FCC Test Report

Report No.:	RF170901E04-1
FCC ID:	NOIKBEA0M05
Test Model:	DPT-CP1
Received Date:	Sep. 01, 2017
Test Date:	Nov. 03 to Dec. 01, 2017
Issued Date:	Mar. 06, 2018
Applicant:	NETRONIX, INC.
Address:	No. 945, Boai St., Jubei City, Hsin-Chu,302,Taiwan, R.O.C.
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

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Release Control Record

Issue No.	Description	Date Issued
RF170901E04-1	Original release.	Mar. 06, 2018

1 Certificate of Conformity

Product:	Digital Paper
Brand:	SONY
Test Model:	DPT-CP1
Sample Status:	ENGINEERING SAMPLE
Applicant:	NETRONIX, INC.
Test Date:	Nov. 03 to Dec. 01, 2017
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 : Cindy Hsin , **Date:** Mar. 06, 2018

Cindy Hsin / Specialist

Approved by : , **Date:** Mar. 06, 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)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -22.85dB at 0.59141MHz.
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 -0.4dB at 5457.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX 4 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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.30 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.16 dB
	6GHz ~ 18GHz	4.91 dB
	18GHz ~ 40GHz	5.30 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Digital Paper
Brand	SONY
Test Model	DPT-CP1
Status of EUT	MASS-PRODUCTION
Power Supply Rating	3.7Vdc from battery or 5Vdc from USB interface
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
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 ~ 5.72GHz, 5.745 ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20): 11 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	**2.4GHz**: 438.058mW **5GHz:** **5.18 ~ 5.24GHz:** 14.86mW **5.26 ~ 5.32GHz:** 15.137mW **5.50 ~ 5.72GHz:** 14.077mW **5.745 ~ 5.825GHz:** 15.488mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery x1
Data Cable Supplied	USB cable (shielded, 1.5m) x 1

Note:

1. There are WLAN, Bluetooth and NFC technology used for the EUT.
2. Simultaneously transmission condition.

Condition	Technology		
1	WLAN 2.4GHz	Bluetooth	NFC
2	WLAN 5GHz	Bluetooth	NFC
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

3. The EUT needs to be supplied from battery, the information is as below table:

Brand	Model No.	Spec.
Li-ion	185360211	3.7 Vdc, 2.08Ah

4. The antennas provided to the EUT, please refer to the following table:

Antenna No.	PCB Chain No	Antenna Net. Gain(dBi)	Frequency range	Antenna Type	Connector type	Cable Length
Ant 1 (WiFi+BT)	Chain 0	1.54	2.4~2.4835GHz	PCB	IPEX 4	121mm
		2.19	5.15~5.85GHz			
Ant 0 (WiFi)	Chain 1	3.92	2.4~2.4835GHz	PCB	IPEX 4	90mm
		3.49	5.15~5.85GHz			
NFC	-	-	13.56 MHz	FPC	NA	-
Note : For 1TX configuration mode, max gain was selected for the final test.						

5. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	1TX diversity	2RX
802.11g	6 ~ 54Mbps	1TX diversity	2RX
802.11n (HT20)	MCS 0~7	1TX diversity	2RX
	MCS 8~15	2TX	2RX
5GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	1TX diversity	2RX
802.11n (HT20)	MCS 0~7	1TX diversity	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	1TX diversity	2RX
	MCS 8~15	2TX	2RX
802.11ac (VHT20)	MCS0~8 Nss=1	1TX diversity	2RX
	MCS0~8 Nss=2	2TX	2RX
802.11ac (VHT40)	MCS0~9 Nss=1	1TX diversity	2RX
	MCS0~9 Nss=2	2TX	2RX
802.11ac (VHT80)	MCS0~9 Nss=1	1TX diversity	2RX
	MCS0~9 Nss=2	2TX	2RX

6. For the radiated emissions, the EUT was pre-tested under the following modes:

Test Mode	Description
Mode A	**Power from adapter**
Mode B	Power from battery

From the above modes, the worst case was found in **Mode A**. Therefore only the test data of the mode was recorded in this report.

7. 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 ~ 5720MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825MHz:

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

Channel	Frequency	Channel	Frequency
149	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	PLC	APCM	
1	√	√	√	√	Adapter Mode
2	-	-	√	-	Laptop Mode

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

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

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	13
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	27
802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	13
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	27
802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	13
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	27
802.11ac (VHT80)		106 to 122	106, 138, 122	OFDM	BPSK	58.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	13
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	27
802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

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 5745-5825 5500-5720 5745-5825	36 to 48 52 to 64 100 to 144 149 to 165	40	OFDM	BPSK	13

Power Line Conducted Emission Test:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5240 5745-5825 5500-5720 5745-5825	36 to 48	40	OFDM	BPSK	13

Antenna Port Conducted Measurement:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	13
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	27
802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	13
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	27
802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	13
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	27
802.11ac (VHT80)		106 to 122	106, 138, 122	OFDM	BPSK	58.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	13
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	27
802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

Test Condition:

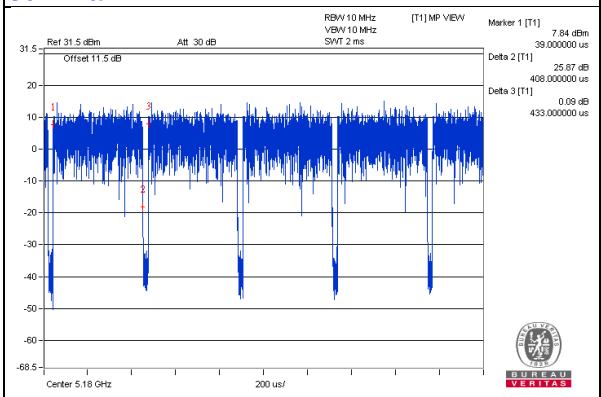
Applicable To	ENVIRONMENTAL CONDITIONS	INPUT POWER (System)	TESTED BY
RE≥1G	23deg. C, 65%RH	120Vac, 60Hz	Jyunchun Lin
RE<1G	24deg. C, 69%RH	120Vac, 60Hz	Frank Chuang
PLC	25deg. C, 58%RH 25deg. C, 75%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Robert Cheng

3.3 Duty Cycle of Test Signal

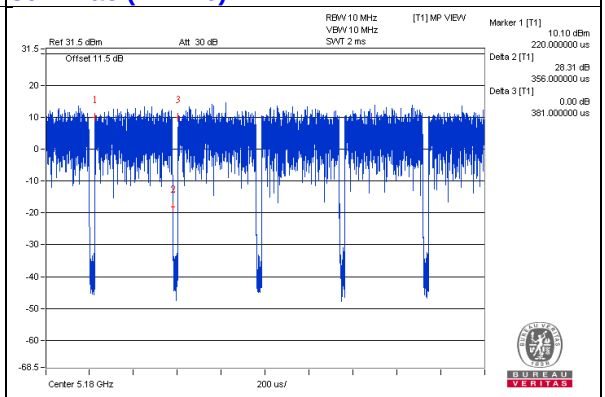
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 0.408/0.433 = 0.942, Duty factor = 10 * log(1/0.942) = 0.26
802.11ac (VHT20): Duty cycle = 0.356/0.381 = 0.934, Duty factor = 10 * log(1/0.934) = 0.29
802.11ac (VHT40): Duty cycle = 0.191/0.192 = 0.995
802.11ac (VHT80): Duty cycle = 0.115/0.116 = 0.991

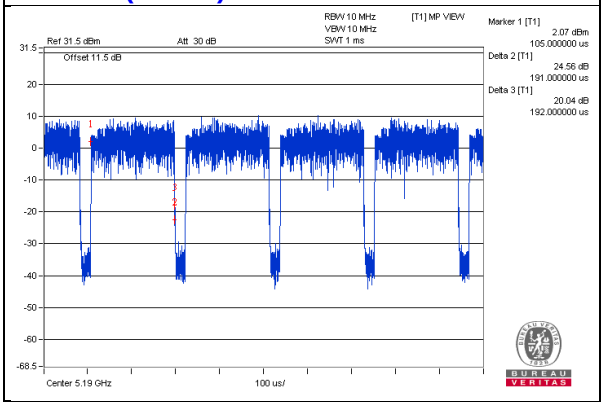
802.11a



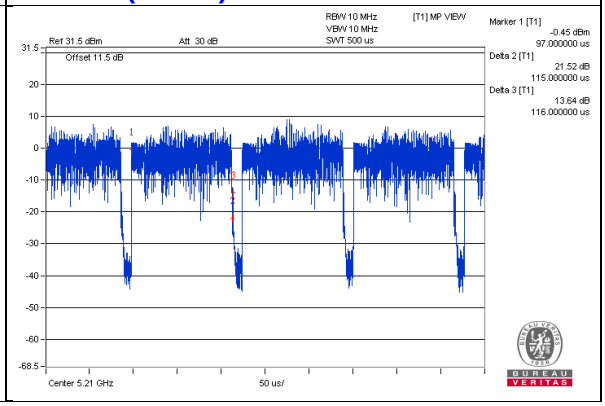
802.11ac (VHT20)



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.	Adapter	SONY	AC-UUD12	NA	NA	Supplied by client
B.	NFC Card	Sony	XPERIA NFC Card	NA	NA	Supplied by client
C.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab

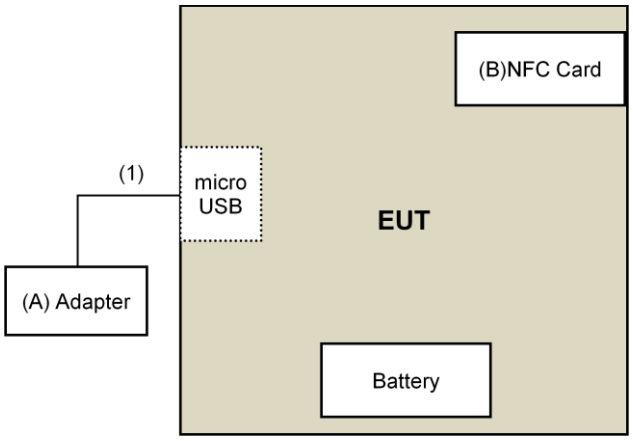
Note:

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

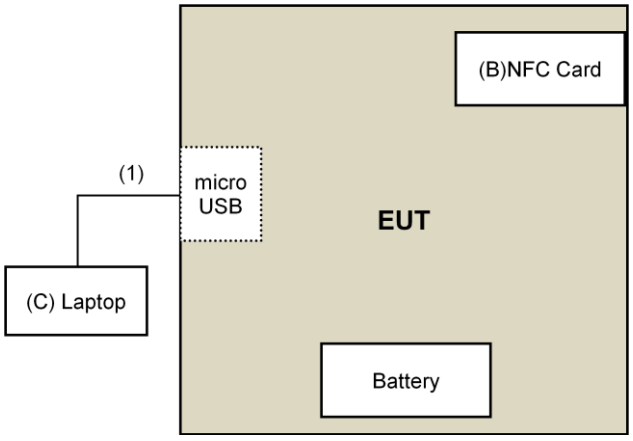
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1.5	Yes	0	Supplied by client

3.4.1 Configuration of System under Test

For Adapter Mode :



For Laptop Mode :



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 v01r04
KDB 662911 D01 Multiple Transmitter Output v02r01
KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01
ANSI C63.10-2013

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

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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="2">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="2" rowspan="2">789033 D02 General UNII Test Procedure New Rules v01r04</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 below 1GHz 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	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 17, 2017	Jan. 16, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 09, 2017	Nov. 08, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Dec. 13, 2016	Dec. 12, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 03, 2017	Oct. 02, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	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: Nov. 23, 2017

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 08, 2017	July 07, 2018
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 27, 2016	Dec. 26, 2017
Pre-Amplifier EMCI	EMC12630SE	980385	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160923 150318 150321	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Pre-Amplifier EMCI	EMC184045SE	980387	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 15, 2016	Dec. 14, 2017
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSv40	100964	July 1, 2017	June 30, 2018
Power meter Anritsu	ML2495A	1014008	May 11, 2017	May 10, 2018
Power sensor Anritsu	MA2411B	0917122	May 11, 2017	May 10, 2018
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 11, 2017	Jan. 10, 2018
DC Power Supply Topward	6603D	795558	NA	NA
Digital Multimeter FLUKE	87III	73680266	Nov. 10, 2016	Nov. 09, 2017

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. The CANADA Site Registration No. is 20331-2
4. Tested Date: Nov. 03 to 07, 2017

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. Both X and Y axes 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 detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

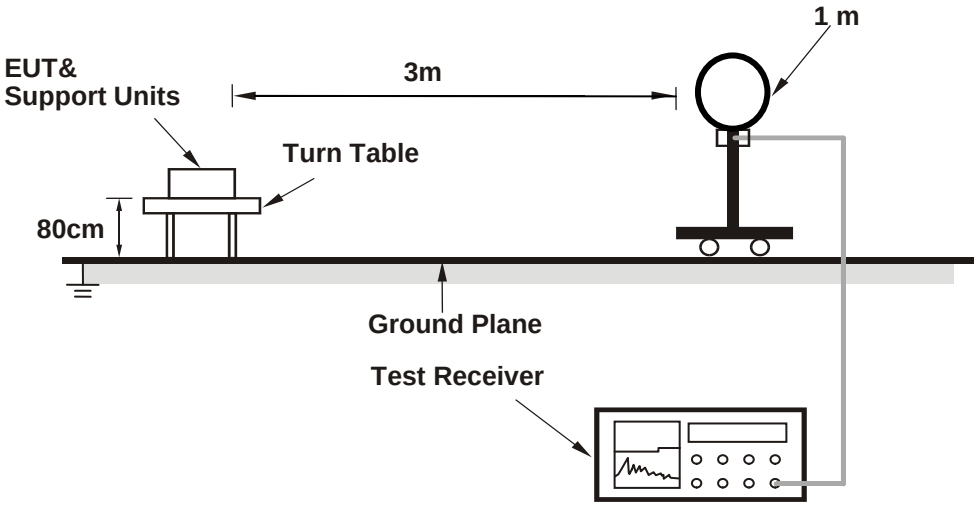
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

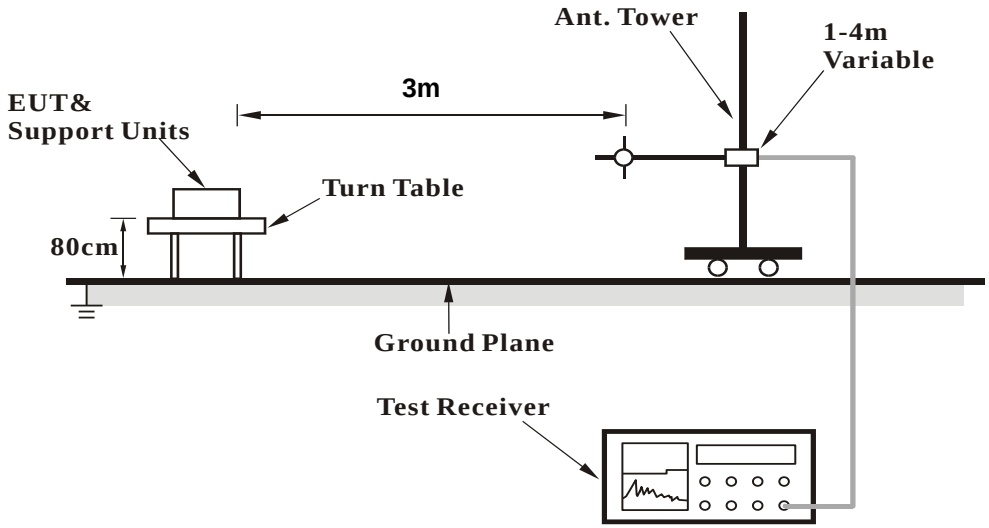
No deviation.

4.1.5 Test Setup

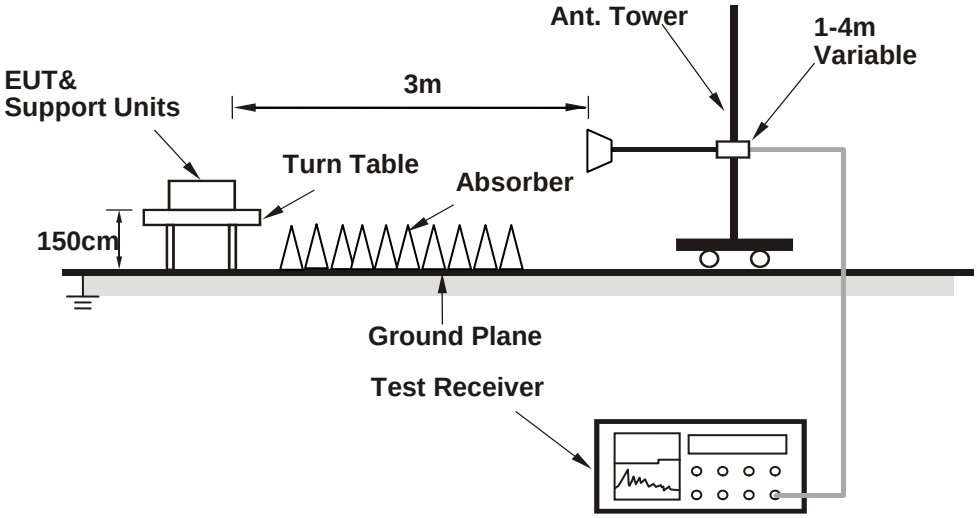
For Radiated emission below 30MHz



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. Controlling software (DutApiMimoBtFmBrdigeEth.exe(Marvell) Ver 2.0.0.68) 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	51.2 PK	74.0	-22.8	1.50 H	162	47.2	4.0
2	5150.00	41.2 AV	54.0	-12.8	1.50 H	162	37.2	4.0
3	*5180.00	102.1 PK			1.50 H	162	98.1	4.0
4	*5180.00	94.1 AV			1.50 H	162	90.1	4.0
5	#10360.00	46.8 PK	74.0	-27.2	1.52 H	316	33.2	13.6
6	#10360.00	35.7 AV	54.0	-18.3	1.52 H	316	22.1	13.6
7	15540.00	45.3 PK	74.0	-28.7	1.49 H	195	32.1	13.2
8	15540.00	34.4 AV	54.0	-19.6	1.49 H	195	21.2	13.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.4 PK	74.0	-24.6	3.39 V	294	45.4	4.0
2	5150.00	40.2 AV	54.0	-13.8	3.39 V	294	36.2	4.0
3	*5180.00	100.8 PK			3.39 V	294	96.8	4.0
4	*5180.00	92.0 AV			3.39 V	294	88.0	4.0
5	#10360.00	49.2 PK	74.0	-24.8	1.01 V	204	35.6	13.6
6	#10360.00	42.8 AV	54.0	-11.2	1.01 V	204	29.2	13.6
7	15540.00	46.0 PK	74.0	-28.0	1.50 V	211	32.8	13.2
8	15540.00	34.7 AV	54.0	-19.3	1.50 V	211	21.5	13.2

REMARKS:

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

CHANNEL	TX Channel 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	103.3 PK			1.50 H	156	99.3	4.0
2	*5200.00	94.2 AV			1.50 H	156	90.2	4.0
3	#10400.00	47.1 PK	74.0	-26.9	1.54 H	311	33.5	13.6
4	#10400.00	35.8 AV	54.0	-18.2	1.54 H	311	22.2	13.6
5	15600.00	45.4 PK	74.0	-28.6	1.48 H	205	32.0	13.4
6	15600.00	34.2 AV	54.0	-19.8	1.48 H	205	20.8	13.4
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	*5200.00	101.3 PK			3.42 V	306	97.3	4.0
2	*5200.00	92.3 AV			3.42 V	306	88.3	4.0
3	#10400.00	49.4 PK	74.0	-24.6	1.08 V	202	35.8	13.6
4	#10400.00	43.2 AV	54.0	-10.8	1.08 V	202	29.6	13.6
5	15600.00	45.5 PK	74.0	-28.5	1.54 V	214	32.1	13.4
6	15600.00	34.5 AV	54.0	-19.5	1.54 V	214	21.1	13.4

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 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	103.9 PK			1.50 H	156	99.7	4.2
2	*5240.00	95.0 AV			1.50 H	156	90.8	4.2
3	5350.00	47.4 PK	74.0	-26.6	1.50 H	156	43.0	4.4
4	5350.00	37.1 AV	54.0	-16.9	1.50 H	156	32.7	4.4
5	#10480.00	46.9 PK	74.0	-27.1	1.55 H	312	33.2	13.7
6	#10480.00	35.4 AV	54.0	-18.6	1.55 H	312	21.7	13.7
7	15720.00	45.8 PK	74.0	-28.2	1.43 H	211	31.8	14.0
8	15720.00	34.6 AV	54.0	-19.4	1.43 H	211	20.6	14.0
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	*5240.00	102.3 PK			3.40 V	298	98.1	4.2
2	*5240.00	93.3 AV			3.40 V	298	89.1	4.2
3	5350.00	46.2 PK	74.0	-27.8	3.40 V	298	41.8	4.4
4	5350.00	36.0 AV	54.0	-18.0	3.40 V	298	31.6	4.4
5	#10480.00	49.9 PK	74.0	-24.1	1.02 V	211	36.2	13.7
6	#10480.00	43.7 AV	54.0	-10.3	1.02 V	211	30.0	13.7
7	15720.00	45.1 PK	74.0	-28.9	1.58 V	208	31.1	14.0
8	15720.00	34.1 AV	54.0	-19.9	1.58 V	208	20.1	14.0

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 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	46.9 PK	74.0	-27.1	1.49 H	154	42.9	4.0
2	5150.00	36.6 AV	54.0	-17.4	1.49 H	154	32.6	4.0
3	*5260.00	103.1 PK			1.49 H	154	98.9	4.2
4	*5260.00	94.6 AV			1.49 H	154	90.4	4.2
5	#10520.00	46.3 PK	74.0	-27.7	1.55 H	310	32.5	13.8
6	#10520.00	35.1 AV	54.0	-18.9	1.55 H	310	21.3	13.8
7	15780.00	46.2 PK	74.0	-27.8	1.46 H	196	32.1	14.1
8	15780.00	34.8 AV	54.0	-19.2	1.46 H	196	20.7	14.1
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	5150.00	45.7 PK	74.0	-28.3	3.44 V	304	41.7	4.0
2	5150.00	35.4 AV	54.0	-18.6	3.44 V	304	31.4	4.0
3	*5260.00	101.6 PK			3.44 V	304	97.4	4.2
4	*5260.00	92.7 AV			3.44 V	304	88.5	4.2
5	#10520.00	49.9 PK	74.0	-24.1	1.06 V	225	36.1	13.8
6	#10520.00	43.4 AV	54.0	-10.6	1.06 V	225	29.6	13.8
7	15780.00	45.0 PK	74.0	-29.0	1.53 V	223	30.9	14.1
8	15780.00	33.7 AV	54.0	-20.3	1.53 V	223	19.6	14.1

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 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	103.8 PK			1.19 H	156	99.5	4.3
2	*5300.00	94.5 AV			1.19 H	156	90.2	4.3
3	10600.00	46.7 PK	74.0	-27.3	1.58 H	303	32.9	13.8
4	10600.00	35.3 AV	54.0	-18.7	1.58 H	303	21.5	13.8
5	15900.00	46.2 PK	74.0	-27.8	1.46 H	215	33.0	13.2
6	15900.00	34.7 AV	54.0	-19.3	1.46 H	215	21.5	13.2
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	*5300.00	101.4 PK			3.38 V	302	97.1	4.3
2	*5300.00	92.5 AV			3.38 V	302	88.2	4.3
3	10600.00	49.5 PK	74.0	-24.5	1.01 V	212	35.7	13.8
4	10600.00	43.3 AV	54.0	-10.7	1.01 V	212	29.5	13.8
5	15900.00	45.3 PK	74.0	-28.7	1.62 V	219	32.1	13.2
6	15900.00	34.1 AV	54.0	-19.9	1.62 V	219	20.9	13.2

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.

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	103.6 PK			1.10 H	157	99.3	4.3
2	*5320.00	94.6 AV			1.10 H	157	90.3	4.3
3	5350.00	54.6 PK	74.0	-19.4	1.10 H	157	50.2	4.4
4	5350.00	42.5 AV	54.0	-11.5	1.10 H	157	38.1	4.4
5	10640.00	46.8 PK	74.0	-27.2	1.51 H	317	32.8	14.0
6	10640.00	35.1 AV	54.0	-18.9	1.51 H	317	21.1	14.0
7	15960.00	45.7 PK	74.0	-28.3	1.46 H	204	32.2	13.5
8	15960.00	34.8 AV	54.0	-19.2	1.46 H	204	21.3	13.5
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	101.2 PK			3.35 V	303	96.9	4.3
2	*5320.00	92.5 AV			3.35 V	303	88.2	4.3
3	5350.00	53.4 PK	74.0	-20.6	3.35 V	303	49.0	4.4
4	5350.00	41.3 AV	54.0	-12.7	3.35 V	303	36.9	4.4
5	10640.00	50.6 PK	74.0	-23.4	1.07 V	208	36.6	14.0
6	10640.00	44.2 AV	54.0	-9.8	1.07 V	208	30.2	14.0
7	15960.00	45.3 PK	74.0	-28.7	1.59 V	208	31.8	13.5
8	15960.00	34.2 AV	54.0	-19.8	1.59 V	208	20.7	13.5

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	51.8 PK	74.0	-22.2	1.04 H	118	47.3	4.5
2	#5470.00	41.9 AV	54.0	-12.1	1.04 H	118	37.4	4.5
3	*5500.00	103.8 PK			1.04 H	118	99.3	4.5
4	*5500.00	94.5 AV			1.04 H	118	90.0	4.5
5	11000.00	46.4 PK	74.0	-27.6	1.45 H	174	31.6	14.8
6	11000.00	37.9 AV	54.0	-16.1	1.45 H	174	23.1	14.8
7	#16500.00	52.4 PK	74.0	-21.6	1.61 H	244	36.8	15.6
8	#16500.00	39.8 AV	54.0	-14.2	1.61 H	244	24.2	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	#5470.00	50.5 PK	74.0	-23.5	3.36 V	304	46.0	4.5
2	#5470.00	40.7 AV	54.0	-13.3	3.36 V	304	36.2	4.5
3	*5500.00	100.7 PK			3.36 V	304	96.2	4.5
4	*5500.00	92.0 AV			3.36 V	304	87.5	4.5
5	11000.00	46.0 PK	74.0	-28.0	1.46 V	203	31.2	14.8
6	11000.00	37.4 AV	54.0	-16.6	1.46 V	203	22.6	14.8
7	#16500.00	52.6 PK	74.0	-21.4	1.51 V	212	37.0	15.6
8	#16500.00	40.9 AV	54.0	-13.1	1.51 V	212	25.3	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 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	103.1 PK			1.02 H	116	98.5	4.6
2	*5580.00	94.9 AV			1.02 H	116	90.3	4.6
3	11160.00	46.4 PK	74.0	-27.6	1.50 H	179	32.0	14.4
4	11160.00	37.4 AV	54.0	-16.6	1.50 H	179	23.0	14.4
5	#16740.00	52.9 PK	74.0	-21.1	1.61 H	240	36.4	16.5
6	#16740.00	40.3 AV	54.0	-13.7	1.61 H	240	23.8	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	*5580.00	101.6 PK			3.35 V	290	97.0	4.6
2	*5580.00	92.8 AV			3.35 V	290	88.2	4.6
3	11160.00	46.6 PK	74.0	-27.4	1.46 V	224	32.2	14.4
4	11160.00	37.8 AV	54.0	-16.2	1.46 V	224	23.4	14.4
5	#16740.00	53.0 PK	74.0	-21.0	1.47 V	216	36.5	16.5
6	#16740.00	41.3 AV	54.0	-12.7	1.47 V	216	24.8	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 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	103.2 PK			1.50 H	119	98.4	4.8
2	*5700.00	94.7 AV			1.50 H	119	89.9	4.8
3	#5725.00	52.6 PK	74.0	-21.4	1.50 H	119	47.7	4.9
4	#5725.00	43.5 AV	54.0	-10.5	1.50 H	119	38.6	4.9
5	11400.00	46.7 PK	74.0	-27.3	1.48 H	187	32.3	14.4
6	11400.00	37.8 AV	54.0	-16.2	1.48 H	187	23.4	14.4
7	#17100.00	52.7 PK	74.0	-21.3	1.57 H	243	34.2	18.5
8	#17100.00	39.7 AV	54.0	-14.3	1.57 H	243	21.2	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.4 PK			3.42 V	305	96.6	4.8
2	*5700.00	92.6 AV			3.42 V	305	87.8	4.8
3	#5725.00	51.2 PK	74.0	-22.8	3.42 V	305	46.3	4.9
4	#5725.00	42.1 AV	54.0	-11.9	3.42 V	305	37.2	4.9
5	11400.00	45.9 PK	74.0	-28.1	1.52 V	205	31.5	14.4
6	11400.00	37.0 AV	54.0	-17.0	1.52 V	205	22.6	14.4
7	#17100.00	53.4 PK	74.0	-20.6	1.45 V	237	34.9	18.5
8	#17100.00	41.6 AV	54.0	-12.4	1.45 V	237	23.1	18.5

REMARKS:

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

CHANNEL	TX Channel 144	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	52.3 PK	74.0	-21.7	1.49 H	122	47.8	4.5
2	#5470.00	43.2 AV	54.0	-10.8	1.49 H	122	38.7	4.5
3	*5720.00	103.6 PK			1.49 H	122	98.7	4.9
4	*5720.00	95.1 AV			1.49 H	122	90.2	4.9
5	#5850.00	52.5 PK	74.0	-21.5	1.49 H	122	47.4	5.1
6	#5850.00	42.6 AV	54.0	-11.4	1.49 H	122	37.5	5.1
7	11440.00	45.9 PK	74.0	-28.1	1.53 H	188	31.7	14.2
8	11440.00	37.4 AV	54.0	-16.6	1.53 H	188	23.2	14.2
9	#17160.00	53.1 PK	74.0	-20.9	1.56 H	240	34.8	18.3
10	#17160.00	40.5 AV	54.0	-13.5	1.56 H	240	22.2	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	51.1 PK	74.0	-22.9	3.40 V	317	46.6	4.5
2	#5470.00	41.0 AV	54.0	-13.0	3.40 V	317	36.5	4.5
3	*5720.00	101.8 PK			3.40 V	317	96.9	4.9
4	*5720.00	92.8 AV			3.40 V	317	87.9	4.9
5	#5850.00	51.2 PK	74.0	-22.8	3.40 V	317	46.1	5.1
6	#5850.00	41.3 AV	54.0	-12.7	3.40 V	317	36.2	5.1
7	11440.00	46.3 PK	74.0	-27.7	1.58 V	224	32.1	14.2
8	11440.00	37.6 AV	54.0	-16.4	1.58 V	224	23.4	14.2
9	#17160.00	52.7 PK	74.0	-21.3	1.48 V	219	34.4	18.3
10	#17160.00	40.8 AV	54.0	-13.2	1.48 V	219	22.5	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5610.54	55.6 PK	68.2	-12.6	1.06 H	126	50.9	4.7
2	*5745.00	104.0 PK			1.06 H	126	99.0	5.0
3	*5745.00	95.3 AV			1.06 H	126	90.3	5.0
4	#5967.29	57.0 PK	68.2	-11.2	1.06 H	126	51.5	5.5
5	11490.00	46.1 PK	74.0	-27.9	1.49 H	183	32.0	14.1
6	11490.00	37.4 AV	54.0	-16.6	1.49 H	183	23.3	14.1
7	#17235.00	52.8 PK	74.0	-21.2	1.62 H	245	34.5	18.3
8	#17235.00	40.1 AV	54.0	-13.9	1.62 H	245	21.8	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.44	56.5 PK	68.2	-11.7	3.82 V	95	51.7	4.8
2	*5745.00	100.9 PK			3.82 V	95	95.9	5.0
3	*5745.00	91.7 AV			3.82 V	95	86.7	5.0
4	#5928.67	57.1 PK	68.2	-11.1	3.82 V	95	51.7	5.4
5	11490.00	46.2 PK	74.0	-27.8	1.52 V	209	32.1	14.1
6	11490.00	37.5 AV	54.0	-16.5	1.52 V	209	23.4	14.1
7	#17235.00	53.2 PK	74.0	-20.8	1.49 V	221	34.9	18.3
8	#17235.00	41.2 AV	54.0	-12.8	1.49 V	221	22.9	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5630.47	57.2 PK	68.2	-11.0	1.09 H	121	52.4	4.8
2	*5785.00	104.0 PK			1.09 H	121	99.0	5.0
3	*5785.00	95.2 AV			1.09 H	121	90.2	5.0
4	#5945.28	59.1 PK	68.2	-9.1	1.09 H	121	53.7	5.4
5	11570.00	46.2 PK	74.0	-27.8	1.48 H	169	32.2	14.0
6	11570.00	37.5 AV	54.0	-16.5	1.48 H	169	23.5	14.0
7	#17355.00	52.6 PK	74.0	-21.4	1.60 H	231	33.7	18.9
8	#17355.00	40.0 AV	54.0	-14.0	1.60 H	231	21.1	18.9
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	#5617.15	56.6 PK	68.2	-11.6	3.83 V	92	51.9	4.7
2	*5785.00	100.6 PK			3.83 V	92	95.6	5.0
3	*5785.00	91.2 AV			3.83 V	92	86.2	5.0
4	#5942.98	58.5 PK	68.2	-9.7	3.83 V	92	53.1	5.4
5	11570.00	45.5 PK	74.0	-28.5	1.51 V	208	31.5	14.0
6	11570.00	37.0 AV	54.0	-17.0	1.51 V	208	23.0	14.0
7	#17355.00	53.5 PK	74.0	-20.5	1.54 V	237	34.6	18.9
8	#17355.00	41.3 AV	54.0	-12.7	1.54 V	237	22.4	18.9

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5642.58	57.7 PK	68.2	-10.5	1.12 H	116	52.9	4.8
2	*5825.00	104.1 PK			1.12 H	116	98.9	5.2
3	*5825.00	95.5 AV			1.12 H	116	90.3	5.2
4	#5965.91	58.1 PK	68.2	-10.1	1.12 H	116	52.6	5.5
5	11650.00	45.8 PK	74.0	-28.2	1.52 H	194	31.7	14.1
6	11650.00	37.3 AV	54.0	-16.7	1.52 H	194	23.2	14.1
7	#17475.00	52.8 PK	74.0	-21.2	1.63 H	246	33.1	19.7
8	#17475.00	40.2 AV	54.0	-13.8	1.63 H	246	20.5	19.7
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	#5617.66	57.2 PK	68.2	-11.0	3.79 V	81	52.5	4.7
2	*5825.00	100.2 PK			3.79 V	81	95.0	5.2
3	*5825.00	90.7 AV			3.79 V	81	85.5	5.2
4	#5968.14	57.6 PK	68.2	-10.6	3.79 V	81	52.1	5.5
5	11650.00	46.6 PK	74.0	-27.4	1.50 V	205	32.5	14.1
6	11650.00	37.8 AV	54.0	-16.2	1.50 V	205	23.7	14.1
7	#17475.00	53.4 PK	74.0	-20.6	1.48 V	225	33.7	19.7
8	#17475.00	41.6 AV	54.0	-12.4	1.48 V	225	21.9	19.7

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.

