

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 96
47 CFR FCC Part 2

Report No.: RFBCMA-WTW-P23030799-8

FCC ID: RAXTMOG4AR

Product: 5G Gateway

Brand: T-Mobile

Model No.: TMO-G4AR

Received Date: 2023/3/15

Test Date: 2023/4/12 ~ 2023/4/13

Issued Date: 2023/5/23

Applicant: Arcadyan Technology Corporation

Address: No.8, Sec.2, Guangfu Rd., Hsinchu City 30071, 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. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan

FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

Jeremy Lin / Project Engineer

, Date: _____

2023/5/23

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Prepared by : Polly Chien / Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBCMA-WTW-P23030799-8	Original release.	2023/5/23

1 Certificate

Product: 5G Gateway

Brand: T-Mobile

Test Model: TMO-G4AR

Sample Status: Engineering sample

Applicant: Arcadyan Technology Corporation

Test Date: 2023/4/12 ~ 2023/4/13

Standard: 47 CFR FCC Part 96
47 CFR FCC Part 2

Measurement procedure: ANSI/TIA/EIA-603-E 2016
ANSI C63.26-2015
KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 940660 D01 Part 96 CBRS Eqpt v03

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.

2 Summary of Test Results

47 CFR FCC Part 96 & Part 2			
Standard / Clause	Test Item	Result	Remark
FCC 47 CFR Part 2.1046 FCC 47 CFR Part 96.41(b)	Maximum EIRP	N/A	Refer to Note 1
FCC 47 CFR Part 2.1047	Modulation Characteristics	N/A	Refer to Note 1
FCC 47 CFR Part 2.1046 FCC 47 CFR Part 96.41(b)	Maximum Power Spectral Density	N/A	Refer to Note 1
FCC 47 CFR Part 96.41(g)	Peak to Average Ratio	N/A	Refer to Note 1
FCC 47 CFR Part 2.1049	Bandwidth	N/A	Refer to Note 1
FCC 47 CFR Part 2.1051 FCC 47 CFR Part 96.41(e)	Conducted Spurious Emissions	N/A	Refer to Note 1
FCC 47 CFR Part 2.1053 FCC 47 CFR Part 96.41(e)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -6.52 dB at 88.20 MHz
FCC 47 CFR Part 2.1053 FCC 47 CFR Part 96.41(e)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -2.78 dB at 7249.98 MHz
FCC 47 CFR Part 2.1055	Frequency Stability	N/A	Refer to Note 1

Note:

1. The only test item of Equivalent Isotropically Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to SGS-CSRC Standards Technical Services (Suzhou) Co., Ltd. Report No.: KSCR221000187201 (LTE Module, Brand: Fibocom, Model: FG360-NA, FCC ID: ZMOFG360NA08).
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:

Parameter	Specification	Uncertainty (±)
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	5G Gateway
Brand	T-Mobile
Test Model	TMO-G4AR
Status of EUT	Engineering sample
Power Supply Rating	20Vdc or 15Vdc or 12Vdc or 9Vdc or 5Vdc (From adapter)

Note:

1. Base on the conducted power and all conducted result no change, the device WWAN conducted data leverage 5G module (Fibocom FG360-NA), and record EIRP in the report with Internal Antenna to prove it not over the limit.
2. The EUT supports the following ENDC configuration.

5GNR	FCC 5G FR1			ENDC
	Band	SCS	Bandwidth (MHz)	
	n25	15kHz	5/10/15/20/25/30/40	Band 12, 66
	n41	30kHz	10/1520/30/40/50/60/70/80/90/100	Band 2, 66
	n48	30kHz	10/15/20/40	Band 2, 66
	n66	15kHz	5/10/15/20/25/30/40	Band 2, 12
	n71	15kHz	5/10/15/20	Band 2, 66

*The ENDC configuration only selected the worst case for testing according to original module report. The test configuration is as follows: NR n25 + LTE B12, NR n41 + LTE B66, NR n48 + LTE B66, NR n66 + LTE B12, n71 + LTE B2.

3. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
LUCENT TRANS	1A78	AC Input : 100~240V, 1.2A, 50-60Hz DC Output : 5.0V, 3.0A, 15W or 9.0V, 3.0A, 27W or 12.0V, 3.0A, 36W or 15.0V, 3.0A, 45W or 20.0V, 2.25A, 45W DC Output Cable : 1.85 m, non-shielded cable, W/O ferrite core Plug : US
AC Adapter 2		
Brand	Model	Specification
MASS POWER	PD045E-C1C0AVU	AC Input : 100~240V, 1.0A, 50-60Hz DC Output : 5.0V, 3.0A or 9.0V, 3.0A or 12.0V, 3.0A or 15.0V, 3.0A or 20.0V, 2.25A, 45W DC Output Cable : 1.8 m, non-shielded cable, W/O ferrite core Plug : US

*The adapter 1 was chosen for final test.

4. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
WWAN Antenna (Internal)	B71 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	3.17	663-698 MHz	Monopole	ipex(MHF1)
	B71 (Rx)(M1)		RFPCA811609IMMB402_A	3.10	663-698 MHz	Monopole	ipex(MHF1)
	B71 (Rx) (D1)		RFPCA652018IMMB401_A	2.09	663-698 MHz	Monopole	ipex(MHF1)
	B71 (Rx)(D2)		RFFPA656320IMMB401_B	2.01	663-698 MHz	Monopole	ipex(MHF1)
	B12 (TRx)(M2)	PSA	RFPCA811609IMMB403_B	3.34	698-716 MHz	Monopole	ipex(MHF1)
	B12 (Rx)(D2)		RFFPA656320IMMB401_B	2.05	698-716 MHz	Monopole	ipex(MHF1)
	B5 (TRx)(M2)	PSA	RFPCA811609IMMB403_B	1.68	824-849 MHz	Monopole	ipex(MHF1)
	B5 (Rx) (D2)		RFFPA656320IMMB401_B	0.63	824-849 MHz	Monopole	ipex(MHF1)
	B4/B66 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	3.69	1710-1780 MHz	Monopole	ipex(MHF1)
	B4/B66 (TRx) (M1)		RFPCA811609IMMB402_A	5.13	1710-1780 MHz	Monopole	ipex(MHF1)
	B4/B66 (Rx) (D1)		RFPCA652018IMMB401_A	4.26	1710-1780 MHz	Monopole	ipex(MHF1)
	B4/B66 (Rx) (D2)		RFFPA656320IMMB401_B	4.10	1710-1780 MHz	Monopole	ipex(MHF1)
	B2/B25 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	3.33	1850-1915 MHz	Monopole	ipex(MHF1)
	B2/B25 (TRx) (M1)		RFPCA811609IMMB402_A	4.78	1850-1915 MHz	Monopole	ipex(MHF1)
	B2/B25 (Rx) (D1)		RFPCA652018IMMB401_A	3.79	1850-1915 MHz	Monopole	ipex(MHF1)
	B2/B25 (Rx) (D2)		RFFPA656320IMMB401_B	4.11	1850-1915 MHz	Monopole	ipex(MHF1)
	B41 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	2.78	2496-2690 MHz	Monopole	ipex(MHF1)
	B41 (TRx) (M1)		RFPCA811609IMMB402_A	3.02	2496-2690 MHz	Monopole	ipex(MHF1)
	B41 (Rx) (Omni-Antenna HC1O)		RFPCA380906IMMB401_A	4.45	2496-2690 MHz	Dipole	ipex(MHF1)
	B41 (Rx) (Omni-Antenna HC2O)		RFPCA380912IMMB401_A	3.67	2496-2690 MHz	Dipole	ipex(MHF1)
	B41 (Rx) (Semi-Antenna HC1S)		RFPCA474709IMMB401_A	7.59	2496-2690 MHz	Dipole	ipex(MHF1)
	B41 (Rx) (Semi-Antenna HC2S)		RFPCA474709IMMB401_A	7.76	2496-2690 MHz	Dipole	ipex(MHF1)
	B48 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	0.94	3550-3700 MHz	Monopole	ipex(MHF1)
	B48 (TRx) (M1)		RFPCA811609IMMB402_A	1.02	3550-3700 MHz	Monopole	ipex(MHF1)
	B48 (Rx) (Omni-Antenna HC1O)		RFPCA380906IMMB401_A	4.64	3550-3700 MHz	Dipole	ipex(MHF1)
	B48 (Rx) (Omni-Antenna HC2O)		RFPCA380912IMMB401_A	4.03	3550-3700 MHz	Dipole	ipex(MHF1)
	B48 (Rx) (Semi-Antenna HC1S)		RFPCA474709IMMB401_A	7.67	3550-3700 MHz	Dipole	ipex(MHF1)
	B48 (Rx) (Semi-Antenna HC2S)		RFPCA474709IMMB401_A	8.01	3550-3700 MHz	Dipole	ipex(MHF1)
	B77 (TRx) (M2)	PSA	RFPCA811609IMMB403_B	0.84	3300-4200 MHz	Monopole	ipex(MHF1)
	B77(TRx) (M1)		RFPCA811609IMMB402_A	0.91	3300-4200 MHz	Monopole	ipex(MHF1)
	B77 (Rx) (Omni-Antenna HC1O)		RFPCA380906IMMB401_A	4.73	3300-4200 MHz	Dipole	ipex(MHF1)
	B77 (Rx) (Omni-Antenna HC2O)		RFPCA380912IMMB401_A	4.14	3300-4200 MHz	Dipole	ipex(MHF1)
	B77 (Rx) (Semi-Antenna HC1S)		RFPCA474709IMMB401_A	7.98	3300-4200 MHz	Dipole	ipex(MHF1)
	B77 (Rx) (Semi-Antenna HC2S)		RFPCA474709IMMB401_A	8.13	3300-4200 MHz	Dipole	ipex(MHF1)

