

FCC Test Report (DFS Band)

Report No.: RF170323C01-2

FCC ID: VUICGM4231

Test Model: CGM4231

Series Model: CGM4231XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)

Received Date: Mar. 23, 2017

Test Date: Apr. 05 to 18, 2017

Issued Date: Nov. 29, 2017

Applicant: Pegatron Corp.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RF170323C01-2	Original release.	Nov. 29, 2017

1 Certificate of Conformity

Product: DOCSIS3.1 Wireless Residential Gateway with Embedded Digital Voice Adapter

Brand: Technicolor

Test Model: CGM4231

Series Model: CGM4231XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)

Sample Status: ENGINEERING SAMPLE

Applicant: Pegatron Corp.

Test Date: Apr. 05 to 18, 2017

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10: 2013

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

Prepared by : Wendy Wu , **Date:** Nov. 29, 2017
Wendy Wu / Specialist

Approved by : May Chen , **Date:** Nov. 29, 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 -16.27dB at 0.15000MHz.
15.407(b)(1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.4dB at 5350.00MHz.
15.407(a)(1/2/3)	Max. Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.30 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	4.78 dB
	6GHz ~ 18GHz	4.52 dB
	18GHz ~ 40GHz	5.08 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (DFS Band)

Product	DOCSIS3.1 Wireless Residential Gateway with Embedded Digital Voice Adapter
Brand	Technicolor
Test Model	CGM4231
Series Model	CGM4231XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	5.26GHz ~ 5.32GHz, 5.50GHz ~ 5.72GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 16 802.11n (HT40), 802.11ac (VHT40): 8 802.11ac (VHT80): 4
Output Power	5.26 ~ 5.32GHz: CDD Mode: 196.492mW Beamforming Mode: 95.441mW 5.50 ~ 5.72GHz CDD Mode: 243.721mW Beamforming Mode: 85.062mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	USB to Mini USB cable (Shielded, 1.1m) RJ45 cable (Unshielded, 1.1m)

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF170323C01-1 as the following:
◆ Add DFS band <5.26 ~ 5.32GHz, 5.50 ~ 5.72GHz>
2. According to above condition, all test items need to be performed. And all data weres verified to meet the requirements.
3. 2.4GHz and 5GHz technology cannot transmit at same time.
4. The EUT must be supplied with a power adapter as following table:

Brand	Model No.	Spec.
Acbel	ADG009	Input: 100-240Vac, 50/60Hz, MAX 1.5A AC output cable(Unshielded, 1.7m) Output: 12V, 4.5A DC output cable(Unshielded, 1m)

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

Transmitter Circuit	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
Chain 0	4.32	2400 ~ 2483.5	PCB	NA	NA
	4.11	5150 ~ 5250			
	4.32	5250 ~ 5350			
	4.90	5470 ~ 5725			
	4.97	5725 ~ 5850			
Chain 1	4.71	2400 ~ 2483.5	PCB	NA	NA
	5.12	5150 ~ 5250			
	4.75	5250 ~ 5350			
	4.45	5470 ~ 5725			
	3.90	5725 ~ 5850			
Chain 2	3.44	2400 ~ 2483.5	PCB	i-pex(MHF)	100mm
	4.39	5150 ~ 5250			
	4.59	5250 ~ 5350			
	4.99	5470 ~ 5725			
	5.19	5725 ~ 5850			
Chain 3	2.85	5150 ~ 5250	PCB	NA	NA
	2.92	5250 ~ 5350			
	3.81	5470 ~ 5725			
	4.06	5725 ~ 5850			

6. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	3TX/2TX/1TX diversity	3RX
802.11g	6 ~ 54Mbps	3TX/2TX/1TX diversity	3RX
802.11n (HT20)	MCS 0~7	3TX/2TX/1TX diversity	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
802.11n (HT40)	MCS 0~7	3TX/2TX/1TX diversity	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	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
	MCS 0~7	4TX	4RX
802.11n (HT40)	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
	MCS 0~7	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. 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)

2. All of modulation mode support beamforming function except 2.4GHz and 5GHz (802.11a) modulation mode.

3. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report (except Radiated emission & Output power test items).

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

3.2 Description of Test Modes

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270MHz	62	5310MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

FOR 5500 ~ 5720MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
Beamforming Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
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

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5260-5320 5500-5720	58 106 to 138	122	OFDM	BPSK	29.3

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5260-5320 5500-5720	58 106 to 138	122	OFDM	BPSK	29.3

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.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
Beamforming Mode (Output power only)						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
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
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

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE $\geq$ 1G	20deg. C, 63%RH	120Vac, 60Hz	Terry Huang
RE<1G	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin
PLC	25deg. C, 75%RH	120Vac, 60Hz	Andy Ho
APCM	23deg. C, 66%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

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

If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

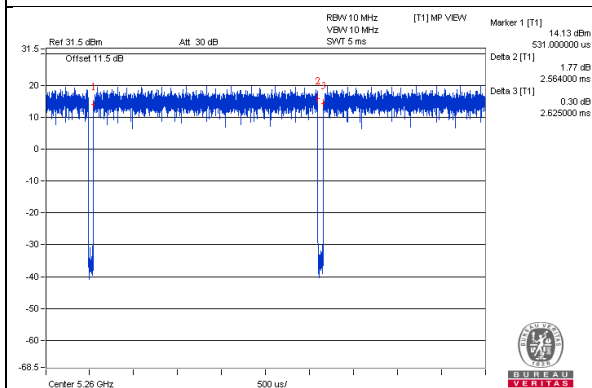
802.11a: Duty cycle = $2.564 \text{ ms} / 2.625 \text{ ms} = 0.977$, Duty factor = $10 * \log(1/0.977) = 0.10$

802.11ac (VHT20): Duty cycle = $19.818 \text{ ms} / 19.94 \text{ ms} = 0.994$

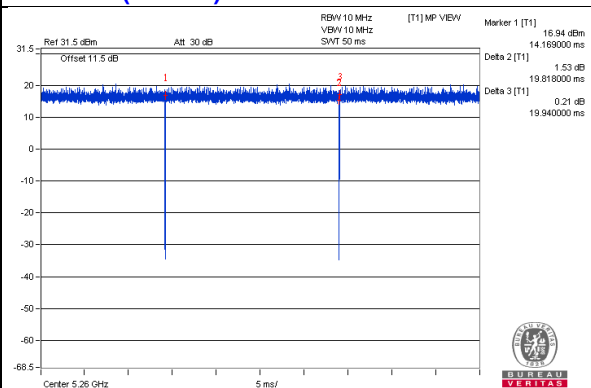
802.11ac (VHT40): Duty cycle = $10.101 \text{ ms} / 10.22 \text{ ms} = 0.988$

802.11ac (VHT80): Duty cycle = $2.772 \text{ ms} / 2.835 \text{ ms} = 0.978$, Duty factor = $10 * \log(1/0.978) = 0.10$

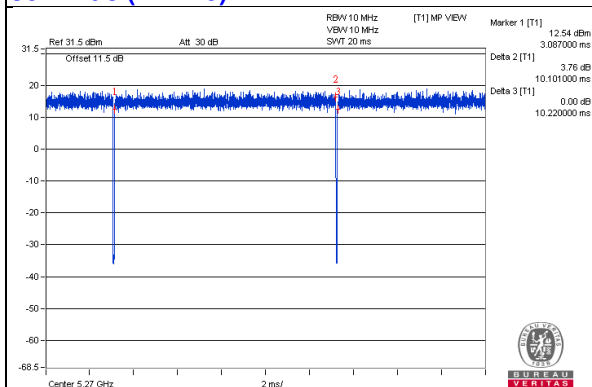
802.11a



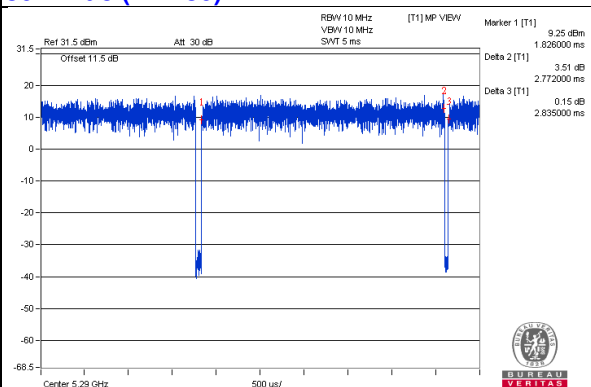
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

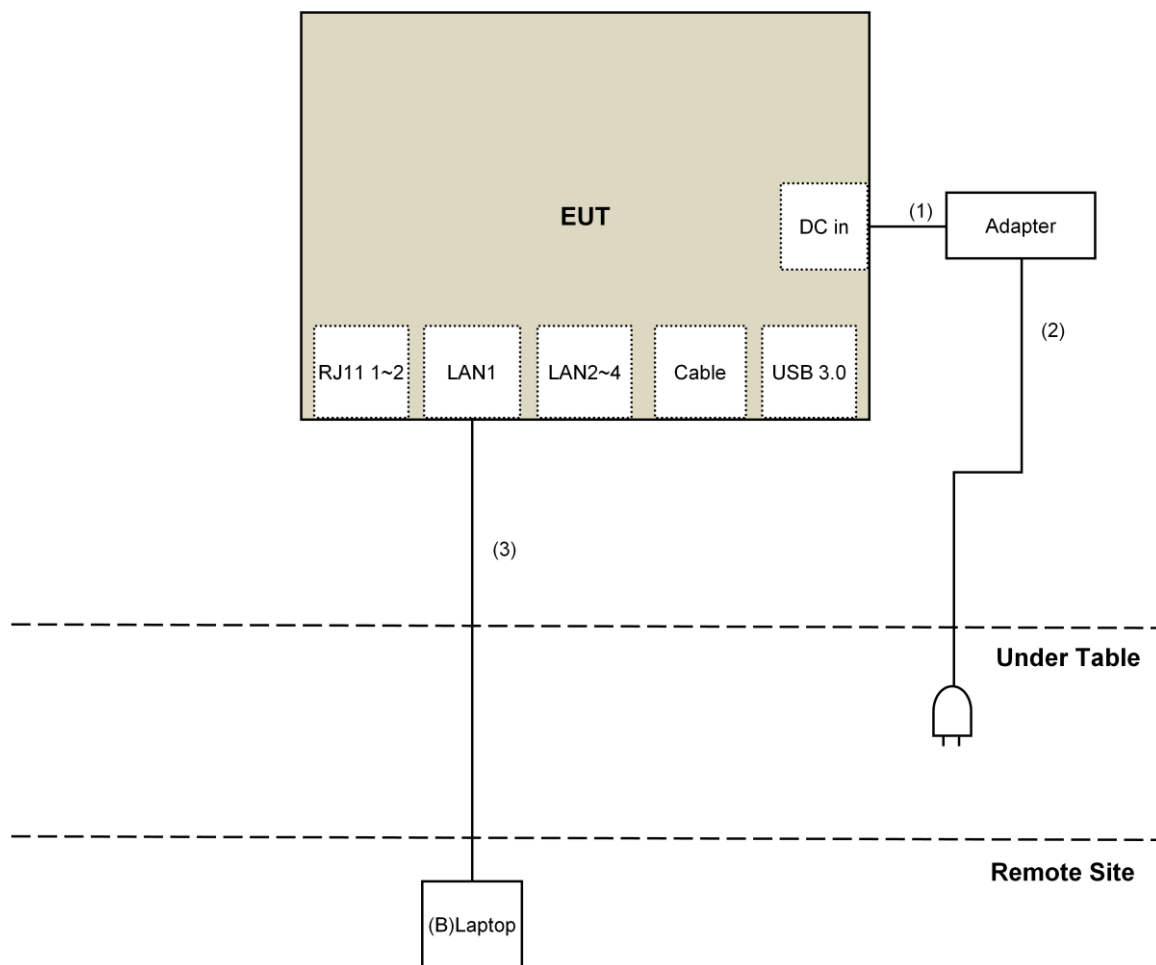
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab

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.	DC Cable	1	1	No	0	Supplied by client
2.	AC Cable	1	1.7	No	0	Supplied by client
3.	RJ-45 Cable	1	10	No	0	Provided by Lab

3.4.1 Configuration of System under Test



NOTE: The test configuration was defined by the applicant requirement.

3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedure New Rules v01r04

KDB 662911 D01 Multiple Transmitter Output v02r01

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	
789033 D02 General UNII Test Procedure New Rules v01r04			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 Keysight	N9038A	MY54450088	July 20, 2016	July 19, 2017
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 17, 2017	Jan. 16, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 10, 2016	Nov. 09, 2017
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Dec. 13, 2016	Dec. 12, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 05, 2016	Oct. 04, 2017
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 27, 2016	Dec. 26, 2017
Pre-Amplifier EMCI	EMC12630SE	980385	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160923 150318 150323	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Pre-Amplifier EMCI	EMC184045SE	980387	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 15, 2016	Dec. 14, 2017
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSv40	100964	June 28, 2016	June 27, 2017
Power meter Anritsu	ML2495A	1014008	May 5, 2016	May 4, 2017
Power sensor Anritsu	MA2411B	0917122	May 5, 2016	May 4, 2017
AC Power Source Extech Electronics	6205	1440452	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 11, 2017	Jan. 10, 2018
Digital Multimeter FLUKE	87III	73680266	Nov. 10, 2016	Nov. 09, 2017

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 4.
4. The CANADA Site Registration No. is 20331-2
- 5 Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Apr. 05 to 18, 2017

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

NOTE:

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

For Radiated emission above 30MHz

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

Note:

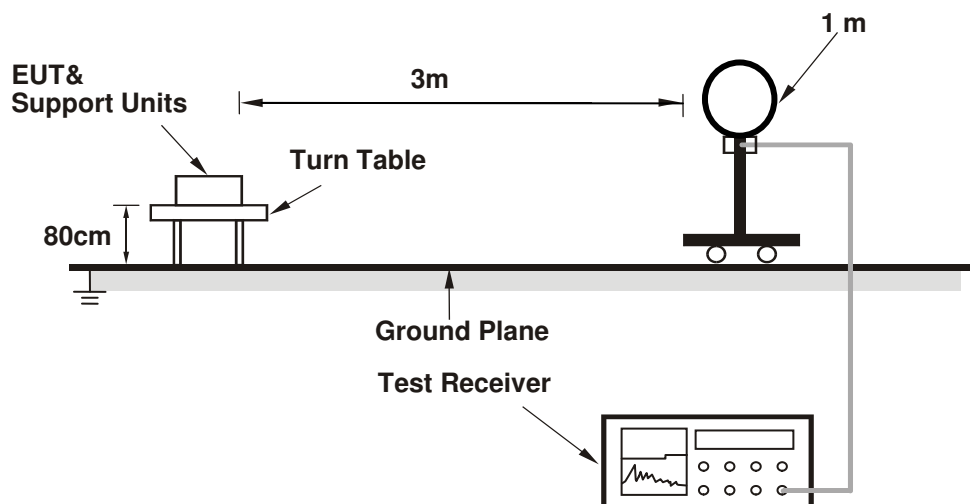
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

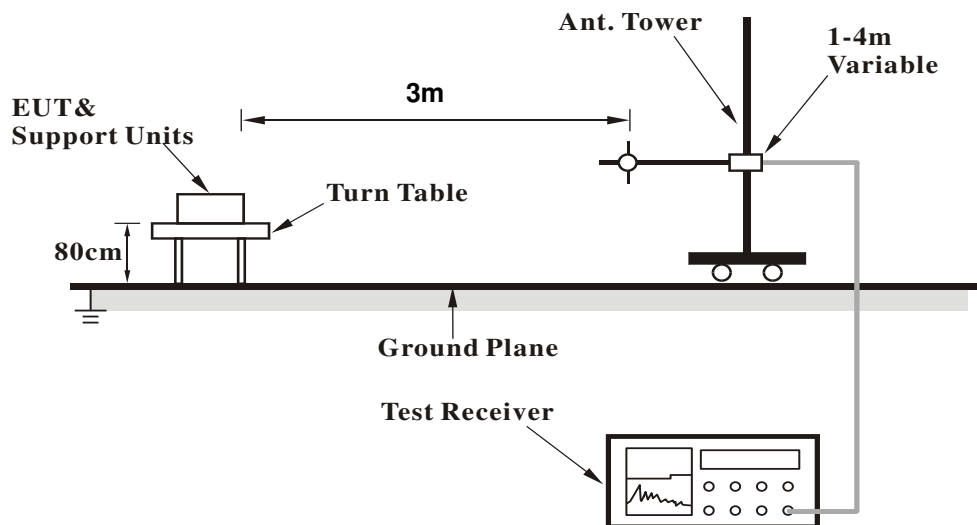
No deviation.

4.1.5 Test Setup

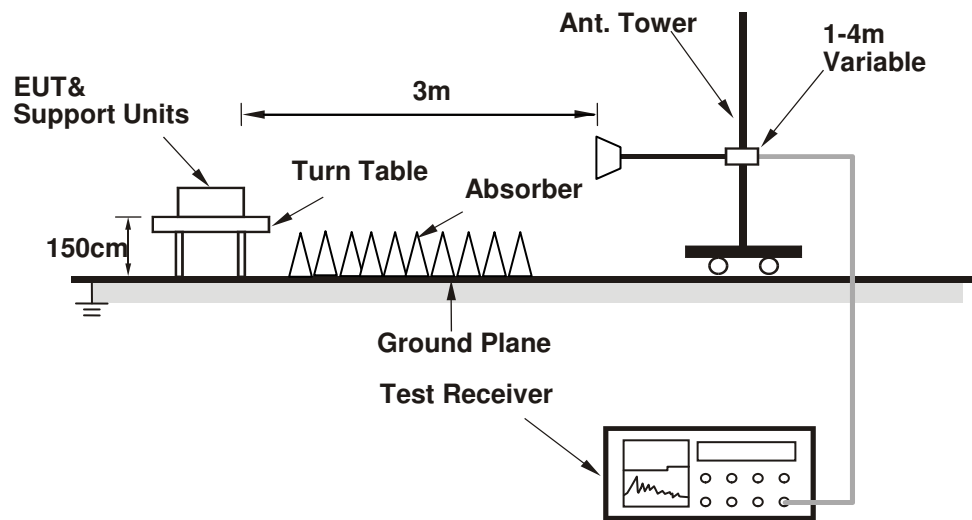
For Radiated emission below 30MHz



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

- Connected the EUT with the Laptop which is placed on remote site.
- Contorlling software (QTN Command) has been activated to set the EUT on specific status.

4.1.7 Test Results

CDD Mode

Above 1GHz Data:

802.11a

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	45.1 PK	74.0	-28.9	4.00 H	275	42.2	2.9
2	5150.00	34.5 AV	54.0	-19.5	4.00 H	275	31.6	2.9
3	*5260.00	107.2 PK			4.00 H	275	104.0	3.2
4	*5260.00	99.5 AV			4.00 H	275	96.3	3.2
5	#10520.00	52.7 PK	74.0	-21.3	2.71 H	202	40.7	12.0
6	#10520.00	39.9 AV	54.0	-14.1	2.71 H	202	27.9	12.0
7	15780.00	55.4 PK	74.0	-18.6	1.55 H	275	42.3	13.1
8	15780.00	40.0 AV	54.0	-14.0	1.55 H	275	26.9	13.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.1 PK	74.0	-19.9	3.48 V	150	51.2	2.9
2	5150.00	40.2 AV	54.0	-13.8	3.48 V	150	37.3	2.9
3	*5260.00	112.1 PK			3.48 V	150	108.9	3.2
4	*5260.00	104.1 AV			3.48 V	150	100.9	3.2
5	#10520.00	52.3 PK	74.0	-21.7	1.65 V	313	40.3	12.0
6	#10520.00	39.7 AV	54.0	-14.3	1.65 V	313	27.7	12.0
7	15780.00	55.1 PK	74.0	-18.9	1.43 V	304	42.0	13.1
8	15780.00	39.8 AV	54.0	-14.2	1.43 V	304	26.7	13.1

REMARKS:

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

CHANNEL	TX Channel 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	107.0 PK			3.13 H	277	103.8	3.2
2	*5300.00	99.2 AV			3.13 H	277	96.0	3.2
3	10600.00	53.3 PK	74.0	-20.7	2.74 H	198	41.1	12.2
4	10600.00	40.3 AV	54.0	-13.7	2.74 H	198	28.1	12.2
5	15900.00	55.1 PK	74.0	-18.9	1.47 H	267	42.6	12.5
6	15900.00	39.9 AV	54.0	-14.1	1.47 H	267	27.4	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.6 PK			3.43 V	143	109.4	3.2
2	*5300.00	104.5 AV			3.43 V	143	101.3	3.2
3	10600.00	52.5 PK	74.0	-21.5	1.62 V	297	40.3	12.2
4	10600.00	39.8 AV	54.0	-14.2	1.62 V	297	27.6	12.2
5	15900.00	55.4 PK	74.0	-18.6	1.40 V	312	42.9	12.5
6	15900.00	40.0 AV	54.0	-14.0	1.40 V	312	27.5	12.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	106.4 PK			3.98 H	275	103.1	3.3
2	*5320.00	98.7 AV			3.98 H	275	95.4	3.3
3	5350.00	51.2 PK	74.0	-22.8	3.98 H	275	47.8	3.4
4	5350.00	42.1 AV	54.0	-11.9	3.98 H	275	38.7	3.4
5	10640.00	53.5 PK	74.0	-20.5	2.74 H	193	41.0	12.5
6	10640.00	40.7 AV	54.0	-13.3	2.74 H	193	28.2	12.5
7	15960.00	55.6 PK	74.0	-18.4	1.49 H	282	43.0	12.6
8	15960.00	40.4 AV	54.0	-13.6	1.49 H	282	27.8	12.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.1 PK			3.39 V	132	108.8	3.3
2	*5320.00	104.2 AV			3.39 V	132	100.9	3.3
3	5350.00	57.8 PK	74.0	-16.2	3.47 V	150	54.4	3.4
4	5350.00	48.1 AV	54.0	-5.9	3.47 V	150	44.7	3.4
5	10640.00	52.6 PK	74.0	-21.4	1.58 V	310	40.1	12.5
6	10640.00	40.1 AV	54.0	-13.9	1.58 V	310	27.6	12.5
7	15960.00	55.6 PK	74.0	-18.4	1.37 V	299	43.0	12.6
8	15960.00	40.1 AV	54.0	-13.9	1.37 V	299	27.5	12.6

REMARKS:

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

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	54.1 PK	74.0	-19.9	2.18 H	270	50.7	3.4
2	#5470.00	43.1 AV	54.0	-10.9	2.18 H	270	39.7	3.4
3	*5500.00	105.7 PK			2.18 H	270	102.3	3.4
4	*5500.00	98.2 AV			2.18 H	270	94.8	3.4
5	11000.00	53.3 PK	74.0	-20.7	2.79 H	20	39.9	13.4
6	11000.00	40.2 AV	54.0	-13.8	2.79 H	20	26.8	13.4
7	#16500.00	55.1 PK	74.0	-18.9	1.47 H	27	40.4	14.7
8	#16500.00	39.9 AV	54.0	-14.1	1.47 H	27	25.2	14.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.2 PK	74.0	-14.8	2.75 V	176	55.8	3.4
2	#5470.00	46.2 AV	54.0	-7.8	2.75 V	176	42.8	3.4
3	*5500.00	112.4 PK			2.75 V	176	109.0	3.4
4	*5500.00	104.0 AV			2.75 V	176	100.6	3.4
5	11000.00	51.9 PK	74.0	-22.1	1.63 V	302	38.5	13.4
6	11000.00	39.5 AV	54.0	-14.5	1.63 V	302	26.1	13.4
7	#16500.00	55.2 PK	74.0	-18.8	1.45 V	307	40.5	14.7
8	#16500.00	39.8 AV	54.0	-14.2	1.45 V	307	25.1	14.7

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 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	106.7 PK			2.18 H	270	103.2	3.5
2	*5580.00	98.7 AV			2.18 H	270	95.2	3.5
3	11160.00	53.0 PK	74.0	-21.0	2.78 H	210	40.1	12.9
4	11160.00	40.3 AV	54.0	-13.7	2.78 H	210	27.4	12.9
5	#16740.00	54.5 PK	74.0	-19.5	1.42 H	262	38.8	15.7
6	#16740.00	39.4 AV	54.0	-14.6	1.42 H	262	23.7	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	*5580.00	112.5 PK			2.74 V	208	109.0	3.5
2	*5580.00	104.6 AV			2.74 V	208	101.1	3.5
3	11160.00	53.1 PK	74.0	-20.9	1.61 V	304	40.2	12.9
4	11160.00	40.2 AV	54.0	-13.8	1.61 V	304	27.3	12.9
5	#16740.00	55.7 PK	74.0	-18.3	1.39 V	318	40.0	15.7
6	#16740.00	40.0 AV	54.0	-14.0	1.39 V	318	24.3	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 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	106.4 PK			2.11 H	271	102.6	3.8
2	*5700.00	99.0 AV			2.11 H	271	95.2	3.8
3	#5725.00	60.1 PK	74.0	-13.9	2.11 H	271	56.2	3.9
4	#5725.00	45.2 AV	54.0	-8.8	2.11 H	271	41.3	3.9
5	11400.00	53.6 PK	74.0	-20.4	2.70 H	201	40.7	12.9
6	11400.00	40.4 AV	54.0	-13.6	2.70 H	201	27.5	12.9
7	#17100.00	54.6 PK	74.0	-19.4	1.50 H	257	37.0	17.6
8	#17100.00	39.4 AV	54.0	-14.6	1.50 H	257	21.8	17.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.3 PK			2.83 V	210	108.5	3.8
2	*5700.00	104.3 AV			2.83 V	210	100.5	3.8
3	#5725.00	62.4 PK	74.0	-11.6	2.83 V	210	58.5	3.9
4	#5725.00	47.8 AV	54.0	-6.2	2.83 V	210	43.9	3.9
5	11400.00	53.0 PK	74.0	-21.0	1.60 V	291	40.1	12.9
6	11400.00	40.2 AV	54.0	-13.8	1.60 V	291	27.3	12.9
7	#17100.00	55.7 PK	74.0	-18.3	1.45 V	323	38.1	17.6
8	#17100.00	40.1 AV	54.0	-13.9	1.45 V	323	22.5	17.6

REMARKS:

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

CHANNEL	TX Channel 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	*5720.00	105.5 PK			2.13 H	284	101.6	3.9
2	*5720.00	97.9 AV			2.13 H	284	94.0	3.9
3	#5850.00	54.0 PK	74.0	-20.0	2.13 H	284	49.9	4.1
4	#5850.00	39.1 AV	54.0	-14.9	2.13 H	284	35.0	4.1
5	11440.00	53.6 PK	74.0	-20.4	2.73 H	194	40.8	12.8
6	11440.00	40.5 AV	54.0	-13.5	2.73 H	194	27.7	12.8
7	#17160.00	54.8 PK	74.0	-19.2	1.50 H	284	37.4	17.4
8	#17160.00	39.5 AV	54.0	-14.5	1.50 H	284	22.1	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	*5720.00	112.5 PK			2.76 V	162	108.6	3.9
2	*5720.00	104.0 AV			2.76 V	162	100.1	3.9
3	#5850.00	56.0 PK	74.0	-18.0	2.76 V	162	51.9	4.1
4	#5850.00	40.1 AV	54.0	-13.9	2.76 V	162	36.0	4.1
5	11440.00	52.1 PK	74.0	-21.9	1.68 V	297	39.3	12.8
6	11440.00	39.4 AV	54.0	-14.6	1.68 V	297	26.6	12.8
7	#17160.00	54.9 PK	74.0	-19.1	1.46 V	308	37.5	17.4
8	#17160.00	39.6 AV	54.0	-14.4	1.46 V	308	22.2	17.4

REMARKS:

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

802.11ac (VHT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	49.2 PK	74.0	-24.8	2.29 H	285	46.3	2.9
2	5150.00	35.1 AV	54.0	-18.9	2.29 H	285	32.2	2.9
3	*5260.00	108.2 PK			2.29 H	285	105.0	3.2
4	*5260.00	98.7 AV			2.29 H	285	95.5	3.2
5	#10520.00	52.8 PK	74.0	-21.2	2.77 H	213	40.8	12.0
6	#10520.00	40.1 AV	54.0	-13.9	2.77 H	213	28.1	12.0
7	15780.00	54.5 PK	74.0	-19.5	1.49 H	272	41.4	13.1
8	15780.00	39.5 AV	54.0	-14.5	1.49 H	272	26.4	13.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.7 PK	74.0	-19.3	2.71 V	156	51.8	2.9
2	5150.00	40.5 AV	54.0	-13.5	2.71 V	156	37.6	2.9
3	*5260.00	113.1 PK			2.71 V	156	109.9	3.2
4	*5260.00	103.0 AV			2.71 V	156	99.8	3.2
5	#10520.00	61.7 PK	74.0	-12.3	2.60 V	289	49.7	12.0
6	#10520.00	49.2 AV	54.0	-4.8	2.60 V	289	37.2	12.0
7	15780.00	55.4 PK	74.0	-18.6	1.69 V	331	42.3	13.1
8	15780.00	43.3 AV	54.0	-10.7	1.69 V	331	30.2	13.1

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 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	108.2 PK			2.19 H	292	105.0	3.2
2	*5300.00	98.7 AV			2.19 H	292	95.5	3.2
3	10600.00	53.3 PK	74.0	-20.7	2.72 H	208	41.1	12.2
4	10600.00	40.6 AV	54.0	-13.4	2.72 H	208	28.4	12.2
5	15900.00	55.4 PK	74.0	-18.6	1.51 H	260	42.9	12.5
6	15900.00	40.1 AV	54.0	-13.9	1.51 H	260	27.6	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.5 PK			2.66 V	215	110.3	3.2
2	*5300.00	103.1 AV			2.66 V	215	99.9	3.2
3	10600.00	61.8 PK	74.0	-12.2	2.60 V	303	49.6	12.2
4	10600.00	49.7 AV	54.0	-4.3	2.60 V	303	37.5	12.2
5	15900.00	55.8 PK	74.0	-18.2	1.65 V	326	43.3	12.5
6	15900.00	43.6 AV	54.0	-10.4	1.65 V	326	31.1	12.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	108.7 PK			2.15 H	290	105.4	3.3
2	*5320.00	99.1 AV			2.15 H	290	95.8	3.3
3	5350.00	60.2 PK	74.0	-13.8	2.15 H	290	56.8	3.4
4	5350.00	45.7 AV	54.0	-8.3	2.15 H	290	42.3	3.4
5	10640.00	53.2 PK	74.0	-20.8	2.79 H	212	40.7	12.5
6	10640.00	40.4 AV	54.0	-13.6	2.79 H	212	27.9	12.5
7	15960.00	55.4 PK	74.0	-18.6	1.50 H	282	42.8	12.6
8	15960.00	40.1 AV	54.0	-13.9	1.50 H	282	27.5	12.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.6 PK			2.65 V	212	109.3	3.3
2	*5320.00	102.6 AV			2.65 V	212	99.3	3.3
3	5350.00	63.1 PK	74.0	-10.9	2.65 V	212	59.7	3.4
4	5350.00	47.8 AV	54.0	-6.2	2.65 V	212	44.4	3.4
5	10640.00	52.0 PK	74.0	-22.0	1.67 V	299	39.5	12.5
6	10640.00	39.4 AV	54.0	-14.6	1.67 V	299	26.9	12.5
7	15960.00	55.2 PK	74.0	-18.8	1.48 V	306	42.6	12.6
8	15960.00	39.8 AV	54.0	-14.2	1.48 V	306	27.2	12.6

