



MEASUREMENT REPORT (Class II Change) FCC PART 22H, 24E, 27, 90S

FCC ID: 2ARBSEL3007565

APPLICANT: Hewlett Packard Enterprise

Application Type: Certification

Product: LTE Module

Model No.: EL300_EM75L

Trademark: 

FCC Classification: PCS Licensed Transmitter held to ear (PCE)

FCC Rule Part(s): Part 2, Part 22 Subpart H, Part 24 Subpart E, Part 27, Part 90 Subpart S

Test Procedure(s): ANSI/TIA-603-E-2016, KDB 971168 D01v03r01

Received Date: August 21, 2018

Test Date: November 22, 2018 ~ January 30, 2019

Tested By : *Fran Chen*
(Fran Chen)

Reviewed By : *Paddy Chen*
(Paddy Chen)

Approved By : *Chenz Ker*
(Chenz Ker)



The test results only relate to the tested sample.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1808TW5101-U11	1.0	Original Report	2019-01-31	

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§2.1033 General Information

Applicant	Hewlett Packard Enterprise
Applicant Address	11445 Compaq Center Dr W Houston 77070 United States
Manufacturer	Inventec Corporation
Manufacturer Address	No.88, Dazhi Rd. Taoyuan Dist. 33068 Taoyuan City, Taiwan
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 22H, Part 24E, Part27, Part90S
Model No.	EL300_EM75L
Test Device Serial No.	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Fuxing Rd., Taoyuan, Taiwan (R.O.C)

- MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
- MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
- MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.

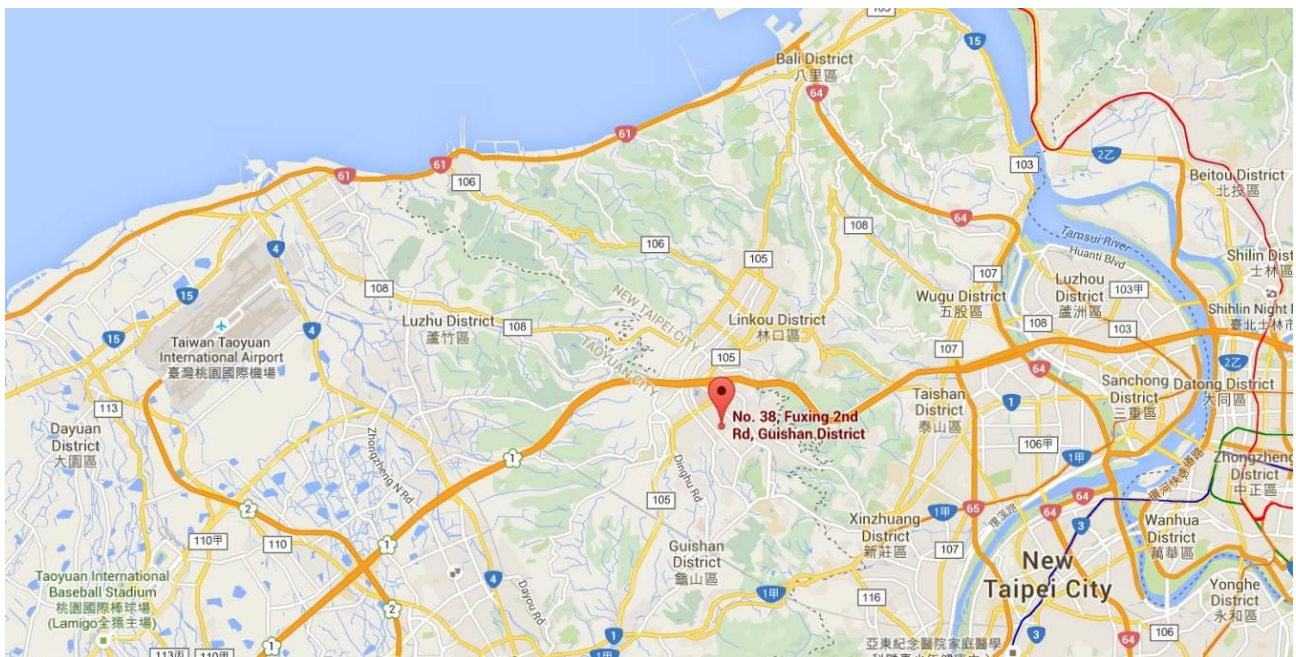
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name	LTE Module
Model No.	EL300_EM75L
Trademark	
Hardware Version Identification Number (HVIN)	1104266
Firmware Version Identification Number (FVIN)	1.08.04
Emission Designator	G7D, W7D
IMEI	35925908XXXXXXXX
Host Supports Radios Spec.	WLAN (Contains FCC ID : 2ARBSEL3009260): 2.4G: 802.11b/g/n-20/n-40 5G: 802.11a/n-20/ac-20/n-40/ac-40/ac-80/ac-160, Band 1,2,3,4 Bluetooth Dual Mode: V2.1+EDR/ V5.0 LE WLAN (Contains FCC ID : 2ARBSEL300530S): 2.4G: 802.11b/g/n-20 5G: 802.11a/n-20/n-40, Band 1,2,3,4 Bluetooth Dual Mode: V2.1+EDR/ V4.2 LE WWAN (Contains FCC ID : 2ARBSEL3007565): 3G: WCDMA Band 2,4,5 4G: FDD Band 2,4,5,7,12,13,26,30,66; TDD Band 41 4G: CA Band 7,41 GNSS
4G Operation Band (s)	Band 2, 4, 5, 7, 12, 13, 26, 30, 41, 66 CA Band 7, 41

Frequency Range	Band2: 1850MHz–1910MHz Band4: 1710MHz–1755MHz Band5: 824MHz–849MHz Band7: 2500MHz–2570MHz Band12: 699MHz–716MHz Band13: 777MHz–787MHz Band26: 814MHz–849MHz Band30: 2305MHz–2315MHz Band41: 2496MHz–2690MHz Band66: 1710MHz–1780MHz
Power Adapter	MFR: FSP GROUP INC. Model No: FSP096-AHAN3 Input: AC 100-240V~1.8A, 50-60Hz Output: DC 12V, 8A Cable Out: Non-shielding, 1.8m with Core*1

Note: This case is to update the motherboard, so the C2PC (Radiated Spurious Emission, Radiated Power, Conducted Output Power) is executed. (Original Report Grant Date: 01/31/2019, FCC ID: 2ARBSEL3007565)

1. Add a host : HPE EL300 Converged Edge System Brand : HPE, Product : HSTNS-2162
2. Change the gain of antenna

Frequency(MHz)	Gain(dBi)	
	Original	New
B2: 1850~1910	4	2.87
B4: 1710~1755MHz	4	2.55
B5: 824~849MHz	4	1.31
B7: 2500~2570MHz	4	2.55
B12: 699~716MHz	4	0.14
B13: 777~787MHz	4	0.88
B26: 824~849MHz	4	1.31
B30: 2305~2315MHz	1	1.00
B41: 2500~2690MHz	4	2.55
B66: 1710~1780MHz	4	2.55

3. Remove the LTE Band 48(3550 ~3700MHz) by software from CBE grant , No hardware changes have been made

2.2. Equipment Description

Antenna Type	Dipole
Antenna M/N	DAM-D6-R-N0-000-04-02
Antenna Gain	Band 2: 2.87dBi, Band 4: 2.55dBi, Band 5: 1.31dBi, Band 7: 2.55dBi Band 12: 0.14dBi, Band 13: 0.88dBi, Band 26: 1.31dBi Band 30: 1.00dBi, Band 41: 2.55dBi,, Band 66: 2.55dBi
Type of Modulation	QPSK, 16QAM, 64QAM

Note: The test report has showed the worst test mode.

2.3. Device Capabilities

This device contains the following capabilities:

LTE Band 2, 4, 5, 7, 12, 13, 26, 30, 41, 66

LTE CA Band 7, 41

2.4. Test Configuration

The **LTE Module** was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01v03r01. See section 3.0 of this report for a description of the radiated and antenna port conducted emissions tests.

2.5. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3. DESCRIPTION OF TEST

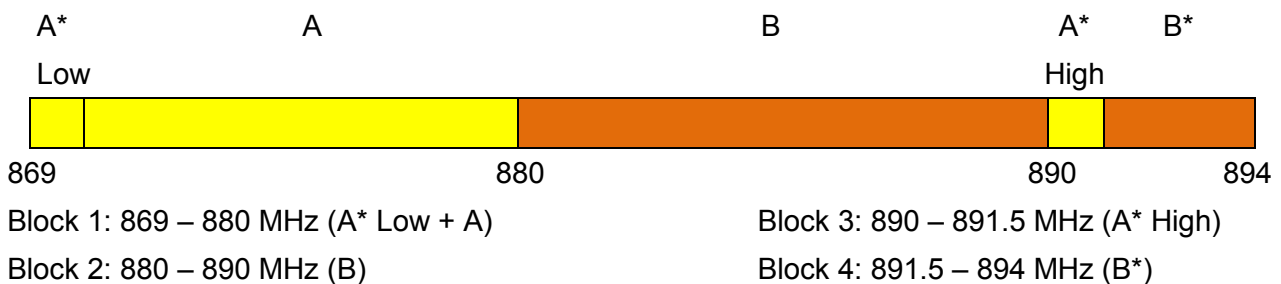
3.1. Evaluation Procedure

The measurement procedures described in the “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-E-2016) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168) were used in the measurement of the **LTE Module**

Deviation from measurement procedure.....None

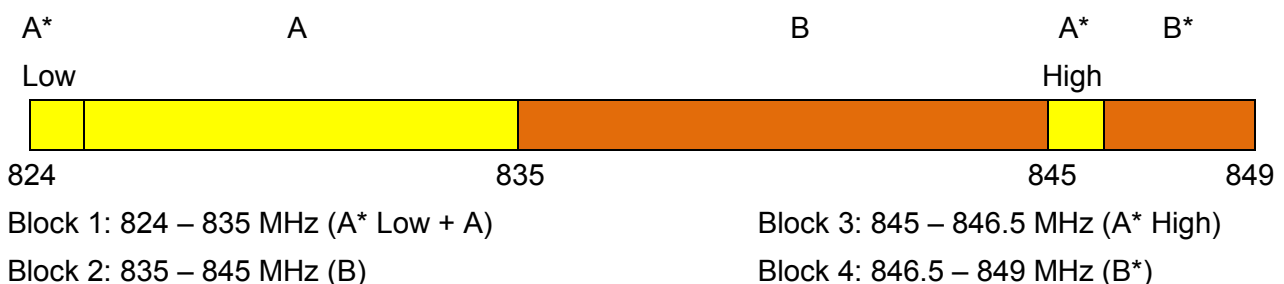
3.2. Cellular – Base Frequency Blocks

\$22.905



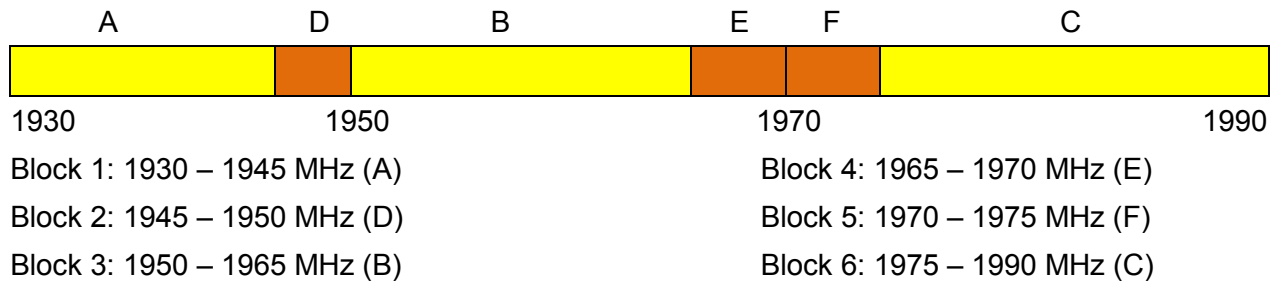
3.3. Cellular – Mobile Frequency Blocks

\$22.905



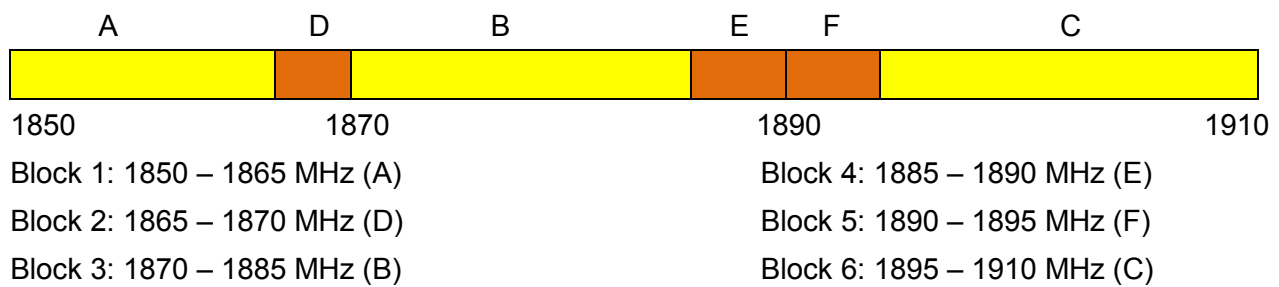
3.4. PCS – Base Frequency Blocks

§24.229



3.5. PCS – Mobile Frequency Blocks

§24.229



3.6. Occupied Bandwidth

§2.1049

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The spectrum analyzers' "occupied bandwidth" measurement function was used to record the occupied bandwidth in accordance with KDB 971168.

