

FCC Test Report

Report No.: RF190626D12-2

FCC ID: RFH-CNRCPO8500T

Test Model: CNR-CPO-8500T

Received Date: Jun. 26, 2019

Test Date: Jul. 27 to Sep. 3, 2019

Issued Date: Sep. 3, 2019

Applicant: IEI Integration Corp.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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(R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
RF190626D12-2	Original release.	Sep. 3, 2019

1 Certificate of Conformity

Product: IPC

Brand: iEi

Test Model: CNR-CPO-8500T

Sample Status: Engineering sample

Applicant: IEI Integration Corp.

Test Date: Jul. 27 to Sep. 3, 2019

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10: 2013

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 : Annie Chang, **Date:** Sep. 3, 2019
Annie Chang / Senior Specialist

Approved by : Rex Lai, **Date:** Sep. 3, 2019
Rex Lai / Associate Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.76dB at 0.42761MHz.
15.407(b)(1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -1.11dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is SMA. (The device is professionally installed)

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.

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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.77 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.38 dB
	30MHz ~ 1GHz	5.43 dB
Radiated Emissions above 1 GHz	Above 1GHz	5.42 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IPC
Brand	iEi
Test Model	CNR-CPO-8500T
Status of EUT	Engineering sample
Power Supply Rating	19Vdc
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 4 802.11n (40MHz), 802.11ac (40MHz): 2 802.11ac (80MHz): 1 5260~5320MHz: 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 4 802.11n (40MHz), 802.11ac (40MHz): 2 802.11ac (80MHz): 1 5500~5700MHz: 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 8 802.11n (40MHz), 802.11ac (40MHz): 3 802.11ac (80MHz): 1 5745~5825MHz: 802.11a, 802.11n (20MHz), 802.11ac (20MHz): 5 802.11n (40MHz), 802.11ac (40MHz): 2 802.11ac (80MHz): 1
Output Power	5180~5240MHz: 63.611mW 5260~5320MHz: 63.173mW 5500~5700MHz: 63.833mW 5745~5825MHz: 63.538mW
Antenna Type	Dipole Antenna with 3.12dBi gain
Antenna Connector	SMA
Accessory Device	Adapter
Data Cable Supplied	N/A

Note:

1. The EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	TX FUNCTION
802.11a	2TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX
802.11ac (20MHz)	2TX
802.11ac (40MHz)	2TX
802.11ac (80MHz)	2TX

* The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT uses following adapter.

Brand	Darfon
Model	H1120-B0
Input Power	100-240Vac, 2.0-1.0A, 50-60Hz
Output Power	19Vdc, 6.31A
Power Line	Non-shielded AC 3-Pin cable (1.7m) Non-shielded DC cable (1.1m) with one ferrite core

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

3.2 Description of Test Modes

5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency
42	5210MHz

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency
58	5290MHz

5500~5700MHz:

8 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

3 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
102	5510 MHz	134	5670 MHz
110	5550 MHz		

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency
106	5530 MHz

5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

Radiated Emission Test (Above 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (40MHz)		38 to 46	38, 46	OFDM	13.5
	802.11ac (80MHz)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (40MHz)		54 to 62	54, 62	OFDM	13.5
	802.11ac (80MHz)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116,132, 140	OFDM	6.0
	802.11ac (20MHz)		100 to 140	100, 116,132, 140	OFDM	6.5
	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (80MHz)		106	106	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (20MHz)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (40MHz)		151 to 159	151, 159	OFDM	13.5
	802.11ac (80MHz)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	116	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	116	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (40MHz)		38 to 46	38, 46	OFDM	13.5
	802.11ac (80MHz)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (40MHz)		54 to 62	54, 62	OFDM	13.5
	802.11ac (80MHz)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116,132, 140	OFDM	6.0
	802.11ac (20MHz)		100 to 140	100, 116,132, 140	OFDM	6.5
	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (80MHz)		106	106	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (20MHz)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (40MHz)		151 to 159	151, 159	OFDM	13.5
	802.11ac (80MHz)		155	155	OFDM	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	25deg. C, 76%RH	120Vac, 60Hz	Dalen Dai
RE<1G	25deg. C, 76%RH	120Vac, 60Hz	Dalen Dai
PLC	25deg. C, 75%RH	120Vac, 60Hz	Ian Chang
APCM	25deg. C, 76%RH	120Vac, 60Hz	Saxon Lee

3.3 Duty Cycle of Test Signal

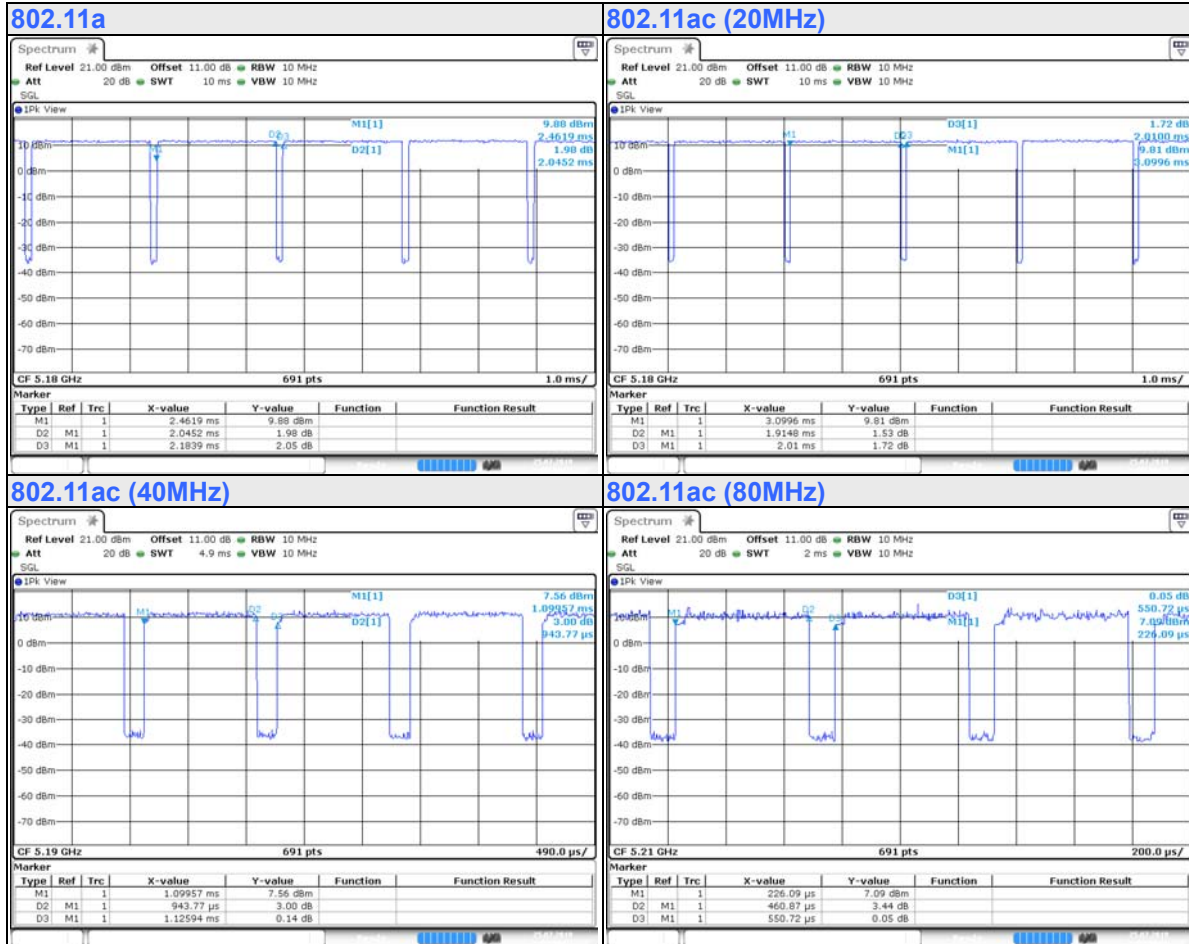
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = 2.045/2.183 = 0.937, Duty factor = $10 * \log(1/0.937) = 0.28$

802.11ac (20MHz) Duty cycle = 1.914/2.01 = 0.952, Duty factor = $10 * \log(1/0.952) = 0.21$

802.11ac (40MHz): Duty cycle = 0.943/1.125 = 0.838, Duty factor = $10 * \log(1/0.838) = 0.77$

802.11ac (80MHz): Duty cycle = 0.46/0.55 = 0.836, Duty factor = $10 * \log(1/0.836) = 0.78$



3.4 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.

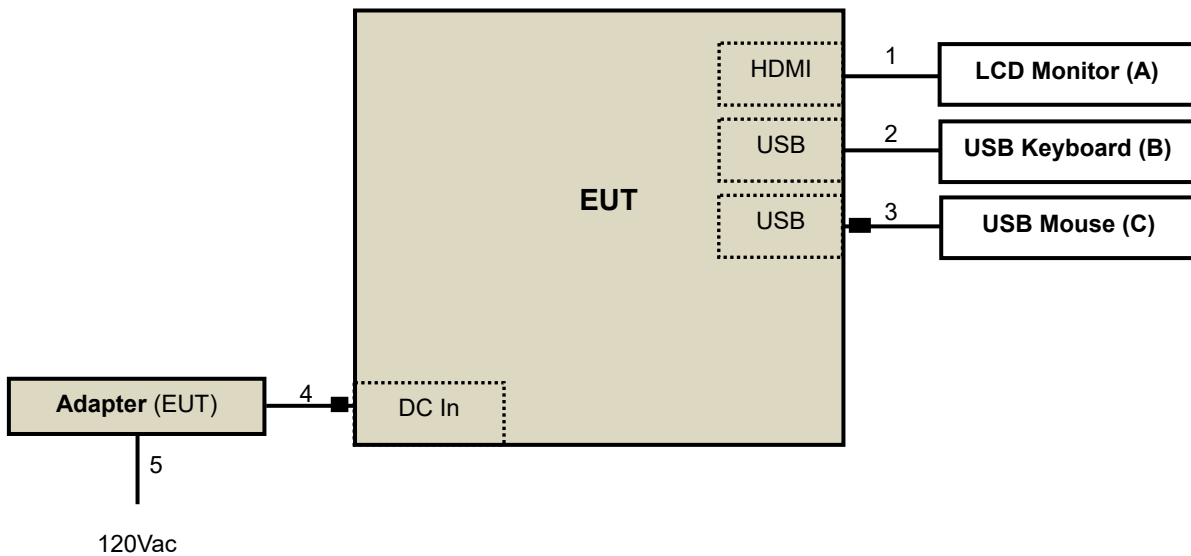
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	LCD MONITOR	DELL	U2410	CN082WXD728720CC 0KCL	N/A	Provided by Lab
B.	USB KEYBOARD	BTC	5200U	N/A	N/A	Provided by Lab
C.	USB Mouse	Microsoft	1113	9170515772229	N/A	Provided by Lab

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.	HDMI cable	1	1.8	Y	0	Provided by Lab
2.	USB cable	1	1.5	Y	0	Provided by Lab
3.	USB cable	1	1.8	Y	1	Provided by Lab
4.	DC cable	1	1.1	N	1	Supplied by client
5.	AC power cord	1	1.7	N	0	Supplied by client

Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK:74 (dBuV/m)	AV:54 (dBuV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<input checked="" type="checkbox"/> 15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8(dBμV/m) ^{*3} PK:122.2 (dBμV/m) ^{*4}
	<input type="checkbox"/> 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
^{*1} beyond 75 MHz or more above of the band edge.		^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
HP Preamplifier	8447D	2432A03504	Feb. 20, 2019	Feb. 19, 2020
HP Preamplifier	8449B	3008A01201	Feb. 21, 2019	Feb. 20, 2020
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 20, 2019	Feb. 19, 2020
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 05, 2019	Mar. 04, 2020
Schwarzbeck Antenna	VULB 9168	139	Nov. 26, 2018	Nov. 25, 2019
Schwarzbeck Antenna	VHBA 9123	480	Jun. 3, 2019	Jun. 2, 2021
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 25, 2018	Nov. 24, 2019
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Nov. 25, 2018	Nov. 24, 2019
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF102	Cable-CH6-01	Aug. 13, 2018	Aug. 12, 2019
SUHNER RF cable With 3/4dB PAD	SF102	Cable-CH8-3.6m	Aug. 13, 2018	Aug. 12, 2019
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 11, 2019	Jun. 10, 2020
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 30, 2019	Jul. 29, 2020
Loop Antenna EMCI	LPA600	270	Aug. 11, 2017	Aug. 10, 2019
EMCO Horn Antenna	3115	00028257	Nov. 25, 2018	Nov. 24, 2019
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 27, 2018	Sep. 26, 2019
Anritsu Power Sensor	MA2411B	0738404	Apr. 16, 2019	Apr. 15, 2020
Anritsu Power Meter	ML2495A	0842014	Apr. 16, 2019	Apr. 15, 2020

- NOTE:**
1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 3. The test was performed in Chamber No. 6.
 4. Tested Date: Jul. 27 ~ Aug. 5, 2019

4.1.3 Test Procedure

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

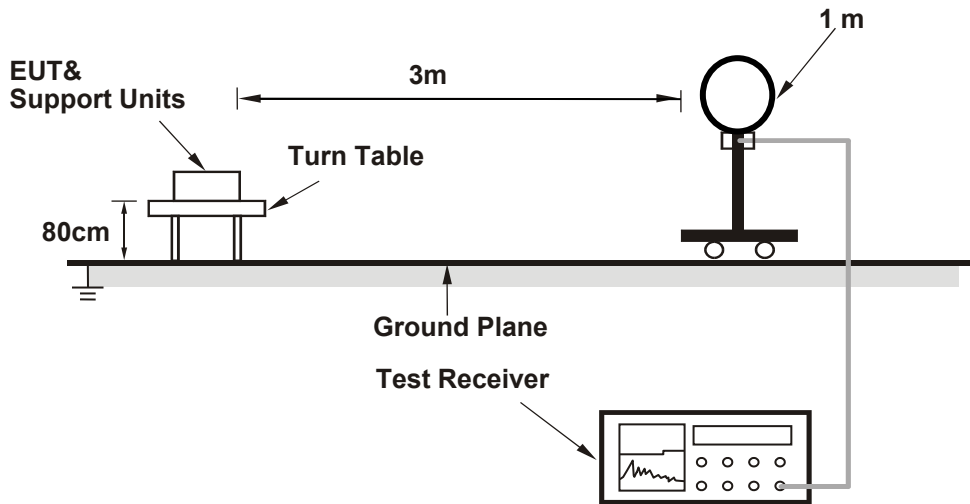
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

