

FCC Test Report (Part 24 – SA Mode: n2, n25 Band)

Report No.: RF200514C16A-1

FCC ID: T8GSAN9000

Test Model: SA-N9000 OEM D1

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Test Date: Nov. 08 ~ Dec. 03, 2020

Issued Date: Dec. 08, 2020

Applicant: Harman Connected Car Division

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
RF200514C16A-1	Original release	Dec. 08, 2020

1 Certificate of Conformity

Product: Module

Brand: Harman

Test Model: SA-N9000 OEM D1

Sample Status: Standard Sample

Applicant: Harman Connected Car Division

Test Date: Nov. 08 ~ Dec. 03, 2020

Standards: FCC Part 24, Subpart E

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

Prepared by : Celine Chou , **Date:** Dec. 08, 2020
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Dec. 08, 2020
Bruce Chen / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective radiated power	Pass	Meet the requirement of limit.
2.1046 24.232(d)	Peak To Average Ratio	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	Pass	Meet the requirement
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.00dB at 36.25MHz.

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

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Dec. 31, 2019	Dec. 30, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 03, 2020	Nov. 02, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
Horn Antenna ETS	3117	00034128	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
MXG Vector signal generator Agilent	N5182B	MY53050162	Jan. 14, 2020	Jan. 13, 2021
Spectrum Analyzer KEYSIGHT	N9030B	MY57140953	Jul. 02, 2020	Jul. 01, 2021
5G Wireless Test Platforms Keysight	E7515B	MY58300759	Apr. 18, 2020	Apr. 17, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Jun. 08, 2020	Jun. 07, 2021
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jun. 08, 2020	Jun. 07, 2021
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH4-01	Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-300 0	150929	Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Jun. 08, 2020	Jun. 07, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Jun. 08, 2020	Jun. 07, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
Standard Temperature And Humidity Chamber TERCHY	MHU-225AU	920842	May 27, 2020	May 26, 2021
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 06, 2020	Jun. 05, 2021
DC power supply	U8002A	MY56330015	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.

3 General Information

3.1 General Description of EUT

Product	Module					
Brand	Harman					
Test Model	SA-N9000 OEM D1					
Sample Status	Standard Sample					
Power Supply rating	4.2Vdc					
Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM					
Waveform Type	CP-OFDM, DFT-s-OFDM					
Operating Frequency	n2 (Channel Bandwidth: 5MHz)	1852.5 ~ 1907.5MHz				
	n2 (Channel Bandwidth: 10MHz)	1855.0 ~ 1905.0MHz				
	n2 (Channel Bandwidth: 15MHz)	1857.5 ~ 1902.5MHz				
	n2 (Channel Bandwidth: 20MHz)	1860.0 ~ 1900.0MHz				
	n25 (Channel Bandwidth: 5MHz)	1852.5 ~ 1912.5MHz				
	n25 (Channel Bandwidth: 10MHz)	1855.0 ~ 1910.0MHz				
	n25 (Channel Bandwidth: 15MHz)	1857.5 ~ 1907.5MHz				
	n25 (Channel Bandwidth: 20MHz)	1860.0 ~ 1905.0MHz				
Max. EIRP Power		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n2 (Channel Bandwidth: 5MHz)	464.515mW (26.67dBm)	239.332mW (23.79dBm)	232.274mW (23.66dBm)	212.324mW (23.27dBm)	106.905mW (20.29dBm)
	n2 (Channel Bandwidth: 10MHz)	468.813mW (26.71dBm)	240.991mW (23.82dBm)	235.505mW (23.72dBm)	214.783mW (23.32dBm)	107.647mW (20.32dBm)
	n2 (Channel Bandwidth: 15MHz)	468.813mW (26.71dBm)	240.991mW (23.82dBm)	233.884mW (23.69dBm)	214.783mW (23.32dBm)	107.647mW (20.32dBm)
	n2 (Channel Bandwidth: 20MHz)	468.813mW (26.71dBm)	240.991mW (23.82dBm)	234.963mW (23.71dBm)	214.783mW (23.32dBm)	107.647mW (20.32dBm)
	n25 (Channel Bandwidth: 5MHz)	509.331mW (27.07dBm)	254.683mW (24.06dBm)	243.781mW (23.87dBm)	227.510mW (23.57dBm)	113.763mW (20.56dBm)
	n25 (Channel Bandwidth: 10MHz)	508.159mW (27.06dBm)	255.270mW (24.07dBm)	243.781mW (23.87dBm)	226.986mW (23.56dBm)	113.501mW (20.55dBm)
	n25 (Channel Bandwidth: 15MHz)	506.991mW (27.05dBm)	255.270mW (24.07dBm)	243.781mW (23.87dBm)	227.510mW (23.57dBm)	113.763mW (20.56dBm)
	n25 (Channel Bandwidth: 20MHz)	509.331mW (27.07dBm)	254.097mW (24.05dBm)	243.781mW (23.87dBm)	226.986mW (23.56dBm)	113.501mW (20.55dBm)
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
Emission Designator	n2 (Channel Bandwidth: 5MHz)	4M47G7D	4M46G7D	4M47D7W	4M46D7W	4M47D7W
	n2 (Channel Bandwidth: 10MHz)	9M28G7D	9M27G7D	9M27D7W	9M27D7W	9M27D7W
	n2 (Channel Bandwidth: 15MHz)	14M1G7D	14M1G7D	14M1D7W	14M1D7W	14M1D7W
	n2 (Channel Bandwidth: 20MHz)	18M9G7D	18M9G7D	18M9D7W	18M9D7W	18M9D7W
	n25 (Channel Bandwidth: 5MHz)	4M48G7D	4M46G7D	4M47D7W	4M47D7W	4M47D7W
	n25 (Channel Bandwidth: 10MHz)	9M31G7D	9M28G7D	9M27D7W	9M28D7W	9M27D7W
	n25 (Channel Bandwidth: 15MHz)	14M1G7D	14M1G7D	14M1D7W	14M1D7W	14M1D7W
	n25 (Channel Bandwidth: 20MHz)	18M9G7D	18M9G7D	18M9D7W	18M9D7W	18M9D7W

Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Cable Supplied	NA

Note:

1. The antenna information is listed as below.

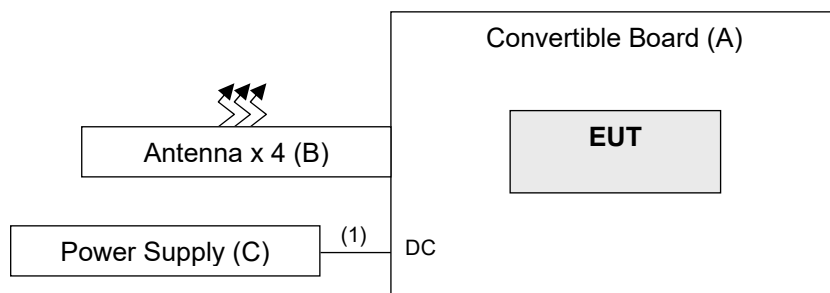
Operating frequency band	Antenna	Gain (dBi)	Connector Type
Band 2	5G/4G Terminal Mount Monopole Antenna	2.92	SMA
Band 5		1.01	
Band 7		2.20	
Band 12		-1.17	
Band 25		2.97	
Band 38		2.18	
Band 41		2.20	
Band 66		3.44	
Band 71		1.72	
Band 77		2.61	

* 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.

2. The EUT supports the following ENDC configuration.

5GNR	FCC 5G FR1			ENDC
	Band	SCS	Bandwidth (MHz)	
	n5	15kHz	5/10/15/20	Band 2/66
	n41	30kHz	10/15/20/40/50/60/80/90/100	Band 26
	n66	15kHz	5/10/15/20/40	Band 5/12
	n71	15kHz	5/10/15/20	Band 2/66

3.2 Configuration of System under Test



3.2.1 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Convertible Board	NA	NA	NA	NA	Provided by client
B.	Antenna x 4	TAOGLAS	TG.55.8113	NA	NA	Provided by client
C.	DC Power supply	TECPEL	GPS-3030DD	GEO855739	NA	-

Note: All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1	N	0	-

3.3 Test Mode Applicability and Tested Channel Detail

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

n2

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 26 RB Offset 1 RB / 51 RB Offset 26 RB / 0 RB Offset 26 RB / 13 RB Offset 26 RB / 26 RB Offset 52 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 376000 (1880.0MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 39 RB Offset 1 RB / 78 RB Offset 39 RB / 0 RB Offset 39 RB / 19 RB Offset 39 RB / 40 RB Offset 79 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 53 RB Offset 1 RB / 105 RB Offset 53 RB / 0 RB Offset 53 RB / 27 RB Offset 53 RB / 53 RB Offset 106 RB / 0 RB Offset
-	Modulation Characteristics	372000 to 380000	376000 (1880.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	106 RB / 0 RB Offset
-	Frequency Stability	370500 to 381500	370500 (1852.5MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK	25 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK	52 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK	79 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK	106 RB / 0 RB Offset
-	Occupied Bandwidth	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	25 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 376000 (1880.0MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	79 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	106 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Band Edge	370500 to 381500	370500 (1852.5MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 51 RB Offset 52 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 78 RB Offset 79 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 105 RB Offset 106 RB / 0 RB Offset
-	Peak to Average Ratio	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 376000 (1880.0MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
-	Conducted Emission	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 376000 (1880.0MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	372000 to 380000	376000 (1880.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	370500 to 381500	370500 (1852.5MHz), 376000 (1880.0MHz), 381500 (1907.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371000 to 381000	371000 (1855.0MHz), 376000 (1880.0MHz), 381000 (1905.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371500 to 380500	371500 (1857.5MHz), 376000 (1880.0MHz), 380500 (1902.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		372000 to 380000	372000 (1860.0MHz), 376000 (1880.0MHz), 380000 (1900.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset

Note: The conducted output power for $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM, measured value of $\pi/2$ BPSK is higher than QPSK, 16QAM, 64QAM and 256QAM mode. Therefore, only EIRP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under $\pi/2$ BPSK mode only.

n25

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	370500 to 382500	370500 (1852.5MHz), 376500 (1882.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 376500 (1882.5MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 26 RB Offset 1 RB / 51 RB Offset 26 RB / 0 RB Offset 26 RB / 13 RB Offset 26 RB / 26 RB Offset 52 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 376500 (1882.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 39 RB Offset 1 RB / 78 RB Offset 39 RB / 0 RB Offset 39 RB / 19 RB Offset 39 RB / 40 RB Offset 79 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 376500 (1882.5MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset 1 RB / 53 RB Offset 1 RB / 105 RB Offset 53 RB / 0 RB Offset 53 RB / 27 RB Offset 53 RB / 53 RB Offset 106 RB / 0 RB Offset
-	Modulation Characteristics	372000 to 379000	376500 (1882.5MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	106 RB / 0 RB Offset
-	Frequency Stability	370500 to 382500	370500 (1852.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK	25 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK	52 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK	79 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK	106 RB / 0 RB Offset
-	Occupied Bandwidth	370500 to 382500	370500 (1852.5MHz), 376500 (1882.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	25 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 376500 (1882.5MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 376500 (1882.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	79 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 376500 (1882.5MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	106 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Band Edge	370500 to 382500	370500 (1852.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 51 RB Offset 52 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 78 RB Offset 79 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 105 RB Offset 106 RB / 0 RB Offset
-	Peak to Average Ratio	370500 to 382500	370500 (1852.5MHz), 376500 (1882.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 376500 (1882.5MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 376500 (1882.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 376500 (1882.5MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
-	Conducted Emission	370500 to 382500	370500 (1852.5MHz), 376500 (1882.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 376500 (1882.5MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 376500 (1882.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 376500 (1882.5MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	372000 to 379000	376500 (1882.5MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	370500 to 382500	370500 (1852.5MHz), 376500 (1882.5MHz), 382500 (1912.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371000 to 382000	371000 (1855.0MHz), 376500 (1882.5MHz), 382000 (1910.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		371500 to 381500	371500 (1857.5MHz), 376500 (1882.5MHz), 381500 (1907.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		372000 to 379000	372000 (1860.0MHz), 376500 (1882.5MHz), 379000 (1905.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset

Note: The conducted output power for $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM, measured value of $\pi/2$ BPSK is higher than QPSK, 16QAM, 64QAM and 256QAM mode. Therefore, only EIRP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under $\pi/2$ BPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
EIRP	25deg. C, 70%RH	4.2Vdc	James Yang
Modulation Characteristics	25deg. C, 70%RH	4.2Vdc	James Yang
Frequency Stability	25deg. C, 70%RH	4.2Vdc	James Yang
Occupied Bandwidth	25deg. C, 70%RH	4.2Vdc	James Yang
Band Edge	25deg. C, 70%RH	4.2Vdc	James Yang
Peak To Average Ratio	25deg. C, 70%RH	4.2Vdc	James Yang
Conducted Emission	25deg. C, 70%RH	4.2Vdc	James Yang
Radiated Emission	22deg. C, 66%RH	120Vac, 60Hz	Jones Chang Han Wu

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards and References

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

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

4.1.2 Test Procedures

Conducted Power Measurement:

1. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Set span to at least 1.5 times the OBW.
3. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
4. Set VBW $\geq 3 \times$ RBW.
5. Set number of points in sweep $\geq 2 \times$ span / RBW.
6. Sweep time = auto-couple.
7. Detector = RMS (power averaging).
8. If the EUT can be configured to transmit continuously (i.e., burst duty cycle $\geq 98\%$), then set the trigger to free run.
9. If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle $< 98\%$), then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Ensure that the sweep time is less than or equal to the transmission burst duration.
10. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
11. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with the band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

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)

4.1.3 Test Setup

Conducted Power Measurement:



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

4.1.4 Test Results

Conducted Output Power (dBm)