*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

*Only B2/B4/B25 bands support 1TX diversity.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis

For NR n48+LTE Band 66

NR n48

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
RE Below 1GHz	641666 (3624.99 MHz)	20 MHz	QPSK	1 RB
RE Above 1GHz	637000 (3555.00 MHz)	10 MHz	QPSK	1 RB
	641666 (3624.99 MHz)			
	646332 (3694.98 MHz)			
	637334 (3560.01 MHz)	20 MHz	QPSK	1 RB
	641666 (3624.99 MHz)			
	646000 (3690.00 MHz)			
	638000 (3570.00 MHz)	40 MHz	QPSK	1 RB
	641666 (3624.99 MHz)			
	645332 (3679.98 MHz)			

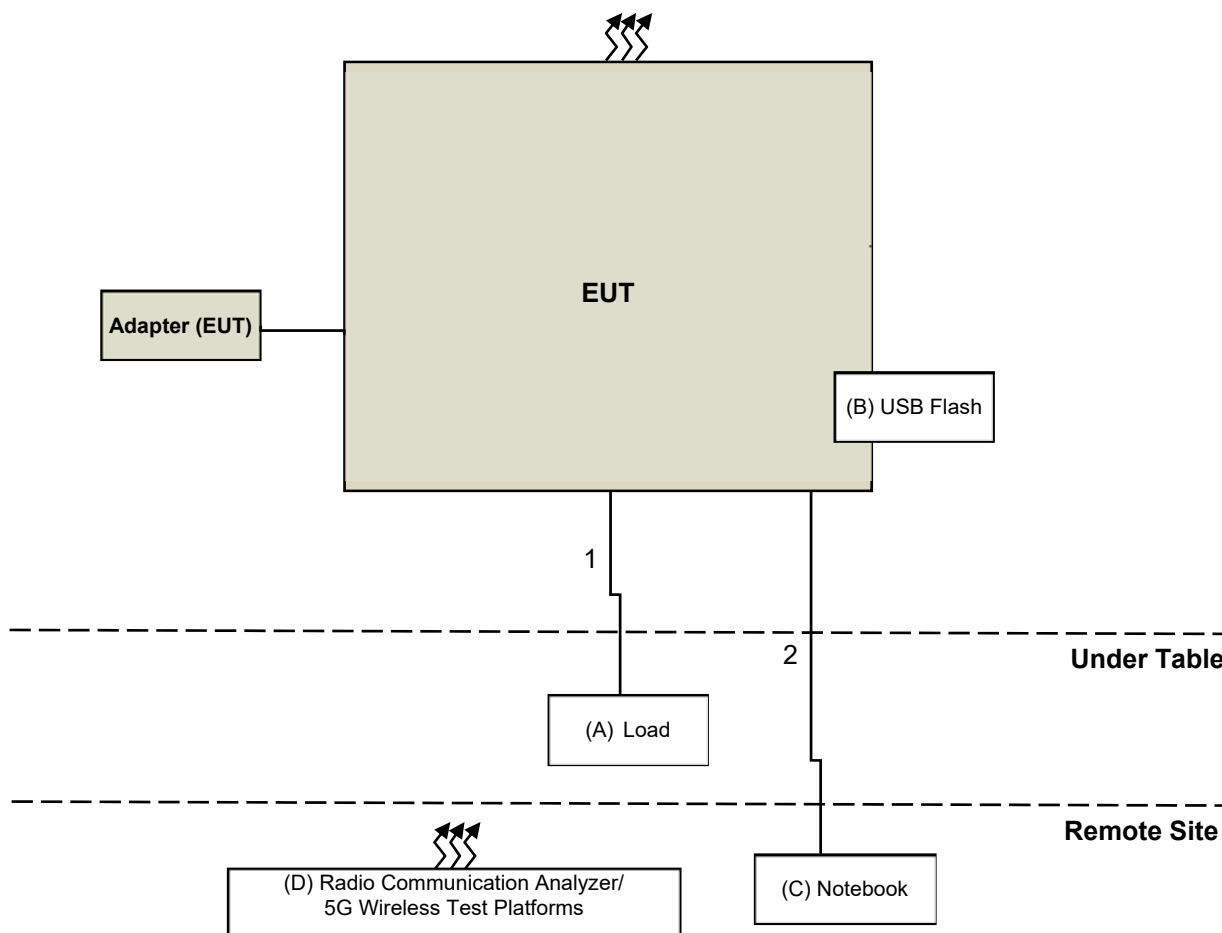
LTE Band 66

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
RE Below 1GHz	132647 (1777.50 MHz)	5 MHz	QPSK	1 RB
RE Above 1GHz	131979 (1710.70 MHz)	1.4 MHz	QPSK	1 RB
	132322 (1745.00 MHz)			
	132665 (1779.30 MHz)			
	131997 (1712.50 MHz)	5 MHz	QPSK	1 RB
	132322 (1745.00 MHz)			
	132647 (1777.50 MHz)			
	132072 (1720.00 MHz)	20 MHz	QPSK	1 RB
	132322 (1745.00 MHz)			
	132572 (1770.00 MHz)			

3.4 Test Program Used and Operation Descriptions

There is no need to controlling software during the test, and the EUT can be paired with the Radio Communication Analyzer//5G Wireless Test Platforms to test the connection when it is powered on.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Load	NA	NA	NA	NA	Provided by Lab
B	USB Flash	SanDisk G	SDDDC3-032	NA	NA	Provided by Lab
C	Notebook	Lenovo	80Q7	PF0KUGU6	FCC DoC Approved	Provided by Lab
D	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	NA	Provided by Lab
