FCC Test Report
(Part 22 – SA Mode: n5 Band)

Report No.:	RF200514C16A
FCC ID:	T8GSAN9000
Test Model:	SA-N9000 OEM D1
Received Date:	May 14, 2020
Test Date:	Nov. 10 ~ Dec. 03, 2020
Issued Date:	Dec. 08, 2020
Applicant:	Harman Connected Car Division
Address:	Parking 3, 85748 Garching Germany
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF200514C16A	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. 10 ~ Dec. 03, 2020
Standards:	FCC Part 22, Subpart H

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 22 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective radiated power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	Pass	Meet the requirement
22.913 (d)	Peak To Average Ratio	Pass	Meet the requirement of limit.
2.1055 22.355	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
22.917	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 22.917	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -18.10dB at 1673.00MHz.

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) (±)
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-3000	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	n5 (Channel Bandwidth: 5MHz)	826.5 ~ 846.5MHz				
	n5 (Channel Bandwidth: 10MHz)	829.0 ~ 844.0MHz				
	n5 (Channel Bandwidth: 15MHz)	831.5 ~ 841.5MHz				
	n5 (Channel Bandwidth: 20MHz)	834.0 ~ 839.0MHz				
Max. ERP Power		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n5 (Channel Bandwidth: 5MHz)	215.774mW (23.34dBm)	108.643mW (20.36dBm)	108.643mW (20.36dBm)	93.541mW (19.71dBm)	46.666mW (16.69dBm)
	n5 (Channel Bandwidth: 10MHz)	216.770mW (23.36dBm)	108.643mW (20.36dBm)	106.414mW (20.27dBm)	93.111mW (19.69dBm)	47.424mW (16.76dBm)
	n5 (Channel Bandwidth: 15MHz)	216.272mW (23.35dBm)	106.170mW (20.26dBm)	108.143mW (20.34dBm)	94.624mW (19.76dBm)	47.315mW (16.75dBm)
	n5 (Channel Bandwidth: 20MHz)	216.770mW (23.36dBm)	107.399mW (20.31dBm)	108.143mW (20.34dBm)	93.972mW (19.73dBm)	47.424mW (16.76dBm)
Emission Designator		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n5 (Channel Bandwidth: 5MHz)	4M46G7D	4M46G7D	4M47D7W	4M46D7W	4M46D7W
	n5 (Channel Bandwidth: 10MHz)	9M38G7D	9M38G7D	9M37D7W	9M38D7W	9M38D7W
	n5 (Channel Bandwidth: 15MHz)	14M1G7D	14M1G7D	14M1D7W	14M1D7W	14M1D7W
	n5 (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.

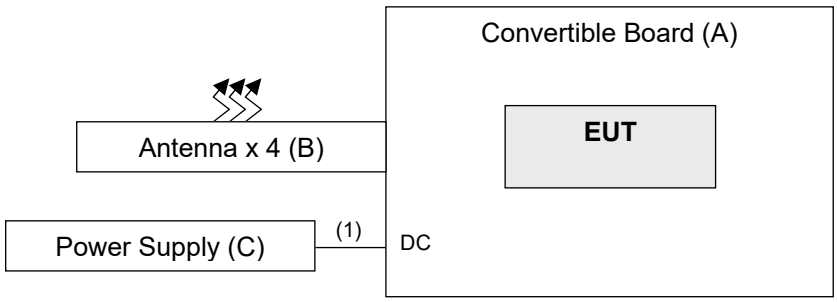
Operating frequency band	Antenna	Gain (dBi)	Connector Type
Band 2	5G/4G Terminal Mount Monopole Antenna	2.92	SMA
Band 5		1.01	
Band 7		2.20	
Band 12		-1.17	
Band 25		2.97	
Band 38		2.18	
Band 41		2.20	
Band 66		3.44	
Band 71		1.72	
Band 77		2.61	

* 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.

	FCC 5G FR1			ENDC
	Band	SCS	Bandwidth (MHz)	
5GNR	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.

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 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
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	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
		166300 to 168300	166300 (831.5MHz), 167300 (836.5MHz), 168300 (841.5MHz)	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
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	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	166800 to 167800	167300 (836.5MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	106 RB / 0 RB Offset
-	Frequency Stability	165300 to 169300	165300 (826.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK	25 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK	52 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK	79 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167800 (839.0MHz)	20MHz	$\pi/2$ BPSK	106 RB / 0 RB Offset
-	Occupied Bandwidth	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	25 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 167300 (836.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	79 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	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	165300 to 169300	165300 (826.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 51 RB Offset 52 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 78 RB Offset 79 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167800 (839.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 105 RB Offset 106 RB / 0 RB Offset
-	Peak to Average Ratio	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 167300 (836.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 0 RB Offset
-	Conducted Emission	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 167300 (836.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	166800 to 167800	167300 (836.5MHz)	20MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	165300 to 169300	165300 (826.5MHz), 167300 (836.5MHz), 169300 (846.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		165800 to 168800	165800 (829.0MHz), 167300 (836.5MHz), 168800 (844.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		166300 to 168300	166300 (831.5MHz), 167300 (836.5MHz), 168300 (841.5MHz)	15MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset
		166800 to 167800	166800 (834.0MHz), 167300 (836.5MHz), 167800 (839.0MHz)	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 ERP, 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
ERP	25deg. C, 70%RH	4.2Vdc	James Yang
Modulation characteristics	25deg. C, 70%RH	4.2Vdc	James Yang
Frequency Stability	24deg. C, 64%RH	4.2Vdc	James Yang
Occupied Bandwidth	24deg. C, 64%RH	4.2Vdc	James Yang
Band Edge	24deg. C, 64%RH	4.2Vdc	James Yang
Peak To Average Ratio	24deg. C, 64%RH	4.2Vdc	James Yang
Conducted Emission	24deg. C, 64%RH	4.2Vdc	James Yang
Radiated Emission	22deg. C, 66%RH	120Vac, 60Hz	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 22

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 7 watts e.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 ≥ 3 × RBW.
5. Set number of points in sweep ≥ 2 × 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 ≥ 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:

$EIRP = P_{Meas} + G_T$

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

where

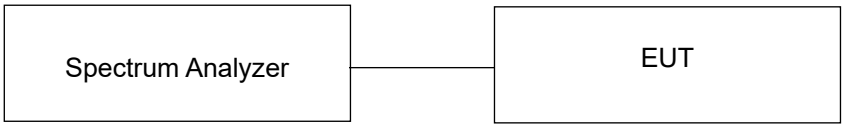
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

4.1.3 Test Setup

Conducted Power Measurement:



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 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		166800	167300	167800
		Frequency (MHz)		834	836.5	839
20M	pi/2 BPSK	1	0	24.44	24.50	24.35
		1	53	24.40	24.36	24.21
		1	105	24.40	24.31	24.44
		53	0	24.38	24.32	24.21
		53	27	24.32	24.31	24.24
		53	53	24.23	24.39	24.36
		106	0	24.28	24.27	24.26
	QPSK	1	0	21.45	21.35	21.44
		1	53	21.25	21.37	21.20
		1	105	21.45	21.34	21.31
		53	0	21.38	21.21	21.21
		53	27	21.36	21.36	21.38
		53	53	21.31	21.40	21.23
		106	0	21.22	21.25	21.28
	16QAM	1	0	21.32	21.31	21.48
		1	53	21.30	21.20	21.21
		1	105	21.47	21.34	21.32
		53	0	21.25	21.34	21.30
		53	27	21.25	21.35	21.35
		53	53	21.31	21.36	21.38
		106	0	21.14	21.20	21.30
	64QAM	1	0	20.74	20.87	20.77
		1	53	20.74	20.79	20.79
		1	105	20.86	20.72	20.83
		53	0	20.70	20.69	20.72
		53	27	20.70	20.71	20.60
		53	53	20.65	20.67	20.75
		106	0	20.56	20.52	20.54
	256QAM	1	0	17.76	17.86	17.89
		1	53	17.65	17.74	17.75
		1	105	17.73	17.80	17.90
		53	0	17.78	17.67	17.72
		53	27	17.63	17.72	17.79
		53	53	17.60	17.77	17.73
		106	0	17.58	17.68	17.52

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		166300	167300	168300
		Frequency (MHz)		831.5	836.5	841.5
15M	pi/2 BPSK	1	0	24.41	24.49	24.35
		1	39	24.39	24.32	24.40
		1	78	24.47	24.43	24.49
		39	0	24.26	24.36	24.22
		39	19	24.38	24.27	24.24
		39	40	24.22	24.38	24.26
		79	0	24.14	24.29	24.12
	QPSK	1	0	21.32	21.35	21.32
		1	39	21.35	21.20	21.30
		1	78	21.34	21.34	21.40
		39	0	21.23	21.28	21.33
		39	19	21.33	21.23	21.23
		39	40	21.24	21.34	21.34
		79	0	21.19	21.11	21.13
	16QAM	1	0	21.30	21.37	21.30
		1	39	21.29	21.40	21.23
		1	78	21.45	21.48	21.31
		39	0	21.20	21.31	21.20
		39	19	21.39	21.29	21.22
		39	40	21.21	21.34	21.33
		79	0	21.11	21.19	21.23
	64QAM	1	0	20.86	20.81	20.78
		1	39	20.72	20.72	20.62
		1	78	20.73	20.90	20.78
		39	0	20.65	20.68	20.66
		39	19	20.70	20.64	20.60
		39	40	20.68	20.68	20.66
		79	0	20.57	20.60	20.66
	256QAM	1	0	17.87	17.81	17.75
		1	39	17.62	17.66	17.69
		1	78	17.89	17.83	17.88
		39	0	17.80	17.74	17.65
		39	19	17.61	17.61	17.66
		39	40	17.75	17.63	17.69
		79	0	17.62	17.57	17.58

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		165800	167300	168800
		Frequency (MHz)		829	836.5	844
10M	pi/2 BPSK	1	0	24.35	24.50	24.39
		1	26	24.32	24.24	24.20
		1	51	24.40	24.48	24.50
		26	0	24.20	24.32	24.21
		26	13	24.21	24.33	24.40
		26	26	24.21	24.30	24.33
		52	0	24.20	24.11	24.24
	QPSK	1	0	21.40	21.50	21.30
		1	26	21.30	21.31	21.37
		1	51	21.49	21.33	21.36
		26	0	21.33	21.29	21.27
		26	13	21.20	21.24	21.36
		26	26	21.40	21.39	21.37
		52	0	21.17	21.21	21.27
	16QAM	1	0	21.41	21.39	21.30
		1	26	21.30	21.23	21.35
		1	51	21.34	21.38	21.36
		26	0	21.27	21.23	21.30
		26	13	21.32	21.36	21.20
		26	26	21.39	21.40	21.34
		52	0	21.23	21.24	21.23
	64QAM	1	0	20.80	20.78	20.83
		1	26	20.66	20.70	20.77
		1	51	20.82	20.72	20.80
		26	0	20.78	20.80	20.65
		26	13	20.64	20.74	20.73
		26	26	20.60	20.74	20.62
		52	0	20.63	20.52	20.58
	256QAM	1	0	17.90	17.75	17.70
		1	26	17.64	17.74	17.76
		1	51	17.76	17.88	17.87
		26	0	17.68	17.66	17.64
		26	13	17.65	17.75	17.74
		26	26	17.69	17.64	17.70
		52	0	17.66	17.54	17.66

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		165300	167300	169300
		Frequency (MHz)		826.5	836.5	846.5
5M	pi/2 BPSK	1	0	24.36	24.48	24.30
		1	12	24.39	24.21	24.36
		1	24	24.41	24.47	24.35
		12	0	24.32	24.20	24.27
		12	6	24.23	24.30	24.29
		12	13	24.35	24.39	24.25
		25	0	24.29	24.20	24.10
	QPSK	1	0	21.36	21.50	21.37
		1	12	21.24	21.21	21.21
		1	24	21.32	21.31	21.49
		12	0	21.35	21.31	21.38
		12	6	21.40	21.37	21.24
		12	13	21.34	21.40	21.29
		25	0	21.27	21.17	21.12
	16QAM	1	0	21.39	21.35	21.50
		1	12	21.24	21.20	21.32
		1	24	21.47	21.46	21.30
		12	0	21.28	21.20	21.29
		12	6	21.38	21.33	21.27
		12	13	21.30	21.25	21.38
		25	0	21.26	21.29	21.16
	64QAM	1	0	20.85	20.76	20.79
		1	12	20.64	20.62	20.64
		1	24	20.79	20.83	20.83
		12	0	20.62	20.72	20.74
		12	6	20.73	20.61	20.60
		12	13	20.60	20.79	20.69
		25	0	20.63	20.56	20.65
	256QAM	1	0	17.81	17.81	17.82
		1	12	17.75	17.79	17.79
		1	24	17.81	17.83	17.80
		12	0	17.80	17.67	17.63
		12	6	17.61	17.66	17.61
		12	13	17.77	17.60	17.67
		25	0	17.60	17.61	17.55

ERP Power (dBm)

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		166800	167300	167800
		Frequency (MHz)		834	836.5	839
20M	pi/2 BPSK	1	0	23.30	23.36	23.21
		1	53	23.26	23.22	23.07
		1	105	23.26	23.17	23.30
		53	0	23.24	23.18	23.07
		53	27	23.18	23.17	23.10
		53	53	23.09	23.25	23.22
		106	0	23.14	23.13	23.12
	QPSK	1	0	20.31	20.21	20.30
		1	53	20.11	20.23	20.06
		1	105	20.31	20.20	20.17
		53	0	20.24	20.07	20.07
		53	27	20.22	20.22	20.24
		53	53	20.17	20.26	20.09
		106	0	20.08	20.11	20.14
	16QAM	1	0	20.18	20.17	20.34
		1	53	20.16	20.06	20.07
		1	105	20.33	20.20	20.18
		53	0	20.11	20.20	20.16
		53	27	20.11	20.21	20.21
		53	53	20.17	20.22	20.24
		106	0	20.00	20.06	20.16
	64QAM	1	0	19.60	19.73	19.63
		1	53	19.60	19.65	19.65
		1	105	19.72	19.58	19.69
		53	0	19.56	19.55	19.58
		53	27	19.56	19.57	19.46
		53	53	19.51	19.53	19.61
		106	0	19.42	19.38	19.40
	256QAM	1	0	16.62	16.72	16.75
		1	53	16.51	16.60	16.61
		1	105	16.59	16.66	16.76
		53	0	16.64	16.53	16.58
		53	27	16.49	16.58	16.65
		53	53	16.46	16.63	16.59
		106	0	16.44	16.54	16.38