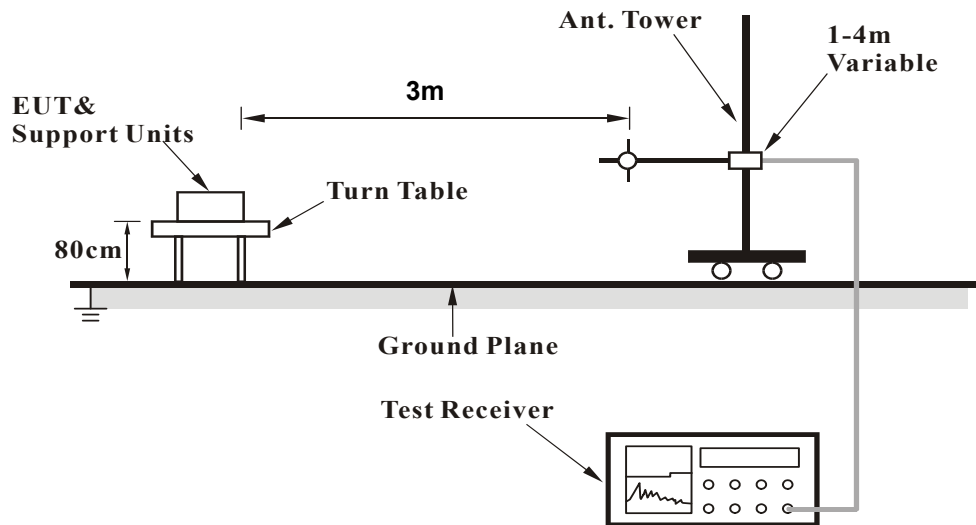
No deviation.

4.1.5 Test Setup

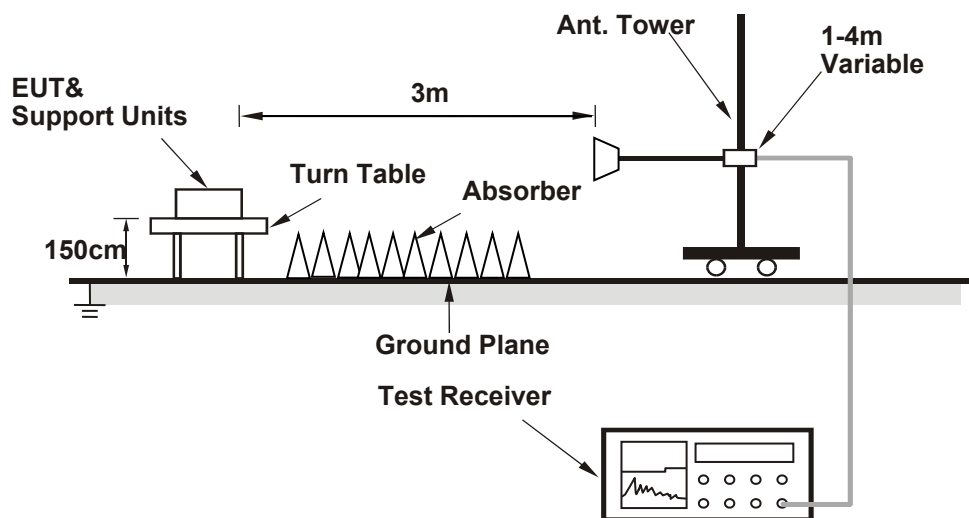
For Radiated emission below 30MHz



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).

4.1.6 EUT Operating Condition

Set the EUT under transmission condition continuously at specific channel frequency continuously.

4.1.7 Test Results

Above 1GHz Data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.82 PK	74.00	-14.18	1.87 H	285	52.61	7.21
2	5150.00	46.67 AV	54.00	-7.33	1.87 H	285	39.46	7.21
3	*5180.00	104.68 PK			1.87 H	285	97.43	7.25
4	*5180.00	94.72 AV			1.87 H	285	87.47	7.25
5	#10360.00	56.82 PK	68.20	-11.38	1.68 H	177	39.68	17.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.75 PK	74.00	-10.25	2.46 V	335	56.54	7.21
2	5150.00	47.80 AV	54.00	-6.20	2.46 V	335	40.59	7.21
3	*5180.00	111.91 PK			2.46 V	335	104.66	7.25
4	*5180.00	101.71 AV			2.46 V	335	94.46	7.25
5	#10360.00	58.01 PK	68.20	-10.19	1.58 V	36	40.87	17.14

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.52 PK			1.92 H	291	94.26	7.26
2	*5200.00	94.70 AV			1.92 H	291	87.44	7.26
3	#10400.00	57.23 PK	68.20	-10.97	1.69 H	35	39.89	17.34

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.64 PK			2.57 V	335	104.38	7.26
2	*5200.00	101.89 AV			2.57 V	335	94.63	7.26
3	#10400.00	57.86 PK	68.20	-10.34	1.42 V	223	40.52	17.34

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	104.11 PK			1.84 H	268	97.15	6.96
2	*5240.00	93.99 AV			1.84 H	268	87.03	6.96
3	5350.00	59.24 PK	74.00	-14.76	1.84 H	268	51.87	7.37
4	5350.00	44.59 AV	54.00	-9.41	1.84 H	268	37.22	7.37
5	#10480.00	57.58 PK	68.20	-10.62	1.77 H	128	39.88	17.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	110.66 PK			2.39 V	339	103.70	6.96
2	*5240.00	100.37 AV			2.39 V	339	93.41	6.96
3	5350.00	60.06 PK	74.00	-13.94	2.39 V	339	52.69	7.37
4	5350.00	45.84 AV	54.00	-8.16	2.39 V	339	38.47	7.37
5	#10480.00	57.95 PK	68.20	-10.25	1.68 V	238	40.25	17.70

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.90 PK	74.00	-14.10	1.87 H	149	52.69	7.21
2	5150.00	46.87 AV	54.00	-7.13	1.87 H	149	39.66	7.21
3	*5260.00	105.69 PK			1.87 H	149	98.77	6.92
4	*5260.00	95.45 AV			1.87 H	149	88.53	6.92
5	#10520.00	57.20 PK	68.20	-11.00	2.01 H	116	39.36	17.84

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.97 PK	74.00	-13.03	2.78 V	178	53.76	7.21
2	5150.00	47.61 AV	54.00	-6.39	2.78 V	178	40.40	7.21
3	*5260.00	112.38 PK			2.78 V	178	105.46	6.92
4	*5260.00	102.31 AV			2.78 V	178	95.39	6.92
5	#10520.00	58.39 PK	68.20	-9.81	1.45 V	257	40.55	17.84

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.51 PK			1.85 H	152	98.42	7.09
2	*5300.00	95.38 AV			1.85 H	152	88.29	7.09
3	10600.00	57.35 PK	74.00	-16.65	1.89 H	226	39.33	18.02
4	10600.00	44.66 AV	54.00	-9.34	1.89 H	226	26.64	18.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.45 PK			2.80 V	189	105.36	7.09
2	*5300.00	102.97 AV			2.80 V	189	95.88	7.09
3	10600.00	58.89 PK	74.00	-15.11	1.63 V	269	40.87	18.02
4	10600.00	45.91 AV	54.00	-8.09	1.63 V	269	27.89	18.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.83 PK			1.87 H	152	98.64	7.19
2	*5320.00	95.72 AV			1.87 H	152	88.53	7.19
3	5350.00	60.63 PK	74.00	-13.37	1.87 H	152	53.26	7.37
4	5350.00	47.03 AV	54.00	-6.97	1.87 H	152	39.66	7.37
5	10640.00	57.24 PK	74.00	-16.76	1.83 H	269	39.52	17.72
6	10640.00	44.70 AV	54.00	-9.30	1.83 H	269	26.98	17.72

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.69 PK			2.39 V	158	105.50	7.19
2	*5320.00	102.48 AV			2.39 V	158	95.29	7.19
3	5350.00	61.82 PK	74.00	-12.18	2.39 V	158	54.45	7.37
4	5350.00	48.35 AV	54.00	-5.65	2.39 V	158	40.98	7.37
5	10640.00	58.60 PK	74.00	-15.40	1.64 V	135	40.88	17.72
6	10640.00	45.36 AV	54.00	-8.64	1.64 V	135	27.64	17.72

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.09 PK	74.00	-13.91	1.92 H	169	52.46	7.63
2	5460.00	47.31 AV	54.00	-6.69	1.92 H	169	39.68	7.63
3	#5470.00	64.02 PK	68.20	-4.18	1.92 H	169	56.37	7.65
4	*5500.00	106.36 PK			1.92 H	169	98.67	7.69
5	*5500.00	96.28 AV			1.92 H	169	88.59	7.69
6	11000.00	57.88 PK	74.00	-16.12	1.93 H	268	39.64	18.24
7	11000.00	44.82 AV	54.00	-9.18	1.93 H	268	26.58	18.24

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.17 PK	74.00	-12.83	2.16 V	179	53.54	7.63
2	5460.00	48.32 AV	54.00	-5.68	2.16 V	179	40.69	7.63
3	#5470.00	65.08 PK	68.20	-3.12	2.16 V	179	57.43	7.65
4	*5500.00	112.94 PK			2.16 V	179	105.25	7.69
5	*5500.00	102.88 AV			2.16 V	179	95.19	7.69
6	11000.00	58.79 PK	74.00	-15.21	1.67 V	184	40.55	18.24
7	11000.00	45.93 AV	54.00	-8.07	1.67 V	184	27.69	18.24

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	106.41 PK			1.87 H	174	98.71	7.70
2	*5580.00	96.23 AV			1.87 H	174	88.53	7.70
3	11160.00	57.55 PK	74.00	-16.45	1.39 H	342	39.65	17.90
4	11160.00	44.58 AV	54.00	-9.42	1.39 H	342	26.68	17.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.04 PK			2.20 V	186	105.34	7.70
2	*5580.00	103.16 AV			2.20 V	186	95.46	7.70
3	11160.00	58.55 PK	74.00	-15.45	1.77 V	154	40.65	17.90
4	11160.00	45.79 AV	54.00	-8.21	1.77 V	154	27.89	17.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 132	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	106.09 PK			1.82 H	192	98.67	7.42
2	*5660.00	96.01 AV			1.82 H	192	88.59	7.42
3	11320.00	57.34 PK	74.00	-16.66	1.97 H	45	39.58	17.76
4	11320.00	43.94 AV	54.00	-10.06	1.97 H	45	26.18	17.76

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	112.90 PK			2.18 V	186	105.48	7.42
2	*5660.00	103.05 AV			2.18 V	186	95.63	7.42
3	11320.00	58.63 PK	74.00	-15.37	1.85 V	258	40.87	17.76
4	11320.00	45.45 AV	54.00	-8.55	1.85 V	258	27.69	17.76

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.17 PK			1.88 H	299	98.75	7.42
2	*5700.00	95.94 AV			1.88 H	299	88.52	7.42
3	#5725.00	62.71 PK	68.20	-5.49	1.88 H	299	55.21	7.50
4	11400.00	57.04 PK	74.00	-16.96	2.85 H	226	39.34	17.70
5	11400.00	43.98 AV	54.00	-10.02	2.85 H	226	26.28	17.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.60 PK			2.14 V	182	105.18	7.42
2	*5700.00	102.05 AV			2.14 V	182	94.63	7.42
3	#5725.00	63.50 PK	68.20	-4.70	2.14 V	182	56.00	7.50
4	11400.00	58.55 PK	74.00	-15.45	2.31 V	156	40.85	17.70
5	11400.00	45.06 AV	54.00	-8.94	2.31 V	156	27.36	17.70

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5616.02	59.47 PK	68.20	-8.73	2.83 H	17	51.87	7.60
2	*5745.00	106.32 PK			2.83 H	17	98.73	7.59
3	*5745.00	96.31 AV			2.83 H	17	88.72	7.59
4	#5996.50	60.84 PK	68.20	-7.36	2.83 H	17	52.76	8.08
5	11490.00	57.41 PK	74.00	-16.59	1.69 H	227	39.34	18.07
6	11490.00	44.77 AV	54.00	-9.23	1.69 H	227	26.70	18.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5602.73	59.52 PK	68.20	-8.68	3.22 V	332	51.87	7.65
2	*5745.00	111.94 PK			3.22 V	332	104.35	7.59
3	*5745.00	101.82 AV			3.22 V	332	94.23	7.59
4	#5954.70	60.59 PK	68.20	-7.61	3.22 V	332	52.49	8.10
5	11490.00	58.94 PK	74.00	-15.06	1.45 V	94	40.87	18.07
6	11490.00	45.88 AV	54.00	-8.12	1.45 V	94	27.81	18.07

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.68	59.63 PK	68.20	-8.57	2.81 H	25	52.07	7.56
2	*5785.00	106.19 PK			2.81 H	25	98.45	7.74
3	*5785.00	96.08 AV			2.81 H	25	88.34	7.74
4	#5937.60	60.30 PK	68.20	-7.90	2.81 H	25	52.16	8.14
5	11570.00	57.38 PK	74.00	-16.62	1.72 H	234	39.40	17.98
6	11570.00	44.69 AV	54.00	-9.31	1.72 H	234	26.71	17.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.10	60.22 PK	68.20	-7.98	3.26 V	318	52.66	7.56
2	*5785.00	111.82 PK			3.26 V	318	104.08	7.74
3	*5785.00	101.64 AV			3.26 V	318	93.90	7.74
4	#5961.35	61.20 PK	68.20	-7.00	3.26 V	318	53.10	8.10
5	11570.00	58.83 PK	74.00	-15.17	1.36 V	92	40.85	17.98
6	11570.00	45.79 AV	54.00	-8.21	1.36 V	92	27.81	17.98

