



SAR TEST REPORT

Applicant ZTE Corporation
FCC ID SRQ-ZTEA2023G
Product 5G NR Multi model smart phone
Model ZTE A2023G
Report No. R2204A0354-S1V2
Issue Date June 6, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528-2013, ANSI C95.1: 1992, IEEE C95.1: 1991**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	June 5, 2022
Rev.1	Update description.	June 6, 2022
Rev.2	Update data.	June 6, 2022

Note: This revised report (Report No. R2204A0354-S1V2) supersedes and replaces the previously issued report (Report No. R2204A0354-S1V1). Please discard or destroy the previously issued report and dispose of it accordingly.



1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	



2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)			
	1g SAR Head	1g SAR Body-worn	1g SAR Hotspot	Product Specific 10-g SAR
GSM 850	0.158	0.327	0.520	NA
GSM 1900	0.793	0.268	0.648	NA
WCDMA Band II	1.177	0.640	0.739	3.383
WCDMA Band IV	1.063	0.571	0.797	3.280
WCDMA Band V	0.142	0.334	0.631	NA
LTE FDD 2	0.956	0.566	0.766	3.204
LTE FDD 4	1.105	0.501	0.778	3.198
LTE FDD 5	0.540	0.344	0.507	NA
LTE FDD 7	0.964	0.703	0.799	3.568
LTE FDD 12 (LTE FDD 17)	0.319	0.151	0.245	NA
LTE FDD 28A	0.148	0.173	0.343	NA
LTE FDD 28B	0.228	0.246	0.361	NA
LTE TDD 40	1.118	0.418	1.001	2.949
LTE TDD 41 (LTE TDD 38)	1.151	0.616	1.002	3.318
LTE FDD 66	0.924	0.613	0.815	3.215
NR n2	1.154	0.229	0.960	NA
NR n5	0.408	0.367	0.623	NA
NR n7	0.877	0.542	1.050	3.451
NR n41	0.795	0.388	0.799	1.638
NR n66	0.938	0.394	0.531	NA
NR n77	0.508	0.366	0.478	NA
NR n78	0.754	0.596	0.691	1.314
Wi-Fi (2.4G)	0.406	0.442	0.396	NA
Wi-Fi (5G)	1.168	0.370	0.573	1.617
BT	0.195	0.061	0.128	NA



Date of Testing: April 16, 2022 ~June 2, 2022

Date of Sample Received: April 12, 2022

Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.

2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

3. According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands):

a) Antenna SAR for LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range 699-716 MHz) due to similar frequency range, LTE Band 38 (Frequency range: 2570-2620 MHz) is covered by LTE Band 41 (Frequency range 2496-2690 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
Highest Simultaneous Transmission SAR (W/kg)	1.594	1.570	1.577	3.568

Note: The detail for simultaneous transmission consideration is described in chapter 10.3.

3 Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China

General Technologies

Application Purpose	Original Grant
EUT Stage	Identical Prototype
Model	ZTE A2023G
SN	327324440042
Hardware Version	ZTE A2023GHW1.0
Software Version	MyOS12.0.2_A2023G_GLB
Antenna Type	Internal Antenna
Device Class	B
Wi-Fi Hotspot	Wi-Fi 2.4G Wi-Fi 5G
Power Class	GSM 850: 4 GSM 1900: 1 UMTS Band II/IV/V: 3 LTE FDD 2/4/5/7/12/17/28/66: 3 LTE TDD 38/40/41: 3 NR n2/n5/n7/n41/n66/n77: 3 NR n41/n78: 2
Power Level	GSM 850: level 5 GSM 1900: level 0 UMTS Band II/IV/V: all up bits LTE FDD 2/4/5/7/12/17/28/66: max power LTE TDD 38/40/41: max power NR n2/n5/n7/n41/n66/n77/n78: max power
EUT Accessory	
Adapter	Manufacturer: ShenZhen KunXing Technology Co., Ltd. Model: STC-A59152050AC-Z
Battery	Manufacturer: Zhuhai Cosmx Battery Co., Ltd. Model: Li3949T44P8h806459
Earphone 1	Manufacturer: JUWEI ELECTRONICS CO.,LTD



	Model: JWEP1092-Z01
Earphone 2	Manufacturer: ShenZhen FDC Electronic Co.,Ltd Model: DEM-9A
USB Cable 1	Manufacturer: King Power Electronics Co., Ltd Model: TC20-TC20-W-100-M-6A-HSF
USB Cable 2	Manufacturer: Luxshare-ICT Co., Ltd Model: TC20-TC20-W-100-M-6A-HSF
Type-C to 3.5 mm Headphone Jack	Manufacturer: HUIZHOU JUWEI ELECTRONICS CO., LTD Model: HMZ24
Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.	

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	<input type="checkbox"/> Multi-slot Class:8-1UP <input type="checkbox"/> Multi-slot Class:10-2UP <input checked="" type="checkbox"/> Multi-slot Class:12-4UP <input type="checkbox"/> Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
UMTS	Band II	QPSK, 16QAM	HSDPA UE Category:24 HSUPA UE Category:6	1850 ~ 1910
	Band IV			1710 ~ 1755
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.15	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	FDD 12			699 ~ 716
	FDD 17			704 ~ 716
	FDD 28A			703 ~ 733
	FDD 28B			718 ~ 748
	TDD 38			2570 ~ 2620
	TDD 40			2300 ~ 2400
	TDD 41			2496 ~ 2690
	FDD 66			1710 ~ 1780
	Does this device support Carrier Aggregation (CA) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
NR	FDD n2	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM; DFT-s OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	/	1850 ~ 1910
	FDD n5			824 ~ 849
	FDD n7			2500 ~ 2570
	TDD n38			2570 ~ 2620
	TDD n41			2496 ~ 2690
	FDD n66			1710 ~ 1780
	FDD n77 subset 1			3450 ~ 3550
	FDD n77 subset 2			3700 ~ 3980



	FDD n78 subset 1			3450 ~ 3550
	FDD n78 subset 2			3700 ~ 3800
EN-DC Band	DC_66A-n5A DC_28A-n41A; DC_2A-n66A; DC_5A-n66A DC_2A-n77A; DC_5A-n77A; DC_12A-n77A DC_2A-n78A; DC_7A-n78A; DC_28A-n78A			
BT	2.4G	Version 5.2 BR/EDR + LE		2402 ~2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20/ax HE20	2412 ~ 2462
		OFDM	802.11n HT40/ax HE40	2422 ~ 2452
	5G	OFDM	802.11a/n HT20/ HT40/ ac VHT20/ VHT40/ VHT80/ ax HE20/HE40/HE80	5150 ~ 5350 5470 ~ 5850
Does this device support MIMO <input checked="" type="checkbox"/> Yes(2TX, 2RX) <input type="checkbox"/> No				
NFC	13.56MHz			

4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991, the following FCC Published RF exposure KDB procedures:

Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02

KDB 447498 D01 General RF Exposure Guidance v06

KDB 648474 D04 Handset SAR v01r03

KDB 690783 D01 SAR Listings on Grants v01r03

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

KDB 865664 D02 RF Exposure Reporting v01r02

KDB 941225 D01 3G SAR Procedures v03r01

KDB 941225 D05 SAR for LTE Devices v02r05

KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02

KDB 941225 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2013 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

5.1.2 Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a 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.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

5.1.3 Phablet SAR test considerations

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

- a) The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
- b) The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. The 1-g SAR at 5 mm for UMPC mini-tablets is not required. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Product specific 10-g SAR is also not required for the front (top) surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode product specific 10-g SAR.
- c) The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions.

5.2 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

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

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

5.3 Test Configuration

5.3.1 GSM Test Configuration

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Output power of reductions:

Table 3: The allowed power reduction in the multi-slot configuration

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power (dB)
1	0
2	0 to 3,0
3	1,8 to 4,8
4	3,0 to 6,0

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

5.3.2 UMTS Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations modes according to output power, exposure conditions and device operating capabilities. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121.

5.3.2.2 Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest SAR configuration in 12.2 kbps RMC for head exposure.

5.3.2.3 Body-worn accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the EUT with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the EUT, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC

5.3.2.4 Release 5 HSDPA Test Configuration

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest SAR body-worn accessory exposure configuration in 12.2 kbps RMC. EUT with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Table 4: Subtests for UMTS Release 5 HSDPA

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

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

5.3.2.5 Release 6 HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the ‘WCDMA EUT’ and ‘Release 5 HSDPA Data Devices’ sections of this document

Table 5: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: $\Delta_{ACK}, \Delta_{NACK}$ and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
 Note 2: CM = 1 for $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
 Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.
 Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.
 Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.
 Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 6: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592



4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2	11484	5.76
	4	4	10	SF4	20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	22996	?
	4	4	10		20000	?
NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4. UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM. (TS25.306-7.3.0)						

5.3.2.6 HSPA, HSPA+ and DC-HSDPA Test Configuration

SAR test exclusion may apply to 3GPP Rel. 6 HSPA and Rel. 8 DC-HSDPA. When SAR measurement is required for HSPA or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements. Without prior KDB confirmation to determine the SAR results are acceptable, a PAG is required for equipment approval.

SAR test exclusion for HSPA, HSPA+ and DC-HSDPA is determined according to the following:

1) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.

2) SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

3) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

4) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA, HSPA+ or DC-HSDPA:

a) The output power measurement results and applicable release version(s) of 3GPP TS 34.121.

Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.

b) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.

c) The UE category, operating parameters, such as the β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA/HSPA+ channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.

5) When SAR measurement is required, the test configurations, procedures and power measurement

results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

Table 7: HS-DSCH UE category

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI NOTE 1	Total number of soft channel bits	Supported modulations without MIMO operation or dual cell operation	Supported modulations with MIMO operation and without dual cell operation	Supported modulations with dual cell operation
Category 1	5	3	7298	19200	QPSK, 16QAM	Not applicable (MIMO not supported)	Not applicable (dual cell operation not supported)
Category 2	5	3	7298	28800			
Category 3	5	2	7298	28800			
Category 4	5	2	7298	38400			
Category 5	5	1	7298	57600			
Category 6	5	1	7298	67200			
Category 7	10	1	14411	115200			
Category 8	10	1	14411	134400			
Category 9	15	1	20251	172800			
Category 10	15	1	27952	172800			
Category 11	5	2	3630	14400	QPSK	Not applicable (dual cell operation not supported)	
Category 12	5	1	3630	28800	QPSK, 16QAM, 64QAM		
Category 13	15	1	35280	259200	QPSK, 16QAM		
Category 14	15	1	42192	259200	QPSK, 16QAM		
Category 15	15	1	23370	345600	QPSK, 16QAM		
Category 16	15	1	27952	345600	QPSK, 16QAM, 64QAM		
Category 17 NOTE 2	15	1	35280	259200	QPSK, 16QAM, 64QAM		—
			23370	345600	—		QPSK, 16QAM
Category 18 NOTE 3	15	1	42192	259200	QPSK, 16QAM, 64QAM		—
			27952	345600	—		QPSK, 16QAM
Category 19	15	1	35280	518400	QPSK, 16QAM, 64QAM		
Category 20	15	1	42192	518400	QPSK, 16QAM, 64QAM		
Category 21	15	1	23370	345600	-	-	QPSK, 16QAM
Category 22	15	1	27952	345600			
Category 23	15	1	35280	518400			
Category 24	15	1	42192	518400			

5.3.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The R&S CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

A) Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

D) Largest channel bandwidth standalone SAR test requirements

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

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

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

5.3.4 Additional requirements for TDD LTE specification

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

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

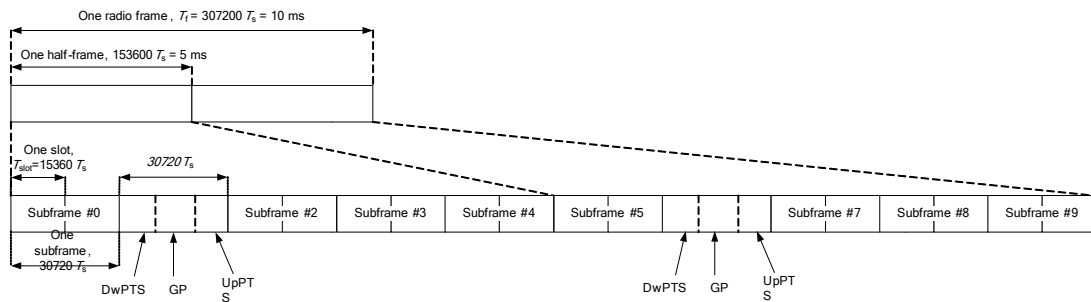


Figure 1: Frame structure type 2

Table 8: 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 9: 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

According to Figure 1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table: Uplink-downlink configurations:

$$\text{Duty cycle} = (30720Ts * \text{Ups} + \text{Uplink Component} * \text{Specials}) / (307200Ts)$$

About the uplink component of Special subframes, we can figure out by Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS):

$$\text{Uplink Component} = \text{UpPTS}$$

In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(30720Ts * \text{Ups}) + \text{UpPTS} * \text{Specials}] / (307200Ts)$$

And we can get different Duty cycles under different configurations:

Uplink-downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
	D	S	U	Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
				configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type

Path: Physical Cell Setup/TDD/Uplink Downlink Configuration

Duplex Mode: TDD Use Carrier Specific: FrameStructure Type 2

Scenario: Search... 1CC - 1x1

DL Cell Bandwidth: 20.0 MHz #RB Max: 100

UL Cell Bandwidth: 20.0 MHz

Physical Cell ID: 0

Cyclic Prefix: Normal

Sounding RS (SRS):

SRS:

TDD:

Use Carrier Specific:

Uplink Downlink Configurat...: 0

Subframe Number	Direction	Special Subframe
0	↓	
1	S	
2	↑	
3	↑	
4	↑	
5	↓	
6	S	
7	↑	
8	↑	
9	↑	

Special Subframe: 7

LTE Signaling: ON

5.3.5 5G NR Test Configuration

For 5G NR SAR testing, 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.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.

The worst-case scenario for all measurements is based on an engineering evaluation and QPSK was observed as the worst one and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, 256QAM, and BPSK, modulations.

For TDD NR Band operation and final implementation, TDD NR slot configuration extended cyclic prefix uplink duty cycle =25%; However, EN-DC transmission on test DUT is only possible using FTM mode with continuous transmission (duty cycle =100%). SAR testing was performed using FTM mode at maximum output power adjusted for duty cycle to mimic final 25% cycle

Band	Power Class	5G NR(NSA) Antenna Power Level (dBm)	
		Tune up	Tune up
		(Not Adjusted for duty cycle)	(Adjusted for duty cycle)
NR Band n41 (Ant 3)	Class 2	26.50	20.50
NR Band n41 (Ant 6)	Class 2	25.50	19.50
NR Band n41 (Ant 1)	Class 2	25.50	19.50
NR Band n41 (Ant 4)	Class 2	22.50	16.50
NR Band n41 (MIMO-Ant 3)	Class 3	23.50	17.50
NR Band n41 (MIMO-Ant 6)	Class 3	22.50	16.50
NR Band n41 (MIMO-Ant 1)	Class 3	22.50	16.50
NR Band n41 (MIMO-Ant 4)	Class 3	20.50	14.50
NR Band n77 (Ant 3)	Class 3	23.50	17.50
NR Band n77 (Ant 7)	Class 3	21.50	15.50
NR Band n77 (Ant 5)	Class 3	23.00	17.00
NR Band n77 (Ant 2)	Class 3	23.00	17.00
NR Band n78 (Ant 3)	Class 2	26.00	20.00
NR Band n78 (Ant 7)	Class 2	23.50	17.50
NR Band n78 (Ant 5)	Class 2	26.00	20.00
NR Band n78 (Ant 2)	Class 2	25.50	19.50
NR Band n78 (MIMO-Ant 3)	Class 3	22.00	16.00
NR Band n78 (MIMO-Ant 7)	Class 3	20.50	14.50
NR Band n78 (MIMO-Ant 2)	Class 3	22.50	16.50

NR Band n41/ n77/ n78 supports HPUE, HPUE power and SAR testing performed separately, NR Band n41/ n77/ n78 HUPE with higher power, NR Band n41/ n77/ n78 HPUE SAR can represent power class 2/class 3 level SAR.

For EN-DC SAR, as the existing SAR test system can not test the multiple different frequency bands

simultaneous Transmission SAR at the same time, we suggest that the conservative "max tune-up + max 10dBm tune-up" for hotspot multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink EN-DC SAR from standalone SAR test results of each LTE and NR EN-DC component band and the conservative "max tune-up + max 10dBm tune-up" for hotspot multi-Tx method to combine the scaled SAR value from each EN-DC component band as the inter-band Uplink EN-DC SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report.

5.3.6 Wi-Fi Test Configuration

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

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

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

the test reduction.

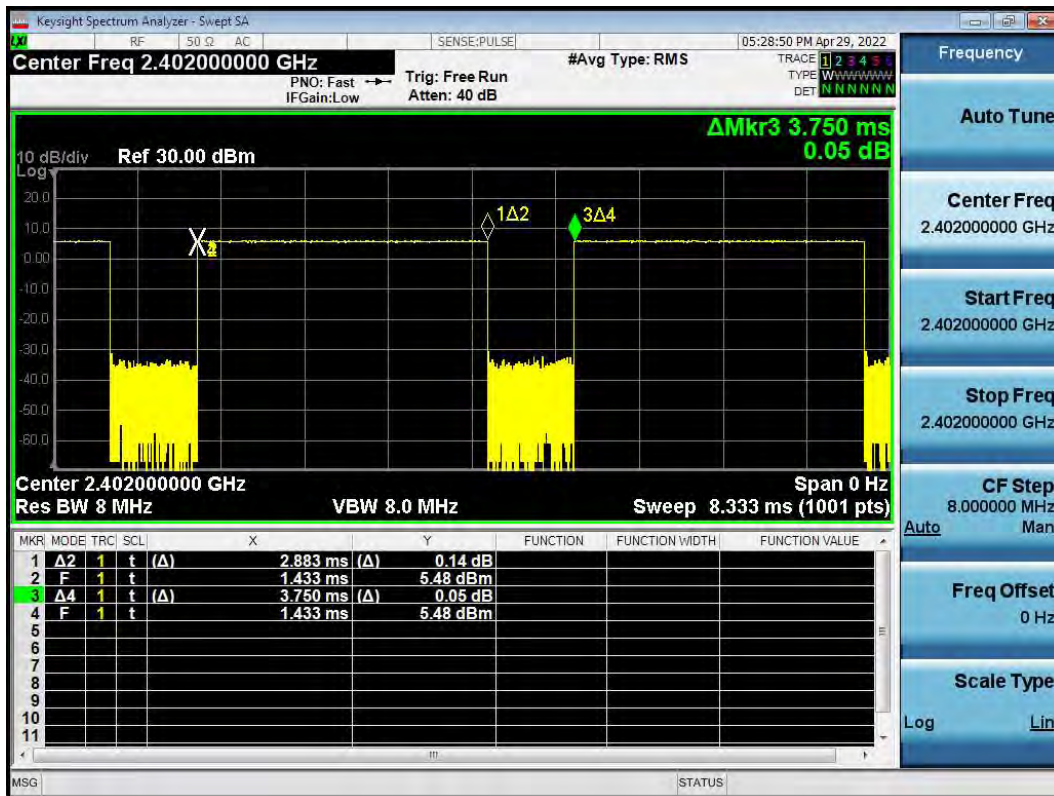
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

5.3.7 BT Test Configuration

For BT SAR testing, BT engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hopping off and data rate set for DH5.

The SAR measurement takes full account of the BT duty cycle and is reflected in the report, and the duty factor of the device is as follow:



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.883/3.750*100%=76.9%

5.3.8 LTE CA specification

The device supports LTE advanced Rel. 15, Carrier Aggregation (CA) is supported for Intra band only, more details information is provided in tables below:

1) CA Intra band contiguous

E-UTRA CA configuration / Bandwidth combination set								
E-UTRA CA configuration	Uplink CA configurations (NOTE 3)	Component carriers in order of increasing carrier frequency					Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7C	CA_7C	15	15				40	0
		20	20					
		10	20				40	1
		15	15, 20					
		20	10, 15, 20				40	2
		15	10, 15					
CA_41C	CA_41C	10	20				40	0
		15	15, 20					
		20	10, 15, 20					
		5, 10	20				40	1
		15	15, 20					
		20	5, 10, 15, 20				40	2
		10	15, 20					
		15	10, 15, 20					
		20	10, 15, 20				40	3
		10	20					
20	20							

5.3.9 Proximity sensor Configuration

Due to the operating configurations and exposure conditions required by the device, the proximity sensor is used to indicate when the device is held close to a user's body exposure condition. It utilizes the proximity sensor to reduce the output power in specific wireless and operating modes of Antenna 2 to ensure SAR compliance. It is also set an output power leveled to the lowest one to make sure that in any case of SAR sensor hardware failure, the SAR requirements can still be satisfied.

The following tables summarize the key power reduction information for proximity sensor. The test procedures be applied to determine proximity sensor triggering distances, and sensor coverage for normal and tilt positions. To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for movements to and from the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.

Antenna 1				
Band	Test position	Sensor Trigger Distance range (DUT to Phantom)	Power reduction amount (dB)	Power level
LTE B7	Back side	0mm≤distance≤8mm	2.5	Level 6-D1
		8mm<distance	0	Level 6-D2
	Front side	0mm≤distance≤8mm	2.5	Level 6-D1
		8mm<distance	0	Level 6-D2
	Left edge	/	0	Level 6-D2
	Right edge	/	0	Level 6-D2
	Top edge	/	0	Level 6-D2
	Bottom Edge	0mm≤distance≤8mm	2.5	Level 6-D1
		8mm<distance	0	Level 6-D2
	LTE B41	Back side	0mm≤distance≤8mm	1.5
8mm<distance			0	Level 6-D2
Front side		0mm≤distance≤8mm	1.5	Level 6-D1
		8mm<distance	0	Level 6-D2
Left edge		/	0	Level 6-D2
Right edge		/	0	Level 6-D2
Top edge		/	0	Level 6-D2
Bottom Edge		0mm≤distance≤8mm	1.5	Level 6-D1
		8mm<distance	0	Level 6-D2
n7		Back side	0mm≤distance≤8mm	1
	8mm<distance		0	Level 6-D2
	Front side	0mm≤distance≤8mm	1	Level 6-D1
		8mm<distance	0	Level 6-D2
	Left edge	/	0	Level 6-D2
	Right edge	/	0	Level 6-D2
	Top edge	/	0	Level 6-D2

	Bottom Edge	$0\text{mm} \leq \text{distance} \leq 8\text{mm}$	1	Level 6-D1
		$8\text{mm} < \text{distance}$	0	Level 6-D2

Note:

To ensure all production units are compliant, the smallest separation distance determined by the sensor triggering and sensor coverage for normal and tit positions for all usage conditions and applicable sides, minus 1 mm, must be used as the test separation distance for additional SAR testing of each higher power stage.

For the other sides or other frequency bands of the device, SAR is still tested at the DSI-2 level with sensor off.

Procedures for determining proximity sensor triggering distances

The device was tested by the test lab to determine the proximity sensor triggering distances for the backside, top side and bottom edge of the device. To ensure all production units are compliant, the smallest separation distance determined by the sensor triggering minus 1 mm, must be used as the test separation distance for SAR testing.

The Proximity sensor triggering distance measurement method are as below:



Picture : Proximity sensor triggering distances assessment(Back side)



Picture : Proximity sensor triggering distances assessment(Bottom edge)

Table: Summary of Trigger Distances

Band	Trigger distance-Back Side		Trigger distance-Front Side		Trigger distance-Bottom Edge	
	Moving toward Phantom	Moving away from Phantom	Moving toward Phantom	Moving away from Phantom	Moving toward Phantom	Moving away from Phantom
LTE 7	8	8	8	8	8	8
LTE 41	8	8	8	8	8	8
NR n7	8	8	8	8	8	8

Conclusion: It can be ensured that the proximity sensor can be valid triggered for the body exposure condition (LTE Band 7/41, NR Band 7 with Antenna 1)

The detailed conducted power measurement data to determine the triggering distances is as below:

Table: Reduced power (Moving toward phantom)

Position	Ant	Band	Power Reduction Status(dBm)																								
			25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Back Side	Antenna 1	LTE B7	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	
Back Side	Antenna 1	LTE B41	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	
Back Side	Antenna 1	n7	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	

Position	Ant	Band	Power Reduction Status(dBm)																								
			25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Front Side	Antenna 1	LTE B7	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	
Front Side	Antenna 1	LTE B41	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	
Front Side	Antenna 1	n7	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	

Position	Ant	Band	Power Reduction Status(dBm)																								
			25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Bottom Edge	Antenna 1	LTE B7	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	24.27	
Bottom Edge	Antenna 1	LTE B41	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	
Bottom Edge	Antenna 1	n7	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	22.60	

Table: Full power (Moving away from phantom)

Position	Ant	Band	Power Reduction Status(dBm)																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Back Side	Antenna 1	LTE B7	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	
Back Side	Antenna 1	LTE B41	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	
Back Side	Antenna 1	n7	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	

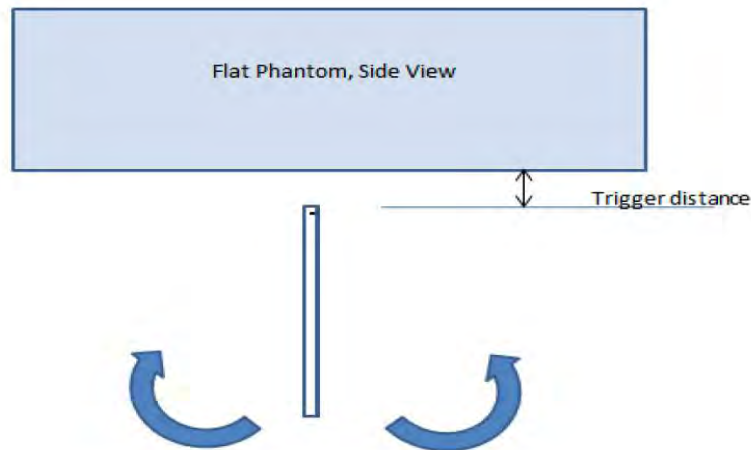
Position	Ant	Band	Power Reduction Status(dBm)																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Front Side	Antenna 1	LTE B7	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	
Front Side	Antenna 1	LTE B41	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	
Front Side	Antenna 1	n7	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	

Position	Ant	Band	Power Reduction Status(dBm)																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Bottom Edge	Antenna 1	LTE B7	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	19.27	
Bottom Edge	Antenna 1	LTE B41	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	21.80	
Bottom Edge	Antenna 1	n7	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	21.26	

Procedures for determining device tilt angle influences to proximity sensor triggering

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Bottom Edge and Top Edge parallel to the base of the flat phantom for each band. The EUT was rotated about Bottom Edge and Top Edge for angles up to +/- 45°. If the output power increased during the rotation the DUT was moved 1mm toward the phantom and the rotation repeated. This procedure was repeated until the power remained reduced for all angles up to +/- 45°.

The proximity sensor triggering tilt angle measurement method are as below:



**Table: Summary of Tablet Tilt Angle Influence to Proximity Sensor Triggering**

Band	Position	Minimum trigger distance at which power reduction was maintained over $\pm 45^\circ$	Power Reduction Status										
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
LTE 7	Bottom edge	8mm	on	on	on	on	on	on	on	on	on	on	on
LTE 41	Bottom edge	8mm	on	on	on	on	on	on	on	on	on	on	on
NR n7	Bottom edge	8mm	on	on	on	on	on	on	on	on	on	on	on

Conclusion: It can be ensured that the proximity sensor can be valid triggered for the DUT tilt coverage exposure condition.

5.3.10 Receiver detection mechanism specification

This device support the receiver detection mechanism, the main purpose is to minimize triggering associated with power reduction scenarios by receiver detection mechanisms and provide enhanced user experience. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 3G&4G&5G and Wi-Fi antennas accordingly.

More details information followings:

1. When there is a voice call (including VOIP) and the modem chip detects that the Headset is unconnected and speaker is off, then the receiver is triggered and it is considered as Held to ear scenario (Head). The power level receiver on is applied.
2. When there is a voice call, but the headset is connected or speaker mode is on, the receiver will not work. It is considered as other scenarios (Body etc.). The power level receiver off and receiver off+hotspot on is applied.
3. When there is data service only(No voice call, including VOIP), the receiver will not work too. It is considered as other scenarios (Body etc.).The power level receiver off and receiver off+hotspot on is applied.

Note: The power level receiver on and receiver off and receiver off+hotspot on can be set to the same or different.

a. Power Level Table

WWAN

Antenna	Position	Reduced level	Receiver State	Hotspot State	Sensor State	Transmitting conditions
ANT0	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
			On	N/A	N/A	WWAN+WLAN2.4G+WLAN5G
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
			Off	N/A	N/A	WWAN+WLAN2.4G+WLAN5G
	Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G
			Off	On	N/A	WWAN+WLAN2.4G+WLAN5G
ANT1	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
			On	N/A	N/A	WWAN+WLAN2.4G+WLAN5G
	Body worn	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
			Off	N/A	N/A	WWAN+WLAN2.4G+WLAN5G
	Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G
			Off	On	N/A	WWAN+WLAN2.4G+WLAN5G
	Product-specific 10g SAR	LEVEL6	Off	N/A	D1	WWAN Only and sensor on
			Off	N/A	D1	WWAN+WLAN2.4G/5G and sensor on
		LEVEL7	Off	N/A	D1	WWAN+WLAN2.4G+WLAN5G and sensor on
			Off	N/A	D2	WWAN Only and sensor off
LEVEL6	Off	N/A	D2	WWAN+WLAN2.4G/5G and sensor off		
	Off	N/A	D2	WWAN+WLAN2.4G+WLAN5G and sensor off		



			Off	N/A	D2	WWAN+WLAN2.4G+WLAN5G and sensor off
ANT2	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
	On		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
	Off		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G	
		Off	On	N/A	WWAN+WLAN2.4G+WLAN5G	
ANT3	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
	On		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
	Off		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G	
		Off	On	N/A	WWAN+WLAN2.4G+WLAN5G	
ANT4	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
	On		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
	Off		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G	
		Off	On	N/A	WWAN+WLAN2.4G+WLAN5G	
ANT5	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
	On		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
	Off		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G	
		Off	On	N/A	WWAN+WLAN2.4G+WLAN5G	
ANT6	Head	LEVEL1	On	N/A	N/A	WWAN Only
		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
	On		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
		LEVEL4	Off	N/A	N/A	WWAN+WLAN2.4G/5G
	Off		N/A	N/A	WWAN+WLAN2.4G+WLAN5G	
Hotspot	LEVEL5	Off	On	N/A	WWAN+WLAN2.4G/5G	
		Off	On	N/A	WWAN+WLAN2.4G+WLAN5G	
ANT7	Head	LEVEL1	On	N/A	N/A	WWAN Only



		LEVEL2	On	N/A	N/A	WWAN+WLAN2.4G/5G
			On	N/A	N/A	WWAN+WLAN2.4G+WLAN5G
	Body worn / Product-specific 10g SAR	LEVEL3	Off	N/A	N/A	WWAN Only
			LEVEL4	Off	N/A	N/A
	Hotspot	LEVEL5		Off	On	N/A
			Off	On	N/A	WWAN+WLAN2.4G+WLAN5G

WLAN

Antenna	Position	Reduced level	Receiver State	Transmitting conditions
ANT7	Head	LEVEL1	On	WLAN Only
		LEVEL2	On	WWAN+WLAN2.4G/5G
			On	WWAN+WLAN2.4G+WLAN5G
	Body worn / Product-specific 10g SAR	LEVEL3	Off	WLAN Only
	Hotspot	LEVEL4	Off	WWAN+WLAN2.4G/5G
			Off	WWAN+WLAN2.4G+WLAN5G
ANT8	Head	LEVEL1	On	WLAN Only
		LEVEL2	On	WWAN+WLAN2.4G/5G
			On	WWAN+WLAN2.4G+WLAN5G
	Body worn / Product-specific 10g SAR	LEVEL3	Off	WLAN Only
	Hotspot	LEVEL4	Off	WWAN+WLAN2.4G/5G
			Off	WWAN+WLAN2.4G+WLAN5G
ANT9	Head	LEVEL1	On	WLAN Only
		LEVEL2	On	WWAN+WLAN2.4G/5G
			On	WWAN+WLAN2.4G+WLAN5G
	Body worn / Product-specific 10g SAR	LEVEL3	Off	WLAN Only
	Hotspot	LEVEL4	Off	WWAN+WLAN2.4G/5G
			Off	WWAN+WLAN2.4G+WLAN5G



b. Power Reduced Table

WWAN

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)				Body worn (Receiver off)				Hotspot (Receiver off+Hotspot on)		
				Standa lone	Simultaneous transmission			Stand alone	Simultaneous transmission			Simultaneous transmission		
					WWAN	WWAN	WWAN		WWAN	WWAN	WWAN	WWAN	WWAN	WWAN
					+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN		+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN	+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN
GSM (CS)	GSM 850	32.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		31.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GSM (CS)	GSM 1900	30.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		29.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
		23.5	Ant.4	2.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B4	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	4.0
		23.5	Ant.4	2.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LTE Bands	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
		23.5	Ant.4	3.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B4	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	4.0
		23.5	Ant.4	1.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B7	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
		24.0	Ant.4	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B12	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B17	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28A	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28B	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B38	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
		23.0	Ant.4	0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B40	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
		23.0	Ant.4	0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B41	26.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
		24.5	Ant.4	1.5	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
		25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
23.5		Ant.4	3.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



SA Bands	n 2	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		22.5	Ant.4	1.5	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		22.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 7	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
		22.0	Ant.4	2.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	21.5	Ant.2	0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
		19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		19.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
		19.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		19.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		16.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
		15.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		17.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		17.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
		17.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		20.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19.5		Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



Mode	Band	Full power (Tune up)	Antenna	Product Specific (Receiver off+Sensor on)				Product Specific (Receiver off+Sensor off)			
				Standa lone	Simultaneous transmission			Stand alone	Simultaneous transmission		
					WWAN	WWAN	WWAN		WWAN	WWAN	WWAN
					+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN		+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN
GSM (CS)	GSM 850	32.5	Ant.0	/	/	/	/	/	/	/	/
		31.0	Ant.6	/	/	/	/	/	/	/	/
GSM (CS)	GSM 1900	30.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		29.0	Ant.4	/	/	/	/	/	/	/	/
12.2kbps RMC	WCDMA B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.5	Ant.4	/	/	/	/	/	/	/	/
12.2kbps RMC	WCDMA B4	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.5	Ant.4	/	/	/	/	/	/	/	/
12.2kbps RMC	WCDMA B5	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
LTE Bands	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.5	Ant.4	/	/	/	/	/	/	/	/
	LTE B4	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.5	Ant.4	/	/	/	/	/	/	/	/
	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
	LTE B7	25.0	Ant.1	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0
		24.0	Ant.4	/	/	/	/	/	/	/	/
	LTE B12	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
	LTE B17	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
	LTE B28A	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
	LTE B28B	25.0	Ant.0	/	/	/	/	/	/	/	/
		23.0	Ant.6	/	/	/	/	/	/	/	/
	LTE B38	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.4	/	/	/	/	/	/	/	/
	LTE B40	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.4	/	/	/	/	/	/	/	/
	LTE B41	26.0	Ant.1	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0
		24.5	Ant.4	/	/	/	/	/	/	/	/
	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/
		25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23.5		Ant.4	/	/	/	/	/	/	/	/	
SA Bands	n 2	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		22.5	Ant.4	/	/	/	/	/	/	/	/



	n 5	24.0	Ant.0	/	/	/	/	/	/	/	/	/
		22.0	Ant.6	/	/	/	/	/	/	/	/	/
	n 7	23.0	Ant.1	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
		22.0	Ant.4	/	/	/	/	/	/	/	/	/
	n 66	21.5	Ant.2	/	/	/	/	/	/	/	/	/
		19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		19.0	Ant.4	/	/	/	/	/	/	/	/	/
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/	/
		19.5	Ant.6	/	/	/	/	/	/	/	/	/
		19.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		16.5	Ant.4	/	/	/	/	/	/	/	/	/
	n 77	17.5	Ant.3	/	/	/	/	/	/	/	/	/
		15.5	Ant.7	/	/	/	/	/	/	/	/	/
		17.0	Ant.5	/	/	/	/	/	/	/	/	/
		17.0	Ant.2	/	/	/	/	/	/	/	/	/
	n 78	20.0	Ant.3	/	/	/	/	/	/	/	/	/
17.5		Ant.7	/	/	/	/	/	/	/	/	/	
20.0		Ant.5	/	/	/	/	/	/	/	/	/	
19.5		Ant.2	/	/	/	/	/	/	/	/	/	

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)				Body wron (Receiver off)				Hotspot (Receiver off+Hotspot on)		
				Standa lone	Simultaneous transmission			Stand alone	Simultaneous transmission			Simultaneous transmission		
					WWAN	WWAN	WWAN		WWAN	WWAN	WWAN	WWAN	WWAN	WWAN
					+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN		+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN	+2.4G WLAN	+5G WLAN	+2.4G+5G WLAN
EN-DC (B66+N5)	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 5	22.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	23.5	Ant.4	3.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B28+N41)	LTE B28	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B28	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
EN-DC (B66+N41)	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B66	23.5	Ant.4	3.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



	n 41	20.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
EN-DC (B2+N66)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 66	21.5	Ant.2	1.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
	LTE B2	23.5	Ant.4	3.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	21.5	Ant.2	1.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
EN-DC (B5+N66)	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	21.5	Ant.2	1.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
	LTE B5	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	21.5	Ant.2	1.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	19.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B2+N77)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	17.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B2	23.5	Ant.4	3.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	15.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	17.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	17.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B5+N77)	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B5	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	15.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B12+N77)	LTE B12	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B12	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	15.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B12	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B12	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B66+N77)	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	17.5	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B66	25.0	Ant.2	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	15.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 77	17.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



	LTE B66	23.5	Ant.4	3.5	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B2+N78)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 78	20.0	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B2	23.5	Ant.4	3.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	17.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 78	20.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 78	19.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B7+N78)	LTE B7	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
	n 78	20.0	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B7	24.0	Ant.4	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	17.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B7	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
	n 78	20.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B7	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
	n 78	19.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B28+N78)	LTE B28	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	LTE B28	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	17.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	19.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Mode	Band	Full power (Tune up)	Antenna	Product Specific						Product Specific					
				(Receiver off+Sensor on)						(Receiver off+Sensor off)					
				Stand alone	Simultaneous transmission			Stand alone	Simultaneous transmission						
					WWAN +2.4G	WWAN +5G	WWAN +2.4G+5G		WWAN +2.4G	WWAN +5G	WWAN +2.4G+5G				
			WLAN			WLAN			WLAN						
EN-DC (B66+N5)	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/	/	/	/	
	n 5	24.0	Ant.0	/	/	/	/	/	/	/	/	/	/	/	
	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/	/	/	/	
	n 5	22.0	Ant.6	/	/	/	/	/	/	/	/	/	/	/	
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	n 5	24.0	Ant.0	/	/	/	/	/	/	/	/	/	/	/	
	LTE B66	23.5	Ant.4	/	/	/	/	/	/	/	/	/	/	/	
	n 5	24.0	Ant.0	/	/	/	/	/	/	/	/	/	/	/	
EN-DC (B28+N41)	LTE B28	25.0	Ant.0	/	/	/	/	/	/	/	/	/	/	/	
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/	/	/	/	



	LTE B28	23.0	Ant.6	/	/	/	/	/	/	/	/
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/
EN-DC (B66+N41)	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B66	23.5	Ant.4	/	/	/	/	/	/	/	/
	n 41	20.5	Ant.3	/	/	/	/	/	/	/	/
EN-DC (B2+N66)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	21.5	Ant.2	/	/	/	/	/	/	/	/
	LTE B2	23.5	Ant.4	/	/	/	/	/	/	/	/
	n 66	21.5	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B5+N66)	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 66	21.5	Ant.2	/	/	/	/	/	/	/	/
	LTE B5	23.0	Ant.6	/	/	/	/	/	/	/	/
	n 66	21.5	Ant.2	/	/	/	/	/	/	/	/
	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 66	19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 66	19.0	Ant.4	/	/	/	/	/	/	/	/
EN-DC (B2+N77)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B2	23.5	Ant.4	/	/	/	/	/	/	/	/
	n 77	15.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B5+N77)	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 77	17.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B5	23.0	Ant.6	/	/	/	/	/	/	/	/
	n 77	15.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 77	17.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B5	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 77	17.0	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B12+N77)	LTE B12	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 77	17.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B12	23.0	Ant.6	/	/	/	/	/	/	/	/
	n 77	15.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B12	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 77	17.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B12	25.0	Ant.0	/	/	/	/	/	/	/	/



	n 77	17.0	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B66+N77)	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/
	n 77	17.5	Ant.3	/	/	/	/	/	/	/	/
	LTE B66	25.0	Ant.2	/	/	/	/	/	/	/	/
	n 77	15.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B66	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 77	17.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B66	23.5	Ant.4	/	/	/	/	/	/	/	/
	n 77	17.0	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B2+N78)	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.3	/	/	/	/	/	/	/	/
	LTE B2	23.5	Ant.4	/	/	/	/	/	/	/	/
	n 78	17.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B2	25.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78	19.5	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B7+N78)	LTE B7	25.0	Ant.1	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.3	/	/	/	/	/	/	/	/
	LTE B7	24.0	Ant.4	/	/	/	/	/	/	/	/
	n 78	17.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B7	25.0	Ant.1	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0
	n 78	20.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B7	25.0	Ant.1	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0
	n 78	19.5	Ant.2	/	/	/	/	/	/	/	/
EN-DC (B28+N78)	LTE B28	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 78	20.0	Ant.3	/	/	/	/	/	/	/	/
	LTE B28	23.0	Ant.6	/	/	/	/	/	/	/	/
	n 78	17.5	Ant.7	/	/	/	/	/	/	/	/
	LTE B28	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 78	20.0	Ant.5	/	/	/	/	/	/	/	/
	LTE B28	25.0	Ant.0	/	/	/	/	/	/	/	/
	n 78	19.5	Ant.2	/	/	/	/	/	/	/	/



WLAN

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)			Body worn/Product Specific (Receiver off)			Hotspot (Receiver off+Hotspot on)	
				Standalone	Simultaneous transmission		Standalone	Simultaneous transmission		Simultaneous transmission	
					WWAN+ 2.4/5G WLAN	WWAN+ 2.4+5G WLAN		WWAN+ 2.4/5G WLAN	WWAN+ 2.4+5G WLAN	WWAN+ 2.4/5G WLAN	WWAN+ 2.4+5G WLAN
2.4G	802.11b CH1-11	20.0	Ant.7	2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11g CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT20 CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT40 CH3-9	18.5		2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11ax20 CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11ax20 CH3-9	18.5		2.0	2.0	2.0	0.0	0.0	0.0	3.0	3.0
	802.11b CH1-11	20.0	Ant.9	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11g CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH3-9	18.5		2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH1-11	20.0		2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH3-9	18.5		2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
	802.11b CH1-11	23.5	Ant.7+9 (MIMO)	5.0	5.0	5.0	0.0	0.0	0.0	4.0	4.0
	802.11g CH1-11	23.5		5.0	5.0	5.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT20 CH1-11	23.5		5.0	5.0	5.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT40 CH3-9	21.0		5.0	5.0	5.0	0.0	0.0	0.0	4.0	4.0
802.11ax20 CH1-11	22.0	5.0		5.0	5.0	0.0	0.0	0.0	4.0	4.0	
802.11ax20 CH3-9	21.0	5.0		5.0	5.0	0.0	0.0	0.0	4.0	4.0	
5G U-NII-1	802.11a CH36-48	19.5	Ant.8	4.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT20 CH36-48	19.5		4.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT40 CH38-46	18.5		4.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT20 CH36-48	19.5		4.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT40 CH38-46	18.5		4.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT80 CH42	17.5		4.0	7.0	7.0	0.0	0.0	0.0	4.0	4.0
	802.11ax20 CH36-48	19.5		4.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11ax40 CH38-46	18.5		4.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11ax80 CH42	18.0		4.0	7.5	7.5	0.0	0.0	0.0	4.0	4.0
	802.11a CH36-48	19.5	Ant.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH36-48	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH38-46	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH36-48	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH38-46	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH42	17.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH36-48	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802.11ax40 CH38-46	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		



	802.11ax80 CH42	18.0	Ant.8+9 (MIMO)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11a CH36-48	22.5		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT20 CH36-48	22.5		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT40 CH38-46	21.0		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT20 CH36-48	22.5		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT40 CH38-46	21.0		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT80 CH42	20.0		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11ax20 CH36-48	22.5		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11ax40 CH38-46	21.0		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
	802.11ax80 CH42	21.0		6.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
5G U-NII-2A	802.11a CH52-64	19.5	Ant.8	5.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT20 CH52-64	19.5		5.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11nHT40 CH54-62	18.5		5.0	7.0	7.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT20 CH52-64	19.5		5.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT40 CH54-62	18.5		5.0	7.0	7.0	0.0	0.0	0.0	4.0	4.0
	802.11acVHT80 CH58	17.5		5.0	6.0	6.0	0.0	0.0	0.0	4.0	4.0
	802.11ax20 CH52-64	19.5		5.0	8.0	8.0	0.0	0.0	0.0	4.0	4.0
	802.11ax40 CH54-62	18.5		5.0	7.0	7.0	0.0	0.0	0.0	4.0	4.0
	802.11ax80 CH58	18.0		5.0	6.5	6.5	0.0	0.0	0.0	4.0	4.0
	802.11a CH52-64	19.5		Ant.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH52-64	19.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH54-62	18.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH52-64	19.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH54-62	18.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH58	17.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH52-64	19.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH54-62	18.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax80 CH58	18.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11a CH52-64	22.5	Ant.8+9 (MIMO)		5.0	9.0	9.0	0.0	0.0	0.0	4.0
	802.11nHT20 CH52-64	22.5		5.0	9.0	9.0	0.0	0.0	0.0	4.0	4.0
802.11nHT40 CH54-62	21.0	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11acVHT20 CH52-64	22.5	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11acVHT40 CH54-62	21.0	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11acVHT80 CH58	20.0	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11ax20 CH52-64	22.5	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11ax40 CH54-62	21.0	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
802.11ax80 CH58	21.0	5.0		9.0	9.0	0.0	0.0	0.0	4.0	4.0	
5G U-NII-2C	802.11a CH100-144	19.5		Ant.8	1.0	5.0	5.0	0.0	0.0	0.0	3.0
	802.11nHT20 CH100-144	19.5	1.0		5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT40 CH102-142	18.5	1.0		5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT20 CH100-144	19.5	1.0		5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT40 CH102-142	18.5	1.0		5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT80 CH106-138	17.5	1.0		5.0	5.0	0.0	0.0	0.0	3.0	3.0



	802.11x20 CH100-144	19.5		1.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11ax40 CH102-142	18.5		1.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11ax80 CH106-138	18.0		1.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11a CH100-144	19.5	Ant.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH100-144	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH102-142	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH100-144	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH102-142	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH106-138	17.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11x20 CH100-144	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH102-142	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax80 CH106-138	18.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11a CH100-144	22.5	Ant.8+9 (MIMO)	3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH100-144	22.5		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH102-142	21.0		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH100-144	22.5		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH102-142	21.0		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH106-138	20.0		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11x20 CH100-144	22.5		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH102-142	21.0		3.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
802.11ax80 CH106-138	20.0	3.0		6.0	6.0	0.0	0.0	0.0	0.0	0.0	
5G U-NII-3	802.11a CH149-165	19.5	Ant.8	0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT20 CH149-165	19.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT40 CH151-159	18.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT20 CH149-165	19.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT40 CH151-159	18.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT80 CH155	17.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11ax20 CH149-165	19.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11ax40 CH151-159	18.5		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11ax80 CH155	18.0		0.0	5.0	5.0	0.0	0.0	0.0	3.0	3.0
	802.11a CH149-165	19.5	Ant.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH149-165	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH151-159	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH149-165	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH151-159	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH155	17.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH149-165	19.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH151-159	18.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax80 CH155	18.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11a CH149-165	22.5	Ant.8+9 (MIMO)	3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
	802.11nHT20 CH149-165	22.5		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
802.11nHT40 CH151-159	21.0	3.0		6.0	6.0	0.0	0.0	0.0	3.0	3.0	
802.11acVHT20 CH149-165	22.5	3.0		6.0	6.0	0.0	0.0	0.0	3.0	3.0	

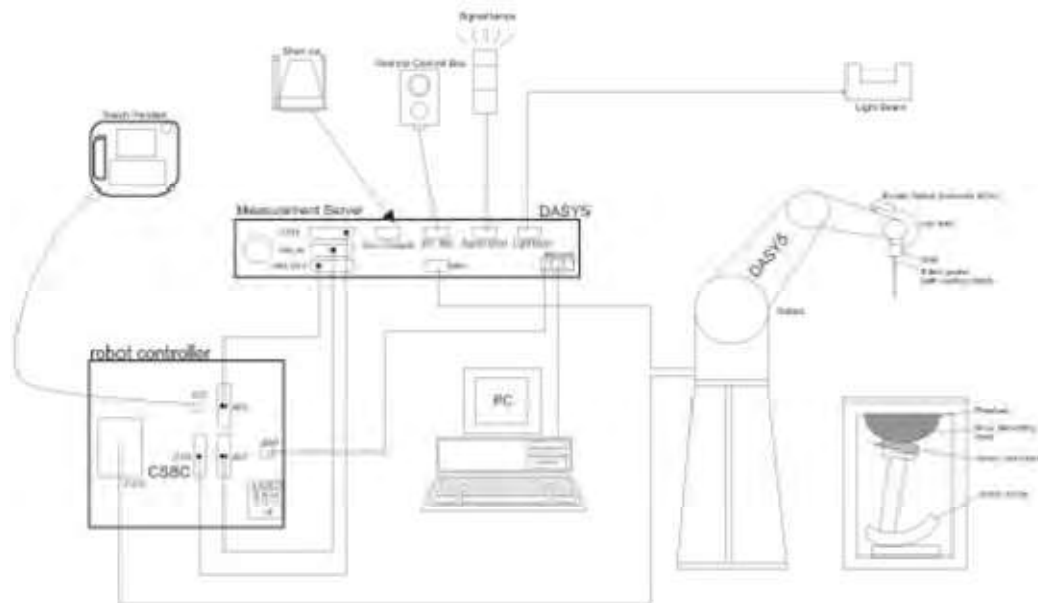


	802.11acVHT40 CH151-159	21.0		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
	802.11acVHT80 CH155	20.0		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
	802.11ax20 CH149-165	22.5		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
	802.11ax40 CH151-159	21.0		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0
	802.11ax80 CH155	20.0		3.0	6.0	6.0	0.0	0.0	0.0	3.0	3.0

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

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



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

6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.



E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than ± 0.25 dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR=C\Delta T/\Delta t$$

Where: Δt = Exposure time (30 seconds),
 C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.

Or

$$SAR=IEI^2\sigma/\rho$$

Where: σ = Simulated tissue conductivity,
 ρ = Tissue density (kg/m³).

6.3 SAR Measurement Procedure

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.

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 D01 SAR measurement 100 MHz to 6 GHz.

	≤3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: ΔxArea, ΔyArea	≤ 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.	

Zoom Scan

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

Zoom scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

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

Volume Scan Procedures

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

Power Drift Monitoring

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



7 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Last Cal.	Cal. Due Date
Network analyzer	Agilent	E5071B	MY42404014	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Dielectric Probe Kit	Agilent	85070E	US44020115	/	/
Power meter	R&S	NRP R&S	102186	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Power sensor	R&S	NRP18S	101954	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Signal Generator	R&S	SBM100A	102594	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Dual directional coupler	UCL	UCL-DDC0 56G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060 G01	13030502	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Wireless communication tester	Anritsu	MT8820C	6201342015	2021-12-12	2022-12-11
Wireless communication tester	Key sight	E5515C	MY48360988	2021-12-12	2022-12-11
Wireless communication tester	Anritsu	MT8000A	6261844783	2021-06-04	2022-06-03
Wireless communication tester	Starpoint	SP9500	20440	2021-12-12	2022-12-11
Wideband radio communication tester	R&S	CMW 500	113645	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
E-field Probe	SPEAG	EX3DV4	7543	2021-12-28	2022-12-27
DAE	SPEAG	DAE4	1291	2022-03-24	2023-03-23
Validation Kit 750MHz	SPEAG	D750V3	1045	2020-08-28	2023-08-27
Validation Kit 835MHz	SPEAG	D835V2	4d020	2020-08-28	2023-08-27
Validation Kit 1750MHz	SPEAG	D1750V2	1033	2020-02-25	2023-02-24
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	2020-08-27	2023-08-26
Validation Kit 2300MHz	SPEAG	D2300V2	1110	2020-09-28	2023-09-27



Validation Kit 2450MHz	SPEAG	D2450V2	786	2020-08-27	2023-08-26
Validation Kit 2600MHz	SPEAG	D2600V2	1025	2021-04-23	2024-04-22
Validation Kit 3500MHz	SPEAG	D3500V2	1083	2019-08-20	2022-08-19
Validation Kit 3700MHz	SPEAG	D3700V2	1048	2019-08-20	2022-08-19
Validation Kit 3900MHz	SPEAG	D3900V2	1027	2019-09-20	2022-09-19
Validation Kit 5GHz	SPEAG	D5GHzV2	1151	2020-02-27	2023-02-26
Temperature Probe	Tianjin jinming	JM222	381	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
Software for Tissue	Agilent	85070	/	/	/
SAR Lab 1					
Twin SAM Phantom	SPEAG	SAM2	1666	/	/
Hygrothermograph	Anymetr	HTC - 1	TY2020A003	2021-05-15	2022-05-14
				2022-05-14	2023-05-13
TX90 XL	SPEAG	Staubli TX90 XL	/	/	/
Software for Test	SPEAG	DASY52	52.10.4.1527	/	/

8 Tissue Dielectric Parameter Measurements & System Verification

8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ 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 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

Target values

Frequency (MHz)	ϵ_r	$\sigma(\text{s/m})$
750	41.9	0.89
835	41.5	0.90
1750	40.1	1.37
1900	40.0	1.40
2300	39.5	1.67
2450	39.2	1.80
2600	39.0	1.96
3400	37.4	2.81
3500	37.9	2.91
3700	37.7	3.12
3900	37.5	3.32
5250	35.9	4.71
5600	35.5	5.07
5750	35.4	5.22

Measurements results

Frequency (MHz)	Test Date	Temp $^\circ\text{C}$	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within $\pm 5\%$)	
			ϵ_r	$\sigma(\text{s/m})$	ϵ_r	$\sigma(\text{s/m})$	Dev $\epsilon_r(\%)$	Dev $\sigma(\%)$
750	2022/4/19	21.5	42.3	0.88	41.9	0.89	0.95	-1.12
	2022/4/23	21.5	42.0	0.87	41.9	0.89	0.24	-2.25
	2022/4/29	21.5	41.8	0.89	41.9	0.89	-0.24	0.00
835	2022/4/19	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	2022/4/20	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
	2022/4/30	21.5	41.4	0.92	41.5	0.90	-0.24	2.22
1750	2022/4/18	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
	2022/4/22	21.5	40.1	1.34	40.1	1.37	0.00	-2.19

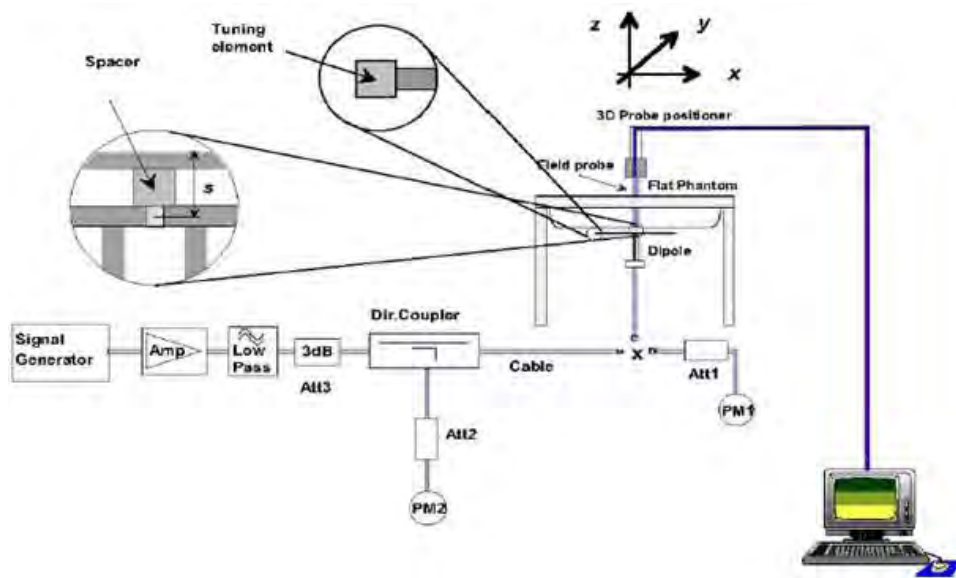


	2022/4/24	21.5	40.2	1.36	40.1	1.37	0.25	-0.73
	2022/5/10	21.5	39.3	1.37	40.1	1.37	-2.00	0.00
	2022/5/11	21.5	40.2	1.36	40.1	1.37	0.25	-0.73
	2022/5/23	21.5	40.0	1.33	40.1	1.37	-0.25	-2.92
	2022/5/24	21.5	40.2	1.35	40.1	1.37	0.25	-1.46
1900	2022/4/17	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	2022/4/25	21.5	40.2	1.43	40.0	1.40	0.50	2.14
	2022/5/5	21.5	40.0	1.40	40.0	1.40	0.00	0.00
	2022/5/22	21.5	40.5	1.34	40.0	1.40	1.25	-4.29
2300	2022/6/1	21.5	40.0	1.65	39.5	1.67	1.27	-1.20
	2022/6/2	21.5	40.0	1.64	39.5	1.67	1.27	-1.80
2450	2022/5/15	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2022/4/16	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/5/6	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/5/8	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	2022/5/9	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
	2022/5/25	21.5	38.5	1.95	39.0	1.96	-1.28	-0.51
	2022/5/27	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/5/30	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
	2022/5/31	21.5	39.0	1.98	39.0	1.96	0.00	1.02
3500	2022/4/26	21.5	37.6	2.83	37.9	2.91	-0.79	-2.75
	2022/4/27	21.5	37.9	2.85	37.9	2.91	0.00	-2.06
	2022/4/28	21.5	37.8	2.90	37.9	2.91	-0.26	-0.34
	2022/5/2	21.5	37.9	2.89	37.9	2.91	0.00	-0.69
3700	2022/4/28	21.5	38.0	3.01	37.7	3.12	0.80	-3.53
3900	2022/5/14	21.5	37.9	3.42	37.5	3.32	1.07	3.01
5250	2022/5/19	21.5	36.2	4.77	35.9	4.71	0.84	1.27
	2022/5/20	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
	2022/5/21	21.5	35.7	4.74	35.9	4.71	-0.56	0.64
	2022/5/26	21.5	35.3	4.88	35.9	4.71	-1.67	3.61
5600	2022/5/21	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
	2022/5/22	21.5	34.4	5.17	35.5	5.07	-3.10	1.97
5750	2022/5/16	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19
	2022/5/18	21.5	35.6	5.14	35.4	5.22	0.56	-1.53
Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.								

8.2 System Performance Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Performance Check setup



Picture 2 Setup Photo

**Justification for Extended SAR Dipole Calibrations**

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (< -20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

Dipole		Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$
Dipole D750V3 SN: 1045	Head	8/28/2020	-26.6	/	54.3	/
	Liquid	8/27/2021	-26.2	-1.5	53.9	-0.4
Dipole D835V2 SN: 4d020	Head	8/28/2020	-26.2	/	54.8	/
	Liquid	8/27/2021	-26.5	1.1	55.2	0.4
Dipole D1750V2 SN: 1033	Head	2/25/2020	-38.3	/	48.8	/
		2/24/2021	-40.0	4.4	49.9	1.1
		2/23/2022	-40.6	1.5	51.1	1.2
Dipole D1900V2 SN: 5d060	Head	8/27/2020	-23.3	/	52.5	/
	Liquid	8/26/2021	-23.0	-1.3	51.9	-0.6
Dipole D2450V2 SN: 786	Head	8/27/2020	-26.9	/	54.5	/
	Liquid	8/26/2021	-27.1	0.7	53.8	-0.7
Dipole D3500V2 SN: 1083 (3500MHz)	Head	9/20/2019	-31.4	/	52.3	/
		9/19/2020	-31.1	-1.0	52.2	-0.1
		9/18/2021	-31.0	-0.3	51.9	-0.3
Dipole D3700V2 SN: 1048	Head	9/20/2019	-24.1	/	44.7	/
		9/19/2020	-23.7	-1.7	44.4	-0.3
		9/18/2021	-23.8	0.4	44.3	-0.1
Dipole D3900V2 SN: 1027 (3900MHz)	Head	9/20/2019	-24.2	/	48.0	/
		9/19/2020	-24.4	0.8	47.8	-0.2
		9/18/2021	-23.7	-2.9	47.7	-0.1
Dipole D5GHzV2 SN: 1151 (5250MHz)	Head	2/27/2020	-23.4	/	52.4	/
		2/26/2021	-23.8	1.7	50.0	-2.4
		2/25/2022	-23.9	0.4	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5600MHz)	Head	2/27/2020	-22.6	/	52.4	/
		2/26/2021	-21.5	-4.9	50.0	-2.4
		2/25/2022	-20.9	-2.8	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5750MHz)	Head	2/27/2020	-25.0	/	55.9	/
		2/26/2021	-26.8	-1.8	52.5	-3.4
		2/25/2022	-27.1	1.1	52.1	-0.4



System Check results

Frequency (MHz)	Test Date	Temp °C	250mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2022/4/19	21.5	2.13	8.52	8.37	1.79	1
	2022/4/23	21.5	2.10	8.40	8.37	0.36	2
	2022/4/29	21.5	2.04	8.16	8.37	-2.51	3
835	2022/4/19	21.5	2.44	9.76	9.65	1.14	4
	2022/4/20	21.5	2.46	9.84	9.65	1.97	5
	2022/4/30	21.5	2.43	9.72	9.65	0.73	6
1750	2022/4/18	21.5	8.95	35.80	35.90	-0.28	7
	2022/4/22	21.5	9.11	36.44	35.90	1.50	8
	2022/4/24	21.5	8.96	35.84	35.90	-0.17	9
	2022/5/10	21.5	8.99	35.96	35.90	0.17	10
	2022/5/11	21.5	8.92	35.68	35.90	-0.61	11
	2022/5/23	21.5	9.03	36.12	35.90	0.61	12
	2022/5/24	21.5	9.43	37.72	35.90	5.07	13
1900	2022/4/17	21.5	9.88	39.52	39.50	0.05	14
	2022/4/25	21.5	9.85	39.40	39.50	-0.25	15
	2022/5/5	21.5	10.55	42.20	39.50	6.84	16
	2022/5/22	21.5	10.50	42.00	39.50	6.33	17
2300	2022/6/1	21.5	12.60	50.40	47.70	5.66	18
	2022/6/2	21.5	12.60	50.40	47.70	5.66	19
2450	2022/5/15	21.5	13.70	54.80	52.30	4.78	20
2600	2022/4/16	21.5	13.90	55.60	56.10	-0.89	21
	2022/5/6	21.5	13.90	55.60	56.10	-0.89	22
	2022/5/8	21.5	13.88	55.52	56.10	-1.03	23
	2022/5/9	21.5	13.94	55.76	56.10	-0.61	24
	2022/5/25	21.5	13.91	55.64	56.10	-0.82	25
	2022/5/27	21.5	13.89	55.56	56.10	-0.96	26
	2022/5/30	21.5	13.93	55.72	56.10	-0.68	27
	2022/5/31	21.5	13.85	55.40	56.10	-1.25	28
Frequency (MHz)	Test Date	Temp °C	100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
3500	2022/4/26	21.5	6.50	65.00	67.10	-3.13	29
	2022/4/27	21.5	6.53	65.30	67.10	-2.68	30
	2022/4/28	21.5	6.47	64.70	67.10	-3.58	31



	2022/5/2	21.5	6.55	65.50	67.10	-2.38	32
3700	2022/4/28	21.5	6.63	66.30	67.20	-1.34	33
3900	2022/5/14	21.5	6.83	68.30	71.50	-4.48	34
5250	2022/5/19	21.5	7.87	78.70	78.00	0.90	35
	2022/5/20	21.5	7.87	78.70	78.00	0.90	36
	2022/5/21	21.5	7.64	76.40	78.00	-2.05	37
	2022/5/26	21.5	7.83	78.30	78.00	0.38	38
5600	2022/5/21	21.5	8.17	81.70	80.50	1.49	39
	2022/5/22	21.5	8.18	81.80	80.50	1.61	40
5750	2022/5/16	21.5	7.66	76.60	77.40	-1.03	41
	2022/5/18	21.5	7.65	76.50	77.40	-1.16	42

Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.

8.3 SAR System Validation

Per FCC KDB 865664 D02v01, SAR system verification is required to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles are used with the required tissue-equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point must be validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status, measurement frequencies, SAR probes, calibrated signal type(s) and tissue dielectric parameters has been included.

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
750	12/28/2022	7543	EX3DV4	750	Head	41.9	0.89	PASS	PASS	PASS
835	12/28/2022	7543	EX3DV4	835	Head	41.5	0.90	PASS	PASS	PASS
1750	12/28/2022	7543	EX3DV4	1750	Head	40.1	1.37	PASS	PASS	PASS
1900	12/28/2022	7543	EX3DV4	1900	Head	40.0	1.40	PASS	PASS	PASS
2300	12/28/2022	7543	EX3DV4	1900	Head	39.5	1.67	PASS	PASS	PASS
2450	12/28/2022	7543	EX3DV4	2450	Head	39.2	1.80	PASS	PASS	PASS
2600	12/28/2022	7543	EX3DV4	2600	Head	39.0	1.96	PASS	PASS	PASS
3500	12/28/2022	7543	EX3DV4	3500	Head	37.9	2.91	PASS	PASS	PASS
3700	12/28/2022	7543	EX3DV4	3700	Head	37.7	3.12	PASS	PASS	PASS
3900	12/28/2022	7543	EX3DV4	3900	Head	37.5	3.32	PASS	PASS	PASS
5250	12/28/2022	7543	EX3DV4	5250	Head	35.9	4.71	PASS	PASS	PASS
5600	12/28/2022	7543	EX3DV4	5600	Head	35.5	5.07	PASS	PASS	PASS
5750	12/28/2022	7543	EX3DV4	5750	Head	35.4	5.22	PASS	PASS	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664D01v01 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5dB), such as OFDM according to KDB 865664.



9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1 GSM Mode

GSM850										
Full Power & Level1 & Level 2 & Level 3 & Level 4 & Level 5- Main Ant0		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
			MAX	128/824.2	190/836.6			251/848.8	MAX	128/824.2
GSM	CS	32.50	31.98	31.76	31.94	9.03	23.47	22.95	22.73	22.91
GPRS/EGPRS (GMSK)	1 Tx Slot	32.50	31.89	31.67	31.83	9.03	23.47	22.86	22.64	22.80
	2 Tx Slots	31.50	30.85	30.98	30.76	6.02	25.48	24.83	24.96	24.74
	3 Tx Slots	29.50	28.76	28.71	28.73	4.26	25.24	24.50	24.45	24.47
	4 Tx Slots	28.50	27.66	27.61	27.55	3.01	25.49	24.65	24.60	24.54
EGPRS (8PSK)	1 Tx Slot	27.00	26.42	26.45	26.13	9.03	17.97	17.39	17.42	17.10
	2 Tx Slots	25.00	24.08	24.12	23.92	6.02	18.98	18.06	18.10	17.90
	3 Tx Slots	23.00	22.36	22.32	22.43	4.26	18.74	18.10	18.06	18.17
	4 Tx Slots	22.00	21.42	21.31	21.12	3.01	18.99	18.41	18.30	18.11
GSM850										
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5- Div Ant6		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
			MAX	128/824.2	190/836.6			251/848.8	MAX	128/824.2
GSM	CS	31.00	30.17	29.89	30.22	9.03	21.97	21.14	20.86	21.19
GPRS/EGPRS (GMSK)	1 Tx Slot	31.00	30.11	29.91	30.12	9.03	21.97	21.08	20.88	21.09
	2 Tx Slots	30.00	28.93	29.14	29.05	6.02	23.98	22.91	23.12	23.03
	3 Tx Slots	28.00	26.81	26.91	26.75	4.26	23.74	22.55	22.65	22.49
	4 Tx Slots	27.00	25.81	25.75	25.97	3.01	23.99	22.80	22.74	22.96
EGPRS (8PSK)	1 Tx Slot	25.50	24.55	24.75	24.47	9.03	16.47	15.52	15.72	15.44
	2 Tx Slots	23.50	22.20	22.40	22.34	6.02	17.48	16.18	16.38	16.32
	3 Tx Slots	21.50	20.55	20.68	20.65	4.26	17.24	16.29	16.42	16.39
	4 Tx Slots	20.50	19.60	19.57	19.62	3.01	17.49	16.59	16.56	16.61
PCS 1900										
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
			MAX	512/1850.2	661/1880			810/1909.8	MAX	512/1850.2
GSM	CS	30.00	29.35	29.05	29.32	9.03	20.97	20.32	20.02	20.29



GPRS/EGPRS (GMSK)	1 Tx Slot	30.00	29.36	29.20	29.30	9.03	20.97	20.33	20.17	20.27
	2 Tx Slots	28.00	27.22	26.85	26.71	6.02	21.98	21.20	20.83	20.69
	3 Tx Slots	26.00	25.38	24.94	25.30	4.26	21.74	21.12	20.68	21.04
	4 Tx Slots	25.00	24.12	24.12	24.18	3.01	21.99	21.11	21.11	21.17
EGPRS (8PSK)	1 Tx Slot	26.00	25.67	25.50	25.58	9.03	16.97	16.64	16.47	16.55
	2 Tx Slots	24.00	23.22	23.05	23.03	6.02	17.98	17.20	17.03	17.01
	3 Tx Slots	22.00	21.51	20.96	21.22	4.26	17.74	17.25	16.70	16.96
	4 Tx Slots	21.00	20.56	20.22	20.25	3.01	17.99	17.55	17.21	17.24

PCS 1900

Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5- Div Ant4	Burst-Averaged output power(dBm)					Division Factors	Frame-Averaged output power(dBm)			
	Tune-up	Channel/Frequency(MHz)			Tune-up		Channel/Frequency(MHz)			
		MAX	512/1850.2	661/1880			810/1909.8	MAX	512/1850.2	661/1880
GSM CS	29.00	27.91	27.95	27.97	9.03	19.97	18.88	18.92	18.94	
GPRS/EGPRS (GMSK)	1 Tx Slot	29.00	27.84	27.80	27.82	9.03	19.97	18.81	18.77	18.79
	2 Tx Slots	27.00	26.09	25.55	25.72	6.02	20.98	20.07	19.53	19.70
	3 Tx Slots	25.00	23.99	23.99	24.08	4.26	20.74	19.73	19.73	19.82
	4 Tx Slots	24.00	22.86	22.85	22.97	3.01	20.99	19.85	19.84	19.96
EGPRS (8PSK)	1 Tx Slot	25.00	24.30	24.22	24.11	9.03	15.97	15.27	15.19	15.08
	2 Tx Slots	23.00	22.10	21.62	21.66	6.02	16.98	16.08	15.60	15.64
	3 Tx Slots	21.00	20.30	19.86	19.91	4.26	16.74	16.04	15.60	15.65
	4 Tx Slots	20.00	19.12	19.21	19.22	3.01	16.99	16.11	16.20	16.21

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:
 1. Standalone: GSM 850 GMSK (GPRS) mode with 4 time slots for Max power, PCS 1900 GMSK (GPRS) mode with 4 time slots for Max power, based on the output power measurements above..



9.2 WCDMA Mode

The following tests were completed according to the test requirements outlined in the 3GPP TS34.121 specification.

WCDMA Band II					
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	24.00	23.87	23.89	25.00
AMR	12.2k	23.94	23.73	23.73	25.00
HSDPA	Subtest 1	22.88	23.03	23.03	24.00
	Subtest 2	22.90	22.95	22.75	24.00
	Subtest 3	22.56	22.45	22.37	23.50
	Subtest 4	22.42	22.41	22.47	23.50
HSUPA	Subtest 1	23.10	22.79	23.05	24.00
	Subtest 2	20.90	20.99	20.87	22.00
	Subtest 3	22.00	21.83	21.95	23.00
	Subtest 4	21.00	21.01	20.95	22.00
	Subtest 5	23.02	23.01	23.05	24.00
DC-HSDPA	Subtest 1	23.00	22.79	22.85	24.00
	Subtest 2	22.90	22.77	22.75	24.00
	Subtest 3	22.48	22.47	22.31	23.50
	Subtest 4	22.54	22.45	22.43	23.50
HSPA+	16QAM	21.66	21.63	21.47	22.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band II					
Level 5-Main Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	20.95	21.01	20.91	22.00
AMR	12.2k	20.81	20.93	20.79	22.00
HSDPA	Subtest 1	19.89	19.97	19.75	21.00
	Subtest 2	20.11	19.93	19.99	21.00
	Subtest 3	19.53	19.51	19.49	20.50
	Subtest 4	19.37	19.41	19.27	20.50
HSUPA	Subtest 1	19.89	20.15	19.85	21.00
	Subtest 2	17.97	17.89	18.01	19.00
	Subtest 3	18.83	18.99	18.97	20.00
	Subtest 4	17.89	17.93	17.81	19.00



	Subtest 5	20.03	20.01	19.95	21.00
DC-HSDPA	Subtest 1	19.83	20.17	20.01	21.00
	Subtest 2	19.85	20.15	19.97	21.00
	Subtest 3	19.61	19.65	19.33	20.50
	Subtest 4	19.43	19.39	19.49	20.50
HSPA+	16QAM	18.31	18.43	18.49	19.50
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band II					
Full Power & Level 3 & Level 4 & Level 5-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	22.72	22.63	22.62	23.50
AMR	12.2k	22.58	22.79	22.60	23.50
HSDPA	Subtest 1	21.92	21.83	21.82	22.50
	Subtest 2	21.90	21.86	21.82	22.50
	Subtest 3	21.44	21.38	21.32	22.00
	Subtest 4	21.43	21.35	21.33	22.00
HSUPA	Subtest 1	21.93	21.84	21.81	22.50
	Subtest 2	19.94	19.85	19.81	20.50
	Subtest 3	20.94	20.84	20.79	21.50
	Subtest 4	19.92	19.84	19.79	20.50
	Subtest 5	21.93	21.82	21.82	22.50
DC-HSDPA	Subtest 1	21.70	21.67	21.66	22.50
	Subtest 2	21.72	21.59	21.46	22.50
	Subtest 3	21.10	20.97	21.00	22.00
	Subtest 4	21.34	21.15	21.02	22.00
HSPA+	16QAM	20.27	20.32	20.27	21.00
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band II					
Level 1-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	20.53	20.50	20.38	21.00
AMR	12.2k	20.41	20.54	20.53	21.00
HSDPA	Subtest 1	19.51	19.46	19.41	20.00
	Subtest 2	19.45	19.44	19.55	20.00
	Subtest 3	19.13	19.06	18.91	19.50
	Subtest 4	19.13	18.96	18.99	19.50
HSUPA	Subtest 1	19.43	19.40	19.67	20.00
	Subtest 2	17.41	17.66	17.55	18.00
	Subtest 3	18.67	18.58	18.61	19.00
	Subtest 4	17.55	17.66	17.51	18.00
	Subtest 5	19.65	19.58	19.57	20.00
DC-HSDPA	Subtest 1	19.49	19.66	19.39	20.00
	Subtest 2	19.55	19.48	19.43	20.00
	Subtest 3	18.99	19.00	19.13	19.50
	Subtest 4	18.99	18.92	18.91	19.50
HSPA+	16QAM	18.13	18.10	17.89	18.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band II					
Level 2-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	18.55	18.40	18.37	19.50
AMR	12.2k	18.71	18.36	18.27	19.50
HSDPA	Subtest 1	17.57	17.52	17.31	18.50
	Subtest 2	17.45	17.42	17.53	18.50
	Subtest 3	17.05	16.92	16.87	18.00
	Subtest 4	17.09	16.86	16.79	18.00
HSUPA	Subtest 1	17.55	17.34	17.27	18.50
	Subtest 2	15.55	15.28	15.51	16.50
	Subtest 3	16.59	16.46	16.51	17.50
	Subtest 4	15.59	15.30	15.51	16.50
	Subtest 5	17.61	17.34	17.51	18.50
DC-HSDPA	Subtest 1	17.55	17.42	17.33	18.50
	Subtest 2	17.61	17.32	17.39	18.50
	Subtest 3	17.09	17.04	16.79	18.00
	Subtest 4	17.11	16.80	16.93	18.00



HSPA+	16QAM	16.15	15.74	15.89	17.00
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band IV					
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	23.72	23.82	23.81	25.00
AMR	12.2k	23.78	23.92	23.65	25.00
HSDPA	Subtest 1	22.80	22.76	22.85	24.00
	Subtest 2	22.74	22.96	22.67	24.00
	Subtest 3	22.06	22.40	22.43	23.50
	Subtest 4	22.20	22.40	22.41	23.50
HSUPA	Subtest 1	22.76	22.98	22.97	24.00
	Subtest 2	20.88	20.74	20.89	22.00
	Subtest 3	21.56	21.84	21.73	23.00
	Subtest 4	20.68	20.88	20.89	22.00
	Subtest 5	22.80	22.88	22.83	24.00
DC-HSDPA	Subtest 1	22.76	22.84	22.67	24.00
	Subtest 2	22.56	22.94	22.97	24.00
	Subtest 3	22.24	22.26	22.43	23.50
	Subtest 4	22.12	22.34	22.37	23.50
HSPA+	16QAM	21.52	21.60	21.39	22.50
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band IV					
Level 5-Main Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	19.89	20.09	19.87	21.00
AMR	12.2k	19.99	20.06	19.93	21.00
HSDPA	Subtest 1	18.75	18.92	18.95	20.00
	Subtest 2	18.99	18.90	18.95	20.00
	Subtest 3	18.27	18.40	18.51	19.50
	Subtest 4	18.49	18.56	18.47	19.50
HSUPA	Subtest 1	18.99	19.06	18.85	20.00
	Subtest 2	16.73	17.06	16.89	18.00
	Subtest 3	17.91	17.94	17.87	19.00
	Subtest 4	16.73	17.04	16.83	18.00
	Subtest 5	19.01	18.80	18.89	20.00
DC-HSDPA	Subtest 1	19.03	18.92	18.99	20.00



	Subtest 2	18.73	18.98	18.97	20.00
	Subtest 3	18.25	18.28	18.47	19.50
	Subtest 4	18.53	18.36	18.39	19.50
HSPA+	16QAM	17.31	17.60	17.21	18.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band IV					
Full Power & Level 3 & Level 4 & Level 5-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	22.66	22.69	22.68	23.50
AMR	12.2k	22.72	22.55	22.58	23.50
HSDPA	Subtest 1	21.76	21.77	21.76	22.50
	Subtest 2	21.78	21.73	21.54	22.50
	Subtest 3	21.06	21.35	21.02	22.00
	Subtest 4	21.06	21.31	21.04	22.00
HSUPA	Subtest 1	21.68	21.75	21.68	22.50
	Subtest 2	19.58	19.81	19.68	20.50
	Subtest 3	20.80	20.63	20.70	21.50
	Subtest 4	19.70	19.85	19.62	20.50
	Subtest 5	21.68	21.73	21.60	22.50
DC-HSDPA	Subtest 1	21.58	21.59	21.58	22.50
	Subtest 2	21.60	21.57	21.82	22.50
	Subtest 3	21.12	21.07	21.28	22.00
	Subtest 4	21.28	21.35	21.02	22.00
HSPA+	16QAM	20.52	20.33	20.28	21.00

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band IV					
Level 1-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	20.96	21.12	21.10	21.50
AMR	12.2k	21.00	21.04	21.02	21.50
HSDPA	Subtest 1	20.12	20.12	20.26	20.50
	Subtest 2	20.08	20.08	20.02	20.50
	Subtest 3	19.50	19.78	19.52	20.00
	Subtest 4	19.38	19.64	19.54	20.00
HSUPA	Subtest 1	19.94	20.04	20.16	20.50
	Subtest 2	17.88	18.22	18.18	18.50
	Subtest 3	19.04	19.00	19.22	19.50



	Subtest 4	17.94	18.00	18.24	18.50
	Subtest 5	19.92	19.98	20.20	20.50
DC-HSDPA	Subtest 1	20.00	20.10	20.00	20.50
	Subtest 2	20.12	19.98	20.12	20.50
	Subtest 3	19.48	19.52	19.54	20.00
	Subtest 4	19.32	19.66	19.62	20.00
HSPA+	16QAM	18.44	18.54	18.46	19.00
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band IV					
Level 2-Div Ant4		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	18.63	18.72	18.62	19.50
AMR	12.2k	18.77	18.64	18.64	19.50
HSDPA	Subtest 1	17.61	17.70	17.78	18.50
	Subtest 2	17.71	17.78	17.72	18.50
	Subtest 3	17.03	17.20	17.12	18.00
	Subtest 4	17.17	17.36	17.28	18.00
HSUPA	Subtest 1	17.59	17.76	17.76	18.50
	Subtest 2	15.57	15.82	15.78	16.50
	Subtest 3	16.67	16.86	16.74	17.50
	Subtest 4	15.55	15.64	15.60	16.50
	Subtest 5	17.67	17.58	17.72	18.50
DC-HSDPA	Subtest 1	17.49	17.78	17.68	18.50
	Subtest 2	17.63	17.58	17.64	18.50
	Subtest 3	17.25	17.32	17.02	18.00
	Subtest 4	17.13	17.32	17.16	18.00
HSPA+	16QAM	16.25	16.20	15.96	17.00
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".					

