FCC Test Report

Report No.: RF160701E08 R3

FCC ID: ACQ-MT76125G

Test Model: MT7612 5G

Received Date: July 05, 2016

Test Date: July 15 to 22, 2016

Issued Date: Aug. 11, 2016

Applicant: ARRIS Group, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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Release Control Record

Issue No.	Description	Date Issued
RF160701E08	Original release.	July 28, 2016
RF160701E08 R1	Revised section 3.4	Aug. 05, 2016
RF160701E08 R2	Revised section 5 (Test Setup Photo)	Aug. 08, 2016
RF160701E08 R3	Revised address of applicant	Aug. 11, 2016

1 Certificate of Conformity

Product: WiFi Wireless Module

Brand: ARRIS

Test Model: MT7612 5G

Sample Status: ENGINEERING SAMPLE

Applicant: ARRIS Group, Inc.

Test Date: July 15 to 22, 2016

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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Aug. 08, 2016
Midoli Peng / Specialist

Approved by : _____ , **Date:** Aug. 08, 2016
May Chen / 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 -15.69dB at 0.16172MHz
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 -0.1dB at 5150.00MHz& 5470.00MHz
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
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 i-pex(MHF) not a standard connector.

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

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	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.31 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.40 dB
	6GHz ~ 18GHz	3.73 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	WiFi Wireless Module
Brand	ARRIS
Test Model	MT7612 5G
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 3.3V from host equipment
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	5180 MHz ~ 5240 MHz, 5260 MHz ~5320 MHz, 5500 MHz ~ 5720 MHz, 5745 MHz ~ 5825 MHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	5180-5240MHz : 76.831mW 5260-5320MHz : 76.039mW 5500-5720MHz : 77.274mW 5745-5825MHz : 77.193mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The antenna provided to the EUT, please refer to the following table:

Set 1							
Transmitter Circuit	Brand	Model	Gain (dBi) (Include cable loss)	Antenna Type	Connecter Type	Frequency range (GHz to GHz)	Cable Length (mm)
Chain (0)	Amphenol	N5X20SC-G112U	3.57	PCB	i-pex(MHF)	5.15~5.25	112
			3.41			5.25~5.35	
			3.01			5.47~5.725	
			3.48			5.725~5.85	
Chain (1)	Amphenol	N5X20SC-G162U	3.57	PCB	i-pex(MHF)	5.15~5.25	162
			3.41			5.25~5.35	
			3.01			5.47~5.725	
			3.48			5.725~5.85	
Set 2							
Transmitter Circuit	Brand	Model	Gain (dBi) (Include cable loss)	Antenna Type	Connecter Type	Frequency range (GHz to GHz)	Cable Length (mm)
Chain (0)	Airgain	AMSTD-112-00	2	PCB	i-pex(MHF)	5.15~5.25	112
			2			5.25~5.35	
			2			5.47~5.725	
			2			5.725~5.85	
Chain (1)	Airgain	AMSTD-162-00	2	PCB	i-pex(MHF)	5.15~5.25	162
			2			5.25~5.35	
			2			5.47~5.725	
			2			5.725~5.85	

2. The EUT incorporates a MIMO function

802.11a	6 ~ 54Mbps	2TX	2RX
802.11n (HT20) & 802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11ac (VHT20)	MCS0~8 Nss=1	2TX	2RX
	MCS0~8 Nss=2	2TX	2RX
802.11ac (VHT40) & 802.11ac (VHT80)	MCS0~9 Nss=1	2TX	2RX
	MCS0~9 Nss=2	2TX	2RX
Note: 1. 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)			

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

FOR 5500 ~ 5720MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530MHz	138	5690 MHz
122	5610 MHz		

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	140	OFDM	BPSK	6
	5260-5320	52 to 64				
	5500-5720	100 to 144				
	5745-5825	149 to 165				

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	140	OFDM	BPSK	6
	5260-5320	52 to 64				
	5500-5720	100 to 144				
	5745-5825	149 to 165				

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power (System)	Tested By
RE≥1G	24deg. C, 62%RH	120Vac, 60Hz	Tim Ho
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Tim Ho
PLC	24deg. C, 61%RH	120Vac, 60Hz	Jyunchun Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98%, duty factor shall be considered.

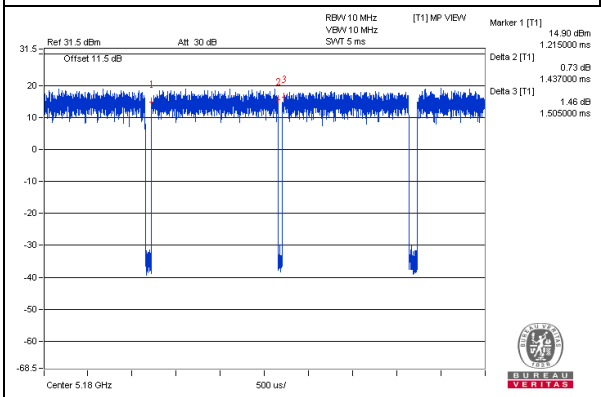
802.11a: Duty cycle = 1.437 ms/1.505 ms = 0.955, Duty factor = 10 * log(1/0.955) = 0.20

802.11ac (VHT20): Duty cycle = 1.36 ms/1.514 ms = 0.898, Duty factor = 10 * log(1/0.898) = 0.47

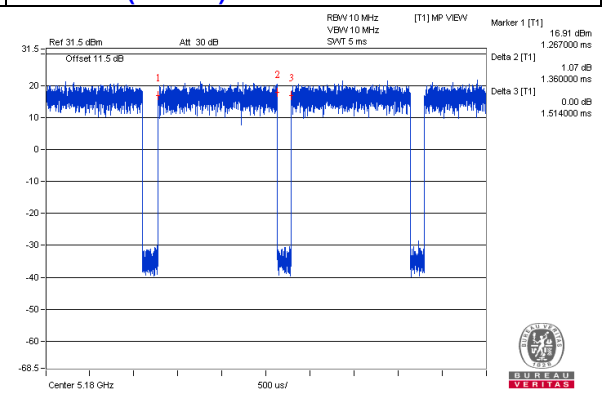
802.11ac (VHT40): Duty cycle = 0.675 ms/0.829 ms = 0.814, Duty factor = 10 * log(1/0.814) = 0.89

802.11ac (VHT80): Duty cycle = 0.336 ms/0.471 ms = 0.713, Duty factor = 10 * log(1/0.713) = 1.47

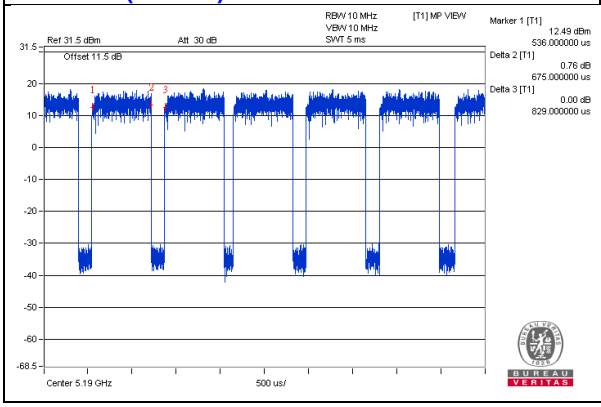
802.11a



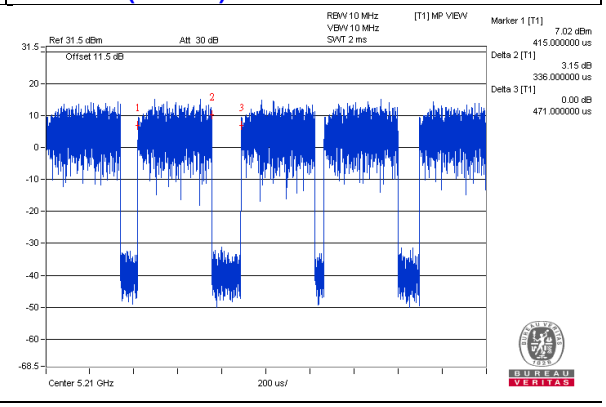
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

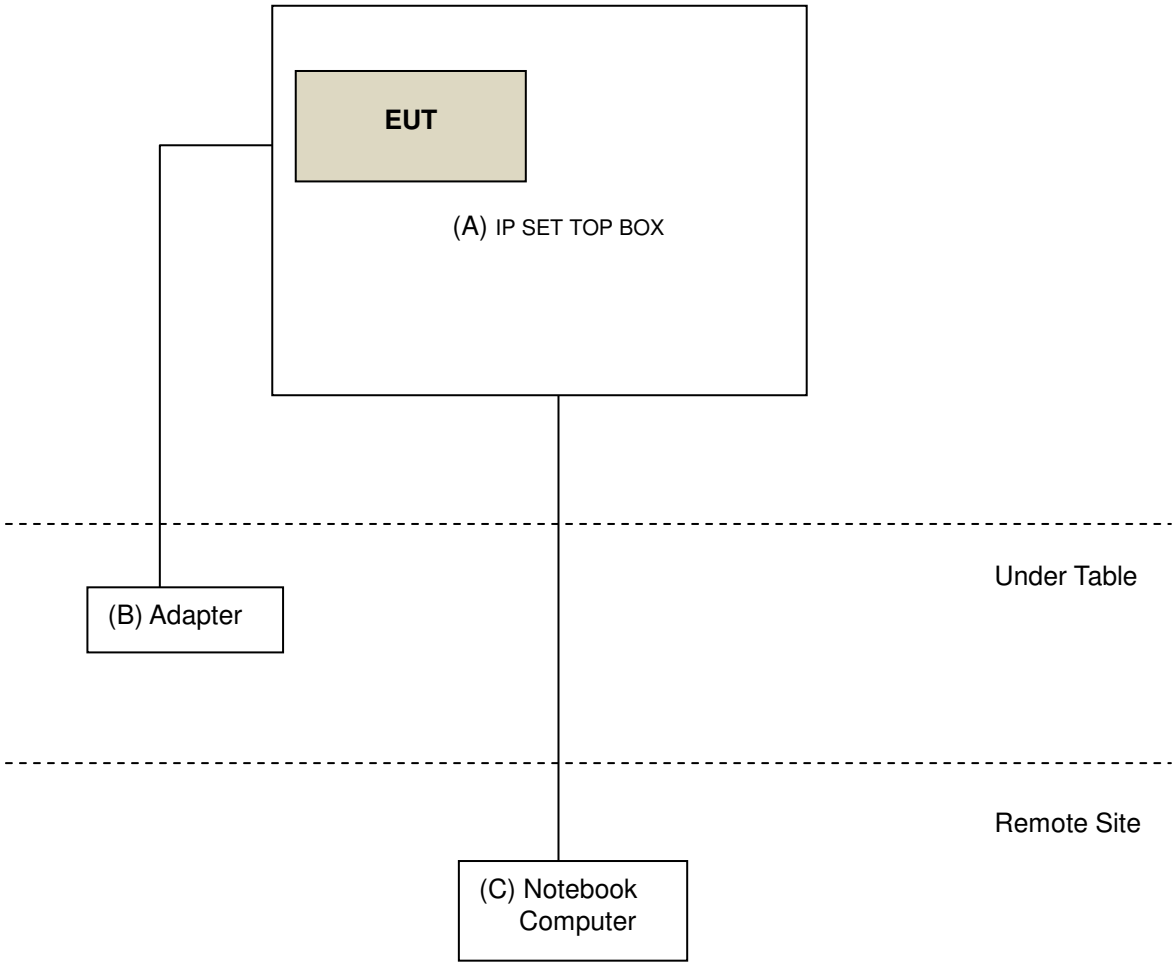
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	IP SET TOP BOX	ARRIS	VIP4402W	NA	NA	Supplied by client
B.	Adapter	APD	WB-18D12FU-FD AA	NA	NA	Supplied by client
C.	Notebook Computer	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.5	No	0	Supplied by client
2.	RJ-45 cable	1	10	No	0	Provided by Lab

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 v01r02
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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. 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 v01r02			Field Strength at 3m	
			PK:74 (dBμV/m)	AV:54 (dBμV/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	☒	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
	☐	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:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 12, 2015	Aug. 11, 2016
Pre-Amplifier(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-05	May 07, 2016	May 06, 2017
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-156	Jan. 04, 2016	Jan. 03, 2017
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 02, 2016	Apr. 01, 2017
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Jan. 20, 2016	Jan. 19, 2017
Pre-Amplifier Agilent	8449B	3008A02465	Apr. 05, 2016	Apr. 04, 2017
RF Cable	EMC104-SM-SM-2000 EMC104-SM-SM-5000 EMC104-SM-SM-5000	150317 150321 150322	Mar. 30, 2016	Mar. 29, 2017
Spectrum Analyzer Keysight	N9030A	MY54490520	July 26, 2015	July 25, 2016
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2016	Jan. 14, 2017
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Jan. 08, 2016	Jan. 07, 2017
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 16, 2016	Jan. 15, 2017
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Power meter Anritsu	ML2495A	0824006	May 26, 2016	May 25, 2017
Power sensor Anritsu	MA2411B	0738172	May 26, 2016	May 25, 2017
Spectrum Analyzer R&S	FSP40	100036	Jan. 27, 2016	Jan. 26, 2017
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 03, 2015	Dec. 02, 2016

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 calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3 Loop antenna was used for all emissions below 30 MHz.
4. The test was performed in 966 Chamber No. 3.
5 The FCC Site Registration No. is 147459
6. The CANADA Site Registration No. is 20331-1
7 Tested Date: July 15o 22, 2016

4.1.3 Test Procedure

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 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 detect 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:

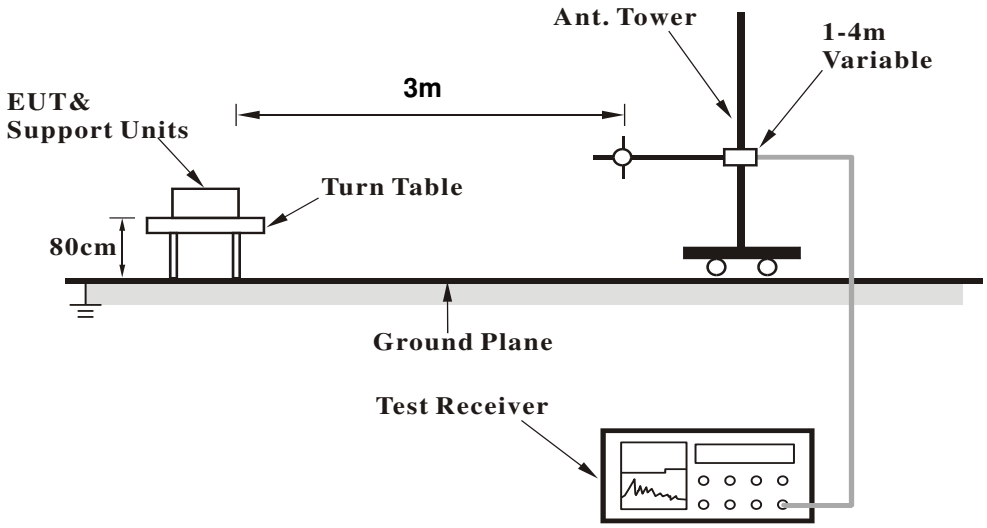
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 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

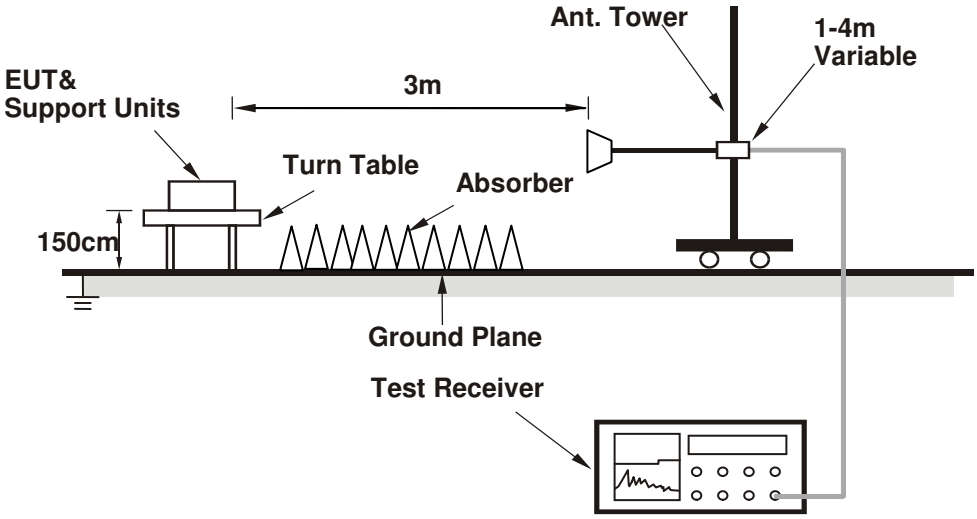
No deviation.

