

FCC Test Report

Report No.: RF181212E04-1

FCC ID: NOIKBEA0Q04

Test Model: EA0Q04

Received Date: Dec. 12, 2018

Test Date: Jan. 22 to Mar. 07, 2019

Issued Date: Mar. 25, 2019

Applicant: NETRONIX, INC.

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

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Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	10
3.2.1 Test Mode Applicability and Tested Channel Detail	12
3.3 Duty Cycle of Test Signal	14
3.4 Description of Support Units	15
3.4.1 Configuration of System under Test	16
3.5 General Description of Applied Standard	17
4 Test Types and Results	18
4.1 Radiated Emission and Bandedge Measurement.....	18
4.1.1 Limits of Radiated Emission and Bandedge Measurement	18
4.1.2 Test Instruments	19
4.1.3 Test Procedure	21
4.1.4 Deviation from Test Standard	22
4.1.5 Test Setup.....	22
4.1.6 EUT Operating Condition	23
4.1.7 Test Results	24
4.2 Conducted Emission Measurement	68
4.2.1 Limits of Conducted Emission Measurement	68
4.2.2 Test Instruments	68
4.2.3 Test Procedure	69
4.2.4 Deviation from Test Standard	69
4.2.5 Test Setup.....	69
4.2.6 EUT Operating Condition	69
4.2.7 Test Results	70
4.3 Transmit Power Measurement	72
4.3.1 Limits of Transmit Power Measurement	72
4.3.2 Test Setup.....	72
4.3.3 Test Instruments	73
4.3.4 Test Procedure	73
4.3.5 Deviation from Test Standard	73
4.3.6 EUT Operating Condition	73
4.3.7 Test Result.....	74
4.4 Occupied Bandwidth Measurement	82
4.4.1 Test Setup.....	82
4.4.2 Test Instruments	82
4.4.3 Test Procedure	82
4.4.4 Test Results	83
4.5 Peak Power Spectral Density Measurement	88
4.5.1 Limits of Peak Power Spectral Density Measurement	88
4.5.2 Test Setup.....	88
4.5.3 Test Instruments	88
4.5.4 Test Procedure	88
4.5.5 Deviation from Test Standard	89
4.5.6 EUT Operating Condition	89
4.5.7 Test Results	90
4.6 Frequency Stability Measurement.....	97
4.6.1 Limits of Frequency Stability Measurement	97

4.6.2	Test Setup.....	97
4.6.3	Test Instruments	97
4.6.4	Test Procedure	97
4.6.5	Deviation from Test Standard	97
4.6.6	EUT Operating Condition	97
4.6.7	Test Results	98
4.7	6dB Bandwidth Measurement	99
4.7.1	Limits of 6dB Bandwidth Measurement	99
4.7.2	Test Setup.....	99
4.7.3	Test Instruments	99
4.7.4	Test Procedure	99
4.7.5	Deviation from Test Standard	99
4.7.6	EUT Operating Condition	99
4.7.7	Test Results	100
5	Pictures of Test Arrangements.....	102
	Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	103
	Appendix – Information of the Testing Laboratories	106

Release Control Record

Issue No.	Description	Date Issued
RF181212E04-1	Original release.	Mar. 25, 2019

1 Certificate of Conformity

Product: Digital Notepad

Brand: MobiScribe

Test Model: EA0Q04

Sample Status: ENGINEERING SAMPLE

Applicant: NETRONIX, INC.

Test Date: Jan. 22 to Mar. 07, 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 :  , **Date:** Mar. 25, 2019
Wendy Wu / Specialist

Approved by :  , **Date:** Mar. 25, 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	Pass	Meet the requirement of limit. Minimum passing margin is -11.44dB at 0.48594MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 15600.00MHz, 15720.00MHz., 15960.00MHz, 5725.00MHz, 11570.00MHz, 11490.00MHz, 5150.00MHz, 5350.00MHz, 5470.00MHz, 5725.00MHz, 11510.00MHz, 11590.00MHz.
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 i-pex(MHF) not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB 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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	4.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.12 dB
	6GHz ~ 18GHz	4.86 dB
	18GHz ~ 40GHz	5.24 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Digital Notepad
Brand	MobiScribe
Test Model	EA0Q04
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 3.8V from battery or DC 5V from USB interface
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: 339.514mW 5GHz: 5.18 ~ 5.24GHz: 18.003mW 5.26 ~ 5.32GHz: 15.879mW 5.50 ~ 5.72GHz: 13.695mW 5.745 ~ 5.825GHz: 17.391mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	USB Cable x 1 (Shielded, 1m)

Note:

1. Simultaneously transmission condition.

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

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

2. The EUT could be supplied with a rechargeable battery as the following table:

Brand Name	Model No.	Spec.
TCL	PR-248899G	3.8Vdc, 3035mAh 11.53Wh

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

Antenna No.	Brand	Model	Antenna Net Gain (dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length (mm)
1	Walsin	RFPCA310904EMLB301	2.96	2400~2500	PCB	i-pex(MHF)	43
			3.72	5150~5850			
2	Walsin	RFPCA310912EMLB301	1.83	2400~2500	PCB	i-pex(MHF)	128
			5.43	5150~5850			

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

Brand	Model	Spec.
SANDISK	SDINBDG4-8G	8G Byte

5. For conducted emissions, the EUT was pre-tested under the following modes:

Test Mode	Description
Mode A	Power from USB adapter
Mode B	Power from Laptop

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

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

Test Mode	Description
Mode A	Power from USB adapter
Mode B	Power from Battery

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

7. The EUT incorporates a MIMO function.

2.4GHz		
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		
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:

1. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5700MHz

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 $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	PLC: power from Laptop Other: power from USB interface

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE:

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

Radiated Emission Test (Above 1GHz):

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

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

Radiated Emission Test (Below 1GHz):

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5180-5240	42	155	OFDM	BPSK	29.3
	5260-5320	58				
	5500-5720	106 to 138				
	5745-5825	155				

Power Line Conducted Emission Test:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5180-5240	42	155	OFDM	BPSK	29.3
	5260-5320	58				
	5500-5720	106 to 138				
	5745-5825	155				

Antenna Port Conducted Measurement:

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

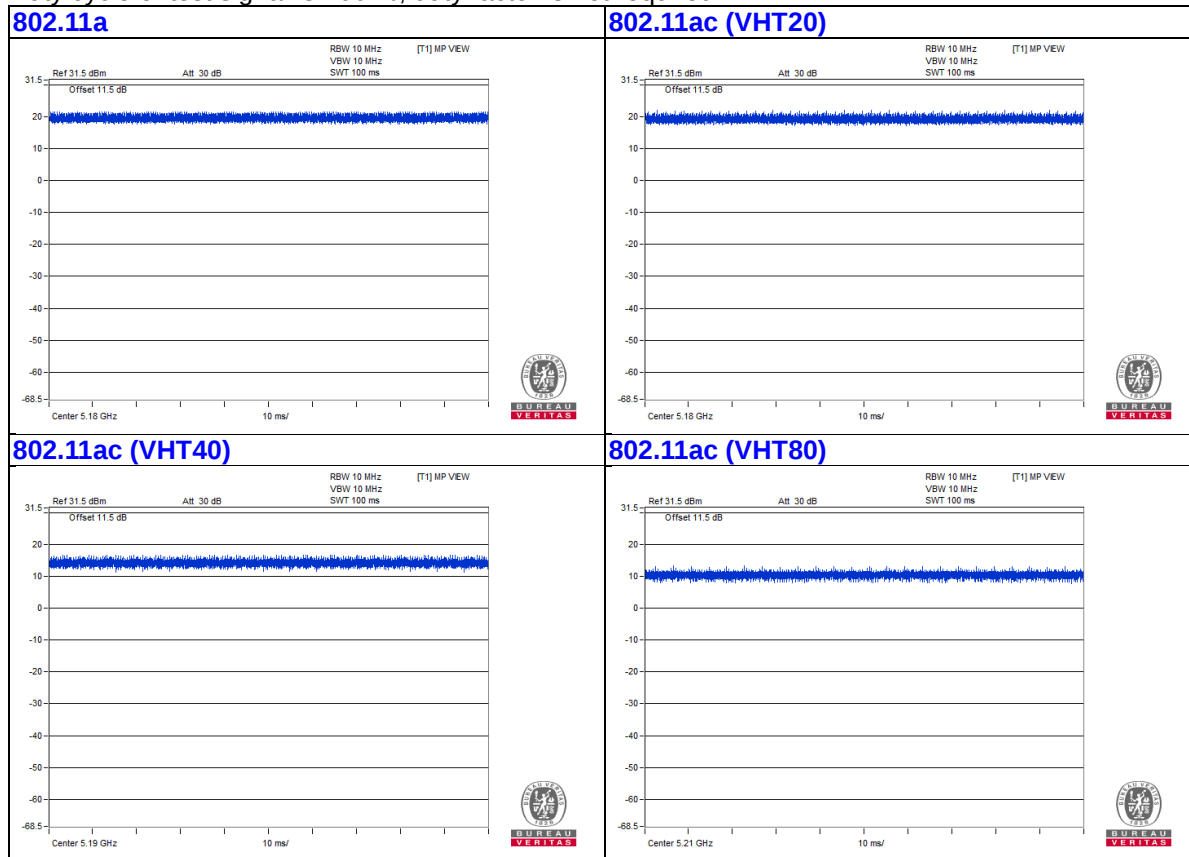
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a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

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Frank Chuang
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Steven Chaing
PLC	25deg. C, 68%RH	120Vac, 60Hz	Frank Chuang
APCM	21deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

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



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.	USB Adapter	ASUS	EXA1205UA	NA	NA	Provided by Lab
B.	Laptop	HP	TPN-Q186	5CD8212YYG	FCC DoC	Provided by Lab

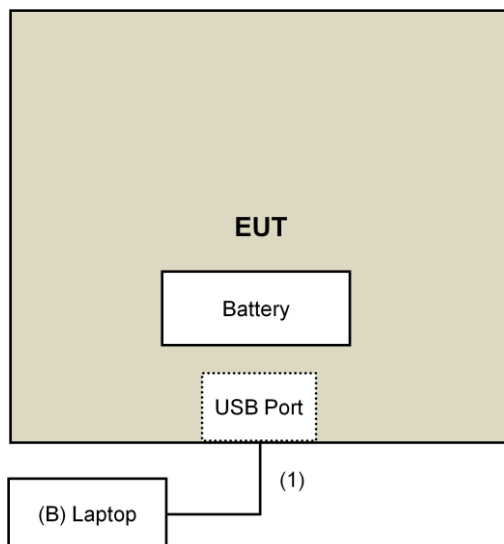
Note:

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

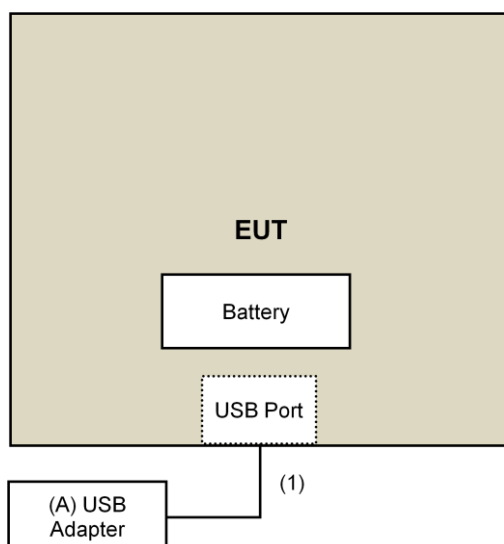
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Micro USB Cable	1	1	Yes	0	Supplied by client

3.4.1 Configuration of System under Test

For conducted emissions test:



For other 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:

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

Limits of unwanted emission out of the restricted bands

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

Note:

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

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

4.1.2 Test Instruments

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 05, 2018	July 04, 2019
Pre-Amplifier EMCI	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
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-01	Oct. 30, 2018	Oct. 29, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-4-1	Mar. 21, 2018	Mar. 20, 2019
RF Cable	8D	966-4-2	Mar. 21, 2018	Mar. 20, 2019
RF Cable	8D	966-4-3	Mar. 21, 2018	Mar. 20, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Sep. 27, 2018	Sep. 26, 2019
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier Mini-Circuits	ZVA-183-S+	AMP-ZVA-03	May 10, 2018	May 09, 2019
RF Cable	EMC104-SM-SM-1200	160923	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-2000	150318	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-5000	150321	Jan. 29, 2018	Jan. 28, 2019
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160925	Jan. 29, 2018	Jan. 28, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. The CANADA Site Registration No. is 20331-2
4. Loop antenna was used for all emissions below 30 MHz.
5. Tested Date: Jan. 23 to 26, 2019

For output power test:

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

Note:

1. 1. The test was performed in Oven room 2.
2. 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Jan. 26 to Mar. 05, 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:

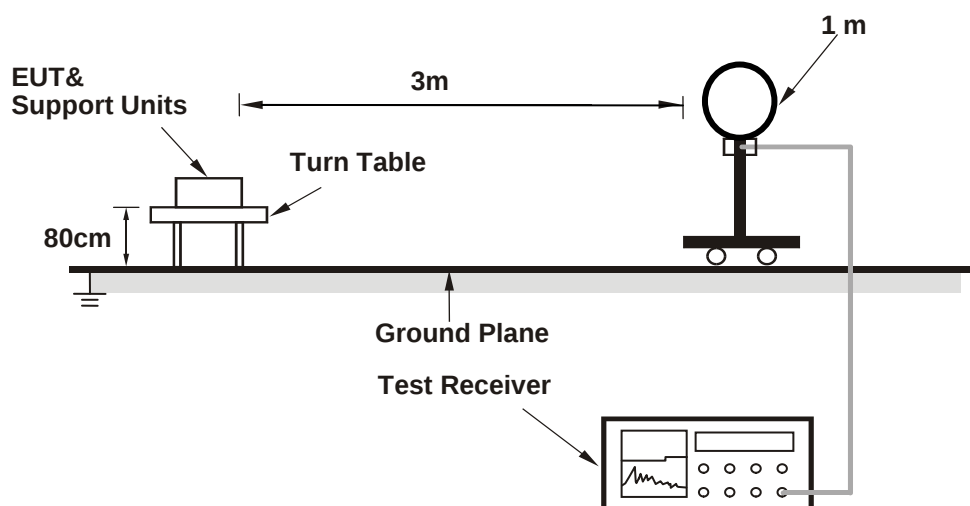
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

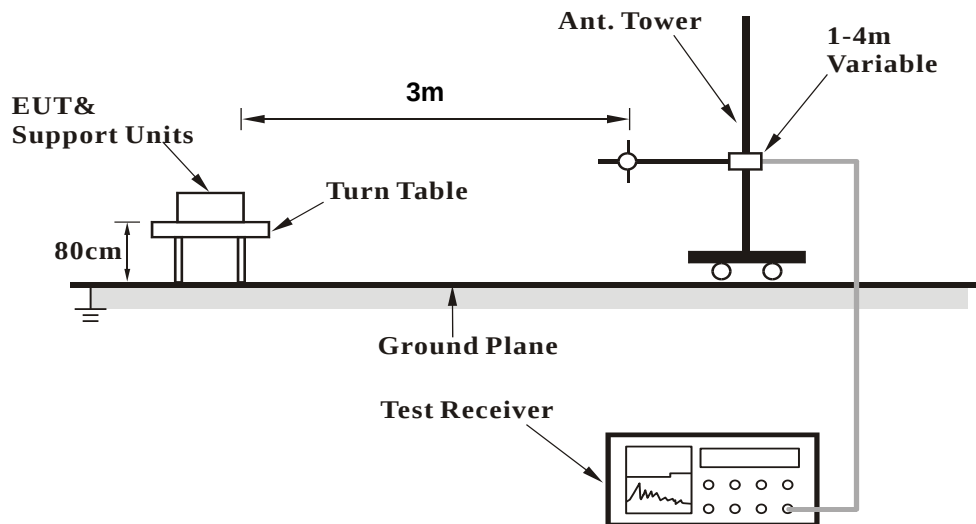
No deviation.