3.7. Spurious and Harmonic Emissions at Antenna Terminal

§2.1051 §22.917(a) §24.238(a) §27.53(c),(g),(m) §90.691

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for Part 22. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

3.8. Power and Radiated Spurious Emissions

§2.1053 §22.913(a.2) §22.917(a) §24.232(c) §24.238(a) §27.53(c),(g),(m) §90.691

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurement and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. A 80cm high PVC support structure is placed on top of the turntable.

The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration band set to the emissions' occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168.

Per the guidance of ANSI/TIA-603-E-2016, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d \text{ [dBm]} = P_g \text{ [dBm]} - \text{cable loss [dB]} + \text{antenna gain [dBd/dBi]}$$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g \text{ [dBm]} - \text{cable loss [dB]}$.

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of $43 + 10 \cdot \log_{10}(\text{Power [Watts]})$ specified in 22.917(a).

3.9. Peak-Average Ratio

§24.232(d)

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

For pulsed signals, the spectrum analyzer is set to use an internal “RF Burst” trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the “on time” of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power. For continuous signals, the trigger is set to “free run” in the CCDF measurement mode.

3.10. Frequency Stability / Temperature Variation

§2.1055 §22.355 §22.863 §22.905 §24.229 §24.235 §27.54 §90.213

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) Temperature: The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – For Part 22, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2019/3/20
Cable	Rosnol	N1C50-RG400-B 1C50-500CM	MRTTWE00013	1 year	2019/5/18
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2019/3/19

Radiated Emissions – AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2019/5/22
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2019/3/19
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2019/4/24
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2019/4/24
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2019/4/23
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2019/4/23
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2019/4/23
Cable	HUBERSUHNER	SF106	MRTTWA00010	1 year	2019/5/18
Cable	Rosnol	K1K50-UP0264- K1K50-4M	MRTTWA00012	1 year	2019/7/30

Conducted Test Equipment – SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/7/30
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2019/3/20
Wideband Radio Communication Taster	R&S	CMW 500	MRTTWA00041	1 year	2019/2/13

Test Software

Software	Version	Function
e3	9.160520a	EMI Test Software
EMI	V3	EMI Test Software

5. SAMPLE CALCULATIONS

GSM Emission Designator

Emission Designator = 250KGXW

GSM BW = 250 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EGPRS Emission Designator

Emission Designator = 250KG7W

GSM BW = 250 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA / CDMA Emission Designator

Emission Designator = 1M25F9W

WCDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

LTE Emission Designator

Emission Designator = QPSK 5M00G7D / 16QAM 5M00W7D

LTE BW = 1.4/3/5/10/15/20 MHz

QPSK G = Phase Modulation /

16QAM W= in a combination of two or more of the following modes: amplitude, angle, pulse

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

Spurious Radiated Emission

Example: Spurious emission at 1688.10 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was -65.0dBm . The gain of the substituted antenna is 6.5dBi . The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -65.0dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 4.5 dB at 1688.1MHz . So 2 dB is added to the signal generator reading of -25dBm yielding -23dBm . The fundamental EIRP was 24.0dBm so this harmonic was $24.0\text{dBm} - (-23) = 47\text{dBc}$.

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.22dB

7. TEST RESULT

7.1. Summary

Product Name: LTE Module
FCC Classification: PCS Licensed Transmitter (PCB)
Mode(s): LTE Band 2, 4, 5, 7, 12, 13, 26, 30, 41, 66, LTE CA Band 7, 41

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
<u>Transmitter Mode(TX)</u>					
2.1049	Occupied bandwidth	N/A	Conducted	N/A	Original Report
2.1051 22.917(a) 24.238(a) 27.53(c) 27.52(h) 90.691	Conducted Spurious Emissions	> 43 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 2,4,5,12,13,26,66)		N/A	Original Report
2.1051 27.53(m)		> 55 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 7,41)			
27.53(a)		< 70 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 30)			
2.1051 22.917(a) 24.238(a) 27.53(c) 27.52(h) 90.691	Band Edge	> 43 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 2,4,5,12,13,26,66)	Conducted	N/A	Original Report
2.1051 27.53(m)		> 55 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 7,41)			
27.53(a)		< 70 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 30)			
2.1046	Conducted Output Power	N/A		Pass	Section 7.5

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
Transmitter Mode(TX)					
90.691	Radiated Output Power	< 100 Watts max. ERP (Band 26)	Radiated	Pass	Section 7.5
22.913(a)		< 7 Watts max. ERP (Band 5,26)			
24.232(c) 27.50(h)		< 2 Watts max. EIRP (Band 2,7,30,41)			
27.50(b)		< 3 Watts max. ERP (Band 12,13)			
27.50(d)		< 1 Watts max. EIRP (Band 4,66)			
2.1051 22.917(a) 24.238(a) 27.53(c) 27.52(h) 90.691	Radiated Spurious Emissions	> 43 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 2,4,5,12,13,26,66)		Pass	Section 7.5
2.1051 27.53(m)		> 55 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 7,41)			
27.53(a)		< 70 + 10log ₁₀ (P[Watts]) at for all out-of-band emissions (Band 30)			
24.232(d) 27.50(B)	Peak-Average Ratio	<13dB	Conducted	N/A	Original Report
2.1055 22.355 90.213	Frequency Stability	< 2.5 ppm		N/A	Original Report
2.1055 24.235 27.54		Within Authorized Band			

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

7.2. Occupied Bandwidth

7.2.1. Test Limit

N/A

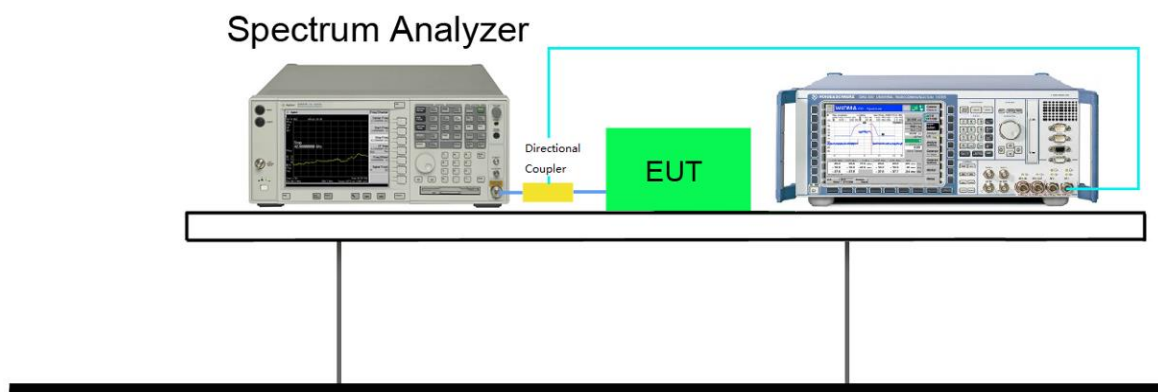
7.2.2. Test Procedure used

KDB 971168 D01v03r01 – Section 4.2 & ANSI/TIA-603-E-2016

7.2.3. Test Setting

1. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
2. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW. (RBW = approximately 1% of the emission bandwidth).
3. Set the detection mode to peak, and the trace mode to max hold.
4. Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

7.2.4. Test Setup



7.2.5. Test Result

Note: Reference Original Report Grant Date: 01/31/2019, FCC ID: 2ARBSEL3007565.

7.3. Conducted Spurious Emissions

7.3.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log_{10}(P)$ dB for Band 2,4,5,12,13,26,66 / $55 + 10\log_{10}(P)$ dB for Band7,41 / $70 + 10\log_{10}(P)$ dB for Band30

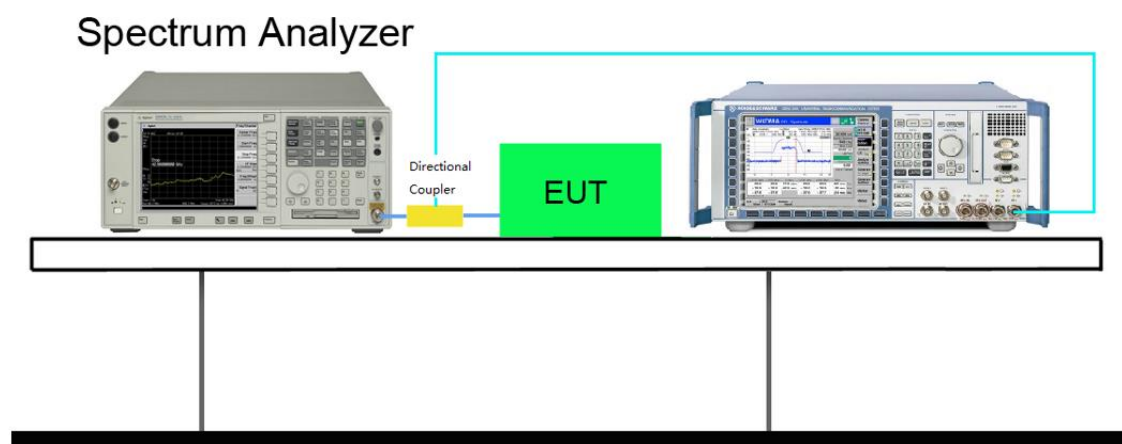
7.3.2. Test Procedure Used

KDB 971168 D01v03r01 – Section 6.0 & ANSI/TIA-603-E-2016

7.3.3. Test Setting

Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz is at or below 1GHz and 1MHz is above 1GHz, If any, up to 10th harmonic.

7.3.4. Test Setup



7.3.5. Test Result

Note: Reference Original Report Grant Date: 01/31/2019, FCC ID: 2ARBSEL3007565.

7.4. Band Edge at Antenna Terminal

7.4.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P)

24.238 (a) and RSS-133

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (c) and RSS-130

For operations in the 776-788 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least $65 + 10 \log_{10} p(\text{watts})$, dB, for mobile and portable equipment.

27.53 (g) and RSS-130

For operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

27.53(a)(4)

For mobile and portable stations operation in the 2305-2315MHz and 2350-2360MHz bands:

- (i) By a factor not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2337 and 2341MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337MHz,
- (ii) By a factor not less than: $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 AND 2296MHz, $67 + 10 \log (P)$ dB on all frequencies 2288 and 2292MHz, and $70 + 10 \log (P)$ dB below 2288MHz,
- (iii) By a factor not less than: $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log (P)$ dB below 2365MHz.

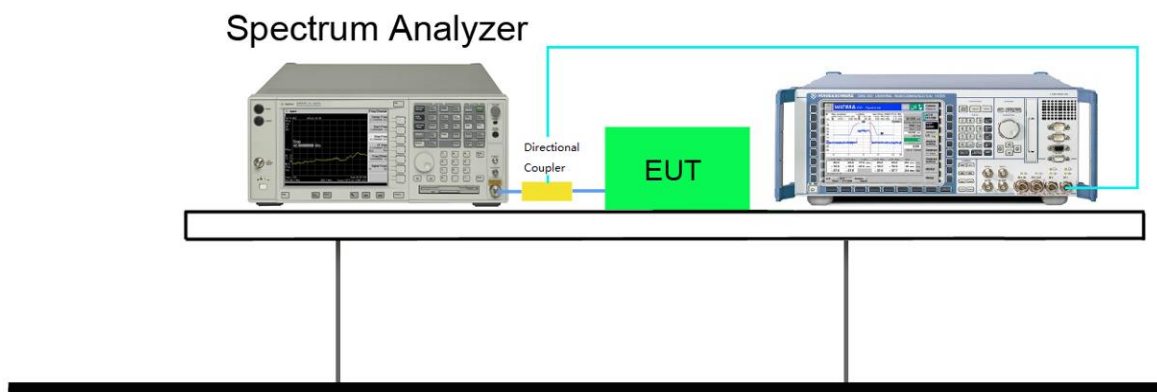
7.4.2. Test Procedure Used

KDB 971168 D01v03r01 – Section 6.0 & ANSI/TIA-603-E-2016

7.4.3. Test Setting

In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

7.4.4. Test Setup



7.4.5. Test Result

Note: Reference Original Report Grant Date: 01/31/2019, FCC ID: 2ARBSEL3007565.

7.5. Power and Radiated Spurious Emissions

7.5.1 Test Limit

Radiated Power

For FCC Part 90.691:

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 100 Watts.

For FCC Part 22.913(a):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(c)/27.50(h):

The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

For FCC Part 27.50(b):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 3 Watts.

For FCC Part 27.50(d):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 1 Watts.

