FCC Test Report (WLAN)

Report No.:	RF190308C34-1
FCC ID:	HD5-CN85L0N
Test Model:	CN85L0N
Received Date:	Mar. 08, 2019
Test Date:	Apr. 18 to May 02, 2019
Issued Date:	May 30, 2019
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

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Release Control Record

Issue No.	Description	Date Issued
RF190308C34-1	Original release.	May 30, 2019

1 Certificate of Conformity

Product:	Mobile computer
Brand:	Honeywell
Test Model:	CN85L0N
Sample Status:	ENGINEERING SAMPLE
Applicant:	Honeywell International Inc.
Test Date:	Apr. 18 to May 02, 2019
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Phoenix Huang , **Date:** May 30, 2019

Phoenix Huang / Specialist

Approved by : , **Date:** May 30, 2019

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	NA	Without AC power port of the EUT.
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 -2.1dB at 5725.00MHz.
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 POGO pin 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.

Note:
Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.1 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.1 dB
	6GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.2 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Mobile computer
Brand	Honeywell
Test Model	CN85L0N
Status of EUT	ENGINEERING SAMPLE
HW Version	V1.0
HW P/N	V2.0 (DVT)
Software Version	OS.02.001-HON.01.102
SW P/N	86.00.00-Debug(0633)
Power Supply Rating	3.85Vdc from battery
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18~ 5.24GHz, 5.26GHz ~ 5.32GHz, 5.50GHz ~ 5.72GHz, 5.745 ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7 **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:** 456.377 mW **5.18 ~ 5.24GHz:** 87.866 mW **5.26 ~ 5.32GHz:** 98.082 mW **5.5 ~ 5.72GHz:** 100.379 mW **5.745 ~ 5.825GHz:** 95.722 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery x 1, Touch pen x 1, Handstrap x 1
Data Cable Supplied	NA

Note:

1. There're 2 configurations for the EUT listed as below.

Item
Sample A: Scanner: N6703ER with Keypad 1 (Number) + 4G RAM
Sample B: Scanner: N6703ER with Keypad 2 (Letter) + 4G RAM
Note: From the above samples, the **Sample B** was selected for the test and its data was recorded in this report.

2. There are WLAN, Bluetooth, Zigbee and NFC technology used for the EUT. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3	Radio 4
WLAN+BT 1	Zigbee+BT 2	NFC	Wireless charger (Rx)
Note: For Bluetooth technology the Radio 1 support BT 5.0 dual mode, the Radio 2 support BT-LE (4.2) single mode only.			

3. Simultaneously transmission condition.

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

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

Brand	Model No.	Spec.
Inventus Power, Inc. / Honeywell	CW-BAT	3.85Vdc, 5800mAh, 22.3Wh

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

Radio 1					
WLAN Antenna Spec. / Bluetooth Antenna No. 1 Spec.					
Chain No.	Antenna Gain include trace loss (dBi)	Frequency range (GHz)	Antenna type	Connector type	Trace loss (dB)
Chain 0	0.4	2.4~2.4835	PIFA	POGO pin	1.4
	1.62	5.15~5.25			2
	1.62	5.25~5.35			2
	1.15	5.47~5.725			2.4
	1.15	5.725~5.85			2.4
Chain 1	1.7	2.4~2.4835	PIFA	POGO pin	0.3
	1.3	5.15~5.25			0.9
	1.3	5.25~5.35			0.9
	2	5.47~5.725			0.9
	2	5.725~5.85			0.9
Radio 2					
Bluetooth Antenna No. 2 Spec. / Zigbee Antenna Spec.					
Antenna Gain include trace loss (dBi)	Frequency range (GHz)	Antenna type	Connector type	Trace loss (dB)	
-0.1	2.4~2.4835	PIFA	POGO pin	0.5	
Radio 3					
NFC Antenna Spec.					
Frequency range (MHz)	Antenna type	Connector type			
13~14	Loop	NA			

6. The EUT incorporates a MIMO function.

2.4GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11b	2TX	2RX
802.11g	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
VHT20	2TX	2RX
VHT40	2TX	2RX
5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report.		

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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

Note:
1. No need to concern of Conducted Emission due to the EUT is powered by battery.
2. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane (below 1GHz) & X-plane (above 1GHz)**.

Radiated Emission Test (Above 1GHz):

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

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

Radiated Emission Test (Below 1GHz):

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

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

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:

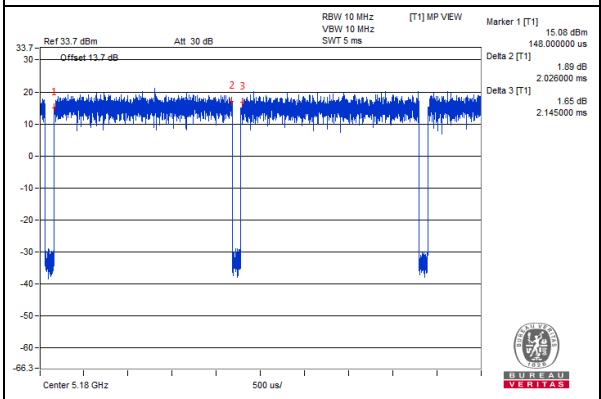
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	24deg. C, 71%RH	3.85Vdc	Andy Ho
	24deg. C, 68%RH	3.85Vdc	Andy Ho
RE<1G	23deg. C, 68%RH	3.85Vdc	Andy Ho
APCM	25deg. C, 60%RH	3.85Vdc	Anderson Chen

3.3 Duty Cycle of Test Signal

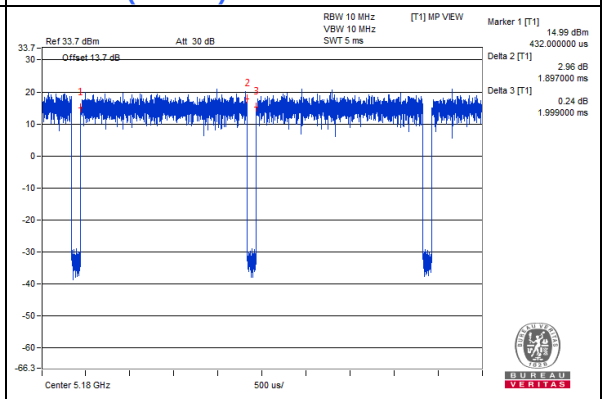
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 2.026 ms/2.145 ms = 0.945, Duty factor = 10 * log (1/Duty cycle) = 0.25
802.11ac (VHT20): Duty cycle = 1.897 ms/1.999 ms = 0.949, Duty factor = 10 * log (1/Duty cycle) = 0.23
802.11ac (VHT40): Duty cycle = 0.934 ms/1.025 ms = 0.911, Duty factor = 10 * log (1/Duty cycle) = 0.4
802.11ac (VHT80): Duty cycle = 0.595 ms/0.684 ms = 0.87, Duty factor = 10 * log (1/Duty cycle) = 0.61

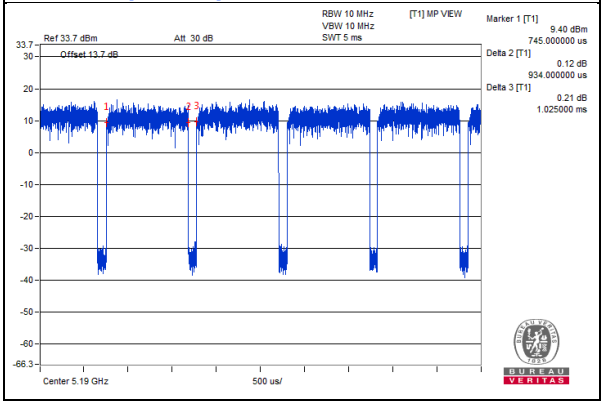
802.11a



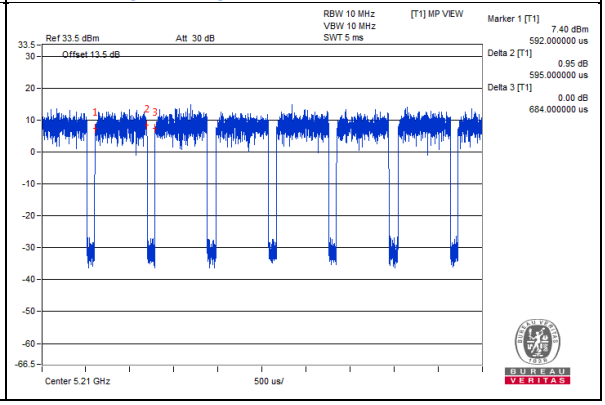
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

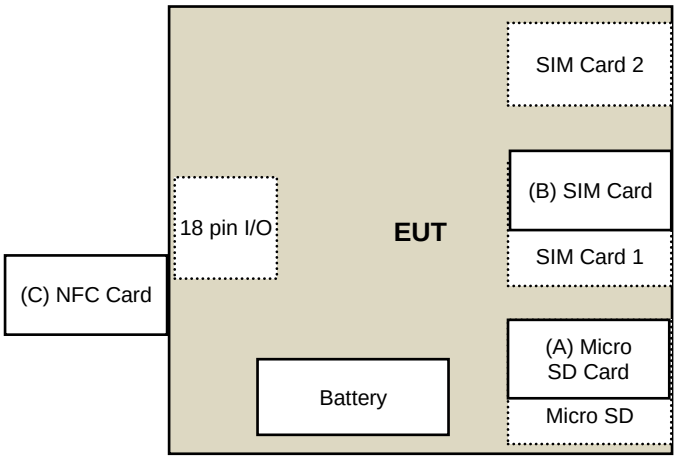


3.4 Description of Support Units

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.	MicroSD Card	Transcend	NA	NA	NA	Provided by Lab
B.	SIM Card	R&S	CRT-Z3	NA	NA	Provided by Lab
C.	NFC Card	UGSI	NA	NA	NA	Supplied by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

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

Note:

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

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Jan. 25, 2019	Jan. 24, 2020
Loop Antenna Electro-Metrics	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
RF Cable	NA	LOOPCAB-001	Jan. 14, 2019	Jan. 13, 2020
RF Cable	NA	LOOPCAB-002	Jan. 14, 2019	Jan. 13, 2020
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-3-1	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-2	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-3	Mar. 18, 2019	Mar. 17, 2020
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-1200	160922	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-2000	180601	June 12, 2018	June 11, 2019
RF Cable	EMC104-SM-SM-6000	180602	June 12, 2018	June 11, 2019
Spectrum Analyzer Keysight	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 28, 2019	Jan. 27, 2020
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160924	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC102-KM-KM-1200	160925	Jan. 28, 2019	Jan. 27, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 09, 2019	Jan. 08, 2020
True RMS Clamp Meter FLUKE	325	31130711WS	May 22, 2018	May 21, 2019

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: Apr. 18 to May 02, 2019

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

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

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

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

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

Note:

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

For Radiated emission above 30MHz

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

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

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

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

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

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

Note:

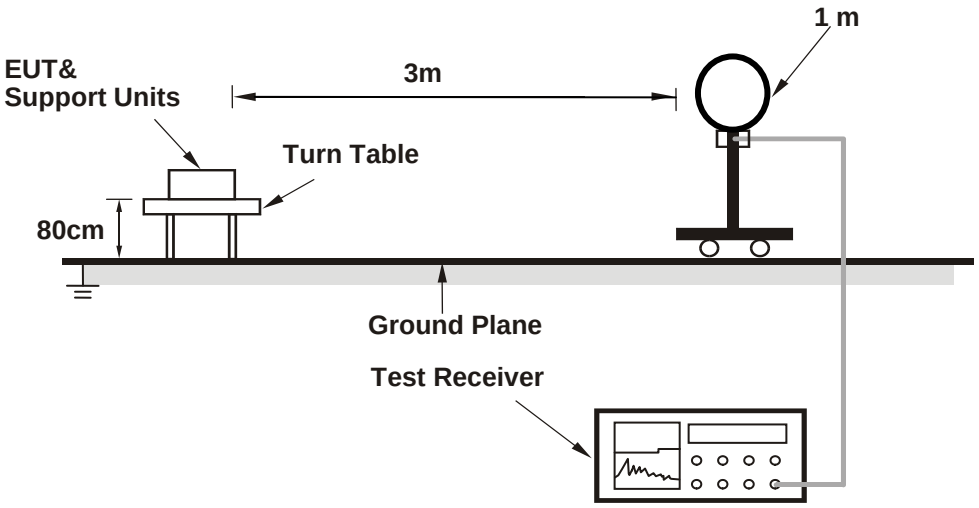
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

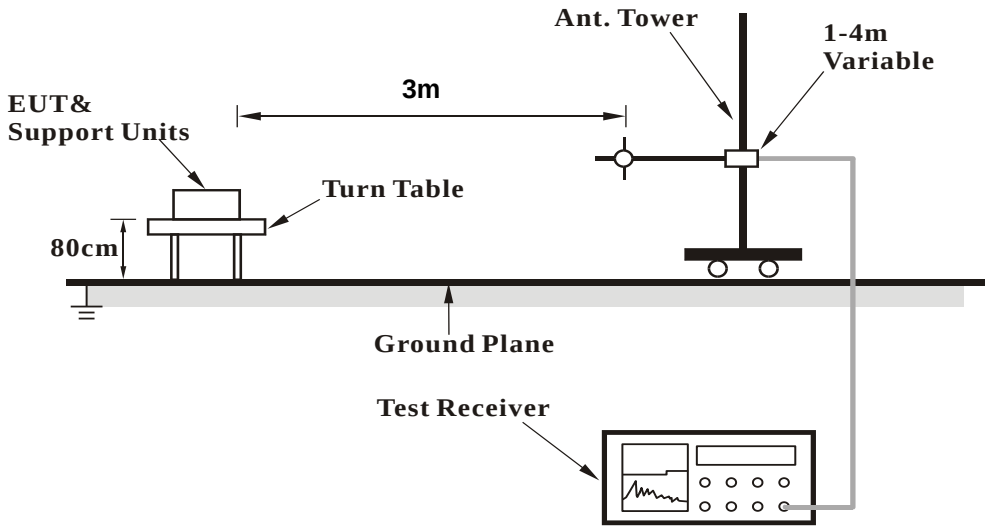
No deviation.

4.1.5 Test Setup

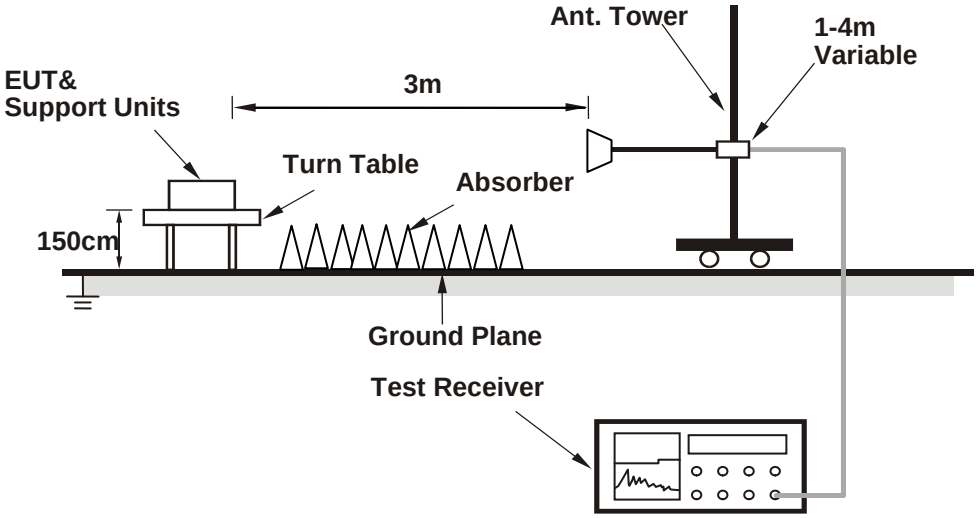
For Radiated emission below 30MHz



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. Placed the EUT on the testing table.
b. Controlling software (QRCT_V3.0.298.0) has been activated to set the EUT under transmission condition continuously.

