



# SAR TEST REPORT

No. I21Z62219-SEM01

For

**vivo Mobile Communication Co., Ltd.**

**Mobile Phone**

**Model Name: V2127**

with

**Hardware Version: MP\_0.1**

**Software Version: PD2166DF\_EX\_A\_3.5.8**

**FCC ID: 2AUCY-V2127**

**Issued Date: 2022-1-26**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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## REPORT HISTORY

Report Number	Revision	Issue Date	Description
I21Z62219-SEM01	Rev.0	2022-1-5	Initial creation of test report
I21Z62219-SEM01	Rev.1	2022-1-13	1. Add diagonal dimension of the EUT at Section 13.5 2. Add Sensor Triggering Data Summary at ANNEX I
I21Z62219-SEM01	Rev.2	2022-1-14	Update ANNEX I
I21Z62219-SEM01	Rev.3	2022-1-17	1. Update the table 2.1 on page 6 2. Update the Annex I on page 479
I21Z62219-SEM01	Rev.4	2022-1-26	Add the conducted power of n77/78 for 70M bandwidth in section 11.4.

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## 1 Test Laboratory

### 1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

### 1.2 Testing Environment

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

### 1.3 Project Data

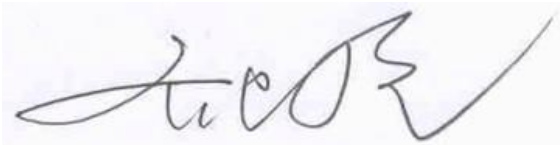
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	November 22, 2021
Testing End Date:	December 16, 2021

### 1.4 Signature



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Lin Xiaojun  
(Prepared this test report)



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Qi Dianyuan  
(Reviewed this test report)



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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 vivo Mobile Communication Co., Ltd. Mobile Phone V2127 are as follows:

**Table 2.1: Highest Reported SAR -Standalone(1g)**

Mode	Antenna	Highest Reported SAR (1g)			
		Head SAR	Body-worn SAR	Hotspot SAR	
GSM	GSM 850	13	0.23	0.31	0.31
	GSM 850	41	0.27	0.47	0.47
	PCS 1900	13	0.55	0.45	0.71
	PCS 1900	31	0.12	0.22	0.45
WCDMA	UMTS FDD 2	13	0.84	0.69	0.53
	UMTS FDD 2	31	0.23	0.40	0.44
	UMTS FDD 4	13	0.76	0.64	0.51
	UMTS FDD 4	31	0.25	0.32	0.53
	UMTS FDD 5	13	0.22	0.24	0.24
	UMTS FDD 5	41	0.25	0.40	0.40
LTE	LTE Band 2	13	0.72	0.49	0.51
	LTE Band 2	31	0.21	0.28	0.50
	LTE Band 4	13	0.58	0.30	0.34
	LTE Band 4	31	0.33	0.28	0.49
	LTE Band 5	13	0.25	0.24	0.24
	LTE Band 5	41	0.24	0.32	0.32
	LTE Band 7	13	0.52	0.64	0.58
	LTE Band 7	31	0.34	0.16	0.27
	LTE Band 12	13	0.22	0.07	0.07
	LTE Band 12	41	0.24	0.24	0.24
	LTE Band 13	13	0.20	0.12	0.12
	LTE Band 13	41	0.11	0.15	0.15
	LTE Band 38	13	0.27	0.23	0.47
	LTE Band 38	31	0.16	0.28	0.28
	LTE Band 41	13	0.20	0.19	0.42
	LTE Band 41	31	0.14	0.32	0.32
	LTE Band 66	13	0.41	0.43	0.41
	LTE Band 66	31	0.23	0.24	0.46
NR SA/NSA	N7	11	0.31	0.33	0.39
	N7	13	0.55	0.63	0.45
	N66	11	0.10	0.05	0.08
	N66	13	0.51	0.25	0.28
	N77 3450M-3550M	11	0.27	0.43	0.42
	N77 3450M-3550M	12	0.48	0.24	0.44
	N77 3700M-3980M	11	0.39	0.49	0.58
	N77 3700M-3980M	12	0.29	0.09	0.13
	N78	11	0.50	0.26	0.44
	N78	12	0.33	0.08	0.16
WLAN 2.4 GHz	22	0.16	0.12	0.12	
WLAN 5 GHz	22	0.34	0.67	0.35	
BT	22	0.08	0.03	/	

**Note:** The device have similar frequency in some LTE bands : LTEB12/17, since the supported frequency spans for the smaller LTE bands are completely cover by the larger LTE bands and the channel bandwidth and other operating parameters for the smaller band be fully supported by the larger band, therefore, only larger LTE bands were required to be tested for SAR.

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 10 mm for hotspot and 15mm for body worn 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. A detailed description of the equipment under test can be found in chapter 4 of this test report.

**Table 2.2: Highest Reported SAR -Simultaneous transmission**

reported SAR 1g (W/kg)						
Head		WWAN		WIFI5G	BT	WWAN+WiFi5G +BT
		LTE Band2 ANT13	N78 ANT11			
Cheek	Right	0.6	0.5	0.16	0.03	1.29

The detail for simultaneous transmission consideration is described in chapter 15.

**The highest reported SAR for Head, Body Worn, Hotspot, and Simultaneous transmission exposure conditions are 0.84W/kg, 0.69W/kg, 0.71W/kg, and 1.29W/kg**



### 3 Client Information

#### 3.1 Applicant Information

Company Name:	vivo Mobile Communication Co., Ltd.
Address/Post:	No.168 Jinghai East Rd.,Chang'an, Dongguan, Guangdong,China
Contact Person:	xiangjianfeng
E-mail:	xiangjianfeng@vivo.com
Telephone:	188 2371 0059
Fax:	/

#### 3.2 Manufacturer Information

Company Name:	vivo Mobile Communication Co., Ltd.
Address/Post:	No.168 Jinghai East Rd.,Chang'an, Dongguan, Guangdong,China
Contact Person:	xiangjianfeng
E-mail:	xiangjianfeng@vivo.com
Telephone:	188 2371 0059
Fax:	/



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

### 4.1 About EUT

Description:	Mobile Phone
Model name:	V2127
Tested mode(s):	GSM850/1900, WCDMA1900/1700/850, LTE Band 2/4/5/7/12/13/17/66/38/41 n7/n66/n77/n78, 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)
	1710 – 1755 MHz (WCDMA 1700 Band IV)
	1850–1910 MHz (WCDMA1900 Band II)
	1850 – 1910 MHz(LTE Band 2)
	1710 – 1755 MHz (LTE Band 4)
	824 – 849 MHz (LTE Band 5)
	2500 – 2570 MHz(LTE Band 7)
	699 – 716 MHz (LTE Band 12)
	777 –787 MHz (LTE Band 13)
	2570 – 2620 MHz (LTE Band 38)
	2496 – 2690 MHz (LTE Band 41)
	1710 – 1780 MHz (LTE Band 66)
	2500 – 2570 MHz (NR n7)
	2570 – 2620 MHz (NR n66)
	3450 – 3550 MHz (NR n77)
3700 – 3980 MHz (NR n77)	
3300 – 3800 MHz (NR n78)	
2402 – 2480 MHz (Bluetooth)	
2412 – 2462 MHz (Wi-Fi 2.4G)	
5150-5825 MHz (Wi-Fi 5G)	
GPRS/EGPRS Multislot Class:	12
GPRS capability Class:	B
Antenna type:	Integrated antenna
Hotspot mode:	Support
Note:	<p>1. The device have similar frequency in some LTE bands : LTEB12/17, since the supported frequency spans for the smaller LTE bands are completely cover by the larger LTE bands and the channel bandwidth and other operating parameters for the smaller band be fully supported by the larger band, therefore, only larger LTE bands were required to be tested for SAR</p> <p>2. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.</p> <p>3. For WiFi 5G, hotspot mode is only applied in UNII-1 and UNII-3.</p>

#### 4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI/SN	HW	SW Version
EUT1	863582059997430 863582059997422	MP_0.1	PD2166DF_EX_A_3.5.8
EUT2	863582059997190 863582059997182	MP_0.1	PD2166DF_EX_A_3.5.8
EUT3	863582059997331 863582059997323	MP_0.1	PD2166DF_EX_A_3.5.8
EUT4	863582059996754 863582059996747	MP_0.1	PD2166DF_EX_A_3.5.8
EUT5	863582059997638 863582059997620	MP_0.1	PD2166DF_EX_A_3.5.8

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

**Note:** It is performed to test SAR with the EUT3-5 and conducted power with the EUT1-2.

#### 4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	B-T6	/	Dongguan NVT Technology Co.,Ltd
AE2	Headset	XE160	/	/

\*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.

**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 (  $\rho$  ). The equation description is as below:

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

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

SAR measurement can be either related to the temperature elevation in tissue by

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

Where:  $C$  is the specific heat capacity,  $\delta T$  is the temperature rise and  $\delta t$  is the exposure duration, or related to the electrical field in the tissue by

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

Where:  $\sigma$  is the conductivity of the tissue,  $\rho$  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

The temperature of the tissue-equivalent medium used during measurement must also be within 18 °C to 25 °C and within  $\pm 2$  °C of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

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

### 7.1 Targets for tissue simulating liquid

**Table 7.1: Targets for tissue simulating liquid**

Frequency(MHz)	Liquid Type	Conductivity( $\sigma$ )	$\pm 10\%$ Range	Permittivity( $\epsilon$ )	$\pm 10\%$ Range
750	Head	0.89	0.80~0.98	41.94	37.75~46.13
835	Head	0.90	0.81~0.99	41.5	37.35~45.65
1750	Head	1.40	1.26~1.54	40.0	36~44
1900	Head	1.40	1.26~1.54	40.0	36~44
2450	Head	1.80	1.62~1.98	39.2	35.28~43.12
2600	Head	1.96	1.76~2.16	39.01	35.11~42.91

**Table 7.2: Targets for tissue simulating liquid**

Frequency(MHz)	Liquid Type	Conductivity( $\sigma$ )	$\pm 5\%$ Range	Permittivity( $\epsilon$ )	$\pm 5\%$ Range
3700	Head	3.12	2.96~3.28	37.70	35.82~39.59
3900	Head	3.32	3.15~3.49	37.47	35.6~39.34
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

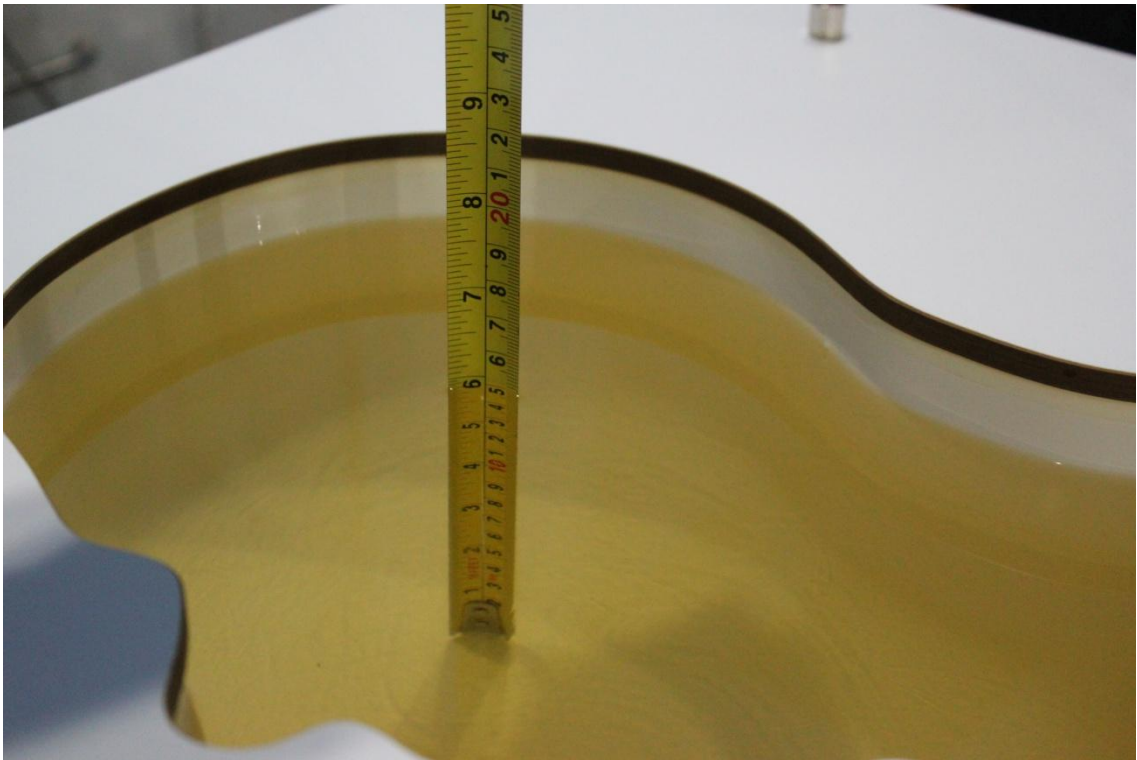
### 7.2 Dielectric Performance

**Table 7.3: Dielectric Performance of Tissue Simulating Liquid**

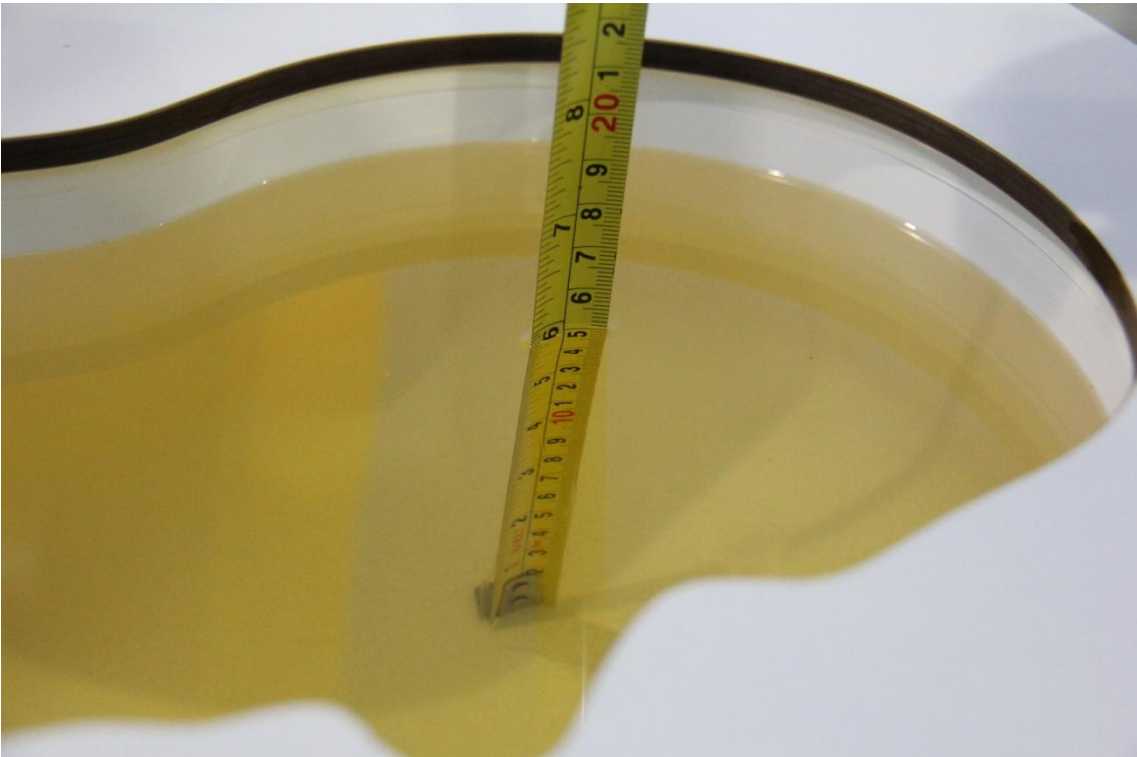
Measurement Date yyyy/mm/dd	Frequency	Type	Permittivity $\epsilon$	Drift (%)	Conductivity $\sigma$ (S/m)	Drift (%)
2021/11/22	750MHz	Head	44.24	5.48%	0.8698	-2.27%
2021/11/25	750MHz	Head	44.31	5.65%	0.8103	-8.96%
2021/11/27	750MHz	Head	44.4	5.87%	0.8012	-9.98%
2021/12/9	750MHz	Head	44.4	5.87%	0.8261	-7.18%
2021/11/22	835 MHz	Head	43.91	5.81%	0.9063	0.70%
2021/11/24	835 MHz	Head	44.02	6.07%	0.8458	-6.02%

2021/11/27	835 MHz	Head	44.11	6.29%	0.8332	-7.42%
2021/12/10	835 MHz	Head	44.11	6.29%	0.8623	-4.19%
2021/11/22	1750MHz	Head	41.92	4.59%	1.385	1.09%
2021/11/24	1750MHz	Head	41.75	4.17%	1.356	-1.02%
2021/11/26	1750MHz	Head	41.75	4.17%	1.356	-1.02%
2021/11/28	1750MHz	Head	41.84	4.39%	1.336	-2.48%
2021/12/11	1750MHz	Head	41.84	4.39%	1.341	-2.12%
2021/12/13	1750MHz	Head	41.75	4.17%	1.466	7.01%
2021/11/22	1900 MHz	Head	41.92	4.80%	1.385	-1.07%
2021/11/24	1900 MHz	Head	41.54	3.85%	1.453	3.79%
2021/11/27	1900 MHz	Head	41.62	4.05%	1.431	2.21%
2021/12/9	1900 MHz	Head	41.62	4.05%	1.437	2.64%
2021/12/13	1900 MHz	Head	41.58	3.95%	1.495	6.79%
2021/12/7	2450 MHz	Head	40.64	3.67%	1.871	3.94%
2021/11/22	2600 MHz	Head	40.58	4.02%	2.025	3.32%
2021/11/24	2600 MHz	Head	40.22	3.10%	2.035	3.83%
2021/11/27	2600 MHz	Head	40.3	3.31%	2.005	2.30%
2021/12/10	2600 MHz	Head	40.63	4.15%	2.049	4.54%
2021/12/12	2600 MHz	Head	40.31	3.33%	2.005	2.30%
2021/12/11	3500 MHz	Head	38.49	1.48%	2.781	-4.43%
2021/12/11	3700 MHz	Head	38.33	1.67%	2.983	-4.39%
2021/12/16	5250 MHz	Head	34.73	-3.34%	4.834	2.63%
2021/12/16	5600 MHz	Head	34.03	-4.22%	5.231	3.18%
2021/12/16	5750 MHz	Head	33.75	-4.55%	5.398	3.41%

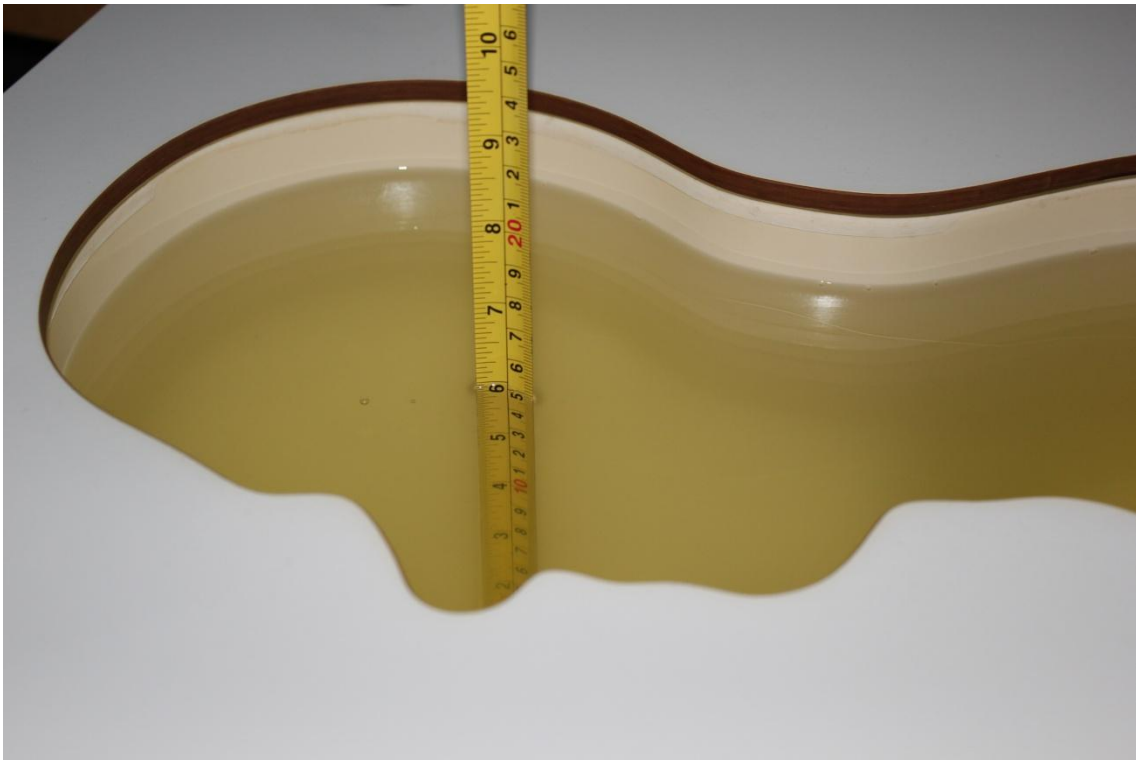
Note: The liquid temperature is (22.0 -23.0)°C



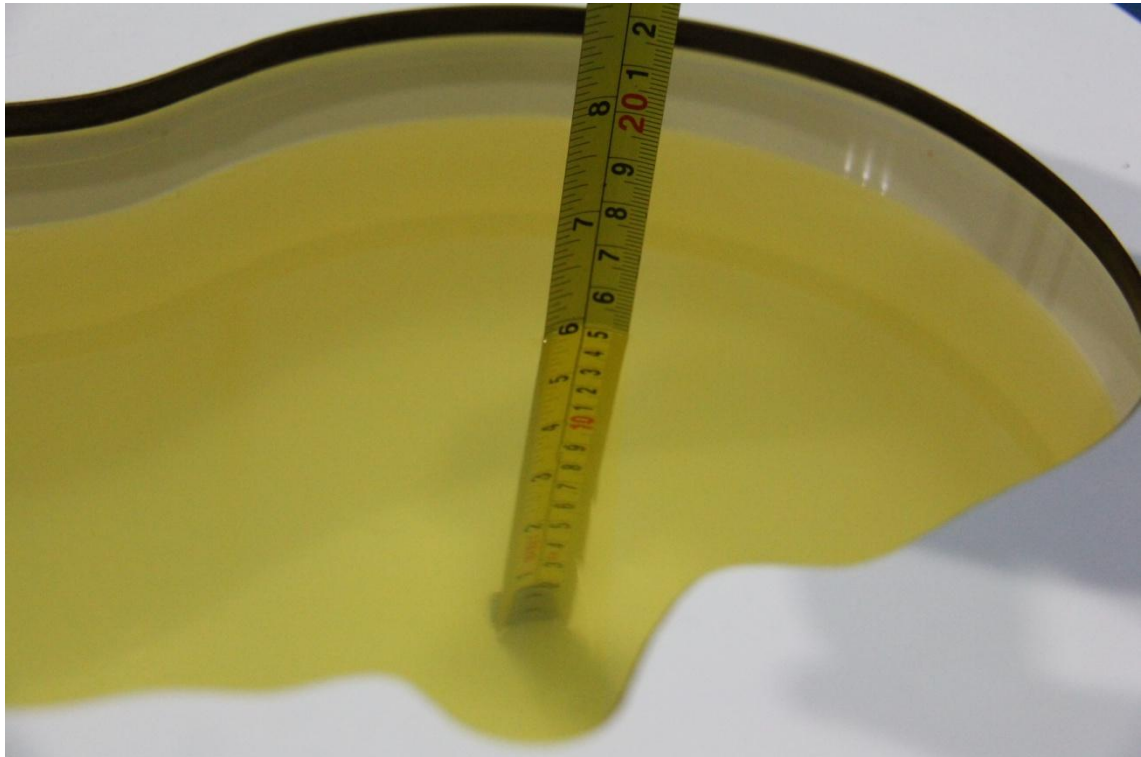
Picture 7-1 Liquid depth in the Head Phantom (750MHz)



Picture 7-2 Liquid depth in the Head Phantom (835 MHz)

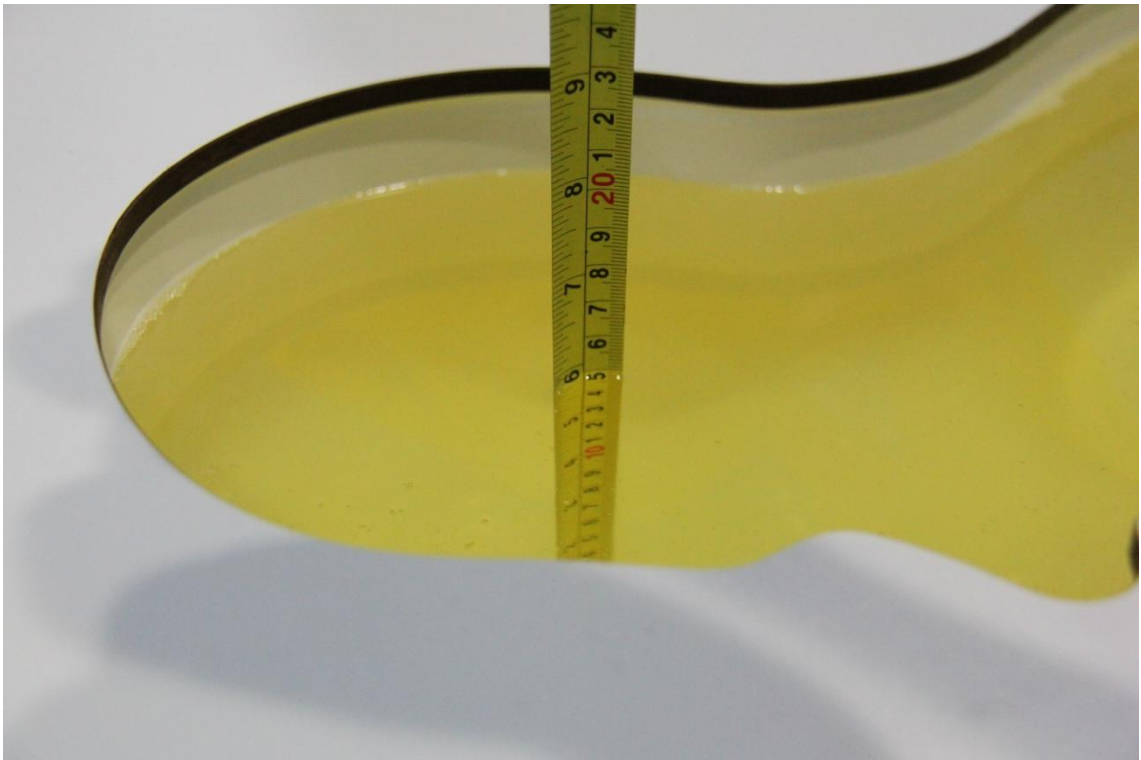


Picture 7-3 Liquid depth in the Head Phantom (1750 MHz)



Picture 7-4 Liquid depth in the Head Phantom (1900 MHz)





Picture 7-5 Liquid depth in the Head Phantom (2450MHz)



Picture 7-6 Liquid depth in the Head Phantom (2600 MHz)



Picture 7-7 Liquid depth in the Head Phantom (3500-3900 MHz)

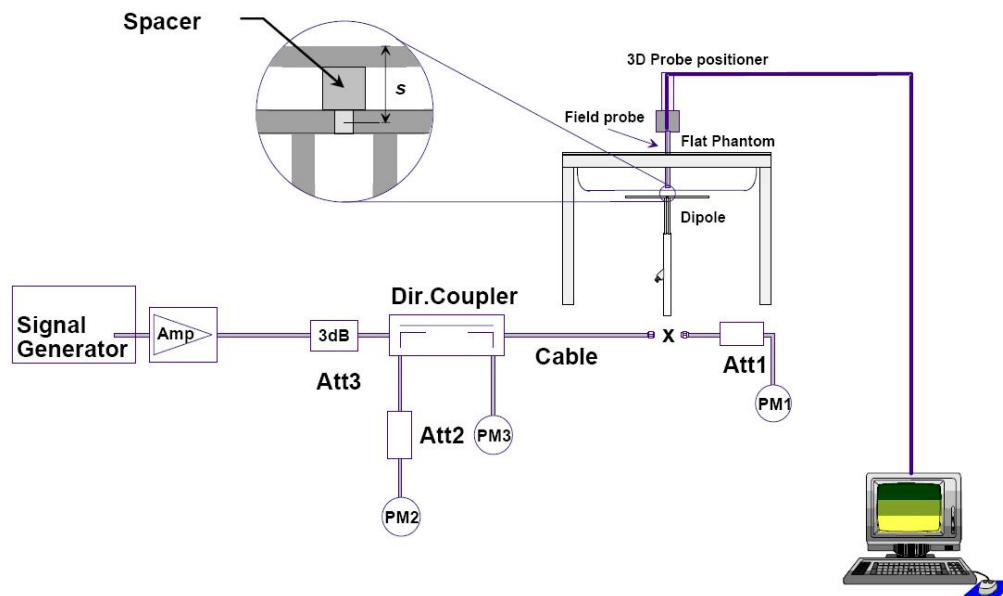


Picture 7-8 Liquid depth in the Head Phantom (5GHz)

## 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.

**Table 8.1: System Verification of Head**

Calibration Date	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
2021/11/22	750 MHz	5.65	8.68	5.72	8.40	1.24%	-3.23%
2021/11/25	750 MHz	5.65	8.68	5.52	8.16	-2.30%	-5.99%
2021/11/27	750 MHz	5.65	8.68	5.48	8.08	-3.01%	-6.91%
2021/12/9	750 MHz	5.65	8.68	5.88	9.36	4.07%	7.83%
2021/11/22	835 MHz	6.24	9.63	5.80	8.80	-7.05%	-8.62%
2021/11/24	835 MHz	6.24	9.63	5.92	9.00	-5.13%	-6.54%
2021/11/27	835 MHz	6.24	9.63	5.88	8.92	-5.77%	-7.37%
2021/12/10	835 MHz	6.24	9.63	5.84	8.68	-6.41%	-9.87%
2021/11/22	1750 MHz	19.4	36.9	20.5	37.9	5.57%	2.76%
2021/11/24	1750 MHz	19.4	36.9	19.2	35.6	-1.24%	-3.41%
2021/11/26	1750 MHz	19.4	36.9	20.0	36.4	3.09%	-1.46%
2021/11/28	1750 MHz	19.4	36.9	19.9	36.2	2.47%	-1.79%
2021/12/11	1750 MHz	19.4	36.9	20.0	36.8	3.30%	-0.38%
2021/12/13	1750 MHz	19.4	36.9	20.0	36.3	3.09%	-1.57%
2021/11/22	1900 MHz	20.9	40.1	22.2	42.0	6.41%	4.74%
2021/11/24	1900 MHz	20.9	40.1	22.1	41.6	5.84%	3.74%
2021/11/27	1900 MHz	20.9	40.1	20.0	38.0	-4.31%	-5.34%
2021/12/9	1900 MHz	20.9	40.1	20.2	38.4	-3.54%	-4.14%
2021/12/13	1900 MHz	20.9	40.1	21.1	40.0	0.86%	-0.25%
2021/12/7	2450 MHz	24.9	53.3	25.2	54.4	1.20%	2.06%
2021/11/22	2600 MHz	25.5	57.1	26.7	58.8	4.78%	2.98%
2021/11/24	2600 MHz	25.5	57.1	26.8	58.8	4.94%	2.98%
2021/11/27	2600 MHz	25.5	57.1	26.6	58.4	4.16%	2.28%
2021/12/10	2600 MHz	25.5	57.1	24.8	54.8	-2.90%	-4.03%
2021/12/12	2600 MHz	25.5	57.1	25.6	56.4	0.24%	-1.23%
2021/12/11	3500 MHz	25.2	67.3	25.3	66.3	0.40%	-1.49%
2021/12/11	3700 MHz	24.3	67.1	24.6	67.1	1.23%	0.00%
2021/12/16	5250 MHz	22.7	79.5	22.6	80.1	-0.44%	0.75%
2021/12/16	5600 MHz	23.7	83.8	23.7	85.3	0.00%	1.79%
2021/12/16	5750 MHz	22.7	81.0	23.4	84.5	3.08%	4.32%

## 9 General Measurement Procedure

### 9.1 Power Reference Measurement

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

### 9.2 Area Scan

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

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

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

### 9.3 Zoom Scan

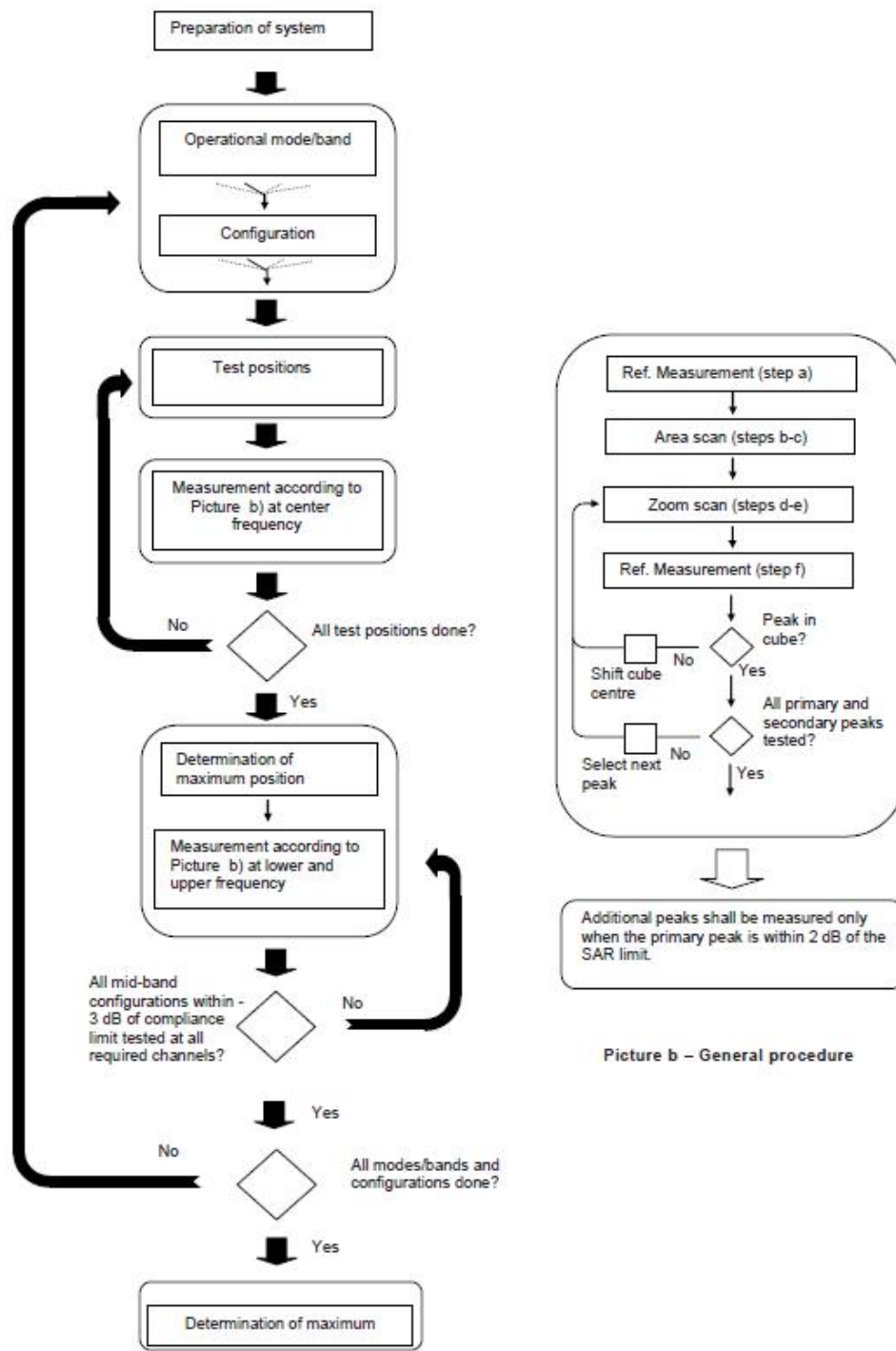
Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure.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

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

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

### 9.4 Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as 10.1.



Picture a - Tests to be performed

Picture b - General procedure

Picture 9.1 Block diagram of the tests to be performed

## **9.5 Area Scan Based 1-g SAR**

### **9.5-1 Requirement of KDB**

According to the KDB447498 D01 v06, 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  $\leq 1.2$  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.

### **9.5-2 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 55 wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm are 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.



## 10 Measurement Procedure for different technologies

### 10.1 GSM/GPRS Measurement Procedures for SAR

GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode, SAR measurement is not required for the secondary mode.

### 10.2 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<sub>n</sub>), 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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c / \beta_d$	$\beta_{hs}$	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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c / \beta_d$	$\beta_{hs}$	$\beta_c$	$\beta_{ed}$	$\beta_{ed}$ (SF)	$\beta_{ed}$ (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	$\beta_{ed1}^{47/15}$	4	2	1.5	1.5	15	92

							$\beta_{ed2:47/}$						
							15						
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.7 Release 7 HSPA+ Data Devices

**Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

Sub-test	$\beta_c$ (Note 3)	$\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (2xSF2) (Note 4)	$\beta_{ed}$ (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed1}$ : 30/15 $\beta_{ed2}$ : 30/15	$\beta_{ed3}$ : 24/15 $\beta_{ed4}$ : 24/15	3.5	2.5	14	105	105
<p>Note 1: <math>\Delta_{ACK}</math>, <math>\Delta_{NACK}</math> and <math>\Delta_{CQI} = 30/15</math> with <math>\beta_{hs} = 30/15 * \beta_c</math>.</p> <p>Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).</p> <p>Note 3: DPDCH is not configured, therefore the <math>\beta_c</math> is set to 1 and <math>\beta_d = 0</math> by default.</p> <p>Note 4: <math>\beta_{ed}</math> can not be set directly; it is set by Absolute Grant Value.</p> <p>Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.</p>											

### 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.

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

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

### 10.3 LTE Measurement Procedures for SAR

SAR tests for LTE are performed with a base station simulator, Rohde & Schwarz CMW500 or Anritsu MT8821C Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

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  $\leq 0.8$  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  $\leq 0.8$  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 v02r05 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 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

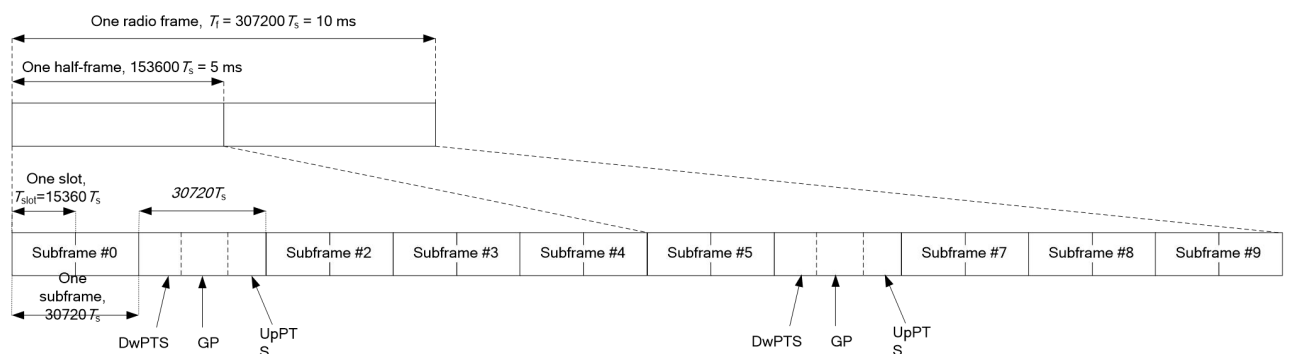


Figure 10.2: Frame structure type 2 (for 5 ms switch-point periodicity)

**Table 10.1: 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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
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 10.2: 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:

$$\begin{aligned}
 \text{Duty factor} &= \text{uplink frame} \cdot 6 + \text{UpPTS} \cdot 2 / \text{one frame length} \\
 &= (30720 \cdot T_s \cdot 6 + 5120 \cdot T_s \cdot 2) / 307200 \cdot T_s \\
 &= 0.633
 \end{aligned}$$

According to the KDB 447498 D01, SAR should be evaluated at more than 3 frequencies for devices supporting transmit bands wider than 100MHz. Oct.2014 FCC-TCB conference notes (Dec. 2014 rev.) specifies the 5 test channels to use for 3GPP band 38/41 SAR evaluation.

## 10.4 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.

## 10.5 SAR Measurement for ENDC

1. Test LTE SAR with single uplink at maximum power following LTE SAR test procedure.
2. Test conducted power of 5G NR sub-carrier under EN-DC at maximum power ( FDD and TDD)[1] and change the different parameters to find the worst-case configuration, see detail procedure as attached.  
[1] For TDD band (n41), PC2 mode is only tested, because the duty cycle of both PC2 and PC3 are the same and PC2 has higher power than PC3.
3. Test SAR in worst case configuration for 5G NR in single uplink (test mode).
4. If the single uplink 1g SAR values for 5G NR and LTE are both less than 0.8W/kg and the algebraic summation of the 1g SAR values are less than 1.45W/kg, no additional measurements need to be performed.

## 11 Conducted Output Power

DSI	Receiver mode	Sensor	Hotspot	Transmitting	Position
				conditions	
DSI2	ON(head scenario)	/	OFF	WWAN Use Only	Head
DSI3	ON(head scenario)	/	OFF	WWAN +WLAN	Head
DSI4	OFF (Body/other scenario)	OFF	OFF	WWAN Use Only	Back/Right for antenna11 limb SAR of sensor Trigger distance-1
					Front/Back/Top for antenna11 limb SAR of sensor Trigger distance-1
					ALL position for all antenna of Body 15mm
					Front/Left/Top/Bottom for antenna11 limb SAR 0mm
					Right/Left/Bottom for antenna13 limb SAR 0mm
					ALL position for antenna31/41 limb SAR 0mm
DSI5	OFF (Body/other scenario)	ON	OFF	WWAN Use Only	Front/Back/Top for antenna13 limb SAR 0mm
					Back/Right for antenna11 limb SAR 0mm
DSI8	OFF (Body/other scenario)	ON	OFF	WWAN +WLAN	13#: Front/Back/Top for antenna13 limb SAR 0mm
	OFF (Body/other scenario)	ON	OFF	WWAN +WLAN	Back/Right for antenna11 limb SAR 0mm
	OFF (Body/other scenario)	ON	OFF	WWAN +WLAN	Front/Left/Top/Bottom for antenna11 limb SAR 0mm
					Right/Left/Bottom for antenna13 limb SAR 0mm
					ALL position for antenna31/41 limb SAR 0mm
DSI9	OFF (Body/other scenario)	ON	OFF	WWAN +WLAN	Back/Right for antenna11 limb SAR 0mm
DSI10	OFF (Body/other scenario)	ON	OFF	WWAN +WLAN	Front/Back/Top for antenna13 limb SAR 0mm
	OFF (Body/other scenario)	ON	ON	WWAN Use Only WWAN +WLAN	ALL position for FCC Hotspot mode

## 11.1 GSM Measurement result

### GSM850(ANT13 DSI2/3)

GSM 850 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	25.05	25.12	24.93	26.20	-9.03	16.02	16.09	15.90
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
1Txslot	25.04	25.10	24.91	26.20	-9.03	16.01	16.07	15.88
<b>2Txslots</b>	<b>23.82</b>	<b>23.85</b>	<b>23.67</b>	<b>24.50</b>	<b>-6.02</b>	<b>17.80</b>	<b>17.83</b>	<b>17.65</b>
3Txslots	21.81	21.90	21.71	22.50	-4.26	17.55	17.64	17.45
4Txslots	19.81	19.88	19.69	20.70	-3.01	16.80	16.87	16.68
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	25.00	25.08	24.88	26.20	-9.03	15.97	16.05	15.85
<b>2Txslots</b>	<b>23.78</b>	<b>23.83</b>	<b>23.65</b>	<b>24.50</b>	<b>-6.02</b>	<b>17.76</b>	<b>17.81</b>	<b>17.63</b>
3Txslots	21.77	21.88	21.68	22.50	-4.26	17.51	17.62	17.42
4Txslots	19.78	19.87	19.67	20.70	-3.01	16.77	16.86	16.66
GSM 850 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	24.49	24.34	24.40	25.70	-9.03	15.46	15.31	15.37
2Txslots	23.11	23.04	22.97	24.50	-6.02	17.09	17.02	16.95
3Txslots	20.97	20.78	20.78	22.50	-4.26	16.71	16.52	16.52
4Txslots	19.08	18.95	19.02	20.50	-3.01	16.07	15.94	16.01

**GSM850(ANT13 DSI4/8/9/10)**

GSM 850 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	32.55	32.61	32.41	33.70	-9.03	23.52	23.58	23.38
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
1Txslot	32.57	32.58	32.36	33.70	-9.03	23.54	23.55	23.33
<b>2Txslots</b>	<b>31.25</b>	<b>31.25</b>	<b>31.03</b>	<b>32.00</b>	<b>-6.02</b>	<b>25.23</b>	<b>25.23</b>	<b>25.01</b>
3Txslots	29.28	29.31	29.09	30.00	-4.26	25.02	25.05	24.83
4Txslots	27.31	27.35	27.14	28.20	-3.01	24.30	24.34	24.13
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	32.54	32.56	32.36	33.70	-9.03	23.51	23.53	23.33
<b>2Txslots</b>	<b>31.24</b>	<b>31.26</b>	<b>31.03</b>	<b>32.00</b>	<b>-6.02</b>	<b>25.22</b>	<b>25.24</b>	<b>25.01</b>
3Txslots	29.26	29.34	29.09	30.00	-4.26	25.00	25.08	24.83
4Txslots	27.30	27.37	27.14	28.20	-3.01	24.29	24.36	24.13
GSM 850 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	26.74	26.95	26.69	28.00	-9.03	17.71	17.92	17.66
2Txslots	25.05	24.60	24.48	26.00	-6.02	19.03	18.58	18.46
3Txslots	22.62	22.40	22.90	24.00	-4.26	18.36	18.14	18.64
4Txslots	20.80	21.77	20.64	22.50	-3.01	17.79	18.76	17.63



**GSM850(ANT41 DSI2/4/8/9/10)**

GSM 850 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	32.34	32.51	32.44	33.70	-9.03	23.31	23.48	23.41
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
1Txslot	32.33	32.47	32.39	33.70	-9.03	23.30	23.44	23.36
<b>2Txslots</b>	<b>31.00</b>	<b>31.15</b>	<b>31.10</b>	<b>32.00</b>	<b>-6.02</b>	<b>24.98</b>	<b>25.13</b>	<b>25.08</b>
3Txslots	29.01	29.21	29.18	30.00	-4.26	24.75	24.95	24.92
4Txslots	27.05	27.25	27.24	28.20	-3.01	24.04	24.24	24.23
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	32.31	32.46	32.38	33.70	-9.03	23.28	23.43	23.35
<b>2Txslots</b>	<b>30.98</b>	<b>31.14</b>	<b>31.09</b>	<b>32.00</b>	<b>-6.02</b>	<b>24.96</b>	<b>25.12</b>	<b>25.07</b>
3Txslots	28.99	29.19	29.16	30.00	-4.26	24.73	24.93	24.90
4Txslots	27.03	27.24	27.22	28.20	-3.01	24.02	24.23	24.21
GSM 850 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1Txslot	26.84	26.81	26.86	28.00	-9.03	17.81	17.78	17.83
2Txslots	24.64	24.56	24.67	26.00	-6.02	18.62	18.54	18.65
3Txslots	22.43	22.66	22.55	24.00	-4.26	18.17	18.40	18.29
4Txslots	20.67	20.70	20.82	22.00	-3.01	17.66	17.69	17.81

**GSM1900(ANT13 DSI2/3)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	22.86	22.91	22.97	24.00	-9.03	13.83	13.88	13.94
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	22.85	22.91	22.95	24.00	-9.03	13.82	13.88	13.92
<b>2Txslots</b>	<b>21.09</b>	<b>21.15</b>	<b>21.20</b>	<b>22.00</b>	<b>-6.02</b>	<b>15.07</b>	<b>15.13</b>	<b>15.18</b>
3Txslots	19.11	19.16	19.19	20.00	-4.26	14.85	14.90	14.93
4Txslots	17.57	17.62	17.66	18.50	-3.01	14.56	14.61	14.65
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	22.82	22.87	22.93	24.00	-9.03	13.79	13.84	13.90
<b>2Txslots</b>	<b>21.07</b>	<b>21.12</b>	<b>21.19</b>	<b>22.00</b>	<b>-6.02</b>	<b>15.05</b>	<b>15.10</b>	<b>15.17</b>
3Txslots	19.08	19.13	19.17	20.00	-4.26	14.82	14.87	14.91
4Txslots	17.54	17.59	17.64	18.50	-3.01	14.53	14.58	14.63
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	22.91	22.92	23.02	23.80	-9.03	13.88	13.89	13.99
2Txslots	20.98	21.00	21.12	22.00	-6.02	14.96	14.98	15.10
3Txslots	18.68	18.73	18.87	20.00	-4.26	14.42	14.47	14.61
4Txslots	16.93	16.99	17.12	18.50	-3.01	13.92	13.98	14.11