Radiated Spurious Emissions

For FCC Part 22.917(a)/24.238(a)/27.53(c)/ 27.52(h)/90.691:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log_{10}(P)$ dB.

For FCC Part 27.53(m):

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10\log_{10}(P)$ dB.

For FCC Part 27.53(a):

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $70 + 10\log_{10}(P)$ dB.

7.5.2 Test Procedure Used

KDB 971168 D01v03r01 - Section 7.0 & ANSI/TIA-603-E-2016

7.5.3 Test Setting

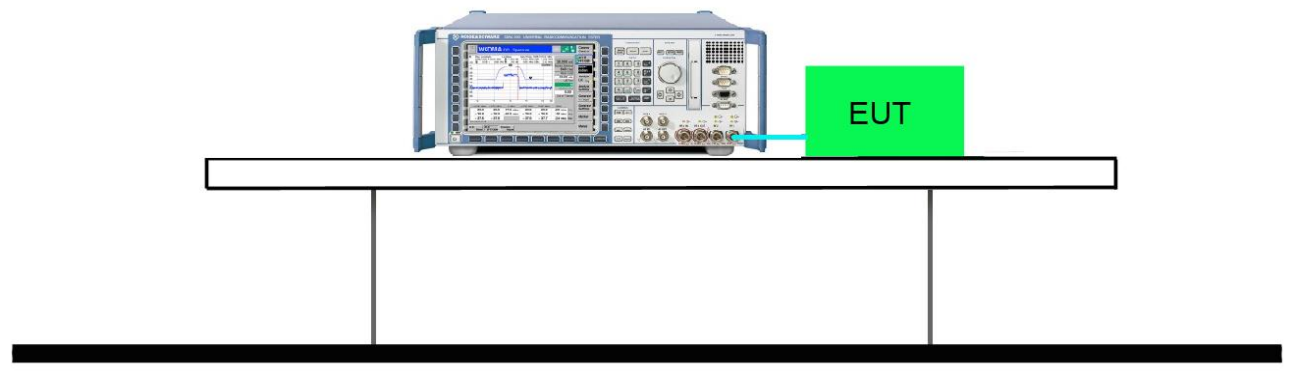
1. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
3. The output of the test antenna shall be connected to the measuring receiver.
4. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
8. The maximum signal level detected by the measuring receiver shall be noted.
9. The transmitter shall be replaced by a substitution antenna.
10. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
11. The substitution antenna shall be connected to a calibrated signal generator.
12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter

radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
16. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
17. Test site anechoic chamber refer to ANSI C63.4: 2014.

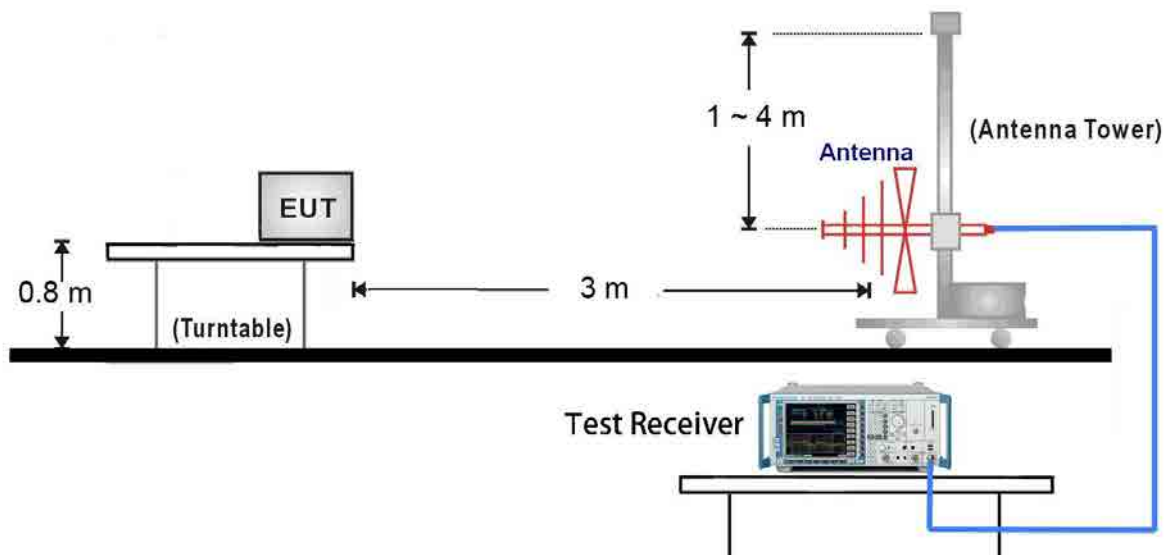
7.5.4 Test Setup

Conducted Power

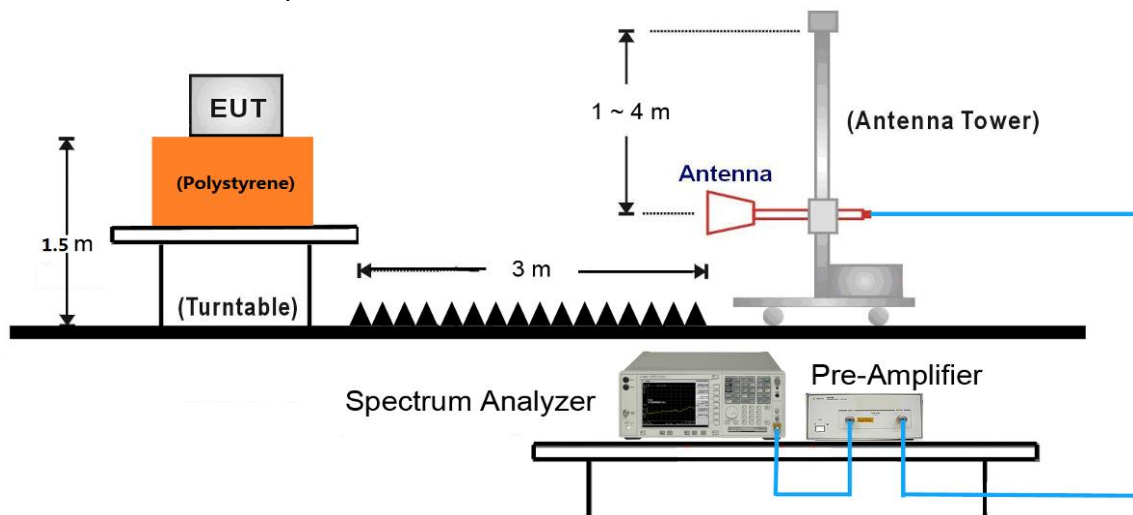


Radiated Power & Radiated Spurious Emissions

30MHz ~ 1GHz Test Setup:



1GHz ~ 10GHz Test Setup:



7.5.5 Test Result

Conducted Power

LTE Band 2		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	
		18607 (1850.7MHz)			18615 (1851.5MHz)			18625 (1852.5MHz)			18650 (1855MHz)			18675 (1857.5MHz)			18700 (1860MHz)			
Low	QPSK	1	#0	21.41	1	#0	21.59	1	#0	21.92	1	#0	22.3	1	#0	22.14	1	#0	22.31	0
		1	#2	21.39	1	#7	21.55	1	#12	21.91	1	#25	22.28	1	#36	22.11	1	#49	22.27	0
		1	#5	21.36	1	#14	21.52	1	#24	21.88	1	#49	22.24	1	#74	22.1	1	#99	22.23	0
		3	#0	21.59	8	#0	20.69	12	#0	20.88	25	#0	20.93	36	#0	21.03	50	#0	21	0-1
		3	#2	21.55	8	#4	20.68	12	#6	20.86	25	#12	20.97	36	#18	21	50	#24	20.98	0-1
		3	#3	21.5	8	#7	20.66	12	#13	20.85	25	#25	20.95	36	#37	20.98	50	#49	20.96	0-1
		6	#0	20.59	15	#0	20.67	25	#0	20.88	50	#0	20.96	75	#0	20.97	100	#0	20.99	0-1
	16QAM	1	#0	21	1	#0	20.97	1	#0	21.41	1	#0	21.68	1	#0	21.5	1	#0	21.78	0-1
		1	#2	20.99	1	#7	20.95	1	#12	21.4	1	#25	21.66	1	#36	21.47	1	#49	21.76	0-1
		1	#5	20.94	1	#14	20.94	1	#24	21.38	1	#49	21.62	1	#74	21.44	1	#99	21.72	0-1
		3	#0	20.93	8	#0	19.73	12	#0	19.96	25	#0	20.05	36	#0	20.12	50	#0	20.05	0-2
		3	#2	20.91	8	#4	19.71	12	#6	19.95	25	#12	20.04	36	#18	20.1	50	#24	20.03	0-2
		3	#3	20.88	8	#7	19.68	12	#13	19.91	25	#25	20.01	36	#37	19.98	50	#49	20.02	0-2
		6	#0	19.66	15	#0	19.84	25	#0	20.02	50	#0	20.7	75	#0	20.03	100	#0	20.05	0-2
	64QAM	1	#0	19.86	1	#0	20.15	1	#0	20.23	1	#0	20.48	1	#0	20.41	1	#0	20.59	0-1
		1	#2	19.85	1	#7	20.11	1	#12	20.21	1	#25	20.44	1	#36	20.39	1	#49	20.56	0-1
		1	#5	19.83	1	#14	20.08	1	#24	20.18	1	#49	20.38	1	#74	20.35	1	#99	20.54	0-1
		3	#0	19.88	8	#0	19.03	12	#0	19.1	25	#0	19.12	36	#0	19.22	50	#0	19.17	0-2
		3	#2	19.85	8	#4	19.02	12	#6	19.06	25	#12	19.1	36	#18	19.21	50	#24	19.14	0-2
		3	#3	19.84	8	#7	19	12	#13	19.05	25	#25	19.07	36	#37	19.19	50	#49	19.13	0-2
		6	#0	18.7	15	#0	19.01	25	#0	19.02	50	#0	19.02	75	#0	19.03	100	#0	19.1	0-2



LTE Band 2		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
Mid	QPSK	18900 (1880MHz)			18900 (1880MHz)			18900 (1880MHz)			18900 (1880MHz)			18900 (1880MHz)			18900 (1880MHz)			
		1	#0	21.39	1	#0	21.5	1	#0	21.76	1	#0	21.77	1	#0	21.94	1	#0	21.91	0
		1	#2	21.37	1	#7	21.48	1	#12	21.75	1	#25	21.74	1	#36	21.93	1	#49	21.86	0
		1	#5	21.33	1	#14	21.44	1	#24	21.73	1	#49	21.71	1	#74	21.92	1	#99	21.83	0
		3	#0	21.41	8	#0	20.48	12	#0	20.59	25	#0	20.54	36	#0	20.78	50	#0	20.82	0-1
		3	#2	21.38	8	#4	20.47	12	#6	20.57	25	#12	20.53	36	#18	20.73	50	#24	20.76	0-1
		3	#3	21.34	8	#7	20.45	12	#13	20.54	25	#25	20.48	36	#37	20.71	50	#49	20.74	0-1
		6	#0	20.45	15	#0	20.53	25	#0	20.64	50	#0	20.52	75	#0	20.78	100	#0	20.87	0-1
	16QAM	1	#0	21.03	1	#0	21.03	1	#0	20.9	1	#0	21.19	1	#0	21.26	1	#0	21.47	0-1
		1	#2	21.02	1	#7	21.01	1	#12	20.88	1	#25	21.17	1	#36	21.23	1	#49	21.45	0-1
		1	#5	21	1	#14	20.98	1	#24	20.83	1	#49	21.14	1	#74	21.21	1	#99	21.44	0-1
		3	#0	20.46	8	#0	19.57	12	#0	19.85	25	#0	19.57	36	#0	19.92	50	#0	19.87	0-2
		3	#2	20.43	8	#4	19.55	12	#6	19.84	25	#12	19.53	36	#18	19.9	50	#24	19.83	0-2
		3	#3	20.41	8	#7	19.52	12	#13	19.82	25	#25	19.49	36	#37	19.86	50	#49	19.81	0-2
		6	#0	19.5	15	#0	19.64	25	#0	19.7	50	#0	19.62	75	#0	19.78	100	#0	19.76	0-2
	64QAM	1	#0	19.83	1	#0	20.9	1	#0	20.06	1	#0	20.27	1	#0	20.12	1	#0	20.23	0-1
		1	#2	19.81	1	#7	20.87	1	#12	20.04	1	#25	20.24	1	#36	20.09	1	#49	20.21	0-1
		1	#5	19.77	1	#14	20.83	1	#24	20.01	1	#49	20.22	1	#74	20.07	1	#99	20.2	0-1
		3	#0	19.87	8	#0	18.79	12	#0	18.89	25	#0	18.82	36	#0	18.87	50	#0	18.84	0-2
		3	#2	19.84	8	#4	18.74	12	#6	18.84	25	#12	18.81	36	#18	18.84	50	#24	18.82	0-2
		3	#3	19.83	8	#7	18.71	12	#13	18.82	25	#25	18.78	36	#37	18.79	50	#49	18.8	0-2
		6	#0	18.8	15	#0	18.8	25	#0	18.88	50	#0	18.86	75	#0	18.84	100	#0	18.85	0-2