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	54.3 PK	74.0	-19.7	1.30 H	16	51.2	3.1
2	5150.00	39.9 AV	54.0	-14.1	1.30 H	16	36.8	3.1
3	*5180.00	106.4 PK			1.22 H	22	103.3	3.1
4	*5180.00	95.8 AV			1.22 H	22	92.7	3.1
5	#10360.00	47.0 PK	68.2	-21.2	1.44 H	288	34.7	12.3
6	15540.00	46.1 PK	74.0	-27.9	1.26 H	137	33.1	13.0
7	15540.00	34.5 AV	54.0	-19.5	1.26 H	137	21.5	13.0
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	58.5 PK	74.0	-15.5	1.19 V	168	55.4	3.1
2	5150.00	40.3 AV	54.0	-13.7	1.19 V	168	37.2	3.1
3	*5180.00	105.3 PK			1.19 V	168	102.2	3.1
4	*5180.00	96.7 AV			1.19 V	168	93.6	3.1
5	#10360.00	46.9 PK	68.2	-21.3	1.93 V	318	34.6	12.3
6	15540.00	45.9 PK	74.0	-28.1	1.37 V	267	32.9	13.0
7	15540.00	35.2 AV	54.0	-18.8	1.37 V	267	22.2	13.0

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	46.5 PK	74.0	-27.5	1.51 H	149	43.4	3.1
2	5150.00	35.7 AV	54.0	-18.3	1.51 H	149	32.6	3.1
3	*5200.00	102.1 PK			1.51 H	149	99.1	3.0
4	*5200.00	94.1 AV			1.51 H	149	91.1	3.0
5	#10400.00	47.2 PK	68.2	-21.0	1.49 H	287	34.5	12.7
6	15600.00	45.7 PK	74.0	-28.3	1.33 H	161	32.2	13.5
7	15600.00	34.4 AV	54.0	-19.6	1.33 H	161	20.9	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	5150.00	51.5 PK	74.0	-22.5	1.19 V	191	48.4	3.1
2	5150.00	38.4 AV	54.0	-15.6	1.19 V	191	35.3	3.1
3	*5200.00	105.2 PK			1.19 V	191	102.2	3.0
4	*5200.00	96.7 AV			1.19 V	191	93.7	3.0
5	#10400.00	47.6 PK	68.2	-20.6	1.91 V	278	34.9	12.7
6	15600.00	46.7 PK	74.0	-27.3	1.37 V	267	33.2	13.5
7	15600.00	35.6 AV	54.0	-18.4	1.37 V	267	22.1	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) 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	102.8 PK			1.51 H	158	100.1	2.7
2	*5240.00	94.8 AV			1.51 H	158	92.1	2.7
3	5350.00	46.1 PK	74.0	-27.9	1.51 H	158	43.2	2.9
4	5350.00	36.3 AV	54.0	-17.7	1.51 H	158	33.4	2.9
5	#10480.00	46.2 PK	68.2	-22.0	1.47 H	281	33.7	12.5
6	15720.00	45.9 PK	74.0	-28.1	1.31 H	142	33.4	12.5
7	15720.00	34.2 AV	54.0	-19.8	1.31 H	142	21.7	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.5 PK			1.23 V	169	102.8	2.7
2	*5240.00	97.0 AV			1.23 V	169	94.3	2.7
3	5350.00	50.2 PK	74.0	-23.8	1.23 V	169	47.3	2.9
4	5350.00	37.9 AV	54.0	-16.1	1.23 V	169	35.0	2.9
5	#10480.00	47.8 PK	68.2	-20.4	1.95 V	303	35.3	12.5
6	15720.00	46.1 PK	74.0	-27.9	1.40 V	291	33.6	12.5
7	15720.00	35.0 AV	54.0	-19.0	1.40 V	291	22.5	12.5

REMARKS:

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

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) 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	49.5 PK	74.0	-24.5	1.49 H	148	46.4	3.1
2	5150.00	47.6 AV	54.0	-6.4	1.49 H	148	44.5	3.1
3	*5260.00	106.2 PK			1.49 H	148	103.6	2.6
4	*5260.00	97.4 AV			1.49 H	148	94.8	2.6
5	#10520.00	48.2 PK	68.2	-20.0	1.47 H	287	35.8	12.4
6	15780.00	46.8 PK	74.0	-27.2	1.21 H	177	34.7	12.1
7	15780.00	35.4 AV	54.0	-18.6	1.21 H	177	23.3	12.1
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	57.5 PK	74.0	-16.5	1.44 V	181	54.4	3.1
2	5150.00	49.6 AV	54.0	-4.4	1.44 V	181	46.5	3.1
3	*5260.00	108.7 PK			1.44 V	181	106.1	2.6
4	*5260.00	99.5 AV			1.44 V	181	96.9	2.6
5	#10520.00	48.2 PK	68.2	-20.0	1.90 V	305	35.8	12.4
6	15780.00	47.1 PK	74.0	-26.9	1.42 V	288	35.0	12.1
7	15780.00	36.2 AV	54.0	-17.8	1.42 V	288	24.1	12.1

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	106.4 PK			1.54 H	130	103.7	2.7
2	*5300.00	98.0 AV			1.54 H	130	95.3	2.7
3	5350.00	52.9 PK	74.0	-21.1	1.54 H	130	50.0	2.9
4	5350.00	40.3 AV	54.0	-13.7	1.54 H	130	37.4	2.9
5	10600.00	47.5 PK	74.0	-26.5	1.51 H	278	35.2	12.3
6	10600.00	34.3 AV	54.0	-19.7	1.51 H	278	22.0	12.3
7	15900.00	46.6 PK	74.0	-27.4	1.21 H	153	34.6	12.0
8	15900.00	35.7 AV	54.0	-18.3	1.21 H	153	23.7	12.0
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	*5300.00	109.5 PK			1.31 V	190	106.8	2.7
2	*5300.00	100.6 AV			1.31 V	190	97.9	2.7
3	5350.00	58.1 PK	74.0	-15.9	1.31 V	190	55.2	2.9
4	5350.00	43.0 AV	54.0	-11.0	1.31 V	190	40.1	2.9
5	10600.00	49.3 PK	74.0	-24.7	2.03 V	300	37.0	12.3
6	10600.00	35.6 AV	54.0	-18.4	2.03 V	300	23.3	12.3
7	15900.00	47.5 PK	74.0	-26.5	1.31 V	278	35.5	12.0
8	15900.00	36.9 AV	54.0	-17.1	1.31 V	278	24.9	12.0

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.5 PK			1.50 H	160	103.8	2.7
2	*5320.00	98.1 AV			1.50 H	160	95.4	2.7
3	5350.00	63.2 PK	74.0	-10.8	1.50 H	160	60.3	2.9
4	5350.00	48.4 AV	54.0	-5.6	1.50 H	160	45.5	2.9
5	10640.00	47.7 PK	74.0	-26.3	1.42 H	287	35.5	12.2
6	10640.00	33.7 AV	54.0	-20.3	1.42 H	287	21.5	12.2
7	15960.00	46.3 PK	74.0	-27.7	1.27 H	167	34.0	12.3
8	15960.00	35.2 AV	54.0	-18.8	1.27 H	167	22.9	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.2 PK			1.33 V	184	106.5	2.7
2	*5320.00	100.1 AV			1.33 V	184	97.4	2.7
3	5350.00	67.5 PK	74.0	-6.5	1.33 V	184	64.6	2.9
4	5350.00	50.3 AV	54.0	-3.7	1.33 V	184	47.4	2.9
5	10640.00	48.4 PK	74.0	-25.6	1.93 V	326	36.2	12.2
6	10640.00	34.7 AV	54.0	-19.3	1.93 V	326	22.5	12.2
7	15960.00	47.3 PK	74.0	-26.7	1.30 V	256	35.0	12.3
8	15960.00	36.4 AV	54.0	-17.6	1.30 V	256	24.1	12.3

REMARKS:

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

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) 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	5460.00	57.3 PK	74.0	-16.7	1.47 H	155	54.1	3.2
2	5460.00	40.6 AV	54.0	-13.4	1.47 H	155	37.4	3.2
3	#5470.00	59.8 PK	68.2	-8.4	1.47 H	155	56.6	3.2
4	*5500.00	106.0 PK			1.47 H	155	102.9	3.1
5	*5500.00	97.2 AV			1.47 H	155	94.1	3.1
6	11000.00	47.9 PK	74.0	-26.1	1.51 H	271	34.9	13.0
7	11000.00	34.3 AV	54.0	-19.7	1.51 H	271	21.3	13.0
8	#16500.00	46.9 PK	68.2	-21.3	1.24 H	164	32.6	14.3
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	5460.00	61.4 PK	74.0	-12.6	1.36 V	175	58.2	3.2
2	5460.00	42.7 AV	54.0	-11.3	1.36 V	175	39.5	3.2
3	#5470.00	64.0 PK	68.2	-4.2	1.36 V	175	60.8	3.2
4	*5500.00	108.0 PK			1.36 V	175	104.9	3.1
5	*5500.00	99.0 AV			1.36 V	175	95.9	3.1
6	11000.00	48.2 PK	74.0	-25.8	1.83 V	298	35.2	13.0
7	11000.00	34.5 AV	54.0	-19.5	1.83 V	298	21.5	13.0
8	#16500.00	47.4 PK	68.2	-20.8	1.36 V	277	33.1	14.3

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	105.5 PK			1.46 H	145	102.3	3.2
2	*5580.00	96.6 AV			1.46 H	145	93.4	3.2
3	11160.00	46.8 PK	74.0	-27.2	1.45 H	261	34.3	12.5
4	11160.00	33.7 AV	54.0	-20.3	1.45 H	261	21.2	12.5
5	#16740.00	46.2 PK	68.2	-22.0	1.23 H	165	31.3	14.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.0 PK			1.31 V	170	104.8	3.2
2	*5580.00	98.7 AV			1.31 V	170	95.5	3.2
3	11160.00	48.3 PK	74.0	-25.7	2.00 V	323	35.8	12.5
4	11160.00	34.9 AV	54.0	-19.1	2.00 V	323	22.4	12.5
5	#16740.00	47.2 PK	68.2	-21.0	1.30 V	274	32.3	14.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.7 PK			1.56 H	173	100.3	3.4
2	*5700.00	95.1 AV			1.56 H	173	91.7	3.4
3	#5725.00	61.4 PK	68.2	-6.8	1.56 H	173	58.0	3.4
4	11400.00	47.0 PK	74.0	-27.0	1.50 H	274	33.9	13.1
5	11400.00	33.6 AV	54.0	-20.4	1.50 H	274	20.5	13.1
6	#17100.00	46.7 PK	68.2	-21.5	1.17 H	169	30.0	16.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.4 PK			1.09 V	180	104.0	3.4
2	*5700.00	97.9 AV			1.09 V	180	94.5	3.4
3	#5725.00	65.7 PK	68.2	-2.5	1.09 V	180	62.3	3.4
4	11400.00	48.2 PK	74.0	-25.8	2.03 V	322	35.1	13.1
5	11400.00	34.7 AV	54.0	-19.3	2.03 V	322	21.6	13.1
6	#17100.00	47.2 PK	68.2	-21.0	1.31 V	272	30.5	16.7

REMARKS:

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

CHANNEL	TX Channel 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	5460.00	46.4 PK	74.0	-27.6	1.46 H	151	43.2	3.2
2	5460.00	35.1 AV	54.0	-18.9	1.46 H	151	31.9	3.2
3	#5470.00	44.9 PK	68.2	-23.3	1.46 H	151	41.7	3.2
4	*5720.00	105.5 PK			1.46 H	151	102.1	3.4
5	*5720.00	96.3 AV			1.46 H	151	92.9	3.4
6	#5850.00	46.5 PK	68.2	-21.7	1.46 H	151	42.7	3.8
7	11440.00	47.6 PK	74.0	-26.4	1.44 H	293	34.5	13.1
8	11440.00	34.6 AV	54.0	-19.4	1.44 H	293	21.5	13.1
9	#17160.00	46.2 PK	68.2	-22.0	1.09 H	194	29.7	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	5460.00	48.6 PK	74.0	-25.4	1.03 V	171	45.4	3.2
2	5460.00	36.4 AV	54.0	-17.6	1.03 V	171	33.2	3.2
3	#5470.00	49.5 PK	68.2	-18.7	1.03 V	171	46.3	3.2
4	*5720.00	108.7 PK			1.03 V	171	105.3	3.4
5	*5720.00	98.9 AV			1.03 V	171	95.5	3.4
6	#5850.00	50.5 PK	68.2	-17.7	1.03 V	171	46.7	3.8
7	11440.00	48.3 PK	74.0	-25.7	1.86 V	301	35.2	13.1
8	11440.00	35.8 AV	54.0	-18.2	1.86 V	301	22.7	13.1
9	#17160.00	46.9 PK	68.2	-21.3	1.38 V	264	30.4	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5594.40	50.6 PK	68.2	-17.6	2.66 H	128	47.3	3.3
2	*5745.00	105.9 PK			1.46 H	147	102.4	3.5
3	*5745.00	96.9 AV			1.46 H	147	93.4	3.5
4	#5942.59	50.3 PK	68.2	-17.9	2.66 H	128	46.1	4.2
5	11490.00	46.0 PK	74.0	-28.0	1.51 H	26	33.0	13.0
6	11490.00	34.4 AV	54.0	-19.6	1.51 H	26	21.4	13.0
7	#17235.00	51.4 PK	68.2	-16.8	1.38 H	191	35.2	16.2
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	#5616.77	50.1 PK	68.2	-18.1	1.46 V	147	46.8	3.3
2	*5745.00	108.9 PK			1.02 V	161	105.4	3.5
3	*5745.00	99.0 AV			1.02 V	161	95.5	3.5
4	#5998.34	49.6 PK	68.2	-18.6	1.46 V	147	45.5	4.1
5	11490.00	48.9 PK	74.0	-25.1	1.90 V	69	35.9	13.0
6	11490.00	37.6 AV	54.0	-16.4	1.90 V	69	24.6	13.0
7	#17235.00	50.7 PK	68.2	-17.5	1.49 V	166	34.5	16.2

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) 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	#5622.59	49.5 PK	68.2	-18.7	1.14 H	172	46.2	3.3
2	*5785.00	105.2 PK			1.18 H	155	101.5	3.7
3	*5785.00	96.2 AV			1.18 H	155	92.5	3.7
4	#5977.94	47.4 PK	68.2	-20.8	1.14 H	172	43.3	4.1
5	11570.00	48.2 PK	74.0	-25.8	1.49 H	285	35.5	12.7
6	11570.00	34.9 AV	54.0	-19.1	1.49 H	285	22.2	12.7
7	#17355.00	46.2 PK	68.2	-22.0	1.27 H	185	29.5	16.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.38	50.2 PK	68.2	-18.0	1.18 V	155	46.9	3.3
2	*5785.00	108.0 PK			1.14 V	172	104.3	3.7
3	*5785.00	98.5 AV			1.14 V	172	94.8	3.7
4	#5945.82	51.1 PK	68.2	-17.1	1.18 V	155	46.9	4.2
5	11570.00	48.1 PK	74.0	-25.9	2.01 V	298	35.4	12.7
6	11570.00	35.2 AV	54.0	-18.8	2.01 V	298	22.5	12.7
7	#17355.00	47.4 PK	68.2	-20.8	1.27 V	263	30.7	16.7

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) 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	#5634.11	50.4 PK	68.2	-17.8	1.15 H	150	47.1	3.3
2	*5825.00	104.9 PK			1.14 H	156	101.2	3.7
3	*5825.00	96.0 AV			1.14 H	156	92.3	3.7
4	#5971.54	49.7 PK	68.2	-18.5	1.15 H	150	45.6	4.1
5	11650.00	46.9 PK	74.0	-27.1	1.47 H	272	34.2	12.7
6	11650.00	33.9 AV	54.0	-20.1	1.47 H	272	21.2	12.7
7	#17475.00	46.5 PK	68.2	-21.7	1.20 H	153	28.5	18.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.73	50.5 PK	68.2	-17.7	1.14 V	156	47.2	3.3
2	*5825.00	108.0 PK			1.15 V	150	104.3	3.7
3	*5825.00	98.4 AV			1.15 V	150	94.7	3.7
4	#5980.73	49.5 PK	68.2	-18.7	1.14 V	156	45.4	4.1
5	11650.00	48.6 PK	74.0	-25.4	1.97 V	297	35.9	12.7
6	11650.00	35.3 AV	54.0	-18.7	1.97 V	297	22.6	12.7
7	#17475.00	47.0 PK	68.2	-21.2	1.43 V	266	29.0	18.0

REMARKS:

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

802.11ac (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	56.4 PK	74.0	-17.6	1.57 H	162	53.3	3.1
2	5150.00	38.8 AV	54.0	-15.2	1.57 H	162	35.7	3.1
3	*5180.00	102.9 PK			1.57 H	162	99.8	3.1
4	*5180.00	94.1 AV			1.57 H	162	91.0	3.1
5	#10360.00	46.0 PK	68.2	-22.2	1.48 H	240	33.7	12.3
6	15540.00	45.4 PK	74.0	-28.6	1.31 H	155	32.4	13.0
7	15540.00	34.0 AV	54.0	-20.0	1.31 H	155	21.0	13.0
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	60.0 PK	74.0	-14.0	1.37 V	186	56.9	3.1
2	5150.00	40.5 AV	54.0	-13.5	1.37 V	186	37.4	3.1
3	*5180.00	105.0 PK			1.37 V	186	101.9	3.1
4	*5180.00	95.6 AV			1.37 V	186	92.5	3.1
5	#10360.00	47.6 PK	68.2	-20.6	1.94 V	279	35.3	12.3
6	15540.00	45.7 PK	74.0	-28.3	1.36 V	266	32.7	13.0
7	15540.00	34.4 AV	54.0	-19.6	1.36 V	266	21.4	13.0

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

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK) 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	56.1 PK	74.0	-17.9	1.57 H	153	53.0	3.1
2	5150.00	38.8 AV	54.0	-15.2	1.57 H	153	35.7	3.1
3	*5200.00	103.0 PK			1.57 H	153	100.0	3.0
4	*5200.00	93.7 AV			1.57 H	153	90.7	3.0
5	#10400.00	46.5 PK	68.2	-21.7	1.44 H	255	33.8	12.7
6	15600.00	45.0 PK	74.0	-29.0	1.22 H	164	31.5	13.5
7	15600.00	33.8 AV	54.0	-20.2	1.22 H	164	20.3	13.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	1.23 V	166	57.4	3.1
2	5150.00	41.3 AV	54.0	-12.7	1.23 V	166	38.2	3.1
3	*5200.00	106.1 PK			1.23 V	166	103.1	3.0
4	*5200.00	96.3 AV			1.23 V	166	93.3	3.0
5	#10400.00	47.1 PK	68.2	-21.1	1.97 V	298	34.4	12.7
6	15600.00	46.0 PK	74.0	-28.0	1.33 V	260	32.5	13.5
7	15600.00	35.0 AV	54.0	-19.0	1.33 V	260	21.5	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK) 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	102.8 PK			1.46 H	155	100.1	2.7
2	*5240.00	93.9 AV			1.46 H	155	91.2	2.7
3	5350.00	45.7 PK	74.0	-28.3	1.46 H	155	42.8	2.9
4	5350.00	35.6 AV	54.0	-18.4	1.46 H	155	32.7	2.9
5	#10480.00	47.2 PK	68.2	-21.0	1.49 H	285	34.7	12.5
6	15720.00	46.7 PK	74.0	-27.3	1.29 H	157	34.2	12.5
7	15720.00	34.8 AV	54.0	-19.2	1.29 H	157	22.3	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	105.9 PK			1.30 V	184	103.2	2.7
2	*5240.00	96.4 AV			1.30 V	184	93.7	2.7
3	5350.00	50.2 PK	74.0	-23.8	1.30 V	184	47.3	2.9
4	5350.00	38.2 AV	54.0	-15.8	1.30 V	184	35.3	2.9
5	#10480.00	48.2 PK	68.2	-20.0	1.92 V	312	35.7	12.5
6	15720.00	45.8 PK	74.0	-28.2	1.40 V	282	33.3	12.5
7	15720.00	34.3 AV	54.0	-19.7	1.40 V	282	21.8	12.5