4.1.5 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Condition

1. Connect the EUT with the support unit A (Notebook Computer) which is placed on remote site.
2. Controlling software (QATool V1.0.3.14) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data：

802.11a

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

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	57.6 PK	74.0	-16.4	1.10 H	157	54.6	3.0
2	5150.00	44.2 AV	54.0	-9.8	1.10 H	157	41.2	3.0
3	*5180.00	110.2 PK			1.10 H	157	107.1	3.1
4	*5180.00	101.0 AV			1.10 H	157	97.9	3.1
5	#10360.00	56.8 PK	74.0	-17.2	3.96 H	264	43.2	13.6
6	#10360.00	44.5 AV	54.0	-9.5	3.96 H	264	30.9	13.6
7	15540.00	58.8 PK	74.0	-15.2	1.25 H	185	43.1	15.7
8	15540.00	45.7 AV	54.0	-8.3	1.25 H	185	30.0	15.7
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	53.5 PK	74.0	-20.5	3.91 V	85	50.5	3.0
2	5150.00	41.2 AV	54.0	-12.8	3.91 V	85	38.2	3.0
3	*5180.00	105.6 PK			3.91 V	85	102.5	3.1
4	*5180.00	96.3 AV			3.91 V	85	93.2	3.1
5	#10360.00	59.5 PK	74.0	-14.5	2.27 V	187	45.9	13.6
6	#10360.00	46.8 AV	54.0	-7.2	2.27 V	187	33.2	13.6
7	15540.00	56.2 PK	74.0	-17.8	2.27 V	118	40.5	15.7
8	15540.00	43.4 AV	54.0	-10.6	2.27 V	118	27.7	15.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	110.6 PK			1.16 H	154	107.5	3.1
2	*5200.00	101.4 AV			1.16 H	154	98.3	3.1
3	#10400.00	56.8 PK	74.0	-17.2	4.00 H	254	43.2	13.6
4	#10400.00	44.5 AV	54.0	-9.5	4.00 H	254	30.9	13.6
5	15600.00	59.1 PK	74.0	-14.9	1.26 H	200	43.4	15.7
6	15600.00	45.8 AV	54.0	-8.2	1.26 H	200	30.1	15.7
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	106.2 PK			3.93 V	79	103.1	3.1
2	*5200.00	96.8 AV			3.93 V	79	93.7	3.1
3	#10400.00	59.7 PK	74.0	-14.3	2.32 V	203	46.1	13.6
4	#10400.00	47.3 AV	54.0	-6.7	2.32 V	203	33.7	13.6
5	15600.00	56.4 PK	74.0	-17.6	2.29 V	133	40.7	15.7
6	15600.00	43.8 AV	54.0	-10.2	2.29 V	133	28.1	15.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	110.8 PK			1.62 H	192	107.6	3.2
2	*5240.00	101.4 AV			1.62 H	192	98.2	3.2
3	5350.00	53.5 PK	74.0	-20.5	1.62 H	192	50.0	3.5
4	5350.00	40.8 AV	54.0	-13.2	1.62 H	192	37.3	3.5
5	#10480.00	56.8 PK	74.0	-17.2	3.98 H	269	42.8	14.0
6	#10480.00	44.5 AV	54.0	-9.5	3.98 H	269	30.5	14.0
7	15720.00	58.7 PK	74.0	-15.3	1.31 H	180	43.3	15.4
8	15720.00	45.5 AV	54.0	-8.5	1.31 H	180	30.1	15.4
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	106.0 PK			3.85 V	74	102.8	3.2
2	*5240.00	96.3 AV			3.85 V	74	93.1	3.2
3	5350.00	54.0 PK	74.0	-20.0	3.85 V	74	50.5	3.5
4	5350.00	41.5 AV	54.0	-12.5	3.85 V	74	38.0	3.5
5	#10480.00	59.1 PK	74.0	-14.9	2.33 V	177	45.1	14.0
6	#10480.00	46.7 AV	54.0	-7.3	2.33 V	177	32.7	14.0
7	15720.00	56.4 PK	74.0	-17.6	2.26 V	128	41.0	15.4
8	15720.00	43.4 AV	54.0	-10.6	2.26 V	128	28.0	15.4

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	53.2 PK	74.0	-20.8	1.02 H	192	50.2	3.0
2	5150.00	41.0 AV	54.0	-13.0	1.02 H	192	38.0	3.0
3	*5260.00	111.3 PK			1.02 H	192	108.0	3.3
4	*5260.00	101.9 AV			1.02 H	192	98.6	3.3
5	#10520.00	56.2 PK	74.0	-17.8	3.94 H	280	42.1	14.1
6	#10520.00	44.2 AV	54.0	-9.8	3.94 H	280	30.1	14.1
7	15780.00	59.2 PK	74.0	-14.8	1.23 H	171	44.0	15.2
8	15780.00	46.0 AV	54.0	-8.0	1.23 H	171	30.8	15.2
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	53.7 PK	74.0	-20.3	3.94 V	81	50.7	3.0
2	5150.00	41.4 AV	54.0	-12.6	3.94 V	81	38.4	3.0
3	*5260.00	106.3 PK			3.94 V	81	103.0	3.3
4	*5260.00	97.0 AV			3.94 V	81	93.7	3.3
5	#10520.00	59.9 PK	74.0	-14.1	2.32 V	171	45.8	14.1
6	#10520.00	47.2 AV	54.0	-6.8	2.32 V	171	33.1	14.1
7	15780.00	56.5 PK	74.0	-17.5	2.26 V	108	41.3	15.2
8	15780.00	43.7 AV	54.0	-10.3	2.26 V	108	28.5	15.2

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	111.3 PK			1.49 H	197	108.0	3.3
2	*5300.00	101.9 AV			1.49 H	197	98.6	3.3
3	10600.00	57.0 PK	74.0	-17.0	3.91 H	271	42.7	14.3
4	10600.00	44.7 AV	54.0	-9.3	3.91 H	271	30.4	14.3
5	15900.00	58.2 PK	74.0	-15.8	1.29 H	180	43.1	15.1
6	15900.00	45.3 AV	54.0	-8.7	1.29 H	180	30.2	15.1
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	106.4 PK			3.87 V	78	103.1	3.3
2	*5300.00	96.7 AV			3.87 V	78	93.4	3.3
3	10600.00	59.7 PK	74.0	-14.3	2.23 V	192	45.4	14.3
4	10600.00	47.1 AV	54.0	-6.9	2.23 V	192	32.8	14.3
5	15900.00	56.1 PK	74.0	-17.9	2.32 V	125	41.0	15.1
6	15900.00	43.3 AV	54.0	-10.7	2.32 V	125	28.2	15.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	111.1 PK			1.05 H	172	107.6	3.5
2	*5320.00	101.6 AV			1.05 H	172	98.1	3.5
3	5350.00	57.2 PK	74.0	-16.8	1.05 H	172	53.7	3.5
4	5350.00	44.3 AV	54.0	-9.7	1.05 H	172	40.8	3.5
5	10640.00	56.9 PK	74.0	-17.1	3.99 H	265	42.6	14.3
6	10640.00	44.5 AV	54.0	-9.5	3.99 H	265	30.2	14.3
7	15960.00	58.6 PK	74.0	-15.4	1.28 H	201	43.5	15.1
8	15960.00	45.5 AV	54.0	-8.5	1.28 H	201	30.4	15.1
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	106.3 PK			3.93 V	81	102.8	3.5
2	*5320.00	96.9 AV			3.93 V	81	93.4	3.5
3	5350.00	53.2 PK	74.0	-20.8	3.93 V	81	49.7	3.5
4	5350.00	40.7 AV	54.0	-13.3	3.93 V	81	37.2	3.5
5	10640.00	59.5 PK	74.0	-14.5	2.31 V	179	45.2	14.3
6	10640.00	46.7 AV	54.0	-7.3	2.31 V	179	32.4	14.3
7	15960.00	55.8 PK	74.0	-18.2	2.24 V	129	40.7	15.1
8	15960.00	43.2 AV	54.0	-10.8	2.24 V	129	28.1	15.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	#5470.00	58.3 PK	74.0	-15.7	1.05 H	155	54.6	3.7
2	#5470.00	45.5 AV	54.0	-8.5	1.05 H	155	41.8	3.7
3	*5500.00	111.3 PK			1.05 H	155	107.5	3.8
4	*5500.00	101.9 AV			1.05 H	155	98.1	3.8
5	11000.00	56.8 PK	74.0	-17.2	3.96 H	250	41.6	15.2
6	11000.00	44.8 AV	54.0	-9.2	3.96 H	250	29.6	15.2
7	#16500.00	58.4 PK	74.0	-15.6	1.31 H	189	41.0	17.4
8	#16500.00	45.4 AV	54.0	-8.6	1.31 H	189	28.0	17.4
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	#5470.00	53.5 PK	74.0	-20.5	3.96 V	73	49.8	3.7
2	#5470.00	41.0 AV	54.0	-13.0	3.96 V	73	37.3	3.7
3	*5500.00	106.2 PK			3.96 V	73	102.4	3.8
4	*5500.00	96.9 AV			3.96 V	73	93.1	3.8
5	11000.00	59.5 PK	74.0	-14.5	2.27 V	193	44.3	15.2
6	11000.00	47.1 AV	54.0	-6.9	2.27 V	193	31.9	15.2
7	#16500.00	56.5 PK	74.0	-17.5	2.23 V	115	39.1	17.4
8	#16500.00	43.5 AV	54.0	-10.5	2.23 V	115	26.1	17.4

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	111.3 PK			1.00 H	217	107.4	3.9
2	*5580.00	102.0 AV			1.00 H	217	98.1	3.9
3	11160.00	56.7 PK	74.0	-17.3	4.00 H	256	41.5	15.2
4	11160.00	44.4 AV	54.0	-9.6	4.00 H	256	29.2	15.2
5	#16740.00	59.1 PK	74.0	-14.9	1.28 H	191	40.8	18.3
6	#16740.00	45.8 AV	54.0	-8.2	1.28 H	191	27.5	18.3
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	105.8 PK			3.87 V	71	101.9	3.9
2	*5580.00	96.7 AV			3.87 V	71	92.8	3.9
3	11160.00	59.8 PK	74.0	-14.2	2.30 V	192	44.6	15.2
4	11160.00	47.2 AV	54.0	-6.8	2.30 V	192	32.0	15.2
5	#16740.00	55.7 PK	74.0	-18.3	2.29 V	126	37.4	18.3
6	#16740.00	43.0 AV	54.0	-11.0	2.29 V	126	24.7	18.3

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	111.5 PK			1.00 H	217	107.3	4.2
2	*5700.00	102.1 AV			1.00 H	217	97.9	4.2
3	#5725.00	65.1 PK	74.0	-8.9	1.00 H	217	60.9	4.2
4	#5725.00	49.8 AV	54.0	-4.2	1.00 H	217	45.6	4.2
5	11400.00	57.0 PK	74.0	-17.0	4.00 H	258	41.5	15.5
6	11400.00	44.4 AV	54.0	-9.6	4.00 H	258	28.9	15.5
7	#17100.00	58.8 PK	74.0	-15.2	1.20 H	195	38.7	20.1
8	#17100.00	45.5 AV	54.0	-8.5	1.20 H	195	25.4	20.1
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	106.7 PK			3.94 V	71	102.5	4.2
2	*5700.00	97.4 AV			3.94 V	71	93.2	4.2
3	#5725.00	53.2 PK	74.0	-20.8	3.94 V	71	49.0	4.2
4	#5725.00	41.0 AV	54.0	-13.0	3.94 V	71	36.8	4.2
5	11400.00	59.6 PK	74.0	-14.4	2.23 V	188	44.1	15.5
6	11400.00	46.8 AV	54.0	-7.2	2.23 V	188	31.3	15.5
7	#17100.00	56.6 PK	74.0	-17.4	2.26 V	103	36.5	20.1
8	#17100.00	43.5 AV	54.0	-10.5	2.26 V	103	23.4	20.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	#5470.00	53.0 PK	74.0	-21.0	1.00 H	217	49.3	3.7
2	#5470.00	40.0 AV	54.0	-14.0	1.00 H	217	36.3	3.7
3	*5720.00	111.0 PK			1.00 H	217	106.8	4.2
4	*5720.00	101.8 AV			1.00 H	217	97.6	4.2
5	#5850.00	53.8 PK	74.0	-20.2	1.00 H	217	49.6	4.2
6	#5850.00	40.8 AV	54.0	-13.2	1.00 H	217	36.6	4.2
7	11440.00	56.9 PK	74.0	-17.1	3.92 H	252	41.6	15.3
8	11440.00	44.5 AV	54.0	-9.5	3.92 H	252	29.2	15.3
9	#17160.00	58.5 PK	74.0	-15.5	1.22 H	173	38.7	19.8
10	#17160.00	45.6 AV	54.0	-8.4	1.22 H	173	25.8	19.8
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	#5470.00	53.5 PK	74.0	-20.5	3.92 V	79	49.8	3.7
2	#5470.00	40.4 AV	54.0	-13.6	3.92 V	79	36.7	3.7
3	*5720.00	105.5 PK			3.92 V	79	101.3	4.2
4	*5720.00	96.5 AV			3.92 V	79	92.3	4.2
5	#5850.00	54.2 PK	74.0	-19.8	3.92 V	79	50.0	4.2
6	#5850.00	41.1 AV	54.0	-12.9	3.92 V	79	36.9	4.2
7	11440.00	59.7 PK	74.0	-14.3	2.25 V	192	44.4	15.3
8	11440.00	47.0 AV	54.0	-7.0	2.25 V	192	31.7	15.3
9	#17160.00	56.3 PK	74.0	-17.7	2.26 V	108	36.5	19.8
10	#17160.00	43.8 AV	54.0	-10.2	2.26 V	108	24.0	19.8

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5635.50	54.7 PK	68.2	-13.5	1.00 H	191	50.7	4.0
2	*5745.00	112.9 PK			1.00 H	191	108.7	4.2
3	*5745.00	103.8 AV			1.00 H	191	99.6	4.2
4	#5965.62	54.5 PK	68.2	-13.7	1.00 H	191	50.0	4.5
5	11490.00	57.2 PK	74.0	-16.8	3.94 H	271	42.0	15.2
6	11490.00	44.9 AV	54.0	-9.1	3.94 H	271	29.7	15.2
7	#17235.00	58.6 PK	74.0	-15.4	1.19 H	182	38.6	20.0
8	#17235.00	45.8 AV	54.0	-8.2	1.19 H	182	25.8	20.0
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	#5633.60	53.0 PK	68.2	-15.2	3.33 V	279	49.0	4.0
2	*5745.00	104.4 PK			3.33 V	279	100.2	4.2
3	*5745.00	95.3 AV			3.33 V	279	91.1	4.2
4	#5965.62	53.2 PK	68.2	-15.0	3.33 V	279	48.7	4.5
5	11490.00	59.8 PK	74.0	-14.2	2.24 V	188	44.6	15.2
6	11490.00	47.0 AV	54.0	-7.0	2.24 V	188	31.8	15.2
7	#17235.00	56.6 PK	74.0	-17.4	2.30 V	125	36.6	20.0
8	#17235.00	43.7 AV	54.0	-10.3	2.30 V	125	23.7	20.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5620.30	53.7 PK	68.2	-14.5	1.43 H	188	49.7	4.0
2	*5785.00	109.9 PK			1.43 H	188	105.8	4.1
3	*5785.00	101.8 AV			1.43 H	188	97.7	4.1
4	#6014.07	53.9 PK	68.2	-14.3	1.43 H	188	49.4	4.5
5	11570.00	56.6 PK	74.0	-17.4	3.93 H	271	41.5	15.1
6	11570.00	44.4 AV	54.0	-9.6	3.93 H	271	29.3	15.1
7	#17355.00	59.0 PK	74.0	-15.0	1.29 H	173	38.5	20.5
8	#17355.00	45.8 AV	54.0	-8.2	1.29 H	173	25.3	20.5
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	#5623.62	51.9 PK	68.2	-16.3	3.47 V	311	47.9	4.0
2	*5785.00	104.7 PK			3.47 V	311	100.6	4.1
3	*5785.00	96.2 AV			3.47 V	311	92.1	4.1
4	#6020.73	53.1 PK	68.2	-15.1	3.47 V	311	48.5	4.6
5	11570.00	59.2 PK	74.0	-14.8	2.29 V	177	44.1	15.1
6	11570.00	46.6 AV	54.0	-7.4	2.29 V	177	31.5	15.1
7	#17355.00	56.8 PK	74.0	-17.2	2.25 V	121	36.3	20.5
8	#17355.00	43.8 AV	54.0	-10.2	2.25 V	121	23.3	20.5

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5604.62	52.7 PK	68.2	-15.5	1.00 H	218	48.8	3.9
2	*5825.00	110.2 PK			1.00 H	218	106.0	4.2
3	*5825.00	101.9 AV			1.00 H	218	97.7	4.2
4	#6015.98	53.9 PK	68.2	-14.3	1.00 H	218	49.4	4.5
5	11650.00	56.7 PK	74.0	-17.3	3.93 H	253	41.7	15.0
6	11650.00	44.2 AV	54.0	-9.8	3.93 H	253	29.2	15.0
7	#17475.00	59.2 PK	74.0	-14.8	1.31 H	172	38.1	21.1
8	#17475.00	45.9 AV	54.0	-8.1	1.31 H	172	24.8	21.1
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	#5610.80	52.6 PK	68.2	-15.6	3.44 V	307	48.7	3.9
2	*5825.00	105.1 PK			3.44 V	307	100.9	4.2
3	*5825.00	96.9 AV			3.44 V	307	92.7	4.2
4	#6002.20	52.7 PK	68.2	-15.5	3.44 V	307	48.2	4.5
5	11650.00	59.5 PK	74.0	-14.5	2.25 V	195	44.5	15.0
6	11650.00	46.7 AV	54.0	-7.3	2.25 V	195	31.7	15.0
7	#17475.00	56.4 PK	74.0	-17.6	2.28 V	114	35.3	21.1
8	#17475.00	43.8 AV	54.0	-10.2	2.28 V	114	22.7	21.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT20)

