

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBEDV-WTW-P24080720-5

FCC ID: VUI-F2892C

Product: Nura4K

Brand: PEGATRON

Model No.: MC1521-Q60

Received Date: 2023/4/27

Test Date: 2023/5/30 ~ 2024/9/26

Issued Date: 2024/10/1

Applicant: PEGATRON CORPORATION

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

, Date: _____

2024/10/1

Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P24080720-5	Original release.	2024/10/1

1 Certificate

Product: Nura4K

Brand: PEGATRON

Test Model: MC1521-Q60

Sample Status: Engineering sample

Applicant: PEGATRON CORPORATION

Test Date: 2023/5/30 ~ 2024/9/26

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

Measurement ANSI/TIA/EIA-603-E 2016

procedure: ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 940660 D01 Part 96 CBRS Eqpt v03

KDB 662911 D01 Multiple Transmitter Output v02r01

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

Standard / Clause	Test Item	Result	Remark
Part 2.1046 Part 96.41(b)	Maximum EIRP	Pass	Meet the requirement of limit.
Part 2.1047	Modulation Characteristics	N/A	Refer to Note 1
Part 2.1046 Part 96.41(b)	Maximum Power Spectral Density	N/A	This device is End User Device.
Part 96.41(g)	Peak to Average Ratio	N/A	Refer to Note 1
Part 2.1049	Bandwidth	N/A	Refer to Note 1
Part 2.1051 Part 96.41(e)	Conducted Spurious Emissions	N/A	Refer to Note 1
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -6.20 dB at 53.28 MHz
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -3.09 dB at 7359.96 MHz
Part 2.1055	Frequency Stability	N/A	Refer to Note 1

Note:

1. The only test item of Maximum EIRP and Radiated Spurious Emissions tests were performed for this report. Select the worst case scenario for each WWAN band for testing. Other testing data please refer to SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. Report No.: FYCR220600021102 (LTE Module, Brand: Quectel, Model: RM520N-GL, FCC ID: XMR2022RM520NGL).
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 (±)
Maximum Output Power	-	1.371 dB
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	Nura4K
Brand	PEGATRON
Test Model	MC1521-Q60
Status of EUT	Engineering sample
Power Supply Rating	5 Vdc or 9 Vdc or 12 Vdc or 15 Vdc (from adapter)

Note:

1. EUT Overview

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)
10 MHz	3555 ~ 3694.98	QPSK	0.120	20.79
		16QAM	0.067	18.27
		64QAM	0.053	17.27
		256QAM	0.028	14.43
20 MHz/Full Power	3560.01 ~ 3690	QPSK	0.120	20.78
		16QAM	0.068	18.33
		64QAM	0.053	17.27
		256QAM	0.028	14.41
40 MHz/Full Power	3570 ~ 3679.98	QPSK	0.120	20.79
		16QAM	0.068	18.34
		64QAM	0.053	17.25
		256QAM	0.028	14.42
20 MHz/10 MHz	3560.01 ~ 3690	QPSK	0.120	20.79
		16QAM	0.068	18.33
		64QAM	0.053	17.24
		256QAM	0.028	14.40
40 MHz/10 MHz	3570 ~ 3679.98	QPSK	0.119	20.77
		16QAM	0.067	18.28
		64QAM	0.053	17.27
		256QAM	0.028	14.43

*The power setting were modified lower specifically for this host to meet EIRP < 23 dBm.

*The EIRP is tested by radiated method, so directional gain is not be used for EIRP calculations under MIMO mode.

2. The EUT is authorized for use in specific End-product. Please refer to below for more details.

Brand	Brand	Model	FCC ID
Nura4K	PEGATRON	MC1521-Q60	VUI-F2660C

3. The specific module configuration tested within this report will be locked at factory for use within grantee's own host product.

4. The EUT uses following accessories.

AC Adapter		
Brand	Model	Specification
DELTA	ADH-36DW B	AC Input: 100-240 V, 0.8 A, 50-60 Hz DC Output: 5.0 Vdc, 3.0A / 9.0Vdc, 3.0A / 12.0Vdc, 3.0A / 15Vdc, 2.4A, 36.0W DC Output Cable: USB Type C 1.8m

5. 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.

Ant. Type		PIFA	
Connector		ipex(MHF)	
5G FR1 Band			
Band	Freq. Range (MHz)	Gain (dBi)	
		Ant. 0	Ant. 2
n48	3550 ~ 3700	2.96	3.96
n77	3450 ~ 3550	1.98	3.96
n77	3700 ~ 3980	3.13	2.66

*SISO mode is fixed to transmit in Ant. 2.

*Antennas are for use with n48/n77 bands only in the host device FCC ID: VUI-F2660C.

*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.