REMARKS:

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

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) 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	44.1 PK	74.0	-29.9	1.53 H	151	41.0	3.1
2	5150.00	34.8 AV	54.0	-19.2	1.53 H	151	31.7	3.1
3	*5260.00	105.5 PK			1.53 H	151	102.9	2.6
4	*5260.00	96.8 AV			1.53 H	151	94.2	2.6
5	#10520.00	47.2 PK	68.2	-21.0	1.32 H	239	34.8	12.4
6	15780.00	45.8 PK	74.0	-28.2	1.13 H	194	33.7	12.1
7	15780.00	35.2 AV	54.0	-18.8	1.13 H	194	23.1	12.1
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	48.9 PK	74.0	-25.1	1.22 V	179	45.8	3.1
2	5150.00	38.0 AV	54.0	-16.0	1.22 V	179	34.9	3.1
3	*5260.00	108.7 PK			1.22 V	179	106.1	2.6
4	*5260.00	99.3 AV			1.22 V	179	96.7	2.6
5	#10520.00	48.7 PK	68.2	-19.5	1.97 V	318	36.3	12.4
6	15780.00	46.5 PK	74.0	-27.5	1.37 V	286	34.4	12.1
7	15780.00	35.6 AV	54.0	-18.4	1.37 V	286	23.5	12.1

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

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) 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	105.2 PK			1.47 H	167	102.5	2.7
2	*5300.00	96.3 AV			1.47 H	167	93.6	2.7
3	5350.00	51.5 PK	74.0	-22.5	1.47 H	167	48.6	2.9
4	5350.00	40.1 AV	54.0	-13.9	1.47 H	167	37.2	2.9
5	10600.00	47.8 PK	74.0	-26.2	1.34 H	274	35.5	12.3
6	10600.00	34.6 AV	54.0	-19.4	1.34 H	274	22.3	12.3
7	15900.00	46.0 PK	74.0	-28.0	1.20 H	190	34.0	12.0
8	15900.00	35.2 AV	54.0	-18.8	1.20 H	190	23.2	12.0
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	*5300.00	108.2 PK			1.23 V	181	105.5	2.7
2	*5300.00	98.5 AV			1.23 V	181	95.8	2.7
3	5350.00	55.7 PK	74.0	-18.3	1.23 V	181	52.8	2.9
4	5350.00	42.6 AV	54.0	-11.4	1.23 V	181	39.7	2.9
5	10600.00	48.3 PK	74.0	-25.7	1.99 V	314	36.0	12.3
6	10600.00	34.8 AV	54.0	-19.2	1.99 V	314	22.5	12.3
7	15900.00	47.4 PK	74.0	-26.6	1.33 V	277	35.4	12.0
8	15900.00	36.7 AV	54.0	-17.3	1.33 V	277	24.7	12.0

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

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) 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	105.9 PK			1.49 H	175	103.2	2.7
2	*5320.00	96.9 AV			1.49 H	175	94.2	2.7
3	5350.00	63.4 PK	74.0	-10.6	1.49 H	175	60.5	2.9
4	5350.00	47.6 AV	54.0	-6.4	1.49 H	175	44.7	2.9
5	10640.00	47.6 PK	74.0	-26.4	1.43 H	255	35.4	12.2
6	10640.00	34.0 AV	54.0	-20.0	1.43 H	255	21.8	12.2
7	15960.00	46.1 PK	74.0	-27.9	1.20 H	200	33.8	12.3
8	15960.00	35.0 AV	54.0	-19.0	1.20 H	200	22.7	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.2 PK			1.21 V	170	106.5	2.7
2	*5320.00	99.6 AV			1.21 V	170	96.9	2.7
3	5350.00	68.8 PK	74.0	-5.2	1.21 V	170	65.9	2.9
4	5350.00	50.8 AV	54.0	-3.2	1.21 V	170	47.9	2.9
5	10640.00	48.9 PK	74.0	-25.1	2.00 V	311	36.7	12.2
6	10640.00	35.9 AV	54.0	-18.1	2.00 V	311	23.7	12.2
7	15960.00	47.2 PK	74.0	-26.8	1.30 V	289	34.9	12.3
8	15960.00	36.2 AV	54.0	-17.8	1.30 V	289	23.9	12.3

REMARKS:

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

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) 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	5460.00	58.1 PK	74.0	-15.9	1.55 H	150	54.9	3.2
2	5460.00	41.1 AV	54.0	-12.9	1.55 H	150	37.9	3.2
3	#5470.00	61.6 PK	68.2	-6.6	1.55 H	150	58.4	3.2
4	*5500.00	104.8 PK			1.55 H	150	101.7	3.1
5	*5500.00	95.4 AV			1.55 H	150	92.3	3.1
6	11000.00	47.8 PK	74.0	-26.2	1.40 H	273	34.8	13.0
7	11000.00	34.1 AV	54.0	-19.9	1.40 H	273	21.1	13.0
8	#16500.00	45.6 PK	68.2	-22.6	1.17 H	177	31.3	14.3
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	5460.00	62.3 PK	74.0	-11.7	1.09 V	186	59.1	3.2
2	5460.00	43.3 AV	54.0	-10.7	1.09 V	186	40.1	3.2
3	#5470.00	65.8 PK	68.2	-2.4	1.09 V	186	62.6	3.2
4	*5500.00	107.3 PK			1.09 V	186	104.2	3.1
5	*5500.00	97.3 AV			1.09 V	186	94.2	3.1
6	11000.00	49.0 PK	74.0	-25.0	1.81 V	322	36.0	13.0
7	11000.00	35.4 AV	54.0	-18.6	1.81 V	322	22.4	13.0
8	#16500.00	47.0 PK	68.2	-21.2	1.41 V	302	32.7	14.3

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	105.7 PK			1.46 H	150	102.5	3.2
2	*5580.00	96.8 AV			1.46 H	150	93.6	3.2
3	11160.00	47.3 PK	74.0	-26.7	1.46 H	260	34.8	12.5
4	11160.00	33.7 AV	54.0	-20.3	1.46 H	260	21.2	12.5
5	#16740.00	46.4 PK	68.2	-21.8	1.18 H	172	31.5	14.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.9 PK			1.01 V	184	105.7	3.2
2	*5580.00	99.1 AV			1.01 V	184	95.9	3.2
3	11160.00	48.6 PK	74.0	-25.4	2.02 V	288	36.1	12.5
4	11160.00	34.7 AV	54.0	-19.3	2.02 V	288	22.2	12.5
5	#16740.00	48.1 PK	68.2	-20.1	1.33 V	287	33.2	14.9

REMARKS:

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

CHANNEL	TX Channel 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	104.1 PK			1.56 H	148	100.7	3.4
2	*5700.00	94.9 AV			1.56 H	148	91.5	3.4
3	#5725.00	61.0 PK	68.2	-7.2	1.56 H	148	57.6	3.4
4	11400.00	46.2 PK	74.0	-27.8	1.46 H	272	33.1	13.1
5	11400.00	32.8 AV	54.0	-21.2	1.46 H	272	19.7	13.1
6	#17100.00	45.4 PK	68.2	-22.8	1.19 H	123	28.7	16.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.5 PK			1.03 V	185	103.1	3.4
2	*5700.00	96.7 AV			1.03 V	185	93.3	3.4
3	**#5725.00**	**66.1 PK**	**68.2**	**-2.1**	**1.03 V**	**185**	**62.7**	**3.4**
4	11400.00	47.3 PK	74.0	-26.7	2.07 V	332	34.2	13.1
5	11400.00	34.2 AV	54.0	-19.8	2.07 V	332	21.1	13.1
6	#17100.00	46.2 PK	68.2	-22.0	1.38 V	263	29.5	16.7

REMARKS:

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

CHANNEL	TX Channel 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	46.1 PK	68.2	-22.1	1.60 H	153	42.9	3.2
2	*5720.00	104.9 PK			1.59 H	162	101.5	3.4
3	*5720.00	95.9 AV			1.59 H	162	92.5	3.4
4	#5850.00	47.1 PK	68.2	-21.1	1.53 H	148	43.3	3.8
5	11440.00	46.9 PK	74.0	-27.1	1.33 H	253	33.8	13.1
6	11440.00	34.0 AV	54.0	-20.0	1.33 H	253	20.9	13.1
7	#17160.00	45.8 PK	68.2	-22.4	1.17 H	181	29.3	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	#5470.00	50.2 PK	68.2	-18.0	1.04 V	188	47.0	3.2
2	*5720.00	107.5 PK			1.06 V	198	104.1	3.4
3	*5720.00	97.9 AV			1.06 V	198	94.5	3.4
4	#5850.00	51.9 PK	68.2	-16.3	1.00 V	198	48.1	3.8
5	11440.00	48.3 PK	74.0	-25.7	1.95 V	302	35.2	13.1
6	11440.00	34.6 AV	54.0	-19.4	1.95 V	302	21.5	13.1
7	#17160.00	47.8 PK	68.2	-20.4	1.42 V	261	31.3	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.77	51.5 PK	68.2	-16.7	1.22 H	163	48.2	3.3
2	*5745.00	104.7 PK			1.22 H	163	101.2	3.5
3	*5745.00	96.4 AV			1.22 H	163	92.9	3.5
4	#5966.63	49.3 PK	68.2	-18.9	1.22 H	163	45.1	4.2
5	11490.00	46.7 PK	74.0	-27.3	1.39 H	286	33.7	13.0
6	11490.00	33.6 AV	54.0	-20.4	1.39 H	286	20.6	13.0
7	#17235.00	45.1 PK	68.2	-23.1	1.10 H	136	28.9	16.2
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	#5643.24	53.3 PK	68.2	-14.9	1.00 V	137	50.0	3.3
2	*5745.00	108.0 PK			1.00 V	137	104.5	3.5
3	*5745.00	98.4 AV			1.00 V	137	94.9	3.5
4	#5988.50	51.3 PK	68.2	-16.9	1.00 V	137	47.2	4.1
5	11490.00	49.0 PK	74.0	-25.0	1.99 V	291	36.0	13.0
6	11490.00	35.3 AV	54.0	-18.7	1.99 V	291	22.3	13.0
7	#17235.00	46.2 PK	68.2	-22.0	1.39 V	277	30.0	16.2

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) 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	#5580.54	51.1 PK	68.2	-17.1	1.21 H	162	47.8	3.3
2	*5785.00	104.7 PK			1.21 H	162	101.0	3.7
3	*5785.00	96.2 AV			1.21 H	162	92.5	3.7
4	#5989.66	50.3 PK	68.2	-17.9	1.21 H	162	46.2	4.1
5	11570.00	47.5 PK	74.0	-26.5	1.52 H	272	34.8	12.7
6	11570.00	34.4 AV	54.0	-19.6	1.52 H	272	21.7	12.7
7	#17355.00	45.7 PK	68.2	-22.5	1.17 H	173	29.0	16.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5603.13	49.3 PK	68.2	-18.9	1.14 V	162	46.0	3.3
2	*5785.00	107.4 PK			1.14 V	162	103.7	3.7
3	*5785.00	97.6 AV			1.14 V	162	93.9	3.7
4	#5944.44	50.7 PK	68.2	-17.5	1.14 V	162	46.5	4.2
5	11570.00	49.7 PK	74.0	-24.3	1.92 V	292	37.0	12.7
6	11570.00	35.7 AV	54.0	-18.3	1.92 V	292	23.0	12.7
7	#17355.00	47.0 PK	68.2	-21.2	1.32 V	271	30.3	16.7

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) 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	#5591.18	49.2 PK	68.2	-19.0	1.08 H	165	45.9	3.3
2	*5825.00	105.1 PK			1.08 H	165	101.4	3.7
3	*5825.00	96.7 AV			1.08 H	165	93.0	3.7
4	#5981.34	49.8 PK	68.2	-18.4	1.08 H	165	45.7	4.1
5	11650.00	47.3 PK	74.0	-26.7	1.42 H	262	34.6	12.7
6	11650.00	34.2 AV	54.0	-19.8	1.42 H	262	21.5	12.7
7	#17475.00	44.8 PK	68.2	-23.4	1.16 H	158	26.8	18.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5592.22	49.0 PK	68.2	-19.2	1.14 V	162	45.7	3.3
2	*5825.00	108.1 PK			1.07 V	151	104.4	3.7
3	*5825.00	98.3 AV			1.07 V	151	94.6	3.7
4	#5935.28	51.8 PK	68.2	-16.4	1.14 V	162	47.6	4.2
5	11650.00	48.4 PK	74.0	-25.6	1.96 V	305	35.7	12.7
6	11650.00	35.0 AV	54.0	-19.0	1.96 V	305	22.3	12.7
7	#17475.00	46.3 PK	68.2	-21.9	1.34 V	291	28.3	18.0

REMARKS:

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

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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	64.4 PK	74.0	-9.6	1.57 H	145	61.3	3.1
2	5150.00	48.9 AV	54.0	-5.1	1.57 H	145	45.8	3.1
3	*5190.00	100.3 PK			1.57 H	145	97.3	3.0
4	*5190.00	92.1 AV			1.57 H	145	89.1	3.0
5	5350.00	45.3 PK	74.0	-28.7	1.57 H	145	42.4	2.9
6	5350.00	36.3 AV	54.0	-17.7	1.57 H	145	33.4	2.9
7	#10380.00	47.2 PK	68.2	-21.0	1.51 H	289	34.7	12.5
8	15570.00	45.7 PK	74.0	-28.3	1.22 H	144	32.4	13.3
9	15570.00	34.7 AV	54.0	-19.3	1.22 H	144	21.4	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	68.2 PK	74.0	-5.8	1.03 V	165	65.1	3.1
2	5150.00	51.0 AV	54.0	-3.0	1.03 V	165	47.9	3.1
3	*5190.00	103.2 PK			1.03 V	165	100.2	3.0
4	*5190.00	94.3 AV			1.03 V	165	91.3	3.0
5	5350.00	50.6 PK	74.0	-23.4	1.03 V	165	47.7	2.9
6	5350.00	39.1 AV	54.0	-14.9	1.03 V	165	36.2	2.9
7	#10380.00	47.7 PK	68.2	-20.5	1.92 V	331	35.2	12.5
8	15570.00	46.1 PK	74.0	-27.9	1.39 V	270	32.8	13.3
9	15570.00	34.9 AV	54.0	-19.1	1.39 V	270	21.6	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK) 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	102.2 PK			1.47 H	133	99.4	2.8
2	*5230.00	94.0 AV			1.47 H	133	91.2	2.8
3	5350.00	46.6 PK	74.0	-27.4	1.47 H	133	43.7	2.9
4	5350.00	37.0 AV	54.0	-17.0	1.47 H	133	34.1	2.9
5	#10460.00	46.3 PK	68.2	-21.9	1.39 H	268	33.8	12.5
6	15690.00	46.0 PK	74.0	-28.0	1.28 H	156	33.3	12.7
7	15690.00	34.7 AV	54.0	-19.3	1.28 H	156	22.0	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	104.8 PK			1.06 V	169	102.0	2.8
2	*5230.00	96.2 AV			1.06 V	169	93.4	2.8
3	5350.00	51.2 PK	74.0	-22.8	1.06 V	169	48.3	2.9
4	5350.00	39.4 AV	54.0	-14.6	1.06 V	169	36.5	2.9
5	#10460.00	46.8 PK	68.2	-21.4	2.00 V	276	34.3	12.5
6	15690.00	45.8 PK	74.0	-28.2	1.29 V	296	33.1	12.7
7	15690.00	34.9 AV	54.0	-19.1	1.29 V	296	22.2	12.7

REMARKS:

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

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK) 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	44.5 PK	74.0	-29.5	1.58 H	143	41.4	3.1
2	5150.00	35.0 AV	54.0	-19.0	1.58 H	143	31.9	3.1
3	*5270.00	102.7 PK			1.58 H	143	100.1	2.6
4	*5270.00	94.7 AV			1.58 H	143	92.1	2.6
5	#10540.00	48.1 PK	68.2	-20.1	1.46 H	258	35.7	12.4
6	15810.00	46.9 PK	74.0	-27.1	1.22 H	158	34.9	12.0
7	15810.00	36.1 AV	54.0	-17.9	1.22 H	158	24.1	12.0
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	49.0 PK	74.0	-25.0	1.07 V	174	45.9	3.1
2	5150.00	37.3 AV	54.0	-16.7	1.07 V	174	34.2	3.1
3	*5270.00	105.3 PK			1.07 V	174	102.7	2.6
4	*5270.00	96.3 AV			1.07 V	174	93.7	2.6
5	#10540.00	48.1 PK	68.2	-20.1	1.90 V	295	35.7	12.4
6	15810.00	47.1 PK	74.0	-26.9	1.42 V	282	35.1	12.0
7	15810.00	36.8 AV	54.0	-17.2	1.42 V	282	24.8	12.0

