FCC Test Report

(Spot Check: ENDC: n77+B2/B5/B7/B12/B13/B14/B30/B41/B66)

Report No.:	RFBHQC-WTW-P21030610C-1
FCC ID:	2AQ68T99W175M
Original FCC ID:	2AQ68T99W175
Test Model:	T99W175M
Received Date:	Sep. 06, 2021
Test Date:	Oct. 21 ~ Oct. 31, 2021
Issued Date:	Dec. 30, 2021
Applicant:	Hon Lin Technology Co., Ltd.
Address:	11F, No. 32, Jihu Rd., Neihu Dist., Taipei City 114, Taiwan R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location(1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number(1):	788550 / TW0003
Test Location(2):	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number(2):	281270 / TW0032

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBHQC-WTW-P21030610C-1	Original release	Dec. 30, 2021

1 Certificate of Conformity

Product:	5G WWAN Module
Brand:	Foxconn
Test Model:	T99W175M
Sample Status:	Engineering Sample
Applicant:	Hon Lin Technology Co., Ltd.
Test Date:	Oct. 21 ~ Oct. 31, 2021
Standards:	FCC Part 22, Subpart H FCC Part 24, Subpart E FCC Part 27, Subpart C, D, F, H, L, M, O, Q FCC Part 90, Subpart R

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Pettie Chen , **Date:** Dec. 30, 2021

Pettie Chen / Senior Specialist

Approved by : Jeremy Lin , **Date:** Dec. 30, 2021

Jeremy Lin / Project Engineer

2 Summary of Test Results

For 5GNR n77, n78 (Part 27O):

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (j)	Equivalent Radiated Power	Pass	Meet the requirement of limit.
2.1053 27.53(l)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -26.57dB at 7420.02MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For 5GNR n77, n78 (Part 27Q):

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (k)	Equivalent Radiated Power	Pass	Meet the requirement of limit.
2.1053 27.53(n)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -27.73dB at 7000.02MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 2:

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Isotropically Radiated Power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 5:

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective radiated power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 7:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(h)(2)	Equivalent Isotropically radiated power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 12:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (c)	Equivalent Radiated Power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 13:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(b)	Equivalent radiated power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 14:

Applied Standard: FCC Part 90 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 90.542 (a)(7)	Effective Radiated Power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 30:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(a)	Equivalent Isotropically radiated power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 41:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (h)(2)	Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
2.1053 27.53 (m)(4)(6)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.81dB at 5186.00MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 66:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)	Equivalent Isotropically radiated power	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver Rohde & Schwarz	N9038A	MY55420137	Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer KEYSIGHT	N9020B	MY60110440	Dec. 18, 2020	Dec. 17, 2021
BILOG Antenna SCHWARZBECK	VULB9168	1213	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	995	Nov. 22, 2020	Nov. 21, 2021
Preamplifier EMCI	EMC330N	980782	Jan. 12, 2021	Jan. 11, 2022
Preamplifier EMCI	EMC118A45SE	980808	Jan. 12, 2021	Jan. 11, 2022
Preamplifier EMCI	EMC184045SE	980788	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMC104-SM-SM-(9000+2000+1000)	201243+ 201231+ 210102	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMCCFD400-NM-NM-(9000+300+500)	201236+ 201235+ 201233	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMC101G-KM-KM-(5000+3000+2000)	201260+201257+201254	Jan. 12, 2021	Jan. 11, 2022
Software BV ADT	ADT_Radiated_V7.6.15.9.5	NA	NA	NA
Antenna Tower Max-Full	MFT-151SS-0.5T	NA	NA	NA
Turn Table Max-Full	MF-7802BS	NA	NA	NA
Turn Table Controller Max-Full	MF-7802BS	MF780208674	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/ MY55190007/MY55210005	Jul. 12, 2021	Jul. 11, 2022
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Standard Temperature And Humidity Chamber GIANT FORCE	GTH-120-40-CP-AR	MAA1306-019	Sep. 10, 2021	Sep. 09, 2022
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 02, 2021	Jun. 01, 2022
DC power supply Keysight	U8002A	MY56330015	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in WM Chamber 8.

3 General Information

3.1 General Description of EUT

Product	5G WWAN Module
Brand	Foxconn
Test Model	T99W175M
Sample Status	Engineering Sample
Power Supply Rating	5 Vdc (Host equipment) 3.135Vdc~3.63Vdc (Module)

5GNR n77, n78 (Part 27O)

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM					
Waveform Type	CP-OFDM, DFT-s-OFDM					
Operating Band	n77 (3700-3980MHz) / n78 (3700-3800MHz)					
Operating Frequency	n77 (Channel Bandwidth 20MHz)	3710.01MHz ~ 3969.99MHz				
	n77 (Channel Bandwidth 40MHz)	3720.00MHz ~ 3960.00MHz				
	n77 (Channel Bandwidth 50MHz)	3725.01MHz ~ 3954.99MHz				
	n77 (Channel Bandwidth 60MHz)	3730.02MHz ~ 3949.98MHz				
	n77 (Channel Bandwidth 80MHz)	3740.01MHz ~ 3939.99MHz				
	n77 (Channel Bandwidth 90MHz)	3745.02MHz ~ 3934.98MHz				
	n77 (Channel Bandwidth 100MHz)	3750.00MHz ~ 3930.00MHz				
Max. EIRP Power		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n77 (Channel Bandwidth 20MHz)	866.962mW (29.38dBm)	839.460mW (29.24dBm)	666.807mW (28.24dBm)	505.825mW (27.04dBm)	360.579mW (25.57dBm)
	n77 (Channel Bandwidth 40MHz)	847.227mW (29.28dBm)	814.704mW (29.11dBm)	653.131mW (28.15dBm)	493.174mW (26.93dBm)	360.579mW (25.57dBm)
	n77 (Channel Bandwidth 50MHz)	860.994mW (29.35dBm)	841.395mW (29.25dBm)	632.412mW (28.01dBm)	517.607mW (27.14dBm)	363.078mW (25.60dBm)
	n77 (Channel Bandwidth 60MHz)	860.994mW (29.35dBm)	849.180mW (29.29dBm)	674.528mW (28.29dBm)	523.600mW (27.19dBm)	349.140mW (25.43dBm)
	n77 (Channel Bandwidth 80MHz)	862.979mW (29.36dBm)	814.704mW (29.11dBm)	648.634mW (28.12dBm)	526.017mW (27.21dBm)	357.273mW (25.53dBm)
	n77 (Channel Bandwidth 90MHz)	855.067mW (29.32dBm)	837.529mW (29.23dBm)	668.344mW (28.25dBm)	519.996mW (27.16dBm)	367.282mW (25.65dBm)
	n77 (Channel Bandwidth 100MHz)	841.395mW (29.25dBm)	818.465mW (29.13dBm)	633.870mW (28.02dBm)	511.682mW (27.09dBm)	354.813mW (25.50dBm)
Emission Designator		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n77 (Channel Bandwidth 20MHz)	18M1G7D	18M3G7D	18M2D7W	18M2D7W	18M3D7W
	n77 (Channel Bandwidth 40MHz)	37M5G7D	37M8G7D	37M8D7W	37M8D7W	37M8D7W
	n77 (Channel Bandwidth 50MHz)	47M1G7D	47M5G7D	47M5D7W	47M5D7W	47M5D7W
	n77 (Channel Bandwidth 60MHz)	57M9G7D	57M9G7D	57M9D7W	57M9D7W	57M9D7W
	n77 (Channel Bandwidth 80MHz)	77M2G7D	77M5G7D	77M5D7W	77M5D7W	77M5D7W
	n77 (Channel Bandwidth 90MHz)	86M9G7D	87M5G7D	87M5D7W	87M5D7W	87M5D7W
	n77 (Channel Bandwidth 100MHz)	96M8G7D	97M6G7D	97M7D7W	97M6D7W	97M6D7W

*n78 has the same RF charecteristic and power setting as n77, the operating frequency range of n77 is wider than n78, therefore n77 was selected as final mode for test.

5GNR n77, n78 (Part 27Q)

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM					
Waveform Type	CP-OFDM, DFT-s-OFDM					
Operating Band	n77, n78 (3450-3550MHz)					
Operating Frequency	n77 (Channel Bandwidth 20MHz)	3460.02MHz ~ 3540.00MHz				
	n77 (Channel Bandwidth 40MHz)	3470.01MHz ~ 3529.98MHz				
	n77 (Channel Bandwidth 50MHz)	3475.02MHz ~ 3525.00MHz				
	n77 (Channel Bandwidth 60MHz)	3480.00MHz ~ 3519.99MHz				
	n77 (Channel Bandwidth 80MHz)	3490.02MHz ~ 3510.00MHz				
	n77 (Channel Bandwidth 90MHz)	3495.00MHz ~ 3504.99MHz				
	n77 (Channel Bandwidth 100MHz)	3500.01MHz				
Max. EIRP Power		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n77 (Channel Bandwidth 20MHz)	909.913mW (29.59dBm)	796.159mW (29.01dBm)	644.169mW (28.09dBm)	528.445mW (27.23dBm)	346.737mW (25.40dBm)
	n77 (Channel Bandwidth 40MHz)	891.251mW (29.50dBm)	841.395mW (29.25dBm)	644.169mW (28.09dBm)	523.600mW (27.19dBm)	353.997mW (25.49dBm)
	n77 (Channel Bandwidth 50MHz)	889.201mW (29.49dBm)	831.764mW (29.20dBm)	659.174mW (28.19dBm)	521.195mW (27.17dBm)	350.752mW (25.45dBm)
	n77 (Channel Bandwidth 60MHz)	866.962mW (29.38dBm)	827.942mW (29.18dBm)	666.807mW (28.24dBm)	523.600mW (27.19dBm)	349.945mW (25.44dBm)
	n77 (Channel Bandwidth 80MHz)	870.964mW (29.40dBm)	824.138mW (29.16dBm)	659.174mW (28.19dBm)	528.445mW (27.23dBm)	345.939mW (25.39dBm)
	n77 (Channel Bandwidth 90MHz)	855.067mW (29.32dBm)	824.138mW (29.16dBm)	642.688mW (28.08dBm)	518.800mW (27.15dBm)	354.813mW (25.50dBm)
	n77 (Channel Bandwidth 100MHz)	824.138mW (29.16dBm)	774.462mW (28.89dBm)	654.636mW (28.16dBm)	510.505mW (27.08dBm)	345.939mW (25.39dBm)
Emission Designator		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n77 (Channel Bandwidth 20MHz)	18M0G7D	18M2G7D	18M2D7W	18M3D7W	18M2D7W
	n77 (Channel Bandwidth 40MHz)	37M5G7D	37M8G7D	37M8D7W	37M8D7W	37M8D7W
	n77 (Channel Bandwidth 50MHz)	47M1G7D	47M5G7D	47M5D7W	47M5D7W	47M5D7W
	n77 (Channel Bandwidth 60MHz)	57M9G7D	57M9G7D	57M9D7W	57M9D7W	57M9D7W
	n77 (Channel Bandwidth 80MHz)	77M2G7D	77M5G7D	77M5D7W	77M5D7W	77M5D7W
	n77 (Channel Bandwidth 90MHz)	86M9G7D	87M5G7D	87M5D7W	87M5D7W	87M5D7W
	n77 (Channel Bandwidth 100MHz)	96M5G7D	97M4G7D	97M4D7W	97M4D7W	97M4D7W

*n78 has the same RF charecteristic and power setting as n77, the operating frequency range of n77 is wider than n78, therefore n77 was selected as final mode for test.

LTE Band

Modulation Type	QPSK, 16QAM, 64QAM, 256QAM		
Operating Frequency	LTE Band 2	Channel Bandwidth 1.4MHz	1850.7MHz ~ 1909.3MHz
		Channel Bandwidth 3MHz	1851.5MHz ~ 1908.5MHz
		Channel Bandwidth 5MHz	1852.5MHz ~ 1907.5MHz
		Channel Bandwidth 10MHz	1855.0MHz ~ 1905.0MHz
		Channel Bandwidth 15MHz	1857.5MHz ~ 1902.5MHz
		Channel Bandwidth 20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band 5	Channel Bandwidth 1.4MHz	824.7MHz ~ 848.3MHz
		Channel Bandwidth 3MHz	825.5MHz ~ 847.5MHz
		Channel Bandwidth 5MHz	826.5MHz ~ 846.5MHz
		Channel Bandwidth 10MHz	829.0MHz ~ 844.0MHz
	LTE Band 7	Channel Bandwidth 5MHz	2502.5MHz ~ 2567.5MHz
		Channel Bandwidth 10MHz	2505.0MHz ~ 2565.0MHz
		Channel Bandwidth 15MHz	2507.5MHz ~ 2562.5MHz
		Channel Bandwidth 20MHz	2510.0MHz ~ 2560.0MHz
	LTE Band 12	Channel Bandwidth 1.4MHz	699.7MHz ~ 715.3MHz
		Channel Bandwidth 3MHz	700.5MHz ~ 714.5MHz
		Channel Bandwidth 5MHz	701.5MHz ~ 713.5MHz
		Channel Bandwidth 10MHz	704.0MHz ~ 711.0MHz
	LTE Band 13	Channel Bandwidth 5MHz	779.5MHz ~ 784.5MHz
		Channel Bandwidth 10MHz	782.0MHz
	LTE Band 14	Channel Bandwidth 5MHz	790.5MHz ~ 795.5MHz
		Channel Bandwidth 10MHz	793MHz
	LTE Band 30	Channel Bandwidth 5MHz	2307.5MHz ~ 2312.5MHz
		Channel Bandwidth 10MHz	2310.0MHz
	LTE Band 41	Channel Bandwidth 5MHz	2498.5MHz ~ 2687.5MHz
		Channel Bandwidth 10MHz	2501.0MHz ~ 2685.0 MHz
		Channel Bandwidth 15MHz	2503.5MHz ~ 2682.5MHz
		Channel Bandwidth 20MHz	2506.0MHz ~ 2680.0 MHz
	LTE Band 66	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1779.3MHz
		Channel Bandwidth 3MHz	1711.5MHz ~ 1778.5MHz
		Channel Bandwidth 5MHz	1712.5MHz ~ 1777.5MHz
		Channel Bandwidth 10MHz	1715.0MHz ~ 1775.0MHz
		Channel Bandwidth 15MHz	1717.5MHz ~ 1772.5MHz
		Channel Bandwidth 20MHz	1720.0MHz ~ 1770.0MHz

			QPSK	16QAM	64QAM	256QAM
Max. EIRP Power	LTE Band 2	Channel Bandwidth 1.4MHz	767.361mW (28.85dBm)	642.688mW (28.08dBm)	526.017mW (27.21dBm)	358.922mW (25.55dBm)
		Channel Bandwidth 3MHz	778.037mW (28.91dBm)	687.068mW (28.37dBm)	517.607mW (27.14dBm)	368.978mW (25.67dBm)
		Channel Bandwidth 5MHz	790.679mW (28.98dBm)	671.429mW (28.27dBm)	553.350mW (27.43dBm)	331.131mW (25.20dBm)
		Channel Bandwidth 10MHz	781.628mW (28.93dBm)	706.318mW (28.49dBm)	582.103mW (27.65dBm)	368.129mW (25.66dBm)
		Channel Bandwidth 15MHz	787.046mW (28.96dBm)	669.885mW (28.26dBm)	524.807mW (27.20dBm)	331.131mW (25.20dBm)
		Channel Bandwidth 20MHz	774.462mW (28.89dBm)	695.024mW (28.42dBm)	550.808mW (27.41dBm)	348.337mW (25.42dBm)
	LTE Band 7	Channel Bandwidth 5MHz	1106.624mW (30.44dBm)	897.429mW (29.53dBm)	762.079mW (28.82dBm)	470.977mW (26.73dBm)
		Channel Bandwidth 10MHz	1044.720mW (30.19dBm)	907.821mW (29.58dBm)	756.833mW (28.79dBm)	506.991mW (27.05dBm)
		Channel Bandwidth 15MHz	1042.317mW (30.18dBm)	845.279mW (29.27dBm)	734.514mW (28.66dBm)	462.381mW (26.65dBm)
		Channel Bandwidth 20MHz	1061.696mW (30.26dBm)	931.108mW (29.69dBm)	776.247mW (28.90dBm)	516.416mW (27.13dBm)
	LTE Band 30	Channel Bandwidth 5MHz	244.906mW (23.89dBm)	204.174mW (23.10dBm)	158.489mW (22.00dBm)	110.154mW (20.42dBm)
		Channel Bandwidth 10MHz	239.332mW (23.79dBm)	204.644mW (23.11dBm)	155.239mW (21.91dBm)	102.094mW (20.09dBm)
	LTE Band 41	Channel Bandwidth 5MHz	1931.968mW (32.86dBm)	1640.590mW (32.15dBm)	1330.454mW (31.24dBm)	810.961mW (29.09dBm)
		Channel Bandwidth 10MHz	1958.845mW (32.92dBm)	1710.015mW (32.33dBm)	1294.196mW (31.12dBm)	812.831mW (29.10dBm)
		Channel Bandwidth 15MHz	1887.991mW (32.76dBm)	1655.770mW (32.19dBm)	1235.947mW (30.92dBm)	839.460mW (29.24dBm)
		Channel Bandwidth 20MHz	1963.360mW (32.93dBm)	1629.296mW (32.12dBm)	1273.503mW (31.05dBm)	855.067mW (29.32dBm)
	LTE Band 66	Channel Bandwidth 1.4MHz	765.597mW (28.84dBm)	659.174mW (28.19dBm)	500.035mW (26.99dBm)	327.341mW (25.15dBm)
		Channel Bandwidth 3MHz	779.830mW (28.92dBm)	669.885mW (28.26dBm)	508.159mW (27.06dBm)	331.131mW (25.20dBm)
		Channel Bandwidth 5MHz	792.501mW (28.99dBm)	682.339mW (28.34dBm)	506.991mW (27.05dBm)	320.627mW (25.06dBm)
		Channel Bandwidth 10MHz	790.679mW (28.98dBm)	659.174mW (28.19dBm)	497.737mW (26.97dBm)	306.196mW (24.86dBm)
		Channel Bandwidth 15MHz	796.159mW (29.01dBm)	691.831mW (28.40dBm)	500.035mW (26.99dBm)	349.945mW (25.44dBm)
		Channel Bandwidth 20MHz	803.526mW (29.05dBm)	669.885mW (28.26dBm)	528.445mW (27.23dBm)	326.588mW (25.14dBm)
Max. ERP Power	LTE Band 5	Channel Bandwidth 1.4MHz	453.942mW (26.57dBm)	393.550mW (25.95dBm)	309.742mW (24.91dBm)	206.063mW (23.14dBm)
		Channel Bandwidth 3MHz	459.198mW (26.62dBm)	400.867mW (26.03dBm)	325.087mW (25.12dBm)	205.116mW (23.12dBm)
		Channel Bandwidth 5MHz	468.813mW (26.71dBm)	399.025mW (26.01dBm)	312.608mW (24.95dBm)	207.014mW (23.16dBm)
		Channel Bandwidth 10MHz	469.894mW (26.72dBm)	424.620mW (26.28dBm)	320.627mW (25.06dBm)	206.538mW (23.15dBm)
	LTE Band 12	Channel Bandwidth 1.4MHz	515.229mW (27.12dBm)	426.580mW (26.30dBm)	345.939mW (25.39dBm)	222.331mW (23.47dBm)
		Channel Bandwidth 3MHz	518.800mW (27.15dBm)	437.522mW (26.41dBm)	347.536mW (25.41dBm)	242.103mW (23.84dBm)
		Channel Bandwidth 5MHz	521.195mW (27.17dBm)	444.631mW (26.48dBm)	344.350mW (25.37dBm)	226.986mW (23.56dBm)
		Channel Bandwidth 10MHz	501.187mW (27.00dBm)	454.988mW (26.58dBm)	350.752mW (25.45dBm)	228.034mW (23.58dBm)
	LTE Band 13	Channel Bandwidth 5MHz	528.445mW (27.23dBm)	472.063mW (26.74dBm)	359.749mW (25.56dBm)	238.781mW (23.78dBm)
		Channel Bandwidth 10MHz	527.230mW (27.22dBm)	450.817mW (26.54dBm)	363.915mW (25.61dBm)	246.037mW (23.91dBm)
	LTE Band 14	Channel Bandwidth 5MHz	517.607mW (27.14dBm)	444.631mW (26.48dBm)	358.096mW (25.54dBm)	232.809mW (23.67dBm)
		Channel Bandwidth 10MHz	508.159mW (27.06dBm)	462.381mW (26.65dBm)	375.837mW (25.75dBm)	250.035mW (23.98dBm)
Antenna Type	Refer to Note as below					
Antenna Connector	Refer to Note as below					
Accessory Device	Refer to Note as below					
Cable Supplied	Refer to Note as below					

Output Power / Emission Designator	n77(Part 27O)+ LTE Band 2		Maximum EIRP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	19M3D7D
		LTE Band 2 (EIRP)	790.679 (28.98dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	116MD7D
		LTE Band 2 (EIRP)	348.337 (25.42dBm)	
	n77(Part 27O)+ LTE Band 5		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	27M2D7D
		LTE Band 5 (ERP)	469.894 (26.72dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	107MD7D
		LTE Band 5 (ERP)	335.738mW (25.26dBm)	
	n77(Part 27O)+ LTE Band 7		Maximum EIRP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	22M7D7D
		LTE Band 7 (EIRP)	1106.624 (30.44dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	116MD7D
		LTE Band 7 (EIRP)	326.588mW (25.14dBm)	
	n77(Part 27O)+ LTE Band 12		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	22M7D7D
		LTE Band 12 (ERP)	521.195 (27.17dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	107MD7D
		LTE Band 12 (ERP)	426.5806mW (26.30dBm)	
	n77(Part 27O)+ LTE Band 13		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	22M7D7D
		LTE Band 13 (ERP)	528.448 (27.23dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	107MD7D
		LTE Band 13 (ERP)	414.954mW (26.18dBm)	
	n77(Part 27O)+ LTE Band 14		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	22M7D7D
		LTE Band 14 (ERP)	517.607 (27.14dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	107MD7D
		LTE Band 14 (ERP)	362.249mW (25.59dBm)	
	n77(Part 27O)+ LTE Band 30		Maximum EIRP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	36M1D7D
		LTE Band 30 (EIRP)	244.906 (23.89dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	107MD7D
		LTE Band 30 (EIRP)	192.752mW (22.85dBm)	

Output Power / Emission Designator	n77(Part 27O)+ LTE Band 41		Maximum EIRP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	36M1D7D
		LTE Band 41 (EIRP)	1963.36 (32.93dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	116MD7D
		LTE Band 41 (EIRP)	1238.797mW (30.93dBm)	
	n77(Part 27O)+ LTE Band 66		Maximum EIRP	Sum Bandwidth
		n77(Part 27O)	866.962mW (29.38dBm)	36M1D7D
		LTE Band 66 (EIRP)	803.526 (29.05dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27O)	528.445mW (27.23dBm)	116MD7D
		LTE Band 66 (EIRP)	591.562mW (27.72dBm)	

Output Power / Emission Designator	n77(Part 27Q)+ LTE Band 2		Maximum EIRP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	19M1D7D
		LTE Band 2 (EIRP)	790.679 (28.98dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	115MD7D
		LTE Band 2 (EIRP)	348.337 (25.42dBm)	
	n77(Part 27Q)+ LTE Band 5		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	27M0D7D
		LTE Band 5 (ERP)	469.894 (26.72dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	106MD7D
		LTE Band 5 (ERP)	335.738mW (25.26dBm)	
	n77(Part 27Q)+ LTE Band 7		Maximum EIRP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	22M5D7D
		LTE Band 7 (EIRP)	1106.624 (30.44dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	115MD7D
		LTE Band 7 (EIRP)	326.588mW (25.14dBm)	
	n77(Part 27Q)+ LTE Band 12		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	22M5D7D
		LTE Band 12 (ERP)	521.195 (27.17dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	106MD7D
		LTE Band 12 (ERP)	426.5806mW (26.30dBm)	
	n77(Part 27Q)+ LTE Band 13		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	22M5D7D
		LTE Band 13 (ERP)	528.448 (27.23dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	106MD7D
		LTE Band 13 (ERP)	414.954mW (26.18dBm)	

Output Power / Emission Designator	n77(Part 27Q)+ LTE Band 14		Maximum EIRP / ERP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	22M5D7D
		LTE Band 14 (ERP)	517.607 (27.14dBm)	
			EIRP / ERP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	106MD7D
		LTE Band 14 (ERP)	362.249mW (25.59dBm)	
	n77(Part 27Q)+ LTE Band 30		Maximum EIRP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	22M5D7D
		LTE Band 30 (EIRP)	244.906 (23.89dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	106MD7D
		LTE Band 30 (EIRP)	192.752mW (22.85dBm)	
	n77(Part 27Q)+ LTE Band 41		Maximum EIRP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	35M9D7D
		LTE Band 41 (EIRP)	1963.36 (32.93dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	115MD7D
		LTE Band 41 (EIRP)	1238.797mW (30.93dBm)	
	n77(Part 27Q)+ LTE Band 66		Maximum EIRP	Sum Bandwidth
		n77(Part 27Q)	909.913mW (29.59dBm)	35M9D7D
		LTE Band 66 (EIRP)	803.526 (29.05dBm)	
			EIRP	MAX Sum Bandwidth
		n77(Part 27Q)	523.600mW (27.19dBm)	116MD7D
		LTE Band 66 (EIRP)	591.562mW (27.72dBm)	

Note:

1. This report is a supplementary report to the original BV CPS report no.: RFBHQC-WTW-P21030610B-1. Difference compared with the original report is adding ENDC mode (n77+LTE B2, LTE B5, LTE B12, LTE B13, LTE B14, LTE B30, LTE B41, LTE B66) through software enable. Exhibit prepared for FCC Spot Check Verification report, the format, test items and amount of spot-check test data are decided by applicant's engineering judgment, for more details please refer to declaration letter exhibit. Radiated emission and output power verification worst test refer to original report.
2. There are four Difference HW of T99W175M.

