%	17.0	16.9	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40 MIMO	BT/WIFI2	Max	18	Back	62	5310	0.016	86.4%	17.0	15.6	0.013	0.021	
				22	Edge Top	62	5310	0.020	86.4%	17.0	15.6	0.020	0.032	
				11	Edge Right	62	5310	-	86.4%	17.0	15.6	-	-	
				10	Edge Left	62	5310	0.175	86.4%	17.0	15.6	0.182	0.291	39
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ac VHT160 MIMO	BT/WIFI1	Reduced	0	Back	50	5250	0.251	97.4%	8.0	7.9	0.353	0.371	
					Edge Top	50	5250	0.145	97.4%	8.0	7.9	0.140	0.147	
					Edge Right	50	5250	0.934	97.4%	8.0	7.9	0.972	1.021	40
					Edge Left	50	5250	-	97.4%	8.0	7.9	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ac VHT160 MIMO	BT/WIFI2	Reduced	0	Back	50	5250	0.396	97.4%	8.0	7.0	0.405	0.523	
					Edge Top	50	5250	0.028	97.4%	8.0	7.0	0.023	0.030	
					Edge Right	50	5250	-	97.4%	8.0	7.0	-	-	
					Edge Left	50	5250	0.448	97.4%	8.0	7.0	0.454	0.587	41

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

UNII-2C

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40	BT/WIFI1	Max	18	Back	118	5590	0.059	86.4%	17.0	17.0	0.064	0.074	
				22	Edge Top	118	5590	0.041	86.4%	17.0	17.0	0.028	0.032	
				11	Edge Right	118	5590	0.429	86.4%	17.0	17.0	0.446	0.516	42
				10	Edge Left	118	5590	0.124	86.4%	17.0	17.0	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40	BT/WIFI2	Max	18	Back	118	5590	0.065	86.4%	17.0	16.2	0.057	0.079	
				22	Edge Top	118	5590	0.063	86.4%	17.0	16.2	0.061	0.085	
				11	Edge Right	118	5590	0.429	86.4%	17.0	16.2	-	-	
				10	Edge Left	118	5590	0.124	86.4%	17.0	16.2	0.125	0.174	43
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan 1-g SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up	Meas.	Meas.	Scaled	
Body	802.11ac VHT160	BT/WIFI1	Reduced	0	Back	114	5570	0.406	97.4%	8.0	8.0	0.433	0.445	
					Edge Top	114	5570	0.084	97.4%	8.0	8.0	0.087	0.089	
					Edge Right	114	5570	0.700	97.4%	8.0	8.0	0.726	0.745	44
					Edge Left	114	5570	0.377	97.4%	8.0	8.0	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan 1-g SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up	Meas.	Meas.	Scaled	
Body	802.11ac VHT160	BT/WIFI2	Reduced	0	Back	114	5570	0.371	97.4%	8.0	7.2	0.648	0.800	45
					Edge Top	114	5570	0.091	97.4%	8.0	7.2	0.103	0.127	
					Edge Right	114	5570	0.700	97.4%	8.0	7.2	-	-	
					Edge Left	114	5570	0.377	97.4%	8.0	7.2	0.380	0.469	

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

UNII-3

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40 MIMO	BT/WIFI1	Max	18	Back	151	5755	0.040	86.4%	17.0	15.7	0.039	0.061	
				22	Edge Top	151	5755	0.035	86.4%	17.0	15.7	0.030	0.047	
				11	Edge Right	151	5755	0.313	86.4%	17.0	15.7	0.310	0.484	46
				10	Edge Left	151	5755	-	86.4%	17.0	15.7	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40 MIMO	BT/WIFI2	Max	18	Back	151	5755	0.043	86.4%	17.0	17.0	0.039	0.045	
				22	Edge Top	151	5755	0.040	86.4%	17.0	17.0	0.040	0.046	
				11	Edge Right	151	5755	-	86.4%	17.0	17.0	-	-	
				10	Edge Left	151	5755	0.142	86.4%	17.0	17.0	0.142	0.164	47
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body and Hotspot	802.11n VHT80 MIMO	BT/WIFI1	Reduced	0	Back	155	5775	0.180	97.4%	9.0	8.8	0.279	0.300	
					Edge Top	155	5775	0.049	97.4%	9.0	8.8	0.044	0.047	
					Edge Right	155	5775	0.475	97.4%	9.0	8.8	0.503	0.541	48
					Edge Left	155	5775	-	97.4%	9.0	8.8	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body and Hotspot	802.11n VHT80 MIMO	BT/WIFI2	Reduced	0	Back	155	5775	0.328	97.4%	9.0	8.5	0.693	0.798	49
					Edge Top	155	5775	0.037	97.4%	9.0	8.5	0.030	0.035	
					Edge Right	155	5775	-	97.4%	9.0	8.5	-	-	
					Edge Left	155	5775	0.441	97.4%	9.0	8.5	0.420	0.484	

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

UNII-4

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40	BT/WIFI1	Max	18	Back	175	5875	0.045	86.4%	17.0	15.6	0.036	0.058	
				22	Edge Top	175	5875	0.022	86.4%	17.0	15.6	0.024	0.038	
				11	Edge Right	175	5875	0.222	86.4%	17.0	15.6	0.231	0.369	50
				10	Edge Left	175	5875	0.252	86.4%	17.0	15.6	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11n HT40	BT/WIFI2	Max	18	Back	175	5875	0.052	86.4%	17.0	17.0	0.056	0.065	
				22	Edge Top	175	5875	0.046	86.4%	17.0	17.0	0.052	0.060	
				11	Edge Right	175	5875	0.222	86.4%	17.0	17.0	-	-	
				10	Edge Left	175	5875	0.252	86.4%	17.0	17.0	0.259	0.300	51

