

FCC Test Report

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Test Model: E2100

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Issued Date: Jan. 05, 2017

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Release Control Record

Issue No.	Description	Date Issued
RF160901E04-1	Original release.	Jan. 05, 2017

1 Certificate of Conformity

Product: Wi-Fi Extender

Brand: NA

Test Model: E2100

Sample Status: MASS-PRODUCTION

Applicant: Greenwave Systems Pte. Ltd.

Test Date: Oct. 24 to Nov. 11, 2016

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 : Midoli Peng, **Date:** Jan. 05, 2017
Midoli Peng / Specialist

Approved by : May Chen, **Date:** Jan. 05, 2017
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 -5.03dB at 0.25547MHz.
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 5725.00MHz & 11490.00MHz.
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.

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	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.36 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.47 dB
	6GHz ~ 18GHz	3.75 dB
	18GHz ~ 40GHz	3.30 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wi-Fi Extender
Brand	NA
Test Model	E2100
Status of EUT	MASS-PRODUCTION
Power Supply Rating	DC 12V from power adapter
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 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	For 15.247: 2.412 ~ 2.462GHz
	For 15.407: 5.18~5.24GHz, 5.26~5.32GHz, 5.50~5.72GHz, 5.745~5.825GHz
Number of Channel	For 15.247: 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7
	For 15.407: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	For 15.247: 896.52mW For 15.407: CDD Mode : 5180-5240MHz : 767.196mW 5260-5320MHz : 249.65mW 5500-5720MHz : 231.867mW 5745-5825MHz : 897.877mW SDM Mode : 5180-5240MHz : 767.196mW 5260-5320MHz : 249.65mW 5500-5720MHz : 230.622mW 5745-5825MHz : 819.587mW BF Mode : 5180-5240MHz : 767.196mW 5260-5320MHz : 249.65mW 5500-5720MHz : 230.622mW 5745-5825MHz : 819.587mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

1. The EUT has two kind of 5GHz filter. Detail as described in table below:

Item	Supplier	Remark	Description
SKU #1	Sangshin	W+S	5GHz filter passive filter (pin to pin & same design)
SKU #2	Partron	W+P	5GHz filter passive filter (pin to pin & same design)

From the above items, SKU #1 was selected as representative type for the test and its data was recorded in this report.

2. The EUT has three radio transceivers as below table:

Radio	Band	Remark
Radio 1	2.4GHz	-
Radio 2	5GHz<U-NII-1 & U-NII-2A>	Client function : U-NII-1 & U-NII-2A Master function : U-NII- 1
Radio 3	5GHz<U-NII-2C & U-NII-3>	Client function : U-NII-2C & U-NII-3 Master function : U-NII-3
Remark: This device can support different category application which switched to master mode or client mode by software.		

3. Simultaneously transmission condition.

Condition	Technology		
1	WLAN (2.4GHz)	WLAN (5GHz <U-NII-1 & U-NII-2A>)	WLAN (5GHz <U-NII-2C & U-NII-3>)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

4. The EUT must be supplied with a power adapter as following table:

Brand	Model No.	Spec.
NA	MU36-D120300-A1	Input: 100-240Vac, 50-60Hz, 1.5A Output: 12Vdc, 3A DC output cable (Unshielded, 1.8m)

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

No.	PCB Chain No	Brand	Antenna Gain(dBi) Including cable loss	Frequency range (GHz~GHz)	Antenna Type	Connector type	Cable Length (mm)
2G-1	Chain2	WNC	4.62	2.4~2.4835	Dipole	i-pex(MHF)	75
2G-2	Chain1	WNC	3.33	2.4~2.4835	Dipole	i-pex(MHF)	52
2G-3	Chain0	WNC	3.63	2.4~2.4835	Dipole	i-pex(MHF)	187
5G-5	Chain3	WNC	3.24	5.15~5.25	Dipole	i-pex(MHF)	171
			3.24	5.25~5.35			
5G-6	Chain2	WNC	4.39	5.15~5.25	Dipole	i-pex(MHF)	187
			4.58	5.25~5.35			
5G-7	Chain1	WNC	3.68	5.15~5.25	Dipole	i-pex(MHF)	228
			3.62	5.25~5.35			
5G-8	Chain0	WNC	4.63	5.15~5.25	Dipole	i-pex(MHF)	237
			4.07	5.25~5.35			
5G-1	Chain3	WNC	3.45	5.47~5.725	Dipole	i-pex(MHF)	171
			3.45	5.725~5.85			
5G-2	Chain2	WNC	4.28	5.47~5.725	Dipole	i-pex(MHF)	187
			4.47	5.725~5.85			
5G-3	Chain1	WNC	4.01	5.47~5.725	Dipole	i-pex(MHF)	228
			3.54	5.725~5.85			
5G-4	Chain0	WNC	2.71	5.47~5.725	Dipole	i-pex(MHF)	237
			2.95	5.725~5.85			

6. The Directional gain table:

Frequency (MHz)	Max Gain (dBi)
UNII-1 band	3.97
UNII-2A band	4.29
UNII-2C band	5.21
UNII-3 band	4.88

Note:

1. Non-TxBF mode & TxBF mode antenna gain refer to KDB 662911 F 2) f) (ii)

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

7. The EUT incorporates a MIMO function:

2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	3TX	3RX
802.11g	6 ~ 54Mbps	3TX	3RX
802.11n (HT20)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
802.11n (HT40)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
VHT20	MCS0~8 Nss=1	3TX	3RX
	MCS0~8 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
VHT40	MCS0~9 Nss=1	3TX	3RX
	MCS0~9 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
5GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11a	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11ac (VHT20)	MCS0~8 Nss=1	4TX	4RX
	MCS0~8 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~8 Nss=4	4TX	4RX
802.11ac (VHT40)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX
802.11ac (VHT80)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. 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	5210MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE<1G	PLC	APCM	
	√	√	√	√	

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

Radiated Emission Test (Above 1GHz):

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

Radio 2 – CDD mode						
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
Radio 3 – CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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.

Radio 2 – CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5180-5240	42	58	OFDM	BPSK	29.3
	5260-5320	58				
Radio 3 – CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5500-5720	100 to 144	100	OFDM	BPSK	6
	5745-5825	149 to 165				

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.

Radio 2 – CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5180-5240	42	58	OFDM	BPSK	29.3
	5260-5320	58				
Radio 3 – CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5500-5720	100 to 144	100	OFDM	BPSK	6
	5745-5825	149 to 165				

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.

Transmit Power Measurement (For Client function)						
Radio 2 – CDD mode						
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
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
Radio 2 –SDM, BF mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5240	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
802.11ac (VHT20)	5260-5320	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
Radio 3–SDM, BF mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5500-5720	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
802.11ac (VHT20)	5745-5825	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

Transmit Power Measurement (For Master function)						
Radio 2 – CDD mode						
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
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
Radio 2 –SDM, BF mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5240	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
Radio 3–SDM, BF mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5745-5825	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

Power Density Measurement (For Client function)						
Radio 2 – CDD mode						
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
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
Power Density Measurement (For Master function)						
Radio 2 – CDD mode						
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
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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

Occupied Bandwidth Measurement						
Radio 2 – CDD mode						
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
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
6dB Bandwidth Measurement						
Radio 3– CDD mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	24deg. C, 63%RH	120Vac, 60Hz	Gary Cheng
	24deg. C, 65%RH		Jyunchun Lin
RE<1G	23deg. C, 62%RH	120Vac, 60Hz	Jyunchun Lin
PLC	25deg. C, 63%RH	120Vac, 60Hz	Bear Lee
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

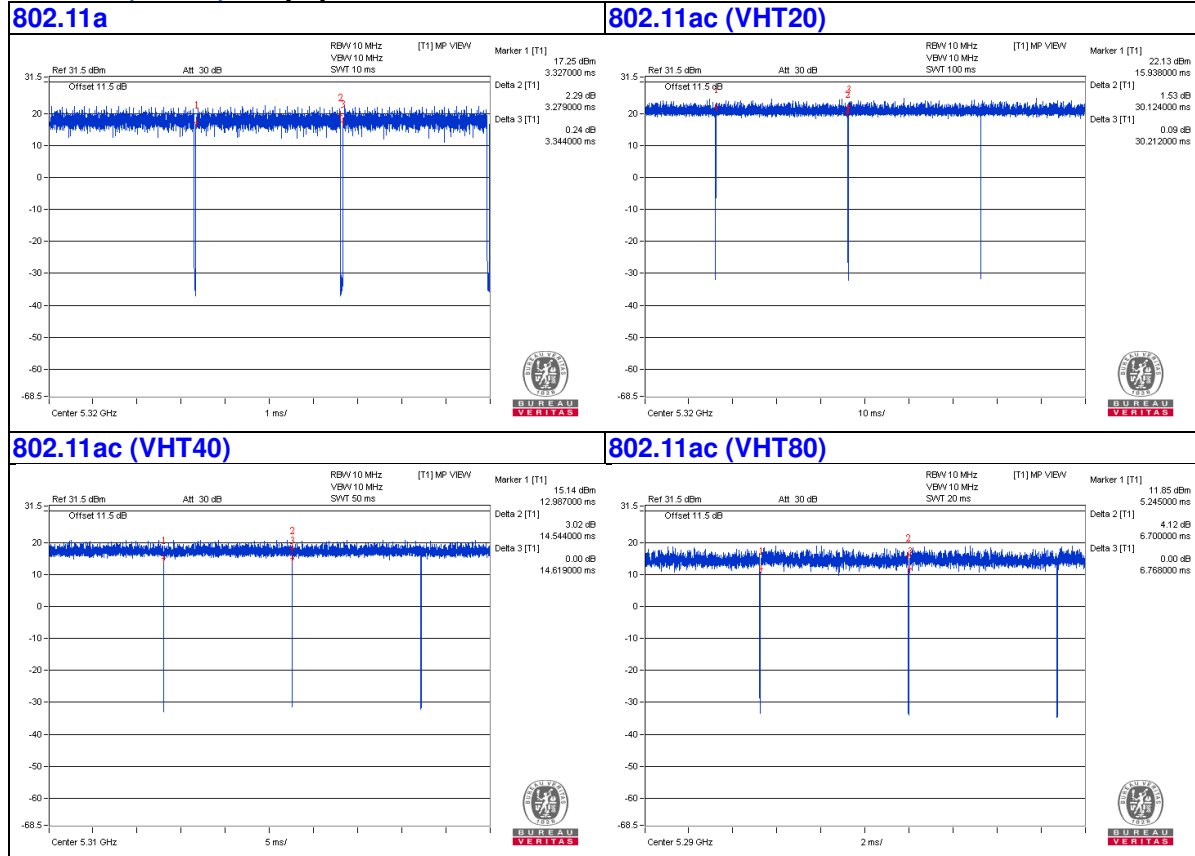
Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11a: Duty cycle = $3.279 \text{ ms} / 3.344 \text{ ms} = 0.981$

802.11ac (VHT20): Duty cycle = $30.124 \text{ ms} / 30.212 \text{ ms} = 0.997$

802.11ac (VHT40): Duty cycle = $14.544 \text{ ms} / 14.619 \text{ ms} = 0.995$

802.11ac (VHT80): Duty cycle = $6.7 \text{ ms} / 6.768 \text{ ms} = 0.99$



3.4 Description of Support Units

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

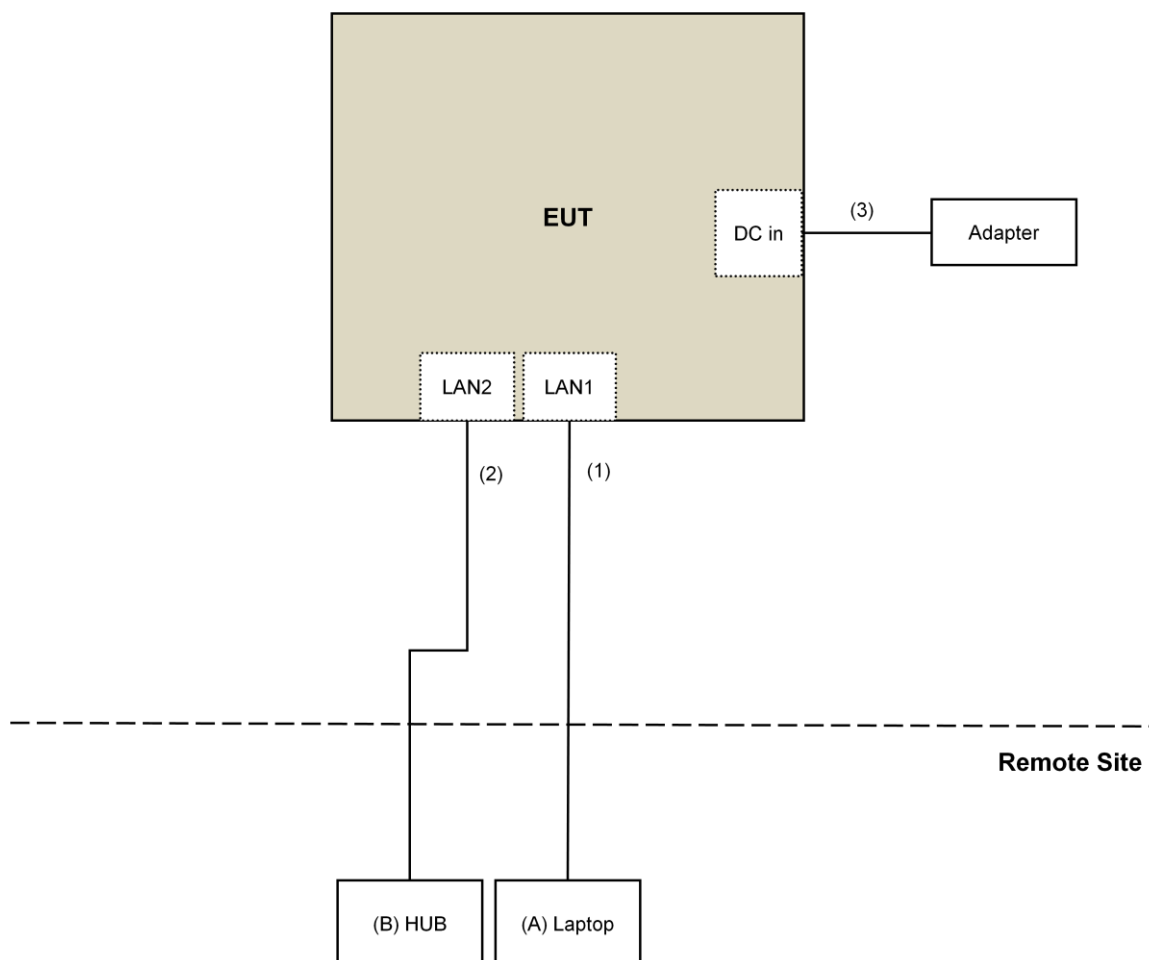
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	4YV4VY1	FCC DoC	Provided by Lab
B.	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC	Provided by Lab

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.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	DC Cable	1	1.8	No	0	Supplied by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedure New Rules v01r03

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

- 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	
KDB 789033 D02 General UNII Test Procedure New Rules v01r03			Field Strength at 3m	
			PK:74 (dBμV/m)	AV:54 (dBμV/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(dBμV/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(dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8(dBμV/m) ^{*3} PK:122.2 (dBμV/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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 18, 2016	Aug. 17, 2017
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-05	May 07, 2016	May 06, 2017
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-156	Jan. 04, 2016	Jan. 03, 2017
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 02, 2016	Apr. 01, 2017
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Jan. 20, 2016	Jan. 19, 2017
Pre-Amplifier Agilent	8449B	3008A02465	Apr. 05, 2016	Apr. 04, 2017
RF Cable	EMC104-SM- SM-2000 EMC104-SM- SM-5000 EMC104-SM- SM-5000	150317 150321 150322	Mar. 30, 2016	Mar. 29, 2017
Spectrum Analyzer Keysight	N9030A	MY54490520	July 29, 2016	July 28, 2017
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2016	Jan. 14, 2017
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Jan. 08, 2016	Jan. 07, 2017
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 16, 2016	Jan. 15, 2017
Software	ADT_Radiated _V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSP40	100036	Jan. 27, 2016	Jan. 26, 2017
AC Power Source Extech Electronics	6502	1140503	NA	NA
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 03, 2015	Dec. 02, 2016
Power meter Anritsu	ML2495A	0824006	May 26, 2016	May 25, 2017
Power sensor Anritsu	MA2411B	0738172	May 26, 2016	May 25, 2017
Digital Multimeter FLUKE	87III	73680266	Nov. 10, 2015	Nov. 09, 2016

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 3.
4. The FCC Site Registration No. is 147459
5. The CANADA Site Registration No. is 20331-1
6. Loop antenna was used for all emissions below 30 MHz
7. Tested Date: Oct. 24 to Nov. 04, 2016

4.1.3 Test Procedure

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

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

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

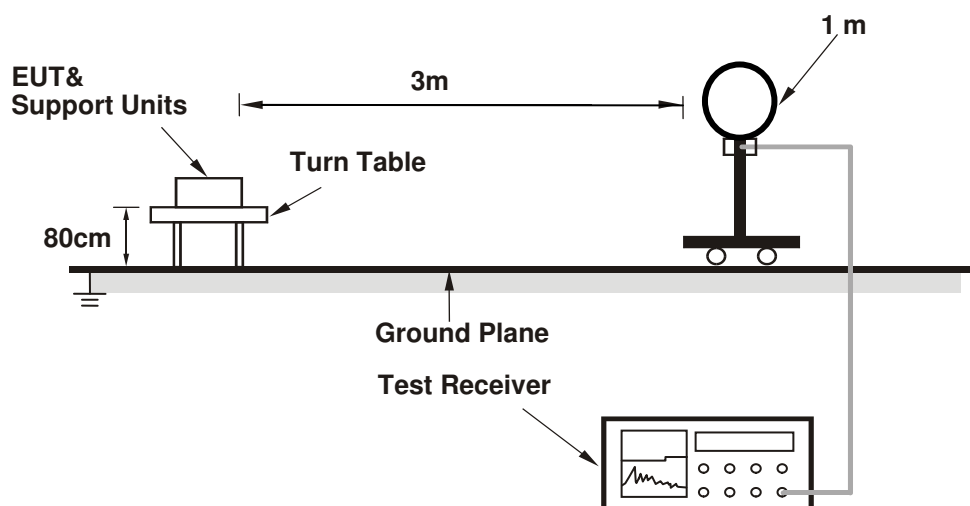
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

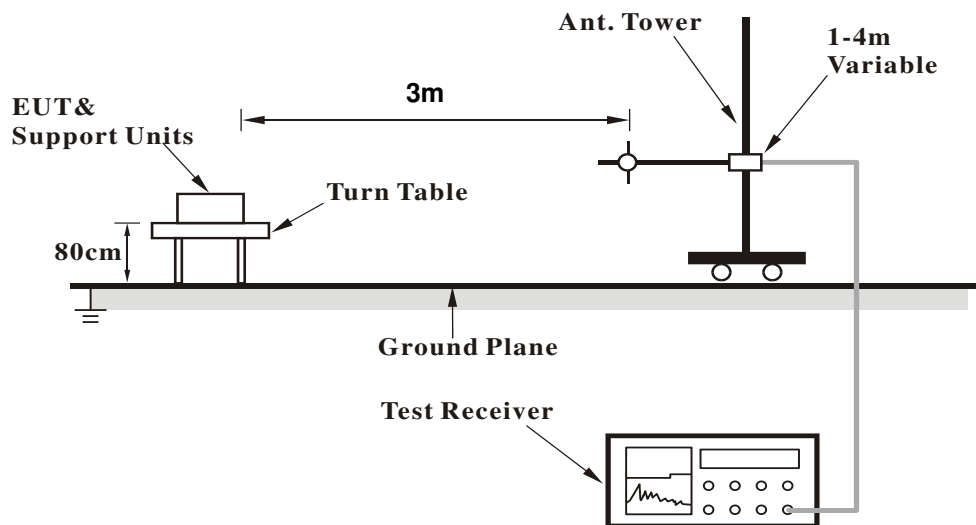
No deviation.

4.1.5 Test Setup

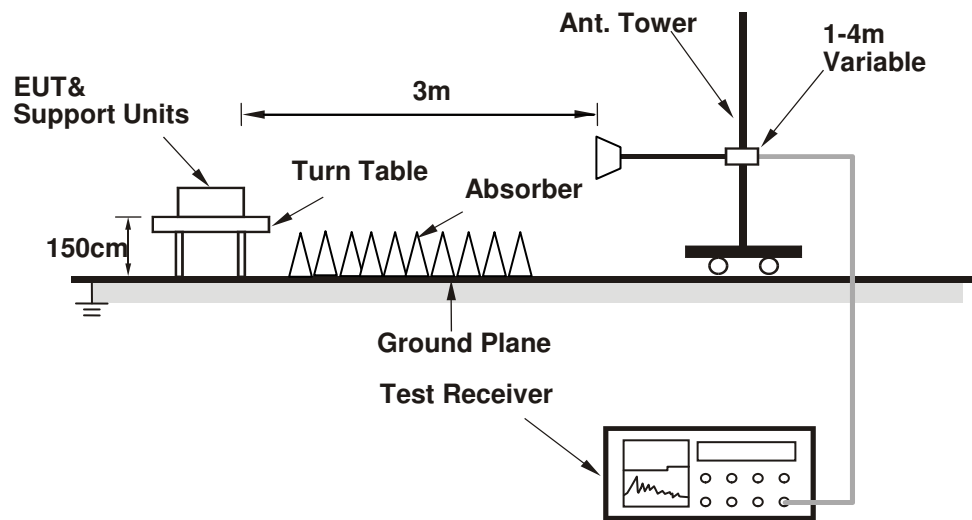
For Radiated emission below 30MHz



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

1. Connect the EUT with the support unit A (Laptop) which is placed on remote site.
2. The communication partner run test program "Telnet paste command .txt" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

Radio 2

CDD Mode

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	68.2 PK	74.0	-5.8	1.07 H	65	65.2	3.0
2	5150.00	53.4 AV	54.0	-0.6	1.07 H	65	50.4	3.0
3	*5180.00	118.3 PK			1.07 H	65	115.2	3.1
4	*5180.00	106.8 AV			1.07 H	65	103.7	3.1
5	#10360.00	62.3 PK	74.0	-11.7	2.59 H	211	48.7	13.6
6	#10360.00	50.2 AV	54.0	-3.8	2.59 H	211	36.6	13.6
7	15540.00	60.4 PK	74.0	-13.6	1.71 H	312	44.7	15.7
8	15540.00	46.8 AV	54.0	-7.2	1.71 H	312	31.1	15.7
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	72.2 PK	74.0	-1.8	1.48 V	105	69.2	3.0
2	5150.00	53.7 AV	54.0	-0.3	1.48 V	105	50.7	3.0
3	*5180.00	119.9 PK			1.48 V	105	116.8	3.1
4	*5180.00	108.1 AV			1.48 V	105	105.0	3.1
5	#10360.00	58.4 PK	74.0	-15.6	3.58 V	265	44.8	13.6
6	#10360.00	46.7 AV	54.0	-7.3	3.58 V	265	33.1	13.6
7	15540.00	60.1 PK	74.0	-13.9	2.27 V	241	44.4	15.7
8	15540.00	46.0 AV	54.0	-8.0	2.27 V	241	30.3	15.7

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 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	56.6 PK	74.0	-17.4	1.06 H	80	53.6	3.0
2	5150.00	47.3 AV	54.0	-6.7	1.06 H	80	44.3	3.0
3	*5200.00	117.5 PK			1.06 H	80	114.4	3.1
4	*5200.00	106.4 AV			1.06 H	80	103.3	3.1
5	#10400.00	62.6 PK	74.0	-11.4	2.59 H	225	49.0	13.6
6	#10400.00	50.4 AV	54.0	-3.6	2.59 H	225	36.8	13.6
7	15600.00	60.1 PK	74.0	-13.9	1.68 H	299	44.4	15.7
8	15600.00	46.4 AV	54.0	-7.6	1.68 H	299	30.7	15.7

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	60.5 PK	74.0	-13.5	1.03 V	182	57.5	3.0
2	5150.00	47.6 AV	54.0	-6.4	1.03 V	182	44.6	3.0
3	*5200.00	119.1 PK			1.03 V	182	116.0	3.1
4	*5200.00	107.7 AV			1.03 V	182	104.6	3.1
5	#10400.00	58.2 PK	74.0	-15.8	3.56 V	252	44.6	13.6
6	#10400.00	46.6 AV	54.0	-7.4	3.56 V	252	33.0	13.6
7	15600.00	60.4 PK	74.0	-13.6	2.31 V	254	44.7	15.7
8	15600.00	46.4 AV	54.0	-7.6	2.31 V	254	30.7	15.7

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 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	117.8 PK			1.10 H	63	114.6	3.2
2	*5240.00	106.6 AV			1.10 H	63	103.4	3.2
3	5350.00	53.8 PK	74.0	-20.2	1.10 H	63	50.3	3.5
4	5350.00	44.9 AV	54.0	-9.1	1.10 H	63	41.4	3.5
5	#10480.00	63.7 PK	74.0	-10.3	2.68 H	251	49.7	14.0
6	#10480.00	49.9 AV	54.0	-4.1	2.68 H	251	35.9	14.0
7	15720.00	60.4 PK	74.0	-13.6	1.69 H	297	45.0	15.4
8	15720.00	46.8 AV	54.0	-7.2	1.69 H	297	31.4	15.4

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	119.1 PK			1.00 V	180	115.9	3.2
2	*5240.00	107.7 AV			1.00 V	180	104.5	3.2
3	5350.00	57.3 PK	74.0	-16.7	1.00 V	180	53.8	3.5
4	5350.00	45.2 AV	54.0	-8.8	1.00 V	180	41.7	3.5
5	#10480.00	57.8 PK	74.0	-16.2	3.51 V	246	43.8	14.0
6	#10480.00	46.5 AV	54.0	-7.5	3.51 V	246	32.5	14.0
7	15720.00	59.9 PK	74.0	-14.1	2.35 V	263	44.5	15.4
8	15720.00	46.2 AV	54.0	-7.8	2.35 V	263	30.8	15.4

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	*5260.00	118.5 PK			1.06 H	64	115.2	3.3
2	*5260.00	107.0 AV			1.06 H	64	103.7	3.3
3	5350.00	54.0 PK	74.0	-20.0	1.06 H	64	50.5	3.5
4	5350.00	45.4 AV	54.0	-8.6	1.06 H	64	41.9	3.5
5	#10520.00	63.5 PK	74.0	-10.5	2.71 H	256	49.4	14.1
6	#10520.00	49.6 AV	54.0	-4.4	2.71 H	256	35.5	14.1
7	15780.00	60.0 PK	74.0	-14.0	1.67 H	310	44.8	15.2
8	15780.00	46.6 AV	54.0	-7.4	1.67 H	310	31.4	15.2

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	119.2 PK			1.08 V	179	115.9	3.3
2	*5260.00	107.6 AV			1.08 V	179	104.3	3.3
3	5350.00	57.2 PK	74.0	-16.8	1.08 V	179	53.7	3.5
4	5350.00	45.6 AV	54.0	-8.4	1.08 V	179	42.1	3.5
5	#10520.00	57.4 PK	74.0	-16.6	3.55 V	259	43.3	14.1
6	#10520.00	46.2 AV	54.0	-7.8	3.55 V	259	32.1	14.1
7	15780.00	60.4 PK	74.0	-13.6	2.33 V	257	45.2	15.2
8	15780.00	46.5 AV	54.0	-7.5	2.33 V	257	31.3	15.2

REMARKS:

