SAR TEST REPORT

No. I23Z61433-SEM01

For

TCL Communication Ltd.

Tablet PC

Model Name: 8192A

with

Hardware Version: 05

Software Version: KY14

FCC ID: 2ACCJB205

Issued Date: 2023-9-1

Note:

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The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I23Z61433-SEM01	Rev.0	2023-8-30	Initial creation of test report
I23Z61433-SEM01	Rev.1	2023-9-1	1. Revise the tune up power for WIFI5G 802.11n on page80.

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1 Test Laboratory

1.1 Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website.

1.2 Testing Location

Company Name:	CTTL
Address:	No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

1.3 Testing Environment

Temperature:	18°C~25°C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

1.4 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Yao Juming
Testing Start Date:	August 7, 2023
Testing End Date:	August 25, 2023

1.5 Signature

Yao Juming
(Prepared this test report)
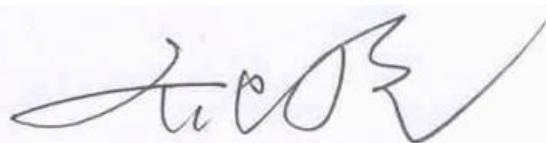
Qi Dianyuan
(Reviewed this test report)
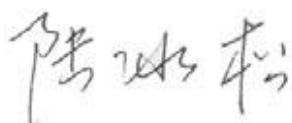
Lu Bingsong
Deputy Director of the laboratory
(Approved this test report)

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for TCL Communication Ltd. Tablet PC 8192A are as follows:

Table 2.1: Highest Reported SAR (1g)

Technology Band	Body SAR 1g (W/kg)	Equipment Class
GSM850	0.56	PCT
GSM1900	0.62	
WCDMA1900	0.62	
WCDMA1700	0.66	
WCDMA 850	0.54	
LTE Band2	0.60	
LTE Band5	0.68	
LTE Band7	1.18	
LTE Band12	0.67	
LTE Band13	0.67	
LTE Band41	1.16	
LTE Band66	1.14	
WLAN 2.4GHz	1.03	DTS
WLAN 5GHz	1.16	NII
BT	0.24	DSS

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 0mm/5mm/11mm/17mm between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C of this test report. A detailed description of the equipment under test can be found in chapter 4 of this test report. The highest reported SAR value is obtained at the case of **(Table 2.1),** and the values are**:**

Body: 1.18 W/kg(1g) (Rear 17mm)

Remark：

This device supports both LTE B17/B4/B38 and LTE B12/B66/B41.Since the supported frequency span for LTE B17/B4/B38 falls completely within the supports frequency span for LTE B12/B66/B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B12/B66/B41.

Table 2.2: The sum of SAR values for Main antenna + WiFi-2.4G

	Position	Main antenna	WiFi-2.4G	Sum
Highest SAR value for Body	Rear 0mm (LTE B66)	0.72	0.64	**1.36**
Highest SAR value for Body	Left 0mm (WCDMA 1900)	0.53	0.98	**1.51**

Table 2.3: The sum of SAR values for Main antenna + WiFi-5G +BT

	Position	Main antenna	WiFi-5G	BT	Sum
Highest SAR value for Body	Rear 0mm (LTE B66)	0.72	0.68	0.08	**1.48**
Highest SAR value for Body	Left 0mm (WCDMA 1900)	0.53	0.65	0.24	**1.42**

According to the above tables, the highest sum of reported SAR values is **1.51 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

3 Client Information

3.1 Applicant Information

Company Name:	TCL Communication Ltd.
Address/Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact Person:	Annie Jiang
Contact Email:	nianxiang.jiang@tcl.com
Telephone:	+86 755 3661 1621

3.2 Manufacturer Information

Company Name:	TCL Communication Ltd.
Address/Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact Person:	Annie Jiang
Contact Email:	nianxiang.jiang@tcl.com
Telephone:	+86 755 3661 1621

4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Tablet PC
Model name:	8192A
Operating mode(s):	GSM850/900/1800/1900, WCDMA850/900/1700/1900/2100 LTEBand1/2/3/4/5/7/8/12/13/17/20/28/38/40/41/66,BT, Wi-Fi(2.4G&5G)
Tested Tx Frequency:	824 – 849 MHz (GSM 850)
	1850 – 1910 MHz (GSM 1900)
	824 – 849 MHz (WCDMA 850 Band V)
	1850 – 1910 MHz (WCDMA1900 Band IV)
	1710-1755 MHz (WCDMA1700 Band II)
	1850 – 1910 MHz (LTE Band 2)
	824 – 849 MHz (LTE Band 5)
	2500 – 2570 MHz (LTE Band 7)
	699.7 – 715.3 MHz (LTE Band 12)
	779.5 – 784.5 MHz (LTE Band 13)
	2496 – 2690 MHz (LTE Band41)
	1710 –1780 MHz (LTE Band 66)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	2400 – 2483.5 MHz (Bluetooth)
	5180 – 5240 MHz (Wi-Fi 5.2G)
	5260 – 5320 MHz (Wi-Fi 5.3G)
	5500 – 5720 MHz (Wi-Fi 5.5G)
	5745 – 5825 MHz (Wi-Fi 5.8G)
GPRS/EGPRS Multislot Class:	12
Test device production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI/SN	HW Version	SW Version
EUT1	351324190000488	05	KY14
EUT2	351324190000439	05	KY14
EUT3	351324190000421	05	KY14
EUT4	351324190000413	05	KY14

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the EUT1-2 and conducted power with the EUT3-4.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	2853B7PL－2P	/	HUNAN GAOYUAN BATTERY COMPANY LIMITED

*AE ID: is used to identify the test sample in the lab internally.

5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

ANSI C95.1–1992:IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB616217 D04 SAR for laptop and tablets v01r02 SAR Evaluation Considerations for Laptop, Notebook, Notebook and Tablet Computers.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

6 Specific Absorption Rate (SAR)

6.1 Introduction

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

6.2 SAR Definition

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

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

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

$$SAR = c(\frac{\delta T}{\delta t})$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

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

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 Tissue Simulating Liquids

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
750	Head	0.89	0.85～0.93	41.94	39.8～44.0
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
1750	Head	1.37	1.30～1.44	40.08	38.1～42.1
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
2450	Head	1.67	1.59～1.75	39.47	37.5～41.4
2600	Head	1.96	1.86～2.06	39.01	37.1～41.0
5250	Head	4.71	4.47～4.95	35.93	34.13～37.73
5600	Head	5.07	4.82～5.32	35.53	33.8～37.3
5750	Head	5.22	4.96～5.48	35.36	33.59～37.13

7.2 Dielectric Performance

Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2023-8-15	Head	750 MHz	42.712	1.84	0.897	0.79
2023-8-7	Head	835 MHz	42.31	1.95	0.911	1.22
2023-8-9	Head	1800 MHz	39.423	-1.44	1.36	-2.86
2023-8-12	Head	1900 MHz	39.336	-1.66	1.393	-0.50
2023-8-18	Head	2450 MHz	40.234	2.64	1.847	2.61
2023-8-16	Head	2550 MHz	38.912	-0.40	1.951	2.15
2023-8-22	Head	5250 MHz	35.783	-0.41	4.641	-1.46
2023-8-24	Head	5600 MHz	35.13	-1.13	4.96	-2.17
2023-8-25	Head	5750 MHz	35.864	1.43	5.079	-2.70

Note: The liquid temperature is 22.0℃
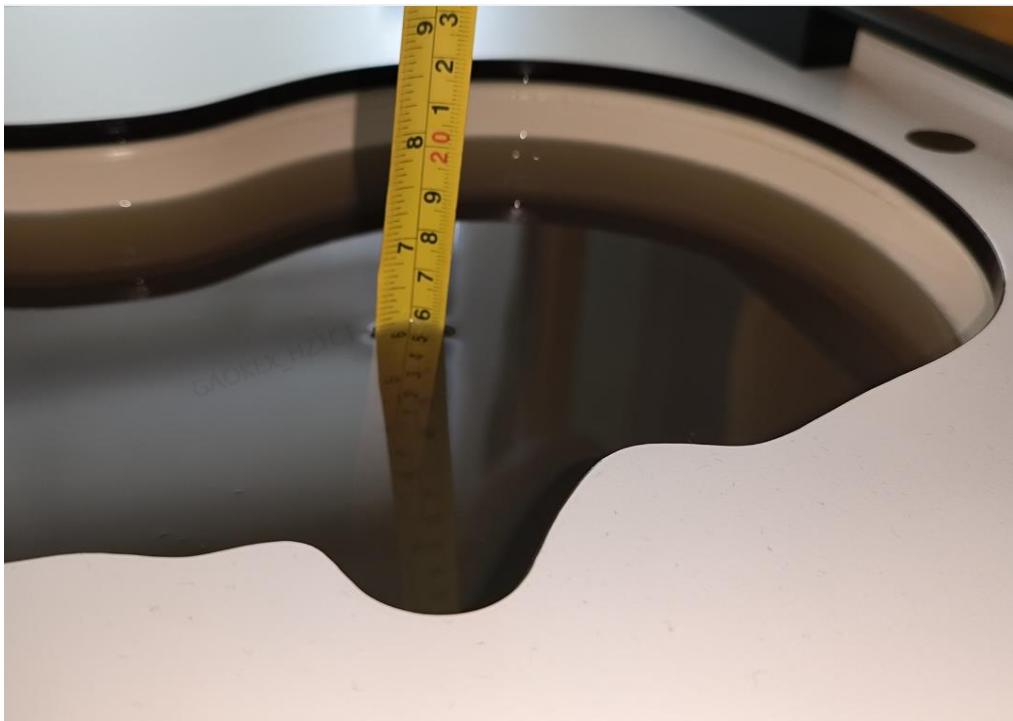
Picture 7-1 Liquid depth in the Head Phantom
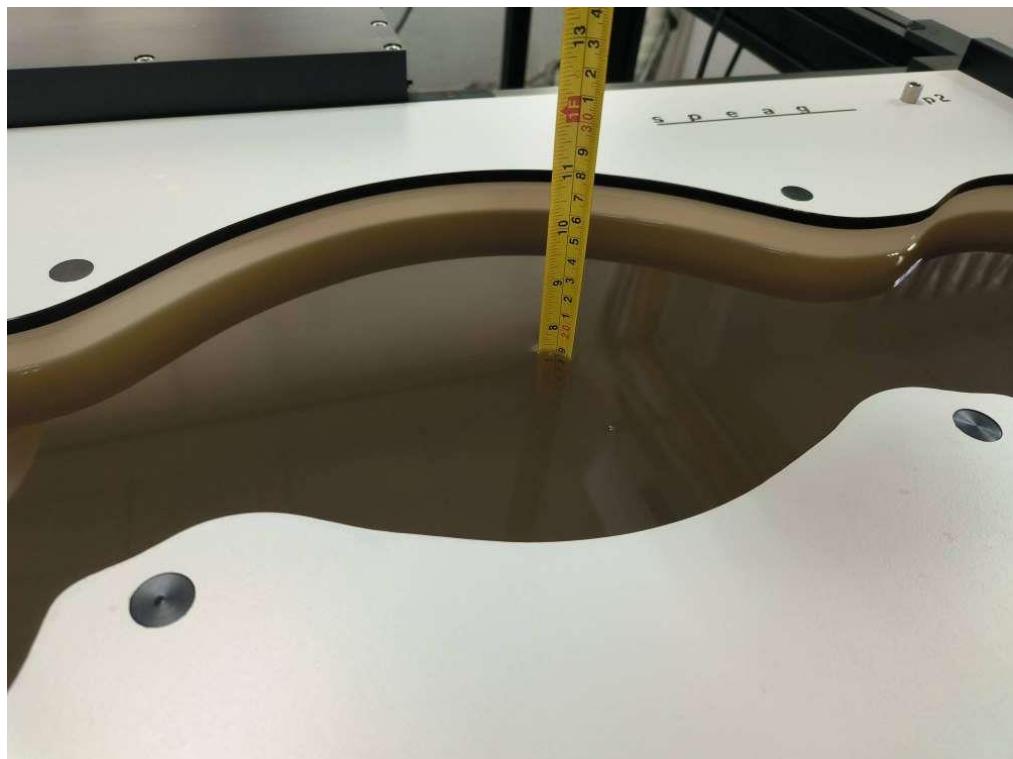
Picture 7-2 Liquid depth in the Head Phantom

8 System verification

8.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:
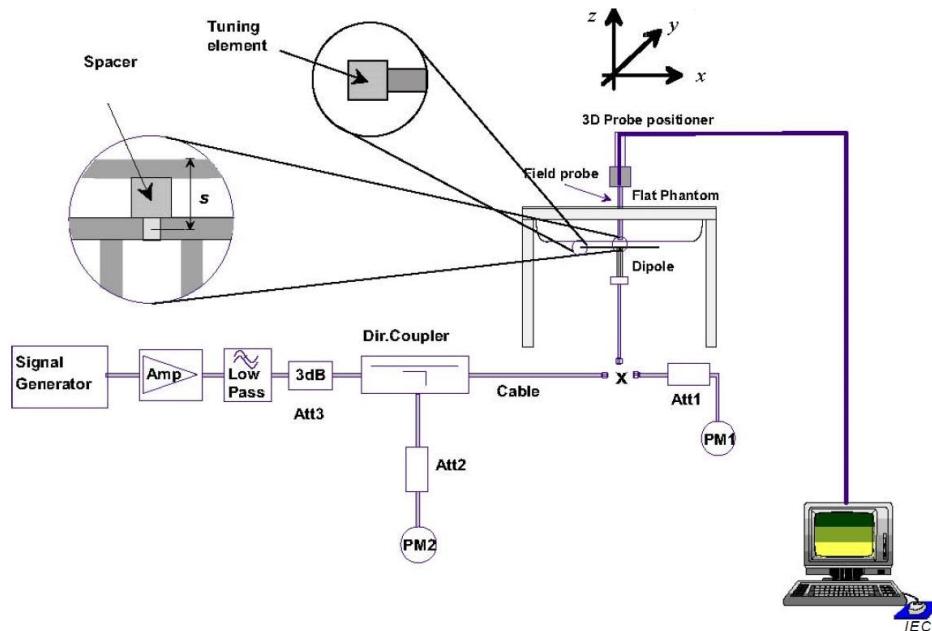
Picture 8.1 System Setup for System Evaluation

Picture 8.2 Photo of Dipole Setup

8.2 System Verification

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 system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2023-8-15	750 MHz	5.54	8.48	5.36	8.28	-3.25%	-2.36%
2023-8-7	835 MHz	6.32	9.55	6.16	9.28	-2.53%	-2.83%
2023-8-9	1800 MHz	20.8	39.1	21.24	39.88	2.12%	1.99%
2023-8-12	1900 MHz	21	40.4	20.44	39.4	-2.67%	-2.48%
2023-8-18	2450 MHz	24.5	52.4	25.08	53.72	2.37%	2.52%
2023-8-16	2550 MHz	24.6	55.5	24.28	54.68	-1.30%	-1.48%
2023-8-22	5250 MHz	22.8	79.6	21.8	76.2	-4.39%	-4.27%
2023-8-24	5600 MHz	23.8	83.6	24.1	84.4	1.26%	0.96%
2023-8-25	5750 MHz	22.7	80.5	23.3	81.8	2.64%	1.61%

9 Measurement Procedures

9.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of

the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., N_c > 3), then all

frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1,perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.

Preparation of system

Operational mode/band

Configuration

Test positions

Measurement according to Picture b) at center frequency

No — All test positions done?

Yes

Determination of maximum position

Measurement according to Picture b) at lower and upper frequency

All mid-band configurations within -3 dB of compliance limit tested at all required channels? — No

Yes

No — All modes/bands and configurations done?

Yes

Determination of maximum

Picture a – Tests to be performed

Ref. Measurement (step a)

Area scan (steps b-c)

Zoom scan (steps d-e)

Ref. Measurement (step f)

Peak in cube? — No — Shift cube centre

Yes

All primary and secondary peaks tested? — No — Select next peak

Yes

Additional peaks shall be measured only when the primary peak is within 2 dB of the SAR limit.

Picture b – General procedure

Picture 9.1 Block diagram of the tests to be performed

9.2 General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2003. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

			$\leq$ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30° \pm 1°$	$20° \pm 1°$
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			$\leq$ 2 GHz: $\leq$ 15 mm 2 – 3 GHz: $\leq$ 12 mm	3 – 4 GHz: $\leq$ 12 mm 4 – 6 GHz: $\leq$ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			$\leq$ 2 GHz: $\leq$ 8 mm 2 – 3 GHz: $\leq$ 5 mm*	3 – 4 GHz: $\leq$ 5 mm* 4 – 6 GHz: $\leq$ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		$\leq$ 5 mm	3 – 4 GHz: $\leq$ 4 mm 4 – 5 GHz: $\leq$ 3 mm 5 – 6 GHz: $\leq$ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	$\leq$ 4 mm	3 – 4 GHz: $\leq$ 3 mm 4 – 5 GHz: $\leq$ 2.5 mm 5 – 6 GHz: $\leq$ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		$\geq$ 30 mm	3 – 4 GHz: $\geq$ 28 mm 4 – 5 GHz: $\geq$ 25 mm 5 – 6 GHz: $\geq$ 22 mm

Note: 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 $\leq$ 1.4 W/kg, $\leq$ 8 mm, $\leq$ 7 mm and $\leq$ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

9.3 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & DPDCH$_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} （SF）	β_{ed} （codes）	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.5	1.5	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	1.5	1.5	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	1.5	1.5	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.8 DC-HSDPA (Cat 24)

SAR test exclusion for Rel.8 DC-HSDPA must satisfy the SAR test exclusion requirements of Rel.5 HSDPA. SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion.

9.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.

It is performed for conducted power and SAR based on the KDB941225 D05.

SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

1) QPSK with 1 RB allocation

    Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

    The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

    For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.
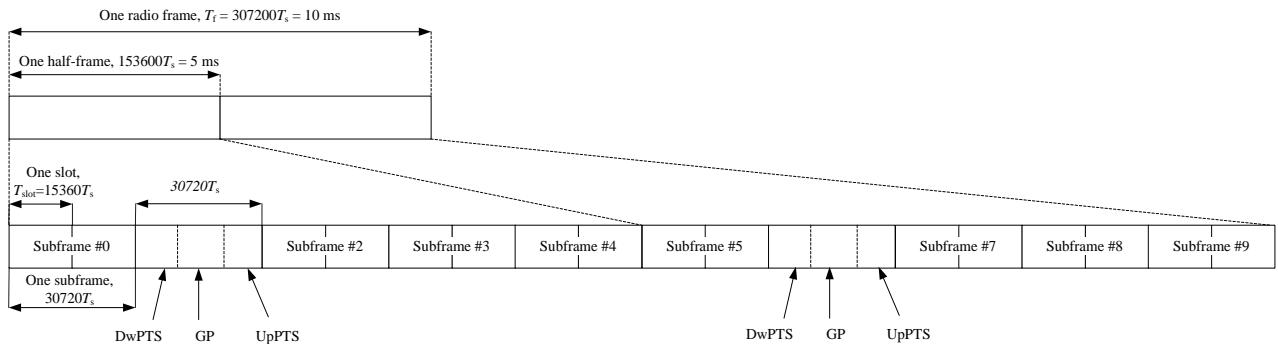
Figure 9.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 9.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

Table 9.2: Uplink-downlink configurations

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

Duty factor is calculated by:

Duty factor = uplink frame*6+UpPTS*2/one frame length

$$= (30720.T_s * 6+5120. T_s*2)/307200.T_s$$

$$= 0.633$$

9.5 Bluetooth & Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

9.6 Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

10 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ⩽ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz)and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm mare 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

11 Conducted Output Power

Table11.1: Summary of Sensor detection mechanism – Main Antenna

Antenna	Sar sensor off+ WWAN transmit alone	Sar sensor on + WWAN transmit alone	Sar sensor off+ WWAN transmit with WIFI	Sar sensor on+ WWAN transmit with WIFI
Main Antenna	DSI0	DSI1	DSI2	DSI3

Table11.2: Summary of Sensor detection mechanism – WIFI Antenna

Antenna	Sar sensor off+ WIFI transmit alone	Sar sensor on + WIFI transmit alone	Sar sensor off+ WIFI transmit with WWAN	Sar sensor on+ WIFI transmit with WWAN
WIFI Antenna	DSI0	DSI1	DSI2	DSI3

Note: The detail of proximity sensor is presented in Annex I.

11.1 GSM Measurement result

Table 11.1-1: The conducted power for GSM850 - DSI0/DSI2

GSM 850 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	32.46	32.39	32.34	33.50	-9.03	23.43	23.36	23.31
2 Txslots	30.03	30.03	30.02	31.00	-6.02	24.01	24.01	24.00
3 Txslots	27.92	27.96	28.07	29.00	-4.26	23.66	23.70	23.81
4 Txslots	26.71	26.81	26.94	28.00	-3.01	23.70	23.80	23.93
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	32.33	32.33	32.32	33.50	-9.03	23.30	23.30	23.29
2 Txslots	30.02	30.03	30.04	31.00	-6.02	24.00	24.01	24.02
3 Txslots	28.01	28.02	28.05	29.00	-4.26	23.75	23.76	23.79
4 Txslots	26.65	26.78	26.93	28.00	-3.01	23.64	23.77	23.92
GSM 850 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	26.42	26.55	26.66	27.00	-9.03	17.39	17.52	17.63
2 Txslots	23.51	23.54	23.67	24.50	-6.02	17.49	17.52	17.65
3Txslots	21.73	21.55	21.68	22.50	-4.26	17.47	17.29	17.42
4 Txslots	20.38	20.45	20.59	21.50	-3.01	17.37	17.44	17.58

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

Table 11.1-2: The conducted power for GSM850 - DSI1/DSI3

GSM 850 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	26.06	26.18	26.28	27.00	-9.03	17.03	17.15	17.25
2 Txslots	23.99	24.13	24.29	25.00	-6.02	17.97	18.11	18.27
3 Txslots	21.99	22.14	22.29	23.00	-4.26	17.73	17.88	18.03
4 Txslots	20.89	21.06	21.23	22.00	-3.01	17.88	18.05	18.22
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	25.95	26.14	26.25	27.00	-9.03	16.92	17.11	17.22
2 Txslots	23.94	24.09	24.27	25.00	-6.02	17.92	18.07	18.25
3 Txslots	21.96	22.13	22.27	23.00	-4.26	17.70	17.87	18.01
4 Txslots	20.87	21.04	21.22	22.00	-3.01	17.86	18.03	18.21
GSM 850 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	23.64	23.57	23.71	24.50	-9.03	14.61	14.54	14.68
2 Txslots	23.66	23.54	23.70	24.50	-6.02	17.64	17.52	17.68
3Txslots	21.56	21.53	21.70	22.50	-4.26	17.30	17.27	17.44
4 Txslots	20.47	20.43	20.61	21.50	-3.01	17.46	17.42	17.60

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots => conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots => conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots => conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots => conducted power divided by (8/4) => -3.01dB

Table 11.1-3: The conducted power for GSM1900 - DSI0/DSI2

PCS1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	29.89	29.85	29.66	30.50	-9.03	20.86	20.82	20.63
2 Txslots	27.61	27.46	27.18	28.50	-6.02	21.59	21.44	21.16
3 Txslots	25.60	25.42	25.13	26.50	-4.26	21.34	21.16	20.87
4 Txslots	24.49	24.33	24.00	25.50	-3.01	21.48	21.32	20.99
PCS1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	29.78	29.78	29.61	30.50	-9.03	20.75	20.75	20.58
2 Txslots	27.49	27.39	27.12	28.50	-6.02	21.47	21.37	21.10
3 Txslots	25.50	25.36	25.09	26.50	-4.26	21.24	21.10	20.83
4 Txslots	24.42	24.28	23.96	25.50	-3.01	21.41	21.27	20.95
PCS1900 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	26.06	26.22	25.85	27.00	-9.03	17.03	17.19	16.82
2 Txslots	23.86	23.10	23.27	24.50	-6.02	17.84	17.08	17.25
3Txslots	21.25	21.21	20.95	22.00	-4.26	16.99	16.95	16.69
4 Txslots	20.18	20.35	19.93	21.00	-3.01	17.17	17.34	16.92

