FCC Test Report

Report No.:	RF171122C17-1
FCC ID:	HD5-CT60L1N
Test Model:	CT60L1N
Received Date:	Sep. 08, 2017
Test Date:	Oct. 06 to 18, 2017
Issued Date:	Jan. 10, 2018
Applicant:	Honeywell International Inc.
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location :	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

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Release Control Record

Issue No.	Description	Date Issued
RF171122C17-1	Original release.	Jan. 10, 2018

1 Certificate of Conformity

Product:	Dolphin CT60
Brand:	Honeywell
Test Model:	CT60L1N
Sample Status:	ENGINEERING SAMPLE
Applicant:	Honeywell International Inc.
Test Date:	Oct. 06 to 18, 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 : _____ , **Date:** Jan. 10, 2018

Wendy Wu / Specialist

Approved by : _____ , **Date:** Jan. 10, 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 -12.54dB at 0.56797MHz.
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 -5.9dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is UFL 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 (WLAN)

Product	Dolphin CT60
Brand	Honeywell
Test Model	CT60L1N
Status of EUT	ENGINEERING SAMPLE
HW Version	V1.0
HW P/N	DVT3
SW Version	OS.01.001-HON.01.003
SW P/N	329D
Power Supply Rating	3.6Vdc from battery 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 150Mbps 802.11ac: up to 433.3Mbps
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**: 343.558mW **5GHz:** **5.18 ~ 5.24GHz:** 38.459mW **5.26 ~ 5.32GHz:** 38.371mW **5.50 ~ 5.72GHz:** 38.371mW **5.745 ~ 5.825GHz:** 38.371mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery x 1
Data Cable Supplied	USB snap-on adapter x 1 (1.25m, Shielded with two cores)

Note:

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

Condition	Technology		
1	WLAN 2.4GHz	NFC	WWAN
2	WLAN 5GHz	NFC	WWAN
3	Bluetooth	NFC	WWAN
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.
Inventus	CT50-BTSC	3.6Vdc, 4040mAh, 14.6Wh

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

WLAN / Bluetooth Antenna Spec.				
Antenna Gain include path loss (dBi)	Frequency range (GHz)	Antenna type	Connector type	Trace loss (dB)
0.62	2.4~2.4835	PIFA	POGO pin	1
1.14	5.15~5.25			1.7
1.14	5.25~5.35			
1.14	5.47~5.725			
1.14	5.725~5.85			

NFC Antenna Spec.		
Frequency range (MHz)	Antenna type	Connector type
13~14	Loop	NA

WWAN Antenna Spec.					
Chain No.	Antenna Gain include path loss (dBi)	Frequency range	Antenna type	Connector type	Trace loss (dB)
Chain 0	0	700~960MHz	PIFA	POGO pin	0.2
	3	1.71~1.9GHz			0.4
	2.4	2.1~2.3GHz			0.5
	0.3	2.7GHz			0.6
Chain 1 (RX only)	-2	700~960MHz	PIFA	POGO pin	NA
	0.5	1.71~1.9GHz			
	0.8	2.1~2.3GHz			
	0.8	2.7GHz			

5. The EUT incorporates a SISO function.

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

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

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

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	5530MHz	138	5690MHz
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	√	√	√	√	Power from Laptop
2	-	-	√	-	Power from Adapter

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

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane (below 1GHz) & X-plane (Above 1GHz).**

NOTE: "-"means no effect.

Radiated Emission Test (Above 1GHz):

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

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

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

Radiated Emission Test (Below 1GHz):

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

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5240 5745-5825 5500-5720 5745-5825	36 to 48 52 to 64 100 to 144 149 to 165	36	OFDM	BPSK	6.5

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 52 to 64 100 to 144 149 to 165	36	OFDM	BPSK	6.5

Antenna Port Conducted Measurement:

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

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

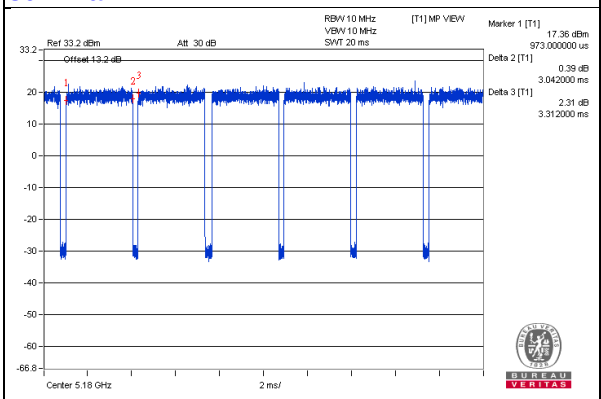
Test Condition:

Applicable To	ENVIRONMENTAL CONDITIONS	INPUT POWER (System)	TESTED BY
RE≥1G	24deg. C, 64%RH	120Vac, 60Hz	Jyunchun Lin
RE<1G	24deg. C, 62%RH	120Vac, 60Hz	Jyunchun Lin
PLC	26deg. C, 73%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

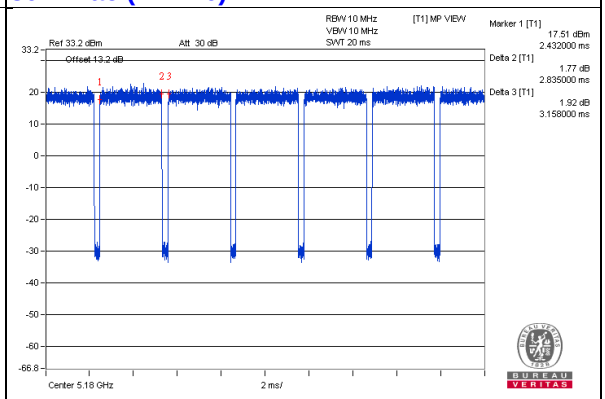
3.3 Duty Cycle of Test Signal

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 = 3.042 ms/3.312 ms = 0.918, Duty factor = 10 * log(1/0.918) = 0.37
802.11ac (VHT20): Duty cycle = 2.835 ms/3.158 ms = 0.898, Duty factor = 10 * log(1/0.898) = 0.47
802.11ac (VHT40): Duty cycle = 2.902 ms/3.174 ms = 0.914, Duty factor = 10 * log(1/0.914) = 0.39
802.11ac (VHT80): Duty cycle = 1.362 ms/1.613 ms = 0.844, Duty factor = 10 * log(1/0.844) = 0.73

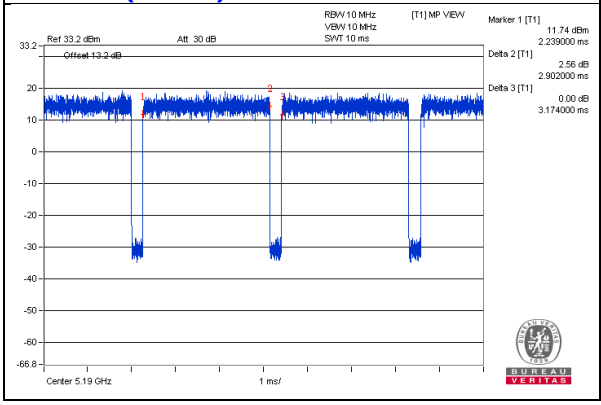
802.11a



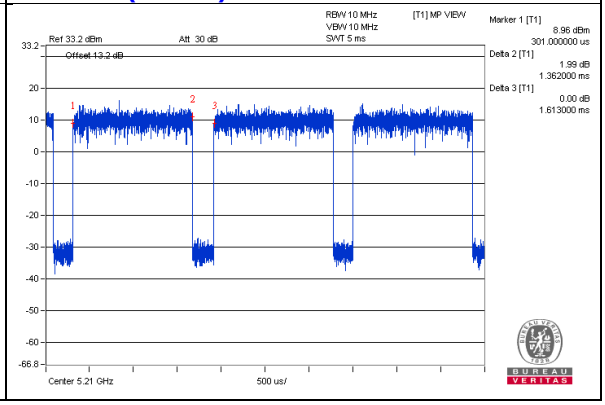
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	HP	Pavilion 14-ab023TU	5CD5340WXZ	FCC DoC	Provided by Lab
		DELL	E6440	F9LYQ32	FCC DoC	Provided by Lab (For Conducted Emission)
B.	Micro SD Card	Transcend	16GB	NA	NA	Provided by Lab
C.	USB Adapter	ASUS	EXA1205UA	NA	NA	Provided by Lab

Note:

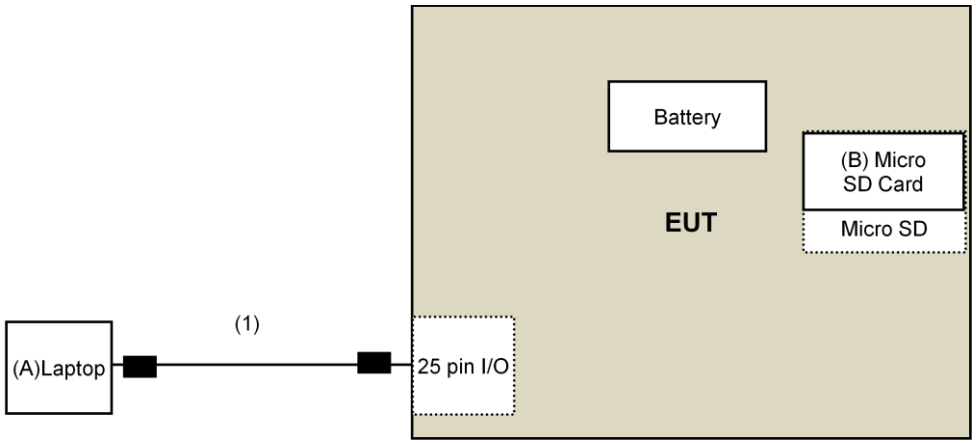
1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Charging Cable	1	1.25	Yes	2	Supplied by client(for RF Setup)

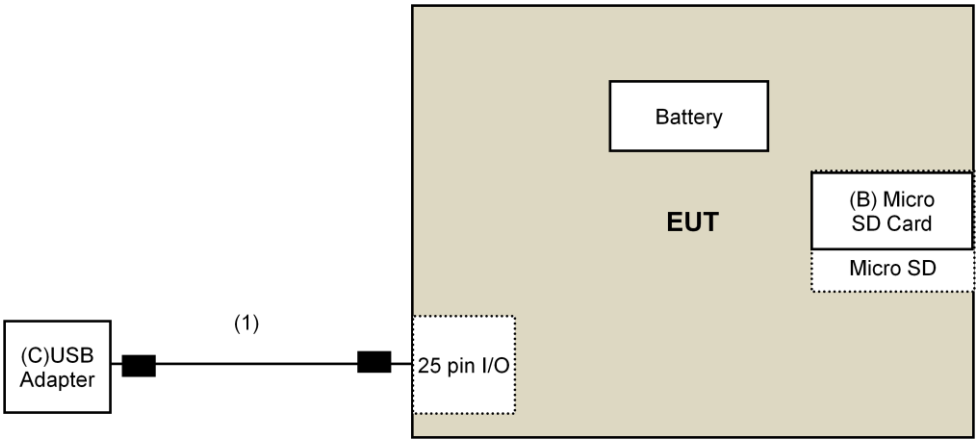
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Mode 1



Mode 2



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
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

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. 10, 2016	Nov. 09, 2017
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
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 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 Loop antenna was used for all emissions below 30 MHz.
5. The CANADA Site Registration No. is 20331-2
6. Tested Date: Oct. 06 to 12, 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:

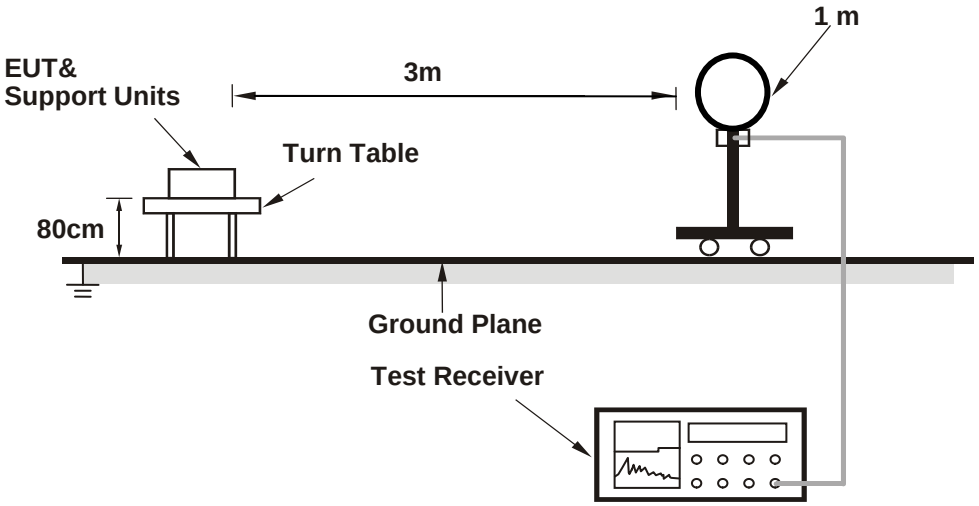
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

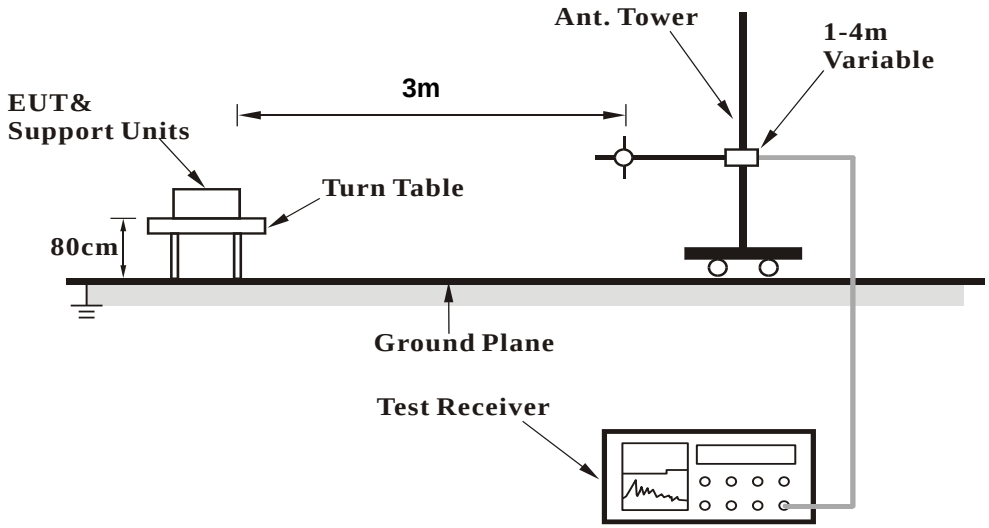
No deviation.