802.11ac (VHT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.3 PK	74.0	-19.7	1.50 H	165	50.3	4.0
2	5150.00	43.1 AV	54.0	-10.9	1.50 H	165	39.1	4.0
3	*5180.00	104.0 PK			1.50 H	165	100.0	4.0
4	*5180.00	95.2 AV			1.50 H	165	91.2	4.0
5	#10360.00	45.6 PK	74.0	-28.4	1.46 H	181	32.0	13.6
6	#10360.00	37.1 AV	54.0	-16.9	1.46 H	181	23.5	13.6
7	15540.00	52.7 PK	74.0	-21.3	1.62 H	215	39.5	13.2
8	15540.00	40.3 AV	54.0	-13.7	1.62 H	215	27.1	13.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.6 PK	74.0	-24.4	3.21 V	300	45.6	4.0
2	5150.00	41.8 AV	54.0	-12.2	3.21 V	300	37.8	4.0
3	*5180.00	101.4 PK			3.21 V	300	97.4	4.0
4	*5180.00	92.4 AV			3.21 V	300	88.4	4.0
5	#10360.00	49.5 PK	74.0	-24.5	1.03 V	191	35.9	13.6
6	#10360.00	43.2 AV	54.0	-10.8	1.03 V	191	29.6	13.6
7	15540.00	45.8 PK	74.0	-28.2	1.53 V	210	32.6	13.2
8	15540.00	34.3 AV	54.0	-19.7	1.53 V	210	21.1	13.2

REMARKS:

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

CHANNEL	TX Channel 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	104.6 PK			1.53 H	154	100.6	4.0
2	*5200.00	95.6 AV			1.53 H	154	91.6	4.0
3	#10400.00	45.7 PK	74.0	-28.3	1.49 H	177	32.1	13.6
4	#10400.00	37.2 AV	54.0	-16.8	1.49 H	177	23.6	13.6
5	15600.00	53.2 PK	74.0	-20.8	1.59 H	246	39.8	13.4
6	15600.00	40.5 AV	54.0	-13.5	1.59 H	246	27.1	13.4
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	*5200.00	101.6 PK			3.23 V	312	97.6	4.0
2	*5200.00	92.6 AV			3.23 V	312	88.6	4.0
3	#10400.00	49.6 PK	74.0	-24.4	1.01 V	196	36.0	13.6
4	#10400.00	43.0 AV	54.0	-11.0	1.01 V	196	29.4	13.6
5	15600.00	46.1 PK	74.0	-27.9	1.48 V	222	32.7	13.4
6	15600.00	34.8 AV	54.0	-19.2	1.48 V	222	21.4	13.4

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 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	103.8 PK			1.00 H	164	99.6	4.2
2	*5240.00	95.2 AV			1.00 H	164	91.0	4.2
3	5350.00	48.7 PK	74.0	-25.3	1.00 H	164	44.3	4.4
4	5350.00	38.1 AV	54.0	-15.9	1.00 H	164	33.7	4.4
5	#10480.00	46.7 PK	74.0	-27.3	1.48 H	167	33.0	13.7
6	#10480.00	37.7 AV	54.0	-16.3	1.48 H	167	24.0	13.7
7	15720.00	53.0 PK	74.0	-21.0	1.60 H	243	39.0	14.0
8	15720.00	40.1 AV	54.0	-13.9	1.60 H	243	26.1	14.0
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	*5240.00	101.4 PK			3.22 V	305	97.2	4.2
2	*5240.00	92.3 AV			3.22 V	305	88.1	4.2
3	5350.00	47.6 PK	74.0	-26.4	3.22 V	305	43.2	4.4
4	5350.00	37.0 AV	54.0	-17.0	3.22 V	305	32.6	4.4
5	#10480.00	49.4 PK	74.0	-24.6	1.06 V	203	35.7	13.7
6	#10480.00	43.2 AV	54.0	-10.8	1.06 V	203	29.5	13.7
7	15720.00	45.8 PK	74.0	-28.2	1.53 V	213	31.8	14.0
8	15720.00	34.6 AV	54.0	-19.4	1.53 V	213	20.6	14.0

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 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	46.6 PK	74.0	-27.4	1.00 H	160	42.6	4.0
2	5150.00	38.1 AV	54.0	-15.9	1.00 H	160	34.1	4.0
3	*5260.00	106.4 PK			1.00 H	160	102.2	4.2
4	*5260.00	97.6 AV			1.00 H	160	93.4	4.2
5	#10520.00	46.6 PK	74.0	-27.4	1.43 H	154	32.8	13.8
6	#10520.00	37.9 AV	54.0	-16.1	1.43 H	154	24.1	13.8
7	15780.00	52.4 PK	74.0	-21.6	1.63 H	236	38.3	14.1
8	15780.00	39.8 AV	54.0	-14.2	1.63 H	236	25.7	14.1
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	5150.00	45.4 PK	74.0	-28.6	3.17 V	311	41.4	4.0
2	5150.00	37.0 AV	54.0	-17.0	3.17 V	311	33.0	4.0
3	*5260.00	103.8 PK			3.17 V	311	99.6	4.2
4	*5260.00	94.7 AV			3.17 V	311	90.5	4.2
5	#10520.00	48.8 PK	74.0	-25.2	1.06 V	211	35.0	13.8
6	#10520.00	42.7 AV	54.0	-11.3	1.06 V	211	28.9	13.8
7	15780.00	45.6 PK	74.0	-28.4	1.51 V	216	31.5	14.1
8	15780.00	34.5 AV	54.0	-19.5	1.51 V	216	20.4	14.1

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 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	106.2 PK			1.04 H	161	101.9	4.3
2	*5300.00	97.2 AV			1.04 H	161	92.9	4.3
3	10600.00	46.3 PK	74.0	-27.7	1.48 H	161	32.5	13.8
4	10600.00	37.6 AV	54.0	-16.4	1.48 H	161	23.8	13.8
5	15900.00	52.3 PK	74.0	-21.7	1.61 H	241	39.1	13.2
6	15900.00	39.9 AV	54.0	-14.1	1.61 H	241	26.7	13.2
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	*5300.00	103.6 PK			3.12 V	309	99.3	4.3
2	*5300.00	94.5 AV			3.12 V	309	90.2	4.3
3	10600.00	48.4 PK	74.0	-25.6	1.03 V	208	34.6	13.8
4	10600.00	42.3 AV	54.0	-11.7	1.03 V	208	28.5	13.8
5	15900.00	45.6 PK	74.0	-28.4	1.49 V	224	32.4	13.2
6	15900.00	34.5 AV	54.0	-19.5	1.49 V	224	21.3	13.2

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.

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	106.8 PK			1.21 H	120	102.5	4.3
2	*5320.00	96.9 AV			1.21 H	120	92.6	4.3
3	5350.00	52.8 PK	74.0	-21.2	1.21 H	120	48.4	4.4
4	5350.00	43.5 AV	54.0	-10.5	1.21 H	120	39.1	4.4
5	10640.00	45.9 PK	74.0	-28.1	1.47 H	180	31.9	14.0
6	10640.00	37.3 AV	54.0	-16.7	1.47 H	180	23.3	14.0
7	15960.00	52.5 PK	74.0	-21.5	1.58 H	235	39.0	13.5
8	15960.00	40.0 AV	54.0	-14.0	1.58 H	235	26.5	13.5
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	103.4 PK			3.22 V	323	99.1	4.3
2	*5320.00	94.2 AV			3.22 V	323	89.9	4.3
3	5350.00	51.5 PK	74.0	-22.5	3.22 V	323	47.1	4.4
4	5350.00	42.2 AV	54.0	-11.8	3.22 V	323	37.8	4.4
5	10640.00	49.1 PK	74.0	-24.9	1.05 V	215	35.1	14.0
6	10640.00	42.6 AV	54.0	-11.4	1.05 V	215	28.6	14.0
7	15960.00	46.0 PK	74.0	-28.0	1.48 V	221	32.5	13.5
8	15960.00	34.9 AV	54.0	-19.1	1.48 V	221	21.4	13.5

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	54.2 PK	74.0	-19.8	1.20 H	119	49.7	4.5
2	#5470.00	46.2 AV	54.0	-7.8	1.20 H	119	41.7	4.5
3	*5500.00	105.6 PK			1.20 H	119	101.1	4.5
4	*5500.00	97.5 AV			1.20 H	119	93.0	4.5
5	11000.00	46.0 PK	74.0	-28.0	1.45 H	193	31.2	14.8
6	11000.00	38.2 AV	54.0	-15.8	1.45 H	193	23.4	14.8
7	#16500.00	53.5 PK	74.0	-20.5	1.60 H	173	37.9	15.6
8	#16500.00	42.9 AV	54.0	-11.1	1.60 H	173	27.3	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	#5470.00	53.1 PK	74.0	-20.9	3.11 V	318	48.6	4.5
2	#5470.00	45.0 AV	54.0	-9.0	3.11 V	318	40.5	4.5
3	*5500.00	103.4 PK			3.11 V	318	98.9	4.5
4	*5500.00	94.5 AV			3.11 V	318	90.0	4.5
5	11000.00	51.3 PK	74.0	-22.7	1.05 V	190	36.5	14.8
6	11000.00	45.4 AV	54.0	-8.6	1.05 V	190	30.6	14.8
7	#16500.00	53.6 PK	74.0	-20.4	1.53 V	219	38.0	15.6
8	#16500.00	42.3 AV	54.0	-11.7	1.53 V	219	26.7	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 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	105.6 PK			1.17 H	124	101.0	4.6
2	*5580.00	97.4 AV			1.17 H	124	92.8	4.6
3	11160.00	46.2 PK	74.0	-27.8	1.55 H	194	31.8	14.4
4	11160.00	37.8 AV	54.0	-16.2	1.55 H	194	23.4	14.4
5	#16740.00	53.5 PK	74.0	-20.5	1.61 H	166	37.0	16.5
6	#16740.00	42.5 AV	54.0	-11.5	1.61 H	166	26.0	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	*5580.00	103.9 PK			3.13 V	301	99.3	4.6
2	*5580.00	94.7 AV			3.13 V	301	90.1	4.6
3	11160.00	51.2 PK	74.0	-22.8	1.04 V	193	36.8	14.4
4	11160.00	45.0 AV	54.0	-9.0	1.04 V	193	30.6	14.4
5	#16740.00	53.7 PK	74.0	-20.3	1.53 V	226	37.2	16.5
6	#16740.00	42.7 AV	54.0	-11.3	1.53 V	226	26.2	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 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	107.4 PK			1.21 H	115	102.6	4.8
2	*5700.00	98.7 AV			1.21 H	115	93.9	4.8
3	#5725.00	60.9 PK	74.0	-13.1	1.21 H	115	56.0	4.9
4	#5725.00	49.6 AV	54.0	-4.4	1.21 H	115	44.7	4.9
5	11400.00	46.3 PK	74.0	-27.7	1.50 H	197	31.9	14.4
6	11400.00	38.2 AV	54.0	-15.8	1.50 H	197	23.8	14.4
7	#17100.00	53.2 PK	74.0	-20.8	1.60 H	167	34.7	18.5
8	#17100.00	42.3 AV	54.0	-11.7	1.60 H	167	23.8	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.4 PK			3.09 V	300	99.6	4.8
2	*5700.00	95.3 AV			3.09 V	300	90.5	4.8
3	#5725.00	59.7 PK	74.0	-14.3	3.09 V	300	54.8	4.9
4	#5725.00	48.4 AV	54.0	-5.6	3.09 V	300	43.5	4.9
5	11400.00	51.6 PK	74.0	-22.4	1.01 V	176	37.2	14.4
6	11400.00	45.8 AV	54.0	-8.2	1.01 V	176	31.4	14.4
7	#17100.00	54.3 PK	74.0	-19.7	1.48 V	226	35.8	18.5
8	#17100.00	43.0 AV	54.0	-11.0	1.48 V	226	24.5	18.5

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.1 PK	74.0	-19.9	1.23 H	116	49.6	4.5
2	#5470.00	46.1 AV	54.0	-7.9	1.23 H	116	41.6	4.5
3	*5720.00	107.1 PK			1.23 H	116	102.2	4.9
4	*5720.00	98.6 AV			1.23 H	116	93.7	4.9
5	#5850.00	59.8 PK	74.0	-14.2	1.23 H	116	54.7	5.1
6	#5850.00	49.4 AV	54.0	-4.6	1.23 H	116	44.3	5.1
7	11440.00	46.2 PK	74.0	-27.8	1.50 H	179	32.0	14.2
8	11440.00	37.9 AV	54.0	-16.1	1.50 H	179	23.7	14.2
9	#17160.00	53.4 PK	74.0	-20.6	1.69 H	166	35.1	18.3
10	#17160.00	42.7 AV	54.0	-11.3	1.69 H	166	24.4	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	52.9 PK	74.0	-21.1	3.10 V	303	48.4	4.5
2	#5470.00	44.9 AV	54.0	-9.1	3.10 V	303	40.4	4.5
3	*5720.00	104.2 PK			3.10 V	303	99.3	4.9
4	*5720.00	95.1 AV			3.10 V	303	90.2	4.9
5	#5850.00	58.6 PK	74.0	-15.4	3.10 V	303	53.5	5.1
6	#5850.00	48.1 AV	54.0	-5.9	3.10 V	303	43.0	5.1
7	11440.00	52.0 PK	74.0	-22.0	1.05 V	182	37.8	14.2
8	11440.00	45.7 AV	54.0	-8.3	1.05 V	182	31.5	14.2
9	#17160.00	53.2 PK	74.0	-20.8	1.52 V	234	34.9	18.3
10	#17160.00	42.3 AV	54.0	-11.7	1.52 V	234	24.0	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5614.11	55.6 PK	68.2	-12.6	1.12 H	112	50.9	4.7
2	*5745.00	106.0 PK			1.12 H	112	101.0	5.0
3	*5745.00	98.1 AV			1.12 H	112	93.1	5.0
4	#5930.37	57.3 PK	68.2	-10.9	1.12 H	112	51.9	5.4
5	11490.00	46.2 PK	74.0	-27.8	1.50 H	183	32.1	14.1
6	11490.00	38.1 AV	54.0	-15.9	1.50 H	183	24.0	14.1
7	#17235.00	53.1 PK	74.0	-20.9	1.64 H	162	34.8	18.3
8	#17235.00	42.4 AV	54.0	-11.6	1.64 H	162	24.1	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.23	49.7 PK	68.2	-18.5	3.12 V	313	45.0	4.7
2	*5745.00	102.4 PK			3.12 V	313	97.4	5.0
3	*5745.00	93.5 AV			3.12 V	313	88.5	5.0
4	#5964.70	50.7 PK	68.2	-17.5	3.12 V	313	45.2	5.5
5	11490.00	51.4 PK	74.0	-22.6	1.03 V	182	37.3	14.1
6	11490.00	45.4 AV	54.0	-8.6	1.03 V	182	31.3	14.1
7	#17235.00	53.8 PK	74.0	-20.2	1.54 V	221	35.5	18.3
8	#17235.00	42.6 AV	54.0	-11.4	1.54 V	221	24.3	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5566.57	49.6 PK	68.2	-18.6	1.15 H	120	45.0	4.6
2	*5785.00	106.2 PK			1.15 H	120	101.2	5.0
3	*5785.00	98.2 AV			1.15 H	120	93.2	5.0
4	#5958.38	51.5 PK	68.2	-16.7	1.15 H	120	46.0	5.5
5	11570.00	46.3 PK	74.0	-27.7	1.45 H	177	32.3	14.0
6	11570.00	38.3 AV	54.0	-15.7	1.45 H	177	24.3	14.0
7	#17355.00	52.9 PK	74.0	-21.1	1.68 H	164	34.0	18.9
8	#17355.00	42.2 AV	54.0	-11.8	1.68 H	164	23.3	18.9
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	#5622.72	49.3 PK	68.2	-18.9	3.15 V	310	44.6	4.7
2	*5785.00	102.1 PK			3.15 V	310	97.1	5.0
3	*5785.00	93.2 AV			3.15 V	310	88.2	5.0
4	#5943.60	49.7 PK	68.2	-18.5	3.15 V	310	44.3	5.4
5	11570.00	51.2 PK	74.0	-22.8	1.09 V	191	37.2	14.0
6	11570.00	45.3 AV	54.0	-8.7	1.09 V	191	31.3	14.0
7	#17355.00	53.7 PK	74.0	-20.3	1.54 V	217	34.8	18.9
8	#17355.00	42.5 AV	54.0	-11.5	1.54 V	217	23.6	18.9

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 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	#5635.26	57.7 PK	68.2	-10.5	1.19 H	116	52.9	4.8
2	*5825.00	106.1 PK			1.19 H	116	100.9	5.2
3	*5825.00	98.3 AV			1.19 H	116	93.1	5.2
4	#5953.18	57.7 PK	68.2	-10.5	1.19 H	116	52.3	5.4
5	11650.00	46.0 PK	74.0	-28.0	1.50 H	181	31.9	14.1
6	11650.00	37.8 AV	54.0	-16.2	1.50 H	181	23.7	14.1
7	#17475.00	53.7 PK	74.0	-20.3	1.70 H	174	34.0	19.7
8	#17475.00	42.9 AV	54.0	-11.1	1.70 H	174	23.2	19.7
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	#5605.14	49.1 PK	68.2	-19.1	3.10 V	318	44.4	4.7
2	*5825.00	102.2 PK			3.10 V	318	97.0	5.2
3	*5825.00	93.1 AV			3.10 V	318	87.9	5.2
4	#5972.92	51.2 PK	68.2	-17.0	3.10 V	318	45.7	5.5
5	11650.00	50.9 PK	74.0	-23.1	1.00 V	185	36.8	14.1
6	11650.00	45.1 AV	54.0	-8.9	1.00 V	185	31.0	14.1
7	#17475.00	54.4 PK	74.0	-19.6	1.48 V	237	34.7	19.7
8	#17475.00	43.0 AV	54.0	-11.0	1.48 V	237	23.3	19.7

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.

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	57.3 PK	74.0	-16.7	1.01 H	166	53.3	4.0
2	5150.00	48.7 AV	54.0	-5.3	1.01 H	166	44.7	4.0
3	*5190.00	100.8 PK			1.01 H	166	96.8	4.0
4	*5190.00	92.5 AV			1.01 H	166	88.5	4.0
5	5350.00	48.5 PK	74.0	-25.5	1.01 H	166	44.1	4.4
6	5350.00	39.0 AV	54.0	-15.0	1.01 H	166	34.6	4.4
7	#10380.00	44.6 PK	74.0	-29.4	1.00 H	197	31.0	13.6
8	#10380.00	33.3 AV	54.0	-20.7	1.00 H	197	19.7	13.6
9	15570.00	46.1 PK	74.0	-27.9	1.44 H	212	32.8	13.3
10	15570.00	34.3 AV	54.0	-19.7	1.44 H	212	21.0	13.3
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	5150.00	56.1 PK	74.0	-17.9	3.18 V	287	52.1	4.0
2	5150.00	47.5 AV	54.0	-6.5	3.18 V	287	43.5	4.0
3	*5190.00	98.5 PK			3.18 V	287	94.5	4.0
4	*5190.00	89.4 AV			3.18 V	287	85.4	4.0
5	5350.00	47.2 PK	74.0	-26.8	3.18 V	287	42.8	4.4
6	5350.00	37.8 AV	54.0	-16.2	3.18 V	287	33.4	4.4
7	#10380.00	50.4 PK	74.0	-23.6	1.00 V	214	36.8	13.6
8	#10380.00	39.5 AV	54.0	-14.5	1.00 V	214	25.9	13.6
9	15570.00	45.8 PK	74.0	-28.2	1.58 V	196	32.5	13.3
10	15570.00	34.1 AV	54.0	-19.9	1.58 V	196	20.8	13.3

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 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	101.1 PK			1.00 H	164	96.9	4.2
2	*5230.00	92.2 AV			1.00 H	164	88.0	4.2
3	5350.00	48.1 PK	74.0	-25.9	1.00 H	164	43.7	4.4
4	5350.00	38.7 AV	54.0	-15.3	1.00 H	164	34.3	4.4
5	#10460.00	44.9 PK	74.0	-29.1	1.00 H	200	31.2	13.7
6	#10460.00	33.4 AV	54.0	-20.6	1.00 H	200	19.7	13.7
7	15690.00	46.0 PK	74.0	-28.0	1.49 H	219	32.0	14.0
8	15690.00	34.4 AV	54.0	-19.6	1.49 H	219	20.4	14.0
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	*5230.00	98.6 PK			3.20 V	299	94.4	4.2
2	*5230.00	89.3 AV			3.20 V	299	85.1	4.2
3	5350.00	46.9 PK	74.0	-27.1	3.20 V	299	42.5	4.4
4	5350.00	37.5 AV	54.0	-16.5	3.20 V	299	33.1	4.4
5	#10460.00	50.6 PK	74.0	-23.4	1.06 V	205	36.9	13.7
6	#10460.00	39.6 AV	54.0	-14.4	1.06 V	205	25.9	13.7
7	15690.00	45.7 PK	74.0	-28.3	1.57 V	193	31.7	14.0
8	15690.00	33.8 AV	54.0	-20.2	1.57 V	193	19.8	14.0