Brand	Model	HW
Foxconn	T99W175M	1. 3G+LTE+Sub6+mmWave+eSIM
		2. 3G+LTE+Sub6+mmWave+w/o eSIM
		3. 3G+LTE+Sub6+mmWave+eSIM+GNSS connector
		4. 3G+LTE+Sub6+mmWave+w/o eSIM+GNSS connector

*After pre-testing, “HW: 1. 3G+LTE+Sub6+mmWave+eSIM” is the worst for the final tests.

3. The EUT supports non-STA (ENDC) mode only, not support STA mode.

4. The following antennas were provided to the EUT.

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type
1		WHA YU	C107-511720-A	4.41	660~803	PCB	I-PEX
2		WHA YU	C107-511721-A	3.81 4.03	791~960 1447.9~1606	PCB	I-PEX
3		WHA YU	C107-511722-A	4.27 5.31	1710~2170 2500~2690	PCB	I-PEX
4		WHA YU	C107-511723-A	2.99 0.92	2300~2400 3500~3700	PCB	I-PEX
5		WHA YU	C107-511724-A	6.45	5150~5925	PCB	I-PEX
6		WHA YU	C107-511725-A	4.89	3400~3700	PCB	I-PEX
7		AVX	5000106-R1-X01	2.91	699~803	Monopole	I-PEX
8		AVX	5000107-R1-X01	2.59	791~960	Monopole	I-PEX
9		AVX	5000108-R1-X01	2.85	1427~1610	Monopole	I-PEX
10		AVX	5000109-R1-X01	2.23 2.94	1710~2200 5150~5925	Monopole	I-PEX
11		AVX	5000110-R1-X01	0.9	2300~2690	Monopole	I-PEX
12		AVX	5000111-R1-X01	0.87	3300~5000	Monopole	I-PEX
13	Tx1/ Rx1	Ethertronics	5003806	0.4 -1.61 0.39 2.95 1.98 0.38 0.83 2.31	698-821 824-960 1425-1515 1710-2200 2300-2690 3300-4200 4400-5000 5150-5925	PIFA	I-PEX
	Rx2	Ethertronics	5003807	-2.24 -4.52 2.87 2.99 2.93 2.91 2.23 -0.85 -3.04	716-821 824-960 1425-1515 1557-1610 1805-2200 2300-2690 3300-4200 4400-5000 5150-5925	PIFA	I-PEX
	Tx2/ Rx3	Ethertronics	5003806	2.21 2.25 -0.45 2.6	1710-2200 2300-2690 3300-4200 4400-5000	PIFA	I-PEX
	Rx4	Ethertronics	5003700	1.38 2.87 0.6 -2.09	1805-2200 2300-2690 3300-4200 4400-5000	PIFA	I-PEX

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type
14	Ant. 0 (TX/RX)	Master Wave	NA	2.4 2.2 2.9 2.9 2.9 NA	880~960 1020~2170 2545~2595 3565~3600 3900~4000 GPS	PCB	I-PEX
	Ant. 2 (TX/RX)	Master Wave	NA	NA 2.2 2.8 2.9 2.8 NA	880~960 1020~2170 2545~2595 3565~3600 3900~4000 GPS	PCB	I-PEX
	Ant. 1 (RX)	Master Wave	NA	NA 5.3 5.1 4.3 4.5 NA	880~960 1020~2170 2545~2595 3565~3600 3900~4000 GPS	PCB	I-PEX
	Ant. 3 (RX)	Master Wave	NA	1.3 6.8 3.7 6.4 6.2 3.7	880~960 1020~2170 2545~2595 3565~3600 3900~4000 GPS	PCB	I-PEX

*The antenna for the final tests as following table.

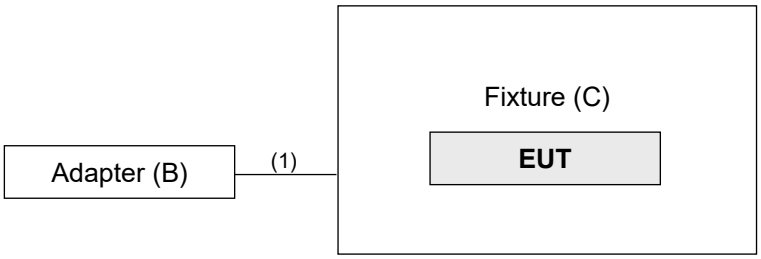
	Band	Antenna
5GNR	n77 (Part27O) (30kHz) / 20/40/50/60/80/90/100	Antenna 14
5GNR	n77 (Part27Q) (30kHz) / 20/40/50/60/80/90/100	Antenna 6

	Band	Antenna
LTE	2	Antenna 3
	5	Antenna 2
	7	Antenna 3
	12	Antenna 1
	13	Antenna 1
	14	Antenna 3
	30	Antenna 4
	41	Antenna 3
	66	Antenna 3

5. The EUT supports the following ENDC configuration.

	FCC 5G FR1			ENDC
5GNR	Band	SCS	Bandwidth (MHz)	
	n25	15kHz	5/10/15/20	Band 12
	n77	30kHz	20/40/50/60/80/90/100	Band 2/5/7/12/13/14/30/41/66

3.2 Configuration of System under Test



Remote site

3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	5G Wireless Test Platforms	Keysight	E7515B	MY60102114	NA	-
B.	Adapter	LITEON	PA-1050-39	NA	NA	-
C.	Fixture	NA	NA	NA	NA	Provided by client.

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	1.5	Y	0	-

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
5GNR n77	Z-plane
LTE Band 41	Z-plane

5GNR n77 (Part 27O)

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	647334 to 665666	647334 (3710.01MHz), 656000 (3840.00MHz), 665666 (3969.99MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 26 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 13 RB Offset 25 RB / 26 RB Offset 50 RB / 0 RB Offset
		648000 to 664000	648000 (3720.00MHz), 656000 (3840.00MHz), 664000 (3960.00MHz)	40MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 53 RB Offset 1 RB / 104 RB Offset 50 RB / 0 RB Offset 50 RB / 28 RB Offset 50 RB / 56 RB Offset 100 RB / 0 RB Offset
		648334 to 663666	648334 (3725.01MHz), 656000 (3840.00MHz), 663666 (3954.99MHz)	50MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 67 RB Offset 1 RB / 131 RB Offset 64 RB / 0 RB Offset 64 RB / 35 RB Offset 64 RB / 69 RB Offset 128 RB / 0 RB Offset
		648668 to 663332	648668 (3730.02MHz), 656000 (3840.00MHz), 663332 (3949.98MHz)	60MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 81 RB Offset 1 RB / 160 RB Offset 81 RB / 0 RB Offset 81 RB / 41 RB Offset 81 RB / 81 RB Offset 162 RB / 0 RB Offset
		649334 to 662666	649334 (3740.01MHz), 656000 (3840.00MHz), 662666 (3939.99MHz)	80MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 109 RB Offset 1 RB / 215 RB Offset 108 RB / 0 RB Offset 108 RB / 55 RB Offset 108 RB / 109 RB Offset 216 RB / 0 RB Offset
		649558 to 662332	649558 (3745.02MHz), 656000 (3840.00MHz), 662332 (3934.98MHz)	90MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 123 RB Offset 1 RB / 243 RB Offset 120 RB / 0 RB Offset 120 RB / 63 RB Offset 120 RB / 125 RB Offset 240 RB / 0 RB Offset
		650000 to 662000	650000 (3750.00MHz), 656000 (3840.00MHz), 662000 (3930.00MHz)	100MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 137 RB Offset 1 RB / 271 RB Offset 135 RB / 0 RB Offset 135 RB / 69 RB Offset 135 RB / 138 RB Offset 270 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission Below 1GHz	647334 to 665666	647334 (3710.01MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	647334 to 665666	647334 (3710.01MHz), 656000 (3840.00MHz), 665666 (3969.99MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset

Note:

1. Only output power, modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worst mode according to the maximum output power.
2. For radiated emission above 1GHz, according to 3GPP 38.521-1 Section 6.5.3.1.4, choose the lowest, mid and highest channel bandwidth for final test.
3. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.

5GNR n77 (Part 27Q)

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	630668 to 636000	630668 (3460.02MHz), 633334 (3500.01MHz), 636000 (3540.00MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 26 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 13 RB Offset 25 RB / 26 RB Offset 50 RB / 0 RB Offset
		631334 to 635332	631334 (3470.01MHz), 633334 (3500.01MHz), 635332 (3529.98MHz)	40MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 53 RB Offset 1 RB / 104 RB Offset 50 RB / 0 RB Offset 50 RB / 28 RB Offset 50 RB / 56 RB Offset 100 RB / 0 RB Offset
		631668 to 635000	631668 (3475.02MHz), 633334 (3500.01MHz), 635000 (3525.00MHz)	50MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 67 RB Offset 1 RB / 131 RB Offset 64 RB / 0 RB Offset 64 RB / 35 RB Offset 64 RB / 69 RB Offset 128 RB / 0 RB Offset
		632000 to 634666	632000 (3480.00MHz), 633334 (3500.01MHz), 634666 (3519.99MHz)	60MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 81 RB Offset 1 RB / 160 RB Offset 81 RB / 0 RB Offset 81 RB / 41 RB Offset 81 RB / 81 RB Offset 162 RB / 0 RB Offset
		632668 to 634000	632668 (3490.02MHz), 633334 (3500.01MHz), 634000 (3510.00MHz)	80MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 109 RB Offset 1 RB / 215 RB Offset 108 RB / 0 RB Offset 108 RB / 55 RB Offset 108 RB / 109 RB Offset 216 RB / 0 RB Offset
		633000 to 633666	633000 (3495.00MHz), 633334 (3500.01MHz), 633666 (3504.99MHz)	90MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 123 RB Offset 1 RB / 243 RB Offset 120 RB / 0 RB Offset 120 RB / 63 RB Offset 120 RB / 125 RB Offset 240 RB / 0 RB Offset
		633334	633334 (3500.01MHz)	100MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 137 RB Offset 1 RB / 271 RB Offset 135 RB / 0 RB Offset 135 RB / 69 RB Offset 135 RB / 138 RB Offset 270 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission Below 1GHz	630668 to 636000	633334 (3500.01MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	630668 to 636000	630668 (3460.02MHz), 633334 (3500.01MHz), 636000 (3540.00MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset

Note:

1. Only output power, modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worst mode according to the maximum output power.
2. For radiated emission above 1GHz, according to 3GPP 38.521-1 Section 6.5.3.1.4, choose the lowest, mid and highest channel bandwidth for final test.
3. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.

LTE Band 2

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607 (1850.70MHz), 18900 (1880.00MHz), 19193 (1909.30MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		18615 to 19185	18615 (1851.50MHz), 18900 (1880.00MHz), 19185 (1908.50MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		18625 to 19175	18625 (1852.50MHz), 18900 (1880.00MHz), 19175 (1907.50MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		18650 to 19150	18650 (1855.00MHz), 18900 (1880.00MHz), 19150 (1905.00MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		18675 to 19125	18675 (1857.50MHz), 18900 (1880.00MHz), 19125 (1902.50MHz)	15MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		18700 to 19100	18700 (1860.00MHz), 18900 (1880.00MHz), 19100 (1900.00MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset

LTE Band 5

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	20407 to 20643	20407(824.7MHz), 20525(836.5MHz), 20643(848.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		20415 to 20635	20415(825.5MHz), 20525(836.5MHz), 20635(847.5MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		20425 to 20625	20425(826.5MHz), 20525(836.5MHz), 20625(846.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		20450 to 20600	20450(829.0MHz), 20525(836.5MHz), 20600(844.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

LTE Band 7

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	20775 to 21425	20775 (2502.5MHz), 21100 (2535.0MHz), 21425 (2567.5MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		20800 to 21400	20800 (2505.0MHz), 21100 (2535.0MHz), 21400 (2565.0MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		20825 to 21375	20825 (2507.5MHz), 21100 (2535.0MHz), 21375 (2562.5MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		20850 to 21350	20850 (2510.0MHz), 21100 (2535.0MHz), 21350 (2560.0MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset

LTE Band 12

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5 MHz), 23130(711.0 MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

LTE Band 13

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

LTE Band 14

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23305 to 23355	23305(790.5MHz), 23330(793.0MHz), 23355(795.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23330	23330(793.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

LTE Band 30

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	27685 to 27735	27685 (2307.5MHz), 27710 (2310.0MHz), 27735 (2312.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		27710	27710 (2310.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		27710	27710 (2310.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset

LTE Band 41

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	39750 to 41490	40620 (2593.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. The conducted output power for QPSK, 16QAM, 64QAM and 256QAM measured value of QPSK is higher than 16QAM, 64QAM and 256QAM mode. Therefore, only EIRP item had been tested under QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under QPSK mode only.

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		132072 to 132572	132072 (1720.0MHz), 132322 (1745.0MHz), 132572 (1770.0MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset

Test Condition:

Test Item	Environmental Conditions	Input Power (system)	Tested By
EIRP/ERP	25deg. C, 60%RH 23deg. C, 67%RH	120Vac, 60Hz	James Yang Adair Peng
Radiated Emission	23deg. C, 67%RH	120Vac, 60Hz	Greg Lin

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and References:

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

FCC 47 CFR Part 24

FCC 47 CFR Part 27

FCC 47 CFR Part 90

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 971168 D02 Misc Rev Approv License Devices v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For 5GNR n77 (Part 27O):
Mobile and portable stations transmitting in the 3700-3980 MHz band are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

For 5GNR n77 (Part 27Q):
Mobile devices transmitting in the 3450-3550 MHz band are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

For LTE Band 2:
Mobile / Portable station are limited to 2 watts e.i.r.p.

For LTE Band 5:
Mobile / Portable station are limited to 7 watts e.r.p.

For LTE Band 12:
Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.
Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

For LTE Band 13:
Control and mobile stations in the 698-746 MHz, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 30 watts ERP.
Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink, 746-757 MHz,787-788 MHz and 805-806 MHz band are limited to 3 watts ERP.

For LTE Band 14:
Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP. Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

For LTE Band 30:
For mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.

For LTE Band 7, LTE Band 41:
Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

For LTE Band 66:
Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with 5GNR and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

For all band except 5GNR n77 (Part 27Q):

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$EIRP = P_{Meas} + G_T$

$ERP = P_{Meas} + G_T - 2.15$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

For 5GNR n77 (Part 27Q):

EIRP Measurement:

a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

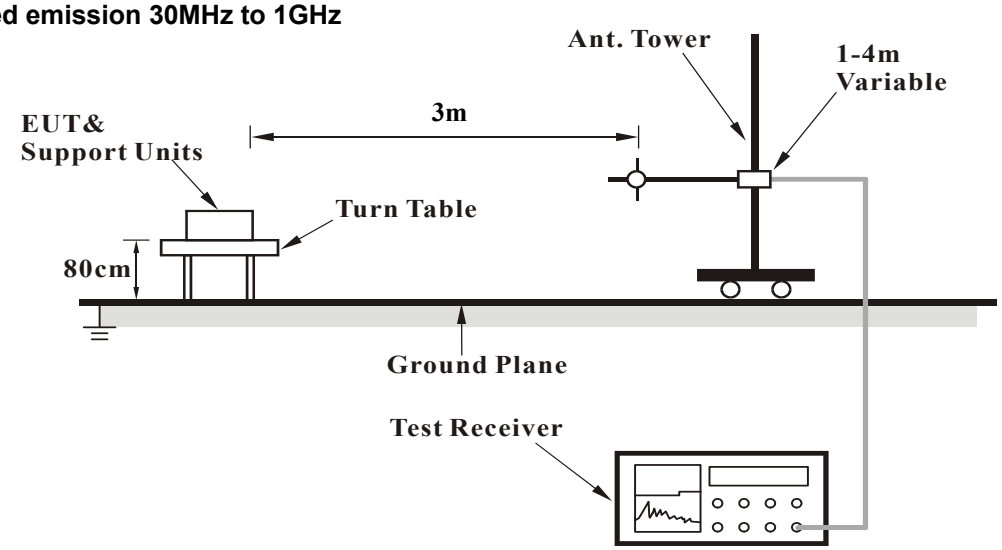
d. Following C63.26 section 5.2.7 and 5.2.2.4
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

4.1.3 Test Setup

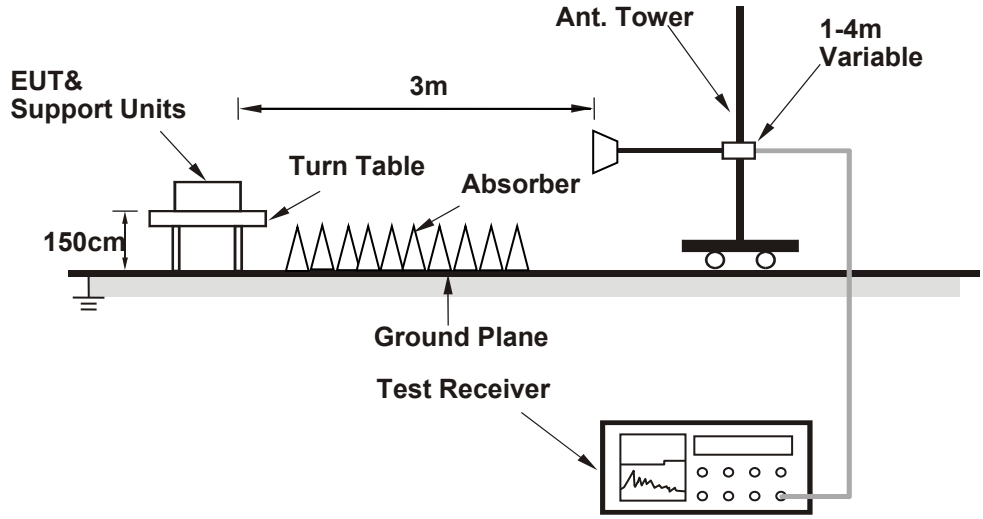
Conducted Power Measurement:

For 5GNR n77 (Part 27Q):
EIRP Measurement:

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 Test Results

Conducted Output Power (dBm)

5GNR n77 (Part 27O):

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequency (MHz)		3750	3840	3930
100M	$\pi/2$ BPSK	1	1	26.21	26.02	26.18
		1	137	26.10	26.29	26.14
		1	271	26.21	26.14	26.35
		135	0	25.68	25.67	25.55
		135	69	25.48	25.71	25.84
		135	138	25.66	25.71	25.56
		270	0	25.45	25.82	25.57
	QPSK	1	1	25.72	25.92	26.05
		1	137	25.98	25.82	26.09
		1	271	25.89	26.23	26.16
		135	0	25.43	25.20	25.43
		135	69	25.44	25.54	25.43
		135	138	25.37	25.58	25.21
		273	0	25.43	25.34	25.27
	16QAM	1	1	24.96	25.00	24.93
		1	137	24.83	25.12	25.07
		1	271	24.88	24.79	24.99
		135	0	24.53	24.29	24.47
		135	69	24.37	24.52	24.57
		135	138	24.30	24.34	24.46
		273	0	24.33	24.36	24.54
	64QAM	1	1	24.00	23.92	23.88
		1	137	24.19	23.91	24.06
		1	271	23.88	23.84	23.89
		135	0	23.36	23.39	23.22
		135	69	23.47	23.63	23.43
		135	138	23.68	23.35	23.32
		273	0	23.45	23.22	23.33
	256QAM	1	1	22.44	22.12	22.36
		1	137	22.29	22.55	22.26
		1	271	22.29	22.60	22.23
		135	0	21.72	21.82	21.95
		135	69	21.75	21.61	21.82
		135	138	21.82	21.83	21.73
		273	0	21.90	21.56	21.92

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649558	656000	662332
		Frequency (MHz)		3745.02	3840	3934.98
90M	$\pi/2$ BPSK	1	1	26.10	25.97	26.05
		1	123	26.22	26.29	26.21
		1	243	26.42	26.08	26.33
		120	0	25.95	25.92	25.86
		120	63	25.79	25.87	25.67
		120	125	26.01	25.49	25.99
		243	0	25.94	25.93	25.78
	QPSK	1	1	26.33	25.84	25.85
		1	123	25.89	25.62	26.32
		1	243	25.87	25.80	26.33
		120	0	25.60	25.55	25.29
		120	63	25.62	25.12	25.83
		120	125	25.66	25.32	25.44
		243	0	25.82	25.46	25.69
	16QAM	1	1	25.35	25.35	25.05
		1	123	25.02	25.17	24.65
		1	243	24.64	24.85	25.30
		120	0	24.31	24.50	24.33
		120	63	24.75	24.34	24.56
		120	125	24.36	24.40	24.47
		243	0	24.81	24.40	24.38
	64QAM	1	1	23.95	23.97	24.08
		1	123	23.62	24.11	24.10
		1	243	24.18	23.94	24.26
		120	0	23.55	23.32	23.59
		120	63	23.41	23.71	23.72
		120	125	23.46	23.34	23.07
		243	0	23.26	23.39	23.64
	256QAM	1	1	22.75	22.41	22.20
		1	123	22.59	22.61	22.68
		1	243	22.71	22.54	22.52
		120	0	21.63	21.79	21.78
		120	63	21.56	22.29	22.17
		120	125	22.18	21.70	21.80
		243	0	21.77	21.86	21.77

