

# TEST REPORT

## CERTIFICATE OF CONFORMITY

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

**Report No.:** RFBCMA-WTW-P23030799-6

**FCC ID:** RAXTMOG4AR

**Product:** 5G Gateway

**Brand:** T-Mobile

**Model No.:** TMO-G4AR

**Received Date:** 2023/3/15

**Test Date:** 2023/4/12 ~ 2023/5/2

**Issued Date:** 2023/5/23

**Applicant:** Arcadyan Technology Corporation

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

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN

**FCC Registration /** 788550 / TW0003

**Designation Number:**

**Approved by:** Jeremy Lin, **Date:** 2023/5/23  
Jeremy Lin / Project Engineer

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Prepared by : Vera Huang / Specialist



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## Release Control Record

Issue No.	Description	Date Issued
RFBCMA-WTW-P23030799-6	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 ~ 2023/5/2

**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

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	Pass	Meet the requirement of limit. Refer to Note 2
FCC 47 CFR Part 2.1047	Modulation Characteristics	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 -7.01 dB at 326.82 MHz
FCC 47 CFR Part 2.1053 FCC 47 CFR Part 96.41(e)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -3.04 dB at 7249.98 MHz
FCC 47 CFR Part 2.1055	Frequency Stability	N/A	Refer to Note 1

Note:

1. 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.: KSCR2210001872AT (5G Module, Brand: Fibocom, Model: FG360-NA, FCC ID: ZMOFG360NA08).
2. The conducted output power was copied from the original module report.
3. 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 ( $\pm$ )
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 configuration.

5GNR	FCC 5G FR1		
	Band	SCS	Bandwidth (MHz)
	n48	15kHz	5/10/15/20/40
30kHz		10/15/20/40	

#### 3. EUT Overview.

Band / Bandwidth	TX Frequency Range (MHz)	Max. EIRP Power			
SCS 15kHz, SISO					
n48 (Channel Bandwidth 40MHz)	3570.00-3679.995	QPSK	21.51 dBm	/	141.579 mW
		16QAM	20.67 dBm	/	116.681 mW
		64QAM	19.25 dBm	/	84.140 mW
		256QAM	17.38 dBm	/	54.702 mW
SCS 15kHz, MIMO					
n48 (Channel Bandwidth 40MHz)	3570.00-3679.995	QPSK	20.77 dBm	/	119.399 mW
		16QAM	20.23 dBm	/	105.439 mW
		64QAM	18.73 dBm	/	74.645 mW
		256QAM	15.85 dBm	/	38.459 mW



Band / Bandwidth	TX Frequency Range (MHz)	Max. EIRP Power			
SCS 30kHz, SISO					
n48 (Channel Bandwidth 10MHz)	3555.00-3694.98	QPSK	21.73 dBm	/	148.936 mW
		16QAM	20.61 dBm	/	115.080 mW
		64QAM	19.87 dBm	/	97.051 mW
		256QAM	18.67 dBm	/	73.621 mW
n48 (Channel Bandwidth 15MHz)	3557.52-3692.49	QPSK	21.69 dBm	/	147.571 mW
		16QAM	20.87 dBm	/	122.180 mW
		64QAM	19.87 dBm	/	97.051 mW
		256QAM	19.14 dBm	/	82.035 mW
n48 (Channel Bandwidth 20MHz)	3560.01-3690.00	QPSK	21.71 dBm	/	148.252 mW
		16QAM	20.87 dBm	/	122.180 mW
		64QAM	19.98 dBm	/	99.541 mW
		256QAM	18.98 dBm	/	79.068 mW
n48 (Channel Bandwidth 40MHz)	3570.00-3679.98	QPSK	21.82 dBm	/	152.055 mW
		16QAM	20.87 dBm	/	122.180 mW
		64QAM	19.43 dBm	/	87.700 mW
		256QAM	18.34 dBm	/	68.234 mW
SCS 30kHz, MIMO					
n48 (Channel Bandwidth 10MHz)	3555.00-3694.98	QPSK	20.68 dBm	=	116.950 mW
		16QAM	20.04 dBm	=	100.925 mW
		64QAM	19.42 dBm	=	87.498 mW
		256QAM	15.63 dBm	=	36.559 mW
n48 (Channel Bandwidth 15MHz)	3557.52-3692.49	QPSK	20.43 dBm	=	110.408 mW
		16QAM	20.07 dBm	=	101.625 mW
		64QAM	18.77 dBm	=	75.336 mW
		256QAM	15.66 dBm	=	36.813 mW
n48 (Channel Bandwidth 20MHz)	3560.01-3690.00	QPSK	20.70 dBm	=	117.490 mW
		16QAM	20.10 dBm	=	102.329 mW
		64QAM	18.53 dBm	=	71.285 mW
		256QAM	15.68 dBm	=	36.983 mW
n48 (Channel Bandwidth 40MHz)	3570.00-3679.98	QPSK	20.77 dBm	=	119.399 mW
		16QAM	20.23 dBm	=	105.439 mW
		64QAM	18.73 dBm	=	74.645 mW
		256QAM	15.85 dBm	=	38.459 mW

4. 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.

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.

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 NR n41/48/77 support 2TX/2RX, other bands support 1TX/1RX only.