4.1.5 Test Setup

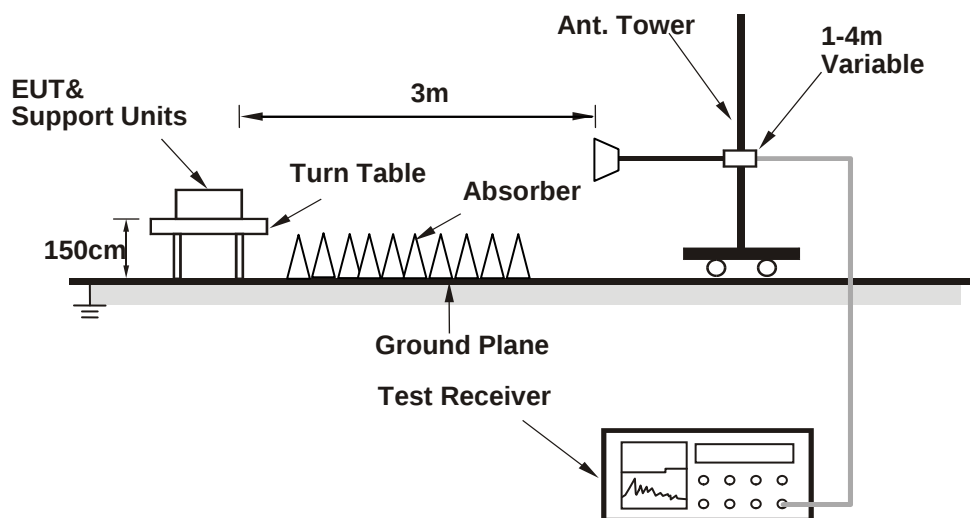
For Radiated emission below 30MHz



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

- Placed the EUT on the testing table.
- Controlling software (Tera Term paste EA0C04_Wifi SOP_20190116.doc) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.4 PK	74.0	-8.6	1.00 H	24	62.4	3.0
2	5150.00	52.1 AV	54.0	-1.9	1.00 H	24	49.1	3.0
3	*5180.00	109.2 PK			1.00 H	24	106.3	2.9
4	*5180.00	100.2 AV			1.00 H	24	97.3	2.9
5	#10360.00	48.7 PK	68.2	-19.5	1.02 H	222	35.7	13.0
6	15540.00	57.8 PK	74.0	-16.2	1.24 H	238	44.7	13.1
7	15540.00	44.6 AV	54.0	-9.4	1.24 H	238	31.5	13.1
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	64.1 PK	74.0	-9.9	3.97 V	214	61.1	3.0
2	5150.00	50.1 AV	54.0	-3.9	3.97 V	214	47.1	3.0
3	*5180.00	106.8 PK			3.97 V	214	103.9	2.9
4	*5180.00	97.6 AV			3.97 V	214	94.7	2.9
5	#10360.00	53.4 PK	68.2	-14.8	1.52 V	360	40.4	13.0
6	15540.00	66.8 PK	74.0	-7.2	1.50 V	347	53.7	13.1
7	15540.00	53.7 AV	54.0	-0.3	1.50 V	347	40.6	13.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	50.3 PK	74.0	-23.7	1.01 H	4	47.3	3.0
2	5150.00	38.5 AV	54.0	-15.5	1.01 H	4	35.5	3.0
3	*5200.00	108.7 PK			1.01 H	4	105.8	2.9
4	*5200.00	99.8 AV			1.01 H	4	96.9	2.9
5	#10400.00	48.8 PK	68.2	-19.4	1.01 H	209	35.7	13.1
6	15600.00	57.2 PK	74.0	-16.8	1.29 H	217	44.2	13.0
7	15600.00	44.2 AV	54.0	-9.8	1.29 H	217	31.2	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	50.1 PK	74.0	-23.9	3.91 V	195	47.1	3.0
2	5150.00	38.2 AV	54.0	-15.8	3.91 V	195	35.2	3.0
3	*5200.00	106.3 PK			3.91 V	195	103.4	2.9
4	*5200.00	96.5 AV			3.91 V	195	93.6	2.9
5	#10400.00	53.4 PK	68.2	-14.8	1.52 V	360	40.3	13.1
6	15600.00	67.5 PK	74.0	-6.5	1.10 V	246	54.5	13.0
7	15600.00	53.9 AV	54.0	-0.1	1.10 V	246	40.9	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	108.1 PK			1.00 H	2	105.6	2.5
2	*5240.00	99.7 AV			1.00 H	2	97.2	2.5
3	5350.00	48.7 PK	74.0	-25.3	1.00 H	2	45.9	2.8
4	5350.00	37.1 AV	54.0	-16.9	1.00 H	2	34.3	2.8
5	#10480.00	48.7 PK	68.2	-19.5	1.06 H	222	35.5	13.2
6	15720.00	57.0 PK	74.0	-17.0	1.26 H	223	44.6	12.4
7	15720.00	44.1 AV	54.0	-9.9	1.26 H	223	31.7	12.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.2 PK			3.96 V	202	103.7	2.5
2	*5240.00	96.7 AV			3.96 V	202	94.2	2.5
3	5350.00	48.6 PK	74.0	-25.4	3.96 V	202	45.8	2.8
4	5350.00	37.0 AV	54.0	-17.0	3.96 V	202	34.2	2.8
5	#10480.00	53.8 PK	68.2	-14.4	1.50 V	360	40.6	13.2
6	15720.00	67.9 PK	74.0	-6.1	1.24 V	92	55.5	12.4
7	15720.00	53.9 AV	54.0	-0.1	1.24 V	92	41.5	12.4

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.7 PK	74.0	-24.3	1.44 H	10	46.7	3.0
2	5150.00	37.6 AV	54.0	-16.4	1.44 H	10	34.6	3.0
3	*5260.00	108.5 PK			1.44 H	10	106.0	2.5
4	*5260.00	99.9 AV			1.44 H	10	97.4	2.5
5	#10520.00	48.7 PK	68.2	-19.5	1.07 H	212	35.5	13.2
6	15780.00	57.1 PK	74.0	-16.9	1.24 H	224	44.5	12.6
7	15780.00	44.0 AV	54.0	-10.0	1.24 H	224	31.4	12.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.3 PK	74.0	-24.7	3.99 V	216	46.3	3.0
2	5150.00	37.2 AV	54.0	-16.8	3.99 V	216	34.2	3.0
3	*5260.00	106.2 PK			3.99 V	216	103.7	2.5
4	*5260.00	96.6 AV			3.99 V	216	94.1	2.5
5	#10520.00	54.0 PK	68.2	-14.2	1.54 V	360	40.8	13.2
6	15780.00	66.3 PK	74.0	-7.7	1.27 V	246	53.7	12.6
7	15780.00	53.8 AV	54.0	-0.2	1.27 V	246	41.2	12.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.1 PK			1.22 H	12	106.4	2.7
2	*5300.00	100.2 AV			1.22 H	12	97.5	2.7
3	5350.00	49.3 PK	74.0	-24.7	1.22 H	12	46.5	2.8
4	5350.00	38.1 AV	54.0	-15.9	1.22 H	12	35.3	2.8
5	10600.00	48.6 PK	74.0	-25.4	1.03 H	210	35.5	13.1
6	10600.00	36.2 AV	54.0	-17.8	1.03 H	210	23.1	13.1
7	15900.00	56.4 PK	74.0	-17.6	1.29 H	238	43.7	12.7
8	15900.00	43.7 AV	54.0	-10.3	1.29 H	238	31.0	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	*5300.00	106.7 PK			3.95 V	214	104.0	2.7
2	*5300.00	97.0 AV			3.95 V	214	94.3	2.7
3	5350.00	58.1 PK	74.0	-15.9	3.95 V	214	55.3	2.8
4	5350.00	46.5 AV	54.0	-7.5	3.95 V	214	43.7	2.8
5	10600.00	54.3 PK	74.0	-19.7	1.53 V	360	41.2	13.1
6	10600.00	43.0 AV	54.0	-11.0	1.53 V	360	29.9	13.1
7	15900.00	68.1 PK	74.0	-5.9	1.20 V	243	55.4	12.7
8	15900.00	53.7 AV	54.0	-0.3	1.20 V	243	41.0	12.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.4 PK			1.11 H	9	106.6	2.8
2	*5320.00	102.4 AV			1.11 H	9	99.6	2.8
3	5350.00	65.1 PK	74.0	-8.9	1.11 H	9	62.3	2.8
4	5350.00	53.1 AV	54.0	-0.9	1.11 H	9	50.3	2.8
5	10640.00	48.8 PK	74.0	-25.2	1.01 H	226	35.6	13.2
6	10640.00	36.1 AV	54.0	-17.9	1.01 H	226	22.9	13.2
7	15960.00	57.2 PK	74.0	-16.8	1.22 H	214	44.3	12.9
8	15960.00	44.0 AV	54.0	-10.0	1.22 H	214	31.1	12.9
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	*5320.00	108.2 PK			3.89 V	212	105.4	2.8
2	*5320.00	101.3 AV			3.89 V	212	98.5	2.8
3	5350.00	62.2 PK	74.0	-11.8	3.89 V	212	59.4	2.8
4	5350.00	51.2 AV	54.0	-2.8	3.89 V	212	48.4	2.8
5	10640.00	54.5 PK	74.0	-19.5	1.49 V	360	41.3	13.2
6	10640.00	42.6 AV	54.0	-11.4	1.49 V	360	29.4	13.2
7	15960.00	65.8 PK	74.0	-8.2	1.28 V	83	52.9	12.9
8	15960.00	53.9 AV	54.0	-0.1	1.28 V	83	41.0	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.3 PK	74.0	-12.7	1.00 H	25	58.2	3.1
2	5460.00	45.2 AV	54.0	-8.8	1.00 H	25	42.1	3.1
3	#5470.00	67.9 PK	68.2	-0.3	1.00 H	25	64.8	3.1
4	*5500.00	111.5 PK			1.00 H	25	108.4	3.1
5	*5500.00	102.8 AV			1.00 H	25	99.7	3.1
6	11000.00	55.6 PK	74.0	-18.4	1.04 H	284	41.6	14.0
7	11000.00	42.5 AV	54.0	-11.5	1.04 H	284	28.5	14.0
8	#16500.00	50.5 PK	68.2	-17.7	3.53 H	11	35.5	15.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.4 PK	74.0	-15.6	2.55 V	197	55.3	3.1
2	5460.00	45.1 AV	54.0	-8.9	2.55 V	197	42.0	3.1
3	#5470.00	66.8 PK	68.2	-1.4	2.55 V	197	63.7	3.1
4	*5500.00	111.9 PK			2.55 V	197	108.8	3.1
5	*5500.00	102.6 AV			2.55 V	197	99.5	3.1
6	11000.00	64.2 PK	74.0	-9.8	1.00 V	360	50.2	14.0
7	11000.00	52.1 AV	54.0	-1.9	1.00 V	360	38.1	14.0
8	#16500.00	67.4 PK	68.2	-0.8	1.12 V	235	52.4	15.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.3 PK			1.36 H	35	107.0	3.3
2	*5580.00	101.7 AV			1.36 H	35	98.4	3.3
3	11160.00	61.3 PK	74.0	-12.7	1.06 H	302	47.9	13.4
4	11160.00	46.9 AV	54.0	-7.1	1.06 H	302	33.5	13.4
5	#16740.00	50.6 PK	68.2	-17.6	3.53 H	14	34.0	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	*5580.00	112.0 PK			2.52 V	189	108.7	3.3
2	*5580.00	102.0 AV			2.52 V	189	98.7	3.3
3	11160.00	65.4 PK	74.0	-8.6	1.04 V	360	52.0	13.4
4	11160.00	53.1 AV	54.0	-0.9	1.04 V	360	39.7	13.4
5	#16740.00	67.3 PK	68.2	-0.9	1.06 V	228	50.7	16.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.2 PK			1.24 H	160	107.6	3.6
2	*5700.00	102.5 AV			1.24 H	160	98.9	3.6
3	#5725.00	68.1 PK	68.2	-0.1	1.24 H	160	64.6	3.5
4	11400.00	61.0 PK	74.0	-13.0	1.08 H	291	47.4	13.6
5	11400.00	46.7 AV	54.0	-7.3	1.08 H	291	33.1	13.6
6	#17100.00	50.5 PK	68.2	-17.7	3.49 H	25	34.2	16.3
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	*5700.00	111.6 PK			2.57 V	211	108.0	3.6
2	*5700.00	102.8 AV			2.57 V	211	99.2	3.6
3	#5725.00	67.8 PK	68.2	-0.4	2.57 V	211	64.3	3.5
4	11400.00	68.4 PK	74.0	-5.6	1.00 V	360	54.8	13.6
5	11400.00	53.4 AV	54.0	-0.6	1.00 V	360	39.8	13.6
6	#17100.00	67.5 PK	68.2	-0.7	1.06 V	220	51.2	16.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.5 PK	74.0	-15.5	1.36 H	176	55.4	3.1
2	5460.00	42.2 AV	54.0	-11.8	1.36 H	176	39.1	3.1
3	#5470.00	58.8 PK	68.2	-9.4	1.36 H	176	55.7	3.1
4	*5720.00	109.3 PK			1.36 H	176	105.8	3.5
5	*5720.00	100.5 AV			1.36 H	176	97.0	3.5
6	#5850.00	60.1 PK	68.2	-8.1	1.36 H	176	56.2	3.9
7	11440.00	60.8 PK	74.0	-13.2	1.05 H	296	47.1	13.7
8	11440.00	46.6 AV	54.0	-7.4	1.05 H	296	32.9	13.7
9	#17160.00	50.4 PK	68.2	-17.8	3.51 H	14	33.7	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	5460.00	58.8 PK	74.0	-15.2	2.45 V	190	55.7	3.1
2	5460.00	42.5 AV	54.0	-11.5	2.45 V	190	39.4	3.1
3	#5470.00	59.2 PK	68.2	-9.0	2.45 V	190	56.1	3.1
4	*5720.00	111.5 PK			2.45 V	190	108.0	3.5
5	*5720.00	102.2 AV			2.45 V	190	98.7	3.5
6	#5850.00	60.6 PK	68.2	-7.6	2.45 V	190	56.7	3.9
7	11440.00	60.7 PK	74.0	-13.3	1.06 V	286	47.0	13.7
8	11440.00	46.8 AV	54.0	-7.2	1.06 V	286	33.1	13.7
9	#17160.00	67.1 PK	68.2	-1.1	3.45 V	26	50.4	16.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5562.67	54.3 PK	68.2	-13.9	1.32 H	161	51.1	3.2
2	*5745.00	109.0 PK			1.32 H	161	105.4	3.6
3	*5745.00	100.4 AV			1.32 H	161	96.8	3.6
4	#5966.43	52.7 PK	68.2	-15.5	1.32 H	161	48.8	3.9
5	11490.00	60.9 PK	74.0	-13.1	1.04 H	280	47.1	13.8
6	11490.00	46.9 AV	54.0	-7.1	1.04 H	280	33.1	13.8
7	#17235.00	50.6 PK	68.2	-17.6	3.52 H	16	33.5	17.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.41	54.9 PK	68.2	-13.3	2.40 V	195	51.7	3.2
2	*5745.00	111.7 PK			2.40 V	195	108.1	3.6
3	*5745.00	102.9 AV			2.40 V	195	99.3	3.6
4	#5961.41	53.5 PK	68.2	-14.7	2.40 V	195	49.6	3.9
5	11490.00	67.2 PK	74.0	-6.8	1.51 V	360	53.4	13.8
6	11490.00	53.8 AV	54.0	-0.2	1.51 V	360	40.0	13.8
7	#17235.00	56.6 PK	68.2	-11.6	1.26 V	317	39.5	17.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5578.73	54.7 PK	68.2	-13.5	1.26 H	160	51.4	3.3
2	*5785.00	109.3 PK			1.26 H	160	105.7	3.6
3	*5785.00	100.6 AV			1.26 H	160	97.0	3.6
4	#5925.61	53.5 PK	68.2	-14.7	1.26 H	160	49.6	3.9
5	11570.00	61.4 PK	74.0	-12.6	1.08 H	290	47.7	13.7
6	11570.00	47.1 AV	54.0	-6.9	1.08 H	290	33.4	13.7
7	#17355.00	50.5 PK	68.2	-17.7	3.50 H	3	32.9	17.6
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	#5596.76	54.7 PK	68.2	-13.5	2.38 V	180	51.4	3.3
2	*5785.00	111.7 PK			2.38 V	180	108.1	3.6
3	*5785.00	102.8 AV			2.38 V	180	99.2	3.6
4	#5961.60	54.8 PK	68.2	-13.4	2.38 V	180	50.9	3.9
5	11570.00	67.0 PK	74.0	-7.0	1.56 V	360	53.3	13.7
6	11570.00	53.9 AV	54.0	-0.1	1.56 V	360	40.2	13.7
7	#17355.00	56.7 PK	68.2	-11.5	1.23 V	305	39.1	17.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.27	54.2 PK	68.2	-14.0	1.29 H	174	51.0	3.2
2	*5825.00	108.9 PK			1.29 H	174	105.1	3.8
3	*5825.00	100.1 AV			1.29 H	174	96.3	3.8
4	#6008.03	55.4 PK	68.2	-12.8	1.29 H	174	51.4	4.0
5	11650.00	60.9 PK	74.0	-13.1	1.08 H	267	47.3	13.6
6	11650.00	47.2 AV	54.0	-6.8	1.08 H	267	33.6	13.6
7	#17475.00	50.8 PK	68.2	-17.4	3.54 H	15	32.2	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.09	55.2 PK	68.2	-13.0	2.44 V	205	52.0	3.2
2	*5825.00	112.0 PK			2.44 V	205	108.2	3.8
3	*5825.00	102.9 AV			2.44 V	205	99.1	3.8
4	#5960.02	54.5 PK	68.2	-13.7	2.44 V	205	50.6	3.9
5	11650.00	67.1 PK	74.0	-6.9	1.49 V	360	53.5	13.6
6	11650.00	53.7 AV	54.0	-0.3	1.49 V	360	40.1	13.6
7	#17475.00	56.4 PK	68.2	-11.8	1.31 V	319	37.8	18.6

REMARKS:

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

802.11ac (VHT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.8 PK	74.0	-9.2	1.05 H	13	61.8	3.0
2	5150.00	51.6 AV	54.0	-2.4	1.05 H	13	48.6	3.0
3	*5180.00	108.6 PK			1.05 H	13	105.7	2.9
4	*5180.00	99.8 AV			1.05 H	13	96.9	2.9
5	#10360.00	47.9 PK	68.2	-20.3	1.01 H	196	34.9	13.0
6	15540.00	57.3 PK	74.0	-16.7	1.37 H	247	44.2	13.1
7	15540.00	44.1 AV	54.0	-9.9	1.37 H	247	31.0	13.1
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	61.2 PK	74.0	-12.8	2.58 V	212	58.2	3.0
2	5150.00	49.6 AV	54.0	-4.4	2.58 V	212	46.6	3.0
3	*5180.00	106.0 PK			2.58 V	212	103.1	2.9
4	*5180.00	97.3 AV			2.58 V	212	94.4	2.9
5	#10360.00	53.2 PK	68.2	-15.0	1.48 V	360	40.2	13.0
6	15540.00	66.4 PK	74.0	-7.6	1.54 V	360	53.3	13.1
7	15540.00	53.8 AV	54.0	-0.2	1.54 V	360	40.7	13.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.1 PK			1.00 H	11	106.2	2.9
2	*5200.00	99.9 AV			1.00 H	11	97.0	2.9
3	#10400.00	48.0 PK	68.2	-20.2	1.00 H	183	34.9	13.1
4	15600.00	56.9 PK	74.0	-17.1	1.32 H	236	43.9	13.0
5	15600.00	44.1 AV	54.0	-9.9	1.32 H	236	31.1	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	*5200.00	106.4 PK			2.52 V	196	103.5	2.9
2	*5200.00	97.4 AV			2.52 V	196	94.5	2.9
3	#10400.00	54.0 PK	68.2	-14.2	1.54 V	360	40.9	13.1
4	15600.00	67.3 PK	74.0	-6.7	1.15 V	244	54.3	13.0
5	15600.00	53.9 AV	54.0	-0.1	1.15 V	244	40.9	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.9 PK			1.03 H	13	105.4	2.5
2	*5240.00	99.4 AV			1.03 H	13	96.9	2.5
3	5350.00	48.5 PK	74.0	-25.5	1.03 H	13	45.7	2.8
4	5350.00	37.2 AV	54.0	-16.8	1.03 H	13	34.4	2.8
5	#10480.00	47.8 PK	68.2	-20.4	1.00 H	189	34.6	13.2
6	15720.00	57.3 PK	74.0	-16.7	1.22 H	225	44.9	12.4
7	15720.00	44.2 AV	54.0	-9.8	1.22 H	225	31.8	12.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.3 PK			2.53 V	216	103.8	2.5
2	*5240.00	97.4 AV			2.53 V	216	94.9	2.5
3	5350.00	48.8 PK	74.0	-25.2	2.53 V	216	46.0	2.8
4	5350.00	37.1 AV	54.0	-16.9	2.53 V	216	34.3	2.8
5	#10480.00	53.6 PK	68.2	-14.6	1.49 V	360	40.4	13.2
6	15720.00	67.7 PK	74.0	-6.3	1.05 V	241	55.3	12.4
7	15720.00	53.7 AV	54.0	-0.3	1.05 V	241	41.3	12.4

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.9 PK	74.0	-24.1	1.46 H	12	46.9	3.0
2	5150.00	37.7 AV	54.0	-16.3	1.46 H	12	34.7	3.0
3	*5260.00	109.1 PK			1.46 H	12	106.6	2.5
4	*5260.00	100.3 AV			1.46 H	12	97.8	2.5
5	#10520.00	48.3 PK	68.2	-19.9	1.00 H	197	35.1	13.2
6	15780.00	56.7 PK	74.0	-17.3	1.32 H	244	44.1	12.6
7	15780.00	43.8 AV	54.0	-10.2	1.32 H	244	31.2	12.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.5 PK	74.0	-25.5	2.57 V	203	45.5	3.0
2	5150.00	37.2 AV	54.0	-16.8	2.57 V	203	34.2	3.0
3	*5260.00	107.2 PK			2.57 V	203	104.7	2.5
4	*5260.00	98.1 AV			2.57 V	203	95.6	2.5
5	#10520.00	53.8 PK	68.2	-14.4	1.53 V	360	40.6	13.2
6	15780.00	65.8 PK	74.0	-8.2	1.27 V	247	53.2	12.6
7	15780.00	53.5 AV	54.0	-0.5	1.27 V	247	40.9	12.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.2 PK			1.26 H	19	106.5	2.7
2	*5300.00	100.3 AV			1.26 H	19	97.6	2.7
3	10600.00	49.2 PK	74.0	-24.8	1.04 H	203	36.1	13.1
4	10600.00	36.6 AV	54.0	-17.4	1.04 H	203	23.5	13.1
5	15900.00	56.6 PK	74.0	-17.4	1.31 H	245	43.9	12.7
6	15900.00	43.7 AV	54.0	-10.3	1.31 H	245	31.0	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	*5300.00	107.1 PK			2.62 V	222	104.4	2.7
2	*5300.00	98.1 AV			2.62 V	222	95.4	2.7
3	10600.00	54.7 PK	74.0	-19.3	1.53 V	359	41.6	13.1
4	10600.00	43.1 AV	54.0	-10.9	1.53 V	359	30.0	13.1
5	15900.00	68.2 PK	74.0	-5.8	1.20 V	236	55.5	12.7
6	15900.00	53.7 AV	54.0	-0.3	1.20 V	236	41.0	12.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.5 PK			1.12 H	22	106.7	2.8
2	*5320.00	102.3 AV			1.12 H	22	99.5	2.8
3	5350.00	65.4 PK	74.0	-8.6	1.12 H	22	62.6	2.8
4	5350.00	53.3 AV	54.0	-0.7	1.12 H	22	50.5	2.8
5	10640.00	48.8 PK	74.0	-25.2	1.00 H	205	35.6	13.2
6	10640.00	36.3 AV	54.0	-17.7	1.00 H	205	23.1	13.2
7	15960.00	56.5 PK	74.0	-17.5	1.33 H	227	43.6	12.9
8	15960.00	43.5 AV	54.0	-10.5	1.33 H	227	30.6	12.9
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	*5320.00	108.2 PK			2.60 V	217	105.4	2.8
2	*5320.00	100.6 AV			2.60 V	217	97.8	2.8
3	5350.00	61.7 PK	74.0	-12.3	2.60 V	217	58.9	2.8
4	5350.00	50.7 AV	54.0	-3.3	2.60 V	217	47.9	2.8
5	10640.00	54.1 PK	74.0	-19.9	1.53 V	360	40.9	13.2
6	10640.00	42.7 AV	54.0	-11.3	1.53 V	360	29.5	13.2
7	15960.00	66.0 PK	74.0	-8.0	1.33 V	85	53.1	12.9
8	15960.00	53.9 AV	54.0	-0.1	1.33 V	85	41.0	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.9 PK	74.0	-12.1	1.00 H	10	58.8	3.1
2	5460.00	45.6 AV	54.0	-8.4	1.00 H	10	42.5	3.1
3	#5470.00	68.0 PK	68.2	-0.2	1.00 H	10	64.9	3.1
4	*5500.00	110.9 PK			1.00 H	10	107.8	3.1
5	*5500.00	102.5 AV			1.00 H	10	99.4	3.1
6	11000.00	55.0 PK	74.0	-19.0	1.02 H	297	41.0	14.0
7	11000.00	42.1 AV	54.0	-11.9	1.02 H	297	28.1	14.0
8	#16500.00	50.5 PK	68.2	-17.7	3.58 H	1	35.5	15.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.1 PK	74.0	-15.9	2.55 V	200	55.0	3.1
2	5460.00	45.0 AV	54.0	-9.0	2.55 V	200	41.9	3.1
3	#5470.00	67.3 PK	68.2	-0.9	2.55 V	200	64.2	3.1
4	*5500.00	108.4 PK			2.55 V	200	105.3	3.1
5	*5500.00	100.6 AV			2.55 V	200	97.5	3.1
6	11000.00	64.0 PK	74.0	-10.0	1.03 V	360	50.0	14.0
7	11000.00	51.8 AV	54.0	-2.2	1.03 V	360	37.8	14.0
8	#16500.00	66.9 PK	68.2	-1.3	3.50 V	39	51.9	15.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.1 PK			1.24 H	166	107.8	3.3
2	*5580.00	102.7 AV			1.24 H	166	99.4	3.3
3	11160.00	55.7 PK	74.0	-18.3	1.00 H	293	42.3	13.4
4	11160.00	42.8 AV	54.0	-11.2	1.00 H	293	29.4	13.4
5	#16740.00	51.2 PK	68.2	-17.0	3.49 H	1	34.6	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	*5580.00	108.6 PK			2.54 V	212	105.3	3.3
2	*5580.00	100.8 AV			2.54 V	212	97.5	3.3
3	11160.00	66.2 PK	74.0	-7.8	1.05 V	360	52.8	13.4
4	11160.00	53.4 AV	54.0	-0.6	1.05 V	360	40.0	13.4
5	#16740.00	67.6 PK	68.2	-0.6	3.50 V	29	51.0	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.2 PK			1.29 H	169	107.6	3.6
2	*5700.00	102.8 AV			1.29 H	169	99.2	3.6
3	#5725.00	68.1 PK	68.2	-0.1	1.29 H	169	64.6	3.5
4	11400.00	55.7 PK	74.0	-18.3	1.00 H	285	42.1	13.6
5	11400.00	42.8 AV	54.0	-11.2	1.00 H	285	29.2	13.6
6	#17100.00	50.2 PK	68.2	-18.0	3.49 H	11	33.9	16.3
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	*5700.00	108.4 PK			2.53 V	220	104.8	3.6
2	*5700.00	100.9 AV			2.53 V	220	97.3	3.6
3	#5725.00	67.2 PK	68.2	-1.0	2.53 V	220	63.7	3.5
4	11400.00	68.6 PK	74.0	-5.4	1.01 V	360	55.0	13.6
5	11400.00	53.6 AV	54.0	-0.4	1.01 V	360	40.0	13.6
6	#17100.00	67.6 PK	68.2	-0.6	3.45 V	16	51.3	16.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.0 PK	68.2	-9.2	1.34 H	166	55.9	3.1
2	*5720.00	110.8 PK			1.34 H	166	107.3	3.5
3	*5720.00	102.2 AV			1.34 H	166	98.7	3.5
4	#5850.00	60.3 PK	68.2	-7.9	1.34 H	166	56.4	3.9
5	11440.00	56.0 PK	74.0	-18.0	1.10 H	282	42.3	13.7
6	11440.00	42.9 AV	54.0	-11.1	1.10 H	282	29.2	13.7
7	#17160.00	49.9 PK	68.2	-18.3	3.55 H	5	33.2	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	#5470.00	59.1 PK	68.2	-9.1	2.52 V	204	56.0	3.1
2	*5720.00	108.2 PK			2.52 V	204	104.7	3.5
3	*5720.00	100.4 AV			2.52 V	204	96.9	3.5
4	#5850.00	60.6 PK	68.2	-7.6	2.52 V	204	56.7	3.9
5	11440.00	68.1 PK	74.0	-5.9	1.56 V	360	54.4	13.7
6	11440.00	52.8 AV	54.0	-1.2	1.56 V	360	39.1	13.7
7	#17160.00	67.2 PK	68.2	-1.0	3.48 V	34	50.5	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5562.58	53.9 PK	68.2	-14.3	1.95 H	357	50.7	3.2
2	*5745.00	105.8 PK			1.95 H	357	102.2	3.6
3	*5745.00	96.8 AV			1.95 H	357	93.2	3.6
4	#6002.22	53.8 PK	68.2	-14.4	1.95 H	357	49.8	4.0
5	11490.00	61.3 PK	74.0	-12.7	1.03 H	279	47.5	13.8
6	11490.00	47.1 AV	54.0	-6.9	1.03 H	279	33.3	13.8
7	#17235.00	50.9 PK	68.2	-17.3	3.48 H	27	33.8	17.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.62	53.8 PK	68.2	-14.4	3.19 V	110	50.4	3.4
2	*5745.00	107.0 PK			3.19 V	110	103.4	3.6
3	*5745.00	98.0 AV			3.19 V	110	94.4	3.6
4	#5977.02	53.6 PK	68.2	-14.6	3.19 V	110	49.6	4.0
5	11490.00	67.2 PK	74.0	-6.8	1.47 V	348	53.4	13.8
6	11490.00	53.9 AV	54.0	-0.1	1.47 V	348	40.1	13.8
7	#17235.00	56.6 PK	68.2	-11.6	1.25 V	315	39.5	17.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5616.94	54.4 PK	68.2	-13.8	1.97 H	356	51.0	3.4
2	*5785.00	105.7 PK			1.97 H	356	102.1	3.6
3	*5785.00	96.9 AV			1.97 H	356	93.3	3.6
4	#6011.17	54.4 PK	68.2	-13.8	1.97 H	356	50.4	4.0
5	11570.00	60.7 PK	74.0	-13.3	1.00 H	282	47.0	13.7
6	11570.00	46.9 AV	54.0	-7.1	1.00 H	282	33.2	13.7
7	#17355.00	50.4 PK	68.2	-17.8	3.49 H	1	32.8	17.6
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	#5644.43	54.1 PK	68.2	-14.1	3.16 V	125	50.9	3.2
2	*5785.00	107.3 PK			3.16 V	125	103.7	3.6
3	*5785.00	98.3 AV			3.16 V	125	94.7	3.6
4	#5956.92	54.2 PK	68.2	-14.0	3.16 V	125	50.3	3.9
5	11570.00	67.0 PK	74.0	-7.0	1.47 V	360	53.3	13.7
6	11570.00	53.6 AV	54.0	-0.4	1.47 V	360	39.9	13.7
7	#17355.00	56.2 PK	68.2	-12.0	1.25 V	313	38.6	17.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.26	54.2 PK	68.2	-14.0	1.91 H	358	50.8	3.4
2	*5825.00	105.5 PK			1.91 H	358	101.7	3.8
3	*5825.00	96.5 AV			1.91 H	358	92.7	3.8
4	#5956.43	54.7 PK	68.2	-13.5	1.91 H	358	50.8	3.9
5	11650.00	60.4 PK	74.0	-13.6	1.00 H	275	46.8	13.6
6	11650.00	46.4 AV	54.0	-7.6	1.00 H	275	32.8	13.6
7	#17475.00	50.2 PK	68.2	-18.0	3.57 H	19	31.6	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5584.18	53.9 PK	68.2	-14.3	3.17 V	112	50.6	3.3
2	*5825.00	107.1 PK			3.17 V	112	103.3	3.8
3	*5825.00	98.3 AV			3.17 V	112	94.5	3.8
4	#6010.90	54.1 PK	68.2	-14.1	3.17 V	112	50.1	4.0
5	11650.00	67.3 PK	74.0	-6.7	1.48 V	345	53.7	13.6
6	11650.00	53.8 AV	54.0	-0.2	1.48 V	345	40.2	13.6
7	#17475.00	56.1 PK	68.2	-12.1	1.24 V	317	37.5	18.6

REMARKS:

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

802.11ac (VHT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.8 PK	74.0	-6.2	1.17 H	30	64.8	3.0
2	5150.00	53.9 AV	54.0	-0.1	1.17 H	30	50.9	3.0
3	*5190.00	104.6 PK			1.17 H	30	101.7	2.9
4	*5190.00	94.7 AV			1.17 H	30	91.8	2.9
5	5350.00	49.8 PK	74.0	-24.2	1.17 H	30	47.0	2.8
6	5350.00	36.6 AV	54.0	-17.4	1.17 H	30	33.8	2.8
7	#10380.00	47.1 PK	68.2	-21.1	1.00 H	196	34.1	13.0
8	15570.00	57.1 PK	74.0	-16.9	1.17 H	235	44.1	13.0
9	15570.00	44.2 AV	54.0	-9.8	1.17 H	235	31.2	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	65.1 PK	74.0	-8.9	3.93 V	223	62.1	3.0
2	5150.00	52.1 AV	54.0	-1.9	3.93 V	223	49.1	3.0
3	*5190.00	100.7 PK			3.93 V	223	97.8	2.9
4	*5190.00	89.4 AV			3.93 V	223	86.5	2.9
5	5350.00	48.4 PK	74.0	-25.6	3.93 V	223	45.6	2.8
6	5350.00	36.6 AV	54.0	-17.4	3.93 V	223	33.8	2.8
7	#10380.00	54.1 PK	68.2	-14.1	1.56 V	360	41.1	13.0
8	15570.00	62.1 PK	74.0	-11.9	1.30 V	91	49.1	13.0
9	15570.00	50.0 AV	54.0	-4.0	1.30 V	91	37.0	13.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	1.63 H	28	56.6	3.0
2	5150.00	45.9 AV	54.0	-8.1	1.63 H	28	42.9	3.0
3	*5230.00	107.8 PK			1.63 H	28	105.2	2.6
4	*5230.00	97.1 AV			1.63 H	28	94.5	2.6
5	5350.00	47.7 PK	74.0	-26.3	1.63 H	28	44.9	2.8
6	5350.00	35.3 AV	54.0	-18.7	1.63 H	28	32.5	2.8
7	#10460.00	47.1 PK	68.2	-21.1	1.00 H	203	33.9	13.2
8	15690.00	56.7 PK	74.0	-17.3	1.28 H	227	44.4	12.3
9	15690.00	43.7 AV	54.0	-10.3	1.28 H	227	31.4	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	5150.00	56.9 PK	74.0	-17.1	2.54 V	210	53.9	3.0
2	5150.00	43.1 AV	54.0	-10.9	2.54 V	210	40.1	3.0
3	*5230.00	105.1 PK			2.54 V	210	102.5	2.6
4	*5230.00	94.6 AV			2.54 V	210	92.0	2.6
5	5350.00	48.2 PK	74.0	-25.8	2.54 V	210	45.4	2.8
6	5350.00	36.6 AV	54.0	-17.4	2.54 V	210	33.8	2.8
7	#10460.00	52.9 PK	68.2	-15.3	1.57 V	360	39.7	13.2
8	15690.00	65.1 PK	74.0	-8.9	1.30 V	93	52.8	12.3
9	15690.00	53.7 AV	54.0	-0.3	1.30 V	93	41.4	12.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.3 PK	74.0	-22.7	1.41 H	28	48.3	3.0
2	5150.00	37.4 AV	54.0	-16.6	1.41 H	28	34.4	3.0
3	*5270.00	107.5 PK			1.41 H	28	105.0	2.5
4	*5270.00	96.4 AV			1.41 H	28	93.9	2.5
5	#10540.00	48.1 PK	68.2	-20.1	1.00 H	182	34.9	13.2
6	15810.00	57.1 PK	74.0	-16.9	1.27 H	209	44.4	12.7
7	15810.00	44.2 AV	54.0	-9.8	1.27 H	209	31.5	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.5 PK	74.0	-25.5	2.58 V	215	45.5	3.0
2	5150.00	36.7 AV	54.0	-17.3	2.58 V	215	33.7	3.0
3	*5270.00	105.6 PK			2.58 V	215	103.1	2.5
4	*5270.00	94.9 AV			2.58 V	215	92.4	2.5
5	#10540.00	54.0 PK	68.2	-14.2	1.50 V	360	40.8	13.2
6	15810.00	64.5 PK	74.0	-9.5	1.23 V	83	51.8	12.7
7	15810.00	53.4 AV	54.0	-0.6	1.23 V	83	40.7	12.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.0 PK			1.47 H	26	99.3	2.7
2	*5310.00	92.1 AV			1.47 H	26	89.4	2.7
3	5350.00	70.2 PK	74.0	-3.8	1.47 H	26	67.4	2.8
4	5350.00	53.9 AV	54.0	-0.1	1.47 H	26	51.1	2.8
5	10620.00	49.9 PK	74.0	-24.1	1.05 H	192	36.8	13.1
6	10620.00	37.1 AV	54.0	-16.9	1.05 H	192	24.0	13.1
7	15930.00	52.2 PK	74.0	-21.8	1.26 H	252	39.5	12.7
8	15930.00	39.1 AV	54.0	-14.9	1.26 H	252	26.4	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	*5310.00	101.1 PK			3.97 V	214	98.4	2.7
2	*5310.00	90.1 AV			3.97 V	214	87.4	2.7
3	5350.00	62.4 PK	74.0	-11.6	3.97 V	214	59.6	2.8
4	5350.00	51.5 AV	54.0	-2.5	3.97 V	214	48.7	2.8
5	10620.00	50.2 PK	74.0	-23.8	1.01 V	360	37.1	13.1
6	10620.00	38.1 AV	54.0	-15.9	1.01 V	360	25.0	13.1
7	15930.00	59.3 PK	74.0	-14.7	3.45 V	26	46.6	12.7
8	15930.00	45.2 AV	54.0	-8.8	3.45 V	26	32.5	12.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.8 PK	74.0	-14.2	1.14 H	162	56.7	3.1
2	5460.00	45.4 AV	54.0	-8.6	1.14 H	162	42.3	3.1
3	#5470.00	68.1 PK	68.2	-0.1	1.14 H	162	65.0	3.1
4	*5510.00	102.3 PK			1.14 H	162	99.2	3.1
5	*5510.00	91.9 AV			1.14 H	162	88.8	3.1
6	11020.00	49.8 PK	74.0	-24.2	1.00 H	176	35.9	13.9
7	11020.00	37.2 AV	54.0	-16.8	1.00 H	176	23.3	13.9
8	#16530.00	51.9 PK	68.2	-16.3	1.25 H	240	37.0	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	5460.00	58.9 PK	74.0	-15.1	2.63 V	216	55.8	3.1
2	5460.00	45.4 AV	54.0	-8.6	2.63 V	216	42.3	3.1
3	#5470.00	67.3 PK	68.2	-0.9	2.63 V	216	64.2	3.1
4	*5510.00	101.2 PK			2.63 V	216	98.1	3.1
5	*5510.00	90.4 AV			2.63 V	216	87.3	3.1
6	11020.00	60.2 PK	74.0	-13.8	1.04 V	360	46.3	13.9
7	11020.00	50.1 AV	54.0	-3.9	1.04 V	360	36.2	13.9
8	#16530.00	59.6 PK	68.2	-8.6	3.47 V	29	44.7	14.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	107.2 PK			1.22 H	162	104.0	3.2
2	*5550.00	96.6 AV			1.22 H	162	93.4	3.2
3	11100.00	49.8 PK	74.0	-24.2	1.11 H	180	36.5	13.3
4	11100.00	37.3 AV	54.0	-16.7	1.11 H	180	24.0	13.3
5	#16650.00	51.9 PK	68.2	-16.3	1.23 H	243	36.3	15.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	105.8 PK			2.55 V	222	102.6	3.2
2	*5550.00	95.1 AV			2.55 V	222	91.9	3.2
3	11100.00	61.0 PK	74.0	-13.0	1.00 V	360	47.7	13.3
4	11100.00	50.6 AV	54.0	-3.4	1.00 V	360	37.3	13.3
5	#16650.00	58.9 PK	68.2	-9.3	3.46 V	22	43.3	15.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.7 PK			1.11 H	158	102.3	3.4
2	*5670.00	95.8 AV			1.11 H	158	92.4	3.4
3	#5725.00	68.1 PK	68.2	-0.1	1.11 H	158	64.6	3.5
4	11340.00	49.8 PK	74.0	-24.2	1.10 H	173	36.1	13.7
5	11340.00	37.5 AV	54.0	-16.5	1.10 H	173	23.8	13.7
6	#17010.00	51.6 PK	68.2	-16.6	1.26 H	234	35.0	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	104.3 PK			2.55 V	217	100.9	3.4
2	*5670.00	94.1 AV			2.55 V	217	90.7	3.4
3	#5725.00	66.9 PK	68.2	-1.3	2.55 V	217	63.4	3.5
4	11340.00	60.8 PK	74.0	-13.2	1.01 V	360	47.1	13.7
5	11340.00	50.5 AV	54.0	-3.5	1.01 V	360	36.8	13.7
6	#17010.00	59.7 PK	68.2	-8.5	3.48 V	18	43.1	16.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.2 PK	68.2	-9.0	1.26 H	177	56.1	3.1
2	*5710.00	107.2 PK			1.26 H	177	103.7	3.5
3	*5710.00	96.4 AV			1.26 H	177	92.9	3.5
4	#5850.00	60.4 PK	68.2	-7.8	1.26 H	177	56.5	3.9
5	11420.00	49.9 PK	74.0	-24.1	1.11 H	181	36.3	13.6
6	11420.00	37.4 AV	54.0	-16.6	1.11 H	181	23.8	13.6
7	#17130.00	51.4 PK	68.2	-16.8	1.20 H	247	34.8	16.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.8 PK	68.2	-8.4	2.56 V	215	56.7	3.1
2	*5710.00	105.9 PK			2.56 V	215	102.4	3.5
3	*5710.00	95.2 AV			2.56 V	215	91.7	3.5
4	#5850.00	60.6 PK	68.2	-7.6	2.56 V	215	56.7	3.9
5	11420.00	61.5 PK	74.0	-12.5	1.01 V	360	47.9	13.6
6	11420.00	51.0 AV	54.0	-3.0	1.01 V	360	37.4	13.6
7	#17130.00	59.1 PK	68.2	-9.1	3.50 V	16	42.5	16.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5595.72	54.8 PK	68.2	-13.4	1.68 H	360	51.5	3.3
2	*5755.00	107.2 PK			1.68 H	360	103.6	3.6
3	*5755.00	96.7 AV			1.68 H	360	93.1	3.6
4	#5976.51	55.5 PK	68.2	-12.7	1.68 H	360	51.5	4.0
5	11510.00	60.0 PK	74.0	-14.0	1.00 H	269	46.2	13.8
6	11510.00	46.1 AV	54.0	-7.9	1.00 H	269	32.3	13.8
7	#17265.00	50.2 PK	68.2	-18.0	3.60 H	27	33.1	17.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5635.98	54.9 PK	68.2	-13.3	2.52 V	192	51.7	3.2
2	*5755.00	109.7 PK			2.52 V	192	106.1	3.6
3	*5755.00	98.7 AV			2.52 V	192	95.1	3.6
4	#5988.76	54.5 PK	68.2	-13.7	2.52 V	192	50.5	4.0
5	11510.00	66.6 PK	74.0	-7.4	1.33 V	357	52.8	13.8
6	11510.00	53.9 AV	54.0	-0.1	1.33 V	357	40.1	13.8
7	#17265.00	59.4 PK	68.2	-8.8	3.52 V	32	42.3	17.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5611.22	53.4 PK	68.2	-14.8	1.70 H	360	50.0	3.4
2	*5795.00	107.0 PK			1.70 H	360	103.4	3.6
3	*5795.00	96.3 AV			1.70 H	360	92.7	3.6
4	#6016.69	53.4 PK	68.2	-14.8	1.70 H	360	49.4	4.0
5	11590.00	60.7 PK	74.0	-13.3	1.02 H	281	47.1	13.6
6	11590.00	46.8 AV	54.0	-7.2	1.02 H	281	33.2	13.6
7	#17385.00	50.4 PK	68.2	-17.8	3.52 H	4	32.5	17.9
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	#5578.49	55.1 PK	68.2	-13.1	2.50 V	206	51.8	3.3
2	*5795.00	109.7 PK			2.50 V	206	106.1	3.6
3	*5795.00	98.9 AV			2.50 V	206	95.3	3.6
4	#6018.05	54.2 PK	68.2	-14.0	2.50 V	206	50.2	4.0
5	11590.00	66.1 PK	74.0	-7.9	1.36 V	360	52.5	13.6
6	11590.00	53.9 AV	54.0	-0.1	1.36 V	360	40.3	13.6
7	#17385.00	60.3 PK	68.2	-7.9	3.52 V	36	42.4	17.9

REMARKS:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.6 PK	74.0	-6.4	1.12 H	30	64.6	3.0
2	5150.00	53.9 AV	54.0	-0.1	1.12 H	30	50.9	3.0
3	*5210.00	99.5 PK			1.12 H	30	96.7	2.8
4	*5210.00	90.8 AV			1.12 H	30	88.0	2.8
5	5350.00	51.6 PK	74.0	-22.4	1.12 H	30	48.8	2.8
6	5350.00	39.2 AV	54.0	-14.8	1.12 H	30	36.4	2.8
7	#10420.00	47.2 PK	68.2	-21.0	1.00 H	206	34.1	13.1
8	15630.00	57.2 PK	74.0	-16.8	1.21 H	236	44.4	12.8
9	15630.00	44.1 AV	54.0	-9.9	1.21 H	236	31.3	12.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.4 PK	74.0	-8.6	2.32 V	193	62.4	3.0
2	5150.00	52.8 AV	54.0	-1.2	2.32 V	193	49.8	3.0
3	*5210.00	96.2 PK			2.32 V	193	93.4	2.8
4	*5210.00	87.5 AV			2.32 V	193	84.7	2.8
5	5350.00	49.6 PK	74.0	-24.4	2.32 V	193	46.8	2.8
6	5350.00	36.9 AV	54.0	-17.1	2.32 V	193	34.1	2.8
7	#10420.00	49.1 PK	68.2	-19.1	1.52 V	360	36.0	13.1
8	15630.00	57.1 PK	74.0	-16.9	1.30 V	78	44.3	12.8
9	15630.00	44.2 AV	54.0	-9.8	1.30 V	78	31.4	12.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.2 PK	74.0	-22.8	1.00 H	157	48.2	3.0
2	5150.00	38.4 AV	54.0	-15.6	1.00 H	157	35.4	3.0
3	*5290.00	98.6 PK			1.00 H	157	96.0	2.6
4	*5290.00	89.8 AV			1.00 H	157	87.2	2.6
5	5350.00	69.5 PK	74.0	-4.5	1.00 H	157	66.7	2.8
6	5350.00	53.9 AV	54.0	-0.1	1.00 H	157	51.1	2.8
7	#10580.00	47.1 PK	68.2	-21.1	1.00 H	197	33.9	13.2
8	15870.00	57.3 PK	74.0	-16.7	1.15 H	239	44.6	12.7
9	15870.00	44.6 AV	54.0	-9.4	1.15 H	239	31.9	12.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	48.2 PK	74.0	-25.8	2.58 V	192	45.2	3.0
2	5150.00	36.5 AV	54.0	-17.5	2.58 V	192	33.5	3.0
3	*5290.00	95.0 PK			2.58 V	192	92.4	2.6
4	*5290.00	86.3 AV			2.58 V	192	83.7	2.6
5	5350.00	68.5 PK	74.0	-5.5	2.58 V	192	65.7	2.8
6	5350.00	53.7 AV	54.0	-0.3	2.58 V	192	50.9	2.8
7	#10580.00	52.7 PK	68.2	-15.5	1.61 V	351	39.5	13.2
8	15870.00	59.4 PK	74.0	-14.6	3.43 V	18	46.7	12.7
9	15870.00	45.4 AV	54.0	-8.6	3.43 V	18	32.7	12.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.5 PK	74.0	-9.5	1.47 H	28	61.4	3.1
2	5460.00	51.6 AV	54.0	-2.4	1.47 H	28	48.5	3.1
3	#5470.00	68.1 PK	68.2	-0.1	1.47 H	28	65.0	3.1
4	*5530.00	103.1 PK			1.47 H	28	99.9	3.2
5	*5530.00	93.8 AV			1.47 H	28	90.6	3.2
6	#5725.00	50.4 PK	68.2	-17.8	1.47 H	28	46.9	3.5
7	11060.00	49.8 PK	74.0	-24.2	1.00 H	182	36.2	13.6
8	11060.00	37.1 AV	54.0	-16.9	1.00 H	182	23.5	13.6
9	#16590.00	51.7 PK	68.2	-16.5	1.25 H	227	36.8	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	5460.00	62.7 PK	74.0	-11.3	2.28 V	189	59.6	3.1
2	5460.00	52.5 AV	54.0	-1.5	2.28 V	189	49.4	3.1
3	#5470.00	65.4 PK	68.2	-2.8	2.28 V	189	62.3	3.1
4	*5530.00	96.2 PK			2.28 V	189	93.0	3.2
5	*5530.00	86.1 AV			2.28 V	189	82.9	3.2
6	#5725.00	48.8 PK	68.2	-19.4	2.28 V	189	45.3	3.5
7	11060.00	59.0 PK	74.0	-15.0	1.08 V	360	45.4	13.6
8	11060.00	48.2 AV	54.0	-5.8	1.08 V	360	34.6	13.6
9	#16590.00	60.1 PK	68.2	-8.1	3.49 V	39	45.2	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	106.8 PK			1.18 H	28	103.4	3.4
2	*5610.00	98.1 AV			1.18 H	28	94.7	3.4
3	#5725.00	68.1 PK	68.2	-0.1	1.18 H	28	64.6	3.5
4	11220.00	49.3 PK	74.0	-24.7	1.00 H	179	35.9	13.4
5	11220.00	36.8 AV	54.0	-17.2	1.00 H	179	23.4	13.4
6	#16830.00	52.2 PK	68.2	-16.0	1.28 H	246	35.5	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	*5610.00	105.9 PK			2.36 V	188	102.5	3.4
2	*5610.00	97.0 AV			2.36 V	188	93.6	3.4
3	#5725.00	67.6 PK	68.2	-0.6	2.36 V	188	64.1	3.5
4	11220.00	58.4 PK	74.0	-15.6	1.02 V	359	45.0	13.4
5	11220.00	47.9 AV	54.0	-6.1	1.02 V	359	34.5	13.4
6	#16830.00	59.6 PK	68.2	-8.6	3.50 V	55	42.9	16.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.4 PK	68.2	-8.8	1.29 H	167	56.3	3.1
2	*5690.00	106.3 PK			1.29 H	167	102.7	3.6
3	*5690.00	97.8 AV			1.29 H	167	94.2	3.6
4	#5850.00	60.0 PK	68.2	-8.2	1.29 H	167	56.1	3.9
5	11380.00	49.8 PK	74.0	-24.2	1.05 H	186	36.1	13.7
6	11380.00	37.3 AV	54.0	-16.7	1.05 H	186	23.6	13.7
7	#17070.00	52.0 PK	68.2	-16.2	1.23 H	236	35.6	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.5 PK	68.2	-8.7	2.50 V	221	56.4	3.1
2	*5690.00	105.8 PK			2.50 V	221	102.2	3.6
3	*5690.00	96.8 AV			2.50 V	221	93.2	3.6
4	#5850.00	60.8 PK	68.2	-7.4	2.50 V	221	56.9	3.9
5	11380.00	57.9 PK	74.0	-16.1	1.06 V	345	44.2	13.7
6	11380.00	47.5 AV	54.0	-6.5	1.06 V	345	33.8	13.7
7	#17070.00	59.6 PK	68.2	-8.6	3.55 V	55	43.2	16.4

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.71	59.1 PK	68.2	-9.1	1.70 H	360	55.9	3.2
2	*5775.00	105.1 PK			1.70 H	360	101.5	3.6
3	*5775.00	95.6 AV			1.70 H	360	92.0	3.6
4	#5926.72	59.4 PK	68.2	-8.8	1.70 H	360	55.5	3.9
5	11550.00	61.5 PK	74.0	-12.5	1.06 H	295	47.9	13.6
6	11550.00	47.7 AV	54.0	-6.3	1.06 H	295	34.1	13.6
7	#17325.00	51.4 PK	68.2	-16.8	3.53 H	10	34.0	17.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.48	63.7 PK	68.2	-4.5	2.40 V	193	60.5	3.2
2	*5775.00	107.6 PK			2.40 V	193	104.0	3.6
3	*5775.00	98.2 AV			2.40 V	193	94.6	3.6
4	#5927.60	62.5 PK	68.2	-5.7	2.40 V	193	58.6	3.9
5	11550.00	63.1 PK	74.0	-10.9	1.22 V	358	49.5	13.6
6	11550.00	53.8 AV	54.0	-0.2	1.22 V	358	40.2	13.6
7	#17325.00	58.6 PK	68.2	-9.6	1.36 V	172	41.2	17.4

REMARKS:

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

Below 1GHz Data:

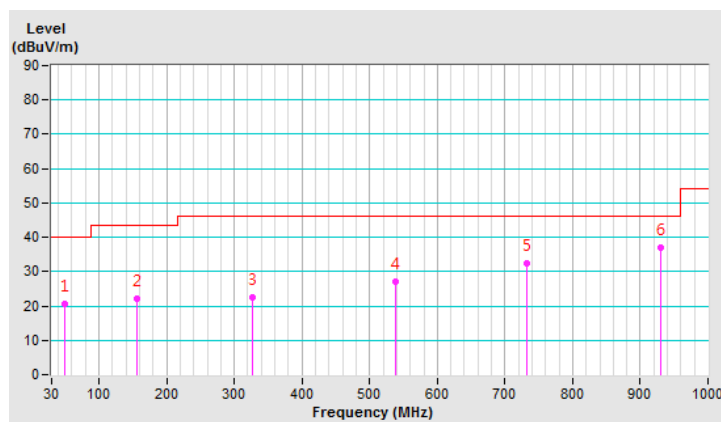
802.11ac (VHT80)

CHANNEL	TX Channel 155	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	48.48	20.7 QP	40.0	-19.3	1.00 H	119	28.8	-8.1
2	155.37	22.1 QP	43.5	-21.4	1.00 H	258	29.9	-7.8
3	326.29	22.4 QP	46.0	-23.6	1.00 H	24	28.8	-6.4
4	537.84	27.2 QP	46.0	-18.8	1.50 H	124	28.5	-1.3
5	732.43	32.5 QP	46.0	-13.5	1.00 H	303	29.6	2.9
6	930.09	36.9 QP	46.0	-9.1	1.00 H	180	30.6	6.3

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 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.