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

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	57.0 PK	74.0	-17.0	1.00 H	206	54.0	3.0
2	5150.00	44.0 AV	54.0	-10.0	1.00 H	206	41.0	3.0
3	*5180.00	109.2 PK			1.00 H	206	106.1	3.1
4	*5180.00	100.3 AV			1.00 H	206	97.2	3.1
5	#10360.00	56.6 PK	74.0	-17.4	3.97 H	270	43.0	13.6
6	#10360.00	44.1 AV	54.0	-9.9	3.97 H	270	30.5	13.6
7	15540.00	58.8 PK	74.0	-15.2	1.24 H	172	43.1	15.7
8	15540.00	45.8 AV	54.0	-8.2	1.24 H	172	30.1	15.7
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	53.5 PK	74.0	-20.5	3.86 V	80	50.5	3.0
2	5150.00	40.5 AV	54.0	-13.5	3.86 V	80	37.5	3.0
3	*5180.00	104.0 PK			3.86 V	80	100.9	3.1
4	*5180.00	95.2 AV			3.86 V	80	92.1	3.1
5	#10360.00	59.5 PK	74.0	-14.5	2.27 V	199	45.9	13.6
6	#10360.00	46.6 AV	54.0	-7.4	2.27 V	199	33.0	13.6
7	15540.00	56.2 PK	74.0	-17.8	2.22 V	121	40.5	15.7
8	15540.00	43.1 AV	54.0	-10.9	2.22 V	121	27.4	15.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	109.5 PK			1.29 H	156	106.4	3.1
2	*5200.00	100.5 AV			1.29 H	156	97.4	3.1
3	#10400.00	56.8 PK	74.0	-17.2	3.95 H	265	43.2	13.6
4	#10400.00	44.6 AV	54.0	-9.4	3.95 H	265	31.0	13.6
5	15600.00	58.4 PK	74.0	-15.6	1.21 H	172	42.7	15.7
6	15600.00	45.3 AV	54.0	-8.7	1.21 H	172	29.6	15.7
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	105.0 PK			3.95 V	96	101.9	3.1
2	*5200.00	96.0 AV			3.95 V	96	92.9	3.1
3	#10400.00	59.7 PK	74.0	-14.3	2.27 V	183	46.1	13.6
4	#10400.00	46.9 AV	54.0	-7.1	2.27 V	183	33.3	13.6
5	15600.00	56.5 PK	74.0	-17.5	2.26 V	126	40.8	15.7
6	15600.00	43.6 AV	54.0	-10.4	2.26 V	126	27.9	15.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	109.9 PK			1.30 H	169	106.7	3.2
2	*5240.00	100.8 AV			1.30 H	169	97.6	3.2
3	5350.00	53.7 PK	74.0	-20.3	1.30 H	169	50.2	3.5
4	5350.00	40.9 AV	54.0	-13.1	1.30 H	169	37.4	3.5
5	#10480.00	56.8 PK	74.0	-17.2	3.91 H	276	42.8	14.0
6	#10480.00	44.2 AV	54.0	-9.8	3.91 H	276	30.2	14.0
7	15720.00	58.8 PK	74.0	-15.2	1.26 H	195	43.4	15.4
8	15720.00	45.8 AV	54.0	-8.2	1.26 H	195	30.4	15.4

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	105.6 PK			3.89 V	95	102.4	3.2
2	*5240.00	96.3 AV			3.89 V	95	93.1	3.2
3	5350.00	54.2 PK	74.0	-19.8	3.89 V	95	50.7	3.5
4	5350.00	41.2 AV	54.0	-12.8	3.89 V	95	37.7	3.5
5	#10480.00	58.8 PK	74.0	-15.2	2.32 V	176	44.8	14.0
6	#10480.00	46.4 AV	54.0	-7.6	2.32 V	176	32.4	14.0
7	15720.00	56.0 PK	74.0	-18.0	2.30 V	122	40.6	15.4
8	15720.00	43.1 AV	54.0	-10.9	2.30 V	122	27.7	15.4

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	53.3 PK	74.0	-20.7	1.10 H	173	50.3	3.0
2	5150.00	40.4 AV	54.0	-13.6	1.10 H	173	37.4	3.0
3	*5260.00	110.6 PK			1.10 H	173	107.3	3.3
4	*5260.00	101.1 AV			1.10 H	173	97.8	3.3
5	#10520.00	57.2 PK	74.0	-16.8	3.98 H	264	43.1	14.1
6	#10520.00	44.9 AV	54.0	-9.1	3.98 H	264	30.8	14.1
7	15780.00	58.9 PK	74.0	-15.1	1.29 H	177	43.7	15.2
8	15780.00	45.6 AV	54.0	-8.4	1.29 H	177	30.4	15.2
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	54.3 PK	74.0	-19.7	3.93 V	70	51.3	3.0
2	5150.00	41.0 AV	54.0	-13.0	3.93 V	70	38.0	3.0
3	*5260.00	105.5 PK			3.93 V	70	102.2	3.3
4	*5260.00	96.0 AV			3.93 V	70	92.7	3.3
5	#10520.00	59.1 PK	74.0	-14.9	2.30 V	203	45.0	14.1
6	#10520.00	46.6 AV	54.0	-7.4	2.30 V	203	32.5	14.1
7	15780.00	56.4 PK	74.0	-17.6	2.32 V	117	41.2	15.2
8	15780.00	43.3 AV	54.0	-10.7	2.32 V	117	28.1	15.2

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	110.5 PK			1.00 H	175	107.2	3.3
2	*5300.00	101.1 AV			1.00 H	175	97.8	3.3
3	10600.00	57.0 PK	74.0	-17.0	3.91 H	273	42.7	14.3
4	10600.00	44.5 AV	54.0	-9.5	3.91 H	273	30.2	14.3
5	15900.00	58.9 PK	74.0	-15.1	1.28 H	191	43.8	15.1
6	15900.00	45.8 AV	54.0	-8.2	1.28 H	191	30.7	15.1
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	105.2 PK			3.89 V	86	101.9	3.3
2	*5300.00	96.1 AV			3.89 V	86	92.8	3.3
3	10600.00	59.3 PK	74.0	-14.7	2.26 V	195	45.0	14.3
4	10600.00	46.8 AV	54.0	-7.2	2.26 V	195	32.5	14.3
5	15900.00	56.3 PK	74.0	-17.7	2.32 V	111	41.2	15.1
6	15900.00	43.6 AV	54.0	-10.4	2.32 V	111	28.5	15.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	110.4 PK			1.03 H	172	106.9	3.5
2	*5320.00	100.9 AV			1.03 H	172	97.4	3.5
3	5350.00	59.5 PK	74.0	-14.5	1.03 H	172	56.0	3.5
4	5350.00	44.8 AV	54.0	-9.2	1.03 H	172	41.3	3.5
5	10640.00	57.2 PK	74.0	-16.8	3.93 H	253	42.9	14.3
6	10640.00	44.7 AV	54.0	-9.3	3.93 H	253	30.4	14.3
7	15960.00	59.4 PK	74.0	-14.6	1.30 H	175	44.3	15.1
8	15960.00	46.2 AV	54.0	-7.8	1.30 H	175	31.1	15.1
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	104.9 PK			3.93 V	79	101.4	3.5
2	*5320.00	95.6 AV			3.93 V	79	92.1	3.5
3	5350.00	54.4 PK	74.0	-19.6	3.93 V	79	50.9	3.5
4	5350.00	41.2 AV	54.0	-12.8	3.93 V	79	37.7	3.5
5	10640.00	59.6 PK	74.0	-14.4	2.25 V	179	45.3	14.3
6	10640.00	46.9 AV	54.0	-7.1	2.25 V	179	32.6	14.3
7	15960.00	55.7 PK	74.0	-18.3	2.27 V	133	40.6	15.1
8	15960.00	43.0 AV	54.0	-11.0	2.27 V	133	27.9	15.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	#5470.00	58.2 PK	74.0	-15.8	1.06 H	176	54.5	3.7
2	#5470.00	45.3 AV	54.0	-8.7	1.06 H	176	41.6	3.7
3	*5500.00	111.2 PK			1.06 H	176	107.4	3.8
4	*5500.00	101.8 AV			1.06 H	176	98.0	3.8
5	11000.00	56.9 PK	74.0	-17.1	3.92 H	264	41.7	15.2
6	11000.00	44.7 AV	54.0	-9.3	3.92 H	264	29.5	15.2
7	#16500.00	58.1 PK	74.0	-15.9	1.25 H	184	40.7	17.4
8	#16500.00	45.3 AV	54.0	-8.7	1.25 H	184	27.9	17.4
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	#5470.00	53.9 PK	74.0	-20.1	3.96 V	77	50.2	3.7
2	#5470.00	40.9 AV	54.0	-13.1	3.96 V	77	37.2	3.7
3	*5500.00	105.7 PK			3.96 V	77	101.9	3.8
4	*5500.00	96.5 AV			3.96 V	77	92.7	3.8
5	11000.00	59.7 PK	74.0	-14.3	2.23 V	178	44.5	15.2
6	11000.00	47.1 AV	54.0	-6.9	2.23 V	178	31.9	15.2
7	#16500.00	56.6 PK	74.0	-17.4	2.33 V	126	39.2	17.4
8	#16500.00	43.6 AV	54.0	-10.4	2.33 V	126	26.2	17.4

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	111.1 PK			1.06 H	219	107.2	3.9
2	*5580.00	101.8 AV			1.06 H	219	97.9	3.9
3	11160.00	56.6 PK	74.0	-17.4	3.98 H	254	41.4	15.2
4	11160.00	44.6 AV	54.0	-9.4	3.98 H	254	29.4	15.2
5	#16740.00	59.2 PK	74.0	-14.8	1.21 H	175	40.9	18.3
6	#16740.00	46.0 AV	54.0	-8.0	1.21 H	175	27.7	18.3
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	106.3 PK			3.86 V	81	102.4	3.9
2	*5580.00	97.1 AV			3.86 V	81	93.2	3.9
3	11160.00	59.4 PK	74.0	-14.6	2.29 V	201	44.2	15.2
4	11160.00	46.8 AV	54.0	-7.2	2.29 V	201	31.6	15.2
5	#16740.00	56.9 PK	74.0	-17.1	2.23 V	123	38.6	18.3
6	#16740.00	43.8 AV	54.0	-10.2	2.23 V	123	25.5	18.3

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	111.7 PK			1.00 H	194	107.5	4.2
2	*5700.00	102.3 AV			1.00 H	194	98.1	4.2
3	#5725.00	67.4 PK	74.0	-6.6	1.00 H	194	63.2	4.2
4	#5725.00	50.7 AV	54.0	-3.3	1.00 H	194	46.5	4.2
5	11400.00	56.8 PK	74.0	-17.2	4.00 H	261	41.3	15.5
6	11400.00	44.2 AV	54.0	-9.8	4.00 H	261	28.7	15.5
7	#17100.00	58.5 PK	74.0	-15.5	1.29 H	173	38.4	20.1
8	#17100.00	45.5 AV	54.0	-8.5	1.29 H	173	25.4	20.1
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	106.3 PK			3.92 V	74	102.1	4.2
2	*5700.00	96.9 AV			3.92 V	74	92.7	4.2
3	#5725.00	53.6 PK	74.0	-20.4	3.92 V	74	49.4	4.2
4	#5725.00	40.5 AV	54.0	-13.5	3.92 V	74	36.3	4.2
5	11400.00	59.7 PK	74.0	-14.3	2.21 V	172	44.2	15.5
6	11400.00	47.2 AV	54.0	-6.8	2.21 V	172	31.7	15.5
7	#17100.00	56.8 PK	74.0	-17.2	2.22 V	124	36.7	20.1
8	#17100.00	43.9 AV	54.0	-10.1	2.22 V	124	23.8	20.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	#5470.00	52.9 PK	74.0	-21.1	1.00 H	215	49.2	3.7
2	#5470.00	40.3 AV	54.0	-13.7	1.00 H	215	36.6	3.7
3	*5720.00	111.0 PK			1.00 H	215	106.8	4.2
4	*5720.00	101.6 AV			1.00 H	215	97.4	4.2
5	#5850.00	53.9 PK	74.0	-20.1	1.00 H	215	49.7	4.2
6	#5850.00	41.2 AV	54.0	-12.8	1.00 H	215	37.0	4.2
7	11440.00	56.3 PK	74.0	-17.7	3.94 H	252	41.0	15.3
8	11440.00	44.1 AV	54.0	-9.9	3.94 H	252	28.8	15.3
9	#17160.00	59.2 PK	74.0	-14.8	1.25 H	180	39.4	19.8
10	#17160.00	46.1 AV	54.0	-7.9	1.25 H	180	26.3	19.8
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	#5470.00	54.1 PK	74.0	-19.9	3.86 V	93	50.4	3.7
2	#5470.00	41.2 AV	54.0	-12.8	3.86 V	93	37.5	3.7
3	*5720.00	106.3 PK			3.86 V	93	102.1	4.2
4	*5720.00	96.9 AV			3.86 V	93	92.7	4.2
5	#5850.00	53.5 PK	74.0	-20.5	3.86 V	93	49.3	4.2
6	#5850.00	40.7 AV	54.0	-13.3	3.86 V	93	36.5	4.2
7	11440.00	59.0 PK	74.0	-15.0	2.22 V	180	43.7	15.3
8	11440.00	46.4 AV	54.0	-7.6	2.22 V	180	31.1	15.3
9	#17160.00	56.7 PK	74.0	-17.3	2.27 V	122	36.9	19.8
10	#17160.00	43.6 AV	54.0	-10.4	2.27 V	122	23.8	19.8

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5644.52	54.0 PK	68.2	-14.2	1.00 H	188	50.0	4.0
2	*5745.00	110.7 PK			1.00 H	188	106.5	4.2
3	*5745.00	101.6 AV			1.00 H	188	97.4	4.2
4	#5936.18	53.3 PK	68.2	-14.9	1.00 H	188	48.9	4.4
5	11490.00	57.1 PK	74.0	-16.9	3.97 H	277	41.9	15.2
6	11490.00	44.7 AV	54.0	-9.3	3.97 H	277	29.5	15.2
7	#17235.00	59.0 PK	74.0	-15.0	1.25 H	193	39.0	20.0
8	#17235.00	45.7 AV	54.0	-8.3	1.25 H	193	25.7	20.0
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	#5583.73	52.3 PK	68.2	-15.9	3.12 V	92	48.4	3.9
2	*5745.00	104.3 PK			3.12 V	92	100.1	4.2
3	*5745.00	95.1 AV			3.12 V	92	90.9	4.2
4	#5985.57	53.6 PK	68.2	-14.6	3.12 V	92	49.1	4.5
5	11490.00	59.5 PK	74.0	-14.5	2.23 V	192	44.3	15.2
6	11490.00	47.0 AV	54.0	-7.0	2.23 V	192	31.8	15.2
7	#17235.00	56.7 PK	74.0	-17.3	2.28 V	123	36.7	20.0
8	#17235.00	43.7 AV	54.0	-10.3	2.28 V	123	23.7	20.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5629.32	53.2 PK	68.2	-15.0	1.15 H	190	49.2	4.0
2	*5785.00	109.7 PK			1.15 H	190	105.6	4.1
3	*5785.00	100.7 AV			1.15 H	190	96.6	4.1
4	#5935.70	54.2 PK	68.2	-14.0	1.15 H	190	49.8	4.4
5	11570.00	56.6 PK	74.0	-17.4	3.99 H	270	41.5	15.1
6	11570.00	44.4 AV	54.0	-9.6	3.99 H	270	29.3	15.1
7	#17355.00	58.7 PK	74.0	-15.3	1.22 H	189	38.2	20.5
8	#17355.00	45.6 AV	54.0	-8.4	1.22 H	189	25.1	20.5

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	#5609.37	52.9 PK	68.2	-15.3	2.61 V	284	49.0	3.9
2	*5785.00	101.9 PK			2.61 V	284	97.8	4.1
3	*5785.00	92.9 AV			2.61 V	284	88.8	4.1
4	#5953.75	53.3 PK	68.2	-14.9	2.61 V	284	48.9	4.4
5	11570.00	59.4 PK	74.0	-14.6	2.24 V	189	44.3	15.1
6	11570.00	46.9 AV	54.0	-7.1	2.24 V	189	31.8	15.1
7	#17355.00	56.3 PK	74.0	-17.7	2.27 V	115	35.8	20.5
8	#17355.00	43.4 AV	54.0	-10.6	2.27 V	115	22.9	20.5

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5642.15	53.1 PK	68.2	-15.1	1.08 H	215	49.1	4.0
2	*5825.00	109.2 PK			1.08 H	215	105.0	4.2
3	*5825.00	100.5 AV			1.08 H	215	96.3	4.2
4	#5943.77	54.7 PK	68.2	-13.5	1.08 H	215	50.3	4.4
5	11650.00	56.4 PK	74.0	-17.6	3.98 H	270	41.4	15.0
6	11650.00	44.3 AV	54.0	-9.7	3.98 H	270	29.3	15.0
7	#17475.00	59.3 PK	74.0	-14.7	1.31 H	170	38.2	21.1
8	#17475.00	46.1 AV	54.0	-7.9	1.31 H	170	25.0	21.1
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	#5644.52	52.4 PK	68.2	-15.8	2.62 V	89	48.4	4.0
2	*5825.00	103.6 PK			2.62 V	89	99.4	4.2
3	*5825.00	94.9 AV			2.62 V	89	90.7	4.2
4	#6019.77	52.6 PK	68.2	-15.6	2.62 V	89	48.1	4.5
5	11650.00	59.4 PK	74.0	-14.6	2.30 V	177	44.4	15.0
6	11650.00	46.9 AV	54.0	-7.1	2.30 V	177	31.9	15.0
7	#17475.00	56.4 PK	74.0	-17.6	2.27 V	119	35.3	21.1
8	#17475.00	43.7 AV	54.0	-10.3	2.27 V	119	22.6	21.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT40)