### 3.3 Test Mode Applicability and Tested Channel Detail

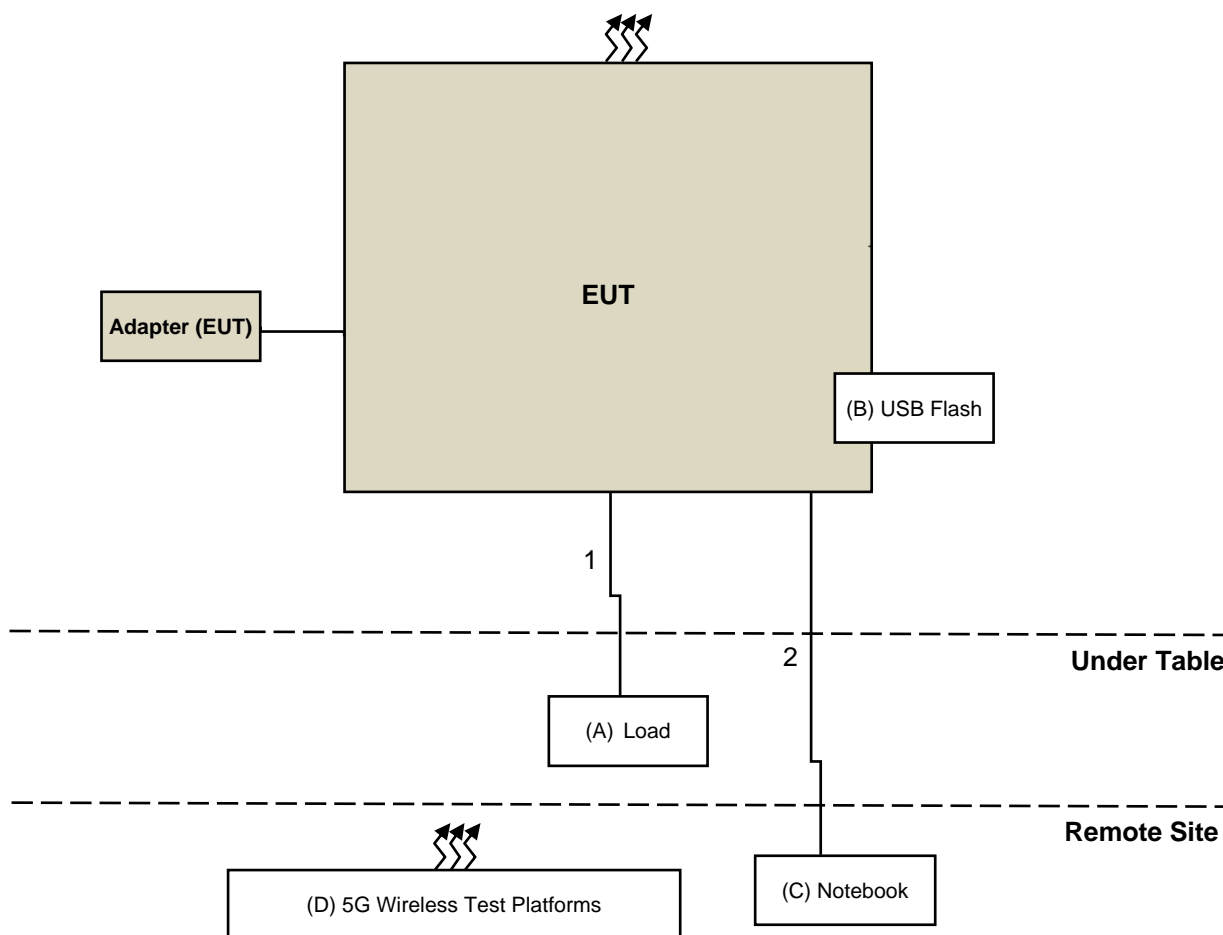
Pre-Scan:	EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	637000 (3555.00 MHz) 641666 (3624.99 MHz) 646332 (3694.98 MHz)	10 MHz	BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	637168 (3557.52 MHz) 641666 (3624.99 MHz) 646166 (3692.49 MHz)	15 MHz	BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	637334 (3560.01 MHz) 641666 (3624.99 MHz) 646000 (3690.00 MHz)	20 MHz	BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	638000 (3570.00 MHz) 641666 (3624.99 MHz) 645332 (3679.98 MHz)	40 MHz	BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
RE Below 1GHz	641666 (3624.99 MHz)	10 MHz	QPSK	1 RB
RE Above 1GHz	637000 (3555.00 MHz) 641666 (3624.99 MHz) 646332 (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	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	5G Wireless Test Platforms	Keysight	E7515B	NA	NA	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	MY59321376	2023/03/13	2024/03/12

Notes:

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

## 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 FLITER 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	ESR	101451	2023/3/27	2024/3/26
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	MY59321376	2023/03/13	2024/03/12

### Notes:

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

## 5 Limits of Test Items

### 5.1 Maximum EIRP

Device		Maximum EIRP (dBm/10 MHz)
<input checked="" type="checkbox"/>	End User Device	23
<input type="checkbox"/>	Category A CBSD	30
<input type="checkbox"/>	Category B CBSD	47

### 5.2 Radiated Spurious Emissions below 1GHz

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

### 5.3 Radiated Spurious Emissions above 1GHz

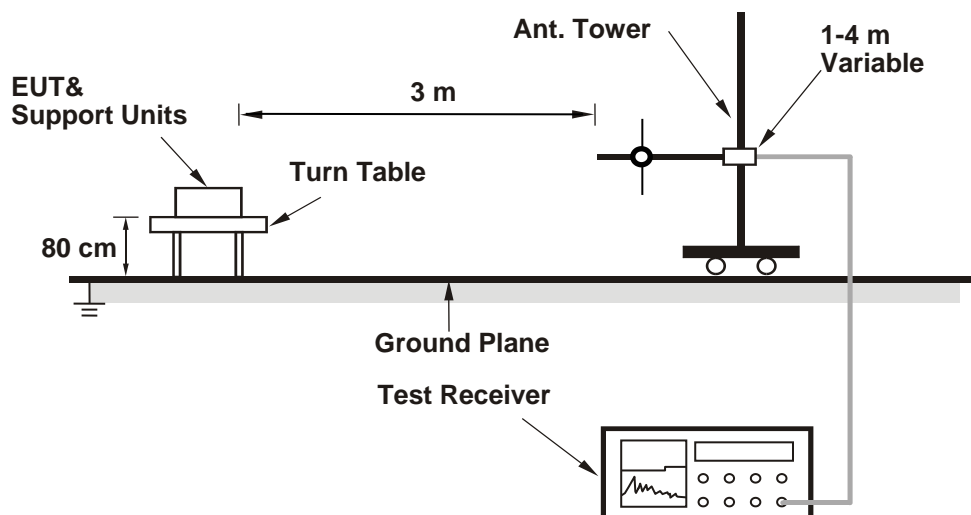
Power of any emissions outside the Fundamental	Limit
Within 0-10MHz above the Assigned Channel	-13 dBm/MHz
Within 0-10MHz below the Assigned Channel	
Greater than 10MHz above the Assigned Channel	-25 dBm/MHz
Greater than 10MHz below the Assigned Channel	
Power of any emission below 3530MHz	-40 dBm/MHz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

## 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.

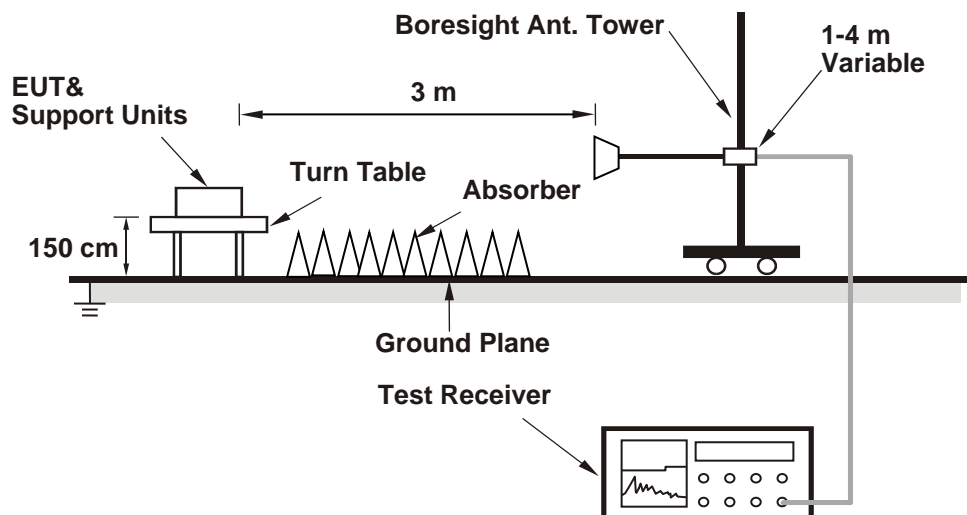
Note:

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



## 7 Test Results of Test Item

### 7.1 Maximum EIRP

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 71% RH	Tested By:	Frank Liu
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#### 7.1.1 NR n48 SCS 15 kHz

