FCC Test Report

Report No.:	RF161216E08C-1
FCC ID:	UAY-W8997-M1216
Test Model:	W8997-M1216
Received Date:	June 18, 2018
Test Date:	June 27 to July 10, 2018
Issued Date:	July 13, 2018
Applicant:	Marvell Semiconductor, Inc.
Address:	5488 Marvell Lane, Santa Clara CA95054 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

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Release Control Record

Issue No.	Description	Date Issued
RF161216E08C-1	Original release.	July 13, 2018

1 Certificate of Conformity

Product:	IEEE 802.11 2X2 MU-MIMO ac/a/b/g/n Wireless LAN + Bluetooth NGFF Module
Brand:	Marvell
Test Model:	W8997-M1216
Sample Status:	ENGINEERING SAMPLE
Applicant:	Marvell Semiconductor, Inc.
Test Date:	June 27 to July 10, 2018
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 : Wendy Wu , **Date:** July 13, 2018

Wendy Wu / Specialist

Approved by : , **Date:** July 13, 2018

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) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.2dB at 5725.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector are i-pex(MHF), RP-SMA 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	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.33 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.10 dB
	6GHz ~ 18GHz	4.85 dB
	18GHz ~ 40GHz	5.24 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IEEE 802.11 2X2 MU-MIMO ac/a/b/g/n Wireless LAN + Bluetooth NGFF Module
Brand	Marvell
Test Model	W8997-M1216
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 3.3V from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18~5.24GHz, 5.26~5.32GHz, 5.50~5.70GHz, 5.745~5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 24 802.11n (HT40), 802.11ac (VHT40): 11 802.11ac (VHT80): 5
Output Power	**2.4GHz:** 918.001mW **5.18GHz ~ 5.24GHz:** 147.595mW **5.26~5.32GHz:** 144.557mW **5.50~5.70GHz:** 123.471mW **5.745GHz ~ 5.825GHz:** 193.443mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF161216E08-1 as the following:

   ◆ Add new antennas as following table:

Original

Antenna Set.	Brand	Model	Chain No.	Antenna Net. Gain(dBi)	Frequency range (MHz)	Antenna Type	Connecter Type
1	MAG.LAYERS	MSA-4008-25GC1-A1	Chain 0(Aux)	2.98	2400~2500	PIFA	i-pex(MHF)
				5.16	4900~5900		
			Chain 1(Main)	2.98	2400~2500		
				5.16	4900~5900		

Newly

Antenna Set.	Brand	Model	Chain No.	Antenna Net. Gain(dBi)	Frequency range (MHz)	Antenna Type	Connecter Type
2	Bondale	G-RA0K10090176-1436B	Chain 0(Aux)	1.9	2400~2500	Dipole	RP-SMA
				3.6	4900~5800		
			Chain 1(Main)	1.9	2400~2500		
				3.6	4900~5800		
3	San Jose	UEN-201	Chain 0(Aux)	2.4	2400~2500	Dipole	RP-SMA
				4.4	4900~5800		
			Chain 1(Main)	2.4	2400~2500		
				4.4	4900~5800		

Note:
1. Max. gain was selected for Antenna Port Conducted Measurement test.
2. Antenna Set. 3 was selected for Radiated Emissions test.

2. According to above condition, only Conducted output power and Radiated Emissions test items need to be performed. And all data weres verified to meet the requirements.
3. There are WLAN, BT technology used for the EUT.
4. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)	Bluetooth
2	WLAN (5GHz)	Bluetooth

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	2TX	2RX
802.11g	6 ~ 54Mbps	2TX	2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
5GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	2TX	2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
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)	MCS0~9 Nss=1	2TX	2RX
	MCS0~9 Nss=2	2TX	2RX
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)

6. 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	5210 MHz

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	5290 MHz

FOR 5500 ~ 5700MHz

11 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		

5 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		

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 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	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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

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	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	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)
802.11ac (VHT20)	5180-5240 5260-5320 5500-5700 5745-5825	36 to 48 52 to 64 100 to 140 149 to 165	157	OFDM	BPSK	6.5

Antenna Port Conducted Measurement:

☒ 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.

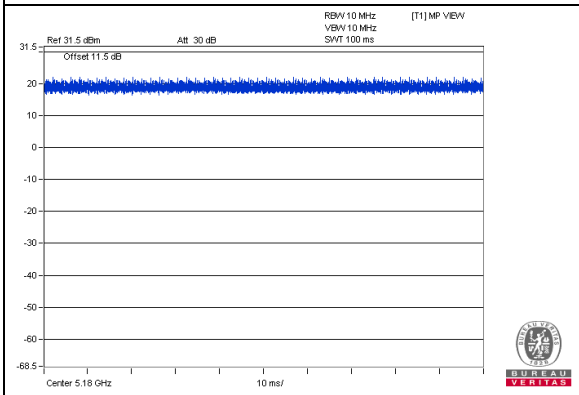
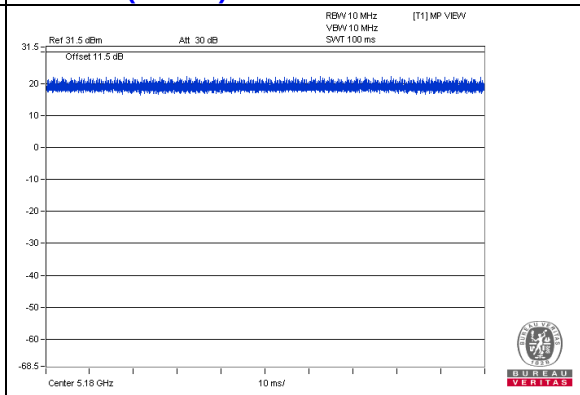
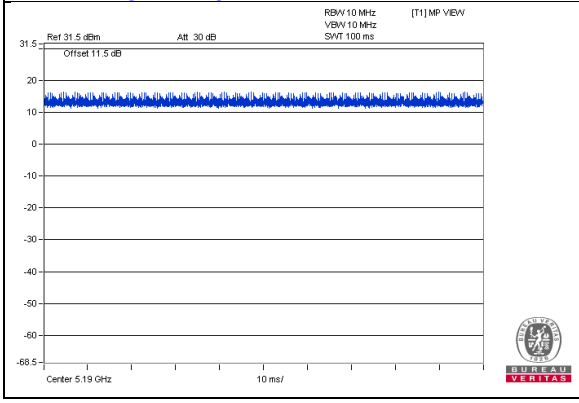
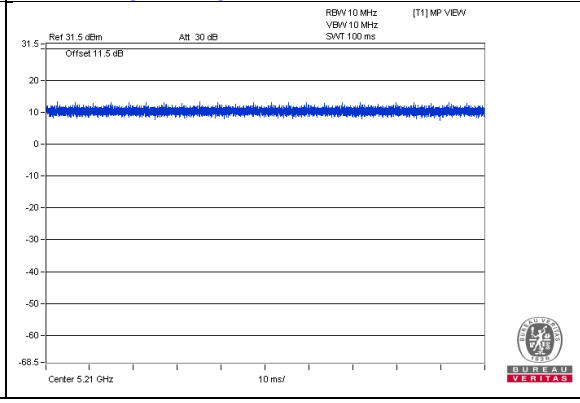
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	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	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	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	22deg. C, 64%RH	120Vac, 60Hz	Eason Tseng
RE<1G	24deg. C, 65%RH	120Vac, 60Hz	Frank Chuang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.

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.

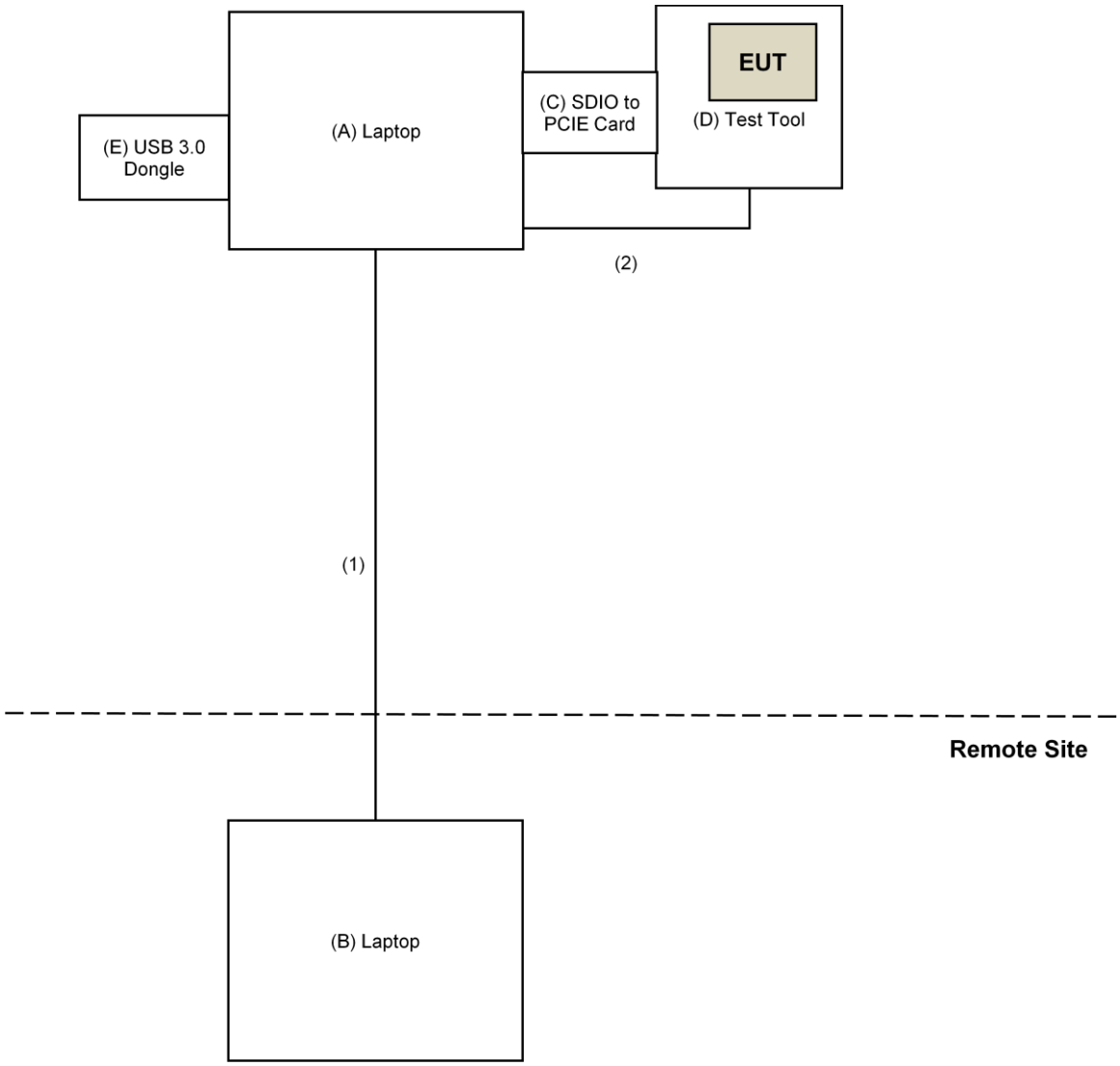
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab
B.	Laptop	HP	Pavilion 14-ab023TU	5CD5340WXZ	NA	Provided by Lab
C.	SDIO to PCIE Card	AzureWave	NA	NA	NA	Supplied by client
D.	Test Tool	AzureWave	NA	NA	NA	Supplied by client
E.	USB 3.0 Dongle	Transcend	JF790	NA	NA	Supplied by client

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.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	USB Cable	1	1.4	Yes	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 v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK:74 (dBμV/m)</td><td>AV:54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK:-27 (dBm/MHz)</td><td rowspan="3">PK:68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK:105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK:122.2 (dBμV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

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

For Output power test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: July 10, 2018

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 08, 2017	July 07, 2018
Pre-Amplifier EMCI	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 09, 2017	Nov. 08, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-4-1 966-4-2 966-4-3	Mar. 21, 2018	Mar. 20, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 03, 2017	Oct. 02, 2018
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 12, 2017	Dec. 11, 2018
Pre-Amplifier EMCI	EMC12630SE	980385	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160923 150318 150321	Jan. 29, 2018	Jan. 28, 2019
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	EMC102-KM-KM-1200	160925	Jan. 29, 2018	Jan. 28, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 4.
4. The CANADA Site Registration No. is 20331-2
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: June 27 to 28, 2018