3.3 Test Mode Applicability and Tested Channel Detail

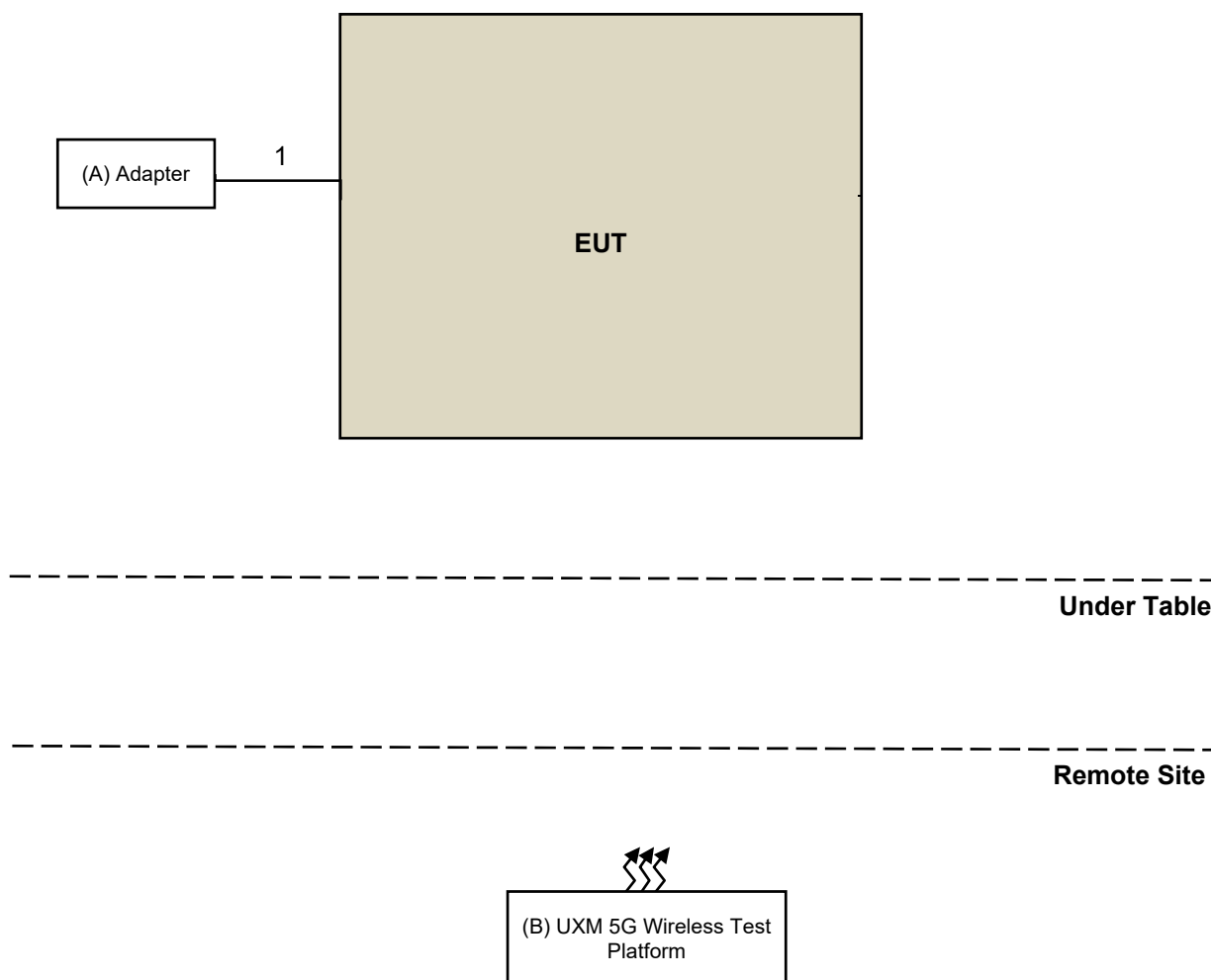
3.3.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

Test Item	EUT Configure Mode	Tested Channel	Channel Bandwidth		Modulation	Mode
Maximum EIRP	1Tx, 2Tx	637000(3555.00 MHz) 641666(3624.99 MHz) 646333(3694.98 MHz)	10 MHz		QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz		QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz		QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	2TX	645332(3679.98 MHz)	10 MHz		QPSK	1 RB
Radiated Spurious Emissions above 1GHz	2Tx	637000(3555.00 MHz) 641666(3624.99 MHz) 646333(3694.98 MHz)	10 MHz		QPSK	1 RB
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz		QPSK	1 RB
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz		QPSK	1 RB

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 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	Adapter	Delta	ADH-36DW B	N/A	N/A	Accessory of EUT
B	UXM 5G Wireless Test Platform	Keysight	E7515B	MY60102115	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.8	N	0	Accessory of EUT

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 Maximum EIRP

MIMO

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn BV ADT	AT100	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1169	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170243	2023/11/12	2024/11/11
MXE EMI Receiver Keysight	N9038B	MY60180018	2024/3/13	2025/3/12
Preamplifier Agilent	8449B	3008A02367	2024/1/6	2025/1/5
Preamplifier EMCI	EMC 184045	980116	2024/9/24	2025/9/23
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2024/1/6	2025/1/5
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2024/1/6	2025/1/5
Signal & Spectrum Analyzer R&S	FSW43	101867	2023/12/29	2024/12/28
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2024/9/26

SISO

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030B	MY57140488	2023/3/6	2024/3/5
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
UXM 5G Wireless Test Platform Keysight	E7515B	MY60102115	2023/5/25	2024/5/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/6/9

4.2 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	VULB 9168	9168-472	2022/10/21	2023/10/20
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Preamplifier EMCI	EMC 330H	980112	2022/10/1	2023/9/30
	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2022/10/1	2023/9/30
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
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

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/6/5

4.3 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
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/1/3	2024/1/2
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2022/11/13	2023/11/12
	BBHA 9170	148	2022/11/13	2023/11/12
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Preamplifier EMCI	EMC 012645	980115	2022/10/1	2023/9/30
	EMC 184045	980116	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
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
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

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/5/30

5 Limits of Test Items

5.1 Maximum EIRP

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

Device Category	Maximum EIRP (dBm/10 MHz)
End User Device	23
Category A CBSD	30
Category B CBSD	47