##### SISO

Band	SCS	Bandwidth	Modulation	Channel	RB Configuration	Conducted Output Power (dBm)	EIRP Power (dBm)
NR n48	15	40	DFT-QPSK	L	Inner_1RB_Left	20.49	<b>21.51</b>
NR n48	15	40	DFT-QPSK	L	Inner_1RB_Right	19.98	21
NR n48	15	40	DFT-QPSK	L	Outer_Full	19.29	20.31
NR n48	15	40	DFT-16QAM	L	Inner_1RB_Left	18.44	19.46
NR n48	15	40	DFT-16QAM	L	Inner_1RB_Right	18.27	19.29
NR n48	15	40	DFT-16QAM	L	Outer_Full	18.14	19.16
NR n48	15	40	DFT-64QAM	L	Inner_1RB_Left	17.34	18.36
NR n48	15	40	DFT-64QAM	L	Inner_1RB_Right	17.47	18.49
NR n48	15	40	DFT-64QAM	L	Outer_Full	17.34	18.36
NR n48	15	40	DFT-256QAM	L	Inner_1RB_Left	16.36	<b>17.38</b>
NR n48	15	40	DFT-256QAM	L	Inner_1RB_Right	15.85	16.87
NR n48	15	40	DFT-256QAM	L	Outer_Full	16.09	17.11
NR n48	15	40	DFT-QPSK	M	Inner_1RB_Left	19.86	20.88
NR n48	15	40	DFT-QPSK	M	Inner_1RB_Right	19.78	20.8
NR n48	15	40	DFT-QPSK	M	Outer_Full	18.83	19.85
NR n48	15	40	DFT-16QAM	M	Inner_1RB_Left	18.93	19.95
NR n48	15	40	DFT-16QAM	M	Inner_1RB_Right	18.74	19.76
NR n48	15	40	DFT-16QAM	M	Outer_Full	17.85	18.87
NR n48	15	40	DFT-64QAM	M	Inner_1RB_Left	18.08	19.1
NR n48	15	40	DFT-64QAM	M	Inner_1RB_Right	17.92	18.94
NR n48	15	40	DFT-64QAM	M	Outer_Full	17.44	18.46
NR n48	15	40	DFT-256QAM	M	Inner_1RB_Left	16.71	17.73
NR n48	15	40	DFT-256QAM	M	Inner_1RB_Right	16.45	17.47
NR n48	15	40	DFT-256QAM	M	Outer_Full	16.43	17.45
NR n48	15	40	DFT-QPSK	H	Inner_1RB_Left	20.21	21.23
NR n48	15	40	DFT-QPSK	H	Inner_1RB_Right	20.59	21.61
NR n48	15	40	DFT-QPSK	H	Outer_Full	19.34	20.36
NR n48	15	40	DFT-16QAM	H	Inner_1RB_Left	19.65	<b>20.67</b>
NR n48	15	40	DFT-16QAM	H	Inner_1RB_Right	19.54	20.56
NR n48	15	40	DFT-16QAM	H	Outer_Full	19.45	20.47
NR n48	15	40	DFT-64QAM	H	Inner_1RB_Left	18.15	19.17
NR n48	15	40	DFT-64QAM	H	Inner_1RB_Right	18.07	19.09
NR n48	15	40	DFT-64QAM	H	Outer_Full	18.23	<b>19.25</b>
NR n48	15	40	DFT-256QAM	H	Inner_1RB_Left	16.88	17.9
NR n48	15	40	DFT-256QAM	H	Inner_1RB_Right	17.15	<b>18.17</b>
NR n48	15	40	DFT-256QAM	H	Outer_Full	16.85	17.87

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

**MIMO**

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Conducted Output Power (dBm)		Total Power (dBm)	EIRP Power (dBm)
						Ant1	Ant2		
NR n48	15	40	CP-QPSK	L	Inner_1RB_Left	16.52	16.47	19.51	20.53
NR n48	15	40	CP-QPSK	L	Inner_1RB_Right	16.88	16.48	19.69	20.71
NR n48	15	40	CP-QPSK	L	Outer_Full	14.97	14.91	17.95	18.97
NR n48	15	40	CP-16QAM	L	Inner_1RB_Left	14.85	14.99	17.93	18.95
NR n48	15	40	CP-16QAM	L	Inner_1RB_Right	14.58	14.65	17.63	18.65
NR n48	15	40	CP-16QAM	L	Outer_Full	14.98	14.94	17.97	18.99
NR n48	15	40	CP-64QAM	L	Inner_1RB_Left	14.56	14.42	17.50	18.52
NR n48	15	40	CP-64QAM	L	Inner_1RB_Right	14.63	14.52	17.59	18.61
NR n48	15	40	CP-64QAM	L	Outer_Full	14.23	14.22	17.24	18.26
NR n48	15	40	CP-256QAM	L	Inner_1RB_Left	11.37	11.42	14.41	15.43
NR n48	15	40	CP-256QAM	L	Inner_1RB_Right	11.25	11.35	14.31	15.33
NR n48	15	40	CP-256QAM	L	Outer_Full	11.36	11.52	14.45	15.47
NR n48	15	40	CP-QPSK	M	Inner_1RB_Left	16.77	16.71	19.75	<b>20.77</b>
NR n48	15	40	CP-QPSK	M	Inner_1RB_Right	16.3	16.33	19.33	20.35
NR n48	15	40	CP-QPSK	M	Outer_Full	14.97	14.93	17.96	18.98
NR n48	15	40	CP-16QAM	M	Inner_1RB_Left	16.34	16.05	19.21	<b>20.23</b>
NR n48	15	40	CP-16QAM	M	Inner_1RB_Right	15.91	15.36	18.65	19.67
NR n48	15	40	CP-16QAM	M	Outer_Full	14.95	14.92	17.95	18.97
NR n48	15	40	CP-64QAM	M	Inner_1RB_Left	14.77	14.58	17.69	18.71
NR n48	15	40	CP-64QAM	M	Inner_1RB_Right	14.76	14.63	17.71	<b>18.73</b>
NR n48	15	40	CP-64QAM	M	Outer_Full	14.52	14.23	17.39	18.41
NR n48	15	40	CP-256QAM	M	Inner_1RB_Left	11.96	11.68	14.83	<b>15.85</b>
NR n48	15	40	CP-256QAM	M	Inner_1RB_Right	11.43	11.11	14.28	15.30
NR n48	15	40	CP-256QAM	M	Outer_Full	11.25	11.36	14.32	15.34
NR n48	15	40	CP-QPSK	H	Inner_1RB_Left	16.39	16.66	19.54	20.56
NR n48	15	40	CP-QPSK	H	Inner_1RB_Right	16.4	16.36	19.39	20.41
NR n48	15	40	CP-QPSK	H	Outer_Full	16.25	16.34	19.31	20.33
NR n48	15	40	CP-16QAM	H	Inner_1RB_Left	16.21	16.12	19.18	20.20
NR n48	15	40	CP-16QAM	H	Inner_1RB_Right	15.63	15.58	18.62	19.64
NR n48	15	40	CP-16QAM	H	Outer_Full	15.21	15.34	18.29	19.31
NR n48	15	40	CP-64QAM	H	Inner_1RB_Left	14.52	14.36	17.45	18.47
NR n48	15	40	CP-64QAM	H	Inner_1RB_Right	14.33	14.25	17.30	18.32
NR n48	15	40	CP-64QAM	H	Outer_Full	14.23	14.25	17.25	18.27
NR n48	15	40	CP-256QAM	H	Inner_1RB_Left	11.25	11.62	14.45	15.47
NR n48	15	40	CP-256QAM	H	Inner_1RB_Right	11.56	11.25	14.42	15.44
NR n48	15	40	CP-256QAM	H	Outer_Full	11.36	11.52	14.45	15.47