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

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK) 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	99.6 PK			1.61 H	147	96.9	2.7
2	*5310.00	91.6 AV			1.61 H	147	88.9	2.7
3	5350.00	64.7 PK	74.0	-9.3	1.61 H	147	61.8	2.9
4	5350.00	49.2 AV	54.0	-4.8	1.61 H	147	46.3	2.9
5	10620.00	46.8 PK	74.0	-27.2	1.47 H	284	34.6	12.2
6	10620.00	33.2 AV	54.0	-20.8	1.47 H	284	21.0	12.2
7	15930.00	45.6 PK	74.0	-28.4	1.21 H	147	33.6	12.0
8	15930.00	34.2 AV	54.0	-19.8	1.21 H	147	22.2	12.0
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	*5310.00	102.7 PK			1.03 V	163	100.0	2.7
2	*5310.00	94.2 AV			1.03 V	163	91.5	2.7
3	5350.00	68.2 PK	74.0	-5.8	1.03 V	163	65.3	2.9
4	5350.00	50.9 AV	54.0	-3.1	1.03 V	163	48.0	2.9
5	10620.00	47.9 PK	74.0	-26.1	1.96 V	318	35.7	12.2
6	10620.00	34.8 AV	54.0	-19.2	1.96 V	318	22.6	12.2
7	15930.00	46.5 PK	74.0	-27.5	1.40 V	278	34.5	12.0
8	15930.00	35.5 AV	54.0	-18.5	1.40 V	278	23.5	12.0

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

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK) 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	5460.00	57.7 PK	74.0	-16.3	1.42 H	158	54.5	3.2
2	5460.00	41.4 AV	54.0	-12.6	1.42 H	158	38.2	3.2
3	#5470.00	61.3 PK	68.2	-6.9	1.42 H	158	58.1	3.2
4	*5510.00	100.1 PK			1.42 H	158	97.0	3.1
5	*5510.00	91.1 AV			1.42 H	158	88.0	3.1
6	11020.00	46.9 PK	74.0	-27.1	1.47 H	271	34.0	12.9
7	11020.00	33.6 AV	54.0	-20.4	1.47 H	271	20.7	12.9
8	#16530.00	45.9 PK	68.2	-22.3	1.18 H	173	31.3	14.6
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	5460.00	62.6 PK	74.0	-11.4	1.06 V	165	59.4	3.2
2	5460.00	44.0 AV	54.0	-10.0	1.06 V	165	40.8	3.2
3	#5470.00	65.9 PK	68.2	-2.3	1.06 V	165	62.7	3.2
4	*5510.00	103.8 PK			1.06 V	165	100.7	3.1
5	*5510.00	94.1 AV			1.06 V	165	91.0	3.1
6	11020.00	46.9 PK	74.0	-27.1	1.98 V	300	34.0	12.9
7	11020.00	34.2 AV	54.0	-19.8	1.98 V	300	21.3	12.9
8	#16530.00	46.8 PK	68.2	-21.4	1.40 V	254	32.2	14.6

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) 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	5460.00	49.0 PK	74.0	-25.0	1.52 H	136	45.8	3.2
2	5460.00	37.7 AV	54.0	-16.3	1.52 H	136	34.5	3.2
3	#5470.00	53.4 PK	68.2	-14.8	1.52 H	136	50.2	3.2
4	*5550.00	102.7 PK			1.52 H	136	99.5	3.2
5	*5550.00	93.7 AV			1.52 H	136	90.5	3.2
6	11100.00	47.3 PK	74.0	-26.7	1.55 H	279	34.8	12.5
7	11100.00	34.5 AV	54.0	-19.5	1.55 H	279	22.0	12.5
8	#16650.00	46.0 PK	68.2	-22.2	1.15 H	171	31.2	14.8
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	5460.00	54.2 PK	74.0	-19.8	1.04 V	169	51.0	3.2
2	5460.00	40.5 AV	54.0	-13.5	1.04 V	169	37.3	3.2
3	#5470.00	57.3 PK	68.2	-10.9	1.04 V	169	54.1	3.2
4	*5550.00	105.2 PK			1.04 V	169	102.0	3.2
5	*5550.00	95.7 AV			1.04 V	169	92.5	3.2
6	11100.00	49.6 PK	74.0	-24.4	1.94 V	323	37.1	12.5
7	11100.00	35.5 AV	54.0	-18.5	1.94 V	323	23.0	12.5
8	#16650.00	47.2 PK	68.2	-21.0	1.30 V	254	32.4	14.8

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	102.1 PK			1.48 H	155	98.8	3.3
2	*5670.00	93.0 AV			1.48 H	155	89.7	3.3
3	#5725.00	59.0 PK	68.2	-9.2	1.48 H	155	55.6	3.4
4	11340.00	47.1 PK	74.0	-26.9	1.51 H	252	33.9	13.2
5	11340.00	33.6 AV	54.0	-20.4	1.51 H	252	20.4	13.2
6	#17010.00	46.7 PK	68.2	-21.5	1.23 H	168	30.1	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	*5670.00	105.0 PK			1.11 V	180	101.7	3.3
2	*5670.00	95.2 AV			1.11 V	180	91.9	3.3
3	#5725.00	63.9 PK	68.2	-4.3	1.11 V	180	60.5	3.4
4	11340.00	48.9 PK	74.0	-25.1	1.99 V	297	35.7	13.2
5	11340.00	35.1 AV	54.0	-18.9	1.99 V	297	21.9	13.2
6	#17010.00	47.4 PK	68.2	-20.8	1.35 V	283	30.8	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 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	5460.00	43.8 PK	74.0	-30.2	1.59 H	139	40.6	3.2
2	5460.00	34.2 AV	54.0	-19.8	1.59 H	139	31.0	3.2
3	#5470.00	44.7 PK	68.2	-23.5	1.59 H	139	41.5	3.2
4	*5710.00	101.1 PK			1.59 H	139	97.6	3.5
5	*5710.00	92.4 AV			1.59 H	139	88.9	3.5
6	#5850.00	45.9 PK	68.2	-22.3	1.59 H	139	42.1	3.8
7	11420.00	46.9 PK	74.0	-27.1	1.44 H	257	33.8	13.1
8	11420.00	33.9 AV	54.0	-20.1	1.44 H	257	20.8	13.1
9	#17130.00	45.2 PK	68.2	-23.0	1.25 H	180	28.6	16.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	48.4 PK	74.0	-25.6	1.10 V	179	45.2	3.2
2	5460.00	37.3 AV	54.0	-16.7	1.10 V	179	34.1	3.2
3	#5470.00	49.2 PK	68.2	-19.0	1.10 V	179	46.0	3.2
4	*5710.00	104.4 PK			1.10 V	179	100.9	3.5
5	*5710.00	94.8 AV			1.10 V	179	91.3	3.5
6	#5850.00	50.0 PK	68.2	-18.2	1.10 V	179	46.2	3.8
7	11420.00	47.9 PK	74.0	-26.1	1.94 V	326	34.8	13.1
8	11420.00	34.3 AV	54.0	-19.7	1.94 V	326	21.2	13.1
9	#17130.00	46.6 PK	68.2	-21.6	1.36 V	276	30.0	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5635.32	49.5 PK	68.2	-18.7	1.55 H	148	46.2	3.3
2	*5755.00	100.8 PK			1.55 H	148	97.2	3.6
3	*5755.00	92.8 AV			1.55 H	148	89.2	3.6
4	#5989.11	49.7 PK	68.2	-18.5	1.55 H	148	45.6	4.1
5	11510.00	47.1 PK	74.0	-26.9	1.42 H	274	34.2	12.9
6	11510.00	34.0 AV	54.0	-20.0	1.42 H	274	21.1	12.9
7	#17265.00	45.4 PK	68.2	-22.8	1.23 H	167	29.3	16.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5577.28	50.8 PK	68.2	-17.4	1.26 V	140	47.5	3.3
2	*5755.00	104.1 PK			1.35 V	138	100.5	3.6
3	*5755.00	95.1 AV			1.35 V	138	91.5	3.6
4	#5985.88	49.4 PK	68.2	-18.8	1.26 V	140	45.3	4.1
5	11510.00	48.8 PK	74.0	-25.2	1.90 V	316	35.9	12.9
6	11510.00	35.7 AV	54.0	-18.3	1.90 V	316	22.8	12.9
7	#17265.00	47.7 PK	68.2	-20.5	1.34 V	298	31.6	16.1

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK) 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	#5596.26	50.5 PK	68.2	-17.7	1.50 H	163	47.2	3.3
2	*5795.00	100.2 PK			1.50 H	163	96.6	3.6
3	*5795.00	92.5 AV			1.50 H	163	88.9	3.6
4	#5946.83	50.2 PK	68.2	-18.0	1.50 H	163	46.0	4.2
5	11590.00	47.9 PK	74.0	-26.1	1.49 H	260	35.1	12.8
6	11590.00	34.5 AV	54.0	-19.5	1.49 H	260	21.7	12.8
7	#17385.00	46.5 PK	68.2	-21.7	1.15 H	170	29.6	16.9
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	#5635.12	49.3 PK	68.2	-18.9	1.26 V	140	46.0	3.3
2	*5795.00	103.4 PK			1.26 V	140	99.8	3.6
3	*5795.00	94.6 AV			1.26 V	140	91.0	3.6
4	#5962.82	49.8 PK	68.2	-18.4	1.26 V	140	45.6	4.2
5	11590.00	48.2 PK	74.0	-25.8	2.02 V	295	35.4	12.8
6	11590.00	34.4 AV	54.0	-19.6	2.02 V	295	21.6	12.8
7	#17385.00	47.4 PK	68.2	-20.8	1.32 V	270	30.5	16.9

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

802.11ac (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	62.6 PK	74.0	-11.4	1.38 H	154	59.5	3.1
2	5150.00	48.6 AV	54.0	-5.4	1.38 H	154	45.5	3.1
3	*5210.00	97.4 PK			1.38 H	154	94.5	2.9
4	*5210.00	89.4 AV			1.38 H	154	86.5	2.9
5	5350.00	50.6 PK	74.0	-23.4	1.38 H	154	47.7	2.9
6	5350.00	40.1 AV	54.0	-13.9	1.38 H	154	37.2	2.9
7	#10420.00	45.9 PK	68.2	-22.3	1.45 H	255	33.3	12.6
8	15630.00	45.6 PK	74.0	-28.4	1.29 H	135	32.4	13.2
9	15630.00	34.0 AV	54.0	-20.0	1.29 H	135	20.8	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	68.9 PK	74.0	-5.1	1.02 V	160	65.8	3.1
2	5150.00	51.8 AV	54.0	-2.2	1.02 V	160	48.7	3.1
3	*5210.00	100.2 PK			1.02 V	160	97.3	2.9
4	*5210.00	91.3 AV			1.02 V	160	88.4	2.9
5	5350.00	54.7 PK	74.0	-19.3	1.02 V	160	51.8	2.9
6	5350.00	42.0 AV	54.0	-12.0	1.02 V	160	39.1	2.9
7	#10420.00	47.1 PK	68.2	-21.1	1.91 V	325	34.5	12.6
8	15630.00	45.8 PK	74.0	-28.2	1.32 V	259	32.6	13.2
9	15630.00	35.0 AV	54.0	-19.0	1.32 V	259	21.8	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	45.4 PK	74.0	-28.6	1.53 H	159	42.3	3.1
2	5150.00	35.6 AV	54.0	-18.4	1.53 H	159	32.5	3.1
3	*5290.00	94.9 PK			1.53 H	159	92.3	2.6
4	*5290.00	86.5 AV			1.53 H	159	83.9	2.6
5	5350.00	60.0 PK	74.0	-14.0	1.53 H	159	57.1	2.9
6	5350.00	48.8 AV	54.0	-5.2	1.53 H	159	45.9	2.9
7	#10580.00	47.7 PK	68.2	-20.5	1.49 H	278	35.3	12.4
8	15870.00	44.5 PK	74.0	-29.5	1.25 H	157	32.6	11.9
9	15870.00	33.6 AV	54.0	-20.4	1.25 H	157	21.7	11.9
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	5150.00	48.1 PK	74.0	-25.9	1.10 V	172	45.0	3.1
2	5150.00	37.0 AV	54.0	-17.0	1.10 V	172	33.9	3.1
3	*5290.00	96.7 PK			1.10 V	172	94.1	2.6
4	*5290.00	87.8 AV			1.10 V	172	85.2	2.6
5	5350.00	65.0 PK	74.0	-9.0	1.10 V	172	62.1	2.9
6	5350.00	51.2 AV	54.0	-2.8	1.10 V	172	48.3	2.9
7	#10580.00	47.6 PK	68.2	-20.6	1.98 V	294	35.2	12.4
8	15870.00	46.1 PK	74.0	-27.9	1.27 V	278	34.2	11.9
9	15870.00	35.2 AV	54.0	-18.8	1.27 V	278	23.3	11.9

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

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK) 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	5460.00	58.0 PK	74.0	-16.0	1.59 H	176	54.8	3.2
2	5460.00	43.8 AV	54.0	-10.2	1.59 H	176	40.6	3.2
3	#5470.00	61.3 PK	68.2	-6.9	1.59 H	176	58.1	3.2
4	*5530.00	96.7 PK			1.59 H	176	93.6	3.1
5	*5530.00	89.0 AV			1.59 H	176	85.9	3.1
6	#5725.00	45.9 PK	68.2	-22.3	1.59 H	176	42.5	3.4
7	11060.00	46.7 PK	74.0	-27.3	1.44 H	293	34.0	12.7
8	11060.00	33.6 AV	54.0	-20.4	1.44 H	293	20.9	12.7
9	#16590.00	46.9 PK	68.2	-21.3	1.29 H	154	32.1	14.8
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	5460.00	61.4 PK	74.0	-12.6	1.05 V	201	58.2	3.2
2	5460.00	45.6 AV	54.0	-8.4	1.05 V	201	42.4	3.2
3	#5470.00	65.0 PK	68.2	-3.2	1.05 V	201	61.8	3.2
4	*5530.00	100.2 PK			1.05 V	201	97.1	3.1
5	*5530.00	91.7 AV			1.05 V	201	88.6	3.1
6	#5725.00	50.3 PK	68.2	-17.9	1.05 V	201	46.9	3.4
7	11060.00	47.1 PK	74.0	-26.9	1.93 V	317	34.4	12.7
8	11060.00	33.8 AV	54.0	-20.2	1.93 V	317	21.1	12.7
9	#16590.00	45.9 PK	68.2	-22.3	1.38 V	249	31.1	14.8

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

CHANNEL	TX Channel 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	99.2 PK			1.58 H	165	96.0	3.2
2	*5610.00	90.8 AV			1.58 H	165	87.6	3.2
3	#5725.00	59.9 PK	68.2	-8.3	1.58 H	165	56.5	3.4
4	11220.00	46.8 PK	74.0	-27.2	1.41 H	269	34.1	12.7
5	11220.00	33.6 AV	54.0	-20.4	1.41 H	269	20.9	12.7
6	#16830.00	46.2 PK	68.2	-22.0	1.23 H	175	30.9	15.3
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	*5610.00	102.2 PK			1.01 V	168	99.0	3.2
2	*5610.00	93.5 AV			1.01 V	168	90.3	3.2
3	#5725.00	64.4 PK	68.2	-3.8	1.01 V	168	61.0	3.4
4	11220.00	47.8 PK	74.0	-26.2	2.00 V	285	35.1	12.7
5	11220.00	34.6 AV	54.0	-19.4	2.00 V	285	21.9	12.7
6	#16830.00	47.3 PK	68.2	-20.9	1.40 V	265	32.0	15.3

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	44.8 PK	74.0	-29.2	1.53 H	143	41.6	3.2
2	5460.00	34.2 AV	54.0	-19.8	1.53 H	143	31.0	3.2
3	#5470.00	45.9 PK	68.2	-22.3	1.53 H	143	42.7	3.2
4	*5690.00	99.5 PK			1.53 H	143	96.1	3.4
5	*5690.00	91.2 AV			1.53 H	143	87.8	3.4
6	#5850.00	47.0 PK	68.2	-21.2	1.53 H	143	43.2	3.8
7	11380.00	46.8 PK	74.0	-27.2	1.39 H	279	33.7	13.1
8	11380.00	33.8 AV	54.0	-20.2	1.39 H	279	20.7	13.1
9	#17070.00	46.8 PK	68.2	-21.4	1.16 H	173	30.1	16.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	49.7 PK	74.0	-24.3	1.05 V	162	46.5	3.2
2	5460.00	38.6 AV	54.0	-15.4	1.05 V	162	35.4	3.2
3	#5470.00	50.2 PK	68.2	-18.0	1.05 V	162	47.0	3.2
4	*5690.00	101.6 PK			1.05 V	162	98.2	3.4
5	*5690.00	92.9 AV			1.05 V	162	89.5	3.4
6	#5850.00	50.8 PK	68.2	-17.4	1.05 V	162	47.0	3.8
7	11380.00	48.9 PK	74.0	-25.1	2.00 V	296	35.8	13.1
8	11380.00	35.5 AV	54.0	-18.5	2.00 V	296	22.4	13.1
9	#17070.00	47.5 PK	68.2	-20.7	1.41 V	266	30.8	16.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5635.08	54.2 PK	68.2	-14.0	1.47 H	162	50.9	3.3
2	*5775.00	97.4 PK			1.47 H	162	93.8	3.6
3	*5775.00	89.6 AV			1.47 H	162	86.0	3.6
4	#5956.55	51.3 PK	68.2	-16.9	1.47 H	162	47.1	4.2
5	11550.00	47.7 PK	74.0	-26.3	1.43 H	264	34.8	12.9
6	11550.00	33.8 AV	54.0	-20.2	1.43 H	264	20.9	12.9
7	#17325.00	45.2 PK	68.2	-23.0	1.19 H	152	28.8	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.68	58.4 PK	68.2	-9.8	1.13 V	136	55.1	3.3
2	*5775.00	100.9 PK			1.13 V	136	97.3	3.6
3	*5775.00	92.0 AV			1.13 V	136	88.4	3.6
4	#5932.22	55.6 PK	68.2	-12.6	1.13 V	136	51.5	4.1
5	11550.00	47.7 PK	74.0	-26.3	1.86 V	320	34.8	12.9
6	11550.00	34.9 AV	54.0	-19.1	1.86 V	320	22.0	12.9
7	#17325.00	46.6 PK	68.2	-21.6	1.39 V	281	30.2	16.4