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

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	68.7 PK	74.0	-5.3	1.43 H	154	65.7	3.0
2	5150.00	50.1 AV	54.0	-3.9	1.43 H	154	47.1	3.0
3	*5190.00	106.5 PK			1.43 H	154	103.4	3.1
4	*5190.00	98.0 AV			1.43 H	154	94.9	3.1
5	#10380.00	56.7 PK	74.0	-17.3	4.00 H	248	43.0	13.7
6	#10380.00	44.2 AV	54.0	-9.8	4.00 H	248	30.5	13.7
7	15570.00	59.3 PK	74.0	-14.7	1.23 H	176	43.7	15.6
8	15570.00	46.0 AV	54.0	-8.0	1.23 H	176	30.4	15.6
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	53.4 PK	74.0	-20.6	3.93 V	90	50.4	3.0
2	5150.00	40.4 AV	54.0	-13.6	3.93 V	90	37.4	3.0
3	*5190.00	101.8 PK			3.93 V	90	98.7	3.1
4	*5190.00	93.2 AV			3.93 V	90	90.1	3.1
5	#10380.00	59.5 PK	74.0	-14.5	2.29 V	172	45.8	13.7
6	#10380.00	46.6 AV	54.0	-7.4	2.29 V	172	32.9	13.7
7	15570.00	56.1 PK	74.0	-17.9	2.25 V	131	40.5	15.6
8	15570.00	43.2 AV	54.0	-10.8	2.25 V	131	27.6	15.6

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	107.0 PK			1.66 H	196	103.8	3.2
2	*5230.00	98.6 AV			1.66 H	196	95.4	3.2
3	5350.00	53.5 PK	74.0	-20.5	1.66 H	196	50.0	3.5
4	5350.00	41.8 AV	54.0	-12.2	1.66 H	196	38.3	3.5
5	#10460.00	56.8 PK	74.0	-17.2	3.92 H	256	42.9	13.9
6	#10460.00	44.5 AV	54.0	-9.5	3.92 H	256	30.6	13.9
7	15690.00	59.3 PK	74.0	-14.7	1.28 H	174	43.7	15.6
8	15690.00	46.1 AV	54.0	-7.9	1.28 H	174	30.5	15.6
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	102.0 PK			3.91 V	94	98.8	3.2
2	*5230.00	93.8 AV			3.91 V	94	90.6	3.2
3	5350.00	53.4 PK	74.0	-20.6	3.91 V	94	49.9	3.5
4	5350.00	40.6 AV	54.0	-13.4	3.91 V	94	37.1	3.5
5	#10460.00	59.3 PK	74.0	-14.7	2.24 V	196	45.4	13.9
6	#10460.00	46.3 AV	54.0	-7.7	2.24 V	196	32.4	13.9
7	15690.00	56.0 PK	74.0	-18.0	2.27 V	108	40.4	15.6
8	15690.00	43.2 AV	54.0	-10.8	2.27 V	108	27.6	15.6

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	53.3 PK	74.0	-20.7	1.29 H	197	50.3	3.0
2	5150.00	41.2 AV	54.0	-12.8	1.29 H	197	38.2	3.0
3	*5270.00	106.7 PK			1.29 H	197	103.4	3.3
4	*5270.00	98.2 AV			1.29 H	197	94.9	3.3
5	#10540.00	56.7 PK	74.0	-17.3	4.00 H	251	42.5	14.2
6	#10540.00	44.4 AV	54.0	-9.6	4.00 H	251	30.2	14.2
7	15810.00	58.6 PK	74.0	-15.4	1.31 H	187	43.6	15.0
8	15810.00	45.4 AV	54.0	-8.6	1.31 H	187	30.4	15.0

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	53.8 PK	74.0	-20.2	3.91 V	99	50.8	3.0
2	5150.00	40.8 AV	54.0	-13.2	3.91 V	99	37.8	3.0
3	*5270.00	102.5 PK			3.91 V	99	99.2	3.3
4	*5270.00	93.7 AV			3.91 V	99	90.4	3.3
5	#10540.00	59.7 PK	74.0	-14.3	2.21 V	193	45.5	14.2
6	#10540.00	46.8 AV	54.0	-7.2	2.21 V	193	32.6	14.2
7	15810.00	56.6 PK	74.0	-17.4	2.30 V	129	41.6	15.0
8	15810.00	43.8 AV	54.0	-10.2	2.30 V	129	28.8	15.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	107.1 PK			1.03 H	176	103.7	3.4
2	*5310.00	98.9 AV			1.03 H	176	95.5	3.4
3	5350.00	67.1 PK	74.0	-6.9	1.03 H	176	63.6	3.5
4	5350.00	49.9 AV	54.0	-4.1	1.03 H	176	46.4	3.5
5	10620.00	56.3 PK	74.0	-17.7	3.98 H	268	42.0	14.3
6	10620.00	44.2 AV	54.0	-9.8	3.98 H	268	29.9	14.3
7	15930.00	59.3 PK	74.0	-14.7	1.25 H	201	44.2	15.1
8	15930.00	45.9 AV	54.0	-8.1	1.25 H	201	30.8	15.1
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	101.7 PK			3.85 V	88	98.3	3.4
2	*5310.00	93.6 AV			3.85 V	88	90.2	3.4
3	5350.00	54.2 PK	74.0	-19.8	3.85 V	88	50.7	3.5
4	5350.00	41.1 AV	54.0	-12.9	3.85 V	88	37.6	3.5
5	10620.00	59.6 PK	74.0	-14.4	2.26 V	202	45.3	14.3
6	10620.00	47.1 AV	54.0	-6.9	2.26 V	202	32.8	14.3
7	15930.00	56.0 PK	74.0	-18.0	2.29 V	120	40.9	15.1
8	15930.00	43.0 AV	54.0	-11.0	2.29 V	120	27.9	15.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

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	#5470.00	69.3 PK	74.0	-4.7	1.00 H	196	65.6	3.7
2	#5470.00	53.8 AV	54.0	-0.2	1.00 H	196	50.1	3.7
3	*5510.00	106.9 PK			1.00 H	196	103.1	3.8
4	*5510.00	98.1 AV			1.00 H	196	94.3	3.8
5	11020.00	56.3 PK	74.0	-17.7	3.97 H	261	41.2	15.1
6	11020.00	44.2 AV	54.0	-9.8	3.97 H	261	29.1	15.1
7	#16530.00	58.6 PK	74.0	-15.4	1.20 H	185	41.1	17.5
8	#16530.00	45.2 AV	54.0	-8.8	1.20 H	185	27.7	17.5
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	#5470.00	54.1 PK	74.0	-19.9	3.90 V	70	50.4	3.7
2	#5470.00	41.1 AV	54.0	-12.9	3.90 V	70	37.4	3.7
3	*5510.00	102.5 PK			3.90 V	70	98.7	3.8
4	*5510.00	93.5 AV			3.90 V	70	89.7	3.8
5	11020.00	58.8 PK	74.0	-15.2	2.30 V	195	43.7	15.1
6	11020.00	46.4 AV	54.0	-7.6	2.30 V	195	31.3	15.1
7	#16530.00	55.6 PK	74.0	-18.4	2.27 V	126	38.1	17.5
8	#16530.00	42.9 AV	54.0	-11.1	2.27 V	126	25.4	17.5

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	108.1 PK			1.00 H	180	104.2	3.9
2	*5550.00	99.4 AV			1.00 H	180	95.5	3.9
3	11100.00	57.1 PK	74.0	-16.9	3.93 H	265	42.0	15.1
4	11100.00	44.8 AV	54.0	-9.2	3.93 H	265	29.7	15.1
5	#16650.00	58.4 PK	74.0	-15.6	1.23 H	198	40.4	18.0
6	#16650.00	45.5 AV	54.0	-8.5	1.23 H	198	27.5	18.0
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	103.1 PK			3.93 V	75	99.2	3.9
2	*5550.00	94.2 AV			3.93 V	75	90.3	3.9
3	11100.00	59.4 PK	74.0	-14.6	2.29 V	197	44.3	15.1
4	11100.00	46.9 AV	54.0	-7.1	2.29 V	197	31.8	15.1
5	#16650.00	56.6 PK	74.0	-17.4	2.25 V	106	38.6	18.0
6	#16650.00	43.6 AV	54.0	-10.4	2.25 V	106	25.6	18.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	107.8 PK			1.17 H	218	103.8	4.0
2	*5670.00	98.8 AV			1.17 H	218	94.8	4.0
3	#5725.00	58.2 PK	74.0	-15.8	1.17 H	218	54.0	4.2
4	#5725.00	45.3 AV	54.0	-8.7	1.17 H	218	41.1	4.2
5	11340.00	56.5 PK	74.0	-17.5	3.99 H	262	41.2	15.3
6	11340.00	44.2 AV	54.0	-9.8	3.99 H	262	28.9	15.3
7	#17010.00	58.8 PK	74.0	-15.2	1.24 H	170	38.9	19.9
8	#17010.00	45.4 AV	54.0	-8.6	1.24 H	170	25.5	19.9
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	103.2 PK			3.90 V	75	99.2	4.0
2	*5670.00	94.0 AV			3.90 V	75	90.0	4.0
3	#5725.00	54.1 PK	74.0	-19.9	3.90 V	75	49.9	4.2
4	#5725.00	40.9 AV	54.0	-13.1	3.90 V	75	36.7	4.2
5	11340.00	59.7 PK	74.0	-14.3	2.31 V	200	44.4	15.3
6	11340.00	47.0 AV	54.0	-7.0	2.31 V	200	31.7	15.3
7	#17010.00	56.6 PK	74.0	-17.4	2.27 V	102	36.7	19.9
8	#17010.00	43.7 AV	54.0	-10.3	2.27 V	102	23.8	19.9

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*5710.00	107.8 PK			1.03 H	216	103.6	4.2
2	*5710.00	98.6 AV			1.03 H	216	94.4	4.2
3	11420.00	57.0 PK	74.0	-17.0	3.91 H	265	41.6	15.4
4	11420.00	44.9 AV	54.0	-9.1	3.91 H	265	29.5	15.4
5	#17130.00	59.1 PK	74.0	-14.9	1.22 H	191	39.1	20.0
6	#17130.00	45.9 AV	54.0	-8.1	1.22 H	191	25.9	20.0
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	*5710.00	102.7 PK			3.89 V	81	98.5	4.2
2	*5710.00	93.5 AV			3.89 V	81	89.3	4.2
3	11420.00	59.3 PK	74.0	-14.7	2.31 V	190	43.9	15.4
4	11420.00	46.5 AV	54.0	-7.5	2.31 V	190	31.1	15.4
5	#17130.00	56.2 PK	74.0	-17.8	2.28 V	126	36.2	20.0
6	#17130.00	43.5 AV	54.0	-10.5	2.28 V	126	23.5	20.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5645.48	54.3 PK	68.2	-13.9	1.00 H	189	50.3	4.0
2	*5755.00	107.5 PK			1.00 H	189	103.3	4.2
3	*5755.00	97.7 AV			1.00 H	189	93.5	4.2
4	#6008.37	53.4 PK	68.2	-14.8	1.00 H	189	48.9	4.5
5	11510.00	56.7 PK	74.0	-17.3	3.99 H	263	41.6	15.1
6	11510.00	44.2 AV	54.0	-9.8	3.99 H	263	29.1	15.1
7	#17265.00	59.3 PK	74.0	-14.7	1.29 H	190	39.4	19.9
8	#17265.00	46.0 AV	54.0	-8.0	1.29 H	190	26.1	19.9
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	#5595.12	52.3 PK	68.2	-15.9	3.90 V	144	48.4	3.9
2	*5755.00	100.0 PK			3.90 V	144	95.8	4.2
3	*5755.00	90.5 AV			3.90 V	144	86.3	4.2
4	#6022.62	53.1 PK	68.2	-15.1	3.90 V	144	48.5	4.6
5	11510.00	59.9 PK	74.0	-14.1	2.22 V	184	44.8	15.1
6	11510.00	47.0 AV	54.0	-7.0	2.22 V	184	31.9	15.1
7	#17265.00	56.1 PK	74.0	-17.9	2.26 V	110	36.2	19.9
8	#17265.00	43.2 AV	54.0	-10.8	2.26 V	110	23.3	19.9

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5645.00	53.3 PK	68.2	-14.9	1.00 H	192	49.3	4.0
2	*5795.00	106.7 PK			1.00 H	192	102.6	4.1
3	*5795.00	97.4 AV			1.00 H	192	93.3	4.1
4	#5985.10	53.6 PK	68.2	-14.6	1.00 H	192	49.1	4.5
5	11590.00	56.8 PK	74.0	-17.2	3.97 H	255	41.7	15.1
6	11590.00	44.7 AV	54.0	-9.3	3.97 H	255	29.6	15.1
7	#17385.00	59.6 PK	74.0	-14.4	1.20 H	177	39.0	20.6
8	#17385.00	46.2 AV	54.0	-7.8	1.20 H	177	25.6	20.6
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	#5628.85	51.7 PK	68.2	-16.5	3.89 V	188	47.7	4.0
2	*5795.00	100.9 PK			3.89 V	118	96.8	4.1
3	*5795.00	92.4 AV			3.89 V	118	88.3	4.1
4	#5932.37	53.7 PK	68.2	-14.5	3.89 V	188	49.3	4.4
5	11590.00	59.8 PK	74.0	-14.2	2.22 V	177	44.7	15.1
6	11590.00	47.0 AV	54.0	-7.0	2.22 V	177	31.9	15.1
7	#17385.00	55.7 PK	74.0	-18.3	2.26 V	108	35.1	20.6
8	#17385.00	42.9 AV	54.0	-11.1	2.26 V	108	22.3	20.6

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT80)

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

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	67.9 PK	74.0	-6.1	1.00 H	231	64.9	3.0
2	**5150.00**	**53.9 AV**	**54.0**	**-0.1**	**1.00 H**	**231**	**50.9**	**3.0**
3	*5210.00	103.4 PK			1.00 H	156	100.2	3.2
4	*5210.00	94.0 AV			1.00 H	156	90.8	3.2
5	#10420.00	56.9 PK	74.0	-17.1	3.90 H	264	43.1	13.8
6	#10420.00	44.7 AV	54.0	-9.3	3.90 H	264	30.9	13.8
7	15630.00	59.2 PK	74.0	-14.8	1.20 H	197	43.5	15.7
8	15630.00	46.0 AV	54.0	-8.0	1.20 H	197	30.3	15.7
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	53.7 PK	74.0	-20.3	3.87 V	81	50.7	3.0
2	5150.00	40.6 AV	54.0	-13.4	3.87 V	81	37.6	3.0
3	*5210.00	98.8 PK			3.87 V	81	95.6	3.2
4	*5210.00	89.3 AV			3.87 V	81	86.1	3.2
5	#10420.00	59.7 PK	74.0	-14.3	2.29 V	174	45.9	13.8
6	#10420.00	46.8 AV	54.0	-7.2	2.29 V	174	33.0	13.8
7	15630.00	56.5 PK	74.0	-17.5	2.22 V	104	40.8	15.7
8	15630.00	43.5 AV	54.0	-10.5	2.22 V	104	27.8	15.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	*5290.00	105.0 PK			1.00 H	152	101.7	3.3
2	*5290.00	95.5 AV			1.00 H	152	92.2	3.3
3	5350.00	67.2 PK	74.0	-6.8	1.00 H	152	63.7	3.5
4	5350.00	53.7 AV	54.0	-0.3	1.00 H	152	50.2	3.5
5	#10580.00	56.9 PK	74.0	-17.1	3.92 H	258	42.6	14.3
6	#10580.00	44.7 AV	54.0	-9.3	3.92 H	258	30.4	14.3
7	15870.00	58.9 PK	74.0	-15.1	1.29 H	184	43.9	15.0
8	15870.00	45.7 AV	54.0	-8.3	1.29 H	184	30.7	15.0
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	*5290.00	100.0 PK			3.87 V	84	96.7	3.3
2	*5290.00	90.6 AV			3.87 V	84	87.3	3.3
3	5350.00	54.0 PK	74.0	-20.0	3.87 V	84	50.5	3.5
4	5350.00	41.2 AV	54.0	-12.8	3.87 V	84	37.7	3.5
5	#10580.00	59.0 PK	74.0	-15.0	2.26 V	180	44.7	14.3
6	#10580.00	46.6 AV	54.0	-7.4	2.26 V	180	32.3	14.3
7	15870.00	55.9 PK	74.0	-18.1	2.27 V	103	40.9	15.0
8	15870.00	43.4 AV	54.0	-10.6	2.27 V	103	28.4	15.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5470.00	65.6 PK	74.0	-8.4	1.00 H	198	61.9	3.7
2	**#5470.00**	**53.9 AV**	**54.0**	**-0.1**	**1.00 H**	**198**	**50.2**	**3.7**
3	*5530.00	102.1 PK			1.00 H	198	98.2	3.9
4	*5530.00	92.8 AV			1.00 H	198	88.9	3.9
5	11060.00	56.5 PK	74.0	-17.5	4.00 H	269	41.4	15.1
6	11060.00	44.2 AV	54.0	-9.8	4.00 H	269	29.1	15.1
7	#16590.00	58.5 PK	74.0	-15.5	1.27 H	189	40.8	17.7
8	#16590.00	45.2 AV	54.0	-8.8	1.27 H	189	27.5	17.7