**Note:**

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

## 7.1.2 NR n48 SCS 30 kHz

**SISO**

Band	SCS	Bandwidth	Modulation	Channel	RB Configuration	Conducted Output Power (dBm)	EIRP Power (dBm)
NR n48	30	10	DFT-QPSK	L	Inner_1RB_Left	20.45	21.47
NR n48	30	10	DFT-QPSK	L	Inner_1RB_Right	20.63	21.65
NR n48	30	10	DFT-QPSK	L	Outer_Full	20.12	21.14
NR n48	30	10	DFT-16QAM	L	Inner_1RB_Left	19.54	20.56
NR n48	30	10	DFT-16QAM	L	Inner_1RB_Right	19.45	20.47
NR n48	30	10	DFT-16QAM	L	Outer_Full	19.12	20.14
NR n48	30	10	DFT-64QAM	L	Inner_1RB_Left	18.85	<b>19.87</b>
NR n48	30	10	DFT-64QAM	L	Inner_1RB_Right	18.65	19.67
NR n48	30	10	DFT-64QAM	L	Outer_Full	18.74	19.76
NR n48	30	10	DFT-256QAM	L	Inner_1RB_Left	17.65	<b>18.67</b>
NR n48	30	10	DFT-256QAM	L	Inner_1RB_Right	17.52	18.54
NR n48	30	10	DFT-256QAM	L	Outer_Full	17.32	18.34
NR n48	30	10	DFT-QPSK	M	Inner_1RB_Left	20.56	21.58
NR n48	30	10	DFT-QPSK	M	Inner_1RB_Right	20.45	21.47
NR n48	30	10	DFT-QPSK	M	Outer_Full	19.05	20.07
NR n48	30	10	DFT-16QAM	M	Inner_1RB_Left	19.12	20.14
NR n48	30	10	DFT-16QAM	M	Inner_1RB_Right	19.23	20.25
NR n48	30	10	DFT-16QAM	M	Outer_Full	19.02	20.04
NR n48	30	10	DFT-64QAM	M	Inner_1RB_Left	18.32	19.34
NR n48	30	10	DFT-64QAM	M	Inner_1RB_Right	18.45	19.47
NR n48	30	10	DFT-64QAM	M	Outer_Full	18.52	19.54
NR n48	30	10	DFT-256QAM	M	Inner_1RB_Left	17.32	18.34
NR n48	30	10	DFT-256QAM	M	Inner_1RB_Right	17.52	18.54
NR n48	30	10	DFT-256QAM	M	Outer_Full	17.54	18.56
NR n48	30	10	DFT-QPSK	H	Inner_1RB_Left	20.6	21.62
NR n48	30	10	DFT-QPSK	H	Inner_1RB_Right	20.71	<b>21.73</b>
NR n48	30	10	DFT-QPSK	H	Outer_Full	19.72	20.74
NR n48	30	10	DFT-16QAM	H	Inner_1RB_Left	19.54	20.56
NR n48	30	10	DFT-16QAM	H	Inner_1RB_Right	19.59	<b>20.61</b>
NR n48	30	10	DFT-16QAM	H	Outer_Full	18.71	19.73
NR n48	30	10	DFT-64QAM	H	Inner_1RB_Left	18.33	19.35
NR n48	30	10	DFT-64QAM	H	Inner_1RB_Right	18.39	19.41
NR n48	30	10	DFT-64QAM	H	Outer_Full	18.32	19.34
NR n48	30	10	DFT-256QAM	H	Inner_1RB_Left	17.52	18.54
NR n48	30	10	DFT-256QAM	H	Inner_1RB_Right	17.63	18.65
NR n48	30	10	DFT-256QAM	H	Outer_Full	17.52	18.54

## Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

Band	SCS	Bandwidth	Modulation	Channel	RB Configuration	Conducted Output Power (dBm)	EIRP Power (dBm)
NR n48	30	15	DFT-QPSK	L	Inner_1RB_Left	20.65	21.67
NR n48	30	15	DFT-QPSK	L	Inner_1RB_Right	20.39	21.41
NR n48	30	15	DFT-QPSK	L	Outer_Full	19.72	20.74
NR n48	30	15	DFT-16QAM	L	Inner_1RB_Left	19.25	20.27
NR n48	30	15	DFT-16QAM	L	Inner_1RB_Right	19.33	20.35
NR n48	30	15	DFT-16QAM	L	Outer_Full	19.02	20.04
NR n48	30	15	DFT-64QAM	L	Inner_1RB_Left	18.46	19.48
NR n48	30	15	DFT-64QAM	L	Inner_1RB_Right	18.52	19.54
NR n48	30	15	DFT-64QAM	L	Outer_Full	18.32	19.34
NR n48	30	15	DFT-256QAM	L	Inner_1RB_Left	17.98	19
NR n48	30	15	DFT-256QAM	L	Inner_1RB_Right	17.88	18.9
NR n48	30	15	DFT-256QAM	L	Outer_Full	17.65	18.67
NR n48	30	15	DFT-QPSK	M	Inner_1RB_Left	19.93	20.95
NR n48	30	15	DFT-QPSK	M	Inner_1RB_Right	19.83	20.85
NR n48	30	15	DFT-QPSK	M	Outer_Full	19.06	20.08
NR n48	30	15	DFT-16QAM	M	Inner_1RB_Left	19.04	20.06
NR n48	30	15	DFT-16QAM	M	Inner_1RB_Right	18.84	19.86
NR n48	30	15	DFT-16QAM	M	Outer_Full	18.07	19.09
NR n48	30	15	DFT-64QAM	M	Inner_1RB_Left	18.85	<b>19.87</b>
NR n48	30	15	DFT-64QAM	M	Inner_1RB_Right	18.32	19.34
NR n48	30	15	DFT-64QAM	M	Outer_Full	18.41	19.43
NR n48	30	15	DFT-256QAM	M	Inner_1RB_Left	17.52	18.54
NR n48	30	15	DFT-256QAM	M	Inner_1RB_Right	17.63	18.65
NR n48	30	15	DFT-256QAM	M	Outer_Full	17.85	18.87
NR n48	30	15	DFT-QPSK	H	Inner_1RB_Left	20.56	21.58
NR n48	30	15	DFT-QPSK	H	Inner_1RB_Right	20.67	<b>21.69</b>
NR n48	30	15	DFT-QPSK	H	Outer_Full	20.32	21.34
NR n48	30	15	DFT-16QAM	H	Inner_1RB_Left	19.85	<b>20.87</b>
NR n48	30	15	DFT-16QAM	H	Inner_1RB_Right	19.65	20.67
NR n48	30	15	DFT-16QAM	H	Outer_Full	19.23	20.25
NR n48	30	15	DFT-64QAM	H	Inner_1RB_Left	18.74	19.76
NR n48	30	15	DFT-64QAM	H	Inner_1RB_Right	18.65	19.67
NR n48	30	15	DFT-64QAM	H	Outer_Full	18.23	19.25
NR n48	30	15	DFT-256QAM	H	Inner_1RB_Left	18.12	<b>19.14</b>
NR n48	30	15	DFT-256QAM	H	Inner_1RB_Right	17.68	18.7
NR n48	30	15	DFT-256QAM	H	Outer_Full	17.85	18.87