4.1.5 Test Setup

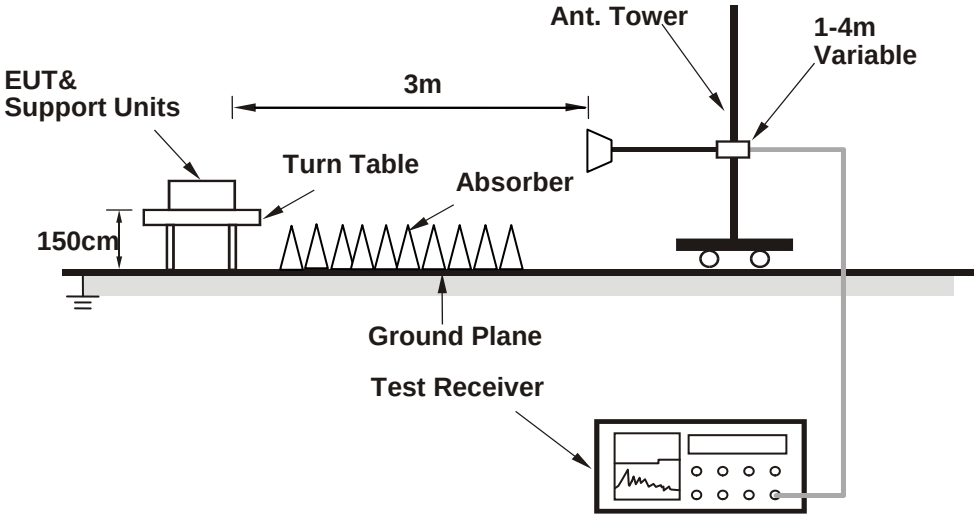
For Radiated emission below 30MHz



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. Connected the EUT with the Laptop.
b. Controlling software (QRCT_Version3.0.268.0) 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	54.7 PK	74.0	-19.3	1.19 H	243	50.7	4.0
2	5150.00	38.8 AV	54.0	-15.2	1.19 H	243	34.8	4.0
3	*5180.00	100.1 PK			1.19 H	243	96.1	4.0
4	*5180.00	90.3 AV			1.19 H	243	86.3	4.0
5	#10360.00	46.7 PK	74.0	-27.3	1.56 H	108	33.1	13.6
6	#10360.00	34.1 AV	54.0	-19.9	1.56 H	108	20.5	13.6
7	15540.00	47.1 PK	74.0	-26.9	1.47 H	180	33.9	13.2
8	15540.00	34.6 AV	54.0	-19.4	1.47 H	180	21.4	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	54.8 PK	74.0	-19.2	1.05 V	303	50.8	4.0
2	5150.00	38.9 AV	54.0	-15.1	1.05 V	303	34.9	4.0
3	*5180.00	100.5 PK			1.05 V	303	96.5	4.0
4	*5180.00	90.6 AV			1.05 V	303	86.6	4.0
5	#10360.00	46.6 PK	74.0	-27.4	1.50 V	122	33.0	13.6
6	#10360.00	34.1 AV	54.0	-19.9	1.50 V	122	20.5	13.6
7	15540.00	47.3 PK	74.0	-26.7	1.47 V	73	34.1	13.2
8	15540.00	34.5 AV	54.0	-19.5	1.47 V	73	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.
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	100.3 PK			1.14 H	238	96.3	4.0
2	*5200.00	90.4 AV			1.14 H	238	86.4	4.0
3	#10400.00	46.6 PK	74.0	-27.4	1.54 H	122	33.0	13.6
4	#10400.00	33.8 AV	54.0	-20.2	1.54 H	122	20.2	13.6
5	15600.00	47.6 PK	74.0	-26.4	1.52 H	198	34.2	13.4
6	15600.00	34.9 AV	54.0	-19.1	1.52 H	198	21.5	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	100.8 PK			1.05 V	299	96.8	4.0
2	*5200.00	90.7 AV			1.05 V	299	86.7	4.0
3	#10400.00	45.9 PK	74.0	-28.1	1.48 V	122	32.3	13.6
4	#10400.00	33.5 AV	54.0	-20.5	1.48 V	122	19.9	13.6
5	15600.00	47.2 PK	74.0	-26.8	1.45 V	75	33.8	13.4
6	15600.00	34.6 AV	54.0	-19.4	1.45 V	75	21.2	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	100.7 PK			1.20 H	257	96.5	4.2
2	*5240.00	91.0 AV			1.20 H	257	86.8	4.2
3	5350.00	50.2 PK	74.0	-23.8	1.20 H	257	45.8	4.4
4	5350.00	37.4 AV	54.0	-16.6	1.20 H	257	33.0	4.4
5	#10480.00	46.4 PK	74.0	-27.6	1.50 H	111	32.7	13.7
6	#10480.00	33.9 AV	54.0	-20.1	1.50 H	111	20.2	13.7
7	15720.00	47.1 PK	74.0	-26.9	1.50 H	185	33.1	14.0
8	15720.00	34.6 AV	54.0	-19.4	1.50 H	185	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	101.2 PK			1.05 V	298	97.0	4.2
2	*5240.00	91.4 AV			1.05 V	298	87.2	4.2
3	5350.00	50.5 PK	74.0	-23.5	1.05 V	298	46.1	4.4
4	5350.00	37.8 AV	54.0	-16.2	1.05 V	298	33.4	4.4
5	#10480.00	46.6 PK	74.0	-27.4	1.50 V	108	32.9	13.7
6	#10480.00	34.0 AV	54.0	-20.0	1.50 V	108	20.3	13.7
7	15720.00	47.3 PK	74.0	-26.7	1.50 V	80	33.3	14.0
8	15720.00	34.6 AV	54.0	-19.4	1.50 V	80	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	49.8 PK	74.0	-24.2	1.16 H	266	45.8	4.0
2	5150.00	37.4 AV	54.0	-16.6	1.16 H	266	33.4	4.0
3	*5260.00	100.6 PK			1.16 H	266	96.4	4.2
4	*5260.00	90.9 AV			1.16 H	266	86.7	4.2
5	#10520.00	46.7 PK	74.0	-27.3	1.46 H	107	32.9	13.8
6	#10520.00	34.3 AV	54.0	-19.7	1.46 H	107	20.5	13.8
7	15780.00	47.3 PK	74.0	-26.7	1.56 H	173	33.2	14.1
8	15780.00	34.6 AV	54.0	-19.4	1.56 H	173	20.5	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	50.0 PK	74.0	-24.0	1.05 V	300	46.0	4.0
2	5150.00	37.6 AV	54.0	-16.4	1.05 V	300	33.6	4.0
3	*5260.00	101.2 PK			1.05 V	300	97.0	4.2
4	*5260.00	91.4 AV			1.05 V	300	87.2	4.2
5	#10520.00	47.0 PK	74.0	-27.0	1.49 V	122	33.2	13.8
6	#10520.00	34.4 AV	54.0	-19.6	1.49 V	122	20.6	13.8
7	15780.00	47.1 PK	74.0	-26.9	1.48 V	73	33.0	14.1
8	15780.00	34.4 AV	54.0	-19.6	1.48 V	73	20.3	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	99.6 PK			1.19 H	281	95.3	4.3
2	*5300.00	90.0 AV			1.19 H	281	85.7	4.3
3	10600.00	46.9 PK	74.0	-27.1	1.49 H	104	33.1	13.8
4	10600.00	34.3 AV	54.0	-19.7	1.49 H	104	20.5	13.8
5	15900.00	46.8 PK	74.0	-27.2	1.45 H	171	33.6	13.2
6	15900.00	34.2 AV	54.0	-19.8	1.45 H	171	21.0	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	100.2 PK			1.05 V	300	95.9	4.3
2	*5300.00	90.4 AV			1.05 V	300	86.1	4.3
3	10600.00	46.0 PK	74.0	-28.0	1.48 V	113	32.2	13.8
4	10600.00	33.6 AV	54.0	-20.4	1.48 V	113	19.8	13.8
5	15900.00	47.5 PK	74.0	-26.5	1.48 V	79	34.3	13.2
6	15900.00	34.8 AV	54.0	-19.2	1.48 V	79	21.6	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	99.0 PK			1.18 H	296	94.7	4.3
2	*5320.00	89.2 AV			1.18 H	296	84.9	4.3
3	5350.00	54.2 PK	74.0	-19.8	1.18 H	296	49.8	4.4
4	5350.00	39.3 AV	54.0	-14.7	1.18 H	296	34.9	4.4
5	10640.00	46.6 PK	74.0	-27.4	1.45 H	127	32.6	14.0
6	10640.00	34.3 AV	54.0	-19.7	1.45 H	127	20.3	14.0
7	15960.00	47.3 PK	74.0	-26.7	1.51 H	200	33.8	13.5
8	15960.00	34.7 AV	54.0	-19.3	1.51 H	200	21.2	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	99.9 PK			1.05 V	300	95.6	4.3
2	*5320.00	89.7 AV			1.05 V	300	85.4	4.3
3	5350.00	54.5 PK	74.0	-19.5	1.05 V	300	50.1	4.4
4	5350.00	39.6 AV	54.0	-14.4	1.05 V	300	35.2	4.4
5	10640.00	46.5 PK	74.0	-27.5	1.50 V	106	32.5	14.0
6	10640.00	34.1 AV	54.0	-19.9	1.50 V	106	20.1	14.0
7	15960.00	47.5 PK	74.0	-26.5	1.51 V	80	34.0	13.5
8	15960.00	34.9 AV	54.0	-19.1	1.51 V	80	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	51.9 PK	74.0	-22.1	1.20 H	295	47.4	4.5
2	#5470.00	38.1 AV	54.0	-15.9	1.20 H	295	33.6	4.5
3	*5500.00	96.5 PK			1.20 H	295	92.0	4.5
4	*5500.00	86.7 AV			1.20 H	295	82.2	4.5
5	11000.00	46.3 PK	74.0	-27.7	1.49 H	126	31.5	14.8
6	11000.00	33.7 AV	54.0	-20.3	1.49 H	126	18.9	14.8
7	#16500.00	47.0 PK	74.0	-27.0	1.49 H	185	31.4	15.6
8	#16500.00	34.7 AV	54.0	-19.3	1.49 H	185	19.1	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	52.1 PK	74.0	-21.9	1.05 V	24	47.6	4.5
2	#5470.00	38.3 AV	54.0	-15.7	1.05 V	24	33.8	4.5
3	*5500.00	97.4 PK			1.05 V	24	92.9	4.5
4	*5500.00	87.3 AV			1.05 V	24	82.8	4.5
5	11000.00	46.7 PK	74.0	-27.3	1.55 V	93	31.9	14.8
6	11000.00	34.1 AV	54.0	-19.9	1.55 V	93	19.3	14.8
7	#16500.00	46.9 PK	74.0	-27.1	1.48 V	86	31.3	15.6
8	#16500.00	34.5 AV	54.0	-19.5	1.48 V	86	18.9	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	96.2 PK			1.25 H	298	91.6	4.6
2	*5580.00	86.5 AV			1.25 H	298	81.9	4.6
3	11160.00	46.1 PK	74.0	-27.9	1.44 H	126	31.7	14.4
4	11160.00	33.9 AV	54.0	-20.1	1.44 H	126	19.5	14.4
5	#16740.00	47.3 PK	74.0	-26.7	1.45 H	196	30.8	16.5
6	#16740.00	34.6 AV	54.0	-19.4	1.45 H	196	18.1	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	97.3 PK			1.00 V	24	92.7	4.6
2	*5580.00	87.2 AV			1.00 V	24	82.6	4.6
3	11160.00	46.1 PK	74.0	-27.9	1.53 V	117	31.7	14.4
4	11160.00	33.8 AV	54.0	-20.2	1.53 V	117	19.4	14.4
5	#16740.00	47.4 PK	74.0	-26.6	1.56 V	73	30.9	16.5
6	#16740.00	35.0 AV	54.0	-19.0	1.56 V	73	18.5	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	97.3 PK			1.23 H	309	92.5	4.8
2	*5700.00	87.5 AV			1.23 H	309	82.7	4.8
3	#5725.00	55.2 PK	74.0	-18.8	1.23 H	309	50.3	4.9
4	#5725.00	40.1 AV	54.0	-13.9	1.23 H	309	35.2	4.9
5	11400.00	47.5 PK	74.0	-26.5	1.46 H	149	33.1	14.4
6	11400.00	34.4 AV	54.0	-19.6	1.46 H	149	20.0	14.4
7	#17100.00	54.0 PK	74.0	-20.0	1.45 H	198	35.5	18.5
8	#17100.00	41.0 AV	54.0	-13.0	1.45 H	198	22.5	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	98.3 PK			1.00 V	249	93.5	4.8
2	*5700.00	88.2 AV			1.00 V	249	83.4	4.8
3	#5725.00	55.8 PK	74.0	-18.2	1.00 V	249	50.9	4.9
4	#5725.00	40.6 AV	54.0	-13.4	1.00 V	249	35.7	4.9
5	11400.00	46.6 PK	74.0	-27.4	1.50 V	86	32.2	14.4
6	11400.00	33.8 AV	54.0	-20.2	1.50 V	86	19.4	14.4
7	#17100.00	53.6 PK	74.0	-20.4	1.53 V	33	35.1	18.5
8	#17100.00	41.1 AV	54.0	-12.9	1.53 V	33	22.6	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	51.2 PK	74.0	-22.8	1.20 H	294	46.7	4.5
2	#5470.00	37.8 AV	54.0	-16.2	1.20 H	294	33.3	4.5
3	*5720.00	97.2 PK			1.20 H	294	92.3	4.9
4	*5720.00	87.4 AV			1.20 H	294	82.5	4.9
5	#5850.00	51.6 PK	74.0	-22.4	1.20 H	294	46.5	5.1
6	#5850.00	38.8 AV	54.0	-15.2	1.20 H	294	33.7	5.1
7	11440.00	47.1 PK	74.0	-26.9	1.47 H	170	32.9	14.2
8	11440.00	34.4 AV	54.0	-19.6	1.47 H	170	20.2	14.2
9	#17160.00	53.6 PK	74.0	-20.4	1.45 H	218	35.3	18.3
10	#17160.00	40.7 AV	54.0	-13.3	1.45 H	218	22.4	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	51.1 PK	74.0	-22.9	1.00 V	211	46.6	4.5
2	#5470.00	38.0 AV	54.0	-16.0	1.00 V	211	33.5	4.5
3	*5720.00	98.1 PK			1.00 V	211	93.2	4.9
4	*5720.00	88.2 AV			1.00 V	211	83.3	4.9
5	#5850.00	51.8 PK	74.0	-22.2	1.00 V	211	46.7	5.1
6	#5850.00	38.9 AV	54.0	-15.1	1.00 V	211	33.8	5.1
7	11440.00	46.8 PK	74.0	-27.2	1.44 V	73	32.6	14.2
8	11440.00	34.2 AV	54.0	-19.8	1.44 V	73	20.0	14.2
9	#17160.00	53.6 PK	74.0	-20.4	1.50 V	38	35.3	18.3
10	#17160.00	40.8 AV	54.0	-13.2	1.50 V	38	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	#5612.52	50.6 PK	68.2	-17.6	1.00 H	220	45.9	4.7
2	*5745.00	96.6 PK			1.00 H	220	91.6	5.0
3	*5745.00	87.2 AV			1.00 H	220	82.2	5.0
4	#5991.81	50.1 PK	68.2	-18.1	1.00 H	220	44.5	5.6
5	11490.00	47.7 PK	74.0	-26.3	1.52 H	159	33.6	14.1
6	11490.00	34.9 AV	54.0	-19.1	1.52 H	159	20.8	14.1
7	#17235.00	54.6 PK	74.0	-19.4	1.45 H	197	36.3	18.3
8	#17235.00	41.4 AV	54.0	-12.6	1.45 H	197	23.1	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	#5608.92	50.2 PK	68.2	-18.0	1.03 V	249	45.5	4.7
2	*5745.00	97.7 PK			1.03 V	249	92.7	5.0
3	*5745.00	87.6 AV			1.03 V	249	82.6	5.0
4	#5936.19	51.5 PK	68.2	-16.7	1.03 V	249	46.1	5.4
5	11490.00	47.5 PK	74.0	-26.5	1.50 V	56	33.4	14.1
6	11490.00	34.5 AV	54.0	-19.5	1.50 V	56	20.4	14.1
7	#17235.00	53.9 PK	74.0	-20.1	1.55 V	61	35.6	18.3
8	#17235.00	41.0 AV	54.0	-13.0	1.55 V	61	22.7	18.3

REMARKS:

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

CHANNEL	TX Channel 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	#5581.22	50.5 PK	68.2	-17.7	1.00 H	223	45.9	4.6
2	*5785.00	97.2 PK			1.00 H	223	92.2	5.0
3	*5785.00	87.6 AV			1.00 H	223	82.6	5.0
4	#6006.83	52.0 PK	68.2	-16.2	1.00 H	223	46.3	5.7
5	11570.00	47.5 PK	74.0	-26.5	1.50 H	163	33.5	14.0
6	11570.00	34.7 AV	54.0	-19.3	1.50 H	163	20.7	14.0
7	#17355.00	54.1 PK	74.0	-19.9	1.50 H	210	35.2	18.9
8	#17355.00	41.0 AV	54.0	-13.0	1.50 H	210	22.1	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	#5600.74	51.0 PK	68.2	-17.2	1.03 V	249	46.4	4.6
2	*5785.00	98.0 PK			1.03 V	249	93.0	5.0
3	*5785.00	87.9 AV			1.03 V	249	82.9	5.0
4	#5957.42	51.7 PK	68.2	-16.5	1.03 V	249	46.2	5.5
5	11570.00	47.2 PK	74.0	-26.8	1.50 V	68	33.2	14.0
6	11570.00	34.5 AV	54.0	-19.5	1.50 V	68	20.5	14.0
7	#17355.00	54.0 PK	74.0	-20.0	1.50 V	50	35.1	18.9
8	#17355.00	41.0 AV	54.0	-13.0	1.50 V	50	22.1	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	#5619.58	50.0 PK	68.2	-18.2	1.00 H	209	45.3	4.7
2	*5825.00	97.6 PK			1.00 H	209	92.4	5.2
3	*5825.00	97.6 AV			1.00 H	209	92.4	5.2
4	#5953.17	50.6 PK	68.2	-17.6	1.00 H	209	45.2	5.4
5	11650.00	47.8 PK	74.0	-26.2	1.55 H	167	33.7	14.1
6	11650.00	35.1 AV	54.0	-18.9	1.55 H	167	21.0	14.1
7	#17475.00	54.4 PK	74.0	-19.6	1.47 H	197	34.7	19.7
8	#17475.00	41.1 AV	54.0	-12.9	1.47 H	197	21.4	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	#5611.11	50.8 PK	68.2	-17.4	1.03 V	249	46.1	4.7
2	*5825.00	98.1 PK			1.03 V	249	92.9	5.2
3	*5825.00	88.0 AV			1.03 V	249	82.8	5.2
4	#6022.23	51.4 PK	68.2	-16.8	1.03 V	249	45.8	5.6
5	11650.00	47.1 PK	74.0	-26.9	1.50 V	66	33.0	14.1
6	11650.00	34.6 AV	54.0	-19.4	1.50 V	66	20.5	14.1
7	#17475.00	53.9 PK	74.0	-20.1	1.55 V	35	34.2	19.7
8	#17475.00	41.1 AV	54.0	-12.9	1.55 V	35	21.4	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	54.6 PK	74.0	-19.4	1.24 H	279	50.6	4.0
2	5150.00	38.7 AV	54.0	-15.3	1.24 H	279	34.7	4.0
3	*5180.00	99.8 PK			1.24 H	279	95.8	4.0
4	*5180.00	88.7 AV			1.24 H	279	84.7	4.0
5	#10360.00	46.3 PK	74.0	-27.7	1.47 H	127	32.7	13.6
6	#10360.00	33.7 AV	54.0	-20.3	1.47 H	127	20.1	13.6
7	15540.00	46.6 PK	74.0	-27.4	1.48 H	183	33.4	13.2
8	15540.00	34.2 AV	54.0	-19.8	1.48 H	183	21.0	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	54.8 PK	74.0	-19.2	1.00 V	307	50.8	4.0
2	5150.00	38.9 AV	54.0	-15.1	1.00 V	307	34.9	4.0
3	*5180.00	100.3 PK			1.00 V	307	96.3	4.0
4	*5180.00	89.1 AV			1.00 V	307	85.1	4.0
5	#10360.00	46.2 PK	74.0	-27.8	1.46 V	116	32.6	13.6
6	#10360.00	33.9 AV	54.0	-20.1	1.46 V	116	20.3	13.6
7	15540.00	47.6 PK	74.0	-26.4	1.45 V	77	34.4	13.2
8	15540.00	34.8 AV	54.0	-19.2	1.45 V	77	21.6	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	99.6 PK			1.27 H	284	95.6	4.0
2	*5200.00	88.5 AV			1.27 H	284	84.5	4.0
3	#10400.00	46.7 PK	74.0	-27.3	1.52 H	119	33.1	13.6
4	#10400.00	34.2 AV	54.0	-19.8	1.52 H	119	20.6	13.6
5	15600.00	47.4 PK	74.0	-26.6	1.49 H	198	34.0	13.4
6	15600.00	35.0 AV	54.0	-19.0	1.49 H	198	21.6	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	100.2 PK			1.03 V	302	96.2	4.0
2	*5200.00	89.0 AV			1.03 V	302	85.0	4.0
3	#10400.00	47.3 PK	74.0	-26.7	1.53 V	109	33.7	13.6
4	#10400.00	34.5 AV	54.0	-19.5	1.53 V	109	20.9	13.6
5	15600.00	47.3 PK	74.0	-26.7	1.48 V	68	33.9	13.4
6	15600.00	34.9 AV	54.0	-19.1	1.48 V	68	21.5	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	99.8 PK			1.28 H	279	95.6	4.2
2	*5240.00	88.7 AV			1.28 H	279	84.5	4.2
3	5350.00	50.5 PK	74.0	-23.5	1.28 H	279	46.1	4.4
4	5350.00	37.8 AV	54.0	-16.2	1.28 H	279	33.4	4.4
5	#10480.00	46.1 PK	74.0	-27.9	1.47 H	102	32.4	13.7
6	#10480.00	33.7 AV	54.0	-20.3	1.47 H	102	20.0	13.7
7	15720.00	47.0 PK	74.0	-27.0	1.55 H	182	33.0	14.0
8	15720.00	34.5 AV	54.0	-19.5	1.55 H	182	20.5	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	100.3 PK			1.06 V	304	96.1	4.2
2	*5240.00	89.1 AV			1.06 V	304	84.9	4.2
3	5350.00	50.7 PK	74.0	-23.3	1.06 V	304	46.3	4.4
4	5350.00	38.0 AV	54.0	-16.0	1.06 V	304	33.6	4.4
5	#10480.00	46.7 PK	74.0	-27.3	1.46 V	94	33.0	13.7
6	#10480.00	33.9 AV	54.0	-20.1	1.46 V	94	20.2	13.7
7	15720.00	47.9 PK	74.0	-26.1	1.56 V	93	33.9	14.0
8	15720.00	35.0 AV	54.0	-19.0	1.56 V	93	21.0	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	50.1 PK	74.0	-23.9	1.33 H	286	46.1	4.0
2	5150.00	37.8 AV	54.0	-16.2	1.33 H	286	33.8	4.0
3	*5260.00	100.4 PK			1.33 H	286	96.2	4.2
4	*5260.00	89.2 AV			1.33 H	286	85.0	4.2
5	#10520.00	45.9 PK	74.0	-28.1	1.47 H	108	32.1	13.8
6	#10520.00	33.7 AV	54.0	-20.3	1.47 H	108	19.9	13.8
7	15780.00	46.8 PK	74.0	-27.2	1.50 H	198	32.7	14.1
8	15780.00	34.4 AV	54.0	-19.6	1.50 H	198	20.3	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	50.3 PK	74.0	-23.7	1.00 V	303	46.3	4.0
2	5150.00	38.0 AV	54.0	-16.0	1.00 V	303	34.0	4.0
3	*5260.00	100.9 PK			1.00 V	303	96.7	4.2
4	*5260.00	89.6 AV			1.00 V	303	85.4	4.2
5	#10520.00	46.0 PK	74.0	-28.0	1.46 V	118	32.2	13.8
6	#10520.00	33.6 AV	54.0	-20.4	1.46 V	118	19.8	13.8
7	15780.00	47.4 PK	74.0	-26.6	1.46 V	88	33.3	14.1
8	15780.00	34.8 AV	54.0	-19.2	1.46 V	88	20.7	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	100.2 PK			1.29 H	276	95.9	4.3
2	*5300.00	89.0 AV			1.29 H	276	84.7	4.3
3	10600.00	46.5 PK	74.0	-27.5	1.49 H	116	32.7	13.8
4	10600.00	33.9 AV	54.0	-20.1	1.49 H	116	20.1	13.8
5	15900.00	47.2 PK	74.0	-26.8	1.50 H	172	34.0	13.2
6	15900.00	34.9 AV	54.0	-19.1	1.50 H	172	21.7	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	100.7 PK			1.00 V	303	96.4	4.3
2	*5300.00	89.4 AV			1.00 V	303	85.1	4.3
3	10600.00	46.4 PK	74.0	-27.6	1.49 V	104	32.6	13.8
4	10600.00	34.0 AV	54.0	-20.0	1.49 V	104	20.2	13.8
5	15900.00	47.0 PK	74.0	-27.0	1.56 V	77	33.8	13.2
6	15900.00	34.3 AV	54.0	-19.7	1.56 V	77	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.