WCDMA Band V					
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	24.02	24.05	23.92	25.00
AMR	12.2k	24.12	24.17	24.02	25.00
HSDPA	Subtest 1	22.92	22.99	23.00	24.00
	Subtest 2	23.10	23.11	23.04	24.00
	Subtest 3	22.58	22.49	22.52	23.50
	Subtest 4	22.54	22.47	22.48	23.50



HSUPA	Subtest 1	22.88	23.05	23.08	24.00
	Subtest 2	21.14	21.01	21.00	22.00
	Subtest 3	21.90	22.15	22.00	23.00
	Subtest 4	21.12	21.07	20.78	22.00
	Subtest 5	22.96	23.17	23.04	24.00
DC-HSDPA	Subtest 1	23.02	22.91	22.98	24.00
	Subtest 2	23.04	22.91	22.78	24.00
	Subtest 3	22.52	22.71	22.56	23.50
	Subtest 4	22.68	22.65	22.26	23.50
HSPA+	16QAM	21.78	21.77	21.62	22.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band V					
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	22.27	22.25	22.25	23.00
AMR	12.2k	22.25	22.09	22.15	23.00
HSDPA	Subtest 1	21.11	21.13	21.11	22.00
	Subtest 2	21.23	21.33	21.33	22.00
	Subtest 3	20.67	20.75	20.69	21.50
	Subtest 4	20.61	20.89	20.73	21.50
HSUPA	Subtest 1	21.21	21.21	21.09	22.00
	Subtest 2	19.29	19.27	19.41	20.00
	Subtest 3	20.21	20.41	20.41	21.00
	Subtest 4	19.25	19.25	19.37	20.00
	Subtest 5	21.31	21.21	21.41	22.00
DC-HSDPA	Subtest 1	21.37	21.29	21.39	22.00
	Subtest 2	21.33	21.19	21.31	22.00
	Subtest 3	20.63	20.71	20.81	21.50
	Subtest 4	20.73	20.91	20.67	21.50
HSPA+	16QAM	19.78	19.76	19.80	20.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

9.3 LTE Mode

9.3.1 LTE Single Carrier

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

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

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

LTE Band2							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	23.90	24.00	23.97	25.00
		1	2	24.05	24.15	24.14	25.00
		1	5	24.35	24.12	24.20	25.00
		3	0	24.21	24.19	23.97	25.00
		3	2	24.30	24.27	24.22	25.00
		3	3	24.33	24.28	24.24	25.00
		6	0	23.36	23.24	23.31	24.00
	16QAM	1	0	23.34	23.28	23.31	24.00
		1	2	23.48	23.44	23.44	24.00
		1	5	23.61	23.46	23.51	24.00
		3	0	23.22	23.09	23.11	24.00
		3	2	23.37	23.21	23.25	24.00
		3	3	23.39	23.28	23.29	24.00
		6	0	22.38	22.28	22.33	23.00
	64QAM	1	0	22.42	22.22	22.29	23.00
		1	2	22.52	22.51	22.40	23.00
		1	5	22.56	22.44	22.44	23.00
		3	0	22.29	22.18	22.20	23.00
		3	2	22.40	22.24	22.28	23.00
		3	3	22.44	22.33	22.34	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
				6	0	21.43	
3MHz	QPSK	1	0	23.92	24.04	24.00	25.00
		1	7	24.03	24.18	24.18	25.00
		1	14	24.38	24.17	24.24	25.00
		8	0	23.31	23.31	23.10	24.00
		8	4	23.42	23.37	23.34	24.00
		8	7	23.43	23.39	23.34	24.00
		15	0	23.36	23.28	23.34	24.00
	16QAM	1	0	23.34	23.30	23.34	24.00
		1	7	23.48	23.44	23.48	24.00
		1	14	23.63	23.50	23.54	24.00
		8	0	22.33	22.22	22.23	23.00
		8	4	22.48	22.34	22.37	23.00
		8	7	22.49	22.40	22.42	23.00
		15	0	22.41	22.32	22.36	23.00
	64QAM	1	0	22.45	22.24	22.32	23.00
		1	7	22.55	22.51	22.42	23.00
		1	14	22.58	22.43	22.47	23.00
		8	0	21.40	21.31	21.32	22.00
		8	4	21.51	21.37	21.40	22.00
		8	7	21.54	21.45	21.47	22.00
		15	0	21.46	21.36	21.40	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
				5MHz	QPSK	1	
5MHz	QPSK	1	13	24.01	24.14	24.15	25.00
		1	24	24.35	24.12	24.20	25.00
		12	0	23.28	23.26	23.06	24.00
		12	6	23.40	23.33	23.29	24.00
		12	13	23.41	23.37	23.30	24.00
		25	0	23.36	23.27	23.32	24.00
		16QAM	1	0	23.34	23.26	23.31
	1		13	23.48	23.42	23.45	24.00
	1		24	23.60	23.48	23.50	24.00
	12		0	22.31	22.18	22.20	23.00
	12		6	22.45	22.29	22.33	23.00
	12		13	22.46	22.35	22.38	23.00
	25		0	22.39	22.28	22.31	23.00
	64QAM	1	0	22.42	22.24	22.29	23.00
		1	13	22.52	22.53	22.39	23.00
		1	24	22.59	22.41	22.43	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18650/1855	18900/1880	19150/1905		
		12	0	21.38	21.27	21.33	22.00	
		12	6	21.48	21.32	21.36	22.00	
		12	13	21.51	21.40	21.43	22.00	
		25	0	21.44	21.32	21.35	22.00	
10MHz	QPSK	1	0	23.91	24.03	23.99	25.00	
		1	25	24.04	24.19	24.19	25.00	
10MHz	QPSK	1	49	24.37	24.16	24.23	25.00	
		25	0	23.31	23.31	23.10	24.00	
		25	13	23.43	23.38	23.33	24.00	
		25	25	23.43	23.41	23.35	24.00	
		50	0	23.40	23.29	23.36	24.00	
		16QAM	1	0	23.38	23.29	23.33	24.00
	1		25	23.52	23.46	23.48	24.00	
	1		49	23.63	23.50	23.53	24.00	
	25		0	22.34	22.23	22.24	23.00	
	25		13	22.47	22.33	22.36	23.00	
	25		25	22.49	22.40	22.42	23.00	
	64QAM	50	0	22.42	22.33	22.35	23.00	
		1	0	22.44	22.23	22.31	23.00	
		1	25	22.55	22.53	22.42	23.00	
		1	49	22.58	22.43	22.46	23.00	
		25	0	21.41	21.32	21.33	22.00	
		25	13	21.50	21.36	21.39	22.00	
	15MHz <td rowspan="2">QPSK <td>25</td> <td>25</td> <td>21.54</td> <td>21.45</td> <td>21.47</td> <td>22.00</td> </td>	QPSK <td>25</td> <td>25</td> <td>21.54</td> <td>21.45</td> <td>21.47</td> <td>22.00</td>	25	25	21.54	21.45	21.47	22.00
			50	0	21.47	21.37	21.39	22.00
	15MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18675/1857.5	18900/1880	19125/1902.5	
	15MHz	QPSK	1	0	23.90	23.99	23.97	25.00
			1	38	24.02	24.18	24.16	25.00
			1	74	24.34	24.11	24.19	25.00
36			0	23.29	23.27	23.07	24.00	
36			18	23.40	23.33	23.29	24.00	
36			39	23.40	23.38	23.31	24.00	
75			0	23.38	23.25	23.31	24.00	
16QAM		1	0	23.36	23.27	23.31	24.00	
		1	38	23.50	23.43	23.46	24.00	
		1	74	23.61	23.46	23.50	24.00	
		36	0	22.31	22.21	22.21	23.00	
		36	18	22.44	22.28	22.32	23.00	
		36	39	22.47	22.36	22.39	23.00	
		75	0	22.39	22.28	22.31	23.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	64QAM	1	0	22.39	22.21	22.29	23.00
		1	38	22.53	22.50	22.40	23.00
		1	74	22.59	22.42	22.47	23.00
		36	0	21.40	21.34	21.34	22.00
		36	18	21.48	21.33	21.38	22.00
		36	39	21.52	21.41	21.44	22.00
		75	0	21.44	21.32	21.35	22.00
20MHz	QPSK	1	0	23.87	23.95	23.94	25.00
		1	50	24.01	24.14	24.14	25.00
		1	99	24.32	24.10	24.16	25.00
		50	0	23.26	23.22	23.03	24.00
		50	25	23.38	23.29	23.26	24.00
		50	50	23.37	23.33	23.27	24.00
		100	0	23.35	23.20	23.27	24.00
	16QAM	1	0	23.33	23.23	23.26	24.00
		1	50	23.47	23.41	23.42	24.00
		1	99	23.58	23.43	23.48	24.00
		50	0	22.28	22.17	22.18	23.00
		50	25	22.41	22.26	22.29	23.00
		50	50	22.44	22.31	22.35	23.00
		100	0	22.37	22.24	22.28	23.00
	64QAM	1	0	22.37	22.17	22.24	23.00
		1	50	22.49	22.48	22.36	23.00
		1	99	22.53	22.36	22.41	23.00
		50	0	21.35	21.26	21.27	22.00
		50	25	21.44	21.29	21.32	22.00
		50	50	21.49	21.36	21.40	22.00
		100	0	21.42	21.28	21.32	22.00

LTE Band2							
Level 5-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	21.13	20.97	21.01	22.00
		1	2	21.06	20.92	20.94	22.00
		1	5	20.98	20.96	20.99	22.00
		3	0	21.22	21.09	20.95	22.00
		3	2	21.10	21.09	21.10	22.00
		3	3	21.07	21.08	21.05	22.00
		6	0	20.16	20.14	20.10	21.00
	16QAM	1	0	20.53	20.51	20.62	21.00



		1	2	20.29	20.27	20.35	21.00
		1	5	20.14	20.10	20.21	21.00
		3	0	20.08	19.99	20.14	21.00
		3	2	20.20	20.13	20.27	21.00
		3	3	20.44	20.37	20.51	21.00
		6	0	19.25	19.22	19.38	20.50
	64QAM	1	0	20.01	19.96	20.08	20.50
		1	2	19.96	19.93	20.03	20.50
		1	5	19.80	19.80	19.85	20.50
		3	0	20.00	19.91	20.05	20.50
		3	2	20.01	19.94	20.08	20.50
		3	3	19.99	19.94	20.05	20.50
			6	0	18.98	18.95	19.09
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	21.15	21.01	21.04	22.00
		1	7	21.04	20.95	20.98	22.00
		1	14	21.01	21.01	21.03	22.00
		8	0	20.32	20.21	20.08	21.00
		8	4	20.22	20.19	20.22	21.00
		8	7	20.17	20.19	20.15	21.00
		15	0	20.16	20.18	20.13	21.00
	16QAM	1	0	20.53	20.53	20.65	21.00
		1	7	20.29	20.27	20.39	21.00
		1	14	20.16	20.14	20.24	21.00
		8	0	19.19	19.12	19.26	20.50
		8	4	19.31	19.26	19.39	20.50
		8	7	19.54	19.49	19.64	20.50
		15	0	19.28	19.26	19.41	20.50
	64QAM	1	0	20.04	19.98	20.11	20.50
		1	7	19.99	19.93	20.05	20.50
		1	14	19.82	19.79	19.88	20.50
		8	0	19.11	19.04	19.17	19.50
		8	4	19.12	19.07	19.20	19.50
		8	7	19.09	19.06	19.18	19.50
		15	0	19.01	18.99	19.12	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	21.12	20.99	21.00	22.00
		1	13	21.02	20.91	20.95	22.00
		1	24	20.98	20.96	20.99	22.00
		12	0	20.29	20.16	20.04	21.00
		12	6	20.20	20.15	20.17	21.00



		12	13	20.15	20.17	20.11	21.00	
		25	0	20.16	20.17	20.11	21.00	
	16QAM	1	0	20.53	20.49	20.62	21.00	
			13	20.29	20.25	20.36	21.00	
		1	24	20.13	20.12	20.20	21.00	
			12	0	19.17	19.08	19.23	20.50
		12	6	19.28	19.21	19.35	20.50	
			13	19.51	19.44	19.60	20.50	
		25	0	19.26	19.22	19.36	20.50	
			0	20.01	19.98	20.08	20.50	
	64QAM	1	13	19.96	19.95	20.02	20.50	
			24	19.83	19.77	19.84	20.50	
		12	0	19.09	19.00	19.18	19.50	
			6	19.09	19.02	19.16	19.50	
		12	13	19.06	19.01	19.14	19.50	
			0	18.99	18.95	19.07	19.50	
Bandwidth		Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	21.14	21.00	21.03	22.00	
		1	25	21.05	20.96	20.99	22.00	
		1	49	21.00	21.00	21.02	22.00	
		25	0	20.32	20.21	20.08	21.00	
		25	13	20.23	20.20	20.21	21.00	
		25	25	20.17	20.21	20.16	21.00	
		50	0	20.20	20.19	20.15	21.00	
	16QAM	1	0	20.57	20.52	20.64	21.00	
		1	25	20.33	20.29	20.39	21.00	
		1	49	20.16	20.14	20.23	21.00	
		25	0	19.20	19.13	19.27	20.50	
		25	13	19.30	19.25	19.38	20.50	
		25	25	19.54	19.49	19.64	20.50	
		50	0	19.29	19.27	19.40	20.50	
	64QAM	1	0	20.03	19.97	20.10	20.50	
		1	25	19.99	19.95	20.05	20.50	
		1	49	19.82	19.79	19.87	20.50	
		25	0	19.12	19.05	19.18	19.50	
		25	13	19.11	19.06	19.19	19.50	
		25	25	19.09	19.06	19.18	19.50	
		50	0	19.02	19.00	19.11	19.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18675/1857.5	18900/1880	19125/1902.5	
	15MHz	QPSK	1	0	21.13	20.96	21.01	22.00
			1	38	21.03	20.95	20.96	22.00



		1	74	20.97	20.95	20.98	22.00
		36	0	20.30	20.17	20.05	21.00
		36	18	20.20	20.15	20.17	21.00
		36	39	20.14	20.18	20.12	21.00
		75	0	20.18	20.15	20.10	21.00
	16QAM	1	0	20.55	20.50	20.62	21.00
		1	38	20.31	20.26	20.37	21.00
		1	74	20.14	20.10	20.20	21.00
		36	0	19.17	19.11	19.24	20.50
		36	18	19.27	19.20	19.34	20.50
		36	39	19.52	19.45	19.61	20.50
		75	0	19.26	19.22	19.36	20.50
	64QAM	1	0	19.98	19.95	20.08	20.50
		1	38	19.97	19.92	20.03	20.50
1		74	19.83	19.78	19.88	20.50	
36		0	19.11	19.07	19.19	19.50	
36		18	19.09	19.03	19.18	19.50	
36		39	19.07	19.02	19.15	19.50	
75		0	18.99	18.95	19.07	19.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	21.10	20.92	20.98	22.00
		1	50	21.02	20.91	20.94	22.00
		1	99	20.95	20.94	20.95	22.00
		50	0	20.27	20.12	20.01	21.00
		50	25	20.18	20.11	20.14	21.00
		50	50	20.11	20.13	20.08	21.00
		100	0	20.15	20.10	20.06	21.00
	16QAM	1	0	20.52	20.46	20.57	21.00
		1	50	20.28	20.24	20.33	21.00
		1	99	20.11	20.07	20.18	21.00
		50	0	19.14	19.07	19.21	20.50
		50	25	19.24	19.18	19.31	20.50
		50	50	19.49	19.40	19.57	20.50
		100	0	19.24	19.18	19.33	20.50
	64QAM	1	0	19.96	19.91	20.03	20.50
		1	50	19.93	19.90	19.99	20.50
		1	99	19.77	19.72	19.82	20.50
		50	0	19.06	18.99	19.12	19.50
		50	25	19.05	18.99	19.12	19.50
		50	50	19.04	18.97	19.11	19.50
		100	0	18.97	18.91	19.04	19.50



LTE Band2								
Full Power & Level 3 & Level 4 & Level 5-Div Ant4				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				18607/1850.7	18900/1880	19193/1909.3		
1.4MHz	QPSK	1	0	23.00	22.98	22.86	23.50	
		1	2	22.93	22.75	22.71	23.50	
		1	5	22.82	22.78	22.69	23.50	
		3	0	22.96	22.90	22.82	23.50	
		3	2	22.95	22.97	22.79	23.50	
		3	3	22.95	22.85	22.82	23.50	
	16QAM	1	0	22.28	22.25	22.25	22.50	
		1	2	22.22	22.18	22.15	22.50	
		1	5	22.11	22.00	22.04	22.50	
		3	0	21.95	21.89	21.82	22.50	
		3	2	22.04	21.94	21.83	22.50	
		3	3	21.94	21.90	21.79	22.50	
	64QAM	6	0	21.06	21.03	20.90	21.50	
		1	0	21.33	21.27	21.11	21.50	
		1	2	21.17	21.16	21.10	21.50	
		1	5	21.14	21.08	21.01	21.50	
		3	0	21.00	20.93	20.88	21.50	
		3	2	21.07	20.98	20.84	21.50	
	3MHz	QPSK	3	3	21.02	20.92	20.87	21.50
			6	0	20.11	20.07	19.96	20.50
			1	0	23.02	23.02	22.89	23.50
1			7	22.91	22.78	22.75	23.50	
1			14	22.85	22.83	22.73	23.50	
8			0	22.06	22.02	21.95	22.50	
8			4	22.07	22.07	21.91	22.50	
16QAM		8	7	22.05	21.96	21.92	22.50	
		15	0	22.04	22.06	21.88	22.50	
		1	0	22.28	22.27	22.28	22.50	
		1	7	22.22	22.18	22.19	22.50	
		1	14	22.13	22.04	22.07	22.50	
		8	0	21.06	21.02	20.94	21.50	
		8	4	21.15	21.07	20.95	21.50	
64QAM		8	7	21.04	21.02	20.92	21.50	
	15	0	21.09	21.07	20.93	21.50		
	1	0	21.36	21.29	21.14	21.50		



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18625/1852.5	18900/1880	19175/1907.5		
		1	7	21.20	21.16	21.12	21.50	
		1	14	21.16	21.07	21.04	21.50	
		8	0	20.11	20.06	20.00	20.50	
		8	4	20.18	20.11	19.96	20.50	
		8	7	20.12	20.04	20.00	20.50	
		15	0	20.14	20.11	19.99	20.50	
5MHz	QPSK	1	0	22.99	23.00	22.85	23.50	
		1	13	22.89	22.74	22.72	23.50	
		1	24	22.82	22.78	22.69	23.50	
		12	0	22.03	21.97	21.91	22.50	
		12	6	22.05	22.03	21.86	22.50	
		12	13	22.03	21.94	21.88	22.50	
		25	0	22.04	22.05	21.86	22.50	
	16QAM	1	0	22.28	22.23	22.25	22.50	
		1	13	22.22	22.16	22.16	22.50	
		1	24	22.10	22.02	22.03	22.50	
		12	0	21.04	20.98	20.91	21.50	
		12	6	21.12	21.02	20.91	21.50	
		12	13	21.01	20.97	20.88	21.50	
		25	0	21.07	21.03	20.88	21.50	
	64QAM	1	0	21.33	21.29	21.11	21.50	
		1	13	21.17	21.18	21.09	21.50	
		1	24	21.17	21.05	21.00	21.50	
		12	0	20.09	20.02	20.01	20.50	
		12	6	20.15	20.06	19.92	20.50	
		12	13	20.09	19.99	19.96	20.50	
		25	0	20.12	20.07	19.94	20.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18650/1855	18900/1880	19150/1905	
	10MHz	QPSK	1	0	23.01	23.01	22.88	23.50
1			25	22.92	22.79	22.76	23.50	
1			49	22.84	22.82	22.72	23.50	
25			0	22.06	22.02	21.95	22.50	
25			13	22.08	22.08	21.90	22.50	
25			25	22.05	21.98	21.93	22.50	
50			0	22.08	22.07	21.90	22.50	
16QAM		1	0	22.32	22.26	22.27	22.50	
		1	25	22.26	22.20	22.19	22.50	
		1	49	22.13	22.04	22.06	22.50	
		25	0	21.07	21.03	20.95	21.50	
		25	13	21.14	21.06	20.94	21.50	



		25	25	21.04	21.02	20.92	21.50
		50	0	21.10	21.08	20.92	21.50
	64QAM	1	0	21.35	21.28	21.13	21.50
		1	25	21.20	21.18	21.12	21.50
		1	49	21.16	21.07	21.03	21.50
		25	0	20.12	20.07	20.01	20.50
		25	13	20.17	20.10	19.95	20.50
		25	25	20.12	20.04	20.00	20.50
		50	0	20.15	20.12	19.98	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	23.00	22.97	22.86	23.50
		1	38	22.90	22.78	22.73	23.50
		1	74	22.81	22.77	22.68	23.50
		36	0	22.04	21.98	21.92	22.50
		36	18	22.05	22.03	21.86	22.50
		36	39	22.02	21.95	21.89	22.50
		75	0	22.06	22.03	21.85	22.50
	16QAM	1	0	22.30	22.24	22.25	22.50
		1	38	22.24	22.17	22.17	22.50
		1	74	22.11	22.00	22.03	22.50
		36	0	21.04	21.01	20.92	21.50
		36	18	21.11	21.01	20.90	21.50
		36	39	21.02	20.98	20.89	21.50
		75	0	21.07	21.03	20.88	21.50
	64QAM	1	0	21.30	21.26	21.11	21.50
		1	38	21.18	21.15	21.10	21.50
		1	74	21.17	21.06	21.04	21.50
		36	0	20.11	20.09	20.02	20.50
		36	18	20.15	20.07	19.94	20.50
		36	39	20.10	20.00	19.97	20.50
		75	0	20.12	20.07	19.94	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	22.97	22.93	22.83	23.50
		1	50	22.89	22.74	22.71	23.50
		1	99	22.79	22.76	22.65	23.50
		50	0	22.01	21.93	21.88	22.50
		50	25	22.03	21.99	21.83	22.50
		50	50	21.99	21.90	21.85	22.50
		100	0	22.03	21.98	21.81	22.50
	16QAM	1	0	22.27	22.20	22.20	22.50
		1	50	22.21	22.15	22.13	22.50



		1	99	22.08	21.97	22.01	22.50
		50	0	21.01	20.97	20.89	21.50
		50	25	21.08	20.99	20.87	21.50
		50	50	20.99	20.93	20.85	21.50
		100	0	21.05	20.99	20.85	21.50
	64QAM	1	0	21.28	21.22	21.06	21.50
		1	50	21.14	21.13	21.06	21.50
		1	99	21.11	21.00	20.98	21.50
		50	0	20.06	20.01	19.95	20.50
		50	25	20.11	20.03	19.88	20.50
		50	50	20.07	19.95	19.93	20.50
		100	0	20.10	20.03	19.91	20.50

LTE Band2							
Level 1-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	19.49	19.63	19.67	20.50
		1	2	19.47	19.43	19.50	20.50
		1	5	19.42	19.48	19.41	20.50
		3	0	19.47	19.58	19.49	20.50
		3	2	19.55	19.56	19.45	20.50
		3	3	19.49	19.51	19.45	20.50
		6	0	18.58	18.66	18.52	19.50
	16QAM	1	0	18.59	18.59	18.74	19.50
		1	2	18.64	18.62	18.67	19.50
		1	5	18.67	18.62	18.69	19.50
		3	0	18.59	18.48	18.61	19.50
		3	2	18.64	18.54	18.68	19.50
		3	3	18.59	18.56	18.63	19.50
		6	0	17.80	17.78	17.92	19.00
	64QAM	1	0	18.46	18.40	18.49	19.00
		1	2	18.58	18.54	18.60	19.00
		1	5	18.63	18.61	18.64	19.00
		3	0	18.51	18.42	18.54	19.00
		3	2	18.68	18.58	18.71	19.00
		3	3	18.51	18.48	18.55	19.00
		6	0	17.63	17.60	17.72	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
3MHz	QPSK			18615/1851.5	18900/1880	19185/1908.5	
		1	0	19.51	19.67	19.70	20.50
		1	7	19.45	19.46	19.54	20.50
		1	14	19.45	19.53	19.45	20.50



		8	0	18.57	18.70	18.62	19.50
		8	4	18.67	18.66	18.57	19.50
		8	7	18.59	18.62	18.55	19.50
		15	0	18.58	18.70	18.55	19.50
	16QAM	1	0	18.59	18.61	18.77	19.50
		1	7	18.64	18.62	18.71	19.50
		1	14	18.69	18.66	18.72	19.50
		8	0	17.70	17.61	17.73	19.00
		8	4	17.75	17.67	17.80	19.00
		8	7	17.69	17.68	17.76	19.00
		15	0	17.83	17.82	17.95	19.00
	64QAM	1	0	18.49	18.42	18.52	19.00
		1	7	18.61	18.54	18.62	19.00
		1	14	18.65	18.60	18.67	19.00
8		0	17.62	17.55	17.66	18.00	
8		4	17.79	17.71	17.83	18.00	
8		7	17.61	17.60	17.68	18.00	
15		0	17.66	17.64	17.75	18.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	19.48	19.65	19.66	20.50
		1	13	19.43	19.42	19.51	20.50
		1	24	19.42	19.48	19.41	20.50
		12	0	18.54	18.65	18.58	19.50
		12	6	18.65	18.62	18.52	19.50
		12	13	18.57	18.60	18.51	19.50
		25	0	18.58	18.69	18.53	19.50
	16QAM	1	0	18.59	18.57	18.74	19.50
		1	13	18.64	18.60	18.68	19.50
		1	24	18.66	18.64	18.68	19.50
		12	0	17.68	17.57	17.70	19.00
		12	6	17.72	17.62	17.76	19.00
		12	13	17.66	17.63	17.72	19.00
		25	0	17.81	17.78	17.90	19.00
	64QAM	1	0	18.46	18.42	18.49	19.00
		1	13	18.58	18.56	18.59	19.00
		1	24	18.66	18.58	18.63	19.00
		12	0	17.60	17.51	17.67	18.00
		12	6	17.76	17.66	17.79	18.00
		12	13	17.58	17.55	17.64	18.00
		25	0	17.64	17.60	17.70	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	19.50	19.66	19.69	20.50
		1	25	19.46	19.47	19.55	20.50
		1	49	19.44	19.52	19.44	20.50
		25	0	18.57	18.70	18.62	19.50
		25	13	18.68	18.67	18.56	19.50
		25	25	18.59	18.64	18.56	19.50
		50	0	18.62	18.71	18.57	19.50
	16QAM	1	0	18.63	18.60	18.76	19.50
		1	25	18.68	18.64	18.71	19.50
		1	49	18.69	18.66	18.71	19.50
		25	0	17.71	17.62	17.74	19.00
		25	13	17.74	17.66	17.79	19.00
		25	25	17.69	17.68	17.76	19.00
		50	0	17.84	17.83	17.94	19.00
	64QAM	1	0	18.48	18.41	18.51	19.00
		1	25	18.61	18.56	18.62	19.00
		1	49	18.65	18.60	18.66	19.00
		25	0	17.63	17.56	17.67	18.00
		25	13	17.78	17.70	17.82	18.00
		25	25	17.61	17.60	17.68	18.00
		50	0	17.67	17.65	17.74	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
15MHz	QPSK	1	0	19.49	19.62	19.67	20.50
		1	38	19.44	19.46	19.52	20.50
		1	74	19.41	19.47	19.40	20.50
		36	0	18.55	18.66	18.59	19.50
		36	18	18.65	18.62	18.52	19.50
		36	39	18.56	18.61	18.52	19.50
		75	0	18.60	18.67	18.52	19.50
	16QAM	1	0	18.61	18.58	18.74	19.50
		1	38	18.66	18.61	18.69	19.50
		1	74	18.67	18.62	18.68	19.50
		36	0	17.68	17.60	17.71	19.00
		36	18	17.71	17.61	17.75	19.00
		36	39	17.67	17.64	17.73	19.00
		75	0	17.81	17.78	17.90	19.00
	64QAM	1	0	18.43	18.39	18.49	19.00
		1	38	18.59	18.53	18.60	19.00
		1	74	18.66	18.59	18.67	19.00
		36	0	17.62	17.58	17.68	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	36	18	17.76	17.67	17.81	18.00
		36	39	17.59	17.56	17.65	18.00
		75	0	17.64	17.60	17.70	18.00
		1	0	19.46	19.58	19.64	20.50
		1	50	19.43	19.42	19.50	20.50
		1	99	19.39	19.46	19.37	20.50
		50	0	18.52	18.61	18.55	19.50
	50	25	18.63	18.58	18.49	19.50	
	50	50	18.53	18.56	18.48	19.50	
	100	0	18.57	18.62	18.48	19.50	
	16QAM	1	0	18.58	18.54	18.69	19.50
		1	50	18.63	18.59	18.65	19.50
		1	99	18.64	18.59	18.66	19.50
		50	0	17.65	17.56	17.68	19.00
		50	25	17.68	17.59	17.72	19.00
		50	50	17.64	17.59	17.69	19.00
		100	0	17.79	17.74	17.87	19.00
	64QAM	1	0	18.41	18.35	18.44	19.00
		1	50	18.55	18.51	18.56	19.00
		1	99	18.60	18.53	18.61	19.00
		50	0	17.57	17.50	17.61	18.00
		50	25	17.72	17.63	17.75	18.00
		50	50	17.56	17.51	17.61	18.00
		100	0	17.62	17.56	17.67	18.00

LTE Band2							
Level 2-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	18.57	18.66	18.56	19.50
		1	2	18.49	18.58	18.46	19.50
		1	5	18.44	18.46	18.53	19.50
		3	0	18.53	18.64	18.51	19.50
		3	2	18.62	18.70	18.55	19.50
		3	3	18.63	18.51	18.52	19.50
		6	0	17.67	17.73	17.72	18.50
	16QAM	1	0	17.81	17.68	17.77	18.50
		1	2	17.65	17.57	17.62	18.50
		1	5	17.99	17.76	17.87	18.50
		3	0	17.81	17.58	17.70	18.50
		3	2	17.89	17.62	17.74	18.50



		3	3	17.82	17.59	17.67	18.50
		6	0	16.92	16.72	16.84	17.50
	64QAM	1	0	17.30	17.02	17.15	17.50
		1	2	17.08	16.89	17.00	17.50
		1	5	17.23	17.08	17.11	17.50
		3	0	16.76	16.56	16.65	17.50
		3	2	16.92	16.65	16.77	17.50
		3	3	16.89	16.66	16.74	17.50
		6	0	15.97	15.77	15.89	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	18.59	18.70	18.59	19.50
		1	7	18.47	18.61	18.50	19.50
		1	14	18.47	18.51	18.57	19.50
		8	0	17.63	17.76	17.64	18.50
		8	4	17.74	17.80	17.67	18.50
		8	7	17.73	17.62	17.62	18.50
		15	0	17.67	17.77	17.75	18.50
	16QAM	1	0	17.81	17.70	17.80	18.50
		1	7	17.65	17.57	17.66	18.50
		1	14	18.01	17.80	17.90	18.50
		8	0	16.92	16.71	16.82	17.50
		8	4	17.00	16.75	16.86	17.50
		8	7	16.92	16.71	16.80	17.50
		15	0	16.95	16.76	16.87	17.50
	64QAM	1	0	17.33	17.04	17.18	17.50
		1	7	17.11	16.89	17.02	17.50
		1	14	17.25	17.07	17.14	17.50
		8	0	15.87	15.69	15.77	16.50
		8	4	16.03	15.78	15.89	16.50
		8	7	15.99	15.78	15.87	16.50
		15	0	16.00	15.81	15.92	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	18.56	18.68	18.55	19.50
		1	13	18.45	18.57	18.47	19.50
		1	24	18.44	18.46	18.53	19.50
		12	0	17.60	17.71	17.60	18.50
		12	6	17.72	17.76	17.62	18.50
		12	13	17.71	17.60	17.58	18.50
		25	0	17.67	17.76	17.73	18.50
	16QAM	1	0	17.81	17.66	17.77	18.50
		1	13	17.65	17.55	17.63	18.50



	64QAM	1	24	17.98	17.78	17.86	18.50
		12	0	16.90	16.67	16.79	17.50
		12	6	16.97	16.70	16.82	17.50
		12	13	16.89	16.66	16.76	17.50
		25	0	16.93	16.72	16.82	17.50
		1	0	17.30	17.04	17.15	17.50
		1	13	17.08	16.91	16.99	17.50
		1	24	17.26	17.05	17.10	17.50
		12	0	15.85	15.65	15.78	16.50
		12	6	16.00	15.73	15.85	16.50
		12	13	15.96	15.73	15.83	16.50
		25	0	15.98	15.77	15.87	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	18.58	18.69	18.58	19.50
		1	25	18.48	18.62	18.51	19.50
		1	49	18.46	18.50	18.56	19.50
		25	0	17.63	17.76	17.64	18.50
		25	13	17.75	17.81	17.66	18.50
		25	25	17.73	17.64	17.63	18.50
		50	0	17.71	17.78	17.77	18.50
	16QAM	1	0	17.85	17.69	17.79	18.50
		1	25	17.69	17.59	17.66	18.50
		1	49	18.01	17.80	17.89	18.50
		25	0	16.93	16.72	16.83	17.50
		25	13	16.99	16.74	16.85	17.50
		25	25	16.92	16.71	16.80	17.50
		50	0	16.96	16.77	16.86	17.50
	64QAM	1	0	17.32	17.03	17.17	17.50
		1	25	17.11	16.91	17.02	17.50
		1	49	17.25	17.07	17.13	17.50
		25	0	15.88	15.70	15.78	16.50
		25	13	16.02	15.77	15.88	16.50
		25	25	15.99	15.78	15.87	16.50
		50	0	16.01	15.82	15.91	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	18.57	18.65	18.56	19.50
		1	38	18.46	18.61	18.48	19.50
		1	74	18.43	18.45	18.52	19.50
		36	0	17.61	17.72	17.61	18.50
		36	18	17.72	17.76	17.62	18.50
		36	39	17.70	17.61	17.59	18.50



	16QAM	75	0	17.69	17.74	17.72	18.50
		1	0	17.83	17.67	17.77	18.50
		1	38	17.67	17.56	17.64	18.50
		1	74	17.99	17.76	17.86	18.50
		36	0	16.90	16.70	16.80	17.50
		36	18	16.96	16.69	16.81	17.50
		36	39	16.90	16.67	16.77	17.50
		75	0	16.93	16.72	16.82	17.50
	64QAM	1	0	17.27	17.01	17.15	17.50
		1	38	17.09	16.88	17.00	17.50
		1	74	17.26	17.06	17.14	17.50
		36	0	15.87	15.72	15.79	16.50
		36	18	16.00	15.74	15.87	16.50
		36	39	15.97	15.74	15.84	16.50
		75	0	15.98	15.77	15.87	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	18.54	18.61	18.53	19.50
		1	50	18.45	18.57	18.46	19.50
		1	99	18.41	18.44	18.49	19.50
		50	0	17.58	17.67	17.57	18.50
		50	25	17.70	17.72	17.59	18.50
		50	50	17.67	17.56	17.55	18.50
		100	0	17.66	17.69	17.68	18.50
	16QAM	1	0	17.80	17.63	17.72	18.50
		1	50	17.64	17.54	17.60	18.50
		1	99	17.96	17.73	17.84	18.50
		50	0	16.87	16.66	16.77	17.50
		50	25	16.93	16.67	16.78	17.50
		50	50	16.87	16.62	16.73	17.50
		100	0	16.91	16.68	16.79	17.50
	64QAM	1	0	17.25	16.97	17.10	17.50
		1	50	17.05	16.86	16.96	17.50
		1	99	17.20	17.00	17.08	17.50
		50	0	15.82	15.64	15.72	16.50
		50	25	15.96	15.70	15.81	16.50
		50	50	15.94	15.69	15.80	16.50
		100	0	15.96	15.73	15.84	16.50



LTE Band4							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.91	23.96	24.12	25.00
		1	2	24.04	24.05	24.06	25.00
		1	5	24.00	24.20	24.14	25.00
		3	0	24.00	24.09	24.08	25.00
		3	2	24.01	24.08	24.13	25.00
		3	3	24.07	24.41	24.13	25.00
		6	0	23.02	23.12	23.17	24.00
	16QAM	1	0	23.56	23.55	23.45	24.00
		1	2	23.58	23.58	23.50	24.00
		1	5	23.50	23.44	23.54	24.00
		3	0	23.09	23.02	23.19	24.00
		3	2	23.12	23.07	23.24	24.00
		3	3	23.12	23.08	23.22	24.00
		6	0	22.11	22.13	22.29	23.00
	64QAM	1	0	22.50	22.49	22.51	23.00
		1	2	22.24	22.23	22.32	23.00
		1	5	22.41	22.41	22.52	23.00
		3	0	22.16	22.09	22.21	23.00
		3	2	22.18	22.10	22.29	23.00
		3	3	22.21	22.18	22.31	23.00
		6	0	21.12	21.11	21.28	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	23.93	24.00	24.15	25.00
		1	7	24.02	24.08	24.10	25.00
		1	14	24.03	24.25	24.18	25.00
		8	0	23.10	23.21	23.21	24.00
		8	4	23.13	23.18	23.25	24.00
		8	7	23.17	23.52	23.23	24.00
		15	0	23.02	23.16	23.20	24.00
	16QAM	1	0	23.56	23.57	23.48	24.00
		1	7	23.58	23.58	23.54	24.00
		1	14	23.52	23.48	23.57	24.00
		8	0	22.20	22.15	22.31	23.00
		8	4	22.23	22.20	22.36	23.00
		8	7	22.22	22.20	22.35	23.00



	64QAM	15	0	22.14	22.17	22.32	23.00	
		1	0	22.53	22.51	22.54	23.00	
		1	7	22.27	22.23	22.34	23.00	
		1	14	22.43	22.40	22.55	23.00	
		8	0	21.27	21.22	21.33	22.00	
		8	4	21.29	21.23	21.41	22.00	
		8	7	21.31	21.30	21.44	22.00	
		15	0	21.15	21.15	21.31	22.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				19975/1712.5	20175/1732.5	20375/1752.5		
5MHz	QPSK	1	0	23.90	23.98	24.11	25.00	
		1	13	24.00	24.04	24.07	25.00	
		1	24	24.00	24.20	24.14	25.00	
		12	0	23.07	23.16	23.17	24.00	
		12	6	23.11	23.14	23.20	24.00	
		12	13	23.15	23.50	23.19	24.00	
		25	0	23.02	23.15	23.18	24.00	
	16QAM	1	0	23.56	23.53	23.45	24.00	
		1	13	23.58	23.56	23.51	24.00	
		1	24	23.49	23.46	23.53	24.00	
		12	0	22.18	22.11	22.28	23.00	
		12	6	22.20	22.15	22.32	23.00	
		12	13	22.19	22.15	22.31	23.00	
		25	0	22.12	22.13	22.27	23.00	
	64QAM	1	0	22.50	22.51	22.51	23.00	
		1	13	22.24	22.25	22.31	23.00	
		1	24	22.44	22.38	22.51	23.00	
		12	0	21.25	21.18	21.34	22.00	
		12	6	21.26	21.18	21.37	22.00	
		12	13	21.28	21.25	21.40	22.00	
		25	0	21.13	21.11	21.26	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20000/1715	20175/1732.5	20350/1750	
	10MHz	QPSK	1	0	23.92	23.99	24.14	25.00
1			25	24.03	24.09	24.11	25.00	
1			49	24.02	24.24	24.17	25.00	
25			0	23.10	23.21	23.21	24.00	
25			13	23.14	23.19	23.24	24.00	
25			25	23.17	23.54	23.24	24.00	
50			0	23.06	23.17	23.22	24.00	
16QAM		1	0	23.60	23.56	23.47	24.00	
		1	25	23.62	23.60	23.54	24.00	
		1	49	23.52	23.48	23.56	24.00	



		25	0	22.21	22.16	22.32	23.00	
		25	13	22.22	22.19	22.35	23.00	
		25	25	22.22	22.20	22.35	23.00	
		50	0	22.15	22.18	22.31	23.00	
	64QAM	1	0	22.52	22.50	22.53	23.00	
		1	25	22.27	22.25	22.34	23.00	
		1	49	22.43	22.40	22.54	23.00	
		25	0	21.28	21.23	21.34	22.00	
		25	13	21.28	21.22	21.40	22.00	
		25	25	21.31	21.30	21.44	22.00	
		50	0	21.16	21.16	21.30	22.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20025/1717.5	20175/1732.5	20325/1747.5		
15MHz	QPSK	1	0	23.91	23.95	24.12	25.00	
		1	38	24.01	24.08	24.08	25.00	
		1	74	23.99	24.19	24.13	25.00	
		36	0	23.08	23.17	23.18	24.00	
		36	18	23.11	23.14	23.20	24.00	
		36	39	23.14	23.51	23.20	24.00	
		75	0	23.04	23.13	23.17	24.00	
	16QAM	1	0	23.58	23.54	23.45	24.00	
		1	38	23.60	23.57	23.52	24.00	
		1	74	23.50	23.44	23.53	24.00	
		36	0	22.18	22.14	22.29	23.00	
		36	18	22.19	22.14	22.31	23.00	
		36	39	22.20	22.16	22.32	23.00	
		75	0	22.12	22.13	22.27	23.00	
	64QAM	1	0	22.47	22.48	22.51	23.00	
		1	38	22.25	22.22	22.32	23.00	
		1	74	22.44	22.39	22.55	23.00	
		36	0	21.27	21.25	21.35	22.00	
		36	18	21.26	21.19	21.39	22.00	
		36	39	21.29	21.26	21.41	22.00	
		75	0	21.13	21.11	21.26	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20050/1720	20175/1732.5	20300/1745	
	20MHz	QPSK	1	0	23.88	23.91	24.09	25.00
1			50	24.00	24.04	24.06	25.00	
1			99	23.97	24.18	24.10	25.00	
50			0	23.05	23.12	23.14	24.00	
50			25	23.09	23.10	23.17	24.00	
50			50	23.11	23.46	23.16	24.00	
100			0	23.01	23.08	23.13	24.00	



	16QAM	1	0	23.55	23.50	23.40	24.00
		1	50	23.57	23.55	23.48	24.00
		1	99	23.47	23.41	23.51	24.00
		50	0	22.15	22.10	22.26	23.00
		50	25	22.16	22.12	22.28	23.00
		50	50	22.17	22.11	22.28	23.00
		100	0	22.10	22.09	22.24	23.00
	64QAM	1	0	22.45	22.44	22.46	23.00
		1	50	22.21	22.20	22.28	23.00
		1	99	22.38	22.33	22.49	23.00
		50	0	21.22	21.17	21.28	22.00
		50	25	21.22	21.15	21.33	22.00
		50	50	21.26	21.21	21.37	22.00
		100	0	21.11	21.07	21.23	22.00

LTE Band4							
Level 5-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	19.89	19.98	19.97	21.00
		1	2	19.92	20.00	20.04	21.00
		1	5	19.83	19.96	19.84	21.00
		3	0	19.99	19.87	19.91	21.00
		3	2	19.94	19.93	19.92	21.00
		3	3	19.87	19.87	19.91	21.00
		6	0	18.99	18.93	18.93	20.00
	16QAM	1	0	19.68	19.65	19.73	20.00
		1	2	19.54	19.53	19.64	20.00
		1	5	19.35	19.28	19.44	20.00
		3	0	18.93	18.86	19.00	20.00
		3	2	18.99	18.90	19.10	20.00
		3	3	19.01	18.94	19.10	20.00
		6	0	18.06	18.01	18.20	19.00
	64QAM	1	0	18.75	18.68	18.85	19.00
		1	2	18.75	18.72	18.76	19.00
		1	5	18.74	18.72	18.65	19.00
		3	0	18.59	18.52	18.68	19.00
		3	2	18.61	18.52	18.73	19.00
		3	3	18.72	18.65	18.52	19.00
		6	0	17.61	17.84	17.68	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
3MHz	QPSK	1	0	19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	19.91	20.02	20.00	21.00



		1	7	19.90	20.03	20.08	21.00		
		1	14	19.86	20.01	19.88	21.00		
		8	0	19.09	18.99	19.04	20.00		
		8	4	19.06	19.03	19.04	20.00		
		8	7	18.97	18.98	19.01	20.00		
		15	0	18.99	18.97	18.96	20.00		
	16QAM	1	0	19.68	19.67	19.76	20.00		
		1	7	19.54	19.53	19.68	20.00		
		1	14	19.37	19.32	19.47	20.00		
		8	0	18.04	17.99	18.12	19.00		
		8	4	18.10	18.03	18.22	19.00		
		8	7	18.11	18.06	18.23	19.00		
	64QAM	15	0	18.09	18.05	18.23	19.00		
		1	0	18.78	18.70	18.88	19.00		
		1	7	18.78	18.72	18.78	19.00		
		1	14	18.76	18.71	18.68	19.00		
		8	0	17.70	17.65	17.80	18.00		
		8	4	17.72	17.65	17.85	18.00		
			8	7	17.82	17.77	17.65	18.00	
			15	0	17.64	17.88	17.71	18.00	
			Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)		
19975/1712.5							20175/1732.5	20375/1752.5	
5MHz			QPSK	1	0	19.88	20.00	19.96	21.00
				1	13	19.88	19.99	20.05	21.00
	1	24		19.83	19.96	19.84	21.00		
	12	0		19.06	18.94	19.00	20.00		
	12	6		19.04	18.99	18.99	20.00		
	12	13		18.95	18.96	18.97	20.00		
	25	0		18.99	18.96	18.94	20.00		
	16QAM	1	0	19.68	19.63	19.73	20.00		
		1	13	19.54	19.51	19.65	20.00		
		1	24	19.34	19.30	19.43	20.00		
		12	0	18.02	17.95	18.09	19.00		
		12	6	18.07	17.98	18.18	19.00		
		12	13	18.08	18.01	18.19	19.00		
		25	0	18.07	18.01	18.18	19.00		
	64QAM	1	0	18.75	18.70	18.85	19.00		
		1	13	18.75	18.74	18.75	19.00		
		1	24	18.77	18.69	18.64	19.00		
		12	0	17.68	17.61	17.81	18.00		
		12	6	17.69	17.60	17.81	18.00		
		12	13	17.79	17.72	17.61	18.00		
		25	0	17.62	17.84	17.66	18.00		



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	19.90	20.01	19.99	21.00
		1	25	19.91	20.04	20.09	21.00
		1	49	19.85	20.00	19.87	21.00
		25	0	19.09	18.99	19.04	20.00
		25	13	19.07	19.04	19.03	20.00
		25	25	18.97	19.00	19.02	20.00
		50	0	19.03	18.98	18.98	20.00
	16QAM	1	0	19.72	19.66	19.75	20.00
		1	25	19.58	19.55	19.68	20.00
		1	49	19.37	19.32	19.46	20.00
		25	0	18.05	18.00	18.13	19.00
		25	13	18.09	18.02	18.21	19.00
		25	25	18.11	18.06	18.23	19.00
		50	0	18.10	18.06	18.22	19.00
	64QAM	1	0	18.77	18.69	18.87	19.00
		1	25	18.78	18.74	18.78	19.00
		1	49	18.76	18.71	18.67	19.00
		25	0	17.71	17.66	17.81	18.00
		25	13	17.71	17.64	17.84	18.00
		25	25	17.82	17.77	17.65	18.00
		50	0	17.65	17.89	17.70	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	19.89	19.97	19.97	21.00
		1	38	19.89	20.03	20.06	21.00
		1	74	19.82	19.95	19.83	21.00
		36	0	19.07	18.95	19.01	20.00
		36	18	19.04	18.99	18.99	20.00
		36	39	18.94	18.97	18.98	20.00
		75	0	19.01	18.94	18.93	20.00
	16QAM	1	0	19.70	19.64	19.73	20.00
		1	38	19.56	19.52	19.66	20.00
		1	74	19.35	19.28	19.43	20.00
		36	0	18.02	17.98	18.10	19.00
		36	18	18.06	17.97	18.17	19.00
		36	39	18.09	18.02	18.20	19.00
		75	0	18.07	18.01	18.18	19.00
	64QAM	1	0	18.72	18.67	18.85	19.00
		1	38	18.76	18.71	18.76	19.00
		1	74	18.77	18.70	18.68	19.00
		36	0	17.70	17.68	17.82	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	36	18	17.69	17.61	17.83	18.00
		36	39	17.80	17.73	17.62	18.00
		75	0	17.62	17.84	17.66	18.00
		1	0	19.86	19.93	19.94	21.00
		1	50	19.88	19.99	20.04	21.00
		1	99	19.80	19.94	19.80	21.00
		50	0	19.04	18.90	18.97	20.00
	16QAM	50	25	19.02	18.95	18.96	20.00
		50	50	18.91	18.92	18.94	20.00
		100	0	18.98	18.89	18.89	20.00
		1	0	19.67	19.60	19.68	20.00
		1	50	19.53	19.50	19.62	20.00
		1	99	19.32	19.25	19.41	20.00
		50	0	17.99	17.94	18.07	19.00
	64QAM	50	25	18.03	17.95	18.14	19.00
		50	50	18.06	17.97	18.16	19.00
		100	0	18.05	17.97	18.15	19.00
		1	0	18.70	18.63	18.80	19.00
		1	50	18.72	18.69	18.72	19.00
		1	99	18.71	18.64	18.62	19.00
		50	0	17.65	17.60	17.75	18.00
50	25	17.65	17.57	17.77	18.00		
50	50	17.77	17.68	17.58	18.00		
100	0	17.60	17.80	17.63	18.00		

LTE Band4							
Full Power & Level 3 & Level 4 & Level 5-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.06	23.10	23.01	23.50
		1	2	22.95	22.97	22.89	23.50
		1	5	22.88	22.81	22.77	23.50
		3	0	22.98	22.99	22.95	23.50
		3	2	22.98	22.94	22.91	23.50
		3	3	22.93	22.90	22.91	23.50
		6	0	22.05	21.97	21.97	22.50
	16QAM	1	0	22.45	22.44	22.30	22.50
		1	2	22.28	22.26	22.18	22.50
		1	5	22.16	22.15	22.07	22.50
		3	0	21.96	21.95	21.94	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				19965/1711.5	20175/1732.5	20385/1753.5		
	64QAM	3	2	22.01	21.93	21.92	22.50	
		3	3	21.96	21.92	21.89	22.50	
		6	0	21.05	20.99	20.97	21.50	
		1	0	21.31	21.31	21.08	21.50	
		1	2	21.15	21.00	21.05	21.50	
		1	5	20.94	21.02	20.91	21.50	
		3	0	20.93	20.86	20.86	21.50	
		3	2	20.96	20.87	20.89	21.50	
		3	3	20.85	20.88	20.83	21.50	
		6	0	20.17	20.05	19.91	20.50	
3MHz	QPSK	1	0	23.08	23.14	23.04	23.50	
		1	7	22.93	23.00	22.93	23.50	
		1	14	22.91	22.86	22.81	23.50	
		8	0	22.08	22.11	22.08	22.50	
		8	4	22.10	22.04	22.03	22.50	
		8	7	22.03	22.01	22.01	22.50	
		15	0	22.05	22.01	22.00	22.50	
	16QAM	1	0	22.45	22.46	22.33	22.50	
		1	7	22.28	22.26	22.22	22.50	
		1	14	22.18	22.19	22.10	22.50	
		8	0	21.07	21.08	21.06	21.50	
		8	4	21.12	21.06	21.04	21.50	
		8	7	21.06	21.04	21.02	21.50	
		15	0	21.08	21.03	21.00	21.50	
	64QAM	1	0	21.34	21.33	21.11	21.50	
		1	7	21.18	21.00	21.07	21.50	
		1	14	20.96	21.01	20.94	21.50	
		8	0	20.04	19.99	19.98	20.50	
		8	4	20.07	20.00	20.01	20.50	
		8	7	19.95	20.00	19.96	20.50	
		15	0	20.20	20.09	19.94	20.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					19975/1712.5	20175/1732.5	20375/1752.5	
	5MHz	QPSK	1	0	23.05	23.12	23.00	23.50
1			13	22.91	22.96	22.90	23.50	
1			24	22.88	22.81	22.77	23.50	
12			0	22.05	22.06	22.04	22.50	
12			6	22.08	22.00	21.98	22.50	
12			13	22.01	21.99	21.97	22.50	
25			0	22.05	22.00	21.98	22.50	
16QAM		1	0	22.45	22.42	22.30	22.50	



		1	13	22.28	22.24	22.19	22.50
		1	24	22.15	22.17	22.06	22.50
		12	0	21.05	21.04	21.03	21.50
		12	6	21.09	21.01	21.00	21.50
		12	13	21.03	20.99	20.98	21.50
		25	0	21.06	20.99	20.95	21.50
	64QAM	1	0	21.31	21.33	21.08	21.50
		1	13	21.15	21.02	21.04	21.50
		1	24	20.97	20.99	20.90	21.50
		12	0	20.02	19.95	19.99	20.50
		12	6	20.04	19.95	19.97	20.50
		12	13	19.92	19.95	19.92	20.50
		25	0	20.18	20.05	19.89	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	23.07	23.13	23.03	23.50
		1	25	22.94	23.01	22.94	23.50
		1	49	22.90	22.85	22.80	23.50
		25	0	22.08	22.11	22.08	22.50
		25	13	22.11	22.05	22.02	22.50
		25	25	22.03	22.03	22.02	22.50
		50	0	22.09	22.02	22.02	22.50
	16QAM	1	0	22.49	22.45	22.32	22.50
		1	25	22.32	22.28	22.22	22.50
		1	49	22.18	22.19	22.09	22.50
		25	0	21.08	21.09	21.07	21.50
		25	13	21.11	21.05	21.03	21.50
		25	25	21.06	21.04	21.02	21.50
		50	0	21.09	21.04	20.99	21.50
	64QAM	1	0	21.33	21.32	21.10	21.50
		1	25	21.18	21.02	21.07	21.50
		1	49	20.96	21.01	20.93	21.50
		25	0	20.05	20.00	19.99	20.50
		25	13	20.06	19.99	20.00	20.50
		25	25	19.95	20.00	19.96	20.50
		50	0	20.21	20.10	19.93	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	23.06	23.09	23.01	23.50
		1	38	22.92	23.00	22.91	23.50
		1	74	22.87	22.80	22.76	23.50
		36	0	22.06	22.07	22.05	22.50
		36	18	22.08	22.00	21.98	22.50



		36	39	22.00	22.00	21.98	22.50
		75	0	22.07	21.98	21.97	22.50
	16QAM	1	0	22.47	22.43	22.30	22.50
		1	38	22.30	22.25	22.20	22.50
		1	74	22.16	22.15	22.06	22.50
		36	0	21.05	21.07	21.04	21.50
		36	18	21.08	21.00	20.99	21.50
		36	39	21.04	21.00	20.99	21.50
		75	0	21.06	20.99	20.95	21.50
	64QAM	1	0	21.28	21.30	21.08	21.50
		1	38	21.16	20.99	21.05	21.50
		1	74	20.97	21.00	20.94	21.50
		36	0	20.04	20.02	20.00	20.50
		36	18	20.04	19.96	19.99	20.50
36		39	19.93	19.96	19.93	20.50	
75		0	20.18	20.05	19.89	20.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	23.03	23.05	22.98	23.50
		1	50	22.91	22.96	22.89	23.50
		1	99	22.85	22.79	22.73	23.50
		50	0	22.03	22.02	22.01	22.50
		50	25	22.06	21.96	21.95	22.50
		50	50	21.97	21.95	21.94	22.50
		100	0	22.04	21.93	21.93	22.50
	16QAM	1	0	22.44	22.39	22.25	22.50
		1	50	22.27	22.23	22.16	22.50
		1	99	22.13	22.12	22.04	22.50
		50	0	21.02	21.03	21.01	21.50
		50	25	21.05	20.98	20.96	21.50
		50	50	21.01	20.95	20.95	21.50
		100	0	21.04	20.95	20.92	21.50
	64QAM	1	0	21.26	21.26	21.03	21.50
		1	50	21.12	20.97	21.01	21.50
		1	99	20.91	20.94	20.88	21.50
		50	0	19.99	19.94	19.93	20.50
		50	25	20.00	19.92	19.93	20.50
		50	50	19.90	19.91	19.89	20.50
		100	0	20.16	20.01	19.86	20.50



LTE Band4							
Level 1-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	21.74	21.68	21.85	22.00
		1	2	21.62	21.52	21.57	22.00
		1	5	21.71	21.51	21.57	22.00
		3	0	21.51	21.62	21.59	22.00
		3	2	21.56	21.62	21.53	22.00
		3	3	21.50	21.56	21.51	22.00
		6	0	20.62	20.62	20.60	21.00
	16QAM	1	0	20.90	20.80	20.83	21.00
		1	2	20.77	20.69	20.69	21.00
		1	5	20.77	20.63	20.68	21.00
		3	0	20.66	20.55	20.57	21.00
		3	2	20.75	20.60	20.64	21.00
		3	3	20.65	20.53	20.54	21.00
		6	0	19.72	19.61	19.66	21.00
	64QAM	1	0	20.79	20.71	20.78	21.00
		1	2	20.75	20.60	20.66	21.00
		1	5	20.37	20.25	20.25	21.00
		3	0	20.62	20.49	20.51	21.00
		3	2	20.71	20.63	20.67	21.00
		3	3	20.60	20.48	20.49	21.00
		6	0	19.69	19.58	19.63	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	21.76	21.72	21.88	22.00
		1	7	21.60	21.55	21.61	22.00
		1	14	21.74	21.56	21.61	22.00
		8	0	20.61	20.74	20.72	21.00
		8	4	20.68	20.72	20.65	21.00
		8	7	20.60	20.67	20.61	21.00
		15	0	20.62	20.66	20.63	21.00
	16QAM	1	0	20.90	20.82	20.86	21.00
		1	7	20.77	20.69	20.73	21.00
		1	14	20.79	20.67	20.71	21.00
		8	0	19.77	19.68	19.69	21.00
		8	4	19.86	19.73	19.76	21.00
		8	7	19.75	19.65	19.67	21.00
		15	0	19.75	19.65	19.69	21.00
	64QAM	1	0	20.82	20.73	20.81	21.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up		
				19975/1712.5	20175/1732.5	20375/1752.5			
		1	7	20.78	20.60	20.68	21.00		
		1	14	20.39	20.24	20.28	21.00		
		8	0	19.73	19.62	19.63	20.00		
		8	4	19.82	19.76	19.79	20.00		
		8	7	19.70	19.60	19.62	20.00		
		15	0	19.72	19.62	19.66	20.00		
5MHz	QPSK	1	0	21.73	21.70	21.84	22.00		
		1	13	21.58	21.51	21.58	22.00		
		1	24	21.71	21.51	21.57	22.00		
		12	0	20.58	20.69	20.68	21.00		
		12	6	20.66	20.68	20.60	21.00		
		12	13	20.58	20.65	20.57	21.00		
	16QAM	25	0	20.62	20.65	20.61	21.00		
		1	0	20.90	20.78	20.83	21.00		
		1	13	20.77	20.67	20.70	21.00		
		1	24	20.76	20.65	20.67	21.00		
		12	0	19.75	19.64	19.66	21.00		
		12	6	19.83	19.68	19.72	21.00		
	64QAM	12	13	19.72	19.60	19.63	21.00		
		25	0	19.73	19.61	19.64	21.00		
		1	0	20.79	20.73	20.78	21.00		
		1	13	20.75	20.62	20.65	21.00		
		1	24	20.40	20.22	20.24	21.00		
		12	0	19.71	19.58	19.64	20.00		
	10MHz	QPSK	12	6	19.79	19.71	19.75	20.00	
			12	13	19.67	19.55	19.58	20.00	
			25	0	19.70	19.58	19.61	20.00	
			1	0	21.75	21.71	21.87	22.00	
			1	25	21.61	21.56	21.62	22.00	
			1	49	21.73	21.55	21.60	22.00	
16QAM		25	0	20.61	20.74	20.72	21.00		
		25	13	20.69	20.73	20.64	21.00		
		25	25	20.60	20.69	20.62	21.00		
		50	0	20.66	20.67	20.65	21.00		
		1	0	20.94	20.81	20.85	21.00		
		1	25	20.81	20.71	20.73	21.00		
		1	49	20.79	20.67	20.70	21.00		
		25	0	19.78	19.69	19.70	21.00		
		25	13	19.85	19.72	19.75	21.00		
						20000/1715	20175/1732.5	20350/1750	
						20000/1715	20175/1732.5	20350/1750	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20025/1717.5	20175/1732.5	20325/1747.5		
	64QAM	25	25	19.75	19.65	19.67	21.00	
		50	0	19.76	19.66	19.68	21.00	
		1	0	20.81	20.72	20.80	21.00	
		1	25	20.78	20.62	20.68	21.00	
		1	49	20.39	20.24	20.27	21.00	
		25	0	19.74	19.63	19.64	20.00	
		25	13	19.81	19.75	19.78	20.00	
		25	25	19.70	19.60	19.62	20.00	
		50	0	19.73	19.63	19.65	20.00	
15MHz	QPSK	1	0	21.74	21.67	21.85	22.00	
		1	38	21.59	21.55	21.59	22.00	
		1	74	21.70	21.50	21.56	22.00	
		36	0	20.59	20.70	20.69	21.00	
		36	18	20.66	20.68	20.60	21.00	
		36	39	20.57	20.66	20.58	21.00	
		75	0	20.64	20.63	20.60	21.00	
	16QAM	1	0	20.92	20.79	20.83	21.00	
		1	38	20.79	20.68	20.71	21.00	
		1	74	20.77	20.63	20.67	21.00	
		36	0	19.75	19.67	19.67	21.00	
		36	18	19.82	19.67	19.71	21.00	
		36	39	19.73	19.61	19.64	21.00	
		75	0	19.73	19.61	19.64	21.00	
	64QAM	1	0	20.76	20.70	20.78	21.00	
		1	38	20.76	20.59	20.66	21.00	
		1	74	20.40	20.23	20.28	21.00	
		36	0	19.73	19.65	19.65	20.00	
		36	18	19.79	19.72	19.77	20.00	
		36	39	19.68	19.56	19.59	20.00	
		75	0	19.70	19.58	19.61	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20050/1720	20175/1732.5	20300/1745	
	20MHz	QPSK	1	0	21.71	21.63	21.82	22.00
1			50	21.58	21.51	21.57	22.00	
1			99	21.68	21.49	21.53	22.00	
50			0	20.56	20.65	20.65	21.00	
50			25	20.64	20.64	20.57	21.00	
50			50	20.54	20.61	20.54	21.00	
100			0	20.61	20.58	20.56	21.00	
16QAM		1	0	20.89	20.75	20.78	21.00	
		1	50	20.76	20.66	20.67	21.00	



		1	99	20.74	20.60	20.65	21.00
		50	0	19.72	19.63	19.64	21.00
		50	25	19.79	19.65	19.68	21.00
		50	50	19.70	19.56	19.60	21.00
		100	0	19.71	19.57	19.61	21.00
	64QAM	1	0	20.74	20.66	20.73	21.00
		1	50	20.72	20.57	20.62	21.00
		1	99	20.34	20.17	20.22	21.00
		50	0	19.68	19.57	19.58	20.00
		50	25	19.75	19.68	19.71	20.00
		50	50	19.65	19.51	19.55	20.00
		100	0	19.68	19.54	19.58	20.00

LTE Band4							
Level 2-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	18.58	18.76	18.67	19.50
		1	2	18.69	18.64	18.51	19.50
		1	5	18.71	18.64	18.64	19.50
		3	0	18.64	18.67	18.68	19.50
		3	2	18.63	18.64	18.58	19.50
		3	3	18.54	18.65	18.69	19.50
		6	0	17.68	17.72	17.67	18.50
	16QAM	1	0	17.85	17.86	18.00	18.50
		1	2	17.77	17.77	17.86	18.50
		1	5	17.74	17.66	17.85	18.50
		3	0	17.75	17.67	17.84	18.50
		3	2	17.69	17.59	17.85	18.50
		3	3	17.62	17.59	17.75	18.50
		6	0	16.74	16.73	16.92	17.50
	64QAM	1	0	17.11	16.95	17.27	17.50
		1	2	16.85	16.73	16.98	17.50
		1	5	16.90	16.87	17.01	17.50
		3	0	16.74	16.66	16.83	17.50
		3	2	16.77	16.67	16.93	17.50
		3	3	16.75	16.72	16.88	17.50
		6	0	15.84	15.83	16.02	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	18.60	18.80	18.70	19.50
		1	7	18.67	18.67	18.55	19.50
		1	14	18.74	18.69	18.68	19.50



		8	0	17.74	17.79	17.81	18.50
		8	4	17.75	17.74	17.70	18.50
		8	7	17.64	17.76	17.79	18.50
		15	0	17.68	17.76	17.70	18.50
	16QAM	1	0	17.85	17.88	18.03	18.50
		1	7	17.77	17.77	17.90	18.50
		1	14	17.76	17.70	17.88	18.50
		8	0	16.86	16.80	16.96	17.50
		8	4	16.80	16.72	16.97	17.50
		8	7	16.72	16.71	16.88	17.50
		15	0	16.77	16.77	16.95	17.50
	64QAM	1	0	17.14	16.97	17.30	17.50
		1	7	16.88	16.73	17.00	17.50
		1	14	16.92	16.86	17.04	17.50
8		0	15.85	15.79	15.95	16.50	
8		4	15.88	15.80	16.05	16.50	
8		7	15.85	15.84	16.01	16.50	
15		0	15.87	15.87	16.05	16.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	18.59	18.79	18.69	19.50
		1	13	18.68	18.68	18.56	19.50
		1	24	18.73	18.68	18.67	19.50
		12	0	17.74	17.79	17.81	18.50
		12	6	17.76	17.75	17.69	18.50
		12	13	17.64	17.78	17.80	18.50
		25	0	17.72	17.77	17.72	18.50
	16QAM	1	0	17.89	17.87	18.02	18.50
		1	13	17.81	17.79	17.90	18.50
		1	24	17.76	17.70	17.87	18.50
		12	0	16.87	16.81	16.97	17.50
		12	6	16.79	16.71	16.96	17.50
		12	13	16.72	16.71	16.88	17.50
		25	0	16.78	16.78	16.94	17.50
	64QAM	1	0	17.13	16.96	17.29	17.50
		1	13	16.88	16.75	17.00	17.50
		1	24	16.92	16.86	17.03	17.50
		12	0	15.86	15.80	15.96	16.50
		12	6	15.87	15.79	16.04	16.50
		12	13	15.85	15.84	16.01	16.50
		25	0	15.88	15.88	16.04	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	18.58	18.75	18.67	19.50
		1	25	18.66	18.67	18.53	19.50
		1	49	18.70	18.63	18.63	19.50
		25	0	17.72	17.75	17.78	18.50
		25	13	17.73	17.70	17.65	18.50
		25	25	17.61	17.75	17.76	18.50
		50	0	17.70	17.73	17.67	18.50
	16QAM	1	0	17.87	17.85	18.00	18.50
		1	25	17.79	17.76	17.88	18.50
		1	49	17.74	17.66	17.84	18.50
		25	0	16.84	16.79	16.94	17.50
		25	13	16.76	16.66	16.92	17.50
		25	25	16.70	16.67	16.85	17.50
		50	0	16.75	16.73	16.90	17.50
	64QAM	1	0	17.08	16.94	17.27	17.50
		1	25	16.86	16.72	16.98	17.50
		1	49	16.93	16.85	17.04	17.50
		25	0	15.85	15.82	15.97	16.50
		25	13	15.85	15.76	16.03	16.50
		25	25	15.83	15.80	15.98	16.50
		50	0	15.85	15.83	16.00	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	18.54	18.67	18.62	19.50
		1	38	18.63	18.62	18.48	19.50
		1	74	18.65	18.57	18.56	19.50
		36	0	17.67	17.66	17.71	18.50
		36	18	17.68	17.61	17.58	18.50
		36	39	17.55	17.67	17.68	18.50
		75	0	17.65	17.64	17.58	18.50
	16QAM	1	0	17.82	17.79	17.93	18.50
		1	38	17.74	17.71	17.82	18.50
		1	74	17.69	17.59	17.79	18.50
		36	0	16.78	16.73	16.88	17.50
		36	18	16.70	16.59	16.85	17.50
		36	39	16.65	16.58	16.78	17.50
		75	0	16.70	16.64	16.83	17.50
	64QAM	1	0	17.01	16.88	17.20	17.50
		1	38	16.80	16.67	16.92	17.50
		1	74	16.88	16.78	16.99	17.50
		36	0	15.79	15.76	15.91	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	36	18	15.79	15.69	15.96	16.50
		36	39	15.78	15.71	15.91	16.50
		75	0	15.80	15.74	15.93	16.50
		1	0	18.51	18.63	18.59	19.50
		1	50	18.62	18.58	18.46	19.50
		1	99	18.63	18.56	18.53	19.50
		50	0	17.64	17.61	17.67	18.50
	50	25	17.66	17.57	17.55	18.50	
	50	50	17.52	17.62	17.64	18.50	
	100	0	17.62	17.59	17.54	18.50	
	16QAM	1	0	17.79	17.75	17.88	18.50
		1	50	17.71	17.69	17.78	18.50
		1	99	17.66	17.56	17.77	18.50
		50	0	16.75	16.69	16.85	17.50
		50	25	16.67	16.57	16.82	17.50
		50	50	16.62	16.53	16.74	17.50
		100	0	16.68	16.60	16.80	17.50
	64QAM	1	0	16.99	16.84	17.15	17.50
		1	50	16.76	16.65	16.88	17.50
		1	99	16.82	16.72	16.93	17.50
		50	0	15.74	15.68	15.84	16.50
		50	25	15.75	15.65	15.90	16.50
		50	50	15.75	15.66	15.87	16.50
		100	0	15.78	15.70	15.90	16.50

LTE Band5							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	24.17	24.06	24.13	25.00
		1	2	24.04	24.09	24.02	25.00
		1	5	24.09	24.07	24.08	25.00
		3	0	23.99	24.13	24.08	25.00
		3	2	24.13	24.16	24.05	25.00
		3	3	24.14	24.20	24.13	25.00
		6	0	23.23	23.23	23.18	24.00
	16QAM	1	0	23.64	23.60	23.66	24.00
		1	2	23.65	23.63	23.65	24.00
		1	5	23.75	23.71	23.82	24.00
		3	0	23.20	23.05	23.16	24.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
		3	2	23.26	23.11	23.23	24.00
		3	3	23.27	23.15	23.23	24.00
		6	0	22.28	22.21	22.27	23.00
	64QAM	1	0	22.36	22.22	22.31	23.00
		1	2	22.58	22.48	22.56	23.00
		1	5	22.45	22.38	22.43	23.00
		3	0	22.23	22.09	22.20	23.00
		3	2	22.38	22.19	22.34	23.00
		3	3	22.10	21.99	22.06	23.00
		6	0	21.37	21.29	21.38	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	24.19	24.10	24.16	25.00
		1	7	24.02	24.12	24.06	25.00
		1	14	24.12	24.12	24.12	25.00
		8	0	23.09	23.25	23.21	24.00
		8	4	23.25	23.26	23.17	24.00
		8	7	23.24	23.31	23.23	24.00
		15	0	23.23	23.27	23.21	24.00
	16QAM	1	0	23.64	23.62	23.69	24.00
		1	7	23.65	23.63	23.69	24.00
		1	14	23.77	23.75	23.85	24.00
		8	0	22.31	22.18	22.28	23.00
		8	4	22.37	22.24	22.35	23.00
		8	7	22.37	22.27	22.36	23.00
		15	0	22.31	22.25	22.30	23.00
	64QAM	1	0	22.39	22.24	22.34	23.00
		1	7	22.61	22.48	22.58	23.00
		1	14	22.47	22.37	22.46	23.00
		8	0	21.34	21.22	21.32	22.00
		8	4	21.49	21.32	21.46	22.00
		8	7	21.20	21.11	21.19	22.00
		15	0	21.40	21.33	21.41	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	24.17	24.05	24.13	25.00
		1	13	24.01	24.12	24.04	25.00
		1	24	24.08	24.06	24.07	25.00
		12	0	23.07	23.21	23.18	24.00
		12	6	23.23	23.22	23.12	24.00
		12	13	23.21	23.30	23.20	24.00
		25	0	23.25	23.24	23.18	24.00
	16QAM	1	0	23.66	23.59	23.66	24.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	64QAM	1	13	23.67	23.62	23.67	24.00
		1	24	23.75	23.71	23.81	24.00
		12	0	22.29	22.17	22.26	23.00
		12	6	22.33	22.18	22.30	23.00
		12	13	22.35	22.23	22.33	23.00
		25	0	22.29	22.21	22.25	23.00
	QPSK	1	0	22.33	22.21	22.31	23.00
		1	13	22.59	22.47	22.56	23.00
		1	24	22.48	22.36	22.46	23.00
		12	0	21.34	21.25	21.34	22.00
		12	6	21.46	21.28	21.44	22.00
		12	13	21.18	21.07	21.16	22.00
		25	0	21.38	21.29	21.36	22.00
		16QAM	1	0	23.63	23.55	23.61
1	25		23.64	23.60	23.63	24.00	
1	49		23.72	23.68	23.79	24.00	
25	0		22.26	22.13	22.23	23.00	
25	13		22.30	22.16	22.27	23.00	
25	25		22.32	22.18	22.29	23.00	
50	0		22.27	22.17	22.22	23.00	
64QAM	1		0	22.31	22.17	22.26	23.00
	1		25	22.55	22.45	22.52	23.00
	1		49	22.42	22.30	22.40	23.00
	25		0	21.29	21.17	21.27	22.00
	25		13	21.42	21.24	21.38	22.00
	25		25	21.15	21.02	21.12	22.00
	50		0	21.36	21.25	21.33	22.00

LTE Band5							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	22.28	22.26	22.12	23.00



		1	2	22.25	22.26	22.08	23.00		
		1	5	22.33	22.29	22.15	23.00		
		3	0	22.25	22.31	22.24	23.00		
		3	2	22.27	22.35	22.25	23.00		
		3	3	22.30	22.16	22.29	23.00		
		6	0	21.39	21.30	21.33	22.00		
	16QAM	1	0	21.56	21.52	21.69	22.00		
		1	2	21.46	21.32	21.52	22.00		
		1	5	21.64	21.08	21.57	22.00		
		3	0	21.20	21.13	21.27	22.00		
		3	2	21.36	21.23	21.32	22.00		
		3	3	21.29	21.05	21.31	22.00		
	64QAM	6	0	20.37	20.28	20.38	21.00		
		1	0	20.41	20.06	20.47	21.00		
		1	2	20.43	20.05	20.41	21.00		
		1	5	20.56	20.19	20.43	21.00		
		3	0	20.24	19.92	20.29	21.00		
		3	2	20.35	20.33	20.31	21.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up		
				20415/825.5	20525/836.5	20635/847.5			
		3MHz	QPSK	1	0	22.29	22.29	22.14	23.00
				1	7	22.24	22.30	22.13	23.00
				1	14	22.35	22.33	22.18	23.00
				8	0	21.35	21.43	21.37	22.00
				8	4	21.40	21.46	21.36	22.00
				8	7	21.40	21.29	21.40	22.00
				15	0	21.43	21.35	21.38	22.00
			16QAM	1	0	21.60	21.53	21.71	22.00
				1	7	21.50	21.34	21.56	22.00
				1	14	21.66	21.12	21.59	22.00
				8	0	20.32	20.27	20.40	21.00
				8	4	20.46	20.35	20.43	21.00
				8	7	20.39	20.17	20.44	21.00
				15	0	20.41	20.33	20.40	21.00
			64QAM	1	0	20.43	20.07	20.49	21.00
1	7			20.46	20.07	20.43	21.00		
1	14			20.58	20.18	20.45	21.00		
8	0			19.36	19.06	19.42	20.00		
8	4			19.45	19.45	19.42	20.00		
8	7			19.42	19.08	19.46	20.00		
15	0			19.26	19.39	19.40	20.00		



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	22.28	22.25	22.12	23.00
		1	13	22.22	22.29	22.10	23.00
		1	24	22.32	22.28	22.14	23.00
		12	0	21.33	21.39	21.34	22.00
		12	6	21.37	21.41	21.32	22.00
		12	13	21.37	21.26	21.36	22.00
		25	0	21.41	21.31	21.33	22.00
	16QAM	1	0	21.58	21.51	21.69	22.00
		1	13	21.48	21.31	21.54	22.00
		1	24	21.64	21.08	21.56	22.00
		12	0	20.29	20.25	20.37	21.00
		12	6	20.43	20.30	20.39	21.00
		12	13	20.37	20.13	20.41	21.00
		25	0	20.38	20.28	20.36	21.00
	64QAM	1	0	20.38	20.05	20.47	21.00
		1	13	20.44	20.04	20.41	21.00
		1	24	20.59	20.17	20.46	21.00
		12	0	19.35	19.08	19.43	20.00
		12	6	19.43	19.42	19.41	20.00
		12	13	19.40	19.04	19.43	20.00
		25	0	19.23	19.34	19.36	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	22.25	22.21	22.09	23.00
		1	25	22.21	22.25	22.08	23.00
		1	49	22.30	22.27	22.11	23.00
		25	0	21.30	21.34	21.30	22.00
		25	13	21.35	21.37	21.29	22.00
		25	25	21.34	21.21	21.32	22.00
		50	0	21.38	21.26	21.29	22.00
	16QAM	1	0	21.55	21.47	21.64	22.00
		1	25	21.45	21.29	21.50	22.00
		1	49	21.61	21.05	21.54	22.00
		25	0	20.26	20.21	20.34	21.00
		25	13	20.40	20.28	20.36	21.00
		25	25	20.34	20.08	20.37	21.00
		50	0	20.36	20.24	20.33	21.00
	64QAM	1	0	20.36	20.01	20.42	21.00
		1	25	20.40	20.02	20.37	21.00
		1	49	20.53	20.11	20.40	21.00
		25	0	19.30	19.00	19.36	20.00



		25	13	19.39	19.38	19.35	20.00
		25	25	19.37	18.99	19.39	20.00
		50	0	19.21	19.30	19.33	20.00

LTE Band7							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D2 & Level 7-D2-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	24.15	24.28	24.29	25.00
		1	13	24.13	24.27	24.34	25.00
		1	24	24.27	24.38	24.38	25.00
		12	0	23.29	23.41	23.41	24.00
		12	6	23.38	23.45	23.54	24.00
		12	13	23.39	23.50	23.53	24.00
		25	0	23.39	23.46	23.56	24.00
	16QAM	1	0	23.39	23.53	23.65	24.00
		1	13	23.48	23.67	23.65	24.00
		1	24	23.55	23.75	23.49	24.00
		12	0	22.28	22.37	22.40	23.00
		12	6	22.44	22.45	22.56	23.00
		12	13	22.38	22.50	22.54	23.00
		25	0	22.40	22.45	22.53	23.00
	64QAM	1	0	22.15	22.51	22.42	23.00
		1	13	22.48	22.50	22.12	23.00
		1	24	22.18	22.60	21.78	23.00
		12	0	21.21	21.40	21.43	22.00
		12	6	21.45	21.47	21.25	22.00
		12	13	21.40	21.53	21.07	22.00
		25	0	21.25	21.43	21.20	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	24.17	24.29	24.32	25.00
		1	25	24.16	24.32	24.38	25.00
		1	49	24.29	24.42	24.41	25.00
		25	0	23.32	23.46	23.45	24.00
		25	13	23.41	23.50	23.58	24.00
		25	25	23.41	23.54	23.58	24.00
		50	0	23.43	23.48	23.60	24.00
	16QAM	1	0	23.43	23.56	23.67	24.00
		1	25	23.52	23.71	23.68	24.00
		1	49	23.58	23.77	23.52	24.00
		25	0	22.31	22.42	22.44	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20825/2507.5	21100/2535	21375/2562.5		
	64QAM	25	13	22.46	22.49	22.59	23.00	
		25	25	22.41	22.55	22.58	23.00	
		50	0	22.43	22.50	22.57	23.00	
		1	0	22.17	22.50	22.44	23.00	
		1	25	22.51	22.50	22.15	23.00	
		1	49	22.17	22.62	21.81	23.00	
		25	0	21.24	21.45	21.43	22.00	
		25	13	21.47	21.51	21.28	22.00	
		25	25	21.43	21.58	21.11	22.00	
		50	0	21.28	21.48	21.24	22.00	
15MHz	QPSK	1	0	24.16	24.25	24.30	25.00	
		1	38	24.14	24.31	24.35	25.00	
		1	74	24.26	24.37	24.37	25.00	
		36	0	23.30	23.42	23.42	24.00	
		36	18	23.38	23.45	23.54	24.00	
		36	39	23.38	23.51	23.54	24.00	
		75	0	23.41	23.44	23.55	24.00	
	16QAM	1	0	23.41	23.54	23.65	24.00	
		1	38	23.50	23.68	23.66	24.00	
		1	74	23.56	23.73	23.49	24.00	
		36	0	22.28	22.40	22.41	23.00	
		36	18	22.43	22.44	22.55	23.00	
		36	39	22.39	22.51	22.55	23.00	
		75	0	22.40	22.45	22.53	23.00	
	64QAM	1	0	22.12	22.48	22.42	23.00	
		1	38	22.49	22.47	22.13	23.00	
		1	74	22.18	22.61	21.82	23.00	
		36	0	21.23	21.47	21.44	22.00	
		36	18	21.45	21.48	21.27	22.00	
		36	39	21.41	21.54	21.08	22.00	
		75	0	21.25	21.43	21.20	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20850/2510	21100/2535	21350/2560	
	20MHz	QPSK	1	0	24.13	24.21	24.27	25.00
1			50	24.13	24.27	24.33	25.00	
1			99	24.24	24.36	24.34	25.00	
50			0	23.27	23.37	23.38	24.00	
50			25	23.36	23.41	23.51	24.00	
50			50	23.35	23.46	23.50	24.00	
100			0	23.38	23.39	23.51	24.00	
16QAM		1	0	23.38	23.50	23.60	24.00	



		1	50	23.47	23.66	23.62	24.00
		1	99	23.53	23.70	23.47	24.00
		50	0	22.25	22.36	22.38	23.00
		50	25	22.40	22.42	22.52	23.00
		50	50	22.36	22.46	22.51	23.00
		100	0	22.38	22.41	22.50	23.00
	64QAM	1	0	22.10	22.44	22.37	23.00
		1	50	22.45	22.45	22.09	23.00
		1	99	22.12	22.55	21.76	23.00
		50	0	21.18	21.39	21.37	22.00
		50	25	21.41	21.44	21.21	22.00
		50	50	21.38	21.49	21.04	22.00
		100	0	21.23	21.39	21.17	22.00

LTE Band7								
Level 5-Main Ant1				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				20775/2502.5	21100/2535	21425/2567.5		
5MHz	QPSK	1	0	19.17	19.19	19.29	20.00	
		1	13	19.07	19.21	19.26	20.00	
		1	24	19.26	19.18	19.26	20.00	
		12	0	18.14	18.24	18.21	19.00	
		12	6	18.36	18.36	18.36	19.00	
		12	13	18.36	18.32	18.46	19.00	
		25	0	18.25	18.34	18.36	19.00	
	16QAM	1	0	18.47	18.38	18.42	19.00	
		1	13	18.41	18.35	18.39	19.00	
		1	24	18.69	18.55	18.62	19.00	
		12	0	17.51	17.30	17.41	18.50	
		12	6	17.62	17.39	17.54	18.50	
		12	13	17.51	17.37	17.46	18.50	
		25	0	17.51	17.37	17.44	18.50	
	64QAM	1	0	18.24	18.03	18.17	18.50	
		1	13	18.21	18.08	18.18	18.50	
		1	24	18.18	18.13	18.20	18.50	
		12	0	17.23	17.19	17.34	17.50	
		12	6	17.26	17.16	17.31	17.50	
		12	13	17.31	17.27	17.23	17.50	
		25	0	17.29	17.15	17.22	17.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20800/2505	21100/2535	21400/2565	
	10MHz	QPSK	1	0	19.19	19.20	19.32	20.00
1			25	19.10	19.26	19.30	20.00	



		1	49	19.28	19.22	19.29	20.00	
		25	0	18.17	18.29	18.25	19.00	
		25	13	18.39	18.41	18.40	19.00	
		25	25	18.38	18.36	18.51	19.00	
		50	0	18.29	18.36	18.40	19.00	
		16QAM	1	0	18.51	18.41	18.44	19.00
			1	25	18.45	18.39	18.42	19.00
	1		49	18.72	18.57	18.65	19.00	
	25		0	17.54	17.35	17.45	18.50	
	25		13	17.64	17.43	17.57	18.50	
	25		25	17.54	17.42	17.50	18.50	
	50		0	17.54	17.42	17.48	18.50	
		64QAM	1	0	18.26	18.02	18.19	18.50
			1	25	18.24	18.08	18.21	18.50
1			49	18.17	18.15	18.23	18.50	
25			0	17.26	17.24	17.34	17.50	
25			13	17.28	17.20	17.34	17.50	
25			25	17.34	17.32	17.27	17.50	
50			0	17.32	17.20	17.26	17.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20825/2507.5	21100/2535	21375/2562.5		
15MHz	QPSK	1	0	19.18	19.16	19.30	20.00	
		1	38	19.08	19.25	19.27	20.00	
		1	74	19.25	19.17	19.25	20.00	
		36	0	18.15	18.25	18.22	19.00	
		36	18	18.36	18.36	18.36	19.00	
		36	39	18.35	18.33	18.47	19.00	
		75	0	18.27	18.32	18.35	19.00	
	16QAM	1	0	18.49	18.39	18.42	19.00	
		1	38	18.43	18.36	18.40	19.00	
		1	74	18.70	18.53	18.62	19.00	
		36	0	17.51	17.33	17.42	18.50	
		36	18	17.61	17.38	17.53	18.50	
		36	39	17.52	17.38	17.47	18.50	
		75	0	17.51	17.37	17.44	18.50	
	64QAM	1	0	18.21	18.00	18.17	18.50	
		1	38	18.22	18.05	18.19	18.50	
		1	74	18.18	18.14	18.24	18.50	
		36	0	17.25	17.26	17.35	17.50	
		36	18	17.26	17.17	17.33	17.50	
		36	39	17.32	17.28	17.24	17.50	
		75	0	17.29	17.15	17.22	17.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	19.15	19.12	19.27	20.00
		1	50	19.07	19.21	19.25	20.00
		1	99	19.23	19.16	19.22	20.00
		50	0	18.12	18.20	18.18	19.00
		50	25	18.34	18.32	18.33	19.00
		50	50	18.32	18.28	18.43	19.00
		100	0	18.24	18.27	18.31	19.00
	16QAM	1	0	18.46	18.35	18.37	19.00
		1	50	18.40	18.34	18.36	19.00
		1	99	18.67	18.50	18.60	19.00
		50	0	17.48	17.29	17.39	18.50
		50	25	17.58	17.36	17.50	18.50
		50	50	17.49	17.33	17.43	18.50
		100	0	17.49	17.33	17.41	18.50
	64QAM	1	0	18.19	17.96	18.12	18.50
		1	50	18.18	18.03	18.15	18.50
		1	99	18.12	18.08	18.18	18.50
		50	0	17.20	17.18	17.28	17.50
		50	25	17.22	17.13	17.27	17.50
		50	50	17.29	17.23	17.20	17.50
		100	0	17.27	17.11	17.19	17.50

LTE Band7							
Level 6-D1 & Level 7-D1-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	21.64	21.61	21.76	22.50
		1	13	21.36	21.57	21.79	22.50
		1	24	21.62	21.57	21.79	22.50
		12	0	20.62	20.70	20.80	21.50
		12	6	20.84	20.87	20.94	21.50
		12	13	20.92	20.89	20.92	21.50
		25	0	20.63	20.92	20.97	21.50
	16QAM	1	0	20.63	20.92	21.09	21.50
		1	13	20.88	20.94	21.02	21.50
		1	24	21.04	21.15	20.83	21.50
		12	0	19.62	19.54	19.57	20.50
		12	6	19.83	19.68	19.81	20.50
		12	13	19.71	19.79	19.77	20.50
		25	0	19.86	19.87	19.93	20.50
	64QAM	1	0	19.56	19.78	19.86	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20800/2505	21100/2535	21400/2565		
		1	13	19.85	19.65	19.49	20.50	
		1	24	19.58	19.87	19.16	20.50	
		12	0	18.57	18.77	19.00	19.50	
		12	6	18.85	18.88	18.85	19.50	
		12	13	18.73	18.98	18.62	19.50	
		25	0	18.71	19.01	18.76	19.50	
10MHz	QPSK	1	0	21.66	21.62	21.79	22.50	
		1	25	21.39	21.62	21.83	22.50	
		1	49	21.64	21.61	21.82	22.50	
		25	0	20.65	20.75	20.84	21.50	
		25	13	20.87	20.92	20.98	21.50	
		25	25	20.94	20.93	20.97	21.50	
	16QAM	50	0	20.67	20.94	21.01	21.50	
		1	0	20.67	20.95	21.11	21.50	
		1	25	20.92	20.98	21.05	21.50	
		1	49	21.07	21.17	20.86	21.50	
		25	0	19.65	19.59	19.61	20.50	
		25	13	19.85	19.72	19.84	20.50	
	64QAM	25	25	19.74	19.84	19.81	20.50	
		50	0	19.89	19.92	19.97	20.50	
		1	0	19.58	19.77	19.88	20.50	
		1	25	19.88	19.65	19.52	20.50	
		1	49	19.57	19.89	19.19	20.50	
		25	0	18.60	18.82	19.00	19.50	
	15MHz	QPSK	25	13	18.87	18.92	18.88	19.50
			25	25	18.76	19.03	18.66	19.50
			50	0	18.74	19.06	18.80	19.50
			1	0	21.65	21.58	21.77	22.50
			1	38	21.37	21.61	21.80	22.50
			1	74	21.61	21.56	21.78	22.50
16QAM		36	0	20.63	20.71	20.81	21.50	
		36	18	20.84	20.87	20.94	21.50	
		36	39	20.91	20.90	20.93	21.50	
		75	0	20.65	20.90	20.96	21.50	
		1	0	20.65	20.93	21.09	21.50	
		1	38	20.90	20.95	21.03	21.50	
		1	74	21.05	21.13	20.83	21.50	
		36	0	19.62	19.57	19.58	20.50	
		36	18	19.82	19.67	19.80	20.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
	64QAM	36	39	19.72	19.80	19.78	20.50
		75	0	19.86	19.87	19.93	20.50
		1	0	19.53	19.75	19.86	20.50
		1	38	19.86	19.62	19.50	20.50
		1	74	19.58	19.88	19.20	20.50
		36	0	18.59	18.84	19.01	19.50
		36	18	18.85	18.89	18.87	19.50
		36	39	18.74	18.99	18.63	19.50
		75	0	18.71	19.01	18.76	19.50
		20MHz	QPSK	1	0	21.75	21.67
1	50			21.49	21.70	21.91	22.50
1	99			21.72	21.68	21.88	22.50
50	0			20.73	20.79	20.90	21.50
50	25			20.95	20.96	21.04	21.50
50	50			21.01	20.98	21.02	21.50
100	0			20.75	20.98	21.05	21.50
16QAM	1		0	20.75	21.02	21.17	21.50
	1		50	21.00	21.06	21.12	21.50
	1		99	21.15	21.23	20.94	21.50
	50		0	19.72	19.66	19.68	20.50
	50		25	19.92	19.78	19.90	20.50
	50		50	19.82	19.88	19.87	20.50
	100		0	19.97	19.96	20.03	20.50
64QAM	1		0	19.64	19.84	19.94	20.50
	1		50	19.95	19.73	19.59	20.50
	1		99	19.65	19.95	19.27	20.50
	50		0	18.67	18.89	19.07	19.50
	50		25	18.94	18.98	18.94	19.50
	50		50	18.84	19.07	18.72	19.50
	100		0	18.82	19.10	18.86	19.50

LTE Band7							
Full Power & Level 3 & Level 4 & Level 5-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	22.67	22.84	22.93	24.00
		1	13	22.66	22.87	23.03	24.00
		1	24	22.85	22.96	22.99	24.00
		12	0	21.83	21.98	22.05	23.00
		12	6	21.93	22.07	22.20	23.00



		12	13	21.99	22.10	22.16	23.00
		25	0	21.94	22.06	22.19	23.00
	16QAM	1	0	21.95	22.13	22.23	23.00
		1	13	22.16	22.27	22.26	23.00
		1	24	22.14	22.39	22.07	23.00
		12	0	20.84	20.95	21.06	22.00
		12	6	21.00	21.03	21.20	22.00
		12	13	20.94	21.10	21.18	22.00
		25	0	20.94	21.01	21.16	22.00
		64QAM	1	0	20.95	21.08	21.20
	1		13	21.01	21.22	21.26	22.00
	1		24	21.26	21.32	21.39	22.00
	12		0	19.86	20.01	20.14	21.00
	12		6	20.01	20.07	20.24	21.00
12	13		19.98	20.16	20.23	21.00	
25	0		19.96	20.10	20.20	21.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	22.69	22.85	22.96	24.00
		1	25	22.69	22.92	23.07	24.00
		1	49	22.87	23.00	23.02	24.00
		25	0	21.86	22.03	22.09	23.00
		25	13	21.96	22.12	22.24	23.00
		25	25	22.01	22.14	22.21	23.00
		50	0	21.98	22.08	22.23	23.00
	16QAM	1	0	21.99	22.16	22.25	23.00
		1	25	22.20	22.31	22.29	23.00
		1	49	22.17	22.41	22.10	23.00
		25	0	20.87	21.00	21.10	22.00
		25	13	21.02	21.07	21.23	22.00
		25	25	20.97	21.15	21.22	22.00
		50	0	20.97	21.06	21.20	22.00
	64QAM	1	0	20.97	21.07	21.22	22.00
		1	25	21.04	21.22	21.29	22.00
		1	49	21.25	21.34	21.42	22.00
		25	0	19.89	20.06	20.14	21.00
		25	13	20.03	20.11	20.27	21.00
		25	25	20.01	20.21	20.27	21.00
		50	0	19.99	20.15	20.24	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	22.68	22.81	22.94	24.00
		1	38	22.67	22.91	23.04	24.00



		1	74	22.84	22.95	22.98	24.00	
		36	0	21.84	21.99	22.06	23.00	
		36	18	21.93	22.07	22.20	23.00	
		36	39	21.98	22.11	22.17	23.00	
		75	0	21.96	22.04	22.18	23.00	
		1	0	21.97	22.14	22.23	23.00	
		1	38	22.18	22.28	22.27	23.00	
	16QAM	1	74	22.15	22.37	22.07	23.00	
		36	0	20.84	20.98	21.07	22.00	
		36	18	20.99	21.02	21.19	22.00	
		36	39	20.95	21.11	21.19	22.00	
		75	0	20.94	21.01	21.16	22.00	
		1	0	20.92	21.05	21.20	22.00	
		1	38	21.02	21.19	21.27	22.00	
64QAM	1	74	21.26	21.33	21.43	22.00		
	36	0	19.88	20.08	20.15	21.00		
	36	18	20.01	20.08	20.26	21.00		
	36	39	19.99	20.17	20.24	21.00		
	75	0	19.96	20.10	20.20	21.00		
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	22.65	22.77	22.91	24.00	
		1	50	22.66	22.87	23.02	24.00	
		1	99	22.82	22.94	22.95	24.00	
		50	0	21.81	21.94	22.02	23.00	
		50	25	21.91	22.03	22.17	23.00	
		50	50	21.95	22.06	22.13	23.00	
		100	0	21.93	21.99	22.14	23.00	
	16QAM	1	0	21.94	22.10	22.18	23.00	
		1	50	22.15	22.26	22.23	23.00	
		1	99	22.12	22.34	22.05	23.00	
		50	0	20.81	20.94	21.04	22.00	
		50	25	20.96	21.00	21.16	22.00	
		50	50	20.92	21.06	21.15	22.00	
		100	0	20.92	20.97	21.13	22.00	
	64QAM	1	0	20.90	21.01	21.15	22.00	
		1	50	20.98	21.17	21.23	22.00	
		1	99	21.20	21.27	21.37	22.00	
		50	0	19.83	20.00	20.08	21.00	
		50	25	19.97	20.04	20.20	21.00	
		50	50	19.96	20.12	20.20	21.00	
		100	0	19.94	20.06	20.17	21.00	



LTE Band7							
Level 1-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	18.14	18.11	18.11	19.00
		1	13	17.93	18.07	18.18	19.00
		1	24	18.22	18.11	18.29	19.00
		12	0	17.13	17.32	17.19	18.00
		12	6	17.15	17.23	17.33	18.00
		12	13	17.13	17.38	17.36	18.00
		25	0	17.16	17.36	17.30	18.00
	16QAM	1	0	17.60	17.54	17.65	18.00
		1	13	17.41	17.32	17.45	18.00
		1	24	17.77	17.62	17.64	18.00
		12	0	16.37	16.16	16.22	17.50
		12	6	16.54	16.29	16.40	17.50
		12	13	16.29	16.21	16.23	17.50
		25	0	16.33	16.24	16.28	17.50
	64QAM	1	0	16.95	16.77	16.86	17.50
		1	13	16.88	16.68	16.79	17.50
		1	24	17.27	17.10	17.12	17.50
		12	0	16.13	16.02	16.10	16.50
		12	6	16.28	16.05	16.18	16.50
		12	13	16.17	16.06	16.08	16.50
		25	0	16.08	15.98	16.03	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	18.12	18.04	18.09	19.00
		1	25	17.93	18.07	18.17	19.00
		1	49	18.19	18.09	18.25	19.00
		25	0	17.11	17.28	17.16	18.00
		25	13	17.13	17.19	17.30	18.00
		25	25	17.09	17.34	17.33	18.00
		50	0	17.15	17.29	17.25	18.00
	16QAM	1	0	17.59	17.51	17.60	18.00
		1	25	17.40	17.31	17.42	18.00
		1	49	17.75	17.57	17.62	18.00
		25	0	16.34	16.15	16.20	17.50
		25	13	16.50	16.26	16.36	17.50
		25	25	16.27	16.17	16.20	17.50
		50	0	16.31	16.20	16.25	17.50
	64QAM	1	0	16.90	16.70	16.81	17.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20825/2507.5	21100/2535	21375/2562.5		
		1	25	16.85	16.63	16.76	17.50	
		1	49	17.21	17.05	17.10	17.50	
		25	0	16.10	16.01	16.04	16.50	
		25	13	16.24	16.02	16.14	16.50	
		25	25	16.15	16.02	16.05	16.50	
		50	0	16.06	15.94	16.00	16.50	
15MHz	QPSK	1	0	18.15	18.08	18.12	19.00	
		1	38	17.94	18.11	18.19	19.00	
		1	74	18.21	18.10	18.28	19.00	
		36	0	17.14	17.33	17.20	18.00	
		36	18	17.15	17.23	17.33	18.00	
		36	39	17.12	17.39	17.37	18.00	
	16QAM	75	0	17.18	17.34	17.29	18.00	
		1	0	17.62	17.55	17.65	18.00	
		1	38	17.43	17.33	17.46	18.00	
		1	74	17.78	17.60	17.64	18.00	
		36	0	16.37	16.19	16.23	17.50	
		36	18	16.53	16.28	16.39	17.50	
	64QAM	36	39	16.30	16.22	16.24	17.50	
		75	0	16.33	16.24	16.28	17.50	
		1	0	16.92	16.74	16.86	17.50	
		1	38	16.89	16.65	16.80	17.50	
		1	74	17.27	17.11	17.16	17.50	
		36	0	16.15	16.09	16.11	16.50	
	20MHz	QPSK	36	18	16.28	16.06	16.20	16.50
			36	39	16.18	16.07	16.09	16.50
			75	0	16.08	15.98	16.03	16.50
			1	0	17.91	17.82	17.88	19.00
			1	50	17.74	17.85	17.97	19.00
			1	99	17.99	17.90	18.04	19.00
16QAM		50	0	16.90	17.05	16.94	18.00	
		50	25	16.93	16.97	17.09	18.00	
		50	50	16.88	17.11	17.11	18.00	
		100	0	16.94	17.06	17.03	18.00	
		1	0	17.38	17.29	17.37	18.00	
		1	50	17.37	17.29	17.38	18.00	
		1	99	17.72	17.54	17.60	18.00	
		50	0	16.31	16.11	16.17	17.50	
		50	25	16.47	16.24	16.33	17.50	



		50	50	16.24	16.12	16.16	17.50
		100	0	16.29	16.16	16.22	17.50
	64QAM	1	0	16.88	16.66	16.76	17.50
		1	50	16.81	16.61	16.72	17.50
		1	99	17.15	16.99	17.04	17.50
		50	0	16.05	15.93	15.97	16.50
		50	25	16.20	15.98	16.08	16.50
		50	50	16.12	15.97	16.01	16.50
		100	0	16.04	15.90	15.97	16.50

LTE Band7							
Level 2-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	16.60	16.77	16.67	18.00
		1	13	16.53	16.84	16.68	18.00
		1	24	16.70	16.81	16.89	18.00
		12	0	15.79	15.86	15.97	17.00
		12	6	15.77	15.97	16.02	17.00
		12	13	15.93	15.92	15.97	17.00
		25	0	15.75	15.84	15.99	17.00
	16QAM	1	0	16.20	16.20	16.39	17.00
		1	13	16.33	16.34	16.46	17.00
		1	24	16.37	16.35	16.44	17.00
		12	0	14.96	14.85	15.00	16.00
		12	6	15.02	14.91	15.11	16.00
		12	13	15.13	15.10	15.23	16.00
		25	0	14.98	14.93	15.11	16.00
	64QAM	1	0	15.27	15.17	15.35	16.00
		1	13	15.43	15.35	15.49	16.00
		1	24	15.24	15.15	15.27	16.00
		12	0	13.98	13.90	14.06	15.00
		12	6	14.01	13.91	14.10	15.00
		12	13	14.11	14.08	14.21	15.00
		25	0	13.89	13.87	14.02	15.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	16.57	16.69	16.64	18.00
		1	25	16.54	16.85	16.68	18.00
		1	49	16.66	16.78	16.84	18.00
		25	0	15.77	15.82	15.94	17.00
		25	13	15.76	15.94	15.98	17.00
		25	25	15.89	15.90	15.95	17.00



	16QAM	50	0	15.78	15.78	15.96	17.00
		1	0	16.23	16.16	16.33	17.00
		1	25	16.36	16.35	16.43	17.00
		1	49	16.35	16.30	16.41	17.00
		25	0	14.94	14.85	14.99	16.00
		25	13	14.97	14.87	15.06	16.00
		25	25	15.11	15.06	15.20	16.00
		50	0	14.97	14.90	15.07	16.00
	64QAM	1	0	15.21	15.09	15.29	16.00
		1	25	15.40	15.32	15.46	16.00
		1	49	15.18	15.10	15.24	16.00
		25	0	13.96	13.90	14.01	15.00
		25	13	13.96	13.87	14.05	15.00
		25	25	14.09	14.04	14.18	15.00
		50	0	13.88	13.84	13.98	15.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	16.56	16.65	16.62	18.00
		1	38	16.52	16.84	16.65	18.00
		1	74	16.63	16.73	16.80	18.00
		36	0	15.75	15.78	15.91	17.00
		36	18	15.73	15.89	15.94	17.00
		36	39	15.86	15.87	15.91	17.00
		75	0	15.76	15.74	15.91	17.00
	16QAM	1	0	16.21	16.14	16.31	17.00
		1	38	16.34	16.32	16.41	17.00
		1	74	16.33	16.26	16.38	17.00
		36	0	14.91	14.83	14.96	16.00
		36	18	14.94	14.82	15.02	16.00
		36	39	15.09	15.02	15.17	16.00
		75	0	14.94	14.85	15.03	16.00
	64QAM	1	0	15.16	15.07	15.27	16.00
		1	38	15.38	15.29	15.44	16.00
		1	74	15.19	15.09	15.25	16.00
		36	0	13.95	13.92	14.02	15.00
		36	18	13.94	13.84	14.04	15.00
		36	39	14.07	14.00	14.15	15.00
		75	0	13.85	13.79	13.94	15.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	16.53	16.61	16.59	18.00
		1	50	16.51	16.80	16.63	18.00
		1	99	16.61	16.72	16.77	18.00



		50	0	15.72	15.73	15.87	17.00
		50	25	15.71	15.85	15.91	17.00
		50	50	15.83	15.82	15.87	17.00
		100	0	15.73	15.69	15.87	17.00
	16QAM	1	0	16.18	16.10	16.26	17.00
		1	50	16.31	16.30	16.37	17.00
		1	99	16.30	16.23	16.36	17.00
		50	0	14.88	14.79	14.93	16.00
		50	25	14.91	14.80	14.99	16.00
		50	50	15.06	14.97	15.13	16.00
		100	0	14.92	14.81	15.00	16.00
	64QAM	1	0	15.14	15.03	15.22	16.00
		1	50	15.34	15.27	15.40	16.00
1		99	15.13	15.03	15.19	16.00	
50		0	13.90	13.84	13.95	15.00	
50		25	13.90	13.80	13.98	15.00	
50		50	14.04	13.95	14.11	15.00	
100		0	13.83	13.75	13.91	15.00	

LTE Band12							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	23.82	24.20	23.80	25.00
		1	2	24.11	24.00	23.94	25.00
		1	5	24.09	24.26	24.23	25.00
		3	0	23.96	24.07	24.13	25.00
		3	2	24.04	24.19	24.17	25.00
		3	3	24.13	24.18	24.29	25.00
		6	0	23.12	23.26	22.65	24.00
	16QAM	1	0	23.51	23.36	23.42	24.00
		1	2	23.59	23.50	23.53	24.00
		1	5	23.56	23.42	23.50	24.00
		3	0	23.28	23.07	23.15	24.00
		3	2	23.45	23.20	23.29	24.00
		3	3	23.38	23.17	23.21	24.00
		6	0	22.44	22.25	22.33	23.00
	64QAM	1	0	22.61	22.51	22.59	23.00
		1	2	22.55	22.52	22.59	23.00
		1	5	22.45	22.52	22.53	23.00
		3	0	22.32	22.15	22.21	23.00
		3	2	22.43	22.18	22.27	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	3	3	22.53	22.32	22.36	23.00
		6	0	21.37	21.16	21.25	22.00
		1	0	23.84	24.24	23.83	25.00
		1	7	24.09	24.03	23.98	25.00
		1	14	24.12	24.31	24.27	25.00
		8	0	23.06	23.19	23.26	24.00
		8	4	23.16	23.29	23.29	24.00
	16QAM	8	7	23.23	23.29	23.39	24.00
		15	0	23.12	23.30	22.68	24.00
		1	0	23.51	23.38	23.45	24.00
		1	7	23.59	23.50	23.57	24.00
		1	14	23.58	23.46	23.53	24.00
		8	0	22.39	22.20	22.27	23.00
		8	4	22.56	22.33	22.41	23.00
	64QAM	8	7	22.48	22.29	22.34	23.00
		15	0	22.47	22.29	22.36	23.00
		1	0	22.64	22.53	22.62	23.00
		1	7	22.58	22.52	22.61	23.00
		1	14	22.47	22.51	22.56	23.00
		8	0	21.43	21.28	21.33	22.00
		8	4	21.54	21.31	21.39	22.00
5MHz	QPSK	8	7	21.63	21.44	21.49	22.00
		15	0	21.40	21.20	21.28	22.00
		1	0	23.82	24.19	23.80	25.00
		1	13	24.08	24.03	23.96	25.00
		1	24	24.08	24.25	24.22	25.00
		12	0	23.04	23.15	23.23	24.00
		12	6	23.14	23.25	23.24	24.00
	16QAM	12	13	23.20	23.28	23.36	24.00
		25	0	23.14	23.27	22.65	24.00
		1	0	23.53	23.35	23.42	24.00
		1	13	23.61	23.49	23.55	24.00
		1	24	23.56	23.42	23.49	24.00
		12	0	22.37	22.19	22.25	23.00
		12	6	22.52	22.27	22.36	23.00
	64QAM	12	13	22.46	22.25	22.31	23.00
		25	0	22.45	22.25	22.31	23.00
		1	0	22.58	22.50	22.59	23.00
		1	13	22.56	22.51	22.59	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23060/704	23095/707.5	23130/711	
		1	24	22.48	22.50	22.56	23.00
		12	0	21.43	21.31	21.35	22.00
		12	6	21.51	21.27	21.37	22.00
		12	13	21.61	21.40	21.46	22.00
		25	0	21.38	21.16	21.23	22.00
10MHz	QPSK	1	0	23.79	24.15	23.77	25.00
		1	25	24.07	23.99	23.94	25.00
		1	49	24.06	24.24	24.19	25.00
		25	0	23.01	23.10	23.19	24.00
		25	13	23.12	23.21	23.21	24.00
		25	25	23.17	23.23	23.32	24.00
		50	0	23.11	23.22	22.61	24.00
	16QAM	1	0	23.50	23.31	23.37	24.00
		1	25	23.58	23.47	23.51	24.00
		1	49	23.53	23.39	23.47	24.00
		25	0	22.34	22.15	22.22	23.00
		25	13	22.49	22.25	22.33	23.00
		25	25	22.43	22.20	22.27	23.00
		50	0	22.43	22.21	22.28	23.00
	64QAM	1	0	22.56	22.46	22.54	23.00
		1	25	22.52	22.49	22.55	23.00
		1	49	22.42	22.44	22.50	23.00
		25	0	21.38	21.23	21.28	22.00
		25	13	21.47	21.23	21.31	22.00
		25	25	21.58	21.35	21.42	22.00
		50	0	21.36	21.12	21.20	22.00