5.2 Radiated Spurious Emissions below 1GHz

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

5.3 Radiated Spurious Emissions above 1GHz

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

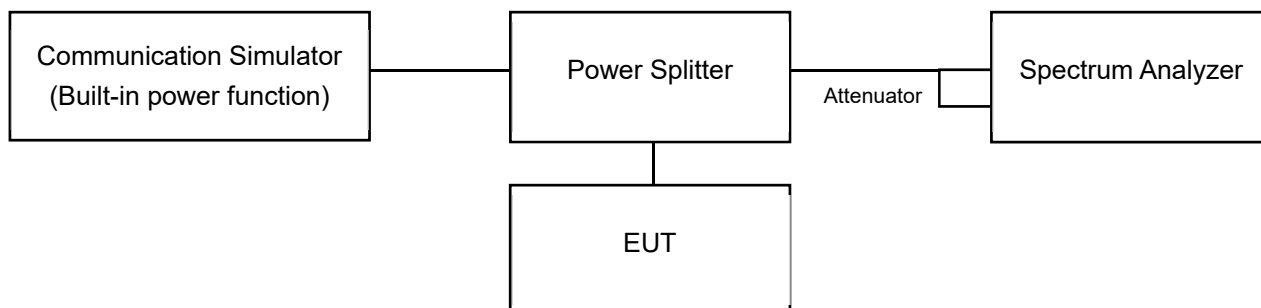
The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

6 Test Arrangements

6.1 Maximum EIRP

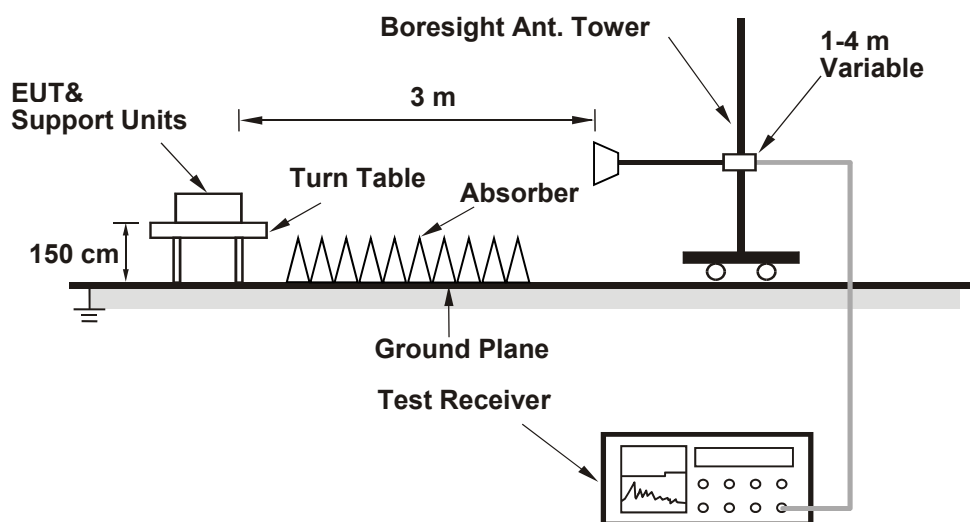
6.1.1 Test Setup

Conducted Power Measurement:



Radiated Power EIRP / ERP Measurement:

For Radiated Emission above 1 GHz



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

6.1.2 Test Procedure

Conducted Power Measurement:

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology and link to spectrum analyzer measurements. Set the EUT to transmit under low, middle and high channel and record the power level shown on spectrum analyzer. Power measurements use detector average (rms).

Measurement method refers to ANSI C63.26 section 5.2.4.4.

- a. Set span to $2 \times$ to $3 \times$ the OBW.
- b. Set RBW = 1% to 5% of the OBW.
- c. Set VBW $\geq 3 \times$ RBW.
- d. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
- e. Set Sweep time = auto-couple.
- f. Detector = power averaging (rms).
- g. Set sweep trigger to "free run."
- h. Trace average at least 100 traces in power averaging (rms) mode.
- i. Use the Band/Channel Power function to determine the integrated power per 10 MHz bandwidth and full bandwidth, according to the 47 CFR FCC Part 96 standard.
- j. If Duty cycle < 98%, Add $10 \log (1/\text{duty cycle})$ to the measured power level to compute the average power during continuous transmission.

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:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$

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

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)

Radiated Power EIRP / ERP Measurement:

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

Set the EUT to transmit under low, middle and high channel and record the power level shown on spectrum analyzer.

- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 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.
 - 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. Set the detector to power averaging (rms) detector.
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; 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.

Spectrum analyzer setting as below:

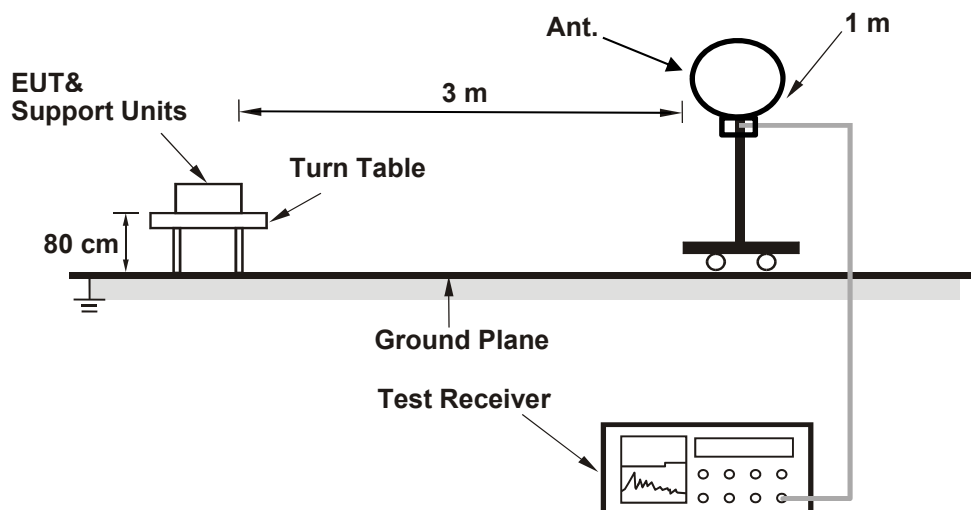
Measurement method refers to ANSI C63.26 section 5.2.4.4.