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

CHANNEL	TX Channel 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	117.5 PK			1.13 H	56	114.2	3.3
2	*5300.00	106.2 AV			1.13 H	56	102.9	3.3
3	5350.00	56.9 PK	74.0	-17.1	1.13 H	56	53.4	3.5
4	5350.00	47.6 AV	54.0	-6.4	1.13 H	56	44.1	3.5
5	10600.00	64.1 PK	74.0	-9.9	2.67 H	240	49.8	14.3
6	10600.00	50.1 AV	54.0	-3.9	2.67 H	240	35.8	14.3
7	15900.00	59.9 PK	74.0	-14.1	1.68 H	304	44.8	15.1
8	15900.00	46.3 AV	54.0	-7.7	1.68 H	304	31.2	15.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	118.6 PK			1.07 V	180	115.3	3.3
2	*5300.00	107.7 AV			1.07 V	180	104.4	3.3
3	5350.00	59.9 PK	74.0	-14.1	1.07 V	180	56.4	3.5
4	5350.00	48.0 AV	54.0	-6.0	1.07 V	180	44.5	3.5
5	10600.00	57.3 PK	74.0	-16.7	3.56 V	250	43.0	14.3
6	10600.00	46.4 AV	54.0	-7.6	3.56 V	250	32.1	14.3
7	15900.00	60.5 PK	74.0	-13.5	2.32 V	267	45.4	15.1
8	15900.00	46.4 AV	54.0	-7.6	2.32 V	267	31.3	15.1

REMARKS:

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

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	116.4 PK			3.24 H	77	112.9	3.5
2	*5320.00	105.7 AV			3.24 H	77	102.2	3.5
3	5350.00	62.2 PK	74.0	-11.8	3.24 H	77	58.7	3.5
4	5350.00	52.6 AV	54.0	-1.4	3.24 H	77	49.1	3.5
5	10640.00	64.1 PK	74.0	-9.9	2.71 H	236	49.8	14.3
6	10640.00	50.2 AV	54.0	-3.8	2.71 H	236	35.9	14.3
7	15960.00	60.2 PK	74.0	-13.8	1.65 H	291	45.1	15.1
8	15960.00	46.8 AV	54.0	-7.2	1.65 H	291	31.7	15.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.5 PK			1.00 V	181	114.0	3.5
2	*5320.00	108.3 AV			1.00 V	181	104.8	3.5
3	5350.00	65.9 PK	74.0	-8.1	1.00 V	181	62.4	3.5
4	5350.00	53.0 AV	54.0	-1.0	1.00 V	181	49.5	3.5
5	10640.00	57.1 PK	74.0	-16.9	3.53 V	264	42.8	14.3
6	10640.00	46.4 AV	54.0	-7.6	3.53 V	264	32.1	14.3
7	15960.00	60.5 PK	74.0	-13.5	2.37 V	252	45.4	15.1
8	15960.00	46.2 AV	54.0	-7.8	2.37 V	252	31.1	15.1

REMARKS:

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

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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	67.6 PK	74.0	-6.4	1.09 H	51	64.6	3.0
2	5150.00	53.0 AV	54.0	-1.0	1.09 H	51	50.0	3.0
3	*5180.00	118.9 PK			1.09 H	51	115.8	3.1
4	*5180.00	107.3 AV			1.09 H	51	104.2	3.1
5	#10360.00	64.3 PK	74.0	-9.7	2.69 H	237	50.7	13.6
6	#10360.00	50.1 AV	54.0	-3.9	2.69 H	237	36.5	13.6
7	15540.00	60.6 PK	74.0	-13.4	1.72 H	302	44.9	15.7
8	15540.00	46.7 AV	54.0	-7.3	1.72 H	302	31.0	15.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.5 PK	74.0	-6.5	1.06 V	185	64.5	3.0
2	5150.00	53.4 AV	54.0	-0.6	1.06 V	185	50.4	3.0
3	*5180.00	118.2 PK			1.06 V	185	115.1	3.1
4	*5180.00	108.2 AV			1.06 V	185	105.1	3.1
5	#10360.00	57.6 PK	74.0	-16.4	3.61 V	252	44.0	13.6
6	#10360.00	46.1 AV	54.0	-7.9	3.61 V	252	32.5	13.6
7	15540.00	60.8 PK	74.0	-13.2	2.33 V	270	45.1	15.7
8	15540.00	46.8 AV	54.0	-7.2	2.33 V	270	31.1	15.7

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 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	56.4 PK	74.0	-17.6	1.10 H	51	53.4	3.0
2	5150.00	47.2 AV	54.0	-6.8	1.10 H	51	44.2	3.0
3	*5200.00	119.4 PK			1.10 H	51	116.3	3.1
4	*5200.00	107.6 AV			1.10 H	51	104.5	3.1
5	#10400.00	64.2 PK	74.0	-9.8	2.66 H	228	50.6	13.6
6	#10400.00	49.9 AV	54.0	-4.1	2.66 H	228	36.3	13.6
7	15600.00	59.9 PK	74.0	-14.1	1.67 H	292	44.2	15.7
8	15600.00	46.6 AV	54.0	-7.4	1.67 H	292	30.9	15.7
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	60.2 PK	74.0	-13.8	1.01 V	107	57.2	3.0
2	5150.00	47.4 AV	54.0	-6.6	1.01 V	107	44.4	3.0
3	*5200.00	118.0 PK			1.01 V	107	114.9	3.1
4	*5200.00	108.5 AV			1.01 V	107	105.4	3.1
5	#10400.00	58.9 PK	74.0	-15.1	3.62 V	260	45.3	13.6
6	#10400.00	47.0 AV	54.0	-7.0	3.62 V	260	33.4	13.6
7	15600.00	60.1 PK	74.0	-13.9	2.27 V	252	44.4	15.7
8	15600.00	46.3 AV	54.0	-7.7	2.27 V	252	30.6	15.7

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 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	119.6 PK			1.05 H	47	116.4	3.2
2	*5240.00	107.8 AV			1.05 H	47	104.6	3.2
3	5350.00	54.0 PK	74.0	-20.0	1.05 H	47	50.5	3.5
4	5350.00	44.8 AV	54.0	-9.2	1.05 H	47	41.3	3.5
5	#10480.00	63.8 PK	74.0	-10.2	2.65 H	230	49.8	14.0
6	#10480.00	49.9 AV	54.0	-4.1	2.65 H	230	35.9	14.0
7	15720.00	60.0 PK	74.0	-14.0	1.69 H	302	44.6	15.4
8	15720.00	46.2 AV	54.0	-7.8	1.69 H	302	30.8	15.4

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	119.5 PK			1.02 V	179	116.3	3.2
2	*5240.00	108.8 AV			1.02 V	179	105.6	3.2
3	5350.00	57.0 PK	74.0	-17.0	1.02 V	179	53.5	3.5
4	5350.00	45.2 AV	54.0	-8.8	1.02 V	179	41.7	3.5
5	#10480.00	58.1 PK	74.0	-15.9	3.60 V	251	44.1	14.0
6	#10480.00	46.7 AV	54.0	-7.3	3.60 V	251	32.7	14.0
7	15720.00	60.3 PK	74.0	-13.7	2.32 V	269	44.9	15.4
8	15720.00	46.6 AV	54.0	-7.4	2.32 V	269	31.2	15.4

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	54.3 PK	74.0	-19.7	1.00 H	40	51.3	3.0
2	5150.00	45.0 AV	54.0	-9.0	1.00 H	40	42.0	3.0
3	*5260.00	119.6 PK			1.03 H	40	116.3	3.3
4	*5260.00	108.1 AV			1.03 H	40	104.8	3.3
5	#10520.00	63.5 PK	74.0	-10.5	2.63 H	249	49.4	14.1
6	#10520.00	49.7 AV	54.0	-4.3	2.63 H	249	35.6	14.1
7	15780.00	59.9 PK	74.0	-14.1	1.70 H	309	44.7	15.2
8	15780.00	46.3 AV	54.0	-7.7	1.70 H	309	31.1	15.2

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	1.00 V	180	53.5	3.0
2	5150.00	45.4 AV	54.0	-8.6	1.00 V	180	42.4	3.0
3	*5260.00	118.8 PK			1.00 V	180	115.5	3.3
4	*5260.00	109.1 AV			1.00 V	180	105.8	3.3
5	#10520.00	58.0 PK	74.0	-16.0	3.56 V	264	43.9	14.1
6	#10520.00	46.7 AV	54.0	-7.3	3.56 V	264	32.6	14.1
7	15780.00	60.7 PK	74.0	-13.3	2.26 V	257	45.5	15.2
8	15780.00	46.8 AV	54.0	-7.2	2.26 V	257	31.6	15.2

REMARKS:

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

CHANNEL	TX Channel 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	116.5 PK			1.02 H	33	113.2	3.3
2	*5300.00	107.0 AV			1.02 H	33	103.7	3.3
3	5350.00	59.6 PK	74.0	-14.4	1.02 H	33	56.1	3.5
4	5350.00	47.6 AV	54.0	-6.4	1.02 H	33	44.1	3.5
5	10600.00	64.2 PK	74.0	-9.8	2.67 H	228	49.9	14.3
6	10600.00	50.0 AV	54.0	-4.0	2.67 H	228	35.7	14.3
7	15900.00	59.9 PK	74.0	-14.1	1.62 H	289	44.8	15.1
8	15900.00	46.5 AV	54.0	-7.5	1.62 H	289	31.4	15.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	117.1 PK			1.02 V	195	113.8	3.3
2	*5300.00	107.8 AV			1.02 V	195	104.5	3.3
3	5350.00	60.3 PK	74.0	-13.7	1.02 V	195	56.8	3.5
4	5350.00	48.2 AV	54.0	-5.8	1.02 V	195	44.7	3.5
5	10600.00	58.7 PK	74.0	-15.3	3.60 V	263	44.4	14.3
6	10600.00	47.2 AV	54.0	-6.8	3.60 V	263	32.9	14.3
7	15900.00	60.4 PK	74.0	-13.6	2.31 V	270	45.3	15.1
8	15900.00	46.6 AV	54.0	-7.4	2.31 V	270	31.5	15.1

REMARKS:

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

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	117.6 PK			1.06 H	45	114.1	3.5
2	*5320.00	117.5 AV			1.06 H	45	114.0	3.5
3	5350.00	68.5 PK	74.0	-5.5	1.06 H	45	65.0	3.5
4	5350.00	52.4 AV	54.0	-1.6	1.06 H	45	48.9	3.5
5	10640.00	64.5 PK	74.0	-9.5	2.73 H	250	50.2	14.3
6	10640.00	50.5 AV	54.0	-3.5	2.73 H	250	36.2	14.3
7	15960.00	60.4 PK	74.0	-13.6	1.72 H	301	45.3	15.1
8	15960.00	46.5 AV	54.0	-7.5	1.72 H	301	31.4	15.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	118.2 PK			1.05 V	180	114.7	3.5
2	*5320.00	108.3 AV			1.05 V	180	104.8	3.5
3	5350.00	69.2 PK	74.0	-4.8	1.05 V	180	65.7	3.5
4	5350.00	53.1 AV	54.0	-0.9	1.05 V	180	49.6	3.5
5	10640.00	56.8 PK	74.0	-17.2	3.53 V	260	42.5	14.3
6	10640.00	46.1 AV	54.0	-7.9	3.53 V	260	31.8	14.3
7	15960.00	60.2 PK	74.0	-13.8	2.32 V	256	45.1	15.1
8	15960.00	46.1 AV	54.0	-7.9	2.32 V	256	31.0	15.1

REMARKS:

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

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	68.1 PK	74.0	-5.9	1.05 H	71	65.1	3.0
2	5150.00	52.8 AV	54.0	-1.2	1.05 H	71	49.8	3.0
3	*5190.00	109.5 PK			1.05 H	71	106.4	3.1
4	*5190.00	100.2 AV			1.05 H	71	97.1	3.1
5	5350.00	54.1 PK	74.0	-19.9	1.05 H	71	50.6	3.5
6	5350.00	42.7 AV	54.0	-11.3	1.05 H	71	39.2	3.5
7	#10380.00	58.3 PK	74.0	-15.7	2.60 H	215	44.6	13.7
8	#10380.00	45.6 AV	54.0	-8.4	2.60 H	215	31.9	13.7
9	15570.00	56.8 PK	74.0	-17.2	1.77 H	316	41.2	15.6
10	15570.00	44.1 AV	54.0	-9.9	1.77 H	316	28.5	15.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.3 PK	74.0	-4.7	1.03 V	185	66.3	3.0
2	5150.00	53.4 AV	54.0	-0.6	1.03 V	185	50.4	3.0
3	*5190.00	110.7 PK			1.03 V	185	107.6	3.1
4	*5190.00	101.5 AV			1.03 V	185	98.4	3.1
5	5350.00	54.9 PK	74.0	-19.1	1.03 V	185	51.4	3.5
6	5350.00	43.6 AV	54.0	-10.4	1.03 V	185	40.1	3.5
7	#10380.00	54.8 PK	74.0	-19.2	3.64 V	265	41.1	13.7
8	#10380.00	42.1 AV	54.0	-11.9	3.64 V	265	28.4	13.7
9	15570.00	55.6 PK	74.0	-18.4	2.29 V	248	40.0	15.6
10	15570.00	43.2 AV	54.0	-10.8	2.29 V	248	27.6	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 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	*5230.00	114.2 PK			1.05 H	95	111.0	3.2
2	*5230.00	104.0 AV			1.05 H	95	100.8	3.2
3	5350.00	57.3 PK	74.0	-16.7	1.05 H	71	53.8	3.5
4	5350.00	44.8 AV	54.0	-9.2	1.05 H	71	41.3	3.5
5	#10460.00	60.2 PK	74.0	-13.8	2.54 H	205	46.3	13.9
6	#10460.00	48.7 AV	54.0	-5.3	2.54 H	205	34.8	13.9
7	15690.00	58.3 PK	74.0	-15.7	1.77 H	312	42.7	15.6
8	15690.00	46.4 AV	54.0	-7.6	1.77 H	312	30.8	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	*5230.00	115.4 PK			1.24 V	178	112.2	3.2
2	*5230.00	105.2 AV			1.24 V	178	102.0	3.2
3	5350.00	58.1 PK	74.0	-15.9	1.24 V	178	54.6	3.5
4	5350.00	45.7 AV	54.0	-8.3	1.24 V	178	42.2	3.5
5	#10460.00	57.3 PK	74.0	-16.7	3.58 V	258	43.4	13.9
6	#10460.00	45.2 AV	54.0	-8.8	3.58 V	258	31.3	13.9
7	15690.00	57.9 PK	74.0	-16.1	2.29 V	256	42.3	15.6
8	15690.00	45.8 AV	54.0	-8.2	2.29 V	256	30.2	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 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	60.0 PK	74.0	-14.0	1.10 H	79	57.0	3.0
2	5150.00	46.3 AV	54.0	-7.7	1.10 H	79	43.3	3.0
3	*5270.00	115.6 PK			1.10 H	79	112.3	3.3
4	*5270.00	105.2 AV			1.10 H	79	101.9	3.3
5	#10540.00	60.2 PK	74.0	-13.8	2.64 H	210	46.0	14.2
6	#10540.00	48.5 AV	54.0	-5.5	2.64 H	210	34.3	14.2
7	15810.00	58.9 PK	74.0	-15.1	1.77 H	312	43.9	15.0
8	15810.00	46.5 AV	54.0	-7.5	1.77 H	312	31.5	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	5150.00	60.9 PK	74.0	-13.1	1.00 V	180	57.9	3.0
2	5150.00	47.5 AV	54.0	-6.5	1.00 V	180	44.5	3.0
3	*5270.00	117.1 PK			1.00 V	180	113.8	3.3
4	*5270.00	106.9 AV			1.00 V	180	103.6	3.3
5	#10540.00	57.5 PK	74.0	-16.5	3.62 V	257	43.3	14.2
6	#10540.00	45.1 AV	54.0	-8.9	3.62 V	257	30.9	14.2
7	15810.00	58.2 PK	74.0	-15.8	2.22 V	227	43.2	15.0
8	15810.00	46.0 AV	54.0	-8.0	2.22 V	227	31.0	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 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	111.1 PK			1.07 H	75	107.7	3.4
2	*5310.00	101.0 AV			1.07 H	75	97.6	3.4
3	5350.00	70.8 PK	74.0	-3.2	1.07 H	75	67.3	3.5
4	5350.00	52.1 AV	54.0	-1.9	1.07 H	75	48.6	3.5
5	10620.00	59.2 PK	74.0	-14.8	2.63 H	195	44.9	14.3
6	10620.00	46.1 AV	54.0	-7.9	2.63 H	195	31.8	14.3
7	15930.00	56.7 PK	74.0	-17.3	1.69 H	307	41.6	15.1
8	15930.00	44.7 AV	54.0	-9.3	1.69 H	307	29.6	15.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	112.3 PK			1.02 V	181	108.9	3.4
2	*5310.00	102.2 AV			1.02 V	181	98.8	3.4
3	5350.00	71.8 PK	74.0	-2.2	1.02 V	181	68.3	3.5
4	5350.00	53.0 AV	54.0	-1.0	1.02 V	181	49.5	3.5
5	10620.00	55.6 PK	74.0	-18.4	3.55 V	279	41.3	14.3
6	10620.00	42.9 AV	54.0	-11.1	3.55 V	279	28.6	14.3
7	15930.00	56.2 PK	74.0	-17.8	2.23 V	245	41.1	15.1
8	15930.00	44.0 AV	54.0	-10.0	2.23 V	245	28.9	15.1

REMARKS:

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

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	70.2 PK	74.0	-3.8	1.00 H	35	67.2	3.0
2	5150.00	52.4 AV	54.0	-1.6	1.00 H	35	49.4	3.0
3	*5210.00	107.9 PK			1.00 H	35	104.7	3.2
4	*5210.00	97.5 AV			1.00 H	35	94.3	3.2
5	5350.00	53.7 PK	74.0	-20.3	1.00 H	35	50.2	3.5
6	5350.00	41.8 AV	54.0	-12.2	1.00 H	35	38.3	3.5
7	#10420.00	56.7 PK	74.0	-17.3	2.66 H	206	42.9	13.8
8	#10420.00	44.1 AV	54.0	-9.9	2.66 H	206	30.3	13.8
9	15630.00	57.0 PK	74.0	-17.0	1.78 H	328	41.3	15.7
10	15630.00	44.4 AV	54.0	-9.6	1.78 H	328	28.7	15.7
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	73.3 PK	74.0	-0.7	1.15 V	187	70.3	3.0
2	5150.00	53.7 AV	54.0	-0.3	1.15 V	187	50.7	3.0
3	*5210.00	109.2 PK			1.15 V	187	106.0	3.2
4	*5210.00	98.6 AV			1.15 V	187	95.4	3.2
5	5350.00	55.1 PK	74.0	-18.9	1.15 V	187	51.6	3.5
6	5350.00	43.4 AV	54.0	-10.6	1.15 V	187	39.9	3.5
7	#10420.00	54.5 PK	74.0	-19.5	3.68 V	251	40.7	13.8
8	#10420.00	42.0 AV	54.0	-12.0	3.68 V	251	28.2	13.8
9	15630.00	55.2 PK	74.0	-18.8	2.28 V	252	39.5	15.7
10	15630.00	42.9 AV	54.0	-11.1	2.28 V	252	27.2	15.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.8 PK	74.0	-18.2	1.00 H	42	52.8	3.0
2	5150.00	41.0 AV	54.0	-13.0	1.00 H	42	38.0	3.0
3	*5290.00	108.1 PK			1.00 H	42	104.8	3.3
4	*5290.00	97.3 AV			1.00 H	42	94.0	3.3
5	5350.00	70.8 PK	74.0	-3.2	1.00 H	42	67.3	3.5
6	5350.00	52.1 AV	54.0	-1.9	1.00 H	42	48.6	3.5
7	#10580.00	57.3 PK	74.0	-16.7	2.57 H	201	43.0	14.3
8	#10580.00	44.5 AV	54.0	-9.5	2.57 H	201	30.2	14.3
9	15870.00	56.8 PK	74.0	-17.2	1.74 H	317	41.8	15.0
10	15870.00	44.3 AV	54.0	-9.7	1.74 H	317	29.3	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	5150.00	56.6 PK	74.0	-17.4	1.03 V	180	53.6	3.0
2	5150.00	41.9 AV	54.0	-12.1	1.03 V	180	38.9	3.0
3	*5290.00	109.3 PK			1.03 V	180	106.0	3.3
4	*5290.00	98.5 AV			1.03 V	180	95.2	3.3
5	5350.00	71.1 PK	74.0	-2.9	1.03 V	180	67.6	3.5
6	5350.00	53.2 AV	54.0	-0.8	1.03 V	180	49.7	3.5
7	#10580.00	54.7 PK	74.0	-19.3	3.68 V	281	40.4	14.3
8	#10580.00	41.7 AV	54.0	-12.3	3.68 V	281	27.4	14.3
9	15870.00	55.0 PK	74.0	-19.0	2.33 V	233	40.0	15.0
10	15870.00	42.8 AV	54.0	-11.2	2.33 V	233	27.8	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.

Radio 3

CDD Mode

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.1 PK	74.0	-6.9	3.22 H	83	63.4	3.7
2	#5470.00	51.6 AV	54.0	-2.4	3.22 H	83	47.9	3.7
3	*5500.00	115.7 PK			3.22 H	83	111.9	3.8
4	*5500.00	105.0 AV			3.22 H	83	101.2	3.8
5	11000.00	64.2 PK	74.0	-9.8	2.74 H	233	49.0	15.2
6	11000.00	50.2 AV	54.0	-3.8	2.74 H	233	35.0	15.2
7	#16500.00	60.6 PK	74.0	-13.4	1.69 H	305	43.2	17.4
8	#16500.00	47.0 AV	54.0	-7.0	1.69 H	305	29.6	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	#5470.00	65.7 PK	74.0	-8.3	1.04 V	178	62.0	3.7
2	#5470.00	50.7 AV	54.0	-3.3	1.04 V	178	47.0	3.7
3	*5500.00	116.6 PK			1.04 V	178	112.8	3.8
4	*5500.00	104.6 AV			1.04 V	178	100.8	3.8
5	11000.00	57.5 PK	74.0	-16.5	3.56 V	279	42.3	15.2
6	11000.00	46.6 AV	54.0	-7.4	3.56 V	279	31.4	15.2
7	#16500.00	61.0 PK	74.0	-13.0	2.36 V	260	43.6	17.4
8	#16500.00	46.5 AV	54.0	-7.5	2.36 V	260	29.1	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.

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	118.2 PK			2.95 H	101	114.3	3.9
2	*5580.00	106.5 AV			2.95 H	101	102.6	3.9
3	#5725.00	57.8 PK	74.0	-16.2	2.95 H	101	53.6	4.2
4	#5725.00	45.5 AV	54.0	-8.5	2.95 H	101	41.3	4.2
5	11160.00	64.0 PK	74.0	-10.0	2.80 H	247	48.8	15.2
6	11160.00	50.1 AV	54.0	-3.9	2.80 H	247	34.9	15.2
7	#16740.00	60.9 PK	74.0	-13.1	1.73 H	295	42.6	18.3
8	#16740.00	47.0 AV	54.0	-7.0	1.73 H	295	28.7	18.3

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	116.6 PK			1.00 V	177	112.7	3.9
2	*5580.00	105.2 AV			1.00 V	177	101.3	3.9
3	#5725.00	53.8 PK	74.0	-20.2	1.00 V	177	49.6	4.2
4	#5725.00	45.2 AV	54.0	-8.8	1.00 V	177	41.0	4.2
5	11160.00	58.0 PK	74.0	-16.0	3.54 V	285	42.8	15.2
6	11160.00	46.9 AV	54.0	-7.1	3.54 V	285	31.7	15.2
7	#16740.00	61.2 PK	74.0	-12.8	2.38 V	269	42.9	18.3
8	#16740.00	46.4 AV	54.0	-7.6	2.38 V	269	28.1	18.3

REMARKS:

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

CHANNEL	TX Channel 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	118.3 PK			2.95 H	104	114.1	4.2
2	*5700.00	106.7 AV			2.95 H	104	102.5	4.2
3	#5725.00	70.3 PK	74.0	-3.7	2.95 H	104	66.1	4.2
4	#5725.00	53.9 AV	54.0	-0.1	2.95 H	104	49.7	4.2
5	11400.00	64.1 PK	74.0	-9.9	2.84 H	253	48.6	15.5
6	11400.00	50.0 AV	54.0	-4.0	2.84 H	253	34.5	15.5
7	#17100.00	60.3 PK	74.0	-13.7	1.79 H	284	40.2	20.1
8	#17100.00	46.5 AV	54.0	-7.5	1.79 H	284	26.4	20.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.2 PK			1.10 V	185	100.0	4.2
2	*5700.00	104.1 AV			1.10 V	185	99.9	4.2
3	#5725.00	62.6 PK	74.0	-11.4	1.10 V	185	58.4	4.2
4	#5725.00	50.9 AV	54.0	-3.1	1.10 V	185	46.7	4.2
5	11400.00	57.9 PK	74.0	-16.1	3.53 V	288	42.4	15.5
6	11400.00	46.6 AV	54.0	-7.4	3.53 V	288	31.1	15.5
7	#17100.00	61.0 PK	74.0	-13.0	2.41 V	273	40.9	20.1
8	#17100.00	46.1 AV	54.0	-7.9	2.41 V	273	26.0	20.1

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 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	56.6 PK	74.0	-17.4	2.12 H	81	52.9	3.7
2	#5470.00	45.4 AV	54.0	-8.6	2.12 H	81	41.7	3.7
3	*5720.00	114.3 PK			2.12 H	81	110.1	4.2
4	*5720.00	106.0 AV			2.12 H	81	101.8	4.2
5	#5873.00	61.3 PK	74.0	-12.7	2.12 H	81	57.1	4.2
6	#5873.00	50.0 AV	54.0	-4.0	2.12 H	81	45.8	4.2
7	11440.00	64.1 PK	74.0	-9.9	2.71 H	238	48.8	15.3
8	11440.00	50.4 AV	54.0	-3.6	2.71 H	238	35.1	15.3
9	#17160.00	60.2 PK	74.0	-13.8	1.65 H	310	40.4	19.8
10	#17160.00	46.8 AV	54.0	-7.2	1.65 H	310	27.0	19.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	55.6 PK	74.0	-18.4	1.50 V	63	51.9	3.7
2	#5470.00	44.2 AV	54.0	-9.8	1.50 V	63	40.5	3.7
3	*5720.00	112.0 PK			1.50 V	63	107.8	4.2
4	*5720.00	103.3 AV			1.50 V	63	99.1	4.2
5	#5873.00	59.0 PK	74.0	-15.0	1.50 V	63	54.8	4.2
6	#5873.00	47.7 AV	54.0	-6.3	1.50 V	63	43.5	4.2
7	11440.00	57.9 PK	74.0	-16.1	3.59 V	291	42.6	15.3
8	11440.00	46.8 AV	54.0	-7.2	3.59 V	291	31.5	15.3
9	#17160.00	61.1 PK	74.0	-12.9	2.36 V	269	41.3	19.8
10	#17160.00	46.0 AV	54.0	-8.0	2.36 V	269	26.2	19.8

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 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	#5553.32	58.9 PK	68.2	-9.3	2.89 H	61	55.0	3.9
2	*5745.00	117.8 PK			2.89 H	61	113.6	4.2
3	*5745.00	106.9 AV			2.89 H	61	102.7	4.2
4	#5937.60	58.7 PK	68.2	-9.5	2.89 H	61	54.3	4.4
5	11490.00	67.4 PK	74.0	-6.6	1.59 H	222	52.2	15.2
6	11490.00	53.9 AV	54.0	-0.1	1.59 H	222	38.7	15.2
7	#17235.00	59.8 PK	74.0	-14.2	1.75 H	284	39.8	20.0
8	#17235.00	46.2 AV	54.0	-7.8	1.75 H	284	26.2	20.0