LTE Band12							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	22.39	22.26	22.03	23.00
		1	2	22.25	22.00	22.07	23.00
		1	5	22.09	22.03	21.97	23.00
		3	0	22.22	22.12	22.05	23.00
		3	2	22.24	22.11	22.01	23.00
		3	3	22.20	22.13	22.02	23.00
		6	0	21.30	21.19	21.07	22.00
	16QAM	1	0	21.52	21.51	21.55	22.00
		1	2	21.50	21.41	21.28	22.00



		1	5	21.47	21.28	21.32	22.00
		3	0	21.19	21.10	21.07	22.00
		3	2	21.28	21.13	21.07	22.00
		3	3	21.22	21.15	21.05	22.00
		6	0	20.31	20.18	20.14	21.00
		6	0	20.37	20.38	20.41	21.00
	64QAM	1	2	20.45	20.35	20.24	21.00
		1	5	20.36	20.31	20.26	21.00
		3	0	20.23	20.15	20.09	21.00
		3	2	20.18	20.13	20.07	21.00
		3	3	20.08	20.15	20.10	21.00
		6	0	19.16	19.22	19.14	20.00
		6	0	19.16	19.22	19.14	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	1	0	22.41	22.30	22.06	23.00
		1	7	22.23	22.03	22.11	23.00
		1	14	22.12	22.08	22.01	23.00
		8	0	21.32	21.24	21.18	22.00
		8	4	21.36	21.21	21.13	22.00
		8	7	21.30	21.24	21.12	22.00
		15	0	21.30	21.23	21.10	22.00
	16QAM	1	0	21.52	21.53	21.58	22.00
		1	7	21.50	21.41	21.32	22.00
		1	14	21.49	21.32	21.35	22.00
		8	0	20.30	20.23	20.19	21.00
		8	4	20.39	20.26	20.19	21.00
		8	7	20.32	20.27	20.18	21.00
		15	0	20.34	20.22	20.17	21.00
	64QAM	1	0	20.40	20.40	20.44	21.00
		1	7	20.48	20.35	20.26	21.00
		1	14	20.38	20.30	20.29	21.00
		8	0	19.34	19.28	19.21	20.00
		8	4	19.29	19.26	19.19	20.00
		8	7	19.18	19.27	19.23	20.00
		15	0	19.19	19.26	19.17	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23035/701.5	23095/707.5	23155/713.5	
5MHz	QPSK	1	0	22.38	22.28	22.02	23.00
		1	13	22.21	21.99	22.08	23.00
		1	24	22.09	22.03	21.97	23.00
		12	0	21.29	21.19	21.14	22.00
		12	6	21.34	21.17	21.08	22.00
		12	13	21.28	21.22	21.08	22.00



	16QAM	25	0	21.30	21.22	21.08	22.00
		1	0	21.52	21.49	21.55	22.00
		1	13	21.50	21.39	21.29	22.00
		1	24	21.46	21.30	21.31	22.00
		12	0	20.28	20.19	20.16	21.00
		12	6	20.36	20.21	20.15	21.00
		12	13	20.29	20.22	20.14	21.00
		25	0	20.32	20.18	20.12	21.00
	64QAM	1	0	20.37	20.40	20.41	21.00
		1	13	20.45	20.37	20.23	21.00
		1	24	20.39	20.28	20.25	21.00
		12	0	19.32	19.24	19.22	20.00
		12	6	19.26	19.21	19.15	20.00
		12	13	19.15	19.22	19.19	20.00
		25	0	19.17	19.22	19.12	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	22.36	22.21	22.00	23.00
		1	25	22.21	21.99	22.07	23.00
		1	49	22.06	22.01	21.93	23.00
		25	0	21.27	21.15	21.11	22.00
		25	13	21.32	21.13	21.05	22.00
		25	25	21.24	21.18	21.05	22.00
		50	0	21.29	21.15	21.03	22.00
	16QAM	1	0	21.51	21.46	21.50	22.00
		1	25	21.49	21.38	21.26	22.00
		1	49	21.44	21.25	21.29	22.00
		25	0	20.25	20.18	20.14	21.00
		25	13	20.32	20.18	20.11	21.00
		25	25	20.27	20.18	20.11	21.00
		50	0	20.30	20.14	20.09	21.00
	64QAM	1	0	20.32	20.33	20.36	21.00
		1	25	20.42	20.32	20.20	21.00
		1	49	20.33	20.23	20.23	21.00
		25	0	19.29	19.23	19.16	20.00
		25	13	19.22	19.18	19.11	20.00
		25	25	19.13	19.18	19.16	20.00
		50	0	19.15	19.18	19.09	20.00



LTE Band17							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	23.91	23.85	23.95	25.00
		1	13	23.79	24.09	24.07	25.00
		1	24	24.18	24.09	24.15	25.00
		12	0	23.02	23.12	23.05	24.00
		12	6	23.15	23.15	23.28	24.00
		12	13	23.23	23.21	23.19	24.00
		25	0	23.18	23.19	23.13	24.00
	16QAM	1	0	23.29	23.22	23.36	24.00
		1	13	23.41	23.34	23.44	24.00
		1	24	23.36	23.30	23.41	24.00
		12	0	22.11	22.07	22.16	23.00
		12	6	22.40	22.31	22.44	23.00
		12	13	22.28	22.23	22.35	23.00
		25	0	22.20	22.14	22.22	23.00
	64QAM	1	0	21.95	21.89	21.99	23.00
		1	13	22.44	22.36	22.45	23.00
		1	24	22.41	22.35	22.46	23.00
		12	0	20.87	20.85	20.94	22.00
		12	6	21.23	21.15	21.32	22.00
		12	13	21.32	21.27	21.38	22.00
		25	0	21.18	21.12	21.23	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23780/709	23790/710	23800/711	
10MHz	QPSK	1	0	23.88	23.81	23.92	25.00
		1	25	23.78	24.05	24.05	25.00
		1	49	24.16	24.08	24.12	25.00
		25	0	22.99	23.07	23.01	24.00
		25	13	23.13	23.11	23.25	24.00
		25	25	23.20	23.16	23.15	24.00
		50	0	23.15	23.14	23.09	24.00
	16QAM	1	0	23.26	23.18	23.31	24.00
		1	25	23.38	23.32	23.40	24.00
		1	49	23.33	23.27	23.39	24.00
		25	0	22.08	22.03	22.13	23.00
		25	13	22.37	22.29	22.41	23.00
		25	25	22.25	22.18	22.31	23.00
		50	0	22.18	22.10	22.19	23.00



	64QAM	1	0	21.93	21.85	21.94	23.00
		1	25	22.40	22.34	22.41	23.00
		1	49	22.35	22.29	22.40	23.00
		25	0	20.82	20.77	20.87	22.00
		25	13	21.19	21.11	21.26	22.00
		25	25	21.29	21.22	21.34	22.00
		50	0	21.16	21.08	21.20	22.00

LTE Band17							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	22.33	22.08	22.10	23.00
		1	13	22.32	22.16	22.06	23.00
		1	24	22.24	22.00	22.00	23.00
		12	0	21.47	21.28	21.25	22.00
		12	6	21.48	21.24	21.19	22.00
		12	13	21.40	21.19	21.16	22.00
		25	0	21.40	21.17	21.23	22.00
	16QAM	1	0	21.66	21.52	21.50	22.00
		1	13	21.54	21.37	21.36	22.00
		1	24	21.57	21.39	21.32	22.00
		12	0	20.52	20.25	20.24	21.00
		12	6	20.58	20.21	20.24	21.00
		12	13	20.31	20.24	20.22	21.00
		25	0	20.22	20.25	20.17	21.00
	64QAM	1	0	20.39	20.38	20.35	21.00
		1	13	20.36	20.35	20.34	21.00
		1	24	20.36	20.33	20.31	21.00
		12	0	19.34	19.34	19.31	20.00
		12	6	19.38	19.27	19.27	20.00
		12	13	19.29	19.26	19.24	20.00
		25	0	19.25	19.25	19.22	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23780/709	23790/710	23800/711	
10MHz	QPSK	1	0	22.30	22.04	22.07	23.00
		1	25	22.31	22.12	22.04	23.00
		1	49	22.22	21.99	21.97	23.00
		25	0	21.44	21.23	21.21	22.00
		25	13	21.46	21.20	21.16	22.00
		25	25	21.37	21.14	21.12	22.00
		50	0	21.37	21.12	21.19	22.00



	16QAM	1	0	21.63	21.48	21.45	22.00
		1	25	21.51	21.35	21.32	22.00
		1	49	21.54	21.36	21.30	22.00
		25	0	20.49	20.21	20.21	21.00
		25	13	20.55	20.19	20.21	21.00
		25	25	20.28	20.19	20.18	21.00
		50	0	20.20	20.21	20.14	21.00
	64QAM	1	0	20.37	20.34	20.30	21.00
		1	25	20.32	20.33	20.30	21.00
		1	49	20.30	20.27	20.25	21.00
		25	0	19.29	19.26	19.24	20.00
		25	13	19.34	19.23	19.21	20.00
		25	25	19.26	19.21	19.20	20.00
		50	0	19.23	19.21	19.19	20.00

LTE Band28A							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27225/704.5	27360/718	27495/731.5	
3MHz	QPSK	1	0	24.36	24.28	24.20	25.00
		1	7	24.48	24.38	24.46	25.00
		1	14	24.66	24.61	24.60	25.00
		8	0	23.51	23.52	23.53	24.00
		8	4	23.66	23.82	23.74	24.00
		8	7	23.86	23.65	23.72	24.00
		15	0	23.58	23.65	23.60	24.00
	16QAM	1	0	23.65	23.64	23.77	24.00
		1	7	23.80	23.79	23.79	24.00
		1	14	23.84	23.79	23.87	24.00
		8	0	22.57	22.52	22.59	23.00
		8	4	22.84	22.77	22.89	23.00
		8	7	22.86	22.81	22.76	23.00
		15	0	22.67	22.63	22.74	23.00
	64QAM	1	0	22.67	22.59	22.72	23.00
		1	7	22.70	22.64	22.73	23.00
		1	14	22.88	22.83	22.77	23.00
		8	0	21.51	21.46	21.57	22.00
		8	4	21.89	21.82	21.94	22.00
		8	7	21.74	21.89	21.73	22.00
		15	0	21.66	21.62	21.73	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27235/705.5	27360/718	27485/730.5	
5MHz	QPSK	1	0	24.33	24.26	24.16	25.00
		1	13	24.46	24.34	24.43	25.00
		1	24	24.63	24.56	24.56	25.00
		12	0	23.48	23.47	23.49	24.00
		12	6	23.64	23.78	23.69	24.00
		12	13	23.84	23.63	23.68	24.00
		25	0	23.58	23.64	23.58	24.00
	16QAM	1	0	23.65	23.60	23.74	24.00
		1	13	23.80	23.77	23.76	24.00
		1	24	23.81	23.77	23.83	24.00
		12	0	22.55	22.48	22.56	23.00
		12	6	22.81	22.72	22.85	23.00
		12	13	22.83	22.76	22.72	23.00
		25	0	22.65	22.59	22.69	23.00
	64QAM	1	0	22.64	22.59	22.69	23.00
		1	13	22.67	22.66	22.70	23.00
		1	24	22.89	22.81	22.73	23.00
		12	0	21.49	21.42	21.58	22.00
		12	6	21.86	21.77	21.90	22.00
		12	13	21.71	21.84	21.69	22.00
		25	0	21.64	21.58	21.68	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27260/708	27360/718	27460/728	
10MHz	QPSK	1	0	24.35	24.27	24.19	25.00
		1	25	24.49	24.39	24.47	25.00
		1	49	24.65	24.60	24.59	25.00
		25	0	23.51	23.52	23.53	24.00
		25	13	23.67	23.83	23.73	24.00
		25	25	23.86	23.67	23.73	24.00
		50	0	23.62	23.66	23.62	24.00
	16QAM	1	0	23.69	23.63	23.76	24.00
		1	25	23.84	23.81	23.79	24.00
		1	49	23.84	23.79	23.86	24.00
		25	0	22.58	22.53	22.60	23.00
		25	13	22.83	22.76	22.88	23.00
		25	25	22.86	22.81	22.76	23.00
		50	0	22.68	22.64	22.73	23.00
	64QAM	1	0	22.66	22.58	22.71	23.00
		1	25	22.70	22.66	22.73	23.00
		1	49	22.88	22.83	22.76	23.00
		25	0	21.52	21.47	21.58	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27285/710.5	27360/718	27435/725.5	
		25	13	21.88	21.81	21.93	22.00
		25	25	21.74	21.89	21.73	22.00
		50	0	21.67	21.63	21.72	22.00
15MHz	QPSK	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27285/710.5	27360/718	27435/725.5	
15MHz	QPSK	1	0	24.34	24.23	24.17	25.00
		1	38	24.47	24.38	24.44	25.00
		1	74	24.62	24.55	24.55	25.00
		36	0	23.49	23.48	23.50	24.00
		36	18	23.64	23.78	23.69	24.00
		36	39	23.83	23.64	23.69	24.00
		75	0	23.60	23.62	23.57	24.00
	16QAM	1	0	23.67	23.61	23.74	24.00
		1	38	23.82	23.78	23.77	24.00
		1	74	23.82	23.75	23.83	24.00
		36	0	22.55	22.51	22.57	23.00
		36	18	22.80	22.71	22.84	23.00
		36	39	22.84	22.77	22.73	23.00
		75	0	22.65	22.59	22.69	23.00
	64QAM	1	0	22.61	22.56	22.69	23.00
		1	38	22.68	22.63	22.71	23.00
		1	74	22.89	22.82	22.77	23.00
		36	0	21.51	21.49	21.59	22.00
		36	18	21.86	21.78	21.92	22.00
		36	39	21.72	21.85	21.70	22.00
		75	0	21.64	21.58	21.68	22.00
20MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27310/713	27360/718	27410/723	
20MHz	QPSK	1	0	24.31	24.19	24.14	25.00
		1	50	24.46	24.34	24.42	25.00
		1	99	24.60	24.54	24.52	25.00
		50	0	23.46	23.43	23.46	24.00
		50	25	23.62	23.74	23.66	24.00
		50	50	23.80	23.59	23.65	24.00
		100	0	23.57	23.57	23.53	24.00
	16QAM	1	0	23.64	23.57	23.69	24.00
		1	50	23.79	23.76	23.73	24.00
		1	99	23.79	23.72	23.81	24.00
		50	0	22.52	22.47	22.54	23.00
		50	25	22.77	22.69	22.81	23.00
		50	50	22.81	22.72	22.69	23.00
		100	0	22.63	22.55	22.66	23.00
	64QAM	1	0	22.59	22.52	22.64	23.00



		1	50	22.64	22.61	22.67	23.00
		1	99	22.83	22.76	22.71	23.00
		50	0	21.46	21.41	21.52	22.00
		50	25	21.82	21.74	21.86	22.00
		50	50	21.69	21.80	21.66	22.00
		100	0	21.62	21.54	21.65	22.00

LTE Band28A							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27225/704.5	27360/718	27495/731.5	
3MHz	QPSK	1	0	21.93	22.21	22.14	23.00
		1	7	22.04	22.40	22.59	23.00
		1	14	22.07	22.58	22.46	23.00
		8	0	21.12	21.47	21.42	22.00
		8	4	21.21	21.73	21.61	22.00
		8	7	21.29	21.74	21.71	22.00
		15	0	21.18	21.54	21.46	22.00
	16QAM	1	0	21.29	21.63	21.48	22.00
		1	7	21.42	21.57	21.53	22.00
		1	14	21.59	21.60	21.70	22.00
		8	0	20.08	20.35	20.21	21.00
		8	4	20.21	20.49	20.33	21.00
		8	7	20.30	20.59	20.42	21.00
		15	0	20.17	20.49	20.33	21.00
	64QAM	1	0	20.09	20.34	20.21	21.00
		1	7	20.29	20.39	20.36	21.00
		1	14	20.46	20.61	20.56	21.00
		8	0	19.08	19.26	19.16	20.00
		8	4	19.21	19.49	19.33	20.00
		8	7	19.28	19.63	19.43	20.00
		15	0	19.18	19.49	19.33	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27235/705.5	27360/718	27485/730.5	
5MHz	QPSK	1	0	21.90	22.19	22.10	23.00
		1	13	22.02	22.36	22.56	23.00
		1	24	22.04	22.53	22.42	23.00
		12	0	21.09	21.42	21.38	22.00
		12	6	21.19	21.69	21.56	22.00
		12	13	21.27	21.72	21.67	22.00
		25	0	21.18	21.53	21.44	22.00
	16QAM	1	0	21.29	21.59	21.45	22.00



		1	13	21.42	21.55	21.50	22.00
		1	24	21.56	21.58	21.66	22.00
		12	0	20.06	20.31	20.18	21.00
		12	6	20.18	20.44	20.29	21.00
		12	13	20.27	20.54	20.38	21.00
		25	0	20.15	20.45	20.28	21.00
	64QAM	1	0	20.06	20.34	20.18	21.00
		1	13	20.26	20.41	20.33	21.00
		1	24	20.47	20.59	20.52	21.00
		12	0	19.06	19.22	19.17	20.00
		12	6	19.18	19.44	19.29	20.00
		12	13	19.25	19.58	19.39	20.00
		25	0	19.16	19.45	19.28	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27260/708	27360/718	27460/728	
10MHz	QPSK	1	0	21.92	22.20	22.13	23.00
		1	25	22.05	22.41	22.60	23.00
		1	49	22.06	22.57	22.45	23.00
		25	0	21.12	21.47	21.42	22.00
		25	13	21.22	21.74	21.60	22.00
		25	25	21.29	21.76	21.72	22.00
		50	0	21.22	21.55	21.48	22.00
	16QAM	1	0	21.33	21.62	21.47	22.00
		1	25	21.46	21.59	21.53	22.00
		1	49	21.59	21.60	21.69	22.00
		25	0	20.09	20.36	20.22	21.00
		25	13	20.20	20.48	20.32	21.00
		25	25	20.30	20.59	20.42	21.00
		50	0	20.18	20.50	20.32	21.00
	64QAM	1	0	20.08	20.33	20.20	21.00
		1	25	20.29	20.41	20.36	21.00
		1	49	20.46	20.61	20.55	21.00
		25	0	19.09	19.27	19.17	20.00
		25	13	19.20	19.48	19.32	20.00
		25	25	19.28	19.63	19.43	20.00
		50	0	19.19	19.50	19.32	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27285/710.5	27360/718	27435/725.5	
15MHz	QPSK	1	0	21.91	22.16	22.11	23.00
		1	38	22.03	22.40	22.57	23.00
		1	74	22.03	22.52	22.41	23.00
		36	0	21.10	21.43	21.39	22.00
		36	18	21.19	21.69	21.56	22.00



		36	39	21.26	21.73	21.68	22.00
		75	0	21.20	21.51	21.43	22.00
	16QAM	1	0	21.31	21.60	21.45	22.00
		1	38	21.44	21.56	21.51	22.00
		1	74	21.57	21.56	21.66	22.00
		36	0	20.06	20.34	20.19	21.00
		36	18	20.17	20.43	20.28	21.00
		36	39	20.28	20.55	20.39	21.00
		75	0	20.15	20.45	20.28	21.00
	64QAM	1	0	20.03	20.31	20.18	21.00
		1	38	20.27	20.38	20.34	21.00
		1	74	20.47	20.60	20.56	21.00
		36	0	19.08	19.29	19.18	20.00
		36	18	19.18	19.45	19.31	20.00
36		39	19.26	19.59	19.40	20.00	
75		0	19.16	19.45	19.28	20.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27310/713	27360/718	27410/723	
	QPSK	1	0	21.88	22.12	22.08	23.00
		1	50	22.02	22.36	22.55	23.00
		1	99	22.01	22.51	22.38	23.00
		50	0	21.07	21.38	21.35	22.00
		50	25	21.17	21.65	21.53	22.00
		50	50	21.23	21.68	21.64	22.00
		100	0	21.17	21.46	21.39	22.00
	16QAM	1	0	21.28	21.56	21.40	22.00
		1	50	21.41	21.54	21.47	22.00
		1	99	21.54	21.53	21.64	22.00
		50	0	20.03	20.30	20.16	21.00
		50	25	20.14	20.41	20.25	21.00
		50	50	20.25	20.50	20.35	21.00
		100	0	20.13	20.41	20.25	21.00
	64QAM	1	0	20.01	20.27	20.13	21.00
		1	50	20.23	20.36	20.30	21.00
		1	99	20.41	20.54	20.50	21.00
		50	0	19.03	19.21	19.11	20.00
		50	25	19.14	19.41	19.25	20.00
		50	50	19.23	19.54	19.36	20.00
		100	0	19.14	19.41	19.25	20.00



LTE Band28B							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27225/704.5	27375/719.5	27645/746.5	
3MHz	QPSK	1	0	23.91	24.10	23.98	25.00
		1	7	24.23	24.13	24.03	25.00
		1	14	24.37	24.50	24.35	25.00
		8	0	23.30	23.31	23.29	24.00
		8	4	23.40	23.45	23.38	24.00
		8	7	23.56	23.57	23.51	24.00
		15	0	23.35	23.45	23.28	24.00
	16QAM	1	0	23.43	23.45	23.54	24.00
		1	7	23.45	23.43	23.52	24.00
		1	14	23.43	23.41	23.46	24.00
		8	0	22.36	22.29	22.34	23.00
		8	4	22.52	22.50	22.58	23.00
		8	7	22.61	22.64	22.55	23.00
		15	0	22.54	22.53	22.61	23.00
	64QAM	1	0	22.43	22.41	22.50	23.00
		1	7	22.57	22.51	22.60	23.00
		1	14	22.55	22.53	22.58	23.00
		8	0	21.27	21.23	21.28	22.00
		8	4	21.58	21.52	21.60	22.00
		8	7	21.59	21.65	21.55	22.00
		15	0	21.47	21.46	21.54	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27235/705.5	27385/720.5	27635/745.5	
5MHz	QPSK	1	0	23.88	24.08	23.94	25.00
		1	13	24.21	24.09	24.00	25.00
		1	24	24.34	24.45	24.31	25.00
		12	0	23.27	23.26	23.25	24.00
		12	6	23.38	23.41	23.33	24.00
		12	13	23.54	23.55	23.47	24.00
		25	0	23.35	23.44	23.26	24.00
	16QAM	1	0	23.43	23.41	23.51	24.00
		1	13	23.45	23.41	23.49	24.00
		1	24	23.40	23.39	23.42	24.00
		12	0	22.34	22.25	22.31	23.00
		12	6	22.49	22.45	22.54	23.00
		12	13	22.58	22.59	22.51	23.00
		25	0	22.52	22.49	22.56	23.00
	64QAM	1	0	22.40	22.41	22.47	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				27260/708	27410/723	27610/743		
		1	13	22.54	22.53	22.57	23.00	
		1	24	22.56	22.51	22.54	23.00	
		12	0	21.25	21.19	21.29	22.00	
		12	6	21.55	21.47	21.56	22.00	
		12	13	21.56	21.60	21.51	22.00	
		25	0	21.45	21.42	21.49	22.00	
10MHz	QPSK	1	0	23.90	24.09	23.97	25.00	
		1	25	24.24	24.14	24.04	25.00	
		1	49	24.36	24.49	24.34	25.00	
		25	0	23.30	23.31	23.29	24.00	
		25	13	23.41	23.46	23.37	24.00	
		25	25	23.56	23.59	23.52	24.00	
		50	0	23.39	23.46	23.30	24.00	
	16QAM	1	0	23.47	23.44	23.53	24.00	
		1	25	23.49	23.45	23.52	24.00	
		1	49	23.43	23.41	23.45	24.00	
		25	0	22.37	22.30	22.35	23.00	
		25	13	22.51	22.49	22.57	23.00	
		25	25	22.61	22.64	22.55	23.00	
		50	0	22.55	22.54	22.60	23.00	
	64QAM	1	0	22.42	22.40	22.49	23.00	
		1	25	22.57	22.53	22.60	23.00	
		1	49	22.55	22.53	22.57	23.00	
		25	0	21.28	21.24	21.29	22.00	
		25	13	21.57	21.51	21.59	22.00	
		25	25	21.59	21.65	21.55	22.00	
		50	0	21.48	21.47	21.53	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					27285/710.5	27435/725.5	27585/740.5	
	15MHz	QPSK	1	0	23.89	24.05	23.95	25.00
1			38	24.22	24.13	24.01	25.00	
1			74	24.33	24.44	24.30	25.00	
36			0	23.28	23.27	23.26	24.00	
36			18	23.38	23.41	23.33	24.00	
36			39	23.53	23.56	23.48	24.00	
75			0	23.37	23.42	23.25	24.00	
16QAM		1	0	23.45	23.42	23.51	24.00	
		1	38	23.47	23.42	23.50	24.00	
		1	74	23.41	23.37	23.42	24.00	
		36	0	22.34	22.28	22.32	23.00	
		36	18	22.48	22.44	22.53	23.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27310/713	27460/728	27560/738	
	64QAM	36	39	22.59	22.60	22.52	23.00
		75	0	22.52	22.49	22.56	23.00
		1	0	22.37	22.38	22.47	23.00
		1	38	22.55	22.50	22.58	23.00
		1	74	22.56	22.52	22.58	23.00
		36	0	21.27	21.26	21.30	22.00
		36	18	21.55	21.48	21.58	22.00
		36	39	21.57	21.61	21.52	22.00
		75	0	21.45	21.42	21.49	22.00
		20MHz	QPSK	1	0	23.86	24.01
1	50			24.21	24.09	23.99	25.00
1	99			24.31	24.43	24.27	25.00
50	0			23.25	23.22	23.22	24.00
50	25			23.36	23.37	23.30	24.00
50	50			23.50	23.51	23.44	24.00
100	0			23.34	23.37	23.21	24.00
16QAM	1		0	23.42	23.38	23.46	24.00
	1		50	23.44	23.40	23.46	24.00
	1		99	23.38	23.34	23.40	24.00
	50		0	22.31	22.24	22.29	23.00
	50		25	22.45	22.42	22.50	23.00
	50		50	22.56	22.55	22.48	23.00
	100		0	22.50	22.45	22.53	23.00
64QAM	1		0	22.35	22.34	22.42	23.00
	1		50	22.51	22.48	22.54	23.00
	1		99	22.50	22.46	22.52	23.00
	50		0	21.22	21.18	21.23	22.00
	50		25	21.51	21.44	21.52	22.00
	50		50	21.54	21.56	21.48	22.00
	100		0	21.43	21.38	21.46	22.00

LTE Band28B							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27225/704.5	27375/719.5	27645/746.5	
3MHz	QPSK	1	0	22.14	22.13	21.99	23.00
		1	7	22.25	21.99	22.21	23.00
		1	14	22.43	22.12	22.52	23.00
		8	0	21.33	21.15	21.40	22.00
		8	4	21.42	21.21	21.59	22.00



		8	7	21.50	21.24	21.65	22.00	
		15	0	21.39	21.25	21.62	22.00	
	16QAM		1	0	21.36	21.48	21.18	22.00
			1	7	21.28	21.38	21.02	22.00
		1	14	21.42	21.52	21.18	22.00	
		8	0	20.00	20.09	19.76	21.00	
		8	4	20.13	20.20	19.89	21.00	
		8	7	20.19	20.30	19.94	21.00	
		15	0	20.11	20.21	19.92	21.00	
		64QAM		1	0	20.14	20.19	19.90
	1			7	20.04	20.09	19.74	21.00
	1		14	20.14	20.24	19.88	21.00	
	8		0	19.04	19.13	18.75	20.00	
	8		4	19.21	19.28	18.98	20.00	
	8		7	19.21	19.32	18.99	20.00	
	15		0	19.18	19.28	18.97	20.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				27235/705.5	27385/720.5	27635/745.5		
5MHz	QPSK	1	0	22.11	22.11	21.95	23.00	
		1	13	22.23	21.95	22.18	23.00	
		1	24	22.40	22.07	22.48	23.00	
		12	0	21.30	21.10	21.36	22.00	
		12	6	21.40	21.17	21.54	22.00	
		12	13	21.48	21.22	21.61	22.00	
		25	0	21.39	21.24	21.60	22.00	
	16QAM	1	0	21.36	21.44	21.15	22.00	
		1	13	21.28	21.36	20.99	22.00	
		1	24	21.39	21.50	21.14	22.00	
		12	0	19.98	20.05	19.73	21.00	
		12	6	20.10	20.15	19.85	21.00	
		12	13	20.16	20.25	19.90	21.00	
		25	0	20.09	20.17	19.87	21.00	
	64QAM	1	0	20.11	20.19	19.87	21.00	
		1	13	20.01	20.11	19.71	21.00	
		1	24	20.15	20.22	19.84	21.00	
		12	0	19.02	19.09	18.76	20.00	
		12	6	19.18	19.23	18.94	20.00	
		12	13	19.18	19.27	18.95	20.00	
		25	0	19.16	19.24	18.92	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					27260/708	27410/723	27610/743	
	10MHz	QPSK	1	0	22.13	22.12	21.98	23.00
1			25	22.26	22.00	22.22	23.00	



		1	49	22.42	22.11	22.51	23.00	
		25	0	21.33	21.15	21.40	22.00	
		25	13	21.43	21.22	21.58	22.00	
		25	25	21.50	21.26	21.66	22.00	
		50	0	21.43	21.26	21.64	22.00	
		16QAM	1	0	21.40	21.47	21.17	22.00
			1	25	21.32	21.40	21.02	22.00
	1		49	21.42	21.52	21.17	22.00	
	25		0	20.01	20.10	19.77	21.00	
	25		13	20.12	20.19	19.88	21.00	
	25		25	20.19	20.30	19.94	21.00	
	50		0	20.12	20.22	19.91	21.00	
		64QAM	1	0	20.13	20.18	19.89	21.00
			1	25	20.04	20.11	19.74	21.00
1			49	20.14	20.24	19.87	21.00	
25			0	19.05	19.14	18.76	20.00	
25			13	19.20	19.27	18.97	20.00	
25			25	19.21	19.32	18.99	20.00	
50			0	19.19	19.29	18.96	20.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				27285/710.5	27435/725.5	27585/740.5		
15MHz	QPSK	1	0	22.12	22.08	21.96	23.00	
		1	38	22.24	21.99	22.19	23.00	
		1	74	22.39	22.06	22.47	23.00	
		36	0	21.31	21.11	21.37	22.00	
		36	18	21.40	21.17	21.54	22.00	
		36	39	21.47	21.23	21.62	22.00	
		75	0	21.41	21.22	21.59	22.00	
	16QAM	1	0	21.38	21.45	21.15	22.00	
		1	38	21.30	21.37	21.00	22.00	
		1	74	21.40	21.48	21.14	22.00	
		36	0	19.98	20.08	19.74	21.00	
		36	18	20.09	20.14	19.84	21.00	
		36	39	20.17	20.26	19.91	21.00	
		75	0	20.09	20.17	19.87	21.00	
	64QAM	1	0	20.08	20.16	19.87	21.00	
		1	38	20.02	20.08	19.72	21.00	
		1	74	20.15	20.23	19.88	21.00	
		36	0	19.04	19.16	18.77	20.00	
		36	18	19.18	19.24	18.96	20.00	
		36	39	19.19	19.28	18.96	20.00	
		75	0	19.16	19.24	18.92	20.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27310/713	27460/728	27560/738	
20MHz	QPSK	1	0	22.09	22.04	21.93	23.00
		1	50	22.23	21.95	22.17	23.00
		1	99	22.37	22.05	22.44	23.00
		50	0	21.28	21.06	21.33	22.00
		50	25	21.38	21.13	21.51	22.00
		50	50	21.44	21.18	21.58	22.00
		100	0	21.38	21.17	21.55	22.00
	16QAM	1	0	21.35	21.41	21.10	22.00
		1	50	21.27	21.35	20.96	22.00
		1	99	21.37	21.45	21.12	22.00
		50	0	19.95	20.04	19.71	21.00
		50	25	20.06	20.12	19.81	21.00
		50	50	20.14	20.21	19.87	21.00
		100	0	20.07	20.13	19.84	21.00
	64QAM	1	0	20.06	20.12	19.82	21.00
		1	50	19.98	20.06	19.68	21.00
		1	99	20.09	20.17	19.82	21.00
		50	0	18.99	19.08	18.70	20.00
		50	25	19.14	19.20	18.90	20.00
		50	50	19.16	19.23	18.92	20.00
		100	0	19.14	19.20	18.89	20.00

LTE Band 38							
Full Power&Level1&Level2&Level3&Level4&Level6-D1&Level6-D2&Level7-D1&Level7-D2-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	24.31	24.36	24.32	25.00
		1	13	24.22	24.48	24.38	25.00
		1	24	24.44	24.48	24.47	25.00
		12	0	23.26	23.41	23.38	24.00
		12	6	23.39	23.48	23.46	24.00
		12	13	23.39	23.42	23.56	24.00
	16QAM	25	0	23.41	23.36	23.40	24.00
		1	0	23.38	23.35	23.50	24.00
		1	13	23.54	23.51	23.62	24.00
		1	24	23.65	23.60	23.71	24.00
		12	0	22.42	22.31	22.46	23.00
		12	6	22.48	22.38	22.56	23.00
		12	13	22.58	22.50	22.66	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				37800/2575	38000/2595	38200/2615		
	64QAM	25	0	22.47	22.41	22.56	23.00	
		1	0	22.29	22.19	22.37	23.00	
		1	13	22.35	22.29	22.41	23.00	
		1	24	22.47	22.35	22.49	23.00	
		12	0	21.53	21.38	21.61	22.00	
		12	6	21.62	21.50	21.70	22.00	
		12	13	21.60	21.52	21.68	22.00	
		25	0	21.52	21.46	21.61	22.00	
10MHz	QPSK	1	0	24.33	24.37	24.35	25.00	
		1	25	24.25	24.53	24.42	25.00	
		1	49	24.46	24.52	24.50	25.00	
		25	0	23.29	23.46	23.42	24.00	
		25	13	23.42	23.53	23.50	24.00	
		25	25	23.41	23.46	23.61	24.00	
		50	0	23.45	23.38	23.44	24.00	
	16QAM	1	0	23.42	23.38	23.52	24.00	
		1	25	23.58	23.55	23.65	24.00	
		1	49	23.68	23.62	23.74	24.00	
		25	0	22.45	22.36	22.50	23.00	
		25	13	22.50	22.42	22.59	23.00	
		25	25	22.61	22.55	22.70	23.00	
		50	0	22.50	22.46	22.60	23.00	
	64QAM	1	0	22.31	22.18	22.39	23.00	
		1	25	22.38	22.29	22.44	23.00	
		1	49	22.46	22.37	22.52	23.00	
		25	0	21.56	21.43	21.61	22.00	
		25	13	21.64	21.54	21.73	22.00	
		25	25	21.63	21.57	21.72	22.00	
		50	0	21.55	21.51	21.65	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					37825/2577.5	38000/2595	38175/2612.5	
	15MHz	QPSK	1	0	24.32	24.33	24.33	25.00
1			38	24.23	24.52	24.39	25.00	
1			74	24.43	24.47	24.46	25.00	
36			0	23.27	23.42	23.39	24.00	
36			18	23.39	23.48	23.46	24.00	
36			39	23.38	23.43	23.57	24.00	
75			0	23.43	23.34	23.39	24.00	
16QAM		1	0	23.40	23.36	23.50	24.00	
		1	38	23.56	23.52	23.63	24.00	
		1	74	23.66	23.58	23.71	24.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	64QAM	36	0	22.42	22.34	22.47	23.00
		36	18	22.47	22.37	22.55	23.00
		36	39	22.59	22.51	22.67	23.00
		75	0	22.47	22.41	22.56	23.00
		1	0	22.26	22.16	22.37	23.00
		1	38	22.36	22.26	22.42	23.00
		1	74	22.47	22.36	22.53	23.00
	QPSK	36	0	21.55	21.45	21.62	22.00
		36	18	21.62	21.51	21.72	22.00
		36	39	21.61	21.53	21.69	22.00
		75	0	21.52	21.46	21.61	22.00
		1	0	24.29	24.29	24.30	25.00
		1	50	24.22	24.48	24.37	25.00
		1	99	24.41	24.46	24.43	25.00
16QAM	50	0	23.24	23.37	23.35	24.00	
	50	25	23.37	23.44	23.43	24.00	
	50	50	23.35	23.38	23.53	24.00	
	100	0	23.40	23.29	23.35	24.00	
	1	0	23.37	23.32	23.45	24.00	
	1	50	23.53	23.50	23.59	24.00	
	1	99	23.63	23.55	23.69	24.00	
64QAM	50	0	22.39	22.30	22.44	23.00	
	50	25	22.44	22.35	22.52	23.00	
	50	50	22.56	22.46	22.63	23.00	
	100	0	22.45	22.37	22.53	23.00	
	1	0	22.24	22.12	22.32	23.00	
	1	50	22.32	22.24	22.38	23.00	
	1	99	22.41	22.30	22.47	23.00	
5MHz	QPSK	50	0	21.50	21.37	21.55	22.00
		50	25	21.58	21.47	21.66	22.00
		50	50	21.58	21.48	21.65	22.00
		100	0	21.50	21.42	21.58	22.00

LTE Band 38							
Level5-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	22.23	22.15	22.26	23.50
		1	13	22.29	22.22	22.29	23.50
		1	24	22.39	22.25	22.27	23.50
		12	0	21.13	21.20	21.20	22.50



		12	6	21.28	21.37	21.36	22.50
		12	13	21.35	21.38	21.38	22.50
		25	0	21.28	21.25	21.32	22.50
	16QAM	1	0	21.35	21.32	21.41	22.50
		1	13	21.44	21.39	21.46	22.50
		1	24	21.46	21.42	21.49	22.50
		12	0	20.37	20.28	20.38	21.50
		12	6	20.45	20.37	20.47	21.50
		12	13	20.39	20.33	20.44	21.50
		25	0	20.37	20.30	20.39	21.50
	64QAM	1	0	20.34	20.29	20.35	21.50
		1	13	20.53	20.49	20.54	21.50
		1	24	20.51	20.45	20.49	21.50
		12	0	19.35	19.27	19.41	20.50
12		6	19.38	19.30	19.42	20.50	
12		13	19.52	19.47	19.55	20.50	
25		0	19.35	19.30	19.38	20.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	22.25	22.16	22.29	23.50
		1	25	22.32	22.27	22.33	23.50
		1	49	22.41	22.29	22.30	23.50
		25	0	21.16	21.25	21.24	22.50
		25	13	21.31	21.42	21.40	22.50
		25	25	21.37	21.42	21.43	22.50
		50	0	21.32	21.27	21.36	22.50
	16QAM	1	0	21.39	21.35	21.43	22.50
		1	25	21.48	21.43	21.49	22.50
		1	49	21.49	21.44	21.52	22.50
		25	0	20.40	20.33	20.42	21.50
		25	13	20.47	20.41	20.50	21.50
		25	25	20.42	20.38	20.48	21.50
		50	0	20.40	20.35	20.43	21.50
	64QAM	1	0	20.36	20.28	20.37	21.50
		1	25	20.56	20.49	20.57	21.50
		1	49	20.50	20.47	20.52	21.50
		25	0	19.38	19.32	19.41	20.50
		25	13	19.40	19.34	19.45	20.50
		25	25	19.55	19.52	19.59	20.50
		50	0	19.38	19.35	19.42	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	22.24	22.12	22.27	23.50



		1	38	22.30	22.26	22.30	23.50
		1	74	22.38	22.24	22.26	23.50
		36	0	21.14	21.21	21.21	22.50
		36	18	21.28	21.37	21.36	22.50
		36	39	21.34	21.39	21.39	22.50
		75	0	21.30	21.23	21.31	22.50
		1	0	21.37	21.33	21.41	22.50
	16QAM	1	38	21.46	21.40	21.47	22.50
		1	74	21.47	21.40	21.49	22.50
		36	0	20.37	20.31	20.39	21.50
		36	18	20.44	20.36	20.46	21.50
		36	39	20.40	20.34	20.45	21.50
		75	0	20.37	20.30	20.39	21.50
		1	0	20.31	20.26	20.35	21.50
	64QAM	1	38	20.54	20.46	20.55	21.50
		1	74	20.51	20.46	20.53	21.50
		36	0	19.37	19.34	19.42	20.50
		36	18	19.38	19.31	19.44	20.50
		36	39	19.53	19.48	19.56	20.50
		75	0	19.35	19.30	19.38	20.50
		Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)	
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	22.21	22.08	22.24	23.50
		1	50	22.29	22.22	22.28	23.50
		1	99	22.36	22.23	22.23	23.50
		50	0	21.11	21.16	21.17	22.50
		50	25	21.26	21.33	21.33	22.50
		50	50	21.31	21.34	21.35	22.50
		100	0	21.27	21.18	21.27	22.50
	16QAM	1	0	21.34	21.29	21.36	22.50
		1	50	21.43	21.38	21.43	22.50
		1	99	21.44	21.37	21.47	22.50
		50	0	20.34	20.27	20.36	21.50
		50	25	20.41	20.34	20.43	21.50
		50	50	20.37	20.29	20.41	21.50
		100	0	20.35	20.26	20.36	21.50
	64QAM	1	0	20.29	20.22	20.30	21.50
		1	50	20.50	20.44	20.51	21.50
		1	99	20.45	20.40	20.47	21.50
		50	0	19.32	19.26	19.35	20.50
		50	25	19.34	19.27	19.38	20.50
		50	50	19.50	19.43	19.52	20.50
		100	0	19.33	19.26	19.35	20.50



LTE Band 38							
Full Power&Level1&Level3&Level4&Level5-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	21.62	22.22	22.57	23.00
		1	13	21.68	22.31	22.62	23.00
		1	24	22.06	22.26	22.45	23.00
		12	0	20.80	21.40	21.37	22.00
		12	6	20.93	21.39	21.54	22.00
		12	13	21.09	21.36	21.55	22.00
		25	0	21.03	21.32	21.53	22.00
	16QAM	1	0	21.45	21.46	21.57	22.00
		1	13	21.49	21.45	21.57	22.00
		1	24	21.67	21.62	21.70	22.00
		12	0	20.33	20.26	20.37	21.00
		12	6	20.44	20.34	20.48	21.00
		12	13	20.48	20.45	20.55	21.00
		25	0	20.33	20.32	20.42	21.00
	64QAM	1	0	20.26	20.14	20.34	21.00
		1	13	20.37	20.22	20.41	21.00
		1	24	20.36	20.27	20.39	21.00
		12	0	19.54	19.45	19.59	20.00
		12	6	19.65	19.53	19.71	20.00
		12	13	19.59	19.56	19.66	20.00
		25	0	19.38	19.37	19.46	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	21.57	22.13	22.51	23.00
		1	25	21.66	22.27	22.58	23.00
		1	49	22.00	22.19	22.37	23.00
		25	0	20.75	21.31	21.30	22.00
		25	13	20.89	21.31	21.46	22.00
		25	25	21.03	21.30	21.48	22.00
		50	0	21.02	21.24	21.46	22.00
	16QAM	1	0	21.44	21.39	21.49	22.00
		1	25	21.48	21.42	21.51	22.00
		1	49	21.62	21.55	21.64	22.00
		25	0	20.28	20.21	20.32	21.00
		25	13	20.37	20.26	20.40	21.00
		25	25	20.43	20.36	20.48	21.00
		50	0	20.29	20.24	20.34	21.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				37825/2577.5	38000/2595	38175/2612.5		
	64QAM	1	0	20.18	20.07	20.26	21.00	
		1	25	20.31	20.19	20.35	21.00	
		1	49	20.31	20.20	20.33	21.00	
		25	0	19.49	19.40	19.54	20.00	
		25	13	19.58	19.45	19.63	20.00	
		25	25	19.54	19.47	19.59	20.00	
		50	0	19.34	19.29	19.38	20.00	
15MHz	QPSK	1	0	21.59	22.18	22.54	23.00	
		1	38	21.67	22.27	22.60	23.00	
		1	74	22.04	22.25	22.42	23.00	
		36	0	20.77	21.35	21.33	22.00	
		36	18	20.91	21.35	21.51	22.00	
		36	39	21.06	21.31	21.51	22.00	
		75	0	21.00	21.27	21.49	22.00	
	16QAM	1	0	21.42	21.42	21.52	22.00	
		1	38	21.46	21.43	21.53	22.00	
		1	74	21.64	21.59	21.68	22.00	
		36	0	20.30	20.22	20.34	21.00	
		36	18	20.41	20.32	20.45	21.00	
		36	39	20.45	20.40	20.51	21.00	
		75	0	20.31	20.28	20.39	21.00	
	64QAM	1	0	20.24	20.10	20.29	21.00	
		1	38	20.33	20.20	20.37	21.00	
		1	74	20.30	20.21	20.33	21.00	
		36	0	19.49	19.37	19.52	20.00	
		36	18	19.61	19.49	19.65	20.00	
		36	39	19.56	19.51	19.62	20.00	
		75	0	19.36	19.33	19.43	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					37850/2580	38000/2595	38150/2610	
	20MHz	QPSK	1	0	21.54	22.09	22.48	23.00
			1	50	21.65	22.23	22.56	23.00
			1	99	21.98	22.18	22.34	23.00
			50	0	20.72	21.26	21.26	22.00
			50	25	20.87	21.27	21.43	22.00
50			50	21.00	21.25	21.44	22.00	
100			0	20.99	21.19	21.42	22.00	
16QAM		1	0	21.41	21.35	21.44	22.00	
		1	50	21.45	21.40	21.47	22.00	
		1	99	21.59	21.52	21.62	22.00	
		50	0	20.25	20.17	20.29	21.00	



		50	25	20.34	20.24	20.37	21.00
		50	50	20.40	20.31	20.44	21.00
		100	0	20.27	20.20	20.31	21.00
	64QAM	1	0	20.16	20.03	20.21	21.00
		1	50	20.27	20.17	20.31	21.00
		1	99	20.25	20.14	20.27	21.00
		50	0	19.44	19.32	19.47	20.00
		50	25	19.54	19.41	19.57	20.00
		50	50	19.51	19.42	19.55	20.00
		100	0	19.32	19.25	19.35	20.00

LTE Band 38							
Level2-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	20.36	20.54	20.40	21.50
		1	13	20.53	20.71	20.66	21.50
		1	24	20.65	20.70	20.64	21.50
		12	0	19.52	19.58	19.66	20.50
		12	6	19.54	19.65	19.56	20.50
		12	13	19.53	19.71	19.53	20.50
		25	0	19.54	19.68	19.60	20.50
	16QAM	1	0	19.76	19.72	19.77	20.50
		1	13	19.75	19.71	19.74	20.50
		1	24	19.72	19.79	19.81	20.50
		12	0	18.49	18.55	18.57	19.50
		12	6	18.64	18.69	18.73	19.50
		12	13	18.73	18.68	18.71	19.50
		25	0	18.69	18.53	18.56	19.50
	64QAM	1	0	18.52	18.33	18.50	19.50
		1	13	18.42	18.35	18.50	19.50
		1	24	18.59	18.47	18.61	19.50
		12	0	17.55	17.47	17.65	18.50
		12	6	17.64	17.56	17.72	18.50
		12	13	17.52	17.47	17.62	18.50
		25	0	17.69	17.65	17.68	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK			37800/2575	38000/2595	38200/2615	
		1	0	20.38	20.55	20.43	21.50
		1	25	20.56	20.76	20.70	21.50
		1	49	20.67	20.74	20.67	21.50
		25	0	19.55	19.63	19.70	20.50
		25	13	19.57	19.70	19.60	20.50



		25	25	19.55	19.75	19.58	20.50
		50	0	19.58	19.70	19.64	20.50
	16QAM	1	0	19.80	19.75	19.79	20.50
		1	25	19.79	19.75	19.77	20.50
		1	49	19.75	19.81	19.84	20.50
		25	0	18.52	18.60	18.61	19.50
		25	13	18.66	18.73	18.76	19.50
		25	25	18.76	18.73	18.75	19.50
		50	0	18.72	18.58	18.60	19.50
	64QAM	1	0	18.54	18.32	18.52	19.50
		1	25	18.45	18.35	18.53	19.50
		1	49	18.58	18.49	18.64	19.50
		25	0	17.58	17.52	17.65	18.50
		25	13	17.66	17.60	17.75	18.50
25		25	17.55	17.52	17.66	18.50	
50		0	17.72	17.70	17.72	18.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	20.37	20.51	20.41	21.50
		1	38	20.54	20.75	20.67	21.50
		1	74	20.64	20.69	20.63	21.50
		36	0	19.53	19.59	19.67	20.50
		36	18	19.54	19.65	19.56	20.50
		36	39	19.52	19.72	19.54	20.50
		75	0	19.56	19.66	19.59	20.50
	16QAM	1	0	19.78	19.73	19.77	20.50
		1	38	19.77	19.72	19.75	20.50
		1	74	19.73	19.77	19.81	20.50
		36	0	18.49	18.58	18.58	19.50
		36	18	18.63	18.68	18.72	19.50
		36	39	18.74	18.69	18.72	19.50
		75	0	18.69	18.53	18.56	19.50
	64QAM	1	0	18.49	18.30	18.50	19.50
		1	38	18.43	18.32	18.51	19.50
		1	74	18.59	18.48	18.65	19.50
		36	0	17.57	17.54	17.66	18.50
		36	18	17.64	17.57	17.74	18.50
		36	39	17.53	17.48	17.63	18.50
		75	0	17.69	17.65	17.68	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	20.34	20.47	20.38	21.50
		1	50	20.53	20.71	20.65	21.50



		1	99	20.62	20.68	20.60	21.50
		50	0	19.50	19.54	19.63	20.50
		50	25	19.52	19.61	19.53	20.50
		50	50	19.49	19.67	19.50	20.50
		100	0	19.53	19.61	19.55	20.50
	16QAM	1	0	19.75	19.69	19.72	20.50
		1	50	19.74	19.70	19.71	20.50
		1	99	19.70	19.74	19.79	20.50
		50	0	18.46	18.54	18.55	19.50
		50	25	18.60	18.66	18.69	19.50
		50	50	18.71	18.64	18.68	19.50
		100	0	18.67	18.49	18.53	19.50
	64QAM	1	0	18.47	18.26	18.45	19.50
		1	50	18.39	18.30	18.47	19.50
		1	99	18.53	18.42	18.59	19.50
		50	0	17.52	17.46	17.59	18.50
		50	25	17.60	17.53	17.68	18.50
		50	50	17.50	17.43	17.59	18.50
		100	0	17.67	17.61	17.65	18.50

LTE Band 40							
Full Power&Level1&Level2&Level3&Level4&Level6-D1&Level6-D2&Level7-D1&Level7-D2-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				38675/2302.5	39150/2350	39625/2397.5	
5MHz	QPSK	1	0	24.11	24.39	24.40	25.00
		1	13	23.86	24.18	24.12	25.00
		1	24	23.91	23.94	23.87	25.00
		12	0	23.05	23.37	23.32	24.00
		12	6	22.99	23.14	23.15	24.00
		12	13	22.99	23.16	23.11	24.00
		25	0	23.07	23.35	23.24	24.00
	16QAM	1	0	23.57	23.63	23.66	24.00
		1	13	23.31	23.29	23.41	24.00
		1	24	23.31	23.22	23.27	24.00
		12	0	22.35	22.24	22.30	23.00
		12	6	22.42	22.22	22.31	23.00
		12	13	22.42	22.34	22.36	23.00
		25	0	22.33	22.26	22.38	23.00
	64QAM	1	0	22.59	22.58	22.75	23.00
		1	13	22.51	21.85	22.46	23.00
		1	24	22.59	22.64	22.44	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				38700/2305	39150/2350	39600/2395	
		12	0	21.49	21.42	21.52	22.00
		12	6	21.39	21.26	21.42	22.00
		12	13	21.26	21.24	21.32	22.00
		25	0	21.32	21.30	21.43	22.00
10MHz	QPSK	1	0	24.06	24.30	24.34	25.00
		1	25	23.84	24.14	24.08	25.00
		1	49	23.85	23.87	23.79	25.00
		25	0	23.00	23.28	23.25	24.00
		25	13	22.95	23.06	23.07	24.00
		25	25	22.93	23.10	23.04	24.00
		50	0	23.06	23.27	23.17	24.00
	16QAM	1	0	23.56	23.56	23.58	24.00
		1	25	23.30	23.26	23.35	24.00
		1	49	23.26	23.15	23.21	24.00
		25	0	22.30	22.19	22.25	23.00
		25	13	22.35	22.14	22.23	23.00
		25	25	22.37	22.25	22.29	23.00
		50	0	22.29	22.18	22.30	23.00
	64QAM	1	0	22.51	22.51	22.67	23.00
		1	25	22.45	21.82	22.40	23.00
		1	49	22.54	22.57	22.38	23.00
		25	0	21.44	21.37	21.47	22.00
		25	13	21.32	21.18	21.34	22.00
		25	25	21.21	21.15	21.25	22.00
		50	0	21.28	21.22	21.35	22.00

LTE Band 40							
Level5-Main Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				38675/2302.5	39150/2350	39625/2397.5	
5MHz	QPSK	1	0	22.04	22.00	22.04	23.00
		1	13	21.98	22.08	22.00	23.00
		1	24	21.88	22.08	22.08	23.00
		12	0	20.97	21.16	21.12	22.00
		12	6	21.06	21.11	21.11	22.00
		12	13	21.05	21.11	21.08	22.00
		25	0	20.99	21.15	21.07	22.00
	16QAM	1	0	21.19	21.13	21.28	22.00
		1	13	21.20	21.17	21.27	22.00
		1	24	21.18	21.13	21.23	22.00
		12	0	20.09	20.04	20.15	21.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				38700/2305	39150/2350	39600/2395		
10MHz	64QAM	12	6	20.23	20.16	20.31	21.00	
		12	13	20.22	20.17	20.31	21.00	
		25	0	20.14	20.10	20.23	21.00	
		1	0	20.32	20.24	20.39	21.00	
		1	13	20.26	20.22	20.32	21.00	
		1	24	20.25	20.20	20.30	21.00	
		12	0	19.25	19.20	19.31	20.00	
		12	6	19.20	19.13	19.28	20.00	
		12	13	19.27	19.22	19.36	20.00	
	25	0	19.25	19.21	19.34	20.00		
	10MHz	QPSK	1	0	22.00	21.92	21.99	23.00
			1	25	21.95	22.03	21.95	23.00
			1	49	21.83	22.02	22.01	23.00
			25	0	20.92	21.07	21.05	22.00
			25	13	21.01	21.02	21.04	22.00
25			25	20.99	21.03	21.00	22.00	
50			0	20.94	21.26	20.98	22.00	
16QAM		1	0	21.14	21.07	21.21	22.00	
		1	25	21.15	21.12	21.21	22.00	
		1	49	21.13	21.06	21.18	22.00	
		25	0	20.03	19.98	20.09	21.00	
		25	13	20.17	20.09	20.24	21.00	
		25	25	20.17	20.08	20.24	21.00	
		50	0	20.09	20.01	20.16	21.00	
64QAM		1	0	20.25	20.18	20.32	21.00	
	1	25	20.20	20.17	20.26	21.00		
	1	49	20.20	20.13	20.25	21.00		
	25	0	19.19	19.14	19.25	20.00		
	25	13	19.14	19.06	19.21	20.00		
	25	25	19.22	19.13	19.29	20.00		
	50	0	19.20	19.12	19.27	20.00		

LTE Band 40							
Full Power&Level1&Level3&Level4&Level5-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				38675/2302.5	39150/2350	39625/2397.5	
5MHz	QPSK	1	0	22.29	22.64	22.59	23.00
		1	13	22.22	22.48	22.56	23.00
		1	24	22.41	22.47	22.56	23.00
		12	0	21.36	21.69	21.59	22.00



		12	6	21.39	21.70	21.68	22.00
		12	13	21.45	21.66	21.71	22.00
		25	0	21.32	21.76	21.70	22.00
	16QAM	1	0	21.37	21.77	21.81	22.00
		1	13	21.50	21.69	21.67	22.00
		1	24	21.65	21.78	21.71	22.00
		12	0	20.40	20.56	20.58	21.00
		12	6	20.61	20.71	20.76	21.00
		12	13	20.43	20.72	20.66	21.00
		25	0	20.39	20.67	20.69	21.00
	64QAM	1	0	20.54	20.69	20.76	21.00
		1	13	20.50	20.61	20.04	21.00
		1	24	20.10	20.65	20.03	21.00
		12	0	19.62	19.64	19.57	20.00
12		6	19.53	19.65	19.19	20.00	
12		13	19.30	19.71	19.22	20.00	
25		0	19.38	19.73	19.52	20.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				38700/2305	39150/2350	39600/2395	
10MHz	QPSK	1	0	22.25	22.56	22.54	23.00
		1	25	22.19	22.43	22.51	23.00
		1	49	22.36	22.41	22.49	23.00
		25	0	21.31	21.60	21.52	22.00
		25	13	21.34	21.61	21.61	22.00
		25	25	21.39	21.58	21.63	22.00
		50	0	21.27	21.67	21.61	22.00
	16QAM	1	0	21.32	21.71	21.74	22.00
		1	25	21.45	21.64	21.61	22.00
		1	49	21.60	21.71	21.66	22.00
		25	0	20.34	20.50	20.52	21.00
		25	13	20.55	20.64	20.69	21.00
		25	25	20.38	20.63	20.59	21.00
		50	0	20.34	20.58	20.62	21.00
	64QAM	1	0	20.47	20.63	20.69	21.00
		1	25	20.44	20.56	19.98	21.00
		1	49	20.05	20.58	19.98	21.00
		25	0	19.56	19.58	19.51	20.00
		25	13	19.47	19.58	19.12	20.00
		25	25	19.25	19.62	19.15	20.00
		50	0	19.33	19.64	19.45	20.00

LTE Band 40							
Level2-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				38675/2302.5	39150/2350	39625/2397.5	
5MHz	QPSK	1	0	20.40	20.49	20.36	21.50
		1	13	20.27	20.34	20.29	21.50
		1	24	20.34	20.20	20.24	21.50
		12	0	19.29	19.45	19.46	20.50
		12	6	19.45	19.37	19.37	20.50
		12	13	19.39	19.50	19.35	20.50
		25	0	19.43	19.48	19.43	20.50
	16QAM	1	0	19.51	19.48	19.58	20.50
		1	13	19.62	19.57	19.65	20.50
		1	24	19.33	19.29	19.38	20.50
		12	0	18.46	18.37	18.46	19.50
		12	6	18.54	18.46	18.57	19.50
		12	13	18.44	18.38	18.49	19.50
		25	0	18.48	18.41	18.53	19.50
	64QAM	1	0	18.45	18.40	18.52	19.50
		1	13	18.54	18.50	18.59	19.50
		1	24	18.36	18.30	18.37	19.50
		12	0	17.53	17.45	17.57	18.50
		12	6	17.48	17.40	17.51	18.50
		12	13	17.38	17.33	17.43	18.50
		25	0	17.46	17.41	17.51	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK	1	0	20.38	20.42	20.34	21.50
		1	25	20.27	20.34	20.28	21.50
		1	49	20.31	20.18	20.20	21.50
		25	0	19.27	19.41	19.43	20.50
		25	13	19.43	19.33	19.34	20.50
		25	25	19.35	19.46	19.32	20.50
		50	0	19.42	19.41	19.38	20.50
	16QAM	1	0	19.50	19.45	19.53	20.50
		1	25	19.61	19.56	19.62	20.50
		1	49	19.31	19.24	19.36	20.50
		25	0	18.43	18.36	18.44	19.50
		25	13	18.50	18.43	18.53	19.50
		25	25	18.42	18.34	18.46	19.50
		50	0	18.46	18.37	18.50	19.50
	64QAM	1	0	18.40	18.33	18.47	19.50



		1	25	18.51	18.45	18.56	19.50
		1	49	18.30	18.25	18.35	19.50
		25	0	17.50	17.44	17.51	18.50
		25	13	17.44	17.37	17.47	18.50
		25	25	17.36	17.29	17.40	18.50
		50	0	17.44	17.37	17.48	18.50

LTE Band 41									
Full Power&Level1&Level2&Level3&Level4&Level6-D2&Level7-D2-Main Ant1				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	25.45	25.27	24.80	25.76	24.25	26.00
		1	13	25.45	25.25	24.82	25.55	24.75	26.00
		1	24	25.42	25.26	25.23	25.25	25.53	26.00
		12	0	24.44	24.48	24.08	24.58	23.59	25.00
		12	6	24.59	24.62	24.19	24.72	24.13	25.00
		12	13	24.59	24.65	24.32	24.55	24.57	25.00
		25	0	24.63	24.65	24.14	24.69	24.00	25.00
	16QAM	1	0	24.16	24.23	24.17	24.32	24.26	25.00
		1	13	24.16	24.20	24.17	24.26	24.23	25.00
		1	24	24.37	24.42	24.32	24.53	24.44	25.00
		12	0	23.25	23.26	23.23	23.40	23.32	24.00
		12	6	23.39	23.41	23.36	23.57	23.49	24.00
		12	13	23.46	23.52	23.43	23.65	23.56	24.00
		25	0	23.34	23.39	23.31	23.52	23.42	24.00
	64QAM	1	0	22.73	22.80	22.66	22.94	22.86	24.00
		1	13	22.73	22.79	22.68	22.90	22.83	24.00
		1	24	23.11	23.16	23.02	23.28	23.18	24.00
		12	0	21.38	21.43	21.40	21.54	21.53	23.00
		12	6	21.46	21.51	21.43	21.65	21.59	23.00
		12	13	21.60	21.66	21.57	21.80	21.70	23.00
		25	0	21.46	21.51	21.43	21.64	21.54	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	25.47	25.28	24.83	25.77	24.28	26.00
		1	25	25.48	25.30	24.86	25.60	24.79	26.00
		1	49	25.44	25.30	25.26	25.29	25.56	26.00
		25	0	24.47	24.53	24.12	24.63	23.63	25.00
		25	13	24.62	24.67	24.23	24.77	24.17	25.00
		25	25	24.61	24.69	24.37	24.59	24.62	25.00
		50	0	24.67	24.67	24.18	24.71	24.04	25.00



	16QAM	1	0	24.20	24.26	24.19	24.35	24.28	25.00
		1	25	24.20	24.24	24.20	24.30	24.26	25.00
		1	49	24.40	24.44	24.35	24.55	24.47	25.00
		25	0	23.28	23.31	23.27	23.45	23.36	24.00
		25	13	23.41	23.45	23.39	23.61	23.52	24.00
		25	25	23.49	23.57	23.47	23.70	23.60	24.00
		50	0	23.37	23.44	23.35	23.57	23.46	24.00
	64QAM	1	0	22.75	22.79	22.68	22.93	22.88	24.00
		1	25	22.76	22.79	22.71	22.90	22.86	24.00
		1	49	23.10	23.18	23.05	23.30	23.21	24.00
		25	0	21.41	21.48	21.40	21.59	21.53	23.00
		25	13	21.48	21.55	21.46	21.69	21.62	23.00
		25	25	21.63	21.71	21.61	21.85	21.74	23.00
		50	0	21.49	21.56	21.47	21.69	21.58	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	25.46	25.24	24.81	25.73	24.26	26.00
		1	38	25.46	25.29	24.83	25.59	24.76	26.00
		1	74	25.41	25.25	25.22	25.24	25.52	26.00
		36	0	24.45	24.49	24.09	24.59	23.60	25.00
		36	18	24.59	24.62	24.19	24.72	24.13	25.00
		36	39	24.58	24.66	24.33	24.56	24.58	25.00
		75	0	24.65	24.63	24.13	24.67	23.99	25.00
	16QAM	1	0	24.18	24.24	24.17	24.33	24.26	25.00
		1	38	24.18	24.21	24.18	24.27	24.24	25.00
		1	74	24.38	24.40	24.32	24.51	24.44	25.00
		36	0	23.25	23.29	23.24	23.43	23.33	24.00
		36	18	23.38	23.40	23.35	23.56	23.48	24.00
		36	39	23.47	23.53	23.44	23.66	23.57	24.00
		75	0	23.34	23.39	23.31	23.52	23.42	24.00
	64QAM	1	0	22.70	22.77	22.66	22.91	22.86	24.00
		1	38	22.74	22.76	22.69	22.87	22.84	24.00
		1	74	23.11	23.17	23.06	23.29	23.22	24.00
		36	0	21.40	21.50	21.41	21.61	21.54	23.00
		36	18	21.46	21.52	21.45	21.66	21.61	23.00
		36	39	21.61	21.67	21.58	21.81	21.71	23.00
		75	0	21.46	21.51	21.43	21.64	21.54	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	25.43	25.20	24.78	25.69	24.23	26.00
		1	50	25.45	25.25	24.81	25.55	24.74	26.00
		1	99	25.39	25.24	25.19	25.23	25.49	26.00
		50	0	24.42	24.44	24.05	24.54	23.56	25.00



		50	25	24.57	24.58	24.16	24.68	24.10	25.00
		50	50	24.55	24.61	24.29	24.51	24.54	25.00
		100	0	24.62	24.58	24.09	24.62	23.95	25.00
	16QAM	1	0	24.15	24.20	24.12	24.29	24.21	25.00
		1	50	24.15	24.19	24.14	24.25	24.20	25.00
		1	99	24.35	24.37	24.30	24.48	24.42	25.00
		50	0	23.22	23.25	23.21	23.39	23.30	24.00
		50	25	23.35	23.38	23.32	23.54	23.45	24.00
		50	50	23.44	23.48	23.40	23.61	23.53	24.00
		100	0	23.32	23.35	23.28	23.48	23.39	24.00
	64QAM	1	0	22.68	22.73	22.61	22.87	22.81	24.00
		1	50	22.70	22.74	22.65	22.85	22.80	24.00
		1	99	23.05	23.11	23.00	23.23	23.16	24.00
		50	0	21.35	21.42	21.34	21.53	21.47	23.00
50		25	21.42	21.48	21.39	21.62	21.55	23.00	
50		50	21.58	21.62	21.54	21.76	21.67	23.00	
100		0	21.44	21.47	21.40	21.60	21.51	23.00	

LTE Band 41									
Level5-Main Ant1				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	21.87	21.77	21.86	21.87	21.81	23.50
		1	13	21.71	21.78	21.71	21.62	21.78	23.50
		1	24	21.77	21.77	21.75	21.65	21.87	23.50
		12	0	20.98	20.86	20.66	20.83	20.88	22.50
		12	6	20.84	20.85	20.85	20.87	20.80	22.50
		12	13	20.92	20.87	20.78	20.94	20.94	22.50
		25	0	20.99	20.84	20.79	20.92	20.86	22.50
	16QAM	1	0	21.05	21.15	21.08	21.01	21.00	22.50
		1	13	20.83	20.91	20.88	20.79	20.80	22.50
		1	24	20.97	21.03	21.01	20.96	20.91	22.50
		12	0	19.91	20.02	20.00	19.86	19.84	21.50
		12	6	19.93	20.03	20.01	19.89	19.88	21.50
		12	13	19.98	20.08	20.04	19.93	19.89	21.50
		25	0	20.00	20.11	20.07	19.95	19.91	21.50
	64QAM	1	0	20.06	20.14	20.11	20.02	19.97	21.50
		1	13	19.95	20.02	19.99	19.93	19.88	21.50
		1	24	20.05	20.10	20.11	20.02	19.96	21.50
		12	0	18.90	19.04	18.98	18.86	18.88	20.50
		12	6	19.00	19.11	19.08	18.98	18.96	20.50
		12	13	18.93	19.02	18.98	18.88	18.84	20.50
		25	0	18.93	19.01	18.98	18.89	18.86	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	21.88	21.80	21.88	21.88	21.84	23.50
		1	25	21.76	21.82	21.74	21.67	21.82	23.50
		1	49	21.81	21.80	21.77	21.69	21.90	23.50
		25	0	21.03	20.90	20.69	20.88	20.92	22.50
		25	13	20.89	20.89	20.88	20.92	20.84	22.50
		25	25	20.96	20.92	20.80	20.98	20.99	22.50
		50	0	21.01	20.88	20.83	20.94	20.90	22.50
	16QAM	1	0	21.08	21.17	21.12	21.04	21.02	22.50
		1	25	20.87	20.94	20.92	20.83	20.83	22.50
		1	49	20.99	21.06	21.04	20.98	20.94	22.50
		25	0	19.96	20.06	20.03	19.91	19.88	21.50
		25	13	19.97	20.06	20.03	19.93	19.91	21.50
		25	25	20.03	20.12	20.07	19.98	19.93	21.50
		50	0	20.05	20.15	20.10	20.00	19.95	21.50
	64QAM	1	0	20.05	20.16	20.13	20.01	19.99	21.50
		1	25	19.95	20.05	20.02	19.93	19.91	21.50
		1	49	20.07	20.13	20.10	20.04	19.99	21.50
		25	0	18.95	19.04	19.01	18.91	18.88	20.50
		25	13	19.04	19.14	19.10	19.02	18.99	20.50
		25	25	18.98	19.06	19.01	18.93	18.88	20.50
		50	0	18.98	19.05	19.01	18.94	18.90	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	21.84	21.78	21.87	21.84	21.82	23.50
		1	38	21.75	21.79	21.72	21.66	21.79	23.50
		1	74	21.76	21.76	21.74	21.64	21.86	23.50
		36	0	20.99	20.87	20.67	20.84	20.89	22.50
		36	18	20.84	20.85	20.85	20.87	20.80	22.50
		36	39	20.93	20.88	20.77	20.95	20.95	22.50
		75	0	20.97	20.83	20.81	20.90	20.85	22.50
	16QAM	1	0	21.06	21.15	21.10	21.02	21.00	22.50
		1	38	20.84	20.92	20.90	20.80	20.81	22.50
		1	74	20.95	21.03	21.02	20.94	20.91	22.50
		36	0	19.94	20.03	20.00	19.89	19.85	21.50
		36	18	19.92	20.02	20.00	19.88	19.87	21.50
		36	39	19.99	20.09	20.05	19.94	19.90	21.50
		75	0	20.00	20.11	20.07	19.95	19.91	21.50
	64QAM	1	0	20.03	20.14	20.08	19.99	19.97	21.50
		1	38	19.92	20.03	20.00	19.90	19.89	21.50
		1	74	20.06	20.14	20.11	20.03	20.00	21.50
		36	0	18.97	19.05	19.00	18.93	18.89	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
				36	18	19.01	19.13	19.08	
36	39	18.94	19.03	18.99	18.89	18.85	20.50		
75	0	18.93	19.01	18.98	18.89	18.86	20.50		
20MHz	QPSK	1	0	21.84	21.80	21.79	21.80	21.75	23.50
		1	50	21.71	21.62	21.77	21.71	21.77	23.50
		1	99	21.72	21.63	21.83	21.75	21.73	23.50
		50	0	20.64	20.79	20.85	20.94	20.83	22.50
		50	25	20.83	20.83	20.77	20.80	20.82	22.50
		50	50	20.74	20.90	20.91	20.88	20.84	22.50
		100	0	20.78	20.85	20.81	21.22	20.79	22.50
	16QAM	1	0	21.07	20.98	20.95	21.02	21.10	22.50
		1	50	20.87	20.78	20.77	20.82	20.88	22.50
		1	99	20.99	20.91	20.89	20.92	21.01	22.50
		50	0	19.97	19.85	19.82	19.90	20.00	21.50
		50	25	19.97	19.86	19.84	19.90	19.99	21.50
		50	50	20.02	19.89	19.86	19.94	20.05	21.50
		100	0	20.05	19.91	19.88	19.96	20.08	21.50
	64QAM	1	0	20.06	19.95	19.92	19.99	20.09	21.50
		1	50	19.96	19.88	19.85	19.90	19.99	21.50
		1	99	20.05	19.97	19.94	20.00	20.08	21.50
		50	0	18.95	18.85	18.82	18.89	18.98	20.50
		50	25	19.04	18.95	18.92	18.97	19.07	20.50
		50	50	18.96	18.84	18.81	18.89	18.99	20.50
		100	0	18.96	18.85	18.83	18.89	18.98	20.50

LTE Band 41									
Level6-D1&Level7-D1-Main Ant1				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	23.61	23.62	23.75	23.99	24.00	24.50
		1	13	23.62	23.65	23.76	23.78	23.94	24.50
		1	24	23.71	23.70	23.84	23.95	23.79	24.50
		12	0	22.77	22.72	22.83	22.99	22.97	23.50
		12	6	22.82	22.95	22.90	22.75	23.03	23.50
		12	13	22.77	22.86	22.92	23.12	23.05	23.50
		25	0	22.79	22.87	22.88	22.85	22.89	23.50
	16QAM	1	0	22.74	22.81	22.69	22.93	22.92	23.50
		1	13	22.88	22.90	22.83	22.97	22.97	23.50
		1	24	22.78	22.85	22.72	22.97	22.95	23.50
		12	0	21.93	22.01	21.87	22.15	22.09	22.50
		12	6	21.92	21.96	21.85	22.14	22.08	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
	64QAM	12	13	22.03	22.13	21.97	22.25	22.28	22.50
		25	0	21.85	21.96	21.79	22.10	22.08	22.50
		1	0	21.58	21.69	21.54	21.85	21.77	22.50
		1	13	21.93	21.96	21.87	22.11	22.01	22.50
		1	24	21.90	21.98	21.85	22.13	22.10	22.50
		12	0	20.99	21.12	20.95	21.21	21.21	21.50
		12	6	21.01	21.09	20.96	21.25	21.20	21.50
		12	13	21.06	21.16	21.00	21.28	21.31	21.50
		25	0	20.93	21.02	20.87	21.13	21.16	21.50
10MHz	QPSK	1	0	23.63	23.67	23.78	23.94	23.91	24.50
		1	25	23.63	23.65	23.78	23.76	23.90	24.50
		1	49	23.75	23.76	23.89	23.89	23.72	24.50
		25	0	22.79	22.76	22.86	22.94	22.88	23.50
		25	13	22.84	22.99	22.95	22.71	22.95	23.50
		25	25	22.80	22.87	22.95	23.06	22.99	23.50
		50	0	22.77	22.90	22.91	22.84	22.81	23.50
	16QAM	1	0	22.72	22.84	22.72	22.92	22.85	23.50
		1	25	22.86	22.91	22.85	22.96	22.94	23.50
		1	49	22.80	22.89	22.76	22.92	22.88	23.50
		25	0	21.95	22.02	21.89	22.10	22.04	22.50
		25	13	21.96	22.02	21.90	22.07	22.00	22.50
		25	25	22.05	22.17	22.00	22.20	22.19	22.50
		50	0	21.87	22.00	21.84	22.06	22.00	22.50
	64QAM	1	0	21.64	21.72	21.57	21.77	21.70	22.50
		1	25	21.95	21.97	21.89	22.05	21.98	22.50
		1	49	21.89	21.99	21.85	22.08	22.03	22.50
		25	0	20.99	21.09	20.93	21.16	21.16	21.50
		25	13	21.04	21.13	20.98	21.18	21.12	21.50
		25	25	21.08	21.20	21.03	21.23	21.22	21.50
		50	0	20.95	21.06	20.92	21.09	21.08	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	23.60	23.65	23.74	23.90	23.83	24.50
		1	38	23.61	23.61	23.75	23.73	23.85	24.50
		1	74	23.72	23.71	23.85	23.84	23.66	24.50
		36	0	22.76	22.71	22.82	22.89	22.79	23.50
		36	18	22.82	22.95	22.90	22.66	22.86	23.50
		36	39	22.78	22.85	22.91	23.00	22.91	23.50
		75	0	22.77	22.89	22.89	22.79	22.72	23.50
	16QAM	1	0	22.72	22.80	22.69	22.87	22.79	23.50
		1	38	22.86	22.89	22.82	22.91	22.89	23.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	64QAM	1	74	22.77	22.87	22.72	22.87	22.81	23.50
		36	0	21.93	21.98	21.86	22.04	21.98	22.50
		36	18	21.93	21.97	21.86	22.01	21.93	22.50
		36	39	22.02	22.12	21.96	22.15	22.10	22.50
		75	0	21.85	21.96	21.79	22.01	21.91	22.50
		1	0	21.61	21.72	21.54	21.70	21.64	22.50
		1	38	21.92	21.99	21.86	21.99	21.93	22.50
	QPSK	1	74	21.90	21.97	21.81	22.03	21.96	22.50
		36	0	20.97	21.05	20.94	21.10	21.10	21.50
		36	18	21.01	21.08	20.94	21.12	21.05	21.50
		36	39	21.05	21.15	20.99	21.18	21.13	21.50
		75	0	20.93	21.02	20.87	21.04	20.99	21.50
		1	0	23.58	23.58	23.72	23.87	23.79	24.50
		1	50	23.61	23.61	23.74	23.72	23.81	24.50
20MHz	16QAM	1	99	23.69	23.69	23.81	23.82	23.65	24.50
		50	0	22.74	22.67	22.79	22.86	22.74	23.50
		50	25	22.80	22.91	22.87	22.64	22.82	23.50
		50	50	22.74	22.81	22.88	22.97	22.86	23.50
		100	0	22.76	22.82	22.84	22.76	22.67	23.50
		1	0	22.71	22.77	22.64	22.84	22.75	23.50
		1	50	22.85	22.88	22.79	22.88	22.87	23.50
	64QAM	1	99	22.75	22.82	22.70	22.84	22.78	23.50
		50	0	21.90	21.97	21.84	22.01	21.94	22.50
		50	25	21.89	21.94	21.82	21.98	21.91	22.50
		50	50	22.00	22.08	21.93	22.12	22.05	22.50
		100	0	21.83	21.92	21.76	21.99	21.87	22.50
		1	0	21.56	21.65	21.49	21.68	21.60	22.50
		1	50	21.89	21.94	21.83	21.95	21.91	22.50
5MHz	QPSK	1	99	21.84	21.92	21.79	21.97	21.90	22.50
		50	0	20.94	21.04	20.88	21.05	21.02	21.50
		50	25	20.97	21.05	20.90	21.08	21.01	21.50
		50	50	21.03	21.11	20.96	21.15	21.08	21.50
		100	0	20.91	20.98	20.84	21.02	20.95	21.50

LTE Band 41									
Full Power&Level3& Level4&Level5-Div Ant4				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	24.01	24.02	23.34	24.03	23.08	24.50
		1	13	23.85	23.99	23.38	23.99	23.73	24.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
		1	24	23.96	24.11	23.75	23.56	23.93	24.50
		12	0	23.11	23.14	22.46	23.19	22.42	23.50
		12	6	23.10	23.14	22.48	23.09	22.66	23.50
		12	13	23.08	23.07	22.57	23.18	22.97	23.50
		25	0	23.14	23.03	22.46	23.16	22.26	23.50
	16QAM	1	0	22.64	22.50	22.47	22.61	22.55	23.50
		1	13	22.57	22.48	22.46	22.55	22.51	23.50
		1	24	22.98	22.84	22.79	22.95	22.86	23.50
		12	0	21.72	21.59	21.57	21.65	21.61	22.50
		12	6	21.89	21.73	21.71	21.84	21.77	22.50
		12	13	21.94	21.79	21.74	21.90	21.82	22.50
		25	0	21.85	21.74	21.70	21.86	21.77	22.50
	64QAM	1	0	21.87	21.73	21.66	21.88	21.78	22.50
		1	13	21.82	21.72	21.66	21.83	21.75	22.50
1		24	22.21	22.04	21.95	22.15	22.06	22.50	
12		0	20.47	20.34	20.32	20.40	20.40	21.50	
12		6	20.64	20.45	20.40	20.56	20.49	21.50	
12		13	20.70	20.56	20.51	20.67	20.59	21.50	
25		0	20.54	20.40	20.36	20.52	20.43	21.50	
10MHz	QPSK	1	0	24.02	23.99	23.35	24.04	23.11	24.50
		1	25	23.86	24.03	23.39	24.04	23.77	24.50
		1	49	23.95	24.10	23.74	23.60	23.96	24.50
		25	0	23.12	23.15	22.47	23.24	22.46	23.50
		25	13	23.10	23.14	22.48	23.14	22.70	23.50
		25	25	23.07	23.08	22.58	23.22	23.02	23.50
		50	0	23.16	23.01	22.45	23.18	22.30	23.50
	16QAM	1	0	22.66	22.51	22.47	22.64	22.57	23.50
		1	25	22.59	22.49	22.47	22.59	22.54	23.50
		1	49	22.99	22.82	22.79	22.97	22.89	23.50
		25	0	21.72	21.62	21.58	21.70	21.65	22.50
		25	13	21.88	21.72	21.70	21.88	21.80	22.50
		25	25	21.95	21.80	21.75	21.95	21.86	22.50
		50	0	21.85	21.74	21.70	21.91	21.81	22.50
	64QAM	1	0	21.84	21.70	21.66	21.87	21.80	22.50
		1	25	21.83	21.69	21.67	21.83	21.78	22.50
		1	49	22.21	22.05	21.99	22.17	22.09	22.50
		25	0	20.49	20.41	20.33	20.45	20.40	21.50
		25	13	20.64	20.46	20.42	20.60	20.52	21.50
		25	25	20.71	20.57	20.52	20.72	20.63	21.50
		50	0	20.54	20.40	20.36	20.57	20.47	21.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	24.03	24.03	23.37	24.00	23.09	24.50
		1	38	23.88	24.04	23.42	24.03	23.74	24.50
		1	74	23.98	24.15	23.78	23.55	23.92	24.50
		36	0	23.14	23.19	22.50	23.20	22.43	23.50
		36	18	23.13	23.19	22.52	23.09	22.66	23.50
		36	39	23.10	23.11	22.62	23.19	22.98	23.50
		75	0	23.18	23.05	22.50	23.14	22.25	23.50
	16QAM	1	0	22.68	22.53	22.49	22.62	22.55	23.50
		1	38	22.61	22.52	22.49	22.56	22.52	23.50
		1	74	23.01	22.86	22.82	22.93	22.86	23.50
		36	0	21.75	21.64	21.61	21.68	21.62	22.50
		36	18	21.91	21.77	21.74	21.83	21.76	22.50
		36	39	21.97	21.84	21.78	21.91	21.83	22.50
		75	0	21.88	21.79	21.74	21.86	21.77	22.50
	64QAM	1	0	21.89	21.72	21.68	21.85	21.78	22.50
		1	38	21.85	21.72	21.69	21.80	21.76	22.50
		1	74	22.20	22.06	21.98	22.16	22.10	22.50
		36	0	20.50	20.39	20.32	20.47	20.41	21.50
		36	18	20.66	20.49	20.43	20.57	20.51	21.50
		36	39	20.73	20.61	20.55	20.68	20.60	21.50
		75	0	20.57	20.45	20.40	20.52	20.43	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	23.99	23.95	23.32	23.96	23.06	24.50
		1	50	23.85	23.99	23.37	23.99	23.72	24.50
		1	99	23.93	24.09	23.71	23.54	23.89	24.50
		50	0	23.09	23.10	22.43	23.15	22.39	23.50
		50	25	23.08	23.10	22.45	23.05	22.63	23.50
		50	50	23.04	23.03	22.54	23.14	22.94	23.50
		100	0	23.13	22.96	22.41	23.09	22.21	23.50
	16QAM	1	0	22.63	22.47	22.42	22.58	22.50	23.50
		1	50	22.56	22.47	22.43	22.54	22.48	23.50
		1	99	22.96	22.79	22.77	22.90	22.84	23.50
		50	0	21.69	21.58	21.55	21.64	21.59	22.50
		50	25	21.85	21.70	21.67	21.81	21.73	22.50
		50	50	21.92	21.75	21.71	21.86	21.79	22.50
		100	0	21.83	21.70	21.67	21.82	21.74	22.50
	64QAM	1	0	21.82	21.66	21.61	21.81	21.73	22.50
		1	50	21.79	21.67	21.63	21.78	21.72	22.50
		1	99	22.15	21.99	21.93	22.10	22.04	22.50
		50	0	20.44	20.33	20.26	20.39	20.34	21.50



		50	25	20.60	20.42	20.36	20.53	20.45	21.50
		50	50	20.68	20.52	20.48	20.63	20.56	21.50
		100	0	20.52	20.36	20.33	20.48	20.40	21.50

LTE Band 41									
Level1-Div Ant4				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	22.02	22.31	22.29	21.93	22.17	23.00
		1	13	21.96	22.08	22.29	21.92	21.90	23.00
		1	24	22.02	22.09	22.47	21.94	21.83	23.00
		12	0	20.89	21.18	21.33	21.00	20.97	22.00
		12	6	21.08	21.38	21.37	21.02	21.03	22.00
		12	13	21.08	21.30	21.42	21.01	20.90	22.00
		25	0	20.97	21.11	21.33	20.99	20.87	22.00
	16QAM	1	0	21.21	21.35	21.15	21.24	21.19	22.00
		1	13	21.22	21.30	21.20	21.23	21.22	22.00
		1	24	21.48	21.56	21.29	21.45	21.36	22.00
		12	0	20.32	20.37	20.20	20.31	20.24	21.00
		12	6	20.38	20.47	20.21	20.36	20.28	21.00
		12	13	20.33	20.44	20.18	20.33	20.24	21.00
		25	0	20.21	20.33	20.08	20.21	20.14	21.00
	64QAM	1	0	20.20	20.27	19.93	20.12	20.05	21.00
		1	13	20.15	20.18	19.96	20.07	20.04	21.00
		1	24	20.13	20.21	19.92	20.10	20.03	21.00
		12	0	19.36	19.41	19.26	19.35	19.30	20.00
		12	6	19.39	19.48	19.22	19.37	19.29	20.00
		12	13	19.50	19.61	19.35	19.50	19.41	20.00
		25	0	19.38	19.50	19.24	19.38	19.30	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	22.06	22.39	22.34	21.91	22.13	23.00
		1	25	21.99	22.13	22.34	21.88	21.87	23.00
		1	49	22.07	22.15	22.54	21.89	21.79	23.00
		25	0	20.94	21.27	21.40	20.95	20.93	22.00
		25	13	21.13	21.47	21.44	20.98	20.98	22.00
		25	25	21.14	21.38	21.50	20.99	20.86	22.00
		50	0	21.02	21.20	21.42	20.98	20.85	22.00
	16QAM	1	0	21.26	21.41	21.22	21.20	21.16	22.00
		1	25	21.27	21.35	21.26	21.21	21.19	22.00
		1	49	21.53	21.63	21.34	21.43	21.32	22.00
		25	0	20.38	20.43	20.26	20.27	20.21	21.00
		25	13	20.44	20.54	20.28	20.31	20.24	21.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
	64QAM	25	25	20.38	20.53	20.25	20.28	20.20	21.00
		50	0	20.26	20.42	20.15	20.17	20.09	21.00
		1	0	20.27	20.33	20.00	20.12	20.02	21.00
		1	25	20.21	20.23	20.02	20.09	20.01	21.00
		1	49	20.18	20.28	19.97	20.08	19.99	21.00
		25	0	19.42	19.47	19.32	19.31	19.31	20.00
		25	13	19.45	19.55	19.29	19.32	19.25	20.00
		25	25	19.55	19.70	19.42	19.45	19.37	20.00
		50	0	19.43	19.59	19.31	19.34	19.25	20.00
15MHz	QPSK	1	0	22.00	22.26	22.26	21.92	22.16	23.00
		1	38	21.95	22.08	22.27	21.93	21.91	23.00
		1	74	21.98	22.03	22.42	21.93	21.82	23.00
		36	0	20.87	21.14	21.30	21.00	20.97	22.00
		36	18	21.06	21.34	21.32	21.03	21.02	22.00
		36	39	21.05	21.29	21.39	21.03	20.91	22.00
		75	0	20.99	21.08	21.30	21.00	20.89	22.00
	16QAM	1	0	21.23	21.32	21.12	21.23	21.18	22.00
		1	38	21.24	21.29	21.18	21.25	21.22	22.00
		1	74	21.46	21.52	21.25	21.45	21.35	22.00
		36	0	20.30	20.36	20.18	20.32	20.25	21.00
		36	18	20.34	20.41	20.16	20.35	20.27	21.00
		36	39	20.31	20.40	20.15	20.33	20.24	21.00
		75	0	20.19	20.29	20.03	20.22	20.13	21.00
	64QAM	1	0	20.14	20.24	19.90	20.11	20.04	21.00
		1	38	20.13	20.17	19.94	20.09	20.04	21.00
		1	74	20.14	20.20	19.92	20.10	20.02	21.00
		36	0	19.36	19.44	19.28	19.36	19.31	20.00
		36	18	19.36	19.44	19.20	19.36	19.28	20.00
		36	39	19.48	19.57	19.32	19.50	19.41	20.00
		75	0	19.36	19.46	19.19	19.39	19.29	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	21.97	22.22	22.23	21.84	22.11	23.00
		1	50	21.94	22.04	22.25	21.88	21.86	23.00
		1	99	21.96	22.02	22.39	21.87	21.75	23.00
		50	0	20.84	21.09	21.26	20.91	20.90	22.00
		50	25	21.04	21.30	21.29	20.94	20.95	22.00
		50	50	21.02	21.24	21.35	20.95	20.83	22.00
		100	0	20.96	21.03	21.26	20.91	20.80	22.00
	16QAM	1	0	21.20	21.28	21.07	21.17	21.11	22.00
		1	50	21.21	21.27	21.14	21.20	21.16	22.00



		1	99	21.43	21.49	21.23	21.38	21.30	22.00
		50	0	20.27	20.32	20.15	20.26	20.19	21.00
		50	25	20.31	20.39	20.13	20.28	20.20	21.00
		50	50	20.28	20.35	20.11	20.24	20.17	21.00
		100	0	20.17	20.25	20.00	20.13	20.06	21.00
	64QAM	1	0	20.12	20.20	19.85	20.05	19.97	21.00
		1	50	20.09	20.15	19.90	20.04	19.98	21.00
		1	99	20.08	20.14	19.86	20.03	19.97	21.00
		50	0	19.31	19.36	19.21	19.30	19.25	20.00
		50	25	19.32	19.40	19.14	19.29	19.21	20.00
		50	50	19.45	19.52	19.28	19.41	19.34	20.00
		100	0	19.34	19.42	19.16	19.30	19.22	20.00

LTE Band 41									
Level2-Div Ant4				Maximum Output Power (dBm)					Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					
				39675/2498.5	40148/2545.8	40620/2593	41093/2640.3	41565/2687.5	
5MHz	QPSK	1	0	19.92	20.16	20.12	20.23	20.15	21.50
		1	13	19.98	20.08	20.12	20.02	19.97	21.50
		1	24	20.10	20.07	20.08	20.05	20.07	21.50
		12	0	19.16	19.13	19.08	19.19	19.10	20.50
		12	6	19.13	19.20	19.18	19.15	19.17	20.50
		12	13	19.17	19.14	19.15	19.22	19.18	20.50
		25	0	19.05	19.23	19.13	19.12	19.10	20.50
	16QAM	1	0	19.40	19.29	19.25	19.38	19.38	20.50
		1	13	19.14	19.10	19.08	19.10	19.12	20.50
		1	24	19.29	19.26	19.15	19.31	19.25	20.50
		12	0	18.30	18.17	18.11	18.23	18.22	19.50
		12	6	18.34	18.23	18.16	18.29	18.28	19.50
		12	13	18.33	18.22	18.14	18.30	18.25	19.50
		25	0	18.34	18.23	18.15	18.31	18.29	19.50
	64QAM	1	0	18.52	18.46	18.36	18.50	18.47	19.50
		1	13	18.31	18.29	18.21	18.31	18.28	19.50
		1	24	18.43	18.32	18.23	18.39	18.34	19.50
		12	0	17.27	17.17	17.17	17.21	17.23	18.50
		12	6	17.45	17.35	17.28	17.42	17.39	18.50
		12	13	17.37	17.28	17.20	17.34	17.31	18.50
		25	0	17.36	17.28	17.19	17.34	17.31	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	19.94	20.17	20.15	20.24	20.18	21.50
		1	25	20.01	20.13	20.16	20.07	20.01	21.50
		1	49	20.12	20.11	20.11	20.09	20.10	21.50