- a. Set span to $2 \times$ to $3 \times$ the OBW.
- b. Set RBW = 1% to 5% of the OBW.
- c. Set VBW $\geq 3 \times$ RBW.
- d. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
- e. Set Sweep time = auto-couple.
- f. Detector = power averaging (rms).
- g. Set sweep trigger to "free run."
- h. Trace average at least 100 traces in power averaging (rms) mode.
- i. Use the Band/Channel Power function to determine the integrated power per 10 MHz bandwidth and full bandwidth, according to the 47 CFR FCC Part 96 standard.
- j. If Duty cycle < 98%, Add $10 \log (1/\text{duty cycle})$ to the measured power level to compute the average power during continuous transmission.

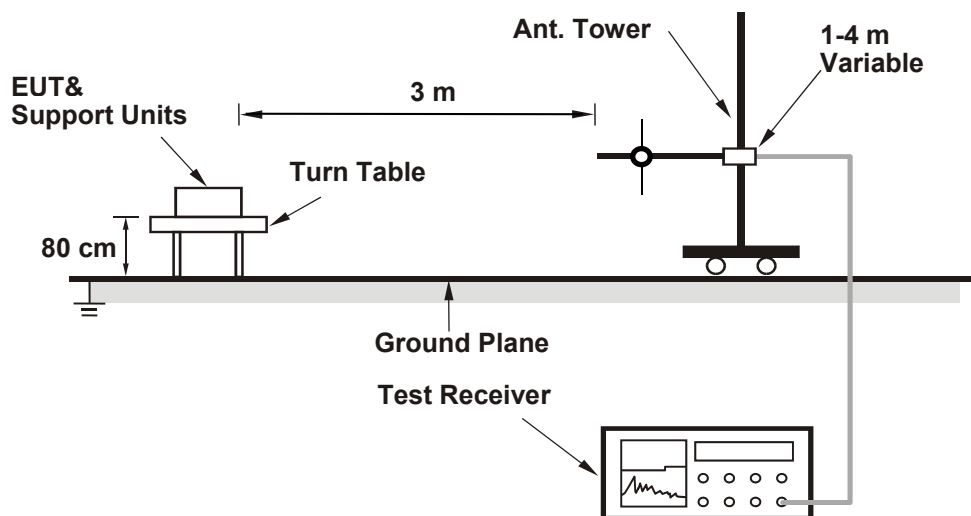
6.2 Radiated Spurious Emissions below 1GHz

6.2.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.2.2 Test Procedure

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

- a. 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.
- 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 ANSI C63.26 section 5.5 and 5.2.7
- e. $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- f. $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

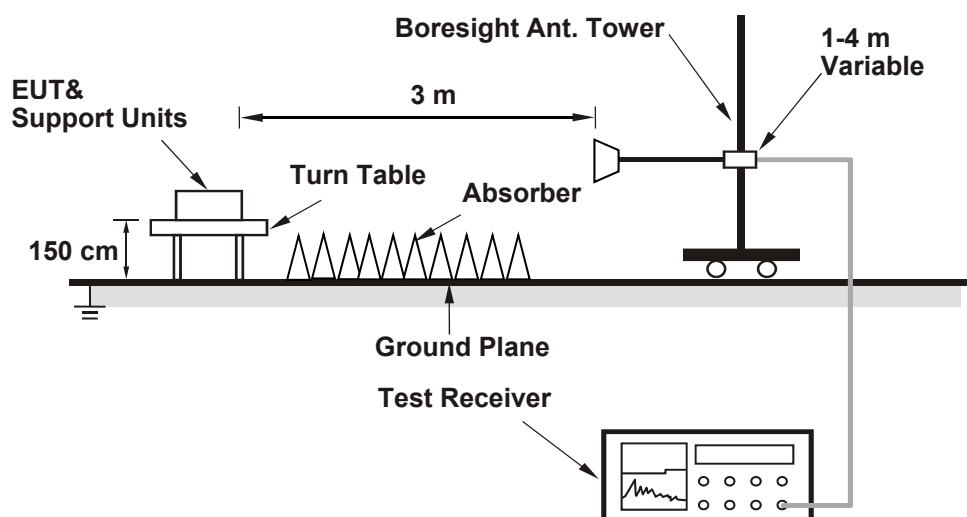
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
2. The amplitude of spurious emissions in the range 9 kHz to 30 MHz which are attenuated more than 20 dB below the permissible value need not be reported.

6.3 Radiated Spurious Emissions above 1GHz

6.3.1 Test Setup

For radiated emission above 1 GHz



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

6.3.2 Test Procedure

The EUT is configured 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 ANSI 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 Maximum EIRP

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 68% RH	Tested By:	James Yang
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7.1.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

MIMO

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 10 MHz

Modulation	Channel	Channel Frequency (MHz)	Field Strength (dBμV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	637000	3555	113.05	-95.26	60.117	17.79	23
	641666	3624.99	113.14	-95.26	61.376	17.88	23
	646333	3694.98	113.08	-95.26	60.534	17.82	23
16QAM	637000	3555	112.18	-95.26	49.204	16.92	23
	641666	3624.99	112.24	-95.26	49.888	16.98	23
	646333	3694.98	112.19	-95.26	49.317	16.93	23
64QAM	637000	3555	111.19	-95.26	39.174	15.93	23
	641666	3624.99	111.27	-95.26	39.902	16.01	23
	646333	3694.98	111.23	-95.26	39.537	15.97	23
256QAM	637000	3555	108.54	-95.26	21.281	13.28	23
	641666	3624.99	108.64	-95.26	21.777	13.38	23
	646333	3694.98	108.62	-95.26	21.677	13.36	23

Notes:

1. EIRP (dBm) = Field Strength (dBμV/m) + Correction Factor (dB)
2. Correction Factor (dB) = $20\log(D) - 104.8$; where D is the measurement distance at 3 meters.