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5612.70	59.14 PK	68.20	-9.06	2.86 H	13	51.53	7.61
2	*5825.00	106.51 PK			2.86 H	13	98.59	7.92
3	*5825.00	96.38 AV			2.86 H	13	88.46	7.92
4	#6023.10	60.78 PK	68.20	-7.42	2.86 H	13	52.59	8.19
5	11650.00	57.42 PK	74.00	-16.58	1.65 H	223	39.70	17.72
6	11650.00	44.80 AV	54.00	-9.20	1.65 H	223	27.08	17.72

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5592.27	59.80 PK	68.20	-8.40	3.20 V	324	52.12	7.68
2	*5825.00	111.62 PK			3.20 V	324	103.70	7.92
3	*5825.00	101.49 AV			3.20 V	324	93.57	7.92
4	#5931.90	61.36 PK	68.20	-6.84	3.20 V	324	53.20	8.16
5	11650.00	58.77 PK	74.00	-15.23	1.40 V	98	41.05	17.72
6	11650.00	45.68 AV	54.00	-8.32	1.40 V	98	27.96	17.72

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac(20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.47 PK	74.00	-12.53	1.85 H	279	54.26	7.21
2	5150.00	47.43 AV	54.00	-6.57	1.85 H	279	40.22	7.21
3	*5180.00	104.81 PK			1.85 H	279	97.56	7.25
4	*5180.00	90.94 AV			1.85 H	279	83.69	7.25
5	#10360.00	56.82 PK	68.20	-11.38	1.88 H	179	39.68	17.14

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.82 PK	74.00	-11.18	2.48 V	348	55.61	7.21
2	5150.00	48.40 AV	54.00	-5.60	2.48 V	348	41.19	7.21
3	*5180.00	112.11 PK			2.48 V	348	104.86	7.25
4	*5180.00	98.60 AV			2.48 V	348	91.35	7.25
5	#10360.00	57.68 PK	68.20	-10.52	1.86 V	136	40.54	17.14

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.62 PK			1.88 H	275	96.36	7.26
2	*5200.00	90.55 AV			1.88 H	275	83.29	7.26
3	#10400.00	56.77 PK	68.20	-11.43	1.63 H	264	39.43	17.34

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.02 PK			2.36 V	348	103.76	7.26
2	*5200.00	97.89 AV			2.36 V	348	90.63	7.26
3	#10400.00	57.98 PK	68.20	-10.22	1.87 V	263	40.64	17.34

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	104.42 PK			1.74 H	269	97.46	6.96
2	*5240.00	90.22 AV			1.74 H	269	83.26	6.96
3	5350.00	60.01 PK	74.00	-13.99	1.74 H	269	52.64	7.37
4	5350.00	46.03 AV	54.00	-7.97	1.74 H	269	38.66	7.37
5	#10480.00	57.03 PK	68.20	-11.17	1.95 H	258	39.33	17.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.22 PK			2.56 V	352	104.26	6.96
2	*5240.00	98.18 AV			2.56 V	352	91.22	6.96
3	5350.00	61.24 PK	74.00	-12.76	2.56 V	352	53.87	7.37
4	5350.00	46.80 AV	54.00	-7.20	2.56 V	352	39.43	7.37
5	#10480.00	58.28 PK	68.20	-9.92	1.66 V	264	40.58	17.70

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.68 PK	74.00	-14.32	1.88 H	156	52.47	7.21
2	5150.00	46.83 AV	54.00	-7.17	1.88 H	156	39.62	7.21
3	*5260.00	105.37 PK			1.88 H	156	98.45	6.92
4	*5260.00	92.26 AV			1.88 H	156	85.34	6.92
5	#10520.00	57.12 PK	68.20	-11.08	1.69 H	36	39.28	17.84

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.85 PK	74.00	-13.15	2.81 V	184	53.64	7.21
2	5150.00	47.57 AV	54.00	-6.43	2.81 V	184	40.36	7.21
3	*5260.00	112.34 PK			2.81 V	184	105.42	6.92
4	*5260.00	99.26 AV			2.81 V	184	92.34	6.92
5	#10520.00	58.48 PK	68.20	-9.72	1.27 V	164	40.64	17.84

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.81 PK			1.82 H	157	98.72	7.09
2	*5300.00	92.72 AV			1.82 H	157	85.63	7.09
3	10600.00	57.65 PK	74.00	-16.35	1.95 H	217	39.63	18.02
4	10600.00	44.90 AV	54.00	-9.10	1.95 H	217	26.88	18.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.47 PK			2.74 V	169	105.38	7.09
2	*5300.00	99.74 AV			2.74 V	169	92.65	7.09
3	10600.00	58.87 PK	74.00	-15.13	1.55 V	124	40.85	18.02
4	10600.00	45.96 AV	54.00	-8.04	1.55 V	124	27.94	18.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.83 PK			1.86 H	163	98.64	7.19
2	*5320.00	92.45 AV			1.86 H	163	85.26	7.19
3	5350.00	60.35 PK	74.00	-13.65	1.86 H	163	52.98	7.37
4	5350.00	47.03 AV	54.00	-6.97	1.86 H	163	39.66	7.37
5	10640.00	57.03 PK	74.00	-16.97	1.82 H	174	39.31	17.72
6	10640.00	44.01 AV	54.00	-9.99	1.82 H	174	26.29	17.72

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.51 PK			2.85 V	158	105.32	7.19
2	*5320.00	99.25 AV			2.85 V	158	92.06	7.19
3	5350.00	61.63 PK	74.00	-12.37	2.85 V	158	54.26	7.37
4	5350.00	48.02 AV	54.00	-5.98	2.85 V	158	40.65	7.37
5	10640.00	58.56 PK	74.00	-15.44	1.69 V	188	40.84	17.72
6	10640.00	45.11 AV	54.00	-8.89	1.69 V	188	27.39	17.72

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.97 PK	74.00	-14.03	1.86 H	194	52.34	7.63
2	5460.00	47.32 AV	54.00	-6.68	1.86 H	194	39.69	7.63
3	#5470.00	60.94 PK	68.20	-7.26	1.86 H	194	53.29	7.65
4	*5500.00	104.06 PK			1.86 H	194	96.37	7.69
5	*5500.00	92.25 AV			1.86 H	194	84.56	7.69
6	11000.00	57.88 PK	74.00	-16.12	1.96 H	231	39.64	18.24
7	11000.00	44.78 AV	54.00	-9.22	1.96 H	231	26.54	18.24

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.70 PK	74.00	-13.30	2.05 V	166	53.07	7.63
2	5460.00	48.06 AV	54.00	-5.94	2.05 V	166	40.43	7.63
3	#5470.00	62.17 PK	68.20	-6.03	2.05 V	166	54.52	7.65
4	*5500.00	111.24 PK			2.05 V	166	103.55	7.69
5	*5500.00	99.11 AV			2.05 V	166	91.42	7.69
6	11000.00	59.08 PK	74.00	-14.92	1.97 V	145	40.84	18.24
7	11000.00	45.81 AV	54.00	-8.19	1.97 V	145	27.57	18.24

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	104.28 PK			1.92 H	148	96.58	7.70
2	*5580.00	92.39 AV			1.92 H	148	84.69	7.70
3	11160.00	57.62 PK	74.00	-16.38	1.55 H	226	39.72	17.90
4	11160.00	44.44 AV	54.00	-9.56	1.55 H	226	26.54	17.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.39 PK			2.14 V	159	103.69	7.70
2	*5580.00	99.37 AV			2.14 V	159	91.67	7.70
3	11160.00	58.59 PK	74.00	-15.41	1.84 V	152	40.69	17.90
4	11160.00	45.74 AV	54.00	-8.26	1.84 V	152	27.84	17.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 132	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	104.14 PK			1.93 H	187	96.72	7.42
2	*5660.00	92.30 AV			1.93 H	187	84.88	7.42
3	11320.00	57.65 PK	74.00	-16.35	1.62 H	295	39.89	17.76
4	11320.00	44.64 AV	54.00	-9.36	1.62 H	295	26.88	17.76

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	111.26 PK			2.09 V	174	103.84	7.42
2	*5660.00	99.11 AV			2.09 V	174	91.69	7.42
3	11320.00	58.56 PK	74.00	-15.44	1.97 V	189	40.80	17.76
4	11320.00	45.35 AV	54.00	-8.65	1.97 V	189	27.59	17.76

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.66 PK			1.86 H	205	96.24	7.42
2	*5700.00	91.64 AV			1.86 H	205	84.22	7.42
3	#5725.00	61.76 PK	68.20	-6.44	1.86 H	205	54.26	7.50
4	11400.00	57.36 PK	74.00	-16.64	1.87 H	184	39.66	17.70
5	11400.00	44.59 AV	54.00	-9.41	1.87 H	184	26.89	17.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	110.68 PK			2.13 V	103	103.26	7.42
2	*5700.00	98.49 AV			2.13 V	103	91.07	7.42
3	#5725.00	62.96 PK	68.20	-5.24	2.13 V	103	55.46	7.50
4	11400.00	58.42 PK	74.00	-15.58	2.01 V	115	40.72	17.70
5	11400.00	45.64 AV	54.00	-8.36	2.01 V	115	27.94	17.70

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5587.05	59.26 PK	68.20	-8.94	2.75 H	29	51.58	7.68
2	*5745.00	106.13 PK			2.75 H	29	98.54	7.59
3	*5745.00	95.94 AV			2.75 H	29	88.35	7.59
4	#6024.05	60.32 PK	68.20	-7.88	2.75 H	29	52.13	8.19
5	11490.00	57.27 PK	74.00	-16.73	1.68 H	229	39.20	18.07
6	11490.00	44.60 AV	54.00	-9.40	1.68 H	229	26.53	18.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5581.35	59.36 PK	68.20	-8.84	3.16 V	317	51.67	7.69
2	*5745.00	111.52 PK			3.16 V	317	103.93	7.59
3	*5745.00	101.34 AV			3.16 V	317	93.75	7.59
4	#5981.30	60.93 PK	68.20	-7.27	3.16 V	317	52.83	8.10
5	11490.00	58.63 PK	74.00	-15.37	1.48 V	102	40.56	18.07
6	11490.00	45.74 AV	54.00	-8.26	1.48 V	102	27.67	18.07

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5579.93	59.88 PK	68.20	-8.32	2.81 H	27	52.18	7.70
2	*5785.00	106.08 PK			2.81 H	27	98.34	7.74
3	*5785.00	95.86 AV			2.81 H	27	88.12	7.74
4	#5986.05	60.70 PK	68.20	-7.50	2.81 H	27	52.61	8.09
5	11570.00	57.30 PK	74.00	-16.70	1.73 H	236	39.32	17.98
6	11570.00	44.64 AV	54.00	-9.36	1.73 H	236	26.66	17.98

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.68	60.30 PK	68.20	-7.90	3.23 V	298	52.74	7.56
2	*5785.00	111.38 PK			3.23 V	298	103.64	7.74
3	*5785.00	101.17 AV			3.23 V	298	93.43	7.74
4	#5991.27	60.95 PK	68.20	-7.25	3.23 V	298	52.87	8.08
5	11570.00	57.52 PK	74.00	-16.48	1.39 V	97	39.54	17.98
6	11570.00	45.61 AV	54.00	-8.39	1.39 V	97	27.63	17.98

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5608.43	59.30 PK	68.20	-8.90	2.77 H	20	51.68	7.62
2	*5825.00	106.13 PK			2.77 H	20	98.21	7.92
3	*5825.00	95.84 AV			2.77 H	20	87.92	7.92
4	#5930.95	60.70 PK	68.20	-7.50	2.77 H	20	52.55	8.15
5	11650.00	57.36 PK	74.00	-16.64	1.66 H	223	39.64	17.72
6	11650.00	44.71 AV	54.00	-9.29	1.66 H	223	26.99	17.72

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5581.82	60.10 PK	68.20	-8.10	3.25 V	289	52.41	7.69
2	*5825.00	111.34 PK			3.25 V	289	103.42	7.92
3	*5825.00	101.15 AV			3.25 V	289	93.23	7.92
4	#5928.10	60.83 PK	68.20	-7.37	3.25 V	289	52.67	8.16
5	11650.00	58.39 PK	74.00	-15.61	1.37 V	93	40.67	17.72
6	11650.00	45.48 AV	54.00	-8.52	1.37 V	93	27.76	17.72

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.86 PK	74.00	-11.14	1.88 H	282	55.65	7.21
2	5150.00	48.85 AV	54.00	-5.15	1.88 H	282	41.64	7.21
3	*5190.00	101.51 PK			1.88 H	282	94.26	7.25
4	*5190.00	87.58 AV			1.88 H	282	80.33	7.25
5	#10380.00	56.90 PK	68.20	-11.30	1.45 H	123	39.66	17.24

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.44 PK	74.00	-9.56	2.36 V	345	57.23	7.21
2	5150.00	50.88 AV	54.00	-3.12	2.36 V	345	43.67	7.21
3	*5190.00	109.17 PK			2.36 V	345	101.92	7.25
4	*5190.00	94.95 AV			2.36 V	345	87.70	7.25
5	#10380.00	57.46 PK	68.20	-10.74	1.94 V	237	40.22	17.24

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	101.30 PK			1.89 H	269	94.26	7.04
2	*5230.00	87.26 AV			1.89 H	269	80.22	7.04
3	5350.00	58.60 PK	74.00	-15.40	1.89 H	269	51.23	7.37
4	5350.00	46.00 AV	54.00	-8.00	1.89 H	269	38.63	7.37
5	#10460.00	56.94 PK	68.20	-11.26	1.94 H	235	39.33	17.61