	5G Wireless Test Platforms	Keysight	E7515B	MY60102114	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.5	No	0	Provided by Lab
2	RJ-45 Cable	1	10	No	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB9168	9168-472	2022/10/21	2023/10/20
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-Amplifier EMCI	EMC 330H	980112	2022/10/1	2023/9/30
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable WORKEN	8D-FB	Cable-Ch10-01	2022/10/1	2023/9/30
Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Test Receiver KEYSIGHT	N9038A	MY55420137	2022/4/27	2023/4/26
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A
5G Wireless Test Platforms Keysight	E7515B	MY60102114	2022/5/20	2023/5/19

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/4/13

4.2 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2022/11/13	2023/11/12
	BBHA 9170	148	2022/11/13	2023/11/12
Pre-Amplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Pre-Amplifier EMCI	EMC 012645	980115	2022/10/1	2023/9/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2022/7/9	2023/7/8
	EMC102-KM-KM-3000	150929	2022/7/9	2023/7/8
	EMC104-SM-SM- 8000+3000	171005	2022/10/1	2023/9/30
RF Coaxial Cable HUBER SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	2022/10/1	2023/9/30
RF FILTER MICRO-TRONICS	BRM17690	004	2023/1/11	2024/1/10
	BRM50716	060	2023/1/11	2024/1/10
Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Test Receiver KEYSIGHT	N9038A	MY55420137	2022/4/27	2023/4/26
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A
5G Wireless Test Platforms Keysight	E7515B	MY60102114	2022/5/20	2023/5/19