REMARKS:

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

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	57.6 PK	74.0	-16.4	2.19 H	270	54.2	3.4
2	#5470.00	42.1 AV	54.0	-11.9	2.19 H	270	38.7	3.4
3	*5500.00	108.0 PK			2.19 H	270	104.6	3.4
4	*5500.00	98.7 AV			2.19 H	270	95.3	3.4
5	11000.00	53.6 PK	74.0	-20.4	2.77 H	195	40.2	13.4
6	11000.00	40.6 AV	54.0	-13.4	2.77 H	195	27.2	13.4
7	#16500.00	54.9 PK	74.0	-19.1	1.42 H	272	40.2	14.7
8	#16500.00	39.9 AV	54.0	-14.1	1.42 H	272	25.2	14.7

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	60.8 PK	74.0	-13.2	2.40 V	214	57.4	3.4
2	#5470.00	45.9 AV	54.0	-8.1	2.40 V	214	42.5	3.4
3	*5500.00	112.3 PK			2.40 V	214	108.9	3.4
4	*5500.00	102.3 AV			2.40 V	214	98.9	3.4
5	11000.00	52.5 PK	74.0	-21.5	1.62 V	310	39.1	13.4
6	11000.00	39.7 AV	54.0	-14.3	1.62 V	310	26.3	13.4
7	#16500.00	55.6 PK	74.0	-18.4	1.42 V	310	40.9	14.7
8	#16500.00	40.2 AV	54.0	-13.8	1.42 V	310	25.5	14.7

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 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	107.8 PK			2.14 H	278	104.3	3.5
2	*5580.00	98.6 AV			2.14 H	278	95.1	3.5
3	11160.00	53.1 PK	74.0	-20.9	2.73 H	185	40.2	12.9
4	11160.00	40.1 AV	54.0	-13.9	2.73 H	185	27.2	12.9
5	#16740.00	55.7 PK	74.0	-18.3	1.47 H	261	40.0	15.7
6	#16740.00	40.4 AV	54.0	-13.6	1.47 H	261	24.7	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	*5580.00	112.9 PK			2.55 V	210	109.4	3.5
2	*5580.00	102.7 AV			2.55 V	210	99.2	3.5
3	11160.00	52.2 PK	74.0	-21.8	1.60 V	307	39.3	12.9
4	11160.00	39.6 AV	54.0	-14.4	1.60 V	307	26.7	12.9
5	#16740.00	55.2 PK	74.0	-18.8	1.46 V	298	39.5	15.7
6	#16740.00	40.1 AV	54.0	-13.9	1.46 V	298	24.4	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 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	108.1 PK			2.11 H	265	104.3	3.8
2	*5700.00	98.7 AV			2.11 H	265	94.9	3.8
3	#5725.00	58.2 PK	74.0	-15.8	2.11 H	265	54.3	3.9
4	#5725.00	45.1 AV	54.0	-8.9	2.11 H	265	41.2	3.9
5	11400.00	53.2 PK	74.0	-20.8	2.74 H	192	40.3	12.9
6	11400.00	40.0 AV	54.0	-14.0	2.74 H	192	27.1	12.9
7	#17100.00	55.2 PK	74.0	-18.8	1.48 H	264	37.6	17.6
8	#17100.00	40.0 AV	54.0	-14.0	1.48 H	264	22.4	17.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.4 PK			2.55 V	206	108.6	3.8
2	*5700.00	102.4 AV			2.55 V	206	98.6	3.8
3	#5725.00	62.7 PK	74.0	-11.3	2.55 V	206	58.8	3.9
4	#5725.00	48.0 AV	54.0	-6.0	2.55 V	206	44.1	3.9
5	11400.00	51.9 PK	74.0	-22.1	1.65 V	318	39.0	12.9
6	11400.00	39.4 AV	54.0	-14.6	1.65 V	318	26.5	12.9
7	#17100.00	55.7 PK	74.0	-18.3	1.44 V	311	38.1	17.6
8	#17100.00	40.2 AV	54.0	-13.8	1.44 V	311	22.6	17.6

REMARKS:

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

CHANNEL	TX Channel 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	*5720.00	108.5 PK			2.10 H	271	104.6	3.9
2	*5720.00	98.8 AV			2.10 H	271	94.9	3.9
3	#5850.00	54.4 PK	74.0	-19.6	2.10 H	271	50.3	4.1
4	#5850.00	39.4 AV	54.0	-14.6	2.10 H	271	35.3	4.1
5	11440.00	52.8 PK	74.0	-21.2	2.78 H	177	40.0	12.8
6	11440.00	39.7 AV	54.0	-14.3	2.78 H	177	26.9	12.8
7	#17160.00	54.7 PK	74.0	-19.3	1.43 H	252	37.3	17.4
8	#17160.00	39.6 AV	54.0	-14.4	1.43 H	252	22.2	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	*5720.00	112.3 PK			2.55 V	211	108.4	3.9
2	*5720.00	102.5 AV			2.55 V	211	98.6	3.9
3	#5850.00	55.9 PK	74.0	-18.1	2.55 V	211	51.8	4.1
4	#5850.00	39.9 AV	54.0	-14.1	2.55 V	211	35.8	4.1
5	11440.00	51.5 PK	74.0	-22.5	1.63 V	303	38.7	12.8
6	11440.00	39.0 AV	54.0	-15.0	1.63 V	303	26.2	12.8
7	#17160.00	55.5 PK	74.0	-18.5	1.41 V	324	38.1	17.4
8	#17160.00	39.8 AV	54.0	-14.2	1.41 V	324	22.4	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.

802.11ac (VHT40)

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	50.2 PK	74.0	-23.8	1.64 H	267	47.3	2.9
2	5150.00	39.2 AV	54.0	-14.8	1.64 H	267	36.3	2.9
3	*5270.00	107.2 PK			1.64 H	267	104.0	3.2
4	*5270.00	97.1 AV			1.64 H	267	93.9	3.2
5	#10540.00	52.3 PK	74.0	-21.7	2.76 H	213	40.3	12.0
6	#10540.00	39.8 AV	54.0	-14.2	2.76 H	213	27.8	12.0
7	15810.00	54.1 PK	74.0	-19.9	1.53 H	251	41.1	13.0
8	15810.00	39.0 AV	54.0	-15.0	1.53 H	251	26.0	13.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.1 PK	74.0	-21.9	2.06 V	182	49.2	2.9
2	5150.00	41.2 AV	54.0	-12.8	2.06 V	182	38.3	2.9
3	*5270.00	110.2 PK			2.06 V	182	107.0	3.2
4	*5270.00	101.0 AV			2.06 V	182	97.8	3.2
5	#10540.00	51.7 PK	74.0	-22.3	1.62 V	300	39.7	12.0
6	#10540.00	39.2 AV	54.0	-14.8	1.62 V	300	27.2	12.0
7	15810.00	55.4 PK	74.0	-18.6	1.42 V	311	42.4	13.0
8	15810.00	40.3 AV	54.0	-13.7	1.42 V	311	27.3	13.0

REMARKS:

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

CHANNEL	TX Channel 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	106.8 PK			1.72 H	268	103.5	3.3
2	*5310.00	97.8 AV			1.72 H	268	94.5	3.3
3	5350.00	60.1 PK	74.0	-13.9	1.72 H	268	56.7	3.4
4	5350.00	50.9 AV	54.0	-3.1	1.72 H	268	47.5	3.4
5	10620.00	51.9 PK	74.0	-22.1	2.67 H	196	39.5	12.4
6	10620.00	39.5 AV	54.0	-14.5	2.67 H	196	27.1	12.4
7	15930.00	54.6 PK	74.0	-19.4	1.51 H	251	42.1	12.5
8	15930.00	39.3 AV	54.0	-14.7	1.51 H	251	26.8	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	111.2 PK			2.05 V	174	107.9	3.3
2	*5310.00	102.2 AV			2.05 V	174	98.9	3.3
3	5350.00	66.8 PK	74.0	-7.2	2.05 V	174	63.4	3.4
4	5350.00	51.2 AV	54.0	-2.8	2.05 V	174	47.8	3.4
5	10620.00	51.9 PK	74.0	-22.1	1.65 V	309	39.5	12.4
6	10620.00	39.2 AV	54.0	-14.8	1.65 V	309	26.8	12.4
7	15930.00	55.2 PK	74.0	-18.8	1.44 V	289	42.7	12.5
8	15930.00	40.3 AV	54.0	-13.7	1.44 V	289	27.8	12.5

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.5 PK	74.0	-10.5	1.70 H	270	60.1	3.4
2	5460.00	48.7 AV	54.0	-5.3	1.70 H	270	45.3	3.4
3	#5470.00	68.1 PK	74.0	-5.9	1.70 H	270	64.7	3.4
4	#5470.00	51.2 AV	54.0	-2.8	1.70 H	270	47.8	3.4
5	*5510.00	106.8 PK			1.70 H	270	103.3	3.5
6	*5510.00	97.7 AV			1.70 H	270	94.2	3.5
7	11020.00	52.1 PK	74.0	-21.9	2.78 H	210	38.8	13.3
8	11020.00	39.7 AV	54.0	-14.3	2.78 H	210	26.4	13.3
9	#16530.00	54.9 PK	74.0	-19.1	1.45 H	269	40.1	14.8
10	#16530.00	39.5 AV	54.0	-14.5	1.45 H	269	24.7	14.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	66.8 PK	74.0	-7.2	1.93 V	172	63.4	3.4
2	5460.00	50.9 AV	54.0	-3.1	1.93 V	172	47.5	3.4
3	#5470.00	70.2 PK	74.0	-3.8	1.93 V	172	66.8	3.4
4	#5470.00	51.4 AV	54.0	-2.6	1.93 V	172	48.0	3.4
5	*5510.00	111.2 PK			1.93 V	172	107.7	3.5
6	*5510.00	102.4 AV			1.93 V	172	98.9	3.5
7	11020.00	52.6 PK	74.0	-21.4	1.61 V	297	39.3	13.3
8	11020.00	39.9 AV	54.0	-14.1	1.61 V	297	26.6	13.3
9	#16530.00	55.5 PK	74.0	-18.5	1.45 V	308	40.7	14.8
10	#16530.00	40.3 AV	54.0	-13.7	1.45 V	308	25.5	14.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	107.4 PK			1.64 H	276	104.0	3.4
2	*5550.00	98.2 AV			1.64 H	276	94.8	3.4
3	11100.00	56.0 PK	74.0	-18.0	2.68 H	214	43.0	13.0
4	11100.00	44.6 AV	54.0	-9.4	2.68 H	214	31.6	13.0
5	#16650.00	57.5 PK	74.0	-16.5	1.51 H	276	42.0	15.5
6	#16650.00	43.0 AV	54.0	-11.0	1.51 H	276	27.5	15.5
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	*5550.00	111.4 PK			1.98 V	172	108.0	3.4
2	*5550.00	102.4 AV			1.98 V	172	99.0	3.4
3	11100.00	52.1 PK	74.0	-21.9	1.62 V	299	39.1	13.0
4	11100.00	39.2 AV	54.0	-14.8	1.62 V	299	26.2	13.0
5	#16650.00	54.7 PK	74.0	-19.3	1.44 V	295	39.2	15.5
6	#16650.00	39.9 AV	54.0	-14.1	1.44 V	295	24.4	15.5