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

UNII-3 & 4

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan 1-g SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ac VHT160	BT/WIFI1	Reduced	0	Back	163	5815	0.174	97.4%	8.0	7.3	0.163	0.197	
					Edge Top	163	5815	0.041	97.4%	8.0	7.3	0.038	0.046	
					Edge Right	163	5815	0.352	97.4%	8.0	7.3	0.363	0.438	52
					Edge Left	163	5815	0.569	97.4%	8.0	7.3	0.000	0.000	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan 1-g SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ac VHT160	BT/WIFI2	Reduced	0	Back	163	5815	0.579	97.4%	9.0	9.0	1.140	1.170	53
					Edge Top	163	5815	0.033	97.4%	9.0	9.0	0.048	0.049	
					Edge Right	163	5815	0.352	97.4%	9.0	9.0	0.000	0.000	
					Edge Left	163	5815	0.569	97.4%	9.0	9.0	0.597	0.613	

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

UNII-5 & 6 & 7 & 8

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ax HE160 MIMO	BT/WIFI1	Max	18	Back	207	6985	0.011	99.7%	10.0	10.0	0.020	0.020	
				22	Edge Top	207	6985	0.004	99.7%	10.0	10.0	-	-	54
				11	Edge Right	207	6985	0.018	99.7%	10.0	10.0	0.016	0.016	
				10	Edge Left	207	6985	-	99.7%	10.0	10.0	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ax HE160 MIMO	BT/WIFI2	Max	18	Back	111	6505	0.002	99.7%	10.0	10.0	0.004	0.004	
				22	Edge Top	111	6505	0.003	99.7%	10.0	10.0	0.006	0.006	
				11	Edge Right	111	6505	-	99.7%	10.0	10.0	-	-	
				10	Edge Left	111	6505	0.009	99.7%	10.0	10.0	0.008	0.008	55
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ax HE160 MIMO	BT/WIFI1	Reduced	0	Back	143	6665	0.222	99.7%	8.0	7.8	0.264	0.277	56
					Edge Top	143	6665	-	99.7%	8.0	7.8	0.001	0.001	
					Edge Right	143	6665	0.150	99.7%	8.0	7.8	0.134	0.141	
					Edge Left	143	6665	-	99.7%	8.0	7.8	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	
Body	802.11ax HE160 MIMO	BT/WIFI2	Reduced	0	Back	15	6025	0.696	99.7%	8.0	8.0	0.675	0.677	
						47	6185	0.462	99.7%	8.0	7.1	0.474	0.736	
						111	6505	0.584	99.7%	8.0	8.0	0.531	0.533	
						143	6665	0.753	99.7%	8.0	8.0	0.870	0.873	
						207	6985	0.797	99.7%	8.0	6.9	0.739	0.955	57
					Edge Top	143	5775	0.042	99.7%	8.0	8.0	0.056	0.056	
					Edge Right	143	5775	-	99.7%	8.0	8.0	-	-	
					Edge Left	143	5775	0.366	99.7%	8.0	8.0	0.295	0.295	

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

10.18. Bluetooth

RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	BR GFSK	BT/WIFI1	Max	18	Back	39	2441	18	16.5	0.054	0.076	
				22	Edge Top	39	2441	18	16.5	0.037	0.052	
				11	Edge Right	39	2441	18	16.5	0.095	0.134	58
				0	Edge Left	39	2441	18	16.5	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	BR GFSK	BT/WIFI2	Max	18	Back	39	2441	17	15.2	0.031	0.047	
				25	Edge Top	39	2441	17	15.2	0.011	0.017	
				0	Edge Right	39	2441	17	15.2	-	-	
				10	Edge Left	39	2441	17	15.2	0.066	0.100	59
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	BR GFSK	BT/WIFI1	Reduced	0	Back	39	2441	11	9.3	0.181	**0.268**	60
					Edge Top	39	2441	11	9.3	0.092	0.136	
					Edge Right	39	2441	11	9.3	0.164	0.243	
					Edge Left	39	2441	11	9.3	-	-	
RF Exposure Conditions	Mode	Antenna	Power State	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	
Body	BR GFSK	BT/WIFI2	Reduced	0	Back	0	2402	9	7.2	0.070	0.106	61
					Edge Top	0	2402	9	7.2	0.023	0.035	
					Edge Right	0	2402	9	7.2	-	-	
					Edge Left	0	2402	9	7.2	0.041	0.062	

Note(s):

1. For results listed with "-", the SAR result is less than 0.001 W/kg.

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. 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 < 0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated	
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio
Max Power									
700	LTE Band 12	Body	Back	No	0.224	N/A	N/A	N/A	N/A
	LTE Band 13	Body	Back	No	0.325	N/A	N/A	N/A	N/A
850	GSM 850	Body	Back	No	0.494	N/A	N/A	N/A	N/A
	WCDMA Band V	Body	Back	No	0.344	N/A	N/A	N/A	N/A
	LTE Band 5	Body	Back	No	0.337	N/A	N/A	N/A	N/A
	LTE Band 26	Body	Back	No	0.331	N/A	N/A	N/A	N/A
	NR Band n5	Body	Back	No	0.417	N/A	N/A	N/A	N/A
1700	WCDMA Band IV	Body	Edge Left	No	0.412	N/A	N/A	N/A	N/A
	LTE Band 66	Body	Edge Left	No	0.358	N/A	N/A	N/A	N/A
	NR Band n66	Body	Edge Left	No	0.392	N/A	N/A	N/A	N/A
1900	GSM 1900	Body	Edge Left	No	0.212	N/A	N/A	N/A	N/A
	WCDMA Band II	Body	Back	No	0.596	N/A	N/A	N/A	N/A
	LTE Band 2	Body	Back	No	0.415	N/A	N/A	N/A	N/A
	LTE Band 25	Body	Back	No	0.457	N/A	N/A	N/A	N/A
2400	Wi-Fi 802.11b/g/n/ax	Body	Edge Left	No	0.231	N/A	N/A	N/A	N/A
	BT	Body	Edge Right	No	0.095	N/A	N/A	N/A	N/A
2600	LTE Band 41 PC3	Body	Edge Left	No	0.119	N/A	N/A	N/A	N/A
	LTE Band 41 PC2	Body	Edge Top	No	0.133	N/A	N/A	N/A	N/A
5300	Wi-Fi 802.11a/n/ac/ax	Body	Edge Right	No	0.425	N/A	N/A	N/A	N/A
5500	Wi-Fi 802.11a/n/ac/ax	Body	Edge Right	No	0.446	N/A	N/A	N/A	N/A
5800	Wi-Fi 802.11a/n/ac/ax	Body	Edge Right	No	0.310	N/A	N/A	N/A	N/A
5900	Wi-Fi 802.11a/n/ac/ax	Body	Edge Left	No	0.259	N/A	N/A	N/A	N/A