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/4/12

5 Limits of Test Items

5.1 Radiated Spurious Emissions below 1GHz

Power of any emissions outside the Fundamental	Limit
Within 0-10 mHz above the Assigned Channel	-13 dBm/MHz
Within 0-10 mHz below the Assigned Channel	
Greater than 10 mHz above the Assigned Channel	-25 dBm/MHz
Greater than 10 mHz below the Assigned Channel	
Power of any emission below 3530 MHz	-40 dBm/MHz
Power of any emission above 3720 MHz	

5.2 Radiated Spurious Emissions above 1GHz

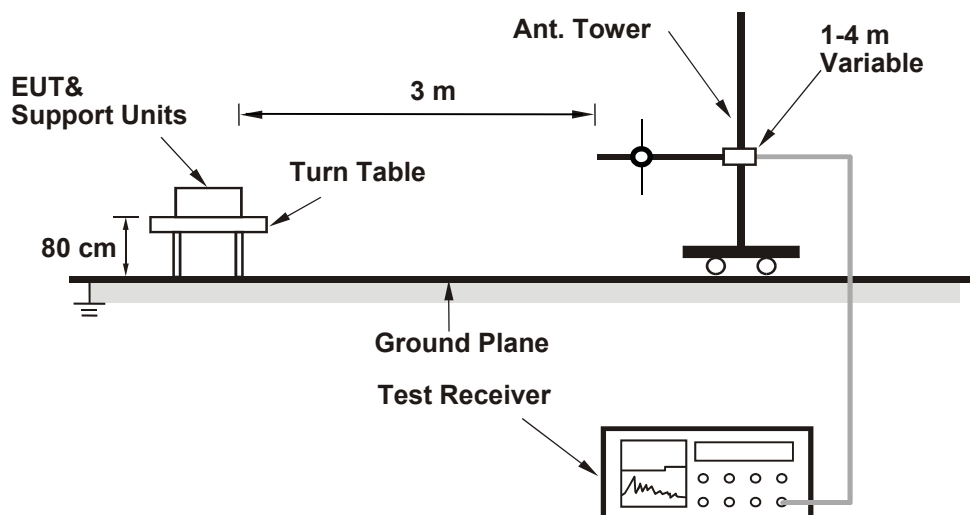
Power of any emissions outside the Fundamental	Limit
Within 0-10 mHz above the Assigned Channel	-13 dBm/MHz
Within 0-10 mHz below the Assigned Channel	
Greater than 10 mHz above the Assigned Channel	-25 dBm/MHz
Greater than 10 mHz below the Assigned Channel	
Power of any emission below 3530 MHz	-40 dBm/MHz
Power of any emission above 3720 MHz	

6 Test Arrangements

6.1 Radiated Spurious Emissions below 1GHz

6.1.1 Test Setup

For radiated emission 30 MHz to 1 GHz



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

6.1.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- 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.
- 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.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

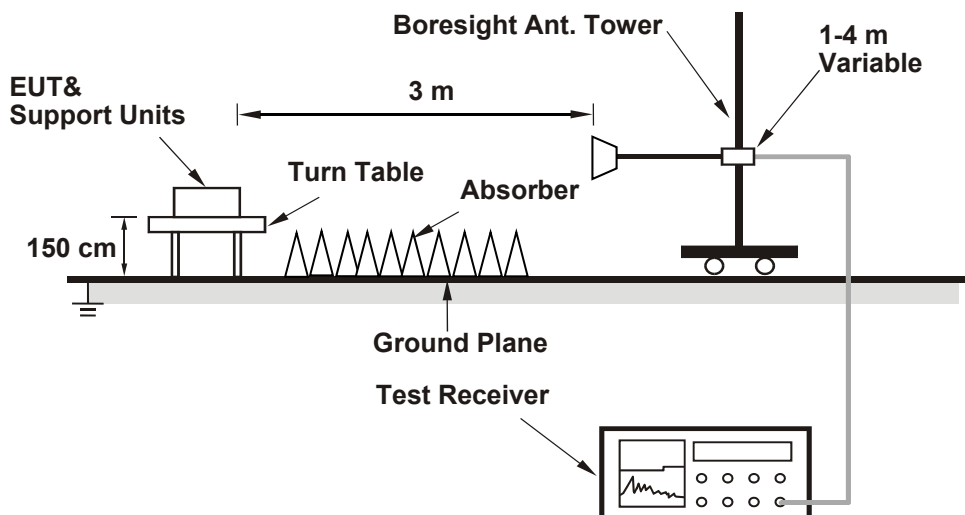
Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
- 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.