*ERP = Conducted + antenna gain - 2.15

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		166300	167300	168300
		Frequency (MHz)		831.5	836.5	841.5
15M	pi/2 BPSK	1	0	23.27	23.35	23.21
		1	39	23.25	23.18	23.26
		1	78	23.33	23.29	23.35
		39	0	23.12	23.22	23.08
		39	19	23.24	23.13	23.10
		39	40	23.08	23.24	23.12
		79	0	23.00	23.15	22.98
	QPSK	1	0	20.18	20.21	20.18
		1	39	20.21	20.06	20.16
		1	78	20.20	20.20	20.26
		39	0	20.09	20.14	20.19
		39	19	20.19	20.09	20.09
		39	40	20.10	20.20	20.20
		79	0	20.05	19.97	19.99
	16QAM	1	0	20.16	20.23	20.16
		1	39	20.15	20.26	20.09
		1	78	20.31	20.34	20.17
		39	0	20.06	20.17	20.06
		39	19	20.25	20.15	20.08
		39	40	20.07	20.20	20.19
		79	0	19.97	20.05	20.09
	64QAM	1	0	19.72	19.67	19.64
		1	39	19.58	19.58	19.48
		1	78	19.59	19.76	19.64
		39	0	19.51	19.54	19.52
		39	19	19.56	19.50	19.46
		39	40	19.54	19.54	19.52
		79	0	19.43	19.46	19.52
	256QAM	1	0	16.73	16.67	16.61
		1	39	16.48	16.52	16.55
		1	78	16.75	16.69	16.74
		39	0	16.66	16.60	16.51
		39	19	16.47	16.47	16.52
		39	40	16.61	16.49	16.55
		79	0	16.48	16.43	16.44

*ERP = Conducted + antenna gain - 2.15

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		165800	167300	168800
		Frequency (MHz)		829	836.5	844
10M	pi/2 BPSK	1	0	23.21	23.36	23.25
		1	26	23.18	23.10	23.06
		1	51	23.26	23.34	23.36
		26	0	23.06	23.18	23.07
		26	13	23.07	23.19	23.26
		26	26	23.07	23.16	23.19
		52	0	23.06	22.97	23.10
	QPSK	1	0	20.26	20.36	20.16
		1	26	20.16	20.17	20.23
		1	51	20.35	20.19	20.22
		26	0	20.19	20.15	20.13
		26	13	20.06	20.10	20.22
		26	26	20.26	20.25	20.23
		52	0	20.03	20.07	20.13
	16QAM	1	0	20.27	20.25	20.16
		1	26	20.16	20.09	20.21
		1	51	20.20	20.24	20.22
		26	0	20.13	20.09	20.16
		26	13	20.18	20.22	20.06
		26	26	20.25	20.26	20.20
		52	0	20.09	20.10	20.09
	64QAM	1	0	19.66	19.64	19.69
		1	26	19.52	19.56	19.63
		1	51	19.68	19.58	19.66
		26	0	19.64	19.66	19.51
		26	13	19.50	19.60	19.59
		26	26	19.46	19.60	19.48
		52	0	19.49	19.38	19.44
	256QAM	1	0	16.76	16.61	16.56
		1	26	16.50	16.60	16.62
		1	51	16.62	16.74	16.73
		26	0	16.54	16.52	16.50
		26	13	16.51	16.61	16.60
		26	26	16.55	16.50	16.56
		52	0	16.52	16.40	16.52

*ERP = Conducted + antenna gain - 2.15

NR Band 5 (SCS 15kHz)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		165300	167300	169300
		Frequency (MHz)		826.5	836.5	846.5
5M	pi/2 BPSK	1	0	23.22	23.34	23.16
		1	12	23.25	23.07	23.22
		1	24	23.27	23.33	23.21
		12	0	23.18	23.06	23.13
		12	6	23.09	23.16	23.15
		12	13	23.21	23.25	23.11
		25	0	23.15	23.06	22.96
	QPSK	1	0	20.22	20.36	20.23
		1	12	20.10	20.07	20.07
		1	24	20.18	20.17	20.35
		12	0	20.21	20.17	20.24
		12	6	20.26	20.23	20.10
		12	13	20.20	20.26	20.15
		25	0	20.13	20.03	19.98
	16QAM	1	0	20.25	20.21	20.36
		1	12	20.10	20.06	20.18
		1	24	20.33	20.32	20.16
		12	0	20.14	20.06	20.15
		12	6	20.24	20.19	20.13
		12	13	20.16	20.11	20.24
		25	0	20.12	20.15	20.02
	64QAM	1	0	19.71	19.62	19.65
		1	12	19.50	19.48	19.50
		1	24	19.65	19.69	19.69
		12	0	19.48	19.58	19.60
		12	6	19.59	19.47	19.46
		12	13	19.46	19.65	19.55
		25	0	19.49	19.42	19.51
	256QAM	1	0	16.67	16.67	16.68
		1	12	16.61	16.65	16.65
		1	24	16.67	16.69	16.66
		12	0	16.66	16.53	16.49
		12	6	16.47	16.52	16.47
		12	13	16.63	16.46	16.53
		25	0	16.46	16.47	16.41

*ERP = Conducted + antenna gain - 2.15

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

n5	
Spectrum Plot of Measurement Value	
Channel: 167300 / Frequency (MHz): 836.5MHz	
$\pi/2$ BPSK	QPSK
	
16QAM	64QAM
	
256QAM	
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

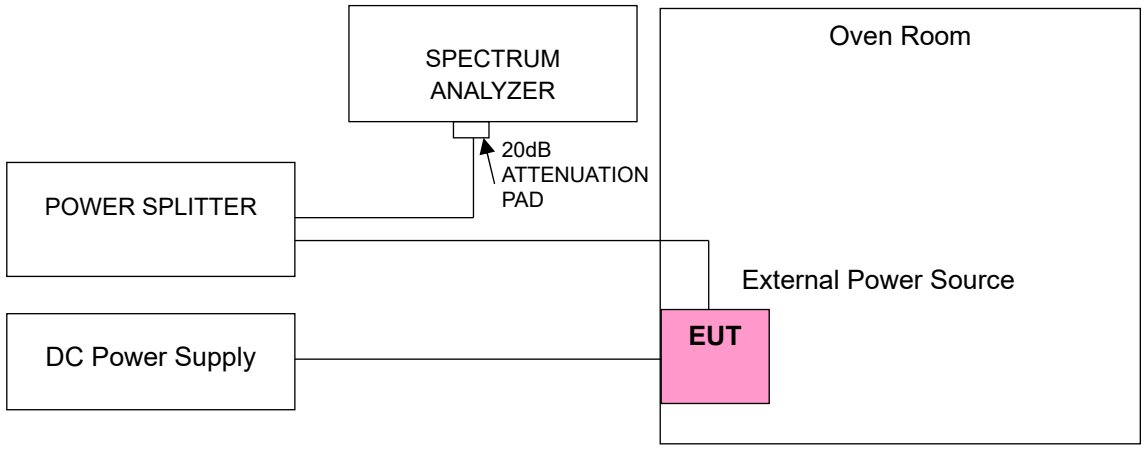
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.3.2 Test Procedure

a. 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.
b. 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.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ 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)	n5			
	Channel Bandwidth: 5MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	826.500004	0.004	846.500002	0.003
4.2	826.500004	0.005	846.500003	0.004
4.4	826.500003	0.004	846.500003	0.003