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

Table 11.1-4: The conducted power for GSM1900 - DSI1/DSI3

PCS1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	21.94	21.74	21.27	22.50	-9.03	12.91	12.71	12.24
2 Txslots	20.01	19.75	19.54	21.00	-6.02	13.99	13.73	13.52
3 Txslots	18.05	17.84	17.19	19.00	-4.26	13.79	13.58	12.93
4 Txslots	17.12	16.79	15.93	17.50	-3.01	14.11	13.78	12.92
PCS1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	21.88	21.71	21.26	22.50	-9.03	12.85	12.68	12.23
2 Txslots	19.98	19.72	19.52	21.00	-6.02	13.96	13.70	13.50
3 Txslots	18.02	17.82	17.18	19.00	-4.26	13.76	13.56	12.92
4 Txslots	17.10	16.77	15.93	17.50	-3.01	14.09	13.76	12.92
PCS1900 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	17.57	17.50	17.26	18.50	-9.03	8.54	8.47	8.23
2 Txslots	17.55	17.49	17.27	18.50	-6.02	11.53	11.47	11.25
3Txslots	17.51	17.49	17.24	18.50	-4.26	13.25	13.23	12.98
4 Txslots	17.39	17.46	17.21	18.50	-3.01	14.38	14.45	14.20

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

11.2 WCDMA Measurement result

Table 11.2-1: The conducted Power for WCDMA B2 - DSI0/DSI2

WCDMA1900	FDDII result (dBm)			Tune up
	9538/9938 (1907.6MHz)	9400/9800 (1880MHz)	9262/9662 (1852.4MHz)	
	23.24	23.28	23.26	24.00
HSUPA	20.93	21.32	21.22	22.00
	21.02	21.34	21.19	22.00
	21.04	21.25	21.19	22.00
	20.91	21.31	21.16	22.00
	20.66	21.29	21.15	22.00
HSPA+	20.71	20.65	20.67	22.00
DC-HSDPA	21.01	21.05	21.06	22.00
	20.81	20.62	20.61	22.00
	20.43	20.52	20.49	22.00
	20.42	20.51	20.48	22.00

Table 11.2-2: The conducted Power for WCDMA B4 - DSI0/DSI2

WCDMA1700	FDDIV result (dBm)			Tune up
	1513/1738 (1752.6MHz)	1412/1637 (1732.4MHz)	1312/1537 (1712.4MHz)	
	23.01	22.97	22.93	24.00
HSUPA	20.92	20.85	20.83	22.00
	20.98	20.89	20.95	22.00
	20.92	20.93	20.95	22.00
	20.94	20.88	20.92	22.00
	20.89	20.96	20.93	22.00
HSPA+	20.42	20.39	20.43	22.00
DC-HSDPA	20.85	20.86	20.93	22.00
	20.57	20.44	20.39	21.50
	20.31	20.38	20.38	21.50
	20.28	20.32	20.37	21.50

Table 11.2-3: The conducted Power for WCDMA B5 - DSI0/DSI2

WCDMA850	FDDV result (dBm)			Tune up
	4233/4458	4183/4408	4132/4357	
	(846.6MHz)	(836.6MHz)	(826.4MHz)	
	23.34	23.29	23.26	24.00
HSUPA	21.53	21.37	21.51	22.00
	21.51	21.42	21.48	22.00
	21.52	21.45	21.47	22.00
	21.43	21.44	21.49	22.00
	21.49	21.46	21.47	22.00
HSPA+	21.05	20.97	21.12	22.00
DC-HSDPA	21.49	21.47	21.48	22.00
	21.31	21.32	21.27	22.00
	20.96	20.97	20.99	22.00
	20.94	20.95	20.98	22.00

Table 11.2-4: The conducted Power for WCDMA B2 - DSI1/DSI3

WCDMA1900	FDDII result (dBm)			Tune up
	9538/9938	9400/9800	9262/9662	
	(1907.6MHz)	(1880MHz)	(1852.4MHz)	
	14.41	14.37	14.34	15.50
HSUPA	14.27	14.27	14.13	15.00
	14.17	14.12	14.04	15.00
	13.75	13.56	13.61	14.50
	14.33	14.15	14.16	15.00
	13.18	13.02	13.08	14.00
HSPA+	13.76	13.62	13.59	15.00
DC-HSDPA	14.17	14.16	14.07	15.00
	14.28	14.27	14.15	15.00
	13.78	13.71	13.58	14.50
	13.67	13.59	13.60	14.50

Table 11.2-5: The conducted Power for WCDMA B4 - DSI1/DSI3

| WCDMA1700 | FDDIV result (dBm) | | | Tune up |
	1513/1738 (1752.6MHz)	1412/1637 (1732.4MHz)	1312/1537 (1712.4MHz)	
	14.06	14.12	14.13	15.50
HSUPA	14.25	14.10	14.07	15.00
	14.16	14.02	14.16	15.00
	13.52	13.38	13.38	14.50
	14.12	14.06	13.96	15.00
	13.06	13.01	13.02	14.00
HSPA+	13.72	13.60	13.61	15.00
DC-HSDPA	14.24	14.21	14.05	15.00
	14.15	13.98	13.98	15.00
	13.62	13.48	13.62	14.50
	13.69	13.66	13.51	14.50

Table 11.2-6: The conducted Power for WCDMA B5 - DSI1/DSI3

| WCDMA850 | FDDV result (dBm) | | | Tune up |
	4233/4458 (846.6MHz)	4183/4408 (836.6MHz)	4132/4357 (826.4MHz)	
	15.93	15.87	15.85	16.50
HSUPA	15.83	15.72	15.63	16.50
	15.73	15.69	15.68	16.50
	15.44	15.31	15.37	16.50
	15.82	15.65	15.75	16.50
	14.73	14.54	14.53	15.50
HSPA+	15.38	15.26	15.38	16.50
DC-HSDPA	15.85	15.82	15.67	16.50
	15.79	15.59	15.62	16.50
	15.39	15.21	15.28	16.00
	15.18	15.11	15.03	16.00

11.3 LTE Measurement result

Table 11.3-1: Maximum Power Reduction (MPR) for LTE

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4	3	5	10	15	20	
	MHz	MHz	MHz	MHz	MHz	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

Table 11.3-2: The tune up for LTE

Band	Tune up			
	Sar sensor off+ WWAN transmit alone	Sar sensor on + WWAN transmit alone	Sar sensor off+ WWAN transmit with WIFI	Sar sensor on+ WWAN transmit with WIFI
	DSI0	DSI1	DSI2	DSI3
LTE B2	24	16	24	16
LTE B5	24.5	17.5	24.5	17.5
LTE B7	24	13	24	11.5
LTE B12	24.5	18.5	24.5	18.5
LTE B13	24.5	19	24.5	19
LTE B41	24	15.5	24	13.5
LTE B66	24	18	24	16.5

LTE B2 - DSI0/DSI2

LTE B2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	22.84	22.18	21.03
		1880 (18900)	22.79	22.09	21.02
		1850.7 (18607)	22.80	22.09	21.03
	1RB-Middle (3)	1909.3 (19193)	22.98	22.26	21.17
		1880 (18900)	22.95	22.27	21.14
		1850.7 (18607)	22.95	22.15	21.16
	1RB-Low (0)	1909.3 (19193)	22.84	22.03	21.07
		1880 (18900)	22.80	21.99	21.11
		1850.7 (18607)	22.82	22.09	20.99
	3RB-High (3)	1909.3 (19193)	22.96	21.91	21.05
		1880 (18900)	22.92	21.92	21.05
		1850.7 (18607)	22.93	21.86	21.01
	3RB-Middle (1)	1909.3 (19193)	23.03	21.98	21.10

		1880 (18900)	22.98	21.99	21.06
		1850.7 (18607)	22.98	21.91	21.08
	3RB-Low (0)	1909.3 (19193)	22.97	21.99	21.06
		1880 (18900)	22.91	21.94	21.00
		1850.7 (18607)	22.95	21.90	21.04
	6RB (0)	1909.3 (19193)	22.00	21.11	20.01
		1880 (18900)	22.00	21.04	19.97
		1850.7 (18607)	22.00	20.99	19.95
3MHz	1RB-High (14)	1908.5 (19185)	22.86	22.19	21.11
		1880 (18900)	22.86	22.27	21.13
		1851.5 (18615)	22.84	22.16	21.14
	1RB-Middle (7)	1908.5 (19185)	22.98	22.30	21.20
		1880 (18900)	23.03	22.28	21.18
		1851.5 (18615)	23.04	22.28	21.15
	1RB-Low (0)	1908.5 (19185)	22.88	22.16	21.06
		1880 (18900)	22.87	22.08	21.04
		1851.5 (18615)	22.83	22.12	21.12
	8RB-High (7)	1908.5 (19185)	21.95	21.02	19.98
		1880 (18900)	21.92	20.99	19.98
		1851.5 (18615)	21.89	20.90	19.96
	8RB-Middle (4)	1908.5 (19185)	22.00	21.08	20.01
		1880 (18900)	21.93	20.98	19.96
		1851.5 (18615)	21.92	20.97	19.98
	8RB-Low (0)	1908.5 (19185)	21.98	21.05	20.06
		1880 (18900)	21.93	20.97	19.92
		1851.5 (18615)	21.90	20.93	19.97
	15RB (0)	1908.5 (19185)	21.97	20.98	20.00
		1880 (18900)	21.95	20.93	19.90
		1851.5 (18615)	21.92	20.93	19.88
5MHz	1RB-High (24)	1907.5 (19175)	22.80	22.00	21.05
		1880 (18900)	22.73	21.93	20.96
		1852.5 (18625)	22.77	22.05	21.00
	1RB-Middle (12)	1907.5 (19175)	23.02	22.27	21.24
		1880 (18900)	23.02	22.21	21.20
		1852.5 (18625)	23.06	22.15	21.23
	1RB-Low (0)	1907.5 (19175)	22.79	22.05	20.93
		1880 (18900)	22.76	22.00	21.02
		1852.5 (18625)	22.72	22.05	20.95
	12RB-High (13)	1907.5 (19175)	21.87	20.85	19.88
		1880 (18900)	21.90	20.87	19.93
		1852.5 (18625)	21.91	20.91	19.95
	12RB-Middle (6)	1907.5 (19175)	22.03	21.00	20.07

		1880 (18900)	21.95	20.96	19.99
		1852.5 (18625)	21.94	20.93	19.97
	12RB-Low (0)	1907.5 (19175)	22.03	21.01	20.04
		1880 (18900)	21.95	20.94	19.99
		1852.5 (18625)	21.91	20.91	19.97
	25RB (0)	1907.5 (19175)	22.00	20.99	20.01
		1880 (18900)	21.95	20.95	19.96
		1852.5 (18625)	21.94	20.95	19.94
10MHz	1RB-High (49)	1905 (19150)	22.88	22.17	21.05
		1880 (18900)	22.80	22.00	21.03
		1855 (18650)	22.84	22.17	20.99
	1RB-Middle (24)	1905 (19150)	22.93	22.19	21.10
		1880 (18900)	22.96	22.27	21.13
		1855 (18650)	22.96	22.24	21.14
	1RB-Low (0)	1905 (19150)	22.86	22.14	21.10
		1880 (18900)	22.80	22.11	21.09
		1855 (18650)	22.82	22.08	21.07
	25RB-High (25)	1905 (19150)	21.82	20.82	19.82
		1880 (18900)	21.92	20.93	19.91
		1855 (18650)	21.92	20.92	19.93
	25RB-Middle (12)	1905 (19150)	22.02	20.99	20.01
		1880 (18900)	21.97	20.93	19.94
		1855 (18650)	21.99	20.99	19.99
	25RB-Low (0)	1905 (19150)	22.03	20.99	20.05
		1880 (18900)	21.95	20.94	19.94
		1855 (18650)	22.00	20.98	20.02
	50RB (0)	1905 (19150)	21.94	20.92	19.95
		1880 (18900)	21.93	20.94	19.92
		1855 (18650)	21.99	21.00	20.01
15MHz	1RB-High (74)	1902.5 (19125)	22.91	22.13	21.05
		1880 (18900)	22.78	22.13	20.98
		1857.5 (18675)	22.78	22.07	21.04
	1RB-Middle (37)	1902.5 (19125)	22.88	22.16	21.15
		1880 (18900)	22.87	22.21	21.12
		1857.5 (18675)	22.88	22.14	21.13
	1RB-Low (0)	1902.5 (19125)	22.84	22.13	21.04
		1880 (18900)	22.79	22.02	21.05
		1857.5 (18675)	22.81	21.98	20.99
	36RB-High (38)	1902.5 (19125)	21.91	20.89	19.94
		1880 (18900)	21.91	20.89	19.92
		1857.5 (18675)	21.96	20.92	19.94
	36RB-Middle (19)	1902.5 (19125)	22.03	20.99	20.00

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
		1880 (18900)	21.95	20.93	19.96
		1857.5 (18675)	22.01	20.95	20.01
	36RB-Low (0)	1902.5 (19125)	21.99	20.97	19.96
		1880 (18900)	21.96	20.91	19.96
		1857.5 (18675)	22.00	20.98	20.02
	75RB (0)	1902.5 (19125)	21.94	20.96	19.91
		1880 (18900)	21.96	20.94	19.93
		1857.5 (18675)	22.01	20.97	19.99
20MHz	1RB-High (99)	1900 (19100)	22.68	21.96	20.91
		1880 (18900)	22.63	22.00	20.81
		1860 (18700)	22.67	22.00	20.89
	1RB-Middle (50)	1900 (19100)	22.98	22.24	21.16
		1880 (18900)	22.97	22.26	21.16
		1860 (18700)	22.95	21.90	21.25
	1RB-Low (0)	1900 (19100)	22.67	21.91	20.93
		1880 (18900)	22.65	21.95	20.93
		1860 (18700)	22.63	21.84	20.91
	50RB-High (50)	1900 (19100)	21.82	20.84	19.85
		1880 (18900)	21.86	20.91	19.88
		1860 (18700)	22.01	21.02	20.01
	50RB-Middle (25)	1900 (19100)	22.02	20.98	19.99
		1880 (18900)	21.97	20.95	19.94
		1860 (18700)	22.01	21.00	19.99
	50RB-Low (0)	1900 (19100)	22.11	21.02	20.05
		1880 (18900)	21.98	20.94	19.93
		1860 (18700)	22.10	21.04	20.09
	100RB (0)	1900 (19100)	21.97	20.94	19.97
		1880 (18900)	21.91	20.90	19.89
		1860 (18700)	22.03	21.02	20.04

LTE B2 – DSI1/DSI3

LTE B2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	14.63	15.02	14.95
		1880 (18900)	14.55	14.89	14.96
		1850.7 (18607)	14.55	15.11	14.92
	1RB-Middle (3)	1909.3 (19193)	14.89	15.47	15.35
		1880 (18900)	15.03	15.35	15.05
		1850.7 (18607)	15.05	15.40	15.36
	1RB-Low (0)	1909.3 (19193)	14.55	14.95	14.89
		1880 (18900)	14.63	15.04	15.00

		1850.7 (18607)	14.80	15.14	14.91
	3RB-High (3)	1909.3 (19193)	14.91	15.01	15.04
		1880 (18900)	14.81	14.96	15.03
		1850.7 (18607)	14.87	15.04	14.96
	3RB-Middle (1)	1909.3 (19193)	14.84	14.91	15.06
		1880 (18900)	15.09	14.87	15.06
		1850.7 (18607)	15.12	14.93	15.09
	3RB-Low (0)	1909.3 (19193)	15.16	14.98	14.97
		1880 (18900)	15.04	15.09	15.00
		1850.7 (18607)	15.13	15.16	15.15
	6RB (0)	1909.3 (19193)	14.91	15.10	14.86
		1880 (18900)	14.88	14.86	14.90
		1850.7 (18607)	15.02	15.16	15.11
3MHz	1RB-High (14)	1908.5 (19185)	14.76	15.07	15.11
		1880 (18900)	14.59	15.08	14.74
		1851.5 (18615)	14.66	15.03	14.89
	1RB-Middle (7)	1908.5 (19185)	15.03	15.43	15.28
		1880 (18900)	14.91	15.44	15.16
		1851.5 (18615)	15.03	15.27	15.23
	1RB-Low (0)	1908.5 (19185)	14.55	15.20	14.84
		1880 (18900)	14.56	15.10	14.93
		1851.5 (18615)	14.79	15.09	15.04
	8RB-High (7)	1908.5 (19185)	14.93	14.85	14.85
		1880 (18900)	14.82	15.06	14.84
		1851.5 (18615)	15.05	15.09	14.92
	8RB-Middle (4)	1908.5 (19185)	15.03	14.88	15.15
		1880 (18900)	14.86	15.02	14.96
		1851.5 (18615)	15.03	14.91	15.03
	8RB-Low (0)	1908.5 (19185)	14.98	15.07	15.12
		1880 (18900)	15.11	15.01	15.07
		1851.5 (18615)	15.18	15.06	15.17
	15RB (0)	1908.5 (19185)	14.94	15.08	14.87
		1880 (18900)	14.90	14.90	15.04
		1851.5 (18615)	14.92	15.04	14.97
5MHz	1RB-High (24)	1907.5 (19175)	14.80	15.10	14.81
		1880 (18900)	14.73	14.99	14.94
		1852.5 (18625)	14.54	15.20	14.85
	1RB-Middle (12)	1907.5 (19175)	14.90	15.40	15.20
		1880 (18900)	14.96	15.33	15.31
		1852.5 (18625)	14.81	15.39	15.11
	1RB-Low (0)	1907.5 (19175)	14.72	15.02	14.81
		1880 (18900)	14.84	15.04	14.86

		1852.5 (18625)	14.57	14.94	14.96
	12RB-High (13)	1907.5 (19175)	14.98	14.85	15.02
		1880 (18900)	14.78	14.80	14.80
		1852.5 (18625)	15.10	15.01	15.06
	12RB-Middle (6)	1907.5 (19175)	15.11	15.09	15.16
		1880 (18900)	14.92	14.89	14.87
		1852.5 (18625)	15.06	15.12	14.82
	12RB-Low (0)	1907.5 (19175)	15.20	15.16	14.99
		1880 (18900)	14.92	14.96	14.94
		1852.5 (18625)	14.94	15.02	15.05
	25RB (0)	1907.5 (19175)	14.87	14.93	15.07
		1880 (18900)	14.81	14.94	15.07
		1852.5 (18625)	15.13	14.90	14.92
10MHz	1RB-High (49)	1905 (19150)	14.82	15.06	14.88
		1880 (18900)	14.53	14.97	14.76
		1855 (18650)	14.71	14.96	14.74
	1RB-Middle (24)	1905 (19150)	15.03	15.20	15.34
		1880 (18900)	15.09	15.27	15.32
		1855 (18650)	14.85	15.29	15.14
	1RB-Low (0)	1905 (19150)	14.65	15.11	14.94
		1880 (18900)	14.81	15.27	14.83
		1855 (18650)	14.72	15.00	14.93
	25RB-High (25)	1905 (19150)	15.06	15.06	14.81
		1880 (18900)	14.85	14.84	14.98
		1855 (18650)	15.04	14.92	14.96
	25RB-Middle (12)	1905 (19150)	15.10	15.17	14.95
		1880 (18900)	14.84	15.10	14.96
		1855 (18650)	14.93	14.86	15.09
	25RB-Low (0)	1905 (19150)	14.92	15.24	15.01
		1880 (18900)	14.99	15.03	14.84
		1855 (18650)	15.03	15.01	15.08
	50RB (0)	1905 (19150)	15.07	15.06	14.98
		1880 (18900)	14.89	14.94	14.93
		1855 (18650)	15.03	15.06	14.89
15MHz	1RB-High (74)	1902.5 (19125)	14.55	14.93	15.02
		1880 (18900)	14.57	14.86	14.87
		1857.5 (18675)	14.50	15.22	14.91
	1RB-Middle (37)	1902.5 (19125)	15.03	15.34	15.36
		1880 (18900)	14.82	15.33	15.05
		1857.5 (18675)	14.78	15.36	15.25
	1RB-Low (0)	1902.5 (19125)	14.53	15.07	15.02
		1880 (18900)	14.62	15.16	14.89

		1857.5 (18675)	14.75	15.13	14.96
	36RB-High (38)	1902.5 (19125)	14.82	14.96	15.06
		1880 (18900)	14.81	15.08	15.08
		1857.5 (18675)	15.06	14.91	15.01
	36RB-Middle (19)	1902.5 (19125)	15.14	15.16	14.88
		1880 (18900)	14.84	14.90	15.01
		1857.5 (18675)	14.99	15.13	14.94
	36RB-Low (0)	1902.5 (19125)	15.05	15.19	15.00
		1880 (18900)	15.06	15.11	14.94
		1857.5 (18675)	15.00	15.09	15.09
	75RB (0)	1902.5 (19125)	14.96	15.02	14.85
		1880 (18900)	14.93	14.82	14.91
		1857.5 (18675)	15.05	14.97	14.90
20MHz	1RB-High (99)	1900 (19100)	14.73	15.11	15.01
		1880 (18900)	14.67	15.05	14.94
		1860 (18700)	14.70	15.16	14.94
	1RB-Middle (50)	1900 (19100)	15.01	15.37	15.35
		1880 (18900)	15.00	15.39	15.22
		1860 (18700)	14.97	15.37	15.27
	1RB-Low (0)	1900 (19100)	14.68	15.12	15.01
		1880 (18900)	14.74	15.18	15.00
		1860 (18700)	14.74	15.05	14.99
	50RB-High (50)	1900 (19100)	14.96	14.98	14.99
		1880 (18900)	14.98	15.00	14.98
		1860 (18700)	15.07	15.08	15.08
	50RB-Middle (25)	1900 (19100)	15.04	15.08	15.06
		1880 (18900)	15.02	15.07	15.06
		1860 (18700)	15.03	15.04	15.02
	50RB-Low (0)	1900 (19100)	15.12	15.15	15.14
		1880 (18900)	15.01	15.01	15.00
		1860 (18700)	15.11	15.15	15.14
	100RB (0)	1900 (19100)	15.04	15.06	15.04
		1880 (18900)	15.00	15.00	15.01
		1860 (18700)	15.05	15.08	15.08

LTE B5 - DSI0/DSI2

LTE B5					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	848.3 (20643)	23.54	22.84	21.76
		836.5 (20525)	23.49	22.70	21.62
		824.7 (20407)	23.46	22.75	21.65
	1RB-Middle (3)	848.3 (20643)	23.65	22.99	21.88
		836.5 (20525)	23.63	22.81	21.68
		824.7 (20407)	23.59	22.80	21.80
	1RB-Low (0)	848.3 (20643)	23.55	22.73	21.65
		836.5 (20525)	23.49	22.75	21.66
		824.7 (20407)	23.46	22.77	21.67
	3RB-High (3)	848.3 (20643)	23.65	22.58	21.71
		836.5 (20525)	23.58	22.55	21.66
		824.7 (20407)	23.60	22.54	21.65
	3RB-Middle (1)	848.3 (20643)	23.67	22.62	21.75
		836.5 (20525)	23.64	22.62	21.72
		824.7 (20407)	23.63	22.62	21.66
	3RB-Low (0)	848.3 (20643)	23.63	22.63	21.74
		836.5 (20525)	23.60	22.57	21.74
		824.7 (20407)	23.60	22.60	21.66
	6RB (0)	848.3 (20643)	22.66	21.74	20.66
		836.5 (20525)	22.62	21.67	20.61
		824.7 (20407)	22.62	21.66	20.60
3MHz	1RB-High (14)	847.5 (20635)	23.58	22.77	21.78
		836.5 (20525)	23.54	22.73	21.71
		825.5 (20415)	23.54	22.77	20.66
	1RB-Middle (7)	847.5 (20635)	23.77	23.07	21.91
		836.5 (20525)	23.71	22.94	21.87
		825.5 (20415)	23.62	22.02	21.82
	1RB-Low (0)	847.5 (20635)	23.58	22.79	21.75
		836.5 (20525)	23.57	22.94	21.75
		825.5 (20415)	23.52	22.83	21.69
	8RB-High (7)	847.5 (20635)	22.64	21.67	20.68
		836.5 (20525)	22.62	21.63	20.62
		825.5 (20415)	22.56	21.56	20.57
	8RB-Middle (4)	847.5 (20635)	22.68	21.76	20.69
		836.5 (20525)	22.67	21.69	20.66
		825.5 (20415)	22.59	21.66	20.65
	8RB-Low (0)	847.5 (20635)	22.68	21.72	20.70
		836.5 (20525)	22.62	21.66	20.62