Note(s):

Repeated measurement is not required since the original highest measured SAR is <0.8 W/kg (1-g).

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated	
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio
Reduced Power									
700	LTE Band 12	Body	Back	No	0.420	N/A	N/A	N/A	N/A
	LTE Band 13	Body	Back	No	0.353	N/A	N/A	N/A	N/A
850	GSM 850	Body	Edge Top	No	0.275	N/A	N/A	N/A	N/A
	WCDMA Band V	Body	Edge Top	No	0.515	N/A	N/A	N/A	N/A
	LTE Band 5	Body	Edge Top	No	0.525	N/A	N/A	N/A	N/A
	LTE Band 26	Body	Edge Top	No	0.540	N/A	N/A	N/A	N/A
	NR Band n5	Body	Edge Top	No	0.517	N/A	N/A	N/A	N/A
1700	WCDMA Band IV	Body	Edge Top	Yes	1.090	1.090	1.00	N/A	N/A
	LTE Band 66	Body	Edge Top	No	1.060	N/A	N/A	N/A	N/A
	NR Band n66	Body	Edge Top	No	0.901	N/A	N/A	N/A	N/A
1900	GSM 1900	Body	Edge Top	No	0.327	N/A	N/A	N/A	N/A
	WCDMA Band II	Body	Edge Top	Yes	1.010	1.030	1.02	N/A	N/A
	LTE Band 2	Body	Back	No	0.781	N/A	N/A	N/A	N/A
	LTE Band 25	Body	Edge Top	Yes	0.980	0.867	1.13	N/A	N/A
2400	Wi-Fi 802.11b/g/n/ax	Body	Back	No	0.665	N/A	N/A	N/A	N/A
	BT	Body	Back	No	0.181	N/A	N/A	N/A	N/A
2600	LTE Band 41 PC3	Body	Edge Top	Yes	0.959	0.942	1.02	N/A	N/A
5300	Wi-Fi 802.11a/n/ac/ax	Body	Edge Right	Yes	0.972	1.01	1.04	N/A	N/A
5500	Wi-Fi 802.11a/n/ac/ax	Body	Edge Right	No	0.726	N/A	N/A	N/A	N/A
5800	Wi-Fi 802.11a/n/ac/ax	Body	Back	Yes	1.140	1.19	1.04	N/A	N/A

Note(s):

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

12. Simultaneous Transmission Conditions

Item	Simultaneous scenario	WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT Ant.1	BT Ant.2
1	WWAN + DTS	On		On				
2	WWAN + DTS MIMO	On	On	On				
3	WWAN + UNII MIMO	On			On	On		
4	WWAN + BT	On					On	
5		On						On
6	WWAN + DTS + BT	On		On			On	
7	WWAN + UNII MIMO + BT	On			On	On	On	
8		On			On	On		On

12.1. Simultaneous transmission SAR test exclusion considerations

KDB 447498 D01 General RF Exposure Guidance provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

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

Where:

SAR_1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest reported 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 $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

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:

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

When an individual antenna transmits at on two bands simultaneously, the sum of the highest *reported* SAR for the frequency bands should be used to determine SAR_1.or SAR_2. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

The antennas in all antenna pairs that do not qualify for simultaneous transmission SAR test exclusion must be tested for SAR compliance, according to the enlarged zoom scan and volume scan post-processing procedures in KDB Publication 865664 D01

12.2. Sum of the SAR for PCB & DTS SISO – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz SISO	WWAN + WLAN 2.4 GHz SISO
		Main1 ①	BT/WIFI2 ③	① + ③
Body and Hotspot	Back	0.610	0.067	0.676
	Edge Top	0.435	0.023	0.458
	Edge Right	0.140	0.000	0.140
	Edge Left	0.422	0.223	0.645

12.3. Sum of the SAR for PCB & DTS SISO – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz SISO	WWAN + WLAN 2.4 GHz SISO
		Main1 ①	BT/WIFI2 ③	① + ③
Body and Hotspot	Back	1.017	0.356	1.374
	Edge Top	1.195	0.142	1.337
	Edge Right	0.155	0.000	0.155
	Edge Left	0.084	0.223	0.306

12.4. Sum of the SAR for PCB & DTS MIMO – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz MIMO	WWAN + WLAN 2.4 GHz MIMO
		Main1 ①	BT/WIFI1 + BT/WIFI2 ②+③	① + ② + ③
Body and Hotspot	Back	0.610	0.135	0.745
	Edge Top	0.435	0.176	0.610
	Edge Right	0.140	0.252	0.392
	Edge Left	0.422	0.234	0.655