LTE Band 2		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
High	QPSK	19193 (1909.3MHz)			19185 (1908.5MHz)			19175 (1907.5MHz)			19150 (1905MHz)			19125 (1902.5MHz)			19100 (1900MHz)			
		1	#0	21.69	1	#0	21.92	1	#0	22.06	1	#0	21.98	1	#0	22.1	1	#0	22.09	0
		1	#2	21.57	1	#7	21.89	1	#12	22.05	1	#25	21.95	1	#36	22.09	1	#49	22.03	0
		1	#5	21.54	1	#14	21.85	1	#24	22.01	1	#49	21.93	1	#74	22.05	1	#99	22.01	0
		3	#0	21.79	8	#0	20.88	12	#0	20.79	25	#0	20.78	36	#0	21.07	50	#0	21.11	0-1
		3	#2	21.77	8	#4	20.85	12	#6	20.77	25	#12	20.75	36	#18	21.04	50	#24	21.1	0-1
		3	#3	21.74	8	#7	20.78	12	#13	20.74	25	#25	20.74	36	#37	20.98	50	#49	21.08	0-1
		6	#0	20.64	15	#0	20.95	25	#0	20.86	50	#0	20.72	75	#0	21.06	100	#0	21.13	0-1
	16QAM	1	#0	21.21	1	#0	21.04	1	#0	21.16	1	#0	21.04	1	#0	21.38	1	#0	21.42	0-1
		1	#2	21.19	1	#7	21.01	1	#12	21.14	1	#25	21.02	1	#36	21.34	1	#49	21.39	0-1
		1	#5	21.15	1	#14	20.96	1	#24	21.11	1	#49	20.87	1	#74	21.33	1	#99	21.34	0-1
		3	#0	20.94	8	#0	19.97	12	#0	20.09	25	#0	19.77	36	#0	19.95	50	#0	20.15	0-2
		3	#2	20.88	8	#4	19.94	12	#6	20.06	25	#12	19.74	36	#18	19.93	50	#24	20.13	0-2
		3	#3	20.85	8	#7	19.92	12	#13	20.02	25	#25	19.71	36	#37	19.92	50	#49	20.11	0-2
		6	#0	19.81	15	#0	19.87	25	#0	19.92	50	#0	19.82	75	#0	20.07	100	#0	20.11	0-2
	64QAM	1	#0	20.05	1	#0	20.05	1	#0	20.13	1	#0	20.18	1	#0	20.31	1	#0	20.25	0-1
		1	#2	20.03	1	#7	20.04	1	#12	20.11	1	#25	20.16	1	#36	20.29	1	#49	20.21	0-1
		1	#5	20.02	1	#14	19.98	1	#24	20.07	1	#49	20.13	1	#74	20.23	1	#99	20.2	0-1
		3	#0	20.13	8	#0	19.08	12	#0	19.11	25	#0	19.11	36	#0	19.15	50	#0	19.14	0-2
		3	#2	20.11	8	#4	19.05	12	#6	19.07	25	#12	19.09	36	#18	19.13	50	#24	19.12	0-2
		3	#3	20.06	8	#7	19.02	12	#13	19.04	25	#25	19.04	36	#37	19.11	50	#49	19.11	0-2
		6	#0	19.01	15	#0	19.04	25	#0	19.02	50	#0	19.07	75	#0	19.02	100	#0	19.12	0-2

LTE Band 4		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	
		CH19957 (1710.7MHz)			CH19965 (1711.5MHz)			CH19975 (1712.5MHz)			CH20000 (1715MHz)			CH20025 (1717.5MHz)			CH20050 (1720MHz)			
Low	QPSK	1	#0	21.99	1	#0	22.08	1	#0	22.13	1	#0	22.3	1	#0	22.36	1	#0	22.26	0
		1	#2	21.96	1	#7	22.05	1	#12	22.11	1	#25	22.29	1	#36	22.34	1	#49	22.23	0
		1	#5	21.91	1	#14	22.01	1	#24	22.08	1	#49	22.23	1	#74	22.31	1	#99	22.22	0
		3	#0	22.09	8	#0	21.04	12	#0	21.09	25	#0	21.29	36	#0	21.3	50	#0	21.2	0-1
		3	#2	22.06	8	#4	21.03	12	#6	21.07	25	#12	21.26	36	#18	21.27	50	#24	21.18	0-1
		3	#3	22.03	8	#7	20.98	12	#13	21.04	25	#25	21.21	36	#37	21.23	50	#49	21.13	0-1
		6	#0	21.05	15	#0	21.06	25	#0	21.06	50	#0	21.24	75	#0	21.28	100	#0	21.21	0-1
	16QAM	1	#0	21.35	1	#0	21.49	1	#0	21.6	1	#0	21.59	1	#0	21.77	1	#0	21.7	0-1
		1	#2	21.31	1	#7	21.43	1	#12	21.57	1	#25	21.55	1	#36	21.75	1	#49	21.67	0-1
		1	#5	21.29	1	#14	21.41	1	#24	21.54	1	#49	21.52	1	#74	21.72	1	#99	21.63	0-1
		3	#0	20.95	8	#0	20.19	12	#0	20.19	25	#0	20.33	36	#0	20.36	50	#0	20.14	0-2
		3	#2	20.93	8	#4	20.14	12	#6	20.15	25	#12	20.31	36	#18	20.32	50	#24	20.11	0-2
		3	#3	20.91	8	#7	20.12	12	#13	20.13	25	#25	20.27	36	#37	20.29	50	#49	20.08	0-2
		6	#0	19.98	15	#0	20.12	25	#0	20.2	50	#0	20.37	75	#0	20.34	100	#0	20.15	0-2
	64QAM	1	#0	20.48	1	#0	20.36	1	#0	20.53	1	#0	20.55	1	#0	20.75	1	#0	20.65	0-1
		1	#2	20.43	1	#7	20.34	1	#12	20.51	1	#25	20.52	1	#36	20.73	1	#49	20.62	0-1
		1	#5	20.39	1	#14	20.33	1	#24	20.45	1	#49	20.49	1	#74	20.7	1	#99	20.58	0-1
		3	#0	20.51	8	#0	19.18	12	#0	19.42	25	#0	19.4	36	#0	19.6	50	#0	19.4	0-2
		3	#2	20.48	8	#4	19.14	12	#6	19.41	25	#12	19.39	36	#18	19.58	50	#24	19.39	0-2
		3	#3	20.41	8	#7	19.11	12	#13	19.37	25	#25	19.36	36	#37	19.55	50	#49	19.34	0-2
		6	#0	19.32	15	#0	19.14	25	#0	19.12	50	#0	19.39	75	#0	19.52	100	#0	19.32	0-2

LTE Band 4		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
Mid	QPSK	CH20175 (1732.5MHz)			CH20175 (1732.5MHz)			CH20175 (1732.5MHz)			CH20175 (1732.5MHz)			CH20175 (1732.5MHz)			CH20175 (1732.5MHz)			
		1	#0	22.19	1	#0	22.25	1	#0	22.31	1	#0	22.36	1	#0	22.41	1	#0	22.58	0
		1	#2	22.17	1	#7	22.21	1	#12	22.29	1	#25	22.31	1	#36	22.34	1	#49	22.56	0
		1	#5	22.14	1	#14	22.16	1	#24	22.24	1	#49	22.27	1	#74	22.31	1	#99	22.55	0
		3	#0	22.19	8	#0	21.38	12	#0	21.3	25	#0	21.5	36	#0	21.37	50	#0	21.43	0-1
		3	#2	22.16	8	#4	21.34	12	#6	21.28	25	#12	21.48	36	#18	21.33	50	#24	21.41	0-1
		3	#3	22.13	8	#7	21.33	12	#13	21.25	25	#25	21.44	36	#37	21.31	50	#49	21.36	0-1
		6	#0	21.12	15	#0	21.3	25	#0	21.34	50	#0	21.62	75	#0	21.39	100	#0	21.41	0-1
	16QAM	1	#0	21.47	1	#0	21.62	1	#0	21.84	1	#0	21.94	1	#0	22.07	1	#0	21.85	0-1
		1	#2	21.44	1	#7	21.58	1	#12	21.82	1	#25	21.92	1	#36	22.05	1	#49	21.84	0-1
1		#5	21.39	1	#14	21.56	1	#24	21.81	1	#49	21.9	1	#74	22.04	1	#99	21.81	0-1	
3		#0	21.46	8	#0	20.31	12	#0	20.3	25	#0	20.38	36	#0	20.32	50	#0	20.51	0-2	
3		#2	21.44	8	#4	20.29	12	#6	20.28	25	#12	20.34	36	#18	20.29	50	#24	20.49	0-2	
3		#3	21.39	8	#7	20.24	12	#13	20.23	25	#25	20.33	36	#37	20.24	50	#49	20.44	0-2	
6		#0	20.36	15	#0	20.33	25	#0	20.28	50	#0	20.35	75	#0	20.31	100	#0	20.38	0-2	
64QAM	1	#0	20.71	1	#0	20.47	1	#0	20.62	1	#0	20.62	1	#0	20.83	1	#0	20.93	0-1	
	1	#2	20.7	1	#7	20.44	1	#12	20.61	1	#25	20.6	1	#36	20.82	1	#49	20.96	0-1	
	1	#5	20.65	1	#14	20.42	1	#24	20.57	1	#49	20.55	1	#74	20.77	1	#99	20.92	0-1	
	3	#0	20.68	8	#0	19.41	12	#0	19.57	25	#0	19.44	36	#0	19.51	50	#0	19.67	0-2	
	3	#2	20.63	8	#4	19.38	12	#6	19.55	25	#12	19.43	36	#18	19.49	50	#24	19.64	0-2	
	3	#3	20.61	8	#7	19.37	12	#13	19.53	25	#25	19.41	36	#37	19.48	50	#49	19.62	0-2	
	6	#0	19.52	15	#0	19.38	25	#0	19.52	50	#0	19.41	75	#0	19.48	100	#0	19.62	0-2	

LTE Band 4		1.4MHz			3MHz			5MHz			10MHz			15MHz			20MHz			MPR
High	QPSK	CH20393 (1754.3MHz)			CH20385 (1753.5MHz)			CH20375 (1752.5MHz)			CH20350 (1750MHz)			CH20325 (1747.5MHz)			CH20300 (1745MHz)			
		1	#0	22.24	1	#0	22.24	1	#0	22.33	1	#0	22.37	1	#0	22.56	1	#0	22.54	0
		1	#2	22.21	1	#7	22.22	1	#12	22.3	1	#25	22.34	1	#36	22.52	1	#49	22.52	0
		1	#5	22.18	1	#14	22.16	1	#24	22.27	1	#49	22.31	1	#74	22.51	1	#99	22.47	0
		3	#0	22.18	8	#0	21.17	12	#0	21.19	25	#0	21.2	36	#0	21.41	50	#0	21.46	0-1
		3	#2	22.14	8	#4	21.15	12	#6	21.16	25	#12	21.18	36	#18	21.37	50	#24	21.44	0-1
		3	#3	22.13	8	#7	21.12	12	#13	21.14	25	#25	21.15	36	#37	21.34	50	#49	21.39	0-1
		6	#0	21.24	15	#0	21.17	25	#0	21.21	50	#0	21.12	75	#0	21.32	100	#0	21.39	0-1
	16QAM	1	#0	21.74	1	#0	21.48	1	#0	21.79	1	#0	21.77	1	#0	21.92	1	#0	22.13	0-1
		1	#2	21.72	1	#7	21.44	1	#12	21.77	1	#25	21.76	1	#36	21.91	1	#49	22.11	0-1
		1	#5	21.66	1	#14	21.41	1	#24	21.74	1	#49	21.72	1	#74	21.87	1	#99	22.1	0-1
		3	#0	21.35	8	#0	20.27	12	#0	20.39	25	#0	20.28	36	#0	20.35	50	#0	20.57	0-2
		3	#2	21.32	8	#4	20.23	12	#6	20.34	25	#12	20.24	36	#18	20.32	50	#24	20.53	0-2
		3	#3	21.27	8	#7	20.21	12	#13	20.31	25	#25	20.22	36	#37	20.3	50	#49	20.51	0-2
		6	#0	20.18	15	#0	20.3	25	#0	20.35	50	#0	20.23	75	#0	20.29	100	#0	20.53	0-2
	64QAM	1	#0	20.48	1	#0	20.6	1	#0	20.65	1	#0	20.58	1	#0	21.02	1	#0	20.88	0-1
		1	#2	20.43	1	#7	20.56	1	#12	20.63	1	#25	20.52	1	#36	21	1	#49	20.83	0-1
		1	#5	20.41	1	#14	20.52	1	#24	20.62	1	#49	20.5	1	#74	20.96	1	#99	20.79	0-1
		3	#0	20.63	8	#0	19.27	12	#0	19.53	25	#0	19.39	36	#0	19.61	50	#0	19.55	0-2
		3	#2	20.62	8	#4	19.25	12	#6	19.52	25	#12	19.37	36	#18	19.56	50	#24	19.53	0-2
		3	#3	20.59	8	#7	19.21	12	#13	19.47	25	#25	19.34	36	#37	19.54	50	#49	19.49	0-2
		6	#0	19.45	15	#0	19.25	25	#0	19.35	50	#0	19.33	75	#0	19.52	100	#0	19.51	0-2

