Partial FCC Test Report

(ENDC: n2/n5/n66/n71/n77/n78 + LTE B5/B66)

Report No.:	RFCDVB-WTW-P22100074-5
FCC ID:	QYLEM9190V
Test Model:	EM9190
Received Date:	Nov. 15, 2022
Test Date:	Nov. 28, 2022 ~ Feb. 02, 2023
Issued Date:	Apr. 06, 2023
Applicant:	Getac Technology Corporation.
Address:	5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, 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:	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFCDVB-WTW-P22100074-5	Original Release	Apr. 06, 2023

1 Certificate of Conformity

Product:	Radio Module
Brand:	Getac
Test Model:	EM9190
Sample Status:	Engineering Sample
Applicant:	Getac Technology Corporation.
Test Date:	Nov. 28, 2022 ~ Feb. 02, 2023
Standards:	FCC Part 22, Subpart H FCC Part 24, Subpart E FCC Part 27, Subpart C, H, L, M, N

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 : Gina Liu , **Date:** Apr. 06, 2023

Gina Liu / Specialist

Approved by : Jeremy Lin , **Date:** Apr. 06, 2023

Jeremy Lin / Project Engineer

2 Summary of Test Results

For n2

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
24.232 (d)	Peak To Average Ratio	N/A	Refer to Note
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 24.235	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
24.238	Band Edge Measurements	N/A	Refer to Note
2.1051 24.238	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -38.13dB at 529.55MHz.

For n5

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.
2.1047	Modulation Characteristics	N/A	Refer to Note
22.913 (d)	Peak To Average Ratio	N/A	Refer to Note
2.1055 22.355	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
22.917	Band Edge Measurements	N/A	Refer to Note
2.1051 22.917	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -31.20dB at 1693.00MHz.

For n66:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (d)(4)	Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
27.50 (d)(5)	Peak To Average Ratio	N/A	Refer to Note
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
2.1051 27.53 (h)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53 (h)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53 (h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -39.46dB at 513.06MHz.

For n71:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (c)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
----	Peak To Average Ratio	N/A	Refer to Note
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
2.1051 27.53 (g)	Band Edge / Out of Band Emissions Measurements	N/A	Refer to Note
2.1051 27.53 (g)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53 (g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -39.29dB at 1391.00MHz.

For n77/78:

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (j)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
----	Peak To Average Ratio	N/A	Refer to Note
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
2.1051 27.53(l)	Band Edge / Out of Band Emissions Measurements	N/A	Refer to Note
2.1051 27.53(l)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53(l)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -30.08dB at 7939.98MHz.

Note:

1. This report is a partial report. Therefore, only test item of Equivalent Isotropically Radiated Power, Effective radiated power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Sporton International (Shenzhen) Inc. report no.: FG021501G_Rev. 03, FG1N1001B_Rev. 01, and FG1N1001D_Rev. 01 for module (Brand: Airprime, Model: EM9190).
2. 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.
2.1047	Modulation Characteristics	N/A	Refer to Note
22.913 (d)	Peak To Average Ratio	N/A	Refer to Note
2.1055 22.355	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
22.917	Band Edge Measurements	N/A	Refer to Note
2.1051 22.917	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -34.86dB at 1673.00MHz.

Note:
1. This report is a Class II change partial report. Therefore, only test item of Effective radiated power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Sporton International (Shenzhen) Inc. report no.: FG021501G_Rev. 03 for module (Brand: Airprime, Model: EM9190).
2. 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 (h)(2)	Equivalent Isotropically Radiated Power	Pass	Meet the requirement.
2.1047	Modulation Characteristics	N/A	Refer to Note
----	Peak To Average Ratio	N/A	Refer to Note
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
2.1051 27.53 (m)(4)(6)	Band Edge / Out of Band Emissions Measurements	N/A	Refer to Note
2.1051 27.53 (m)(4)(6)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53 (m)(4)(6)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -23.82dB at 3440.00MHz.

Note:
1. This report is a Class II change partial report. Therefore, only test item of Equivalent Isotropically Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Sporton International (Shenzhen) Inc. report no.: FG021501G_Rev. 03 for module (Brand: Airprime, Model: EM9190).
2. 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	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 27, 2022	Apr. 26, 2023
Spectrum Analyzer R&S	FSW43	101867	Dec. 30, 2022	Dec. 29, 2023
Loop Antenna TESEQ	HLA 6121	45745	July 27, 2022	July 26, 2023
Loop Antenna EMCI	EM-6879	269	Sep. 19, 2022	Sep. 18, 2023
Pre-amplifier EMCI	EMC001340	980201	Sep. 23, 2022	Sep. 22, 2023
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	Jan. 15, 2022	Jan. 14, 2023
			Jan. 07, 2023	Jan. 06, 2024
Preamplifier Agilent	8447D	2944A10638	May 14, 2022	May 13, 2023
Bi_Log Antenna Schwarbeck	VULB9168	9168-160	Oct. 20, 2022	Oct. 19, 2023
RF Coaxial Cable WOKEN	8D-FB	Cable-CH9-01	May 14, 2022	May 13, 2023
Horn Antenna Schwarzbeck	9120D	9120D-1169	Nov. 14, 2021	Nov. 13, 2022
Preamplifier Agilent	8449B	3008A02367	Feb. 16, 2022	Feb. 15, 2023
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2022	Jan. 14, 2023
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795 /4)	Jan. 15, 2022	Jan. 14, 2023
RF FLITER MICRO-TRONICS	BRM50716	060	Jan. 10, 2022	Jan. 9, 2023
			Jan. 11, 2023	Jan. 10, 2024
RF FLITER MICRO-TRONICS	BRM17690	004	Jan. 10, 2022	Jan. 9, 2023
			Jan. 11, 2023	Jan. 10, 2024
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Pre-Ammlifier EMCI	EMC 184045	980116	Oct. 1, 2022	Sep. 30, 2023
Horn Antenna Schwarzbeck	BBHA 9170	9170-480	Nov. 13, 2022	Nov. 12, 2023
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170243	Nov. 13, 2022	Nov. 12, 2023
RF Coaxial Cable EMCI	EMC102-KM-KM-3000	150929	July 9, 2022	July 8, 2023
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	July 9, 2022	July 8, 2023
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Mar. 03, 2022	Mar. 02, 2023

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 HY - 966 chamber 4.

3 General Information

3.1 General Description of EUT

Product	Radio Module
Brand	Getac
Test Model	EM9190
Sample Status	Engineering Sample
Power Supply Rating	3.3 Vdc (Host equipment)

n2

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Waveform Type	CP-OFDM, DFT-s-OFDM	
Operating Frequency	n2 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1907.5MHz
	n2 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1905.0MHz
	n2 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1902.5MHz
	n2 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1900.0MHz
Max. EIRP Power	n2 + LTE Band 5:	
	n2 (Channel Bandwidth 5MHz)	360.579 mW(25.57dBm)
	n2 (Channel Bandwidth 10MHz)	368.129 mW(25.66dBm)
	n2 (Channel Bandwidth 20MHz)	351.560 mW(25.46dBm)

n5

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Waveform Type	CP-OFDM, DFT-s-OFDM	
Operating Frequency	n5 (Channel Bandwidth 5MHz)	826.5MHz ~ 846.5MHz
	n5 (Channel Bandwidth 10MHz)	829.0MHz ~ 844.0MHz
	n5 (Channel Bandwidth 15MHz)	831.5MHz ~ 841.5MHz
	n5 (Channel Bandwidth 20MHz)	834.0MHz ~ 839.0MHz
Max. ERP Power	n5 + LTE Band 66:	
	n5 (Channel Bandwidth 5MHz)	106.660 mW(20.28dBm)
	n5 (Channel Bandwidth 10MHz)	104.472 mW(20.19dBm)
	n5 (Channel Bandwidth 20MHz)	106.170 mW(20.26dBm)

n66

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Waveform Type	CP-OFDM, DFT-s-OFDM	
Operating Frequency	n66 (Channel Bandwidth 5MHz)	1712.5MHz ~ 1777.5MHz
	n66 (Channel Bandwidth 10MHz)	1715.0MHz ~ 1775.0MHz
	n66 (Channel Bandwidth 15MHz)	1717.5MHz ~ 1772.5MHz
	n66 (Channel Bandwidth 20MHz)	1720.0MHz ~ 1770.0MHz
	n66 (Channel Bandwidth 30MHz)	1725.0MHz ~ 1765.0MHz
	n66 (Channel Bandwidth 40MHz)	1730.0MHz ~ 1760.0MHz
Max. EIRP Power	n66 + LTE Band 5:	
	n66 (Channel Bandwidth 5MHz)	375.837 mW(25.75dBm)
	n66 (Channel Bandwidth 10MHz)	388.150 mW(25.89dBm)
	n66 (Channel Bandwidth 20MHz)	385.478 mW(25.86dBm)

n71

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Waveform Type	CP-OFDM, DFT-s-OFDM	
Operating Frequency	n71 (Channel Bandwidth 5MHz)	665.5MHz ~ 695.5MHz
	n71 (Channel Bandwidth 10MHz)	668.0MHz ~ 693.0MHz
	n71 (Channel Bandwidth 15MHz)	670.5MHz ~ 690.5MHz
	n71 (Channel Bandwidth 20MHz)	673.0MHz ~ 688.0MHz
Max. ERP Power	n71 + LTE Band 66:	
	n71 (Channel Bandwidth 5MHz)	207.014 mW(23.16dBm)
	n71 (Channel Bandwidth 10MHz)	201.372 mW(23.04dBm)
	n71 (Channel Bandwidth 20MHz)	207.014 mW(23.16dBm)

n77/n78

Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Waveform Type	CP-OFDM, DFT-s-OFDM	
Operating Frequency	For Part 27O	
	n77 (Channel Bandwidth 20MHz)	3710.01MHz ~ 3969.99MHz
	n77 (Channel Bandwidth 30MHz)	3715.02MHz ~ 3964.98MHz
	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 70MHz)	3750.00MHz ~ 3945.00MHz
	n77 (Channel Bandwidth 80MHz)	3740.01MHz ~ 3939.99MHz
	n77 (Channel Bandwidth 90MHz)	3745.02MHz ~ 3934.98MHz
	n77 (Channel Bandwidth 100MHz)	3750.00MHz ~ 3930.00MHz
	n78 (Channel Bandwidth 20MHz)	3710.01MHz ~ 3789.99MHz
	n78 (Channel Bandwidth 30MHz)	3715.02MHz ~ 3784.98MHz
	n78 (Channel Bandwidth 40MHz)	3720.00MHz ~ 3780.00MHz
	n78 (Channel Bandwidth 50MHz)	3725.01MHz ~ 3774.99MHz
	n78 (Channel Bandwidth 60MHz)	3730.02MHz ~ 3769.98MHz
	n78 (Channel Bandwidth 70MHz)	3750.00MHz ~ 3765.00MHz
	n78 (Channel Bandwidth 80MHz)	3740.01MHz ~ 3759.99MHz
	n78 (Channel Bandwidth 90MHz)	3745.02MHz ~ 3754.98MHz
	n78 (Channel Bandwidth 100MHz)	3750.00MHz
	For Part 27Q	
	n77 (Channel Bandwidth 20MHz)	3460.02MHz ~ 3540.00MHz
	n77 (Channel Bandwidth 30MHz)	3465.00MHz ~ 3534.99MHz
	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 70MHz)	3485.01MHz ~ 3514.98MHz
	n77 (Channel Bandwidth 80MHz)	3490.02MHz ~ 3510.00MHz
	n77 (Channel Bandwidth 90MHz)	3495.01MHz ~ 3504.99MHz
	n77 (Channel Bandwidth 100MHz)	3500.01MHz

Max. EIRP Power	n77 (Part 27O) + LTE Band 5:	
	n77 (Channel Bandwidth 20MHz)	252.348 mW(24.02dBm)
	n77 (Channel Bandwidth 30MHz)	252.348 mW(24.02dBm)
	n77 (Channel Bandwidth 40MHz)	254.097 mW(24.05dBm)
	n77 (Channel Bandwidth 50MHz)	254.097 mW(24.05dBm)
	n77 (Channel Bandwidth 60MHz)	253.513 mW(24.04dBm)
	n77 (Channel Bandwidth 70MHz)	253.513 mW(24.04dBm)
	n77 (Channel Bandwidth 80MHz)	252.348 mW(24.02dBm)
	n77 (Channel Bandwidth 90MHz)	250.035 mW(23.98dBm)
	n77 (Channel Bandwidth 100MHz)	256.448 mW(24.09dBm)
	n77 (Part 27Q) + LTE Band 5:	
	n77 (Channel Bandwidth 20MHz)	247.742 mW(23.94dBm)
	n77 (Channel Bandwidth 30MHz)	254.097 mW(24.05dBm)
	n77 (Channel Bandwidth 40MHz)	252.930 mW(24.03dBm)
	n77 (Channel Bandwidth 50MHz)	251.189 mW(24.00dBm)
	n77 (Channel Bandwidth 60MHz)	252.348 mW(24.02dBm)
	n77 (Channel Bandwidth 70MHz)	249.459 mW(23.97dBm)
	n77 (Channel Bandwidth 80MHz)	246.037 mW(23.91dBm)
	n77 (Channel Bandwidth 90MHz)	245.471 mW(23.90dBm)
	n77 (Channel Bandwidth 100MHz)	254.097 mW(24.05dBm)

LTE Band

Modulation Type	QPSK, 16QAM, 64QAM, 256QAM	
Operating Frequency	LTE Band 5 (Channel Bandwidth 1.4MHz)	824.7MHz ~ 848.3MHz
	LTE Band 5 (Channel Bandwidth 3MHz)	825.5MHz ~ 847.5MHz
	LTE Band 5 (Channel Bandwidth 5MHz)	826.5MHz ~ 846.5MHz
	LTE Band 5 (Channel Bandwidth 10MHz)	829.0MHz ~ 844.0MHz
	LTE Band 66 (Channel Bandwidth 1.4MHz)	1710.7MHz ~ 1779.3 MHz
	LTE Band 66 (Channel Bandwidth 3MHz)	1711.5MHz ~ 1778.5 MHz
	LTE Band 66 (Channel Bandwidth 5MHz)	1712.5MHz ~ 1777.5 MHz
	LTE Band 66 (Channel Bandwidth 10MHz)	1715.0MHz ~ 1775.0 MHz
	LTE Band 66 (Channel Bandwidth 15MHz)	1717.5MHz ~ 1772.5 MHz
	LTE Band 66 (Channel Bandwidth 20MHz)	1720.0MHz ~ 1770.0 MHz
Max. ERP/EIRP Power	n2 + LTE Band 5:	
	n2 (Channel Bandwidth 10MHz)	368.129 mW(25.66dBm)
	LTE Band 5 (Channel Bandwidth 10MHz)	0.491 mW(-3.09dBm)
	n66 + LTE Band 5:	
	n66 (Channel Bandwidth 5MHz)	388.150 mW(25.89dBm)
	LTE Band 5 (Channel Bandwidth 10MHz)	0.476 mW(-3.22dBm)
	n77 (Part 27O) + LTE Band 5:	
	n77 (Channel Bandwidth 100MHz)	256.448 mW(24.09dBm)
	LTE Band 5 (Channel Bandwidth 10MHz)	0.565 mW(-2.48dBm)
	n77 (Part 27Q) + LTE Band 5:	
	n77 (Channel Bandwidth 100MHz)	254.097 mW(24.05dBm)
	LTE Band 5 (Channel Bandwidth 10MHz)	0.558 mW(-2.53dBm)

	n5 + LTE Band 66:	
	n5 (Channel Bandwidth 5MHz)	106.660 mW(20.28dBm)
	LTE Band 66 (Channel Bandwidth 20MHz)	1.858 mW(2.69dBm)
	n71 + LTE Band 66:	
	n71 (Channel Bandwidth 20MHz)	207.014 mW(23.16dBm)
	LTE Band 66 (Channel Bandwidth 20MHz)	1.841 mW(2.65dBm)
Antenna Type	Refer to Note as below	
Antenna Connector	Refer to Note as below	
Accessory Device	N/A	
Cable Supplied	N/A	

Note:

1. The EUT is authorized for use in specific End-product.

Product	Brand	Model	Difference
Notebook	Getac	V110	For marketing purpose
		V110G7	
		V110Y (Y= 10 characters, Y can be 0 to 9, A to Z, a to z, "/", "\", "-", "_" or blank)	

* The model of the V110G7 was chosen for final test.