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	108.76 PK			2.09 V	349	101.72	7.04
2	*5230.00	94.94 AV			2.09 V	349	87.90	7.04
3	5350.00	60.28 PK	74.00	-13.72	2.09 V	349	52.91	7.37
4	5350.00	46.47 AV	54.00	-7.53	2.09 V	349	39.10	7.37
5	#10460.00	58.19 PK	68.20	-10.01	1.66 V	235	40.58	17.61

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.67 PK	74.00	-15.33	1.84 H	178	51.46	7.21
2	5150.00	46.47 AV	54.00	-7.53	1.84 H	178	39.26	7.21
3	*5270.00	101.82 PK			1.84 H	178	94.86	6.96
4	*5270.00	87.32 AV			1.84 H	178	80.36	6.96
5	#10540.00	57.22 PK	68.20	-10.98	1.93 H	265	39.34	17.88

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.38 PK	74.00	-14.62	2.10 V	200	52.17	7.21
2	5150.00	47.15 AV	54.00	-6.85	2.10 V	200	39.94	7.21
3	*5270.00	108.74 PK			2.10 V	200	101.78	6.96
4	*5270.00	94.52 AV			2.10 V	200	87.56	6.96
5	#10540.00	58.54 PK	68.20	-9.66	1.69 V	36	40.66	17.88

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.33 PK			1.92 H	169	95.18	7.15
2	*5310.00	88.48 AV			1.92 H	169	81.33	7.15
3	5350.00	65.26 PK	74.00	-8.74	1.92 H	169	57.89	7.37
4	5350.00	49.53 AV	54.00	-4.47	1.92 H	169	42.16	7.37
5	10620.00	57.53 PK	74.00	-16.47	1.45 H	269	39.67	17.86
6	10620.00	44.23 AV	54.00	-9.77	1.45 H	269	26.37	17.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	110.01 PK			2.01 V	180	102.86	7.15
2	*5310.00	95.24 AV			2.01 V	180	88.09	7.15
3	5350.00	69.80 PK	74.00	-4.20	2.01 V	180	62.43	7.37
4	5350.00	52.89 AV	54.00	-1.11	2.01 V	180	45.52	7.37
5	10620.00	58.55 PK	74.00	-15.45	1.77 V	145	40.69	17.86
6	10620.00	45.67 AV	54.00	-8.33	1.77 V	145	27.81	17.86

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.84 PK	74.00	-13.16	1.87 H	182	53.21	7.63
2	5460.00	47.81 AV	54.00	-6.19	1.87 H	182	40.18	7.63
3	#5470.00	62.89 PK	68.20	-5.31	1.87 H	182	55.24	7.65
4	*5510.00	101.31 PK			1.87 H	182	93.61	7.70
5	*5510.00	88.47 AV			1.87 H	182	80.77	7.70
6	11020.00	57.72 PK	74.00	-16.28	1.62 H	238	39.54	18.18
7	11020.00	44.61 AV	54.00	-9.39	1.62 H	238	26.43	18.18

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.13 PK	74.00	-11.87	1.98 V	172	54.50	7.63
2	5460.00	49.16 AV	54.00	-4.84	1.98 V	172	41.53	7.63
3	#5470.00	64.23 PK	68.20	-3.97	1.98 V	172	56.58	7.65
4	*5510.00	108.44 PK			1.98 V	172	100.74	7.70
5	*5510.00	94.81 AV			1.98 V	172	87.11	7.70
6	11020.00	58.75 PK	74.00	-15.25	1.94 V	134	40.57	18.18
7	11020.00	45.99 AV	54.00	-8.01	1.94 V	134	27.81	18.18

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	101.60 PK			1.82 H	169	93.87	7.73
2	*5550.00	87.98 AV			1.82 H	169	80.25	7.73
3	11100.00	57.60 PK	74.00	-16.40	1.27 H	154	39.68	17.92
4	11100.00	44.70 AV	54.00	-9.30	1.27 H	154	26.78	17.92

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	108.42 PK			2.03 V	181	100.69	7.73
2	*5550.00	94.99 AV			2.03 V	181	87.26	7.73
3	11100.00	58.88 PK	74.00	-15.12	1.66 V	269	40.96	17.92
4	11100.00	45.84 AV	54.00	-8.16	1.66 V	269	27.92	17.92

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	100.98 PK			1.81 H	179	93.55	7.43
2	*5670.00	87.89 AV			1.81 H	179	80.46	7.43
3	#5725.00	59.19 PK	68.20	-9.01	1.81 H	179	51.69	7.50
4	11340.00	57.15 PK	74.00	-16.85	1.96 H	358	39.41	17.74
5	11340.00	43.93 AV	54.00	-10.07	1.96 H	358	26.19	17.74

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	108.06 PK			2.32 V	185	100.63	7.43
2	*5670.00	95.17 AV			2.32 V	185	87.74	7.43
3	#5725.00	60.18 PK	68.20	-8.02	2.32 V	185	52.68	7.50
4	11340.00	58.62 PK	74.00	-15.38	1.52 V	236	40.88	17.74
5	11340.00	45.68 AV	54.00	-8.32	1.52 V	236	27.94	17.74

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5588.69	60.00 PK	68.20	-8.20	2.73 H	26	52.31	7.69
2	*5755.00	101.89 PK			2.73 H	26	94.28	7.61
3	*5755.00	87.68 AV			2.73 H	26	80.07	7.61
4	#5933.24	60.07 PK	68.20	-8.13	2.73 H	26	51.91	8.16
5	11510.00	57.35 PK	74.00	-16.65	1.64 H	263	39.26	18.09
6	11510.00	44.43 AV	54.00	-9.57	1.64 H	263	26.34	18.09

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5635.52	60.44 PK	68.20	-7.76	3.39 V	293	52.94	7.50
2	*5755.00	106.81 PK			3.39 V	293	99.20	7.61
3	*5755.00	92.64 AV			3.39 V	293	85.03	7.61
4	#5952.48	59.85 PK	68.20	-8.35	3.39 V	293	51.75	8.10
5	11510.00	58.45 PK	74.00	-15.55	1.88 V	124	40.36	18.09
6	11510.00	46.03 AV	54.00	-7.97	1.88 V	124	27.94	18.09

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5620.37	58.22 PK	68.20	-9.98	2.86 H	12	50.64	7.58
2	*5795.00	101.68 PK			2.86 H	12	93.89	7.79
3	*5795.00	87.66 AV			2.86 H	12	79.87	7.79
4	#5970.17	60.81 PK	68.20	-7.39	2.86 H	12	52.71	8.10
5	11590.00	57.56 PK	74.00	-16.44	1.23 H	239	39.62	17.94
6	11590.00	44.47 AV	54.00	-9.53	1.23 H	239	26.53	17.94

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.52	59.90 PK	68.20	-8.30	3.33 V	333	52.34	7.56
2	*5795.00	106.84 PK			3.33 V	333	99.05	7.79
3	*5795.00	92.38 AV			3.33 V	333	84.59	7.79
4	#5943.04	61.27 PK	68.20	-6.93	3.33 V	333	53.15	8.12
5	11590.00	58.22 PK	74.00	-15.78	1.34 V	128	40.28	17.94
6	11590.00	45.32 AV	54.00	-8.68	1.34 V	128	27.38	17.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (80MHz)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.55 PK	74.00	-10.45	1.88 H	215	56.34	7.21
2	5150.00	49.49 AV	54.00	-4.51	1.88 H	215	42.28	7.21
3	*5210.00	94.64 PK			1.88 H	215	87.46	7.18
4	*5210.00	85.87 AV			1.88 H	215	78.69	7.18
5	5350.00	58.78 PK	74.00	-15.22	1.88 H	215	51.41	7.37
6	5350.00	46.16 AV	54.00	-7.84	1.88 H	215	38.79	7.37
7	#10420.00	57.07 PK	68.20	-11.13	2.05 H	136	39.64	17.43

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.34 PK	74.00	-7.66	2.69 V	165	59.13	7.21
2	5150.00	52.56 AV	54.00	-1.44	2.69 V	165	45.35	7.21
3	*5210.00	101.33 PK			2.69 V	165	94.15	7.18
4	*5210.00	92.22 AV			2.69 V	165	85.04	7.18
5	5350.00	60.16 PK	74.00	-13.84	2.69 V	165	52.79	7.37
6	5350.00	47.15 AV	54.00	-6.85	2.69 V	165	39.78	7.37
7	#10420.00	58.06 PK	68.20	-10.14	1.63 V	229	40.63	17.43

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.69 PK	74.00	-15.31	1.89 H	192	51.48	7.21
2	5150.00	46.87 AV	54.00	-7.13	1.89 H	192	39.66	7.21
3	*5290.00	95.61 PK			1.89 H	192	88.56	7.05
4	*5290.00	86.68 AV			1.89 H	192	79.63	7.05
5	5350.00	61.63 PK	74.00	-12.37	1.89 H	192	54.26	7.37
6	5350.00	48.63 AV	54.00	-5.37	1.89 H	192	41.26	7.37
7	#10580.00	57.45 PK	68.20	-10.75	1.99 H	134	39.48	17.97

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.22 PK	74.00	-13.78	2.02 V	179	53.01	7.21
2	5150.00	47.23 AV	54.00	-6.77	2.02 V	179	40.02	7.21
3	*5290.00	102.68 PK			2.02 V	179	95.63	7.05
4	*5290.00	92.98 AV			2.02 V	179	85.93	7.05
5	5350.00	63.93 PK	74.00	-10.07	2.02 V	179	56.56	7.37
6	5350.00	51.53 AV	54.00	-2.47	2.02 V	179	44.16	7.37
7	#10580.00	58.60 PK	68.20	-9.60	1.94 V	164	40.63	17.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.89 PK	74.00	-13.11	1.88 H	162	53.26	7.63
2	5460.00	48.65 AV	54.00	-5.35	1.88 H	162	41.02	7.63
3	#5470.00	62.94 PK	68.20	-5.26	1.88 H	162	55.29	7.65
4	*5530.00	96.18 PK			1.88 H	162	88.46	7.72
5	*5530.00	85.21 AV			1.88 H	162	77.49	7.72
6	11060.00	57.50 PK	74.00	-16.50	1.96 H	69	39.45	18.05
7	11060.00	44.69 AV	54.00	-9.31	1.96 H	69	26.64	18.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.47 PK	74.00	-11.53	2.07 V	179	54.84	7.63
2	5460.00	50.45 AV	54.00	-3.55	2.07 V	179	42.82	7.63
3	#5470.00	65.52 PK	68.20	-2.68	2.07 V	179	57.87	7.65
4	*5530.00	102.73 PK			2.07 V	179	95.01	7.72
5	*5530.00	92.67 AV			2.07 V	179	84.95	7.72
6	11060.00	58.93 PK	74.00	-15.07	1.62 V	132	40.88	18.05
7	11060.00	45.73 AV	54.00	-8.27	1.62 V	132	27.68	18.05

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5576.36	59.00 PK	68.20	-9.20	2.88 H	19	51.30	7.70
2	*5775.00	95.34 PK			2.88 H	19	87.64	7.70
3	*5775.00	86.33 AV			2.88 H	19	78.63	7.70
4	#5960.73	59.45 PK	68.20	-8.75	2.88 H	19	51.34	8.11
5	11550.00	57.67 PK	74.00	-16.33	1.88 H	142	39.65	18.02
6	11550.00	44.83 AV	54.00	-9.17	1.88 H	142	26.81	18.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5611.61	61.24 PK	68.20	-6.96	3.26 V	179	53.63	7.61
2	*5775.00	100.64 PK			3.26 V	179	92.94	7.70
3	*5775.00	91.66 AV			3.26 V	179	83.96	7.70
4	#5998.65	61.89 PK	68.20	-6.31	3.26 V	179	53.81	8.08
5	11550.00	58.76 PK	74.00	-15.24	1.39 V	284	40.74	18.02
6	11550.00	45.83 AV	54.00	-8.17	1.39 V	284	27.81	18.02

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Data:

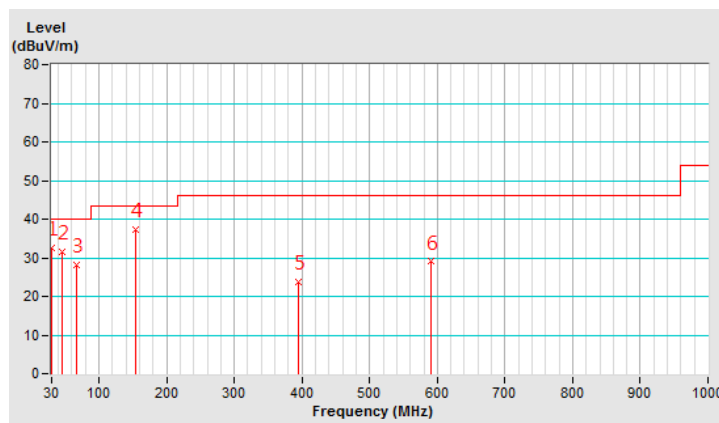
802.11a

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.10	32.61 QP	40.00	-7.39	1.63 H	262	41.49	-8.88
2	44.55	31.68 QP	40.00	-8.32	1.52 H	140	39.07	-7.39
3	67.44	28.09 QP	40.00	-11.91	1.88 H	145	36.73	-8.64
4	153.19	37.31 QP	43.50	-6.19	1.49 H	152	44.05	-6.74
5	394.91	23.77 QP	46.00	-22.23	2.08 H	29	26.86	-3.09
6	590.95	29.00 QP	46.00	-17.00	1.75 H	62	27.45	1.55