4.1.3 Test Procedure

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

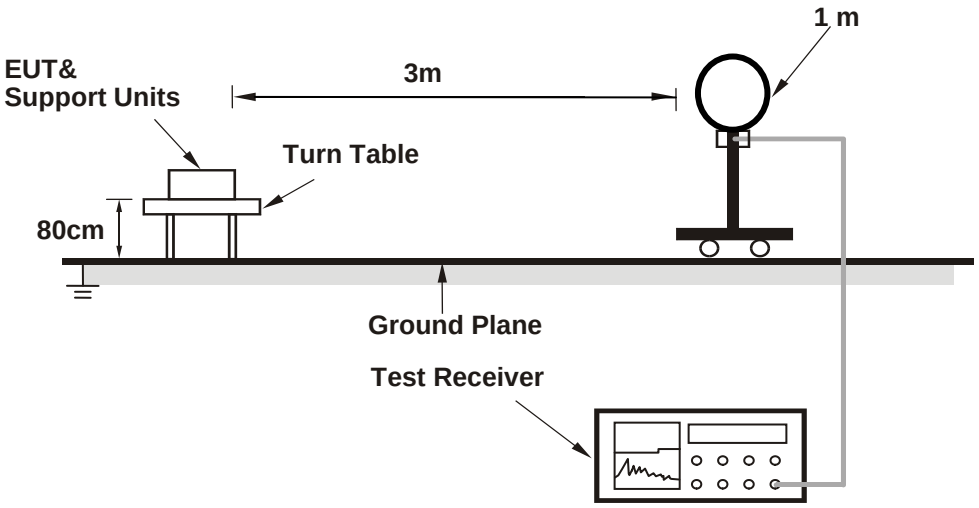
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

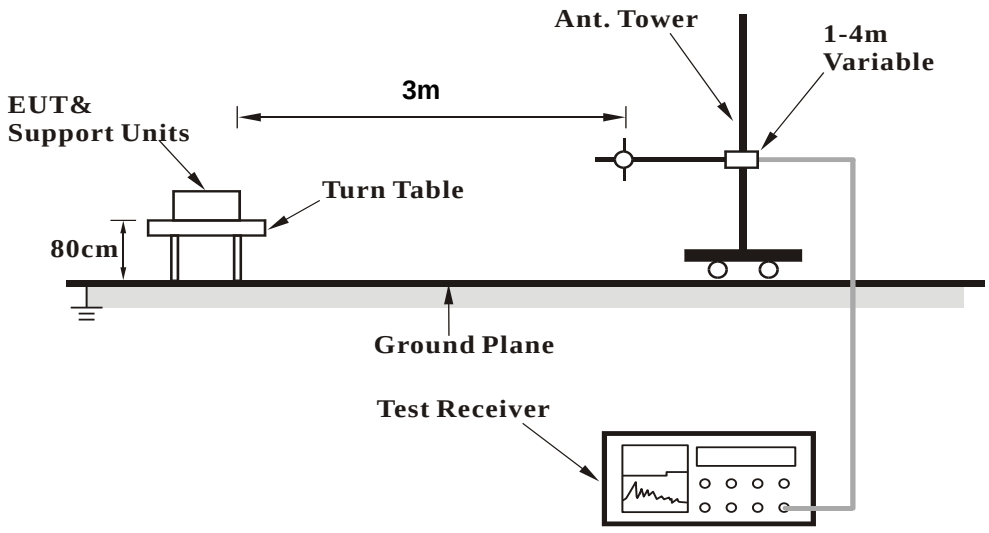
No deviation.

4.1.5 Test Setup

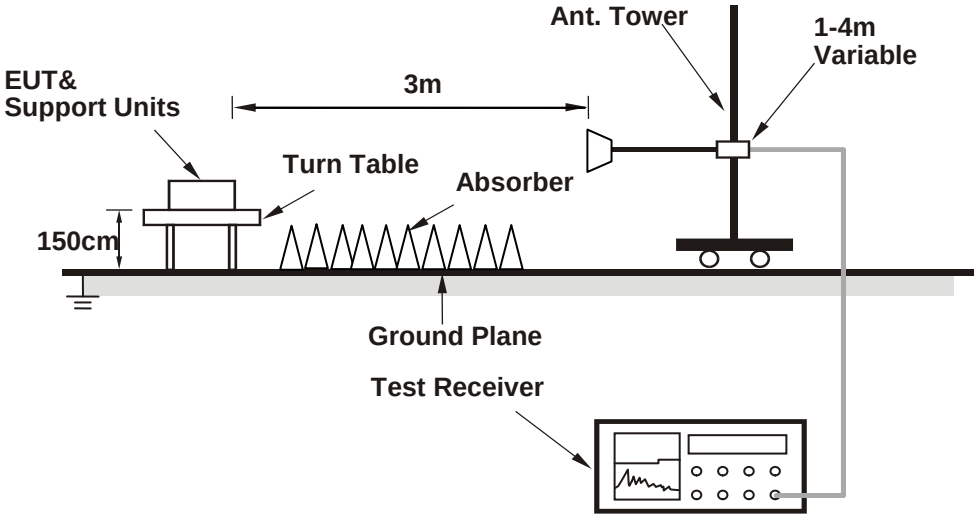
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

a. Connected the EUT with the Laptop Computer which is placed on remote site.
b. Controlling software (DUT labtool (1.0.0.109)) 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	55.1 PK	74.0	-18.9	1.19 H	118	52.1	3.0
2	5150.00	38.2 AV	54.0	-15.8	1.19 H	118	35.2	3.0
3	*5180.00	94.0 PK			1.19 H	118	91.2	2.8
4	*5180.00	85.6 AV			1.19 H	118	82.8	2.8
5	#10360.00	50.3 PK	74.0	-23.7	3.87 H	351	37.9	12.4
6	#10360.00	39.7 AV	54.0	-14.3	3.87 H	351	27.3	12.4
7	15540.00	46.2 PK	74.0	-27.8	2.03 H	286	33.4	12.8
8	15540.00	34.3 AV	54.0	-19.7	2.03 H	286	21.5	12.8
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	5150.00	67.4 PK	74.0	-6.6	1.72 V	345	64.4	3.0
2	5150.00	48.3 AV	54.0	-5.7	1.72 V	345	45.3	3.0
3	*5180.00	107.4 PK			1.72 V	345	104.6	2.8
4	*5180.00	98.4 AV			1.72 V	345	95.6	2.8
5	#10360.00	61.9 PK	74.0	-12.1	3.73 V	354	49.5	12.4
6	#10360.00	48.7 AV	54.0	-5.3	3.73 V	354	36.3	12.4
7	15540.00	46.9 PK	74.0	-27.1	2.03 V	192	34.1	12.8
8	15540.00	35.0 AV	54.0	-19.0	2.03 V	192	22.2	12.8

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 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	94.3 PK			1.24 H	108	91.6	2.7
2	*5200.00	85.7 AV			1.24 H	108	83.0	2.7
3	#10400.00	50.2 PK	74.0	-23.8	3.81 H	336	37.7	12.5
4	#10400.00	39.6 AV	54.0	-14.4	3.81 H	336	27.1	12.5
5	15600.00	46.2 PK	74.0	-27.8	2.04 H	289	33.4	12.8
6	15600.00	34.2 AV	54.0	-19.8	2.04 H	289	21.4	12.8
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	*5200.00	107.2 PK			1.50 V	314	104.5	2.7
2	*5200.00	98.2 AV			1.50 V	314	95.5	2.7
3	#10400.00	62.7 PK	74.0	-11.3	3.75 V	352	50.2	12.5
4	#10400.00	49.4 AV	54.0	-4.6	3.75 V	352	36.9	12.5
5	15600.00	47.3 PK	74.0	-26.7	1.99 V	215	34.5	12.8
6	15600.00	35.2 AV	54.0	-18.8	1.99 V	215	22.4	12.8

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 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	98.2 PK			1.28 H	105	95.7	2.5
2	*5240.00	88.5 AV			1.28 H	105	86.0	2.5
3	5350.00	48.4 PK	74.0	-25.6	1.28 H	105	45.8	2.6
4	5350.00	36.9 AV	54.0	-17.1	1.28 H	105	34.3	2.6
5	#10480.00	50.1 PK	74.0	-23.9	3.84 H	339	37.1	13.0
6	#10480.00	39.4 AV	54.0	-14.6	3.84 H	339	26.4	13.0
7	15720.00	46.4 PK	74.0	-27.6	2.05 H	281	34.0	12.4
8	15720.00	34.2 AV	54.0	-19.8	2.05 H	281	21.8	12.4
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	110.6 PK			1.88 V	315	108.1	2.5
2	*5240.00	101.5 AV			1.88 V	315	99.0	2.5
3	5350.00	59.4 PK	74.0	-14.6	1.88 V	315	56.8	2.6
4	5350.00	43.5 AV	54.0	-10.5	1.88 V	315	40.9	2.6
5	#10480.00	62.5 PK	74.0	-11.5	3.73 V	348	49.5	13.0
6	#10480.00	49.1 AV	54.0	-4.9	3.73 V	348	36.1	13.0
7	15720.00	47.4 PK	74.0	-26.6	1.98 V	201	35.0	12.4
8	15720.00	35.4 AV	54.0	-18.6	1.98 V	201	23.0	12.4

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	45.8 PK	74.0	-28.2	1.15 H	111	42.8	3.0
2	5150.00	36.7 AV	54.0	-17.3	1.15 H	111	33.7	3.0
3	*5260.00	97.6 PK			1.15 H	111	95.2	2.4
4	*5260.00	88.0 AV			1.15 H	111	85.6	2.4
5	#10520.00	49.7 PK	74.0	-24.3	3.84 H	328	36.8	12.9
6	#10520.00	39.2 AV	54.0	-14.8	3.84 H	328	26.3	12.9
7	15780.00	46.4 PK	74.0	-27.6	1.99 H	278	33.9	12.5
8	15780.00	33.9 AV	54.0	-20.1	1.99 H	278	21.4	12.5
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	5150.00	51.8 PK	74.0	-22.2	1.76 V	316	48.8	3.0
2	5150.00	42.1 AV	54.0	-11.9	1.76 V	316	39.1	3.0
3	*5260.00	110.7 PK			1.76 V	316	108.3	2.4
4	*5260.00	101.5 AV			1.76 V	316	99.1	2.4
5	#10520.00	62.3 PK	74.0	-11.7	3.78 V	353	49.4	12.9
6	#10520.00	48.8 AV	54.0	-5.2	3.78 V	353	35.9	12.9
7	15780.00	47.7 PK	74.0	-26.3	1.94 V	188	35.2	12.5
8	15780.00	35.5 AV	54.0	-18.5	1.94 V	188	23.0	12.5

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 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	98.3 PK			1.14 H	124	95.8	2.5
2	*5300.00	88.7 AV			1.14 H	124	86.2	2.5
3	10600.00	50.2 PK	74.0	-23.8	3.80 H	339	37.8	12.4
4	10600.00	39.4 AV	54.0	-14.6	3.80 H	339	27.0	12.4
5	15900.00	46.2 PK	74.0	-27.8	2.04 H	291	33.9	12.3
6	15900.00	34.1 AV	54.0	-19.9	2.04 H	291	21.8	12.3
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	*5300.00	110.1 PK			1.77 V	326	107.6	2.5
2	*5300.00	101.3 AV			1.77 V	326	98.8	2.5
3	10600.00	63.0 PK	74.0	-11.0	3.72 V	354	50.6	12.4
4	10600.00	49.4 AV	54.0	-4.6	3.72 V	354	37.0	12.4
5	15900.00	47.6 PK	74.0	-26.4	1.98 V	186	35.3	12.3
6	15900.00	35.6 AV	54.0	-18.4	1.98 V	186	23.3	12.3

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.