2. The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	FSP	FSP065-RBBN3	I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 19.0Vdc, 3.42A 1.5m DC power cable with one core attached on adapter
Adapter 2	Getac	MTA190474W4	I/P: 100-240Vac, 50-60Hz, 1.6A O/P: 19.0Vdc, 4.74A 1.55m DC power cable with two cores attached on adapter
Battery	Getac	BP3S1P2100-S	Rating: 11.1Vdc, 2040mAh, 23Wh Typical name: 2100mAh, 24Wh
Digitizer Pen	EMpen Technology Corp	DIGITIZER PEN	-

3. The End-product has three SKUs for sale, after pre-test. SKU 3 was chosen for final test and presented in the test report.

Part	Brand	Model	Specification	Configuration		
				SKU 1	SKU 2	SKU 3
CPU	Intel	Alder Lake	i5-1235U (Non Vpro)	V		V
			i7-1265U (Vpro)		V	
DDR	Kingston	---	16GB (8GB+8GB)	V		
		---	32GB (16GB+16GB)		V	
		---	64GB (32GB+32GB)			V
SSD	SSSTC	---	256GB	V		
		---	512GB		V	
		---	1TB			V
LCD Panel	AUO	G116HAN01	11.6"	V	V	V
Finger Print	Egistec	---	---	V	V	V
WLAN Module	Intel	AX211NGW	---	V	V	V
WWAN Module	Sierra	EM9190	---	V	V	V
GPS	GlobalSat	MC1010G	---	V	V	V
RFID Module	NXP	PN-7462	---		V	V
Digitizer Module	Getac	EMR116-UA00	---		V	V
Bottom Camera	FOXLINK	FN80AF-443H	---	V	V	V
	Chicony	CKAM816	---	V	V	V
Camera	FOXLINK	FN20FF-679H	---	V	V	V
IR Camera	FOXLINK	FN23FF-678H	---		V	V
Option Bay	Honeywell	N6703	Barcode	V		V
	Getac	---	SD Card reader		V	
	Getac	---	Smart Card		V	

4. The following antennas were provided to the EUT.

5G FR1 Band					
Antenna Type	Gain (dBi)				
	B2	B5	B66	B71	B77/78
PIFA	2.48	-0.69	2.28	2.65	0.99

* Detail antenna specification please refer to antenna datasheet an antenna gain measurement report.

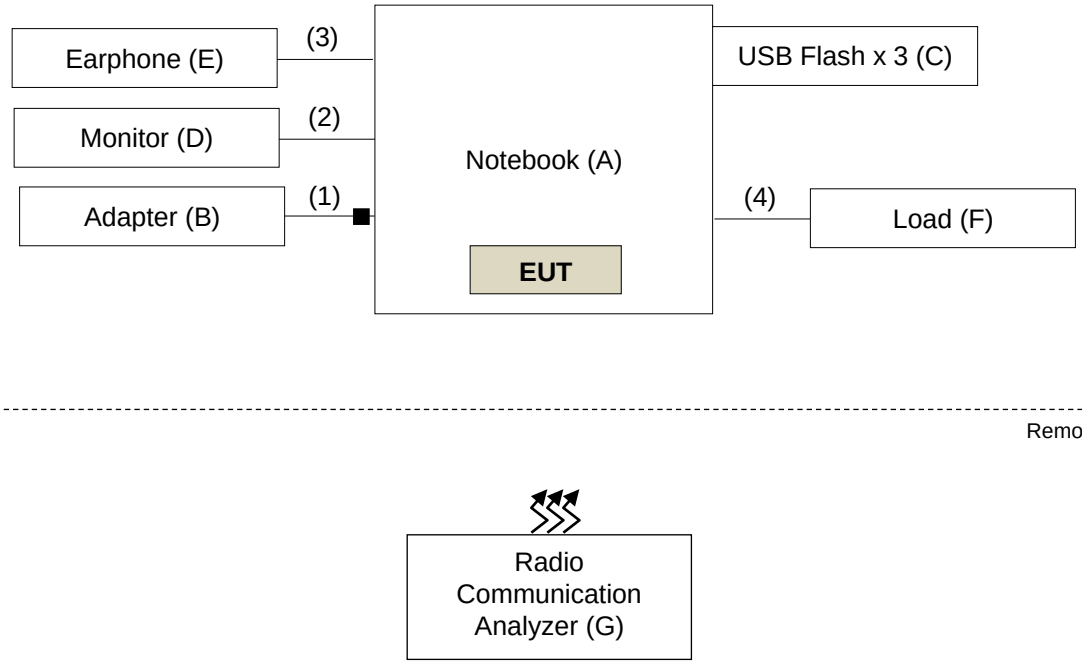
5. The EUT supports the following ENDC configuration.

	FCC 5G FR1			ENDC
	Band	SCS	Bandwidth (MHz)	
5GNR	n2	15kHz	5/10/15/20	Band 5/12
	n5	15kHz	5/10/15/20	Band 2/7/30/66
	n66	15kHz	5/10/15/20/30/40	Band 5/12/13
	n71	15kHz	5/10/15/20	Band 2/7/66
	n77/n78	30kHz	20/30/40/50/60/70/80/90/100	Band 5

*The ENDC configuration only selected the worst case for testing. The test configuration is as follows:
n2 + LTE B5, n5 + LTE B66, n66 + LTE B5, n71 + LTE B66, n77 + LTE B5.

6. 5GNR n78 has the same RF characteristic and power setting as 5GNR n77.
7. 5GNR n77 overlaps the entire frequency range of 5GNR n78. Therefore, test data provided in this report covers 5GNR n78 as well as 5GNR n77.
8. This EUT support SA mode and NSA mode, after verification, NSA mode was the worst case and chosen for final test.

3.2 Configuration of System under Test



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.	Notebook	Getac	V110G7	NA	NA	Provided by manufacturer
B.	Adapter	FSP	FSP065-RBBN3	NA	NA	Provided by manufacturer
C.	USB Flash x 3	SanDisk	SDDDC3-032G	NA	NA	-
D.	Monitor	ASUS	VA24EHE	LCLMTF243824	NA	-
E.	Earphone	Apple	MB77PFEB	NA	NA	-
F.	Load	NA	NA	NA	NA	-
G.	Radio Communication Analyzer	Anritsu	MT8820C	6201300640	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Power Cable	1	1.5	N	1	Provided by manufacturer Attached on adapter
2.	HDMI Cable	1	1.0	Y	0	-
3.	Earphone Cable	1	1.5	N	0	-
4.	RJ45 Cable	1	1.5	N	0	-

Note: The core(s) is(are) originally attached to the cable(s).

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, NB mode and tablet mode. 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
n2	NB mode
n5	NB mode
n66	NB mode
n71	NB mode
n77	NB mode
LTE Band 5	NB mode
LTE Band 66	NB mode

n2

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK / QPSK	1 Half Full
-	Radiated Emission Below 1GHz	372000 to 380000	376000 (1880.0MHz)	20MHz	QPSK	1
-	Radiated Emission Above 1GHz	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	QPSK	1
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	QPSK	1

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the lowest and highest channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK modes, the other test items were performed under worse mode according to the maximum output power.

n5

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	20MHz	$\pi/2$ BPSK / QPSK	1 Half Full
-	Radiated Emission Below 1GHz	165300 to 169300	167300 (836.5MHz),	5MHz	QPSK	1
-	Radiated Emission Above 1GHz	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	QPSK	1
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	20MHz	QPSK	1

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the lowest and highest channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK modes, the other test items were performed under worse mode according to the maximum output power.

n66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	342500 to 355500	342500 (1712.5MHz), 349000 (1745.0MHz), 355500 (1777.5MHz)	5MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		343000 to 355000	343000 (1715.0MHz), 349000 (1745.0MHz), 355000 (1775.0MHz)	10MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		344000 to 354000	344000 (1720.0MHz), 349000 (1745.0MHz), 354000 (1770.0MHz)	20MHz	$\pi/2$ BPSK / QPSK	1 Half Full
-	Radiated Emission Below 1GHz	342500 to 355500	355500 (1777.5MHz)	5MHz	QPSK	1
-	Radiated Emission Above 1GHz	342500 to 355500	342500 (1712.5MHz), 349000 (1745.0MHz), 355500 (1777.5MHz)	5MHz	QPSK	1
		344000 to 354000	344000 (1720.0MHz), 349000 (1745.0MHz), 354000 (1770.0MHz)	20MHz	QPSK	1

Note:
1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the 5MHz and 20MHz channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK modes, the other test items were performed under worse mode according to the maximum output power.

n71

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	133100 to 139100	133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz)	5 MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		133600 to 138600	133600 (668.0MHz), 136100 (680.5MHz), 138600 (693.0MHz)	10 MHz	$\pi/2$ BPSK / QPSK	1 Half Full
		134600 to 137600	134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz)	20 MHz	$\pi/2$ BPSK / QPSK	1 Half Full
-	Radiated Emission Below 1GHz	133100 to 139100	136100 (680.5MHz),	5 MHz	QPSK	1
-	Radiated Emission Above 1GHz	133100 to 139100	133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz)	5 MHz	QPSK	1
		134600 to 137600	134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz)	20 MHz	QPSK	1

Note:
1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the lowest and highest channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK modes, the other test items were performed under worse mode according to the maximum output power.

n77 (Part 27O)

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	647334 to 664666	647334 (3710.01MHz), 656000 (3840.00MHz), 664666 (3969.99MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		647668 to 664332	647668 (3715.02MHz), 656000 (3840.00MHz), 665666 (3964.98MHz)	30MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		648000 to 664000	648000 (3720.00MHz), 656000 (3840.00MHz), 664000 (3960.00MHz)	40MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		648334 to 663666	648334 (3725.01MHz), 656000 (3840.00MHz), 663666 (3954.99MHz)	50MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		648668 to 663332	648668 (3730.02MHz), 656000 (3840.00MHz), 663332 (3949.98MHz)	60MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		649000 to 663332	649000 (3735.00MHz), 656000 (3840.00MHz), 663000 (3945.00MHz)	70MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		649334 to 662666	649334 (3740.01MHz), 656000 (3840.00MHz), 662666 (3939.99MHz)	80MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		649668 to 662332	649668 (3745.02MHz), 656000 (3840.00MHz), 662332 (3934.98MHz)	90MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		650000 to 662000	650000 (3750.00MHz), 656000 (3840.00MHz), 662000 (3930.00MHz)	100MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
-	Radiated Emission Below 1GHz	647334 to 664666	664666 (3969.99MHz)	20MHz	QPSK	1
-	Radiated Emission Above 1GHz	647334 to 664666	647334 (3710.01MHz), 656000 (3840.00MHz), 664666 (3969.99MHz)	20MHz	QPSK	1
		648668 to 663332	648668 (3730.02MHz), 656000 (3840.00MHz), 663332 (3949.98MHz)	60MHz	QPSK	1
		650000 to 662000	650000 (3750.00MHz), 656000 (3840.00MHz), 662000 (3930.00MHz)	100MHz	QPSK	1

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the lowest and highest channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM and CP QPSK modes, the other test items were performed under worse mode according to the maximum output power.

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 / CP QPSK	1 Half Full
		631000 to 635666	631000 (3465.00MHz), 633334 (3500.01MHz), 635666 (3535.99MHz)	30MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		631334 to 635332	631334 (3470.01MHz), 633334 (3500.01MHz), 635332 (3529.98MHz)	40MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		631668 to 635000	631668 (3475.02MHz), 633334 (3500.01MHz), 635000 (3525.00MHz)	50MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		632000 to 634666	632000 (3480.00MHz), 633334 (3500.01MHz), 634666 (3519.99MHz)	60MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		632334 to 634332	632334 (3485.01MHz), 633334 (3500.01MHz), 634332 (3514.98MHz)	70MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		632668 to 634000	632668 (3490.02MHz), 633334 (3500.01MHz), 634000 (3510.00MHz)	80MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		649668 to 633666	649668 (3495.00MHz), 633334 (3500.01MHz), 633666 (3504.99MHz)	90MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
		633334	633334 (3500.01MHz)	100MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM / CP QPSK	1 Half Full
-	Radiated Emission Below 1GHz	635000	635000 (3525.00MHz)	50MHz	QPSK	1
-	Radiated Emission Above 1GHz	630668 to 636000	630668 (3460.02MHz), 633334 (3500.01MHz), 636000 (3540.00MHz)	20MHz	QPSK	1
		631668 to 635000	631668 (3475.02MHz), 633334 (3500.01MHz), 635000 (3525.00MHz)	50MHz	QPSK	1
		633334	633334 (3500.01MHz)	100MHz	QPSK	1

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, choose the lowest and highest channel bandwidth for final test.
3. Only output power, items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM and CP QPSK modes, the other test items were performed under worse mode according to the maximum output power.

LTE Band 5

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	20450 to 20600	20450 (829.0MHz), 20525 (836.5MHz), 20600 (844.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
-	Radiated Emission Below 1GHz	20450 to 20600	20525 (836.5MHz)	10MHz	QPSK	1
-	Radiated Emission Above 1GHz	20450 to 20600	20450 (829.0MHz), 20525 (836.5MHz), 20600 (844.0MHz)	10MHz	QPSK	1

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	132072 to 132572	132072 (1720.0MHz), 132322 (1745.0MHz), 132572 (1770.0MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
-	Radiated Emission Below 1GHz	132072 to 132572	132322 (1745.0MHz),	20MHz	QPSK	1
-	Radiated Emission Above 1GHz	132072 to 132572	132072 (1720.0MHz), 132322 (1745.0MHz), 132572 (1770.0MHz)	20MHz	QPSK	1

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP / ERP	25deg. C, 60%RH	120Vac, 60Hz (System)	Willy Cheng
Radiated Emission	24deg. C, 75%RH	120Vac, 60Hz (System)	Vincent Chen, Thomas Cheng

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:

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

FCC 47 CFR Part 24

FCC 47 CFR Part 27

ANSI/TIA/EIA-603-D-2010

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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 and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For n2:
Mobile / Portable station are limited to 2 watts e.i.r.p.

For n5/LTE 5:
Mobile / Portable station are limited to 7 watts e.r.p.

For n66/LTE 66:
Mobile / Portable station are limited to 1 watts e.i.r.p.

For n71:
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 n77/78:
Mobile and portable stations 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.

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.