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	100.8 PK			1.34 H	275	96.5	4.3
2	*5320.00	89.6 AV			1.34 H	275	85.3	4.3
3	5350.00	55.5 PK	74.0	-18.5	1.34 H	275	51.1	4.4
4	5350.00	39.7 AV	54.0	-14.3	1.34 H	275	35.3	4.4
5	10640.00	46.1 PK	74.0	-27.9	1.44 H	121	32.1	14.0
6	10640.00	33.8 AV	54.0	-20.2	1.44 H	121	19.8	14.0
7	15960.00	47.4 PK	74.0	-26.6	1.50 H	191	33.9	13.5
8	15960.00	34.9 AV	54.0	-19.1	1.50 H	191	21.4	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	101.3 PK			1.05 V	298	97.0	4.3
2	*5320.00	90.0 AV			1.05 V	298	85.7	4.3
3	5350.00	55.8 PK	74.0	-18.2	1.05 V	298	51.4	4.4
4	5350.00	40.0 AV	54.0	-14.0	1.05 V	298	35.6	4.4
5	10640.00	46.6 PK	74.0	-27.4	1.55 V	109	32.6	14.0
6	10640.00	34.2 AV	54.0	-19.8	1.55 V	109	20.2	14.0
7	15960.00	48.0 PK	74.0	-26.0	1.56 V	73	34.5	13.5
8	15960.00	35.1 AV	54.0	-18.9	1.56 V	73	21.6	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	51.9 PK	74.0	-22.1	1.30 H	274	47.4	4.5
2	#5470.00	38.5 AV	54.0	-15.5	1.30 H	274	34.0	4.5
3	*5500.00	97.1 PK			1.30 H	274	92.6	4.5
4	*5500.00	86.0 AV			1.30 H	274	81.5	4.5
5	11000.00	45.8 PK	74.0	-28.2	1.49 H	124	31.0	14.8
6	11000.00	33.2 AV	54.0	-20.8	1.49 H	124	18.4	14.8
7	#16500.00	47.0 PK	74.0	-27.0	1.49 H	192	31.4	15.6
8	#16500.00	34.8 AV	54.0	-19.2	1.49 H	192	19.2	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	52.3 PK	74.0	-21.7	1.03 V	17	47.8	4.5
2	#5470.00	38.8 AV	54.0	-15.2	1.03 V	17	34.3	4.5
3	*5500.00	97.5 PK			1.03 V	17	93.0	4.5
4	*5500.00	86.4 AV			1.03 V	17	81.9	4.5
5	11000.00	46.6 PK	74.0	-27.4	1.56 V	91	31.8	14.8
6	11000.00	34.0 AV	54.0	-20.0	1.56 V	91	19.2	14.8
7	#16500.00	46.7 PK	74.0	-27.3	1.43 V	83	31.1	15.6
8	#16500.00	34.5 AV	54.0	-19.5	1.43 V	83	18.9	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	96.7 PK			1.26 H	266	92.1	4.6
2	*5580.00	85.6 AV			1.26 H	266	81.0	4.6
3	11160.00	46.3 PK	74.0	-27.7	1.51 H	135	31.9	14.4
4	11160.00	33.4 AV	54.0	-20.6	1.51 H	135	19.0	14.4
5	#16740.00	47.0 PK	74.0	-27.0	1.53 H	176	30.5	16.5
6	#16740.00	35.0 AV	54.0	-19.0	1.53 H	176	18.5	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	97.1 PK			1.03 V	25	92.5	4.6
2	*5580.00	86.0 AV			1.03 V	25	81.4	4.6
3	11160.00	46.6 PK	74.0	-27.4	1.56 V	102	32.2	14.4
4	11160.00	33.8 AV	54.0	-20.2	1.56 V	102	19.4	14.4
5	#16740.00	47.1 PK	74.0	-26.9	1.48 V	96	30.6	16.5
6	#16740.00	34.6 AV	54.0	-19.4	1.48 V	96	18.1	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	96.7 PK			1.25 H	267	91.9	4.8
2	*5700.00	85.5 AV			1.25 H	267	80.7	4.8
3	#5725.00	55.0 PK	74.0	-19.0	1.25 H	267	50.1	4.9
4	#5725.00	39.6 AV	54.0	-14.4	1.25 H	267	34.7	4.9
5	11400.00	46.9 PK	74.0	-27.1	1.50 H	111	32.5	14.4
6	11400.00	34.1 AV	54.0	-19.9	1.50 H	111	19.7	14.4
7	#17100.00	47.1 PK	74.0	-26.9	1.49 H	175	28.6	18.5
8	#17100.00	34.8 AV	54.0	-19.2	1.49 H	175	16.3	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	97.1 PK			1.03 V	27	92.3	4.8
2	*5700.00	86.0 AV			1.03 V	27	81.2	4.8
3	#5725.00	55.2 PK	74.0	-18.8	1.03 V	27	50.3	4.9
4	#5725.00	39.8 AV	54.0	-14.2	1.03 V	27	34.9	4.9
5	11400.00	46.9 PK	74.0	-27.1	1.44 V	90	32.5	14.4
6	11400.00	34.2 AV	54.0	-19.8	1.44 V	90	19.8	14.4
7	#17100.00	53.5 PK	74.0	-20.5	1.59 V	21	35.0	18.5
8	#17100.00	41.3 AV	54.0	-12.7	1.59 V	21	22.8	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 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	51.1 PK	74.0	-22.9	1.25 H	272	46.6	4.5
2	#5470.00	38.0 AV	54.0	-16.0	1.25 H	272	33.5	4.5
3	*5720.00	97.5 PK			1.25 H	272	92.6	4.9
4	*5720.00	86.3 AV			1.25 H	272	81.4	4.9
5	#5850.00	51.6 PK	74.0	-22.4	1.25 H	272	46.5	5.1
6	#5850.00	38.7 AV	54.0	-15.3	1.25 H	272	33.6	5.1
7	11440.00	47.8 PK	74.0	-26.2	1.58 H	170	33.6	14.2
8	11440.00	35.3 AV	54.0	-18.7	1.58 H	170	21.1	14.2
9	#17160.00	54.2 PK	74.0	-19.8	1.44 H	202	35.9	18.3
10	#17160.00	40.9 AV	54.0	-13.1	1.44 H	202	22.6	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	51.2 PK	74.0	-22.8	1.03 V	211	46.7	4.5
2	#5470.00	38.1 AV	54.0	-15.9	1.03 V	211	33.6	4.5
3	*5720.00	98.0 PK			1.03 V	211	93.1	4.9
4	*5720.00	86.8 AV			1.03 V	211	81.9	4.9
5	#5850.00	51.9 PK	74.0	-22.1	1.03 V	211	46.8	5.1
6	#5850.00	39.0 AV	54.0	-15.0	1.03 V	211	33.9	5.1
7	11440.00	47.4 PK	74.0	-26.6	1.47 V	63	33.2	14.2
8	11440.00	34.6 AV	54.0	-19.4	1.47 V	63	20.4	14.2
9	#17160.00	54.1 PK	74.0	-19.9	1.55 V	60	35.8	18.3
10	#17160.00	41.2 AV	54.0	-12.8	1.55 V	60	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 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	#5643.33	51.6 PK	68.2	-16.6	1.01 H	225	46.8	4.8
2	*5745.00	97.9 PK			1.01 H	225	92.9	5.0
3	*5745.00	87.0 AV			1.01 H	225	82.0	5.0
4	#5974.20	52.2 PK	68.2	-16.0	1.01 H	225	46.7	5.5
5	11490.00	48.2 PK	74.0	-25.8	1.58 H	156	34.1	14.1
6	11490.00	35.3 AV	54.0	-18.7	1.58 H	156	21.2	14.1
7	#17235.00	55.0 PK	74.0	-19.0	1.40 H	188	36.7	18.3
8	#17235.00	41.7 AV	54.0	-12.3	1.40 H	188	23.4	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	#5625.26	50.8 PK	68.2	-17.4	1.03 V	250	46.1	4.7
2	*5745.00	99.0 PK			1.03 V	250	94.0	5.0
3	*5745.00	87.4 AV			1.03 V	250	82.4	5.0
4	#5992.27	51.3 PK	68.2	-16.9	1.03 V	250	45.7	5.6
5	11490.00	46.8 PK	74.0	-27.2	1.54 V	57	32.7	14.1
6	11490.00	34.2 AV	54.0	-19.8	1.54 V	57	20.1	14.1
7	#17235.00	54.5 PK	74.0	-19.5	1.55 V	55	36.2	18.3
8	#17235.00	41.4 AV	54.0	-12.6	1.55 V	55	23.1	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	#5634.91	50.0 PK	68.2	-18.2	1.02 H	235	45.2	4.8
2	*5785.00	98.3 PK			1.02 H	235	93.3	5.0
3	*5785.00	87.3 AV			1.02 H	235	82.3	5.0
4	#5946.95	50.8 PK	68.2	-17.4	1.02 H	235	45.4	5.4
5	11570.00	48.1 PK	74.0	-25.9	1.51 H	164	34.1	14.0
6	11570.00	35.2 AV	54.0	-18.8	1.51 H	164	21.2	14.0
7	#17355.00	54.5 PK	74.0	-19.5	1.46 H	213	35.6	18.9
8	#17355.00	41.4 AV	54.0	-12.6	1.46 H	213	22.5	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	#5567.94	51.1 PK	68.2	-17.1	1.06 V	250	46.5	4.6
2	*5785.00	99.6 PK			1.06 V	250	94.6	5.0
3	*5785.00	88.0 AV			1.06 V	250	83.0	5.0
4	#5963.82	51.5 PK	68.2	-16.7	1.06 V	250	46.0	5.5
5	11570.00	47.6 PK	74.0	-26.4	1.47 V	60	33.6	14.0
6	11570.00	34.6 AV	54.0	-19.4	1.47 V	60	20.6	14.0
7	#17355.00	53.8 PK	74.0	-20.2	1.47 V	36	34.9	18.9
8	#17355.00	40.6 AV	54.0	-13.4	1.47 V	36	21.7	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	#5586.82	51.3 PK	68.2	-16.9	1.01 H	212	46.7	4.6
2	*5825.00	98.1 PK			1.01 H	212	92.9	5.2
3	*5825.00	87.3 AV			1.01 H	212	82.1	5.2
4	#6020.21	51.3 PK	68.2	-16.9	1.01 H	212	45.6	5.7
5	11650.00	47.6 PK	74.0	-26.4	1.48 H	164	33.5	14.1
6	11650.00	34.9 AV	54.0	-19.1	1.48 H	164	20.8	14.1
7	#17475.00	54.3 PK	74.0	-19.7	1.39 H	210	34.6	19.7
8	#17475.00	41.2 AV	54.0	-12.8	1.39 H	210	21.5	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	#5605.15	51.0 PK	68.2	-17.2	1.06 V	250	46.3	4.7
2	*5825.00	100.8 PK			1.06 V	250	95.6	5.2
3	*5825.00	89.2 AV			1.06 V	250	84.0	5.2
4	#5928.62	51.6 PK	68.2	-16.6	1.06 V	250	46.2	5.4
5	11650.00	47.4 PK	74.0	-26.6	1.48 V	62	33.3	14.1
6	11650.00	34.5 AV	54.0	-19.5	1.48 V	62	20.4	14.1
7	#17475.00	54.1 PK	74.0	-19.9	1.45 V	49	34.4	19.7
8	#17475.00	41.0 AV	54.0	-13.0	1.45 V	49	21.3	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	61.1 PK	74.0	-12.9	1.24 H	277	57.1	4.0
2	5150.00	40.2 AV	54.0	-13.8	1.24 H	277	36.2	4.0
3	*5190.00	96.9 PK			1.24 H	277	92.9	4.0
4	*5190.00	86.8 AV			1.24 H	277	82.8	4.0
5	5350.00	50.3 PK	74.0	-23.7	1.24 H	277	45.9	4.4
6	5350.00	38.2 AV	54.0	-15.8	1.24 H	277	33.8	4.4
7	#10380.00	45.9 PK	74.0	-28.1	1.53 H	110	32.3	13.6
8	#10380.00	33.4 AV	54.0	-20.6	1.53 H	110	19.8	13.6
9	15570.00	47.0 PK	74.0	-27.0	1.55 H	182	33.7	13.3
10	15570.00	34.4 AV	54.0	-19.6	1.55 H	182	21.1	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	61.5 PK	74.0	-12.5	1.04 V	302	57.5	4.0
2	5150.00	40.6 AV	54.0	-13.4	1.04 V	302	36.6	4.0
3	*5190.00	97.3 PK			1.04 V	302	93.3	4.0
4	*5190.00	87.2 AV			1.04 V	302	83.2	4.0
5	5350.00	50.7 PK	74.0	-23.3	1.04 V	302	46.3	4.4
6	5350.00	38.6 AV	54.0	-15.4	1.04 V	302	34.2	4.4
7	#10380.00	46.6 PK	74.0	-27.4	1.40 V	97	33.0	13.6
8	#10380.00	34.0 AV	54.0	-20.0	1.40 V	97	20.4	13.6
9	15570.00	47.8 PK	74.0	-26.2	1.58 V	104	34.5	13.3
10	15570.00	34.8 AV	54.0	-19.2	1.58 V	104	21.5	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	97.8 PK			1.21 H	272	93.6	4.2
2	*5230.00	87.1 AV			1.21 H	272	82.9	4.2
3	5350.00	50.2 PK	74.0	-23.8	1.21 H	272	45.8	4.4
4	5350.00	38.5 AV	54.0	-15.5	1.21 H	272	34.1	4.4
5	#10460.00	45.8 PK	74.0	-28.2	1.47 H	115	32.1	13.7
6	#10460.00	33.4 AV	54.0	-20.6	1.47 H	115	19.7	13.7
7	15690.00	46.7 PK	74.0	-27.3	1.60 H	192	32.7	14.0
8	15690.00	34.3 AV	54.0	-19.7	1.60 H	192	20.3	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	98.3 PK			1.04 V	303	94.1	4.2
2	*5230.00	87.5 AV			1.04 V	303	83.3	4.2
3	5350.00	50.6 PK	74.0	-23.4	1.04 V	303	46.2	4.4
4	5350.00	38.8 AV	54.0	-15.2	1.04 V	303	34.4	4.4
5	#10460.00	47.0 PK	74.0	-27.0	1.44 V	81	33.3	13.7
6	#10460.00	34.3 AV	54.0	-19.7	1.44 V	81	20.6	13.7
7	15690.00	48.4 PK	74.0	-25.6	1.54 V	99	34.4	14.0
8	15690.00	35.3 AV	54.0	-18.7	1.54 V	99	21.3	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	50.0 PK	74.0	-24.0	1.16 H	267	46.0	4.0
2	5150.00	38.2 AV	54.0	-15.8	1.16 H	267	34.2	4.0
3	*5270.00	97.6 PK			1.16 H	267	93.4	4.2
4	*5270.00	87.0 AV			1.16 H	267	82.8	4.2
5	#10540.00	46.1 PK	74.0	-27.9	1.47 H	110	32.4	13.7
6	#10540.00	33.8 AV	54.0	-20.2	1.47 H	110	20.1	13.7
7	15810.00	46.9 PK	74.0	-27.1	1.51 H	193	32.9	14.0
8	15810.00	34.3 AV	54.0	-19.7	1.51 H	193	20.3	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	50.2 PK	74.0	-23.8	1.04 V	304	46.2	4.0
2	5150.00	38.5 AV	54.0	-15.5	1.04 V	304	34.5	4.0
3	*5270.00	98.1 PK			1.04 V	304	93.9	4.2
4	*5270.00	87.4 AV			1.04 V	304	83.2	4.2
5	#10540.00	46.6 PK	74.0	-27.4	1.40 V	105	32.9	13.7
6	#10540.00	33.9 AV	54.0	-20.1	1.40 V	105	20.2	13.7
7	15810.00	47.9 PK	74.0	-26.1	1.52 V	90	33.9	14.0
8	15810.00	35.2 AV	54.0	-18.8	1.52 V	90	21.2	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	97.3 PK			1.17 H	266	93.0	4.3
2	*5310.00	86.6 AV			1.17 H	266	82.3	4.3
3	5350.00	58.8 PK	74.0	-15.2	1.17 H	266	54.4	4.4
4	5350.00	42.9 AV	54.0	-11.1	1.17 H	266	38.5	4.4
5	10620.00	46.0 PK	74.0	-28.0	1.50 H	109	32.1	13.9
6	10620.00	33.9 AV	54.0	-20.1	1.50 H	109	20.0	13.9
7	15930.00	47.1 PK	74.0	-26.9	1.59 H	197	33.8	13.3
8	15930.00	34.8 AV	54.0	-19.2	1.59 H	197	21.5	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	97.8 PK			1.04 V	297	93.5	4.3
2	*5310.00	87.0 AV			1.04 V	297	82.7	4.3
3	5350.00	59.2 PK	74.0	-14.8	1.04 V	297	54.8	4.4
4	5350.00	43.2 AV	54.0	-10.8	1.04 V	297	38.8	4.4
5	10620.00	47.1 PK	74.0	-26.9	1.50 V	98	33.2	13.9
6	10620.00	34.2 AV	54.0	-19.8	1.50 V	98	20.3	13.9
7	15930.00	47.6 PK	74.0	-26.4	1.62 V	86	34.3	13.3
8	15930.00	34.7 AV	54.0	-19.3	1.62 V	86	21.4	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	58.5 PK	74.0	-15.5	1.22 H	250	54.0	4.5
2	#5470.00	39.8 AV	54.0	-14.2	1.22 H	250	35.3	4.5
3	*5510.00	94.2 PK			1.22 H	250	89.6	4.6
4	*5510.00	83.6 AV			1.22 H	250	79.0	4.6
5	11020.00	45.3 PK	74.0	-28.7	1.55 H	103	30.6	14.7
6	11020.00	33.5 AV	54.0	-20.5	1.55 H	103	18.8	14.7
7	#16530.00	47.2 PK	74.0	-26.8	1.59 H	207	31.4	15.8
8	#16530.00	34.8 AV	54.0	-19.2	1.59 H	207	19.0	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	58.9 PK	74.0	-15.1	1.04 V	24	54.4	4.5
2	#5470.00	40.2 AV	54.0	-13.8	1.04 V	24	35.7	4.5
3	*5510.00	94.7 PK			1.04 V	24	90.1	4.6
4	*5510.00	84.0 AV			1.04 V	24	79.4	4.6
5	11020.00	46.8 PK	74.0	-27.2	1.56 V	108	32.1	14.7
6	11020.00	33.9 AV	54.0	-20.1	1.56 V	108	19.2	14.7
7	#16530.00	47.5 PK	74.0	-26.5	1.66 V	102	31.7	15.8
8	#16530.00	34.9 AV	54.0	-19.1	1.66 V	102	19.1	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	*5550.00	94.4 PK			1.25 H	262	89.9	4.5
2	*5550.00	83.8 AV			1.25 H	262	79.3	4.5
3	11100.00	46.2 PK	74.0	-27.8	1.45 H	103	31.8	14.4
4	11100.00	34.1 AV	54.0	-19.9	1.45 H	103	19.7	14.4
5	#16650.00	47.1 PK	74.0	-26.9	1.59 H	197	30.7	16.4
6	#16650.00	35.1 AV	54.0	-18.9	1.59 H	197	18.7	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	*5550.00	94.9 PK			1.04 V	24	90.4	4.5
2	*5550.00	84.2 AV			1.04 V	24	79.7	4.5
3	11100.00	47.0 PK	74.0	-27.0	1.47 V	72	32.6	14.4
4	11100.00	34.1 AV	54.0	-19.9	1.47 V	72	19.7	14.4
5	#16650.00	53.5 PK	74.0	-20.5	1.49 V	29	37.1	16.4
6	#16650.00	41.0 AV	54.0	-13.0	1.49 V	29	24.6	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	94.0 PK			1.28 H	262	89.2	4.8
2	*5670.00	83.4 AV			1.28 H	262	78.6	4.8
3	#5725.00	51.8 PK	74.0	-22.2	1.28 H	262	46.9	4.9
4	#5725.00	38.7 AV	54.0	-15.3	1.28 H	262	33.8	4.9
5	11340.00	45.3 PK	74.0	-28.7	1.54 H	110	30.9	14.4
6	11340.00	33.5 AV	54.0	-20.5	1.54 H	110	19.1	14.4
7	#17010.00	47.4 PK	74.0	-26.6	1.64 H	187	29.2	18.2
8	#17010.00	34.8 AV	54.0	-19.2	1.64 H	187	16.6	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	94.5 PK			1.04 V	31	89.7	4.8
2	*5670.00	83.8 AV			1.04 V	31	79.0	4.8
3	#5725.00	52.1 PK	74.0	-21.9	1.04 V	31	47.2	4.9
4	#5725.00	40.0 AV	54.0	-14.0	1.04 V	31	35.1	4.9
5	11340.00	46.5 PK	74.0	-27.5	1.49 V	118	32.1	14.4
6	11340.00	34.0 AV	54.0	-20.0	1.49 V	118	19.6	14.4
7	#17010.00	47.4 PK	74.0	-26.6	1.57 V	58	29.2	18.2
8	#17010.00	34.8 AV	54.0	-19.2	1.57 V	58	16.6	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	51.2 PK	74.0	-22.8	1.31 H	267	46.7	4.5
2	#5470.00	38.1 AV	54.0	-15.9	1.31 H	267	33.6	4.5
3	*5710.00	95.0 PK			1.31 H	267	90.1	4.9
4	*5710.00	84.0 AV			1.31 H	267	79.1	4.9
5	#5850.00	52.0 PK	74.0	-22.0	1.31 H	267	46.9	5.1
6	#5850.00	39.1 AV	54.0	-14.9	1.31 H	267	34.0	5.1
7	11420.00	47.8 PK	74.0	-26.2	1.45 H	163	33.5	14.3
8	11420.00	35.4 AV	54.0	-18.6	1.45 H	163	21.1	14.3
9	#17130.00	54.9 PK	74.0	-19.1	1.41 H	226	36.4	18.5
10	#17130.00	41.7 AV	54.0	-12.3	1.41 H	226	23.2	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	#5470.00	51.5 PK	74.0	-22.5	1.00 V	212	47.0	4.5
2	#5470.00	38.4 AV	54.0	-15.6	1.00 V	212	33.9	4.5
3	*5710.00	95.4 PK			1.00 V	212	90.5	4.9
4	*5710.00	84.2 AV			1.00 V	212	79.3	4.9
5	#5850.00	52.3 PK	74.0	-21.7	1.00 V	212	47.2	5.1
6	#5850.00	39.4 AV	54.0	-14.6	1.00 V	212	34.3	5.1
7	11420.00	46.2 PK	74.0	-27.8	1.43 V	133	31.9	14.3
8	11420.00	33.8 AV	54.0	-20.2	1.43 V	133	19.5	14.3
9	#17130.00	47.8 PK	74.0	-26.2	1.54 V	70	29.3	18.5
10	#17130.00	35.0 AV	54.0	-19.0	1.54 V	70	16.5	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 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	#5586.71	50.8 PK	68.2	-17.4	1.03 H	225	46.2	4.6
2	*5755.00	94.1 PK			1.03 H	225	89.1	5.0
3	*5755.00	84.9 AV			1.03 H	225	79.9	5.0
4	#5988.52	50.7 PK	68.2	-17.5	1.03 H	225	45.1	5.6
5	11510.00	47.3 PK	74.0	-26.7	1.53 H	166	33.3	14.0
6	11510.00	34.7 AV	54.0	-19.3	1.53 H	166	20.7	14.0
7	#17265.00	54.3 PK	74.0	-19.7	1.43 H	199	35.8	18.5
8	#17265.00	41.1 AV	54.0	-12.9	1.43 H	199	22.6	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	#5646.48	50.6 PK	68.2	-17.6	1.04 V	249	45.8	4.8
2	*5755.00	95.9 PK			1.04 V	249	90.9	5.0
3	*5755.00	85.1 AV			1.04 V	249	80.1	5.0
4	#5998.00	52.1 PK	68.2	-16.1	1.04 V	249	46.5	5.6
5	11510.00	46.8 PK	74.0	-27.2	1.52 V	128	32.8	14.0
6	11510.00	34.5 AV	54.0	-19.5	1.52 V	128	20.5	14.0
7	#17265.00	47.9 PK	74.0	-26.1	1.62 V	64	29.4	18.5
8	#17265.00	35.2 AV	54.0	-18.8	1.62 V	64	16.7	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	#5569.19	50.8 PK	68.2	-17.4	1.01 H	219	46.2	4.6
2	*5795.00	94.1 PK			1.01 H	219	89.0	5.1
3	*5795.00	84.7 AV			1.01 H	219	79.6	5.1
4	#5956.18	51.7 PK	68.2	-16.5	1.01 H	219	46.2	5.5
5	11590.00	47.2 PK	74.0	-26.8	1.44 H	167	33.2	14.0
6	11590.00	34.7 AV	54.0	-19.3	1.44 H	167	20.7	14.0
7	#17385.00	54.6 PK	74.0	-19.4	1.42 H	225	35.5	19.1
8	#17385.00	41.3 AV	54.0	-12.7	1.42 H	225	22.2	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	#5636.58	51.5 PK	68.2	-16.7	1.04 V	250	46.7	4.8
2	*5795.00	96.4 PK			1.04 V	250	91.3	5.1
3	*5795.00	85.3 AV			1.04 V	250	80.2	5.1
4	#5954.43	52.1 PK	68.2	-16.1	1.04 V	250	46.7	5.4
5	11590.00	45.8 PK	74.0	-28.2	1.55 V	132	31.8	14.0
6	11590.00	33.5 AV	54.0	-20.5	1.55 V	132	19.5	14.0
7	#17385.00	46.9 PK	74.0	-27.1	1.58 V	48	27.8	19.1
8	#17385.00	34.4 AV	54.0	-19.6	1.58 V	48	15.3	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	59.9 PK	74.0	-14.1	1.34 H	262	55.9	4.0
2	5150.00	42.7 AV	54.0	-11.3	1.34 H	262	38.7	4.0
3	*5210.00	94.8 PK			1.34 H	262	90.7	4.1
4	*5210.00	84.7 AV			1.34 H	262	80.6	4.1
5	5350.00	50.7 PK	74.0	-23.3	1.34 H	262	46.3	4.4
6	5350.00	38.9 AV	54.0	-15.1	1.34 H	262	34.5	4.4
7	#10420.00	46.0 PK	74.0	-28.0	1.49 H	102	32.4	13.6
8	#10420.00	33.9 AV	54.0	-20.1	1.49 H	102	20.3	13.6
9	15630.00	47.5 PK	74.0	-26.5	1.60 H	175	33.9	13.6
10	15630.00	35.0 AV	54.0	-19.0	1.60 H	175	21.4	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	60.2 PK	74.0	-13.8	1.04 V	303	56.2	4.0
2	5150.00	43.0 AV	54.0	-11.0	1.04 V	303	39.0	4.0
3	*5210.00	95.2 PK			1.04 V	303	91.1	4.1
4	*5210.00	85.1 AV			1.04 V	303	81.0	4.1
5	5350.00	50.9 PK	74.0	-23.1	1.04 V	303	46.5	4.4
6	5350.00	39.2 AV	54.0	-14.8	1.04 V	303	34.8	4.4
7	#10420.00	46.1 PK	74.0	-27.9	1.48 V	94	32.5	13.6
8	#10420.00	33.4 AV	54.0	-20.6	1.48 V	94	19.8	13.6
9	15630.00	48.0 PK	74.0	-26.0	1.58 V	90	34.4	13.6
10	15630.00	35.4 AV	54.0	-18.6	1.58 V	90	21.8	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	50.5 PK	74.0	-23.5	1.38 H	265	46.5	4.0
2	5150.00	38.6 AV	54.0	-15.4	1.38 H	265	34.6	4.0
3	*5290.00	94.4 PK			1.38 H	265	90.1	4.3
4	*5290.00	84.1 AV			1.38 H	265	79.8	4.3
5	5350.00	62.2 PK	74.0	-11.8	1.38 H	265	57.8	4.4
6	5350.00	47.8 AV	54.0	-6.2	1.38 H	265	43.4	4.4
7	#10580.00	46.5 PK	74.0	-27.5	1.50 H	99	32.6	13.9
8	#10580.00	34.0 AV	54.0	-20.0	1.50 H	99	20.1	13.9
9	15870.00	47.1 PK	74.0	-26.9	1.53 H	187	33.7	13.4
10	15870.00	34.5 AV	54.0	-19.5	1.53 H	187	21.1	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	5150.00	50.9 PK	74.0	-23.1	1.04 V	297	46.9	4.0
2	5150.00	39.0 AV	54.0	-15.0	1.04 V	297	35.0	4.0
3	*5290.00	94.8 PK			1.04 V	297	90.5	4.3
4	*5290.00	84.5 AV			1.04 V	297	80.2	4.3
5	5350.00	62.5 PK	74.0	-11.5	1.04 V	297	58.1	4.4
6	**5350.00**	**48.1 AV**	**54.0**	**-5.9**	**1.04 V**	**297**	**43.7**	**4.4**
7	#10580.00	46.9 PK	74.0	-27.1	1.49 V	84	33.0	13.9
8	#10580.00	33.9 AV	54.0	-20.1	1.49 V	84	20.0	13.9
9	15870.00	48.0 PK	74.0	-26.0	1.59 V	103	34.6	13.4
10	15870.00	34.8 AV	54.0	-19.2	1.59 V	103	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 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	#5470.00	58.7 PK	74.0	-15.3	1.36 H	278	54.2	4.5
2	#5470.00	42.7 AV	54.0	-11.3	1.36 H	278	38.2	4.5
3	*5530.00	91.3 PK			1.36 H	278	86.8	4.5
4	*5530.00	80.6 AV			1.36 H	278	76.1	4.5
5	#5725.00	51.8 PK	74.0	-22.2	1.36 H	278	46.9	4.9
6	#5725.00	40.1 AV	54.0	-13.9	1.36 H	278	35.2	4.9
7	11060.00	47.1 PK	74.0	-26.9	1.45 H	91	32.6	14.5
8	11060.00	34.3 AV	54.0	-19.7	1.45 H	91	19.8	14.5
9	#16590.00	47.0 PK	74.0	-27.0	1.56 H	199	30.4	16.6
10	#16590.00	34.1 AV	54.0	-19.9	1.56 H	199	17.5	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	#5470.00	59.1 PK	74.0	-14.9	1.00 V	24	54.6	4.5
2	#5470.00	43.1 AV	54.0	-10.9	1.00 V	24	38.6	4.5
3	*5530.00	91.7 PK			1.00 V	24	87.2	4.5
4	*5530.00	81.0 AV			1.00 V	24	76.5	4.5
5	#5725.00	52.2 PK	74.0	-21.8	1.00 V	24	47.3	4.9
6	#5725.00	40.4 AV	54.0	-13.6	1.00 V	24	35.5	4.9
7	11060.00	46.8 PK	74.0	-27.2	1.48 V	107	32.3	14.5
8	11060.00	34.3 AV	54.0	-19.7	1.48 V	107	19.8	14.5
9	#16590.00	47.7 PK	74.0	-26.3	1.51 V	74	31.1	16.6
10	#16590.00	35.2 AV	54.0	-18.8	1.51 V	74	18.6	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	91.7 PK			1.42 H	286	87.0	4.7
2	*5610.00	81.0 AV			1.42 H	286	76.3	4.7
3	#5725.00	52.2 PK	74.0	-21.8	1.42 H	286	47.3	4.9
4	#5725.00	40.2 AV	54.0	-13.8	1.42 H	286	35.3	4.9
5	11220.00	46.3 PK	74.0	-27.7	1.50 H	112	31.9	14.4
6	11220.00	34.0 AV	54.0	-20.0	1.50 H	112	19.6	14.4
7	#16830.00	47.6 PK	74.0	-26.4	1.57 H	174	30.6	17.0
8	#16830.00	34.8 AV	54.0	-19.2	1.57 H	174	17.8	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	92.1 PK			1.00 V	24	87.4	4.7
2	*5610.00	81.4 AV			1.00 V	24	76.7	4.7
3	#5725.00	52.6 PK	74.0	-21.4	1.00 V	24	47.7	4.9
4	#5725.00	40.5 AV	54.0	-13.5	1.00 V	24	35.6	4.9
5	11220.00	46.0 PK	74.0	-28.0	1.53 V	115	31.6	14.4
6	11220.00	33.8 AV	54.0	-20.2	1.53 V	115	19.4	14.4
7	#16830.00	47.7 PK	74.0	-26.3	1.57 V	61	30.7	17.0
8	#16830.00	35.1 AV	54.0	-18.9	1.57 V	61	18.1	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)
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	51.2 PK	74.0	-22.8	1.44 H	275	46.7	4.5
2	#5470.00	38.9 AV	54.0	-15.1	1.44 H	275	34.4	4.5
3	*5690.00	91.4 PK			1.44 H	275	86.6	4.8
4	*5690.00	80.7 AV			1.44 H	275	75.9	4.8
5	#5850.00	52.1 PK	74.0	-21.9	1.44 H	275	47.0	5.1
6	#5850.00	39.7 AV	54.0	-14.3	1.44 H	275	34.6	5.1
7	11380.00	47.1 PK	74.0	-26.9	1.51 H	171	32.7	14.4
8	11380.00	34.6 AV	54.0	-19.4	1.51 H	171	20.2	14.4
9	#17070.00	54.2 PK	74.0	-19.8	1.36 H	213	35.9	18.3
10	#17070.00	40.9 AV	54.0	-13.1	1.36 H	213	22.6	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	51.6 PK	74.0	-22.4	1.00 V	212	47.1	4.5
2	#5470.00	39.2 AV	54.0	-14.8	1.00 V	212	34.7	4.5
3	*5690.00	91.9 PK			1.00 V	212	87.1	4.8
4	*5690.00	81.1 AV			1.00 V	212	76.3	4.8
5	#5850.00	52.4 PK	74.0	-21.6	1.00 V	212	47.3	5.1
6	#5850.00	40.0 AV	54.0	-14.0	1.00 V	212	34.9	5.1
7	11380.00	46.4 PK	74.0	-27.6	1.54 V	115	32.0	14.4
8	11380.00	33.8 AV	54.0	-20.2	1.54 V	115	19.4	14.4
9	#17070.00	47.5 PK	74.0	-26.5	1.51 V	42	29.2	18.3
10	#17070.00	35.1 AV	54.0	-18.9	1.51 V	42	16.8	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	#5608.25	50.5 PK	68.2	-17.7	1.02 H	225	45.8	4.7
2	*5775.00	91.9 PK			1.02 H	225	86.9	5.0
3	*5775.00	82.2 AV			1.02 H	225	77.2	5.0
4	#5964.63	51.3 PK	68.2	-16.9	1.02 H	225	45.8	5.5
5	11550.00	47.4 PK	74.0	-26.6	1.51 H	153	33.4	14.0
6	11550.00	34.6 AV	54.0	-19.4	1.51 H	153	20.6	14.0
7	#17325.00	54.9 PK	74.0	-19.1	1.41 H	211	36.3	18.6
8	#17325.00	41.6 AV	54.0	-12.4	1.41 H	211	23.0	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	#5642.66	51.5 PK	68.2	-16.7	1.04 V	250	46.7	4.8
2	*5775.00	93.0 PK			1.04 V	250	88.0	5.0
3	*5775.00	82.3 AV			1.04 V	250	77.3	5.0
4	#5981.10	52.8 PK	68.2	-15.4	1.04 V	250	47.3	5.5
5	11550.00	46.9 PK	74.0	-27.1	1.55 V	105	32.9	14.0
6	11550.00	34.2 AV	54.0	-19.8	1.55 V	105	20.2	14.0
7	#17325.00	47.7 PK	74.0	-26.3	1.54 V	67	29.1	18.6
8	#17325.00	34.8 AV	54.0	-19.2	1.54 V	67	16.2	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 36	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	100.25	25.2 QP	43.5	-18.3	2.00 H	288	37.9	-12.7
2	233.58	31.8 QP	46.0	-14.2	1.00 H	360	42.2	-10.4
3	496.16	26.1 QP	46.0	-19.9	2.00 H	315	29.0	-2.9
4	722.56	31.0 QP	46.0	-15.0	1.00 H	105	29.9	1.1
5	771.78	31.4 QP	46.0	-14.6	1.00 H	23	29.2	2.2
6	885.73	33.2 QP	46.0	-12.8	1.50 H	0	29.5	3.7
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	30.36	27.5 QP	40.0	-12.5	1.00 V	350	37.0	-9.5
2	128.31	25.0 QP	43.5	-18.5	1.00 V	344	34.3	-9.3
3	237.09	22.2 QP	46.0	-23.8	2.00 V	237	32.3	-10.1
4	556.83	27.1 QP	46.0	-18.9	1.50 V	208	28.9	-1.8
5	720.86	30.7 QP	46.0	-15.3	2.00 V	0	29.6	1.1
6	946.92	33.9 QP	46.0	-12.1	1.00 V	274	29.3	4.6