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 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	46.7 PK	74.0	-27.3	1.02 H	160	42.7	4.0
2	5150.00	38.8 AV	54.0	-15.2	1.02 H	160	34.8	4.0
3	*5270.00	101.3 PK			1.02 H	160	97.1	4.2
4	*5270.00	92.5 AV			1.02 H	160	88.3	4.2
5	#10540.00	45.1 PK	74.0	-28.9	1.00 H	193	31.4	13.7
6	#10540.00	33.5 AV	54.0	-20.5	1.00 H	193	19.8	13.7
7	15810.00	45.8 PK	74.0	-28.2	1.38 H	198	31.8	14.0
8	15810.00	33.8 AV	54.0	-20.2	1.38 H	198	19.8	14.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	45.4 PK	74.0	-28.6	3.23 V	296	41.4	4.0
2	5150.00	37.5 AV	54.0	-16.5	3.23 V	296	33.5	4.0
3	*5270.00	98.9 PK			3.23 V	296	94.7	4.2
4	*5270.00	89.5 AV			3.23 V	296	85.3	4.2
5	#10540.00	50.4 PK	74.0	-23.6	1.00 V	224	36.7	13.7
6	#10540.00	39.5 AV	54.0	-14.5	1.00 V	224	25.8	13.7
7	15810.00	45.8 PK	74.0	-28.2	1.53 V	202	31.8	14.0
8	15810.00	34.2 AV	54.0	-19.8	1.53 V	202	20.2	14.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.1 PK			1.01 H	122	97.8	4.3
2	*5310.00	93.5 AV			1.01 H	122	89.2	4.3
3	5350.00	63.3 PK	74.0	-10.7	1.01 H	122	58.9	4.4
4	5350.00	47.5 AV	54.0	-6.5	1.01 H	122	43.1	4.4
5	10620.00	44.4 PK	74.0	-29.6	1.00 H	198	30.5	13.9
6	10620.00	32.8 AV	54.0	-21.2	1.00 H	198	18.9	13.9
7	15930.00	45.6 PK	74.0	-28.4	1.40 H	219	32.3	13.3
8	15930.00	34.0 AV	54.0	-20.0	1.40 H	219	20.7	13.3
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	*5310.00	99.8 PK			3.14 V	304	95.5	4.3
2	*5310.00	90.3 AV			3.14 V	304	86.0	4.3
3	5350.00	62.1 PK	74.0	-11.9	3.14 V	304	57.7	4.4
4	5350.00	46.3 AV	54.0	-7.7	3.14 V	304	41.9	4.4
5	10620.00	50.7 PK	74.0	-23.3	1.12 V	200	36.8	13.9
6	10620.00	39.6 AV	54.0	-14.4	1.12 V	200	25.7	13.9
7	15930.00	45.9 PK	74.0	-28.1	1.58 V	202	32.6	13.3
8	15930.00	34.3 AV	54.0	-19.7	1.58 V	202	21.0	13.3

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.4 PK	74.0	-16.6	1.22 H	118	52.9	4.5
2	#5470.00	48.7 AV	54.0	-5.3	1.22 H	118	44.2	4.5
3	*5510.00	102.5 PK			1.22 H	118	97.9	4.6
4	*5510.00	93.4 AV			1.22 H	118	88.8	4.6
5	11020.00	46.8 PK	74.0	-27.2	1.52 H	180	32.1	14.7
6	11020.00	38.2 AV	54.0	-15.8	1.52 H	180	23.5	14.7
7	#16530.00	53.8 PK	74.0	-20.2	1.68 H	179	38.0	15.8
8	#16530.00	43.1 AV	54.0	-10.9	1.68 H	179	27.3	15.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	56.2 PK	74.0	-17.8	3.13 V	299	51.7	4.5
2	#5470.00	47.5 AV	54.0	-6.5	3.13 V	299	43.0	4.5
3	*5510.00	99.6 PK			3.13 V	299	95.0	4.6
4	*5510.00	90.4 AV			3.13 V	299	85.8	4.6
5	11020.00	50.7 PK	74.0	-23.3	1.02 V	202	36.0	14.7
6	11020.00	44.9 AV	54.0	-9.1	1.02 V	202	30.2	14.7
7	#16530.00	52.7 PK	74.0	-21.3	1.49 V	230	36.9	15.8
8	#16530.00	41.7 AV	54.0	-12.3	1.49 V	230	25.9	15.8

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 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	#5470.00	49.5 PK	74.0	-24.5	1.21 H	116	45.0	4.5
2	#5470.00	41.6 AV	54.0	-12.4	1.21 H	116	37.1	4.5
3	*5550.00	103.0 PK			1.21 H	116	98.5	4.5
4	*5550.00	94.2 AV			1.21 H	116	89.7	4.5
5	#5725.00	49.8 PK	74.0	-24.2	1.21 H	116	44.9	4.9
6	#5725.00	40.4 AV	54.0	-13.6	1.21 H	116	35.5	4.9
7	11100.00	46.0 PK	74.0	-28.0	1.45 H	177	31.6	14.4
8	11100.00	37.7 AV	54.0	-16.3	1.45 H	177	23.3	14.4
9	#16650.00	53.2 PK	74.0	-20.8	1.73 H	164	36.8	16.4
10	#16650.00	42.3 AV	54.0	-11.7	1.73 H	164	25.9	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	#5470.00	48.3 PK	74.0	-25.7	3.10 V	302	43.8	4.5
2	#5470.00	40.4 AV	54.0	-13.6	3.10 V	302	35.9	4.5
3	*5550.00	99.6 PK			3.10 V	302	95.1	4.5
4	*5550.00	90.6 AV			3.10 V	302	86.1	4.5
5	#5725.00	48.5 PK	74.0	-25.5	3.10 V	302	43.6	4.9
6	#5725.00	39.2 AV	54.0	-14.8	3.10 V	302	34.3	4.9
7	11100.00	51.6 PK	74.0	-22.4	1.05 V	193	37.2	14.4
8	11100.00	45.6 AV	54.0	-8.4	1.05 V	193	31.2	14.4
9	#16650.00	53.2 PK	74.0	-20.8	1.47 V	230	36.8	16.4
10	#16650.00	42.0 AV	54.0	-12.0	1.47 V	230	25.6	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 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	102.4 PK			1.22 H	118	97.6	4.8
2	*5670.00	93.8 AV			1.22 H	118	89.0	4.8
3	#5725.00	54.0 PK	74.0	-20.0	1.22 H	118	49.1	4.9
4	#5725.00	44.6 AV	54.0	-9.4	1.22 H	118	39.7	4.9
5	11340.00	46.0 PK	74.0	-28.0	1.48 H	192	31.6	14.4
6	11340.00	37.6 AV	54.0	-16.4	1.48 H	192	23.2	14.4
7	#17010.00	53.4 PK	74.0	-20.6	1.63 H	153	35.2	18.2
8	#17010.00	42.8 AV	54.0	-11.2	1.63 H	153	24.6	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	*5670.00	99.3 PK			3.17 V	289	94.5	4.8
2	*5670.00	90.2 AV			3.17 V	289	85.4	4.8
3	#5725.00	52.8 PK	74.0	-21.2	3.17 V	289	47.9	4.9
4	#5725.00	43.3 AV	54.0	-10.7	3.17 V	289	38.4	4.9
5	11340.00	52.3 PK	74.0	-21.7	1.01 V	203	37.9	14.4
6	11340.00	46.1 AV	54.0	-7.9	1.01 V	203	31.7	14.4
7	#17010.00	53.3 PK	74.0	-20.7	1.48 V	233	35.1	18.2
8	#17010.00	42.1 AV	54.0	-11.9	1.48 V	233	23.9	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	48.4 PK	74.0	-25.6	1.21 H	117	43.9	4.5
2	#5470.00	41.4 AV	54.0	-12.6	1.21 H	117	36.9	4.5
3	*5710.00	102.1 PK			1.21 H	117	97.2	4.9
4	*5710.00	94.6 AV			1.21 H	117	89.7	4.9
5	#5850.00	48.4 PK	74.0	-25.6	1.21 H	117	43.3	5.1
6	#5850.00	39.2 AV	54.0	-14.8	1.21 H	117	34.1	5.1
7	11420.00	46.4 PK	74.0	-27.6	1.50 H	183	32.1	14.3
8	11420.00	38.0 AV	54.0	-16.0	1.50 H	183	23.7	14.3
9	#17130.00	53.0 PK	74.0	-21.0	1.75 H	157	34.5	18.5
10	#17130.00	42.3 AV	54.0	-11.7	1.75 H	157	23.8	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	47.1 PK	74.0	-26.9	3.14 V	296	42.6	4.5
2	#5470.00	40.2 AV	54.0	-13.8	3.14 V	296	35.7	4.5
3	*5710.00	100.1 PK			3.14 V	296	95.2	4.9
4	*5710.00	90.9 AV			3.14 V	296	86.0	4.9
5	#5850.00	47.2 PK	74.0	-26.8	3.14 V	296	42.1	5.1
6	#5850.00	38.0 AV	54.0	-16.0	3.14 V	296	32.9	5.1
7	11420.00	51.5 PK	74.0	-22.5	1.09 V	191	37.2	14.3
8	11420.00	45.7 AV	54.0	-8.3	1.09 V	191	31.4	14.3
9	#17130.00	53.4 PK	74.0	-20.6	1.51 V	244	34.9	18.5
10	#17130.00	42.4 AV	54.0	-11.6	1.51 V	244	23.9	18.5

REMARKS:

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

CHANNEL	TX Channel 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	#5594.26	58.0 PK	68.2	-10.2	1.12 H	119	53.4	4.6
2	*5755.00	102.1 PK			1.12 H	119	97.1	5.0
3	*5755.00	95.5 AV			1.12 H	119	90.5	5.0
4	#5973.44	58.2 PK	68.2	-10.0	1.12 H	119	52.7	5.5
5	11510.00	45.9 PK	74.0	-28.1	1.50 H	174	31.9	14.0
6	11510.00	37.8 AV	54.0	-16.2	1.50 H	174	23.8	14.0
7	#17265.00	53.1 PK	74.0	-20.9	1.73 H	173	34.6	18.5
8	#17265.00	42.2 AV	54.0	-11.8	1.73 H	173	23.7	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.31	56.8 PK	68.2	-11.4	3.12 V	313	52.0	4.8
2	*5755.00	99.5 PK			3.12 V	313	94.5	5.0
3	*5755.00	91.8 AV			3.12 V	313	86.8	5.0
4	#5968.15	58.4 PK	68.2	-9.8	3.12 V	313	52.9	5.5
5	11510.00	51.2 PK	74.0	-22.8	1.07 V	186	37.2	14.0
6	11510.00	45.3 AV	54.0	-8.7	1.07 V	186	31.3	14.0
7	#17265.00	53.5 PK	74.0	-20.5	1.49 V	237	35.0	18.5
8	#17265.00	42.3 AV	54.0	-11.7	1.49 V	237	23.8	18.5

REMARKS:

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

CHANNEL	TX Channel 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	#5631.44	56.2 PK	68.2	-12.0	1.12 H	115	51.4	4.8
2	*5795.00	102.4 PK			1.12 H	115	97.3	5.1
3	*5795.00	96.0 AV			1.12 H	115	90.9	5.1
4	#5974.09	57.4 PK	68.2	-10.8	1.12 H	115	51.9	5.5
5	11590.00	46.1 PK	74.0	-27.9	1.54 H	169	32.1	14.0
6	11590.00	38.1 AV	54.0	-15.9	1.54 H	169	24.1	14.0
7	#17385.00	53.3 PK	74.0	-20.7	1.65 H	153	34.2	19.1
8	#17385.00	42.4 AV	54.0	-11.6	1.65 H	153	23.3	19.1
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	#5617.31	57.3 PK	68.2	-10.9	3.12 V	312	52.6	4.7
2	*5795.00	99.6 PK			3.12 V	312	94.5	5.1
3	*5795.00	92.0 AV			3.12 V	312	86.9	5.1
4	#5979.35	57.4 PK	68.2	-10.8	3.12 V	312	51.9	5.5
5	11590.00	51.6 PK	74.0	-22.4	1.07 V	196	37.6	14.0
6	11590.00	45.5 AV	54.0	-8.5	1.07 V	196	31.5	14.0
7	#17385.00	53.2 PK	74.0	-20.8	1.48 V	230	34.1	19.1
8	#17385.00	42.0 AV	54.0	-12.0	1.48 V	230	22.9	19.1

REMARKS:

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

802.11ac (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	64.2 PK	74.0	-9.8	1.23 H	156	60.2	4.0
2	5150.00	53.1 AV	54.0	-0.9	1.23 H	156	49.1	4.0
3	*5210.00	96.9 PK			1.23 H	156	92.8	4.1
4	*5210.00	88.6 AV			1.23 H	156	84.5	4.1
5	5350.00	49.2 PK	74.0	-24.8	1.23 H	156	44.8	4.4
6	5350.00	40.0 AV	54.0	-14.0	1.23 H	156	35.6	4.4
7	#10420.00	44.9 PK	74.0	-29.1	1.00 H	205	31.3	13.6
8	#10420.00	33.4 AV	54.0	-20.6	1.00 H	205	19.8	13.6
9	15630.00	45.9 PK	74.0	-28.1	1.47 H	213	32.3	13.6
10	15630.00	34.2 AV	54.0	-19.8	1.47 H	213	20.6	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.9 PK	74.0	-11.1	3.17 V	289	58.9	4.0
2	5150.00	51.8 AV	54.0	-2.2	3.17 V	289	47.8	4.0
3	*5210.00	93.8 PK			3.17 V	289	89.7	4.1
4	*5210.00	85.5 AV			3.17 V	289	81.4	4.1
5	5350.00	48.0 PK	74.0	-26.0	3.17 V	289	43.6	4.4
6	5350.00	38.7 AV	54.0	-15.3	3.17 V	289	34.3	4.4
7	#10420.00	48.1 PK	74.0	-25.9	1.00 V	215	34.5	13.6
8	#10420.00	36.9 AV	54.0	-17.1	1.00 V	215	23.3	13.6
9	15630.00	45.8 PK	74.0	-28.2	1.54 V	212	32.2	13.6
10	15630.00	33.9 AV	54.0	-20.1	1.54 V	212	20.3	13.6

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	50.6 PK	74.0	-23.4	1.23 H	154	46.6	4.0
2	5150.00	40.2 AV	54.0	-13.8	1.23 H	154	36.2	4.0
3	*5290.00	96.7 PK			1.23 H	154	92.4	4.3
4	*5290.00	89.0 AV			1.23 H	154	84.7	4.3
5	5350.00	66.2 PK	74.0	-7.8	1.23 H	154	61.8	4.4
6	5350.00	53.4 AV	54.0	-0.6	1.23 H	154	49.0	4.4
7	#10580.00	44.2 PK	74.0	-29.8	1.00 H	210	30.3	13.9
8	#10580.00	32.9 AV	54.0	-21.1	1.00 H	210	19.0	13.9
9	15870.00	46.2 PK	74.0	-27.8	1.46 H	202	32.8	13.4
10	15870.00	34.7 AV	54.0	-19.3	1.46 H	202	21.3	13.4
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	49.4 PK	74.0	-24.6	3.23 V	298	45.4	4.0
2	5150.00	39.1 AV	54.0	-14.9	3.23 V	298	35.1	4.0
3	*5290.00	94.3 PK			3.23 V	298	90.0	4.3
4	*5290.00	85.8 AV			3.23 V	298	81.5	4.3
5	5350.00	65.1 PK	74.0	-8.9	3.23 V	298	60.7	4.4
6	5350.00	52.2 AV	54.0	-1.8	3.23 V	298	47.8	4.4
7	#10580.00	47.8 PK	74.0	-26.2	1.03 V	220	33.9	13.9
8	#10580.00	36.8 AV	54.0	-17.2	1.03 V	220	22.9	13.9
9	15870.00	45.9 PK	74.0	-28.1	1.51 V	216	32.5	13.4
10	15870.00	33.7 AV	54.0	-20.3	1.51 V	216	20.3	13.4

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)
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	5457.00	64.6 PK	74.0	-9.4	1.26 H	168	60.1	4.5
2	**5457.00**	**53.6 AV**	**54.0**	**-0.4**	**1.26 H**	**168**	**49.1**	**4.5**
3	*5530.00	96.0 PK			1.26 H	168	91.5	4.5
4	*5530.00	87.6 AV			1.26 H	168	83.1	4.5
5	#5725.00	49.7 PK	74.0	-24.3	1.26 H	168	44.8	4.9
6	#5725.00	40.8 AV	54.0	-13.2	1.26 H	168	35.9	4.9
7	11060.00	46.2 PK	74.0	-27.8	1.44 H	174	31.7	14.5
8	11060.00	37.9 AV	54.0	-16.1	1.44 H	174	23.4	14.5
9	#16590.00	53.3 PK	74.0	-20.7	1.75 H	159	36.7	16.6
10	#16590.00	42.1 AV	54.0	-11.9	1.75 H	159	25.5	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	5457.00	63.4 PK	74.0	-10.6	3.22 V	285	58.9	4.5
2	5457.00	52.3 AV	54.0	-1.7	3.22 V	285	47.8	4.5
3	*5530.00	92.6 PK			3.22 V	285	88.1	4.5
4	*5530.00	84.2 AV			3.22 V	285	79.7	4.5
5	#5725.00	48.5 PK	74.0	-25.5	3.22 V	285	43.6	4.9
6	#5725.00	39.6 AV	54.0	-14.4	3.22 V	285	34.7	4.9
7	11060.00	46.6 PK	74.0	-27.4	1.00 V	191	32.1	14.5
8	11060.00	40.9 AV	54.0	-13.1	1.00 V	191	26.4	14.5
9	#16590.00	53.3 PK	74.0	-20.7	1.46 V	227	36.7	16.6
10	#16590.00	42.2 AV	54.0	-11.8	1.46 V	227	25.6	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 122	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	97.0 PK			1.25 H	179	92.3	4.7
2	*5610.00	88.2 AV			1.25 H	179	83.5	4.7
3	#5725.00	49.7 PK	74.0	-24.3	1.25 H	179	44.8	4.9
4	#5725.00	41.0 AV	54.0	-13.0	1.25 H	179	36.1	4.9
5	11220.00	46.4 PK	74.0	-27.6	1.43 H	167	32.0	14.4
6	11220.00	37.9 AV	54.0	-16.1	1.43 H	167	23.5	14.4
7	#16830.00	53.8 PK	74.0	-20.2	1.70 H	167	36.8	17.0
8	#16830.00	42.5 AV	54.0	-11.5	1.70 H	167	25.5	17.0
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	*5610.00	93.5 PK			3.21 V	283	88.8	4.7
2	*5610.00	84.7 AV			3.21 V	283	80.0	4.7
3	#5725.00	48.5 PK	74.0	-25.5	3.21 V	283	43.6	4.9
4	#5725.00	39.8 AV	54.0	-14.2	3.21 V	283	34.9	4.9
5	11220.00	46.5 PK	74.0	-27.5	1.00 V	182	32.1	14.4
6	11220.00	40.6 AV	54.0	-13.4	1.00 V	182	26.2	14.4
7	#16830.00	53.8 PK	74.0	-20.2	1.47 V	215	36.8	17.0
8	#16830.00	42.5 AV	54.0	-11.5	1.47 V	215	25.5	17.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	64.3 PK	74.0	-9.7	1.24 H	182	59.8	4.5
2	#5470.00	51.1 AV	54.0	-2.9	1.24 H	182	46.6	4.5
3	*5690.00	96.8 PK			1.24 H	182	92.0	4.8
4	*5690.00	89.4 AV			1.24 H	182	84.6	4.8
5	#5850.00	50.6 PK	74.0	-23.4	1.24 H	182	45.5	5.1
6	#5850.00	41.4 AV	54.0	-12.6	1.24 H	182	36.3	5.1
7	11380.00	46.4 PK	74.0	-27.6	1.45 H	189	32.0	14.4
8	11380.00	38.3 AV	54.0	-15.7	1.45 H	189	23.9	14.4
9	#17070.00	53.6 PK	74.0	-20.4	1.77 H	152	35.3	18.3
10	#17070.00	42.2 AV	54.0	-11.8	1.77 H	152	23.9	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.1 PK	74.0	-10.9	3.25 V	294	58.6	4.5
2	#5470.00	49.8 AV	54.0	-4.2	3.25 V	294	45.3	4.5
3	*5690.00	95.2 PK			3.25 V	294	90.4	4.8
4	*5690.00	86.5 AV			3.25 V	294	81.7	4.8
5	#5850.00	49.4 PK	74.0	-24.6	3.25 V	294	44.3	5.1
6	#5850.00	40.1 AV	54.0	-13.9	3.25 V	294	35.0	5.1
7	11380.00	46.0 PK	74.0	-28.0	1.02 V	166	31.6	14.4
8	11380.00	40.4 AV	54.0	-13.6	1.02 V	166	26.0	14.4
9	#17070.00	54.3 PK	74.0	-19.7	1.41 V	207	36.0	18.3
10	#17070.00	42.8 AV	54.0	-11.2	1.41 V	207	24.5	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5641.16	57.9 PK	68.2	-10.3	1.23 H	161	53.1	4.8
2	*5775.00	99.5 PK			1.23 H	161	94.5	5.0
3	*5775.00	90.0 AV			1.23 H	161	85.0	5.0
4	#5950.40	57.4 PK	68.2	-10.8	1.23 H	161	52.0	5.4
5	11550.00	46.2 PK	74.0	-27.8	1.47 H	172	32.2	14.0
6	11550.00	37.8 AV	54.0	-16.2	1.47 H	172	23.8	14.0
7	#17325.00	53.5 PK	74.0	-20.5	1.70 H	158	34.9	18.6
8	#17325.00	42.4 AV	54.0	-11.6	1.70 H	158	23.8	18.6
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	#5634.65	57.1 PK	68.2	-11.1	3.21 V	310	52.3	4.8
2	*5775.00	96.2 PK			3.21 V	310	91.2	5.0
3	*5775.00	87.4 AV			3.21 V	310	82.4	5.0
4	#5956.60	58.6 PK	68.2	-9.6	3.21 V	310	53.1	5.5
5	11550.00	46.7 PK	74.0	-27.3	1.00 V	180	32.7	14.0
6	11550.00	40.8 AV	54.0	-13.2	1.00 V	180	26.8	14.0
7	#17325.00	53.8 PK	74.0	-20.2	1.44 V	231	35.2	18.6
8	#17325.00	42.3 AV	54.0	-11.7	1.44 V	231	23.7	18.6