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		372000	376000	380000
		Frequency (MHz)		1860	1880	1900
20M	pi/2 BPSK	1	0	23.69	23.67	23.65
		1	53	23.79	23.71	23.75
		1	105	23.79	23.78	23.74
		53	0	23.69	23.64	23.64
		53	27	23.67	23.62	23.63
		53	53	23.65	23.68	23.63
		106	0	23.51	23.50	23.50
	QPSK	1	0	20.77	20.80	20.80
		1	53	20.90	20.87	20.85
		1	105	20.87	20.83	20.83
		53	0	20.80	20.71	20.75
		53	27	20.72	20.75	20.71
		53	53	20.74	20.78	20.77
		106	0	20.65	20.64	20.68
	16QAM	1	0	20.61	20.61	20.65
		1	53	20.75	20.79	20.70
		1	105	20.77	20.70	20.77
		53	0	20.61	20.60	20.64
		53	27	20.66	20.60	20.65
		53	53	20.68	20.65	20.60
		106	0	20.60	20.52	20.57
	64QAM	1	0	20.27	20.21	20.27
		1	53	20.35	20.37	20.30
		1	105	20.30	20.40	20.39
		53	0	20.29	20.29	20.29
		53	27	20.22	20.30	20.21
		53	53	20.21	20.28	20.29
		106	0	20.16	20.10	20.18
	256QAM	1	0	17.30	17.26	17.27
		1	53	17.39	17.30	17.40
		1	105	17.31	17.31	17.39
		53	0	17.27	17.26	17.21
		53	27	17.27	17.25	17.29
		53	53	17.27	17.22	17.21
		106	0	17.14	17.18	17.11

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371500	376000	380500
		Frequency (MHz)		1857.5	1880	1902.5
15M	pi/2 BPSK	1	0	23.67	23.62	23.65
		1	39	23.70	23.79	23.73
		1	78	23.78	23.71	23.70
		39	0	23.69	23.68	23.62
		39	19	23.69	23.60	23.60
		39	40	23.62	23.63	23.68
		79	0	23.56	23.54	23.55
	QPSK	1	0	20.74	20.74	20.76
		1	39	20.80	20.86	20.81
		1	78	20.85	20.90	20.86
		39	0	20.75	20.76	20.79
		39	19	20.72	20.77	20.70
		39	40	20.72	20.73	20.76
		79	0	20.69	20.70	20.60
	16QAM	1	0	20.67	20.66	20.67
		1	39	20.72	20.71	20.70
		1	78	20.73	20.74	20.77
		39	0	20.63	20.65	20.63
		39	19	20.60	20.68	20.65
		39	40	20.68	20.67	20.68
		79	0	20.52	20.50	20.53
	64QAM	1	0	20.29	20.23	20.29
		1	39	20.33	20.35	20.36
		1	78	20.34	20.37	20.40
		39	0	20.25	20.22	20.30
		39	19	20.25	20.22	20.28
		39	40	20.28	20.22	20.20
		79	0	20.10	20.18	20.18
	256QAM	1	0	17.26	17.22	17.23
		1	39	17.40	17.36	17.37
		1	78	17.38	17.38	17.34
		39	0	17.24	17.28	17.29
		39	19	17.27	17.23	17.22
		39	40	17.25	17.20	17.27
		79	0	17.12	17.20	17.15

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371000	376000	381000
		Frequency (MHz)		1855	1880	1905
10M	pi/2 BPSK	1	0	23.65	23.63	23.67
		1	26	23.79	23.79	23.72
		1	51	23.77	23.70	23.77
		26	0	23.63	23.61	23.62
		26	13	23.64	23.63	23.66
		26	26	23.66	23.67	23.64
		52	0	23.58	23.59	23.53
	QPSK	1	0	20.74	20.71	20.79
		1	26	20.90	20.89	20.88
		1	51	20.90	20.88	20.86
		26	0	20.75	20.72	20.75
		26	13	20.75	20.75	20.78
		26	26	20.80	20.77	20.71
		52	0	20.61	20.65	20.69
	16QAM	1	0	20.70	20.60	20.65
		1	26	20.75	20.77	20.80
		1	51	20.74	20.74	20.77
		26	0	20.64	20.68	20.65
		26	13	20.69	20.70	20.64
		26	26	20.69	20.64	20.70
		52	0	20.50	20.60	20.55
	64QAM	1	0	20.30	20.28	20.30
		1	26	20.31	20.36	20.36
		1	51	20.40	20.30	20.39
		26	0	20.28	20.23	20.29
		26	13	20.30	20.29	20.30
		26	26	20.27	20.22	20.28
		52	0	20.18	20.11	20.18
	256QAM	1	0	17.28	17.28	17.28
		1	26	17.36	17.40	17.36
		1	51	17.38	17.30	17.32
		26	0	17.21	17.28	17.21
		26	13	17.21	17.23	17.26
		26	26	17.21	17.25	17.21
		52	0	17.11	17.15	17.16

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		370500	376000	381500
		Frequency (MHz)		1852.5	1880	1907.5
5M	pi/2 BPSK	1	0	23.63	23.62	23.60
		1	12	23.71	23.71	23.75
		1	24	23.73	23.71	23.75
		12	0	23.64	23.63	23.67
		12	6	23.66	23.61	23.67
		12	13	23.64	23.61	23.66
		25	0	23.55	23.58	23.54
	QPSK	1	0	20.80	20.71	20.73
		1	12	20.84	20.82	20.87
		1	24	20.81	20.86	20.83
		12	0	20.79	20.77	20.78
		12	6	20.71	20.72	20.74
		12	13	20.78	20.80	20.71
		25	0	20.67	20.66	20.70
	16QAM	1	0	20.60	20.67	20.69
		1	12	20.73	20.70	20.74
		1	24	20.72	20.73	20.74
		12	0	20.68	20.66	20.60
		12	6	20.67	20.60	20.69
		12	13	20.70	20.67	20.61
		25	0	20.55	20.52	20.56
	64QAM	1	0	20.20	20.30	20.27
		1	12	20.31	20.35	20.35
		1	24	20.33	20.31	20.33
		12	0	20.21	20.23	20.29
		12	6	20.27	20.28	20.26
		12	13	20.21	20.27	20.29
		25	0	20.18	20.12	20.18
	256QAM	1	0	17.23	17.26	17.29
		1	12	17.37	17.32	17.37
		1	24	17.35	17.34	17.35
		12	0	17.27	17.30	17.28
		12	6	17.20	17.22	17.25
		12	13	17.29	17.20	17.28
		25	0	17.11	17.14	17.10

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		374000	376500	379000
		Frequency (MHz)		1870	1882.5	1895
20M	pi/2 BPSK	1	0	23.98	24.09	24.02
		1	53	23.92	23.97	24.10
		1	105	24.00	23.94	23.92
		53	0	24.02	24.06	23.91
		53	27	24.04	23.91	24.05
		53	53	23.98	23.97	23.89
		106	0	23.82	23.82	23.89
	QPSK	1	0	21.00	20.96	21.02
		1	53	21.03	21.02	21.08
		1	105	20.84	20.88	20.93
		53	0	21.05	20.90	20.98
		53	27	20.92	21.07	20.94
		53	53	20.93	20.80	20.95
		106	0	20.87	20.88	20.85
	16QAM	1	0	20.89	20.72	20.77
		1	53	20.90	20.71	20.75
		1	105	20.75	20.76	20.73
		53	0	20.90	20.77	20.83
		53	27	20.71	20.88	20.86
		53	53	20.63	20.70	20.77
		106	0	20.78	20.74	20.63
	64QAM	1	0	20.59	20.49	20.40
		1	53	20.40	20.43	20.45
		1	105	20.43	20.45	20.43
		53	0	20.47	20.52	20.52
		53	27	20.44	20.40	20.52
		53	53	20.39	20.49	20.45
		106	0	20.42	20.46	20.42
	256QAM	1	0	17.54	17.54	17.57
		1	53	17.45	17.48	17.46
		1	105	17.35	17.30	17.41
		53	0	17.48	17.58	17.41
		53	27	17.48	17.53	17.58
		53	53	17.33	17.43	17.44
		106	0	17.38	17.38	17.32

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371500	376500	381500
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	pi/2 BPSK	1	0	24.03	23.90	23.94
		1	39	23.94	23.90	24.07
		1	78	23.84	23.97	23.98
		39	0	24.06	24.04	24.08
		39	19	24.07	23.99	23.94
		39	40	23.89	23.87	23.90
		79	0	23.92	23.88	23.81
	QPSK	1	0	21.10	20.97	20.94
		1	39	20.91	21.08	20.94
		1	78	20.84	20.83	20.90
		39	0	20.91	21.03	20.95
		39	19	21.04	21.05	20.96
		39	40	20.86	20.80	20.81
		79	0	20.83	20.84	20.81
	16QAM	1	0	20.72	20.70	20.86
		1	39	20.80	20.81	20.80
		1	78	20.71	20.70	20.77
		39	0	20.90	20.78	20.81
		39	19	20.85	20.83	20.78
		39	40	20.60	20.67	20.68
		79	0	20.69	20.60	20.62
	64QAM	1	0	20.44	20.51	20.50
		1	39	20.57	20.42	20.53
		1	78	20.34	20.47	20.46
		39	0	20.43	20.42	20.57
		39	19	20.60	20.51	20.59
		39	40	20.47	20.35	20.35
		79	0	20.36	20.50	20.45
	256QAM	1	0	17.53	17.58	17.57
		1	39	17.50	17.59	17.40
		1	78	17.47	17.50	17.36
		39	0	17.57	17.47	17.43
		39	19	17.49	17.44	17.43
		39	40	17.32	17.38	17.42
		79	0	17.42	17.34	17.49

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371000	376500	382000
		Frequency (MHz)		1855	1882.5	1910
10M	pi/2 BPSK	1	0	24.09	23.95	23.98
		1	26	24.04	24.03	24.09
		1	51	23.84	23.83	23.96
		26	0	23.93	24.00	23.95
		26	13	23.91	24.06	23.91
		26	26	23.85	23.85	23.95
		52	0	23.86	23.87	23.84
	QPSK	1	0	21.02	20.92	21.07
		1	26	20.95	21.03	21.06
		1	51	20.81	20.86	20.81
		26	0	20.90	21.10	21.01
		26	13	20.98	21.08	20.91
		26	26	20.91	20.89	20.86
		52	0	20.82	20.85	20.97
	16QAM	1	0	20.79	20.75	20.81
		1	26	20.73	20.75	20.74
		1	51	20.80	20.71	20.64
		26	0	20.90	20.79	20.71
		26	13	20.84	20.75	20.71
		26	26	20.66	20.75	20.70
		52	0	20.61	20.65	20.71
	64QAM	1	0	20.51	20.43	20.53
		1	26	20.53	20.40	20.44
		1	51	20.46	20.31	20.47
		26	0	20.42	20.45	20.46
		26	13	20.56	20.59	20.43
		26	26	20.43	20.42	20.40
		52	0	20.50	20.41	20.30
	256QAM	1	0	17.58	17.50	17.43
		1	26	17.51	17.55	17.52
		1	51	17.36	17.43	17.47
		26	0	17.55	17.51	17.43
		26	13	17.43	17.51	17.57
		26	26	17.43	17.39	17.38
		52	0	17.44	17.36	17.45

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		370500	376500	382500
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	pi/2 BPSK	1	0	24.04	23.93	24.04
		1	12	23.93	24.00	24.10
		1	24	23.85	23.83	23.81
		12	0	23.99	23.96	23.96
		12	6	23.95	24.00	24.10
		12	13	23.94	23.93	23.93
		25	0	23.87	23.96	23.94
	QPSK	1	0	21.01	21.09	21.05
		1	12	20.92	21.07	20.91
		1	24	20.89	20.95	20.86
		12	0	20.93	21.05	21.01
		12	6	21.04	21.09	20.97
		12	13	20.81	20.82	20.97
		25	0	20.84	20.87	20.80
	16QAM	1	0	20.81	20.73	20.85
		1	12	20.85	20.89	20.80
		1	24	20.79	20.65	20.62
		12	0	20.90	20.73	20.75
		12	6	20.70	20.79	20.85
		12	13	20.75	20.67	20.69
		25	0	20.72	20.72	20.60
	64QAM	1	0	20.45	20.60	20.42
		1	12	20.47	20.45	20.45
		1	24	20.39	20.50	20.49
		12	0	20.55	20.56	20.46
		12	6	20.52	20.56	20.44
		12	13	20.42	20.46	20.34
		25	0	20.45	20.33	20.46
	256QAM	1	0	17.48	17.53	17.53
		1	12	17.50	17.42	17.42
		1	24	17.36	17.49	17.38
		12	0	17.42	17.51	17.50
		12	6	17.59	17.45	17.53
		12	13	17.34	17.47	17.50
		25	0	17.49	17.46	17.43

EIRP Power (dBm)

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		372000	376000	380000
		Frequency (MHz)		1860	1880	1900
20M	pi/2 BPSK	1	0	26.61	26.59	26.57
		1	53	26.71	26.63	26.67
		1	105	26.71	26.70	26.66
		53	0	26.61	26.56	26.56
		53	27	26.59	26.54	26.55
		53	53	26.57	26.60	26.55
		106	0	26.43	26.42	26.42
	QPSK	1	0	23.69	23.72	23.72
		1	53	23.82	23.79	23.77
		1	105	23.79	23.75	23.75
		53	0	23.72	23.63	23.67
		53	27	23.64	23.67	23.63
		53	53	23.66	23.70	23.69
		106	0	23.57	23.56	23.60
	16QAM	1	0	23.53	23.53	23.57
		1	53	23.67	23.71	23.62
		1	105	23.69	23.62	23.69
		53	0	23.53	23.52	23.56
		53	27	23.58	23.52	23.57
		53	53	23.60	23.57	23.52
		106	0	23.52	23.44	23.49
	64QAM	1	0	23.19	23.13	23.19
		1	53	23.27	23.29	23.22
		1	105	23.22	23.32	23.31
		53	0	23.21	23.21	23.21
		53	27	23.14	23.22	23.13
		53	53	23.13	23.20	23.21
		106	0	23.08	23.02	23.10
	256QAM	1	0	20.22	20.18	20.19
		1	53	20.31	20.22	20.32
		1	105	20.23	20.23	20.31
		53	0	20.19	20.18	20.13
		53	27	20.19	20.17	20.21
		53	53	20.19	20.14	20.13
		106	0	20.06	20.10	20.03