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	#5470.00	53.5 PK	74.0	-20.5	3.88 V	71	49.8	3.7
2	#5470.00	40.3 AV	54.0	-13.7	3.88 V	71	36.6	3.7
3	*5530.00	96.6 PK			3.88 V	71	92.7	3.9
4	*5530.00	87.5 AV			3.88 V	71	83.6	3.9
5	11060.00	59.3 PK	74.0	-14.7	2.21 V	202	44.2	15.1
6	11060.00	46.7 AV	54.0	-7.3	2.21 V	202	31.6	15.1
7	#16590.00	56.5 PK	74.0	-17.5	2.25 V	134	38.8	17.7
8	#16590.00	43.5 AV	54.0	-10.5	2.25 V	134	25.8	17.7

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*5610.00	106.0 PK			1.00 H	174	102.1	3.9
2	*5610.00	96.8 AV			1.00 H	174	92.9	3.9
3	#5725.00	57.9 PK	74.0	-16.1	1.00 H	174	53.7	4.2
4	#5725.00	47.8 AV	54.0	-6.2	1.00 H	174	43.6	4.2
5	11220.00	56.4 PK	74.0	-17.6	3.99 H	254	41.2	15.2
6	11220.00	44.2 AV	54.0	-9.8	3.99 H	254	29.0	15.2
7	#16830.00	58.6 PK	74.0	-15.4	1.28 H	193	40.1	18.5
8	#16830.00	45.7 AV	54.0	-8.3	1.28 H	193	27.2	18.5
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	*5610.00	100.9 PK			3.86 V	85	97.0	3.9
2	*5610.00	91.5 AV			3.86 V	85	87.6	3.9
3	#5725.00	53.2 PK	74.0	-20.8	3.86 V	85	49.0	4.2
4	#5725.00	40.5 AV	54.0	-13.5	3.86 V	85	36.3	4.2
5	11220.00	59.6 PK	74.0	-14.4	2.22 V	179	44.4	15.2
6	11220.00	46.8 AV	54.0	-7.2	2.22 V	179	31.6	15.2
7	#16830.00	56.5 PK	74.0	-17.5	2.23 V	103	38.0	18.5
8	#16830.00	43.5 AV	54.0	-10.5	2.23 V	103	25.0	18.5

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	#5470.00	53.6 PK	74.0	-20.4	1.15 H	195	49.9	3.7
2	#5470.00	41.6 AV	54.0	-12.4	1.15 H	195	37.9	3.7
3	*5690.00	106.6 PK			1.15 H	195	102.4	4.2
4	*5690.00	97.3 AV			1.15 H	195	93.1	4.2
5	#5850.00	54.1 PK	74.0	-19.9	1.15 H	195	49.9	4.2
6	#5850.00	42.8 AV	54.0	-11.2	1.15 H	195	38.6	4.2
7	11380.00	57.4 PK	74.0	-16.6	3.93 H	248	42.0	15.4
8	11380.00	45.0 AV	54.0	-9.0	3.93 H	248	29.6	15.4
9	#17070.00	58.3 PK	74.0	-15.7	1.26 H	178	38.3	20.0
10	#17070.00	45.3 AV	54.0	-8.7	1.26 H	178	25.3	20.0
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	#5470.00	54.1 PK	74.0	-19.9	3.92 V	94	50.4	3.7
2	#5470.00	41.0 AV	54.0	-13.0	3.92 V	94	37.3	3.7
3	*5690.00	101.7 PK			3.92 V	94	97.5	4.2
4	*5690.00	92.6 AV			3.92 V	94	88.4	4.2
5	#5850.00	54.2 PK	74.0	-19.8	3.92 V	94	50.0	4.2
6	#5850.00	41.3 AV	54.0	-12.7	3.92 V	94	37.1	4.2
7	11380.00	59.2 PK	74.0	-14.8	2.24 V	175	43.8	15.4
8	11380.00	46.5 AV	54.0	-7.5	2.24 V	175	31.1	15.4
9	#17070.00	56.5 PK	74.0	-17.5	2.29 V	106	36.5	20.0
10	#17070.00	43.7 AV	54.0	-10.3	2.29 V	106	23.7	20.0

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

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	#5651.18	54.5 PK	69.1	-14.6	1.00 H	191	50.5	4.0
2	*5775.00	104.4 PK			1.00 H	191	100.2	4.2
3	*5775.00	95.8 AV			1.00 H	191	91.6	4.2
4	#5929.52	54.2 PK	68.2	-14.0	1.00 H	191	49.8	4.4
5	11550.00	56.7 PK	74.0	-17.3	3.91 H	249	41.5	15.2
6	11550.00	44.2 AV	54.0	-9.8	3.91 H	249	29.0	15.2
7	#17325.00	58.5 PK	74.0	-15.5	1.20 H	198	38.2	20.3
8	#17325.00	45.3 AV	54.0	-8.7	1.20 H	198	25.0	20.3
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	#5609.85	52.3 PK	68.2	-15.9	3.66 V	72	48.4	3.9
2	*5775.00	99.8 PK			3.66 V	72	95.6	4.2
3	*5775.00	90.3 AV			3.66 V	72	86.1	4.2
4	#6024.05	52.3 PK	68.2	-15.9	3.66 V	72	47.7	4.6
5	11550.00	59.8 PK	74.0	-14.2	2.25 V	188	44.6	15.2
6	11550.00	47.3 AV	54.0	-6.7	2.25 V	188	32.1	15.2
7	#17325.00	56.2 PK	74.0	-17.8	2.31 V	114	35.9	20.3
8	#17325.00	43.2 AV	54.0	-10.8	2.31 V	114	22.9	20.3

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Data:

802.11a

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 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	99.91	28.9 QP	43.5	-14.6	2.00 H	91	41.90	-13.00
2	309.26	30.3 QP	46.0	-15.7	1.00 H	289	37.40	-7.10
3	499.99	38.6 QP	46.0	-7.4	1.50 H	306	40.90	-2.30
4	589.54	35.6 QP	46.0	-10.4	1.50 H	144	36.00	-0.40
5	775.23	36.4 QP	46.0	-9.6	1.00 H	360	33.50	2.90
6	889.13	31.9 QP	46.0	-14.1	1.50 H	109	27.80	4.10
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	34.66	35.0 QP	40.0	-5.0	1.00 V	179	44.60	-9.60
2	61.65	37.3 QP	40.0	-2.7	1.00 V	212	46.50	-9.20
3	96.30	31.1 QP	43.5	-12.4	1.50 V	350	44.70	-13.60
4	487.67	35.4 QP	46.0	-10.6	1.00 V	360	38.20	-2.80
5	589.57	36.3 QP	46.0	-9.7	2.00 V	0	36.70	-0.40
6	763.32	32.3 QP	46.0	-13.7	1.00 V	337	29.60	2.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

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.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 23, 2015	Oct. 22, 2016
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 28, 2015	Oct. 27, 2016
RF Cable	5D-FB	COACAB-002	Mar. 04, 2016	Mar. 03, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 20, 2016	June 19, 2017
Software BVADT	BVADT_Cond_ V7.3.7.3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 1.
3 Tested Date: July 19, 2016

4.2.3 Test Procedure

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

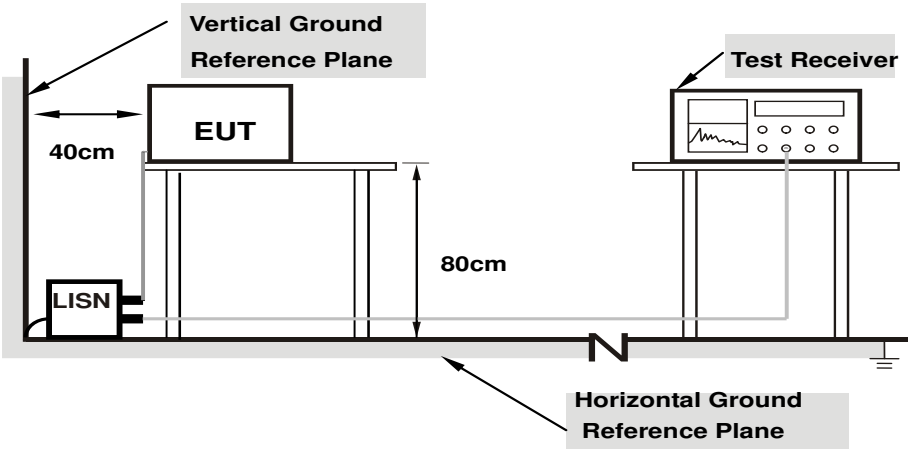
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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.

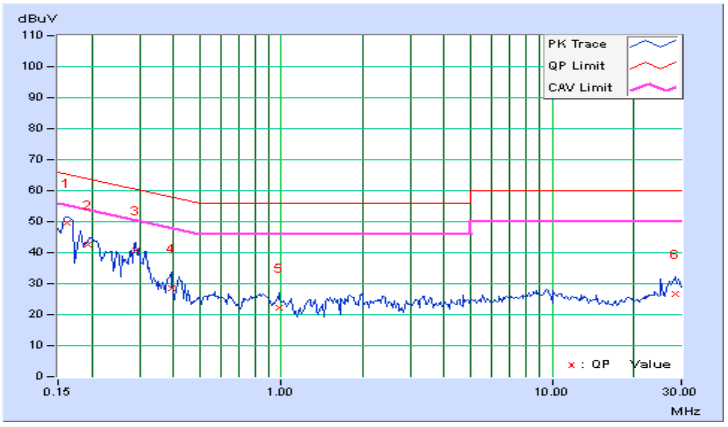
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.21	39.32	25.17	49.53	35.38	65.38	55.38	-15.84	-19.99
2	0.19453	10.22	32.45	18.60	42.67	28.82	63.84	53.84	-21.17	-25.02
3	0.29063	10.22	30.61	20.80	40.83	31.02	60.51	50.51	-19.68	-19.49
4	0.39219	10.22	18.15	5.89	28.37	16.11	58.02	48.02	-29.65	-31.91
5	0.97813	10.26	12.00	6.41	22.26	16.67	56.00	46.00	-33.74	-29.33
6	28.64844	11.51	15.06	10.37	26.57	21.88	60.00	50.00	-33.43	-28.12

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

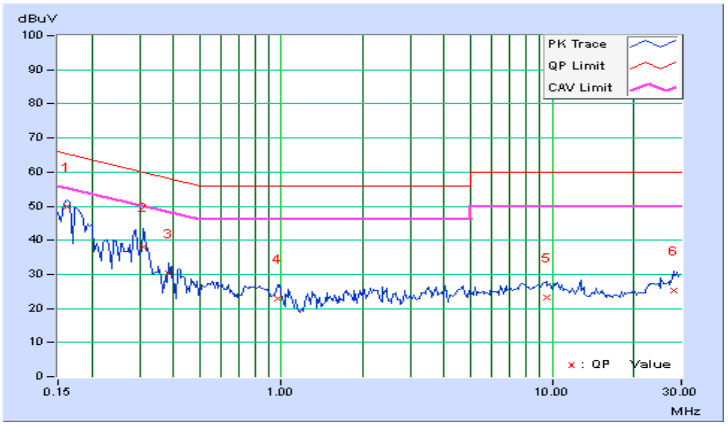


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.16172**	**10.19**	**39.49**	**25.96**	**49.68**	**36.15**	**65.38**	**55.38**	**-15.69**	**-19.22**
2	0.31016	10.20	27.90	12.95	38.10	23.15	59.97	49.97	-21.86	-26.81
3	0.38438	10.20	20.24	11.14	30.44	21.34	58.18	48.18	-27.74	-26.84
4	0.97031	10.24	12.76	5.38	23.00	15.62	56.00	46.00	-33.00	-30.38
5	9.58594	10.48	12.59	6.04	23.07	16.52	60.00	50.00	-36.93	-33.48
6	28.01172	11.13	14.14	9.21	25.27	20.34	60.00	50.00	-34.73	-29.66

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 Measurment

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 ≦ 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)
	√	Mobile and Portable 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,

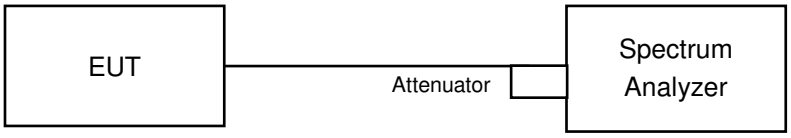
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.3.2 Test Setup

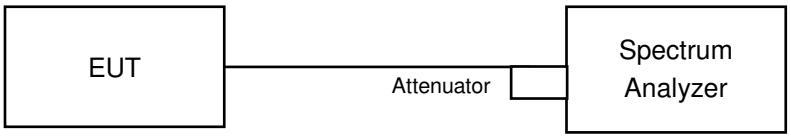
FOR POWER OUTPUT MEASUREMENT

For channel straddling 5725MHz:



For other channels:

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 channel straddling 5725MHz:

Method SA-2

1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW ≥ 3 x RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

For other channels:

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. Duty factor is not added to measured value.

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

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.82	15.50	73.675	18.67	24	Pass
40	5200	15.87	15.82	76.831	18.86	24	Pass
48	5240	15.53	15.63	72.286	18.59	24	Pass
52	5260	15.68	15.71	74.222	18.71	24	Pass
60	5300	15.77	15.83	76.039	18.81	24	Pass
64	5320	15.58	15.50	71.622	18.55	24	Pass
100	5500	15.88	15.86	77.274	18.88	24	Pass
120	5600	15.77	15.70	74.911	18.75	24	Pass
140	5700	15.81	15.54	73.917	18.69	24	Pass
*144 (UNII-2c Band)	5720	9.83	9.63	19.689	12.94	24	Pass
*144 (UNII-3 Band)	5720	2.97	3.61	4.48	6.51	30	Pass
149	5745	15.64	15.53	72.371	18.60	30	Pass
157	5785	15.81	15.66	74.92	18.75	30	Pass
165	5825	15.80	15.93	77.193	18.88	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	24.169	13.83
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	32.91	32.98
60	5300	32.95	31.96
64	5320	32.96	30.70
100	5500	33.06	30.23
120	5600	29.81	29.98
140	5700	33.94	32.58
144 (UNII-2c Band)	5720	21.22	20.46

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	32.91	26.17 > 24
60	5300	31.96	26.04 > 24
64	5320	30.70	25.87 > 24
100	5500	30.23	25.8 > 24
120	5600	29.81	25.74 > 24
140	5700	32.58	26.12 > 24
144 (UNII-2c Band)	5720	20.46	24.1 > 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.08	15.07	64.348	18.09	24	Pass
40	5200	15.08	15.14	64.87	18.12	24	Pass
48	5240	15.16	15.34	67.008	18.26	24	Pass
52	5260	15.29	15.45	68.881	18.38	24	Pass
60	5300	15.20	15.20	66.226	18.21	24	Pass
64	5320	15.26	15.08	65.785	18.18	24	Pass
100	5500	15.17	15.20	65.998	18.20	24	Pass
120	5600	15.46	15.27	68.807	18.38	24	Pass
140	5700	15.40	15.06	66.737	18.24	24	Pass
*144 (UNII-2c Band)	5720	8.53	9.17	17.132	12.34	24	Pass
*144 (UNII-3 Band)	5720	2.40	2.86	4.086	6.11	30	Pass
149	5745	15.19	15.35	67.314	18.28	30	Pass
157	5785	15.17	15.31	66.848	18.25	30	Pass
165	5825	15.40	15.16	67.484	18.29	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	21.218	13.27
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	30.73	30.86
60	5300	33.15	33.29
64	5320	33.51	30.24
100	5500	32.17	28.60
120	5600	33.13	29.82
140	5700	34.56	35.91
144 (UNII-2c Band)	5720	20.85	20.51

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	30.73	25.87 > 24
60	5300	33.15	26.2 > 24
64	5320	30.24	25.8 > 24
100	5500	28.60	25.56 > 24
120	5600	29.82	25.74 > 24
140	5700	34.56	26.38 > 24
144 (UNII-2c Band)	5720	20.51	24.11 > 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	15.08	15.00	63.834	18.05	24	Pass
46	5230	15.19	15.10	65.396	18.16	24	Pass
54	5270	15.30	15.35	68.161	18.34	24	Pass
62	5310	15.35	15.35	68.554	18.36	24	Pass
102	5510	14.92	14.57	59.688	17.76	24	Pass
118	5590	15.11	15.34	66.632	18.24	24	Pass
134	5670	15.06	15.33	66.182	18.21	24	Pass
*142 (UNII-2c Band)	5710	6.50	6.46	10.922	10.38	24	Pass
*142 (UNII-3 Band)	5710	-4.76	-3.97	0.9028	-0.44	24	Pass
151	5755	15.29	15.24	67.226	18.28	30	Pass
159	5795	15.22	15.33	67.385	18.29	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*142	5710	11.8248	10.73
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	63.10	66.28
62	5310	50.80	63.06
102	5510	54.08	50.39
118	5590	63.41	57.28
134	5670	62.85	76.22
142 (UNII-2c Band)	5710	45.40	49.40

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	63.10	29 > 24
62	5310	50.80	28.05 > 24
102	5510	50.39	28.02 > 24
118	5590	57.28	28.58 > 24
134	5670	62.85	28.98 > 24
142 (UNII-2c Band)	5710	45.40	27.57 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	14.72	15.38	64.162	18.07	24	Pass
58	5290	15.21	14.69	62.633	17.97	24	Pass
106	5530	12.59	12.42	35.613	15.52	24	Pass
122	5610	15.32	15.28	67.77	18.31	24	Pass
*138 (UNII-2c Band)	5690	5.16	4.43	8.486	9.29	24	Pass
*138 (UNII-3 Band)	5690	-7.00	-10.21	0.41326	-3.84	30	Pass
155	5775	15.15	15.39	67.328	18.28	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