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649334	656000	662666
		Frequency (MHz)		3740.01	3840	3939.99
80M	$\pi/2$ BPSK	1	1	26.29	26.32	25.77
		1	109	26.17	26.40	26.46
		1	215	25.90	26.21	26.10
		108	0	26.03	25.81	25.86
		108	55	26.04	25.80	25.80
		108	109	25.88	25.47	25.58
		216	0	25.87	25.96	25.80
	QPSK	1	1	26.21	25.93	25.97
		1	109	25.68	25.99	25.77
		1	215	25.93	25.81	25.99
		108	0	25.14	25.28	25.62
		108	55	25.25	25.40	25.29
		108	109	25.68	25.64	25.69
		216	0	25.41	25.57	25.72
	16QAM	1	1	24.71	24.82	24.75
		1	109	24.93	25.22	25.22
		1	215	25.06	24.74	25.04
		108	0	24.58	24.54	24.67
		108	55	24.41	24.58	24.70
		108	109	24.76	24.77	24.69
		216	0	24.57	24.11	24.24
	64QAM	1	1	23.75	23.95	24.20
		1	109	24.31	24.05	24.05
		1	215	23.85	23.78	24.12
		108	0	23.68	23.61	23.15
		108	55	23.22	23.32	23.16
		108	109	23.39	23.42	23.41
		216	0	23.37	23.48	23.39
	256QAM	1	1	22.52	22.63	22.58
		1	109	22.52	22.13	22.62
		1	215	22.43	22.42	22.30
		108	0	21.67	21.93	21.82
		108	55	21.77	22.04	21.98
		108	109	21.89	21.80	21.62
		216	0	22.20	22.14	21.96

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648668	656000	663332
		Frequency (MHz)		3730.02	3840	3949.98
60M	$\pi/2$ BPSK	1	1	26.25	26.28	26.32
		1	81	26.39	26.28	26.08
		1	160	26.45	25.94	26.17
		81	0	25.61	25.66	26.19
		81	41	25.94	25.83	25.51
		81	81	25.39	25.91	25.71
		162	0	25.90	25.61	26.11
	QPSK	1	1	25.92	25.91	25.89
		1	81	25.85	26.14	26.07
		1	160	26.39	25.85	25.79
		81	0	25.38	25.54	25.67
		81	41	25.41	25.26	25.50
		81	81	25.45	25.38	25.36
		162	0	25.63	25.45	25.55
	16QAM	1	1	25.23	25.10	24.53
		1	81	24.82	24.67	25.28
		1	160	24.99	25.39	25.15
		81	0	24.91	24.27	24.37
		81	41	24.35	24.24	24.34
		81	81	24.51	24.40	24.61
		162	0	24.49	24.29	24.51
	64QAM	1	1	23.96	24.17	23.62
		1	81	23.62	24.02	23.76
		1	160	23.95	24.08	24.29
		81	0	23.51	23.79	23.70
		81	41	23.52	23.25	23.77
		81	81	23.58	23.85	23.82
		162	0	23.59	23.76	23.30
	256QAM	1	1	22.39	22.53	22.15
		1	81	22.26	21.98	22.35
		1	160	22.33	22.04	22.45
		81	0	21.69	22.06	21.90
		81	41	21.73	21.57	21.71
		81	81	22.30	21.93	21.80
		162	0	21.76	21.71	21.70

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648334	656000	663666
		Frequency (MHz)		3725.01	3840	3954.99
50M	$\pi/2$ BPSK	1	1	26.24	26.45	26.22
		1	67	26.22	26.17	26.19
		1	131	25.99	26.25	26.07
		64	0	25.64	25.69	25.65
		64	35	25.96	25.50	25.85
		64	69	26.00	25.95	25.87
		128	0	25.94	25.78	25.85
	QPSK	1	1	26.10	25.96	26.20
		1	67	26.17	26.16	26.11
		1	131	26.26	26.22	26.35
		64	0	25.28	25.62	25.47
		64	35	25.17	25.76	25.24
		64	69	25.52	25.58	25.37
		128	0	25.57	25.75	25.33
	16QAM	1	1	24.98	24.90	24.77
		1	67	24.59	25.11	24.68
		1	131	24.85	24.70	25.04
		64	0	24.67	24.75	24.52
		64	35	24.54	24.29	24.66
		64	69	24.33	24.49	24.29
		128	0	24.36	24.71	24.85
	64QAM	1	1	24.04	23.87	23.79
		1	67	23.80	23.79	23.85
		1	131	24.16	24.24	24.00
		64	0	23.25	23.36	23.46
		64	35	23.26	23.43	23.31
		64	69	23.32	23.75	23.46
		128	0	23.66	23.31	23.47
	256QAM	1	1	22.66	22.70	22.26
		1	67	22.41	22.51	22.50
		1	131	22.58	22.50	22.11
		64	0	21.57	21.79	21.74
		64	35	21.68	21.68	21.76
		64	69	22.18	21.49	21.96
		128	0	21.57	21.59	21.68

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648000	656000	664000
		Frequency (MHz)		3720	3840	3960
40M	$\pi/2$ BPSK	1	1	26.31	26.23	26.33
		1	53	26.30	26.21	26.34
		1	104	26.38	26.24	26.15
		50	0	25.95	25.57	26.20
		50	28	25.65	25.55	25.67
		50	56	25.83	25.84	25.59
		100	0	25.78	25.65	25.91
	QPSK	1	1	26.03	25.84	26.05
		1	53	25.75	26.18	25.84
		1	104	25.84	26.21	26.07
		50	0	25.48	25.24	25.51
		50	28	25.56	25.58	25.33
		50	56	25.52	25.45	25.35
		100	0	25.74	25.54	25.35
	16QAM	1	1	24.96	24.95	25.25
		1	53	25.15	25.19	25.14
		1	104	24.93	24.86	24.84
		50	0	24.81	24.12	24.77
		50	28	24.62	24.56	24.58
		50	56	24.64	24.60	24.47
		100	0	24.79	24.76	24.36
	64QAM	1	1	23.98	23.93	23.92
		1	53	24.00	24.00	24.03
		1	104	23.93	23.90	23.74
		50	0	23.73	23.40	23.15
		50	28	23.25	23.34	23.43
		50	56	23.63	23.38	23.73
		100	0	23.69	23.20	23.46
	256QAM	1	1	22.63	22.44	22.47
		1	53	22.51	22.32	22.54
		1	104	22.24	22.67	22.52
		50	0	21.70	21.81	21.82
		50	28	22.14	21.80	21.82
		50	56	22.06	21.77	22.10
		100	0	21.77	22.08	21.86

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647334	656000	665666
		Frequency (MHz)		3710.01	3840	3969.99
20M	$\pi/2$ BPSK	1	1	26.27	26.48	25.93
		1	26	25.92	26.23	26.42
		1	49	26.02	26.41	26.19
		25	0	25.49	25.86	25.75
		25	13	25.94	25.83	25.42
		25	26	25.37	25.97	25.83
		50	0	25.78	25.99	25.85
	QPSK	1	1	26.12	26.17	25.91
		1	26	25.90	25.61	25.89
		1	49	25.86	26.34	25.71
		25	0	25.73	25.61	25.64
		25	13	25.15	25.55	25.61
		25	26	25.49	25.34	25.61
		50	0	25.67	25.45	25.29
	16QAM	1	1	25.34	25.18	24.65
		1	26	24.91	25.04	24.68
		1	49	25.03	25.08	25.29
		25	0	24.44	24.35	24.66
		25	13	24.45	24.64	24.45
		25	26	24.59	24.83	24.49
		50	0	24.35	24.31	24.31
	64QAM	1	1	23.79	24.14	23.84
		1	26	23.83	23.98	24.04
		1	49	23.64	23.63	23.56
		25	0	23.85	23.43	23.87
		25	13	23.25	23.13	23.84
		25	26	23.86	23.60	23.36
		50	0	23.64	23.33	23.29
	256QAM	1	1	22.46	22.26	21.96
		1	26	22.59	22.56	22.45
		1	49	22.35	22.65	22.67
		25	0	22.08	21.80	21.88
		25	13	22.14	21.91	21.81
		25	26	22.27	21.75	22.08
		50	0	21.97	22.05	22.07

5GNR n77 (Part 27Q):

5GNR n77				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		633334
		Frequency (MHz)		3500.01
100M	$\pi/2$ BPSK	1	0	26.26
		1	137	26.15
		1	271	26.04
		135	0	25.72
		135	69	25.61
		135	138	25.65
		270	0	25.55
	QPSK	1	0	25.99
		1	137	25.92
		1	271	25.86
		135	0	25.55
		135	69	25.46
		135	138	25.26
		270	0	25.45
	16QAM	1	0	25.00
		1	137	25.26
		1	271	24.93
		135	0	24.58
		135	69	24.58
		135	138	24.27
		270	0	24.29
	64QAM	1	0	24.05
		1	137	23.88
		1	271	24.18
		135	0	23.66
		135	69	23.34
		135	138	23.27
		270	0	23.48
	256QAM	1	0	22.41
		1	137	22.49
		1	271	22.38
		135	0	21.90
		135	69	21.87
		135	138	21.71
		270	0	21.73

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		633000	633334	633666
		Frequency (MHz)		3495	3500.01	3504.99
90M	$\pi/2$ BPSK	1	0	26.03	26.31	26.25
		1	123	26.15	26.42	26.34
		1	243	26.42	26.05	25.97
		120	0	25.69	25.80	25.50
		120	63	25.61	25.80	25.71
		120	125	25.50	25.88	25.83
		240	0	25.71	25.71	25.82
	QPSK	1	0	26.12	26.26	26.09
		1	123	25.97	25.93	26.05
		1	243	25.99	25.98	26.06
		120	0	25.31	25.15	25.54
		120	63	25.37	25.39	25.30
		120	125	25.56	25.25	25.60
		240	0	25.37	25.54	25.36
	16QAM	1	0	24.76	25.04	24.95
		1	123	25.14	24.98	24.89
		1	243	25.18	25.14	24.95
		120	0	24.42	24.25	24.45
		120	63	24.32	24.32	24.50
		120	125	24.30	24.40	24.51
		240	0	24.41	24.63	24.63
	64QAM	1	0	24.15	23.88	24.12
		1	123	24.09	23.99	24.19
		1	243	24.14	23.88	24.25
		120	0	23.14	23.41	23.53
		120	63	23.47	23.64	23.50
		120	125	23.65	23.54	23.41
		240	0	23.46	23.15	23.47
	256QAM	1	0	22.49	22.38	22.60
		1	123	22.22	22.25	22.44
		1	243	22.39	22.35	22.37
		120	0	21.82	21.77	21.67
		120	63	21.96	21.82	21.80
		120	125	21.91	21.64	21.68
		240	0	21.78	21.99	21.68

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632668	633334	634000
		Frequency (MHz)		3490.02	3500.01	3510
80M	$\pi/2$ BPSK	1	0	26.15	26.50	26.17
		1	109	26.00	26.09	26.29
		1	215	26.18	26.23	26.02
		108	0	25.53	25.77	26.04
		108	55	25.88	25.50	26.08
		108	109	26.11	25.83	25.48
		216	0	25.44	25.75	25.92
	QPSK	1	0	26.26	26.13	26.01
		1	109	26.25	25.59	26.01
		1	215	26.11	25.88	25.94
		108	0	25.17	25.67	25.30
		108	55	25.43	25.72	25.09
		108	109	25.37	25.66	25.55
		216	0	25.73	25.28	25.06
	16QAM	1	0	25.29	25.25	24.78
		1	109	25.15	24.95	25.05
		1	215	25.07	24.94	25.21
		108	0	24.18	24.55	24.32
		108	55	24.28	24.53	24.69
		108	109	24.51	24.22	24.42
		216	0	24.22	24.66	24.63
	64QAM	1	0	24.13	24.33	24.02
		1	109	23.85	23.73	23.72
		1	215	23.85	23.85	24.02
		108	0	23.22	23.49	23.91
		108	55	23.52	23.24	23.62
		108	109	23.38	23.59	23.18
		216	0	23.23	23.50	23.36
	256QAM	1	0	22.11	22.39	22.49
		1	109	22.18	22.33	22.22
		1	215	22.15	22.27	22.34
		108	0	22.07	22.25	21.79
		108	55	22.19	21.67	21.83
		108	109	22.08	21.82	21.90
		216	0	21.64	21.80	21.44

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632000	633334	634666
		Frequency (MHz)		3480	3500.01	3519.99
60M	$\pi/2$ BPSK	1	0	26.14	26.48	26.36
		1	81	26.28	26.45	26.39
		1	160	25.98	25.99	26.31
		81	0	25.77	25.72	25.79
		81	41	25.91	25.82	25.99
		81	81	25.78	25.67	25.83
		162	0	25.80	26.05	26.02
	QPSK	1	0	26.20	26.01	25.95
		1	81	25.70	26.18	26.18
		1	160	26.27	26.28	25.90
		81	0	25.35	25.18	25.49
		81	41	25.27	25.24	25.22
		81	81	25.60	25.49	25.83
		162	0	25.37	25.23	25.37
	16QAM	1	0	24.95	25.18	24.63
		1	81	24.92	24.77	25.34
		1	160	24.95	24.99	25.14
		81	0	24.69	24.72	24.69
		81	41	24.66	24.26	24.43
		81	81	24.19	24.52	24.60
		162	0	24.41	24.35	24.29
	64QAM	1	0	23.99	23.78	24.29
		1	81	23.77	23.88	24.17
		1	160	24.09	23.77	24.13
		81	0	23.43	23.65	23.64
		81	41	23.31	23.72	23.75
		81	81	23.27	23.44	23.57
		162	0	23.44	23.30	23.44
	256QAM	1	0	22.52	22.37	22.54
		1	81	22.29	22.14	22.16
		1	160	22.36	22.36	22.48
		81	0	21.86	21.99	21.94
		81	41	21.85	22.04	21.92
		81	81	21.77	21.92	21.68
		162	0	21.93	21.95	22.01

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631668	633334	635000
		Frequency (MHz)		3475.02	3500.01	3525
50M	$\pi/2$ BPSK	1	0	26.18	26.35	26.43
		1	67	26.17	26.45	26.59
		1	131	26.18	26.22	26.55
		64	0	25.46	25.82	26.07
		64	35	25.68	25.68	25.94
		64	69	25.90	25.58	25.70
		128	0	26.02	25.98	25.61
	QPSK	1	0	26.04	25.83	26.22
		1	67	25.83	25.87	25.73
		1	131	26.30	25.91	25.92
		64	0	25.55	25.72	25.12
		64	35	25.15	25.49	25.33
		64	69	25.65	25.24	25.27
		128	0	25.25	25.46	25.51
	16QAM	1	0	25.21	24.90	25.02
		1	67	24.81	25.01	24.92
		1	131	25.29	25.09	25.22
		64	0	24.53	24.62	24.29
		64	35	24.59	24.64	24.75
		64	69	24.72	24.36	24.56
		128	0	24.50	24.51	24.65
	64QAM	1	0	23.86	24.09	24.14
		1	67	24.24	24.16	23.70
		1	131	23.69	24.03	24.27
		64	0	23.45	23.51	23.77
		64	35	23.37	23.75	23.61
		64	69	23.50	23.61	23.62
		128	0	23.30	23.38	23.57
	256QAM	1	0	22.14	22.50	22.25
		1	67	22.23	22.41	22.55
		1	131	22.25	22.44	22.39
		64	0	22.12	21.86	22.04
		64	35	21.62	21.82	22.06
		64	69	21.97	21.78	21.79
		128	0	21.90	21.55	22.04

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631334	633334	635332
		Frequency (MHz)		3470.01	3500.01	3529.98
40M	$\pi/2$ BPSK	1	0	26.31	26.25	26.40
		1	53	26.30	25.90	26.60
		1	104	26.09	25.82	26.27
		50	0	26.03	25.59	26.07
		50	28	25.80	25.89	25.77
		50	56	25.61	26.19	25.90
		100	0	25.70	25.81	25.97
	QPSK	1	0	25.80	25.77	25.55
		1	53	25.85	26.03	25.94
		1	104	26.35	25.96	26.04
		50	0	25.32	25.67	25.55
		50	28	25.66	25.66	25.61
		50	56	25.61	25.21	25.71
		100	0	25.81	25.63	25.81
	16QAM	1	0	24.91	24.69	24.99
		1	53	25.03	24.79	24.92
		1	104	25.00	25.19	25.07
		50	0	24.44	24.64	24.47
		50	28	24.27	24.53	24.63
		50	56	24.15	24.58	24.59
		100	0	24.38	24.57	24.14
	64QAM	1	0	24.05	24.29	24.22
		1	53	24.17	23.93	24.11
		1	104	24.05	24.24	24.11
		50	0	23.33	23.40	23.47
		50	28	23.28	23.14	23.50
		50	56	23.28	23.25	23.40
		100	0	23.27	23.32	23.29
	256QAM	1	0	22.59	22.56	22.55
		1	53	22.53	22.39	22.49
		1	104	22.12	22.32	22.42
		50	0	21.73	21.60	22.01
		50	28	21.70	21.87	21.85
		50	56	21.86	22.07	22.11
		100	0	21.77	22.01	21.82

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		630668	633334	636000
		Frequency (MHz)		3460.02	3500.01	3540
20M	$\pi/2$ BPSK	1	0	26.47	26.50	26.51
		1	26	26.50	26.48	26.01
		1	49	26.50	26.69	26.24
		25	0	25.94	26.04	25.69
		25	13	26.03	25.69	25.81
		25	26	26.06	25.93	25.39
		50	0	25.97	25.97	25.88
	QPSK	1	0	25.78	26.11	25.92
		1	26	26.01	25.98	26.09
		1	49	25.66	26.08	26.00
		25	0	25.28	25.55	25.75
		25	13	25.33	25.12	25.13
		25	26	25.22	25.38	25.37
		50	0	25.46	25.45	25.52
	16QAM	1	0	24.84	24.99	24.89
		1	26	25.19	25.06	24.79
		1	49	25.01	24.78	24.71
		25	0	24.47	24.33	24.64
		25	13	24.23	24.09	24.30
		25	26	24.54	24.31	24.58
		50	0	24.76	24.17	24.66
	64QAM	1	0	23.73	24.25	24.32
		1	26	24.00	23.82	24.28
		1	49	23.81	24.09	24.33
		25	0	23.82	23.59	23.76
		25	13	23.45	23.11	23.64
		25	26	23.66	23.41	23.26
		50	0	23.36	23.43	23.60
	256QAM	1	0	22.30	22.50	22.39
		1	26	22.46	22.36	22.15
		1	49	22.24	22.00	22.44
		25	0	22.05	21.96	21.97
		25	13	21.77	21.98	21.97
		25	26	21.85	21.91	21.81
		50	0	21.70	21.73	21.78

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	24.50	24.38	24.27
		1	50	24.54	24.62	24.32
		1	99	24.43	24.30	24.57
		50	0	23.39	23.57	23.54
		50	25	23.54	23.37	23.20
		50	50	23.50	23.74	23.48
		100	0	23.60	23.44	23.68
	16QAM	1	0	23.33	24.15	23.70
		1	50	23.74	24.00	23.58
		1	99	23.48	24.12	23.50
		50	0	22.51	22.42	22.38
		50	25	22.42	22.51	22.41
		50	50	22.31	22.39	22.25
		100	0	22.35	22.61	22.33
	64QAM	1	0	22.38	23.14	22.80
		1	50	22.48	22.92	22.39
		1	99	22.55	22.89	22.32
		50	0	21.04	21.30	21.15
		50	25	21.20	21.21	21.00
		50	50	21.37	21.66	21.34
		100	0	21.69	21.90	21.30
	256QAM	1	0	20.56	20.88	20.63
		1	50	20.58	21.05	20.03
		1	99	20.32	21.15	20.59
		50	0	19.18	19.60	19.38
		50	25	19.39	19.54	19.16
		50	50	19.05	19.69	18.94
		100	0	19.75	20.03	19.46

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	24.69	24.38	24.40
		1	37	24.10	24.52	24.16
		1	74	24.46	24.65	24.05
		36	0	23.32	23.35	23.46
		36	19	23.66	23.34	23.52
		36	39	23.79	23.48	23.26
		75	0	23.64	23.54	23.56
	16QAM	1	0	23.99	23.99	23.32
		1	37	23.71	23.96	23.87
		1	74	23.93	23.64	23.62
		36	0	22.66	22.51	22.09
		36	19	22.49	22.23	22.15
		36	39	22.39	22.32	22.13
		75	0	22.54	22.71	22.31
	64QAM	1	0	22.85	22.93	22.32
		1	37	22.58	22.57	22.54
		1	74	22.71	22.31	22.52
		36	0	21.37	21.82	21.35
		36	19	21.46	21.57	21.81
		36	39	21.59	21.51	21.37
		75	0	21.79	21.84	21.51
	256QAM	1	0	20.93	20.91	20.23
		1	37	20.69	20.79	20.56
		1	74	20.66	20.44	20.57
		36	0	19.73	19.75	19.45
		36	19	19.51	19.59	19.48
		36	39	19.66	19.74	19.77
		75	0	20.16	19.61	20.01

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	24.53	24.54	23.94
		1	24	24.50	24.04	24.05
		1	49	24.66	24.39	24.39
		25	0	23.54	23.60	23.16
		25	12	23.73	23.58	23.18
		25	25	23.67	23.69	23.50
		50	0	23.41	23.77	23.35
	16QAM	1	0	24.22	23.87	23.61
		1	24	23.38	23.52	23.58
		1	49	23.93	23.64	23.92
		25	0	22.63	22.30	22.19
		25	12	22.65	22.50	22.40
		25	25	22.39	22.36	22.24
		50	0	22.46	22.27	22.40
	64QAM	1	0	23.38	22.86	22.91
		1	24	22.65	22.48	23.05
		1	49	22.97	22.37	22.75
		25	0	21.31	21.70	21.25
		25	12	21.29	21.30	20.97
		25	25	21.13	21.36	21.37
		50	0	21.35	21.58	21.28
	256QAM	1	0	21.20	20.64	20.91
		1	24	20.44	20.59	20.91
		1	49	21.39	20.86	20.76
		25	0	19.51	19.66	19.45
		25	12	19.33	19.35	19.38
		25	25	19.06	19.04	19.24
		50	0	19.42	19.81	19.19

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	24.57	24.27	24.22
		1	12	24.71	24.57	24.16
		1	24	24.49	24.51	24.21
		12	0	23.39	23.20	23.47
		12	6	23.51	23.30	23.29
		12	13	23.75	23.40	23.57
		25	0	23.68	23.69	23.48
	16QAM	1	0	23.65	23.69	23.68
		1	12	24.00	23.74	23.18
		1	24	23.51	23.87	23.45
		12	0	22.39	22.40	22.34
		12	6	22.76	22.71	22.42
		12	13	22.72	22.30	22.44
		25	0	22.81	22.22	22.09
	64QAM	1	0	22.61	22.68	22.67
		1	12	22.88	22.54	22.35
		1	24	22.97	23.16	22.95
		12	0	21.18	21.53	21.35
		12	6	21.44	21.44	20.93
		12	13	21.76	21.65	21.54
		25	0	21.58	21.08	21.53
	256QAM	1	0	20.60	20.66	20.60
		1	12	20.46	20.54	20.56
		1	24	20.45	20.93	20.86
		12	0	19.40	19.60	19.44
		12	6	19.67	19.62	19.23
		12	13	19.38	19.10	19.54
		25	0	19.66	19.29	19.21