**GSM1900(ANT13 DSI4)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.77	29.81	29.94	31.00	-9.03	20.74	20.78	20.91
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.76	29.83	29.93	31.00	-9.03	20.73	20.80	20.90
<b>2Txslots</b>	<b>28.02</b>	<b>28.07</b>	<b>28.16</b>	<b>29.00</b>	<b>-6.02</b>	<b>22.00</b>	<b>22.05</b>	<b>22.14</b>
3Txslots	26.01	26.09	26.15	27.00	-4.26	21.75	21.83	21.89
4Txslots	24.59	24.63	24.71	25.50	-3.01	21.58	21.62	21.70
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.72	29.81	29.98	31.00	-9.03	20.69	20.78	20.95
<b>2Txslots</b>	<b>27.99</b>	<b>28.06</b>	<b>28.17</b>	<b>29.00</b>	<b>-6.02</b>	<b>21.97</b>	<b>22.04</b>	<b>22.15</b>
3Txslots	25.98	26.09	26.19	27.00	-4.26	21.72	21.83	21.93
4Txslots	24.59	24.63	24.70	25.50	-3.01	21.58	21.62	21.69
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	26.11	26.22	26.27	27.00	-9.03	17.08	17.19	17.24
2Txslots	24.36	24.22	24.32	25.00	-6.02	18.34	18.20	18.30
3Txslots	21.90	21.89	22.21	23.00	-4.26	17.64	17.63	17.95
4Txslots	20.06	20.52	20.32	21.50	-3.01	17.05	17.51	17.31

**GSM1900(ANT13 DSI8/9/10)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	26.36	26.42	26.49	27.50	-9.03	17.33	17.39	17.46
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	26.35	26.40	26.47	27.50	-9.03	17.32	17.37	17.44
<b>2Txslots</b>	<b>24.42</b>	<b>24.66</b>	<b>24.70</b>	<b>25.50</b>	<b>-6.02</b>	<b>18.40</b>	<b>18.64</b>	<b>18.68</b>
3Txslots	22.47	22.64	22.70	23.50	-4.26	18.21	18.38	18.44
4Txslots	21.09	21.14	21.21	22.00	-3.01	18.08	18.13	18.20
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	26.35	26.41	26.47	27.50	-9.03	17.32	17.38	17.44
<b>2Txslots</b>	<b>24.60</b>	<b>24.66</b>	<b>24.70</b>	<b>25.50</b>	<b>-6.02</b>	<b>18.58</b>	<b>18.64</b>	<b>18.68</b>
3Txslots	22.59	22.65	22.70	23.50	-4.26	18.33	18.39	18.44
4Txslots	21.09	21.14	21.21	22.00	-3.01	18.08	18.13	18.20
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	26.08	26.06	26.22	27.00	-9.03	17.05	17.03	17.19
2Txslots	24.09	24.17	24.31	25.00	-6.02	18.07	18.15	18.29
3Txslots	21.82	21.86	22.01	23.00	-4.26	17.56	17.60	17.75
4Txslots	20.07	20.10	20.29	21.50	-3.01	17.06	17.09	17.28

**GSM1900(ANT31 DSI2/3)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.71	29.82	30.04	31.00	-9.03	20.68	20.79	21.01
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.72	29.81	30.02	31.00	-9.03	20.69	20.78	20.99
<b>2Txslots</b>	<b>28.07</b>	<b>28.19</b>	<b>28.27</b>	<b>29.50</b>	<b>-6.02</b>	<b>22.05</b>	<b>22.17</b>	<b>22.25</b>
3Txslots	25.96	26.13	26.31	27.50	-4.26	21.70	21.87	22.05
4Txslots	24.46	24.66	24.83	25.80	-3.01	21.45	21.65	21.82
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	29.71	29.88	30.00	31.00	-9.03	20.68	20.85	20.97
<b>2Txslots</b>	<b>27.98</b>	<b>28.21</b>	<b>28.24</b>	<b>29.50</b>	<b>-6.02</b>	<b>21.96</b>	<b>22.19</b>	<b>22.22</b>
3Txslots	25.85	26.10	26.27	27.50	-4.26	21.59	21.84	22.01
4Txslots	24.45	24.61	24.79	25.80	-3.01	21.44	21.60	21.78
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	25.98	26.06	26.30	27.00	-9.03	16.95	17.03	17.27
2Txslots	23.92	24.00	24.24	25.00	-6.02	17.90	17.98	18.22
3Txslots	21.65	21.74	22.09	23.00	-4.26	17.39	17.48	17.83
4Txslots	20.01	20.08	20.12	21.00	-3.01	17.00	17.07	17.11

**GSM1900(ANT31 DSI4)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	28.60	28.73	29.02	30.00	-9.03	19.57	19.70	19.99
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	28.89	28.91	29.03	30.00	-9.03	19.86	19.88	20.00
<b>2Txslots</b>	<b>27.04</b>	<b>27.14</b>	<b>27.40</b>	<b>28.50</b>	<b>-6.02</b>	<b>21.02</b>	<b>21.12</b>	<b>21.38</b>
3Txslots	24.95	25.08	25.41	26.50	-4.26	20.69	20.82	21.15
4Txslots	23.39	23.55	23.87	24.80	-3.01	20.38	20.54	20.86
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	28.94	28.98	29.05	30.00	-9.03	19.91	19.95	20.02
<b>2Txslots</b>	<b>27.07</b>	<b>27.20</b>	<b>27.43</b>	<b>28.50</b>	<b>-6.02</b>	<b>21.05</b>	<b>21.18</b>	<b>21.41</b>
3Txslots	25.00	25.13	25.41	26.50	-4.26	20.74	20.87	21.15
4Txslots	23.44	23.58	23.87	24.80	-3.01	20.43	20.57	20.86
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	25.87	25.96	26.27	27.00	-9.03	16.84	16.93	17.24
2Txslots	23.91	24.21	24.24	25.00	-6.02	17.89	18.19	18.22
3Txslots	21.64	21.73	21.91	23.00	-4.26	17.38	17.47	17.65
4Txslots	19.76	19.85	20.02	21.00	-3.01	16.75	16.84	17.01

**GSM1900(ANT31 DSI8/9/10)**

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	27.06	27.21	27.52	28.50	-9.03	18.03	18.18	18.49
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	27.31	27.34	27.55	28.50	-9.03	18.28	18.31	18.52
<b>2Txslots</b>	<b>25.45</b>	<b>25.51</b>	<b>25.80</b>	<b>27.00</b>	<b>-6.02</b>	<b>19.43</b>	<b>19.49</b>	<b>19.78</b>
3Txslots	23.39	23.47	23.77	25.00	-4.26	19.13	19.21	19.51
4Txslots	21.83	21.91	22.27	23.00	-3.01	18.82	18.90	19.26
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	27.28	27.33	27.54	28.50	-9.03	18.25	18.30	18.51
<b>2Txslots</b>	<b>25.42</b>	<b>25.50</b>	<b>25.78</b>	<b>27.00</b>	<b>-6.02</b>	<b>19.40</b>	<b>19.48</b>	<b>19.76</b>
3Txslots	23.37	23.46	23.76	25.00	-4.26	19.11	19.20	19.50
4Txslots	21.80	21.91	22.24	23.00	-3.01	18.79	18.90	19.23
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	<b>810</b>	<b>661</b>	<b>512</b>			<b>810</b>	<b>661</b>	<b>512</b>
1Txslot	25.87	25.93	26.20	27.00	-9.03	16.84	16.90	17.17
2Txslots	23.77	23.86	24.20	25.00	-6.02	17.75	17.84	18.18
3Txslots	21.49	21.57	21.96	23.00	-4.26	17.23	17.31	17.70
4Txslots	19.92	19.96	20.09	21.00	-3.01	16.91	16.95	17.08

## 11.2 WCDMA Measurement result

### WCDMA1900(ANT13 DSI2/3)

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	14.08	14.26	13.93	15.50
HSUPA	1	11.51	11.72	11.44	13.00
	2	11.03	11.27	10.92	12.50
	3	11.04	11.30	10.95	12.50
	4	10.56	10.78	10.76	12.00
	5	12.06	12.25	12.22	13.50
HSPA+		12.67	12.84	12.56	14.00
DC-HSDPA	1	13.04	13.23	12.96	14.00
	2	13.03	13.22	12.95	14.00
	3	12.59	12.70	12.52	14.00
	4	12.58	12.68	12.51	14.00

### WCDMA1900(ANT13 DSI4)

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	22.08	22.30	22.02	23.50
HSUPA	1	19.57	19.31	18.98	20.50
	2	19.17	19.44	19.07	20.50
	3	19.19	19.46	19.10	20.50
	4	18.72	18.99	18.63	20.00
	5	20.15	20.42	20.05	21.50
HSPA+		20.55	20.73	20.51	22.00
DC-HSDPA	1	21.02	21.10	20.98	22.00
	2	21	21.08	20.96	22.00
	3	20.58	20.68	20.41	22.00
	4	20.59	20.66	20.40	22.00



**WCDMA1900(ANT13 DSI8/9/10)**

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	16.63	16.80	16.50	18.00
HSUPA	1	13.44	13.71	13.37	15.00
	2	13.6	13.82	13.49	15.00
	3	13.46	13.72	13.38	15.00
	4	12.93	13.15	12.85	14.50
	5	14.28	14.30	14.28	15.50
HSPA+		15.05	15.29	15.04	16.50
DC-HSDPA	1	15.31	15.55	15.30	16.50
	2	15.32	15.53	15.31	16.50
	3	14.85	15.04	14.83	16.00
	4	14.84	15.02	14.82	16.00

**WCDMA1900(ANT31 DSI2/3)**

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	23.27	23.58	23.36	24.50
HSUPA	1	19.88	20.18	19.85	21.00
	2	19.87	20.16	19.84	21.00
	3	19.88	20.15	19.83	21.00
	4	19.41	19.70	19.52	21.00
	5	20.69	20.95	20.90	22.00
HSPA+		21.29	21.58	21.47	23.00
DC-HSDPA	1	21.8	21.98	21.88	23.00
	2	21.79	21.99	21.90	23.00
	3	21.28	21.51	21.38	22.50
	4	21.27	21.50	21.39	22.50

**WCDMA1900(ANT31 DSI4)**

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
<b>WCDMA</b>	\	21.71	21.95	21.74	23.20
<b>HSUPA</b>	1	18.19	18.51	18.33	19.50
	2	18.18	18.49	18.32	19.50
	3	18.2	18.48	18.31	19.50
	4	17.75	18.02	17.86	19.00
	5	18.99	19.30	19.14	20.00
<b>HSPA+</b>		19.58	19.88	19.72	20.50
<b>DC-HSDPA</b>	1	20.09	20.38	20.21	21.00
	2	20.1	20.37	20.20	21.00
	3	19.65	19.90	19.83	21.00
	4	19.66	19.88	19.84	21.00

**WCDMA1900(ANT31 DSI8/9/10)**

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
<b>WCDMA</b>	\	19.80	20.10	19.90	21.00
<b>HSUPA</b>	1	16.42	16.82	16.74	17.50
	2	16.38	16.70	16.62	17.50
	3	16.4	16.68	16.50	17.50
	4	15.95	16.22	16.18	17.50
	5	17.2	17.50	17.46	18.50
<b>HSPA+</b>		17.78	18.08	17.92	19.00
<b>DC-HSDPA</b>	1	18.28	18.58	18.42	19.50
	2	18.3	18.57	18.42	19.50
	3	17.85	18.10	17.93	19.00
	4	17.86	18.08	17.92	19.00

**WCDMA1700(ANT13 DSI2/3)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
<b>WCDMA</b>	\	14.83	14.79	14.94	16.00
<b>HSUPA</b>	1	12.03	12.16	12.17	13.50
	2	11.29	11.62	11.67	13.00
	3	11.58	11.65	11.69	13.00
	4	11.03	11.14	11.20	12.50
	5	12.53	12.60	12.64	14.00
<b>HSPA+</b>		13.05	13.21	13.23	14.50
<b>DC-HSDPA</b>	1	13.52	13.68	13.70	14.50
	2	13.53	13.70	13.71	14.50
	3	13.09	13.32	13.33	14.50
	4	13.1	13.30	13.31	14.50

**WCDMA1700(ANT13 DSI4)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
<b>WCDMA</b>	\	22.88	22.85	22.98	24.00
<b>HSUPA</b>	1	19.6	19.64	19.74	21.00
	2	19.71	19.79	19.84	21.00
	3	19.72	19.80	19.83	21.00
	4	19.23	19.30	19.32	20.50
	5	20.5	20.62	20.64	22.00
<b>HSPA+</b>		21.07	21.20	21.19	22.50
<b>DC-HSDPA</b>	1	21.48	21.56	21.62	22.50
	2	21.49	21.55	21.63	22.50
	3	21.03	21.11	21.20	22.50
	4	21.02	21.10	21.18	22.50

**WCDMA1700(ANT13 DSI8/9/10)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	17.34	17.37	17.48	18.50
HSUPA	1	13.96	14.20	14.12	15.50
	2	14.13	14.22	14.26	15.50
	3	14.33	14.42	14.45	15.50
	4	13.81	13.90	13.92	15.00
	5	15.17	15.25	15.28	16.50
HSPA+		15.64	15.68	15.80	16.50
DC-HSDPA	1	16.22	16.27	16.38	17.50
	2	16.23	16.26	16.37	17.50
	3	15.75	15.78	15.86	17.00
	4	15.74	15.77	15.85	17.00

**WCDMA1700(ANT31 DSI2/3)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.89	23.78	23.87	24.50
HSUPA	1	20.32	20.35	20.32	21.50
	2	20.45	20.47	20.44	21.50
	3	20.47	20.48	20.45	21.50
	4	19.98	20.00	19.95	21.00
	5	21.27	21.25	21.28	22.50
HSPA+		21.89	21.88	21.91	23.00
DC-HSDPA	1	22.33	22.28	22.32	23.50
	2	22.31	22.29	22.33	23.50
	3	21.86	21.82	21.86	23.00
	4	21.85	21.83	21.85	23.00

**WCDMA1700(ANT31 DSI4)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
<b>WCDMA</b>	\	20.90	20.79	20.89	21.70
<b>HSUPA</b>	1	17.24	17.26	17.23	18.50
	2	17.35	17.37	17.32	18.50
	3	17.36	17.38	17.34	18.50
	4	16.87	16.89	16.84	18.00
	5	18.32	18.34	18.31	19.00
<b>HSPA+</b>		18.94	18.96	18.91	19.50
<b>DC-HSDPA</b>	1	19.4	19.42	19.38	20.50
	2	19.41	19.44	19.40	20.50
	3	18.95	18.96	18.93	20.00
	4	18.94	18.95	18.92	20.00

**WCDMA1700(ANT31 DSI8/9/10)**

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
<b>WCDMA</b>	\	19.86	19.80	19.88	20.50
<b>HSUPA</b>	1	16.72	16.75	16.71	17.50
	2	16.83	16.86	16.82	17.50
	3	16.85	16.87	16.83	17.50
	4	16.36	16.37	16.34	17.50
	5	17.83	17.85	17.80	18.50
<b>HSPA+</b>		18.43	18.45	18.41	19.50
<b>DC-HSDPA</b>	1	18.91	18.94	18.90	19.50
	2	18.9	18.95	18.89	19.50
	3	18.45	18.46	18.45	19.50
	4	18.44	18.44	18.42	19.50

**WCDMA850(ANT13 DSI2/3)**

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	18.36	18.50	18.61	19.50
HSUPA	1	15.16	15.13	15.29	16.50
	2	14.65	14.63	14.79	15.50
	3	15.17	15.30	15.43	16.50
	4	14.74	14.80	14.94	16.00
	5	16.26	16.24	16.44	17.50
HSPA+		16.74	16.72	16.90	18.00
DC-HSDPA	1	17.22	17.20	17.36	18.50
	2	17.23	17.21	17.35	18.50
	3	16.77	16.74	16.88	18.00
	4	16.76	16.75	16.87	18.00

**WCDMA850(ANT13 DSI4/10)**

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	23.37	23.49	23.55	24.50
HSUPA	1	20.2	20.33	20.43	21.50
	2	20.3	20.42	20.49	21.50
	3	20.33	20.31	20.50	21.50
	4	19.83	19.81	19.99	21.00
	5	21.12	21.25	21.32	22.50
HSPA+		21.68	21.86	21.96	23.00
DC-HSDPA	1	22.12	22.30	22.32	23.00
	2	22.14	22.31	22.33	23.00
	3	21.67	21.86	21.90	23.00
	4	21.66	21.85	21.88	23.00

**WCDMA850(ANT41 DSI2/3/4/10)**

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	23.45	23.56	23.66	24.50
HSUPA	1	20.04	20.15	20.23	21.50
	2	20.15	20.25	20.32	21.50
	3	20.16	20.26	20.31	21.50
	4	19.65	19.74	19.81	21.00
	5	21.01	21.10	21.16	22.00
HSPA+		21.62	21.70	21.78	23.00
DC-HSDPA	1	22.1	22.18	22.24	23.50
	2	22.08	22.16	22.22	23.50
	3	21.65	21.76	21.83	23.00
	4	21.62	21.74	21.80	23.00

### 11.3 LTE Measurement result

The maximum output power(Tune-up Limit)=Target power+ Uncertainty

Mode/Band	ANT	DSI2 (dBm)	DSI3 (dBm)	DSI4 (dBm)	DSI5 (dBm)	DSI8 (dBm)	DSI9 (dBm)	DSI10 (dBm)	Uncertainty (dB)
LTE2	Ant.13	14.5	14.5	23.0	18.0	17.5	17.5	17.5	±1
LTE4	Ant.13	15.5	15.5	23.0	18.5	17.5	17.5	17.5	±1
LTE5	Ant.13	19.0	19.0	23.5	23.5	23.5	23.5	23.5	±1
LTE7	Ant.13	15.0	15.0	22.5	20.5	17.5	17.5	17.5	±1
LTE12	Ant.13	20.5	20.5	23.5	23.5	23.5	23.5	23.5	±1
LTE13	Ant.13	20.5	20.5	23.5	23.5	23.5	23.5	23.5	±1
LTE38	Ant.13	18.0	18.0	23.0	22.5	21.5	21.5	21.5	±1
LTE41	Ant.13	16.5	16.5	23.0	22.0	21.0	21.0	21.0	±1
LTE66	Ant.13	13.5	13.5	23.0	19.0	18.0	18.0	18.0	±1
LTE2	Ant.31	23.8	23.8	22.3	22.3	20.8	20.8	20.8	±1
LTE4	Ant.31	23.8	23.8	20.8	20.8	19.8	19.8	19.8	±1
LTE5	Ant.41	23.5	23.5	23.5	23.5	23.5	23.5	23.5	±1
LTE7	Ant.31	23.0	23.0	21.0	21.0	20.0	20.0	20.0	±1
LTE12	Ant.41	23.5	23.5	23.5	23.5	23.5	23.5	23.5	±1
LTE13	Ant.41	23.5	23.5	23.5	23.5	23.5	23.5	23.5	±1
LTE38	Ant.31	23.0	23.0	23.0	23.0	23.0	23.0	23.0	±1
LTE41	Ant.31	23.0	23.0	23.0	23.0	23.0	23.0	23.0	±1
LTE66	Ant.31	23.5	23.5	20.8	20.8	19.8	19.8	19.8	±1

#### LTE Band2(ANT13 DSI2/3)

Band 2						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	
1.4MHz	1RB-High	1909.3	14.56	14.96	14.78	
		1880	14.48	14.76	14.67	
		1850.7	14.45	14.63	14.61	
	1RB-Middle	1909.3	14.57	14.95	14.78	
		1880	14.48	14.76	14.67	
		1850.7	14.46	14.69	14.58	
	1RB-Low	1909.3	14.55	14.89	14.74	
		1880	14.49	14.76	14.66	
		1850.7	14.43	14.73	14.55	
	3RB-High	1909.3	14.61	14.63	14.69	
		1880	14.50	14.54	14.61	
		1850.7	14.49	14.55	14.57	
	3RB-Middle	1909.3	14.58	14.62	14.71	
		1880	14.50	14.51	14.57	
		1850.7	14.48	14.54	14.54	
	3RB-Low	1909.3	14.62	14.58	14.75	
		1880	14.49	14.57	14.56	
		1850.7	14.48	14.55	14.58	
	6RB		1909.3	14.60	14.65	14.59

		1880	14.50	14.61	14.50
		1850.7	14.47	14.59	14.48
3MHz	1RB-High	1908.5	14.58	14.83	14.75
		1880	14.49	14.78	14.68
		1851.5	14.45	14.64	14.60
	1RB-Middle	1908.5	14.53	14.77	14.68
		1880	14.52	14.68	14.64
		1851.5	14.47	14.73	14.64
	1RB-Low	1908.5	14.51	14.80	14.70
		1880	14.47	14.76	14.70
		1851.5	14.44	14.78	14.64
	8RB-High	1908.5	14.58	14.68	14.66
		1880	14.49	14.60	14.54
		1851.5	14.46	14.52	14.52
	8RB-Middle	1908.5	14.56	14.65	14.59
		1880	14.46	14.58	14.50
		1851.5	14.45	14.57	14.52
	8RB-Low	1908.5	14.55	14.66	14.66
		1880	14.50	14.57	14.56
		1851.5	14.47	14.55	14.53
15RB	1908.5	14.52	14.62	14.60	
	1880	14.47	14.50	14.50	
	1851.5	14.45	14.50	14.44	
5MHz	1RB-High	1907.5	14.63	14.90	14.74
		1880	14.50	14.68	14.68
		1852.5	14.45	14.69	14.57
	1RB-Middle	1907.5	14.60	14.78	14.78
		1880	14.56	14.70	14.64
		1852.5	14.47	14.76	14.67
	1RB-Low	1907.5	14.53	14.74	14.68
		1880	14.53	14.74	14.68
		1852.5	14.50	14.75	14.63
	12RB-High	1907.5	14.54	14.55	14.60
		1880	14.48	14.50	14.51
		1852.5	14.48	14.47	14.49
	12RB-Middle	1907.5	14.58	14.61	14.66
		1880	14.52	14.51	14.58
		1852.5	14.44	14.48	14.50
	12RB-Low	1907.5	14.61	14.65	14.64
		1880	14.52	14.56	14.61
		1852.5	14.51	14.54	14.57
25RB	1907.5	14.58	14.63	14.65	
	1880	14.55	14.55	14.56	
	1852.5	14.50	14.53	14.49	
10MHz	1RB-High	1905	14.58	14.88	14.73
		1880	14.52	14.68	14.76
		1855	14.40	14.69	14.55
	1RB-Middle	1905	14.54	14.88	14.69
		1880	14.53	14.72	14.75
		1855	14.46	14.72	14.67
	1RB-Low	1905	14.46	14.66	14.58
		1880	14.50	14.64	14.67
		1855	14.46	14.64	14.62
25RB-High	1905	14.55	14.51	14.55	
	1880	14.51	14.54	14.49	



	25RB-Middle	1855	14.49	14.50	14.48	
		1905	14.55	14.59	14.56	
		1880	14.53	14.56	14.56	
	25RB-Low	1855	14.52	14.50	14.52	
		1905	14.51	14.63	14.60	
		1880	14.52	14.54	14.54	
	50RB	1855	14.47	14.53	14.50	
		1905	14.59	14.60	14.59	
		1880	14.53	14.52	14.50	
	15MHz	1RB-High	1855	14.55	14.55	14.48
			1902.5	14.52	14.84	14.71
			1880	14.44	14.74	14.63
1RB-Middle		1857.5	14.36	14.67	14.48	
		1902.5	14.49	14.82	14.66	
		1880	14.49	14.71	14.71	
1RB-Low		1857.5	14.46	14.80	14.60	
		1902.5	14.44	14.68	14.64	
		1880	14.38	14.77	14.59	
36RB-High		1857.5	14.41	14.66	14.53	
		1902.5	14.54	14.53	14.55	
		1880	14.45	14.52	14.49	
36RB-Middle		1857.5	14.46	14.49	14.47	
		1902.5	14.46	14.55	14.53	
		1880	14.51	14.51	14.54	
36RB-Low		1857.5	14.47	14.45	14.48	
		1902.5	14.53	14.48	14.52	
		1880	14.51	14.50	14.47	
75RB		1857.5	14.45	14.49	14.49	
		1902.5	14.54	14.53	14.48	
		1880	14.53	14.50	14.50	
20MHz		1RB-High	1857.5	14.48	14.44	14.45
			1900	14.43	14.69	14.63
			1880	14.34	14.62	14.49
	1RB-Middle	1860	14.30	14.57	14.50	
		1900	14.40	14.68	14.51	
		1880	14.40	14.75	14.55	
	1RB-Low	1860	14.46	14.76	14.65	
		1900	14.30	14.64	14.43	
		1880	14.30	14.62	14.49	
	50RB-High	1860	14.39	14.56	14.57	
		1900	14.42	14.40	14.41	
		1880	14.34	14.38	14.35	
	50RB-Middle	1860	14.52	14.46	14.45	
		1900	14.35	14.38	14.42	
		1880	14.42	14.43	14.43	
	50RB-Low	1860	14.44	14.41	14.44	
		1900	14.42	14.42	14.39	
		1880	14.41	14.48	14.45	
	100RB	1860	14.45	14.41	14.43	
		1900	14.40	14.33	14.36	
		1880	14.39	14.38	14.40	
			1860	14.41	14.45	14.41

**LTE Band2(ANT13 DSI4)**

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1909.3	23.09	22.24	21.24
		1880	23.07	22.26	21.20
		1850.7	22.93	22.21	21.17
	1RB-Middle	1909.3	23.03	22.28	21.21
		1880	23.07	22.27	21.21
		1850.7	22.97	22.17	21.18
	1RB-Low	1909.3	23.03	22.21	21.19
		1880	23.08	22.21	21.19
		1850.7	22.94	22.12	21.25
	3RB-High	1909.3	23.06	21.98	21.10
		1880	23.06	22.00	21.04
		1850.7	22.95	21.95	21.17
	3RB-Middle	1909.3	23.07	21.97	21.09
		1880	23.07	22.02	21.06
		1850.7	22.97	21.99	21.19
	3RB-Low	1909.3	23.07	22.03	21.10
		1880	23.06	22.04	21.14
		1850.7	22.94	21.96	21.16
	6RB	1909.3	22.07	21.14	20.16
		1880	22.05	21.07	20.17
		1850.7	21.96	21.16	20.07
3MHz	1RB-High	1908.5	23.04	22.20	21.19
		1880	23.07	22.33	21.16
		1851.5	22.93	22.27	21.19
	1RB-Middle	1908.5	23.06	22.29	21.32
		1880	23.12	22.23	21.22
		1851.5	22.93	22.25	21.19
	1RB-Low	1908.5	22.99	22.27	21.22
		1880	23.07	22.28	21.11
		1851.5	22.93	22.08	21.21
	8RB-High	1908.5	22.04	21.08	20.18
		1880	21.99	21.01	20.18
		1851.5	21.92	21.16	20.08
	8RB-Middle	1908.5	22.02	21.26	20.20
		1880	22.02	21.05	20.18
		1851.5	21.95	21.14	20.07
	8RB-Low	1908.5	22.05	21.27	20.18
		1880	21.97	21.07	20.16
		1851.5	21.88	21.11	20.11
	15RB	1908.5	22.01	21.18	20.16
		1880	22.00	21.02	20.13
		1851.5	21.91	21.09	20.04
5MHz	1RB-High	1907.5	23.09	22.39	21.18
		1880	23.08	22.32	21.19
		1852.5	22.97	22.24	21.16
	1RB-Middle	1907.5	23.04	22.35	21.38
		1880	23.14	22.28	21.24
		1852.5	22.99	22.27	21.26
	1RB-Low	1907.5	23.05	22.28	21.29
		1880	23.12	22.31	21.20
		1852.5	22.99	22.07	21.29

	12RB-High	1907.5	21.99	20.97	20.14	
		1880	22.01	21.01	20.15	
		1852.5	21.90	21.01	20.09	
	12RB-Middle	1907.5	22.03	21.25	20.21	
		1880	22.04	21.01	20.20	
		1852.5	21.94	21.09	20.07	
	12RB-Low	1907.5	22.07	21.19	20.26	
		1880	22.09	21.07	20.21	
		1852.5	21.99	21.12	20.13	
	25RB	1907.5	22.06	21.21	20.18	
		1880	22.11	21.08	20.22	
		1852.5	21.93	21.09	20.08	
10MHz	1RB-High	1905	23.01	22.29	21.19	
		1880	23.09	22.34	21.11	
		1855	22.91	22.04	21.19	
	1RB-Middle	1905	23.08	22.22	21.21	
		1880	23.15	22.27	21.18	
		1855	23.00	22.17	21.21	
	1RB-Low	1905	23.02	22.26	21.24	
		1880	23.01	22.24	21.11	
		1855	22.94	22.20	21.13	
	25RB-High	1905	21.98	21.15	20.13	
		1880	22.04	20.98	20.18	
		1855	21.95	21.12	20.11	
	25RB-Middle	1905	22.01	21.14	20.14	
		1880	22.04	21.03	20.20	
		1855	21.96	21.10	20.09	
	25RB-Low	1905	22.04	21.18	20.19	
		1880	22.04	21.02	20.20	
		1855	21.89	21.10	20.12	
	50RB	1905	22.05	21.16	20.18	
		1880	22.05	21.00	20.19	
		1855	22.00	21.09	20.13	
	15MHz	1RB-High	1902.5	22.96	22.21	21.09
			1880	22.97	22.14	21.06
			1857.5	22.82	21.98	21.09
1RB-Middle		1902.5	22.98	22.16	21.24	
		1880	23.02	22.30	21.17	
		1857.5	22.94	22.21	21.26	
1RB-Low		1902.5	22.90	22.22	20.95	
		1880	22.88	22.22	20.99	
		1857.5	22.87	22.10	21.15	
36RB-High		1902.5	21.87	21.04	20.06	
		1880	21.97	21.00	20.12	
		1857.5	21.88	21.02	20.08	
36RB-Middle		1902.5	21.93	21.04	20.10	
		1880	22.01	20.99	20.18	
		1857.5	21.88	21.03	20.03	
36RB-Low		1902.5	21.93	21.06	20.13	
		1880	21.96	20.96	20.18	
		1857.5	21.81	20.97	20.03	
75RB		1902.5	21.94	21.06	20.09	
		1880	21.98	20.99	20.07	
		1857.5	21.90	21.02	19.99	
20MHz		1RB-High	1900	22.87	22.06	21.12

	1RB-Middle	1880	22.89	22.11	20.98
		1860	22.82	22.15	20.90
		1900	22.92	22.19	21.15
	1RB-Low	1880	23.08	22.17	21.12
		1860	22.94	22.10	21.14
		1900	22.86	22.17	20.95
	50RB-High	1880	22.84	22.14	20.96
		1860	22.91	22.16	21.17
		1900	21.86	20.97	19.97
	50RB-Middle	1880	22.04	21.09	20.08
		1860	21.91	20.88	19.96
		1900	21.89	20.99	19.97
	50RB-Low	1880	21.98	20.99	20.08
		1860	21.92	21.02	20.03
		1900	21.90	21.03	19.98
	100RB	1880	21.99	20.96	20.12
		1860	21.91	21.02	20.02
		1900	21.86	21.00	19.97
		1880	21.98	20.92	20.07
		1860	21.94	21.05	19.99

**LTE Band2(ANT13 DSI8/9/10)**

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1909.3	17.59	17.94	17.76
		1880	17.52	17.82	17.67
		1850.7	17.44	17.78	17.68
	1RB-Middle	1909.3	17.54	17.92	17.77
		1880	17.54	17.76	17.70
		1850.7	17.44	17.70	17.63
	1RB-Low	1909.3	17.55	17.92	17.64
		1880	17.51	17.80	17.76
		1850.7	17.46	17.83	17.74
	3RB-High	1909.3	17.54	17.56	17.67
		1880	17.52	17.60	17.65
		1850.7	17.48	17.46	17.57
	3RB-Middle	1909.3	17.57	17.62	17.60
		1880	17.54	17.51	17.67
		1850.7	17.49	17.48	17.56
	3RB-Low	1909.3	17.56	17.58	17.70
		1880	17.53	17.55	17.67
		1850.7	17.48	17.54	17.54
6RB	1909.3	17.55	17.63	17.54	
	1880	17.51	17.60	17.47	
	1850.7	17.49	17.53	17.49	
3MHz	1RB-High	1908.5	17.54	17.74	17.77
		1880	17.51	17.90	17.71
		1851.5	17.46	17.83	17.67
	1RB-Middle	1908.5	17.53	17.75	17.80
		1880	17.59	17.86	17.76
		1851.5	17.45	17.73	17.77
1RB-Low	1908.5	17.48	17.72	17.62	
	1880	17.52	17.88	17.75	

	8RB-High	1851.5	17.46	17.68	17.61	
		1908.5	17.52	17.66	17.60	
		1880	17.51	17.64	17.58	
	8RB-Middle	1851.5	17.47	17.55	17.54	
		1908.5	17.55	17.64	17.56	
		1880	17.50	17.63	17.57	
	8RB-Low	1851.5	17.49	17.57	17.54	
		1908.5	17.55	17.61	17.59	
		1880	17.53	17.59	17.63	
	15RB	1851.5	17.49	17.57	17.55	
		1908.5	17.51	17.54	17.56	
		1880	17.49	17.57	17.57	
	5MHz	1RB-High	1851.5	17.44	17.51	17.50
			1907.5	17.60	17.87	17.77
			1880	17.57	17.93	17.76
1RB-Middle		1852.5	17.50	17.83	17.69	
		1907.5	17.57	17.75	17.78	
		1880	17.60	17.82	17.81	
1RB-Low		1852.5	17.51	17.83	17.78	
		1907.5	17.51	17.86	17.69	
		1880	17.58	17.87	17.74	
12RB-High		1852.5	17.50	17.83	17.70	
		1907.5	17.52	17.54	17.56	
		1880	17.50	17.55	17.61	
12RB-Middle		1852.5	17.47	17.43	17.53	
		1907.5	17.56	17.56	17.64	
		1880	17.54	17.56	17.60	
12RB-Low		1852.5	17.45	17.50	17.48	
		1907.5	17.60	17.62	17.61	
		1880	17.61	17.58	17.62	
25RB		1852.5	17.47	17.52	17.58	
		1907.5	17.60	17.57	17.57	
		1880	17.59	17.64	17.63	
10MHz		1RB-High	1852.5	17.52	17.52	17.50
			1905	17.56	17.77	17.80
			1880	17.58	17.94	17.74
		1RB-Middle	1855	17.47	17.68	17.67
			1905	17.52	17.87	17.74
			1880	17.60	17.90	17.85
	1RB-Low	1855	17.49	17.74	17.68	
		1905	17.50	17.68	17.61	
		1880	17.51	17.78	17.71	
	25RB-High	1855	17.48	17.67	17.66	
		1905	17.51	17.50	17.51	
		1880	17.55	17.59	17.60	
	25RB-Middle	1855	17.51	17.52	17.49	
		1905	17.52	17.57	17.54	
		1880	17.52	17.59	17.59	
	25RB-Low	1855	17.51	17.54	17.51	
		1905	17.57	17.60	17.57	
		1880	17.59	17.63	17.63	
	50RB	1855	17.51	17.55	17.56	
		1905	17.58	17.60	17.55	
		1880	17.57	17.60	17.57	
			1855	17.56	17.55	17.54

15MHz	1RB-High	1902.5	17.52	17.74	17.73
		1880	17.45	17.77	17.69
		1857.5	17.36	17.74	17.63
	1RB-Middle	1902.5	17.51	17.77	17.74
		1880	17.54	17.81	17.80
		1857.5	17.46	17.74	17.60
	1RB-Low	1902.5	17.47	17.79	17.61
		1880	17.42	17.66	17.58
		1857.5	17.41	17.69	17.69
	36RB-High	1902.5	17.46	17.51	17.51
		1880	17.51	17.57	17.56
		1857.5	17.43	17.50	17.53
	36RB-Middle	1902.5	17.48	17.50	17.56
		1880	17.52	17.53	17.60
		1857.5	17.44	17.48	17.54
	36RB-Low	1902.5	17.48	17.51	17.47
		1880	17.50	17.53	17.56
		1857.5	17.47	17.44	17.47
75RB	1902.5	17.52	17.55	17.50	
	1880	17.54	17.58	17.55	
	1857.5	17.47	17.47	17.48	
20MHz	1RB-High	1900	17.37	17.70	17.52
		1880	17.36	17.71	17.57
		1860	17.33	17.67	17.46
	1RB-Middle	1900	17.36	17.62	17.55
		1880	17.41	17.60	17.63
		1860	17.48	17.82	17.63
	1RB-Low	1900	17.28	17.71	17.41
		1880	17.31	17.57	17.47
		1860	17.37	17.58	17.62
	50RB-High	1900	17.37	17.37	17.39
		1880	17.33	17.35	17.39
		1860	17.52	17.48	17.51
	50RB-Middle	1900	17.40	17.39	17.38
		1880	17.47	17.50	17.48
		1860	17.41	17.44	17.39
	50RB-Low	1900	17.38	17.40	17.42
		1880	17.48	17.49	17.46
		1860	17.41	17.43	17.41
100RB	1900	17.34	17.31	17.35	
	1880	17.43	17.43	17.41	
	1860	17.45	17.43	17.43	

**LTE Band2(ANT31 DSI2/3)**

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1909.3	23.44	22.74	21.56
		1880	23.51	22.78	21.71
		1850.7	23.42	22.61	21.74
	1RB-Middle	1909.3	23.42	22.64	21.54
		1880	23.54	22.86	21.66
		1850.7	23.47	22.71	21.79
	1RB-Low	1909.3	23.46	22.73	21.58

		1880	23.53	22.69	21.66	
		1850.7	23.46	22.70	21.71	
		1909.3	23.44	22.44	21.47	
	3RB-High	1880	23.50	22.47	21.51	
		1850.7	23.46	22.38	21.70	
		1909.3	23.43	22.49	21.54	
	3RB-Middle	1880	23.54	22.49	21.55	
		1850.7	23.44	22.41	21.71	
		1909.3	23.43	22.40	21.53	
	3RB-Low	1880	23.50	22.46	21.56	
		1850.7	23.47	22.33	21.69	
		1909.3	22.46	21.47	20.54	
	6RB	1880	22.49	21.58	20.59	
		1850.7	22.44	21.66	20.57	
		1908.5	23.44	22.66	21.56	
3MHz	1RB-High	1880	23.51	22.80	21.67	
		1851.5	23.43	22.70	21.75	
		1908.5	23.44	22.60	21.76	
	1RB-Middle	1880	23.54	22.77	21.71	
		1851.5	23.49	22.72	21.71	
		1908.5	23.40	22.57	21.65	
	1RB-Low	1880	23.55	22.74	21.66	
		1851.5	23.44	22.76	21.69	
		1908.5	22.43	21.45	20.57	
	8RB-High	1880	22.48	21.51	20.59	
		1851.5	22.41	21.67	20.60	
		1908.5	22.42	21.63	20.52	
	8RB-Middle	1880	22.50	21.52	20.62	
		1851.5	22.41	21.61	20.55	
		1908.5	22.42	21.64	20.59	
	8RB-Low	1880	22.49	21.50	20.64	
		1851.5	22.44	21.61	20.58	
		1908.5	22.39	21.57	20.50	
	15RB	1880	22.48	21.46	20.58	
		1851.5	22.37	21.60	20.54	
		1907.5	23.49	22.76	21.52	
	5MHz	1RB-High	1880	23.56	22.77	21.67
			1852.5	23.45	22.62	21.74
			1907.5	23.52	22.80	21.74
		1RB-Middle	1880	23.60	22.79	21.71
			1852.5	23.52	22.73	21.77
			1907.5	23.44	22.68	21.65
		1RB-Low	1880	23.58	22.75	21.66
			1852.5	23.47	22.64	21.71
			1907.5	22.41	21.35	20.56
12RB-High		1880	22.50	21.40	20.66	
		1852.5	22.47	21.59	20.55	
		1907.5	22.46	21.56	20.60	
12RB-Middle		1880	22.51	21.43	20.65	
		1852.5	22.42	21.60	20.56	
		1907.5	22.48	21.61	20.62	
12RB-Low		1880	22.52	21.51	20.72	
		1852.5	22.41	21.62	20.61	
		1907.5	22.46	21.60	20.59	
25RB		1880	22.57	21.52	20.67	

10MHz	1RB-High	1852.5	22.46	21.57	20.56
		1905	23.49	22.75	21.57
		1880	23.53	22.72	21.66
	1RB-Middle	1855	23.42	22.65	21.68
		1905	23.50	22.73	21.68
		1880	23.61	22.84	21.66
	1RB-Low	1855	23.50	22.71	21.66
		1905	23.43	22.63	21.59
		1880	23.47	22.80	21.53
	25RB-High	1855	23.49	22.80	21.68
		1905	22.40	21.53	20.54
		1880	22.51	21.50	20.65
	25RB-Middle	1855	22.47	21.64	20.60
		1905	22.40	21.57	20.52
		1880	22.54	21.48	20.61
	25RB-Low	1855	22.46	21.62	20.60
		1905	22.46	21.68	20.63
		1880	22.53	21.52	20.69
	50RB	1855	22.42	21.58	20.57
		1905	22.50	21.60	20.61
		1880	22.53	21.49	20.67
15MHz	1RB-High	1855	22.50	21.67	20.62
		1902.5	23.46	22.64	21.53
		1880	23.48	22.67	21.49
	1RB-Middle	1857.5	23.39	22.58	21.60
		1902.5	23.48	22.67	21.70
		1880	23.59	22.78	21.67
	1RB-Low	1857.5	23.51	22.66	21.70
		1902.5	23.47	22.55	21.51
		1880	23.46	22.72	21.49
	36RB-High	1857.5	23.44	22.72	21.69
		1902.5	22.35	21.52	20.43
		1880	22.46	21.47	20.61
	36RB-Middle	1857.5	22.41	21.62	20.59
		1902.5	22.40	21.54	20.51
		1880	22.53	21.43	20.68
	36RB-Low	1857.5	22.44	21.55	20.53
		1902.5	22.46	21.60	20.54
		1880	22.54	21.50	20.65
	75RB	1857.5	22.37	21.52	20.54
		1902.5	22.44	21.58	20.50
		1880	22.53	21.47	20.56
20MHz	1RB-High	1857.5	22.43	21.51	20.53
		1900	23.41	22.66	21.62
		1880	23.47	22.78	21.57
	1RB-Middle	1860	23.41	22.63	21.45
		1900	23.44	22.54	21.66
		1880	23.66	22.82	21.69
	1RB-Low	1860	23.49	22.69	21.73
		1900	23.41	22.67	21.49
		1880	23.41	22.59	21.51
	50RB-High	1860	23.42	22.61	21.68
		1900	22.27	21.38	20.35
		1880	22.54	21.45	20.56
		1860	22.51	21.68	20.59



	50RB-Middle	1900	22.39	21.55	20.51
		1880	22.58	21.52	20.64
		1860	22.48	21.56	20.56
	50RB-Low	1900	22.43	21.53	20.51
		1880	22.63	21.62	20.73
		1860	22.36	21.50	20.43
	100RB	1900	22.31	21.41	20.42
		1880	22.63	21.53	20.63
		1860	22.46	21.55	20.50

**LTE Band2(ANT31 DSI4)**

Band 2						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4MHz	1RB-High	1909.3	21.99	22.34	21.63	
		1880	22.12	22.40	21.73	
		1850.7	21.99	22.31	21.82	
	1RB-Middle	1909.3	22.01	22.19	21.63	
		1880	22.08	22.37	21.75	
		1850.7	21.94	22.32	21.87	
	1RB-Low	1909.3	21.98	22.33	21.67	
		1880	22.11	22.30	21.68	
		1850.7	21.99	22.35	21.85	
	3RB-High	1909.3	21.98	21.92	21.60	
		1880	22.09	22.01	21.67	
		1850.7	21.99	21.93	21.74	
	3RB-Middle	1909.3	21.97	21.96	21.55	
		1880	22.12	22.09	21.71	
		1850.7	22.00	21.98	21.79	
	3RB-Low	1909.3	22.00	22.02	21.54	
		1880	22.06	22.09	21.61	
		1850.7	21.95	22.02	21.79	
	6RB	1909.3	22.02	21.59	20.62	
		1880	22.06	21.64	20.64	
		1850.7	22.01	21.75	20.54	
	3MHz	1RB-High	1908.5	21.99	22.31	21.65
			1880	22.07	22.29	21.67
			1851.5	21.98	22.34	21.83
1RB-Middle		1908.5	21.98	22.32	21.81	
		1880	22.11	22.32	21.88	
		1851.5	21.99	22.19	21.83	
1RB-Low		1908.5	21.94	22.22	21.69	
		1880	22.12	22.27	21.73	
		1851.5	21.98	22.35	21.87	
8RB-High		1908.5	21.97	21.56	20.66	
		1880	22.07	21.58	20.74	
		1851.5	21.96	21.72	20.69	
8RB-Middle		1908.5	21.96	21.70	20.60	
		1880	22.08	21.62	20.76	
		1851.5	21.97	21.75	20.67	
8RB-Low		1908.5	21.97	21.74	20.66	
		1880	22.09	21.66	20.78	
		1851.5	22.00	21.72	20.69	
15RB		1908.5	21.95	21.66	20.62	

		1880	22.06	21.60	20.67
		1851.5	21.99	21.67	20.65
5MHz	1RB-High	1907.5	22.04	22.29	21.72
		1880	22.16	22.43	21.80
		1852.5	21.98	22.29	21.87
	1RB-Middle	1907.5	22.08	22.26	21.79
		1880	22.17	22.43	21.75
		1852.5	22.07	22.33	21.86
	1RB-Low	1907.5	21.96	22.13	21.78
		1880	22.15	22.33	21.85
		1852.5	22.01	22.34	21.88
	12RB-High	1907.5	21.98	21.41	20.66
		1880	22.09	21.59	20.74
		1852.5	21.99	21.69	20.69
	12RB-Middle	1907.5	22.04	21.63	20.68
		1880	22.10	21.56	20.76
		1852.5	22.00	21.63	20.68
	12RB-Low	1907.5	22.04	21.70	20.70
		1880	22.14	21.61	20.83
		1852.5	22.02	21.65	20.67
	25RB	1907.5	22.06	21.68	20.68
		1880	22.14	21.62	20.79
		1852.5	22.03	21.66	20.67
10MHz	1RB-High	1905	21.95	22.31	21.62
		1880	22.10	22.29	21.77
		1855	21.95	22.22	21.75
	1RB-Middle	1905	21.99	22.27	21.79
		1880	22.13	22.35	21.76
		1855	22.00	22.40	21.87
	1RB-Low	1905	21.98	22.19	21.71
		1880	22.05	22.31	21.75
		1855	22.03	22.34	21.84
	25RB-High	1905	21.95	21.64	20.62
		1880	22.09	21.57	20.77
		1855	22.05	21.77	20.70
	25RB-Middle	1905	21.99	21.66	20.64
		1880	22.08	21.63	20.76
		1855	22.03	21.70	20.66
	25RB-Low	1905	22.09	21.77	20.68
		1880	22.12	21.62	20.82
		1855	21.98	21.66	20.63
	50RB	1905	22.02	21.73	20.66
		1880	22.13	21.61	20.80
		1855	22.05	21.70	20.70
15MHz	1RB-High	1902.5	21.95	22.27	21.53
		1880	21.98	22.36	21.68
		1857.5	21.90	22.21	21.72
	1RB-Middle	1902.5	21.99	22.26	21.76
		1880	22.11	22.43	21.70
		1857.5	21.97	22.27	21.85
	1RB-Low	1902.5	21.95	22.15	21.54
		1880	22.00	22.12	21.65
		1857.5	21.90	22.26	21.80
36RB-High	1902.5	21.91	21.57	20.58	
	1880	22.07	21.60	20.70	

	36RB-Middle	1857.5	21.96	21.66	20.66	
		1902.5	21.93	21.63	20.57	
		1880	22.10	21.60	20.79	
	36RB-Low	1857.5	21.98	21.66	20.64	
		1902.5	22.00	21.67	20.60	
		1880	22.06	21.56	20.70	
	75RB	1857.5	21.90	21.64	20.61	
		1902.5	21.98	21.62	20.59	
		1880	22.10	21.56	20.74	
	20MHz	1RB-High	1857.5	21.99	21.58	20.57
			1900	21.82	22.07	21.64
			1880	21.85	22.19	21.43
1RB-Middle		1860	21.82	22.10	21.43	
		1900	21.87	22.06	21.60	
		1880	22.05	22.40	21.67	
1RB-Low		1860	21.92	22.25	21.68	
		1900	21.76	22.07	21.53	
		1880	21.83	22.15	21.40	
50RB-High		1860	21.86	22.20	21.71	
		1900	21.69	21.37	20.33	
		1880	21.98	21.47	20.60	
50RB-Middle		1860	21.98	21.61	20.62	
		1900	21.86	21.52	20.49	
		1880	22.06	21.53	20.62	
50RB-Low		1860	21.96	21.55	20.54	
		1900	21.85	21.46	20.50	
		1880	22.10	21.57	20.71	
100RB		1860	21.84	21.47	20.48	
		1900	21.74	21.39	20.34	
		1880	22.06	21.54	20.68	
			1860	21.90	21.55	20.54