12.5. Sum of the SAR for PCB & DTS MIMO – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz MIMO	WWAN + WLAN 2.4 GHz MIMO
		Main1 ①	BT/WIFI1 + BT/WIFI2 ②+③	① + ② + ③
Body and Hotspot	Back	1.017	0.705	**1.722**
	Edge Top	1.195	0.377	**1.572**
	Edge Right	0.155	0.596	0.750
	Edge Left	0.084	0.241	0.325

12.6. Sum of the SAR for PCB & UNII MIMO – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 5/6 GHz MIMO	WWAN + WLAN 5/6 GHz
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	① + ② + ③
Body	Back	0.610	0.199	0.809
	Edge Top	0.435	0.117	0.552
	Edge Right	0.140	0.516	0.656
	Edge Left	0.422	0.366	0.788
RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 5/6 GHz MIMO	WWAN + WLAN 5/6 GHz
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	① + ② + ③
Hotspot	Back	0.610	0.199	0.809
	Edge Top	0.435	0.110	0.545
	Edge Right	0.140	0.484	0.624
	Edge Left	0.422	0.366	0.788

12.7. Sum of the SAR for PCB & UNII MIMO – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 5/6 GHz MIMO	WWAN + WLAN 5/6 GHz
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	① + ② + ③
Body	Back	1.017	1.170	**2.188**
	Edge Top	1.195	0.147	1.342
	Edge Right	0.155	1.021	1.176
	Edge Left	0.084	0.626	0.709
RF Exposure Conditions	Test Position	Standalone SAR (W/kg)		Σ 1-g SAR (W/kg)
		WWAN	WLAN 5/6 GHz MIMO	WWAN + WLAN 5/6 GHz
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	① + ② + ③
Hotspot	Back	1.017	0.798	**1.816**
	Edge Top	1.195	0.137	1.332
	Edge Right	0.155	0.791	0.946
	Edge Left	0.084	0.626	0.709

12.8. Sum of the SAR for PCB & BT – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)			Σ 1-g SAR (W/kg)	
		WWAN	BT		WWAN + BT	
		Main1 ①	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ④	① + ⑤
Body	Back	0.610	0.076	0.047	0.686	0.657
	Edge Top	0.435	0.052	0.017	0.487	0.451
	Edge Right	0.140	0.134	0.000	0.274	0.140
	Edge Left	0.422	0.000	0.100	0.422	0.521

12.9. Sum of the SAR for PCB & BT – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)			Σ 1-g SAR (W/kg)	
		WWAN	BT		WWAN + BT	
		Main1 ①	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ④	① + ⑤
Body	Back	1.017	0.268	0.106	1.285	1.123
	Edge Top	1.195	0.136	0.035	1.331	1.230
	Edge Right	0.155	0.243	0.000	0.397	0.155
	Edge Left	0.084	0.000	0.062	0.084	0.146

12.10. Sum of the SAR for PCB & DTS & BT – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)			Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz	BT	WWAN + WLAN 2.4 GHz + BT
		Main1 ①	BT/WIFI2 ③	BT/WIFI1 ④	① + ③ + ④
Body and Hotspot	Back	0.610	0.067	0.076	0.753
	Edge Top	0.435	0.023	0.052	0.510
	Edge Right	0.140	0.000	0.134	0.274
	Edge Left	0.422	0.223	0.000	0.645

12.11. Sum of the SAR for PCB & DTS & BT – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)			Σ 1-g SAR (W/kg)
		WWAN	WLAN 2.4 GHz	BT	WWAN + WLAN 2.4 GHz + BT
		Main1 ①	BT/WIFI2 ③	BT/WIFI1 ④	① + ③ + ④
Body and Hotspot	Back	1.017	0.356	0.268	**1.641**
	Edge Top	1.195	0.142	0.136	1.473
	Edge Right	0.155	0.000	0.243	0.397
	Edge Left	0.084	0.223	0.000	0.306

12.12. Sum of the SAR for PCB & UNII MIMO & BT – Max Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)				Σ 1-g SAR (W/kg)	
		WWAN	WLAN 5/6 GHz MIMO	BT		WWAN + WLAN 5/6 GHz MIMO + BT	
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ② + ③ + ④	① + ② + ③ + ⑤
Body	Back	0.610	0.199	0.076	0.047	0.885	0.855
	Edge Top	0.435	0.117	0.052	0.017	0.604	0.569
	Edge Right	0.140	0.516	0.134	0.000	0.791	0.656
	Edge Left	0.422	0.366	0.000	0.100	0.788	0.887
RF Exposure Conditions	Test Position	Standalone SAR (W/kg)				Σ 1-g SAR (W/kg)	
		WWAN	WLAN 5/6 GHz MIMO	BT		WWAN + WLAN 5/6 GHz MIMO + BT	
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ② + ③ + ④	① + ② + ③ + ⑤
Hotspot	Back	0.610	0.199	0.076	0.047	0.885	0.855
	Edge Top	0.435	0.110	0.052	0.017	0.597	0.561
	Edge Right	0.140	0.484	0.134	0.000	0.758	0.624
	Edge Left	0.422	0.366	0.000	0.100	0.788	0.887