The Total Power for the straddle channel:

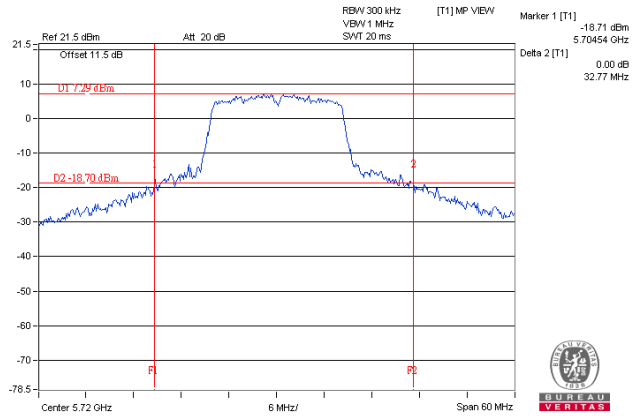
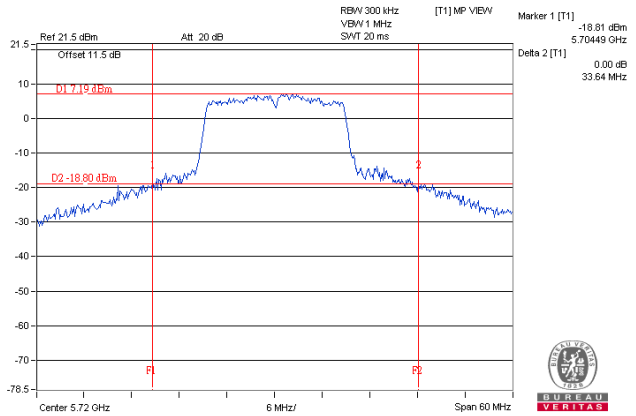
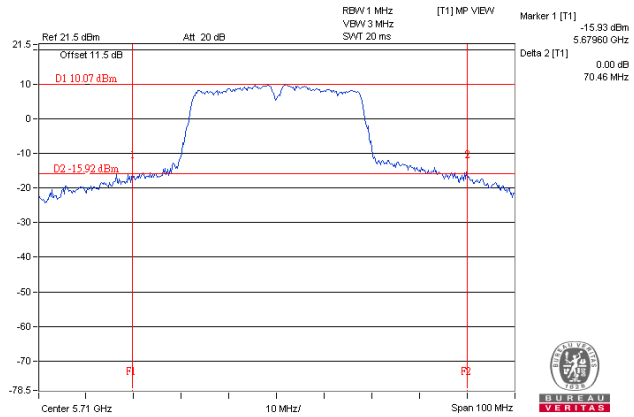
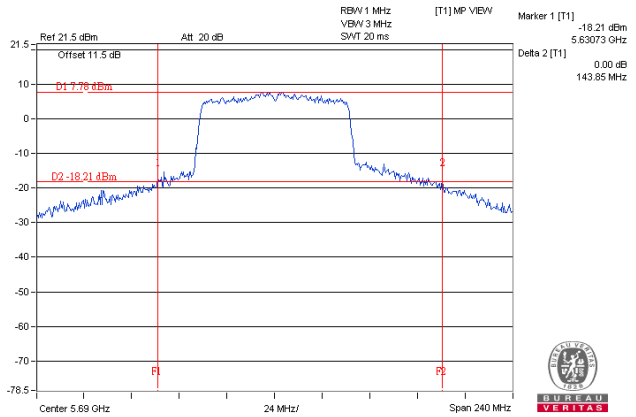
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*138	5690	8.89926	9.49
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	123.16	125.40
106	5530	124.88	131.34
122	5610	130.21	133.05
138 (UNII-2c Band)	5690	103.37	94.27

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	123.16	31.9 > 24
106	5530	124.88	31.96 > 24
122	5610	130.21	32.14 > 24
138 (UNII-2c Band)	5690	94.27	30.74 > 24

Spectrum Plot of Worst Value	
802.11a / Chain 1 - CH144 (UNII-2c Band)	**802.11ac (VHT20) / Chain 1 - CH144 (UNII-2c Band)**
	
802.11ac (VHT40) / Chain 0 - CH142 (UNII-2c Band)	**802.11ac (VHT80) / Chain 1 - CH138 (UNII-2c Band)**
	

NOTE:

For CH144 (UNII-2c Band) = 5725MHz - Marker 1
For CH142 (UNII-2c Band) = 5725MHz - Marker 1
For CH138 (UNII-2c Band) = 5725MHz - Marker 1

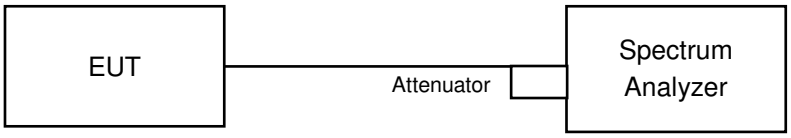
For Reference only – Power meter value

The power value was measured by power meter with average sensor.

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)
		Chain 0	Chain 1		
802.11a					
144	5720	15.72	15.61	73.717	18.68
802.11ac (VHT20)					
144	5720	15.15	15.26	66.308	18.22
802.11ac (VHT40)					
142	5710	15.16	15.14	65.469	18.16
802.11ac (VHT80)					
138	5690	15.15	15.18	67.328	18.28
Note: The total power was calculated through formula and record the value for reference only.					

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.

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.68	17.16
40	5200	17.52	17.16
48	5240	17.28	17.16
52	5260	17.04	17.04
60	5300	17.04	17.04
64	5320	17.04	17.04
100	5500	17.04	17.04
116	5580	16.92	16.92
140	5700	17.76	17.52
2c-144	5720	13.52	13.64
3-144	5720	3.52	3.76
149	5745	17.40	16.92
157	5785	17.28	17.16
165	5825	17.28	17.16

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.00	18.00
40	5200	18.12	18.12
48	5240	18.00	18.00
52	5260	18.00	18.00
60	5300	18.00	18.00
64	5320	18.00	18.00
100	5500	17.88	18.00
116	5580	18.00	18.00
140	5700	18.36	18.00
2c-144	5720	14.00	14.00
3-144	5720	4.12	4.00
149	5745	18.00	18.00
157	5785	18.12	18.00
165	5825	17.88	18.00

802.11ac (VHT40)

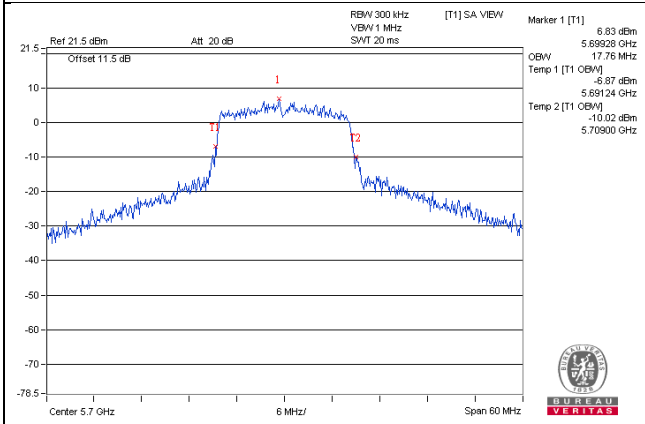
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.72	36.72
46	5230	36.72	36.72
54	5270	36.48	36.72
62	5310	36.72	36.72
102	5510	36.72	36.72
110	5550	36.72	36.72
134	5670	36.96	37.20
2c-142	5710	33.39	33.39
3-142	5710	3.61	3.61
151	5755	36.96	36.96
159	5795	36.96	36.96

802.11ac (VHT80)

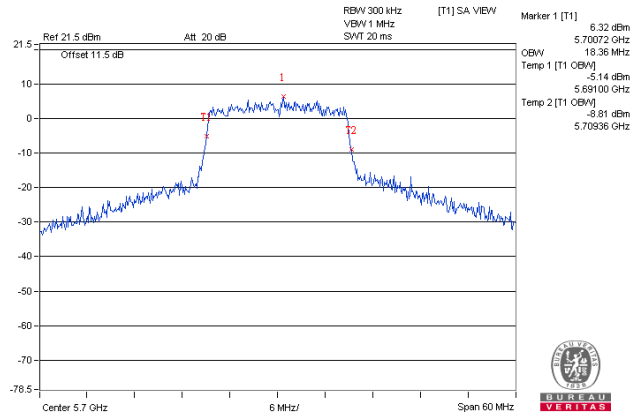
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.36	75.36
58	5290	75.84	75.84
106	5530	75.36	75.36
122	5610	76.32	76.32
2c-138	5690	72.92	72.92
3-138	5690	3.39	3.39
155	5775	76.80	75.84

Spectrum Plot of Worst Value

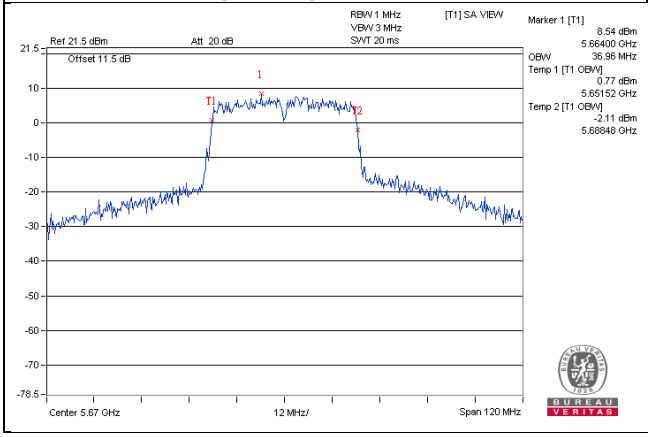
802.11a / Chain 0 – CH140



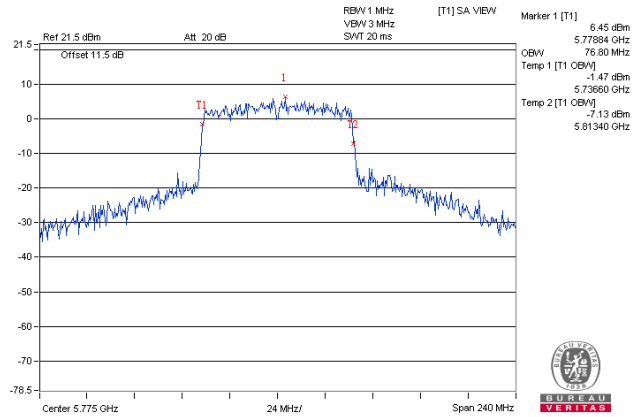
802.11ac (VHT20) / Chain 0 - CH140



802.11ac (VHT40) / Chain 0 – CH134

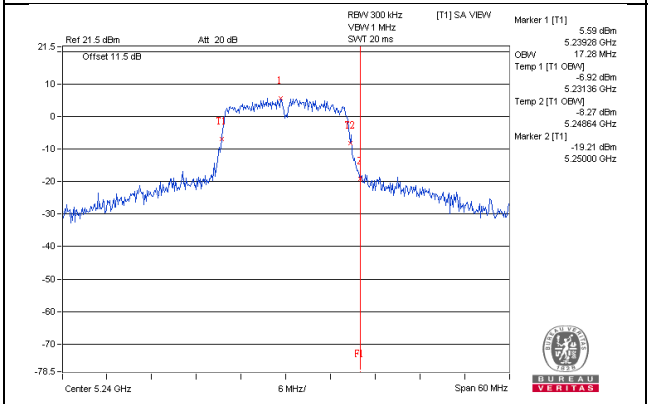


802.11ac (VHT80) / Chain 0 - CH155

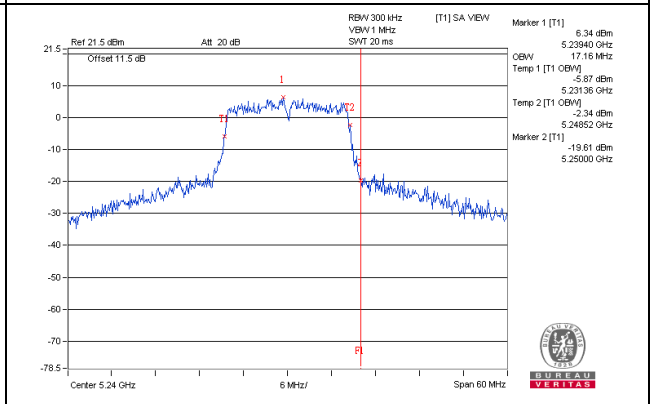


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)

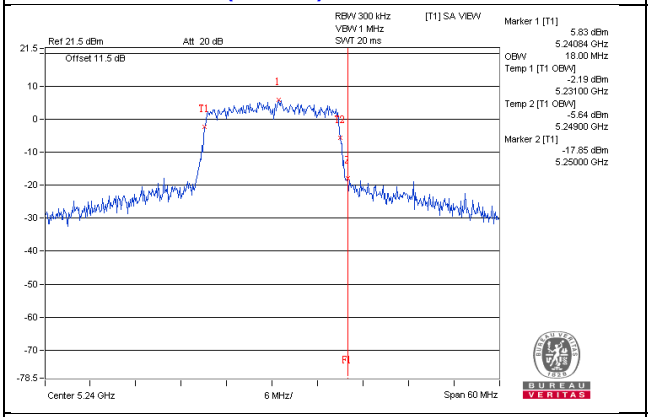
802.11a / Chain 0 – CH48



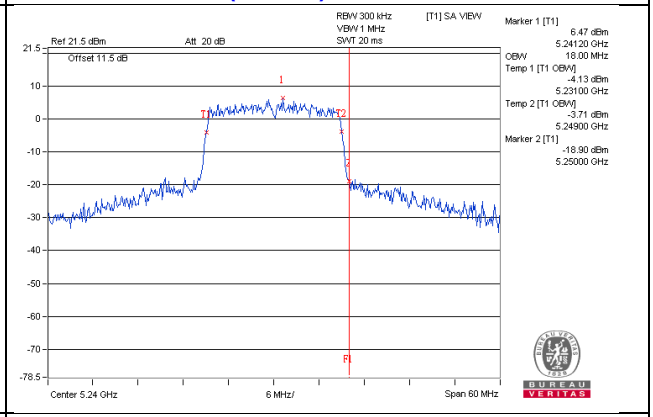
802.11a / Chain 1 – CH48



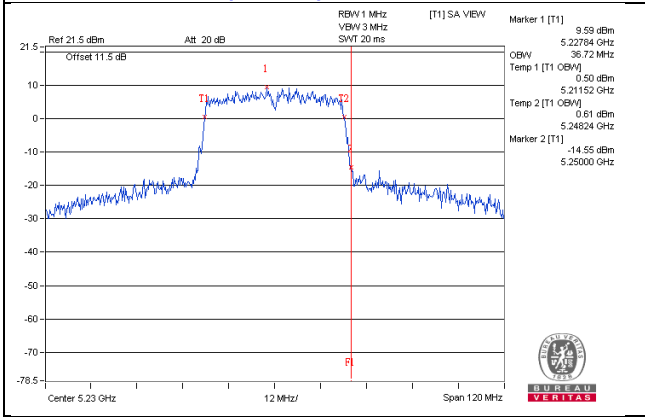
802.11ac (VHT20) / Chain 0 – CH48



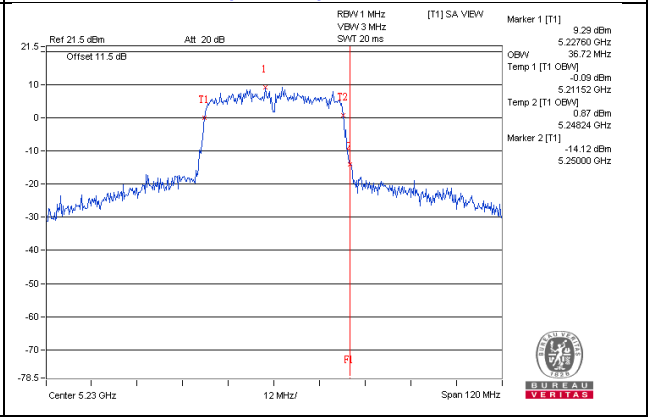
802.11ac (VHT20) / Chain 0 – CH48



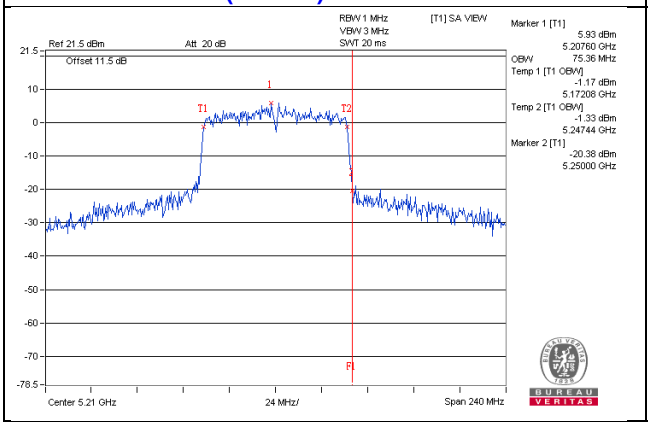
802.11ac (VHT40) / Chain 0 – CH46



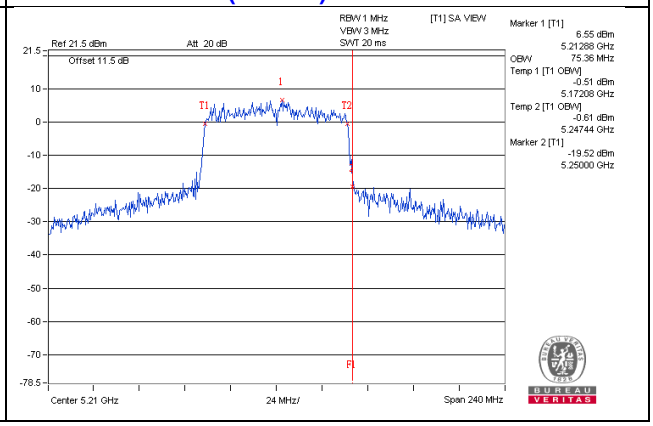
802.11ac (VHT40) / Chain 1 – CH46



802.11ac (VHT80) / Chain 0 – CH42



802.11ac (VHT80) / Chain 1 – CH42

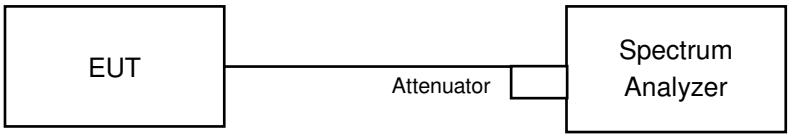


4.5 Peak Power Spectral Density Measurement

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	
	√	Mobile and Portable 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 = 1 MHz, Set VBW ≥ 3 MHz, 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)