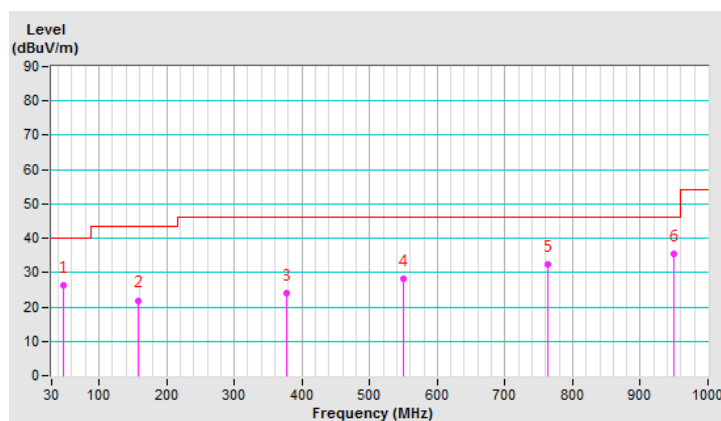


CHANNEL	TX Channel 155	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	47.73	26.3 QP	40.0	-13.7	1.00 V	312	34.4	-8.1
2	158.53	21.9 QP	43.5	-21.6	1.50 V	0	29.7	-7.8
3	376.94	23.9 QP	46.0	-22.1	1.00 V	2	28.9	-5.0
4	550.16	28.2 QP	46.0	-17.8	1.00 V	88	29.3	-1.1
5	763.78	32.5 QP	46.0	-13.5	2.00 V	150	29.0	3.5
6	950.00	35.3 QP	46.0	-10.7	1.00 V	169	29.0	6.3

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 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 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 24, 2018	Oct. 23, 2019
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 22, 2018	Oct. 21, 2019
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 04, 2018	June 03, 2019
50 ohms Terminator	N/A	3	Oct. 22, 2018	Oct. 21, 2019
RF Cable	5D-FB	COCCAB-001	Sep. 28, 2018	Sep. 27, 2019
Fixed attenuator EMCI	STI02-2200-10	003	Mar. 16, 2018	Mar. 15, 2019
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
- 3 Tested Date: Jan. 22, 2019

4.2.3 Test Procedure

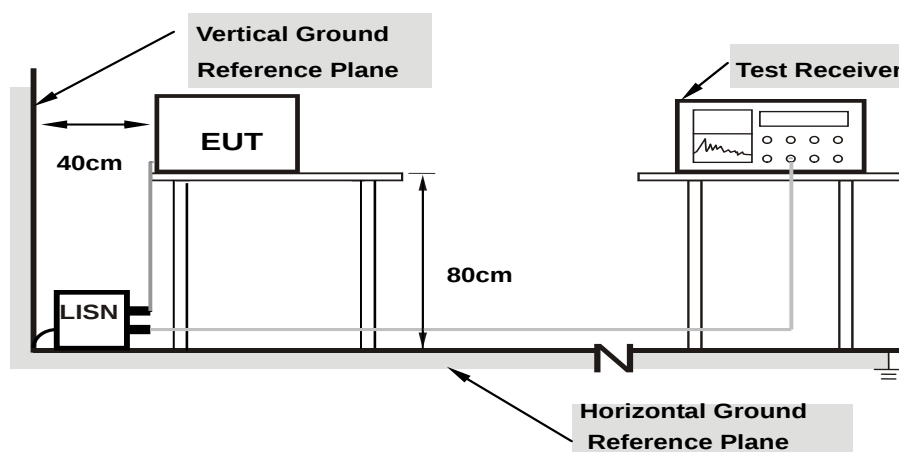
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

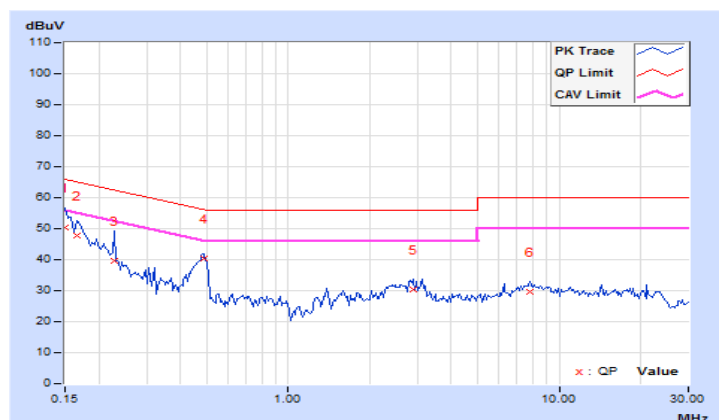
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.02	40.47	28.80	50.49	38.82	66.00	56.00	-15.51	-17.18
2	0.16562	10.03	37.85	23.13	47.88	33.16	65.18	55.18	-17.30	-22.02
3	0.22812	10.04	29.53	12.07	39.57	22.11	62.52	52.52	-22.95	-30.41
4	0.48594	10.08	30.33	24.72	40.41	34.80	56.24	46.24	-15.83	-11.44
5	2.90234	10.20	20.31	12.22	30.51	22.42	56.00	46.00	-25.49	-23.58
6	7.78906	10.43	19.06	13.49	29.49	23.92	60.00	50.00	-30.51	-26.08

REMARKS:

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

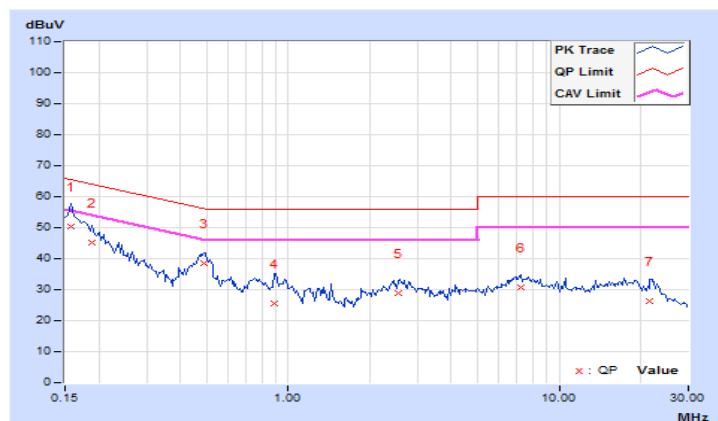


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.93	40.53	28.14	50.46	38.07	65.58	55.58	-15.12	-17.51
2	0.18906	9.94	35.14	19.14	45.08	29.08	64.08	54.08	-19.00	-25.00
3	0.48594	9.96	28.68	22.99	38.64	32.95	56.24	46.24	-17.60	-13.29
4	0.89219	9.98	15.67	10.10	25.65	20.08	56.00	46.00	-30.35	-25.92
5	2.56250	10.06	18.87	13.33	28.93	23.39	56.00	46.00	-27.07	-22.61
6	7.24609	10.26	20.37	15.43	30.63	25.69	60.00	50.00	-29.37	-24.31
7	21.63281	10.89	15.29	11.17	26.18	22.06	60.00	50.00	-33.82	-27.94

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 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} ;

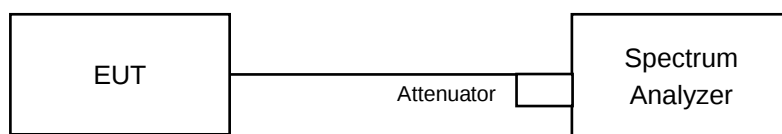
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

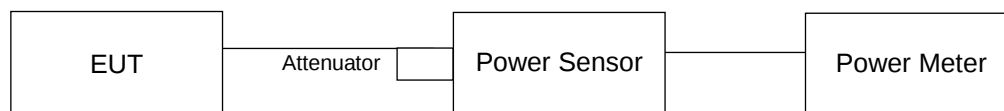
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

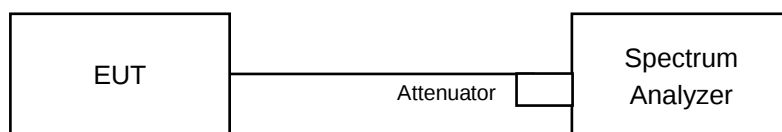
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For channel straddling 5725MHz:

Method SA-1

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

For other channels:

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

FOR 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Result

802.11a

POWER OUTPUT:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	9.23	9.51	17.308	12.38	24.00	Pass
40	5200	9.39	9.47	17.541	12.44	24.00	Pass
48	5240	9.45	9.55	17.826	12.51	24.00	Pass
52	5260	8.83	9.16	15.879	12.01	24.00	Pass
60	5300	8.77	9.06	15.588	11.93	24.00	Pass
64	5320	8.81	9.04	15.62	11.94	24.00	Pass
100	5500	7.77	8.81	13.587	11.33	24.00	Pass
116	5580	7.76	8.79	13.538	11.32	24.00	Pass
140	5700	7.82	8.83	13.691	11.36	24.00	Pass
*144 (UNII-2C Band)	5720	3.70	5.70	6.059	7.82	22.80	Pass
*144 (UNII-3 Band)	5720	-2.51	-0.13	1.5315	1.85	30.00	Pass
149	5745	8.26	10.16	17.074	12.32	30.00	Pass
157	5785	8.19	10.18	17.015	12.31	30.00	Pass
165	5825	8.24	10.21	17.163	12.35	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)
144	5720	7.5905	8.8

Note: The total power was calculated through formula and record the value for reference only.

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.44	20.38
60	5300	20.42	20.37
64	5320	20.31	20.35
100	5500	20.42	20.24
116	5580	20.39	20.34
140	5700	20.24	20.17
144 (UNII-2C Band)	5720	15.16	15.20

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	20.38	24.09 > 24
60	5300	20.37	24.08 > 24
64	5320	20.31	24.07 > 24
100	5500	20.24	24.06 > 24
116	5580	20.34	24.08 > 24
140	5700	20.17	24.04 > 24
144 (UNII-2C Band)	5720	15.16	22.80 < 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	9.26	9.41	17.163	12.35	24.00	Pass
40	5200	9.24	9.58	17.473	12.42	24.00	Pass
48	5240	9.32	9.65	17.777	12.50	24.00	Pass
52	5260	8.80	9.15	15.808	11.99	24.00	Pass
60	5300	8.79	9.11	15.715	11.96	24.00	Pass
64	5320	8.82	9.05	15.656	11.95	24.00	Pass
100	5500	7.81	8.84	13.695	11.37	24.00	Pass
116	5580	7.75	8.80	13.543	11.32	24.00	Pass
140	5700	7.79	8.76	13.528	11.31	24.00	Pass
*144 (UNII-2C Band)	5720	4.09	5.42	6.047	7.82	22.93	Pass
*144 (UNII-3 Band)	5720	-1.66	-0.19	1.6395	2.15	30.00	Pass
149	5745	8.21	10.18	17.045	12.32	30.00	Pass
157	5785	8.19	10.16	16.967	12.30	30.00	Pass
165	5825	8.17	10.11	16.818	12.26	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)
144	5720	7.6865	8.86

Note: The total power was calculated through formula and record the value for reference only.

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.84	21.23
60	5300	20.98	21.25
64	5320	21.02	21.23
100	5500	21.18	21.13
116	5580	21.03	21.18
140	5700	20.83	21.31
144 (UNII-2C Band)	5720	15.62	15.81

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	20.84	24.18 > 24
60	5300	20.98	24.21 > 24
64	5320	21.02	24.22 > 24
100	5500	21.13	24.24 > 24
116	5580	21.03	24.22 > 24
140	5700	20.83	24.18 > 24
144 (UNII-2C Band)	5720	15.62	22.93 < 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	9.16	9.55	17.257	12.37	24.00	Pass
46	5230	9.38	9.70	18.003	12.55	24.00	Pass
54	5270	8.79	9.11	15.715	11.96	24.00	Pass
62	5310	8.75	9.04	15.516	11.91	24.00	Pass
102	5510	7.81	8.80	13.625	11.34	24.00	Pass
110	5550	7.75	8.75	13.456	11.29	24.00	Pass
134	5670	7.79	8.82	13.633	11.35	24.00	Pass
*142 (UNII-2C Band)	5710	4.22	6.33	6.937	8.41	24.00	Pass
*142 (UNII-3 Band)	5710	-6.38	-3.89	0.6384	-1.95	30.00	Pass
151	5755	8.24	10.19	17.115	12.33	30.00	Pass
159	5795	8.22	10.17	17.036	12.31	30.00	Pass

Note: 1. * 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	7.5754	8.79

Note: The total power was calculated through formula and record the value for reference only.

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	43.33	44.56
62	5310	43.84	44.24
102	5510	43.64	44.49
110	5550	43.54	44.57
134	5670	43.89	44.27
142 (UNII-2C Band)	5710	36.52	36.88

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)
54	5270	43.33	27.36 > 24
62	5310	43.84	27.41 > 24
102	5510	43.64	27.39 > 24
110	5550	43.54	27.38 > 24
134	5670	43.89	27.42 > 24
142 (UNII-2C Band)	5710	36.52	26.62 > 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	8.32	9.12	14.958	11.75	24.00	Pass
58	5290	8.74	9.02	15.462	11.89	24.00	Pass
106	5530	7.85	8.75	13.594	11.33	24.00	Pass
122	5610	7.82	8.81	13.656	11.35	24.00	Pass
*138 (UNII-2C Band)	5690	4.56	6.01	6.848	8.36	24.00	Pass
*138 (UNII-3 Band)	5690	-10.08	-7.71	0.2676	-5.73	30.00	Pass
155	5775	8.34	10.24	17.391	12.40	30.00	Pass

Note: 1. * 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	7.1156	8.52

Note: The total power was calculated through formula and record the value for reference only.

26dB BANDWIDTH:

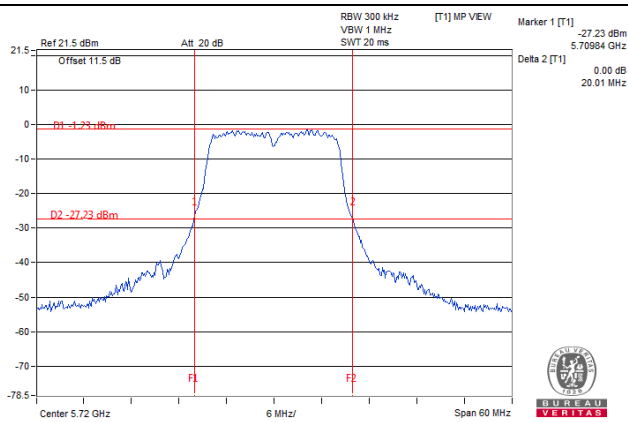
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.62	83.34
106	5530	82.69	82.75
122	5610	82.83	83.12
138 (UNII-2C Band)	5690	76.08	76.43

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

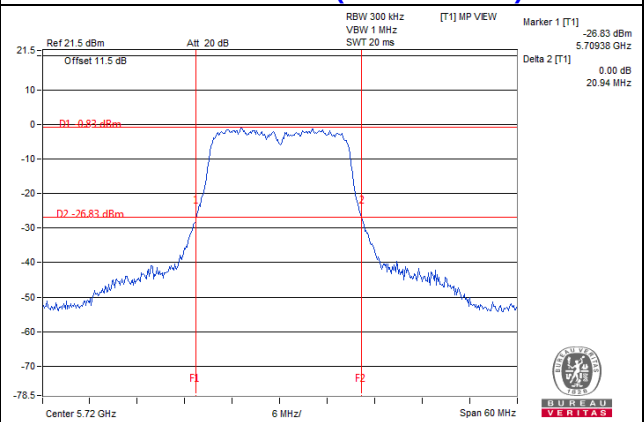
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.62	30.17 > 24
106	5530	82.69	30.17 > 24
122	5610	82.83	30.18 > 24
138 (UNII-2C Band)	5690	76.08	29.81 > 24

Spectrum Plot of Worst Value

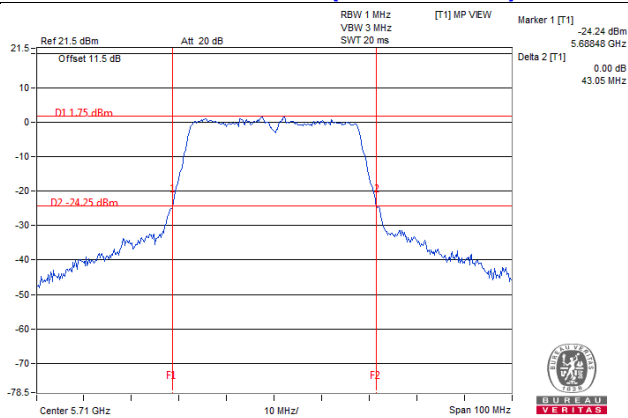
802.11a / Chain 0 – CH144 (UNII-2C Band)