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)

4.1.3 Test Setup

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

n2 + LTE Band 5:

NR Band 2						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**372000**	**376000**	**380000**
		Frequency (MHz)		**1860**	**1880**	**1900**
20M	DFT-S PI/2 BPSK	1	1	22.93	22.68	22.84
20M	DFT-S QPSK	1	1	22.92	22.88	22.68
		1	104	22.84	22.85	22.75
		50	25	22.98	22.80	22.80
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**371000**	**376000**	**381000**
		Frequency (MHz)		**1855**	**1880**	**1905**
10M	DFT-S PI/2 BPSK	1	1	22.83	22.80	22.77
10M	DFT-S QPSK	1	1	23.18	22.67	22.80
		1	50	22.95	22.85	22.84
		25	12	22.92	22.76	22.80
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**370500**	**376000**	**381500**
		Frequency (MHz)		**1852.5**	**1880**	**1907.5**
5M	DFT-S PI/2 BPSK	1	1	22.83	22.45	22.54
5M	DFT-S QPSK	1	1	23.09	22.81	22.80
		1	23	22.81	22.74	22.62
		12	6	22.88	22.69	22.80
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	-0.27	-0.25	-0.29
		1	49	-0.36	-0.33	-0.37
		50	0	-0.42	-0.39	-0.44

n5 + LTE Band 66:

NR Band 5						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**166800**	**167300**	**167800**
		Frequency (MHz)		**834**	**836.5**	**839**
20M	DFT-S PI/2 BPSK	1	1	22.98	22.99	22.93
20M	DFT-S QPSK	1	1	23.10	23.01	22.92
		1	104	23.02	22.88	22.88
		50	25	22.91	22.94	22.76
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**165800**	**167300**	**168800**
		Frequency (MHz)		**829**	**836.5**	**844**
10M	DFT-S PI/2 BPSK	1	1	22.85	22.88	22.86
10M	DFT-S QPSK	1	1	23.03	23.01	22.90
		1	50	22.91	22.86	22.97
		25	12	22.77	22.93	22.76
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**165300**	**167300**	**169300**
		Frequency (MHz)		**826.5**	**836.5**	**846.5**
5M	DFT-S PI/2 BPSK	1	1	22.97	22.88	22.93
5M	DFT-S QPSK	1	1	23.05	23.12	22.84
		1	23	22.93	22.99	22.89
		12	6	22.83	22.75	22.79
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	0.27	0.41	0.25
		1	99	0.36	0.35	0.3
		100	0	0.22	0.23	0.15

n66 + LTE Band 5:

NR Band 66						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**344000**	**349000**	**354000**
		Frequency (MHz)		**1720**	**1745**	**1770**
20M	DFT-S PI/2 BPSK	1	1	23.42	23.35	23.32
20M	DFT-S QPSK	1	1	23.46	23.33	23.48
		1	104	23.35	23.29	23.21
		50	25	23.58	23.42	23.38
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**343000**	**349000**	**355000**
		Frequency (MHz)		**1715**	**1745**	**1775**
10M	DFT-S PI/2 BPSK	1	1	23.43	23.35	23.15
10M	DFT-S QPSK	1	1	23.49	23.42	23.31
		1	50	23.33	23.34	23.24
		25	12	23.61	23.34	23.33
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**342500**	**349000**	**355500**
		Frequency (MHz)		**1712.5**	**1745**	**1777.5**
5M	DFT-S PI/2 BPSK	1	1	23.42	23.33	23.28
5M	DFT-S QPSK	1	1	23.47	23.32	23.42
		1	23	23.30	23.33	23.30
		12	6	23.40	23.45	23.33
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	-0.39	-0.38	-0.40
		1	49	-0.47	-0.4	-0.48
		50	0	-0.5	-45	-0.53

n71 + LTE Band 66:

NR Band 71						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**134600**	**136100**	**137600**
		Frequency (MHz)		**673**	**680.5**	**688**
20M	DFT-S PI/2 BPSK	1	1	22.66	22.43	22.28
20M	DFT-S QPSK	1	1	22.64	22.53	22.39
		1	104	22.64	22.57	22.42
		50	25	22.26	22.28	22.14
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**133600**	**136100**	**138600**
		Frequency (MHz)		**668**	**680.5**	**693**
10M	DFT-S PI/2 BPSK	1	1	22.46	22.43	22.39
10M	DFT-S QPSK	1	1	22.51	22.45	22.34
		1	50	22.54	22.48	22.37
		25	12	22.17	22.24	21.88
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**133100**	**136100**	**139100**
		Frequency (MHz)		**665.5**	**680.5**	**695.5**
5M	DFT-S PI/2 BPSK	1	1	22.64	22.27	22.51
5M	DFT-S QPSK	1	1	22.66	22.48	22.35
		1	23	22.52	22.53	22.36
		12	6	22.05	21.96	22.05
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	0.33	0.37	0.32
		1	99	0.28	0.30	0.27
		100	0	0.20	0.22	0.19

n77/78 (Part 27O) + LTE Band 5:

NR Band 77/78 (Part 27O)						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**650000**	**656000**	**662000**
		Frequency (MHz)		**3750**	**3840**	**3930**
100M	DFT-S PI/2 BPSK	1	1	23.10	22.82	22.52
100M	DFT-S QPSK	1	1	23.02	22.75	22.60
		1	137	22.88	23.00	22.51
		1	271	23.01	22.76	22.37
		135	0	21.73	21.52	21.46
		135	69	22.59	22.39	22.39
		135	138	21.57	21.47	21.34
		270	0	21.44	21.27	21.40
100M	DFT-S 16QAM	1	1	21.58	21.25	21.23
100M	DFT-S 64QAM	1	1	20.02	19.52	19.50
100M	DFT-S 256QAM	1	1	17.94	17.73	17.26
100M	CP QPSK	1	1	21.14	20.98	20.74
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**649668**	**656000**	**662332**
		Frequency (MHz)		**3745.02**	**3840**	**3934.98**
90M	DFT-S PI/2 BPSK	1	1	22.85	22.88	22.29
90M	DFT-S QPSK	1	1	22.85	22.87	22.50
		1	123	22.99	22.72	22.56
		1	243	22.92	22.80	22.55
		120	0	21.52	21.37	21.41
		120	63	22.62	22.49	22.28
		120	125	21.43	21.34	21.11
		243	0	21.81	21.63	21.47
90M	DFT-S 16QAM	1	1	21.83	22.00	21.41
90M	DFT-S 64QAM	1	1	20.45	20.38	19.91
90M	DFT-S 256QAM	1	1	18.61	18.34	17.95
90M	CP QPSK	1	1	20.95	21.12	20.73

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649334	656000	662666
		Frequency (MHz)		3740.01	3840	3939.99
80M	DFT-S PI/2 BPSK	1	1	23.03	22.92	22.40
80M	DFT-S QPSK	1	1	22.83	22.79	22.54
		1	109	23.01	22.79	22.47
		1	215	22.86	22.81	22.36
		108	0	21.43	21.38	21.42
		108	55	22.51	22.54	22.36
		108	109	21.61	21.39	21.19
		216	0	21.47	21.36	21.39
80M	DFT-S 16QAM	1	1	21.33	21.35	21.30
80M	DFT-S 64QAM	1	1	19.71	19.88	20.13
80M	DFT-S 256QAM	1	1	18.01	17.73	18.04
80M	CP QPSK	1	1	20.96	20.65	20.80
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649000	656000	663000
		Frequency (MHz)		3735	3840	3945
70M	DFT-S PI/2 BPSK	1	1	23.05	22.75	22.47
70M	DFT-S QPSK	1	1	22.95	22.97	22.48
		1	95	23.02	22.74	22.63
		1	187	22.81	22.76	22.47
		90	0	21.65	21.57	21.36
		90	50	22.75	22.47	22.47
		90	99	21.54	21.31	21.15
		180	0	22.05	21.76	21.54
70M	DFT-S 16QAM	1	1	21.86	21.99	21.37
70M	DFT-S 64QAM	1	1	20.33	20.17	19.85
70M	DFT-S 256QAM	1	1	18.28	18.23	17.77
70M	CP QPSK	1	1	20.85	21.04	20.77

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648668	656000	663332
		Frequency (MHz)		3730.02	3840	3949.98
60M	DFT-S PI/2 BPSK	1	1	22.94	22.83	22.68
60M	DFT-S QPSK	1	1	22.92	22.67	22.45
		1	81	22.97	22.68	22.41
		1	160	23.05	22.74	22.24
		81	0	21.61	21.47	21.37
		81	41	22.67	22.33	22.23
		81	81	21.57	21.21	21.15
		162	0	22.02	22.00	21.49
60M	DFT-S 16QAM	1	1	21.96	21.82	21.42
60M	DFT-S 64QAM	1	1	20.65	20.40	19.91
60M	DFT-S 256QAM	1	1	18.45	18.31	17.81
60M	CP QPSK	1	1	21.09	20.85	20.91
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648334	656000	663666
		Frequency (MHz)		3725.01	3840	3954.99
50M	DFT-S PI/2 BPSK	1	1	22.97	23.06	22.49
50M	DFT-S QPSK	1	1	23.05	22.72	22.44
		1	67	22.87	22.95	22.46
		1	131	22.89	22.71	22.42
		64	0	21.50	21.34	21.30
		64	35	22.57	22.59	22.25
		64	69	21.38	21.53	21.16
		128	0	21.43	21.28	21.24
50M	DFT-S 16QAM	1	1	21.32	21.44	21.19
50M	DFT-S 64QAM	1	1	20.55	20.34	19.89
50M	DFT-S 256QAM	1	1	18.42	18.28	17.77
50M	CP QPSK	1	1	21.16	20.85	20.63

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648000	656000	664000
		Frequency (MHz)		3720	3840	3960
40M	DFT-S PI/2 BPSK	1	1	23.06	22.66	22.46
40M	DFT-S QPSK	1	1	22.84	22.87	22.67
		1	53	22.85	22.85	22.54
		1	104	22.95	22.88	22.42
		50	0	21.63	21.54	21.19
		50	28	22.52	22.48	22.50
		50	56	21.52	21.40	21.23
		100	0	21.98	21.86	21.53
40M	DFT-S 16QAM	1	1	21.79	21.96	21.49
40M	DFT-S 64QAM	1	1	20.42	20.11	19.65
40M	DFT-S 256QAM	1	1	18.44	18.20	18.00
40M	CP QPSK	1	1	20.97	20.83	20.99
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647668	656000	664332
		Frequency (MHz)		3715.02	3840	3964.98
30M	DFT-S PI/2 BPSK	1	1	23.03	22.86	22.27
30M	DFT-S QPSK	1	1	22.97	22.83	22.49
		1	39	23.01	22.94	22.56
		1	76	22.77	22.75	22.36
		36	0	21.56	21.29	21.36
		36	21	22.47	22.37	22.52
		36	42	21.28	21.26	21.28
		75	0	21.92	21.73	21.38
30M	DFT-S 16QAM	1	1	22.00	21.80	21.43
30M	DFT-S 64QAM	1	1	20.52	20.13	19.74
30M	DFT-S 256QAM	1	1	18.46	18.22	18.03
30M	CP QPSK	1	1	21.03	21.00	20.91

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647334	656000	664666
		Frequency (MHz)		3710.01	3840	3969.99
20M	DFT-S PI/2 BPSK	1	1	23.03	22.74	22.46
20M	DFT-S QPSK	1	1	23.02	22.88	22.57
		1	26	22.89	22.66	22.58
		1	49	22.92	22.78	22.50
		25	0	21.45	21.57	21.23
		25	13	22.53	22.62	22.42
		25	26	21.34	21.36	21.39
		50	0	21.87	21.83	21.31
20M	DFT-S 16QAM	1	1	22.01	21.70	21.58
20M	DFT-S 64QAM	1	1	20.36	20.08	19.71
20M	DFT-S 256QAM	1	1	18.28	18.20	17.89
20M	CP QPSK	1	1	21.05	20.88	20.74
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	0.34	0.31	0.36
		1	49	0.25	0.22	0.26
		50	0	0.10	0.15	0.11

n77/78 (Part 27Q) + LTE Band 5:

NR Band 77/78_part27Q						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel			**633334**	
		Frequence (MHz)			**3500.01**	
100M	DFT-S PI/2 BPSK	1	1		22.86	
100M	DFT-S QPSK	1	1		22.64	
		1	137		23.06	
		1	271		22.70	
		135	0		21.53	
		135	69		22.35	
		135	138		21.36	
		270	0		21.24	
100M	DFT-S 16QAM	1	1		21.27	
100M	DFT-S 64QAM	1	1		19.42	
100M	DFT-S 256QAM	1	1		17.65	
100M	CP QPSK	1	1		20.99	
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**633000**	**633334**	**633666**
		Frequence (MHz)		**3495**	**3500.01**	**3504.99**
90M	DFT-S PI/2 BPSK	1	1	22.77	22.79	22.35
90M	DFT-S QPSK	1	1	22.91	22.79	22.50
		1	123	22.91	22.75	22.51
		1	243	22.82	22.74	22.44
		120	0	21.56	21.33	21.33
		120	63	22.55	22.50	22.24
		120	125	21.49	21.28	21.14
		243	0	21.71	21.56	21.36
90M	DFT-S 16QAM	1	1	21.73	22.02	21.42
90M	DFT-S 64QAM	1	1	20.51	20.44	19.86
90M	DFT-S 256QAM	1	1	18.64	18.33	18.00
90M	CP QPSK	1	1	20.93	21.06	20.79

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		633000	633334	633666
		Frequence (MHz)		3495	3500.01	3504.99
80M	DFT-S PI/2 BPSK	1	1	22.92	22.83	22.43
80M	DFT-S QPSK	1	1	22.74	22.81	22.56
		1	109	22.91	22.81	22.50
		1	215	22.86	22.79	22.39
		108	0	21.44	21.37	21.33
		108	55	22.49	22.48	22.31
		108	109	21.65	21.32	21.23
		216	0	21.46	21.42	21.43
80M	DFT-S 16QAM	1	1	21.27	21.27	21.31
80M	DFT-S 64QAM	1	1	19.66	19.92	20.14
80M	DFT-S 256QAM	1	1	18.02	17.69	18.03
80M	CP QPSK	1	1	20.90	20.68	20.69
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632334	633334	634332
		Frequence (MHz)		3485.01	3500.01	3514.98
70M	DFT-S PI/2 BPSK	1	1	22.85	22.73	22.51
70M	DFT-S QPSK	1	1	22.87	22.98	22.53
		1	95	22.98	22.80	22.65
		1	187	22.71	22.66	22.53
		90	0	21.67	21.46	21.29
		90	50	22.78	22.51	22.40
		90	99	21.59	21.25	21.10
		180	0	22.05	21.79	21.60
70M	DFT-S 16QAM	1	1	21.77	22.00	21.30
70M	DFT-S 64QAM	1	1	20.34	20.14	19.91
70M	DFT-S 256QAM	1	1	18.22	18.25	17.67
70M	CP QPSK	1	1	20.87	21.02	20.80

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632000	633334	634666
		Frequence (MHz)		3480	3500.01	3519.99
60M	DFT-S PI/2 BPSK	1	1	22.98	22.80	22.62
60M	DFT-S QPSK	1	1	22.81	22.63	22.44
		1	81	22.96	22.62	22.36
		1	160	23.03	22.77	22.15
		81	0	21.59	21.36	21.29
		81	41	22.64	22.30	22.17
		81	81	21.58	21.20	21.13
		162	0	21.92	22.02	21.45
60M	DFT-S 16QAM	1	1	21.86	21.85	21.41
60M	DFT-S 64QAM	1	1	20.67	20.30	19.87
60M	DFT-S 256QAM	1	1	18.43	18.31	17.80
60M	CP QPSK	1	1	21.15	20.87	20.87
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-S PI/2 BPSK	1	1	23.01	23.01	22.41
50M	DFT-S QPSK	1	1	22.98	22.65	22.49
		1	67	22.89	22.95	22.45
		1	131	22.90	22.61	22.42
		64	0	21.56	21.38	21.30
		64	35	22.54	22.63	22.17
		64	69	21.33	21.49	21.09
		128	0	21.36	21.33	21.13
50M	DFT-S 16QAM	1	1	21.30	21.41	21.20
50M	DFT-S 64QAM	1	1	20.63	20.26	19.81
50M	DFT-S 256QAM	1	1	18.39	18.22	17.77
50M	CP QPSK	1	1	21.08	20.76	20.59