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	#5609.37	59.4 PK	68.2	-8.8	1.06 V	100	55.5	3.9
2	*5745.00	116.6 PK			1.06 V	100	112.4	4.2
3	*5745.00	105.7 AV			1.06 V	100	101.5	4.2
4	#5972.75	58.4 PK	68.2	-9.8	1.06 V	100	53.9	4.5
5	11490.00	57.2 PK	74.0	-16.8	3.50 V	283	42.0	15.2
6	11490.00	46.2 AV	54.0	-7.8	3.50 V	283	31.0	15.2
7	#17235.00	61.1 PK	74.0	-12.9	2.40 V	288	41.1	20.0
8	#17235.00	46.0 AV	54.0	-8.0	2.40 V	288	26.0	20.0

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 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	#5635.50	58.8 PK	68.2	-9.4	2.90 H	36	54.8	4.0
2	*5785.00	118.2 PK			2.90 H	36	114.1	4.1
3	*5785.00	106.9 AV			2.90 H	36	102.8	4.1
4	#5934.75	58.6 PK	68.2	-9.6	2.90 H	36	54.2	4.4
5	11570.00	62.7 PK	74.0	-11.3	1.50 H	308	47.6	15.1
6	11570.00	50.6 AV	54.0	-3.4	1.50 H	308	35.5	15.1
7	#17355.00	56.4 PK	74.0	-17.6	1.50 H	57	35.9	20.5
8	#17355.00	44.5 AV	54.0	-9.5	1.50 H	57	24.0	20.5

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.05	59.1 PK	68.2	-9.1	1.10 V	113	55.1	4.0
2	*5785.00	116.4 PK			1.10 V	113	112.3	4.1
3	*5785.00	105.5 AV			1.10 V	113	101.4	4.1
4	#5980.82	59.5 PK	68.2	-8.7	1.10 V	113	55.0	4.5
5	11570.00	63.3 PK	74.0	-10.7	2.44 V	218	48.2	15.1
6	11570.00	50.3 AV	54.0	-3.7	2.44 V	218	35.2	15.1
7	#17355.00	56.7 PK	74.0	-17.3	1.50 V	63	36.2	20.5
8	#17355.00	43.4 AV	54.0	-10.6	1.50 V	63	22.9	20.5

REMARKS:

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

CHANNEL	TX Channel 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	#5647.85	58.9 PK	68.2	-9.3	2.94 H	50	54.9	4.0
2	*5825.00	117.9 PK			2.94 H	50	113.7	4.2
3	*5825.00	106.8 AV			2.94 H	50	102.6	4.2
4	#5946.62	59.3 PK	68.2	-8.9	2.94 H	50	54.9	4.4
5	11650.00	61.9 PK	74.0	-12.1	1.57 H	298	46.9	15.0
6	11650.00	47.8 AV	54.0	-6.2	1.57 H	298	32.8	15.0
7	#17475.00	56.5 PK	74.0	-17.5	1.50 H	46	35.4	21.1
8	#17475.00	44.4 AV	54.0	-9.6	1.50 H	46	23.3	21.1

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	#5598.93	58.3 PK	68.2	-9.9	1.10 V	113	54.4	3.9
2	*5825.00	116.8 PK			1.09 V	90	112.6	4.2
3	*5825.00	105.6 AV			1.09 V	90	101.4	4.2
4	#5925.73	58.8 PK	68.2	-9.4	1.10 V	113	54.4	4.4
5	11650.00	63.0 PK	74.0	-11.0	2.39 V	218	48.0	15.0
6	11650.00	50.1 AV	54.0	-3.9	2.39 V	218	35.1	15.0
7	#17475.00	56.4 PK	74.0	-17.6	1.49 V	71	35.3	21.1
8	#17475.00	43.0 AV	54.0	-11.0	1.49 V	71	21.9	21.1

REMARKS:

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

802.11ac (VHT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	69.2 PK	74.0	-4.8	3.50 H	271	65.5	3.7
2	#5470.00	49.7 AV	54.0	-4.3	3.50 H	271	46.0	3.7
3	*5500.00	118.3 PK			3.50 H	271	114.5	3.8
4	*5500.00	108.2 AV			3.50 H	271	104.4	3.8
5	11000.00	63.7 PK	74.0	-10.3	2.79 H	224	48.5	15.2
6	11000.00	49.7 AV	54.0	-4.3	2.79 H	224	34.5	15.2
7	#16500.00	60.4 PK	74.0	-13.6	1.73 H	302	43.0	17.4
8	#16500.00	46.6 AV	54.0	-7.4	1.73 H	302	29.2	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	#5470.00	67.9 PK	74.0	-6.1	1.12 V	159	64.2	3.7
2	#5470.00	48.5 AV	54.0	-5.5	1.12 V	159	44.8	3.7
3	*5500.00	117.0 PK			1.12 V	159	113.2	3.8
4	*5500.00	105.9 AV			1.12 V	159	102.1	3.8
5	11000.00	57.4 PK	74.0	-16.6	3.58 V	286	42.2	15.2
6	11000.00	46.3 AV	54.0	-7.7	3.58 V	286	31.1	15.2
7	#16500.00	61.1 PK	74.0	-12.9	2.30 V	257	43.7	17.4
8	#16500.00	46.8 AV	54.0	-7.2	2.30 V	257	29.4	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.

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	#5470.00	67.2 PK	74.0	-6.8	3.53 H	275	63.5	3.7
2	#5470.00	47.7 AV	54.0	-6.3	3.53 H	275	44.0	3.7
3	*5580.00	118.4 PK			3.53 H	275	114.5	3.9
4	*5580.00	108.1 AV			3.53 H	275	104.2	3.9
5	11160.00	63.7 PK	74.0	-10.3	2.77 H	219	48.5	15.2
6	11160.00	50.0 AV	54.0	-4.0	2.77 H	219	34.8	15.2
7	#16740.00	60.5 PK	74.0	-13.5	1.71 H	296	42.2	18.3
8	#16740.00	47.2 AV	54.0	-6.8	1.71 H	296	28.9	18.3

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	66.1 PK	74.0	-7.9	1.08 V	163	62.4	3.7
2	#5470.00	46.7 AV	54.0	-7.3	1.08 V	163	43.0	3.7
3	*5580.00	116.9 PK			1.08 V	163	113.0	3.9
4	*5580.00	105.5 AV			1.08 V	163	101.6	3.9
5	11160.00	57.1 PK	74.0	-16.9	3.59 V	283	41.9	15.2
6	11160.00	46.4 AV	54.0	-7.6	3.59 V	283	31.2	15.2
7	#16740.00	61.4 PK	74.0	-12.6	2.31 V	251	43.1	18.3
8	#16740.00	46.9 AV	54.0	-7.1	2.31 V	251	28.6	18.3

REMARKS:

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

CHANNEL	TX Channel 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	118.2 PK			3.37 H	267	114.0	4.2
2	*5700.00	108.0 AV			3.37 H	267	103.8	4.2
3	#5725.00	66.7 PK	74.0	-7.3	3.37 H	267	62.5	4.2
4	#5725.00	53.8 AV	54.0	-0.2	3.37 H	267	49.6	4.2
5	11400.00	64.7 PK	74.0	-9.3	2.78 H	247	49.2	15.5
6	11400.00	50.5 AV	54.0	-3.5	2.78 H	247	35.0	15.5
7	#17100.00	60.9 PK	74.0	-13.1	1.74 H	289	40.8	20.1
8	#17100.00	47.2 AV	54.0	-6.8	1.74 H	289	27.1	20.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	116.3 PK			1.03 V	188	112.1	4.2
2	*5700.00	104.8 AV			1.03 V	188	100.6	4.2
3	#5725.00	65.2 PK	74.0	-8.8	1.03 V	188	61.0	4.2
4	#5725.00	52.5 AV	54.0	-1.5	1.03 V	188	48.3	4.2
5	11400.00	57.2 PK	74.0	-16.8	3.59 V	294	41.7	15.5
6	11400.00	46.3 AV	54.0	-7.7	3.59 V	294	30.8	15.5
7	#17100.00	61.2 PK	74.0	-12.8	2.30 V	263	41.1	20.1
8	#17100.00	46.9 AV	54.0	-7.1	2.30 V	263	26.8	20.1

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 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	57.6 PK	74.0	-16.4	2.12 H	80	53.9	3.7
2	#5470.00	44.7 AV	54.0	-9.3	2.12 H	80	41.0	3.7
3	*5720.00	114.3 PK			2.12 H	80	110.1	4.2
4	*5720.00	104.5 AV			2.12 H	80	100.3	4.2
5	#5879.00	61.6 PK	74.0	-12.4	2.12 H	80	57.4	4.2
6	#5879.00	49.2 AV	54.0	-4.8	2.12 H	80	45.0	4.2
7	11440.00	64.2 PK	74.0	-9.8	2.77 H	232	48.9	15.3
8	11440.00	50.6 AV	54.0	-3.4	2.77 H	232	35.3	15.3
9	#17160.00	60.8 PK	74.0	-13.2	1.60 H	300	41.0	19.8
10	#17160.00	47.2 AV	54.0	-6.8	1.60 H	300	27.4	19.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	56.6 PK	74.0	-17.4	1.47 V	59	52.9	3.7
2	#5470.00	43.5 AV	54.0	-10.5	1.47 V	59	39.8	3.7
3	*5720.00	112.1 PK			1.47 V	59	107.9	4.2
4	*5720.00	101.9 AV			1.47 V	59	97.7	4.2
5	#5879.00	59.4 PK	74.0	-14.6	1.47 V	59	55.2	4.2
6	#5879.00	47.0 AV	54.0	-7.0	1.47 V	59	42.8	4.2
7	11440.00	57.9 PK	74.0	-16.1	3.57 V	304	42.6	15.3
8	11440.00	46.8 AV	54.0	-7.2	3.57 V	304	31.5	15.3
9	#17160.00	61.8 PK	74.0	-12.2	2.37 V	280	42.0	19.8
10	#17160.00	46.5 AV	54.0	-7.5	2.37 V	280	26.7	19.8

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 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	#5638.35	59.9 PK	68.2	-8.3	3.25 H	280	55.9	4.0
2	*5745.00	118.1 PK			3.25 H	280	113.9	4.2
3	*5745.00	108.8 AV			3.25 H	280	104.6	4.2
4	#5978.45	58.6 PK	68.2	-9.6	3.25 H	280	54.1	4.5
5	11490.00	68.0 PK	74.0	-6.0	1.91 H	144	52.8	15.2
6	11490.00	53.6 AV	54.0	-0.4	1.91 H	144	38.4	15.2
7	#17235.00	57.9 PK	74.0	-16.1	1.60 H	150	37.9	20.0
8	#17235.00	46.4 AV	54.0	-7.6	1.60 H	150	26.4	20.0
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	#5600.82	58.6 PK	68.2	-9.6	3.31 V	185	54.7	3.9
2	*5745.00	117.9 PK			3.31 V	185	113.7	4.2
3	*5745.00	108.6 AV			3.31 V	185	104.4	4.2
4	#5976.07	58.1 PK	68.2	-10.1	3.31 V	185	53.6	4.5
5	11490.00	63.6 PK	74.0	-10.4	1.57 V	252	48.4	15.2
6	11490.00	49.9 AV	54.0	-4.1	1.57 V	252	34.7	15.2
7	#17235.00	60.4 PK	74.0	-13.6	1.48 V	57	40.4	20.0
8	#17235.00	47.4 AV	54.0	-6.6	1.48 V	57	27.4	20.0

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 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	#5639.30	59.2 PK	68.2	-9.0	3.24 H	278	55.2	4.0
2	*5785.00	118.3 PK			3.24 H	278	114.2	4.1
3	*5785.00	108.9 AV			3.24 H	278	104.8	4.1
4	#5956.12	58.7 PK	68.2	-9.5	3.24 H	278	54.3	4.4
5	11570.00	62.5 PK	74.0	-11.5	1.50 H	296	47.4	15.1
6	11570.00	50.7 AV	54.0	-3.3	1.50 H	296	35.6	15.1
7	#17355.00	56.2 PK	74.0	-17.8	1.50 H	60	35.7	20.5
8	#17355.00	44.0 AV	54.0	-10.0	1.50 H	60	23.5	20.5

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.65	59.1 PK	68.2	-9.1	3.23 V	176	55.1	4.0
2	*5785.00	118.3 PK			3.23 V	176	114.2	4.1
3	*5785.00	108.4 AV			3.23 V	176	104.3	4.1
4	#5937.12	58.5 PK	68.2	-9.7	3.23 V	176	54.1	4.4
5	11570.00	62.9 PK	74.0	-11.1	2.42 V	224	47.8	15.1
6	11570.00	50.1 AV	54.0	-3.9	2.42 V	224	35.0	15.1
7	#17355.00	56.7 PK	74.0	-17.3	1.44 V	72	36.2	20.5
8	#17355.00	43.3 AV	54.0	-10.7	1.44 V	72	22.8	20.5

REMARKS:

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

CHANNEL	TX Channel 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	#5634.07	59.2 PK	68.2	-9.0	3.26 H	278	55.2	4.0
2	*5825.00	118.7 PK			3.26 H	278	114.5	4.2
3	*5825.00	109.2 AV			3.26 H	278	105.0	4.2
4	#5930.48	58.2 PK	68.2	-10.0	3.26 H	278	53.8	4.4
5	11650.00	62.5 PK	74.0	-11.5	1.48 H	307	47.5	15.0
6	11650.00	50.5 AV	54.0	-3.5	1.48 H	307	35.5	15.0
7	#17475.00	56.4 PK	74.0	-17.6	1.55 H	65	35.3	21.1
8	#17475.00	44.7 AV	54.0	-9.3	1.55 H	65	23.6	21.1
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	#5639.30	58.4 PK	68.2	-9.8	3.25 V	174	54.4	4.0
2	*5825.00	118.4 PK			3.25 V	174	114.2	4.2
3	*5825.00	108.8 AV			3.25 V	174	104.6	4.2
4	#5959.93	58.5 PK	68.2	-9.7	3.25 V	174	54.0	4.5
5	11650.00	63.4 PK	74.0	-10.6	2.40 V	218	48.4	15.0
6	11650.00	50.2 AV	54.0	-3.8	2.40 V	218	35.2	15.0
7	#17475.00	56.5 PK	74.0	-17.5	1.53 V	56	35.4	21.1
8	#17475.00	43.2 AV	54.0	-10.8	1.53 V	56	22.1	21.1

REMARKS:

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

802.11ac (VHT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	73.0 PK	74.0	-1.0	1.64 H	281	69.3	3.7
2	#5470.00	52.2 AV	54.0	-1.8	1.64 H	281	48.5	3.7
3	*5510.00	108.8 PK			1.64 H	281	105.0	3.8
4	*5510.00	99.3 AV			1.64 H	281	95.5	3.8
5	11020.00	57.9 PK	74.0	-16.1	2.57 H	225	42.8	15.1
6	11020.00	45.3 AV	54.0	-8.7	2.57 H	225	30.2	15.1
7	#16530.00	56.4 PK	74.0	-17.6	1.77 H	319	38.9	17.5
8	#16530.00	43.8 AV	54.0	-10.2	1.77 H	319	26.3	17.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	65.7 PK	74.0	-8.3	2.67 V	177	62.0	3.7
2	#5470.00	48.1 AV	54.0	-5.9	2.67 V	177	44.4	3.7
3	*5510.00	108.0 PK			2.67 V	177	104.2	3.8
4	*5510.00	99.0 AV			2.67 V	177	95.2	3.8
5	11020.00	54.6 PK	74.0	-19.4	3.67 V	262	39.5	15.1
6	11020.00	41.7 AV	54.0	-12.3	3.67 V	262	26.6	15.1
7	#16530.00	55.8 PK	74.0	-18.2	2.24 V	232	38.3	17.5
8	#16530.00	43.7 AV	54.0	-10.3	2.24 V	232	26.2	17.5

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 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	113.1 PK			1.70 H	282	109.2	3.9
2	*5550.00	103.5 AV			1.70 H	282	99.6	3.9
3	#5725.00	57.9 PK	74.0	-16.1	1.70 H	282	53.7	4.2
4	#5725.00	44.6 AV	54.0	-9.4	1.70 H	282	40.4	4.2
5	11100.00	59.9 PK	74.0	-14.1	2.61 H	212	44.8	15.1
6	11100.00	48.4 AV	54.0	-5.6	2.61 H	212	33.3	15.1
7	#16650.00	58.9 PK	74.0	-15.1	1.78 H	319	40.9	18.0
8	#16650.00	46.7 AV	54.0	-7.3	1.78 H	319	28.7	18.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	112.3 PK			2.71 V	190	108.4	3.9
2	*5550.00	103.1 AV			2.71 V	190	99.2	3.9
3	#5725.00	57.2 PK	74.0	-16.8	2.71 V	190	53.0	4.2
4	#5725.00	44.2 AV	54.0	-9.8	2.71 V	190	40.0	4.2
5	11100.00	57.6 PK	74.0	-16.4	3.67 V	265	42.5	15.1
6	11100.00	45.0 AV	54.0	-9.0	3.67 V	265	29.9	15.1
7	#16650.00	58.1 PK	74.0	-15.9	2.24 V	232	40.1	18.0
8	#16650.00	45.7 AV	54.0	-8.3	2.24 V	232	27.7	18.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	115.9 PK			1.71 H	270	111.9	4.0
2	*5670.00	105.4 AV			1.71 H	270	101.4	4.0
3	#5725.00	64.2 PK	74.0	-9.8	1.71 H	270	60.0	4.2
4	#5725.00	49.7 AV	54.0	-4.3	1.71 H	270	45.5	4.2
5	11340.00	60.0 PK	74.0	-14.0	2.60 H	206	44.7	15.3
6	11340.00	48.6 AV	54.0	-5.4	2.60 H	206	33.3	15.3
7	#17010.00	59.0 PK	74.0	-15.0	1.82 H	308	39.1	19.9
8	#17010.00	46.4 AV	54.0	-7.6	1.82 H	308	26.5	19.9

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	*5670.00	115.2 PK			2.68 V	193	111.2	4.0
2	*5670.00	104.9 AV			2.68 V	193	100.9	4.0
3	#5725.00	63.8 PK	74.0	-10.2	2.68 V	193	59.6	4.2
4	#5725.00	48.3 AV	54.0	-5.7	2.68 V	193	44.1	4.2
5	11340.00	57.8 PK	74.0	-16.2	3.68 V	271	42.5	15.3
6	11340.00	45.1 AV	54.0	-8.9	3.68 V	271	29.8	15.3
7	#17010.00	58.5 PK	74.0	-15.5	2.21 V	243	38.6	19.9
8	#17010.00	46.2 AV	54.0	-7.8	2.21 V	243	26.3	19.9

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 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	58.0 PK	74.0	-16.0	2.12 H	85	54.3	3.7
2	#5470.00	45.1 AV	54.0	-8.9	2.12 H	85	41.4	3.7
3	*5710.00	110.5 PK			2.12 H	85	106.3	4.2
4	*5710.00	101.0 AV			2.12 H	85	96.8	4.2
5	#5887.00	61.6 PK	74.0	-12.4	2.12 H	85	57.4	4.2
6	#5887.00	48.3 AV	54.0	-5.7	2.12 H	85	44.1	4.2
7	11420.00	62.9 PK	74.0	-11.1	1.63 H	285	47.5	15.4
8	11420.00	48.2 AV	54.0	-5.8	1.63 H	285	32.8	15.4
9	#17130.00	61.5 PK	74.0	-12.5	1.55 H	309	41.5	20.0
10	#17130.00	47.6 AV	54.0	-6.4	1.55 H	309	27.6	20.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.1 PK	74.0	-16.9	1.49 V	65	53.4	3.7
2	#5470.00	44.0 AV	54.0	-10.0	1.49 V	65	40.3	3.7
3	*5710.00	108.4 PK			1.49 V	65	104.2	4.2
4	*5710.00	96.4 AV			1.49 V	65	92.2	4.2
5	#5887.00	59.6 PK	74.0	-14.4	1.49 V	65	55.4	4.2
6	#5887.00	46.0 AV	54.0	-8.0	1.49 V	65	41.8	4.2
7	11420.00	56.6 PK	74.0	-17.4	3.60 V	308	41.2	15.4
8	11420.00	45.5 AV	54.0	-8.5	3.60 V	308	30.1	15.4
9	#17130.00	62.8 PK	74.0	-11.2	2.31 V	288	42.8	20.0
10	#17130.00	47.2 AV	54.0	-6.8	2.31 V	288	27.2	20.0

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 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	#5636.93	59.8 PK	68.2	-8.4	1.80 H	295	55.8	4.0
2	*5755.00	115.1 PK			1.80 H	295	110.9	4.2
3	*5755.00	105.1 AV			1.80 H	295	100.9	4.2
4	#6008.37	58.7 PK	68.2	-9.5	1.80 H	295	54.2	4.5
5	11510.00	66.0 PK	74.0	-8.0	1.62 H	207	50.9	15.1
6	11510.00	52.7 AV	54.0	-1.3	1.62 H	207	37.6	15.1
7	#17265.00	60.1 PK	74.0	-13.9	1.72 H	296	40.2	19.9
8	#17265.00	46.0 AV	54.0	-8.0	1.72 H	296	26.1	19.9
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	#5618.87	58.8 PK	68.2	-9.4	2.94 V	179	54.8	4.0
2	*5755.00	114.6 PK			2.94 V	179	110.4	4.2
3	*5755.00	105.3 AV			2.94 V	179	101.1	4.2
4	#6008.85	58.1 PK	68.2	-10.1	2.94 V	179	53.6	4.5
5	11510.00	57.2 PK	74.0	-16.8	3.51 V	268	42.1	15.1
6	11510.00	45.8 AV	54.0	-8.2	3.51 V	268	30.7	15.1
7	#17265.00	61.6 PK	74.0	-12.4	2.40 V	301	41.7	19.9
8	#17265.00	46.2 AV	54.0	-7.8	2.40 V	301	26.3	19.9

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 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	#5634.07	58.4 PK	68.2	-9.8	1.86 H	295	54.4	4.0
2	*5795.00	115.3 PK			1.86 H	295	111.2	4.1
3	*5795.00	105.1 AV			1.86 H	295	101.0	4.1
4	#6004.10	58.0 PK	68.2	-10.2	1.86 H	295	53.5	4.5
5	11590.00	62.9 PK	74.0	-11.1	1.52 H	315	47.8	15.1
6	11590.00	50.9 AV	54.0	-3.1	1.52 H	315	35.8	15.1
7	#17385.00	61.0 PK	74.0	-13.0	1.50 H	48	40.4	20.6
8	#17385.00	46.6 AV	54.0	-7.4	1.50 H	48	26.0	20.6

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	#5621.25	58.5 PK	68.2	-9.7	2.92 V	179	54.5	4.0
2	*5795.00	114.9 PK			2.92 V	179	110.8	4.1
3	*5795.00	105.3 AV			2.92 V	179	101.2	4.1
4	#5970.85	58.3 PK	68.2	-9.9	2.92 V	179	53.8	4.5
5	11590.00	62.6 PK	74.0	-11.4	2.45 V	223	47.5	15.1
6	11590.00	49.4 AV	54.0	-4.6	2.45 V	223	34.3	15.1
7	#17385.00	61.8 PK	74.0	-12.2	1.55 V	63	41.2	20.6
8	#17385.00	46.4 AV	54.0	-7.6	1.55 V	63	25.8	20.6

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 (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	70.1 PK	74.0	-3.9	2.33 H	71	66.4	3.7
2	#5470.00	53.6 AV	54.0	-0.4	2.33 H	71	49.9	3.7
3	*5530.00	107.2 PK			2.33 H	71	103.3	3.9
4	*5530.00	97.3 AV			2.33 H	71	93.4	3.9
5	#5725.00	54.8 PK	74.0	-19.2	2.33 H	71	50.6	4.2
6	#5725.00	42.3 AV	54.0	-11.7	2.33 H	71	38.1	4.2
7	11060.00	57.1 PK	74.0	-16.9	2.61 H	211	42.0	15.1
8	11060.00	44.2 AV	54.0	-9.8	2.61 H	211	29.1	15.1
9	#16590.00	57.8 PK	74.0	-16.2	1.73 H	304	40.1	17.7
10	#16590.00	44.9 AV	54.0	-9.1	1.73 H	304	27.2	17.7
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	69.4 PK	74.0	-4.6	2.07 V	58	65.7	3.7
2	#5470.00	52.2 AV	54.0	-1.8	2.07 V	58	48.5	3.7
3	*5530.00	107.5 PK			2.07 V	58	103.6	3.9
4	*5530.00	97.1 AV			2.07 V	58	93.2	3.9
5	#5725.00	54.2 PK	74.0	-19.8	2.07 V	58	50.0	4.2
6	#5725.00	41.5 AV	54.0	-12.5	2.07 V	58	37.3	4.2
7	11060.00	53.9 PK	74.0	-20.1	3.69 V	271	38.8	15.1
8	11060.00	41.2 AV	54.0	-12.8	3.69 V	271	26.1	15.1
9	#16590.00	57.1 PK	74.0	-16.9	2.36 V	217	39.4	17.7
10	#16590.00	44.4 AV	54.0	-9.6	2.36 V	217	26.7	17.7

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 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	110.4 PK			2.46 H	64	106.5	3.9
2	*5610.00	100.3 AV			2.46 H	64	96.4	3.9
3	#5725.00	61.5 PK	74.0	-12.5	2.46 H	64	57.3	4.2
4	#5725.00	49.8 AV	54.0	-4.2	2.46 H	64	45.6	4.2
5	11220.00	59.0 PK	74.0	-15.0	2.60 H	192	43.8	15.2
6	11220.00	47.4 AV	54.0	-6.6	2.60 H	192	32.2	15.2
7	#16830.00	58.4 PK	74.0	-15.6	1.88 H	322	39.9	18.5
8	#16830.00	45.9 AV	54.0	-8.1	1.88 H	322	27.4	18.5

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	110.1 PK			2.11 V	67	106.2	3.9
2	*5610.00	100.0 AV			2.11 V	67	96.1	3.9
3	#5725.00	61.1 PK	74.0	-12.9	2.11 V	67	56.9	4.2
4	#5725.00	49.4 AV	54.0	-4.6	2.11 V	67	45.2	4.2
5	11220.00	57.3 PK	74.0	-16.7	3.66 V	278	42.1	15.2
6	11220.00	44.5 AV	54.0	-9.5	3.66 V	278	29.3	15.2
7	#16830.00	57.9 PK	74.0	-16.1	2.22 V	247	39.4	18.5
8	#16830.00	45.5 AV	54.0	-8.5	2.22 V	247	27.0	18.5

REMARKS:

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

CHANNEL	TX Channel 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	57.2 PK	74.0	-16.8	2.12 H	82	53.5	3.7
2	#5470.00	46.0 AV	54.0	-8.0	2.12 H	82	42.3	3.7
3	*5690.00	108.4 PK			2.12 H	82	104.2	4.2
4	*5690.00	99.0 AV			2.12 H	82	94.8	4.2
5	#5850.00	62.0 PK	74.0	-12.0	2.12 H	82	57.8	4.2
6	#5850.00	49.6 AV	54.0	-4.4	2.12 H	82	45.4	4.2
7	11380.00	61.6 PK	74.0	-12.4	1.65 H	290	46.2	15.4
8	11380.00	47.0 AV	54.0	-7.0	1.65 H	290	31.6	15.4
9	#17070.00	63.6 PK	74.0	-10.4	1.55 H	306	43.6	20.0
10	#17070.00	48.1 AV	54.0	-5.9	1.55 H	306	28.1	20.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	56.2 PK	74.0	-17.8	1.47 V	49	52.5	3.7
2	#5470.00	44.8 AV	54.0	-9.2	1.47 V	49	41.1	3.7
3	*5690.00	106.3 PK			1.47 V	49	102.1	4.2
4	*5690.00	94.5 AV			1.47 V	49	90.3	4.2
5	#5850.00	60.3 PK	74.0	-13.7	1.47 V	49	56.1	4.2
6	#5850.00	47.4 AV	54.0	-6.6	1.47 V	49	43.2	4.2
7	11380.00	55.4 PK	74.0	-18.6	3.59 V	304	40.0	15.4
8	11380.00	44.6 AV	54.0	-9.4	3.59 V	304	29.2	15.4
9	#17070.00	63.1 PK	74.0	-10.9	2.34 V	268	43.1	20.0
10	#17070.00	47.6 AV	54.0	-6.4	2.34 V	268	27.6	20.0

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 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	#5625.05	63.9 PK	68.2	-4.3	2.41 H	82	59.9	4.0
2	*5775.00	114.5 PK			2.41 H	82	110.3	4.2
3	*5775.00	102.2 AV			2.41 H	82	98.0	4.2
4	#5930.48	61.0 PK	68.2	-7.2	2.41 H	82	56.6	4.4
5	11550.00	62.5 PK	74.0	-11.5	1.56 H	311	47.3	15.2
6	11550.00	48.7 AV	54.0	-5.3	1.56 H	311	33.5	15.2
7	#17325.00	61.3 PK	74.0	-12.7	1.52 H	47	41.0	20.3
8	#17325.00	46.9 AV	54.0	-7.1	1.52 H	47	26.6	20.3
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	#5624.10	63.9 PK	68.2	-4.3	3.03 V	184	59.9	4.0
2	*5775.00	111.8 PK			3.03 V	184	107.6	4.2
3	*5775.00	100.8 AV			3.03 V	184	96.6	4.2
4	#5935.70	59.3 PK	68.2	-8.9	3.03 V	184	54.9	4.4
5	11550.00	60.4 PK	74.0	-13.6	2.49 V	211	45.2	15.2
6	11550.00	47.0 AV	54.0	-7.0	2.49 V	211	31.8	15.2
7	#17325.00	62.1 PK	74.0	-11.9	2.39 V	309	41.8	20.3
8	#17325.00	46.6 AV	54.0	-7.4	2.39 V	309	26.3	20.3

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.