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	24.48	24.55	24.16
		1	7	24.54	24.64	24.24
		1	14	24.53	24.58	24.44
		8	0	23.76	23.63	23.11
		8	3	23.54	23.74	23.24
		8	7	23.53	23.35	23.41
		15	0	23.52	23.39	23.09
	16QAM	1	0	23.67	23.77	23.21
		1	7	24.10	24.02	23.63
		1	14	23.66	23.41	23.66
		8	0	22.53	22.32	22.16
		8	3	22.81	22.31	22.16
		8	7	22.67	22.60	22.02
		15	0	22.49	22.28	22.21
	64QAM	1	0	22.73	22.58	22.26
		1	7	22.69	22.87	22.15
		1	14	22.47	22.02	22.80
		8	0	21.59	21.67	21.29
		8	3	21.32	21.71	21.16
		8	7	21.43	21.24	21.31
		15	0	21.10	21.67	21.67
	256QAM	1	0	20.94	20.73	20.05
		1	7	20.88	21.40	20.08
		1	14	20.54	19.99	20.62
		8	0	19.97	19.54	19.18
		8	3	19.48	19.60	19.03
		8	7	19.53	19.19	19.41
		15	0	18.97	19.11	19.62

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	24.33	24.34	24.02
		1	2	24.58	24.56	24.34
		1	5	24.44	24.13	24.26
		3	0	24.22	24.22	24.08
		3	1	24.35	24.58	23.95
		3	3	24.22	24.15	24.23
		6	0	23.59	23.65	22.98
	16QAM	1	0	23.81	23.77	23.03
		1	2	23.44	23.70	23.38
		1	5	23.64	23.61	23.80
		3	0	23.43	23.35	23.21
		3	1	23.67	23.63	23.46
		3	3	23.35	23.45	23.20
		6	0	22.43	22.46	22.22
	64QAM	1	0	22.74	22.94	22.21
		1	2	22.03	22.46	22.57
		1	5	22.05	22.25	22.61
		3	0	22.66	22.59	21.80
		3	1	22.83	22.88	21.98
		3	3	22.67	22.23	22.29
		6	0	21.91	21.71	21.05
	256QAM	1	0	21.28	20.53	19.84
		1	2	20.08	20.57	20.63
		1	5	20.49	20.74	20.77
		3	0	20.56	20.59	19.69
		3	1	20.80	20.94	19.75
		3	3	20.60	20.34	20.66
		6	0	19.57	19.26	18.74

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	24.87	25.06	24.68
		1	24	24.58	24.79	24.48
		1	49	24.57	24.51	24.55
		25	0	23.64	23.56	23.69
		25	12	23.90	23.50	23.97
		25	25	23.57	23.60	23.75
		50	0	23.60	23.75	23.60
	16QAM	1	0	23.96	24.23	24.62
		1	24	24.13	24.33	24.01
		1	49	23.81	23.90	23.74
		25	0	22.84	22.62	22.78
		25	12	22.81	22.69	22.56
		25	25	22.99	22.43	22.98
		50	0	22.54	22.84	22.38
	64QAM	1	0	22.83	22.99	23.40
		1	24	22.99	23.25	23.00
		1	49	22.79	22.78	22.98
		25	0	21.87	21.79	21.33
		25	12	21.73	21.77	21.57
		25	25	21.80	21.56	21.60
		50	0	21.61	21.50	21.43
	256QAM	1	0	21.00	21.49	21.06
		1	24	21.45	21.23	20.88
		1	49	21.29	20.35	20.66
		25	0	19.48	19.27	19.54
		25	12	20.14	20.10	19.51
		25	25	20.03	19.57	19.79
		50	0	19.71	19.50	19.71

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20425	20525	20625
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	24.99	25.05	24.79
		1	12	24.83	25.00	24.57
		1	24	24.73	24.76	24.54
		12	0	23.63	23.48	23.75
		12	6	23.76	23.94	23.83
		12	13	23.66	23.91	23.69
		25	0	23.74	23.58	23.59
	16QAM	1	0	23.91	23.65	23.88
		1	12	24.05	24.35	24.32
		1	24	23.73	23.94	23.97
		12	0	23.09	22.77	22.50
		12	6	22.92	22.81	22.63
		12	13	23.00	22.83	22.64
		25	0	22.62	22.73	22.51
	64QAM	1	0	23.29	22.97	22.85
		1	12	23.28	23.23	23.08
		1	24	22.78	23.06	22.84
		12	0	21.71	21.86	21.72
		12	6	21.82	21.73	21.58
		12	13	21.96	22.14	21.44
		25	0	21.98	21.81	21.85
	256QAM	1	0	21.21	20.82	21.03
		1	12	21.39	21.43	21.11
		1	24	20.41	21.50	20.59
		12	0	19.82	19.94	19.73
		12	6	19.56	19.77	19.77
		12	13	19.72	19.78	19.63
		25	0	19.95	19.80	19.32

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20415	20525	20635
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	24.93	24.78	24.75
		1	7	24.96	24.76	24.86
		1	14	24.66	24.52	24.33
		8	0	23.79	23.71	23.61
		8	3	23.82	23.63	23.80
		8	7	23.88	23.63	23.85
		15	0	23.64	23.89	23.48
	16QAM	1	0	23.94	24.37	23.89
		1	7	23.98	24.02	23.86
		1	14	24.02	24.08	24.08
		8	0	22.76	22.93	22.86
		8	3	23.17	22.91	23.05
		8	7	22.86	22.86	22.93
		15	0	22.86	22.84	22.86
	64QAM	1	0	22.61	23.46	23.03
		1	7	22.95	22.61	22.86
		1	14	23.05	23.01	22.97
		8	0	22.03	21.44	21.59
		8	3	22.03	21.73	21.74
		8	7	21.55	21.61	21.51
		15	0	21.86	21.50	21.48
	256QAM	1	0	20.49	21.36	20.69
		1	7	21.46	20.89	20.74
		1	14	20.98	21.12	20.63
		8	0	20.22	19.55	19.25
		8	3	19.89	19.89	19.50
		8	7	19.79	19.30	19.58
		15	0	19.93	19.96	19.99

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20407	20525	20643
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	24.52	24.43	24.37
		1	2	24.61	24.65	24.56
		1	5	24.49	24.48	24.69
		3	0	24.91	24.58	24.52
		3	1	24.85	24.62	24.77
		3	3	24.61	24.73	24.56
		6	0	23.91	23.52	23.69
	16QAM	1	0	24.18	23.57	24.08
		1	2	23.71	23.71	23.94
		1	5	23.69	24.29	23.69
		3	0	23.66	23.27	23.61
		3	1	23.84	23.93	23.48
		3	3	23.41	23.48	23.65
		6	0	22.69	22.86	22.94
	64QAM	1	0	23.25	22.57	23.13
		1	2	23.11	22.75	22.96
		1	5	22.99	23.06	22.51
		3	0	22.47	22.53	22.27
		3	1	22.52	23.03	22.62
		3	3	22.28	22.74	22.53
		6	0	21.55	21.72	21.29
	256QAM	1	0	21.48	20.04	20.95
		1	2	20.81	20.82	20.67
		1	5	20.98	20.80	20.66
		3	0	20.40	20.47	20.16
		3	1	20.30	21.06	20.59
		3	3	20.41	20.56	20.64
		6	0	20.02	19.79	19.43

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20850	21100	21350
		Frequency (MHz)		2510	2535	2560
20M	QPSK	1	0	24.75	24.55	24.57
		1	50	24.87	24.71	24.49
		1	99	24.95	24.61	24.57
		50	0	23.66	23.71	23.65
		50	25	23.86	23.60	23.90
		50	50	23.88	23.72	23.74
		100	0	23.84	23.55	23.95
	16QAM	1	0	23.82	24.15	23.54
		1	50	23.90	24.05	24.25
		1	99	23.73	24.17	24.38
		50	0	23.04	22.76	22.38
		50	25	22.67	22.78	22.71
		50	50	22.71	22.90	22.93
		100	0	22.98	22.88	22.59
	64QAM	1	0	22.96	23.01	22.87
		1	50	22.80	23.17	22.81
		1	99	22.82	23.59	22.89
		50	0	21.84	21.99	21.27
		50	25	21.54	21.76	21.90
		50	50	21.80	21.78	21.64
		100	0	21.48	21.96	21.70
	256QAM	1	0	20.68	21.43	21.06
		1	50	21.03	21.32	21.10
		1	99	20.93	21.82	20.90
		50	0	19.44	19.57	19.46
		50	25	20.26	19.80	19.97
		50	50	19.54	20.18	19.51
		100	0	19.47	19.83	19.72

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20825	21100	21375
		Frequency (MHz)		2507.5	2535	2562.5
15M	QPSK	1	0	24.68	24.60	24.70
		1	37	24.61	24.67	24.45
		1	74	24.86	24.87	24.46
		36	0	23.79	23.86	23.59
		36	19	23.94	23.75	23.41
		36	39	23.73	23.88	23.84
		75	0	23.89	23.51	23.57
	16QAM	1	0	23.80	23.68	23.45
		1	37	23.96	23.64	23.96
		1	74	23.82	23.95	23.56
		36	0	22.82	22.69	22.51
		36	19	23.03	22.49	22.35
		36	39	23.00	22.68	22.88
		75	0	22.76	22.44	22.32
	64QAM	1	0	23.11	22.47	22.42
		1	37	22.54	22.53	22.85
		1	74	23.35	23.05	22.52
		36	0	22.17	21.60	21.75
		36	19	21.59	21.83	21.53
		36	39	21.86	21.81	21.68
		75	0	21.94	21.65	21.78
	256QAM	1	0	21.34	20.20	20.64
		1	37	20.68	20.50	20.49
		1	74	21.18	20.80	20.98
		36	0	20.22	19.66	19.63
		36	19	19.91	19.80	19.71
		36	39	19.89	19.52	19.86
		75	0	20.06	19.15	19.69

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20800	21100	21400
		Frequency (MHz)		2505	2535	2565
10M	QPSK	1	0	24.73	24.71	24.41
		1	24	24.49	24.44	24.18
		1	49	24.70	24.88	24.60
		25	0	23.87	23.83	23.51
		25	12	24.04	23.87	23.53
		25	25	23.83	23.75	23.94
		50	0	24.03	23.84	23.52
	16QAM	1	0	24.04	23.38	23.36
		1	24	24.21	23.71	24.14
		1	49	24.15	24.27	23.45
		25	0	23.02	22.53	22.35
		25	12	22.98	22.66	22.94
		25	25	22.99	22.89	22.66
		50	0	22.76	22.46	22.70
	64QAM	1	0	23.48	22.90	22.52
		1	24	22.79	23.03	22.80
		1	49	23.27	22.97	22.71
		25	0	22.28	21.19	21.88
		25	12	22.07	21.40	21.55
		25	25	21.80	21.83	21.94
		50	0	21.81	21.48	21.55
	256QAM	1	0	21.74	20.37	20.76
		1	24	21.26	20.67	21.15
		1	49	21.11	20.92	20.81
		25	0	20.23	19.68	19.90
		25	12	19.76	19.41	19.34
		25	25	19.44	19.95	19.85
		50	0	20.07	19.21	19.06

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20775	21100	21425
		Frequency (MHz)		2502.5	2535	2567.5
5M	QPSK	1	0	24.65	24.40	24.46
		1	12	25.13	24.78	24.61
		1	24	24.69	24.51	24.63
		12	0	24.08	23.54	23.59
		12	6	23.66	23.64	23.44
		12	13	23.54	23.65	23.43
		25	0	23.71	23.81	23.42
	16QAM	1	0	23.77	24.13	23.92
		1	12	24.22	23.57	23.96
		1	24	23.85	23.80	23.72
		12	0	22.96	22.80	22.42
		12	6	22.68	22.91	22.88
		12	13	22.91	22.65	22.74
		25	0	22.68	22.61	22.78
	64QAM	1	0	23.18	23.05	22.35
		1	12	23.51	22.72	23.09
		1	24	22.50	22.47	22.56
		12	0	21.96	22.11	21.76
		12	6	21.81	22.01	21.98
		12	13	21.79	21.54	21.86
		25	0	21.61	21.65	21.39
	256QAM	1	0	20.81	21.02	20.71
		1	12	21.42	20.22	20.80
		1	24	20.86	20.72	20.66
		12	0	20.26	19.94	19.65
		12	6	20.04	20.00	19.80
		12	13	19.96	19.37	19.69
		25	0	19.52	20.21	19.52

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	24.58	24.45	24.73
		1	24	24.51	24.74	24.63
		1	49	24.74	24.67	24.41
		25	0	23.53	23.52	23.59
		25	12	23.78	23.64	23.52
		25	25	23.84	23.89	23.80
		50	0	24.04	23.79	23.98
	16QAM	1	0	24.32	23.89	23.53
		1	24	24.20	24.00	23.99
		1	49	24.25	23.80	23.77
		25	0	22.99	22.83	22.73
		25	12	22.75	22.67	22.86
		25	25	22.81	22.47	22.77
		50	0	23.00	22.82	22.79
	64QAM	1	0	23.03	23.19	22.51
		1	24	23.01	22.88	22.93
		1	49	22.70	23.04	22.88
		25	0	22.03	21.42	21.42
		25	12	22.06	21.56	21.48
		25	25	21.87	21.30	21.82
		50	0	21.30	21.22	22.01
	256QAM	1	0	20.65	21.07	20.44
		1	24	20.84	20.87	21.32
		1	49	20.58	21.07	20.71
		25	0	20.06	19.43	19.51
		25	12	19.81	19.82	19.05
		25	25	19.75	19.42	19.37
		50	0	19.46	19.81	19.46

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	24.59	24.75	24.79
		1	12	24.60	24.44	24.35
		1	24	24.88	24.91	24.64
		12	0	23.74	23.48	23.73
		12	6	23.55	23.65	23.83
		12	13	23.70	23.64	23.71
		25	0	23.75	23.72	23.60
	16QAM	1	0	24.14	23.62	23.30
		1	12	24.05	23.79	23.87
		1	24	23.83	23.74	24.22
		12	0	22.80	22.58	22.35
		12	6	22.85	22.53	22.70
		12	13	22.83	22.71	22.58
		25	0	22.55	22.79	22.86
	64QAM	1	0	22.86	23.02	22.84
		1	12	23.11	22.77	22.92
		1	24	22.85	23.02	22.72
		12	0	21.63	21.88	21.43
		12	6	21.62	21.66	21.77
		12	13	21.74	21.71	21.47
		25	0	21.73	21.73	21.73
	256QAM	1	0	20.37	21.30	21.11
		1	12	20.88	20.74	20.85
		1	24	20.93	21.01	20.70
		12	0	19.74	20.09	19.27
		12	6	19.68	19.50	19.66
		12	13	19.11	19.26	19.55
		25	0	20.11	20.08	20.00

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	24.73	24.80	24.36
		1	7	24.33	24.89	24.41
		1	14	24.40	24.44	24.70
		8	0	23.90	23.42	23.51
		8	3	23.58	23.81	23.36
		8	7	23.64	23.84	23.74
		15	0	23.94	23.89	23.73
	16QAM	1	0	23.96	23.87	24.01
		1	7	23.90	23.66	24.06
		1	14	23.78	24.15	23.69
		8	0	22.50	22.74	22.51
		8	3	22.82	22.67	22.72
		8	7	22.94	22.89	22.81
		15	0	22.89	22.72	22.72
	64QAM	1	0	22.92	22.59	22.74
		1	7	22.90	23.01	23.01
		1	14	22.44	23.15	22.72
		8	0	21.78	21.99	21.24
		8	3	21.92	22.15	21.30
		8	7	21.50	21.67	21.78
		15	0	21.69	21.80	21.86
	256QAM	1	0	20.96	20.99	20.79
		1	7	21.07	20.86	21.58
		1	14	20.80	21.08	20.46
		8	0	19.68	19.86	19.74
		8	3	19.83	19.52	19.49
		8	7	19.93	19.79	19.61
		15	0	20.25	19.90	19.94

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	24.76	24.53	24.31
		1	2	24.86	24.67	24.46
		1	5	24.37	24.43	24.29
		3	0	24.67	24.52	24.34
		3	1	24.77	24.54	24.24
		3	3	24.78	24.68	24.51
		6	0	23.59	23.45	23.28
	16QAM	1	0	24.04	23.88	23.59
		1	2	23.85	23.72	23.89
		1	5	23.81	23.82	23.31
		3	0	23.90	23.41	23.37
		3	1	23.81	23.51	23.24
		3	3	23.84	23.70	23.51
		6	0	22.79	22.87	22.71
	64QAM	1	0	22.92	22.82	22.23
		1	2	23.13	22.74	22.74
		1	5	22.59	23.04	22.34
		3	0	22.77	22.54	22.64
		3	1	23.13	22.73	22.06
		3	3	22.24	22.69	22.35
		6	0	22.10	21.73	21.75
	256QAM	1	0	20.78	21.03	20.07
		1	2	21.21	20.89	20.71
		1	5	21.02	21.12	19.91
		3	0	20.65	20.23	20.60
		3	1	21.13	20.61	20.20
		3	3	20.67	20.35	20.13
		6	0	19.91	20.13	19.76

LTE Band 13				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	24.79
		1	24	24.96
		1	49	24.66
		25	0	23.94
		25	12	23.74
		25	25	23.71
		50	0	23.92
	16QAM	1	0	23.89
		1	24	23.92
		1	49	24.28
		25	0	23.14
		25	12	22.63
		25	25	23.15
		50	0	22.93
	64QAM	1	0	23.23
		1	24	23.19
		1	49	23.35
		25	0	21.91
		25	12	21.73
		25	25	21.61
		50	0	21.72
	256QAM	1	0	21.01
		1	24	21.28
		1	49	21.65
		25	0	20.33
		25	12	20.01
		25	25	19.78
		50	0	19.73

LTE Band 13						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	24.66	24.90	24.97
		1	12	24.74	24.68	24.90
		1	24	24.54	24.59	24.40
		12	0	24.00	24.08	23.57
		12	6	23.88	23.70	23.73
		12	13	24.04	23.65	23.80
		25	0	23.69	23.70	23.48
	16QAM	1	0	23.80	24.12	24.08
		1	12	24.48	24.17	23.70
		1	24	23.82	24.18	24.12
		12	0	22.88	22.72	23.22
		12	6	22.95	22.76	22.87
		12	13	23.11	22.71	23.11
		25	0	22.86	23.02	22.73
	64QAM	1	0	22.79	23.09	23.29
		1	12	23.30	23.16	22.73
		1	24	23.04	23.00	23.29
		12	0	21.76	21.54	22.10
		12	6	21.92	22.02	21.61
		12	13	21.95	21.66	21.79
		25	0	21.75	21.97	21.57
	256QAM	1	0	20.47	20.85	21.41
		1	12	21.52	20.88	21.04
		1	24	20.54	20.66	21.21
		12	0	19.89	19.33	19.70
		12	6	19.67	19.90	19.45
		12	13	19.80	19.11	19.98
		25	0	19.31	19.78	19.24

LTE Band 14				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23330
		Frequency (MHz)		793
10M	QPSK	1	0	24.80
		1	24	24.67
		1	49	24.61
		25	0	23.95
		25	12	23.59
		25	25	23.47
		50	0	23.69
	16QAM	1	0	24.28
		1	24	24.39
		1	49	23.84
		25	0	22.68
		25	12	22.53
		25	25	22.63
		50	0	22.62
	64QAM	1	0	23.49
		1	24	22.91
		1	49	22.75
		25	0	21.41
		25	12	21.43
		25	25	21.95
		50	0	21.51
	256QAM	1	0	21.72
		1	24	20.71
		1	49	21.11
		25	0	19.58
		25	12	19.69
		25	25	19.84
		50	0	20.00

LTE Band 14						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23305	23330	23355
		Frequency (MHz)		790.5	793	795.5
5M	QPSK	1	0	24.37	24.55	24.66
		1	12	24.62	24.76	24.83
		1	24	24.71	24.88	24.42
		12	0	23.88	23.75	23.78
		12	6	23.91	23.90	23.41
		12	13	23.82	23.96	23.96
		25	0	23.65	23.63	23.95
	16QAM	1	0	24.18	24.22	24.04
		1	12	24.15	23.44	24.15
		1	24	24.09	24.20	23.76
		12	0	22.65	22.92	22.99
		12	6	22.94	22.67	22.75
		12	13	22.56	22.75	22.91
		25	0	23.07	22.44	22.85
	64QAM	1	0	23.15	23.03	23.28
		1	12	22.62	22.36	22.96
		1	24	23.01	22.97	22.87
		12	0	21.46	21.38	22.07
		12	6	21.40	21.77	21.80
		12	13	21.87	21.73	21.81
		25	0	21.66	21.65	21.60
	256QAM	1	0	21.06	20.87	21.17
		1	12	20.37	20.21	21.10
		1	24	21.09	21.04	21.41
		12	0	19.98	19.43	19.77
		12	6	19.76	20.16	19.60
		12	13	19.76	19.82	20.06
		25	0	19.87	20.09	19.69

LTE Band 30				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		27710
		Frequency (MHz)		2310
10M	QPSK	1	0	20.80
		1	24	20.38
		1	49	20.30
		25	0	19.70
		25	12	19.45
		25	25	19.82
		50	0	19.86
	16QAM	1	0	19.87
		1	24	20.12
		1	49	19.54
		25	0	18.31
		25	12	18.74
		25	25	18.58
		50	0	18.57
	64QAM	1	0	18.70
		1	24	18.92
		1	49	18.20
		25	0	17.70
		25	12	17.95
		25	25	17.78
		50	0	17.69
	256QAM	1	0	16.48
		1	24	17.10
		1	49	16.50
		25	0	15.77
		25	12	16.02
		25	25	16.03
		50	0	15.88

LTE Band 30						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		27685	27710	27735
		Frequency (MHz)		2307.5	2310	2312.5
5M	QPSK	1	0	20.42	20.35	20.45
		1	12	20.86	20.90	20.46
		1	24	20.40	20.50	20.45
		12	0	19.40	19.41	19.46
		12	6	19.91	19.50	19.47
		12	13	19.57	19.58	19.70
		25	0	19.63	19.37	19.58
	16QAM	1	0	19.57	19.76	19.89
		1	12	19.91	20.09	19.78
		1	24	19.46	20.02	20.11
		12	0	18.71	18.70	18.79
		12	6	18.65	18.57	18.74
		12	13	18.44	18.45	18.58
		25	0	18.66	18.48	18.37
	64QAM	1	0	18.56	18.65	18.92
		1	12	18.96	18.92	18.98
		1	24	18.16	18.96	19.01
		12	0	17.48	17.51	17.79
		12	6	17.16	17.43	17.50
		12	13	17.48	17.65	17.70
		25	0	17.63	17.62	17.83
	256QAM	1	0	16.12	17.03	17.22
		1	12	17.43	16.93	16.39
		1	24	16.54	16.89	16.70
		12	0	15.22	15.09	15.45
		12	6	15.33	15.36	15.56
		12	13	15.83	15.09	15.66
		25	0	15.73	15.64	15.76

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20M	QPSK	1	0	27.62	27.00	27.05
		1	50	27.30	27.30	26.72
		1	99	27.42	27.22	25.96
		50	0	26.35	26.42	26.06
		50	25	26.41	26.30	25.85
		50	50	26.63	26.67	25.63
		100	0	26.30	26.66	26.04
	16QAM	1	0	26.54	26.48	26.59
		1	50	26.81	26.38	26.19
		1	99	26.50	26.31	25.31
		50	0	25.53	25.29	25.14
		50	25	25.67	25.41	25.05
		50	50	25.71	25.67	24.35
		100	0	25.33	25.62	25.01
	64QAM	1	0	25.37	25.74	25.64
		1	50	25.66	25.51	24.63
		1	99	25.43	25.31	24.20
		50	0	24.23	24.34	24.23
		50	25	24.40	24.49	24.24
		50	50	24.29	24.23	23.50
		100	0	24.34	24.40	24.01
	256QAM	1	0	23.37	23.85	23.35
		1	50	24.01	23.59	22.52
		1	99	23.38	23.41	21.99
		50	0	21.97	22.63	22.21
		50	25	22.53	22.47	22.16
		50	50	21.98	22.10	21.38
		100	0	22.17	22.92	22.07