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 20 MHz, Output Power: Full Power

Modulation	Channel	Channel Frequency (MHz)	Field Strength (dBμV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	637334	3560.01	113.08	-95.26	60.534	17.82	23
	641666	3624.99	113.05	-95.26	60.117	17.79	23
	646000	3690	113	-95.26	59.429	17.74	23
16QAM	637334	3560.01	112.21	-95.26	49.545	16.95	23
	641666	3624.99	112.15	-95.26	48.865	16.89	23
	646000	3690	112.14	-95.26	48.753	16.88	23
64QAM	637334	3560.01	111.23	-95.26	39.537	15.97	23
	641666	3624.99	111.22	-95.26	39.446	15.96	23
	646000	3690	111.15	-95.26	38.815	15.89	23
256QAM	637334	3560.01	108.49	-95.26	21.038	13.23	23
	641666	3624.99	108.58	-95.26	21.478	13.32	23
	646000	3690	108.57	-95.26	21.429	13.31	23

Notes:

1. EIRP (dBm) = Field Strength (dBμV/m) + Correction Factor (dB)
2. Correction Factor (dB) = $20\log(D) - 104.8$; where D is the measurement distance at 3 meters.

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 40 MHz, Output Power: Full Power

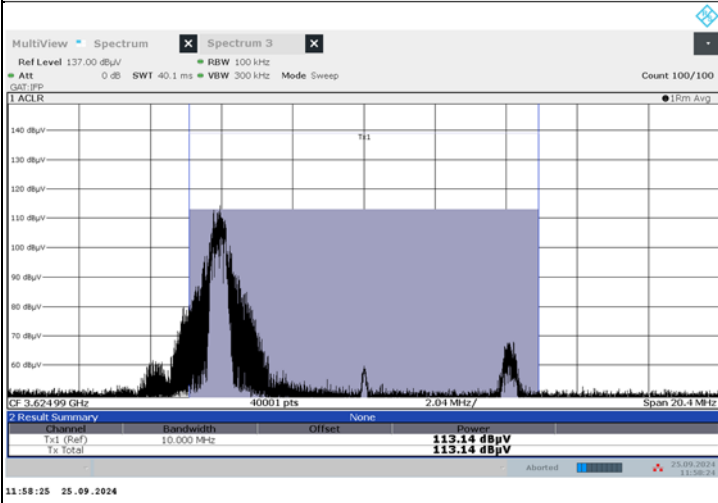
Modulation	Channel	Channel Frequency (MHz)	Field Strength (dB μ V/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	638000	3570	113.07	-95.26	60.395	17.81	23
	641666	3624.99	113.22	-95.26	62.517	17.96	23
	645332	3679.98	113.17	-95.26	61.802	17.91	23
16QAM	638000	3570	112.18	-95.26	49.204	16.92	23
	641666	3624.99	112.31	-95.26	50.699	17.05	23
	645332	3679.98	112.28	-95.26	50.35	17.02	23
64QAM	638000	3570	111.21	-95.26	39.355	15.95	23
	641666	3624.99	111.28	-95.26	39.994	16.02	23
	645332	3679.98	111.28	-95.26	39.994	16.02	23
256QAM	638000	3570	108.57	-95.26	21.429	13.31	23
	641666	3624.99	108.74	-95.26	22.284	13.48	23
	645332	3679.98	108.71	-95.26	22.131	13.45	23

Notes:

1. EIRP (dBm) = Field Strength (dB μ V/m) + Correction Factor (dB)
2. Correction Factor (dB) = 20log(D) – 104.8; where D is the measurement distance at 3 meters.