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-S PI/2 BPSK	1	1	23.04	22.63	22.43
40M	DFT-S QPSK	1	1	22.85	22.80	22.58
		1	53	22.90	22.78	22.52
		1	104	22.94	22.92	22.44
		50	0	21.69	21.47	21.23
		50	28	22.43	22.53	22.52
		50	56	21.54	21.33	21.12
		100	0	21.99	21.85	21.58
40M	DFT-S 16QAM	1	1	21.71	21.87	21.39
40M	DFT-S 64QAM	1	1	20.39	20.10	19.71
40M	DFT-S 256QAM	1	1	18.32	18.15	17.90
40M	CP QPSK	1	1	20.94	20.87	20.90
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-S PI/2 BPSK	1	1	23.03	22.90	22.20
30M	DFT-S QPSK	1	1	23.01	22.85	22.55
		1	39	23.06	22.97	22.48
		1	76	22.71	22.72	22.34
		36	0	21.62	21.26	21.29
		36	21	22.50	22.39	22.47
		36	42	21.19	21.16	21.23
		75	0	21.93	21.76	21.34
30M	DFT-S 16QAM	1	1	22.02	21.81	21.43
30M	DFT-S 64QAM	1	1	20.43	20.11	19.77
30M	DFT-S 256QAM	1	1	18.36	18.25	17.97
30M	CP QPSK	1	1	20.92	20.94	20.92

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-S PI/2 BPSK	1	1	22.95	22.67	22.48
20M	DFT-S QPSK	1	1	22.89	22.83	22.53
		1	26	22.87	22.71	22.57
		1	49	22.91	22.72	22.51
		25	0	21.49	21.53	21.23
		25	13	22.52	22.67	22.39
		25	26	21.28	21.40	21.35
		50	0	21.86	21.87	21.20
20M	DFT-S 16QAM	1	1	21.95	21.69	21.51
20M	DFT-S 64QAM	1	1	20.41	20.09	19.70
20M	DFT-S 256QAM	1	1	18.30	18.22	17.90
20M	CP QPSK	1	1	20.97	20.86	20.80
LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequence (MHz)		829	836.5	844
10M	QPSK	1	0	0.25	0.31	0.28
		1	49	0.17	0.22	0.12
		50	0	-0.13	-0.03	-0.10

EIRP / ERP Power (dBm)

n2 + LTE Band 5:

NR Band 2						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**372000**	**376000**	**380000**
		Frequency (MHz)		**1860**	**1880**	**1900**
20M	DFT-S PI/2 BPSK	1	1	25.41	25.16	25.32
20M	DFT-S QPSK	1	1	25.40	25.36	25.16
		1	104	25.32	25.33	25.23
		50	25	25.46	25.28	25.28
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**371000**	**376000**	**381000**
		Frequency (MHz)		**1855**	**1880**	**1905**
10M	DFT-S PI/2 BPSK	1	1	25.31	25.28	25.25
10M	DFT-S QPSK	1	1	25.66	25.15	25.28
		1	50	25.43	25.33	25.32
		25	12	25.40	25.24	25.28
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**370500**	**376000**	**381500**
		Frequency (MHz)		**1852.5**	**1880**	**1907.5**
5M	DFT-S PI/2 BPSK	1	1	25.31	24.93	25.02
5M	DFT-S QPSK	1	1	25.57	25.29	25.28
		1	23	25.29	25.22	25.10
		12	6	25.36	25.17	25.28

*EIRP = Conducted + antenna gain (2.48dBi)

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	-3.11	-3.09	-3.13
		1	49	-3.20	-3.17	-3.21
		50	0	-3.26	-3.23	-3.28

*ERP = Conducted + antenna gain (-0.69dBi) – 2.15

n5 + LTE Band 66:

NR Band 5						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**166800**	**167300**	**167800**
		Frequency (MHz)		**834**	**836.5**	**839**
20M	DFT-S PI/2 BPSK	1	1	20.14	20.15	20.09
20M	DFT-S QPSK	1	1	20.26	20.17	20.08
		1	104	20.18	20.04	20.04
		50	25	20.07	20.10	19.92
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**165800**	**167300**	**168800**
		Frequency (MHz)		**829**	**836.5**	**844**
10M	DFT-S PI/2 BPSK	1	1	20.01	20.04	20.02
10M	DFT-S QPSK	1	1	20.19	20.17	20.06
		1	50	20.07	20.02	20.13
		25	12	19.93	20.09	19.92
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**165300**	**167300**	**169300**
		Frequency (MHz)		**826.5**	**836.5**	**846.5**
5M	DFT-S PI/2 BPSK	1	1	20.13	20.04	20.09
5M	DFT-S QPSK	1	1	20.21	20.28	20.00
		1	23	20.09	20.15	20.05
		12	6	19.99	19.91	19.95

*ERP = Conducted + antenna gain (-0.69dBi) – 2.15

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	2.55	2.69	2.53
		1	99	2.64	2.63	2.58
		100	0	2.50	2.51	2.43

*EIRP = Conducted + antenna gain (2.28dBi)

n66 + LTE Band 5:

NR Band 66						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**344000**	**349000**	**354000**
		Frequency (MHz)		**1720**	**1745**	**1770**
20M	DFT-S PI/2 BPSK	1	1	25.70	25.63	25.60
20M	DFT-S QPSK	1	1	25.74	25.61	25.76
		1	104	25.63	25.57	25.49
		50	25	25.86	25.70	25.66
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**343000**	**349000**	**355000**
		Frequency (MHz)		**1715**	**1745**	**1775**
10M	DFT-S PI/2 BPSK	1	1	25.71	25.63	25.43
10M	DFT-S QPSK	1	1	25.77	25.70	25.59
		1	50	25.61	25.62	25.52
		25	12	25.89	25.62	25.61
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**342500**	**349000**	**355500**
		Frequency (MHz)		**1712.5**	**1745**	**1777.5**
5M	DFT-S PI/2 BPSK	1	1	25.70	25.61	25.56
5M	DFT-S QPSK	1	1	25.75	25.60	25.70
		1	23	25.58	25.61	25.58
		12	6	25.68	25.73	25.61

*EIRP = Conducted + antenna gain (2.28dBi)

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	-3.23	-3.22	-3.24
		1	49	-3.31	-3.24	-3.32
		50	0	-3.34	-47.84	-3.37

*ERP = Conducted + antenna gain (-0.69dBi) – 2.15

n71 + LTE Band 66:

NR Band 71						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**134600**	**136100**	**137600**
		Frequency (MHz)		**673**	**680.5**	**688**
20M	DFT-S PI/2 BPSK	1	1	23.16	22.93	22.78
20M	DFT-S QPSK	1	1	23.14	23.03	22.89
		1	104	23.14	23.07	22.92
		50	25	22.76	22.78	22.64
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**133600**	**136100**	**138600**
		Frequency (MHz)		**668**	**680.5**	**693**
10M	DFT-S PI/2 BPSK	1	1	22.96	22.93	22.89
10M	DFT-S QPSK	1	1	23.01	22.95	22.84
		1	50	23.04	22.98	22.87
		25	12	22.67	22.74	22.38
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**133100**	**136100**	**139100**
		Frequency (MHz)		**665.5**	**680.5**	**695.5**
5M	DFT-S PI/2 BPSK	1	1	23.14	22.77	23.01
5M	DFT-S QPSK	1	1	23.16	22.98	22.85
		1	23	23.02	23.03	22.86
		12	6	21.75	21.64	21.55

*ERP = Conducted + antenna gain (2.65dBi) – 2.15

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	2.61	2.65	2.60
		1	99	2.56	2.58	2.55
		100	0	2.48	2.50	2.47

*EIRP = Conducted + antenna gain (2.28dBi)

n77 + LTE Band 5:

NR Band 77/78 (Part 27O)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequency (MHz)		3750	3840	3930
100M	DFT-S PI/2 BPSK	1	1	24.09	23.81	23.51
100M	DFT-S QPSK	1	1	24.01	23.74	23.59
		1	137	23.87	23.99	23.50
		1	271	24.00	23.75	23.36
		135	0	22.72	22.51	22.45
		135	69	23.58	23.38	23.38
		135	138	22.56	22.46	22.33
		270	0	22.43	22.26	22.39
100M	DFT-S 16QAM	1	1	22.57	22.24	22.22
100M	DFT-S 64QAM	1	1	21.01	20.51	20.49
100M	DFT-S 256QAM	1	1	18.93	18.72	18.25
100M	CP QPSK	1	1	22.13	21.97	21.73
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649668	656000	662332
		Frequency (MHz)		3745.02	3840	3934.98
90M	DFT-S PI/2 BPSK	1	1	23.84	23.87	23.28
90M	DFT-S QPSK	1	1	23.84	23.86	23.49
		1	123	23.98	23.71	23.55
		1	243	23.91	23.79	23.54
		120	0	22.51	22.36	22.40
		120	63	23.61	23.48	23.27
		120	125	22.42	22.33	22.10
		243	0	22.80	22.62	22.46
90M	DFT-S 16QAM	1	1	22.82	22.99	22.40
90M	DFT-S 64QAM	1	1	21.44	21.37	20.90
90M	DFT-S 256QAM	1	1	19.60	19.33	18.94
90M	CP QPSK	1	1	21.94	22.11	21.72

*EIRP = Conducted + antenna gain (0.99dBi)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649334	656000	662666
		Frequency (MHz)		3740.01	3840	3939.99
80M	DFT-S PI/2 BPSK	1	1	24.02	23.91	23.39
80M	DFT-S QPSK	1	1	23.82	23.78	23.53
		1	109	24.00	23.78	23.46
		1	215	23.85	23.80	23.35
		108	0	22.42	22.37	22.41
		108	55	23.50	23.53	23.35
		108	109	22.60	22.38	22.18
		216	0	22.46	22.35	22.38
80M	DFT-S 16QAM	1	1	22.32	22.34	22.29
80M	DFT-S 64QAM	1	1	20.70	20.87	21.12
80M	DFT-S 256QAM	1	1	19.00	18.72	19.03
80M	CP QPSK	1	1	21.95	21.64	21.79
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		649000	656000	663000
		Frequency (MHz)		3735	3840	3945
70M	DFT-S PI/2 BPSK	1	1	24.04	23.74	23.46
70M	DFT-S QPSK	1	1	23.94	23.96	23.47
		1	95	24.01	23.73	23.62
		1	187	23.80	23.75	23.46
		90	0	22.64	22.56	22.35
		90	50	23.74	23.46	23.46
		90	99	22.53	22.30	22.14
		180	0	23.04	22.75	22.53
70M	DFT-S 16QAM	1	1	22.85	22.98	22.36
70M	DFT-S 64QAM	1	1	21.32	21.16	20.84
70M	DFT-S 256QAM	1	1	19.27	19.22	18.76
70M	CP QPSK	1	1	21.84	22.03	21.76

*EIRP = Conducted + antenna gain (0.99dBi)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648668	656000	663332
		Frequency (MHz)		3730.02	3840	3949.98
60M	DFT-S PI/2 BPSK	1	1	23.93	23.82	23.67
60M	DFT-S QPSK	1	1	23.91	23.66	23.44
		1	81	23.96	23.67	23.40
		1	160	24.04	23.73	23.23
		81	0	22.60	22.46	22.36
		81	41	23.66	23.32	23.22
		81	81	22.56	22.20	22.14
		162	0	23.01	22.99	22.48
60M	DFT-S 16QAM	1	1	22.95	22.81	22.41
60M	DFT-S 64QAM	1	1	21.64	21.39	20.90
60M	DFT-S 256QAM	1	1	19.44	19.30	18.80
60M	CP QPSK	1	1	22.08	21.84	21.90
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648334	656000	663666
		Frequency (MHz)		3725.01	3840	3954.99
50M	DFT-S PI/2 BPSK	1	1	23.96	24.05	23.48
50M	DFT-S QPSK	1	1	24.04	23.71	23.43
		1	67	23.86	23.94	23.45
		1	131	23.88	23.70	23.41
		64	0	22.49	22.33	22.29
		64	35	23.56	23.58	23.24
		64	69	22.37	22.52	22.15
		128	0	22.42	22.27	22.23
50M	DFT-S 16QAM	1	1	22.31	22.43	22.18
50M	DFT-S 64QAM	1	1	21.54	21.33	20.88
50M	DFT-S 256QAM	1	1	19.41	19.27	18.76
50M	CP QPSK	1	1	22.15	21.84	21.62

*EIRP = Conducted + antenna gain (0.99dBi)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		648000	656000	664000
		Frequency (MHz)		3720	3840	3960
40M	DFT-S PI/2 BPSK	1	1	24.05	23.65	23.45
40M	DFT-S QPSK	1	1	23.83	23.86	23.66
		1	53	23.84	23.84	23.53
		1	104	23.94	23.87	23.41
		50	0	22.62	22.53	22.18
		50	28	23.51	23.47	23.49
		50	56	22.51	22.39	22.22
		100	0	22.97	22.85	22.52
40M	DFT-S 16QAM	1	1	22.78	22.95	22.48
40M	DFT-S 64QAM	1	1	21.41	21.10	20.64
40M	DFT-S 256QAM	1	1	19.43	19.19	18.99
40M	CP QPSK	1	1	21.96	21.82	21.98
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647668	656000	664332
		Frequency (MHz)		3715.02	3840	3964.98
30M	DFT-S PI/2 BPSK	1	1	24.02	23.85	23.26
30M	DFT-S QPSK	1	1	23.96	23.82	23.48
		1	39	24.00	23.93	23.55
		1	76	23.76	23.74	23.35
		36	0	22.55	22.28	22.35
		36	21	23.46	23.36	23.51
		36	42	22.27	22.25	22.27
		75	0	22.91	22.72	22.37
30M	DFT-S 16QAM	1	1	22.99	22.79	22.42
30M	DFT-S 64QAM	1	1	21.51	21.12	20.73
30M	DFT-S 256QAM	1	1	19.45	19.21	19.02
30M	CP QPSK	1	1	22.02	21.99	21.90

*EIRP = Conducted + antenna gain (0.99dBi)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		647334	656000	664666
		Frequency (MHz)		3710.01	3840	3969.99
20M	DFT-S PI/2 BPSK	1	1	24.02	23.73	23.45
20M	DFT-S QPSK	1	1	24.01	23.87	23.56
		1	26	23.88	23.65	23.57
		1	49	23.91	23.77	23.49
		25	0	22.44	22.56	22.22
		25	13	23.52	23.61	23.41
		25	26	22.33	22.35	22.38
		50	0	22.86	22.82	22.30
20M	DFT-S 16QAM	1	1	23.00	22.69	22.57
20M	DFT-S 64QAM	1	1	21.35	21.07	20.70
20M	DFT-S 256QAM	1	1	19.27	19.19	18.88
20M	CP QPSK	1	1	22.04	21.87	21.73

*EIRP = Conducted + antenna gain (0.99dBi)

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	-2.50	-2.53	-2.48
		1	49	-2.59	-2.62	-2.58
		50	0	-2.74	-2.69	-2.73

*ERP = Conducted + antenna gain (-0.69dBi) – 2.15

NR Band 77/78 (Part 27Q)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel			633334	
		Frequence (MHz)			3500.01	
100M	DFT-S PI/2 BPSK	1	1		23.85	
100M	DFT-S QPSK	1	1		23.63	
		1	137		24.05	
		1	271		23.69	
		135	0		22.52	
		135	69		23.34	
		135	138		22.35	
		270	0		22.23	
100M	DFT-S 16QAM	1	1		22.26	
100M	DFT-S 64QAM	1	1		20.41	
100M	DFT-S 256QAM	1	1		18.64	
100M	CP QPSK	1	1		21.98	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		633000	633334	633666
		Frequence (MHz)		3495	3500.01	3504.99
90M	DFT-S PI/2 BPSK	1	1	23.76	23.78	23.34
90M	DFT-S QPSK	1	1	23.90	23.78	23.49
		1	123	23.90	23.74	23.50
		1	243	23.81	23.73	23.43
		120	0	22.55	22.32	22.32
		120	63	23.54	23.49	23.23
		120	125	22.48	22.27	22.13
		243	0	22.70	22.55	22.35
90M	DFT-S 16QAM	1	1	22.72	23.01	22.41
90M	DFT-S 64QAM	1	1	21.50	21.43	20.85
90M	DFT-S 256QAM	1	1	19.63	19.32	18.99
90M	CP QPSK	1	1	21.92	22.05	21.78