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 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	107.5 PK			1.66 H	271	103.8	3.7
2	*5670.00	98.5 AV			1.66 H	271	94.8	3.7
3	#5725.00	64.2 PK	74.0	-9.8	1.66 H	271	60.3	3.9
4	#5725.00	49.6 AV	54.0	-4.4	1.66 H	271	45.7	3.9
5	11340.00	52.2 PK	74.0	-21.8	2.70 H	222	39.2	13.0
6	11340.00	39.5 AV	54.0	-14.5	2.70 H	222	26.5	13.0
7	#17010.00	55.3 PK	74.0	-18.7	1.56 H	264	37.9	17.4
8	#17010.00	39.7 AV	54.0	-14.3	1.56 H	264	22.3	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	*5670.00	111.7 PK			1.77 V	167	108.0	3.7
2	*5670.00	102.5 AV			1.77 V	167	98.8	3.7
3	#5725.00	65.1 PK	74.0	-8.9	1.77 V	167	61.2	3.9
4	#5725.00	50.4 AV	54.0	-3.6	1.77 V	167	46.5	3.9
5	11340.00	52.2 PK	74.0	-21.8	1.60 V	292	39.2	13.0
6	11340.00	39.4 AV	54.0	-14.6	1.60 V	292	26.4	13.0
7	#17010.00	55.0 PK	74.0	-19.0	1.45 V	310	37.6	17.4
8	#17010.00	39.7 AV	54.0	-14.3	1.45 V	310	22.3	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 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	*5710.00	107.7 PK			1.69 H	285	103.8	3.9
2	*5710.00	98.9 AV			1.69 H	285	95.0	3.9
3	#5850.00	53.8 PK	74.0	-20.2	1.69 H	285	49.7	4.1
4	#5850.00	38.9 AV	54.0	-15.1	1.69 H	285	34.8	4.1
5	11420.00	51.9 PK	74.0	-22.1	2.75 H	210	39.1	12.8
6	11420.00	39.4 AV	54.0	-14.6	2.75 H	210	26.6	12.8
7	#17130.00	55.2 PK	74.0	-18.8	1.53 H	258	37.6	17.6
8	#17130.00	39.7 AV	54.0	-14.3	1.53 H	258	22.1	17.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5710.00	111.9 PK			1.82 V	169	108.0	3.9
2	*5710.00	102.9 AV			1.82 V	169	99.0	3.9
3	#5850.00	55.8 PK	74.0	-18.2	1.82 V	169	51.7	4.1
4	#5850.00	40.0 AV	54.0	-14.0	1.82 V	169	35.9	4.1
5	11420.00	52.3 PK	74.0	-21.7	1.58 V	286	39.5	12.8
6	11420.00	39.4 AV	54.0	-14.6	1.58 V	286	26.6	12.8
7	#17130.00	55.2 PK	74.0	-18.8	1.50 V	310	37.6	17.6
8	#17130.00	40.0 AV	54.0	-14.0	1.50 V	310	22.4	17.6

REMARKS:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.9 PK	74.0	-22.1	1.61 H	265	49.0	2.9
2	5150.00	40.9 AV	54.0	-13.1	1.61 H	265	38.0	2.9
3	*5290.00	105.2 PK			1.61 H	265	102.0	3.2
4	*5290.00	95.8 AV			1.61 H	265	92.6	3.2
5	5350.00	59.7 PK	74.0	-14.3	1.61 H	265	56.3	3.4
6	5350.00	50.5 AV	54.0	-3.5	1.61 H	265	47.1	3.4
7	#10580.00	52.3 PK	74.0	-21.7	2.76 H	219	40.1	12.2
8	#10580.00	39.5 AV	54.0	-14.5	2.76 H	219	27.3	12.2
9	15870.00	55.2 PK	74.0	-18.8	1.52 H	260	42.6	12.6
10	15870.00	39.6 AV	54.0	-14.4	1.52 H	260	27.0	12.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.5 PK	74.0	-21.5	3.47 V	207	49.6	2.9
2	5150.00	42.3 AV	54.0	-11.7	3.47 V	207	39.4	2.9
3	*5290.00	108.2 PK			3.47 V	207	105.0	3.2
4	*5290.00	98.9 AV			3.47 V	207	95.7	3.2
5	5350.00	64.5 PK	74.0	-9.5	3.47 V	207	61.1	3.4
6	5350.00	53.6 AV	54.0	-0.4	3.47 V	207	50.2	3.4
7	#10580.00	52.4 PK	74.0	-21.6	1.65 V	296	40.2	12.2
8	#10580.00	39.7 AV	54.0	-14.3	1.65 V	296	27.5	12.2
9	15870.00	55.2 PK	74.0	-18.8	1.43 V	295	42.6	12.6
10	15870.00	40.3 AV	54.0	-13.7	1.43 V	295	27.7	12.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.3 PK	74.0	-13.7	1.73 H	281	56.9	3.4
2	5460.00	49.5 AV	54.0	-4.5	1.73 H	281	46.1	3.4
3	#5470.00	65.8 PK	74.0	-8.2	1.73 H	281	62.4	3.4
4	#5470.00	53.2 AV	54.0	-0.8	1.73 H	281	49.8	3.4
5	*5530.00	106.1 PK			1.73 H	281	102.7	3.4
6	*5530.00	96.4 AV			1.73 H	281	93.0	3.4
7	11060.00	52.4 PK	74.0	-21.6	2.74 H	222	39.2	13.2
8	11060.00	39.7 AV	54.0	-14.3	2.74 H	222	26.5	13.2
9	#16590.00	54.8 PK	74.0	-19.2	1.48 H	269	39.4	15.4
10	#16590.00	39.3 AV	54.0	-14.7	1.48 H	269	23.9	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	5460.00	62.7 PK	74.0	-11.3	3.48 V	213	59.3	3.4
2	5460.00	51.8 AV	54.0	-2.2	3.48 V	213	48.4	3.4
3	#5470.00	70.2 PK	74.0	-3.8	3.48 V	213	66.8	3.4
4	#5470.00	53.5 AV	54.0	-0.5	3.48 V	213	50.1	3.4
5	*5530.00	110.2 PK			3.48 V	213	106.8	3.4
6	*5530.00	101.2 AV			3.48 V	213	97.8	3.4
7	11060.00	52.8 PK	74.0	-21.2	1.58 V	302	39.6	13.2
8	11060.00	39.9 AV	54.0	-14.1	1.58 V	302	26.7	13.2
9	#16590.00	55.0 PK	74.0	-19.0	1.45 V	301	39.6	15.4
10	#16590.00	40.1 AV	54.0	-13.9	1.45 V	301	24.7	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 122	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	106.0 PK			1.53 H	270	102.3	3.7
2	*5610.00	96.3 AV			1.53 H	270	92.6	3.7
3	#5725.00	59.2 PK	74.0	-14.8	1.53 H	270	55.3	3.9
4	#5725.00	49.9 AV	54.0	-4.1	1.53 H	270	46.0	3.9
5	11220.00	52.9 PK	74.0	-21.1	2.75 H	199	39.9	13.0
6	11220.00	40.0 AV	54.0	-14.0	2.75 H	199	27.0	13.0
7	#16830.00	55.2 PK	74.0	-18.8	1.53 H	249	39.2	16.0
8	#16830.00	39.8 AV	54.0	-14.2	1.53 H	249	23.8	16.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	109.8 PK			3.47 V	208	106.1	3.7
2	*5610.00	100.8 AV			3.47 V	208	97.1	3.7
3	#5725.00	60.8 PK	74.0	-13.2	3.47 V	208	56.9	3.9
4	#5725.00	50.1 AV	54.0	-3.9	3.47 V	208	46.2	3.9
5	11220.00	52.6 PK	74.0	-21.4	1.65 V	307	39.6	13.0
6	11220.00	39.9 AV	54.0	-14.1	1.65 V	307	26.9	13.0
7	#16830.00	54.6 PK	74.0	-19.4	1.42 V	285	38.6	16.0
8	#16830.00	39.8 AV	54.0	-14.2	1.42 V	285	23.8	16.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5690.00	106.7 PK			1.51 H	260	102.9	3.8
2	*5690.00	96.8 AV			1.51 H	260	93.0	3.8
3	#5850.00	54.2 PK	74.0	-19.8	1.51 H	260	50.1	4.1
4	#5850.00	39.3 AV	54.0	-14.7	1.51 H	260	35.2	4.1
5	11380.00	52.9 PK	74.0	-21.1	2.78 H	201	40.0	12.9
6	11380.00	40.1 AV	54.0	-13.9	2.78 H	201	27.2	12.9
7	#17070.00	54.8 PK	74.0	-19.2	1.55 H	252	37.3	17.5
8	#17070.00	39.5 AV	54.0	-14.5	1.55 H	252	22.0	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	*5690.00	109.3 PK			3.44 V	199	105.5	3.8
2	*5690.00	100.3 AV			3.44 V	199	96.5	3.8
3	#5850.00	56.0 PK	74.0	-18.0	3.44 V	199	51.9	4.1
4	#5850.00	39.9 AV	54.0	-14.1	3.44 V	199	35.8	4.1
5	11380.00	52.4 PK	74.0	-21.6	1.66 V	320	39.5	12.9
6	11380.00	39.7 AV	54.0	-14.3	1.66 V	320	26.8	12.9
7	#17070.00	55.2 PK	74.0	-18.8	1.43 V	320	37.7	17.5
8	#17070.00	39.8 AV	54.0	-14.2	1.43 V	320	22.3	17.5

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.