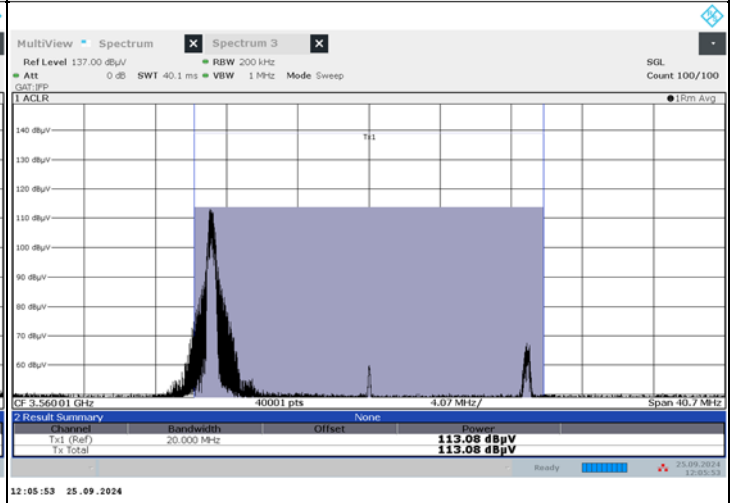
Spectrum Plot of Worst Value

Channel Bandwidth: 10 MHz



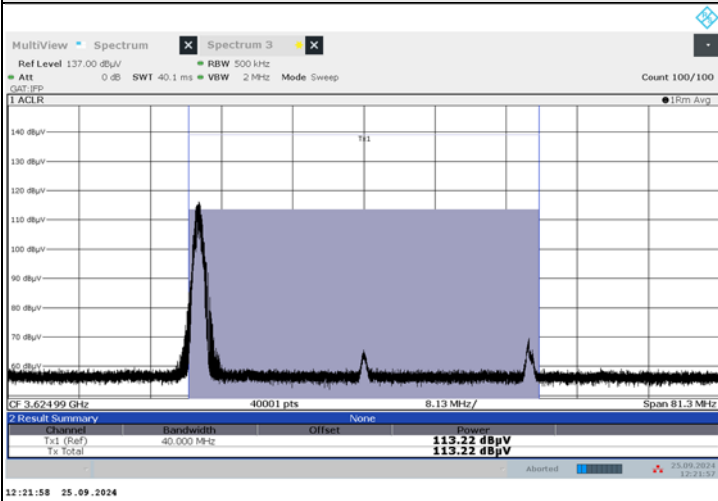
QPSK CH 641666 (3624.99 MHz)

Channel Bandwidth: 20 MHz



QPSK CH 637334 (3560.01 MHz)

Channel Bandwidth: 40 MHz



QPSK CH 641666 (3624.99 MHz)

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 20 MHz, Output Power: dBm/10 MHz

Modulation	Channel	Channel Frequency (MHz)	Field Strength (dBμV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	637334	3560.01	112.87	-95.26	57.677	17.61	23
	641666	3624.99	112.85	-95.26	57.412	17.59	23
	646000	3690	112.81	-95.26	56.885	17.55	23
16QAM	637334	3560.01	111.99	-95.26	47.098	16.73	23
	641666	3624.99	111.97	-95.26	46.881	16.71	23
	646000	3690	111.93	-95.26	46.452	16.67	23
64QAM	637334	3560.01	111.02	-95.26	37.67	15.76	23
	641666	3624.99	111	-95.26	37.497	15.74	23
	646000	3690	110.96	-95.26	37.154	15.7	23
256QAM	637334	3560.01	108.38	-95.26	20.512	13.12	23
	641666	3624.99	108.36	-95.26	20.417	13.1	23
	646000	3690	108.32	-95.26	20.23	13.06	23

Notes:

1. EIRP (dBm) = Field Strength (dBμV/m) + Correction Factor (dB)
2. Correction Factor (dB) = $20\log(D) - 104.8$; where D is the measurement distance at 3 meters.

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz), Channel Bandwidth: 40 MHz, Output Power: dBm/10 MHz

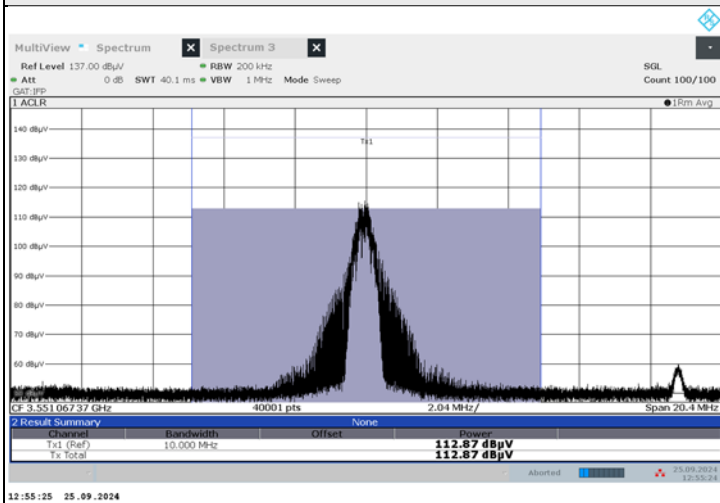
Modulation	Channel	Channel Frequency (MHz)	Field Strength (dBμV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	638000	3570	112.84	-95.26	57.28	17.58	23
	641666	3624.99	113.02	-95.26	59.704	17.76	23
	645332	3679.98	112.97	-95.26	59.02	17.71	23
16QAM	638000	3570	111.96	-95.26	46.774	16.7	23
	641666	3624.99	112.14	-95.26	48.753	16.88	23
	645332	3679.98	112.09	-95.26	48.195	16.83	23
64QAM	638000	3570	110.99	-95.26	37.411	15.73	23
	641666	3624.99	111.17	-95.26	38.994	15.91	23
	645332	3679.98	111.12	-95.26	38.548	15.86	23
256QAM	638000	3570	108.35	-95.26	20.37	13.09	23
	641666	3624.99	108.53	-95.26	21.232	13.27	23
	645332	3679.98	108.48	-95.26	20.989	13.22	23

Notes:

1. EIRP (dBm) = Field Strength (dBμV/m) + Correction Factor (dB)
2. Correction Factor (dB) = $20\log(D) - 104.8$; where D is the measurement distance at 3 meters.