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.

Below 1GHz Data:

802.11ac (VHT20)

CHANNEL	TX Channel 40	**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	48.87	22.7 QP	40.0	-17.3	1.50 H	222	30.6	-7.9
2	160.00	22.8 QP	43.5	-20.7	2.00 H	103	30.5	-7.7
3	193.74	24.0 QP	43.5	-19.5	1.00 H	90	34.9	-10.9
4	344.16	23.2 QP	46.0	-22.8	2.00 H	67	29.5	-6.3
5	488.45	25.2 QP	46.0	-20.8	2.00 H	215	28.1	-2.9
6	685.26	28.6 QP	46.0	-17.4	1.00 H	338	27.7	0.9
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	42.00	27.3 QP	40.0	-12.7	1.00 V	296	35.4	-8.1
2	122.05	27.6 QP	43.5	-15.9	1.00 V	360	37.0	-9.4
3	197.35	21.2 QP	43.5	-22.3	2.00 V	206	32.4	-11.2
4	394.31	24.8 QP	46.0	-21.2	1.50 V	98	29.9	-5.1
5	498.97	26.0 QP	46.0	-20.0	2.00 V	134	28.6	-2.6
6	688.39	29.4 QP	46.0	-16.6	2.00 V	352	28.4	1.0

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Nov. 01, 2017	Oct. 31, 2018
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Nov. 15, 20167	Nov. 14, 2018
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 03, 2017	June 02, 2018
50 ohms Terminator	N/A	EMC-02	Sep. 22, 2017	Sep. 21, 2018
RF Cable	5D-FB	COCCAB-001	Sep. 29, 2017	Sep. 28, 2018
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 18, 2017	June 17, 2018
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 1.
3 Tested Date: Nov. 29 to Dec. 01, 2017

4.2.3 Test Procedure

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

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

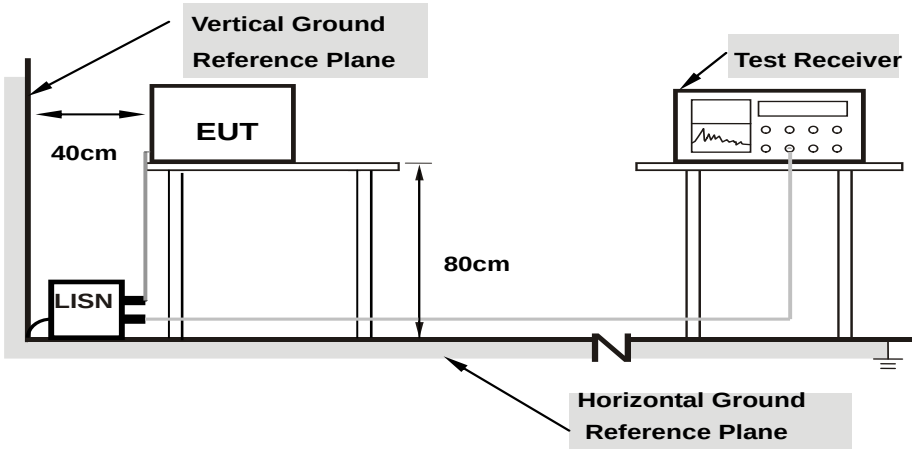
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

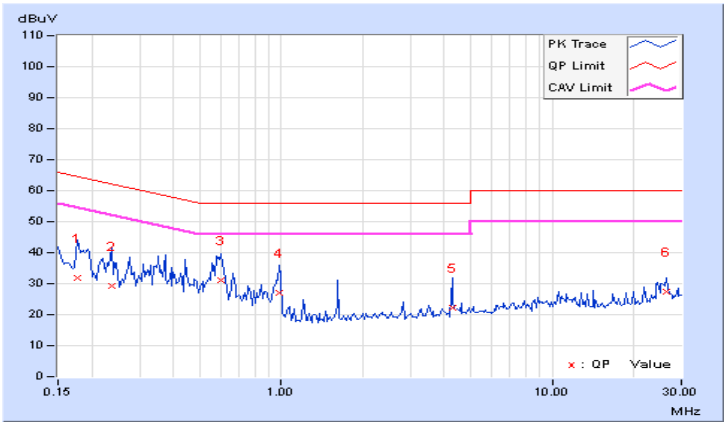
4.2.7 Test Results (Mode 1)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17734	10.08	21.83	3.19	31.91	13.27	64.61	54.61	-32.70	-41.34
2	0.23594	10.08	19.35	-3.11	29.43	6.97	62.24	52.24	-32.81	-45.27
3	0.59922	10.14	21.13	2.47	31.27	12.61	56.00	46.00	-24.73	-33.39
4	0.98594	10.17	17.02	-3.88	27.19	6.29	56.00	46.00	-28.81	-39.71
5	4.27344	10.38	12.00	-0.99	22.38	9.39	56.00	46.00	-33.62	-36.61
6	26.33594	11.68	15.86	5.04	27.54	16.72	60.00	50.00	-32.46	-33.28

REMARKS:

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

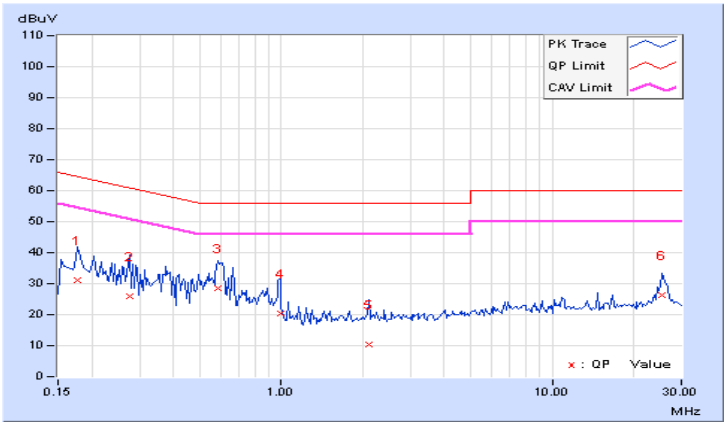


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17734	10.06	21.16	3.88	31.22	13.94	64.61	54.61	-33.39	-40.67
2	0.27500	10.07	15.90	-0.46	25.97	9.61	60.97	50.97	-35.00	-41.36
3	0.58359	10.12	18.50	5.59	28.62	15.71	56.00	46.00	-27.38	-30.29
4	0.98984	10.13	10.20	1.43	20.33	11.56	56.00	46.00	-35.67	-34.44
5	2.10156	10.21	0.31	-6.71	10.52	3.50	56.00	46.00	-45.48	-42.50
6	25.31250	11.28	14.85	1.28	26.13	12.56	60.00	50.00	-33.87	-37.44

REMARKS:

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



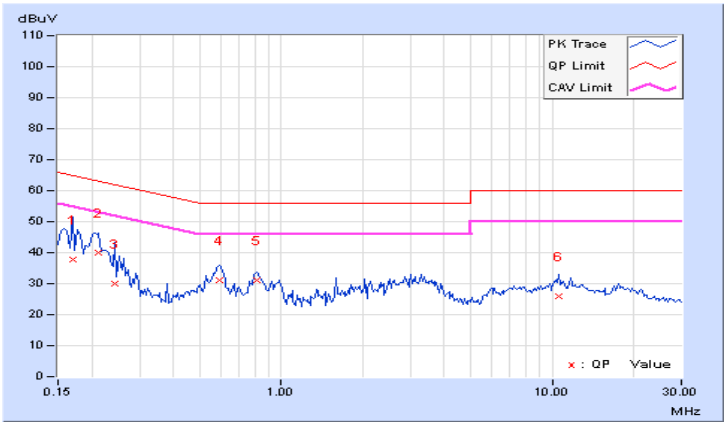
4.2.8 Test Results (Mode 2)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16953	10.07	27.87	10.58	37.94	20.65	64.98	54.98	-27.04	-34.33
2	0.21250	10.06	29.92	12.46	39.98	22.52	63.11	53.11	-23.13	-30.59
3	0.24375	10.07	19.86	9.32	29.93	19.39	61.97	51.97	-32.04	-32.58
4	**0.59141**	**10.12**	**20.93**	**13.03**	**31.05**	**23.15**	**56.00**	**46.00**	**-24.95**	**-22.85**
5	0.81406	10.14	20.84	10.93	30.98	21.07	56.00	46.00	-25.02	-24.93
6	10.53906	10.66	15.19	10.72	25.85	21.38	60.00	50.00	-34.15	-28.62

REMARKS:

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

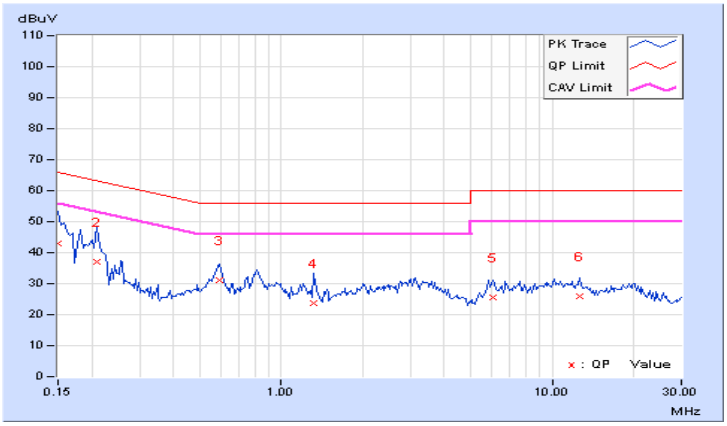


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.07	32.80	22.17	42.87	32.24	66.00	56.00	-23.13	-23.76
2	0.20859	10.03	26.90	8.50	36.93	18.53	63.26	53.26	-26.33	-34.73
3	0.59141	10.11	20.86	12.81	30.97	22.92	56.00	46.00	-25.03	-23.08
4	1.31250	10.14	13.72	6.70	23.86	16.84	56.00	46.00	-32.14	-29.16
5	6.01563	10.33	15.16	9.56	25.49	19.89	60.00	50.00	-34.51	-30.11
6	12.60547	10.69	15.29	8.72	25.98	19.41	60.00	50.00	-34.02	-30.59

REMARKS:

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



4.3 Transmit Power Measurment

4.3.1 Limits of Transmit Power Measurement

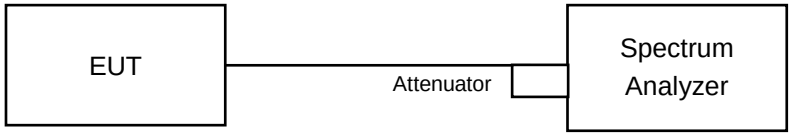
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client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

*B is the 26 dB emission bandwidth in megahertz

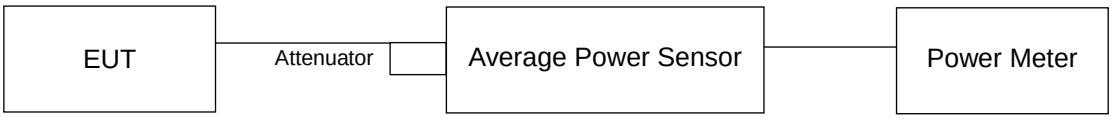
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

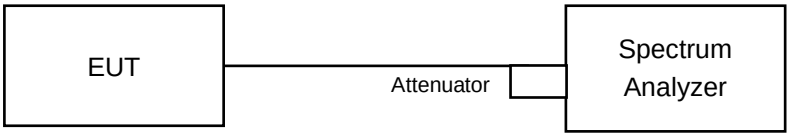
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For channel straddling 5725MHz:

802.11ac (VHT40), 802.11ac (VHT80) :

Method SA-1

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

802.11a, 802.11ac (VHT20):

Method SA-2

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

For other channels:

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

FOR 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Result

802.11a

Power Output:

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
36	5180	7.079	8.50	24.00	Pass
40	5200	7.015	8.46	24.00	Pass
48	5240	7.328	8.65	24.00	Pass
52	5260	7.499	8.75	24.00	Pass
60	5300	7.656	8.84	24.00	Pass
64	5320	7.244	8.60	24.00	Pass
100	5500	7.413	8.70	24.00	Pass
116	5580	7.674	8.85	24.00	Pass
140	5700	6.792	8.32	24.00	Pass
*144 (UNII-2C Band)	5720	3.474	5.41	22.78	Pass
*144 (UNII-3 Band)	5720	0.8626	-0.64	30.00	Pass
149	5745	14.223	11.53	30.00	Pass
157	5785	15.488	11.90	30.00	Pass
165	5825	15.346	11.86	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	4.3366	6.37
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	20.18
60	5300	20.18
64	5320	20.30
100	5500	20.16
116	5580	20.10
140	5700	20.29
144 (UNII-2C Band)	5720	15.08

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	20.18	24.04 > 24
60	5300	20.18	24.04 > 24
64	5320	20.30	24.07 > 24
100	5500	20.16	24.04 > 24
116	5580	20.10	24.03 > 24
140	5700	20.29	24.07 > 24
144 (UNII-2C Band)	5720	15.08	22.78 < 24

802.11ac (VHT20)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	8.69	8.73	14.86	11.72	24.00	Pass
40	5200	8.42	8.66	14.295	11.55	24.00	Pass
48	5240	8.56	8.42	14.128	11.50	24.00	Pass
52	5260	8.46	8.53	14.144	11.51	24.00	Pass
60	5300	8.76	8.82	15.137	11.80	24.00	Pass
64	5320	8.52	8.63	14.407	11.59	24.00	Pass
100	5500	8.38	8.45	13.885	11.43	24.00	Pass
116	5580	8.45	8.50	14.077	11.49	24.00	Pass
140	5700	8.32	8.10	13.249	11.22	24.00	Pass
*144 (UNII-2C Band)	5720	3.41	0.57	3.567	5.52	22.79	Pass
*144 (UNII-3 Band)	5720	-4.16	-3.65	0.8724	-0.59	30.00	Pass
149	5745	7.36	7.21	10.705	10.30	30.00	Pass
157	5785	7.48	7.94	11.821	10.73	30.00	Pass
165	5825	7.54	7.77	11.659	10.67	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	4.4394	6.47
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.43	20.26
60	5300	20.26	20.18
64	5320	20.33	20.47
100	5500	20.19	20.33
116	5580	20.34	20.15
140	5700	20.51	20.42
144 (UNII-2C Band)	5720	15.18	15.12

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	20.26	24.06 > 24
60	5300	20.18	24.04 > 24
64	5320	20.33	24.08 > 24
100	5500	20.19	24.05 > 24
116	5580	20.15	24.04 > 24
140	5700	20.42	24.1 > 24
144 (UNII-2C Band)	5720	15.12	22.79 < 24

802.11ac (VHT40)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	7.60	7.90	11.92	10.76	24.00	Pass
46	5230	7.52	7.60	11.403	10.57	24.00	Pass
54	5270	7.47	7.52	11.234	10.51	24.00	Pass
62	5310	7.59	7.63	11.535	10.62	24.00	Pass
102	5510	7.38	7.52	11.119	10.46	24.00	Pass
110	5550	7.42	7.74	11.464	10.59	24.00	Pass
134	5670	7.38	7.65	11.291	10.53	24.00	Pass
*142 (UNII-2C Band)	5710	-0.97	-1.09	1.5778	1.98	24.00	Pass
*142 (UNII-3 Band)	5710	-12.49	-13.44	0.10165	-9.93	30.00	Pass
151	5755	6.66	6.78	9.398	9.73	30.00	Pass
159	5795	6.53	6.60	9.069	9.58	30.00	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	1.67945	2.25
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	42.06	42.22
62	5310	42.17	41.98
102	5510	42.43	42.19
110	5550	42.37	42.43
134	5670	42.29	42.29
*142 (UNII-3 Band)	5710	36.32	36.19

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	42.06	27.23 > 24
62	5310	41.98	27.23 > 24
102	5510	42.19	27.25 > 24
110	5550	42.37	27.27 > 24
134	5670	42.29	27.26 > 24
142 (UNII-2C Band)	5710	36.19	26.58 > 24