12.13. Sum of the SAR for PCB & UNII MIMO & BT – Reduced Power

RF Exposure Conditions	Test Position	Standalone SAR (W/kg)				Σ 1-g SAR (W/kg)	
		WWAN	WLAN 5/6 GHz MIMO	BT		WWAN + WLAN 5/6 GHz MIMO + BT	
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ② + ③ + ④	① + ② + ③ + ⑤
Body	Back	1.017	1.170	0.268	0.106	**2.455**	**2.294**
	Edge Top	1.195	0.147	0.136	0.035	**1.478**	1.377
	Edge Right	0.155	1.021	0.243	0.000	1.419	1.176
	Edge Left	0.084	0.626	0.000	0.062	0.709	0.771
RF Exposure Conditions	Test Position	Standalone SAR (W/kg)				Σ 1-g SAR (W/kg)	
		WWAN	WLAN 5/6 GHz MIMO	BT		WWAN + WLAN 5/6 GHz MIMO + BT	
		Main1 ①	BT/WIFI1 + BT/WIFI2 ② + ③	BT/WIFI1 ④	BT/WIFI2 ⑤	① + ② + ③ + ④	① + ② + ③ + ⑤
Hotspot	Back	1.017	0.798	0.268	0.106	**2.083**	**1.922**
	Edge Top	1.195	0.137	0.136	0.035	1.468	1.367
	Edge Right	0.155	0.791	0.243	0.000	1.189	0.946
	Edge Left	0.084	0.626	0.000	0.062	0.709	0.771

SAR to Peak Location Separation Ratio (SPLSR)

Figure 1 – Back – LTE Band 66 + DTS MIMO

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
DTS on BT/WIFI1	②	0.705	77.5	-123.5	-177.0
DTS on BT/WIFI2	③	0.405	-80.6	-117.6	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+②	51.83	0.04	No
①+③	106.59	0.02	No
②+③	158.21	0.04	No

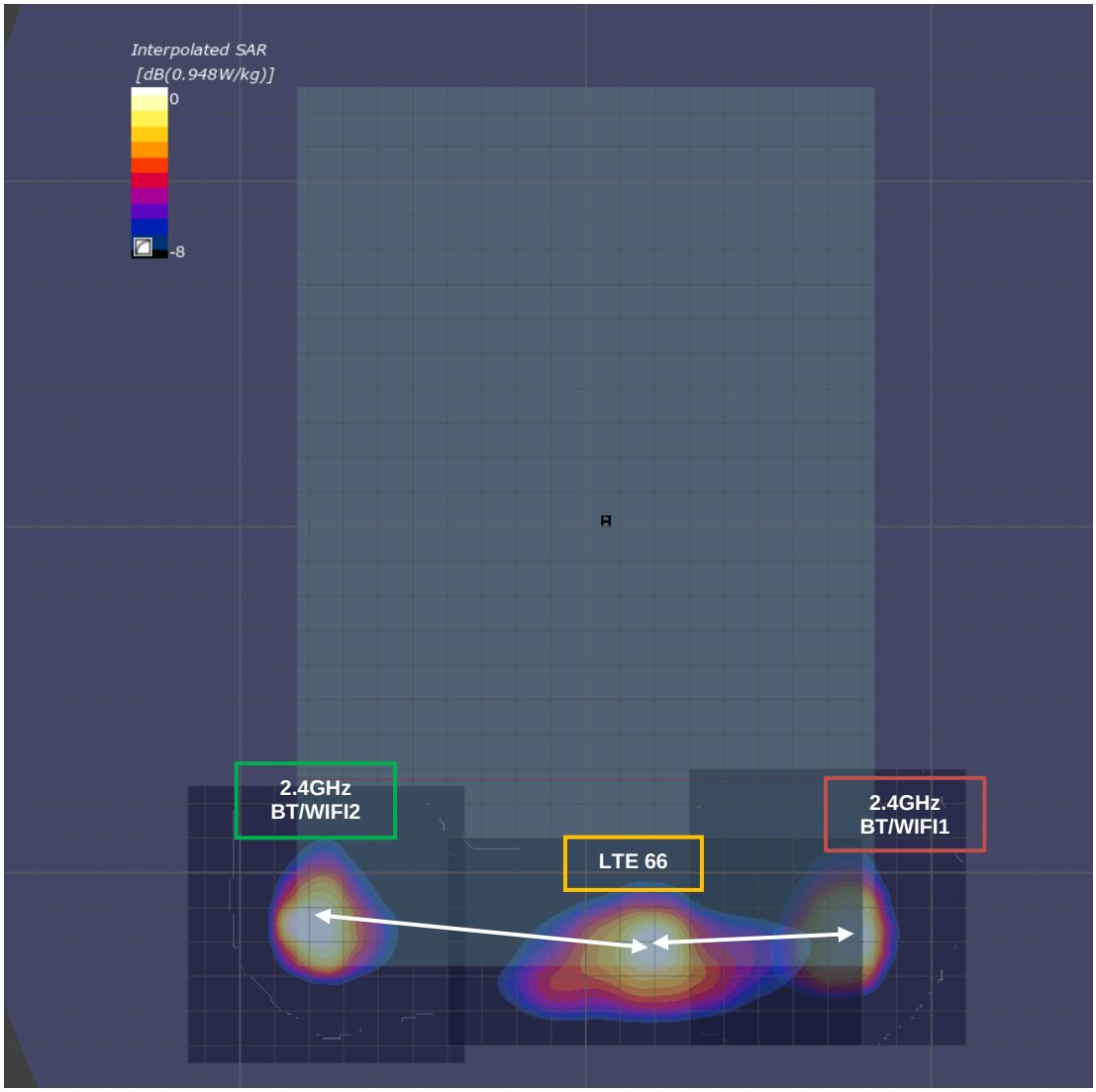


Figure 2 – Back – LTE Band 66 + DTS on BT/WIFI2 + BT on BT/WIFI1

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
DTS on BT/WIFI2	③	0.356	-81.4	-119.1	-177.0
BT on BT/WIFI1	④	0.268	75.9	-124.3	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+③	107.29	0.02	No
①+④	50.21	0.03	No
③+④	157.39	0.03	No