LTE Band 5		1.4MHz			3MHz			5MHz			10MHz			MPR
Channel	Modulation	RB No.	RB Offset	Max Power	RB No.	RB Offset	Power	RB No.	RB Offset	Power	RB No.	RB Offset	Power	
		CH20407 (824.7MHz)			CH20415 (825.5MHz)			CH20425 (826.5MHz)			CH20450 (829MHz)			
Low	QPSK	1	#0	22.13	1	#0	22.16	1	#0	22.2	1	#0	22.37	0
		1	#2	22.11	1	#7	22.13	1	#12	22.16	1	#25	22.33	0
		1	#5	22.08	1	#14	22.1	1	#24	22.14	1	#49	22.31	0
		3	#0	22.14	8	#0	21.24	12	#0	21.23	25	#0	21.39	0-1
		3	#2	22.12	8	#4	21.17	12	#6	21.22	25	#12	21.35	0-1
		3	#3	22.07	8	#7	21.16	12	#13	21.18	25	#25	21.32	0-1
		6	#0	21.12	15	#0	21.11	25	#0	21.29	50	#0	21.29	0-1
	16QAM	1	#0	21.56	1	#0	21.45	1	#0	21.56	1	#0	21.74	0-1
		1	#2	21.53	1	#7	21.43	1	#12	21.53	1	#25	21.73	0-1
		1	#5	21.51	1	#14	21.39	1	#24	21.51	1	#49	21.69	0-1
		3	#0	21.24	8	#0	20.27	12	#0	20.19	25	#0	20.39	0-2
		3	#2	21.22	8	#4	20.23	12	#6	20.15	25	#12	20.35	0-2
		3	#3	21.17	8	#7	20.21	12	#13	20.12	25	#25	20.31	0-2
		6	#0	20.19	15	#0	20.28	25	#0	20.21	50	#0	20.35	0-2
	64QAM	1	#0	20.37	1	#0	20.6	1	#0	20.36	1	#0	20.56	0-1
		1	#2	20.34	1	#7	20.58	1	#12	20.34	1	#25	20.53	0-1
		1	#5	20.3	1	#14	20.53	1	#24	20.31	1	#49	20.51	0-1
		3	#0	20.35	8	#0	19.29	12	#0	19.6	25	#0	19.6	0-2
		3	#2	20.32	8	#4	19.25	12	#6	19.58	25	#12	19.57	0-2
		3	#3	20.31	8	#7	19.23	12	#13	19.53	25	#25	19.55	0-2
		6	#0	19.18	15	#0	19.26	25	#0	19.41	50	#0	19.52	0-2

LTE Band 5		1.4MHz			3MHz			5MHz			10MHz			MPR
Mid	QPSK	CH20525 (836.5MHz)			CH20525 (836.5MHz)			CH 0525 (836.5MHz)			CH20525 (836.5MHz)			
		1	#0	22.07	1	#0	22.18	1	#0	22.17	1	#0	22.19	0
		1	#2	22.04	1	#7	22.17	1	#12	22.14	1	#25	22.17	0
		1	#5	22.01	1	#14	22.13	1	#24	22.12	1	#49	22.14	0
		3	#0	22.09	8	#0	21.27	12	#0	21.19	25	#0	21.19	0-1
		3	#2	22.05	8	#4	21.23	12	#6	21.18	25	#12	21.14	0-1
		3	#3	22.02	8	#7	21.22	12	#13	21.16	25	#25	21.11	0-1
		6	#0	21.12	15	#0	21.15	25	#0	21.2	50	#0	21.17	0-1
	16QAM	1	#0	21.35	1	#0	21.55	1	#0	21.45	1	#0	21.59	0-1
		1	#2	21.34	1	#7	21.52	1	#12	21.44	1	#25	21.56	0-1
		1	#5	21.31	1	#14	21.5	1	#24	21.42	1	#49	21.53	0-1
		3	#0	21.4	8	#0	20.22	12	#0	20.32	25	#0	20.32	0-2
		3	#2	21.39	8	#4	20.21	12	#6	20.29	25	#12	20.31	0-2
		3	#3	21.34	8	#7	20.15	12	#13	20.24	25	#25	20.27	0-2
		6	#0	20.22	15	#0	20.14	25	#0	20.19	50	#0	20.2	0-2
	64QAM	1	#0	20.35	1	#0	20.51	1	#0	20.33	1	#0	20.44	0-1
		1	#2	20.34	1	#7	20.5	1	#12	20.31	1	#25	20.41	0-1
		1	#5	20.29	1	#14	20.46	1	#24	20.28	1	#49	20.35	0-1
		3	#0	20.32	8	#0	19.27	12	#0	19.39	25	#0	19.51	0-2
		3	#2	20.31	8	#4	19.23	12	#6	19.37	25	#12	19.5	0-2
		3	#3	20.27	8	#7	19.21	12	#13	19.33	25	#25	19.46	0-2
		6	#0	19.15	15	#0	19.2	25	#0	19.32	50	#0	19.43	0-2

LTE Band 5		1.4MHz			3MHz			5MHz			10MHz			MPR
High	QPSK	CH20643 (848.3MHz)			CH20635 (847.5MHz)			CH20625 (846.5MHz)			CH20600 (844MHz)			
		1	#0	22.25	1	#0	22.33	1	#0	22.23	1	#0	22.3	0
		1	#2	22.22	1	#7	22.31	1	#12	22.2	1	#25	22.28	0
		1	#5	22.19	1	#14	22.28	1	#24	22.16	1	#49	22.27	0
		3	#0	22.28	8	#0	21.35	12	#0	21.24	25	#0	21.34	0-1
		3	#2	22.23	8	#4	21.34	12	#6	21.22	25	#12	21.31	0-1
		3	#3	22.2	8	#7	21.32	12	#13	21.18	25	#25	21.27	0-1
		6	#0	21.26	15	#0	21.32	25	#0	21.22	50	#0	21.38	0-1
	16QAM	1	#0	21.7	1	#0	21.54	1	#0	21.54	1	#0	21.65	0-1
		1	#2	21.67	1	#7	21.53	1	#12	21.52	1	#25	21.63	0-1
		1	#5	21.64	1	#14	21.51	1	#24	21.51	1	#49	21.59	0-1
		3	#0	21.37	8	#0	20.4	12	#0	20.36	25	#0	20.48	0-2
		3	#2	21.36	8	#4	20.37	12	#6	20.34	25	#12	20.45	0-2
		3	#3	21.31	8	#7	20.34	12	#13	20.33	25	#25	20.41	0-2
		6	#0	20.39	15	#0	20.35	25	#0	20.26	50	#0	20.45	0-2
	64QAM	1	#0	20.42	1	#0	20.73	1	#0	20.42	1	#0	20.58	0-1
		1	#2	20.39	1	#7	20.71	1	#12	20.41	1	#25	20.56	0-1
		1	#5	20.34	1	#14	20.68	1	#24	20.37	1	#49	20.53	0-1
		3	#0	20.4	8	#0	19.36	12	#0	19.48	25	#0	19.53	0-2
		3	#2	20.38	8	#4	19.32	12	#6	19.45	25	#12	19.51	0-2
		3	#3	20.34	8	#7	19.31	12	#13	19.43	25	#25	19.47	0-2
		6	#0	19.29	15	#0	19.37	25	#0	19.57	50	#0	19.58	0-2

LTE Band 7		5MHz			10MHz			15MHz			20MHz			MPR
Channel	Modulation	RB No.	RB Offset	Max Power	RB No.	RB Offset	Max Power	RB No.	RB Offset	Max Power	RB No.	RB Offset	Max Power	
		CH20775 (2502.5MHz)			CH20800 (2505MHz)			CH20825 (2507.5MHz)			CH20850 (2510MHz)			
Low	QPSK	1	#0	21.32	1	#0	21.37	1	#0	21.42	1	#0	21.49	0
		1	#12	21.3	1	#25	21.35	1	#36	21.41	1	#49	21.46	0
		1	#24	21.27	1	#49	21.32	1	#74	21.37	1	#99	21.42	0
		12	#0	20.35	25	#0	20.32	36	#0	20.42	50	#0	20.21	0-1
		12	#6	20.31	25	#12	20.31	36	#18	20.41	50	#24	20.2	0-1
		12	#13	20.29	25	#25	20.27	36	#37	20.34	50	#49	20.18	0-1
		25	#0	20.24	50	#0	20.3	75	#0	20.41	100	#0	20.3	0-1
	16QAM	1	#0	20.83	1	#0	20.82	1	#0	20.77	1	#0	20.75	0-1
		1	#12	20.82	1	#25	20.81	1	#36	20.74	1	#49	20.73	0-1
		1	#24	20.77	1	#49	20.78	1	#74	20.73	1	#99	20.71	0-1
		12	#0	19.35	25	#0	19.43	36	#0	19.38	50	#0	19.18	0-2
		12	#6	19.32	25	#12	19.42	36	#18	19.34	50	#24	19.16	0-2
		12	#13	19.28	25	#25	19.41	36	#37	19.31	50	#49	19.13	0-2
		25	#0	19.24	50	#0	19.38	75	#0	19.34	100	#0	19.25	0-2
	64QAM	1	#0	19.45	1	#0	19.61	1	#0	19.73	1	#0	19.47	0-1
		1	#12	19.41	1	#25	19.59	1	#36	19.71	1	#49	19.43	0-1
		1	#24	19.39	1	#49	19.53	1	#74	19.67	1	#99	19.41	0-1
		12	#0	18.32	25	#0	18.48	36	#0	18.48	50	#0	18.21	0-2
		12	#6	18.31	25	#12	18.47	36	#18	18.45	50	#24	18.19	0-2
		12	#13	18.29	25	#25	18.44	36	#37	18.42	50	#49	18.17	0-2
		25	#0	18.2	50	#0	18.45	75	#0	18.42	100	#0	18.25	0-2

LTE Band 7		5MHz			10MHz			15MHz			20MHz			MPR
Mid	QPSK	CH21100 (2535MHz)			CH21100 (2535MHz)			CH21100 (2535MHz)			CH21100 (2535MHz)			
		1	#0	21.56	1	#0	21.64	1	#0	21.6	1	#0	21.67	0
		1	#12	21.54	1	#25	21.62	1	#36	21.58	1	#49	21.65	0
		1	#24	21.49	1	#49	21.59	1	#74	21.55	1	#99	21.63	0
		12	#0	20.42	25	#0	20.55	36	#0	20.43	50	#0	20.6	0-1
		12	#6	20.39	25	#12	20.52	36	#18	20.42	50	#24	20.54	0-1
		12	#13	20.35	25	#25	20.51	36	#37	20.4	50	#49	20.51	0-1
		25	#0	20.44	50	#0	20.54	75	#0	20.41	100	#0	20.63	0-1
	16QAM	1	#0	20.68	1	#0	20.76	1	#0	20.77	1	#0	20.78	0-1
		1	#12	20.65	1	#25	20.74	1	#36	20.74	1	#49	20.74	0-1
		1	#24	20.64	1	#49	20.72	1	#74	20.71	1	#99	20.71	0-1
		12	#0	19.59	25	#0	19.58	36	#0	19.51	50	#0	19.61	0-2
		12	#6	19.57	25	#12	19.56	36	#18	19.48	50	#24	19.59	0-2
		12	#13	19.54	25	#25	19.53	36	#37	19.45	50	#49	19.54	0-2
		25	#0	19.55	50	#0	19.55	75	#0	19.47	100	#0	19.65	0-2
	64QAM	1	#0	19.47	1	#0	19.68	1	#0	19.71	1	#0	19.53	0-1
		1	#12	19.45	1	#25	19.66	1	#36	19.69	1	#49	19.51	0-1
		1	#24	19.42	1	#49	19.63	1	#74	19.64	1	#99	19.49	0-1
		12	#0	18.37	25	#0	18.47	36	#0	18.52	50	#0	18.5	0-2
		12	#6	18.34	25	#12	18.45	36	#18	18.5	50	#24	18.48	0-2
		12	#13	18.31	25	#25	18.42	36	#37	18.47	50	#49	18.46	0-2
		25	#0	18.33	50	#0	18.46	75	#0	18.42	100	#0	18.27	0-2