		825.5 (20415)	22.59	21.61	20.59
	15RB (0)	847.5 (20635)	22.65	21.64	20.63
		836.5 (20525)	22.63	21.60	20.59
		825.5 (20415)	22.57	21.56	20.53
5MHz	1RB-High (24)	846.5 (20625)	23.47	22.80	21.64
		836.5 (20525)	23.40	22.57	21.55
		826.5 (20425)	23.47	22.71	21.75
	1RB-Middle (12)	846.5 (20625)	23.67	22.94	21.86
		836.5 (20525)	23.71	22.93	21.88
		826.5 (20425)	23.69	22.96	21.85
	1RB-Low (0)	846.5 (20625)	23.44	22.75	21.58
		836.5 (20525)	23.53	22.81	21.69
		826.5 (20425)	23.41	22.70	21.59
	12RB-High (13)	846.5 (20625)	22.59	21.57	20.62
		836.5 (20525)	22.66	21.57	20.63
		826.5 (20425)	22.54	21.48	20.51
	12RB-Middle (6)	846.5 (20625)	22.70	21.66	20.69
		836.5 (20525)	22.67	21.64	20.62
		826.5 (20425)	22.63	21.62	20.61
	12RB-Low (0)	846.5 (20625)	22.69	21.67	20.64
		836.5 (20525)	22.59	21.53	20.53
		826.5 (20425)	22.63	21.63	20.61
	25RB (0)	846.5 (20625)	22.66	21.66	20.62
		836.5 (20525)	22.65	21.62	20.62
		826.5 (20425)	22.58	21.58	20.56
10MHz	1RB-High (49)	844 (20600)	23.56	22.82	21.79
		836.5 (20525)	23.52	22.71	21.60
		829 (20450)	23.52	22.77	21.68
	1RB-Middle (24)	844 (20600)	23.61	22.78	21.78
		836.5 (20525)	23.62	22.82	21.73
		829 (20450)	23.64	22.99	21.80
	1RB-Low (0)	844 (20600)	23.56	22.71	21.68
		836.5 (20525)	23.58	22.92	21.80
		829 (20450)	23.51	22.74	21.69
	25RB-High (25)	844 (20600)	22.60	21.55	20.52
		836.5 (20525)	22.75	21.73	20.72
		829 (20450)	22.66	21.67	20.64
	25RB-Middle (12)	844 (20600)	22.72	21.67	20.68
		836.5 (20525)	22.67	21.68	20.64
		829 (20450)	22.64	21.63	20.62
	25RB-Low (0)	844 (20600)	22.76	21.73	20.70
		836.5 (20525)	22.61	21.64	20.59

		829 (20450)	22.78	21.76	20.73
		844 (20600)	22.67	21.66	20.63
	50RB (0)	836.5 (20525)	22.70	21.66	20.66
		829 (20450)	22.72	21.70	20.68

LTE B5 – DSI1/DSI3

LTE B5					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	848.3 (20643)	15.95	16.30	16.40
		836.5 (20525)	15.93	16.37	16.10
		824.7 (20407)	16.04	16.41	16.08
	1RB-Middle (3)	848.3 (20643)	16.05	16.28	16.36
		836.5 (20525)	16.13	16.48	16.15
		824.7 (20407)	16.10	16.56	16.33
	1RB-Low (0)	848.3 (20643)	16.10	16.37	16.31
		836.5 (20525)	16.07	16.27	16.28
		824.7 (20407)	15.93	16.20	16.06
	3RB-High (3)	848.3 (20643)	16.07	16.06	15.99
		836.5 (20525)	16.12	16.18	16.02
		824.7 (20407)	15.99	16.05	16.14
	3RB-Middle (1)	848.3 (20643)	16.08	15.99	16.02
		836.5 (20525)	16.07	16.09	16.05
		824.7 (20407)	16.14	16.02	16.18
	3RB-Low (0)	848.3 (20643)	16.19	16.22	16.20
		836.5 (20525)	15.90	16.17	16.11
		824.7 (20407)	16.12	16.33	16.25
	6RB (0)	848.3 (20643)	15.90	16.14	15.96
		836.5 (20525)	16.15	16.14	16.23
		824.7 (20407)	15.97	16.05	16.18
3MHz	1RB-High (14)	847.5 (20635)	15.96	16.36	16.39
		836.5 (20525)	15.79	16.17	16.11
		825.5 (20415)	16.11	16.37	16.17
	1RB-Middle (7)	847.5 (20635)	15.99	16.52	16.32
		836.5 (20525)	15.99	16.33	16.18
		825.5 (20415)	16.16	16.42	16.25
	1RB-Low (0)	847.5 (20635)	15.92	16.43	16.34
		836.5 (20525)	16.17	16.27	16.24
		825.5 (20415)	16.15	16.46	15.98
	8RB-High (7)	847.5 (20635)	15.88	16.06	15.97
		836.5 (20525)	16.30	16.22	16.21
		825.5 (20415)	16.16	16.07	15.97

		847.5 (20635)	16.17	16.14	16.12
	8RB-Middle (4)	836.5 (20525)	15.98	16.05	15.98
		825.5 (20415)	15.96	16.01	15.99
		847.5 (20635)	16.14	16.30	16.05
	8RB-Low (0)	836.5 (20525)	16.12	16.19	16.11
		825.5 (20415)	16.28	16.14	16.21
		847.5 (20635)	15.94	16.06	16.19
	15RB (0)	836.5 (20525)	16.02	16.00	15.98
		825.5 (20415)	16.10	16.28	16.00
5MHz		846.5 (20625)	16.09	16.27	16.18
	1RB-High (24)	836.5 (20525)	15.79	16.23	16.31
		826.5 (20425)	16.09	16.32	16.34
		846.5 (20625)	16.05	16.36	16.22
	1RB-Middle (12)	836.5 (20525)	15.99	16.47	16.11
		826.5 (20425)	16.15	16.27	16.33
		846.5 (20625)	15.98	16.30	16.15
	1RB-Low (0)	836.5 (20525)	16.05	16.23	16.40
		826.5 (20425)	16.06	16.34	16.11
		846.5 (20625)	15.88	15.98	16.11
	12RB-High (13)	836.5 (20525)	16.21	16.33	16.03
		826.5 (20425)	16.05	15.93	16.06
		846.5 (20625)	16.02	16.00	16.13
	12RB-Middle (6)	836.5 (20525)	16.01	16.02	15.97
		826.5 (20425)	16.12	15.97	16.20
		846.5 (20625)	16.20	16.15	16.30
	12RB-Low (0)	836.5 (20525)	15.93	16.05	16.09
		826.5 (20425)	16.06	16.06	16.11
		846.5 (20625)	16.08	16.15	16.11
	25RB (0)	836.5 (20525)	16.00	16.24	16.17
		826.5 (20425)	16.21	16.07	16.24
10MHz		844 (20600)	16.10	16.47	16.33
	1RB-High (49)	836.5 (20525)	15.99	16.30	16.25
		829 (20450)	16.07	16.46	16.27
		844 (20600)	16.18	16.48	16.40
	1RB-Middle (24)	836.5 (20525)	16.17	16.41	16.30
		829 (20450)	16.19	16.47	16.34
		844 (20600)	16.07	16.45	16.25
	1RB-Low (0)	836.5 (20525)	16.08	16.41	16.31
		829 (20450)	16.05	16.40	16.15
		844 (20600)	16.06	16.10	16.09
	25RB-High (25)	836.5 (20525)	16.20	16.26	16.21
		829 (20450)	16.09	16.10	16.08

	844 (20600)	16.15	16.18	16.17
25RB-Middle (12)	836.5 (20525)	16.10	16.13	16.12
	829 (20450)	16.10	16.12	16.13
	844 (20600)	16.21	16.21	16.22
25RB-Low (0)	836.5 (20525)	16.08	16.14	16.12
	829 (20450)	16.23	16.25	16.25
	844 (20600)	16.08	16.16	16.16
50RB (0)	836.5 (20525)	16.15	16.17	16.15
	829 (20450)	16.15	16.19	16.20

LTE B7 - DSI0/DSI2

LTE B7					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2567.5 (21425)	22.98	21.78	21.30
		2535 (21100)	23.05	22.35	21.23
		2502.5 (20775)	22.96	22.35	21.34
	1RB-Middle (12)	2567.5 (21425)	23.21	22.15	21.56
		2535 (21100)	23.28	22.55	21.49
		2502.5 (20775)	23.21	22.54	21.53
	1RB-Low (0)	2567.5 (21425)	23.00	21.93	21.17
		2535 (21100)	23.11	22.42	21.29
		2502.5 (20775)	22.64	22.31	21.20
	12RB-High (13)	2567.5 (21425)	22.13	20.92	20.21
		2535 (21100)	22.18	21.17	20.16
		2502.5 (20775)	22.11	21.21	20.16
	12RB-Middle (6)	2567.5 (21425)	22.26	21.16	20.29
		2535 (21100)	22.27	21.24	20.25
		2502.5 (20775)	22.16	21.20	20.15
	12RB-Low (0)	2567.5 (21425)	22.29	21.30	20.31
		2535 (21100)	22.26	21.20	20.21
		2502.5 (20775)	22.08	21.08	20.09
	25RB (0)	2567.5 (21425)	22.20	21.25	20.21
		2535 (21100)	22.21	21.20	20.17
		2502.5 (20775)	22.09	21.13	20.09
10MHz	1RB-High (49)	2565 (21400)	23.11	22.25	21.33
		2535 (21100)	23.11	22.49	21.29
		2505 (20800)	23.06	22.37	21.36
	1RB-Middle (24)	2565 (21400)	23.22	22.45	21.49
		2535 (21100)	23.27	22.57	21.52
		2505 (20800)	23.19	22.53	21.41
	1RB-Low (0)	2565 (21400)	23.17	22.48	21.43

		2535 (21100)	23.19	22.39	21.27
		2505 (20800)	23.00	22.41	21.33
	25RB-High (25)	2565 (21400)	22.10	21.10	20.09
		2535 (21100)	22.22	21.20	20.19
		2505 (20800)	22.21	21.24	20.19
	25RB-Middle (12)	2565 (21400)	22.25	21.23	20.23
		2535 (21100)	22.24	21.26	20.24
		2505 (20800)	22.15	21.20	20.13
	25RB-Low (0)	2565 (21400)	22.37	21.36	20.32
		2535 (21100)	22.32	21.29	20.29
		2505 (20800)	22.12	21.15	20.06
	50RB (0)	2565 (21400)	22.22	21.23	20.17
		2535 (21100)	22.26	21.23	20.23
		2505 (20800)	22.18	21.20	20.14
15MHz	1RB-High (74)	2562.5 (21375)	23.04	22.27	21.34
		2535 (21100)	23.08	22.43	21.32
		2507.5 (20825)	23.05	22.42	21.31
	1RB-Middle (37)	2562.5 (21375)	23.17	22.42	21.38
		2535 (21100)	23.21	22.49	21.45
		2507.5 (20825)	23.13	22.51	21.42
	1RB-Low (0)	2562.5 (21375)	23.16	22.38	21.36
		2535 (21100)	23.16	22.36	21.34
		2507.5 (20825)	22.99	22.28	21.22
	36RB-High (38)	2562.5 (21375)	22.16	21.11	20.12
		2535 (21100)	22.26	21.19	20.22
		2507.5 (20825)	22.24	21.20	20.17
	36RB-Middle (19)	2562.5 (21375)	22.28	21.25	20.22
		2535 (21100)	22.32	21.22	20.21
		2507.5 (20825)	22.20	21.18	20.17
	36RB-Low (0)	2562.5 (21375)	22.33	21.24	20.26
		2535 (21100)	22.32	21.24	20.26
		2507.5 (20825)	22.14	21.11	20.06
	75RB (0)	2562.5 (21375)	22.25	21.20	20.17
		2535 (21100)	22.29	21.23	20.22
		2507.5 (20825)	22.21	21.18	20.14
20MHz	1RB-High (99)	2560 (21350)	22.94	22.27	21.23
		2535 (21100)	23.01	22.37	21.23
		2510 (20850)	23.00	22.29	21.08
	1RB-Middle (50)	2560 (21350)	23.30	22.58	21.50
		2535 (21100)	23.38	22.58	21.50
		2510 (20850)	23.23	22.55	21.45
	1RB-Low (0)	2560 (21350)	23.10	22.45	21.31

		2535 (21100)	23.05	22.33	21.15
		2510 (20850)	22.88	22.19	21.10
	50RB-High (50)	2560 (21350)	22.06	21.04	20.04
		2535 (21100)	22.20	21.18	20.13
		2510 (20850)	22.29	21.28	20.21
	50RB-Middle (25)	2560 (21350)	22.33	21.29	20.28
		2535 (21100)	22.33	21.30	20.27
		2510 (20850)	22.26	21.25	20.22
	50RB-Low (0)	2560 (21350)	22.33	21.25	20.21
		2535 (21100)	22.35	21.30	20.33
		2510 (20850)	22.31	21.14	20.10
	100RB (0)	2560 (21350)	22.20	21.12	20.10
		2535 (21100)	22.30	21.22	20.22
		2510 (20850)	22.22	21.20	20.13

LTE B7 – DSI1

LTE B7					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2567.5 (21425)	11.70	11.65	11.55
		2535 (21100)	11.63	11.56	11.76
		2502.5 (20775)	11.47	11.67	11.48
	1RB-Middle (12)	2567.5 (21425)	11.94	12.03	11.81
		2535 (21100)	11.90	11.89	11.98
		2502.5 (20775)	11.81	11.82	11.73
	1RB-Low (0)	2567.5 (21425)	11.58	11.78	11.78
		2535 (21100)	11.71	11.73	11.72
		2502.5 (20775)	11.58	11.72	11.52
	12RB-High (13)	2567.5 (21425)	11.90	11.68	11.80
		2535 (21100)	11.71	11.70	11.77
		2502.5 (20775)	11.92	11.73	11.86
	12RB-Middle (6)	2567.5 (21425)	11.86	11.96	11.82
		2535 (21100)	12.01	11.81	11.77
		2502.5 (20775)	11.84	11.80	11.62
	12RB-Low (0)	2567.5 (21425)	11.78	11.94	11.82
		2535 (21100)	11.97	11.81	11.87
		2502.5 (20775)	11.79	11.68	11.75
	25RB (0)	2567.5 (21425)	11.96	11.77	11.76
		2535 (21100)	11.89	11.84	11.74
		2502.5 (20775)	11.69	11.62	11.80
10MHz	1RB-High (49)	2565 (21400)	11.70	11.78	11.54
		2535 (21100)	11.58	11.64	11.66

		2505 (20800)	11.52	11.70	11.69
	1RB-Middle (24)	2565 (21400)	11.87	12.11	11.85
		2535 (21100)	11.91	11.97	11.94
		2505 (20800)	11.86	11.88	11.92
	1RB-Low (0)	2565 (21400)	11.65	11.63	11.75
		2535 (21100)	11.59	11.75	11.73
		2505 (20800)	11.53	11.75	11.59
	25RB-High (25)	2565 (21400)	11.69	11.68	11.78
		2535 (21100)	11.73	11.77	11.89
		2505 (20800)	11.76	11.72	11.88
	25RB-Middle (12)	2565 (21400)	12.00	11.88	11.87
		2535 (21100)	11.96	11.95	11.91
		2505 (20800)	11.79	11.80	11.62
	25RB-Low (0)	2565 (21400)	11.77	11.80	11.83
		2535 (21100)	11.85	11.95	11.94
		2505 (20800)	11.75	11.77	11.61
	50RB (0)	2565 (21400)	11.83	11.85	11.73
		2535 (21100)	11.75	11.86	11.73
		2505 (20800)	11.71	11.68	11.75
15MHz	1RB-High (74)	2562.5 (21375)	11.63	11.86	11.44
		2535 (21100)	11.47	11.78	11.54
		2507.5 (20825)	11.49	11.77	11.52
	1RB-Middle (37)	2562.5 (21375)	11.90	12.15	12.02
		2535 (21100)	11.92	12.00	11.88
		2507.5 (20825)	11.91	12.03	11.74
	1RB-Low (0)	2562.5 (21375)	11.57	11.67	11.73
		2535 (21100)	11.51	11.84	11.68
		2507.5 (20825)	11.59	11.54	11.57
	36RB-High (38)	2562.5 (21375)	11.75	11.87	11.87
		2535 (21100)	11.81	11.73	11.69
		2507.5 (20825)	11.73	11.71	11.72
	36RB-Middle (19)	2562.5 (21375)	11.82	11.92	11.94
		2535 (21100)	11.88	11.84	11.70
		2507.5 (20825)	11.78	11.63	11.80
	36RB-Low (0)	2562.5 (21375)	11.86	11.81	11.73
		2535 (21100)	11.84	11.87	11.87
		2507.5 (20825)	11.72	11.70	11.60
	75RB (0)	2562.5 (21375)	11.89	11.80	11.78
		2535 (21100)	11.71	11.80	11.74
		2507.5 (20825)	11.87	11.72	11.61
20MHz	1RB-High (99)	2560 (21350)	11.64	11.76	11.57
		2535 (21100)	11.56	11.70	11.68

		2510 (20850)	11.57	11.76	11.61
	1RB-Middle (50)	2560 (21350)	11.91	12.05	11.93
		2535 (21100)	11.92	12.02	11.93
		2510 (20850)	11.81	11.94	11.84
	1RB-Low (0)	2560 (21350)	11.66	11.75	11.70
		2535 (21100)	11.63	11.75	11.70
		2510 (20850)	11.57	11.68	11.56
	50RB-High (50)	2560 (21350)	11.84	11.79	11.77
		2535 (21100)	11.80	11.80	11.81
		2510 (20850)	11.83	11.81	11.78
	50RB-Middle (25)	2560 (21350)	11.94	11.88	11.86
		2535 (21100)	11.95	11.90	11.85
		2510 (20850)	11.83	11.75	11.74
	50RB-Low (0)	2560 (21350)	11.90	11.88	11.85
		2535 (21100)	11.92	11.93	11.92
		2510 (20850)	11.74	11.68	11.68
	100RB (0)	2560 (21350)	11.86	11.78	11.79
		2535 (21100)	11.85	11.84	11.82
		2510 (20850)	11.77	11.70	11.71

LTE B7 – DSI3

LTE B7					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2567.5 (21425)	9.43	9.68	9.73
		2535 (21100)	9.33	9.82	9.74
		2502.5 (20775)	9.41	9.60	9.41
	1RB-Middle (12)	2567.5 (21425)	9.73	9.89	9.90
		2535 (21100)	9.94	10.13	9.84
		2502.5 (20775)	9.83	9.70	9.73
	1RB-Low (0)	2567.5 (21425)	9.58	9.82	9.80
		2535 (21100)	9.33	9.69	9.48
		2502.5 (20775)	9.22	9.54	9.69
	12RB-High (13)	2567.5 (21425)	9.75	9.70	9.58
		2535 (21100)	9.75	9.62	9.56
		2502.5 (20775)	9.59	9.67	9.58
	12RB-Middle (6)	2567.5 (21425)	9.88	9.81	9.89
		2535 (21100)	9.87	9.64	9.78
		2502.5 (20775)	9.65	9.57	9.60
	12RB-Low (0)	2567.5 (21425)	9.75	9.86	9.83
		2535 (21100)	9.80	9.73	9.87
		2502.5 (20775)	9.63	9.57	9.39

		2567.5 (21425)	9.62	9.68	9.56
	25RB (0)	2535 (21100)	9.81	9.57	9.65
		2502.5 (20775)	9.55	9.65	9.65
10MHz	1RB-High (49)	2565 (21400)	9.59	9.83	9.63
		2535 (21100)	9.38	9.69	9.69
		2505 (20800)	9.50	9.77	9.62
	1RB-Middle (24)	2565 (21400)	9.69	9.99	10.04
		2535 (21100)	9.94	10.10	9.82
		2505 (20800)	9.55	9.69	9.86
	1RB-Low (0)	2565 (21400)	9.59	9.82	9.69
		2535 (21100)	9.34	9.56	9.60
		2505 (20800)	9.29	9.70	9.73
	25RB-High (25)	2565 (21400)	9.60	9.67	9.73
		2535 (21100)	9.72	9.59	9.45
		2505 (20800)	9.80	9.75	9.69
	25RB-Middle (12)	2565 (21400)	9.93	9.63	9.84
		2535 (21100)	9.96	9.64	9.63
		2505 (20800)	9.67	9.75	9.67
	25RB-Low (0)	2565 (21400)	9.64	9.67	9.78
		2535 (21100)	9.86	9.69	9.83
		2505 (20800)	9.66	9.64	9.51
	50RB (0)	2565 (21400)	9.61	9.56	9.83
		2535 (21100)	9.76	9.53	9.78
		2505 (20800)	9.65	9.44	9.56
15MHz	1RB-High (74)	2562.5 (21375)	9.46	9.81	9.60
		2535 (21100)	9.29	9.54	9.57
		2507.5 (20825)	9.28	9.72	9.43
	1RB-Middle (37)	2562.5 (21375)	9.81	10.02	9.81
		2535 (21100)	9.94	10.14	9.92
		2507.5 (20825)	9.78	9.81	9.93
	1RB-Low (0)	2562.5 (21375)	9.38	9.77	9.67
		2535 (21100)	9.48	9.54	9.50
		2507.5 (20825)	9.35	9.79	9.70
	36RB-High (38)	2562.5 (21375)	9.80	9.79	9.80
		2535 (21100)	9.62	9.56	9.47
		2507.5 (20825)	9.60	9.67	9.72
	36RB-Middle (19)	2562.5 (21375)	9.90	9.77	9.78
		2535 (21100)	9.72	9.84	9.81
		2507.5 (20825)	9.50	9.58	9.54
	36RB-Low (0)	2562.5 (21375)	9.73	9.72	9.69
		2535 (21100)	9.61	9.57	9.77
		2507.5 (20825)	9.68	9.59	9.49

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
	75RB (0)	2562.5 (21375)	9.78	9.74	9.72
		2535 (21100)	9.73	9.74	9.71
		2507.5 (20825)	9.54	9.43	9.68
20MHz	1RB-High (99)	2560 (21350)	9.54	9.77	9.67
		2535 (21100)	9.44	9.74	9.64
		2510 (20850)	9.43	9.68	9.53
	1RB-Middle (50)	2560 (21350)	9.85	10.05	9.97
		2535 (21100)	9.88	10.10	9.85
		2510 (20850)	9.73	9.89	9.84
	1RB-Low (0)	2560 (21350)	9.56	9.81	9.73
		2535 (21100)	9.48	9.68	9.62
		2510 (20850)	9.41	9.69	9.63
	50RB-High (50)	2560 (21350)	9.74	9.76	9.73
		2535 (21100)	9.66	9.63	9.62
		2510 (20850)	9.72	9.70	9.68
	50RB-Middle (25)	2560 (21350)	9.83	9.80	9.79
		2535 (21100)	9.87	9.76	9.75
		2510 (20850)	9.69	9.69	9.65
	50RB-Low (0)	2560 (21350)	9.77	9.79	9.77
		2535 (21100)	9.79	9.75	9.77
		2510 (20850)	9.60	9.58	9.57
	100RB (0)	2560 (21350)	9.76	9.73	9.74
		2535 (21100)	9.72	9.68	9.68
		2510 (20850)	9.64	9.61	9.64

LTE B12 - DSI0/DSI2

LTE B12					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	715.3	23.43	22.58	21.55
		707.5	23.45	22.70	21.60
		699.7	23.53	22.72	20.71
	1RB-Middle (3)	715.3	23.54	22.76	21.69
		707.5	23.56	22.83	21.72
		699.7	23.60	22.96	21.86
	1RB-Low (0)	715.3	23.44	22.69	21.59
		707.5	23.44	22.72	21.66
		699.7	23.48	22.75	21.68
	3RB-High (3)	715.3	23.62	22.44	21.63
		707.5	23.58	22.51	21.61
		699.7	23.67	22.58	21.70
	3RB-Middle (1)	715.3	23.63	22.53	21.67