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	91.6 PK			1.21 H	112	89.1	2.5
2	*5320.00	83.5 AV			1.21 H	112	81.0	2.5
3	5350.00	59.8 PK	74.0	-14.2	1.21 H	112	57.2	2.6
4	5350.00	39.2 AV	54.0	-14.8	1.21 H	112	36.6	2.6
5	10640.00	45.1 PK	74.0	-28.9	3.78 H	328	32.5	12.6
6	10640.00	34.3 AV	54.0	-19.7	3.78 H	328	21.7	12.6
7	15960.00	46.7 PK	74.0	-27.3	2.06 H	294	34.2	12.5
8	15960.00	34.6 AV	54.0	-19.4	2.06 H	294	22.1	12.5
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	*5320.00	104.8 PK			1.82 V	316	102.3	2.5
2	*5320.00	96.2 AV			1.82 V	316	93.7	2.5
3	5350.00	66.6 PK	74.0	-7.4	1.82 V	316	64.0	2.6
4	5350.00	46.3 AV	54.0	-7.7	1.82 V	316	43.7	2.6
5	10640.00	59.9 PK	74.0	-14.1	2.27 V	317	47.3	12.6
6	10640.00	46.2 AV	54.0	-7.8	2.27 V	317	33.6	12.6
7	15960.00	48.1 PK	74.0	-25.9	1.20 V	229	35.6	12.5
8	15960.00	36.3 AV	54.0	-17.7	1.20 V	229	23.8	12.5

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	60.5 PK	74.0	-13.5	1.24 H	124	57.6	2.9
2	#5470.00	42.1 AV	54.0	-11.9	1.24 H	124	39.2	2.9
3	*5500.00	92.7 PK			1.24 H	124	89.8	2.9
4	*5500.00	84.6 AV			1.24 H	124	81.7	2.9
5	11000.00	44.9 PK	74.0	-29.1	3.84 H	325	31.7	13.2
6	11000.00	34.1 AV	54.0	-19.9	3.84 H	325	20.9	13.2
7	#16500.00	47.0 PK	74.0	-27.0	2.02 H	298	32.0	15.0
8	#16500.00	34.6 AV	54.0	-19.4	2.02 H	298	19.6	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	#5470.00	66.5 PK	74.0	-7.5	1.91 V	338	63.6	2.9
2	#5470.00	48.4 AV	54.0	-5.6	1.91 V	338	45.5	2.9
3	*5500.00	106.7 PK			1.91 V	338	103.8	2.9
4	*5500.00	97.1 AV			1.91 V	338	94.2	2.9
5	11000.00	60.3 PK	74.0	-13.7	2.22 V	324	47.1	13.2
6	11000.00	46.7 AV	54.0	-7.3	2.22 V	324	33.5	13.2
7	#16500.00	48.2 PK	74.0	-25.8	1.17 V	219	33.2	15.0
8	#16500.00	36.5 AV	54.0	-17.5	1.17 V	219	21.5	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 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	97.5 PK			1.19 H	103	94.3	3.2
2	*5580.00	87.4 AV			1.19 H	103	84.2	3.2
3	11160.00	50.4 PK	74.0	-23.6	3.83 H	360	37.3	13.1
4	11160.00	39.6 AV	54.0	-14.4	3.83 H	360	26.5	13.1
5	#16740.00	46.3 PK	74.0	-27.7	2.00 H	274	29.9	16.4
6	#16740.00	34.2 AV	54.0	-19.8	2.00 H	274	17.8	16.4
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	*5580.00	110.2 PK			2.00 V	342	107.0	3.2
2	*5580.00	100.1 AV			2.00 V	342	96.9	3.2
3	11160.00	62.8 PK	74.0	-11.2	3.76 V	355	49.7	13.1
4	11160.00	49.4 AV	54.0	-4.6	3.76 V	355	36.3	13.1
5	#16740.00	48.2 PK	74.0	-25.8	1.96 V	185	31.8	16.4
6	#16740.00	36.1 AV	54.0	-17.9	1.96 V	185	19.7	16.4

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 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	91.8 PK			1.24 H	117	88.4	3.4
2	*5700.00	81.6 AV			1.24 H	117	78.2	3.4
3	#5725.00	60.0 PK	74.0	-14.0	1.24 H	117	56.7	3.3
4	#5725.00	41.7 AV	54.0	-12.3	1.24 H	117	38.4	3.3
5	11400.00	51.7 PK	74.0	-22.3	1.08 H	337	38.2	13.5
6	11400.00	39.2 AV	54.0	-14.8	1.08 H	337	25.7	13.5
7	#17100.00	52.0 PK	74.0	-22.0	2.15 H	211	35.9	16.1
8	#17100.00	39.3 AV	54.0	-14.7	2.15 H	211	23.2	16.1
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	104.7 PK			1.89 V	157	101.3	3.4
2	*5700.00	95.1 AV			1.89 V	157	91.7	3.4
3	#5725.00	70.5 PK	74.0	-3.5	1.89 V	157	67.2	3.3
4	#5725.00	49.5 AV	54.0	-4.5	1.89 V	157	46.2	3.3
5	11400.00	59.4 PK	74.0	-14.6	2.26 V	309	45.9	13.5
6	11400.00	46.0 AV	54.0	-8.0	2.26 V	309	32.5	13.5
7	#17100.00	47.9 PK	74.0	-26.1	1.25 V	309	31.8	16.1
8	#17100.00	35.9 AV	54.0	-18.1	1.25 V	309	19.8	16.1

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 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	#5617.62	56.7 PK	68.2	-11.5	1.55 H	319	53.4	3.3
2	*5745.00	97.6 PK			1.55 H	319	94.3	3.3
3	*5745.00	89.5 AV			1.55 H	319	86.2	3.3
4	#5978.49	56.7 PK	68.2	-11.5	1.55 H	319	53.1	3.6
5	11490.00	51.2 PK	74.0	-22.8	1.12 H	332	37.8	13.4
6	11490.00	38.8 AV	54.0	-15.2	1.12 H	332	25.4	13.4
7	#17235.00	51.6 PK	74.0	-22.4	2.15 H	226	34.9	16.7
8	#17235.00	39.1 AV	54.0	-14.9	2.15 H	226	22.4	16.7
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	#5648.12	59.4 PK	68.2	-8.8	1.74 V	161	56.2	3.2
2	*5745.00	111.3 PK			1.74 V	161	108.0	3.3
3	*5745.00	102.4 AV			1.74 V	161	99.1	3.3
4	#5943.89	59.3 PK	68.2	-8.9	1.74 V	161	55.8	3.5
5	11490.00	53.6 PK	74.0	-20.4	2.25 V	306	40.2	13.4
6	11490.00	41.2 AV	54.0	-12.8	2.25 V	306	27.8	13.4
7	#17235.00	51.7 PK	74.0	-22.3	1.25 V	239	35.0	16.7
8	#17235.00	39.4 AV	54.0	-14.6	1.25 V	239	22.7	16.7

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 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	#5586.05	56.1 PK	68.2	-12.1	1.52 H	322	52.9	3.2
2	*5785.00	97.3 PK			1.52 H	322	94.0	3.3
3	*5785.00	89.1 AV			1.52 H	322	85.8	3.3
4	#5990.42	57.0 PK	68.2	-11.2	1.52 H	322	53.3	3.7
5	11570.00	51.5 PK	74.0	-22.5	1.07 H	346	38.1	13.4
6	11570.00	39.3 AV	54.0	-14.7	1.07 H	346	25.9	13.4
7	#17355.00	51.6 PK	74.0	-22.4	2.13 H	218	34.3	17.3
8	#17355.00	39.1 AV	54.0	-14.9	2.13 H	218	21.8	17.3
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	#5609.60	59.0 PK	68.2	-9.2	1.75 V	160	55.7	3.3
2	*5785.00	111.3 PK			1.75 V	160	108.0	3.3
3	*5785.00	102.2 AV			1.75 V	160	98.9	3.3
4	#5932.93	59.4 PK	68.2	-8.8	1.75 V	160	55.8	3.6
5	11570.00	53.5 PK	74.0	-20.5	2.23 V	307	40.1	13.4
6	11570.00	41.1 AV	54.0	-12.9	2.23 V	307	27.7	13.4
7	#17355.00	51.8 PK	74.0	-22.2	1.19 V	240	34.5	17.3
8	#17355.00	39.4 AV	54.0	-14.6	1.19 V	240	22.1	17.3

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 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	#5594.02	57.3 PK	68.2	-10.9	1.54 H	321	54.1	3.2
2	*5825.00	97.9 PK			1.54 H	321	94.4	3.5
3	*5825.00	89.9 AV			1.54 H	321	86.4	3.5
4	#5944.42	57.4 PK	68.2	-10.8	1.54 H	321	53.9	3.5
5	11650.00	50.8 PK	74.0	-23.2	1.13 H	326	37.5	13.3
6	11650.00	38.5 AV	54.0	-15.5	1.13 H	326	25.2	13.3
7	#17475.00	52.3 PK	74.0	-21.7	2.12 H	235	34.1	18.2
8	#17475.00	39.6 AV	54.0	-14.4	2.12 H	235	21.4	18.2
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	#5628.11	58.8 PK	68.2	-9.4	1.74 V	163	55.5	3.3
2	*5825.00	111.2 PK			1.74 V	163	107.7	3.5
3	*5825.00	102.1 AV			1.74 V	163	98.6	3.5
4	#5931.67	64.6 PK	68.2	-3.6	1.74 V	163	61.0	3.6
5	11650.00	53.6 PK	74.0	-20.4	2.22 V	303	40.3	13.3
6	11650.00	41.0 AV	54.0	-13.0	2.22 V	303	27.7	13.3
7	#17475.00	51.8 PK	74.0	-22.2	1.23 V	225	33.6	18.2
8	#17475.00	39.7 AV	54.0	-14.3	1.23 V	225	21.5	18.2

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.

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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	59.4 PK	74.0	-14.6	1.16 H	119	56.4	3.0
2	5150.00	46.6 AV	54.0	-7.4	1.16 H	119	43.6	3.0
3	*5180.00	93.9 PK			1.16 H	119	91.1	2.8
4	*5180.00	84.9 AV			1.16 H	119	82.1	2.8
5	#10360.00	50.5 PK	74.0	-23.5	3.92 H	347	38.1	12.4
6	#10360.00	39.7 AV	54.0	-14.3	3.92 H	347	27.3	12.4
7	15540.00	46.8 PK	74.0	-27.2	2.00 H	292	34.0	12.8
8	15540.00	34.8 AV	54.0	-19.2	2.00 H	292	22.0	12.8
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	5150.00	65.1 PK	74.0	-8.9	1.93 V	314	62.1	3.0
2	5150.00	52.6 AV	54.0	-1.4	1.93 V	314	49.6	3.0
3	*5180.00	106.8 PK			1.93 V	314	104.0	2.8
4	*5180.00	97.6 AV			1.93 V	314	94.8	2.8
5	#10360.00	62.0 PK	74.0	-12.0	3.70 V	341	49.6	12.4
6	#10360.00	48.6 AV	54.0	-5.4	3.70 V	341	36.2	12.4
7	15540.00	47.4 PK	74.0	-26.6	2.00 V	179	34.6	12.8
8	15540.00	35.2 AV	54.0	-18.8	2.00 V	179	22.4	12.8

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 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	104.5 PK			1.23 H	122	101.8	2.7
2	*5200.00	84.7 AV			1.23 H	122	82.0	2.7
3	#10400.00	49.8 PK	74.0	-24.2	3.89 H	348	37.3	12.5
4	#10400.00	39.5 AV	54.0	-14.5	3.89 H	348	27.0	12.5
5	15600.00	46.1 PK	74.0	-27.9	2.01 H	277	33.3	12.8
6	15600.00	34.0 AV	54.0	-20.0	2.01 H	277	21.2	12.8
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	*5200.00	107.0 PK			1.98 V	316	104.3	2.7
2	*5200.00	98.0 AV			1.98 V	316	95.3	2.7
3	#10400.00	62.3 PK	74.0	-11.7	3.68 V	360	49.8	12.5
4	#10400.00	49.2 AV	54.0	-4.8	3.68 V	360	36.7	12.5
5	15600.00	47.2 PK	74.0	-26.8	2.07 V	205	34.4	12.8
6	15600.00	35.3 AV	54.0	-18.7	2.07 V	205	22.5	12.8