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

Band	SCS	Bandwidth	Modulation	Channel	RB Configuration	Conducted Output Power (dBm)	EIRP Power (dBm)
NR n48	30	20	DFT-QPSK	L	Inner_1RB_Left	20.69	<b>21.71</b>
NR n48	30	20	DFT-QPSK	L	Inner_1RB_Right	20.4	21.42
NR n48	30	20	DFT-QPSK	L	Outer_Full	19.64	20.66
NR n48	30	20	DFT-16QAM	L	Inner_1RB_Left	19.65	20.67
NR n48	30	20	DFT-16QAM	L	Inner_1RB_Right	19.85	<b>20.87</b>
NR n48	30	20	DFT-16QAM	L	Outer_Full	19.74	20.76
NR n48	30	20	DFT-64QAM	L	Inner_1RB_Left	18.32	19.34
NR n48	30	20	DFT-64QAM	L	Inner_1RB_Right	18.58	19.6
NR n48	30	20	DFT-64QAM	L	Outer_Full	18.21	19.23
NR n48	30	20	DFT-256QAM	L	Inner_1RB_Left	17.96	<b>18.98</b>
NR n48	30	20	DFT-256QAM	L	Inner_1RB_Right	17.69	18.71
NR n48	30	20	DFT-256QAM	L	Outer_Full	17.32	18.34
NR n48	30	20	DFT-QPSK	M	Inner_1RB_Left	20.32	21.34
NR n48	30	20	DFT-QPSK	M	Inner_1RB_Right	20.12	21.14
NR n48	30	20	DFT-QPSK	M	Outer_Full	19.89	20.91
NR n48	30	20	DFT-16QAM	M	Inner_1RB_Left	19.85	<b>20.87</b>
NR n48	30	20	DFT-16QAM	M	Inner_1RB_Right	19.45	20.47
NR n48	30	20	DFT-16QAM	M	Outer_Full	19.32	20.34
NR n48	30	20	DFT-64QAM	M	Inner_1RB_Left	18.96	<b>19.98</b>
NR n48	30	20	DFT-64QAM	M	Inner_1RB_Right	18.74	19.76
NR n48	30	20	DFT-64QAM	M	Outer_Full	18.23	19.25
NR n48	30	20	DFT-256QAM	M	Inner_1RB_Left	17.25	18.27
NR n48	30	20	DFT-256QAM	M	Inner_1RB_Right	17.32	18.34
NR n48	30	20	DFT-256QAM	M	Outer_Full	17.23	18.25
NR n48	30	20	DFT-QPSK	H	Inner_1RB_Left	20.54	21.56
NR n48	30	20	DFT-QPSK	H	Inner_1RB_Right	20.69	<b>21.71</b>
NR n48	30	20	DFT-QPSK	H	Outer_Full	19.63	20.65
NR n48	30	20	DFT-16QAM	H	Inner_1RB_Left	18.32	19.34
NR n48	30	20	DFT-16QAM	H	Inner_1RB_Right	18.41	19.43
NR n48	30	20	DFT-16QAM	H	Outer_Full	18.25	19.27
NR n48	30	20	DFT-64QAM	H	Inner_1RB_Left	17.89	18.91
NR n48	30	20	DFT-64QAM	H	Inner_1RB_Right	17.63	18.65
NR n48	30	20	DFT-64QAM	H	Outer_Full	17.85	18.87
NR n48	30	20	DFT-256QAM	H	Inner_1RB_Left	16.12	17.14
NR n48	30	20	DFT-256QAM	H	Inner_1RB_Right	16.32	17.34
NR n48	30	20	DFT-256QAM	H	Outer_Full	16.52	17.54

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

Band	SCS	Bandwidth	Modulation	Channel	RB Configuration	Conducted Output Power (dBm)	EIRP Power (dBm)
NR n48	30	40	DFT-QPSK	L	Inner_1RB_Left	20.7	21.72
NR n48	30	40	DFT-QPSK	L	Inner_1RB_Right	20.18	21.2
NR n48	30	40	DFT-QPSK	L	Outer_Full	19.48	20.5
NR n48	30	40	DFT-16QAM	L	Inner_1RB_Left	18.63	19.65
NR n48	30	40	DFT-16QAM	L	Inner_1RB_Right	18.45	19.47
NR n48	30	40	DFT-16QAM	L	Outer_Full	18.32	19.34
NR n48	30	40	DFT-64QAM	L	Inner_1RB_Left	17.52	18.54
NR n48	30	40	DFT-64QAM	L	Inner_1RB_Right	17.65	18.67
NR n48	30	40	DFT-64QAM	L	Outer_Full	17.52	18.54
NR n48	30	40	DFT-256QAM	L	Inner_1RB_Left	16.53	17.55
NR n48	30	40	DFT-256QAM	L	Inner_1RB_Right	16.01	17.03
NR n48	30	40	DFT-256QAM	L	Outer_Full	16.25	17.27
NR n48	30	40	DFT-QPSK	M	Inner_1RB_Left	20.06	21.08
NR n48	30	40	DFT-QPSK	M	Inner_1RB_Right	19.98	21
NR n48	30	40	DFT-QPSK	M	Outer_Full	19.02	20.04
NR n48	30	40	DFT-16QAM	M	Inner_1RB_Left	19.12	20.14
NR n48	30	40	DFT-16QAM	M	Inner_1RB_Right	18.93	19.95
NR n48	30	40	DFT-16QAM	M	Outer_Full	18.03	19.05
NR n48	30	40	DFT-64QAM	M	Inner_1RB_Left	18.26	19.28
NR n48	30	40	DFT-64QAM	M	Inner_1RB_Right	18.1	19.12
NR n48	30	40	DFT-64QAM	M	Outer_Full	17.62	18.64
NR n48	30	40	DFT-256QAM	M	Inner_1RB_Left	16.88	17.9
NR n48	30	40	DFT-256QAM	M	Inner_1RB_Right	16.62	17.64
NR n48	30	40	DFT-256QAM	M	Outer_Full	16.6	17.62
NR n48	30	40	DFT-QPSK	H	Inner_1RB_Left	20.41	21.43
NR n48	30	40	DFT-QPSK	H	Inner_1RB_Right	20.8	<b>21.82</b>
NR n48	30	40	DFT-QPSK	H	Outer_Full	19.54	20.56
NR n48	30	40	DFT-16QAM	H	Inner_1RB_Left	19.85	<b>20.87</b>
NR n48	30	40	DFT-16QAM	H	Inner_1RB_Right	19.74	20.76
NR n48	30	40	DFT-16QAM	H	Outer_Full	19.65	20.67
NR n48	30	40	DFT-64QAM	H	Inner_1RB_Left	18.33	19.35
NR n48	30	40	DFT-64QAM	H	Inner_1RB_Right	18.25	19.27
NR n48	30	40	DFT-64QAM	H	Outer_Full	18.41	<b>19.43</b>
NR n48	30	40	DFT-256QAM	H	Inner_1RB_Left	17.05	18.07
NR n48	30	40	DFT-256QAM	H	Inner_1RB_Right	17.32	<b>18.34</b>
NR n48	30	40	DFT-256QAM	H	Outer_Full	17.02	18.04