		707.5	23.63	22.56	21.68
		699.7	23.62	22.55	21.76
	3RB-Low (0)	715.3	23.57	22.50	21.61
		707.5	23.56	22.47	21.66
		699.7	23.61	22.51	21.66
	6RB (0)	715.3	22.59	21.60	20.56
		707.5	22.59	21.68	20.58
		699.7	22.61	21.69	20.59
3MHz	1RB-High (14)	714.5	23.45	22.63	21.53
		707.5	23.47	22.66	21.72
		700.5	23.51	22.67	21.73
	1RB-Middle (7)	714.5	23.66	22.84	21.76
		707.5	23.62	22.89	21.87
		700.5	23.72	22.83	21.83
	1RB-Low (0)	714.5	23.49	22.68	21.63
		707.5	23.52	22.72	21.65
		700.5	23.54	22.71	21.66
	8RB-High (7)	714.5	22.50	21.54	20.54
		707.5	22.50	21.59	20.58
		700.5	22.56	21.65	20.64
	8RB-Middle (4)	714.5	22.58	21.59	20.61
		707.5	22.55	21.65	20.62
		700.5	22.61	21.66	20.67
	8RB-Low (0)	714.5	22.53	21.60	20.60
		707.5	22.54	21.59	20.61
		700.5	22.55	21.63	20.62
	15RB (0)	714.5	22.54	21.53	20.53
		707.5	22.52	21.55	20.53
		700.5	22.56	21.60	20.57
5MHz	1RB-High (24)	713.5	23.37	22.59	21.52
		707.5	23.37	22.61	21.57
		701.5	23.37	22.54	21.58
	1RB-Middle (12)	713.5	23.61	22.86	21.78
		707.5	23.66	22.75	21.76
		701.5	23.65	22.90	21.83
	1RB-Low (0)	713.5	23.37	22.69	21.60
		707.5	23.41	22.58	21.61
		701.5	23.44	22.65	21.60
	12RB-High (13)	713.5	22.50	21.49	20.52
		707.5	22.53	21.52	20.55
		701.5	22.53	21.55	20.60
	12RB-Middle (6)	713.5	22.57	21.55	20.58

No

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
		707.5	22.57	21.58	20.59
		701.5	22.60	21.61	20.64
	12RB-Low (0)	713.5	22.57	21.57	20.61
		707.5	22.53	21.54	20.52
		701.5	22.61	21.62	20.65
	25RB (0)	713.5	22.58	21.56	20.58
		707.5	22.55	21.55	20.52
		701.5	22.61	21.61	20.63
10MHz	1RB-High (49)	711	23.38	22.68	21.53
		707.5	23.44	22.68	21.64
		704	23.39	22.71	21.55
	1RB-Middle (24)	711	23.53	22.78	21.71
		707.5	23.55	22.70	21.69
		704	23.52	22.78	21.74
	1RB-Low (0)	711	23.48	22.73	21.66
		707.5	23.44	22.62	21.73
		704	23.49	22.77	21.67
	25RB-High (25)	711	22.50	21.50	20.49
		707.5	22.58	21.59	20.61
		704	22.61	21.71	20.65
	25RB-Middle (12)	711	22.54	21.55	20.58
		707.5	22.56	21.59	20.60
		704	22.58	21.61	20.62
	25RB-Low (0)	711	22.58	21.54	20.57
		707.5	22.65	21.53	20.52
		704	22.63	21.66	20.65
	50RB (0)	711	22.53	21.54	20.53
		707.5	22.54	21.59	20.57
		704	22.66	21.65	20.67

LTE B12 – DSI1/DSI3

LTE B12					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	715.3	16.37	16.67	16.64
		707.5	16.26	16.72	16.75
		699.7	16.38	16.66	16.56
	1RB-Middle (3)	715.3	16.53	16.79	16.73
		707.5	16.61	16.88	16.85
		699.7	16.56	16.89	16.84
	1RB-Low (0)	715.3	16.56	16.69	16.67
		707.5	16.44	16.83	16.75

		699.7	16.35	16.67	16.62
	3RB-High (3)	715.3	16.54	16.61	16.63
		707.5	16.58	16.67	16.59
		699.7	16.74	16.69	16.61
	3RB-Middle (1)	715.3	16.67	16.49	16.41
		707.5	16.40	16.44	16.57
		699.7	16.52	16.49	16.56
	3RB-Low (0)	715.3	16.59	16.40	16.63
		707.5	16.49	16.43	16.55
		699.7	16.63	16.67	16.67
	6RB (0)	715.3	16.52	16.62	16.65
		707.5	16.60	16.44	16.59
		699.7	16.44	16.61	16.55
3MHz	1RB-High (14)	714.5	16.48	16.67	16.63
		707.5	16.50	16.79	16.67
		700.5	16.35	16.86	16.73
	1RB-Middle (7)	714.5	16.46	16.68	16.74
		707.5	16.60	17.09	16.88
		700.5	16.62	16.92	16.61
	1RB-Low (0)	714.5	16.54	16.90	16.83
		707.5	16.59	16.72	16.66
		700.5	16.43	16.75	16.51
	8RB-High (7)	714.5	16.47	16.51	16.56
		707.5	16.70	16.61	16.48
		700.5	16.46	16.49	16.68
	8RB-Middle (4)	714.5	16.62	16.49	16.51
		707.5	16.47	16.57	16.40
		700.5	16.64	16.54	16.54
	8RB-Low (0)	714.5	16.32	16.58	16.43
		707.5	16.59	16.58	16.58
		700.5	16.56	16.65	16.63
	15RB (0)	714.5	16.55	16.46	16.65
		707.5	16.54	16.69	16.62
		700.5	16.66	16.52	16.48
5MHz	1RB-High (24)	713.5	16.25	16.59	16.71
		707.5	16.32	16.85	16.61
		701.5	16.41	16.72	16.59
	1RB-Middle (12)	713.5	16.62	16.92	16.63
		707.5	16.54	17.04	16.74
		701.5	16.75	16.89	16.80
	1RB-Low (0)	713.5	16.31	16.82	16.81
		707.5	16.37	16.78	16.59

		701.5	16.46	16.84	16.51
	12RB-High (13)	713.5	16.47	16.61	16.63
		707.5	16.71	16.54	16.66
		701.5	16.44	16.73	16.60
	12RB-Middle (6)	713.5	16.60	16.63	16.67
		707.5	16.49	16.38	16.42
		701.5	16.49	16.63	16.49
	12RB-Low (0)	713.5	16.46	16.53	16.37
		707.5	16.50	16.61	16.62
		701.5	16.58	16.64	16.62
	25RB (0)	713.5	16.33	16.57	16.57
		707.5	16.51	16.56	16.59
		701.5	16.71	16.67	16.65
10MHz	1RB-High (49)	711	16.45	16.74	16.65
		707.5	16.43	16.80	16.66
		704	16.44	16.78	16.67
	1RB-Middle (24)	711	16.57	16.84	16.81
		707.5	16.68	17.01	16.81
		704	16.67	17.00	16.78
	1RB-Low (0)	711	16.49	16.87	16.73
		707.5	16.54	16.89	16.79
		704	16.48	16.80	16.63
	25RB-High (25)	711	16.54	16.54	16.53
		707.5	16.65	16.62	16.56
		704	16.64	16.68	16.65
	25RB-Middle (12)	711	16.58	16.60	16.59
		707.5	16.55	16.58	16.57
		704	16.61	16.64	16.63
	25RB-Low (0)	711	16.52	16.57	16.55
		707.5	16.52	16.54	16.57
		704	16.62	16.70	16.69
	50RB (0)	711	16.53	16.56	16.56
		707.5	16.58	16.61	16.60
		704	16.62	16.68	16.67

LTE B13 - DSI0/DSI2

LTE B13					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	784.5 (23255)	23.44	22.66	21.57
		782 (23230)	23.43	22.76	21.60
		779.5 (23205)	23.40	22.68	21.54

	1RB-Middle (12)	784.5 (23255)	23.76	23.05	21.94
		782 (23230)	23.73	22.90	21.87
		779.5 (23205)	23.71	22.91	21.89
	1RB-Low (0)	784.5 (23255)	23.46	22.68	21.63
		782 (23230)	23.44	22.69	21.54
		779.5 (23205)	23.46	22.60	21.59
	12RB-High (13)	784.5 (23255)	22.69	21.67	20.76
		782 (23230)	22.54	21.55	20.60
		779.5 (23205)	22.45	21.47	20.52
	12RB-Middle (6)	784.5 (23255)	22.68	21.65	20.70
		782 (23230)	22.65	21.63	20.69
		779.5 (23205)	22.61	21.58	20.65
	12RB-Low (0)	784.5 (23255)	22.67	21.64	20.75
		782 (23230)	22.65	21.64	20.68
		779.5 (23205)	22.54	21.54	20.56
	25RB (0)	784.5 (23255)	22.67	21.68	20.72
		782 (23230)	22.62	21.64	20.64
		779.5 (23205)	22.51	21.50	20.55
10MHz	1RB-High (49)	782 (23230)	23.54	22.84	21.69
	1RB-Middle (24)	782 (23230)	23.63	22.89	21.79
	1RB-Low (0)	782 (23230)	23.55	22.82	21.69
	25RB-High (25)	782 (23230)	22.66	21.65	20.68
	25RB-Middle (12)	782 (23230)	22.66	21.65	20.69
	25RB-Low (0)	782 (23230)	22.69	21.69	20.73
	50RB (0)	782 (23230)	22.71	21.66	20.69

LTE B13 – DSI1/DSI3

LTE B13					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	784.5 (23255)	17.44	17.73	17.69
		782 (23230)	17.45	17.77	17.74
		779.5 (23205)	17.41	17.83	17.58
	1RB-Middle (12)	784.5 (23255)	17.71	18.05	18.00
		782 (23230)	17.69	18.02	17.91
		779.5 (23205)	17.62	18.04	17.89
	1RB-Low (0)	784.5 (23255)	17.45	17.73	17.71
		782 (23230)	17.42	17.70	17.64
		779.5 (23205)	17.43	17.86	17.69
	12RB-High (13)	784.5 (23255)	17.60	17.66	17.67
		782 (23230)	17.50	17.53	17.58
		779.5 (23205)	17.48	17.49	17.52

BANDWIDTH	Number of RBs	Frequency			
	12RB-Middle (6)	784.5 (23255)	17.61	17.63	17.68
		782 (23230)	17.60	17.64	17.66
		779.5 (23205)	17.62	17.65	17.66
	12RB-Low (0)	784.5 (23255)	17.65	17.70	17.70
		782 (23230)	17.59	17.63	17.65
		779.5 (23205)	17.48	17.48	17.52
	25RB (0)	784.5 (23255)	17.64	17.68	17.69
		782 (23230)	17.59	17.62	17.60
		779.5 (23205)	17.52	17.54	17.51
10MHz	1RB-High (49)	782 (23230)	17.49	17.92	17.71
	1RB-Middle (24)	782 (23230)	17.66	18.01	17.86
	1RB-Low (0)	782 (23230)	17.56	17.86	17.82
	25RB-High (25)	782 (23230)	17.61	17.66	17.65
	25RB-Middle (12)	782 (23230)	17.65	17.66	17.65
	25RB-Low (0)	782 (23230)	17.66	17.69	17.69
	50RB (0)	782 (23230)	17.64	17.68	17.66

LTE B41 - DSI0/DSI2

LTE B41					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5 (41565)	23.10	22.16	20.78
		2640.3(41093)	23.16	22.23	20.87
		2593 (40620)	23.06	22.16	20.81
		2545.8(40148)	23.10	22.20	20.83
		2498.5 (39675)	22.91	21.99	20.61
	1RB-Middle (12)	2687.5 (41565)	23.29	22.36	20.97
		2640.3(41093)	23.30	22.40	21.10
		2593 (40620)	23.25	22.39	21.00
		2545.8(40148)	23.26	22.48	21.06
		2498.5 (39675)	23.10	22.19	20.85
	1RB-Low (0)	2687.5 (41565)	23.12	22.23	20.81
		2640.3(41093)	23.20	22.25	20.87
		2593 (40620)	23.10	22.20	20.82
		2545.8(40148)	23.14	22.24	20.89
		2498.5 (39675)	22.87	22.01	20.60
	12RB-High (13)	2687.5 (41565)	22.20	21.15	20.24
		2640.3(41093)	22.27	21.21	20.32
		2593 (40620)	22.18	21.15	20.27
		2545.8(40148)	22.20	21.16	20.30
		2498.5 (39675)	22.05	20.98	20.08
	12RB-Middle (6)	2687.5 (41565)	22.31	21.24	20.28

		2640.3(41093)	22.33	21.24	20.30
		2593 (40620)	22.26	21.21	20.28
		2545.8(40148)	22.30	21.27	20.34
		2498.5 (39675)	22.09	21.02	20.13
	12RB-Low (0)	2687.5 (41565)	22.26	21.17	20.28
		2640.3(41093)	22.28	21.20	20.31
		2593 (40620)	22.22	21.18	20.27
		2545.8(40148)	22.28	21.23	20.30
		2498.5 (39675)	22.08	20.97	20.08
	25RB (0)	2687.5 (41565)	22.21	21.22	20.26
		2640.3(41093)	22.29	21.29	20.35
		2593 (40620)	22.23	21.25	20.29
		2545.8(40148)	22.24	21.31	20.35
		2498.5 (39675)	22.06	21.06	20.13
10MHz	1RB-High (49)	2685 (41540)	23.16	22.23	20.85
		2639(41080)	23.18	22.26	20.90
		2593 (40620)	23.14	22.22	20.85
		2547(40160)	23.21	22.29	20.89
		2501 (39700)	22.99	22.09	20.77
	1RB-Middle (24)	2685 (41540)	23.31	22.36	21.00
		2639(41080)	23.34	22.39	21.00
		2593 (40620)	23.30	22.33	20.98
		2547(40160)	23.32	22.38	21.01
		2501 (39700)	23.08	22.11	20.73
	1RB-Low (0)	2685 (41540)	23.22	22.30	20.94
		2639(41080)	23.29	22.36	20.98
		2593 (40620)	23.21	22.26	20.92
		2547(40160)	23.27	22.32	20.98
		2501 (39700)	22.95	22.02	20.67
	25RB-High (25)	2685 (41540)	22.19	21.20	20.26
		2639(41080)	22.29	21.29	20.35
		2593 (40620)	22.22	21.23	20.31
		2547(40160)	22.27	21.26	20.35
		2501 (39700)	22.05	21.11	20.12
	25RB-Middle (12)	2685 (41540)	22.30	21.26	20.29
		2639(41080)	22.28	21.29	20.32
		2593 (40620)	22.25	21.27	20.32
		2547(40160)	22.24	21.33	20.38
		2501 (39700)	22.06	21.11	20.17
	25RB-Low (0)	2685 (41540)	22.27	21.27	20.34
		2639(41080)	22.31	21.30	20.36
		2593 (40620)	22.28	21.24	20.33

		2547(40160)	22.31	21.31	20.42
		2501 (39700)	22.09	21.12	20.15
	50RB (0)	2685 (41540)	22.21	21.25	20.20
		2639(41080)	22.29	21.29	20.31
		2593 (40620)	22.24	21.24	20.26
		2547(40160)	22.29	21.33	20.33
		2501 (39700)	22.07	21.15	20.09
15MHz	1RB-High (74)	2682.5 (41515)	23.06	22.17	20.77
		2637.8(41068)	23.14	22.22	20.83
		2593 (40620)	23.06	22.13	20.77
		2548.3(40173)	23.10	22.16	20.79
		2503.5 (39725)	22.94	22.03	20.69
	1RB-Middle (37)	2682.5 (41515)	23.21	22.28	20.85
		2637.8(41068)	23.25	22.32	20.94
		2593 (40620)	23.19	22.25	20.89
		2548.3(40173)	23.25	22.31	20.93
		2503.5 (39725)	22.97	22.08	20.70
	1RB-Low (0)	2682.5 (41515)	23.20	22.25	20.87
		2637.8(41068)	23.22	22.32	20.92
		2593 (40620)	23.17	22.23	20.89
		2548.3(40173)	23.15	22.28	20.88
		2503.5 (39725)	22.89	22.00	20.63
	36RB-High (38)	2682.5 (41515)	22.20	21.14	20.19
		2637.8(41068)	22.31	21.26	20.27
		2593 (40620)	22.16	21.18	20.21
		2548.3(40173)	22.25	21.24	20.27
		2503.5 (39725)	22.13	21.08	20.10
	36RB-Middle (19)	2682.5 (41515)	22.26	21.17	20.24
		2637.8(41068)	22.33	21.25	20.27
		2593 (40620)	22.22	21.19	20.26
		2548.3(40173)	22.25	21.25	20.27
		2503.5 (39725)	22.07	21.05	20.07
	36RB-Low (0)	2682.5 (41515)	22.31	21.25	20.29
		2637.8(41068)	22.35	21.28	20.30
		2593 (40620)	22.25	21.17	20.25
		2548.3(40173)	22.30	21.27	20.29
		2503.5 (39725)	22.07	21.06	20.03
	75RB (0)	2682.5 (41515)	22.22	21.22	20.22
		2637.8(41068)	22.28	21.29	20.30
		2593 (40620)	22.23	21.27	20.25
		2548.3(40173)	22.26	21.29	20.30
		2503.5 (39725)	22.08	21.11	20.09

		2680 (41490)	22.92	21.97	20.59
		2636.5(41055)	23.00	22.05	20.64
	1RB-High (99)	2593 (40620)	22.86	21.97	20.58
		2549.5(40185)	22.87	22.06	20.60
		2506 (39750)	22.78	21.95	20.56
		2680 (41490)	23.33	22.33	21.00
		2636.5(41055)	23.35	22.38	21.04
	1RB-Middle (50)	2593 (40620)	23.24	22.31	20.98
		2549.5(40185)	23.31	22.39	21.02
		2506 (39750)	23.09	22.20	20.86
		2680 (41490)	23.06	22.15	20.73
		2636.5(41055)	23.15	22.21	20.79
	1RB-Low (0)	2593 (40620)	23.03	22.09	20.71
		2549.5(40185)	23.00	22.11	20.74
		2506 (39750)	22.76	21.85	20.49
		2680 (41490)	22.08	21.11	20.11
		2636.5(41055)	22.21	21.22	20.23
20MHz	50RB-High (50)	2593 (40620)	22.17	21.25	20.19
		2549.5(40185)	22.23	21.31	20.24
		2506 (39750)	22.11	21.21	20.15
		2680 (41490)	22.20	21.19	20.23
		2636.5(41055)	22.28	21.27	20.29
	50RB-Middle (25)	2593 (40620)	22.16	21.27	20.25
		2549.5(40185)	22.26	21.34	20.30
		2506 (39750)	22.02	21.15	20.10
		2680 (41490)	22.22	21.30	20.27
		2636.5(41055)	22.24	21.27	20.27
	50RB-Low (0)	2593 (40620)	22.17	21.23	20.19
		2549.5(40185)	22.25	21.34	20.30
		2506 (39750)	21.99	21.10	20.07
		2680 (41490)	22.24	21.23	20.27
		2636.5(41055)	22.33	21.30	20.31
	100RB (0)	2593 (40620)	22.21	21.25	20.23
		2549.5(40185)	22.28	21.34	20.25
		2506 (39750)	22.11	21.14	20.15

LTE B41 – DSI1

	LTE B41				
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2687.5 (41565)	14.05	13.99	13.58
		2640.3(41093)	14.01	14.25	13.87
		2593 (40620)	13.99	13.98	13.73
		2545.8(40148)	13.94	14.18	13.83
		2498.5 (39675)	14.10	14.02	13.63
	1RB-Middle (12)	2687.5 (41565)	14.44	14.57	13.99
		2640.3(41093)	14.45	14.63	14.10
		2593 (40620)	14.39	14.40	13.87
		2545.8(40148)	14.28	14.35	13.95
		2498.5 (39675)	14.35	14.19	13.92
	1RB-Low (0)	2687.5 (41565)	14.21	14.27	13.79
		2640.3(41093)	14.23	14.28	13.91
		2593 (40620)	14.03	14.25	13.90
		2545.8(40148)	14.21	14.15	13.89
		2498.5 (39675)	13.91	13.99	13.65
	12RB-High (13)	2687.5 (41565)	14.08	14.33	14.26
		2640.3(41093)	14.34	14.50	14.38
		2593 (40620)	14.09	14.40	14.28
		2545.8(40148)	14.10	14.38	14.31
		2498.5 (39675)	13.99	14.15	14.08
	12RB-Middle (6)	2687.5 (41565)	14.17	14.28	14.27
		2640.3(41093)	14.39	14.48	14.32
		2593 (40620)	14.15	14.17	14.36
		2545.8(40148)	14.17	14.17	14.09
		2498.5 (39675)	14.13	13.92	13.95
	12RB-Low (0)	2687.5 (41565)	14.27	14.42	14.45
		2640.3(41093)	14.22	14.55	14.34
		2593 (40620)	14.17	14.24	14.23
		2545.8(40148)	14.28	14.35	14.35
		2498.5 (39675)	14.09	13.99	14.08
	25RB (0)	2687.5 (41565)	14.27	14.44	14.49
		2640.3(41093)	14.30	14.36	14.31
		2593 (40620)	14.35	14.21	14.19
		2545.8(40148)	14.26	14.34	14.28
		2498.5 (39675)	14.22	14.16	14.16
10MHz	1RB-High (49)	2685 (41540)	14.16	13.99	13.69
		2639(41080)	14.10	14.14	13.67
		2593 (40620)	14.11	14.12	13.70

		2547(40160)	14.02	14.20	13.81
		2501 (39700)	13.91	13.95	13.55
	1RB-Middle (24)	2685 (41540)	14.36	14.43	14.01
		2639(41080)	14.30	14.59	14.15
		2593 (40620)	14.24	14.41	13.84
		2547(40160)	14.50	14.45	14.18
		2501 (39700)	14.31	14.19	13.86
	1RB-Low (0)	2685 (41540)	14.24	14.27	13.95
		2639(41080)	14.11	14.20	13.88
		2593 (40620)	14.07	14.17	13.80
		2547(40160)	14.01	14.18	13.82
		2501 (39700)	13.90	14.06	13.66
	25RB-High (25)	2685 (41540)	14.18	14.42	14.28
		2639(41080)	14.12	14.43	14.49
		2593 (40620)	14.19	14.31	14.19
		2547(40160)	14.21	14.29	14.16
		2501 (39700)	14.05	14.19	14.07
	25RB-Middle (12)	2685 (41540)	14.23	14.34	14.38
		2639(41080)	14.21	14.47	14.36
		2593 (40620)	14.24	14.14	14.17
		2547(40160)	14.11	14.15	14.27
		2501 (39700)	13.95	13.92	14.03
	25RB-Low (0)	2685 (41540)	14.16	14.56	14.34
		2639(41080)	14.37	14.40	14.50
		2593 (40620)	14.17	14.37	14.18
		2547(40160)	14.27	14.23	14.33
		2501 (39700)	14.01	14.09	14.08
	50RB (0)	2685 (41540)	14.22	14.45	14.40
		2639(41080)	14.32	14.52	14.40
		2593 (40620)	14.22	14.23	14.17
		2547(40160)	14.32	14.28	14.34
		2501 (39700)	14.21	14.12	13.94
15MHz	1RB-High (74)	2682.5 (41515)	14.07	13.94	13.54
		2637.8(41068)	14.17	14.07	13.76
		2593 (40620)	14.00	14.04	13.56
		2548.3(40173)	14.04	14.15	13.73
		2503.5 (39725)	13.97	13.99	13.72
	1RB-Middle (37)	2682.5 (41515)	14.34	14.57	13.98
		2637.8(41068)	14.28	14.46	14.12
		2593 (40620)	14.42	14.31	13.97
		2548.3(40173)	14.27	14.56	14.17
		2503.5 (39725)	14.33	14.31	13.90

		2682.5 (41515)	14.10	14.11	13.82
		2637.8(41068)	14.31	14.26	13.85
	1RB-Low (0)	2593 (40620)	14.06	14.13	13.74
		2548.3(40173)	14.24	14.28	13.85
		2503.5 (39725)	13.98	13.95	13.56
		2682.5 (41515)	14.01	14.35	14.32
		2637.8(41068)	14.37	14.28	14.40
	36RB-High (38)	2593 (40620)	14.20	14.44	14.26
		2548.3(40173)	14.11	14.20	14.26
		2503.5 (39725)	14.07	14.03	14.18
		2682.5 (41515)	14.10	14.36	14.30
		2637.8(41068)	14.23	14.54	14.30
	36RB-Middle (19)	2593 (40620)	14.07	14.30	14.15
		2548.3(40173)	14.22	14.23	14.07
		2503.5 (39725)	14.07	13.97	14.14
		2682.5 (41515)	14.30	14.55	14.42
		2637.8(41068)	14.25	14.42	14.45
	36RB-Low (0)	2593 (40620)	14.14	14.34	14.24
		2548.3(40173)	14.26	14.23	14.22
		2503.5 (39725)	14.14	14.02	13.94
		2682.5 (41515)	14.22	14.26	14.37
		2637.8(41068)	14.47	14.47	14.29
	75RB (0)	2593 (40620)	14.26	14.29	14.27
		2548.3(40173)	14.25	14.39	14.28
		2503.5 (39725)	14.13	14.18	14.01
		2680 (41490)	14.07	14.06	13.59
		2636.5(41055)	14.11	14.19	13.77
	1RB-High (99)	2593 (40620)	14.04	14.12	13.69
		2549.5(40185)	14.08	14.15	13.73
		2506 (39750)	14.03	14.05	13.66
		2680 (41490)	14.35	14.48	14.07
		2636.5(41055)	14.42	14.55	14.13
	1RB-Middle (50)	2593 (40620)	14.33	14.39	13.97
20MHz		2549.5(40185)	14.41	14.46	14.08
		2506 (39750)	14.33	14.33	13.93
		2680 (41490)	14.22	14.23	13.87
		2636.5(41055)	14.25	14.31	13.91
	1RB-Low (0)	2593 (40620)	14.14	14.23	13.85
		2549.5(40185)	14.15	14.25	13.81
		2506 (39750)	13.99	13.98	13.63
		2680 (41490)	14.16	14.36	14.32
	50RB-High (50)	2636.5(41055)	14.27	14.43	14.40