LTE Band 7		5MHz			10MHz			15MHz			20MHz			MPR
High	QPSK	CH21425 (2567.5MHz)			CH21400 (2565MHz)			CH21375 (2562.5MHz)			CH21350 (2560MHz)			
		1	#0	21.72	1	#0	21.46	1	#0	21.5	1	#0	21.37	0
		1	#12	21.71	1	#25	21.42	1	#36	21.48	1	#49	21.35	0
		1	#24	21.67	1	#49	21.38	1	#74	21.45	1	#99	21.31	0
		12	#0	20.74	25	#0	20.51	36	#0	20.57	50	#0	20.35	0-1
		12	#6	20.73	25	#12	20.49	36	#18	20.54	50	#24	20.33	0-1
		12	#13	20.71	25	#25	20.45	36	#37	20.52	50	#49	20.29	0-1
		25	#0	20.7	50	#0	20.4	75	#0	20.63	100	#0	20.38	0-1
	16QAM	1	#0	20.95	1	#0	20.79	1	#0	20.79	1	#0	20.73	0-1
		1	#12	20.94	1	#25	20.75	1	#36	20.74	1	#49	20.7	0-1
		1	#24	20.92	1	#49	20.72	1	#74	20.71	1	#99	20.67	0-1
		12	#0	19.82	25	#0	19.7	36	#0	19.41	50	#0	19.41	0-2
		12	#6	19.81	25	#12	19.67	36	#18	19.4	50	#24	19.39	0-2
		12	#13	19.78	25	#25	19.64	36	#37	19.37	50	#49	19.38	0-2
		25	#0	19.65	50	#0	19.73	75	#0	19.4	100	#0	19.51	0-2
	64QAM	1	#0	19.69	1	#0	19.73	1	#0	19.68	1	#0	19.56	0-1
		1	#12	19.67	1	#25	19.71	1	#36	19.64	1	#49	19.53	0-1
		1	#24	19.66	1	#49	19.68	1	#74	19.61	1	#99	19.51	0-1
		12	#0	18.67	25	#0	18.64	36	#0	18.54	50	#0	18.42	0-2
		12	#6	18.65	25	#12	18.62	36	#18	18.52	50	#24	18.41	0-2
		12	#13	18.63	25	#25	18.59	36	#37	18.47	50	#49	18.38	0-2
		25	#0	18.66	50	#0	18.65	75	#0	18.47	100	#0	18.39	0-2

LTE Band 12		1.4MHz			3MHz			5MHz			10MHz			MPR
Channel	Modulation	RB No.	RB Offset	Max Power	RB No.	RB Offset	Power	RB No.	RB Offset	Power	RB No.	RB Offset	Power	
		CH23017 (699.7MHz)			CH23025 (700.5MHz)			CH23035 (701.5MHz)			CH23060 (704MHz)			
Low	QPSK	1	#0	22.25	1	#0	22.49	1	#0	22.46	1	#0	22.57	0
		1	#2	22.21	1	#7	22.45	1	#12	22.43	1	#25	22.54	0
		1	#5	22.19	1	#14	22.41	1	#24	22.41	1	#49	22.52	0
		3	#0	22.34	8	#0	21.49	12	#0	21.34	25	#0	21.42	0-1
		3	#2	22.31	8	#4	21.45	12	#6	21.32	25	#12	21.39	0-1
		3	#3	22.28	8	#7	21.43	12	#13	21.3	25	#25	21.34	0-1
		6	#0	21.25	15	#0	21.51	25	#0	21.3	50	#0	21.43	0-1
	16QAM	1	#0	21.51	1	#0	21.73	1	#0	21.8	1	#0	21.8	0-1
		1	#2	21.49	1	#7	21.71	1	#12	21.78	1	#25	21.78	0-1
		1	#5	21.43	1	#14	21.68	1	#24	21.76	1	#49	21.77	0-1
		3	#0	21.33	8	#0	20.6	12	#0	20.53	25	#0	20.51	0-2
		3	#2	21.32	8	#4	20.57	12	#6	20.52	25	#12	20.47	0-2
		3	#3	21.29	8	#7	20.54	12	#13	20.49	25	#25	20.43	0-2
		6	#0	20.31	15	#0	20.58	25	#0	20.6	50	#0	20.53	0-2
	64QAM	1	#0	20.47	1	#0	20.72	1	#0	20.7	1	#0	20.81	0-1
		1	#2	20.45	1	#7	20.71	1	#12	20.67	1	#25	20.78	0-1
		1	#5	20.42	1	#14	20.67	1	#24	20.63	1	#49	20.74	0-1
		3	#0	20.42	8	#0	19.61	12	#0	19.39	25	#0	19.43	0-2
		3	#2	20.4	8	#4	19.59	12	#6	19.34	25	#12	19.42	0-2
		3	#3	20.37	8	#7	19.54	12	#13	19.32	25	#25	19.4	0-2
		6	#0	19.31	15	#0	19.53	25	#0	19.5	50	#0	19.49	0-2

LTE Band 12		1.4MHz			3MHz			5MHz			10MHz			MPR
Mid	QPSK	CH23095 (707.5MHz)			CH23095 (707.5MHz)			CH23095 (707.5MHz)			CH23095 (707.5MHz)			
		1	#0	22.19	1	#0	22.35	1	#0	22.4	1	#0	22.4	0
		1	#2	22.17	1	#7	22.32	1	#12	22.37	1	#25	22.36	0
		1	#5	22.15	1	#14	22.3	1	#24	22.32	1	#49	22.34	0
		3	#0	22.26	8	#0	21.24	12	#0	21.39	25	#0	21.41	0-1
		3	#2	22.24	8	#4	21.21	12	#6	21.36	25	#12	21.39	0-1
		3	#3	22.18	8	#7	21.18	12	#13	21.32	25	#25	21.35	0-1
		6	#0	21.24	15	#0	21.29	25	#0	21.38	50	#0	21.4	0-1
	16QAM	1	#0	21.51	1	#0	21.5	1	#0	21.67	1	#0	21.62	0-1
		1	#2	21.48	1	#7	21.47	1	#12	21.64	1	#25	21.61	0-1
		1	#5	21.45	1	#14	21.43	1	#24	21.61	1	#49	21.57	0-1
		3	#0	21.34	8	#0	20.47	12	#0	20.6	25	#0	20.54	0-2
		3	#2	21.32	8	#4	20.45	12	#6	20.57	25	#12	20.52	0-2
		3	#3	21.28	8	#7	20.41	12	#13	20.53	25	#25	20.51	0-2
		6	#0	20.38	15	#0	20.37	25	#0	20.57	50	#0	20.45	0-2
	64QAM	1	#0	20.45	1	#0	20.53	1	#0	20.73	1	#0	20.83	0-1
		1	#2	20.44	1	#7	20.51	1	#12	20.72	1	#25	20.81	0-1
		1	#5	20.41	1	#14	20.48	1	#24	20.67	1	#49	20.78	0-1
		3	#0	20.43	8	#0	19.6	12	#0	19.47	25	#0	19.45	0-2
		3	#2	20.42	8	#4	19.58	12	#6	19.45	25	#12	19.42	0-2
		3	#3	20.38	8	#7	19.55	12	#13	19.43	25	#25	19.41	0-2
		6	#0	19.3	15	#0	19.56	25	#0	19.48	50	#0	19.42	0-2

LTE Band 12		1.4MHz			3MHz			5MHz			10MHz			MPR
High	QPSK	CH23173 (715.3MHz)			CH23165 (714.5MHz)			CH23155 (713.5MHz)			CH23130 (711MHz)			
		1	#0	22.38	1	#0	22.45	1	#0	22.57	1	#0	22.42	0
		1	#2	22.37	1	#7	22.43	1	#12	22.54	1	#25	22.41	0
		1	#5	22.34	1	#14	22.41	1	#24	22.53	1	#49	22.48	0
		3	#0	22.33	8	#0	21.47	12	#0	21.38	25	#0	21.37	0-1
		3	#2	22.31	8	#4	21.44	12	#6	21.35	25	#12	21.35	0-1
		3	#3	22.29	8	#7	21.42	12	#13	21.32	25	#25	21.32	0-1
		6	#0	21.3	15	#0	21.41	25	#0	21.36	50	#0	21.36	0-1
	16QAM	1	#0	21.7	1	#0	21.61	1	#0	21.6	1	#0	21.59	0-1
		1	#2	21.67	1	#7	21.59	1	#12	21.58	1	#25	21.56	0-1
		1	#5	21.64	1	#14	21.56	1	#24	21.53	1	#49	21.54	0-1
		3	#0	21.42	8	#0	20.44	12	#0	20.57	25	#0	20.37	0-2
		3	#2	21.41	8	#4	20.42	12	#6	20.54	25	#12	20.35	0-2
		3	#3	21.37	8	#7	20.37	12	#13	20.51	25	#25	20.31	0-2
		6	#0	20.46	15	#0	20.41	25	#0	20.6	50	#0	20.49	0-2
	64QAM	1	#0	20.52	1	#0	20.8	1	#0	20.62	1	#0	20.74	0-1
		1	#2	20.5	1	#7	20.77	1	#12	20.61	1	#25	20.73	0-1
		1	#5	20.48	1	#14	20.76	1	#24	20.57	1	#49	20.71	0-1
		3	#0	20.53	8	#0	19.72	12	#0	19.35	25	#0	19.42	0-2
		3	#2	20.51	8	#4	19.7	12	#6	19.33	25	#12	19.41	0-2
		3	#3	20.47	8	#7	19.68	12	#13	19.29	25	#25	19.36	0-2
		6	#0	19.43	15	#0	19.64	25	#0	19.46	50	#0	19.5	0-2

LTE Band 13		5MHz			10MHz			MPR
Channel	Modulation	RB No.	RB Offset	Max Power	RB No.	RB Offset	Max Power	
		CH23205 (779.5MHz)			CH23230 (782MHz)			
Low	QPSK	1	#0	22.3	N/A	N/A	N/A	0
		1	#12	22.28	N/A	N/A	N/A	0
		1	#24	22.25	N/A	N/A	N/A	0
		12	#0	21.37	N/A	N/A	N/A	0-1
		12	#6	21.35	N/A	N/A	N/A	0-1
		12	#13	21.32	N/A	N/A	N/A	0-1
		25	#0	21.48	N/A	N/A	N/A	0-1
	16QAM	1	#0	21.8	N/A	N/A	N/A	0-1
		1	#12	21.78	N/A	N/A	N/A	0-1
		1	#24	21.75	N/A	N/A	N/A	0-1
		12	#0	20.41	N/A	N/A	N/A	0-2
		12	#6	20.39	N/A	N/A	N/A	0-2
		12	#13	20.35	N/A	N/A	N/A	0-2
		25	#0	20.36	N/A	N/A	N/A	0-2
	64QAM	1	#0	20.45	N/A	N/A	N/A	0-1
		1	#12	20.44	N/A	N/A	N/A	0-1
		1	#24	20.41	N/A	N/A	N/A	0-1
		12	#0	19.46	N/A	N/A	N/A	0-2
		12	#6	19.44	N/A	N/A	N/A	0-2
		12	#13	19.4	N/A	N/A	N/A	0-2
		25	#0	19.53	N/A	N/A	N/A	0-2

LTE Band 13		5MHz			10MHz			MPR
Mid	QPSK	CH23230 (782MHz)			CH23230 (782MHz)			
		1	#0	22.4	1	#0	22.59	0
		1	#12	22.38	1	#25	22.54	0
		1	#24	22.35	1	#49	22.51	0
		12	#0	21.32	25	#0	21.58	0-1
		12	#6	21.3	25	#12	21.57	0-1
		12	#13	21.28	25	#25	21.55	0-1
		25	#0	21.37	50	#0	21.68	0-1
	16QAM	1	#0	21.6	1	#0	21.77	0-1
		1	#12	21.59	1	#25	21.74	0-1
		1	#24	21.56	1	#49	21.71	0-1
		12	#0	20.39	25	#0	20.42	0-2
		12	#6	20.38	25	#12	20.4	0-2
		12	#13	20.36	25	#25	20.37	0-2
		25	#0	20.43	50	#0	20.69	0-2
	64QAM	1	#0	20.48	1	#0	20.83	0-1
		1	#12	20.45	1	#25	20.81	0-1
		1	#24	20.43	1	#49	20.78	0-1
		12	#0	19.49	25	#0	19.61	0-2
		12	#6	19.46	25	#12	19.59	0-2
		12	#13	19.45	25	#25	19.54	0-2
		25	#0	19.51	50	#0	19.69	0-2

LTE Band 13		5MHz			10MHz			MPR
High	QPSK	CH23255 (784.5MHz)			CH23230 (782MHz)			
		1	#0	22.48	N/A	N/A	N/A	0
		1	#12	22.43	N/A	N/A	N/A	0
		1	#24	22.41	N/A	N/A	N/A	0
		12	#0	21.49	N/A	N/A	N/A	0-1
		12	#6	21.47	N/A	N/A	N/A	0-1
		12	#13	21.44	N/A	N/A	N/A	0-1
		25	#0	21.47	N/A	N/A	N/A	0-1
	16QAM	1	#0	21.76	N/A	N/A	N/A	0-1
		1	#12	21.75	N/A	N/A	N/A	0-1
		1	#24	21.73	N/A	N/A	N/A	0-1
		12	#0	20.36	N/A	N/A	N/A	0-2
		12	#6	20.35	N/A	N/A	N/A	0-2
		12	#13	20.33	N/A	N/A	N/A	0-2
		25	#0	20.36	N/A	N/A	N/A	0-2
	16QAM	1	#0	20.4	N/A	N/A	N/A	0-1
		1	#12	20.38	N/A	N/A	N/A	0-1
		1	#24	20.34	N/A	N/A	N/A	0-1
		12	#0	19.42	N/A	N/A	N/A	0-2
		12	#6	19.41	N/A	N/A	N/A	0-2
		12	#13	19.38	N/A	N/A	N/A	0-2
		25	#0	19.5	N/A	N/A	N/A	0-2