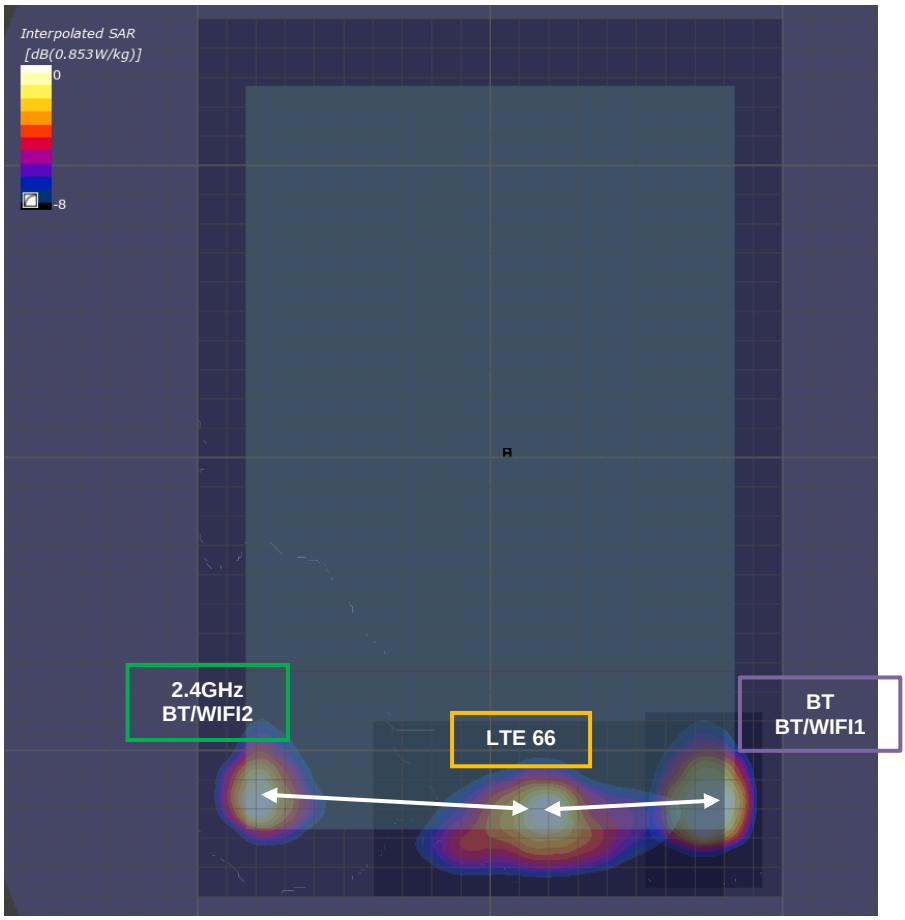


Figure 3 – Back – LTE Band 66 + UNII-3&4 MIMO + BT on BT/WIFI1

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
UNII-3&4 and BTon BT/WIFI1	②+④	0.516	75.9	-124.5	-177.0
UNII-3&4 on BT/WIFI2	③	1.170	-73.9	-120.4	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+②+④	50.21	0.04	No
①+③	99.73	0.03	No
②+④+③	149.86	0.01	No

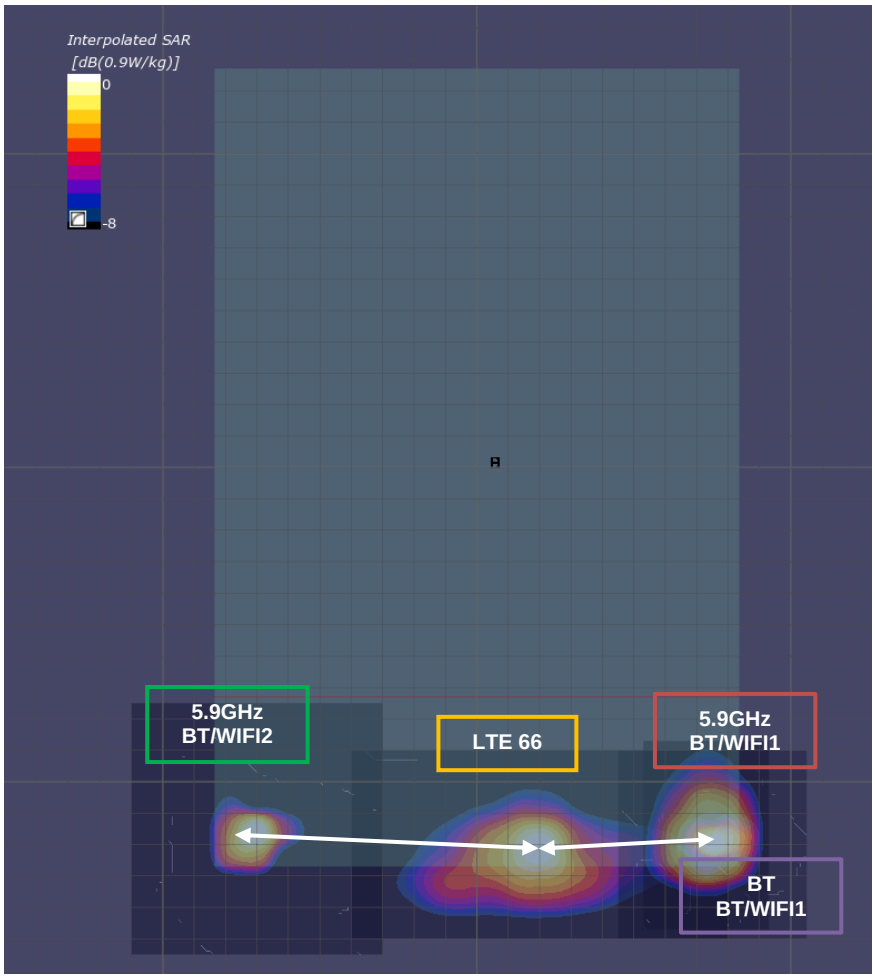


Figure 4 – Back – LTE Band 66 + UNII-3&4 MIMO + BT on BT/WIFI2

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
UNII-3&4 on BT/WIFI1	②	0.248	75.0	-119.0	-177.0
UNII-3&4 and BT on BT/WIFI2	③+⑤	1.276	-81.8	118.2	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+②	49.71	0.03	No
①+③+⑤	266.27	0.01	No
②+③+⑤	284.34	0.01	No