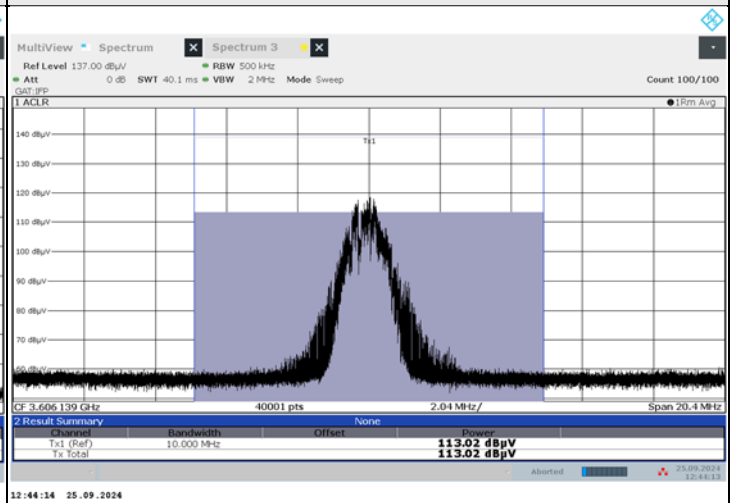
Spectrum Plot of Worst Value

Channel Bandwidth: 20 MHz



QPSK CH 637334 (3560.01 MHz)

Channel Bandwidth: 40 MHz



QPSK CH 641666 (3624.99 MHz)

SISO

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) - SISO, Channel Bandwidth: 10 MHz

NR n48 SCS 30 kHz 10M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 637000	CH 641666	CH 646332
			3555 MHz	3624.99 MHz	3694.98 MHz
QPSK	1	1	16.72	16.75	16.83
	1	11	16.82	16.81	16.80
	1	22	16.78	16.78	16.80
	12	0	16.69	16.70	16.66
	12	6	16.63	16.76	16.68
	12	12	16.75	16.71	16.75
	24	0	15.66	15.70	15.72
16QAM	1	1	14.31	14.24	14.31
64QAM	1	1	13.31	13.25	13.19
256QAM	1	1	10.47	10.36	10.34

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	15.66	16.83	19.62	20.79	23
16QAM	14.24	14.31	18.2	18.27	23
64QAM	13.19	13.31	17.15	17.27	23
256QAM	10.34	10.47	14.3	14.43	23

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) - SISO, Channel Bandwidth: 20 MHz, Output Power: Full Power

NR n48 SCS 30 kHz 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 6377334	CH 641666	CH 646000
			3560.01 MHz	3624.99 MHz	3690 MHz
QPSK	1	1	16.70	16.82	16.75
	1	19	16.70	16.82	16.69
	1	36	16.81	16.81	16.79
	18	0	16.73	16.77	16.63
	18	10	16.64	16.74	16.63
	18	20	16.71	16.66	16.71
	36	0	15.62	15.74	15.74
16QAM	1	1	14.32	14.30	14.37
64QAM	1	1	13.31	13.18	13.16
256QAM	1	1	10.32	10.45	10.45

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	15.62	16.82	19.58	20.78	23
16QAM	14.3	14.37	18.26	18.33	23
64QAM	13.16	13.31	17.12	17.27	23
256QAM	10.32	10.45	14.28	14.41	23

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) - SISO, Channel Bandwidth: 40 MHz, Output Power: Full Power

NR n48 SCS 30 kHz 40M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 638000	CH 641666	CH 645332
			3570 MHz	3624.99 MHz	3679.98 MHz
QPSK	1	1	16.69	16.75	16.77
	1	53	16.83	16.75	16.73
	1	104	16.76	16.83	16.82
	50	0	16.77	16.72	16.77
	50	28	16.76	16.73	16.65
	50	56	16.74	16.73	16.69
	100	0	15.64	15.61	15.66
16QAM	1	1	14.29	14.38	14.30
64QAM	1	1	13.23	13.29	13.29
256QAM	1	1	10.43	10.44	10.46

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	15.61	16.83	19.57	20.79	23
16QAM	14.29	14.38	18.25	18.34	23
64QAM	13.23	13.29	17.19	17.25	23
256QAM	10.43	10.46	14.39	14.42	23

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) - SISO, Channel Bandwidth: 20 MHz, Output Power: dBm/10 MHz

NR n48 SCS 30 kHz 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 637334	CH 641666	CH 646000
			3560.01 MHz	3624.99 MHz	3690 MHz
QPSK	1	1	16.82	16.83	16.82
	1	26	16.75	16.72	16.79
	1	49	16.75	16.72	16.68
	25	0	16.73	16.75	16.66
	25	13	16.77	16.75	16.62
	25	26	16.70	16.77	16.74
	50	0	13.09	13.12	13.19
16QAM	1	1	14.26	14.31	14.37
64QAM	1	1	13.17	13.28	13.20
256QAM	1	1	10.36	10.36	10.44

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	13.09	16.83	17.05	20.79	23
16QAM	14.26	14.37	18.22	18.33	23
64QAM	13.17	13.28	17.13	17.24	23
256QAM	10.36	10.44	14.32	14.40	23

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz) - SISO, Channel Bandwidth: 40 MHz, Output Power: dBm/10 MHz

NR n48 SCS 30 kHz 40M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 638000	CH 641666	CH 645332
			3570 MHz	3624.99 MHz	3679.98 MHz
QPSK	1	1	16.68	16.81	16.76
	1	53	16.76	16.78	16.73
	1	104	16.73	16.77	16.75
	50	0	14.55	14.47	14.54
	50	28	14.49	14.55	14.49
	50	56	14.51	14.59	14.60
	100	0	10.12	10.26	10.18
16QAM	1	1	14.31	14.28	14.32
64QAM	1	1	13.29	13.21	13.31
256QAM	1	1	10.40	10.40	10.47

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	10.12	16.81	14.08	20.77	23
16QAM	14.28	14.32	18.24	18.28	23
64QAM	13.21	13.31	17.17	17.27	23
256QAM	10.4	10.47	14.36	14.43	23

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.2 Radiated Spurious Emissions below 1GHz