**LTE Band2(ANT31 DSI8/9/10)**

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1909.3	20.58	20.85	20.72
		1880	20.63	21.00	20.80
		1850.7	20.55	20.89	20.75
	1RB-Middle	1909.3	20.59	20.85	20.80
		1880	20.67	21.03	20.76
		1850.7	20.56	20.91	20.70
	1RB-Low	1909.3	20.56	20.88	20.74
		1880	20.68	20.94	20.80
		1850.7	20.55	20.92	20.69
	3RB-High	1909.3	20.53	20.54	20.69
		1880	20.64	20.66	20.75
		1850.7	20.59	20.51	20.67
	3RB-Middle	1909.3	20.54	20.53	20.68
		1880	20.66	20.69	20.79

	3RB-Low	1850.7	20.59	20.49	20.73	
		1909.3	20.58	20.51	20.68	
		1880	20.64	20.64	20.75	
	6RB	1850.7	20.62	20.60	20.69	
		1909.3	20.60	20.68	20.51	
		1880	20.65	20.74	20.61	
3MHz	1RB-High	1850.7	20.59	20.68	20.57	
		1908.5	20.58	20.83	20.80	
		1880	20.68	20.97	20.86	
	1RB-Middle	1851.5	20.61	20.95	20.67	
		1908.5	20.52	20.87	20.84	
		1880	20.64	21.05	20.88	
	1RB-Low	1851.5	20.56	20.83	20.71	
		1908.5	20.53	20.89	20.70	
		1880	20.63	20.89	20.82	
	8RB-High	1851.5	20.55	20.90	20.81	
		1908.5	20.56	20.66	20.57	
		1880	20.63	20.71	20.71	
	8RB-Middle	1851.5	20.57	20.62	20.61	
		1908.5	20.55	20.62	20.55	
		1880	20.65	20.69	20.70	
	8RB-Low	1851.5	20.55	20.61	20.60	
		1908.5	20.58	20.64	20.60	
		1880	20.67	20.72	20.69	
	15RB	1851.5	20.59	20.69	20.60	
		1908.5	20.53	20.58	20.56	
		1880	20.62	20.66	20.65	
	5MHz	1RB-High	1851.5	20.62	20.66	20.65
			1907.5	20.59	20.61	20.61
			1880	20.60	20.98	20.77
1RB-Middle		1852.5	20.62	20.78	20.85	
		1907.5	20.59	20.84	20.77	
		1880	20.71	20.96	20.88	
1RB-Low		1852.5	20.63	20.85	20.88	
		1907.5	20.57	20.87	20.70	
		1880	20.70	20.92	20.82	
12RB-High		1852.5	20.63	20.94	20.85	
		1907.5	20.52	20.53	20.59	
		1880	20.68	20.68	20.66	
12RB-Middle		1852.5	20.61	20.60	20.60	
		1907.5	20.57	20.57	20.63	
		1880	20.68	20.69	20.73	
12RB-Low		1852.5	20.60	20.55	20.61	
		1907.5	20.62	20.65	20.65	
		1880	20.70	20.73	20.77	
25RB		1852.5	20.56	20.63	20.67	
		1907.5	20.57	20.59	20.65	
		1880	20.68	20.70	20.74	
10MHz		1RB-High	1852.5	20.60	20.62	20.61
			1905	20.55	20.96	20.73
			1880	20.68	20.84	20.78
	1RB-Middle	1855	20.55	20.69	20.74	
		1905	20.59	20.79	20.70	
		1880	20.72	21.05	20.85	
		1855	20.59	20.96	20.78	

	1RB-Low	1905	20.55	20.85	20.65	
		1880	20.63	20.91	20.77	
		1855	20.59	20.92	20.79	
	25RB-High	1905	20.54	20.50	20.51	
		1880	20.69	20.67	20.66	
		1855	20.60	20.68	20.65	
	25RB-Middle	1905	20.59	20.57	20.55	
		1880	20.71	20.72	20.69	
		1855	20.60	20.61	20.61	
	25RB-Low	1905	20.68	20.70	20.67	
		1880	20.67	20.73	20.71	
		1855	20.56	20.56	20.56	
	50RB	1905	20.61	20.66	20.62	
		1880	20.66	20.66	20.68	
		1855	20.65	20.61	20.64	
15MHz	1RB-High	1902.5	20.50	20.87	20.71	
		1880	20.56	20.96	20.81	
		1857.5	20.48	20.85	20.71	
	1RB-Middle	1902.5	20.51	20.78	20.66	
		1880	20.69	21.04	20.85	
		1857.5	20.56	20.95	20.72	
	1RB-Low	1902.5	20.49	20.85	20.72	
		1880	20.53	20.89	20.82	
		1857.5	20.49	20.84	20.67	
	36RB-High	1902.5	20.47	20.48	20.49	
		1880	20.59	20.68	20.70	
		1857.5	20.53	20.62	20.62	
	36RB-Middle	1902.5	20.50	20.52	20.54	
		1880	20.67	20.66	20.73	
		1857.5	20.52	20.54	20.58	
	36RB-Low	1902.5	20.53	20.59	20.57	
		1880	20.60	20.63	20.68	
		1857.5	20.49	20.53	20.55	
	75RB	1902.5	20.55	20.53	20.54	
		1880	20.62	20.64	20.60	
		1857.5	20.58	20.57	20.56	
	20MHz	1RB-High	1900	20.52	20.86	20.64
			1880	20.52	20.92	20.63
			1860	20.47	20.76	20.69
		1RB-Middle	1900	20.54	20.71	20.59
			1880	20.69	20.96	20.80
			1860	20.57	20.96	20.66
1RB-Low		1900	20.45	20.92	20.67	
		1880	20.51	20.84	20.65	
		1860	20.52	20.82	20.69	
50RB-High		1900	20.37	20.38	20.35	
		1880	20.59	20.60	20.58	
		1860	20.63	20.59	20.63	
50RB-Middle		1900	20.51	20.48	20.50	
		1880	20.66	20.68	20.63	
		1860	20.60	20.54	20.57	
50RB-Low		1900	20.53	20.50	20.51	
		1880	20.73	20.79	20.76	
		1860	20.53	20.48	20.49	
100RB		1900	20.40	20.37	20.38	

		1880	20.68	20.69	20.63
		1860	20.53	20.53	20.50

**LTE Band4(ANT13 DSI2/3)**

		Band 4				
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4 MHz	1RB_High	1754.3	14.56	14.96	14.78	
		1732.5	14.48	14.76	14.67	
		1710.7	14.45	14.63	14.61	
	1RB_Middle	1754.3	14.57	14.95	14.78	
		1732.5	14.48	14.76	14.67	
		1710.7	14.46	14.69	14.58	
	1RB_Low	1754.3	14.55	14.89	14.74	
		1732.5	14.49	14.76	14.66	
		1710.7	14.43	14.73	14.55	
	3RB_High	1754.3	14.61	14.63	14.69	
		1732.5	14.50	14.54	14.61	
		1710.7	14.49	14.55	14.57	
	3RB_Middle	1754.3	14.58	14.62	14.71	
		1732.5	14.50	14.51	14.57	
		1710.7	14.48	14.54	14.54	
	3RB_Low	1754.3	14.62	14.58	14.75	
		1732.5	14.49	14.57	14.56	
		1710.7	14.48	14.55	14.58	
	6RB	1754.3	14.60	14.65	14.59	
		1732.5	14.50	14.61	14.50	
		1710.7	14.47	14.59	14.48	
	3 MHz	1RB_High	1753.5	14.58	14.83	14.75
			1732.5	14.49	14.78	14.68
			1711.5	14.45	14.64	14.60
		1RB_Middle	1753.5	14.53	14.77	14.68
			1732.5	14.52	14.68	14.64
			1711.5	14.47	14.73	14.64
1RB_Low		1753.5	14.51	14.80	14.70	
		1732.5	14.47	14.76	14.70	
		1711.5	14.44	14.78	14.64	
8RB_High		1753.5	14.58	14.68	14.66	
		1732.5	14.49	14.60	14.54	
		1711.5	14.46	14.52	14.52	
8RB_Middle		1753.5	14.56	14.65	14.59	
		1732.5	14.46	14.58	14.50	
		1711.5	14.45	14.57	14.52	
8RB_Low		1753.5	14.55	14.66	14.66	
		1732.5	14.50	14.57	14.56	
		1711.5	14.47	14.55	14.53	
15RB		1753.5	14.52	14.62	14.60	
		1732.5	14.47	14.50	14.50	
		1711.5	14.45	14.50	14.44	
5 MHz		1RB_High	1752.5	14.63	14.90	14.74
			1732.5	14.50	14.68	14.68
			1712.5	14.45	14.69	14.57
		1RB_Middle	1752.5	14.60	14.78	14.78

	1RB_Low	1732.5	14.56	14.70	14.64
		1712.5	14.47	14.76	14.67
		1752.5	14.53	14.74	14.68
	12RB_High	1732.5	14.53	14.74	14.68
		1712.5	14.50	14.75	14.63
		1752.5	14.54	14.55	14.60
	12RB_Middle	1732.5	14.48	14.50	14.51
		1712.5	14.48	14.47	14.49
		1752.5	14.58	14.61	14.66
	12RB_Low	1732.5	14.52	14.51	14.58
		1712.5	14.44	14.48	14.50
		1752.5	14.61	14.65	14.64
	25RB	1732.5	14.52	14.56	14.61
		1712.5	14.51	14.54	14.57
		1752.5	14.58	14.63	14.65
10MHz	1RB_High	1750	14.58	14.88	14.73
		1732.5	14.52	14.68	14.76
		1715	14.40	14.69	14.55
	1RB_Middle	1750	14.54	14.88	14.69
		1732.5	14.53	14.72	14.75
		1715	14.46	14.72	14.67
	1RB_Low	1750	14.46	14.66	14.58
		1732.5	14.50	14.64	14.67
		1715	14.46	14.64	14.62
	25RB_High	1750	14.55	14.51	14.55
		1732.5	14.51	14.54	14.49
		1715	14.49	14.50	14.48
	25RB_Middle	1750	14.55	14.59	14.56
		1732.5	14.53	14.56	14.56
		1715	14.52	14.50	14.52
25RB_Low	1750	14.51	14.63	14.60	
	1732.5	14.52	14.54	14.54	
	1715	14.47	14.53	14.50	
50RB	1750	14.59	14.60	14.59	
	1732.5	14.53	14.52	14.50	
	1715	14.55	14.55	14.48	
15MHz	1RB_High	1747.5	14.52	14.84	14.71
		1732.5	14.44	14.74	14.63
		1717.5	14.36	14.67	14.48
	1RB_Middle	1747.5	14.49	14.82	14.66
		1732.5	14.49	14.71	14.71
		1717.5	14.46	14.80	14.60
	1RB_Low	1747.5	14.44	14.68	14.64
		1732.5	14.38	14.77	14.59
		1717.5	14.41	14.66	14.53
	36RB_High	1747.5	14.54	14.53	14.55
		1732.5	14.45	14.52	14.49
		1717.5	14.46	14.49	14.47
	36RB_Middle	1747.5	14.46	14.55	14.53
		1732.5	14.51	14.51	14.54
		1717.5	14.47	14.45	14.48
36RB_Low	1747.5	14.53	14.48	14.52	
	1732.5	14.51	14.50	14.47	

20MHz	75RB	1717.5	14.45	14.49	14.49
		1747.5	14.54	14.53	14.48
		1732.5	14.53	14.50	14.50
		1717.5	14.48	14.44	14.45
	1RB_High	1745	14.43	14.69	14.63
		1732.5	14.34	14.62	14.49
		1720	14.30	14.57	14.50
	1RB_Middle	1745	14.40	14.68	14.51
		1732.5	14.40	14.75	14.55
		1720	14.46	14.76	14.65
	1RB_Low	1745	14.30	14.64	14.43
		1732.5	14.30	14.62	14.49
		1720	14.39	14.56	14.57
	50RB_High	1745	14.42	14.40	14.41
		1732.5	14.34	14.38	14.35
		1720	14.52	14.46	14.45
	50RB_Middle	1745	14.35	14.38	14.42
		1732.5	14.42	14.43	14.43
		1720	14.44	14.41	14.44
	50RB_Low	1745	14.42	14.42	14.39
		1732.5	14.41	14.48	14.45
		1720	14.45	14.41	14.43
	100RB	1745	14.40	14.33	14.36
		1732.5	14.39	14.38	14.40
		1720	14.41	14.45	14.41

**LTE Band4(ANT13 DSI4)**

Band 4						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4 MHz	1RB_High	1754.3	23.09	22.24	21.24	
		1732.5	23.07	22.26	21.20	
		1710.7	22.93	22.21	21.17	
	1RB_Middle	1754.3	23.03	22.28	21.21	
		1732.5	23.07	22.27	21.21	
		1710.7	22.97	22.17	21.18	
	1RB_Low	1754.3	23.03	22.21	21.19	
		1732.5	23.08	22.21	21.19	
		1710.7	22.94	22.12	21.25	
	3RB_High	1754.3	23.06	21.98	21.10	
		1732.5	23.06	22.00	21.04	
		1710.7	22.95	21.95	21.17	
	3RB_Middle	1754.3	23.07	21.97	21.09	
		1732.5	23.07	22.02	21.06	
		1710.7	22.97	21.99	21.19	
	3RB_Low	1754.3	23.07	22.03	21.10	
		1732.5	23.06	22.04	21.14	
		1710.7	22.94	21.96	21.16	
	6RB	1754.3	22.07	21.14	20.16	
		1732.5	22.05	21.07	20.17	
		1710.7	21.96	21.16	20.07	
	3 MHz	1RB_High	1753.5	23.04	22.20	21.19
			1732.5	23.07	22.33	21.16
			1711.5	22.93	22.27	21.19



	1RB_Middle	1753.5	23.06	22.29	21.32
		1732.5	23.12	22.23	21.22
		1711.5	22.93	22.25	21.19
	1RB_Low	1753.5	22.99	22.27	21.22
		1732.5	23.07	22.28	21.11
		1711.5	22.93	22.08	21.21
	8RB_High	1753.5	22.04	21.08	20.18
		1732.5	21.99	21.01	20.18
		1711.5	21.92	21.16	20.08
	8RB_Middle	1753.5	22.02	21.26	20.20
		1732.5	22.02	21.05	20.18
		1711.5	21.95	21.14	20.07
	8RB_Low	1753.5	22.05	21.27	20.18
		1732.5	21.97	21.07	20.16
		1711.5	21.88	21.11	20.11
15RB	1753.5	22.01	21.18	20.16	
	1732.5	22.00	21.02	20.13	
	1711.5	21.91	21.09	20.04	
5 MHz	1RB_High	1752.5	23.09	22.39	21.18
		1732.5	23.08	22.32	21.19
		1712.5	22.97	22.24	21.16
	1RB_Middle	1752.5	23.04	22.35	21.38
		1732.5	23.14	22.28	21.24
		1712.5	22.99	22.27	21.26
	1RB_Low	1752.5	23.05	22.28	21.29
		1732.5	23.12	22.31	21.20
		1712.5	22.99	22.07	21.29
	12RB_High	1752.5	21.99	20.97	20.14
		1732.5	22.01	21.01	20.15
		1712.5	21.90	21.01	20.09
	12RB_Middle	1752.5	22.03	21.25	20.21
		1732.5	22.04	21.01	20.20
		1712.5	21.94	21.09	20.07
	12RB_Low	1752.5	22.07	21.19	20.26
		1732.5	22.09	21.07	20.21
		1712.5	21.99	21.12	20.13
25RB	1752.5	22.06	21.21	20.18	
	1732.5	22.11	21.08	20.22	
	1712.5	21.93	21.09	20.08	
10MHz	1RB_High	1750	23.01	22.29	21.19
		1732.5	23.09	22.34	21.11
		1715	22.91	22.04	21.19
	1RB_Middle	1750	23.08	22.22	21.21
		1732.5	23.15	22.27	21.18
		1715	23.00	22.17	21.21
	1RB_Low	1750	23.02	22.26	21.24
		1732.5	23.01	22.24	21.11
		1715	22.94	22.20	21.13
	25RB_High	1750	21.98	21.15	20.13
		1732.5	22.04	20.98	20.18
		1715	21.95	21.12	20.11
	25RB_Middle	1750	22.01	21.14	20.14
		1732.5	22.04	21.03	20.20
		1715	21.96	21.10	20.09
25RB_Low	1750	22.04	21.18	20.19	

	50RB	1732.5	22.04	21.02	20.20	
		1715	21.89	21.10	20.12	
		1750	22.05	21.16	20.18	
		1732.5	22.05	21.00	20.19	
15MHz	1RB_High	1715	22.00	21.09	20.13	
		1747.5	22.96	22.21	21.09	
		1732.5	22.97	22.14	21.06	
	1RB_Middle	1717.5	22.82	21.98	21.09	
		1747.5	22.98	22.16	21.24	
		1732.5	23.02	22.30	21.17	
	1RB_Low	1717.5	22.94	22.21	21.26	
		1747.5	22.90	22.22	20.95	
		1732.5	22.88	22.22	20.99	
	36RB_High	1717.5	22.87	22.10	21.15	
		1747.5	21.87	21.04	20.06	
		1732.5	21.97	21.00	20.12	
	36RB_Middle	1717.5	21.88	21.02	20.08	
		1747.5	21.93	21.04	20.10	
		1732.5	22.01	20.99	20.18	
	36RB_Low	1717.5	21.88	21.03	20.03	
		1747.5	21.93	21.06	20.13	
		1732.5	21.96	20.96	20.18	
	75RB	1717.5	21.81	20.97	20.03	
		1747.5	21.94	21.06	20.09	
		1732.5	21.98	20.99	20.07	
	20MHz	1RB_High	1717.5	21.90	21.02	19.99
			1745	22.87	22.06	21.12
			1732.5	22.89	22.11	20.98
1RB_Middle		1720	22.82	22.15	20.90	
		1745	22.92	22.19	21.15	
		1732.5	23.08	22.17	21.12	
1RB_Low		1720	22.94	22.10	21.14	
		1745	22.86	22.17	20.95	
		1732.5	22.84	22.14	20.96	
50RB_High		1720	22.91	22.16	21.17	
		1745	21.86	20.97	19.97	
		1732.5	22.04	21.09	20.08	
50RB_Middle		1720	21.91	20.88	19.96	
		1745	21.89	20.99	19.97	
		1732.5	21.98	20.99	20.08	
50RB_Low		1720	21.92	21.02	20.03	
		1745	21.90	21.03	19.98	
		1732.5	21.99	20.96	20.12	
100RB		1720	21.91	21.02	20.02	
		1745	21.86	21.00	19.97	
		1732.5	21.98	20.92	20.07	
			1720	21.94	21.05	19.99

**LTE Band4(ANT13 DSI8/9/10)**

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	17.59	17.94	17.76
		1732.5	17.52	17.82	17.67

	1RB_Middle	1710.7	17.44	17.78	17.68	
		1754.3	17.54	17.92	17.77	
		1732.5	17.54	17.76	17.70	
	1RB_Low	1710.7	17.44	17.70	17.63	
		1754.3	17.55	17.92	17.64	
		1732.5	17.51	17.80	17.76	
	3RB_High	1710.7	17.46	17.83	17.74	
		1754.3	17.54	17.56	17.67	
		1732.5	17.52	17.60	17.65	
	3RB_Middle	1710.7	17.48	17.46	17.57	
		1754.3	17.57	17.62	17.60	
		1732.5	17.54	17.51	17.67	
	3RB_Low	1710.7	17.49	17.48	17.56	
		1754.3	17.56	17.58	17.70	
		1732.5	17.53	17.55	17.67	
	6RB	1710.7	17.48	17.54	17.54	
		1754.3	17.55	17.63	17.54	
		1732.5	17.51	17.60	17.47	
3 MHz	1RB_High	1710.7	17.49	17.53	17.49	
		1753.5	17.54	17.74	17.77	
		1732.5	17.51	17.90	17.71	
	1RB_Middle	1711.5	17.46	17.83	17.67	
		1753.5	17.53	17.75	17.80	
		1732.5	17.59	17.86	17.76	
	1RB_Low	1711.5	17.45	17.73	17.77	
		1753.5	17.48	17.72	17.62	
		1732.5	17.52	17.88	17.75	
	8RB_High	1711.5	17.46	17.68	17.61	
		1753.5	17.52	17.66	17.60	
		1732.5	17.51	17.64	17.58	
	8RB_Middle	1711.5	17.47	17.55	17.54	
		1753.5	17.55	17.64	17.56	
		1732.5	17.50	17.63	17.57	
	8RB_Low	1711.5	17.49	17.57	17.54	
		1753.5	17.55	17.61	17.59	
		1732.5	17.53	17.59	17.63	
15RB	1711.5	17.49	17.57	17.55		
	1753.5	17.51	17.54	17.56		
	1732.5	17.49	17.57	17.57		
5 MHz	1RB_High	1711.5	17.44	17.51	17.50	
		1752.5	17.60	17.87	17.77	
		1732.5	17.57	17.93	17.76	
	1RB_Middle	1712.5	17.50	17.83	17.69	
		1752.5	17.57	17.75	17.78	
		1732.5	17.60	17.82	17.81	
	1RB_Low	1712.5	17.51	17.83	17.78	
		1752.5	17.51	17.86	17.69	
		1732.5	17.58	17.87	17.74	
	12RB_High	1712.5	17.50	17.83	17.70	
		1752.5	17.52	17.54	17.56	
		1732.5	17.50	17.55	17.61	
	12RB_Middle	1712.5	17.47	17.43	17.53	
		1752.5	17.56	17.56	17.64	
		1732.5	17.54	17.56	17.60	
			1712.5	17.45	17.50	17.48

	12RB_Low	1752.5	17.60	17.62	17.61	
		1732.5	17.61	17.58	17.62	
		1712.5	17.47	17.52	17.58	
	25RB	1752.5	17.60	17.57	17.57	
		1732.5	17.59	17.64	17.63	
1712.5		17.52	17.52	17.50		
10MHz	1RB_High	1750	17.56	17.77	17.80	
		1732.5	17.58	17.94	17.74	
		1715	17.47	17.68	17.67	
	1RB_Middle	1750	17.52	17.87	17.74	
		1732.5	17.60	17.90	17.85	
		1715	17.49	17.74	17.68	
	1RB_Low	1750	17.50	17.68	17.61	
		1732.5	17.51	17.78	17.71	
		1715	17.48	17.67	17.66	
	25RB_High	1750	17.51	17.50	17.51	
		1732.5	17.55	17.59	17.60	
		1715	17.51	17.52	17.49	
	25RB_Middle	1750	17.52	17.57	17.54	
		1732.5	17.52	17.59	17.59	
		1715	17.51	17.54	17.51	
	25RB_Low	1750	17.57	17.60	17.57	
		1732.5	17.59	17.63	17.63	
		1715	17.51	17.55	17.56	
	50RB	1750	17.58	17.60	17.55	
		1732.5	17.57	17.60	17.57	
		1715	17.56	17.55	17.54	
	15MHz	1RB_High	1747.5	17.52	17.74	17.73
			1732.5	17.45	17.77	17.69
			1717.5	17.36	17.74	17.63
		1RB_Middle	1747.5	17.51	17.77	17.74
			1732.5	17.54	17.81	17.80
			1717.5	17.46	17.74	17.60
1RB_Low		1747.5	17.47	17.79	17.61	
		1732.5	17.42	17.66	17.58	
		1717.5	17.41	17.69	17.69	
36RB_High		1747.5	17.46	17.51	17.51	
		1732.5	17.51	17.57	17.56	
		1717.5	17.43	17.50	17.53	
36RB_Middle		1747.5	17.48	17.50	17.56	
		1732.5	17.52	17.53	17.60	
		1717.5	17.44	17.48	17.54	
36RB_Low		1747.5	17.48	17.51	17.47	
		1732.5	17.50	17.53	17.56	
		1717.5	17.47	17.44	17.47	
75RB		1747.5	17.52	17.55	17.50	
		1732.5	17.54	17.58	17.55	
		1717.5	17.47	17.47	17.48	
20MHz	1RB_High	1745	17.37	17.70	17.52	
		1732.5	17.36	17.71	17.57	
		1720	17.33	17.67	17.46	
	1RB_Middle	1745	17.36	17.62	17.55	
		1732.5	17.41	17.60	17.63	
		1720	17.48	17.82	17.63	
	1RB_Low	1745	17.28	17.71	17.41	

	50RB_High	1732.5	17.31	17.57	17.47
		1720	17.37	17.58	17.62
		1745	17.37	17.37	17.39
	50RB_Middle	1732.5	17.33	17.35	17.39
		1720	17.52	17.48	17.51
		1745	17.40	17.39	17.38
	50RB_Low	1732.5	17.47	17.50	17.48
		1720	17.41	17.44	17.39
		1745	17.38	17.40	17.42
	100RB	1732.5	17.48	17.49	17.46
		1720	17.41	17.43	17.41
		1745	17.34	17.31	17.35
		1732.5	17.43	17.43	17.41
		1720	17.45	17.43	17.43

**LTE Band4(ANT31 DSI2/3)**

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	23.72	23.02	21.99
		1732.5	23.74	22.93	22.07
		1710.7	23.78	22.97	21.99
	1RB_Middle	1754.3	23.73	22.95	21.99
		1732.5	23.73	23.01	22.10
		1710.7	23.76	22.93	22.07
	1RB_Low	1754.3	23.72	22.99	21.95
		1732.5	23.75	23.02	22.07
		1710.7	23.77	22.93	22.06
	3RB_High	1754.3	23.74	22.74	21.92
		1732.5	23.75	22.75	21.91
		1710.7	23.78	22.76	22.06
	3RB_Middle	1754.3	23.72	22.67	21.92
		1732.5	23.79	22.79	21.97
		1710.7	23.82	22.82	22.07
	3RB_Low	1754.3	23.72	22.75	21.93
		1732.5	23.81	22.78	21.98
		1710.7	23.79	22.82	22.03
6RB	1754.3	22.70	21.94	20.78	
	1732.5	22.75	21.99	20.88	
	1710.7	22.78	21.95	20.82	
3 MHz	1RB_High	1753.5	23.72	22.95	22.01
		1732.5	23.73	22.91	22.06
		1711.5	23.82	23.08	21.98
	1RB_Middle	1753.5	23.78	22.96	22.01
		1732.5	23.79	22.97	22.06
		1711.5	23.83	22.97	22.08
	1RB_Low	1753.5	23.74	22.84	22.02
		1732.5	23.76	22.98	22.06
		1711.5	23.77	22.97	22.04
	8RB_High	1753.5	22.68	21.92	20.85
		1732.5	22.70	21.93	20.90
		1711.5	22.74	21.96	20.93
8RB_Middle	1753.5	22.71	21.92	20.87	
	1732.5	22.70	21.93	20.89	

	8RB_Low	1711.5	22.76	21.93	20.91	
		1753.5	22.74	21.94	20.90	
		1732.5	22.72	21.97	20.89	
	15RB	1711.5	22.78	21.96	20.92	
		1753.5	22.76	21.91	20.86	
		1732.5	22.72	21.89	20.85	
5 MHz	1RB_High	1711.5	22.77	21.95	20.85	
		1752.5	23.77	22.90	22.00	
		1732.5	23.79	23.03	22.06	
	1RB_Middle	1712.5	23.82	22.96	22.05	
		1752.5	23.74	22.94	21.97	
		1732.5	23.86	23.01	22.09	
	1RB_Low	1712.5	23.94	23.01	22.03	
		1752.5	23.79	22.97	22.01	
		1732.5	23.82	23.05	22.10	
	12RB_High	1712.5	23.84	23.01	22.09	
		1752.5	22.70	21.81	20.88	
		1732.5	22.75	21.87	20.88	
	12RB_Middle	1712.5	22.77	21.87	20.94	
		1752.5	22.73	21.88	20.89	
		1732.5	22.78	21.90	20.91	
	12RB_Low	1712.5	22.77	21.93	20.91	
		1752.5	22.76	21.87	20.87	
		1732.5	22.81	21.93	20.95	
	25RB	1712.5	22.80	21.93	20.89	
		1752.5	22.76	21.92	20.86	
		1732.5	22.79	21.95	20.91	
	10MHz	1RB_High	1712.5	22.78	21.92	20.92
			1750	23.75	22.94	22.00
			1732.5	23.74	22.91	22.01
1RB_Middle		1715	23.91	23.06	22.02	
		1750	23.83	23.12	22.06	
		1732.5	23.88	23.05	22.09	
1RB_Low		1715	23.88	22.96	22.10	
		1750	23.78	23.05	22.03	
		1732.5	23.81	23.08	22.03	
25RB_High		1715	23.81	22.97	22.01	
		1750	22.72	21.90	20.91	
		1732.5	22.76	21.91	20.87	
25RB_Middle		1715	22.85	22.02	20.95	
		1750	22.81	21.90	20.94	
		1732.5	22.74	21.92	20.91	
25RB_Low		1715	22.79	21.98	20.96	
		1750	22.78	21.95	20.95	
		1732.5	22.80	21.94	20.96	
50RB		1715	22.76	21.91	20.89	
		1750	22.79	21.91	20.93	
		1732.5	22.76	21.95	20.91	
15MHz		1RB_High	1715	22.82	21.98	20.90
			1747.5	23.69	22.80	21.94
			1732.5	23.69	22.90	22.00
	1RB_Middle	1717.5	23.71	22.82	21.99	
		1747.5	23.78	23.07	22.02	
		1732.5	23.78	22.99	22.05	
		1717.5	23.80	23.09	22.08	

	1RB_Low	1747.5	23.64	22.94	21.91
		1732.5	23.78	22.95	21.96
		1717.5	23.72	22.83	22.00
	36RB_High	1747.5	22.70	21.85	20.84
		1732.5	22.72	21.83	20.89
		1717.5	22.72	21.87	20.90
	36RB_Middle	1747.5	22.69	21.86	20.90
		1732.5	22.73	21.85	20.86
		1717.5	22.79	21.90	20.96
	36RB_Low	1747.5	22.71	21.87	20.86
		1732.5	22.68	21.89	20.86
		1717.5	22.72	21.90	20.86
75RB	1747.5	22.69	21.83	20.87	
	1732.5	22.71	21.82	20.89	
	1717.5	22.75	21.85	20.89	
20MHz	1RB_High	1745	23.78	22.87	22.00
		1732.5	23.68	22.85	21.85
		1720	23.67	22.88	21.94
	1RB_Middle	1745	23.88	23.12	21.99
		1732.5	23.77	23.02	22.04
		1720	23.83	22.99	22.00
	1RB_Low	1745	23.62	22.90	21.85
		1732.5	23.73	22.90	22.00
		1720	23.86	22.93	22.05
	50RB_High	1745	22.79	21.90	20.88
		1732.5	22.74	21.84	20.80
		1720	22.73	21.84	20.79
	50RB_Middle	1745	22.80	21.88	20.91
		1732.5	22.71	21.79	20.77
		1720	22.77	21.90	20.86
	50RB_Low	1745	22.72	21.83	20.86
		1732.5	22.65	21.84	20.78
		1720	22.74	21.86	20.86
	100RB	1745	22.76	21.84	20.84
		1732.5	22.70	21.83	20.75
		1720	22.74	21.79	20.78

**LTE Band4(ANT31 DSI4)**

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	20.79	21.18	21.03
		1732.5	20.78	21.19	21.09
		1710.7	20.83	21.15	21.03
	1RB_Middle	1754.3	20.82	21.11	20.98
		1732.5	20.86	21.22	21.00
		1710.7	20.82	21.21	21.00
	1RB_Low	1754.3	20.78	21.02	21.01
		1732.5	20.82	21.13	20.98
		1710.7	20.83	21.22	21.08
	3RB_High	1754.3	20.78	20.75	20.92
		1732.5	20.85	20.78	20.95

	3RB_Middle	1710.7	20.88	20.90	20.93	
		1754.3	20.76	20.84	20.88	
		1732.5	20.89	20.88	21.01	
	3RB_Low	1710.7	20.87	20.77	20.99	
		1754.3	20.80	20.81	20.85	
		1732.5	20.84	20.85	20.92	
	6RB	1710.7	20.84	20.81	20.95	
		1754.3	20.81	20.95	20.73	
		1732.5	20.84	20.96	20.85	
	3 MHz	1RB_High	1710.7	20.85	20.98	20.85
			1753.5	20.81	21.03	20.97
			1732.5	20.82	21.11	21.05
1RB_Middle		1711.5	20.88	21.03	21.03	
		1753.5	20.78	20.99	21.03	
		1732.5	20.86	21.23	21.03	
1RB_Low		1711.5	20.87	21.20	21.07	
		1753.5	20.78	21.03	21.00	
		1732.5	20.84	21.06	21.05	
8RB_High		1711.5	20.83	21.03	21.04	
		1753.5	20.78	20.83	20.85	
		1732.5	20.80	20.88	20.83	
8RB_Middle		1711.5	20.82	20.95	20.90	
		1753.5	20.80	20.86	20.82	
		1732.5	20.83	20.85	20.82	
8RB_Low		1711.5	20.83	20.88	20.89	
		1753.5	20.82	20.89	20.88	
		1732.5	20.87	20.91	20.90	
15RB		1711.5	20.88	20.89	20.87	
		1753.5	20.79	20.86	20.85	
		1732.5	20.83	20.84	20.86	
5 MHz		1RB_High	1711.5	20.85	20.90	20.90
			1752.5	20.83	21.17	21.08
			1732.5	20.86	21.10	21.00
	1RB_Middle	1712.5	20.90	21.11	21.07	
		1752.5	20.85	21.19	21.02	
		1732.5	20.84	21.19	21.02	
	1RB_Low	1712.5	20.91	21.12	21.09	
		1752.5	20.83	21.19	21.04	
		1732.5	20.90	21.24	21.08	
	12RB_High	1712.5	20.89	21.10	21.09	
		1752.5	20.77	20.79	20.83	
		1732.5	20.84	20.85	20.87	
	12RB_Middle	1712.5	20.87	20.81	20.89	
		1752.5	20.83	20.87	20.88	
		1732.5	20.89	20.90	20.90	
	12RB_Low	1712.5	20.85	20.89	20.90	
		1752.5	20.87	20.85	20.87	
		1732.5	20.90	20.88	20.90	
	25RB	1712.5	20.90	20.90	20.94	
		1752.5	20.87	20.88	20.87	
		1732.5	20.88	20.88	20.89	
	10MHz	1RB_High	1712.5	20.91	20.90	20.88
			1750	20.81	21.06	20.95
			1732.5	20.84	21.07	21.02
		1715	20.95	21.30	21.03	



	1RB_Middle	1750	20.91	21.11	20.96
		1732.5	20.89	21.20	21.02
		1715	20.94	21.28	21.01
	1RB_Low	1750	20.83	21.11	21.05
		1732.5	20.91	21.20	21.02
		1715	20.85	21.09	21.07
	25RB_High	1750	20.84	20.87	20.86
		1732.5	20.81	20.89	20.85
		1715	20.94	21.00	20.95
	25RB_Middle	1750	20.88	20.90	20.95
		1732.5	20.81	20.88	20.87
		1715	20.94	20.91	20.92
	25RB_Low	1750	20.88	20.95	20.93
		1732.5	20.90	20.93	20.92
		1715	20.83	20.83	20.89
50RB	1750	20.92	20.90	20.91	
	1732.5	20.87	20.88	20.85	
	1715	20.92	20.92	20.95	
15MHz	1RB_High	1747.5	20.76	21.05	20.96
		1732.5	20.80	20.99	21.05
		1717.5	20.78	21.11	20.95
	1RB_Middle	1747.5	20.88	21.11	21.01
		1732.5	20.86	21.09	21.01
		1717.5	20.92	21.25	21.02
	1RB_Low	1747.5	20.75	20.99	21.01
		1732.5	20.87	21.16	21.04
		1717.5	20.83	21.14	21.01
	36RB_High	1747.5	20.85	20.87	20.91
		1732.5	20.83	20.86	20.85
		1717.5	20.87	20.87	20.89
	36RB_Middle	1747.5	20.84	20.84	20.84
		1732.5	20.85	20.85	20.92
		1717.5	20.94	20.95	20.96
	36RB_Low	1747.5	20.86	20.86	20.84
		1732.5	20.88	20.87	20.85
		1717.5	20.91	20.90	20.91
75RB	1747.5	20.89	20.89	20.85	
	1732.5	20.89	20.86	20.82	
	1717.5	20.82	20.85	20.86	
20MHz	1RB_High	1745	20.84	21.03	20.96
		1732.5	20.70	21.05	20.87
		1720	20.71	20.99	20.87
	1RB_Middle	1745	20.89	21.14	21.08
		1732.5	20.79	21.18	21.01
		1720	20.87	21.20	20.91
	1RB_Low	1745	20.68	21.05	20.87
		1732.5	20.80	21.07	20.92
		1720	20.84	21.12	21.04
	50RB_High	1745	20.88	20.90	20.93
		1732.5	20.83	20.79	20.85
		1720	20.78	20.82	20.74
	50RB_Middle	1745	20.90	20.86	20.89
		1732.5	20.81	20.75	20.75
		1720	20.85	20.81	20.90
	50RB_Low	1745	20.81	20.82	20.84

		1732.5	20.79	20.75	20.73
		1720	20.82	20.84	20.84
		1745	20.89	20.80	20.85
	100RB	1732.5	20.78	20.75	20.76
	1720	20.77	20.80	20.81	

**LTE Band4(ANT31 DSI8/9/10)**

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	19.73	20.03	19.86
		1732.5	19.74	20.06	19.86
		1710.7	19.77	20.04	19.91
	1RB_Middle	1754.3	19.74	20.06	19.84
		1732.5	19.74	19.97	20.01
		1710.7	19.79	20.12	19.91
	1RB_Low	1754.3	19.68	20.02	19.94
		1732.5	19.76	20.13	20.01
		1710.7	19.77	20.13	19.97
	3RB_High	1754.3	19.73	19.71	19.78
		1732.5	19.77	19.81	19.89
		1710.7	19.79	19.83	19.89
	3RB_Middle	1754.3	19.72	19.68	19.86
		1732.5	19.76	19.79	19.84
		1710.7	19.81	19.75	19.85
	3RB_Low	1754.3	19.71	19.72	19.88
		1732.5	19.81	19.72	19.87
		1710.7	19.79	19.80	19.93
6RB	1754.3	19.73	19.84	19.66	
	1732.5	19.79	19.89	19.76	
	1710.7	19.79	19.90	19.82	
3 MHz	1RB_High	1753.5	19.71	19.98	19.93
		1732.5	19.75	20.07	19.96
		1711.5	19.81	20.10	20.03
	1RB_Middle	1753.5	19.73	20.05	19.89
		1732.5	19.77	20.10	19.95
		1711.5	19.81	19.99	19.91
	1RB_Low	1753.5	19.72	20.03	19.92
		1732.5	19.76	20.11	19.94
		1711.5	19.77	20.12	19.90
	8RB_High	1753.5	19.72	19.81	19.78
		1732.5	19.76	19.84	19.79
		1711.5	19.77	19.89	19.83
	8RB_Middle	1753.5	19.75	19.81	19.83
		1732.5	19.74	19.83	19.77
		1711.5	19.79	19.84	19.82
	8RB_Low	1753.5	19.77	19.83	19.80
		1732.5	19.79	19.87	19.82
		1711.5	19.79	19.87	19.84
15RB	1753.5	19.74	19.81	19.80	
	1732.5	19.75	19.78	19.76	
	1711.5	19.80	19.82	19.80	
5 MHz	1RB_High	1752.5	19.75	20.07	19.93
		1732.5	19.80	19.98	19.99

	1RB_Middle	1712.5	19.84	20.07	19.97	
		1752.5	19.74	20.09	19.92	
		1732.5	19.78	20.17	20.07	
	1RB_Low	1712.5	19.83	20.18	19.99	
		1752.5	19.75	19.99	19.97	
		1732.5	19.83	20.02	20.02	
	12RB_High	1712.5	19.81	20.16	20.00	
		1752.5	19.75	19.74	19.80	
		1732.5	19.78	19.73	19.80	
	12RB_Middle	1712.5	19.76	19.83	19.79	
		1752.5	19.75	19.79	19.76	
		1732.5	19.81	19.78	19.83	
	12RB_Low	1712.5	19.78	19.83	19.84	
		1752.5	19.83	19.78	19.83	
		1732.5	19.84	19.87	19.81	
	25RB	1712.5	19.83	19.77	19.82	
		1752.5	19.80	19.82	19.79	
		1732.5	19.78	19.83	19.82	
10MHz	1RB_High	1712.5	19.80	19.83	19.83	
		1750	19.74	19.95	19.94	
		1732.5	19.75	20.03	19.90	
	1RB_Middle	1715	19.88	20.23	20.09	
		1750	19.80	20.09	19.91	
		1732.5	19.78	20.04	20.08	
	1RB_Low	1715	19.89	20.17	19.98	
		1750	19.76	20.06	19.91	
		1732.5	19.80	20.01	19.94	
	25RB_High	1715	19.77	20.10	19.90	
		1750	19.78	19.82	19.74	
		1732.5	19.79	19.80	19.82	
	25RB_Middle	1715	19.90	19.92	19.93	
		1750	19.81	19.87	19.85	
		1732.5	19.79	19.83	19.84	
	25RB_Low	1715	19.86	19.89	19.88	
		1750	19.84	19.84	19.83	
		1732.5	19.84	19.82	19.88	
50RB	1715	19.79	19.83	19.81		
	1750	19.83	19.82	19.79		
	1732.5	19.84	19.84	19.79		
15MHz	1RB_High	1715	19.86	19.87	19.86	
		1747.5	19.67	19.99	19.86	
		1732.5	19.67	19.99	19.90	
	1RB_Middle	1717.5	19.73	19.99	19.86	
		1747.5	19.77	20.09	19.98	
		1732.5	19.77	20.08	20.03	
	1RB_Low	1717.5	19.81	20.07	20.02	
		1747.5	19.67	19.93	19.82	
		1732.5	19.82	20.17	19.94	
	36RB_High	1717.5	19.73	19.96	19.97	
		1747.5	19.72	19.81	19.79	
		1732.5	19.74	19.77	19.79	
	36RB_Middle	1717.5	19.78	19.82	19.84	
		1747.5	19.78	19.81	19.84	
		1732.5	19.80	19.81	19.81	
			1717.5	19.81	19.86	19.87

	36RB_Low	1747.5	19.77	19.83	19.86
		1732.5	19.73	19.76	19.77
		1717.5	19.73	19.77	19.80
	75RB	1747.5	19.78	19.78	19.76
		1732.5	19.73	19.79	19.80
		1717.5	19.81	19.82	19.79
20MHz	1RB_High	1745	19.81	20.13	19.94
		1732.5	19.67	20.01	19.87
		1720	19.71	20.06	19.93
	1RB_Middle	1745	19.86	20.13	19.96
		1732.5	19.73	20.03	19.88
		1720	19.80	20.06	20.02
	1RB_Low	1745	19.59	19.90	19.85
		1732.5	19.79	20.02	19.91
		1720	19.85	20.11	20.02
	50RB_High	1745	19.88	19.88	19.81
		1732.5	19.81	19.75	19.79
		1720	19.78	19.79	19.74
	50RB_Middle	1745	19.86	19.87	19.86
		1732.5	19.76	19.77	19.79
		1720	19.82	19.87	19.86
	50RB_Low	1745	19.83	19.83	19.83
		1732.5	19.72	19.77	19.74
		1720	19.80	19.79	19.81
	100RB	1745	19.83	19.81	19.82
		1732.5	19.77	19.72	19.70
		1720	19.81	19.73	19.74

**LTE Band5(ANT13 DSI2/3)**

Band 5						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4MHz	1RB-High	848.3	18.73	19.04	18.97	
		836.5	18.87	19.10	19.06	
		824.7	18.85	19.14	19.08	
	1RB-Middle	848.3	18.72	19.08	18.90	
		836.5	18.85	19.22	19.08	
		824.7	18.81	19.19	19.01	
	1RB-Low	848.3	18.73	19.03	18.98	
		836.5	18.81	19.16	19.06	
		824.7	18.82	19.17	19.01	
	3RB-High	848.3	18.74	18.78	18.92	
		836.5	18.84	18.85	18.98	
		824.7	18.86	18.89	18.94	
	3RB-Middle	848.3	18.78	18.81	18.86	
		836.5	18.87	18.87	18.94	
		824.7	18.85	18.83	18.98	
	3RB-Low	848.3	18.78	18.81	18.90	
		836.5	18.84	18.84	18.95	
		824.7	18.85	18.86	18.96	
	6RB	848.3	18.77	18.88	18.73	
		836.5	18.88	18.98	18.90	
		824.7	18.86	18.94	18.81	
			847.5	18.70	19.07	18.94

	1RB-Middle	836.5	18.81	19.19	18.99
		825.5	18.82	19.14	19.06
		847.5	18.71	19.12	19.02
	1RB-Low	836.5	18.83	19.23	19.03
		825.5	18.88	19.12	19.01
		847.5	18.80	19.18	19.00
	8RB-High	836.5	18.77	19.11	18.99
		825.5	18.86	19.08	19.05
		847.5	18.71	18.89	18.85
	8RB-Middle	836.5	18.76	18.93	18.87
		825.5	18.86	18.96	18.93
		847.5	18.70	18.86	18.83
	8RB-Low	836.5	18.79	18.96	18.93
		825.5	18.85	18.92	18.89
		847.5	18.77	18.87	18.86
	15RB	836.5	18.82	18.93	18.92
		825.5	18.81	18.94	18.88
		847.5	18.77	18.84	18.87
5MHz	1RB-High	846.5	18.81	19.09	18.96
		836.5	18.89	19.23	18.98
		826.5	18.92	19.18	19.09
	1RB-Middle	846.5	18.86	19.22	19.11
		836.5	18.87	19.09	19.17
		826.5	18.93	19.21	19.03
	1RB-Low	846.5	18.87	19.18	19.07
		836.5	18.86	19.27	19.09
		826.5	18.93	19.25	19.09
	12RB-High	846.5	18.84	18.82	18.85
		836.5	18.86	18.86	18.87
		826.5	18.84	18.84	18.88
	12RB-Middle	846.5	18.81	18.83	18.84
		836.5	18.85	18.83	18.86
		826.5	18.90	18.88	18.90
	12RB-Low	846.5	18.93	18.89	18.89
		836.5	18.83	18.87	18.90
		826.5	18.91	18.87	18.93
25RB	846.5	18.86	18.88	18.85	
	836.5	18.85	18.84	18.83	
	826.5	18.92	18.87	18.85	
10MHz	1RB-High	844	18.78	19.14	18.88
		836.5	18.82	19.17	18.97
		829	18.86	19.14	19.04
	1RB-Middle	844	18.90	19.22	19.04
		836.5	18.87	19.13	19.12
		829	18.96	19.31	19.14
	1RB-Low	844	18.85	19.11	19.07
		836.5	18.88	19.14	18.99
		829	18.87	19.17	19.07
	25RB-High	844	18.80	18.84	18.84
		836.5	18.86	18.90	18.90
		829	18.92	18.94	18.91
25RB-Middle	844	18.91	18.90	18.94	
	836.5	18.85	18.88	18.87	

	25RB-Low	829	18.97	18.96	18.96
		844	19.01	19.02	19.00
		836.5	18.81	18.82	18.87
	50RB	829	19.02	19.08	19.06
		844	18.91	18.95	18.92
		836.5	18.90	18.88	18.87
		829	18.99	18.97	18.98

**LTE Band5(ANT13 DSI4/10)**

Band 5					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	848.3	23.15	22.31	21.50
		836.5	23.30	22.51	21.58
		824.7	23.28	22.49	21.56
	1RB-Middle	848.3	23.10	22.41	21.39
		836.5	23.27	22.56	21.58
		824.7	23.25	22.39	21.57
	1RB-Low	848.3	23.14	22.30	21.35
		836.5	23.30	22.53	21.53
		824.7	23.30	22.46	21.50
	3RB-High	848.3	23.12	22.17	21.37
		836.5	23.30	22.22	21.46
		824.7	23.27	22.22	21.42
	3RB-Middle	848.3	23.17	22.14	21.37
		836.5	23.31	22.33	21.46
		824.7	23.28	22.25	21.45
	3RB-Low	848.3	23.20	22.22	21.41
		836.5	23.31	22.27	21.43
		824.7	23.26	22.31	21.48
6RB	848.3	22.18	21.35	20.27	
	836.5	22.32	21.52	20.39	
	824.7	22.26	21.47	20.32	
3MHz	1RB-High	847.5	23.14	22.37	21.44
		836.5	23.22	22.42	21.50
		825.5	23.27	22.39	21.54
	1RB-Middle	847.5	23.23	22.30	21.40
		836.5	23.32	22.59	21.61
		825.5	23.32	22.44	21.59
	1RB-Low	847.5	23.23	22.43	21.48
		836.5	23.29	22.38	21.57
		825.5	23.26	22.45	21.55
	8RB-High	847.5	22.14	21.37	20.32
		836.5	22.23	21.44	20.38
		825.5	22.24	21.47	20.42
	8RB-Middle	847.5	22.15	21.36	20.31
		836.5	22.24	21.47	20.38
		825.5	22.22	21.45	20.42
	8RB-Low	847.5	22.15	21.39	20.32
		836.5	22.20	21.46	20.38
		825.5	22.26	21.43	20.43
15RB	847.5	22.18	21.39	20.33	
	836.5	22.22	21.41	20.32	
	825.5	22.24	21.43	20.36	