REMARKS:

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

Below 1GHz Data:

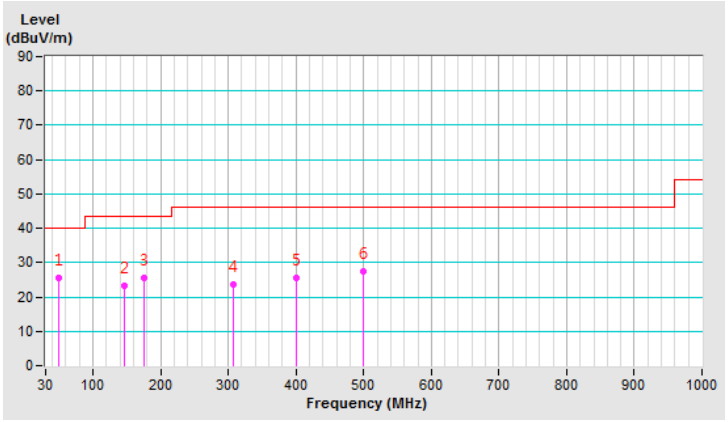
802.11a

CHANNEL	TX Channel 100	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	48.58	25.6 QP	40.0	-14.4	1.50 H	330	34.2	-8.6
2	146.84	23.3 QP	43.5	-20.2	1.50 H	269	31.1	-7.8
3	176.30	25.5 QP	43.5	-18.0	1.00 H	198	34.6	-9.1
4	307.20	23.6 QP	46.0	-22.4	2.00 H	149	30.1	-6.5
5	400.69	25.6 QP	46.0	-20.4	1.00 H	149	29.9	-4.3
6	498.73	27.3 QP	46.0	-18.7	2.00 H	258	29.0	-1.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

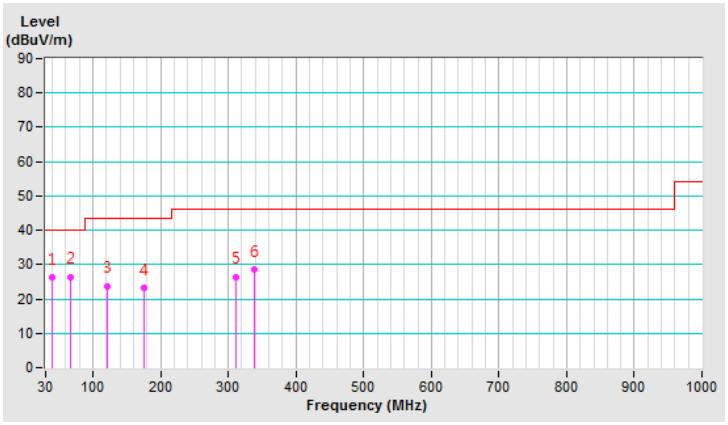


CHANNEL	TX Channel 100	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	40.65	26.3 QP	40.0	-13.7	1.50 V	224	35.5	-9.2
2	67.81	26.5 QP	40.0	-13.5	1.00 V	179	36.6	-10.1
3	122.05	23.8 QP	43.5	-19.7	1.50 V	301	33.7	-9.9
4	176.30	23.3 QP	43.5	-20.2	1.56 V	144	32.4	-9.1
5	311.91	26.5 QP	46.0	-19.5	1.98 V	206	32.7	-6.2
6	339.04	28.5 QP	46.0	-17.5	1.50 V	293	34.2	-5.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Transmit Power Measurement

4.2.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

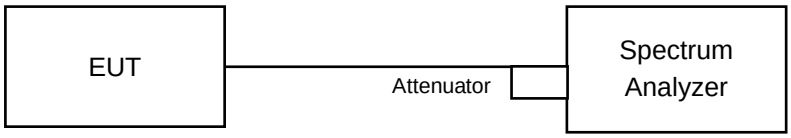
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.2.2 Test Setup

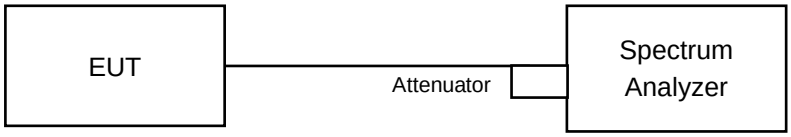
FOR POWER OUTPUT MEASUREMENT

For channel straddling 5725MHz:



For other channels:

FOR 26dB OCCUPIED BANDWIDTH



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

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

For channel straddling 5725MHz:
Follow FCC KDB 789033 UNII test procedure:
Method SA-2
1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW ≥ 3 x RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

FOR 26dB OCCUPIED BANDWIDTH

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

4.2.7 Test Results

802.11a

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.75	14.63	58.894	17.70	24.00	Pass
40	5200	14.81	14.62	59.242	17.73	24.00	Pass
48	5240	14.78	14.67	59.37	17.74	24.00	Pass
52	5260	16.85	16.54	93.499	19.71	24.00	Pass
60	5300	16.77	16.35	90.686	19.58	24.00	Pass
64	5320	16.76	16.10	88.162	19.45	24.00	Pass
100	5500	17.70	16.18	100.379	20.02	24.00	Pass
120	5600	17.68	16.05	98.886	19.95	24.00	Pass
140	5700	16.38	15.17	76.336	18.83	24.00	Pass
*144 (U-NII-2C Band)	5720	11.26	11.90	30.549	14.85	23.01	Pass
*144 (U-NII-3 Band)	5720	7.22	4.32	8.444	9.27	30.00	Pass
149	5745	17.25	16.03	93.175	19.69	30.00	Pass
157	5785	17.35	16.15	95.535	19.80	30.00	Pass
165	5825	17.17	16.04	92.298	19.65	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	38.993	15.91
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	22.56	21.92
40	5200	23.52	21.82
48	5240	22.83	21.75
52	5260	30.36	21.69
60	5300	30.27	21.87
64	5320	27.38	22.32
100	5500	24.13	22.47
116	5580	26.41	22.15
140	5700	23.69	21.69
144 (U-NII-2C Band)	5720	16.62	15.92

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	21.69	24.36 > 24
60	5300	21.87	24.39 > 24
64	5320	22.32	24.48 > 24
100	5500	22.47	24.51 > 24
116	5580	22.15	24.45 > 24
140	5700	21.69	24.36 > 24
144 (U-NII-2C Band)	5720	15.92	23.01 < 24

802.11ac (VHT20)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.85	14.62	59.522	17.75	24.00	Pass
40	5200	14.85	14.44	58.346	17.66	24.00	Pass
48	5240	15.03	14.28	58.634	17.68	24.00	Pass
52	5260	16.80	16.13	88.883	19.49	24.00	Pass
60	5300	16.77	16.12	88.46	19.47	24.00	Pass
64	5320	16.82	16.03	88.171	19.45	24.00	Pass
100	5500	16.48	14.69	73.907	18.69	24.00	Pass
120	5600	17.45	15.68	92.573	19.66	24.00	Pass
140	5700	15.09	13.86	56.607	17.53	24.00	Pass
*144 (U-NII-2C Band)	5720	12.89	11.10	34.075	15.32	23.27	Pass
*144 (U-NII-3 Band)	5720	7.34	6.54	10.462	10.20	30.00	Pass
149	5745	17.28	16.10	94.194	19.74	30.00	Pass
157	5785	17.38	16.13	95.722	19.81	30.00	Pass
165	5825	17.00	15.75	87.703	19.43	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	44.537	16.49
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	27.06	23.71
40	5200	27.50	23.57
48	5240	26.42	23.36
52	5260	39.33	23.57
60	5300	41.25	23.93
64	5320	37.64	23.31
100	5500	29.48	23.44
116	5580	30.01	24.57
140	5700	27.32	23.51
144 (U-NII-2C Band)	5720	19.22	16.88

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	23.57	24.72 > 24
60	5300	23.93	24.78 > 24
64	5320	23.31	24.67 > 24
100	5500	23.44	24.69 > 24
116	5580	24.57	24.9 > 24
140	5700	23.51	24.71 > 24
144 (U-NII-2C Band)	5720	16.88	23.27 < 24

802.11ac (VHT40)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	15.02	14.78	61.83	17.91	24.00	Pass
46	5230	16.75	16.08	87.866	19.44	24.00	Pass
54	5270	17.12	16.68	98.082	19.92	24.00	Pass
62	5310	14.03	13.35	46.92	16.71	24.00	Pass
102	5510	15.12	13.75	56.223	17.50	24.00	Pass
110	5550	17.11	15.36	85.76	19.33	24.00	Pass
134	5670	17.03	15.75	88.05	19.45	24.00	Pass
*142 (U-NII-2C Band)	5710	9.98	10.36	22.846	13.59	24.00	Pass
*142 (U-NII-3 Band)	5710	1.71	-0.46	2.6141	4.17	30.00	Pass
151	5755	17.18	15.78	90.084	19.55	30.00	Pass
159	5795	17.09	15.69	88.236	19.46	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	25.4601	14.06
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	66.58	43.55
46	5230	85.73	48.62
54	5270	85.89	44.17
62	5310	54.90	43.52
102	5510	58.83	43.46
110	5550	74.93	44.16
134	5670	81.52	56.71
142 (U-NII-2C Band)	5710	47.88	41.04

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	44.17	27.45 > 24
62	5310	43.52	27.38 > 24
102	5510	43.46	27.38 > 24
110	5550	44.16	27.45 > 24
134	5670	56.71	28.53 > 24
142 (U-NII-2C Band)	5710	41.04	27.13 > 24

802.11ac (VHT80)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	14.05	13.44	47.49	16.77	24.00	Pass
58	5290	11.06	10.35	23.603	13.73	24.00	Pass
106	5530	14.55	12.96	48.28	16.84	24.00	Pass
122	5610	17.16	15.89	90.815	19.58	24.00	Pass
*138 (U-NII-2C Band)	5690	10.10	8.85	20.586	13.14	24.00	Pass
*138 (U-NII-3 Band)	5690	-1.58	-2.24	1.4853	1.72	30.00	Pass
155	5775	17.15	15.73	89.291	19.51	30.00	Pass

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

The Total Power for the straddle channel:

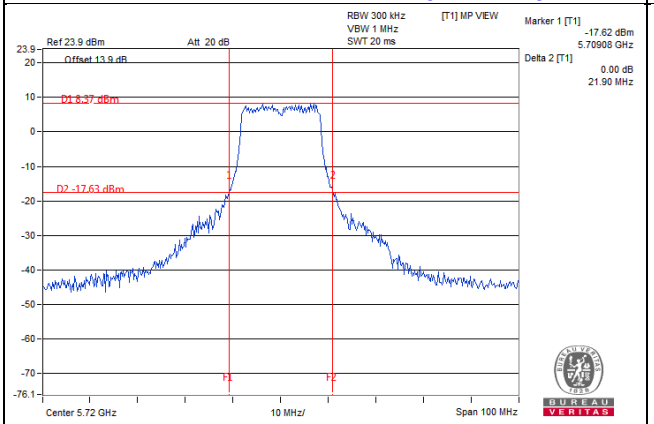
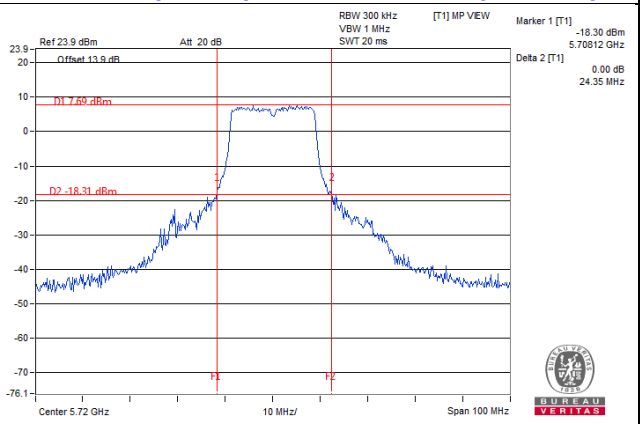
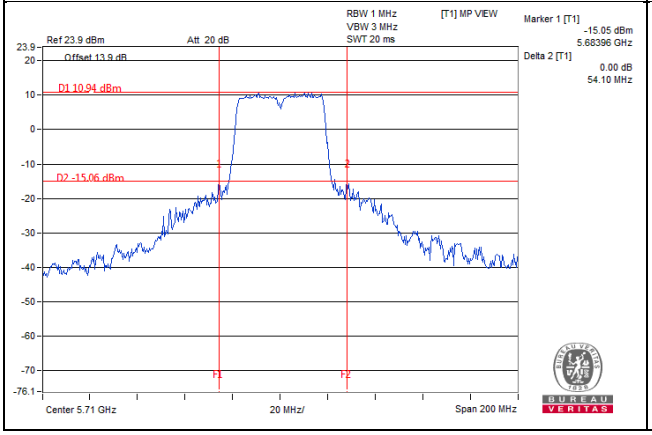
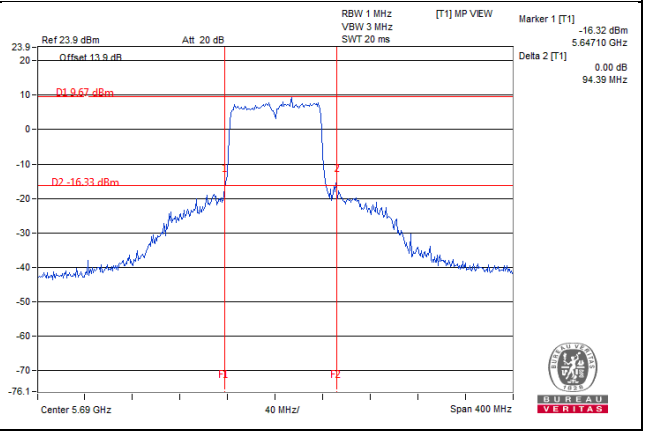
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	22.0713	13.44
Note: The total power was calculated through formula and record the value for reference only.			

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	92.85	84.98
58	5290	96.60	85.71
106	5530	86.24	85.59
122	5610	151.56	86.59
138 (U-NII-2C Band)	5690	87.23	77.90

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	85.71	30.33 > 24
106	5530	85.59	30.32 > 24
122	5610	86.59	30.37 > 24
138 (U-NII-2C Band)	5690	77.90	29.91 > 24

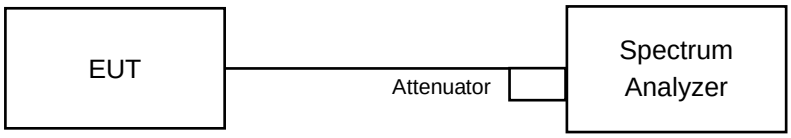
Spectrum Plot of Worst Value	
802.11a_Chain 1 / CH144 (U-NII-2C)	**802.11ac (VHT20)_Chain 1 / CH144 (U-NII-2C)**
	
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-2C)	**802.11ac (VHT80)_Chain 1 / CH138 (U-NII-2C)**
	

Note:

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

4.3 Occupied Bandwidth Measurement

4.3.1 Test Setup



4.3.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.3 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.