*EIRP = Conducted + antenna gain

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371500	376000	380500
		Frequency (MHz)		1857.5	1880	1902.5
15M	pi/2 BPSK	1	0	26.59	26.54	26.57
		1	39	26.62	26.71	26.65
		1	78	26.70	26.63	26.62
		39	0	26.61	26.60	26.54
		39	19	26.61	26.52	26.52
		39	40	26.54	26.55	26.60
		79	0	26.48	26.46	26.47
	QPSK	1	0	23.66	23.66	23.68
		1	39	23.72	23.78	23.73
		1	78	23.77	23.82	23.78
		39	0	23.67	23.68	23.71
		39	19	23.64	23.69	23.62
		39	40	23.64	23.65	23.68
		79	0	23.61	23.62	23.52
	16QAM	1	0	23.59	23.58	23.59
		1	39	23.64	23.63	23.62
		1	78	23.65	23.66	23.69
		39	0	23.55	23.57	23.55
		39	19	23.52	23.60	23.57
		39	40	23.60	23.59	23.60
		79	0	23.44	23.42	23.45
	64QAM	1	0	23.21	23.15	23.21
		1	39	23.25	23.27	23.28
		1	78	23.26	23.29	23.32
		39	0	23.17	23.14	23.22
		39	19	23.17	23.14	23.20
		39	40	23.20	23.14	23.12
		79	0	23.02	23.10	23.10
	256QAM	1	0	20.18	20.14	20.15
		1	39	20.32	20.28	20.29
		1	78	20.30	20.30	20.26
		39	0	20.16	20.20	20.21
		39	19	20.19	20.15	20.14
		39	40	20.17	20.12	20.19
		79	0	20.04	20.12	20.07

*EIRP = Conducted + antenna gain

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371000	376000	381000
		Frequency (MHz)		1855	1880	1905
10M	pi/2 BPSK	1	0	26.57	26.55	26.59
		1	26	26.71	26.71	26.64
		1	51	26.69	26.62	26.69
		26	0	26.55	26.53	26.54
		26	13	26.56	26.55	26.58
		26	26	26.58	26.59	26.56
		52	0	26.50	26.51	26.45
	QPSK	1	0	23.66	23.63	23.71
		1	26	23.82	23.81	23.80
		1	51	23.82	23.80	23.78
		26	0	23.67	23.64	23.67
		26	13	23.67	23.67	23.70
		26	26	23.72	23.69	23.63
		52	0	23.53	23.57	23.61
	16QAM	1	0	23.62	23.52	23.57
		1	26	23.67	23.69	23.72
		1	51	23.66	23.66	23.69
		26	0	23.56	23.60	23.57
		26	13	23.61	23.62	23.56
		26	26	23.61	23.56	23.62
		52	0	23.42	23.52	23.47
	64QAM	1	0	23.22	23.20	23.22
		1	26	23.23	23.28	23.28
		1	51	23.32	23.22	23.31
		26	0	23.20	23.15	23.21
		26	13	23.22	23.21	23.22
		26	26	23.19	23.14	23.20
		52	0	23.10	23.03	23.10
	256QAM	1	0	20.20	20.20	20.20
		1	26	20.28	20.32	20.28
		1	51	20.30	20.22	20.24
		26	0	20.13	20.20	20.13
		26	13	20.13	20.15	20.18
		26	26	20.13	20.17	20.13
		52	0	20.03	20.07	20.08

*EIRP = Conducted + antenna gain

NR Band 2 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		370500	376000	381500
		Frequency (MHz)		1852.5	1880	1907.5
5M	pi/2 BPSK	1	0	26.55	26.54	26.52
		1	12	26.63	26.63	26.67
		1	24	26.65	26.63	26.67
		12	0	26.56	26.55	26.59
		12	6	26.58	26.53	26.59
		12	13	26.56	26.53	26.58
		25	0	26.47	26.50	26.46
	QPSK	1	0	23.72	23.63	23.65
		1	12	23.76	23.74	23.79
		1	24	23.73	23.78	23.75
		12	0	23.71	23.69	23.70
		12	6	23.63	23.64	23.66
		12	13	23.70	23.72	23.63
		25	0	23.59	23.58	23.62
	16QAM	1	0	23.52	23.59	23.61
		1	12	23.65	23.62	23.66
		1	24	23.64	23.65	23.66
		12	0	23.60	23.58	23.52
		12	6	23.59	23.52	23.61
		12	13	23.62	23.59	23.53
		25	0	23.47	23.44	23.48
	64QAM	1	0	23.12	23.22	23.19
		1	12	23.23	23.27	23.27
		1	24	23.25	23.23	23.25
		12	0	23.13	23.15	23.21
		12	6	23.19	23.20	23.18
		12	13	23.13	23.19	23.21
		25	0	23.10	23.04	23.10
	256QAM	1	0	20.15	20.18	20.21
		1	12	20.29	20.24	20.29
		1	24	20.27	20.26	20.27
		12	0	20.19	20.22	20.20
		12	6	20.12	20.14	20.17
		12	13	20.21	20.12	20.20
		25	0	20.03	20.06	20.02

*EIRP = Conducted + antenna gain

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		374000	376500	379000
		Frequency (MHz)		1870	1882.5	1895
20M	pi/2 BPSK	1	0	26.95	27.06	26.99
		1	53	26.89	26.94	27.07
		1	105	26.97	26.91	26.89
		53	0	26.99	27.03	26.88
		53	27	27.01	26.88	27.02
		53	53	26.95	26.94	26.86
		106	0	26.79	26.79	26.86
	QPSK	1	0	23.97	23.93	23.99
		1	53	24.00	23.99	24.05
		1	105	23.81	23.85	23.90
		53	0	24.02	23.87	23.95
		53	27	23.89	24.04	23.91
		53	53	23.90	23.77	23.92
		106	0	23.84	23.85	23.82
	16QAM	1	0	23.86	23.69	23.74
		1	53	23.87	23.68	23.72
		1	105	23.72	23.73	23.70
		53	0	23.87	23.74	23.80
		53	27	23.68	23.85	23.83
		53	53	23.60	23.67	23.74
		106	0	23.75	23.71	23.60
	64QAM	1	0	23.56	23.46	23.37
		1	53	23.37	23.40	23.42
		1	105	23.40	23.42	23.40
		53	0	23.44	23.49	23.49
		53	27	23.41	23.37	23.49
		53	53	23.36	23.46	23.42
		106	0	23.39	23.43	23.39
	256QAM	1	0	20.51	20.51	20.54
		1	53	20.42	20.45	20.43
		1	105	20.32	20.27	20.38
		53	0	20.45	20.55	20.38
		53	27	20.45	20.50	20.55
		53	53	20.30	20.40	20.41
		106	0	20.35	20.35	20.29

*EIRP = Conducted + antenna gain

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371500	376500	381500
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	pi/2 BPSK	1	0	27.00	26.87	26.91
		1	39	26.91	26.87	27.04
		1	78	26.81	26.94	26.95
		39	0	27.03	27.01	27.05
		39	19	27.04	26.96	26.91
		39	40	26.86	26.84	26.87
		79	0	26.89	26.85	26.78
	QPSK	1	0	24.07	23.94	23.91
		1	39	23.88	24.05	23.91
		1	78	23.81	23.80	23.87
		39	0	23.88	24.00	23.92
		39	19	24.01	24.02	23.93
		39	40	23.83	23.77	23.78
		79	0	23.80	23.81	23.78
	16QAM	1	0	23.69	23.67	23.83
		1	39	23.77	23.78	23.77
		1	78	23.68	23.67	23.74
		39	0	23.87	23.75	23.78
		39	19	23.82	23.80	23.75
		39	40	23.57	23.64	23.65
		79	0	23.66	23.57	23.59
	64QAM	1	0	23.41	23.48	23.47
		1	39	23.54	23.39	23.50
		1	78	23.31	23.44	23.43
		39	0	23.40	23.39	23.54
		39	19	23.57	23.48	23.56
		39	40	23.44	23.32	23.32
		79	0	23.33	23.47	23.42
	256QAM	1	0	20.50	20.55	20.54
		1	39	20.47	20.56	20.37
		1	78	20.44	20.47	20.33
		39	0	20.54	20.44	20.40
		39	19	20.46	20.41	20.40
		39	40	20.29	20.35	20.39
		79	0	20.39	20.31	20.46

*EIRP = Conducted + antenna gain

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		371000	376500	382000
		Frequency (MHz)		1855	1882.5	1910
10M	pi/2 BPSK	1	0	27.06	26.92	26.95
		1	26	27.01	27.00	27.06
		1	51	26.81	26.80	26.93
		26	0	26.90	26.97	26.92
		26	13	26.88	27.03	26.88
		26	26	26.82	26.82	26.92
		52	0	26.83	26.84	26.81
	QPSK	1	0	23.99	23.89	24.04
		1	26	23.92	24.00	24.03
		1	51	23.78	23.83	23.78
		26	0	23.87	24.07	23.98
		26	13	23.95	24.05	23.88
		26	26	23.88	23.86	23.83
		52	0	23.79	23.82	23.94
	16QAM	1	0	23.76	23.72	23.78
		1	26	23.70	23.72	23.71
		1	51	23.77	23.68	23.61
		26	0	23.87	23.76	23.68
		26	13	23.81	23.72	23.68
		26	26	23.63	23.72	23.67
		52	0	23.58	23.62	23.68
	64QAM	1	0	23.48	23.40	23.50
		1	26	23.50	23.37	23.41
		1	51	23.43	23.28	23.44
		26	0	23.39	23.42	23.43
		26	13	23.53	23.56	23.40
		26	26	23.40	23.39	23.37
		52	0	23.47	23.38	23.27
	256QAM	1	0	20.55	20.47	20.40
		1	26	20.48	20.52	20.49
		1	51	20.33	20.40	20.44
		26	0	20.52	20.48	20.40
		26	13	20.40	20.48	20.54
		26	26	20.40	20.36	20.35
		52	0	20.41	20.33	20.42

*EIRP = Conducted + antenna gain

NR Band 25 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		370500	376500	382500
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	pi/2 BPSK	1	0	27.01	26.90	27.01
		1	12	26.90	26.97	27.07
		1	24	26.82	26.80	26.78
		12	0	26.96	26.93	26.93
		12	6	26.92	26.97	27.07
		12	13	26.91	26.90	26.90
		25	0	26.84	26.93	26.91
	QPSK	1	0	23.98	24.06	24.02
		1	12	23.89	24.04	23.88
		1	24	23.86	23.92	23.83
		12	0	23.90	24.02	23.98
		12	6	24.01	24.06	23.94
		12	13	23.78	23.79	23.94
		25	0	23.81	23.84	23.77
	16QAM	1	0	23.78	23.70	23.82
		1	12	23.82	23.86	23.77
		1	24	23.76	23.62	23.59
		12	0	23.87	23.70	23.72
		12	6	23.67	23.76	23.82
		12	13	23.72	23.64	23.66
		25	0	23.69	23.69	23.57
	64QAM	1	0	23.42	23.57	23.39
		1	12	23.44	23.42	23.42
		1	24	23.36	23.47	23.46
		12	0	23.52	23.53	23.43
		12	6	23.49	23.53	23.41
		12	13	23.39	23.43	23.31
		25	0	23.42	23.30	23.43
	256QAM	1	0	20.45	20.50	20.50
		1	12	20.47	20.39	20.39
		1	24	20.33	20.46	20.35
		12	0	20.39	20.48	20.47
		12	6	20.56	20.42	20.50
		12	13	20.31	20.44	20.47
		25	0	20.46	20.43	20.40

*EIRP = Conducted + antenna gain

4.2 Modulation Characteristics Measurement

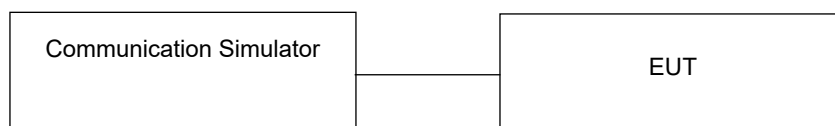
4.2.1 Limits of Modulation Characteristics