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

## MIMO

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Conducted Output Power (dBm)		Total Power (dBm)	EIRP Power (dBm)
						Ant1	Ant2		
NR n48	30	10	CP-QPSK	L	Inner_1RB_Left	16.56	16.74	19.66	<b>20.68</b>
NR n48	30	10	CP-QPSK	L	Inner_1RB_Right	16.42	16.14	19.29	20.31
NR n48	30	10	CP-QPSK	L	Outer_Full	16.12	16.32	19.23	20.25
NR n48	30	10	CP-16QAM	L	Inner_1RB_Left	15.89	15.96	18.94	19.96
NR n48	30	10	CP-16QAM	L	Inner_1RB_Right	15.65	15.45	18.56	19.58
NR n48	30	10	CP-16QAM	L	Outer_Full	15.36	15.25	18.32	19.34
NR n48	30	10	CP-64QAM	L	Inner_1RB_Left	15.42	15.36	18.40	19.42
NR n48	30	10	CP-64QAM	L	Inner_1RB_Right	15.23	15.21	18.23	19.25
NR n48	30	10	CP-64QAM	L	Outer_Full	14.32	14.25	17.30	18.32
NR n48	30	10	CP-256QAM	L	Inner_1RB_Left	11.23	11.28	14.27	15.29
NR n48	30	10	CP-256QAM	L	Inner_1RB_Right	11.25	11.36	14.32	15.34
NR n48	30	10	CP-256QAM	L	Outer_Full	11.32	11.42	14.38	15.40
NR n48	30	10	CP-QPSK	M	Inner_1RB_Left	16.57	16.56	19.58	20.60
NR n48	30	10	CP-QPSK	M	Inner_1RB_Right	16.38	16.51	19.46	20.48
NR n48	30	10	CP-QPSK	M	Outer_Full	15	15.13	18.08	19.10
NR n48	30	10	CP-16QAM	M	Inner_1RB_Left	16.13	15.88	19.02	<b>20.04</b>
NR n48	30	10	CP-16QAM	M	Inner_1RB_Right	16.05	15.81	18.94	19.96
NR n48	30	10	CP-16QAM	M	Outer_Full	14.97	15.11	18.05	19.07
NR n48	30	10	CP-64QAM	M	Inner_1RB_Left	14.76	14.58	17.68	18.70
NR n48	30	10	CP-64QAM	M	Inner_1RB_Right	14.85	14.69	17.78	18.80
NR n48	30	10	CP-64QAM	M	Outer_Full	14.66	14.32	17.50	18.52
NR n48	30	10	CP-256QAM	M	Inner_1RB_Left	11.51	11.68	14.61	<b>15.63</b>
NR n48	30	10	CP-256QAM	M	Inner_1RB_Right	11.31	11.59	14.46	15.48
NR n48	30	10	CP-256QAM	M	Outer_Full	11.25	11.36	14.32	15.34
NR n48	30	10	CP-QPSK	H	Inner_1RB_Left	16.28	16.09	19.20	20.22
NR n48	30	10	CP-QPSK	H	Inner_1RB_Right	16.29	16.09	19.20	20.22
NR n48	30	10	CP-QPSK	H	Outer_Full	14.81	14.73	17.78	18.80
NR n48	30	10	CP-16QAM	H	Inner_1RB_Left	15.91	15.52	18.73	19.75
NR n48	30	10	CP-16QAM	H	Inner_1RB_Right	15.94	15.57	18.77	19.79
NR n48	30	10	CP-16QAM	H	Outer_Full	14.81	14.7	17.77	18.79
NR n48	30	10	CP-64QAM	H	Inner_1RB_Left	14.79	14.96	17.89	<b>18.91</b>
NR n48	30	10	CP-64QAM	H	Inner_1RB_Right	14.85	14.52	17.70	18.72
NR n48	30	10	CP-64QAM	H	Outer_Full	14.23	14.14	17.20	18.22
NR n48	30	10	CP-256QAM	H	Inner_1RB_Left	11.14	11.38	14.27	15.29
NR n48	30	10	CP-256QAM	H	Inner_1RB_Right	11.12	11.21	14.18	15.20
NR n48	30	10	CP-256QAM	H	Outer_Full	11.32	11.19	14.27	15.29

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)



Band	SCS	Bandwidth	Modulation	Channel	RB Config	Conducted Output Power (dBm)		Total Power (dBm)	EIRP Power (dBm)
						Ant1	Ant2		
NR n48	30	15	CP-QPSK	L	Inner_1RB_Left	16.17	16.34	19.27	20.29
NR n48	30	15	CP-QPSK	L	Inner_1RB_Right	16.33	16.35	19.35	20.37
NR n48	30	15	CP-QPSK	L	Outer_Full	14.92	14.67	17.81	18.83
NR n48	30	15	CP-16QAM	L	Inner_1RB_Left	15.94	15.69	18.83	19.85
NR n48	30	15	CP-16QAM	L	Inner_1RB_Right	15.93	15.67	18.81	19.83
NR n48	30	15	CP-16QAM	L	Outer_Full	14.97	14.73	17.86	18.88
NR n48	30	15	CP-64QAM	L	Inner_1RB_Left	14.6	14.26	17.44	18.46
NR n48	30	15	CP-64QAM	L	Inner_1RB_Right	14.25	14.32	17.30	18.32
NR n48	30	15	CP-64QAM	L	Outer_Full	14.25	14.55	17.41	18.43
NR n48	30	15	CP-256QAM	L	Inner_1RB_Left	11.29	11.33	14.32	15.34
NR n48	30	15	CP-256QAM	L	Inner_1RB_Right	11.18	11.33	14.27	15.29
NR n48	30	15	CP-256QAM	L	Outer_Full	11.25	11.63	14.45	15.47
NR n48	30	15	CP-QPSK	M	Inner_1RB_Left	16.7	16.67	19.70	<b>20.72</b>
NR n48	30	15	CP-QPSK	M	Inner_1RB_Right	16.36	16.54	19.46	20.48
NR n48	30	15	CP-QPSK	M	Outer_Full	15.01	15.06	18.05	19.07
NR n48	30	15	CP-16QAM	M	Inner_1RB_Left	16.16	15.91	19.05	<b>20.07</b>
NR n48	30	15	CP-16QAM	M	Inner_1RB_Right	15.88	15.71	18.81	19.83
NR n48	30	15	CP-16QAM	M	Outer_Full	15.01	15.07	18.05	19.07
NR n48	30	15	CP-64QAM	M	Inner_1RB_Left	14.73	14.59	17.67	18.69
NR n48	30	15	CP-64QAM	M	Inner_1RB_Right	14.85	14.63	17.75	<b>18.77</b>
NR n48	30	15	CP-64QAM	M	Outer_Full	14.23	14.21	17.23	18.25
NR n48	30	15	CP-256QAM	M	Inner_1RB_Left	11.6	11.66	14.64	<b>15.66</b>
NR n48	30	15	CP-256QAM	M	Inner_1RB_Right	11.2	11.56	14.39	15.41
NR n48	30	15	CP-256QAM	M	Outer_Full	11.25	11.36	14.32	15.34
NR n48	30	15	CP-QPSK	H	Inner_1RB_Left	16.34	16.46	19.41	20.43
NR n48	30	15	CP-QPSK	H	Inner_1RB_Right	16.37	16.31	19.35	20.37
NR n48	30	15	CP-QPSK	H	Outer_Full	14.79	14.76	17.79	18.81
NR n48	30	15	CP-16QAM	H	Inner_1RB_Left	15.89	15.77	18.84	19.86
NR n48	30	15	CP-16QAM	H	Inner_1RB_Right	15.94	15.57	18.77	19.79
NR n48	30	15	CP-16QAM	H	Outer_Full	14.81	14.78	17.81	18.83
NR n48	30	15	CP-64QAM	H	Inner_1RB_Left	14.35	14.48	17.43	18.45
NR n48	30	15	CP-64QAM	H	Inner_1RB_Right	14.52	14.33	17.44	18.46
NR n48	30	15	CP-64QAM	H	Outer_Full	14.25	14.36	17.32	18.34
NR n48	30	15	CP-256QAM	H	Inner_1RB_Left	11.15	11.45	14.31	15.33
NR n48	30	15	CP-256QAM	H	Inner_1RB_Right	11.13	11.28	14.22	15.24
NR n48	30	15	CP-256QAM	H	Outer_Full	11.25	11.34	14.31	15.33