		2593 (40620)	14.15	14.34	14.30
		2549.5(40185)	14.14	14.29	14.27
		2506 (39750)	14.12	14.13	14.13
	50RB-Middle (25)	2680 (41490)	14.24	14.43	14.40
		2636.5(41055)	14.29	14.45	14.44
		2593 (40620)	14.16	14.28	14.26
		2549.5(40185)	14.22	14.24	14.22
		2506 (39750)	14.07	14.07	14.07
	50RB-Low (0)	2680 (41490)	14.31	14.48	14.46
		2636.5(41055)	14.32	14.46	14.45
		2593 (40620)	14.18	14.31	14.28
		2549.5(40185)	14.22	14.28	14.27
		2506 (39750)	14.08	14.10	14.07
	100RB (0)	2680 (41490)	14.34	14.39	14.40
		2636.5(41055)	14.40	14.45	14.44
		2593 (40620)	14.31	14.30	14.28
		2549.5(40185)	14.29	14.33	14.29
		2506 (39750)	14.18	14.10	14.08

LTE B41 – DSI3

LTE B41					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2687.5 (41565)	11.52	11.52	10.99
		2640.3(41093)	11.56	11.65	11.09
		2593 (40620)	11.65	11.57	11.16
		2545.8(40148)	11.62	11.55	11.10
		2498.5 (39675)	11.47	11.63	11.00
	1RB-Middle (12)	2687.5 (41565)	11.81	11.80	11.64
		2640.3(41093)	11.80	12.02	11.44
		2593 (40620)	11.86	11.86	11.48
		2545.8(40148)	12.01	11.76	11.44
		2498.5 (39675)	11.96	11.70	11.46
	1RB-Low (0)	2687.5 (41565)	11.60	11.69	11.21
		2640.3(41093)	11.65	11.77	11.42
		2593 (40620)	11.51	11.68	11.38
		2545.8(40148)	11.60	11.77	11.35
		2498.5 (39675)	11.50	11.36	11.09
	12RB-High (13)	2687.5 (41565)	11.46	11.88	11.67
		2640.3(41093)	11.70	11.98	11.80
		2593 (40620)	11.57	11.65	11.81
		2545.8(40148)	11.77	11.69	11.85

		2498.5 (39675)	11.44	11.47	11.69
	12RB-Middle (6)	2687.5 (41565)	11.84	11.83	11.62
		2640.3(41093)	11.82	11.81	11.68
		2593 (40620)	11.74	11.73	11.79
		2545.8(40148)	11.62	11.78	11.82
		2498.5 (39675)	11.66	11.66	11.55
	12RB-Low (0)	2687.5 (41565)	11.90	11.85	11.99
		2640.3(41093)	11.70	11.78	11.73
		2593 (40620)	11.52	11.71	11.79
		2545.8(40148)	11.67	11.87	11.83
		2498.5 (39675)	11.36	11.52	11.69
	25RB (0)	2687.5 (41565)	11.69	11.98	11.71
		2640.3(41093)	11.72	11.77	12.00
		2593 (40620)	11.69	11.62	11.74
		2545.8(40148)	11.63	11.70	11.88
		2498.5 (39675)	11.60	11.57	11.56
10MHz	1RB-High (49)	2685 (41540)	11.67	11.60	11.16
		2639(41080)	11.55	11.69	11.12
		2593 (40620)	11.52	11.45	11.15
		2547(40160)	11.70	11.59	11.15
		2501 (39700)	11.49	11.55	11.03
	1RB-Middle (24)	2685 (41540)	11.75	11.85	11.52
		2639(41080)	11.96	12.10	11.54
		2593 (40620)	11.63	11.76	11.51
		2547(40160)	11.75	11.78	11.33
		2501 (39700)	11.79	11.80	11.20
	1RB-Low (0)	2685 (41540)	11.56	11.90	11.23
		2639(41080)	11.84	11.87	11.39
		2593 (40620)	11.54	11.56	11.16
		2547(40160)	11.69	11.63	11.35
		2501 (39700)	11.34	11.51	10.99
	25RB-High (25)	2685 (41540)	11.71	11.60	11.54
		2639(41080)	11.64	11.94	11.85
		2593 (40620)	11.70	11.71	11.73
		2547(40160)	11.65	11.61	11.68
		2501 (39700)	11.67	11.52	11.62
	25RB-Middle (12)	2685 (41540)	11.68	11.65	11.66
		2639(41080)	11.69	11.89	11.89
		2593 (40620)	11.46	11.66	11.75
		2547(40160)	11.68	11.59	11.62
		2501 (39700)	11.54	11.43	11.49
	25RB-Low (0)	2685 (41540)	11.74	11.72	11.94

		2639(41080)	11.91	11.89	11.89
		2593 (40620)	11.76	11.82	11.77
		2547(40160)	11.77	11.71	11.86
		2501 (39700)	11.53	11.67	11.55
	50RB (0)	2685 (41540)	11.92	11.78	11.70
		2639(41080)	11.76	11.96	11.80
		2593 (40620)	11.73	11.92	11.77
		2547(40160)	11.70	11.71	11.86
		2501 (39700)	11.51	11.51	11.61
15MHz	1RB-High (74)	2682.5 (41515)	11.39	11.53	11.23
		2637.8(41068)	11.47	11.73	11.31
		2593 (40620)	11.49	11.53	11.20
		2548.3(40173)	11.69	11.52	11.19
		2503.5 (39725)	11.43	11.48	10.98
	1RB-Middle (37)	2682.5 (41515)	11.99	11.89	11.50
		2637.8(41068)	11.98	11.96	11.53
		2593 (40620)	11.73	11.95	11.48
		2548.3(40173)	11.91	11.84	11.44
		2503.5 (39725)	11.93	11.75	11.39
	1RB-Low (0)	2682.5 (41515)	11.71	11.77	11.30
		2637.8(41068)	11.81	11.85	11.26
		2593 (40620)	11.52	11.57	11.23
		2548.3(40173)	11.63	11.73	11.22
		2503.5 (39725)	11.61	11.57	11.13
	36RB-High (38)	2682.5 (41515)	11.74	11.85	11.78
		2637.8(41068)	11.71	11.83	11.92
		2593 (40620)	11.78	11.78	11.55
		2548.3(40173)	11.62	11.86	11.75
		2503.5 (39725)	11.42	11.72	11.69
	36RB-Middle (19)	2682.5 (41515)	11.57	11.83	11.67
		2637.8(41068)	11.80	11.67	11.81
		2593 (40620)	11.46	11.63	11.65
		2548.3(40173)	11.72	11.78	11.64
		2503.5 (39725)	11.43	11.59	11.52
	36RB-Low (0)	2682.5 (41515)	11.73	11.70	11.84
		2637.8(41068)	11.72	11.91	11.81
		2593 (40620)	11.66	11.73	11.62
		2548.3(40173)	11.59	11.77	11.76
		2503.5 (39725)	11.40	11.52	11.53
	75RB (0)	2682.5 (41515)	11.81	11.73	11.82
		2637.8(41068)	11.71	11.90	11.74
		2593 (40620)	11.83	11.88	11.91

		2548.3(40173)	11.89	11.71	11.88
		2503.5 (39725)	11.61	11.80	11.67
20MHz	1RB-High (99)	2680 (41490)	11.58	11.57	11.18
		2636.5(41055)	11.64	11.70	11.27
		2593 (40620)	11.58	11.59	11.19
		2549.5(40185)	11.63	11.62	11.26
		2506 (39750)	11.58	11.59	11.18
	1RB-Middle (50)	2680 (41490)	11.89	11.95	11.57
		2636.5(41055)	11.91	12.01	11.60
		2593 (40620)	11.83	11.88	11.48
		2549.5(40185)	11.92	11.92	11.53
		2506 (39750)	11.95	11.78	11.39
	1RB-Low (0)	2680 (41490)	11.73	11.80	11.35
		2636.5(41055)	11.78	11.82	11.43
		2593 (40620)	11.71	11.74	11.32
		2549.5(40185)	11.75	11.71	11.31
		2506 (39750)	11.51	11.56	11.16
	50RB-High (50)	2680 (41490)	11.66	11.79	11.74
		2636.5(41055)	11.72	11.88	11.84
		2593 (40620)	11.68	11.75	11.72
		2549.5(40185)	11.67	11.79	11.76
		2506 (39750)	11.61	11.66	11.69
	50RB-Middle (25)	2680 (41490)	11.74	11.83	11.80
		2636.5(41055)	11.78	11.86	11.87
		2593 (40620)	11.65	11.78	11.73
		2549.5(40185)	11.75	11.75	11.75
		2506 (39750)	11.62	11.60	11.59
	50RB-Low (0)	2680 (41490)	11.81	11.89	11.89
		2636.5(41055)	11.84	11.93	11.89
		2593 (40620)	11.70	11.80	11.77
		2549.5(40185)	11.70	11.83	11.77
		2506 (39750)	11.55	11.66	11.65
	100RB (0)	2680 (41490)	11.84	11.92	11.88
		2636.5(41055)	11.84	11.96	11.94
		2593 (40620)	11.78	11.82	11.87
		2549.5(40185)	11.81	11.85	11.84
		2506 (39750)	11.71	11.70	11.71

LTE B66 - DSI0/DSI2

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
				LTE B66	
1.4MHz	1RB-High (5)	1779.3 (132665)	23.13	22.33	21.36
		1745 (132322)	23.02	22.32	21.29
		1710.7 (131979)	23.10	22.30	21.42
	1RB-Middle (3)	1779.3 (132665)	23.27	22.42	21.50
		1745 (132322)	23.15	22.54	21.41
		1710.7 (131979)	23.23	22.46	21.39
	1RB-Low (0)	1779.3 (132665)	23.14	22.38	21.36
		1745 (132322)	23.01	22.34	21.21
		1710.7 (131979)	23.08	22.41	21.24
	3RB-High (3)	1779.3 (132665)	23.21	22.22	21.36
		1745 (132322)	23.11	22.09	21.28
		1710.7 (131979)	23.20	22.21	21.30
	3RB-Middle (1)	1779.3 (132665)	23.31	22.25	21.44
		1745 (132322)	23.18	22.21	21.34
		1710.7 (131979)	23.24	22.22	21.35
	3RB-Low (0)	1779.3 (132665)	23.26	22.18	21.32
		1745 (132322)	23.10	22.11	21.28
		1710.7 (131979)	23.21	22.21	21.34
	6RB (0)	1779.3 (132665)	22.27	21.36	20.29
		1745 (132322)	22.17	21.27	20.15
		1710.7 (131979)	22.24	21.32	20.24
3MHz	1RB-High (14)	1778.5 (132657)	23.17	22.38	21.41
		1745 (132322)	23.09	22.41	21.38
		1711.5 (131987)	23.13	22.39	21.43
	1RB-Middle (7)	1778.5 (132657)	23.36	22.70	21.60
		1745 (132322)	23.27	22.44	21.46
		1711.5 (131987)	23.24	22.65	21.57
	1RB-Low (0)	1778.5 (132657)	23.18	22.55	21.38
		1745 (132322)	23.05	22.33	21.40
		1711.5 (131987)	23.14	22.35	21.37
	8RB-High (7)	1778.5 (132657)	22.25	21.36	20.29
		1745 (132322)	22.15	21.24	20.19
		1711.5 (131987)	22.21	21.27	20.26
	8RB-Middle (4)	1778.5 (132657)	22.31	21.36	20.34
		1745 (132322)	22.20	21.27	20.22
		1711.5 (131987)	22.23	21.32	20.32
	8RB-Low (0)	1778.5 (132657)	22.27	20.00	20.34
		1745 (132322)	22.17	21.24	20.20

		1711.5 (131987)	22.21	21.29	20.27
		1778.5 (132657)	22.29	21.28	20.24
	15RB (0)	1745 (132322)	22.17	21.17	20.14
		1711.5 (131987)	22.22	21.25	20.25
5MHz	1RB-High (24)	1777.5 (132647)	23.07	22.28	21.25
		1745 (132322)	23.02	22.35	21.12
		1712.5 (131997)	23.02	22.30	21.31
	1RB-Middle (12)	1777.5 (132647)	23.43	22.53	21.56
		1745 (132322)	23.23	22.39	21.45
		1712.5 (131997)	23.34	22.50	21.55
	1RB-Low (0)	1777.5 (132647)	23.04	22.46	21.33
		1745 (132322)	23.00	22.30	21.14
		1712.5 (131997)	23.03	22.27	21.24
	12RB-High (13)	1777.5 (132647)	22.23	21.18	20.26
		1745 (132322)	22.13	21.11	20.17
		1712.5 (131997)	22.23	21.24	20.21
	12RB-Middle (6)	1777.5 (132647)	22.34	21.19	20.29
		1745 (132322)	22.22	21.21	20.24
		1712.5 (131997)	22.28	21.27	20.29
	12RB-Low (0)	1777.5 (132647)	22.25	21.26	20.24
		1745 (132322)	22.14	21.11	20.16
		1712.5 (131997)	22.18	21.20	20.22
	25RB (0)	1777.5 (132647)	22.27	21.26	20.26
		1745 (132322)	22.18	21.17	20.16
		1712.5 (131997)	22.24	21.28	20.23
10MHz	1RB-High (49)	1775 (132622)	23.15	22.46	21.36
		1745 (132322)	23.08	22.38	21.26
		1715 (132022)	23.12	22.48	21.39
	1RB-Middle (24)	1775 (132622)	23.21	22.51	21.47
		1745 (132322)	23.17	22.42	21.38
		1715 (132022)	23.26	22.38	21.49
	1RB-Low (0)	1775 (132622)	23.15	22.39	21.25
		1745 (132322)	23.09	22.46	21.31
		1715 (132022)	23.13	22.42	21.35
	25RB-High (25)	1775 (132622)	22.26	21.24	20.24
		1745 (132322)	22.19	21.18	20.20
		1715 (132022)	22.29	21.33	20.22
	25RB-Middle (12)	1775 (132622)	22.27	21.28	20.25
		1745 (132322)	22.22	21.21	20.18
		1715 (132022)	22.28	21.27	20.26
	25RB-Low (0)	1775 (132622)	22.27	21.27	20.25
		1745 (132322)	22.14	21.18	20.16

		1715 (132022)	22.28	21.29	20.23
		1775 (132622)	22.25	21.24	20.24
	50RB (0)	1745 (132322)	22.17	21.18	20.20
		1715 (132022)	22.30	21.30	20.22
15MHz	1RB-High (74)	1772.5 (132597)	23.07	22.28	21.31
		1745 (132322)	22.97	22.32	21.21
		1717.5 (132047)	23.05	22.44	21.34
	1RB-Middle (37)	1772.5 (132597)	22.20	22.50	21.35
		1745 (132322)	23.09	22.34	21.35
		1717.5 (132047)	23.15	22.41	21.47
	1RB-Low (0)	1772.5 (132597)	23.05	22.36	21.32
		1745 (132322)	23.10	22.36	21.20
		1717.5 (132047)	23.07	22.41	21.31
	36RB-High (38)	1772.5 (132597)	22.28	21.23	20.23
		1745 (132322)	22.19	21.14	20.19
		1717.5 (132047)	22.28	21.27	20.22
	36RB-Middle (19)	1772.5 (132597)	22.24	21.24	20.23
		1745 (132322)	22.20	21.17	20.21
		1717.5 (132047)	22.28	21.23	20.23
	36RB-Low (0)	1772.5 (132597)	22.27	21.22	20.26
		1745 (132322)	22.19	21.14	20.17
		1717.5 (132047)	22.26	21.27	20.24
	75RB (0)	1772.5 (132597)	22.23	21.22	20.20
		1745 (132322)	22.18	21.16	20.16
		1717.5 (132047)	22.24	21.28	20.24
20MHz	1RB-High (99)	1770 (132572)	22.93	22.22	21.10
		1745 (132322)	22.82	22.08	20.98
		1720 (132072)	22.89	22.19	21.22
	1RB-Middle (50)	1770 (132572)	23.23	22.46	21.44
		1745 (132322)	23.16	22.51	21.43
		1720 (132072)	23.25	22.63	21.48
	1RB-Low (0)	1770 (132572)	22.82	22.19	21.02
		1745 (132322)	22.90	22.22	21.12
		1720 (132072)	22.93	22.15	21.15
	50RB-High (50)	1770 (132572)	22.23	21.22	20.18
		1745 (132322)	22.24	21.21	20.17
		1720 (132072)	22.25	21.27	20.26
	50RB-Middle (25)	1770 (132572)	22.26	21.29	20.25
		1745 (132322)	22.22	21.22	20.22
		1720 (132072)	22.25	21.25	20.23
	50RB-Low (0)	1770 (132572)	22.28	21.30	20.27
		1745 (132322)	22.19	21.18	20.17

		1720 (132072)	22.29	21.25	20.29
		1770 (132572)	22.24	21.23	20.23
	100RB (0)	1745 (132322)	22.20	21.19	20.16
		1720 (132072)	22.24	21.23	20.25

LTE B66 – DSI1

LTE B66					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1779.3 (132665)	16.99	17.29	17.22
		1745 (132322)	17.08	17.10	16.90
		1710.7 (131979)	17.00	17.27	16.97
	1RB-Middle (3)	1779.3 (132665)	17.38	17.45	17.38
		1745 (132322)	17.16	17.62	17.43
		1710.7 (131979)	17.42	17.76	17.51
	1RB-Low (0)	1779.3 (132665)	16.96	17.35	17.04
		1745 (132322)	16.88	17.37	17.09
		1710.7 (131979)	16.95	17.23	17.16
	3RB-High (3)	1779.3 (132665)	17.26	17.16	17.31
		1745 (132322)	17.15	17.13	17.17
		1710.7 (131979)	17.33	17.10	17.30
	3RB-Middle (1)	1779.3 (132665)	17.26	17.20	17.12
		1745 (132322)	17.11	17.22	17.04
		1710.7 (131979)	17.23	17.14	17.08
	3RB-Low (0)	1779.3 (132665)	17.42	17.35	17.27
		1745 (132322)	17.33	17.12	17.11
		1710.7 (131979)	17.28	17.27	17.19
	6RB (0)	1779.3 (132665)	17.35	17.11	17.07
		1745 (132322)	17.14	17.16	17.18
		1710.7 (131979)	17.25	17.11	17.11
3MHz	1RB-High (14)	1778.5 (132657)	17.17	17.30	17.08
		1745 (132322)	17.04	17.19	17.08
		1711.5 (131987)	16.97	17.29	17.14
	1RB-Middle (7)	1778.5 (132657)	17.36	17.56	17.39
		1745 (132322)	17.11	17.63	17.41
		1711.5 (131987)	17.30	17.65	17.48
	1RB-Low (0)	1778.5 (132657)	17.08	17.37	17.28
		1745 (132322)	16.93	17.35	17.16
		1711.5 (131987)	17.03	17.17	17.25
	8RB-High (7)	1778.5 (132657)	17.28	17.35	17.12
		1745 (132322)	17.22	17.28	17.10
		1711.5 (131987)	17.17	17.20	17.12

		1778.5 (132657)	17.30	17.18	17.29
	8RB-Middle (4)	1745 (132322)	17.18	17.21	17.20
		1711.5 (131987)	17.32	17.09	17.25
		1778.5 (132657)	17.43	17.34	17.22
	8RB-Low (0)	1745 (132322)	17.35	17.15	17.12
		1711.5 (131987)	17.37	17.23	17.09
		1778.5 (132657)	17.24	17.21	17.08
	15RB (0)	1745 (132322)	17.18	17.02	17.11
		1711.5 (131987)	17.13	17.08	17.10
5MHz	1RB-High (24)	1777.5 (132647)	17.01	17.52	17.15
		1745 (132322)	16.91	17.21	16.94
		1712.5 (131997)	17.08	17.52	17.10
	1RB-Middle (12)	1777.5 (132647)	17.20	17.40	17.39
		1745 (132322)	17.26	17.58	17.43
		1712.5 (131997)	17.21	17.80	17.61
	1RB-Low (0)	1777.5 (132647)	17.00	17.20	17.13
		1745 (132322)	17.11	17.28	17.22
		1712.5 (131997)	17.13	17.36	17.06
	12RB-High (13)	1777.5 (132647)	17.42	17.29	17.29
		1745 (132322)	17.22	17.20	17.07
		1712.5 (131997)	17.32	17.20	17.14
	12RB-Middle (6)	1777.5 (132647)	17.28	17.22	17.12
		1745 (132322)	17.33	17.10	17.17
		1712.5 (131997)	17.21	17.19	17.06
	12RB-Low (0)	1777.5 (132647)	17.25	17.28	17.18
		1745 (132322)	17.20	17.23	17.01
		1712.5 (131997)	17.41	17.13	17.25
	25RB (0)	1777.5 (132647)	17.20	17.30	17.06
		1745 (132322)	17.14	17.07	17.18
		1712.5 (131997)	17.13	17.07	17.13
10MHz	1RB-High (49)	1775 (132622)	17.00	17.49	17.23
		1745 (132322)	16.89	17.11	16.93
		1715 (132022)	17.00	17.33	17.12
	1RB-Middle (24)	1775 (132622)	17.21	17.54	17.46
		1745 (132322)	17.25	17.64	17.23
		1715 (132022)	17.35	17.58	17.40
	1RB-Low (0)	1775 (132622)	17.03	17.40	17.25
		1745 (132322)	17.11	17.44	17.05
		1715 (132022)	17.09	17.24	17.10
	25RB-High (25)	1775 (132622)	17.35	17.33	17.10
		1745 (132322)	17.29	17.17	17.18
		1715 (132022)	17.25	17.31	17.20

		1775 (132622)	17.31	17.19	17.10
	25RB-Middle (12)	1745 (132322)	17.12	17.17	17.24
		1715 (132022)	17.19	17.14	17.22
		1775 (132622)	17.21	17.28	17.24
	25RB-Low (0)	1745 (132322)	17.14	17.10	17.08
		1715 (132022)	17.41	17.25	17.15
		1775 (132622)	17.39	17.27	17.29
	50RB (0)	1745 (132322)	17.17	17.23	17.23
		1715 (132022)	17.27	17.17	17.11
15MHz	1RB-High (74)	1772.5 (132597)	17.08	17.45	17.10
		1745 (132322)	16.91	17.06	17.01
		1717.5 (132047)	17.00	17.51	17.19
	1RB-Middle (37)	1772.5 (132597)	17.31	17.48	17.52
		1745 (132322)	17.18	17.40	17.24
		1717.5 (132047)	17.42	17.78	17.60
	1RB-Low (0)	1772.5 (132597)	16.90	17.25	17.26
		1745 (132322)	16.87	17.31	17.17
		1717.5 (132047)	17.05	17.36	17.16
	36RB-High (38)	1772.5 (132597)	17.30	17.19	17.28
		1745 (132322)	17.26	17.08	17.02
		1717.5 (132047)	17.25	17.17	17.28
	36RB-Middle (19)	1772.5 (132597)	17.20	17.37	17.29
		1745 (132322)	17.13	17.09	17.18
		1717.5 (132047)	17.27	17.27	17.19
	36RB-Low (0)	1772.5 (132597)	17.41	17.22	17.30
		1745 (132322)	17.14	17.05	17.08
		1717.5 (132047)	17.42	17.26	17.22
	75RB (0)	1772.5 (132597)	17.39	17.27	17.25
		1745 (132322)	17.10	17.20	17.20
		1717.5 (132047)	17.22	17.06	17.20
20MHz	1RB-High (99)	1770 (132572)	17.08	17.44	17.15
		1745 (132322)	16.98	17.21	17.05
		1720 (132072)	17.03	17.42	17.12
	1RB-Middle (50)	1770 (132572)	17.32	17.49	17.53
		1745 (132322)	17.24	17.55	17.38
		1720 (132072)	17.35	17.73	17.51
	1RB-Low (0)	1770 (132572)	17.04	17.35	17.18
		1745 (132322)	17.01	17.37	17.18
		1720 (132072)	17.07	17.29	17.19
	50RB-High (50)	1770 (132572)	17.32	17.27	17.21
		1745 (132322)	17.25	17.20	17.16
		1720 (132072)	17.28	17.25	17.21