802.11ac (VHT80)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	7.50	7.52	11.272	10.52	24.00	Pass
58	5290	7.52	7.42	11.17	10.48	24.00	Pass
106	5530	7.53	7.42	11.183	10.49	24.00	Pass
122	5610	7.37	7.55	11.147	10.47	24.00	Pass
*138 (UNII-2C Band)	5690	0.24	-0.16	2.0206	3.05	24.00	Pass
*138 (UNII-3 Band)	5690	-18.57	-8.44	0.15712	-8.04	30.00	Pass
155	5775	6.61	6.40	8.946	9.52	30.00	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Total Power for the straddle channel:

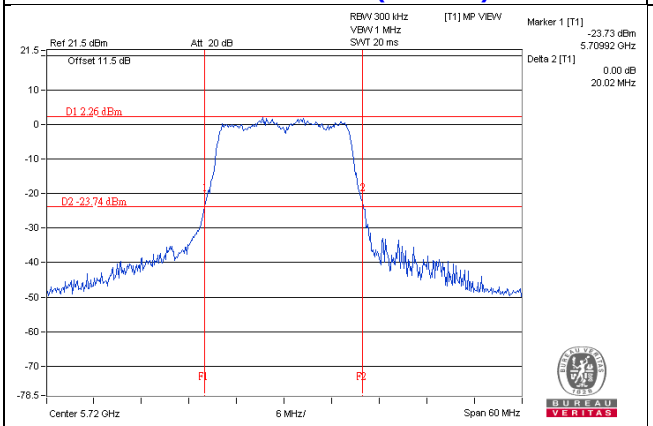
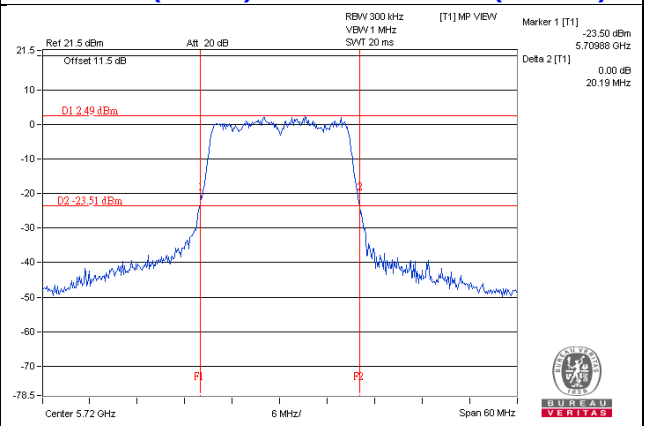
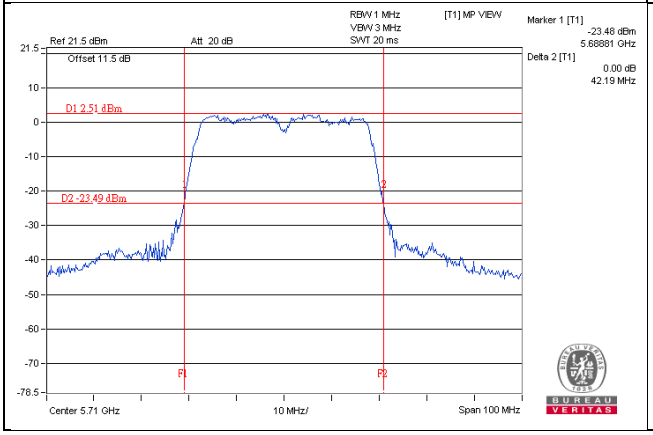
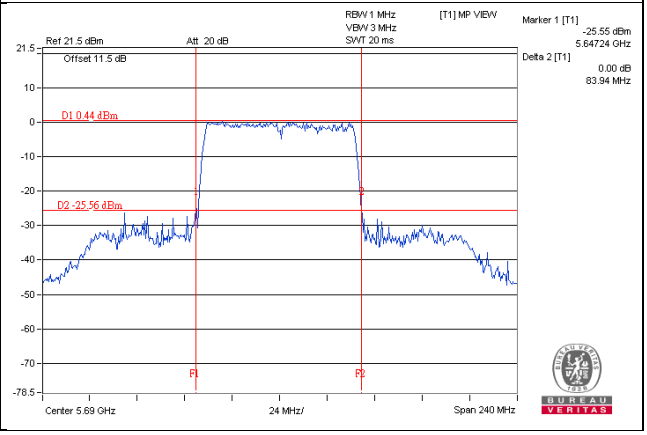
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	2.17772	3.38
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.87	81.96
106	5530	83.92	81.91
122	5610	83.31	81.83
138 (UNII-2C Band)	5690	79.67	77.76

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	81.96	30.13 > 24
106	5530	81.91	30.13 > 24
122	5610	81.83	30.12 > 24
138 (UNII-2C Band)	5690	77.76	29.9 > 24

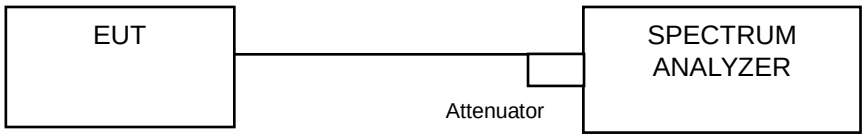
Spectrum Plot of Worst Value	
802.11a / CH 144 (UNII-2C)	**802.11ac (VHT20) - Chain 1 / CH 144 (UNII-2C)**
	
802.11ac (VHT40) - Chain 1 / CH 142 (UNII-2C)	**802.11ac (VHT80) Chain 1 / CH 138 (UNII-2C)**
	

NOTE:

For CH144 (U_NII-2C) = 5725MHz - Marker 1
For CH142 (U_NII-2C) = 5725MHz - Marker 1
For CH138 (U_NII-2C) = 5725MHz - Marker 1

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.68
40	5200	16.68
48	5240	16.68
52	5260	16.80
60	5300	16.68
64	5320	16.80
100	5500	16.80
116	5580	16.68
140	5700	16.68
144 (UNII-2C Band)	5720	13.40
144 (UNII-3 Band)	5720	3.40
149	5745	16.68
157	5785	16.68
165	5825	16.80

802.11ac (VHT20)

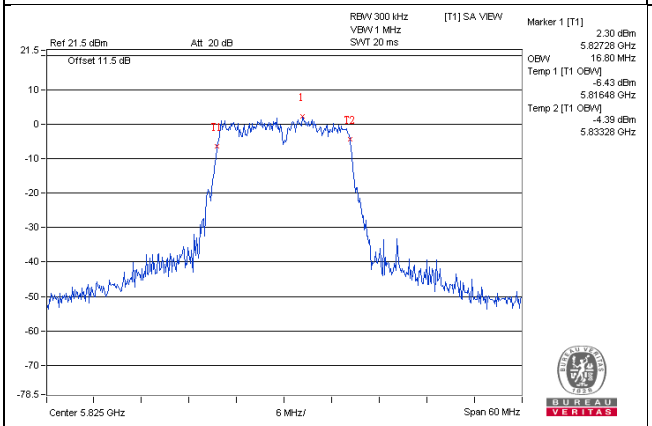
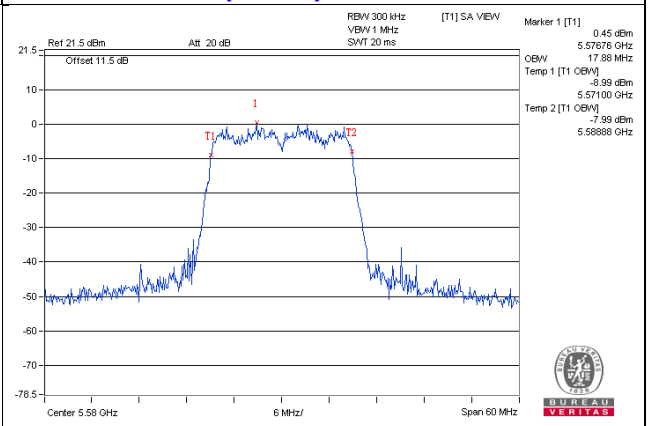
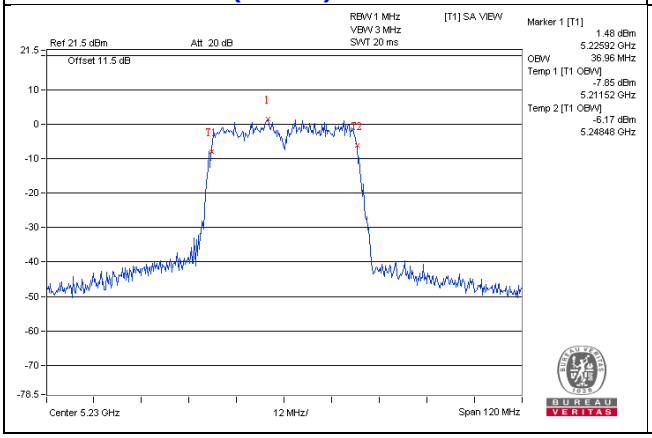
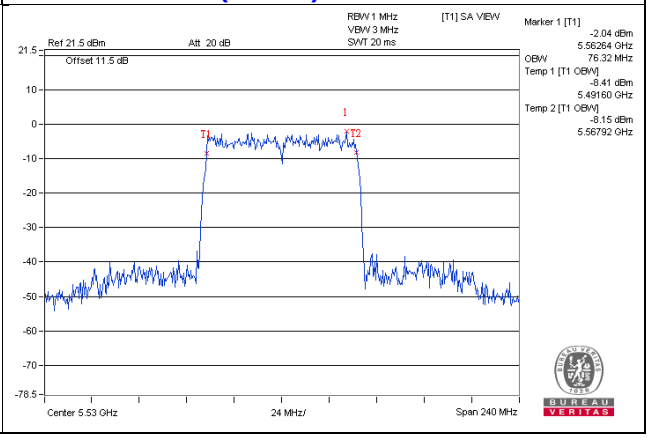
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.76
40	5200	17.76	17.64
48	5240	17.64	17.64
52	5260	17.76	17.64
60	5300	17.76	17.76
64	5320	17.64	17.64
100	5500	17.76	17.76
116	5580	17.64	17.88
140	5700	17.64	17.76
144 (UNII-2C Band)	5720	13.88	13.88
144 (UNII-3 Band)	5720	3.76	3.76
149	5745	17.76	17.64
157	5785	17.64	17.64
165	5825	17.76	17.64

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.24	36.72
46	5230	36.48	36.96
54	5270	36.72	36.72
62	5310	36.24	36.48
102	5510	36.48	36.72
110	5550	36.48	36.72
134	5670	36.24	36.24
144 (UNII-2C Band)	5720	33.40	33.40
144 (UNII-3 Band)	5720	3.00	3.20
151	5755	36.72	36.24
159	5795	3	36.48

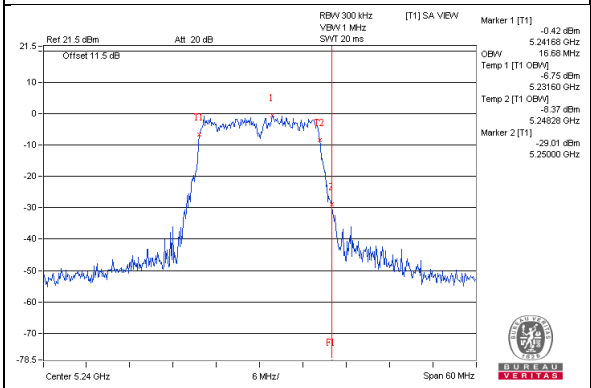
802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.32	75.84
58	5290	76.32	76.32
106	5530	76.32	76.32
122	5610	76.32	75.84
138 (UNII-2C Band)	5690	73.40	73.40
138 (UNII-3 Band)	5690	2.92	2.44
155	5775	76.32	76.32

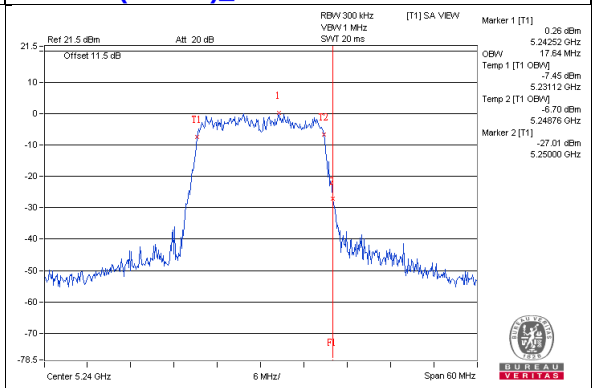
Spectrum Plot of Worst Value	
802.11a / CH165	**802.11ac (VHT20) - Chain1 / CH116**
	