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

Frequency Error vs. Temperature

Temp. (℃)	n5			
	Channel Bandwidth: 5MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	826.500003	0.004	846.500004	0.005
-20	826.500004	0.004	846.500002	0.002
-10	826.500001	0.002	846.500003	0.003
0	826.500003	0.004	846.500004	0.005
10	826.500001	0.001	846.500003	0.004
20	826.499999	-0.002	846.499999	-0.001
30	826.499999	-0.001	846.499996	-0.004
40	826.499996	-0.004	846.499996	-0.004
50	826.499996	-0.005	846.499999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	n5			
	Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	829.000004	0.004	844.000001	0.002
4.2	829.000003	0.004	844.000003	0.004
4.4	829.000001	0.001	844.000001	0.001

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

Frequency Error vs. Temperature

Temp. (℃)	n5			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	829.000004	0.004	844.000002	0.003
-20	829.000001	0.002	844.000003	0.003
-10	829.000004	0.005	844.000003	0.003
0	829.000002	0.002	844.000002	0.002
10	829.000001	0.001	844.000004	0.004
20	828.999997	-0.004	843.999999	-0.002
30	828.999996	-0.005	843.999998	-0.002
40	828.999998	-0.003	843.999999	-0.001
50	828.999997	-0.004	843.999999	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	n5			
	Channel Bandwidth: 15MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	831.500002	0.003	841.500004	0.004
4.2	831.500003	0.004	841.500001	0.001
4.4	831.500003	0.004	841.500002	0.003

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

Frequency Error vs. Temperature

Temp. (℃)	n5			
	Channel Bandwidth: 15MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	831.500003	0.003	841.500003	0.004
-20	831.500004	0.004	841.500003	0.004
-10	831.500004	0.004	841.500003	0.003
0	831.500003	0.003	841.500002	0.002
10	831.500004	0.005	841.500001	0.001
20	831.499998	-0.003	841.499999	-0.001
30	831.499997	-0.004	841.499996	-0.005
40	831.499997	-0.004	841.499997	-0.003
50	831.499996	-0.005	841.499997	-0.003

Frequency Error vs. Voltage

Voltage (Volts)	n5			
	Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
4.0	834.000002	0.003	839.000001	0.001
4.2	834.000001	0.002	839.000002	0.002
4.4	834.000002	0.002	839.000003	0.003

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

Frequency Error vs. Temperature

Temp. (℃)	n5			
	Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	834.000002	0.002	839.000002	0.002
-20	834.000002	0.002	839.000001	0.001
-10	834.000002	0.002	839.000004	0.004
0	834.000003	0.004	839.000002	0.002
10	834.000003	0.004	839.000003	0.004
20	833.999999	-0.002	838.999997	-0.004
30	833.999997	-0.004	838.999996	-0.005
40	833.999997	-0.004	838.999996	-0.005
50	833.999996	-0.005	838.999996	-0.005

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.

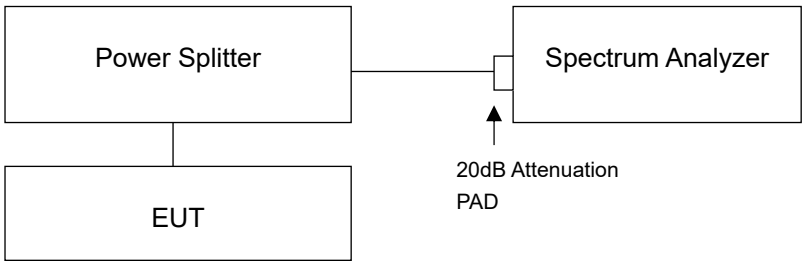
4.4.2 Test Procedure

Occupied Bandwidth

a. 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.
b. 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.

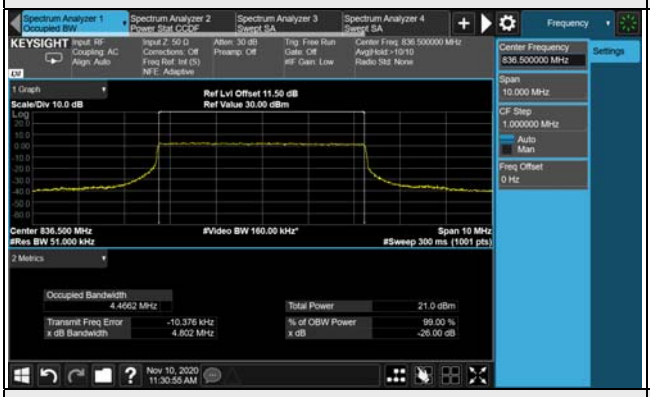
4.4.3 Test Setup



4.4.4 Test Result

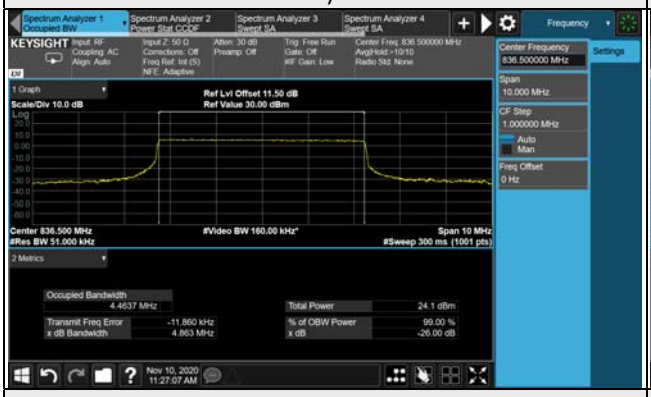
Occupied Bandwidth

n5, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165300	826.5	4.46	4.46	4.47	4.46	4.46
167300	836.5	4.46	4.46	4.47	4.46	4.46
169300	846.5	4.46	4.46	4.46	4.46	4.46
n5, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165800	829.0	9.38	9.38	9.37	9.38	9.38
167300	836.5	9.38	9.38	9.37	9.37	9.37
168800	844.0	9.36	9.36	9.36	9.36	9.37
n5, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166300	831.5	14.07	14.07	14.07	14.08	14.06
167300	836.5	14.07	14.07	14.07	14.08	14.06
168300	841.5	14.06	14.06	14.06	14.07	14.06
n5, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166800	834.0	18.90	18.90	18.90	18.90	18.89
167300	836.5	18.89	18.89	18.90	18.89	18.89
167800	839.0	18.89	18.89	18.89	18.89	18.88