*ERP = Conducted + antenna gain (0.99dBi) – 2.15

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		633000	633334	633666
		Frequence (MHz)		3495	3500.01	3504.99
80M	DFT-S PI/2 BPSK	1	1	23.91	23.82	23.42
80M	DFT-S QPSK	1	1	23.73	23.80	23.55
		1	109	23.90	23.80	23.49
		1	215	23.85	23.78	23.38
		108	0	22.43	22.36	22.32
		108	55	23.48	23.47	23.30
		108	109	22.64	22.31	22.22
		216	0	22.45	22.41	22.42
80M	DFT-S 16QAM	1	1	22.26	22.26	22.30
80M	DFT-S 64QAM	1	1	20.65	20.91	21.13
80M	DFT-S 256QAM	1	1	19.01	18.68	19.02
80M	CP QPSK	1	1	21.89	21.67	21.68
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632334	633334	634332
		Frequence (MHz)		3485.01	3500.01	3514.98
70M	DFT-S PI/2 BPSK	1	1	23.84	23.72	23.50
70M	DFT-S QPSK	1	1	23.86	23.97	23.52
		1	95	23.97	23.79	23.64
		1	187	23.70	23.65	23.52
		90	0	22.66	22.45	22.28
		90	50	23.77	23.50	23.39
		90	99	22.58	22.24	22.09
		180	0	23.04	22.78	22.59
70M	DFT-S 16QAM	1	1	22.76	22.99	22.29
70M	DFT-S 64QAM	1	1	21.33	21.13	20.90
70M	DFT-S 256QAM	1	1	19.21	19.24	18.66
70M	CP QPSK	1	1	21.86	22.01	21.79

*ERP = Conducted + antenna gain (0.99dBi) – 2.15

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		632000	633334	634666
		Frequence (MHz)		3480	3500.01	3519.99
60M	DFT-S PI/2 BPSK	1	1	23.97	23.79	23.61
60M	DFT-S QPSK	1	1	23.80	23.62	23.43
		1	81	23.95	23.61	23.35
		1	160	24.02	23.76	23.14
		81	0	22.58	22.35	22.28
		81	41	23.63	23.29	23.16
		81	81	22.57	22.19	22.12
		162	0	22.91	23.01	22.44
60M	DFT-S 16QAM	1	1	22.85	22.84	22.40
60M	DFT-S 64QAM	1	1	21.66	21.29	20.86
60M	DFT-S 256QAM	1	1	19.42	19.30	18.79
60M	CP QPSK	1	1	22.14	21.86	21.86
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-S PI/2 BPSK	1	1	24.00	24.00	23.40
50M	DFT-S QPSK	1	1	23.97	23.64	23.48
		1	67	23.88	23.94	23.44
		1	131	23.89	23.60	23.41
		64	0	22.55	22.37	22.29
		64	35	23.53	23.62	23.16
		64	69	22.32	22.48	22.08
		128	0	22.35	22.32	22.12
50M	DFT-S 16QAM	1	1	22.29	22.40	22.19
50M	DFT-S 64QAM	1	1	21.62	21.25	20.80
50M	DFT-S 256QAM	1	1	19.38	19.21	18.76
50M	CP QPSK	1	1	22.07	21.75	21.58

*ERP = Conducted + antenna gain (0.99dBi) – 2.15

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-S PI/2 BPSK	1	1	24.03	23.62	23.42
40M	DFT-S QPSK	1	1	23.84	23.79	23.57
		1	53	23.89	23.77	23.51
		1	104	23.93	23.91	23.43
		50	0	22.68	22.46	22.22
		50	28	23.42	23.52	23.51
		50	56	22.53	22.32	22.11
		100	0	22.98	22.84	22.57
40M	DFT-S 16QAM	1	1	22.70	22.86	22.38
40M	DFT-S 64QAM	1	1	21.38	21.09	20.70
40M	DFT-S 256QAM	1	1	19.31	19.14	18.89
40M	CP QPSK	1	1	21.93	21.86	21.89
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-S PI/2 BPSK	1	1	24.02	23.89	23.19
30M	DFT-S QPSK	1	1	24.00	23.84	23.54
		1	39	24.05	23.96	23.47
		1	76	23.70	23.71	23.33
		36	0	22.61	22.25	22.28
		36	21	23.49	23.38	23.46
		36	42	22.18	22.15	22.22
		75	0	22.92	22.75	22.33
30M	DFT-S 16QAM	1	1	23.01	22.80	22.42
30M	DFT-S 64QAM	1	1	21.42	21.10	20.76
30M	DFT-S 256QAM	1	1	19.35	19.24	18.96
30M	CP QPSK	1	1	21.91	21.93	21.91

*ERP = Conducted + antenna gain (0.99dBi) – 2.15

BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-S PI/2 BPSK	1	1	23.94	23.66	23.47
20M	DFT-S QPSK	1	1	23.88	23.82	23.52
		1	26	23.86	23.70	23.56
		1	49	23.90	23.71	23.50
		25	0	22.48	22.52	22.22
		25	13	23.51	23.66	23.38
		25	26	22.27	22.39	22.34
		50	0	22.85	22.86	22.19
20M	DFT-S 16QAM	1	1	22.94	22.68	22.50
20M	DFT-S 64QAM	1	1	21.40	21.08	20.69
20M	DFT-S 256QAM	1	1	19.29	19.21	18.89
20M	CP QPSK	1	1	21.96	21.85	21.79

*ERP = Conducted + antenna gain (0.99dBi) – 2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequence (MHz)		829	836.5	844
10M	QPSK	1	0	-2.59	-2.53	-2.56
		1	49	-2.67	-2.62	-2.72
		50	0	-2.97	-2.87	-2.94

*ERP = Conducted + antenna gain (-0.69dBi) – 2.15

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For n2, n5, n66, LTE Band 5, LTE Band 66:
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 n71:
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. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For 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.

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.

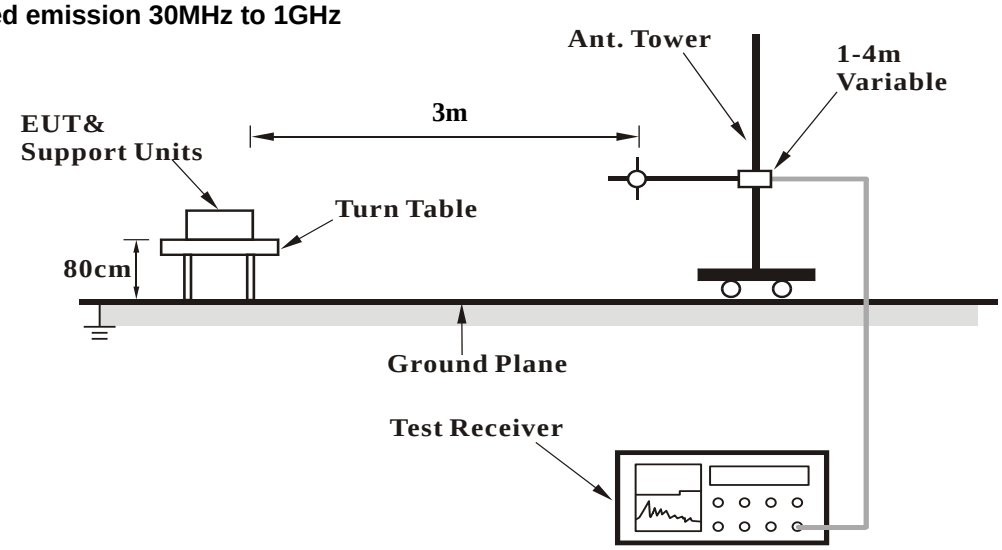
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

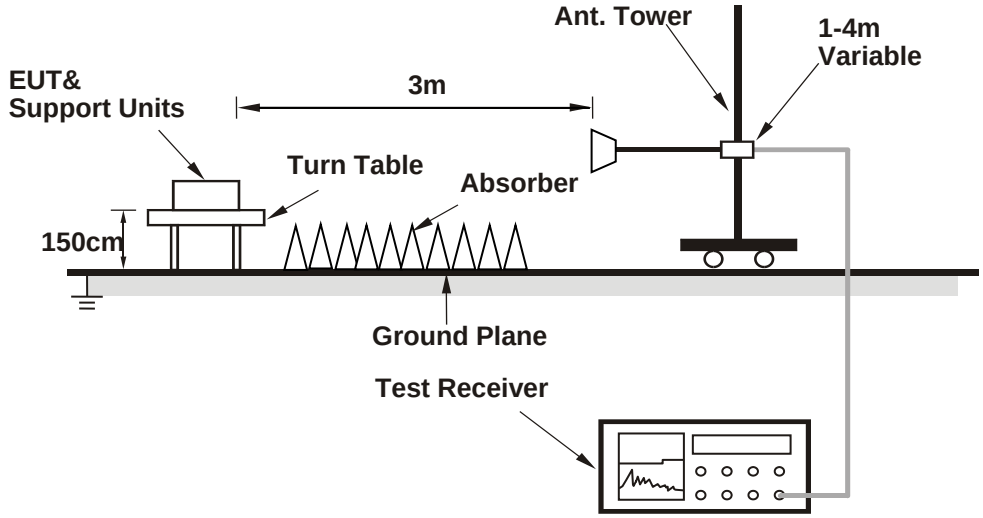
No deviation.

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:

n2 + LTE Band 5

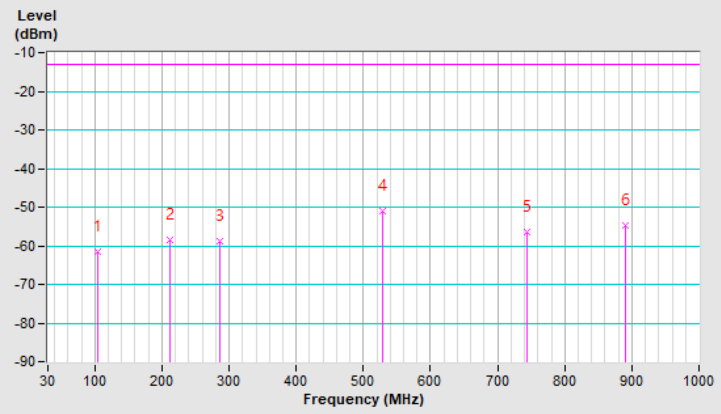
n2, Channel Bandwidth 20MHz

Mode	TX channel 376000 (1880MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	104.69	-61.68	-13.00	-48.68	1.00 H	24	49.51	-111.19
2	211.39	-58.42	-13.00	-45.42	1.50 H	134	52.50	-110.92
3	287.05	-58.69	-13.00	-45.69	2.00 H	250	48.62	-107.31
4	**529.55**	**-51.13**	**-13.00**	**-38.13**	**1.50 H**	**96**	**50.42**	**-101.55**
5	742.95	-56.29	-13.00	-43.29	1.00 H	11	41.20	-97.49
6	890.39	-54.67	-13.00	-41.67	1.50 H	55	41.71	-96.38

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

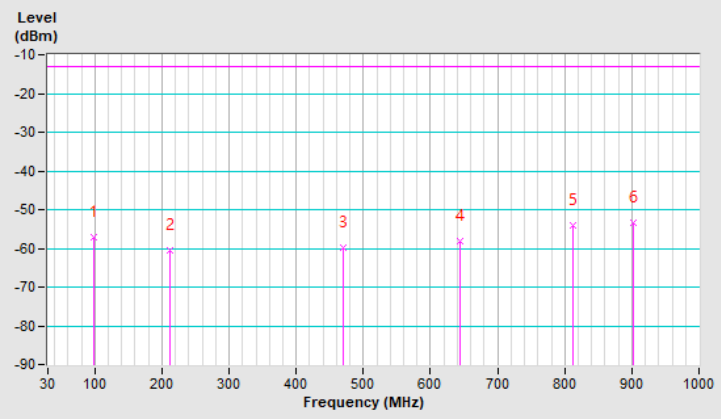


Mode	TX channel 376000 (1880MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical 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	97.90	-57.24	-13.00	-44.24	1.00 V	51	55.13	-112.37
2	211.39	-60.46	-13.00	-47.46	2.00 V	80	50.46	-110.92
3	470.38	-59.97	-13.00	-46.97	1.50 V	319	42.88	-102.85
4	644.01	-58.11	-13.00	-45.11	1.50 V	89	41.47	-99.58
5	812.79	-54.07	-13.00	-41.07	1.50 V	164	42.75	-96.82
6	902.03	-53.40	-13.00	-40.40	2.00 V	136	42.90	-96.30

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



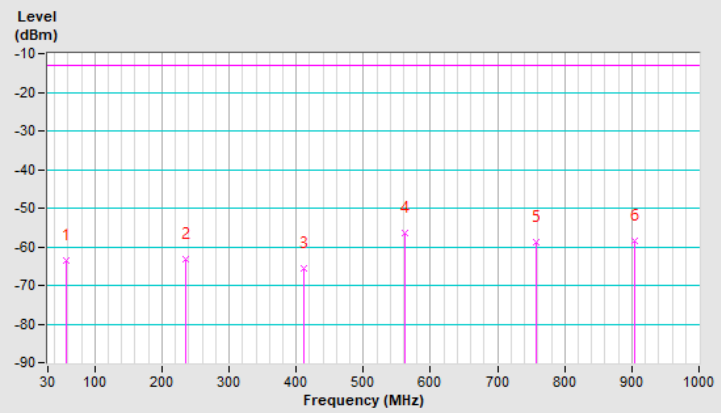
LTE 5, Channel Bandwidth 10MHz

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	57.16	-63.47	-13.00	-50.47	2.00 H	104	46.72	-110.19
2	235.64	-63.11	-13.00	-50.11	1.50 H	159	48.64	-111.75
3	411.21	-65.76	-13.00	-52.76	1.00 H	2	40.92	-106.68
4	561.56	-56.40	-13.00	-43.40	1.00 H	269	47.16	-103.56
5	756.53	-58.82	-13.00	-45.82	1.50 H	40	40.43	-99.25
6	904.94	-58.33	-13.00	-45.33	1.50 H	295	40.07	-98.40

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

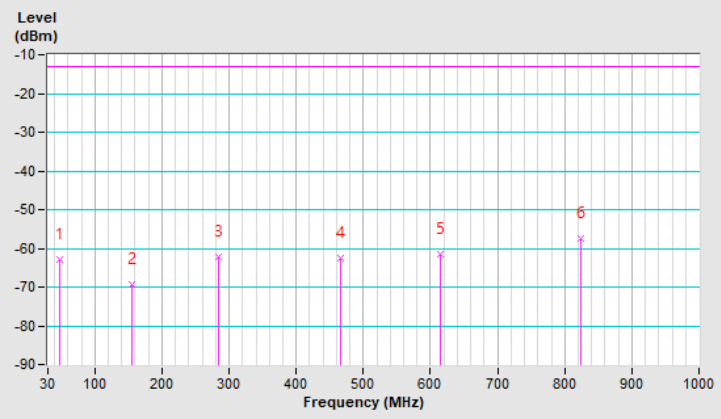


Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	48.43	-62.77	-13.00	-49.77	2.00 V	296	46.86	-109.63
2	156.10	-69.26	-13.00	-56.26	1.50 V	349	40.62	-109.88
3	285.11	-62.25	-13.00	-49.25	2.00 V	186	47.25	-109.50
4	465.53	-62.54	-13.00	-49.54	1.50 V	336	42.58	-105.12
5	613.94	-61.69	-13.00	-48.69	1.50 V	339	40.68	-102.37
6	823.46	-57.46	-13.00	-44.46	1.00 V	150	41.42	-98.88