N/A

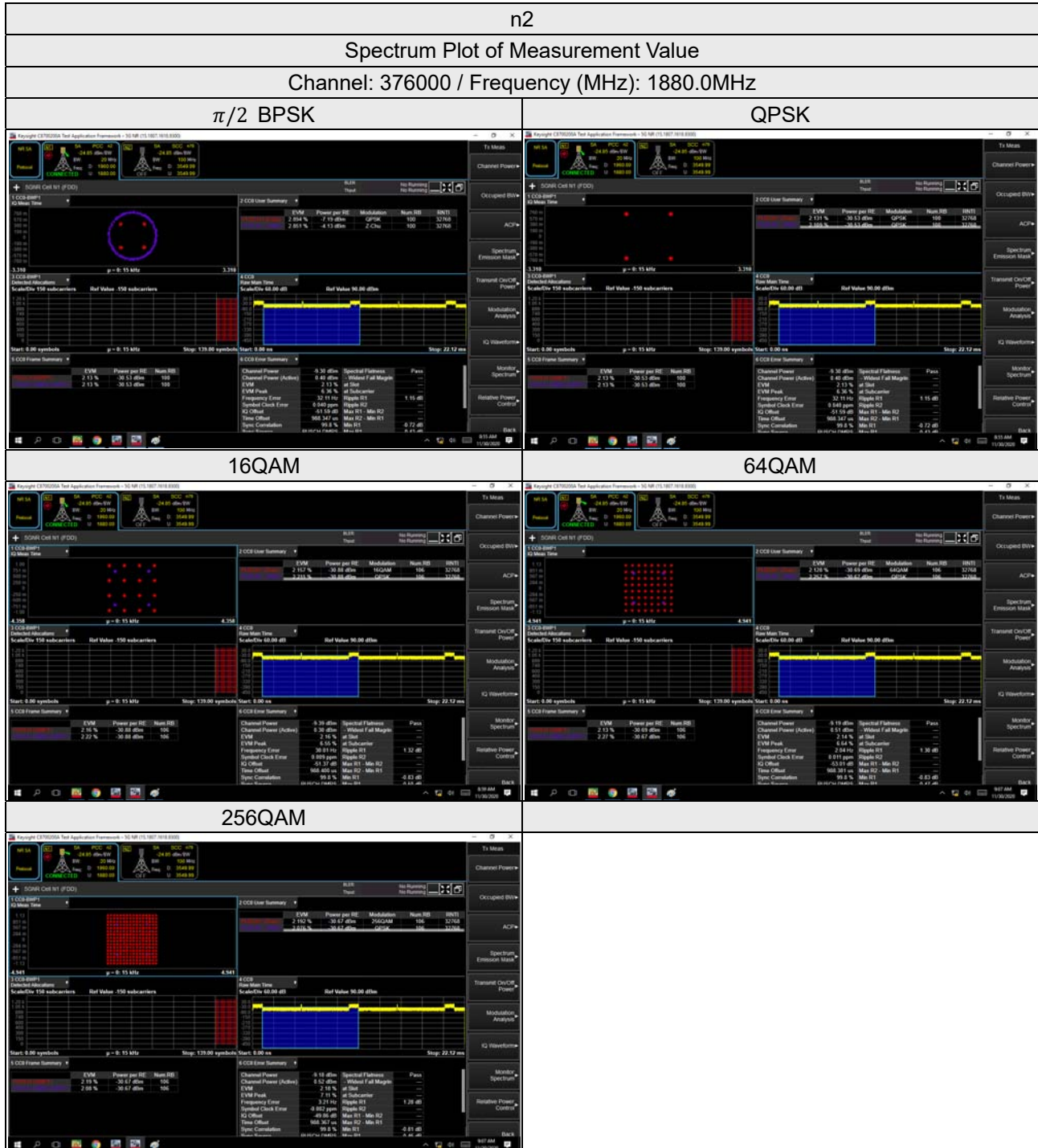
4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup



4.2.4 Test Results

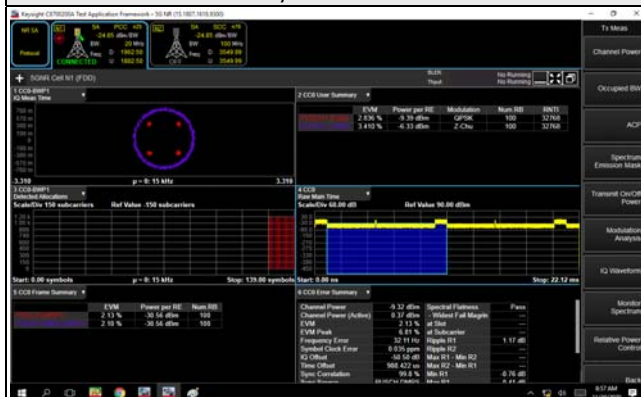


n25

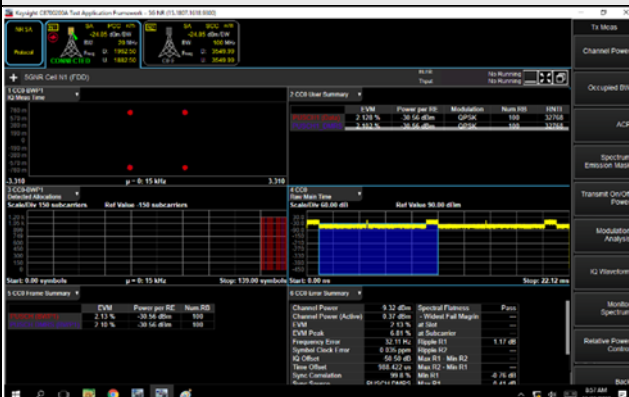
Spectrum Plot of Measurement Value

Channel: 376000 / Frequency (MHz): 1882.5MHz

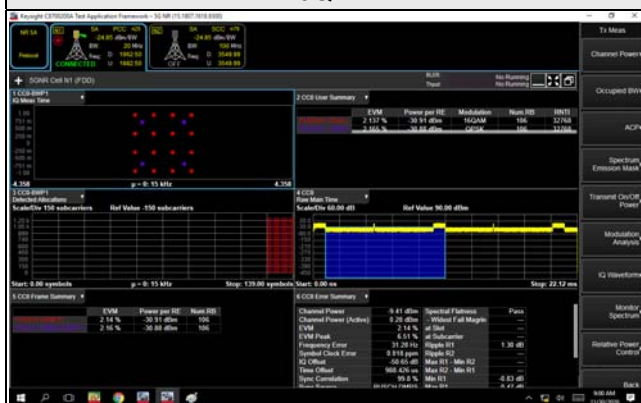
$\pi/2$ BPSK



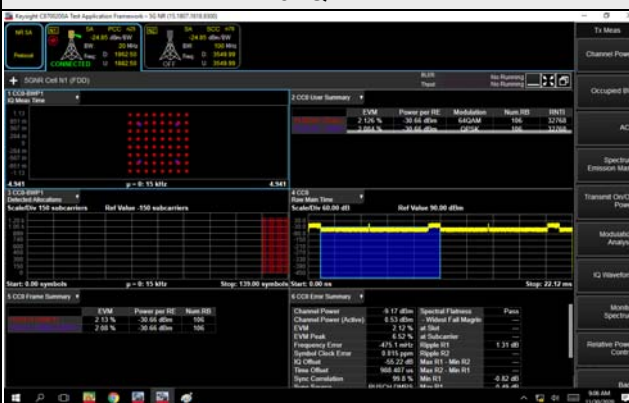
QPSK



16QAM



64QAM



256QAM



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

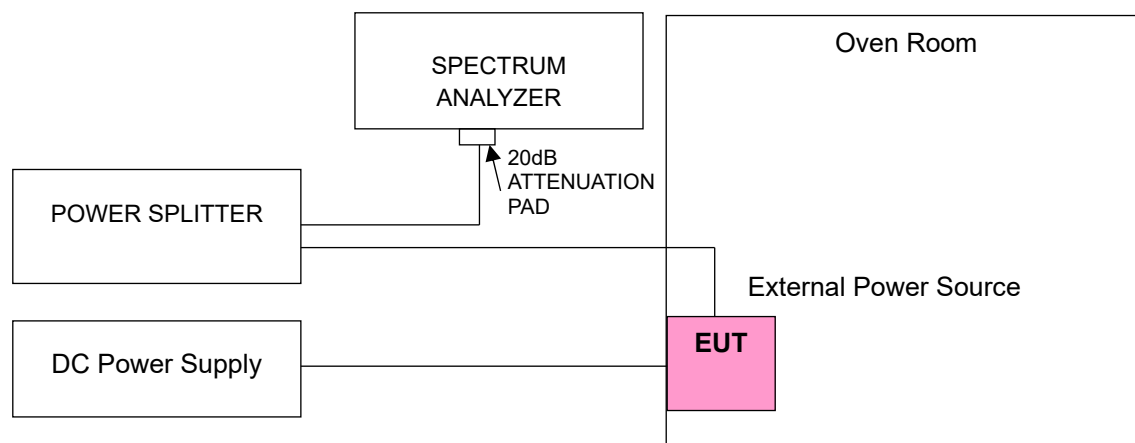
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.3.2 Test Procedure

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the communication simulator.

4.3.3 Test Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	n2			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1852.500001	0.001	1907.499999	-0.001
4.2	1852.500001	0.001	1907.499996	-0.002
4.4	1852.500003	0.002	1907.499998	-0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n2			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.500003	0.002	1907.500001	0.001
-20	1852.500003	0.001	1907.500002	0.001
-10	1852.500002	0.001	1907.500004	0.002
0	1852.500001	0.001	1907.500003	0.002
10	1852.500004	0.002	1907.500003	0.002
20	1852.499998	-0.001	1907.500004	0.002
30	1852.499997	-0.002	1907.500003	0.001
40	1852.499999	-0.001	1907.499999	-0.001
50	1852.499997	-0.001	1907.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n2			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1855.000002	0.001	1905.000003	0.002
4.2	1855.000002	0.001	1905.000003	0.001
4.4	1855.000001	0.001	1905.000002	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n2			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1855.000003	0.002	1905.000001	0.001
-20	1855.000004	0.002	1905.000004	0.002
-10	1855.000002	0.001	1905.000002	0.001
0	1855.000001	0.001	1905.000002	0.001
10	1855.000003	0.001	1905.000004	0.002
20	1854.999997	-0.002	1904.999997	-0.002
30	1854.999999	-0.001	1904.999996	-0.002
40	1854.999997	-0.002	1904.999997	-0.002
50	1854.999996	-0.002	1904.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n2			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1857.500002	0.001	1902.500001	0.001
4.2	1857.500002	0.001	1902.500003	0.002
4.4	1857.500003	0.001	1902.500003	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n2			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1857.500001	0.001	1902.500002	0.001
-20	1857.500002	0.001	1902.500002	0.001
-10	1857.500003	0.001	1902.500003	0.002
0	1857.500002	0.001	1902.500004	0.002
10	1857.500003	0.002	1902.500001	0.001
20	1857.499997	-0.002	1902.499996	-0.002
30	1857.499996	-0.002	1902.499997	-0.002
40	1857.499998	-0.001	1902.499997	-0.002
50	1857.499997	-0.001	1902.499996	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	n2			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1860.000003	0.001	1900.000002	0.001
4.2	1860.000003	0.002	1900.000002	0.001
4.4	1860.000003	0.002	1900.000002	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n2			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1860.000003	0.001	1900.000004	0.002
-20	1860.000003	0.002	1900.000002	0.001
-10	1860.000003	0.001	1900.000003	0.001
0	1860.000003	0.002	1900.000004	0.002
10	1860.000003	0.001	1900.000003	0.002
20	1859.999997	-0.002	1899.999998	-0.001
30	1859.999997	-0.002	1899.999996	-0.002
40	1859.999998	-0.001	1899.999997	-0.002
50	1859.999997	-0.002	1899.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n25			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1852.500004	0.002	1912.500000	0.001
4.2	1852.500003	0.002	1912.500000	0.001
4.4	1852.500002	0.001	1912.500000	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n25			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.500004	0.002	1912.500000	0.002
-20	1852.500004	0.002	1912.500000	0.002
-10	1852.500003	0.001	1912.500000	0.002
0	1852.500003	0.002	1912.500000	0.001
10	1852.500003	0.001	1912.500000	0.001
20	1852.499997	-0.002	1912.500000	-0.001
30	1852.499997	-0.002	1912.500000	-0.002
40	1852.499999	-0.001	1912.500000	-0.001
50	1852.499996	-0.002	1912.500000	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n25			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1852.500004	0.002	1910.000002	0.001
4.2	1852.500003	0.002	1910.000004	0.002
4.4	1852.500002	0.001	1910.000002	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n25			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.500002	0.002	1910.000001	0.002
-20	1852.500002	0.001	1910.000001	0.001
-10	1852.500004	0.002	1910.000002	0.001
0	1852.500001	0.001	1910.000003	0.001
10	1852.500002	0.001	1910.000002	0.001
20	1852.499997	-0.001	1909.999998	-0.001
30	1852.499999	-0.001	1909.999996	-0.002
40	1852.499997	-0.002	1909.999999	-0.001
50	1852.499996	-0.002	1909.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n25			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1857.500002	0.001	1907.500001	0.001
4.2	1857.500003	0.001	1907.500001	0.001
4.4	1857.500003	0.002	1907.500002	0.001

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n25			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1857.500003	0.001	1907.500001	0.001
-20	1857.500004	0.002	1907.500002	0.001
-10	1857.500002	0.001	1907.500001	0.001
0	1857.500001	0.001	1907.500004	0.002
10	1857.500004	0.002	1907.500002	0.001
20	1857.499998	-0.001	1907.499998	-0.001
30	1857.499998	-0.001	1907.499998	-0.001
40	1857.499998	-0.001	1907.499998	-0.001
50	1857.499998	-0.001	1907.499997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	n25			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	1860.000001	0.001	1895.000001	0.001
4.2	1860.000002	0.001	1895.000002	0.001
4.4	1860.000004	0.002	1895.000004	0.002

Note: The applicant defined the normal working voltage is from 4.2Vdc to 4.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	n25			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1860.000003	0.001	1895.000003	0.002
-20	1860.000002	0.001	1895.000004	0.002
-10	1860.000001	0.001	1895.000003	0.001
0	1860.000004	0.002	1895.000003	0.002
10	1860.000001	0.001	1895.000001	0.001
20	1859.999998	-0.001	1894.999999	-0.001
30	1859.999997	-0.001	1894.999998	-0.001
40	1859.999998	-0.001	1894.999997	-0.001
50	1859.999998	-0.001	1894.999997	-0.002