6.2 Radiated Spurious Emissions above 1GHz

6.2.1 Test Setup

For radiated emission above 1 GHz



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

6.2.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 1.5 m 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- 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.
- 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.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

7 Test Results of Test Item

7.1 Radiated Spurious Emissions below 1GHz

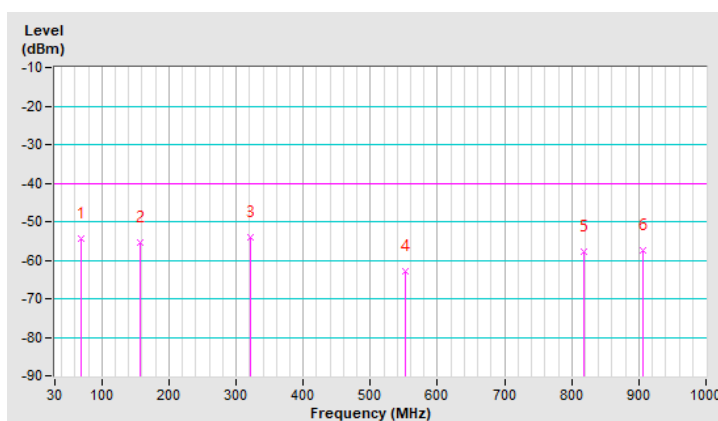
7.1.1 NR n48 SCS 30 kHz+LTE Band 66

RF Mode	NR n48 Channel Bandwidth: 20MHz	Channel	CH 641666 : 3624.99 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	69.77	-54.30	-40.00	-14.30	2.00 H	54	55.33	-109.63
2	157.07	-55.47	-40.00	-15.47	1.50 H	53	52.21	-107.68
3	321.00	-54.11	-40.00	-14.11	1.00 H	339	52.39	-106.50
4	551.86	-62.94	-40.00	-22.94	1.50 H	169	38.61	-101.55
5	818.61	-57.67	-40.00	-17.67	1.00 H	339	39.05	-96.72
6	906.88	-57.47	-40.00	-17.47	1.00 H	171	38.73	-96.20

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
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.

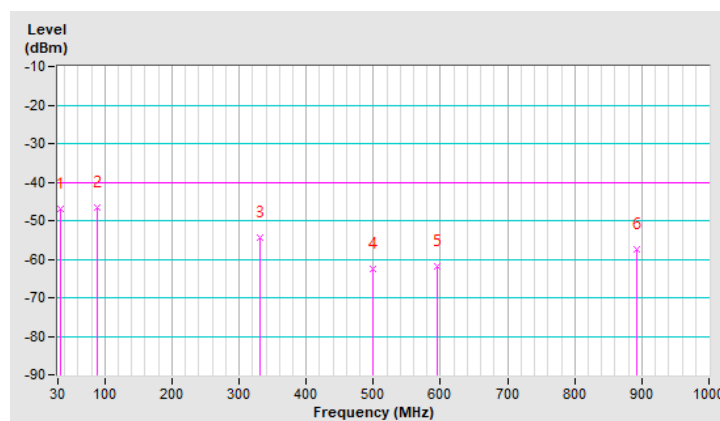


RF Mode	NR n48 Channel Bandwidth: 20MHz	Channel	CH 641666 : 3624.99 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
Tested By	Vincent Chen		

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	33.88	-46.94	-40.00	-6.94	1.00 V	84	61.06	-108.00
2	88.20	-46.52	-40.00	-6.52	1.50 V	246	66.75	-113.27
3	331.67	-54.45	-40.00	-14.45	2.00 V	18	51.81	-106.26
4	499.48	-62.47	-40.00	-22.47	1.50 V	242	39.70	-102.17
5	594.54	-61.99	-40.00	-21.99	2.00 V	1	38.75	-100.74
6	892.33	-57.53	-40.00	-17.53	1.50 V	159	38.84	-96.37

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
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.