Beamforming Mode

Above 1GHz Data:

802.11ac (VHT20)

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	5000.00	53.5 PK	74.0	-20.5	1.66 H	306	50.7	2.8
2	5000.00	45.7 AV	54.0	-8.3	1.66 H	306	42.9	2.8
3	5150.00	52.1 PK	74.0	-21.9	1.66 H	306	49.2	2.9
4	5150.00	43.2 AV	54.0	-10.8	1.66 H	306	40.3	2.9
5	*5260.00	110.4 PK			1.66 H	306	107.2	3.2
6	*5260.00	99.6 AV			1.66 H	306	96.4	3.2
7	#10520.00	52.1 PK	74.0	-21.9	2.62 H	31	39.8	12.3
8	#10520.00	40.4 AV	54.0	-13.6	2.62 H	31	28.1	12.3
9	15780.00	52.7 PK	74.0	-21.3	1.50 H	200	39.7	13.0
10	15780.00	39.6 AV	54.0	-14.4	1.50 H	200	26.6	13.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5000.00	55.0 PK	74.0	-19.0	1.85 V	174	52.2	2.8
2	5000.00	48.6 AV	54.0	-5.4	1.85 V	174	45.8	2.8
3	5150.00	53.2 PK	74.0	-20.8	1.85 V	174	50.3	2.9
4	5150.00	41.3 AV	54.0	-12.7	1.85 V	174	38.4	2.9
5	*5260.00	112.6 PK			1.85 V	174	109.4	3.2
6	*5260.00	101.8 AV			1.85 V	174	98.6	3.2
7	#10520.00	58.9 PK	74.0	-15.1	1.36 V	71	46.6	12.3
8	#10520.00	46.2 AV	54.0	-7.8	1.36 V	71	33.9	12.3
9	15780.00	46.8 PK	74.0	-27.2	2.84 V	303	33.8	13.0
10	15780.00	35.3 AV	54.0	-18.7	2.84 V	303	22.3	13.0

REMARKS:

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

CHANNEL	TX Channel 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	5000.00	53.2 PK	74.0	-20.8	1.64 H	313	50.4	2.8
2	5000.00	45.6 AV	54.0	-8.4	1.64 H	313	42.8	2.8
3	5150.00	51.3 PK	74.0	-22.7	1.67 H	306	48.4	2.9
4	5150.00	40.9 AV	54.0	-13.1	1.67 H	306	38.0	2.9
5	*5300.00	110.3 PK			1.63 H	316	107.1	3.2
6	*5300.00	99.4 AV			1.63 H	316	96.2	3.2
7	5350.00	53.2 PK	74.0	-20.8	1.63 H	306	49.8	3.4
8	5350.00	41.1 AV	54.0	-12.9	1.63 H	306	37.7	3.4
9	10600.00	52.1 PK	74.0	-21.9	2.60 H	25	39.6	12.5
10	10600.00	40.2 AV	54.0	-13.8	2.60 H	25	27.7	12.5
11	15900.00	52.5 PK	74.0	-21.5	1.50 H	191	40.1	12.4
12	15900.00	39.6 AV	54.0	-14.4	1.50 H	191	27.2	12.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5000.00	55.4 PK	74.0	-18.6	1.72 V	169	52.6	2.8
2	5000.00	48.5 AV	54.0	-5.5	1.72 V	169	45.7	2.8
3	5150.00	52.7 PK	74.0	-21.3	1.72 V	169	49.8	2.9
4	5150.00	41.8 AV	54.0	-12.2	1.72 V	169	38.9	2.9
5	*5300.00	113.4 PK			1.72 V	169	110.2	3.2
6	*5300.00	102.1 AV			1.72 V	169	98.9	3.2
7	5350.00	56.0 PK	74.0	-18.0	1.72 V	169	52.6	3.4
8	5350.00	43.4 AV	54.0	-10.6	1.72 V	169	40.0	3.4
9	10600.00	59.2 PK	74.0	-14.8	1.36 V	61	46.7	12.5
10	10600.00	46.5 AV	54.0	-7.5	1.36 V	61	34.0	12.5
11	15900.00	47.5 PK	74.0	-26.5	2.93 V	291	35.1	12.4
12	15900.00	35.6 AV	54.0	-18.4	2.93 V	291	23.2	12.4

REMARKS:

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

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	110.0 PK			1.71 H	296	106.8	3.2
2	*5320.00	99.5 AV			1.71 H	296	96.3	3.2
3	5350.00	54.2 PK	74.0	-19.8	1.60 H	308	50.8	3.4
4	5350.00	43.4 AV	54.0	-10.6	1.60 H	308	40.0	3.4
5	10640.00	51.5 PK	74.0	-22.5	2.55 H	16	38.9	12.6
6	10640.00	40.0 AV	54.0	-14.0	2.55 H	16	27.4	12.6
7	15960.00	52.7 PK	74.0	-21.3	1.48 H	204	40.3	12.4
8	15960.00	39.9 AV	54.0	-14.1	1.48 H	204	27.5	12.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.9 PK			1.70 V	171	109.7	3.2
2	*5320.00	101.8 AV			1.70 V	171	98.6	3.2
3	5350.00	56.2 PK	74.0	-17.8	1.70 V	171	52.8	3.4
4	5350.00	46.1 AV	54.0	-7.9	1.70 V	171	42.7	3.4
5	10640.00	59.1 PK	74.0	-14.9	1.29 V	77	46.5	12.6
6	10640.00	46.5 AV	54.0	-7.5	1.29 V	77	33.9	12.6
7	15960.00	46.8 PK	74.0	-27.2	2.85 V	290	34.4	12.4
8	15960.00	35.1 AV	54.0	-18.9	2.85 V	290	22.7	12.4

REMARKS:

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

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	53.4 PK	74.0	-20.6	1.61 H	299	49.9	3.5
2	#5470.00	43.3 AV	54.0	-10.7	1.61 H	299	39.8	3.5
3	*5500.00	108.1 PK			1.62 H	295	104.6	3.5
4	*5500.00	98.2 AV			1.62 H	295	94.7	3.5
5	11000.00	51.7 PK	74.0	-22.3	2.64 H	2	38.3	13.4
6	11000.00	39.9 AV	54.0	-14.1	2.64 H	2	26.5	13.4
7	#16500.00	52.9 PK	74.0	-21.1	1.52 H	208	38.4	14.5
8	#16500.00	40.1 AV	54.0	-13.9	1.52 H	208	25.6	14.5

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	54.8 PK	74.0	-19.2	1.68 V	220	51.3	3.5
2	#5470.00	44.2 AV	54.0	-9.8	1.68 V	220	40.7	3.5
3	*5500.00	110.6 PK			1.68 V	220	107.1	3.5
4	*5500.00	100.4 AV			1.68 V	220	96.9	3.5
5	11000.00	59.2 PK	74.0	-14.8	1.37 V	70	45.8	13.4
6	11000.00	46.6 AV	54.0	-7.4	1.37 V	70	33.2	13.4
7	#16500.00	47.6 PK	74.0	-26.4	2.88 V	293	33.1	14.5
8	#16500.00	35.9 AV	54.0	-18.1	2.88 V	293	21.4	14.5

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 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	52.4 PK	74.0	-21.6	1.67 H	299	48.9	3.5
2	#5470.00	42.6 AV	54.0	-11.4	1.67 H	299	39.1	3.5
3	*5580.00	108.3 PK			1.62 H	291	104.7	3.6
4	*5580.00	98.5 AV			1.62 H	291	94.9	3.6
5	#5725.00	51.3 PK	74.0	-22.7	1.59 H	295	47.3	4.0
6	#5725.00	43.6 AV	54.0	-10.4	1.59 H	295	39.6	4.0
7	11160.00	52.5 PK	74.0	-21.5	2.64 H	23	39.6	12.9
8	11160.00	40.5 AV	54.0	-13.5	2.64 H	23	27.6	12.9
9	#16740.00	52.3 PK	74.0	-21.7	1.52 H	212	36.7	15.6
10	#16740.00	39.5 AV	54.0	-14.5	1.52 H	212	23.9	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	53.4 PK	74.0	-20.6	1.65 V	218	49.9	3.5
2	#5470.00	42.2 AV	54.0	-11.8	1.65 V	218	38.7	3.5
3	*5580.00	110.2 PK			1.65 V	218	106.6	3.6
4	*5580.00	99.4 AV			1.65 V	218	95.8	3.6
5	#5725.00	53.6 PK	74.0	-20.4	1.65 V	218	49.6	4.0
6	#5725.00	40.1 AV	54.0	-13.9	1.65 V	218	36.1	4.0
7	11160.00	58.8 PK	74.0	-15.2	1.35 V	63	45.9	12.9
8	11160.00	46.3 AV	54.0	-7.7	1.35 V	63	33.4	12.9
9	#16740.00	47.2 PK	74.0	-26.8	2.87 V	285	31.6	15.6
10	#16740.00	35.4 AV	54.0	-18.6	2.87 V	285	19.8	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 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	108.2 PK			1.61 H	303	104.3	3.9
2	*5700.00	98.3 AV			1.61 H	303	94.4	3.9
3	#5725.00	54.5 PK	74.0	-19.5	1.57 H	281	50.5	4.0
4	#5725.00	43.5 AV	54.0	-10.5	1.57 H	281	39.5	4.0
5	11400.00	52.6 PK	74.0	-21.4	2.57 H	30	39.6	13.0
6	11400.00	40.5 AV	54.0	-13.5	2.57 H	30	27.5	13.0
7	#17100.00	52.8 PK	74.0	-21.2	1.50 H	195	35.4	17.4
8	#17100.00	39.7 AV	54.0	-14.3	1.50 H	195	22.3	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	*5700.00	112.2 PK			1.69 V	215	108.3	3.9
2	*5700.00	101.1 AV			1.69 V	215	97.2	3.9
3	#5725.00	56.1 PK	74.0	-17.9	1.69 V	215	52.1	4.0
4	#5725.00	44.2 AV	54.0	-9.8	1.69 V	215	40.2	4.0
5	11400.00	59.1 PK	74.0	-14.9	1.30 V	64	46.1	13.0
6	11400.00	46.5 AV	54.0	-7.5	1.30 V	64	33.5	13.0
7	#17100.00	46.9 PK	74.0	-27.1	2.85 V	295	29.5	17.4
8	#17100.00	35.3 AV	54.0	-18.7	2.85 V	295	17.9	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 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	51.0 PK	74.0	-23.0	1.71 H	289	47.5	3.5
2	#5470.00	40.6 AV	54.0	-13.4	1.71 H	289	37.1	3.5
3	*5720.00	108.0 PK			1.61 H	300	104.0	4.0
4	*5720.00	98.2 AV			1.61 H	300	94.2	4.0
5	#5850.00	50.3 PK	74.0	-23.7	1.59 H	301	46.2	4.1
6	#5850.00	38.9 AV	54.0	-15.1	1.59 H	301	34.8	4.1
7	11440.00	51.8 PK	74.0	-22.2	2.58 H	24	38.9	12.9
8	11440.00	39.9 AV	54.0	-14.1	2.58 H	24	27.0	12.9
9	#17160.00	53.2 PK	74.0	-20.8	1.51 H	204	35.8	17.4
10	#17160.00	40.0 AV	54.0	-14.0	1.51 H	204	22.6	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	53.9 PK	74.0	-20.1	1.71 V	221	50.4	3.5
2	#5470.00	42.7 AV	54.0	-11.3	1.71 V	221	39.2	3.5
3	*5720.00	111.7 PK			1.69 V	231	107.7	4.0
4	*5720.00	100.8 AV			1.69 V	231	96.8	4.0
5	#5850.00	53.9 PK	74.0	-20.1	1.64 V	234	49.8	4.1
6	#5850.00	40.1 AV	54.0	-13.9	1.64 V	234	36.0	4.1
7	11440.00	58.2 PK	74.0	-15.8	1.27 V	79	45.3	12.9
8	11440.00	45.8 AV	54.0	-8.2	1.27 V	79	32.9	12.9
9	#17160.00	47.6 PK	74.0	-26.4	2.90 V	287	30.2	17.4
10	#17160.00	35.8 AV	54.0	-18.2	2.90 V	287	18.4	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.