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 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	97.9 PK			1.13 H	110	95.4	2.5
2	*5240.00	88.8 AV			1.13 H	110	86.3	2.5
3	5350.00	45.7 PK	74.0	-28.3	1.13 H	110	43.1	2.6
4	5350.00	36.5 AV	54.0	-17.5	1.13 H	110	33.9	2.6
5	#10480.00	50.5 PK	74.0	-23.5	3.83 H	355	37.5	13.0
6	#10480.00	39.7 AV	54.0	-14.3	3.83 H	355	26.7	13.0
7	15720.00	45.9 PK	74.0	-28.1	2.08 H	298	33.5	12.4
8	15720.00	34.3 AV	54.0	-19.7	2.08 H	298	21.9	12.4
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	110.3 PK			1.82 V	316	107.8	2.5
2	*5240.00	101.4 AV			1.82 V	316	98.9	2.5
3	5350.00	59.1 PK	74.0	-14.9	1.82 V	316	56.5	2.6
4	5350.00	44.1 AV	54.0	-9.9	1.82 V	316	41.5	2.6
5	#10480.00	62.9 PK	74.0	-11.1	3.70 V	354	49.9	13.0
6	#10480.00	49.5 AV	54.0	-4.5	3.70 V	354	36.5	13.0
7	15720.00	47.4 PK	74.0	-26.6	1.97 V	171	35.0	12.4
8	15720.00	35.6 AV	54.0	-18.4	1.97 V	171	23.2	12.4

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	46.1 PK	74.0	-27.9	1.22 H	102	43.1	3.0
2	5150.00	36.9 AV	54.0	-17.1	1.22 H	102	33.9	3.0
3	*5260.00	97.4 PK			1.22 H	102	95.0	2.4
4	*5260.00	88.4 AV			1.22 H	102	86.0	2.4
5	#10520.00	50.8 PK	74.0	-23.2	3.88 H	341	37.9	12.9
6	#10520.00	40.1 AV	54.0	-13.9	3.88 H	341	27.2	12.9
7	15780.00	45.8 PK	74.0	-28.2	2.05 H	296	33.3	12.5
8	15780.00	34.2 AV	54.0	-19.8	2.05 H	296	21.7	12.5
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	5150.00	51.8 PK	74.0	-22.2	1.76 V	316	48.8	3.0
2	5150.00	42.1 AV	54.0	-11.9	1.76 V	316	39.1	3.0
3	*5260.00	110.7 PK			1.76 V	316	108.3	2.4
4	*5260.00	101.5 AV			1.76 V	316	99.1	2.4
5	#10520.00	62.9 PK	74.0	-11.1	3.77 V	347	50.0	12.9
6	#10520.00	49.3 AV	54.0	-4.7	3.77 V	347	36.4	12.9
7	15780.00	47.9 PK	74.0	-26.1	1.98 V	171	35.4	12.5
8	15780.00	35.6 AV	54.0	-18.4	1.98 V	171	23.1	12.5

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 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	97.8 PK			1.19 H	106	95.3	2.5
2	*5300.00	88.6 AV			1.19 H	106	86.1	2.5
3	10600.00	51.0 PK	74.0	-23.0	3.86 H	349	38.6	12.4
4	10600.00	40.1 AV	54.0	-13.9	3.86 H	349	27.7	12.4
5	15900.00	46.2 PK	74.0	-27.8	2.05 H	275	33.9	12.3
6	15900.00	34.2 AV	54.0	-19.8	2.05 H	275	21.9	12.3
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	*5300.00	110.1 PK			1.77 V	326	107.6	2.5
2	*5300.00	101.3 AV			1.77 V	326	98.8	2.5
3	10600.00	62.9 PK	74.0	-11.1	3.73 V	360	50.5	12.4
4	10600.00	49.5 AV	54.0	-4.5	3.73 V	360	37.1	12.4
5	15900.00	47.4 PK	74.0	-26.6	2.02 V	182	35.1	12.3
6	15900.00	35.4 AV	54.0	-18.6	2.02 V	182	23.1	12.3

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.

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	92.8 PK			1.19 H	101	90.3	2.5
2	*5320.00	83.6 AV			1.19 H	101	81.1	2.5
3	5350.00	60.3 PK	74.0	-13.7	1.19 H	101	57.7	2.6
4	5350.00	40.2 AV	54.0	-13.8	1.19 H	101	37.6	2.6
5	10640.00	45.5 PK	74.0	-28.5	3.76 H	323	32.9	12.6
6	10640.00	34.5 AV	54.0	-19.5	3.76 H	323	21.9	12.6
7	15960.00	46.3 PK	74.0	-27.7	2.03 H	303	33.8	12.5
8	15960.00	34.3 AV	54.0	-19.7	2.03 H	303	21.8	12.5
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	*5320.00	105.2 PK			1.82 V	316	102.7	2.5
2	*5320.00	96.2 AV			1.82 V	316	93.7	2.5
3	5350.00	66.6 PK	74.0	-7.4	1.82 V	316	64.0	2.6
4	5350.00	46.3 AV	54.0	-7.7	1.82 V	316	43.7	2.6
5	10640.00	60.5 PK	74.0	-13.5	2.27 V	310	47.9	12.6
6	10640.00	46.7 AV	54.0	-7.3	2.27 V	310	34.1	12.6
7	15960.00	48.8 PK	74.0	-25.2	1.19 V	237	36.3	12.5
8	15960.00	36.8 AV	54.0	-17.2	1.19 V	237	24.3	12.5

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.

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	62.5 PK	74.0	-11.5	1.25 H	110	59.6	2.9
2	#5470.00	42.8 AV	54.0	-11.2	1.25 H	110	39.9	2.9
3	*5500.00	93.9 PK			1.25 H	110	91.0	2.9
4	*5500.00	84.5 AV			1.25 H	110	81.6	2.9
5	11000.00	45.0 PK	74.0	-29.0	3.73 H	317	31.8	13.2
6	11000.00	34.2 AV	54.0	-19.8	3.73 H	317	21.0	13.2
7	#16500.00	46.2 PK	74.0	-27.8	2.04 H	288	31.2	15.0
8	#16500.00	34.2 AV	54.0	-19.8	2.04 H	288	19.2	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	#5470.00	66.5 PK	74.0	-7.5	1.91 V	338	63.6	2.9
2	#5470.00	48.4 AV	54.0	-5.6	1.91 V	338	45.5	2.9
3	*5500.00	106.7 PK			1.91 V	338	103.8	2.9
4	*5500.00	97.1 AV			1.91 V	338	94.2	2.9
5	11000.00	59.5 PK	74.0	-14.5	2.33 V	329	46.3	13.2
6	11000.00	46.0 AV	54.0	-8.0	2.33 V	329	32.8	13.2
7	#16500.00	48.1 PK	74.0	-25.9	1.16 V	242	33.1	15.0
8	#16500.00	36.2 AV	54.0	-17.8	1.16 V	242	21.2	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 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	98.9 PK			1.25 H	102	95.7	3.2
2	*5580.00	88.4 AV			1.25 H	102	85.2	3.2
3	11160.00	50.6 PK	74.0	-23.4	3.83 H	360	37.5	13.1
4	11160.00	39.9 AV	54.0	-14.1	3.83 H	360	26.8	13.1
5	#16740.00	46.6 PK	74.0	-27.4	2.06 H	286	30.2	16.4
6	#16740.00	34.6 AV	54.0	-19.4	2.06 H	286	18.2	16.4
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	*5580.00	110.2 PK			2.00 V	342	107.0	3.2
2	*5580.00	100.1 AV			2.00 V	342	96.9	3.2
3	11160.00	62.8 PK	74.0	-11.2	3.72 V	350	49.7	13.1
4	11160.00	49.0 AV	54.0	-5.0	3.72 V	350	35.9	13.1
5	#16740.00	47.7 PK	74.0	-26.3	2.00 V	202	31.3	16.4
6	#16740.00	35.6 AV	54.0	-18.4	2.00 V	202	19.2	16.4

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 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	93.7 PK			1.18 H	102	90.3	3.4
2	*5700.00	83.6 AV			1.18 H	102	80.2	3.4
3	#5725.00	59.8 PK	74.0	-14.2	1.18 H	102	56.5	3.3
4	#5725.00	46.7 AV	54.0	-7.3	1.18 H	102	43.4	3.3
5	11400.00	44.7 PK	74.0	-29.3	3.81 H	321	31.2	13.5
6	11400.00	34.1 AV	54.0	-19.9	3.81 H	321	20.6	13.5
7	#17100.00	47.1 PK	74.0	-26.9	2.10 H	285	31.0	16.1
8	#17100.00	35.1 AV	54.0	-18.9	2.10 H	285	19.0	16.1
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	105.2 PK			1.78 V	169	101.8	3.4
2	*5700.00	95.9 AV			1.78 V	169	92.5	3.4
3	#5725.00	67.9 PK	74.0	-6.1	1.78 V	169	64.6	3.3
4	#5725.00	52.1 AV	54.0	-1.9	1.78 V	169	48.8	3.3
5	11400.00	59.3 PK	74.0	-14.7	2.22 V	310	45.8	13.5
6	11400.00	45.9 AV	54.0	-8.1	2.22 V	310	32.4	13.5
7	#17100.00	47.8 PK	74.0	-26.2	1.24 V	244	31.7	16.1
8	#17100.00	35.8 AV	54.0	-18.2	1.24 V	244	19.7	16.1

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 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	#5595.94	57.0 PK	68.2	-11.2	1.51 H	320	53.8	3.2
2	*5745.00	97.3 PK			1.51 H	320	94.0	3.3
3	*5745.00	89.4 AV			1.51 H	320	86.1	3.3
4	#5962.44	57.2 PK	68.2	-11.0	1.51 H	320	53.7	3.5
5	11490.00	51.3 PK	74.0	-22.7	1.14 H	335	37.9	13.4
6	11490.00	39.1 AV	54.0	-14.9	1.14 H	335	25.7	13.4
7	#17235.00	51.2 PK	74.0	-22.8	2.10 H	233	34.5	16.7
8	#17235.00	38.7 AV	54.0	-15.3	2.10 H	233	22.0	16.7
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	#5579.66	59.3 PK	68.2	-8.9	1.73 V	163	56.1	3.2
2	*5745.00	111.2 PK			1.73 V	163	107.9	3.3
3	*5745.00	102.1 AV			1.73 V	163	98.8	3.3
4	#5965.95	58.8 PK	68.2	-9.4	1.73 V	163	55.3	3.5
5	11490.00	54.4 PK	74.0	-19.6	2.31 V	311	41.0	13.4
6	11490.00	41.7 AV	54.0	-12.3	2.31 V	311	28.3	13.4
7	#17235.00	52.3 PK	74.0	-21.7	1.23 V	250	35.6	16.7
8	#17235.00	39.7 AV	54.0	-14.3	1.23 V	250	23.0	16.7

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 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	#5630.86	56.1 PK	68.2	-12.1	1.51 H	321	52.9	3.2
2	*5785.00	97.4 PK			1.51 H	321	94.1	3.3
3	*5785.00	89.0 AV			1.51 H	321	85.7	3.3
4	#5991.43	56.8 PK	68.2	-11.4	1.51 H	321	53.1	3.7
5	11570.00	50.9 PK	74.0	-23.1	1.14 H	341	37.5	13.4
6	11570.00	38.6 AV	54.0	-15.4	1.14 H	341	25.2	13.4
7	#17355.00	51.2 PK	74.0	-22.8	2.12 H	220	33.9	17.3
8	#17355.00	38.9 AV	54.0	-15.1	2.12 H	220	21.6	17.3
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	#5602.84	61.0 PK	68.2	-7.2	1.72 V	161	57.7	3.3
2	*5785.00	111.1 PK			1.72 V	161	107.8	3.3
3	*5785.00	102.0 AV			1.72 V	161	98.7	3.3
4	#5930.46	61.1 PK	68.2	-7.1	1.72 V	161	57.5	3.6
5	11570.00	53.7 PK	74.0	-20.3	2.24 V	301	40.3	13.4
6	11570.00	41.4 AV	54.0	-12.6	2.24 V	301	28.0	13.4
7	#17355.00	51.6 PK	74.0	-22.4	1.25 V	252	34.3	17.3
8	#17355.00	39.3 AV	54.0	-14.7	1.25 V	252	22.0	17.3

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 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	#5634.50	57.0 PK	68.2	-11.2	1.55 H	323	53.8	3.2
2	*5825.00	97.8 PK			1.55 H	323	94.3	3.5
3	*5825.00	89.4 AV			1.55 H	323	85.9	3.5
4	#5960.86	56.7 PK	68.2	-11.5	1.55 H	323	53.2	3.5
5	11650.00	51.8 PK	74.0	-22.2	1.16 H	319	38.5	13.3
6	11650.00	39.1 AV	54.0	-14.9	1.16 H	319	25.8	13.3
7	#17475.00	51.0 PK	74.0	-23.0	2.14 H	214	32.8	18.2
8	#17475.00	38.8 AV	54.0	-15.2	2.14 H	214	20.6	18.2
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	#5617.39	60.4 PK	68.2	-7.8	1.73 V	160	57.1	3.3
2	*5825.00	111.8 PK			1.73 V	160	108.3	3.5
3	*5825.00	102.6 AV			1.73 V	160	99.1	3.5
4	#5938.88	63.7 PK	68.2	-4.5	1.73 V	160	60.1	3.6
5	11650.00	53.0 PK	74.0	-21.0	2.30 V	317	39.7	13.3
6	11650.00	40.9 AV	54.0	-13.1	2.30 V	317	27.6	13.3
7	#17475.00	51.6 PK	74.0	-22.4	1.27 V	247	33.4	18.2
8	#17475.00	39.0 AV	54.0	-15.0	1.27 V	247	20.8	18.2

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.