Spectrum Plot of Worst Value	
5MHz / 16QAM	10MHz / 256QAM
	
15MHz / 64QAM	20MHz / $\pi/2$ BPSK
	

26dB Bandwidth

n5, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165300	826.5	4.84	4.82	4.86	4.84	4.79
167300	836.5	4.86	4.79	4.80	4.84	4.79
169300	846.5	4.82	4.82	4.83	4.84	4.76
n5, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165800	829.0	10.10	10.09	10.07	10.08	10.09
167300	836.5	10.12	10.08	10.08	10.07	10.07
168800	844.0	10.09	10.07	10.07	10.06	10.07
n5, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166300	831.5	14.63	14.62	14.63	14.62	14.61
167300	836.5	14.63	14.64	14.61	14.62	14.61
168300	841.5	14.63	14.63	14.63	14.60	14.62
n5, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166800	834.0	19.68	19.62	19.63	19.62	19.62
167300	836.5	19.68	19.61	19.63	19.61	19.61
167800	839.0	19.67	19.60	19.62	19.61	19.60

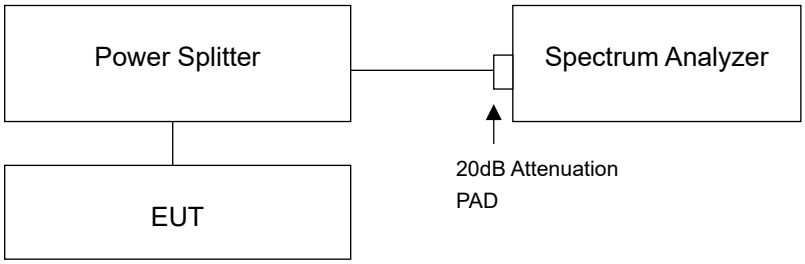
Spectrum Plot of Worst Value	
5MHz / $\pi/2$ BPSK	10MHz / $\pi/2$ BPSK
	
15MHz / QPSK	20MHz / $\pi/2$ BPSK
	

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

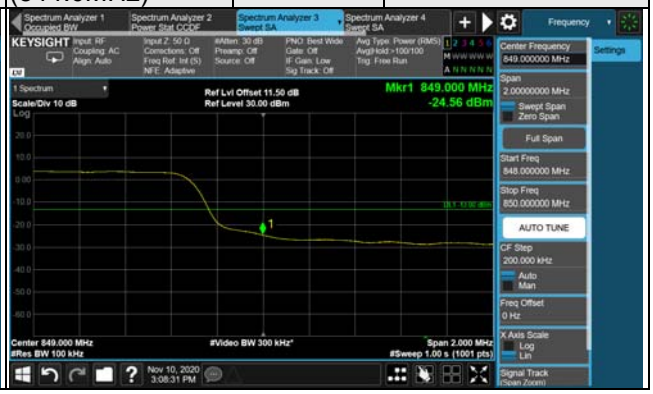


4.5.3 Test Procedures

a. All measurements were done at low and high operational frequency range.
b. 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).
c. 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).
d. 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).
e. 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).
f. Record the max trace plot into the test report.

4.5.4 Test Results

n5, Channel Bandwidth: 5MHz					
Channel 165300 (826.5MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 169300 (846.5MHz)	$\pi/2$ BPSK	1 RB / 24 RB Offset
					
Channel 165300 (826.5MHz)	$\pi/2$ BPSK	25 RB / 0 RB Offset	Channel 169300 (846.5MHz)	$\pi/2$ BPSK	25 RB / 0 RB Offset
					

n5, Channel Bandwidth: 10MHz					
Channel 165800 (829.0MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 168800 (844.0MHz)	$\pi/2$ BPSK	1 RB / 51 RB Offset
					
Channel 165800 (829.0MHz)	$\pi/2$ BPSK	52 RB / 0 RB Offset	Channel 168800 (844.0MHz)	$\pi/2$ BPSK	52 RB / 0 RB Offset
					

n5, Channel Bandwidth: 15MHz					
Channel 166300 (831.5MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 168300 (841.5MHz)	$\pi/2$ BPSK	1 RB / 78 RB Offset
					
Channel 166300 (831.5MHz)	$\pi/2$ BPSK	79 RB / 0 RB Offset	Channel 168300 (841.5MHz)	$\pi/2$ BPSK	79 RB / 0 RB Offset
					

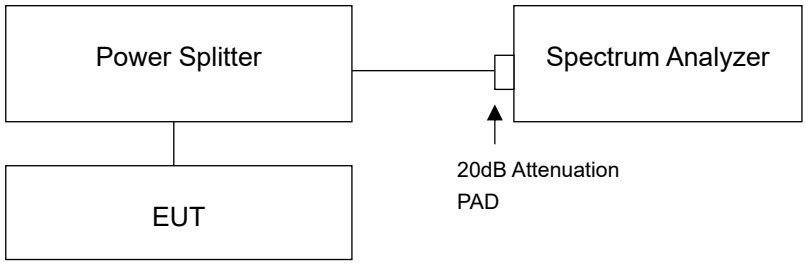
n5, Channel Bandwidth: 20MHz					
Channel 166800 (834.0MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 167800 (839.0MHz)	$\pi/2$ BPSK	1 RB / 105 RB Offset
					
Channel 166800 (834.0MHz)	$\pi/2$ BPSK	106 RB / 0 RB Offset	Channel 167800 (839.0MHz)	$\pi/2$ BPSK	106 RB / 0 RB Offset
					

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

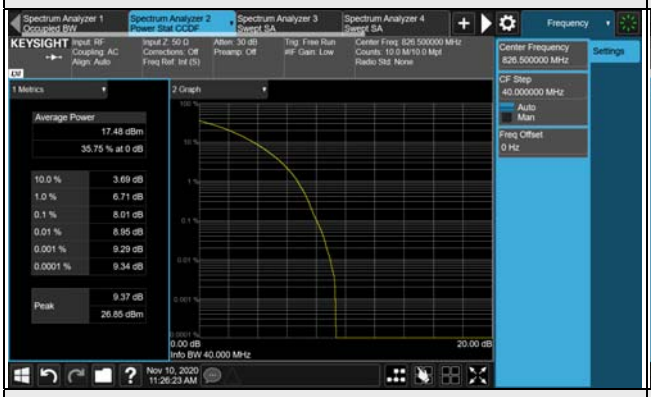
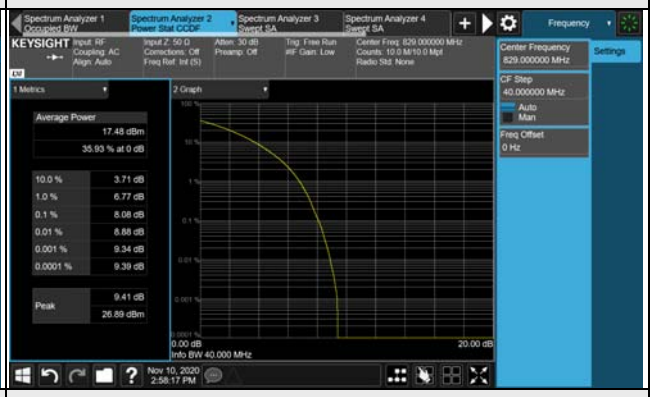
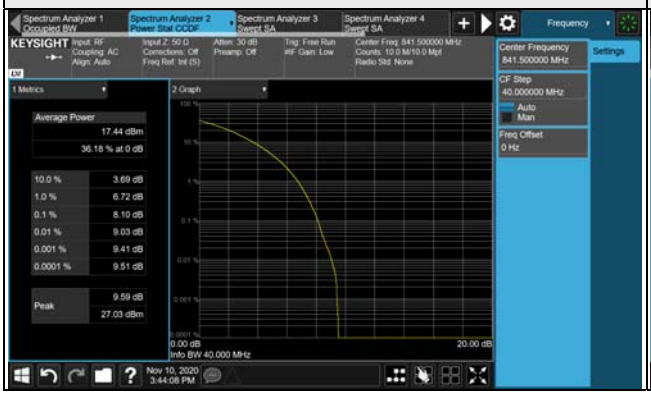
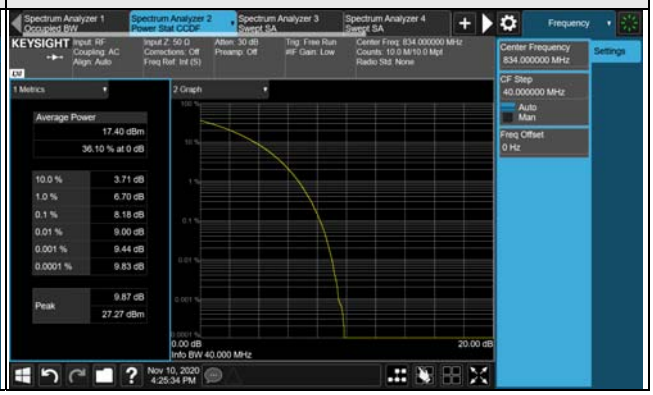