4.4 Occupied Bandwidth Measurement

4.4.1 Limits of Occupied Bandwidth Measurement

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.4.2 Test Procedure

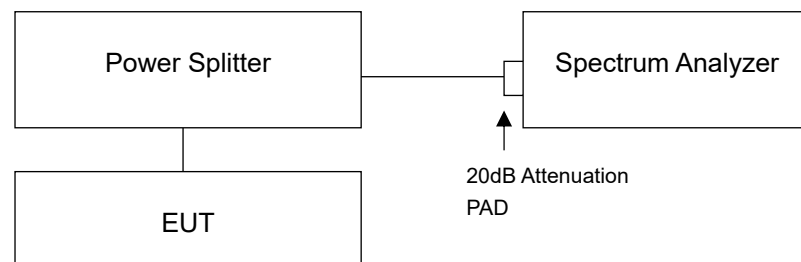
Occupied Bandwidth

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer. Measurement method refers to ANSI C63.26 section 5.4.4.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

26dBc Bandwidth:

For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

4.4.3 Test Setup



4.4.4 Test Result

Occupied Bandwidth

n2, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	4.47	4.46	4.47	4.46	4.47
376000	1880.0	4.47	4.46	4.47	4.46	4.47
381500	1907.5	4.47	4.46	4.47	4.46	4.47
n2, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	9.28	9.27	9.27	9.26	9.27
376000	1880.0	9.28	9.27	9.27	9.27	9.27
381000	1905.0	9.28	9.27	9.27	9.27	9.27
n2, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	14.08	14.07	14.06	14.07	14.05
376000	1880.0	14.08	14.07	14.07	14.08	14.06
380500	1902.5	14.07	14.07	14.06	14.07	14.06
n2, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	18.90	18.89	18.89	18.89	18.88
376000	1880.0	18.91	18.90	18.90	18.90	18.89
380000	1900.0	18.90	18.89	18.89	18.89	18.89

Spectrum Plot of Worst Value



n25, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	4.47	4.46	4.47	4.46	4.46
376500	1882.5	4.48	4.46	4.47	4.47	4.46
382500	1912.5	4.47	4.46	4.47	4.46	4.46
n25, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	9.28	9.27	9.26	9.27	9.27
376500	1882.5	9.31	9.27	9.27	9.28	9.27
382000	1910.0	9.30	9.28	9.27	9.28	9.27
n25, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	14.09	14.06	14.06	14.07	14.06
376500	1882.5	14.11	14.07	14.06	14.08	14.06
381500	1907.5	14.09	14.07	14.06	14.07	14.05
n25, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	18.90	18.89	18.89	18.88	18.88
376500	1882.5	18.94	18.89	18.90	18.89	18.89
379000	1895.0	18.91	18.89	18.89	18.88	18.89

Spectrum Plot of Worst Value

5MHz / $\pi/2$ BPSK



10MHz / $\pi/2$ BPSK



15MHz / $\pi/2$ BPSK



20MHz / $\pi/2$ BPSK

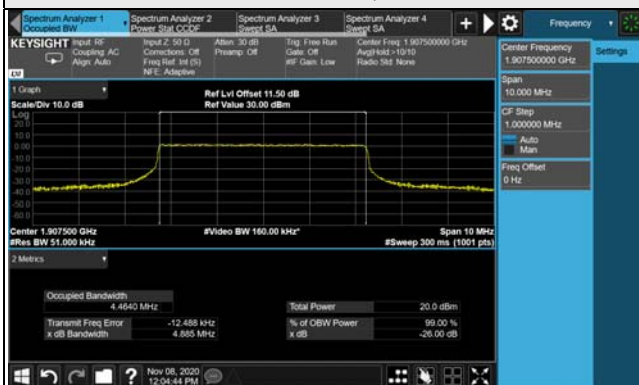


26dB Bandwidth

n2, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	4.86	4.79	4.84	4.85	4.84
376000	1880.0	4.87	4.79	4.85	4.88	4.84
381500	1907.5	4.87	4.79	4.84	4.89	4.87
n2, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	9.79	9.69	9.68	9.67	9.76
376000	1880.0	9.83	9.73	9.69	9.69	9.75
381000	1905.0	9.83	9.72	9.68	9.69	9.75
n2, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	14.67	14.62	14.63	14.60	14.61
376000	1880.0	14.68	14.62	14.63	14.61	14.63
380500	1902.5	14.63	14.62	14.61	14.60	14.62
n2, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	19.69	19.62	19.66	19.62	19.62
376000	1880.0	19.77	19.63	19.66	19.63	19.62
380000	1900.0	19.71	19.62	19.66	19.62	19.65

Spectrum Plot of Worst Value

5MHz / 64QAM



10MHz / $\pi/2$ BPSK



15MHz / $\pi/2$ BPSK



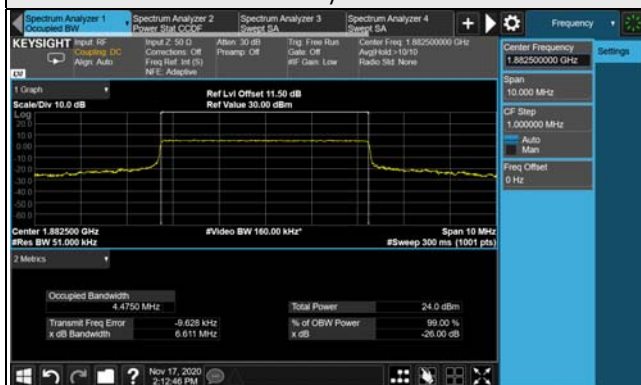
20MHz / $\pi/2$ BPSK



n25, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	4.91	4.78	4.87	4.80	4.83
376500	1882.5	6.61	4.81	4.88	4.83	4.84
382500	1912.5	5.35	4.80	4.87	4.84	4.85
n25, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	9.97	9.71	9.71	9.71	9.74
376500	1882.5	13.93	9.73	9.74	9.71	9.78
382000	1910.0	11.69	9.73	9.72	9.71	9.75
n25, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	14.77	14.62	14.60	14.61	14.62
376500	1882.5	18.28	14.64	14.62	14.62	14.63
381500	1907.5	15.41	14.61	14.60	14.62	14.61
n25, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	19.76	19.61	19.65	19.59	19.63
376500	1882.5	21.49	19.61	19.67	19.60	19.63
379000	1895.0	20.02	19.61	19.64	19.59	19.64

Spectrum Plot of Worst Value

5MHz / $\pi/2$ BPSK



10MHz / $\pi/2$ BPSK



15MHz / $\pi/2$ BPSK



20MHz / $\pi/2$ BPSK

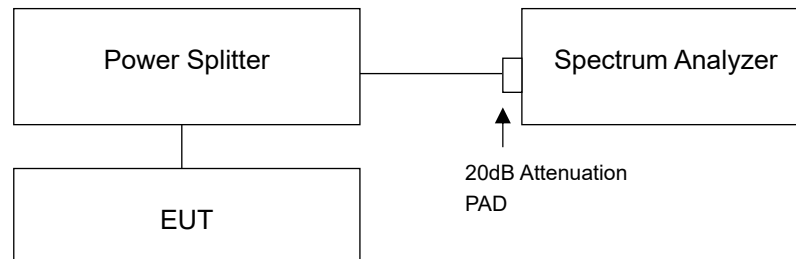


4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.5.2 Test Setup



4.5.3 Test Procedures

- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (Channel Bandwidth: 5MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel Bandwidth: 10MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (Channel Bandwidth: 15MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (Channel Bandwidth: 20MHz).
- Record the max trace plot into the test report.

4.5.4 Test Results

n2, Channel Bandwidth: 5MHz

Channel 370500
(1852.5MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 381500
(1907.5MHz)

$\pi/2$ BPSK

1 RB / 24 RB Offset



Channel 370500
(1852.5MHz)

$\pi/2$ BPSK

25 RB / 0 RB Offset

Channel 381500
(1907.5MHz)

$\pi/2$ BPSK

25 RB / 0 RB Offset



n2, Channel Bandwidth: 10MHz

Channel 371000
(1855.0MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 381000
(1905.0MHz)

$\pi/2$ BPSK

1 RB / 51 RB Offset



Channel 371000
(1855.0MHz)

$\pi/2$ BPSK

52 RB / 0 RB Offset

Channel 381000
(1905.0MHz)

$\pi/2$ BPSK

52 RB / 0 RB Offset



n2, Channel Bandwidth: 15MHz

Channel 371500
(1857.5MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 380500
(1902.5MHz)

$\pi/2$ BPSK

1 RB / 78 RB Offset



Channel 371500
(1857.5MHz)

$\pi/2$ BPSK

79 RB / 0 RB Offset

Channel 380500
(1902.5MHz)

$\pi/2$ BPSK

79 RB / 0 RB Offset



n2, Channel Bandwidth: 20MHz

Channel 372000
(1860.0MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 380000
(1900.0MHz)

$\pi/2$ BPSK

1 RB / 105 RB Offset



Channel 372000
(1860.0MHz)

$\pi/2$ BPSK

106 RB / 0 RB Offset

Channel 380000
(1900.0MHz)

$\pi/2$ BPSK

106 RB / 0 RB Offset



n25, Channel Bandwidth: 5MHz

Channel 370500
(1852.5MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 382500
(1912.5MHz)

$\pi/2$ BPSK

1 RB / 24 RB Offset



Channel 370500
(1852.5MHz)

$\pi/2$ BPSK

25 RB / 0 RB Offset

Channel 382500
(1912.5MHz)

$\pi/2$ BPSK

25 RB / 0 RB Offset



n25, Channel Bandwidth: 10MHz

Channel 371000
(1855.0MHz)

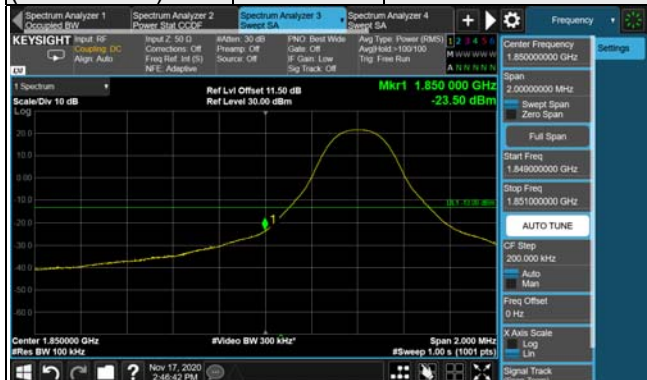
$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 382000
(1910.0MHz)

$\pi/2$ BPSK

1 RB / 51 RB Offset



Channel 371000
(1855.0MHz)

$\pi/2$ BPSK

52 RB / 0 RB Offset

Channel 382000
(1910.0MHz)

$\pi/2$ BPSK

52 RB / 0 RB Offset



n25, Channel Bandwidth: 15MHz

Channel 371500
(1857.5MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 381500
(1907.5MHz)

$\pi/2$ BPSK

1 RB / 78 RB Offset



Channel 371500
(1857.5MHz)

$\pi/2$ BPSK

79 RB / 0 RB Offset

Channel 381500
(1907.5MHz)

$\pi/2$ BPSK

79 RB / 0 RB Offset



n25, Channel Bandwidth: 20MHz

Channel 372000
(1860.0MHz)

$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 379000
(1905.0MHz)

$\pi/2$ BPSK

1 RB / 105 RB Offset



Channel 372000
(1860.0MHz)

$\pi/2$ BPSK

106 RB / 0 RB Offset

Channel 379000
(1905.0MHz)

$\pi/2$ BPSK

106 RB / 0 RB Offset

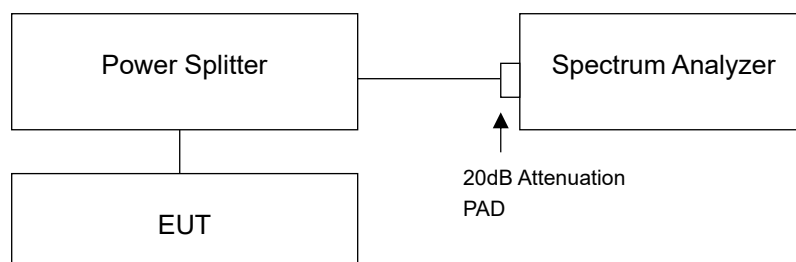


4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

4.6.2 Test Setup



4.6.3 Test Procedures

- Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Record the maximum PAPR level associated with a probability of 0.1%.