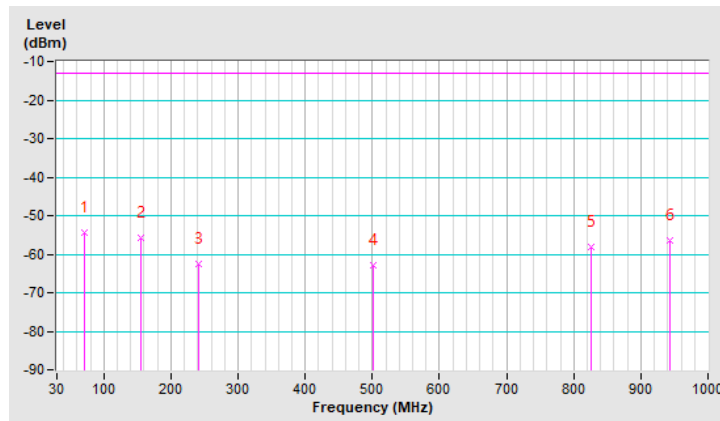


RF Mode	LTE Band 66 Channel Bandwidth: 5MHz	Channel	CH 132647 : 1777.5 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
Tested By	Vincent Chen		

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	71.71	-54.29	-13.00	-41.29	1.00 H	208	55.66	-109.95
2	156.10	-55.70	-13.00	-42.70	2.00 H	72	52.03	-107.73
3	240.49	-62.69	-13.00	-49.69	1.50 H	17	46.52	-109.21
4	500.45	-63.05	-13.00	-50.05	1.00 H	169	39.10	-102.15
5	826.37	-57.98	-13.00	-44.98	1.50 H	3	38.77	-96.75
6	942.77	-56.46	-13.00	-43.46	2.00 H	300	39.35	-95.81

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
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.

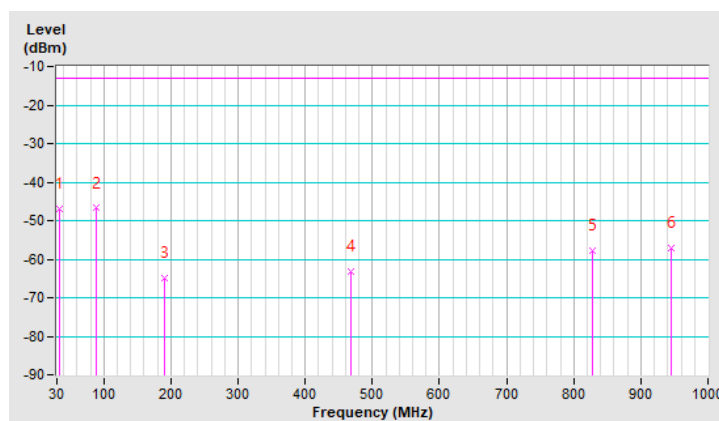


RF Mode	LTE Band 66 Channel Bandwidth: 5MHz	Channel	CH 132647 : 1777.5 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
Tested By	Vincent Chen		

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	34.85	-47.00	-13.00	-34.00	1.00 V	95	61.17	-108.17
2	88.20	-46.78	-13.00	-33.78	1.50 V	137	66.49	-113.27
3	190.05	-64.90	-13.00	-51.90	1.50 V	1	45.45	-110.35
4	467.47	-63.35	-13.00	-50.35	2.00 V	239	39.57	-102.92
5	828.31	-57.79	-13.00	-44.79	1.50 V	192	38.98	-96.77
6	944.71	-56.99	-13.00	-43.99	1.00 V	203	38.79	-95.78

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
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.