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15M	QPSK	1	0	27.08	27.43	27.19
		1	37	27.19	27.28	26.33
		1	74	27.43	27.45	25.85
		36	0	26.47	26.19	26.18
		36	19	26.39	26.37	25.51
		36	39	26.74	26.17	25.57
		75	0	26.57	26.40	25.64
	16QAM	1	0	26.58	26.61	26.88
		1	37	26.69	26.56	25.80
		1	74	26.85	26.41	25.47
		36	0	25.78	25.32	24.90
		36	19	25.28	25.52	24.92
		36	39	25.40	25.26	24.36
		75	0	25.72	25.47	24.69
	64QAM	1	0	25.31	25.39	25.55
		1	37	25.53	25.57	24.39
		1	74	25.61	25.21	24.13
		36	0	24.46	24.19	23.95
		36	19	24.46	24.60	23.90
		36	39	24.30	24.28	23.38
		75	0	24.42	24.75	24.19
	256QAM	1	0	23.93	23.18	23.38
		1	37	23.63	23.10	22.65
		1	74	23.45	23.32	22.25
		36	0	22.75	22.35	22.27
		36	19	22.41	23.02	21.73
		36	39	22.36	22.03	21.42
		75	0	22.38	22.51	22.04

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10M	QPSK	1	0	27.61	27.12	26.63
		1	24	27.61	27.31	26.52
		1	49	27.17	27.10	26.05
		25	0	26.37	26.25	25.87
		25	12	26.34	26.27	25.64
		25	25	26.44	26.37	25.11
		50	0	26.67	26.48	25.28
	16QAM	1	0	27.02	26.26	26.31
		1	24	26.46	26.63	25.87
		1	49	26.49	26.75	25.49
		25	0	25.80	25.40	24.80
		25	12	25.58	25.76	24.66
		25	25	25.60	25.17	24.64
		50	0	25.54	25.57	24.45
	64QAM	1	0	25.60	25.21	25.10
		1	24	25.62	25.34	25.05
		1	49	25.81	25.42	23.86
		25	0	24.88	24.57	23.92
		25	12	24.29	24.67	23.78
		25	25	24.55	24.40	23.31
		50	0	24.77	24.12	23.66
	256QAM	1	0	23.18	23.54	23.22
		1	24	23.79	23.52	22.89
		1	49	23.67	23.52	21.90
		25	0	22.44	22.46	21.62
		25	12	21.87	22.72	21.97
		25	25	22.02	22.76	21.62
		50	0	22.65	22.72	21.63

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5M	QPSK	1	0	27.55	27.36	26.23
		1	12	27.11	27.30	25.87
		1	24	27.54	27.18	25.75
		12	0	26.60	26.62	25.56
		12	6	26.59	26.23	25.49
		12	13	26.39	26.49	25.30
		25	0	26.43	26.60	25.53
	16QAM	1	0	26.84	26.53	25.72
		1	12	26.43	26.77	25.24
		1	24	26.48	26.63	25.20
		12	0	25.54	25.40	24.67
		12	6	25.73	25.60	24.36
		12	13	25.44	25.66	24.29
		25	0	25.48	25.51	24.40
	64QAM	1	0	25.75	25.24	24.64
		1	12	25.93	25.24	24.10
		1	24	25.66	25.37	24.17
		12	0	24.57	24.39	23.70
		12	6	24.62	24.46	23.53
		12	13	24.50	24.72	23.12
		25	0	24.09	24.60	23.12
	256QAM	1	0	23.78	23.32	22.76
		1	12	23.49	23.55	22.50
		1	24	23.55	23.75	22.46
		12	0	22.14	22.15	21.66
		12	6	22.11	22.06	21.47
		12	13	22.58	22.68	21.72
		25	0	22.24	22.87	21.22

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132072	132322	132572
		Frequency (MHz)		1720	1745	1770
20M	QPSK	1	0	24.78	24.49	24.57
		1	50	24.75	24.67	24.46
		1	99	24.64	24.61	24.53
		50	0	23.57	23.17	23.60
		50	25	23.53	23.49	23.62
		50	50	23.49	23.33	23.83
		100	0	23.39	23.30	23.45
	16QAM	1	0	23.34	23.67	23.91
		1	50	23.34	23.99	23.57
		1	99	23.54	23.50	23.80
		50	0	22.88	23.00	22.48
		50	25	22.46	22.60	22.72
		50	50	22.59	22.46	22.74
		100	0	22.59	22.32	22.86
	64QAM	1	0	22.44	22.55	22.96
		1	50	22.48	22.80	22.82
		1	99	22.51	22.38	22.44
		50	0	21.57	21.70	21.87
		50	25	21.70	21.56	21.61
		50	50	21.65	21.40	21.68
		100	0	21.80	21.32	21.80
	256QAM	1	0	20.19	20.66	20.81
		1	50	20.13	20.87	20.71
		1	99	20.34	20.43	20.70
		50	0	19.44	19.49	19.27
		50	25	19.50	19.32	19.38
		50	50	19.41	19.50	19.39
		100	0	19.44	19.64	19.74

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132047	132322	132597
		Frequency (MHz)		1717.5	1745	1772.5
15M	QPSK	1	0	24.28	24.51	24.24
		1	37	24.31	24.34	24.74
		1	74	24.46	24.70	24.37
		36	0	23.41	23.15	23.58
		36	19	23.21	23.28	23.47
		36	39	23.34	23.35	23.75
		75	0	23.10	23.30	23.65
	16QAM	1	0	23.47	23.40	23.37
		1	37	24.00	23.66	24.03
		1	74	23.70	23.90	24.13
		36	0	22.75	22.36	22.76
		36	19	22.56	22.89	22.96
		36	39	22.48	23.05	22.69
		75	0	22.22	22.57	22.71
	64QAM	1	0	22.55	22.21	22.36
		1	37	22.47	22.55	22.54
		1	74	22.63	22.72	22.61
		36	0	21.70	21.30	21.72
		36	19	21.57	21.67	21.79
		36	39	21.34	21.44	21.33
		75	0	20.99	21.60	21.80
	256QAM	1	0	20.20	20.21	20.18
		1	37	20.69	21.03	20.62
		1	74	20.64	21.17	20.51
		36	0	19.83	19.28	19.40
		36	19	19.31	19.59	19.72
		36	39	19.70	19.35	19.16
		75	0	19.07	19.48	19.60

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132022	132322	132622
		Frequency (MHz)		1715	1745	1775
10M	QPSK	1	0	24.34	24.68	24.71
		1	24	24.16	24.03	24.58
		1	49	24.17	24.16	24.31
		25	0	23.62	23.33	23.61
		25	12	23.71	23.40	23.44
		25	25	23.70	23.34	23.63
		50	0	23.72	23.40	23.89
	16QAM	1	0	23.85	23.56	23.92
		1	24	23.52	23.65	23.73
		1	49	23.22	23.18	23.78
		25	0	22.35	22.90	22.72
		25	12	22.37	22.92	22.68
		25	25	22.63	22.47	22.56
		50	0	22.85	22.77	22.91
	64QAM	1	0	22.32	22.25	22.61
		1	24	22.43	22.70	22.51
		1	49	21.99	22.45	22.50
		25	0	21.19	21.53	21.71
		25	12	21.25	21.36	21.48
		25	25	21.35	21.58	21.60
		50	0	22.03	21.74	21.58
	256QAM	1	0	20.20	20.08	20.54
		1	24	20.10	20.38	20.45
		1	49	19.93	20.17	20.59
		25	0	19.04	19.63	19.19
		25	12	19.27	19.47	19.70
		25	25	19.59	19.51	19.38
		50	0	19.86	19.62	19.96

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131997	132322	132647
		Frequency (MHz)		1712.5	1745	1777.5
5M	QPSK	1	0	24.57	24.66	24.66
		1	12	24.22	24.28	24.50
		1	24	24.72	24.55	24.19
		12	0	23.67	23.43	23.30
		12	6	23.60	23.49	23.43
		12	13	23.35	23.57	23.77
		25	0	23.33	23.30	23.45
	16QAM	1	0	23.91	23.52	24.07
		1	12	23.37	23.63	23.41
		1	24	23.89	24.07	23.52
		12	0	22.72	22.94	22.67
		12	6	22.73	22.48	22.57
		12	13	23.00	22.35	22.72
		25	0	22.55	22.35	22.88
	64QAM	1	0	22.47	22.26	22.78
		1	12	22.33	22.76	22.32
		1	24	22.71	22.73	22.15
		12	0	21.44	21.47	21.96
		12	6	21.29	21.49	21.35
		12	13	21.59	21.55	22.14
		25	0	21.73	21.18	21.44
	256QAM	1	0	20.10	20.14	20.56
		1	12	20.11	20.72	20.76
		1	24	20.77	20.79	20.24
		12	0	19.38	19.47	19.90
		12	6	19.52	19.42	19.17
		12	13	19.45	19.58	19.78
		25	0	19.53	19.35	19.50

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131987	132322	132657
		Frequency (MHz)		1711.5	1745	1778.5
3M	QPSK	1	0	24.65	24.30	24.12
		1	7	24.35	24.42	24.45
		1	14	24.40	24.44	24.17
		8	0	23.55	23.39	23.64
		8	3	23.57	23.42	23.31
		8	7	23.24	23.41	23.30
		15	0	23.47	23.50	23.30
	16QAM	1	0	23.69	23.92	23.45
		1	7	23.44	23.63	23.21
		1	14	23.99	23.61	23.60
		8	0	22.57	22.51	22.98
		8	3	22.72	22.33	22.96
		8	7	22.56	22.69	22.46
		15	0	22.70	22.57	22.49
	64QAM	1	0	22.76	22.79	22.62
		1	7	22.66	22.43	22.08
		1	14	22.66	22.49	22.30
		8	0	21.53	21.69	22.05
		8	3	22.02	21.36	21.64
		8	7	21.63	21.76	21.56
		15	0	21.28	21.50	21.43
	256QAM	1	0	20.50	20.93	20.18
		1	7	20.56	20.37	19.97
		1	14	20.82	20.47	20.11
		8	0	19.64	19.73	20.14
		8	3	19.93	19.08	19.41
		8	7	19.55	19.75	19.40
		15	0	19.16	19.15	19.59

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131979	132322	132665
		Frequency (MHz)		1710.7	1745	1779.3
1.4M	QPSK	1	0	24.24	24.39	24.57
		1	2	24.12	24.13	24.39
		1	5	24.06	24.12	24.31
		3	0	24.04	24.06	24.15
		3	1	24.06	24.02	24.50
		3	3	24.13	24.02	24.00
		6	0	22.87	23.17	23.11
	16QAM	1	0	23.38	23.81	23.80
		1	2	23.20	23.33	23.46
		1	5	23.69	23.58	23.68
		3	0	23.84	23.66	23.12
		3	1	23.38	23.18	23.92
		3	3	23.12	23.40	23.17
		6	0	22.03	22.16	22.85
	64QAM	1	0	22.37	22.45	22.43
		1	2	22.32	22.52	22.38
		1	5	22.36	22.62	22.72
		3	0	22.45	22.07	22.47
		3	1	21.92	22.29	22.40
		3	3	21.95	22.14	21.64
		6	0	21.14	21.07	21.52
	256QAM	1	0	20.88	20.59	20.68
		1	2	20.13	20.30	20.50
		1	5	20.38	20.46	20.35
		3	0	20.16	20.14	20.14
		3	1	20.07	20.16	20.45
		3	3	20.11	19.92	19.64
		6	0	18.87	19.23	19.59

EIRP / ERP Power (dBm)

5GNR n77 (Part 27O):

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequency (MHz)		3750	3840	3930
100M	$\pi/2$ BPSK	1	0	29.11	28.92	29.08
		1	137	29.00	29.19	29.04
		1	271	29.11	29.04	**29.25**
		135	0	28.58	28.57	28.45
		135	69	28.38	28.61	28.74
		135	138	28.56	28.61	28.46
		270	0	28.35	28.72	28.47
	QPSK	1	0	28.62	28.82	28.95
		1	137	28.88	28.72	28.99
		1	271	28.79	**29.13**	29.06
		135	0	28.33	28.10	28.33
		135	69	28.34	28.44	28.33
		135	138	28.27	28.48	28.11
		270	0	28.33	28.24	28.17
	16QAM	1	0	27.86	27.90	27.83
		1	137	27.73	**28.02**	27.97
		1	271	27.78	27.69	27.89
		135	0	27.43	27.19	27.37
		135	69	27.27	27.42	27.47
		135	138	27.20	27.24	27.36
		270	0	27.23	27.26	27.44
	64QAM	1	0	26.90	26.82	26.78
		1	137	**27.09**	26.81	26.96
		1	271	26.78	26.74	26.79
		135	0	26.26	26.29	26.12
		135	69	26.37	26.53	26.33
		135	138	26.58	26.25	26.22
		270	0	26.35	26.12	26.23
	256QAM	1	0	25.34	25.02	25.26
		1	137	25.19	25.45	25.16
		1	271	25.19	**25.50**	25.13
		135	0	24.62	24.72	24.85
		135	69	24.65	24.51	24.72
		135	138	24.72	24.73	24.63
		270	0	24.80	24.46	24.82

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649558	656000	662332
		Frequency (MHz)		3745.02	3840	3934.98
90M	$\pi/2$ BPSK	1	0	29.00	28.87	28.95
		1	123	29.12	29.19	29.11
		1	243	**29.32**	28.98	29.23
		120	0	28.85	28.82	28.76
		120	63	28.69	28.77	28.57
		120	125	28.91	28.39	28.89
		240	0	28.84	28.83	28.68
	QPSK	1	0	**29.23**	28.74	28.75
		1	123	28.79	28.52	29.22
		1	243	28.77	28.70	**29.23**
		120	0	28.50	28.45	28.19
		120	63	28.52	28.02	28.73
		120	125	28.56	28.22	28.34
		240	0	28.72	28.36	28.59
	16QAM	1	0	**28.25**	28.25	27.95
		1	123	27.92	28.07	27.55
		1	243	27.54	27.75	28.20
		120	0	27.21	27.40	27.23
		120	63	27.65	27.24	27.46
		120	125	27.26	27.30	27.37
		240	0	27.71	27.30	27.28
	64QAM	1	0	26.85	26.87	26.98
		1	123	26.52	27.01	27.00
		1	243	27.08	26.84	**27.16**
		120	0	26.45	26.22	26.49
		120	63	26.31	26.61	26.62
		120	125	26.36	26.24	25.97
		240	0	26.16	26.29	26.54
	256QAM	1	0	**25.65**	25.31	25.10
		1	123	25.49	25.51	25.58
		1	243	25.61	25.44	25.42
		120	0	24.53	24.69	24.68
		120	63	24.46	25.19	25.07
		120	125	25.08	24.60	24.70
		240	0	24.67	24.76	24.67

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649334	656000	662666
		Frequency (MHz)		3740.01	3840	3939.99
80M	$\pi/2$ BPSK	1	0	29.19	29.22	28.67
		1	109	29.07	29.30	**29.36**
		1	215	28.80	29.11	29.00
		108	0	28.93	28.71	28.76
		108	55	28.94	28.70	28.70
		108	109	28.78	28.37	28.48
		216	0	28.77	28.86	28.70
	QPSK	1	0	**29.11**	28.83	28.87
		1	109	28.58	28.89	28.67
		1	215	28.83	28.71	28.89
		108	0	28.04	28.18	28.52
		108	55	28.15	28.30	28.19
		108	109	28.58	28.54	28.59
		216	0	28.31	28.47	28.62
	16QAM	1	0	27.61	27.72	27.65
		1	109	27.83	28.12	**28.12**
		1	215	27.96	27.64	27.94
		108	0	27.48	27.44	27.57
		108	55	27.31	27.48	27.60
		108	109	27.66	27.67	27.59
		216	0	27.47	27.01	27.14
	64QAM	1	0	26.65	26.85	27.10
		1	109	**27.21**	26.95	26.95
		1	215	26.75	26.68	27.02
		108	0	26.58	26.51	26.05
		108	55	26.12	26.22	26.06
		108	109	26.29	26.32	26.31
		216	0	26.27	26.38	26.29
	256QAM	1	0	25.42	**25.53**	25.48
		1	109	25.42	25.03	25.52
		1	215	25.33	25.32	25.20
		108	0	24.57	24.83	24.72
		108	55	24.67	24.94	24.88
		108	109	24.79	24.70	24.52
		216	0	25.10	25.04	24.86

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648668	656000	663332
		Frequency (MHz)		3730.02	3840	3949.98
60M	$\pi/2$ BPSK	1	0	29.15	29.18	29.22
		1	81	29.29	29.18	28.98
		1	160	**29.35**	28.84	29.07
		81	0	28.51	28.56	29.09
		81	41	28.84	28.73	28.41
		81	81	28.29	28.81	28.61
		162	0	28.80	28.51	29.01
	QPSK	1	0	28.82	28.81	28.79
		1	81	28.75	29.04	28.97
		1	160	**29.29**	28.75	28.69
		81	0	28.28	28.44	28.57
		81	41	28.31	28.16	28.40
		81	81	28.35	28.28	28.26
		162	0	28.53	28.35	28.45
	16QAM	1	0	28.13	28.00	27.43
		1	81	27.72	27.57	28.18
		1	160	27.89	**28.29**	28.05
		81	0	27.81	27.17	27.27
		81	41	27.25	27.14	27.24
		81	81	27.41	27.30	27.51
		162	0	27.39	27.19	27.41
	64QAM	1	0	26.86	27.07	26.52
		1	81	26.52	26.92	26.66
		1	160	26.85	26.98	**27.19**
		81	0	26.41	26.69	26.60
		81	41	26.42	26.15	26.67
		81	81	26.48	26.75	26.72
		162	0	26.49	26.66	26.20
	256QAM	1	0	25.29	**25.43**	25.05
		1	81	25.16	24.88	25.25
		1	160	25.23	24.94	25.35
		81	0	24.59	24.96	24.80
		81	41	24.63	24.47	24.61
		81	81	25.20	24.83	24.70
		162	0	24.66	24.61	24.60

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648334	656000	663666
		Frequency (MHz)		3725.01	3840	3954.99
50M	$\pi/2$ BPSK	1	0	29.14	**29.35**	29.12
		1	67	29.12	29.07	29.09
		1	131	28.89	29.15	28.97
		64	0	28.54	28.59	28.55
		64	35	28.86	28.40	28.75
		64	69	28.90	28.85	28.77
		128	0	28.84	28.68	28.75
	QPSK	1	0	29.00	28.86	29.10
		1	67	29.07	29.06	29.01
		1	131	29.16	29.12	**29.25**
		64	0	28.18	28.52	28.37
		64	35	28.07	28.66	28.14
		64	69	28.42	28.48	28.27
		128	0	28.47	28.65	28.23
	16QAM	1	0	27.88	27.80	27.67
		1	67	27.49	**28.01**	27.58
		1	131	27.75	27.60	27.94
		64	0	27.57	27.65	27.42
		64	35	27.44	27.19	27.56
		64	69	27.23	27.39	27.19
		128	0	27.26	27.61	27.75
	64QAM	1	0	26.94	26.77	26.69
		1	67	26.70	26.69	26.75
		1	131	27.06	**27.14**	26.90
		64	0	26.15	26.26	26.36
		64	35	26.16	26.33	26.21
		64	69	26.22	26.65	26.36
		128	0	26.56	26.21	26.37
	256QAM	1	0	25.56	**25.60**	25.16
		1	67	25.31	25.41	25.40
		1	131	25.48	25.40	25.01
		64	0	24.47	24.69	24.64
		64	35	24.58	24.58	24.66
		64	69	25.08	24.39	24.86
		128	0	24.47	24.49	24.58

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648000	656000	664000
		Frequency (MHz)		3720	3840	3960
40M	$\pi/2$ BPSK	1	0	29.21	29.13	29.23
		1	53	29.20	29.11	29.24
		1	104	**29.28**	29.14	29.05
		50	0	28.85	28.47	29.10
		50	28	28.55	28.45	28.57
		50	56	28.73	28.74	28.49
		100	0	28.68	28.55	28.81
	QPSK	1	0	28.93	28.74	28.95
		1	53	28.65	29.08	28.74
		1	104	28.74	**29.11**	28.97
		50	0	28.38	28.14	28.41
		50	28	28.46	28.48	28.23
		50	56	28.42	28.35	28.25
		100	0	28.64	28.44	28.25
	16QAM	1	0	27.86	27.85	**28.15**
		1	53	28.05	28.09	28.04
		1	104	27.83	27.76	27.74
		50	0	27.71	27.02	27.67
		50	28	27.52	27.46	27.48
		50	56	27.54	27.50	27.37
		100	0	27.69	27.66	27.26
	64QAM	1	0	26.88	26.83	26.82
		1	53	26.90	26.90	**26.93**
		1	104	26.83	26.80	26.64
		50	0	26.63	26.30	26.05
		50	28	26.15	26.24	26.33
		50	56	26.53	26.28	26.63
		100	0	26.59	26.10	26.36
	256QAM	1	0	25.53	25.34	25.37
		1	53	25.41	25.22	25.44
		1	104	25.14	**25.57**	25.42
		50	0	24.60	24.71	24.72
		50	28	25.04	24.70	24.72
		50	56	24.96	24.67	25.00
		100	0	24.67	24.98	24.76

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647334	656000	665666
		Frequency (MHz)		3710.01	3840	3969.99
20M	$\pi/2$ BPSK	1	0	29.17	**29.38**	28.83
		1	26	28.82	29.13	29.32
		1	49	28.92	29.31	29.09
		25	0	28.39	28.76	28.65
		25	13	28.84	28.73	28.32
		25	26	28.27	28.87	28.73
		50	0	28.68	28.89	28.75
	QPSK	1	0	29.02	29.07	28.81
		1	26	28.80	28.51	28.79
		1	49	28.76	**29.24**	28.61
		25	0	28.63	28.51	28.54
		25	13	28.05	28.45	28.51
		25	26	28.39	28.24	28.51
		50	0	28.57	28.35	28.19
	16QAM	1	0	**28.24**	28.08	27.55
		1	26	27.81	27.94	27.58
		1	49	27.93	27.98	28.19
		25	0	27.34	27.25	27.56
		25	13	27.35	27.54	27.35
		25	26	27.49	27.73	27.39
		50	0	27.25	27.21	27.21
	64QAM	1	0	26.69	**27.04**	26.74
		1	26	26.73	26.88	26.94
		1	49	26.54	26.53	26.46
		25	0	26.75	26.33	26.77
		25	13	26.15	26.03	26.74
		25	26	26.76	26.50	26.26
		50	0	26.54	26.23	26.19
	256QAM	1	0	25.36	25.16	24.86
		1	26	25.49	25.46	25.35
		1	49	25.25	25.55	**25.57**
		25	0	24.98	24.70	24.78
		25	13	25.04	24.81	24.71
		25	26	25.17	24.65	24.98
		50	0	24.87	24.95	24.97

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77 (Part 27Q):

5GNR n77				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		633334
		Frequency (MHz)		3500.01
100M	$\pi/2$ BPSK	1	0	**29.16**
		1	137	29.05
		1	271	28.94
		135	0	28.62
		135	69	28.51
		135	138	28.55
		270	0	28.45
	QPSK	1	0	**28.89**
		1	137	28.82
		1	271	28.76
		135	0	28.45
		135	69	28.36
		135	138	28.16
		270	0	28.35
	16QAM	1	0	27.90
		1	137	**28.16**
		1	271	27.83
		135	0	27.48
		135	69	27.48
		135	138	27.17
		270	0	27.19
	64QAM	1	0	26.95
		1	137	26.78
		1	271	**27.08**
		135	0	26.56
		135	69	26.24
		135	138	26.17
		270	0	26.38
	256QAM	1	0	25.31
		1	137	**25.39**
		1	271	25.28
		135	0	24.80
		135	69	24.77
		135	138	24.61
		270	0	24.63