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 24, 2016	Oct. 23, 2017
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 26, 2016	Oct. 25, 2017
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: Oct. 17 to 18, 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.

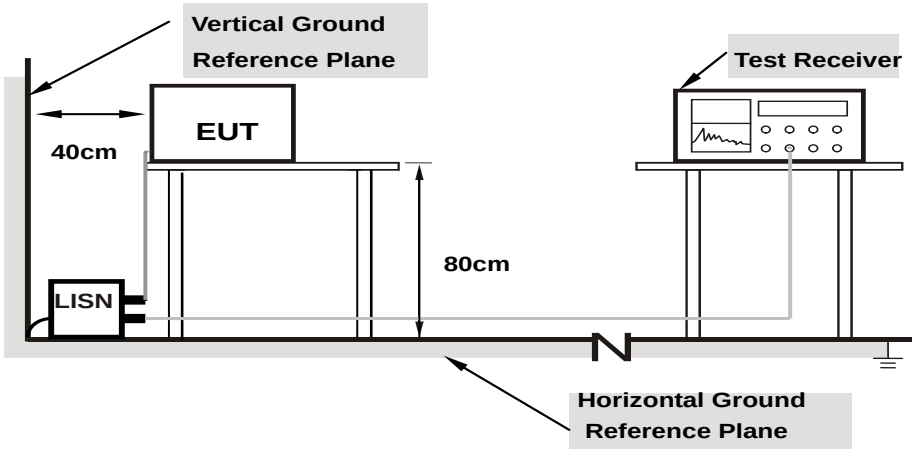
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

Controlling software (QRCT_Version3.0.268.0) has been activated to set the EUT on specific status.

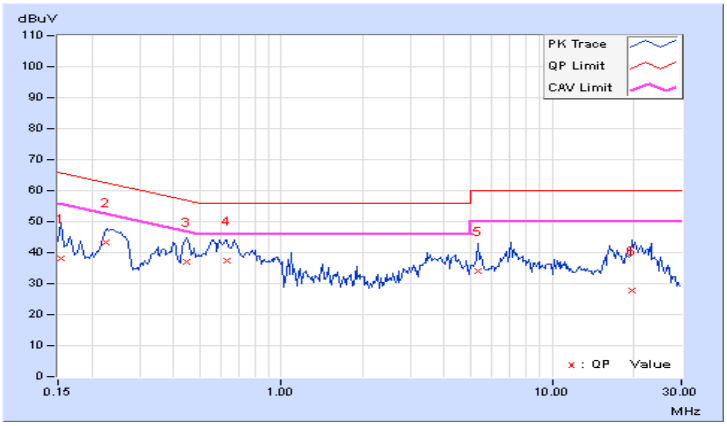
4.2.7 Test Results (Mode 1)

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	0.15391	10.07	28.09	17.99	38.16	28.06	65.79	55.79	-27.63	-27.73
2	0.22422	10.07	33.08	19.92	43.15	29.99	62.66	52.66	-19.51	-22.67
3	0.44688	10.11	27.06	21.21	37.17	31.32	56.93	46.93	-19.76	-15.61
4	0.63047	10.12	27.28	9.76	37.40	19.88	56.00	46.00	-18.60	-26.12
5	5.29688	10.37	23.78	15.19	34.15	25.56	60.00	50.00	-25.85	-24.44
6	19.64844	11.27	16.59	10.49	27.86	21.76	60.00	50.00	-32.14	-28.24

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.

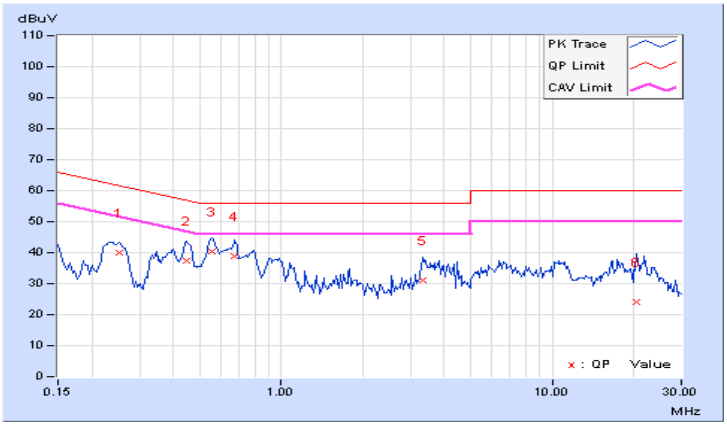


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.25156	10.05	30.00	16.53	40.05	26.58	61.71	51.71	-21.66	-25.13
2	0.44688	10.10	27.33	21.30	37.43	31.40	56.93	46.93	-19.50	-15.53
3	0.55234	10.10	30.20	20.42	40.30	30.52	56.00	46.00	-15.70	-15.48
4	0.67344	10.10	28.74	20.16	38.84	30.26	56.00	46.00	-17.16	-15.74
5	3.33984	10.21	20.92	14.29	31.13	24.50	56.00	46.00	-24.87	-21.50
6	20.51563	11.01	13.08	8.37	24.09	19.38	60.00	50.00	-35.91	-30.62

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.



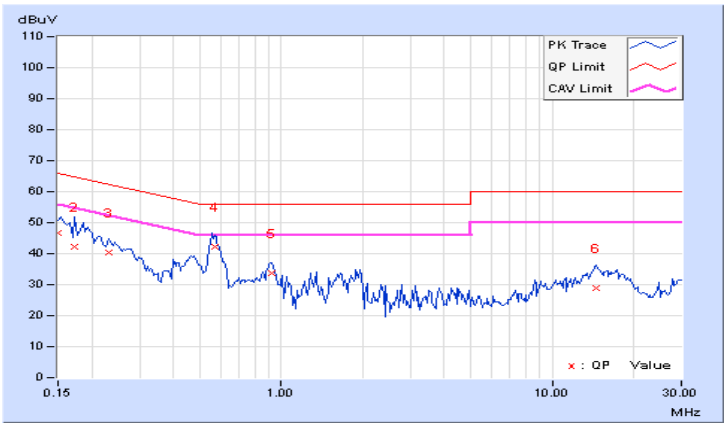
4.2.8 Test Results (Mode 2)

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	0.15000	10.08	36.70	27.06	46.78	37.14	66.00	56.00	-19.22	-18.86
2	0.17344	10.08	32.20	20.68	42.28	30.76	64.79	54.79	-22.51	-24.03
3	0.23203	10.08	30.39	19.57	40.47	29.65	62.38	52.38	-21.91	-22.73
4	**0.56797**	**10.13**	**31.93**	**23.33**	**42.06**	**33.46**	**56.00**	**46.00**	**-13.94**	**-12.54**
5	0.92344	10.15	23.45	14.39	33.60	24.54	56.00	46.00	-22.40	-21.46
6	14.59375	11.16	17.71	10.49	28.87	21.65	60.00	50.00	-31.13	-28.35

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.

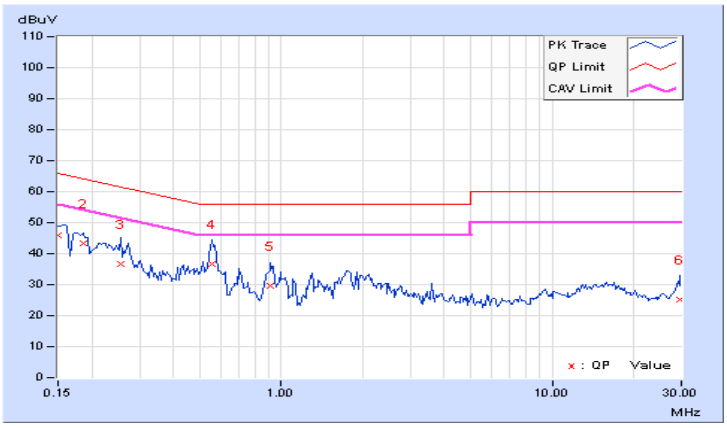


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	35.96	21.93	46.03	32.00	66.00	56.00	-19.97	-24.00
2	0.18516	10.05	33.19	20.70	43.24	30.75	64.25	54.25	-21.01	-23.50
3	0.25547	10.06	26.46	15.07	36.52	25.13	61.58	51.58	-25.06	-26.45
4	0.55234	10.12	26.48	19.71	36.60	29.83	56.00	46.00	-19.40	-16.17
5	0.91563	10.12	19.67	12.61	29.79	22.73	56.00	46.00	-26.21	-23.27
6	29.78906	11.29	13.96	8.97	25.25	20.26	60.00	50.00	-34.75	-29.74

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

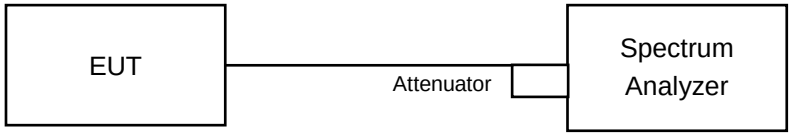
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client 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

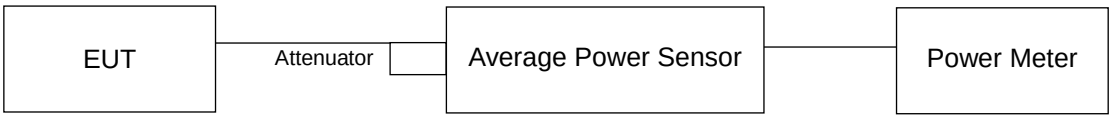
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

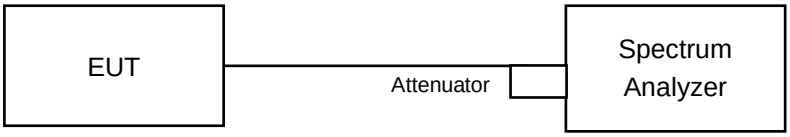
For channel straddling 5725MHz:



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:

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).