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)



Band	SCS	Bandwidth	Modulation	Channel	RB Config	Conducted Output Power (dBm)		Total Power (dBm)	EIRP Power (dBm)
						Ant1	Ant2		
NR n48	30	20	CP-QPSK	L	Inner_1RB_Left	16.38	15.91	19.16	20.18
NR n48	30	20	CP-QPSK	L	Inner_1RB_Right	16.56	16.7	19.64	20.66
NR n48	30	20	CP-QPSK	L	Outer_Full	14.99	14.81	17.91	18.93
NR n48	30	20	CP-16QAM	L	Inner_1RB_Left	15.99	15.71	18.86	19.88
NR n48	30	20	CP-16QAM	L	Inner_1RB_Right	16.07	16.06	19.08	<b>20.10</b>
NR n48	30	20	CP-16QAM	L	Outer_Full	14.98	14.83	17.92	18.94
NR n48	30	20	CP-64QAM	L	Inner_1RB_Left	14.5	14.3	17.41	18.43
NR n48	30	20	CP-64QAM	L	Inner_1RB_Right	14.25	14.36	17.32	18.34
NR n48	30	20	CP-64QAM	L	Outer_Full	14.33	14.16	17.26	18.28
NR n48	30	20	CP-256QAM	L	Inner_1RB_Left	11.54	11.52	14.54	15.56
NR n48	30	20	CP-256QAM	L	Inner_1RB_Right	11.38	11.63	14.52	15.54
NR n48	30	20	CP-256QAM	L	Outer_Full	11.57	11.36	14.48	15.50
NR n48	30	20	CP-QPSK	M	Inner_1RB_Left	16.64	16.7	19.68	<b>20.70</b>
NR n48	30	20	CP-QPSK	M	Inner_1RB_Right	16.33	16.26	19.31	20.33
NR n48	30	20	CP-QPSK	M	Outer_Full	15	15.08	18.05	19.07
NR n48	30	20	CP-16QAM	M	Inner_1RB_Left	16.17	15.87	19.03	20.05
NR n48	30	20	CP-16QAM	M	Inner_1RB_Right	15.88	15.55	18.73	19.75
NR n48	30	20	CP-16QAM	M	Outer_Full	15.42	15.3	18.37	19.39
NR n48	30	20	CP-64QAM	M	Inner_1RB_Left	14.46	14.53	17.51	<b>18.53</b>
NR n48	30	20	CP-64QAM	M	Inner_1RB_Right	14.54	14.19	17.38	18.40
NR n48	30	20	CP-64QAM	M	Outer_Full	14.46	14.53	17.51	18.53
NR n48	30	20	CP-256QAM	M	Inner_1RB_Left	11.58	11.68	14.64	15.66
NR n48	30	20	CP-256QAM	M	Inner_1RB_Right	11.25	11.32	14.30	15.32
NR n48	30	20	CP-256QAM	M	Outer_Full	11.6	11.69	14.66	<b>15.68</b>
NR n48	30	20	CP-QPSK	H	Inner_1RB_Left	16.35	16.54	19.46	20.48
NR n48	30	20	CP-QPSK	H	Inner_1RB_Right	16.4	16.31	19.37	20.39
NR n48	30	20	CP-QPSK	H	Outer_Full	14.76	14.85	17.82	18.84
NR n48	30	20	CP-16QAM	H	Inner_1RB_Left	15.91	15.87	18.90	19.92
NR n48	30	20	CP-16QAM	H	Inner_1RB_Right	15.99	15.55	18.79	19.81
NR n48	30	20	CP-16QAM	H	Outer_Full	14.73	14.87	17.81	18.83
NR n48	30	20	CP-64QAM	H	Inner_1RB_Left	14.42	14.21	17.33	18.35
NR n48	30	20	CP-64QAM	H	Inner_1RB_Right	14.25	14.69	17.49	18.51
NR n48	30	20	CP-64QAM	H	Outer_Full	14.12	14.28	17.21	18.23
NR n48	30	20	CP-256QAM	H	Inner_1RB_Left	11.19	11.52	14.37	15.39
NR n48	30	20	CP-256QAM	H	Inner_1RB_Right	11.24	11.26	14.26	15.28
NR n48	30	20	CP-256QAM	H	Outer_Full	11.32	11.25	14.30	15.32

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)



Band	SCS	Bandwidth	Modulation	Channel	RB Config	Conducted Output Power (dBm)		Total Power (dBm)	EIRP Power (dBm)
						Ant1	Ant2		
NR n48	30	40	CP-QPSK	L	Inner_1RB_Left	16.52	16.47	19.51	20.53
NR n48	30	40	CP-QPSK	L	Inner_1RB_Right	16.88	16.48	19.69	20.71
NR n48	30	40	CP-QPSK	L	Outer_Full	14.97	14.91	17.95	18.97
NR n48	30	40	CP-16QAM	L	Inner_1RB_Left	14.85	14.99	17.93	18.95
NR n48	30	40	CP-16QAM	L	Inner_1RB_Right	14.58	14.65	17.63	18.65
NR n48	30	40	CP-16QAM	L	Outer_Full	14.98	14.94	17.97	18.99
NR n48	30	40	CP-64QAM	L	Inner_1RB_Left	14.56	14.42	17.50	18.52
NR n48	30	40	CP-64QAM	L	Inner_1RB_Right	14.63	14.52	17.59	18.61
NR n48	30	40	CP-64QAM	L	Outer_Full	14.23	14.22	17.24	18.26
NR n48	30	40	CP-256QAM	L	Inner_1RB_Left	11.37	11.42	14.41	15.43
NR n48	30	40	CP-256QAM	L	Inner_1RB_Right	11.25	11.35	14.31	15.33
NR n48	30	40	CP-256QAM	L	Outer_Full	11.36	11.52	14.45	15.47
NR n48	30	40	CP-QPSK	M	Inner_1RB_Left	16.77	16.71	19.75	<b>20.77</b>
NR n48	30	40	CP-QPSK	M	Inner_1RB_Right	16.3	16.33	19.33	20.35
NR n48	30	40	CP-QPSK	M	Outer_Full	14.97	14.93	17.96	18.98
NR n48	30	40	CP-16QAM	M	Inner_1RB_Left	16.34	16.05	19.21	<b>20.23</b>
NR n48	30	40	CP-16QAM	M	Inner_1RB_Right	15.91	15.36	18.65	19.67
NR n48	30	40	CP-16QAM	M	Outer_Full	14.95	14.92	17.95	18.97
NR n48	30	40	CP-64QAM	M	Inner_1RB_Left	14.77	14.58	17.69	18.71
NR n48	30	40	CP-64QAM	M	Inner_1RB_Right	14.76	14.63	17.71	<b>18.73</b>
NR n48	30	40	CP-64QAM	M	Outer_Full	14.52	14.23	17.39	18.41
NR n48	30	40	CP-256QAM	M	Inner_1RB_Left	11.96	11.68	14.83	<b>15.85</b>
NR n48	30	40	CP-256QAM	M	Inner_1RB_Right	11.43	11.11	14.28	15.30
NR n48	30	40	CP-256QAM	M	Outer_Full	11.25	11.36	14.32	15.34
NR n48	30	40	CP-QPSK	H	Inner_1RB_Left	16.39	16.66	19.54	20.56
NR n48	30	40	CP-QPSK	H	Inner_1RB_Right	16.4	16.36	19.39	20.41
NR n48	30	40	CP-QPSK	H	Outer_Full	16.25	16.34	19.31	20.33
NR n48	30	40	CP-16QAM	H	Inner_1RB_Left	16.21	16.12	19.18	20.20
NR n48	30	40	CP-16QAM	H	Inner_1RB_Right	15.63	15.58	18.62	19.64
NR n48	30	40	CP-16QAM	H	Outer_Full	15.21	15.34	18.29	19.31
NR n48	30	40	CP-64QAM	H	Inner_1RB_Left	14.52	14.36	17.45	18.47
NR n48	30	40	CP-64QAM	H	Inner_1RB_Right	14.33	14.25	17.30	18.32
NR n48	30	40	CP-64QAM	H	Outer_Full	14.23	14.25	17.25	18.27
NR n48	30	40	CP-256QAM	H	Inner_1RB_Left	11.25	11.62	14.45	15.47
NR n48	30	40	CP-256QAM	H	Inner_1RB_Right	11.56	11.25	14.42	15.44
NR n48	30	40	CP-256QAM	H	Outer_Full	11.36	11.52	14.45	15.47