For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. 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 Band

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	2.27	2.60	0.20	5.65	10.42	Pass
40	5200	2.44	2.11	0.20	5.49	10.42	Pass
48	5240	1.96	2.50	0.20	5.45	10.42	Pass
52	5260	2.18	2.15	0.20	5.38	10.58	Pass
60	5300	3.18	3.31	0.20	6.46	10.58	Pass
64	5320	2.75	2.49	0.20	5.83	10.58	Pass
100	5500	2.54	2.41	0.20	5.69	10.98	Pass
116	5580	3.40	1.92	0.20	5.93	10.98	Pass
140	5700	2.42	2.38	0.20	5.61	10.98	Pass
2c-144	5720	3.52	3.15	0.20	6.55	10.98	Pass

Note:
1. 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.
2. **For U-NII-1:** Directional gain = 3.57dBi + 10log(2) = 6.58dBi > 6dBi , so the power density limit shall be reduced to 11-(6.58-6) = 10.42dBm.
3. **For U-NII-2A:** Directional gain = 3.41dBi + 10log(2) = 6.42dBi > 6dBi , so the power density limit shall be reduced to 11-(6.42-6) = 10.58dBm.
4. **For U-NII-2C:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 11-(6.02-6) = 10.98dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

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	2.52	2.10	0.47	5.79	10.42	Pass
40	5200	1.86	1.91	0.47	5.36	10.42	Pass
48	5240	2.04	1.83	0.47	5.41	10.42	Pass
52	5260	1.95	2.30	0.47	5.60	10.58	Pass
60	5300	2.15	2.35	0.47	5.73	10.58	Pass
64	5320	2.43	1.91	0.47	5.65	10.58	Pass
100	5500	2.03	2.09	0.47	5.54	10.98	Pass
120	5600	2.09	1.99	0.47	5.52	10.98	Pass
140	5700	1.92	2.52	0.47	5.71	10.98	Pass
144 (UNII-2c Band)	5720	1.57	2.42	0.47	5.49	10.98	Pass

Note:
1. 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.
2. **For U-NII-1:** Directional gain = 3.57dBi + 10log(2) = 6.58dBi > 6dBi , so the power density limit shall be reduced to 11-(6.58-6) = 10.42dBm.
3. **For U-NII-2A:** Directional gain = 3.41dBi + 10log(2) = 6.42dBi > 6dBi , so the power density limit shall be reduced to 11-(6.42-6) = 10.58dBm.
4. **For U-NII-2C:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 11-(6.02-6) = 10.98dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

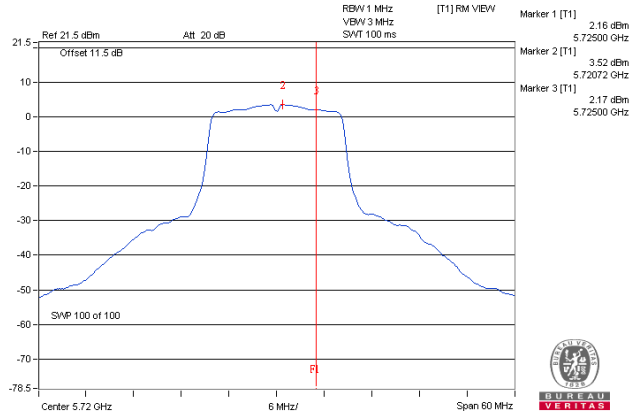
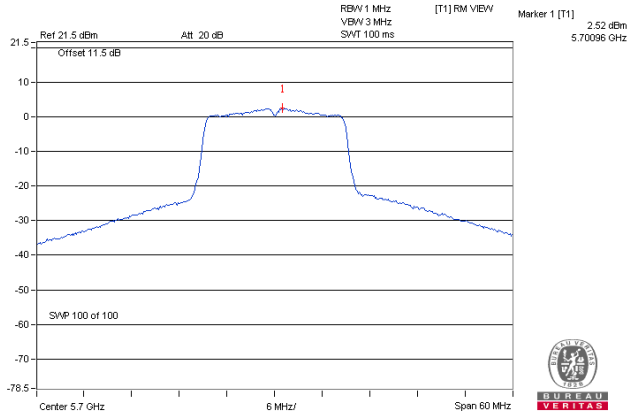
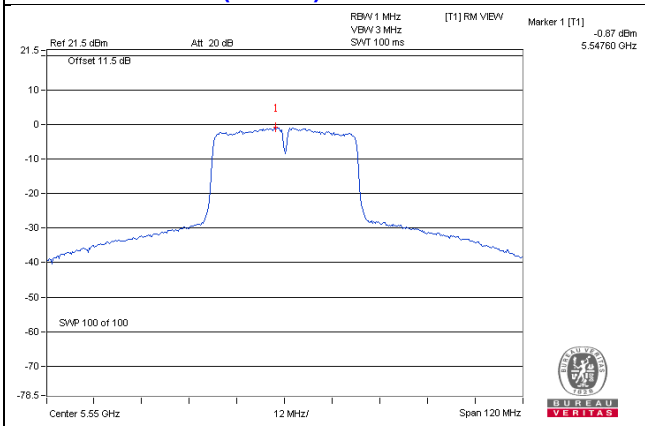
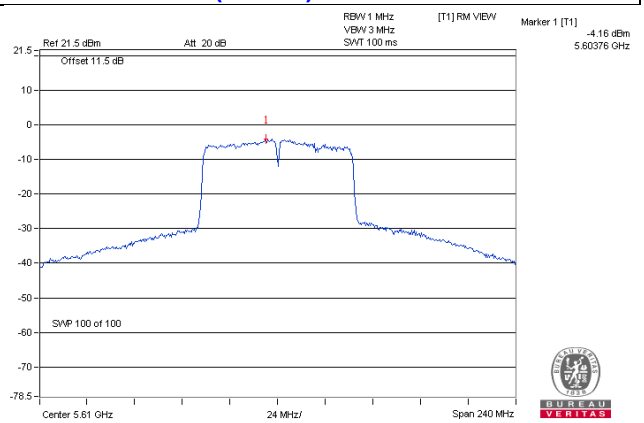
Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-1.23	-1.72	0.89	2.43	10.42	Pass
46	5230	-0.94	-1.47	0.89	2.71	10.42	Pass
54	5270	-1.60	-1.07	0.89	2.58	10.58	Pass
62	5310	-1.21	-1.26	0.89	2.67	10.58	Pass
102	5510	-1.41	-1.80	0.89	2.30	10.98	Pass
118	5590	-0.87	-1.19	0.89	2.88	10.98	Pass
134	5670	-1.86	-1.43	0.89	2.26	10.98	Pass
142 (UNII-2c Band)	5710	-1.74	-1.41	0.89	2.33	10.98	Pass

Note:
1. 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.
2. **For U-NII-1:** Directional gain = 3.57dBi + 10log(2) = 6.58dBi > 6dBi , so the power density limit shall be reduced to 11-(6.58-6) = 10.42dBm.
3. **For U-NII-2A:** Directional gain = 3.41dBi + 10log(2) = 6.42dBi > 6dBi , so the power density limit shall be reduced to 11-(6.42-6) = 10.58dBm.
4. **For U-NII-2C:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 11-(6.02-6) = 10.98dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

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	-4.70	-4.17	1.47	0.05	10.42	Pass
58	5290	-4.22	-4.66	1.47	0.04	10.58	Pass
106	5530	-7.13	-6.99	1.47	-2.58	10.98	Pass
122	5610	-4.20	-4.16	1.47	0.30	10.98	Pass
138 (UNII-2c Band)	5690	-4.32	-4.58	1.47	0.03	10.98	Pass

Note:
1. 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.
2. **For U-NII-1:** Directional gain = 3.57dBi + 10log(2) = 6.58dBi > 6dBi , so the power density limit shall be reduced to 11-(6.58-6) = 10.42dBm.
3. **For U-NII-2A:** Directional gain = 3.41dBi + 10log(2) = 6.42dBi > 6dBi , so the power density limit shall be reduced to 11-(6.42-6) = 10.58dBm.
4. **For U-NII-2C:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 11-(6.02-6) = 10.98dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 0 - CH144 (UNII-2c Band)	**802.11ac (VHT20) / Chain 0 – CH36**
	
802.11ac (VHT40) / Chain 0 - CH110	**802.11ac (VHT80) / Chain 1 - CH122**
	

For U-NII-3 Band

802.11a

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144 (UNII-3 Band)	5720	-5.84	-3.62	3.01	0.20	-0.41	29.51	Pass
	149	5745	-4.70	-2.48	3.01	0.20	0.73	29.51	Pass
	157	5785	-4.35	-2.13	3.01	0.20	1.08	29.51	Pass
	165	5825	-4.20	-1.98	3.01	0.20	1.23	29.51	Pass
1	144 (UNII-3 Band)	5720	-6.25	-4.03	3.01	0.20	-0.82	29.51	Pass
	149	5745	-5.69	-3.47	3.01	0.20	-0.26	29.51	Pass
	157	5785	-4.60	-2.38	3.01	0.20	0.83	29.51	Pass
	165	5825	-5.20	-2.98	3.01	0.20	0.23	29.51	Pass

Note: 1. **For U-NII-3:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 30-(6.49-6) = 29.51dBm.

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

802.11ac (VHT20)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144 (UNII-3 Band)	5720	-7.56	-5.34	3.01	0.47	-1.86	29.51	Pass
	149	5745	-5.57	-3.35	3.01	0.47	0.13	29.51	Pass
	157	5785	-6.44	-4.22	3.01	0.47	-0.74	29.51	Pass
	165	5825	-6.44	-4.22	3.01	0.47	-0.74	29.51	Pass
1	144 (UNII-3 Band)	5720	-7.13	-4.91	3.01	0.47	-1.43	29.51	Pass
	149	5745	-5.99	-3.77	3.01	0.47	-0.29	29.51	Pass
	157	5785	-5.99	-3.77	3.01	0.47	-0.29	29.51	Pass
	165	5825	-6.20	-3.98	3.01	0.47	-0.50	29.51	Pass

Note: 1. **For U-NII-3:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 30-(6.49-6) = 29.51dBm.

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

802.11ac (VHT40)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	142 (UNII-3 Band)	5710	-11.49	-9.27	3.01	0.89	-5.37	29.51	Pass
	151	5755	-9.69	-7.47	3.01	0.89	-3.57	29.51	Pass
	159	5795	-10.13	-7.91	3.01	0.89	-4.01	29.51	Pass
1	142 (UNII-3 Band)	5710	-11.17	-8.95	3.01	0.89	-5.05	29.51	Pass
	151	5755	-10.15	-7.93	3.01	0.89	-4.03	29.51	Pass
	159	5795	-10.32	-8.10	3.01	0.89	-4.20	29.51	Pass

Note: 1. **For U-NII-3:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 30-(6.49-6) = 29.51dBm.

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

802.11ac (VHT80)

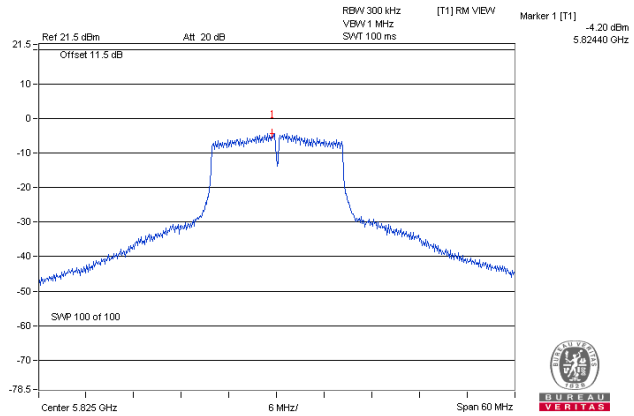
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	138 (UNII-3 Band)	5690	-15.03	-12.81	-15.03	3.01	-8.33	29.51	Pass
	155	5775	-13.24	-11.02	-13.24	3.01	-6.54	29.51	Pass
1	138 (UNII-3 Band)	5690	-14.95	-12.73	-14.95	3.01	-8.25	29.51	Pass
	155	5775	-13.23	-11.01	-13.23	3.01	-6.53	29.51	Pass

Note: 1. **For U-NII-3:** Directional gain = 3.01dBi + 10log(2) = 6.02dBi > 6dBi , so the power density limit shall be reduced to 30-(6.49-6) = 29.51dBm.

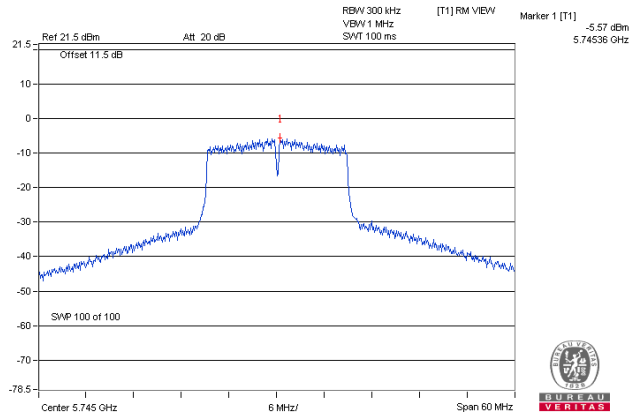
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

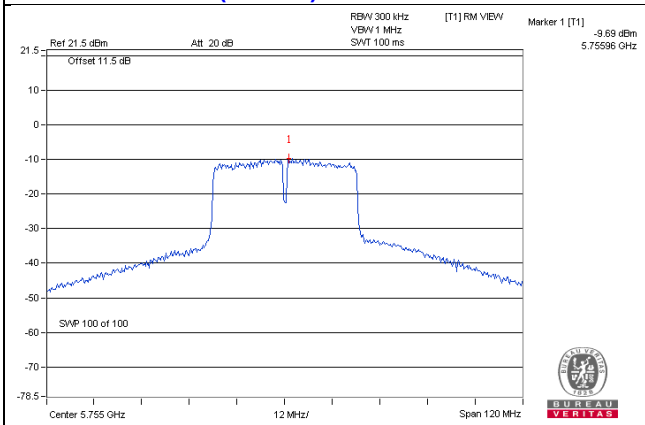
802.11a / Chain 0 – CH165



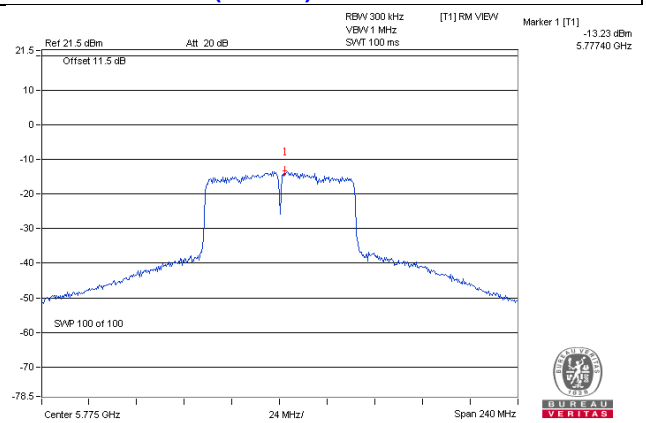
802.11ac (VHT20) / Chain 0 – CH149



802.11ac (VHT40) / Chain 0 – CH151



802.11ac (VHT80) / Chain 1 – CH155

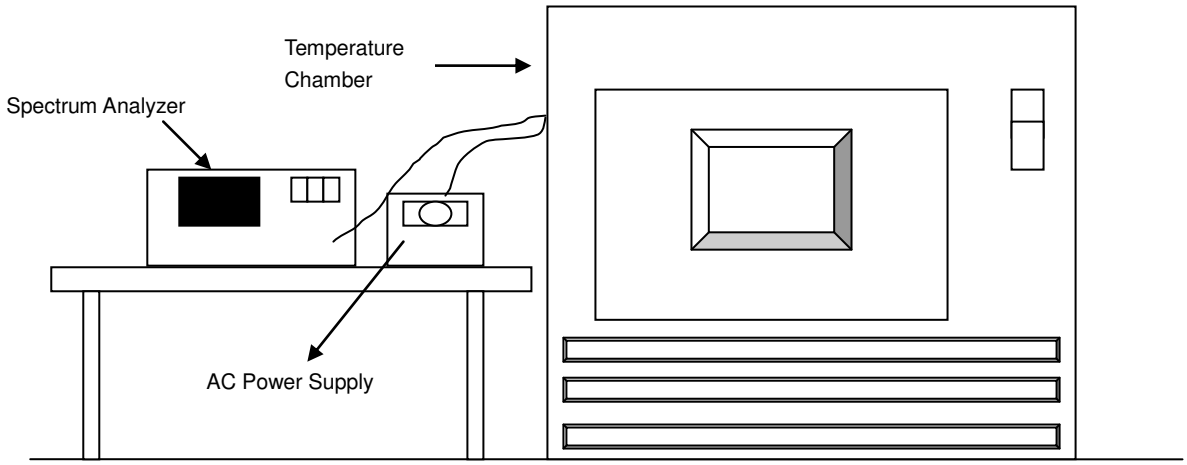


4.6 Frequency Stability Measurement

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

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. 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.
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
f. 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. (℃)	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	5179.9983	PASS	5180.0007	PASS	5179.9987	PASS	5180.0025	Pass
40	120	5180.0258	PASS	5180.0255	PASS	5180.0251	PASS	5180.025	Pass
30	120	5179.9975	PASS	5179.9936	PASS	5179.9946	PASS	5179.9933	Pass
20	120	5179.9993	PASS	5179.9992	PASS	5179.9964	PASS	5180.0009	Pass
10	120	5179.9884	PASS	5179.9882	PASS	5179.9867	PASS	5179.9856	Pass
0	120	5179.9807	PASS	5179.9789	PASS	5179.9797	PASS	5179.9799	Pass
-10	120	5180.0212	PASS	5180.0237	PASS	5180.0231	PASS	5180.0201	Pass
-20	120	5179.9932	PASS	5179.9898	PASS	5179.9899	PASS	5179.9909	Pass
-30	120	5180.0175	PASS	5180.0182	PASS	5180.0189	PASS	5180.0169	Pass