4.6.4 Test Results

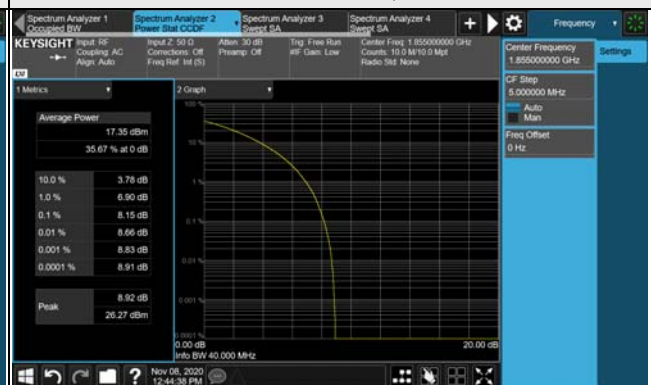
n2, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	6.83	7.35	7.33	7.18	8.08
376000	1880.0	6.56	7.56	7.55	7.53	7.48
381500	1907.5	6.49	7.47	7.45	7.11	7.44
n2, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	7.19	7.57	7.53	7.34	8.15
376000	1880.0	6.51	7.50	7.51	7.30	7.44
381000	1905.0	6.09	7.31	7.33	7.26	7.62
n2, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	6.45	7.02	7.00	7.14	8.27
376000	1880.0	6.68	7.40	7.38	7.33	7.50
380500	1902.5	7.11	7.69	7.67	7.55	7.78
n2, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	7.04	7.39	7.40	7.50	8.40
376000	1880.0	6.86	7.53	7.56	7.60	7.63
380000	1900.0	7.12	7.81	7.83	7.80	7.82

Spectrum Plot of Worst Value

5MHz / 256QAM



10MHz / 256QAM



15MHz / 256QAM



20MHz / 256QAM



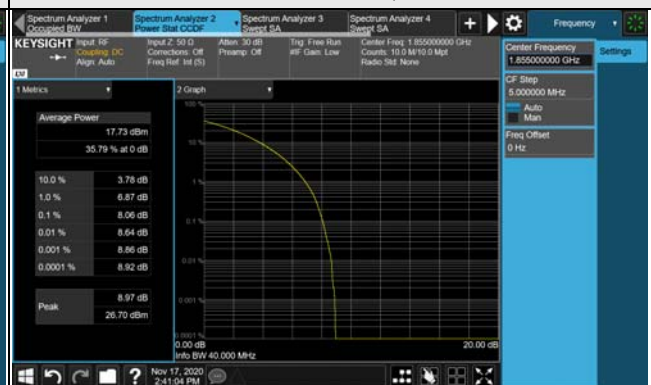
n25, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
370500	1852.5	6.39	7.63	7.67	7.28	8.06
376500	1882.5	5.23	7.46	7.50	7.42	7.14
382500	1912.5	5.59	7.30	7.37	7.17	7.29
n25, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371000	1855.0	6.00	7.46	7.46	7.12	8.06
376500	1882.5	5.28	7.50	7.51	7.39	7.15
382000	1910.0	5.83	7.41	7.43	7.20	7.37
n25, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
371500	1857.5	6.06	7.24	7.26	7.27	8.28
376500	1882.5	5.55	7.59	7.60	7.57	7.29
381500	1907.5	6.13	7.84	7.83	7.60	7.67
n25, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
372000	1860.0	6.58	7.81	7.81	7.58	8.36
376500	1882.5	5.86	7.73	7.75	7.63	7.47
379000	1895.0	6.44	8.10	8.14	7.99	7.85

Spectrum Plot of Worst Value

5MHz / 256QAM



10MHz / 256QAM



15MHz / 256QAM



20MHz / 256QAM

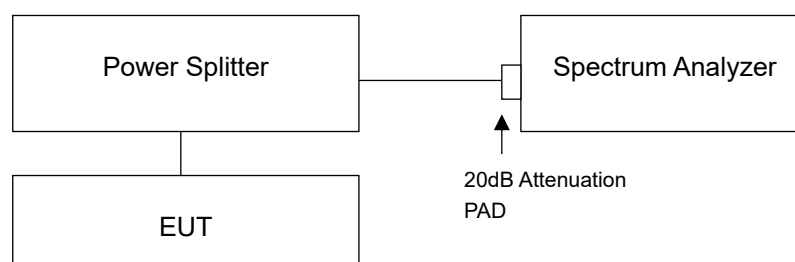


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

4.7.2 Test Setup



4.7.3 Test Procedure

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9kHz to 20GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

4.7.4 Test Results

n2, Channel Bandwidth: 5MHz

Channel 370500 (1852.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz



Channel 376000 (1880.0MHz)

Frequency Range : 9kHz ~ 1GHz

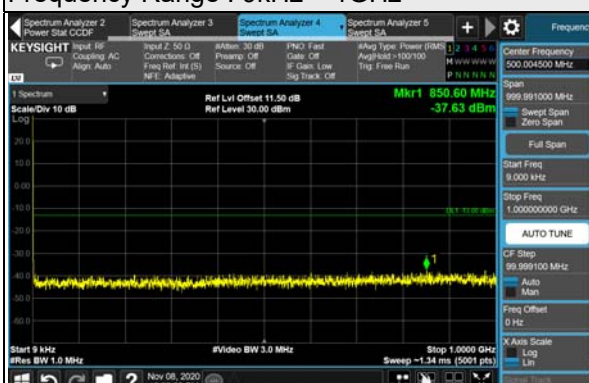


Frequency Range : 1GHz ~ 20GHz



Channel 381500 (1907.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

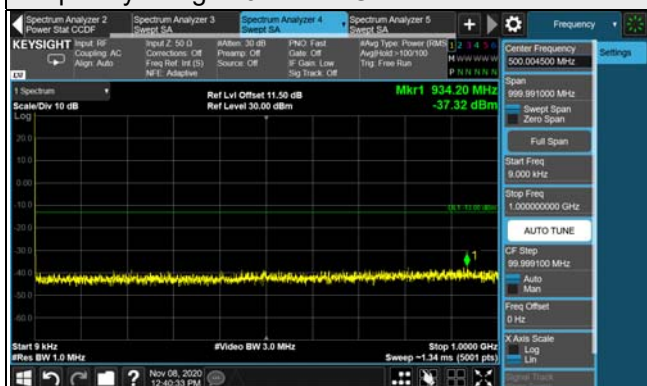


*The 9kHz signal over the limit is from Spectrum.

n2, Channel Bandwidth: 10MHz

Channel 371000 (1855.0MHz)

Frequency Range : 9kHz ~ 1GHz

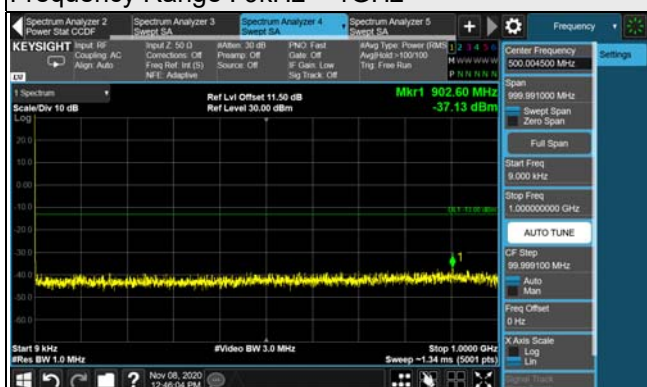


Frequency Range : 1GHz ~ 20GHz



Channel 376000 (1880.0MHz)

Frequency Range : 9kHz ~ 1GHz

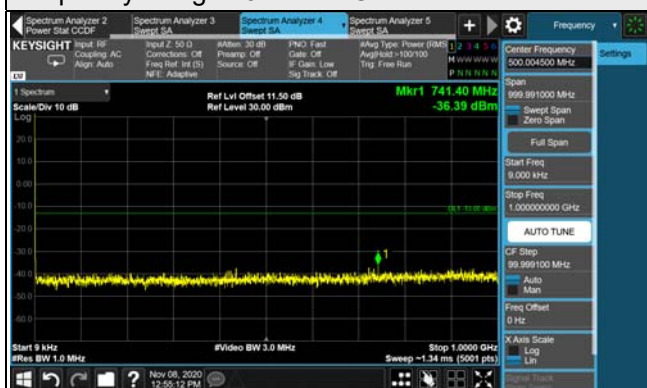


Frequency Range : 1GHz ~ 20GHz



Channel 381000 (1905.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

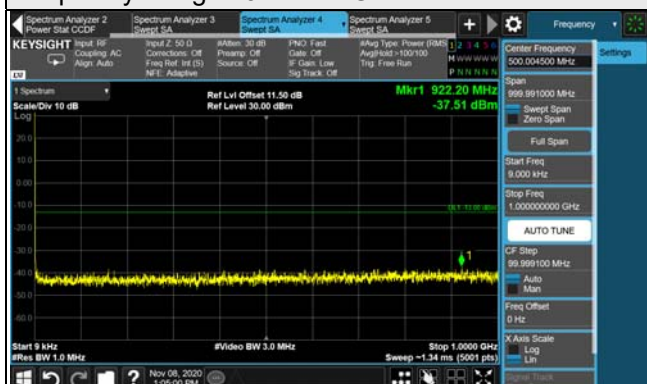


*The 9kHz signal over the limit is from Spectrum.

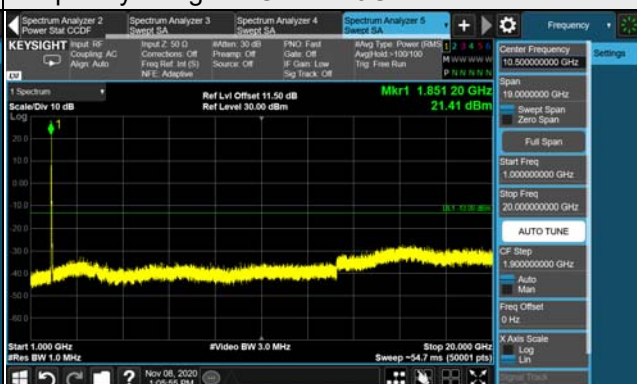
n2, Channel Bandwidth: 15MHz

Channel 371500 (1857.5MHz)

Frequency Range : 9kHz ~ 1GHz

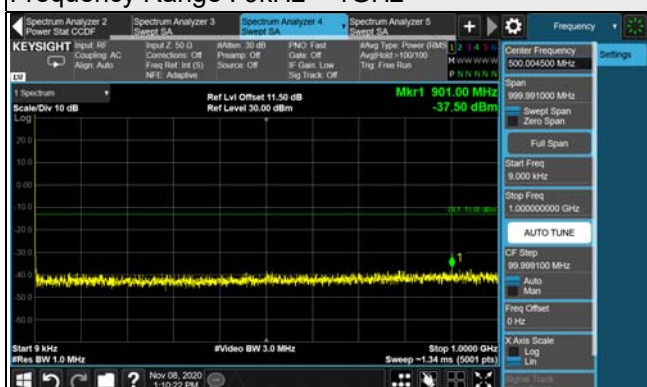


Frequency Range : 1GHz ~ 20GHz



Channel 376000 (1880.0MHz)

Frequency Range : 9kHz ~ 1GHz

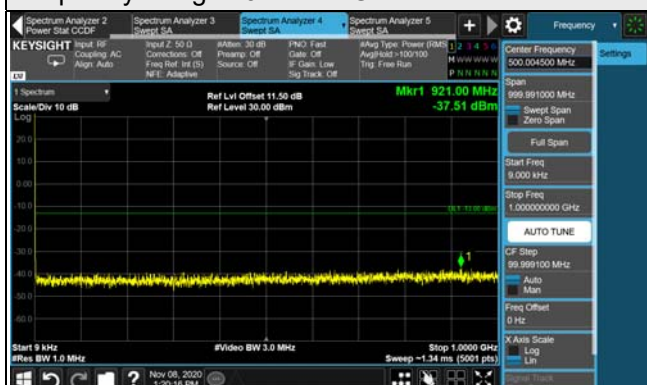


Frequency Range : 1GHz ~ 20GHz



Channel 380500 (1902.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

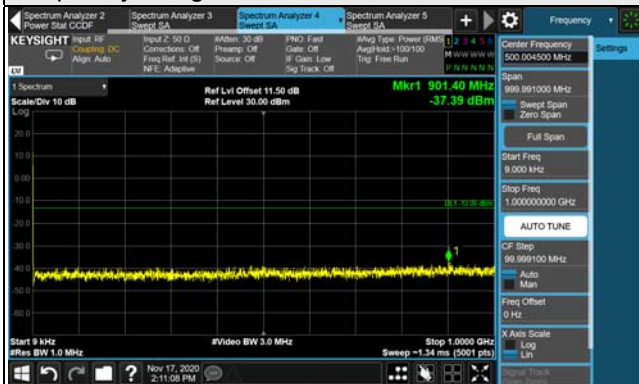


*The 9kHz signal over the limit is from Spectrum.

n25, Channel Bandwidth: 5MHz

Channel 370500 (1852.5MHz)

Frequency Range : 9kHz ~ 1GHz

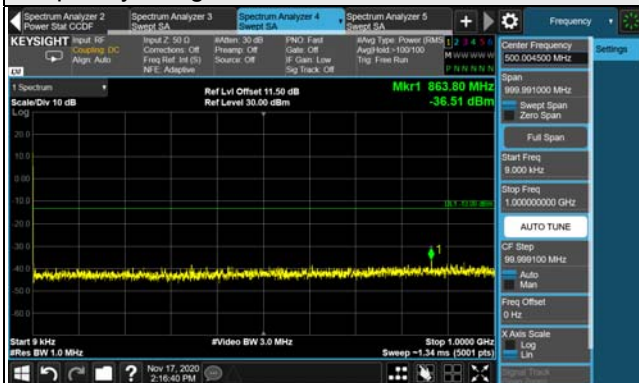


Frequency Range : 1GHz ~ 20GHz



Channel 376500 (1882.5MHz)

Frequency Range : 9kHz ~ 1GHz

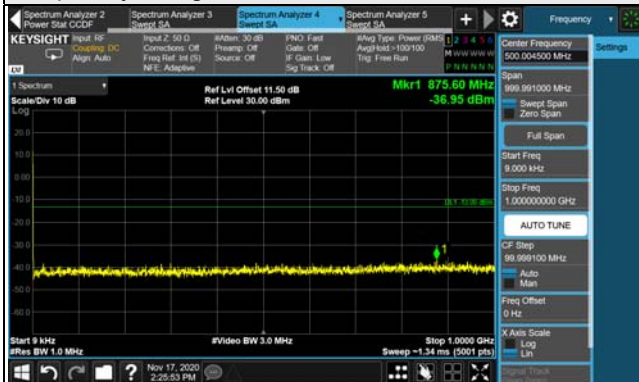


Frequency Range : 1GHz ~ 20GHz



Channel 382500 (1912.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

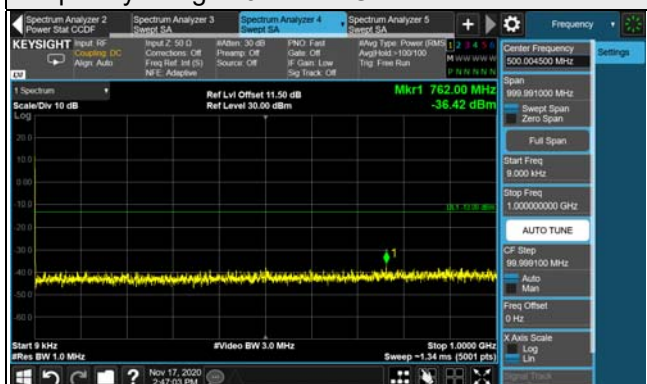


*The 9kHz signal over the limit is from Spectrum.