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	59.7 PK	74.0	-14.3	1.17 H	133	56.7	3.0
2	5150.00	46.7 AV	54.0	-7.3	1.17 H	133	43.7	3.0
3	*5190.00	90.4 PK			1.17 H	133	87.6	2.8
4	*5190.00	81.1 AV			1.17 H	133	78.3	2.8
5	5350.00	44.1 PK	74.0	-29.9	1.17 H	133	41.5	2.6
6	5350.00	32.4 AV	54.0	-21.6	1.17 H	133	29.8	2.6
7	#10380.00	45.3 PK	74.0	-28.7	3.79 H	316	32.9	12.4
8	#10380.00	34.5 AV	54.0	-19.5	3.79 H	316	22.1	12.4
9	15570.00	48.3 PK	74.0	-25.7	2.16 H	310	35.5	12.8
10	15570.00	36.9 AV	54.0	-17.1	2.16 H	310	24.1	12.8
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	5150.00	61.2 PK	74.0	-12.8	1.78 V	344	58.2	3.0
2	5150.00	53.1 AV	54.0	-0.9	1.78 V	344	50.1	3.0
3	*5190.00	101.8 PK			1.78 V	344	99.0	2.8
4	*5190.00	93.9 AV			1.78 V	344	91.1	2.8
5	5350.00	49.5 PK	74.0	-24.5	1.78 V	344	46.9	2.6
6	5350.00	37.2 AV	54.0	-16.8	1.78 V	344	34.6	2.6
7	#10380.00	48.1 PK	74.0	-25.9	2.25 V	353	35.7	12.4
8	#10380.00	35.6 AV	54.0	-18.4	2.25 V	353	23.2	12.4
9	15570.00	48.5 PK	74.0	-25.5	1.17 V	240	35.7	12.8
10	15570.00	37.0 AV	54.0	-17.0	1.17 V	240	24.2	12.8

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 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	94.9 PK			1.20 H	104	92.4	2.5
2	*5230.00	85.8 AV			1.20 H	104	83.3	2.5
3	5350.00	56.4 PK	74.0	-17.6	1.20 H	104	53.8	2.6
4	5350.00	39.3 AV	54.0	-14.7	1.20 H	104	36.7	2.6
5	#10460.00	44.5 PK	74.0	-29.5	3.73 H	318	31.6	12.9
6	#10460.00	33.6 AV	54.0	-20.4	3.73 H	318	20.7	12.9
7	15690.00	47.9 PK	74.0	-26.1	2.12 H	302	35.5	12.4
8	15690.00	36.6 AV	54.0	-17.4	2.12 H	302	24.2	12.4
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	*5230.00	107.3 PK			1.81 V	347	104.8	2.5
2	*5230.00	98.5 AV			1.81 V	347	96.0	2.5
3	5350.00	61.8 PK	74.0	-12.2	1.81 V	347	59.2	2.6
4	5350.00	45.1 AV	54.0	-8.9	1.81 V	347	42.5	2.6
5	#10460.00	48.4 PK	74.0	-25.6	2.34 V	345	35.5	12.9
6	#10460.00	35.5 AV	54.0	-18.5	2.34 V	345	22.6	12.9
7	15690.00	48.5 PK	74.0	-25.5	1.09 V	231	36.1	12.4
8	15690.00	36.9 AV	54.0	-17.1	1.09 V	231	24.5	12.4

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 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	50.5 PK	74.0	-23.5	1.16 H	115	47.5	3.0
2	5150.00	36.7 AV	54.0	-17.3	1.16 H	115	33.7	3.0
3	*5270.00	95.2 PK			1.16 H	115	92.8	2.4
4	*5270.00	86.1 AV			1.16 H	115	83.7	2.4
5	#10540.00	44.7 PK	74.0	-29.3	3.74 H	303	31.9	12.8
6	#10540.00	33.6 AV	54.0	-20.4	3.74 H	303	20.8	12.8
7	15810.00	48.3 PK	74.0	-25.7	2.10 H	294	35.9	12.4
8	15810.00	37.2 AV	54.0	-16.8	2.10 H	294	24.8	12.4
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	5150.00	56.5 PK	74.0	-17.5	2.00 V	321	53.5	3.0
2	5150.00	42.6 AV	54.0	-11.4	2.00 V	321	39.6	3.0
3	*5270.00	107.2 PK			2.00 V	321	104.8	2.4
4	*5270.00	98.4 AV			2.00 V	321	96.0	2.4
5	#10540.00	47.7 PK	74.0	-26.3	2.32 V	340	34.9	12.8
6	#10540.00	34.8 AV	54.0	-19.2	2.32 V	340	22.0	12.8
7	15810.00	48.5 PK	74.0	-25.5	1.10 V	231	36.1	12.4
8	15810.00	37.0 AV	54.0	-17.0	1.10 V	231	24.6	12.4

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 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	90.2 PK			1.24 H	106	87.8	2.4
2	*5310.00	81.1 AV			1.24 H	106	78.7	2.4
3	5350.00	59.9 PK	74.0	-14.1	1.24 H	106	57.3	2.6
4	5350.00	46.6 AV	54.0	-7.4	1.24 H	106	44.0	2.6
5	10620.00	44.3 PK	74.0	-29.7	3.74 H	309	31.8	12.5
6	10620.00	33.6 AV	54.0	-20.4	3.74 H	309	21.1	12.5
7	15930.00	47.8 PK	74.0	-26.2	2.11 H	299	35.4	12.4
8	15930.00	36.5 AV	54.0	-17.5	2.11 H	299	24.1	12.4
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	*5310.00	101.8 PK			1.92 V	340	99.4	2.4
2	*5310.00	93.4 AV			1.92 V	340	91.0	2.4
3	5350.00	64.9 PK	74.0	-9.1	1.92 V	340	62.3	2.6
4	5350.00	52.4 AV	54.0	-1.6	1.92 V	340	49.8	2.6
5	10620.00	47.9 PK	74.0	-26.1	2.26 V	323	35.4	12.5
6	10620.00	35.3 AV	54.0	-18.7	2.26 V	323	22.8	12.5
7	15930.00	48.1 PK	74.0	-25.9	1.11 V	233	35.7	12.4
8	15930.00	36.7 AV	54.0	-17.3	1.11 V	233	24.3	12.4

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	60.0 PK	74.0	-14.0	1.25 H	120	57.1	2.9
2	#5470.00	46.9 AV	54.0	-7.1	1.25 H	120	44.0	2.9
3	*5510.00	90.1 PK			1.25 H	120	87.2	2.9
4	*5510.00	81.0 AV			1.25 H	120	78.1	2.9
5	11020.00	44.7 PK	74.0	-29.3	3.80 H	327	31.5	13.2
6	11020.00	33.6 AV	54.0	-20.4	3.80 H	327	20.4	13.2
7	#16530.00	48.2 PK	74.0	-25.8	2.16 H	301	33.3	14.9
8	#16530.00	37.0 AV	54.0	-17.0	2.16 H	301	22.1	14.9
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	#5470.00	62.1 PK	74.0	-11.9	1.88 V	348	59.2	2.9
2	#5470.00	52.7 AV	54.0	-1.3	1.88 V	348	49.8	2.9
3	*5510.00	101.4 PK			1.88 V	348	98.5	2.9
4	*5510.00	93.2 AV			1.88 V	348	90.3	2.9
5	11020.00	48.5 PK	74.0	-25.5	2.28 V	337	35.3	13.2
6	11020.00	35.7 AV	54.0	-18.3	2.28 V	337	22.5	13.2
7	#16530.00	48.1 PK	74.0	-25.9	1.10 V	243	33.2	14.9
8	#16530.00	36.5 AV	54.0	-17.5	1.10 V	243	21.6	14.9

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 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	91.8 PK			1.21 H	111	88.8	3.0
2	*5550.00	82.7 AV			1.21 H	111	79.7	3.0
3	11100.00	44.4 PK	74.0	-29.6	3.78 H	303	31.4	13.0
4	11100.00	33.6 AV	54.0	-20.4	3.78 H	303	20.6	13.0
5	#16650.00	48.4 PK	74.0	-25.6	2.12 H	296	32.8	15.6
6	#16650.00	37.1 AV	54.0	-16.9	2.12 H	296	21.5	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	*5550.00	103.8 PK			1.88 V	329	100.8	3.0
2	*5550.00	95.7 AV			1.88 V	329	92.7	3.0
3	11100.00	48.6 PK	74.0	-25.4	2.26 V	349	35.6	13.0
4	11100.00	35.7 AV	54.0	-18.3	2.26 V	349	22.7	13.0
5	#16650.00	49.0 PK	74.0	-25.0	1.11 V	238	33.4	15.6
6	#16650.00	37.3 AV	54.0	-16.7	1.11 V	238	21.7	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 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	90.2 PK			1.19 H	121	86.9	3.3
2	*5670.00	84.9 AV			1.19 H	121	81.6	3.3
3	#5725.00	62.1 PK	74.0	-11.9	1.19 H	121	58.8	3.3
4	#5725.00	42.6 AV	54.0	-11.4	1.19 H	121	39.3	3.3
5	11340.00	45.4 PK	74.0	-28.6	3.76 H	322	31.9	13.5
6	11340.00	34.2 AV	54.0	-19.8	3.76 H	322	20.7	13.5
7	#17010.00	48.4 PK	74.0	-25.6	2.14 H	305	31.9	16.5
8	#17010.00	36.9 AV	54.0	-17.1	2.14 H	305	20.4	16.5
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	*5670.00	102.4 PK			1.93 V	341	99.1	3.3
2	*5670.00	94.5 AV			1.93 V	341	91.2	3.3
3	#5725.00	64.5 PK	74.0	-9.5	1.93 V	341	61.2	3.3
4	#5725.00	48.2 AV	54.0	-5.8	1.93 V	341	44.9	3.3
5	11340.00	47.4 PK	74.0	-26.6	2.35 V	344	33.9	13.5
6	11340.00	34.8 AV	54.0	-19.2	2.35 V	344	21.3	13.5
7	#17010.00	48.8 PK	74.0	-25.2	1.17 V	227	32.3	16.5
8	#17010.00	37.2 AV	54.0	-16.8	1.17 V	227	20.7	16.5