		25	0	19.19	19.18	19.12	19.24	19.14	20.50
		25	13	19.16	19.25	19.22	19.20	19.21	20.50
		25	25	19.19	19.18	19.20	19.26	19.23	20.50
		50	0	19.09	19.25	19.17	19.14	19.14	20.50
	16QAM	1	0	19.44	19.32	19.27	19.41	19.40	20.50
		1	25	19.18	19.14	19.11	19.14	19.15	20.50
		1	49	19.32	19.28	19.18	19.33	19.28	20.50
		25	0	18.33	18.22	18.15	18.28	18.26	19.50
		25	13	18.36	18.27	18.19	18.33	18.31	19.50
		25	25	18.36	18.27	18.18	18.35	18.29	19.50
		50	0	18.37	18.28	18.19	18.36	18.33	19.50
	64QAM	1	0	18.54	18.45	18.38	18.49	18.49	19.50
		1	25	18.34	18.29	18.24	18.31	18.31	19.50
		1	49	18.42	18.34	18.26	18.41	18.37	19.50
25		0	17.30	17.22	17.17	17.26	17.23	18.50	
25		13	17.47	17.39	17.31	17.46	17.42	18.50	
25		25	17.40	17.33	17.24	17.39	17.35	18.50	
50		0	17.39	17.33	17.23	17.39	17.35	18.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	19.93	20.13	20.13	20.20	20.16	21.50
		1	38	19.99	20.12	20.13	20.06	19.98	21.50
		1	74	20.09	20.06	20.07	20.04	20.06	21.50
		36	0	19.17	19.14	19.09	19.20	19.11	20.50
		36	18	19.13	19.20	19.18	19.15	19.17	20.50
		36	39	19.16	19.15	19.16	19.23	19.19	20.50
		75	0	19.07	19.21	19.12	19.10	19.09	20.50
	16QAM	1	0	19.42	19.30	19.25	19.39	19.38	20.50
		1	38	19.16	19.11	19.09	19.11	19.13	20.50
		1	74	19.30	19.24	19.15	19.29	19.25	20.50
		36	0	18.30	18.20	18.12	18.26	18.23	19.50
		36	18	18.33	18.22	18.15	18.28	18.27	19.50
		36	39	18.34	18.23	18.15	18.31	18.26	19.50
		75	0	18.34	18.23	18.15	18.31	18.29	19.50
	64QAM	1	0	18.49	18.43	18.36	18.47	18.47	19.50
		1	38	18.32	18.26	18.22	18.28	18.29	19.50
		1	74	18.43	18.33	18.27	18.40	18.38	19.50
		36	0	17.29	17.24	17.18	17.28	17.24	18.50
		36	18	17.45	17.36	17.30	17.43	17.41	18.50
		36	39	17.38	17.29	17.21	17.35	17.32	18.50
		75	0	17.36	17.28	17.19	17.34	17.31	18.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	19.90	20.09	20.10	20.16	20.13	21.50
		1	50	19.98	20.08	20.11	20.02	19.96	21.50
		1	99	20.07	20.05	20.04	20.03	20.03	21.50
		50	0	19.14	19.09	19.05	19.15	19.07	20.50
		50	25	19.11	19.16	19.15	19.11	19.14	20.50
		50	50	19.13	19.10	19.12	19.18	19.15	20.50
		100	0	19.04	19.16	19.08	19.05	19.05	20.50
	16QAM	1	0	19.39	19.26	19.20	19.35	19.33	20.50
		1	50	19.13	19.09	19.05	19.09	19.09	20.50
		1	99	19.27	19.21	19.13	19.26	19.23	20.50
		50	0	18.27	18.16	18.09	18.22	18.20	19.50
		50	25	18.30	18.20	18.12	18.26	18.24	19.50
		50	50	18.31	18.18	18.11	18.26	18.22	19.50
		100	0	18.32	18.19	18.12	18.27	18.26	19.50
	64QAM	1	0	18.47	18.39	18.31	18.43	18.42	19.50
		1	50	18.28	18.24	18.18	18.26	18.25	19.50
		1	99	18.37	18.27	18.21	18.34	18.32	19.50
		50	0	17.24	17.16	17.11	17.20	17.17	18.50
		50	25	17.41	17.32	17.24	17.39	17.35	18.50
		50	50	17.35	17.24	17.17	17.30	17.28	18.50
		100	0	17.34	17.24	17.16	17.30	17.28	18.50

LTE Band66							
Full Power & Level 3 & Level 4-Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	24.11	24.30	24.20	25.00
		1	2	24.20	24.13	24.11	25.00
		1	5	24.10	23.98	24.01	25.00
		3	0	24.19	24.20	24.13	25.00
		3	2	24.20	24.18	24.11	25.00
		3	3	24.16	24.17	24.12	25.00
		6	0	23.30	23.19	23.17	24.00
	16QAM	1	0	23.73	23.62	23.70	24.00
		1	2	23.70	23.66	23.71	24.00
		1	5	23.83	23.75	23.81	24.00
		3	0	23.27	23.16	23.22	24.00
		3	2	23.25	23.12	23.21	24.00
		3	3	23.30	23.21	23.25	24.00
		6	0	22.35	22.23	22.32	23.00
	64QAM	1	0	22.72	22.61	22.69	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				1319871711.5	132322/1745	132657/1778.5		
		1	2	22.70	22.63	22.70	23.00	
		1	5	22.72	22.81	22.82	23.00	
		3	0	22.34	22.26	22.32	23.00	
		3	2	22.37	22.25	22.34	23.00	
		3	3	22.36	22.27	22.31	23.00	
		6	0	21.40	21.31	21.40	22.00	
3MHz	QPSK	1	0	24.13	24.34	24.23	25.00	
		1	7	24.18	24.16	24.15	25.00	
		1	14	24.13	24.03	24.05	25.00	
		8	0	23.29	23.32	23.26	24.00	
		8	4	23.32	23.28	23.23	24.00	
		8	7	23.26	23.28	23.22	24.00	
		15	0	23.30	23.23	23.20	24.00	
	16QAM	1	0	23.73	23.64	23.73	24.00	
		1	7	23.70	23.66	23.75	24.00	
		1	14	23.85	23.79	23.84	24.00	
		8	0	22.38	22.29	22.34	23.00	
		8	4	22.36	22.25	22.33	23.00	
		8	7	22.40	22.33	22.38	23.00	
		15	0	22.38	22.27	22.35	23.00	
	64QAM	1	0	22.75	22.63	22.72	23.00	
		1	7	22.73	22.63	22.72	23.00	
		1	14	22.74	22.80	22.85	23.00	
		8	0	21.45	21.39	21.44	22.00	
		8	4	21.48	21.38	21.46	22.00	
		8	7	21.46	21.39	21.44	22.00	
		15	0	21.43	21.35	21.43	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					131997/1712.5	132322/1745	132647/1777.5	
	5MHz	QPSK	1	0	24.10	24.32	24.19	25.00
1			13	24.16	24.12	24.12	25.00	
1			24	24.10	23.98	24.01	25.00	
12			0	23.26	23.27	23.22	24.00	
12			6	23.30	23.24	23.18	24.00	
12			13	23.24	23.26	23.18	24.00	
25			0	23.30	23.22	23.18	24.00	
16QAM		1	0	23.73	23.60	23.70	24.00	
		1	13	23.70	23.64	23.72	24.00	
		1	24	23.82	23.77	23.80	24.00	
		12	0	22.36	22.25	22.31	23.00	
		12	6	22.33	22.20	22.29	23.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				132022/1715	132322/1745	132622/1775		
	64QAM	12	13	22.37	22.28	22.34	23.00	
		25	0	22.36	22.23	22.30	23.00	
		1	0	22.72	22.63	22.69	23.00	
		1	13	22.70	22.65	22.69	23.00	
		1	24	22.75	22.78	22.81	23.00	
		12	0	21.43	21.35	21.45	22.00	
		12	6	21.45	21.33	21.42	22.00	
		12	13	21.43	21.34	21.40	22.00	
		25	0	21.41	21.31	21.38	22.00	
10MHz	QPSK	1	0	24.12	24.33	24.22	25.00	
		1	25	24.19	24.17	24.16	25.00	
		1	49	24.12	24.02	24.04	25.00	
		25	0	23.29	23.32	23.26	24.00	
		25	13	23.33	23.29	23.22	24.00	
		25	25	23.26	23.30	23.23	24.00	
		50	0	23.34	23.24	23.22	24.00	
	16QAM	1	0	23.77	23.63	23.72	24.00	
		1	25	23.74	23.68	23.75	24.00	
		1	49	23.85	23.79	23.83	24.00	
		25	0	22.39	22.30	22.35	23.00	
		25	13	22.35	22.24	22.32	23.00	
		25	25	22.40	22.33	22.38	23.00	
		50	0	22.39	22.28	22.34	23.00	
	64QAM	1	0	22.74	22.62	22.71	23.00	
		1	25	22.73	22.65	22.72	23.00	
		1	49	22.74	22.80	22.84	23.00	
		25	0	21.46	21.40	21.45	22.00	
		25	13	21.47	21.37	21.45	22.00	
		25	25	21.46	21.39	21.44	22.00	
		50	0	21.44	21.36	21.42	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132047/1717.5	132322/1745	132597/1772.5	
	15MHz	QPSK	1	0	24.11	24.29	24.20	25.00
1			38	24.17	24.16	24.13	25.00	
1			74	24.09	23.97	24.00	25.00	
36			0	23.27	23.28	23.23	24.00	
36			18	23.30	23.24	23.18	24.00	
36			39	23.23	23.27	23.19	24.00	
75			0	23.32	23.20	23.17	24.00	
16QAM		1	0	23.75	23.61	23.70	24.00	
		1	38	23.72	23.65	23.73	24.00	



		1	74	23.83	23.75	23.80	24.00
		36	0	22.36	22.28	22.32	23.00
		36	18	22.32	22.19	22.28	23.00
		36	39	22.38	22.29	22.35	23.00
		75	0	22.36	22.23	22.30	23.00
	64QAM	1	0	22.69	22.60	22.69	23.00
		1	38	22.71	22.62	22.70	23.00
		1	74	22.75	22.79	22.85	23.00
		36	0	21.45	21.42	21.46	22.00
		36	18	21.45	21.34	21.44	22.00
		36	39	21.44	21.35	21.41	22.00
		75	0	21.41	21.31	21.38	22.00
		Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)	
132072/1720	132322/1745					132572/1770	
20MHz	QPSK	1	0	24.08	24.25	24.17	25.00
		1	50	24.16	24.12	24.11	25.00
		1	99	24.07	23.96	23.97	25.00
		50	0	23.24	23.23	23.19	24.00
		50	25	23.28	23.20	23.15	24.00
		50	50	23.20	23.22	23.15	24.00
		100	0	23.29	23.15	23.13	24.00
	16QAM	1	0	23.72	23.57	23.65	24.00
		1	50	23.69	23.63	23.69	24.00
		1	99	23.80	23.72	23.78	24.00
		50	0	22.33	22.24	22.29	23.00
		50	25	22.29	22.17	22.25	23.00
		50	50	22.35	22.24	22.31	23.00
		100	0	22.34	22.19	22.27	23.00
	64QAM	1	0	22.67	22.56	22.64	23.00
		1	50	22.67	22.60	22.66	23.00
		1	99	22.69	22.73	22.79	23.00
		50	0	21.40	21.34	21.39	22.00
		50	25	21.41	21.30	21.38	22.00
		50	50	21.41	21.30	21.37	22.00
		100	0	21.39	21.27	21.35	22.00

LTE Band66							
Level 1-Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	21.93	22.21	22.03	23.00
		1	2	21.97	21.92	21.91	23.00
		1	5	21.94	21.82	21.88	23.00



		3	0	22.01	22.08	21.98	23.00
		3	2	21.99	22.05	21.97	23.00
		3	3	22.01	22.02	21.97	23.00
		6	0	21.07	21.09	21.04	22.00
	16QAM	1	0	21.50	21.47	21.58	22.00
		1	2	21.47	21.45	21.55	22.00
		1	5	21.65	21.62	21.64	22.00
		3	0	21.10	20.97	21.04	22.00
		3	2	21.11	20.98	21.08	22.00
		3	3	21.12	21.09	21.10	22.00
		6	0	20.16	20.10	20.18	21.00
		64QAM	1	0	20.60	20.50	20.57
	1		2	20.54	20.46	20.54	21.00
	1		5	20.58	20.68	20.65	21.00
3	0		20.17	20.07	20.18	21.00	
3	2		20.23	20.11	20.21	21.00	
3	3		20.18	20.15	20.16	21.00	
6	0		19.21	19.18	19.26	20.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	21.95	22.25	22.06	23.00
		1	7	21.95	21.95	21.95	23.00
		1	14	21.97	21.87	21.92	23.00
		8	0	21.11	21.20	21.11	22.00
		8	4	21.11	21.15	21.09	22.00
		8	7	21.11	21.13	21.07	22.00
		15	0	21.07	21.13	21.07	22.00
	16QAM	1	0	21.50	21.49	21.61	22.00
		1	7	21.47	21.45	21.59	22.00
		1	14	21.67	21.66	21.67	22.00
		8	0	20.21	20.10	20.16	21.00
		8	4	20.22	20.11	20.20	21.00
		8	7	20.22	20.21	20.23	21.00
		15	0	20.19	20.14	20.21	21.00
	64QAM	1	0	20.63	20.52	20.60	21.00
		1	7	20.57	20.46	20.56	21.00
		1	14	20.60	20.67	20.68	21.00
		8	0	19.28	19.20	19.30	20.00
		8	4	19.34	19.24	19.33	20.00
		8	7	19.28	19.27	19.29	20.00
		15	0	19.24	19.22	19.29	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	21.92	22.23	22.02	23.00
		1	13	21.93	21.91	21.92	23.00
		1	24	21.94	21.82	21.88	23.00
		12	0	21.08	21.15	21.07	22.00
		12	6	21.09	21.11	21.04	22.00
		12	13	21.09	21.11	21.03	22.00
		25	0	21.07	21.12	21.05	22.00
	16QAM	1	0	21.50	21.45	21.58	22.00
		1	13	21.47	21.43	21.56	22.00
		1	24	21.64	21.64	21.63	22.00
		12	0	20.19	20.06	20.13	21.00
		12	6	20.19	20.06	20.16	21.00
		12	13	20.19	20.16	20.19	21.00
		25	0	20.17	20.10	20.16	21.00
	64QAM	1	0	20.60	20.52	20.57	21.00
		1	13	20.54	20.48	20.53	21.00
		1	24	20.61	20.65	20.64	21.00
		12	0	19.26	19.16	19.31	20.00
		12	6	19.31	19.19	19.29	20.00
		12	13	19.25	19.22	19.25	20.00
		25	0	19.22	19.18	19.24	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK	1	0	21.94	22.24	22.05	23.00
		1	25	21.96	21.96	21.96	23.00
		1	49	21.96	21.86	21.91	23.00
		25	0	21.11	21.20	21.11	22.00
		25	13	21.12	21.16	21.08	22.00
		25	25	21.11	21.15	21.08	22.00
		50	0	21.11	21.14	21.09	22.00
	16QAM	1	0	21.54	21.48	21.60	22.00
		1	25	21.51	21.47	21.59	22.00
		1	49	21.67	21.66	21.66	22.00
		25	0	20.22	20.11	20.17	21.00
		25	13	20.21	20.10	20.19	21.00
		25	25	20.22	20.21	20.23	21.00
		50	0	20.20	20.15	20.20	21.00
	64QAM	1	0	20.62	20.51	20.59	21.00
		1	25	20.57	20.48	20.56	21.00
		1	49	20.60	20.67	20.67	21.00
		25	0	19.29	19.21	19.31	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
		25	13	19.33	19.23	19.32	20.00
		25	25	19.28	19.27	19.29	20.00
		50	0	19.25	19.23	19.28	20.00
15MHz	QPSK	1	0	21.93	22.20	22.03	23.00
		1	38	21.94	21.95	21.93	23.00
1		74	21.93	21.81	21.87	23.00	
36		0	21.09	21.16	21.08	22.00	
36		18	21.09	21.11	21.04	22.00	
36		39	21.08	21.12	21.04	22.00	
75		0	21.09	21.10	21.04	22.00	
15MHz	16QAM	1	0	21.52	21.46	21.58	22.00
		1	38	21.49	21.44	21.57	22.00
		1	74	21.65	21.62	21.63	22.00
		36	0	20.19	20.09	20.14	21.00
		36	18	20.18	20.05	20.15	21.00
		36	39	20.20	20.17	20.20	21.00
		75	0	20.17	20.10	20.16	21.00
	64QAM	1	0	20.57	20.49	20.57	21.00
		1	38	20.55	20.45	20.54	21.00
		1	74	20.61	20.66	20.68	21.00
		36	0	19.28	19.23	19.32	20.00
		36	18	19.31	19.20	19.31	20.00
		36	39	19.26	19.23	19.26	20.00
		75	0	19.22	19.18	19.24	20.00
20MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	21.88	22.09	21.98	23.00
		1	50	21.93	21.91	21.90	23.00
		1	99	21.88	21.78	21.80	23.00
		50	0	21.04	21.07	21.01	22.00
		50	25	21.05	21.03	20.98	22.00
		50	50	21.01	21.03	20.97	22.00
		100	0	21.05	20.98	20.95	22.00
	16QAM	1	0	21.48	21.39	21.48	22.00
		1	50	21.45	21.41	21.50	22.00
		1	99	21.60	21.54	21.59	22.00
		50	0	20.13	20.04	20.09	21.00
		50	25	20.11	20.00	20.08	21.00
		50	50	20.15	20.08	20.13	21.00
		100	0	20.13	20.02	20.10	21.00
64QAM	1	0	20.50	20.38	20.47	21.00	



		1	50	20.48	20.38	20.47	21.00
		1	99	20.49	20.55	20.60	21.00
		50	0	19.20	19.14	19.19	20.00
		50	25	19.23	19.13	19.21	20.00
		50	50	19.21	19.14	19.19	20.00
		100	0	19.18	19.10	19.18	20.00

LTE Band66							
Level 2-Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	22.19	22.34	22.17	23.00
		1	2	22.13	22.13	21.95	23.00
		1	5	22.11	22.11	22.03	23.00
		3	0	22.18	22.20	22.05	23.00
		3	2	22.17	22.16	22.09	23.00
		3	3	22.20	22.14	22.01	23.00
		6	0	21.24	21.19	21.19	22.00
	16QAM	1	0	21.47	21.62	21.68	22.00
		1	2	21.33	21.52	21.58	22.00
		1	5	21.37	21.42	21.45	22.00
		3	0	21.08	21.08	21.13	22.00
		3	2	21.10	21.12	21.21	22.00
		3	3	21.11	21.20	21.17	22.00
		6	0	20.05	20.17	20.30	21.00
	64QAM	1	0	20.61	20.62	20.69	21.00
		1	2	20.49	20.48	20.57	21.00
		1	5	20.28	20.39	20.34	21.00
		3	0	20.09	20.13	20.17	21.00
		3	2	20.08	20.13	20.21	21.00
		3	3	20.02	20.18	20.21	21.00
		6	0	19.15	19.27	19.34	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	22.20	22.37	22.19	23.00
		1	7	22.12	22.17	22.00	23.00
		1	14	22.13	22.15	22.06	23.00
		8	0	21.28	21.32	21.18	22.00
		8	4	21.30	21.27	21.20	22.00
		8	7	21.30	21.27	21.12	22.00
		15	0	21.28	21.24	21.24	22.00
	16QAM	1	0	21.51	21.63	21.70	22.00
		1	7	21.37	21.54	21.62	22.00



		1	14	21.39	21.46	21.47	22.00	
		8	0	20.20	20.22	20.26	21.00	
		8	4	20.20	20.24	20.32	21.00	
		8	7	20.21	20.32	20.30	21.00	
		15	0	20.09	20.22	20.32	21.00	
		64QAM	1	0	20.63	20.63	20.71	21.00
			1	7	20.52	20.50	20.59	21.00
			1	14	20.30	20.38	20.36	21.00
			8	0	19.21	19.27	19.30	20.00
			8	4	19.18	19.25	19.32	20.00
8	7		19.12	19.30	19.34	20.00		
15	0	19.19	19.32	19.36	20.00			
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				131997/1712.5	132322/1745	132647/1777.5		
5MHz	QPSK	1	0	22.19	22.33	22.17	23.00	
		1	13	22.10	22.16	21.97	23.00	
		1	24	22.10	22.10	22.02	23.00	
		12	0	21.26	21.28	21.15	22.00	
		12	6	21.27	21.22	21.16	22.00	
		12	13	21.27	21.24	21.08	22.00	
		25	0	21.26	21.20	21.19	22.00	
	16QAM	1	0	21.49	21.61	21.68	22.00	
		1	13	21.35	21.51	21.60	22.00	
		1	24	21.37	21.42	21.44	22.00	
		12	0	20.17	20.20	20.23	21.00	
		12	6	20.17	20.19	20.28	21.00	
		12	13	20.19	20.28	20.27	21.00	
		25	0	20.06	20.17	20.28	21.00	
	64QAM	1	0	20.58	20.61	20.69	21.00	
		1	13	20.50	20.47	20.57	21.00	
		1	24	20.31	20.37	20.37	21.00	
		12	0	19.20	19.29	19.31	20.00	
		12	6	19.16	19.22	19.31	20.00	
		12	13	19.10	19.26	19.31	20.00	
		25	0	19.16	19.27	19.32	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132022/1715	132322/1745	132622/1775	
	10MHz	QPSK	1	0	22.16	22.29	22.14	23.00
1			25	22.09	22.12	21.95	23.00	
1			49	22.08	22.09	21.99	23.00	
25			0	21.23	21.23	21.11	22.00	
25			13	21.25	21.18	21.13	22.00	
25			25	21.24	21.19	21.04	22.00	



	16QAM	50	0	21.23	21.15	21.15	22.00
		1	0	21.46	21.57	21.63	22.00
		1	25	21.32	21.49	21.56	22.00
		1	49	21.34	21.39	21.42	22.00
		25	0	20.14	20.16	20.20	21.00
		25	13	20.14	20.17	20.25	21.00
		25	25	20.16	20.23	20.23	21.00
		50	0	20.04	20.13	20.25	21.00
	64QAM	1	0	20.56	20.57	20.64	21.00
		1	25	20.46	20.45	20.53	21.00
		1	49	20.25	20.31	20.31	21.00
		25	0	19.15	19.21	19.24	20.00
		25	13	19.12	19.18	19.25	20.00
		25	25	19.07	19.21	19.27	20.00
		50	0	19.14	19.23	19.29	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	22.14	22.24	22.11	23.00
		1	38	22.08	22.12	21.93	23.00
		1	74	22.04	22.03	21.94	23.00
		36	0	21.21	21.19	21.08	22.00
		36	18	21.23	21.14	21.08	22.00
		36	39	21.21	21.18	21.01	22.00
		75	0	21.25	21.12	21.12	22.00
	16QAM	1	0	21.48	21.54	21.60	22.00
		1	38	21.34	21.48	21.54	22.00
		1	74	21.32	21.35	21.38	22.00
		36	0	20.12	20.15	20.18	21.00
		36	18	20.10	20.11	20.20	21.00
		36	39	20.14	20.19	20.20	21.00
		75	0	20.02	20.09	20.20	21.00
	64QAM	1	0	20.50	20.54	20.61	21.00
		1	38	20.44	20.44	20.51	21.00
		1	74	20.26	20.30	20.31	21.00
		36	0	19.15	19.24	19.26	20.00
		36	18	19.09	19.14	19.23	20.00
		36	39	19.05	19.17	19.24	20.00
		75	0	19.12	19.19	19.24	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	22.11	22.20	22.08	23.00
		1	50	22.07	22.08	21.91	23.00
		1	99	22.02	22.02	21.91	23.00



		50	0	21.18	21.14	21.04	22.00
		50	25	21.21	21.10	21.05	22.00
		50	50	21.18	21.13	20.97	22.00
		100	0	21.22	21.07	21.08	22.00
	16QAM	1	0	21.45	21.50	21.55	22.00
		1	50	21.31	21.46	21.50	22.00
		1	99	21.29	21.32	21.36	22.00
		50	0	20.09	20.11	20.15	21.00
		50	25	20.07	20.09	20.17	21.00
		50	50	20.11	20.14	20.16	21.00
		100	0	20.00	20.05	20.17	21.00
		64QAM	1	0	20.48	20.50	20.56
	1		50	20.40	20.42	20.47	21.00
	1		99	20.20	20.24	20.25	21.00
	50		0	19.10	19.16	19.19	20.00
	50		25	19.05	19.10	19.17	20.00
50	50		19.02	19.12	19.20	20.00	
100	0		19.10	19.15	19.21	20.00	

LTE Band66							
Level 5-Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	21.56	21.55	21.42	22.00
		1	2	21.42	21.40	21.25	22.00
		1	5	21.37	21.37	21.25	22.00
		3	0	21.47	21.44	21.30	22.00
		3	2	21.49	21.40	21.71	22.00
		3	3	21.50	21.36	21.67	22.00
		6	0	20.65	20.45	20.80	21.00
	16QAM	1	0	20.62	20.80	20.62	21.00
		1	2	20.73	20.80	20.64	21.00
		1	5	20.68	20.74	20.66	21.00
		3	0	20.39	20.39	20.45	21.00
		3	2	20.32	20.38	20.48	21.00
		3	3	20.30	20.43	20.44	21.00
		6	0	19.41	19.49	19.62	20.00
	64QAM	1	0	19.68	19.72	19.82	20.00
		1	2	19.69	19.73	19.84	20.00
		1	5	19.54	19.63	19.61	20.00
		3	0	19.39	19.42	19.49	20.00
		3	2	19.32	19.43	19.54	20.00
		3	3	19.33	19.47	19.46	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up			
				6	0	18.36		18.48	18.62	19.00
				1319871711.5	132322/1745	132657/1778.5				
3MHz	QPSK	1	0	21.56	21.54	21.42	22.00			
		1	7	21.39	21.43	21.27	22.00			
		1	14	21.36	21.36	21.24	22.00			
		8	0	20.55	20.52	20.40	21.00			
		8	4	20.59	20.46	20.78	21.00			
		8	7	20.57	20.46	20.74	21.00			
		15	0	20.67	20.46	20.80	21.00			
	16QAM	1	0	20.64	20.79	20.62	21.00			
		1	7	20.75	20.79	20.66	21.00			
		1	14	20.68	20.74	20.65	21.00			
		8	0	19.48	19.51	19.55	20.00			
		8	4	19.39	19.45	19.55	20.00			
		8	7	19.38	19.51	19.54	20.00			
		15	0	19.42	19.49	19.60	20.00			
	64QAM	1	0	19.65	19.71	19.82	20.00			
		1	7	19.70	19.72	19.84	20.00			
		1	14	19.57	19.61	19.64	20.00			
		8	0	18.50	18.58	18.63	19.00			
		8	4	18.40	18.52	18.64	19.00			
		8	7	18.41	18.55	18.56	19.00			
		15	0	18.37	18.48	18.60	19.00			
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up			
				131997/1712.5	132322/1745	132647/1777.5				
				131997/1712.5	132322/1745	132647/1777.5				
5MHz	QPSK	1	0	21.53	21.50	21.39	22.00			
		1	13	21.38	21.39	21.25	22.00			
		1	24	21.34	21.35	21.21	22.00			
		12	0	20.52	20.47	20.36	21.00			
		12	6	20.57	20.42	20.75	21.00			
		12	13	20.54	20.41	20.70	21.00			
		25	0	20.64	20.41	20.76	21.00			
	16QAM	1	0	20.61	20.75	20.57	21.00			
		1	13	20.72	20.77	20.62	21.00			
		1	24	20.65	20.71	20.63	21.00			
		12	0	19.45	19.47	19.52	20.00			
		12	6	19.36	19.43	19.52	20.00			
		12	13	19.35	19.46	19.50	20.00			
		25	0	19.40	19.45	19.57	20.00			
	64QAM	1	0	19.63	19.67	19.77	20.00			
		1	13	19.66	19.70	19.80	20.00			
		1	24	19.51	19.55	19.58	20.00			



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				132022/1715	132322/1745	132622/1775		
		12	0	18.45	18.50	18.56	19.00	
		12	6	18.36	18.48	18.58	19.00	
		12	13	18.38	18.50	18.52	19.00	
		25	0	18.35	18.44	18.57	19.00	
10MHz	QPSK	1	0	21.50	21.48	21.35	22.00	
		1	25	21.36	21.35	21.22	22.00	
		1	49	21.31	21.30	21.17	22.00	
		25	0	20.49	20.42	20.32	21.00	
		25	13	20.55	20.38	20.70	21.00	
		25	25	20.52	20.39	20.66	21.00	
		50	0	20.64	20.40	20.74	21.00	
	16QAM	1	0	20.61	20.71	20.54	21.00	
		1	25	20.72	20.75	20.59	21.00	
		1	49	20.62	20.69	20.59	21.00	
		25	0	19.43	19.43	19.49	20.00	
		25	13	19.33	19.38	19.48	20.00	
		25	25	19.32	19.41	19.46	20.00	
		50	0	19.38	19.41	19.52	20.00	
	64QAM	1	0	19.60	19.67	19.74	20.00	
		1	25	19.63	19.72	19.77	20.00	
		1	49	19.52	19.53	19.54	20.00	
		25	0	18.43	18.46	18.57	19.00	
		25	13	18.33	18.43	18.54	19.00	
		25	25	18.35	18.45	18.48	19.00	
		50	0	18.33	18.40	18.52	19.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132047/1717.5	132322/1745	132597/1772.5	
	15MHz	QPSK	1	0	21.51	21.45	21.36	22.00
			1	38	21.37	21.39	21.23	22.00
			1	74	21.30	21.29	21.16	22.00
			36	0	20.50	20.43	20.33	21.00
			36	18	20.55	20.38	20.70	21.00
36			39	20.51	20.40	20.67	21.00	
75			0	20.66	20.38	20.73	21.00	
16QAM		1	0	20.63	20.72	20.54	21.00	
		1	38	20.74	20.76	20.60	21.00	
		1	74	20.63	20.67	20.59	21.00	
		36	0	19.43	19.46	19.50	20.00	
		36	18	19.32	19.37	19.47	20.00	
		36	39	19.33	19.42	19.47	20.00	
		75	0	19.38	19.41	19.52	20.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
	64QAM	1	0	19.57	19.64	19.74	20.00
		1	38	19.64	19.69	19.78	20.00
		1	74	19.52	19.54	19.58	20.00
		36	0	18.45	18.53	18.58	19.00
		36	18	18.33	18.44	18.56	19.00
		36	39	18.36	18.46	18.49	19.00
		75	0	18.33	18.40	18.52	19.00
20MHz	QPSK	1	0	21.48	21.41	21.33	22.00
		1	50	21.36	21.35	21.21	22.00
		1	99	21.28	21.28	21.13	22.00
		50	0	20.47	20.38	20.29	21.00
		50	25	20.53	20.34	20.67	21.00
		50	50	20.48	20.35	20.63	21.00
		100	0	20.63	20.33	20.69	21.00
	16QAM	1	0	20.60	20.68	20.49	21.00
		1	50	20.71	20.74	20.56	21.00
		1	99	20.60	20.64	20.57	21.00
		50	0	19.40	19.42	19.47	20.00
		50	25	19.29	19.35	19.44	20.00
		50	50	19.30	19.37	19.43	20.00
		100	0	19.36	19.37	19.49	20.00
	64QAM	1	0	19.55	19.60	19.69	20.00
		1	50	19.60	19.67	19.74	20.00
		1	99	19.46	19.48	19.52	20.00
		50	0	18.40	18.45	18.51	19.00
		50	25	18.29	18.40	18.50	19.00
		50	50	18.33	18.41	18.45	19.00
		100	0	18.31	18.36	18.49	19.00

LTE Band66							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Div Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	24.22	24.26	24.34	25.00
		1	2	24.21	24.21	24.21	25.00
		1	5	24.14	24.13	24.26	25.00
		3	0	24.19	24.22	24.25	25.00
		3	2	24.20	24.22	24.24	25.00
		3	3	24.16	24.23	24.29	25.00



	16QAM	6	0	23.31	23.25	23.35	24.00
		1	0	23.70	23.66	23.68	24.00
		1	2	23.68	23.66	23.66	24.00
		1	5	23.68	23.81	23.85	24.00
		3	0	23.31	23.16	23.20	24.00
		3	2	23.35	23.20	23.24	24.00
		3	3	23.36	23.24	23.24	24.00
		6	0	22.35	22.28	22.34	23.00
	64QAM	1	0	22.75	22.61	22.66	23.00
		1	2	22.78	22.68	22.72	23.00
		1	5	22.77	22.70	22.67	23.00
		3	0	22.42	22.28	22.31	23.00
		3	2	22.49	22.30	22.35	23.00
		3	3	22.48	22.37	22.37	23.00
		6	0	21.46	21.38	21.42	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	24.24	24.30	24.37	25.00
		1	7	24.19	24.24	24.25	25.00
		1	14	24.17	24.18	24.30	25.00
		8	0	23.29	23.34	23.38	24.00
		8	4	23.32	23.32	23.36	24.00
		8	7	23.26	23.34	23.39	24.00
		15	0	23.31	23.29	23.38	24.00
	16QAM	1	0	23.70	23.68	23.71	24.00
		1	7	23.68	23.66	23.70	24.00
		1	14	23.70	23.85	23.88	24.00
		8	0	22.42	22.29	22.32	23.00
		8	4	22.46	22.33	22.36	23.00
		8	7	22.46	22.36	22.37	23.00
		15	0	22.38	22.32	22.37	23.00
	64QAM	1	0	22.78	22.63	22.69	23.00
		1	7	22.81	22.68	22.74	23.00
		1	14	22.79	22.69	22.70	23.00
		8	0	21.53	21.41	21.43	22.00
		8	4	21.60	21.43	21.47	22.00
		8	7	21.58	21.49	21.50	22.00
		15	0	21.49	21.42	21.45	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	24.21	24.28	24.33	25.00
		1	13	24.17	24.20	24.22	25.00
		1	24	24.14	24.13	24.26	25.00



		12	0	23.26	23.29	23.34	24.00
		12	6	23.30	23.28	23.31	24.00
		12	13	23.24	23.32	23.35	24.00
		25	0	23.31	23.28	23.36	24.00
	16QAM	1	0	23.70	23.64	23.68	24.00
		1	13	23.68	23.64	23.67	24.00
		1	24	23.67	23.83	23.84	24.00
		12	0	22.40	22.25	22.29	23.00
		12	6	22.43	22.28	22.32	23.00
		12	13	22.43	22.31	22.33	23.00
		25	0	22.36	22.28	22.32	23.00
	64QAM	1	0	22.75	22.63	22.66	23.00
		1	13	22.78	22.70	22.71	23.00
		1	24	22.80	22.67	22.66	23.00
12		0	21.51	21.37	21.44	22.00	
12		6	21.57	21.38	21.43	22.00	
12		13	21.55	21.44	21.46	22.00	
25		0	21.47	21.38	21.40	22.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	24.23	24.29	24.36	25.00
		1	25	24.20	24.25	24.26	25.00
		1	49	24.16	24.17	24.29	25.00
		25	0	23.29	23.34	23.38	24.00
		25	13	23.33	23.33	23.35	24.00
		25	25	23.26	23.36	23.40	24.00
		50	0	23.35	23.30	23.40	24.00
	16QAM	1	0	23.74	23.67	23.70	24.00
		1	25	23.72	23.68	23.70	24.00
		1	49	23.70	23.85	23.87	24.00
		25	0	22.43	22.30	22.33	23.00
		25	13	22.45	22.32	22.35	23.00
		25	25	22.46	22.36	22.37	23.00
		50	0	22.39	22.33	22.36	23.00
	64QAM	1	0	22.77	22.62	22.68	23.00
		1	25	22.81	22.70	22.74	23.00
		1	49	22.79	22.69	22.69	23.00
		25	0	21.54	21.42	21.44	22.00
		25	13	21.59	21.42	21.46	22.00
		25	25	21.58	21.49	21.50	22.00
		50	0	21.50	21.43	21.44	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	24.22	24.25	24.34	25.00
		1	38	24.18	24.24	24.23	25.00
		1	74	24.13	24.12	24.25	25.00
		36	0	23.27	23.30	23.35	24.00
		36	18	23.30	23.28	23.31	24.00
		36	39	23.23	23.33	23.36	24.00
		75	0	23.33	23.26	23.35	24.00
	16QAM	1	0	23.72	23.65	23.68	24.00
		1	38	23.70	23.65	23.68	24.00
		1	74	23.68	23.81	23.84	24.00
		36	0	22.40	22.28	22.30	23.00
		36	18	22.42	22.27	22.31	23.00
		36	39	22.44	22.32	22.34	23.00
		75	0	22.36	22.28	22.32	23.00
	64QAM	1	0	22.72	22.60	22.66	23.00
		1	38	22.79	22.67	22.72	23.00
		1	74	22.80	22.68	22.70	23.00
		36	0	21.53	21.44	21.45	22.00
		36	18	21.57	21.39	21.45	22.00
		36	39	21.56	21.45	21.47	22.00
		75	0	21.47	21.38	21.40	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
20MHz	QPSK	1	0	24.19	24.21	24.31	25.00
		1	50	24.17	24.20	24.21	25.00
		1	99	24.11	24.11	24.22	25.00
		50	0	23.24	23.25	23.31	24.00
		50	25	23.28	23.24	23.28	24.00
		50	50	23.20	23.28	23.32	24.00
		100	0	23.30	23.21	23.31	24.00
	16QAM	1	0	23.69	23.61	23.63	24.00
		1	50	23.67	23.63	23.64	24.00
		1	99	23.65	23.78	23.82	24.00
		50	0	22.37	22.24	22.27	23.00
		50	25	22.39	22.25	22.28	23.00
		50	50	22.41	22.27	22.30	23.00
		100	0	22.34	22.24	22.29	23.00
	64QAM	1	0	22.70	22.56	22.61	23.00
		1	50	22.75	22.65	22.68	23.00
		1	99	22.74	22.62	22.64	23.00
		50	0	21.48	21.36	21.38	22.00



		50	25	21.53	21.35	21.39	22.00
		50	50	21.53	21.40	21.43	22.00
		100	0	21.45	21.34	21.37	22.00

LTE Band66							
Level 5-Div Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	21.65	21.73	21.74	22.00
		1	2	21.58	21.65	21.64	22.00
		1	5	21.61	21.61	21.60	22.00
		3	0	21.56	21.58	21.62	22.00
		3	2	21.59	21.67	21.61	22.00
		3	3	21.58	21.67	21.69	22.00
		6	0	20.72	20.75	20.75	21.00
	16QAM	1	0	19.92	19.99	20.03	21.00
		1	2	20.22	20.27	20.30	21.00
		1	5	20.19	20.22	20.26	21.00
		3	0	20.63	20.65	20.68	21.00
		3	2	20.62	20.65	20.68	21.00
		3	3	20.65	20.71	20.70	21.00
		6	0	19.66	19.73	19.76	20.00
	64QAM	1	0	19.25	19.29	19.31	20.00
		1	2	19.18	19.22	19.25	20.00
		1	5	19.20	19.29	19.26	20.00
		3	0	19.69	19.69	19.67	20.00
		3	2	19.68	19.69	19.67	20.00
		3	3	19.69	19.73	19.67	20.00
		6	0	18.69	18.74	18.72	19.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	21.67	21.77	21.77	22.00
		1	7	21.56	21.68	21.68	22.00
		1	14	21.64	21.66	21.64	22.00
		8	0	20.66	20.70	20.75	21.00
		8	4	20.71	20.77	20.73	21.00
		8	7	20.68	20.78	20.79	21.00
		15	0	20.72	20.79	20.78	21.00
	16QAM	1	0	19.92	20.01	20.06	21.00
		1	7	20.22	20.27	20.34	21.00
		1	14	20.21	20.26	20.29	21.00
		8	0	19.74	19.78	19.80	20.00
8		4	19.73	19.78	19.80	20.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				131997/1712.5	132322/1745	132647/1777.5		
	64QAM	8	7	19.75	19.83	19.83	20.00	
		15	0	19.69	19.77	19.79	20.00	
		1	0	19.28	19.31	19.34	20.00	
		1	7	19.21	19.22	19.27	20.00	
		1	14	19.22	19.28	19.29	20.00	
		8	0	18.80	18.82	18.79	19.00	
		8	4	18.79	18.82	18.79	19.00	
		8	7	18.79	18.85	18.80	19.00	
		15	0	18.72	18.78	18.75	19.00	
5MHz	QPSK	1	0	21.64	21.75	21.73	22.00	
		1	13	21.54	21.64	21.65	22.00	
		1	24	21.61	21.61	21.60	22.00	
		12	0	20.63	20.65	20.71	21.00	
		12	6	20.69	20.73	20.68	21.00	
		12	13	20.66	20.76	20.75	21.00	
		25	0	20.72	20.78	20.76	21.00	
	16QAM	1	0	19.92	19.97	20.03	21.00	
		1	13	20.22	20.25	20.31	21.00	
		1	24	20.18	20.24	20.25	21.00	
		12	0	19.72	19.74	19.77	20.00	
		12	6	19.70	19.73	19.76	20.00	
		12	13	19.72	19.78	19.79	20.00	
		25	0	19.67	19.73	19.74	20.00	
	64QAM	1	0	19.25	19.31	19.31	20.00	
		1	13	19.18	19.24	19.24	20.00	
		1	24	19.23	19.26	19.25	20.00	
		12	0	18.78	18.78	18.80	19.00	
		12	6	18.76	18.77	18.75	19.00	
		12	13	18.76	18.80	18.76	19.00	
		25	0	18.70	18.74	18.70	19.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132022/1715	132322/1745	132622/1775	
	10MHz	QPSK	1	0	21.66	21.76	21.76	22.00
1			25	21.57	21.69	21.69	22.00	
1			49	21.63	21.65	21.63	22.00	
25			0	20.66	20.70	20.75	21.00	
25			13	20.72	20.78	20.72	21.00	
25			25	20.68	20.80	20.80	21.00	
50			0	20.76	20.80	20.80	21.00	
16QAM		1	0	19.96	20.00	20.05	21.00	
		1	25	20.26	20.29	20.34	21.00	



		1	49	20.21	20.26	20.28	21.00	
		25	0	19.75	19.79	19.81	20.00	
		25	13	19.72	19.77	19.79	20.00	
		25	25	19.75	19.83	19.83	20.00	
		50	0	19.70	19.78	19.78	20.00	
	64QAM	1	0	19.27	19.30	19.33	20.00	
		1	25	19.21	19.24	19.27	20.00	
		1	49	19.22	19.28	19.28	20.00	
		25	0	18.81	18.83	18.80	19.00	
		25	13	18.78	18.81	18.78	19.00	
		25	25	18.79	18.85	18.80	19.00	
		50	0	18.73	18.79	18.74	19.00	
		Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)		
				132047/1717.5	132322/1745	132597/1772.5		
15MHz	QPSK	1	0	21.65	21.72	21.74	22.00	
		1	38	21.55	21.68	21.66	22.00	
		1	74	21.60	21.60	21.59	22.00	
		36	0	20.64	20.66	20.72	21.00	
		36	18	20.69	20.73	20.68	21.00	
		36	39	20.65	20.77	20.76	21.00	
		75	0	20.74	20.76	20.75	21.00	
	16QAM	1	0	19.94	19.98	20.03	21.00	
		1	38	20.24	20.26	20.32	21.00	
		1	74	20.19	20.22	20.25	21.00	
		36	0	19.72	19.77	19.78	20.00	
		36	18	19.69	19.72	19.75	20.00	
		36	39	19.73	19.79	19.80	20.00	
		75	0	19.67	19.73	19.74	20.00	
	64QAM	1	0	19.22	19.28	19.31	20.00	
		1	38	19.19	19.21	19.25	20.00	
		1	74	19.23	19.27	19.29	20.00	
		36	0	18.80	18.85	18.81	19.00	
		36	18	18.76	18.78	18.77	19.00	
		36	39	18.77	18.81	18.77	19.00	
		75	0	18.70	18.74	18.70	19.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132072/1720	132322/1745	132572/1770	
	20MHz	QPSK	1	0	21.62	21.68	21.71	22.00
1			50	21.54	21.64	21.64	22.00	
1			99	21.58	21.59	21.56	22.00	
50			0	20.61	20.61	20.68	21.00	
50			25	20.67	20.69	20.65	21.00	
50			50	20.62	20.72	20.72	21.00	



	16QAM	100	0	20.71	20.71	20.71	21.00
		1	0	19.91	19.94	19.98	21.00
		1	50	20.21	20.24	20.28	21.00
		1	99	20.16	20.19	20.23	21.00
		50	0	19.69	19.73	19.75	20.00
		50	25	19.66	19.70	19.72	20.00
		50	50	19.70	19.74	19.76	20.00
		100	0	19.65	19.69	19.71	20.00
	64QAM	1	0	19.20	19.24	19.26	20.00
		1	50	19.15	19.19	19.21	20.00
		1	99	19.17	19.21	19.23	20.00
		50	0	18.75	18.77	18.74	19.00
		50	25	18.72	18.74	18.71	19.00
		50	50	18.74	18.76	18.73	19.00
		100	0	18.68	18.70	18.67	19.00

LTE Band66							
Full Power & Level 3 & Level 4 & Level 5-Mas Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	23.08	22.62	22.13	23.50
		1	2	22.95	22.16	21.90	23.50
		1	5	22.86	22.29	21.88	23.50
		3	0	23.00	22.69	22.28	23.50
		3	2	22.50	22.61	22.31	23.50
		3	3	22.46	22.62	22.27	23.50
		6	0	21.31	21.63	21.86	22.50
	16QAM	1	0	22.15	22.09	22.12	22.50
		1	2	22.00	22.00	22.03	22.50
		1	5	22.18	22.11	22.14	22.50
		3	0	21.98	21.83	21.87	22.50
		3	2	21.96	21.84	21.88	22.50
		3	3	21.92	21.88	21.86	22.50
		6	0	21.20	21.12	21.18	21.50
	64QAM	1	0	21.28	21.37	21.35	21.50
		1	2	21.20	21.13	21.20	21.50
		1	5	21.19	21.14	21.10	21.50
		3	0	21.00	20.92	20.95	21.50
		3	2	21.02	20.91	20.96	21.50
		3	3	21.00	20.93	20.91	21.50
		6	0	20.01	20.04	20.08	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	23.07	22.64	22.12	23.50
		1	7	22.91	22.15	21.91	23.50
		1	14	22.86	22.29	21.88	23.50
		8	0	22.07	21.76	21.37	22.50
		8	4	21.60	21.67	21.38	22.50
		8	7	21.54	21.71	21.33	22.50
		15	0	21.31	21.66	21.87	22.50
	16QAM	1	0	22.15	22.07	22.12	22.50
		1	7	22.00	21.98	22.04	22.50
		1	14	22.17	22.13	22.13	22.50
		8	0	21.07	20.92	20.96	21.50
		8	4	21.04	20.92	20.96	21.50
		8	7	20.99	20.95	20.95	21.50
		15	0	21.21	21.12	21.16	21.50
	64QAM	1	0	21.48	21.39	21.43	21.50
		1	7	21.20	21.15	21.19	21.50
		1	14	21.22	21.11	21.09	21.50
		8	0	20.09	20.01	20.08	20.50
		8	4	20.10	19.99	20.04	20.50
		8	7	20.07	20.00	20.00	20.50
		15	0	20.02	20.04	20.06	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
5MHz	QPSK	1	0	23.10	22.66	22.16	23.50
		1	13	22.93	22.19	21.94	23.50
		1	24	22.89	22.34	21.92	23.50
		12	0	22.10	21.81	21.41	22.50
		12	6	21.62	21.71	21.43	22.50
		12	13	21.56	21.73	21.37	22.50
		25	0	21.31	21.67	21.89	22.50
	16QAM	1	0	22.15	22.11	22.15	22.50
		1	13	22.00	22.00	22.07	22.50
		1	24	22.20	22.15	22.17	22.50
		12	0	21.09	20.96	20.99	21.50
		12	6	21.07	20.97	21.00	21.50
		12	13	21.02	21.00	20.99	21.50
		25	0	21.23	21.16	21.21	21.50
	64QAM	1	0	21.40	21.39	21.32	21.50
		1	13	21.23	21.13	21.22	21.50
		1	24	21.21	21.13	21.13	21.50
		12	0	20.11	20.05	20.07	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132022/1715	132322/1745	132622/1775	
		12	6	20.13	20.04	20.08	20.50
		12	13	20.10	20.05	20.04	20.50
		25	0	20.04	20.08	20.11	20.50
10MHz	QPSK	1	0	23.05	22.57	22.10	23.50
		1	25	22.91	22.15	21.90	23.50
1		49	22.83	22.27	21.84	23.50	
25		0	22.05	21.72	21.34	22.50	
25		13	21.58	21.63	21.35	22.50	
25		25	21.50	21.67	21.30	22.50	
50		0	21.30	21.59	21.82	22.50	
10MHz	16QAM	1	0	22.14	22.04	22.07	22.50
		1	25	21.99	21.97	22.01	22.50
		1	49	22.15	22.08	22.11	22.50
		25	0	21.04	20.91	20.94	21.50
		25	13	21.00	20.89	20.92	21.50
		25	25	20.97	20.91	20.92	21.50
		50	0	21.19	21.08	21.13	21.50
	64QAM	1	0	21.32	21.32	21.38	21.50
		1	25	21.17	21.10	21.16	21.50
		1	49	21.16	21.06	21.07	21.50
		25	0	20.06	20.00	20.02	20.50
		25	13	20.06	19.96	20.00	20.50
		25	25	20.05	19.96	19.97	20.50
		50	0	20.00	20.00	20.03	20.50
15MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	23.03	22.52	22.07	23.50
		1	38	22.90	22.15	21.88	23.50
		1	74	22.79	22.21	21.79	23.50
		36	0	22.03	21.68	21.31	22.50
		36	18	21.56	21.59	21.30	22.50
		36	39	21.47	21.66	21.27	22.50
		75	0	21.32	21.56	21.79	22.50
	16QAM	1	0	22.16	22.01	22.04	22.50
		1	38	22.01	21.96	21.99	22.50
		1	74	22.13	22.04	22.07	22.50
		36	0	21.02	20.90	20.92	21.50
		36	18	20.96	20.83	20.87	21.50
		36	39	20.95	20.87	20.89	21.50
		75	0	21.17	21.04	21.08	21.50
64QAM	1	0	21.37	21.29	21.35	21.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
		1	38	21.15	21.09	21.14	21.50
		1	74	21.17	21.05	21.07	21.50
		36	0	20.06	20.03	20.04	20.50
		36	18	20.03	19.92	19.98	20.50
		36	39	20.03	19.92	19.94	20.50
		75	0	19.98	19.96	19.98	20.50
20MHz	QPSK	1	0	23.00	22.48	22.04	23.50
		1	50	22.89	22.11	21.86	23.50
		1	99	22.77	22.20	21.76	23.50
		50	0	22.00	21.63	21.27	22.50
		50	25	21.54	21.55	21.27	22.50
		50	50	21.44	21.61	21.23	22.50
		100	0	21.29	21.51	21.75	22.50
	16QAM	1	0	22.13	21.97	21.99	22.50
		1	50	21.98	21.94	21.95	22.50
		1	99	22.10	22.01	22.05	22.50
		50	0	20.99	20.86	20.89	21.50
		50	25	20.93	20.81	20.84	21.50
		50	50	20.92	20.82	20.85	21.50
		100	0	21.15	21.00	21.05	21.50
	64QAM	1	0	21.35	21.25	21.30	21.50
		1	50	21.11	21.07	21.10	21.50
		1	99	21.11	20.99	21.01	21.50
		50	0	20.01	19.95	19.97	20.50
		50	25	19.99	19.88	19.92	20.50
		50	50	20.00	19.87	19.90	20.50
		100	0	19.96	19.92	19.95	20.50

LTE Band66							
Level 1-Mas Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	18.60	18.89	18.71	20.00
		1	2	18.50	18.98	18.37	20.00
		1	5	18.61	19.13	18.43	20.00
		3	0	18.29	18.66	18.16	20.00
		3	2	18.73	18.38	18.53	20.00
		3	3	18.43	18.23	18.24	20.00
		6	0	17.38	17.38	17.55	19.00
	16QAM	1	0	17.67	18.00	18.45	19.00
		1	2	17.47	17.59	18.18	19.00



		1	5	17.55	17.69	18.09	19.00
		3	0	17.16	17.13	17.49	19.00
		3	2	17.29	17.29	17.56	19.00
		3	3	17.21	17.40	17.66	19.00
		6	0	16.14	16.38	16.84	18.00
	64QAM	1	0	16.34	16.29	16.69	18.00
		1	2	16.57	16.44	17.04	18.00
		1	5	16.34	16.52	16.84	18.00
		3	0	16.13	16.14	16.47	18.00
		3	2	16.22	16.32	16.72	18.00
		3	3	16.36	16.56	16.89	18.00
		6	0	15.43	15.66	16.13	17.00
		Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)	
1319871711.5	132322/1745					132657/1778.5	
3MHz	QPSK	1	0	18.62	18.93	18.74	20.00
		1	7	18.48	19.01	18.41	20.00
		1	14	18.64	19.18	18.47	20.00
		8	0	17.39	17.78	17.29	19.00
		8	4	17.85	17.48	17.65	19.00
		8	7	17.53	17.34	17.34	19.00
		15	0	17.38	17.42	17.58	19.00
	16QAM	1	0	17.67	18.02	18.48	19.00
		1	7	17.47	17.59	18.22	19.00
		1	14	17.57	17.73	18.12	19.00
		8	0	16.27	16.26	16.61	18.00
		8	4	16.40	16.42	16.68	18.00
		8	7	16.31	16.52	16.79	18.00
		15	0	16.17	16.42	16.87	18.00
	64QAM	1	0	16.37	16.31	16.72	18.00
		1	7	16.60	16.44	17.06	18.00
		1	14	16.36	16.51	16.87	18.00
		8	0	15.24	15.27	15.59	17.00
		8	4	15.33	15.45	15.84	17.00
		8	7	15.46	15.68	16.02	17.00
		15	0	15.46	15.70	16.16	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	18.59	18.91	18.70	20.00
		1	13	18.46	18.97	18.38	20.00
		1	24	18.61	19.13	18.43	20.00
		12	0	17.36	17.73	17.25	19.00
		12	6	17.83	17.44	17.60	19.00
		12	13	17.51	17.32	17.30	19.00



	16QAM	25	0	17.38	17.41	17.56	19.00
		1	0	17.67	17.98	18.45	19.00
		1	13	17.47	17.57	18.19	19.00
		1	24	17.54	17.71	18.08	19.00
		12	0	16.25	16.22	16.58	18.00
		12	6	16.37	16.37	16.64	18.00
		12	13	16.28	16.47	16.75	18.00
		25	0	16.15	16.38	16.82	18.00
	64QAM	1	0	16.34	16.31	16.69	18.00
		1	13	16.57	16.46	17.03	18.00
		1	24	16.37	16.49	16.83	18.00
		12	0	15.22	15.23	15.60	17.00
		12	6	15.30	15.40	15.80	17.00
		12	13	15.43	15.63	15.98	17.00
		25	0	15.44	15.66	16.11	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	18.61	18.92	18.73	20.00
		1	25	18.49	19.02	18.42	20.00
		1	49	18.63	19.17	18.46	20.00
		25	0	17.39	17.78	17.29	19.00
		25	13	17.86	17.49	17.64	19.00
		25	25	17.53	17.36	17.35	19.00
		50	0	17.42	17.43	17.60	19.00
	16QAM	1	0	17.71	18.01	18.47	19.00
		1	25	17.51	17.61	18.22	19.00
		1	49	17.57	17.73	18.11	19.00
		25	0	16.28	16.27	16.62	18.00
		25	13	16.39	16.41	16.67	18.00
		25	25	16.31	16.52	16.79	18.00
		50	0	16.18	16.43	16.86	18.00
	64QAM	1	0	16.36	16.30	16.71	18.00
		1	25	16.60	16.46	17.06	18.00
		1	49	16.36	16.51	16.86	18.00
		25	0	15.25	15.28	15.60	17.00
		25	13	15.32	15.44	15.83	17.00
		25	25	15.46	15.68	16.02	17.00
		50	0	15.47	15.71	16.15	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	18.60	18.88	18.71	20.00
		1	38	18.47	19.01	18.39	20.00
		1	74	18.60	19.12	18.42	20.00



		36	0	17.37	17.74	17.26	19.00
		36	18	17.83	17.44	17.60	19.00
		36	39	17.50	17.33	17.31	19.00
		75	0	17.40	17.39	17.55	19.00
	16QAM	1	0	17.69	17.99	18.45	19.00
		1	38	17.49	17.58	18.20	19.00
		1	74	17.55	17.69	18.08	19.00
		36	0	16.25	16.25	16.59	18.00
		36	18	16.36	16.36	16.63	18.00
		36	39	16.29	16.48	16.76	18.00
		75	0	16.15	16.38	16.82	18.00
	64QAM	1	0	16.31	16.28	16.69	18.00
		1	38	16.58	16.43	17.04	18.00
		1	74	16.37	16.50	16.87	18.00
36		0	15.24	15.30	15.61	17.00	
36		18	15.30	15.41	15.82	17.00	
36		39	15.44	15.64	15.99	17.00	
75		0	15.44	15.66	16.11	17.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	18.57	18.84	18.98	20.00
		1	50	18.46	18.97	18.37	20.00
		1	99	18.88	19.11	18.39	20.00
		50	0	17.34	17.69	17.22	19.00
		50	25	17.81	17.40	17.57	19.00
		50	50	17.47	17.28	17.27	19.00
		100	0	17.37	17.34	17.51	19.00
	16QAM	1	0	17.66	17.95	18.40	19.00
		1	50	17.46	17.56	18.16	19.00
		1	99	17.52	17.66	18.06	19.00
		50	0	16.22	16.21	16.56	18.00
		50	25	16.33	16.34	16.60	18.00
		50	50	16.26	16.43	16.72	18.00
		100	0	16.13	16.34	16.79	18.00
	64QAM	1	0	16.29	16.24	16.64	18.00
		1	50	16.54	16.41	17.00	18.00
		1	99	16.31	16.44	16.81	18.00
		50	0	15.19	15.22	15.54	17.00
		50	25	15.26	15.37	15.76	17.00
		50	50	15.41	15.59	15.95	17.00
		100	0	15.42	15.62	16.08	17.00



LTE Band66							
Level 2-Mas Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	17.94	18.59	17.89	19.50
		1	2	17.86	17.91	17.74	19.50
		1	5	17.84	17.80	17.71	19.50
		3	0	17.81	17.87	17.78	19.50
		3	2	18.07	17.85	17.81	19.50
		3	3	17.83	17.87	17.76	19.50
		6	0	16.99	17.29	16.94	18.50
	16QAM	1	0	17.28	17.65	17.98	18.50
		1	2	17.12	17.43	17.76	18.50
		1	5	17.24	17.57	17.83	18.50
		3	0	16.54	16.91	17.32	18.50
		3	2	16.63	17.00	17.43	18.50
		3	3	16.57	17.03	17.38	18.50
		6	0	15.59	16.06	16.45	17.50
	64QAM	1	0	16.05	16.49	16.88	17.50
		1	2	16.21	16.61	17.02	17.50
		1	5	16.54	16.98	17.30	17.50
		3	0	16.22	16.41	16.66	17.50
		3	2	15.97	16.15	16.39	17.50
		3	3	16.37	16.63	16.78	17.50
		6	0	15.15	15.42	15.61	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	17.96	18.63	17.92	19.50
		1	7	17.84	17.94	17.78	19.50
		1	14	17.87	17.85	17.75	19.50
		8	0	16.91	16.99	16.91	18.50
		8	4	17.19	16.95	16.93	18.50
		8	7	16.93	16.98	16.86	18.50
		15	0	16.99	17.33	16.97	18.50
	16QAM	1	0	17.28	17.67	18.01	18.50
		1	7	17.12	17.43	17.80	18.50
		1	14	17.26	17.61	17.86	18.50
		8	0	15.65	16.04	16.44	17.50
		8	4	15.74	16.13	16.55	17.50
		8	7	15.67	16.15	16.51	17.50
		15	0	15.62	16.10	16.48	17.50
	64QAM	1	0	16.08	16.51	16.91	17.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				131997/1712.5	132322/1745	132647/1777.5		
		1	7	16.24	16.61	17.04	17.50	
		1	14	16.56	16.97	17.33	17.50	
		8	0	15.33	15.54	15.78	16.50	
		8	4	15.08	15.28	15.51	16.50	
		8	7	15.47	15.75	15.91	16.50	
		15	0	15.18	15.46	15.64	16.50	
5MHz	QPSK	1	0	17.93	18.61	17.88	19.50	
		1	13	17.82	17.90	17.75	19.50	
		1	24	17.84	17.80	17.71	19.50	
		12	0	16.88	16.94	16.87	18.50	
		12	6	17.17	16.91	16.88	18.50	
		12	13	16.91	16.96	16.82	18.50	
		25	0	16.99	17.32	16.95	18.50	
	16QAM	1	0	17.28	17.63	17.98	18.50	
		1	13	17.12	17.41	17.77	18.50	
		1	24	17.23	17.59	17.82	18.50	
		12	0	15.63	16.00	16.41	17.50	
		12	6	15.71	16.08	16.51	17.50	
		12	13	15.64	16.10	16.47	17.50	
		25	0	15.60	16.06	16.43	17.50	
	64QAM	1	0	16.05	16.51	16.88	17.50	
		1	13	16.21	16.63	17.01	17.50	
		1	24	16.57	16.95	17.29	17.50	
		12	0	15.31	15.50	15.79	16.50	
		12	6	15.05	15.23	15.47	16.50	
		12	13	15.44	15.70	15.87	16.50	
		25	0	15.16	15.42	15.59	16.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132022/1715	132322/1745	132622/1775	
	10MHz	QPSK	1	0	17.95	18.62	17.91	19.50
1			25	17.85	17.95	17.79	19.50	
1			49	17.86	17.84	17.74	19.50	
25			0	16.91	16.99	16.91	18.50	
25			13	17.20	16.96	16.92	18.50	
25			25	16.93	17.00	16.87	18.50	
50			0	17.03	17.34	16.99	18.50	
16QAM		1	0	17.32	17.66	18.00	18.50	
		1	25	17.16	17.45	17.80	18.50	
		1	49	17.26	17.61	17.85	18.50	
		25	0	15.66	16.05	16.45	17.50	
		25	13	15.73	16.12	16.54	17.50	



		25	25	15.67	16.15	16.51	17.50
		50	0	15.63	16.11	16.47	17.50
	64QAM	1	0	16.07	16.50	16.90	17.50
		1	25	16.24	16.63	17.04	17.50
		1	49	16.56	16.97	17.32	17.50
		25	0	15.34	15.55	15.79	16.50
		25	13	15.07	15.27	15.50	16.50
		25	25	15.47	15.75	15.91	16.50
		50	0	15.19	15.47	15.63	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	17.94	18.58	17.89	19.50
		1	38	17.83	17.94	17.76	19.50
		1	74	17.83	17.79	17.70	19.50
		36	0	16.89	16.95	16.88	18.50
		36	18	17.17	16.91	16.88	18.50
		36	39	16.90	16.97	16.83	18.50
		75	0	17.01	17.30	16.94	18.50
	16QAM	1	0	17.30	17.64	17.98	18.50
		1	38	17.14	17.42	17.78	18.50
		1	74	17.24	17.57	17.82	18.50
		36	0	15.63	16.03	16.42	17.50
		36	18	15.70	16.07	16.50	17.50
		36	39	15.65	16.11	16.48	17.50
		75	0	15.60	16.06	16.43	17.50
	64QAM	1	0	16.02	16.48	16.88	17.50
		1	38	16.22	16.60	17.02	17.50
		1	74	16.57	16.96	17.33	17.50
		36	0	15.33	15.57	15.80	16.50
		36	18	15.05	15.24	15.49	16.50
		36	39	15.45	15.71	15.88	16.50
		75	0	15.16	15.42	15.59	16.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	17.91	18.54	17.86	19.50
		1	50	17.82	17.90	17.74	19.50
		1	99	17.81	17.78	17.67	19.50
		50	0	16.86	16.90	16.84	18.50
		50	25	17.15	16.87	16.85	18.50
		50	50	16.87	16.92	16.79	18.50
		100	0	16.98	17.25	16.90	18.50
	16QAM	1	0	17.27	17.60	17.93	18.50
		1	50	17.11	17.40	17.74	18.50



		1	99	17.21	17.54	17.80	18.50
		50	0	15.60	15.99	16.39	17.50
		50	25	15.67	16.05	16.47	17.50
		50	50	15.62	16.06	16.44	17.50
		100	0	15.58	16.02	16.40	17.50
	64QAM	1	0	16.00	16.44	16.83	17.50
		1	50	16.18	16.58	16.98	17.50
		1	99	16.51	16.90	17.27	17.50
		50	0	15.28	15.49	15.73	16.50
		50	25	15.01	15.20	15.43	16.50
		50	50	15.42	15.66	15.84	16.50
		100	0	15.14	15.38	15.56	16.50



9.3.2 LTE CA

CA Combination	Test Scenario	Modulation	PCC							SCC						output power	
			PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC UL Channel	f _{UL} [MHz]	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC UL Channel	f _{UL} [MHz]	SCC UL RB size	SCC UL RB offset	conducted power (dbm)	Tune up (dbm)
CA_7C ANT1 Main	Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D2 & Level 7-D2	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	24.08	25.00
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	24.02	25.00
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	23.96	25.00
	Level 5	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	19.12	20.00
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	19.02	20.00
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	19.05	20.00
	Level 6-D1 & Level 7-D1	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	21.70	22.50
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	21.73	22.50
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	21.78	22.50
CA_7C ANT4 Div	Full Power & Level 3 & Level 4 & Level 5	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	22.91	24.00
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	22.82	24.00
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	22.85	24.00
	Level 1	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	17.88	19.00
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	17.75	19.00
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	17.79	19.00
	Level 2	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	16.64	18.00
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	16.69	18.00
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	16.70	18.00

9.4 NR Mode

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS 138.521-1 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 TS138.521-1.

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	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	$\leq 0.5^2$		0^2
DFT-s-OFDM QPSK	≤ 1		0
DFT-s-OFDM 16 QAM	≤ 2		≤ 1
DFT-s-OFDM 64 QAM		≤ 2.5	
DFT-s-OFDM 256 QAM		≤ 4.5	
CP-OFDM QPSK	≤ 3		≤ 1.5
CP-OFDM 16 QAM	≤ 3		≤ 2
CP-OFDM 64 QAM		≤ 3.5	
CP-OFDM 256 QAM		≤ 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.

The allowed A-MPR values specified below in Table 6.2.3.3.1-1 of 3GPP TS138.521-1 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01"

Table 6.2.3.3.1-1: Additional maximum power reduction (A-MPR)

Network Signalling label	Requirements (subclause)	NR Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01		Table 5.2-1	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Table 5.3.2-1	N/A

EN-DC Antenna Configuration

EN-DC Configurations	E-UTRA	NR	Antenna Configurations				
	Band	Band	Mode	1	2	3	4
DC_66A-n5A	LTE Band 66	n5	LTE	Ant 2	Ant 2	Ant 1	Ant 4
			NR	Ant 0	Ant 6	Ant 0	Ant 0
DC_28A-n41A	LTE Band 28	n41	LTE	Ant 0	Ant 6	/	/
			NR	Ant 3	Ant 3	/	/
DC_2A-n66A	LTE Band 2	n66	LTE	Ant 1	Ant 4	/	/
			NR	Ant 2	Ant 2	/	/
DC_5A-n66A	LTE Band 5		LTE	Ant 0	Ant 6	Ant 0	Ant 0
			NR	Ant 2	Ant 2	Ant 1	Ant 4
DC_2A-n77A	LTE Band 2	n77	LTE	Ant 1	Ant 4	Ant 1	Ant 1
			NR	Ant 3	Ant 7	Ant 5	Ant 2
DC_5A-n77A	LTE Band 5		LTE	Ant 0	Ant 6	Ant 0	Ant 0
			NR	Ant 3	Ant 7	Ant 5	Ant 2
DC_12A-n77A	LTE Band 12		LTE	Ant 0	Ant 6	Ant 0	Ant 0
			NR	Ant 3	Ant 7	Ant 5	Ant 2
DC_2A-n78A	LTE Band 2	n78	LTE	Ant 1	Ant 4	Ant 1	Ant 1
			NR	Ant 3	Ant 7	Ant 5	Ant 2
DC_7A-n78A	LTE Band 7		LTE	Ant 1	Ant 4	Ant 1	Ant 1
			NR	Ant 3	Ant 7	Ant 5	Ant 2
DC_28A-n78A	LTE Band 28		LTE	Ant 0	Ant 6	Ant 0	Ant 0
			NR	Ant 3	Ant 7	Ant 5	Ant 2

Note: The EN-DC mode maximum power for LTE are same as LTE standalone mode, so this section only list 5G NR conducted power.



NR n2							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Main Ant1(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.63	22.61	22.63	23.00
		1	23	22.55	22.54	21.90	23.00
		12	6	22.50	22.50	22.44	23.00
		25	0	22.52	22.54	22.41	23.00
	DFT-s-OFDM QPSK	1	1	22.46	22.50	22.50	23.00
		1	23	22.45	22.52	22.09	23.00
		12	6	22.47	22.56	22.19	23.00
		25	0	22.49	21.93	21.58	23.00
	DFT-s-OFDM 16QAM	1	1	22.82	22.79	22.68	23.00
		1	23	22.87	21.85	21.68	23.00
		12	6	22.46	21.87	21.51	23.00
	DFT-s-OFDM 64QAM	1	1	20.91	20.97	20.86	21.50
		1	23	20.94	20.29	20.48	21.50
		12	6	21.03	20.50	20.32	21.50
	DFT-s-OFDM 256QAM	1	1	19.04	19.03	19.07	20.00
		1	23	18.99	18.53	18.57	20.00
		12	6	18.99	19.03	18.92	20.00
	CP-OFDM QPSK	1	1	21.98	21.82	22.04	22.50
	CP-OFDM 16QAM	1	1	21.24	21.10	21.28	22.00
	CP-OFDM 64QAM	1	1	19.56	19.64	19.57	20.50
CP-OFDM 256QAM	1	1	17.21	17.23	17.23	17.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	22.66	22.65	22.66	23.00
		1	50	22.56	22.58	21.92	23.00
		25	12	22.52	22.51	22.47	23.00
		50	0	22.55	22.59	22.45	23.00
	DFT-s-OFDM QPSK	1	1	22.48	22.54	22.53	23.00
		1	50	22.48	22.57	22.13	23.00
		25	12	22.50	22.61	22.23	23.00
		50	0	22.52	21.97	21.63	23.00
	DFT-s-OFDM	1	1	22.85	22.81	22.72	23.00



	16QAM	1	50	22.90	21.88	21.70	23.00
		25	12	22.49	21.91	21.54	23.00
	DFT-s-OFDM 64QAM	1	1	20.94	20.99	20.89	21.50
		1	50	20.97	20.34	20.52	21.50
		25	12	21.05	20.54	20.35	21.50
	DFT-s-OFDM 256QAM	1	1	19.06	19.07	19.12	20.00
		1	50	19.03	18.55	18.61	20.00
		25	12	19.05	19.09	18.98	20.00
	CP-OFDM QPSK	1	1	22.03	21.90	22.11	22.50
	CP-OFDM 16QAM	1	1	21.28	21.14	21.34	22.00
CP-OFDM 64QAM	1	1	19.59	19.69	19.61	20.50	
CP-OFDM 256QAM	1	1	17.23	17.27	17.26	17.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.61	22.56	22.60	23.00
		1	77	22.54	22.54	21.88	23.00
		36	18	22.46	22.44	22.39	23.00
		75	0	22.50	22.50	22.38	23.00
	DFT-s-OFDM QPSK	1	1	22.44	22.46	22.45	23.00
		1	77	22.42	22.51	22.06	23.00
		36	18	22.49	22.53	22.16	23.00
		75	0	22.51	21.90	21.55	23.00
	DFT-s-OFDM 16QAM	1	1	22.84	22.78	22.66	23.00
		1	77	22.85	21.81	21.64	23.00
		36	18	22.44	21.86	21.49	23.00
	DFT-s-OFDM 64QAM	1	1	20.87	20.91	20.81	21.50
		1	77	20.92	20.25	20.45	21.50
		36	18	21.01	20.46	20.27	21.50
	DFT-s-OFDM 256QAM	1	1	18.98	19.00	19.04	20.00
		1	77	18.97	18.52	18.55	20.00
		36	18	19.00	19.02	18.92	20.00
	CP-OFDM QPSK	1	1	21.98	21.85	22.06	22.50
	CP-OFDM 16QAM	1	1	21.21	21.06	21.26	22.00
	CP-OFDM 64QAM	1	1	19.54	19.60	19.54	20.50
CP-OFDM 256QAM	1	1	17.19	17.19	17.18	17.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				372000/1860	376000/1880	380000/1900	
20MHz	DFT-s-OFDM BPSK	1	1	22.58	22.52	22.57	23.00
		1	104	22.53	22.50	21.86	23.00
		50	25	22.44	22.43	22.36	23.00
		100	0	22.47	22.45	22.34	23.00
	DFT-s-OFDM QPSK	1	1	22.42	22.42	22.42	23.00
		1	104	22.39	22.46	22.02	23.00
		50	25	22.46	22.48	22.12	23.00
	DFT-s-OFDM 16QAM	100	0	22.48	21.86	21.50	23.00
		1	1	22.81	22.76	22.62	23.00
		1	104	22.82	21.78	21.62	23.00
	DFT-s-OFDM 64QAM	50	25	22.41	21.82	21.46	23.00
		1	1	20.84	20.89	20.78	21.50
		1	104	20.89	20.20	20.41	21.50
	DFT-s-OFDM 256QAM	50	25	20.99	20.42	20.24	21.50
		1	1	18.96	18.96	18.99	20.00
		1	104	18.93	18.50	18.51	20.00
	CP-OFDM QPSK	50	25	18.94	18.96	18.86	20.00
		1	1	21.93	21.77	21.99	22.50
	CP-OFDM 16QAM	1	1	21.17	21.02	21.20	22.00
		1	1	19.51	19.55	19.50	20.50
CP-OFDM 256QAM	1	1	17.17	17.15	17.15	17.50	

NR n2							
Full Power & Level 3 & Level 4 & Level 5-Div Ant4(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.71	21.74	21.71	22.50
		1	23	21.68	21.66	21.06	22.50
		12	6	21.69	21.55	21.49	22.50
		25	0	21.68	21.64	21.54	22.50
	DFT-s-OFDM QPSK	1	1	21.55	21.55	21.56	22.50
		1	23	21.57	21.61	21.27	22.50
		12	6	21.70	21.62	21.50	22.50
		25	0	21.67	21.43	20.80	22.50
	DFT-s-OFDM 16QAM	1	1	21.98	21.90	21.94	22.50
		1	23	21.93	21.29	21.20	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				371000/1855	376000/1880	381000/1905	
	DFT-s-OFDM 64QAM	12	6	21.61	21.45	21.01	22.50
		1	1	20.00	19.98	20.05	21.00
		1	23	20.01	19.45	19.39	21.00
		12	6	20.22	20.10	19.72	21.00
	DFT-s-OFDM 256QAM	1	1	18.15	18.14	18.16	19.50
		1	23	18.10	18.05	17.89	19.50
		12	6	18.28	18.17	18.00	19.50
	CP-OFDM QPSK	1	1	21.15	21.11	21.16	22.00
	CP-OFDM 16QAM	1	1	20.49	20.32	20.33	21.50
	CP-OFDM 64QAM	1	1	18.70	18.66	18.59	20.00
	CP-OFDM 256QAM	1	1	16.27	16.31	16.30	17.00
	10MHz	DFT-s-OFDM BPSK	1	1	21.68	21.70	21.68
1			50	21.67	21.62	21.04	22.50
25			12	21.67	21.54	21.46	22.50
50			0	21.65	21.59	21.50	22.50
DFT-s-OFDM QPSK		1	1	21.53	21.51	21.53	22.50
		1	50	21.54	21.56	21.23	22.50
		25	12	21.67	21.57	21.46	22.50
DFT-s-OFDM 16QAM		50	0	21.64	21.39	20.75	22.50
		1	1	21.95	21.88	21.90	22.50
		1	50	21.90	21.26	21.18	22.50
DFT-s-OFDM 64QAM		25	12	21.58	21.41	20.98	22.50
		1	1	19.97	19.96	20.02	21.00
		1	50	19.98	19.40	19.35	21.00
DFT-s-OFDM 256QAM		25	12	20.20	20.06	19.69	21.00
		1	1	18.13	18.10	18.11	19.50
		1	50	18.06	18.03	17.85	19.50
CP-OFDM QPSK		25	12	18.22	18.11	17.94	19.50
		1	1	21.10	21.03	21.09	22.00
		1	1	20.45	20.28	20.27	21.50
CP-OFDM 16QAM		1	1	18.67	18.61	18.55	20.00
CP-OFDM 64QAM		1	1	16.25	16.27	16.27	17.00
CP-OFDM 256QAM		1	1				



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.73	21.79	21.74	22.50
		1	77	21.69	21.66	21.08	22.50
		36	18	21.73	21.61	21.54	22.50
		75	0	21.70	21.68	21.57	22.50
	DFT-s-OFDM QPSK	1	1	21.57	21.59	21.61	22.50
		1	77	21.60	21.62	21.30	22.50
		36	18	21.68	21.65	21.53	22.50
		75	0	21.65	21.46	20.83	22.50
	DFT-s-OFDM 16QAM	1	1	21.96	21.91	21.96	22.50
		1	77	21.95	21.33	21.24	22.50
		36	18	21.63	21.46	21.03	22.50
	DFT-s-OFDM 64QAM	1	1	20.04	20.04	20.10	21.00
		1	77	20.03	19.49	19.42	21.00
		36	18	20.24	20.14	19.77	21.00
	DFT-s-OFDM 256QAM	1	1	18.21	18.17	18.19	19.50
		1	77	18.12	18.06	17.91	19.50
		36	18	18.27	18.18	18.00	19.50
	CP-OFDM QPSK	1	1	21.15	21.08	21.14	22.00
	CP-OFDM 16QAM	1	1	20.52	20.36	20.35	21.50
	CP-OFDM 64QAM	1	1	18.72	18.70	18.62	20.00
CP-OFDM 256QAM	1	1	16.29	16.35	16.35	17.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
20MHz	DFT-s-OFDM BPSK	1	1	21.66	21.63	21.66	22.50
		1	104	21.67	21.62	21.03	22.50
		50	25	21.64	21.52	21.42	22.50
		100	0	21.63	21.55	21.47	22.50
	DFT-s-OFDM QPSK	1	1	21.51	21.47	21.50	22.50
		1	104	21.50	21.52	21.20	22.50
		50	25	21.66	21.50	21.41	22.50
		100	0	21.63	21.36	20.70	22.50
	DFT-s-OFDM 16QAM	1	1	21.94	21.87	21.87	22.50
		1	104	21.88	21.21	21.16	22.50
		50	25	21.55	21.40	20.96	22.50
	DFT-s-OFDM 64QAM	1	1	19.93	19.93	19.98	21.00
		1	104	19.96	19.36	19.32	21.00
		50	25	20.18	20.02	19.66	21.00



	DFT-s-OFDM 256QAM	1	1	18.08	18.03	18.06	19.50
		1	104	18.03	17.98	17.82	19.50
		50	25	18.16	18.06	17.92	19.50
	CP-OFDM QPSK	1	1	21.07	21.02	21.03	22.00
	CP-OFDM 16QAM	1	1	20.41	20.25	20.23	21.50
	CP-OFDM 64QAM	1	1	18.65	18.57	18.52	20.00
	CP-OFDM 256QAM	1	1	16.23	16.23	16.24	17.00

NR n2							
Level 1-Div Ant4(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	20.07	20.14	20.15	21.00
		1	23	20.00	20.05	19.48	21.00
		12	6	20.05	19.87	19.89	21.00
		25	0	20.05	20.03	19.95	21.00
	DFT-s-OFDM QPSK	1	1	19.96	19.98	19.97	21.00
		1	23	20.00	20.02	19.69	21.00
		12	6	20.10	20.03	19.91	21.00
		25	0	20.01	19.77	19.36	21.00
	DFT-s-OFDM 16QAM	1	1	20.32	20.19	20.33	21.00
		1	23	20.36	19.67	19.63	21.00
		12	6	20.04	19.85	19.45	21.00
	DFT-s-OFDM 64QAM	1	1	19.44	19.38	19.45	20.50
		1	23	19.38	18.84	18.80	20.50
		12	6	19.57	19.47	19.13	20.50
	DFT-s-OFDM 256QAM	1	1	17.53	17.44	17.57	19.00
		1	23	17.49	17.30	17.28	19.00
		12	6	17.70	17.58	17.41	19.00
	CP-OFDM QPSK	1	1	19.60	19.61	19.60	21.00
	CP-OFDM 16QAM	1	1	18.94	18.80	18.82	20.50
	CP-OFDM 64QAM	1	1	19.13	19.17	19.06	20.00
CP-OFDM 256QAM	1	1	15.68	15.80	15.77	17.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	20.04	20.10	20.12	21.00
		1	50	19.99	20.01	19.46	21.00
		25	12	20.03	19.86	19.86	21.00
		50	0	20.02	19.98	19.91	21.00
	DFT-s-OFDM QPSK	1	1	19.94	19.94	19.94	21.00
		1	50	19.97	19.97	19.65	21.00
		25	12	20.07	19.98	19.87	21.00
		50	0	19.98	19.73	19.31	21.00
	DFT-s-OFDM 16QAM	1	1	20.29	20.17	20.29	21.00
		1	50	20.33	19.64	19.61	21.00
		25	12	20.01	19.81	19.42	21.00
	DFT-s-OFDM 64QAM	1	1	19.41	19.36	19.42	20.50
		1	50	19.35	18.79	18.76	20.50
		25	12	19.55	19.43	19.10	20.50
	DFT-s-OFDM 256QAM	1	1	17.51	17.40	17.52	19.00
		1	50	17.45	17.28	17.24	19.00
		25	12	17.64	17.52	17.35	19.00
	CP-OFDM QPSK	1	1	19.55	19.53	19.53	21.00
	CP-OFDM 16QAM	1	1	18.90	18.76	18.76	20.50
	CP-OFDM 64QAM	1	1	19.10	19.12	19.02	20.00
CP-OFDM 256QAM	1	1	15.66	15.76	15.74	17.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	20.03	20.06	20.10	21.00
		1	77	19.97	20.00	19.43	21.00
		36	18	20.00	19.81	19.82	21.00
		75	0	20.00	19.94	19.88	21.00
	DFT-s-OFDM QPSK	1	1	19.91	19.89	19.90	21.00
		1	77	19.94	19.94	19.61	21.00
		36	18	20.05	19.94	19.82	21.00
		75	0	19.96	19.71	19.29	21.00
	DFT-s-OFDM 16QAM	1	1	20.27	20.14	20.27	21.00
		1	77	20.31	19.60	19.58	21.00
		36	18	19.98	19.79	19.39	21.00
	DFT-s-OFDM 64QAM	1	1	19.38	19.31	19.38	20.50
		1	77	19.33	18.75	18.73	20.50
		36	18	19.52	19.38	19.06	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				372000/1860	376000/1880	380000/1900	
	DFT-s-OFDM 256QAM	1	1	17.46	17.38	17.50	19.00
		1	77	17.43	17.25	17.22	19.00
		36	18	17.65	17.51	17.36	19.00
	CP-OFDM QPSK	1	1	19.54	19.55	19.54	21.00
	CP-OFDM 16QAM	1	1	18.88	18.73	18.75	20.50
	CP-OFDM 64QAM	1	1	19.08	19.08	18.99	20.00
	CP-OFDM 256QAM	1	1	15.63	15.71	15.70	17.00
20MHz	DFT-s-OFDM BPSK	1	1	20.00	20.02	20.07	21.00
		1	104	19.96	19.96	19.41	21.00
		50	25	19.98	19.80	19.79	21.00
		100	0	19.97	19.89	19.84	21.00
	DFT-s-OFDM QPSK	1	1	19.89	19.85	19.87	21.00
		1	104	19.91	19.89	19.57	21.00
		50	25	20.02	19.89	19.78	21.00
		100	0	19.93	19.67	19.24	21.00
	DFT-s-OFDM 16QAM	1	1	20.24	20.12	20.23	21.00
		1	104	20.28	19.57	19.56	21.00
		50	25	19.95	19.75	19.36	21.00
	DFT-s-OFDM 64QAM	1	1	19.35	19.29	19.35	20.50
		1	104	19.30	18.70	18.69	20.50
		50	25	19.50	19.34	19.03	20.50
	DFT-s-OFDM 256QAM	1	1	17.44	17.34	17.45	19.00
		1	104	17.39	17.23	17.18	19.00
		50	25	17.59	17.45	17.30	19.00
	CP-OFDM QPSK	1	1	19.49	19.47	19.47	21.00
	CP-OFDM 16QAM	1	1	18.84	18.69	18.69	20.50
	CP-OFDM 64QAM	1	1	19.05	19.03	18.95	20.00
	CP-OFDM 256QAM	1	1	15.61	15.67	15.67	17.00



NR n2							
Level 2-Div Ant4(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.25	19.48	19.30	20.50
		1	23	19.13	19.21	19.09	20.50
		12	6	19.34	19.25	19.24	20.50
		25	0	19.22	19.38	19.24	20.50
	DFT-s-OFDM QPSK	1	1	19.16	19.36	19.37	20.50
		1	23	19.28	19.32	19.03	20.50
		12	6	19.16	19.43	19.26	20.50
		25	0	19.07	19.13	18.99	20.50
	DFT-s-OFDM 16QAM	1	1	19.38	19.40	19.65	20.50
		1	23	19.53	18.99	18.91	20.50
		12	6	19.21	19.11	18.92	20.50
	DFT-s-OFDM 64QAM	1	1	17.95	18.04	18.11	19.00
		1	23	18.12	17.82	18.15	19.00
		12	6	18.28	17.99	18.10	19.00
	DFT-s-OFDM 256QAM	1	1	16.35	16.35	16.48	17.50
		1	23	16.63	16.43	16.48	17.50
		12	6	16.45	16.81	16.53	17.50
	CP-OFDM QPSK	1	1	18.75	18.71	18.70	20.00
	CP-OFDM 16QAM	1	1	18.19	18.13	18.08	19.50
	CP-OFDM 64QAM	1	1	16.95	17.17	17.26	18.00
CP-OFDM 256QAM	1	1	13.73	13.97	13.96	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	19.27	19.49	19.33	20.50
		1	50	19.16	19.26	19.13	20.50
		25	12	19.36	19.29	19.27	20.50
		50	0	19.25	19.43	19.28	20.50
	DFT-s-OFDM QPSK	1	1	19.19	19.41	19.41	20.50
		1	50	19.30	19.36	19.08	20.50
		25	12	19.20	19.45	19.30	20.50
		50	0	19.11	19.16	19.01	20.50
	DFT-s-OFDM 16QAM	1	1	19.42	19.44	19.68	20.50
		1	50	19.56	19.01	18.94	20.50
		25	12	19.24	19.16	18.96	20.50



	DFT-s-OFDM 64QAM	1	1	17.97	18.08	18.14	19.00
		1	50	18.15	17.87	18.19	19.00
		25	12	18.31	18.04	18.14	19.00
	DFT-s-OFDM 256QAM	1	1	16.37	16.34	16.50	17.50
		1	50	16.66	16.43	16.51	17.50
		25	12	16.44	16.83	16.56	17.50
	CP-OFDM QPSK	1	1	18.78	18.76	18.70	20.00
	CP-OFDM 16QAM	1	1	18.21	18.17	18.11	19.50
CP-OFDM 64QAM	1	1	16.98	17.22	17.30	18.00	
CP-OFDM 256QAM	1	1	13.76	14.02	14.00	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	19.26	19.45	19.31	20.50
		1	77	19.14	19.25	19.10	20.50
		36	18	19.33	19.24	19.23	20.50
		75	0	19.23	19.39	19.25	20.50
	DFT-s-OFDM QPSK	1	1	19.16	19.36	19.37	20.50
		1	77	19.27	19.33	19.04	20.50
		36	18	19.18	19.41	19.25	20.50
		75	0	19.09	19.14	18.99	20.50
	DFT-s-OFDM 16QAM	1	1	19.40	19.41	19.66	20.50
		1	77	19.54	18.97	18.91	20.50
		36	18	19.21	19.14	18.93	20.50
	DFT-s-OFDM 64QAM	1	1	17.94	18.03	18.10	19.00
		1	77	18.13	17.83	18.16	19.00
		36	18	18.28	17.99	18.10	19.00
	DFT-s-OFDM 256QAM	1	1	16.32	16.32	16.48	17.50
		1	77	16.64	16.40	16.49	17.50
		36	18	16.45	16.82	16.57	17.50
	CP-OFDM QPSK	1	1	18.77	18.78	18.71	20.00
	CP-OFDM 16QAM	1	1	18.19	18.14	18.10	19.50
	CP-OFDM 64QAM	1	1	16.96	17.18	17.27	18.00
CP-OFDM 256QAM	1	1	13.73	13.97	13.96	15.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				372000/1860	376000/1880	380000/1900	
20MHz	DFT-s-OFDM BPSK	1	1	19.23	19.41	19.28	20.50
		1	104	19.13	19.21	19.08	20.50
		50	25	19.31	19.23	19.20	20.50
		100	0	19.20	19.34	19.21	20.50
	DFT-s-OFDM QPSK	1	1	19.14	19.32	19.34	20.50
		1	104	19.24	19.28	19.00	20.50
		50	25	19.15	19.36	19.21	20.50
		100	0	19.06	19.10	18.94	20.50
	DFT-s-OFDM 16QAM	1	1	19.37	19.39	19.62	20.50
		1	104	19.51	18.94	18.89	20.50
		50	25	19.18	19.10	18.90	20.50
	DFT-s-OFDM 64QAM	1	1	17.91	18.01	18.07	19.00
		1	104	18.10	17.78	18.12	19.00
		50	25	18.26	17.95	18.07	19.00
	DFT-s-OFDM 256QAM	1	1	16.30	16.28	16.43	17.50
		1	104	16.60	16.38	16.45	17.50
		50	25	16.39	16.76	16.51	17.50
	CP-OFDM QPSK	1	1	18.72	18.70	18.64	20.00
	CP-OFDM 16QAM	1	1	18.15	18.10	18.04	19.50
	CP-OFDM 64QAM	1	1	16.93	17.13	17.23	18.00
CP-OFDM 256QAM	1	1	13.71	13.93	13.93	15.00	

NR n5							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant0(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				165300/826.5	167300/836.5	169300/846.5	
5MHz	DFT-s-OFDM BPSK	1	1	23.59	23.58	23.60	24.00
		1	23	22.55	23.10	22.86	24.00
		12	6	23.34	22.76	23.00	24.00
		25	0	23.44	23.29	23.21	24.00
	DFT-s-OFDM QPSK	1	1	23.32	23.02	23.53	24.00
		1	23	22.77	22.91	23.05	24.00
		12	6	23.29	23.11	23.01	24.00
		25	0	23.40	23.13	23.24	24.00
	DFT-s-OFDM 16QAM	1	1	23.83	23.00	23.40	24.00
		1	23	22.88	22.74	22.80	24.00



		12	6	23.34	22.99	23.18	24.00
	DFT-s-OFDM 64QAM	1	1	21.86	21.15	21.40	22.50
		1	23	20.88	21.13	21.19	22.50
		12	6	21.86	21.26	21.22	22.50
	DFT-s-OFDM 256QAM	1	1	20.01	19.37	19.85	21.00
		1	23	19.25	19.32	19.50	21.00
		12	6	19.87	19.87	19.54	21.00
	CP-OFDM QPSK	1	1	22.94	22.99	22.43	23.50
	CP-OFDM 16QAM	1	1	22.17	22.17	21.70	23.00
CP-OFDM 64QAM	1	1	20.36	20.46	20.70	21.50	
CP-OFDM 256QAM	1	1	18.02	18.12	18.11	18.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				165800/829	167300/836.5	168800/844	
10MHz	DFT-s-OFDM BPSK	1	1	23.58	23.61	23.59	24.00
		1	50	22.54	23.06	22.85	24.00
		25	12	23.35	22.77	23.01	24.00
		50	0	23.43	23.28	23.20	24.00
	DFT-s-OFDM QPSK	1	1	23.32	23.02	23.53	24.00
		1	50	22.78	22.90	23.04	24.00
		25	12	23.27	23.13	23.02	24.00
		50	0	23.38	23.12	23.24	24.00
	DFT-s-OFDM 16QAM	1	1	23.81	22.99	23.39	24.00
		1	50	22.87	22.76	22.80	24.00
		25	12	23.34	22.96	23.17	24.00
	DFT-s-OFDM 64QAM	1	1	21.87	21.16	21.41	22.50
		1	50	20.87	21.12	21.18	22.50
		25	12	21.86	21.26	21.22	22.50
	DFT-s-OFDM 256QAM	1	1	20.04	19.40	19.85	21.00
		1	50	19.24	19.35	19.49	21.00
		25	12	19.87	19.86	19.50	21.00
	CP-OFDM QPSK	1	1	22.92	22.92	22.42	23.50
	CP-OFDM 16QAM	1	1	22.17	22.16	21.68	23.00
	CP-OFDM 64QAM	1	1	20.35	20.45	20.69	21.50
	CP-OFDM 256QAM	1	1	18.02	18.12	18.11	18.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				166300/831.5	167300/836.5	168300/841.5	
15MHz	DFT-s-OFDM BPSK	1	1	23.56	23.54	23.57	24.00
		1	77	22.54	23.06	22.84	24.00
		36	18	23.32	22.75	22.97	24.00
		75	0	23.41	23.24	23.17	24.00
	DFT-s-OFDM QPSK	1	1	23.30	22.98	23.50	24.00
		1	77	22.74	22.86	23.01	24.00
		36	18	23.26	23.06	22.97	24.00
		75	0	23.37	23.09	23.19	24.00
	DFT-s-OFDM 16QAM	1	1	23.80	22.98	23.36	24.00
		1	77	22.85	22.71	22.78	24.00
		36	18	23.31	22.95	23.15	24.00
	DFT-s-OFDM 64QAM	1	1	21.83	21.13	21.37	22.50
		1	77	20.85	21.08	21.15	22.50
		36	18	21.84	21.22	21.19	22.50
	DFT-s-OFDM 256QAM	1	1	19.99	19.33	19.80	21.00
		1	77	19.21	19.30	19.46	21.00
		36	18	19.81	19.81	19.48	21.00
	CP-OFDM QPSK	1	1	22.89	22.91	22.36	23.50
	CP-OFDM 16QAM	1	1	22.13	22.13	21.64	23.00
	CP-OFDM 64QAM	1	1	20.33	20.41	20.66	21.50
CP-OFDM 256QAM	1	1	18.00	18.08	18.08	18.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				166800/834	167300/836.5	167800/839	
20MHz	DFT-s-OFDM BPSK	1	1	23.51	23.45	23.51	24.00
		1	104	22.52	23.02	22.80	24.00
		50	25	23.26	22.68	22.89	24.00
		100	0	23.36	23.15	23.10	24.00
	DFT-s-OFDM QPSK	1	1	23.26	22.90	23.42	24.00
		1	104	22.68	22.80	22.94	24.00
		50	25	23.25	22.98	22.90	24.00
		100	0	23.36	23.02	23.11	24.00
	DFT-s-OFDM 16QAM	1	1	23.79	22.95	23.30	24.00
		1	104	22.80	22.64	22.72	24.00
		50	25	23.26	22.90	23.10	24.00
	DFT-s-OFDM 64QAM	1	1	21.76	21.05	21.29	22.50
		1	104	20.80	20.99	21.08	22.50
		50	25	21.80	21.14	21.11	22.50



	DFT-s-OFDM 256QAM	1	1	19.91	19.26	19.72	21.00
		1	104	19.15	19.27	19.40	21.00
		50	25	19.76	19.74	19.42	21.00
	CP-OFDM QPSK	1	1	22.84	22.86	22.31	23.50
	CP-OFDM 16QAM	1	1	22.06	22.05	21.56	23.00
	CP-OFDM 64QAM	1	1	20.28	20.32	20.59	21.50
CP-OFDM 256QAM	1	1	17.96	18.00	18.00	18.50	