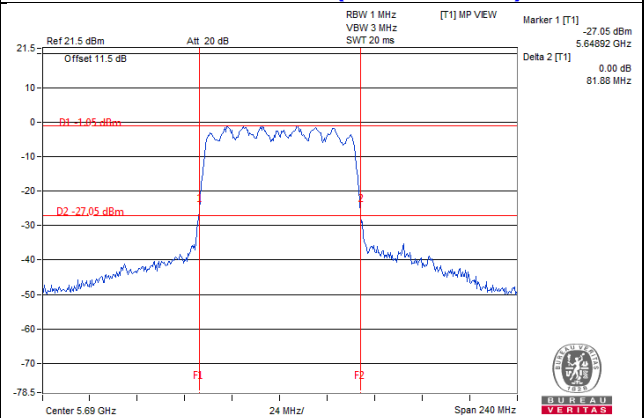
802.11ac (VHT20) / Chain 0 – CH144 (UNII-2C Band)



802.11ac (VHT40) / Chain 0 – CH142 (UNII-2C Band)



802.11ac (VHT80) / Chain 0 – CH138 (UNII-2C Band)

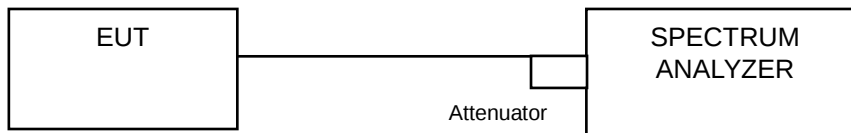


NOTE:

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

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.44	16.56
40	5200	16.68	16.68
48	5240	16.56	16.68
52	5260	16.56	16.68
60	5300	16.56	16.56
64	5320	16.56	16.56
100	5500	16.56	16.68
116	5580	16.56	16.68
140	5700	16.56	16.56
144 (UNII-2C Band)	5720	13.40	13.40
144 (UNII-3 Band)	5720	3.16	3.16
149	5745	16.56	16.68
157	5785	16.56	16.68
165	5825	16.56	16.56

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.64
40	5200	17.64	17.64
48	5240	17.64	17.64
52	5260	17.64	17.64
60	5300	17.64	17.64
64	5320	17.64	17.76
100	5500	17.64	17.64
116	5580	17.64	17.64
140	5700	17.40	17.64
144 (UNII-2C Band)	5720	13.88	14.00
144 (UNII-3 Band)	5720	3.76	3.76
149	5745	17.64	17.64
157	5785	17.64	17.64
165	5825	17.64	17.64

802.11ac (VHT40)

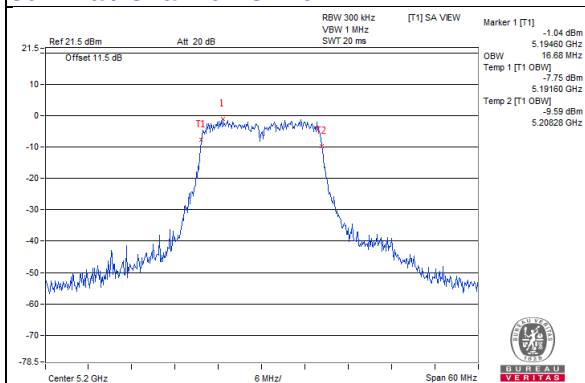
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.72	36.72
46	5230	36.72	36.72
54	5270	36.72	36.72
62	5310	36.72	36.72
102	5510	36.48	36.48
110	5550	36.72	36.72
134	5670	36.72	36.72
142 (UNII-2C Band)	5710	33.40	33.40
142 (UNII-3 Band)	5710	3.00	3.20
151	5755	36.72	36.72
159	5795	36.72	36.72

802.11ac (VHT80)

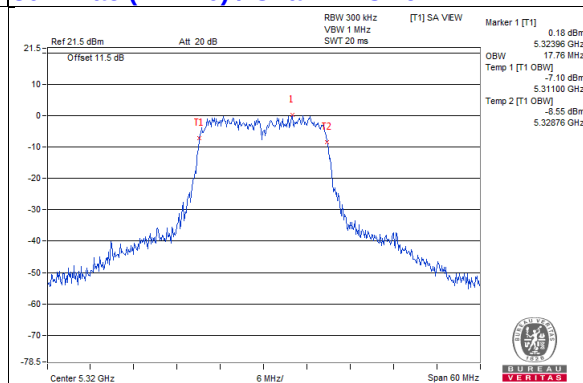
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.36	75.36
58	5290	74.88	75.36
106	5530	75.36	75.36
122	5610	75.36	75.84
138 (UNII-2C Band)	5690	72.92	72.92
138 (UNII-3 Band)	5690	2.44	2.44
155	5775	75.36	75.84

Spectrum Plot of Max Value

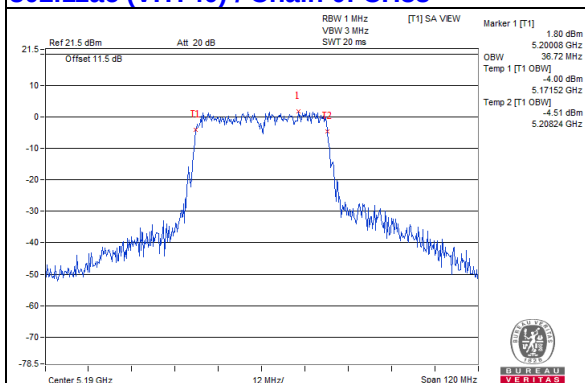
802.11a / Chain 0 : CH40



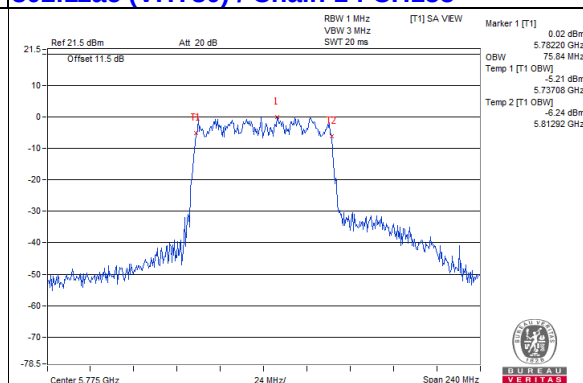
802.11ac (VHT20) / Chain 1: CH64



802.11ac (VHT40) / Chain 0: CH38

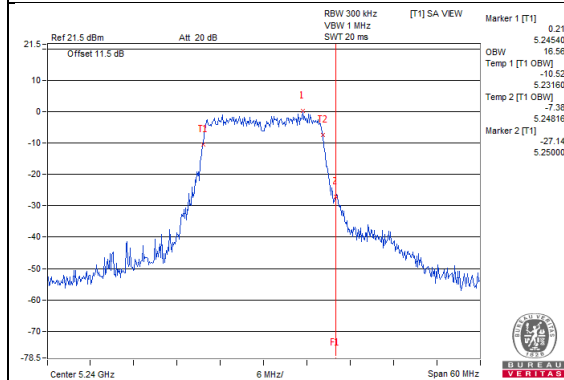


802.11ac (VHT80) / Chain 1 : CH155

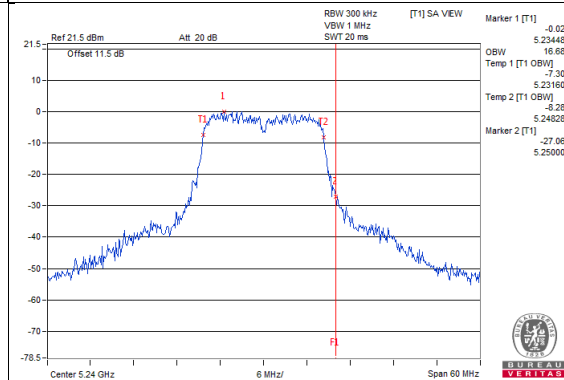


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2A band)

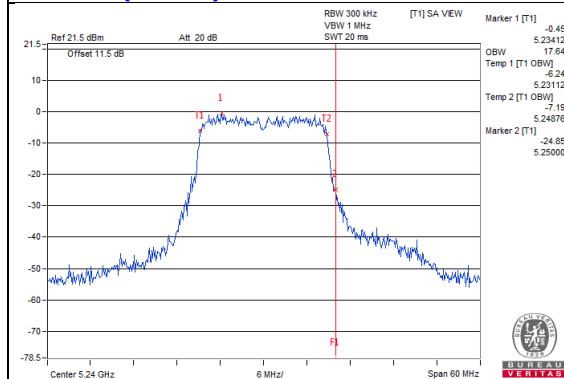
802.11a_Chain0 / CH48



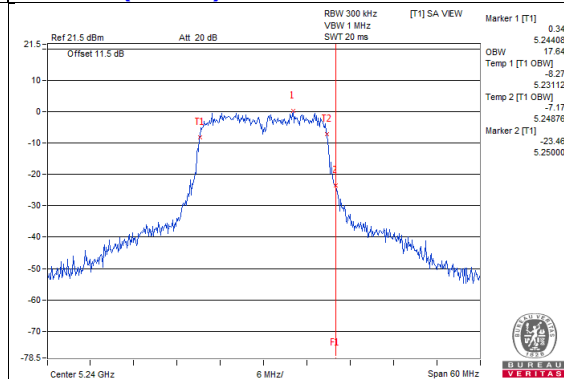
802.11a_Chain1 / CH48



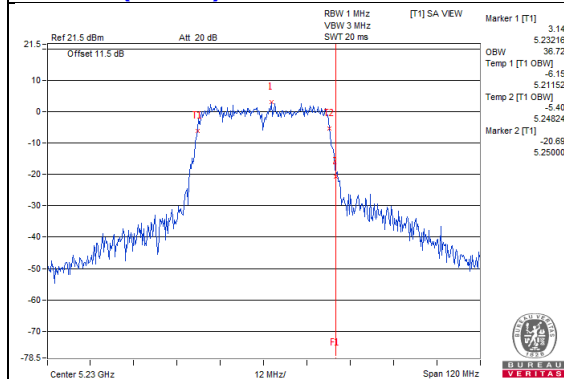
802.11ac(VHT20)_Chain0 / CH48



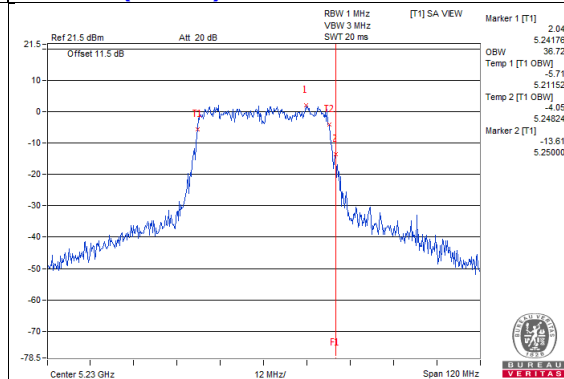
802.11ac(VHT20)_Chain1 / CH48



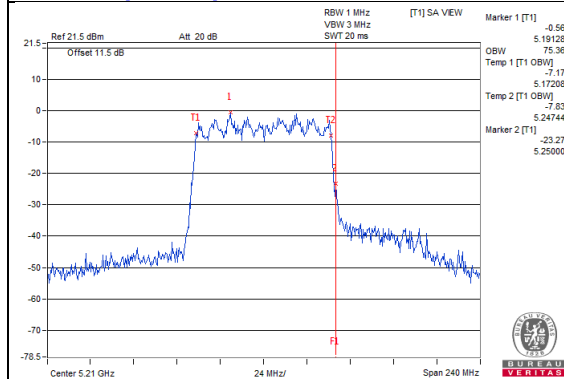
802.11ac(VHT40)_Chain0 / CH46



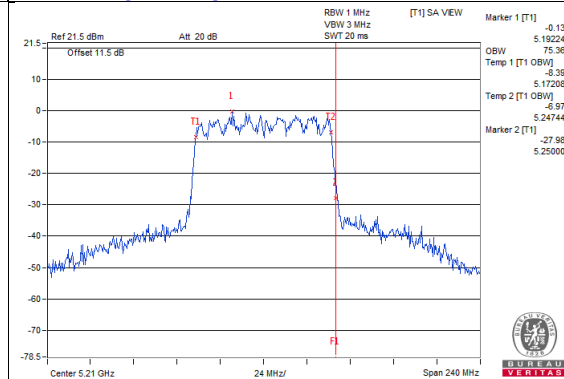
802.11ac(VHT40)_Chain1 / CH46



802.11ac(VHT80)_Chain0 / CH42

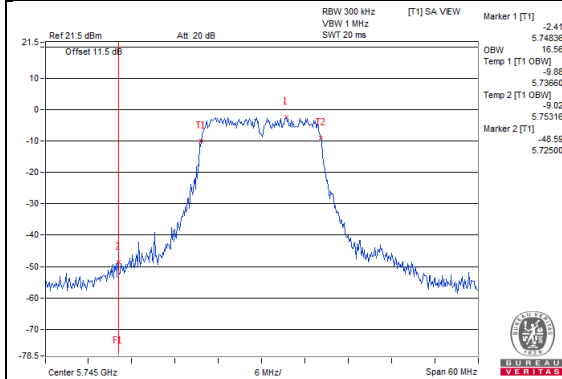


802.11ac(VHT80)_Chain1 / CH42

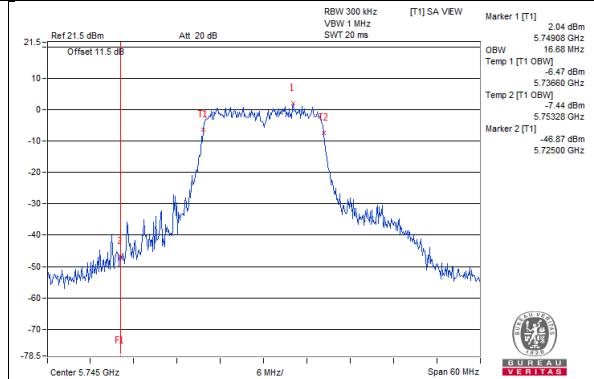


Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2C band)

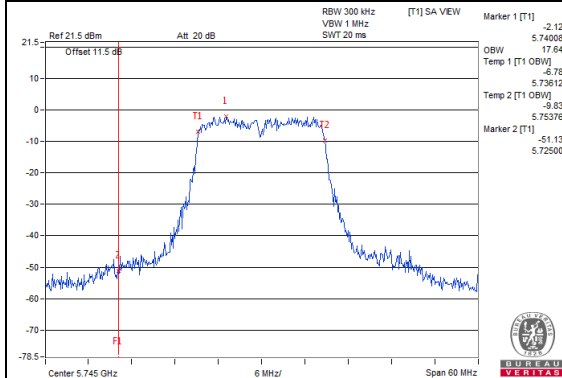
802.11a_Chain0 / CH149



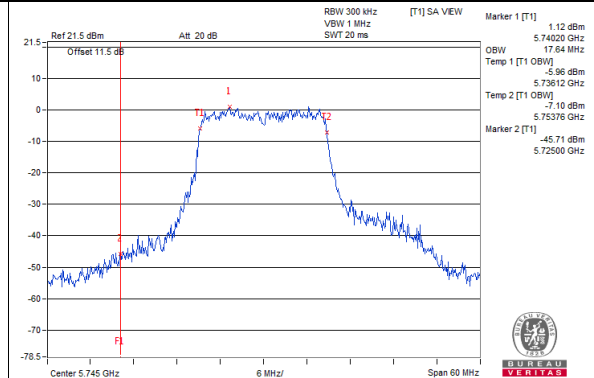
802.11a_Chain1 / CH149



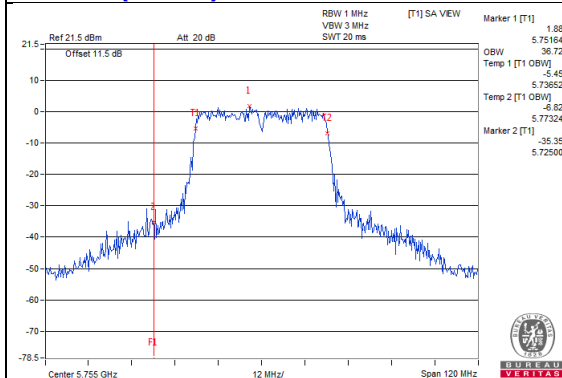
802.11ac(VHT20)_Chain0 / CH149



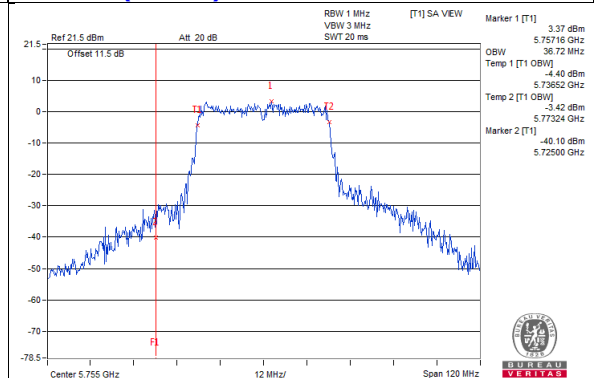
802.11ac(VHT20)_Chain1 / CH149



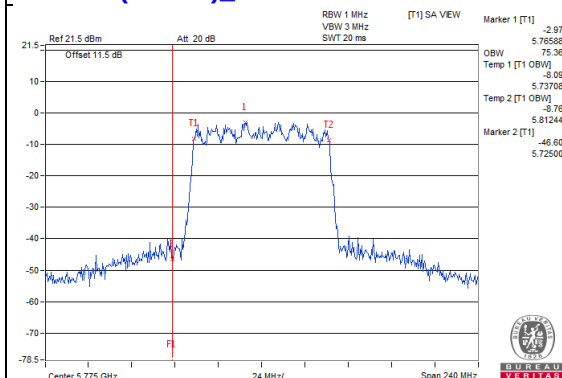
802.11ac(VHT40)_Chain0 / CH151



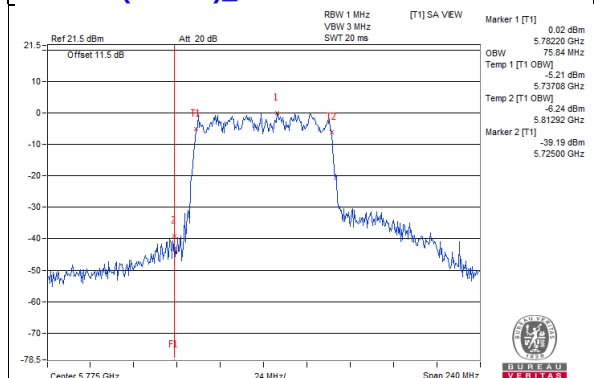
802.11ac(VHT40)_Chain1 / CH151



802.11ac(VHT80)_Chain0 / CH155



802.11ac(VHT80)_Chain1 / CH155

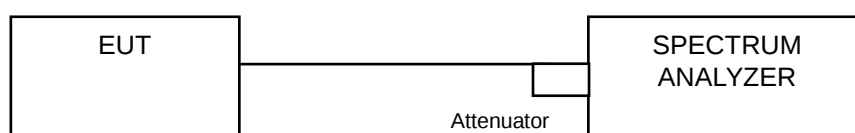


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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