FCC Part 90S 814MHz-824MHz

LTE Band26		1.4MHz			3MHz			5MHz			10MHz			15MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	
		CH26697 (814.7MHz)			CH26705 (815.5MHz)			CH26715 (816.5MHz)			N/A			CH26765 (821.5MHz)			
Low	QPSK	1	#0	22.32	1	#0	22.25	1	#0	22.48	N/A	1	#0	22.48	0		
		1	#2	22.3	1	#7	22.23	1	#12	22.45		1	#36	22.46	0		
		1	#5	22.28	1	#14	22.22	1	#24	22.42		1	#74	22.45	0		
		3	#0	22.35	8	#0	21.39	12	#0	21.39		36	#0	21.34	0-1		
		3	#2	22.34	8	#4	21.37	12	#6	21.35		36	#18	21.31	0-1		
		3	#3	22.32	8	#7	21.32	12	#13	22.32		36	#37	21.28	0-1		
		6	#0	21.24	15	#0	21.33	25	#0	21.47		75	#0	21.33	0-1		
	16QAM	1	#0	21.65	1	#0	21.65	1	#0	21.8		1	#0	21.83	0-1		
		1	#2	21.62	1	#7	21.63	1	#12	21.78		1	#36	21.81	0-1		
		1	#5	21.61	1	#14	21.58	1	#24	21.75		1	#74	21.76	0-1		
		3	#0	21.43	8	#0	20.47	12	#0	20.52		36	#0	20.4	0-2		
		3	#2	21.41	8	#4	20.44	12	#6	20.48		36	#18	20.38	0-2		
		3	#3	21.37	8	#7	20.41	12	#13	20.46		36	#37	20.35	0-2		
		6	#0	20.19	15	#0	20.39	25	#0	20.39		75	#0	20.35	0-2		
	64QAM	1	#0	20.33	1	#0	20.42	1	#0	20.48		1	#0	20.69	0-1		
		1	#2	20.31	1	#7	20.38	1	#12	20.43		1	#36	20.67	0-1		
		1	#5	20.28	1	#14	20.34	1	#24	20.42		1	#74	20.66	0-1		
		3	#0	20.31	8	#0	19.38	12	#0	19.62		36	#0	19.48	0-2		
		3	#2	20.29	8	#4	19.35	12	#6	19.61		36	#18	19.45	0-2		
		3	#3	20.23	8	#7	19.32	12	#13	19.57		36	#37	19.43	0-2		
		6	#0	19.5	15	#0	19.37	25	#0	19.23		75	#0	19.51	0-2		

LTE Band26		1.4MHz			3MHz			5MHz			10MHz			15MHz	MPR
		CH26740 (819MHz)			CH26740 (819MHz)			CH26740 (819MHz)			CH26740 (819MHz)			N/A	
Mid	QPSK	1	#0	22.18	1	#0	22.24	1	#0	22.26	1	#0	22.3	N/A	0
		1	#2	22.17	1	#7	22.22	1	#12	22.25	1	#25	22.29		0
		1	#5	22.15	1	#14	22.19	1	#24	22.23	1	#49	22.26		0
		3	#0	22.21	8	#0	21.32	12	#0	21.21	25	#0	21.4		0-1
		3	#2	22.19	8	#4	21.3	12	#6	21.19	25	#12	21.37		0-1
		3	#3	22.15	8	#7	21.27	12	#13	21.15	25	#25	21.34		0-1
		6	#0	21.24	15	#0	21.27	25	#0	21.24	50	#0	21.11		0-1
	16QAM	1	#0	21.44	1	#0	21.49	1	#0	21.6	1	#0	21.83		0-1
		1	#2	21.42	1	#7	21.46	1	#12	21.54	1	#25	21.82		0-1
		1	#5	21.39	1	#14	21.42	1	#24	21.51	1	#49	21.77		0-1
		3	#0	21.44	8	#0	20.34	12	#0	20.42	25	#0	20.23		0-2
		3	#2	21.41	8	#4	20.33	12	#6	20.41	25	#12	20.21		0-2
		3	#3	21.38	8	#7	20.29	12	#13	20.38	25	#25	20.18		0-2
		6	#0	20.42	15	#0	20.3	25	#0	20.27	50	#0	20.25		0-2
	64QAM	1	#0	20.28	1	#0	20.29	1	#0	20.42	1	#0	20.47		0-1
		1	#2	20.27	1	#7	20.28	1	#12	20.38	1	#25	20.45		0-1
		1	#5	20.24	1	#14	20.26	1	#24	20.35	1	#49	20.42		0-1
		3	#0	20.26	8	#0	19.35	12	#0	19.28	25	#0	19.51		0-2
		3	#2	20.23	8	#4	19.32	12	#6	19.27	25	#12	19.5		0-2
		3	#3	20.21	8	#7	19.28	12	#13	19.23	25	#25	19.46		0-2
		6	#0	19.43	15	#0	19.35	25	#0	19.27	50	#0	19.46		0-2

LTE Band26		1.4MHz			3MHz			5MHz			10MHz	15MHz	MPR
		CH2678 (823.3MHz)			CH26775 (822.5MHz)			CH26765 (821.5MHz)			N/A	N/A	
High	QPSK	1	#0	22.22	1	#0	22.37	1	#0	22.41	N/A	N/A	0
		1	#2	22.19	1	#7	22.35	1	#12	22.39			0
		1	#5	22.16	1	#14	22.32	1	#24	22.36			0
		3	#0	22.24	8	#0	21.41	12	#0	21.35			0-1
		3	#2	22.21	8	#4	21.39	12	#6	21.33			0-1
		3	#3	22.18	8	#7	21.36	12	#13	21.3			0-1
		6	#0	21.48	15	#0	21.35	25	#0	21.38			0-1
	16QAM	1	#0	21.56	1	#0	21.86	1	#0	21.78			0-1
		1	#2	21.52	1	#7	21.84	1	#12	21.76			0-1
		1	#5	21.5	1	#14	21.81	1	#24	21.75			0-1
		3	#0	21.38	8	#0	20.43	12	#0	20.57			0-2
		3	#2	21.35	8	#4	20.42	12	#6	20.54			0-2
		3	#3	21.32	8	#7	20.37	12	#13	20.52			0-2
		6	#0	20.43	15	#0	20.36	25	#0	20.41			0-2
	64QAM	1	#0	20.47	1	#0	20.55	1	#0	20.52			0-1
		1	#2	20.45	1	#7	20.53	1	#12	20.51			0-1
		1	#5	20.44	1	#14	20.51	1	#24	20.48			0-1
		3	#0	20.45	8	#0	19.47	12	#0	19.5			0-2
		3	#2	20.43	8	#4	19.44	12	#6	19.48			0-2
		3	#3	20.41	8	#7	19.42	12	#13	19.45			0-2
		6	#0	19.57	15	#0	19.49	25	#0	19.63			0-2

FCC Part 22H 824MHz-849MHz

LTE Band 26		1.4MHz			3MHz			5MHz			10MHz			15MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	
		CH26797(824.7MHz)			CH26805 (825.5MHz)			CH26815 (826.5MHz)			CH26840 (829MHz)			CH26865 (831.5MHz)			
Low	QPSK	1	#0	22.15	1	#0	22.24	1	#0	22.24	1	#0	22.36	1	#0	22.36	0
		1	#2	22.13	1	#7	22.22	1	#12	22.21	1	#25	22.33	1	#36	22.34	0
		1	#5	22.12	1	#14	22.19	1	#24	22.2	1	#49	22.31	1	#74	22.31	0
		3	#0	22.26	8	#0	21.29	12	#0	21.29	25	#0	21.41	36	#0	21.41	0-1
		3	#2	22.23	8	#4	21.24	12	#6	21.27	25	#12	21.39	36	#18	21.39	0-1
		3	#3	22.2	8	#7	21.21	12	#13	21.24	25	#25	21.35	36	#37	21.36	0-1
		6	#0	21.27	15	#0	21.26	25	#0	21.26	50	#0	21.35	75	#0	21.44	0-1
	16QAM	1	#0	21.63	1	#0	21.64	1	#0	21.7	1	#0	21.82	1	#0	21.69	0-1
		1	#2	21.62	1	#7	21.63	1	#12	21.67	1	#25	21.81	1	#36	21.65	0-1
		1	#5	21.56	1	#14	21.62	1	#24	21.65	1	#49	21.78	1	#74	21.62	0-1
		3	#0	21.27	8	#0	20.31	12	#0	20.35	25	#0	20.44	36	#0	20.31	0-2
		3	#2	21.26	8	#4	20.29	12	#6	20.34	25	#12	20.42	36	#18	20.29	0-2
		3	#3	21.24	8	#7	20.26	12	#13	20.31	25	#25	20.41	36	#37	20.25	0-2
		6	#0	20.36	15	#0	20.27	25	#0	20.32	50	#0	20.51	75	#0	20.27	0-2
	64QAM	1	#0	20.43	1	#0	20.52	1	#0	20.49	1	#0	20.73	1	#0	20.65	0-1
		1	#2	20.41	1	#7	20.51	1	#12	20.47	1	#25	20.72	1	#36	20.63	0-1
		1	#5	20.38	1	#14	20.48	1	#24	20.42	1	#49	20.67	1	#74	20.61	0-1
		3	#0	20.45	8	#0	19.47	12	#0	19.65	25	#0	19.57	36	#0	19.47	0-2
		3	#2	20.43	8	#4	19.45	12	#6	19.64	25	#12	19.54	36	#18	19.45	0-2
		3	#3	20.4	8	#7	19.44	12	#13	19.62	25	#25	19.52	36	#37	19.44	0-2
		6	#0	19.36	15	#0	19.46	25	#0	19.43	50	#0	19.51	75	#0	19.53	0-2

LTE Band 26		1.4MHz			3MHz			5MHz			10MHz			15MHz			MPR
Mid	QPSK	CH26915 (836.5MHz)			CH26915 (836.5MHz)			CH26915 (836.5MHz)			CH26915 (836.5MHz)			CH26915 (836.5MHz)			
		1	#0	22.17	1	#0	22.28	1	#0	22.28	1	#0	22.3	1	#0	22.41	0
		1	#2	22.15	1	#7	22.25	1	#12	22.25	1	#25	22.28	1	#36	22.38	0
		1	#5	22.14	1	#14	22.21	1	#24	22.23	1	#49	22.25	1	#74	22.34	0
		3	#0	22.21	8	#0	21.32	12	#0	21.26	25	#0	21.37	36	#0	21.3	0-1
		3	#2	22.2	8	#4	21.3	12	#6	21.23	25	#12	21.35	36	#18	21.27	0-1
		3	#3	22.17	8	#7	21.28	12	#13	21.22	25	#25	21.34	36	#37	21.26	0-1
		6	#0	21.19	15	#0	21.22	25	#0	21.32	50	#0	21.38	75	#0	21.32	0-1
	16QAM	1	#0	21.69	1	#0	21.79	1	#0	21.61	1	#0	21.65	1	#0	21.91	0-1
		1	#2	21.65	1	#7	21.75	1	#12	21.6	1	#25	21.63	1	#36	21.87	0-1
		1	#5	21.63	1	#14	21.72	1	#24	21.56	1	#49	21.6	1	#74	21.84	0-1
		3	#0	21.45	8	#0	20.27	12	#0	20.5	25	#0	20.25	36	#0	20.36	0-2
		3	#2	21.43	8	#4	20.25	12	#6	20.46	25	#12	20.23	36	#18	20.34	0-2
		3	#3	21.42	8	#7	20.23	12	#13	20.42	25	#25	20.22	36	#37	20.31	0-2
		6	#0	20.35	15	#0	20.37	25	#0	20.36	50	#0	20.43	75	#0	20.34	0-2
	64QAM	1	#0	20.42	1	#0	20.4	1	#0	20.38	1	#0	20.65	1	#0	20.63	0-1
		1	#2	20.39	1	#7	20.38	1	#12	20.36	1	#25	20.63	1	#36	20.62	0-1
		1	#5	20.36	1	#14	20.34	1	#24	20.32	1	#49	20.62	1	#74	20.58	0-1
		3	#0	20.41	8	#0	19.41	12	#0	19.4	25	#0	19.38	36	#0	19.5	0-2
		3	#2	20.4	8	#4	19.39	12	#6	19.38	25	#12	19.35	36	#18	19.49	0-2
		3	#3	20.37	8	#7	19.36	12	#13	19.35	25	#25	19.31	36	#37	19.46	0-2
		6	#0	19.29	15	#0	19.5	25	#0	19.37	50	#0	19.37	75	#0	19.41	0-2