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 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	#5649.58	57.9 PK	68.2	-10.3	1.53 H	323	54.7	3.2
2	*5755.00	94.9 PK			1.53 H	323	91.6	3.3
3	*5755.00	85.1 AV			1.53 H	323	81.8	3.3
4	#5928.50	57.3 PK	68.2	-10.9	1.53 H	323	53.7	3.6
5	11510.00	48.3 PK	74.0	-25.7	3.70 H	331	34.9	13.4
6	11510.00	36.2 AV	54.0	-17.8	3.70 H	331	22.8	13.4
7	#17265.00	52.1 PK	74.0	-21.9	2.15 H	313	35.3	16.8
8	#17265.00	39.1 AV	54.0	-14.9	2.15 H	313	22.3	16.8
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	#5604.67	62.5 PK	68.2	-5.7	2.00 V	317	59.2	3.3
2	*5755.00	107.1 PK			2.00 V	317	103.8	3.3
3	*5755.00	98.6 AV			2.00 V	317	95.3	3.3
4	#5931.92	62.0 PK	68.2	-6.2	2.00 V	317	58.4	3.6
5	11510.00	49.2 PK	74.0	-24.8	2.25 V	322	35.8	13.4
6	11510.00	36.4 AV	54.0	-17.6	2.25 V	322	23.0	13.4
7	#17265.00	52.4 PK	74.0	-21.6	1.29 V	254	35.6	16.8
8	#17265.00	40.0 AV	54.0	-14.0	1.29 V	254	23.2	16.8

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 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	#5590.09	56.5 PK	68.2	-11.7	1.51 H	320	53.3	3.2
2	*5795.00	94.4 PK			1.51 H	320	91.1	3.3
3	*5795.00	85.2 AV			1.51 H	320	81.9	3.3
4	#5944.69	57.2 PK	68.2	-11.0	1.51 H	320	53.7	3.5
5	11590.00	48.1 PK	74.0	-25.9	3.67 H	347	34.7	13.4
6	11590.00	36.0 AV	54.0	-18.0	3.67 H	347	22.6	13.4
7	#17385.00	52.5 PK	74.0	-21.5	2.10 H	321	35.0	17.5
8	#17385.00	39.6 AV	54.0	-14.4	2.10 H	321	22.1	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	#5647.74	58.7 PK	68.2	-9.5	2.01 V	315	55.5	3.2
2	*5795.00	106.5 PK			2.01 V	315	103.2	3.3
3	*5795.00	98.4 AV			2.01 V	315	95.1	3.3
4	#5927.95	63.0 PK	68.2	-5.2	2.01 V	315	59.4	3.6
5	11590.00	49.5 PK	74.0	-24.5	2.22 V	318	36.1	13.4
6	11590.00	36.6 AV	54.0	-17.4	2.22 V	318	23.2	13.4
7	#17385.00	51.8 PK	74.0	-22.2	1.33 V	243	34.3	17.5
8	#17385.00	39.6 AV	54.0	-14.4	1.33 V	243	22.1	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.

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	64.3 PK	74.0	-9.7	1.13 H	121	61.3	3.0
2	5150.00	46.5 AV	54.0	-7.5	1.13 H	121	43.5	3.0
3	*5210.00	85.2 PK			1.13 H	121	82.5	2.7
4	*5210.00	76.1 AV			1.13 H	121	73.4	2.7
5	5350.00	52.3 PK	74.0	-21.7	1.13 H	121	49.7	2.6
6	5350.00	34.2 AV	54.0	-19.8	1.13 H	121	31.6	2.6
7	#10420.00	45.0 PK	74.0	-29.0	3.75 H	305	32.4	12.6
8	#10420.00	34.2 AV	54.0	-19.8	3.75 H	305	21.6	12.6
9	15630.00	48.2 PK	74.0	-25.8	2.10 H	309	35.5	12.7
10	15630.00	36.9 AV	54.0	-17.1	2.10 H	309	24.2	12.7
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	67.4 PK	74.0	-6.6	1.81 V	345	64.4	3.0
2	5150.00	52.8 AV	54.0	-1.2	1.81 V	345	49.8	3.0
3	*5210.00	97.2 PK			1.81 V	345	94.5	2.7
4	*5210.00	88.8 AV			1.81 V	345	86.1	2.7
5	5350.00	51.1 PK	74.0	-22.9	1.81 V	345	48.5	2.6
6	5350.00	39.9 AV	54.0	-14.1	1.81 V	345	37.3	2.6
7	#10420.00	47.7 PK	74.0	-26.3	2.29 V	348	35.1	12.6
8	#10420.00	34.8 AV	54.0	-19.2	2.29 V	348	22.2	12.6
9	15630.00	49.1 PK	74.0	-24.9	1.17 V	241	36.4	12.7
10	15630.00	37.3 AV	54.0	-16.7	1.17 V	241	24.6	12.7

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)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.1 PK	74.0	-21.9	1.18 H	127	49.1	3.0
2	5150.00	34.3 AV	54.0	-19.7	1.18 H	127	31.3	3.0
3	*5290.00	84.9 PK			1.18 H	127	82.5	2.4
4	*5290.00	75.6 AV			1.18 H	127	73.2	2.4
5	5350.00	64.0 PK	74.0	-10.0	1.18 H	127	61.4	2.6
6	5350.00	46.0 AV	54.0	-8.0	1.18 H	127	43.4	2.6
7	#10580.00	45.0 PK	74.0	-29.0	3.72 H	328	32.4	12.6
8	#10580.00	33.8 AV	54.0	-20.2	3.72 H	328	21.2	12.6
9	15870.00	47.9 PK	74.0	-26.1	2.12 H	315	35.5	12.4
10	15870.00	36.8 AV	54.0	-17.2	2.12 H	315	24.4	12.4
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	5150.00	56.2 PK	74.0	-17.8	1.82 V	340	53.2	3.0
2	5150.00	40.1 AV	54.0	-13.9	1.82 V	340	37.1	3.0
3	*5290.00	97.1 PK			1.82 V	340	94.7	2.4
4	*5290.00	88.5 AV			1.82 V	340	86.1	2.4
5	5350.00	67.2 PK	74.0	-6.8	1.82 V	340	64.6	2.6
6	5350.00	52.5 AV	54.0	-1.5	1.82 V	340	49.9	2.6
7	#10580.00	47.6 PK	74.0	-26.4	2.26 V	356	35.0	12.6
8	#10580.00	34.4 AV	54.0	-19.6	2.26 V	356	21.8	12.6
9	15870.00	48.5 PK	74.0	-25.5	1.20 V	234	36.1	12.4
10	15870.00	36.8 AV	54.0	-17.2	1.20 V	234	24.4	12.4

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 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	51.7 PK	74.0	-22.3	1.21 H	102	48.8	2.9
2	#5470.00	33.8 AV	54.0	-20.2	1.21 H	102	30.9	2.9
3	*5530.00	83.8 PK			1.21 H	102	80.8	3.0
4	*5530.00	74.5 AV			1.21 H	102	71.5	3.0
5	#5725.00	60.5 PK	74.0	-13.5	1.21 H	102	57.2	3.3
6	#5725.00	48.2 AV	54.0	-5.8	1.21 H	102	44.9	3.3
7	11060.00	44.8 PK	74.0	-29.2	3.81 H	325	31.6	13.2
8	11060.00	34.1 AV	54.0	-19.9	3.81 H	325	20.9	13.2
9	#16590.00	47.6 PK	74.0	-26.4	2.10 H	294	32.5	15.1
10	#16590.00	36.4 AV	54.0	-17.6	2.10 H	294	21.3	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	#5470.00	51.4 PK	74.0	-22.6	1.78 V	347	48.5	2.9
2	#5470.00	39.9 AV	54.0	-14.1	1.78 V	347	37.0	2.9
3	*5530.00	96.2 PK			1.78 V	347	93.2	3.0
4	*5530.00	87.4 AV			1.78 V	347	84.4	3.0
5	#5725.00	67.5 PK	74.0	-6.5	1.78 V	347	64.2	3.3
6	#5725.00	53.7 AV	54.0	-0.3	1.78 V	347	50.4	3.3
7	11060.00	47.8 PK	74.0	-26.2	2.34 V	357	34.6	13.2
8	11060.00	35.0 AV	54.0	-19.0	2.34 V	357	21.8	13.2
9	#16590.00	49.3 PK	74.0	-24.7	1.17 V	248	34.2	15.1
10	#16590.00	37.4 AV	54.0	-16.6	1.17 V	248	22.3	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.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	86.9 PK			1.15 H	134	83.6	3.3
2	*5610.00	77.6 AV			1.15 H	134	74.3	3.3
3	#5725.00	61.5 PK	74.0	-12.5	1.15 H	134	58.2	3.3
4	#5725.00	48.4 AV	54.0	-5.6	1.15 H	134	45.1	3.3
5	11220.00	45.0 PK	74.0	-29.0	3.71 H	309	31.8	13.2
6	11220.00	34.0 AV	54.0	-20.0	3.71 H	309	20.8	13.2
7	#16830.00	48.5 PK	74.0	-25.5	2.17 H	316	31.9	16.6
8	#16830.00	37.2 AV	54.0	-16.8	2.17 H	316	20.6	16.6
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	*5610.00	99.5 PK			1.79 V	337	96.2	3.3
2	*5610.00	90.1 AV			1.79 V	337	86.8	3.3
3	#5725.00	67.9 PK	74.0	-6.1	1.79 V	337	64.6	3.3
4	**#5725.00**	**53.8 AV**	**54.0**	**-0.2**	**1.79 V**	**337**	**50.5**	**3.3**
5	11220.00	47.5 PK	74.0	-26.5	2.34 V	355	34.3	13.2
6	11220.00	34.5 AV	54.0	-19.5	2.34 V	355	21.3	13.2
7	#16830.00	49.0 PK	74.0	-25.0	1.23 V	250	32.4	16.6
8	#16830.00	37.0 AV	54.0	-17.0	1.23 V	250	20.4	16.6

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 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	#5586.34	56.2 PK	68.2	-12.0	1.52 H	321	53.0	3.2
2	*5775.00	87.3 PK			1.52 H	321	83.9	3.4
3	*5775.00	77.6 AV			1.52 H	321	74.2	3.4
4	#5934.12	57.3 PK	68.2	-10.9	1.52 H	321	53.7	3.6
5	11550.00	48.4 PK	74.0	-25.6	3.71 H	343	35.1	13.3
6	11550.00	36.3 AV	54.0	-17.7	3.71 H	343	23.0	13.3
7	#17325.00	52.3 PK	74.0	-21.7	2.12 H	323	35.2	17.1
8	#17325.00	39.1 AV	54.0	-14.9	2.12 H	323	22.0	17.1
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	#5588.05	60.0 PK	68.2	-8.2	2.04 V	307	56.8	3.2
2	*5775.00	99.2 PK			2.04 V	307	95.8	3.4
3	*5775.00	90.1 AV			2.04 V	307	86.7	3.4
4	#5936.47	62.2 PK	68.2	-6.0	2.04 V	307	58.6	3.6
5	11550.00	49.3 PK	74.0	-24.7	2.20 V	310	36.0	13.3
6	11550.00	36.2 AV	54.0	-17.8	2.20 V	310	22.9	13.3
7	#17325.00	52.0 PK	74.0	-22.0	1.32 V	256	34.9	17.1
8	#17325.00	39.7 AV	54.0	-14.3	1.32 V	256	22.6	17.1

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.

Below 1GHz Data:

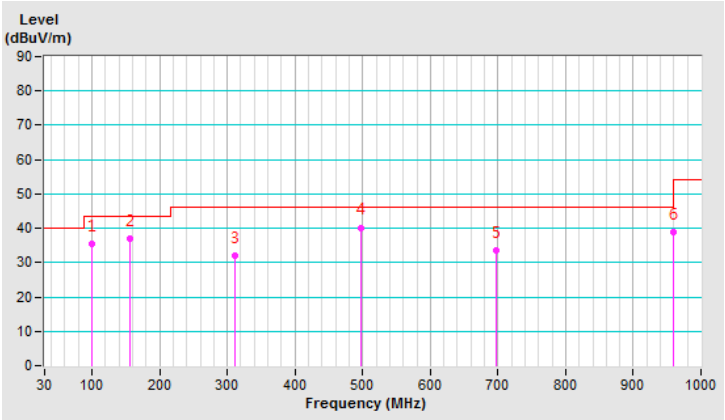
802.11ac (VHT20)

CHANNEL	TX Channel 157	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	99.74	35.6 QP	43.5	-7.9	1.50 H	259	52.9	-17.3
2	156.02	36.9 QP	43.5	-6.6	1.50 H	76	49.4	-12.5
3	311.15	32.1 QP	46.0	-13.9	1.00 H	170	43.8	-11.7
4	498.03	40.2 QP	46.0	-5.8	1.00 H	22	47.1	-6.9
5	696.67	33.4 QP	46.0	-12.6	2.00 H	109	36.6	-3.2
6	960.01	38.8 QP	54.0	-15.2	1.00 H	154	37.7	1.1

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. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz.