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



n5 + LTE Band 66

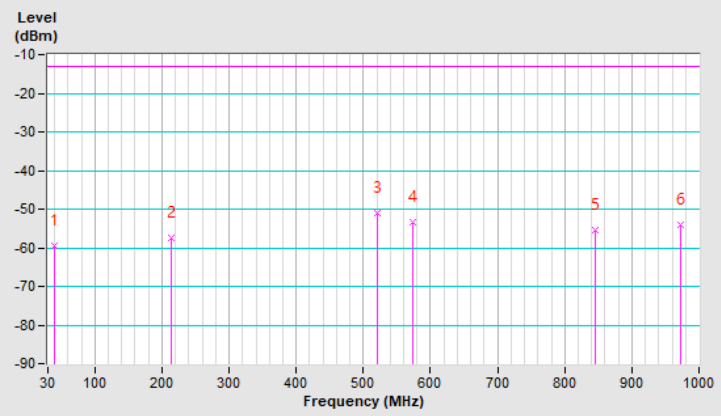
n5, Channel Bandwidth 5MHz

Mode	TX channel 167300 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	40.67	-59.48	-13.00	-46.48	1.00 H	264	50.37	-109.85
2	213.33	-57.33	-13.00	-44.33	1.50 H	142	55.75	-113.08
3	521.79	-51.17	-13.00	-38.17	1.00 H	116	52.66	-103.83
4	574.17	-53.36	-13.00	-40.36	1.00 H	171	49.97	-103.33
5	845.77	-55.39	-13.00	-42.39	1.50 H	153	43.58	-98.97
6	972.84	-54.07	-13.00	-41.07	1.00 H	114	43.38	-97.45

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

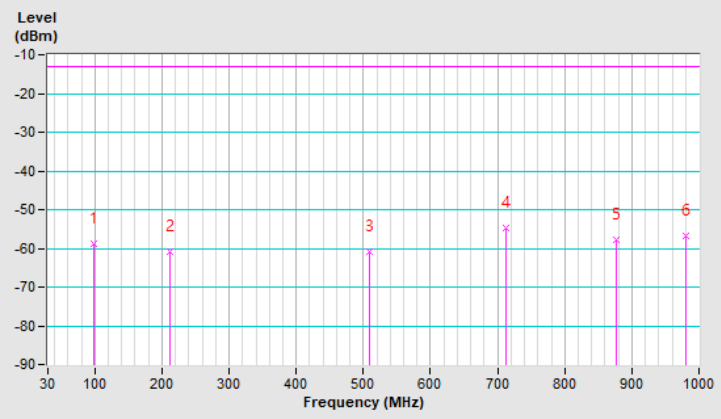


Mode	TX channel 167300 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	98.87	-58.82	-13.00	-45.82	1.50 V	204	55.53	-114.35
2	212.36	-60.90	-13.00	-47.90	1.50 V	75	52.18	-113.08
3	509.18	-60.93	-13.00	-47.93	2.00 V	265	43.08	-104.01
4	711.91	-54.77	-13.00	-41.77	1.50 V	332	46.27	-101.04
5	875.84	-57.67	-13.00	-44.67	2.00 V	169	41.08	-98.75
6	979.63	-56.73	-13.00	-43.73	1.00 V	92	40.63	-97.36

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



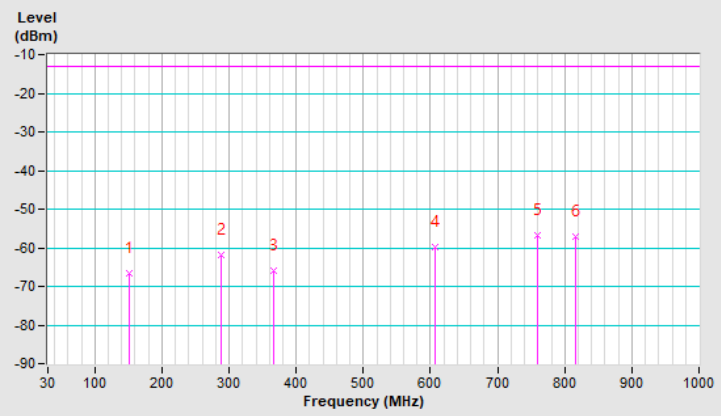
LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132322 (1745MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	150.28	-66.52	-13.00	-53.52	1.00 H	263	41.14	-107.66
2	288.99	-61.99	-13.00	-48.99	1.50 H	248	45.27	-107.26
3	365.62	-65.80	-13.00	-52.80	2.00 H	4	39.76	-105.56
4	607.15	-59.96	-13.00	-46.96	1.50 H	73	40.50	-100.46
5	760.41	-56.93	-13.00	-43.93	2.00 H	331	40.12	-97.05
6	815.70	-57.23	-13.00	-44.23	1.00 H	140	39.55	-96.78

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

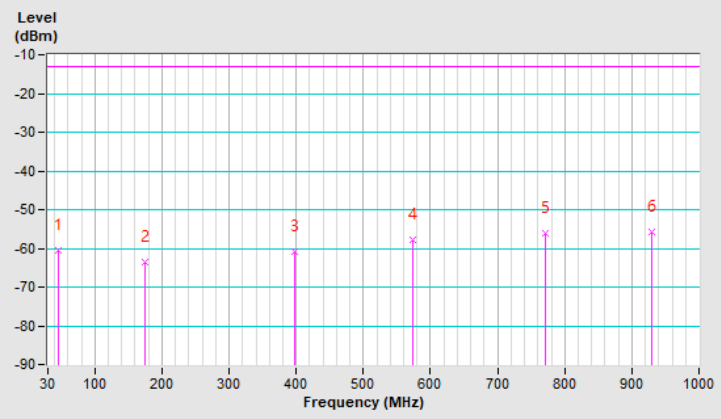


Mode	TX channel 132322 (1745MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical 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	45.52	-60.62	-13.00	-47.62	1.00 V	224	46.84	-107.46
2	175.50	-63.45	-13.00	-50.45	1.50 V	300	45.33	-108.78
3	397.63	-60.89	-13.00	-47.89	1.00 V	358	43.93	-104.82
4	574.17	-57.90	-13.00	-44.90	1.50 V	180	43.28	-101.18
5	771.08	-56.08	-13.00	-43.08	2.00 V	200	40.98	-97.06
6	930.16	-55.75	-13.00	-42.75	1.50 V	230	40.23	-95.98

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



n66 + LTE Band 5:

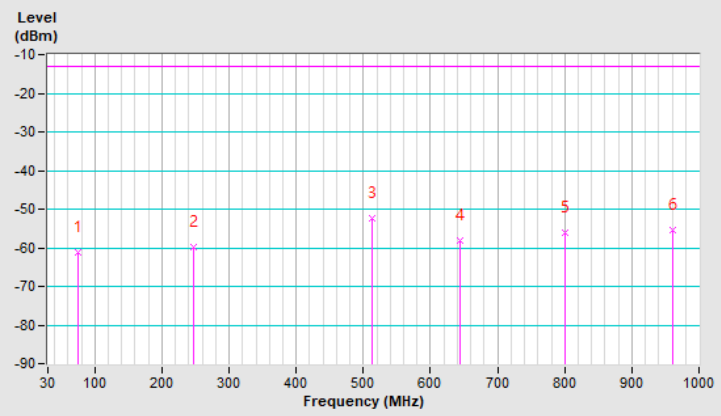
n66, Channel Bandwidth: 5MHz

Mode	TX channel 355500 (1777.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	74.62	-61.27	-13.00	-48.27	1.00 H	163	49.30	-110.57
2	246.31	-59.74	-13.00	-46.74	1.50 H	233	49.24	-108.98
3	**513.06**	**-52.46**	**-13.00**	**-39.46**	**2.00 H**	**194**	**49.33**	**-101.79**
4	644.98	-58.00	-13.00	-45.00	1.50 H	243	41.57	-99.57
5	801.15	-56.12	-13.00	-43.12	1.00 H	160	40.57	-96.69
6	960.23	-55.56	-13.00	-42.56	1.50 H	64	39.94	-95.50

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

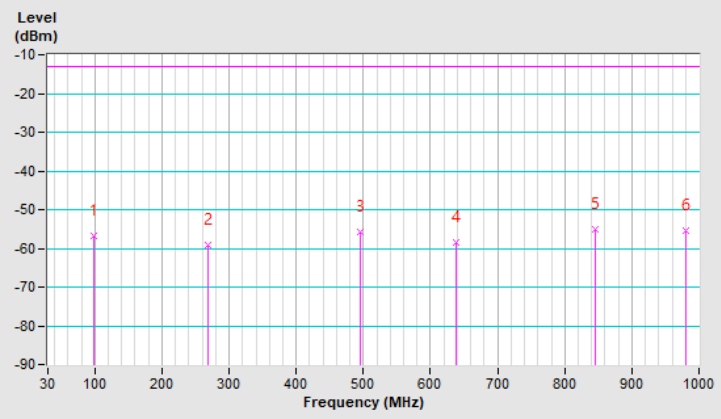


Mode	TX channel 355500 (1777.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical 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	98.87	-56.93	-13.00	-43.93	1.00 V	211	55.27	-112.20
2	268.62	-59.11	-13.00	-46.11	1.50 V	16	48.93	-108.04
3	495.60	-55.86	-13.00	-42.86	2.00 V	264	46.43	-102.29
4	639.16	-58.53	-13.00	-45.53	1.50 V	186	41.16	-99.69
5	845.77	-55.12	-13.00	-42.12	1.00 V	307	41.70	-96.82
6	980.60	-55.40	-13.00	-42.40	1.50 V	222	39.82	-95.22

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



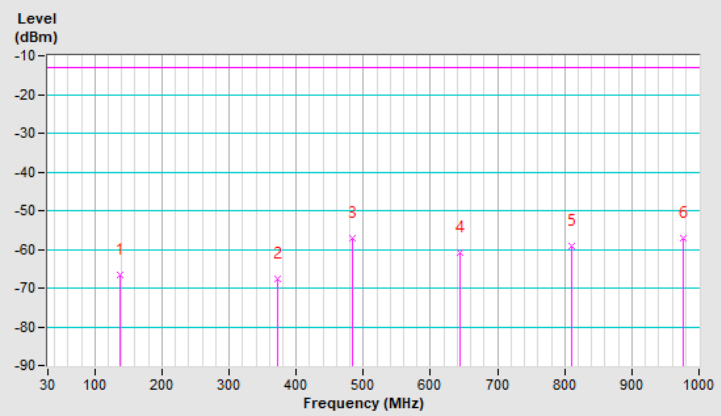
LTE Band 5, Channel Bandwidth: 10MHz

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	137.67	-66.53	-13.00	-53.53	1.50 H	271	43.71	-110.24
2	372.41	-67.75	-13.00	-54.75	1.50 H	302	39.70	-107.45
3	482.99	-57.27	-13.00	-44.27	1.50 H	195	47.46	-104.73
4	644.01	-60.78	-13.00	-47.78	1.50 H	265	40.95	-101.73
5	809.88	-59.11	-13.00	-46.11	1.50 H	108	39.90	-99.01
6	975.75	-57.27	-13.00	-44.27	1.00 H	286	40.14	-97.41

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

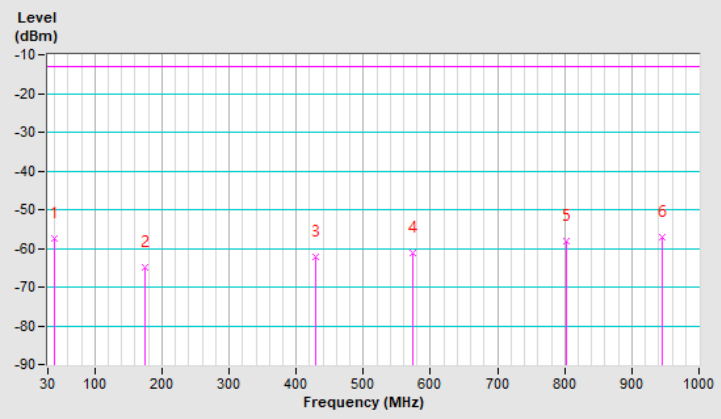


Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	40.67	-57.37	-13.00	-44.37	2.00 V	176	52.48	-109.85
2	175.50	-64.82	-13.00	-51.82	1.50 V	25	46.11	-110.93
3	429.64	-62.33	-13.00	-49.33	1.00 V	341	43.72	-106.05
4	574.17	-61.07	-13.00	-48.07	1.50 V	165	42.26	-103.33
5	802.12	-58.00	-13.00	-45.00	2.00 V	139	40.86	-98.86
6	945.68	-57.24	-13.00	-44.24	1.50 V	142	40.67	-97.91

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



n71 + LTE Band 66:

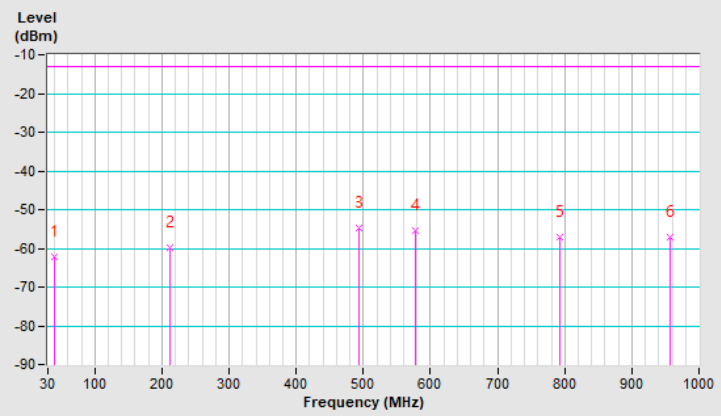
n71, Channel Bandwidth 5MHz

Mode	TX channel 136100 (680.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	40.67	-62.05	-13.00	-49.05	1.00 H	191	47.80	-109.85
2	211.39	-59.85	-13.00	-46.85	1.50 H	151	53.22	-113.07
3	492.69	-54.60	-13.00	-41.60	2.00 H	199	49.90	-104.50
4	578.05	-55.43	-13.00	-42.43	1.50 H	185	47.82	-103.25
5	792.42	-56.97	-13.00	-43.97	1.00 H	120	42.12	-99.09
6	957.32	-57.13	-13.00	-44.13	1.00 H	2	40.58	-97.71

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

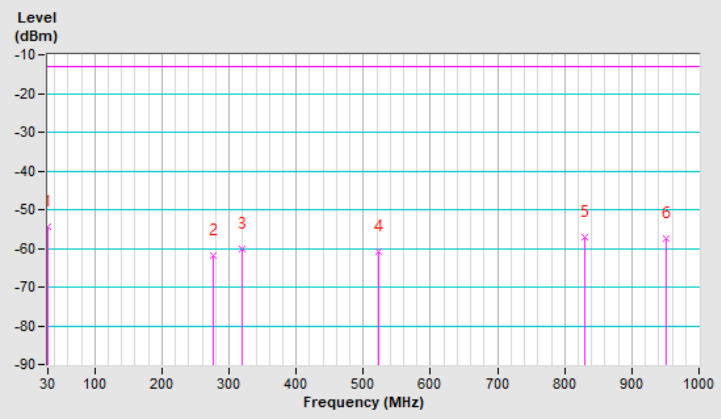


Mode	TX channel 136100 (680.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.97	-54.43	-13.00	-41.43	1.00 V	25	55.92	-110.35
2	277.35	-61.71	-13.00	-48.71	1.50 V	27	48.05	-109.76
3	319.06	-60.23	-13.00	-47.23	1.00 V	48	48.47	-108.70
4	523.73	-60.69	-13.00	-47.69	1.50 V	42	43.09	-103.78
5	829.28	-57.26	-13.00	-44.26	1.50 V	168	41.67	-98.93
6	950.53	-57.35	-13.00	-44.35	2.00 V	319	40.47	-97.82