NR n5							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				165300/826.5	167300/836.5	169300/846.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.62	21.75	21.68	22.00
		1	23	20.98	21.07	21.03	22.00
		12	6	21.52	21.19	21.38	22.00
		25	0	21.62	21.11	20.93	22.00
	DFT-s-OFDM QPSK	1	1	21.50	21.10	20.93	22.00
		1	23	20.96	20.82	20.69	22.00
		12	6	21.42	21.00	21.67	22.00
	DFT-s-OFDM 16QAM	25	0	21.53	21.10	20.94	22.00
		1	1	21.71	21.61	21.66	22.00
		1	23	21.60	21.09	21.05	22.00
	DFT-s-OFDM 64QAM	12	6	21.55	21.29	20.71	22.00
		1	1	19.99	19.31	20.03	20.50
		1	23	19.08	19.27	19.47	20.50
	DFT-s-OFDM 256QAM	12	6	19.84	19.34	19.30	20.50
		1	1	18.10	17.63	18.08	19.00
		1	23	17.48	18.05	17.74	19.00
	CP-OFDM QPSK	12	6	18.01	17.97	17.92	19.00
		1	1	21.06	21.05	21.05	21.50
		1	1	20.18	20.24	20.37	21.00
	CP-OFDM 16QAM	1	1	18.46	18.53	18.64	19.50
	CP-OFDM 64QAM	1	1	16.14	16.26	16.22	16.50
	CP-OFDM 256QAM	1	1				



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				165800/829	167300/836.5	168800/844	
10MHz	DFT-s-OFDM BPSK	1	1	21.65	21.79	21.71	22.00
		1	50	20.99	21.11	21.05	22.00
		25	12	21.54	21.20	21.41	22.00
		50	0	21.65	21.16	20.97	22.00
	DFT-s-OFDM QPSK	1	1	21.52	21.14	20.96	22.00
		1	50	20.99	20.87	20.73	22.00
		25	12	21.45	21.05	21.71	22.00
		50	0	21.56	21.14	20.99	22.00
	DFT-s-OFDM 16QAM	1	1	21.74	21.63	21.70	22.00
		1	50	21.63	21.12	21.07	22.00
		25	12	21.58	21.33	20.74	22.00
	DFT-s-OFDM 64QAM	1	1	20.02	19.33	20.06	20.50
		1	50	19.11	19.32	19.51	20.50
		25	12	19.86	19.38	19.33	20.50
	DFT-s-OFDM 256QAM	1	1	18.12	17.67	18.13	19.00
		1	50	17.52	18.07	17.78	19.00
		25	12	18.07	18.03	17.98	19.00
	CP-OFDM QPSK	1	1	21.11	21.13	21.12	21.50
	CP-OFDM 16QAM	1	1	20.22	20.28	20.43	21.00
	CP-OFDM 64QAM	1	1	18.49	18.58	18.68	19.50
CP-OFDM 256QAM	1	1	16.16	16.30	16.25	16.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				166300/831.5	167300/836.5	168300/841.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.60	21.70	21.65	22.00
		1	77	20.97	21.07	21.01	22.00
		36	18	21.48	21.13	21.33	22.00
		75	0	21.60	21.07	20.90	22.00
	DFT-s-OFDM QPSK	1	1	21.48	21.06	20.88	22.00
		1	77	20.93	20.81	20.66	22.00
		36	18	21.44	20.97	21.64	22.00
		75	0	21.55	21.07	20.91	22.00
	DFT-s-OFDM 16QAM	1	1	21.73	21.60	21.64	22.00
		1	77	21.58	21.05	21.01	22.00
		36	18	21.53	21.28	20.69	22.00
	DFT-s-OFDM 64QAM	1	1	19.95	19.25	19.98	20.50
		1	77	19.06	19.23	19.44	20.50
		36	18	19.82	19.30	19.25	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				166800/834	167300/836.5	167800/839	
	DFT-s-OFDM 256QAM	1	1	18.04	17.60	18.05	19.00
		1	77	17.46	18.04	17.72	19.00
		36	18	18.02	17.96	17.92	19.00
	CP-OFDM QPSK	1	1	21.06	21.08	21.07	21.50
	CP-OFDM 16QAM	1	1	20.15	20.20	20.35	21.00
	CP-OFDM 64QAM	1	1	18.44	18.49	18.61	19.50
	CP-OFDM 256QAM	1	1	16.12	16.22	16.17	16.50
20MHz	DFT-s-OFDM BPSK	1	1	21.57	21.66	21.62	22.00
		1	104	20.96	21.03	20.99	22.00
		50	25	21.46	21.12	21.30	22.00
		100	0	21.57	21.02	20.86	22.00
	DFT-s-OFDM QPSK	1	1	21.46	21.02	20.85	22.00
		1	104	20.90	20.76	20.62	22.00
		50	25	21.41	20.92	21.60	22.00
		100	0	21.52	21.03	20.86	22.00
	DFT-s-OFDM 16QAM	1	1	21.70	21.58	21.60	22.00
		1	104	21.55	21.02	20.99	22.00
		50	25	21.50	21.24	20.66	22.00
	DFT-s-OFDM 64QAM	1	1	19.92	19.23	19.95	20.50
		1	104	19.03	19.18	19.40	20.50
		50	25	19.80	19.26	19.22	20.50
	DFT-s-OFDM 256QAM	1	1	18.02	17.56	18.00	19.00
		1	104	17.42	18.02	17.68	19.00
		50	25	17.96	17.90	17.86	19.00
	CP-OFDM QPSK	1	1	21.01	21.00	21.00	21.50
	CP-OFDM 16QAM	1	1	20.11	20.16	20.29	21.00
	CP-OFDM 64QAM	1	1	18.41	18.44	18.57	19.50
	CP-OFDM 256QAM	1	1	16.10	16.18	16.14	16.50



NR n7							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 6-D2 & Level 7-D2-Main Ant1(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.43	22.67	22.43	23.00
		1	23	22.56	22.46	22.27	23.00
		12	6	22.49	22.53	22.32	23.00
		25	0	22.46	22.53	21.83	23.00
	DFT-s-OFDM QPSK	1	1	22.49	22.57	22.34	23.00
		1	23	22.64	22.58	22.33	23.00
		12	6	22.47	22.56	22.28	23.00
		25	0	22.02	22.57	21.94	23.00
	DFT-s-OFDM 16QAM	1	1	21.76	22.14	21.68	23.00
		1	23	21.62	22.11	21.38	23.00
		12	6	22.25	22.57	21.58	23.00
	DFT-s-OFDM 64QAM	1	1	20.87	20.93	20.64	21.50
		1	23	19.91	21.00	20.96	21.50
		12	6	20.50	20.98	20.21	21.50
	DFT-s-OFDM 256QAM	1	1	18.93	19.14	18.91	20.00
		1	23	18.98	19.06	18.65	20.00
12		6	19.12	19.09	18.78	20.00	
CP-OFDM QPSK	1	1	21.69	22.17	21.49	22.50	
CP-OFDM 16QAM	1	1	21.13	21.50	20.91	22.00	
CP-OFDM 64QAM	1	1	19.92	20.02	19.86	20.50	
CP-OFDM 256QAM	1	1	16.76	16.94	16.74	17.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	22.45	22.68	22.46	23.00
		1	50	22.59	22.51	22.31	23.00
		25	12	22.51	22.57	22.35	23.00
		50	0	22.49	22.58	21.87	23.00
	DFT-s-OFDM QPSK	1	1	22.52	22.62	22.38	23.00
		1	50	22.66	22.62	22.38	23.00
		25	12	22.51	22.58	22.32	23.00
		50	0	22.06	22.60	21.96	23.00
DFT-s-OFDM	1	1	21.80	22.18	21.71	23.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501500/2507.5	507000/2535	512500/2562.5	
	16QAM	1	50	21.65	22.13	21.41	23.00
		25	12	22.28	22.62	21.62	23.00
	DFT-s-OFDM 64QAM	1	1	20.89	20.97	20.67	21.50
		1	50	19.94	21.05	21.00	21.50
		25	12	20.53	21.03	20.25	21.50
	DFT-s-OFDM 256QAM	1	1	18.95	19.13	18.93	20.00
		1	50	19.01	19.06	18.68	20.00
		25	12	19.11	19.11	18.81	20.00
	CP-OFDM QPSK	1	1	21.72	22.22	21.49	22.50
	CP-OFDM 16QAM	1	1	21.15	21.54	20.94	22.00
CP-OFDM 64QAM	1	1	19.95	20.07	19.90	20.50	
CP-OFDM 256QAM	1	1	16.79	16.99	16.78	17.50	
15MHz	DFT-s-OFDM BPSK	1	1	22.44	22.64	22.44	23.00
		1	77	22.57	22.50	22.28	23.00
		36	18	22.48	22.52	22.31	23.00
		75	0	22.47	22.54	21.84	23.00
	DFT-s-OFDM QPSK	1	1	22.49	22.57	22.34	23.00
		1	77	22.63	22.59	22.34	23.00
		36	18	22.49	22.54	22.27	23.00
		75	0	22.04	22.58	21.94	23.00
	DFT-s-OFDM 16QAM	1	1	21.78	22.15	21.69	23.00
		1	77	21.63	22.09	21.38	23.00
		36	18	22.25	22.60	21.59	23.00
	DFT-s-OFDM 64QAM	1	1	20.86	20.92	20.63	21.50
		1	77	19.92	21.01	20.97	21.50
		36	18	20.50	20.98	20.21	21.50
	DFT-s-OFDM 256QAM	1	1	18.90	19.11	18.91	20.00
		1	77	18.99	19.03	18.66	20.00
		36	18	19.12	19.10	18.82	20.00
	CP-OFDM QPSK	1	1	21.71	22.24	21.50	22.50
	CP-OFDM 16QAM	1	1	21.13	21.51	20.93	22.00
	CP-OFDM 64QAM	1	1	19.93	20.03	19.87	20.50
	CP-OFDM 256QAM	1	1	16.76	16.94	16.74	17.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	22.41	22.60	22.41	23.00
		1	104	22.56	22.46	22.26	23.00
		50	25	22.46	22.51	22.28	23.00
		100	0	22.44	22.49	21.80	23.00
	DFT-s-OFDM QPSK	1	1	22.47	22.53	22.31	23.00
		1	104	22.60	22.54	22.30	23.00
		50	25	22.46	22.49	22.23	23.00
		100	0	22.01	22.54	21.89	23.00
	DFT-s-OFDM 16QAM	1	1	21.75	22.13	21.65	23.00
		1	104	21.60	22.06	21.36	23.00
		50	25	22.22	22.56	21.56	23.00
	DFT-s-OFDM 64QAM	1	1	20.83	20.90	20.60	21.50
		1	104	19.89	20.96	20.93	21.50
		50	25	20.48	20.94	20.18	21.50
	DFT-s-OFDM 256QAM	1	1	18.88	19.07	18.86	20.00
		1	104	18.95	19.01	18.62	20.00
		50	25	19.06	19.04	18.76	20.00
	CP-OFDM QPSK	1	1	21.66	22.16	21.43	22.50
	CP-OFDM 16QAM	1	1	21.09	21.47	20.87	22.00
	CP-OFDM 64QAM	1	1	19.90	19.98	19.83	20.50
	CP-OFDM 256QAM	1	1	16.74	16.90	16.71	17.50

NR n7							
Level 5-Main Ant1(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	20.50	20.49	20.55	21.00
		1	23	20.28	20.39	20.35	21.00
		12	6	20.34	20.38	20.38	21.00
		25	0	19.89	20.42	19.97	21.00
	DFT-s-OFDM QPSK	1	1	20.37	20.44	20.39	21.00
		1	23	20.40	20.39	20.41	21.00
		12	6	20.26	20.42	20.38	21.00
		25	0	19.92	20.45	20.05	21.00
	DFT-s-OFDM 16QAM	1	1	19.68	20.37	19.76	21.00
		1	23	19.43	20.47	19.46	21.00
		12	6	19.65	20.40	19.69	21.00



	DFT-s-OFDM 64QAM	1	1	19.71	20.28	19.74	21.00
		1	23	20.02	20.43	20.10	21.00
		12	6	19.24	20.46	19.33	21.00
	DFT-s-OFDM 256QAM	1	1	17.94	19.00	18.01	19.50
		1	23	17.72	18.92	17.74	19.50
		12	6	17.89	18.91	17.96	19.50
	CP-OFDM QPSK	1	1	20.56	20.41	20.66	21.00
	CP-OFDM 16QAM	1	1	20.00	20.30	20.07	20.50
CP-OFDM 64QAM	1	1	18.92	19.74	19.00	20.00	
CP-OFDM 256QAM	1	1	15.77	16.91	15.86	17.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	20.47	20.45	20.52	21.00
		1	50	20.27	20.35	20.33	21.00
		25	12	20.32	20.37	20.35	21.00
		50	0	19.86	20.37	19.93	21.00
	DFT-s-OFDM QPSK	1	1	20.35	20.40	20.36	21.00
		1	50	20.37	20.34	20.37	21.00
		25	12	20.23	20.37	20.34	21.00
		50	0	19.89	20.41	20.00	21.00
	DFT-s-OFDM 16QAM	1	1	19.65	20.35	19.72	21.00
		1	50	19.40	20.44	19.44	21.00
		25	12	19.62	20.36	19.66	21.00
	DFT-s-OFDM 64QAM	1	1	19.68	20.26	19.71	21.00
		1	50	19.99	20.38	20.06	21.00
		25	12	19.22	20.42	19.30	21.00
	DFT-s-OFDM 256QAM	1	1	17.92	18.96	17.96	19.50
		1	50	17.68	18.90	17.70	19.50
		25	12	17.83	18.85	17.90	19.50
	CP-OFDM QPSK	1	1	20.51	20.33	20.59	21.00
	CP-OFDM 16QAM	1	1	19.96	20.26	20.01	20.50
	CP-OFDM 64QAM	1	1	18.89	19.69	18.96	20.00
CP-OFDM 256QAM	1	1	15.75	16.87	15.83	17.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	20.45	20.40	20.49	21.00
		1	77	20.26	20.35	20.31	21.00
		36	18	20.28	20.31	20.30	21.00
		75	0	19.84	20.33	19.90	21.00
	DFT-s-OFDM QPSK	1	1	20.33	20.36	20.31	21.00
		1	77	20.34	20.33	20.34	21.00
		36	18	20.25	20.34	20.31	21.00
		75	0	19.91	20.38	19.97	21.00
	DFT-s-OFDM 16QAM	1	1	19.67	20.34	19.70	21.00
		1	77	19.38	20.40	19.40	21.00
		36	18	19.60	20.35	19.64	21.00
	DFT-s-OFDM 64QAM	1	1	19.64	20.20	19.66	21.00
		1	77	19.97	20.34	20.03	21.00
		36	18	19.20	20.38	19.25	21.00
	DFT-s-OFDM 256QAM	1	1	17.86	18.93	17.93	19.50
		1	77	17.66	18.89	17.68	19.50
		36	18	17.84	18.84	17.90	19.50
	CP-OFDM QPSK	1	1	20.51	20.36	20.61	21.00
	CP-OFDM 16QAM	1	1	19.93	20.22	19.99	20.50
	CP-OFDM 64QAM	1	1	18.87	19.65	18.93	20.00
CP-OFDM 256QAM	1	1	15.73	16.83	15.78	17.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	20.42	20.36	20.46	21.00
		1	104	20.25	20.31	20.29	21.00
		50	25	20.26	20.30	20.27	21.00
		100	0	19.81	20.28	19.86	21.00
	DFT-s-OFDM QPSK	1	1	20.31	20.32	20.28	21.00
		1	104	20.31	20.28	20.30	21.00
		50	25	20.22	20.29	20.27	21.00
		100	0	19.88	20.34	19.92	21.00
	DFT-s-OFDM 16QAM	1	1	19.64	20.32	19.66	21.00
		1	104	19.35	20.37	19.38	21.00
		50	25	19.57	20.31	19.61	21.00
	DFT-s-OFDM 64QAM	1	1	19.61	20.18	19.63	21.00
		1	104	19.94	20.29	19.99	21.00
		50	25	19.18	20.34	19.22	21.00



	DFT-s-OFDM 256QAM	1	1	17.84	18.89	17.88	19.50
		1	104	17.62	18.87	17.64	19.50
		50	25	17.78	18.78	17.84	19.50
	CP-OFDM QPSK	1	1	20.46	20.28	20.54	21.00
	CP-OFDM 16QAM	1	1	19.89	20.18	19.93	20.50
	CP-OFDM 64QAM	1	1	18.84	19.60	18.89	20.00
CP-OFDM 256QAM	1	1	15.71	16.79	15.75	17.00	

NR n7							
Level 6-D1 & Level 7-D1-Main Ant1(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.42	21.41	21.38	22.00
		1	23	21.09	21.08	21.17	22.00
		12	6	21.20	21.14	21.25	22.00
		25	0	20.72	21.18	20.81	22.00
	DFT-s-OFDM QPSK	1	1	21.30	21.30	21.24	22.00
		1	23	21.36	21.33	21.34	22.00
		12	6	21.16	21.33	21.26	22.00
		25	0	20.82	21.29	20.92	22.00
	DFT-s-OFDM 16QAM	1	1	20.49	21.10	20.60	22.00
		1	23	20.35	21.36	20.39	22.00
		12	6	20.59	21.20	20.61	22.00
	DFT-s-OFDM 64QAM	1	1	20.58	21.05	20.61	22.00
		1	23	20.85	21.19	20.94	22.00
		12	6	20.72	21.32	20.66	22.00
	DFT-s-OFDM 256QAM	1	1	18.84	19.92	18.97	20.50
		1	23	19.32	19.82	19.23	20.50
		12	6	19.19	19.77	19.22	20.50
	CP-OFDM QPSK	1	1	21.39	21.17	21.62	22.00
	CP-OFDM 16QAM	1	1	20.77	21.05	20.91	21.50
	CP-OFDM 64QAM	1	1	19.75	20.59	19.84	21.00
	CP-OFDM 256QAM	1	1	16.70	17.86	16.80	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	21.43	21.38	21.39	22.00
		1	50	21.10	21.12	21.18	22.00
		25	12	21.19	21.13	21.24	22.00
		50	0	20.73	21.19	20.82	22.00
	DFT-s-OFDM QPSK	1	1	21.30	21.30	21.24	22.00
		1	50	21.35	21.34	21.35	22.00
		25	12	21.18	21.31	21.25	22.00
		50	0	20.84	21.30	20.92	22.00
	DFT-s-OFDM 16QAM	1	1	20.51	21.11	20.61	22.00
		1	50	20.36	21.34	20.39	22.00
		25	12	20.59	21.23	20.62	22.00
	DFT-s-OFDM 64QAM	1	1	20.57	21.04	20.60	22.00
		1	50	20.86	21.20	20.95	22.00
		25	12	20.72	21.32	20.66	22.00
	DFT-s-OFDM 256QAM	1	1	18.81	19.89	18.97	20.50
		1	50	19.33	19.79	19.24	20.50
		25	12	19.19	19.78	19.26	20.50
	CP-OFDM QPSK	1	1	21.41	21.24	21.63	22.00
	CP-OFDM 16QAM	1	1	20.77	21.06	20.93	21.50
	CP-OFDM 64QAM	1	1	19.76	20.60	19.85	21.00
CP-OFDM 256QAM	1	1	16.70	17.86	16.80	18.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
15MHz	DFT-s-OFDM BPSK	1	1	21.40	21.34	21.36	22.00
		1	77	21.09	21.08	21.16	22.00
		36	18	21.17	21.12	21.21	22.00
		75	0	20.70	21.14	20.78	22.00
	DFT-s-OFDM QPSK	1	1	21.28	21.26	21.21	22.00
		1	77	21.32	21.29	21.31	22.00
		36	18	21.15	21.26	21.21	22.00
		75	0	20.81	21.26	20.87	22.00
	DFT-s-OFDM 16QAM	1	1	20.48	21.09	20.57	22.00
		1	77	20.33	21.31	20.37	22.00
		36	18	20.56	21.19	20.59	22.00
	DFT-s-OFDM 64QAM	1	1	20.54	21.02	20.57	22.00
		1	77	20.83	21.15	20.91	22.00
		36	18	20.70	21.28	20.63	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				502000/2510	507000/2535	512000/2560	
	DFT-s-OFDM 256QAM	1	1	18.79	19.85	18.92	20.50
		1	77	19.29	19.77	19.20	20.50
		36	18	19.13	19.72	19.20	20.50
	CP-OFDM QPSK	1	1	21.36	21.16	21.56	22.00
	CP-OFDM 16QAM	1	1	20.73	21.02	20.87	21.50
	CP-OFDM 64QAM	1	1	19.73	20.55	19.81	21.00
	CP-OFDM 256QAM	1	1	16.68	17.82	16.77	18.00
20MHz	DFT-s-OFDM BPSK	1	1	21.35	21.25	21.30	22.00
		1	104	21.07	21.04	21.12	22.00
		50	25	21.11	21.05	21.13	22.00
		100	0	20.65	21.05	20.71	22.00
	DFT-s-OFDM QPSK	1	1	21.24	21.18	21.13	22.00
		1	104	21.26	21.23	21.24	22.00
		50	25	21.14	21.18	21.14	22.00
		100	0	20.80	21.19	20.79	22.00
	DFT-s-OFDM 16QAM	1	1	20.47	21.06	20.51	22.00
		1	104	20.28	21.24	20.31	22.00
		50	25	20.51	21.14	20.54	22.00
	DFT-s-OFDM 64QAM	1	1	20.47	20.94	20.49	22.00
		1	104	20.78	21.06	20.84	22.00
		50	25	20.66	21.20	20.55	22.00
	DFT-s-OFDM 256QAM	1	1	18.71	19.78	18.84	20.50
		1	104	19.23	19.74	19.14	20.50
		50	25	19.08	19.65	19.14	20.50
	CP-OFDM QPSK	1	1	21.31	21.11	21.51	22.00
	CP-OFDM 16QAM	1	1	20.66	20.94	20.79	21.50
	CP-OFDM 64QAM	1	1	19.68	20.46	19.74	21.00
	CP-OFDM 256QAM	1	1	16.64	17.74	16.69	18.00



NR n7							
Full Power & Level 3 & Level 4 & Level 5-Div Ant4(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.17	21.37	21.20	22.00
		1	23	21.19	21.24	20.65	22.00
		12	6	21.19	21.33	21.16	22.00
		25	0	21.18	21.34	21.04	22.00
	DFT-s-OFDM QPSK	1	1	21.16	21.40	21.09	22.00
		1	23	21.28	21.35	21.06	22.00
		12	6	21.12	21.39	20.83	22.00
	DFT-s-OFDM 16QAM	25	0	20.60	21.24	21.16	22.00
		1	1	20.37	20.63	20.42	22.00
		1	23	20.48	20.86	20.76	22.00
	DFT-s-OFDM 64QAM	12	6	20.83	21.31	21.04	22.00
		1	1	19.61	19.76	19.45	20.50
		1	23	19.46	19.87	19.48	20.50
	DFT-s-OFDM 256QAM	12	6	19.01	19.77	18.75	20.50
		1	1	17.68	17.79	17.71	19.00
		1	23	17.45	17.71	17.41	19.00
	CP-OFDM QPSK	12	6	17.69	17.81	17.45	19.00
		1	1	20.31	20.82	20.16	21.50
1		1	19.81	20.20	19.66	21.00	
1		1	18.49	18.75	18.58	19.50	
1		1	15.40	15.62	15.59	16.50	

Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	21.13	21.25	21.15	22.00
		1	50	21.18	21.24	20.62	22.00
		25	12	21.12	21.25	21.07	22.00
		50	0	21.14	21.26	20.98	22.00
	DFT-s-OFDM QPSK	1	1	21.12	21.32	21.01	22.00
		1	50	21.21	21.30	21.00	22.00
		25	12	21.13	21.29	20.75	22.00
	DFT-s-OFDM 16QAM	50	0	20.61	21.18	21.08	22.00
		1	1	20.38	20.61	20.37	22.00
		1	50	20.44	20.77	20.70	22.00



		25	12	20.78	21.29	21.00	22.00
	DFT-s-OFDM 64QAM	1	1	19.53	19.67	19.36	20.50
		1	50	19.42	19.79	19.42	20.50
		25	12	18.97	19.69	18.67	20.50
	DFT-s-OFDM 256QAM	1	1	17.57	17.69	17.63	19.00
		1	50	17.40	17.65	17.36	19.00
		25	12	17.64	17.75	17.43	19.00
	CP-OFDM QPSK	1	1	20.28	20.84	20.12	21.50
	CP-OFDM 16QAM	1	1	19.74	20.13	19.60	21.00
CP-OFDM 64QAM	1	1	18.45	18.67	18.52	19.50	
CP-OFDM 256QAM	1	1	15.36	15.54	15.51	16.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.10	21.21	21.12	22.00
		1	77	21.17	21.20	20.60	22.00
		36	18	21.10	21.24	21.04	22.00
		75	0	21.11	21.21	20.94	22.00
	DFT-s-OFDM QPSK	1	1	21.10	21.28	20.98	22.00
		1	77	21.18	21.25	20.96	22.00
		36	18	21.10	21.24	20.71	22.00
		75	0	20.58	21.14	21.03	22.00
	DFT-s-OFDM 16QAM	1	1	20.35	20.59	20.33	22.00
		1	77	20.41	20.74	20.68	22.00
		36	18	20.75	21.25	20.97	22.00
	DFT-s-OFDM 64QAM	1	1	19.50	19.65	19.33	20.50
		1	77	19.39	19.74	19.38	20.50
		36	18	18.95	19.65	18.64	20.50
	DFT-s-OFDM 256QAM	1	1	17.55	17.65	17.58	19.00
		1	77	17.36	17.63	17.32	19.00
		36	18	17.58	17.69	17.37	19.00
	CP-OFDM QPSK	1	1	20.23	20.76	20.05	21.50
	CP-OFDM 16QAM	1	1	19.70	20.09	19.54	21.00
	CP-OFDM 64QAM	1	1	18.42	18.62	18.48	19.50
	CP-OFDM 256QAM	1	1	15.34	15.50	15.48	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	21.05	21.12	21.06	22.00
		1	104	21.15	21.16	20.56	22.00
		50	25	21.04	21.17	20.96	22.00
		100	0	21.06	21.12	20.87	22.00
	DFT-s-OFDM QPSK	1	1	21.06	21.20	20.90	22.00
		1	104	21.12	21.19	20.89	22.00
		50	25	21.09	21.16	20.64	22.00
		100	0	20.57	21.07	20.95	22.00
	DFT-s-OFDM 16QAM	1	1	20.34	20.56	20.27	22.00
		1	104	20.36	20.67	20.62	22.00
		50	25	20.70	21.20	20.92	22.00
	DFT-s-OFDM 64QAM	1	1	19.43	19.57	19.25	20.50
		1	104	19.34	19.65	19.31	20.50
		50	25	18.91	19.57	18.56	20.50
	DFT-s-OFDM 256QAM	1	1	17.47	17.58	17.50	19.00
		1	104	17.30	17.60	17.26	19.00
		50	25	17.53	17.62	17.31	19.00
	CP-OFDM QPSK	1	1	20.18	20.71	20.00	21.50
	CP-OFDM 16QAM	1	1	19.63	20.01	19.46	21.00
	CP-OFDM 64QAM	1	1	18.37	18.53	18.41	19.50
	CP-OFDM 256QAM	1	1	15.30	15.42	15.40	16.50

NR n7							
Level 1-Div Ant4(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.04	19.17	19.11	20.00
		1	23	19.04	19.08	18.53	20.00
		12	6	18.97	19.08	18.97	20.00
		25	0	19.05	19.15	18.88	20.00
	DFT-s-OFDM QPSK	1	1	19.04	19.16	18.84	20.00
		1	23	19.07	19.16	18.84	20.00
		12	6	19.07	19.22	18.67	20.00
		25	0	18.55	19.08	18.99	20.00
	DFT-s-OFDM 16QAM	1	1	18.32	18.53	18.28	20.00
		1	23	18.29	18.63	18.60	20.00
		12	6	18.64	19.07	18.85	20.00



	DFT-s-OFDM 64QAM	1	1	19.14	19.20	18.96	20.00
		1	23	19.03	19.32	19.02	20.00
		12	6	18.59	19.23	18.26	20.00
	DFT-s-OFDM 256QAM	1	1	17.18	17.33	17.24	18.50
		1	23	17.01	17.25	16.91	18.50
		12	6	17.29	17.31	16.97	18.50
	CP-OFDM QPSK	1	1	18.70	19.24	18.57	20.00
	CP-OFDM 16QAM	1	1	18.15	18.52	18.00	19.50
CP-OFDM 64QAM	1	1	18.06	18.26	18.12	19.00	
CP-OFDM 256QAM	1	1	14.98	15.14	15.10	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	19.06	19.18	19.14	20.00
		1	50	19.07	19.13	18.57	20.00
		25	12	18.99	19.12	19.00	20.00
		50	0	19.08	19.20	18.92	20.00
	DFT-s-OFDM QPSK	1	1	19.07	19.21	18.88	20.00
		1	50	19.09	19.20	18.89	20.00
		25	12	19.11	19.24	18.71	20.00
		50	0	18.59	19.11	19.01	20.00
	DFT-s-OFDM 16QAM	1	1	18.36	18.57	18.31	20.00
		1	50	18.32	18.65	18.63	20.00
		25	12	18.67	19.12	18.89	20.00
	DFT-s-OFDM 64QAM	1	1	19.16	19.24	18.99	20.00
		1	50	19.06	19.37	19.06	20.00
		25	12	18.62	19.28	18.30	20.00
	DFT-s-OFDM 256QAM	1	1	17.20	17.32	17.26	18.50
		1	50	17.04	17.25	16.94	18.50
		25	12	17.28	17.33	17.00	18.50
	CP-OFDM QPSK	1	1	18.73	19.29	18.57	20.00
	CP-OFDM 16QAM	1	1	18.17	18.56	18.03	19.50
	CP-OFDM 64QAM	1	1	18.09	18.31	18.16	19.00
CP-OFDM 256QAM	1	1	15.01	15.19	15.14	16.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	19.05	19.14	19.12	20.00
		1	77	19.05	19.12	18.54	20.00
		36	18	18.96	19.07	18.96	20.00
		75	0	19.06	19.16	18.89	20.00
	DFT-s-OFDM QPSK	1	1	19.04	19.16	18.84	20.00
		1	77	19.06	19.17	18.85	20.00
		36	18	19.09	19.20	18.66	20.00
		75	0	18.57	19.09	18.99	20.00
	DFT-s-OFDM 16QAM	1	1	18.34	18.54	18.29	20.00
		1	77	18.30	18.61	18.60	20.00
		36	18	18.64	19.10	18.86	20.00
	DFT-s-OFDM 64QAM	1	1	19.13	19.19	18.95	20.00
		1	77	19.04	19.33	19.03	20.00
		36	18	18.59	19.23	18.26	20.00
	DFT-s-OFDM 256QAM	1	1	17.15	17.30	17.24	18.50
		1	77	17.02	17.22	16.92	18.50
		36	18	17.29	17.32	17.01	18.50
	CP-OFDM QPSK	1	1	18.72	19.31	18.58	20.00
	CP-OFDM 16QAM	1	1	18.15	18.53	18.02	19.50
	CP-OFDM 64QAM	1	1	18.07	18.27	18.13	19.00
CP-OFDM 256QAM	1	1	14.98	15.14	15.10	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	19.02	19.10	19.09	20.00
		1	104	19.04	19.08	18.52	20.00
		50	25	18.94	19.06	18.93	20.00
		100	0	19.03	19.11	18.85	20.00
	DFT-s-OFDM QPSK	1	1	19.02	19.12	18.81	20.00
		1	104	19.03	19.12	18.81	20.00
		50	25	19.06	19.15	18.62	20.00
		100	0	18.54	19.05	18.94	20.00
	DFT-s-OFDM 16QAM	1	1	18.31	18.52	18.25	20.00
		1	104	18.27	18.58	18.58	20.00
		50	25	18.61	19.06	18.83	20.00
	DFT-s-OFDM 64QAM	1	1	19.10	19.17	18.92	20.00
		1	104	19.01	19.28	18.99	20.00
		50	25	18.57	19.19	18.23	20.00



	DFT-s-OFDM 256QAM	1	1	17.13	17.26	17.19	18.50
		1	104	16.98	17.20	16.88	18.50
		50	25	17.23	17.26	16.95	18.50
	CP-OFDM QPSK	1	1	18.67	19.23	18.51	20.00
	CP-OFDM 16QAM	1	1	18.11	18.49	17.96	19.50
	CP-OFDM 64QAM	1	1	18.04	18.22	18.09	19.00
CP-OFDM 256QAM	1	1	14.96	15.10	15.07	16.00	

NR n7							
Level 2-Div Ant4(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	17.99	18.20	18.05	19.00
		1	23	17.88	18.01	17.39	19.00
		12	6	17.89	18.03	17.91	19.00
		25	0	17.97	18.19	17.82	19.00
	DFT-s-OFDM QPSK	1	1	17.93	18.17	17.79	19.00
		1	23	18.00	18.13	17.79	19.00
		12	6	17.92	18.21	17.61	19.00
		25	0	17.36	18.01	17.90	19.00
	DFT-s-OFDM 16QAM	1	1	17.17	17.41	17.19	19.00
		1	23	17.21	17.58	17.49	19.00
		12	6	17.56	18.02	17.74	19.00
	DFT-s-OFDM 64QAM	1	1	18.09	18.18	17.94	19.00
		1	23	17.95	18.36	18.00	19.00
		12	6	17.44	18.20	17.25	19.00
	DFT-s-OFDM 256QAM	1	1	16.10	16.22	16.27	17.50
		1	23	15.92	16.05	15.90	17.50
		12	6	16.16	16.21	15.94	17.50
	CP-OFDM QPSK	1	1	17.60	18.15	17.50	19.00
	CP-OFDM 16QAM	1	1	17.07	17.44	17.01	18.50
	CP-OFDM 64QAM	1	1	16.98	17.26	17.10	18.00
CP-OFDM 256QAM	1	1	13.87	14.11	14.09	15.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	17.98	18.16	18.03	19.00
		1	50	17.86	18.00	17.36	19.00
		25	12	17.86	17.98	17.87	19.00
		50	0	17.95	18.15	17.79	19.00
	DFT-s-OFDM QPSK	1	1	17.90	18.12	17.75	19.00
		1	50	17.97	18.10	17.75	19.00
		25	12	17.90	18.17	17.56	19.00
		50	0	17.34	17.99	17.88	19.00
	DFT-s-OFDM 16QAM	1	1	17.15	17.38	17.17	19.00
		1	50	17.19	17.54	17.46	19.00
		25	12	17.53	18.00	17.71	19.00
	DFT-s-OFDM 64QAM	1	1	18.06	18.13	17.90	19.00
		1	50	17.93	18.32	17.97	19.00
		25	12	17.41	18.15	17.21	19.00
	DFT-s-OFDM 256QAM	1	1	16.05	16.20	16.25	17.50
		1	50	15.90	16.02	15.88	17.50
		25	12	16.17	16.20	15.95	17.50
	CP-OFDM QPSK	1	1	17.59	18.17	17.51	19.00
	CP-OFDM 16QAM	1	1	17.05	17.41	17.00	18.50
	CP-OFDM 64QAM	1	1	16.96	17.22	17.07	18.00
CP-OFDM 256QAM	1	1	13.84	14.06	14.05	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	17.95	18.12	18.00	19.00
		1	77	17.85	17.96	17.34	19.00
		36	18	17.84	17.97	17.84	19.00
		75	0	17.92	18.10	17.75	19.00
	DFT-s-OFDM QPSK	1	1	17.88	18.08	17.72	19.00
		1	77	17.94	18.05	17.71	19.00
		36	18	17.87	18.12	17.52	19.00
		75	0	17.31	17.95	17.83	19.00
	DFT-s-OFDM 16QAM	1	1	17.12	17.36	17.13	19.00
		1	77	17.16	17.51	17.44	19.00
		36	18	17.50	17.96	17.68	19.00
	DFT-s-OFDM 64QAM	1	1	18.03	18.11	17.87	19.00
		1	77	17.90	18.27	17.93	19.00
		36	18	17.39	18.11	17.18	19.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				502000/2510	507000/2535	512000/2560	
	DFT-s-OFDM 256QAM	1	1	16.03	16.16	16.20	17.50
		1	77	15.86	16.00	15.84	17.50
		36	18	16.11	16.14	15.89	17.50
	CP-OFDM QPSK	1	1	17.54	18.09	17.44	19.00
	CP-OFDM 16QAM	1	1	17.01	17.37	16.94	18.50
	CP-OFDM 64QAM	1	1	16.93	17.17	17.03	18.00
	CP-OFDM 256QAM	1	1	13.82	14.02	14.02	15.00
20MHz	DFT-s-OFDM BPSK	1	1	17.90	18.03	17.94	19.00
		1	104	17.83	17.92	17.30	19.00
		50	25	17.78	17.90	17.76	19.00
		100	0	17.87	18.01	17.68	19.00
	DFT-s-OFDM QPSK	1	1	17.84	18.00	17.64	19.00
		1	104	17.88	17.99	17.64	19.00
		50	25	17.86	18.04	17.45	19.00
		100	0	17.30	17.88	17.75	19.00
	DFT-s-OFDM 16QAM	1	1	17.11	17.33	17.07	19.00
		1	104	17.11	17.44	17.38	19.00
		50	25	17.45	17.91	17.63	19.00
	DFT-s-OFDM 64QAM	1	1	17.96	18.03	17.79	19.00
		1	104	17.85	18.18	17.86	19.00
		50	25	17.35	18.03	17.10	19.00
	DFT-s-OFDM 256QAM	1	1	15.95	16.09	16.12	17.50
		1	104	15.80	15.97	15.78	17.50
		50	25	16.06	16.07	15.83	17.50
	CP-OFDM QPSK	1	1	17.49	18.04	17.39	19.00
	CP-OFDM 16QAM	1	1	16.94	17.29	16.86	18.50
	CP-OFDM 64QAM	1	1	16.88	17.08	16.96	18.00
CP-OFDM 256QAM	1	1	13.78	13.94	13.94	15.00	



NR n66							
Full Power&Level1&Level3&Level4-Main Ant2 (SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	20.39	20.70	20.91	21.50
		1	23	20.73	20.82	20.98	21.50
		12	6	20.65	20.70	21.04	21.50
		25	0	20.70	20.79	20.94	21.50
	DFT-s-OFDM QPSK	1	1	20.37	20.73	20.91	21.50
		1	23	20.72	20.90	20.90	21.50
		12	6	20.66	20.81	20.95	21.50
	DFT-s-OFDM 16QAM	25	0	20.64	20.77	20.79	21.50
		1	1	20.36	20.71	20.92	21.50
		1	23	20.50	20.89	20.93	21.50
	DFT-s-OFDM 64QAM	12	6	20.65	20.70	21.00	21.50
		1	1	18.85	18.72	19.34	20.00
		1	23	19.24	18.98	19.51	20.00
	DFT-s-OFDM 256QAM	12	6	19.12	19.25	19.41	20.00
		1	1	17.13	17.61	17.61	18.50
		1	23	17.61	17.88	17.56	18.50
CP-OFDM	QPSK	12	6	17.12	17.23	17.41	18.50
		1	1	19.91	20.02	20.40	21.00
	16QAM	1	1	19.61	19.67	20.11	20.50
		1	1	18.40	18.56	18.82	19.00
CP-OFDM 256QAM	1	1	14.98	15.07	15.44	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	20.36	20.66	20.88	21.50
		1	50	20.72	20.78	20.96	21.50
		25	12	20.63	20.69	21.01	21.50
		50	0	20.67	20.74	20.90	21.50
	DFT-s-OFDM QPSK	1	1	20.35	20.69	20.88	21.50
		1	50	20.69	20.85	20.86	21.50
		25	12	20.63	20.76	20.91	21.50
	DFT-s-OFDM 16QAM	50	0	20.61	20.73	20.74	21.50
1		1	20.33	20.69	20.88	21.50	
		1	50	20.47	20.86	20.91	21.50



		25	12	20.62	20.66	20.97	21.50
	DFT-s-OFDM 64QAM	1	1	18.82	18.70	19.31	20.00
		1	50	19.21	18.93	19.47	20.00
		25	12	19.10	19.21	19.38	20.00
	DFT-s-OFDM 256QAM	1	1	17.11	17.57	17.56	18.50
		1	50	17.57	17.86	17.52	18.50
		25	12	17.06	17.17	17.35	18.50
	CP-OFDM QPSK	1	1	19.86	19.94	20.33	21.00
	CP-OFDM 16QAM	1	1	19.57	19.63	20.05	20.50
CP-OFDM 64QAM	1	1	18.37	18.51	18.78	19.00	
CP-OFDM 256QAM	1	1	14.96	15.03	15.41	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	20.33	20.64	20.84	21.50
		1	77	20.70	20.74	20.93	21.50
		36	18	20.60	20.64	20.97	21.50
		75	0	20.64	20.69	20.86	21.50
	DFT-s-OFDM QPSK	1	1	20.33	20.65	20.83	21.50
		1	77	20.67	20.83	20.82	21.50
		36	18	20.63	20.75	20.89	21.50
		75	0	20.61	20.69	20.71	21.50
	DFT-s-OFDM 16QAM	1	1	20.33	20.67	20.85	21.50
		1	77	20.44	20.84	20.87	21.50
		36	18	20.60	20.62	20.94	21.50
	DFT-s-OFDM 64QAM	1	1	18.79	18.65	19.27	20.00
		1	77	19.18	18.88	19.43	20.00
		36	18	19.08	19.17	19.33	20.00
	DFT-s-OFDM 256QAM	1	1	17.08	17.57	17.53	18.50
		1	77	17.54	17.88	17.49	18.50
		36	18	17.07	17.15	17.31	18.50
	CP-OFDM QPSK	1	1	19.84	19.90	20.34	21.00
	CP-OFDM 16QAM	1	1	19.54	19.58	20.01	20.50
	CP-OFDM 64QAM	1	1	18.34	18.46	18.74	19.00
	CP-OFDM 256QAM	1	1	14.94	14.99	15.36	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	20.46	20.84	21.00	21.50
		1	104	20.76	20.86	21.04	21.50
		50	25	20.75	20.83	21.17	21.50
		100	0	20.77	20.92	21.04	21.50
	DFT-s-OFDM QPSK	1	1	20.43	20.85	21.04	21.50
		1	104	20.81	20.97	21.00	21.50
		50	25	20.65	20.92	21.05	21.50
		100	0	20.63	20.87	20.90	21.50
	DFT-s-OFDM 16QAM	1	1	20.35	20.75	21.00	21.50
		1	104	20.57	21.00	21.03	21.50
		50	25	20.72	20.76	21.07	21.50
	DFT-s-OFDM 64QAM	1	1	18.96	18.86	19.47	20.00
		1	104	19.31	19.11	19.61	20.00
		50	25	19.18	19.37	19.54	20.00
	DFT-s-OFDM 256QAM	1	1	17.27	17.71	17.72	18.50
		1	104	17.69	17.92	17.64	18.50
		50	25	17.16	17.31	17.47	18.50
	CP-OFDM QPSK	1	1	19.96	20.04	20.43	21.00
	CP-OFDM 16QAM	1	1	19.71	19.79	20.21	20.50
	CP-OFDM 64QAM	1	1	18.47	18.69	18.92	19.00
CP-OFDM 256QAM	1	1	15.04	15.19	15.57	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	20.31	20.57	20.82	21.50
		1	158	20.70	20.74	20.92	21.50
		80	40	20.57	20.62	20.93	21.50
		160	0	20.62	20.65	20.83	21.50
	DFT-s-OFDM QPSK	1	1	20.31	20.61	20.80	21.50
		1	158	20.63	20.79	20.79	21.50
		80	40	20.62	20.68	20.84	21.50
		160	0	20.60	20.66	20.66	21.50
	DFT-s-OFDM 16QAM	1	1	20.32	20.66	20.82	21.50
		1	158	20.42	20.79	20.85	21.50
		80	40	20.57	20.61	20.92	21.50
	DFT-s-OFDM 64QAM	1	1	18.75	18.62	19.23	20.00
		1	158	19.16	18.84	19.40	20.00
		80	40	19.06	19.13	19.30	20.00



	DFT-s-OFDM 256QAM	1	1	17.03	17.50	17.48	18.50
		1	158	17.51	17.83	17.46	18.50
		80	40	17.01	17.10	17.29	18.50
	CP-OFDM QPSK	1	1	19.81	19.89	20.28	21.00
	CP-OFDM 16QAM	1	1	19.50	19.55	19.97	20.50
	CP-OFDM 64QAM	1	1	18.32	18.42	18.71	19.00
CP-OFDM 256QAM	1	1	14.92	14.95	15.33	16.00	

NR n66							
Level 2-Main Ant2(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	18.50	18.32	18.81	19.50
		1	23	18.59	18.59	18.85	19.50
		12	6	18.53	18.50	18.92	19.50
		25	0	18.59	18.64	18.81	19.50
	DFT-s-OFDM QPSK	1	1	18.54	18.32	18.79	19.50
		1	23	18.75	18.61	18.78	19.50
		12	6	18.58	18.63	18.84	19.50
		25	0	18.52	18.53	18.61	19.50
	DFT-s-OFDM 16QAM	1	1	18.52	18.20	18.74	19.50
		1	23	18.73	18.40	18.80	19.50
		12	6	18.52	18.48	18.87	19.50
	DFT-s-OFDM 64QAM	1	1	18.45	18.60	19.12	19.50
		1	23	18.68	19.08	19.32	19.50
		12	6	18.96	18.93	19.19	19.50
	DFT-s-OFDM 256QAM	1	1	15.49	14.96	15.47	16.50
		1	23	15.75	15.35	15.42	16.50
		12	6	15.04	14.95	15.24	16.50
	CP-OFDM QPSK	1	1	17.84	17.72	18.23	19.50
	CP-OFDM 16QAM	1	1	17.52	17.45	17.96	19.00
	CP-OFDM 64QAM	1	1	17.66	17.60	17.99	18.50
CP-OFDM 256QAM	1	1	14.18	14.19	14.62	15.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	18.47	18.30	18.77	19.50
		1	50	18.57	18.55	18.82	19.50
		25	12	18.50	18.45	18.88	19.50
		50	0	18.56	18.59	18.77	19.50
	DFT-s-OFDM QPSK	1	1	18.52	18.28	18.74	19.50
		1	50	18.73	18.59	18.74	19.50
		25	12	18.58	18.62	18.82	19.50
		50	0	18.52	18.49	18.58	19.50
	DFT-s-OFDM 16QAM	1	1	18.52	18.18	18.71	19.50
		1	50	18.70	18.38	18.76	19.50
		25	12	18.50	18.44	18.84	19.50
	DFT-s-OFDM 64QAM	1	1	18.42	18.55	19.08	19.50
		1	50	18.65	19.03	19.28	19.50
		25	12	18.94	18.89	19.14	19.50
	DFT-s-OFDM 256QAM	1	1	15.46	14.96	15.44	16.50
		1	50	15.72	15.37	15.39	16.50
		25	12	15.05	14.93	15.20	16.50
	CP-OFDM QPSK	1	1	17.82	17.68	18.24	19.50
	CP-OFDM 16QAM	1	1	17.49	17.40	17.92	19.00
	CP-OFDM 64QAM	1	1	17.63	17.55	17.95	18.50
CP-OFDM 256QAM	1	1	14.16	14.15	14.57	15.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
15MHz	DFT-s-OFDM BPSK	1	1	343500/1717.5	349000/1745	354500/1772.5	19.50
		1	77	18.57	18.55	18.81	19.50
		36	18	18.47	18.43	18.84	19.50
		75	0	18.54	18.55	18.74	19.50
	DFT-s-OFDM QPSK	1	1	18.50	18.24	18.71	19.50
		1	77	18.69	18.55	18.71	19.50
		36	18	18.57	18.55	18.77	19.50
		75	0	18.51	18.46	18.53	19.50
	DFT-s-OFDM 16QAM	1	1	18.51	18.17	18.68	19.50
		1	77	18.68	18.33	18.74	19.50
		36	18	18.47	18.43	18.82	19.50
	DFT-s-OFDM 64QAM	1	1	18.38	18.52	19.04	19.50
		1	77	18.63	18.99	19.25	19.50
		36	18	18.92	18.85	19.11	19.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
	DFT-s-OFDM 256QAM	1	1	15.41	14.89	15.39	16.50
		1	77	15.69	15.32	15.36	16.50
		36	18	14.99	14.88	15.18	16.50
	CP-OFDM QPSK	1	1	17.79	17.67	18.18	19.50
	CP-OFDM 16QAM	1	1	17.45	17.37	17.88	19.00
	CP-OFDM 64QAM	1	1	17.61	17.51	17.92	18.50
CP-OFDM 256QAM	1	1	14.14	14.11	14.54	15.50	
20MHz	DFT-s-OFDM BPSK	1	1	18.44	18.19	18.73	19.50
		1	104	18.55	18.54	18.78	19.50
		50	25	18.44	18.38	18.80	19.50
		100	0	18.52	18.51	18.71	19.50
	DFT-s-OFDM QPSK	1	1	18.47	18.19	18.67	19.50
		1	104	18.66	18.52	18.67	19.50
		50	25	18.55	18.51	18.72	19.50
		100	0	18.49	18.44	18.51	19.50
	DFT-s-OFDM 16QAM	1	1	18.49	18.14	18.66	19.50
		1	104	18.66	18.29	18.71	19.50
		50	25	18.44	18.41	18.79	19.50
	DFT-s-OFDM 64QAM	1	1	18.35	18.47	19.00	19.50
		1	104	18.61	18.95	19.22	19.50
		50	25	18.89	18.80	19.07	19.50
	DFT-s-OFDM 256QAM	1	1	15.36	14.87	15.37	16.50
		1	104	15.67	15.29	15.34	16.50
		50	25	15.00	14.87	15.19	16.50
	CP-OFDM QPSK	1	1	17.78	17.69	18.19	19.50
	CP-OFDM 16QAM	1	1	17.43	17.34	17.87	19.00
	CP-OFDM 64QAM	1	1	17.59	17.47	17.89	18.50
CP-OFDM 256QAM	1	1	14.11	14.06	14.50	15.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	18.41	18.15	18.70	19.50
		1	158	18.54	18.50	18.76	19.50
		80	40	18.42	18.37	18.77	19.50



		160	0	18.49	18.46	18.67	19.50
	DFT-s-OFDM QPSK	1	1	18.45	18.15	18.64	19.50
		1	158	18.63	18.47	18.63	19.50
		80	40	18.52	18.46	18.68	19.50
		160	0	18.46	18.40	18.46	19.50
	DFT-s-OFDM 16QAM	1	1	18.46	18.12	18.62	19.50
		1	158	18.63	18.26	18.69	19.50
		80	40	18.41	18.37	18.76	19.50
	DFT-s-OFDM 64QAM	1	1	18.32	18.45	18.97	19.50
		1	158	18.58	18.90	19.18	19.50
		80	40	18.87	18.76	19.04	19.50
	DFT-s-OFDM 256QAM	1	1	15.34	14.83	15.32	16.50
1		158	15.63	15.27	15.30	16.50	
80		40	14.94	14.81	15.13	16.50	
CP-OFDM QPSK	1	1	17.73	17.61	18.12	19.50	
CP-OFDM 16QAM	1	1	17.39	17.30	17.81	19.00	
CP-OFDM 64QAM	1	1	17.56	17.42	17.85	18.50	
CP-OFDM 256QAM	1	1	14.09	14.02	14.47	15.50	

NR n66							
Level 5-Main Ant2(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	18.91	18.79	19.26	20.00
		1	23	18.91	18.99	19.24	20.00
		12	6	18.90	18.86	19.36	20.00
		25	0	18.96	19.09	19.25	20.00
	DFT-s-OFDM QPSK	1	1	18.87	18.73	19.23	20.00
		1	23	19.16	19.04	19.21	20.00
		12	6	18.87	19.03	19.23	20.00
		25	0	18.84	18.95	19.09	20.00
	DFT-s-OFDM 16QAM	1	1	18.84	18.51	19.17	20.00
		1	23	19.13	18.79	19.20	20.00
		12	6	18.91	18.86	19.26	20.00
	DFT-s-OFDM 64QAM	1	1	18.88	18.99	19.56	20.00
		1	23	19.08	19.50	19.73	20.00
		12	6	19.32	19.34	19.63	20.00
	DFT-s-OFDM 256QAM	1	1	16.53	16.00	16.57	17.00
		1	23	16.80	16.28	16.47	17.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
		12	6	16.12	16.02	16.34	17.00
	CP-OFDM QPSK	1	1	18.89	18.80	19.32	20.00
	CP-OFDM 16QAM	1	1	18.59	18.50	19.08	19.50
	CP-OFDM 64QAM	1	1	18.36	18.35	18.73	19.00
	CP-OFDM 256QAM	1	1	14.84	14.90	15.36	16.00
10MHz	DFT-s-OFDM BPSK	1	1	18.89	18.74	19.23	20.00
		1	50	18.90	18.99	19.22	20.00
		25	12	18.86	18.80	19.31	20.00
		50	0	18.94	19.05	19.22	20.00
	DFT-s-OFDM QPSK	1	1	18.85	18.69	19.18	20.00
		1	50	19.13	19.03	19.18	20.00
		25	12	18.89	19.00	19.20	20.00
		50	0	18.86	18.92	19.06	20.00
	DFT-s-OFDM 16QAM	1	1	18.86	18.50	19.15	20.00
		1	50	19.11	18.75	19.16	20.00
		25	12	18.89	18.85	19.24	20.00
	DFT-s-OFDM 64QAM	1	1	18.84	18.93	19.51	20.00
		1	50	19.06	19.46	19.70	20.00
		25	12	19.30	19.30	19.58	20.00
	DFT-s-OFDM 256QAM	1	1	16.47	15.97	16.54	17.00
		1	50	16.78	16.27	16.45	17.00
		25	12	16.13	16.01	16.34	17.00
	CP-OFDM QPSK	1	1	18.89	18.83	19.34	20.00
	CP-OFDM 16QAM	1	1	18.56	18.46	19.06	19.50
	CP-OFDM 64QAM	1	1	18.34	18.31	18.70	19.00
CP-OFDM 256QAM	1	1	14.82	14.86	15.31	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	18.86	18.70	19.20	20.00
		1	77	18.89	18.95	19.20	20.00
		36	18	18.84	18.79	19.28	20.00
		75	0	18.91	19.00	19.18	20.00
	DFT-s-OFDM	1	1	18.83	18.65	19.15	20.00



	QPSK	1	77	19.10	18.98	19.14	20.00
		36	18	18.86	18.95	19.16	20.00
		75	0	18.83	18.88	19.01	20.00
	DFT-s-OFDM 16QAM	1	1	18.83	18.48	19.11	20.00
		1	77	19.08	18.72	19.14	20.00
		36	18	18.86	18.81	19.21	20.00
	DFT-s-OFDM 64QAM	1	1	18.81	18.91	19.48	20.00
		1	77	19.03	19.41	19.66	20.00
		36	18	19.28	19.26	19.55	20.00
	DFT-s-OFDM 256QAM	1	1	16.45	15.93	16.49	17.00
		1	77	16.74	16.25	16.41	17.00
		36	18	16.07	15.95	16.28	17.00
CP-OFDM QPSK	1	1	18.84	18.75	19.27	20.00	
CP-OFDM 16QAM	1	1	18.52	18.42	19.00	19.50	
CP-OFDM 64QAM	1	1	18.31	18.26	18.66	19.00	
CP-OFDM 256QAM	1	1	14.80	14.82	15.28	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	18.84	18.65	19.17	20.00
		1	104	18.88	18.95	19.18	20.00
		50	25	18.80	18.73	19.23	20.00
		100	0	18.89	18.96	19.15	20.00
	DFT-s-OFDM QPSK	1	1	18.81	18.61	19.10	20.00
		1	104	19.07	18.97	19.11	20.00
		50	25	18.88	18.92	19.13	20.00
		100	0	18.85	18.85	18.98	20.00
	DFT-s-OFDM 16QAM	1	1	18.85	18.47	19.09	20.00
		1	104	19.06	18.68	19.10	20.00
		50	25	18.84	18.80	19.19	20.00
	DFT-s-OFDM 64QAM	1	1	18.77	18.85	19.43	20.00
		1	104	19.01	19.37	19.63	20.00
		50	25	19.26	19.22	19.50	20.00
	DFT-s-OFDM 256QAM	1	1	16.39	15.90	16.46	17.00
		1	104	16.72	16.24	16.39	17.00
		50	25	16.08	15.94	16.28	17.00
	CP-OFDM QPSK	1	1	18.84	18.78	19.29	20.00
	CP-OFDM 16QAM	1	1	18.49	18.38	18.98	19.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
	CP-OFDM 64QAM	1	1	18.29	18.22	18.63	19.00
	CP-OFDM 256QAM	1	1	14.78	14.78	15.23	16.00
30MHz	DFT-s-OFDM BPSK	1	1	18.81	18.61	19.14	20.00
		1	158	18.87	18.91	19.16	20.00
		80	40	18.78	18.72	19.20	20.00
		160	0	18.86	18.91	19.11	20.00
	DFT-s-OFDM QPSK	1	1	18.79	18.57	19.07	20.00
		1	158	19.04	18.92	19.07	20.00
		80	40	18.85	18.87	19.09	20.00
	DFT-s-OFDM 16QAM	160	0	18.82	18.81	18.93	20.00
		1	1	18.82	18.45	19.05	20.00
		1	158	19.03	18.65	19.08	20.00
	DFT-s-OFDM 64QAM	80	40	18.81	18.76	19.16	20.00
		1	1	18.74	18.83	19.40	20.00
		1	158	18.98	19.32	19.59	20.00
	DFT-s-OFDM 256QAM	80	40	19.24	19.18	19.47	20.00
		1	1	16.37	15.86	16.41	17.00
		1	158	16.68	16.22	16.35	17.00
	CP-OFDM QPSK	80	40	16.02	15.88	16.22	17.00
		1	1	18.79	18.70	19.22	20.00
	CP-OFDM 16QAM	1	1	18.45	18.34	18.92	19.50
	CP-OFDM 64QAM	1	1	18.26	18.17	18.59	19.00
CP-OFDM 256QAM	1	1	14.76	14.74	15.20	16.00	

NR n66							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Div Ant1(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	17.80	18.34	18.43	19.00
		1	23	18.26	18.41	18.49	19.00
		12	6	18.09	18.32	18.21	19.00
		25	0	18.14	18.39	18.02	19.00
	DFT-s-OFDM	1	1	17.78	18.18	18.22	19.00



	QPSK	1	23	18.24	18.35	18.27	19.00
		12	6	18.09	18.46	17.96	19.00
		25	0	18.16	18.30	17.82	19.00
	DFT-s-OFDM 16QAM	1	1	18.13	18.49	18.41	19.00
		1	23	18.60	18.82	18.13	19.00
		12	6	18.15	18.27	18.30	19.00
	DFT-s-OFDM 64QAM	1	1	16.30	16.52	16.02	17.50
		1	23	16.73	16.83	16.13	17.50
		12	6	16.63	16.93	16.50	17.50
	DFT-s-OFDM 256QAM	1	1	14.47	14.69	14.41	16.00
		1	23	14.82	15.08	14.91	16.00
		12	6	14.54	14.73	14.69	16.00
CP-OFDM QPSK	1	1	17.30	17.54	16.94	18.50	
CP-OFDM 16QAM	1	1	16.71	16.90	16.81	18.00	
CP-OFDM 64QAM	1	1	14.93	15.27	15.13	16.50	
CP-OFDM 256QAM	1	1	12.54	12.88	12.50	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	17.81	18.35	18.44	19.00
		1	50	18.25	18.40	18.48	19.00
		25	12	18.10	18.33	18.22	19.00
		50	0	18.14	18.39	18.02	19.00
	DFT-s-OFDM QPSK	1	1	17.77	18.17	18.23	19.00
		1	50	18.24	18.33	18.26	19.00
		25	12	18.05	18.45	17.94	19.00
		50	0	18.12	18.31	17.83	19.00
	DFT-s-OFDM 16QAM	1	1	18.09	18.47	18.41	19.00
		1	50	18.60	18.82	18.14	19.00
		25	12	18.14	18.26	18.29	19.00
	DFT-s-OFDM 64QAM	1	1	16.31	16.53	16.03	17.50
		1	50	16.73	16.83	16.13	17.50
		25	12	16.62	16.92	16.51	17.50
	DFT-s-OFDM 256QAM	1	1	14.48	14.70	14.42	16.00
		1	50	14.82	15.06	14.91	16.00
		25	12	14.54	14.73	14.70	16.00
	CP-OFDM QPSK	1	1	17.29	17.53	16.93	18.50
	CP-OFDM 16QAM	1	1	16.72	16.91	16.82	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				343500/1717.5	349000/1745	354500/1772.5		
	CP-OFDM 64QAM	1	1	14.93	15.27	15.13	16.50	
	CP-OFDM 256QAM	1	1	12.53	12.87	12.51	13.50	
15MHz	DFT-s-OFDM BPSK	1	1	17.77	18.23	18.39	19.00	
		1	77	18.24	18.40	18.45	19.00	
		36	18	18.03	18.25	18.13	19.00	
		75	0	18.10	18.31	17.96	19.00	
	DFT-s-OFDM QPSK	1	1	17.73	18.09	18.15	19.00	
		1	77	18.17	18.28	18.20	19.00	
		36	18	18.06	18.35	17.86	19.00	
	DFT-s-OFDM 16QAM	75	0	18.13	18.25	17.75	19.00	
		1	1	18.10	18.45	18.36	19.00	
		1	77	18.56	18.73	18.08	19.00	
	DFT-s-OFDM 64QAM	36	18	18.09	18.24	18.25	19.00	
		1	1	16.23	16.44	15.94	17.50	
		1	77	16.69	16.75	16.07	17.50	
	DFT-s-OFDM 256QAM	36	18	16.58	16.84	16.43	17.50	
		1	1	14.37	14.60	14.34	16.00	
		1	77	14.77	15.00	14.86	16.00	
	CP-OFDM	QPSK	36	18	14.49	14.67	14.68	16.00
			1	1	17.26	17.55	16.89	18.50
		16QAM	1	1	16.65	16.84	16.76	18.00
			1	1	14.89	15.19	15.07	16.50
CP-OFDM 256QAM	1	1	12.49	12.79	12.43	13.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				344000/1720	349000/1745	354000/1770		
20MHz	DFT-s-OFDM BPSK	1	1	17.76	18.26	18.38	19.00	
		1	104	18.23	18.36	18.44	19.00	
		50	25	18.04	18.26	18.14	19.00	
		100	0	18.09	18.30	17.95	19.00	
	DFT-s-OFDM QPSK	1	1	17.73	18.09	18.15	19.00	
		1	104	18.18	18.27	18.19	19.00	
		50	25	18.04	18.37	17.87	19.00	
		100	0	18.11	18.24	17.75	19.00	
	DFT-s-OFDM 16QAM	1	1	18.08	18.44	18.35	19.00	
		1	104	18.55	18.75	18.08	19.00	



		50	25	18.09	18.21	18.24	19.00
	DFT-s-OFDM 64QAM	1	1	16.24	16.45	15.95	17.50
		1	104	16.68	16.74	16.06	17.50
		50	25	16.58	16.84	16.43	17.50
	DFT-s-OFDM 256QAM	1	1	14.40	14.63	14.34	16.00
		1	104	14.76	15.03	14.85	16.00
		50	25	14.49	14.66	14.64	16.00
	CP-OFDM QPSK	1	1	17.24	17.48	16.88	18.50
	CP-OFDM 16QAM	1	1	16.65	16.83	16.74	18.00
CP-OFDM 64QAM	1	1	14.88	15.18	15.06	16.50	
CP-OFDM 256QAM	1	1	12.49	12.79	12.43	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	17.74	18.19	18.36	19.00
		1	158	18.23	18.36	18.43	19.00
		80	40	18.01	18.24	18.10	19.00
		160	0	18.07	18.26	17.92	19.00
	DFT-s-OFDM QPSK	1	1	17.71	18.05	18.12	19.00
		1	158	18.14	18.23	18.16	19.00
		80	40	18.03	18.30	17.82	19.00
		160	0	18.10	18.21	17.70	19.00
	DFT-s-OFDM 16QAM	1	1	18.07	18.43	18.32	19.00
		1	158	18.53	18.70	18.06	19.00
		80	40	18.06	18.20	18.22	19.00
	DFT-s-OFDM 64QAM	1	1	16.20	16.42	15.91	17.50
		1	158	16.66	16.70	16.03	17.50
		80	40	16.56	16.80	16.40	17.50
	DFT-s-OFDM 256QAM	1	1	14.35	14.56	14.29	16.00
		1	158	14.73	14.98	14.82	16.00
		80	40	14.43	14.61	14.62	16.00
	CP-OFDM QPSK	1	1	17.21	17.47	16.82	18.50
	CP-OFDM 16QAM	1	1	16.61	16.80	16.70	18.00
	CP-OFDM 64QAM	1	1	14.86	15.14	15.03	16.50
	CP-OFDM 256QAM	1	1	12.47	12.75	12.40	13.50



NR n66							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant4(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	18.43	18.50	18.25	19.00
		1	23	18.30	18.26	18.23	19.00
		12	6	18.49	18.34	18.05	19.00
		25	0	18.50	18.39	17.93	19.00
	DFT-s-OFDM QPSK	1	1	18.38	18.44	18.29	19.00
		1	23	18.35	18.37	18.18	19.00
		12	6	18.42	18.41	18.15	19.00
		25	0	18.48	18.42	18.28	19.00
	DFT-s-OFDM 16QAM	1	1	18.42	18.45	18.32	19.00
		1	23	18.44	18.45	18.62	19.00
		12	6	18.52	18.53	18.16	19.00
	DFT-s-OFDM 64QAM	1	1	17.04	17.00	16.72	17.50
		1	23	16.96	16.91	16.75	17.50
		12	6	17.01	17.01	16.93	17.50
	DFT-s-OFDM 256QAM	1	1	14.91	14.90	14.63	16.00
		1	23	15.03	15.01	14.78	16.00
		12	6	14.99	14.98	14.62	16.00
	CP-OFDM QPSK	1	1	17.95	17.88	17.56	18.50
CP-OFDM 16QAM	1	1	17.40	17.36	17.57	18.00	
CP-OFDM 64QAM	1	1	15.90	15.84	15.93	16.50	
CP-OFDM 256QAM	1	1	13.19	13.24	12.89	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	18.46	18.54	18.28	19.00
		1	50	18.31	18.30	18.25	19.00
		25	12	18.51	18.35	18.08	19.00
		50	0	18.53	18.44	17.97	19.00
	DFT-s-OFDM QPSK	1	1	18.40	18.48	18.32	19.00
		1	50	18.38	18.42	18.22	19.00
		25	12	18.45	18.46	18.19	19.00
		50	0	18.51	18.46	18.33	19.00
	DFT-s-OFDM 16QAM	1	1	18.45	18.47	18.36	19.00
		1	50	18.47	18.48	18.64	19.00
		25	12	18.55	18.57	18.19	19.00
		25	12	18.55	18.57	18.19	19.00



	DFT-s-OFDM 64QAM	1	1	17.07	17.02	16.75	17.50
		1	50	16.99	16.96	16.79	17.50
		25	12	17.03	17.05	16.96	17.50
	DFT-s-OFDM 256QAM	1	1	14.93	14.94	14.68	16.00
		1	50	15.07	15.03	14.82	16.00
		25	12	15.05	15.04	14.68	16.00
	CP-OFDM QPSK	1	1	18.00	17.96	17.63	18.50
	CP-OFDM 16QAM	1	1	17.44	17.40	17.63	18.00
CP-OFDM 64QAM	1	1	15.93	15.89	15.97	16.50	
CP-OFDM 256QAM	1	1	13.21	13.28	12.92	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	18.44	18.47	18.26	19.00
		1	77	18.31	18.30	18.24	19.00
		36	18	18.48	18.33	18.04	19.00
		75	0	18.51	18.40	17.94	19.00
	DFT-s-OFDM QPSK	1	1	18.38	18.44	18.29	19.00
		1	77	18.34	18.38	18.19	19.00
		36	18	18.44	18.39	18.14	19.00
		75	0	18.50	18.43	18.28	19.00
	DFT-s-OFDM 16QAM	1	1	18.44	18.46	18.33	19.00
		1	77	18.45	18.43	18.62	19.00
		36	18	18.52	18.56	18.17	19.00
	DFT-s-OFDM 64QAM	1	1	17.03	16.99	16.71	17.50
		1	77	16.97	16.92	16.76	17.50
		36	18	17.01	17.01	16.93	17.50
	DFT-s-OFDM 256QAM	1	1	14.88	14.87	14.63	16.00
		1	77	15.04	14.98	14.79	16.00
		36	18	14.99	14.99	14.66	16.00
	CP-OFDM QPSK	1	1	17.97	17.95	17.57	18.50
	CP-OFDM 16QAM	1	1	17.40	17.37	17.59	18.00
	CP-OFDM 64QAM	1	1	15.91	15.85	15.94	16.50
CP-OFDM 256QAM	1	1	13.19	13.24	12.89	13.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	18.48	18.59	18.31	19.00
		1	104	18.32	18.30	18.27	19.00
		50	25	18.55	18.41	18.13	19.00
		100	0	18.55	18.48	18.00	19.00
	DFT-s-OFDM QPSK	1	1	18.42	18.52	18.37	19.00
		1	104	18.41	18.43	18.25	19.00
		50	25	18.43	18.49	18.22	19.00
		100	0	18.49	18.49	18.36	19.00
	DFT-s-OFDM 16QAM	1	1	18.43	18.48	18.38	19.00
		1	104	18.49	18.52	18.68	19.00
		50	25	18.57	18.58	18.21	19.00
	DFT-s-OFDM 64QAM	1	1	17.11	17.08	16.80	17.50
		1	104	17.01	17.00	16.82	17.50
		50	25	17.05	17.09	17.01	17.50
	DFT-s-OFDM 256QAM	1	1	14.99	14.97	14.71	16.00
		1	104	15.09	15.04	14.84	16.00
		50	25	15.04	15.05	14.68	16.00
	CP-OFDM QPSK	1	1	18.00	17.93	17.61	18.50
	CP-OFDM 16QAM	1	1	17.47	17.44	17.65	18.00
	CP-OFDM 64QAM	1	1	15.95	15.93	16.00	16.50
CP-OFDM 256QAM	1	1	13.23	13.32	12.97	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	18.41	18.43	18.23	19.00
		1	158	18.30	18.26	18.22	19.00
		80	40	18.46	18.32	18.01	19.00
		160	0	18.48	18.35	17.90	19.00
	DFT-s-OFDM QPSK	1	1	18.36	18.40	18.26	19.00
		1	158	18.31	18.33	18.15	19.00
		80	40	18.41	18.34	18.10	19.00
		160	0	18.47	18.39	18.23	19.00
	DFT-s-OFDM 16QAM	1	1	18.41	18.44	18.29	19.00
		1	158	18.42	18.40	18.60	19.00
		80	40	18.49	18.52	18.14	19.00
	DFT-s-OFDM 64QAM	1	1	17.00	16.97	16.68	17.50
		1	158	16.94	16.87	16.72	17.50
		80	40	16.99	16.97	16.90	17.50



	DFT-s-OFDM 256QAM	1	1	14.86	14.83	14.58	16.00
		1	158	15.00	14.96	14.75	16.00
		80	40	14.93	14.93	14.60	16.00
	CP-OFDM QPSK	1	1	17.92	17.87	17.50	18.50
	CP-OFDM 16QAM	1	1	17.36	17.33	17.53	18.00
	CP-OFDM 64QAM	1	1	15.88	15.80	15.90	16.50
CP-OFDM 256QAM	1	1	13.17	13.20	12.86	13.50	

NR n66							
Full Power & Level 3 & Level 4-Main Ant2(NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	20.39	20.70	20.91	21.50
		1	23	20.73	20.82	20.98	21.50
		12	6	20.65	20.70	21.04	21.50
		25	0	20.70	20.79	20.94	21.50
	DFT-s-OFDM QPSK	1	1	20.37	20.73	20.91	21.50
		1	23	20.72	20.90	20.90	21.50
		12	6	20.66	20.81	20.95	21.50
		25	0	20.64	20.77	20.79	21.50
	DFT-s-OFDM 16QAM	1	1	20.36	20.71	20.92	21.50
		1	23	20.50	20.89	20.93	21.50
		12	6	20.65	20.70	21.00	21.50
	DFT-s-OFDM 64QAM	1	1	18.85	18.72	19.34	20.00
		1	23	19.24	18.98	19.51	20.00
		12	6	19.12	19.25	19.41	20.00
	DFT-s-OFDM 256QAM	1	1	17.13	17.61	17.61	18.50
		1	23	17.61	17.88	17.56	18.50
		12	6	17.12	17.23	17.41	18.50
	CP-OFDM QPSK	1	1	19.91	20.02	20.40	21.00
	CP-OFDM 16QAM	1	1	19.61	19.67	20.11	20.50
	CP-OFDM 64QAM	1	1	18.40	18.56	18.82	19.00
CP-OFDM 256QAM	1	1	14.98	15.07	15.44	16.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	20.36	20.66	20.88	21.50
		1	50	20.72	20.78	20.96	21.50
		25	12	20.63	20.69	21.01	21.50
		50	0	20.67	20.74	20.90	21.50
	DFT-s-OFDM QPSK	1	1	20.35	20.69	20.88	21.50
		1	50	20.69	20.85	20.86	21.50
		25	12	20.63	20.76	20.91	21.50
		50	0	20.61	20.73	20.74	21.50
	DFT-s-OFDM 16QAM	1	1	20.33	20.69	20.88	21.50
		1	50	20.47	20.86	20.91	21.50
		25	12	20.62	20.66	20.97	21.50
	DFT-s-OFDM 64QAM	1	1	18.82	18.70	19.31	20.00
		1	50	19.21	18.93	19.47	20.00
		25	12	19.10	19.21	19.38	20.00
	DFT-s-OFDM 256QAM	1	1	17.11	17.57	17.56	18.50
		1	50	17.57	17.86	17.52	18.50
		25	12	17.06	17.17	17.35	18.50
	CP-OFDM QPSK	1	1	19.86	19.94	20.33	21.00
	CP-OFDM 16QAM	1	1	19.57	19.63	20.05	20.50
	CP-OFDM 64QAM	1	1	18.37	18.51	18.78	19.00
CP-OFDM 256QAM	1	1	14.96	15.03	15.41	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
15MHz	DFT-s-OFDM BPSK	1	1	343500/1717.5	349000/1745	354500/1772.5	21.50
		1	77	20.70	20.74	20.93	21.50
		36	18	20.60	20.64	20.97	21.50
		75	0	20.64	20.69	20.86	21.50
	DFT-s-OFDM QPSK	1	1	20.33	20.65	20.83	21.50
		1	77	20.67	20.83	20.82	21.50
		36	18	20.63	20.75	20.89	21.50
		75	0	20.61	20.69	20.71	21.50
	DFT-s-OFDM 16QAM	1	1	20.33	20.67	20.85	21.50
		1	77	20.44	20.84	20.87	21.50
		36	18	20.60	20.62	20.94	21.50
	DFT-s-OFDM 64QAM	1	1	18.79	18.65	19.27	20.00
		1	77	19.18	18.88	19.43	20.00
		36	18	19.08	19.17	19.33	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
	DFT-s-OFDM 256QAM	1	1	17.08	17.57	17.53	18.50
		1	77	17.54	17.88	17.49	18.50
		36	18	17.07	17.15	17.31	18.50
	CP-OFDM QPSK	1	1	19.84	19.90	20.34	21.00
	CP-OFDM 16QAM	1	1	19.54	19.58	20.01	20.50
	CP-OFDM 64QAM	1	1	18.34	18.46	18.74	19.00
CP-OFDM 256QAM	1	1	14.94	14.99	15.36	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	20.46	20.84	21.00	21.50
		1	104	20.76	20.86	21.04	21.50
		50	25	20.75	20.83	21.17	21.50
		100	0	20.77	20.92	21.04	21.50
	DFT-s-OFDM QPSK	1	1	20.43	20.85	21.04	21.50
		1	104	20.81	20.97	21.00	21.50
		50	25	20.65	20.92	21.05	21.50
		100	0	20.63	20.87	20.90	21.50
	DFT-s-OFDM 16QAM	1	1	20.35	20.75	21.00	21.50
		1	104	20.57	21.00	21.03	21.50
		50	25	20.72	20.76	21.07	21.50
	DFT-s-OFDM 64QAM	1	1	18.96	18.86	19.47	20.00
		1	104	19.31	19.11	19.61	20.00
		50	25	19.18	19.37	19.54	20.00
	DFT-s-OFDM 256QAM	1	1	17.27	17.71	17.72	18.50
		1	104	17.69	17.92	17.64	18.50
		50	25	17.16	17.31	17.47	18.50
	CP-OFDM QPSK	1	1	19.96	20.04	20.43	21.00
	CP-OFDM 16QAM	1	1	19.71	19.79	20.21	20.50
	CP-OFDM 64QAM	1	1	18.47	18.69	18.92	19.00
CP-OFDM 256QAM	1	1	15.04	15.19	15.57	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	20.31	20.57	20.82	21.50
		1	158	20.70	20.74	20.92	21.50
		80	40	20.57	20.62	20.93	21.50



		160	0	20.62	20.65	20.83	21.50
DFT-s-OFDM QPSK	1	1	20.31	20.61	20.80	21.50	
	1	158	20.63	20.79	20.79	21.50	
	80	40	20.62	20.68	20.84	21.50	
	160	0	20.60	20.66	20.66	21.50	
DFT-s-OFDM 16QAM	1	1	20.32	20.66	20.82	21.50	
	1	158	20.42	20.79	20.85	21.50	
	80	40	20.57	20.61	20.92	21.50	
DFT-s-OFDM 64QAM	1	1	18.75	18.62	19.23	20.00	
	1	158	19.16	18.84	19.40	20.00	
	80	40	19.06	19.13	19.30	20.00	
DFT-s-OFDM 256QAM	1	1	17.03	17.50	17.48	18.50	
	1	158	17.51	17.83	17.46	18.50	
	80	40	17.01	17.10	17.29	18.50	
CP-OFDM QPSK	1	1	19.81	19.89	20.28	21.00	
CP-OFDM 16QAM	1	1	19.50	19.55	19.97	20.50	
CP-OFDM 64QAM	1	1	18.32	18.42	18.71	19.00	
CP-OFDM 256QAM	1	1	14.92	14.95	15.33	16.00	

NR n66							
Level 1-Main Ant2(NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.34	19.61	19.89	20.50
		1	23	19.65	19.62	19.95	20.50
		12	6	19.64	19.43	19.93	20.50
		25	0	19.67	19.56	19.81	20.50
	DFT-s-OFDM QPSK	1	1	19.34	19.65	19.95	20.50
		1	23	19.72	19.62	19.79	20.50
		12	6	19.59	19.57	19.86	20.50
		25	0	19.57	19.47	19.66	20.50
	DFT-s-OFDM 16QAM	1	1	19.29	19.37	19.76	20.50
		1	23	19.47	19.62	19.62	20.50
		12	6	19.64	19.38	19.69	20.50
	DFT-s-OFDM 64QAM	1	1	17.86	17.62	18.23	19.00
		1	23	18.21	17.90	18.38	19.00
		12	6	18.09	18.17	18.30	19.00
	DFT-s-OFDM 256QAM	1	1	16.03	16.31	16.33	17.50
		1	23	16.45	16.54	16.25	17.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				343000/1715	349000/1745	355000/1775		
		12	6	16.06	16.08	16.21	17.50	
	CP-OFDM QPSK	1	1	18.88	18.81	19.20	20.00	
	CP-OFDM 16QAM	1	1	18.61	18.70	19.12	19.50	
	CP-OFDM 64QAM	1	1	17.37	17.63	17.84	18.00	
	CP-OFDM 256QAM	1	1	13.95	14.14	14.48	15.00	
10MHz	DFT-s-OFDM BPSK	1	1	19.30	19.53	19.84	20.50	
		1	50	19.62	19.57	19.90	20.50	
		25	12	19.59	19.37	19.86	20.50	
		50	0	19.62	19.47	19.74	20.50	
	DFT-s-OFDM QPSK	1	1	19.29	19.56	19.88	20.50	
		1	50	19.66	19.54	19.71	20.50	
		25	12	19.54	19.48	19.77	20.50	
		50	0	19.52	19.41	19.59	20.50	
	DFT-s-OFDM 16QAM	1	1	19.24	19.32	19.70	20.50	
		1	50	19.42	19.55	19.57	20.50	
		25	12	19.58	19.32	19.63	20.50	
	DFT-s-OFDM 64QAM	1	1	17.80	17.55	18.16	19.00	
		1	50	18.16	17.81	18.31	19.00	
		25	12	18.04	18.08	18.23	19.00	
	DFT-s-OFDM 256QAM	1	1	15.96	16.25	16.26	17.50	
		1	50	16.39	16.49	16.19	17.50	
		25	12	16.01	16.01	16.16	17.50	
	CP-OFDM QPSK	1	1	18.82	18.75	19.14	20.00	
	CP-OFDM 16QAM	1	1	18.55	18.63	19.05	19.50	
	CP-OFDM 64QAM	1	1	17.32	17.54	17.77	18.00	
	CP-OFDM 256QAM	1	1	13.90	14.05	14.41	15.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
					343500/1717.5	349000/1745	354500/1772.5	
	15MHz	DFT-s-OFDM BPSK	1	1	19.25	19.44	19.78	20.50
1			77	19.60	19.53	19.86	20.50	
36			18	19.53	19.30	19.78	20.50	
75			0	19.57	19.38	19.67	20.50	
DFT-s-OFDM		1	1	19.25	19.48	19.80	20.50	



	QPSK	1	77	19.60	19.48	19.64	20.50
		36	18	19.53	19.40	19.70	20.50
		75	0	19.51	19.34	19.51	20.50
	DFT-s-OFDM 16QAM	1	1	19.23	19.29	19.64	20.50
		1	77	19.37	19.48	19.51	20.50
		36	18	19.53	19.27	19.58	20.50
	DFT-s-OFDM 64QAM	1	1	17.73	17.47	18.08	19.00
		1	77	18.11	17.72	18.24	19.00
		36	18	18.00	18.00	18.15	19.00
	DFT-s-OFDM 256QAM	1	1	15.88	16.18	16.18	17.50
		1	77	16.33	16.46	16.13	17.50
		36	18	15.96	15.94	16.10	17.50
CP-OFDM QPSK	1	1	18.77	18.70	19.09	20.00	
CP-OFDM 16QAM	1	1	18.48	18.55	18.97	19.50	
CP-OFDM 64QAM	1	1	17.27	17.45	17.70	18.00	
CP-OFDM 256QAM	1	1	13.86	13.97	14.33	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	19.24	19.40	19.76	20.50
		1	104	19.58	19.52	19.83	20.50
		50	25	19.50	19.25	19.74	20.50
		100	0	19.55	19.34	19.64	20.50
	DFT-s-OFDM QPSK	1	1	19.22	19.43	19.76	20.50
		1	104	19.57	19.45	19.60	20.50
		50	25	19.51	19.36	19.65	20.50
		100	0	19.49	19.32	19.49	20.50
	DFT-s-OFDM 16QAM	1	1	19.21	19.26	19.62	20.50
		1	104	19.35	19.44	19.48	20.50
		50	25	19.50	19.25	19.55	20.50
	DFT-s-OFDM 64QAM	1	1	17.70	17.42	18.04	19.00
		1	104	18.09	17.68	18.21	19.00
		50	25	17.97	17.95	18.11	19.00
	DFT-s-OFDM 256QAM	1	1	15.83	16.16	16.16	17.50
		1	104	16.31	16.43	16.11	17.50
		50	25	15.97	15.93	16.11	17.50
	CP-OFDM QPSK	1	1	18.76	18.72	19.10	20.00
	CP-OFDM 16QAM	1	1	18.46	18.52	18.96	19.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
				CP-OFDM 64QAM	1	1	
CP-OFDM 256QAM	1	1	13.83	13.92	14.29	15.00	
30MHz	DFT-s-OFDM BPSK	1	1	19.21	19.36	19.73	20.50
		1	158	19.57	19.48	19.81	20.50
		80	40	19.48	19.24	19.71	20.50
		160	0	19.52	19.29	19.60	20.50
	DFT-s-OFDM QPSK	1	1	19.20	19.39	19.73	20.50
		1	158	19.54	19.40	19.56	20.50
		80	40	19.48	19.31	19.61	20.50
	DFT-s-OFDM 16QAM	160	0	19.46	19.28	19.44	20.50
		1	1	19.18	19.24	19.58	20.50
		1	158	19.32	19.41	19.46	20.50
	DFT-s-OFDM 64QAM	80	40	19.47	19.21	19.52	20.50
		1	1	17.67	17.40	18.01	19.00
		1	158	18.06	17.63	18.17	19.00
	DFT-s-OFDM 256QAM	80	40	17.95	17.91	18.08	19.00
		1	1	15.81	16.12	16.11	17.50
		1	158	16.27	16.41	16.07	17.50
	CP-OFDM QPSK	80	40	15.91	15.87	16.05	17.50
		1	1	18.71	18.64	19.03	20.00
		1	1	18.42	18.48	18.90	19.50
	CP-OFDM 16QAM	1	1	17.22	17.36	17.63	18.00
1		1	13.81	13.88	14.26	15.00	
1		1	13.81	13.88	14.26	15.00	

NR n66							
Level 2-Main Ant2(NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	18.50	18.32	18.81	19.50
		1	23	18.59	18.59	18.85	19.50
		12	6	18.53	18.50	18.92	19.50
		25	0	18.59	18.64	18.81	19.50
	DFT-s-OFDM QPSK	1	1	18.54	18.32	18.79	19.50
		1	23	18.75	18.61	18.78	19.50
		12	6	18.58	18.63	18.84	19.50



		25	0	18.52	18.53	18.61	19.50
	DFT-s-OFDM 16QAM	1	1	18.52	18.20	18.74	19.50
		1	23	18.73	18.40	18.80	19.50
		12	6	18.52	18.48	18.87	19.50
	DFT-s-OFDM 64QAM	1	1	18.45	18.60	19.12	19.50
		1	23	18.68	19.08	19.32	19.50
		12	6	18.96	18.93	19.19	19.50
	DFT-s-OFDM 256QAM	1	1	15.49	14.96	15.47	16.50
		1	23	15.75	15.35	15.42	16.50
		12	6	15.04	14.95	15.24	16.50
	CP-OFDM QPSK	1	1	17.84	17.72	18.23	19.50
	CP-OFDM 16QAM	1	1	17.52	17.45	17.96	19.00
	CP-OFDM 64QAM	1	1	17.66	17.60	17.99	18.50
CP-OFDM 256QAM	1	1	14.18	14.19	14.62	15.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	18.47	18.30	18.77	19.50
		1	50	18.57	18.55	18.82	19.50
		25	12	18.50	18.45	18.88	19.50
		50	0	18.56	18.59	18.77	19.50
	DFT-s-OFDM QPSK	1	1	18.52	18.28	18.74	19.50
		1	50	18.73	18.59	18.74	19.50
		25	12	18.58	18.62	18.82	19.50
		50	0	18.52	18.49	18.58	19.50
	DFT-s-OFDM 16QAM	1	1	18.52	18.18	18.71	19.50
		1	50	18.70	18.38	18.76	19.50
		25	12	18.50	18.44	18.84	19.50
	DFT-s-OFDM 64QAM	1	1	18.42	18.55	19.08	19.50
		1	50	18.65	19.03	19.28	19.50
		25	12	18.94	18.89	19.14	19.50
	DFT-s-OFDM 256QAM	1	1	15.46	14.96	15.44	16.50
		1	50	15.72	15.37	15.39	16.50
		25	12	15.05	14.93	15.20	16.50
	CP-OFDM QPSK	1	1	17.82	17.68	18.24	19.50
	CP-OFDM 16QAM	1	1	17.49	17.40	17.92	19.00
	CP-OFDM 64QAM	1	1	17.63	17.55	17.95	18.50



	CP-OFDM 256QAM	1	1	14.16	14.15	14.57	15.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	18.45	18.23	18.75	19.50
		1	77	18.57	18.55	18.81	19.50
		36	18	18.47	18.43	18.84	19.50
		75	0	18.54	18.55	18.74	19.50
	DFT-s-OFDM QPSK	1	1	18.50	18.24	18.71	19.50
		1	77	18.69	18.55	18.71	19.50
		36	18	18.57	18.55	18.77	19.50
		75	0	18.51	18.46	18.53	19.50
	DFT-s-OFDM 16QAM	1	1	18.51	18.17	18.68	19.50
		1	77	18.68	18.33	18.74	19.50
		36	18	18.47	18.43	18.82	19.50
	DFT-s-OFDM 64QAM	1	1	18.38	18.52	19.04	19.50
		1	77	18.63	18.99	19.25	19.50
		36	18	18.92	18.85	19.11	19.50
	DFT-s-OFDM 256QAM	1	1	15.41	14.89	15.39	16.50
		1	77	15.69	15.32	15.36	16.50
		36	18	14.99	14.88	15.18	16.50
	CP-OFDM QPSK	1	1	17.79	17.67	18.18	19.50
	CP-OFDM 16QAM	1	1	17.45	17.37	17.88	19.00
	CP-OFDM 64QAM	1	1	17.61	17.51	17.92	18.50
CP-OFDM 256QAM	1	1	14.14	14.11	14.54	15.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	18.44	18.19	18.73	19.50
		1	104	18.55	18.54	18.78	19.50
		50	25	18.44	18.38	18.80	19.50
		100	0	18.52	18.51	18.71	19.50
	DFT-s-OFDM QPSK	1	1	18.47	18.19	18.67	19.50
		1	104	18.66	18.52	18.67	19.50
		50	25	18.55	18.51	18.72	19.50
		100	0	18.49	18.44	18.51	19.50
	DFT-s-OFDM 16QAM	1	1	18.49	18.14	18.66	19.50
		1	104	18.66	18.29	18.71	19.50
		50	25	18.44	18.41	18.79	19.50
	DFT-s-OFDM	1	1	18.35	18.47	19.00	19.50



	64QAM	1	104	18.61	18.95	19.22	19.50
		50	25	18.89	18.80	19.07	19.50
	DFT-s-OFDM 256QAM	1	1	15.36	14.87	15.37	16.50
		1	104	15.67	15.29	15.34	16.50
		50	25	15.00	14.87	15.19	16.50
	CP-OFDM QPSK	1	1	17.78	17.69	18.19	19.50
	CP-OFDM 16QAM	1	1	17.43	17.34	17.87	19.00
	CP-OFDM 64QAM	1	1	17.59	17.47	17.89	18.50
CP-OFDM 256QAM	1	1	14.11	14.06	14.50	15.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	18.41	18.15	18.70	19.50
		1	158	18.54	18.50	18.76	19.50
		80	40	18.42	18.37	18.77	19.50
		160	0	18.49	18.46	18.67	19.50
	DFT-s-OFDM QPSK	1	1	18.45	18.15	18.64	19.50
		1	158	18.63	18.47	18.63	19.50
		80	40	18.52	18.46	18.68	19.50
		160	0	18.46	18.40	18.46	19.50
	DFT-s-OFDM 16QAM	1	1	18.46	18.12	18.62	19.50
		1	158	18.63	18.26	18.69	19.50
		80	40	18.41	18.37	18.76	19.50
	DFT-s-OFDM 64QAM	1	1	18.32	18.45	18.97	19.50
		1	158	18.58	18.90	19.18	19.50
		80	40	18.87	18.76	19.04	19.50
	DFT-s-OFDM 256QAM	1	1	15.34	14.83	15.32	16.50
		1	158	15.63	15.27	15.30	16.50
		80	40	14.94	14.81	15.13	16.50
	CP-OFDM QPSK	1	1	17.73	17.61	18.12	19.50
	CP-OFDM 16QAM	1	1	17.39	17.30	17.81	19.00
	CP-OFDM 64QAM	1	1	17.56	17.42	17.85	18.50
CP-OFDM 256QAM	1	1	14.09	14.02	14.47	15.50	



NR n66								
Level 5-Main Ant2(NSA)				Maximum Output Power (dBm)			Tune -up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				342500/1712.5	349000/1745	355500/1777.5		
5MHz	DFT-s-OFDM BPSK	1	1	18.91	18.79	19.26	20.00	
		1	23	18.91	18.99	19.24	20.00	
		12	6	18.90	18.86	19.36	20.00	
		25	0	18.96	19.09	19.25	20.00	
	DFT-s-OFDM QPSK	1	1	18.87	18.73	19.23	20.00	
		1	23	19.16	19.04	19.21	20.00	
		12	6	18.87	19.03	19.23	20.00	
	DFT-s-OFDM 16QAM	25	0	18.84	18.95	19.09	20.00	
		1	1	18.84	18.51	19.17	20.00	
		1	23	19.13	18.79	19.20	20.00	
	DFT-s-OFDM 64QAM	12	6	18.91	18.86	19.26	20.00	
		1	1	18.88	18.99	19.56	20.00	
		1	23	19.08	19.50	19.73	20.00	
	DFT-s-OFDM 256QAM	12	6	19.32	19.34	19.63	20.00	
		1	1	16.53	16.00	16.57	17.00	
		1	23	16.80	16.28	16.47	17.00	
	CP-OFDM	QPSK	12	6	16.12	16.02	16.34	17.00
			1	1	18.89	18.80	19.32	20.00
16QAM		1	1	18.59	18.50	19.08	19.50	
		1	1	18.36	18.35	18.73	19.00	
256QAM		1	1	14.84	14.90	15.36	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				343000/1715	349000/1745	355000/1775		
10MHz	DFT-s-OFDM BPSK	1	1	18.89	18.74	19.23	20.00	
		1	50	18.90	18.99	19.22	20.00	
		25	12	18.86	18.80	19.31	20.00	
		50	0	18.94	19.05	19.22	20.00	
	DFT-s-OFDM QPSK	1	1	18.85	18.69	19.18	20.00	
		1	50	19.13	19.03	19.18	20.00	
		25	12	18.89	19.00	19.20	20.00	
	DFT-s-OFDM 16QAM	50	0	18.86	18.92	19.06	20.00	
		1	1	18.86	18.50	19.15	20.00	
		1	50	19.11	18.75	19.16	20.00	
	25	12	18.89	18.85	19.24	20.00		