4.6.3 Test Procedures

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

4.6.4 Test Results

n5, Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165300	826.5	7.29	7.60	7.69	7.45	8.01
167300	836.5	7.53	7.72	7.80	7.53	8.00
169300	846.5	7.44	7.59	7.70	7.43	7.97
n5, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
165800	829.0	7.21	7.70	7.67	7.47	8.08
167300	836.5	7.53	7.83	7.78	7.57	8.08
168800	844.0	7.84	7.83	7.73	7.68	8.18
n5, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166300	831.5	7.39	7.42	7.40	7.35	8.03
167300	836.5	7.58	7.54	7.50	7.46	8.06
168300	841.5	7.84	7.65	7.61	7.58	8.10
n5, Channel Bandwidth: 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
166800	834.0	7.47	7.83	7.88	7.82	8.18
167300	836.5	7.60	7.87	7.95	7.86	8.16
167800	839.0	7.74	7.92	8.02	7.92	8.17

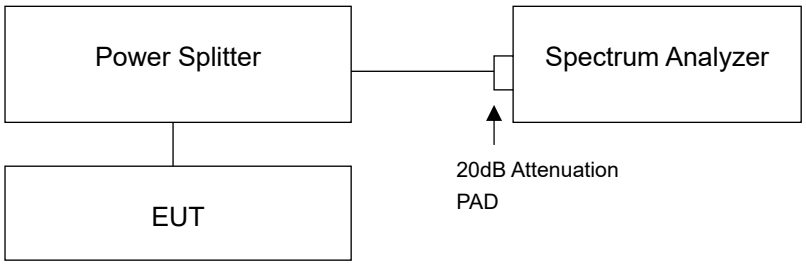
Spectrum Plot of Worst Value	
5MHz / 256QAM	10MHz / 256QAM
	
15MHz / 256QAM	20MHz / 256QAM
	

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.

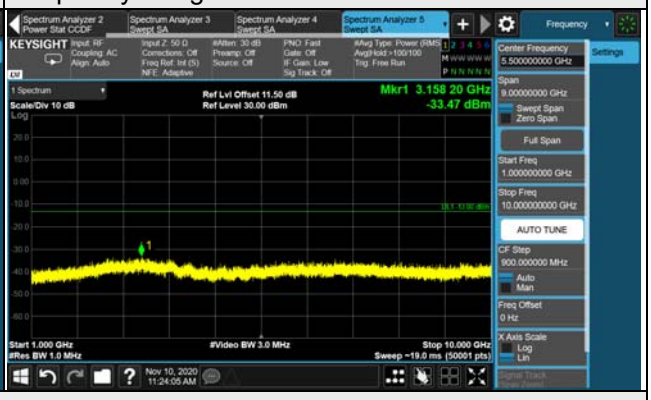
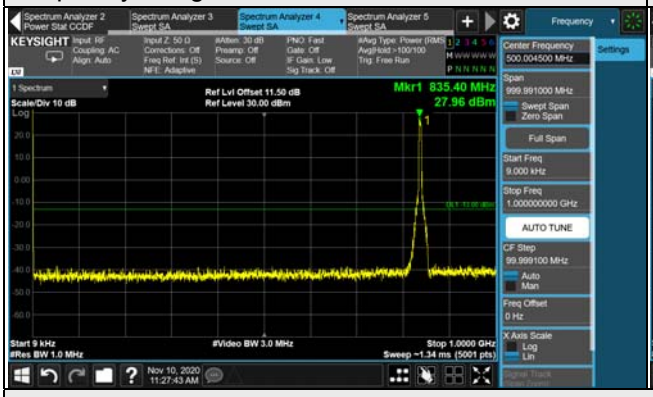
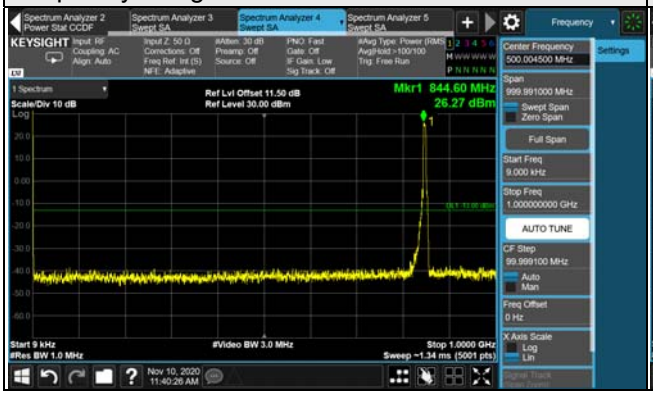
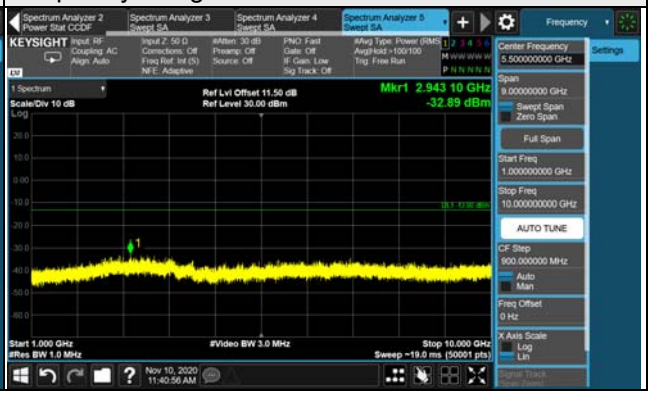
4.7.2 Test Setup