Using method SA-1

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

For U-NII-3:

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

For UNII-1~UNII-2C:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-4.66	-4.22	-1.42	9.37	Pass
40	5200	-4.61	-3.91	-1.24	9.37	Pass
48	5240	-4.48	-3.68	-1.05	9.37	Pass
52	5260	-4.48	-3.76	-1.09	9.37	Pass
60	5300	-4.83	-3.89	-1.32	9.37	Pass
64	5320	-4.79	-3.81	-1.26	9.37	Pass
100	5500	-5.37	-4.11	-1.68	9.37	Pass
116	5580	-5.47	-4.12	-1.73	9.37	Pass
140	5700	-6.28	-3.95	-1.95	9.37	Pass
144 (UNII-2C Band)	5720	-6.16	-4.07	-1.98	9.37	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. Directional gain = $10 \log[(10^{G_0/20} + 10^{G_1/20})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (7.63 - 6) = 9.37\text{dBm}$.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-3.82	-4.61	-1.19	9.37	Pass
40	5200	-4.46	-4.02	-1.22	9.37	Pass
48	5240	-4.16	-3.97	-1.05	9.37	Pass
52	5260	-5.32	-4.26	-1.75	9.37	Pass
60	5300	-5.24	-3.98	-1.55	9.37	Pass
64	5320	-5.01	-3.88	-1.40	9.37	Pass
100	5500	-5.29	-4.70	-1.97	9.37	Pass
116	5580	-5.11	-4.38	-1.72	9.37	Pass
140	5700	-5.67	-4.42	-1.99	9.37	Pass
144 (UNII-2C Band)	5720	-5.69	-4.53	-2.06	9.37	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. Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (7.63 - 6) = 9.37\text{dBm}$.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-7.43	-7.62	-4.51	9.37	Pass
46	5230	-7.19	-7.60	-4.38	9.37	Pass
54	5270	-8.02	-7.68	-4.84	9.37	Pass
62	5310	-7.55	-7.42	-4.47	9.37	Pass
102	5510	-8.18	-7.61	-4.87	9.37	Pass
118	5590	-8.18	-7.53	-4.83	9.37	Pass
134	5670	-8.94	-7.60	-5.21	9.37	Pass
142 (UNII-2C Band)	5710	-9.43	-7.55	-5.38	9.37	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. Directional gain = $10 \log[(10^{G0/20} + 10^{G1/20})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (7.63 - 6) = 9.37\text{dBm}$.

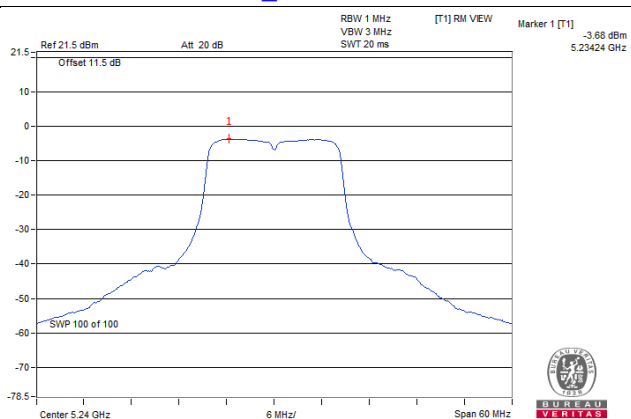
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-10.06	-9.33	-6.67	9.37	Pass
58	5290	-9.90	-9.29	-6.57	9.37	Pass
106	5530	-10.08	-9.55	-6.80	9.37	Pass
122	5610	-10.72	-9.96	-7.31	9.37	Pass
138 (UNII-2C Band)	5690	-11.46	-9.93	-7.62	9.37	Pass

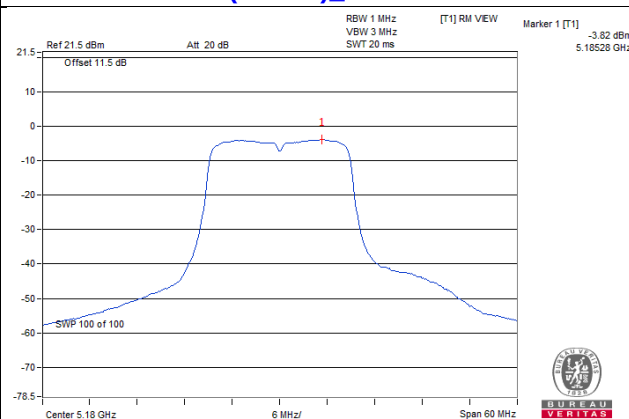
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G_0/20} + 10^{G_1/20})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (7.63 - 6) = 9.37\text{dBm}$.

Spectrum Plot of Worst Value

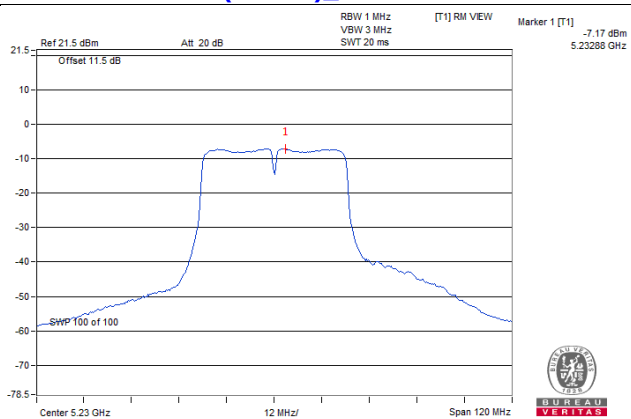
802.11a_Chain 1 / CH48



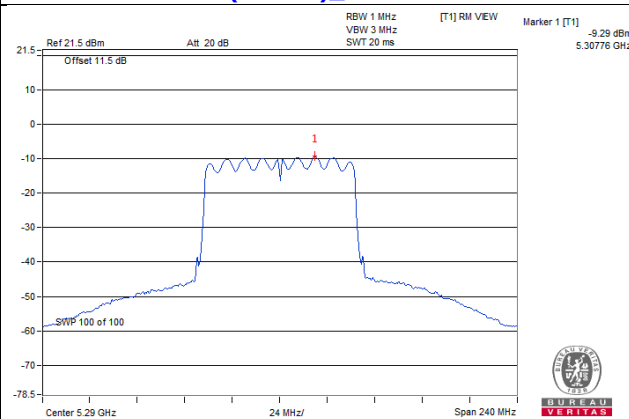
802.11ac (VHT20)_Chain 0 / CH36



802.11ac (VHT40)_Chain 0 / CH46



802.11ac (VHT80)_Chain 1 / CH58



For UNII-3:

802.11a

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
144 (UNII-3 Band)	5720	-13.92	-11.58	0.11005	-9.58	-7.36	28.37	Pass
149	5745	-12.98	-10.36	0.1424	-8.46	-6.24	28.37	Pass
157	5785	-13.27	-9.76	0.15278	-8.16	-5.94	28.37	Pass
165	5825	-13.34	-10.05	0.1452	-8.38	-6.16	28.37	Pass

- Note:** 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
 2. Directional gain = $10 \log[(10^{G_{0/20}} + 10^{G_{1/20}})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (7.63 - 6) = 28.37\text{dBm}$.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
144 (UNII-3 Band)	5720	-13.51	-12.19	0.10496	-9.79	-7.57	28.37	Pass
149	5745	-13.34	-10.42	0.13713	-8.63	-6.41	28.37	Pass
157	5785	-13.72	-10.57	0.13016	-8.86	-6.64	28.37	Pass
165	5825	-13.59	-10.29	0.13729	-8.62	-6.40	28.37	Pass

- Note:** 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
 2. Directional gain = $10 \log[(10^{G_{0/20}} + 10^{G_{1/20}})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (7.63 - 6) = 28.37\text{dBm}$.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
142 (UNII-3 Band)	5710	-17.98	-15.60	0.04346	-13.62	-11.40	28.37	Pass
151	5755	-15.89	-14.19	0.06387	-11.95	-9.73	28.37	Pass
159	5795	-15.79	-13.59	0.07012	-11.54	-9.32	28.37	Pass

- Note:** 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
 2. Directional gain = $10 \log[(10^{G_{0/20}} + 10^{G_{1/20}})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (7.63 - 6) = 28.37\text{dBm}$.

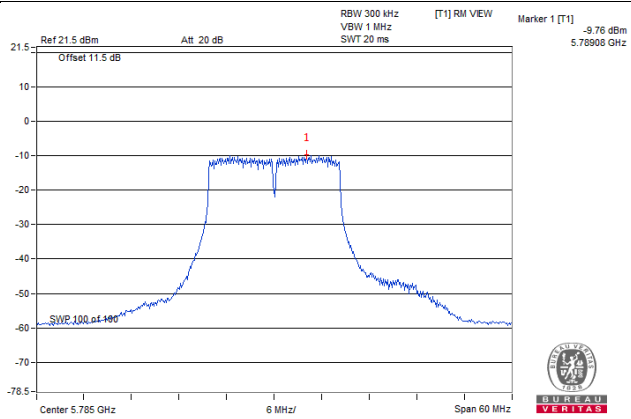
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)		Total PSD		Total PSD (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass /Fail
		Chain 0	Chain 1	mW/ 300kHz	dBm/ 300kHz			
138 (UNII-3 Band)	5690	-22.00	-19.55	0.017401	-17.59	-15.37	28.37	Pass
155	5775	-19.77	-16.28	0.03409	-14.67	-12.45	28.37	Pass

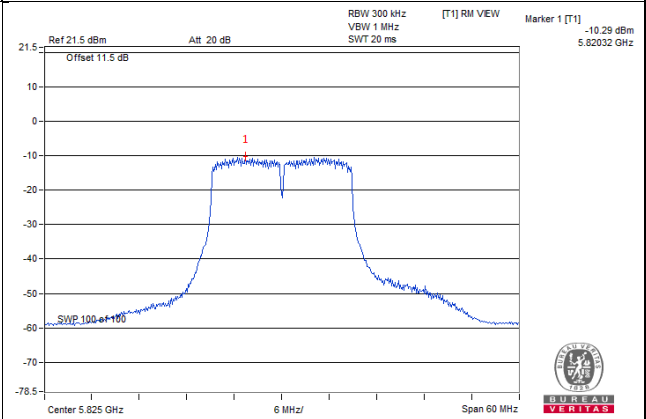
- Note:** 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{G_0/20} + 10^{G_1/20})^2 / 2] = 7.63\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (7.63 - 6) = 28.37\text{dBm}$.

Spectrum Plot of Worst Value

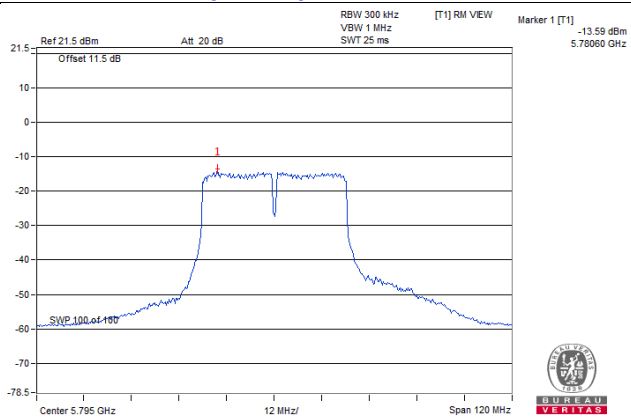
802.11a – Chain 1: CH 157



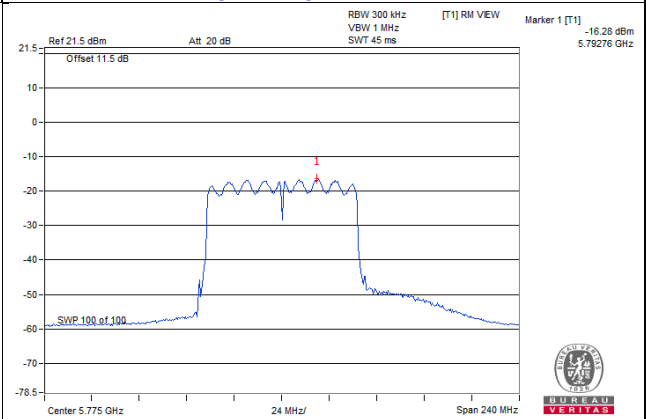
802.11ac (VHT20) - Chain 1: CH 165



802.11ac (VHT40) – Chain 1: CH 159



802.11ac (VHT80) – Chain 1: CH 155

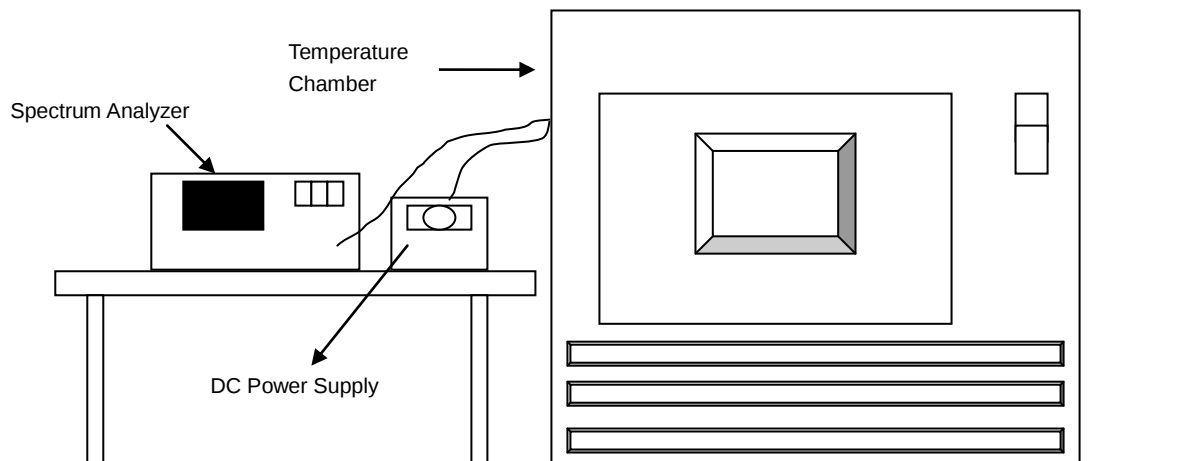


4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- 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.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	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	3.8	5179.9829	PASS	5179.981	PASS	5179.9836	PASS	5179.9832	PASS
40	3.8	5179.9872	PASS	5179.9901	PASS	5179.9896	PASS	5179.9866	PASS
30	3.8	5180.0178	PASS	5180.0197	PASS	5180.021	PASS	5180.0181	PASS
20	3.8	5180.0116	PASS	5180.0071	PASS	5180.0116	PASS	5180.0117	PASS
10	3.8	5180.0066	PASS	5180.0074	PASS	5180.0047	PASS	5180.0065	PASS
0	3.8	5179.9725	PASS	5179.9738	PASS	5179.9749	PASS	5179.9765	PASS
-10	3.8	5179.9916	PASS	5179.9961	PASS	5179.9916	PASS	5179.9944	PASS
-20	3.8	5180.0075	PASS	5180.0102	PASS	5180.0068	PASS	5180.01	PASS
-30	3.8	5180.0161	PASS	5180.0172	PASS	5180.0134	PASS	5180.0138	PASS

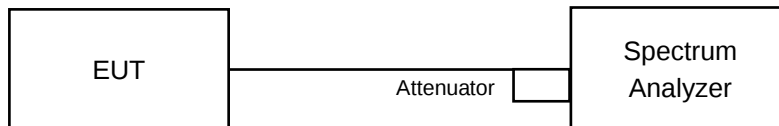
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	4.37	5180.0113	PASS	5180.0062	PASS	5180.011	PASS	5180.0108	PASS
	3.8	5180.0116	PASS	5180.0071	PASS	5180.0116	PASS	5180.0117	PASS
	3.23	5180.0119	PASS	5180.0074	PASS	5180.0126	PASS	5180.0113	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (UNII-3 Band)	5720	3.19	3.24	0.5	PASS
149	5745	16.53	16.52	0.5	PASS
157	5785	16.52	16.54	0.5	PASS
165	5825	16.51	16.54	0.5	PASS

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (UNII-3 Band)	5720	3.78	3.81	0.5	PASS
149	5745	17.64	17.69	0.5	PASS
157	5785	17.66	17.68	0.5	PASS
165	5825	17.65	17.65	0.5	PASS

802.11ac (VHT40)