4.3.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.92	16.80
40	5200	17.04	16.80
48	5240	17.04	16.80
52	5260	17.16	16.80
60	5300	17.16	16.80
64	5320	17.16	16.80
100	5500	17.04	16.80
116	5580	17.04	16.80
140	5700	16.92	16.92
144 (U-NII-2C Band)	5720	13.52	13.40
144 (U-NII-3 Band)	5720	3.52	3.40
149	5745	17.13	16.80
157	5785	17.04	16.80
165	5825	17.04	16.80

802.11ac (VHT20)

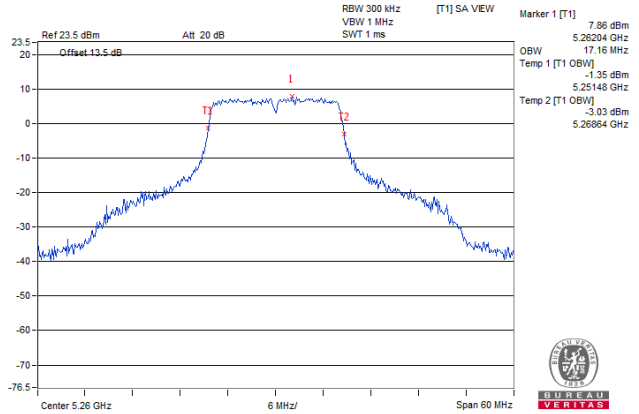
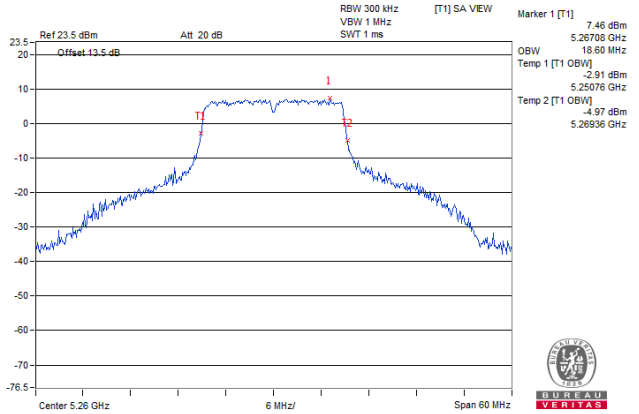
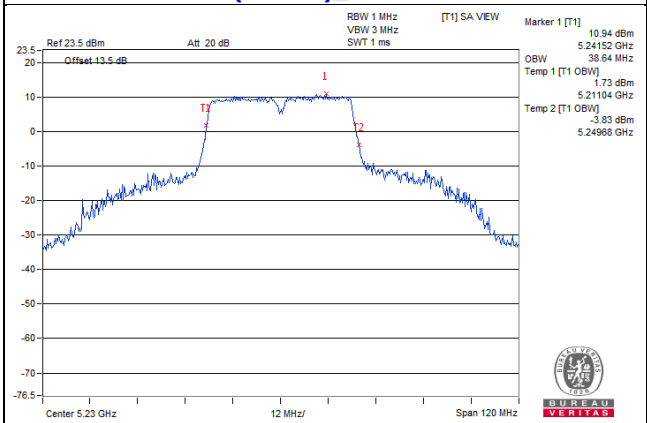
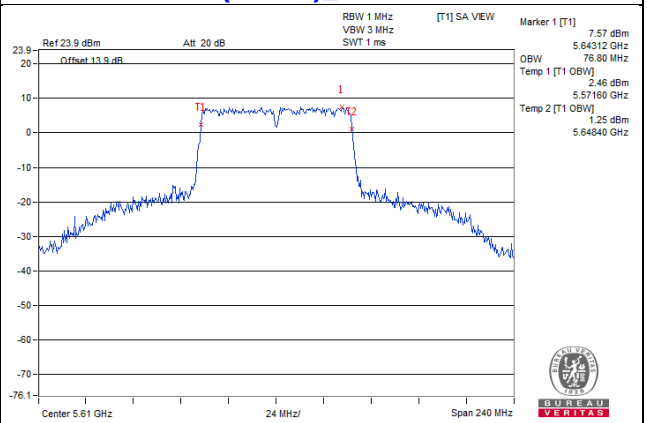
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.12	18.00
40	5200	18.24	18.00
48	5240	18.24	18.00
52	5260	18.60	18.00
60	5300	18.60	18.00
64	5320	18.48	18.00
100	5500	18.24	18.00
116	5580	18.24	18.00
140	5700	18.24	18.12
144 (U-NII-2C Band)	5720	14.24	14.00
144 (U-NII-3 Band)	5720	4.24	4.00
149	5745	18.24	18.12
157	5785	18.36	18.00
165	5825	18.36	18.00

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.68	37.20
46	5230	38.64	36.96
54	5270	38.64	36.96
62	5310	37.44	36.96
102	5510	36.96	36.96
110	5550	37.44	36.96
134	5670	37.68	37.44
142 (U-NII-2C Band)	5710	33.72	33.72
142 (U-NII-3 Band)	5710	3.96	3.48
151	5755	37.68	37.20
159	5795	37.92	37.44

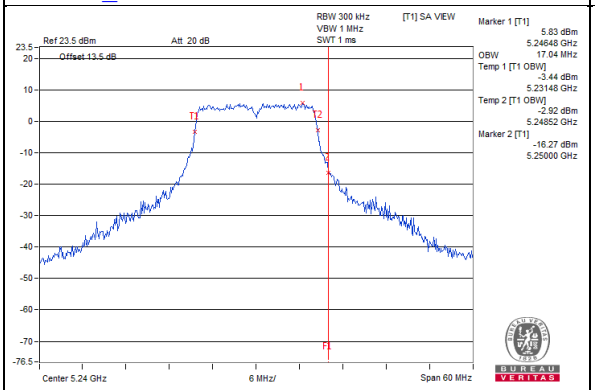
802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.32	76.32
58	5290	76.32	75.84
106	5530	75.84	76.32
122	5610	76.80	75.84
138 (U-NII-2C Band)	5690	73.40	72.92
138 (U-NII-3 Band)	5690	3.40	2.92
155	5775	76.80	75.84

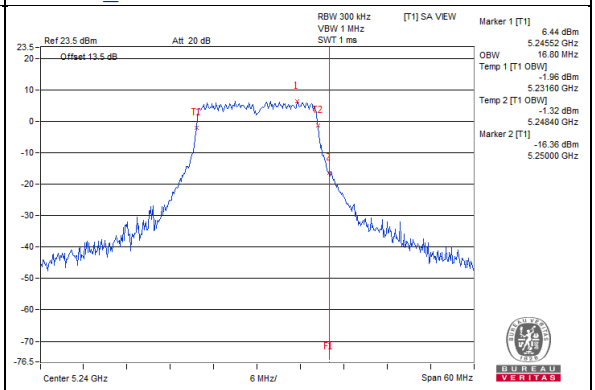
Spectrum Plot of Max. Value	
802.11a_Chain 0 / CH52	**802.11ac (VHT20)_Chain 0 / CH52**
	
802.11ac (VHT40)_Chain 0 / CH46	**802.11ac (VHT80)_Chain 0 / CH122**
	

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

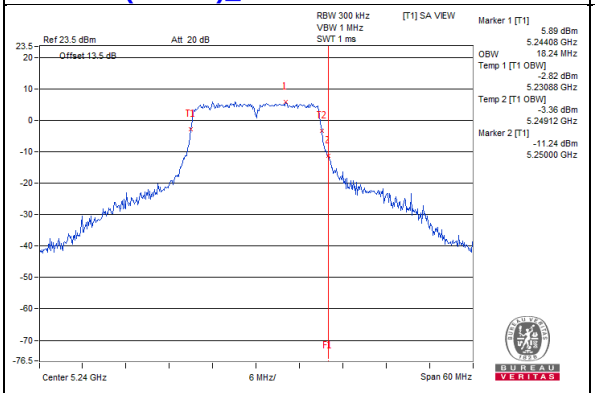
802.11a_Chain 0 / CH48



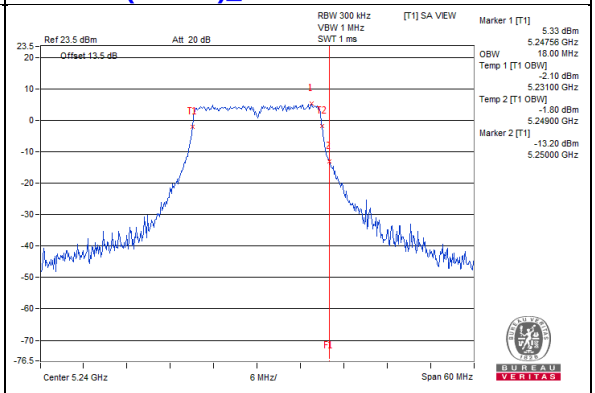
802.11a_Chain 1 / CH48



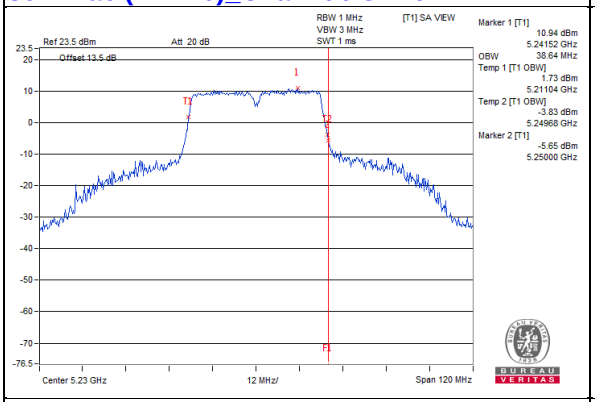
802.11ac (VHT20)_Chain 0 / CH48



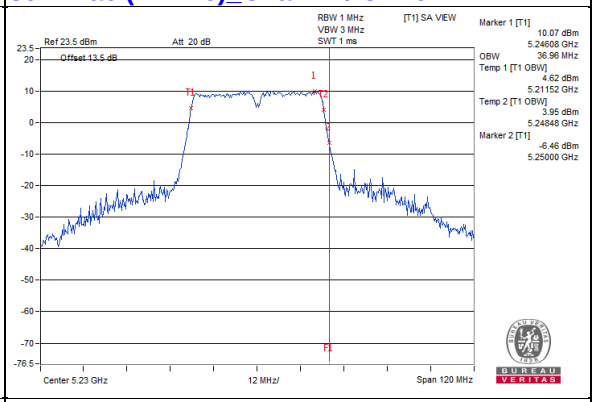
802.11ac (VHT20)_Chain 1 / CH48



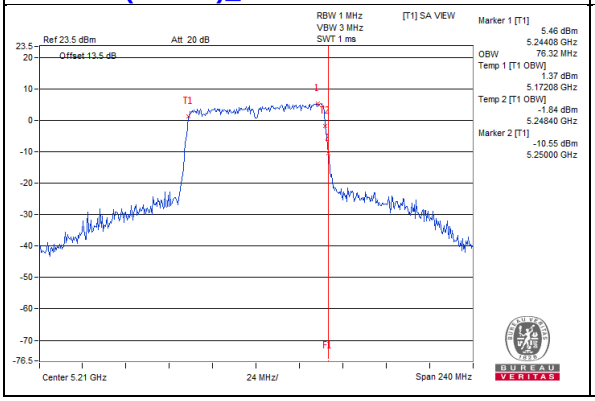
802.11ac (VHT40)_Chain 0 / CH46



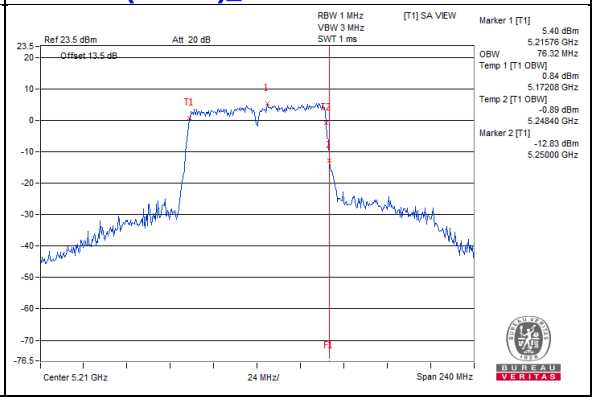
802.11ac (VHT40)_Chain 1 / CH46



802.11ac (VHT80)_Chain 0 / CH42

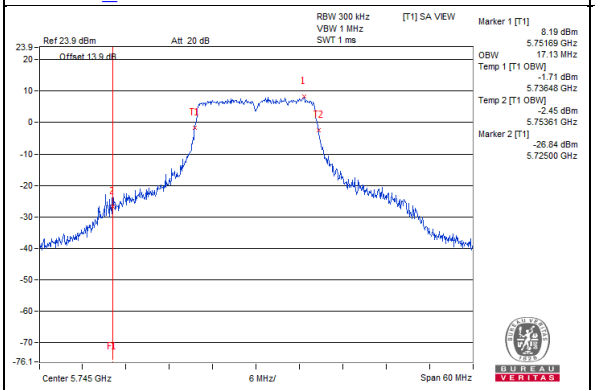


802.11ac (VHT80)_Chain 1 / CH42

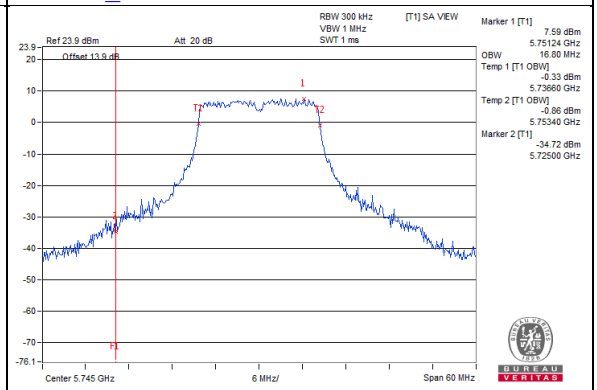


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

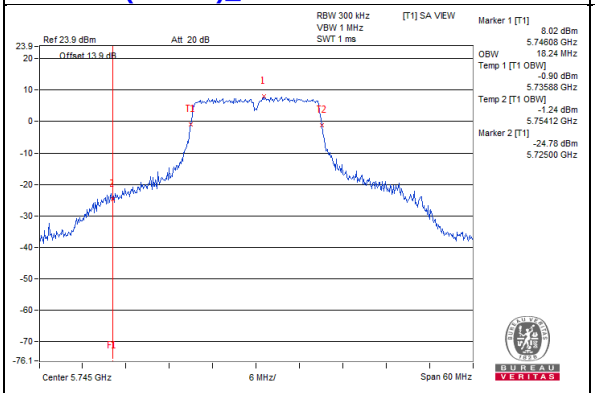
802.11a_Chain 0 / CH149



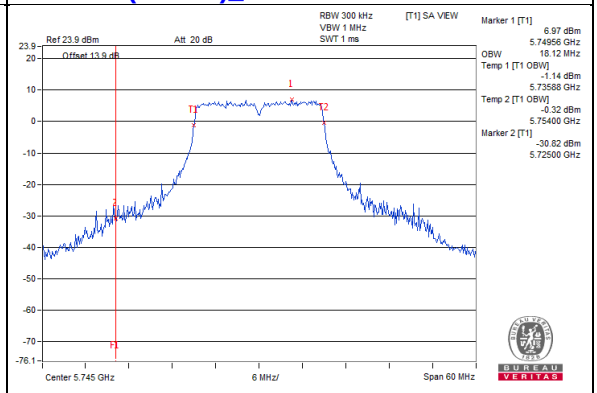
802.11a_Chain 1 / CH149



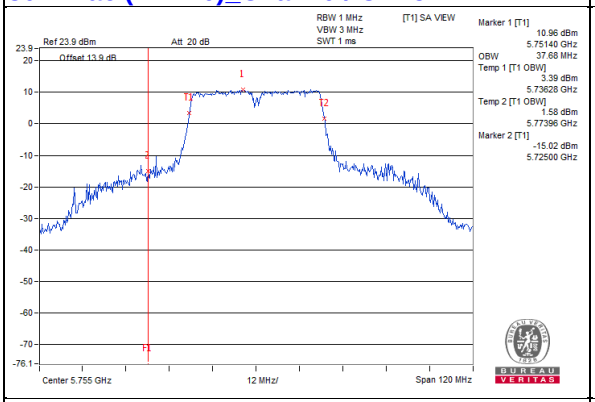
802.11ac (VHT20)_Chain 0 / CH149



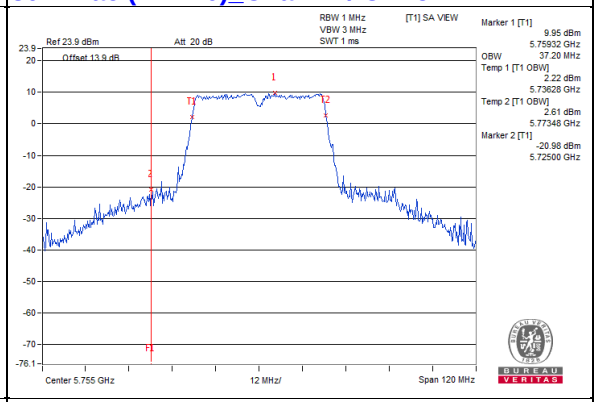
802.11ac (VHT20)_Chain 1 / CH149



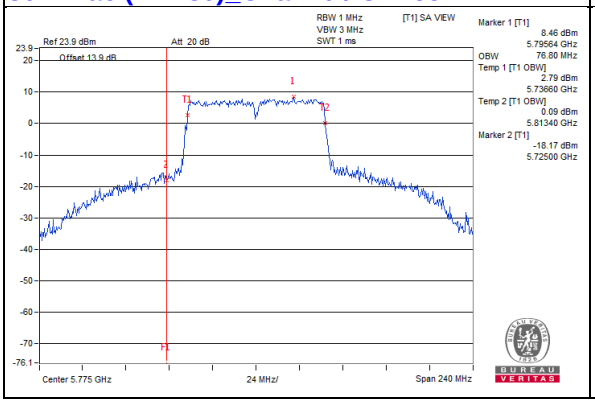
802.11ac (VHT40)_Chain 0 / CH151



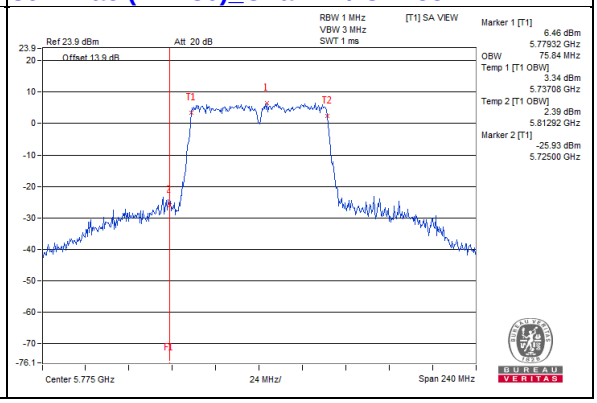
802.11ac (VHT40)_Chain 1 / CH151



802.11ac (VHT80)_Chain 0 / CH155



802.11ac (VHT80)_Chain 1 / CH155

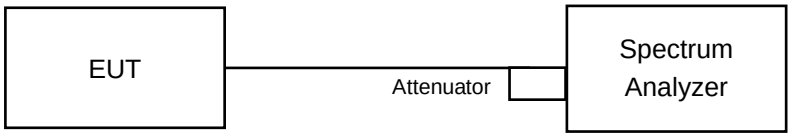


4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedure

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

Using method SA-2

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

For U-NII-3 band:

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(500kHz/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)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Condition

Same as Item 4.2.6.

4.4.7 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)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	1.59	0.96	0.25	4.55	11.00	Pass
40	5200	0.53	0.63	0.25	3.84	11.00	Pass
48	5240	0.50	1.07	0.25	4.05	11.00	Pass
52	5260	3.44	0.24	0.25	5.39	11.00	Pass
60	5300	3.36	2.37	0.25	6.15	11.00	Pass
64	5320	3.06	2.18	0.25	5.90	11.00	Pass
100	5500	3.79	0.72	0.25	5.78	11.00	Pass
116	5580	3.45	1.62	0.25	5.89	11.00	Pass
140	5700	2.89	0.19	0.25	5.01	11.00	Pass
144 (U-NII-2C Band)	5720	2.83	2.37	0.25	5.87	11.00	Pass

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

2. For U-NII-1, U-NII-2A band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.47dBi < 6dBi , so the power density limit shall not be reduced.