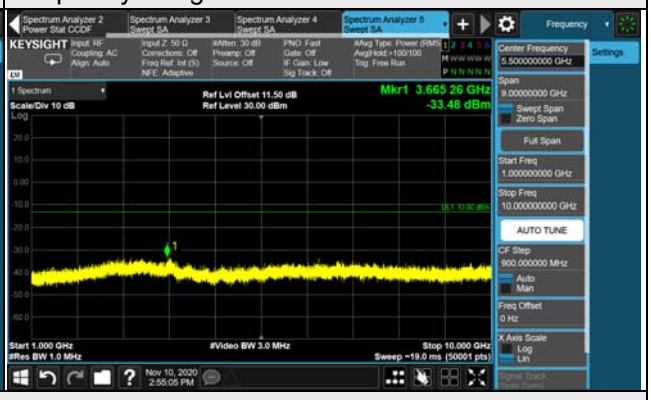
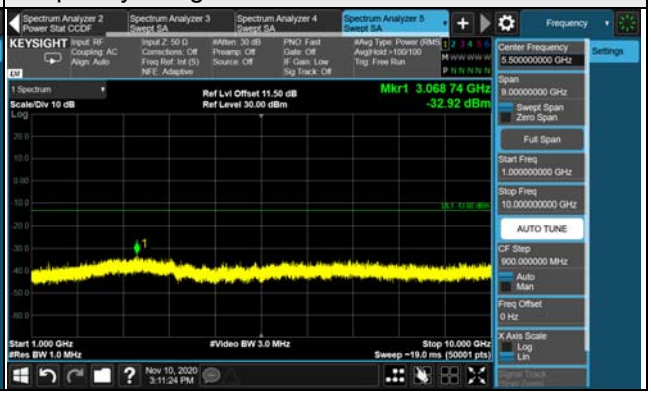
4.7.3 Test Procedure

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9kHz to 10GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

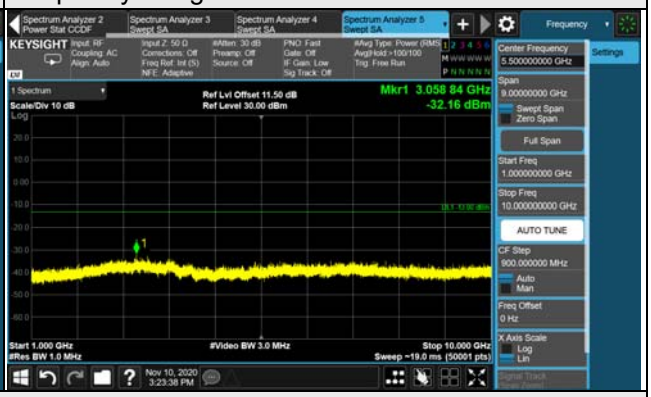
4.7.4 Test Results

n5, Channel Bandwidth: 5MHz	
Channel 165300 (826.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 167300 (836.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 169300 (846.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	

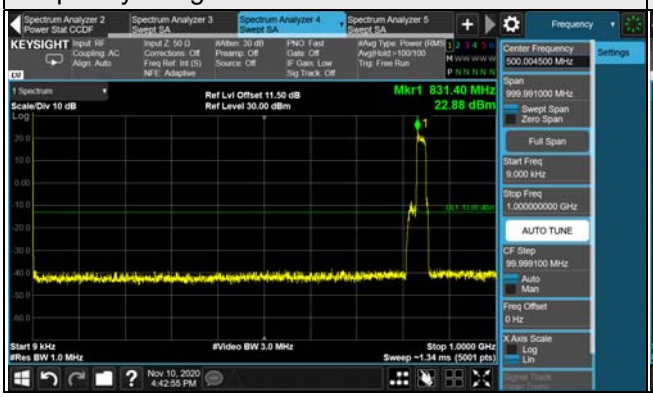
*The 9kHz signal over the limit is from Spectrum.

n5, Channel Bandwidth: 10MHz	
Channel 165800 (829.0MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 167300 (836.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 168800 (844.0MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	

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

n5, Channel Bandwidth: 15MHz	
Channel 166300 (831.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 167300 (836.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 168300 (841.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	

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

n5, Channel Bandwidth: 20MHz	
Channel 166800 (834.0MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 167300 (836.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	
Channel 167800 (839.0MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1GHz ~ 10GHz
	

*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. EIRP = Output power level of S.G – TX cable loss + 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, E.R.P power = E.I.R.P power - 2.15dBi.

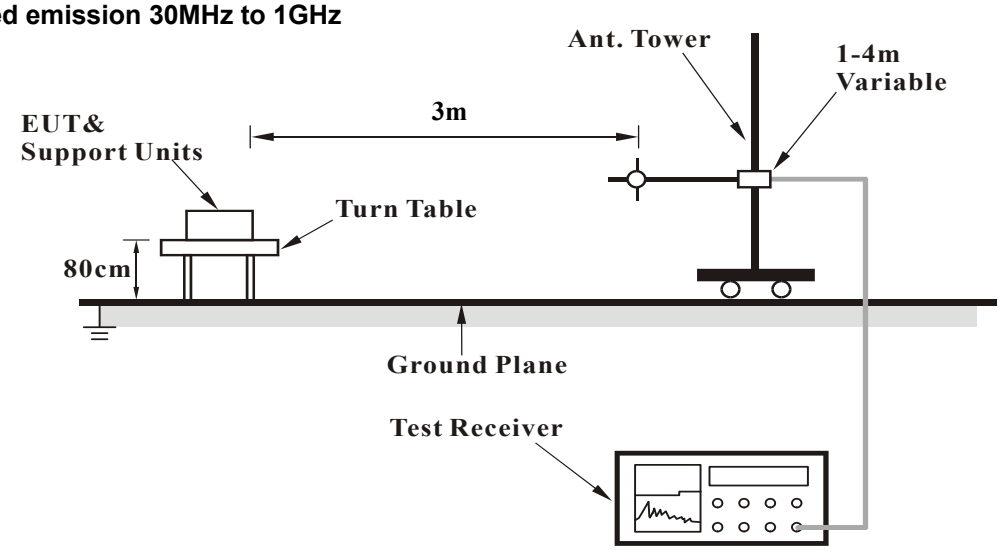
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz: The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

4.8.3 Deviation from Test Standard

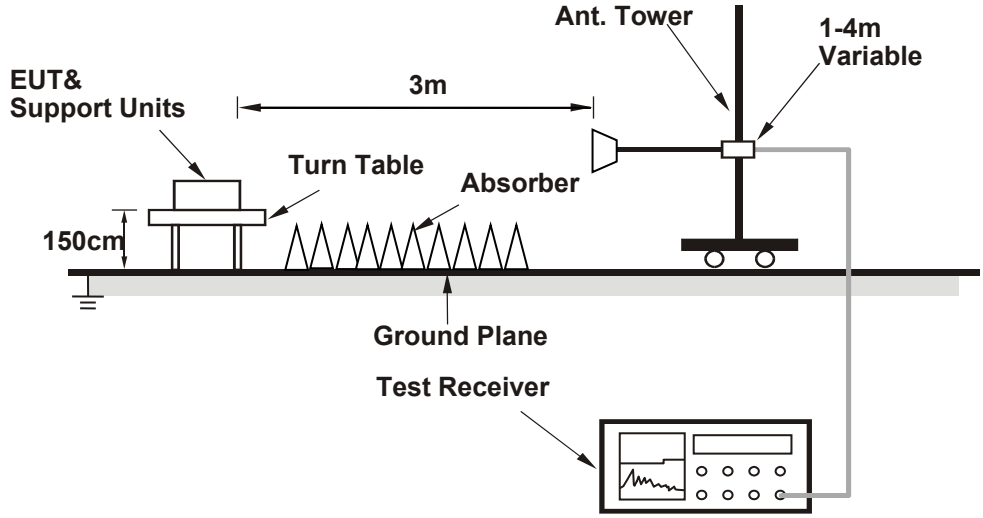
No deviation.