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



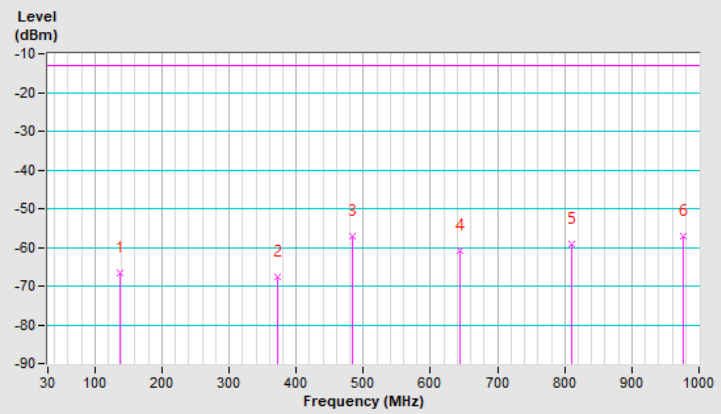
LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132072 (1720MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	137.67	-66.53	-13.00	-53.53	1.50 H	271	41.56	-108.09
2	372.41	-67.75	-13.00	-54.75	1.50 H	302	37.55	-105.30
3	482.99	-57.27	-13.00	-44.27	1.50 H	195	45.31	-102.58
4	644.01	-60.78	-13.00	-47.78	1.50 H	265	38.80	-99.58
5	809.88	-59.11	-13.00	-46.11	1.50 H	108	37.75	-96.86
6	975.75	-57.27	-13.00	-44.27	1.00 H	286	37.99	-95.26

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

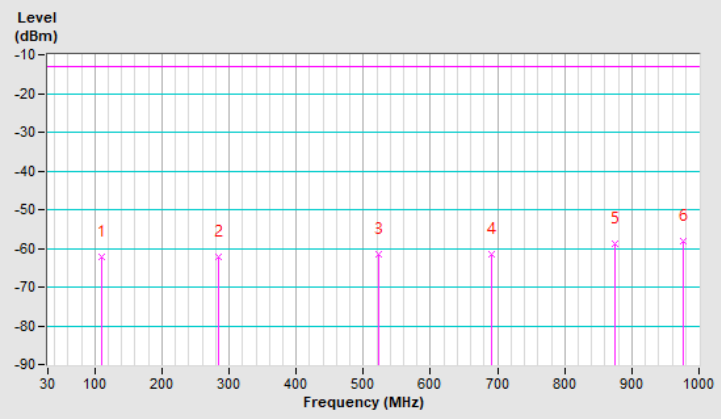


Mode	TX channel 132072 (1720MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Vertical 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	109.54	-62.27	-13.00	-49.27	1.00 V	141	48.23	-110.50
2	285.11	-62.25	-13.00	-49.25	1.50 V	186	45.10	-107.35
3	523.73	-61.39	-13.00	-48.39	2.00 V	27	40.24	-101.63
4	691.54	-61.51	-13.00	-48.51	1.50 V	324	37.62	-99.13
5	873.90	-58.67	-13.00	-45.67	1.00 V	237	37.95	-96.62
6	975.75	-57.97	-13.00	-44.97	2.00 V	104	37.29	-95.26

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



n77 (Part 27O) + LTE Band 5:

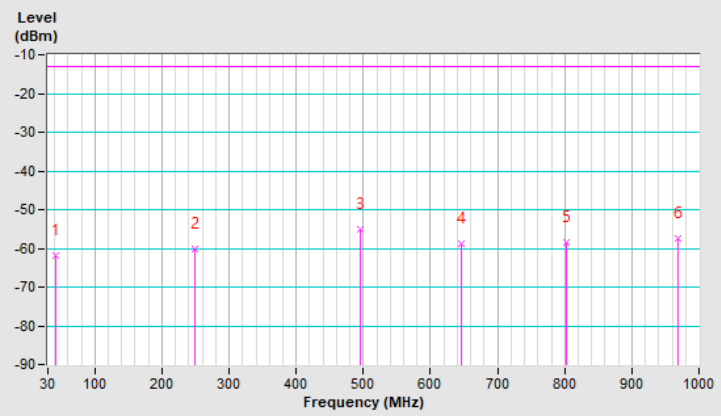
n77, Channel Bandwidth 20MHz

Mode	TX channel 664666 (3969.99MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	41.64	-61.73	-13.00	-48.73	1.00 H	276	45.86	-107.59
2	249.22	-60.09	-13.00	-47.09	1.50 H	272	48.81	-108.90
3	495.60	-55.16	-13.00	-42.16	1.50 H	203	47.13	-102.29
4	646.92	-58.85	-13.00	-45.85	2.00 H	252	40.74	-99.59
5	802.12	-58.37	-13.00	-45.37	1.00 H	214	38.34	-96.71
6	967.99	-57.36	-13.00	-44.36	1.50 H	358	37.99	-95.35

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

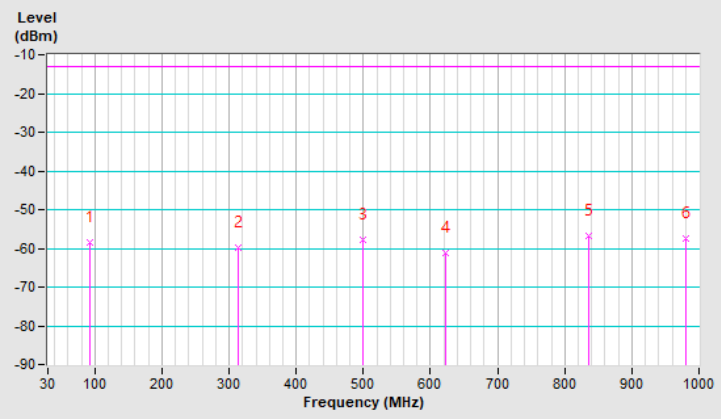


Mode	TX channel 664666 (3969.99MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical 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	93.05	-58.50	-13.00	-45.50	1.50 V	5	54.49	-112.99
2	314.21	-59.89	-13.00	-46.89	1.50 V	59	46.77	-106.66
3	499.48	-57.65	-13.00	-44.65	1.50 V	265	44.52	-102.17
4	621.70	-61.32	-13.00	-48.32	2.00 V	322	38.74	-100.06
5	836.07	-56.63	-13.00	-43.63	1.00 V	152	40.10	-96.73
6	980.60	-57.38	-13.00	-44.38	1.50 V	248	37.84	-95.22

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



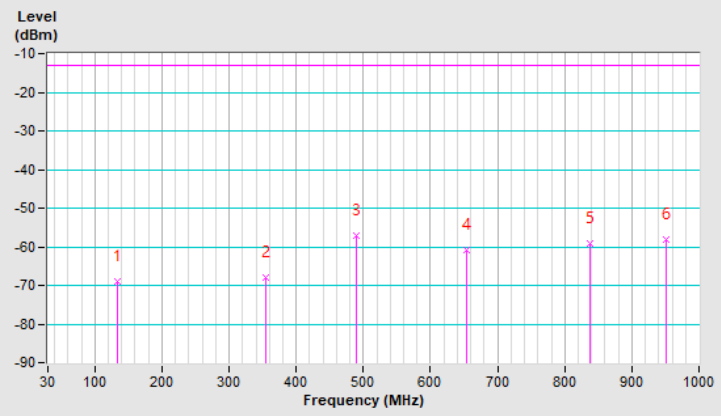
LTE 5, Channel Bandwidth 10MHz

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	133.79	-68.88	-13.00	-55.88	1.00 H	290	41.64	-110.52
2	353.98	-67.86	-13.00	-54.86	1.50 H	2	40.20	-108.06
3	489.78	-57.22	-13.00	-44.22	2.00 H	195	47.34	-104.56
4	653.71	-60.97	-13.00	-47.97	1.50 H	145	40.78	-101.75
5	837.04	-59.01	-13.00	-46.01	1.00 H	82	39.87	-98.88
6	950.53	-58.21	-13.00	-45.21	1.00 H	348	39.61	-97.82

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

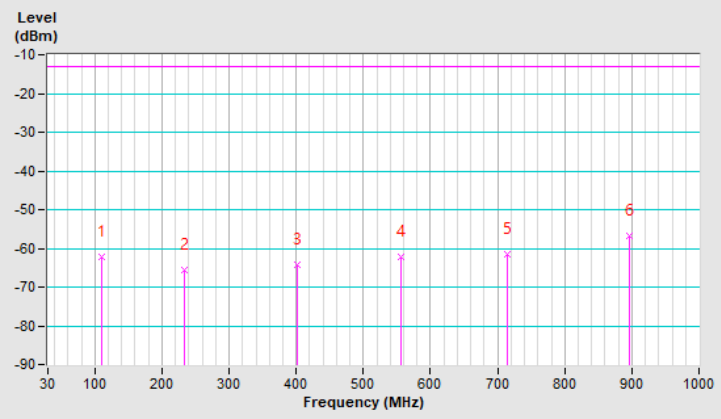


Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	109.54	-62.27	-13.00	-49.27	1.00 V	141	50.38	-112.65
2	233.70	-65.49	-13.00	-52.49	1.50 V	207	46.52	-112.01
3	401.51	-64.33	-13.00	-51.33	2.00 V	69	42.58	-106.91
4	556.71	-62.33	-13.00	-49.33	1.50 V	234	41.30	-103.63
5	714.82	-61.52	-13.00	-48.52	1.00 V	341	39.46	-100.98
6	896.21	-56.69	-13.00	-43.69	1.50 V	18	41.81	-98.50

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



n77 (Part 27Q) + LTE Band 5:

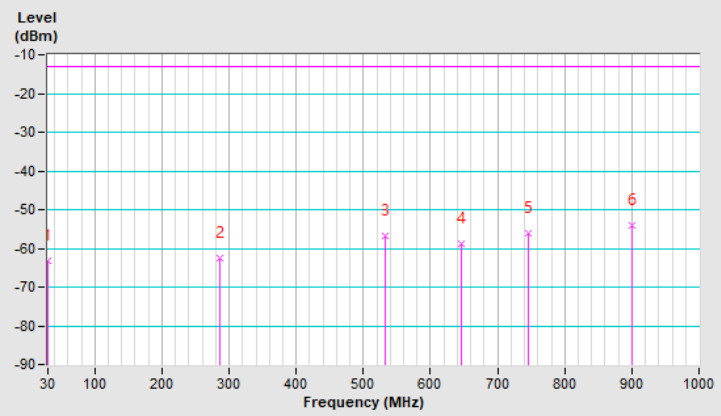
n77, Channel Bandwidth 50MHz

Mode	TX channel 635000 (3525MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	30.94	-63.34	-13.00	-50.34	1.00 H	269	44.86	-108.20
2	287.05	-62.49	-13.00	-49.49	1.50 H	254	44.82	-107.31
3	532.46	-56.86	-13.00	-43.86	1.50 H	132	44.69	-101.55
4	646.92	-58.85	-13.00	-45.85	2.00 H	252	40.74	-99.59
5	745.83	-56.01	-13.00	-43.01	1.00 H	233	41.33	-97.34
6	900.03	-54.15	-13.00	-41.15	1.00 H	289	42.19	-96.34

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

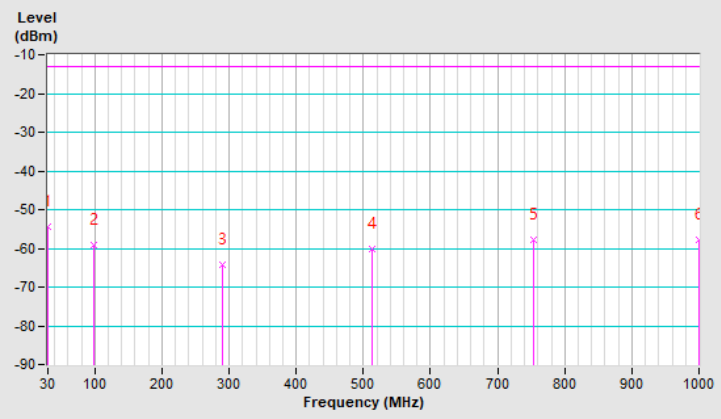


Mode	TX channel 635000 (3525MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical 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	30.00	-54.42	-13.00	-41.42	1.00 V	40	53.57	-107.99
2	98.87	-59.31	-13.00	-46.31	1.50 V	168	52.89	-112.20
3	290.93	-64.27	-13.00	-51.27	1.50 V	72	42.97	-107.24
4	513.06	-60.28	-13.00	-47.28	2.00 V	254	41.51	-101.79
5	753.62	-57.66	-13.00	-44.66	1.50 V	195	39.50	-97.16
6	1000.00	-57.65	-13.00	-44.65	1.00 V	5	37.49	-95.14

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 of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



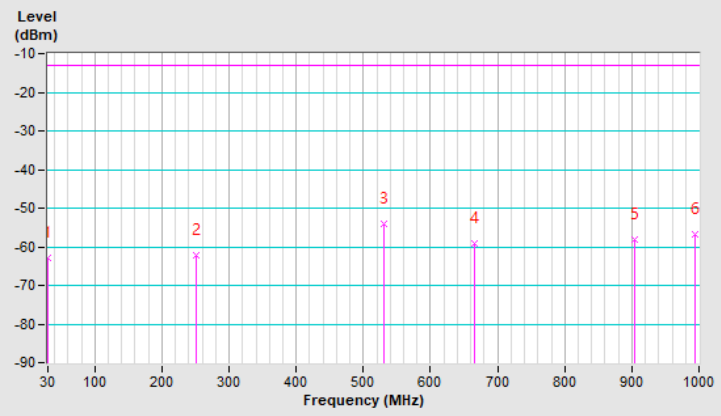
LTE 5, Channel Bandwidth 10MHz

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.97	-62.98	-13.00	-49.98	1.00 H	330	47.37	-110.35
2	250.19	-62.15	-13.00	-49.15	1.50 H	257	48.88	-111.03
3	530.52	-54.20	-13.00	-41.20	1.50 H	130	49.50	-103.70
4	666.32	-59.08	-13.00	-46.08	1.50 H	240	42.53	-101.61
5	903.97	-58.00	-13.00	-45.00	1.50 H	282	40.41	-98.41
6	993.21	-56.94	-13.00	-43.94	1.00 H	67	40.46	-97.40

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

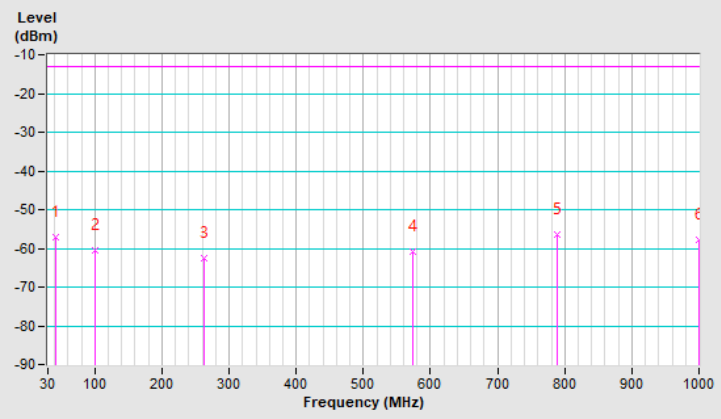


Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	Below 1000 MHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	41.64	-57.22	-13.00	-44.22	1.00 V	150	52.52	-109.74
2	99.84	-60.51	-13.00	-47.51	1.00 V	248	53.63	-114.14
3	262.80	-62.61	-13.00	-49.61	1.50 V	40	47.88	-110.49
4	574.17	-60.88	-13.00	-47.88	1.50 V	179	42.45	-103.33
5	788.54	-56.52	-13.00	-43.52	1.50 V	207	42.58	-99.10
6	1000.00	-57.87	-13.00	-44.87	1.00 V	143	39.42	-97.29