Below 1GHz Data:

Radio 2

CDD Mode

802.11ac (VHT80)

CHANNEL	TX Channel 58	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	288.00	35.0 QP	46.0	-11.0	1.00 H	66	42.8	-7.8
2	296.00	38.7 QP	46.0	-7.3	1.00 H	65	46.2	-7.5
3	464.00	33.2 QP	46.0	-12.8	2.00 H	122	36.2	-3.0
4	500.01	36.1 QP	46.0	-9.9	1.50 H	22	38.7	-2.6
5	696.00	32.1 QP	46.0	-13.9	1.00 H	33	30.7	1.4
6	874.99	34.2 QP	46.0	-11.8	1.00 H	42	30.3	3.9
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	63.56	36.0 QP	40.0	-4.0	1.50 V	308	45.0	-9.0
2	92.32	30.5 QP	43.5	-13.0	1.50 V	306	44.2	-13.7
3	159.16	30.1 QP	43.5	-13.4	1.00 V	7	37.9	-7.8
4	296.00	36.5 QP	46.0	-9.5	1.50 V	240	44.0	-7.5
5	464.00	31.9 QP	46.0	-14.1	1.00 V	98	34.9	-3.0
6	499.99	34.6 QP	46.0	-11.4	1.00 V	106	37.2	-2.6

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

Radio 3
CDD Mode
802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	91.74	30.8 QP	43.5	-12.7	2.00 H	27	44.5	-13.7
2	157.70	33.9 QP	43.5	-9.6	2.00 H	117	41.8	-7.9
3	288.00	35.3 QP	46.0	-10.7	1.00 H	63	43.1	-7.8
4	296.00	38.6 QP	46.0	-7.4	1.00 H	65	46.1	-7.5
5	464.00	33.3 QP	46.0	-12.7	2.00 H	139	36.3	-3.0
6	499.99	35.7 QP	46.0	-10.3	1.50 H	136	38.3	-2.6
7	875.02	34.8 QP	46.0	-11.2	1.50 H	33	30.9	3.9
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	157.05	33.3 QP	43.5	-10.2	1.00 V	25	41.2	-7.9
2	288.02	32.0 QP	46.0	-14.0	1.50 V	249	39.8	-7.8
3	296.00	36.2 QP	46.0	-9.8	1.50 V	244	43.7	-7.5
4	464.00	31.5 QP	46.0	-14.5	1.00 V	109	34.5	-3.0
5	499.99	34.9 QP	46.0	-11.1	1.00 V	28	37.5	-2.6
6	856.03	33.3 QP	46.0	-12.7	1.00 V	88	29.7	3.6

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	100375	May 09, 2016	May 08, 2017
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-522	Aug. 31, 2016	Aug. 30, 2017
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 13, 2016	June 12, 2017
RF Cable	5D-FB	COACAB-002	Mar. 04, 2016	Mar. 03, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-003	Sep. 13, 2016	Sep. 12, 2017
50 ohms Terminator	N/A	EMC-03	Sep. 29, 2016	Sep. 28, 2017
50 ohms Terminator	N/A	EMC-02	Sep. 29, 2016	Sep. 28, 2017
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
- 3 The VCCI Con C Registration No. is C-3611.
- 4 Tested Date: Oct. 25, 2016

4.2.3 Test Procedure

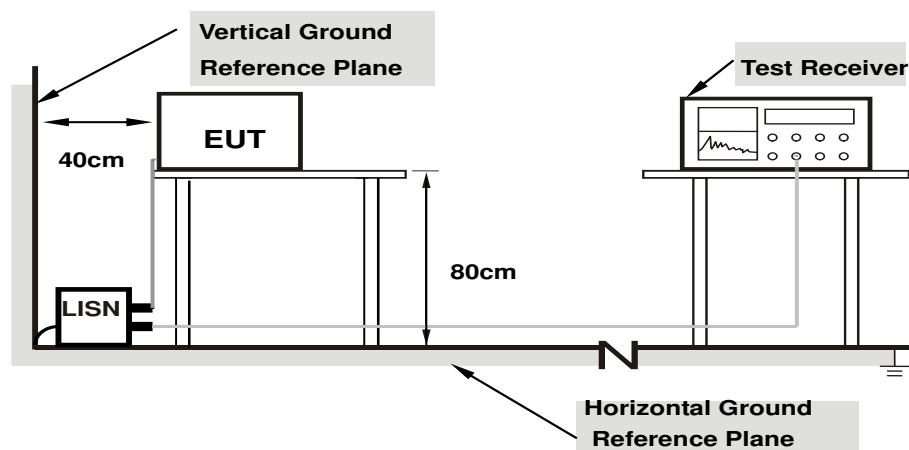
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

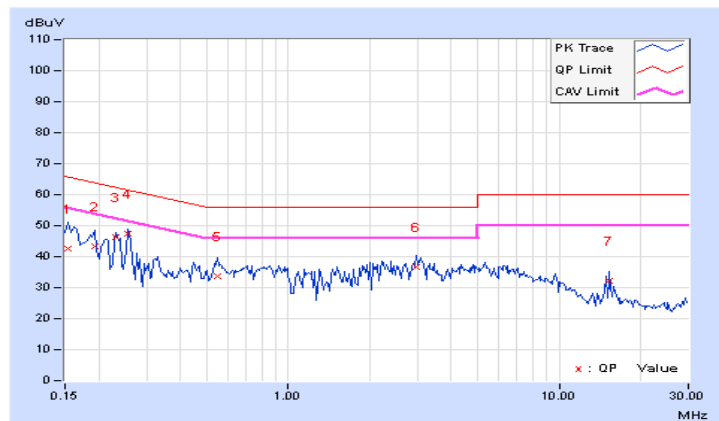
Radio 2 CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.24	32.21	20.26	42.45	30.50	65.79	55.79	-23.34	-25.29
2	0.19297	10.25	33.23	26.86	43.48	37.11	63.91	53.91	-20.43	-16.80
3	0.23203	10.25	36.09	32.84	46.34	43.09	62.38	52.38	-16.04	-9.29
4	0.25547	10.25	37.07	36.30	47.32	46.55	61.58	51.58	-14.26	-5.03
5	0.54844	10.25	23.60	16.70	33.85	26.95	56.00	46.00	-22.15	-19.05
6	2.98047	10.47	26.38	18.88	36.85	29.35	56.00	46.00	-19.15	-16.65
7	15.32422	11.12	20.96	12.48	32.08	23.60	60.00	50.00	-27.92	-26.40

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

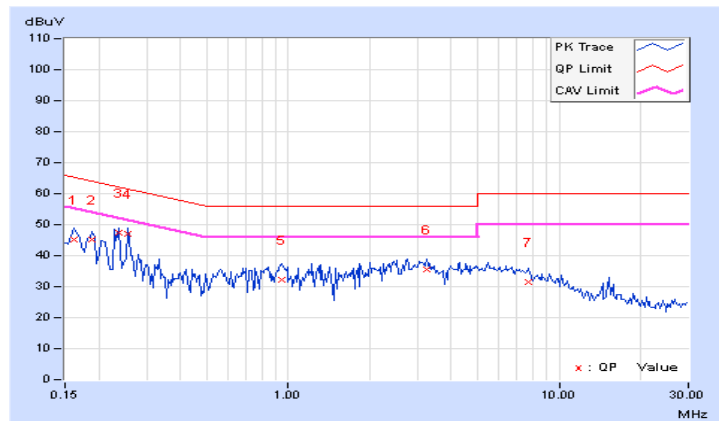


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.27	34.84	25.21	45.11	35.48	65.38	55.38	-20.27	-19.90
2	0.18906	10.23	34.86	31.50	45.09	41.73	64.08	54.08	-18.99	-12.35
3	0.23594	10.23	37.01	33.39	47.24	43.62	62.24	52.24	-15.00	-8.62
4	0.25547	10.24	36.89	35.99	47.13	46.23	61.58	51.58	-14.45	-5.35
5	0.94688	10.42	21.70	16.62	32.12	27.04	56.00	46.00	-23.88	-18.96
6	3.23438	10.52	25.02	18.15	35.54	28.67	56.00	46.00	-20.46	-17.33
7	7.75000	10.77	20.67	15.81	31.44	26.58	60.00	50.00	-28.56	-23.42

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



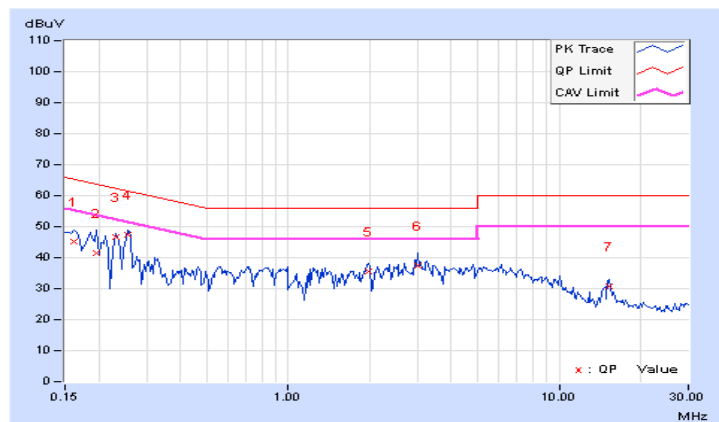
Radio 3 CDD Mode

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.24	34.98	24.90	45.22	35.14	65.38	55.38	-20.16	-20.24
2	0.19687	10.25	31.38	20.41	41.63	30.66	63.74	53.74	-22.11	-23.08
3	0.23203	10.25	36.34	33.30	46.59	43.55	62.38	52.38	-15.79	-8.83
4	0.25547	10.25	37.15	35.44	47.40	45.69	61.58	51.58	-14.18	-5.89
5	1.97656	10.44	25.13	18.26	35.57	28.70	56.00	46.00	-20.43	-17.30
6	3.01172	10.48	26.77	19.16	37.25	29.64	56.00	46.00	-18.75	-16.36
7	15.38281	11.12	19.61	12.29	30.73	23.41	60.00	50.00	-29.27	-26.59

Remarks:

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

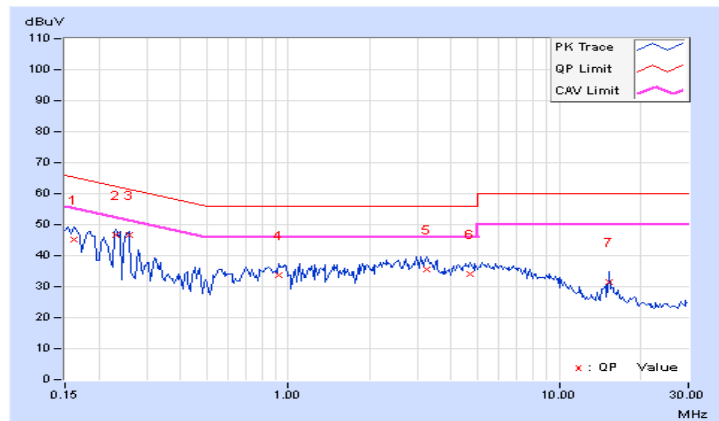


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.27	35.00	24.70	45.27	34.97	65.38	55.38	-20.11	-20.41
2	0.23203	10.23	36.38	33.63	46.61	43.86	62.38	52.38	-15.77	-8.52
3	0.25938	10.24	36.44	34.48	46.68	44.72	61.45	51.45	-14.77	-6.73
4	0.92734	10.41	23.40	17.40	33.81	27.81	56.00	46.00	-22.19	-18.19
5	3.25781	10.53	24.87	18.02	35.40	28.55	56.00	46.00	-20.60	-17.45
6	4.70313	10.63	23.29	17.53	33.92	28.16	56.00	46.00	-22.08	-17.84
7	15.32031	11.15	20.29	13.09	31.44	24.24	60.00	50.00	-28.56	-25.76

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)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Note: This device can support different category application which switched to master mode or client mode by software.

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} ;

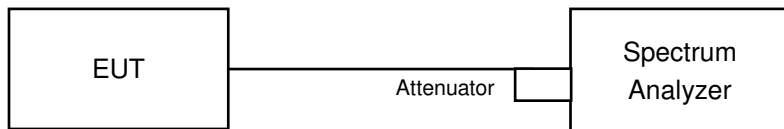
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

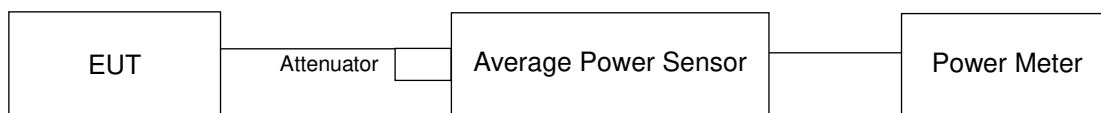
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

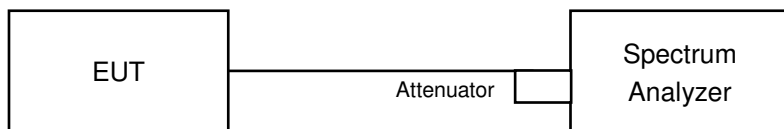
For channel straddling 5725MHz:



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

For Client function
For UNII-1 & UNII-2A

Radio 2
CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	17.33	17.81	17.38	17.39	224	23.50	24.00	Pass
40	5200	17.68	17.72	16.92	18.09	231.391	23.64	24.00	Pass
48	5240	16.96	17.49	16.71	18.31	220.409	23.43	24.00	Pass
52	5260	17.41	17.53	17.60	17.50	225.483	23.53	24.00	Pass
60	5300	17.12	17.55	17.63	17.78	226.33	23.55	24.00	Pass
64	5320	17.53	17.55	17.64	17.52	228.079	23.58	24.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	23.00	23.41	23.13	23.39
60	5300	23.09	23.46	23.09	23.30
64	5320	23.06	23.51	22.56	23.25

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	23.00	24.61 > 24
60	5300	23.09	24.63 > 24
64	5320	22.56	24.53 > 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	17.30	17.68	17.33	17.45	221.982	23.46	24.00	Pass
40	5200	17.63	17.75	16.73	17.95	226.98	23.56	24.00	Pass
48	5240	16.92	17.54	16.62	18.34	220.112	23.43	24.00	Pass
52	5260	17.25	17.31	17.22	17.50	215.872	23.34	24.00	Pass
60	5300	17.85	17.27	17.00	16.73	211.504	23.25	24.00	Pass
64	5320	17.26	16.93	17.27	16.83	204.056	23.10	24.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	24.74	24.69	23.92	24.80
60	5300	24.68	24.94	24.13	24.09
64	5320	23.10	24.86	23.91	24.31

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	23.92	24.78 > 24
60	5300	24.09	24.81 > 24
64	5320	23.10	24.63 > 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.32	17.70	17.11	17.61	221.916	23.46	24.00	Pass
46	5230	17.18	17.54	16.68	18.17	221.168	23.45	24.00	Pass
54	5270	17.19	17.44	17.35	17.42	217.356	23.37	24.00	Pass
62	5310	17.65	16.87	17.22	16.73	206.672	23.15	24.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.31	44.09	43.69	43.17
62	5310	43.84	44.29	43.62	43.51

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	43.17	27.35 > 24
62	5310	43.51	27.38 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.58	18.26	17.46	18.24	246.668	23.92	24.00	Pass
58	5290	17.52	18.21	17.48	18.51	249.65	23.97	24.00	Pass

26dB OCCUPIED BANDWIDTH

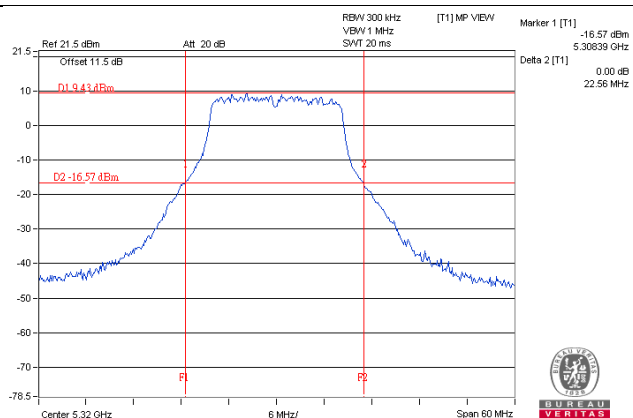
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.54	81.67	83.04	82.29

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

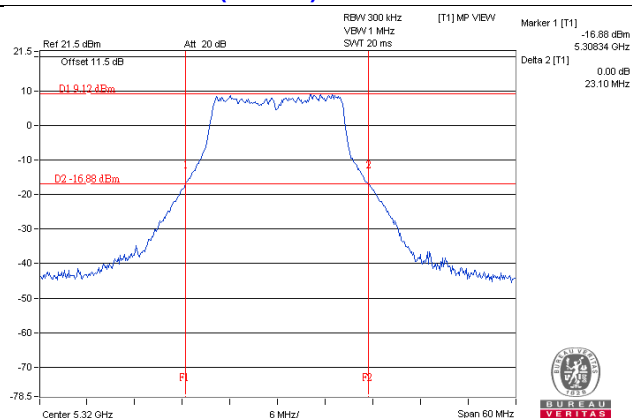
Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	81.67	30.12 > 24

Spectrum Plot of Worst Value

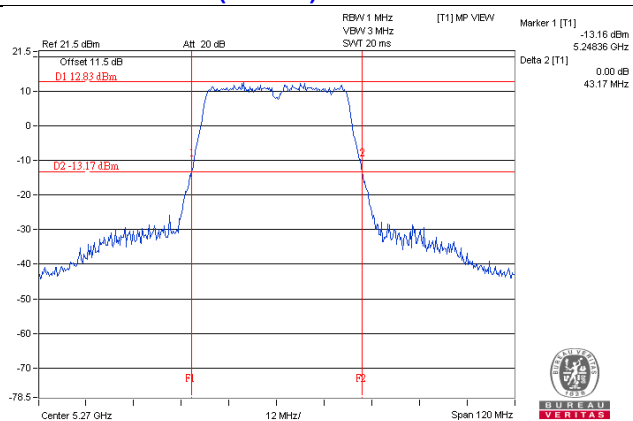
802.11a / Chain 2 – CH64



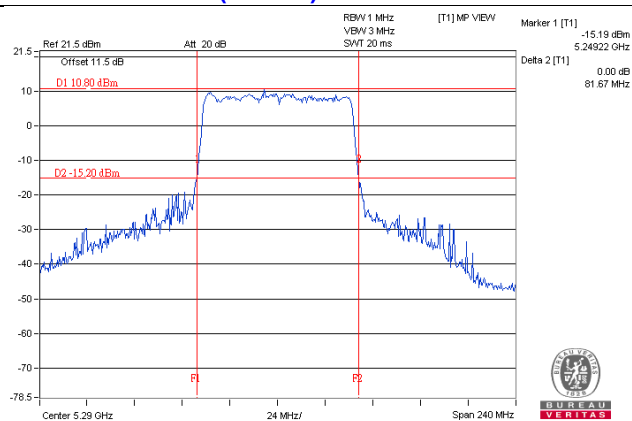
802.11ac (VHT20) / Chain 0 – CH64



802.11ac (VHT40) / Chain 3 – CH54



802.11ac (VHT80) / Chain 1 – CH58



Radio 2
SDM Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	17.30	17.68	17.33	17.45	221.982	23.46	24.00	Pass
40	5200	17.63	17.75	16.73	17.95	226.98	23.56	24.00	Pass
48	5240	16.92	17.54	16.62	18.34	220.112	23.43	24.00	Pass
52	5260	17.25	17.31	17.22	17.50	215.872	23.34	24.00	Pass
60	5300	17.85	17.27	17.00	16.73	211.504	23.25	24.00	Pass
64	5320	17.26	16.93	17.27	16.83	204.056	23.10	24.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	24.74	24.69	23.92	24.80
60	5300	24.68	24.94	24.13	24.09
64	5320	23.10	24.86	23.91	24.31

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	23.92	24.78 > 24
60	5300	24.09	24.81 > 24
64	5320	23.10	24.63 > 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.32	17.70	17.11	17.61	221.916	23.46	24.00	Pass
46	5230	17.18	17.54	16.68	18.17	221.168	23.45	24.00	Pass
54	5270	17.19	17.44	17.35	17.42	217.356	23.37	24.00	Pass
62	5310	17.65	16.87	17.22	16.73	206.672	23.15	24.00	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.31	44.09	43.69	43.17
62	5310	43.84	44.29	43.62	43.51

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	43.17	27.35 > 24
62	5310	43.51	27.38 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.58	18.26	17.46	18.24	246.668	23.92	24.00	Pass
58	5290	17.52	18.21	17.48	18.51	249.65	23.97	24.00	Pass

26dB OCCUPIED BANDWIDTH

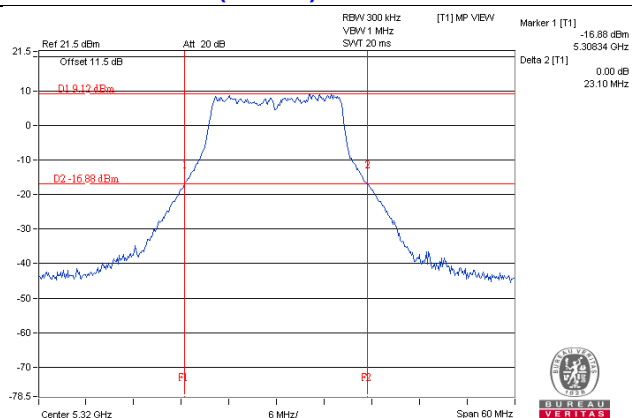
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.54	81.67	83.04	82.29

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

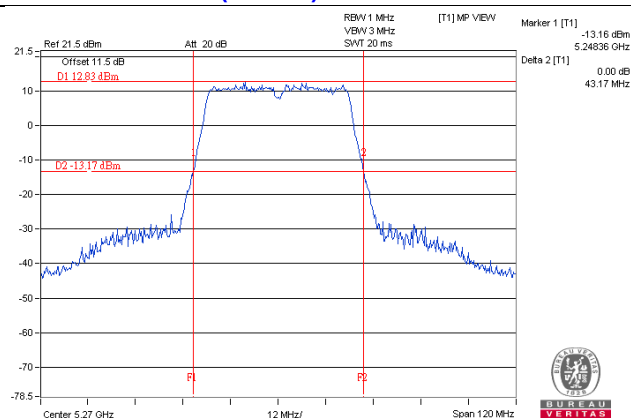
Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	81.67	30.12 > 24

Spectrum Plot of Worst Value

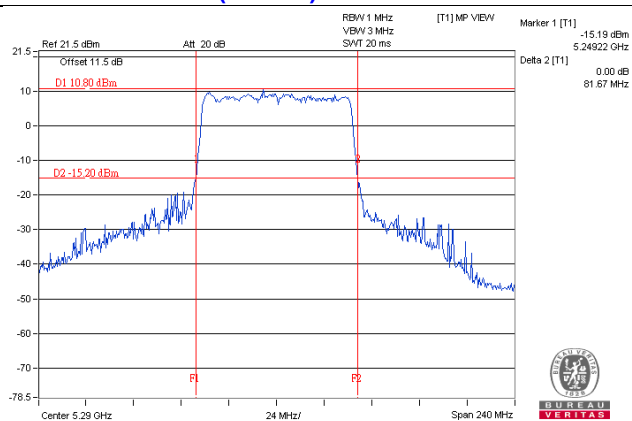
802.11ac (VHT20) / Chain 0 – CH64



802.11ac (VHT40) / Chain 3 – CH54



802.11ac (VHT80) / Chain 1 – CH58



Radio 2
BF Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	17.30	17.68	17.33	17.45	221.982	23.46	24.00	Pass
40	5200	17.63	17.75	16.73	17.95	226.98	23.56	24.00	Pass
48	5240	16.92	17.54	16.62	18.34	220.112	23.43	24.00	Pass
52	5260	17.25	17.31	17.22	17.50	215.872	23.34	24.00	Pass
60	5300	17.85	17.27	17.00	16.73	211.504	23.25	24.00	Pass
64	5320	17.26	16.93	17.27	16.83	204.056	23.10	24.00	Pass

Note: 1. For U-NII-1 band: Directional gain =3.97dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A band: Directional gain =4.29dBi < 6dBi, so the power limit shall not be reduced.

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	24.74	24.69	23.92	24.80
60	5300	24.68	24.94	24.13	24.09
64	5320	23.10	24.86	23.91	24.31

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	23.92	24.78 > 24
60	5300	24.09	24.81 > 24
64	5320	23.10	24.63 > 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.32	17.70	17.11	17.61	221.916	23.46	24.00	Pass
46	5230	17.18	17.54	16.68	18.17	221.168	23.45	24.00	Pass
54	5270	17.19	17.44	17.35	17.42	217.356	23.37	24.00	Pass
62	5310	17.65	16.87	17.22	16.73	206.672	23.15	24.00	Pass

- Note:** 1. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power limit shall not be reduced.
 2. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power limit shall not be reduced.

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.31	44.09	43.69	43.17
62	5310	43.84	44.29	43.62	43.51

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

Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	43.17	27.35 > 24
62	5310	43.51	27.38 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.58	18.26	17.46	18.24	246.668	23.92	24.00	Pass
58	5290	17.52	18.21	17.48	18.51	249.65	23.97	24.00	Pass

- Note:** 1. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power limit shall not be reduced.
 2. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power limit shall not be reduced.