	50RB-Middle (25)	1770 (132572)	17.32	17.27	17.24
		1745 (132322)	17.24	17.19	17.14
		1720 (132072)	17.22	17.23	17.17
	50RB-Low (0)	1770 (132572)	17.33	17.30	17.24
		1745 (132322)	17.25	17.17	17.13
		1720 (132072)	17.34	17.27	17.22
	100RB (0)	1770 (132572)	17.29	17.25	17.19
		1745 (132322)	17.25	17.15	17.13
		1720 (132072)	17.28	17.20	17.16

LTE B66 – DSI3

LTE B66					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1779.3 (132665)	14.74	14.99	14.91
		1745 (132322)	14.72	15.18	14.98
		1710.7 (131979)	14.87	15.04	14.99
	1RB-Middle (3)	1779.3 (132665)	15.03	15.43	15.27
		1745 (132322)	14.85	15.32	15.10
		1710.7 (131979)	15.22	15.20	15.27
	1RB-Low (0)	1779.3 (132665)	14.57	15.20	14.76
		1745 (132322)	14.70	15.06	14.95
		1710.7 (131979)	14.67	15.32	15.18
	3RB-High (3)	1779.3 (132665)	15.01	14.96	15.11
		1745 (132322)	15.02	14.90	14.91
		1710.7 (131979)	15.08	15.18	14.94
	3RB-Middle (1)	1779.3 (132665)	14.99	15.10	15.20
		1745 (132322)	15.00	15.07	14.82
		1710.7 (131979)	14.90	14.95	15.09
	3RB-Low (0)	1779.3 (132665)	14.98	15.22	15.15
		1745 (132322)	14.98	15.06	15.11
		1710.7 (131979)	15.17	15.15	15.21
	6RB (0)	1779.3 (132665)	14.97	15.15	15.15
		1745 (132322)	14.85	15.09	14.87
		1710.7 (131979)	15.04	14.96	15.12
3MHz	1RB-High (14)	1778.5 (132657)	14.65	15.01	15.06
		1745 (132322)	14.56	15.10	14.80
		1711.5 (131987)	14.88	15.05	15.03
	1RB-Middle (7)	1778.5 (132657)	14.99	15.16	15.28
		1745 (132322)	14.94	15.43	15.04
		1711.5 (131987)	14.95	15.21	15.15
	1RB-Low (0)	1778.5 (132657)	14.57	15.05	14.76

		1745 (132322)	14.87	14.98	15.02
		1711.5 (131987)	14.68	15.09	15.04
	8RB-High (7)	1778.5 (132657)	15.12	15.03	15.04
		1745 (132322)	14.99	15.09	14.87
		1711.5 (131987)	14.99	14.99	14.93
	8RB-Middle (4)	1778.5 (132657)	14.98	15.12	15.01
		1745 (132322)	14.97	14.93	14.97
		1711.5 (131987)	15.04	14.94	15.13
	8RB-Low (0)	1778.5 (132657)	15.19	14.99	15.02
		1745 (132322)	15.10	15.12	14.87
		1711.5 (131987)	15.12	15.24	15.10
	15RB (0)	1778.5 (132657)	15.10	14.90	15.16
		1745 (132322)	15.09	14.86	14.92
		1711.5 (131987)	15.06	15.16	15.04
5MHz	1RB-High (24)	1777.5 (132647)	14.63	15.24	15.18
		1745 (132322)	14.64	15.15	14.98
		1712.5 (131997)	14.86	15.02	14.88
	1RB-Middle (12)	1777.5 (132647)	15.02	15.25	15.26
		1745 (132322)	14.85	15.27	15.13
		1712.5 (131997)	15.02	15.23	15.16
	1RB-Low (0)	1777.5 (132647)	14.58	15.03	14.86
		1745 (132322)	14.78	14.93	15.07
		1712.5 (131997)	14.69	15.08	14.92
	12RB-High (13)	1777.5 (132647)	14.95	15.01	14.99
		1745 (132322)	15.00	14.94	15.04
		1712.5 (131997)	15.13	15.04	14.94
	12RB-Middle (6)	1777.5 (132647)	15.01	14.96	15.03
		1745 (132322)	14.96	14.82	14.99
		1712.5 (131997)	15.14	15.17	14.98
	12RB-Low (0)	1777.5 (132647)	15.01	14.98	15.10
		1745 (132322)	15.14	14.98	14.91
		1712.5 (131997)	15.18	15.09	15.03
	25RB (0)	1777.5 (132647)	15.07	15.00	15.08
		1745 (132322)	15.10	15.04	15.13
		1712.5 (131997)	14.97	15.05	14.90
10MHz	1RB-High (49)	1775 (132622)	14.65	15.29	14.94
		1745 (132322)	14.66	14.99	14.95
		1715 (132022)	14.71	15.23	15.08
	1RB-Middle (24)	1775 (132622)	15.14	15.27	15.18
		1745 (132322)	14.86	15.37	15.18
		1715 (132022)	15.20	15.47	15.33
	1RB-Low (0)	1775 (132622)	14.57	15.11	14.86

		1745 (132322)	14.75	15.08	14.78
		1715 (132022)	14.71	15.09	14.94
	25RB-High (25)	1775 (132622)	15.02	15.14	15.13
		1745 (132322)	15.06	15.10	14.91
		1715 (132022)	14.97	14.94	14.96
	25RB-Middle (12)	1775 (132622)	15.21	15.17	14.98
		1745 (132322)	15.08	15.04	14.93
		1715 (132022)	15.14	15.11	14.92
	25RB-Low (0)	1775 (132622)	15.23	15.02	14.96
		1745 (132322)	14.88	14.98	15.11
		1715 (132022)	15.04	15.04	14.98
	50RB (0)	1775 (132622)	14.98	15.18	15.02
		1745 (132322)	14.95	15.12	15.02
		1715 (132022)	15.07	15.17	15.03
15MHz	1RB-High (74)	1772.5 (132597)	14.91	15.23	15.07
		1745 (132322)	14.66	14.93	14.86
		1717.5 (132047)	14.63	15.14	15.03
	1RB-Middle (37)	1772.5 (132597)	14.97	15.34	15.37
		1745 (132322)	14.96	15.20	15.23
		1717.5 (132047)	15.04	15.21	15.34
	1RB-Low (0)	1772.5 (132597)	14.78	15.18	14.86
		1745 (132322)	14.80	14.99	14.85
		1717.5 (132047)	14.95	15.23	14.91
	36RB-High (38)	1772.5 (132597)	14.97	15.05	15.10
		1745 (132322)	14.92	15.14	15.13
		1717.5 (132047)	15.02	15.07	15.05
	36RB-Middle (19)	1772.5 (132597)	15.12	15.01	15.09
		1745 (132322)	15.10	14.98	15.08
		1717.5 (132047)	15.08	15.15	15.13
	36RB-Low (0)	1772.5 (132597)	15.05	15.05	15.13
		1745 (132322)	14.95	14.88	15.06
		1717.5 (132047)	14.98	15.24	15.05
	75RB (0)	1772.5 (132597)	15.11	14.97	15.06
		1745 (132322)	14.93	15.12	15.01
		1717.5 (132047)	15.06	15.05	15.19
20MHz	1RB-High (99)	1770 (132572)	14.83	15.19	15.08
		1745 (132322)	14.70	15.11	14.99
		1720 (132072)	14.80	15.16	15.01
	1RB-Middle (50)	1770 (132572)	15.11	15.33	15.29
		1745 (132322)	15.01	15.38	15.16
		1720 (132072)	15.12	15.39	15.27
	1RB-Low (0)	1770 (132572)	14.77	15.12	14.94

		1745 (132322)	14.77	15.10	14.97
		1720 (132072)	14.87	15.27	15.08
	50RB-High (50)	1770 (132572)	15.11	15.11	15.09
		1745 (132322)	15.06	15.04	15.06
		1720 (132072)	15.09	15.12	15.08
	50RB-Middle (25)	1770 (132572)	15.12	15.11	15.11
		1745 (132322)	15.03	15.02	15.01
		1720 (132072)	15.07	15.07	15.06
	50RB-Low (0)	1770 (132572)	15.13	15.14	15.14
		1745 (132322)	15.05	15.03	15.05
		1720 (132072)	15.15	15.16	15.15
	100RB (0)	1770 (132572)	15.09	15.09	15.09
		1745 (132322)	15.00	15.03	15.03
		1720 (132072)	15.09	15.10	15.09

11.4 Wi-Fi and BT Measurement result

The maximum output power of BT antenna is 11dBm.

The maximum tune up of BT antenna is 11dBm.

Antenna	Sar sensor off+ WIFI transmit alone	Sar sensor on + WIFI transmit alone	Sar sensor off+ WIFI transmit with WWAN	Sar sensor on+ WIFI transmit with WWAN
WIFI Antenna	DSI0	DSI1	DSI2	DSI3

The average conducted power for Wi-Fi 2.4G is as following - DSI0/DSI2

802.11b	
Channel\data rate	1Mbps
11(2462MHz)	19.78
6(2437(MHz)	19.94
1(2412MHz)	19.65
Tune up	20.50
802.11g	
Channel\data rate	6Mbps
11(2462MHz)	17.74
6(2437(MHz)	17.84
1(2412MHz)	17.45
Tune up	18.00
802.11n-20MHz	
Channel\data rate	MCS0
11(2462MHz)	17.48
6(2437(MHz)	17.78
1(2412MHz)	17.28
Tune up	18.00
802.11n-40MHz	
Channel\data rate	MCS0
9(2452MHz)	16.15
6(2437MHz)	16.16
3(2422MHz)	16.06
Tune up	18.00

The average conducted power for Wi-Fi 2.4G is as following – DSI1/DSI3

802.11b	
Channel\data rate	1Mbps
11(2462MHz)	14.79
6(2437(MHz)	14.82
1(2412MHz)	14.43
Tune up	15.00
802.11g	
Channel\data rate	6Mbps
11(2462MHz)	12.56
6(2437(MHz)	12.81
1(2412MHz)	12.21
Tune up	13.50
802.11n-20MHz	
Channel\data rate	MCS0
11(2462MHz)	12.46
6(2437(MHz)	12.76
1(2412MHz)	12.25
Tune up	13.50
802.11n-40MHz	
Channel\data rate	MCS0
9(2452MHz)	12.91
6(2437MHz)	12.92
3(2422MHz)	12.85
Tune up	13.50

The tune up power for Wi-Fi 5G is as following – DSI0

WiFi 802.11a (5GHz) Normal					
6Mbps~12Mbps					
Channel	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	18.5	18.5	18.5	18.5	18.5
Tune-up(dB)	18.5± 1	18.5± 1	18.5± 1	18.5± 1	18.5± 1
18Mbps~36Mbps					
Channel	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	17	17	17	17	17
Tune-up(dB)	17± 1	17± 1	17± 1	17± 1	17± 1
48Mbps~54Mbps					
Data Rate	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	17	17	17	17	17
Tune-up(dB)	17± 1	17± 1	17± 1	17± 1	17± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	16	16	16
Tune-up(dB)	16± 1	16± 1	16± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	15.5	15.5	15.5
Tune-up(dB)	15.5± 1	15.5± 1	15.5± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4

Channel	Channel 52/56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	16	16	16	16
Tune-up(dB)	16± 1	16± 1	16± 1	16± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 52/56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	15.5	15.5	15.5	15.5
Tune-up(dB)	15.5± 1	15.5± 1	15.5± 1	15.5± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	16	16	16	16
Tune-up(dB)	16± 1	16± 1	16± 1	16± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	15.5	15.5	15.5	15.5
Tune-up(dB)	15.5± 1	15.5± 1	15.5± 1	15.5± 1

WiFi 802.11n-40 (5GHz) MCS0~MCS4				
Channel	Channel 38	Channel 46	Channel 54	Channel 62
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-40 (5GHz) MCS5~MCS7				

Channel	Channel 38	Channel 46	Channel 54	Channel 62
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-40 (5GHz) MCS0~MCS4			
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-40 (5GHz) MCS5~MCS7			
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-40 (5.7GHz) MCS0~MCS4			
Channel	Channel 151	Channel 159		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

WiFi 802.11n-40 (5.7GHz) MCS5~MCS7			
Channel	Channel 151	Channel 159		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

WiFi 802.11ac-20   (5.2GHz)MCS0~4

Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	14	14	14	
Tune-up(dB)	14± 1	14± 1	14± 1	

WiFi 802.11ac-20 (5.2GHz)MCS5~MCS8				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	14	14	14	
Tune-up(dB)	14± 1	14± 1	14± 1	

WiFi 802.11ac-20 (5.2GHz)MCS9				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	14	14	14	
Tune-up(dB)	14± 1	14± 1	14± 1	

WiFi 802.11ac-20 (5.3GHz)MCS0~4				
Channel	Channel 52/56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-20 (5.3GHz)MCS5~ MCS8				
Channel	Channel 52/56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-20 (5.3GHz) MCS9				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-20 (5.8GHz)MCS0~4				
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	14	14	14	14	14

Tune-up(dB)	14± 1	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-20　(5.8GHz)MCS5~MCS8					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	14	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-20　(5.8GHz)MCS9					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	14	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS0~ MCS4			
Channel	Channel 38	Channel 46	Channel 54	Channel 62
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS5~CS8			
Channel	Channel 38	Channel 46	Channel 54	Channel 62
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS9			
Channel	Channel 38	Channel 46	Channel 54	Channel 62
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.5~5.6GHz) MCS0~ MCS4			
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.5~5.6GHz) MCS5~ MCS8			
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.5~5.6GHz) CS9			
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11ac-40 (5.8GHz) MCS0~ MCS4			
Data Rate	Channel 151	Channel 159		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

WiFi 802.11ac-40 (5.8GHz) MCS5~ MCS8			
Data Rate	Channel 151	Channel 159		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

WiFi 802.11ac-40 (5.8GHz) MCS9

Channel	Channel 151	Channel 159		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1
WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1
WiFi 802.11ac-80　MCS9				
Channel	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1
WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 138	Channel 155		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		
WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 138	Channel 155		

Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		
WiFi 802.11ac-80 MCS9				
Channel	Channel 138	Channel 155		
Target (dBm)	14	14		
Tune-up(dB)	14± 1	14± 1		

The average conducted power for Wi-Fi 5G is as following – DSI0

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	18.68
40(5200 MHz)	18.88
44(5220 MHz)	18.71
48(5240 MHz)	18.81
52(5260 MHz)	18.70
56(5280 MHz)	18.61
60(5300 MHz)	18.11
64(5320 MHz)	18.24
100(5500 MHz)	18.67
104(5520 MHz)	18.11
108(5540 MHz)	18.35
112(5560 MHz)	18.35
116(5580 MHz)	18.22
120(5600 MHz)	18.21
124(5620 MHz)	18.35
128(5640 MHz)	18.32
132(5660 MHz)	18.44
136(5680 MHz)	18.69
140(5700 MHz)	18.84
144(5720 MHz)	18.88
149(5745 MHz)	18.79
153(5765 MHz)	18.94
157(5785 MHz)	18.91
161(5805 MHz)	18.87
165(5825 MHz)	18.95
Tune up	19.50

The tune up power for Wi-Fi 5G is as following – DSI1

WiFi 802.11a (5GHz) Low					
6Mbps~12Mbps					
Channel	Channel 36~48	Channel 100~104	Channel 108~124	Channel 128~144	Channel 149~165
Target (dBm)	14.5	14.5	14.5	14.5	14.5
Tune-up(dB)	14.5± 1	14.5± 1	14.5± 1	14.5± 1	14.5± 1
18Mbps~36Mbps					
Channel	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	11.5	11.5	11.5	11.5	11.5
Tune-up(dB)	11.5± 1	11.5± 1	11.5± 1	11.5± 1	11.5± 1
48Mbps~54Mbps					
Data Rate	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	11.5	11.5	11.5	11.5	11.5
Tune-up(dB)	11.5± 1	11.5± 1	11.5± 1	11.5± 1	11.5± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	11.5	11.5	11.5
Tune-up(dB)	11.5± 1	11.5± 1	11.5± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	10.5	10.5	10.5
Tune-up(dB)	10.5± 1	10.5± 1	10.5± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4

Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	11.5	11.5	11.5	11.5
Tune-up(dB)	11.5± 1	11.5± 1	11.5± 1	11.5± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	10.5	10.5	10.5	10.5
Tune-up(dB)	10.5± 1	10.5± 1	10.5± 1	10.5± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	10.5	10.5	10.5	10.5
Tune-up(dB)	10.5± 1	10.5± 1	10.5± 1	10.5± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	10.5	10.5	10.5	10.5
Tune-up(dB)	10.5± 1	10.5± 1	10.5± 1	10.5± 1

WiFi 802.11n-40 (5GHz) MCS0~MCS4			
Channel	Channel 38	Channel 46	
Target (dBm)	11	11	
Tune-up(dB)	11± 1	11± 1	

WiFi 802.11n-40 (5GHz) MCS5~MCS7			

Channel	Channel 38	Channel 46		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11n-40 (5GHz) MCS0~MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11n-40 (5GHz) MCS5~MCS7				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11n-40 (5.7GHz) MCS0~MCS4				
Channel	Channel 151	Channel 159		
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11n-40 (5.7GHz) MCS5~MCS7				
Channel	Channel 151	Channel 159		
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20   (5.2GHz)MCS0~4

Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	11	11	11	
Tune-up(dB)	11± 1	11± 1	11± 1	

WiFi 802.11ac-20 (5.2GHz)MCS5~MCS8				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	11	11	11	
Tune-up(dB)	11± 1	11± 1	11± 1	

WiFi 802.11ac-20 (5.2GHz)MCS9				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	11	11	11	
Tune-up(dB)	11± 1	11± 1	11± 1	

WiFi 802.11ac-20 (5.3GHz)MCS0~4				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20 (5.3GHz)MCS5~ MCS8				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20 (5.3GHz) MCS9				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20 (5.8GHz)MCS0~4				
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	11	11	11	11	11

Tune-up(dB)	11± 1	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20　(5.8GHz)MCS5~MCS8					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	11	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-20　(5.8GHz)MCS9					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	11	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS0~ MCS4				
Channel	Channel 38	Channel 46		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-40 (5.2~5.3GHz) MCS5~CS8				
Channel	Channel 38	Channel 46		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-40 (5.2~5.3GHz) MCS9				
Channel	Channel 38	Channel 46		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-40 (5.5~5.6GHz) MCS0~ MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-40 (5.5~5.6GHz) MCS5~ MCS8				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-40 (5.5~5.6GHz) CS9				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-40 (5.8GHz) MCS0~ MCS4				
Data Rate	Channel 151	Channel 159		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-40 (5.8GHz) MCS5~ MCS8				
Data Rate	Channel 151	Channel 159		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-40 (5.8GHz) MCS9

Channel	Channel 151	Channel 159		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-80　MCS9				
Channel	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	11	11	11	11
Tune-up(dB)	11± 1	11± 1	11± 1	11± 1

WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 138	Channel 155		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 138	Channel 155		

Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		
WiFi 802.11ac-80 MCS9				
Channel	Channel 138	Channel 155		
Target (dBm)	11	11		
Tune-up(dB)	11± 1	11± 1		

The average conducted power for Wi-Fi 5G is as following – DSI1

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	14.28
40(5200 MHz)	14.46
44(5220 MHz)	14.55
48(5240 MHz)	14.52
52(5260 MHz)	14.55
56(5280 MHz)	14.46
60(5300 MHz)	14.39
64(5320 MHz)	14.46
100(5500 MHz)	14.69
104(5520 MHz)	14.84
108(5540 MHz)	14.76
112(5560 MHz)	14.81
116(5580 MHz)	15.06
120(5600 MHz)	15.04
124(5620 MHz)	15.08
128(5640 MHz)	15.26
132(5660 MHz)	15.21
136(5680 MHz)	15.38
140(5700 MHz)	15.46
144(5720 MHz)	15.42
149(5745 MHz)	15.33
153(5765 MHz)	15.21
157(5785 MHz)	15.22
161(5805 MHz)	15.44
165(5825 MHz)	15.43
Tune up	15.50

The tune up power for Wi-Fi 5G is as following – DSI2

WiFi 802.11a (5GHz) Low				
6Mbps~12Mbps				
Channel	Channel 36~48	Channel 100~104	Channel 108~124	Channel 128~144	Channel 149~165
Target (dBm)	17	17	17	17	17
Tune-up(dB)	17± 1	17± 1	17± 1	17± 1	17± 1
18Mbps~36Mbps				
Channel	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	14	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1	14± 1
48Mbps~54Mbps				
Data Rate	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	14	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4

Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	14	14	14	14
Tune-up(dB)	14± 1	14± 1	14± 1	14± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-40 (5GHz) MCS0~MCS4				
Channel	Channel 38	Channel 46		
Target (dBm)	13	13		
Tune-up(dB)	13± 1	13± 1		

WiFi 802.11n-40 (5GHz) MCS5~MCS7				

Channel	Channel 38	Channel 46		
Target (dBm)	13	13		
Tune-up(dB)	13± 1	13± 1		

WiFi 802.11n-40 (5GHz) MCS0~MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-40 (5GHz) MCS5~MCS7				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-40 (5.7GHz) MCS0~MCS4				
Channel	Channel 151	Channel 159		
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11n-40 (5.7GHz) MCS5~MCS7				
Channel	Channel 151	Channel 159		
Target (dBm)	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1

WiFi 802.11ac-20   (5.2GHz)MCS0~4

Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	13.5	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	

WiFi 802.11ac-20 (5.2GHz)MCS5~MCS8				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	13.5	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	

WiFi 802.11ac-20 (5.2GHz)MCS9				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	13.5	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	

WiFi 802.11ac-20 (5.3GHz)MCS0~4				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-20 (5.3GHz)MCS5~ MCS8				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-20 (5.3GHz) MCS9				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-20 (5.8GHz)MCS0~4				
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	13.5	13.5	13.5	13.5	13.5

Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-20　(5.8GHz)MCS5~MCS8					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	13.5	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-20　(5.8GHz)MCS9					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	13.5	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS0~ MCS4			
Channel	Channel 38	Channel 46	
Target (dBm)	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	

WiFi 802.11ac-40 (5.2~5.3GHz) MCS5~CS8			
Channel	Channel 38	Channel 46	
Target (dBm)	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	

WiFi 802.11ac-40 (5.2~5.3GHz) MCS9			
Channel	Channel 38	Channel 46	
Target (dBm)	13.5	13.5	
Tune-up(dB)	13.5± 1	13.5± 1	

WiFi 802.11ac-40 (5.5~5.6GHz) MCS0~ MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-40 (5.5~5.6GHz) MCS5~ MCS8				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-40 (5.5~5.6GHz) CS9				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-40 (5.8GHz) MCS0~ MCS4				
Data Rate	Channel 151	Channel 159		
Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		

WiFi 802.11ac-40 (5.8GHz) MCS5~ MCS8				
Data Rate	Channel 151	Channel 159		
Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		

WiFi 802.11ac-40 (5.8GHz) MCS9

Channel	Channel 151	Channel 159		
Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		

WiFi 802.11ac-80 MCS0~ MCS4				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-80 MCS9				
Channel	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	13.5	13.5	13.5	13.5
Tune-up(dB)	13.5± 1	13.5± 1	13.5± 1	13.5± 1

WiFi 802.11ac-80 MCS0~ MCS4				
Data Rate	Channel 138	Channel 155		
Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 138	Channel 155		

Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		
WiFi 802.11ac-80 MCS9				
Channel	Channel 138	Channel 155		
Target (dBm)	13.5	13.5		
Tune-up(dB)	13.5± 1	13.5± 1		