5MHz	1RB-High	846.5	23.18	22.35	21.48	
		836.5	23.29	22.46	21.53	
		826.5	23.34	22.44	21.64	
	1RB-Middle	846.5	23.22	22.51	21.49	
		836.5	23.41	22.52	21.59	
		826.5	23.28	22.55	21.60	
	1RB-Low	846.5	23.28	22.38	21.56	
		836.5	23.30	22.45	21.51	
		826.5	23.27	22.44	21.53	
	12RB-High	846.5	22.19	21.34	20.38	
		836.5	22.22	21.38	20.44	
		826.5	22.22	21.38	20.39	
	12RB-Middle	846.5	22.21	21.35	20.40	
		836.5	22.26	21.37	20.39	
		826.5	22.27	21.41	20.45	
	12RB-Low	846.5	22.25	21.37	20.43	
		836.5	22.24	21.35	20.42	
		826.5	22.27	21.42	20.43	
	25RB	846.5	22.20	21.42	20.39	
		836.5	22.22	21.37	20.33	
		826.5	22.27	21.45	20.43	
	10MHz	1RB-High	844	23.26	22.41	21.46
			836.5	23.34	22.48	21.50
			829	23.35	22.48	21.51
		1RB-Middle	844	23.42	22.60	21.58
			836.5	23.40	22.56	21.59
			829	23.43	22.50	21.64
1RB-Low		844	23.37	22.48	21.57	
		836.5	23.37	22.45	21.61	
		829	23.37	22.47	21.60	
25RB-High		844	22.26	21.42	20.38	
		836.5	22.32	21.48	20.43	
		829	22.42	21.55	20.53	
25RB-Middle		844	22.33	21.49	20.47	
		836.5	22.30	21.47	20.48	
		829	22.42	21.57	20.53	
25RB-Low		844	22.40	21.59	20.57	
		836.5	22.29	21.43	20.43	
		829	22.48	21.64	20.57	
50RB		844	22.37	21.50	20.48	
		836.5	22.34	21.44	20.45	
		829	22.41	21.58	20.56	

**LTE Band5(ANT41 DSI2/3/4/10)**

Band 5					
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset		QPSK	16QAM	64QAM
1.4MHz	1RB-High	848.3	23.18	22.36	21.53
		836.5	23.28	22.51	21.56
		824.7	23.24	22.45	21.55
	1RB-Middle	848.3	23.25	22.33	21.46
		836.5	23.31	22.57	21.49
		824.7	23.22	22.41	21.51
	1RB-Low	848.3	23.22	22.40	21.52
		836.5	23.29	22.44	21.56

	3RB-High	824.7	23.22	22.37	21.50	
		848.3	23.17	22.15	21.37	
		836.5	23.29	22.26	21.47	
	3RB-Middle	824.7	23.22	22.22	21.40	
		848.3	23.23	22.23	21.38	
		836.5	23.30	22.25	21.50	
	3RB-Low	824.7	23.22	22.24	21.42	
		848.3	23.18	22.15	21.43	
		836.5	23.26	22.37	21.48	
	6RB	824.7	23.23	22.16	21.44	
		848.3	22.22	21.38	20.22	
		836.5	22.32	21.53	20.41	
	3MHz	1RB-High	824.7	22.21	21.42	20.35
			847.5	23.19	22.30	21.51
			836.5	23.22	22.47	21.54
1RB-Middle		825.5	23.20	22.44	21.46	
		847.5	23.24	22.41	21.51	
		836.5	23.34	22.52	21.63	
1RB-Low		825.5	23.23	22.56	21.54	
		847.5	23.23	22.52	21.61	
		836.5	23.28	22.52	21.55	
8RB-High		825.5	23.22	22.39	21.51	
		847.5	22.19	21.39	20.39	
		836.5	22.21	21.47	20.40	
8RB-Middle		825.5	22.22	21.44	20.40	
		847.5	22.19	21.43	20.32	
		836.5	22.24	21.46	20.40	
8RB-Low		825.5	22.20	21.43	20.39	
		847.5	22.24	21.47	20.36	
		836.5	22.25	21.45	20.41	
15RB		825.5	22.19	21.40	20.40	
		847.5	22.22	21.42	20.32	
		836.5	22.18	21.40	20.38	
5MHz		1RB-High	825.5	22.20	21.41	20.36
			846.5	23.23	22.41	21.46
			836.5	23.31	22.56	21.55
		1RB-Middle	826.5	23.32	22.46	21.56
			846.5	23.32	22.56	21.59
			836.5	23.34	22.56	21.65
	1RB-Low	826.5	23.24	22.52	21.55	
		846.5	23.30	22.41	21.62	
		836.5	23.32	22.49	21.55	
	12RB-High	826.5	23.23	22.52	21.48	
		846.5	22.18	21.34	20.36	
		836.5	22.26	21.40	20.40	
	12RB-Middle	826.5	22.19	21.36	20.36	
		846.5	22.25	21.37	20.42	
		836.5	22.20	21.39	20.38	
	12RB-Low	826.5	22.23	21.37	20.38	
		846.5	22.32	21.42	20.49	
		836.5	22.28	21.42	20.43	
	25RB	826.5	22.17	21.32	20.35	
		846.5	22.25	21.43	20.38	
		836.5	22.25	21.44	20.40	
			826.5	22.18	21.40	20.33



10MHz	1RB-High	844	23.25	22.43	21.47
		836.5	23.24	22.38	21.46
		829	23.26	22.40	21.46
	1RB-Middle	844	23.33	22.47	21.55
		836.5	23.29	22.49	21.53
		829	23.37	22.54	21.56
	1RB-Low	844	23.26	22.46	21.52
		836.5	23.27	22.48	21.48
		829	23.28	22.45	21.53
	25RB-High	844	22.18	21.32	20.24
		836.5	22.28	21.47	20.39
		829	22.24	21.38	20.39
	25RB-Middle	844	22.25	21.39	20.36
		836.5	22.24	21.41	20.40
		829	22.31	21.47	20.46
	25RB-Low	844	22.30	21.49	20.45
		836.5	22.23	21.44	20.35
		829	22.30	21.49	20.48
	50RB	844	22.22	21.38	20.35
		836.5	22.26	21.44	20.41
		829	22.28	21.43	20.40

**LTE Band7(ANT13 DSI2/3)**

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2567.5	15.08	15.34	15.20
		2535	15.17	15.42	15.25
		2502.5	14.84	15.12	14.97
	1RB-Middle	2567.5	15.11	15.35	15.21
		2535	15.17	15.30	15.32
		2502.5	14.84	15.12	14.93
	1RB-Low	2567.5	15.07	15.34	15.20
		2535	15.16	15.46	15.29
		2502.5	14.80	15.10	14.94
	12RB-High	2567.5	15.09	15.10	15.12
		2535	15.13	15.10	15.13
		2502.5	14.85	14.88	14.92
	12RB-Middle	2567.5	15.05	15.07	15.08
		2535	15.10	15.15	15.18
		2502.5	14.80	14.85	14.86
	12RB-Low	2567.5	15.08	15.10	15.14
		2535	15.15	15.16	15.22
		2502.5	14.78	14.84	14.87
	25RB	2567.5	15.10	15.11	15.10
		2535	15.13	15.20	15.16
		2502.5	14.83	14.84	14.83
10MHz	1RB-High	2565	15.04	15.23	15.20
		2535	15.09	15.25	15.20
		2505	14.87	15.11	15.03
	1RB-Middle	2565	15.07	15.32	15.23
		2535	15.17	15.38	15.33
		2505	14.85	15.17	14.97

	1RB-Low	2565	15.08	15.38	15.26	
		2535	15.09	15.36	15.21	
		2505	14.78	14.96	14.89	
	25RB-High	2565	15.05	15.08	15.08	
		2535	15.14	15.18	15.15	
		2505	14.91	14.93	14.91	
	25RB-Middle	2565	15.09	15.12	15.10	
		2535	15.14	15.17	15.14	
		2505	14.83	14.90	14.88	
	25RB-Low	2565	15.15	15.18	15.10	
		2535	15.11	15.17	15.13	
		2505	14.79	14.82	14.83	
50RB	2565	15.11	15.08	15.09		
	2535	15.16	15.16	15.16		
	2505	14.85	14.87	14.90		
15MHz	1RB-High	2562.5	14.99	15.22	15.09	
		2535	15.05	15.22	15.19	
		2507.5	14.86	15.17	15.10	
	1RB-Middle	2562.5	15.09	15.25	15.14	
		2535	15.14	15.36	15.32	
		2507.5	14.82	15.12	14.92	
	1RB-Low	2562.5	15.00	15.22	15.17	
		2535	15.10	15.38	15.24	
		2507.5	14.71	14.93	14.84	
	36RB-High	2562.5	15.06	15.04	15.07	
		2535	15.11	15.15	15.14	
		2507.5	14.91	14.89	14.92	
	36RB-Middle	2562.5	15.02	15.05	15.08	
		2535	15.05	15.15	15.16	
		2507.5	14.85	14.90	14.92	
	36RB-Low	2562.5	15.11	15.10	15.12	
		2535	15.08	15.12	15.18	
		2507.5	14.80	14.81	14.86	
	75RB	2562.5	15.08	15.09	15.12	
		2535	15.12	15.11	15.18	
		2507.5	14.86	14.86	14.87	
	20MHz	1RB-High	2560	14.81	15.07	14.97
			2535	14.72	14.94	14.84
			2510	14.61	14.86	14.76
		1RB-Middle	2560	14.86	15.11	15.04
			2535	14.83	15.08	15.00
			2510	14.66	14.81	14.81
1RB-Low		2560	14.84	15.04	14.93	
		2535	14.65	14.83	14.73	
		2510	14.54	14.69	14.66	
50RB-High		2560	14.87	14.90	14.87	
		2535	14.79	14.79	14.80	
		2510	14.69	14.70	14.69	
50RB-Middle		2560	14.95	14.92	14.93	
		2535	14.84	14.83	14.83	
		2510	14.65	14.69	14.69	
50RB-Low		2560	14.94	14.95	14.97	
		2535	14.81	14.81	14.84	
		2510	14.63	14.60	14.64	
100RB		2560	14.90	14.89	14.90	

		2535	14.81	14.77	14.77
		2510	14.65	14.66	14.67

**LTE Band7(ANT13 DSI4)**

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2567.5	22.79	22.49	21.36
		2535	22.86	22.44	21.45
		2502.5	22.64	22.28	21.19
	1RB-Middle	2567.5	22.82	22.45	21.41
		2535	22.86	22.46	21.49
		2502.5	22.56	22.29	21.13
	1RB-Low	2567.5	22.80	22.45	21.36
		2535	22.85	22.49	21.46
		2502.5	22.58	22.16	21.17
	12RB-High	2567.5	22.25	21.27	20.25
		2535	22.30	21.25	20.31
		2502.5	22.09	21.02	20.03
	12RB-Middle	2567.5	22.30	21.26	20.25
		2535	22.30	21.27	20.29
		2502.5	22.05	20.59	20.02
	12RB-Low	2567.5	22.29	21.31	20.27
		2535	22.33	21.28	20.30
		2502.5	22.08	21.01	20.03
	25RB	2567.5	22.27	21.27	20.27
		2535	22.29	21.31	20.27
		2502.5	22.02	21.08	20.00
10MHz	1RB-High	2565	22.77	22.44	21.36
		2535	22.81	22.47	21.39
		2505	22.63	22.39	21.26
	1RB-Middle	2565	22.79	22.49	21.45
		2535	22.84	22.47	21.43
		2505	22.62	22.32	21.20
	1RB-Low	2565	22.83	22.41	21.33
		2535	22.81	22.42	21.35
		2505	22.54	22.13	21.08
	25RB-High	2565	22.30	21.30	20.23
		2535	22.34	21.37	20.29
		2505	22.09	21.15	20.07
	25RB-Middle	2565	22.29	21.30	20.26
		2535	22.31	21.32	20.30
		2505	22.04	21.07	20.01
	25RB-Low	2565	22.34	21.34	20.32
		2535	22.31	21.31	20.26
		2505	21.98	21.04	19.98
50RB	2565	22.29	21.28	20.28	
	2535	22.32	21.31	20.31	
	2505	22.07	21.02	20.02	
15MHz	1RB-High	2562.5	22.69	22.44	21.20
		2535	22.76	22.41	21.32
		2507.5	22.61	22.30	21.23
	1RB-Middle	2562.5	22.81	22.46	21.41
		2535	22.84	22.49	21.41

	1RB-Low	2507.5	22.62	22.16	21.20
		2562.5	22.75	22.39	21.30
		2535	22.81	22.45	21.43
	36RB-High	2507.5	22.02	22.14	21.05
		2562.5	22.19	21.22	20.22
		2535	22.27	21.30	20.29
	36RB-Middle	2507.5	21.65	21.11	20.12
		2562.5	22.25	21.23	20.24
		2535	22.31	21.30	20.32
	36RB-Low	2507.5	22.07	21.01	20.05
		2562.5	22.29	21.28	20.27
		2535	22.30	21.24	20.21
	75RB	2507.5	22.00	21.01	20.00
		2562.5	22.26	21.23	20.25
		2535	22.29	21.26	20.28
20MHz	1RB-High	2507.5	22.11	21.02	20.01
		2560	22.39	21.98	21.01
		2535	22.29	22.02	20.90
	1RB-Middle	2510	22.18	21.78	20.78
		2560	22.49	22.21	21.03
		2535	22.41	22.00	20.97
	1RB-Low	2510	22.25	21.97	20.77
		2560	22.38	22.05	20.89
		2535	22.24	21.79	20.81
	50RB-High	2510	22.10	21.78	20.67
		2560	21.92	20.91	19.88
		2535	21.80	20.78	19.78
	50RB-Middle	2510	21.73	20.67	19.70
		2560	21.98	20.99	19.98
		2535	21.84	20.84	19.83
	50RB-Low	2510	21.74	20.72	19.66
		2560	22.02	21.04	19.97
		2535	21.83	20.81	19.79
	100RB	2510	21.66	20.63	19.61
		2560	21.96	20.97	19.94
		2535	21.81	20.77	19.78
		2510	21.66	20.66	19.65

**LTE Band7(ANT13 DSI8/9/10)**

		Band 7			
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2567.5	17.85	18.10	17.93
		2535	17.92	18.18	18.16
		2502.5	17.74	18.00	17.80
	1RB-Middle	2567.5	17.84	18.12	18.09
		2535	17.98	18.26	18.15
		2502.5	17.71	17.97	17.89
	1RB-Low	2567.5	17.83	18.16	18.04
		2535	17.97	18.11	18.09
		2502.5	17.63	17.89	17.77
	12RB-High	2567.5	17.79	17.84	17.85
		2535	17.91	17.91	17.94
		2502.5	17.69	17.72	17.77

	12RB-Middle	2567.5	17.84	17.84	17.86	
		2535	17.93	17.92	17.97	
		2502.5	17.62	17.66	17.71	
	12RB-Low	2567.5	17.84	17.86	17.91	
		2535	17.95	17.94	17.96	
		2502.5	17.67	17.69	17.69	
	25RB	2567.5	17.86	17.87	17.84	
		2535	17.96	17.98	17.96	
		2502.5	17.67	17.70	17.71	
10MHz	1RB-High	2565	17.82	18.02	18.03	
		2535	17.93	18.13	18.09	
		2505	17.73	18.00	17.83	
	1RB-Middle	2565	17.90	18.10	18.06	
		2535	17.98	18.18	18.17	
		2505	17.71	18.03	17.85	
	1RB-Low	2565	17.83	18.21	18.04	
		2535	17.90	18.26	17.99	
		2505	17.60	17.97	17.74	
	25RB-High	2565	17.83	17.87	17.89	
		2535	17.95	18.00	17.97	
		2505	17.74	17.76	17.75	
	25RB-Middle	2565	17.85	17.90	17.88	
		2535	17.94	17.98	17.96	
		2505	17.70	17.70	17.67	
	25RB-Low	2565	17.93	17.99	17.97	
		2535	17.95	17.97	17.98	
		2505	17.65	17.65	17.64	
	50RB	2565	17.83	17.89	17.85	
		2535	17.91	17.97	17.97	
		2505	17.74	17.70	17.67	
	15MHz	1RB-High	2562.5	17.78	18.10	17.86
			2535	17.81	18.10	18.04
			2507.5	17.70	17.94	17.86
1RB-Middle		2562.5	17.85	18.21	18.05	
		2535	17.95	18.17	18.11	
		2507.5	17.64	18.03	17.92	
1RB-Low		2562.5	17.76	18.08	17.97	
		2535	17.91	18.19	18.12	
		2507.5	17.53	17.87	17.76	
36RB-High		2562.5	17.79	17.81	17.84	
		2535	17.87	17.90	17.99	
		2507.5	17.70	17.76	17.72	
36RB-Middle		2562.5	17.82	17.84	17.88	
		2535	17.89	17.91	17.95	
		2507.5	17.66	17.68	17.71	
36RB-Low		2562.5	17.90	17.90	17.91	
		2535	17.92	17.94	17.88	
		2507.5	17.63	17.61	17.69	
75RB		2562.5	17.82	17.86	17.82	
		2535	17.92	17.97	17.92	
		2507.5	17.68	17.69	17.68	
20MHz		1RB-High	2560	17.36	17.62	17.61
			2535	17.29	17.59	17.40
			2510	17.19	17.49	17.34
	1RB-Middle	2560	17.45	17.78	17.64	

	1RB-Low	2535	17.41	17.69	17.46
		2510	17.22	17.44	17.32
		2560	17.37	17.72	17.52
	50RB-High	2535	17.22	17.52	17.37
		2510	17.09	17.43	17.28
		2560	17.48	17.44	17.44
	50RB-Middle	2535	17.36	17.35	17.35
		2510	17.25	17.28	17.27
		2560	17.51	17.52	17.52
	50RB-Low	2535	17.43	17.39	17.42
		2510	17.22	17.23	17.23
		2560	17.52	17.53	17.54
	100RB	2535	17.40	17.34	17.38
		2510	17.24	17.20	17.22
		2560	17.47	17.47	17.51
		2535	17.35	17.37	17.38
		2510	17.26	17.21	17.25

**LTE Band7(ANT31 DSI2/3)**

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2567.5	23.47	22.62	21.60
		2535	23.20	22.36	21.26
		2502.5	23.42	22.54	21.43
	1RB-Middle	2567.5	23.49	22.63	21.60
		2535	23.24	22.39	21.30
		2502.5	23.45	22.67	21.58
	1RB-Low	2567.5	23.46	22.57	21.54
		2535	23.21	22.40	21.27
		2502.5	23.44	22.60	21.46
	12RB-High	2567.5	22.47	21.43	20.38
		2535	22.10	21.08	20.11
		2502.5	22.37	21.36	20.33
	12RB-Middle	2567.5	22.44	21.43	20.42
		2535	22.13	21.11	20.12
		2502.5	22.40	21.34	20.30
	12RB-Low	2567.5	22.48	21.43	20.40
		2535	22.16	21.13	20.15
		2502.5	22.41	21.37	20.37
	25RB	2567.5	22.47	21.49	20.39
		2535	22.16	21.14	20.12
		2502.5	22.38	21.39	20.32
10MHz	1RB-High	2565	23.46	22.59	21.45
		2535	23.21	22.43	21.28
		2505	23.32	22.54	21.36
	1RB-Middle	2565	23.48	22.65	21.53
		2535	23.24	22.36	21.20
		2505	23.42	22.53	21.54
	1RB-Low	2565	23.43	22.62	21.48
		2535	23.15	22.36	21.22
		2505	23.44	22.54	21.50
25RB-High	2565	22.44	21.47	20.42	
	2535	22.18	21.16	20.13	

	25RB-Middle	2505	22.32	21.33	20.27	
		2565	22.47	21.48	20.44	
		2535	22.14	21.16	20.12	
	25RB-Low	2505	22.33	21.34	20.30	
		2565	22.45	21.47	20.43	
		2535	22.13	21.14	20.11	
	50RB	2505	22.33	21.35	20.28	
		2565	22.45	21.39	20.40	
		2535	22.18	21.18	20.12	
	15MHz	1RB-High	2505	22.38	21.35	20.29
2562.5			23.41	22.64	21.46	
2535			23.17	22.39	21.22	
1RB-Middle		2507.5	23.19	22.39	21.29	
		2562.5	23.44	22.70	21.47	
		2535	23.20	22.37	21.28	
1RB-Low		2507.5	23.32	22.54	21.40	
		2562.5	23.28	22.46	21.33	
		2535	23.19	22.21	21.24	
36RB-High		2507.5	23.34	22.42	21.41	
		2562.5	22.37	21.38	20.34	
		2535	22.13	21.13	20.14	
36RB-Middle		2507.5	22.24	21.27	20.24	
		2562.5	22.39	21.38	20.37	
		2535	22.14	21.14	20.08	
36RB-Low		2507.5	22.26	21.25	20.27	
		2562.5	22.38	21.38	20.37	
		2535	22.15	21.11	20.11	
75RB		2507.5	22.27	21.29	20.32	
		2562.5	22.34	21.39	20.37	
		2535	22.11	21.13	20.15	
20MHz		1RB-High	2507.5	22.31	21.24	20.26
			2560	23.17	22.33	21.22
			2535	23.00	22.27	21.09
	1RB-Middle	2510	22.95	22.10	20.97	
		2560	23.21	22.42	21.31	
		2535	23.05	22.20	21.13	
	1RB-Low	2510	23.14	22.33	21.21	
		2560	23.16	22.19	21.16	
		2535	22.91	21.98	20.98	
	50RB-High	2510	23.09	22.20	21.15	
		2560	22.19	21.20	20.14	
		2535	21.98	20.97	19.92	
	50RB-Middle	2510	22.08	21.02	20.03	
		2560	22.19	21.22	20.20	
		2535	22.07	21.01	20.05	
	50RB-Low	2510	22.12	21.06	20.02	
		2560	22.25	21.26	20.21	
		2535	22.02	21.02	19.99	
	100RB	2510	22.11	21.10	20.05	
		2560	22.21	21.19	20.15	
		2535	21.98	20.99	19.95	
			2510	22.08	21.03	20.02

**LTE Band7(ANT31 DSI4)**

Band 7						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
5MHz	1RB-High	2567.5	21.42	21.70	21.55	
		2535	21.14	21.36	21.35	
		2502.5	21.35	21.51	21.53	
	1RB-Middle	2567.5	21.47	21.82	21.65	
		2535	21.20	21.43	21.32	
		2502.5	21.37	21.49	21.48	
	1RB-Low	2567.5	21.41	21.59	21.54	
		2535	21.17	21.35	21.31	
		2502.5	21.38	21.57	21.52	
	12RB-High	2567.5	21.43	21.47	20.39	
		2535	21.12	21.15	20.12	
		2502.5	21.36	21.36	20.36	
	12RB-Middle	2567.5	21.42	21.42	20.39	
		2535	21.11	21.16	20.11	
		2502.5	21.34	21.37	20.33	
	12RB-Low	2567.5	21.47	21.44	20.46	
		2535	21.17	21.15	20.16	
		2502.5	21.37	21.36	20.39	
	25RB	2567.5	21.45	21.45	20.40	
		2535	21.09	21.13	20.12	
		2502.5	21.34	21.39	20.33	
	10MHz	1RB-High	2565	21.42	21.61	21.56
			2535	21.15	21.43	21.22
			2505	21.26	21.47	21.42
1RB-Middle		2565	21.45	21.73	21.57	
		2535	21.18	21.47	21.33	
		2505	21.37	21.52	21.49	
1RB-Low		2565	21.36	21.61	21.50	
		2535	21.10	21.25	21.21	
		2505	21.35	21.43	21.46	
25RB-High		2565	21.45	21.47	20.43	
		2535	21.18	21.21	20.14	
		2505	21.34	21.36	20.31	
25RB-Middle		2565	21.42	21.48	20.44	
		2535	21.14	21.16	20.15	
		2505	21.31	21.34	20.32	
25RB-Low		2565	21.42	21.50	20.43	
		2535	21.11	21.16	20.11	
		2505	21.32	21.34	20.33	
50RB		2565	21.44	21.41	20.40	
		2535	21.18	21.18	20.13	
		2505	21.34	21.32	20.32	
15MHz		1RB-High	2562.5	21.33	21.56	21.43
			2535	21.04	21.33	21.21
			2507.5	21.12	21.38	21.22
	1RB-Middle	2562.5	21.39	21.63	21.53	
		2535	21.12	21.34	21.26	
		2507.5	21.23	21.61	21.42	
	1RB-Low	2562.5	21.22	21.40	21.32	
		2535	21.09	21.31	21.21	
		2507.5	21.25	21.50	21.39	



	36RB-High	2562.5	21.35	21.38	20.43
		2535	21.15	21.13	20.15
		2507.5	21.22	21.23	20.21
	36RB-Middle	2562.5	21.36	21.36	20.37
		2535	21.11	21.10	20.12
		2507.5	21.23	21.29	20.28
	36RB-Low	2562.5	21.34	21.37	20.36
		2535	21.04	21.11	20.11
		2507.5	21.25	21.24	20.28
	75RB	2562.5	21.38	21.38	20.32
		2535	21.15	21.14	20.10
		2507.5	21.28	21.25	20.25
20MHz	1RB-High	2560	21.11	21.37	21.32
		2535	20.88	21.11	21.00
		2510	20.91	21.03	21.04
	1RB-Middle	2560	21.16	21.42	21.33
		2535	20.99	21.23	21.17
		2510	21.07	21.30	21.29
	1RB-Low	2560	21.00	21.26	21.17
		2535	20.90	21.12	20.99
		2510	21.01	21.28	21.10
	50RB-High	2560	21.15	21.17	20.13
		2535	20.94	20.96	19.93
		2510	21.08	21.04	20.04
	50RB-Middle	2560	21.22	21.24	20.22
		2535	21.00	21.01	19.97
		2510	21.08	21.07	20.06
	50RB-Low	2560	21.25	21.23	20.22
		2535	21.04	21.03	20.03
		2510	21.08	21.10	20.07
	100RB	2560	21.15	21.18	20.13
		2535	21.02	20.98	20.00
		2510	21.06	21.03	20.05

**LTE Band7(ANT31 DSI8/9/10)**

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2567.5	20.13	20.34	20.24
		2535	19.87	20.10	20.03
		2502.5	20.06	20.31	20.16
	1RB-Middle	2567.5	20.18	20.32	20.32
		2535	19.91	20.02	20.09
		2502.5	20.16	20.29	20.26
	1RB-Low	2567.5	20.09	20.37	20.20
		2535	19.87	20.11	20.04
		2502.5	20.08	20.38	20.24
	12RB-High	2567.5	20.12	20.09	20.17
		2535	19.81	19.76	19.84
		2502.5	20.07	20.03	20.10
	12RB-Middle	2567.5	20.12	20.15	20.16
		2535	19.83	19.82	19.88
		2502.5	20.04	20.05	20.10
	12RB-Low	2567.5	20.14	20.18	20.16

	25RB	2535	19.90	19.88	19.90
		2502.5	20.07	20.10	20.10
		2567.5	20.10	20.17	20.17
		2535	19.89	19.89	19.86
		2502.5	20.08	20.09	20.09
10MHz	1RB-High	2565	20.13	20.42	20.24
		2535	19.82	20.15	19.97
		2505	19.97	20.27	20.11
	1RB-Middle	2565	20.10	20.44	20.29
		2535	19.91	20.12	20.05
		2505	20.07	20.33	20.26
	1RB-Low	2565	20.03	20.36	20.19
		2535	19.81	19.99	19.89
		2505	20.07	20.23	20.16
	25RB-High	2565	20.14	20.17	20.15
		2535	19.86	19.88	19.87
		2505	19.99	20.02	20.02
	25RB-Middle	2565	20.08	20.15	20.15
		2535	19.80	19.85	19.86
		2505	20.01	20.02	20.04
	25RB-Low	2565	20.15	20.16	20.17
		2535	19.80	19.86	19.86
		2505	20.02	20.06	20.05
	50RB	2565	20.14	20.13	20.14
		2535	19.86	19.88	19.90
		2505	20.06	20.08	20.07
15MHz	1RB-High	2562.5	20.05	20.34	20.22
		2535	19.76	20.13	19.93
		2507.5	19.80	20.08	19.95
	1RB-Middle	2562.5	20.07	20.28	20.20
		2535	19.81	20.14	20.04
		2507.5	19.93	20.16	20.13
	1RB-Low	2562.5	19.94	20.20	20.04
		2535	19.82	20.02	20.04
		2507.5	19.98	20.16	20.08
	36RB-High	2562.5	20.07	20.04	20.09
		2535	19.80	19.85	19.87
		2507.5	19.90	19.96	19.99
	36RB-Middle	2562.5	20.01	20.09	20.11
		2535	19.83	19.84	19.85
		2507.5	19.95	19.95	19.98
	36RB-Low	2562.5	20.03	20.10	20.11
		2535	19.79	19.83	19.83
		2507.5	20.01	20.02	20.00
	75RB	2562.5	20.07	20.07	20.09
		2535	19.82	19.85	19.86
		2507.5	19.99	19.97	20.00
20MHz	1RB-High	2560	20.09	20.30	20.19
		2535	19.86	20.16	20.04
		2510	19.88	20.10	19.97
	1RB-Middle	2560	20.11	20.40	20.31
		2535	20.00	20.15	20.17
	1RB-Low	2510	20.02	20.39	20.13
2560		19.96	20.18	20.26	
		2535	19.84	20.01	19.96

	50RB-High	2510	20.00	20.17	20.08
		2560	20.10	20.13	20.15
		2535	19.94	19.96	19.95
	50RB-Middle	2510	20.01	20.05	20.05
		2560	20.20	20.21	20.23
		2535	20.03	20.02	20.04
	50RB-Low	2510	20.06	20.07	20.07
		2560	20.18	20.20	20.24
		2535	20.01	20.00	20.02
	100RB	2510	20.03	20.10	20.08
		2560	20.16	20.16	20.15
		2535	20.01	19.97	19.98
		2510	20.03	20.06	20.00

**LTE Band12(ANT13 DSI2/3)**

		Band 12				
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	
1.4MHz	1RB-High	715.3	20.31	20.53	20.57	
		707.5	20.29	20.53	20.45	
		699.7	20.38	20.74	20.62	
	1RB-Middle	715.3	20.39	20.56	20.55	
		707.5	20.31	20.55	20.49	
		699.7	20.37	20.70	20.61	
	1RB-Low	715.3	20.34	20.64	20.48	
		707.5	20.34	20.69	20.49	
		699.7	20.41	20.66	20.64	
	3RB-High	715.3	20.37	20.40	20.50	
		707.5	20.33	20.32	20.46	
		699.7	20.41	20.40	20.51	
	3RB-Middle	715.3	20.37	20.39	20.47	
		707.5	20.33	20.35	20.43	
		699.7	20.37	20.46	20.51	
	3RB-Low	715.3	20.35	20.30	20.44	
		707.5	20.33	20.38	20.44	
		699.7	20.40	20.46	20.49	
	6RB	715.3	20.41	20.48	20.40	
		707.5	20.33	20.39	20.29	
		699.7	20.45	20.47	20.42	
	3MHz	1RB-High	714.5	20.32	20.54	20.48
			707.5	20.24	20.53	20.41
			700.5	20.39	20.62	20.64
1RB-Middle		714.5	20.35	20.62	20.55	
		707.5	20.38	20.70	20.53	
		700.5	20.43	20.71	20.68	
1RB-Low		714.5	20.35	20.59	20.51	
		707.5	20.34	20.67	20.51	
		700.5	20.43	20.69	20.62	
8RB-High		714.5	20.33	20.43	20.38	
		707.5	20.29	20.42	20.37	
		700.5	20.39	20.49	20.50	
8RB-Middle		714.5	20.30	20.38	20.37	
		707.5	20.32	20.42	20.39	
		700.5	20.36	20.52	20.49	

	8RB-Low	714.5	20.39	20.47	20.43	
		707.5	20.29	20.36	20.39	
		700.5	20.36	20.51	20.50	
	15RB	714.5	20.31	20.37	20.30	
		707.5	20.30	20.33	20.26	
		700.5	20.40	20.47	20.45	
5MHz	1RB-High	713.5	20.39	20.55	20.55	
		707.5	20.32	20.43	20.48	
		701.5	20.44	20.64	20.58	
	1RB-Middle	713.5	20.42	20.70	20.56	
		707.5	20.38	20.57	20.56	
		701.5	20.44	20.58	20.69	
	1RB-Low	713.5	20.40	20.65	20.57	
		707.5	20.39	20.68	20.50	
		701.5	20.44	20.59	20.55	
	12RB-High	713.5	20.26	20.24	20.29	
		707.5	20.31	20.32	20.31	
		701.5	20.44	20.43	20.45	
	12RB-Middle	713.5	20.40	20.35	20.43	
		707.5	20.34	20.36	20.40	
		701.5	20.37	20.44	20.45	
	12RB-Low	713.5	20.37	20.40	20.41	
		707.5	20.36	20.36	20.38	
		701.5	20.34	20.43	20.41	
	25RB	713.5	20.33	20.33	20.37	
		707.5	20.30	20.34	20.37	
		701.5	20.36	20.45	20.45	
	10MHz	1RB-High	711	20.37	20.64	20.48
			707.5	20.33	20.56	20.41
			704	20.35	20.63	20.50
1RB-Middle		711	20.41	20.59	20.47	
		707.5	20.52	20.78	20.62	
		704	20.54	20.66	20.65	
1RB-Low		711	20.46	20.61	20.47	
		707.5	20.46	20.71	20.60	
		704	20.51	20.73	20.71	
25RB-High		711	20.32	20.36	20.32	
		707.5	20.38	20.40	20.36	
		704	20.48	20.49	20.49	
25RB-Middle		711	20.37	20.40	20.43	
		707.5	20.42	20.45	20.48	
		704	20.42	20.50	20.49	
25RB-Low		711	20.42	20.45	20.48	
		707.5	20.42	20.47	20.43	
		704	20.31	20.35	20.38	
50RB		711	20.36	20.42	20.40	
		707.5	20.38	20.43	20.41	
		704	20.39	20.42	20.45	

**LTE Band12(ANT13 DSI4/10)**

Band 12					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM

1.4MHz	1RB-High	715.3	23.26	22.65	21.54	
		707.5	23.17	22.54	21.55	
		699.7	23.31	22.73	21.55	
	1RB-Middle	715.3	23.25	22.61	21.54	
		707.5	23.20	22.54	21.54	
		699.7	23.32	22.73	21.61	
	1RB-Low	715.3	23.23	22.49	21.55	
		707.5	23.23	22.67	21.56	
		699.7	23.36	22.72	21.62	
	3RB-High	715.3	23.31	22.46	21.48	
		707.5	23.20	22.33	21.39	
		699.7	23.32	22.57	21.56	
	3RB-Middle	715.3	23.29	22.52	21.45	
		707.5	23.20	22.40	21.48	
		699.7	23.37	22.56	21.54	
	3RB-Low	715.3	23.25	22.45	21.46	
		707.5	23.21	22.39	21.43	
		699.7	23.38	22.51	21.55	
	6RB	715.3	22.44	21.49	20.35	
		707.5	22.37	21.39	20.31	
		699.7	22.52	21.54	20.46	
	3MHz	1RB-High	714.5	23.24	22.54	21.56
			707.5	23.15	22.46	21.43
			700.5	23.31	22.69	21.58
		1RB-Middle	714.5	23.28	22.63	21.56
			707.5	23.28	22.62	21.49
			700.5	23.42	22.70	21.65
1RB-Low		714.5	23.18	22.54	21.47	
		707.5	23.23	22.51	21.55	
		700.5	23.36	22.71	21.65	
8RB-High		714.5	22.36	21.43	20.40	
		707.5	22.31	21.40	20.35	
		700.5	22.47	21.50	20.49	
8RB-Middle		714.5	22.38	21.43	20.36	
		707.5	22.36	21.43	20.37	
		700.5	22.45	21.49	20.47	
8RB-Low		714.5	22.41	21.48	20.46	
		707.5	22.39	21.40	20.38	
		700.5	22.49	21.52	20.53	
15RB		714.5	22.35	21.40	20.32	
		707.5	22.34	21.36	20.31	
		700.5	22.43	21.49	20.42	
5MHz		1RB-High	713.5	23.29	22.58	21.55
			707.5	23.20	22.50	21.44
			701.5	23.35	22.64	21.65
		1RB-Middle	713.5	23.32	22.62	21.57
			707.5	23.32	22.53	21.53
			701.5	23.38	22.60	21.71
	1RB-Low	713.5	23.27	22.61	21.54	
		707.5	23.29	22.57	21.58	
		701.5	23.38	22.60	21.62	
	12RB-High	713.5	22.29	21.28	20.28	
		707.5	22.33	21.33	20.34	
		701.5	22.50	21.47	20.44	
	12RB-Middle	713.5	22.40	21.42	20.43	

	12RB-Low	707.5	22.42	21.31	20.39	
		701.5	22.47	21.43	20.46	
		713.5	22.40	21.39	20.40	
	25RB	707.5	22.39	21.38	20.40	
		701.5	22.45	21.41	20.41	
		713.5	22.37	21.37	20.31	
		707.5	22.36	21.35	20.34	
	10MHz	1RB-High	701.5	22.47	21.45	20.47
			711	23.30	22.65	21.53
			707.5	23.22	22.59	21.47
1RB-Middle		704	23.29	22.63	21.53	
		711	23.33	22.60	21.49	
		707.5	23.42	22.77	21.58	
1RB-Low		704	23.49	22.81	21.68	
		711	23.35	22.71	21.63	
		707.5	23.39	22.74	21.63	
25RB-High		704	23.50	22.68	21.69	
		711	22.36	21.33	20.32	
		707.5	22.43	21.44	20.40	
25RB-Middle		704	22.54	21.53	20.49	
		711	22.39	21.45	20.44	
		707.5	22.45	21.50	20.49	
25RB-Low		704	22.55	21.54	20.53	
		711	22.47	21.51	20.48	
		707.5	22.49	21.52	20.47	
50RB		704	22.38	21.41	20.40	
		711	22.41	21.41	20.42	
		707.5	22.46	21.42	20.40	
			704	22.49	21.50	20.46

**LTE Band12(ANT41 DSI2/3/4/10)**

Band 12					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	715.3	23.24	22.56	21.52
		707.5	23.18	22.58	21.42
		699.7	23.34	22.66	21.66
	1RB-Middle	715.3	23.20	22.56	21.53
		707.5	23.21	22.56	21.44
		699.7	23.36	22.70	21.63
	1RB-Low	715.3	23.25	22.53	21.55
		707.5	23.23	22.52	21.57
		699.7	23.31	22.68	21.65
	3RB-High	715.3	23.23	22.35	21.46
		707.5	23.17	22.38	21.43
		699.7	23.33	22.52	21.51
	3RB-Middle	715.3	23.23	22.37	21.44
		707.5	23.19	22.32	21.40
		699.7	23.34	22.55	21.60
	3RB-Low	715.3	23.21	22.35	21.39
		707.5	23.20	22.43	21.43
		699.7	23.31	22.54	21.57
	6RB	715.3	22.38	21.47	20.35
		707.5	22.37	21.42	20.25

		699.7	22.53	21.56	20.44
3MHz	1RB-High	714.5	23.24	22.60	21.52
		707.5	23.13	22.49	21.45
		700.5	23.29	22.67	21.52
	1RB-Middle	714.5	23.26	22.50	21.48
		707.5	23.29	22.60	21.50
		700.5	23.39	22.74	21.63
	1RB-Low	714.5	23.19	22.55	21.50
		707.5	23.24	22.54	21.47
		700.5	23.37	22.77	21.67
	8RB-High	714.5	22.33	21.43	20.33
		707.5	22.33	21.40	20.33
		700.5	22.47	21.53	20.46
	8RB-Middle	714.5	22.36	21.41	20.33
		707.5	22.35	21.44	20.34
		700.5	22.44	21.53	20.46
	8RB-Low	714.5	22.40	21.40	20.43
		707.5	22.37	21.42	20.35
		700.5	22.46	21.52	20.49
	15RB	714.5	22.31	21.35	20.31
		707.5	22.34	21.41	20.35
		700.5	22.42	21.48	20.42
5MHz	1RB-High	713.5	23.26	22.57	21.49
		707.5	23.22	22.46	21.38
		701.5	23.36	22.66	21.52
	1RB-Middle	713.5	23.32	22.53	21.51
		707.5	23.24	22.65	21.58
		701.5	23.38	22.57	21.61
	1RB-Low	713.5	23.26	22.52	21.52
		707.5	23.28	22.55	21.57
		701.5	23.39	22.62	21.60
	12RB-High	713.5	22.23	21.22	20.23
		707.5	22.32	21.29	20.36
		701.5	22.48	21.42	20.44
	12RB-Middle	713.5	22.40	21.37	20.39
		707.5	22.36	21.39	20.40
		701.5	22.46	21.48	20.47
	12RB-Low	713.5	22.39	21.34	20.40
		707.5	22.41	21.39	20.43
		701.5	22.41	21.36	20.39
	25RB	713.5	22.29	21.32	20.30
		707.5	22.36	21.40	20.34
		701.5	22.42	21.48	20.41
10MHz	1RB-High	711	23.19	22.50	21.45
		707.5	23.17	22.55	21.42
		704	23.21	22.52	21.41
	1RB-Middle	711	23.28	22.62	21.51
		707.5	23.37	22.71	21.62
		704	23.37	22.63	21.63
	1RB-Low	711	23.26	22.63	21.57
		707.5	23.30	22.70	21.51
		704	23.40	22.68	21.57
	25RB-High	711	22.31	21.32	20.31
		707.5	22.42	21.42	20.37
		704	22.42	21.43	20.39

	25RB-Middle	711	22.36	21.35	20.35
		707.5	22.44	21.44	20.43
		704	22.44	21.49	20.46
	25RB-Low	711	22.29	21.34	20.30
		707.5	22.40	21.40	20.38
		704	22.50	21.52	20.49
	50RB	711	22.37	21.32	20.33
		707.5	22.37	21.35	20.33
		704	22.44	21.38	20.42

**LTE Band13(ANT13 DSI2/3)**

Band 13					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5 MHz	1RB-High	784.5	20.60	20.83	20.74
		782	20.56	20.73	20.72
		779.5	20.68	20.98	20.80
	1RB-Middle	784.5	20.64	20.79	20.72
		782	20.71	21.06	20.84
		779.5	20.70	21.04	20.93
	1RB-Low	784.5	20.70	21.02	20.83
		782	20.73	21.02	20.85
		779.5	20.77	21.18	20.99
	12RB-High	784.5	20.45	20.47	20.47
		782	20.62	20.57	20.63
		779.5	20.84	20.80	20.82
	12RB-Middle	784.5	20.59	20.57	20.59
		782	20.60	20.62	20.63
		779.5	20.64	20.66	20.71
	12RB-Low	784.5	20.59	20.55	20.61
		782	20.53	20.51	20.53
		779.5	20.62	20.63	20.67
	25RB	784.5	20.51	20.55	20.53
		782	20.54	20.58	20.57
		779.5	20.74	20.77	20.81
10 MHz	1RB-High	782	20.63	20.82	20.66
	1RB-Middle	782	20.75	21.06	20.88
	1RB-Low	782	20.89	21.24	20.98
	25RB-High	782	20.54	20.57	20.58
	25RB-Middle	782	20.70	20.72	20.71
	25RB-Low	782	20.49	20.49	20.53
	50RB	782	20.55	20.50	20.52

**LTE Band13(ANT13 DSI4/10)**

Band 13			
Bandwidth (MHz)	RB allocation	Frequency	Actual output power (dBm)



	RB offset (Start RB)	(MHz)	QPSK	16QAM	64QAM
5 MHz	1RB-High	784.5	23.50	22.59	21.77
		782	23.46	22.66	21.73
		779.5	23.56	22.80	21.89
	1RB-Middle	784.5	23.53	22.58	21.77
		782	23.57	22.85	21.85
		779.5	23.59	22.82	21.89
	1RB-Low	784.5	23.56	22.81	21.85
		782	23.63	22.85	21.96
		779.5	23.70	22.99	21.87
	12RB-High	784.5	22.30	21.46	20.47
		782	22.41	21.62	20.64
		779.5	22.67	21.82	20.84
	12RB-Middle	784.5	22.44	21.59	20.65
		782	22.49	21.61	20.63
		779.5	22.54	21.71	20.68
	12RB-Low	784.5	22.44	21.58	20.61
		782	22.41	21.52	20.52
		779.5	22.49	21.65	20.65
25RB	784.5	22.37	21.53	20.51	
	782	22.40	21.63	20.59	
	779.5	22.60	21.75	20.77	
10 MHz	1RB-High	782	23.53	22.60	21.75
	1RB-Middle	782	23.65	22.96	21.87
	1RB-Low	782	23.78	23.04	21.96
	25RB-High	782	22.38	21.58	20.53
	25RB-Middle	782	22.59	21.70	20.74
	25RB-Low	782	22.36	21.49	20.54
	50RB	782	22.37	21.49	20.55

**LTE Band13(ANT41 DSI2/3/4/10)**

Band 13					
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset (Start RB)		QPSK	16QAM	64QAM
5 MHz	1RB-High	784.5	23.50	22.54	21.77
		782	23.44	22.70	21.73
		779.5	23.56	22.84	21.91
	1RB-Middle	784.5	23.53	22.58	21.74
		782	23.59	22.86	21.76
		779.5	23.64	22.87	21.93
	1RB-Low	784.5	23.57	22.82	21.87
		782	23.65	22.91	21.91
		779.5	23.69	22.85	21.91
	12RB-High	784.5	22.31	21.51	20.50
		782	22.46	21.58	20.64
		779.5	22.68	21.83	20.82
	12RB-Middle	784.5	22.43	21.60	20.60
		782	22.46	21.61	20.62
		779.5	22.54	21.71	20.71
	12RB-Low	784.5	22.43	21.62	20.57
		782	22.39	21.52	20.55
		779.5	22.50	21.66	20.65
25RB	784.5	22.40	21.56	20.50	
	782	22.46	21.60	20.58	

		779.5	22.58	21.77	20.79
10 MHz	1RB-High	782	23.46	22.57	21.71
	1RB-Middle	782	23.62	22.77	21.91
	1RB-Low	782	23.71	22.89	21.93
	25RB-High	782	22.40	21.59	20.58
	25RB-Middle	782	22.51	21.70	20.70
	25RB-Low	782	22.37	21.48	20.55
	50RB	782	22.39	21.54	20.55

**LTE Band38(ANT13 DSI2/3)**

Band 38						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
5MHz	1RB-High	2617.5	18.19	18.34	18.07	
		2595	18.20	18.31	18.09	
		2572.5	18.09	18.23	17.98	
	1RB-Middle	2617.5	18.20	18.31	18.06	
		2595	18.24	18.34	18.11	
		2572.5	18.15	18.27	18.03	
	1RB-Low	2617.5	18.20	18.33	18.08	
		2595	18.23	18.32	18.12	
		2572.5	18.15	18.25	18.01	
	12RB-High	2617.5	18.11	18.13	18.18	
		2595	18.12	18.14	18.18	
		2572.5	18.06	18.04	18.10	
	12RB-Middle	2617.5	18.09	18.10	18.13	
		2595	18.14	18.12	18.19	
		2572.5	18.04	18.04	18.07	
	12RB-Low	2617.5	18.14	18.14	18.18	
		2595	18.15	18.17	18.20	
		2572.5	18.06	18.05	18.11	
	25RB	2617.5	18.08	18.15	18.16	
		2595	18.16	18.18	18.20	
		2572.5	18.02	18.09	18.10	
	10MHz	1RB-High	2615	18.12	18.30	18.02
			2595	18.14	18.30	18.03
			2575	18.09	18.24	17.97
		1RB-Middle	2615	18.16	18.35	18.06
			2595	18.17	18.35	18.08
			2575	18.10	18.29	18.00
1RB-Low		2615	18.20	18.38	18.10	
		2595	18.23	18.38	18.10	
		2575	18.14	18.30	18.02	
25RB-High		2615	18.07	18.13	18.16	
		2595	18.09	18.12	18.16	
		2575	18.04	18.07	18.11	
25RB-Middle		2615	18.10	18.13	18.15	
		2595	18.12	18.13	18.19	
		2575	18.05	18.10	18.13	
25RB-Low		2615	18.13	18.19	18.22	
		2595	18.15	18.19	18.25	
		2575	18.03	18.10	18.13	
50RB		2615	18.13	18.16	18.16	