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).

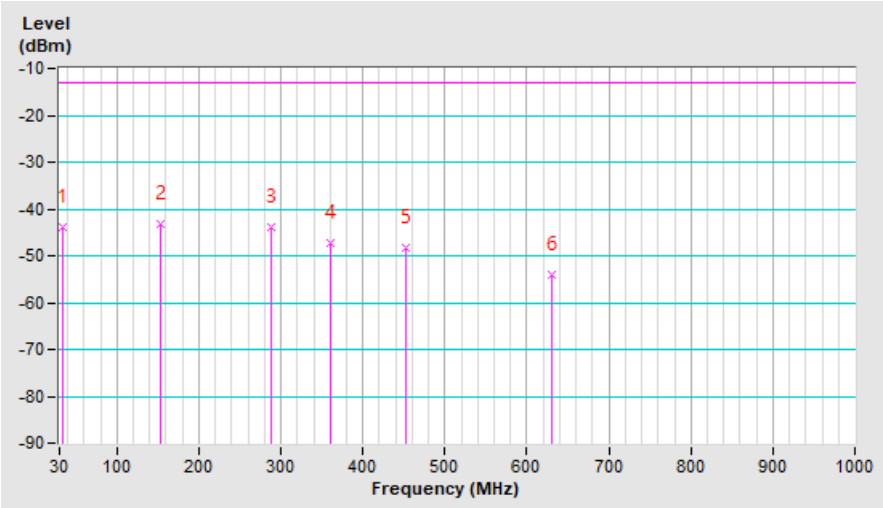
4.8.5 Test Results

Below 1GHz
n5, Channel Bandwidth: 20MHz

Mode	TX channel 167300 (836.5MHz)	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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	33.88	-44.50	-26.70	-17.10	-43.80	-13.00	-30.80
2	154.16	-36.70	-40.20	-2.90	-43.10	-13.00	-30.10
3	288.02	-38.20	-42.20	-1.80	-44.00	-13.00	-31.00
4	359.80	-42.40	-51.20	4.00	-47.20	-13.00	-34.20
5	452.92	-46.20	-51.90	3.50	-48.40	-13.00	-35.40
6	629.46	-54.00	-57.70	3.60	-54.10	-13.00	-41.10

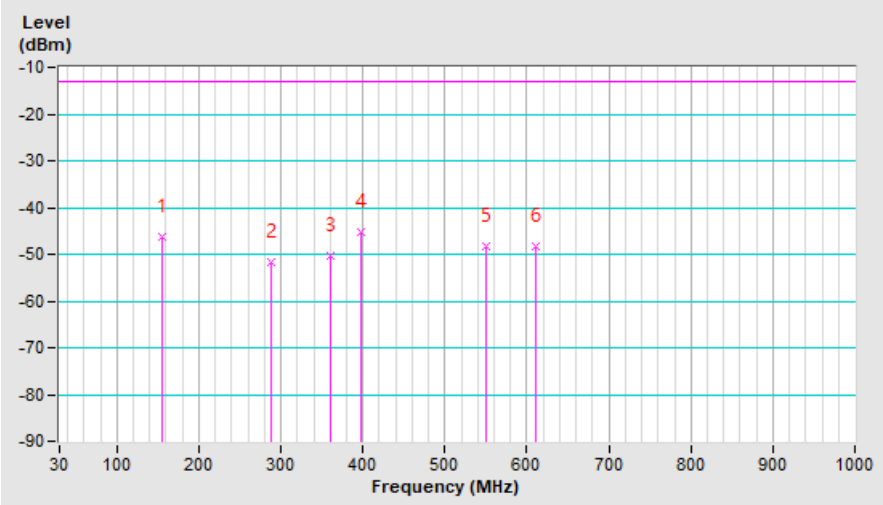
Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.



Mode	TX channel 167300 (836.5MHz)	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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	156.10	-41.20	-43.30	-2.90	-46.20	-13.00	-33.20
2	288.02	-51.10	-50.00	-1.80	-51.80	-13.00	-38.80
3	359.80	-48.00	-54.50	4.00	-50.50	-13.00	-37.50
4	398.60	-42.20	-48.50	3.30	-45.20	-13.00	-32.20
5	549.92	-47.80	-52.00	3.80	-48.20	-13.00	-35.20
6	610.06	-50.80	-52.00	3.70	-48.30	-13.00	-35.30

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.



Above 1GHz
n5, Channel Bandwidth: 5MHz

Mode	TX channel 165300 (826.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1653.00	-44.90	-37.10	0.90	-36.20	-13.00	-23.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1653.00	-42.10	-34.90	0.90	-34.00	-13.00	-21.00

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 167300 (836.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-44.50	-36.80	0.80	-36.00	-13.00	-23.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-42.10	-34.80	0.80	-34.00	-13.00	-21.00

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 169300 (846.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.00	-44.60	-37.10	0.70	-36.40	-13.00	-23.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.00	-42.20	-34.90	0.70	-34.20	-13.00	-21.20

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

n5, Channel Bandwidth: 10MHz

Mode	TX channel 165800 (829.0MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1658.00	-43.80	-36.20	0.90	-35.30	-13.00	-22.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1658.00	-40.90	-33.70	0.90	-32.80	-13.00	-19.80

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 167300 (836.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-44.00	-36.40	0.80	-35.60	-13.00	-22.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-40.80	-33.40	0.80	-32.60	-13.00	-19.60

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 168800 (844.0MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1688.00	-44.10	-36.50	0.70	-35.80	-13.00	-22.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1688.00	-41.90	-34.60	0.70	-33.90	-13.00	-20.90

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

n5, Channel Bandwidth: 15MHz

Mode	TX channel 166300 (831.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-43.50	-35.90	0.90	-35.00	-13.00	-22.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-40.60	-33.40	0.90	-32.50	-13.00	-19.50

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 167300 (836.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-43.50	-35.90	0.80	-35.10	-13.00	-22.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-40.50	-33.20	0.80	-32.40	-13.00	-19.40

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 168300 (841.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1683.00	-43.60	-36.00	0.80	-35.20	-13.00	-22.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1683.00	-40.60	-33.30	0.80	-32.50	-13.00	-19.50

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

n5, Channel Bandwidth: 20MHz

Mode	TX channel 166800 (834.0MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1668.00	-43.20	-35.60	0.80	-34.80	-13.00	-21.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1668.00	-40.40	-33.00	0.80	-32.20	-13.00	-19.20

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 167300 (836.5MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1673.00	-42.80	-35.10	0.80	-34.30	-13.00	-21.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	**1673.00**	**-39.20**	**-31.90**	**0.80**	**-31.10**	**-13.00**	**-18.10**

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

Mode	TX channel 167800 (839.0MHz)	Frequency Range	1GHz ~ 10GHz
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)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1678.00	-43.00	-35.30	0.80	-34.50	-13.00	-21.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1678.00	-40.00	-32.60	0.80	-31.80	-13.00	-18.80

Remarks:
1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB) + 2.15dB.

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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