802.11ac (VHT40) - Chain1 / CH46	**802.11ac (VHT80) – Chain0 / CH106**
	

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

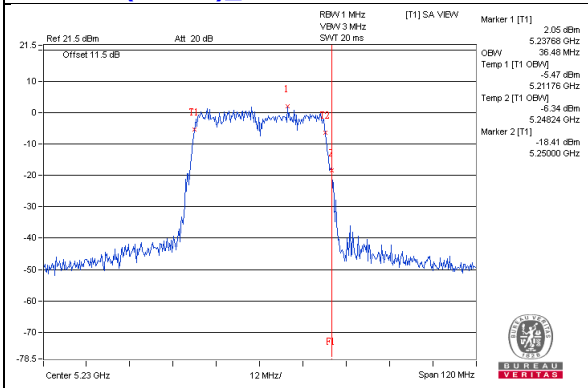
802.11a / CH48



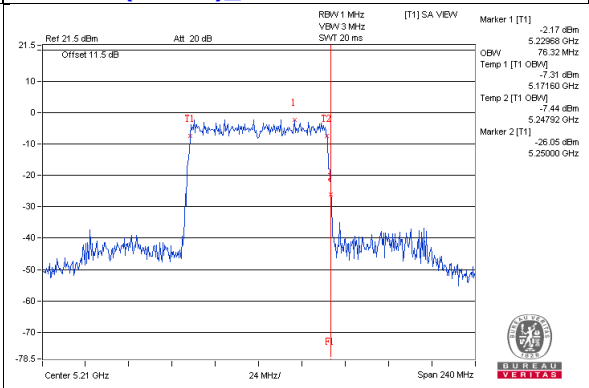
802.11ac(VHT20)_Chain0 / CH48



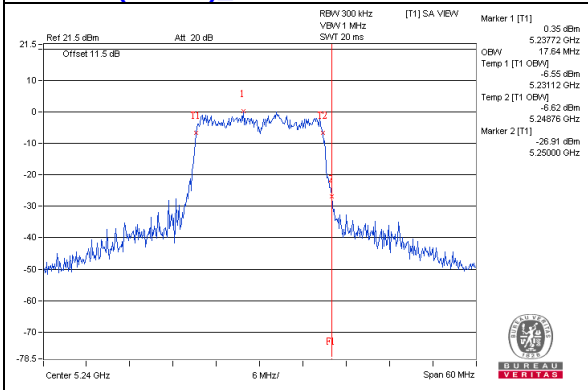
802.11ac (VHT40)_Chain0 : CH46



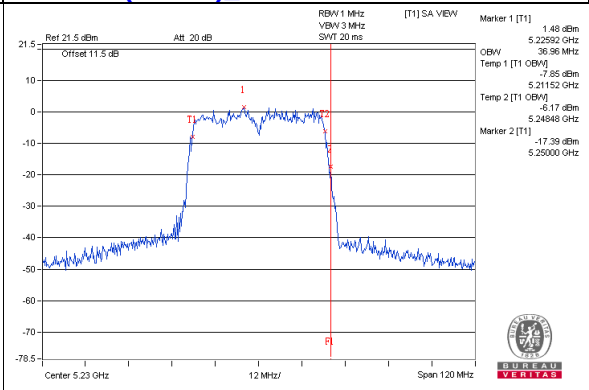
802.11ac (VHT80)_Chain0 : CH42



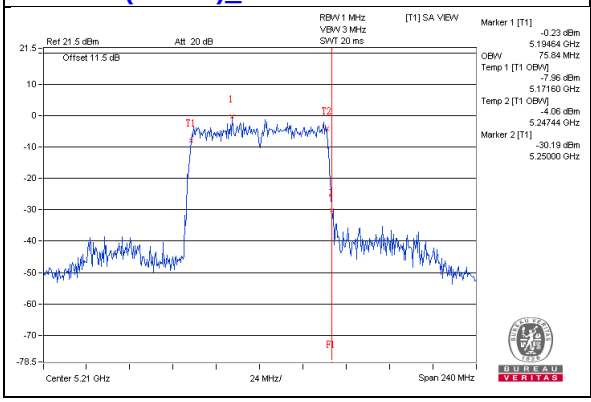
802.11ac(VHT20)_Chain1 / CH48



802.11ac (VHT40)_Chain1 : CH46

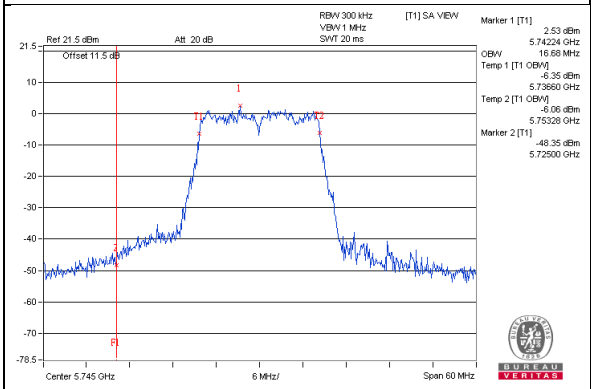


802.11ac (VHT80)_Chain1 : CH42

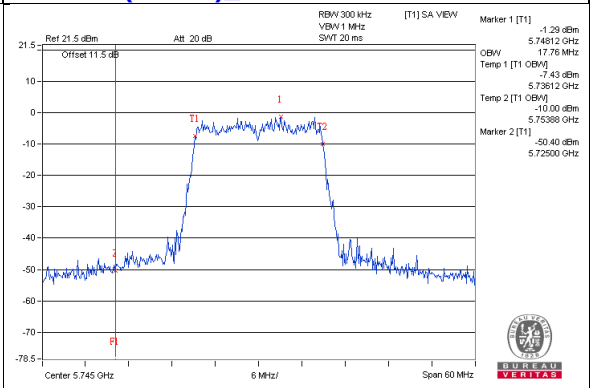


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

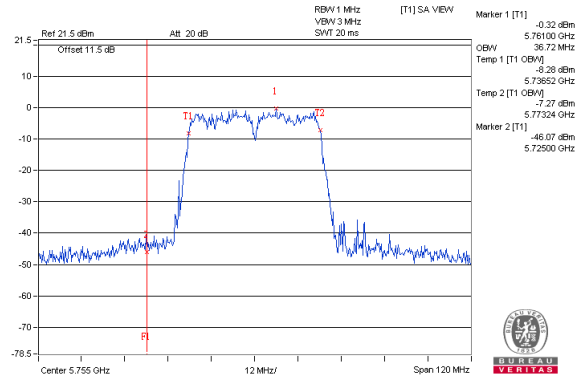
802.11a : CH149



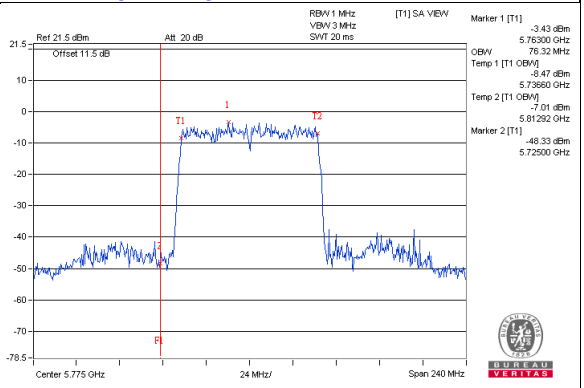
802.11ac (VHT20)_ Chain0 : CH149



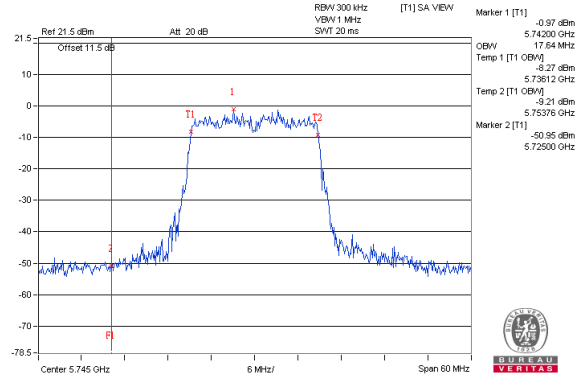
802.11ac (VHT40)_ Chain0: CH151



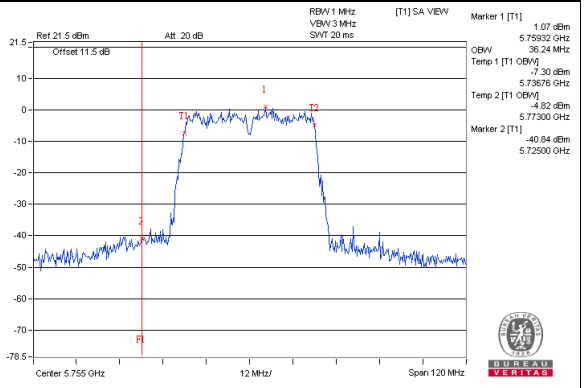
802.11ac (VHT80)_ Chain0 : CH155



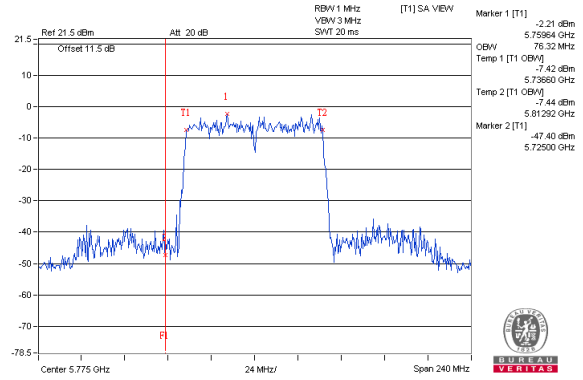
802.11ac (VHT20)_ Chain1 : CH149



802.11ac (VHT40)_ Chain1: CH151



802.11ac (VHT80)_ Chain1 : CH155

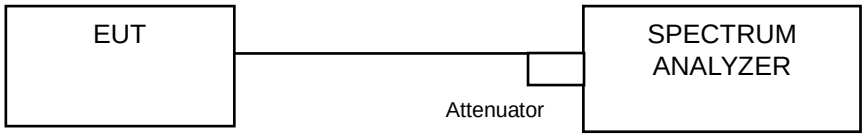


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

802.11a, 802.11ac (VHT20)
For U-NII-1, U-NII-2A, U-NII-2C:
Using method SA-1

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

802.11ac (VHT40), 802.11ac (VHT80)
For U-NII-3:

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	-4.90	0.26	-4.64	11.00	Pass
40	5200	-4.51	0.26	-4.25	11.00	Pass
48	5240	-4.86	0.26	-4.60	11.00	Pass
52	5260	-4.47	0.26	-4.21	11.00	Pass
60	5300	-3.71	0.26	-3.45	11.00	Pass
64	5320	-4.61	0.26	-4.35	11.00	Pass
100	5500	-4.32	0.26	-4.06	11.00	Pass
116	5580	-4.80	0.26	-4.54	11.00	Pass
140	5700	-4.60	0.26	-4.34	11.00	Pass
144 (UNII-2C Band)	5720	-4.25	0.26	-3.99	11.00	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

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

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	-5.32	-5.74	0.29	-2.22	11.00	Pass
40	5200	-5.58	-5.19	0.29	-2.08	11.00	Pass
48	5240	-5.61	-5.02	0.29	-2.00	11.00	Pass
52	5260	-4.57	-4.70	0.29	-1.33	11.00	Pass
60	5300	-5.08	-5.35	0.29	-1.91	11.00	Pass
64	5320	-4.84	-5.79	0.29	-1.98	11.00	Pass
100	5500	-4.90	-5.31	0.29	-1.80	11.00	Pass
116	5580	-5.34	-5.25	0.29	-1.99	11.00	Pass
140	5700	-5.24	-5.50	0.29	-2.06	11.00	Pass
144 (UNII-2C Band)	5720	-7.35	-6.81	0.29	-3.77	11.00	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A & UNII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-9.96	-9.26	-6.59	11.00	Pass
46	5230	-8.49	-8.97	-5.71	11.00	Pass
54	5270	-7.93	-9.72	-5.72	11.00	Pass
62	5310	-8.85	-8.55	-5.69	11.00	Pass
102	5510	-8.88	-9.68	-6.25	11.00	Pass
110	5550	-8.79	-9.47	-6.11	11.00	Pass
134	5670	-9.51	-10.13	-6.80	11.00	Pass
142 (UNII-2C Band)	5710	-13.47	-12.88	-10.15	11.00	Pass

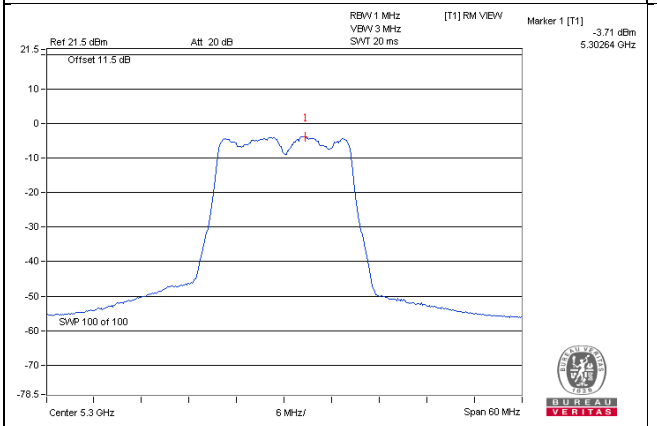
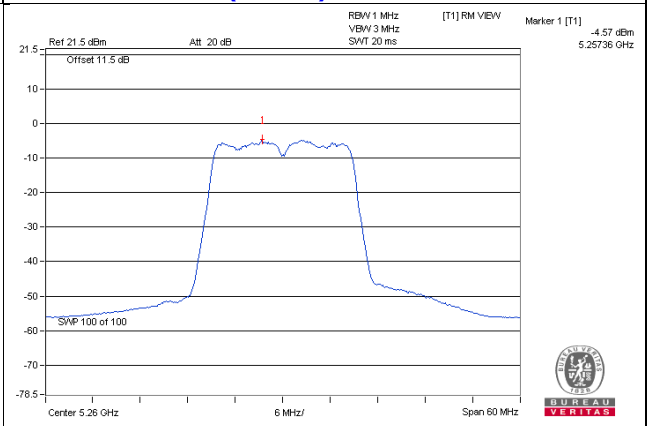
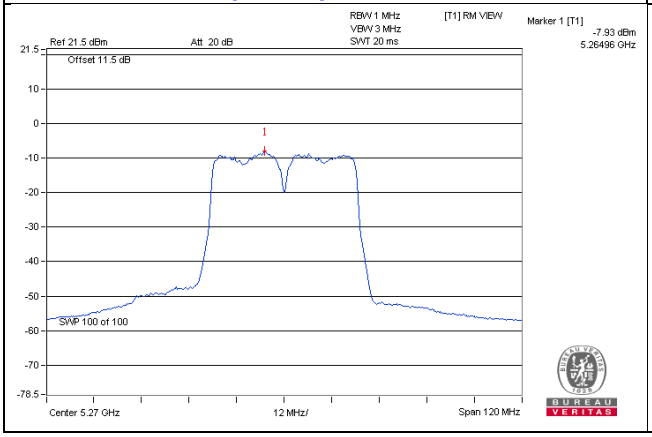
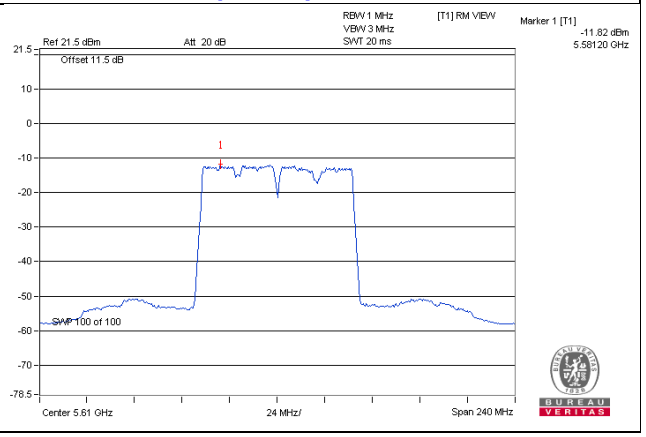
Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A & UNII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-19.90	-18.47	-16.12	11.00	Pass
58	5290	-12.42	-17.84	-11.32	11.00	Pass
106	5530	-12.40	-18.05	-11.35	11.00	Pass
122	5610	-11.82	-23.23	-11.52	11.00	Pass
138 (UNII-2C Band)	5690	-18.28	-20.89	-16.38	11.00	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. For UNII-2A & UNII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.

Spectrum Plot of Worst Value	
802.11a / CH60	**802.11ac (VHT20) - Chain 0 / CH52**
	
802.11ac (VHT40) - Chain 0 / CH54	**802.11ac (VHT80) - Chain 0 / CH122**
	

For U-NII-3:

802.11a

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		(dBm/300kHz)	(dBm/500kHz)				
144 (UNII-3 Band)	5720	-12.51	-10.29	0.26	-10.03	30.00	Pass
149	5745	-10.60	-8.38	0.26	-8.12	30.00	Pass
157	5785	-9.91	-7.69	0.26	-7.43	30.00	Pass
165	5825	-10.33	-8.11	0.26	-7.85	30.00	Pass

Note: 1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144 (UNII-3 Band)	5720	-15.12	-12.90	3.01	0.29	-9.60	30.00	Pass
	149	5745	-14.49	-12.27	3.01	0.29	-8.97	30.00	Pass
	157	5785	-14.59	-12.37	3.01	0.29	-9.07	30.00	Pass
	165	5825	-14.42	-12.20	3.01	0.29	-8.90	30.00	Pass
1	144 (UNII-3 Band)	5720	-16.57	-14.35	3.01	0.29	-11.05	30.00	Pass
	149	5745	-15.16	-12.94	3.01	0.29	-9.64	30.00	Pass
	157	5785	-14.64	-12.42	3.01	0.29	-9.12	30.00	Pass
	165	5825	-14.21	-11.99	3.01	0.29	-8.69	30.00	Pass

Note: 1. UNII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.

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

802.11ac (VHT40)

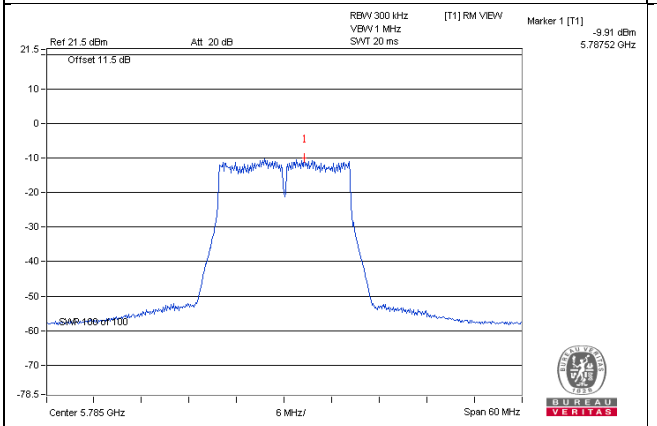
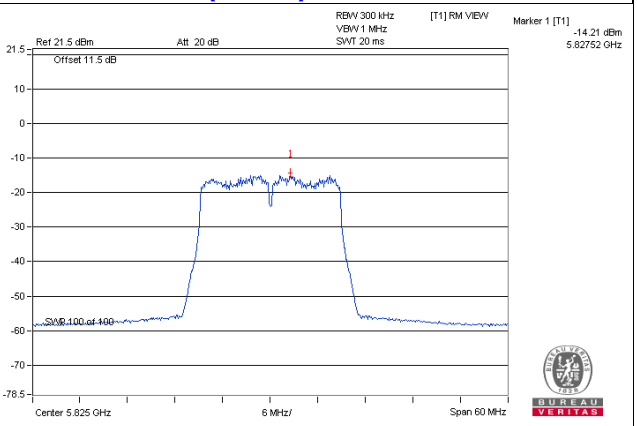
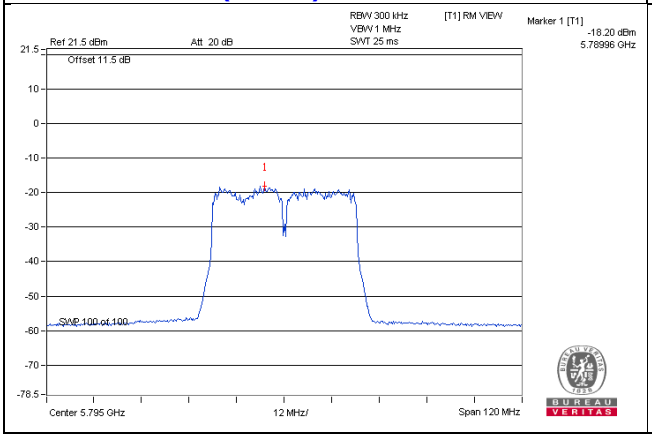
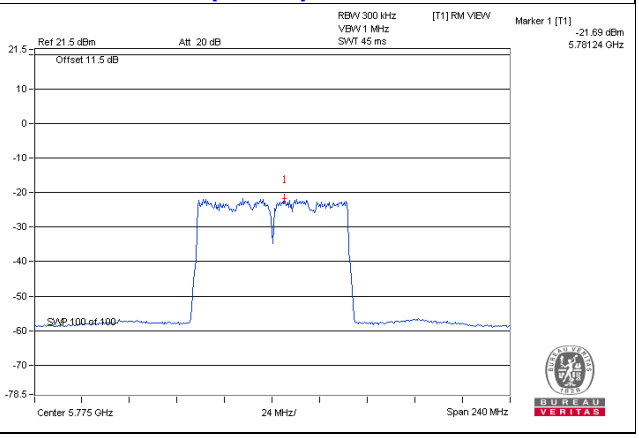
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	142 (UNII-3 Band)	5710	-21.84	-19.62	3.01	-16.61	30.00	Pass
	151	5755	-18.34	-16.12	3.01	-13.11	30.00	Pass
	159	5795	-18.89	-16.67	3.01	-13.66	30.00	Pass
1	142 (UNII-3 Band)	5710	-22.08	-19.86	3.01	-16.85	30.00	Pass
	151	5755	-18.31	-16.09	3.01	-13.08	30.00	Pass
	159	5795	-18.20	-15.98	3.01	-12.97	30.00	Pass

Note: 1. UNII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.

802.11ac (VHT80)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	138 (UNII-3 Band)	5690	-28.23	-26.01	3.01	-23.00	30.00	Pass
	155	5775	-21.69	-19.47	3.01	-16.46	30.00	Pass
1	138 (UNII-3 Band)	5690	-28.63	-26.41	3.01	-23.40	30.00	Pass
	155	5775	-27.88	-25.66	3.01	-22.65	30.00	Pass

Note: 1. UNII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 3.49dBi < 6dBi , so the power density limit shall not be reduced.

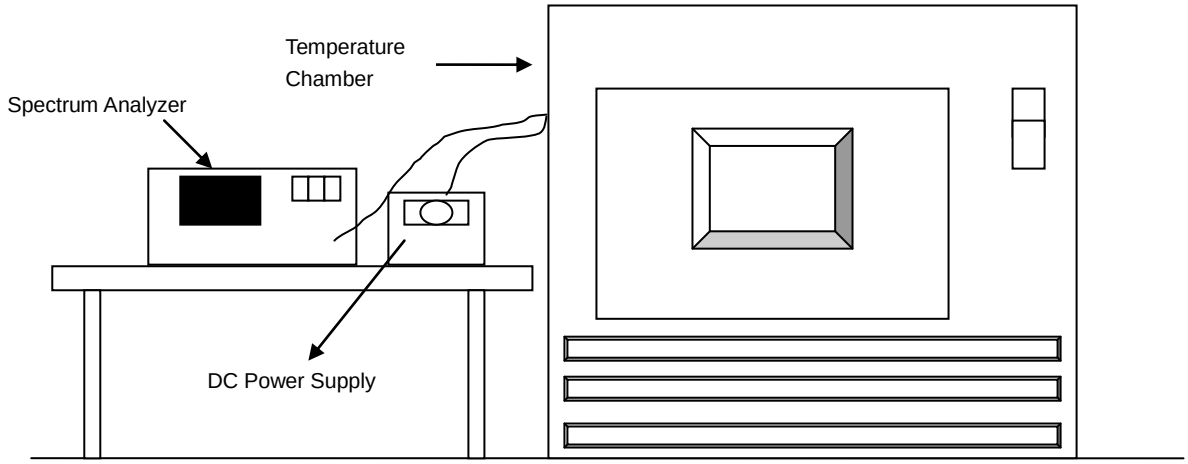
Spectrum Plot of Worst Value	
802.11a / CH157	**802.11ac (VHT20) - Chain 1 / CH165**
	
802.11ac (VHT40) - Chain 1 / CH159	**802.11ac (VHT80) - Chain 0 / CH155**
	

4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	3.7	5180.0117	PASS	5180.0115	PASS	5180.0105	PASS	5180.011	PASS
40	3.7	5180.0078	PASS	5180.0087	PASS	5180.0093	PASS	5180.0073	PASS
30	3.7	5180.0182	PASS	5180.0205	PASS	5180.0195	PASS	5180.0212	PASS
20	3.7	5179.9834	PASS	5179.9825	PASS	5179.9843	PASS	5179.984	PASS
10	3.7	5180.0023	PASS	5180.0031	PASS	5180.002	PASS	5180.0047	PASS
0	3.7	5180.0021	PASS	5180.0038	PASS	5180.0042	PASS	5180.0016	PASS
-10	3.7	5180.0156	PASS	5180.013	PASS	5180.0132	PASS	5180.0153	PASS
-20	3.7	5180.007	PASS	5180.0078	PASS	5180.008	PASS	5180.0072	PASS
-30	3.7	5179.9963	PASS	5179.9962	PASS	5179.9979	PASS	5179.9978	PASS