		2595	18.14	18.17	18.15
		2575	18.09	18.12	18.09
15MHz	1RB-High	2612.5	18.04	18.22	17.96
		2595	18.06	18.23	17.98
		2577.5	18.05	18.18	17.95
	1RB-Middle	2612.5	18.12	18.30	18.03
		2595	18.17	18.31	18.08
		2577.5	18.08	18.24	17.98
	1RB-Low	2612.5	18.13	18.31	18.04
		2595	18.09	18.28	18.02
		2577.5	18.04	18.22	17.98
	36RB-High	2612.5	18.03	18.02	18.04
		2595	18.07	18.07	18.07
		2577.5	18.04	18.05	18.08
	36RB-Middle	2612.5	18.12	18.08	18.11
		2595	18.12	18.11	18.16
		2577.5	18.09	18.05	18.08
	36RB-Low	2612.5	18.14	18.14	18.17
		2595	18.13	18.13	18.15
		2577.5	18.06	18.06	18.11
75RB	2612.5	18.12	18.13	18.14	
	2595	18.12	18.12	18.15	
	2577.5	18.09	18.09	18.09	
20MHz	1RB-High	2610	18.16	18.17	17.76
		2595	18.08	18.10	17.68
		2580	18.15	18.18	17.81
	1RB-Middle	2610	18.22	18.23	17.83
		2595	18.27	18.27	17.86
		2580	18.33	18.31	17.96
	1RB-Low	2610	18.18	18.21	17.82
		2595	18.23	18.19	17.78
		2580	18.16	18.16	17.77
	50RB-High	2610	18.18	18.20	18.18
		2595	18.13	18.12	18.14
		2580	18.15	18.13	18.16
	50RB-Middle	2610	18.23	18.25	18.21
		2595	18.21	18.21	18.20
		2580	18.18	18.23	18.22
	50RB-Low	2610	18.20	18.26	18.23
		2595	18.20	18.23	18.22
		2580	18.27	18.34	18.30
100RB	2610	18.18	18.20	18.18	
	2595	18.17	18.13	18.23	
	2580	18.19	18.20	18.20	

**LTE Band38(ANT13 DSI4)**

		Band 38			
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset		QPSK	16QAM	64QAM
5MHz	1RB-High	2617.5	23.31	22.39	21.17
		2595	23.32	22.38	21.18
		2572.5	23.22	22.32	21.09
	1RB-Middle	2617.5	23.36	22.42	21.20
		2595	23.36	22.42	21.25

	1RB-Low	2572.5	23.29	22.34	21.16	
		2617.5	23.33	22.38	21.20	
		2595	23.35	22.42	21.23	
	12RB-High	2572.5	23.25	22.32	21.14	
		2617.5	22.21	21.21	20.24	
		2595	22.21	21.23	20.24	
	12RB-Middle	2572.5	22.15	21.14	20.17	
		2617.5	22.21	21.21	20.26	
		2595	22.24	21.25	20.28	
	12RB-Low	2572.5	22.13	21.16	20.16	
		2617.5	22.25	21.24	20.27	
		2595	22.29	21.29	20.31	
	25RB	2572.5	22.16	21.16	20.20	
		2617.5	22.22	21.25	20.26	
		2595	22.26	21.29	20.28	
10MHz	1RB-High	2572.5	22.16	21.20	20.19	
		2615	23.28	22.36	21.15	
		2595	23.26	22.37	21.14	
	1RB-Middle	2575	23.20	22.33	21.09	
		2615	23.30	22.43	21.21	
		2595	23.33	22.45	21.22	
	1RB-Low	2575	23.26	22.38	21.16	
		2615	23.33	22.42	21.22	
		2595	23.34	22.46	21.24	
	25RB-High	2575	23.25	22.36	21.14	
		2615	22.21	21.25	20.27	
		2595	22.20	21.24	20.25	
	25RB-Middle	2575	22.16	21.20	20.21	
		2615	22.20	21.22	20.24	
		2595	22.22	21.25	20.26	
	25RB-Low	2575	22.18	21.22	20.20	
		2615	22.25	21.29	20.31	
		2595	22.27	21.31	20.31	
	50RB	2575	22.16	21.20	20.20	
		2615	22.26	21.28	20.25	
		2595	22.27	21.28	20.23	
	15MHz	1RB-High	2575	22.20	21.24	20.17
			2612.5	23.19	22.29	21.10
			2595	23.20	22.30	21.10
		1RB-Middle	2577.5	23.19	22.29	21.07
			2612.5	23.26	22.37	21.17
			2595	23.32	22.42	21.22
1RB-Low		2577.5	23.21	22.34	21.13	
		2612.5	23.25	22.36	21.16	
		2595	23.23	22.35	21.15	
36RB-High		2577.5	23.19	22.31	21.10	
		2612.5	22.15	21.15	20.13	
		2595	22.16	21.17	20.16	
36RB-Middle		2577.5	22.16	21.15	20.16	
		2612.5	22.22	21.20	20.20	
		2595	22.23	21.22	20.23	
36RB-Low		2577.5	22.17	21.18	20.16	
		2612.5	22.25	21.23	20.25	
		2595	22.23	21.22	20.21	
			2577.5	22.18	21.17	20.17

	75RB	2612.5	22.23	21.25	20.22
		2595	22.22	21.23	20.22
		2577.5	22.20	21.20	20.18
20MHz	1RB-High	2610	23.10	22.06	20.69
		2595	23.03	22.00	20.66
		2580	23.08	22.07	20.69
	1RB-Middle	2610	23.28	22.18	20.85
		2595	23.25	22.19	20.84
		2580	23.26	22.14	20.78
	1RB-Low	2610	23.13	22.12	20.76
		2595	23.16	22.08	20.73
		2580	23.12	22.09	20.73
	50RB-High	2610	22.11	21.12	20.07
		2595	22.06	21.07	20.04
		2580	22.10	21.10	20.08
	50RB-Middle	2610	22.15	21.17	20.13
		2595	22.14	21.15	20.13
		2580	22.15	21.16	20.12
	50RB-Low	2610	22.17	21.19	20.13
		2595	22.16	21.18	20.14
		2580	22.15	21.16	20.12
	100RB	2610	22.13	21.13	20.09
		2595	22.11	21.12	20.10
		2580	22.11	21.13	20.11

**LTE Band38(ANT13 DSI8/9/10)**

Band 38						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
5MHz	1RB-High	2617.5	21.67	21.80	21.10	
		2595	21.67	21.82	21.09	
		2572.5	21.60	21.73	21.02	
	1RB-Middle	2617.5	21.72	21.84	21.14	
		2595	21.76	21.84	21.17	
		2572.5	21.65	21.78	21.08	
	1RB-Low	2617.5	21.68	21.81	21.12	
		2595	21.73	21.83	21.15	
		2572.5	21.61	21.75	21.04	
	12RB-High	2617.5	21.62	21.12	20.18	
		2595	21.63	21.13	20.17	
		2572.5	21.54	21.06	20.08	
	12RB-Middle	2617.5	21.62	21.11	20.15	
		2595	21.67	21.16	20.18	
		2572.5	21.55	21.05	20.07	
	12RB-Low	2617.5	21.65	21.16	20.19	
		2595	21.69	21.20	20.22	
		2572.5	21.57	21.07	20.12	
	25RB	2617.5	21.63	21.15	20.18	
		2595	21.66	21.20	20.20	
		2572.5	21.56	21.10	20.08	
	10MHz	1RB-High	2615	21.61	21.78	21.07
			2595	21.61	21.79	21.06
			2575	21.56	21.75	20.99
		1RB-Middle	2615	21.68	21.84	21.12

	1RB-Low	2595	21.70	21.87	21.12
		2575	21.62	21.78	21.04
		2615	21.68	21.85	21.14
	25RB-High	2595	21.71	21.87	21.15
		2575	21.61	21.78	21.04
		2615	21.61	21.16	20.19
	25RB-Middle	2595	21.61	21.14	20.16
		2575	21.57	21.11	20.12
		2615	21.61	21.16	20.15
	25RB-Low	2595	21.64	21.17	20.19
		2575	21.58	21.13	20.11
		2615	21.66	21.20	20.21
	50RB	2595	21.67	21.22	20.22
		2575	21.56	21.10	20.11
		2615	21.67	21.18	20.16
15MHz	1RB-High	2612.5	21.67	21.18	20.16
		2595	21.65	21.20	20.15
		2577.5	21.61	21.14	20.08
	1RB-Middle	2612.5	21.54	21.74	21.02
		2595	21.54	21.71	21.02
		2577.5	21.53	21.72	20.99
	1RB-Low	2612.5	21.61	21.80	21.10
		2595	21.66	21.85	21.14
		2577.5	21.58	21.77	21.04
	36RB-High	2612.5	21.62	21.80	21.08
		2595	21.61	21.79	21.07
		2577.5	21.53	21.75	21.02
	36RB-Middle	2612.5	21.54	21.04	20.05
		2595	21.56	21.08	20.08
		2577.5	21.57	21.07	20.08
36RB-Low	2612.5	21.61	21.13	20.11	
	2595	21.62	21.14	20.13	
	2577.5	21.56	21.08	20.08	
75RB	2612.5	21.65	21.15	20.17	
	2595	21.62	21.14	20.14	
	2577.5	21.56	21.09	20.08	
20MHz	1RB-High	2612.5	21.65	21.16	20.14
		2595	21.62	21.15	20.12
		2577.5	21.61	21.13	20.09
	1RB-Middle	2610	21.54	21.54	20.66
		2595	21.45	21.48	20.62
		2580	21.52	21.52	20.67
	1RB-Low	2610	21.61	21.62	20.76
		2595	21.68	21.66	20.82
		2580	21.67	21.67	20.82
	50RB-High	2610	21.58	21.57	20.73
		2595	21.58	21.57	20.73
		2580	21.53	21.54	20.70
	50RB-Middle	2610	21.57	21.08	20.05
		2595	21.52	21.05	20.01
		2580	21.57	21.07	20.06
50RB-Low	2610	21.62	21.14	20.11	
	2595	21.60	21.12	20.09	
	2580	21.61	21.13	20.08	
		2610	21.62	21.15	20.10
		2595	21.64	21.17	20.11

	100RB	2580	21.61	21.14	20.10
		2610	21.58	21.09	20.06
		2595	21.59	21.11	20.08
		2580	21.58	21.09	20.07

**LTE Band38(ANT31 DSI2/3/4/10)**

Band 38						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
5MHz	1RB-High	2617.5	23.21	22.27	21.06	
		2595	23.36	22.42	21.21	
		2572.5	23.37	22.45	21.25	
	1RB-Middle	2617.5	23.25	22.31	21.13	
		2595	23.44	22.48	21.31	
		2572.5	23.41	22.48	21.27	
	1RB-Low	2617.5	23.23	22.29	21.11	
		2595	23.42	22.48	21.29	
		2572.5	23.38	22.43	21.25	
	12RB-High	2617.5	22.11	21.11	20.16	
		2595	22.27	21.26	20.31	
		2572.5	22.29	21.27	20.31	
		2617.5	22.13	21.11	20.14	
		2595	22.31	21.30	20.34	
		2572.5	22.26	21.28	20.28	
	12RB-Middle	2617.5	22.13	21.15	20.19	
		2595	22.35	21.32	20.36	
		2572.5	22.31	21.30	20.32	
	12RB-Low	2617.5	22.12	21.16	20.15	
		2595	22.30	21.34	20.34	
		2572.5	22.27	21.34	20.30	
	25RB	2617.5	22.12	21.16	20.15	
		2595	22.30	21.34	20.34	
		2572.5	22.27	21.34	20.30	
10MHz	1RB-High	2615	23.18	22.25	21.04	
		2595	23.31	22.39	21.16	
		2575	23.34	22.46	21.21	
	1RB-Middle	2615	23.22	22.33	21.10	
		2595	23.40	22.51	21.28	
		2575	23.40	22.51	21.27	
	1RB-Low	2615	23.27	22.37	21.14	
		2595	23.44	22.55	21.32	
		2575	23.37	22.49	21.23	
	25RB-High	2615	22.09	21.14	20.15	
		2595	22.26	21.28	20.29	
		2575	22.31	21.34	20.33	
	25RB-Middle	2615	22.11	21.14	20.15	
		2595	22.28	21.31	20.31	
		2575	22.30	21.35	20.34	
	25RB-Low	2615	22.17	21.22	20.21	
		2595	22.34	21.39	20.38	
		2575	22.29	21.33	20.32	
	50RB	2615	22.16	21.19	20.13	
		2595	22.32	21.33	20.27	
		2575	22.34	21.37	20.31	
	15MHz	1RB-High	2612.5	23.09	22.19	20.97
			2595	23.19	22.30	21.10
			2577.5	23.30	22.42	21.20

	1RB-Middle	2612.5	23.17	22.31	21.07	
		2595	23.36	22.48	21.27	
		2577.5	23.34	22.48	21.27	
	1RB-Low	2612.5	23.20	22.33	21.12	
		2595	23.34	22.46	21.24	
		2577.5	23.30	22.43	21.23	
	36RB-High	2612.5	22.04	21.05	20.04	
		2595	22.19	21.21	20.20	
		2577.5	22.31	21.29	20.30	
	36RB-Middle	2612.5	22.14	21.13	20.14	
		2595	22.29	21.30	20.30	
		2577.5	22.32	21.31	20.31	
	36RB-Low	2612.5	22.20	21.20	20.22	
		2595	22.31	21.31	20.33	
		2577.5	22.32	21.30	20.29	
	75RB	2612.5	22.16	21.19	20.16	
		2595	22.27	21.28	20.28	
		2577.5	22.33	21.34	20.34	
	20MHz	1RB-High	2610	22.97	21.93	20.57
			2595	22.96	21.92	20.57
			2580	23.12	22.06	20.74
		1RB-Middle	2610	23.09	22.02	20.68
			2595	23.22	22.16	20.81
			2580	23.28	22.24	20.88
		1RB-Low	2610	23.11	22.05	20.69
			2595	23.20	22.12	20.78
			2580	23.18	22.10	20.77
50RB-High		2610	21.96	20.98	19.94	
		2595	22.02	21.02	19.99	
		2580	22.14	21.16	20.12	
50RB-Middle		2610	22.05	21.06	20.04	
		2595	22.13	21.13	20.10	
		2580	22.19	21.21	20.17	
50RB-Low		2610	22.07	21.10	20.06	
		2595	22.17	21.19	20.14	
		2580	22.20	21.21	20.17	
100RB		2610	22.00	21.02	19.99	
		2595	22.08	21.10	20.06	
		2580	22.15	21.17	20.11	

**LTE Band41(ANT13 DSI2/3)**

		Band 41			
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset		QPSK	16QAM	64QAM
5MHz	1RB-High	2687.5	16.75	16.77	16.40
		2640.3	16.92	16.93	16.59
		2593	16.93	16.93	16.60
		2545.8	16.99	16.97	16.65
		2498.5	16.65	16.62	16.33
	1RB-Middle	2687.5	16.78	16.77	16.38
		2640.3	16.95	16.93	16.62
		2593	16.99	16.93	16.66
		2545.8	17.03	17.00	16.69
		2498.5	16.63	16.57	16.30



	1RB-Low	2687.5	16.78	16.76	16.40
		2640.3	16.98	16.96	16.64
		2593	16.98	16.95	16.64
		2545.8	16.99	16.95	16.67
		2498.5	16.60	16.55	16.25
	12RB-High	2687.5	16.71	16.64	16.72
		2640.3	16.89	16.84	16.93
		2593	16.84	16.80	16.88
		2545.8	16.94	16.90	16.97
		2498.5	16.53	16.50	16.57
	12RB-Middle	2687.5	16.72	16.68	16.76
		2640.3	16.86	16.83	16.92
		2593	16.87	16.82	16.90
		2545.8	16.94	16.89	16.99
		2498.5	16.52	16.48	16.57
	12RB-Low	2687.5	16.70	16.65	16.76
		2640.3	16.91	16.87	16.96
		2593	16.89	16.84	16.93
		2545.8	16.92	16.88	16.97
		2498.5	16.53	16.48	16.57
25RB	2687.5	16.71	16.75	16.79	
	2640.3	16.90	16.94	16.98	
	2593	16.88	16.92	16.93	
	2545.8	16.91	16.96	16.99	
	2498.5	16.53	16.58	16.60	
10MHz	1RB-High	2685	16.73	16.75	16.36
		2639	16.87	16.86	16.53
		2593	16.90	16.89	16.56
		2547	16.90	16.90	16.56
		2501	16.65	16.64	16.34
	1RB-Middle	2685	16.74	16.76	16.38
		2639	16.93	16.95	16.60
		2593	16.93	16.95	16.62
		2547	17.00	16.98	16.65
		2501	16.61	16.61	16.29
	1RB-Low	2685	16.72	16.74	16.36
		2639	16.96	16.96	16.61
		2593	16.90	16.92	16.57
		2547	16.97	16.99	16.65
		2501	16.55	16.53	16.22
	25RB-High	2685	16.69	16.76	16.77
		2639	16.86	16.89	16.93
		2593	16.86	16.87	16.91
		2547	16.86	16.94	16.98
		2501	16.56	16.62	16.66
25RB-Middle	2685	16.70	16.74	16.78	
	2639	16.89	16.91	16.96	
	2593	16.85	16.87	16.90	
	2547	16.95	16.96	17.00	
	2501	16.51	16.59	16.61	
25RB-Low	2685	16.68	16.71	16.76	
	2639	16.93	16.97	17.00	
	2593	16.84	16.90	16.93	
	2547	16.90	16.96	16.99	
	2501	16.49	16.55	16.57	

	50RB	2685	16.71	16.74	16.73
		2639	16.91	16.97	16.93
		2593	16.84	16.88	16.89
		2547	16.93	16.97	16.97
		2501	16.54	16.58	16.58
15MHz	1RB-High	2682.5	16.63	16.68	16.30
		2637.8	16.78	16.81	16.46
		2593	16.82	16.83	16.49
		2548.3	16.80	16.83	16.48
		2503.5	16.65	16.66	16.36
	1RB-Middle	2682.5	16.72	16.75	16.37
		2637.8	16.95	16.96	16.61
		2593	16.93	16.94	16.61
		2548.3	16.96	16.98	16.65
		2503.5	16.60	16.62	16.32
	1RB-Low	2682.5	16.65	16.68	16.32
		2637.8	16.89	16.92	16.57
		2593	16.85	16.88	16.54
		2548.3	16.91	16.92	16.60
		2503.5	16.45	16.47	16.16
	36RB-High	2682.5	16.64	16.65	16.69
		2637.8	16.85	16.84	16.86
		2593	16.81	16.79	16.83
		2548.3	16.85	16.86	16.87
		2503.5	16.58	16.59	16.64
	36RB-Middle	2682.5	16.66	16.65	16.69
		2637.8	16.89	16.87	16.91
		2593	16.83	16.81	16.85
		2548.3	16.87	16.88	16.91
		2503.5	16.55	16.56	16.60
	36RB-Low	2682.5	16.66	16.66	16.70
		2637.8	16.90	16.89	16.93
		2593	16.82	16.84	16.89
		2548.3	16.88	16.89	16.95
		2503.5	16.50	16.48	16.53
	75RB	2682.5	16.70	16.71	16.72
		2637.8	16.91	16.92	16.93
		2593	16.88	16.90	16.92
		2548.3	16.88	16.94	16.94
		2503.5	16.57	16.61	16.63
20MHz	1RB-High	2680	16.46	16.48	16.11
		2636.5	16.48	16.50	16.12
		2593	16.38	16.37	16.03
		2549.5	16.37	16.37	16.02
		2506	16.21	16.18	15.87
	1RB-Middle	2680	16.61	16.61	16.24
		2636.5	16.62	16.61	16.24
		2593	16.61	16.59	16.24
		2549.5	16.50	16.47	16.14
		2506	16.26	16.22	15.90
	1RB-Low	2680	16.57	16.57	16.21
		2636.5	16.56	16.55	16.19
		2593	16.56	16.53	16.18
		2549.5	16.42	16.39	16.07
		2506	16.13	16.10	15.77

	50RB-High	2680	16.55	16.59	16.58
		2636.5	16.54	16.56	16.59
		2593	16.48	16.51	16.50
		2549.5	16.43	16.48	16.47
		2506	16.21	16.30	16.27
	50RB-Middle	2680	16.58	16.60	16.60
		2636.5	16.59	16.64	16.62
		2593	16.50	16.53	16.52
		2549.5	16.44	16.48	16.47
		2506	16.22	16.27	16.26
	50RB-Low	2680	16.59	16.66	16.62
		2636.5	16.63	16.68	16.64
		2593	16.56	16.60	16.54
		2549.5	16.44	16.51	16.49
		2506	16.18	16.22	16.19
	100RB	2680	16.58	16.60	16.59
		2636.5	16.60	16.61	16.61
		2593	16.51	16.53	16.52
		2549.5	16.43	16.47	16.45
		2506	16.22	16.23	16.23

**LTE Band41(ANT13 DSI4)**

Band 41					
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset		QPSK	16QAM	64QAM
5MHz	1RB-High	2687.5	23.12	22.03	20.68
		2640.3	23.28	22.20	20.88
		2593	23.37	22.33	20.96
		2545.8	23.43	22.36	21.04
		2498.5	23.12	22.09	20.70
	1RB-Middle	2687.5	23.12	22.06	20.70
		2640.3	23.34	22.23	20.93
		2593	23.44	22.35	21.00
		2545.8	23.53	22.41	21.08
		2498.5	23.12	22.04	20.69
	1RB-Low	2687.5	23.13	22.07	20.70
		2640.3	23.34	22.24	20.94
		2593	23.43	22.35	20.99
		2545.8	23.48	22.37	21.06
		2498.5	23.07	22.00	20.64
	12RB-High	2687.5	22.01	20.92	19.98
		2640.3	22.18	21.12	20.18
		2593	22.24	21.16	20.23
		2545.8	22.36	21.25	20.33
		2498.5	21.99	20.89	19.97
	12RB-Middle	2687.5	22.06	20.97	20.01
		2640.3	22.20	21.12	20.18
		2593	22.28	21.19	20.26
		2545.8	22.37	21.28	20.35
		2498.5	21.97	20.90	19.96
	12RB-Low	2687.5	22.03	20.94	20.02
		2640.3	22.24	21.15	20.24
		2593	22.31	21.22	20.28
		2545.8	22.35	21.26	20.34

	25RB	2498.5	21.97	20.90	19.96
		2687.5	22.06	21.05	20.05
		2640.3	22.24	21.25	20.25
		2593	22.29	21.28	20.28
		2545.8	22.33	21.36	20.34
		2498.5	21.99	21.00	20.00
10MHz	1RB-High	2685	23.06	21.99	20.65
		2639	23.19	22.12	20.83
		2593	23.27	22.30	20.91
		2547	23.30	22.29	20.96
		2501	23.11	22.10	20.71
	1RB-Middle	2685	23.09	22.05	20.70
		2639	23.26	22.19	20.94
		2593	23.37	22.36	21.02
		2547	23.44	22.42	21.09
		2501	23.07	22.08	20.69
	1RB-Low	2685	23.05	22.00	20.65
		2639	23.28	22.21	20.96
		2593	23.31	22.32	20.97
		2547	23.40	22.37	21.05
		2501	22.98	22.00	20.61
	25RB-High	2685	22.02	21.02	20.07
		2639	22.13	21.15	20.21
		2593	22.22	21.24	20.26
		2547	22.29	21.32	20.33
		2501	22.01	21.06	20.06
	25RB-Middle	2685	21.99	21.00	20.04
		2639	22.17	21.19	20.22
		2593	22.19	21.24	20.26
		2547	22.31	21.38	20.36
		2501	21.94	21.01	20.01
	25RB-Low	2685	21.98	20.98	20.03
		2639	22.21	21.23	20.27
		2593	22.21	21.26	20.28
		2547	22.29	21.35	20.36
		2501	21.92	20.96	19.97
50RB	2685	22.01	21.02	20.02	
	2639	22.17	21.19	20.22	
	2593	22.21	21.28	20.24	
	2547	22.29	21.34	20.34	
	2501	21.95	21.00	19.97	
15MHz	1RB-High	2682.5	23.02	21.98	20.59
		2637.8	23.17	22.11	20.79
		2593	23.25	22.24	20.88
		2548.3	23.27	22.23	20.86
		2503.5	23.15	22.16	20.76
	1RB-Middle	2682.5	23.09	22.05	20.66
		2637.8	23.32	22.26	20.95
		2593	23.37	22.36	20.98
		2548.3	23.44	22.39	21.04
		2503.5	23.11	22.10	20.72
	1RB-Low	2682.5	23.04	21.99	20.62
		2637.8	23.29	22.23	20.91
		2593	23.33	22.31	20.92
		2548.3	23.40	22.33	21.00

	36RB-High	2503.5	22.96	21.96	20.55
		2682.5	21.97	20.94	19.95
		2637.8	22.17	21.15	20.15
		2593	22.20	21.19	20.18
		2548.3	22.27	21.24	20.22
	36RB-Middle	2503.5	22.04	21.02	20.01
		2682.5	21.95	20.95	19.96
		2637.8	22.20	21.19	20.19
		2593	22.21	21.20	20.18
		2548.3	22.30	21.28	20.28
	36RB-Low	2503.5	22.01	20.99	19.99
		2682.5	21.98	20.92	19.95
		2637.8	22.22	21.21	20.22
		2593	22.23	21.22	20.22
		2548.3	22.31	21.29	20.28
	75RB	2503.5	21.92	20.90	19.90
		2682.5	22.00	21.00	19.99
		2637.8	22.23	21.24	20.21
		2593	22.28	21.28	20.25
		2548.3	22.32	21.32	20.30
20MHz	1RB-High	2503.5	22.05	21.03	20.03
		2680	22.99	21.96	20.55
		2636.5	22.97	21.91	20.56
		2593	22.90	21.86	20.44
		2549.5	22.85	21.83	20.46
	1RB-Middle	2506	22.73	21.69	20.28
		2680	23.11	22.05	20.67
		2636.5	23.14	22.09	20.73
		2593	23.12	22.07	20.68
		2549.5	23.02	21.97	20.58
	1RB-Low	2506	22.78	21.73	20.34
		2680	23.09	22.02	20.66
		2636.5	23.03	21.99	20.63
		2593	23.05	22.02	20.59
		2549.5	22.93	21.87	20.53
	50RB-High	2506	22.63	21.61	20.22
		2680	22.03	21.03	20.01
		2636.5	22.01	21.03	19.97
		2593	21.94	20.96	19.90
		2549.5	21.93	20.92	19.87
50RB-Middle	2506	21.72	20.72	19.68	
	2680	22.06	21.06	20.03	
	2636.5	22.09	21.10	20.06	
	2593	21.96	21.00	19.93	
	2549.5	21.95	20.94	19.89	
50RB-Low	2506	21.71	20.73	19.66	
	2680	22.08	21.08	20.04	
	2636.5	22.07	21.07	20.06	
	2593	22.02	21.02	19.97	
	2549.5	21.92	20.95	19.90	
100RB	2506	21.67	20.63	19.63	
	2680	22.03	21.03	20.00	
	2636.5	22.05	21.05	20.01	
	2593	21.98	20.92	19.93	
		2549.5	21.90	20.91	19.87

		2506	21.69	20.69	19.64
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**LTE Band41(ANT13 DSI8/9/10)**

Band 41						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	
5MHz	1RB-High	2687.5	21.04	21.09	20.73	
		2640.3	21.26	21.26	20.96	
		2593	21.33	21.37	20.97	
		2545.8	21.39	21.40	21.09	
		2498.5	21.11	21.13	20.76	
	1RB-Middle	2687.5	21.11	21.09	20.74	
		2640.3	21.32	21.30	20.99	
		2593	21.37	21.38	21.02	
		2545.8	21.50	21.45	21.13	
	1RB-Low	2498.5	21.10	21.08	20.73	
		2687.5	21.09	21.07	20.75	
		2640.3	21.30	21.30	21.01	
		2593	21.34	21.38	21.02	
	12RB-High	2545.8	21.43	21.41	21.10	
		2498.5	21.04	21.06	20.68	
		2687.5	21.04	20.99	20.06	
		2640.3	21.23	21.18	20.24	
	12RB-Middle	2593	21.24	21.19	20.25	
		2545.8	21.36	21.31	20.38	
		2498.5	21.00	20.97	20.02	
		2687.5	21.05	21.01	20.08	
	12RB-Low	2640.3	21.22	21.18	20.26	
		2593	21.27	21.23	20.28	
		2545.8	21.38	21.34	20.40	
		2498.5	21.01	20.96	20.02	
	25RB	2687.5	21.06	21.01	20.08	
		2640.3	21.28	21.23	20.32	
		2593	21.30	21.25	20.32	
		2545.8	21.39	21.32	20.41	
		2498.5	21.01	20.96	20.02	
	10MHz	1RB-High	2687.5	21.09	21.09	20.11
			2640.3	21.27	21.31	20.32
2593			21.30	21.31	20.32	
2545.8			21.36	21.40	20.39	
2498.5			21.03	21.04	20.05	
1RB-Middle		2685	21.05	21.06	20.68	
		2639	21.19	21.21	20.89	
		2593	21.28	21.33	20.95	
		2547	21.32	21.33	20.97	
		2501	21.11	21.14	20.75	
1RB-Low		2685	21.07	21.11	20.74	
		2639	21.27	21.33	20.97	
	2593	21.33	21.40	21.02		
1RB-Low	2547	21.42	21.45	21.11		
	2501	21.09	21.16	20.74		
	2685	21.03	21.07	20.69		
1RB-Low	2639	21.30	21.32	21.01		
	2593	21.26	21.34	20.95		

		2547	21.38	21.41	21.09
		2501	21.01	21.04	20.65
	25RB-High	2685	21.06	21.08	20.12
		2639	21.23	21.25	20.25
		2593	21.25	21.28	20.29
		2547	21.31	21.37	20.35
		2501	21.07	21.10	20.10
	25RB-Middle	2685	21.06	21.07	20.10
		2639	21.23	21.28	20.28
		2593	21.23	21.26	20.27
		2547	21.37	21.40	20.41
		2501	21.00	21.04	20.06
	25RB-Low	2685	21.03	21.06	20.08
		2639	21.29	21.33	20.33
		2593	21.25	21.30	20.28
		2547	21.33	21.40	20.39
		2501	20.99	21.01	20.03
	50RB	2685	21.06	21.10	20.06
		2639	21.26	21.31	20.27
		2593	21.27	21.29	20.24
2547		21.35	21.39	20.36	
2501		21.02	21.06	20.00	
15MHz	1RB-High	2682.5	20.96	21.02	20.63
		2637.8	21.12	21.18	20.84
		2593	21.22	21.30	20.89
		2548.3	21.21	21.26	20.90
		2503.5	21.15	21.21	20.81
	1RB-Middle	2682.5	21.04	21.09	20.74
		2637.8	21.29	21.34	20.99
		2593	21.34	21.37	21.02
		2548.3	21.39	21.43	21.09
		2503.5	21.11	21.16	20.76
	1RB-Low	2682.5	20.96	21.04	20.65
		2637.8	21.26	21.30	20.97
		2593	21.25	21.31	20.93
		2548.3	21.36	21.38	21.05
		2503.5	20.95	21.00	20.61
	36RB-High	2682.5	21.01	20.99	20.10
		2637.8	21.20	21.22	20.20
		2593	21.22	21.23	20.21
		2548.3	21.28	21.28	20.26
		2503.5	21.08	21.07	20.06
	36RB-Middle	2682.5	20.97	21.00	20.00
		2637.8	21.24	21.24	20.24
		2593	21.21	21.23	20.20
		2548.3	21.30	21.31	20.31
		2503.5	21.05	21.03	20.04
	36RB-Low	2682.5	21.00	20.99	20.00
		2637.8	21.26	21.27	20.27
		2593	21.24	21.24	20.23
		2548.3	21.33	21.32	20.33
		2503.5	20.97	20.95	20.11
	75RB	2682.5	21.04	21.05	20.03
		2637.8	21.25	21.30	20.26
		2593	21.29	21.31	20.28

20MHz	1RB-High	2548.3	21.34	21.35	20.33
		2503.5	21.08	21.09	20.06
		2680	20.93	20.98	20.57
		2636.5	20.92	20.98	20.62
		2593	20.84	20.91	20.45
		2549.5	20.84	20.86	20.51
	1RB-Middle	2506	20.69	20.70	20.35
		2680	21.05	21.08	20.70
		2636.5	21.07	21.07	20.73
		2593	21.04	21.07	20.68
		2549.5	20.94	20.96	20.61
	1RB-Low	2506	20.74	20.77	20.37
		2680	21.03	21.06	20.68
		2636.5	21.00	21.05	20.69
		2593	20.99	21.02	20.65
		2549.5	20.89	20.86	20.53
	50RB-High	2506	20.61	20.63	20.24
		2680	21.00	21.06	20.31
		2636.5	21.00	21.02	20.29
		2593	20.93	20.96	20.20
		2549.5	20.91	20.92	20.21
	50RB-Middle	2506	20.70	20.74	20.01
		2680	21.05	21.05	20.33
		2636.5	21.06	21.10	20.37
		2593	20.96	20.97	20.24
		2549.5	20.92	20.94	20.21
	50RB-Low	2506	20.69	20.74	20.02
		2680	21.06	21.09	20.36
		2636.5	21.07	21.11	20.36
		2593	21.00	21.03	20.28
2549.5		20.92	20.94	20.21	
100RB	2506	20.65	20.68	20.01	
	2680	21.03	21.06	20.30	
	2636.5	21.04	21.07	20.34	
	2593	20.97	20.99	20.24	
	2549.5	20.90	20.91	20.19	
		2506	20.68	20.70	20.03

**LTE Band41(ANT31 DSI2/3/4/10)**

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High	2687.5	23.38	22.50	21.27
		2640.3	23.29	22.37	21.20
		2593	23.43	22.55	21.32
		2545.8	23.28	22.39	21.19
		2498.5	23.31	22.41	21.17
	1RB-Middle	2687.5	23.43	22.52	21.29
		2640.3	23.34	22.37	21.21
		2593	23.53	22.60	21.43
		2545.8	23.35	22.42	21.24
		2498.5	23.34	22.42	21.23
	1RB-Low	2687.5	23.42	22.49	21.30
		2640.3	23.30	22.38	21.21



		2593	23.50	22.61	21.41
		2545.8	23.25	22.33	21.14
		2498.5	23.31	22.41	21.19
	12RB-High	2687.5	22.30	21.30	20.35
		2640.3	22.21	21.21	20.27
		2593	22.34	21.33	20.37
		2545.8	22.23	21.21	20.24
		2498.5	22.19	21.18	20.21
		2687.5	22.32	21.33	20.42
	12RB-Middle	2640.3	22.20	21.22	20.23
		2593	22.38	21.39	20.40
		2545.8	22.22	21.21	20.22
		2498.5	22.22	21.21	20.24
		2687.5	22.33	21.34	20.41
	12RB-Low	2640.3	22.22	21.23	20.27
		2593	22.41	21.42	20.43
		2545.8	22.19	21.18	20.23
		2498.5	22.24	21.24	20.27
		2687.5	22.35	21.38	20.39
	25RB	2640.3	22.25	21.28	20.29
2593		22.38	21.40	20.42	
2545.8		22.19	21.24	20.24	
2498.5		22.22	21.26	20.25	
2685		23.37	22.47	21.24	
1RB-High	2639	23.27	22.36	21.15	
	2593	23.37	22.49	21.27	
	2547	23.26	22.39	21.14	
	2501	23.24	22.34	21.08	
	2685	23.42	22.54	21.33	
1RB-Middle	2639	23.30	22.41	21.19	
	2593	23.49	22.63	21.39	
	2547	23.32	22.45	21.20	
	2501	23.30	22.45	21.16	
	2685	23.39	22.51	21.28	
1RB-Low	2639	23.27	22.37	21.13	
	2593	23.46	22.59	21.37	
	2547	23.23	22.34	21.13	
	2501	23.28	22.41	21.13	
	2685	22.36	21.37	20.42	
25RB-High	2639	22.21	21.25	20.26	
	2593	22.36	21.37	20.38	
	2547	22.22	21.25	20.25	
	2501	22.18	21.21	20.21	
	2685	22.35	21.39	20.42	
25RB-Middle	2639	22.22	21.26	20.25	
	2593	22.35	21.38	20.39	
	2547	22.23	21.27	20.26	
	2501	22.19	21.22	20.22	
	2685	22.33	21.37	20.38	
25RB-Low	2639	22.25	21.28	20.27	
	2593	22.39	21.42	20.42	
	2547	22.17	21.21	20.22	
	2501	22.21	21.26	20.25	
	2685	22.38	21.41	20.36	
50RB	2639	22.24	21.28	20.21	

10MHz

		2593	22.39	21.39	20.35
		2547	22.22	21.25	20.18
		2501	22.20	21.23	20.17
15MHz	1RB-High	2682.5	23.30	22.42	21.20
		2637.8	23.18	22.32	21.12
		2593	23.28	22.43	21.21
		2548.3	23.20	22.35	21.14
		2503.5	23.14	22.29	21.04
		2682.5	23.41	22.51	21.32
	1RB-Middle	2637.8	23.27	22.40	21.19
		2593	23.47	22.62	21.39
		2548.3	23.30	22.45	21.20
		2503.5	23.24	22.41	21.15
		2682.5	23.34	22.47	21.26
	1RB-Low	2637.8	23.19	22.32	21.10
		2593	23.43	22.58	21.37
		2548.3	23.16	22.31	21.07
		2503.5	23.19	22.36	21.10
		2682.5	22.31	21.28	20.30
	36RB-High	2637.8	22.20	21.21	20.21
		2593	22.31	21.30	20.28
		2548.3	22.20	21.21	20.19
		2503.5	22.11	21.12	20.12
		2682.5	22.32	21.30	20.31
	36RB-Middle	2637.8	22.21	21.23	20.22
		2593	22.33	21.33	20.31
		2548.3	22.20	21.19	20.18
		2503.5	22.18	21.18	20.17
		2682.5	22.32	21.31	20.31
	36RB-Low	2637.8	22.21	21.21	20.21
		2593	22.38	21.37	20.35
		2548.3	22.16	21.16	20.15
		2503.5	22.19	21.17	20.16
		2682.5	22.34	21.35	20.33
	75RB	2637.8	22.23	21.25	20.21
		2593	22.38	21.37	20.37
		2548.3	22.21	21.23	20.19
		2503.5	22.19	21.20	20.19
		2680	23.29	22.23	20.87
20MHz	1RB-High	2636.5	23.18	22.16	20.80
		2593	23.18	22.15	20.77
		2549.5	23.15	22.12	20.74
		2506	23.04	21.99	20.60
		2680	23.44	22.41	21.03
	1RB-Middle	2636.5	23.28	22.24	20.89
		2593	23.43	22.39	20.99
		2549.5	23.23	22.20	20.82
		2506	23.18	22.13	20.75
		2680	23.36	22.33	20.94
	1RB-Low	2636.5	23.22	22.17	20.85
		2593	23.40	22.39	21.02
		2549.5	23.13	22.10	20.71
		2506	23.11	22.07	20.70
	50RB-High	2680	22.34	21.35	20.31
		2636.5	22.17	21.20	20.16

		2593	22.25	21.30	20.23
		2549.5	22.18	21.20	20.13
		2506	22.04	21.05	20.00
	50RB-Middle	2680	22.35	21.38	20.32
		2636.5	22.24	21.27	20.24
		2593	22.30	21.32	20.26
		2549.5	22.14	21.18	20.13
		2506	22.10	21.12	20.05
		2680	22.38	21.40	20.35
	50RB-Low	2636.5	22.25	21.28	20.25
		2593	22.35	21.38	20.32
		2549.5	22.12	21.15	20.09
		2506	22.11	21.13	20.08
		2680	22.35	21.36	20.31
	100RB	2636.5	22.22	21.24	20.20
		2593	22.31	21.32	20.28
		2549.5	22.13	21.15	20.09
		2506	22.07	21.09	20.03

**LTE Band66(ANT13 DSI2/3)**

Band 66					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1779.3	13.13	13.49	13.34
		1745	13.17	13.39	13.37
		1710.7	13.34	13.63	13.48
	1RB-Middle	1779.3	13.15	13.38	13.33
		1745	13.20	13.38	13.33
		1710.7	13.35	13.71	13.56
	1RB-Low	1779.3	13.12	13.45	13.27
		1745	13.20	13.49	13.33
		1710.7	13.35	13.58	13.57
	3RB-High	1779.3	13.22	13.23	13.33
		1745	13.20	13.12	13.29
		1710.7	13.38	13.41	13.50
	3RB-Middle	1779.3	13.17	13.24	13.24
		1745	13.21	13.18	13.29
		1710.7	13.34	13.44	13.45
	3RB-Low	1779.3	13.20	13.23	13.25
		1745	13.22	13.27	13.30
		1710.7	13.41	13.37	13.48
	6RB	1779.3	13.16	13.30	13.12
		1745	13.23	13.30	13.16
		1710.7	13.42	13.49	13.37
3MHz	1RB-High	1778.5	13.12	13.49	13.32
		1745	13.14	13.40	13.38
		1711.5	13.33	13.67	13.48
	1RB-Middle	1778.5	13.13	13.39	13.44
		1745	13.19	13.52	13.37
		1711.5	13.37	13.68	13.50
	1RB-Low	1778.5	13.14	13.34	13.29
		1745	13.19	13.40	13.41
		1711.5	13.34	13.65	13.53
8RB-High	1778.5	13.17	13.24	13.20	

		1745	13.15	13.27	13.24	
		1711.5	13.35	13.45	13.44	
		1778.5	13.14	13.25	13.21	
	8RB-Middle	1745	13.18	13.24	13.24	
		1711.5	13.39	13.46	13.45	
		1778.5	13.18	13.25	13.22	
	8RB-Low	1745	13.22	13.30	13.30	
		1711.5	13.39	13.42	13.45	
		1778.5	13.16	13.17	13.21	
	15RB	1745	13.16	13.18	13.20	
		1711.5	13.39	13.41	13.36	
		1778.5	13.16	13.17	13.21	
5MHz	1RB-High	1777.5	13.16	13.48	13.34	
		1745	13.17	13.34	13.35	
		1712.5	13.33	13.68	13.61	
	1RB-Middle	1777.5	13.22	13.49	13.36	
		1745	13.21	13.44	13.46	
		1712.5	13.43	13.65	13.63	
	1RB-Low	1777.5	13.09	13.35	13.31	
		1745	13.22	13.45	13.40	
		1712.5	13.37	13.70	13.55	
	12RB-High	1777.5	13.14	13.19	13.18	
		1745	13.20	13.16	13.18	
		1712.5	13.37	13.37	13.42	
	12RB-Middle	1777.5	13.20	13.18	13.20	
		1745	13.20	13.21	13.26	
		1712.5	13.44	13.42	13.45	
	12RB-Low	1777.5	13.22	13.25	13.25	
		1745	13.29	13.26	13.31	
		1712.5	13.38	13.48	13.51	
	25RB	1777.5	13.21	13.24	13.21	
		1745	13.23	13.27	13.24	
		1712.5	13.43	13.47	13.42	
	10MHz	1RB-High	1775	13.16	13.38	13.36
			1745	13.13	13.39	13.26
			1715	13.36	13.68	13.57
		1RB-Middle	1775	13.16	13.35	13.32
			1745	13.25	13.40	13.37
			1715	13.40	13.71	13.58
1RB-Low		1775	13.09	13.42	13.34	
		1745	13.22	13.52	13.42	
		1715	13.33	13.67	13.49	
25RB-High		1775	13.19	13.18	13.17	
		1745	13.20	13.26	13.25	
		1715	13.48	13.51	13.52	
25RB-Middle		1775	13.15	13.19	13.16	
		1745	13.21	13.24	13.28	
		1715	13.43	13.44	13.42	
25RB-Low		1775	13.19	13.20	13.16	
		1745	13.27	13.32	13.34	
		1715	13.37	13.42	13.45	
50RB		1775	13.16	13.21	13.17	
		1745	13.27	13.24	13.29	
		1715	13.49	13.42	13.49	
15MHz		1RB-High	1772.5	13.12	13.41	13.28
			1745	13.04	13.35	13.19

	1RB-Middle	1717.5	13.32	13.64	13.48	
		1772.5	13.11	13.36	13.31	
		1745	13.20	13.49	13.35	
		1717.5	13.39	13.72	13.60	
		1RB-Low	1772.5	13.02	13.27	13.16
			1745	13.21	13.55	13.44
			1717.5	13.30	13.60	13.49
		36RB-High	1772.5	13.11	13.21	13.14
			1745	13.18	13.18	13.21
	1717.5		13.39	13.45	13.43	
	36RB-Middle	1772.5	13.11	13.17	13.15	
		1745	13.26	13.21	13.29	
		1717.5	13.39	13.39	13.42	
	36RB-Low	1772.5	13.16	13.15	13.12	
		1745	13.30	13.25	13.33	
		1717.5	13.35	13.35	13.45	
	75RB	1772.5	13.17	13.11	13.16	
		1745	13.26	13.24	13.26	
		1717.5	13.44	13.39	13.43	
	20MHz	1RB-High	1770	13.16	13.46	13.29
			1745	13.23	13.48	13.35
			1720	13.27	13.57	13.48
		1RB-Middle	1770	13.26	13.53	13.34
			1745	13.37	13.68	13.50
			1720	13.45	13.82	13.73
		1RB-Low	1770	13.19	13.51	13.36
			1745	13.26	13.49	13.35
1720			13.37	13.68	13.50	
50RB-High		1770	13.28	13.20	13.21	
		1745	13.34	13.36	13.33	
		1720	13.52	13.50	13.52	
50RB-Middle		1770	13.28	13.28	13.32	
		1745	13.42	13.37	13.38	
		1720	13.53	13.48	13.52	
50RB-Low		1770	13.31	13.33	13.32	
		1745	13.38	13.45	13.44	
		1720	13.48	13.48	13.47	
100RB		1770	13.26	13.25	13.23	
		1745	13.36	13.34	13.36	
		1720	13.45	13.46	13.51	

**LTE Band66(ANT13 DSI4)**

		Band 66			
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)		
	RB offset		QPSK	16QAM	64QAM
1.4MHz	1RB-High	1779.3	22.73	21.89	21.04
		1745	22.66	21.95	20.96
		1710.7	22.93	22.07	21.22
	1RB-Middle	1779.3	22.71	21.93	21.01
		1745	22.68	21.92	21.00
		1710.7	22.94	22.16	21.20
	1RB-Low	1779.3	22.74	21.92	21.05
		1745	22.69	21.88	20.99
		1710.7	22.91	22.07	21.15

	3RB-High	1779.3	22.76	21.70	20.96	
		1745	22.69	21.61	20.85	
		1710.7	22.96	21.87	21.20	
	3RB-Middle	1779.3	22.72	21.71	20.96	
		1745	22.71	21.72	20.93	
		1710.7	22.93	21.93	21.19	
	3RB-Low	1779.3	22.79	21.76	20.97	
		1745	22.70	21.70	20.90	
		1710.7	22.96	21.88	21.10	
	6RB	1779.3	21.70	20.99	19.88	
		1745	21.69	20.87	19.79	
		1710.7	21.94	21.15	20.02	
3MHz	1RB-High	1778.5	22.74	21.90	21.04	
		1745	22.64	21.91	20.97	
		1711.5	22.89	22.13	21.17	
	1RB-Middle	1778.5	22.73	22.10	20.96	
		1745	22.75	21.86	21.02	
		1711.5	22.95	22.24	21.16	
	1RB-Low	1778.5	22.69	21.97	21.08	
		1745	22.70	21.84	20.98	
		1711.5	22.95	22.16	21.20	
	8RB-High	1778.5	21.71	20.95	19.87	
		1745	21.65	20.87	19.78	
		1711.5	21.92	21.16	20.08	
	8RB-Middle	1778.5	21.69	20.90	19.88	
		1745	21.67	20.87	19.77	
		1711.5	21.92	21.16	20.07	
	8RB-Low	1778.5	21.71	20.95	19.87	
		1745	21.71	20.90	19.88	
		1711.5	21.92	21.14	20.07	
	15RB	1778.5	21.66	20.87	19.82	
		1745	21.67	20.83	19.75	
		1711.5	21.92	21.09	20.05	
	5MHz	1RB-High	1777.5	22.78	21.97	21.03
			1745	22.66	21.81	21.00
			1712.5	22.93	22.07	21.24
1RB-Middle		1777.5	22.77	21.98	21.02	
		1745	22.77	21.86	21.00	
		1712.5	23.03	22.18	21.27	
1RB-Low		1777.5	22.70	21.96	20.92	
		1745	22.73	21.95	20.96	
		1712.5	22.97	22.09	21.23	
12RB-High		1777.5	21.68	20.82	19.78	
		1745	21.63	20.79	19.75	
		1712.5	21.92	21.04	19.98	
12RB-Middle		1777.5	21.74	20.88	19.85	
		1745	21.71	20.82	19.84	
		1712.5	21.95	21.08	20.03	
12RB-Low		1777.5	21.77	20.90	19.93	
		1745	21.73	20.86	19.91	
		1712.5	21.91	21.12	20.06	
25RB		1777.5	21.76	20.85	19.86	
		1745	21.64	20.84	19.82	
		1712.5	21.94	21.11	20.06	
10MHz		1RB-High	1775	22.72	21.89	20.96