	DFT-s-OFDM 64QAM	1	1	18.84	18.93	19.51	20.00
		1	50	19.06	19.46	19.70	20.00
		25	12	19.30	19.30	19.58	20.00
	DFT-s-OFDM 256QAM	1	1	16.47	15.97	16.54	17.00
		1	50	16.78	16.27	16.45	17.00
		25	12	16.13	16.01	16.34	17.00
	CP-OFDM QPSK	1	1	18.89	18.83	19.34	20.00
	CP-OFDM 16QAM	1	1	18.56	18.46	19.06	19.50
CP-OFDM 64QAM	1	1	18.34	18.31	18.70	19.00	
CP-OFDM 256QAM	1	1	14.82	14.86	15.31	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	18.86	18.70	19.20	20.00
		1	77	18.89	18.95	19.20	20.00
		36	18	18.84	18.79	19.28	20.00
		75	0	18.91	19.00	19.18	20.00
	DFT-s-OFDM QPSK	1	1	18.83	18.65	19.15	20.00
		1	77	19.10	18.98	19.14	20.00
		36	18	18.86	18.95	19.16	20.00
		75	0	18.83	18.88	19.01	20.00
	DFT-s-OFDM 16QAM	1	1	18.83	18.48	19.11	20.00
		1	77	19.08	18.72	19.14	20.00
		36	18	18.86	18.81	19.21	20.00
	DFT-s-OFDM 64QAM	1	1	18.81	18.91	19.48	20.00
		1	77	19.03	19.41	19.66	20.00
		36	18	19.28	19.26	19.55	20.00
	DFT-s-OFDM 256QAM	1	1	16.45	15.93	16.49	17.00
		1	77	16.74	16.25	16.41	17.00
		36	18	16.07	15.95	16.28	17.00
	CP-OFDM QPSK	1	1	18.84	18.75	19.27	20.00
	CP-OFDM 16QAM	1	1	18.52	18.42	19.00	19.50
	CP-OFDM 64QAM	1	1	18.31	18.26	18.66	19.00
CP-OFDM 256QAM	1	1	14.80	14.82	15.28	16.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	18.84	18.65	19.17	20.00
		1	104	18.88	18.95	19.18	20.00
		50	25	18.80	18.73	19.23	20.00
		100	0	18.89	18.96	19.15	20.00
	DFT-s-OFDM QPSK	1	1	18.81	18.61	19.10	20.00
		1	104	19.07	18.97	19.11	20.00
		50	25	18.88	18.92	19.13	20.00
		100	0	18.85	18.85	18.98	20.00
	DFT-s-OFDM 16QAM	1	1	18.85	18.47	19.09	20.00
		1	104	19.06	18.68	19.10	20.00
		50	25	18.84	18.80	19.19	20.00
	DFT-s-OFDM 64QAM	1	1	18.77	18.85	19.43	20.00
		1	104	19.01	19.37	19.63	20.00
		50	25	19.26	19.22	19.50	20.00
	DFT-s-OFDM 256QAM	1	1	16.39	15.90	16.46	17.00
		1	104	16.72	16.24	16.39	17.00
		50	25	16.08	15.94	16.28	17.00
	CP-OFDM QPSK	1	1	18.84	18.78	19.29	20.00
	CP-OFDM 16QAM	1	1	18.49	18.38	18.98	19.50
	CP-OFDM 64QAM	1	1	18.29	18.22	18.63	19.00
CP-OFDM 256QAM	1	1	14.78	14.78	15.23	16.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
30MHz	DFT-s-OFDM BPSK	1	1	18.81	18.61	19.14	20.00
		1	158	18.87	18.91	19.16	20.00
		80	40	18.78	18.72	19.20	20.00
		160	0	18.86	18.91	19.11	20.00
	DFT-s-OFDM QPSK	1	1	18.79	18.57	19.07	20.00
		1	158	19.04	18.92	19.07	20.00
		80	40	18.85	18.87	19.09	20.00
		160	0	18.82	18.81	18.93	20.00
	DFT-s-OFDM 16QAM	1	1	18.82	18.45	19.05	20.00
		1	158	19.03	18.65	19.08	20.00
		80	40	18.81	18.76	19.16	20.00
	DFT-s-OFDM 64QAM	1	1	18.74	18.83	19.40	20.00
		1	158	18.98	19.32	19.59	20.00
		80	40	19.24	19.18	19.47	20.00



	DFT-s-OFDM 256QAM	1	1	16.37	15.86	16.41	17.00
		1	158	16.68	16.22	16.35	17.00
		80	40	16.02	15.88	16.22	17.00
	CP-OFDM QPSK	1	1	18.79	18.70	19.22	20.00
	CP-OFDM 16QAM	1	1	18.45	18.34	18.92	19.50
	CP-OFDM 64QAM	1	1	18.26	18.17	18.59	19.00
CP-OFDM 256QAM	1	1	14.76	14.74	15.20	16.00	

NR n66							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Div Ant1(NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	17.80	18.34	18.43	19.00
		1	23	18.26	18.41	18.49	19.00
		12	6	18.09	18.32	18.21	19.00
		25	0	18.14	18.39	18.02	19.00
	DFT-s-OFDM QPSK	1	1	17.78	18.18	18.22	19.00
		1	23	18.24	18.35	18.27	19.00
		12	6	18.09	18.46	17.96	19.00
	DFT-s-OFDM 16QAM	25	0	18.16	18.30	17.82	19.00
		1	1	18.13	18.49	18.41	19.00
		1	23	18.60	18.82	18.13	19.00
	DFT-s-OFDM 64QAM	12	6	18.15	18.27	18.30	19.00
		1	1	16.30	16.52	16.02	17.50
		1	23	16.73	16.83	16.13	17.50
	DFT-s-OFDM 256QAM	12	6	16.63	16.93	16.50	17.50
		1	1	14.47	14.69	14.41	16.00
		1	23	14.82	15.08	14.91	16.00
	CP-OFDM QPSK	12	6	14.54	14.73	14.69	16.00
		1	1	17.30	17.54	16.94	18.50
	CP-OFDM 16QAM	1	1	16.71	16.90	16.81	18.00
	CP-OFDM 64QAM	1	1	14.93	15.27	15.13	16.50
CP-OFDM 256QAM	1	1	12.54	12.88	12.50	13.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				343000/1715	349000/1745	355000/1775		
10MHz	DFT-s-OFDM BPSK	1	1	17.81	18.35	18.44	19.00	
		1	50	18.25	18.40	18.48	19.00	
		25	12	18.10	18.33	18.22	19.00	
		50	0	18.14	18.39	18.02	19.00	
	DFT-s-OFDM QPSK	1	1	17.77	18.17	18.23	19.00	
		1	50	18.24	18.33	18.26	19.00	
		25	12	18.05	18.45	17.94	19.00	
		50	0	18.12	18.31	17.83	19.00	
	DFT-s-OFDM 16QAM	1	1	18.09	18.47	18.41	19.00	
		1	50	18.60	18.82	18.14	19.00	
		25	12	18.14	18.26	18.29	19.00	
	DFT-s-OFDM 64QAM	1	1	16.31	16.53	16.03	17.50	
		1	50	16.73	16.83	16.13	17.50	
		25	12	16.62	16.92	16.51	17.50	
	DFT-s-OFDM 256QAM	1	1	14.48	14.70	14.42	16.00	
		1	50	14.82	15.06	14.91	16.00	
		25	12	14.54	14.73	14.70	16.00	
	CP-OFDM QPSK	1	1	17.29	17.53	16.93	18.50	
	CP-OFDM 16QAM	1	1	16.72	16.91	16.82	18.00	
	CP-OFDM 64QAM	1	1	14.93	15.27	15.13	16.50	
CP-OFDM 256QAM	1	1	12.53	12.87	12.51	13.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
15MHz	DFT-s-OFDM BPSK	1	1	343500/1717.5	349000/1745	354500/1772.5	19.00	
		1	77	17.77	18.23	18.39	19.00	
		36	18	18.24	18.40	18.45	19.00	
		75	0	18.03	18.25	18.13	19.00	
	DFT-s-OFDM QPSK	1	1	18.10	18.31	17.96	19.00	
		1	1	17.73	18.09	18.15	19.00	
		1	77	18.17	18.28	18.20	19.00	
		36	18	18.06	18.35	17.86	19.00	
	DFT-s-OFDM 16QAM	75	0	18.13	18.25	17.75	19.00	
		1	1	18.10	18.45	18.36	19.00	
		1	77	18.56	18.73	18.08	19.00	
	DFT-s-OFDM 64QAM	36	18	18.09	18.24	18.25	19.00	
		1	1	16.23	16.44	15.94	17.50	
		1	77	16.69	16.75	16.07	17.50	
			36	18	16.58	16.84	16.43	17.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
	DFT-s-OFDM 256QAM	1	1	14.37	14.60	14.34	16.00
		1	77	14.77	15.00	14.86	16.00
		36	18	14.49	14.67	14.68	16.00
	CP-OFDM QPSK	1	1	17.26	17.55	16.89	18.50
	CP-OFDM 16QAM	1	1	16.65	16.84	16.76	18.00
	CP-OFDM 64QAM	1	1	14.89	15.19	15.07	16.50
CP-OFDM 256QAM	1	1	12.49	12.79	12.43	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	17.76	18.26	18.38	19.00
		1	104	18.23	18.36	18.44	19.00
		50	25	18.04	18.26	18.14	19.00
		100	0	18.09	18.30	17.95	19.00
	DFT-s-OFDM QPSK	1	1	17.73	18.09	18.15	19.00
		1	104	18.18	18.27	18.19	19.00
		50	25	18.04	18.37	17.87	19.00
		100	0	18.11	18.24	17.75	19.00
	DFT-s-OFDM 16QAM	1	1	18.08	18.44	18.35	19.00
		1	104	18.55	18.75	18.08	19.00
		50	25	18.09	18.21	18.24	19.00
	DFT-s-OFDM 64QAM	1	1	16.24	16.45	15.95	17.50
		1	104	16.68	16.74	16.06	17.50
		50	25	16.58	16.84	16.43	17.50
	DFT-s-OFDM 256QAM	1	1	14.40	14.63	14.34	16.00
		1	104	14.76	15.03	14.85	16.00
		50	25	14.49	14.66	14.64	16.00
	CP-OFDM QPSK	1	1	17.24	17.48	16.88	18.50
	CP-OFDM 16QAM	1	1	16.65	16.83	16.74	18.00
	CP-OFDM 64QAM	1	1	14.88	15.18	15.06	16.50
CP-OFDM 256QAM	1	1	12.49	12.79	12.43	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	17.74	18.19	18.36	19.00
		1	158	18.23	18.36	18.43	19.00
		80	40	18.01	18.24	18.10	19.00



		160	0	18.07	18.26	17.92	19.00
	DFT-s-OFDM QPSK	1	1	17.71	18.05	18.12	19.00
		1	158	18.14	18.23	18.16	19.00
		80	40	18.03	18.30	17.82	19.00
		160	0	18.10	18.21	17.70	19.00
	DFT-s-OFDM 16QAM	1	1	18.07	18.43	18.32	19.00
		1	158	18.53	18.70	18.06	19.00
		80	40	18.06	18.20	18.22	19.00
	DFT-s-OFDM 64QAM	1	1	16.20	16.42	15.91	17.50
		1	158	16.66	16.70	16.03	17.50
		80	40	16.56	16.80	16.40	17.50
	DFT-s-OFDM 256QAM	1	1	14.35	14.56	14.29	16.00
1		158	14.73	14.98	14.82	16.00	
80		40	14.43	14.61	14.62	16.00	
CP-OFDM QPSK	1	1	17.21	17.47	16.82	18.50	
CP-OFDM 16QAM	1	1	16.61	16.80	16.70	18.00	
CP-OFDM 64QAM	1	1	14.86	15.14	15.03	16.50	
CP-OFDM 256QAM	1	1	12.47	12.75	12.40	13.50	

NR n66							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant4(NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	18.43	18.50	18.25	19.00
		1	23	18.30	18.26	18.23	19.00
		12	6	18.49	18.34	18.05	19.00
		25	0	18.50	18.39	17.93	19.00
	DFT-s-OFDM QPSK	1	1	18.38	18.44	18.29	19.00
		1	23	18.35	18.37	18.18	19.00
		12	6	18.42	18.41	18.15	19.00
		25	0	18.48	18.42	18.28	19.00
	DFT-s-OFDM 16QAM	1	1	18.42	18.45	18.32	19.00
		1	23	18.44	18.45	18.62	19.00
		12	6	18.52	18.53	18.16	19.00
	DFT-s-OFDM 64QAM	1	1	17.04	17.00	16.72	17.50
		1	23	16.96	16.91	16.75	17.50
		12	6	17.01	17.01	16.93	17.50
	DFT-s-OFDM	1	1	14.91	14.90	14.63	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
	256QAM	1	23	15.03	15.01	14.78	16.00
		12	6	14.99	14.98	14.62	16.00
	CP-OFDM QPSK	1	1	17.95	17.88	17.56	18.50
	CP-OFDM 16QAM	1	1	17.40	17.36	17.57	18.00
	CP-OFDM 64QAM	1	1	15.90	15.84	15.93	16.50
	CP-OFDM 256QAM	1	1	13.19	13.24	12.89	13.50
10MHz	DFT-s-OFDM BPSK	1	1	18.46	18.54	18.28	19.00
		1	50	18.31	18.30	18.25	19.00
		25	12	18.51	18.35	18.08	19.00
		50	0	18.53	18.44	17.97	19.00
	DFT-s-OFDM QPSK	1	1	18.40	18.48	18.32	19.00
		1	50	18.38	18.42	18.22	19.00
		25	12	18.45	18.46	18.19	19.00
		50	0	18.51	18.46	18.33	19.00
	DFT-s-OFDM 16QAM	1	1	18.45	18.47	18.36	19.00
		1	50	18.47	18.48	18.64	19.00
		25	12	18.55	18.57	18.19	19.00
	DFT-s-OFDM 64QAM	1	1	17.07	17.02	16.75	17.50
		1	50	16.99	16.96	16.79	17.50
		25	12	17.03	17.05	16.96	17.50
	DFT-s-OFDM 256QAM	1	1	14.93	14.94	14.68	16.00
		1	50	15.07	15.03	14.82	16.00
		25	12	15.05	15.04	14.68	16.00
	CP-OFDM QPSK	1	1	18.00	17.96	17.63	18.50
	CP-OFDM 16QAM	1	1	17.44	17.40	17.63	18.00
	CP-OFDM 64QAM	1	1	15.93	15.89	15.97	16.50
CP-OFDM 256QAM	1	1	13.21	13.28	12.92	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	18.44	18.47	18.26	19.00
		1	77	18.31	18.30	18.24	19.00
		36	18	18.48	18.33	18.04	19.00
		75	0	18.51	18.40	17.94	19.00



	DFT-s-OFDM QPSK	1	1	18.38	18.44	18.29	19.00
		1	77	18.34	18.38	18.19	19.00
		36	18	18.44	18.39	18.14	19.00
		75	0	18.50	18.43	18.28	19.00
	DFT-s-OFDM 16QAM	1	1	18.44	18.46	18.33	19.00
		1	77	18.45	18.43	18.62	19.00
		36	18	18.52	18.56	18.17	19.00
	DFT-s-OFDM 64QAM	1	1	17.03	16.99	16.71	17.50
		1	77	16.97	16.92	16.76	17.50
		36	18	17.01	17.01	16.93	17.50
	DFT-s-OFDM 256QAM	1	1	14.88	14.87	14.63	16.00
		1	77	15.04	14.98	14.79	16.00
		36	18	14.99	14.99	14.66	16.00
	CP-OFDM QPSK	1	1	17.97	17.95	17.57	18.50
	CP-OFDM 16QAM	1	1	17.40	17.37	17.59	18.00
	CP-OFDM 64QAM	1	1	15.91	15.85	15.94	16.50
CP-OFDM 256QAM	1	1	13.19	13.24	12.89	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	18.48	18.59	18.31	19.00
		1	104	18.32	18.30	18.27	19.00
		50	25	18.55	18.41	18.13	19.00
		100	0	18.55	18.48	18.00	19.00
	DFT-s-OFDM QPSK	1	1	18.42	18.52	18.37	19.00
		1	104	18.41	18.43	18.25	19.00
		50	25	18.43	18.49	18.22	19.00
	DFT-s-OFDM 16QAM	100	0	18.49	18.49	18.36	19.00
		1	1	18.43	18.48	18.38	19.00
		1	104	18.49	18.52	18.68	19.00
	DFT-s-OFDM 64QAM	50	25	18.57	18.58	18.21	19.00
		1	1	17.11	17.08	16.80	17.50
	DFT-s-OFDM 256QAM	1	104	17.01	17.00	16.82	17.50
		50	25	17.05	17.09	17.01	17.50
		1	1	14.99	14.97	14.71	16.00
	CP-OFDM QPSK	1	104	15.09	15.04	14.84	16.00
		50	25	15.04	15.05	14.68	16.00
	CP-OFDM QPSK	1	1	18.00	17.93	17.61	18.50
	CP-OFDM	1	1	17.47	17.44	17.65	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
				16QAM			
	CP-OFDM 64QAM	1	1	15.95	15.93	16.00	16.50
	CP-OFDM 256QAM	1	1	13.23	13.32	12.97	13.50
30MHz	DFT-s-OFDM BPSK	1	1	18.41	18.43	18.23	19.00
		1	158	18.30	18.26	18.22	19.00
		80	40	18.46	18.32	18.01	19.00
		160	0	18.48	18.35	17.90	19.00
	DFT-s-OFDM QPSK	1	1	18.36	18.40	18.26	19.00
		1	158	18.31	18.33	18.15	19.00
		80	40	18.41	18.34	18.10	19.00
		160	0	18.47	18.39	18.23	19.00
	DFT-s-OFDM 16QAM	1	1	18.41	18.44	18.29	19.00
		1	158	18.42	18.40	18.60	19.00
		80	40	18.49	18.52	18.14	19.00
	DFT-s-OFDM 64QAM	1	1	17.00	16.97	16.68	17.50
		1	158	16.94	16.87	16.72	17.50
		80	40	16.99	16.97	16.90	17.50
	DFT-s-OFDM 256QAM	1	1	14.86	14.83	14.58	16.00
		1	158	15.00	14.96	14.75	16.00
		80	40	14.93	14.93	14.60	16.00
	CP-OFDM QPSK	1	1	17.92	17.87	17.50	18.50
	CP-OFDM 16QAM	1	1	17.36	17.33	17.53	18.00
	CP-OFDM 64QAM	1	1	15.88	15.80	15.90	16.50
	CP-OFDM 256QAM	1	1	13.17	13.20	12.86	13.50

NR n41							
Full PowerLevel 1 & Level 2 & Level 3 & Level 4-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	18.95	19.95	20.13	20.50
		1	49	20.13	20.16	19.99	20.50
		25	12	20.07	19.94	19.98	20.50
		50	0	19.51	19.53	19.94	20.50
	DFT-s-OFDM	1	1	19.60	20.13	20.11	20.50



	QPSK	1	49	20.17	20.23	19.59	20.50
		25	12	19.94	20.04	20.19	20.50
		50	0	19.03	19.05	19.18	20.50
	DFT-s-OFDM 16QAM	1	1	18.88	18.83	19.00	20.50
		1	49	19.03	19.21	18.71	20.50
		25	12	19.03	18.98	19.32	20.50
	DFT-s-OFDM 64QAM	1	1	17.36	18.07	17.76	19.00
		1	49	17.72	17.76	17.58	19.00
		25	12	17.51	17.65	17.81	19.00
	DFT-s-OFDM 256QAM	1	1	15.77	15.97	15.76	17.50
		1	49	15.81	15.81	16.04	17.50
		25	12	15.88	15.85	15.97	17.50
	CP-OFDM QPSK	1	1	18.24	18.63	18.67	20.00
CP-OFDM 16QAM	1	1	17.85	17.72	18.05	19.50	
CP-OFDM 64QAM	1	1	16.72	16.61	16.28	18.00	
CP-OFDM 256QAM	1	1	13.54	13.74	14.02	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	18.94	19.91	20.11	20.50
		1	104	20.11	20.15	19.96	20.50
		50	25	20.04	19.89	19.94	20.50
		100	0	19.49	19.49	19.91	20.50
	DFT-s-OFDM QPSK	1	1	19.57	20.08	20.07	20.50
		1	104	20.14	20.20	19.55	20.50
		50	25	19.92	20.00	20.14	20.50
		100	0	19.01	19.03	19.16	20.50
	DFT-s-OFDM 16QAM	1	1	18.86	18.80	18.98	20.50
		1	104	19.01	19.17	18.68	20.50
		50	25	19.00	18.96	19.29	20.50
	DFT-s-OFDM 64QAM	1	1	17.33	18.02	17.72	19.00
		1	104	17.70	17.72	17.55	19.00
		50	25	17.48	17.60	17.77	19.00
	DFT-s-OFDM 256QAM	1	1	15.72	15.95	15.74	17.50
		1	104	15.79	15.78	16.02	17.50
		50	25	15.89	15.84	15.98	17.50
	CP-OFDM QPSK	1	1	18.23	18.65	18.68	20.00
	CP-OFDM 16QAM	1	1	17.83	17.69	18.04	19.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				505200/2526	518598/2595.99	531996/2659.98	
	CP-OFDM 64QAM	1	1	16.70	16.57	16.25	18.00
	CP-OFDM 256QAM	1	1	13.51	13.69	13.98	15.00
60MHz	DFT-s-OFDM BPSK	1	1	18.91	19.87	20.08	20.50
		1	160	20.10	20.11	19.94	20.50
		81	40	20.02	19.88	19.91	20.50
		162	0	19.46	19.44	19.87	20.50
	DFT-s-OFDM QPSK	1	1	19.55	20.04	20.04	20.50
		1	160	20.11	20.15	19.51	20.50
		81	40	19.89	19.95	20.10	20.50
	DFT-s-OFDM 16QAM	162	0	18.98	18.99	19.11	20.50
		1	1	18.83	18.78	18.94	20.50
		1	160	18.98	19.14	18.66	20.50
	DFT-s-OFDM 64QAM	81	40	18.97	18.92	19.26	20.50
		1	1	17.30	18.00	17.69	19.00
		1	160	17.67	17.67	17.51	19.00
	DFT-s-OFDM 256QAM	81	40	17.46	17.56	17.74	19.00
		1	1	15.70	15.91	15.69	17.50
		1	160	15.75	15.76	15.98	17.50
	CP-OFDM QPSK	81	40	15.83	15.78	15.92	17.50
		1	1	18.18	18.57	18.61	20.00
	CP-OFDM 16QAM	1	1	17.79	17.65	17.98	19.50
	CP-OFDM 64QAM	1	1	16.67	16.52	16.21	18.00
CP-OFDM 256QAM	1	1	13.49	13.65	13.95	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	18.88	19.85	20.04	20.50
		1	215	20.08	20.07	19.91	20.50
		108	54	19.99	19.83	19.87	20.50
		216	0	19.43	19.39	19.83	20.50
	DFT-s-OFDM QPSK	1	1	19.53	20.00	19.99	20.50
		1	215	20.09	20.13	19.47	20.50
		108	54	19.89	19.94	20.08	20.50
	DFT-s-OFDM 16QAM	216	0	18.98	18.95	19.08	20.50
		1	1	18.83	18.76	18.91	20.50
		1	215	18.95	19.12	18.62	20.50



		108	54	18.95	18.88	19.23	20.50
	DFT-s-OFDM 64QAM	1	1	17.27	17.95	17.65	19.00
		1	215	17.64	17.62	17.47	19.00
		108	54	17.44	17.52	17.69	19.00
	DFT-s-OFDM 256QAM	1	1	15.67	15.91	15.66	17.50
		1	215	15.72	15.78	15.95	17.50
		108	54	15.84	15.76	15.88	17.50
	CP-OFDM QPSK	1	1	18.16	18.53	18.62	20.00
	CP-OFDM 16QAM	1	1	17.76	17.60	17.94	19.50
CP-OFDM 64QAM	1	1	16.64	16.47	16.17	18.00	
CP-OFDM 256QAM	1	1	13.47	13.61	13.90	15.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	18.86	19.78	20.02	20.50
		1	271	20.08	20.07	19.90	20.50
		135	67	19.96	19.81	19.83	20.50
		270	0	19.41	19.35	19.80	20.50
	DFT-s-OFDM QPSK	1	1	19.51	19.96	19.96	20.50
		1	271	20.05	20.09	19.44	20.50
		135	67	19.88	19.87	20.23	20.50
	DFT-s-OFDM 16QAM	270	0	18.97	18.92	19.03	20.50
		1	1	18.82	18.75	18.88	20.50
		1	271	18.93	19.07	18.60	20.50
	DFT-s-OFDM 64QAM	135	67	18.92	18.87	19.21	20.50
		1	1	17.23	17.92	17.61	19.00
		1	271	17.62	17.58	17.44	19.00
	DFT-s-OFDM 256QAM	135	67	17.42	17.48	17.66	19.00
		1	1	15.62	15.84	15.61	17.50
		1	271	15.69	15.73	15.92	17.50
	CP-OFDM QPSK	135	67	15.78	15.71	15.86	17.50
		1	1	18.13	18.52	18.56	20.00
		1	1	17.72	17.57	17.90	19.50
	CP-OFDM 16QAM	1	1	16.62	16.43	16.14	18.00
		1	1	13.45	13.57	13.87	15.00
	CP-OFDM 64QAM	1	1	13.45	13.57	13.87	15.00
		1	1	13.45	13.57	13.87	15.00
	CP-OFDM 256QAM	1	1	13.45	13.57	13.87	15.00
1		1	13.45	13.57	13.87	15.00	



NR n41							
Level 5-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	16.99	16.99	17.07	18.00
		1	49	16.49	16.56	16.84	18.00
		25	12	16.77	16.73	17.16	18.00
		50	0	16.99	16.94	17.14	18.00
	DFT-s-OFDM QPSK	1	1	16.92	17.13	17.07	18.00
		1	49	16.88	16.31	17.01	18.00
		25	12	16.75	16.78	16.98	18.00
		50	0	16.36	17.02	16.66	18.00
	DFT-s-OFDM 16QAM	1	1	16.22	17.25	16.42	18.00
		1	49	16.51	17.13	16.25	18.00
		25	12	16.64	17.41	16.69	18.00
	DFT-s-OFDM 64QAM	1	1	16.72	16.90	16.82	18.00
		1	49	16.50	16.77	16.65	18.00
		25	12	16.66	16.79	16.86	18.00
	DFT-s-OFDM 256QAM	1	1	14.67	14.83	14.87	16.50
		1	49	15.05	14.93	15.11	16.50
		25	12	15.05	15.09	15.13	16.50
	CP-OFDM QPSK	1	1	17.05	17.18	17.18	18.00
CP-OFDM 16QAM	1	1	16.71	16.60	16.78	17.50	
CP-OFDM 64QAM	1	1	15.20	15.79	15.35	17.00	
CP-OFDM 256QAM	1	1	12.87	13.23	13.07	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	16.96	16.97	17.03	18.00
		1	104	16.47	16.52	16.81	18.00
		50	25	16.74	16.68	17.12	18.00
		100	0	16.96	16.89	17.10	18.00
	DFT-s-OFDM QPSK	1	1	16.90	17.09	17.02	18.00
		1	104	16.86	16.29	16.97	18.00
		50	25	16.75	16.77	16.96	18.00
		100	0	16.36	16.98	16.63	18.00
	DFT-s-OFDM 16QAM	1	1	16.22	17.23	16.39	18.00
		1	104	16.48	17.11	16.21	18.00
		50	25	16.62	17.37	16.66	18.00
	DFT-s-OFDM	1	1	16.69	16.85	16.78	18.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				505200/2526	518598/2595.99	531996/2659.98	
	64QAM	1	104	16.47	16.72	16.61	18.00
		50	25	16.64	16.75	16.81	18.00
	DFT-s-OFDM 256QAM	1	1	14.64	14.83	14.84	16.50
		1	104	15.02	14.95	15.08	16.50
		50	25	15.06	15.07	15.09	16.50
	CP-OFDM QPSK	1	1	17.03	17.14	17.19	18.00
	CP-OFDM 16QAM	1	1	16.68	16.55	16.74	17.50
	CP-OFDM 64QAM	1	1	15.17	15.74	15.31	17.00
CP-OFDM 256QAM	1	1	12.85	13.19	13.02	14.00	
60MHz	DFT-s-OFDM BPSK	1	1	16.98	16.98	17.06	18.00
		1	160	16.50	16.57	16.85	18.00
		81	40	16.76	16.72	17.15	18.00
		162	0	16.99	16.94	17.14	18.00
	DFT-s-OFDM QPSK	1	1	16.93	17.14	17.06	18.00
		1	160	16.88	16.33	17.02	18.00
		81	40	16.79	16.79	17.00	18.00
	DFT-s-OFDM 16QAM	162	0	16.40	17.01	16.65	18.00
		1	1	16.26	17.27	16.42	18.00
		1	160	16.51	17.13	16.24	18.00
	DFT-s-OFDM 64QAM	81	40	16.65	17.42	16.70	18.00
		1	1	16.71	16.89	16.81	18.00
		1	160	16.50	16.77	16.65	18.00
	DFT-s-OFDM 256QAM	81	40	16.67	16.80	16.85	18.00
		1	1	14.66	14.82	14.86	16.50
		1	160	15.05	14.95	15.11	16.50
	CP-OFDM QPSK	81	40	15.05	15.09	15.12	16.50
		1	1	17.06	17.19	17.19	18.00
		1	1	16.70	16.59	16.77	17.50
		1	1	15.20	15.79	15.35	17.00
CP-OFDM 16QAM	1	1	12.88	13.24	13.06	14.00	
80MHz	DFT-s-OFDM BPSK	1	1	16.97	16.94	17.04	18.00
		1	215	16.48	16.56	16.82	18.00



		108	54	16.73	16.67	17.11	18.00
		216	0	16.97	16.90	17.11	18.00
	DFT-s-OFDM QPSK	1	1	16.90	17.09	17.02	18.00
		1	215	16.85	16.30	16.98	18.00
		108	54	16.77	16.75	16.95	18.00
		216	0	16.38	16.99	16.63	18.00
	DFT-s-OFDM 16QAM	1	1	16.24	17.24	16.40	18.00
		1	215	16.49	17.09	16.21	18.00
		108	54	16.62	17.40	16.67	18.00
	DFT-s-OFDM 64QAM	1	1	16.68	16.84	16.77	18.00
		1	215	16.48	16.73	16.62	18.00
		108	54	16.64	16.75	16.81	18.00
	DFT-s-OFDM 256QAM	1	1	14.61	14.80	14.84	16.50
		1	215	15.03	14.92	15.09	16.50
108		54	15.06	15.08	15.13	16.50	
CP-OFDM QPSK		1	1	17.05	17.21	17.20	18.00
CP-OFDM 16QAM		1	1	16.68	16.56	16.76	17.50
CP-OFDM 64QAM		1	1	15.18	15.75	15.32	17.00
CP-OFDM 256QAM	1	1	12.85	13.19	13.02	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	16.94	16.90	17.01	18.00
		1	271	16.47	16.52	16.80	18.00
		135	67	16.71	16.66	17.08	18.00
		270	0	16.94	16.85	17.07	18.00
	DFT-s-OFDM QPSK	1	1	16.88	17.05	16.99	18.00
		1	271	16.82	16.25	16.94	18.00
		135	67	16.74	16.77	16.71	18.00
		270	0	16.35	16.95	16.58	18.00
	DFT-s-OFDM 16QAM	1	1	16.21	17.22	16.36	18.00
		1	271	16.46	17.06	16.19	18.00
		135	67	16.59	17.36	16.64	18.00
	DFT-s-OFDM 64QAM	1	1	16.65	16.82	16.74	18.00
		1	271	16.45	16.68	16.58	18.00
		135	67	16.62	16.71	16.78	18.00
	DFT-s-OFDM 256QAM	1	1	14.59	14.76	14.79	16.50
		1	271	14.99	14.90	15.05	16.50
		135	67	15.00	15.02	15.07	16.50
	CP-OFDM	1	1	17.00	17.13	17.13	18.00



	QPSK						
	CP-OFDM 16QAM	1	1	16.64	16.52	16.70	17.50
	CP-OFDM 64QAM	1	1	15.15	15.70	15.28	17.00
	CP-OFDM 256QAM	1	1	12.83	13.15	12.99	14.00

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	19.07	18.82	19.03	19.50
		1	49	19.03	18.73	19.09	19.50
		25	12	18.80	18.85	19.06	19.50
		50	0	18.81	18.69	18.53	19.50
	DFT-s-OFDM QPSK	1	1	18.61	19.15	19.08	19.50
		1	49	18.79	18.55	18.68	19.50
		25	12	18.57	18.94	19.12	19.50
		50	0	18.38	18.65	18.39	19.50
	DFT-s-OFDM 16QAM	1	1	18.28	18.32	18.61	19.50
		1	49	18.61	18.39	18.37	19.50
		25	12	18.32	18.60	18.48	19.50
	DFT-s-OFDM 64QAM	1	1	16.89	16.86	16.93	18.00
		1	49	16.77	16.86	17.02	18.00
		25	12	16.88	17.13	17.17	18.00
	DFT-s-OFDM 256QAM	1	1	15.40	15.34	15.44	16.50
		1	49	15.05	15.09	14.90	16.50
		25	12	14.91	15.07	15.08	16.50
	CP-OFDM QPSK	1	1	17.85	18.08	18.09	19.00
	CP-OFDM 16QAM	1	1	17.51	17.46	17.41	18.50
	CP-OFDM 64QAM	1	1	15.86	15.88	16.03	17.00
CP-OFDM 256QAM	1	1	12.97	12.93	13.14	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	19.04	18.78	19.00	19.50
		1	104	19.02	18.69	19.07	19.50
		50	25	18.78	18.84	19.03	19.50



		100	0	18.78	18.64	18.49	19.50
	DFT-s-OFDM QPSK	1	1	18.59	19.11	19.05	19.50
		1	104	18.76	18.50	18.64	19.50
		50	25	18.54	18.89	19.08	19.50
		100	0	18.35	18.61	18.34	19.50
	DFT-s-OFDM 16QAM	1	1	18.25	18.30	18.57	19.50
		1	104	18.58	18.36	18.35	19.50
		50	25	18.29	18.56	18.45	19.50
	DFT-s-OFDM 64QAM	1	1	16.86	16.84	16.90	18.00
		1	104	16.74	16.81	16.98	18.00
		50	25	16.86	17.09	17.14	18.00
	DFT-s-OFDM 256QAM	1	1	15.38	15.30	15.39	16.50
		1	104	15.01	15.07	14.86	16.50
		50	25	14.85	15.01	15.02	16.50
CP-OFDM QPSK	1	1	17.80	18.00	18.02	19.00	
CP-OFDM 16QAM	1	1	17.47	17.42	17.35	18.50	
CP-OFDM 64QAM	1	1	15.83	15.83	15.99	17.00	
CP-OFDM 256QAM	1	1	12.95	12.89	13.11	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	19.06	18.79	19.03	19.50
		1	160	19.05	18.74	19.11	19.50
		81	40	18.80	18.88	19.06	19.50
		162	0	18.81	18.69	18.53	19.50
	DFT-s-OFDM QPSK	1	1	18.62	19.16	19.09	19.50
		1	160	18.78	18.54	18.69	19.50
		81	40	18.58	18.91	19.12	19.50
		162	0	18.39	18.64	18.36	19.50
	DFT-s-OFDM 16QAM	1	1	18.29	18.34	18.60	19.50
		1	160	18.61	18.38	18.38	19.50
		81	40	18.32	18.61	18.49	19.50
	DFT-s-OFDM 64QAM	1	1	16.88	16.88	16.93	18.00
		1	160	16.77	16.86	17.02	18.00
		81	40	16.89	17.14	17.18	18.00
	DFT-s-OFDM 256QAM	1	1	15.40	15.29	15.41	16.50
		1	160	15.04	15.07	14.89	16.50
		81	40	14.84	15.03	15.05	16.50
	CP-OFDM QPSK	1	1	17.83	18.05	18.02	19.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				507204/2536.02	518598/2595.99	529998/2649.99		
	CP-OFDM 16QAM	1	1	17.49	17.46	17.38	18.50	
	CP-OFDM 64QAM	1	1	15.86	15.88	16.03	17.00	
	CP-OFDM 256QAM	1	1	12.98	12.94	13.15	14.00	
80MHz	DFT-s-OFDM BPSK	1	1	19.05	18.75	19.01	19.50	
		1	215	19.03	18.73	19.08	19.50	
		108	54	18.77	18.83	19.02	19.50	
		216	0	18.79	18.65	18.50	19.50	
	DFT-s-OFDM QPSK	1	1	18.59	19.11	19.05	19.50	
		1	215	18.75	18.51	18.65	19.50	
		108	54	18.56	18.87	19.07	19.50	
	DFT-s-OFDM 16QAM	216	0	18.37	18.62	18.34	19.50	
		1	1	18.27	18.31	18.58	19.50	
		1	215	18.59	18.34	18.35	19.50	
	DFT-s-OFDM 64QAM	108	54	18.29	18.59	18.46	19.50	
		1	1	16.85	16.83	16.89	18.00	
		1	215	16.75	16.82	16.99	18.00	
	DFT-s-OFDM 256QAM	108	54	16.86	17.09	17.14	18.00	
		1	1	15.35	15.27	15.39	16.50	
		1	215	15.02	15.04	14.87	16.50	
	CP-OFDM QPSK	108	54	14.85	15.02	15.06	16.50	
		1	1	17.82	18.07	18.03	19.00	
		1	1	17.47	17.43	17.37	18.50	
	CP-OFDM 16QAM	1	1	15.84	15.84	16.00	17.00	
		1	1	12.95	12.89	13.11	14.00	
		1	1	17.82	18.07	18.03	19.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	19.02	18.71	18.98	19.50	
		1	271	19.02	18.69	19.06	19.50	
		135	67	18.75	18.82	18.99	19.50	
		270	0	18.76	18.60	18.46	19.50	
	DFT-s-OFDM QPSK	1	1	18.57	19.07	19.07	19.50	
		1	271	18.72	18.46	18.61	19.50	
		135	67	18.53	18.82	18.73	19.50	
		270	0	18.34	18.58	18.29	19.50	



	DFT-s-OFDM 16QAM	1	1	18.24	18.29	18.54	19.50
		1	271	18.56	18.31	18.33	19.50
		135	67	18.26	18.55	18.43	19.50
	DFT-s-OFDM 64QAM	1	1	16.82	16.81	16.86	18.00
		1	271	16.72	16.77	16.95	18.00
		135	67	16.84	17.05	17.11	18.00
	DFT-s-OFDM 256QAM	1	1	15.33	15.23	15.34	16.50
		1	271	14.98	15.02	14.83	16.50
		135	67	14.79	14.96	15.00	16.50
	CP-OFDM QPSK	1	1	17.77	17.99	17.96	19.00
	CP-OFDM 16QAM	1	1	17.43	17.39	17.31	18.50
	CP-OFDM 64QAM	1	1	15.81	15.79	15.96	17.00
CP-OFDM 256QAM	1	1	12.93	12.85	13.08	14.00	

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Mas Ant1(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	19.27	19.21	18.94	19.50
		1	49	19.07	18.72	18.59	19.50
		25	12	19.10	19.18	18.69	19.50
		50	0	18.69	19.21	18.73	19.50
	DFT-s-OFDM QPSK	1	1	19.18	19.19	18.94	19.50
		1	49	19.20	18.91	18.54	19.50
		25	12	19.04	19.14	18.69	19.50
	DFT-s-OFDM 16QAM	50	0	18.14	18.34	18.74	19.50
		1	1	18.18	18.18	18.63	19.50
		1	49	18.18	17.99	18.28	19.50
	DFT-s-OFDM 64QAM	25	12	18.23	17.98	18.66	19.50
		1	1	16.75	16.76	17.55	18.00
		1	49	16.70	16.86	17.24	18.00
	DFT-s-OFDM 256QAM	25	12	16.62	16.73	17.23	18.00
		1	1	15.03	14.80	15.46	16.50
		1	49	14.94	14.63	15.07	16.50
	CP-OFDM QPSK	25	12	14.83	14.90	15.20	16.50
		1	1	17.76	17.66	18.50	19.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				503202/2516.01	518598/2592.99	534000/2670	
	CP-OFDM 16QAM	1	1	17.33	17.03	17.70	18.50
	CP-OFDM 64QAM	1	1	15.75	15.67	16.29	17.00
	CP-OFDM 256QAM	1	1	13.08	12.84	13.07	14.00
40MHz	DFT-s-OFDM BPSK	1	1	19.26	19.20	18.93	19.50
		1	104	19.08	18.73	18.60	19.50
		50	25	19.09	19.17	18.68	19.50
		100	0	18.69	19.21	18.73	19.50
	DFT-s-OFDM QPSK	1	1	19.19	19.20	18.93	19.50
		1	104	19.20	18.93	18.55	19.50
		50	25	19.08	19.15	18.71	19.50
		100	0	18.18	18.33	18.73	19.50
	DFT-s-OFDM 16QAM	1	1	18.22	18.20	18.63	19.50
		1	104	18.18	17.99	18.27	19.50
		50	25	18.24	17.99	18.67	19.50
	DFT-s-OFDM 64QAM	1	1	16.74	16.75	17.54	18.00
		1	104	16.70	16.86	17.24	18.00
		50	25	16.63	16.74	17.22	18.00
	DFT-s-OFDM 256QAM	1	1	15.02	14.79	15.45	16.50
		1	104	14.94	14.65	15.07	16.50
		50	25	14.83	14.90	15.19	16.50
	CP-OFDM QPSK	1	1	17.77	17.67	18.51	19.00
	CP-OFDM 16QAM	1	1	17.32	17.02	17.69	18.50
	CP-OFDM 64QAM	1	1	15.75	15.67	16.29	17.00
CP-OFDM 256QAM	1	1	13.09	12.85	13.06	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	19.25	19.16	18.91	19.50
		1	160	19.06	18.72	18.57	19.50
		81	40	19.06	19.12	18.64	19.50
		162	0	18.67	19.17	18.70	19.50
	DFT-s-OFDM QPSK	1	1	19.16	19.15	18.89	19.50
		1	160	19.17	18.90	18.51	19.50
		81	40	19.06	19.11	18.66	19.50
		162	0	18.16	18.31	18.71	19.50



	DFT-s-OFDM 16QAM	1	1	18.20	18.17	18.61	19.50
		1	160	18.16	17.95	18.24	19.50
		81	40	18.21	17.97	18.64	19.50
	DFT-s-OFDM 64QAM	1	1	16.71	16.70	17.50	18.00
		1	160	16.68	16.82	17.21	18.00
		81	40	16.60	16.69	17.18	18.00
	DFT-s-OFDM 256QAM	1	1	14.97	14.77	15.43	16.50
		1	160	14.92	14.62	15.05	16.50
		81	40	14.84	14.89	15.20	16.50
	CP-OFDM QPSK	1	1	17.76	17.69	18.52	19.00
CP-OFDM 16QAM	1	1	17.30	16.99	17.68	18.50	
CP-OFDM 64QAM	1	1	15.73	15.63	16.26	17.00	
CP-OFDM 256QAM	1	1	13.06	12.80	13.02	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	19.22	19.12	18.88	19.50
		1	215	19.05	18.68	18.55	19.50
		108	54	19.04	19.11	18.61	19.50
		216	0	18.64	19.12	18.66	19.50
	DFT-s-OFDM QPSK	1	1	19.14	19.11	18.86	19.50
		1	215	19.14	18.85	18.47	19.50
		108	54	19.03	19.06	18.62	19.50
		216	0	18.13	18.27	18.66	19.50
	DFT-s-OFDM 16QAM	1	1	18.17	18.15	18.57	19.50
		1	215	18.13	17.92	18.22	19.50
		108	54	18.18	17.93	18.61	19.50
	DFT-s-OFDM 64QAM	1	1	16.68	16.68	17.47	18.00
		1	215	16.65	16.77	17.17	18.00
		108	54	16.58	16.65	17.15	18.00
	DFT-s-OFDM 256QAM	1	1	14.95	14.73	15.38	16.50
		1	215	14.88	14.60	15.01	16.50
		108	54	14.78	14.83	15.14	16.50
	CP-OFDM QPSK	1	1	17.71	17.61	18.45	19.00
	CP-OFDM 16QAM	1	1	17.26	16.95	17.62	18.50
	CP-OFDM 64QAM	1	1	15.70	15.58	16.22	17.00
CP-OFDM	1	1	13.04	12.76	12.99	14.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				509202/2546.01	518598/2592.99	528000/2640	
				256QAM			
100MHz	DFT-s-OFDM BPSK	1	1	19.20	19.05	18.86	19.50
		1	271	19.05	18.68	18.54	19.50
		135	67	19.01	19.09	18.57	19.50
		270	0	18.62	19.08	18.63	19.50
	DFT-s-OFDM QPSK	1	1	19.12	19.07	18.83	19.50
		1	271	19.10	18.81	18.44	19.50
		135	67	19.02	18.99	18.57	19.50
		270	0	18.12	18.24	18.61	19.50
	DFT-s-OFDM 16QAM	1	1	18.16	18.14	18.54	19.50
		1	271	18.11	17.87	18.20	19.50
		135	67	18.15	17.92	18.59	19.50
	DFT-s-OFDM 64QAM	1	1	16.64	16.65	17.43	18.00
		1	271	16.63	16.73	17.14	18.00
		135	67	16.56	16.61	17.12	18.00
	DFT-s-OFDM 256QAM	1	1	14.90	14.66	15.33	16.50
		1	271	14.85	14.55	14.98	16.50
		135	67	14.72	14.78	15.12	16.50
	CP-OFDM QPSK	1	1	17.68	17.60	18.39	19.00
	CP-OFDM 16QAM	1	1	17.22	16.92	17.58	18.50
	CP-OFDM 64QAM	1	1	15.68	15.54	16.19	17.00
CP-OFDM 256QAM	1	1	13.02	12.72	12.96	14.00	

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant4(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	15.84	15.83	15.74	16.50
		1	49	15.84	15.53	15.62	16.50
		25	12	15.82	15.84	15.56	16.50
		50	0	15.29	15.89	15.48	16.50
	DFT-s-OFDM QPSK	1	1	15.81	15.72	15.73	16.50
		1	49	15.76	15.62	15.57	16.50
		25	12	15.57	15.73	15.36	16.50
		50	0	14.68	15.27	15.25	16.50
	DFT-s-OFDM	1	1	14.17	14.63	15.26	16.00



	16QAM	1	49	14.63	14.58	14.55	16.00
		25	12	14.56	14.88	14.65	16.00
	DFT-s-OFDM 64QAM	1	1	13.23	13.64	13.59	14.50
		1	49	13.22	13.12	13.12	14.50
		25	12	13.16	13.53	13.25	14.50
	DFT-s-OFDM 256QAM	1	1	11.65	11.49	11.76	13.00
		1	49	11.45	11.25	11.48	13.00
		25	12	11.51	11.51	11.21	13.00
	CP-OFDM QPSK	1	1	14.16	14.50	14.08	15.50
	CP-OFDM 16QAM	1	1	13.66	13.73	13.99	15.00
CP-OFDM 64QAM	1	1	12.22	12.43	12.43	13.50	
CP-OFDM 256QAM	1	1	9.55	9.09	9.09	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	15.81	15.81	15.70	16.50
		1	104	15.82	15.49	15.59	16.50
		50	25	15.79	15.79	15.52	16.50
		100	0	15.26	15.84	15.44	16.50
	DFT-s-OFDM QPSK	1	1	15.79	15.68	15.68	16.50
		1	104	15.74	15.60	15.53	16.50
		50	25	15.57	15.72	15.34	16.50
	DFT-s-OFDM 16QAM	100	0	14.68	15.23	15.22	16.50
		1	1	14.17	14.61	15.23	16.00
		1	104	14.60	14.56	14.51	16.00
	DFT-s-OFDM 64QAM	50	25	14.54	14.84	14.62	16.00
		1	1	13.20	13.59	13.55	14.50
		1	104	13.19	13.07	13.08	14.50
	DFT-s-OFDM 256QAM	50	25	13.14	13.49	13.20	14.50
		1	1	11.62	11.49	11.73	13.00
		1	104	11.42	11.27	11.45	13.00
	CP-OFDM QPSK	50	25	11.52	11.49	11.17	13.00
		1	1	14.14	14.46	14.09	15.50
	CP-OFDM 16QAM	1	1	13.63	13.68	13.95	15.00
	CP-OFDM 64QAM	1	1	12.19	12.38	12.39	13.50
CP-OFDM 256QAM	1	1	9.53	9.05	9.04	10.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	15.83	15.82	15.73	16.50
		1	160	15.85	15.54	15.63	16.50
		81	40	15.81	15.83	15.55	16.50
		162	0	15.29	15.89	15.48	16.50
	DFT-s-OFDM QPSK	1	1	15.82	15.73	15.72	16.50
		1	160	15.76	15.64	15.58	16.50
		81	40	15.61	15.74	15.38	16.50
		162	0	14.72	15.26	15.24	16.50
	DFT-s-OFDM 16QAM	1	1	14.21	14.65	15.26	16.00
		1	160	14.63	14.58	14.54	16.00
		81	40	14.57	14.89	14.66	16.00
	DFT-s-OFDM 64QAM	1	1	13.22	13.63	13.58	14.50
		1	160	13.22	13.12	13.12	14.50
		81	40	13.17	13.54	13.24	14.50
	DFT-s-OFDM 256QAM	1	1	11.64	11.48	11.75	13.00
		1	160	11.45	11.27	11.48	13.00
		81	40	11.51	11.51	11.20	13.00
	CP-OFDM QPSK	1	1	14.17	14.51	14.09	15.50
CP-OFDM 16QAM	1	1	13.65	13.72	13.98	15.00	
CP-OFDM 64QAM	1	1	12.22	12.43	12.43	13.50	
CP-OFDM 256QAM	1	1	9.56	9.10	9.08	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	15.82	15.78	15.71	16.50
		1	215	15.83	15.53	15.60	16.50
		108	54	15.78	15.78	15.51	16.50
		216	0	15.27	15.85	15.45	16.50
	DFT-s-OFDM QPSK	1	1	15.79	15.68	15.68	16.50
		1	215	15.73	15.61	15.54	16.50
		108	54	15.59	15.70	15.33	16.50
		216	0	14.70	15.24	15.22	16.50
	DFT-s-OFDM 16QAM	1	1	14.19	14.62	15.24	16.00
		1	215	14.61	14.54	14.51	16.00
		108	54	14.54	14.87	14.63	16.00
	DFT-s-OFDM 64QAM	1	1	13.19	13.58	13.54	14.50
		1	215	13.20	13.08	13.09	14.50
		108	54	13.14	13.49	13.20	14.50



	DFT-s-OFDM 256QAM	1	1	11.59	11.46	11.73	13.00
		1	215	11.43	11.24	11.46	13.00
		108	54	11.52	11.50	11.21	13.00
	CP-OFDM QPSK	1	1	14.16	14.53	14.10	15.50
	CP-OFDM 16QAM	1	1	13.63	13.69	13.97	15.00
	CP-OFDM 64QAM	1	1	12.20	12.39	12.40	13.50
CP-OFDM 256QAM	1	1	9.53	9.05	9.04	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	15.74	15.65	15.62	16.50
		1	271	15.80	15.45	15.54	16.50
		135	67	15.70	15.70	15.40	16.50
		270	0	15.19	15.71	15.34	16.50
	DFT-s-OFDM QPSK	1	1	15.73	15.56	15.57	16.50
		1	271	15.64	15.50	15.43	16.50
		135	67	15.55	15.57	15.22	16.50
		270	0	14.66	15.13	15.09	16.50
	DFT-s-OFDM 16QAM	1	1	14.15	14.57	15.14	16.00
		1	271	14.53	14.44	14.43	16.00
		135	67	14.46	14.78	14.55	16.00
	DFT-s-OFDM 64QAM	1	1	13.09	13.48	13.43	14.50
		1	271	13.12	12.94	12.98	14.50
		135	67	13.08	13.37	13.09	14.50
	DFT-s-OFDM 256QAM	1	1	11.49	11.35	11.60	13.00
		1	271	11.33	11.19	11.36	13.00
		135	67	11.41	11.37	11.09	13.00
	CP-OFDM QPSK	1	1	14.06	14.40	13.98	15.50
	CP-OFDM 16QAM	1	1	13.52	13.57	13.83	15.00
	CP-OFDM 64QAM	1	1	12.12	12.25	12.29	13.50
CP-OFDM 256QAM	1	1	9.47	8.93	8.93	10.50	



NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant3-MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	16.99	16.99	17.07	17.50
		1	49	16.49	16.56	16.84	17.50
		25	12	16.77	16.73	17.16	17.50
		50	0	16.99	16.94	17.14	17.50
	DFT-s-OFDM QPSK	1	1	16.92	17.13	17.07	17.50
		1	49	16.88	16.31	17.01	17.50
		25	12	16.75	16.78	16.98	17.50
	DFT-s-OFDM 16QAM	50	0	16.36	17.02	16.66	17.50
		1	1	16.22	17.25	16.42	17.50
		1	49	16.51	17.13	16.25	17.50
	DFT-s-OFDM 64QAM	25	12	16.64	17.41	16.69	17.50
		1	1	16.72	16.90	16.82	17.50
		1	49	16.50	16.77	16.65	17.50
	DFT-s-OFDM 256QAM	25	12	16.66	16.79	16.86	17.50
		1	1	14.67	14.83	14.87	16.00
		1	49	15.05	14.93	15.11	16.00
CP-OFDM	QPSK	25	12	15.05	15.09	15.13	16.00
		1	1	17.05	17.18	17.18	17.50
	16QAM	1	1	16.71	16.60	16.78	17.00
		1	1	15.20	15.79	15.35	16.50
CP-OFDM 256QAM	1	1	12.87	13.23	13.07	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	16.96	16.97	17.03	17.50
		1	104	16.47	16.52	16.81	17.50
		50	25	16.74	16.68	17.12	17.50
		100	0	16.96	16.89	17.10	17.50
	DFT-s-OFDM QPSK	1	1	16.90	17.09	17.02	17.50
		1	104	16.86	16.29	16.97	17.50
		50	25	16.75	16.77	16.96	17.50
	DFT-s-OFDM 16QAM	100	0	16.36	16.98	16.63	17.50
1		1	16.22	17.23	16.39	17.50	
1		104	16.48	17.11	16.21	17.50	



		50	25	16.62	17.37	16.66	17.50
	DFT-s-OFDM 64QAM	1	1	16.69	16.85	16.78	17.50
		1	104	16.47	16.72	16.61	17.50
		50	25	16.64	16.75	16.81	17.50
	DFT-s-OFDM 256QAM	1	1	14.64	14.83	14.84	16.00
		1	104	15.02	14.95	15.08	16.00
		50	25	15.06	15.07	15.09	16.00
	CP-OFDM QPSK	1	1	17.03	17.14	17.19	17.50
	CP-OFDM 16QAM	1	1	16.68	16.55	16.74	17.00
CP-OFDM 64QAM	1	1	15.17	15.74	15.31	16.50	
CP-OFDM 256QAM	1	1	12.85	13.19	13.02	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	16.98	16.98	17.06	17.50
		1	160	16.50	16.57	16.85	17.50
		81	40	16.76	16.72	17.15	17.50
		162	0	16.99	16.94	17.14	17.50
	DFT-s-OFDM QPSK	1	1	16.93	17.14	17.06	17.50
		1	160	16.88	16.33	17.02	17.50
		81	40	16.79	16.79	17.00	17.50
		162	0	16.40	17.01	16.65	17.50
	DFT-s-OFDM 16QAM	1	1	16.26	17.27	16.42	17.50
		1	160	16.51	17.13	16.24	17.50
		81	40	16.65	17.42	16.70	17.50
	DFT-s-OFDM 64QAM	1	1	16.71	16.89	16.81	17.50
		1	160	16.50	16.77	16.65	17.50
		81	40	16.67	16.80	16.85	17.50
	DFT-s-OFDM 256QAM	1	1	14.66	14.82	14.86	16.00
		1	160	15.05	14.95	15.11	16.00
		81	40	15.05	15.09	15.12	16.00
	CP-OFDM QPSK	1	1	17.06	17.19	17.19	17.50
	CP-OFDM 16QAM	1	1	16.70	16.59	16.77	17.00
	CP-OFDM 64QAM	1	1	15.20	15.79	15.35	16.50
	CP-OFDM 256QAM	1	1	12.88	13.24	13.06	13.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	16.97	16.94	17.04	17.50
		1	215	16.48	16.56	16.82	17.50
		108	54	16.73	16.67	17.11	17.50
		216	0	16.97	16.90	17.11	17.50
	DFT-s-OFDM QPSK	1	1	16.90	17.09	17.02	17.50
		1	215	16.85	16.30	16.98	17.50
		108	54	16.77	16.75	16.95	17.50
		216	0	16.38	16.99	16.63	17.50
	DFT-s-OFDM 16QAM	1	1	16.24	17.24	16.40	17.50
		1	215	16.49	17.09	16.21	17.50
		108	54	16.62	17.40	16.67	17.50
	DFT-s-OFDM 64QAM	1	1	16.68	16.84	16.77	17.50
		1	215	16.48	16.73	16.62	17.50
		108	54	16.64	16.75	16.81	17.50
	DFT-s-OFDM 256QAM	1	1	14.61	14.80	14.84	16.00
		1	215	15.03	14.92	15.09	16.00
		108	54	15.06	15.08	15.13	16.00
	CP-OFDM QPSK	1	1	17.05	17.21	17.20	17.50
	CP-OFDM 16QAM	1	1	16.68	16.56	16.76	17.00
	CP-OFDM 64QAM	1	1	15.18	15.75	15.32	16.50
CP-OFDM 256QAM	1	1	12.85	13.19	13.02	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	16.94	16.90	17.01	17.50
		1	271	16.47	16.52	16.80	17.50
		135	67	16.71	16.66	17.08	17.50
		270	0	16.94	16.85	17.07	17.50
	DFT-s-OFDM QPSK	1	1	16.88	17.05	16.99	17.50
		1	271	16.82	16.25	16.94	17.50
		135	67	16.74	16.77	16.71	17.50
		270	0	16.35	16.95	16.58	17.50
	DFT-s-OFDM 16QAM	1	1	16.21	17.22	16.36	17.50
		1	271	16.46	17.06	16.19	17.50
		135	67	16.59	17.36	16.64	17.50
	DFT-s-OFDM 64QAM	1	1	16.65	16.82	16.74	17.50
		1	271	16.45	16.68	16.58	17.50
		135	67	16.62	16.71	16.78	17.50



	DFT-s-OFDM 256QAM	1	1	14.59	14.76	14.79	16.00
		1	271	14.99	14.90	15.05	16.00
		135	67	15.00	15.02	15.07	16.00
	CP-OFDM QPSK	1	1	17.00	17.13	17.13	17.50
	CP-OFDM 16QAM	1	1	16.64	16.52	16.70	17.00
	CP-OFDM 64QAM	1	1	15.15	15.70	15.28	16.50
CP-OFDM 256QAM	1	1	12.83	13.15	12.99	13.50	

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant6-MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	15.91	16.23	15.84	16.50
		1	49	15.92	15.47	15.91	16.50
		25	12	15.78	15.80	15.93	16.50
		50	0	15.65	16.03	15.36	16.50
	DFT-s-OFDM QPSK	1	1	15.37	15.87	15.91	16.50
		1	49	15.81	15.97	15.51	16.50
		25	12	15.92	16.10	15.89	16.50
	DFT-s-OFDM 16QAM	50	0	15.17	15.55	15.31	16.50
		1	1	15.71	15.76	16.12	16.50
		1	49	16.16	15.94	15.90	16.50
	DFT-s-OFDM 64QAM	25	12	15.87	16.08	15.97	16.50
		1	1	16.19	16.14	15.97	16.50
		1	49	15.78	16.14	16.02	16.50
	DFT-s-OFDM 256QAM	25	12	16.10	16.16	15.93	16.50
		1	1	14.74	14.57	14.69	15.00
		1	49	14.74	14.65	14.53	15.00
	CP-OFDM QPSK	25	12	14.49	14.65	14.69	15.00
		1	1	16.23	16.14	16.22	16.50
		1	1	15.73	15.57	15.66	16.00
	CP-OFDM 16QAM	1	1	15.73	15.57	15.66	16.00
CP-OFDM 64QAM	1	1	14.87	14.93	15.09	15.50	
CP-OFDM 256QAM	1	1	11.96	12.02	12.30	12.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	15.93	16.24	15.87	16.50
		1	104	15.95	15.52	15.95	16.50
		50	25	15.80	15.84	15.96	16.50
		100	0	15.68	16.08	15.40	16.50
	DFT-s-OFDM QPSK	1	1	15.40	15.92	15.95	16.50
		1	104	15.83	16.01	15.56	16.50
		50	25	15.96	16.12	15.93	16.50
		100	0	15.21	15.58	15.33	16.50
	DFT-s-OFDM 16QAM	1	1	15.75	15.80	16.15	16.50
		1	104	16.19	15.96	15.93	16.50
		50	25	15.90	16.13	16.01	16.50
	DFT-s-OFDM 64QAM	1	1	16.21	16.18	16.00	16.50
		1	104	15.81	16.19	16.06	16.50
		50	25	16.13	16.21	15.97	16.50
	DFT-s-OFDM 256QAM	1	1	14.76	14.56	14.71	15.00
		1	104	14.77	14.65	14.56	15.00
		50	25	14.48	14.67	14.72	15.00
	CP-OFDM QPSK	1	1	16.26	16.19	16.22	16.50
	CP-OFDM 16QAM	1	1	15.75	15.61	15.69	16.00
	CP-OFDM 64QAM	1	1	14.90	14.98	15.13	15.50
CP-OFDM 256QAM	1	1	11.99	12.07	12.34	12.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	15.92	16.20	15.85	16.50
		1	160	15.93	15.51	15.92	16.50
		81	40	15.77	15.79	15.92	16.50
		162	0	15.66	16.04	15.37	16.50
	DFT-s-OFDM QPSK	1	1	15.37	15.87	15.91	16.50
		1	160	15.80	15.98	15.52	16.50
		81	40	15.94	16.08	15.88	16.50
		162	0	15.19	15.56	15.31	16.50
	DFT-s-OFDM 16QAM	1	1	15.73	15.77	16.13	16.50
		1	160	16.17	15.92	15.90	16.50
		81	40	15.87	16.11	15.98	16.50
	DFT-s-OFDM 64QAM	1	1	16.18	16.13	15.96	16.50
		1	160	15.79	16.15	16.03	16.50
		81	40	16.10	16.16	15.93	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				507204/2536.02	518598/2595.99	529998/2649.99	
	DFT-s-OFDM 256QAM	1	1	14.71	14.54	14.69	15.00
		1	160	14.75	14.62	14.54	15.00
		81	40	14.49	14.66	14.73	15.00
	CP-OFDM QPSK	1	1	16.25	16.21	16.23	16.50
	CP-OFDM 16QAM	1	1	15.73	15.58	15.68	16.00
	CP-OFDM 64QAM	1	1	14.88	14.94	15.10	15.50
	CP-OFDM 256QAM	1	1	11.96	12.02	12.30	12.50
80MHz	DFT-s-OFDM BPSK	1	1	15.89	16.16	15.82	16.50
		1	215	15.92	15.47	15.90	16.50
		108	54	15.75	15.78	15.89	16.50
		216	0	15.63	15.99	15.33	16.50
	DFT-s-OFDM QPSK	1	1	15.35	15.83	15.88	16.50
		1	215	15.77	15.93	15.48	16.50
		108	54	15.91	16.03	15.84	16.50
		216	0	15.16	15.52	15.26	16.50
	DFT-s-OFDM 16QAM	1	1	15.70	15.75	16.09	16.50
		1	215	16.14	15.89	15.88	16.50
		108	54	15.84	16.07	15.95	16.50
	DFT-s-OFDM 64QAM	1	1	16.15	16.11	15.93	16.50
		1	215	15.76	16.10	15.99	16.50
		108	54	16.08	16.12	15.90	16.50
	DFT-s-OFDM 256QAM	1	1	14.69	14.50	14.64	15.00
		1	215	14.71	14.60	14.50	15.00
		108	54	14.43	14.60	14.67	15.00
	CP-OFDM QPSK	1	1	16.20	16.13	16.16	16.50
	CP-OFDM 16QAM	1	1	15.69	15.54	15.62	16.00
	CP-OFDM 64QAM	1	1	14.85	14.89	15.06	15.50
CP-OFDM 256QAM	1	1	11.94	11.98	12.27	12.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	15.84	16.07	15.76	16.50
		1	271	15.90	15.43	15.86	16.50
		135	67	15.69	15.71	15.81	16.50



		270	0	15.58	15.90	15.26	16.50
	DFT-s-OFDM QPSK	1	1	15.31	15.75	15.80	16.50
		1	271	15.71	15.87	15.41	16.50
		135	67	15.90	15.95	15.77	16.50
		270	0	15.15	15.45	15.18	16.50
	DFT-s-OFDM 16QAM	1	1	15.69	15.72	16.03	16.50
		1	271	16.09	15.82	15.82	16.50
		135	67	15.79	16.02	15.90	16.50
	DFT-s-OFDM 64QAM	1	1	16.08	16.03	15.85	16.50
		1	271	15.71	16.01	15.92	16.50
		135	67	16.04	16.04	15.82	16.50
	DFT-s-OFDM 256QAM	1	1	14.61	14.43	14.56	15.00
1		271	14.65	14.57	14.44	15.00	
135		67	14.38	14.53	14.61	15.00	
CP-OFDM QPSK	1	1	16.15	16.08	16.11	16.50	
CP-OFDM 16QAM	1	1	15.62	15.46	15.54	16.00	
CP-OFDM 64QAM	1	1	14.80	14.80	14.99	15.50	
CP-OFDM 256QAM	1	1	11.90	11.90	12.19	12.50	

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5 & Level 6-D1 & Level 6-D2 & Level 7-D1 & Level 7-D2-Mas Ant1-MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	16.03	16.00	15.72	16.50
		1	49	15.73	15.42	15.34	16.50
		25	12	15.81	15.86	15.43	16.50
		50	0	15.39	15.91	15.46	16.50
	DFT-s-OFDM QPSK	1	1	15.92	15.93	15.69	16.50
		1	49	15.96	15.61	15.27	16.50
		25	12	15.73	15.85	15.40	16.50
		50	0	15.03	15.33	15.79	16.50
	DFT-s-OFDM 16QAM	1	1	15.07	15.11	15.66	16.50
		1	49	15.14	14.96	15.32	16.50
		25	12	15.18	14.89	15.62	16.50
	DFT-s-OFDM 64QAM	1	1	13.73	13.71	14.55	15.00
		1	49	13.66	13.82	14.23	15.00
		25	12	13.62	13.73	14.30	15.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				503202/2516.01	518598/2592.99	534000/2670	
	DFT-s-OFDM 256QAM	1	1	12.02	11.83	12.45	13.50
		1	49	11.91	11.79	12.10	13.50
		25	12	11.81	11.93	12.24	13.50
	CP-OFDM QPSK	1	1	14.77	14.69	15.48	16.00
	CP-OFDM 16QAM	1	1	14.37	14.10	14.76	15.50
	CP-OFDM 64QAM	1	1	12.77	12.75	13.34	14.00
CP-OFDM 256QAM	1	1	10.08	9.90	10.14	11.00	
40MHz	DFT-s-OFDM BPSK	1	1	16.00	15.98	15.68	16.50
		1	104	15.71	15.38	15.31	16.50
		50	25	15.78	15.81	15.39	16.50
		100	0	15.36	15.86	15.42	16.50
	DFT-s-OFDM QPSK	1	1	15.90	15.89	15.64	16.50
		1	104	15.94	15.59	15.23	16.50
		50	25	15.73	15.84	15.38	16.50
		100	0	15.03	15.29	15.76	16.50
	DFT-s-OFDM 16QAM	1	1	15.07	15.09	15.63	16.50
		1	104	15.11	14.94	15.28	16.50
		50	25	15.16	14.85	15.59	16.50
	DFT-s-OFDM 64QAM	1	1	13.70	13.66	14.51	15.00
		1	104	13.63	13.77	14.19	15.00
		50	25	13.60	13.69	14.25	15.00
	DFT-s-OFDM 256QAM	1	1	11.99	11.83	12.42	13.50
		1	104	11.88	11.81	12.07	13.50
		50	25	11.82	11.91	12.20	13.50
	CP-OFDM QPSK	1	1	14.75	14.65	15.49	16.00
	CP-OFDM 16QAM	1	1	14.34	14.05	14.72	15.50
	CP-OFDM 64QAM	1	1	12.74	12.70	13.30	14.00
CP-OFDM 256QAM	1	1	10.06	9.86	10.09	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	16.02	15.99	15.71	16.50
		1	160	15.74	15.43	15.35	16.50
		81	40	15.80	15.85	15.42	16.50



		162	0	15.39	15.91	15.46	16.50
	DFT-s-OFDM QPSK	1	1	15.93	15.94	15.68	16.50
		1	160	15.96	15.63	15.28	16.50
		81	40	15.77	15.86	15.42	16.50
		162	0	15.07	15.32	15.78	16.50
	DFT-s-OFDM 16QAM	1	1	15.11	15.13	15.66	16.50
		1	160	15.14	14.96	15.31	16.50
		81	40	15.19	14.90	15.63	16.50
	DFT-s-OFDM 64QAM	1	1	13.72	13.70	14.54	15.00
		1	160	13.66	13.82	14.23	15.00
		81	40	13.63	13.74	14.29	15.00
	DFT-s-OFDM 256QAM	1	1	12.01	11.82	12.44	13.50
		1	160	11.91	11.81	12.10	13.50
		81	40	11.81	11.93	12.23	13.50
	CP-OFDM QPSK	1	1	14.78	14.70	15.49	16.00
CP-OFDM 16QAM	1	1	14.36	14.09	14.75	15.50	
CP-OFDM 64QAM	1	1	12.77	12.75	13.34	14.00	
CP-OFDM 256QAM	1	1	10.09	9.91	10.13	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	16.01	15.95	15.69	16.50
		1	215	15.72	15.42	15.32	16.50
		108	54	15.77	15.80	15.38	16.50
		216	0	15.37	15.87	15.43	16.50
	DFT-s-OFDM QPSK	1	1	15.90	15.89	15.64	16.50
		1	215	15.93	15.60	15.24	16.50
		108	54	15.75	15.82	15.37	16.50
		216	0	15.05	15.30	15.76	16.50
	DFT-s-OFDM 16QAM	1	1	15.09	15.10	15.64	16.50
		1	215	15.12	14.92	15.28	16.50
		108	54	15.16	14.88	15.60	16.50
	DFT-s-OFDM 64QAM	1	1	13.69	13.65	14.50	15.00
		1	215	13.64	13.78	14.20	15.00
		108	54	13.60	13.69	14.25	15.00
	DFT-s-OFDM 256QAM	1	1	11.96	11.80	12.42	13.50
		1	215	11.89	11.78	12.08	13.50
		108	54	11.82	11.92	12.24	13.50
	CP-OFDM QPSK	1	1	14.77	14.72	15.50	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				509202/2546.01	518598/2592.99	528000/2640	
	CP-OFDM 16QAM	1	1	14.34	14.06	14.74	15.50
	CP-OFDM 64QAM	1	1	12.75	12.71	13.31	14.00
	CP-OFDM 256QAM	1	1	10.06	9.86	10.09	11.00
100MHz	DFT-s-OFDM BPSK	1	1	15.98	15.91	15.66	16.50
		1	271	15.71	15.38	15.30	16.50
		135	67	15.75	15.79	15.35	16.50
		270	0	15.34	15.82	15.39	16.50
	DFT-s-OFDM QPSK	1	1	15.88	15.85	15.61	16.50
		1	271	15.90	15.55	15.20	16.50
		135	67	15.72	15.77	15.33	16.50
	DFT-s-OFDM 16QAM	270	0	15.02	15.26	15.71	16.50
		1	1	15.06	15.08	15.60	16.50
		1	271	15.09	14.89	15.26	16.50
	DFT-s-OFDM 64QAM	135	67	15.13	14.84	15.57	16.50
		1	1	13.66	13.63	14.47	15.00
		1	271	13.61	13.73	14.16	15.00
	DFT-s-OFDM 256QAM	135	67	13.58	13.65	14.22	15.00
		1	1	11.94	11.76	12.37	13.50
		1	271	11.85	11.76	12.04	13.50
	CP-OFDM QPSK	135	67	11.76	11.86	12.18	13.50
		1	1	14.72	14.64	15.43	16.00
		1	1	14.30	14.02	14.68	15.50
	CP-OFDM 16QAM	1	1	12.72	12.66	13.27	14.00
1		1	10.04	9.82	10.06	11.00	
1		1	10.04	9.82	10.06	11.00	

NR n41							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant4-MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	13.58	13.76	13.54	14.50
		1	49	13.42	12.82	12.81	14.50
		25	12	13.53	13.44	13.34	14.50
		50	0	13.62	13.62	13.24	14.50



	DFT-s-OFDM QPSK	1	1	13.68	13.63	13.63	14.50
		1	49	13.69	12.99	12.92	14.50
		25	12	13.38	13.75	13.32	14.50
		50	0	12.61	13.54	13.65	14.50
	DFT-s-OFDM 16QAM	1	1	12.99	13.14	13.93	14.50
		1	49	13.11	12.78	12.91	14.50
		25	12	12.77	13.38	13.22	14.50
	DFT-s-OFDM 64QAM	1	1	13.39	14.11	14.19	14.50
		1	49	13.69	13.73	13.76	14.50
		25	12	13.01	14.10	13.87	14.50
	DFT-s-OFDM 256QAM	1	1	11.62	12.08	12.44	13.00
		1	49	11.37	11.73	12.02	13.00
		25	12	11.45	12.05	11.70	13.00
	CP-OFDM QPSK	1	1	13.11	13.38	13.09	14.50
	CP-OFDM 16QAM	1	1	12.42	12.75	13.05	14.00
	CP-OFDM 64QAM	1	1	12.15	13.08	13.01	13.50
CP-OFDM 256QAM	1	1	9.46	9.78	9.73	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	13.60	13.77	13.57	14.50
		1	104	13.45	12.87	12.85	14.50
		50	25	13.55	13.48	13.37	14.50
		100	0	13.65	13.67	13.28	14.50
	DFT-s-OFDM QPSK	1	1	13.71	13.68	13.67	14.50
		1	104	13.71	13.03	12.97	14.50
		50	25	13.42	13.77	13.36	14.50
	DFT-s-OFDM 16QAM	100	0	12.65	13.57	13.67	14.50
		1	1	13.03	13.18	13.96	14.50
		1	104	13.14	12.80	12.94	14.50
	DFT-s-OFDM 64QAM	50	25	12.80	13.43	13.26	14.50
		1	1	13.41	14.15	14.22	14.50
		1	104	13.72	13.78	13.80	14.50
	DFT-s-OFDM 256QAM	50	25	13.04	14.15	13.91	14.50
		1	1	11.64	12.07	12.46	13.00
		1	104	11.40	11.73	12.05	13.00
	CP-OFDM QPSK	50	25	11.44	12.07	11.73	13.00
		1	1	13.14	13.43	13.09	14.50
	CP-OFDM	1	1	12.44	12.79	13.08	14.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				505200/2526	518598/2595.99	531996/2659.98		
				16QAM				
	CP-OFDM 64QAM	1	1	12.18	13.13	13.05	13.50	
	CP-OFDM 256QAM	1	1	9.49	9.83	9.77	10.50	
60MHz	DFT-s-OFDM BPSK	1	1	13.59	13.73	13.55	14.50	
		1	160	13.43	12.86	12.82	14.50	
		81	40	13.52	13.43	13.33	14.50	
		162	0	13.63	13.63	13.25	14.50	
	DFT-s-OFDM QPSK	1	1	13.68	13.63	13.63	14.50	
		1	160	13.68	13.00	12.93	14.50	
		81	40	13.40	13.73	13.31	14.50	
		162	0	12.63	13.55	13.65	14.50	
	DFT-s-OFDM 16QAM	1	1	13.01	13.15	13.94	14.50	
		1	160	13.12	12.76	12.91	14.50	
		81	40	12.77	13.41	13.23	14.50	
	DFT-s-OFDM 64QAM	1	1	13.38	14.10	14.18	14.50	
		1	160	13.70	13.74	13.77	14.50	
		81	40	13.01	14.10	13.87	14.50	
	DFT-s-OFDM 256QAM	1	1	11.59	12.05	12.44	13.00	
		1	160	11.38	11.70	12.03	13.00	
		81	40	11.45	12.06	11.74	13.00	
		CP-OFDM QPSK	1	1	13.13	13.45	13.10	14.50
		CP-OFDM 16QAM	1	1	12.42	12.76	13.07	14.00
		CP-OFDM 64QAM	1	1	12.16	13.09	13.02	13.50
	CP-OFDM 256QAM	1	1	9.46	9.78	9.73	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				507204/2536.02	518598/2595.99	529998/2649.99		
80MHz	DFT-s-OFDM BPSK	1	1	13.56	13.69	13.52	14.50	
		1	215	13.42	12.82	12.80	14.50	
		108	54	13.50	13.42	13.30	14.50	
		216	0	13.60	13.58	13.21	14.50	
	DFT-s-OFDM QPSK	1	1	13.66	13.59	13.60	14.50	
		1	215	13.65	12.95	12.89	14.50	
		108	54	13.37	13.68	13.27	14.50	
		216	0	12.60	13.51	13.60	14.50	
	DFT-s-OFDM	1	1	12.98	13.13	13.90	14.50	



	16QAM	1	215	13.09	12.73	12.89	14.50		
		108	54	12.74	13.37	13.20	14.50		
	DFT-s-OFDM 64QAM	1	1	13.35	14.08	14.15	14.50		
		1	215	13.67	13.69	13.73	14.50		
		108	54	12.99	14.06	13.84	14.50		
				1	1	11.57	12.01	12.39	13.00
	DFT-s-OFDM 256QAM	1	215	11.34	11.68	11.99	13.00		
		108	54	11.39	12.00	11.68	13.00		
	CP-OFDM QPSK	1	1	13.08	13.37	13.03	14.50		
CP-OFDM 16QAM	1	1	12.38	12.72	13.01	14.00			
CP-OFDM 64QAM	1	1	12.13	13.04	12.98	13.50			
CP-OFDM 256QAM	1	1	9.44	9.74	9.70	10.50			
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up		
				509202/2546.01	518598/2592.99	528000/2640			
100MHz	DFT-s-OFDM BPSK	1	1	13.54	13.64	13.49	14.50		
		1	271	13.41	12.82	12.78	14.50		
		135	67	13.46	13.36	13.25	14.50		
		270	0	13.58	13.54	13.18	14.50		
	DFT-s-OFDM QPSK	1	1	13.64	13.55	13.55	14.50		
		1	271	13.62	12.94	12.86	14.50		
		135	67	13.39	13.65	13.24	14.50		
		270	0	12.62	13.48	13.57	14.50		
				1	1	13.00	13.12	13.88	14.50
				1	271	13.07	12.69	12.85	14.50
	DFT-s-OFDM 16QAM	135	67	12.72	13.36	13.18	14.50		
		1	1	13.31	14.02	14.10	14.50		
		1	271	13.65	13.65	13.70	14.50		
	DFT-s-OFDM 64QAM	135	67	12.97	14.02	13.79	14.50		
		1	1	11.51	11.98	12.36	13.00		
		1	271	11.32	11.67	11.97	13.00		
	DFT-s-OFDM 256QAM	135	67	11.40	11.99	11.68	13.00		
		1	1	13.08	13.40	13.05	14.50		
	CP-OFDM QPSK	1	1	12.35	12.68	12.99	14.00		
	CP-OFDM 16QAM	1	1	12.11	13.00	12.95	13.50		
CP-OFDM 64QAM	1	1	9.42	9.70	9.65	10.50			
CP-OFDM 256QAM	1	1							



NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4-Main Ant3-SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	16.86	16.94	16.79	17.50
		1	49	16.84	16.88	16.86	17.50
		25	12	16.71	16.73	16.71	17.50
		50	0	16.41	16.48	16.39	17.50
	DFT-s-OFDM QPSK	1	1	16.88	16.95	16.86	17.50
		1	49	16.94	16.99	16.90	17.50
		25	12	16.89	17.02	16.87	17.50
	DFT-s-OFDM 16QAM	1	1	16.24	16.26	16.26	17.50
		1	49	16.25	16.30	16.19	17.50
		25	12	16.38	16.39	16.36	17.50
	DFT-s-OFDM 64QAM	1	1	14.99	15.01	14.96	16.00
		1	49	15.17	15.24	15.15	16.00
		25	12	14.95	15.02	14.93	16.00
	DFT-s-OFDM 256QAM	1	1	13.65	13.74	13.61	14.50
		1	49	13.32	13.35	13.27	14.50
		25	12	13.26	13.27	13.17	14.50
	CP-OFDM QPSK	1	1	15.95	16.02	15.99	17.00
	CP-OFDM 16QAM	1	1	15.35	15.38	15.34	16.50
CP-OFDM 64QAM	1	1	13.98	14.05	13.96	15.00	
CP-OFDM 256QAM	1	1	10.87	10.94	10.85	12.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	16.88	16.95	16.82	17.50
		1	104	16.87	16.93	16.90	17.50
		50	25	16.73	16.77	16.74	17.50
		100	0	16.44	16.53	16.43	17.50
	DFT-s-OFDM QPSK	1	1	16.91	17.00	16.90	17.50
		1	104	16.96	17.03	16.95	17.50
		50	25	16.93	17.04	16.91	17.50
	DFT-s-OFDM 16QAM	100	0	16.55	16.62	16.56	17.50
		1	1	16.28	16.30	16.29	17.50
		1	104	16.28	16.32	16.22	17.50
	50	25	16.41	16.44	16.40	17.50	



	DFT-s-OFDM 64QAM	1	1	15.01	15.05	14.99	16.00
		1	104	15.20	15.29	15.19	16.00
		50	25	14.98	15.07	14.97	16.00
	DFT-s-OFDM 256QAM	1	1	13.67	13.73	13.63	14.50
		1	104	13.35	13.35	13.30	14.50
		50	25	13.25	13.29	13.20	14.50
	CP-OFDM QPSK	1	1	15.98	16.07	15.99	17.00
	CP-OFDM 16QAM	1	1	15.37	15.42	15.37	16.50
CP-OFDM 64QAM	1	1	14.01	14.10	14.00	15.00	
CP-OFDM 256QAM	1	1	10.90	10.99	10.89	12.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	16.87	16.91	16.80	17.50
		1	160	16.85	16.92	16.87	17.50
		81	40	16.70	16.72	16.70	17.50
		162	0	16.42	16.49	16.40	17.50
	DFT-s-OFDM QPSK	1	1	16.88	16.95	16.86	17.50
		1	160	16.93	17.00	16.91	17.50
		81	40	16.91	17.00	16.86	17.50
		162	0	16.53	16.60	16.54	17.50
	DFT-s-OFDM 16QAM	1	1	16.26	16.27	16.27	17.50
		1	160	16.26	16.28	16.19	17.50
		81	40	16.38	16.42	16.37	17.50
	DFT-s-OFDM 64QAM	1	1	14.98	15.00	14.95	16.00
		1	160	15.18	15.25	15.16	16.00
		81	40	14.95	15.02	14.93	16.00
	DFT-s-OFDM 256QAM	1	1	13.62	13.71	13.61	14.50
		1	160	13.33	13.32	13.28	14.50
		81	40	13.26	13.28	13.21	14.50
	CP-OFDM QPSK	1	1	15.97	16.09	16.00	17.00
	CP-OFDM 16QAM	1	1	15.35	15.39	15.36	16.50
	CP-OFDM 64QAM	1	1	13.99	14.06	13.97	15.00
CP-OFDM 256QAM	1	1	10.87	10.94	10.85	12.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	16.84	16.87	16.77	17.50
		1	215	16.84	16.88	16.85	17.50
		108	54	16.68	16.71	16.67	17.50
		216	0	16.39	16.44	16.36	17.50
	DFT-s-OFDM QPSK	1	1	16.86	16.91	16.83	17.50
		1	215	16.90	16.95	16.87	17.50
		108	54	16.88	16.95	16.82	17.50
		216	0	16.50	16.56	16.49	17.50
	DFT-s-OFDM 16QAM	1	1	16.23	16.25	16.23	17.50
		1	215	16.23	16.25	16.17	17.50
		108	54	16.35	16.38	16.34	17.50
	DFT-s-OFDM 64QAM	1	1	14.95	14.98	14.92	16.00
		1	215	15.15	15.20	15.12	16.00
		108	54	14.93	14.98	14.90	16.00
	DFT-s-OFDM 256QAM	1	1	13.60	13.67	13.56	14.50
		1	215	13.29	13.30	13.24	14.50
		108	54	13.20	13.22	13.15	14.50
	CP-OFDM QPSK	1	1	15.92	16.01	15.93	17.00
	CP-OFDM 16QAM	1	1	15.31	15.35	15.30	16.50
	CP-OFDM 64QAM	1	1	13.96	14.01	13.93	15.00
CP-OFDM 256QAM	1	1	10.85	10.90	10.82	12.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	16.72	/	17.50
		1	271	/	16.82	/	17.50
		135	67	/	16.60	/	17.50
		270	0	/	16.29	/	17.50
	DFT-s-OFDM QPSK	1	1	/	16.77	/	17.50
		1	271	/	16.80	/	17.50
		135	67	/	16.73	/	17.50
		270	0	/	16.39	/	17.50
	DFT-s-OFDM 16QAM	1	1	/	16.16	/	17.50
		1	271	/	16.13	/	17.50
		135	67	/	16.29	/	17.50
	DFT-s-OFDM 64QAM	1	1	/	14.85	/	16.00
		1	271	/	15.05	/	16.00
		135	67	/	14.84	/	16.00



	DFT-s-OFDM 256QAM	1	1	/	13.46	/	14.50
		1	271	/	13.17	/	14.50
		135	67	/	13.07	/	14.50
	CP-OFDM QPSK	1	1	/	15.80	/	17.00
	CP-OFDM 16QAM	1	1	/	15.20	/	16.50
	CP-OFDM 64QAM	1	1	/	13.86	/	15.00
	CP-OFDM 256QAM	1	1	/	10.76	/	12.00

NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4-Main Ant3- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	656000/3840	664666/3970	
20MHz	DFT-s-OFDM BPSK	1	1	16.69	16.51	16.36	17.50
		1	49	16.65	16.56	16.45	17.50
		25	12	16.60	16.44	15.93	17.50
		50	0	16.44	16.01	16.02	17.50
	DFT-s-OFDM QPSK	1	1	16.87	16.46	16.42	17.50
		1	49	16.65	16.67	16.21	17.50
		25	12	16.24	16.48	16.03	17.50
		50	0	16.25	16.42	16.24	17.50
	DFT-s-OFDM 16QAM	1	1	16.12	16.29	16.59	17.50
		1	49	16.18	16.44	16.43	17.50
		25	12	16.55	16.32	15.84	17.50
	DFT-s-OFDM 64QAM	1	1	15.66	14.89	15.97	16.00
		1	49	15.26	15.08	14.64	16.00
		25	12	15.64	14.87	14.81	16.00
	DFT-s-OFDM 256QAM	1	1	14.19	13.02	14.38	14.50
		1	49	13.62	12.81	12.90	14.50
		25	12	13.57	12.93	13.03	14.50
	CP-OFDM QPSK	1	1	16.40	15.61	15.56	17.00
	CP-OFDM 16QAM	1	1	15.74	15.13	15.08	16.50
	CP-OFDM 64QAM	1	1	14.57	13.71	13.45	15.00
CP-OFDM 256QAM	1	1	11.34	10.61	10.41	12.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	656000/3840	664000/3960	
40MHz	DFT-s-OFDM BPSK	1	1	16.68	16.50	16.35	17.50
		1	104	16.66	16.57	16.46	17.50
		50	25	16.59	16.43	15.92	17.50
		100	0	16.44	16.01	16.02	17.50
	DFT-s-OFDM QPSK	1	1	16.88	16.47	16.41	17.50
		1	104	16.65	16.69	16.22	17.50
		50	25	16.28	16.49	16.05	17.50
		100	0	16.29	16.41	16.23	17.50
	DFT-s-OFDM 16QAM	1	1	16.16	16.31	16.59	17.50
		1	104	16.18	16.44	16.42	17.50
		50	25	16.56	16.33	15.85	17.50
	DFT-s-OFDM 64QAM	1	1	15.65	14.88	15.96	16.00
		1	104	15.26	15.08	14.64	16.00
		50	25	15.65	14.88	14.80	16.00
	DFT-s-OFDM 256QAM	1	1	14.18	13.01	14.37	14.50
		1	104	13.62	12.83	12.90	14.50
		50	25	13.57	12.93	13.02	14.50
	CP-OFDM QPSK	1	1	16.41	15.62	15.57	17.00
	CP-OFDM 16QAM	1	1	15.73	15.12	15.07	16.50
	CP-OFDM 64QAM	1	1	14.57	13.71	13.45	15.00
CP-OFDM 256QAM	1	1	11.35	10.62	10.40	12.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	656000/3840	663334/3950	
60MHz	DFT-s-OFDM BPSK	1	1	16.67	16.46	16.33	17.50
		1	160	16.64	16.56	16.43	17.50
		81	40	16.56	16.38	15.88	17.50
		162	0	16.42	15.97	15.99	17.50
	DFT-s-OFDM QPSK	1	1	16.85	16.42	16.37	17.50
		1	160	16.62	16.66	16.18	17.50
		81	40	16.26	16.45	16.00	17.50
		162	0	16.27	16.39	16.21	17.50
	DFT-s-OFDM 16QAM	1	1	16.14	16.28	16.57	17.50
		1	160	16.16	16.40	16.39	17.50
		81	40	16.53	16.31	15.82	17.50
	DFT-s-OFDM 64QAM	1	1	15.62	14.83	15.92	16.00
		1	160	15.24	15.04	14.61	16.00
		81	40	15.62	14.83	14.76	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				649334/3740	656000/3840	662666/3940		
	DFT-s-OFDM 256QAM	1	1	14.13	12.99	14.35	14.50	
		1	160	13.60	12.80	12.88	14.50	
		81	40	13.58	12.92	13.03	14.50	
	CP-OFDM QPSK	1	1	16.40	15.64	15.58	17.00	
	CP-OFDM 16QAM	1	1	15.71	15.09	15.06	16.50	
	CP-OFDM 64QAM	1	1	14.55	13.67	13.42	15.00	
	CP-OFDM 256QAM	1	1	11.32	10.57	10.36	12.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				649334/3740	656000/3840	662666/3940		
80MHz	DFT-s-OFDM BPSK	1	1	16.64	16.42	16.30	17.50	
		1	215	16.63	16.52	16.41	17.50	
		108	54	16.54	16.37	15.85	17.50	
		216	0	16.39	15.92	15.95	17.50	
	DFT-s-OFDM QPSK	1	1	16.83	16.38	16.34	17.50	
		1	215	16.59	16.61	16.14	17.50	
		108	54	16.23	16.40	15.96	17.50	
			216	0	16.24	16.35	16.16	17.50
	DFT-s-OFDM 16QAM	1	1	16.11	16.26	16.53	17.50	
		1	215	16.13	16.37	16.37	17.50	
		108	54	16.50	16.27	15.79	17.50	
	DFT-s-OFDM 64QAM	1	1	15.59	14.81	15.89	16.00	
		1	215	15.21	14.99	14.57	16.00	
		108	54	15.60	14.79	14.73	16.00	
	DFT-s-OFDM 256QAM	1	1	14.11	12.95	14.30	14.50	
		1	215	13.56	12.78	12.84	14.50	
		108	54	13.52	12.86	12.97	14.50	
	CP-OFDM QPSK	1	1	16.35	15.56	15.51	17.00	
CP-OFDM 16QAM	1	1	15.67	15.05	15.00	16.50		
CP-OFDM 64QAM	1	1	14.52	13.62	13.38	15.00		
CP-OFDM 256QAM	1	1	11.30	10.53	10.33	12.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				650000/3750	656000/3840	662000/3930		
100MHz	DFT-s-OFDM BPSK	1	1	16.62	16.35	16.28	17.50	
		1	271	16.63	16.52	16.40	17.50	
		135	67	16.51	16.35	15.81	17.50	
		270	0	16.37	15.88	15.92	17.50	



	DFT-s-OFDM QPSK	1	1	16.81	16.34	16.31	17.50
		1	271	16.55	16.57	16.11	17.50
		135	67	16.22	16.33	15.91	17.50
		270	0	16.23	16.32	16.11	17.50
	DFT-s-OFDM 16QAM	1	1	16.10	16.25	16.50	17.50
		1	271	16.11	16.32	16.35	17.50
		135	67	16.47	16.26	15.77	17.50
	DFT-s-OFDM 64QAM	1	1	15.55	14.78	15.85	16.00
		1	271	15.19	14.95	14.54	16.00
		135	67	15.58	14.75	14.70	16.00
	DFT-s-OFDM 256QAM	1	1	14.06	12.88	14.25	14.50
		1	271	13.53	12.73	12.81	14.50
		135	67	13.46	12.81	12.95	14.50
	CP-OFDM QPSK	1	1	16.32	15.55	15.45	17.00
	CP-OFDM 16QAM	1	1	15.63	15.02	14.96	16.50
	CP-OFDM 64QAM	1	1	14.50	13.58	13.35	15.00
CP-OFDM 256QAM	1	1	11.28	10.49	10.30	12.00	

NR n77							
Level 5-Main Ant3- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	15.13	15.13	15.05	15.50
		1	49	14.93	14.91	14.90	15.50
		25	12	15.07	15.00	14.99	15.50
		50	0	14.75	14.72	14.67	15.50
	DFT-s-OFDM QPSK	1	1	15.18	15.16	15.27	15.50
		1	49	15.12	15.06	15.16	15.50
		25	12	15.18	15.23	15.32	15.50
		50	0	14.75	14.76	14.73	15.50
	DFT-s-OFDM 16QAM	1	1	14.73	14.72	14.70	15.50
		1	49	15.13	15.11	15.06	15.50
		25	12	14.68	14.61	14.59	15.50
	DFT-s-OFDM 64QAM	1	1	13.48	13.40	13.38	14.00
		1	49	13.64	13.61	13.56	14.00
		25	12	13.41	13.39	13.35	14.00
	DFT-s-OFDM 256QAM	1	1	12.09	12.03	11.96	12.50
		1	49	11.78	11.74	11.68	12.50
		25	12	11.86	11.80	11.71	12.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				631332/3470	633332/3500	635332/3530		
40MHz	CP-OFDM QPSK	1	1	14.47	14.40	14.38	15.00	
		1	1	13.92	13.84	13.79	14.50	
		1	1	12.33	12.30	12.25	13.00	
		1	1	9.21	9.19	9.15	10.00	
	DFT-s-OFDM BPSK	1	1	15.15	15.14	15.08	15.50	
		1	104	14.96	14.96	14.94	15.50	
		50	25	15.09	15.04	15.02	15.50	
		100	0	14.78	14.77	14.71	15.50	
		DFT-s-OFDM QPSK	1	1	15.21	15.21	15.31	15.50
			1	104	15.14	15.10	15.21	15.50
			50	25	15.22	15.25	15.36	15.50
			100	0	14.79	14.79	14.75	15.50
		DFT-s-OFDM 16QAM	1	1	14.77	14.76	14.73	15.50
			1	104	15.16	15.13	15.09	15.50
			50	25	14.71	14.66	14.63	15.50
		DFT-s-OFDM 64QAM	1	1	13.50	13.44	13.41	14.00
	1		104	13.67	13.66	13.60	14.00	
	50		25	13.44	13.44	13.39	14.00	
	DFT-s-OFDM 256QAM	1	1	12.11	12.02	11.98	12.50	
		1	104	11.81	11.74	11.71	12.50	
50		25	11.85	11.82	11.74	12.50		
CP-OFDM QPSK	1	1	14.50	14.45	14.38	15.00		
CP-OFDM 16QAM	1	1	13.94	13.88	13.82	14.50		
CP-OFDM 64QAM	1	1	12.36	12.35	12.29	13.00		
CP-OFDM 256QAM	1	1	9.24	9.24	9.19	10.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632000/3480	633332/3500	634666/3520		
60MHz	DFT-s-OFDM BPSK	1	1	15.14	15.10	15.06	15.50	
		1	160	14.94	14.95	14.91	15.50	
		81	40	15.06	14.99	14.98	15.50	
		162	0	14.76	14.73	14.68	15.50	
	DFT-s-OFDM QPSK	1	1	15.18	15.16	15.27	15.50	
		1	160	15.11	15.07	15.17	15.50	
		81	40	15.20	15.21	15.31	15.50	