26dB OCCUPIED BANDWIDTH

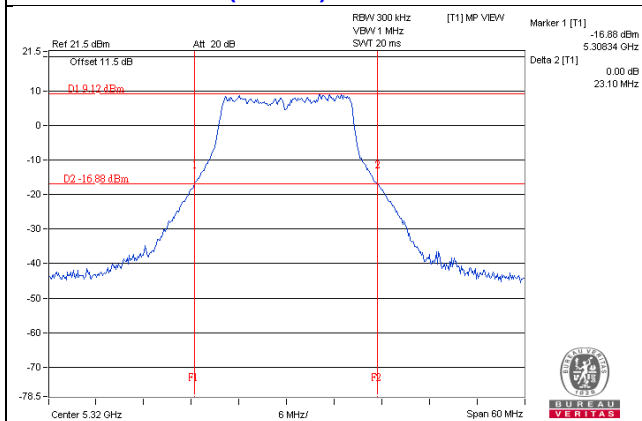
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.54	81.67	83.04	82.29

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

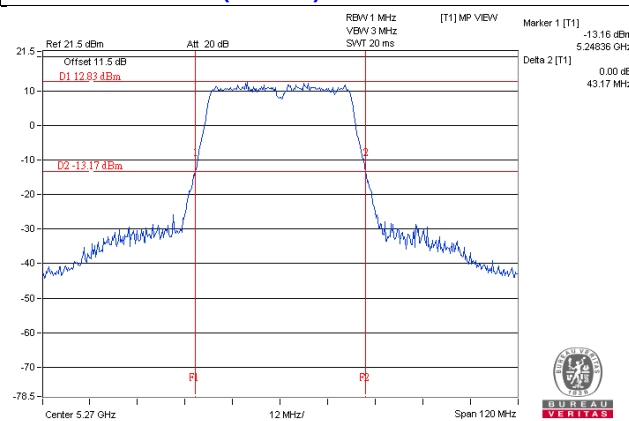
Power Limit = 11dBm + 10logB < U-NII-2A >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	81.67	30.12 > 24

Spectrum Plot of Worst Value

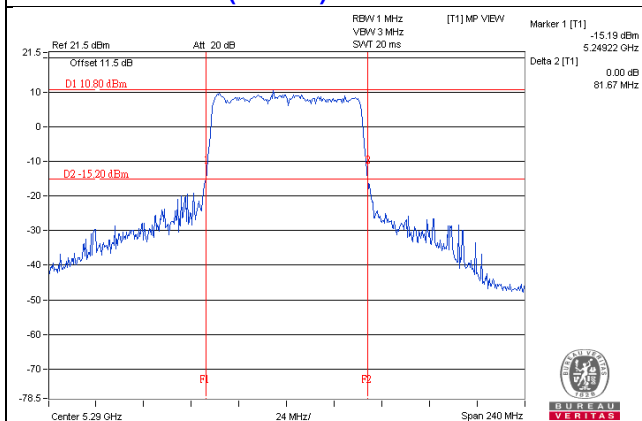
802.11ac (VHT20) / Chain 0 – CH64



802.11ac (VHT40) / Chain 3 – CH54



802.11ac (VHT80) / Chain 1 – CH58



For UNII-2C & UNII-3:
Radio 3
CDD Mode
802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	17.83	17.03	17.65	17.96	231.867	23.65	24.00	Pass
116	5580	17.75	17.51	17.34	17.52	226.624	23.55	24.00	Pass
140	5700	18.05	16.97	17.12	17.62	222.933	23.48	24.00	Pass
*144 (UNII-2C Band)	5720	14.13	12.84	13.88	13.66	92.774	19.67	23.16	Pass
*144 (UNII-3 Band)	5720	8.51	7.12	8.11	7.64	24.527	13.90	30.00	Pass
149	5745	23.31	23.08	23.12	23.45	843.95	29.26	30.00	Pass
157	5785	23.74	23.22	23.58	23.49	897.877	29.53	30.00	Pass
165	5825	23.36	23.07	23.11	23.09	827.886	29.18	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	117.301	20.69

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	23.18	23.71	23.02	23.03
116	5580	23.35	23.49	23.05	22.77
140	5700	23.19	23.68	23.60	22.83
144 (UNII-2C Band)	5720	16.55	16.79	16.94	16.47

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

Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
100	5500	23.02	24.62 > 24
116	5580	22.77	24.57 > 24
140	5700	22.83	24.58 > 24
144 (UNII-2CBand)	5720	16.47	23.16 > 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	17.64	17.26	17.21	17.99	226.84	23.56	24.00	Pass
116	5580	17.54	17.41	17.24	17.96	227.318	23.57	24.00	Pass
140	5700	17.92	16.76	17.15	17.23	214.093	23.31	24.00	Pass
*144 (UNII-2C Band)	5720	13.90	12.91	13.87	13.95	93.299	19.70	23.31	Pass
*144 (UNII-3 Band)	5720	8.96	7.75	8.54	8.35	27.811	14.44	30.00	Pass
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	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	121.11	20.83

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	25.33	25.07	24.25	24.50
116	5580	25.12	24.98	24.60	24.28
140	5700	25.37	24.89	24.57	24.37
144 (UNII-2C Band)	5720	17.59	17.74	17.22	17.03

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

Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
100	5500	24.25	24.84 > 24
116	5580	24.28	24.85 > 24
140	5700	24.37	24.86 > 24
144 (UNII-2C Band)	5720	17.03	23.31 < 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.81	17.12	17.44	18.01	230.622	23.63	24.00	Pass
110	5500	17.59	17.36	17.26	18.02	228.46	23.59	24.00	Pass
134	5670	16.93	16.92	17.02	17.63	206.814	23.16	24.00	Pass
*142 (UNII-2C Band)	5710	14.90	13.64	14.25	14.55	109.141	20.38	24.00	Pass
*142 (UNII-3 Band)	5710	4.68	3.95	4.56	4.38	11.021	10.42	30.00	Pass
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	120.162	20.8

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	44.24	44.07	44.08	43.87
118	5590	44.41	44.19	44.24	43.80
134	5670	44.65	43.95	44.19	44.27
142 (UNII-2C Band)	5710	37.16	37.24	36.78	36.70

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

Power Limit = 11dBm + 10logB <U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
102	5510	43.87	27.42 > 24
118	5590	43.80	27.41 > 24
134	5670	43.95	27.42 > 24
142 (UNII-2C Band)	5710	36.70	26.64 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	17.52	17.12	17.21	17.59	218.031	23.39	24.00	Pass
122	5610	17.36	17.19	17.04	17.66	215.737	23.34	24.00	Pass
*138 (UNII-2C Band)	5690	14.99	14.94	14.83	15.05	125.137	20.97	24.00	Pass
*138 (UNII-3 Band)	5690	0.44	1.77	1.56	1.30	5.391	7.32	30.00	Pass
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	130.528	21.16

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

26dB OCCUPIED BANDWIDTH

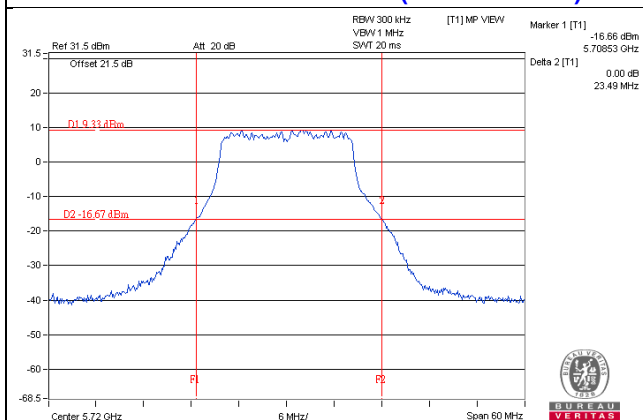
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.13	82.50	83.52	83.05
122	5610	83.85	83.27	83.01	82.65
138 (UNII-2C Band)	5690	76.52	76.00	76.19	76.63

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

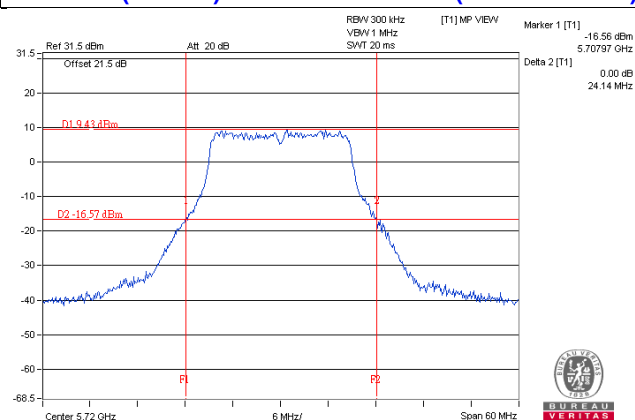
Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
106	5530	82.50	30.16 > 24
122	5610	82.65	30.17 > 24
138 (UNII-2C Band)	5690	76.00	29.8 > 24

Spectrum Plot of Worst Value

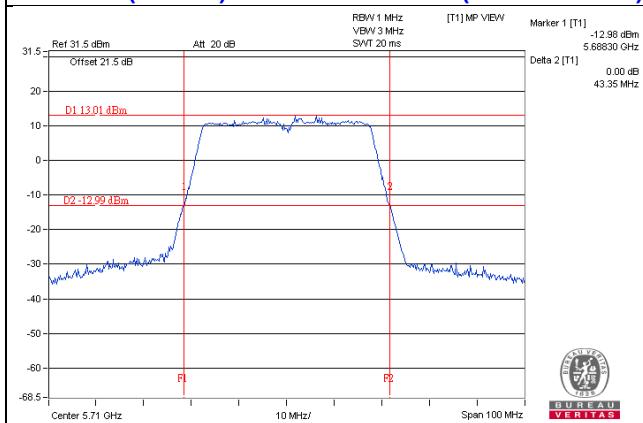
802.11a / Chain 3 - CH144 (UNII-2c Band)



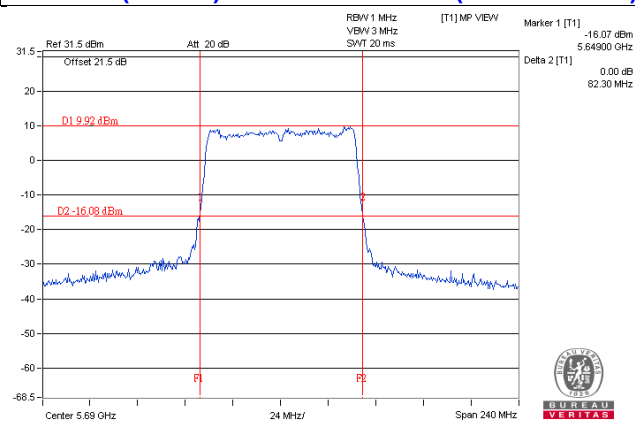
802.11ac (VHT20) / Chain 3 - CH144 (UNII-2c Band)



802.11ac (VHT40) / Chain 3 - CH142 (UNII-2c Band)



802.11ac (VHT80) / Chain 1 - 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

Radio 3 SDM Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	17.64	17.26	17.21	17.99	226.84	23.56	24.00	Pass
116	5580	17.54	17.41	17.24	17.96	227.318	23.57	24.00	Pass
140	5700	17.92	16.76	17.15	17.23	214.093	23.31	24.00	Pass
*144 (UNII-2C Band)	5720	13.90	12.91	13.87	13.95	93.299	19.70	23.31	Pass
*144 (UNII-3 Band)	5720	8.96	7.75	8.54	8.35	27.811	14.44	30.00	Pass
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	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	121.11	20.83

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	25.33	25.07	24.25	24.50
116	5580	25.12	24.98	24.60	24.28
140	5700	25.37	24.89	24.57	24.37
144 (UNII-2CBand)	5720	17.59	17.74	17.22	17.03

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

Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
100	5500	24.25	24.84 > 24
116	5580	24.28	24.85 > 24
140	5700	24.37	24.86 > 24
144 (UNII-2C Band)	5720	17.03	23.31 < 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.81	17.12	17.44	18.01	230.622	23.63	24.00	Pass
110	5500	17.59	17.36	17.26	18.02	228.46	23.59	24.00	Pass
134	5670	16.93	16.92	17.02	17.63	206.814	23.16	24.00	Pass
*142 (UNII-2C Band)	5710	14.90	13.64	14.25	14.55	109.141	20.38	24.00	Pass
*142 (UNII-3 Band)	5710	4.68	3.95	4.56	4.38	11.021	10.42	30.00	Pass
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	120.162	20.8

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	44.24	44.07	44.08	43.87
118	5590	44.41	44.19	44.24	43.80
134	5670	44.65	43.95	44.19	44.27
142 (UNII-2C Band)	5710	37.16	37.24	36.78	36.70

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

Power Limit = 11dBm + 10logB <U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
102	5510	43.87	27.42 > 24
118	5590	43.80	27.41 > 24
134	5670	43.95	27.42 > 24
142 (UNII-2C Band)	5710	36.70	26.64 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	17.52	17.12	17.21	17.59	218.031	23.39	24.00	Pass
122	5610	17.36	17.19	17.04	17.66	215.737	23.34	24.00	Pass
*138 (UNII-2C Band)	5690	14.99	14.94	14.83	15.05	125.137	20.97	24.00	Pass
*138 (UNII-3 Band)	5690	0.44	1.77	1.56	1.30	5.391	7.32	30.00	Pass
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	130.528	21.16

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

26dB OCCUPIED BANDWIDTH

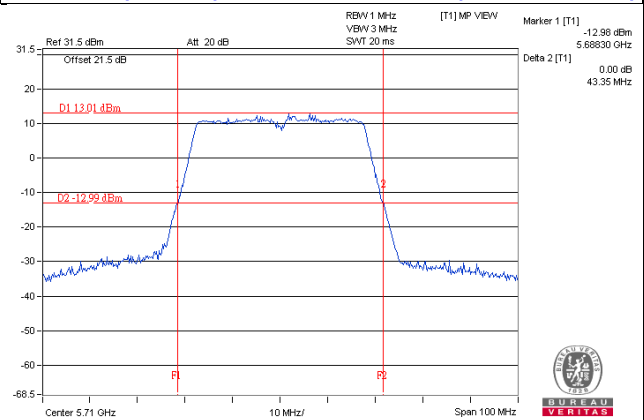
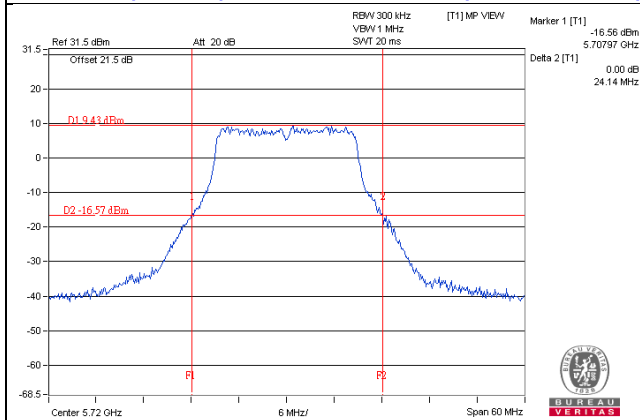
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.13	82.50	83.52	83.05
122	5610	83.85	83.27	83.01	82.65
138 (UNII-2C Band)	5690	76.52	76.00	76.19	76.63

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

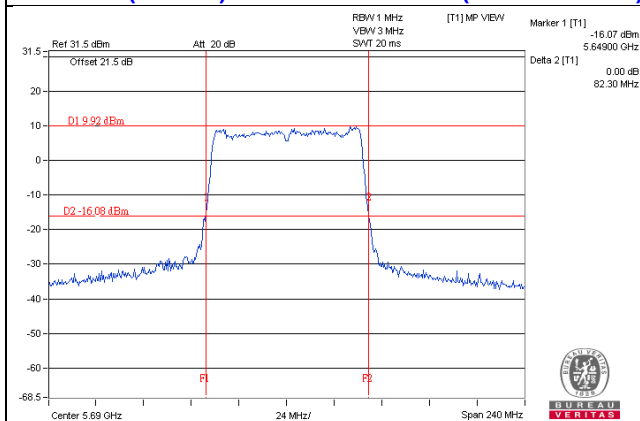
Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
106	5530	82.50	30.16 > 24
122	5610	82.65	30.17 > 24
138 (UNII-2C Band)	5690	76.00	29.8 > 24

Spectrum Plot of Worst Value

802.11ac (VHT20) / Chain 3 - CH144 (UNII-2c Band) **802.11ac (VHT40) / Chain 3 - CH142 (UNII-2c Band)**



802.11ac (VHT80) / Chain 1 - 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

Radio 3
BF Mode
802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
100	5500	17.64	17.26	17.21	17.99	226.84	23.56	24.00	Pass
116	5580	17.54	17.41	17.24	17.96	227.318	23.57	24.00	Pass
140	5700	17.92	16.76	17.15	17.23	214.093	23.31	24.00	Pass
*144 (UNII-2C Band)	5720	13.90	12.91	13.87	13.95	93.299	19.70	23.31	Pass
*144 (UNII-3 Band)	5720	8.96	7.75	8.54	8.35	27.811	14.44	30.00	Pass
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	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.

2. For U-NII-2C band: Directional gain =5.21dBi < 6dBi i, so the power limit shall not be reduced limit.

3. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	121.11	20.83

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	25.33	25.07	24.25	24.50
116	5580	25.12	24.98	24.60	24.28
140	5700	25.37	24.89	24.57	24.37
144 (UNII-2c Band)	5720	17.59	17.74	17.22	17.03

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

Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
100	5500	24.25	24.84 > 24
116	5580	24.28	24.85 > 24
140	5700	24.37	24.86 > 24
144 (UNII-2C Band)	5720	17.03	23.31 < 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
102	5510	17.81	17.12	17.44	18.01	230.622	23.63	24.00	Pass
118	5590	17.59	17.36	17.26	18.02	228.46	23.59	24.00	Pass
134	5670	16.93	16.92	17.02	17.63	206.814	23.16	24.00	Pass
*142 (UNII-2C Band)	5710	14.90	13.64	14.25	14.55	109.141	20.38	24.00	Pass
*142 (UNII-3 Band)	5710	4.68	3.95	4.56	4.38	11.021	10.42	30.00	Pass
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	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.

2. For U-NII-2C band: Directional gain =5.21dBi < 6dBi i, so the power limit shall not be reduced limit.

3. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	120.162	20.8

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

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	44.24	44.07	44.08	43.87
118	5590	44.41	44.19	44.24	43.80
134	5670	44.65	43.95	44.19	44.27
142 (UNII-2C Band)	5710	37.16	37.24	36.78	36.70

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

Power Limit = 11dBm + 10logB <U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
102	5510	43.87	27.42 > 24
118	5590	43.80	27.41 > 24
134	5670	43.95	27.42 > 24
142 (UNII-2C Band)	5710	36.70	26.64 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	17.52	17.12	17.21	17.59	218.031	23.39	24.00	Pass
122	5610	17.36	17.19	17.04	17.66	215.737	23.34	24.00	Pass
*138 (UNII-2C Band)	5690	14.99	14.94	14.83	15.05	125.137	20.97	24.00	Pass
*138 (UNII-3 Band)	5690	0.44	1.77	1.56	1.30	5.391	7.32	30.00	Pass
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	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.

2. For U-NII-2C band: Directional gain =5.21dBi < 6dBi i, so the power limit shall not be reduced limit.

3. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	130.528	21.16

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

26dB OCCUPIED BANDWIDTH

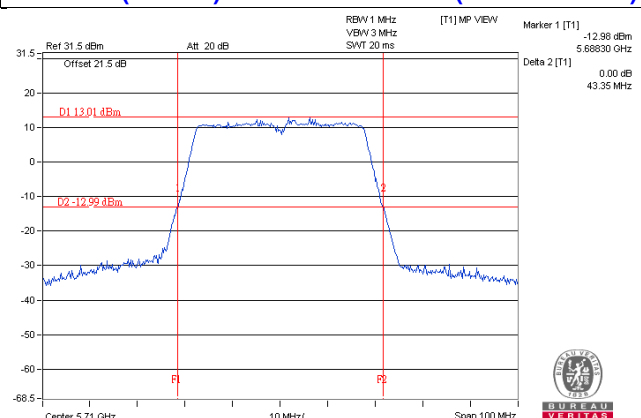
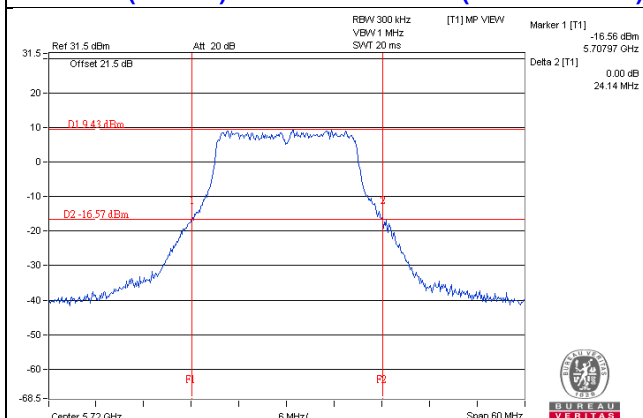
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.13	82.50	83.52	83.05
122	5610	83.85	83.27	83.01	82.65
138 (UNII-2C Band)	5690	76.52	76.00	76.19	76.63

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

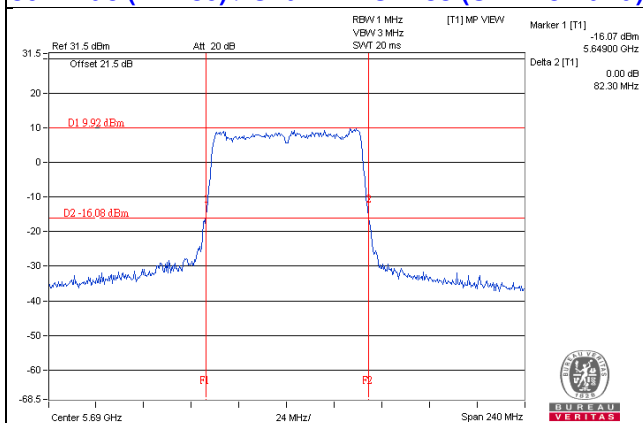
Power Limit = 11dBm + 10logB < U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
106	5530	82.50	30.16 > 24
122	5610	82.65	30.17 > 24
138 (UNII-2C Band)	5690	76.00	29.8 > 24

Spectrum Plot of Worst Value

802.11ac (VHT20) / Chain 3 - CH144 (UNII-2c Band) 802.11ac (VHT40) / Chain 3 - CH142 (UNII-2c Band)



802.11ac (VHT80) / Chain 1 - 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

For Master function
For UNII-1

Radio 2
CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	22.29	22.74	21.93	22.33	684.323	28.35	30.00	Pass
40	5200	22.35	22.73	21.94	22.42	690.187	28.39	30.00	Pass
48	5240	22.54	22.77	21.91	22.36	696.133	28.43	30.00	Pass

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.66	21.53	21.33	21.68	571.85	27.57	30.00	Pass
40	5200	22.20	22.31	21.81	22.43	662.865	28.21	30.00	Pass
48	5240	22.57	23.08	22.01	23.51	767.196	28.85	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.87	18.50	17.89	17.92	255.492	24.07	30.00	Pass
46	5230	22.57	22.37	22.01	23.21	721.567	28.58	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.91	18.28	17.63	18.35	255.434	24.07	30.00	Pass

Radio 2
SDM Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.66	21.53	21.33	21.68	571.85	27.57	30.00	Pass
40	5200	22.20	22.31	21.81	22.43	662.865	28.21	30.00	Pass
48	5240	22.57	23.08	22.01	23.51	767.196	28.85	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.87	18.50	17.89	17.92	255.492	24.07	30.00	Pass
46	5230	22.57	22.37	22.01	23.21	721.567	28.58	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.91	18.28	17.63	18.35	255.434	24.07	30.00	Pass

Radio 2
BF Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.66	21.53	21.33	21.68	571.85	27.57	30.00	Pass
40	5200	22.20	22.31	21.81	22.43	662.865	28.21	30.00	Pass
48	5240	22.57	23.08	22.01	23.51	767.196	28.85	30.00	Pass

Note: 1. For U-NII-1 band: Directional gain =3.97dBi < 6dBi, so the power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	17.87	18.50	17.89	17.92	255.492	24.07	30.00	Pass
46	5230	22.57	22.37	22.01	23.21	721.567	28.58	30.00	Pass

Note: 1. For U-NII-1 band: Directional gain =3.97dBi < 6dBi, so the power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.91	18.28	17.63	18.35	255.434	24.07	30.00	Pass

Note: 1. For U-NII-1 band: Directional gain =3.97dBi < 6dBi, so the power limit shall not be reduced.

For UNII-3:

Radio 3 CDD Mode 802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	23.31	23.08	23.12	23.45	843.95	29.26	30.00	Pass
157	5785	23.74	23.22	23.58	23.49	897.877	29.53	30.00	Pass
165	5825	23.36	23.07	23.11	23.09	827.886	29.18	30.00	Pass

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	30.00	Pass

Radio 3
SDM Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	30.00	Pass

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	30.00	Pass

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	30.00	Pass

Radio 3
BF Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	22.30	22.21	22.03	22.34	667.149	28.24	30.00	Pass
157	5785	23.34	23.01	22.93	23.17	819.587	29.14	30.00	Pass
165	5825	23.08	22.89	22.74	22.81	776.689	28.90	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	23.20	22.79	22.83	23.11	795.549	29.01	30.00	Pass
159	5795	23.10	22.81	22.78	23.07	787.598	28.96	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

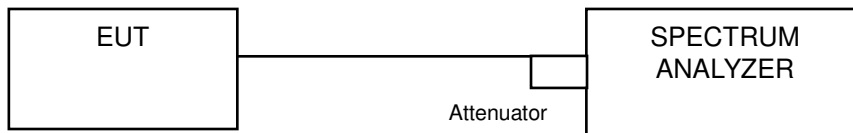
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	23.15	22.72	22.68	23.03	779.868	28.92	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain =4.88dBi < 6dBi, so the power limit shall not be reduced limit.