		1745	22.65	21.79	20.86
		1715	22.97	22.21	21.20
		1775	22.71	21.84	20.97
	1RB-Middle	1745	22.73	22.03	20.90
		1715	22.99	22.11	21.22
		1775	22.65	21.85	20.92
	1RB-Low	1745	22.76	21.93	21.01
		1715	22.96	22.20	21.22
		1775	21.67	20.81	19.84
	25RB-High	1745	21.65	20.88	19.76
		1715	21.97	21.13	20.10
		1775	21.69	20.82	19.86
	25RB-Middle	1745	21.73	20.86	19.82
		1715	21.91	21.05	20.06
		1775	21.71	20.84	19.89
	25RB-Low	1745	21.70	20.94	19.91
		1715	21.90	21.07	20.06
		1775	21.72	20.87	19.87
50RB	1745	21.71	20.83	19.88	
	1715	21.97	21.08	20.05	
	1772.5	22.68	21.90	20.96	
15MHz	1RB-High	1745	22.54	21.87	20.87
		1717.5	22.80	22.06	21.08
		1772.5	22.65	21.84	20.97
	1RB-Middle	1745	22.70	21.83	20.95
		1717.5	22.92	22.13	21.24
		1772.5	22.51	21.85	20.80
	1RB-Low	1745	22.73	21.97	21.01
		1717.5	22.88	22.16	21.13
		1772.5	21.63	20.83	19.86
	36RB-High	1745	21.62	20.81	19.75
		1717.5	21.88	21.03	20.07
		1772.5	21.63	20.83	19.84
	36RB-Middle	1745	21.67	20.80	19.84
		1717.5	21.89	21.03	20.05
		1772.5	21.61	20.73	19.75
	36RB-Low	1745	21.67	20.87	19.87
		1717.5	21.91	21.05	20.05
		1772.5	21.63	20.75	19.77
75RB	1745	21.69	20.80	19.77	
	1717.5	21.90	21.00	20.00	
	1770	22.71	21.96	20.95	
20MHz	1RB-High	1745	22.76	21.86	21.05
		1720	22.80	21.97	21.03
		1770	22.78	22.06	21.00
	1RB-Middle	1745	22.96	22.12	21.07
		1720	23.03	22.29	21.19
		1770	22.73	21.86	21.00
	1RB-Low	1745	22.75	21.99	21.06
		1720	22.98	22.15	21.26
		1770	21.74	20.88	19.89
	50RB-High	1745	21.80	20.99	19.96
		1720	22.03	21.18	20.13
		1770	21.77	20.94	19.88
	50RB-Middle	1745	21.89	21.03	19.98

	50RB-Low	1720	22.02	21.14	20.12
		1770	21.76	20.97	19.93
		1745	21.91	21.05	20.00
		1720	21.97	21.13	20.13
	100RB	1770	21.77	20.87	19.88
		1745	21.85	20.97	19.92
		1720	22.00	21.14	20.10

**LTE Band66(ANT13 DSI8/9/10)**

Band 66						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4MHz	1RB-High	1779.3	17.73	17.98	17.92	
		1745	17.70	18.07	17.91	
		1710.7	17.89	18.25	18.06	
	1RB-Middle	1779.3	17.75	18.11	17.91	
		1745	17.75	18.09	17.90	
		1710.7	17.88	18.23	18.15	
	1RB-Low	1779.3	17.70	18.15	17.92	
		1745	17.72	18.07	17.93	
		1710.7	17.88	18.28	18.04	
	3RB-High	1779.3	17.77	17.69	17.84	
		1745	17.70	17.71	17.74	
		1710.7	17.94	17.95	18.08	
	3RB-Middle	1779.3	17.74	17.74	17.87	
		1745	17.73	17.75	17.82	
		1710.7	17.93	17.95	18.04	
	3RB-Low	1779.3	17.72	17.69	17.85	
		1745	17.72	17.72	17.80	
		1710.7	17.93	17.96	18.01	
	6RB	1779.3	17.75	17.87	17.70	
		1745	17.76	17.86	17.73	
		1710.7	17.91	18.03	17.89	
	3MHz	1RB-High	1778.5	17.72	17.99	17.93
			1745	17.65	18.05	17.81
			1711.5	17.88	18.26	18.12
1RB-Middle		1778.5	17.70	18.02	17.97	
		1745	17.70	18.11	17.90	
		1711.5	17.94	18.24	18.12	
1RB-Low		1778.5	17.70	18.05	17.88	
		1745	17.73	17.91	17.86	
		1711.5	17.90	18.18	18.01	
8RB-High		1778.5	17.73	17.82	17.77	
		1745	17.68	17.78	17.73	
		1711.5	17.92	18.00	17.98	
8RB-Middle		1778.5	17.74	17.80	17.81	
		1745	17.72	17.78	17.76	
		1711.5	17.89	18.00	17.95	
8RB-Low		1778.5	17.73	17.80	17.76	
		1745	17.72	17.81	17.81	
		1711.5	17.91	18.00	17.98	
15RB		1778.5	17.72	17.76	17.78	
		1745	17.66	17.72	17.68	
		1711.5	17.92	17.96	17.96	



5MHz	1RB-High	1777.5	17.73	18.03	17.92
		1745	17.71	17.90	17.87
		1712.5	17.90	18.29	18.05
	1RB-Middle	1777.5	17.76	18.01	17.90
		1745	17.77	18.08	17.95
		1712.5	17.97	18.29	18.16
	1RB-Low	1777.5	17.71	18.08	17.84
		1745	17.75	18.00	17.96
		1712.5	17.93	18.25	18.07
	12RB-High	1777.5	17.69	17.69	17.73
		1745	17.68	17.67	17.72
		1712.5	17.91	17.92	17.95
	12RB-Middle	1777.5	17.72	17.78	17.77
		1745	17.74	17.77	17.77
		1712.5	17.95	17.98	17.97
	12RB-Low	1777.5	17.78	17.82	17.81
		1745	17.79	17.75	17.86
		1712.5	17.93	17.92	18.01
25RB	1777.5	17.77	17.73	17.76	
	1745	17.68	17.76	17.72	
	1712.5	17.93	17.97	17.95	
10MHz	1RB-High	1775	17.71	17.95	17.84
		1745	17.63	17.87	17.93
		1715	17.88	18.31	18.12
	1RB-Middle	1775	17.73	18.10	17.88
		1745	17.77	18.10	18.00
		1715	17.90	18.19	18.06
	1RB-Low	1775	17.64	18.03	17.84
		1745	17.75	18.07	17.99
		1715	17.90	18.29	18.12
	25RB-High	1775	17.73	17.73	17.74
		1745	17.74	17.72	17.75
		1715	18.02	18.01	18.01
	25RB-Middle	1775	17.75	17.75	17.72
		1745	17.76	17.77	17.80
		1715	17.91	17.96	17.95
	25RB-Low	1775	17.71	17.72	17.73
		1745	17.81	17.83	17.81
		1715	17.92	17.94	17.96
50RB	1775	17.72	17.79	17.76	
	1745	17.79	17.81	17.82	
	1715	17.97	17.99	18.00	
15MHz	1RB-High	1772.5	17.67	18.01	17.87
		1745	17.59	18.01	17.85
		1717.5	17.83	18.13	18.07
	1RB-Middle	1772.5	17.69	18.09	17.91
		1745	17.73	17.91	17.95
		1717.5	17.92	18.33	18.13
	1RB-Low	1772.5	17.57	17.97	17.72
		1745	17.74	17.88	17.95
		1717.5	17.87	18.23	18.10
	36RB-High	1772.5	17.68	17.73	17.78
		1745	17.73	17.71	17.78
		1717.5	17.91	17.92	17.98
36RB-Middle	1772.5	17.72	17.72	17.74	

	36RB-Low	1745	17.72	17.79	17.79
		1717.5	17.88	17.96	17.96
		1772.5	17.70	17.67	17.72
		1745	17.82	17.77	17.85
		1717.5	17.87	17.96	17.99
		1772.5	17.74	17.70	17.71
	75RB	1745	17.76	17.73	17.75
		1717.5	17.97	17.92	17.91
		1770	17.78	18.03	18.05
	1RB-High	1745	17.78	18.00	18.02
		1720	17.86	18.18	18.01
		1770	17.81	18.07	18.00
1RB-Middle	1745	17.93	18.32	18.18	
	1720	18.05	18.30	18.21	
	1770	17.75	18.16	18.00	
1RB-Low	1745	17.81	18.06	17.98	
	1720	17.97	18.36	18.12	
	1770	17.83	17.80	17.84	
50RB-High	1745	17.90	17.90	17.89	
	1720	18.10	18.08	18.10	
	1770	17.84	17.89	17.88	
50RB-Middle	1745	17.96	17.99	17.97	
	1720	18.08	18.07	18.08	
	1770	17.88	17.88	17.85	
50RB-Low	1745	17.95	18.00	18.00	
	1720	18.05	18.00	18.05	
	1770	17.84	17.83	17.83	
100RB	1745	17.92	17.89	17.92	
	1720	18.08	18.08	18.10	
	1770	17.78	18.03	18.05	

**LTE Band66(ANT31 DSI2/3)**

		Band 66			
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1779.3	23.04	22.79	21.87
		1745	23.08	22.77	21.81
		1710.7	23.22	22.92	21.90
	1RB-Middle	1779.3	23.05	22.81	21.91
		1745	23.12	22.78	21.84
		1710.7	23.19	22.79	22.03
	1RB-Low	1779.3	23.07	22.79	21.78
		1745	23.12	22.76	21.97
		1710.7	23.19	22.91	22.00
	3RB-High	1779.3	23.10	22.61	21.82
		1745	23.09	22.59	21.78
		1710.7	23.23	22.70	21.91
	3RB-Middle	1779.3	23.09	22.59	21.82
		1745	23.15	22.63	21.83

	3RB-Low	1710.7	23.22	22.72	21.94	
		1779.3	23.11	22.55	21.84	
		1745	23.12	22.56	21.84	
	6RB	1710.7	23.22	22.71	21.94	
		1779.3	22.60	21.77	20.63	
		1745	22.63	21.82	20.70	
		1710.7	22.71	21.91	20.79	
		1778.5	23.03	22.69	21.80	
		1745	23.07	22.79	21.88	
3MHz	1RB-High	1711.5	23.15	22.85	21.99	
		1778.5	23.09	22.80	21.90	
		1745	23.15	22.81	21.82	
	1RB-Middle	1711.5	23.27	22.85	22.03	
		1778.5	23.05	22.74	21.85	
		1745	23.12	22.75	21.90	
	1RB-Low	1711.5	23.19	22.90	21.92	
		1778.5	22.58	21.75	20.75	
		1745	22.55	21.79	20.74	
	8RB-High	1711.5	22.70	21.89	20.82	
		1778.5	22.52	21.75	20.73	
		1745	22.57	21.78	20.72	
	8RB-Middle	1711.5	22.67	21.92	20.84	
		1778.5	22.56	21.80	20.72	
		1745	22.59	21.82	20.79	
	8RB-Low	1711.5	22.66	21.87	20.80	
		1778.5	22.55	21.74	20.67	
		1745	22.52	21.74	20.72	
	15RB	1711.5	22.67	21.87	20.83	
		1777.5	23.08	22.81	21.84	
		1745	23.10	22.77	21.86	
	5MHz	1RB-High	1712.5	23.22	22.97	21.90
			1777.5	23.08	22.92	21.91
			1745	23.21	22.81	21.98
1RB-Middle		1712.5	23.28	22.97	22.07	
		1777.5	23.06	22.84	21.86	
		1745	23.15	22.84	21.92	
1RB-Low		1712.5	23.22	22.87	21.93	
		1777.5	22.51	21.67	20.67	
		1745	22.53	21.67	20.70	
12RB-High		1712.5	22.63	21.78	20.80	
		1777.5	22.56	21.70	20.74	
		1745	22.63	21.76	20.78	
12RB-Middle		1712.5	22.73	21.84	20.85	
		1777.5	22.57	21.78	20.74	
		1745	22.65	21.82	20.85	
12RB-Low		1712.5	22.73	21.83	20.89	
		1777.5	22.57	21.75	20.70	
		1745	22.58	21.74	20.70	
25RB		1712.5	22.75	21.88	20.85	
		1775	23.03	22.72	21.77	
		1745	23.05	22.66	21.76	
10MHz		1RB-High	1715	23.22	23.01	22.02
			1775	23.04	22.89	21.88
			1745	23.15	22.73	21.99
	1RB-Middle	1715	23.26	22.85	22.02	

	1RB-Low	1775	23.02	22.72	21.76	
		1745	23.12	22.75	21.96	
		1715	23.23	22.80	21.92	
	25RB-High	1775	22.58	21.74	20.70	
		1745	22.56	21.72	20.69	
		1715	22.74	21.90	20.88	
	25RB-Middle	1775	22.59	21.75	20.64	
		1745	22.64	21.83	20.81	
		1715	22.75	21.88	20.81	
	25RB-Low	1775	22.50	21.67	20.64	
		1745	22.65	21.85	20.82	
		1715	22.74	21.91	20.85	
	50RB	1775	22.58	21.70	20.68	
		1745	22.62	21.80	20.78	
		1715	22.77	21.91	20.90	
15MHz	1RB-High	1772.5	22.96	22.67	21.78	
		1745	23.00	22.65	21.75	
		1717.5	23.13	22.89	21.90	
	1RB-Middle	1772.5	23.02	22.76	21.82	
		1745	23.09	22.75	21.89	
		1717.5	23.23	22.96	22.00	
	1RB-Low	1772.5	22.91	22.61	21.74	
		1745	23.09	22.86	21.89	
		1717.5	23.15	22.81	21.92	
	36RB-High	1772.5	22.58	21.72	20.74	
		1745	22.48	21.65	20.67	
		1717.5	22.70	21.90	20.88	
	36RB-Middle	1772.5	22.51	21.67	20.67	
		1745	22.58	21.77	20.75	
		1717.5	22.69	21.83	20.85	
	36RB-Low	1772.5	22.44	21.64	20.66	
		1745	22.64	21.80	20.76	
		1717.5	22.69	21.83	20.84	
	75RB	1772.5	22.55	21.69	20.68	
		1745	22.58	21.76	20.68	
		1717.5	22.74	21.85	20.82	
	20MHz	1RB-High	1770	22.96	22.62	21.76
			1745	23.01	22.54	21.65
			1720	22.98	22.74	21.76
		1RB-Middle	1770	23.07	22.71	21.78
			1745	23.11	22.74	21.90
			1720	23.24	23.01	21.98
1RB-Low		1770	23.00	22.68	21.74	
		1745	22.97	22.61	21.75	
		1720	23.16	22.81	21.82	
50RB-High		1770	22.65	21.76	20.78	
		1745	22.49	21.64	20.60	
		1720	22.78	21.88	20.87	
50RB-Middle		1770	22.57	21.68	20.69	
		1745	22.61	21.76	20.75	
		1720	22.75	21.84	20.79	
50RB-Low		1770	22.50	21.68	20.62	
		1745	22.65	21.77	20.75	
		1720	22.74	21.81	20.86	
100RB		1770	22.59	21.74	20.67	

		1745	22.50	21.69	20.66
		1720	22.78	21.90	20.86

**LTE Band66(ANT31 DSI4)**

Band 66					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High	1779.3	20.65	21.00	20.76
		1745	20.67	20.92	20.85
		1710.7	20.77	21.06	20.89
	1RB-Middle	1779.3	20.66	20.94	20.87
		1745	20.70	20.94	20.89
		1710.7	20.77	21.12	20.94
	1RB-Low	1779.3	20.63	20.90	20.90
		1745	20.68	20.92	20.92
		1710.7	20.77	21.05	20.93
	3RB-High	1779.3	20.67	20.63	20.77
		1745	20.70	20.70	20.81
		1710.7	20.76	20.70	20.86
	3RB-Middle	1779.3	20.70	20.70	20.77
		1745	20.71	20.74	20.80
		1710.7	20.79	20.76	20.92
	3RB-Low	1779.3	20.65	20.73	20.73
		1745	20.74	20.70	20.78
		1710.7	20.76	20.82	20.91
	6RB	1779.3	20.65	20.75	20.67
		1745	20.75	20.79	20.72
		1710.7	20.79	20.88	20.77
3MHz	1RB-High	1778.5	20.65	20.91	20.83
		1745	20.69	20.93	20.87
		1711.5	20.72	20.95	20.94
	1RB-Middle	1778.5	20.64	20.90	20.88
		1745	20.73	20.87	20.85
		1711.5	20.77	21.07	20.92
	1RB-Low	1778.5	20.61	20.92	20.80
		1745	20.72	20.95	20.87
		1711.5	20.76	21.07	20.94
	8RB-High	1778.5	20.63	20.76	20.69
		1745	20.63	20.70	20.73
		1711.5	20.75	20.89	20.83
	8RB-Middle	1778.5	20.65	20.72	20.66
		1745	20.66	20.74	20.71
		1711.5	20.78	20.85	20.85
	8RB-Low	1778.5	20.67	20.73	20.69
		1745	20.73	20.76	20.79
		1711.5	20.79	20.88	20.84
	15RB	1778.5	20.62	20.67	20.67
		1745	20.67	20.70	20.70
		1711.5	20.80	20.82	20.77
5MHz	1RB-High	1777.5	20.73	20.91	20.85
		1745	20.72	20.87	20.80
		1712.5	20.82	21.10	20.93
	1RB-Middle	1777.5	20.68	21.03	20.89
		1745	20.75	21.01	20.89

	1RB-Low	1712.5	20.84	21.15	21.02
		1777.5	20.64	20.98	20.83
		1745	20.76	20.89	20.84
	12RB-High	1712.5	20.79	20.95	20.98
		1777.5	20.66	20.67	20.70
		1745	20.63	20.69	20.66
	12RB-Middle	1712.5	20.71	20.75	20.76
		1777.5	20.66	20.66	20.71
		1745	20.72	20.75	20.79
	12RB-Low	1712.5	20.83	20.82	20.80
		1777.5	20.69	20.71	20.73
		1745	20.81	20.76	20.83
	25RB	1712.5	20.85	20.81	20.89
		1777.5	20.69	20.68	20.69
		1745	20.69	20.75	20.73
10MHz	1RB-High	1712.5	20.84	20.83	20.84
		1775	20.67	21.00	20.76
		1745	20.67	20.91	20.75
	1RB-Middle	1715	20.85	21.10	21.02
		1775	20.67	20.96	20.79
		1745	20.77	21.02	20.91
	1RB-Low	1715	20.80	21.10	20.97
		1775	20.60	20.95	20.80
		1745	20.76	21.05	20.96
	25RB-High	1715	20.79	21.00	20.87
		1775	20.68	20.73	20.72
		1745	20.65	20.69	20.67
	25RB-Middle	1715	20.86	20.86	20.84
		1775	20.71	20.68	20.65
		1745	20.74	20.81	20.79
25RB-Low	1715	20.82	20.85	20.80	
	1775	20.61	20.60	20.65	
	1745	20.82	20.81	20.82	
50RB	1715	20.88	20.90	20.89	
	1775	20.74	20.69	20.70	
	1745	20.74	20.75	20.76	
15MHz	1RB-High	1715	20.91	20.88	20.84
		1772.5	20.62	20.94	20.75
		1745	20.60	20.90	20.71
	1RB-Middle	1717.5	20.69	21.12	20.96
		1772.5	20.62	20.96	20.75
		1745	20.73	20.96	20.86
	1RB-Low	1717.5	20.83	21.16	21.06
		1772.5	20.53	20.90	20.70
		1745	20.72	20.94	20.96
	36RB-High	1717.5	20.74	20.97	20.90
		1772.5	20.72	20.76	20.73
		1745	20.60	20.65	20.71
	36RB-Middle	1717.5	20.84	20.85	20.85
		1772.5	20.65	20.67	20.67
		1745	20.72	20.77	20.77
36RB-Low	1717.5	20.80	20.82	20.82	
	1772.5	20.56	20.62	20.62	
	1745	20.75	20.76	20.83	
		1717.5	20.81	20.79	20.82

	75RB	1772.5	20.63	20.65	20.65
		1745	20.73	20.72	20.74
		1717.5	20.81	20.82	20.79
20MHz	1RB-High	1770	20.56	20.85	20.76
		1745	20.60	20.72	20.69
		1720	20.57	20.92	20.71
	1RB-Middle	1770	20.57	20.95	20.78
		1745	20.69	20.92	20.80
		1720	20.77	21.15	20.91
	1RB-Low	1770	20.56	20.84	20.77
		1745	20.54	20.80	20.70
		1720	20.72	20.98	20.89
	50RB-High	1770	20.80	20.78	20.79
		1745	20.57	20.61	20.60
		1720	20.94	20.88	20.85
	50RB-Middle	1770	20.71	20.64	20.63
		1745	20.71	20.69	20.73
		1720	20.86	20.78	20.81
	50RB-Low	1770	20.67	20.61	20.67
		1745	20.77	20.70	20.76
		1720	20.87	20.82	20.82
	100RB	1770	20.70	20.70	20.70
		1745	20.64	20.59	20.62
		1720	20.83	20.85	20.86

**LTE Band66(ANT31 DSI8/9/10)**

Band 66						
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	
1.4MHz	1RB-High	1779.3	19.55	19.97	19.76	
		1745	19.61	19.87	19.75	
		1710.7	19.71	19.98	19.83	
	1RB-Middle	1779.3	19.59	19.92	19.72	
		1745	19.67	19.86	19.81	
		1710.7	19.70	19.86	19.85	
	1RB-Low	1779.3	19.54	19.92	19.71	
		1745	19.63	19.99	19.74	
		1710.7	19.69	20.05	19.91	
	3RB-High	1779.3	19.63	19.65	19.74	
		1745	19.63	19.62	19.74	
		1710.7	19.69	19.67	19.88	
	3RB-Middle	1779.3	19.59	19.64	19.73	
		1745	19.66	19.70	19.72	
		1710.7	19.72	19.73	19.84	
	3RB-Low	1779.3	19.62	19.57	19.68	
		1745	19.66	19.59	19.73	
		1710.7	19.71	19.68	19.85	
	6RB	1779.3	19.57	19.72	19.60	
		1745	19.63	19.75	19.66	
		1710.7	19.73	19.82	19.70	
	3MHz	1RB-High	1778.5	19.54	19.94	19.69
			1745	19.62	19.94	19.82
			1711.5	19.69	19.97	19.82
1RB-Middle		1778.5	19.55	19.91	19.90	

		1745	19.66	19.95	19.83	
		1711.5	19.75	20.02	19.85	
		1778.5	19.55	20.00	19.80	
	1RB-Low	1745	19.66	19.86	19.84	
		1711.5	19.73	20.02	19.92	
		1778.5	19.59	19.72	19.60	
	8RB-High	1745	19.62	19.69	19.67	
		1711.5	19.76	19.76	19.74	
		1778.5	19.58	19.66	19.63	
	8RB-Middle	1745	19.64	19.69	19.68	
		1711.5	19.76	19.80	19.78	
		1778.5	19.62	19.65	19.62	
	8RB-Low	1745	19.67	19.77	19.74	
		1711.5	19.74	19.78	19.76	
		1778.5	19.57	19.62	19.60	
15RB	1745	19.59	19.66	19.60		
	1711.5	19.73	19.75	19.74		
	1777.5	19.58	19.91	19.71		
5MHz	1RB-High	1745	19.66	19.91	19.80	
		1712.5	19.73	20.15	19.93	
		1777.5	19.63	19.98	19.80	
	1RB-Middle	1745	19.68	19.97	19.90	
		1712.5	19.77	20.04	19.90	
		1777.5	19.58	20.01	19.80	
	1RB-Low	1745	19.69	19.93	19.82	
		1712.5	19.74	19.99	19.94	
		1777.5	19.61	19.58	19.64	
	12RB-High	1745	19.60	19.59	19.61	
		1712.5	19.72	19.65	19.72	
		1777.5	19.64	19.59	19.64	
	12RB-Middle	1745	19.68	19.70	19.75	
		1712.5	19.76	19.75	19.76	
		1777.5	19.62	19.63	19.64	
	12RB-Low	1745	19.75	19.70	19.73	
		1712.5	19.81	19.75	19.78	
		1777.5	19.63	19.66	19.65	
	25RB	1745	19.67	19.67	19.68	
		1712.5	19.79	19.79	19.77	
		1775	19.57	19.84	19.75	
	10MHz	1RB-High	1745	19.61	19.93	19.70
			1715	19.73	20.07	20.01
			1775	19.57	20.01	19.78
1RB-Middle		1745	19.72	20.02	19.77	
		1715	19.78	19.97	19.93	
		1775	19.52	19.90	19.70	
1RB-Low		1745	19.69	20.01	19.83	
		1715	19.72	19.99	19.84	
		1775	19.63	19.65	19.69	
25RB-High		1745	19.62	19.60	19.61	
		1715	19.79	19.84	19.80	
		1775	19.57	19.63	19.60	
25RB-Middle		1745	19.72	19.72	19.73	
		1715	19.78	19.77	19.78	
		1775	19.57	19.57	19.60	
25RB-Low		1745	19.74	19.78	19.77	



		1715	19.83	19.79	19.81
	50RB	1775	19.67	19.64	19.67
		1745	19.67	19.74	19.74
		1715	19.82	19.84	19.84
15MHz	1RB-High	1772.5	19.53	19.89	19.71
		1745	19.52	19.85	19.72
		1717.5	19.66	20.12	19.84
	1RB-Middle	1772.5	19.54	19.96	19.73
		1745	19.64	19.98	19.84
		1717.5	19.69	20.18	19.94
	1RB-Low	1772.5	19.40	19.87	19.60
		1745	19.64	19.88	19.88
		1717.5	19.67	19.95	19.79
	36RB-High	1772.5	19.62	19.64	19.66
		1745	19.59	19.60	19.58
		1717.5	19.74	19.77	19.80
	36RB-Middle	1772.5	19.53	19.56	19.60
		1745	19.67	19.68	19.74
		1717.5	19.73	19.77	19.78
	36RB-Low	1772.5	19.53	19.57	19.55
		1745	19.72	19.67	19.71
		1717.5	19.72	19.81	19.77
	75RB	1772.5	19.59	19.58	19.60
		1745	19.64	19.68	19.61
		1717.5	19.79	19.73	19.76
20MHz	1RB-High	1770	19.51	19.91	19.65
		1745	19.53	19.87	19.76
		1720	19.48	20.00	19.68
	1RB-Middle	1770	19.52	19.84	19.67
		1745	19.71	19.85	19.89
		1720	19.72	19.93	19.95
	1RB-Low	1770	19.50	19.85	19.70
		1745	19.48	19.88	19.63
		1720	19.67	19.92	19.77
	50RB-High	1770	19.73	19.69	19.68
		1745	19.57	19.55	19.53
		1720	19.83	19.78	19.80
	50RB-Middle	1770	19.63	19.61	19.59
		1745	19.67	19.68	19.66
		1720	19.79	19.74	19.77
	50RB-Low	1770	19.60	19.60	19.57
		1745	19.69	19.68	19.70
		1720	19.82	19.76	19.77
	100RB	1770	19.64	19.65	19.62
		1745	19.57	19.60	19.60
		1720	19.82	19.78	19.78

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification. UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**

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

### LTE Carrier Aggregation Conducted Power (Uplink)

This device supports uplink carrier aggregation for LTE CA\_7C, CA\_38C and CA\_41C with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. For the non-contiguously allocated resource blocks which the MPR level is determined by various RB separation and RB sizes requirement, and the allowed MPR levels, settings and the conducted powers are permanently implemented in this device per the 3GPP requirements.

According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs

Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. For channels at the ends of a frequency band, the SCC and subsequent CCs are added to the side within the transmission band. Otherwise, the CCs should be added alternatively to either side of the PCC.

**7C ANT13**

ULTE CA Class	DSI2/3										Power	
	PCC					SCC						
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)	
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	16	13.63	
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	16	13.75	
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	16	13.82	
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	16	14.55	
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	16	14.54	
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	16	14.5	
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	16	13.9	
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	16	14.63	
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	16	14.65	
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	16	14.56	
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	16	14.54	
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	16	14.52	
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	16	13.25	
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	16	13.4	
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	16	13.46	
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	16	14.67	
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	16	13.65	
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	16	13.74	

ULTE CA Class	DSI4										Power	
	PCC					SCC						
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)	
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	23.5	13.49	
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	23.5	13.61	
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	23.5	13.68	
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	23.5	22.02	
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	23.5	22.01	
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	23.5	21.95	
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	23.5	13.76	
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	23.5	22.15	
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	23.5	22.18	
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	23.5	22.04	
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	23.5	22.01	
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	23.5	21.98	
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	23.5	13.11	
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	23.5	13.26	
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	23.5	13.32	
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	23.5	22.21	
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	23.5	13.51	
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	23.5	13.6	

ULTE CA Class	DSI8/9/10										Power	
	PCC					SCC						
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)	
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	18.5	13.48	
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	18.5	13.6	
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	18.5	13.68	
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	18.5	17	
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	18.5	16.99	
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	18.5	16.94	
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	18.5	13.74	
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	18.5	17.09	
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	18.5	17.12	
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	18.5	17.01	
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	18.5	16.99	
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	18.5	16.96	
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	18.5	13.11	
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	18.5	13.25	
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	18.5	13.31	
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	18.5	17.14	
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	18.5	13.52	
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	18.5	13.59	

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ULTE CA Class	PCC					DSI2/3				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	24	13.75
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	24	13.87
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	24	13.94
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	24	22.56
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	24	22.55
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	24	22.49
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	24	14.02
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	24	22.69
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	24	22.72
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	24	22.58
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	24	22.55
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	24	22.52
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	24	13.37
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	24	13.52
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	24	13.58
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	24	22.75
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	24	13.77
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	24	13.86

ULTE CA Class	PCC					DSI4				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	22	13.72
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	22	13.84
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	22	13.91
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	22	20.56
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	22	20.54
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	22	20.49
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	22	13.99
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	22	20.67
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	22	20.7
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	22	20.57
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	22	20.54
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	22	20.51
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	22	13.34
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	22	13.49
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	22	13.55
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	22	20.73
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	22	13.74
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	22	13.83

ULTE CA Class	PCC					DSI8/9/10				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	tune up	conducted power (dBm)
CA_7C	20M	21350	3350	1	99	20M	3152	1	0	21	13.72
CA_7C	20M	21350	3350	1	99	15M	3179	1	0	21	13.82
CA_7C	20M	21350	3350	1	99	10M	3206	1	0	21	13.92
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	21	19.56
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	21	19.54
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	21	19.49
CA_7C	15M	21375	3375	1	74	15M	3225	1	0	21	13.97
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	21	19.66
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	21	19.69
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	21	19.57
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	21	19.54
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	21	19.52
CA_7C	20M	20850	2850	1	0	20M	3048	1	99	21	13.33
CA_7C	20M	20850	2850	1	0	15M	3021	1	74	21	13.5
CA_7C	20M	20850	2850	1	0	10M	2994	1	49	21	13.53
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	21	19.72
CA_7C	15M	20825	2825	1	0	15M	2975	1	74	21	13.74
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	21	13.83

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UL LTE CA Class	DSI2/3									
	PCC				SCC				Power	
	PCC Bandwidth	UL channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 38C	20M	38150	1	99	20M	37952	1	0	19	13.98
CA 38C	20M	37850	1	99	20M	38048	1	0	19	17.87
CA 38C	15M	38175	1	74	15M	38025	1	0	19	14.33
CA 38C	15M	37825	1	74	15M	37975	1	0	19	18.03
CA 38C	20M	38150	1	0	20M	37952	1	99	19	17.95
CA 38C	20M	37850	1	0	20M	38048	1	99	19	13.77
CA 38C	15M	38175	1	0	15M	38025	1	74	19	18.08
CA 38C	15M	37825	1	0	15M	37975	1	74	19	14.15

UL LTE CA Class	DSI4									
	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 38C	20M	38150	1	99	20M	37952	1	0	24	13.97
CA 38C	20M	37850	1	99	20M	38048	1	0	24	22.79
CA 38C	15M	38175	1	74	15M	38025	1	0	24	14.33
CA 38C	15M	37825	1	74	15M	37975	1	0	24	22.99
CA 38C	20M	38150	1	0	20M	37952	1	99	24	22.89
CA 38C	20M	37850	1	0	20M	38048	1	99	24	13.78
CA 38C	15M	38175	1	0	15M	38025	1	74	24	23.06
CA 38C	15M	37825	1	0	15M	37975	1	74	24	14.12

UL LTE CA Class	DSI8/9/10									
	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 38C	20M	38150	1	99	20M	37952	1	0	22.5	13.96
CA 38C	20M	37850	1	99	20M	38048	1	0	22.5	21.28
CA 38C	15M	38175	1	74	15M	38025	1	0	22.5	14.31
CA 38C	15M	37825	1	74	15M	37975	1	0	22.5	21.48
CA 38C	20M	38150	1	0	20M	37952	1	99	22.5	21.38
CA 38C	20M	37850	1	0	20M	38048	1	99	22.5	13.78
CA 38C	15M	38175	1	0	15M	38025	1	74	22.5	21.53
CA 38C	15M	37825	1	0	15M	37975	1	74	22.5	14.11

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UL LTE CA Class	DSI2/3/4/8/9/10									
	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 38C	20M	38150	1	99	20M	37952	1	0	24	14.17
CA 38C	20M	37850	1	99	20M	38048	1	0	24	22.98
CA 38C	15M	38175	1	74	15M	38025	1	0	24	14.52
CA 38C	15M	37825	1	74	15M	37975	1	0	24	23.18
CA 38C	20M	38150	1	0	20M	37952	1	99	24	23.08
CA 38C	20M	37850	1	0	20M	38048	1	99	24	13.96
CA 38C	15M	38175	1	0	15M	38025	1	74	24	23.25
CA 38C	15M	37825	1	0	15M	37975	1	74	24	14.34

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DSI2/3										
UL LTE CA Class	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	41490	1	99	20M	41292	1	0	17.5	13.86
CA 41C	20M	41490	1	99	15M	41319	1	0	17.5	14.03
CA 41C	20M	41490	1	99	10M	41346	1	0	17.5	14.01
CA 41C	20M	41490	1	99	5M	41373	1	0	17.5	14.02
CA 41C	20M	39750	1	99	20M	39948	1	0	17.5	16.16
CA 41C	20M	39750	1	99	15M	39921	1	0	17.5	16.2
CA 41C	20M	39750	1	99	10M	39894	1	0	17.5	16.07
CA 41C	20M	39750	1	99	5M	39867	1	0	17.5	16.06
CA 41C	15M	41515	1	74	15M	41365	1	0	17.5	14.19
CA 41C	15M	41515	1	74	10M	41395	1	0	17.5	14.09
CA 41C	15M	39725	1	74	10M	39845	1	0	17.5	16.29
CA 41C	20M	41490	1	0	20M	41292	1	99	17.5	16.23
CA 41C	20M	41490	1	0	15M	41319	1	74	17.5	16.31
CA 41C	20M	41490	1	0	10M	41346	1	49	17.5	16.19
CA 41C	20M	41490	1	0	5M	41373	1	24	17.5	16.16
CA 41C	20M	39750	1	0	20M	39948	1	99	17.5	13.65
CA 41C	20M	39750	1	0	15M	39921	1	74	17.5	13.86
CA 41C	20M	39750	1	0	10M	39894	1	49	17.5	13.83
CA 41C	20M	39750	1	0	5M	39867	1	24	17.5	13.98
CA 41C	15M	41515	1	0	15M	41365	1	74	17.5	16.38
CA 41C	15M	41515	1	0	10M	41395	1	49	17.5	16.26
CA 41C	15M	39725	1	0	10M	39845	1	49	17.5	14.02

DSI4										
UL LTE CA Class	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	41490	1	99	20M	41292	1	0	24	13.86
CA 41C	20M	41490	1	99	15M	41319	1	0	24	14.02
CA 41C	20M	41490	1	99	10M	41346	1	0	24	14.02
CA 41C	20M	41490	1	99	5M	41373	1	0	24	14.03
CA 41C	20M	39750	1	99	20M	39948	1	0	24	22.66
CA 41C	20M	39750	1	99	15M	39921	1	0	24	22.72
CA 41C	20M	39750	1	99	10M	39894	1	0	24	22.54
CA 41C	20M	39750	1	99	5M	39867	1	0	24	22.52
CA 41C	15M	41515	1	74	15M	41365	1	0	24	14.16
CA 41C	15M	41515	1	74	10M	41395	1	0	24	14.12
CA 41C	15M	39725	1	74	10M	39845	1	0	24	22.76
CA 41C	20M	41490	1	0	20M	41292	1	99	24	22.68
CA 41C	20M	41490	1	0	15M	41319	1	74	24	22.79
CA 41C	20M	41490	1	0	10M	41346	1	49	24	22.62
CA 41C	20M	41490	1	0	5M	41373	1	24	24	22.58
CA 41C	20M	39750	1	0	20M	39948	1	99	24	13.64
CA 41C	20M	39750	1	0	15M	39921	1	74	24	13.86
CA 41C	20M	39750	1	0	10M	39894	1	49	24	13.82
CA 41C	20M	39750	1	0	5M	39867	1	24	24	14
CA 41C	15M	41515	1	0	15M	41365	1	74	24	22.89
CA 41C	15M	41515	1	0	10M	41395	1	49	24	22.72
CA 41C	15M	39725	1	0	10M	39845	1	49	24	14.01

DSI8/9/10										
UL LTE CA Class	PCC				SCC				Power	
	PCC Bandwidth	channel	RB	RB OFFSET	SCC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	41490	1	99	20M	41292	1	0	22	13.87
CA 41C	20M	41490	1	99	15M	41319	1	0	22	14.01
CA 41C	20M	41490	1	99	10M	41346	1	0	22	14.13
CA 41C	20M	41490	1	99	5M	41373	1	0	22	14.05
CA 41C	20M	39750	1	99	20M	39948	1	0	22	20.6
CA 41C	20M	39750	1	99	15M	39921	1	0	22	20.67
CA 41C	20M	39750	1	99	10M	39894	1	0	22	20.51
CA 41C	20M	39750	1	99	5M	39867	1	0	22	20.5
CA 41C	15M	41515	1	74	15M	41365	1	0	22	14.14
CA 41C	15M	41515	1	74	10M	41395	1	0	22	14.07
CA 41C	15M	39725	1	74	10M	39845	1	0	22	20.75
CA 41C	20M	41490	1	0	20M	41292	1	99	22	20.67
CA 41C	20M	41490	1	0	15M	41319	1	74	22	20.77
CA 41C	20M	41490	1	0	10M	41346	1	49	22	20.62
CA 41C	20M	41490	1	0	5M	41373	1	24	22	20.58
CA 41C	20M	39750	1	0	20M	39948	1	99	22	13.66
CA 41C	20M	39750	1	0	15M	39921	1	74	22	13.86
CA 41C	20M	39750	1	0	10M	39894	1	49	22	13.8
CA 41C	20M	39750	1	0	5M	39867	1	24	22	13.95
CA 41C	15M	41515	1	0	15M	41365	1	74	22	20.86
CA 41C	15M	41515	1	0	10M	41395	1	49	22	20.71
CA 41C	15M	39725	1	0	10M	39845	1	49	22	14.02



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UL LTE CA Class	DSI2/3/4/8/9/10									
	PCC				SCC				Power	
	PCC Bandwi	channel	RB	RB OFFSET	SCC Bandwi	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	41490	1	99	20M	41292	1	0	24	14.1
CA 41C	20M	41490	1	99	15M	41319	1	0	24	14.28
CA 41C	20M	41490	1	99	10M	41346	1	0	24	14.23
CA 41C	20M	41490	1	99	5M	41373	1	0	24	14.27
CA 41C	20M	39750	1	99	20M	39948	1	0	24	23.19
CA 41C	20M	39750	1	99	15M	39921	1	0	24	23.24
CA 41C	20M	39750	1	99	10M	39894	1	0	24	23.06
CA 41C	20M	39750	1	99	5M	39867	1	0	24	23.05
CA 41C	15M	41515	1	74	15M	41365	1	0	24	14.41
CA 41C	15M	41515	1	74	10M	41395	1	0	24	14.32
CA 41C	15M	39725	1	74	10M	39845	1	0	24	23.13
CA 41C	20M	41490	1	0	20M	41292	1	99	24	23.06
CA 41C	20M	41490	1	0	15M	41319	1	74	24	23.17
CA 41C	20M	41490	1	0	10M	41346	1	49	24	23
CA 41C	20M	41490	1	0	5M	41373	1	24	24	22.96
CA 41C	20M	39750	1	0	20M	39948	1	99	24	13.89
CA 41C	20M	39750	1	0	15M	39921	1	74	24	14.12
CA 41C	20M	39750	1	0	10M	39894	1	49	24	14.09
CA 41C	20M	39750	1	0	5M	39867	1	24	24	14.24
CA 41C	15M	41515	1	0	15M	41365	1	74	24	23.27
CA 41C	15M	41515	1	0	10M	41395	1	49	24	23.1
CA 41C	15M	39725	1	0	10M	39845	1	49	24	14.28

### LTE Carrier Aggregation Conducted Power (Downlink)

Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive. SAR test is not required since maximum output power when downlink carrier aggregation active is not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

#### Maximum Output Powers

#### ANT13 DSI2/3

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	36	0	15M	3225	16	15.05
CA 38C	20M	37850	37850	1	50	20M	38048	19	18.22
CA 41C	15M	41515	41515	1	37	15M	41365	17.5	16.62
CA 66C	20M	132072	66536	50	25	20M	33734	14.5	13.48
CA 4A-4A	20M	20050	2050	1	0	20M	2300	16.5	15.54
CA 7A-7A	10M	21400	3400	25	0	20M	2850	16	15.12
CA 41A-41A	15M	39725	39725	1	74	15M	41515	17.5	16.57
CA 66A-66A	20M	132072	66536	50	25	20M	67236	14.5	13.45
CA 2A-4A	5M	19175	1175	1	24	20M	2175	15.5	14.54
CA 2A-5A	5M	19175	1175	1	24	10M	2525	15.5	14.57
CA 2A-7A	5M	19175	1175	1	24	20M	3100	15.5	14.6
CA 2A-28A	5M	19175	1175	1	24	20M	9460	15.5	14.59
CA 2A-66A	5M	19175	1175	1	24	20M	66786	15.5	14.6
CA 4A-2A	5M	19975	1975	1	12	20M	900	16.5	15.58
CA 4A-5A	5M	19975	1975	1	12	10M	2525	16.5	15.58
CA 4A-7A	5M	19975	1975	1	12	20M	3100	16.5	15.58
CA 4A-28A	5M	19975	1975	1	12	20M	9460	16.5	15.6
CA 5A-1A	10M	20450	2450	25	0	20M	300	20	18.98
CA 5A-2A	10M	20450	2450	25	0	20M	900	20	18.91
CA 5A-3A	10M	20450	2450	25	0	20M	1575	20	18.92
CA 5A-7A	10M	20450	2450	25	0	20M	3100	20	18.92
CA 5A-41A	10M	20450	2450	25	0	20M	40620	20	18.91
CA 7A-1A	10M	21100	3100	1	24	20M	300	16	15.11
CA 7A-3A	10M	21100	3100	1	24	20M	1575	16	15.08
CA 7A-5A	10M	21100	3100	1	24	10M	2525	16	15.09
CA 7A-8A	10M	21100	3100	1	24	10M	3625	16	15.08
CA 7A-28A	10M	21100	3100	1	24	20M	9460	16	15.08
CA 38A-1A	20M	37850	37850	1	50	20M	300	19	18.22
CA 38A-3A	20M	37850	37850	1	50	20M	1575	19	18.28
CA 38A-8A	20M	37850	37850	1	50	10M	3625	19	18.29
CA 38A-28A	20M	37850	37850	1	50	20M	9460	19	18.24
CA 38A-41A	20M	37850	37850	1	50	20M	40620	19	18.22
CA 41A-1A	5M	40148	40148	1	12	20M	300	17.5	16.96
CA 41A-3A	5M	40148	40148	1	12	20M	1575	17.5	16.96
CA 41A-5A	5M	40148	40148	1	12	10M	2525	17.5	16.96
CA 41A-8A	5M	40148	40148	1	12	10M	3625	17.5	17
CA 41A-28A	5M	40148	40148	1	12	20M	9460	17.5	16.96
CA 66A-2A	20M	132072	66536	50	25	20M	900	14.5	13.46
CA 66A-28A	20M	132072	66536	50	25	20M	9460	14.5	13.5



**ANT13 DSI4**

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	1	37	15M	3225	23.5	22.74
CA 38C	20M	37850	37850	1	50	20M	38048	24	23.21
CA 41C	15M	41515	41515	1	37	15M	41365	24	22.95
CA 66C	20M	132072	66536	1	50	20M	33734	24	22.91
CA 4A-4A	20M	20050	2050	1	50	20M	2300	24	22.96
CA 7A-7A	10M	21400	3400	1	0	20M	2850	23.5	22.78
CA 41A-41A	15M	39725	39725	1	74	15M	41515	24	23.03
CA 66A-66A	20M	132072	66536	1	50	20M	67236	24	22.94
CA 2A-4A	10M	18900	900	1	24	20M	2175	24	23.08
CA 2A-5A	10M	18900	900	1	24	10M	2525	24	23.08
CA 2A-7A	10M	18900	900	1	24	20M	3100	24	23.06
CA 2A-28A	10M	18900	900	1	24	20M	9460	24	23.03
CA 2A-66A	10M	18900	900	1	24	20M	66786	24	23.03
CA 4A-2A	20M	20050	2050	1	50	20M	900	24	23.14
CA 4A-5A	20M	20050	2050	1	50	10M	2525	24	23.07
CA 4A-7A	20M	20050	2050	1	50	20M	3100	24	23.07
CA 4A-28A	20M	20050	2050	1	50	20M	9460	24	23.07
CA 5A-1A	10M	20450	2450	1	24	20M	300	24.5	23.38
CA 5A-2A	10M	20450	2450	1	24	20M	900	24.5	23.34
CA 5A-3A	10M	20450	2450	1	24	20M	1575	24.5	23.31
CA 5A-7A	10M	20450	2450	1	24	20M	3100	24.5	23.38
CA 5A-41A	10M	20450	2450	1	24	20M	40620	24.5	23.38
CA 7A-1A	5M	21100	3100	1	24	20M	300	23.5	22.75
CA 7A-3A	5M	21100	3100	1	24	20M	1575	23.5	22.72
CA 7A-5A	5M	21100	3100	1	24	10M	2525	23.5	22.72
CA 7A-8A	5M	21100	3100	1	24	10M	3625	23.5	22.75
CA 7A-28A	5M	21100	3100	1	24	20M	9460	23.5	22.79
CA 38A-1A	5M	38000	38000	1	12	20M	300	24	23.27
CA 38A-3A	5M	38000	38000	1	12	20M	1575	24	23.22
CA 38A-8A	5M	38000	38000	1	12	10M	3625	24	23.29
CA 38A-28A	5M	38000	38000	1	12	20M	9460	24	23.31
CA 38A-41A	5M	38000	38000	1	12	20M	40620	24	23.31
CA 41A-1A	5M	40148	40148	1	12	20M	300	24	23.41
CA 41A-3A	5M	40148	40148	1	12	20M	1575	24	23.41
CA 41A-5A	5M	40148	40148	1	12	10M	2525	24	23.44
CA 41A-8A	5M	40148	40148	1	12	10M	3625	24	23.48
CA 41A-28A	5M	40148	40148	1	12	20M	9460	24	23.48
CA 66A-2A	20M	132072	66536	1	50	20M	900	24	22.96
CA 66A-28A	20M	132072	66536	1	50	20M	9460	24	22.94