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		633000	633334	633666
		Frequency (MHz)		3495	3500.01	3504.99
90M	$\pi/2$ BPSK	1	0	28.93	29.21	29.15
		1	123	29.05	**29.32**	29.24
		1	243	**29.32**	28.95	28.87
		120	0	28.59	28.70	28.40
		120	63	28.51	28.70	28.61
		120	125	28.40	28.78	28.73
		240	0	28.61	28.61	28.72
	QPSK	1	0	29.02	**29.16**	28.99
		1	123	28.87	28.83	28.95
		1	243	28.89	28.88	28.96
		120	0	28.21	28.05	28.44
		120	63	28.27	28.29	28.20
		120	125	28.46	28.15	28.50
		240	0	28.27	28.44	28.26
	16QAM	1	0	27.66	27.94	27.85
		1	123	28.04	27.88	27.79
		1	243	**28.08**	28.04	27.85
		120	0	27.32	27.15	27.35
		120	63	27.22	27.22	27.40
		120	125	27.20	27.30	27.41
		240	0	27.31	27.53	27.53
	64QAM	1	0	27.05	26.78	27.02
		1	123	26.99	26.89	27.09
		1	243	27.04	26.78	**27.15**
		120	0	26.04	26.31	26.43
		120	63	26.37	26.54	26.40
		120	125	26.55	26.44	26.31
		240	0	26.36	26.05	26.37
	256QAM	1	0	25.39	25.28	**25.50**
		1	123	25.12	25.15	25.34
		1	243	25.29	25.25	25.27
		120	0	24.72	24.67	24.57
		120	63	24.86	24.72	24.70
		120	125	24.81	24.54	24.58
		240	0	24.68	24.89	24.58

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632668	633334	634000
		Frequency (MHz)		3490.02	3500.01	3510
80M	$\pi/2$ BPSK	1	0	29.05	**29.40**	29.07
		1	109	28.90	28.99	29.19
		1	215	29.08	29.13	28.92
		108	0	28.43	28.67	28.94
		108	55	28.78	28.40	28.98
		108	109	29.01	28.73	28.38
		216	0	28.34	28.65	28.82
	QPSK	1	0	**29.16**	29.03	28.91
		1	109	29.15	28.49	28.91
		1	215	29.01	28.78	28.84
		108	0	28.07	28.57	28.20
		108	55	28.33	28.62	27.99
		108	109	28.27	28.56	28.45
		216	0	28.63	28.18	27.96
	16QAM	1	0	**28.19**	28.15	27.68
		1	109	28.05	27.85	27.95
		1	215	27.97	27.84	28.11
		108	0	27.08	27.45	27.22
		108	55	27.18	27.43	27.59
		108	109	27.41	27.12	27.32
		216	0	27.12	27.56	27.53
	64QAM	1	0	27.03	**27.23**	26.92
		1	109	26.75	26.63	26.62
		1	215	26.75	26.75	26.92
		108	0	26.12	26.39	26.81
		108	55	26.42	26.14	26.52
		108	109	26.28	26.49	26.08
		216	0	26.13	26.40	26.26
	256QAM	1	0	25.01	25.29	**25.39**
		1	109	25.08	25.23	25.12
		1	215	25.05	25.17	25.24
		108	0	24.97	25.15	24.69
		108	55	25.09	24.57	24.73
		108	109	24.98	24.72	24.80
		216	0	24.54	24.70	24.34

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632000	633334	634666
		Frequency (MHz)		3480	3500.01	3519.99
60M	$\pi/2$ BPSK	1	0	29.04	**29.38**	29.26
		1	81	29.18	29.35	29.29
		1	160	28.88	28.89	29.21
		81	0	28.67	28.62	28.69
		81	41	28.81	28.72	28.89
		81	81	28.68	28.57	28.73
		162	0	28.70	28.95	28.92
	QPSK	1	0	29.10	28.91	28.85
		1	81	28.60	29.08	29.08
		1	160	29.17	**29.18**	28.80
		81	0	28.25	28.08	28.39
		81	41	28.17	28.14	28.12
		81	81	28.50	28.39	28.73
		162	0	28.27	28.13	28.27
	16QAM	1	0	27.85	28.08	27.53
		1	81	27.82	27.67	**28.24**
		1	160	27.85	27.89	28.04
		81	0	27.59	27.62	27.59
		81	41	27.56	27.16	27.33
		81	81	27.09	27.42	27.50
		162	0	27.31	27.25	27.19
	64QAM	1	0	26.89	26.68	**27.19**
		1	81	26.67	26.78	27.07
		1	160	26.99	26.67	27.03
		81	0	26.33	26.55	26.54
		81	41	26.21	26.62	26.65
		81	81	26.17	26.34	26.47
		162	0	26.34	26.20	26.34
	256QAM	1	0	25.42	25.27	**25.44**
		1	81	25.19	25.04	25.06
		1	160	25.26	25.26	25.38
		81	0	24.76	24.89	24.84
		81	41	24.75	24.94	24.82
		81	81	24.67	24.82	24.58
		162	0	24.83	24.85	24.91

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631668	633334	635000
		Frequency (MHz)		3475.02	3500.01	3525
50M	$\pi/2$ BPSK	1	0	29.08	29.25	29.33
		1	67	29.07	29.35	**29.49**
		1	131	29.08	29.12	29.45
		64	0	28.36	28.72	28.97
		64	35	28.58	28.58	28.84
		64	69	28.80	28.48	28.60
		128	0	28.92	28.88	28.51
	QPSK	1	0	28.94	28.73	29.12
		1	67	28.73	28.77	28.63
		1	131	**29.20**	28.81	28.82
		64	0	28.45	28.62	28.02
		64	35	28.05	28.39	28.23
		64	69	28.55	28.14	28.17
		128	0	28.15	28.36	28.41
	16QAM	1	0	28.11	27.80	27.92
		1	67	27.71	27.91	27.82
		1	131	**28.19**	27.99	28.12
		64	0	27.43	27.52	27.19
		64	35	27.49	27.54	27.65
		64	69	27.62	27.26	27.46
		128	0	27.40	27.41	27.55
	64QAM	1	0	26.76	26.99	27.04
		1	67	27.14	27.06	26.60
		1	131	26.59	26.93	**27.17**
		64	0	26.35	26.41	26.67
		64	35	26.27	26.65	26.51
		64	69	26.40	26.51	26.52
		128	0	26.20	26.28	26.47
	256QAM	1	0	25.04	25.40	25.15
		1	67	25.13	25.31	**25.45**
		1	131	25.15	25.34	25.29
		64	0	25.02	24.76	24.94
		64	35	24.52	24.72	24.96
		64	69	24.87	24.68	24.69
		128	0	24.80	24.45	24.94

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631334	633334	635332
		Frequency (MHz)		3470.01	3500.01	3529.98
40M	$\pi/2$ BPSK	1	0	29.21	29.15	29.30
		1	53	29.20	28.80	**29.50**
		1	104	28.99	28.72	29.17
		50	0	28.93	28.49	28.97
		50	28	28.70	28.79	28.67
		50	56	28.51	29.09	28.80
		100	0	28.60	28.71	28.87
	QPSK	1	0	28.70	28.67	28.45
		1	53	28.75	28.93	28.84
		1	104	**29.25**	28.86	28.94
		50	0	28.22	28.57	28.45
		50	28	28.56	28.56	28.51
		50	56	28.51	28.11	28.61
		100	0	28.71	28.53	28.71
	16QAM	1	0	27.81	27.59	27.89
		1	53	27.93	27.69	27.82
		1	104	27.90	**28.09**	27.97
		50	0	27.34	27.54	27.37
		50	28	27.17	27.43	27.53
		50	56	27.05	27.48	27.49
		100	0	27.28	27.47	27.04
	64QAM	1	0	26.95	**27.19**	27.12
		1	53	27.07	26.83	27.01
		1	104	26.95	27.14	27.01
		50	0	26.23	26.30	26.37
		50	28	26.18	26.04	26.40
		50	56	26.18	26.15	26.30
		100	0	26.17	26.22	26.19
	256QAM	1	0	**25.49**	25.46	25.45
		1	53	25.43	25.29	25.39
		1	104	25.02	25.22	25.32
		50	0	24.63	24.50	24.91
		50	28	24.60	24.77	24.75
		50	56	24.76	24.97	25.01
		100	0	24.67	24.91	24.72

*EIRP = Conducted + antenna gain (2.9dBi)

5GNR n77						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		630668	633334	636000
		Frequency (MHz)		3460.02	3500.01	3540
20M	$\pi/2$ BPSK	1	0	29.37	29.40	29.41
		1	26	29.40	29.38	28.91
		1	49	29.40	**29.59**	29.14
		25	0	28.84	28.94	28.59
		25	13	28.93	28.59	28.71
		25	26	28.96	28.83	28.29
		50	0	28.87	28.87	28.78
	QPSK	1	0	28.68	**29.01**	28.82
		1	26	28.91	28.88	28.99
		1	49	28.56	28.98	28.90
		25	0	28.18	28.45	28.65
		25	13	28.23	28.02	28.03
		25	26	28.12	28.28	28.27
		50	0	28.36	28.35	28.42
	16QAM	1	0	27.74	27.89	27.79
		1	26	**28.09**	27.96	27.69
		1	49	27.91	27.68	27.61
		25	0	27.37	27.23	27.54
		25	13	27.13	26.99	27.20
		25	26	27.44	27.21	27.48
		50	0	27.66	27.07	27.56
	64QAM	1	0	26.63	27.15	27.22
		1	26	26.90	26.72	27.18
		1	49	26.71	26.99	**27.23**
		25	0	26.72	26.49	26.66
		25	13	26.35	26.01	26.54
		25	26	26.56	26.31	26.16
		50	0	26.26	26.33	26.50
	256QAM	1	0	25.20	**25.40**	25.29
		1	26	25.36	25.26	25.05
		1	49	25.14	24.90	25.34
		25	0	24.95	24.86	24.87
		25	13	24.67	24.88	24.87
		25	26	24.75	24.81	24.71
		50	0	24.60	24.63	24.68

*EIRP = Conducted + antenna gain (2.9dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	28.77	28.65	28.54
		1	50	28.81	28.89	28.59
		1	99	28.70	28.57	28.84
		50	0	27.66	27.84	27.81
		50	25	27.81	27.64	27.47
		50	50	27.77	28.01	27.75
		100	0	27.87	27.71	27.95
	16QAM	1	0	27.60	28.42	27.97
		1	50	28.01	28.27	27.85
		1	99	27.75	28.39	27.77
		50	0	26.78	26.69	26.65
		50	25	26.69	26.78	26.68
		50	50	26.58	26.66	26.52
		100	0	26.62	26.88	26.60
	64QAM	1	0	26.65	27.41	27.07
		1	50	26.75	27.19	26.66
		1	99	26.82	27.16	26.59
		50	0	25.31	25.57	25.42
		50	25	25.47	25.48	25.27
		50	50	25.64	25.93	25.61
		100	0	25.96	26.17	25.57
	256QAM	1	0	24.83	25.15	24.90
		1	50	24.85	25.32	24.30
		1	99	24.59	25.42	24.86
		50	0	23.45	23.87	23.65
		50	25	23.66	23.81	23.43
		50	50	23.32	23.96	23.21
		100	0	24.02	24.30	23.73

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	28.96	28.65	28.67
		1	37	28.37	28.79	28.43
		1	74	28.73	28.92	28.32
		36	0	27.59	27.62	27.73
		36	19	27.93	27.61	27.79
		36	39	28.06	27.75	27.53
		75	0	27.91	27.81	27.83
	16QAM	1	0	28.26	28.26	27.59
		1	37	27.98	28.23	28.14
		1	74	28.20	27.91	27.89
		36	0	26.93	26.78	26.36
		36	19	26.76	26.50	26.42
		36	39	26.66	26.59	26.40
		75	0	26.81	26.98	26.58
	64QAM	1	0	27.12	27.20	26.59
		1	37	26.85	26.84	26.81
		1	74	26.98	26.58	26.79
		36	0	25.64	26.09	25.62
		36	19	25.73	25.84	26.08
		36	39	25.86	25.78	25.64
		75	0	26.06	26.11	25.78
	256QAM	1	0	25.20	25.18	24.50
		1	37	24.96	25.06	24.83
		1	74	24.93	24.71	24.84
		36	0	24.00	24.02	23.72
		36	19	23.78	23.86	23.75
		36	39	23.93	24.01	24.04
		75	0	24.43	23.88	24.28

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	28.80	28.81	28.21
		1	24	28.77	28.31	28.32
		1	49	28.93	28.66	28.66
		25	0	27.81	27.87	27.43
		25	12	28.00	27.85	27.45
		25	25	27.94	27.96	27.77
		50	0	27.68	28.04	27.62
	16QAM	1	0	28.49	28.14	27.88
		1	24	27.65	27.79	27.85
		1	49	28.20	27.91	28.19
		25	0	26.90	26.57	26.46
		25	12	26.92	26.77	26.67
		25	25	26.66	26.63	26.51
		50	0	26.73	26.54	26.67
	64QAM	1	0	27.65	27.13	27.18
		1	24	26.92	26.75	27.32
		1	49	27.24	26.64	27.02
		25	0	25.58	25.97	25.52
		25	12	25.56	25.57	25.24
		25	25	25.40	25.63	25.64
		50	0	25.62	25.85	25.55
	256QAM	1	0	25.47	24.91	25.18
		1	24	24.71	24.86	25.18
		1	49	25.66	25.13	25.03
		25	0	23.78	23.93	23.72
		25	12	23.60	23.62	23.65
		25	25	23.33	23.31	23.51
		50	0	23.69	24.08	23.46

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	28.84	28.54	28.49
		1	12	28.98	28.84	28.43
		1	24	28.76	28.78	28.48
		12	0	27.66	27.47	27.74
		12	6	27.78	27.57	27.56
		12	13	28.02	27.67	27.84
		25	0	27.95	27.96	27.75
	16QAM	1	0	27.92	27.96	27.95
		1	12	28.27	28.01	27.45
		1	24	27.78	28.14	27.72
		12	0	26.66	26.67	26.61
		12	6	27.03	26.98	26.69
		12	13	26.99	26.57	26.71
		25	0	27.08	26.49	26.36
	64QAM	1	0	26.88	26.95	26.94
		1	12	27.15	26.81	26.62
		1	24	27.24	27.43	27.22
		12	0	25.45	25.80	25.62
		12	6	25.71	25.71	25.20
		12	13	26.03	25.92	25.81
		25	0	25.85	25.35	25.80
	256QAM	1	0	24.87	24.93	24.87
		1	12	24.73	24.81	24.83
		1	24	24.72	25.20	25.13
		12	0	23.67	23.87	23.71
		12	6	23.94	23.89	23.50
		12	13	23.65	23.37	23.81
		25	0	23.93	23.56	23.48

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	28.75	28.82	28.43
		1	7	28.81	28.91	28.51
		1	14	28.80	28.85	28.71
		8	0	28.03	27.90	27.38
		8	3	27.81	28.01	27.51
		8	7	27.80	27.62	27.68
		15	0	27.79	27.66	27.36
	16QAM	1	0	27.94	28.04	27.48
		1	7	28.37	28.29	27.90
		1	14	27.93	27.68	27.93
		8	0	26.80	26.59	26.43
		8	3	27.08	26.58	26.43
		8	7	26.94	26.87	26.29
		15	0	26.76	26.55	26.48
	64QAM	1	0	27.00	26.85	26.53
		1	7	26.96	27.14	26.42
		1	14	26.74	26.29	27.07
		8	0	25.86	25.94	25.56
		8	3	25.59	25.98	25.43
		8	7	25.70	25.51	25.58
		15	0	25.37	25.94	25.94
	256QAM	1	0	25.21	25.00	24.32
		1	7	25.15	25.67	24.35
		1	14	24.81	24.26	24.89
		8	0	24.24	23.81	23.45
		8	3	23.75	23.87	23.30
		8	7	23.80	23.46	23.68
		15	0	23.24	23.38	23.89

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	28.60	28.61	28.29
		1	2	28.85	28.83	28.61
		1	5	28.71	28.40	28.53
		3	0	28.49	28.49	28.35
		3	1	28.62	28.85	28.22
		3	3	28.49	28.42	28.50
		6	0	27.86	27.92	27.25
	16QAM	1	0	28.08	28.04	27.30
		1	2	27.71	27.97	27.65
		1	5	27.91	27.88	28.07
		3	0	27.70	27.62	27.48
		3	1	27.94	27.90	27.73
		3	3	27.62	27.72	27.47
		6	0	26.70	26.73	26.49
	64QAM	1	0	27.01	27.21	26.48
		1	2	26.30	26.73	26.84
		1	5	26.32	26.52	26.88
		3	0	26.93	26.86	26.07
		3	1	27.10	27.15	26.25
		3	3	26.94	26.50	26.56
		6	0	26.18	25.98	25.32
	256QAM	1	0	25.55	24.80	24.11
		1	2	24.35	24.84	24.90
		1	5	24.76	25.01	25.04
		3	0	24.83	24.86	23.96
		3	1	25.07	25.21	24.02
		3	3	24.87	24.61	24.93
		6	0	23.84	23.53	23.01

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	26.53	26.72	26.34
		1	24	26.24	26.45	26.14
		1	49	26.23	26.17	26.21
		25	0	25.30	25.22	25.35
		25	12	25.56	25.16	25.63
		25	25	25.23	25.26	25.41
		50	0	25.26	25.41	25.26
	16QAM	1	0	25.62	25.89	26.28
		1	24	25.79	25.99	25.67
		1	49	25.47	25.56	25.40
		25	0	24.50	24.28	24.44
		25	12	24.47	24.35	24.22
		25	25	24.65	24.09	24.64
		50	0	24.20	24.50	24.04
	64QAM	1	0	24.49	24.65	25.06
		1	24	24.65	24.91	24.66
		1	49	24.45	24.44	24.64
		25	0	23.53	23.45	22.99
		25	12	23.39	23.43	23.23
		25	25	23.46	23.22	23.26
		50	0	23.27	23.16	23.09
	256QAM	1	0	22.66	23.15	22.72
		1	24	23.11	22.89	22.54
		1	49	22.95	22.01	22.32
		25	0	21.14	20.93	21.20
		25	12	21.80	21.76	21.17
		25	25	21.69	21.23	21.45
		50	0	21.37	21.16	21.37

*ERP = Conducted + antenna gain (3.81dBi)-2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20425	20525	20625
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	26.65	26.71	26.45
		1	12	26.49	26.66	26.23
		1	24	26.39	26.42	26.20
		12	0	25.29	25.14	25.41
		12	6	25.42	25.60	25.49
		12	13	25.32	25.57	25.35
		25	0	25.40	25.24	25.25
	16QAM	1	0	25.57	25.31	25.54
		1	12	25.71	26.01	25.98
		1	24	25.39	25.60	25.63
		12	0	24.75	24.43	24.16
		12	6	24.58	24.47	24.29
		12	13	24.66	24.49	24.30
		25	0	24.28	24.39	24.17
	64QAM	1	0	24.95	24.63	24.51
		1	12	24.94	24.89	24.74
		1	24	24.44	24.72	24.50
		12	0	23.37	23.52	23.38
		12	6	23.48	23.39	23.24
		12	13	23.62	23.80	23.10
		25	0	23.64	23.47	23.51
	256QAM	1	0	22.87	22.48	22.69
		1	12	23.05	23.09	22.77
		1	24	22.07	23.16	22.25
		12	0	21.48	21.60	21.39
		12	6	21.22	21.43	21.43
		12	13	21.38	21.44	21.29
		25	0	21.61	21.46	20.98

*ERP = Conducted + antenna gain (3.81dBi)-2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20415	20525	20635
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	26.59	26.44	26.41
		1	7	26.62	26.42	26.52
		1	14	26.32	26.18	25.99
		8	0	25.45	25.37	25.27
		8	3	25.48	25.29	25.46
		8	7	25.54	25.29	25.51
		15	0	25.30	25.55	25.14
	16QAM	1	0	25.60	26.03	25.55
		1	7	25.64	25.68	25.52
		1	14	25.68	25.74	25.74
		8	0	24.42	24.59	24.52
		8	3	24.83	24.57	24.71
		8	7	24.52	24.52	24.59
		15	0	24.52	24.50	24.52
	64QAM	1	0	24.27	25.12	24.69
		1	7	24.61	24.27	24.52
		1	14	24.71	24.67	24.63
		8	0	23.69	23.10	23.25
		8	3	23.69	23.39	23.40
		8	7	23.21	23.27	23.17
		15	0	23.52	23.16	23.14
	256QAM	1	0	22.15	23.02	22.35
		1	7	23.12	22.55	22.40
		1	14	22.64	22.78	22.29
		8	0	21.88	21.21	20.91
		8	3	21.55	21.55	21.16
		8	7	21.45	20.96	21.24
		15	0	21.59	21.62	21.65

*ERP = Conducted + antenna gain (3.81dBi)-2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20407	20525	20643
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	26.18	22.28	22.22
		1	2	26.27	22.50	22.41
		1	5	26.15	22.33	22.54
		3	0	26.57	22.43	22.37
		3	1	26.51	22.47	22.62
		3	3	26.27	22.58	22.41
		6	0	25.57	21.37	21.54
	16QAM	1	0	25.84	25.23	25.74
		1	2	25.37	25.37	25.60
		1	5	25.35	25.95	25.35
		3	0	25.32	24.93	25.27
		3	1	25.50	25.59	25.14
		3	3	25.07	25.14	25.31
		6	0	24.35	24.52	24.60
	64QAM	1	0	24.91	24.23	24.79
		1	2	24.77	24.41	24.62
		1	5	24.65	24.72	24.17
		3	0	24.13	24.19	23.93
		3	1	24.18	24.69	24.28
		3	3	23.94	24.40	24.19
		6	0	23.21	23.38	22.95
	256QAM	1	0	23.14	21.70	22.61
		1	2	22.47	22.48	22.33
		1	5	22.64	22.46	22.32
		3	0	22.06	22.13	21.82
		3	1	21.96	22.72	22.25
		3	3	22.07	22.22	22.30
		6	0	21.68	21.45	21.09

*ERP = Conducted + antenna gain (3.81dBi)-2.15

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20850	21100	21350
		Frequency (MHz)		2510	2535	2560
20M	QPSK	1	0	30.06	29.86	29.88
		1	50	30.18	30.02	29.80
		1	99	30.26	29.92	29.88
		50	0	28.97	29.02	28.96
		50	25	29.17	28.91	29.21
		50	50	29.19	29.03	29.05
		100	0	29.15	28.86	29.26
	16QAM	1	0	29.13	29.46	28.85
		1	50	29.21	29.36	29.56
		1	99	29.04	29.48	29.69
		50	0	28.35	28.07	27.69
		50	25	27.98	28.09	28.02
		50	50	28.02	28.21	28.24
		100	0	28.29	28.19	27.90
	64QAM	1	0	28.27	28.32	28.18
		1	50	28.11	28.48	28.12
		1	99	28.13	28.90	28.20
		50	0	27.15	27.30	26.58
		50	25	26.85	27.07	27.21
		50	50	27.11	27.09	26.95
		100	0	26.79	27.27	27.01
	256QAM	1	0	25.99	26.74	26.37
		1	50	26.34	26.63	26.41
		1	99	26.24	27.13	26.21
		50	0	24.75	24.88	24.77
		50	25	25.57	25.11	25.28
		50	50	24.85	25.49	24.82
		100	0	24.78	25.14	25.03