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

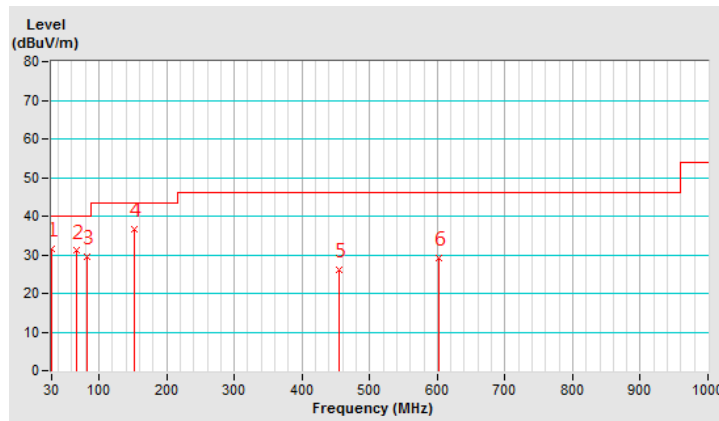


CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.10	31.54 QP	40.00	-8.46	1.52 V	88	40.42	-8.88
2	67.49	31.05 QP	40.00	-8.95	1.78 V	42	39.71	-8.66
3	81.51	29.54 QP	40.00	-10.46	1.63 V	180	41.43	-11.89
4	153.14	36.67 QP	43.50	-6.83	1.21 V	196	43.42	-6.75
5	454.81	26.17 QP	46.00	-19.83	1.95 V	170	27.61	-1.44
6	602.88	29.16 QP	46.00	-16.84	2.07 V	150	27.30	1.86

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	838251/021	Nov. 1, 2018	Oct. 31, 2019
ROHDE & SCHWARZ Artificial Mains Network (For EUT)	ENV216	101195	May 9, 2019	May 8, 2020
LISN With Adapter (for EUT)	101195	N/A	May 9, 2019	May 8, 2020
EMCO L.I.S.N. (For peripherals)	3825/2	9504-2359	Jul. 31, 2019	Jul. 30, 2020
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 14, 2019	May 13, 2020
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C03.01	Sep. 18, 2018	Sep. 17, 2019
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-300	Jan. 25, 2019	Jan. 24, 2020
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-301	Jan. 25, 2019	Jan. 24, 2020
ROHDE & SCHWARZ Artificial Mains Network (For TV EUT)	ESH3-Z5	100220	Nov. 21, 2018	Nov. 20, 2019
LISN With Adapter (for TV EUT)	100220	N/A	Nov. 21, 2018	Nov. 20, 2019

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 Shielded Room No. 3.

3. Tested Date: Sep. 3, 2019

4.2.3 Test Procedure

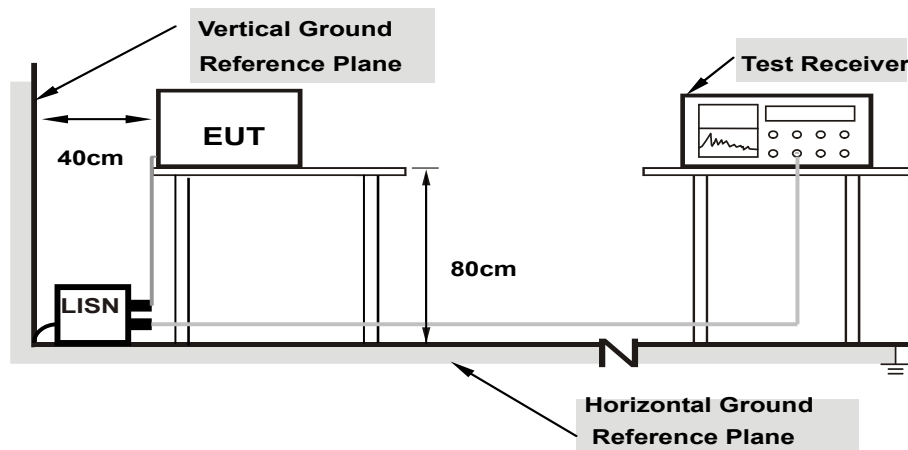
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

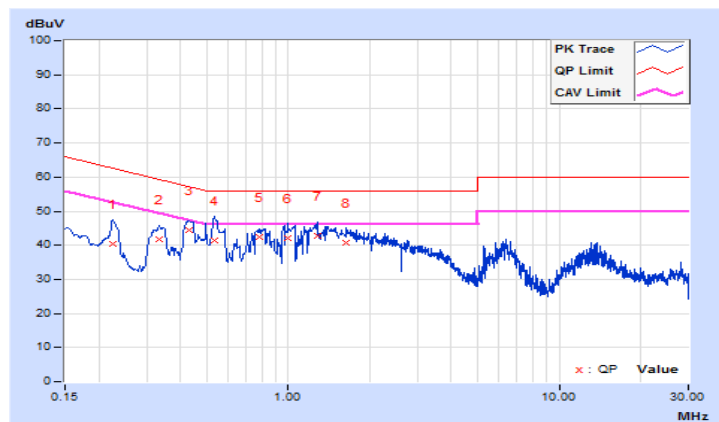
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.22429	9.61	30.91	20.35	40.52	29.96	62.66	52.66	-22.14	-22.70
2	0.33377	9.62	32.28	21.64	41.90	31.26	59.36	49.36	-17.46	-18.10
3	0.43152	9.63	34.96	21.61	44.59	31.24	57.22	47.22	-12.63	-15.98
4	0.53380	9.64	31.65	18.84	41.29	28.48	56.00	46.00	-14.71	-17.52
5	0.78543	9.66	32.67	19.18	42.33	28.84	56.00	46.00	-13.67	-17.16
6	0.99657	9.68	32.30	17.52	41.98	27.20	56.00	46.00	-14.02	-18.80
7	1.27809	9.69	33.03	22.26	42.72	31.95	56.00	46.00	-13.28	-14.05
8	1.63390	9.71	31.04	18.48	40.75	28.19	56.00	46.00	-15.25	-17.81

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

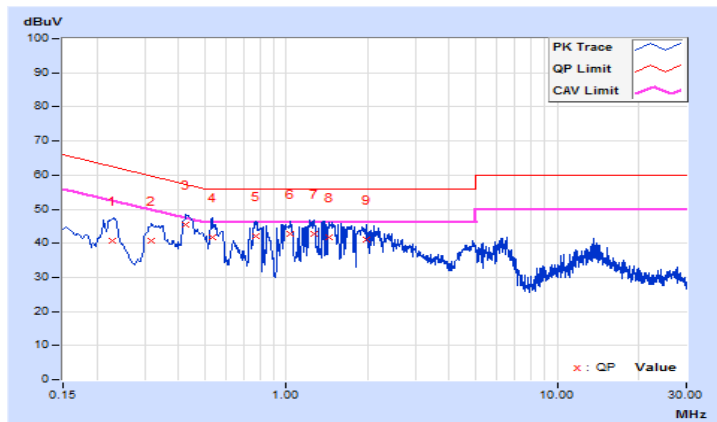


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.22851	9.60	31.25	21.33	40.85	30.93	62.50	52.50	-21.65	-21.57
2	0.31813	9.61	31.16	18.94	40.77	28.55	59.76	49.76	-18.99	-21.21
3	0.42761	9.61	35.93	21.87	45.54	31.48	57.30	47.30	-11.76	-15.82
4	0.53128	9.62	32.18	20.49	41.80	30.11	56.00	46.00	-14.20	-15.89
5	0.77370	9.64	32.44	19.34	42.08	28.98	56.00	46.00	-13.92	-17.02
6	1.03958	9.66	33.12	19.88	42.78	29.54	56.00	46.00	-13.22	-16.46
7	1.27014	9.67	32.96	20.57	42.63	30.24	56.00	46.00	-13.37	-15.76
8	1.44622	9.68	32.23	16.99	41.91	26.67	56.00	46.00	-14.09	-19.33
9	1.97407	9.70	31.24	18.51	40.94	28.21	56.00	46.00	-15.06	-17.79

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24 dBm)
U-NII-2A		√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C		√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3		√	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

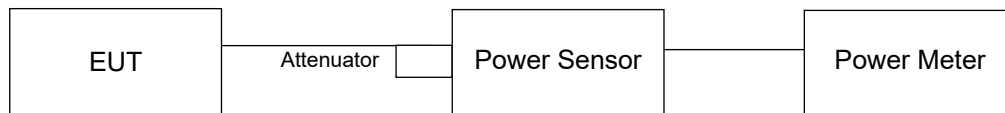
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

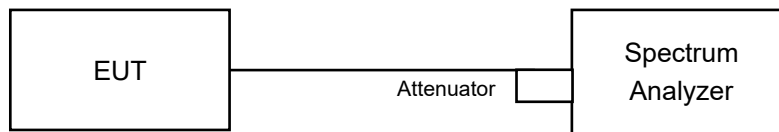
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

For Power Output Measurement



For 26dB Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11ac (20MHz), 802.11ac (40MHz)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to AVERAGE. Duty factor is not added to measured value.

For 802.11ac (80MHz)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to "free run".
- 3) Set RBW = 1 MHz.
- 4) Set VBW \geq 3 MHz
- 5) Number of points in sweep \geq 2 Span / RBW.
- 6) Sweep time \leq (number of points in sweep) * T
- 7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- 8) Detector = RMS.
- 9) Trace mode = max hold.
- 10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

For 26dB Occupied Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

Power Output: 802.11a

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
36	5180	14.51	14.50	56.433	17.52	24	Pass
40	5200	14.49	14.41	55.725	17.46	24	Pass
48	5240	14.49	14.48	56.173	17.50	24	Pass
52	5260	14.57	14.48	56.696	17.54	24	Pass
60	5300	14.52	14.49	56.433	17.52	24	Pass
64	5320	14.52	14.50	56.498	17.52	24	Pass
100	5500	14.45	14.48	55.915	17.48	24	Pass
116	5580	14.49	14.50	56.303	17.51	24	Pass
132	5660	14.55	14.47	56.500	17.52	24	Pass
140	5700	14.53	14.43	56.112	17.49	24	Pass
149	5745	14.52	14.54	56.759	17.54	30	Pass
157	5785	14.50	14.45	56.045	17.49	30	Pass
165	5825	14.51	14.52	56.563	17.53	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(24.61) = 24.91\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(23.93) = 24.79\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(23.82) = 24.77\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(23.57) = 24.72\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(24.24) = 24.85\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(24.64) = 24.92\text{ dBm} > 24\text{dBm}$.
7. $11\text{dBm} + 10\log(24.52) = 24.90\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(24.58) = 24.91\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(24.13) = 24.83\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(24.85) = 24.95\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(24.07) = 24.81\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(24.18) = 24.83\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(25.04) = 24.99\text{ dBm} > 24\text{dBm}$.
7. $11\text{dBm} + 10\log(23.91) = 24.79\text{ dBm} > 24\text{dBm}$.

802.11ac (20MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
36	5180	14.49	14.57	56.761	17.54	24	Pass
40	5200	14.53	14.53	56.758	17.54	24	Pass
48	5240	14.46	14.56	56.501	17.52	24	Pass
52	5260	14.51	14.58	56.957	17.56	24	Pass
60	5300	14.56	14.58	57.284	17.58	24	Pass
64	5320	14.50	14.57	56.826	17.55	24	Pass
100	5500	14.51	14.52	56.563	17.53	24	Pass
116	5580	14.54	14.48	56.499	17.52	24	Pass
132	5660	14.49	14.54	56.564	17.53	24	Pass
140	5700	14.48	14.51	56.303	17.51	24	Pass
149	5745	14.54	14.49	56.564	17.53	30	Pass
157	5785	14.53	14.50	56.563	17.53	30	Pass
165	5825	14.46	14.52	56.239	17.50	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(24.99) = 24.98\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(24.73) = 24.93\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(24.60) = 24.91\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(24.89) = 24.96\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(25.66) = 25.09\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(24.37) = 24.87\text{ dBm} > 24\text{dBm}$.
7. $11\text{dBm} + 10\log(24.55) = 24.90\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(25.50) = 25.07\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(23.86) = 24.78\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(25.02) = 24.98\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(24.31) = 24.86\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(25.20) = 25.01\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(25.87) = 25.13\text{ dBm} > 24\text{dBm}$.
7. $11\text{dBm} + 10\log(24.84) = 24.95\text{ dBm} > 24\text{dBm}$.

802.11ac (40MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
38	5190	15.02	15.03	63.611	18.04	24	Pass
46	5230	14.97	14.94	62.594	17.97	24	Pass
54	5270	15.00	14.96	62.956	17.99	24	Pass
62	5310	14.98	15.01	63.173	18.01	24	Pass
102	5510	15.02	15.01	63.465	18.03	24	Pass
110	5550	14.95	15.04	63.176	18.01	24	Pass
134	5670	15.01	15.07	63.833	18.05	24	Pass
151	5755	15.02	15.02	63.538	18.03	30	Pass
159	5795	14.93	14.98	62.594	17.97	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(45.90) = 27.62\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(45.28) = 27.56\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(46.00) = 27.63\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(45.95) = 27.62\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(46.16) = 27.64\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(45.39) = 27.57\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(45.93) = 27.62\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(45.76) = 27.60\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(45.61) = 27.59\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(47.07) = 27.73\text{ dBm} > 24\text{dBm}$.

802.11ac (80MHz)

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		CHAIN 0	CHAIN 1				
42	5210	10.05	10.03	20.185	13.05	24	Pass
58	5290	10.01	9.98	19.977	13.01	24	Pass
106	5530	10.01	10.03	20.092	13.03	24	Pass
155	5775	10.05	10.01	20.139	13.04	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(87.25) = 30.41\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(85.36) = 30.31\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(85.64) = 30.33\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(86.11) = 30.35\text{ dBm} > 24\text{dBm}$.