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Above 1GHz

n2 + LTE Band 5:

n2, Channel Bandwidth 5MHz

Mode	TX channel 370500 (1852.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3705.00	-53.96	-13.00	-40.96	3.10 H	278	54.92	-108.88
Antenna Polarity & Test Distance : Vertical 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	3705.00	-55.47	-13.00	-42.47	1.28 V	36	53.41	-108.88

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 376000 (1880MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3760.00	-54.21	-13.00	-41.21	1.66 H	195	54.78	-108.99
Antenna Polarity & Test Distance : Vertical 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	3760.00	-54.93	-13.00	-41.93	1.68 V	319	54.06	-108.99

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 381500 (1907.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3815.00	-54.37	-13.00	-41.37	2.77 H	234	54.51	-108.88
Antenna Polarity & Test Distance : Vertical 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	3815.00	-56.00	-13.00	-43.00	1.32 V	325	52.88	-108.88

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.

n2, Channel Bandwidth 20MHz

Mode	TX channel 372000 (1860MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3720.00	-53.77	-13.00	-40.77	1.04 H	165	55.16	-108.93
Antenna Polarity & Test Distance : Vertical 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	3720.00	-54.76	-13.00	-41.76	2.88 V	291	54.17	-108.93

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 376000 (1880MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3760.00	-53.16	-13.00	-40.16	1.75 H	349	55.83	-108.99
Antenna Polarity & Test Distance : Vertical 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	3760.00	-54.19	-13.00	-41.19	1.83 V	344	54.80	-108.99

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 380000 (1900MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3800.00	-52.71	-13.00	-39.71	2.95 H	106	56.29	-109.00
Antenna Polarity & Test Distance : Vertical 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	3800.00	-53.95	-13.00	-40.95	1.45 V	158	55.05	-109.00

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 5, Channel Bandwidth 10MHz

Mode	TX channel 20450 (829MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-50.51	-13.00	-37.51	1.42 H	135	67.47	-117.98
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-47.88	-13.00	-34.88	1.63 V	341	70.10	-117.98

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-50.36	-13.00	-37.36	1.63 H	174	67.63	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-47.86	-13.00	-34.86	1.32 V	332	70.13	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20600 (844MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-49.63	-13.00	-36.63	1.35 H	157	68.36	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-48.25	-13.00	-35.25	1.36 V	352	69.74	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n5 + LTE Band 66:

n5, Channel Bandwidth 5MHz

Mode	TX channel 165300 (826.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1678.00	-44.64	-13.00	-31.64	2.03 H	275	73.35	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1678.00	-45.71	-13.00	-32.71	3.15 V	171	72.28	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 167300 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-45.11	-13.00	-32.11	2.95 H	142	72.88	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-45.73	-13.00	-32.73	1.97 V	280	72.26	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 169300 (846.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1693.00	-44.61	-13.00	-31.61	1.22 H	277	73.39	-118.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1693.00	-44.20	-13.00	-31.20	2.09 V	104	73.80	-118.00

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n5, Channel Bandwidth 20MHz

Mode	TX channel 166800 (834MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1668.00	-44.67	-13.00	-31.67	2.12 H	164	73.31	-117.98
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1668.00	-45.30	-13.00	-32.30	3.95 V	118	72.68	-117.98

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 167300 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-44.54	-13.00	-31.54	1.81 H	63	73.45	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-45.66	-13.00	-32.66	1.75 V	92	72.33	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 167800 (839.0MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1678.00	-44.36	-13.00	-31.36	2.67 H	265	73.63	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1678.00	-45.59	-13.00	-32.59	2.29 V	75	72.40	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132072 (1720MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3440.00	-39.59	-13.00	-26.59	1.65 H	325	70.15	-109.74
Antenna Polarity & Test Distance : Vertical 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	3440.00	-36.82	-13.00	-23.82	2.42 V	206	72.92	-109.74

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 132322 (1745MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3490.00	-38.46	-13.00	-25.46	1.63 H	334	70.67	-109.13
Antenna Polarity & Test Distance : Vertical 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	3490.00	-37.45	-13.00	-24.45	2.42 V	187	71.68	-109.13

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 132572 (1770MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3540.00	-38.71	-13.00	-25.71	1.68 H	314	70.19	-108.90
Antenna Polarity & Test Distance : Vertical 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	3540.00	-37.13	-13.00	-24.13	2.35 V	188	71.77	-108.90

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.

n66 + LTE Band 5:

n66, Channel Bandwidth: 5MHz

Mode	TX channel 342500 (1712.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3425.00	-53.76	-13.00	-40.76	1.17 H	101	56.10	-109.86
Antenna Polarity & Test Distance : Vertical 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	3425.00	-54.97	-13.00	-41.97	2.98 V	184	54.89	-109.86

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 349000 (1745MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3490.00	-53.40	-13.00	-40.40	2.52 H	210	55.73	-109.13
Antenna Polarity & Test Distance : Vertical 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	3490.00	-54.33	-13.00	-41.33	1.85 V	64	54.80	-109.13

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 355500 (1777.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	**3555.00**	**-52.92**	**-13.00**	**-39.92**	**2.23 H**	**314**	**55.95**	**-108.87**
Antenna Polarity & Test Distance : Vertical 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	3555.00	-54.18	-13.00	-41.18	1.80 V	117	54.69	-108.87

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.

n66, Channel Bandwidth 20MHz

Mode	TX channel 344000 (1720MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3440.00	-53.82	-13.00	-40.82	2.37 H	359	55.92	-109.74
Antenna Polarity & Test Distance : Vertical 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	3440.00	-56.54	-13.00	-43.54	1.46 V	173	53.20	-109.74

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 349000 (1745MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3490.00	-53.74	-13.00	-40.74	3.45 H	100	55.39	-109.13
Antenna Polarity & Test Distance : Vertical 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	3490.00	-55.00	-13.00	-42.00	2.20 V	248	54.13	-109.13

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 354000 (1770MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3540.00	-53.52	-13.00	-40.52	2.32 H	189	55.38	-108.90
Antenna Polarity & Test Distance : Vertical 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	3540.00	-54.50	-13.00	-41.50	1.93 V	8	54.40	-108.90

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 5, Channel Bandwidth 10MHz

Mode	TX channel 20450 (829MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-50.50	-13.00	-37.50	1.34 H	162	67.48	-117.98
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-47.90	-13.00	-34.90	1.62 V	298	70.08	-117.98

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-50.36	-13.00	-37.36	1.56 H	327	67.63	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-47.86	-13.00	-34.86	1.65 V	168	70.13	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20600 (844MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-49.62	-13.00	-36.62	1.47 H	164	68.37	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-48.23	-13.00	-35.23	1.52 V	342	69.76	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n71 + LTE Band 66:

n71, Channel Bandwidth 5MHz

Mode	TX channel 133100 (665.5MHz)	Frequency Range	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	Input Power	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1331.00	-52.35	-13.00	-39.35	3.16 H	143	65.74	-118.09
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1331.00	-56.34	-13.00	-43.34	1.14 V	328	61.75	-118.09

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 136100 (680.5MHz)	Frequency Range	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	Input Power	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1361.00	-52.54	-13.00	-39.54	1.12 H	163	65.43	-117.97
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1361.00	-55.91	-13.00	-42.91	3.22 V	138	62.06	-117.97

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 139100 (695.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1391.00	-52.29	-13.00	-39.29	2.83 H	172	65.53	-117.82
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1391.00	-56.25	-13.00	-43.25	2.26 V	316	61.57	-117.82

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n71, Channel Bandwidth 20MHz

Mode	TX channel 134600 (673MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1346.00	-53.72	-13.00	-40.72	1.81 H	312	64.31	-118.03
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1346.00	-56.66	-13.00	-43.66	1.89 V	83	61.37	-118.03

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 136100 (680.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1361.00	-53.61	-13.00	-40.61	2.43 H	250	64.36	-117.97
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1361.00	-56.25	-13.00	-43.25	2.77 V	60	61.72	-117.97

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 137600 688MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1376.00	-53.23	-13.00	-40.23	2.08 H	356	64.66	-117.89
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1376.00	-56.64	-13.00	-43.64	2.08 V	325	61.25	-117.89

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132072 (1720MHz)	Frequency Range	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	Input Power	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3440.00	-39.62	-13.00	-26.62	1.68 H	325	70.12	-109.74
Antenna Polarity & Test Distance : Vertical 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	3440.00	-36.82	-13.00	-23.82	2.42 V	232	72.92	-109.74

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 132322 (1745MHz)	Frequency Range	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	Input Power	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3490.00	-38.45	-13.00	-25.45	1.76 H	325	70.68	-109.13
Antenna Polarity & Test Distance : Vertical 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	3490.00	-37.45	-13.00	-24.45	2.42 V	195	71.68	-109.13

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 132572 (1770MHz)	Frequency Range	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	Input Power	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	3540.00	-38.72	-13.00	-25.72	1.65 H	328	70.18	-108.90
Antenna Polarity & Test Distance : Vertical 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	3540.00	-37.14	-13.00	-24.14	2.32 V	188	71.76	-108.90

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.

n77 (Part 27O) + LTE Band 5:

n77, Channel Bandwidth 20MHz

Mode	TX channel 647334 (3710.01MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	-44.94	-13.00	-31.94	2.76 H	327	54.22	-99.16
Antenna Polarity & Test Distance : Vertical 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	-46.35	-13.00	-33.35	1.52 V	55	52.81	-99.16

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 (3840MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	-44.22	-13.00	-31.22	2.32 H	289	54.68	-98.90
Antenna Polarity & Test Distance : Vertical 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	-45.64	-13.00	-32.64	1.53 V	72	53.26	-98.90

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 664666 (3969.99MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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**	**-43.08**	**-13.00**	**-30.08**	**1.76 H**	**257**	**54.49**	**-97.57**
Antenna Polarity & Test Distance : Vertical 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	-44.46	-13.00	-31.46	1.23 V	54	53.11	-97.57

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.

n77, Channel Bandwidth 50MHz

Mode	TX channel 648334 (3725.01MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	7450.02	-44.60	-13.00	-31.60	1.87 H	245	54.36	-98.96
Antenna Polarity & Test Distance : Vertical 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	7450.02	-46.00	-13.00	-33.00	1.52 V	65	52.96	-98.96

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 (3840MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	-44.15	-13.00	-31.15	2.34 H	187	54.75	-98.90
Antenna Polarity & Test Distance : Vertical 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	-45.56	-13.00	-32.56	1.52 V	65	53.34	-98.90

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 663666 (3954.99MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	7909.98	-43.21	-13.00	-30.21	2.73 H	268	54.56	-97.77
Antenna Polarity & Test Distance : Vertical 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	7909.98	-44.73	-13.00	-31.73	1.48 V	62	53.04	-97.77

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.

n77, Channel Bandwidth 100MHz

Mode	TX channel 650000 (3750MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	7500.00	-44.78	-13.00	-31.78	2.34 H	297	54.43	-99.21
Antenna Polarity & Test Distance : Vertical 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	7500.00	-46.17	-13.00	-33.17	1.56 V	78	53.04	-99.21

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 (3840MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	-44.04	-13.00	-31.04	2.23 H	287	54.86	-98.90
Antenna Polarity & Test Distance : Vertical 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	-45.48	-13.00	-32.48	1.65 V	39	53.42	-98.90

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 662000 (3930MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	7860.00	-43.50	-13.00	-30.50	2.35 H	265	54.65	-98.15
Antenna Polarity & Test Distance : Vertical 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	7860.00	-44.83	-13.00	-31.83	1.58 V	17	53.32	-98.15

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 5, Channel Bandwidth 10MHz

Mode	TX channel 20450 (829MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-50.51	-13.00	-37.51	1.53 H	142	67.47	-117.98
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-47.88	-13.00	-34.88	1.26 V	345	70.10	-117.98

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-50.36	-13.00	-37.36	1.52 H	151	67.63	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-47.86	-13.00	-34.86	1.42 V	342	70.13	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20600 (844MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-49.61	-13.00	-36.61	1.35 H	152	68.38	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-48.23	-13.00	-35.23	1.52 V	324	69.76	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n77 (Part 27Q) + LTE Band 5:

n77, Channel Bandwidth 20MHz

Mode	TX channel 630668 (3460.02MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	-46.95	-13.00	-33.95	2.90 H	330	54.57	-101.52
Antenna Polarity & Test Distance : Vertical 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	-48.09	-13.00	-35.09	1.62 V	69	53.43	-101.52

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**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	-46.06	-13.00	-33.06	2.89 H	328	54.86	-100.92
Antenna Polarity & Test Distance : Vertical 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	-47.28	-13.00	-34.28	1.60 V	69	53.64	-100.92

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**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	-45.61	-13.00	-32.61	2.86 H	325	54.39	-100.00
Antenna Polarity & Test Distance : Vertical 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	-46.74	-13.00	-33.74	1.59 V	70	53.26	-100.00

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.

n77, Channel Bandwidth 50MHz

Mode	TX channel 631668 (3475.02MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	6950.04	-46.72	-13.00	-33.72	2.11 H	240	54.59	-101.31
Antenna Polarity & Test Distance : Vertical 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	6950.04	-47.93	-13.00	-34.93	1.62 V	35	53.38	-101.31

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**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	-46.06	-13.00	-33.06	2.13 H	242	54.86	-100.92
Antenna Polarity & Test Distance : Vertical 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	-47.38	-13.00	-34.38	1.59 V	33	53.54	-100.92

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 635000 (3525MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Thomas Cheng		

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	7050.00	-45.43	-13.00	-32.43	2.13 H	244	54.79	-100.22
Antenna Polarity & Test Distance : Vertical 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	7050.00	-47.07	-13.00	-34.07	1.57 V	30	53.15	-100.22

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.

n77, Channel Bandwidth 100MHz

Mode	TX channel 633334 (3500.01MHz)	**Frequency Range**	1 GHz ~ 40 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

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	-45.92	-13.00	-32.92	2.12 H	240	55.00	-100.92
Antenna Polarity & Test Distance : Vertical 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	-47.11	-13.00	-34.11	1.55 V	29	53.81	-100.92

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 5, Channel Bandwidth 10MHz

Mode	TX channel 20450 (829MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-50.43	-13.00	-37.43	1.47 H	149	67.55	-117.98
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1658.00	-48.27	-13.00	-35.27	1.23 V	333	69.71	-117.98

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20525 (836.5MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-50.63	-13.00	-37.63	1.63 H	155	67.36	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1673.00	-47.98	-13.00	-34.98	1.44 V	336	70.01	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

Mode	TX channel 20600 (844MHz)	**Frequency Range**	1 GHz ~ 18 GHz
Environmental Conditions	24deg. C, 75%RH	**Input Power**	120Vac, 60Hz (System)
Tested By	Vincent Chen		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-49.55	-13.00	-36.55	1.36 H	151	68.44	-117.99
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1688.00	-48.31	-13.00	-35.31	1.33 V	322	69.68	-117.99

Remarks:

1. ERP(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 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP 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.

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

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