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

Radio 2

CDD Mode

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.04	17.16	17.04	17.28
40	5200	17.04	17.16	16.92	17.28
48	5240	17.04	17.28	17.04	17.04
52	5260	16.92	16.92	16.92	16.92
60	5300	16.92	16.92	16.92	16.92
64	5320	16.92	17.16	16.80	16.92

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	18.24	18.12	18.00	18.24
40	5200	18.24	18.24	18.12	18.24
48	5240	18.12	18.48	18.12	18.36
52	5260	18.00	18.12	18.00	18.12
60	5300	18.12	18.12	18.00	18.00
64	5320	16.92	18.12	18.00	18.12

802.11ac (VHT40)

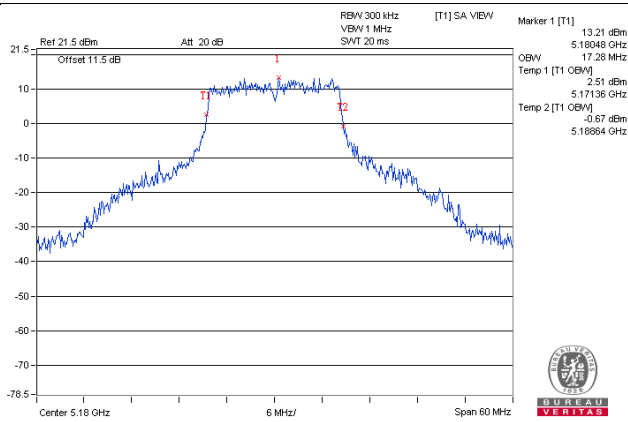
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.72	36.72	36.96	36.72
46	5230	37.20	37.20	37.20	36.96
54	5270	36.96	36.72	36.72	36.72
62	5310	36.72	36.72	36.72	36.96

802.11ac (VHT80)

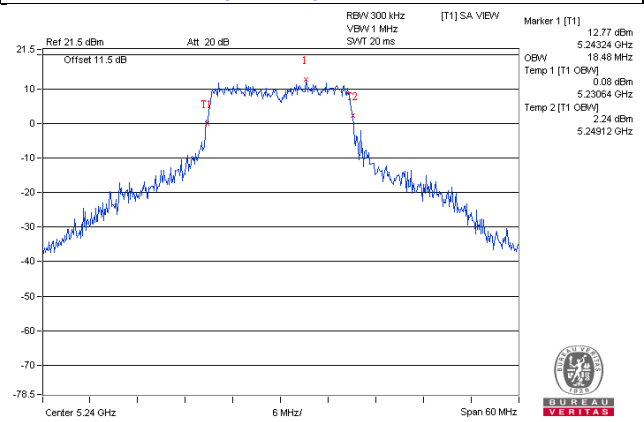
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.36	75.84	75.36	75.36
58	5290	75.36	75.36	75.36	75.36

Spectrum Plot of Worst Value

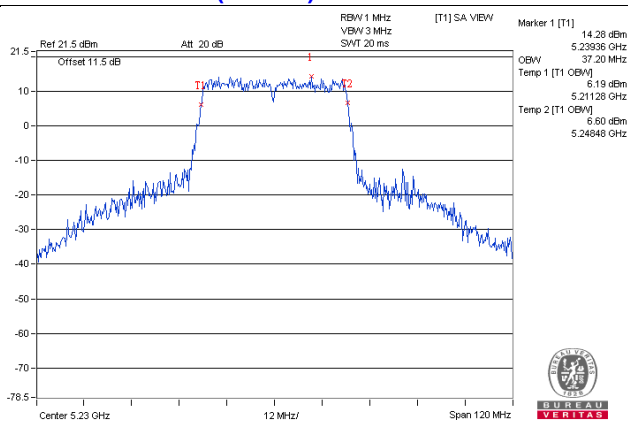
802.11a / Chain 3 – CH36



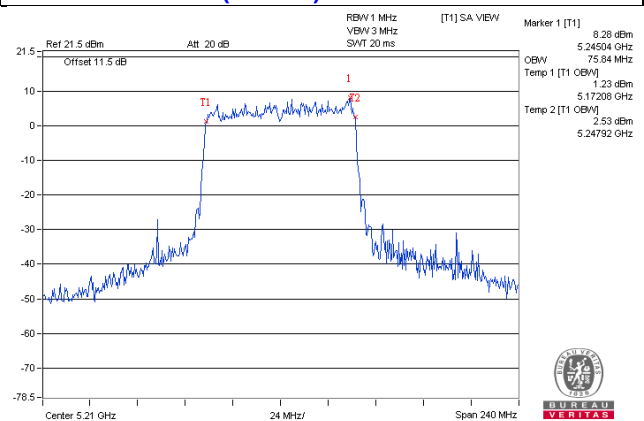
802.11ac (VHT20) / Chain 1 – CH48



802.11ac (VHT40) / Chain 0 – CH46

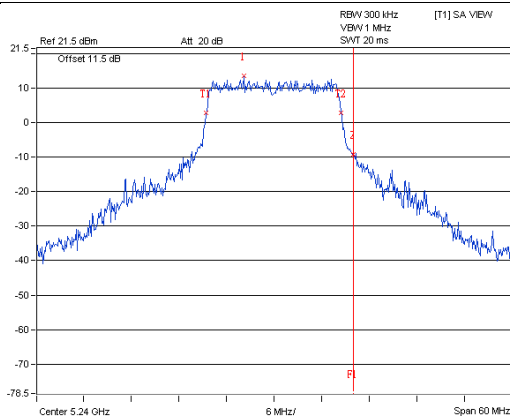


802.11ac (VHT80) / Chain 1 – CH42

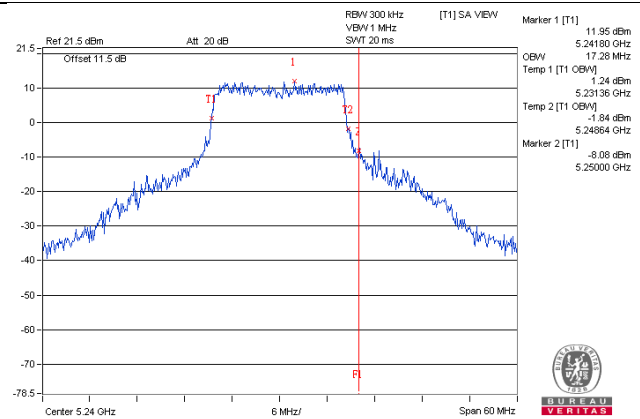


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)

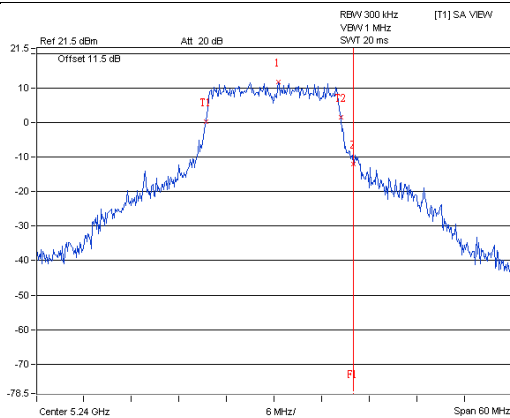
802.11a / Chain 0 – CH48



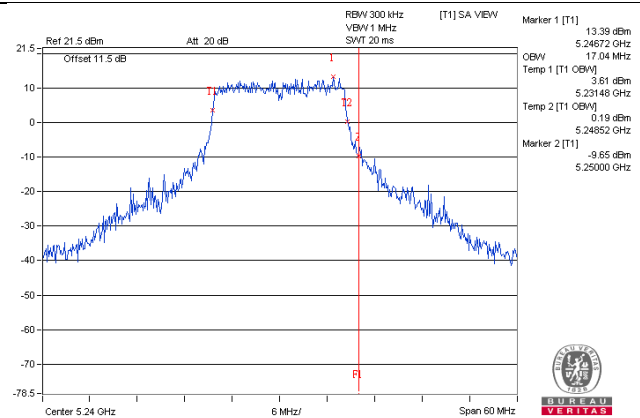
802.11a / Chain 1 – CH48



802.11a / Chain 2 – CH48

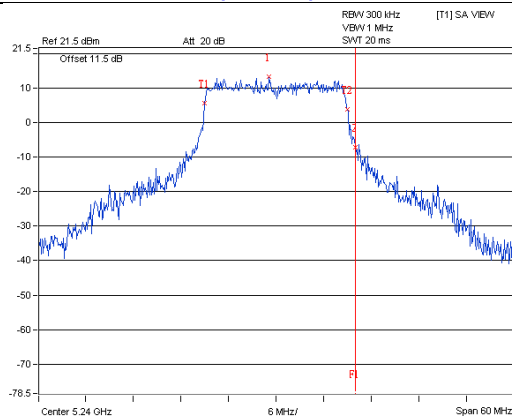


802.11a / Chain 3 – CH48

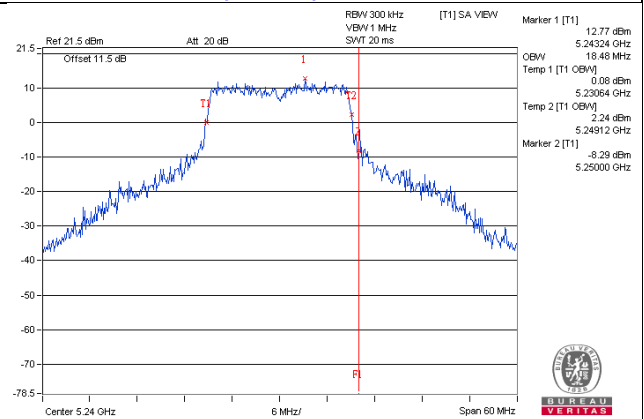


**Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)**

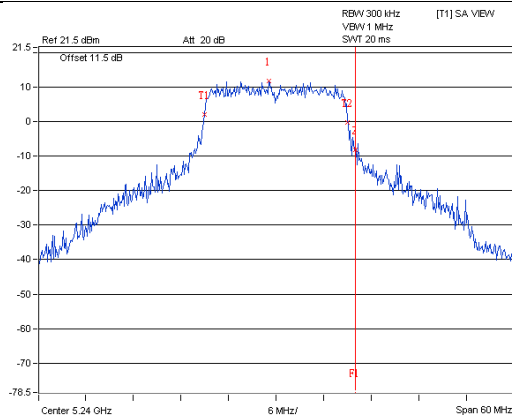
802.11ac (VHT20) / Chain 0 – CH48



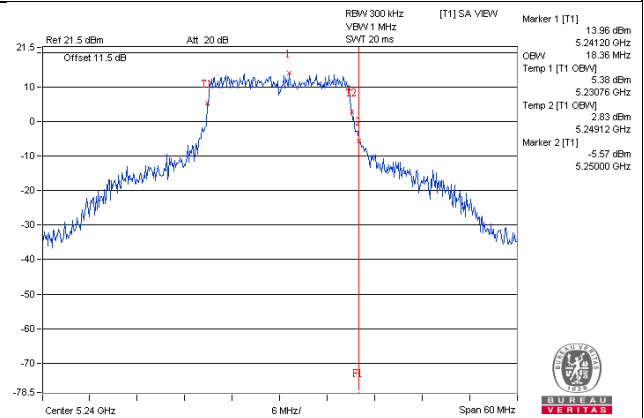
802.11ac (VHT20) / Chain 1 – CH48



802.11ac (VHT20) / Chain 2 – CH48

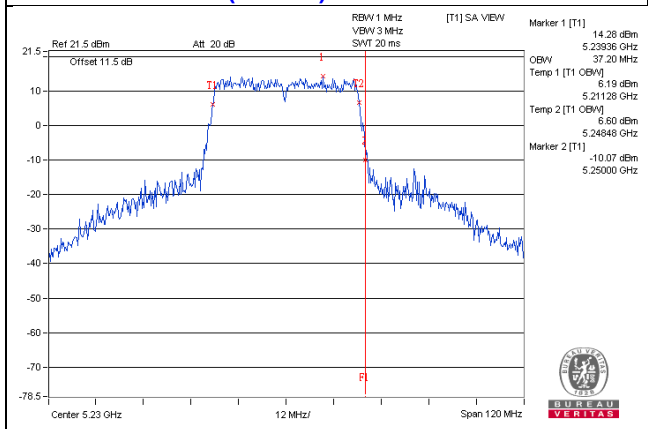


802.11ac (VHT20) / Chain 3 – CH48

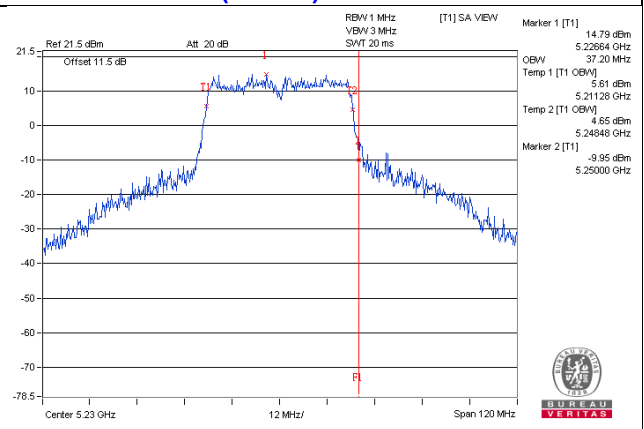


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)

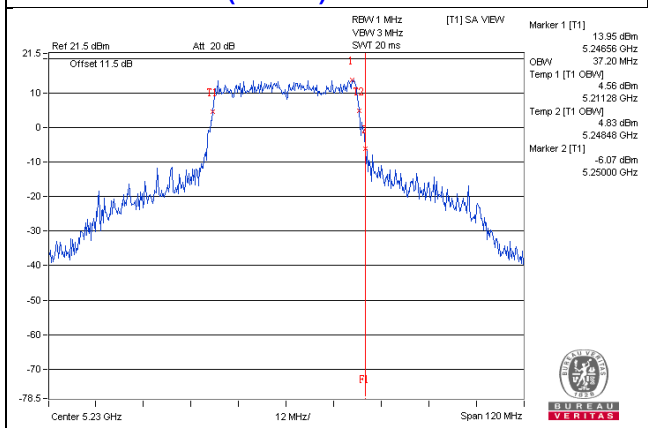
802.11ac (VHT40) / Chain 0 – CH46



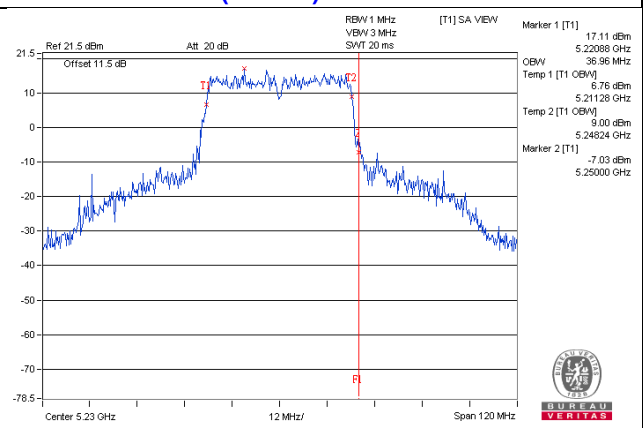
802.11ac (VHT40) / Chain 1 – CH46



802.11ac (VHT40) / Chain 2 – CH46

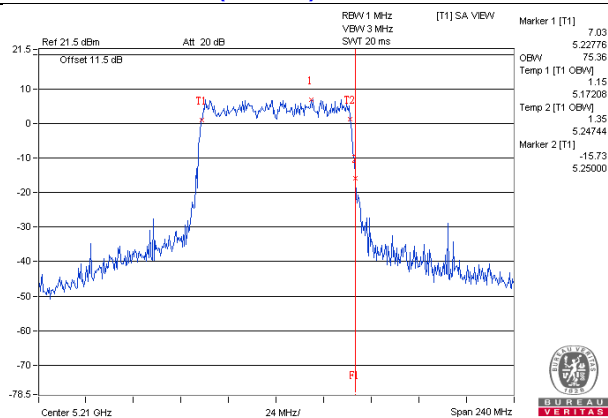


802.11ac (VHT40) / Chain 3 – CH46

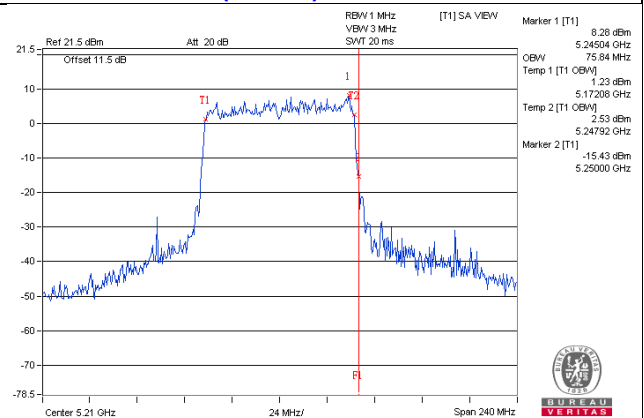


**Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)**

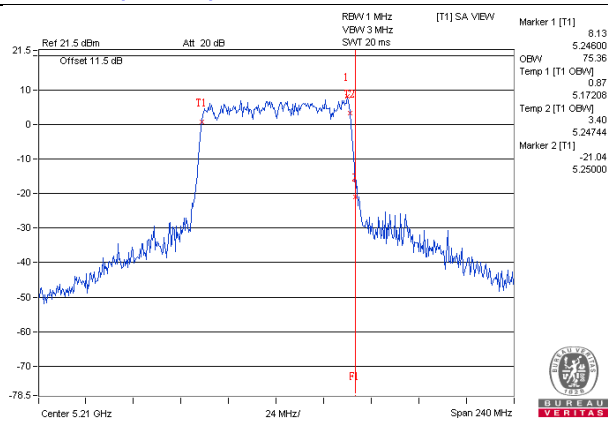
802.11ac (VHT80) / Chain 0 – CH42



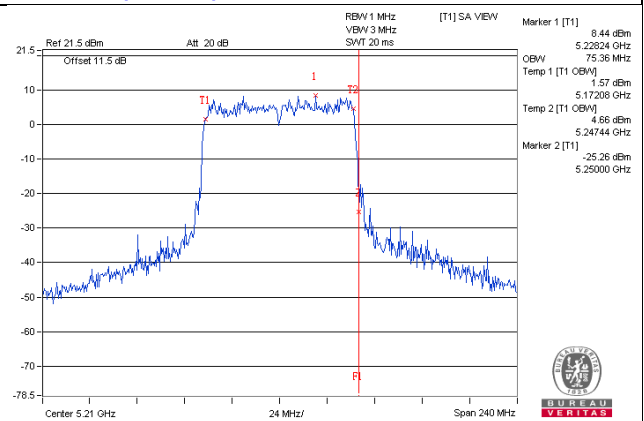
802.11ac (VHT80) / Chain 1 – CH42



802.11ac (VHT80) / Chain 2 – CH42



802.11ac (VHT80) / Chain 3 – CH42



Radio 3

CDD Mode

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	16.92	16.80	16.68	16.68
116	5580	17.04	16.92	16.68	16.92
140	5700	16.92	17.16	16.92	16.92
2C-144	5720	13.52	13.52	13.52	13.64
3-144	5720	3.40	3.40	3.40	3.40
149	5745	16.92	16.92	16.92	16.92
157	5785	17.16	17.28	16.92	16.80
165	5825	16.92	17.16	16.92	16.92

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
100	5500	18.12	18.00	18.00	18.12
116	5580	18.24	18.24	18.00	18.00
140	5700	18.00	18.36	18.12	18.00
2C-144	5720	14.24	14.12	14.12	14.12
3-144	5720	4.12	3.88	3.88	3.88
149	5745	18.24	18.24	18.00	18.00
157	5785	18.36	18.12	18.12	18.12
165	5825	18.12	18.36	18.00	18.24

802.11ac (VHT40)

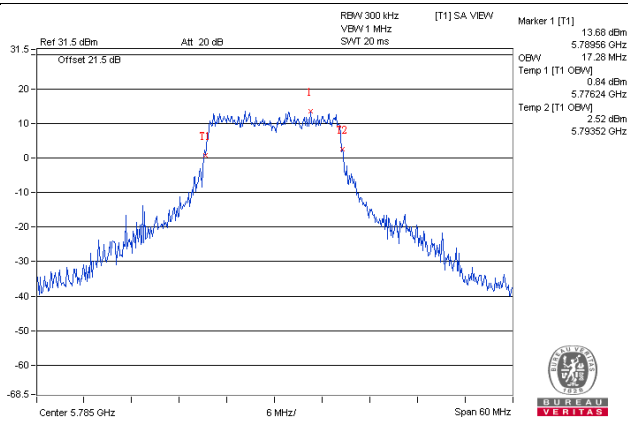
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	36.72	36.72	36.72	36.96
110	5550	36.48	36.72	36.72	36.96
134	5670	36.72	36.72	36.96	36.72
2C-142	5710	33.60	33.40	33.60	33.40
3-142	5710	3.40	3.20	3.20	3.20
151	5755	36.72	36.72	36.96	36.72
159	5795	37.20	37.20	36.72	36.72

802.11ac (VHT80)

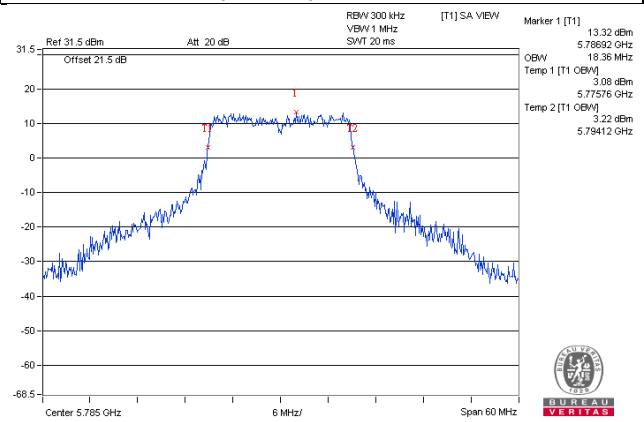
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	75.36	75.36	75.36	75.36
122	5610	75.36	75.36	75.36	75.36
2C-138	5690	72.92	72.92	72.92	72.92
3-138	5690	2.44	2.44	2.44	2.92
155	5775	75.84	75.36	75.84	76.32