3. For U-NII-2C band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.

4. 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)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	1.67	-0.02	0.23	4.15	11.00	Pass
40	5200	1.04	0.93	0.23	4.23	11.00	Pass
48	5240	1.58	0.21	0.23	4.19	11.00	Pass
52	5260	2.99	1.47	0.23	5.54	11.00	Pass
60	5300	1.43	2.17	0.23	5.06	11.00	Pass
64	5320	2.12	2.67	0.23	5.64	11.00	Pass
100	5500	3.22	1.17	0.23	5.56	11.00	Pass
116	5580	2.90	1.87	0.23	5.66	11.00	Pass
140	5700	2.79	-1.33	0.23	4.44	11.00	Pass
144 (U-NII-2C Band)	5720	2.63	2.06	0.23	5.59	11.00	Pass

Note:
1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1, U-NII-2A band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.47dBi < 6dBi , so the power density limit shall not be reduced.
3. For U-NII-2C band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
4. 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)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-3.94	-3.12	0.40	-0.10	11.00	Pass
46	5230	-0.22	-2.79	0.40	2.09	11.00	Pass
54	5270	-1.60	-2.60	0.40	1.34	11.00	Pass
62	5310	-4.39	-4.88	0.40	-1.22	11.00	Pass
102	5510	-2.88	-4.44	0.40	-0.18	11.00	Pass
110	5550	0.39	-1.61	0.40	2.91	11.00	Pass
134	5670	-0.42	-2.27	0.40	2.16	11.00	Pass
142 (U-NII-2C Band)	5710	0.68	-0.48	0.40	3.55	11.00	Pass

Note:
1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1, U-NII-2A band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.47dBi < 6dBi , so the power density limit shall not be reduced.
3. For U-NII-2C band: The directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
4. 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)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-5.96	-6.43	0.61	-2.57	11.00	Pass
58	5290	-13.15	-10.11	0.61	-7.75	11.00	Pass
106	5530	-6.65	-9.70	0.61	-4.29	11.00	Pass
122	5610	-3.82	-9.63	0.61	-2.20	11.00	Pass
138 (U-NII-2C Band)	5690	-5.02	-3.84	0.61	-0.77	11.00	Pass

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

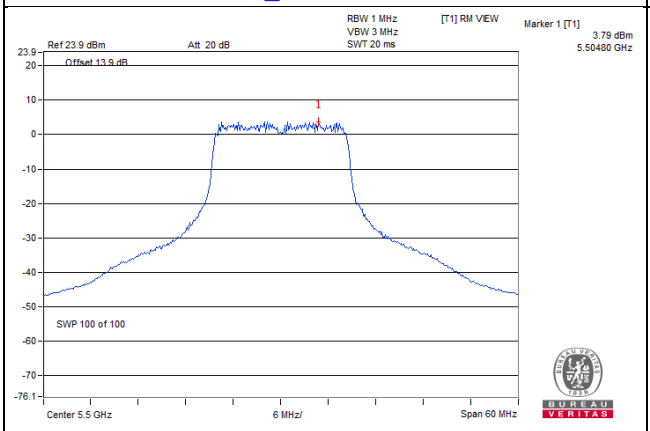
2. For U-NII-1, U-NII-2A band: The directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$)^2 / 2] = 4.47dBi < 6dBi , so the power density limit shall not be reduced.

3. For U-NII-2C band: The directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$)^2 / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.

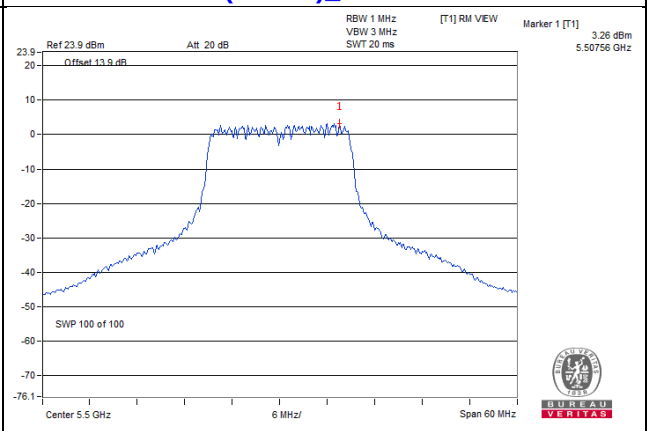
4. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

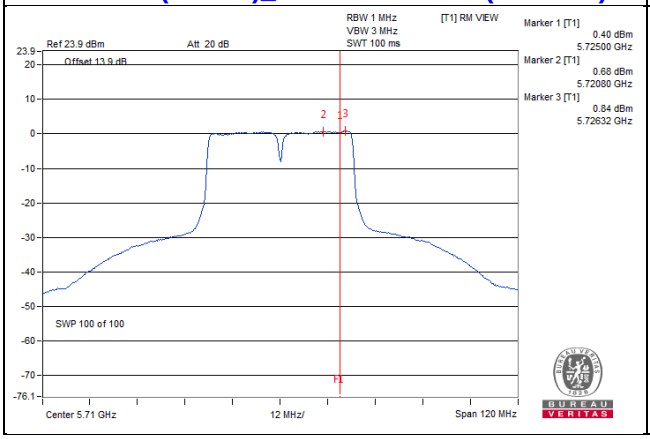
802.11a_Chain 0 / CH100



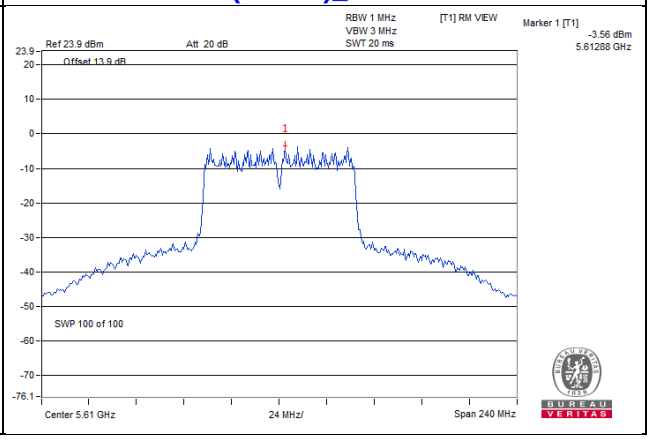
802.11ac (VHT20)_Chain 0 / CH100



802.11ac (VHT40)_Chain 0 / CH142 (U-NII-2C)



802.11ac (VHT80)_Chain 0 / CH22



For U-NII-3:

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)		Duty Factor (dB)	Total PSD With Duty Factor		Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1		dBm/300kHz	dBm/500kHz		
144 (U-NII-3 Band)	5720	-5.36	-6.67	0.25	-2.71	-0.49	30.00	Pass
149	5745	-5.33	-5.65	0.25	-2.23	-0.01	30.00	Pass
157	5785	-5.07	-6.25	0.25	-2.36	-0.14	30.00	Pass
165	5825	-4.65	-6.32	0.25	-2.15	0.07	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$)^2 / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)		Duty Factor (dB)	Total PSD With Duty Factor		Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1		dBm/300kHz	dBm/500kHz		
144 (U-NII-3 Band)	5720	-7.11	-5.99	0.23	-3.28	-1.06	30.00	Pass
149	5745	-5.58	-6.53	0.23	-2.79	-0.57	30.00	Pass
157	5785	-6.17	-6.41	0.23	-3.05	-0.83	30.00	Pass
165	5825	-5.08	-6.52	0.23	-2.50	-0.28	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$)^2 / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)		Duty Factor (dB)	Total PSD With Duty Factor		Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1		dBm/300kHz	dBm/500kHz		
142 (U-NII-3 Band)	5710	-8.20	-9.90	0.40	-5.55	-3.33	30.00	Pass
151	5755	-8.57	-10.52	0.40	-6.02	-3.80	30.00	Pass
159	5795	-9.01	-9.92	0.40	-6.03	-3.81	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[(10$^{Chain0/20}$ + 10$^{Chain1/20}$)^2 / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

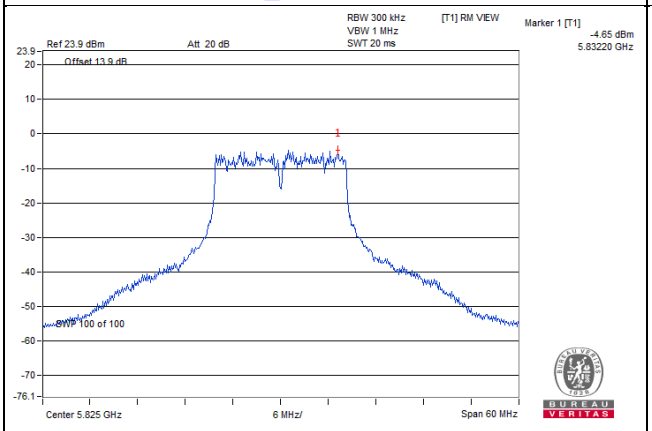
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/300kHz)		Duty Factor (dB)	Total PSD With Duty Factor		Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1		dBm/300kHz	dBm/500kHz		
138 (U-NII-3 Band)	5690	-12.29	-13.48	0.61	-9.23	-7.01	30.00	Pass
155	5775	-11.66	-13.53	0.61	-8.88	-6.66	30.00	Pass

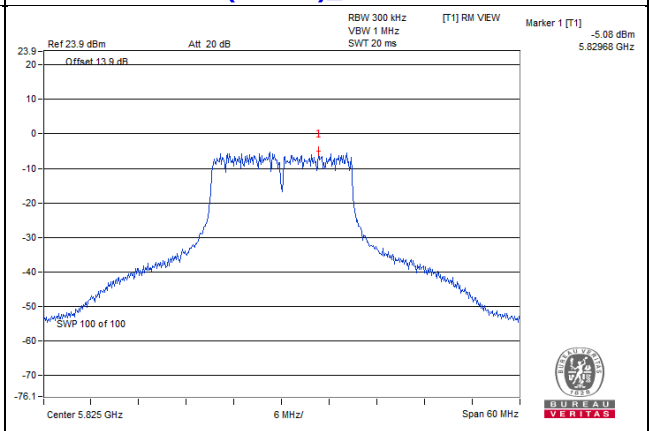
Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$)^2 / 2] = 4.6dBi < 6dBi , so the power density limit shall not be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

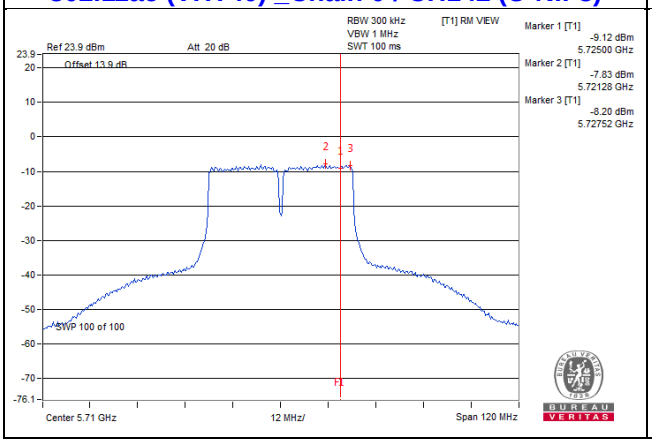
802.11a_Chain 0 / CH165



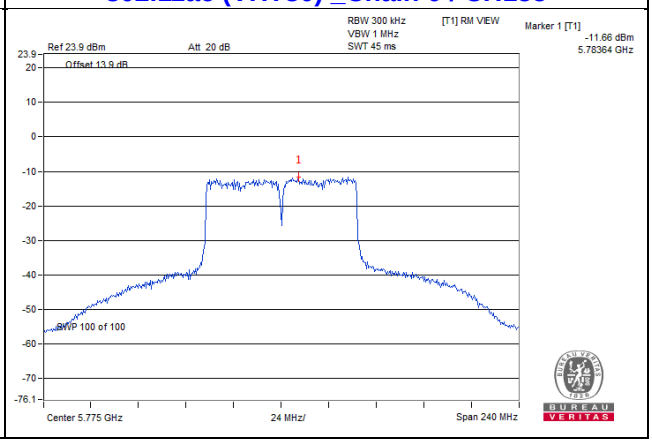
802.11ac (VHT20)_Chain 0 / CH165



802.11ac (VHT40) _Chain 0 / CH142 (U-NII-3)



802.11ac (VHT80) _Chain 0 / CH155

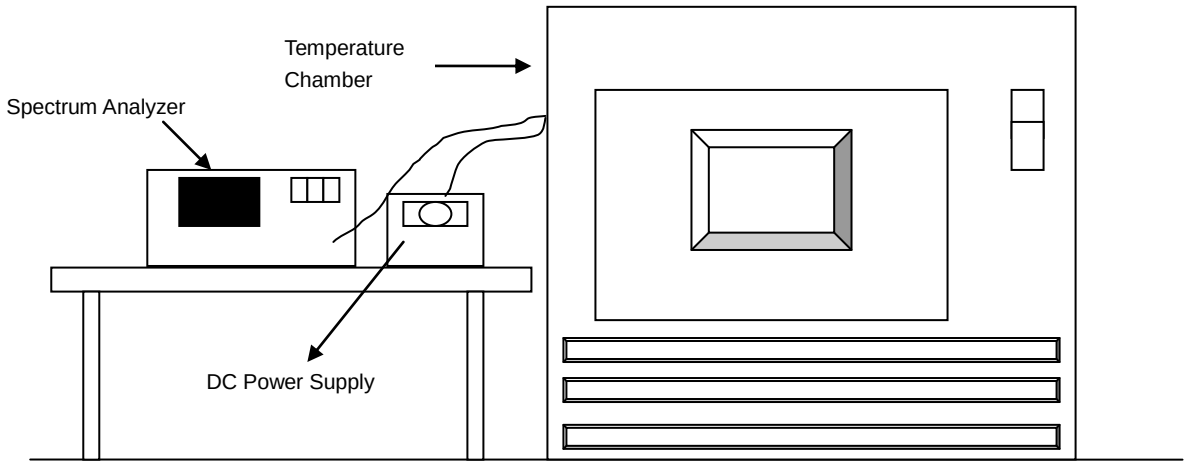


4.5 Frequency Stability Measurement

4.5.1 Limits of Frequency Stability Measurement

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

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

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 (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.

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.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 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	3.85	5180.0167	Pass	5180.0172	Pass	5180.0154	Pass	5180.016	Pass
40	3.85	5179.9827	Pass	5179.9837	Pass	5179.9801	Pass	5179.9836	Pass
30	3.85	5179.9998	Pass	5179.9994	Pass	5179.9954	Pass	5179.9989	Pass
20	3.85	5179.9806	Pass	5179.9805	Pass	5179.9847	Pass	5179.9845	Pass
10	3.85	5180.0117	Pass	5180.0136	Pass	5180.0153	Pass	5180.0137	Pass
0	3.85	5180.0026	Pass	5180.0042	Pass	5179.9999	Pass	5180.002	Pass
-10	3.85	5180.017	Pass	5180.0177	Pass	5180.0171	Pass	5180.0172	Pass
-20	3.85	5180.0224	Pass	5180.025	Pass	5180.0225	Pass	5180.0224	Pass
-30	3.85	5180.0153	Pass	5180.0142	Pass	5180.0144	Pass	5180.0129	Pass

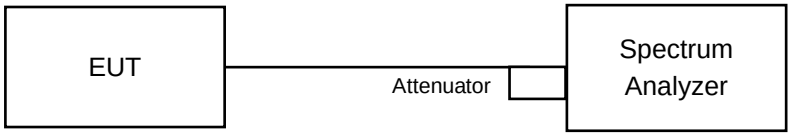
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	4.428	5179.9815	Pass	5179.9797	Pass	5179.9848	Pass	5179.9853	Pass
	3.85	5179.9806	Pass	5179.9805	Pass	5179.9847	Pass	5179.9845	Pass
	3.273	5179.9801	Pass	5179.9797	Pass	5179.985	Pass	5179.9843	Pass

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

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

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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (U-NII-3 Band)	5720	3.19	3.21	0.5	Pass
149	5745	16.41	16.45	0.5	Pass
157	5785	16.43	16.44	0.5	Pass
165	5825	16.44	16.43	0.5	Pass

802.11ac (VHT20)