802.11ac (VHT40)

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	5000.00	52.2 PK	74.0	-21.8	2.42 H	313	49.4	2.8
2	5000.00	45.3 AV	54.0	-8.7	2.42 H	313	42.5	2.8
3	5150.00	50.6 PK	74.0	-23.4	2.36 H	316	47.7	2.9
4	5150.00	40.2 AV	54.0	-13.8	2.36 H	316	37.3	2.9
5	*5270.00	102.1 PK			2.36 H	316	98.9	3.2
6	*5270.00	92.6 AV			2.36 H	316	89.4	3.2
7	#10540.00	50.8 PK	74.0	-23.2	1.54 H	216	38.5	12.3
8	#10540.00	38.6 AV	54.0	-15.4	1.54 H	216	26.3	12.3
9	15810.00	46.1 PK	74.0	-27.9	1.61 H	319	33.2	12.9
10	15810.00	34.1 AV	54.0	-19.9	1.61 H	319	21.2	12.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5000.00	53.2 PK	74.0	-20.8	1.91 V	159	50.4	2.8
2	5000.00	47.3 AV	54.0	-6.7	1.91 V	159	44.5	2.8
3	5150.00	53.6 PK	74.0	-20.4	1.91 V	159	50.7	2.9
4	5150.00	41.2 AV	54.0	-12.8	1.91 V	159	38.3	2.9
5	*5270.00	107.8 PK			1.91 V	159	104.6	3.2
6	*5270.00	97.8 AV			1.91 V	159	94.6	3.2
7	#10540.00	50.6 PK	74.0	-23.4	1.84 V	241	38.3	12.3
8	#10540.00	39.1 AV	54.0	-14.9	1.84 V	241	26.8	12.3
9	15810.00	45.6 PK	74.0	-28.4	1.58 V	360	32.7	12.9
10	15810.00	34.0 AV	54.0	-20.0	1.58 V	360	21.1	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.4 PK			2.39 H	329	99.2	3.2
2	*5310.00	93.1 AV			2.39 H	329	89.9	3.2
3	5350.00	50.4 PK	74.0	-23.6	2.39 H	329	47.0	3.4
4	5350.00	40.1 AV	54.0	-13.9	2.39 H	329	36.7	3.4
5	10620.00	50.8 PK	74.0	-23.2	1.52 H	216	38.3	12.5
6	10620.00	38.2 AV	54.0	-15.8	1.52 H	216	25.7	12.5
7	15930.00	45.5 PK	74.0	-28.5	1.65 H	304	33.2	12.3
8	15930.00	33.8 AV	54.0	-20.2	1.65 H	304	21.5	12.3

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	108.5 PK			1.85 V	164	105.3	3.2
2	*5310.00	98.4 AV			1.85 V	164	95.2	3.2
3	5350.00	60.9 PK	74.0	-13.1	1.85 V	164	57.5	3.4
4	5350.00	46.5 AV	54.0	-7.5	1.85 V	164	43.1	3.4
5	10620.00	51.6 PK	74.0	-22.4	1.86 V	232	39.1	12.5
6	10620.00	39.8 AV	54.0	-14.2	1.86 V	232	27.3	12.5
7	15930.00	46.1 PK	74.0	-27.9	1.51 V	360	33.8	12.3
8	15930.00	34.2 AV	54.0	-19.8	1.51 V	360	21.9	12.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.2 PK	74.0	-19.8	2.32 H	302	50.7	3.5
2	#5470.00	45.0 AV	54.0	-9.0	2.32 H	302	41.5	3.5
3	*5510.00	101.9 PK			2.32 H	302	98.3	3.6
4	*5510.00	92.2 AV			2.32 H	302	88.6	3.6
5	11020.00	51.0 PK	74.0	-23.0	1.49 H	221	37.6	13.4
6	11020.00	38.6 AV	54.0	-15.4	1.49 H	221	25.2	13.4
7	#16530.00	45.0 PK	74.0	-29.0	1.53 H	309	30.3	14.7
8	#16530.00	33.3 AV	54.0	-20.7	1.53 H	309	18.6	14.7

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	63.5 PK	74.0	-10.5	1.93 V	163	60.0	3.5
2	#5470.00	48.8 AV	54.0	-5.2	1.93 V	163	45.3	3.5
3	*5510.00	109.6 PK			1.93 V	163	106.0	3.6
4	*5510.00	98.8 AV			1.93 V	163	95.2	3.6
5	11020.00	51.5 PK	74.0	-22.5	1.83 V	245	38.1	13.4
6	11020.00	39.8 AV	54.0	-14.2	1.83 V	245	26.4	13.4
7	#16530.00	45.7 PK	74.0	-28.3	1.54 V	360	31.0	14.7
8	#16530.00	34.2 AV	54.0	-19.8	1.54 V	360	19.5	14.7

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 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	#5470.00	52.6 PK	74.0	-21.4	2.38 H	313	49.1	3.5
2	#5470.00	40.1 AV	54.0	-13.9	2.38 H	313	36.6	3.5
3	*5550.00	102.0 PK			2.38 H	313	98.5	3.5
4	*5550.00	92.6 AV			2.38 H	313	89.1	3.5
5	#5725.00	51.6 PK	74.0	-22.4	2.38 H	313	47.6	4.0
6	#5725.00	39.5 AV	54.0	-14.5	2.38 H	313	35.5	4.0
7	11100.00	50.9 PK	74.0	-23.1	1.45 H	237	37.9	13.0
8	11100.00	38.5 AV	54.0	-15.5	1.45 H	237	25.5	13.0
9	#16650.00	44.9 PK	74.0	-29.1	1.62 H	310	29.4	15.5
10	#16650.00	33.3 AV	54.0	-20.7	1.62 H	310	17.8	15.5

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	55.7 PK	74.0	-18.3	1.61 V	208	52.2	3.5
2	#5470.00	43.1 AV	54.0	-10.9	1.61 V	208	39.6	3.5
3	*5550.00	108.9 PK			1.61 V	208	105.4	3.5
4	*5550.00	98.6 AV			1.61 V	208	95.1	3.5
5	#5725.00	53.4 PK	74.0	-20.6	1.61 V	208	49.4	4.0
6	#5725.00	41.2 AV	54.0	-12.8	1.61 V	208	37.2	4.0
7	11100.00	51.4 PK	74.0	-22.6	1.91 V	244	38.4	13.0
8	11100.00	39.6 AV	54.0	-14.4	1.91 V	244	26.6	13.0
9	#16650.00	45.6 PK	74.0	-28.4	1.53 V	360	30.1	15.5
10	#16650.00	34.2 AV	54.0	-19.8	1.53 V	360	18.7	15.5

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 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	102.6 PK			2.32 H	321	98.8	3.8
2	*5670.00	92.9 AV			2.32 H	321	89.1	3.8
3	#5725.00	54.8 PK	74.0	-19.2	2.32 H	321	50.8	4.0
4	#5725.00	45.7 AV	54.0	-8.3	2.32 H	321	41.7	4.0
5	11340.00	50.9 PK	74.0	-23.1	1.51 H	239	37.8	13.1
6	11340.00	38.6 AV	54.0	-15.4	1.51 H	239	25.5	13.1
7	#17010.00	45.3 PK	74.0	-28.7	1.63 H	334	27.8	17.5
8	#17010.00	33.3 AV	54.0	-20.7	1.63 H	334	15.8	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	*5670.00	109.9 PK			1.58 V	203	106.1	3.8
2	*5670.00	99.0 AV			1.58 V	203	95.2	3.8
3	#5725.00	57.0 PK	74.0	-17.0	1.58 V	203	53.0	4.0
4	#5725.00	42.1 AV	54.0	-11.9	1.58 V	203	38.1	4.0
5	11340.00	51.3 PK	74.0	-22.7	1.91 V	237	38.2	13.1
6	11340.00	39.6 AV	54.0	-14.4	1.91 V	237	26.5	13.1
7	#17010.00	46.1 PK	74.0	-27.9	1.51 V	358	28.6	17.5
8	#17010.00	34.4 AV	54.0	-19.6	1.51 V	358	16.9	17.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.2 PK	74.0	-14.8	2.37 H	301	55.7	3.5
2	#5470.00	42.1 AV	54.0	-11.9	2.37 H	301	38.6	3.5
3	*5710.00	102.0 PK			2.37 H	301	98.0	4.0
4	*5710.00	92.3 AV			2.37 H	301	88.3	4.0
5	#5850.00	53.7 PK	74.0	-20.3	2.37 H	301	49.6	4.1
6	#5850.00	40.7 AV	54.0	-13.3	2.37 H	301	36.6	4.1
7	11420.00	50.9 PK	74.0	-23.1	1.52 H	226	38.0	12.9
8	11420.00	38.3 AV	54.0	-15.7	1.52 H	226	25.4	12.9
9	#17130.00	45.1 PK	74.0	-28.9	1.54 H	319	27.6	17.5
10	#17130.00	33.5 AV	54.0	-20.5	1.54 H	319	16.0	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	55.7 PK	74.0	-18.3	1.53 V	215	52.2	3.5
2	#5470.00	43.0 AV	54.0	-11.0	1.53 V	215	39.5	3.5
3	*5710.00	109.9 PK			1.53 V	215	105.9	4.0
4	*5710.00	99.0 AV			1.53 V	215	95.0	4.0
5	#5850.00	54.1 PK	74.0	-19.9	1.53 V	215	50.0	4.1
6	#5850.00	41.6 AV	54.0	-12.4	1.53 V	215	37.5	4.1
7	11420.00	51.6 PK	74.0	-22.4	1.89 V	233	38.7	12.9
8	11420.00	39.6 AV	54.0	-14.4	1.89 V	233	26.7	12.9
9	#17130.00	45.8 PK	74.0	-28.2	1.53 V	360	28.3	17.5
10	#17130.00	34.1 AV	54.0	-19.9	1.53 V	360	16.6	17.5

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.