**ANT13 DSI8/9/10**

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	36	0	15M	3225	18.5	17.86
CA 38C	20M	37850	37850	1	50	20M	38048	22.5	21.56
CA 41C	15M	41515	41515	1	37	15M	41365	22	21
CA 66C	20M	132072	66536	50	50	20M	33734	19	18.01
CA 4A-4A	20M	20050	2050	50	0	20M	2300	18.5	17.58
CA 7A-7A	10M	21400	3400	25	0	20M	2850	18.5	17.88
CA 41A-41A	15M	39725	39725	1	74	15M	41515	22	21.09
CA 66A-66A	20M	132072	66536	50	50	20M	67236	19	17.99
CA 2A-4A	5M	18900	900	12	0	20M	2175	18.5	17.52
CA 2A-5A	5M	18900	900	12	0	10M	2525	18.5	17.5
CA 2A-7A	5M	18900	900	12	0	20M	3100	18.5	17.54
CA 2A-28A	5M	18900	900	12	0	20M	9460	18.5	17.52
CA 2A-66A	5M	18900	900	12	0	20M	66786	18.5	17.52
CA 4A-2A	20M	20050	2050	50	0	20M	900	18.5	17.62
CA 4A-5A	20M	20050	2050	50	0	10M	2525	18.5	17.62
CA 4A-7A	20M	20050	2050	50	0	20M	3100	18.5	17.56
CA 4A-28A	20M	20050	2050	50	0	20M	9460	18.5	17.6
CA 7A-1A	10M	21100	3100	1	24	20M	300	18.5	17.87
CA 7A-3A	10M	21100	3100	1	24	20M	1575	18.5	17.94
CA 7A-5A	10M	21100	3100	1	24	10M	2525	18.5	17.91
CA 7A-8A	10M	21100	3100	1	24	10M	3625	18.5	17.94
CA 7A-28A	10M	21100	3100	1	24	20M	9460	18.5	17.89
CA 38A-1A	5M	38000	38000	1	12	20M	300	22.5	21.63
CA 38A-3A	5M	38000	38000	1	12	20M	1575	22.5	21.67
CA 38A-8A	5M	38000	38000	1	12	10M	3625	22.5	21.67
CA 38A-28A	5M	38000	38000	1	12	20M	9460	22.5	21.63
CA 38A-41A	5M	38000	38000	1	12	20M	40620	22.5	21.67
CA 41A-1A	5M	40148	40148	1	12	20M	300	22	21.44
CA 41A-3A	5M	40148	40148	1	12	20M	1575	22	21.41
CA 41A-5A	5M	40148	40148	1	12	10M	2525	22	21.46
CA 41A-8A	5M	40148	40148	1	12	10M	3625	22	21.46
CA 41A-28A	5M	40148	40148	1	12	20M	9460	22	21.46
CA 66A-2A	20M	132072	66536	50	50	20M	900	19	17.99
CA 66A-28A	20M	132072	66536	50	50	20M	9460	19	18.06



**ANT31/41 DSI2**

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	1	37	15M	3225	24	23.3
CA 38C	20M	37850	37850	1	50	20M	38048	24	23.16
CA 41C	15M	41515	41515	1	37	15M	41365	24	23.29
CA 66C	20M	132072	66536	1	50	20M	33734	24	23.15
CA 4A-4A	20M	20050	2050	1	0	20M	2300	24.8	23.72
CA 7A-7A	10M	21400	3400	1	24	20M	2850	24	23.41
CA 41A-41A	15M	39725	39725	1	37	15M	41515	24	23.19
CA 66A-66A	20M	132072	66536	1	50	20M	67236	24.5	23.15
CA 2A-4A	20M	18900	900	1	50	20M	2175	24.8	23.59
CA 2A-5A	20M	18900	900	1	50	10M	2525	24.8	23.52
CA 2A-7A	20M	18900	900	1	50	20M	3100	24.8	23.59
CA 2A-28A	20M	18900	900	1	50	20M	9460	24.8	23.61
CA 2A-66A	20M	18900	900	1	50	20M	66786	24.8	23.57
CA 4A-2A	5M	19975	1975	1	12	20M	900	24.8	23.8
CA 4A-5A	5M	19975	1975	1	12	10M	2525	24.8	23.8
CA 4A-7A	5M	19975	1975	1	12	20M	3100	24.8	23.84
CA 4A-28A	5M	19975	1975	1	12	20M	9460	24.8	23.8
CA 5A-1A	10M	20450	2450	1	24	20M	300	24.5	23.28
CA 5A-2A	10M	20450	2450	1	24	20M	900	24.5	23.32
CA 5A-3A	10M	20450	2450	1	24	20M	1575	24.5	23.25
CA 5A-7A	10M	20450	2450	1	24	20M	3100	24.5	23.23
CA 5A-41A	10M	20450	2450	1	24	20M	40620	24.5	23.25
CA 7A-1A	5M	21425	3425	1	12	20M	300	24	23.4
CA 7A-3A	5M	21425	3425	1	12	20M	1575	24	23.35
CA 7A-5A	5M	21425	3425	1	12	10M	2525	24	23.35
CA 7A-8A	5M	21425	3425	1	12	10M	3625	24	23.35
CA 7A-28A	5M	21425	3425	1	12	20M	9460	24	23.35
CA 38A-1A	10M	38000	38000	1	0	20M	300	24	23.37
CA 38A-3A	10M	38000	38000	1	0	20M	1575	24	23.3
CA 38A-8A	10M	38000	38000	1	0	10M	3625	24	23.35
CA 38A-28A	10M	38000	38000	1	0	20M	9460	24	23.3
CA 38A-41A	10M	38000	38000	1	0	20M	40620	24	23.3
CA 41A-1A	5M	40620	40620	1	12	20M	300	24	23.39
CA 41A-3A	5M	40620	40620	1	12	20M	1575	24	23.48
CA 41A-5A	5M	40620	40620	1	12	10M	2525	24	23.48
CA 41A-8A	5M	40620	40620	1	12	10M	3625	24	23.44
CA 41A-28A	5M	40620	40620	1	12	20M	9460	24	23.39
CA 66A-2A	5M	131997	66461	1	12	20M	900	24.5	23.14
CA 66A-28A	5M	131997	66461	1	12	20M	9460	24.5	23.19

**ANT31/41 DSI4**

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	1	37	15M	3225	22	21.35
CA 66C	20M	132072	66536	50	50	20M	33734	21.8	20.81
CA 4A-4A	20M	20050	2050	1	50	20M	2300	21.8	20.81
CA 7A-7A	10M	21400	3400	1	24	20M	2850	22	21.41
CA 66A-66A	20M	132072	66536	1	50	20M	67236	21.8	20.84
CA 2A-4A	5M	18900	900	1	12	20M	2175	23.3	22.06
CA 2A-5A	5M	18900	900	1	12	10M	2525	23.3	22.06
CA 2A-7A	5M	18900	900	1	12	20M	3100	23.3	22.06
CA 2A-28A	5M	18900	900	1	12	20M	9460	23.3	22.04
CA 2A-66A	5M	18900	900	1	12	20M	66786	23.3	22.13
CA 4A-2A	10M	20000	2000	1	49	20M	900	21.8	20.91
CA 4A-5A	10M	20000	2000	1	49	10M	2525	21.8	20.85
CA 4A-7A	10M	20000	2000	1	49	20M	3100	21.8	20.87
CA 4A-28A	10M	20000	2000	1	49	20M	9460	21.8	20.89
CA 7A-1A	5M	21425	3425	1	12	20M	300	22	21.36
CA 7A-3A	5M	21425	3425	1	12	20M	1575	22	21.38
CA 7A-5A	5M	21425	3425	1	12	10M	2525	22	21.38
CA 7A-8A	5M	21425	3425	1	12	10M	3625	22	21.36
CA 7A-28A	5M	21425	3425	1	12	20M	9460	22	21.38
CA 66A-2A	20M	132072	66536	50	50	20M	900	21.8	20.9
CA 66A-28A	20M	132072	66536	50	50	20M	9460	21.8	20.86

**ANT31/41 DSI8/9/10**

DL LTE CA Class	PCC					SCC		Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA 7C	15M	21375	3350	1	37	15M	3225	21	19.97
CA 66C	20M	132072	66536	50	50	20M	33734	20.8	19.73
CA 4A-4A	20M	20050	2050	1	0	20M	2300	20.5	19.73
CA 7A-7A	10M	21400	3400	25	0	20M	2850	21	20.09
CA 66A-66A	20M	132072	66536	50	50	20M	67236	20.8	19.77
CA 2A-4A	20M	18900	900	50	0	20M	2175	21.5	20.61
CA 2A-5A	20M	18900	900	50	0	10M	2525	21.5	20.67
CA 2A-7A	20M	18900	900	50	0	20M	3100	21.5	20.65
CA 2A-28A	20M	18900	900	50	0	20M	9460	21.5	20.65
CA 2A-66A	20M	18900	900	50	0	20M	66786	21.5	20.61
CA 4A-2A	10M	20000	2000	25	25	20M	900	20.5	19.8
CA 4A-5A	10M	20000	2000	25	25	10M	2525	20.5	19.78
CA 4A-7A	10M	20000	2000	25	25	20M	3100	20.5	19.86
CA 4A-28A	10M	20000	2000	25	25	20M	9460	20.5	19.78
CA 7A-1A	20M	21350	3350	50	25	20M	300	21	20.16
CA 7A-3A	20M	21350	3350	50	25	20M	1575	21	20.12
CA 7A-5A	20M	21350	3350	50	25	10M	2525	21	20.14
CA 7A-8A	20M	21350	3350	50	25	10M	3625	21	20.1
CA 7A-28A	20M	21350	3350	50	25	20M	9460	21	20.08
CA 66A-2A	20M	132072	66536	50	50	20M	900	20.8	19.77
CA 66A-28A	20M	132072	66536	50	50	20M	9460	20.8	19.75



### LTE Carrier Aggregation 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

#### Maximum Output Powers

### ANT13 DSI2/3

DL LTE CA Class	DSI2/3																Power	
	PCC						PCC						SCC				tune up	conducted power (dBm)
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel			
CA_7C-7C	15M	21375	3350	36	0	15M	3225	36	0	15M	3350	15M	3225	15	15.02			
CA_38C-38C	20M	37850	37850	1	0	20M	38048	1	0	20M	37850	20M	38048	19	18.24			
CA_41C-41C	15M	41515	41515	1	37	15M	41365	1	37	15M	41515	15M	41365	17.5	18.6			
CA_66C-66C	20M	132072	66536	50	25	20M	33734	50	25	20M	66536	20M	33734	14.5	13.47			
CA_4A+4A-4A+4A	20M	20050	2050	1	0	20M	2300	1	0	20M	2050	20M	2300	16.5	15.56			
CA_7A+7A-7A+7A	10M	21400	3400	25	0	20M	2850	25	0	10M	3400	20M	2850	17.5	15.13			
CA_41A+41A-41A+41A	15M	39725	39725	1	74	15M	41515	1	74	15M	39725	15M	41515	17.5	16.56			
CA_66A+66A-66A+66A	20M	132072	66536	50	25	20M	67236	50	25	20M	66536	20M	67236	14.5	13.46			
CA_2A+2A-4A+4A	5M	19175	1175	1	24	20M	700	1	0	20M	2050	20M	2300	15.5	14.54			
CA_2A+2A-5A+5A	5M	19175	1175	1	24	20M	700	1	0	10M	2600	20M	2600	15.5	14.56			
CA_2A+2A-7A+7A	5M	19175	1175	1	24	20M	700	1	0	10M	3400	20M	2850	15.5	14.67			
CA_2A+2A-66A+66A	5M	19175	1175	1	24	20M	700	1	0	20M	66536	20M	67236	15.5	14.62			
CA_4A+4A-2A+2A	20M	20050	2050	1	0	20M	2300	1	0	5M	1175	20M	700	16.5	15.57			
CA_4A+4A-5A+5A	20M	20050	2050	1	0	20M	2300	1	0	10M	2450	10M	2600	16.5	15.54			
CA_4A+4A-7A+7A	20M	20050	2050	1	0	20M	2300	1	0	10M	3400	20M	2850	16.5	15.58			
CA_5A+5A-1A+1A	10M	20450	2450	25	0	10M	2600	25	0	20M	250	20M	500	20	18.95			
CA_5A+5A-2A+2A	10M	20450	2450	25	0	10M	2600	25	0	5M	1175	20M	700	20	18.91			
CA_5A+5A-3A+3A	10M	20450	2450	25	0	10M	2600	25	0	20M	1300	20M	1850	20	18.91			
CA_5A+5A-7A+7A	10M	20450	2450	25	0	10M	2600	25	0	10M	3400	20M	2850	20	18.98			
CA_5A+5A-41A+41A	10M	20450	2450	25	0	10M	2600	25	0	15M	39725	15M	41515	20	18.87			
CA_7A+7A-1A+1A	10M	21400	3400	25	0	20M	2850	25	0	20M	250	20M	500	16	15.13			
CA_7A+7A-2A+2A	10M	21400	3400	25	0	20M	2850	25	0	20M	1300	20M	1850	16	15.07			
CA_7A+7A-5A+5A	10M	21400	3400	25	0	20M	2850	25	0	10M	2450	10M	2600	16	15.05			
CA_41A+41A-1A+1A	15M	39725	39725	1	74	15M	41515	1	74	20M	250	20M	500	17.5	16.94			
CA_41A+41A-3A+3A	15M	39725	39725	1	74	15M	41515	1	74	20M	1300	20M	1850	17.5	16.92			
CA_41A+41A-5A+5A	15M	39725	39725	1	74	15M	41515	1	74	10M	2450	10M	2600	17.5	16.96			
CA_66A+66A-2A+2A	20M	132072	66536	50	25	20M	67236	50	25	5M	1175	20M	700	14.5	13.43			

### ANT13 DSI4

DL LTE CA Class	DSI4																Power	
	PCC						PCC						SCC				tune up	conducted power (dBm)
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel			
CA_7C-7C	15M	21375	3350	36	0	15M	3225	36	0	15M	3350	15M	3225	23.5	22.7			
CA_38C-38C	20M	37850	37850	1	0	20M	38048	1	0	20M	37850	20M	38048	24	23.23			
CA_41C-41C	15M	41515	41515	1	37	15M	41365	1	37	15M	41515	15M	41365	24	22.94			
CA_66C-66C	20M	132072	66536	50	25	20M	33734	50	25	20M	66536	20M	33734	24	22.93			
CA_4A+4A-4A+4A	20M	20050	2050	1	0	20M	2300	1	0	20M	2050	20M	2300	24	22.97			
CA_7A+7A-7A+7A	10M	21400	3400	25	0	20M	2850	25	0	10M	3400	20M	2850	24	23.08			
CA_41A+41A-41A+41A	15M	39725	39725	1	74	15M	41515	1	74	15M	39725	15M	41515	24	23.02			
CA_66A+66A-66A+66A	20M	132072	66536	50	25	20M	67236	50	25	20M	66536	20M	67236	24	22.91			
CA_2A+2A-4A+4A	5M	19175	1175	1	24	20M	700	1	0	20M	2050	20M	2300	24	23.06			
CA_2A+2A-5A+5A	5M	19175	1175	1	24	20M	700	1	0	10M	2600	10M	2600	24	23.1			
CA_2A+2A-7A+7A	5M	19175	1175	1	24	20M	700	1	0	10M	3400	20M	2850	24	23.04			
CA_2A+2A-66A+66A	5M	19175	1175	1	24	20M	700	1	0	20M	66536	20M	67236	24	23.04			
CA_4A+4A-2A+2A	20M	20050	2050	1	0	20M	2300	1	0	5M	1175	20M	700	24	23.1			
CA_4A+4A-5A+5A	20M	20050	2050	1	0	20M	2300	1	0	10M	2450	10M	2600	24	23.07			
CA_4A+4A-7A+7A	20M	20050	2050	1	0	20M	2300	1	0	10M	3400	20M	2850	24	23.07			
CA_5A+5A-1A+1A	10M	20450	2450	25	0	10M	2600	25	0	20M	250	20M	500	24.5	23.36			
CA_5A+5A-2A+2A	10M	20450	2450	25	0	10M	2600	25	0	5M	1175	20M	700	24.5	23.35			
CA_5A+5A-3A+3A	10M	20450	2450	25	0	10M	2600	25	0	20M	1300	20M	1850	24.5	23.32			
CA_5A+5A-7A+7A	10M	20450	2450	25	0	10M	2600	25	0	10M	3400	20M	2850	24.5	23.34			
CA_5A+5A-41A+41A	10M	20450	2450	25	0	10M	2600	25	0	15M	39725	15M	41515	24.5	23.37			
CA_7A+7A-1A+1A	10M	21400	3400	25	0	20M	2850	25	0	20M	250	20M	500	23.5	22.71			
CA_7A+7A-2A+2A	10M	21400	3400	25	0	20M	2850	25	0	20M	1300	20M	1850	23.5	22.69			
CA_7A+7A-5A+5A	10M	21400	3400	25	0	20M	2850	25	0	10M	2450	10M	2600	23.5	22.7			
CA_41A+41A-1A+1A	15M	39725	39725	1	74	15M	41515	1	74	20M	250	20M	500	24	23.4			
CA_41A+41A-3A+3A	15M	39725	39725	1	74	15M	41515	1	74	20M	1300	20M	1850	24	23.39			
CA_41A+41A-5A+5A	15M	39725	39725	1	74	15M	41515	1	74	10M	2450	10M	2600	24	23.45			
CA_66A+66A-2A+2A	20M	132072	66536	50	25	20M	67236	50	25	5M	1175	20M	700	24	22.92			

### ANT13 DSI8/9/10

DL LTE CA Class	DSI8/9/10																Power	
	PCC						PCC						SCC				tune up	conducted power (dBm)
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel			
CA_7C-7C	15M	21375	3350	36	0	15M	3225	36	0	15M	3350	15M	3225	18.5	17.85			
CA_38C-38C	20M	37850	37850	1	0	20M	38048	1	0	20M	37850	20M	38048	22.5	21.58			
CA_41C-41C	15M	41515	41515	1	37	15M	41365	1	37	15M	41515	15M	41365	22	21.02			
CA_66C-66C	20M	132072	66536	50	25	20M	33734	50	25	20M	66536	20M	33734	19	17.98			
CA_4A+4A-4A+4A	20M	20050	2050	50	0	20M	2300	50	0	20M	2050	20M	2300	18.5	17.89			
CA_7A+7A-7A+7A	10M	21400	3400	25	0	20M	2850	25	0	10M	3400	20M	2850	18.5	17.88			
CA_41A+41A-41A+41A	15M	39725	39725	1	74	15M	41515	1	74	15M	39725	15M	41515	22	21.11			
CA_66A+66A-66A+66A	20M	132072	66536	50	25	20M	67236	50	25	20M	66536	20M	67236	19	18			
CA_2A+2A-4A+4A	5M	18900	900	12	0	20M	2175	1	0	20M	2050	20M	2300	18.5	17.52			
CA_2A+2A-5A+5A	5M	18900	900	12	0	10M	2325	1	0	10M	2450	10M	2600	18.5	17.5			
CA_2A+2A-7A+7A	5M	18900	900	12	0	20M	2850	1	0	20M	260	20M	500	18.5	17.5			
CA_2A+2A-66A+66A	5M	18900	900	12	0	20M	67236	1	0	20M	66536	20M	67236	18.5	17.52			
CA_4A+4A-2A+2A	20M	20050	2050	50	0	20M	2300	50	0	5M	1175	20M	700	18.5	17.6			
CA_4A+4A-5A+5A	20M	20050	2050	50	0	20M	2300	50	0	10M	2450	10M	2600	18.5	17.59			
CA_4A+4A-7A+7A	20M	20050	2050	50	0	20M	2300	50	0	10M	3400	20M	2850	18.5	17.57			
CA_7A+7A-1A+1A	10M	21400	3400	25	0	20M	2850	25	0	20M	250	20M	500	18.5	17.85			
CA_7A+7A-2A+2A	10M	21400	3400	25	0	20M	2850	25	0	20M	1300	20M	1850	18.5	17.85			
CA_7A+7A-5A+5A	10M	21400	3400	25	0	20M	2850	25	0	10M	2450	10M	2600	18.5	17.88			
CA_41A+41A-1A+1A	15M	39725	39725	1	74	15M	41515	1	74	20M	250	20M	500	22	21.43			
CA_41A+41A-3A+3A	15M	39725	39725	1	74	15M	41515	1	74	20M	1300	20M	1850	22	21.42			
CA_41A+41A-5A+5A	15M	39725	39725	1	74	15M	41515	1	74	10M	2450	10M	2600	22	21.45			
CA_66A+66A-2A+																		



### ANT31/41 DSI2

DL TE CA Class	DSI2/3										Power				
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA_7C-7C	15M	21375	3350	1	37	15M	3225	1	37	15M	3350	15M	3225	24	23.32
CA_38C-38C	20M	37850	37850	1	50	20M	38048	1	50	20M	37850	20M	38048	24	23.14
CA_41C-41C	15M	41515	41515	1	37	15M	41365	1	37	15M	41515	15M	41365	24	23.27
CA_66C-66C	20M	132072	66536	1	50	20M	33734	1	50	20M	66536	20M	33734	24	23.12
CA_4A+4A-4A+4A	20M	20050	2050	1	0	20M	2300	1	0	20M	2050	20M	2300	24.8	23.71
CA_7A+7A-7A+7A	10M	21400	3400	1	24	10M	2850	1	0	10M	3400	20M	2850	24.8	23.39
CA_41A+41A-1A+1A	15M	39725	39725	1	37	15M	41515	1	37	15M	39725	15M	41515	24	23.15
CA_66A+66A-66A+66A	20M	132072	66536	1	50	20M	67236	1	50	20M	66536	20M	67236	24.5	23.13
CA_2A+2A-4A+4A	5M	19175	1175	1	12	20M	700	1	0	20M	2050	20M	2300	24.8	23.56
CA_2A+2A-5A+5A	5M	19175	1175	1	12	20M	700	1	0	10M	2450	10M	2600	24.8	23.51
CA_2A+2A-7A+7A	5M	19175	1175	1	12	20M	700	1	0	10M	3400	20M	2850	24.8	23.55
CA_2A+2A-66A+66A	5M	19175	1175	1	12	20M	700	1	0	20M	66536	20M	67236	24.8	23.53
CA_4A+4A-2A+2A	20M	20050	2050	1	0	20M	2300	1	0	5M	1175	20M	700	24.8	23.75
CA_4A+4A-5A+5A	20M	20050	2050	1	0	20M	2300	1	0	10M	2450	20M	2600	24.8	23.76
CA_4A+4A-7A+7A	20M	20050	2050	1	0	20M	2300	1	0	10M	3400	20M	2850	24.8	23.85
CA_5A+5A-1A+1A	10M	20450	2450	1	24	10M	2600	1	0	20M	250	20M	500	24.5	23.26
CA_5A+5A-2A+2A	10M	20450	2450	1	24	10M	2600	1	0	5M	1175	20M	700	24.5	23.28
CA_5A+5A-3A+3A	10M	20450	2450	1	24	10M	2600	1	0	20M	1300	20M	1850	24.5	23.21
CA_5A+5A-7A+7A	10M	20450	2450	1	24	10M	2600	1	0	10M	3400	20M	2850	24.5	23.2
CA_5A+5A-41A+41A	10M	20450	2450	1	24	10M	2600	1	0	15M	39725	15M	41515	24.5	23.27
CA_7A+7A-1A+1A	10M	21400	3400	1	24	20M	2850	1	0	20M	250	20M	500	24	23.37
CA_7A+7A-3A+3A	10M	21400	3400	1	24	20M	2850	1	0	20M	1300	20M	1850	24	23.32
CA_7A+7A-5A+5A	10M	21400	3400	1	24	20M	2850	1	0	10M	2450	10M	2600	24	23.25
CA_41A+41A-1A+1A	15M	39725	39725	1	37	15M	41515	1	37	20M	250	20M	500	24	23.41
CA_41A+41A-3A+3A	15M	39725	39725	1	37	15M	41515	1	37	20M	1300	20M	1850	24	23.44
CA_41A+41A-5A+5A	15M	39725	39725	1	37	15M	41515	1	37	20M	2450	10M	2600	24	23.45
CA_66A+66A-2A+2A	20M	132072	66536	1	50	20M	67236	1	50	5M	1175	20M	700	24.5	23.1

### ANT31/41 DSI4

DL TE CA Class	DSI4										Power				
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA_7C+7C	15M	21375	3350	1	37	15M	3225	1	37	15M	3350	15M	3225	22	21.34
CA_38C+38C	20M	132072	66536	50	50	20M	33734	50	50	20M	66536	20M	33734	21.8	20.81
CA_4A+4A-4A+4A	20M	20050	2050	1	0	20M	2300	1	0	20M	2050	20M	2300	21.8	20.8
CA_7A+7A-7A+7A	10M	21400	3400	1	24	20M	2850	1	0	10M	3400	20M	2850	22	21.42
CA_66A+66A-66A+66A	20M	132072	66536	1	50	20M	67236	1	50	20M	66536	20M	67236	21.8	20.81
CA_2A+2A-4A+4A	5M	19175	1175	1	12	20M	700	1	0	20M	2050	20M	2300	23.3	22.08
CA_2A+2A-5A+5A	5M	19175	1175	1	12	20M	700	1	0	10M	2450	10M	2600	23.3	22.08
CA_2A+2A-7A+7A	5M	19175	1175	1	12	20M	700	1	0	10M	3400	20M	2850	23.3	22.07
CA_2A+2A-66A+66A	5M	19175	1175	1	12	20M	700	1	0	20M	66536	20M	67236	23.3	22.12
CA_4A+4A-2A+2A	20M	20050	2050	1	0	20M	2300	1	0	5M	1175	20M	700	21.8	20.92
CA_4A+4A-5A+5A	20M	20050	2050	1	0	20M	2300	1	0	10M	2450	10M	2600	21.8	20.87
CA_4A+4A-7A+7A	20M	20050	2050	1	0	20M	2300	1	0	10M	3400	20M	2850	21.8	20.88
CA_7A+7A-1A+1A	10M	21400	3400	1	24	20M	2850	1	0	20M	250	20M	500	22	21.35
CA_7A+7A-3A+3A	10M	21400	3400	1	24	20M	2850	1	0	20M	1300	20M	1850	22	21.4
CA_7A+7A-5A+5A	10M	21400	3400	1	24	20M	2850	1	0	10M	2450	10M	2600	22	21.37
CA_66A+66A-2A+2A	20M	132072	66536	1	50	20M	2300	1	50	5M	1175	20M	700	21.8	20.87

### ANT31/41 DSI8/9/10

DL TE CA Class	DSI8/9/10										Power				
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	PCC Bandwidth	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	SCC Bandwidth	DL channel	tune up	conducted power (dBm)
CA_7C+7C	15M	21375	3350	1	37	15M	3225	1	37	15M	3350	15M	3225	21	19.98
CA_66C+66C	20M	132072	66536	50	50	20M	33734	50	50	20M	66536	20M	33734	20.8	19.72
CA_4A+4A-4A+4A	20M	20050	2050	1	0	20M	2300	1	0	20M	2050	20M	2300	20.5	19.74
CA_7A+7A-7A+7A	10M	21400	3400	25	0	20M	2850	1	0	10M	3400	20M	2850	21	20.1
CA_66A+66A-66A+66A	20M	132072	66536	50	50	20M	67236	50	50	20M	66536	20M	67236	20.8	19.77
CA_2A+2A-4A+4A	5M	19175	1175	50	0	20M	700	1	0	20M	2050	20M	2300	21.5	20.6
CA_2A+2A-5A+5A	5M	19175	1175	50	0	20M	700	1	0	10M	2450	10M	2600	21.5	20.63
CA_2A+2A-7A+7A	5M	19175	1175	50	0	20M	700	1	0	10M	3400	20M	2850	21.5	20.67
CA_2A+2A-66A+66A	5M	19175	1175	50	0	20M	700	1	0	20M	66536	20M	67236	21.5	20.6
CA_4A+4A-2A+2A	20M	20050	2050	1	0	20M	2300	1	0	5M	1175	20M	700	20.5	19.82
CA_4A+4A-5A+5A	20M	20050	2050	1	0	20M	2300	1	0	10M	2450	10M	2600	20.5	19.8
CA_4A+4A-7A+7A	20M	20050	2050	1	0	20M	2300	1	0	10M	3400	20M	2850	20.5	19.85
CA_7A+7A-1A+1A	10M	21400	3400	25	0	20M	2850	1	0	20M	250	20M	500	21	20.16
CA_7A+7A-3A+3A	10M	21400	3400	25	0	20M	2850	1	0	20M	1300	20M	1850	21	20.14
CA_7A+7A-5A+5A	10M	21400	3400	25	0	20M	2850	1	0	10M	2450	10M	2600	21	20.14
CA_66A+66A-2A+2A	20M	132072	66536	50	50	20M	67236	50	50	5M	1175	20M	700	20.8	19.79

### 11.4 NR 5G Measurement result

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping 5G NR(FR1) bands as follows:

- a) The maximum output power, including tolerance, for the smaller band must be ≤ the larger band to qualify for the SAR test exclusion.
- b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.

Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

Uplink RB allocations were used to Table 6.1-1 of the 3GPP TS 138.521-1:

Channel Bandwidth	SCS(kHz)	OFDM	RB allocation							
			Edge_Full_Left	Edge_Full_Right	Edge_1RB_Left	Edge_1RB_Right	Outer_Full	Inner_Full	Inner_1RB_Left	Inner_1RB_Right
5MHz	15	DFT-s	2@0	2@23	1@0	1@24	25@0	12@6	1@1	1@23
		CP	2@0	2@23	1@0	1@24	25@0	13@6	1@1	1@23
	30	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2 <sup>1</sup>	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2 <sup>1</sup>	1@1	1@9
	60	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10MHz	15	DFT-s	2@0	2@50	1@0	1@51	50@0	25@12	1@1	1@50
		CP	2@0	2@50	1@0	1@51	52@0	26@13	1@1	1@50
	30	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
	60	DFT-s	2@0	2@9	1@0	1@10	10@0	5@2 <sup>1</sup>	1@1	1@9
		CP	2@0	2@9	1@0	1@10	11@0	5@2 <sup>1</sup>	1@1	1@9
15MHz	15	DFT-s	2@0	2@77	1@0	1@78	75@0	36@18	1@1	1@77
		CP	2@0	2@77	1@0	1@78	79@0	39@19 <sup>1</sup>	1@1	1@77
	30	DFT-s	2@0	2@36	1@0	1@37	36@0	18@9	1@1	1@36
		CP	2@0	2@36	1@0	1@37	38@0	19@9	1@1	1@36
	60	DFT-s	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
		CP	2@0	2@16	1@0	1@17	18@0	9@4	1@1	1@16
20MHz	15	DFT-s	2@0	2@104	1@0	1@105	100@0	50@25	1@1	1@104
		CP	2@0	2@104	1@0	1@105	106@0	53@26	1@1	1@104
	30	DFT-s	2@0	2@49	1@0	1@50	50@0	25@12	1@1	1@49
		CP	2@0	2@49	1@0	1@50	51@0	25@12 <sup>1</sup>	1@1	1@49
	60	DFT-s	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
		CP	2@0	2@22	1@0	1@23	24@0	12@6	1@1	1@22
25MHz	15	DFT-s	2@0	2@131	1@0	1@132	128@0	64@32	1@1	1@131
		CP	2@0	2@131	1@0	1@132	133@0	67@33	1@1	1@131
	30	DFT-s	2@0	2@63	1@0	1@64	64@0	32@16	1@1	1@63
		CP	2@0	2@63	1@0	1@64	65@0	33@16	1@1	1@63
	60	DFT-s	2@0	2@29	1@0	1@30	30@0	15@7 <sup>1</sup>	1@1	1@29
		CP	2@0	2@29	1@0	1@30	31@0	15@7 <sup>1</sup>	1@1	1@29
30MHz	15	DFT-s	2@0	2@158	1@0	1@159	160@0	80@40	1@1	1@158
		CP	2@0	2@158	1@0	1@159	160@0	80@40	1@1	1@158
	30	DFT-s	2@0	2@76	1@0	1@77	75@0	36@18	1@1	1@76
		CP	2@0	2@76	1@0	1@77	78@0	39@19	1@1	1@76
	60	DFT-s	2@0	2@36	1@0	1@37	36@0	18@9	1@1	1@36
		CP	2@0	2@36	1@0	1@37	38@0	19@9	1@1	1@36
40MHz	15	DFT-s	2@0	2@214	1@0	1@215	216@0	108@54	1@1	1@214
		CP	2@0	2@214	1@0	1@215	216@0	108@54	1@1	1@214
	30	DFT-s	2@0	2@104	1@0	1@105	100@0	50@25	1@1	1@104
		CP	2@0	2@104	1@0	1@105	106@0	53@26	1@1	1@104
	60	DFT-s	2@0	2@49	1@0	1@50	50@0	25@12	1@1	1@49
		CP	2@0	2@49	1@0	1@50	51@0	25@12 <sup>1</sup>	1@1	1@49
50MHz	15	DFT-s	2@0	2@268	1@0	1@269	270@0	135@67	1@1	1@268
		CP	2@0	2@268	1@0	1@269	270@0	135@67	1@1	1@268
	30	DFT-s	2@0	2@131	1@0	1@132	128@0	64@32	1@1	1@131
		CP	2@0	2@131	1@0	1@132	133@0	67@33	1@1	1@131
	60	DFT-s	2@0	2@63	1@0	1@64	64@0	32@16	1@1	1@63
		CP	2@0	2@63	1@0	1@64	65@0	33@16	1@1	1@63
60MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@160	1@0	1@161	162@0	81@40	1@1	1@160
		CP	2@0	2@160	1@0	1@161	162@0	81@40	1@1	1@160
	60	DFT-s	2@0	2@77	1@0	1@78	75@0	36@18	1@1	1@77
		CP	2@0	2@77	1@0	1@78	79@0	39@19 <sup>1</sup>	1@1	1@77
80MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	30	DFT-s	2@0	2@215	1@0	1@216	216@0	108@54	1@1	1@215
		CP	2@0	2@215	1@0	1@216	217@0	109@54	1@1	1@215
	60	DFT-s	2@0	2@105	1@0	1@106	100@0	50@25	1@1	1@105
		CP	2@0	2@105	1@0	1@106	107@0	53@26 <sup>1</sup>	1@1	1@105
90MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@243	1@0	1@244	240@0	120@80	1@1	1@243
		CP	2@0	2@243	1@0	1@244	245@0	123@81	1@1	1@243
	60	DFT-s	2@0	2@119	1@0	1@120	120@0	60@30	1@1	1@119
		CP	2@0	2@119	1@0	1@120	121@0	61@30	1@1	1@119
100MHz	15	DFT-s	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		CP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	DFT-s	2@0	2@271	1@0	1@272	270@0	135@87	1@1	1@271
		CP	2@0	2@271	1@0	1@272	273@0	137@88	1@1	1@271
	60	DFT-s	2@0	2@133	1@0	1@134	135@0	64@32	1@1	1@133
		CP	2@0	2@133	1@0	1@134	135@0	67@33 <sup>1</sup>	1@1	1@133

Note 1: The allocated RB number  $L_{RB}$  is  $\text{ceil}(N_{RB}/2) - 1$  in order to meet Inner RB allocation definition ( $RB_{start,Low} \leq RB_{start} \leq RB_{start,High}$ ) described in subclause 6.2.2 of TS 38.101-1 [2].

**3GPP MPR for NR:**
**Table 6.2.2.3-1: Maximum Power Reduction (MPR) for Power 3**

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	$\leq 0.5^2$		0 <sup>2</sup>
DFT-s-OFDM QPSK	$\leq 1$		0
DFT-s-OFDM 16 QAM	$\leq 2$		$\leq 1$
DFT-s-OFDM 64 QAM		$\leq 2.5$	
DFT-s-OFDM 256 QAM		$\leq 4.5$	
CP-OFDM QPSK	$\leq 3$		$\leq 1.5$
CP-OFDM 16 QAM	$\leq 3$		$\leq 2$
CP-OFDM 64 QAM		$\leq 3.5$	
CP-OFDM 256 QAM		$\leq 6.5$	

NOTE 1: Applicable for UE operating in TDD mode with PI/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

**Table 6.2.2-2 Maximum power reduction (MPR) for power class 2**

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	PI/2 BPSK	$\leq 3.5$	$\leq 0.5$	0
	QPSK	$\leq 3.5$	$\leq 1$	0
	16 QAM	$\leq 3.5$	$\leq 2$	$\leq 1$
	64 QAM	$\leq 3.5$		$\leq 2.5$
	256 QAM		$\leq 4.5$	
CP-OFDM	QPSK	$\leq 3.5$	$\leq 3$	$\leq 1.5$
	16 QAM	$\leq 3.5$	$\leq 3$	$\leq 2$
	64 QAM		$\leq 3.5$	
	256 QAM		$\leq 6.5$	



**N7(ANT11 DSI2/3)**

Test Freq Description	5G-n7							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n7
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	19.30	18.38
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	19.30	18.26
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	19.30	18.34
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	19.30	18.39
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	19.30	18.27
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	19.30	18.33
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	50_25	2560	512000	19.30	18.36
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	19.30	18.38
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	19.30	18.37
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	19.30	18.38
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	19.30	18.35
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	19.30	18.38
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	19.30	18.36
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	18.00	16.94
High	15	20	DFT-s-OFDM QPSK	Edge_1RB_Right	1_105	2560	512000	19.30	18.18
High	15	20	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2560	512000	19.30	18.09
High	15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2_104	2560	512000	19.30	18.22
High	15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2560	512000	19.30	18.17
High	15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1_104	2560	512000	19.30	18.17
High	15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2560	512000	19.30	18.10
High	15	20	DFT-s-OFDM QPSK	Outer_Full	100_0	2560	512000	19.30	18.37
High	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	2565	513000	19.30	18.14
High	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	2562.5	512500	19.30	18.34

**N7(ANT11 DSI4)**

Test Freq Description	5G-n7							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n7
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	23.30	22.50
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	23.30	22.42
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	23.30	22.47
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	23.30	22.53
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	23.30	22.45
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	23.30	22.49
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	50_25	2560	512000	23.30	22.56
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	23.30	22.46
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	22.00	20.95
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	20.00	18.99
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	23.30	22.00
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	22.50	21.43
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	21.00	19.94
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	18.00	16.99
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Right	1_105	2560	512000	23.30	22.33
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Left	1_0	2560	512000	23.30	22.24
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Right	2_104	2560	512000	23.30	22.38
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Left	2_0	2560	512000	23.30	22.33
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Right	1_104	2560	512000	23.30	22.39
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	2560	512000	23.30	22.31
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	100_0	2560	512000	23.30	22.51
High	15	10	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	25_12	2565	513000	23.30	22.41
High	15	15	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	36_18	2562.5	512500	23.30	22.55

**N7(ANT11 DS18/9/10)**

Test Freq	5G-n7							Tune up	Power Results (dBm)
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)		NR Test CH.
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	20.30	19.20
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	20.30	19.09
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	20.30	19.16
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	20.30	19.21
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	20.30	19.10
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	20.30	19.15
High	15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50_25	2560	512000	20.30	19.23
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	20.30	19.22
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	20.30	19.22
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	19.80	18.72
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	20.30	19.25
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	20.30	19.22
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	20.30	19.21
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	17.80	16.80
High	15	20	CP-OFDM QPSK	Edge_1RB_Right	1_105	2560	512000	20.30	19.06
High	15	20	CP-OFDM QPSK	Edge_1RB_Left	1_0	2560	512000	20.00	18.98
High	15	20	CP-OFDM QPSK	Edge_Full_Right	2_104	2560	512000	20.30	19.10
High	15	20	CP-OFDM QPSK	Edge_Full_Left	2_0	2560	512000	20.30	19.05
High	15	20	CP-OFDM QPSK	Inner_1RB_Right	1_104	2560	512000	20.30	19.05
High	15	20	CP-OFDM QPSK	Inner_1RB_Left	1_1	2560	512000	20.30	18.99
High	15	20	CP-OFDM QPSK	Outer_Full	106_0	2560	512000	20.30	19.24
High	15	10	CP-OFDM QPSK	Inner_Full	25_12	2565	513000	20.30	19.03
High	15	15	CP-OFDM QPSK	Inner_Full	36_18	2562.5	512500	20.30	19.21

**N7(ANT13 DSI2/3)**

Test Freq Description	5G-n7							Tune up	Power Results (dBm)
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n7
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	16.80	15.75
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	16.80	15.40
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	16.80	15.52
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	16.80	15.76
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	16.80	15.44
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	16.80	15.55
High	15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50_25	2560	512000	16.80	15.68
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	16.80	15.73
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	16.80	15.64
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	16.80	15.73
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	16.80	15.73
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	16.80	15.69
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	16.80	15.68
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	16.80	15.71
High	15	20	DFT-s-OFDM QPSK	Edge_1RB_Right	1_105	2560	512000	16.80	15.56
High	15	20	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2560	512000	16.80	15.44
High	15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2_104	2560	512000	16.80	15.66
High	15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2560	512000	16.80	15.46
High	15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1_104	2560	512000	16.80	15.58
High	15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2560	512000	16.80	15.47
High	15	20	DFT-s-OFDM QPSK	Outer_Full	100_0	2560	512000	16.80	15.72
High	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	2565	513000	16.80	15.60
High	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	2562.5	512500	16.80	15.69

**N7(ANT13 DSI4)**

Test Freq Description	5G-n7							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n7
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	22.80	21.76
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	22.80	21.55
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	22.80	21.62
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	22.80	21.78
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	22.80	21.59
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	22.80	21.65
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	50_25	2560	512000	22.80	21.80
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	22.80	21.72
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	21.50	20.25
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	19.50	18.21
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	22.50	21.27
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	21.80	20.70
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	20.50	19.20
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	17.50	16.25
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Right	1_105	2560	512000	22.80	21.67
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Left	1_0	2560	512000	22.80	21.43
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Right	2_104	2560	512000	22.80	21.69
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Left	2_0	2560	512000	22.80	21.55
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Right	1_104	2560	512000	22.80	21.68
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	2560	512000	22.80	21.52
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	100_0	2560	512000	22.80	21.84
High	15	20	CP-OFDM QPSK	Outer_Full	106_0	2560	512000	22.80	21.30
High	15	10	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	50_0	2565	513000	22.80	21.60
High	15	15	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	75_0	2562.5	512500	22.80	21.75

**N7(ANT13 DS18/9/10)**

Test Freq	5G-n7							Tune up	Power Results (dBm)
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)		NR Test CH.
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2567.5	513500	18.00	17.12
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2535	507000	18.00	16.99
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2502.5	500500	18.00	17.07
High	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2560	512000	18.00	17.13
Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2535	507000	18.00	16.93
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	2510	502000	18.00	17.00
High	15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50_25	2560	512000	18.00	17.10
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	2560	512000	18.00	17.11
High	15	20	DFT-s-OFDM 64QAM	Inner_Full	50_25	2560	512000	18.00	17.11
High	15	20	DFT-s-OFDM 256QAM	Inner_Full	50_25	2560	512000	18.00	17.11
High	15	20	CP-OFDM QPSK	Inner_Full	53_26	2560	512000	18.00	17.15
High	15	20	CP-OFDM 16QAM	Inner_Full	53_26	2560	512000	18.00	17.11
High	15	20	CP-OFDM 64QAM	Inner_Full	53_26	2560	512000	18.00	17.10
High	15	20	CP-OFDM 256QAM	Inner_Full	53_26	2560	512000	17.30	16.21
High	15	20	CP-OFDM QPSK	Edge_1RB_Right	1_105	2560	512000	18.00	16.93
High	15	20	CP-OFDM QPSK	Edge_1RB_Left	1_0	2560	512000	18.00	16.83
High	15	20	CP-OFDM QPSK	Edge_Full_Right	2_104	2560	512000	18.00	16.97
High	15	20	CP-OFDM QPSK	Edge_Full_Left	2_0	2560	512000	18.00	16.92
High	15	20	CP-OFDM QPSK	Inner_1RB_Right	1_104	2560	512000	18.00	16.92
High	15	20	CP-OFDM QPSK	Inner_1RB_Left	1_1	2560	512000	18.00	16.85
High	15	20	CP-OFDM QPSK	Outer_Full	100_0	2560	512000	18.00	17.14
High	15	10	CP-OFDM QPSK	Outer_Full	50_0	2565	513000	18.00	16.89
High	15	15	CP-OFDM QPSK	Outer_Full	75_0	2562.5	512500	18.00	17.10

**N66(ANT11 DSI2/3)**

Test Freq	5G-n66							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	20.00	19.02
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	20.00	18.98
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	20.00	18.94
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	20.00	18.97
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	20.00	18.98
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	20.00	19.08
Low	15	40	DFT-s-OFDM PI/2 BPSK1	Inner_Full	108_54	1730	346000	20.00	19.07
Low	15	40	DFT-s-OFDM 16QAM	Inner_Full	108_54	1730	346000	20.00	19.07
Low	15	40	DFT-s-OFDM 64QAM	Inner_Full	108_54	1730	346000	20.00	19.07
Low	15	40	DFT-s-OFDM 256QAM	Inner_Full	108_54	1730	346000	19.00	18.06
Low	15	40	CP-OFDM QPSK	Inner_Full	108_54	1730	346000	20.00	19.06
Low	15	40	CP-OFDM 16QAM	Inner_Full	108_54	1730	346000	20.00	19.04
Low	15	40	CP-OFDM 64QAM	Inner_Full	108_54	1730	346000	20.00	19.07
Low	15	40	CP-OFDM 256QAM	Inner_Full	108_54	1730	346000	17.00	16.05
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Right	1_215	1730	346000	19.50	18.43
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1730	346000	19.50	18.34
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Right	2_214	1730	346000	19.50	18.40
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1730	346000	19.50	18.36
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Right	1_214	1730	346000	19.50	18.44
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1730	346000	19.50	18.31
Low	15	40	DFT-s-OFDM QPSK	Outer_Full	216_0	1730	346000	20.00	19.05
Low	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1715	343000	20.00	18.77
Low	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1717.5	343500	20.00	18.94
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1720	344000	20.00	19.01
Low	15	25	DFT-s-OFDM QPSK	Inner_Full	64_32	1722.5	344500	20.00	19.06
Low	15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1725	345000	20.00	19.04

**N66(ANT11 DSI4)**

Test Freq Description	5G-n66						Power Results (dBm)		
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n66
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	23.50	22.43
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	23.50	22.40
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	23.50	22.37
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	23.50	22.41
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	23.50	22.42
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	23.50	22.49
Low	15	40	DFT-s-OFDM PI/2 BPSK1	Inner_Full	108_54	1730	346000	23.50	22.47
Low	15	40	DFT-s-OFDM 16QAM	Inner_Full	108_54	1730	346000	22.50	21.46
Low	15	40	DFT-s-OFDM 64QAM	Inner_Full	108_54	1730	346000	21.00	20.13
Low	15	40	DFT-s-OFDM 256QAM	Inner_Full	108_54	1730	346000	19.00	18.03
Low	15	40	CP-OFDM QPSK	Inner_Full	108_54	1730	346000	22.00	20.93
Low	15	40	CP-OFDM 16QAM	Inner_Full	108_54	1730	346000	21.50	20.59
Low	15	40	CP-OFDM 64QAM	Inner_Full	108_54	1730	346000	20.00	19.06
Low	15	40	CP-OFDM 256QAM	Inner_Full	108_54	1730	346000	17.00	16.04
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Right	1_215	1730	346000	22.00	20.73
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1730	346000	22.00	20.67
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Right	2_214	1730	346000	22.00	20.78
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1730	346000	22.00	20.74
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Right	1_214	1730	346000	23.00	21.76
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1730	346000	23.00	21.72
Low	15	40	DFT-s-OFDM QPSK	Outer_Full	216_0	1730	346000	23.00	21.43
Low	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1715	343000	23.00	22.09
Low	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1717.5	343500	23.50	22.30
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1720	344000	23.50	22.35
Low	15	25	DFT-s-OFDM QPSK	Inner_Full	64_32	1722.5	344500	23.50	22.42
Low	15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1725	345000	23.50	22.42



**N66(ANT11 DSI8/9/10)**

Test Freq	5G-n66							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	21.50	20.25
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	21.50	20.21
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	21.50	20.17
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	21.50	20.22
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	21.50	20.23
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	21.50	20.32
Low	15	40	DFT-s-OFDM PI/2 BPSK1	Inner_Full	108_54	1730	346000	21.50	20.27
Low	15	40	DFT-s-OFDM 16QAM	Inner_Full	108_54	1730	346000	20.00	18.99
Low	15	40	DFT-s-OFDM 64QAM	Inner_Full	108_54	1730	346000	18.50	17.32
Low	15	40	DFT-s-OFDM 256QAM	Inner_Full	108_54	1730	346000	15.50	14.66
Low	15	40	CP-OFDM QPSK	Inner_Full	108_54	1730	346000	19.50	18.33
Low	15	40	CP-OFDM 16QAM	Inner_Full	108_54	1730	346000	19.00	17.90
Low	15	40	CP-OFDM 64QAM	Inner_Full	108_54	1730	346000	17.00	15.96
Low	15	40	CP-OFDM 256QAM	Inner_Full	108_54	1730	346000	13.00	12.15
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Right	1_215	1730	346000	19.00	18.08
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1730	346000	19.00	18.00
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Right	2_214	1730	346000	19.00	18.14
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1730	346000	19.00	18.09
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Right	1_214	1730	346000	20.00	19.37
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1730	346000	20.00	19.33
Low	15	40	DFT-s-OFDM QPSK	Outer_Full	216_0	1730	346000	20.00	18.96
Low	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1715	343000	21.00	20.01
Low	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1717.5	343500	21.00	20.06
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1720	344000	21.00	20.13
Low	15	25	DFT-s-OFDM QPSK	Inner_Full	64_32	1722.5	344500	21.00	20.21
Low	15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1725	345000	21.00	20.21