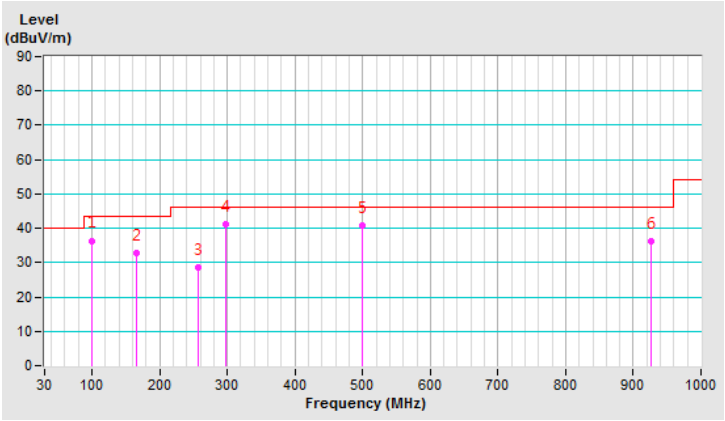


CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	99.99	36.4 QP	43.5	-7.1	1.50 V	191	53.7	-17.3
2	166.38	32.7 QP	43.5	-10.8	2.00 V	140	45.7	-13.0
3	256.32	28.7 QP	46.0	-17.3	1.50 V	146	42.4	-13.7
4	298.68	41.3 QP	46.0	-4.7	1.50 V	27	53.5	-12.2
5	499.77	40.8 QP	46.0	-5.2	1.00 V	11	47.7	-6.9
6	926.22	36.2 QP	46.0	-9.8	1.00 V	90	35.3	0.9

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. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz.



4.2 Transmit Power Measurement

4.2.1 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)
	√	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,

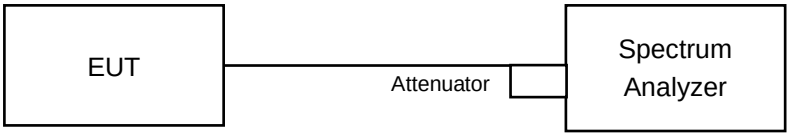
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.2.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

FOR 26dB OCCUPIED BANDWIDTH



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

For Average Power Measurement

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%.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

4.2.7 Test Result

802.11a

Power Output:

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1				
36	5180	15.20	15.22	66.379	18.22	24.00	Pass
40	5200	15.12	15.18	65.47	18.16	24.00	Pass
48	5240	18.62	18.74	147.595	21.69	24.00	Pass
52	5260	18.51	18.53	142.243	21.53	24.00	Pass
60	5300	18.54	18.56	143.229	21.56	24.00	Pass
64	5320	13.26	13.38	42.961	16.33	24.00	Pass
100	5500	14.02	14.01	50.412	17.03	24.00	Pass
116	5580	17.96	17.85	123.471	20.92	24.00	Pass
140	5700	13.50	13.41	44.315	16.47	24.00	Pass
149	5745	19.62	19.52	181.158	22.58	30.00	Pass
157	5785	19.63	19.53	181.576	22.59	30.00	Pass
165	5825	19.59	19.58	181.773	22.60	30.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	41.06	31.98
60	5300	39.06	28.50
64	5320	20.40	20.36
100	5500	20.37	20.29
116	5580	20.35	20.37
140	5700	20.26	20.23

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	31.98	26.04 > 24
60	5300	28.50	25.54 > 24
64	5320	20.36	24.08 > 24
100	5500	20.29	24.07 > 24
116	5580	20.35	24.08 > 24
140	5700	20.23	24.05 > 24

802.11ac (VHT20)

Power Output:

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1				
36	5180	15.15	15.23	66.077	18.20	24.00	Pass
40	5200	15.20	15.21	66.302	18.22	24.00	Pass
48	5240	18.56	18.62	144.557	21.60	24.00	Pass
52	5260	18.62	18.56	144.557	21.60	24.00	Pass
60	5300	18.58	18.58	144.222	21.59	24.00	Pass
64	5320	13.68	13.61	46.296	16.66	24.00	Pass
100	5500	13.15	13.01	40.653	16.09	24.00	Pass
116	5580	18.02	17.76	123.091	20.90	24.00	Pass
140	5700	13.62	13.58	45.817	16.61	24.00	Pass
149	5745	19.92	19.76	192.799	22.85	30.00	Pass
157	5785	19.90	19.81	193.443	22.87	30.00	Pass
165	5825	19.89	19.78	192.559	22.85	30.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	30.66	27.46
60	5300	30.19	28.95
64	5320	20.32	20.29
100	5500	20.31	20.19
116	5580	20.40	20.12
140	5700	20.42	20.18

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	27.46	25.38 > 24
60	5300	28.95	25.61 > 24
64	5320	20.29	24.07 > 24
100	5500	20.19	24.05 > 24
116	5580	20.12	24.03 > 24
140	5700	20.18	24.04 > 24

802.11ac (VHT40)

Power Output:

CHAN.	FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1				
38	5190	13.16	13.02	40.746	16.10	24.00	Pass
46	5230	16.74	16.85	95.623	19.81	24.00	Pass
54	5270	16.85	16.89	97.282	19.88	24.00	Pass
62	5310	13.06	13.16	40.931	16.12	24.00	Pass
102	5510	13.04	12.96	39.907	16.01	24.00	Pass
110	5550	17.13	17.02	101.992	20.09	24.00	Pass
134	5670	13.79	13.71	47.429	16.76	24.00	Pass
151	5755	19.74	19.52	183.725	22.64	30.00	Pass
159	5795	18.88	18.56	149.047	21.73	30.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	42.17	64.63
62	5310	41.91	41.89
102	5510	41.94	41.73
118	5590	41.95	41.92
134	5670	42.08	41.92

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	42.17	27.25 > 24
62	5310	41.89	27.22 > 24
102	5510	41.73	27.2 > 24
110	5550	41.92	27.22 > 24
134	5670	41.92	27.22 > 24

802.11ac (VHT80)

Power Output:

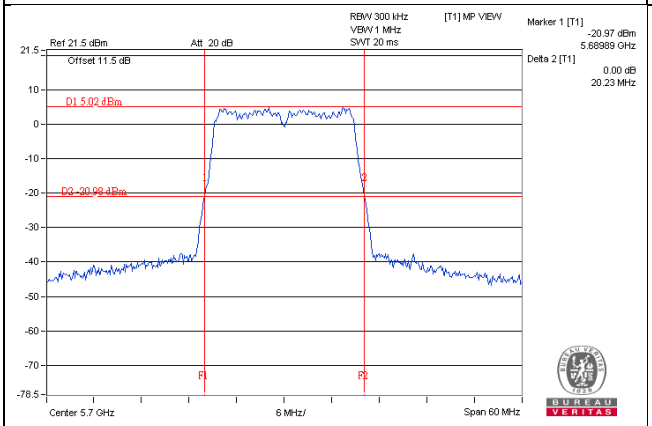
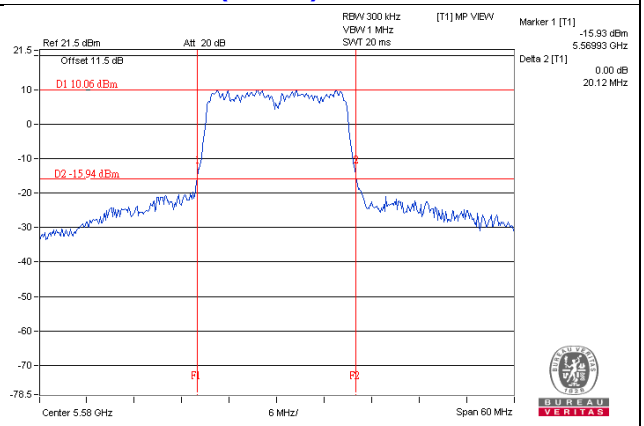
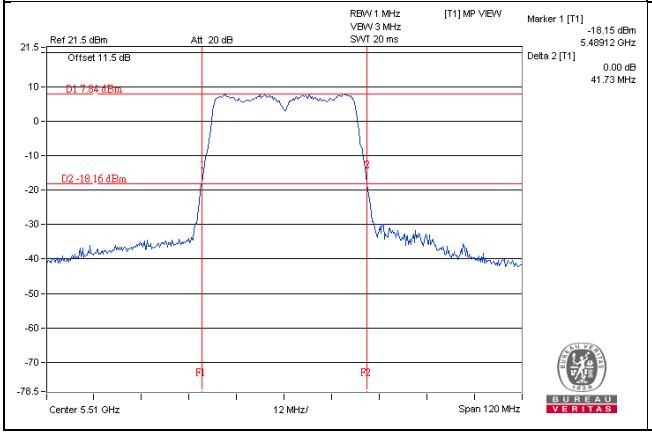
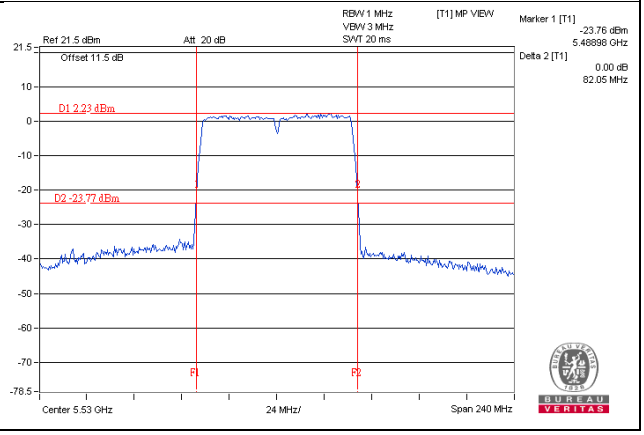
CHAN.	CHAN. FREQ. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1				
42	5210	12.62	12.60	36.478	15.62	24.00	Pass
58	5290	12.56	12.63	36.353	15.61	24.00	Pass
106	5530	11.62	11.56	28.843	14.60	24.00	Pass
122	5610	14.54	14.50	56.629	17.53	24.00	Pass
155	5775	15.13	14.96	63.917	18.06	30.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.60	82.24
106	5530	82.73	82.05
122	5610	82.91	82.17

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	82.24	30.15 > 24
106	5530	82.05	30.14 > 24
122	5610	82.17	30.14 > 24

Spectrum Plot of Worst Value	
802.11a_Chain 1 / CH140	**802.11ac (VHT20)_Chain 1 / CH116**
	
8802.11ac (VHT40) _Chain 1 / CH102	**802.11ac (VHT80) _Chain 1 / CH106**
	

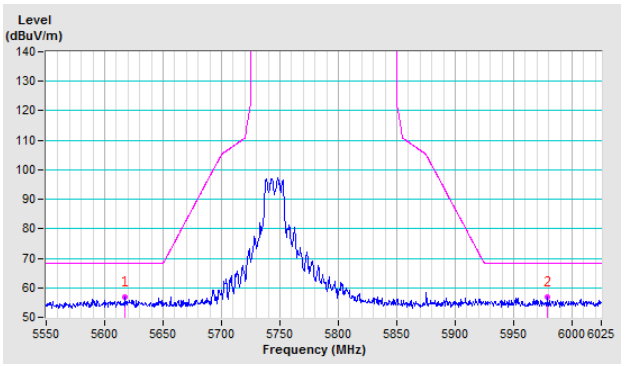
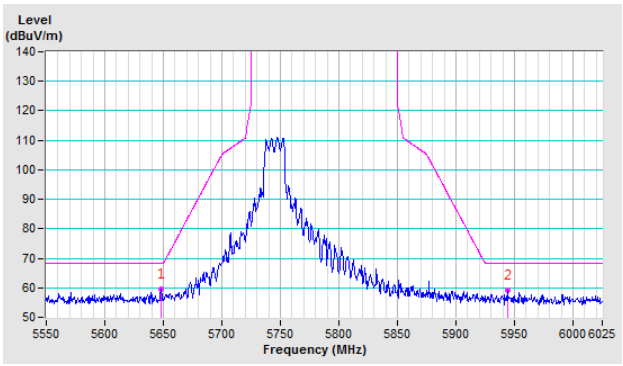
5 Pictures of Test Arrangements