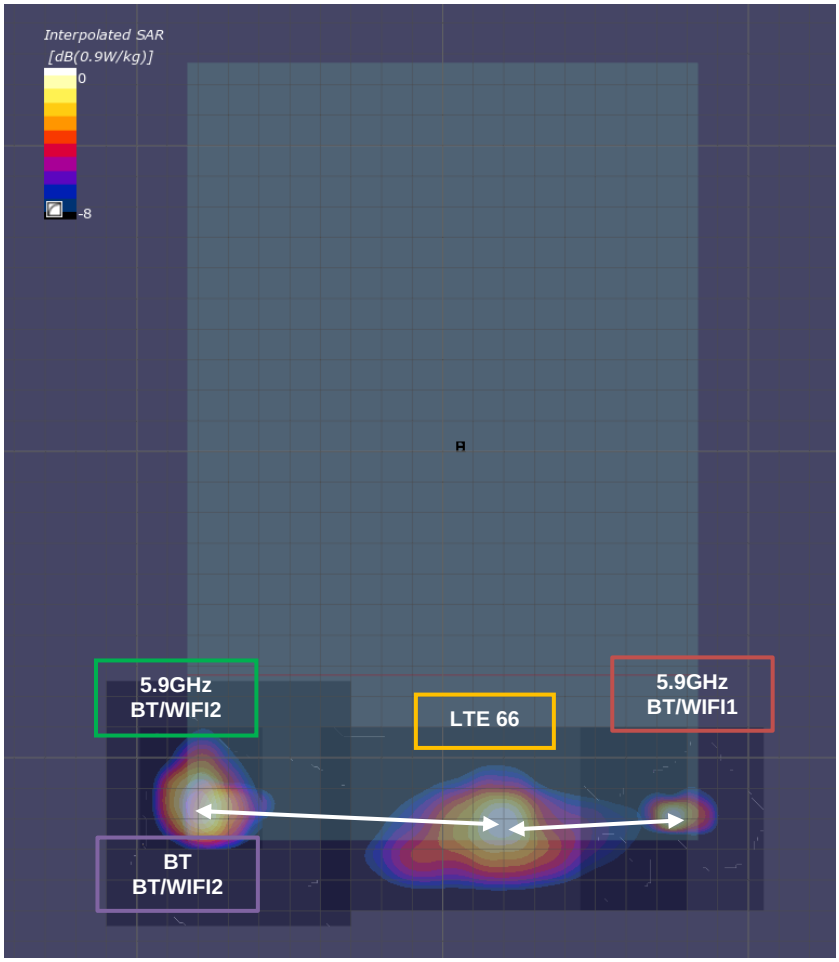


Figure 5 – Back – LTE Band 66 + UNII-3 MIMO + BT on BT/WIFI1

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
UNII-3 and BT on BT/WIFI1	②+④	0.568	75.9	-124.5	-177.0
UNII-3 on BT/WIFI2	③	0.798	-73.2	-120.8	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+②+④	50.21	0.04	No
①+③	99.01	0.02	No
②+④+③	149.15	0.04	No