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20825	21100	21375
		Frequency (MHz)		2507.5	2535	2562.5
15M	QPSK	1	0	29.99	29.91	30.01
		1	37	29.92	29.98	29.76
		1	74	30.17	30.18	29.77
		36	0	29.10	29.17	28.90
		36	19	29.25	29.06	28.72
		36	39	29.04	29.19	29.15
		75	0	29.20	28.82	28.88
	16QAM	1	0	29.11	28.99	28.76
		1	37	29.27	28.95	29.27
		1	74	29.13	29.26	28.87
		36	0	28.13	28.00	27.82
		36	19	28.34	27.80	27.66
		36	39	28.31	27.99	28.19
		75	0	28.07	27.75	27.63
	64QAM	1	0	28.42	27.78	27.73
		1	37	27.85	27.84	28.16
		1	74	28.66	28.36	27.83
		36	0	27.48	26.91	27.06
		36	19	26.90	27.14	26.84
		36	39	27.17	27.12	26.99
		75	0	27.25	26.96	27.09
	256QAM	1	0	26.65	25.51	25.95
		1	37	25.99	25.81	25.80
		1	74	26.49	26.11	26.29
		36	0	25.53	24.97	24.94
		36	19	25.22	25.11	25.02
		36	39	25.20	24.83	25.17
		75	0	25.37	24.46	25.00

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20800	21100	21400
		Frequency (MHz)		2505	2535	2565
10M	QPSK	1	0	30.04	30.02	29.72
		1	24	29.80	29.75	29.49
		1	49	30.01	30.19	29.91
		25	0	29.18	29.14	28.82
		25	12	29.35	29.18	28.84
		25	25	29.14	29.06	29.25
		50	0	29.34	29.15	28.83
	16QAM	1	0	29.35	28.69	28.67
		1	24	29.52	29.02	29.45
		1	49	29.46	29.58	28.76
		25	0	28.33	27.84	27.66
		25	12	28.29	27.97	28.25
		25	25	28.30	28.20	27.97
		50	0	28.07	27.77	28.01
	64QAM	1	0	28.79	28.21	27.83
		1	24	28.10	28.34	28.11
		1	49	28.58	28.28	28.02
		25	0	27.59	26.50	27.19
		25	12	27.38	26.71	26.86
		25	25	27.11	27.14	27.25
		50	0	27.12	26.79	26.86
	256QAM	1	0	27.05	25.68	26.07
		1	24	26.57	25.98	26.46
		1	49	26.42	26.23	26.12
		25	0	25.54	24.99	25.21
		25	12	25.07	24.72	24.65
		25	25	24.75	25.26	25.16
		50	0	25.38	24.52	24.37

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 7						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20775	21100	21425
		Frequency (MHz)		2502.5	2535	2567.5
5M	QPSK	1	0	29.96	29.71	29.77
		1	12	30.44	30.09	29.92
		1	24	30.00	29.82	29.94
		12	0	29.39	28.85	28.90
		12	6	28.97	28.95	28.75
		12	13	28.85	28.96	28.74
		25	0	29.02	29.12	28.73
	16QAM	1	0	29.08	29.44	29.23
		1	12	29.53	28.88	29.27
		1	24	29.16	29.11	29.03
		12	0	28.27	28.11	27.73
		12	6	27.99	28.22	28.19
		12	13	28.22	27.96	28.05
		25	0	27.99	27.92	28.09
	64QAM	1	0	28.49	28.36	27.66
		1	12	28.82	28.03	28.40
		1	24	27.81	27.78	27.87
		12	0	27.27	27.42	27.07
		12	6	27.12	27.32	27.29
		12	13	27.10	26.85	27.17
		25	0	26.92	26.96	26.70
	256QAM	1	0	26.12	26.33	26.02
		1	12	26.73	25.53	26.11
		1	24	26.17	26.03	25.97
		12	0	25.57	25.25	24.96
		12	6	25.35	25.31	25.11
		12	13	25.27	24.68	25.00
		25	0	24.83	25.52	24.83

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	26.84	26.71	26.99
		1	24	26.77	27.00	26.89
		1	49	27.00	26.93	26.67
		25	0	25.79	25.78	25.85
		25	12	26.04	25.90	25.78
		25	25	26.10	26.15	26.06
		50	0	26.30	26.05	26.24
	16QAM	1	0	26.58	26.15	25.79
		1	24	26.46	26.26	26.25
		1	49	26.51	26.06	26.03
		25	0	25.25	25.09	24.99
		25	12	25.01	24.93	25.12
		25	25	25.07	24.73	25.03
		50	0	25.26	25.08	25.05
	64QAM	1	0	25.29	25.45	24.77
		1	24	25.27	25.14	25.19
		1	49	24.96	25.30	25.14
		25	0	24.29	23.68	23.68
		25	12	24.32	23.82	23.74
		25	25	24.13	23.56	24.08
		50	0	23.56	23.48	24.27
	256QAM	1	0	22.91	23.33	22.70
		1	24	23.10	23.13	23.58
		1	49	22.84	23.33	22.97
		25	0	22.32	21.69	21.77
		25	12	22.07	22.08	21.31
		25	25	22.01	21.68	21.63
		50	0	21.72	22.07	21.72

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	26.85	27.01	27.05
		1	12	26.86	26.70	26.61
		1	24	27.14	27.17	26.90
		12	0	26.00	25.74	25.99
		12	6	25.81	25.91	26.09
		12	13	25.96	25.90	25.97
		25	0	26.01	25.98	25.86
	16QAM	1	0	26.40	25.88	25.56
		1	12	26.31	26.05	26.13
		1	24	26.09	26.00	26.48
		12	0	25.06	24.84	24.61
		12	6	25.11	24.79	24.96
		12	13	25.09	24.97	24.84
		25	0	24.81	25.05	25.12
	64QAM	1	0	25.12	25.28	25.10
		1	12	25.37	25.03	25.18
		1	24	25.11	25.28	24.98
		12	0	23.89	24.14	23.69
		12	6	23.88	23.92	24.03
		12	13	24.00	23.97	23.73
		25	0	23.99	23.99	23.99
	256QAM	1	0	22.63	23.56	23.37
		1	12	23.14	23.00	23.11
		1	24	23.19	23.27	22.96
		12	0	22.00	22.35	21.53
		12	6	21.94	21.76	21.92
		12	13	21.37	21.52	21.81
		25	0	22.37	22.34	22.26

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	26.99	27.06	26.62
		1	7	26.59	27.15	26.67
		1	14	26.66	26.70	26.96
		8	0	26.16	25.68	25.77
		8	3	25.84	26.07	25.62
		8	7	25.90	26.10	26.00
		15	0	26.20	26.15	25.99
	16QAM	1	0	26.22	26.13	26.27
		1	7	26.16	25.92	26.32
		1	14	26.04	26.41	25.95
		8	0	24.76	25.00	24.77
		8	3	25.08	24.93	24.98
		8	7	25.20	25.15	25.07
		15	0	25.15	24.98	24.98
	64QAM	1	0	25.18	24.85	25.00
		1	7	25.16	25.27	25.27
		1	14	24.70	25.41	24.98
		8	0	24.04	24.25	23.50
		8	3	24.18	24.41	23.56
		8	7	23.76	23.93	24.04
		15	0	23.95	24.06	24.12
	256QAM	1	0	23.22	23.25	23.05
		1	7	23.33	23.12	23.84
		1	14	23.06	23.34	22.72
		8	0	21.94	22.12	22.00
		8	3	22.09	21.78	21.75
		8	7	22.19	22.05	21.87
		15	0	22.51	22.16	22.20

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	27.02	26.79	26.57
		1	2	27.12	26.93	26.72
		1	5	26.63	26.69	26.55
		3	0	26.93	26.78	26.60
		3	1	27.03	26.80	26.50
		3	3	27.04	26.94	26.77
		6	0	25.85	25.71	25.54
	16QAM	1	0	26.30	26.14	25.85
		1	2	26.11	25.98	26.15
		1	5	26.07	26.08	25.57
		3	0	26.16	25.67	25.63
		3	1	26.07	25.77	25.50
		3	3	26.10	25.96	25.77
		6	0	25.05	25.13	24.97
	64QAM	1	0	25.18	25.08	24.49
		1	2	25.39	25.00	25.00
		1	5	24.85	25.30	24.60
		3	0	25.03	24.80	24.90
		3	1	25.39	24.99	24.32
		3	3	24.50	24.95	24.61
		6	0	24.36	23.99	24.01
	256QAM	1	0	23.04	23.29	22.33
		1	2	23.47	23.15	22.97
		1	5	23.28	23.38	22.17
		3	0	22.91	22.49	22.86
		3	1	23.39	22.87	22.46
		3	3	22.93	22.61	22.39
		6	0	22.17	22.39	22.02

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 13				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	27.05
		1	24	27.22
		1	49	26.92
		25	0	26.20
		25	12	26.00
		25	25	25.97
		50	0	26.18
	16QAM	1	0	26.15
		1	24	26.18
		1	49	26.54
		25	0	25.40
		25	12	24.89
		25	25	25.41
		50	0	25.19
	64QAM	1	0	25.49
		1	24	25.45
		1	49	25.61
		25	0	24.17
		25	12	23.99
		25	25	23.87
		50	0	23.98
	256QAM	1	0	23.27
		1	24	23.54
		1	49	23.91
		25	0	22.59
		25	12	22.27
		25	25	22.04
		50	0	21.99

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 13						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	26.92	27.16	27.23
		1	12	27.00	26.94	27.16
		1	24	26.80	26.85	26.66
		12	0	26.26	26.34	25.83
		12	6	26.14	25.96	25.99
		12	13	26.30	25.91	26.06
		25	0	25.95	25.96	25.74
	16QAM	1	0	26.06	26.38	26.34
		1	12	26.74	26.43	25.96
		1	24	26.08	26.44	26.38
		12	0	25.14	24.98	25.48
		12	6	25.21	25.02	25.13
		12	13	25.37	24.97	25.37
		25	0	25.12	25.28	24.99
	64QAM	1	0	25.05	25.35	25.55
		1	12	25.56	25.42	24.99
		1	24	25.30	25.26	25.55
		12	0	24.02	23.80	24.36
		12	6	24.18	24.28	23.87
		12	13	24.21	23.92	24.05
		25	0	24.01	24.23	23.83
	256QAM	1	0	22.73	23.11	23.67
		1	12	23.78	23.14	23.30
		1	24	22.80	22.92	23.47
		12	0	22.15	21.59	21.96
		12	6	21.93	22.16	21.71
		12	13	22.06	21.37	22.24
		25	0	21.57	22.04	21.50

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 14				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23330
		Frequency (MHz)		793
10M	QPSK	1	0	27.06
		1	24	26.93
		1	49	26.87
		25	0	26.21
		25	12	25.85
		25	25	25.73
		50	0	25.95
	16QAM	1	0	26.54
		1	24	26.65
		1	49	26.10
		25	0	24.94
		25	12	24.79
		25	25	24.89
		50	0	24.88
	64QAM	1	0	25.75
		1	24	25.17
		1	49	25.01
		25	0	23.67
		25	12	23.69
		25	25	24.21
		50	0	23.77
	256QAM	1	0	23.98
		1	24	22.97
		1	49	23.37
		25	0	21.84
		25	12	21.95
		25	25	22.10
		50	0	22.26

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 14						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23305	23330	23355
		Frequency (MHz)		790.5	793	795.5
5M	QPSK	1	0	26.63	26.81	26.92
		1	12	26.88	27.02	27.09
		1	24	26.97	27.14	26.68
		12	0	26.14	26.01	26.04
		12	6	26.17	26.16	25.67
		12	13	26.08	26.22	26.22
		25	0	25.91	25.89	26.21
	16QAM	1	0	26.44	26.48	26.30
		1	12	26.41	25.70	26.41
		1	24	26.35	26.46	26.02
		12	0	24.91	25.18	25.25
		12	6	25.20	24.93	25.01
		12	13	24.82	25.01	25.17
		25	0	25.33	24.70	25.11
	64QAM	1	0	25.41	25.29	25.54
		1	12	24.88	24.62	25.22
		1	24	25.27	25.23	25.13
		12	0	23.72	23.64	24.33
		12	6	23.66	24.03	24.06
		12	13	24.13	23.99	24.07
		25	0	23.92	23.91	23.86
	256QAM	1	0	23.32	23.13	23.43
		1	12	22.63	22.47	23.36
		1	24	23.35	23.30	23.67
		12	0	22.24	21.69	22.03
		12	6	22.02	22.42	21.86
		12	13	22.02	22.08	22.32
		25	0	22.13	22.35	21.95

*ERP = Conducted + antenna gain (4.41dBi)-2.15

LTE Band 30				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		27710
		Frequency (MHz)		2310
10M	QPSK	1	0	23.79
		1	24	23.37
		1	49	23.29
		25	0	22.69
		25	12	22.44
		25	25	22.81
		50	0	22.85
	16QAM	1	0	22.86
		1	24	23.11
		1	49	22.53
		25	0	21.30
		25	12	21.73
		25	25	21.57
		50	0	21.56
	64QAM	1	0	21.69
		1	24	21.91
		1	49	21.19
		25	0	20.69
		25	12	20.94
		25	25	20.77
		50	0	20.68
	256QAM	1	0	19.47
		1	24	20.09
		1	49	19.49
		25	0	18.76
		25	12	19.01
		25	25	19.02
		50	0	18.87

*EIRP = Conducted + antenna gain (2.99dBi)

LTE Band 30						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		27685	27710	27735
		Frequency (MHz)		2307.5	2310	2312.5
5M	QPSK	1	0	23.41	23.34	23.44
		1	12	23.85	23.89	23.45
		1	24	23.39	23.49	23.44
		12	0	22.39	22.40	22.45
		12	6	22.90	22.49	22.46
		12	13	22.56	22.57	22.69
		25	0	22.62	22.36	22.57
	16QAM	1	0	22.56	22.75	22.88
		1	12	22.90	23.08	22.77
		1	24	22.45	23.01	23.10
		12	0	21.70	21.69	21.78
		12	6	21.64	21.56	21.73
		12	13	21.43	21.44	21.57
		25	0	21.65	21.47	21.36
	64QAM	1	0	21.55	21.64	21.91
		1	12	21.95	21.91	21.97
		1	24	21.15	21.95	22.00
		12	0	20.47	20.50	20.78
		12	6	20.15	20.42	20.49
		12	13	20.47	20.64	20.69
		25	0	20.62	20.61	20.82
	256QAM	1	0	19.11	20.02	20.21
		1	12	20.42	19.92	19.38
		1	24	19.53	19.88	19.69
		12	0	18.21	18.08	18.44
		12	6	18.32	18.35	18.55
		12	13	18.82	18.08	18.65
		25	0	18.72	18.63	18.75

*EIRP = Conducted + antenna gain (2.99dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20M	QPSK	1	0	32.93	32.31	32.36
		1	50	32.61	32.61	32.03
		1	99	32.73	32.53	31.27
		50	0	31.66	31.73	31.37
		50	25	31.72	31.61	31.16
		50	50	31.94	31.98	30.94
		100	0	31.61	31.97	31.35
	16QAM	1	0	31.85	31.79	31.90
		1	50	32.12	31.69	31.50
		1	99	31.81	31.62	30.62
		50	0	30.84	30.60	30.45
		50	25	30.98	30.72	30.36
		50	50	31.02	30.98	29.66
		100	0	30.64	30.93	30.32
	64QAM	1	0	30.68	31.05	30.95
		1	50	30.97	30.82	29.94
		1	99	30.74	30.62	29.51
		50	0	29.54	29.65	29.54
		50	25	29.71	29.80	29.55
		50	50	29.60	29.54	28.81
		100	0	29.65	29.71	29.32
	256QAM	1	0	28.68	29.16	28.66
		1	50	29.32	28.90	27.83
		1	99	28.69	28.72	27.30
		50	0	27.28	27.94	27.52
		50	25	27.84	27.78	27.47
		50	50	27.29	27.41	26.69
		100	0	27.48	28.23	27.38

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15M	QPSK	1	0	32.39	32.74	32.50
		1	37	32.50	32.59	31.64
		1	74	32.74	32.76	31.16
		36	0	31.78	31.50	31.49
		36	19	31.70	31.68	30.82
		36	39	32.05	31.48	30.88
		75	0	31.88	31.71	30.95
	16QAM	1	0	31.89	31.92	32.19
		1	37	32.00	31.87	31.11
		1	74	32.16	31.72	30.78
		36	0	31.09	30.63	30.21
		36	19	30.59	30.83	30.23
		36	39	30.71	30.57	29.67
		75	0	31.03	30.78	30.00
	64QAM	1	0	30.62	30.70	30.86
		1	37	30.84	30.88	29.70
		1	74	30.92	30.52	29.44
		36	0	29.77	29.50	29.26
		36	19	29.77	29.91	29.21
		36	39	29.61	29.59	28.69
		75	0	29.73	30.06	29.50
	256QAM	1	0	29.24	28.49	28.69
		1	37	28.94	28.41	27.96
		1	74	28.76	28.63	27.56
		36	0	28.06	27.66	27.58
		36	19	27.72	28.33	27.04
		36	39	27.67	27.34	26.73
		75	0	27.69	27.82	27.35

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10M	QPSK	1	0	32.92	32.43	31.94
		1	24	32.92	32.62	31.83
		1	49	32.48	32.41	31.36
		25	0	31.68	31.56	31.18
		25	12	31.65	31.58	30.95
		25	25	31.75	31.68	30.42
		50	0	31.98	31.79	30.59
	16QAM	1	0	32.33	31.57	31.62
		1	24	31.77	31.94	31.18
		1	49	31.80	32.06	30.80
		25	0	31.11	30.71	30.11
		25	12	30.89	31.07	29.97
		25	25	30.91	30.48	29.95
		50	0	30.85	30.88	29.76
	64QAM	1	0	30.91	30.52	30.41
		1	24	30.93	30.65	30.36
		1	49	31.12	30.73	29.17
		25	0	30.19	29.88	29.23
		25	12	29.60	29.98	29.09
		25	25	29.86	29.71	28.62
		50	0	30.08	29.43	28.97
	256QAM	1	0	28.49	28.85	28.53
		1	24	29.10	28.83	28.20
		1	49	28.98	28.83	27.21
		25	0	27.75	27.77	26.93
		25	12	27.18	28.03	27.28
		25	25	27.33	28.07	26.93
		50	0	27.96	28.03	26.94

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5M	QPSK	1	0	32.86	32.67	31.54
		1	12	32.42	32.61	31.18
		1	24	32.85	32.49	31.06
		12	0	31.91	31.93	30.87
		12	6	31.90	31.54	30.80
		12	13	31.70	31.80	30.61
		25	0	31.74	31.91	30.84
	16QAM	1	0	32.15	31.84	31.03
		1	12	31.74	32.08	30.55
		1	24	31.79	31.94	30.51
		12	0	30.85	30.71	29.98
		12	6	31.04	30.91	29.67
		12	13	30.75	30.97	29.60
		25	0	30.79	30.82	29.71
	64QAM	1	0	31.06	30.55	29.95
		1	12	31.24	30.55	29.41
		1	24	30.97	30.68	29.48
		12	0	29.88	29.70	29.01
		12	6	29.93	29.77	28.84
		12	13	29.81	30.03	28.43
		25	0	29.40	29.91	28.43
	256QAM	1	0	29.09	28.63	28.07
		1	12	28.80	28.86	27.81
		1	24	28.86	29.06	27.77
		12	0	27.45	27.46	26.97
		12	6	27.42	27.37	26.78
		12	13	27.89	27.99	27.03
		25	0	27.55	28.18	26.53

*EIRP = Conducted + antenna gain (5.31dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132072	132322	132572
		Frequency (MHz)		1720	1745	1770
20M	QPSK	1	0	29.05	28.76	28.84
		1	50	29.02	28.94	28.73
		1	99	28.91	28.88	28.80
		50	0	27.84	27.44	27.87
		50	25	27.80	27.76	27.89
		50	50	27.76	27.60	28.10
		100	0	27.66	27.57	27.72
	16QAM	1	0	27.61	27.94	28.18
		1	50	27.61	28.26	27.84
		1	99	27.81	27.77	28.07
		50	0	27.15	27.27	26.75
		50	25	26.73	26.87	26.99
		50	50	26.86	26.73	27.01
		100	0	26.86	26.59	27.13
	64QAM	1	0	26.71	26.82	27.23
		1	50	26.75	27.07	27.09
		1	99	26.78	26.65	26.71
		50	0	25.84	25.97	26.14
		50	25	25.97	25.83	25.88
		50	50	25.92	25.67	25.95
		100	0	26.07	25.59	26.07
	256QAM	1	0	24.46	24.93	25.08
		1	50	24.40	25.14	24.98
		1	99	24.61	24.70	24.97
		50	0	23.71	23.76	23.54
		50	25	23.77	23.59	23.65
		50	50	23.68	23.77	23.66
		100	0	23.71	23.91	24.01

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132047	132322	132597
		Frequency (MHz)		1717.5	1745	1772.5
15M	QPSK	1	0	28.55	28.78	28.51
		1	37	28.58	28.61	29.01
		1	74	28.73	28.97	28.64
		36	0	27.68	27.42	27.85
		36	19	27.48	27.55	27.74
		36	39	27.61	27.62	28.02
		75	0	27.37	27.57	27.92
	16QAM	1	0	27.74	27.67	27.64
		1	37	28.27	27.93	28.30
		1	74	27.97	28.17	28.40
		36	0	27.02	26.63	27.03
		36	19	26.83	27.16	27.23
		36	39	26.75	27.32	26.96
		75	0	26.49	26.84	26.98
	64QAM	1	0	26.82	26.48	26.63
		1	37	26.74	26.82	26.81
		1	74	26.90	26.99	26.88
		36	0	25.97	25.57	25.99
		36	19	25.84	25.94	26.06
		36	39	25.61	25.71	25.60
		75	0	25.26	25.87	26.07
	256QAM	1	0	24.47	24.48	24.45
		1	37	24.96	25.30	24.89
		1	74	24.91	25.44	24.78
		36	0	24.10	23.55	23.67
		36	19	23.58	23.86	23.99
		36	39	23.97	23.62	23.43
		75	0	23.34	23.75	23.87

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		132022	132322	132622
		Frequency (MHz)		1715	1745	1775
10M	QPSK	1	0	28.61	28.95	28.98
		1	24	28.43	28.30	28.85
		1	49	28.44	28.43	28.58
		25	0	27.89	27.60	27.88
		25	12	27.98	27.67	27.71
		25	25	27.97	27.61	27.90
		50	0	27.99	27.67	28.16
	16QAM	1	0	28.12	27.83	28.19
		1	24	27.79	27.92	28.00
		1	49	27.49	27.45	28.05
		25	0	26.62	27.17	26.99
		25	12	26.64	27.19	26.95
		25	25	26.90	26.74	26.83
		50	0	27.12	27.04	27.18
	64QAM	1	0	26.59	26.52	26.88
		1	24	26.70	26.97	26.78
		1	49	26.26	26.72	26.77
		25	0	25.46	25.80	25.98
		25	12	25.52	25.63	25.75
		25	25	25.62	25.85	25.87
		50	0	26.30	26.01	25.85
	256QAM	1	0	24.47	24.35	24.81
		1	24	24.37	24.65	24.72
		1	49	24.20	24.44	24.86
		25	0	23.31	23.90	23.46
		25	12	23.54	23.74	23.97
		25	25	23.86	23.78	23.65
		50	0	24.13	23.89	24.23