Other Modulation mode

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	34.356	15.36	24.00	Pass
40	5200	34.277	15.35	24.00	Pass
48	5240	36.813	15.66	24.00	Pass
52	5260	36.898	15.67	24.00	Pass
60	5300	36.898	15.67	24.00	Pass
64	5320	36.813	15.66	24.00	Pass
100	5500	34.356	15.36	24.00	Pass
116	5580	36.983	15.68	24.00	Pass
140	5700	38.194	15.82	24.00	Pass
*144 (UNII-2C Band)	5720	9.288	9.68	23.15	Pass
*144 (UNII-3 Band)	5720	2.377	3.76	30.00	Pass
149	5745	38.371	15.84	30.00	Pass
157	5785	38.282	15.83	30.00	Pass
165	5825	38.371	15.84	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 Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	11.665	10.67
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	23.25
60	5300	22.89
64	5320	22.62
100	5500	22.86
116	5580	22.90
140	5700	22.91
144 (UNII-2C Band)	5720	16.41

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	23.25	24.66 > 24
60	5300	22.89	24.59 > 24
64	5320	22.62	24.54 > 24
100	5500	22.86	24.59 > 24
116	5580	22.90	24.59 > 24
140	5700	22.91	24.6 > 24
144 (UNII-2C Band)	5720	16.41	23.15 < 24

802.11ac (VHT20)

Power Output:

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
36	5180	38.459	15.85	24.00	Pass
40	5200	37.325	15.72	24.00	Pass
48	5240	36.983	15.68	24.00	Pass
52	5260	37.497	15.74	24.00	Pass
60	5300	38.371	15.84	24.00	Pass
64	5320	36.898	15.67	24.00	Pass
100	5500	37.154	15.70	24.00	Pass
116	5580	36.392	15.61	24.00	Pass
140	5700	35.727	15.53	24.00	Pass
*144 (UNII-2C Band)	5720	7.706	8.87	23.27	Pass
*144 (UNII-3 Band)	5720	2.306	3.63	30.00	Pass
149	5745	37.325	15.72	30.00	Pass
157	5785	36.983	15.68	30.00	Pass
165	5825	36.813	15.66	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 Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*144	5720	10.012	10.01
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	23.16
60	5300	24.01
64	5320	23.68
100	5500	23.87
116	5580	23.68
140	5700	23.92
144 (UNII-2C Band)	5720	16.89

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	23.16	24.64 > 24
60	5300	24.01	24.8 > 24
64	5320	23.68	24.74 > 24
100	5500	23.87	24.77 > 24
116	5580	23.68	24.74 > 24
140	5700	23.92	24.78 > 24
144 (UNII-2C Band)	5720	16.89	23.27 < 24

802.11ac (VHT40)

Power Output:

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
38	5190	38.282	15.83	24.00	Pass
46	5230	38.107	15.81	24.00	Pass
54	5270	35.645	15.52	24.00	Pass
62	5310	37.325	15.72	24.00	Pass
102	5510	36.475	15.62	24.00	Pass
110	5550	38.371	15.84	24.00	Pass
134	5670	38.019	15.80	24.00	Pass
*142 (UNII-2C Band)	5710	9.245	9.66	24.00	Pass
*142 (UNII-3 Band)	5710	1.0184	0.08	30.00	Pass
151	5755	37.757	15.77	30.00	Pass
159	5795	35.645	15.52	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 Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*142	5710	10.2634	10.11
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
54	5270	54.80
62	5310	52.19
102	5510	45.10
110	5550	43.48
134	5670	44.15
142 (UNII-2C Band)	5710	37.03

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	54.80	28.38 > 24
62	5310	52.19	28.17 > 24
102	5510	45.10	27.54 > 24
110	5550	43.48	27.38 > 24
134	5670	44.15	27.44 > 24
142 (UNII-2C Band)	5710	37.03	26.68 > 24

802.11ac (VHT80)

Power Output:

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
42	5210	36.058	15.57	24.00	Pass
58	5290	36.813	15.66	24.00	Pass
106	5530	36.475	15.62	24.00	Pass
122	5610	36.898	15.67	24.00	Pass
*138 (UNII-2C Band)	5690	6.287	7.98	24.00	Pass
*138 (UNII-3 Band)	5690	0.3913	-4.07	30.00	Pass
155	5775	36.644	15.64	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 Average Power for the straddle channel:

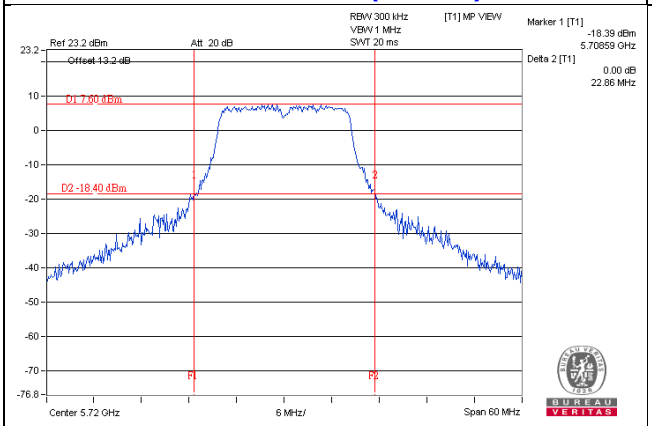
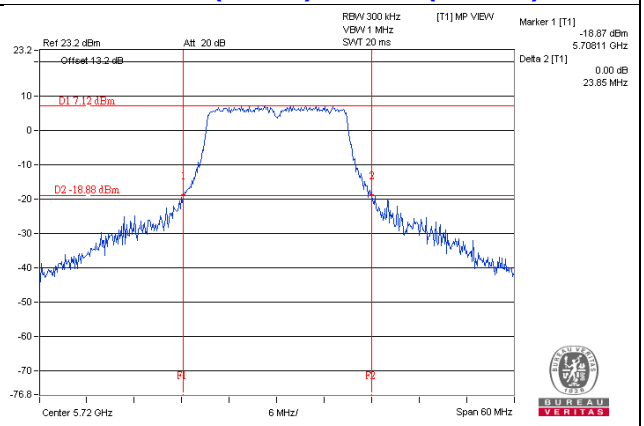
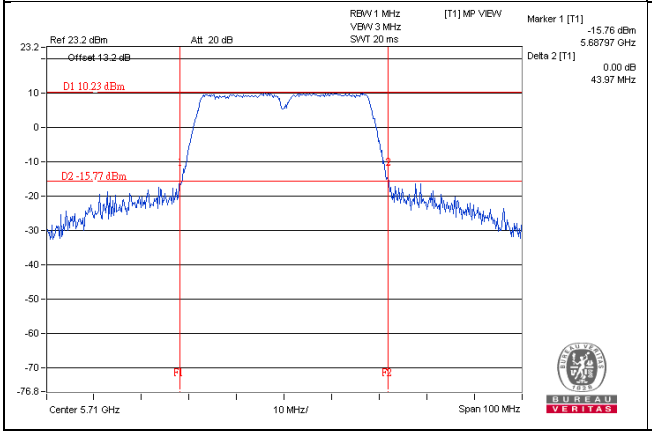
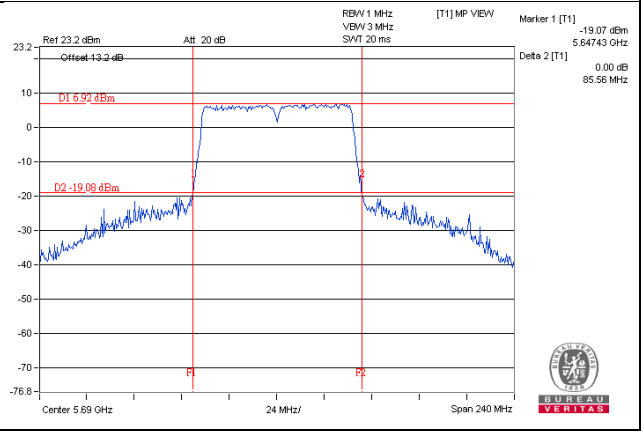
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
*138	5690	6.6783	8.25
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
58	5290	94.65
106	5530	84.91
122	5610	86.53
138 (UNII-2C Band)	5690	77.57

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	94.65	30.76 > 24
106	5530	84.91	30.28 > 24
122	5610	86.53	30.37 > 24
138 (UNII-2C Band)	5690	77.57	29.89 > 24

Spectrum Plot of Worst Value	
802.11a: CH144 (UNII-2C)	**802.11ac (VHT20) / CH144 (UNII-2C)**
	
802.11ac (VHT40) / CH142 (UNII-2C)	**802.11ac (VHT80) / CH138 (UNII-2C)**
	

For Reference only – Power meter value

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

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	38.019	15.80
Note: The total power was calculated through formula and record the value for reference only.			

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	36.983	15.68
Note: The total power was calculated through formula and record the value for reference only.			

802.11ac (VHT40)

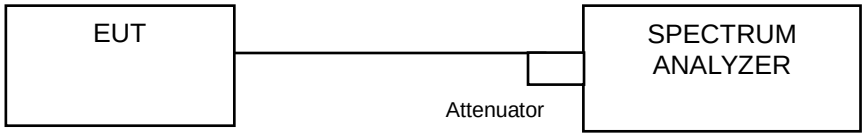
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	37.844	15.78
Note: The total power was calculated through formula and record the value for reference only.			

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	36.141	15.58
Note: The total power was calculated through formula and record the value for reference only.			

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.80
40	5200	16.80
48	5240	17.04
52	5260	16.80
60	5300	16.80
64	5320	16.92
100	5500	16.80
116	5580	16.80
140	5700	16.92
144 (UNII-2C Band)	5720	13.40
144 (UNII-3 Band)	5720	3.40
149	5745	16.92
157	5785	16.68
165	5825	16.80

802.11ac (VHT20)

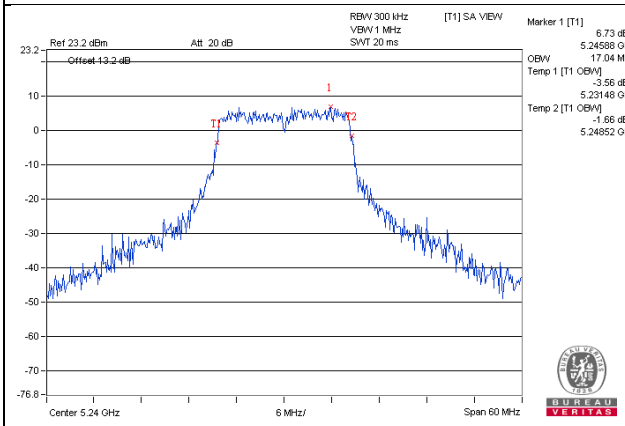
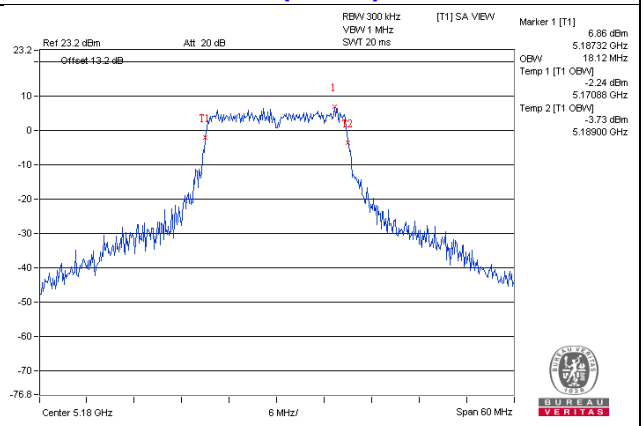
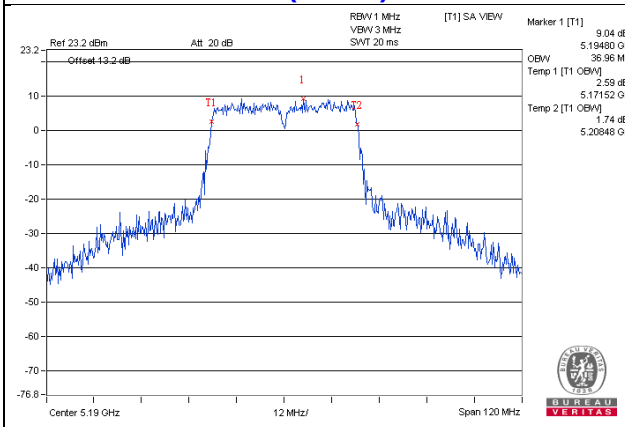
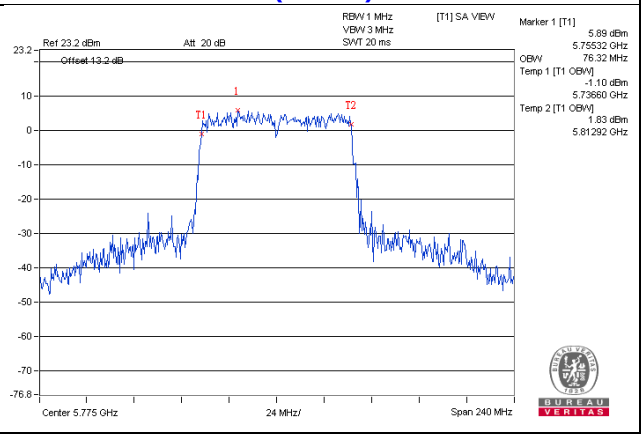
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.00
48	5240	18.00
52	5260	18.00
60	5300	18.00
64	5320	18.00
100	5500	18.00
116	5580	18.00
140	5700	18.00
144 (UNII-2C Band)	5720	14.12
144 (UNII-3 Band)	5720	4.00
149	5745	17.88
157	5785	18.00
165	5825	17.88

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.96
46	5230	36.96
54	5270	36.96
62	5310	36.96
102	5510	36.72
110	5550	36.72
134	5670	36.72
142 (UNII-2C Band)	5710	33.60
142 (UNII-3 Band)	5710	3.40
151	5755	36.96
159	5795	36.96

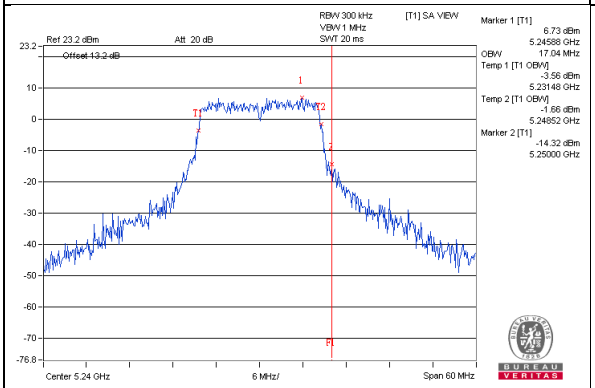
802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	76.32
106	5530	76.32
122	5610	76.32
138 (UNII-2C Band)	5690	72.92
138 (UNII-3 Band)	5690	2.92
155	5775	76.32

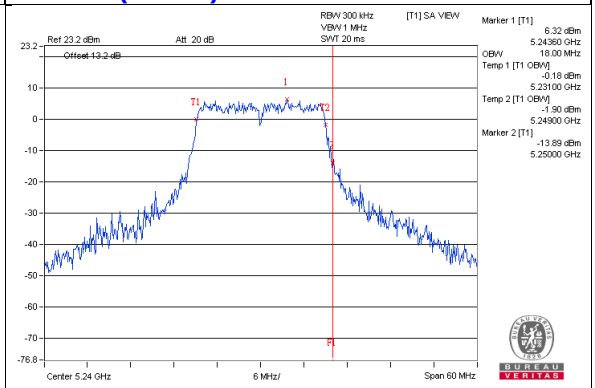
Spectrum Plot of Worst Value	
802.11a / CH48	**802.11ac (VHT20) / CH36**
	
802.11ac (VHT40) / CH38	**802.11ac (VHT80) / CH155**
	

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

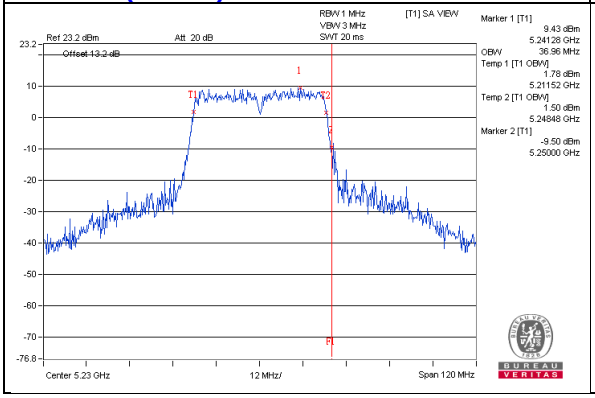
802.11a / CH48



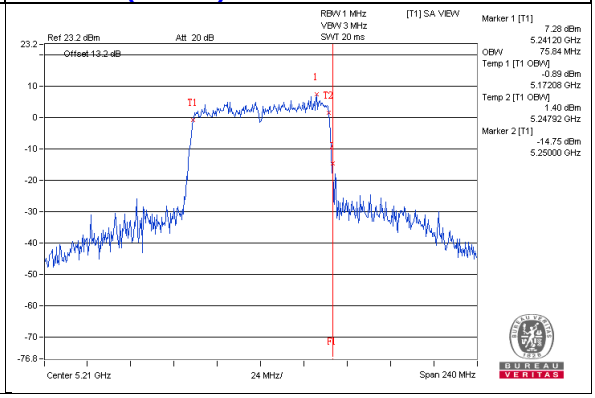
802.11ac(VHT20) / CH48



802.11ac (VHT40) : CH46

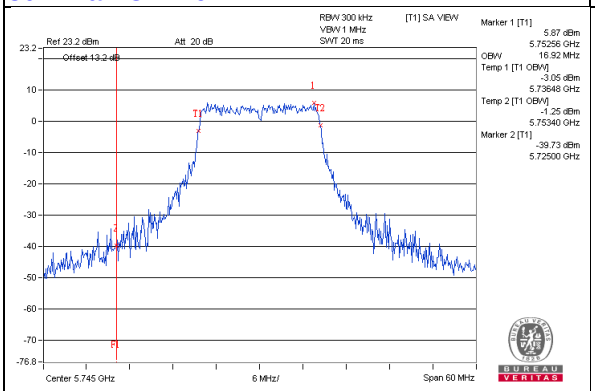


802.11ac (VHT80) : CH42

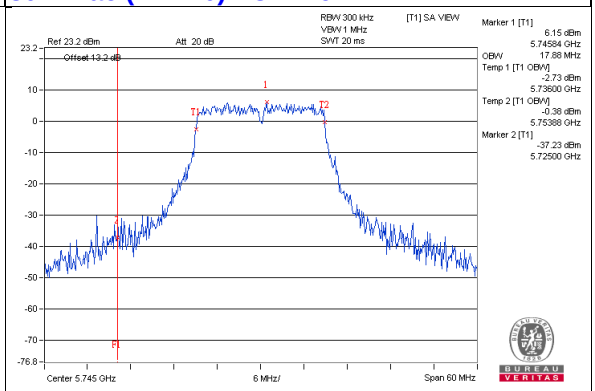


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

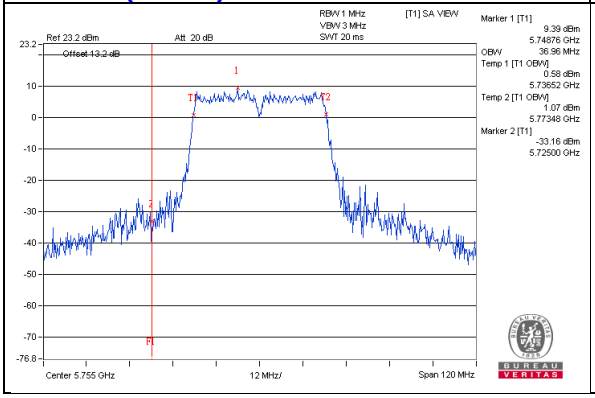
802.11a : CH149



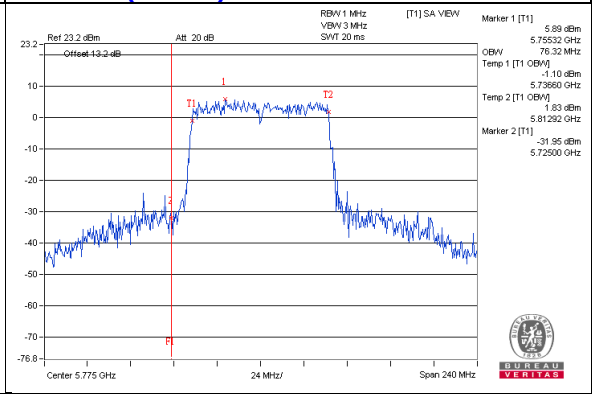
802.11ac (VHT20) : CH149



802.11ac (VHT40) : CH151



802.11ac (VHT80) : CH155

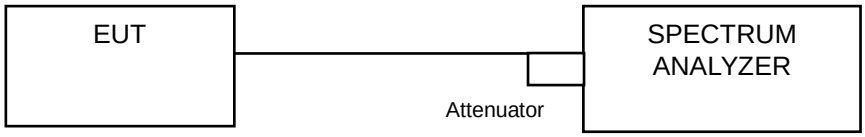


4.5 Peak Power Spectral Density Measurement

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

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

Using method SA-2

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

For U-NII-3:

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

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

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	1.73	0.37	2.10	11.00	Pass
40	5200	1.38	037	1.75	11.00	Pass
48	5240	1.57	0.37	1.94	11.00	Pass
52	5260	1.28	037	1.65	11.00	Pass
60	5300	1.34	0.37	1.71	11.00	Pass
64	5320	0.32	037	0.69	11.00	Pass
100	5500	1.27	0.37	1.64	11.00	Pass
116	5580	1.60	037	1.97	11.00	Pass
140	5700	1.58	0.37	1.95	11.00	Pass
144 (UNII-2C Band)	5720	0.91	037	1.28	11.00	Pass

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

802.11ac (VHT20)

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	1.30	0.47	1.77	11.00	Pass
40	5200	0.40	0.47	0.87	11.00	Pass
48	5240	-0.34	0.47	0.13	11.00	Pass
52	5260	0.75	0.47	1.22	11.00	Pass
60	5300	0.38	0.47	0.85	11.00	Pass
64	5320	0.20	0.47	0.67	11.00	Pass
100	5500	0.71	0.47	1.18	11.00	Pass
116	5580	0.90	0.47	1.37	11.00	Pass
140	5700	0.20	0.47	0.67	11.00	Pass
144 (UNII-2C Band)	5720	0.63	0.47	1.10	11.00	Pass

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

802.11ac (VHT40)

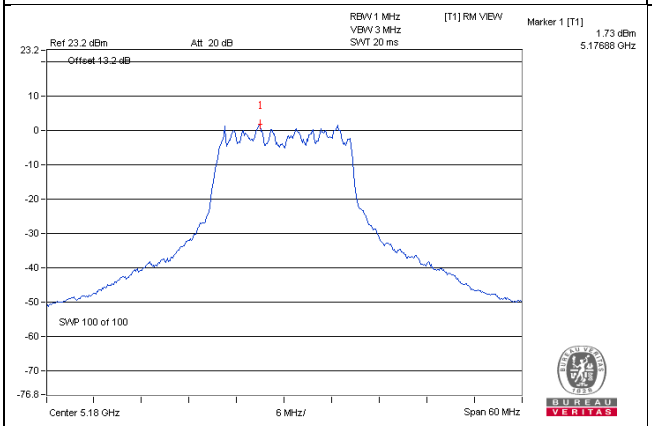
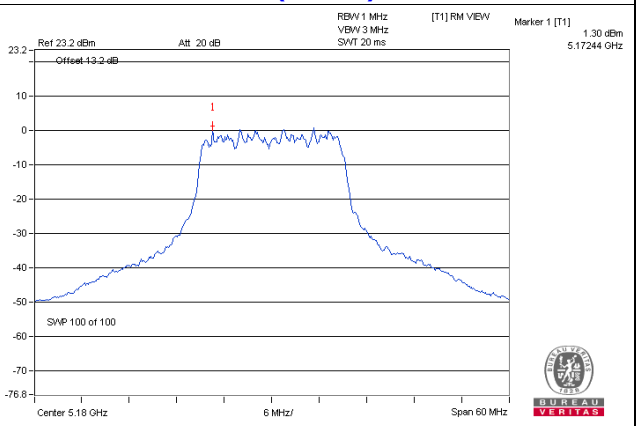
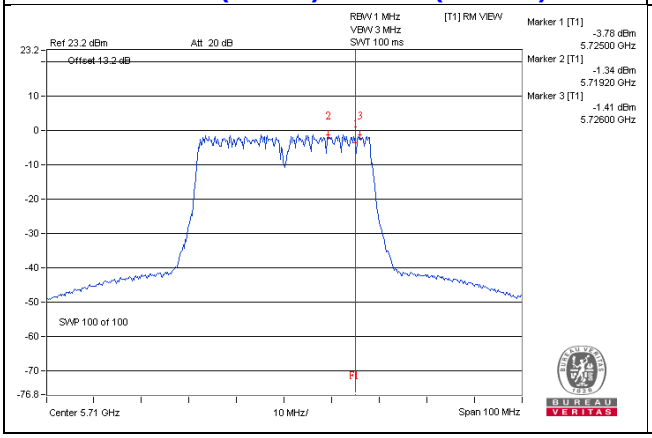
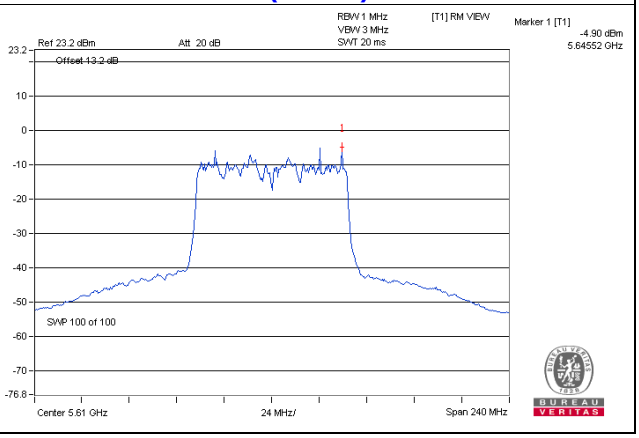
Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
38	5190	-2.31	0.39	-1.92	11.00	Pass
46	5230	-2.05	0.39	-1.66	11.00	Pass
54	5270	-3.78	0.39	-3.39	11.00	Pass
62	5310	-1.64	0.39	-1.25	11.00	Pass
102	5510	-2.35	0.39	-1.96	11.00	Pass
110	5550	-2.34	0.39	-1.95	11.00	Pass
134	5670	-2.39	0.39	-2.00	11.00	Pass
142 (UNII-2C Band)	5710	-1.34	0.39	-0.95	11.00	Pass

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

802.11ac (VHT80)

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
42	5210	-5.03	0.73	-4.29	11.00	Pass
58	5290	-6.45	0.73	-5.72	11.00	Pass
106	5530	-5.69	0.73	-4.96	11.00	Pass
122	5610	-4.90	0.73	-4.17	11.00	Pass
138 (UNII-2C Band)	5690	-5.48	0.73	-4.75	11.00	Pass

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

Spectrum Plot of Worst Value	
802.11a / CH36	**802.11ac (VHT20) / CH36**
	
802.11ac (VHT40) / CH142 (UNII-2C)	**802.11ac (VHT80) / 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 (U-NII-3 Band)	5720	-8.22	-6.00	0.37	-5.63	30.00	Pass
149	5745	-7.23	-5.01	0.37	-4.64	30.00	Pass
157	5785	-7.39	-5.17	0.37	-4.80	30.00	Pass
165	5825	-8.20	-5.98	0.37	-5.61	30.00	Pass

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

802.11ac (VHT20)

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 (U-NII-3 Band)	5720	-9.52	-7.30	0.47	-6.83	30.00	Pass
149	5745	-8.23	-6.01	0.47	-5.54	30.00	Pass
157	5785	-8.09	-5.87	0.47	-5.40	30.00	Pass
165	5825	-9.02	-6.80	0.47	-6.33	30.00	Pass

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

802.11ac (VHT40)

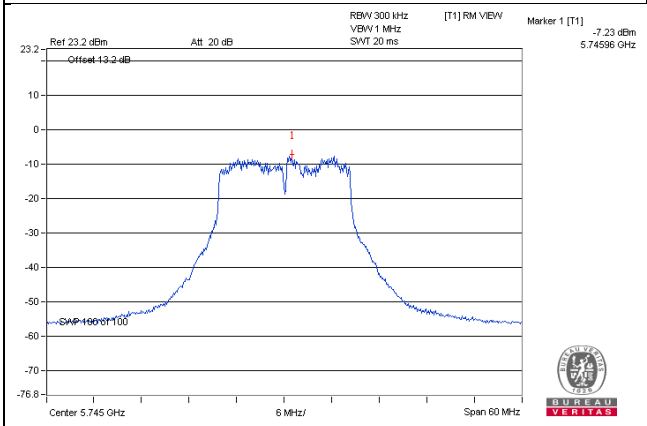
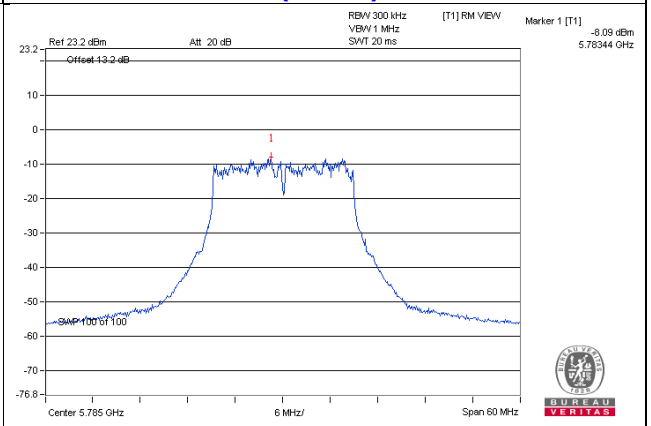
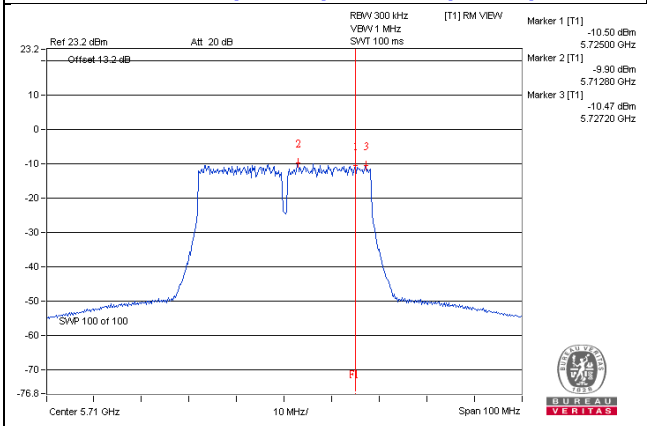
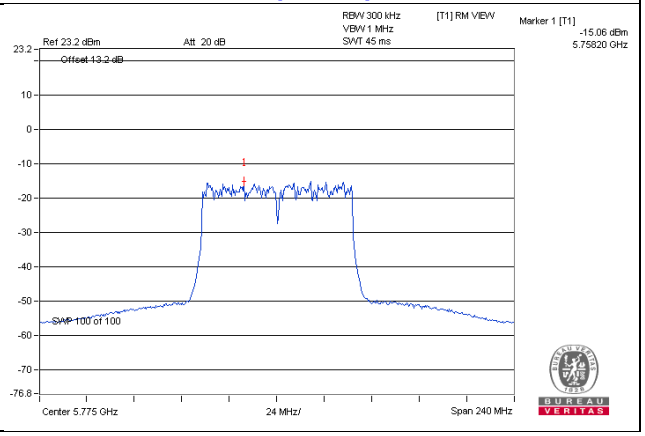
Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		(dBm/300kHz)	(dBm/500kHz)				
142 (U-NII-3 Band)	5710	-10.47	-8.25	0.39	-7.86	30.00	Pass
151	5755	-11.10	-8.88	0.39	-8.49	30.00	Pass
159	5795	-11.19	-8.97	0.39	-8.58	30.00	Pass

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

802.11ac (VHT80)

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)				
138 (U-NII-3 Band)	5690	-15.11	-12.89	0.73	-12.16	30.00	Pass
155	5775	-15.06	-12.84	0.73	-12.11	30.00	Pass

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

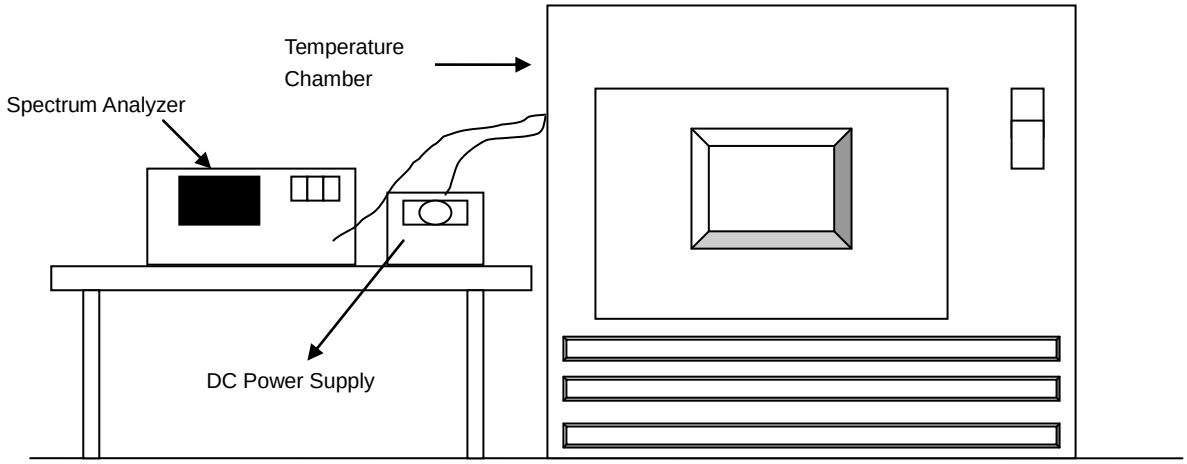
Spectrum Plot of Worst Value	
802.11a / CH149	**802.11ac (VHT20) / CH157**
	
802.11ac (VHT40) / CH142 (UNII-3)	**802.11ac (VHT80) / CH155**
	

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	3.6	5180.0271	PASS	5180.0252	PASS	5180.0276	PASS	5180.0238	PASS
40	3.6	5179.9949	PASS	5179.9921	PASS	5179.9943	PASS	5179.9906	PASS
30	3.6	5180.0103	PASS	5180.0119	PASS	5180.0111	PASS	5180.0077	PASS
20	3.6	5180.023	PASS	5180.0204	PASS	5180.0227	PASS	5180.024	PASS
10	3.6	5180.0224	PASS	5180.0225	PASS	5180.0217	PASS	5180.0189	PASS
0	3.6	5180.0056	PASS	5180.009	PASS	5180.0049	PASS	5180.0089	PASS
-10	3.6	5180.0077	PASS	5180.0062	PASS	5180.0065	PASS	5180.0088	PASS
-20	3.6	5180.0219	PASS	5180.0256	PASS	5180.0229	PASS	5180.0238	PASS
-30	3.6	5180.0208	PASS	5180.0204	PASS	5180.0208	PASS	5180.0201	PASS

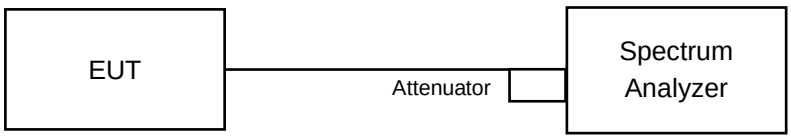
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	4.14	5180.0237	PASS	5180.0207	PASS	5180.0218	PASS	5180.0249	PASS
	3.6	5180.023	PASS	5180.0204	PASS	5180.0227	PASS	5180.024	PASS
	3.3	5180.023	PASS	5180.02	PASS	5180.0234	PASS	5180.0235	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	3.22	0.5	PASS
149	5745	16.44	0.5	PASS
157	5785	16.42	0.5	PASS
165	5825	16.41	0.5	PASS

802.11ac (VHT20)