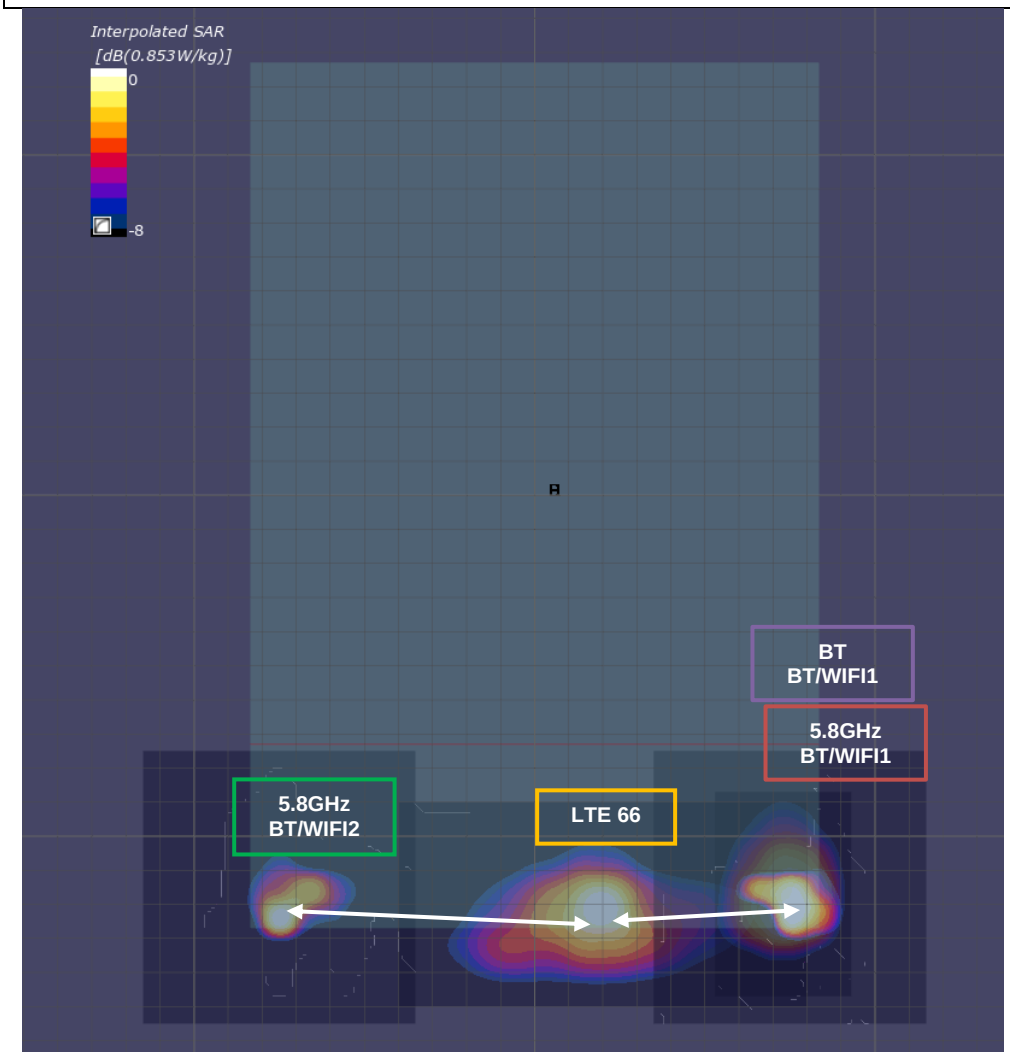
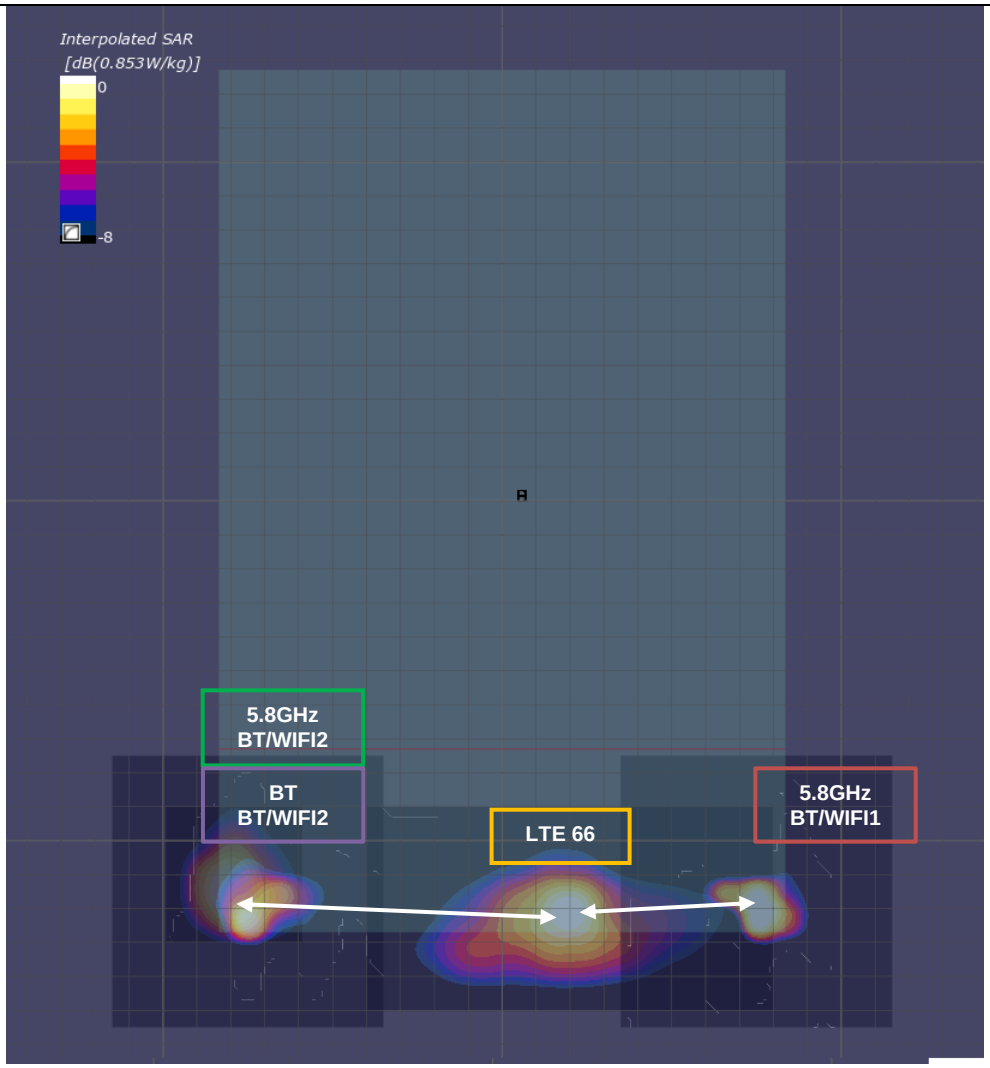


Figure 6 – Back – LTE Band 66 + UNII-3 MIMO + BT on BT/WIFI2

Mode		Peak SAR W/kg	X mm	Y mm	Z mm
LTE 66 on Main1	①	1.017	25.7	-125.4	-177.0
UNII-3 on BT/WIFI1	②	0.300	76.4	-120.6	-177.0
UNII-3 and BT on BT/WIFI2	③+⑤	0.904	-81.8	-118.2	-177.0

Test Case	d: Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)
①+②	50.93	0.03	No
①+③+⑤	107.74	0.02	No
②+③+⑤	158.22	0.01	No



Conclusion:

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

Appendixes

Refer to separated files for the following appendixes.

Appendix A: SAR Setup Photos

Appendix B: SAR System Check Plots

Appendix C: SAR Highest Test Plots

Appendix D: SAR Tissue Ingredients

Appendix E: SAR Probe Certificates

Appendix F: SAR Dipole Certificates

Appendix G: Proximity Sensor Triggering

Appendix H: Dynamic Antenna Tuner Testing

Appendix I: LTE Carrier Aggregation Results

END OF REPORT