Spectrum Plot of Worst Value

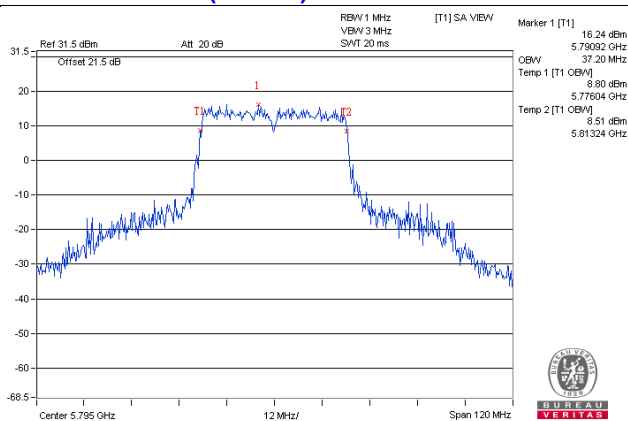
802.11a / Chain 1 – CH157



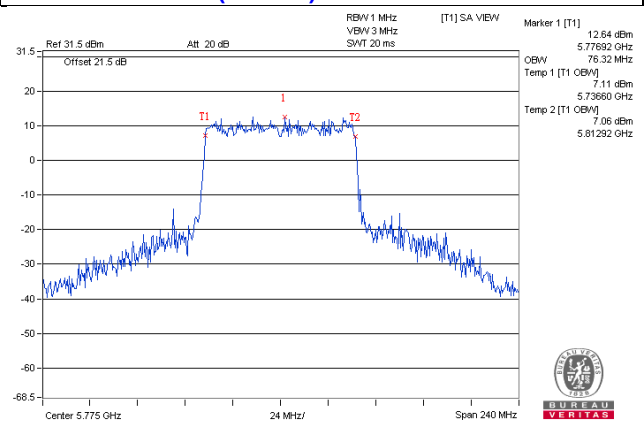
802.11ac (VHT20) / Chain 0 - CH157



802.11ac (VHT40) / Chain 0 – CH159

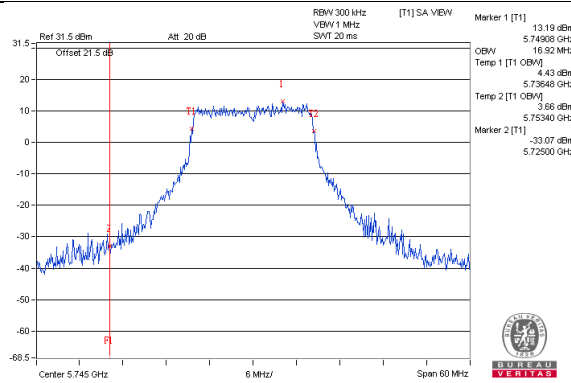


802.11ac (VHT80) / Chain 3 - CH155

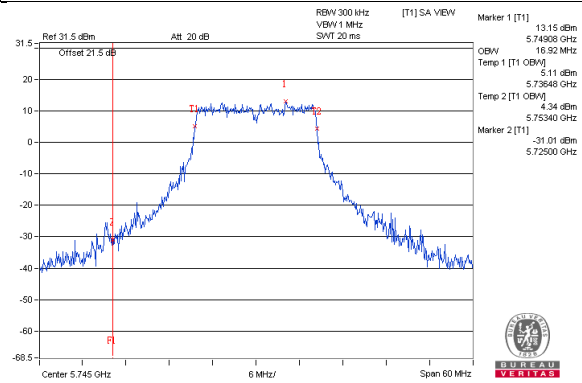


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

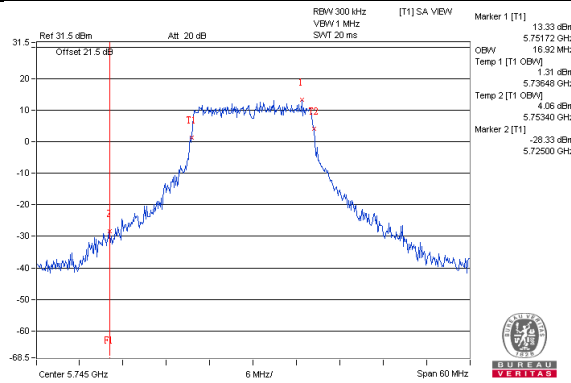
802.11a / Chain 0 – CH149



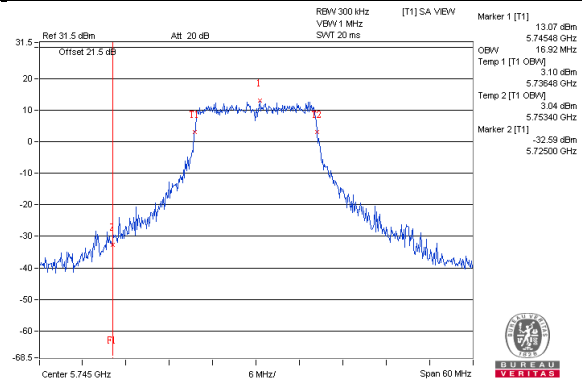
802.11a / Chain 1 – CH149



802.11a / Chain 2 – CH149

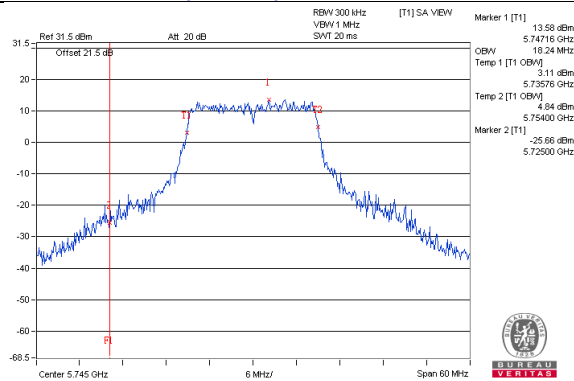


802.11a / Chain 3 – CH149

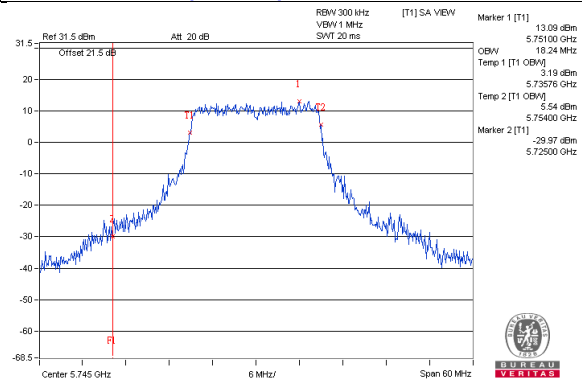


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

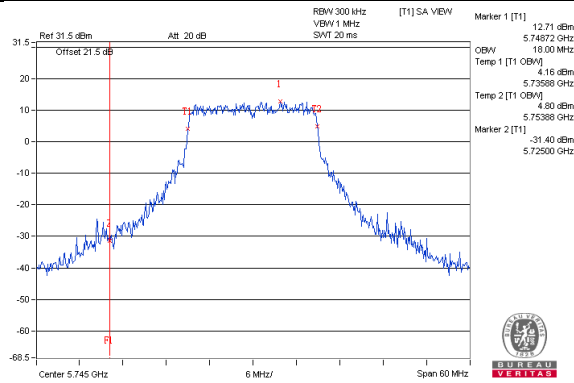
802.11ac (VHT20) / Chain 0 – CH149



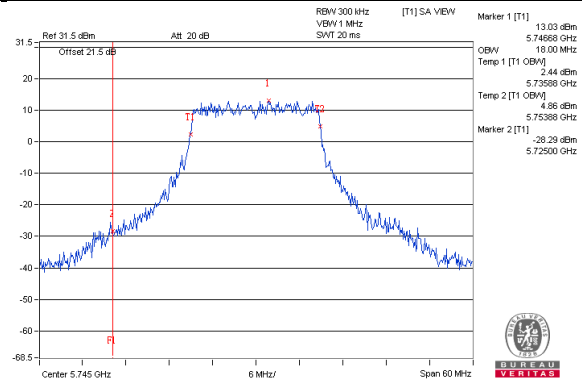
802.11ac (VHT20) / Chain 1 – CH149



802.11ac (VHT20) / Chain 2 – CH149

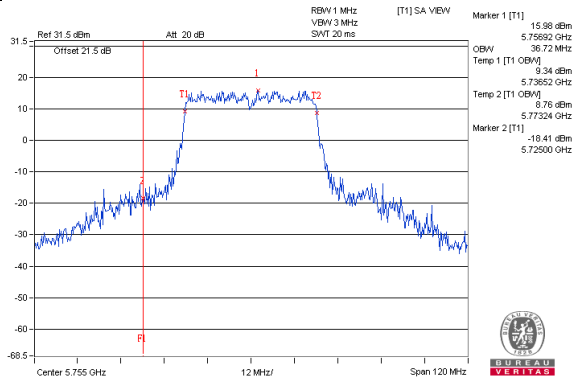


802.11ac (VHT20) / Chain 3 – CH149

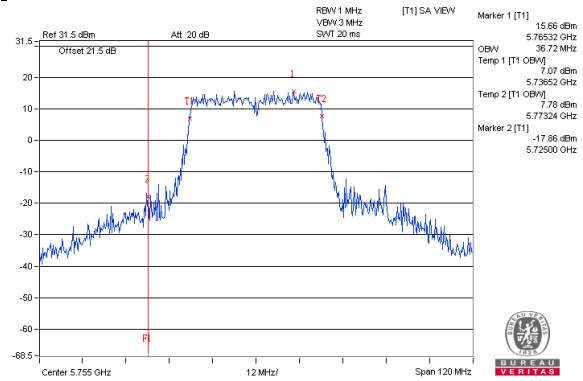


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

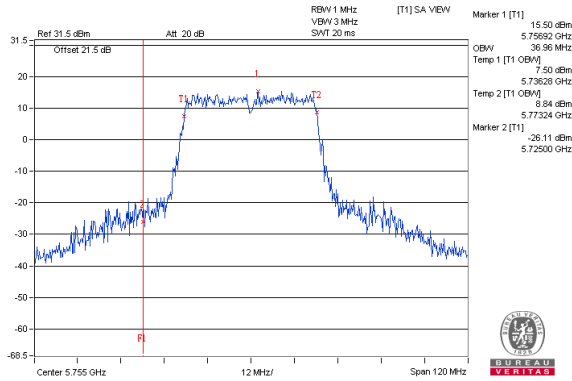
802.11ac (VHT40) / Chain 0 – CH151



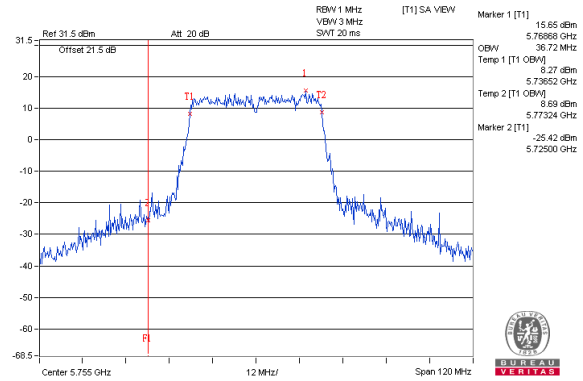
802.11ac (VHT40) / Chain 1 – CH151



802.11ac (VHT40) / Chain 2 – CH151

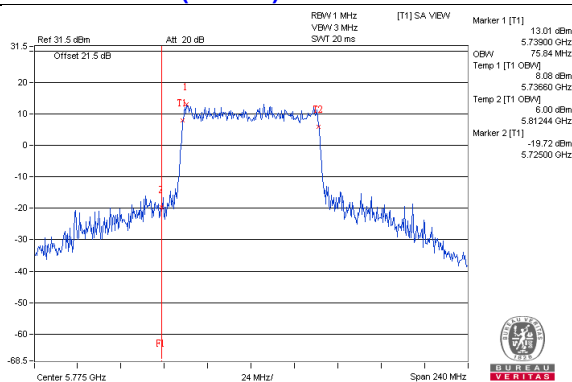


802.11ac (VHT40) / Chain 3 – CH151

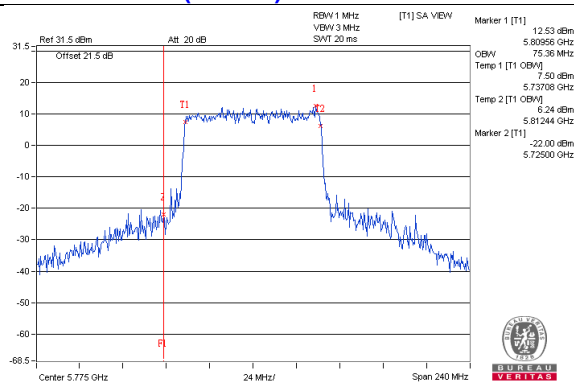


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

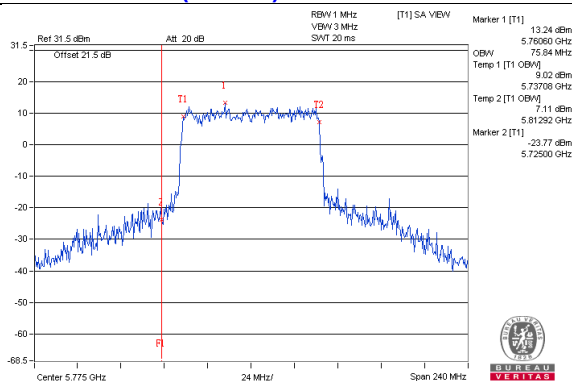
802.11ac (VHT80) / Chain 0 – CH155



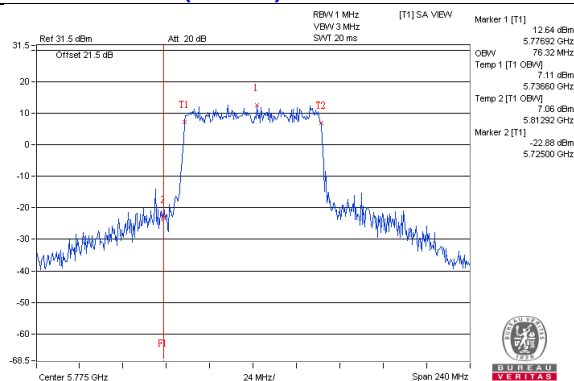
802.11ac (VHT80) / Chain 1 – CH155



802.11ac (VHT80) / Chain 2 – CH155



802.11ac (VHT80) / Chain 3 – CH155



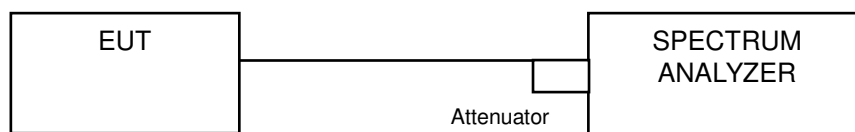
4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

Note: This device can support different category application which switched to master mode or client mode by software.

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 $\geq$ 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 $\geq$ 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 Client function

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

Radio 2

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	3.18	3.41	3.49	3.43	9.40	11.00	Pass
40	5200	3.07	3.36	2.04	4.54	9.36	11.00	Pass
48	5240	2.37	3.48	2.68	4.08	9.23	11.00	Pass
52	5260	3.65	3.98	3.10	3.67	9.63	11.00	Pass
60	5300	3.07	4.22	3.66	3.40	9.63	11.00	Pass
64	5320	3.62	3.95	3.70	3.81	9.79	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
36	5180	3.22	3.37	3.02	3.13	9.21	11.00	Pass
40	5200	3.45	3.35	1.90	3.55	9.13	11.00	Pass
48	5240	3.04	3.33	2.39	4.13	9.29	11.00	Pass
52	5260	3.30	3.74	3.18	3.70	9.51	11.00	Pass
60	5300	2.74	3.90	2.95	3.33	9.27	11.00	Pass
64	5320	3.35	3.24	3.16	2.84	9.17	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
38	5190	-0.08	0.38	0.33	0.78	6.38	11.00	Pass
46	5230	0.38	0.08	0.02	0.79	6.35	11.00	Pass
54	5270	1.32	1.14	0.23	0.25	6.78	11.00	Pass
62	5310	0.70	0.92	0.00	0.17	6.48	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power density limit shall not be reduced.

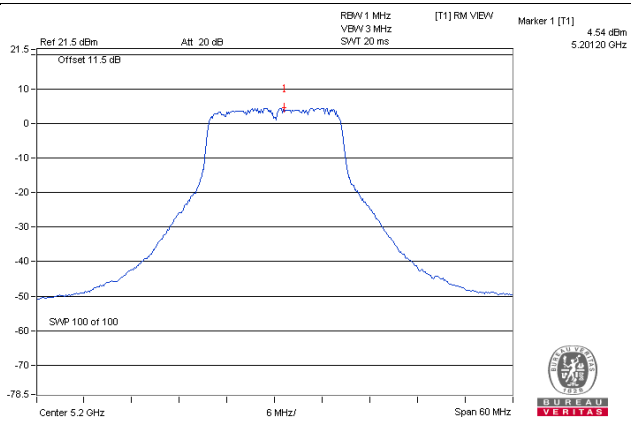
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
42	5210	-2.73	0.15	-1.62	-0.37	5.02	11.00	Pass
58	5290	-2.20	-1.19	-2.68	-1.31	4.22	11.00	Pass

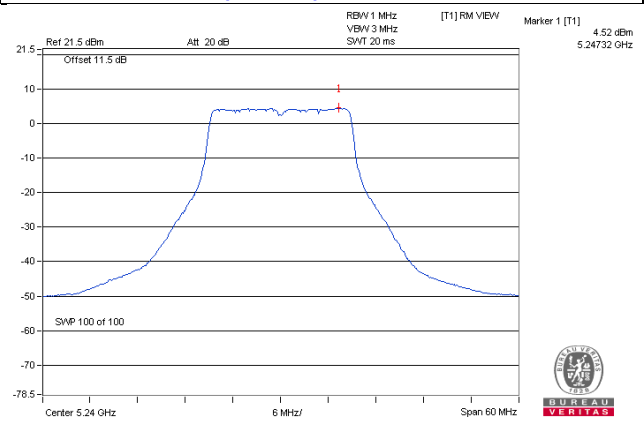
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A band: Directional gain = 4.29dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

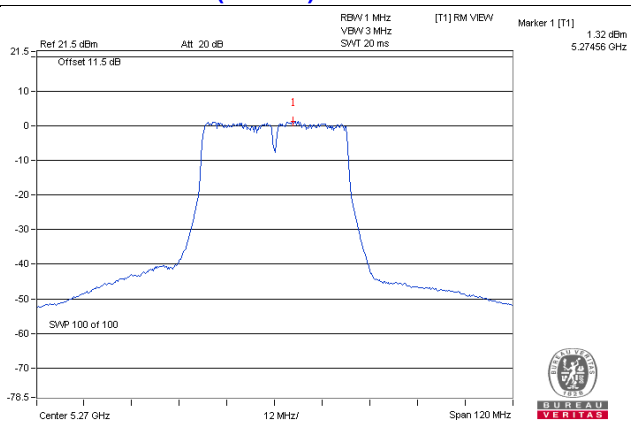
802.11a / Chain 3 – CH40



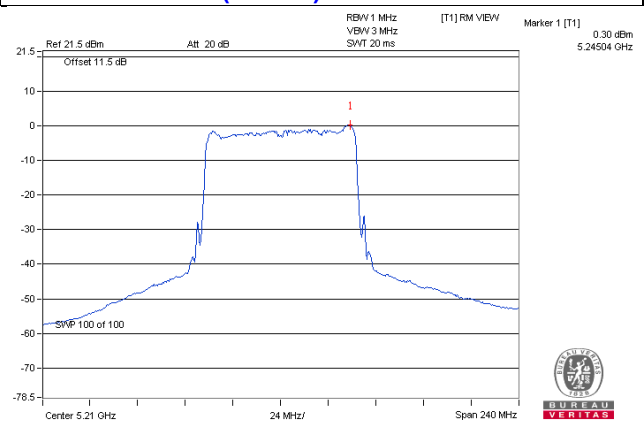
802.11ac (VHT20) / Chain 3 – CH48



802.11ac (VHT40) / Chain 0 – CH54



802.11ac (VHT80) / Chain 1 – CH42



For U-NII-2C
Radio 3
CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
100	5500	3.24	3.69	3.33	3.87	9.56	11.00	Pass
116	5580	3.33	3.43	3.86	3.90	9.66	11.00	Pass
140	5700	4.04	3.19	3.15	2.91	9.36	11.00	Pass
144 (UNII-2C Band)	5720	4.46	2.73	3.70	3.51	9.66	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2C band: Directional gain = 5.21dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
100	5500	3.06	2.57	4.13	4.06	9.53	11.00	Pass
116	5580	3.07	3.13	3.62	3.57	9.38	11.00	Pass
140	5700	3.84	2.88	2.80	2.91	9.15	11.00	Pass
144 (UNII-2C Band)	5720	3.99	2.42	3.54	3.57	9.44	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2C band: Directional gain = 5.21dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
102	5510	0.55	-0.29	0.66	0.65	6.43	11.00	Pass
110	5550	0.60	0.24	0.75	0.83	6.63	11.00	Pass
134	5670	-0.97	-0.01	0.36	0.71	6.09	11.00	Pass
142 (UNII-2C Band)	5710	0.89	-0.77	0.30	0.84	6.38	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2C band: Directional gain = 5.21dBi < 6dBi, so the power density limit shall not be reduced.

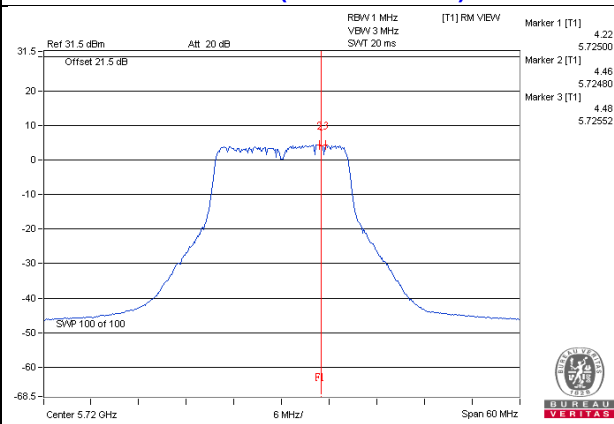
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
106	5530	-2.25	-2.04	-2.09	-1.95	3.94	11.00	Pass
122	5610	-2.36	-2.07	-2.04	-1.95	3.92	11.00	Pass
138 (UNII-2C Band)	5690	-2.48	-1.44	-1.77	-1.02	4.38	11.00	Pass

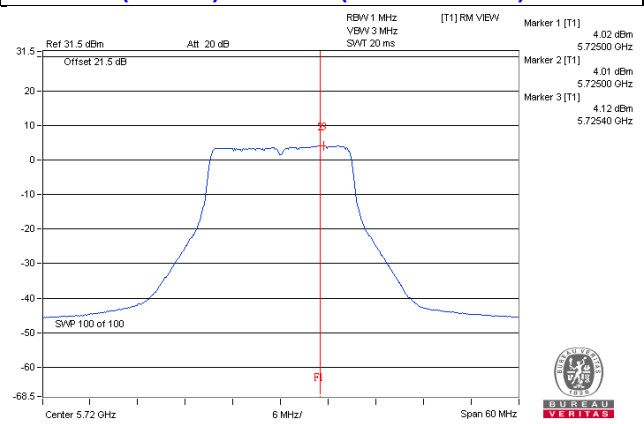
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2C band: Directional gain = 5.21dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

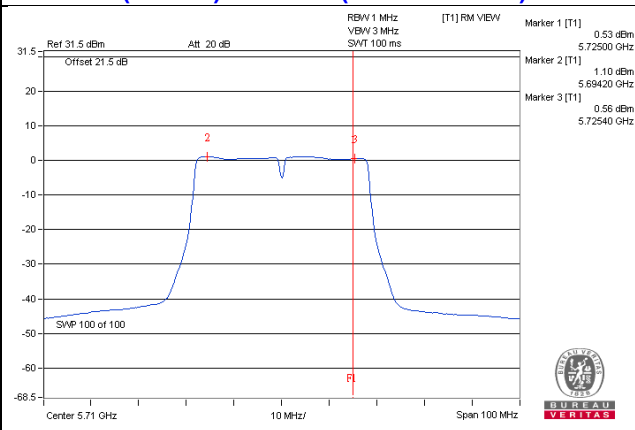
802.11a / Chain 0(UNII-2C Band) – CH144



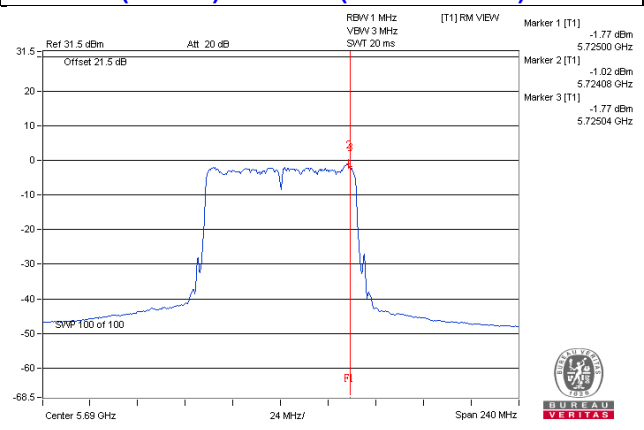
802.11ac (VHT20) / Chain 0(UNII-2C Band) – CH144



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



802.11ac (VHT80) / Chain 3(UNII-2C Band) – CH138



For U-NII-3:
Radio 3
CDD Mode
802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	144 (UNII-3 Band)	5720	-4.23	-2.01	6.02	4.01	30.00	Pass
	149	5745	0.33	2.55	6.02	8.57	30.00	Pass
	157	5785	1.39	3.61	6.02	9.63	30.00	Pass
	165	5825	1.78	4.00	6.02	10.02	30.00	Pass
1	144 (UNII-3 Band)	5720	-5.05	-2.83	6.02	3.19	30.00	Pass
	149	5745	0.24	2.46	6.02	8.48	30.00	Pass
	157	5785	0.64	2.86	6.02	8.88	30.00	Pass
	165	5825	0.94	3.16	6.02	9.18	30.00	Pass
2	144 (UNII-3 Band)	5720	-3.98	-1.76	6.02	4.26	30.00	Pass
	149	5745	-0.42	1.80	6.02	7.82	30.00	Pass
	157	5785	-0.18	2.04	6.02	8.06	30.00	Pass
	165	5825	0.09	2.31	6.02	8.33	30.00	Pass
3	144 (UNII-3 Band)	5720	-4.28	-2.06	6.02	3.96	30.00	Pass
	149	5745	0.45	2.67	6.02	8.69	30.00	Pass
	157	5785	0.25	2.47	6.02	8.49	30.00	Pass
	165	5825	0.50	2.72	6.02	8.74	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	144 (UNII-3 Band)	5720	-3.98	-1.76	6.02	4.26	30.00	Pass
	149	5745	1.61	3.83	6.02	9.85	30.00	Pass
	157	5785	1.60	3.82	6.02	9.84	30.00	Pass
	165	5825	-0.46	1.76	6.02	7.78	30.00	Pass
1	144 (UNII-3 Band)	5720	-4.99	-2.77	6.02	3.25	30.00	Pass
	149	5745	1.00	3.22	6.02	9.24	30.00	Pass
	157	5785	0.97	3.19	6.02	9.21	30.00	Pass
	165	5825	1.04	3.26	6.02	9.28	30.00	Pass
2	144 (UNII-3 Band)	5720	-4.29	-2.07	6.02	3.95	30.00	Pass
	149	5745	1.23	3.45	6.02	9.47	30.00	Pass
	157	5785	0.59	2.81	6.02	8.83	30.00	Pass
	165	5825	0.42	2.64	6.02	8.66	30.00	Pass
3	144 (UNII-3 Band)	5720	-4.39	-2.17	6.02	3.85	30.00	Pass
	149	5745	0.65	2.87	6.02	8.89	30.00	Pass
	157	5785	0.58	2.80	6.02	8.82	30.00	Pass
	165	5825	0.69	2.91	6.02	8.93	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	142 (UNII-3 Band)	5710	-7.62	-5.40	6.02	0.62	30.00	Pass
	151	5755	-2.44	-0.22	6.02	5.80	30.00	Pass
	159	5795	-2.42	-0.20	6.02	5.82	30.00	Pass
1	142 (UNII-3 Band)	5710	-8.28	-6.06	6.02	-0.04	30.00	Pass
	151	5755	-2.62	-0.40	6.02	5.62	30.00	Pass
	159	5795	-2.78	-0.56	6.02	5.46	30.00	Pass
2	142 (UNII-3 Band)	5710	-7.92	-5.70	6.02	0.32	30.00	Pass
	151	5755	-3.26	-1.04	6.02	4.98	30.00	Pass
	159	5795	-3.26	-1.04	6.02	4.98	30.00	Pass
3	142 (UNII-3 Band)	5710	-7.76	-5.54	6.02	0.48	30.00	Pass
	151	5755	-3.06	-0.84	6.02	5.18	30.00	Pass
	159	5795	-3.28	-1.06	6.02	4.96	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

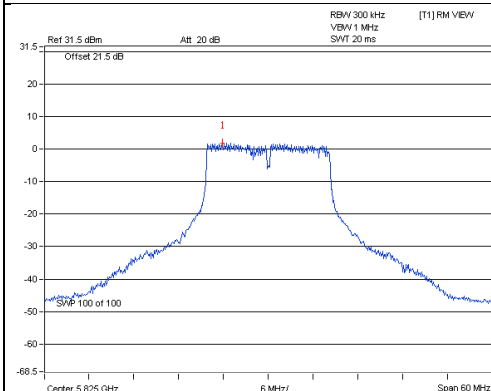
802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	138 (UNII-3 Band)	5690	-10.80	-8.58	6.02	-2.56	30.00	Pass
	155	5775	-4.71	-2.49	6.02	3.53	30.00	Pass
1	138 (UNII-3 Band)	5690	-9.84	-7.62	6.02	-1.60	30.00	Pass
	155	5775	-5.17	-2.95	6.02	3.07	30.00	Pass
2	138 (UNII-3 Band)	5690	-10.57	-8.35	6.02	-2.33	30.00	Pass
	155	5775	-6.08	-3.86	6.02	2.16	30.00	Pass
3	138 (UNII-3 Band)	5690	-10.13	-7.91	6.02	-1.89	30.00	Pass
	155	5775	-5.60	-3.38	6.02	2.64	30.00	Pass

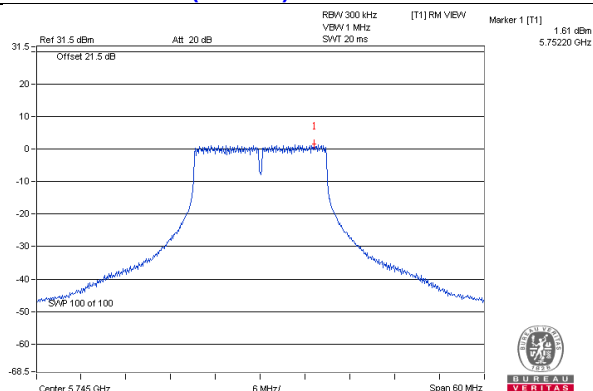
Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

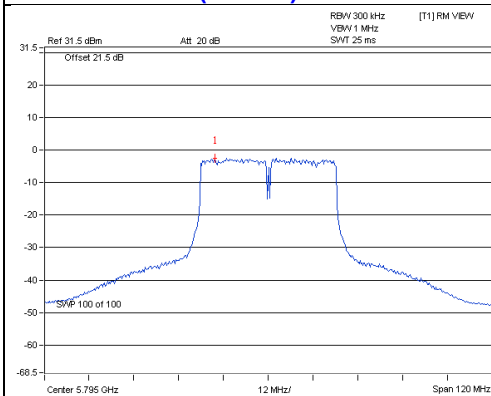
802.11a – Chain 0: CH 165



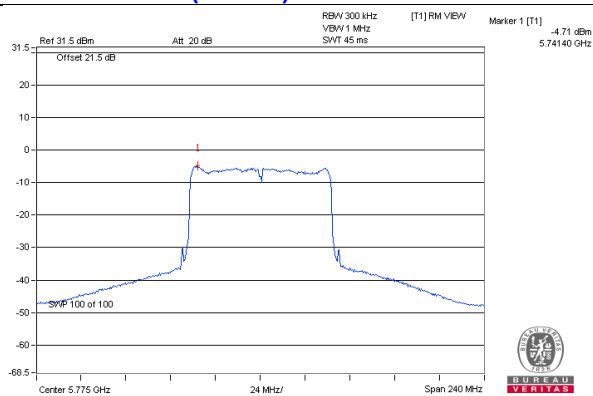
802.11ac (VHT20) – Chain 0: CH 149



802.11ac (VHT40) – Chain 0: CH 159



802.11ac (VHT80) – Chain 0: CH 155



For Master function

For U-NII-1

Radio 2

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	8.04	5.66	7.57	8.79	13.68	17.00	Pass
40	5200	8.87	8.14	7.10	8.56	14.24	17.00	Pass
48	5240	8.58	7.67	7.19	7.87	13.88	17.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
36	5180	6.33	6.60	6.46	6.92	12.60	17.00	Pass
40	5200	8.38	8.12	6.50	8.29	13.91	17.00	Pass
48	5240	8.44	7.92	7.05	9.52	14.35	17.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.

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	Chain 2	Chain 3			
38	5190	-0.48	0.77	0.39	0.85	6.43	17.00	Pass
46	5230	4.85	4.04	4.13	5.64	10.73	17.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.