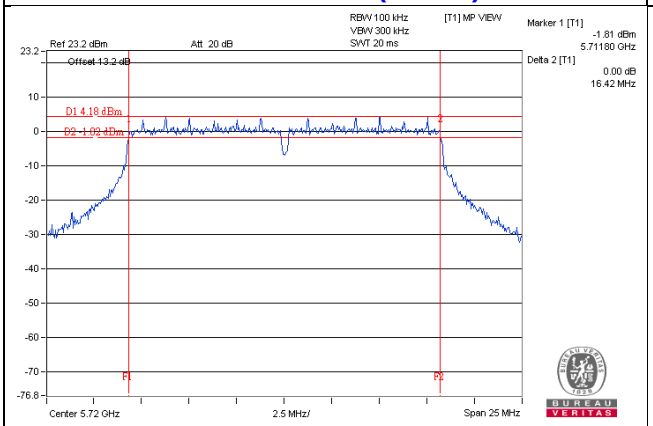
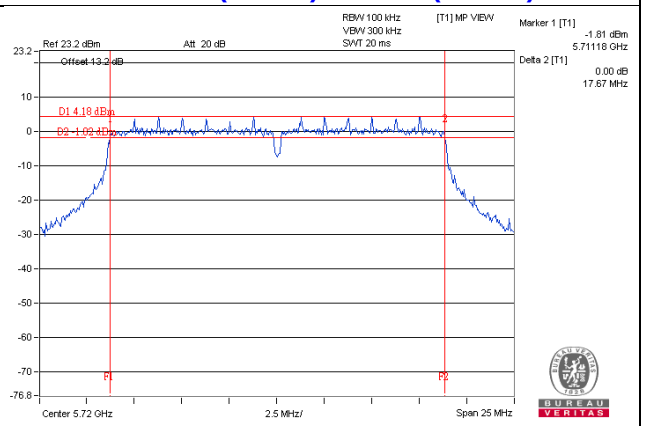
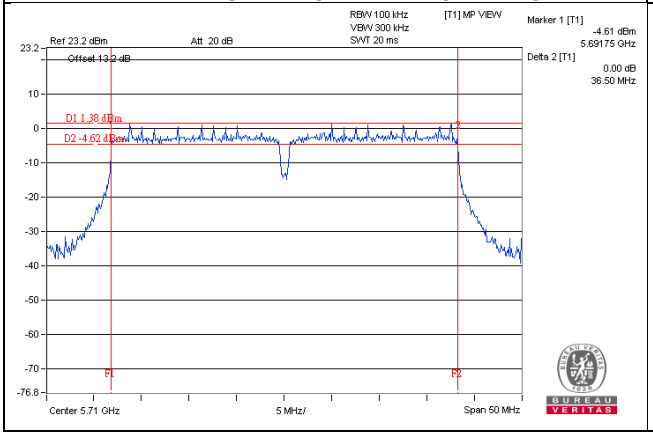
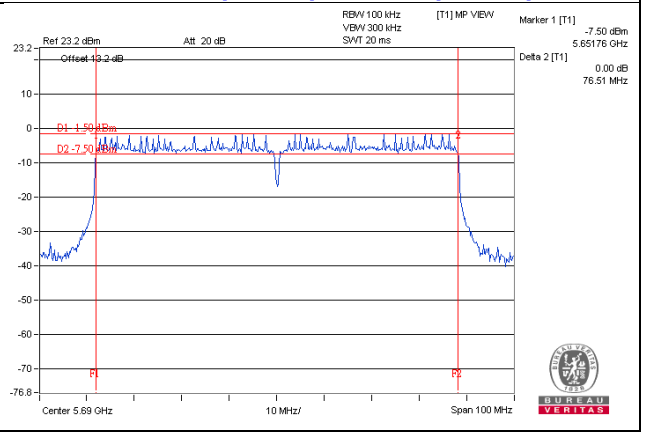
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144 (UNII-3 Band)	5720	3.85	0.5	PASS
149	5745	17.68	0.5	PASS
157	5785	17.68	0.5	PASS
165	5825	17.66	0.5	PASS

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142 (UNII-3 Band)	5710	3.25	0.5	PASS
151	5755	36.42	0.5	PASS
159	5795	36.49	0.5	PASS

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138 (UNII-3 Band)	5690	3.27	0.5	PASS
155	5775	76.40	0.5	PASS

Spectrum Plot of Worst Value	
802.11a / CH144 (U-NII-3)	**802.11ac (VHT20) / CH144 (U-NII-3)**
	
802.11ac (VHT40) / CH142 (U-NII-3)	**802.11ac (VHT80) / CH138 (U-NII-3)**
	

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

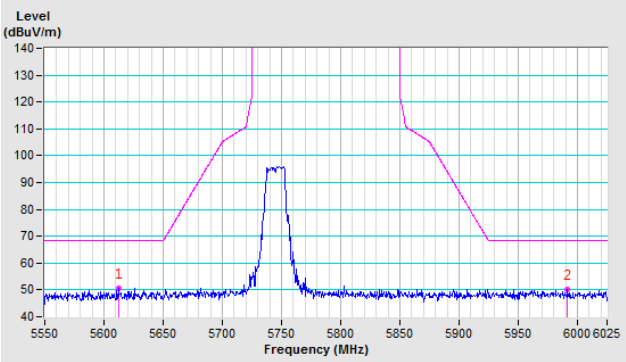
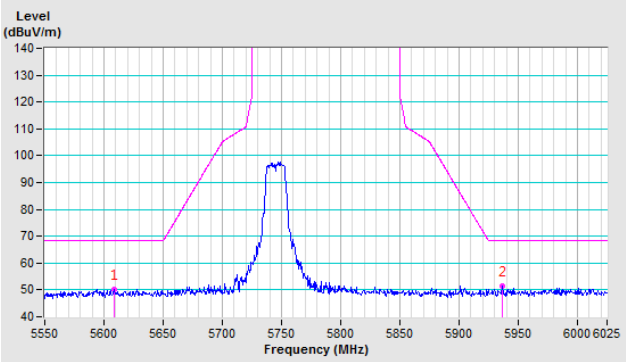
5 Pictures of Test Arrangements

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

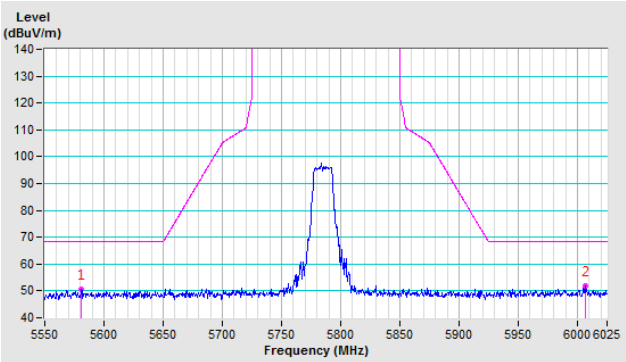
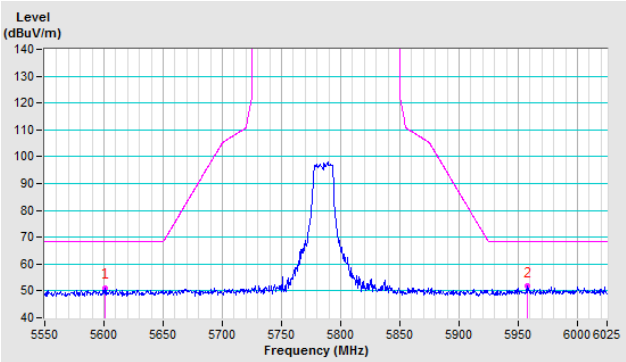
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

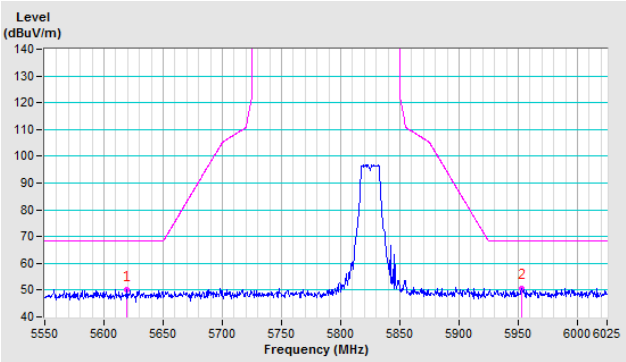
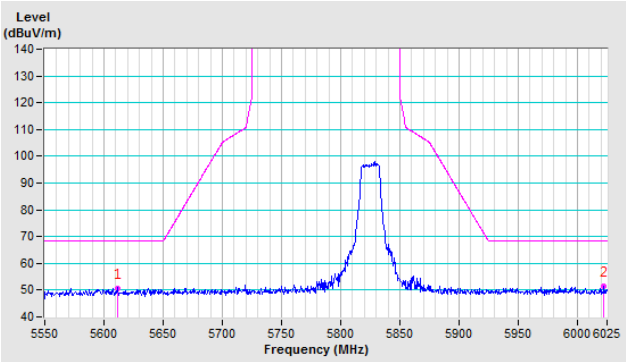
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

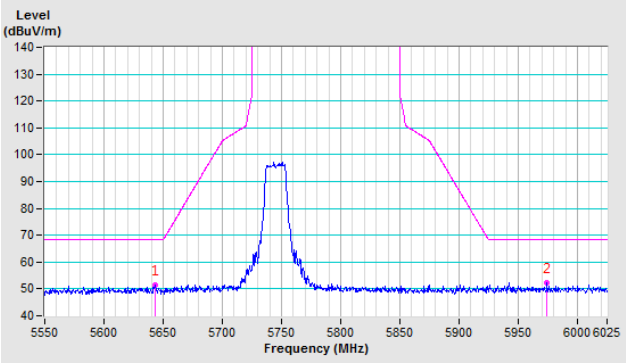
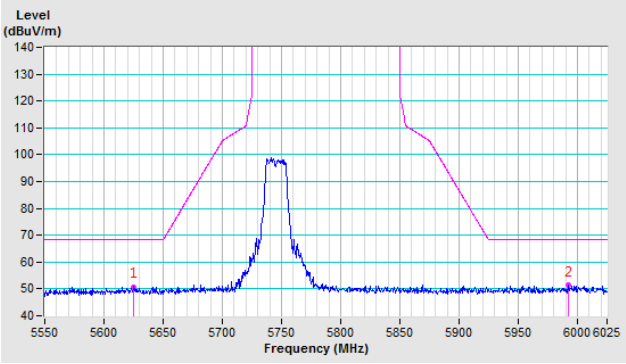
Horizontal	Vertical
	

CH 165 5825 MHz

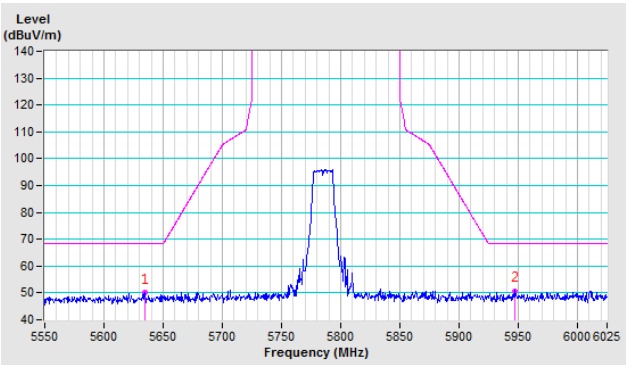
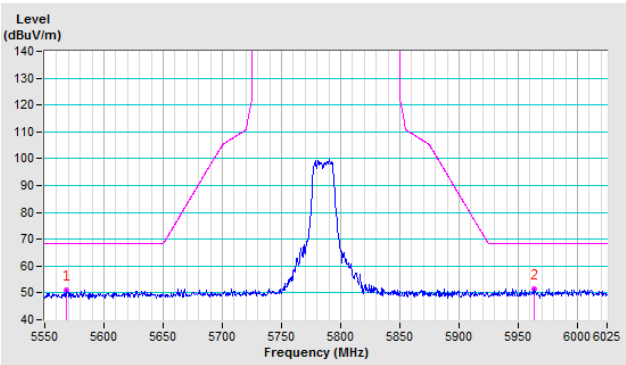
Horizontal	Vertical
	

802.11ac (VHT20)

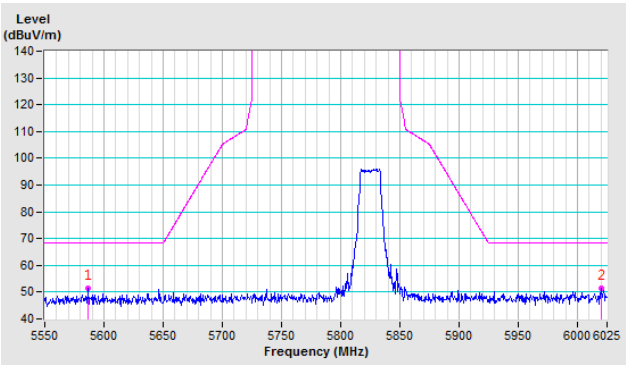
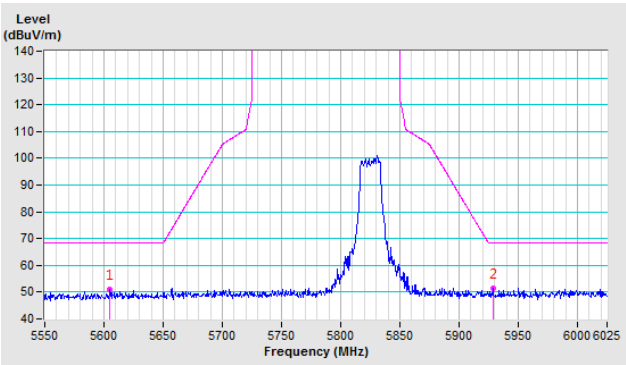
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

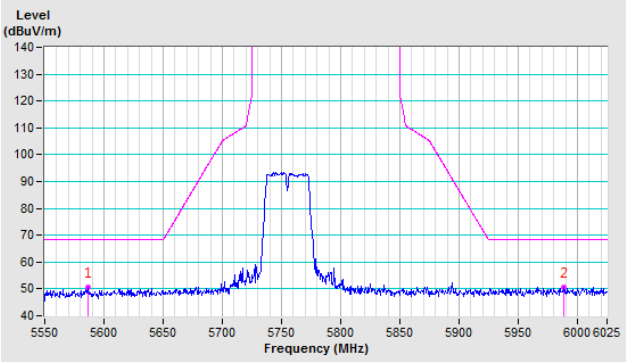
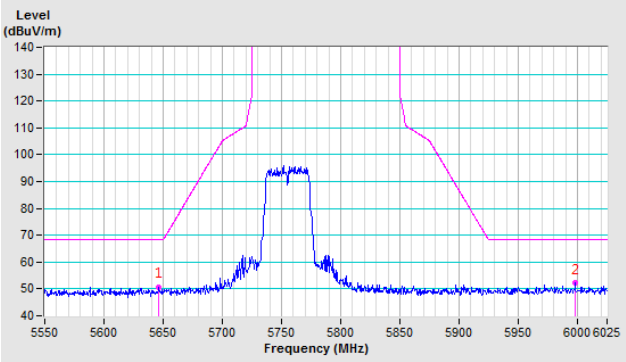
Horizontal	Vertical
	

CH 165 5825 MHz

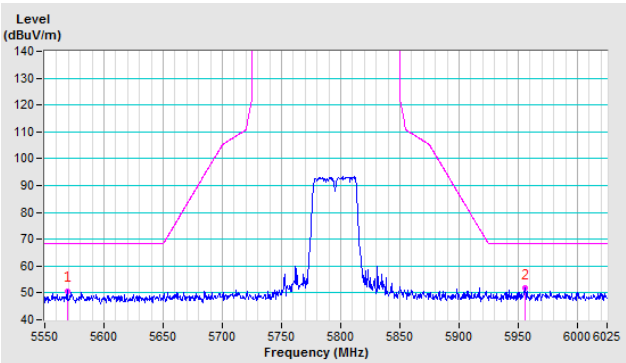
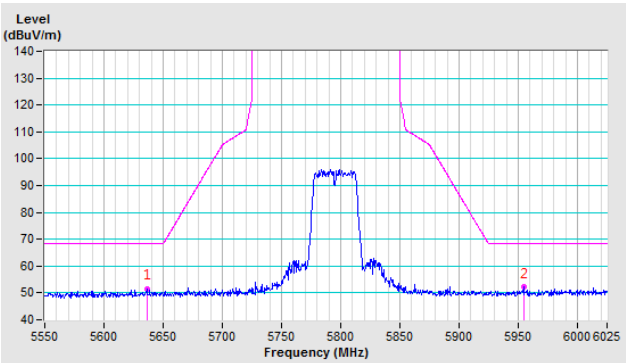
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

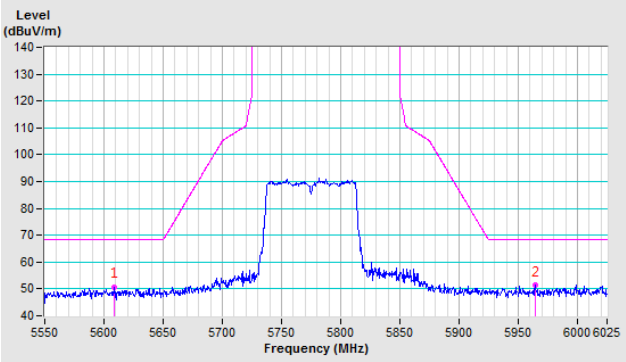
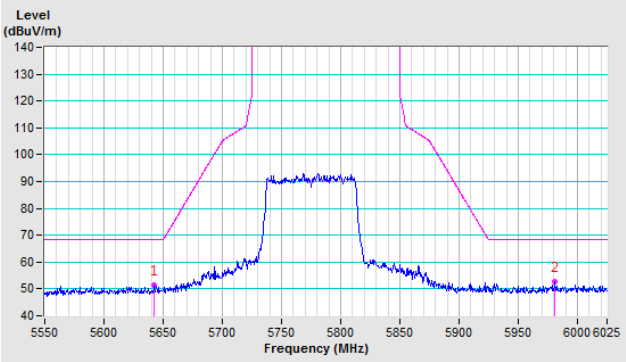
Horizontal	Vertical
	

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.

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