7.2 Radiated Spurious Emissions above 1GHz

7.2.1 NR n48 SCS 30 kHz+LTE Band 66

RF Mode	NR n48 Channel Bandwidth: 10MHz	Channel	CH 637000 : 3555.00 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7110.00	-45.51	-40.00	-5.51	3.11 H	339	54.36	-99.87
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	7110.00	-43.21	-40.00	-3.21	2.38 V	74	56.66	-99.87

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 10MHz	Channel	CH 641666 : 3624.99 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7249.98	-43.16	-40.00	-3.16	3.51 H	230	56.52	-99.68
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	7249.98	-45.49	-40.00	-5.49	1.81 V	353	54.19	-99.68

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 10MHz	Channel	CH 646332 : 3694.98 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7389.96	-43.22	-40.00	-3.22	3.23 H	161	56.08	-99.30
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	7389.96	-44.65	-40.00	-4.65	1.30 V	93	54.65	-99.30

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 20MHz	Channel	CH 637334 : 3560.01 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7120.02	-43.28	-40.00	-3.28	2.10 H	286	56.60	-99.88
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	7120.02	-45.49	-40.00	-5.49	1.31 V	317	54.39	-99.88

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 20MHz	Channel	CH 640000 : 3624.99 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7249.98	-42.78	-40.00	-2.78	3.04 H	238	56.90	-99.68
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	7249.98	-45.10	-40.00	-5.10	2.03 V	9	54.58	-99.68

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 20MHz	Channel	CH 646000 : 3690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7380.00	-43.21	-40.00	-3.21	3.18 H	221	56.08	-99.29
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	7380.00	-44.63	-40.00	-4.63	2.68 V	135	54.66	-99.29

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 40MHz	Channel	CH 638000 : 3570 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7140.00	-43.62	-40.00	-3.62	2.32 H	43	56.29	-99.91
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	7140.00	-45.58	-40.00	-5.58	2.05 V	167	54.33	-99.91

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 40MHz	Channel	CH 641666 : 3624.99 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7249.98	-44.04	-40.00	-4.04	3.86 H	83	55.64	-99.68
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	7249.98	-45.31	-40.00	-5.31	2.75 V	324	54.37	-99.68

Remarks:

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

RF Mode	NR n48 Channel Bandwidth: 40MHz	Channel	CH 645332 : 3679.98 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	7359.96	-44.05	-40.00	-4.05	3.80 H	233	55.24	-99.29
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	7359.96	-44.93	-40.00	-4.93	1.07 V	300	54.36	-99.29

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 1.4MHz	Channel	CH 131979 : 1710.7 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	3421.40	-47.07	-13.00	-34.07	3.91 H	162	62.82	-109.89
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	3421.40	-51.24	-13.00	-38.24	2.54 V	82	58.65	-109.89

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 1.4MHz	Channel	CH 132322 : 1745 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-46.44	-13.00	-33.44	2.70 H	175	62.69	-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	-50.73	-13.00	-37.73	1.59 V	122	58.40	-109.13

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 1.4MHz	Channel	CH 132665 : 1779.3 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	3558.60	-46.40	-13.00	-33.40	2.98 H	79	62.48	-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	3558.60	-50.38	-13.00	-37.38	2.11 V	322	58.50	-108.88

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 5MHz	Channel	CH 131997 : 1712.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-47.60	-13.00	-34.60	3.83 H	146	62.26	-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	-51.41	-13.00	-38.41	2.66 V	113	58.45	-109.86

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 5MHz	Channel	CH 132322 : 1745 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-47.04	-13.00	-34.04	2.57 H	6	62.09	-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	-50.63	-13.00	-37.63	1.18 V	167	58.50	-109.13

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 5MHz	Channel	CH 132647 : 1777.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-46.01	-13.00	-33.01	1.79 H	57	62.86	-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	-49.95	-13.00	-36.95	2.60 V	153	58.92	-108.87

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 20MHz	Channel	CH 132072 : 1720 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-47.68	-13.00	-34.68	1.28 H	261	62.06	-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	-51.06	-13.00	-38.06	1.84 V	134	58.68	-109.74

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 20MHz	Channel	CH 132322 : 1745 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-46.38	-13.00	-33.38	1.40 H	303	62.75	-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	-50.18	-13.00	-37.18	2.42 V	153	58.95	-109.13

Remarks:

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

RF Mode	LTE Band 66 Channel Bandwidth: 20MHz	Channel	CH 132572 : 1770 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
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	-46.52	-13.00	-33.52	2.45 H	240	62.38	-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	-50.19	-13.00	-37.19	1.15 V	348	58.71	-108.90

Remarks:

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

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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 according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

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

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