**N66(ANT13 DSI2/3)**

Test Freq	5G-n66							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	15.00	13.77
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	15.00	13.94
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	15.00	13.90
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	15.00	13.92
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	15.00	14.01
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	15.00	14.07
Low	15	40	DFT-s-OFDM PI/2 BPSK1	Inner_Full	108_54	1730	346000	15.00	14.04
Low	15	40	DFT-s-OFDM 16QAM	Inner_Full	108_54	1730	346000	15.00	14.09
Low	15	40	DFT-s-OFDM 64QAM	Inner_Full	108_54	1730	346000	15.00	14.07
Low	15	40	DFT-s-OFDM 256QAM	Inner_Full	108_54	1730	346000	15.00	14.05
Low	15	40	CP-OFDM QPSK	Inner_Full	108_54	1730	346000	15.00	14.07
Low	15	40	CP-OFDM 16QAM	Inner_Full	108_54	1730	346000	15.00	14.07
Low	15	40	CP-OFDM 64QAM	Inner_Full	108_54	1730	346000	15.00	14.08
Low	15	40	CP-OFDM 256QAM	Inner_Full	108_54	1730	346000	15.00	14.07
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Right	1_215	1730	346000	14.50	13.29
Low	15	40	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1730	346000	14.50	13.24
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Right	2_214	1730	346000	14.50	13.48
Low	15	40	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1730	346000	14.50	13.45
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Right	1_214	1730	346000	14.50	13.33
Low	15	40	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1730	346000	14.50	13.24
Low	15	40	DFT-s-OFDM QPSK	Outer_Full	216_0	1730	346000	15.00	13.96
Low	15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1715	343000	15.00	13.93
Low	15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1717.5	343500	15.00	13.78
Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1720	344000	15.00	13.85
Low	15	25	DFT-s-OFDM QPSK	Inner_Full	64_32	1722.5	344500	15.00	13.89
Low	15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1725	345000	15.00	13.92

**N66(ANT13 DSI4)**

Test Freq	5G-n66							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	22.50	21.78
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	22.50	21.49
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	22.50	21.31
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	22.50	21.60
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	22.50	21.56
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	22.50	21.49
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	12_6	1777.5	355500	22.50	21.84
High	15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	21.50	20.72
High	15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	20.50	19.38
High	15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	18.50	17.37
High	15	5	CP-OFDM QPSK	Inner_Full	13_6	1777.5	355500	21.00	20.21
High	15	5	CP-OFDM 16QAM	Inner_Full	13_6	1777.5	355500	20.50	19.78
High	15	5	CP-OFDM 64QAM	Inner_Full	13_6	1777.5	355500	19.50	18.37
High	15	5	CP-OFDM 256QAM	Inner_Full	13_6	1777.5	355500	16.50	15.26
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Right	1_24	1777.5	355500	22.50	21.24
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Left	1_0	1777.5	355500	22.50	21.14
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Right	2_23	1777.5	355500	22.50	21.22
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Left	2_0	1777.5	355500	22.50	21.20
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Right	1_23	1777.5	355500	22.50	21.77
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	1777.5	355500	22.50	21.70
High	15	5	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	25_0	1777.5	355500	22.50	21.24
High	15	10	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	25_12	1775	355000	22.50	21.56
High	15	15	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	36_18	1772.5	354500	22.50	21.74
High	15	20	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	50_25	1770	354000	22.50	21.78
High	15	25	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	64_32	1767.5	353500	22.50	21.73
High	15	30	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	80_40	1765	35300	22.50	21.69

**N66(ANT13 DSI8/9/10)**

Test Freq	5G-n66							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	17.50	16.84
Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	17.50	16.39
Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	17.50	16.11
High	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	17.50	16.75
Middle	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	17.50	16.69
Low	15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	17.50	16.58
High	15	40	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	1777.5	355500	17.50	16.82
High	15	40	DFT-s-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	17.50	16.86
High	15	40	DFT-s-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	17.50	16.84
High	15	40	DFT-s-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	17.50	16.83
High	15	40	CP-OFDM QPSK	Inner_Full	13_6	1777.5	355500	17.50	16.84
High	15	40	CP-OFDM 16QAM	Inner_Full	13_6	1777.5	355500	17.50	16.84
High	15	40	CP-OFDM 64QAM	Inner_Full	13_6	1777.5	355500	17.50	16.85
High	15	40	CP-OFDM 256QAM	Inner_Full	13_6	1777.5	355500	17.50	16.84
High	15	40	DFT-s-OFDM 16QAM	Edge_1RB_Right	1_24	1777.5	355500	17.00	16.01
High	15	40	DFT-s-OFDM 16QAM	Edge_1RB_Left	1_0	1777.5	355500	17.50	15.96
High	15	40	DFT-s-OFDM 16QAM	Edge_Full_Right	2_23	1777.5	355500	17.50	16.22
High	15	40	DFT-s-OFDM 16QAM	Edge_Full_Left	2_0	1777.5	355500	17.50	16.18
High	15	40	DFT-s-OFDM 16QAM	Inner_1RB_Right	1_23	1777.5	355500	17.00	16.05
High	15	40	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	1777.5	355500	17.00	15.96
High	15	40	DFT-s-OFDM 16QAM	Outer_Full	25_0	1777.5	355500	17.50	16.72
High	15	10	DFT-s-OFDM 16QAM	Inner_Full	25_12	1775	355000	17.50	16.70
High	15	15	DFT-s-OFDM 16QAM	Inner_Full	36_18	1772.5	354500	17.50	16.53
High	15	20	DFT-s-OFDM 16QAM	Inner_Full	50_25	1770	354000	17.50	16.60
High	15	25	DFT-s-OFDM 16QAM	Inner_Full	64_32	1767.5	353500	17.50	16.65
High	15	30	DFT-s-OFDM 16QAM	Inner_Full	80_40	1765	353000	17.50	16.67

**N77 3450MHz-3550MHz(ANT11 DSI2/3)**

Test Freq Description	5G-n77						Power Results (dBm)		
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	14.50	13.47
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	14.50	13.55
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	14.50	13.53
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	14.50	13.54
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	14.50	13.53
Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3500.01	633334	14.50	13.57
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	14.50	13.61
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	14.50	13.56
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	14.50	13.59
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	14.50	13.58
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	14.50	13.65
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	14.50	13.55
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	14.50	13.59
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3500.01	633334	14.50	13.63
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3500.01	633334	14.50	13.71
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3500.01	633334	14.50	13.34
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3500.01	633334	14.50	13.38
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3500.01	633334	14.50	13.62
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.75
Middle	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3500.01	633334	14.50	13.61
Middle	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.66
Middle	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.49
Middle	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.38
Middle	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.66
Middle	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.58
Middle	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.47
Middle	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.34
Middle	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	14.50	13.33

**N77 3450MHz-3550MHz(ANT11 DSI4)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	24.00	22.95
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	24.00	23.04
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	24.00	22.96
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	24.00	22.96
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	24.00	22.99
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	12_6	3500.01	633334	24.00	23.06
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	23.50	22.24
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	21.50	20.69
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	19.50	18.72
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	22.50	21.71
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	22.00	21.26
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	20.50	19.64
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	17.50	16.73
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Right	1_23	3500.01	633334	23.50	22.53
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Left	1_0	3500.01	633334	23.50	22.63
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Right	2_22	3500.01	633334	23.50	22.61
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Left	2_0	3500.01	633334	24.00	22.69
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Right	1_22	3500.01	633334	24.00	22.83
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3500.01	633334	24.00	22.92
Middle	30	10	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	24_0	3500.01	633334	24.00	22.75
Middle	30	15	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	23.01
Middle	30	20	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.93
Middle	30	40	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.86
Middle	30	50	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	23.01
Middle	30	60	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.97
Middle	30	70	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.85
Middle	30	80	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.78
Middle	30	90	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	1_1	3500.01	633334	24.00	22.78

**N77 3450MHz-3550MHz(ANT11 DSI8/9/10)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	17.50	16.64
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	17.50	16.71
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	17.50	16.69
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	17.50	16.70
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	17.50	16.69
Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3500.01	633334	17.50	16.69
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	17.50	16.73
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	17.50	16.69
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	17.50	16.71
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	17.50	16.70
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	17.50	16.76
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	17.50	16.68
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	17.50	16.71
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3500.01	633334	17.50	16.72
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3500.01	633334	17.50	16.79
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3500.01	633334	17.50	16.48
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3500.01	633334	17.50	16.51
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3500.01	633334	17.50	16.71
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.82
Middle	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3500.01	633334	17.50	16.70
Middle	30	15	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.71
Middle	30	20	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.67
Middle	30	40	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.47
Middle	30	50	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.71
Middle	30	60	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.64
Middle	30	70	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.56
Middle	30	80	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.44
Middle	30	90	CP-OFDM 16QAM	Inner_Full	1_1	3500.01	633334	17.50	16.43

**N77 3450MHz-3550MHz(ANT12 DSI2/3)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	17.50	16.25
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	17.50	16.30
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	17.50	16.26
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	17.50	16.29
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	17.50	16.29
Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3500.01	633334	17.50	16.24
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	17.50	16.26
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	17.50	16.22
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	17.50	16.27
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	17.50	16.26
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	17.50	16.32
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	17.50	16.23
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	17.00	15.84
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3500.01	633334	17.50	16.31
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3500.01	633334	17.50	16.33
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3500.01	633334	17.00	16.05
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3500.01	633334	17.00	16.02
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3500.01	633334	17.50	16.30
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.36
Middle	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3500.01	633334	17.50	16.19
Middle	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.25
Middle	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.13
Middle	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.00	15.97
Middle	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.24
Middle	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.16
Middle	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.08
Middle	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.00	15.82
Middle	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.00	15.82
Middle	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	17.50	16.29



**N77 3450MHz-3550MHz(ANT12 DSI4)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	20.00	18.85
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	20.00	18.94
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	20.00	18.87
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	20.00	18.90
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	20.00	18.90
Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3500.01	633334	20.00	18.93
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	20.00	18.95
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	20.00	18.88
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	19.00	17.96
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	20.00	18.92
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	20.00	18.98
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	20.00	18.90
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	16.50	15.97
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3500.01	633334	20.00	18.97
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3500.01	633334	20.00	18.99
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3500.01	633334	20.00	18.76
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3500.01	633334	20.00	18.73
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3500.01	633334	20.00	18.96
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	19.01
Middle	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3500.01	633334	20.00	18.87
Middle	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.9
Middle	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.78
Middle	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.67
Middle	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.89
Middle	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.83
Middle	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	19.69
Middle	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.55
Middle	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.55
Middle	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	20.00	18.94

**N77 3450MHz-3550MHz(ANT12 DSI8/9/10)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3545	636333	18.50	17.15
Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	18.50	17.20
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455	630333	18.50	17.16
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	18.50	17.19
Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	18.50	17.19
Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3500.01	633334	18.50	17.19
Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	18.50	17.21
Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	18.50	17.18
Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	18.50	17.22
Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3500.01	633334	18.50	17.21
Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3500.01	633334	18.50	17.27
Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3500.01	633334	18.50	17.19
Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3500.01	633334	18.00	16.82
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3500.01	633334	18.50	17.25
Middle	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3500.01	633334	18.50	17.27
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3500.01	633334	18.00	17.01
Middle	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3500.01	633334	18.00	16.98
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3500.01	633334	18.50	17.24
Middle	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.50	17.30
Middle	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3500.01	633334	18.50	17.14
Middle	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.50	17.15
Middle	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	16.97
Middle	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	16.89
Middle	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.50	17.14
Middle	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	17.07
Middle	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	16.98
Middle	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	16.75
Middle	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.00	16.75
Middle	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3500.01	633334	18.50	17.22

**N77 3750MHz-3980MHz(ANT11 DSI2/3)**

Test Freq Description	5G-n77							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	14.50	13.53
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	14.50	13.43
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	14.50	13.64
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	14.50	13.51
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	14.50	13.58
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	14.50	13.72
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	14.50	13.51
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	14.50	13.56
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	14.50	13.65
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	14.50	13.54
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	14.50	13.55
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	14.50	13.67
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	12_6	3705.000	647000	14.50	13.68
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	14.50	13.71
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	14.50	13.66
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	14.50	13.74
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	14.50	13.71
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	14.50	13.77
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	14.50	13.67
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	14.50	13.72
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3705.000	647000	14.50	13.76
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3705.000	647000	14.50	13.81
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3705.000	647000	14.50	13.47
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3705.000	647000	14.50	13.48
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3705.000	647000	14.50	13.74
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	14.50	13.83
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3705.000	647000	14.50	13.72
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3707.500	647167	14.50	13.69
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3710.000	647333	14.50	13.66
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3720.000	648000	14.50	13.41
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3725.000	648333	14.50	13.64
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3730.000	648667	14.50	13.6
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3735.000	649000	14.50	13.55
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3740.000	649333	14.50	13.43
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3745.000	649667	14.50	13.34
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	14.50	13.79

**N77 3750MHz-3980MHz(ANT11 DSI4)**

Test Freq Description	5G-n77							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	24.00	22.97
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	24.00	22.92
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	24.00	23.02
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	24.00	22.96
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	24.00	22.99
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	24.00	23.06
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	24.00	22.95
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	24.00	22.97
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	24.00	23.01
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	24.00	22.96
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	24.00	22.96
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	24.00	23.02
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_Full	12_6	3705.000	647000	24.00	23.07
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	23.00	22.10
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	21.50	20.52
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	19.50	18.51
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	22.50	21.55
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	22.00	21.10
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	20.50	19.45
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.50	16.50
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Right	1_23	3705.000	647000	23.50	22.39
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_1RB_Left	1_0	3705.000	647000	23.50	22.49
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Right	2_22	3705.000	647000	23.50	22.47
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Edge_Full_Left	2_0	3705.000	647000	23.50	22.55
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Right	1_22	3705.000	647000	24.00	22.70
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3705.000	647000	24.00	22.79
Low	30	10	DFT-s-OFDM Pi/2 BPSK1	Outer_Full	24_0	3705.000	647000	24.00	22.76
Low	30	15	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3707.500	647167	24.00	22.82
Low	30	20	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3710.000	647333	24.00	22.86
Low	30	40	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3720.000	648000	24.00	22.61
Low	30	50	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3725.000	648333	24.00	22.79
Low	30	60	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3730.000	648667	24.00	22.74
Low	30	70	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3735.000	649000	24.00	22.71
Low	30	80	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3740.000	649333	23.50	22.53
Low	30	90	DFT-s-OFDM Pi/2 BPSK1	Inner_1RB_Left	1_1	3745.000	649667	23.50	22.53

**N77 3750MHz-3980MHz(ANT11 DSI8/9/10)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	17.50	16.45
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	17.50	16.37
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	17.50	16.54
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	17.50	16.43
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	17.50	16.49
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	17.50	16.61
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	17.50	16.43
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	17.50	16.48
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	17.50	16.55
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	17.50	16.46
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	17.50	16.47
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	17.50	16.57
Low	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3705.000	647000	17.50	16.58
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	17.50	16.61
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	17.50	16.57
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.50	16.63
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	17.50	16.61
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	17.50	16.66
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	17.50	16.58
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.50	16.62
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3705.000	647000	17.50	16.63
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3705.000	647000	17.50	16.67
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3705.000	647000	17.50	16.39
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3705.000	647000	17.50	16.40
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3705.000	647000	17.50	16.61
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.50	16.69
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3705.000	647000	17.50	16.60
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.50	16.61
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3707.500	647167	17.50	16.58
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3710.000	647333	17.50	16.57
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3720.000	648000	17.50	16.35
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3725.000	648333	17.50	16.54
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3730.000	648667	17.50	16.51
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3735.000	649000	17.50	16.46
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3740.000	649333	17.50	16.37
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3745.000	649667	17.50	16.29
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.50	16.64

**N77 3750MHz-3980MHz(ANT12 DSI2/3)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	17.00	15.78
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	17.00	15.84
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	17.00	16.20
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	17.00	16.14
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	17.00	16.21
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	17.00	16.25
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	17.00	15.88
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	17.00	16.05
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	17.00	16.21
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	17.00	16.16
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	17.00	16.23
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	17.00	16.23
Low	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3705.000	647000	17.00	16.24
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	17.00	16.27
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	17.00	16.21
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.00	16.25
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	17.00	16.27
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	17.00	16.31
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	17.00	16.24
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.00	15.80
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3705.000	647000	17.00	16.32
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3705.000	647000	17.00	16.31
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3705.000	647000	17.00	16.05
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3705.000	647000	17.00	16.02
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3705.000	647000	17.00	16.29
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.00	16.36
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3705.000	647000	17.00	16.30
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.00	16.25
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3707.500	647167	17.00	16.19
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3710.000	647333	17.00	16.12
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3720.000	648000	17.00	15.82
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3725.000	648333	17.00	16.13
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3730.000	648667	17.00	16.05
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3735.000	649000	17.00	15.92
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3740.000	649333	17.00	15.66
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3745.000	649667	17.00	15.67
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	17.00	16.33

**N77 3750MHz-3980MHz(ANT12 DSI4)**

Test Freq	5G-n77							Power Results (dBm)	
	Description	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	19.50	18.45
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	19.50	18.49
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	20.00	18.80
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	20.00	18.75
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	20.00	18.81
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	20.00	18.84
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	19.50	18.53
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	20.00	18.68
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	20.00	18.81
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	20.00	18.77
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	20.00	18.83
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	20.00	18.83
Low	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3705.000	647000	20.00	18.83
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	20.00	18.86
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	20.00	18.81
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	19.00	17.87
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	20.00	18.86
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	20.00	18.89
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	20.00	18.83
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	17.00	15.80
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3705.000	647000	20.00	18.88
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3705.000	647000	20.00	18.87
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3705.000	647000	20.00	18.65
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3705.000	647000	20.00	18.63
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3705.000	647000	20.00	18.85
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	20.00	18.91
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3705.000	647000	20.00	18.86
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3707.500	647167	20.00	18.79
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3710.000	647333	20.00	18.67
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3720.000	648000	19.50	18.48
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3725.000	648333	20.00	18.74
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3730.000	648667	20.00	18.67
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3735.000	649000	20.00	18.61
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3740.000	649333	19.50	18.35
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3745.000	649667	19.50	18.36
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	20.00	18.88

**N77 3750MHz-3980MHz(ANT12 DSI8/9/10)**

Test Freq Description	5G-n77							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3975.000	665000	18.00	16.73
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3921.000	661400	18.00	16.79
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3867.000	657800	18.00	17.12
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3813.000	654200	18.00	17.07
Middle-5	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3759.000	650600	18.00	17.13
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3705.000	647000	18.00	17.17
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3930.000	662000	18.00	16.82
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3894.000	659600	18.00	16.98
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3858.000	657200	18.00	17.13
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3822.000	654800	18.00	17.09
Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3786.000	652400	18.00	17.15
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750.000	650000	18.00	17.15
Low	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3705.000	647000	18.00	17.16
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	18.00	17.19
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	18.00	17.14
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	18.00	17.17
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3705.000	647000	18.00	17.19
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3705.000	647000	18.00	17.23
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3705.000	647000	18.00	17.16
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3705.000	647000	18.00	16.75
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3705.000	647000	18.00	17.24
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3705.000	647000	18.00	17.23
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3705.000	647000	18.00	16.99
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3705.000	647000	18.00	16.96
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3705.000	647000	18.00	17.21
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	18.00	17.28
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3705.000	647000	18.00	17.22
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3707.500	647167	18.00	17.11
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3710.000	647333	18.00	16.95
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3720.000	648000	18.00	16.77
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3725.000	648333	18.00	17.06
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3730.000	648667	18.00	16.98
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3735.000	649000	18.00	16.84
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3740.000	649333	18.00	16.62
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3745.000	649667	18.00	16.63
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3705.000	647000	18.00	17.24



**N78 (ANT11 DSI2/3)**

Test Freq Description	5G-n78						Tune up	Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)		NR Test CH.	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	15.00	13.56
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	15.00	13.77
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	15.00	13.78
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	15.00	13.88
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	15.00	14.07
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	15.00	13.60
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	15.00	13.76
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	15.00	13.73
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	15.00	13.76
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	15.00	14.03
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	15.00	14.04
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	15.00	14.05
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	15.00	14.02
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	15.00	14.04
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	15.00	14.01
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	15.00	14.06
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	15.00	14.05
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	15.00	13.99
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3305.01	620334	15.00	14.21
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3305.01	620334	15.00	14.19
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3305.01	620334	15.00	13.87
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3305.01	620334	15.00	13.89
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	15.00	14.26
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	15.00	14.22
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3305.01	620334	15.00	14.11
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Right	1_36	3307.5	620500	15.00	14.04
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Right	1_49	3310.02	620668	15.00	14.07
Low	30	25	CP-OFDM 16QAM	Inner_1RB_Right	1_63	3312.51	620834	15.00	13.97
Low	30	30	CP-OFDM 16QAM	Inner_1RB_Right	1_76	3315	621000	15.00	14.06
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Right	1_104	3320.01	621334	15.00	13.99
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Right	1_131	3325.02	621668	15.00	14.00
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Right	1_160	3330	622000	15.00	14.09
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Right	1_160	3335.01	622334	15.00	14.11
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Right	1_215	3340.02	622668	15.00	14.05
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Right	1_243	3345	623000	15.00	14.02
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	15.00	14.18

**N78 (ANT11 DSI4)**

Test Freq Description	5G-n78							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	23.50	22.35
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	23.50	22.62
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	23.50	22.66
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	24.00	22.78
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	24.00	22.98
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	23.50	22.42
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	23.50	22.58
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	23.50	22.61
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	23.50	22.62
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	24.00	22.94
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	24.00	23.00
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	24.00	22.99
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	22.50	21.66
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	20.50	19.67
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	23.50	22.64
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	23.50	22.30
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	21.50	20.67
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	18.50	17.55
Low	30	10	DFT-s-OFDM PI/2 BPSK	Edge_1RB_Right	1_23	3305.01	620334	23.50	22.31
Low	30	10	DFT-s-OFDM PI/2 BPSK	Edge_1RB_Left	1_0	3305.01	620334	23.50	22.30
Low	30	10	DFT-s-OFDM PI/2 BPSK	Edge_Full_Right	2_22	3305.01	620334	23.50	22.37
Low	30	10	DFT-s-OFDM PI/2 BPSK	Edge_Full_Left	2_0	3305.01	620334	23.50	22.34
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_1RB_Right	1_22	3305.01	620334	24.00	22.89
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_1RB_Left	1_1	3305.01	620334	24.00	22.89
Low	30	10	DFT-s-OFDM PI/2 BPSK	Outer_Full	24_0	3305.01	620334	23.50	22.47
Low	30	15	DFT-s-OFDM PI/2 BPSK	Inner_Full	18_9	3307.5	620500	24.00	23.01
Low	30	20	DFT-s-OFDM PI/2 BPSK	Inner_Full	25_12	3310.02	620668	24.00	22.91
Low	30	25	DFT-s-OFDM PI/2 BPSK	Inner_Full	32_16	3312.51	620834	24.00	23.02
Low	30	30	DFT-s-OFDM PI/2 BPSK	Inner_Full	36_18	3315	621000	24.00	22.97
Low	30	40	DFT-s-OFDM PI/2 BPSK	Inner_Full	50_25	3320.01	621334	24.00	22.96
Low	30	50	DFT-s-OFDM PI/2 BPSK	Inner_Full	64_32	3325.02	621668	24.00	23.03
Low	30	60	DFT-s-OFDM PI/2 BPSK	Inner_Full	80_40	3330	622000	24.00	22.96
Low	30	70	DFT-s-OFDM PI/2 BPSK	Inner_Full	80_40	3335.01	622334	24.00	22.87
Low	30	80	DFT-s-OFDM PI/2 BPSK	Inner_Full	108_54	3340.02	622668	24.00	22.94
Low	30	90	DFT-s-OFDM PI/2 BPSK	Inner_Full	120_60	3345	623000	24.00	22.92
Low	30	50	CP-OFDM QPSK	Inner_Full	64_32	3325.02	621668	24.00	22.65

**N78 (ANT11 DSI8/9/10)**

Test Freq Description	5G-n78							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	16.00	15.05
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	16.00	15.10
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	16.50	15.35
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	16.50	15.41
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	16.50	15.61
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	16.00	15.04
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	16.00	15.10
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	16.50	15.35
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	16.50	15.35
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	16.50	15.49
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	16.50	15.53
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	16.50	15.51
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	16.50	15.48
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	16.50	15.50
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	16.50	15.47
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	16.50	15.68
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	16.50	15.51
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	16.00	14.94
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3305.01	620334	16.50	15.67
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3305.01	620334	16.50	15.67
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3305.01	620334	16.50	15.38
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3305.01	620334	16.50	15.42
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	16.50	15.72
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	16.50	15.73
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3305.01	620334	16.50	15.65
Low	30	15	CP-OFDM 16QAM	Inner_Full	18_9	3307.5	620500	16.50	15.63
Low	30	20	CP-OFDM 16QAM	Inner_Full	25_12	3310.02	620668	16.50	15.61
Low	30	25	CP-OFDM 16QAM	Inner_Full	32_16	3312.51	620834	16.50	15.61
Low	30	30	CP-OFDM 16QAM	Inner_Full	36_18	3315	621000	16.50	15.60
Low	30	40	CP-OFDM 16QAM	Inner_Full	50_25	3320.01	621334	16.50	15.53
Low	30	50	CP-OFDM 16QAM	Inner_Full	64_32	3325.02	621668	16.50	15.52
Low	30	60	CP-OFDM 16QAM	Inner_Full	80_40	3330	622000	16.50	15.60
Low	30	70	CP-OFDM 16QAM	Inner_Full	80_40	3335.01	622334	16.50	15.44
Low	30	80	CP-OFDM 16QAM	Inner_Full	108_54	3340.02	622668	16.50	15.52
Low	30	90	CP-OFDM 16QAM	Inner_Full	120_60	3345	623000	16.50	15.48
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	16.50	15.68

**N78 (ANT12 DSI2/3)**

Test Freq Description	5G-n78							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	18.00	16.70
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	18.00	16.74
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	18.00	16.96
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	18.00	17.02
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	18.00	17.20
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	18.00	16.66
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	18.00	16.72
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	18.00	16.95
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	18.00	16.95
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	18.00	17.07
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	18.00	17.18
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	18.00	17.16
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	18.00	17.13
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	18.00	17.15
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	18.00	17.12
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	18.00	17.31
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	18.00	17.16
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	18.00	16.65
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3305.01	620334	18.00	17.26
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3305.01	620334	18.00	17.25
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3305.01	620334	18.00	16.99
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3305.01	620334	18.00	17.02
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	18.00	17.29
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	18.00	17.30
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3305.01	620334	18.00	17.23
Low	30	15	CP-OFDM 16QAM	Inner_Full	19_9	3307.5	620500	18.00	17.21
Low	30	20	CP-OFDM 16QAM	Inner_Full	25_12	3310.02	620668	18.00	17.19
Low	30	25	CP-OFDM 16QAM	Inner_Full	32_16	3312.51	620834	18.00	17.18
Low	30	30	CP-OFDM 16QAM	Inner_Full	36_18	3315	621000	18.00	17.22
Low	30	40	CP-OFDM 16QAM	Inner_Full	53_26	3320.01	621334	18.00	17.12
Low	30	50	CP-OFDM 16QAM	Inner_Full	67_33	3325.02	621668	18.00	17.11
Low	30	60	CP-OFDM 16QAM	Inner_Full	81_40	3330	622000	18.00	17.18
Low	30	70	CP-OFDM 16QAM	Inner_Full	81_40	3335.01	622334	18.00	17.09
Low	30	80	CP-OFDM 16QAM	Inner_Full	109_54	3340.02	622668	18.00	17.11
Low	30	90	CP-OFDM 16QAM	Inner_Full	123_61	3345	623000	18.00	17.08

**N78 (ANT12 DSI4)**

Test Freq Description	5G-n78						Tune up	Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)		NR Test CH.	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	20.50	19.27
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	20.50	19.34
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	20.50	19.55
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	20.50	19.61
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	20.50	19.75
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	20.50	19.26
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	20.50	19.35
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	20.50	19.53
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	20.50	19.50
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	20.50	19.68
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	20.50	19.77
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	20.50	19.74
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	20.50	19.68
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	19.50	18.76
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	20.50	19.67
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	20.50	19.88
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	20.50	19.71
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	17.50	16.63
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3305.01	620334	20.50	19.79
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3305.01	620334	20.50	19.77
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3305.01	620334	20.50	19.54
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3305.01	620334	20.50	19.60
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	20.50	19.91
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	20.50	19.85
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3305.01	620334	20.50	19.79
Low	30	15	CP-OFDM 16QAM	Inner_1RB_Right	1_36	3307.5	620500	20.50	19.75
Low	30	20	CP-OFDM 16QAM	Inner_1RB_Right	1_49	3310.02	620668	20.50	19.69
Low	30	25	CP-OFDM 16QAM	Inner_1RB_Right	1_63	3312.51	620834	20.50	19.69
Low	30	30	CP-OFDM 16QAM	Inner_1RB_Right	1_76	3315	621000	20.50	19.64
Low	30	40	CP-OFDM 16QAM	Inner_1RB_Right	1_104	3320.01	621334	20.50	19.50
Low	30	50	CP-OFDM 16QAM	Inner_1RB_Right	1_131	3325.02	621668	20.50	19.67
Low	30	60	CP-OFDM 16QAM	Inner_1RB_Right	1_160	3330	622000	20.50	19.48
Low	30	70	CP-OFDM 16QAM	Inner_1RB_Right	1_160	3335.01	622334	20.50	19.37
Low	30	80	CP-OFDM 16QAM	Inner_1RB_Right	1_215	3340.02	622668	20.50	19.14
Low	30	90	CP-OFDM 16QAM	Inner_1RB_Right	1_243	3345	623000	20.50	19.29
Low	30	10	DFT-s-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	20.50	19.86

**N78 (ANT12 DSI8/9/10)**

Test Freq Description	5G-n78							Power Results (dBm)	
	SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n78
High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3795	653000	19.50	18.30
Middle-1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3672.495	644833	19.50	18.34
Middle-2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3549.99	636666	19.50	18.54
Middle-3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3427.5	628500	19.50	18.59
Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3305.01	620334	19.50	18.75
High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3750	650000	19.50	18.29
Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3649.995	643333	19.50	18.34
Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3549.99	636666	19.50	18.54
Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3450	628667	19.50	18.54
Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3350.01	623334	19.50	18.65
Low	30	10	DFT-s-OFDM PI/2 BPSK	Inner_Full	12_6	3305.01	620334	19.50	18.77
Low	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	19.50	18.76
Low	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	19.50	18.73
Low	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	19.50	18.75
Low	30	10	CP-OFDM QPSK	Inner_Full	12_6	3305.01	620334	19.50	18.72
Low	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3305.01	620334	19.50	18.89
Low	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3305.01	620334	19.50	18.76
Low	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3305.01	620334	19.50	18.30
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Right	1_23	3305.01	620334	19.50	18.78
Low	30	10	CP-OFDM 16QAM	Edge_1RB_Left	1_0	3305.01	620334	19.50	18.78
Low	30	10	CP-OFDM 16QAM	Edge_Full_Right	2_22	3305.01	620334	19.50	18.54
Low	30	10	CP-OFDM 16QAM	Edge_Full_Left	2_0	3305.01	620334	19.50	18.57
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Right	1_22	3305.01	620334	19.50	18.81
Low	30	10	CP-OFDM 16QAM	Inner_1RB_Left	1_1	3305.01	620334	19.50	18.82
Low	30	10	CP-OFDM 16QAM	Outer_Full	24_0	3305.01	620334	19.50	18.76
Low	30	15	CP-OFDM 16QAM	Inner_Full	19_9	3307.5	620500	19.50	18.74
Low	30	20	CP-OFDM 16QAM	Inner_Full	25_12	3310.02	620668	19.50	18.72
Low	30	25	CP-OFDM 16QAM	Inner_Full	32_16	3312.51	620834	19.50	18.72
Low	30	30	CP-OFDM 16QAM	Inner_Full	36_18	3315	621000	19.50	18.71
Low	30	40	CP-OFDM 16QAM	Inner_Full	53_26	3320.01	621334	19.50	18.66
Low	30	50	CP-OFDM 16QAM	Inner_Full	67_33	3325.02	621668	19.50	18.65
Low	30	60	CP-OFDM 16QAM	Inner_Full	81_40	3330	622000	19.50	18.71
Low	30	70	CP-OFDM 16QAM	Inner_Full	81_40	3335.01	622334	19.50	18.66
Low	30	80	CP-OFDM 16QAM	Inner_Full	109_54	3340.02	622668	19.50	18.65
Low	30	90	CP-OFDM 16QAM	Inner_Full	123_61	3345	623000	19.50	18.62

### 11.5 Wi-Fi and BT Measurement result

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, n, ac then ax) is selected. Therefore the SAR measurements performed for the 802.11n/ac modes, as the lowest order modulation, cover 802.11ax modes.

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

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is  $< 1.6$ W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

#### WIFI Tune up

Mode	Band	Full power& Body Standalone transmission	Head(Receiver on)	Body(Receiver off)
			Standalone&Simultaneous transmission WWAN+WLAN2.4G/5G	Simultaneous transmission WWAN+WLAN2.4G/5G
		Power reduce Level 1	Power reduce Level 2	Power reduce Level 3
2.4G	802.11b CH1-11	20.0	13	15
	802.11g CH1-11	18	11	13
	802.11nHT20 CH1-11	17	10	12
5G B1 (5.15-5.25GHz)	802.11a CH36-48	19	12	14.5
	802.11nHT20 CH36-48	17	10	12.5
	802.11nHT40 CH38-46	16.5	9.5	12
	802.11acVHT20 CH36-48	16.5	9.5	12
	802.11acVHT40 CH38-46	16	9	11.5
	802.11acVHT80 CH42	14	7	9.5
5G B2	802.11a CH52-64	19	12	15.5

(5.25-5.35GHz)	802.11nHT20 CH52-64	17	10	13.5
	802.11nHT40 CH54-62	16.5	9.5	13
	802.11acVHT20 CH52-64	16.5	9.5	13
	802.11acVHT40 CH54-62	16	9	12.5
	802.11acVHT80 CH58	14	7	10.5
5G B3(5.47-5.725GHz)	802.11a CH100-132	18.5	14	17
	802.11a CH136-144	19	15	17.5
	802.11nHT20 CH100-140	17	12	15
	802.11nHT40 CH102-134	16.5	11.5	14.5
	802.11acVHT20 CH100-140	16.5	11.5	14.5
	802.11acVHT40 CH102-134	16	11	14
	802.11acVHT80 CH106-122	14	9	12
5G B4(5.725-5.85GHz)	802.11a CH149-165	19.5	16	18.5
	802.11nHT20 CH149-165	17	12.5	15.5
	802.11nHT40 CH151-159	16.5	12	15
	802.11acVHT20 CH149-165	16.5	12	15
	802.11acVHT40 CH151-159	16	11.5	14.5
	802.11acVHT80 CH155	14	9.5	12.5



**The maximum output power for WiFi 2.4G – Head(receiver on)**

802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	12.33
	6(2437(MHz)	12.65
	1(2412MHz)	12.51
	TUNE UP	13.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	10.27
	6(2437(MHz)	10.26
	1(2412MHz)	10.36
	TUNE UP	11.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	9.23
	6(2437(MHz)	9.29
	1(2412MHz)	9.37
	TUNE UP	10.00

**The maximum output power for WiFi 2.4G - Body(receiver off-standalone)**

802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	19.16
	6(2437(MHz))	19.18
	1(2412MHz)	19.14
	Tune up	20.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	17.05
	6(2437(MHz))	17.10
	1(2412MHz)	17.12
	Tune up	18.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	16.05
	6(2437(MHz))	16.07
	1(2412MHz)	15.99
	Tune up	17.00

**The maximum output power for WiFi 2.4G - Body(receiver off- simultaneous transmission)**

802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	14.35
	6(2437(MHz))	14.36
	1(2412MHz)	14.33
	Tune up	15.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	12.28
	6(2437(MHz))	12.29
	1(2412MHz)	12.33
	Tune up	13.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	11.13
	6(2437(MHz))	11.19
	1(2412MHz)	11.22
	Tune up	12.00

**The maximum output power for WiFi 5G- Head(receiver on)**

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	10.69
40(5200 MHz)	10.84
44(5220 MHz)	10.27
48(5240 MHz)	10.55
Tune up	12.00
52(5260 MHz)	10.63
56(5280 MHz)	10.52
60(5300 MHz)	10.80
64(5320 MHz)	10.86
Tune up	12.00
100(5500 MHz)	12.41
104(5520 MHz)	13.07
108(5540 MHz)	13.18
112(5560 MHz)	13.08
116(5580 MHz)	12.68
120(5600 MHz)	12.83
124(5620 MHz)	12.81
128(5640 MHz)	12.83
132(5660 MHz)	12.95
Tune up	14.00
136(5680 MHz)	13.52
140(5700 MHz)	13.83
144(5720 MHz)	13.99
Tune up	15.00
149(5745 MHz)	14.49
153(5765 MHz)	14.45
157(5785 MHz)	14.38
161(5805 MHz)	14.33
165(5825 MHz)	14.28
Tune up	16.00

**The maximum output power for WiFi 5G- Body(receiver off-standalone)**

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	17.27
40(5200 MHz)	17.43
44(5220 MHz)	17.45
48(5240 MHz)	17.38
Tune up	19.00
52(5260 MHz)	17.32
56(5280 MHz)	17.45
60(5300 MHz)	17.44
64(5320 MHz)	17.63
Tune up	19.00
100(5500 MHz)	17.20
104(5520 MHz)	16.75
108(5540 MHz)	17.62
112(5560 MHz)	17.29
116(5580 MHz)	17.26
120(5600 MHz)	16.79
124(5620 MHz)	16.88
128(5640 MHz)	16.90
132(5660 MHz)	16.82
Tune up	18.50
136(5680 MHz)	17.55
140(5700 MHz)	17.70
144(5720 MHz)	18.18
Tune up	19.00
149(5745 MHz)	18.35
153(5765 MHz)	18.15
157(5785 MHz)	17.72
161(5805 MHz)	17.88
165(5825 MHz)	18.06
Tune up	19.50

**The maximum output power for WiFi 5G - Body(receiver off- simultaneous transmission)**

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	13.36
40(5200 MHz)	13.51
44(5220 MHz)	13.08
48(5240 MHz)	13.11
Tune up	14.50
52(5260 MHz)	13.67
56(5280 MHz)	14.22
60(5300 MHz)	14.34
64(5320 MHz)	14.49
Tune up	15.50
100(5500 MHz)	15.21
104(5520 MHz)	15.51
108(5540 MHz)	16.09
112(5560 MHz)	16.15
116(5580 MHz)	15.79
120(5600 MHz)	15.52
124(5620 MHz)	15.44
128(5640 MHz)	15.46
132(5660 MHz)	15.60
Tune up	17.00
136(5680 MHz)	15.83
140(5700 MHz)	16.23
144(5720 MHz)	16.59
Tune up	17.50
149(5745 MHz)	17.28
153(5765 MHz)	17.07
157(5785 MHz)	16.66
161(5805 MHz)	16.73
165(5825 MHz)	17.01
Tune up	18.50

The average conducted power for BT is as following:

Mode	GFSK			EDR2M-4_DQPSK			EDR3M-8DPSK		
	Channel 0	Channel 39	Channel 78	Channel 0	Channel 39	Channel 78	Channel 0	Channel 39	Channel 78
power	8.99	9.10	9.61	7.95	8.05	8.76	7.95	8.04	8.76
Tune up	10.5	10.5	10.5	9.5	9.5	9.5	9.5	9.5	9.5

## 12 Antenna Location

### 12.1 Transmit Antenna Separation Distances

The detail for transmit antenna separation distances is described in the additional document:

Appendix to test report No.I21Z62219-SEM01

The photos of SAR test

### 12.2 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, 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
ANT13	Yes	Yes	Yes	No	Yes	No
ANT31	Yes	Yes	No	Yes	No	Yes
ANT41	Yes	Yes	Yes	No	No	Yes
ANT22	Yes	Yes	No	Yes	Yes	No
ANT12	Yes	Yes	Yes	No	Yes	No

### 12.3 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR, where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

**Standalone SAR test exclusion considerations**

Band/Mode	F(GHz)	Position	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	11	12.59	No
		Body	19.20	11	12.59	Yes
2.4GHz WLAN	2.45	Head	9.58	13	19.95	No
		Body	19.17	20	100	No
5GHz WLAN	5.2	Head	6.58	12	15.85	No
		Body	13.16	19	79.43	No
	5.3	Head	6.52	12	15.85	No
		Body	13.03	19	79.43	No
	5.6	Head	6.34	15	31.62	No
		Body	12.68	19	79.43	No
	5.8	Head	6.23	16	39.81	No
		Body	12.46	19.5	89.13	No

## 13 SAR Test Result

### Note:

#### **KDB 447498 D01 General RF Exposure Guidance:**

For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)\*Tune-up Scaling Factor

For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)\* Duty Cycle scaling factor \* Tune-up scaling factor

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

$\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz

$\leq 0.6$  W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz

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

#### **KDB 648474 D04 Handset SAR:**

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

#### **KDB 941225 D01 SAR test for 3G devices:**

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

#### **KDB 941225 D05 SAR for LTE Devices:**

SAR test reduction is applied using the following criteria:

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.

When the reported SAR is  $> 0.8$  W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.

Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are  $> 0.8$  W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation  $< 1.45$  W/kg.

Testing for 16-QAM modulation is not required because the reported SAR for QPSK is  $< 1.45$  W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.

Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is  $< 1.45$  W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the



group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.

**KDB 941225 D06 Hot Spot SAR:**

The hotspot mode and body-worn accessory SAR test configurations may overlap for handsets. When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations. This typically applies to the back and front surfaces of a handset when SAR is required for both hotspot mode and body-worn accessory exposure conditions.

**KDB 248227 D01 SAR meas for 802.11:**

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

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

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

When the reported SAR for the initial test position is:

$\leq 0.4$  W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.

$> 0.4$  W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closest/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is  $\leq 0.8$  W/kg or all required test positions are tested.

- For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
- When it is unclear, all equivalent conditions must be tested.

For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is  $> 0.8$  W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is  $\leq 1.2$  W/kg or all required test channels are considered.

•The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

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

When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is  $\leq 1.2$  W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

#### Duty Cycle

Mode	Duty Cycle
Speech for GSM	1:8.3
GPRS&EGPRS 1 Slot	1:8.3
GPRS&EGPRS 2 Slot	1:4
GPRS&EGPRS 3 Slot	1:2.67
GPRS&EGPRS 4 Slot	1:2
WCDMA&LTE FDD	1:1
TDD PC3	1:1.58

**Ambient Temperature: 21.5-23.5 °C Liquid Temperature: 21.5-23.5 °C**

#### The evaluation of multi-SIM cards:

We'll perform the head measurement in all bands with the primary SIM depending on the evaluation of multi-SIM cards and retest on highest value point with other SIM. Then, repeat the measurement in the Body test.

Frequency		Side	Test Position	SIM cards	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.					
836.6	190	Left	Cheek	S1	0.069	0.11
836.6	190	Left	Cheek	S2	0.064	0.05

Note: According to the values in the above table, the **S1** is the primary SIM card.

We'll perform the head measurement with the **S1** and retest on highest value point with others.

Frequency		Test Position	Spacing (mm)	SIM cards	SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.					
836.6	190	Front	10	S1	0.211	-0.03
836.6	190	Front	10	S2	0.206	0.13

Note: According to the values in the above table, the **S1** is the primary SIM card.

We'll perform the body measurement with the **S1** and retest on highest value point with others.

#### Note

**S2: SIM2**

### 13.1 SAR results for 2/3/4G

#### ANT13 Head

ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
13	Head	GSM850	190	836.6	GSM	Cheek Left	0mm	\	25.12	26.2	0.069	0.09	0.056	0.07	0.11
13	Head	GSM850	190	836.6	GSM	Tilt Left	0mm	\	25.12	26.2	0.055	0.07	0.038	0.05	0.03
13	Head	GSM850	251	848.8	GSM	Cheek Right	0mm	\	25.05	26.2	0.128	0.17	0.076	0.10	0.04
13	Head	GSM850	190	836.6	GSM	Cheek Right	0mm	\	25.12	26.2	0.16	0.21	0.101	0.13	0.02
13	Head	GSM850	128	824.2	GSM	Cheek Right	0mm	FIG A.1	24.93	26.2	0.171	0.23	0.103	0.14	0.04
13	Head	GSM850	190	836.6	GSM	Tilt Right	0mm	\	25.12	26.2	0.114	0.15	0.067	0.09	-0.09
13	Head	GSM1900	661	1880	GSM	Cheek Left	0mm	\	22.91	24	0.201	0.26	0.091	0.12	0.04
13	Head	GSM1900	661	1880	GSM	Tilt Left	0mm	\	22.91	24	0.281	0.36	0.125	0.16	0.06
13	Head	GSM1900	661	1880	GSM	Cheek Right	0mm	\	22.91	24	0.357	0.46	0.165	0.21	0.01
13	Head	GSM1900	810	1909.8	GSM	Tilt Right	0mm	\	22.86	24	0.421	0.55	0.175	0.23	0.05
13	Head	GSM1900	661	1880	GSM	Tilt Right	0mm	FIG A.2	22.91	24	0.427	0.55	0.192	0.25	-0.05
13	Head	GSM1900	512	1850.2	GSM	Tilt Right	0mm	\	22.97	24	0.377	0.48	0.162	0.21	-0.04
13	Head	WCDMA1900	9400	1880	RMC	Cheek Left	0mm	\	14.26	15.5	0.337	0.45	0.17	0.23	0.12
13	Head	WCDMA1900	9400	1880	RMC	Tilt Left	0mm	\	14.26	15.5	0.43	0.57	0.211	0.28	-0.08
13	Head	WCDMA1900	9400	1880	RMC	Cheek Right	0mm	\	14.26	15.5	0.467	0.62	0.221	0.29	0.00
13	Head	WCDMA1900	9538	1907.6	RMC	Tilt Right	0mm	\	14.08	15.5	0.601	0.83	0.271	0.38	-0.03
13	Head	WCDMA1900	9400	1880	RMC	Tilt Right	0mm	FIG A.3	14.26	15.5	0.632	0.84	0.285	0.38	-0.01
13	Head	WCDMA1900	9262	1852.4	RMC	Tilt Right	0mm	\	13.93	15.5	0.581	0.83	0.266	0.38	0.06
13	Head	WCDMA1900	9400	1880	RMC	Tilt Right	0mm	S2	14.26	15.5	0.616	0.82	0.273	0.36	0.13
13	Head	WCDMA1700	1413	1732.6	RMC	Cheek Left	0mm	\	14.79	16	0.408	0.54	0.23	0.30	0.00
13	Head	WCDMA1700	1413	1732.6	RMC	Tilt Left	0mm	\	14.79	16	0.374	0.49	0.219	0.29	0.07
13	Head	WCDMA1700	1413	1732.6	RMC	Cheek Right	0mm	\	14.79	16	0.437	0.58	0.21	0.28	0.12
13	Head	WCDMA1700	1513	1752.6	RMC	Tilt Right	0mm	FIG A.4	14.83	16	0.58	0.76	0.262	0.34	-0.05
13	Head	WCDMA1700	1413	1732.6	RMC	Tilt Right	0mm	\	14.79	16	0.527	0.70	0.238	0.31	-0.03
13	Head	WCDMA1700	1312	1712.4	RMC	Tilt Right	0mm	\	14.94	16	0.458	0.58	0.209	0.27	-0.05
13	Head	WCDMA 850	4183	836.6	RMC	Cheek Left	0mm	\	18.50	19.5	0.065	0.08	0.057	0.07	-0.02
13	Head	WCDMA 850	4183	836.6	RMC	Tilt Left	0mm	\	18.50	19.5	0.054	0.07	0.042	0.05	-0.02
13	Head	WCDMA 850	4233	846.6	RMC	Cheek Right	0mm	\	18.36	19.5	0.09	0.12	0.065	0.08	-0.04
13	Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	FIG A.5	18.50	19.5	0.176	0.22	0.11	0.14	-0.02
13	Head	WCDMA 850	4132	826.4	RMC	Cheek Right	0mm	\	18.61	19.5	0.142	0.17	0.095	0.12	-0.02
13	Head	WCDMA 850	4183	836.6	RMC	Tilt Right	0mm	\	18.50	19.5	0.09	0.11	0.065	0.08	0.07
13	Head	LTE Band2	18700	1860	1RB-Middle	Cheek Left	0mm	\	14.46	15.5	0.308	0.39	0.143	0.18	0.09
13	Head	LTE Band2	18700	1860	1RB-Middle	Tilt Left	0mm	\	14.46	15.5	0.426	0.54	0.192	0.24	0.01
13	Head	LTE Band2	18700	1860	1RB-Middle	Cheek Right	0mm	\	14.46	15.5	0.476	0.60	0.212	0.27	-0.06
13	Head	LTE Band2	18700	1860	1RB-Middle	Tilt Right	0mm	FIG A.6	14.46	15.5	0.564	0.72	0.255	0.32	-0.05
13	Head	LTE Band2	18700	1860	50RB-High	Cheek Left	0mm	\	14.52	15.5	0.349	0.44	0.164	0.21	-0.09
13	Head	LTE Band2	18700	1860	50RB-High	Tilt Left	0mm	\	14.52	15.5	0.463	0.58	0.211	0.26	0.05
13	Head	LTE Band2	18700	1860	50RB-High	Cheek Right	0mm	\	14.52	15.5	0.446	0.56	0.206	0.26	0.08
13	Head	LTE Band2	18700	1860	50RB-High	Tilt Right	0mm	\	14.52	15.5	0.559	0.70	0.253	0.32	0.06