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131997	132322	132647
		Frequency (MHz)		1712.5	1745	1777.5
5M	QPSK	1	0	28.84	28.93	28.93
		1	12	28.49	28.55	28.77
		1	24	28.99	28.82	28.46
		12	0	27.94	27.70	27.57
		12	6	27.87	27.76	27.70
		12	13	27.62	27.84	28.04
		25	0	27.60	27.57	27.72
	16QAM	1	0	28.18	27.79	28.34
		1	12	27.64	27.90	27.68
		1	24	28.16	28.34	27.79
		12	0	26.99	27.21	26.94
		12	6	27.00	26.75	26.84
		12	13	27.27	26.62	26.99
		25	0	26.82	26.62	27.15
	64QAM	1	0	26.74	26.53	27.05
		1	12	26.60	27.03	26.59
		1	24	26.98	27.00	26.42
		12	0	25.71	25.74	26.23
		12	6	25.56	25.76	25.62
		12	13	25.86	25.82	26.41
		25	0	26.00	25.45	25.71
	256QAM	1	0	24.37	24.41	24.83
		1	12	24.38	24.99	25.03
		1	24	25.04	25.06	24.51
		12	0	23.65	23.74	24.17
		12	6	23.79	23.69	23.44
		12	13	23.72	23.85	24.05
		25	0	23.80	23.62	23.77

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131987	132322	132657
		Frequency (MHz)		1711.5	1745	1778.5
3M	QPSK	1	0	28.92	28.57	28.39
		1	7	28.62	28.69	28.72
		1	14	28.67	28.71	28.44
		8	0	27.82	27.66	27.91
		8	3	27.84	27.69	27.58
		8	7	27.51	27.68	27.57
		15	0	27.74	27.77	27.57
	16QAM	1	0	27.96	28.19	27.72
		1	7	27.71	27.90	27.48
		1	14	28.26	27.88	27.87
		8	0	26.84	26.78	27.25
		8	3	26.99	26.60	27.23
		8	7	26.83	26.96	26.73
		15	0	26.97	26.84	26.76
	64QAM	1	0	27.03	27.06	26.89
		1	7	26.93	26.70	26.35
		1	14	26.93	26.76	26.57
		8	0	25.80	25.96	26.32
		8	3	26.29	25.63	25.91
		8	7	25.90	26.03	25.83
		15	0	25.55	25.77	25.70
	256QAM	1	0	24.77	25.20	24.45
		1	7	24.83	24.64	24.24
		1	14	25.09	24.74	24.38
		8	0	23.91	24.00	24.41
		8	3	24.20	23.35	23.68
		8	7	23.82	24.02	23.67
		15	0	23.43	23.42	23.86

*EIRP = Conducted + antenna gain (4.27dBi)

LTE Band 66						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		131979	132322	132665
		Frequency (MHz)		1710.7	1745	1779.3
1.4M	QPSK	1	0	28.51	28.66	28.84
		1	2	28.39	28.40	28.66
		1	5	28.33	28.39	28.58
		3	0	28.31	28.33	28.42
		3	1	28.33	28.29	28.77
		3	3	28.40	28.29	28.27
		6	0	27.14	27.44	27.38
	16QAM	1	0	27.65	28.08	28.07
		1	2	27.47	27.60	27.73
		1	5	27.96	27.85	27.95
		3	0	28.11	27.93	27.39
		3	1	27.65	27.45	28.19
		3	3	27.39	27.67	27.44
		6	0	26.30	26.43	27.12
	64QAM	1	0	26.64	26.72	26.70
		1	2	26.59	26.79	26.65
		1	5	26.63	26.89	26.99
		3	0	26.72	26.34	26.74
		3	1	26.19	26.56	26.67
		3	3	26.22	26.41	25.91
		6	0	25.41	25.34	25.79
	256QAM	1	0	25.15	24.86	24.95
		1	2	24.40	24.57	24.77
		1	5	24.65	24.73	24.62
		3	0	24.43	24.41	24.41
		3	1	24.34	24.43	24.72
		3	3	24.38	24.19	23.91
		6	0	23.14	23.50	23.86

*EIRP = Conducted + antenna gain (4.27dBi)

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For 5GNR n77 (Part 27O):
According to FCC 27.53(l), for operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

For 5G NR n77 (Part 27Q):
According to FCC 27.53(n), for operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

For LTE Band 2, LTE Band 5:
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(P) dB. The emission limit equal to –13dBm.

For LTE Band 7, 41:
According to FCC 27.53(m)(4),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 55 + 10 log (P) dB. The emission limit equal to –25dBm.

For LTE Band 12:
According to FCC 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. The limit of emissions is equal to -13 dBm.

For LTE Band 13:
According to FCC 27.53(c)(2) for on any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB.

According to FCC 27.53(f) for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz. The limit of emissions is equal to -40 dBm

For LTE Band 14:
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz. The limit of emissions is equal to -40 dBm.

For LTE Band 30:
According to FCC 27.53(a)(4)(ii)(iii), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 70 +10 log (P) dB. The limit of emission is equal to -40 dBm.

For LTE Band 66:
According to FCC 27.53(h) for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz, 1915-1920MHz, 1995-2000 MHz, 2000-2020MHz, 2110-2155MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB.

4.2.2 Test Procedure

a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

d. Following C63.26 section 5.5 and 5.2.7
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

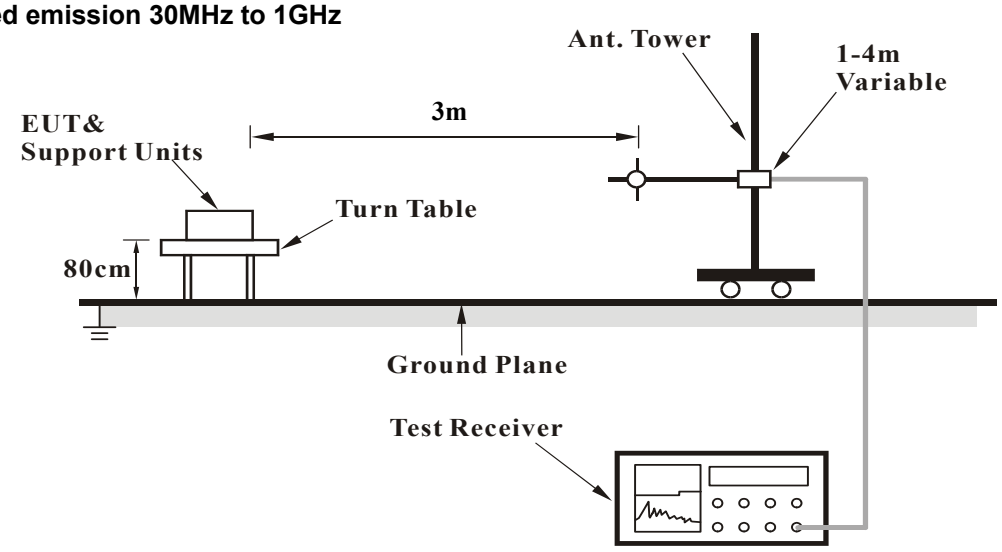
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

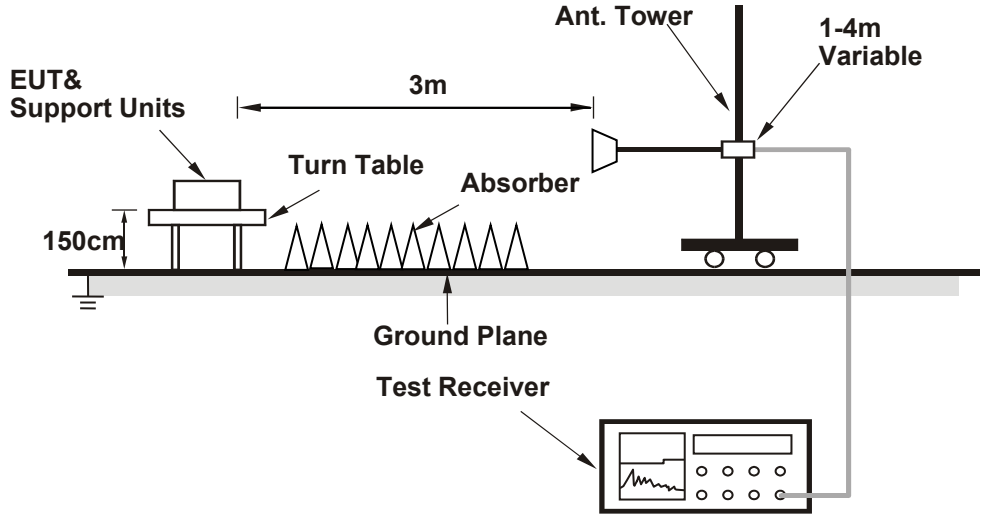
No deviation.

4.2.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.5 Test Results

Below 1GHz

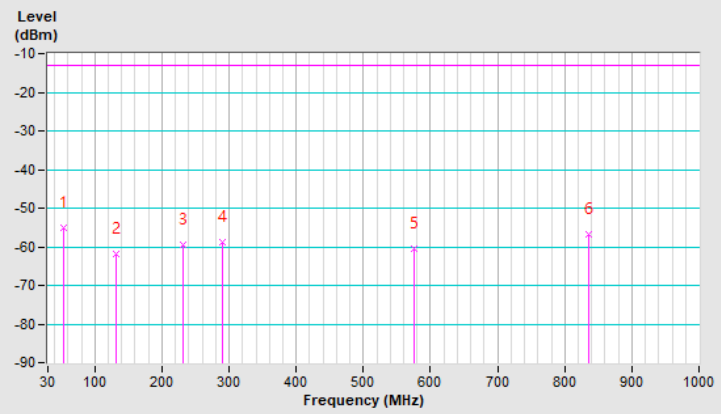
5GNR n77 (Part 27O), Channel Bandwidth 20MHz

Mode	TX channel 647334 (3710.01MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	54.25	-54.92	-13.00	-41.92	1.66 H	285	49.49	-104.41
2	131.85	-61.82	-13.00	-48.82	1.07 H	15	43.33	-105.15
3	231.76	-59.36	-13.00	-46.36	2.05 H	359	46.14	-105.50
4	289.96	-58.65	-13.00	-45.65	1.37 H	15	43.60	-102.25
5	576.11	-60.37	-13.00	-47.37	2.08 H	15	35.69	-96.06
6	836.07	-56.65	-13.00	-43.65	1.16 H	15	34.55	-91.20

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

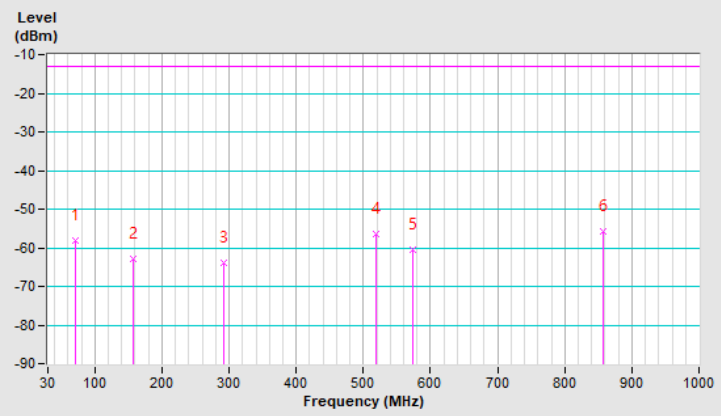


Mode	TX channel 647334 (3710.01MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	70.74	-58.03	-13.00	-45.03	1.65 V	135	48.27	-106.30
2	157.07	-63.04	-13.00	-50.04	1.18 V	313	40.67	-103.71
3	292.87	-63.90	-13.00	-50.90	2.03 V	14	38.28	-102.18
4	518.88	-56.58	-13.00	-43.58	2.51 V	226	40.58	-97.16
5	574.17	-60.66	-13.00	-47.66	1.96 V	8	35.46	-96.12
6	856.44	-55.62	-13.00	-42.62	1.20 V	307	35.15	-90.77

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



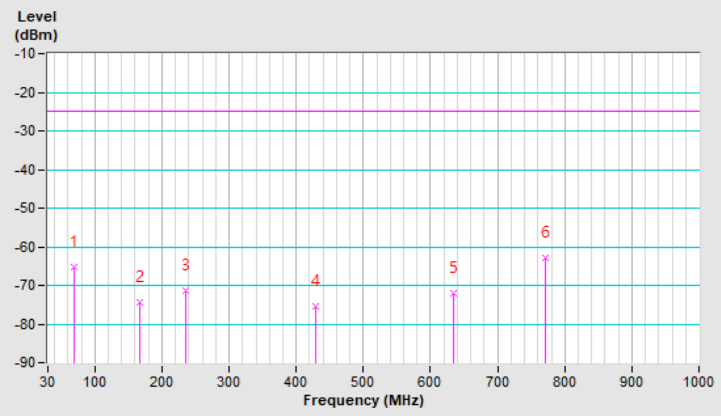
LTE Band 41, Channel Bandwidth: 20MHz

Mode	TX channel 40620 (2593.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	69.77	-65.22	-25.00	-40.22	1.35 H	339	40.92	-106.14
2	167.74	-74.47	-25.00	-49.47	2.56 H	14	29.59	-104.06
3	235.64	-71.24	-25.00	-46.24	1.87 H	52	33.66	-104.90
4	429.64	-75.54	-25.00	-50.54	1.41 H	169	23.43	-98.97
5	633.34	-71.91	-25.00	-46.91	2.20 H	61	22.91	-94.82
6	772.05	-62.86	-25.00	-37.86	1.63 H	245	29.42	-92.28

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

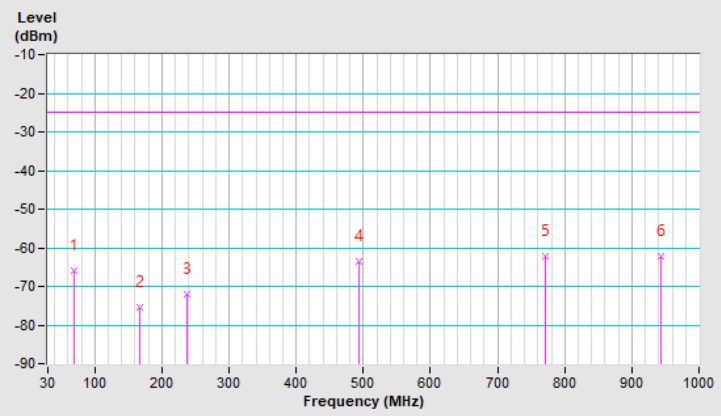


Mode	TX channel 40620 (2593.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	69.77	-65.82	-25.00	-40.82	1.06 V	40	40.32	-106.14
2	167.74	-75.52	-25.00	-50.52	2.21 V	149	28.54	-104.06
3	236.61	-72.05	-25.00	-47.05	1.54 V	5	32.76	-104.81
4	493.66	-63.52	-25.00	-38.52	2.09 V	97	34.18	-97.70
5	772.05	-62.31	-25.00	-37.31	1.63 V	5	29.97	-92.28
6	942.77	-62.11	-25.00	-37.11	2.04 V	36	26.78	-88.89

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



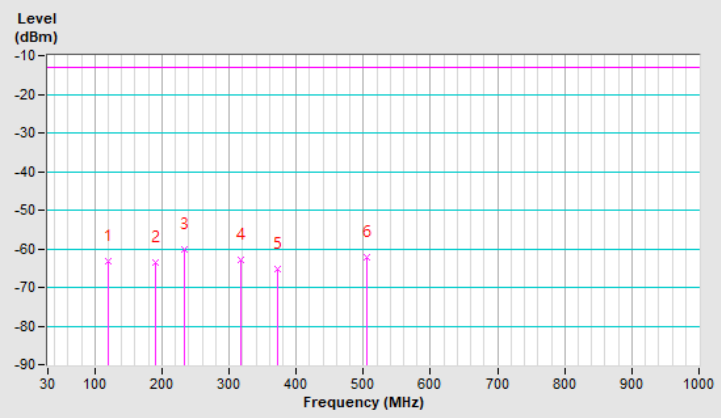
5GNR n77 (Part 27Q), Channel Bandwidth 20MHz

Mode	TX channel 633334 (3500.01MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	120.21	-63.30	-13.00	-50.30	1.00 H	6	42.95	-106.25
2	191.02	-63.49	-13.00	-50.49	1.25 H	192	42.95	-106.44
3	233.70	-60.13	-13.00	-47.13	1.25 H	355	45.04	-105.17
4	317.12	-63.01	-13.00	-50.01	1.25 H	108	38.47	-101.48
5	371.44	-65.32	-13.00	-52.32	2.00 H	219	35.19	-100.51
6	504.33	-62.24	-13.00	-49.24	2.00 H	195	35.19	-97.43

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

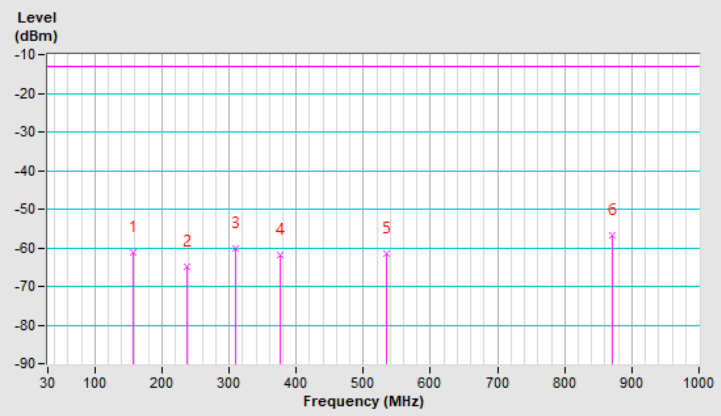


Mode	TX channel 633334 (3500.01MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	158.04	-61.27	-13.00	-48.27	1.00 V	252	42.51	-103.78
2	237.58	-64.78	-13.00	-51.78	1.99 V	233	39.92	-104.70
3	310.33	-60.01	-13.00	-47.01	1.00 V	216	41.56	-101.57
4	376.29	-61.83	-13.00	-48.83	1.00 V	72	38.51	-100.34
5	535.37	-61.55	-13.00	-48.55	1.00 V	156	35.41	-96.96
6	870.99	-56.66	-13.00	-43.66	1.99 V	236	33.82	-90.48

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



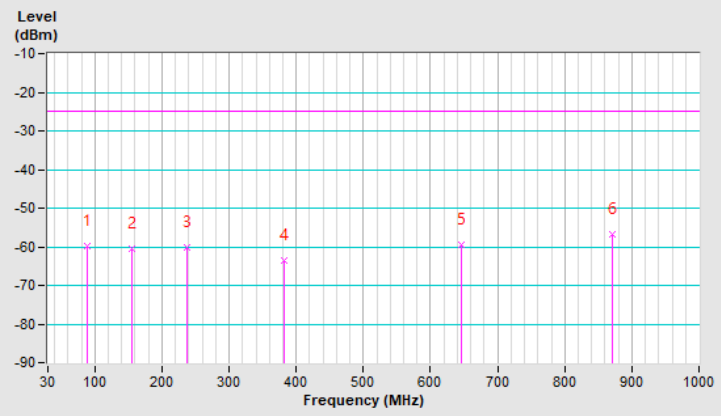
LTE Band 41, Channel Bandwidth: 20MHz

Mode	TX channel 40620 (2593.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	89.17	-59.68	-25.00	-34.68	1.00 H	18	50.13	-109.81
2	155.13	-60.62	-25.00	-35.62	2.00 H	12	43.15	-103.77
3	236.61	-60.14	-25.00	-35.14	1.25 H	10	44.67	-104.81
4	381.14	-63.55	-25.00	-38.55	1.00 H	123	36.66	-100.21
5	646.92	-59.35	-25.00	-34.35	1.25 H	6	35.31	-94.66
6	870.99	-56.63	-25.00	-31.63	2.00 H	86	33.85	-90.48

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

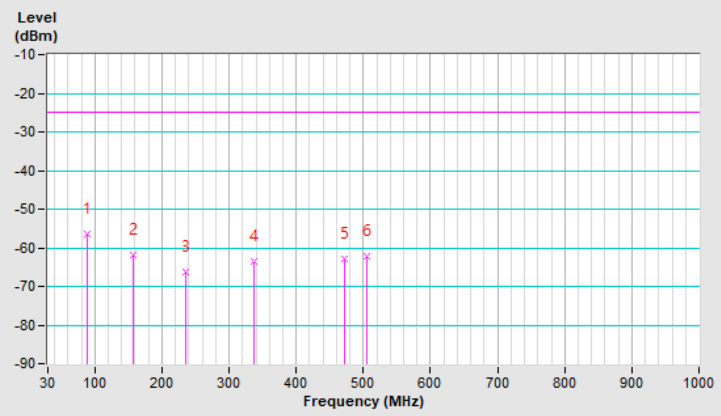


Mode	TX channel 40620 (2593.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	89.17	-56.54	-25.00	-31.54	1.00 V	286	53.27	-109.81
2	157.07	-61.89	-25.00	-36.89	2.00 V	318	41.82	-103.71
3	234.67	-66.19	-25.00	-41.19	1.50 V	235	38.82	-105.01
4	337.49	-63.70	-25.00	-38.70	1.00 V	296	37.37	-101.07
5	471.35	-62.83	-25.00	-37.83	1.25 V	286	35.26	-98.09
6	504.33	-62.36	-25.00	-37.36	2.00 V	243	35.07	-97.43

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Above 1GHz

5GNR n77 (Part 27O), Channel Bandwidth 20MHz

Mode	TX channel 647334 (3710.01MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7420.02	-41.37	-13.00	-28.37	1.38 H	117	41.25	-82.62
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**7420.02**	**-39.57**	**-13.00**	**-26.57**	**1.25 V**	**203**	**43.05**	**-82.62**

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 656000 (3840.00MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7680.00	-40.89	-13.00	-27.89	1.42 H	203	41.91	-82.80
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7680.00	-40.23	-13.00	-27.23	1.20 V	145	42.57	-82.80

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 665666 (3969.99MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7939.98	-40.67	-13.00	-27.67	1.18 H	147	41.62	-82.29
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7939.98	-40.39	-13.00	-27.39	1.09 V	204	41.90	-82.29

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 41, Channel Bandwidth: 20MHz

Mode	TX channel 39750 (2506.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5012.00	-46.58	-25.00	-21.58	1.72 H	163	41.47	-88.05
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5012.00	-46.36	-25.00	-21.36	1.79 V	308	41.69	-88.05

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 40620 (2593.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5186.00	-46.33	-25.00	-21.33	1.68 H	157	41.78	-88.11
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**5186.00**	**-45.81**	**-25.00**	**-20.81**	**1.93 V**	**315**	**42.30**	**-88.11**

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 41490 (2680.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5360.00	-46.73	-25.00	-21.73	1.72 H	155	41.46	-88.19
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5360.00	-46.53	-25.00	-21.53	1.77 V	318	41.66	-88.19

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

5GNR n77 (Part 27Q), Channel Bandwidth 20MHz

Mode	TX channel 630668 (3460.02MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6920.04	-42.20	-13.00	-29.20	1.64 H	127	42.16	-84.36
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6920.04	-41.15	-13.00	-28.15	1.64 V	127	43.21	-84.36

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 633334 (3500.01MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7000.02	-41.68	-13.00	-28.68	1.52 H	178	42.14	-83.82
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**7000.02**	**-40.73**	**-13.00**	**-27.73**	**1.52 V**	**178**	**43.09**	**-83.82**

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 636000 (3540MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7080.00	-42.05	-13.00	-29.05	1.98 H	283	41.22	-83.27
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7080.00	-40.98	-13.00	-27.98	1.98 V	283	42.29	-83.27

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 41, Channel Bandwidth: 20MHz

Mode	TX channel 39750 (2506.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5012.00	-46.82	-25.00	-21.82	1.77 H	146	41.23	-88.05
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5012.00	-46.55	-25.00	-21.55	1.76 V	302	41.50	-88.05

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 40620 (2593.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5186.00	-46.49	-25.00	-21.49	1.66 H	151	41.62	-88.11
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5186.00	-45.86	-25.00	-20.86	1.91 V	319	42.25	-88.11

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 41490 (2680.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5360.00	-47.09	-25.00	-22.09	1.71 H	152	41.10	-88.19
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5360.00	-46.22	-25.00	-21.22	1.67 V	319	41.97	-88.19

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

--- END ---