Note:

1. The conducted output power was copied from the original module report.
2. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

## 7.2 Radiated Spurious Emissions below 1GHz

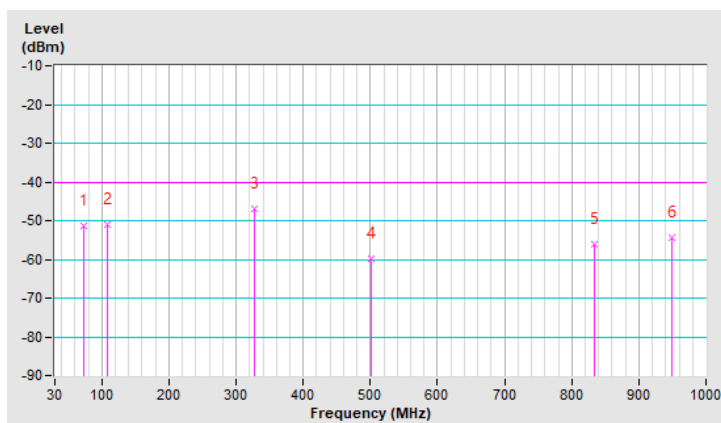
### 7.2.1 NR n48 SCS 30 kHz (SISO)

RF Mode	NR n48 Channel Bandwidth: 10MHz	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	72.68	-51.45	-40.00	-11.45	2.00 H	245	58.71	-110.16
2	108.57	-50.99	-40.00	-10.99	1.50 H	106	59.57	-110.56
<b>3</b>	<b>326.82</b>	<b>-47.01</b>	<b>-40.00</b>	<b>-7.01</b>	<b>1.50 H</b>	<b>30</b>	<b>59.32</b>	<b>-106.33</b>
4	500.45	-59.92	-40.00	-19.92	1.00 H	145	42.23	-102.15
5	833.16	-56.01	-40.00	-16.01	1.00 H	318	40.74	-96.75
6	948.59	-54.54	-40.00	-14.54	1.50 H	16	41.15	-95.69

#### 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 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.



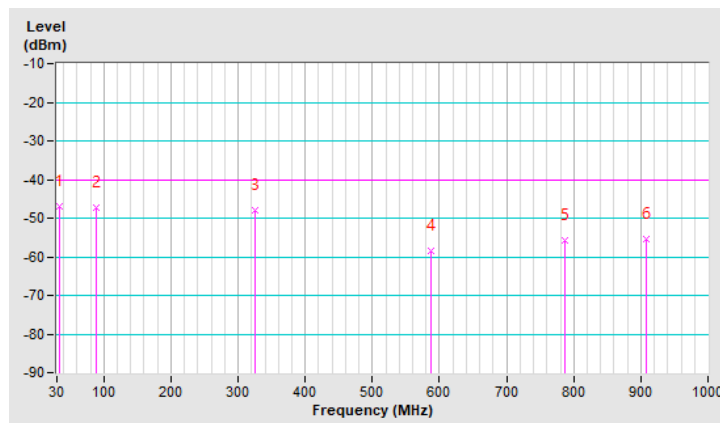
RF Mode	NR n48 Channel Bandwidth: 10MHz	Channel	CH 641666 : 3624.99 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 78% RH
Tested By	Vincent Chen		

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	34.85	-47.11	-40.00	-7.11	1.00 V	71	61.06	-108.17
2	89.17	-47.44	-40.00	-7.44	1.50 V	245	65.83	-113.27
3	325.85	-47.93	-40.00	-7.93	2.00 V	348	58.43	-106.36
4	586.78	-58.64	-40.00	-18.64	1.50 V	41	42.27	-100.91
5	787.57	-55.70	-40.00	-15.70	1.50 V	12	41.21	-96.91
6	907.85	-55.43	-40.00	-15.43	1.00 V	328	40.76	-96.19

Remarks:

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



### 7.3 Radiated Spurious Emissions above 1GHz

#### 7.3.1 NR n48 SCS 30 kHz (SISO)

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	20°C, 67% 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	7110.00	-44.64	-40.00	-4.64	1.63 H	278	55.23	-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	-45.69	-40.00	-5.69	2.32 V	127	54.18	-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	20°C, 67% 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	7249.98	-43.04	-40.00	-3.04	1.52 H	204	56.64	-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	-44.14	-40.00	-4.14	2.31 V	157	55.54	-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	20°C, 67% 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	7389.96	-43.88	-40.00	-3.88	1.34 H	265	55.42	-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	-44.93	-40.00	-4.93	2.37 V	111	54.37	-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	20°C, 67% 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	7120.02	-44.27	-40.00	-4.27	1.23 H	204	55.61	-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	2.04 V	152	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 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	20°C, 67% 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	7249.98	-43.45	-40.00	-3.45	1.25 H	223	56.23	-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	-43.88	-40.00	-3.88	2.06 V	143	55.80	-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 : 3690.00 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 67% 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	7380.00	-43.88	-40.00	-3.88	1.63 H	250	55.41	-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	-44.98	-40.00	-4.98	4.00 V	118	54.31	-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 : 3570.00 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 67% 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	7140.00	-44.92	-40.00	-4.92	1.34 H	205	54.99	-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	-46.03	-40.00	-6.03	2.32 V	176	53.88	-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	20°C, 67% 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	7249.98	-44.26	-40.00	-4.26	2.03 H	168	55.42	-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	-45.32	-40.00	-5.32	1.52 V	236	54.36	-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	20°C, 67% 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	7359.96	-44.51	-40.00	-4.51	1.52 H	226	54.78	-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	-45.47	-40.00	-5.47	2.37 V	196	53.82	-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.

## 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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