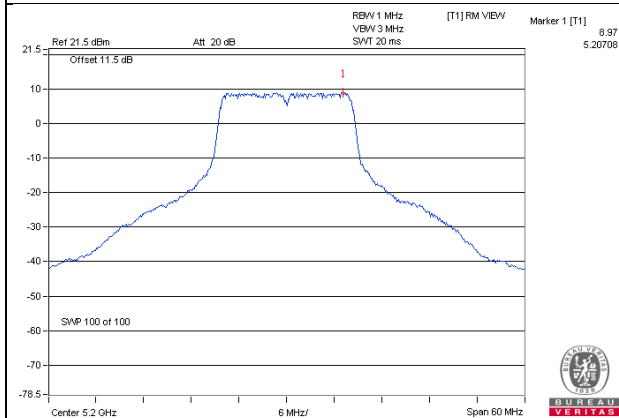
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
42	5210	-3.59	-0.96	-0.90	-1.12	4.51	17.00	Pass

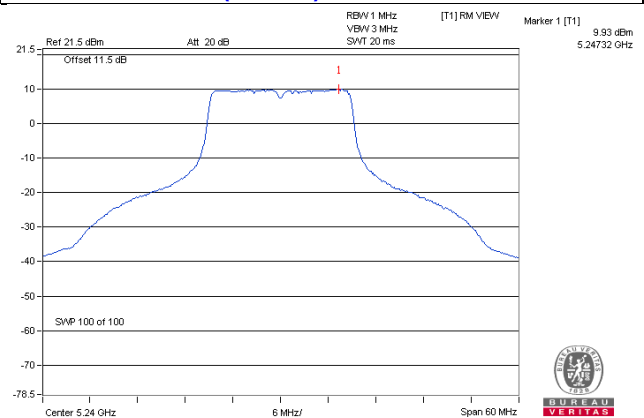
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1 band: Directional gain = 3.97dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

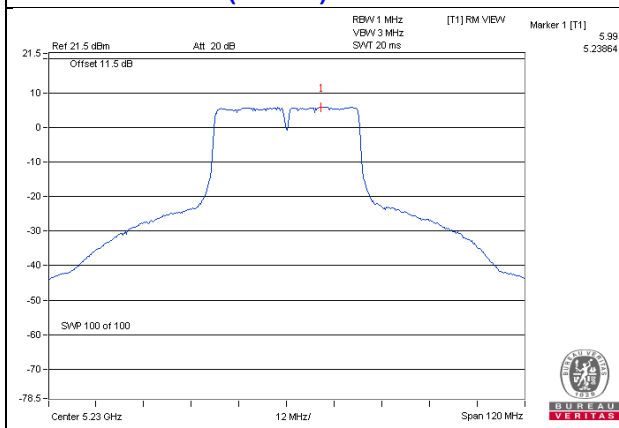
802.11a / Chain 0 – CH40



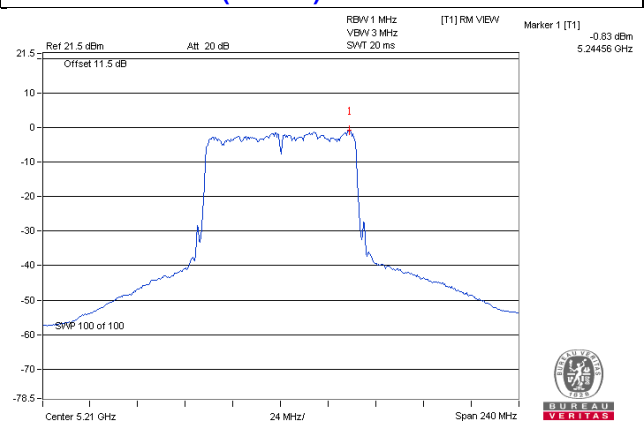
802.11ac (VHT20) / Chain 3 – CH48



802.11ac (VHT40) / Chain 3 – CH46



802.11ac (VHT80) / Chain 2 – CH42



For U-NII-3

Radio 3 CDD Mode 802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	0.33	2.55	6.02	8.57	30.00	Pass
	157	5785	1.39	3.61	6.02	9.63	30.00	Pass
	165	5825	1.78	4.00	6.02	10.02	30.00	Pass
1	149	5745	0.24	2.46	6.02	8.48	30.00	Pass
	157	5785	0.64	2.86	6.02	8.88	30.00	Pass
	165	5825	0.94	3.16	6.02	9.18	30.00	Pass
2	149	5745	-0.42	1.80	6.02	7.82	30.00	Pass
	157	5785	-0.18	2.04	6.02	8.06	30.00	Pass
	165	5825	0.09	2.31	6.02	8.33	30.00	Pass
3	149	5745	0.45	2.67	6.02	8.69	30.00	Pass
	157	5785	0.25	2.47	6.02	8.49	30.00	Pass
	165	5825	0.50	2.72	6.02	8.74	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	1.61	3.83	6.02	9.85	30.00	Pass
	157	5785	1.60	3.82	6.02	9.84	30.00	Pass
	165	5825	-0.46	1.76	6.02	7.78	30.00	Pass
1	149	5745	1.00	3.22	6.02	9.24	30.00	Pass
	157	5785	0.97	3.19	6.02	9.21	30.00	Pass
	165	5825	1.04	3.26	6.02	9.28	30.00	Pass
2	149	5745	1.23	3.45	6.02	9.47	30.00	Pass
	157	5785	0.59	2.81	6.02	8.83	30.00	Pass
	165	5825	0.42	2.64	6.02	8.66	30.00	Pass
3	149	5745	0.65	2.87	6.02	8.89	30.00	Pass
	157	5785	0.58	2.80	6.02	8.82	30.00	Pass
	165	5825	0.69	2.91	6.02	8.93	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-2.44	-0.22	6.02	5.80	30.00	Pass
	159	5795	-2.42	-0.20	6.02	5.82	30.00	Pass
1	151	5755	-2.62	-0.40	6.02	5.62	30.00	Pass
	159	5795	-2.78	-0.56	6.02	5.46	30.00	Pass
2	151	5755	-3.26	-1.04	6.02	4.98	30.00	Pass
	159	5795	-3.26	-1.04	6.02	4.98	30.00	Pass
3	151	5755	-3.06	-0.84	6.02	5.18	30.00	Pass
	159	5795	-3.28	-1.06	6.02	4.96	30.00	Pass

Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

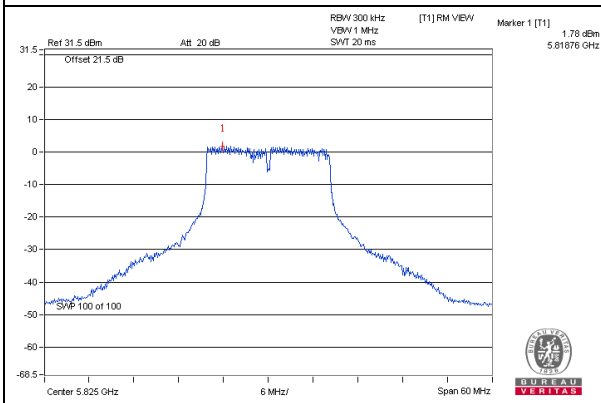
802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-4.71	-2.49	6.02	3.53	30.00	Pass
1	155	5775	-5.17	-2.95	6.02	3.07	30.00	Pass
2	155	5775	-6.08	-3.86	6.02	2.16	30.00	Pass
3	155	5775	-5.60	-3.38	6.02	2.64	30.00	Pass

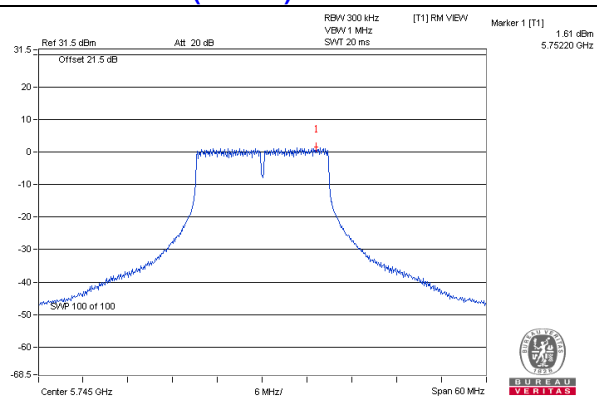
Note: 1. For U-NII-3 band: Directional gain = 4.88dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

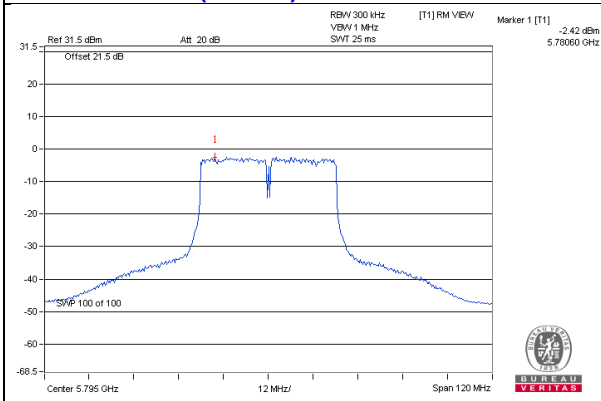
802.11a – Chain 0: CH 165



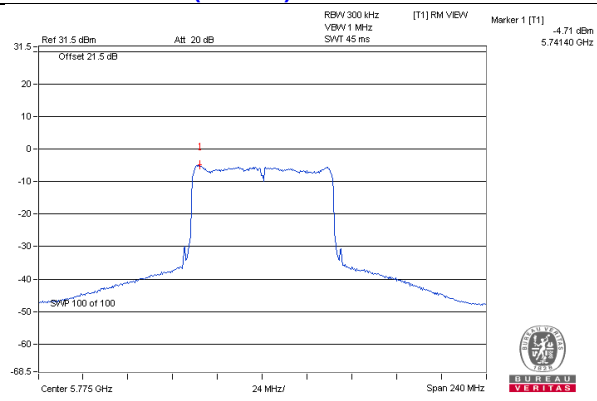
802.11ac (VHT20) – Chain 0: CH 149



802.11ac (VHT40) – Chain 0: CH 159



802.11ac (VHT80) – Chain 0: CH 155

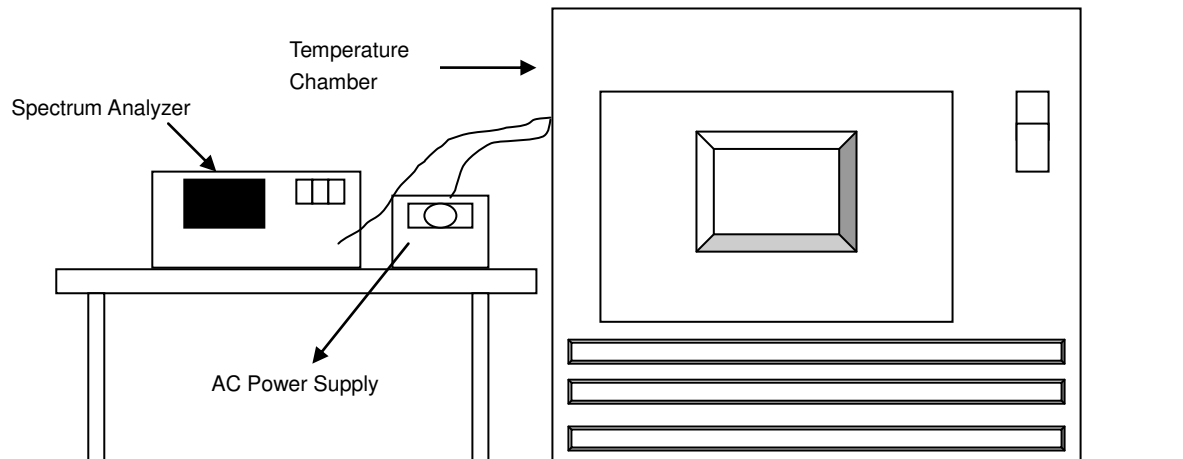


4.6 Frequency Stability Measurement

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 AC 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 2 and 3 with the temperature chamber set to the lowest temperature.
- 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

Radio 2 CDD Mode

Frequency Stability Versus Temp.									
Operating Frequency: 5320 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	120	5320.0028	Pass	5319.9985	Pass	5320.0011	Pass	5320.0024	Pass
40	120	5319.9785	Pass	5319.9815	Pass	5319.9803	Pass	5319.9773	Pass
30	120	5320.024	Pass	5320.0252	Pass	5320.0224	Pass	5320.0254	Pass
20	120	5320.011	Pass	5320.009	Pass	5320.0118	Pass	5320.0116	Pass
10	120	5319.991	Pass	5319.9945	Pass	5319.9921	Pass	5319.9904	Pass
0	120	5319.9858	Pass	5319.9851	Pass	5319.9857	Pass	5319.984	Pass
-10	120	5319.9918	Pass	5319.9921	Pass	5319.993	Pass	5319.9921	Pass
-20	120	5320.0145	Pass	5320.0155	Pass	5320.0159	Pass	5320.0132	Pass
-30	120	5320.0152	Pass	5320.0168	Pass	5320.0197	Pass	5320.0189	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5320 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5320.012	Pass	5320.0093	Pass	5320.0122	Pass	5320.0113	Pass
	120	5320.011	Pass	5320.009	Pass	5320.0118	Pass	5320.0116	Pass
	102	5320.0113	Pass	5320.0097	Pass	5320.0111	Pass	5320.0122	Pass

Radio 3
CDD Mode

Frequency Stability Versus Temp.									
Operating Frequency: 5500 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	120	5500.0269	Pass	5500.0231	Pass	5500.0233	Pass	5500.027	Pass
40	120	5499.9981	Pass	5499.9986	Pass	5500.0023	Pass	5500.0032	Pass
30	120	5499.9744	Pass	5499.9788	Pass	5499.9734	Pass	5499.9785	Pass
20	120	5500.0085	Pass	5500.0044	Pass	5500.0061	Pass	5500.0075	Pass
10	120	5499.9749	Pass	5499.974	Pass	5499.974	Pass	5499.9746	Pass
0	120	5499.9834	Pass	5499.9809	Pass	5499.9847	Pass	5499.9843	Pass
-10	120	5499.9904	Pass	5499.9902	Pass	5499.9897	Pass	5499.9898	Pass
-20	120	5500.0168	Pass	5500.017	Pass	5500.0148	Pass	5500.017	Pass
-30	120	5499.9906	Pass	5499.9894	Pass	5499.99	Pass	5499.9893	Pass

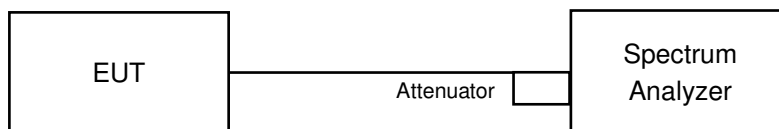
Frequency Stability Versus Voltage									
Operating Frequency: 5500 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5500.0094	Pass	5500.0053	Pass	5500.0054	Pass	5500.0066	Pass
	120	5500.0085	Pass	5500.0044	Pass	5500.0061	Pass	5500.0075	Pass
	102	5500.0093	Pass	5500.0054	Pass	5500.0065	Pass	5500.0078	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

Radio 3

CDD Mode

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
*144 (UNII-3 Band)	5720	3.19	3.19	3.18	3.18	0.5	Pass
149	5745	16.43	16.41	16.39	16.41	0.5	Pass
157	5785	16.43	16.44	16.44	16.43	0.5	Pass
165	5825	16.42	16.42	16.43	16.43	0.5	Pass

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

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
*144 (UNII-3 Band)	5720	3.81	3.82	3.79	3.78	0.5	Pass
149	5745	17.74	17.74	17.70	17.72	0.5	Pass
157	5785	17.67	17.67	17.67	17.67	0.5	Pass
165	5825	17.66	17.81	17.73	17.69	0.5	Pass

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

802.11ac (VHT40)

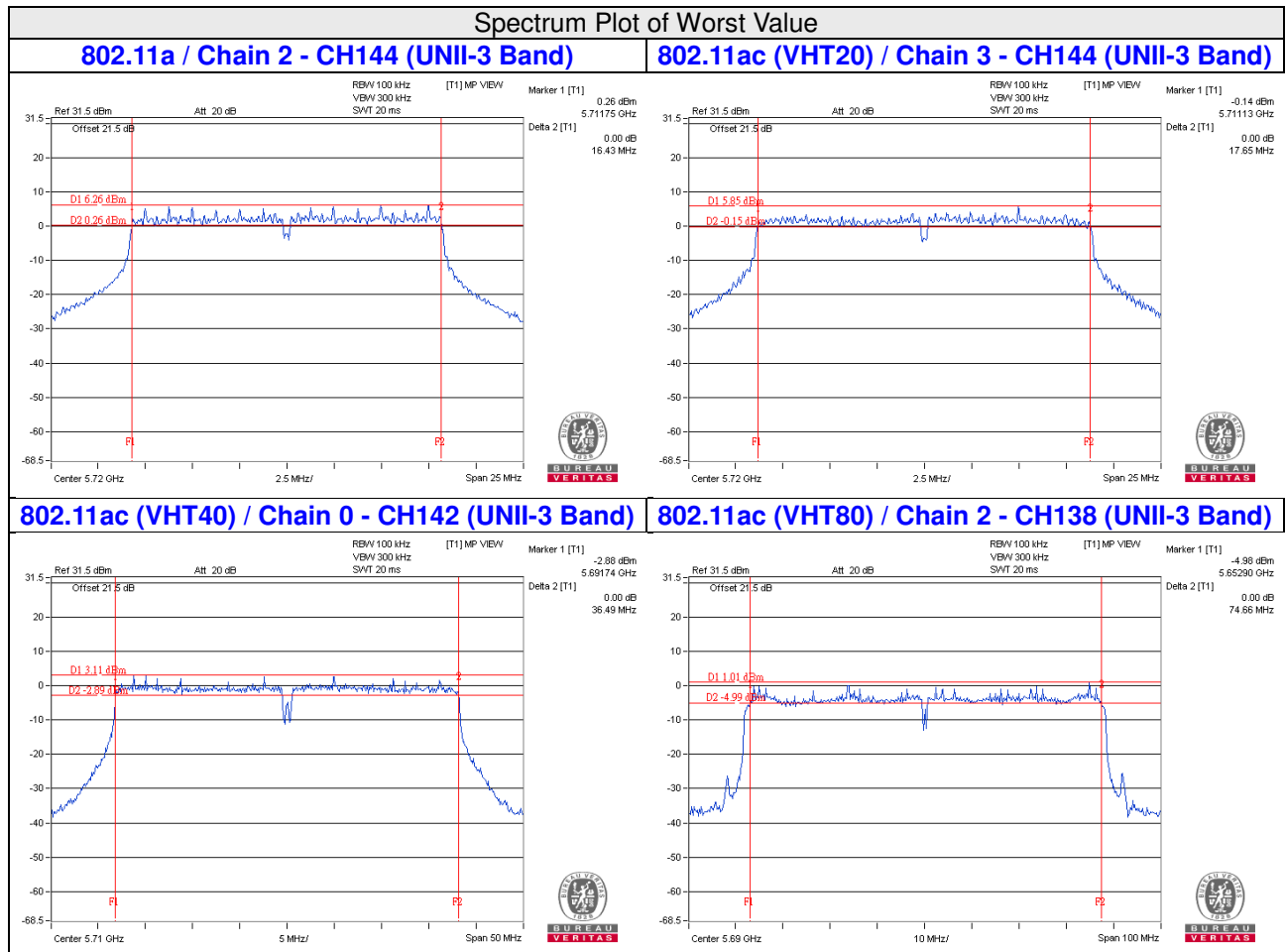
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
*142 (UNII-3 Band)	5710	3.23	3.26	3.26	3.25	0.5	Pass
151	5755	36.48	36.52	36.55	36.50	0.5	Pass
159	5795	36.53	36.46	36.49	36.49	0.5	Pass

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

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
*138 (UNII-3 Band)	5690	2.77	2.94	2.56	2.69	0.5	Pass
155	5775	74.85	74.80	75.53	75.27	0.5	Pass

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



5 Pictures of Test Arrangements

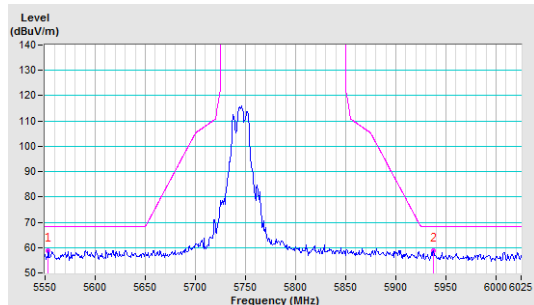
Please refer to the attached file (Test Setup Photo).

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

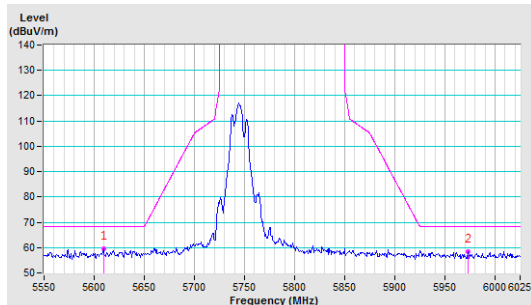
802.11a

CH 149 5745 MHz

Horizontal

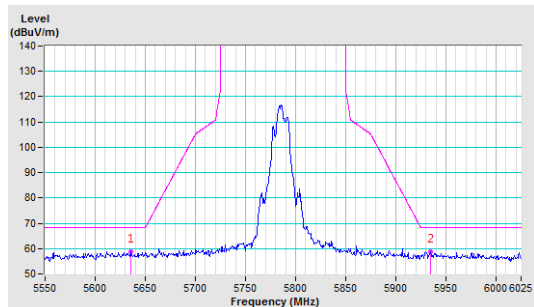


Vertical

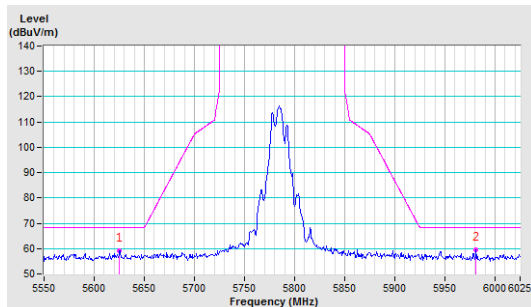


CH 157 5785 MHz

Horizontal

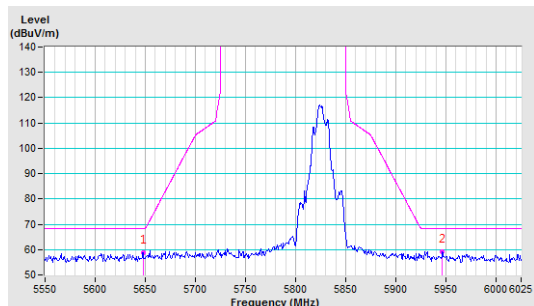


Vertical

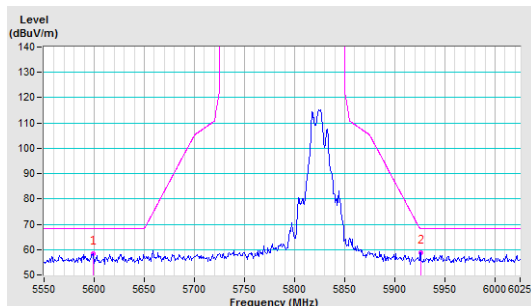


CH 165 5825 MHz

Horizontal



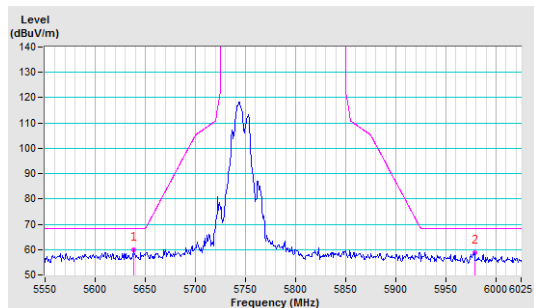
Vertical



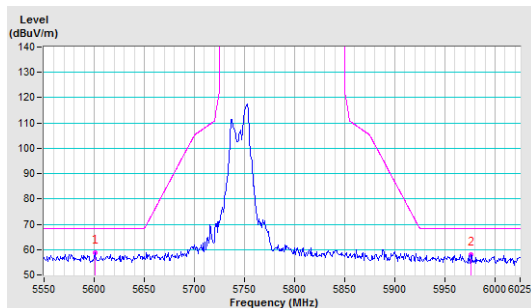
802.11ac (VHT20)

CH 149 5745 MHz

Horizontal

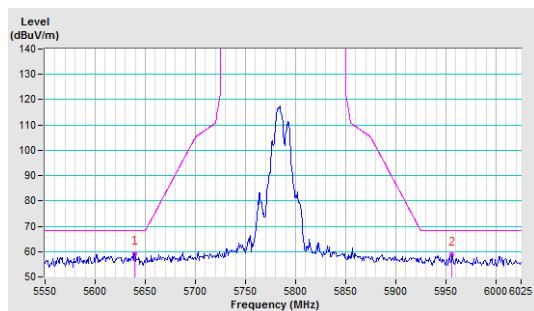


Vertical

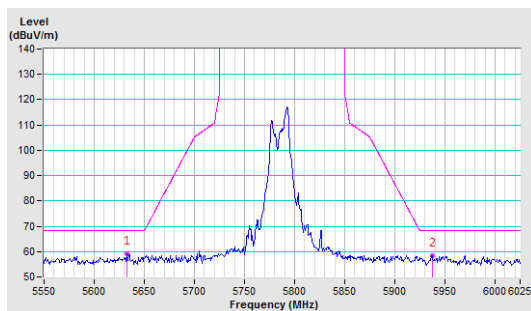


CH 157 5785 MHz

Horizontal

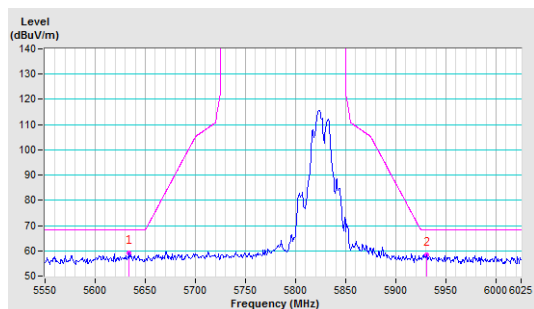


Vertical

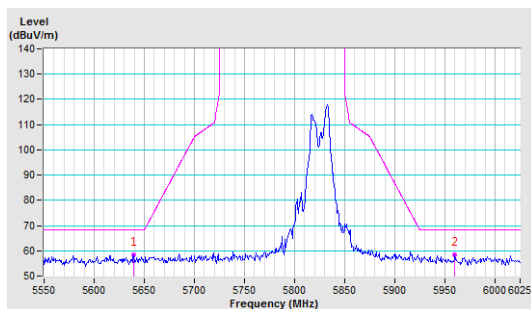


CH 165 5825 MHz

Horizontal



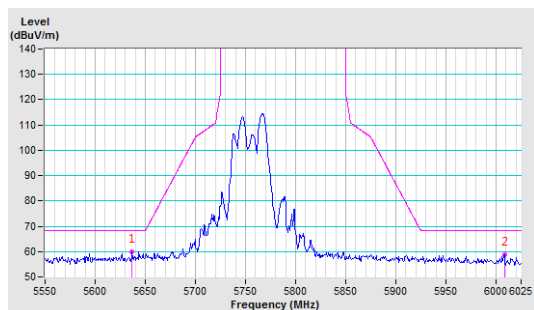
Vertical



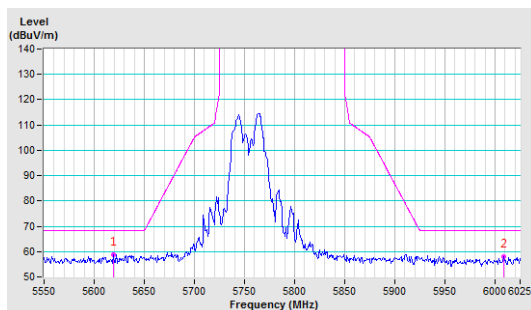
802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

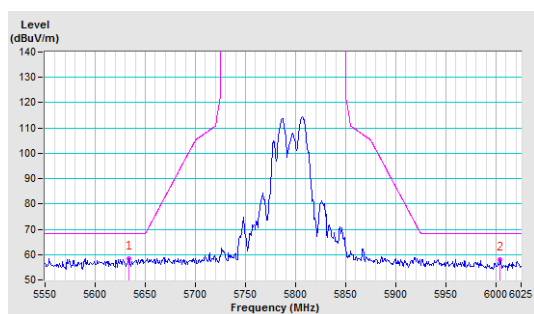


Vertical

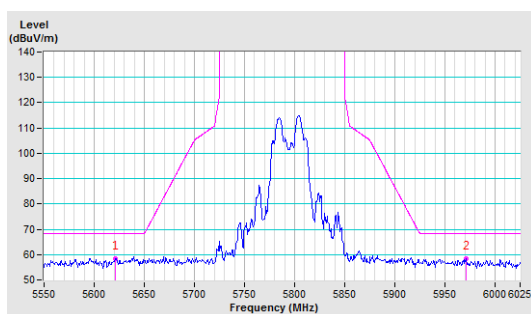


CH 159 5795 MHz

Horizontal



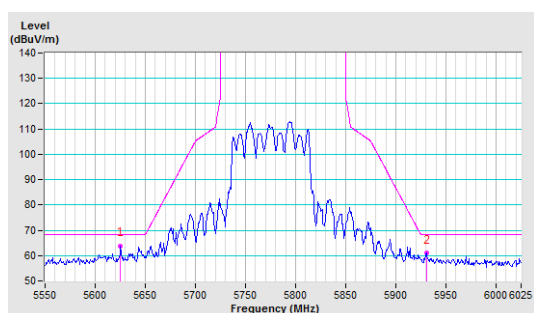
Vertical



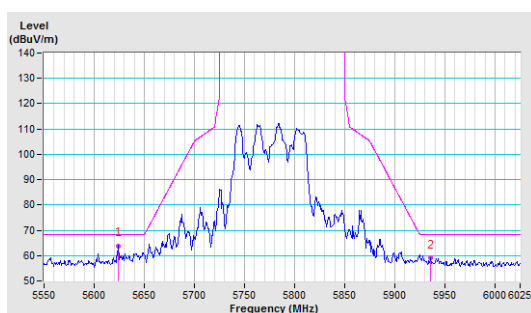
802.11ac (VHT80)

CH 155 5775 MHz

Horizontal



Vertical



Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved 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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