The average conducted power for Wi-Fi 5G is as following – DSI2

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	16.43
40(5200 MHz)	16.42
44(5220 MHz)	16.34
48(5240 MHz)	16.33
52(5260 MHz)	16.46
56(5280 MHz)	16.42
60(5300 MHz)	16.33
64(5320 MHz)	16.37
100(5500 MHz)	16.93
104(5520 MHz)	16.84
108(5540 MHz)	16.82
112(5560 MHz)	16.95
116(5580 MHz)	16.82
120(5600 MHz)	16.78
124(5620 MHz)	17.13
128(5640 MHz)	17.01
132(5660 MHz)	17.12
136(5680 MHz)	17.28
140(5700 MHz)	17.37
144(5720 MHz)	17.34
149(5745 MHz)	17.25
153(5765 MHz)	17.32
157(5785 MHz)	17.35
161(5805 MHz)	17.42
165(5825 MHz)	17.46
Tune up	18.00

The tune up power for Wi-Fi 5G is as following – DSI3

WiFi 802.11a (5GHz) Low				
6Mbps~12Mbps				
Channel	Channel 36~48	Channel 100~104	Channel 108~124	Channel 128~144	Channel 149~165
Target (dBm)	13	13	13	13	13
Tune-up(dB)	13± 1	13± 1	13± 1	13± 1	13± 1
18Mbps~36Mbps				
Channel	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	10	10	10	10	10
Tune-up(dB)	10± 1	10± 1	10± 1	10± 1	10± 1
48Mbps~54Mbps				
Data Rate	Channel 36~48	Channel 100~108	Channel 112~124	Channel 128~144	Channel 149~165
Target (dBm)	10	10	10	10	10
Tune-up(dB)	10± 1	10± 1	10± 1	10± 1	10± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	10	10	10
Tune-up(dB)	10± 1	10± 1	10± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7			
Channel	Channel 36	Channel 40/44	Channel 48
Target (dBm)	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4

Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	10	10	10	10
Tune-up(dB)	10± 1	10± 1	10± 1	10± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-20 (5GHz) MCS0~MCS4				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-20 (5GHz) MCS5~MCS7				
Channel	Channel 149	Channel 153	Channel 157/161	Channel 165
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-40 (5GHz) MCS0~MCS4			
Channel	Channel 38	Channel 46	
Target (dBm)	9	9	
Tune-up(dB)	9± 1	9± 1	

WiFi 802.11n-40 (5GHz) MCS5~MCS7

Channel	Channel 38	Channel 46		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

WiFi 802.11n-40 (5GHz) MCS0~MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-40 (5GHz) MCS5~MCS7				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-40 (5.7GHz) MCS0~MCS4				
Channel	Channel 151	Channel 159		
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11n-40 (5.7GHz) MCS5~MCS7				
Channel	Channel 151	Channel 159		
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20　 (5.2GHz)MCS0~4

Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	9	9	9	
Tune-up(dB)	9± 1	9± 1	9± 1	

WiFi 802.11ac-20 (5.2GHz)MCS5~MCS8				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	9	9	9	
Tune-up(dB)	9± 1	9± 1	9± 1	

WiFi 802.11ac-20 (5.2GHz)MCS9				
Channel	Channel 36	Channel 40/44	Channel 48	
Target (dBm)	9	9	9	
Tune-up(dB)	9± 1	9± 1	9± 1	

WiFi 802.11ac-20 (5.3GHz)MCS0~4				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20 (5.3GHz)MCS5~ MCS8				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20 (5.3GHz) MCS9				
Channel	Channel 56	Channel 60/64	Channel 100~136	Channel 140/144
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20 (5.8GHz)MCS0~4				
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	9	9	9	9	9

Tune-up(dB)	9± 1	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20 (5.8GHz)MCS5~MCS8					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	9	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-20 (5.8GHz)MCS9					
Channel	Channel 149	Channel 153	Channel 157	Channel 161	Channel 165
Target (dBm)	9	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-40 (5.2~5.3GHz) MCS0~ MCS4			
Channel	Channel 38	Channel 46	
Target (dBm)	9	9	
Tune-up(dB)	9± 1	9± 1	

WiFi 802.11ac-40 (5.2~5.3GHz) MCS5~CS8			
Channel	Channel 38	Channel 46	
Target (dBm)	9	9	
Tune-up(dB)	9± 1	9± 1	

WiFi 802.11ac-40 (5.2~5.3GHz) MCS9			
Channel	Channel 38	Channel 46	
Target (dBm)	9	9	
Tune-up(dB)	9± 1	9± 1	

WiFi 802.11ac-40 (5.5~5.6GHz) MCS0~ MCS4				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-40 (5.5~5.6GHz) MCS5~ MCS8				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-40 (5.5~5.6GHz) CS9				
Channel	Channel 102	Channel 110~126	Channel 134	Channel 142
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-40 (5.8GHz) MCS0~ MCS4				
Data Rate	Channel 151	Channel 159		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

WiFi 802.11ac-40 (5.8GHz) MCS5~ MCS8				
Data Rate	Channel 151	Channel 159		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

WiFi 802.11ac-40 (5.8GHz) MCS9

Channel	Channel 151	Channel 159		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-80　MCS9				
Channel	Channel 42	Channel 58	Channel 106	Channel 122
Target (dBm)	9	9	9	9
Tune-up(dB)	9± 1	9± 1	9± 1	9± 1

WiFi 802.11ac-80　MCS0~ MCS4				
Data Rate	Channel 138	Channel 155		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

WiFi 802.11ac-80 MCS5~S8				
Data Rate	Channel 138	Channel 155		

Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		
WiFi 802.11ac-80 MCS9				
Channel	Channel 138	Channel 155		
Target (dBm)	9	9		
Tune-up(dB)	9± 1	9± 1		

The average conducted power for Wi-Fi 5G is as following – DSI3

| 802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	12.45
40(5200 MHz)	12.81
44(5220 MHz)	12.88
48(5240 MHz)	12.84
52(5260 MHz)	13.11
56(5280 MHz)	12.87
60(5300 MHz)	12.74
64(5320 MHz)	13.03
100(5500 MHz)	12.99
104(5520 MHz)	13.02
108(5540 MHz)	13.24
112(5560 MHz)	13.26
116(5580 MHz)	13.29
120(5600 MHz)	13.17
124(5620 MHz)	13.35
128(5640 MHz)	13.53
132(5660 MHz)	13.46
136(5680 MHz)	13.88
140(5700 MHz)	13.91
144(5720 MHz)	13.89
149(5745 MHz)	13.64
153(5765 MHz)	13.56
157(5785 MHz)	13.83
161(5805 MHz)	13.89
165(5825 MHz)	13.92
Tune up	14.00

12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances
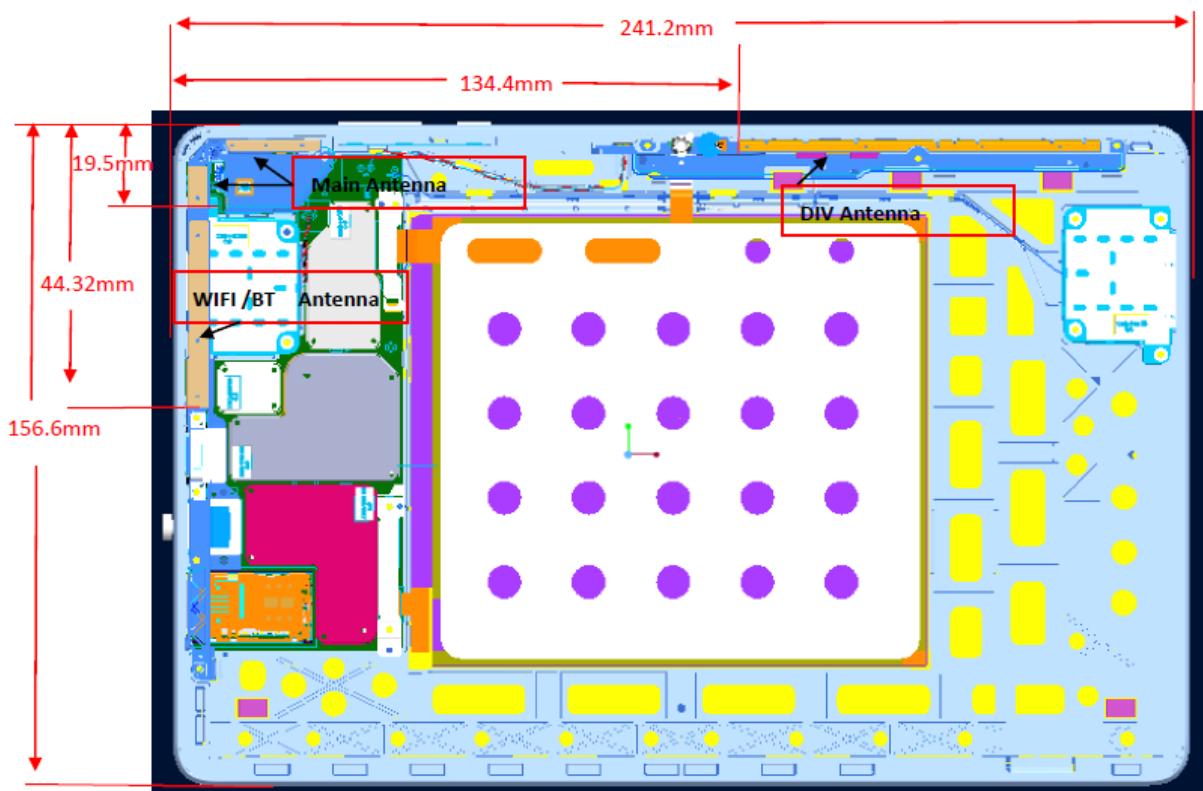
Picture 23 Antenna Locations

12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
WWAN	No	Yes	Yes	No	Yes	No
WIFI ANT	No	Yes	Yes	No	Yes	No

13 Evaluation of Simultaneous

Table 13.1: The sum of SAR values for Main antenna + WiFi-2.4G

	Position	Main antenna	WiFi-2.4G	Sum
Highest SAR value for Body	Rear 0mm (LTE B66)	0.72	0.64	**1.36**
Highest SAR value for Body	Left 0mm (WCDMA 1900)	0.53	0.98	**1.51**

Table 13.2: The sum of SAR values for Main antenna + WiFi-5G +BT

	Position	Main antenna	WiFi-5G	BT	Sum
Highest SAR value for Body	Rear 0mm (LTE B66)	0.72	0.68	0.08	**1.48**
Highest SAR value for Body	Left 0mm (WCDMA 1900)	0.53	0.65	0.24	**1.42**

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom.

The distance is 10 mm and just applied to the condition of body worn accessory.

It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{Target} - P_{Measured})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

$P_{Measured}$ is the measured power in chapter 11.

Table 14.1: Duty Cycle

Mode	Duty Cycle
GPRS/EGPRS 850/1900	1:4
WCDMA&LTE FDD	1:1
LTE TDD	1:1.58

14.1 SAR results for 2G/3G/4G

Table 14.1-1: SAR Values - GSM 850/GSM1900

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	GSM850	251	848.8	GPRS2/Rear 17mm	/	30.03	31	0.177	0.22	0.121	0.15	-0.06
Body	GSM850	190	836.6	GPRS2/Rear 17mm	/	30.03	31	0.161	0.20	0.11	0.14	-0.03
Body	GSM850	128	824.2	GPRS2/Rear 17mm	/	30.02	31	0.13	0.16	0.088	0.11	-0.15
Body	GSM850	190	836.6	GPRS2/Left Edge 11mm	/	30.03	31	0.139	0.17	0.094	0.12	0.05
Body	GSM850	190	836.6	GPRS2/Top Edge 11mm	/	30.03	31	0.117	0.15	0.078	0.10	0.14
Body	GSM850	251	848.8	EGPRS2/Rear 17mm	/	30.02	31	0.173	0.22	0.117	0.15	0.15
Body	GSM850	251	848.8	GPRS2/Rear 0mm	Note1	23.99	25	0.43	0.54	0.169	0.21	-0.13
Body	GSM850	190	836.6	GPRS2/Rear 0mm	Note1	24.13	25	0.451	0.55	0.178	0.22	-0.03
Body	GSM850	128	824.2	GPRS2/Rear 0mm	Note1/1	24.29	25	0.474	0.56	0.191	0.22	-0.14
Body	GSM850	190	836.6	GPRS2/Left Edge 0mm	Note1	24.13	25	0.201	0.25	0.083	0.10	0.12
Body	GSM850	190	836.6	GPRS2/Top Edge 0mm	Note1	24.13	25	0.256	0.31	0.117	0.14	-0.04
Body	GSM850	128	824.2	EGPRS2/Rear 0mm	Note1	24.27	25	0.463	0.55	0.184	0.22	0.06
Body	GSM1900	661	1880	GPRS2/Rear 17mm	/	27.46	28.5	0.22	0.28	0.131	0.17	-0.18
Body	GSM1900	810	1909.8	GPRS2/Left Edge 11mm	/	27.61	28.5	0.244	0.30	0.147	0.18	-0.09
Body	GSM1900	661	1880	GPRS2/Left Edge 11mm	/	27.46	28.5	0.258	0.33	0.152	0.19	-0.02
Body	GSM1900	512	1850.2	GPRS2/Left Edge 11mm	/	27.18	28.5	0.237	0.32	0.151	0.20	0.16
Body	GSM1900	661	1880	GPRS2/Top Edge 11mm	/	27.46	28.5	0.251	0.32	0.147	0.19	-0.18
Body	GSM1900	661	1880	EGPRS2/Left Edge 11mm	/	27.39	28.5	0.241	0.31	0.144	0.19	0.15
Body	GSM1900	810	1909.8	GPRS2/Rear 0mm	Note1	20.01	21	0.459	0.58	0.22	0.28	0.13
Body	GSM1900	661	1880	GPRS2/Rear 0mm	Note1/2	19.75	21	0.462	0.62	0.226	0.30	-0.01
Body	GSM1900	512	1850.2	GPRS2/Rear 0mm	Note1	19.54	21	0.429	0.60	0.209	0.29	-0.03
Body	GSM1900	661	1880	GPRS2/Left Edge 0mm	Note1	19.75	21	0.393	0.52	0.188	0.25	0.16
Body	GSM1900	661	1880	GPRS2/Top Edge 0mm	Note1	19.75	21	0.192	0.26	0.103	0.14	0.02
Body	GSM1900	661	1880	EGPRS2/Rear 0mm	Note1	19.72	21	0.448	0.60	0.214	0.29	0.09

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1/DSI3.

Table 14.1-2: SAR Values – WCDMA B2/B4/B5

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	WCDMA1900	9400	1880	Rear 17mm	/	23.28	24	0.307	0.36	0.193	0.23	-0.1
Body	WCDMA1900	9538	1907.6	Left Edge 11mm	/	23.24	24	0.372	0.44	0.221	0.26	-0.03
Body	WCDMA1900	9400	1880	Left Edge 11mm	/	23.28	24	0.364	0.43	0.213	0.25	0.09
Body	WCDMA1900	9262	1852.4	Left Edge 11mm	/	23.26	24	0.365	0.43	0.215	0.25	0.04
Body	WCDMA1900	9400	1880	Top Edge 11mm	/	23.28	24	0.34	0.40	0.202	0.24	0.01
Body	WCDMA1900	9538	1907.6	Rear 0mm	Note1/3	14.41	15.5	0.481	0.62	0.225	0.29	-0.14
Body	WCDMA1900	9400	1880	Rear 0mm	Note1	14.37	15.5	0.418	0.54	0.207	0.27	0.11
Body	WCDMA1900	9262	1852.4	Rear 0mm	Note1	14.34	15.5	0.401	0.52	0.208	0.27	-0.07
Body	WCDMA1900	9400	1880	Left Edge 0mm	Note1	14.37	15.5	0.411	0.53	0.212	0.28	0.02
Body	WCDMA1900	9400	1880	Top Edge 0mm	Note1	14.37	15.5	0.216	0.28	0.123	0.16	-0.01
Body	WCDMA1700	1412	1732.5	Rear 17mm	/	22.97	24	0.247	0.31	0.154	0.20	-0.1
Body	WCDMA1700	1513	1752.6	Left Edge 11mm	/	23.01	24	0.232	0.29	0.141	0.18	0.02
Body	WCDMA1700	1412	1732.5	Left Edge 11mm	/	22.97	24	0.259	0.33	0.157	0.20	0.03
Body	WCDMA1700	1312	1712.4	Left Edge 11mm	/	22.93	24	0.275	0.35	0.166	0.21	-0.02
Body	WCDMA1700	1412	1732.5	Top Edge 11mm	/	22.97	24	0.206	0.26	0.125	0.16	0.05
Body	WCDMA1700	1513	1752.6	Rear 0mm	Note1	14.06	15.5	0.431	0.60	0.224	0.31	-0.09
Body	WCDMA1700	1412	1732.5	Rear 0mm	Note1	14.12	15.5	0.456	0.63	0.233	0.32	-0.09
Body	WCDMA1700	1312	1712.4	Rear 0mm	Note1/4	14.13	15.5	0.482	0.66	0.244	0.33	-0.08
Body	WCDMA1700	1412	1732.5	Left Edge 0mm	Note1	14.12	15.5	0.29	0.40	0.125	0.17	-0.01
Body	WCDMA1700	1412	1732.5	Top Edge 0mm	Note1	14.12	15.5	0.167	0.23	0.087	0.12	0.17
Body	WCDMA850	4233	846.6	Rear 17mm	/	23.34	24	0.172	0.20	0.119	0.14	-0.08
Body	WCDMA850	4183	836.6	Rear 17mm	/	23.29	24	0.165	0.19	0.115	0.14	0.14
Body	WCDMA850	4132	826.4	Rear 17mm	/	23.26	24	0.157	0.19	0.108	0.13	0.16
Body	WCDMA850	4183	836.6	Left Edge 11mm	/	23.29	24	0.142	0.17	0.097	0.11	-0.06
Body	WCDMA850	4183	836.6	Top Edge 11mm	/	23.29	24	0.13	0.15	0.087	0.10	0.17
Body	WCDMA850	4233	846.6	Rear 0mm	Note1	15.93	16.5	0.459	0.52	0.183	0.21	0.13
Body	WCDMA850	4183	836.6	Rear 0mm	Note1/5	15.87	16.5	0.469	0.54	0.188	0.22	0.06
Body	WCDMA850	4132	826.4	Rear 0mm	Note1	15.85	16.5	0.462	0.54	0.184	0.21	-0.05
Body	WCDMA850	4183	836.6	Left Edge 0mm	Note1	15.87	16.5	0.131	0.15	0.055	0.06	-0.17
Body	WCDMA850	4183	836.6	Top Edge 0mm	Note1	15.87	16.5	0.234	0.27	0.107	0.12	0.02

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1/DSI3.

Table 14.1-3: SAR Values – LTE B2/B5

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band2	19100	1900	1RB-Mid Rear 17mm	/	22.98	24	0.303	0.38	0.133	0.17	0.12
Body	LTE Band2	19100	1900	1RB-Mid Left Edge 11mm	/	22.98	24	0.367	0.46	0.219	0.28	-0.04
Body	LTE Band2	19100	1900	1RB-Mid Top Edge 11mm	/	22.98	24	0.301	0.38	0.129	0.16	-0.11
Body	LTE Band2	19100	1900	50RB-Low Rear 17mm	/	22.11	23	0.247	0.30	0.108	0.13	-0.12
Body	LTE Band2	19100	1900	50RB-Low Left Edge 11mm	/	22.11	23	0.338	0.41	0.135	0.17	0.15
Body	LTE Band2	19100	1900	50RB-Low Top Edge 11mm	/	22.11	23	0.245	0.30	0.104	0.13	0.18
Body	LTE Band2	19100	1900	1RB-Mid Rear 0mm	Note1/6	15.01	16	0.479	0.60	0.228	0.29	-0.05
Body	LTE Band2	19100	1900	1RB-Mid Left Edge 0mm	Note1	15.01	16	0.425	0.53	0.176	0.22	-0.11
Body	LTE Band2	19100	1900	1RB-Mid Top Edge 0mm	Note1	15.01	16	0.247	0.31	0.116	0.15	0.16
Body	LTE Band2	19100	1900	50RB-Low Rear 0mm	Note1	15.12	16	0.476	0.58	0.216	0.26	0.04
Body	LTE Band2	19100	1900	50RB-Low Left Edge 0mm	Note1	15.12	16	0.405	0.50	0.18	0.22	-0.06
Body	LTE Band2	19100	1900	50RB-Low Top Edge 0mm	Note1	15.12	16	0.24	0.29	0.113	0.14	0.04
Body	LTE Band5	20450	829	1RB-Mid Rear 17mm	/	23.64	24.5	0.161	0.20	0.111	0.14	-0.12
Body	LTE Band5	20450	829	1RB-Mid Left Edge 11mm	/	23.64	24.5	0.146	0.18	0.097	0.12	-0.17
Body	LTE Band5	20450	829	1RB-Mid Top Edge 11mm	/	23.64	24.5	0.128	0.16	0.084	0.10	0.16
Body	LTE Band5	20450	829	25RB-Low Rear 17mm	/	22.78	23.5	0.125	0.15	0.086	0.10	-0.16
Body	LTE Band5	20450	829	25RB-Low Left Edge 11mm	/	22.78	23.5	0.097	0.11	0.063	0.07	-0.03
Body	LTE Band5	20450	829	25RB-Low Top Edge 11mm	/	22.78	23.5	0.12	0.14	0.076	0.09	-0.09
Body	LTE Band5	20450	829	1RB-Mid Rear 0mm	Note1/7	16.19	17.5	0.5	0.68	0.202	0.27	-0.08
Body	LTE Band5	20450	829	1RB-Mid Left Edge 0mm	Note1	16.19	17.5	0.106	0.14	0.05	0.07	-0.07
Body	LTE Band5	20450	829	1RB-Mid Top Edge 0mm	Note1	16.19	17.5	0.189	0.26	0.106	0.14	-0.01
Body	LTE Band5	20450	829	25RB-Low Rear 0mm	Note1	16.23	17.5	0.354	0.47	0.169	0.23	-0.13
Body	LTE Band5	20450	829	25RB-Low Left Edge 0mm	Note1	16.23	17.5	0.117	0.16	0.052	0.07	0.1
Body	LTE Band5	20450	829	25RB-Low Top Edge 0mm	Note1	16.23	17.5	0.17	0.23	0.099	0.13	-0.08

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1/DSI3.

Table 14.1-4: SAR Values – LTE B7

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band7	21350	2560	1RB-Mid Rear 17mm	/	23.3	24	1	1.17	0.488	0.57	0.06
Body	LTE Band7	21100	2535	1RB-Mid Rear 17mm	8	23.38	24	1.02	1.18	0.495	0.57	-0.03
Body	LTE Band7	20850	2510	1RB-Mid Rear 17mm	/	23.23	24	0.862	1.03	0.433	0.52	0.01
Body	LTE Band7	21100	2535	100RB Rear 17mm	/	22.3	23	0.859	1.01	0.411	0.48	0.09
Body	LTE Band7	21100	2535	1RB-Mid Left Edge 11mm	/	23.38	24	0.674	0.78	0.356	0.41	0.11
Body	LTE Band7	21100	2535	1RB-Mid Top Edge 11mm	/	23.38	24	0.677	0.78	0.332	0.38	-0.02
Body	LTE Band7	21350	2560	50RB-Low Rear 17mm	/	22.33	23	0.821	0.96	0.395	0.46	0.17
Body	LTE Band7	21100	2535	50RB-Low Rear 17mm	/	22.35	23	0.832	0.97	0.403	0.47	0.03
Body	LTE Band7	20850	2510	50RB-Low Rear 17mm	/	22.31	23	0.786	0.92	0.376	0.44	-0.04
Body	LTE Band7	21100	2535	50RB-Low Left Edge 11mm	/	22.35	23	0.56	0.65	0.295	0.34	-0.03
Body	LTE Band7	21100	2535	50RB-Low Top Edge 11mm	/	22.35	23	0.561	0.65	0.274	0.32	-0.07
Body	LTE Band7	21350	2560	1RB-Mid Rear 0mm	Note1	11.91	13	0.768	0.99	0.288	0.37	-0.13
Body	LTE Band7	21100	2535	1RB-Mid Rear 0mm	Note1	11.92	13	0.791	1.01	0.296	0.38	-0.03
Body	LTE Band7	20850	2510	1RB-Mid Rear 0mm	Note1	11.81	13	0.834	1.10	0.303	0.40	-0.03
Body	LTE Band7	20850	2510	100RB Rear 0mm	Note1	11.77	13	0.806	1.07	0.285	0.38	0.09
Body	LTE Band7	21100	2535	1RB-Mid Left Edge 0mm	Note1	11.92	13	0.468	0.60	0.205	0.26	0.05
Body	LTE Band7	21100	2535	1RB-Mid Top Edge 0mm	Note1	11.92	13	0.475	0.61	0.177	0.23	0.15
Body	LTE Band7	21350	2560	50RB-Mid Rear 0mm	Note1	11.94	13	0.701	0.89	0.186	0.24	0.06
Body	LTE Band7	21100	2535	50RB-Mid Rear 0mm	Note1	11.95	13	0.75	0.96	0.219	0.28	-0.16
Body	LTE Band7	20850	2510	50RB-Mid Rear 0mm	Note1	11.83	13	0.722	0.95	0.201	0.26	-0.11
Body	LTE Band7	21100	2535	50RB-Mid Left Edge 0mm	Note1	11.95	13	0.46	0.59	0.196	0.25	0.11
Body	LTE Band7	21100	2535	50RB-Mid Top Edge 0mm	Note1	11.95	13	0.546	0.70	0.184	0.23	-0.1
Body	LTE Band7	21100	2535	1RB-Mid Rear 0mm	Note2	9.88	11.5	0.482	0.70	0.174	0.25	-0.03
Body	LTE Band7	21100	2535	1RB-Mid Left Edge 0mm	Note2	9.88	11.5	0.266	0.39	0.109	0.16	-0.12
Body	LTE Band7	21100	2535	1RB-Mid Top Edge 0mm	Note2	9.88	11.5	0.305	0.44	0.104	0.15	-0.17
Body	LTE Band7	21100	2535	50RB-Low Rear 0mm	Note2	9.87	11.5	0.48	0.70	0.178	0.26	0.01
Body	LTE Band7	21100	2535	50RB-Low Left Edge 0mm	Note2	9.87	11.5	0.254	0.37	0.107	0.16	-0.04
Body	LTE Band7	21100	2535	50RB-Low Top Edge 0mm	Note2	9.87	11.5	0.295	0.43	0.102	0.15	-0.08

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1.