LTE Band 26		1.4MHz			3MHz			5MHz			10MHz			15MHz			MPR
High	QPSK	CH27033 (848.3MHz)			CH27025 (847.5MHz)			CH27015 (846.5MHz)			CH26990 (844MHz)			CH26965 (841.5MHz)			
		1	#0	22.28	1	#0	22.39	1	#0	22.31	1	#0	22.36	1	#0	22.49	0
		1	#2	22.25	1	#7	22.36	1	#12	22.28	1	#25	22.33	1	#36	22.45	0
		1	#5	22.23	1	#14	22.35	1	#24	22.25	1	#49	22.32	1	#74	22.42	0
		3	#0	22.34	8	#0	21.4	12	#0	21.34	25	#0	21.42	36	#0	21.55	0-1
		3	#2	22.33	8	#4	21.38	12	#6	21.32	25	#12	21.41	36	#18	21.53	0-1
		3	#3	22.29	8	#7	21.35	12	#13	21.31	25	#25	21.38	36	#37	21.51	0-1
		6	#0	21.32	15	#0	21.37	25	#0	21.36	50	#0	21.4	75	#0	21.51	0-1
	16QAM	1	#0	21.64	1	#0	21.85	1	#0	21.82	1	#0	21.71	1	#0	21.82	0-1
		1	#2	21.63	1	#7	21.83	1	#12	21.79	1	#25	21.68	1	#36	21.81	0-1
		1	#5	21.61	1	#14	21.82	1	#24	21.76	1	#49	21.64	1	#74	21.78	0-1
		3	#0	21.38	8	#0	20.55	12	#0	20.44	25	#0	20.37	36	#0	20.41	0-2
		3	#2	21.36	8	#4	20.52	12	#6	20.42	25	#12	20.34	36	#18	20.39	0-2
		3	#3	21.31	8	#7	20.47	12	#13	20.41	25	#25	20.31	36	#37	20.35	0-2
		6	#0	20.43	15	#0	20.42	25	#0	20.38	50	#0	20.44	75	#0	20.32	0-2
	64QAM	1	#0	20.53	1	#0	20.63	1	#0	20.52	1	#0	20.75	1	#0	20.65	0-1
		1	#2	20.52	1	#7	20.62	1	#12	20.49	1	#25	20.74	1	#36	20.63	0-1
		1	#5	20.47	1	#14	20.58	1	#24	20.46	1	#49	20.72	1	#74	20.61	0-1
		3	#0	20.5	8	#0	19.58	12	#0	19.48	25	#0	19.45	36	#0	19.53	0-2
		3	#2	20.48	8	#4	19.55	12	#6	19.45	25	#12	19.44	36	#18	19.52	0-2
		3	#3	20.45	8	#7	19.52	12	#13	19.42	25	#25	19.41	36	#37	19.47	0-2
		6	#0	19.47	15	#0	19.62	25	#0	19.57	50	#0	19.66	75	#0	19.44	0-2

LTE Band 30		5MHz			10MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	
		CH27685 (2307.5MHz)			N/A			
Low	QPSK	1	#0	20.96	N/A			0
		1	#12	20.94				0
		1	#24	20.91				0
		12	#0	19.97				0-1
		12	#6	19.92				0-1
		12	#13	19.91				0-1
		25	#0	20.01				0-1
	16QAM	1	#0	20.2				0-1
		1	#12	20.18				0-1
		1	#24	20.15				0-1
		12	#0	18.98				0-2
		12	#6	18.95				0-2
		12	#13	18.92				0-2
		25	#0	18.97				0-2
	64QAM	1	#0	19.23				0-1
		1	#12	19.22				0-1
		1	#24	19.19				0-1
		12	#0	18.15				0-2
		12	#6	18.13				0-2
		12	#13	18.1				0-2
		25	#0	18.08				0-2

LTE Band 30		5MHz			10MHz			MPR
Mid	QPSK	CH27710 (2310MHz)			CH27710 (2310MHz)			
		1	#0	20.9	1	#0	20.98	0
		1	#12	20.88	1	#25	20.95	0
		1	#24	20.85	1	#49	20.92	0
		12	#0	20.02	25	#0	19.95	0-1
		12	#6	20.01	25	#12	19.93	0-1
		12	#13	19.97	25	#25	19.91	0-1
		25	#0	20.02	50	#0	19.97	0-1
	16QAM	1	#0	20.2	1	#0	20.27	0-1
		1	#12	20.19	1	#25	20.26	0-1
		1	#24	20.16	1	#49	20.23	0-1
		12	#0	18.88	25	#0	18.97	0-2
		12	#6	18.84	25	#12	18.95	0-2
		12	#13	18.81	25	#25	18.92	0-2
		25	#0	18.95	50	#0	18.98	0-2
	64QAM	1	#0	19.15	1	#0	19.23	0-1
		1	#12	19.13	1	#25	19.22	0-1
		1	#24	19.12	1	#49	19.19	0-1
		12	#0	18.11	25	#0	18.02	0-2
		12	#6	18.09	25	#12	17.99	0-2
		12	#13	18.05	25	#25	17.96	0-2
		25	#0	18.02	50	#0	18.07	0-2

LTE Band 30		5MHz			10MHz	MPR
High	QPSK	CH27735 (2312.5MHz)			N/A	
		1	#0	21.09	N/A	0
		1	#12	21.07		0
		1	#24	21.06		0
		12	#0	20.07		0-1
		12	#6	20.03		0-1
		12	#13	20.01		0-1
		25	#0	19.93		0-1
	16QAM	1	#0	20.36		0-1
		1	#12	20.33		0-1
		1	#24	20.3		0-1
		12	#0	19.03		0-2
		12	#6	19.02		0-2
		12	#13	18.99		0-2
		25	#0	18.98		0-2
	16QAM	1	#0	19.37		0-1
		1	#12	19.35		0-1
		1	#24	19.32		0-1
		12	#0	18.26		0-2
		12	#6	18.25		0-2
		12	#13	18.21		0-2
		25	#0	18.14		0-2

LTE Band 41		5MHz			10MHz			15MHz			20MHz			MPR
Channel	Modulation	RB	RB	Max	RB	RB	Max	RB	RB	Max	RB	RB	Max	
		No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	No.	Offset	Power	
		CH39675 (2498.5MHz)			CH39700 (2501MHz)			CH39725 (2503.5MHz)			CH39750 (2506MHz)			
Low	QPSK	1	#0	21.63	1	#0	21.65	1	#0	21.61	1	#0	21.73	0
		1	#12	21.62	1	#25	21.62	1	#36	21.58	1	#49	21.72	0
		1	#24	21.58	1	#49	21.6	1	#74	21.56	1	#99	21.7	0
		12	#0	20.4	25	#0	20.59	36	#0	20.64	50	#0	20.66	0-1
		12	#6	20.37	25	#12	20.58	36	#18	20.63	50	#24	20.62	0-1
		12	#13	20.33	25	#25	20.52	36	#37	20.61	50	#49	20.61	0-1
		25	#0	20.53	50	#0	20.56	75	#0	20.61	100	#0	20.57	0-1
	16QAM	1	#0	20.81	1	#0	20.92	1	#0	21.04	1	#0	20.88	0-1
		1	#12	20.78	1	#25	20.91	1	#36	21.01	1	#49	20.87	0-1
		1	#24	20.74	1	#49	20.87	1	#74	20.98	1	#99	20.84	0-1
		12	#0	19.65	25	#0	19.62	36	#0	19.57	50	#0	19.69	0-2
		12	#6	19.63	25	#12	19.61	36	#18	19.55	50	#24	19.67	0-2
		12	#13	19.61	25	#25	19.58	36	#37	19.52	50	#49	19.63	0-2
		25	#0	19.57	50	#0	19.65	75	#0	19.58	100	#0	19.71	0-2
	64QAM	1	#0	19.31	1	#0	19.38	1	#0	19.61	1	#0	19.67	0-1
		1	#12	19.29	1	#25	19.37	1	#36	19.6	1	#49	19.64	0-1
		1	#24	19.23	1	#49	19.34	1	#74	19.56	1	#99	19.63	0-1
		12	#0	18.72	25	#0	18.67	36	#0	18.68	50	#0	18.81	0-2
		12	#6	18.7	25	#12	18.66	36	#18	18.66	50	#24	18.8	0-2
		12	#13	18.65	25	#25	18.63	36	#37	18.63	50	#49	18.78	0-2
		25	#0	18.45	50	#0	18.55	75	#0	18.68	100	#0	18.74	0-2

LTE Band 41		5MHz			10MHz			15MHz			20MHz			MPR
Mid	QPSK	CH40620 (2593MHz)			CH40620 (2593MHz)			CH40620 (2593MHz)			CH40620 (2593MHz)			
		1	#0	21.42	1	#0	21.62	1	#0	21.7	1	#0	21.75	0
		1	#12	21.4	1	#25	21.61	1	#36	21.69	1	#49	21.74	0
		1	#24	21.37	1	#49	21.59	1	#74	21.67	1	#99	21.7	0
		12	#0	20.48	25	#0	20.57	36	#0	20.58	50	#0	20.58	0-1
		12	#6	20.42	25	#12	20.55	36	#18	20.55	50	#24	20.56	0-1
		12	#13	20.41	25	#25	20.52	36	#37	20.52	50	#49	20.53	0-1
		25	#0	20.47	50	#0	20.58	75	#0	20.59	100	#0	20.47	0-1
	16QAM	1	#0	20.8	1	#0	20.84	1	#0	20.87	1	#0	20.91	0-1
		1	#12	20.78	1	#25	20.82	1	#36	20.83	1	#49	20.89	0-1
		1	#24	20.76	1	#49	20.81	1	#74	20.81	1	#99	20.84	0-1
		12	#0	19.71	25	#0	19.61	36	#0	19.51	50	#0	19.56	0-2
		12	#6	19.7	25	#12	19.59	36	#18	19.49	50	#24	19.54	0-2
		12	#13	19.67	25	#25	19.55	36	#37	19.43	50	#49	19.52	0-2
		25	#0	19.45	50	#0	19.52	75	#0	19.49	100	#0	19.55	0-2
	64QAM	1	#0	19.19	1	#0	19.22	1	#0	19.5	1	#0	19.43	0-1
		1	#12	19.16	1	#25	19.21	1	#36	19.48	1	#49	19.41	0-1
		1	#24	19.12	1	#49	19.19	1	#74	19.43	1	#99	19.37	0-1
		12	#0	18.51	25	#0	18.42	36	#0	18.59	50	#0	18.7	0-2
		12	#6	18.49	25	#12	18.41	36	#18	18.56	50	#24	18.67	0-2
		12	#13	18.46	25	#25	18.38	36	#37	19.53	50	#49	18.66	0-2
		25	#0	18.4	50	#0	18.57	75	#0	18.54	100	#0	18.68	0-2

LTE Band 41		5MHz			10MHz			15MHz			20MHz			MPR
High	QPSK	CH41565 (2687.5MHz)			CH41540 (2685MHz)			CH41515 (2682.5MHz)			CH41490 (2680MHz)			
		1	#0	21.44	1	#0	21.74	1	#0	21.7	1	#0	21.82	0
		1	#12	21.42	1	#25	21.72	1	#36	21.66	1	#49	21.81	0
		1	#24	21.4	1	#49	21.68	1	#74	21.63	1	#99	21.78	0
		12	#0	20.52	25	#0	20.78	36	#0	20.61	50	#0	20.76	0-1
		12	#6	20.51	25	#12	20.77	36	#18	20.6	50	#24	20.67	0-1
		12	#13	20.47	25	#25	20.73	36	#37	20.56	50	#49	20.64	0-1
		25	#0	20.54	50	#0	20.59	75	#0	20.51	100	#0	20.7	0-1
	16QAM	1	#0	20.81	1	#0	20.84	1	#0	20.8	1	#0	20.78	0-1
		1	#12	20.79	1	#25	20.83	1	#36	20.78	1	#49	20.74	0-1
		1	#24	20.77	1	#49	20.81	1	#74	20.74	1	#99	20.72	0-1
		12	#0	19.55	25	#0	19.69	36	#0	19.6	50	#0	19.67	0-2
		12	#6	19.53	25	#12	19.67	36	#18	19.56	50	#24	19.66	0-2
		12	#13	19.5	25	#25	19.62	36	#37	19.52	50	#49	19.63	0-2
		25	#0	19.58	50	#0	19.72	75	#0	19.5	100	#0	19.56	0-2
	64QAM	1	#0	19.33	1	#0	19.32	1	#0	19.52	1	#0	19.52	0-1
		1	#12	19.32	1	#25	19.31	1	#36	19.51	1	#49	19.51	0-1
		1	#24	19.29	1	#49	19.28	1	#74	19.49	1	#99	19.48	0-1
		12	#0	18.43	25	#0	18.35	36	#0	18.52	50	#0	18.68	0-2
		12	#6	18.42	25	#12	18.31	36	#18	18.51	50	#24	18.66	0-2
		12	#13	18.39	25	#25	18.28	36	#37	18.47	50	#49	18.63	0-2
		25	#0	18.38	50	#0	18.58	75	#0	18.55	100	#0	18.68	0-2