n25, Channel Bandwidth: 10MHz

Channel 371000 (1855.0MHz)

Frequency Range : 9kHz ~ 1GHz

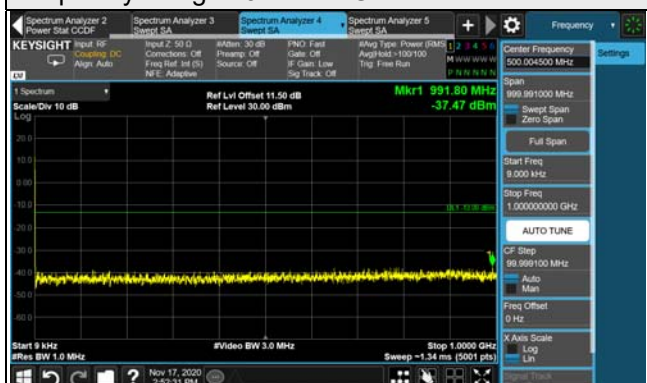


Frequency Range : 1GHz ~ 20GHz



Channel 376500 (1882.5MHz)

Frequency Range : 9kHz ~ 1GHz

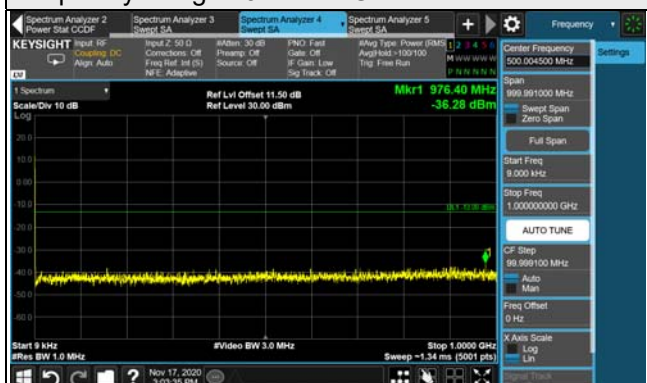


Frequency Range : 1GHz ~ 20GHz



Channel 382000 (1910.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

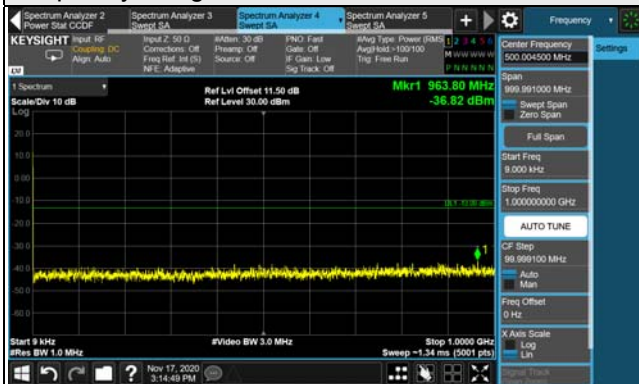


*The 9kHz signal over the limit is from Spectrum.

n25, Channel Bandwidth: 15MHz

Channel 371500 (1857.5MHz)

Frequency Range : 9kHz ~ 1GHz

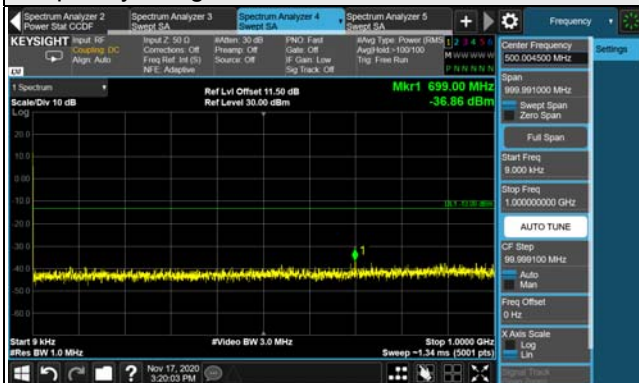


Frequency Range : 1GHz ~ 20GHz



Channel 376500 (1882.5MHz)

Frequency Range : 9kHz ~ 1GHz

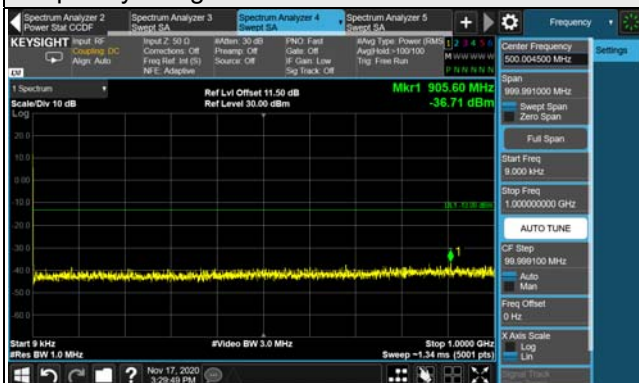


Frequency Range : 1GHz ~ 20GHz

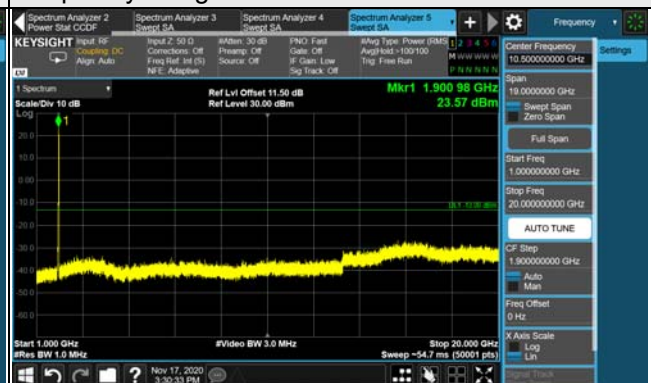


Channel 381500 (1907.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz

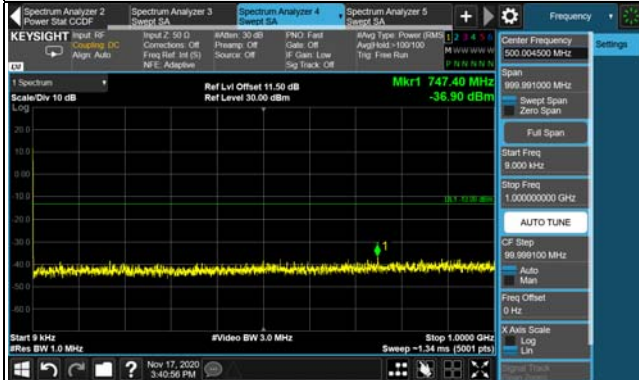


*The 9kHz signal over the limit is from Spectrum.

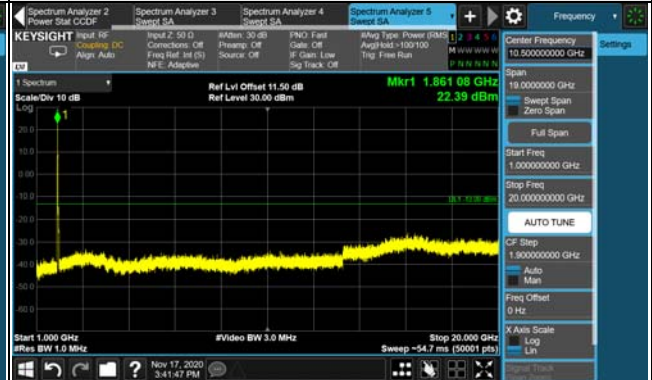
n25, Channel Bandwidth: 20MHz

Channel 372000 (1860.0MHz)

Frequency Range : 9kHz ~ 1GHz

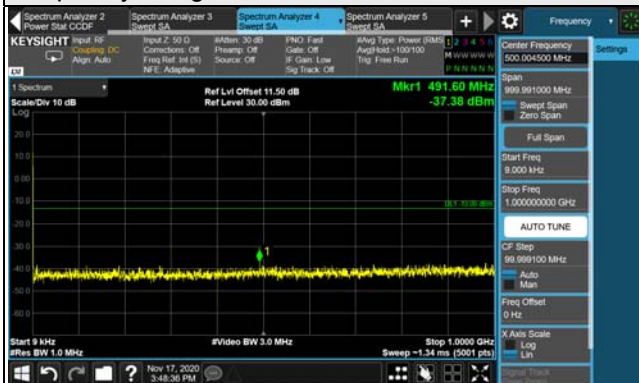


Frequency Range : 1GHz ~ 20GHz



Channel 376500 (1882.5MHz)

Frequency Range : 9kHz ~ 1GHz

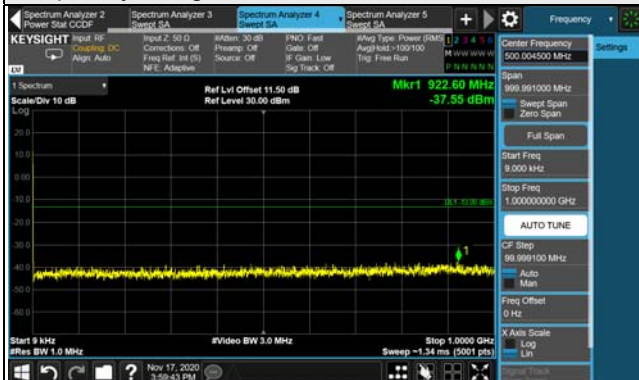


Frequency Range : 1GHz ~ 20GHz

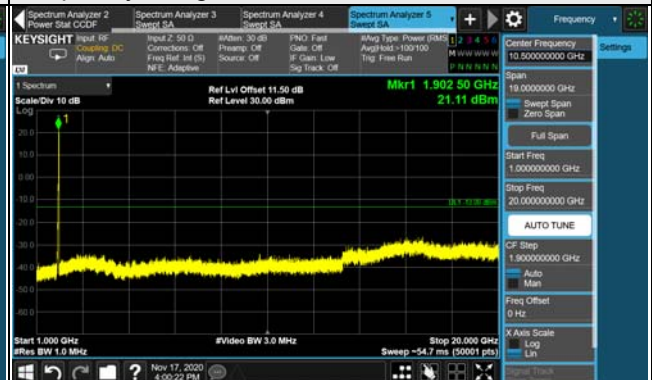


Channel 379000 (1905.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 20GHz



*The 9kHz signal over the limit is from Spectrum.

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

4.8.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m (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 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. Correction Factor (includes EIRP and ERP unit conversion factor) = Antenna gain of substitution horn. – Tx cable loss. Measurement method refers to ANSI C63.26 section 5.5.3.2.
- c. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $\text{E.R.P power} = \text{E.I.R.P power} - 2.15\text{dBi}$.

Note:

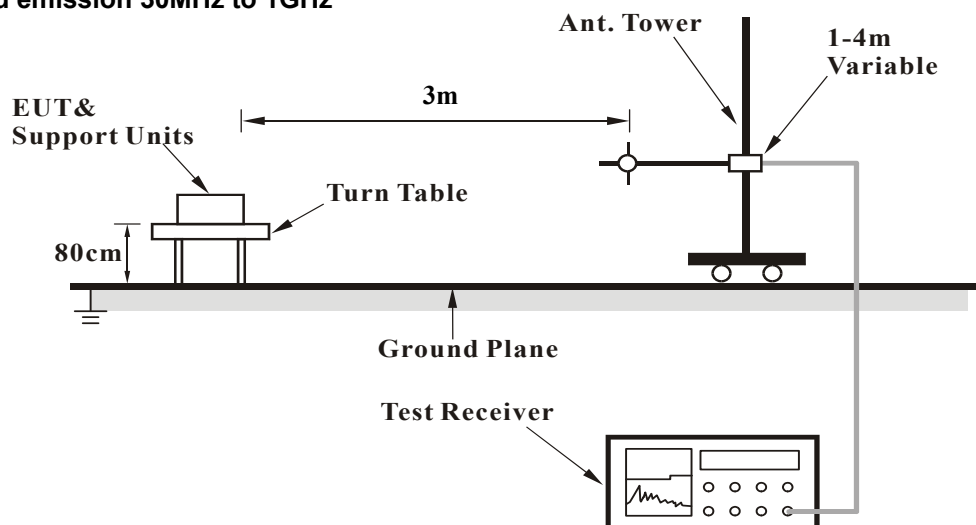
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz: The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

4.8.3 Deviation from Test Standard

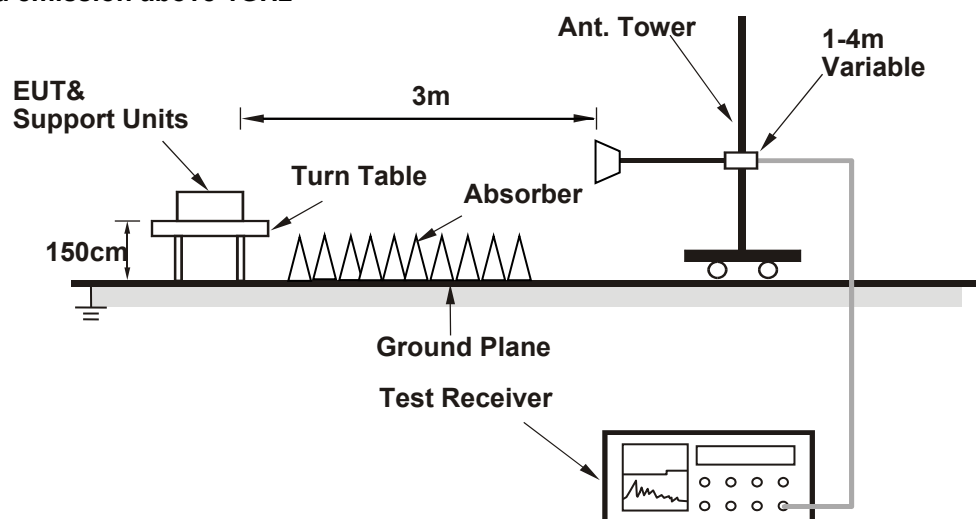
No deviation.