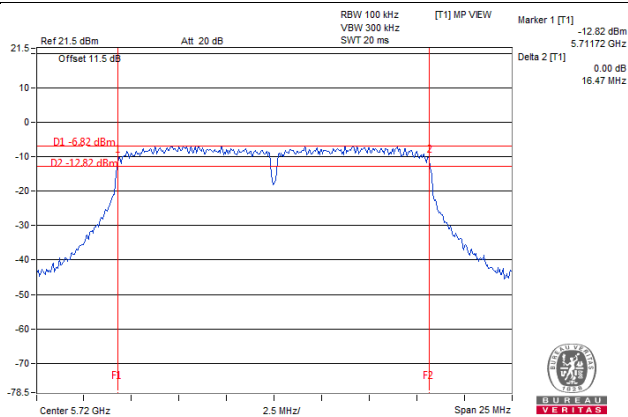
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142 (UNII-3 Band)	5710	3.27	3.28	0.5	PASS
151	5755	36.59	36.60	0.5	PASS
159	5795	36.60	36.61	0.5	PASS

802.11ac (VHT80)

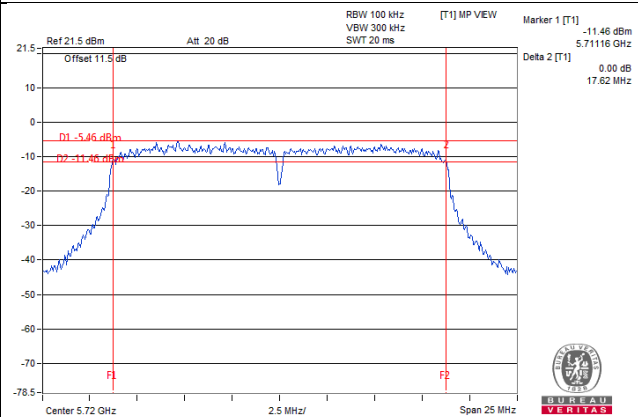
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138 (UNII-3 Band)	5690	2.93	3.20	0.5	PASS
155	5775	76.11	76.39	0.5	PASS

Spectrum Plot of Worst Value

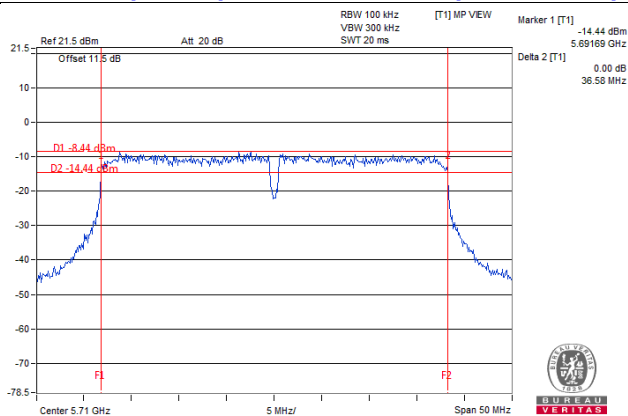
802.11a_Chain 0 / CH144 (UNII-3 Band)



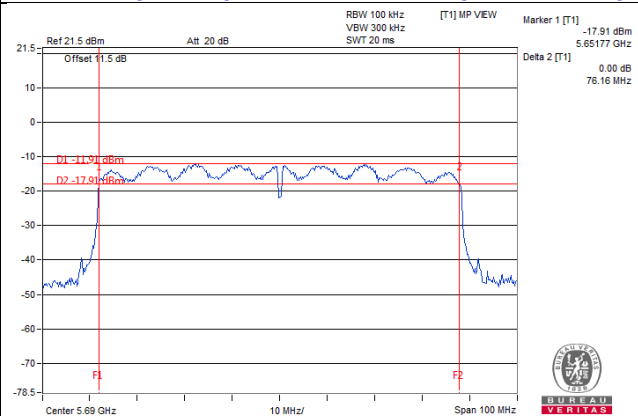
802.11ac (VHT20)_Chain 0 / CH144 (UNII-3 Band)



802.11ac (VHT40)_Chain 0 / CH142 (UNII-3 Band)



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



5 Pictures of Test Arrangements

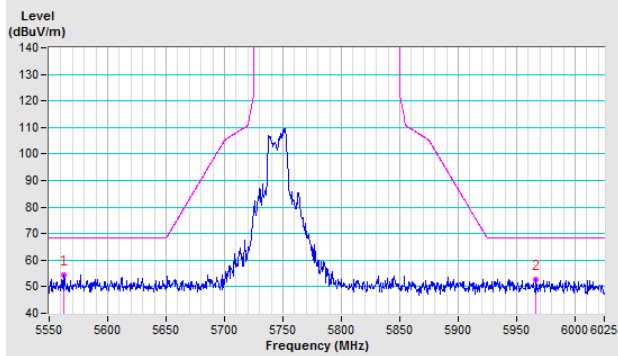
Please refer to the attached file (Test Setup Photo).

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

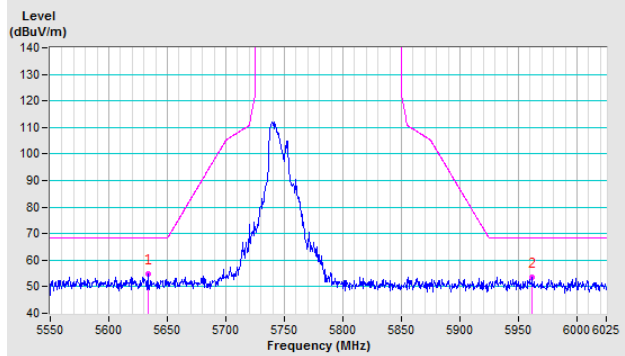
802.11a

CH 149 5745 MHz

Horizontal

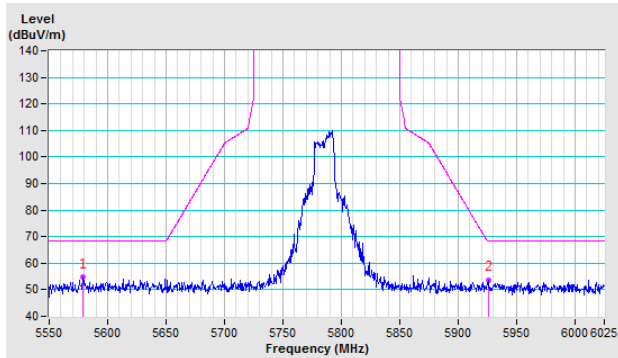


Vertical

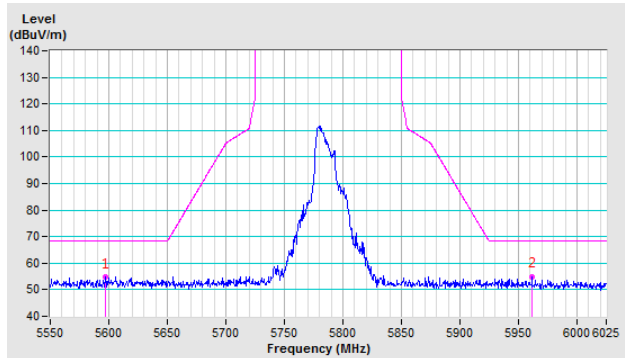


CH 157 5785 MHz

Horizontal

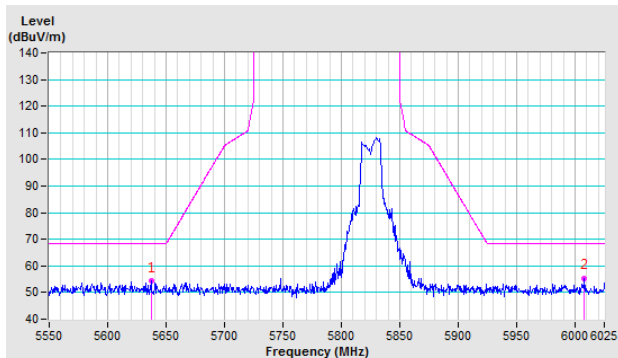


Vertical

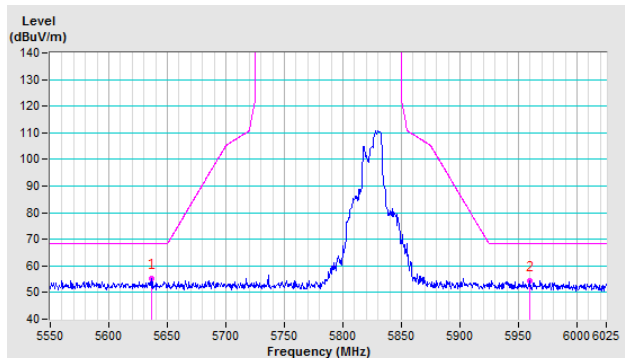


CH 165 5825 MHz

Horizontal



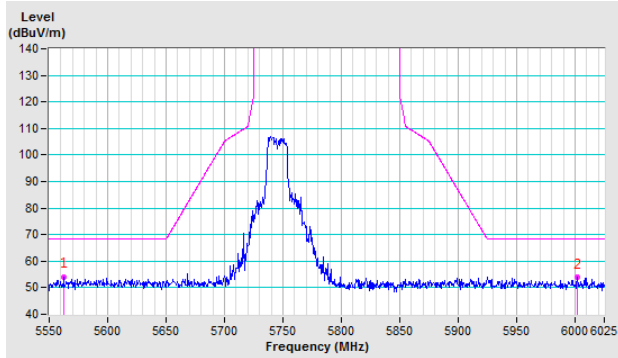
Vertical



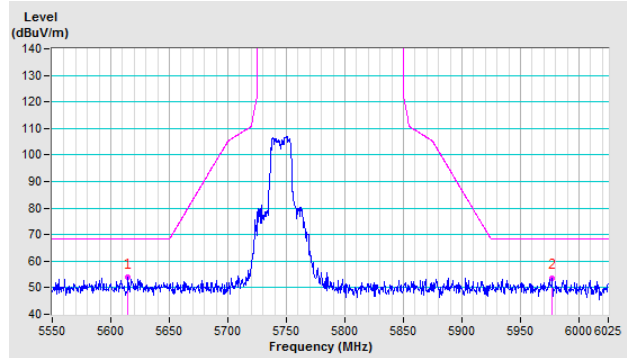
802.11ac (VHT20)

CH 149 5745 MHz

Horizontal

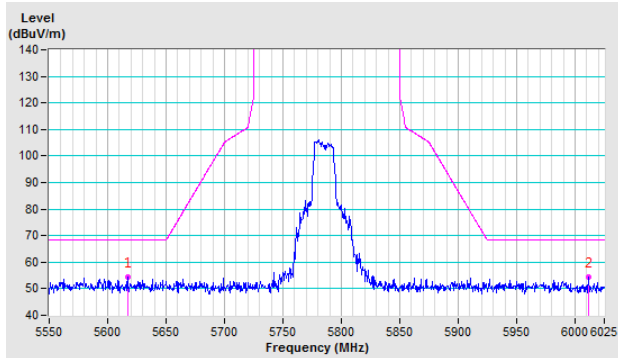


Vertical

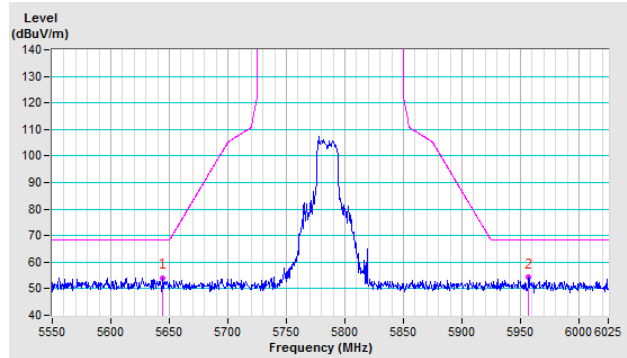


CH 157 5785 MHz

Horizontal

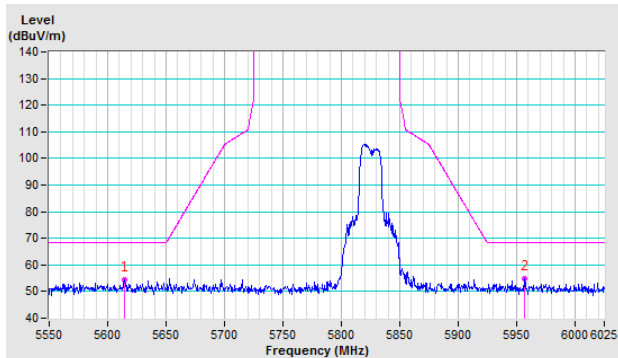


Vertical

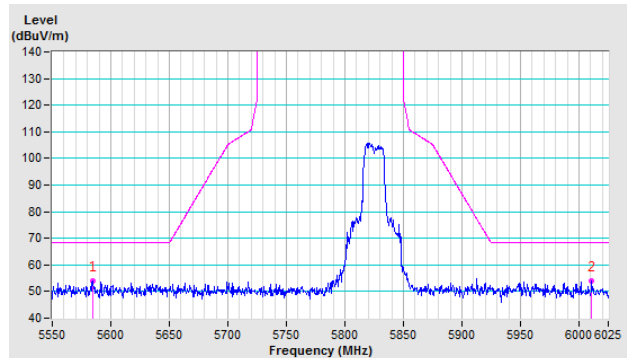


CH 165 5825 MHz

Horizontal



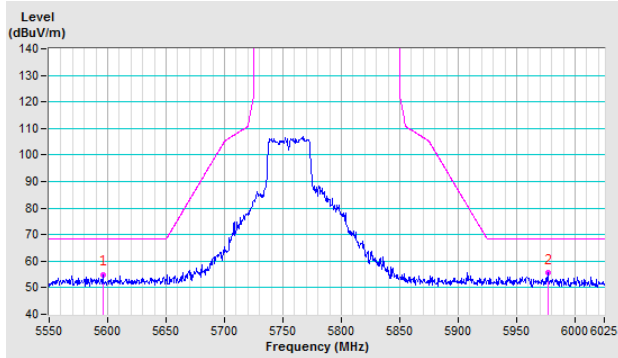
Vertical



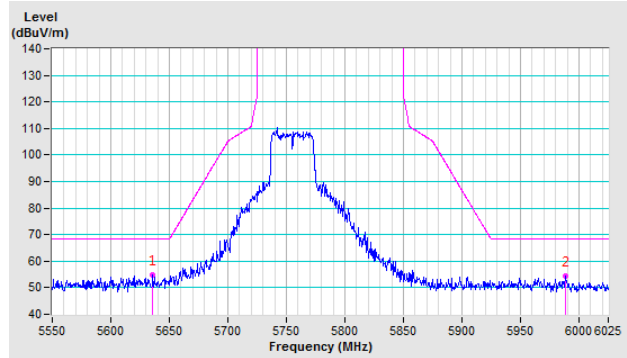
802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

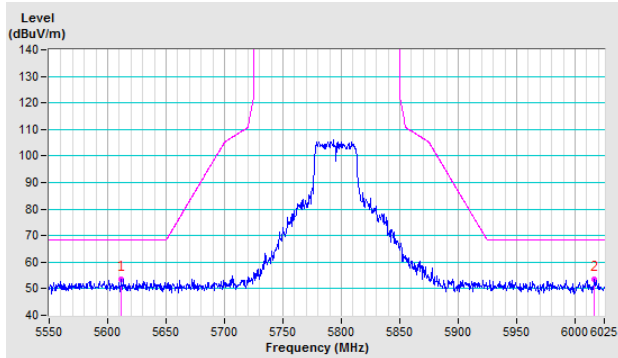


Vertical

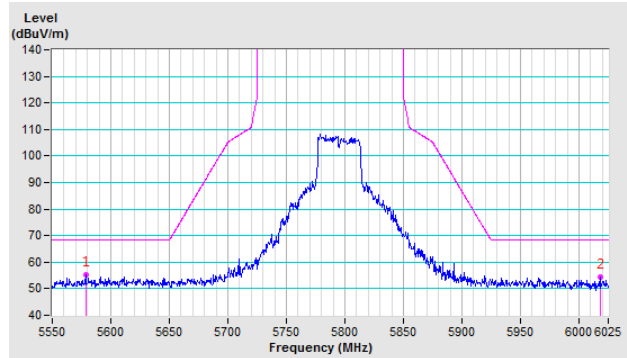


CH 159 5795 MHz

Horizontal



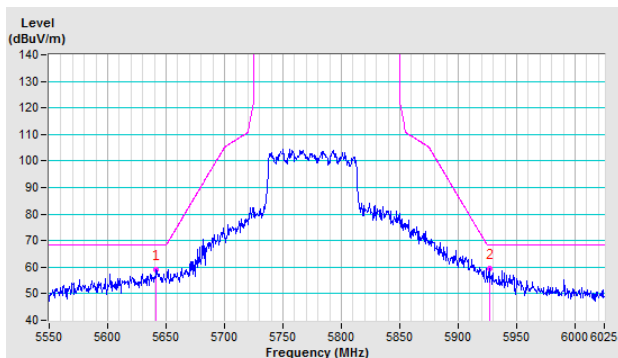
Vertical



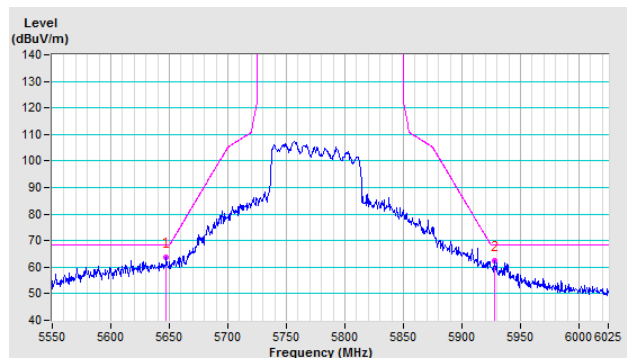
802.11ac (VHT80)

CH 155 5775 MHz

Horizontal



Vertical



Appendix – Information 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.

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

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Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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