26dB Bandwidth:
802.11a

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	24.61	24.58
60	5300	23.93	24.13
64	5320	23.82	24.85
100	5500	23.57	24.07
116	5580	24.24	24.18
132	5660	24.64	25.04
140	5700	24.52	23.91

802.11ac (20MHz)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	24.99	25.50
60	5300	24.73	23.86
64	5320	24.60	25.02
100	5500	24.89	24.31
116	5580	25.66	25.20
132	5660	24.37	25.87
140	5700	24.55	24.84

802.11ac (40MHz)

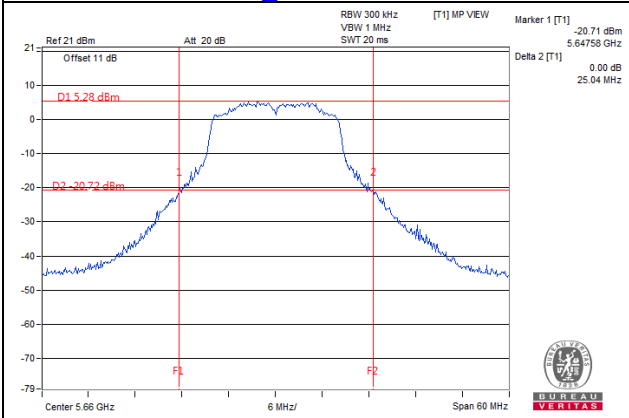
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	45.90	45.39
62	5310	45.28	45.93
102	5510	46.00	45.76
110	5550	45.95	45.61
134	5670	46.16	47.07

802.11ac (80MHz)

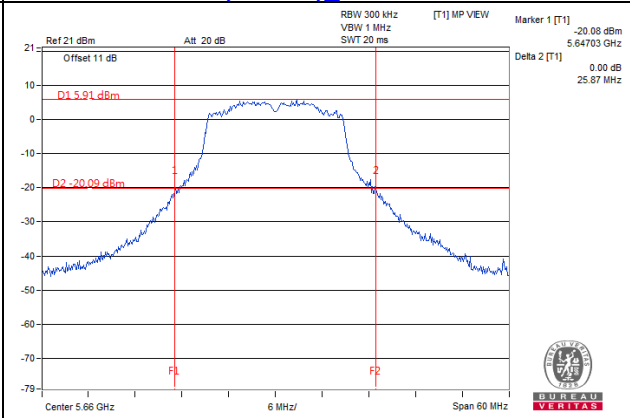
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	87.25	85.64
106	5530	85.36	86.11

Spectrum Plot of Worst Value

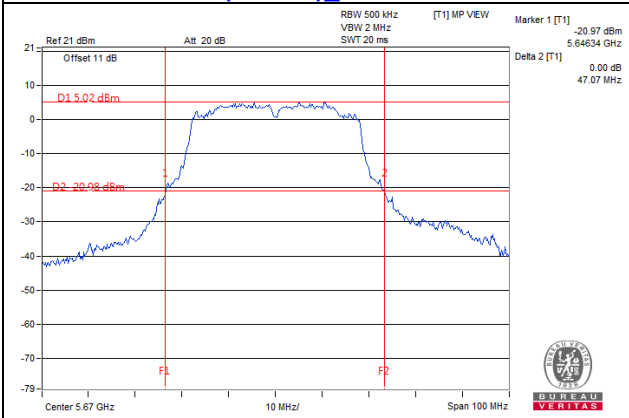
802.11a_Chain1 / CH132



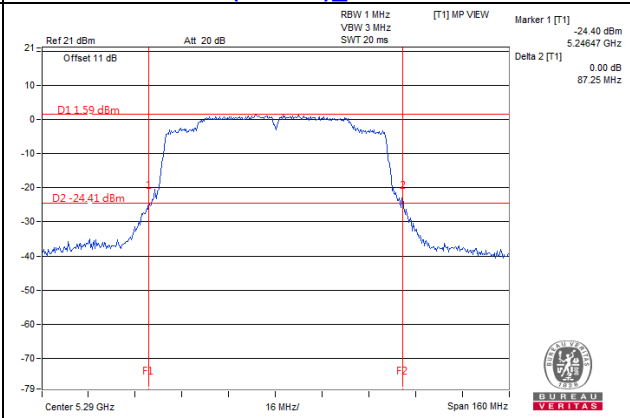
802.11ac (20MHz)_Chain1 / CH132



802.11ac (40MHz)_Chain1 / CH134



802.11ac (80MHz)_Chain0 / CH58



EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	MAX. Power	
	Output Power(dBm)	Output Power(mW)
5250~5350	17.54	59.696
5470~5725	17.52	56.500

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (20MHz)

Frequency Band (MHz)	MAX. Power	
	Output Power(dBm)	Output Power(mW)
5250~5350	17.58	57.284
5470~5725	17.53	56.564

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (40MHz)

Frequency Band (MHz)	MAX. Power	
	Output Power(dBm)	Output Power(mW)
5250~5350	18.01	63.173
5470~5725	18.05	63.833

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

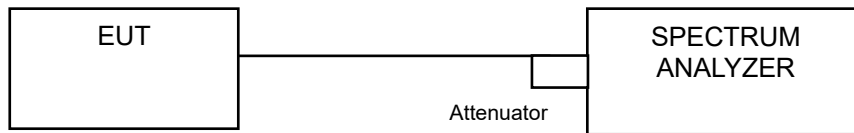
802.11ac (80MHz)

Frequency Band (MHz)	MAX. Power	
	Output Power(dBm)	Output Power(mW)
5250~5350	13.01	19.977
5470~5725	13.03	20.092

NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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 SAMPLE. 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.

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
36	5180	16.68	16.68
40	5200	16.56	16.80
48	5240	16.68	16.68
52	5260	16.80	16.68
60	5300	16.80	16.68
64	5320	16.68	16.80
100	5500	16.68	16.68
116	5580	16.68	16.68
132	5660	16.68	16.68
140	5700	16.68	16.68

802.11ac (20MHz)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
36	5180	17.88	17.88
40	5200	17.88	17.88
48	5240	17.88	17.88
52	5260	17.76	17.88
60	5300	17.88	17.88
64	5320	17.88	17.88
100	5500	17.88	17.88
116	5580	17.88	17.88
132	5660	17.88	17.88
140	5700	17.88	17.88

802.11ac (40MHz)

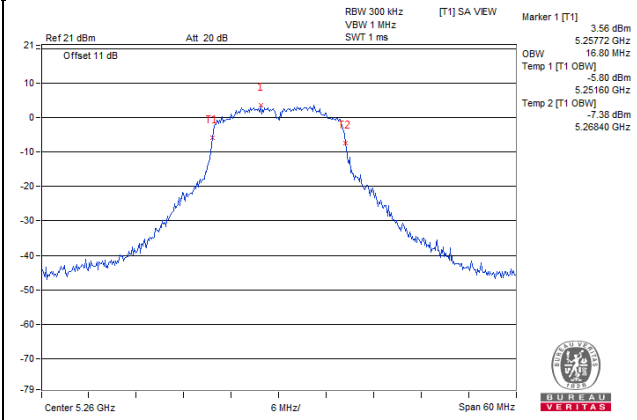
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
38	5190	36.20	36.20
46	5230	36.20	36.40
54	5270	36.20	36.20
62	5310	36.20	36.20
102	5510	36.20	36.20
110	5550	36.40	36.20
134	5670	36.40	36.20

802.11ac (80MHz)

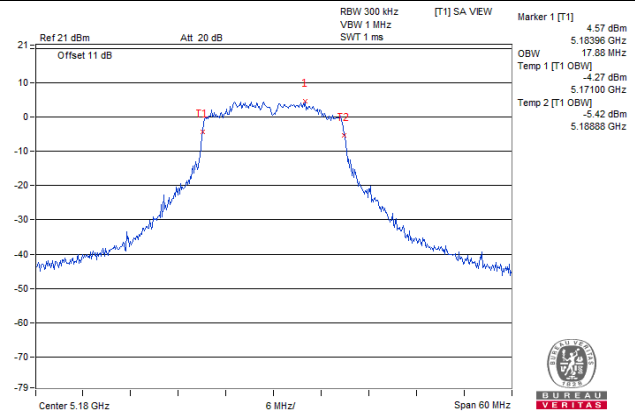
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		CHAIN 0	CHAIN 1
42	5210	75.12	75.12
58	5290	75.12	74.88
106	5530	75.12	75.12

Spectrum Plot of Worst Value

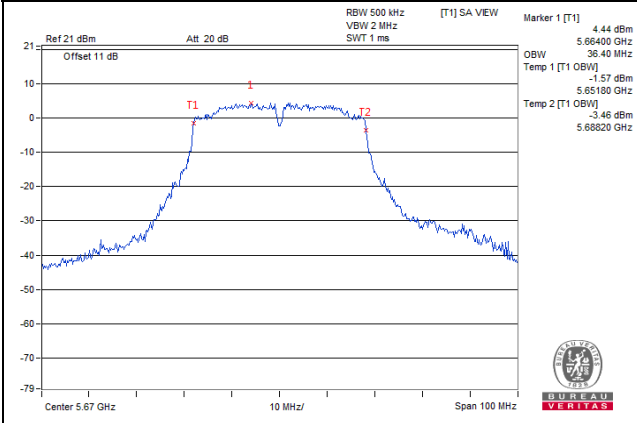
802.11a_Chain0 / CH52



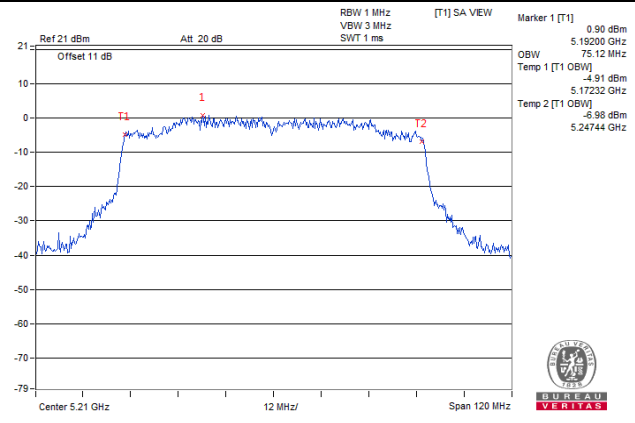
802.11ac (20MHz)_Chain0 / CH36



802.11ac (40MHz)_Chain0 / CH134



802.11ac (80MHz)_Chain0 / CH42



4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Client device	11dBm/ MHz
U-NII-2A		√	11dBm/ MHz
U-NII-2C		√	11dBm/ MHz
U-NII-3		√	30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2 (

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to “free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
- 3) Sweep time = auto, trigger set to “free run”.
- 4) Trace average at least 100 traces in power averaging mode.
- 5) Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C:

802.11a

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	0.77	-0.55	0.28	3.45	10.87	Pass
40	5200	-0.92	-0.55	0.28	2.56	10.87	Pass
48	5240	-0.48	-1.04	0.28	2.54	10.87	Pass
52	5260	-1.11	-1.11	0.28	2.18	10.87	Pass
60	5300	-1.39	-1.45	0.28	1.87	10.87	Pass
64	5320	-0.86	-1.21	0.28	2.26	10.87	Pass
100	5500	-0.43	-0.30	0.28	2.93	10.87	Pass
116	5580	-0.67	-0.55	0.28	2.68	10.87	Pass
132	5660	-0.34	0.30	0.28	3.28	10.87	Pass
140	5700	0.01	0.20	0.28	3.40	10.87	Pass

- Note:**
- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 - Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.13 - 6) = 10.87\text{dBm}$.
 - Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (20MHz)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	0.02	0.97	0.21	3.74	10.87	Pass
40	5200	0.72	0.03	0.21	3.61	10.87	Pass
48	5240	0.55	0.58	0.21	3.79	10.87	Pass
52	5260	0.59	0.63	0.21	3.83	10.87	Pass
60	5300	1.22	0.62	0.21	4.15	10.87	Pass
64	5320	0.65	0.00	0.21	3.56	10.87	Pass
100	5500	0.82	0.83	0.21	4.05	10.87	Pass
116	5580	0.46	0.50	0.21	3.70	10.87	Pass
132	5660	0.23	0.22	0.21	3.45	10.87	Pass
140	5700	0.54	0.59	0.21	3.79	10.87	Pass

- Note:**
- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 - Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11-(6.13-6) = 10.87\text{dBm}$.
 - Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (40MHz)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-2.78	-2.77	0.77	1.00	10.87	Pass
46	5230	-2.96	-2.82	0.77	0.89	10.87	Pass
54	5270	-2.77	-2.72	0.77	1.04	10.87	Pass
62	5310	-2.72	-2.86	0.77	0.99	10.87	Pass
102	5510	-2.98	-2.92	0.77	0.83	10.87	Pass
118	5590	-3.04	-2.87	0.77	0.83	10.87	Pass
134	5670	-3.06	-3.12	0.77	0.69	10.87	Pass

- Note:**
- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 - Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.13 - 6) = 10.87\text{dBm}$.
 - Refer to section 3.3 for duty cycle spectrum plot.