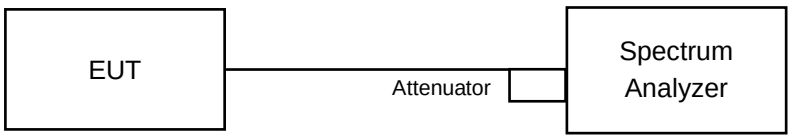
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	4.255	5179.9833	PASS	5179.9835	PASS	5179.9852	PASS	5179.9833	PASS
	3.7	5179.9834	PASS	5179.9825	PASS	5179.9843	PASS	5179.984	PASS
	3.145	5179.9824	PASS	5179.9816	PASS	5179.9836	PASS	5179.9846	PASS

4.7 6dB Bandwidth Measurment

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144 (UNII-3 Band)	5720	3.18	0.5	PASS
149	5745	16.40	0.5	PASS
157	5785	16.39	0.5	PASS
165	5825	16.41	0.5	PASS

802.11ac (VHT20)

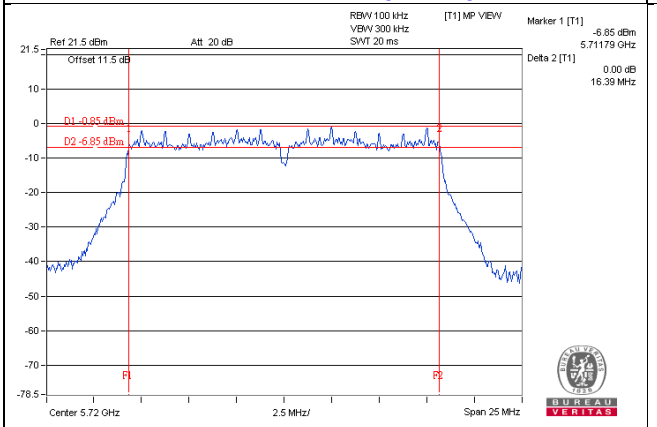
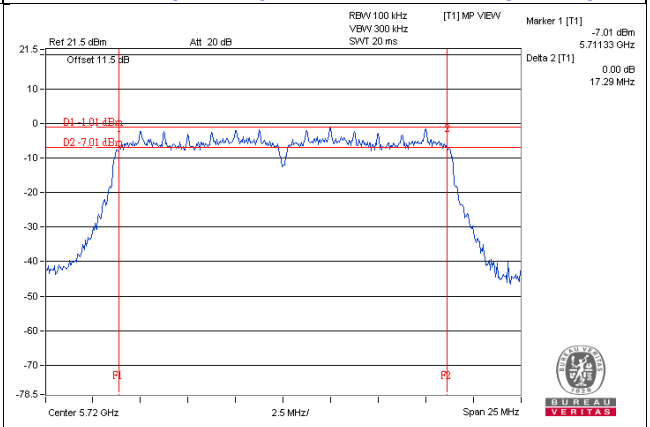
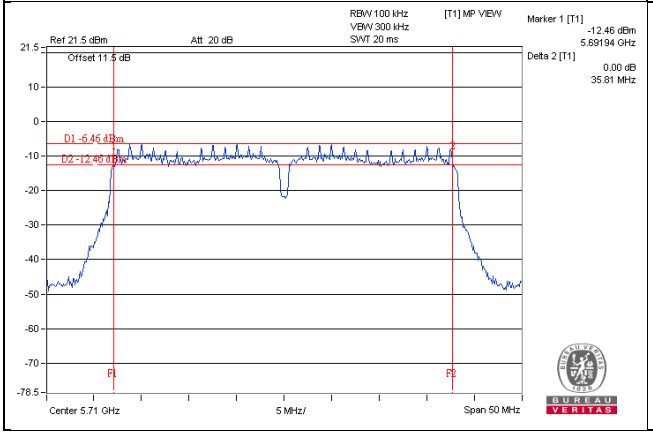
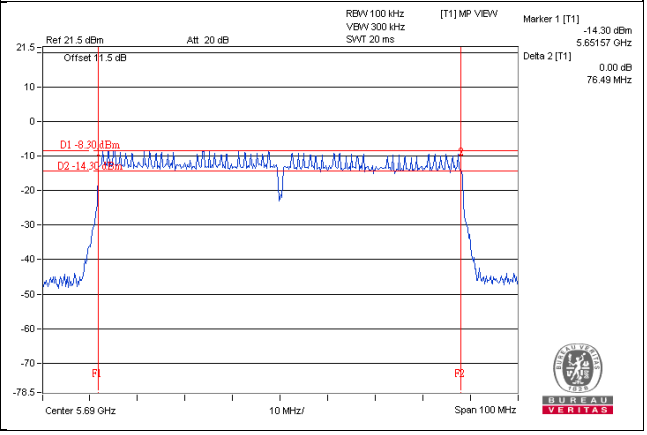
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (UNII-3 Band)	5720	3.76	3.62	0.5	PASS
149	5745	17.34	17.47	0.5	PASS
157	5785	17.32	17.58	0.5	PASS
165	5825	17.44	17.43	0.5	PASS

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142 (UNII-3 Band)	5710	2.75	2.90	0.5	PASS
151	5755	35.77	35.72	0.5	PASS
159	5795	35.87	35.76	0.5	PASS

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138 (UNII-3 Band)	5690	3.25	3.06	0.5	PASS
155	5775	76.65	76.66	0.5	PASS

Spectrum Plot of Worst Value	
802.11a / CH144 (UNII-3)	**802.11ac (VHT20) - Chain 1 / CH144 (UNII-3)**
	
802.11ac (VHT40) - Chain 0 / CH142 (UNII-3)	**802.11ac (VHT80) - Chain 1 / CH138 (UNII-3)**
	

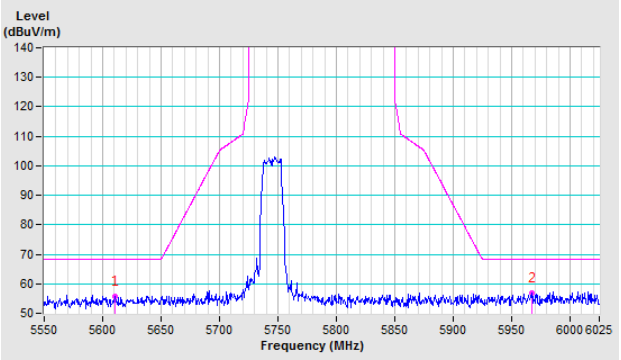
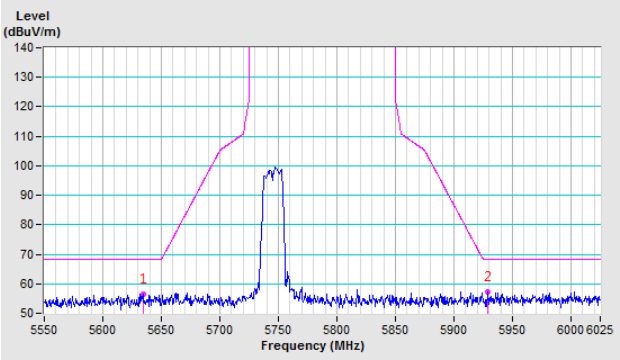
5 Pictures of Test Arrangements

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

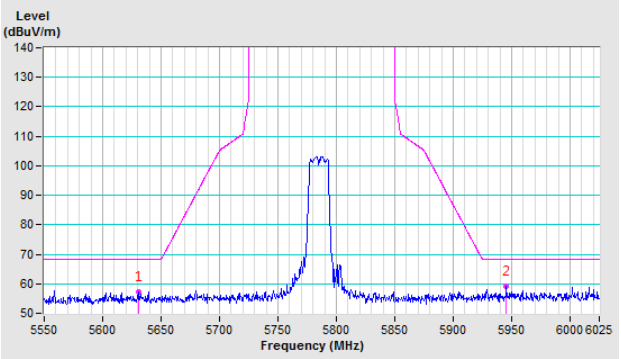
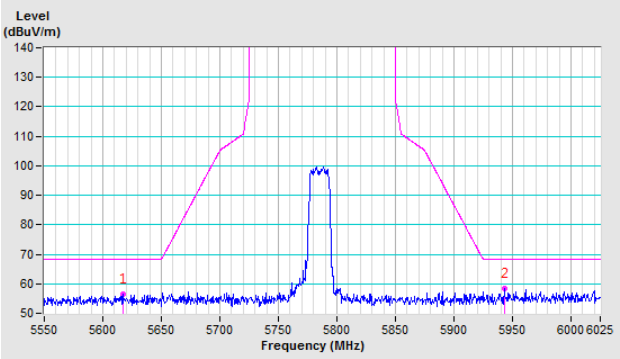
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

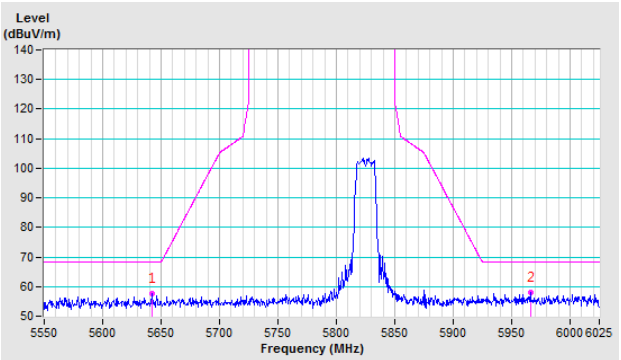
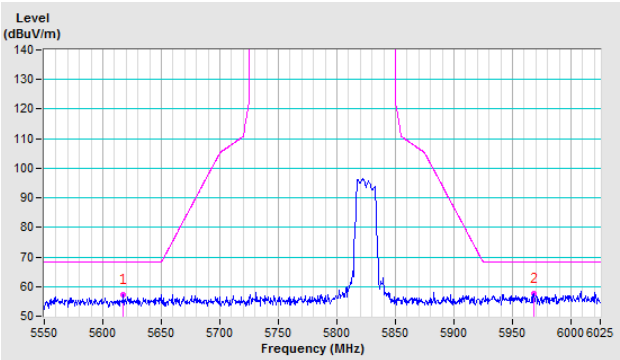
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

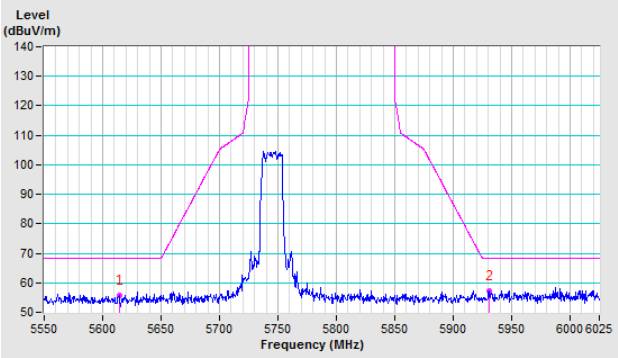
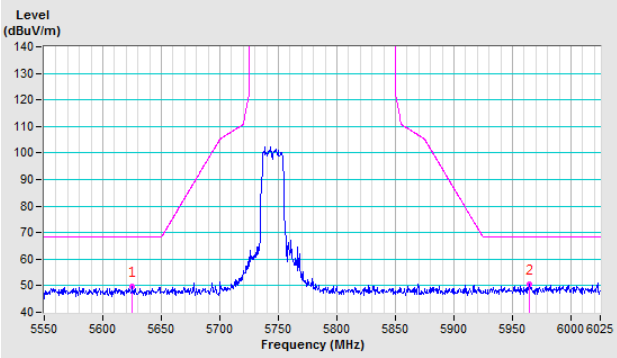
Horizontal	Vertical
	

CH 165 5825 MHz

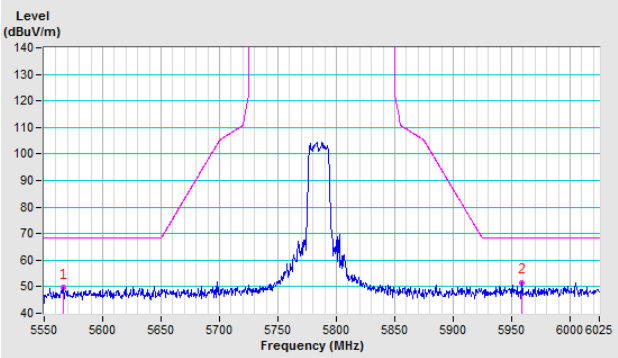
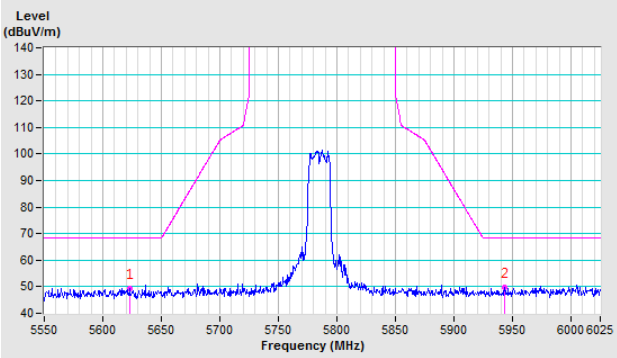
Horizontal	Vertical
	

802.11ac (VHT20)

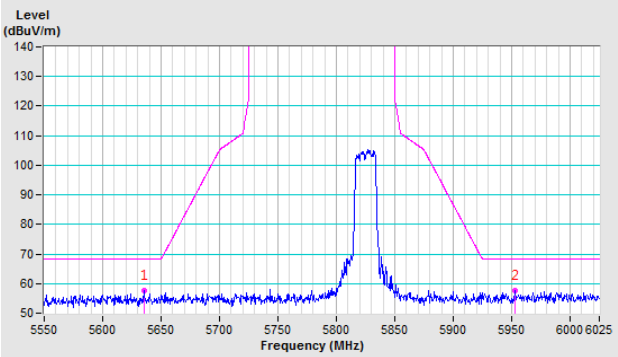
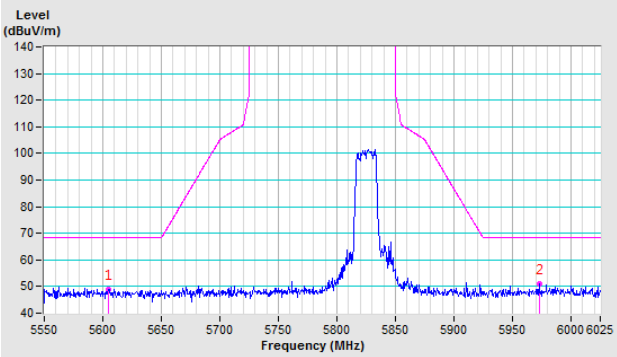
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

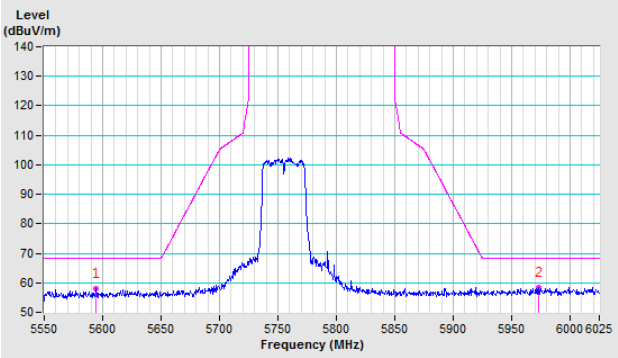
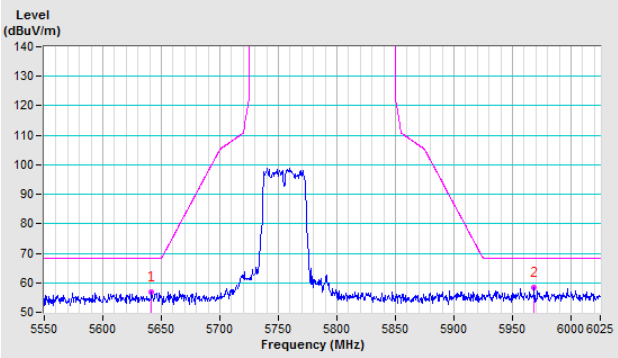
Horizontal	Vertical
	

CH 165 5825 MHz

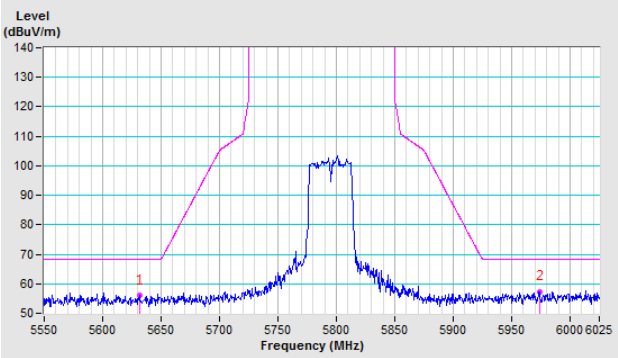
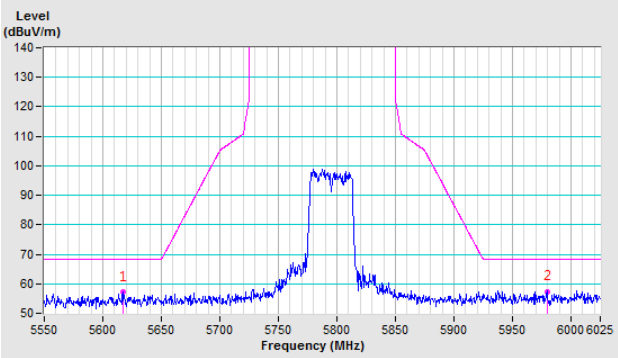
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

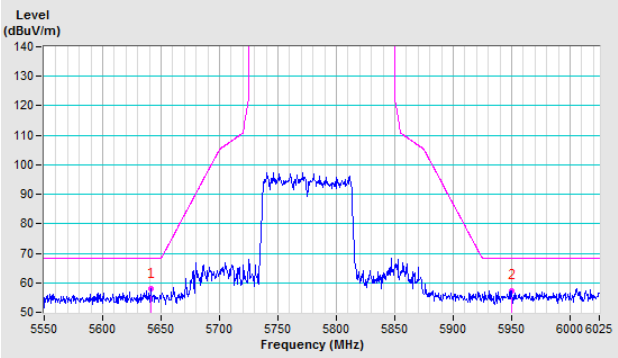
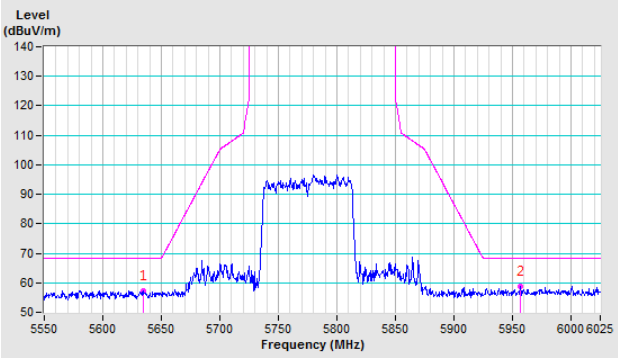
Horizontal	Vertical
	

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.

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

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.

--- END ---