Note2: The results are for DSI3.

Table 14.1-5: SAR Values – LTE B12/B13

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band12	23095	707.5	1RB-Mid Rear 17mm	/	23.55	24.5	0.132	0.16	0.087	0.11	0.17
Body	LTE Band12	23095	707.5	1RB-Mid Left Edge 11mm	/	23.55	24.5	0.175	0.22	0.12	0.15	0.04
Body	LTE Band12	23095	707.5	1RB-Mid Top Edge 11mm	/	23.55	24.5	0.089	0.11	0.06	0.07	-0.08
Body	LTE Band12	23095	707.5	25RB-Low Rear 17mm	/	22.65	23.5	0.09	0.11	0.06	0.07	-0.03
Body	LTE Band12	23095	707.5	25RB-Low Left Edge 11mm	/	22.65	23.5	0.124	0.15	0.085	0.10	-0.12
Body	LTE Band12	23095	707.5	25RB-Low Top Edge 11mm	/	22.65	23.5	0.061	0.07	0.042	0.05	-0.11
Body	LTE Band12	23095	707.5	1RB-Mid Rear 0mm	Note1/9	16.68	18.5	0.443	0.67	0.192	0.29	-0.06
Body	LTE Band12	23095	707.5	1RB-Mid Left Edge 0mm	Note1	16.68	18.5	0.158	0.24	0.065	0.10	-0.13
Body	LTE Band12	23095	707.5	1RB-Mid Top Edge 0mm	Note1	16.68	18.5	0.23	0.35	0.081	0.12	0.13
Body	LTE Band12	23095	707.5	25RB-High Rear 0mm	Note1	16.65	18.5	0.436	0.67	0.187	0.29	0.14
Body	LTE Band12	23095	707.5	25RB-High Left Edge 0mm	Note1	16.65	18.5	0.111	0.17	0.066	0.10	-0.17
Body	LTE Band12	23095	707.5	25RB-HighTop Edge 0mm	Note1	16.65	18.5	0.178	0.27	0.069	0.11	-0.1
Body	LTE Band13	23230	782	1RB-Mid Rear 17mm	/	23.63	24.5	0.14	0.17	0.096	0.12	0.17
Body	LTE Band13	23230	782	1RB-Mid Left Edge 11mm	/	23.63	24.5	0.19	0.23	0.13	0.16	0.04
Body	LTE Band13	23230	782	1RB-Mid Top Edge 11mm	/	23.63	24.5	0.097	0.12	0.066	0.08	0.14
Body	LTE Band13	23230	782	25RB-Low Rear 17mm	/	22.69	23.5	0.106	0.13	0.071	0.09	-0.11
Body	LTE Band13	23230	782	25RB-Low Left Edge 11mm	/	22.69	23.5	0.135	0.16	0.091	0.11	0.07
Body	LTE Band13	23230	782	25RB-Low Top Edge 11mm	/	22.69	23.5	0.079	0.10	0.052	0.06	0.06
Body	LTE Band13	23230	782	1RB-Mid Rear 0mm	Note1/10	17.66	19	0.494	0.67	0.208	0.28	-0.01
Body	LTE Band13	23230	782	1RB-Mid Left Edge 0mm	Note1	17.66	19	0.118	0.16	0.058	0.08	-0.12
Body	LTE Band13	23230	782	1RB-Mid Top Edge 0mm	Note1	17.66	19	0.226	0.31	0.093	0.13	-0.08
Body	LTE Band13	23230	782	25RB-Low Rear 0mm	Note1	17.66	19	0.312	0.42	0.163	0.22	0.1
Body	LTE Band13	23230	782	25RB-Low Left Edge 0mm	Note1	17.66	19	0.115	0.16	0.054	0.07	0.04
Body	LTE Band13	23230	782	25RB-Low Top Edge 0mm	Note1	17.66	19	0.206	0.28	0.085	0.12	0.05

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1/DSI3.

Table 14.1-6: SAR Values – LTE B41

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band41	41055	2636.5	1RB-Mid Rear 17mm	/	23.35	24	0.578	0.67	0.284	0.33	-0.13
Body	LTE Band41	41055	2636.5	1RB-Mid Left Edge 11mm	/	23.35	24	0.537	0.62	0.283	0.33	-0.18
Body	LTE Band41	41055	2636.5	1RB-Mid Top Edge 11mm	/	23.35	24	0.314	0.36	0.164	0.19	0.16
Body	LTE Band41	41055	2636.5	50RB-Low Rear 17mm	/	22.28	23	0.45	0.53	0.221	0.26	-0.13
Body	LTE Band41	41055	2636.5	50RB-Low Left Edge 11mm	/	22.28	23	0.405	0.48	0.214	0.25	0.09
Body	LTE Band41	41055	2636.5	50RB-Low Top Edge 11mm	/	22.28	23	0.262	0.31	0.136	0.16	-0.14
Body	LTE Band41	41490	2680	1RB-Mid Rear 0mm	Note1	14.35	15.5	0.715	0.93	0.258	0.34	-0.16
Body	LTE Band41	41055	2636.5	1RB-Mid Rear 0mm	Note1	14.42	15.5	0.768	0.98	0.279	0.36	0.12
Body	LTE Band41	40620	2593	1RB-Mid Rear 0mm	Note1	14.33	15.5	0.812	1.06	0.29	0.38	-0.11
Body	LTE Band41	40185	2549.5	1RB-Mid Rear 0mm	Note1	14.41	15.5	0.843	1.08	0.301	0.39	-0.18
Body	LTE Band41	39750	2506	1RB-Mid Rear 0mm	Note1/11	14.33	15.5	0.888	1.16	0.317	0.42	-0.01
Body	LTE Band41	41055	2636.5	1RB-Mid Left Edge 0mm	Note1	14.42	15.5	0.485	0.62	0.194	0.25	-0.04
Body	LTE Band41	41055	2636.5	1RB-Mid Top Edge 0mm	Note1	14.42	15.5	0.368	0.47	0.135	0.17	0.07
Body	LTE Band41	41490	2680	50RB-Low Rear 0mm	Note1	14.31	15.5	0.614	0.81	0.235	0.31	-0.15
Body	LTE Band41	41055	2636.5	50RB-Low Rear 0mm	Note1	14.32	15.5	0.66	0.87	0.254	0.33	-0.04
Body	LTE Band41	40620	2593	50RB-Low Rear 0mm	Note1	14.18	15.5	0.698	0.95	0.264	0.36	0.06
Body	LTE Band41	40185	2549.5	50RB-Low Rear 0mm	Note1	14.22	15.5	0.724	0.97	0.274	0.37	-0.07
Body	LTE Band41	39750	2506	50RB-Low Rear 0mm	Note1	14.08	15.5	0.763	1.06	0.289	0.40	0.06
Body	LTE Band41	41055	2636.5	50RB-Low Left Edge 0mm	Note1	14.32	15.5	0.473	0.62	0.186	0.24	0.01
Body	LTE Band41	41055	2636.5	50RB-Low Top Edge 0mm	Note1	14.32	15.5	0.336	0.44	0.122	0.16	-0.04
Body	LTE Band41	39750	2506	1RB-Mid Rear 0mm	Note2	11.95	13.5	0.471	0.67	0.168	0.24	0.01
Body	LTE Band41	39750	2506	1RB-Mid Left Edge 0mm	Note2	11.95	13.5	0.222	0.32	0.096	0.14	0.1
Body	LTE Band41	39750	2506	1RB-Mid Top Edge 0mm	Note2	11.95	13.5	0.159	0.23	0.062	0.09	0.12
Body	LTE Band41	41055	2636.5	50RB-Low Rear 0mm	Note2	11.84	13.5	0.311	0.46	0.138	0.20	0.06
Body	LTE Band41	41055	2636.5	50RB-Low Left Edge 0mm	Note2	11.84	13.5	0.245	0.36	0.095	0.14	0.15
Body	LTE Band41	41055	2636.5	50RB-Low Top Edge 0mm	Note2	11.84	13.5	0.155	0.23	0.06	0.09	-0.16

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1.

Note2: The results are for DSI3.

Table 14.1-7: SAR Values – LTE B66

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band66	132072	1720	1RB-Mid Rear 17mm	/	23.25	24	0.256	0.30	0.162	0.19	-0.1
Body	LTE Band66	132072	1720	1RB-Mid Left Edge 11mm	/	23.25	24	0.323	0.38	0.194	0.23	-0.05
Body	LTE Band66	132072	1720	1RB-Mid Top Edge 11mm	/	23.25	24	0.208	0.25	0.126	0.15	-0.18
Body	LTE Band66	132072	1720	50RB-Low Rear 17mm	/	22.29	23	0.201	0.24	0.128	0.15	0.17
Body	LTE Band66	132072	1720	50RB-Low Left Edge 11mm	/	22.29	23	0.233	0.27	0.141	0.17	-0.06
Body	LTE Band66	132072	1720	50RB-Low Top Edge 11mm	/	22.29	23	0.183	0.22	0.108	0.13	-0.01
Body	LTE Band66	132572	1770	1RB-Mid Rear 0mm	Note1	17.32	18	0.717	0.84	0.392	0.46	0.12
Body	LTE Band66	132322	1745	1RB-Mid Rear 0mm	Note1/12	17.24	18	0.824	0.98	0.419	0.50	-0.05
Body	LTE Band66	132072	1720	1RB-Mid Rear 0mm	Note1	17.35	18	0.763	0.89	0.413	0.48	-0.07
Body	LTE Band66	132322	1745	100RB Rear 0mm	Note1	17.25	18	0.803	0.95	0.4	0.48	0.05
Body	LTE Band66	132072	1720	1RB-Mid Left Edge 0mm	Note1	17.35	18	0.46	0.53	0.212	0.25	0.09
Body	LTE Band66	132072	1720	1RB-Mid Top Edge 0mm	Note1	17.35	18	0.287	0.33	0.149	0.17	-0.15
Body	LTE Band66	132572	1770	50RB-Low Rear 0mm	Note1	17.33	18	0.69	0.81	0.386	0.45	0.09
Body	LTE Band66	132322	1745	50RB-Low Rear 0mm	Note1	17.25	18	0.793	0.94	0.413	0.49	0.11
Body	LTE Band66	132072	1720	50RB-Low Rear 0mm	Note1	17.34	18	0.735	0.86	0.406	0.47	-0.02
Body	LTE Band66	132072	1720	50RB-Low Left Edge 0mm	Note1	17.34	18	0.455	0.53	0.212	0.25	-0.08
Body	LTE Band66	132072	1720	50RB-Low Top Edge 0mm	Note1	17.34	18	0.249	0.29	0.134	0.16	-0.18
Body	LTE Band66	132072	1720	1RB-Mid Rear 0mm	Note2	15.12	16.5	0.523	0.72	0.267	0.37	-0.06
Body	LTE Band66	132072	1720	1RB-Mid Left Edge 0mm	Note2	15.12	16.5	0.287	0.39	0.134	0.18	0.09
Body	LTE Band66	132072	1720	1RB-Mid Top Edge 0mm	Note2	15.12	16.5	0.185	0.25	0.092	0.13	0.01
Body	LTE Band66	132072	1720	50RB-Low Rear 0mm	Note2	15.15	16.5	0.496	0.68	0.268	0.37	0.15
Body	LTE Band66	132072	1720	50RB-Low Left Edge 0mm	Note2	15.15	16.5	0.25	0.34	0.122	0.17	-0.11
Body	LTE Band66	132072	1720	50RB-Low Top Edge 0mm	Note2	15.15	16.5	0.182	0.25	0.093	0.13	-0.14

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1.

Note2: The results are for DSI3.

14.2 SAR Evaluation for WIFI

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.

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 mode (i.e. a, g, n ac then ax) is selected.

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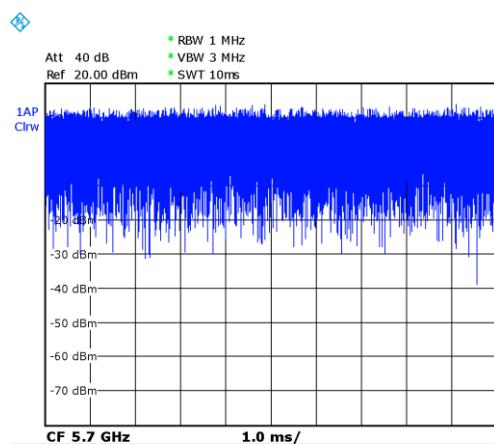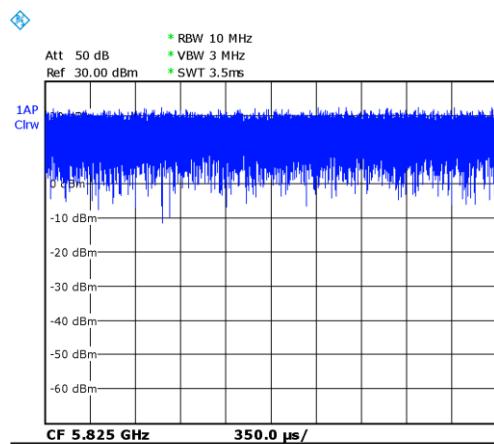
Duty factor plot

CH6
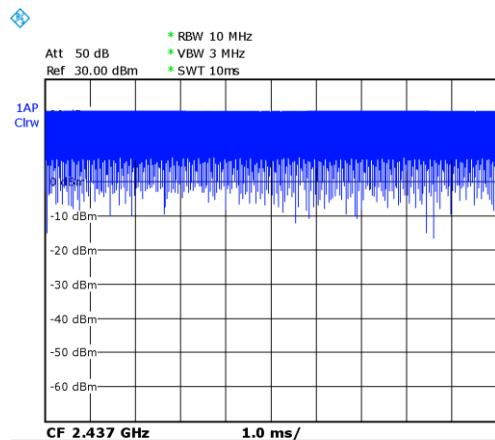
CH52
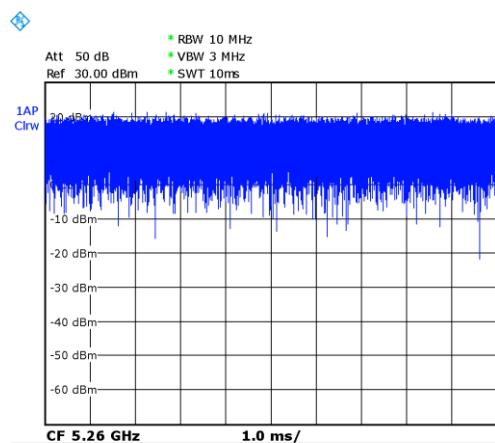
CH140

CH165

Table 14.2-1: SAR Values - WiFi 2.4G

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
				802.11b 1M 21dB								
Body	WIFI2.4G	6	2437	Rear 0mm	/	19.94	20.5	0.559	**0.64**	0.219	**0.25**	-0.09
Body	WIFI2.4G	11	2462	Left 5mm	/	19.78	20.5	0.781	**0.92**	0.325	**0.38**	0.12
Body	WIFI2.4G	6	2437	Left 5mm	13	19.94	20.5	0.901	**1.03**	0.369	**0.42**	0.02
Body	WIFI2.4G	1	2412	Left 5mm	/	19.65	20.5	0.625	**0.76**	0.25	**0.30**	0.03
Body	WIFI2.4G	6	2437	Top 0mm	/	19.94	20.5	0.183	**0.21**	0.073	**0.08**	-0.07
Body	WIFI2.4G	6	2437	Left 11mm	/	19.94	20.5	0.282	**0.32**	0.134	**0.15**	0.05
Body	WIFI2.4G	6	2437	Rear 17mm	/	19.94	20.5	0.052	**0.06**	0.022	**0.03**	0.06
				802.11b 1M 16dB								
Body	WIFI2.4G	11	2462	Left 0mm	Note1	14.79	15	0.656	**0.69**	0.281	**0.29**	-0.12
Body	WIFI2.4G	6	2437	Left 0mm	Note1	14.82	15	0.94	**0.98**	0.332	**0.35**	0.04
Body	WIFI2.4G	1	2412	Left 0mm	Note1	14.43	15	0.716	**0.82**	0.263	**0.30**	0.09

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI1/DSI3.

Table 14.2-2: SAR Values - WiFi 5G

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
802.11a 6M 20dB												
Body	WIFI5G	52	5260	Rear 0mm	Note1/14	18.7	19.5	0.964	1.16	0.295	0.35	-0.02
Body	WIFI5G	56	5280	Rear 0mm	Note1	18.61	19.5	0.934	1.15	0.286	0.35	-0.04
Body	WIFI5G	52	5260	Left 5mm	Note1	18.7	19.5	0.613	0.74	0.198	0.24	0.12
Body	WIFI5G	52	5260	Top 0mm	Note1	18.7	19.5	0.082	0.10	0.028	0.03	0.06
Body	WIFI5G	144	5720	Rear 0mm	Note1	18.88	19.5	0.667	0.77	0.222	0.26	-0.04
Body	WIFI5G	144	5720	Left 5mm	Note1	18.88	19.5	0.49	0.57	0.144	0.17	0.07
Body	WIFI5G	144	5720	Top 0mm	Note1	18.88	19.5	0.091	0.10	0.027	0.03	-0.09
802.11a 6M 18.5dB												
Body	WIFI5G	52	5260	Rear 0mm	Note2	16.46	18	0.475	0.68	0.143	0.20	0.08
Body	WIFI5G	52	5260	Left 5mm	Note2	16.46	18	0.334	0.48	0.102	0.15	0.05
Body	WIFI5G	52	5260	Top 0mm	Note2	16.46	18	0.069	0.10	0.015	0.02	-0.12
Body	WIFI5G	140	5700	Rear 0mm	Note2	17.37	18	0.523	0.60	0.163	0.19	-0.09
Body	WIFI5G	140	5700	Left 5mm	Note2	17.37	18	0.256	0.30	0.078	0.09	0.11
Body	WIFI5G	140	5700	Top 0mm	Note2	17.37	18	0.042	0.05	0.014	0.02	0.03
Body	WIFI5G	165	5825	Rear 0mm	Note2	17.46	18	0.404	0.46	0.141	0.16	-0.09
Body	WIFI5G	165	5825	Left 5mm	Note2	17.46	18	0.25	0.28	0.059	0.07	-0.14
Body	WIFI5G	165	5825	Top 0mm	Note2	17.46	18	0.043	0.05	0.015	0.02	0.07
Body	WIFI5G	52	5260	Rear 17mm	Note2	16.46	18	0.085	0.12	0.027	0.04	-0.11
802.11a 6M 16.5dB												
Body	WIFI5G	52	5260	Left 0mm	Note3	14.55	15.5	0.751	0.93	0.181	0.23	-0.09
Body	WIFI5G	56	5280	Left 0mm	Note3	14.46	15.5	0.885	1.12	0.214	0.27	0.11
Body	WIFI5G	140	5700	Left 0mm	Note3	15.46	15.5	0.592	0.60	0.144	0.15	-0.05
Body	WIFI5G	165	5825	Left 0mm	Note3	15.43	15.5	0.774	0.79	0.166	0.17	0.06
802.11a 6M 15dB												
Body	WIFI5G	52	5260	Left 0mm	Note4	13.11	14	0.529	0.65	0.129	0.16	-0.04
Body	WIFI5G	140	5700	Left 0mm	Note4	13.91	14	0.351	0.36	0.093	0.09	0.09
Body	WIFI5G	165	5825	Left 0mm	Note4	13.92	14	0.459	0.47	0.107	0.11	-0.12

Note: The distance between the EUT and the phantom bottom is 11mm/17mm by sensor, the distance for other results is 0mm.

Note1: The results are for DSI0.

Note2: The results are for DSI2.

Note3: The results are for DSI1.

Note4: The results are for DSI3.

14.3 WLAN Evaluation For BT

Table 14.3-1: SAR Values (BT - Body)

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Test setup/Position	Note/Fig No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	BT	78	2480	DH5 Rear 0mm	/	11	11	0.079	**0.08**	0.047	**0.05**	0.09
Body	BT	78	2480	DH5 Left 0mm	15	11	11	0.235	0.24	0.081	**0.08**	0.12
Body	BT	78	2480	DH5 Top 0mm	/	11	11	<0.01	<0.01	<0.01	<0.01	/

15 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

Band	Frequency		Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
	Ch.	MHz					
LTE B7	21100	2535	Rear 17mm	1.02	0.989	1.03	/
LTE B7	20850	2510	Rear 0mm	0.834	0.811	1.03	/
LTE B41	39750	2506	Rear 0mm	0.888	0.874	1.02	/
LTE B66	132322	1745	Rear 0mm	0.824	0.816	1.01	/
WIFI2.4G	6	2437	Left 5mm	0.904	0.876	1.03	/
WIFI2.4G	6	2437	Left 0mm	0.94	0.923	1.02	/
WIFI5G	52	5260	Rear 0mm	0.964	0.934	1.03	/
WIFI5G	56	5280	Left 0mm	0.885	0.874	1.01	/

16 Measurement Uncertainty

16.1 Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

Combined standard uncertainty	$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$						19.1	18.9	

16.2 Measurement Uncertainty for Normal SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞

21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5

17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 10, 2023	One year
02	Power sensor	NRP110T	101139	January 13, 2023	One year
03	Power sensor	NRP110T	101159	January 13, 2023	One year
04	Signal Generator	E4438C	MY49071430	January 19, 2023	One year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 12, 2023	One year
07	E-field Probe	SPEAG EX3DV4	7727	June 5, 2023	One year
08	DAE	SPEAG DAE4	1745	August 31, 2022	One year
09	Dipole Validation Kit	SPEAG D750V3	1196	May 24,,2023	One year
10	Dipole Validation Kit	SPEAG D835V2	4d260	May 23,,2023	One year
11	Dipole Validation Kit	SPEAG D1800V2	2d222	May 23,,2023	One year
12	Dipole Validation Kit	SPEAG D1900V2	5d234	May 22,,2023	One year
13	Dipole Validation Kit	SPEAG D2450V2	1090	November 15,2022	One year
14	Dipole Validation Kit	SPEAG D2550V2	1013	May 24,,2023	One year
15	Dipole Validation Kit	SPEAG D5GHzV2	1060	June 19,2023	One year

END OF REPORT BODY

Appendixes

ANNEX A   Graph Results

ANNEX B   System Verification Results

ANNEX C   SAR Measurement Setup

ANNEX D   Position of the wireless device in relation to the phantom

ANNEX E   Equivalent Media Recipes

ANNEX F   System Validation

ANNEX G   Probe Calibration Certificate

ANNEX H   Dipole Calibration Certificate

ANNEX I   SAR Sensor Triggering Data Summary

ANNEX J   Accreditation Certificate