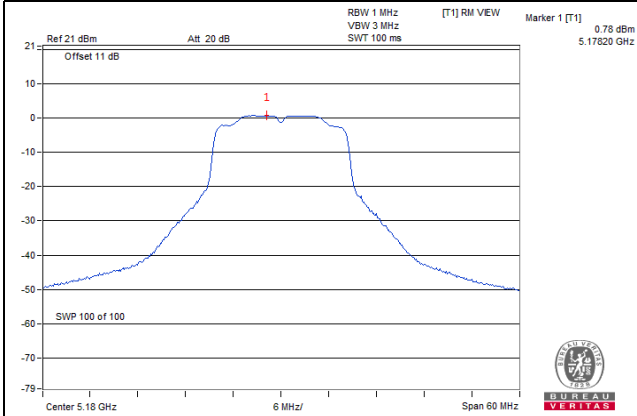
802.11ac (80MHz)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-10.23	-10.14	0.78	-6.39	10.87	Pass
58	5290	-10.22	-10.28	0.78	-6.46	10.87	Pass
106	5530	-10.31	-10.39	0.78	-6.56	10.87	Pass

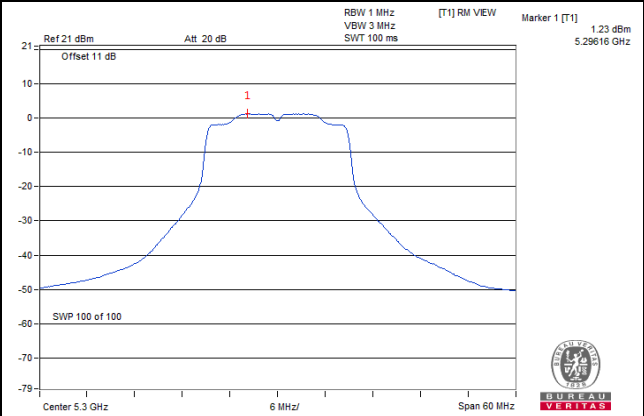
- Note:**
- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
 - Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.13 - 6) = 10.87\text{dBm}$.
 - Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

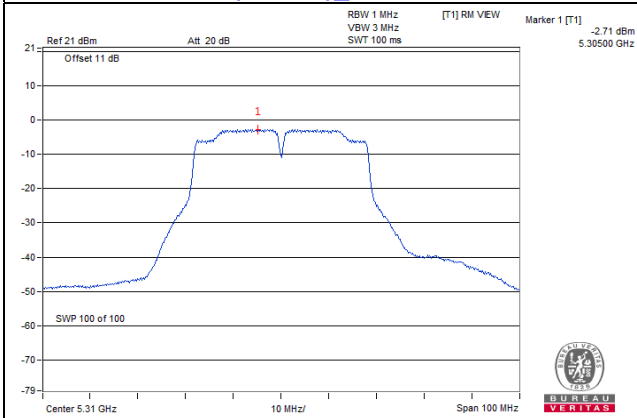
802.11a_Chain 0 / CH36



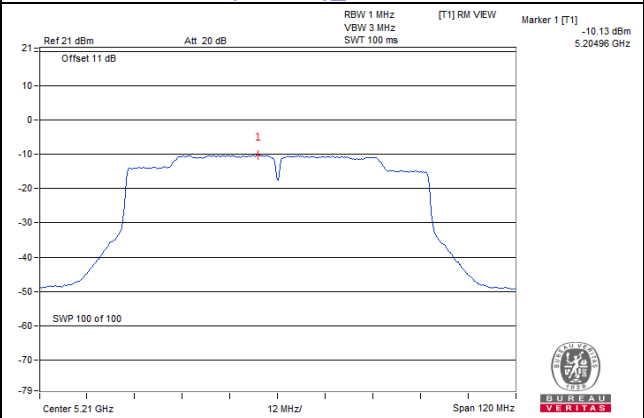
802.11ac (20MHz)_Chain 0 / CH60



802.11ac (40MHz)_Chain 0 / CH62



802.11ac (80MHz)_Chain 1 / CH42



For U-NII-3:

802.11a

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-8.00	3.01	0.28	-4.71	29.87	Pass
	157	5785	-7.43	3.01	0.28	-4.14	29.87	Pass
	165	5825	-7.99	3.01	0.28	-4.70	29.87	Pass
1	149	5745	-7.47	3.01	0.28	-4.18	29.87	Pass
	157	5785	-8.10	3.01	0.28	-4.81	29.87	Pass
	165	5825	-8.09	3.01	0.28	-4.80	29.87	Pass

Note: 1. Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(6.13-6) = 29.87\text{dBm}$.

2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (20MHz)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-7.91	3.01	0.21	-4.69	29.87	Pass
	157	5785	-7.59	3.01	0.21	-4.37	29.87	Pass
	165	5825	-7.98	3.01	0.21	-4.76	29.87	Pass
1	149	5745	-7.78	3.01	0.21	-4.56	29.87	Pass
	157	5785	-8.32	3.01	0.21	-5.10	29.87	Pass
	165	5825	-7.88	3.01	0.21	-4.66	29.87	Pass

Note: 1. Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(6.13-6) = 29.87\text{dBm}$.

2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (40MHz)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-11.85	3.01	0.77	-8.07	29.87	Pass
	159	5795	-11.78	3.01	0.77	-8.00	29.87	Pass
1	151	5755	-11.58	3.01	0.77	-7.80	29.87	Pass
	159	5795	-11.23	3.01	0.77	-7.45	29.87	Pass

Note: 1. Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(6.13-6) = 29.87\text{dBm}$.

2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (80MHz)

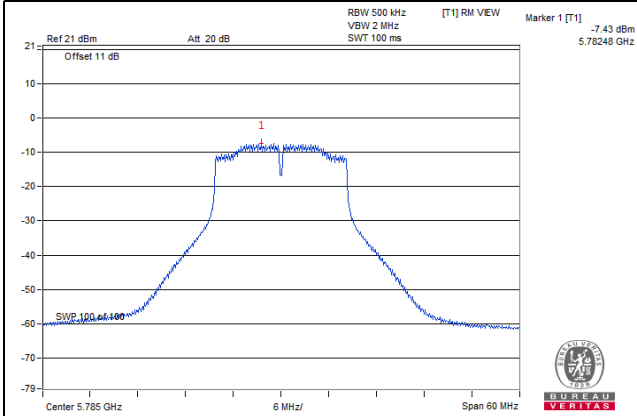
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-18.84	3.01	0.78	-15.05	29.87	Pass
1	155	5775	-18.60	3.01	0.78	-14.81	29.87	Pass

Note: 1. Directional gain = $3.12\text{dBi} + 10\log(2) = 6.13\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(6.13-6) = 29.87\text{dBm}$.

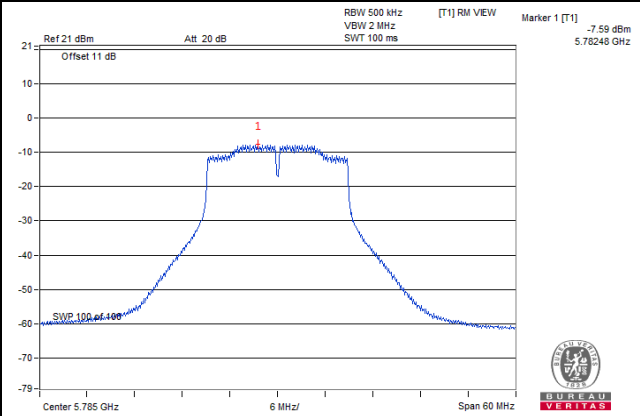
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

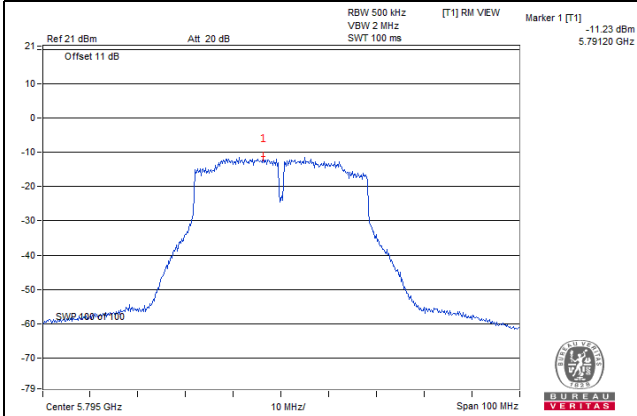
802.11a_Chain 0 / CH157



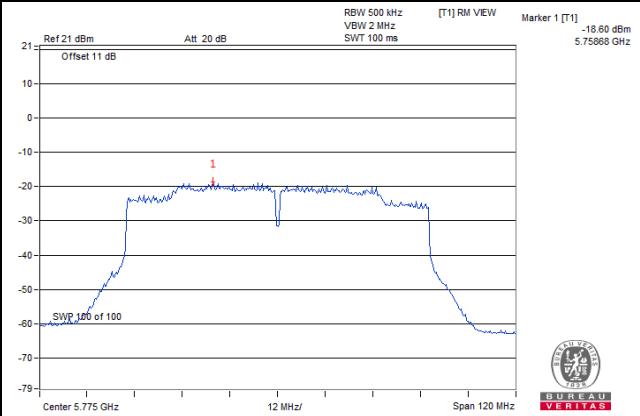
802.11ac (20MHz)_Chain 0 / CH157



802.11ac (40MHz)_Chain 1 / CH159



802.11ac (80MHz)_Chain 1 / CH155

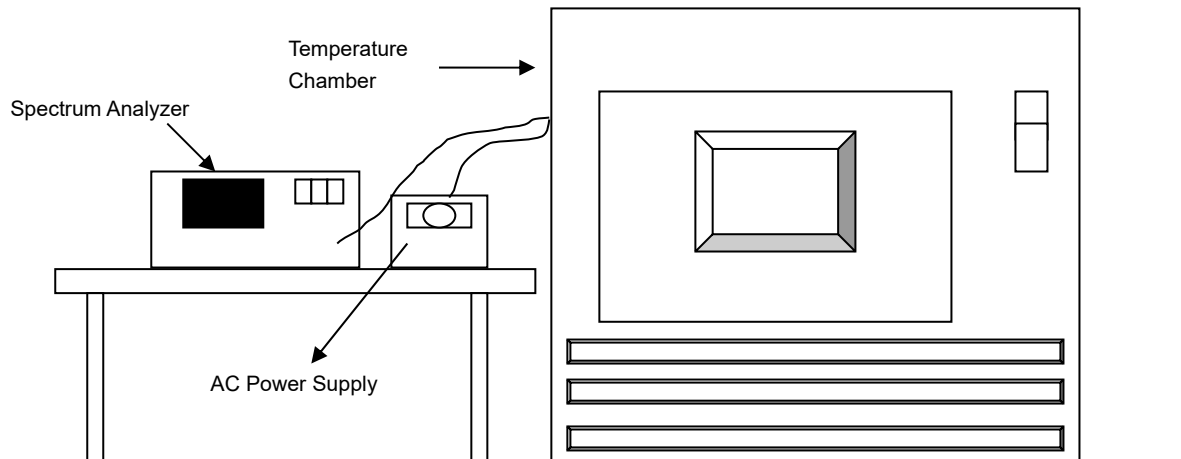


4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed..
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	120	5179.9874	Pass	5179.984	Pass	5179.9857	Pass	5179.9871	Pass
40	120	5179.9773	Pass	5179.9758	Pass	5179.9737	Pass	5179.9773	Pass
30	120	5179.9852	Pass	5179.9835	Pass	5179.9838	Pass	5179.9862	Pass
20	120	5180.0068	Pass	5180.0088	Pass	5180.0086	Pass	5180.0084	Pass
10	120	5180.0013	Pass	5179.9992	Pass	5179.999	Pass	5180.0006	Pass
0	120	5180.0263	Pass	5180.0249	Pass	5180.0273	Pass	5180.0242	Pass
-10	120	5180.0151	Pass	5180.0176	Pass	5180.0163	Pass	5180.017	Pass
-20	120	5179.9947	Pass	5179.9918	Pass	5179.9916	Pass	5179.994	Pass
-30	120	5180.0144	Pass	5180.0136	Pass	5180.0157	Pass	5180.0123	Pass

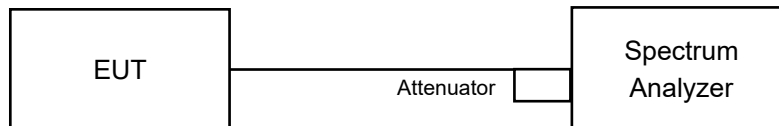
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5180.0062	Pass	5180.0086	Pass	5180.0082	Pass	5180.0092	Pass
	120	5180.0068	Pass	5180.0088	Pass	5180.0086	Pass	5180.0084	Pass
	102	5180.0066	Pass	5180.0082	Pass	5180.0085	Pass	5180.008	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

- a. Set resolution bandwidth (RBW) = 100kHz
- b. Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.15	15.18	0.5	PASS
157	5785	15.17	15.35	0.5	PASS
165	5825	15.39	15.38	0.5	PASS

802.11ac (20MHz)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.16	15.16	0.5	PASS
157	5785	15.18	15.48	0.5	PASS
165	5825	15.19	15.36	0.5	PASS

802.11ac (40MHz)

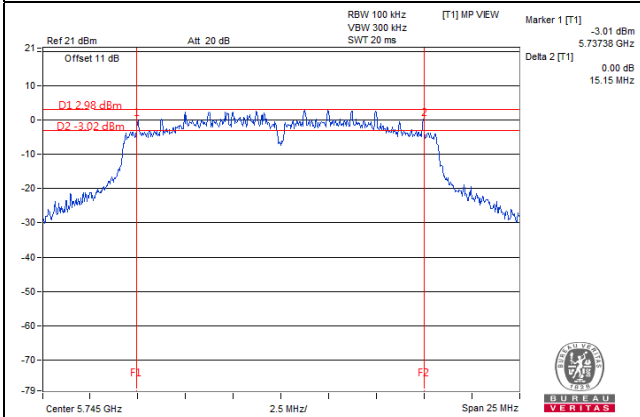
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.19	35.20	0.5	PASS
159	5795	35.17	35.18	0.5	PASS

802.11ac (80MHz)

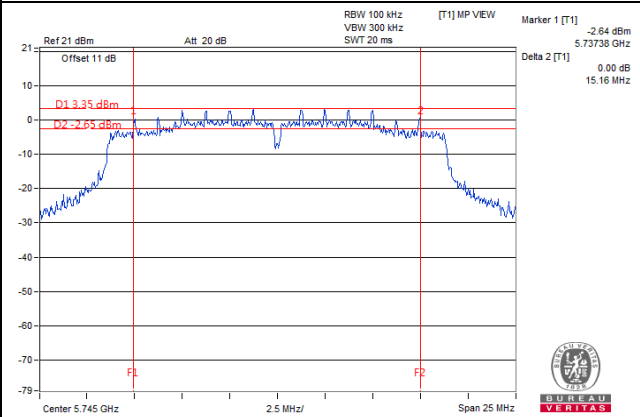
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	62.76	72.63	0.5	PASS