		162	0	14.77	14.77	14.73	15.50
	DFT-s-OFDM 16QAM	1	1	14.75	14.73	14.71	15.50
		1	160	15.14	15.09	15.06	15.50
		81	40	14.68	14.64	14.60	15.50
	DFT-s-OFDM 64QAM	1	1	13.47	13.39	13.37	14.00
		1	160	13.65	13.62	13.57	14.00
		81	40	13.41	13.39	13.35	14.00
	DFT-s-OFDM 256QAM	1	1	12.06	12.00	11.96	12.50
		1	160	11.79	11.71	11.69	12.50
		81	40	11.86	11.81	11.75	12.50
	CP-OFDM QPSK	1	1	14.49	14.47	14.39	15.00
	CP-OFDM 16QAM	1	1	13.92	13.85	13.81	14.50
CP-OFDM 64QAM	1	1	12.34	12.31	12.26	13.00	
CP-OFDM 256QAM	1	1	9.21	9.19	9.15	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	15.11	15.06	15.03	15.50
		1	215	14.93	14.91	14.89	15.50
		108	54	15.04	14.98	14.95	15.50
		216	0	14.73	14.68	14.64	15.50
	DFT-s-OFDM QPSK	1	1	15.16	15.12	15.24	15.50
		1	215	15.08	15.02	15.13	15.50
		108	54	15.17	15.16	15.27	15.50
		216	0	14.74	14.73	14.68	15.50
	DFT-s-OFDM 16QAM	1	1	14.72	14.71	14.67	15.50
		1	215	15.11	15.06	15.04	15.50
		108	54	14.65	14.60	14.57	15.50
	DFT-s-OFDM 64QAM	1	1	13.44	13.37	13.34	14.00
		1	215	13.62	13.57	13.53	14.00
		108	54	13.39	13.35	13.32	14.00
	DFT-s-OFDM 256QAM	1	1	12.04	11.96	11.91	12.50
		1	215	11.75	11.69	11.65	12.50
		108	54	11.80	11.75	11.69	12.50
	CP-OFDM QPSK	1	1	14.44	14.39	14.32	15.00
	CP-OFDM 16QAM	1	1	13.88	13.81	13.75	14.50
	CP-OFDM 64QAM	1	1	12.31	12.26	12.22	13.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	
	CP-OFDM 256QAM	1	1	9.19	9.15	9.12	10.00
100MHz	DFT-s-OFDM BPSK	1	1	/	15.09	/	15.50
		1	271	/	15.03	/	15.50
		135	67	/	14.89	/	15.50
		270	0	/	14.57	/	15.50
	DFT-s-OFDM QPSK	1	1	/	15.17	/	15.50
		1	271	/	15.06	/	15.50
		135	67	/	15.15	/	15.50
		270	0	/	14.60	/	15.50
	DFT-s-OFDM 16QAM	1	1	/	14.63	/	15.50
		1	271	/	14.97	/	15.50
		135	67	/	14.54	/	15.50
	DFT-s-OFDM 64QAM	1	1	/	13.27	/	14.00
		1	271	/	13.46	/	14.00
		135	67	/	13.25	/	14.00
	DFT-s-OFDM 256QAM	1	1	/	11.79	/	12.50
		1	271	/	11.57	/	12.50
		135	67	/	11.62	/	12.50
	CP-OFDM QPSK	1	1	/	14.25	/	15.00
	CP-OFDM 16QAM	1	1	/	13.68	/	14.50
	CP-OFDM 64QAM	1	1	/	12.15	/	13.00
CP-OFDM 256QAM	1	1	/	9.05	/	10.00	

NR n77							
Level 5-Main Ant3- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	656000/3840	664666/3970	
20MHz	DFT-s-OFDM BPSK	1	1	14.88	14.82	14.68	15.50
		1	49	14.81	14.77	14.63	15.50
		25	12	14.66	14.51	14.01	15.50
		50	0	14.82	14.31	14.30	15.50
	DFT-s-OFDM QPSK	1	1	14.87	14.58	14.54	15.50
		1	49	14.86	14.78	13.85	15.50
		25	12	14.34	14.46	14.04	15.50
		50	0	14.37	14.51	14.00	15.50
	DFT-s-OFDM	1	1	13.98	13.95	13.75	15.50



	16QAM	1	49	14.07	14.25	14.28	15.50
		25	12	14.43	14.40	14.34	15.50
	DFT-s-OFDM 64QAM	1	1	13.08	12.52	13.26	14.00
		1	49	12.80	13.18	12.72	14.00
		25	12	13.04	12.83	12.89	14.00
	DFT-s-OFDM 256QAM	1	1	11.60	11.37	11.68	12.50
		1	49	11.40	11.16	11.44	12.50
		25	12	11.33	11.68	11.25	12.50
	CP-OFDM QPSK	1	1	14.18	13.73	13.74	15.00
	CP-OFDM 16QAM	1	1	13.52	13.22	13.30	14.50
CP-OFDM 64QAM	1	1	12.46	11.93	11.69	13.00	
CP-OFDM 256QAM	1	1	9.21	8.81	9.34	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648000/3720	656000/3840	664000/3960	
40MHz	DFT-s-OFDM BPSK	1	1	14.85	14.80	14.64	15.50
		1	104	14.79	14.73	14.60	15.50
		50	25	14.63	14.46	13.97	15.50
		100	0	14.79	14.26	14.26	15.50
	DFT-s-OFDM QPSK	1	1	14.85	14.54	14.49	15.50
		1	104	14.84	14.76	13.81	15.50
		50	25	14.34	14.45	14.02	15.50
		100	0	14.37	14.47	13.97	15.50
	DFT-s-OFDM 16QAM	1	1	13.98	13.93	13.72	15.50
		1	104	14.04	14.23	14.24	15.50
		50	25	14.41	14.36	14.31	15.50
	DFT-s-OFDM 64QAM	1	1	13.05	12.47	13.22	14.00
		1	104	12.77	13.13	12.68	14.00
		50	25	13.02	12.79	12.84	14.00
	DFT-s-OFDM 256QAM	1	1	11.57	11.37	11.65	12.50
		1	104	11.37	11.18	11.41	12.50
		50	25	11.34	11.66	11.21	12.50
	CP-OFDM QPSK	1	1	14.16	13.69	13.75	15.00
	CP-OFDM 16QAM	1	1	13.49	13.17	13.26	14.50
	CP-OFDM 64QAM	1	1	12.43	11.88	11.65	13.00
CP-OFDM 256QAM	1	1	9.19	8.77	9.29	10.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				648666/3730	656000/3840	663334/3950		
60MHz	DFT-s-OFDM BPSK	1	1	14.87	14.81	14.67	15.50	
		1	160	14.82	14.78	14.64	15.50	
		81	40	14.65	14.50	14.00	15.50	
		162	0	14.82	14.31	14.30	15.50	
	DFT-s-OFDM QPSK	1	1	14.88	14.59	14.53	15.50	
		1	160	14.86	14.80	13.86	15.50	
		81	40	14.38	14.47	14.06	15.50	
		162	0	14.41	14.50	13.99	15.50	
	DFT-s-OFDM 16QAM	1	1	14.02	13.97	13.75	15.50	
		1	160	14.07	14.25	14.27	15.50	
		81	40	14.44	14.41	14.35	15.50	
	DFT-s-OFDM 64QAM	1	1	13.07	12.51	13.25	14.00	
		1	160	12.80	13.18	12.72	14.00	
		81	40	13.05	12.84	12.88	14.00	
	DFT-s-OFDM 256QAM	1	1	11.59	11.36	11.67	12.50	
		1	160	11.40	11.18	11.44	12.50	
		81	40	11.33	11.68	11.24	12.50	
	CP-OFDM QPSK	1	1	14.19	13.74	13.75	15.00	
	CP-OFDM 16QAM	1	1	13.51	13.21	13.29	14.50	
	CP-OFDM 64QAM	1	1	12.46	11.93	11.69	13.00	
CP-OFDM 256QAM	1	1	9.22	8.82	9.33	10.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				649334/3740	656000/3840	662666/3940		
80MHz	DFT-s-OFDM BPSK	1	1	14.86	14.77	14.65	15.50	
		1	215	14.80	14.77	14.61	15.50	
		108	54	14.62	14.45	13.96	15.50	
		216	0	14.80	14.27	14.27	15.50	
	DFT-s-OFDM QPSK	1	1	14.85	14.54	14.49	15.50	
		1	215	14.83	14.77	13.82	15.50	
		108	54	14.36	14.43	14.01	15.50	
	DFT-s-OFDM 16QAM	216	0	14.39	14.48	13.97	15.50	
		1	1	14.00	13.94	13.73	15.50	
		1	215	14.05	14.21	14.24	15.50	
	DFT-s-OFDM 64QAM	108	54	14.41	14.39	14.32	15.50	
		1	1	13.04	12.46	13.21	14.00	
		1	215	12.78	13.14	12.69	14.00	
			108	54	13.02	12.79	12.84	14.00



	DFT-s-OFDM 256QAM	1	1	11.54	11.34	11.65	12.50
		1	215	11.38	11.15	11.42	12.50
		108	54	11.34	11.67	11.25	12.50
	CP-OFDM QPSK	1	1	14.18	13.76	13.76	15.00
	CP-OFDM 16QAM	1	1	13.49	13.18	13.28	14.50
	CP-OFDM 64QAM	1	1	12.44	11.89	11.66	13.00
	CP-OFDM 256QAM	1	1	9.19	8.77	9.29	10.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				650000/3750	656000/3840	662000/3930	
100MHz	DFT-s-OFDM BPSK	1	1	14.83	14.73	14.62	15.50
		1	271	14.79	14.73	14.59	15.50
		135	67	14.60	14.44	13.93	15.50
		270	0	14.77	14.22	14.23	15.50
	DFT-s-OFDM QPSK	1	1	14.83	14.50	14.46	15.50
		1	271	14.80	14.72	13.78	15.50
		135	67	14.33	14.38	13.97	15.50
		270	0	14.36	14.44	13.92	15.50
	DFT-s-OFDM 16QAM	1	1	13.97	13.92	13.69	15.50
		1	271	14.02	14.18	14.22	15.50
		135	67	14.38	14.35	14.29	15.50
	DFT-s-OFDM 64QAM	1	1	13.01	12.44	13.18	14.00
		1	271	12.75	13.09	12.65	14.00
		135	67	13.00	12.75	12.81	14.00
	DFT-s-OFDM 256QAM	1	1	11.52	11.30	11.60	12.50
		1	271	11.34	11.13	11.38	12.50
		135	67	11.28	11.61	11.19	12.50
	CP-OFDM QPSK	1	1	14.13	13.68	13.69	15.00
	CP-OFDM 16QAM	1	1	13.45	13.14	13.22	14.50
	CP-OFDM 64QAM	1	1	12.41	11.84	11.62	13.00
	CP-OFDM 256QAM	1	1	9.17	8.73	9.26	10.00



NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7-SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	14.47	14.68	14.64	15.50
		1	49	14.23	14.27	14.30	15.50
		25	12	14.31	14.39	14.50	15.50
		50	0	14.23	14.38	14.41	15.50
	DFT-s-OFDM QPSK	1	1	14.80	14.94	14.99	15.50
		1	49	14.68	14.78	14.84	15.50
		25	12	14.63	14.84	14.91	15.50
		50	0	14.21	14.33	14.46	15.50
	DFT-s-OFDM 16QAM	1	1	13.87	13.91	14.02	15.50
		1	49	14.36	14.51	14.51	15.50
		25	12	14.48	14.52	14.57	15.50
	DFT-s-OFDM 64QAM	1	1	12.65	12.75	12.84	14.00
		1	49	13.21	13.36	13.39	14.00
		25	12	12.98	13.12	13.17	14.00
	DFT-s-OFDM 256QAM	1	1	11.31	11.47	11.56	12.50
		1	49	11.18	11.28	11.35	12.50
25		12	11.25	11.36	11.36	12.50	
CP-OFDM QPSK	1	1	14.20	14.24	14.41	15.00	
CP-OFDM 16QAM	1	1	13.16	13.26	13.35	14.50	
CP-OFDM 64QAM	1	1	11.73	11.88	11.91	13.00	
CP-OFDM 256QAM	1	1	8.58	8.72	8.77	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	14.45	14.61	14.62	15.50
		1	104	14.23	14.27	14.29	15.50
		50	25	14.28	14.37	14.46	15.50
		100	0	14.21	14.34	14.38	15.50
	DFT-s-OFDM QPSK	1	1	14.78	14.90	14.96	15.50
		1	104	14.64	14.74	14.81	15.50
		50	25	14.62	14.77	14.86	15.50
		100	0	14.20	14.30	14.41	15.50
DFT-s-OFDM	1	1	13.86	13.90	13.99	15.50	



	16QAM	1	104	14.34	14.46	14.49	15.50
		50	25	14.45	14.51	14.55	15.50
	DFT-s-OFDM 64QAM	1	1	12.61	12.72	12.80	14.00
		1	104	13.19	13.32	13.36	14.00
		50	25	12.96	13.08	13.14	14.00
	DFT-s-OFDM 256QAM	1	1	11.26	11.40	11.51	12.50
		1	104	11.15	11.23	11.32	12.50
		50	25	11.19	11.31	11.34	12.50
	CP-OFDM QPSK	1	1	14.17	14.23	14.35	15.00
	CP-OFDM 16QAM	1	1	13.12	13.23	13.31	14.50
CP-OFDM 64QAM	1	1	11.71	11.84	11.88	13.00	
CP-OFDM 256QAM	1	1	8.56	8.68	8.74	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	14.43	14.56	14.59	15.50
		1	160	14.22	14.27	14.27	15.50
		81	40	14.24	14.31	14.41	15.50
		162	0	14.19	14.30	14.35	15.50
	DFT-s-OFDM QPSK	1	1	14.76	14.86	14.91	15.50
		1	160	14.61	14.73	14.78	15.50
		81	40	14.64	14.74	14.83	15.50
		162	0	14.22	14.27	14.38	15.50
	DFT-s-OFDM 16QAM	1	1	13.88	13.89	13.97	15.50
		1	160	14.32	14.42	14.45	15.50
		81	40	14.43	14.50	14.53	15.50
	DFT-s-OFDM 64QAM	1	1	12.57	12.66	12.75	14.00
		1	160	13.17	13.28	13.33	14.00
		81	40	12.94	13.04	13.09	14.00
	DFT-s-OFDM 256QAM	1	1	11.20	11.37	11.48	12.50
		1	160	11.13	11.22	11.30	12.50
		81	40	11.20	11.30	11.34	12.50
	CP-OFDM QPSK	1	1	14.17	14.26	14.37	15.00
	CP-OFDM 16QAM	1	1	13.09	13.19	13.29	14.50
	CP-OFDM 64QAM	1	1	11.69	11.80	11.85	13.00
CP-OFDM 256QAM	1	1	8.54	8.64	8.69	10.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	14.40	14.52	14.56	15.50
		1	215	14.21	14.23	14.25	15.50
		108	54	14.22	14.30	14.38	15.50
		216	0	14.16	14.25	14.31	15.50
	DFT-s-OFDM QPSK	1	1	14.74	14.82	14.88	15.50
		1	215	14.58	14.68	14.74	15.50
		108	54	14.61	14.69	14.79	15.50
		216	0	14.19	14.23	14.33	15.50
	DFT-s-OFDM 16QAM	1	1	13.85	13.87	13.93	15.50
		1	215	14.29	14.39	14.43	15.50
		108	54	14.40	14.46	14.50	15.50
	DFT-s-OFDM 64QAM	1	1	12.54	12.64	12.72	14.00
		1	215	13.14	13.23	13.29	14.00
		108	54	12.92	13.00	13.06	14.00
	DFT-s-OFDM 256QAM	1	1	11.18	11.33	11.43	12.50
		1	215	11.09	11.20	11.26	12.50
		108	54	11.14	11.24	11.28	12.50
	CP-OFDM QPSK	1	1	14.12	14.18	14.30	15.00
	CP-OFDM 16QAM	1	1	13.05	13.15	13.23	14.50
	CP-OFDM 64QAM	1	1	11.66	11.75	11.81	13.00
CP-OFDM 256QAM	1	1	8.52	8.60	8.66	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	-up
100MHz	DFT-s-OFDM BPSK	1	1	/	14.34	/	15.50
		1	271	/	14.16	/	15.50
		135	67	/	14.17	/	15.50
		270	0	/	14.08	/	15.50
	DFT-s-OFDM QPSK	1	1	/	14.67	/	15.50
		1	271	/	14.50	/	15.50
		135	67	/	14.51	/	15.50
		270	0	/	14.10	/	15.50
	DFT-s-OFDM 16QAM	1	1	/	13.80	/	15.50
		1	271	/	14.24	/	15.50
		135	67	/	14.34	/	15.50
	DFT-s-OFDM 64QAM	1	1	/	12.48	/	14.00
		1	271	/	13.06	/	14.00
		135	67	/	12.85	/	14.00



	DFT-s-OFDM 256QAM	1	1	/	11.09	/	12.50
		1	271	/	11.04	/	12.50
		135	67	/	11.06	/	12.50
	CP-OFDM QPSK	1	1	/	13.98	/	15.00
	CP-OFDM 16QAM	1	1	/	12.97	/	14.50
	CP-OFDM 64QAM	1	1	/	11.58	/	13.00
	CP-OFDM 256QAM	1	1	/	8.45	/	10.00

NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	656000/3840	664666/3970	
20MHz	DFT-s-OFDM BPSK	1	1	13.74	14.56	14.11	15.50
		1	49	13.97	14.10	13.66	15.50
		25	12	13.74	14.35	13.93	15.50
		50	0	13.78	14.38	13.93	15.50
	DFT-s-OFDM QPSK	1	1	13.67	14.46	14.03	15.50
		1	49	14.13	14.23	13.80	15.50
		25	12	13.73	14.42	13.93	15.50
	DFT-s-OFDM 16QAM	50	0	13.77	14.26	14.03	15.50
		1	1	13.61	14.42	13.72	15.50
		1	49	14.05	14.26	14.01	15.50
	DFT-s-OFDM 64QAM	25	12	13.83	14.26	14.16	15.50
		1	1	12.67	12.99	12.27	14.00
		1	49	12.56	12.85	12.33	14.00
	DFT-s-OFDM 256QAM	25	12	12.24	12.82	12.67	14.00
		1	1	10.89	10.76	10.84	12.50
		1	49	10.90	11.03	10.84	12.50
	CP-OFDM QPSK	25	12	10.77	10.86	10.85	12.50
		1	1	13.85	13.87	13.76	15.00
		1	1	13.07	13.34	12.76	14.50
	CP-OFDM 16QAM	1	1	11.58	12.01	11.43	13.00
	CP-OFDM 64QAM	1	1	8.55	8.93	8.45	10.00
CP-OFDM 256QAM	1	1					



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648000/3720	656000/3840	664000/3960	
40MHz	DFT-s-OFDM BPSK	1	1	13.73	14.52	14.09	15.50
		1	104	13.95	14.09	13.63	15.50
		50	25	13.71	14.30	13.89	15.50
		100	0	13.76	14.34	13.90	15.50
	DFT-s-OFDM QPSK	1	1	13.64	14.41	13.99	15.50
		1	104	14.10	14.20	13.76	15.50
		50	25	13.71	14.38	13.88	15.50
		100	0	13.75	14.24	14.01	15.50
	DFT-s-OFDM 16QAM	1	1	13.59	14.39	13.70	15.50
		1	104	14.03	14.22	13.98	15.50
		50	25	13.80	14.24	14.13	15.50
	DFT-s-OFDM 64QAM	1	1	12.64	12.94	12.23	14.00
		1	104	12.54	12.81	12.30	14.00
		50	25	12.21	12.77	12.63	14.00
	DFT-s-OFDM 256QAM	1	1	10.84	10.74	10.82	12.50
		1	104	10.88	11.00	10.82	12.50
		50	25	10.78	10.85	10.86	12.50
	CP-OFDM QPSK	1	1	13.84	13.89	13.77	15.00
	CP-OFDM 16QAM	1	1	13.05	13.31	12.75	14.50
	CP-OFDM 64QAM	1	1	11.56	11.97	11.40	13.00
CP-OFDM 256QAM	1	1	8.52	8.88	8.41	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648666/3730	656000/3840	663334/3950	
60MHz	DFT-s-OFDM BPSK	1	1	13.70	14.48	14.06	15.50
		1	160	13.94	14.05	13.61	15.50
		81	40	13.69	14.29	13.86	15.50
		162	0	13.73	14.29	13.86	15.50
	DFT-s-OFDM QPSK	1	1	13.62	14.37	13.96	15.50
		1	160	14.07	14.15	13.72	15.50
		81	40	13.68	14.33	13.84	15.50
		162	0	13.72	14.20	13.96	15.50
	DFT-s-OFDM 16QAM	1	1	13.56	14.37	13.66	15.50
		1	160	14.00	14.19	13.96	15.50
		81	40	13.77	14.20	14.10	15.50
	DFT-s-OFDM 64QAM	1	1	12.61	12.92	12.20	14.00
		1	160	12.51	12.76	12.26	14.00
		81	40	12.19	12.73	12.60	14.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				649334/3740	656000/3840	662666/3940	
	DFT-s-OFDM 256QAM	1	1	10.82	10.70	10.77	12.50
		1	160	10.84	10.98	10.78	12.50
		81	40	10.72	10.79	10.80	12.50
	CP-OFDM QPSK	1	1	13.79	13.81	13.70	15.00
	CP-OFDM 16QAM	1	1	13.01	13.27	12.69	14.50
	CP-OFDM 64QAM	1	1	11.53	11.92	11.36	13.00
	CP-OFDM 256QAM	1	1	8.50	8.84	8.38	10.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				649334/3740	656000/3840	662666/3940	
80MHz	DFT-s-OFDM BPSK	1	1	13.67	14.46	14.02	15.50
		1	215	13.92	14.01	13.58	15.50
		108	54	13.66	14.24	13.82	15.50
		216	0	13.70	14.24	13.82	15.50
	DFT-s-OFDM QPSK	1	1	13.60	14.33	13.91	15.50
		1	215	14.05	14.13	13.68	15.50
		108	54	13.68	14.32	13.82	15.50
		216	0	13.72	14.16	13.93	15.50
	DFT-s-OFDM 16QAM	1	1	13.56	14.35	13.63	15.50
		1	215	13.97	14.17	13.92	15.50
		108	54	13.75	14.16	14.07	15.50
	DFT-s-OFDM 64QAM	1	1	12.58	12.87	12.16	14.00
		1	215	12.48	12.71	12.22	14.00
		108	54	12.17	12.69	12.55	14.00
	DFT-s-OFDM 256QAM	1	1	10.79	10.70	10.74	12.50
		1	215	10.81	11.00	10.75	12.50
		108	54	10.73	10.77	10.76	12.50
	CP-OFDM QPSK	1	1	13.77	13.77	13.71	15.00
	CP-OFDM 16QAM	1	1	12.98	13.22	12.65	14.50
	CP-OFDM 64QAM	1	1	11.50	11.87	11.32	13.00
CP-OFDM 256QAM	1	1	8.48	8.80	8.33	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				650000/3750	656000/3840	662000/3930	
100MHz	DFT-s-OFDM BPSK	1	1	13.65	14.39	14.00	15.50
		1	271	13.92	14.01	13.57	15.50
		135	67	13.63	14.22	13.78	15.50
		270	0	13.68	14.20	13.79	15.50



	DFT-s-OFDM QPSK	1	1	13.58	14.29	13.88	15.50
		1	271	14.01	14.09	13.65	15.50
		135	67	13.67	14.25	13.77	15.50
		270	0	13.71	14.13	13.88	15.50
	DFT-s-OFDM 16QAM	1	1	13.55	14.34	13.60	15.50
		1	271	13.95	14.12	13.90	15.50
		135	67	13.72	14.15	14.05	15.50
	DFT-s-OFDM 64QAM	1	1	12.54	12.84	12.12	14.00
		1	271	12.46	12.67	12.19	14.00
		135	67	12.15	12.65	12.52	14.00
	DFT-s-OFDM 256QAM	1	1	10.74	10.63	10.69	12.50
		1	271	10.78	10.95	10.72	12.50
		135	67	10.67	10.72	10.74	12.50
	CP-OFDM QPSK	1	1	13.74	13.76	13.65	15.00
CP-OFDM 16QAM	1	1	12.94	13.19	12.61	14.50	
CP-OFDM 64QAM	1	1	11.48	11.83	11.29	13.00	
CP-OFDM 256QAM	1	1	8.46	8.76	8.30	10.00	

NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant5-SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	16.55	16.62	16.66	17.00
		1	49	16.35	16.36	16.38	17.00
		25	12	16.70	16.73	16.81	17.00
		50	0	16.08	16.13	16.19	17.00
	DFT-s-OFDM QPSK	1	1	16.65	16.70	16.76	17.00
		1	49	16.23	16.26	16.32	17.00
		25	12	16.61	16.72	16.82	17.00
	DFT-s-OFDM 16QAM	50	0	16.25	16.32	16.42	17.00
		1	1	15.89	15.92	15.98	17.00
		1	49	15.67	15.72	15.76	17.00
	DFT-s-OFDM 64QAM	25	12	15.70	15.70	15.74	17.00
		1	1	14.04	14.07	14.15	15.00
		1	49	14.12	14.17	14.23	15.00
	DFT-s-OFDM	25	12	14.08	14.13	14.19	15.00
		1	1	12.88	12.95	13.05	13.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
	256QAM	1	49	12.19	12.24	12.30	13.50
		25	12	12.31	12.32	12.36	13.50
	CP-OFDM QPSK	1	1	14.98	15.02	15.14	16.00
	CP-OFDM 16QAM	1	1	14.82	14.85	14.93	15.50
	CP-OFDM 64QAM	1	1	13.16	13.21	13.27	14.00
	CP-OFDM 256QAM	1	1	10.14	10.19	10.25	11.00
40MHz	DFT-s-OFDM BPSK	1	1	16.57	16.63	16.69	17.00
		1	104	16.38	16.41	16.42	17.00
		50	25	16.72	16.77	16.84	17.00
		100	0	16.11	16.18	16.23	17.00
	DFT-s-OFDM QPSK	1	1	16.68	16.75	16.80	17.00
		1	104	16.25	16.30	16.37	17.00
		50	25	16.65	16.74	16.86	17.00
		100	0	16.29	16.35	16.44	17.00
	DFT-s-OFDM 16QAM	1	1	15.93	15.96	16.01	17.00
		1	104	15.70	15.74	15.79	17.00
		50	25	15.73	15.75	15.78	17.00
	DFT-s-OFDM 64QAM	1	1	14.06	14.11	14.18	15.00
		1	104	14.15	14.22	14.27	15.00
		50	25	14.11	14.18	14.23	15.00
	DFT-s-OFDM 256QAM	1	1	12.90	12.94	13.07	13.50
		1	104	12.22	12.24	12.33	13.50
		50	25	12.30	12.34	12.39	13.50
	CP-OFDM QPSK	1	1	15.01	15.07	15.14	16.00
	CP-OFDM 16QAM	1	1	14.84	14.89	14.96	15.50
	CP-OFDM 64QAM	1	1	13.19	13.26	13.31	14.00
CP-OFDM 256QAM	1	1	10.17	10.24	10.29	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	16.56	16.59	16.67	17.00
		1	160	16.36	16.40	16.39	17.00
		81	40	16.69	16.72	16.80	17.00
		162	0	16.09	16.14	16.20	17.00
	DFT-s-OFDM	1	1	16.65	16.70	16.76	17.00



	QPSK	1	160	16.22	16.27	16.33	17.00
		81	40	16.63	16.70	16.81	17.00
		162	0	16.27	16.33	16.42	17.00
	DFT-s-OFDM 16QAM	1	1	15.91	15.93	15.99	17.00
		1	160	15.68	15.70	15.76	17.00
		81	40	15.70	15.73	15.75	17.00
	DFT-s-OFDM 64QAM	1	1	14.03	14.06	14.14	15.00
		1	160	14.13	14.18	14.24	15.00
		81	40	14.08	14.13	14.19	15.00
	DFT-s-OFDM 256QAM	1	1	12.85	12.92	13.05	13.50
		1	160	12.20	12.21	12.31	13.50
		81	40	12.31	12.33	12.40	13.50
	CP-OFDM QPSK	1	1	15.00	15.09	15.15	16.00
CP-OFDM 16QAM	1	1	14.82	14.86	14.95	15.50	
CP-OFDM 64QAM	1	1	13.17	13.22	13.28	14.00	
CP-OFDM 256QAM	1	1	10.14	10.19	10.25	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	16.53	16.55	16.64	17.00
		1	215	16.35	16.36	16.37	17.00
		108	54	16.67	16.71	16.77	17.00
		216	0	16.06	16.09	16.16	17.00
	DFT-s-OFDM QPSK	1	1	16.63	16.66	16.73	17.00
		1	215	16.19	16.22	16.29	17.00
		108	54	16.60	16.65	16.77	17.00
	DFT-s-OFDM 16QAM	216	0	16.24	16.29	16.37	17.00
		1	1	15.88	15.91	15.95	17.00
		1	215	15.65	15.67	15.74	17.00
	DFT-s-OFDM 64QAM	108	54	15.67	15.69	15.72	17.00
		1	1	14.00	14.04	14.11	15.00
		1	215	14.10	14.13	14.20	15.00
	DFT-s-OFDM 256QAM	108	54	14.06	14.09	14.16	15.00
		1	1	12.83	12.88	13.00	13.50
		1	215	12.16	12.19	12.27	13.50
	CP-OFDM QPSK	108	54	12.25	12.27	12.34	13.50
		1	1	14.95	15.01	15.08	16.00
	CP-OFDM 16QAM	1	1	14.78	14.82	14.89	15.50



	CP-OFDM 64QAM	1	1	13.14	13.17	13.24	14.00
	CP-OFDM 256QAM	1	1	10.12	10.15	10.22	11.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	16.44	/	17.00
		1	271	/	16.35	/	17.00
		135	67	/	16.62	/	17.00
		270	0	/	16.00	/	17.00
	DFT-s-OFDM QPSK	1	1	/	16.57	/	17.00
		1	271	/	16.11	/	17.00
		135	67	/	16.52	/	17.00
	DFT-s-OFDM 16QAM	270	0	/	16.20	/	17.00
		1	1	/	15.86	/	17.00
		1	271	/	15.58	/	17.00
	DFT-s-OFDM 64QAM	135	67	/	15.63	/	17.00
		1	1	/	13.93	/	15.00
		1	271	/	14.04	/	15.00
	DFT-s-OFDM 256QAM	135	67	/	14.00	/	15.00
		1	1	/	12.71	/	13.50
		1	271	/	12.08	/	13.50
	CP-OFDM QPSK	135	67	/	12.14	/	13.50
		1	1	/	14.91	/	16.00
		1	1	/	14.71	/	15.50
	CP-OFDM 16QAM	1	1	/	13.08	/	14.00
1		1	/	10.06	/	11.00	
1		1	/				

NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant5-SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	656000/3840	664666/3970	
20MHz	DFT-s-OFDM BPSK	1	1	15.49	15.45	15.64	17.00
		1	49	15.33	15.66	15.23	17.00
		25	12	15.19	15.20	15.48	17.00
		50	0	15.36	15.41	15.27	17.00
	DFT-s-OFDM	1	1	15.36	15.47	15.49	17.00



	QPSK	1	49	15.56	15.49	15.36	17.00
		25	12	15.37	15.35	15.48	17.00
		50	0	15.19	15.12	15.20	17.00
	DFT-s-OFDM 16QAM	1	1	15.22	15.26	15.27	17.00
		1	49	15.30	15.21	15.19	17.00
		25	12	15.43	15.26	15.33	17.00
	DFT-s-OFDM 64QAM	1	1	13.84	13.46	13.30	15.00
		1	49	14.12	13.47	13.78	15.00
		25	12	14.12	13.50	13.63	15.00
	DFT-s-OFDM 256QAM	1	1	12.29	11.77	11.98	13.50
		1	49	11.64	12.05	11.75	13.50
		25	12	12.31	11.71	11.79	13.50
	CP-OFDM QPSK	1	1	14.45	14.32	14.24	16.00
CP-OFDM 16QAM	1	1	14.15	14.08	13.93	15.50	
CP-OFDM 64QAM	1	1	12.69	12.48	12.73	14.00	
CP-OFDM 256QAM	1	1	10.59	10.38	10.23	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	656000/3840	664000/3960	
40MHz	DFT-s-OFDM BPSK	1	1	15.51	15.46	15.67	17.00
		1	104	15.36	15.71	15.27	17.00
		50	25	15.21	15.24	15.51	17.00
		100	0	15.39	15.46	15.31	17.00
	DFT-s-OFDM QPSK	1	1	15.39	15.52	15.53	17.00
		1	104	15.58	15.53	15.41	17.00
		50	25	15.41	15.37	15.52	17.00
	DFT-s-OFDM 16QAM	100	0	15.23	15.15	15.22	17.00
		1	1	15.26	15.30	15.30	17.00
		1	104	15.33	15.23	15.22	17.00
	DFT-s-OFDM 64QAM	50	25	15.46	15.31	15.37	17.00
		1	1	13.86	13.50	13.33	15.00
		1	104	14.15	13.52	13.82	15.00
	DFT-s-OFDM 256QAM	50	25	14.15	13.55	13.67	15.00
		1	1	12.31	11.76	12.00	13.50
		1	104	11.67	12.05	11.78	13.50
	CP-OFDM QPSK	50	25	12.30	11.73	11.82	13.50
		1	1	14.48	14.37	14.24	16.00
	CP-OFDM 16QAM	1	1	14.17	14.12	13.96	15.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				648666/3730	656000/3840	663334/3950		
	CP-OFDM 64QAM	1	1	12.72	12.53	12.77	14.00	
	CP-OFDM 256QAM	1	1	10.62	10.43	10.27	11.00	
60MHz	DFT-s-OFDM BPSK	1	1	15.50	15.42	15.65	17.00	
		1	160	15.34	15.70	15.24	17.00	
		81	40	15.18	15.19	15.47	17.00	
		162	0	15.37	15.42	15.28	17.00	
	DFT-s-OFDM QPSK	1	1	15.36	15.47	15.49	17.00	
		1	160	15.55	15.50	15.37	17.00	
		81	40	15.39	15.33	15.47	17.00	
	DFT-s-OFDM 16QAM	162	0	15.21	15.13	15.20	17.00	
		1	1	15.24	15.27	15.28	17.00	
		1	160	15.31	15.19	15.19	17.00	
	DFT-s-OFDM 64QAM	81	40	15.43	15.29	15.34	17.00	
		1	1	13.83	13.45	13.29	15.00	
		1	160	14.13	13.48	13.79	15.00	
	DFT-s-OFDM 256QAM	81	40	14.12	13.50	13.63	15.00	
		1	1	12.26	11.74	11.98	13.50	
		1	160	11.65	12.02	11.76	13.50	
	CP-OFDM	QPSK	81	40	12.31	11.72	11.83	13.50
		QPSK	1	1	14.47	14.39	14.25	16.00
		16QAM	1	1	14.15	14.09	13.95	15.50
		64QAM	1	1	12.70	12.49	12.74	14.00
256QAM		1	1	10.59	10.38	10.23	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				649334/3740	656000/3840	662666/3940		
80MHz	DFT-s-OFDM BPSK	1	1	15.47	15.38	15.62	17.00	
		1	215	15.33	15.66	15.22	17.00	
		108	54	15.16	15.18	15.44	17.00	
		216	0	15.34	15.37	15.24	17.00	
	DFT-s-OFDM QPSK	1	1	15.34	15.43	15.46	17.00	
		1	215	15.52	15.45	15.33	17.00	
		108	54	15.36	15.28	15.43	17.00	
	DFT-s-OFDM 16QAM	216	0	15.18	15.09	15.15	17.00	
		1	1	15.21	15.25	15.24	17.00	
		1	215	15.28	15.16	15.17	17.00	
		108	54	15.40	15.25	15.31	17.00	



	DFT-s-OFDM 64QAM	1	1	13.80	13.43	13.26	15.00
		1	215	14.10	13.43	13.75	15.00
		108	54	14.10	13.46	13.60	15.00
	DFT-s-OFDM 256QAM	1	1	12.24	11.70	11.93	13.50
		1	215	11.61	12.00	11.72	13.50
		108	54	12.25	11.66	11.77	13.50
	CP-OFDM QPSK	1	1	14.42	14.31	14.18	16.00
	CP-OFDM 16QAM	1	1	14.11	14.05	13.89	15.50
CP-OFDM 64QAM	1	1	12.67	12.44	12.70	14.00	
CP-OFDM 256QAM	1	1	10.57	10.34	10.20	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				650000/3750	656000/3840	662000/3930	
100MHz	DFT-s-OFDM BPSK	1	1	15.44	15.34	15.59	17.00
		1	271	15.32	15.62	15.20	17.00
		135	67	15.14	15.17	15.41	17.00
		270	0	15.31	15.32	15.20	17.00
	DFT-s-OFDM QPSK	1	1	15.32	15.39	15.43	17.00
		1	271	15.49	15.40	15.29	17.00
		135	67	15.33	15.23	15.39	17.00
		270	0	15.15	15.05	15.10	17.00
	DFT-s-OFDM 16QAM	1	1	15.18	15.23	15.20	17.00
		1	271	15.25	15.13	15.15	17.00
		135	67	15.37	15.21	15.28	17.00
	DFT-s-OFDM 64QAM	1	1	13.77	13.41	13.23	15.00
		1	271	14.07	13.38	13.71	15.00
		135	67	14.08	13.42	13.57	15.00
	DFT-s-OFDM 256QAM	1	1	12.22	11.66	11.88	13.50
		1	271	11.57	11.98	11.68	13.50
		135	67	12.19	11.60	11.71	13.50
	CP-OFDM QPSK	1	1	14.37	14.23	14.11	16.00
	CP-OFDM 16QAM	1	1	14.07	14.01	13.83	15.50
	CP-OFDM 64QAM	1	1	12.64	12.39	12.66	14.00
	CP-OFDM 256QAM	1	1	10.55	10.30	10.17	11.00



NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	16.33	16.43	16.26	17.00
		1	49	16.49	16.50	16.50	17.00
		25	12	16.54	16.58	16.53	17.00
		50	0	16.50	16.57	16.47	17.00
	DFT-s-OFDM QPSK	1	1	15.99	16.05	15.96	17.00
		1	49	16.35	16.42	16.30	17.00
		25	12	16.27	16.37	16.24	17.00
	DFT-s-OFDM 16QAM	50	0	15.36	15.42	15.37	17.00
		1	1	15.24	15.28	15.25	17.00
		1	49	15.36	15.44	15.31	17.00
	DFT-s-OFDM 64QAM	25	12	15.36	15.40	15.34	17.00
		1	1	13.96	14.02	13.93	15.00
		1	49	13.98	14.05	13.95	15.00
	DFT-s-OFDM 256QAM	25	12	14.26	14.32	14.23	15.00
		1	1	12.56	12.65	12.49	13.50
		1	49	12.56	12.65	12.51	13.50
CP-OFDM	QPSK	25	12	12.55	12.66	12.46	13.50
		1	1	14.94	15.00	14.96	16.00
	16QAM	1	1	14.39	14.46	14.36	15.50
		1	1	13.42	13.49	13.39	14.00
256QAM	1	1	10.44	10.50	10.41	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	16.35	16.44	16.29	17.00
		1	104	16.52	16.55	16.54	17.00
		50	25	16.56	16.62	16.56	17.00
		100	0	16.53	16.62	16.51	17.00
	DFT-s-OFDM QPSK	1	1	16.02	16.10	16.00	17.00
		1	104	16.37	16.46	16.35	17.00
		50	25	16.31	16.39	16.28	17.00
	DFT-s-OFDM 16QAM	100	0	15.40	15.45	15.39	17.00
		1	1	15.28	15.32	15.28	17.00
		1	104	15.39	15.46	15.34	17.00



		50	25	15.39	15.45	15.38	17.00
	DFT-s-OFDM 64QAM	1	1	13.98	14.06	13.96	15.00
		1	104	14.01	14.10	13.99	15.00
		50	25	14.29	14.37	14.27	15.00
	DFT-s-OFDM 256QAM	1	1	12.58	12.64	12.51	13.50
		1	104	12.59	12.65	12.54	13.50
		50	25	12.54	12.68	12.49	13.50
	CP-OFDM QPSK	1	1	14.97	15.05	14.96	16.00
	CP-OFDM 16QAM	1	1	14.41	14.50	14.39	15.50
	CP-OFDM 64QAM	1	1	13.45	13.54	13.43	14.00
CP-OFDM 256QAM	1	1	10.47	10.55	10.45	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	16.34	16.40	16.27	17.00
		1	160	16.50	16.54	16.51	17.00
		81	40	16.53	16.57	16.52	17.00
		162	0	16.51	16.58	16.48	17.00
	DFT-s-OFDM QPSK	1	1	15.99	16.05	15.96	17.00
		1	160	16.34	16.43	16.31	17.00
		81	40	16.29	16.35	16.23	17.00
		162	0	15.38	15.43	15.37	17.00
	DFT-s-OFDM 16QAM	1	1	15.26	15.29	15.26	17.00
		1	160	15.37	15.42	15.31	17.00
		81	40	15.36	15.43	15.35	17.00
	DFT-s-OFDM 64QAM	1	1	13.95	14.01	13.92	15.00
		1	160	13.99	14.06	13.96	15.00
		81	40	14.26	14.32	14.23	15.00
	DFT-s-OFDM 256QAM	1	1	12.53	12.62	12.49	13.50
		1	160	12.57	12.62	12.52	13.50
		81	40	12.55	12.67	12.50	13.50
	CP-OFDM QPSK	1	1	14.96	15.07	14.97	16.00
	CP-OFDM 16QAM	1	1	14.39	14.47	14.38	15.50
	CP-OFDM 64QAM	1	1	13.43	13.50	13.40	14.00
	CP-OFDM 256QAM	1	1	10.44	10.50	10.41	11.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				632666/3490	633332/3500	633998/3510		
80MHz	DFT-s-OFDM BPSK	1	1	16.31	16.36	16.24	17.00	
		1	215	16.49	16.50	16.49	17.00	
		108	54	16.51	16.56	16.49	17.00	
		216	0	16.48	16.53	16.44	17.00	
	DFT-s-OFDM QPSK	1	1	15.97	16.01	15.93	17.00	
		1	215	16.31	16.38	16.27	17.00	
		108	54	16.26	16.30	16.19	17.00	
		216	0	15.35	15.39	15.32	17.00	
	DFT-s-OFDM 16QAM	1	1	15.23	15.27	15.22	17.00	
		1	215	15.34	15.39	15.29	17.00	
		108	54	15.33	15.39	15.32	17.00	
	DFT-s-OFDM 64QAM	1	1	13.92	13.99	13.89	15.00	
		1	215	13.96	14.01	13.92	15.00	
		108	54	14.24	14.28	14.20	15.00	
	DFT-s-OFDM 256QAM	1	1	12.51	12.58	12.44	13.50	
		1	215	12.53	12.60	12.48	13.50	
		108	54	12.49	12.61	12.44	13.50	
	CP-OFDM QPSK	1	1	14.91	14.99	14.90	16.00	
	CP-OFDM 16QAM	1	1	14.35	14.43	14.32	15.50	
	CP-OFDM 64QAM	1	1	13.40	13.45	13.36	14.00	
CP-OFDM 256QAM	1	1	10.42	10.46	10.38	11.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				/	633332/3500	/	-up	
100MHz	DFT-s-OFDM BPSK	1	1	/	16.22	/	17.00	
		1	271	/	16.48	/	17.00	
		135	67	/	16.45	/	17.00	
		270	0	/	16.41	/	17.00	
	DFT-s-OFDM QPSK	1	1	/	15.90	/	17.00	
		1	271	/	16.24	/	17.00	
		135	67	/	16.14	/	17.00	
	DFT-s-OFDM 16QAM	270	0	/	15.27	/	17.00	
		1	1	/	15.19	/	17.00	
		1	271	/	15.27	/	17.00	
	DFT-s-OFDM 64QAM	135	67	/	15.30	/	17.00	
		1	1	/	13.85	/	15.00	
		1	271	/	13.89	/	15.00	
			135	67	/	14.17	/	15.00



	DFT-s-OFDM 256QAM	1	1	/	12.39	/	13.50
		1	271	/	12.45	/	13.50
		135	67	/	12.42	/	13.50
	CP-OFDM QPSK	1	1	/	14.84	/	16.00
	CP-OFDM 16QAM	1	1	/	14.28	/	15.50
	CP-OFDM 64QAM	1	1	/	13.33	/	14.00
	CP-OFDM 256QAM	1	1	/	10.35	/	11.00

NR n77							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2- SA&NSA&MIMO(SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	656000/3840	664666/3970	
20MHz	DFT-s-OFDM BPSK	1	1	16.08	15.50	15.73	17.00
		1	49	16.08	15.36	15.49	17.00
		25	12	16.02	15.43	15.71	17.00
		50	0	15.92	15.28	15.21	17.00
	DFT-s-OFDM QPSK	1	1	15.42	15.24	15.43	17.00
		1	49	15.54	15.24	15.44	17.00
		25	12	15.40	15.43	15.29	17.00
	DFT-s-OFDM 16QAM	50	0	15.13	15.21	15.31	17.00
		1	1	15.26	15.25	15.41	17.00
		1	49	15.10	15.37	15.34	17.00
	DFT-s-OFDM 64QAM	25	12	15.17	15.27	15.14	17.00
		1	1	13.60	13.68	13.63	15.00
		1	49	13.66	13.82	13.62	15.00
	DFT-s-OFDM 256QAM	25	12	13.63	13.61	13.57	15.00
		1	1	11.76	11.85	12.05	13.50
		1	49	11.94	11.61	12.02	13.50
	CP-OFDM QPSK	25	12	11.93	12.11	12.18	13.50
		1	1	14.47	14.71	14.58	16.00
		1	1	14.03	14.28	14.22	15.50
	CP-OFDM 16QAM	1	1	12.78	12.91	12.67	14.00
1		1	10.31	10.22	9.78	11.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	656000/3840	664000/3960	
40MHz	DFT-s-OFDM BPSK	1	1	16.05	15.48	15.69	17.00
		1	104	16.06	15.32	15.46	17.00
		50	25	15.99	15.38	15.67	17.00
		100	0	15.89	15.23	15.17	17.00
	DFT-s-OFDM QPSK	1	1	15.40	15.20	15.38	17.00
		1	104	15.52	15.22	15.40	17.00
		50	25	15.40	15.42	15.27	17.00
		100	0	15.13	15.17	15.28	17.00
	DFT-s-OFDM 16QAM	1	1	15.26	15.23	15.38	17.00
		1	104	15.07	15.35	15.30	17.00
		50	25	15.15	15.23	15.11	17.00
	DFT-s-OFDM 64QAM	1	1	13.57	13.63	13.59	15.00
		1	104	13.63	13.77	13.58	15.00
		50	25	13.61	13.57	13.52	15.00
	DFT-s-OFDM 256QAM	1	1	11.73	11.85	12.02	13.50
		1	104	11.91	11.63	11.99	13.50
		50	25	11.94	12.09	12.14	13.50
	CP-OFDM QPSK	1	1	14.45	14.67	14.59	16.00
	CP-OFDM 16QAM	1	1	14.00	14.23	14.18	15.50
	CP-OFDM 64QAM	1	1	12.75	12.86	12.63	14.00
CP-OFDM 256QAM	1	1	10.29	10.18	9.73	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	656000/3840	663334/3950	
60MHz	DFT-s-OFDM BPSK	1	1	16.07	15.49	15.72	17.00
		1	160	16.09	15.37	15.50	17.00
		81	40	16.01	15.42	15.70	17.00
		162	0	15.92	15.28	15.21	17.00
	DFT-s-OFDM QPSK	1	1	15.43	15.25	15.42	17.00
		1	160	15.54	15.26	15.45	17.00
		81	40	15.44	15.44	15.31	17.00
		162	0	15.17	15.20	15.30	17.00
	DFT-s-OFDM 16QAM	1	1	15.30	15.27	15.41	17.00
		1	160	15.10	15.37	15.33	17.00
		81	40	15.18	15.28	15.15	17.00
	DFT-s-OFDM 64QAM	1	1	13.59	13.67	13.62	15.00
		1	160	13.66	13.82	13.62	15.00
		81	40	13.64	13.62	13.56	15.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				649334/3740	656000/3840	662666/3940	
	DFT-s-OFDM 256QAM	1	1	11.75	11.84	12.04	13.50
		1	160	11.94	11.63	12.02	13.50
		81	40	11.93	12.11	12.17	13.50
	CP-OFDM QPSK	1	1	14.48	14.72	14.59	16.00
	CP-OFDM 16QAM	1	1	14.02	14.27	14.21	15.50
	CP-OFDM 64QAM	1	1	12.78	12.91	12.67	14.00
	CP-OFDM 256QAM	1	1	10.32	10.23	9.77	11.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				649334/3740	656000/3840	662666/3940	
80MHz	DFT-s-OFDM BPSK	1	1	16.06	15.45	15.70	17.00
		1	215	16.07	15.36	15.47	17.00
		108	54	15.98	15.37	15.66	17.00
		216	0	15.90	15.24	15.18	17.00
	DFT-s-OFDM QPSK	1	1	15.40	15.20	15.38	17.00
		1	215	15.51	15.23	15.41	17.00
		108	54	15.42	15.40	15.26	17.00
		216	0	15.15	15.18	15.28	17.00
	DFT-s-OFDM 16QAM	1	1	15.28	15.24	15.39	17.00
		1	215	15.08	15.33	15.30	17.00
		108	54	15.15	15.26	15.12	17.00
	DFT-s-OFDM 64QAM	1	1	13.56	13.62	13.58	15.00
		1	215	13.64	13.78	13.59	15.00
		108	54	13.61	13.57	13.52	15.00
	DFT-s-OFDM 256QAM	1	1	11.70	11.82	12.02	13.50
		1	215	11.92	11.60	12.00	13.50
		108	54	11.94	12.10	12.18	13.50
	CP-OFDM QPSK	1	1	14.47	14.74	14.60	16.00
	CP-OFDM 16QAM	1	1	14.00	14.24	14.20	15.50
	CP-OFDM 64QAM	1	1	12.76	12.87	12.64	14.00
CP-OFDM 256QAM	1	1	10.29	10.18	9.73	11.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				650000/3750	656000/3840	662000/3930	
100MHz	DFT-s-OFDM BPSK	1	1	16.03	15.41	15.67	17.00
		1	271	16.06	15.32	15.45	17.00
		135	67	15.96	15.36	15.63	17.00
		270	0	15.87	15.19	15.14	17.00



	DFT-s-OFDM QPSK	1	1	15.38	15.16	15.35	17.00
		1	271	15.48	15.18	15.37	17.00
		135	67	15.39	15.35	15.22	17.00
		270	0	15.12	15.14	15.23	17.00
	DFT-s-OFDM 16QAM	1	1	15.25	15.22	15.35	17.00
		1	271	15.05	15.30	15.28	17.00
		135	67	15.12	15.22	15.09	17.00
	DFT-s-OFDM 64QAM	1	1	13.53	13.60	13.55	15.00
		1	271	13.61	13.73	13.55	15.00
		135	67	13.59	13.53	13.49	15.00
	DFT-s-OFDM 256QAM	1	1	11.68	11.78	11.97	13.50
		1	271	11.88	11.58	11.96	13.50
		135	67	11.88	12.04	12.12	13.50
	CP-OFDM QPSK	1	1	14.42	14.66	14.53	16.00
	CP-OFDM 16QAM	1	1	13.96	14.20	14.14	15.50
	CP-OFDM 64QAM	1	1	12.73	12.82	12.60	14.00
CP-OFDM 256QAM	1	1	10.27	10.14	9.70	11.00	

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	19.40	19.55	19.47	20.00
		1	49	19.30	19.32	19.31	20.00
		25	12	19.24	19.28	19.27	20.00
		50	0	18.53	18.63	18.58	20.00
	DFT-s-OFDM QPSK	1	1	18.41	18.50	18.46	20.00
		1	49	19.11	19.19	19.14	20.00
		25	12	18.95	19.12	19.06	20.00
		50	0	18.47	18.57	18.54	20.00
	DFT-s-OFDM 16QAM	1	1	18.27	18.32	18.30	20.00
		1	49	18.35	18.45	18.40	20.00
		25	12	18.38	18.40	18.38	20.00
	DFT-s-OFDM 64QAM	1	1	16.91	16.96	16.94	18.50
		1	49	16.70	16.80	16.75	18.50
		25	12	16.81	16.90	16.86	18.50
	DFT-s-OFDM 256QAM	1	1	14.95	15.09	15.02	16.50
		1	49	14.90	15.01	14.95	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
		25	12	15.00	15.10	15.01	16.50
	CP-OFDM QPSK	1	1	17.31	17.37	17.35	19.00
	CP-OFDM 16QAM	1	1	16.67	16.75	16.70	18.50
	CP-OFDM 64QAM	1	1	15.33	15.43	15.38	17.00
	CP-OFDM 256QAM	1	1	12.84	12.93	12.89	14.00
40MHz	DFT-s-OFDM BPSK	1	1	19.42	19.56	19.50	20.00
		1	104	19.33	19.37	19.35	20.00
		50	25	19.26	19.32	19.30	20.00
		100	0	18.56	18.68	18.62	20.00
	DFT-s-OFDM QPSK	1	1	18.44	18.55	18.50	20.00
		1	104	19.13	19.23	19.19	20.00
		50	25	18.99	19.14	19.10	20.00
		100	0	18.51	18.60	18.56	20.00
	DFT-s-OFDM 16QAM	1	1	18.31	18.36	18.33	20.00
		1	104	18.38	18.47	18.43	20.00
		50	25	18.41	18.45	18.42	20.00
	DFT-s-OFDM 64QAM	1	1	16.93	17.00	16.97	18.50
		1	104	16.73	16.85	16.79	18.50
		50	25	16.84	16.95	16.90	18.50
	DFT-s-OFDM 256QAM	1	1	14.97	15.08	15.04	16.50
		1	104	14.93	15.01	14.98	16.50
		50	25	14.99	15.12	15.04	16.50
	CP-OFDM QPSK	1	1	17.34	17.42	17.35	19.00
	CP-OFDM 16QAM	1	1	16.69	16.79	16.73	18.50
	CP-OFDM 64QAM	1	1	15.36	15.48	15.42	17.00
CP-OFDM 256QAM	1	1	12.87	12.98	12.93	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	19.41	19.52	19.48	20.00
		1	160	19.31	19.36	19.32	20.00
		81	40	19.23	19.27	19.26	20.00
		162	0	18.54	18.64	18.59	20.00
	DFT-s-OFDM QPSK	1	1	18.41	18.50	18.46	20.00
		1	160	19.10	19.20	19.15	20.00



		81	40	18.97	19.10	19.05	20.00
		162	0	18.49	18.58	18.54	20.00
	DFT-s-OFDM 16QAM	1	1	18.29	18.33	18.31	20.00
		1	160	18.36	18.43	18.40	20.00
		81	40	18.38	18.43	18.39	20.00
	DFT-s-OFDM 64QAM	1	1	16.90	16.95	16.93	18.50
		1	160	16.71	16.81	16.76	18.50
		81	40	16.81	16.90	16.86	18.50
	DFT-s-OFDM 256QAM	1	1	14.92	15.06	15.02	16.50
		1	160	14.91	14.98	14.96	16.50
		81	40	15.00	15.11	15.05	16.50
	CP-OFDM QPSK	1	1	17.33	17.44	17.36	19.00
	CP-OFDM 16QAM	1	1	16.67	16.76	16.72	18.50
CP-OFDM 64QAM	1	1	15.34	15.44	15.39	17.00	
CP-OFDM 256QAM	1	1	12.84	12.93	12.89	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	19.38	19.48	19.45	20.00
		1	215	19.30	19.32	19.30	20.00
		108	54	19.21	19.26	19.23	20.00
		216	0	18.51	18.59	18.55	20.00
	DFT-s-OFDM QPSK	1	1	18.39	18.46	18.43	20.00
		1	215	19.07	19.15	19.11	20.00
		108	54	18.94	19.05	19.01	20.00
		216	0	18.46	18.54	18.49	20.00
	DFT-s-OFDM 16QAM	1	1	18.26	18.31	18.27	20.00
		1	215	18.33	18.40	18.38	20.00
		108	54	18.35	18.39	18.36	20.00
	DFT-s-OFDM 64QAM	1	1	16.87	16.93	16.90	18.50
		1	215	16.68	16.76	16.72	18.50
		108	54	16.79	16.86	16.83	18.50
	DFT-s-OFDM 256QAM	1	1	14.90	15.02	14.97	16.50
		1	215	14.87	14.96	14.92	16.50
		108	54	14.94	15.05	14.99	16.50
	CP-OFDM QPSK	1	1	17.28	17.36	17.29	19.00
	CP-OFDM 16QAM	1	1	16.63	16.72	16.66	18.50
	CP-OFDM 64QAM	1	1	15.31	15.39	15.35	17.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	
	CP-OFDM 256QAM	1	1	12.82	12.89	12.86	14.00
100MHz	DFT-s-OFDM BPSK	1	1	/	19.33	/	20.00
		1	271	/	19.29	/	20.00
		135	67	/	19.16	/	20.00
		270	0	/	18.46	/	20.00
	DFT-s-OFDM QPSK	1	1	/	18.35	/	20.00
		1	271	/	19.00	/	20.00
		135	67	/	18.90	/	20.00
	DFT-s-OFDM 16QAM	270	0	/	18.42	/	20.00
		1	1	/	18.22	/	20.00
		1	271	/	18.28	/	20.00
	DFT-s-OFDM 64QAM	135	67	/	18.29	/	20.00
		1	1	/	16.80	/	18.50
		1	271	/	16.63	/	18.50
	DFT-s-OFDM 256QAM	135	67	/	16.75	/	18.50
		1	1	/	14.83	/	16.50
		1	271	/	14.80	/	16.50
	CP-OFDM QPSK	135	67	/	14.82	/	16.50
		1	1	/	17.20	/	19.00
	CP-OFDM 16QAM	1	1	/	16.55	/	18.50
	CP-OFDM 64QAM	1	1	/	15.26	/	17.00
CP-OFDM 256QAM	1	1	/	12.78	/	14.00	

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	650000/3750	652666/3790	
20MHz	DFT-s-OFDM BPSK	1	1	19.03	19.03	18.91	20.00
		1	49	18.79	18.78	18.79	20.00
		25	12	19.36	19.30	19.30	20.00
		50	0	18.92	18.89	18.84	20.00
	DFT-s-OFDM QPSK	1	1	18.50	18.48	18.43	20.00
		1	49	18.72	18.65	18.60	20.00
		25	12	18.78	18.80	18.71	20.00
		50	0	18.25	18.23	18.22	20.00



	DFT-s-OFDM 16QAM	1	1	18.30	18.26	18.27	20.00
		1	49	18.64	18.62	18.54	20.00
		25	12	18.57	18.49	18.49	20.00
	DFT-s-OFDM 64QAM	1	1	17.34	17.26	17.24	18.50
		1	49	17.09	17.06	17.01	18.50
		25	12	17.14	17.12	17.07	18.50
	DFT-s-OFDM 256QAM	1	1	15.46	15.41	15.32	16.50
		1	49	15.14	15.09	15.02	16.50
		25	12	15.33	15.20	15.12	16.50
	CP-OFDM QPSK	1	1	17.62	17.52	17.56	19.00
CP-OFDM 16QAM	1	1	17.37	17.28	17.26	18.50	
CP-OFDM 64QAM	1	1	15.72	15.69	15.64	17.00	
CP-OFDM 256QAM	1	1	13.17	13.15	13.10	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
40MHz	DFT-s-OFDM BPSK	1	1	19.05	19.04	18.94	20.00
		1	104	18.82	18.83	18.83	20.00
		50	25	19.38	19.34	19.33	20.00
		100	0	18.95	18.94	18.88	20.00
	DFT-s-OFDM QPSK	1	1	18.53	18.53	18.47	20.00
		1	104	18.74	18.69	18.65	20.00
		50	25	18.82	18.82	18.75	20.00
		100	0	18.29	18.26	18.24	20.00
	DFT-s-OFDM 16QAM	1	1	18.34	18.30	18.30	20.00
		1	104	18.67	18.64	18.57	20.00
		50	25	18.60	18.54	18.53	20.00
	DFT-s-OFDM 64QAM	1	1	17.36	17.30	17.27	18.50
		1	104	17.12	17.11	17.05	18.50
		50	25	17.17	17.17	17.11	18.50
	DFT-s-OFDM 256QAM	1	1	15.48	15.40	15.34	16.50
		1	104	15.17	15.09	15.05	16.50
		50	25	15.32	15.22	15.15	16.50
	CP-OFDM QPSK	1	1	17.65	17.57	17.56	19.00
	CP-OFDM 16QAM	1	1	17.39	17.32	17.29	18.50
	CP-OFDM 64QAM	1	1	15.75	15.74	15.68	17.00
CP-OFDM 256QAM	1	1	13.20	13.20	13.14	14.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	19.04	19.00	18.92	20.00
		1	160	18.80	18.82	18.80	20.00
		81	40	19.35	19.29	19.29	20.00
		162	0	18.93	18.90	18.85	20.00
	DFT-s-OFDM QPSK	1	1	18.50	18.48	18.43	20.00
		1	160	18.71	18.66	18.61	20.00
		81	40	18.80	18.78	18.70	20.00
		162	0	18.27	18.24	18.22	20.00
	DFT-s-OFDM 16QAM	1	1	18.32	18.27	18.28	20.00
		1	160	18.65	18.60	18.54	20.00
		81	40	18.57	18.52	18.50	20.00
	DFT-s-OFDM 64QAM	1	1	17.33	17.25	17.23	18.50
		1	160	17.10	17.07	17.02	18.50
		81	40	17.14	17.12	17.07	18.50
	DFT-s-OFDM 256QAM	1	1	15.43	15.38	15.32	16.50
		1	160	15.15	15.06	15.03	16.50
		81	40	15.33	15.21	15.16	16.50
	CP-OFDM QPSK	1	1	17.64	17.59	17.57	19.00
	CP-OFDM 16QAM	1	1	17.37	17.29	17.28	18.50
	CP-OFDM 64QAM	1	1	15.73	15.70	15.65	17.00
CP-OFDM 256QAM	1	1	13.17	13.15	13.10	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				649334/3740	650000/3750	650666/3760	
80MHz	DFT-s-OFDM BPSK	1	1	19.01	18.96	18.89	20.00
		1	215	18.79	18.78	18.78	20.00
		108	54	19.33	19.28	19.26	20.00
		216	0	18.90	18.85	18.81	20.00
	DFT-s-OFDM QPSK	1	1	18.48	18.44	18.40	20.00
		1	215	18.68	18.61	18.57	20.00
		108	54	18.77	18.73	18.66	20.00
		216	0	18.24	18.20	18.17	20.00
	DFT-s-OFDM 16QAM	1	1	18.29	18.25	18.24	20.00
		1	215	18.62	18.57	18.52	20.00
		108	54	18.54	18.48	18.47	20.00
	DFT-s-OFDM 64QAM	1	1	17.30	17.23	17.20	18.50
		1	215	17.07	17.02	16.98	18.50
		108	54	17.12	17.08	17.04	18.50



	DFT-s-OFDM 256QAM	1	1	15.41	15.34	15.27	16.50
		1	215	15.11	15.04	14.99	16.50
		108	54	15.27	15.15	15.10	16.50
	CP-OFDM QPSK	1	1	17.59	17.51	17.50	19.00
	CP-OFDM 16QAM	1	1	17.33	17.25	17.22	18.50
	CP-OFDM 64QAM	1	1	15.70	15.65	15.61	17.00
	CP-OFDM 256QAM	1	1	13.15	13.11	13.07	14.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	650000/3750	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	18.86	/	20.00
		1	271	/	18.76	/	20.00
		135	67	/	19.23	/	20.00
		270	0	/	18.77	/	20.00
	DFT-s-OFDM QPSK	1	1	/	18.37	/	20.00
		1	271	/	18.53	/	20.00
		135	67	/	18.62	/	20.00
		270	0	/	18.12	/	20.00
	DFT-s-OFDM 16QAM	1	1	/	18.20	/	20.00
		1	271	/	18.50	/	20.00
		135	67	/	18.44	/	20.00
	DFT-s-OFDM 64QAM	1	1	/	17.17	/	18.50
		1	271	/	16.94	/	18.50
		135	67	/	17.01	/	18.50
	DFT-s-OFDM 256QAM	1	1	/	15.22	/	16.50
		1	271	/	14.95	/	16.50
		135	67	/	15.04	/	16.50
	CP-OFDM QPSK	1	1	/	17.43	/	19.00
	CP-OFDM 16QAM	1	1	/	17.16	/	18.50
	CP-OFDM 64QAM	1	1	/	15.57	/	17.00
CP-OFDM 256QAM	1	1	/	13.04	/	14.00	



NR n78							
Level 5-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	16.21	16.20	16.17	17.00
		1	49	16.03	16.02	16.03	17.00
		25	12	16.02	15.91	15.96	17.00
		50	0	15.97	15.92	15.93	17.00
	DFT-s-OFDM QPSK	1	1	15.79	15.74	15.75	17.00
		1	49	16.09	15.98	16.01	17.00
		25	12	15.95	15.94	15.93	17.00
	DFT-s-OFDM 16QAM	50	0	15.73	15.68	15.71	17.00
		1	1	15.54	15.49	15.52	17.00
		1	49	15.44	15.41	15.40	17.00
	DFT-s-OFDM 64QAM	25	12	15.34	15.24	15.28	17.00
		1	1	14.08	13.95	14.00	15.50
		1	49	13.90	13.85	13.86	15.50
	DFT-s-OFDM 256QAM	25	12	13.96	13.91	13.92	15.50
		1	1	12.68	12.55	12.58	14.00
		1	49	12.53	12.46	12.47	14.00
	CP-OFDM QPSK	25	12	12.52	12.37	12.40	14.00
		1	1	15.37	15.23	15.31	16.50
CP-OFDM 16QAM	1	1	14.86	14.73	14.78	16.00	
CP-OFDM 64QAM	1	1	12.79	12.74	12.75	14.50	
CP-OFDM 256QAM	1	1	10.13	10.08	10.09	11.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	16.23	16.21	16.20	17.00
		1	104	16.06	16.07	16.07	17.00
		50	25	16.04	15.95	15.99	17.00
		100	0	16.00	15.97	15.97	17.00
	DFT-s-OFDM QPSK	1	1	15.82	15.79	15.79	17.00
		1	104	16.11	16.02	16.06	17.00
		50	25	15.99	15.96	15.97	17.00
	DFT-s-OFDM 16QAM	100	0	15.77	15.71	15.73	17.00
		1	1	15.58	15.53	15.55	17.00
		1	104	15.47	15.43	15.43	17.00
	50	25	15.37	15.29	15.32	17.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632000/3480	633332/3500	634666/3520		
	DFT-s-OFDM 64QAM	1	1	14.10	13.99	14.03	15.50	
		1	104	13.93	13.90	13.90	15.50	
		50	25	13.99	13.96	13.96	15.50	
	DFT-s-OFDM 256QAM	1	1	12.70	12.54	12.60	14.00	
		1	104	12.56	12.46	12.50	14.00	
		50	25	12.51	12.39	12.43	14.00	
	CP-OFDM QPSK	1	1	15.40	15.28	15.31	16.50	
	CP-OFDM 16QAM	1	1	14.88	14.77	14.81	16.00	
CP-OFDM 64QAM	1	1	12.82	12.79	12.79	14.50		
CP-OFDM 256QAM	1	1	10.16	10.13	10.13	11.50		
60MHz	DFT-s-OFDM BPSK	1	1	16.22	16.17	16.18	17.00	
		1	160	16.04	16.06	16.04	17.00	
		81	40	16.01	15.90	15.95	17.00	
		162	0	15.98	15.93	15.94	17.00	
	DFT-s-OFDM QPSK	1	1	15.79	15.74	15.75	17.00	
		1	160	16.08	15.99	16.02	17.00	
		81	40	15.97	15.92	15.92	17.00	
		162	0	15.75	15.69	15.71	17.00	
	DFT-s-OFDM 16QAM	1	1	15.56	15.50	15.53	17.00	
		1	160	15.45	15.39	15.40	17.00	
		81	40	15.34	15.27	15.29	17.00	
	DFT-s-OFDM 64QAM	1	1	14.07	13.94	13.99	15.50	
		1	160	13.91	13.86	13.87	15.50	
		81	40	13.96	13.91	13.92	15.50	
	DFT-s-OFDM 256QAM	1	1	12.65	12.52	12.58	14.00	
		1	160	12.54	12.43	12.48	14.00	
		81	40	12.52	12.38	12.44	14.00	
	CP-OFDM QPSK	1	1	15.39	15.30	15.32	16.50	
	CP-OFDM 16QAM	1	1	14.86	14.74	14.80	16.00	
	CP-OFDM 64QAM	1	1	12.80	12.75	12.76	14.50	
	CP-OFDM 256QAM	1	1	10.13	10.08	10.09	11.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
					632666/3490	633332/3500	633998/3510	
	80MHz	DFT-s-OFDM	1	1	16.19	16.13	16.15	17.00



	BPSK	1	215	16.03	16.02	16.02	17.00	
		108	54	15.99	15.89	15.92	17.00	
		216	0	15.95	15.88	15.90	17.00	
	DFT-s-OFDM QPSK	1	1	15.77	15.70	15.72	17.00	
		1	215	16.05	15.94	15.98	17.00	
		108	54	15.94	15.87	15.88	17.00	
	DFT-s-OFDM 16QAM	216	0	15.72	15.65	15.66	17.00	
		1	1	15.53	15.48	15.49	17.00	
		1	215	15.42	15.36	15.38	17.00	
	DFT-s-OFDM 64QAM	108	54	15.31	15.23	15.26	17.00	
		1	1	14.04	13.92	13.96	15.50	
		1	215	13.88	13.81	13.83	15.50	
	DFT-s-OFDM 256QAM	108	54	13.94	13.87	13.89	15.50	
		1	1	12.63	12.48	12.53	14.00	
		1	215	12.50	12.41	12.44	14.00	
CP-OFDM QPSK	108	54	12.46	12.32	12.38	14.00		
	1	1	15.34	15.22	15.25	16.50		
CP-OFDM 16QAM	1	1	14.82	14.70	14.74	16.00		
CP-OFDM 64QAM	1	1	12.77	12.70	12.72	14.50		
CP-OFDM 256QAM	1	1	10.11	10.04	10.06	11.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				/	633332/3500	/		
100MHz	DFT-s-OFDM BPSK	1	1	/	16.11	/	17.00	
		1	271	/	16.01	/	17.00	
		135	67	/	15.85	/	17.00	
		270	0	/	15.85	/	17.00	
	DFT-s-OFDM QPSK	1	1	/	15.67	/	17.00	
		1	271	/	15.91	/	17.00	
		135	67	/	15.92	/	17.00	
	DFT-s-OFDM 16QAM	270	0	/	15.60	/	17.00	
		1	1	/	15.45	/	17.00	
		1	271	/	15.34	/	17.00	
	DFT-s-OFDM 64QAM	135	67	/	15.21	/	17.00	
		1	1	/	13.88	/	15.50	
		1	271	/	13.78	/	15.50	
	DFT-s-OFDM 256QAM	135	67	/	13.84	/	15.50	
		1	1	/	12.43	/	14.00	
		1	271	/	12.38	/	14.00	
			135	67	/	12.30	/	14.00



	CP-OFDM QPSK	1	1	/	15.16	/	16.50
	CP-OFDM 16QAM	1	1	/	14.66	/	16.00
	CP-OFDM 64QAM	1	1	/	12.67	/	14.50
	CP-OFDM 256QAM	1	1	/	10.01	/	11.50

NR n78							
Level 5-Main Ant3(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	650000/3750	652666/3790	
20MHz	DFT-s-OFDM BPSK	1	1	15.57	15.82	15.56	17.00
		1	49	15.37	15.40	15.40	17.00
		25	12	15.68	15.76	15.68	17.00
		50	0	15.69	15.86	15.70	17.00
	DFT-s-OFDM QPSK	1	1	15.43	15.60	15.46	17.00
		1	49	15.54	15.65	15.50	17.00
		25	12	15.44	15.76	15.53	17.00
		50	0	15.44	15.63	15.54	17.00
	DFT-s-OFDM 16QAM	1	1	15.16	15.23	15.22	17.00
		1	49	15.34	15.51	15.33	17.00
		25	12	15.35	15.37	15.31	17.00
	DFT-s-OFDM 64QAM	1	1	14.09	14.19	14.06	15.50
		1	49	14.01	14.18	14.02	15.50
		25	12	13.92	14.09	13.95	15.50
	DFT-s-OFDM 256QAM	1	1	12.51	12.71	12.46	14.00
		1	49	12.53	12.65	12.50	14.00
		25	12	12.52	12.65	12.43	14.00
	CP-OFDM QPSK	1	1	15.13	15.19	15.13	16.50
CP-OFDM 16QAM	1	1	14.72	14.82	14.69	16.00	
CP-OFDM 64QAM	1	1	12.79	12.96	12.80	14.50	
CP-OFDM 256QAM	1	1	9.83	10.00	9.86	11.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648000/3720	650000/3750	652000/3780	
40MHz	DFT-s-OFDM BPSK	1	1	15.55	15.75	15.54	17.00
		1	104	15.37	15.40	15.39	17.00
		50	25	15.65	15.74	15.64	17.00



		100	0	15.67	15.82	15.67	17.00
	DFT-s-OFDM QPSK	1	1	15.41	15.56	15.43	17.00
		1	104	15.50	15.61	15.47	17.00
		50	25	15.43	15.69	15.48	17.00
		100	0	15.43	15.60	15.49	17.00
	DFT-s-OFDM 16QAM	1	1	15.15	15.22	15.19	17.00
		1	104	15.32	15.46	15.31	17.00
		50	25	15.32	15.36	15.29	17.00
	DFT-s-OFDM 64QAM	1	1	14.05	14.16	14.02	15.50
		1	104	13.99	14.14	13.99	15.50
		50	25	13.90	14.05	13.92	15.50
	DFT-s-OFDM 256QAM	1	1	12.46	12.64	12.41	14.00
		1	104	12.50	12.60	12.47	14.00
		50	25	12.46	12.60	12.41	14.00
CP-OFDM QPSK	1	1	15.10	15.18	15.07	16.50	
CP-OFDM 16QAM	1	1	14.68	14.79	14.65	16.00	
CP-OFDM 64QAM	1	1	12.77	12.92	12.77	14.50	
CP-OFDM 256QAM	1	1	9.81	9.96	9.83	11.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	15.53	15.70	15.51	17.00
		1	160	15.36	15.40	15.37	17.00
		81	40	15.61	15.68	15.59	17.00
		162	0	15.65	15.78	15.64	17.00
	DFT-s-OFDM QPSK	1	1	15.39	15.52	15.38	17.00
		1	160	15.47	15.60	15.44	17.00
		81	40	15.45	15.66	15.45	17.00
		162	0	15.45	15.57	15.46	17.00
	DFT-s-OFDM 16QAM	1	1	15.17	15.21	15.17	17.00
		1	160	15.30	15.42	15.27	17.00
		81	40	15.30	15.35	15.27	17.00
	DFT-s-OFDM 64QAM	1	1	14.01	14.10	13.97	15.50
		1	160	13.97	14.10	13.96	15.50
		81	40	13.88	14.01	13.87	15.50
	DFT-s-OFDM 256QAM	1	1	12.40	12.61	12.38	14.00
		1	160	12.48	12.59	12.45	14.00
		81	40	12.47	12.59	12.41	14.00
	CP-OFDM QPSK	1	1	15.10	15.21	15.09	16.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				649334/3740	650000/3750	650666/3760	
	CP-OFDM 16QAM	1	1	14.65	14.75	14.63	16.00
	CP-OFDM 64QAM	1	1	12.75	12.88	12.74	14.50
	CP-OFDM 256QAM	1	1	9.79	9.92	9.78	11.50
80MHz	DFT-s-OFDM BPSK	1	1	15.50	15.66	15.48	17.00
		1	215	15.35	15.36	15.35	17.00
		108	54	15.59	15.67	15.56	17.00
		216	0	15.62	15.73	15.60	17.00
	DFT-s-OFDM QPSK	1	1	15.37	15.48	15.35	17.00
		1	215	15.44	15.55	15.40	17.00
		108	54	15.42	15.61	15.41	17.00
		216	0	15.42	15.53	15.41	17.00
	DFT-s-OFDM 16QAM	1	1	15.14	15.19	15.13	17.00
		1	215	15.27	15.39	15.25	17.00
		108	54	15.27	15.31	15.24	17.00
	DFT-s-OFDM 64QAM	1	1	13.98	14.08	13.94	15.50
		1	215	13.94	14.05	13.92	15.50
		108	54	13.86	13.97	13.84	15.50
	DFT-s-OFDM 256QAM	1	1	12.38	12.57	12.33	14.00
		1	215	12.44	12.57	12.41	14.00
		108	54	12.41	12.53	12.35	14.00
	CP-OFDM QPSK	1	1	15.05	15.13	15.02	16.50
	CP-OFDM 16QAM	1	1	14.61	14.71	14.57	16.00
	CP-OFDM 64QAM	1	1	12.72	12.83	12.70	14.50
CP-OFDM 256QAM	1	1	9.77	9.88	9.75	11.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	650000/3750	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	15.39	/	17.00
		1	271	/	15.34	/	17.00
		135	67	/	15.50	/	17.00
		270	0	/	15.53	/	17.00
	DFT-s-OFDM QPSK	1	1	/	15.28	/	17.00
		1	271	/	15.33	/	17.00
		135	67	/	15.29	/	17.00
		270	0	/	15.33	/	17.00
	DFT-s-OFDM	1	1	/	15.09	/	17.00



	16QAM	1	271	/	15.18	/	17.00
		135	67	/	15.21	/	17.00
	DFT-s-OFDM 64QAM	1	1	/	13.87	/	15.50
		1	271	/	13.85	/	15.50
		135	67	/	13.77	/	15.50
	DFT-s-OFDM 256QAM	1	1	/	12.21	/	14.00
		1	271	/	12.33	/	14.00
		135	67	/	12.28	/	14.00
	CP-OFDM QPSK	1	1	/	14.95	/	16.50
	CP-OFDM 16QAM	1	1	/	14.50	/	16.00
	CP-OFDM 64QAM	1	1	/	12.63	/	14.50
	CP-OFDM 256QAM	1	1	/	9.68	/	11.50

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	16.38	16.45	16.47	17.50
		1	49	16.48	16.48	16.49	17.50
		25	12	16.84	16.86	16.90	17.50
		50	0	16.23	16.27	16.30	17.50
	DFT-s-OFDM QPSK	1	1	16.77	16.81	16.84	17.50
		1	49	16.76	16.80	16.83	17.50
		25	12	16.56	16.63	16.68	17.50
		50	0	16.04	16.07	16.12	17.50
	DFT-s-OFDM 16QAM	1	1	15.92	15.93	15.96	17.50
		1	49	16.09	16.14	16.16	17.50
		25	12	15.84	15.85	15.87	17.50
	DFT-s-OFDM 64QAM	1	1	14.31	14.34	14.38	16.00
		1	49	14.33	14.37	14.40	16.00
		25	12	14.53	14.57	14.60	16.00
	DFT-s-OFDM 256QAM	1	1	12.45	12.52	12.57	14.00
		1	49	12.47	12.52	12.55	14.00
		25	12	12.51	12.56	12.58	14.00
	CP-OFDM QPSK	1	1	14.92	14.93	14.99	16.50
	CP-OFDM 16QAM	1	1	14.53	14.56	14.60	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				631332/3470	633332/3500	635332/3530		
	CP-OFDM 64QAM	1	1	12.84	12.88	12.91	14.50	
	CP-OFDM 256QAM	1	1	10.10	10.14	10.17	11.50	
40MHz	DFT-s-OFDM BPSK	1	1	16.40	16.46	16.50	17.50	
		1	104	16.51	16.53	16.53	17.50	
		50	25	16.86	16.90	16.93	17.50	
		100	0	16.26	16.32	16.34	17.50	
	DFT-s-OFDM QPSK	1	1	16.80	16.86	16.88	17.50	
		1	104	16.78	16.84	16.88	17.50	
		50	25	16.60	16.65	16.72	17.50	
	DFT-s-OFDM 16QAM	100	0	16.08	16.10	16.14	17.50	
		1	1	15.96	15.97	15.99	17.50	
		1	104	16.12	16.16	16.19	17.50	
	DFT-s-OFDM 64QAM	50	25	15.87	15.90	15.91	17.50	
		1	1	14.33	14.38	14.41	16.00	
		1	104	14.36	14.42	14.44	16.00	
	DFT-s-OFDM 256QAM	50	25	14.56	14.62	14.64	16.00	
		1	1	12.47	12.51	12.59	14.00	
		1	104	12.50	12.52	12.58	14.00	
	CP-OFDM	QPSK	50	25	12.50	12.58	12.61	14.00
			1	1	14.95	14.98	14.99	16.50
			1	1	14.55	14.60	14.63	16.00
		16QAM	1	1	12.87	12.93	12.95	14.50
1			1	10.13	10.19	10.21	11.50	
1			1	10.13	10.19	10.21	11.50	

Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	16.39	16.42	16.48	17.50
		1	160	16.49	16.52	16.50	17.50
		81	40	16.83	16.85	16.89	17.50
		162	0	16.24	16.28	16.31	17.50
	DFT-s-OFDM QPSK	1	1	16.77	16.81	16.84	17.50
		1	160	16.75	16.81	16.84	17.50
		81	40	16.58	16.61	16.67	17.50
	DFT-s-OFDM 16QAM	162	0	16.06	16.08	16.12	17.50
		1	1	15.94	15.94	15.97	17.50
		1	160	16.10	16.12	16.16	17.50
	81	40	15.84	15.88	15.88	17.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				632666/3490	633332/3500	633998/3510		
	DFT-s-OFDM 64QAM	1	1	14.30	14.33	14.37	16.00	
		1	160	14.34	14.38	14.41	16.00	
		81	40	14.53	14.57	14.60	16.00	
	DFT-s-OFDM 256QAM	1	1	12.42	12.49	12.57	14.00	
		1	160	12.48	12.49	12.56	14.00	
		81	40	12.51	12.57	12.62	14.00	
	CP-OFDM QPSK	1	1	14.94	15.00	15.00	16.50	
	CP-OFDM 16QAM	1	1	14.53	14.57	14.62	16.00	
CP-OFDM 64QAM	1	1	12.85	12.89	12.92	14.50		
CP-OFDM 256QAM	1	1	10.10	10.14	10.17	11.50		
80MHz	DFT-s-OFDM BPSK	1	1	16.36	16.38	16.45	17.50	
		1	215	16.48	16.48	16.48	17.50	
		108	54	16.81	16.84	16.86	17.50	
		216	0	16.21	16.23	16.27	17.50	
	DFT-s-OFDM QPSK	1	1	16.75	16.77	16.81	17.50	
		1	215	16.72	16.76	16.80	17.50	
		108	54	16.55	16.56	16.63	17.50	
		216	0	16.03	16.04	16.07	17.50	
	DFT-s-OFDM 16QAM	1	1	15.91	15.92	15.93	17.50	
		1	215	16.07	16.09	16.14	17.50	
		108	54	15.81	15.84	15.85	17.50	
	DFT-s-OFDM 64QAM	1	1	14.27	14.31	14.34	16.00	
		1	215	14.31	14.33	14.37	16.00	
		108	54	14.51	14.53	14.57	16.00	
	DFT-s-OFDM 256QAM	1	1	12.40	12.45	12.52	14.00	
		1	215	12.44	12.47	12.52	14.00	
		108	54	12.45	12.51	12.56	14.00	
	CP-OFDM QPSK	1	1	14.89	14.92	14.93	16.50	
	CP-OFDM 16QAM	1	1	14.49	14.53	14.56	16.00	
	CP-OFDM 64QAM	1	1	12.82	12.84	12.88	14.50	
	CP-OFDM 256QAM	1	1	10.08	10.10	10.14	11.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					/	633332/3500	/	
	100MHz	DFT-s-OFDM	1	1	/	16.30	/	17.50



	BPSK	1	271	/	16.44	/	17.50
		135	67	/	16.73	/	17.50
		270	0	/	16.14	/	17.50
	DFT-s-OFDM QPSK	1	1	/	16.67	/	17.50
		1	271	/	16.65	/	17.50
		135	67	/	16.48	/	17.50
	DFT-s-OFDM 16QAM	270	0	/	15.95	/	17.50
		1	1	/	15.85	/	17.50
		1	271	/	16.01	/	17.50
	DFT-s-OFDM 64QAM	135	67	/	15.76	/	17.50
		1	1	/	14.19	/	16.00
		1	271	/	14.24	/	16.00
	DFT-s-OFDM 256QAM	135	67	/	14.43	/	16.00
		1	1	/	12.32	/	14.00
		1	271	/	12.38	/	14.00
	CP-OFDM QPSK	135	67	/	12.39	/	14.00
		1	1	/	14.84	/	16.50
		1	1	/	14.41	/	16.00
	CP-OFDM 16QAM	1	1	/	12.75	/	14.50
		1	1	/	10.00	/	11.50
1		1	/				

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	650000/3750	652666/3790	
20MHz	DFT-s-OFDM BPSK	1	1	16.02	16.18	16.13	17.50
		1	49	16.14	16.16	16.19	17.50
		25	12	16.15	16.17	16.23	17.50
		50	0	15.60	15.70	15.71	17.50
	DFT-s-OFDM QPSK	1	1	15.93	16.03	16.05	17.50
		1	49	16.03	16.07	16.11	17.50
		25	12	15.76	15.96	15.97	17.50
		50	0	15.59	15.70	15.78	17.50
	DFT-s-OFDM 16QAM	1	1	15.68	15.71	15.80	17.50
		1	49	15.86	15.96	15.94	17.50
		25	12	15.71	15.70	15.74	17.50
	DFT-s-OFDM 64QAM	1	1	14.37	14.40	14.44	16.00
		1	49	14.71	14.81	14.82	16.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
	DFT-s-OFDM 256QAM	25	12	14.10	14.20	14.22	16.00
		1	1	12.23	12.31	12.35	14.00
		1	49	12.24	12.28	12.33	14.00
		25	12	12.20	12.26	12.28	14.00
	CP-OFDM QPSK	1	1	14.95	14.94	15.06	16.50
	CP-OFDM 16QAM	1	1	14.57	14.60	14.67	16.00
	CP-OFDM 64QAM	1	1	12.65	12.75	12.76	14.50
CP-OFDM 256QAM	1	1	9.90	10.00	10.02	11.50	
40MHz	DFT-s-OFDM BPSK	1	1	16.00	16.13	16.10	17.50
		1	104	16.13	16.16	16.17	17.50
		50	25	16.11	16.11	16.18	17.50
		100	0	15.58	15.66	15.68	17.50
	DFT-s-OFDM QPSK	1	1	15.91	15.99	16.00	17.50
		1	104	16.00	16.06	16.08	17.50
		50	25	15.78	15.93	15.94	17.50
	DFT-s-OFDM 16QAM	100	0	15.61	15.67	15.75	17.50
		1	1	15.70	15.70	15.78	17.50
		1	104	15.84	15.92	15.90	17.50
	DFT-s-OFDM 64QAM	50	25	15.69	15.69	15.72	17.50
		1	1	14.33	14.34	14.39	16.00
		1	104	14.69	14.77	14.79	16.00
	DFT-s-OFDM 256QAM	50	25	14.08	14.16	14.17	16.00
		1	1	12.17	12.28	12.32	14.00
		1	104	12.22	12.27	12.31	14.00
	CP-OFDM QPSK	50	25	12.21	12.25	12.28	14.00
		1	1	14.95	14.97	15.08	16.50
		1	1	14.54	14.56	14.65	16.00
	CP-OFDM 16QAM	1	1	12.63	12.71	12.73	14.50
CP-OFDM 64QAM	1	1	9.88	9.96	9.97	11.50	
CP-OFDM 256QAM	1	1					
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	15.97	16.09	16.07	17.50
		1	160	16.12	16.12	16.15	17.50
		81	40	16.09	16.10	16.15	17.50



		162	0	15.55	15.61	15.64	17.50
	DFT-s-OFDM QPSK	1	1	15.89	15.95	15.97	17.50
		1	160	15.97	16.01	16.04	17.50
		81	40	15.75	15.88	15.90	17.50
		162	0	15.58	15.63	15.70	17.50
	DFT-s-OFDM 16QAM	1	1	15.67	15.68	15.74	17.50
		1	160	15.81	15.89	15.88	17.50
		81	40	15.66	15.65	15.69	17.50
	DFT-s-OFDM 64QAM	1	1	14.30	14.32	14.36	16.00
		1	160	14.66	14.72	14.75	16.00
		81	40	14.06	14.12	14.14	16.00
	DFT-s-OFDM 256QAM	1	1	12.15	12.24	12.27	14.00
		1	160	12.18	12.25	12.27	14.00
		81	40	12.15	12.19	12.22	14.00
CP-OFDM QPSK	1	1	14.90	14.89	15.01	16.50	
CP-OFDM 16QAM	1	1	14.50	14.52	14.59	16.00	
CP-OFDM 64QAM	1	1	12.60	12.66	12.69	14.50	
CP-OFDM 256QAM	1	1	9.86	9.92	9.94	11.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				649334/3740	650000/3750	650666/3760	
80MHz	DFT-s-OFDM BPSK	1	1	15.95	16.02	16.05	17.50
		1	215	16.12	16.12	16.14	17.50
		108	54	16.06	16.08	16.11	17.50
		216	0	15.53	15.57	15.61	17.50
	DFT-s-OFDM QPSK	1	1	15.87	15.91	15.94	17.50
		1	215	15.93	15.97	16.01	17.50
		108	54	15.74	15.81	15.85	17.50
	DFT-s-OFDM 16QAM	216	0	15.57	15.60	15.65	17.50
		1	1	15.66	15.67	15.71	17.50
		1	215	15.79	15.84	15.86	17.50
	DFT-s-OFDM 64QAM	108	54	15.63	15.64	15.67	17.50
		1	1	14.26	14.29	14.32	16.00
		1	215	14.64	14.68	14.72	16.00
	DFT-s-OFDM 256QAM	108	54	14.04	14.08	14.11	16.00
		1	1	12.10	12.17	12.22	14.00
		1	215	12.15	12.20	12.24	14.00
	CP-OFDM QPSK	108	54	12.09	12.14	12.20	14.00
		1	1	14.87	14.88	14.95	16.50



	CP-OFDM 16QAM	1	1	14.46	14.49	14.55	16.00
	CP-OFDM 64QAM	1	1	12.58	12.62	12.66	14.50
	CP-OFDM 256QAM	1	1	9.84	9.88	9.91	11.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	650000/3750	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	15.93	/	17.50
		1	271	/	16.12	/	17.50
		135	67	/	16.03	/	17.50
		270	0	/	15.51	/	17.50
	DFT-s-OFDM QPSK	1	1	/	15.85	/	17.50
		1	271	/	15.89	/	17.50
		135	67	/	15.73	/	17.50
	DFT-s-OFDM 16QAM	270	0	/	15.56	/	17.50
		1	1	/	15.65	/	17.50
		1	271	/	15.77	/	17.50
	DFT-s-OFDM 64QAM	135	67	/	15.60	/	17.50
		1	1	/	14.22	/	16.00
		1	271	/	14.62	/	16.00
	DFT-s-OFDM 256QAM	135	67	/	14.02	/	16.00
		1	1	/	12.05	/	14.00
		1	271	/	12.12	/	14.00
	CP-OFDM QPSK	135	67	/	12.03	/	14.00
		1	1	/	14.84	/	16.50
	CP-OFDM 16QAM	1	1	/	14.42	/	16.00
	CP-OFDM 64QAM	1	1	/	12.56	/	14.50
CP-OFDM 256QAM	1	1	/	9.82	/	11.50	

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant5(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	19.24	19.49	19.31	20.00
		1	49	19.17	19.22	19.18	20.00
		25	12	18.89	18.97	18.92	20.00
		50	0	18.95	19.13	19.00	20.00



	DFT-s-OFDM QPSK	1	1	19.16	19.33	19.21	20.00
		1	49	18.73	18.89	18.76	20.00
		25	12	18.96	19.26	19.07	20.00
		50	0	18.85	19.02	18.92	20.00
	DFT-s-OFDM 16QAM	1	1	18.27	18.34	18.30	20.00
		1	49	18.40	18.58	18.45	20.00
		25	12	18.30	18.36	18.30	20.00
	DFT-s-OFDM 64QAM	1	1	17.06	17.17	17.09	18.50
		1	49	16.78	16.96	16.83	18.50
		25	12	16.79	16.96	16.84	18.50
	DFT-s-OFDM 256QAM	1	1	15.15	15.40	15.22	16.50
		1	49	15.03	15.20	15.08	16.50
		25	12	14.98	15.15	14.99	16.50
	CP-OFDM QPSK	1	1	17.86	18.00	17.90	19.00
CP-OFDM 16QAM	1	1	17.15	17.28	17.18	18.50	
CP-OFDM 64QAM	1	1	15.73	15.91	15.78	17.00	
CP-OFDM 256QAM	1	1	12.51	12.68	12.56	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	19.26	19.50	19.34	20.00
		1	104	19.20	19.27	19.22	20.00
		50	25	18.91	19.01	18.95	20.00
		100	0	18.98	19.18	19.04	20.00
	DFT-s-OFDM QPSK	1	1	19.19	19.38	19.25	20.00
		1	104	18.75	18.93	18.81	20.00
		50	25	19.00	19.28	19.11	20.00
	DFT-s-OFDM 16QAM	100	0	18.89	19.05	18.94	20.00
		1	1	18.31	18.38	18.33	20.00
		1	104	18.43	18.60	18.48	20.00
	DFT-s-OFDM 64QAM	50	25	18.33	18.41	18.34	20.00
		1	1	17.08	17.21	17.12	18.50
		1	104	16.81	17.01	16.87	18.50
	DFT-s-OFDM 256QAM	50	25	16.82	17.01	16.88	18.50
		1	1	15.17	15.39	15.24	16.50
		1	104	15.06	15.20	15.11	16.50
	CP-OFDM QPSK	50	25	14.97	15.17	15.02	16.50
		1	1	17.89	18.05	17.90	19.00
	CP-OFDM 16QAM	1	1	17.17	17.32	17.21	18.50