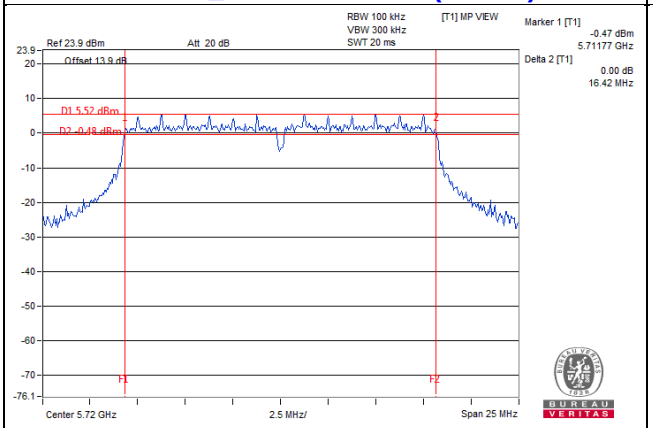
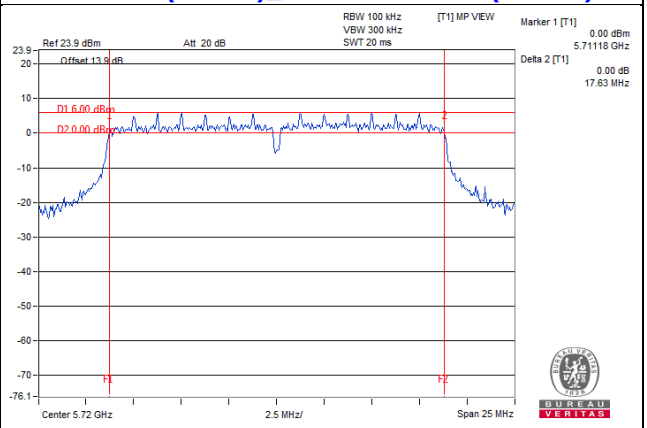
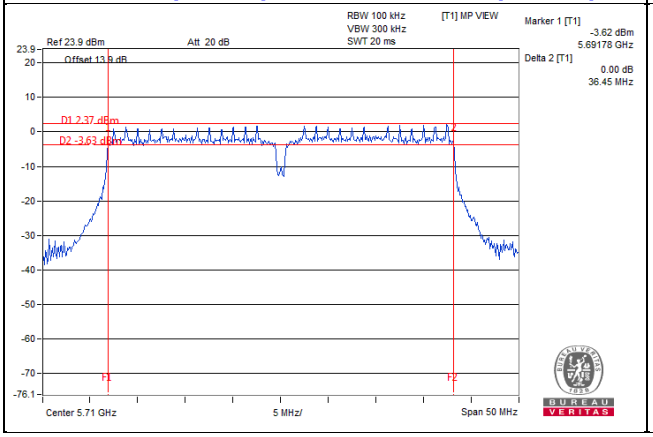
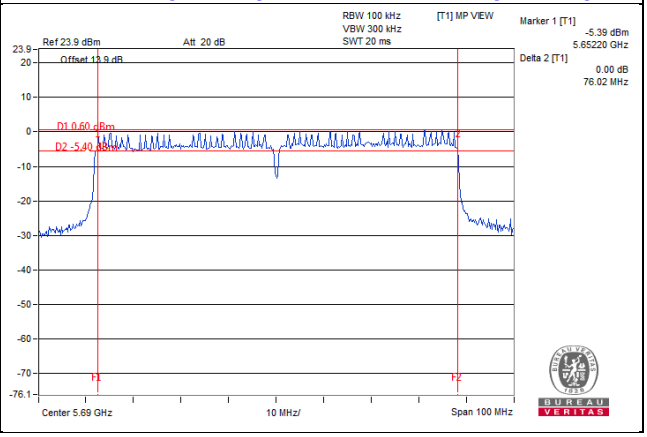
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (U-NII-3 Band)	5720	3.81	3.82	0.5	Pass
149	5745	17.65	17.66	0.5	Pass
157	5785	17.65	17.66	0.5	Pass
165	5825	17.66	17.66	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142 (U-NII-3 Band)	5710	3.24	3.23	0.5	Pass
151	5755	36.46	36.47	0.5	Pass
159	5795	36.47	36.47	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138 (U-NII-3 Band)	5690	3.22	3.23	0.5	Pass
155	5775	76.48	76.22	0.5	Pass

Spectrum Plot of Worst Value	
802.11a_Chain 0 / CH144 (U-NII-3)	**802.11ac (VHT20)_Chain 0 / CH144 (U-NII-3)**
	
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-3)	**802.11ac (VHT80)_Chain 0 / CH138 (U-NII-3)**
	

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

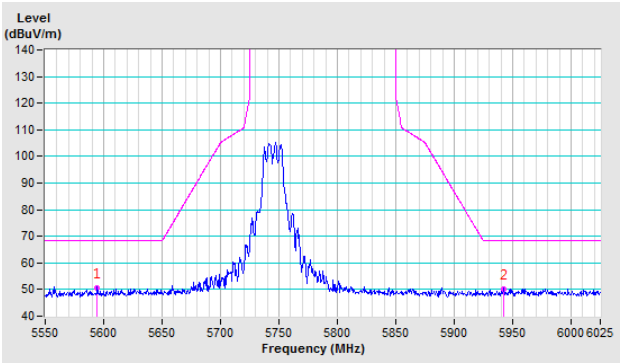
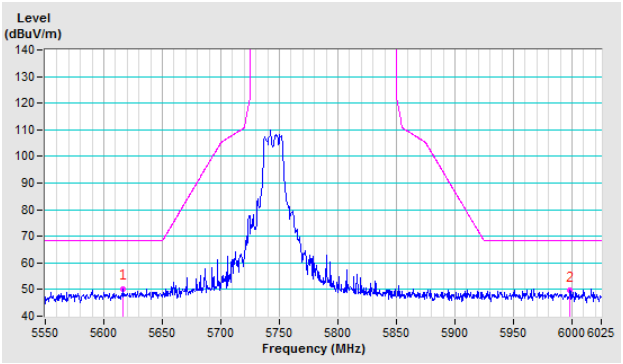
5 Pictures of Test Arrangements

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

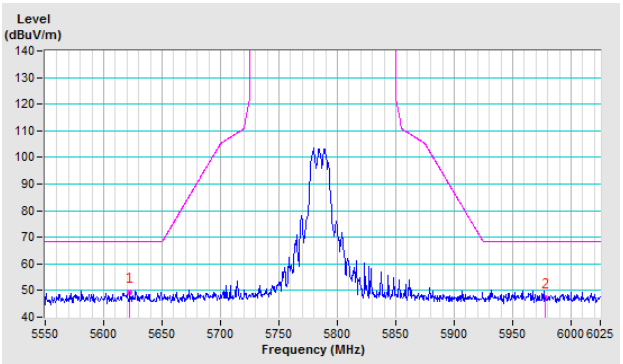
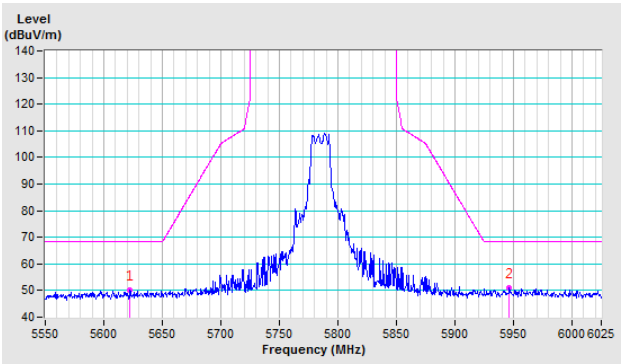
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

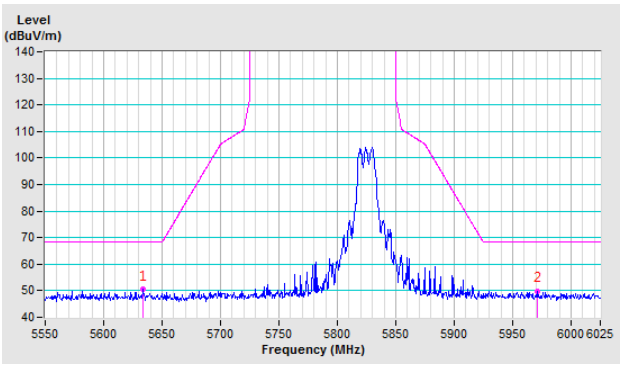
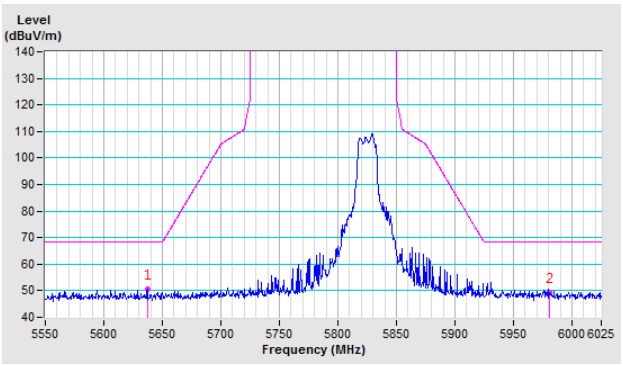
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

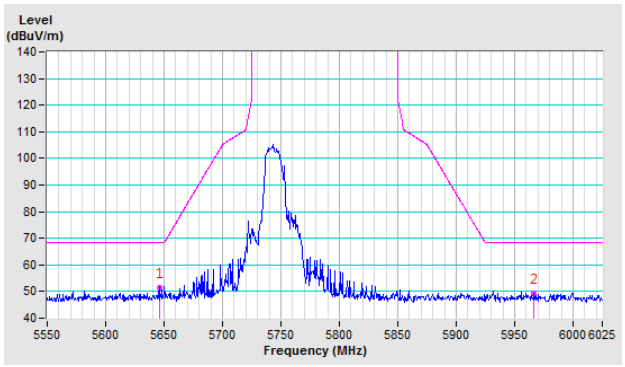
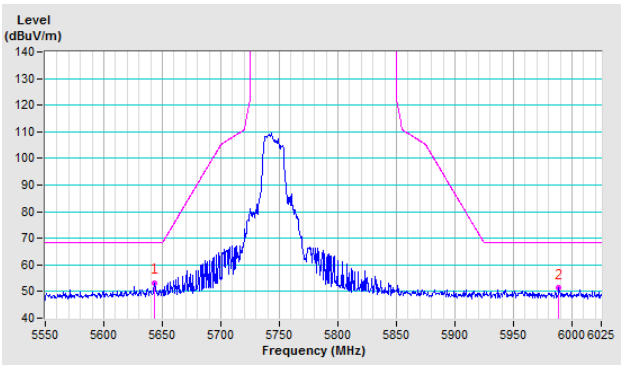
Horizontal	Vertical
	

CH 165 5825 MHz

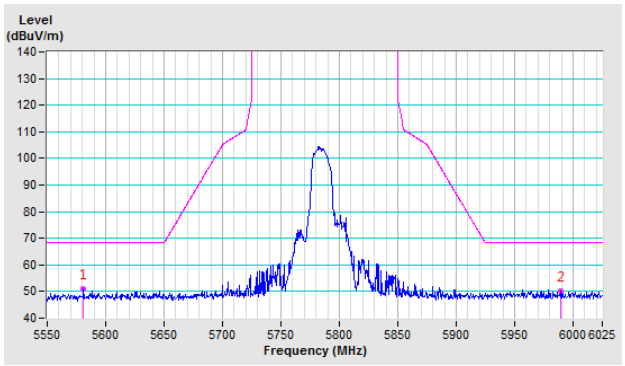
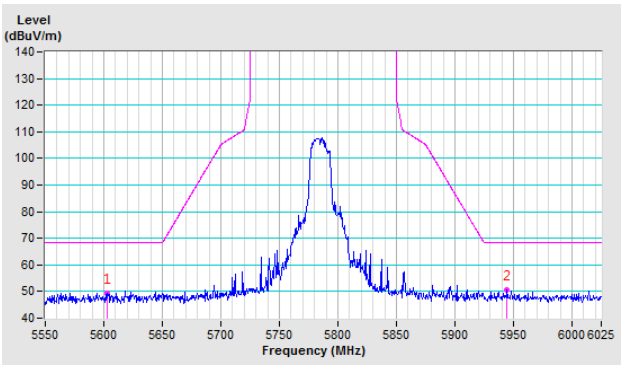
Horizontal	Vertical
	

802.11ac (VHT20)

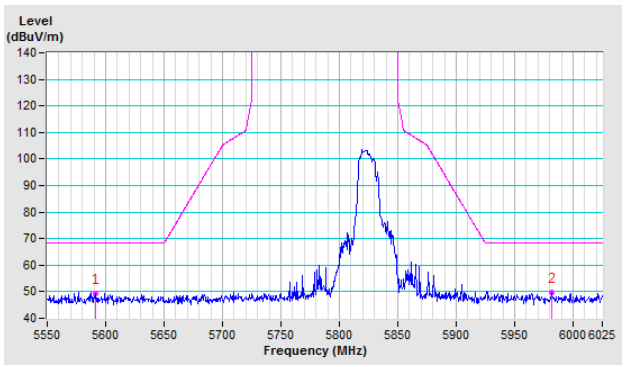
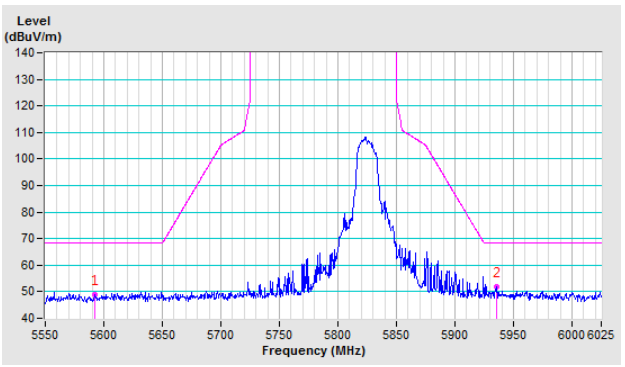
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

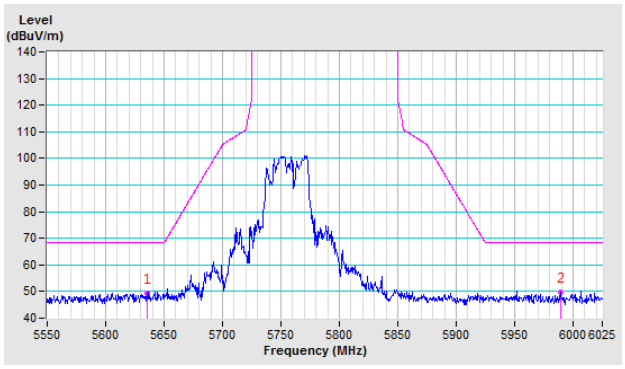
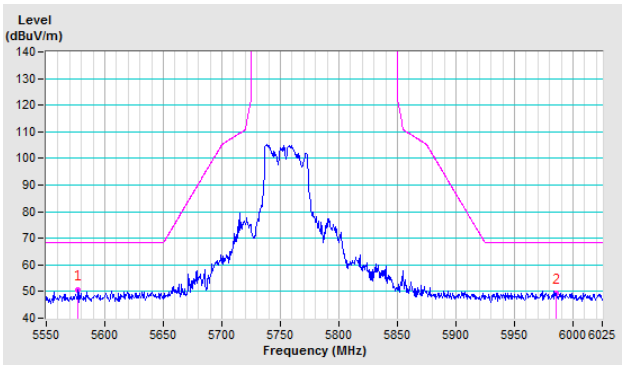
Horizontal	Vertical
	

CH 165 5825 MHz

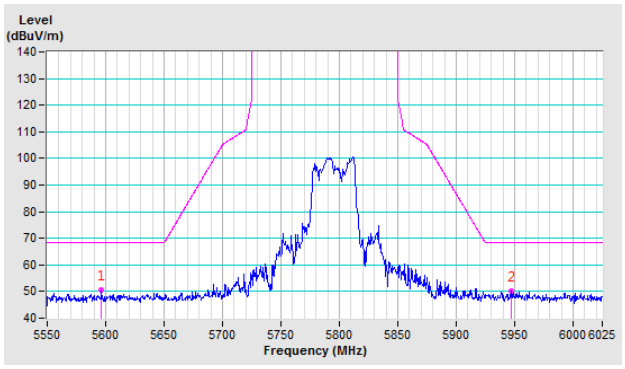
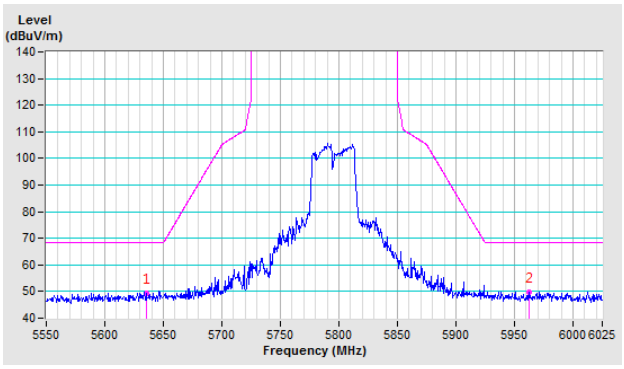
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

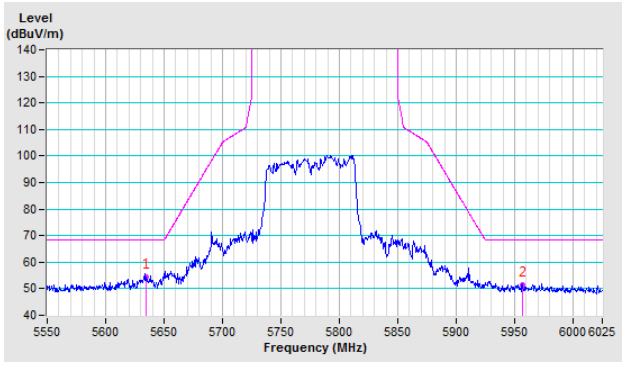
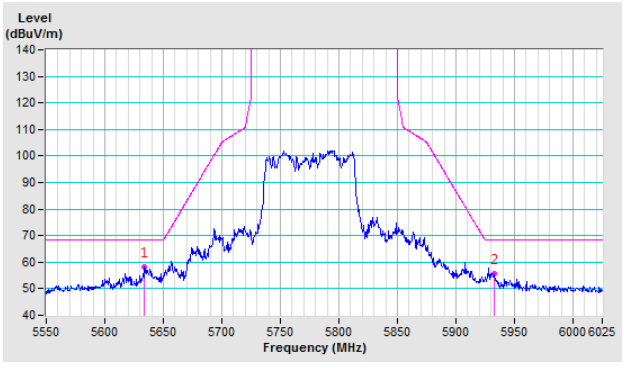
Horizontal	Vertical
	

CH 159 5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80)

CH 155 5775 MHz

Horizontal	Vertical
	

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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Email: service.adt@tw.bureauveritas.com
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The address and road map of all our labs can be found in our web site also.

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