Spectrum Plot of Worst Value

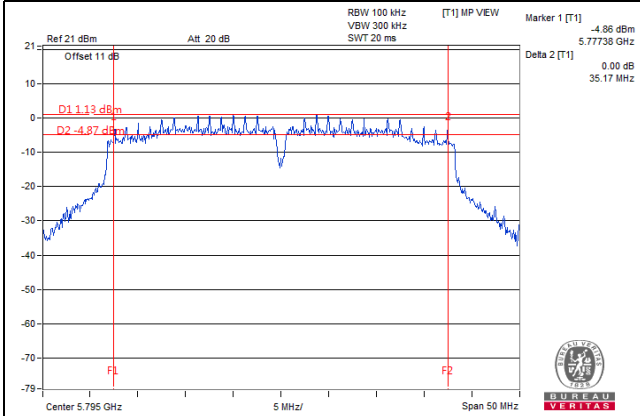
802.11a_Chain 0 / CH149



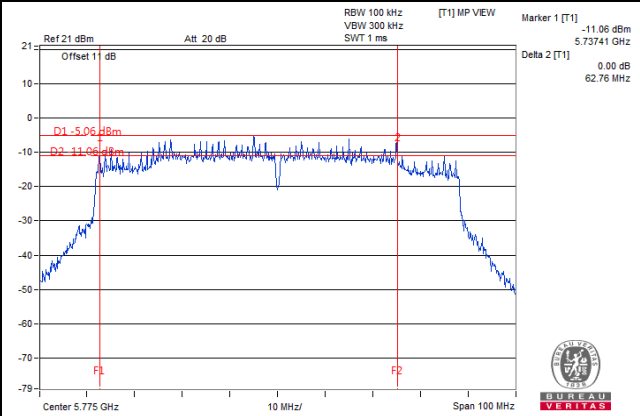
802.11ac (20MHz)_Chain 0 / CH149



802.11ac (40MHz)_Chain 0 / CH159



802.11ac (80MHz)_Chain 0 / CH155

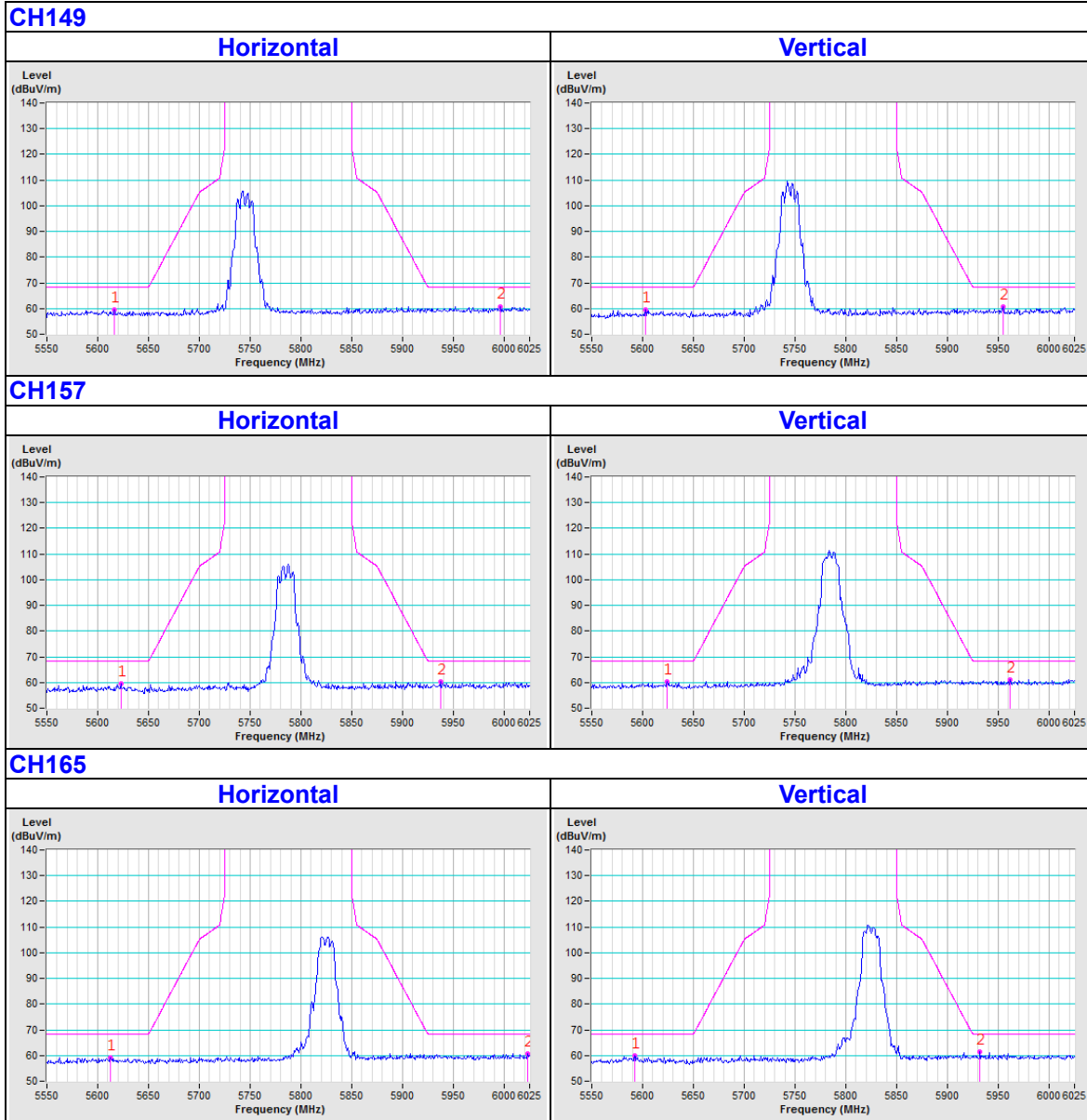


5 Pictures of Test Arrangements

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

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

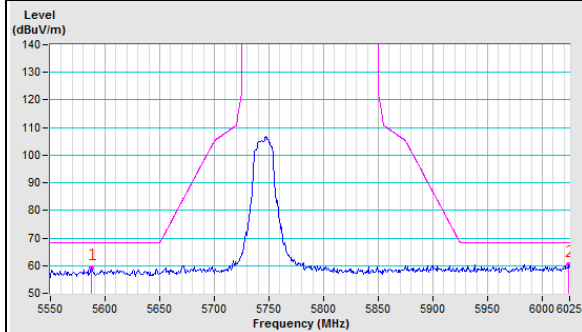
802.11a



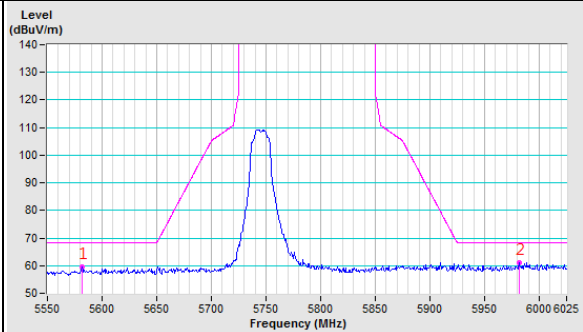
802.11ac (20MHz)

CH149

Horizontal

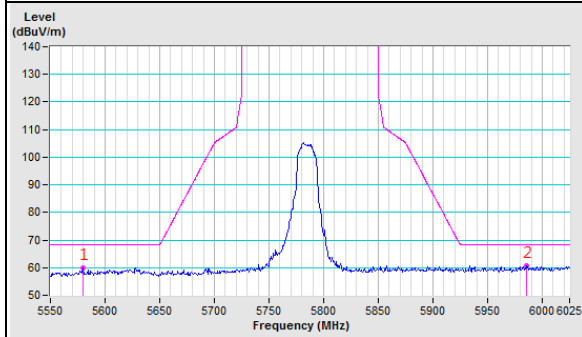


Vertical

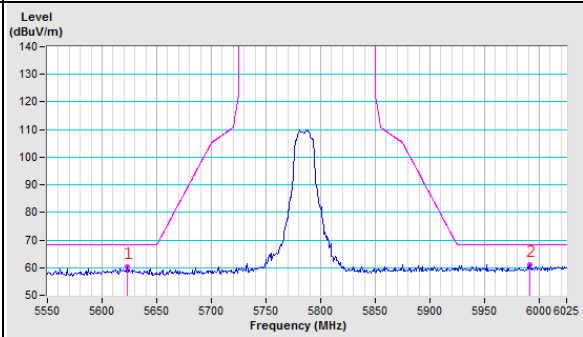


CH157

Horizontal

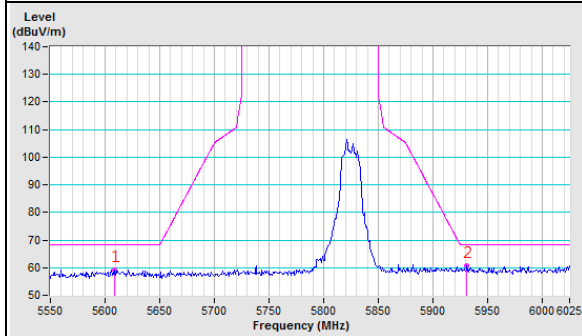


Vertical

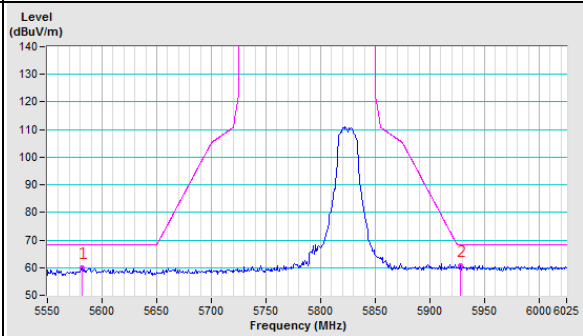


CH165

Horizontal

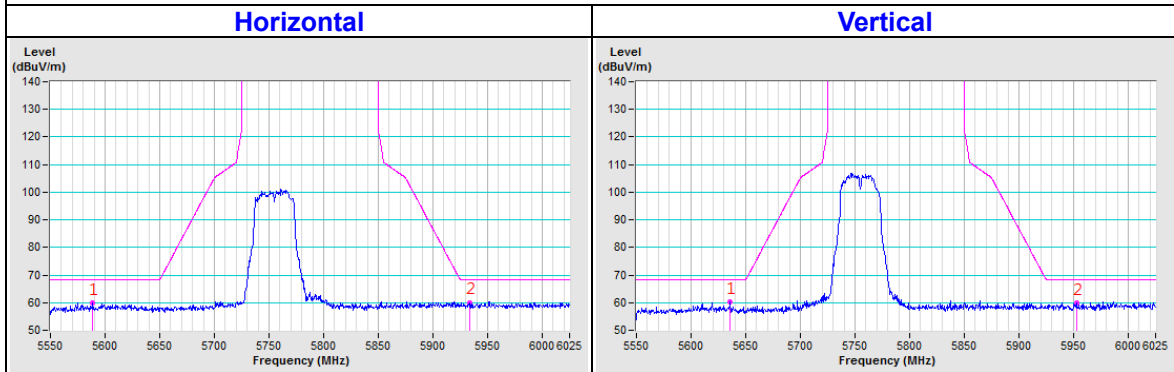


Vertical

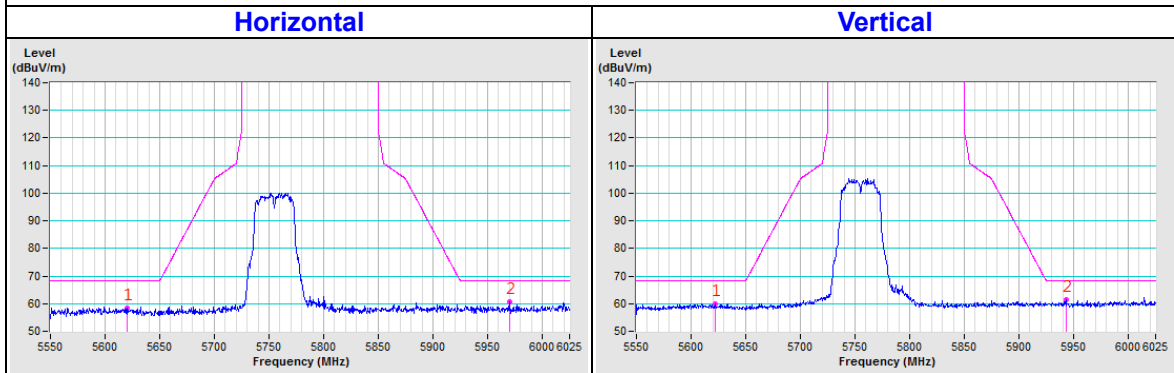


802.11ac (40MHz)

CH151

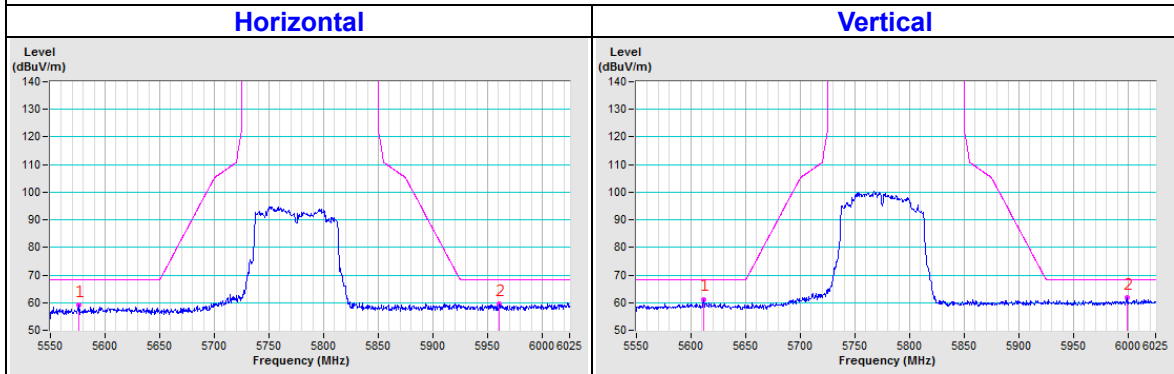


CH159



802.11ac (80MHz)

CH155



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 according to ISO/IEC 17025.

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

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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