	CP-OFDM 64QAM	1	1	15.76	15.96	15.82	17.00	
	CP-OFDM 256QAM	1	1	12.54	12.73	12.60	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632000/3480	633332/3500	634666/3520		
60MHz	DFT-s-OFDM BPSK	1	1	19.25	19.46	19.32	20.00	
		1	160	19.18	19.26	19.19	20.00	
		81	40	18.88	18.96	18.91	20.00	
		162	0	18.96	19.14	19.01	20.00	
	DFT-s-OFDM QPSK	1	1	19.16	19.33	19.21	20.00	
		1	160	18.72	18.90	18.77	20.00	
		81	40	18.98	19.24	19.06	20.00	
	DFT-s-OFDM 16QAM	162	0	18.87	19.03	18.92	20.00	
		1	1	18.29	18.35	18.31	20.00	
		1	160	18.41	18.56	18.45	20.00	
	DFT-s-OFDM 64QAM	81	40	18.30	18.39	18.31	20.00	
		1	1	17.05	17.16	17.08	18.50	
		1	160	16.79	16.97	16.84	18.50	
	DFT-s-OFDM 256QAM	81	40	16.79	16.96	16.84	18.50	
		1	1	15.12	15.37	15.22	16.50	
		1	160	15.04	15.17	15.09	16.50	
	CP-OFDM	QPSK	81	40	14.98	15.16	15.03	16.50
		QPSK	1	1	17.88	18.07	17.91	19.00
		16QAM	1	1	17.15	17.29	17.20	18.50
		64QAM	1	1	15.74	15.92	15.79	17.00
256QAM		1	1	12.51	12.68	12.56	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632666/3490	633332/3500	633998/3510		
80MHz	DFT-s-OFDM BPSK	1	1	19.22	19.42	19.29	20.00	
		1	215	19.17	19.22	19.17	20.00	
		108	54	18.86	18.95	18.88	20.00	
		216	0	18.93	19.09	18.97	20.00	
	DFT-s-OFDM QPSK	1	1	19.14	19.29	19.18	20.00	
		1	215	18.69	18.85	18.73	20.00	
		108	54	18.95	19.19	19.02	20.00	
	DFT-s-OFDM 16QAM	216	0	18.84	18.99	18.87	20.00	
		1	1	18.26	18.33	18.27	20.00	
		1	215	18.38	18.53	18.43	20.00	
			108	54	18.27	18.35	18.28	20.00



	DFT-s-OFDM 64QAM	1	1	17.02	17.14	17.05	18.50
		1	215	16.76	16.92	16.80	18.50
		108	54	16.77	16.92	16.81	18.50
	DFT-s-OFDM 256QAM	1	1	15.10	15.33	15.17	16.50
		1	215	15.00	15.15	15.05	16.50
		108	54	14.92	15.10	14.97	16.50
	CP-OFDM QPSK	1	1	17.83	17.99	17.84	19.00
	CP-OFDM 16QAM	1	1	17.11	17.25	17.14	18.50
CP-OFDM 64QAM	1	1	15.71	15.87	15.75	17.00	
CP-OFDM 256QAM	1	1	12.49	12.64	12.53	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	19.18	/	20.00
		1	271	/	19.16	/	20.00
		135	67	/	18.79	/	20.00
		270	0	/	18.88	/	20.00
	DFT-s-OFDM QPSK	1	1	/	19.09	/	20.00
		1	271	/	18.62	/	20.00
		135	67	/	18.89	/	20.00
		270	0	/	18.78	/	20.00
	DFT-s-OFDM 16QAM	1	1	/	18.22	/	20.00
		1	271	/	18.34	/	20.00
		135	67	/	18.22	/	20.00
	DFT-s-OFDM 64QAM	1	1	/	16.94	/	18.50
		1	271	/	16.71	/	18.50
		135	67	/	16.72	/	18.50
	DFT-s-OFDM 256QAM	1	1	/	15.00	/	16.50
		1	271	/	14.94	/	16.50
		135	67	/	14.84	/	16.50
	CP-OFDM QPSK	1	1	/	17.74	/	19.00
	CP-OFDM 16QAM	1	1	/	17.03	/	18.50
	CP-OFDM 64QAM	1	1	/	15.66	/	17.00
	CP-OFDM 256QAM	1	1	/	12.44	/	14.00



NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Mas Ant5(SA & NSA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	650000/3750	652666/3790	
20MHz	DFT-s-OFDM BPSK	1	1	18.88	19.12	18.99	20.00
		1	49	19.06	19.17	19.11	20.00
		25	12	19.10	19.22	19.18	20.00
		50	0	18.56	18.79	18.67	20.00
	DFT-s-OFDM QPSK	1	1	18.96	19.17	19.08	20.00
		1	49	19.11	19.27	19.21	20.00
		25	12	19.00	19.28	19.18	20.00
		50	0	18.52	18.74	18.69	20.00
	DFT-s-OFDM 16QAM	1	1	18.31	18.40	18.42	20.00
		1	49	18.39	18.55	18.46	20.00
		25	12	19.07	19.17	19.11	20.00
	DFT-s-OFDM 64QAM	1	1	16.96	17.10	17.03	18.50
		1	49	17.06	17.29	17.17	18.50
		25	12	16.66	16.87	16.78	18.50
	DFT-s-OFDM 256QAM	1	1	15.09	15.29	15.24	16.50
		1	49	15.10	15.17	15.19	16.50
		25	12	15.05	15.25	15.17	16.50
	CP-OFDM QPSK	1	1	17.59	17.75	17.69	19.00
	CP-OFDM 16QAM	1	1	17.07	17.25	17.19	18.50
	CP-OFDM 64QAM	1	1	15.48	15.71	15.59	17.00
CP-OFDM 256QAM	1	1	12.50	12.71	12.62	14.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648000/3720	650000/3750	652000/3780	
40MHz	DFT-s-OFDM BPSK	1	1	18.85	19.08	18.96	20.00
		1	104	19.05	19.13	19.09	20.00
		50	25	19.08	19.21	19.15	20.00
		100	0	18.53	18.74	18.63	20.00
	DFT-s-OFDM QPSK	1	1	18.94	19.13	19.05	20.00
		1	104	19.08	19.22	19.17	20.00
		50	25	18.97	19.23	19.14	20.00
		100	0	18.49	18.70	18.64	20.00
	DFT-s-OFDM 16QAM	1	1	18.28	18.38	18.38	20.00
		1	104	18.36	18.52	18.44	20.00
		50	25	19.04	19.13	19.08	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				648666/3730	650000/3750	651334/3770		
	DFT-s-OFDM 64QAM	1	1	16.93	17.08	17.00	18.50	
		1	104	17.03	17.24	17.13	18.50	
		50	25	16.64	16.83	16.75	18.50	
	DFT-s-OFDM 256QAM	1	1	15.07	15.25	15.19	16.50	
		1	104	15.06	15.15	15.15	16.50	
		50	25	14.99	15.19	15.11	16.50	
	CP-OFDM QPSK	1	1	17.54	17.67	17.62	19.00	
	CP-OFDM 16QAM	1	1	17.03	17.21	17.13	18.50	
CP-OFDM 64QAM	1	1	15.45	15.66	15.55	17.00		
CP-OFDM 256QAM	1	1	12.48	12.67	12.59	14.00		
60MHz	DFT-s-OFDM BPSK	1	1	18.82	19.06	18.92	20.00	
		1	160	19.03	19.09	19.06	20.00	
		81	40	19.05	19.16	19.11	20.00	
		162	0	18.50	18.69	18.59	20.00	
	DFT-s-OFDM QPSK	1	1	18.92	19.09	19.00	20.00	
		1	160	19.06	19.20	19.13	20.00	
		81	40	18.97	19.22	19.12	20.00	
		162	0	18.49	18.66	18.61	20.00	
	DFT-s-OFDM 16QAM	1	1	18.28	18.36	18.35	20.00	
		1	160	18.33	18.50	18.40	20.00	
		81	40	19.02	19.09	19.05	20.00	
	DFT-s-OFDM 64QAM	1	1	16.90	17.03	16.96	18.50	
		1	160	17.00	17.19	17.09	18.50	
		81	40	16.62	16.79	16.70	18.50	
	DFT-s-OFDM 256QAM	1	1	15.04	15.25	15.16	16.50	
		1	160	15.03	15.17	15.12	16.50	
		81	40	15.00	15.17	15.07	16.50	
	CP-OFDM QPSK	1	1	17.52	17.63	17.63	19.00	
	CP-OFDM 16QAM	1	1	17.00	17.16	17.09	18.50	
	CP-OFDM 64QAM	1	1	15.42	15.61	15.51	17.00	
	CP-OFDM 256QAM	1	1	12.46	12.63	12.54	14.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					649334/3740	650000/3750	650666/3760	
	80MHz	DFT-s-OFDM	1	1	18.80	18.99	18.90	20.00



	BPSK	1	215	19.03	19.09	19.05	20.00	
		108	54	19.02	19.14	19.07	20.00	
		216	0	18.48	18.65	18.56	20.00	
	DFT-s-OFDM QPSK	1	1	18.90	19.05	18.97	20.00	
		1	215	19.02	19.16	19.10	20.00	
		108	54	18.96	19.15	19.07	20.00	
	DFT-s-OFDM 16QAM	216	0	18.48	18.63	18.56	20.00	
		1	1	18.27	18.35	18.32	20.00	
		1	215	18.31	18.45	18.38	20.00	
	DFT-s-OFDM 64QAM	108	54	18.99	19.08	19.03	20.00	
		1	1	16.86	17.00	16.92	18.50	
		1	215	16.98	17.15	17.06	18.50	
	DFT-s-OFDM 256QAM	108	54	16.60	16.75	16.67	18.50	
		1	1	14.99	15.18	15.11	16.50	
		1	215	15.00	15.12	15.09	16.50	
	CP-OFDM QPSK	108	54	14.94	15.12	15.05	16.50	
1		1	17.49	17.62	17.57	19.00		
CP-OFDM 16QAM	1	1	16.96	17.13	17.05	18.50		
CP-OFDM 64QAM	1	1	15.40	15.57	15.48	17.00		
CP-OFDM 256QAM	1	1	12.44	12.59	12.51	14.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				/	650000/3750	/		
100MHz	DFT-s-OFDM BPSK	1	1	/	18.76	/	20.00	
		1	271	/	19.02	/	20.00	
		135	67	/	18.95	/	20.00	
		270	0	/	18.43	/	20.00	
	DFT-s-OFDM QPSK	1	1	/	18.85	/	20.00	
		1	271	/	18.95	/	20.00	
		135	67	/	18.90	/	20.00	
	DFT-s-OFDM 16QAM	270	0	/	18.42	/	20.00	
		1	1	/	18.23	/	20.00	
		1	271	/	18.27	/	20.00	
	DFT-s-OFDM 64QAM	135	67	/	18.94	/	20.00	
		1	1	/	16.78	/	18.50	
		1	271	/	16.93	/	18.50	
	DFT-s-OFDM 256QAM	135	67	/	16.55	/	18.50	
		1	1	/	14.89	/	16.50	
		1	271	/	14.94	/	16.50	
			135	67	/	14.86	/	16.50



	CP-OFDM QPSK	1	1	/	17.40	/	19.00
	CP-OFDM 16QAM	1	1	/	16.88	/	18.50
	CP-OFDM 64QAM	1	1	/	15.35	/	17.00
	CP-OFDM 256QAM	1	1	/	12.39	/	14.00

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2(SA & NSA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	18.42	18.48	18.47	19.50
		1	49	18.29	18.31	18.32	19.50
		25	12	18.48	18.52	18.57	19.50
		50	0	18.56	18.62	18.63	19.50
	DFT-s-OFDM QPSK	1	1	18.59	18.65	18.68	19.50
		1	49	18.72	18.76	18.80	19.50
		25	12	18.59	18.67	18.71	19.50
	DFT-s-OFDM 16QAM	50	0	17.93	18.00	18.06	19.50
		1	1	17.64	17.67	17.73	19.50
		1	49	17.91	17.95	17.96	19.50
	DFT-s-OFDM 64QAM	25	12	17.87	17.90	17.92	19.50
		1	1	16.52	16.57	16.61	18.00
		1	49	16.65	16.71	16.72	18.00
	DFT-s-OFDM 256QAM	25	12	16.55	16.61	16.64	18.00
		1	1	14.69	14.73	14.79	16.00
		1	49	14.54	14.54	14.60	16.00
	CP-OFDM QPSK	25	12	14.43	14.51	14.52	16.00
		1	1	17.17	17.20	17.26	18.50
		1	1	17.00	17.05	17.09	18.00
	CP-OFDM 16QAM	1	1	15.43	15.49	15.50	16.50
1		1	12.20	12.26	12.29	13.50	
1		1	12.20	12.26	12.29	13.50	
CP-OFDM 64QAM	1	1	15.43	15.49	15.50	16.50	
	1	1	12.20	12.26	12.29	13.50	
	1	1	12.20	12.26	12.29	13.50	
CP-OFDM 256QAM	1	1	12.20	12.26	12.29	13.50	
	1	1	12.20	12.26	12.29	13.50	
	1	1	12.20	12.26	12.29	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	18.39	18.46	18.43	19.50
		1	104	18.27	18.27	18.29	19.50



		50	25	18.45	18.47	18.53	19.50
		100	0	18.53	18.57	18.59	19.50
	DFT-s-OFDM QPSK	1	1	18.57	18.61	18.63	19.50
		1	104	18.70	18.74	18.76	19.50
		50	25	18.59	18.66	18.69	19.50
		100	0	17.93	17.96	18.03	19.50
	DFT-s-OFDM 16QAM	1	1	17.64	17.65	17.70	19.50
		1	104	17.88	17.93	17.92	19.50
		50	25	17.85	17.86	17.89	19.50
	DFT-s-OFDM 64QAM	1	1	16.49	16.52	16.57	18.00
		1	104	16.62	16.66	16.68	18.00
		50	25	16.53	16.57	16.59	18.00
	DFT-s-OFDM 256QAM	1	1	14.66	14.73	14.76	16.00
		1	104	14.51	14.56	14.57	16.00
		50	25	14.44	14.49	14.48	16.00
CP-OFDM QPSK	1	1	17.15	17.16	17.27	18.50	
CP-OFDM 16QAM	1	1	16.97	17.00	17.05	18.00	
CP-OFDM 64QAM	1	1	15.40	15.44	15.46	16.50	
CP-OFDM 256QAM	1	1	12.18	12.22	12.24	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	18.40	18.43	18.44	19.50
		1	160	18.28	18.31	18.30	19.50
		81	40	18.44	18.46	18.52	19.50
		162	0	18.54	18.58	18.60	19.50
	DFT-s-OFDM QPSK	1	1	18.57	18.61	18.63	19.50
		1	160	18.69	18.75	18.77	19.50
		81	40	18.61	18.64	18.68	19.50
		162	0	17.95	17.97	18.03	19.50
	DFT-s-OFDM 16QAM	1	1	17.66	17.66	17.71	19.50
		1	160	17.89	17.91	17.92	19.50
		81	40	17.85	17.89	17.90	19.50
	DFT-s-OFDM 64QAM	1	1	16.48	16.51	16.56	18.00
		1	160	16.63	16.67	16.69	18.00
		81	40	16.53	16.57	16.59	18.00
	DFT-s-OFDM 256QAM	1	1	14.63	14.70	14.76	16.00
		1	160	14.52	14.53	14.58	16.00
		81	40	14.44	14.50	14.52	16.00
	CP-OFDM	1	1	17.17	17.23	17.28	18.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
	QPSK						
	CP-OFDM 16QAM	1	1	16.97	17.01	17.07	18.00
	CP-OFDM 64QAM	1	1	15.41	15.45	15.47	16.50
	CP-OFDM 256QAM	1	1	12.18	12.22	12.24	13.50
80MHz	DFT-s-OFDM BPSK	1	1	18.37	18.39	18.41	19.50
		1	215	18.27	18.27	18.28	19.50
		108	54	18.42	18.45	18.49	19.50
		216	0	18.51	18.53	18.56	19.50
	DFT-s-OFDM QPSK	1	1	18.55	18.57	18.60	19.50
		1	215	18.66	18.70	18.73	19.50
		108	54	18.58	18.59	18.64	19.50
		216	0	17.92	17.93	17.98	19.50
	DFT-s-OFDM 16QAM	1	1	17.63	17.64	17.67	19.50
		1	215	17.86	17.88	17.90	19.50
		108	54	17.82	17.85	17.87	19.50
	DFT-s-OFDM 64QAM	1	1	16.45	16.49	16.53	18.00
		1	215	16.60	16.62	16.65	18.00
		108	54	16.51	16.53	16.56	18.00
	DFT-s-OFDM 256QAM	1	1	14.61	14.66	14.71	16.00
		1	215	14.48	14.51	14.54	16.00
		108	54	14.38	14.44	14.46	16.00
	CP-OFDM QPSK	1	1	17.12	17.15	17.21	18.50
	CP-OFDM 16QAM	1	1	16.93	16.97	17.01	18.00
	CP-OFDM 64QAM	1	1	15.38	15.40	15.43	16.50
CP-OFDM 256QAM	1	1	12.16	12.18	12.21	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	18.28	/	19.50
		1	271	/	18.27	/	19.50
		135	67	/	18.37	/	19.50
		270	0	/	18.45	/	19.50
	DFT-s-OFDM QPSK	1	1	/	18.49	/	19.50
		1	271	/	18.58	/	19.50
		135	67	/	18.50	/	19.50



		270	0	/	17.88	/	19.50
DFT-s-OFDM 16QAM		1	1	/	17.61	/	19.50
		1	271	/	17.79	/	19.50
		135	67	/	17.78	/	19.50
DFT-s-OFDM 64QAM		1	1	/	16.38	/	18.00
		1	271	/	16.54	/	18.00
		135	67	/	16.45	/	18.00
DFT-s-OFDM 256QAM		1	1	/	14.49	/	16.00
		1	271	/	14.40	/	16.00
		135	67	/	14.27	/	16.00
CP-OFDM QPSK		1	1	/	17.08	/	18.50
CP-OFDM 16QAM		1	1	/	16.86	/	18.00
CP-OFDM 64QAM		1	1	/	15.32	/	16.50
CP-OFDM 256QAM		1	1	/	12.10	/	13.50

NR n78								
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2(SA & NSA)				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				647334/3710	650000/3750	652666/3790		
20MHz	DFT-s-OFDM BPSK	1	1	17.91	18.06	17.85	19.50	
		1	49	17.88	17.94	17.90	19.50	
		25	12	18.06	18.17	18.06	19.50	
		50	0	18.15	18.30	18.13	19.50	
	DFT-s-OFDM QPSK	1	1	18.30	18.44	18.28	19.50	
		1	49	18.01	18.13	17.99	19.50	
		25	12	18.15	18.28	18.12	19.50	
		50	0	17.82	17.91	17.81	19.50	
	DFT-s-OFDM 16QAM	1	1	17.83	17.87	17.83	19.50	
		1	49	17.81	17.92	17.76	19.50	
		25	12	17.72	17.80	17.71	19.50	
	DFT-s-OFDM 64QAM	1	1	16.32	16.45	16.30	18.00	
		1	49	16.38	16.53	16.36	18.00	
		25	12	16.32	16.46	16.30	18.00	
	DFT-s-OFDM 256QAM	1	1	14.51	14.62	14.44	16.00	
		1	49	14.70	14.75	14.65	16.00	
		25	12	14.73	14.88	14.68	16.00	
	CP-OFDM QPSK		1	1	17.15	17.23	17.14	18.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
	CP-OFDM 16QAM	1	1	16.34	16.47	16.32	18.00
	CP-OFDM 64QAM	1	1	14.98	15.13	14.96	16.50
	CP-OFDM 256QAM	1	1	12.36	12.50	12.34	13.50
40MHz	DFT-s-OFDM BPSK	1	1	17.94	18.14	17.88	19.50
		1	104	17.87	17.93	17.90	19.50
		50	25	18.10	18.20	18.11	19.50
		100	0	18.17	18.34	18.16	19.50
	DFT-s-OFDM QPSK	1	1	18.31	18.47	18.32	19.50
		1	104	18.05	18.15	18.01	19.50
		50	25	18.12	18.34	18.15	19.50
	DFT-s-OFDM 16QAM	100	0	17.79	17.95	17.87	19.50
		1	1	17.80	17.86	17.86	19.50
		1	104	17.83	17.97	17.79	19.50
	DFT-s-OFDM 64QAM	50	25	17.74	17.80	17.72	19.50
		1	1	16.37	16.49	16.35	18.00
		1	104	16.40	16.57	16.39	18.00
	DFT-s-OFDM 256QAM	50	25	16.33	16.49	16.34	18.00
		1	1	14.57	14.70	14.50	16.00
		1	104	14.73	14.78	14.68	16.00
	CP-OFDM QPSK	50	25	14.79	14.93	14.71	16.00
		1	1	17.17	17.23	17.19	18.50
	CP-OFDM 16QAM	1	1	16.39	16.51	16.37	18.00
	CP-OFDM 64QAM	1	1	15.00	15.17	14.99	16.50
CP-OFDM 256QAM	1	1	12.37	12.53	12.38	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	17.90	18.02	17.83	19.50
		1	160	17.86	17.93	17.87	19.50
		81	40	18.03	18.12	18.02	19.50
		162	0	18.13	18.26	18.10	19.50
	DFT-s-OFDM QPSK	1	1	18.27	18.39	18.24	19.50
		1	160	17.98	18.10	17.95	19.50
		81	40	18.13	18.24	18.07	19.50
		162	0	17.80	17.89	17.79	19.50
	DFT-s-OFDM	1	1	17.81	17.84	17.81	19.50



	16QAM	1	160	17.79	17.88	17.73	19.50
		81	40	17.69	17.78	17.68	19.50
	DFT-s-OFDM 64QAM	1	1	16.29	16.40	16.26	18.00
		1	160	16.36	16.49	16.33	18.00
		81	40	16.29	16.41	16.26	18.00
	DFT-s-OFDM 256QAM	1	1	14.46	14.60	14.42	16.00
		1	160	14.68	14.72	14.63	16.00
		81	40	14.74	14.87	14.69	16.00
	CP-OFDM QPSK	1	1	17.14	17.25	17.15	18.50
	CP-OFDM 16QAM	1	1	16.32	16.44	16.31	18.00
CP-OFDM 64QAM	1	1	14.96	15.09	14.93	16.50	
CP-OFDM 256QAM	1	1	12.33	12.45	12.30	13.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				649334/3740	650000/3750	650666/3760	
80MHz	DFT-s-OFDM BPSK	1	1	17.87	17.98	17.80	19.50
		1	215	17.85	17.89	17.85	19.50
		108	54	18.01	18.11	17.99	19.50
		216	0	18.10	18.21	18.06	19.50
	DFT-s-OFDM QPSK	1	1	18.25	18.35	18.21	19.50
		1	215	17.95	18.05	17.91	19.50
		108	54	18.10	18.19	18.03	19.50
	DFT-s-OFDM 16QAM	216	0	17.77	17.85	17.74	19.50
		1	1	17.78	17.82	17.77	19.50
		1	215	17.76	17.85	17.71	19.50
	DFT-s-OFDM 64QAM	108	54	17.66	17.74	17.65	19.50
		1	1	16.26	16.38	16.23	18.00
		1	215	16.33	16.44	16.29	18.00
	DFT-s-OFDM 256QAM	108	54	16.27	16.37	16.23	18.00
		1	1	14.44	14.56	14.37	16.00
		1	215	14.64	14.70	14.59	16.00
	CP-OFDM QPSK	108	54	14.68	14.81	14.63	16.00
		1	1	17.09	17.17	17.08	18.50
		1	1	16.28	16.40	16.25	18.00
	CP-OFDM 64QAM	1	1	14.93	15.04	14.89	16.50
		1	1	12.31	12.41	12.27	13.50
	CP-OFDM 256QAM	1	1				



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	650000/3750	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	17.71	/	19.50
		1	271	/	17.84	/	19.50
		135	67	/	17.93	/	19.50
		270	0	/	17.99	/	19.50
	DFT-s-OFDM QPSK	1	1	/	18.14	/	19.50
		1	271	/	17.84	/	19.50
		135	67	/	17.91	/	19.50
		270	0	/	17.66	/	19.50
	DFT-s-OFDM 16QAM	1	1	/	17.73	/	19.50
		1	271	/	17.64	/	19.50
		135	67	/	17.62	/	19.50
	DFT-s-OFDM 64QAM	1	1	/	16.16	/	18.00
		1	271	/	16.22	/	18.00
		135	67	/	16.16	/	18.00
	DFT-s-OFDM 256QAM	1	1	/	14.25	/	16.00
		1	271	/	14.51	/	16.00
		135	67	/	14.56	/	16.00
	CP-OFDM QPSK	1	1	/	17.01	/	18.50
	CP-OFDM 16QAM	1	1	/	16.18	/	18.00
	CP-OFDM 64QAM	1	1	/	14.82	/	16.50
CP-OFDM 256QAM	1	1	/	12.20	/	13.50	

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant3 MIMO (SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	15.66	15.90	15.74	16.00
		1	49	15.51	15.46	15.46	16.00
		25	12	15.74	15.69	15.71	16.00
		50	0	14.92	14.99	14.91	16.00
	DFT-s-OFDM QPSK	1	1	14.79	14.85	14.80	16.00
		1	49	15.53	15.52	15.47	16.00
		25	12	15.29	15.50	15.41	16.00
		50	0	14.81	14.90	14.90	16.00
	DFT-s-OFDM 16QAM	1	1	14.61	14.59	14.62	16.00
		1	49	14.74	14.89	14.80	16.00



		25	12	14.78	14.78	14.77	16.00
	DFT-s-OFDM 64QAM	1	1	13.25	13.30	13.38	14.50
		1	49	13.09	13.25	13.26	14.50
		25	12	13.19	13.25	13.29	14.50
	DFT-s-OFDM 256QAM	1	1	11.40	11.46	11.47	12.50
		1	49	11.31	11.32	11.36	12.50
		25	12	11.43	11.45	11.41	12.50
	CP-OFDM QPSK	1	1	13.80	13.75	13.87	15.00
	CP-OFDM 16QAM	1	1	13.19	13.18	13.23	14.50
	CP-OFDM 64QAM	1	1	11.81	11.88	11.89	13.00
CP-OFDM 256QAM	1	1	9.31	9.46	9.50	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	15.65	15.89	15.73	16.00
		1	104	15.52	15.47	15.47	16.00
		50	25	15.73	15.68	15.70	16.00
		100	0	14.92	14.99	14.91	16.00
	DFT-s-OFDM QPSK	1	1	14.80	14.86	14.79	16.00
		1	104	15.53	15.54	15.48	16.00
		50	25	15.33	15.51	15.43	16.00
		100	0	14.85	14.89	14.89	16.00
	DFT-s-OFDM 16QAM	1	1	14.65	14.61	14.62	16.00
		1	104	14.74	14.89	14.79	16.00
		50	25	14.79	14.79	14.78	16.00
	DFT-s-OFDM 64QAM	1	1	13.24	13.29	13.37	14.50
		1	104	13.09	13.25	13.26	14.50
		50	25	13.20	13.26	13.28	14.50
	DFT-s-OFDM 256QAM	1	1	11.39	11.45	11.46	12.50
		1	104	11.31	11.34	11.36	12.50
		50	25	11.43	11.45	11.40	12.50
	CP-OFDM QPSK	1	1	13.81	13.76	13.88	15.00
	CP-OFDM 16QAM	1	1	13.18	13.17	13.22	14.50
	CP-OFDM 64QAM	1	1	11.81	11.88	11.89	13.00
	CP-OFDM 256QAM	1	1	9.32	9.47	9.49	10.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	15.64	15.85	15.71	16.00
		1	160	15.50	15.46	15.66	16.00
		81	40	15.70	15.63	15.66	16.00
		162	0	14.90	14.95	14.88	16.00
	DFT-s-OFDM QPSK	1	1	14.77	14.81	14.75	16.00
		1	160	15.50	15.51	15.44	16.00
		81	40	15.31	15.47	15.38	16.00
		162	0	14.83	14.87	14.87	16.00
	DFT-s-OFDM 16QAM	1	1	14.63	14.58	14.60	16.00
		1	160	14.72	14.85	14.76	16.00
		81	40	14.76	14.77	14.75	16.00
	DFT-s-OFDM 64QAM	1	1	13.21	13.24	13.33	14.50
		1	160	13.07	13.21	13.23	14.50
		81	40	13.17	13.21	13.24	14.50
	DFT-s-OFDM 256QAM	1	1	11.34	11.43	11.44	12.50
		1	160	11.29	11.31	11.34	12.50
		81	40	11.44	11.44	11.41	12.50
	CP-OFDM QPSK	1	1	13.80	13.78	13.89	15.00
	CP-OFDM 16QAM	1	1	13.16	13.14	13.21	14.50
	CP-OFDM 64QAM	1	1	11.79	11.84	11.86	13.00
CP-OFDM 256QAM	1	1	9.29	9.42	9.45	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	15.61	15.81	15.68	16.00
		1	215	15.49	15.42	15.42	16.00
		108	54	15.68	15.62	15.63	16.00
		216	0	14.87	14.90	14.84	16.00
	DFT-s-OFDM QPSK	1	1	14.75	14.77	14.72	16.00
		1	215	15.47	15.46	15.40	16.00
		108	54	15.28	15.42	15.34	16.00
		216	0	14.80	14.83	14.82	16.00
	DFT-s-OFDM 16QAM	1	1	14.60	14.56	14.56	16.00
		1	215	14.69	14.82	14.74	16.00
		108	54	14.73	14.73	14.72	16.00
	DFT-s-OFDM 64QAM	1	1	13.18	13.22	13.30	14.50
		1	215	13.04	13.16	13.19	14.50
		108	54	13.15	13.17	13.21	14.50



	DFT-s-OFDM 256QAM	1	1	11.32	11.39	11.39	12.50
		1	215	11.25	11.29	11.30	12.50
		108	54	11.38	11.38	11.35	12.50
	CP-OFDM QPSK	1	1	13.75	13.70	13.82	15.00
	CP-OFDM 16QAM	1	1	13.12	13.10	13.15	14.50
	CP-OFDM 64QAM	1	1	11.76	11.79	11.82	13.00
CP-OFDM 256QAM	1	1	9.27	9.38	9.42	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	15.59	/	16.00
		1	271	/	15.50	/	16.00
		135	67	/	15.57	/	16.00
		270	0	/	14.85	/	16.00
	DFT-s-OFDM QPSK	1	1	/	14.73	/	16.00
		1	271	/	15.42	/	16.00
		135	67	/	15.24	/	16.00
		270	0	/	14.76	/	16.00
	DFT-s-OFDM 16QAM	1	1	/	14.56	/	16.00
		1	271	/	14.67	/	16.00
		135	67	/	14.69	/	16.00
	DFT-s-OFDM 64QAM	1	1	/	13.32	/	14.50
		1	271	/	13.12	/	14.50
		135	67	/	13.13	/	14.50
	DFT-s-OFDM 256QAM	1	1	/	11.28	/	12.50
		1	271	/	11.21	/	12.50
		135	67	/	11.25	/	12.50
	CP-OFDM QPSK	1	1	/	13.69	/	15.00
	CP-OFDM 16QAM	1	1	/	13.33	/	14.50
	CP-OFDM 64QAM	1	1	/	11.74	/	13.00
CP-OFDM 256QAM	1	1	/	9.25	/	10.00	



NR n78								
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Main Ant3 MIMO (SA)				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				647334/3710	650000/3750	652666/3790		
20MHz	DFT-s-OFDM BPSK	1	1	15.55	15.59	15.54	16.00	
		1	49	15.25	15.31	15.38	16.00	
		25	12	15.88	15.84	15.86	16.00	
		50	0	15.35	15.40	15.40	16.00	
	DFT-s-OFDM QPSK	1	1	14.90	14.96	15.00	16.00	
		1	49	15.24	15.10	15.16	16.00	
		25	12	15.14	15.26	15.25	16.00	
	DFT-s-OFDM 16QAM	50	0	14.61	14.70	14.79	16.00	
		1	1	14.66	14.65	14.81	16.00	
		1	49	15.07	15.06	15.07	16.00	
	DFT-s-OFDM 64QAM	25	12	14.90	14.85	14.92	16.00	
		1	1	13.79	13.73	13.71	14.50	
		1	49	13.52	13.57	13.48	14.50	
	DFT-s-OFDM 256QAM	25	12	13.63	13.69	13.64	14.50	
		1	1	12.00	11.84	11.80	12.50	
		1	49	11.68	11.44	11.47	12.50	
	CP-OFDM	QPSK	25	12	11.75	11.67	11.60	12.50
			1	1	14.06	14.01	13.99	15.00
1			1	13.92	13.86	13.85	14.50	
16QAM		1	1	12.24	12.29	12.20	13.00	
		1	1	9.66	9.72	9.67	10.00	

Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
40MHz	DFT-s-OFDM BPSK	1	1	15.53	15.54	15.51	16.00
		1	104	15.24	15.31	15.36	16.00
		50	25	15.84	15.78	15.81	16.00
		100	0	15.33	15.36	15.37	16.00
	DFT-s-OFDM QPSK	1	1	14.88	14.92	14.95	16.00
		1	104	15.21	15.09	15.13	16.00
		50	25	15.16	15.23	15.22	16.00
	DFT-s-OFDM 16QAM	100	0	14.63	14.67	14.76	16.00
		1	1	14.68	14.64	14.79	16.00
		1	104	15.05	15.02	15.03	16.00



		50	25	14.88	14.84	14.90	16.00
	DFT-s-OFDM 64QAM	1	1	13.75	13.67	13.66	14.50
		1	104	13.50	13.53	13.45	14.50
		50	25	13.61	13.65	13.59	14.50
	DFT-s-OFDM 256QAM	1	1	11.94	11.81	11.77	12.50
		1	104	11.66	11.43	11.45	12.50
		50	25	11.76	11.66	11.60	12.50
	CP-OFDM QPSK	1	1	14.06	14.04	14.01	15.00
	CP-OFDM 16QAM	1	1	13.89	13.82	13.83	14.50
	CP-OFDM 64QAM	1	1	12.22	12.25	12.17	13.00
CP-OFDM 256QAM	1	1	9.64	9.68	9.62	10.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	15.50	15.50	15.48	16.00
		1	160	15.23	15.27	15.34	16.00
		81	40	15.82	15.77	15.78	16.00
		162	0	15.30	15.31	15.33	16.00
	DFT-s-OFDM QPSK	1	1	14.86	14.88	14.92	16.00
		1	160	15.18	15.04	15.09	16.00
		81	40	15.13	15.18	15.18	16.00
		162	0	14.60	14.63	14.71	16.00
	DFT-s-OFDM 16QAM	1	1	14.65	14.62	14.75	16.00
		1	160	15.02	14.99	15.01	16.00
		81	40	14.85	14.80	14.87	16.00
	DFT-s-OFDM 64QAM	1	1	13.72	13.65	13.63	14.50
		1	160	13.47	13.48	13.41	14.50
		81	40	13.59	13.61	13.56	14.50
	DFT-s-OFDM 256QAM	1	1	11.92	11.77	11.72	12.50
		1	160	11.62	11.41	11.41	12.50
		81	40	11.70	11.60	11.54	12.50
	CP-OFDM QPSK	1	1	14.01	13.96	13.94	15.00
	CP-OFDM 16QAM	1	1	13.85	13.78	13.77	14.50
	CP-OFDM 64QAM	1	1	12.19	12.20	12.13	13.00
CP-OFDM 256QAM	1	1	9.62	9.64	9.59	10.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				649334/3740	650000/3750	650666/3760		
80MHz	DFT-s-OFDM BPSK	1	1	15.45	15.41	15.42	16.00	
		1	215	15.21	15.23	15.30	16.00	
		108	54	15.76	15.70	15.70	16.00	
		216	0	15.25	15.22	15.26	16.00	
	DFT-s-OFDM QPSK	1	1	14.82	14.80	14.84	16.00	
		1	215	15.12	14.98	15.02	16.00	
		108	54	15.12	15.10	15.11	16.00	
		216	0	14.59	14.56	14.63	16.00	
	DFT-s-OFDM 16QAM	1	1	14.64	14.59	14.69	16.00	
		1	215	14.97	14.92	14.95	16.00	
		108	54	14.80	14.75	14.82	16.00	
	DFT-s-OFDM 64QAM	1	1	13.65	13.57	13.55	14.50	
		1	215	13.42	13.39	13.34	14.50	
		108	54	13.55	13.53	13.48	14.50	
	DFT-s-OFDM 256QAM	1	1	11.84	11.70	11.64	12.50	
		1	215	11.56	11.38	11.35	12.50	
		108	54	11.65	11.53	11.48	12.50	
	CP-OFDM QPSK	1	1	13.96	13.91	13.89	15.00	
	CP-OFDM 16QAM	1	1	13.78	13.70	13.69	14.50	
	CP-OFDM 64QAM	1	1	12.14	12.11	12.06	13.00	
CP-OFDM 256QAM	1	1	9.58	9.56	9.51	10.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				/	650000/3750	/		
100MHz	DFT-s-OFDM BPSK	1	1	/	15.29	/	16.00	
		1	271	/	15.18	/	16.00	
		135	67	/	15.59	/	16.00	
		270	0	/	15.12	/	16.00	
	DFT-s-OFDM QPSK	1	1	/	14.63	/	16.00	
		1	271	/	14.79	/	16.00	
		135	67	/	14.90	/	16.00	
	DFT-s-OFDM 16QAM	270	0	/	14.65	/	16.00	
		1	1	/	14.55	/	16.00	
		1	271	/	14.84	/	16.00	
	DFT-s-OFDM 64QAM	135	67	/	14.78	/	16.00	
		1	1	/	13.44	/	14.50	
		1	271	/	13.29	/	14.50	
			135	67	/	13.36	/	14.50



	DFT-s-OFDM 256QAM	1	1	/	11.59	/	12.50
		1	271	/	11.30	/	12.50
		135	67	/	11.47	/	12.50
	CP-OFDM QPSK	1	1	/	13.90	/	15.00
	CP-OFDM 16QAM	1	1	/	13.61	/	14.50
	CP-OFDM 64QAM	1	1	/	12.01	/	13.00
	CP-OFDM 256QAM	1	1	/	9.48	/	10.00

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7 MIMO (SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	13.37	13.61	13.47	14.50
		1	49	13.43	13.49	13.46	14.50
		25	12	13.82	13.95	13.90	14.50
		50	0	13.30	13.49	13.39	14.50
	DFT-s-OFDM QPSK	1	1	13.74	13.94	13.85	14.50
		1	49	13.80	13.95	13.88	14.50
		25	12	13.51	13.79	13.69	14.50
		50	0	13.01	13.21	13.16	14.50
	DFT-s-OFDM 16QAM	1	1	12.88	12.98	12.97	14.50
		1	49	13.13	13.31	13.21	14.50
		25	12	12.91	12.98	12.94	14.50
	DFT-s-OFDM 64QAM	1	1	11.38	11.53	11.46	13.00
		1	49	11.46	11.65	11.55	13.00
		25	12	11.62	11.82	11.73	13.00
	DFT-s-OFDM 256QAM	1	1	9.56	9.77	9.68	11.00
		1	49	9.53	9.66	9.61	11.00
		25	12	9.58	9.76	9.66	11.00
	CP-OFDM QPSK	1	1	12.03	12.10	12.10	13.50
	CP-OFDM 16QAM	1	1	11.62	11.77	11.70	13.00
	CP-OFDM 64QAM	1	1	9.85	10.04	9.94	11.50
	CP-OFDM 256QAM	1	1	7.07	7.27	7.18	8.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	13.33	13.49	13.42	14.50
		1	104	13.42	13.49	13.43	14.50
		50	25	13.75	13.87	13.81	14.50
		100	0	13.26	13.41	13.33	14.50
	DFT-s-OFDM QPSK	1	1	13.70	13.86	13.77	14.50
		1	104	13.73	13.90	13.82	14.50
		50	25	13.52	13.69	13.61	14.50
		100	0	13.02	13.15	13.08	14.50
	DFT-s-OFDM 16QAM	1	1	12.89	12.96	12.92	14.50
		1	104	13.09	13.22	13.15	14.50
		50	25	12.86	12.96	12.90	14.50
	DFT-s-OFDM 64QAM	1	1	11.30	11.44	11.37	13.00
		1	104	11.42	11.57	11.49	13.00
		50	25	11.58	11.74	11.65	13.00
	DFT-s-OFDM 256QAM	1	1	9.45	9.67	9.60	11.00
		1	104	9.48	9.60	9.56	11.00
		50	25	9.53	9.70	9.64	11.00
	CP-OFDM QPSK	1	1	12.00	12.12	12.06	13.50
	CP-OFDM 16QAM	1	1	11.55	11.70	11.64	13.00
	CP-OFDM 64QAM	1	1	9.81	9.96	9.88	11.50
CP-OFDM 256QAM	1	1	7.03	7.19	7.10	8.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	13.35	13.54	13.45	14.50
		1	160	13.43	13.49	13.45	14.50
		81	40	13.79	13.93	13.86	14.50
		162	0	13.28	13.45	13.36	14.50
	DFT-s-OFDM QPSK	1	1	13.72	13.90	13.82	14.50
		1	160	13.76	13.91	13.85	14.50
		81	40	13.50	13.72	13.64	14.50
		162	0	13.00	13.18	13.11	14.50
	DFT-s-OFDM 16QAM	1	1	12.87	12.97	12.94	14.50
		1	160	13.11	13.26	13.19	14.50
		81	40	12.88	12.97	12.92	14.50
	DFT-s-OFDM 64QAM	1	1	11.34	11.50	11.42	13.00
		1	160	11.44	11.61	11.52	13.00
		81	40	11.60	11.78	11.70	13.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
	DFT-s-OFDM 256QAM	1	1	9.51	9.70	9.63	11.00
		1	160	9.50	9.61	9.58	11.00
		81	40	9.52	9.71	9.64	11.00
	CP-OFDM QPSK	1	1	12.00	12.09	12.04	13.50
	CP-OFDM 16QAM	1	1	11.58	11.74	11.66	13.00
	CP-OFDM 64QAM	1	1	9.83	10.00	9.91	11.50
	CP-OFDM 256QAM	1	1	7.05	7.23	7.15	8.50
80MHz	DFT-s-OFDM BPSK	1	1	13.30	13.45	13.39	14.50
		1	215	13.41	13.45	13.41	14.50
		108	54	13.73	13.86	13.78	14.50
		216	0	13.23	13.36	13.29	14.50
	DFT-s-OFDM QPSK	1	1	13.68	13.82	13.74	14.50
		1	215	13.70	13.85	13.78	14.50
		108	54	13.49	13.64	13.57	14.50
		216	0	12.99	13.11	13.03	14.50
	DFT-s-OFDM 16QAM	1	1	12.86	12.94	12.88	14.50
		1	215	13.06	13.19	13.13	14.50
		108	54	12.83	12.92	12.87	14.50
	DFT-s-OFDM 64QAM	1	1	11.27	11.42	11.34	13.00
		1	215	11.39	11.52	11.45	13.00
		108	54	11.56	11.70	11.62	13.00
	DFT-s-OFDM 256QAM	1	1	9.43	9.63	9.55	11.00
		1	215	9.44	9.58	9.52	11.00
		108	54	9.47	9.64	9.58	11.00
	CP-OFDM QPSK	1	1	11.95	12.04	11.99	13.50
	CP-OFDM 16QAM	1	1	11.51	11.66	11.58	13.00
	CP-OFDM 64QAM	1	1	9.78	9.91	9.84	11.50
CP-OFDM 256QAM	1	1	7.01	7.15	7.07	8.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	13.25	/	14.50
		1	271	/	13.36	/	14.50
		135	67	/	13.66	/	14.50
		270	0	/	13.16	/	14.50



	DFT-s-OFDM QPSK	1	1	/	13.61	/	14.50
		1	271	/	13.62	/	14.50
		135	67	/	13.40	/	14.50
		270	0	/	12.92	/	14.50
	DFT-s-OFDM 16QAM	1	1	/	12.80	/	14.50
		1	271	/	13.01	/	14.50
		135	67	/	12.77	/	14.50
	DFT-s-OFDM 64QAM	1	1	/	11.20	/	13.00
		1	271	/	11.32	/	13.00
		135	67	/	11.49	/	13.00
	DFT-s-OFDM 256QAM	1	1	/	9.36	/	11.00
		1	271	/	9.38	/	11.00
		135	67	/	9.42	/	11.00
	CP-OFDM QPSK	1	1	/	11.89	/	13.50
	CP-OFDM 16QAM	1	1	/	11.44	/	13.00
	CP-OFDM 64QAM	1	1	/	9.71	/	11.50
CP-OFDM 256QAM	1	1	/	6.94	/	8.50	

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Div Ant7 MIMO (SA)				Maximum Output Power (dBm)			Tune -up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				647334/3710	650000/3750	652666/3790	
20MHz	DFT-s-OFDM BPSK	1	1	13.07	13.27	12.99	14.50
		1	49	13.05	13.11	13.08	14.50
		25	12	13.25	13.28	13.23	14.50
		50	0	13.01	13.16	12.98	14.50
	DFT-s-OFDM QPSK	1	1	12.95	13.09	12.94	14.50
		1	49	13.20	13.29	13.14	14.50
		25	12	12.95	13.20	12.94	14.50
		50	0	12.93	13.08	12.98	14.50
	DFT-s-OFDM 16QAM	1	1	12.90	12.95	12.94	14.50
		1	49	12.95	13.08	12.88	14.50
		25	12	12.96	12.99	12.92	14.50
	DFT-s-OFDM 64QAM	1	1	11.56	11.61	11.50	13.00
		1	49	11.81	11.96	11.78	13.00
		25	12	11.58	11.72	11.57	13.00
	DFT-s-OFDM 256QAM	1	1	9.72	9.84	9.63	11.00
		1	49	9.42	9.48	9.34	11.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
40MHz		25	12	9.54	9.66	9.44	11.00
	CP-OFDM QPSK	1	1	12.10	12.17	12.08	13.50
	CP-OFDM 16QAM	1	1	11.71	11.78	11.67	13.00
	CP-OFDM 64QAM	1	1	9.86	10.01	9.83	11.50
	CP-OFDM 256QAM	1	1	6.92	7.06	6.91	8.50
	DFT-s-OFDM BPSK	1	1	13.05	13.22	12.96	14.50
		1	104	13.04	13.11	13.06	14.50
		50	25	13.21	13.22	13.18	14.50
		100	0	12.99	13.12	12.95	14.50
	DFT-s-OFDM QPSK	1	1	12.93	13.05	12.89	14.50
		1	104	13.17	13.28	13.11	14.50
		50	25	12.97	13.17	12.91	14.50
		100	0	12.95	13.05	12.95	14.50
	DFT-s-OFDM 16QAM	1	1	12.92	12.94	12.92	14.50
		1	104	12.93	13.04	12.84	14.50
		50	25	12.94	12.98	12.90	14.50
	DFT-s-OFDM 64QAM	1	1	11.52	11.55	11.45	13.00
		1	104	11.79	11.92	11.75	13.00
		50	25	11.56	11.68	11.52	13.00
	DFT-s-OFDM 256QAM	1	1	9.66	9.81	9.60	11.00
1		104	9.40	9.47	9.32	11.00	
50		25	9.55	9.65	9.44	11.00	
CP-OFDM QPSK	1	1	12.10	12.20	12.10	13.50	
CP-OFDM 16QAM	1	1	11.68	11.74	11.65	13.00	
CP-OFDM 64QAM	1	1	9.84	9.97	9.80	11.50	
CP-OFDM 256QAM	1	1	6.90	7.02	6.86	8.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	13.02	13.18	12.93	14.50
		1	160	13.03	13.07	13.04	14.50
		81	40	13.19	13.21	13.15	14.50
		162	0	12.96	13.07	12.91	14.50
	DFT-s-OFDM QPSK	1	1	12.91	13.01	12.86	14.50
		1	160	13.14	13.23	13.07	14.50



		81	40	12.94	13.12	12.87	14.50
		162	0	12.92	13.01	12.90	14.50
	DFT-s-OFDM 16QAM	1	1	12.89	12.92	12.88	14.50
		1	160	12.90	13.01	12.82	14.50
		81	40	12.91	12.94	12.87	14.50
	DFT-s-OFDM 64QAM	1	1	11.49	11.53	11.42	13.00
		1	160	11.76	11.87	11.71	13.00
		81	40	11.54	11.64	11.49	13.00
	DFT-s-OFDM 256QAM	1	1	9.64	9.77	9.55	11.00
		1	160	9.36	9.45	9.28	11.00
		81	40	9.49	9.59	9.38	11.00
	CP-OFDM QPSK	1	1	12.05	12.12	12.03	13.50
	CP-OFDM 16QAM	1	1	11.64	11.70	11.59	13.00
	CP-OFDM 64QAM	1	1	9.81	9.92	9.76	11.50
CP-OFDM 256QAM	1	1	6.88	6.98	6.83	8.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				649334/3740	650000/3750	650666/3760	
80MHz	DFT-s-OFDM BPSK	1	1	13.00	13.11	12.91	14.50
		1	215	13.03	13.07	13.03	14.50
		108	54	13.16	13.19	13.11	14.50
		216	0	12.94	13.03	12.88	14.50
	DFT-s-OFDM QPSK	1	1	12.89	12.97	12.83	14.50
		1	215	13.10	13.19	13.04	14.50
		108	54	12.93	13.05	12.82	14.50
		216	0	12.91	12.98	12.85	14.50
	DFT-s-OFDM 16QAM	1	1	12.88	12.91	12.85	14.50
		1	215	12.88	12.96	12.80	14.50
		108	54	12.88	12.93	12.85	14.50
	DFT-s-OFDM 64QAM	1	1	11.45	11.50	11.38	13.00
		1	215	11.74	11.83	11.68	13.00
		108	54	11.52	11.60	11.46	13.00
	DFT-s-OFDM 256QAM	1	1	9.59	9.70	9.50	11.00
		1	215	9.33	9.40	9.25	11.00
		108	54	9.43	9.54	9.36	11.00
	CP-OFDM QPSK	1	1	12.02	12.11	11.97	13.50
	CP-OFDM 16QAM	1	1	11.60	11.67	11.55	13.00
	CP-OFDM 64QAM	1	1	9.79	9.88	9.73	11.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	650000/3750	/	
	CP-OFDM 256QAM	1	1	6.86	6.94	6.80	8.50
100MHz	DFT-s-OFDM BPSK	1	1	/	12.83	/	14.50
		1	271	/	12.99	/	14.50
		135	67	/	13.02	/	14.50
		270	0	/	12.79	/	14.50
	DFT-s-OFDM QPSK	1	1	/	12.76	/	14.50
		1	271	/	12.94	/	14.50
		135	67	/	12.77	/	14.50
	DFT-s-OFDM 16QAM	270	0	/	12.79	/	14.50
		1	1	/	12.80	/	14.50
		1	271	/	12.73	/	14.50
	DFT-s-OFDM 64QAM	135	67	/	12.77	/	14.50
		1	1	/	11.28	/	13.00
		1	271	/	11.59	/	13.00
	DFT-s-OFDM 256QAM	135	67	/	11.39	/	13.00
		1	1	/	9.37	/	11.00
		1	271	/	9.15	/	11.00
	CP-OFDM QPSK	135	67	/	9.25	/	11.00
		1	1	/	11.85	/	13.50
		1	1	/	11.42	/	13.00
	CP-OFDM 16QAM	1	1	/	9.64	/	11.50
1		1	/	6.73	/	8.50	
1		1	/				

NR n78							
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2 MIMO (SA)				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	15.53	15.71	15.72	16.50
		1	49	15.37	15.49	15.50	16.50
		25	12	15.63	15.75	15.85	16.50
		50	0	15.67	15.87	15.91	16.50
	DFT-s-OFDM QPSK	1	1	15.74	15.93	15.98	16.50
		1	49	15.92	16.08	16.15	16.50
		25	12	15.61	15.80	15.87	16.50
		50	0	14.98	15.12	15.24	16.50



	DFT-s-OFDM 16QAM	1	1	14.68	14.75	14.87	16.50
		1	49	15.04	15.18	15.20	16.50
		25	12	15.04	15.16	15.20	16.50
	DFT-s-OFDM 64QAM	1	1	13.75	13.89	13.97	15.00
		1	49	13.76	13.96	14.00	15.00
		25	12	13.64	13.83	13.88	15.00
	DFT-s-OFDM 256QAM	1	1	11.83	11.98	12.10	13.00
		1	49	11.71	11.77	11.89	13.00
		25	12	11.59	11.73	11.80	13.00
	CP-OFDM QPSK	1	1	14.36	14.50	14.62	15.50
CP-OFDM 16QAM	1	1	14.24	14.39	14.51	15.00	
CP-OFDM 64QAM	1	1	12.60	12.80	12.84	13.50	
CP-OFDM 256QAM	1	1	9.35	9.54	9.59	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	15.50	15.67	15.69	16.50
		1	104	15.36	15.45	15.48	16.50
		50	25	15.61	15.74	15.82	16.50
		100	0	15.64	15.82	15.87	16.50
	DFT-s-OFDM QPSK	1	1	15.72	15.89	15.95	16.50
		1	104	15.89	16.03	16.11	16.50
		50	25	15.58	15.75	15.83	16.50
		100	0	14.95	15.08	15.19	16.50
	DFT-s-OFDM 16QAM	1	1	14.65	14.73	14.83	16.50
		1	104	15.01	15.15	15.18	16.50
		50	25	15.01	15.12	15.17	16.50
	DFT-s-OFDM 64QAM	1	1	13.72	13.87	13.94	15.00
		1	104	13.73	13.91	13.96	15.00
		50	25	13.62	13.79	13.85	15.00
	DFT-s-OFDM 256QAM	1	1	11.81	11.94	12.05	13.00
		1	104	11.67	11.75	11.85	13.00
		50	25	11.53	11.67	11.74	13.00
	CP-OFDM QPSK	1	1	14.31	14.42	14.55	15.50
	CP-OFDM 16QAM	1	1	14.20	14.35	14.45	15.00
	CP-OFDM 64QAM	1	1	12.57	12.75	12.80	13.50
CP-OFDM 256QAM	1	1	9.33	9.50	9.56	10.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632000/3480	633332/3500	634666/3520		
60MHz	DFT-s-OFDM BPSK	1	1	15.48	15.62	15.66	16.50	
		1	160	15.35	15.45	15.46	16.50	
		81	40	15.57	15.68	15.77	16.50	
		162	0	15.62	15.78	15.84	16.50	
	DFT-s-OFDM QPSK	1	1	15.70	15.85	15.90	16.50	
		1	160	15.86	16.02	16.08	16.50	
		81	40	15.60	15.72	15.80	16.50	
		162	0	14.97	15.05	15.16	16.50	
	DFT-s-OFDM 16QAM	1	1	14.67	14.72	14.81	16.50	
		1	160	14.99	15.11	15.14	16.50	
		81	40	14.99	15.11	15.15	16.50	
	DFT-s-OFDM 64QAM	1	1	13.68	13.81	13.89	15.00	
		1	160	13.71	13.87	13.93	15.00	
		81	40	13.60	13.75	13.80	15.00	
	DFT-s-OFDM 256QAM	1	1	11.75	11.91	12.02	13.00	
		1	160	11.65	11.74	11.83	13.00	
		81	40	11.54	11.66	11.74	13.00	
	CP-OFDM QPSK	1	1	14.31	14.45	14.57	15.50	
	CP-OFDM 16QAM	1	1	14.17	14.31	14.43	15.00	
	CP-OFDM 64QAM	1	1	12.55	12.71	12.77	13.50	
CP-OFDM 256QAM	1	1	9.31	9.46	9.51	10.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				632666/3490	633332/3500	633998/3510		
80MHz	DFT-s-OFDM BPSK	1	1	15.45	15.58	15.63	16.50	
		1	215	15.34	15.41	15.44	16.50	
		108	54	15.55	15.67	15.74	16.50	
		216	0	15.59	15.73	15.80	16.50	
	DFT-s-OFDM QPSK	1	1	15.68	15.81	15.87	16.50	
		1	215	15.83	15.97	16.04	16.50	
		108	54	15.57	15.67	15.76	16.50	
	DFT-s-OFDM 16QAM	216	0	14.94	15.01	15.11	16.50	
		1	1	14.64	14.70	14.77	16.50	
		1	215	14.96	15.08	15.12	16.50	
	DFT-s-OFDM 64QAM	108	54	14.96	15.07	15.12	16.50	
		1	1	13.65	13.79	13.86	15.00	
		1	215	13.68	13.82	13.89	15.00	
			108	54	13.58	13.71	13.77	15.00



	DFT-s-OFDM 256QAM	1	1	11.73	11.87	11.97	13.00
		1	215	11.61	11.72	11.79	13.00
		108	54	11.48	11.60	11.68	13.00
	CP-OFDM QPSK	1	1	14.26	14.37	14.50	15.50
	CP-OFDM 16QAM	1	1	14.13	14.27	14.37	15.00
	CP-OFDM 64QAM	1	1	12.52	12.66	12.73	13.50
	CP-OFDM 256QAM	1	1	9.29	9.42	9.48	10.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	15.34	/	16.50
		1	271	/	15.25	/	16.50
		135	67	/	15.40	/	16.50
		270	0	/	15.45	/	16.50
	DFT-s-OFDM QPSK	1	1	/	15.53	/	16.50
		1	271	/	15.68	/	16.50
		135	67	/	15.41	/	16.50
		270	0	/	14.79	/	16.50
	DFT-s-OFDM 16QAM	1	1	/	14.52	/	16.50
		1	271	/	14.85	/	16.50
		135	67	/	14.85	/	16.50
	DFT-s-OFDM 64QAM	1	1	/	13.50	/	15.00
		1	271	/	13.54	/	15.00
		135	67	/	13.43	/	15.00
	DFT-s-OFDM 256QAM	1	1	/	11.58	/	13.00
		1	271	/	11.49	/	13.00
		135	67	/	11.37	/	13.00
	CP-OFDM QPSK	1	1	/	14.15	/	15.50
	CP-OFDM 16QAM	1	1	/	13.98	/	15.00
	CP-OFDM 64QAM	1	1	/	12.38	/	13.50
CP-OFDM 256QAM	1	1	/	9.14	/	10.50	



NR n78								
Full Power & Level 1 & Level 2 & Level 3 & Level 4 & Level 5-Tas Ant2 MIMO (SA)				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				647334/3710	650000/3750	652666/3790		
20MHz	DFT-s-OFDM BPSK	1	1	14.99	14.91	14.95	16.50	
		1	49	14.89	14.88	14.88	16.50	
		25	12	15.23	15.15	15.18	16.50	
		50	0	15.20	15.13	15.15	16.50	
	DFT-s-OFDM QPSK	1	1	15.30	15.24	15.28	16.50	
		1	49	15.17	15.06	15.11	16.50	
		25	12	15.06	14.97	15.03	16.50	
	DFT-s-OFDM 16QAM	50	0	14.78	14.71	14.75	16.50	
		1	1	14.80	14.74	14.78	16.50	
		1	49	14.83	14.76	14.80	16.50	
	DFT-s-OFDM 64QAM	25	12	14.79	14.73	14.74	16.50	
		1	1	13.46	13.37	13.40	15.00	
		1	49	13.43	13.36	13.38	15.00	
	DFT-s-OFDM 256QAM	25	12	13.38	13.32	13.36	15.00	
		1	1	11.73	11.55	11.63	13.00	
		1	49	11.78	11.63	11.71	13.00	
	CP-OFDM	QPSK	25	12	11.83	11.72	11.76	13.00
			1	1	14.32	14.18	14.19	15.50
16QAM		1	1	13.57	13.45	13.48	15.00	
		1	1	12.09	12.02	12.04	13.50	
256QAM		1	1	9.42	9.36	9.40	10.50	

Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				648000/3720	650000/3750	652000/3780	
40MHz	DFT-s-OFDM BPSK	1	1	14.96	14.89	14.91	16.50
		1	104	14.87	14.84	14.85	16.50
		50	25	15.20	15.10	15.14	16.50
		100	0	15.17	15.08	15.11	16.50
	DFT-s-OFDM QPSK	1	1	15.28	15.20	15.23	16.50
		1	104	15.15	15.04	15.07	16.50
		50	25	15.06	14.96	15.01	16.50
	DFT-s-OFDM 16QAM	100	0	14.78	14.67	14.72	16.50
		1	1	14.80	14.72	14.75	16.50
		1	104	14.80	14.74	14.76	16.50



		50	25	14.77	14.69	14.71	16.50
	DFT-s-OFDM 64QAM	1	1	13.43	13.32	13.36	15.00
		1	104	13.40	13.31	13.34	15.00
		50	25	13.36	13.28	13.31	15.00
	DFT-s-OFDM 256QAM	1	1	11.70	11.55	11.60	13.00
		1	104	11.75	11.65	11.68	13.00
		50	25	11.84	11.70	11.72	13.00
	CP-OFDM QPSK	1	1	14.30	14.14	14.20	15.50
	CP-OFDM 16QAM	1	1	13.54	13.40	13.44	15.00
	CP-OFDM 64QAM	1	1	12.06	11.97	12.00	13.50
CP-OFDM 256QAM	1	1	9.40	9.32	9.35	10.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up
				648666/3730	650000/3750	651334/3770	
60MHz	DFT-s-OFDM BPSK	1	1	14.98	14.90	14.94	16.50
		1	160	14.90	14.89	14.89	16.50
		81	40	15.22	15.14	15.17	16.50
		162	0	15.20	15.13	15.15	16.50
	DFT-s-OFDM QPSK	1	1	15.31	15.25	15.27	16.50
		1	160	15.17	15.08	15.12	16.50
		81	40	15.10	14.98	15.05	16.50
		162	0	14.82	14.70	14.74	16.50
	DFT-s-OFDM 16QAM	1	1	14.84	14.76	14.78	16.50
		1	160	14.83	14.76	14.79	16.50
		81	40	14.80	14.74	14.75	16.50
	DFT-s-OFDM 64QAM	1	1	13.45	13.36	13.39	15.00
		1	160	13.43	13.36	13.38	15.00
		81	40	13.39	13.33	13.35	15.00
	DFT-s-OFDM 256QAM	1	1	11.72	11.54	11.62	13.00
		1	160	11.78	11.65	11.71	13.00
		81	40	11.83	11.72	11.75	13.00
	CP-OFDM QPSK	1	1	14.33	14.19	14.20	15.50
	CP-OFDM 16QAM	1	1	13.56	13.44	13.47	15.00
	CP-OFDM 64QAM	1	1	12.09	12.02	12.04	13.50
CP-OFDM 256QAM	1	1	9.43	9.37	9.39	10.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				649334/3740	650000/3750	650666/3760		
80MHz	DFT-s-OFDM BPSK	1	1	14.94	14.82	14.89	16.50	
		1	215	14.87	14.84	14.84	16.50	
		108	54	15.17	15.08	15.10	16.50	
		216	0	15.15	15.04	15.08	16.50	
	DFT-s-OFDM QPSK	1	1	15.26	15.16	15.20	16.50	
		1	215	15.11	15.00	15.04	16.50	
		108	54	15.05	14.89	14.96	16.50	
		216	0	14.77	14.64	14.67	16.50	
	DFT-s-OFDM 16QAM	1	1	14.79	14.71	14.72	16.50	
		1	215	14.78	14.69	14.74	16.50	
		108	54	14.74	14.68	14.69	16.50	
	DFT-s-OFDM 64QAM	1	1	13.39	13.29	13.32	15.00	
		1	215	13.38	13.27	13.31	15.00	
		108	54	13.34	13.24	13.28	15.00	
	DFT-s-OFDM 256QAM	1	1	11.65	11.48	11.55	13.00	
		1	215	11.72	11.60	11.65	13.00	
		108	54	11.78	11.65	11.70	13.00	
	CP-OFDM QPSK	1	1	14.27	14.13	14.14	15.50	
	CP-OFDM 16QAM	1	1	13.50	13.37	13.40	15.00	
	CP-OFDM 64QAM	1	1	12.04	11.93	11.97	13.50	
CP-OFDM 256QAM	1	1	9.38	9.28	9.32	10.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune -up	
				/	650000/3750	/		
100MHz	DFT-s-OFDM BPSK	1	1	/	14.77	/	16.50	
		1	271	/	14.82	/	16.50	
		135	67	/	15.02	/	16.50	
		270	0	/	14.99	/	16.50	
	DFT-s-OFDM QPSK	1	1	/	15.12	/	16.50	
		1	271	/	14.94	/	16.50	
		135	67	/	14.88	/	16.50	
	DFT-s-OFDM 16QAM	270	0	/	14.63	/	16.50	
		1	1	/	14.70	/	16.50	
		1	271	/	14.64	/	16.50	
	DFT-s-OFDM 64QAM	135	67	/	14.63	/	16.50	
		1	1	/	13.22	/	15.00	
		1	271	/	13.22	/	15.00	
			135	67	/	13.20	/	15.00



	DFT-s-OFDM 256QAM	1	1	/	11.40	/	13.00
		1	271	/	11.54	/	13.00
		135	67	/	11.60	/	13.00
	CP-OFDM QPSK	1	1	/	14.08	/	15.50
	CP-OFDM 16QAM	1	1	/	13.30	/	15.00
	CP-OFDM 64QAM	1	1	/	11.88	/	13.50
	CP-OFDM 256QAM	1	1	/	9.24	/	10.50

9.5 WLAN Mode

Wi-Fi 2.4G Full power & Level 3 -Ant7 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	20.00	19.56
	6/2437	20.00	19.84
	11/2462	20.00	19.59
802.11g (6M)	1/2412	20.00	18.62
	6/2437	20.00	19.82
	11/2462	20.00	18.61
802.11n (HT20,800ns) (MCS0)	1/2412	17.50	16.51
	6/2437	20.00	19.80
	11/2462	17.50	16.93
802.11n (HT40,400ns) (MCS0)	3/2422	16.50	15.44
	6/2437	18.50	17.87
	9/2452	18.50	17.41
802.11ax 20 (MCS0)	1/2412	17.50	16.12
	6/2437	20.00	18.84
	11/2462	17.50	16.25
802.11ax 40 (MCS0)	3/2422	16.50	15.35
	6/2437	18.50	17.07
	9/2452	18.50	17.29

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Level 1 & Level 2 -Ant7 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	18.00	17.57
	6/2437	18.00	17.85
	11/2462	18.00	17.59
802.11g (6M)	1/2412	18.00	16.48
	6/2437	18.00	17.65
	11/2462	18.00	16.29
802.11n (HT20,800ns) (MCS0)	1/2412	15.50	14.32
	6/2437	18.00	17.45
	11/2462	15.50	14.53
802.11n (HT40,400ns)	3/2422	14.50	13.26
	6/2437	16.50	15.84



(MCS0)	9/2452	16.50	15.27
802.11ax 20 (MCS0)	1/2412	15.50	13.98
	6/2437	18.00	16.67
	11/2462	15.50	14.13
802.11ax 40 (MCS0)	3/2422	14.50	13.16
	6/2437	16.50	15.09
	9/2452	16.50	15.30

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Level 4-Ant7 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	17.00	16.54
	6/2437	17.00	16.57
	11/2462	17.00	16.36
802.11g (6M)	1/2412	17.00	15.43
	6/2437	17.00	16.52
	11/2462	17.00	15.42
802.11n (HT20,800ns) (MCS0)	1/2412	14.50	13.35
	6/2437	17.00	16.56
	11/2462	14.50	13.71
802.11n (HT40,400ns) (MCS0)	3/2422	13.50	12.24
	6/2437	15.50	14.64
	9/2452	15.50	14.20
802.11ax 20 (MCS0)	1/2412	14.50	12.93
	6/2437	17.00	15.78
	11/2462	14.50	13.09
802.11ax 40 (MCS0)	3/2422	13.50	12.33
	6/2437	15.50	14.09
	9/2452	15.50	14.27

Note: Initial test configuration is 802.11b mode.



Wi-Fi 2.4G Full power & Level 3 & Level 4-Ant9 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	20.00	19.52
	6/2437	20.00	19.44
	11/2462	20.00	19.61
802.11g (6M)	1/2412	20.00	18.24
	6/2437	20.00	19.60
	11/2462	20.00	18.16
802.11n (HT20,800ns) (MCS0)	1/2412	17.50	16.21
	6/2437	20.00	19.36
	11/2462	17.50	16.17
802.11n (HT40,400ns) (MCS0)	3/2422	16.50	14.81
	6/2437	18.50	17.48
	9/2452	18.50	16.66
802.11ax 20 (MCS0)	1/2412	17.50	15.77
	6/2437	20.00	18.51
	11/2462	17.50	15.74
802.11ax 40 (MCS0)	3/2422	16.50	14.65
	6/2437	18.50	17.36
	9/2452	18.50	16.62

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Level 1 & Level 2-Ant9(ch1) Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	18.00	17.58
	6/2437	18.00	17.34
	11/2462	18.00	17.56
802.11g (6M)	1/2412	18.00	16.32
	6/2437	18.00	17.47
	11/2462	18.00	16.03
802.11n (HT20,800ns) (MCS0)	1/2412	15.50	14.19
	6/2437	18.00	17.35
	11/2462	15.50	14.10
802.11n (HT40,400ns) (MCS0)	3/2422	14.50	12.74
	6/2437	16.50	15.41
	9/2452	16.50	14.62
802.11ax 20	1/2412	15.50	13.76



(MCS0)	6/2437	18.00	16.47
	11/2462	15.50	13.73
802.11ax 40 (MCS0)	3/2422	14.50	12.67
	6/2437	16.50	15.46
	9/2452	16.50	14.72

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Full power & Level 3-MIMO(Ant7+ANT9) Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant7	Ant9
802.11b (1M)	1/2412	23.51	22.67	19.70	19.62
	6/2437	23.51	23.20	19.91	19.89
	11/2462	23.51	22.75	19.80	19.68
802.11g (6M)	1/2412	22.01	21.41	18.42	18.38
	6/2437	23.51	22.61	19.73	19.48
	11/2462	22.01	21.50	18.54	18.43
802.11n (HT20,800ns) (MCS0)	1/2412	20.51	19.35	16.35	16.33
	6/2437	23.51	22.83	19.85	19.80
	11/2462	20.51	19.37	16.31	16.41
802.11n (HT40,400ns) (MCS0)	3/2422	19.01	18.22	15.24	15.17
	6/2437	21.01	20.57	17.58	17.54
	9/2452	21.01	20.21	17.21	17.19
802.11ax 20 (MCS0)	1/2412	20.01	18.94	15.96	15.91
	6/2437	22.01	21.59	18.56	18.59
	11/2462	20.01	19.06	16.12	15.98
802.11ax 40 (MCS0)	3/2422	19.01	18.05	15.01	15.07
	6/2437	21.01	20.45	17.45	17.42
	9/2452	21.01	20.09	17.04	17.13

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Level 1 & Level 2-MIMO(Ant7+ANT9) Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant7	Ant9
802.11b (1M)	1/2412	18.51	17.72	14.73	14.69
	6/2437	18.51	17.84	14.84	14.83
	11/2462	18.51	17.74	14.79	14.67
802.11g	1/2412	17.01	16.42	13.42	13.39



(6M)	6/2437	18.51	17.62	14.63	14.59
	11/2462	17.01	16.51	13.46	13.53
802.11n (HT20,800ns) (MCS0)	1/2412	15.51	14.35	11.25	11.43
	6/2437	18.51	17.82	14.71	14.91
	11/2462	15.51	14.23	11.06	11.37
802.11n (HT40,400ns) (MCS0)	3/2422	14.01	13.16	10.16	10.14
	6/2437	16.01	15.53	12.46	12.59
	9/2452	16.01	15.17	12.13	12.19
802.11ax 20 (MCS0)	1/2412	15.01	13.90	10.87	10.92
	6/2437	17.01	16.55	13.46	13.61
	11/2462	15.01	14.06	11.09	11.00
802.11ax 40 (MCS0)	3/2422	14.01	13.04	10.03	10.03
	6/2437	16.01	15.50	12.46	12.51
	9/2452	16.01	15.13	12.01	12.22

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Level 4-MIMO(Ant7+ANT9) Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant7	Ant9
802.11b (1M)	1/2412	19.51	18.62	15.64	15.58
	6/2437	19.51	18.77	15.71	15.82
	11/2462	19.51	18.65	15.64	15.64
802.11g (6M)	1/2412	18.01	17.26	14.25	14.24
	6/2437	19.51	18.40	15.57	15.21
	11/2462	18.01	17.23	14.25	14.19
802.11n (HT20,800ns) (MCS0)	1/2412	16.51	15.08	12.06	12.08
	6/2437	19.51	18.68	15.69	15.66
	11/2462	16.51	15.19	12.13	12.23
802.11n (HT40,400ns) (MCS0)	3/2422	15.01	14.04	11.06	11.00
	6/2437	17.01	16.40	13.39	13.39
	9/2452	17.01	16.12	13.17	13.05
802.11ax 20 (MCS0)	1/2412	16.01	14.91	11.91	11.89
	6/2437	18.01	17.49	14.40	14.56
	11/2462	16.01	15.05	12.08	12.00
802.11ax 40 (MCS0)	3/2422	15.01	14.00	10.95	11.03
	6/2437	17.01	16.43	13.39	13.44
	9/2452	17.01	16.09	12.97	13.18

Note: Initial test configuration is 802.11b mode.

Full power & Level 3-Ant8(ch0)			
5GHz Wi-Fi U-NII-1	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	19.50	18.33
	40/5200	19.50	18.27
	48/5240	19.50	18.23
802.11nHT20(MCS0)	36/5180	19.50	18.11
	40/5200	19.50	18.06
	48/5240	19.50	18.00
802.11nHT40(MCS0)	38/5190	18.50	17.00
	46/5230	18.50	17.03
802.11ac-VHT20(MCS0)	36/5180	19.50	18.12
	40/5200	19.50	18.06
	48/5240	19.50	18.03
802.11ac-VHT40(MCS0)	38/5190	18.50	17.01
	46/5230	18.50	17.01
802.11ac-VHT80(MCS0)	42/5210	17.50	16.20
802.11ax 20(MCS0)	36/5180	19.50	18.24
	40/5200	19.50	18.16
	48/5240	19.50	18.09
802.11ax 40(MCS0)	38/5190	18.50	17.42
	46/5230	18.50	17.25
802.11ax 80(MCS0)	42/5210	18.00	16.51
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi (U-NII-2A)	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	19.50	18.14
	60/5300	19.50	18.24
	64/5320	19.50	18.15
802.11nHT20(MCS0)	52/5260	19.50	17.96
	60/5300	19.50	18.01
	64/5320	19.50	17.99
802.11nHT40(MCS0)	54/5270	18.50	17.28
	62/5310	18.50	17.32
802.11ac-VHT20(MCS0)	52/5260	19.50	17.96
	60/5300	19.50	18.08
	64/5320	19.50	17.97
802.11ac-VHT40(MCS0)	54/5270	18.50	17.25
	62/5310	18.50	17.37



802.11ac-VHT80(MCS0)	58/5290	17.50	16.10
802.11ax 20(MCS0)	52/5260	19.50	18.12
	60/5300	19.50	18.19
	64/5320	19.50	18.14
802.11ax 40(MCS0)	54/5270	18.50	17.17
	62/5310	18.50	17.17
802.11ax 80(MCS0)	58/5290	18.00	16.64
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-2C	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	19.50	18.21
	116/5580	19.50	17.95
	140/5700	19.50	17.95
	144/5720	19.50	18.19
802.11nHT20 (MCS0)	100/5500	19.50	18.02
	116/5580	19.50	18.28
	140/5700	19.50	18.20
	144/5720	19.50	18.04
802.11nHT40 (MCS0)	102/5510	18.50	17.15
	110/5550	18.50	17.27
	134/5670	18.50	17.22
	142/5710	18.50	17.35
802.11ac-VHT20 (MCS0)	100/5500	19.50	18.03
	116/5580	19.50	18.31
	140/5700	19.50	18.16
	144/5720	19.50	18.01
802.11ac-VHT40 (MCS0)	102/5510	18.50	17.18
	110/5550	18.50	17.24
	134/5670	18.50	17.16
	142/5710	18.50	17.29
802.11ac-VHT80 (MCS0)	106/5530	17.50	16.04
	138/5690	17.50	16.24
802.11ax 20(MCS0)	100/5500	19.50	18.11
	116/5580	19.50	18.38
	140/5700	19.50	18.23
	144/5720	19.50	18.07
802.11ax 40(MCS0)	102/5510	18.50	17.04
	110/5550	18.50	17.08
	134/5670	18.50	17.07
	142/5710	18.50	17.16



802.11ax 80(MCS0)	106/5530	18.00	16.96
	138/5690	18.00	16.73
Note. Initial test configuration is 802.11ax HE20 mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-3	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	19.50	18.36
	157/5785	19.50	18.24
	165/5825	19.50	18.37
802.11nHT20(MCS0)	149/5745	19.50	18.13
	157/5785	19.50	18.00
	165/5825	19.50	18.18
802.11nHT40(MCS0)	151/5755	18.50	17.09
	159/5795	18.50	17.09
802.11ac-VHT20(MCS0)	149/5745	19.50	18.01
	157/5785	19.50	18.04
	165/5825	19.50	18.11
802.11ac-VHT40(MCS0)	151/5755	18.50	17.13
	159/5795	18.50	17.13
802.11ac-VHT80(MCS0)	155/5775	17.50	16.27
802.11ax 20(MCS0)	149/5745	19.50	18.26
	157/5785	19.50	18.18
	165/5825	19.50	18.28
802.11ax 40(MCS0)	151/5755	18.50	16.96
	159/5795	18.50	16.93
802.11ax 80(MCS0)	155/5775	18.00	16.76
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Level 1-Ant8(ch0)			
5GHz Wi-Fi U-NII-1	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	15.50	14.46
	40/5200	15.50	14.19
	48/5240	15.50	14.29
802.11nHT20(MCS0)	36/5180	15.50	14.07
	40/5200	15.50	14.06
	48/5240	15.50	14.08
802.11nHT40(MCS0)	38/5190	14.50	12.86
	46/5230	14.50	12.89



802.11ac-VHT20(MCS0)	36/5180	15.50	13.98
	40/5200	15.50	14.08
	48/5240	15.50	14.07
802.11ac-VHT40(MCS0)	38/5190	14.50	13.11
	46/5230	14.50	13.09
802.11ac-VHT80(MCS0)	42/5210	13.50	12.26
802.11ax 20(MCS0)	36/5180	15.50	14.44
	40/5200	15.50	14.22
	48/5240	15.50	14.19
802.11ax 40(MCS0)	38/5190	14.50	13.46
	46/5230	14.50	13.41
802.11ax 80(MCS0)	42/5210	14.00	12.59
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi (U-NII-2A)	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	14.50	13.22
	60/5300	14.50	13.12
	64/5320	14.50	13.07
802.11nHT20(MCS0)	52/5260	14.50	12.86
	60/5300	14.50	12.91
	64/5320	14.50	12.95
802.11nHT40(MCS0)	54/5270	13.50	12.30
	62/5310	13.50	12.26
802.11ac-VHT20(MCS0)	52/5260	14.50	12.86
	60/5300	14.50	13.00
	64/5320	14.50	12.81
802.11ac-VHT40(MCS0)	54/5270	13.50	12.13
	62/5310	13.50	12.27
802.11ac-VHT80(MCS0)	58/5290	12.50	11.06
802.11ax 20(MCS0)	52/5260	14.50	13.14
	60/5300	14.50	13.17
	64/5320	14.50	13.12
802.11ax 40(MCS0)	54/5270	13.50	12.13
	62/5310	13.50	12.17
802.11ax 80(MCS0)	58/5290	13.00	11.66
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-2C	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.



802.11a (6M)	100/5500	18.50	17.09
	116/5580	18.50	17.19
	140/5700	18.50	17.02
	144/5720	18.50	17.08
802.11nHT20 (MCS0)	100/5500	18.50	16.88
	116/5580	18.50	17.04
	140/5700	18.50	16.95
	144/5720	18.50	16.70
802.11nHT40 (MCS0)	102/5510	17.50	15.77
	110/5550	17.50	16.20
	134/5670	17.50	16.11
	142/5710	17.50	16.22
802.11ac-VHT20 (MCS0)	100/5500	18.50	16.78
	116/5580	18.50	16.86
	140/5700	18.50	17.04
	144/5720	18.50	16.91
802.11ac-VHT40 (MCS0)	102/5510	17.50	16.09
	110/5550	17.50	16.07
	134/5670	17.50	16.09
	142/5710	17.50	16.16
802.11ac-VHT80 (MCS0)	106/5530	16.50	14.92
	138/5690	16.50	15.00
802.11ax 20(MCS0)	100/5500	18.50	17.04
	116/5580	18.50	17.18
	140/5700	18.50	17.18
	144/5720	18.50	17.08
802.11ax 40(MCS0)	102/5510	17.50	16.06
	110/5550	17.50	16.10
	134/5670	17.50	15.99
	142/5710	17.50	16.20
802.11ax 80(MCS0)	106/5530	17.00	15.97
	138/5690	17.00	15.86
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-3	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	19.50	18.36
	157/5785	19.50	18.24
	165/5825	19.50	18.37
802.11nHT20(MCS0)	149/5745	19.50	18.13
	157/5785	19.50	18.00
	165/5825	19.50	18.18
802.11nHT40(MCS0)	151/5755	18.50	17.09



	159/5795	18.50	17.09
802.11ac-VHT20(MCS0)	149/5745	19.50	18.01
	157/5785	19.50	18.04
	165/5825	19.50	18.11
802.11ac-VHT40(MCS0)	151/5755	18.50	17.13
	159/5795	18.50	17.13
802.11ac-VHT80(MCS0)	155/5775	17.50	16.27
802.11ax 20(MCS0)	149/5745	19.50	18.26
	157/5785	19.50	18.18
	165/5825	19.50	18.28
802.11ax 40(MCS0)	151/5755	18.50	16.96
	159/5795	18.50	16.93
802.11ax 80(MCS0)	155/5775	18.00	16.76
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Level 2-Ant8(ch0)			
5GHz Wi-Fi U-NII-1	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	10.50	9.43
	40/5200	10.50	9.31
	48/5240	10.50	9.34
802.11nHT20(MCS0)	36/5180	10.50	9.24
	40/5200	10.50	9.10
	48/5240	10.50	9.06
802.11nHT40(MCS0)	38/5190	10.50	9.11
	46/5230	10.50	9.01
802.11ac-VHT20(MCS0)	36/5180	10.50	9.08
	40/5200	10.50	9.15
	48/5240	10.50	9.12
802.11ac-VHT40(MCS0)	38/5190	10.50	9.14
	46/5230	10.50	9.14
802.11ac-VHT80(MCS0)	42/5210	10.50	9.32
802.11ax 20(MCS0)	36/5180	10.50	9.37
	40/5200	10.50	9.25
	48/5240	10.50	9.18
802.11ax 40(MCS0)	38/5190	10.50	9.40
	46/5230	10.50	9.38
802.11ax 80(MCS0)	42/5210	10.50	9.14

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi (U-NII-2A)	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	11.50	10.23
	60/5300	11.50	10.23
	64/5320	11.50	10.32
802.11nHT20(MCS0)	52/5260	11.50	10.07
	60/5300	11.50	10.01
	64/5320	11.50	9.99
802.11nHT40(MCS0)	54/5270	11.50	10.23
	62/5310	11.50	10.23
802.11ac-VHT20(MCS0)	52/5260	11.50	9.88
	60/5300	11.50	10.06
	64/5320	11.50	9.93
802.11ac-VHT40(MCS0)	54/5270	11.50	10.28
	62/5310	11.50	10.22
802.11ac-VHT80(MCS0)	58/5290	11.50	10.10
802.11ax 20(MCS0)	52/5260	11.50	10.19
	60/5300	11.50	10.16
	64/5320	11.50	10.21
802.11ax 40(MCS0)	54/5270	11.50	10.25
	62/5310	11.50	10.21
802.11ax 80(MCS0)	58/5290	11.50	10.25
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-2C	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	14.50	13.20
	116/5580	14.50	12.89
	140/5700	14.50	12.97
	144/5720	14.50	13.07
802.11nHT20 (MCS0)	100/5500	14.50	12.90
	116/5580	14.50	13.02
	140/5700	14.50	13.04
	144/5720	14.50	12.77
802.11nHT40 (MCS0)	102/5510	13.50	11.86
	110/5550	13.50	12.14
	134/5670	13.50	12.08
	142/5710	13.50	12.14
802.11ac-VHT20	100/5500	14.50	12.79



(MCS0)	116/5580	14.50	12.88
	140/5700	14.50	12.96
	144/5720	14.50	12.89
802.11ac-VHT40 (MCS0)	102/5510	13.50	12.05
	110/5550	13.50	12.10
	134/5670	13.50	12.07
	142/5710	13.50	12.17
802.11ac-VHT80 (MCS0)	106/5530	12.50	10.96
	138/5690	12.50	11.07
802.11ax 20(MCS0)	100/5500	14.50	13.04
	116/5580	14.50	13.14
	140/5700	14.50	13.19
	144/5720	14.50	13.10
802.11ax 40(MCS0)	102/5510	13.50	12.06
	110/5550	13.50	12.09
	134/5670	13.50	12.02
	142/5710	13.50	12.18
802.11ax 80(MCS0)	106/5530	13.00	11.96
	138/5690	13.00	11.80
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-3	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	14.50	13.49
	157/5785	14.50	13.28
	165/5825	14.50	13.53
802.11nHT20(MCS0)	149/5745	14.50	13.20
	157/5785	14.50	13.09
	165/5825	14.50	13.17
802.11nHT40(MCS0)	151/5755	13.50	12.06
	159/5795	13.50	12.14
802.11ac-VHT20(MCS0)	149/5745	14.50	13.01
	157/5785	14.50	13.16
	165/5825	14.50	13.12
802.11ac-VHT40(MCS0)	151/5755	13.50	12.22
	159/5795	13.50	12.20
802.11ac-VHT80(MCS0)	155/5775	12.50	11.36
802.11ax 20(MCS0)	149/5745	14.50	13.35
	157/5785	14.50	13.20
	165/5825	14.50	13.35
802.11ax 40(MCS0)	151/5755	13.50	11.97
	159/5795	13.50	12.02



802.11ax 80(MCS0)	155/5775	13.00	11.83
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Level 4-Ant8(ch0)			
5GHz Wi-Fi U-NII-1	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	15.50	14.36
	40/5200	15.50	14.23
	48/5240	15.50	14.23
802.11nHT20(MCS0)	36/5180	15.50	14.00
	40/5200	15.50	13.78
	48/5240	15.50	13.70
802.11nHT40(MCS0)	38/5190	14.50	12.56
	46/5230	14.50	12.74
802.11ac-VHT20(MCS0)	36/5180	15.50	13.75
	40/5200	15.50	13.74
	48/5240	15.50	13.69
802.11ac-VHT40(MCS0)	38/5190	14.50	12.87
	46/5230	14.50	12.90
802.11ac-VHT80(MCS0)	42/5210	13.50	12.08
802.11ax 20(MCS0)	36/5180	15.50	14.11
	40/5200	15.50	13.95
	48/5240	15.50	14.12
802.11ax 40(MCS0)	38/5190	14.50	13.44
	46/5230	14.50	13.29
802.11ax 80(MCS0)	42/5210	14.00	12.56
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi (U-NII-2A)	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	15.50	14.22
	60/5300	15.50	14.21
	64/5320	15.50	14.09
802.11nHT20(MCS0)	52/5260	15.50	13.90
	60/5300	15.50	13.78
	64/5320	15.50	13.78
802.11nHT40(MCS0)	54/5270	14.50	13.14
	62/5310	14.50	13.16
802.11ac-VHT20(MCS0)	52/5260	15.50	13.77
	60/5300	15.50	14.15



	64/5320	15.50	14.02
802.11ac-VHT40(MCS0)	54/5270	14.50	13.22
	62/5310	14.50	13.31
802.11ac-VHT80(MCS0)	58/5290	13.50	11.87
802.11ax 20(MCS0)	52/5260	15.50	14.10
	60/5300	15.50	14.10
	64/5320	15.50	14.05
802.11ax 40(MCS0)	54/5270	14.50	13.06
	62/5310	14.50	13.30
802.11ax 80(MCS0)	58/5290	14.00	12.74
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-2C	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	16.50	15.33
	116/5580	16.50	14.89
	140/5700	16.50	14.96
	144/5720	16.50	15.21
802.11nHT20 (MCS0)	100/5500	16.50	15.02
	116/5580	16.50	15.28
	140/5700	16.50	15.05
	144/5720	16.50	14.88
802.11nHT40 (MCS0)	102/5510	15.50	13.95
	110/5550	15.50	14.15
	134/5670	15.50	13.96
	142/5710	15.50	14.14
802.11ac-VHT20 (MCS0)	100/5500	16.50	14.93
	116/5580	16.50	15.19
	140/5700	16.50	15.07
	144/5720	16.50	14.86
802.11ac-VHT40 (MCS0)	102/5510	15.50	14.06
	110/5550	15.50	14.10
	134/5670	15.50	14.07
	142/5710	15.50	14.19
802.11ac-VHT80 (MCS0)	106/5530	14.50	12.88
	138/5690	14.50	13.10
802.11ax 20(MCS0)	100/5500	16.50	15.20
	116/5580	16.50	15.23
	140/5700	16.50	15.07
	144/5720	16.50	14.90
802.11ax 40(MCS0)	102/5510	15.50	13.84



	110/5550	15.50	13.88
	134/5670	15.50	13.81
	142/5710	15.50	14.10
802.11ax 80(MCS0)	106/5530	15.00	13.87
	138/5690	15.00	13.84
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-3	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	16.50	15.44
	157/5785	16.50	15.22
	165/5825	16.50	15.46
802.11nHT20(MCS0)	149/5745	16.50	15.10
	157/5785	16.50	14.96
	165/5825	16.50	15.01
802.11nHT40(MCS0)	151/5755	15.50	13.89
	159/5795	15.50	13.89
802.11ac-VHT20(MCS0)	149/5745	16.50	14.87
	157/5785	16.50	14.86
	165/5825	16.50	14.90
802.11ac-VHT40(MCS0)	151/5755	15.50	14.00
	159/5795	15.50	13.98
802.11ac-VHT80(MCS0)	155/5775	14.50	13.11
802.11ax 20(MCS0)	149/5745	16.50	15.25
	157/5785	16.50	15.09
	165/5825	16.50	15.22
802.11ax 40(MCS0)	151/5755	15.50	13.87
	159/5795	15.50	14.04
802.11ax 80(MCS0)	155/5775	15.00	13.85
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Full power & Level 1 & Level 2 & Level 3 & Level 4-Ant9(ch1)			
5GHz Wi-Fi U-NII-1	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	19.50	18.05
	40/5200	19.50	18.07
	48/5240	19.50	18.03
802.11nHT20(MCS0)	36/5180	19.50	17.90
	40/5200	19.50	17.91
	48/5240	19.50	18.28



802.11nHT40(MCS0)	38/5190	18.50	17.33
	46/5230	18.50	17.44
802.11ac-VHT20(MCS0)	36/5180	19.50	17.91
	40/5200	19.50	17.90
	48/5240	19.50	18.31
802.11ac-VHT40(MCS0)	38/5190	18.50	17.38
	46/5230	18.50	17.44
802.11ac-VHT80(MCS0)	42/5210	17.50	15.98
802.11ax 20(MCS0)	36/5180	19.50	17.99
	40/5200	19.50	18.00
	48/5240	19.50	18.04
802.11ax 40(MCS0)	38/5190	18.50	17.25
	46/5230	18.50	17.25
802.11ax 80(MCS0)	42/5210	18.00	16.56
Note. Initial test configuration is 802.11ac VHT20 mode, since the highest maximum output power.			
5GHz Wi-Fi (U-NII-2A)	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	19.50	17.98
	60/5300	19.50	17.90
	64/5320	19.50	17.97
802.11nHT20(MCS0)	52/5260	19.50	18.27
	60/5300	19.50	18.15
	64/5320	19.50	18.25
802.11nHT40(MCS0)	54/5270	18.50	17.21
	62/5310	18.50	17.37
802.11ac-VHT20(MCS0)	52/5260	19.50	18.32
	60/5300	19.50	18.18
	64/5320	19.50	18.29
802.11ac-VHT40(MCS0)	54/5270	18.50	17.28
	62/5310	18.50	17.38
802.11ac-VHT80(MCS0)	58/5290	17.50	15.92
802.11ax 20(MCS0)	52/5260	19.50	18.37
	60/5300	19.50	18.31
	64/5320	19.50	18.37
802.11ax 40(MCS0)	54/5270	18.50	17.07
	62/5310	18.50	17.18
802.11ax 80(MCS0)	58/5290	18.00	16.95
Note. Initial test configuration is 802.11ax HE20 mode, since the highest maximum output power.			



5GHz Wi-Fi U-NII-2C	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	19.50	18.28
	116/5580	19.50	18.25
	140/5700	19.50	18.07
	144/5720	19.50	18.01
802.11nHT20 (MCS0)	100/5500	19.50	18.16
	116/5580	19.50	18.14
	140/5700	19.50	17.96
	144/5720	19.50	18.24
802.11nHT40 (MCS0)	102/5510	18.50	17.11
	110/5550	18.50	17.11
	134/5670	18.50	17.35
	142/5710	18.50	17.19
802.11ac-VHT20 (MCS0)	100/5500	19.50	18.15
	116/5580	19.50	18.08
	140/5700	19.50	17.99
	144/5720	19.50	17.83
802.11ac-VHT40 (MCS0)	102/5510	18.50	17.15
	110/5550	18.50	17.20
	134/5670	18.50	17.28
	142/5710	18.50	17.31
802.11ac-VHT80 (MCS0)	106/5530	17.50	16.29
	138/5690	17.50	16.10
802.11ax 20(MCS0)	100/5500	19.50	18.21
	116/5580	19.50	18.17
	140/5700	19.50	18.01
	144/5720	19.50	17.86
802.11ax 40(MCS0)	102/5510	18.50	17.19
	110/5550	18.50	17.11
	134/5670	18.50	17.28
	142/5710	18.50	17.32
802.11ax 80(MCS0)	106/5530	18.00	16.75
	138/5690	18.00	16.38
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			
5GHz Wi-Fi U-NII-3	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	19.50	18.25
	157/5785	19.50	18.00
	165/5825	19.50	18.00
802.11nHT20(MCS0)	149/5745	19.50	18.00
	157/5785	19.50	17.89