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

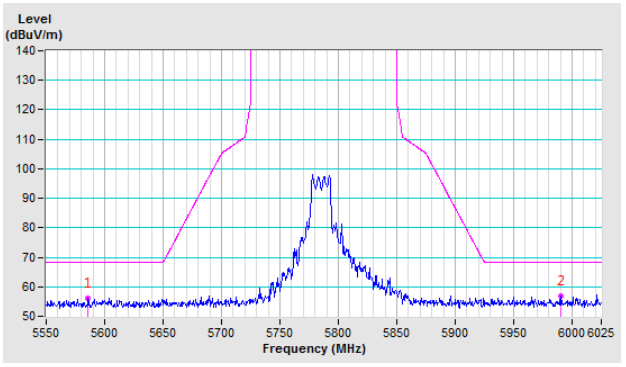
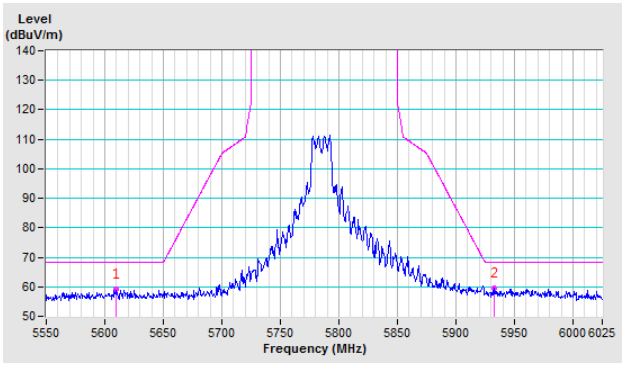
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

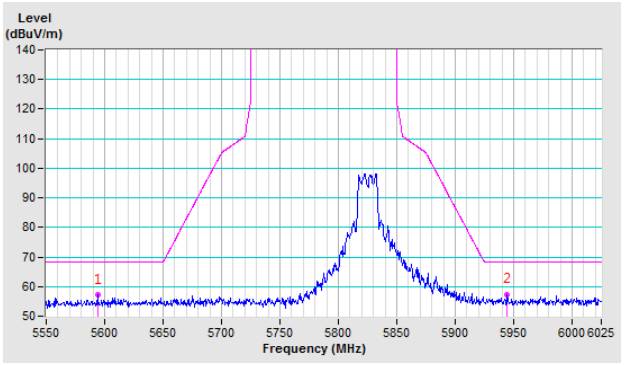
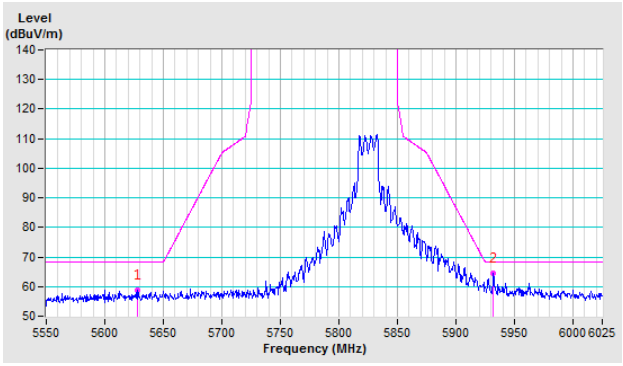
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

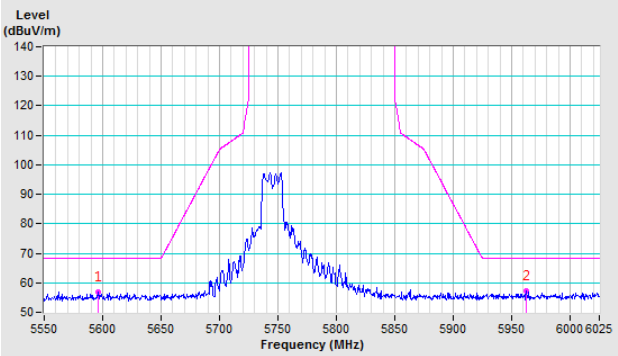
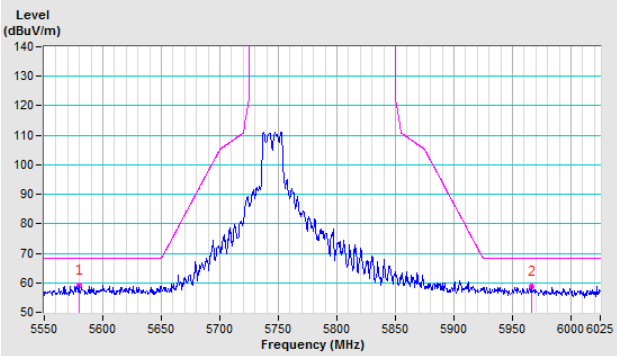
Horizontal	Vertical
	

CH 165 5825 MHz

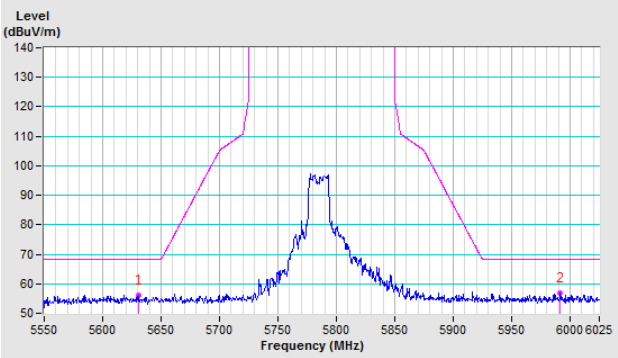
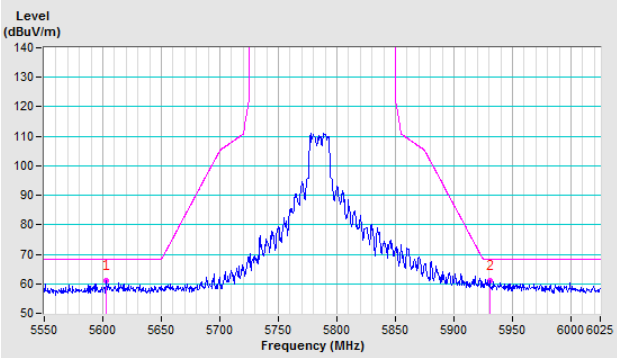
Horizontal	Vertical
	

802.11ac (VHT20)

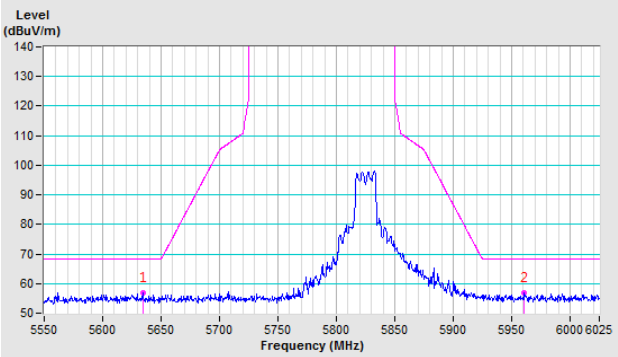
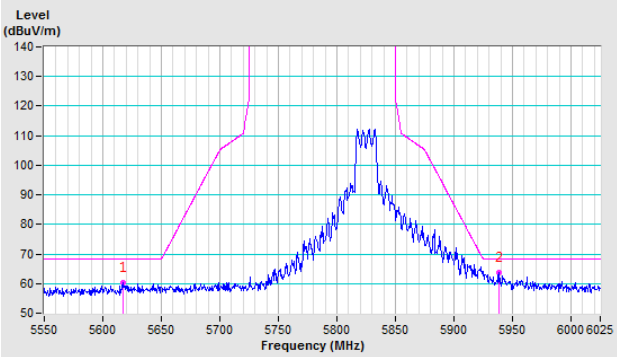
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

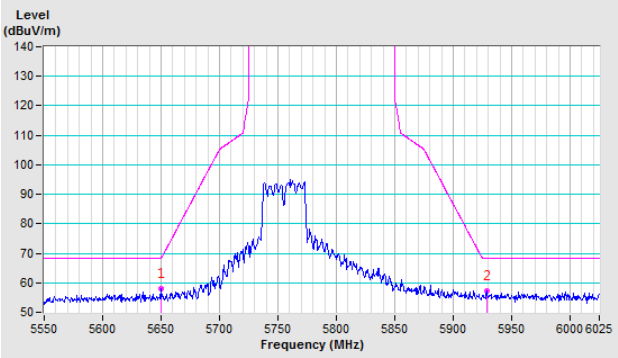
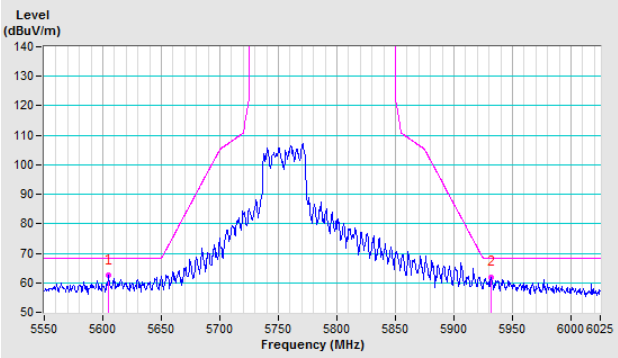
Horizontal	Vertical
	

CH 165 5825 MHz

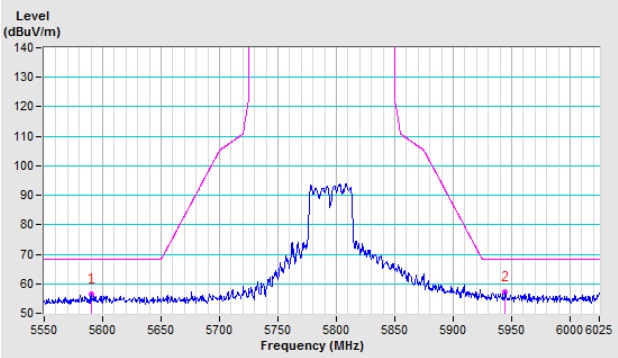
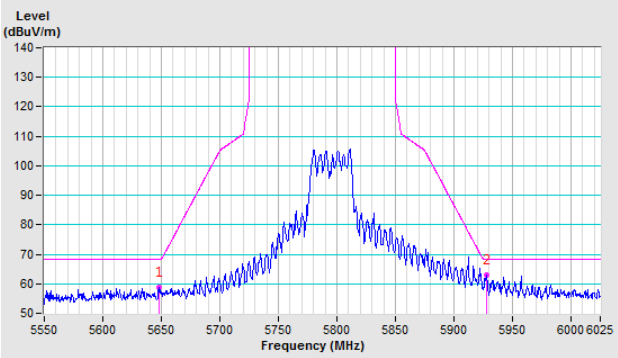
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

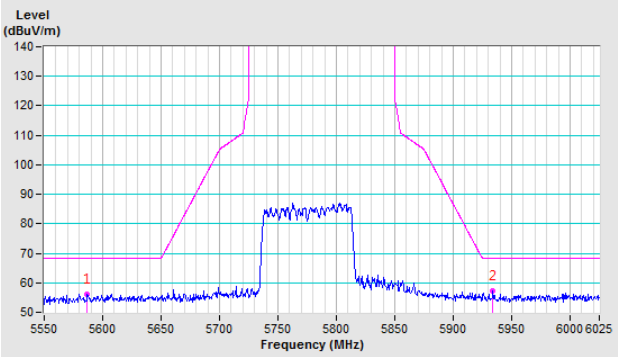
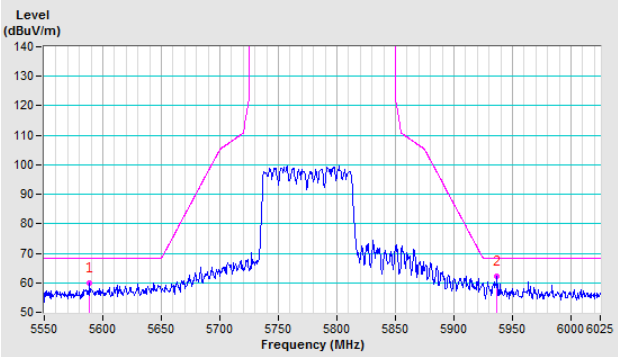
Horizontal	Vertical
	

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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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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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