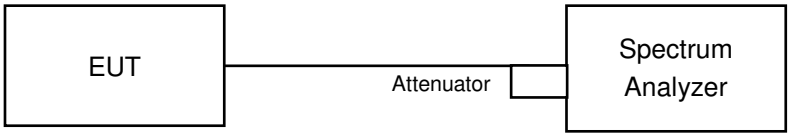
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5179.9987	PASS	5179.999	PASS	5179.9964	PASS	5180.0014	Pass
	120	5179.9993	PASS	5179.9992	PASS	5179.9964	PASS	5180.0009	Pass
	102	5179.9994	PASS	5179.9998	PASS	5179.9972	PASS	5180.0014	Pass

4.7 6dB Bandwidth Measurment

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) ≥ 3 x 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		
*144 (UNII-3 Band)	5720	3.20	3.19	0.5	Pass
149	5745	16.33	16.05	0.5	Pass
157	5785	16.12	15.86	0.5	Pass
165	5825	16.07	16.06	0.5	Pass

Note: *The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
*144 (UNII-3 Band)	5720	3.44	3.44	0.5	Pass
149	5745	16.31	16.42	0.5	Pass
157	5785	16.32	16.34	0.5	Pass
165	5825	16.33	15.50	0.5	Pass

Note: *The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
*142 (UNII-3 Band)	5710	2.69	2.67	0.5	Pass
151	5755	35.42	35.25	0.5	Pass
159	5795	35.20	35.27	0.5	Pass

Note: *The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

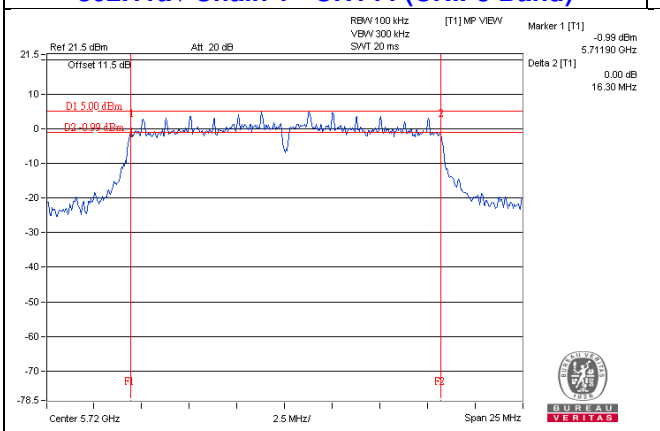
802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
*138 (UNII-3 Band)	5690	2.65	2.66	0.5	Pass
155	5775	75.36	75.35	0.5	Pass

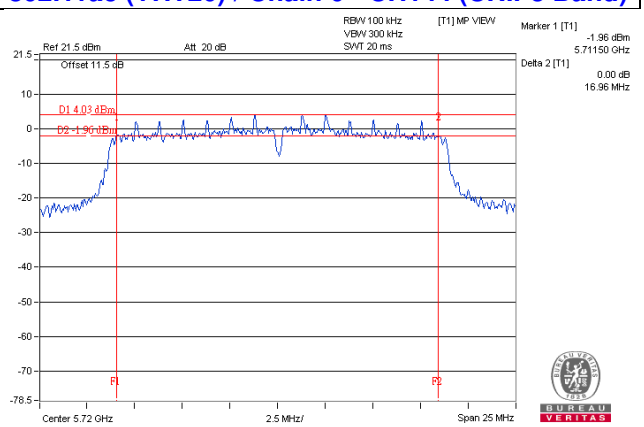
Note: *The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

Spectrum Plot of Worst Value

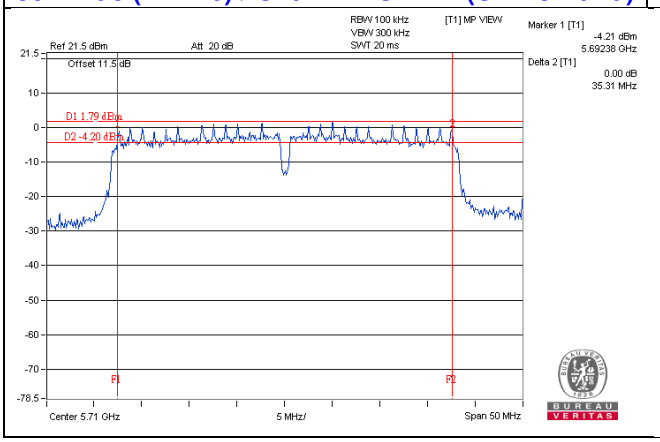
802.11a / Chain 1 - CH144 (UNII-3 Band)



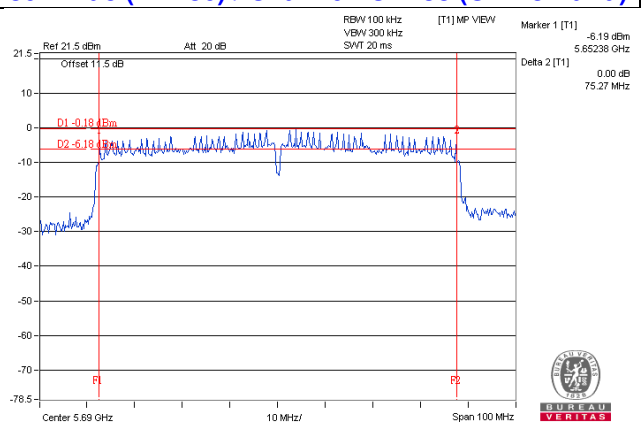
802.11ac (VHT20) / Chain 0 - CH144 (UNII-3 Band)



802.11ac (VHT40) / Chain 1 - CH142 (UNII-3 Band)



802.11ac (VHT80) / Chain 0 - CH138 (UNII-3 Band)



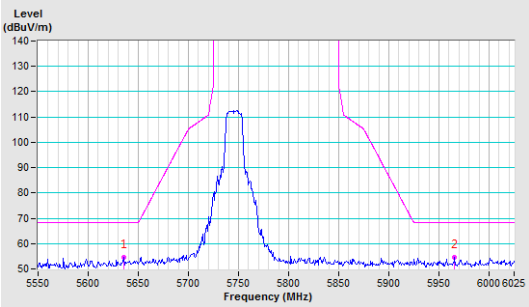
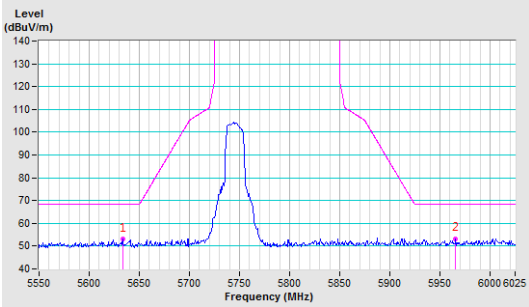
5 Pictures of Test Arrangements

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

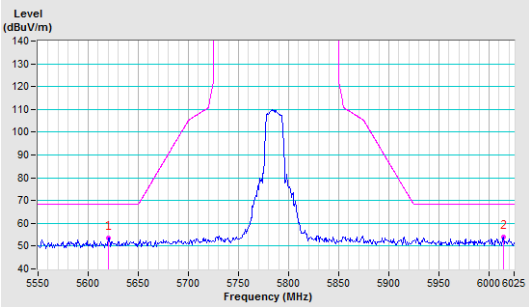
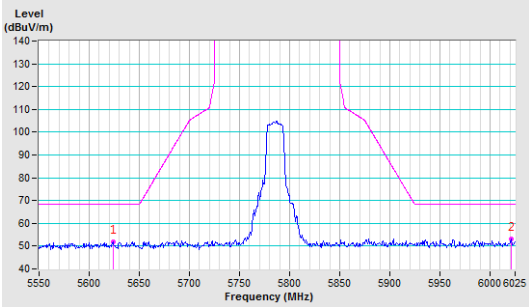
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

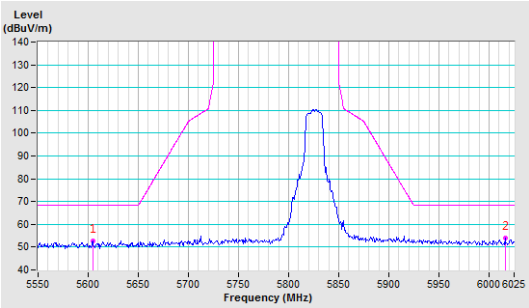
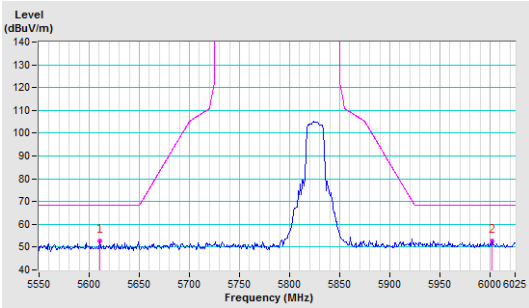
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

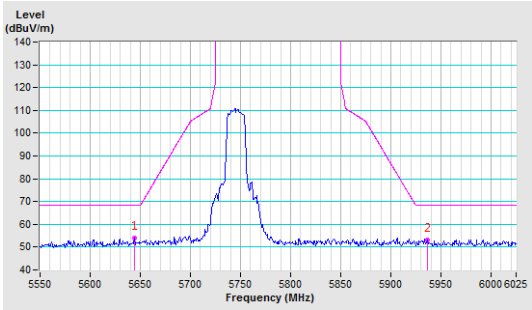
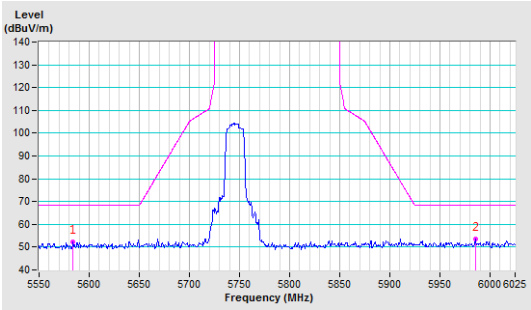
Horizontal	Vertical
	

CH 165 5825 MHz

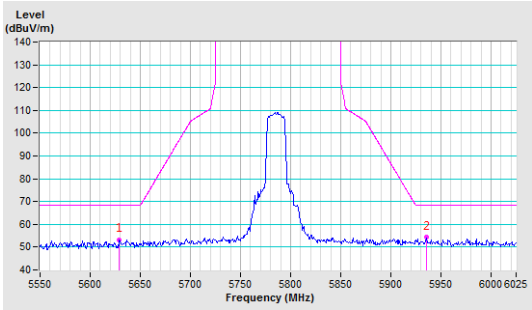
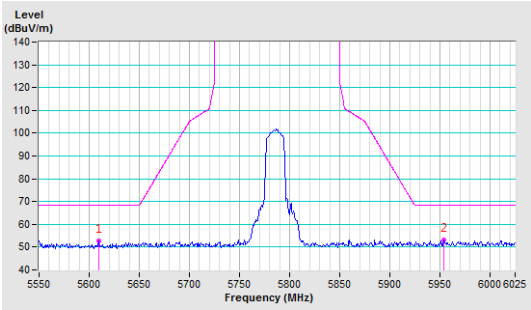
Horizontal	Vertical
	

802.11ac (VHT20)

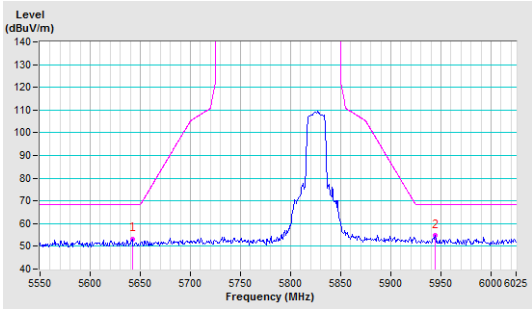
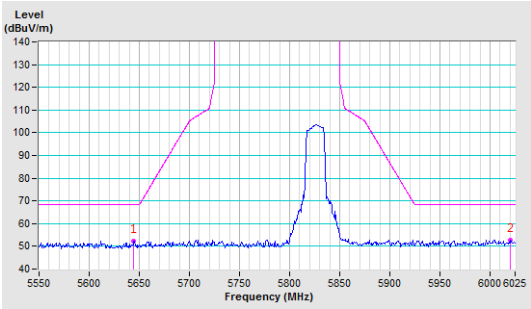
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

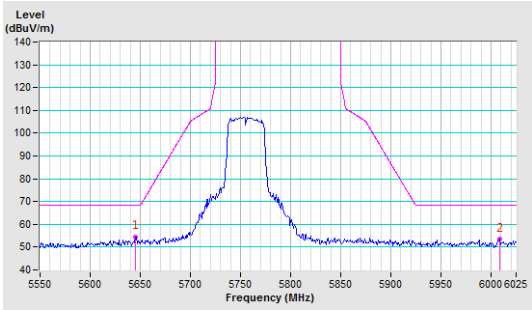
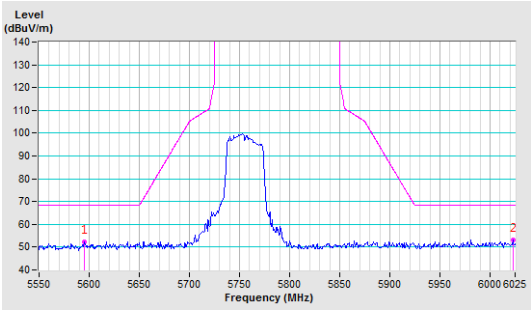
Horizontal	Vertical
	

CH 165 5825 MHz

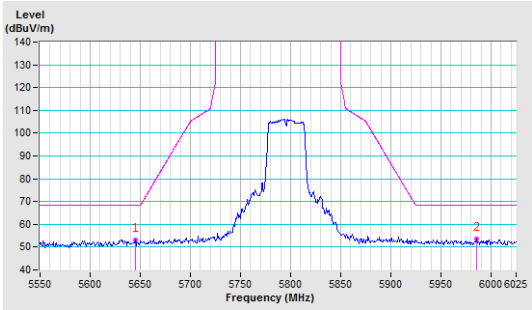
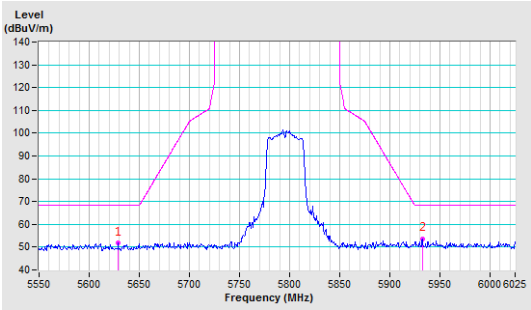
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

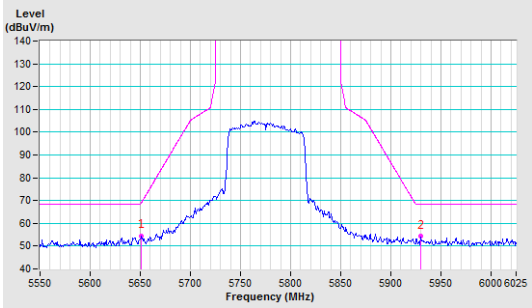
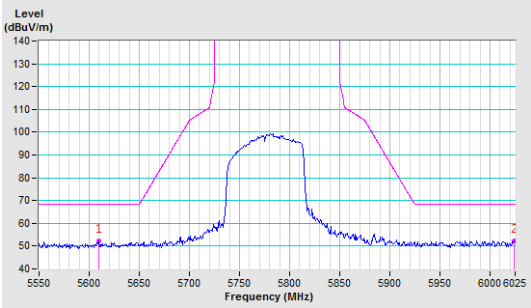
Horizontal	Vertical
	

CH 159 5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80)

CH 155 5775 MHz

Horizontal	Vertical
	

Appendix – Information on 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 accredited and approved 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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