4.8.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



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

4.8.5 Test Results

Below 1GHz

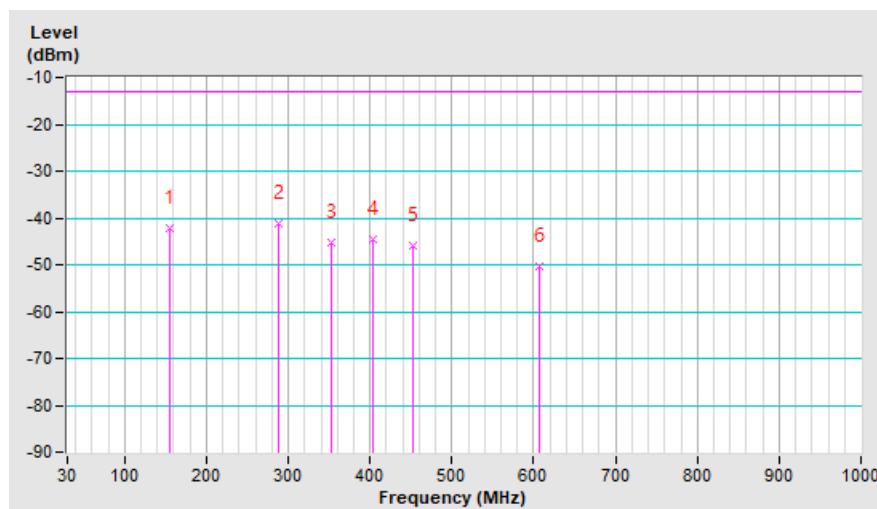
n2, Channel Bandwidth: 20MHz

Mode	TX channel 376000 (1880.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	156.10	-37.60	-39.40	-2.90	-42.30	-13.00	-29.30
2	288.02	-37.70	-39.50	-1.80	-41.30	-13.00	-28.30
3	352.04	-42.00	-49.10	3.90	-45.20	-13.00	-32.20
4	404.42	-44.10	-48.00	3.30	-44.70	-13.00	-31.70
5	452.92	-45.90	-49.40	3.50	-45.90	-13.00	-32.90
6	606.18	-52.20	-54.20	3.70	-50.50	-13.00	-37.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

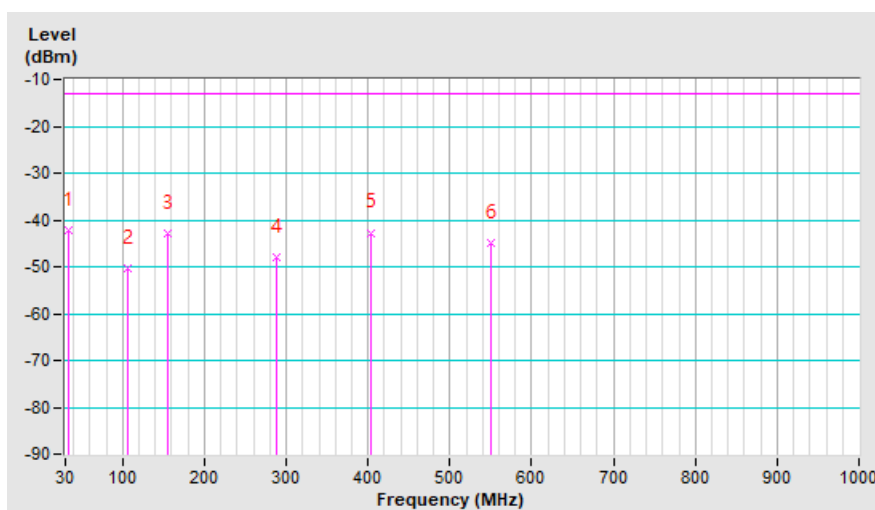


Mode	TX channel 376000 (1880.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	33.88	-31.70	-25.20	-17.10	-42.30	-13.00	-29.30
2	105.66	-41.90	-48.20	-2.20	-50.40	-13.00	-37.40
3	156.10	-40.20	-40.10	-2.90	-43.00	-13.00	-30.00
4	288.02	-49.40	-46.10	-1.80	-47.90	-13.00	-34.90
5	404.42	-42.10	-46.00	3.30	-42.70	-13.00	-29.70
6	549.92	-46.70	-48.80	3.80	-45.00	-13.00	-32.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).



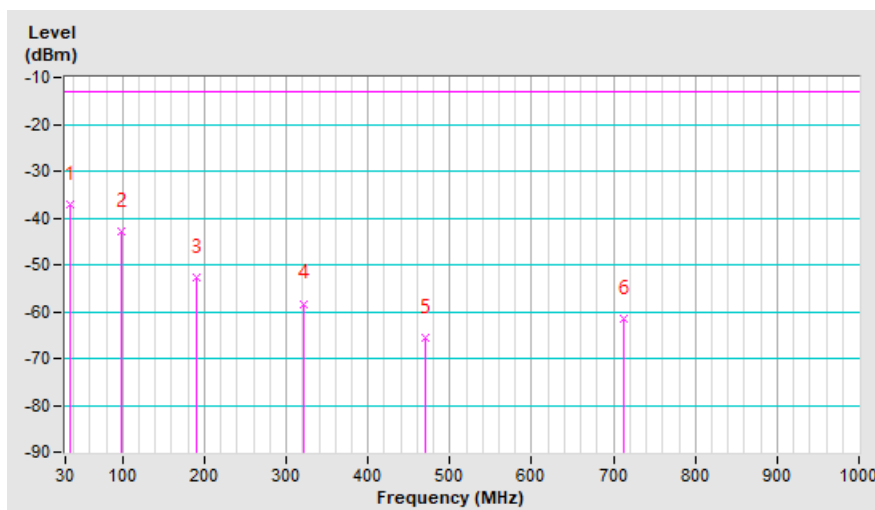
n25, Channel Bandwidth: 20MHz

Mode	TX channel 376500 (1882.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.26	-40.50	-21.00	-16.20	-37.20	-13.00	-24.20
2	98.56	-34.40	-41.70	-1.30	-43.00	-13.00	-30.00
3	189.63	-44.40	-50.00	-2.80	-52.80	-13.00	-39.80
4	322.15	-54.40	-62.40	4.10	-58.30	-13.00	-45.30
5	469.32	-65.30	-69.00	3.50	-65.50	-13.00	-52.50
6	712.54	-64.70	-65.00	3.50	-61.50	-13.00	-48.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

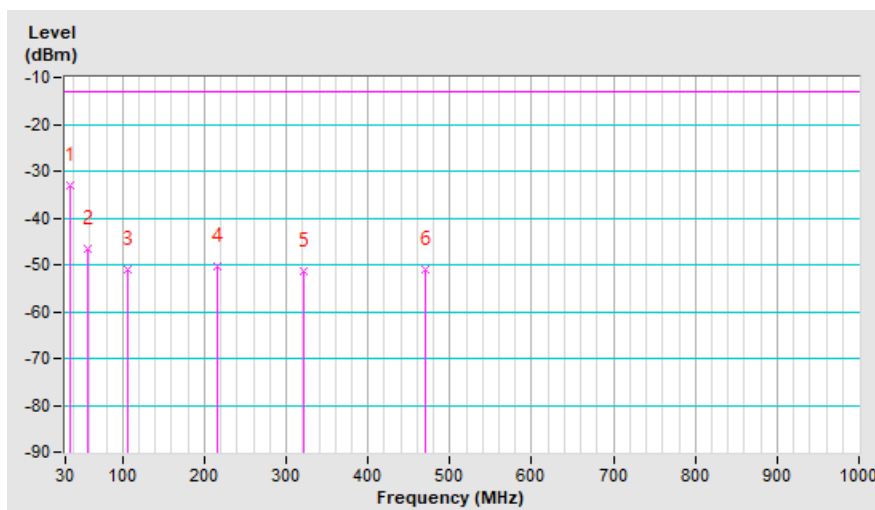


Mode	TX channel 376500 (1882.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.25	-23.40	-17.40	-15.60	-33.00	-13.00	-20.00
2	56.98	-39.70	-41.80	-4.80	-46.60	-13.00	-33.60
3	105.69	-42.60	-48.90	-2.20	-51.10	-13.00	-38.10
4	215.36	-46.70	-48.40	-2.00	-50.40	-13.00	-37.40
5	321.02	-51.20	-55.50	4.10	-51.40	-13.00	-38.40
6	469.68	-50.70	-54.40	3.50	-50.90	-13.00	-37.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).



Above 1GHz

n2, Channel Bandwidth: 5MHz

Mode	TX channel 370500 (1852.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-63.40	-54.90	1.40	-53.50	-13.00	-40.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-64.00	-55.80	1.40	-54.40	-13.00	-41.40

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376000 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-62.80	-54.30	1.30	-53.00	-13.00	-40.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-63.90	-55.60	1.30	-54.30	-13.00	-41.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 381500 (1907.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-62.90	-54.60	1.40	-53.20	-13.00	-40.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-64.00	-55.80	1.40	-54.40	-13.00	-41.40

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n2, Channel Bandwidth: 10MHz

Mode	TX channel 371000 (1855.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-62.20	-53.70	1.40	-52.30	-13.00	-39.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-64.00	-55.80	1.40	-54.40	-13.00	-41.40

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376000 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-61.80	-53.30	1.30	-52.00	-13.00	-39.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-63.80	-55.50	1.30	-54.20	-13.00	-41.20

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 381000 (1905.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-61.80	-53.40	1.30	-52.10	-13.00	-39.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-63.60	-55.30	1.30	-54.00	-13.00	-41.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n2, Channel Bandwidth: 15MHz

Mode	TX channel 371500 (1857.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-61.80	-53.30	1.40	-51.90	-13.00	-38.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-63.50	-55.30	1.40	-53.90	-13.00	-40.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376000 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-62.30	-53.80	1.30	-52.50	-13.00	-39.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-63.10	-54.80	1.30	-53.50	-13.00	-40.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 380500 (1902.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805.00	-62.40	-54.00	1.30	-52.70	-13.00	-39.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805.00	-63.20	-55.00	1.30	-53.70	-13.00	-40.70

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n2, Channel Bandwidth: 20MHz

Mode	TX channel 372000 (1860.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-61.70	-53.20	1.40	-51.80	-13.00	-38.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-61.80	-53.60	1.40	-52.20	-13.00	-39.20

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376000 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-61.40	-52.90	1.30	-51.60	-13.00	-38.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-61.60	-53.30	1.30	-52.00	-13.00	-39.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 380000 (1900.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Jones Chang		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3800.00	-61.50	-53.10	1.30	-51.80	-13.00	-38.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3800.00	-62.00	-53.80	1.30	-52.50	-13.00	-39.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n25, Channel Bandwidth: 5MHz

Mode	TX channel 370500 (1852.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-68.70	-60.20	1.40	-58.80	-13.00	-45.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3705.00	-67.40	-59.20	1.40	-57.80	-13.00	-44.80

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376500 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-68.80	-60.30	1.30	-59.00	-13.00	-46.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-67.10	-58.80	1.30	-57.50	-13.00	-44.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 382500 (1912.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3825.00	-68.80	-60.50	1.40	-59.10	-13.00	-46.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3825.00	-67.20	-59.00	1.40	-57.60	-13.00	-44.60

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n25, Channel Bandwidth: 10MHz

Mode	TX channel 371000 (1855.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-68.60	-60.10	1.40	-58.70	-13.00	-45.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3710.00	-66.30	-58.10	1.40	-56.70	-13.00	-43.70

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376500 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-68.10	-59.60	1.30	-58.30	-13.00	-45.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-66.10	-57.80	1.30	-56.50	-13.00	-43.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 382000 (1910.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3820.00	-68.70	-60.40	1.40	-59.00	-13.00	-46.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3820.00	-66.60	-58.40	1.40	-57.00	-13.00	-44.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n25, Channel Bandwidth: 15MHz

Mode	TX channel 371500 (1857.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-67.20	-58.70	1.40	-57.30	-13.00	-44.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3715.00	-68.30	-60.10	1.40	-58.70	-13.00	-45.70

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376500 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-66.90	-58.40	1.30	-57.10	-13.00	-44.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-68.20	-59.90	1.30	-58.60	-13.00	-45.60

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 381500 (1907.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-67.50	-59.20	1.40	-57.80	-13.00	-44.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3815.00	-68.50	-60.30	1.40	-58.90	-13.00	-45.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

n25, Channel Bandwidth: 20MHz

Mode	TX channel 372000 (1860.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-66.60	-58.10	1.40	-56.70	-13.00	-43.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3720.00	-68.50	-60.30	1.40	-58.90	-13.00	-45.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 376500 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-65.50	-57.00	1.30	-55.70	-13.00	-42.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-68.70	-60.40	1.30	-59.10	-13.00	-46.10

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

Mode	TX channel 379000 (1905.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Han Wu		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-68.60	-60.20	1.30	-58.90	-13.00	-45.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3810.00	-67.50	-59.20	1.30	-57.90	-13.00	-44.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) - Cable Loss (dB).

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

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

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

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