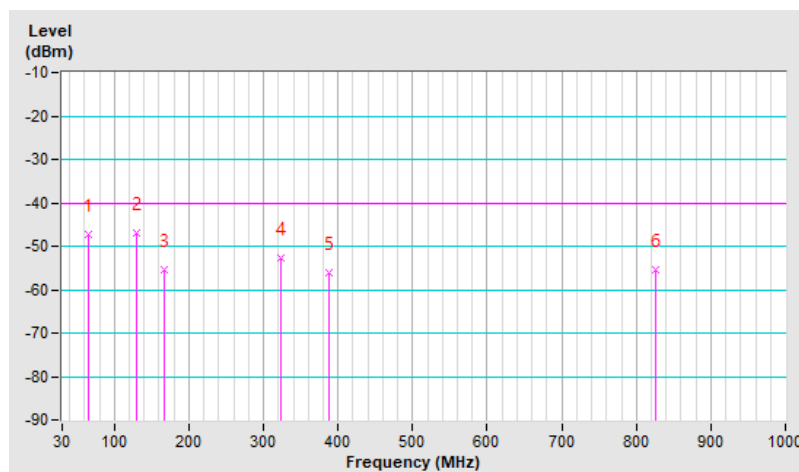
7.2.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

RF Mode	NR n48 Channel Bandwidth: 40MHz	Channel	CH 645332 : 3679.98 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 73 % 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	64.92	-47.38	-40.00	-7.38	1.50 H	2	61.62	-109.00
2	129.91	-47.05	-40.00	-7.05	2.00 H	138	61.62	-108.67
3	167.74	-55.26	-40.00	-15.26	2.00 H	274	52.92	-108.18
4	323.91	-52.77	-40.00	-12.77	1.00 H	66	53.63	-106.40
5	387.93	-55.99	-40.00	-15.99	1.50 H	91	48.97	-104.96
6	825.40	-55.48	-40.00	-15.48	2.00 H	33	41.26	-96.74

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

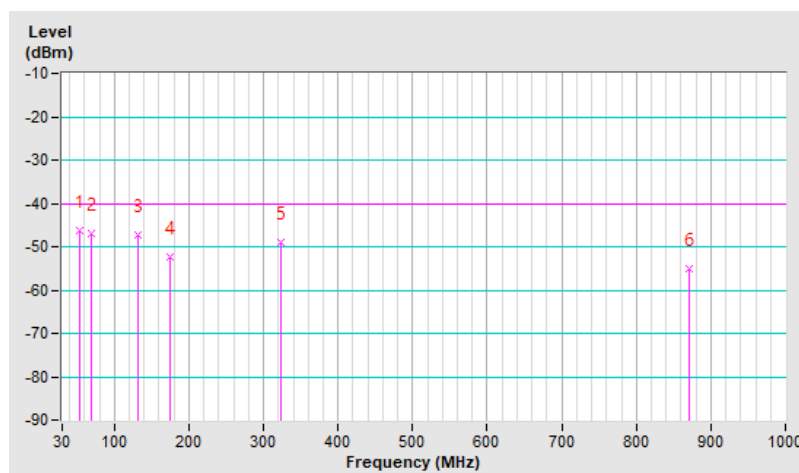


RF Mode	NR n48 Channel Bandwidth: 40MHz	Channel	CH 645332 : 3679.98 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 73 % RH
Tested By	Thomas Cheng		

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	53.28	-46.20	-40.00	-6.20	1.50 V	317	61.45	-107.65
2	69.77	-46.95	-40.00	-6.95	2.00 V	2	62.68	-109.63
3	131.85	-47.34	-40.00	-7.34	2.00 V	202	61.29	-108.63
4	175.50	-52.34	-40.00	-12.34	1.50 V	191	56.44	-108.78
5	323.91	-49.15	-40.00	-9.15	1.00 V	54	57.25	-106.40
6	870.99	-55.07	-40.00	-15.07	2.00 V	302	41.62	-96.69

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 frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.3 Radiated Spurious Emissions above 1GHz

7.3.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

RF Mode	NR n48 Channel Bandwidth: 10MHz	Channel	CH 637000 : 3555 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	21 °C, 66 % 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	-43.69	-40.00	-3.69	2.65 H	112	54.56	-98.25
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	-46.02	-40.00	-6.02	1.42 V	206	52.23	-98.25

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	21 °C, 66 % 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	-43.68	-40.00	-3.68	2.63 H	147	54.38	-98.06
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	-45.90	-40.00	-5.90	1.52 V	203	52.16	-98.06

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	21 °C, 66 % 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	-43.48	-40.00	-3.48	1.22 H	258	54.28	-97.76
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	-45.31	-40.00	-5.31	1.67 V	177	52.45	-97.76

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	21 °C, 66 % 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	-43.52	-40.00	-3.52	2.25 H	167	54.72	-98.24
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	-46.07	-40.00	-6.07	1.23 V	257	52.17	-98.24

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 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	21 °C, 66 % 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	-43.77	-40.00	-3.77	2.58 H	108	54.29	-98.06
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	-45.67	-40.00	-5.67	1.67 V	111	52.39	-98.06

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	21 °C, 66 % 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	-43.61	-40.00	-3.61	2.85 H	166	54.15	-97.76
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	-45.37	-40.00	-5.37	1.55 V	205	52.39	-97.76

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	21 °C, 66 % 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	-43.43	-40.00	-3.43	1.52 H	33	54.82	-98.25
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	-45.78	-40.00	-5.78	2.58 V	111	52.47	-98.25

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	21 °C, 66 % 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	-43.83	-40.00	-3.83	2.26 H	107	54.23	-98.06
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	-45.80	-40.00	-5.80	1.16 V	208	52.26	-98.06

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	21 °C, 66 % 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	-43.09	-40.00	-3.09	2.52 H	177	54.68	-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	7359.96	-45.38	-40.00	-5.38	1.74 V	296	52.39	-97.77

Remarks:

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

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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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