802.11ac (VHT80)

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	54.3 PK	74.0	-19.7	2.39 H	286	51.4	2.9
2	5150.00	42.5 AV	54.0	-11.5	2.39 H	286	39.6	2.9
3	*5290.00	103.9 PK			2.39 H	286	100.7	3.2
4	*5290.00	93.9 AV			2.39 H	286	90.7	3.2
5	5350.00	59.3 PK	74.0	-14.7	2.39 H	286	55.9	3.4
6	5350.00	48.7 AV	54.0	-5.3	2.39 H	286	45.3	3.4
7	#10580.00	50.9 PK	74.0	-23.1	1.46 H	218	38.4	12.5
8	#10580.00	38.0 AV	54.0	-16.0	1.46 H	218	25.5	12.5
9	15870.00	45.6 PK	74.0	-28.4	1.59 H	329	33.1	12.5
10	15870.00	33.9 AV	54.0	-20.1	1.59 H	329	21.4	12.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.8 PK	74.0	-21.2	1.76 V	158	49.9	2.9
2	5150.00	47.0 AV	54.0	-7.0	1.76 V	158	44.1	2.9
3	*5290.00	108.4 PK			1.76 V	158	105.2	3.2
4	*5290.00	97.8 AV			1.76 V	158	94.6	3.2
5	5350.00	63.5 PK	74.0	-10.5	1.76 V	158	60.1	3.4
6	5350.00	51.1 AV	54.0	-2.9	1.76 V	158	47.7	3.4
7	#10580.00	51.4 PK	74.0	-22.6	1.82 V	244	38.9	12.5
8	#10580.00	39.4 AV	54.0	-14.6	1.82 V	244	26.9	12.5
9	15870.00	45.0 PK	74.0	-29.0	1.51 V	356	32.5	12.5
10	15870.00	33.6 AV	54.0	-20.4	1.51 V	356	21.1	12.5

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	65.3 PK	74.0	-8.7	2.34 H	287	61.8	3.5
2	#5470.00	40.8 AV	54.0	-13.2	2.34 H	287	37.3	3.5
3	*5530.00	103.2 PK			2.34 H	287	99.7	3.5
4	*5530.00	93.5 AV			2.34 H	287	90.0	3.5
5	#5725.00	52.5 PK	74.0	-21.5	2.34 H	287	48.5	4.0
6	#5725.00	41.1 AV	54.0	-12.9	2.34 H	287	37.1	4.0
7	11060.00	50.9 PK	74.0	-23.1	1.53 H	214	37.7	13.2
8	11060.00	38.4 AV	54.0	-15.6	1.53 H	214	25.2	13.2
9	#16590.00	45.4 PK	74.0	-28.6	1.52 H	307	30.0	15.4
10	#16590.00	33.6 AV	54.0	-20.4	1.52 H	307	18.2	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	#5470.00	67.5 PK	74.0	-6.5	1.81 V	149	64.0	3.5
2	#5470.00	49.9 AV	54.0	-4.1	1.81 V	149	46.4	3.5
3	*5530.00	106.5 PK			1.81 V	149	103.0	3.5
4	*5530.00	97.6 AV			1.81 V	149	94.1	3.5
5	#5725.00	54.8 PK	74.0	-19.2	1.81 V	149	50.8	4.0
6	#5725.00	43.4 AV	54.0	-10.6	1.81 V	149	39.4	4.0
7	11060.00	51.3 PK	74.0	-22.7	1.90 V	219	38.1	13.2
8	11060.00	39.5 AV	54.0	-14.5	1.90 V	219	26.3	13.2
9	#16590.00	45.7 PK	74.0	-28.3	1.50 V	360	30.3	15.4
10	#16590.00	33.9 AV	54.0	-20.1	1.50 V	360	18.5	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 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	103.7 PK			2.44 H	301	100.0	3.7
2	*5610.00	93.9 AV			2.44 H	301	90.2	3.7
3	#5725.00	53.7 PK	74.0	-20.3	2.44 H	301	49.7	4.0
4	#5725.00	41.2 AV	54.0	-12.8	2.44 H	301	37.2	4.0
5	11220.00	51.0 PK	74.0	-23.0	1.52 H	233	38.0	13.0
6	11220.00	38.5 AV	54.0	-15.5	1.52 H	233	25.5	13.0
7	#16830.00	45.1 PK	74.0	-28.9	1.49 H	333	29.1	16.0
8	#16830.00	33.3 AV	54.0	-20.7	1.49 H	333	17.3	16.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	106.6 PK			1.79 V	146	102.9	3.7
2	*5610.00	97.5 AV			1.79 V	146	93.8	3.7
3	#5725.00	67.0 PK	74.0	-7.0	1.77 V	152	63.0	4.0
4	#5725.00	49.6 AV	54.0	-4.4	1.77 V	152	45.6	4.0
5	11220.00	50.7 PK	74.0	-23.3	1.84 V	241	37.7	13.0
6	11220.00	39.1 AV	54.0	-14.9	1.84 V	241	26.1	13.0
7	#16830.00	46.1 PK	74.0	-27.9	1.58 V	360	30.1	16.0
8	#16830.00	34.3 AV	54.0	-19.7	1.58 V	360	18.3	16.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	51.6 PK	74.0	-22.4	2.38 H	286	48.1	3.5
2	#5470.00	40.6 AV	54.0	-13.4	2.38 H	286	37.1	3.5
3	*5690.00	102.3 PK			2.38 H	286	98.4	3.9
4	*5690.00	92.1 AV			2.38 H	286	88.2	3.9
5	#5850.00	54.4 PK	74.0	-19.6	2.38 H	286	50.3	4.1
6	#5850.00	41.5 AV	54.0	-12.5	2.38 H	286	37.4	4.1
7	11380.00	50.6 PK	74.0	-23.4	1.55 H	224	37.6	13.0
8	11380.00	38.0 AV	54.0	-16.0	1.55 H	224	25.0	13.0
9	#17070.00	45.7 PK	74.0	-28.3	1.53 H	310	28.3	17.4
10	#17070.00	34.0 AV	54.0	-20.0	1.53 H	310	16.6	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	67.1 PK	74.0	-6.9	1.77 V	130	63.6	3.5
2	#5470.00	49.7 AV	54.0	-4.3	1.77 V	130	46.2	3.5
3	*5690.00	105.1 PK			1.77 V	130	101.2	3.9
4	*5690.00	96.3 AV			1.77 V	130	92.4	3.9
5	#5850.00	54.1 PK	74.0	-19.9	1.77 V	130	50.0	4.1
6	#5850.00	42.9 AV	54.0	-11.1	1.77 V	130	38.8	4.1
7	11380.00	51.5 PK	74.0	-22.5	1.86 V	234	38.5	13.0
8	11380.00	39.8 AV	54.0	-14.2	1.86 V	234	26.8	13.0
9	#17070.00	45.6 PK	74.0	-28.4	1.48 V	348	28.2	17.4
10	#17070.00	34.1 AV	54.0	-19.9	1.48 V	348	16.7	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.

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 24, 2016	Oct. 23, 2017
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 26, 2016	Oct. 25, 2017
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 13, 2016	June 12, 2017
50 ohms Terminator	N/A	EMC-02	Sep. 29, 2016	Sep. 28, 2017
RF Cable	5D-FB	COCCAB-001	Sep. 30, 2016	Sep. 29, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 20, 2016	June 19, 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. 1.
3. Tested Date: Apr. 06, 2017

4.2.3 Test Procedure

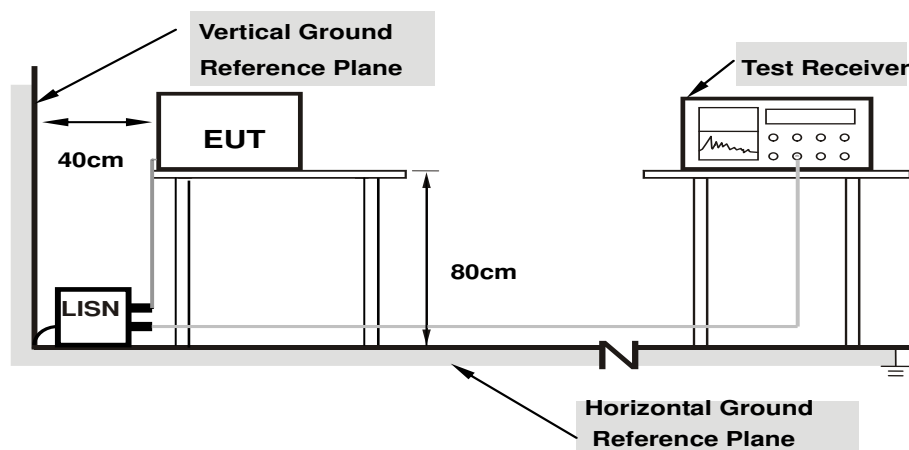
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

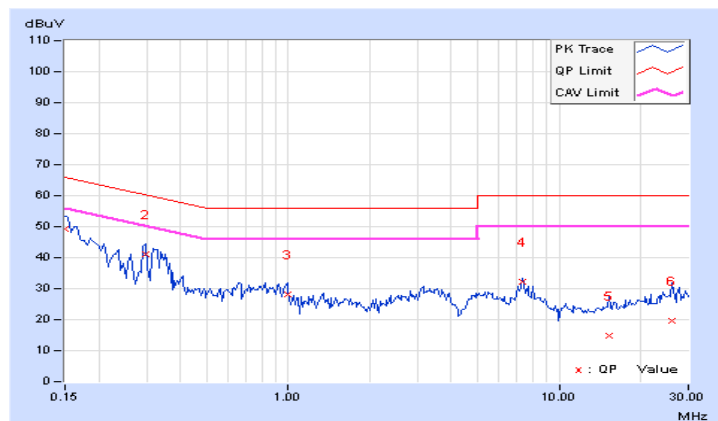
4.2.7 Test Results

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

No	Freq. [MHz]	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
		(dB)								
1	0.15000	10.19	39.21	25.04	49.40	35.23	66.00	56.00	-16.60	-20.77
2	0.29844	10.20	30.98	21.14	41.18	31.34	60.29	50.29	-19.11	-18.95
3	0.99766	10.26	18.01	8.19	28.27	18.45	56.00	46.00	-27.73	-27.55
4	7.36328	10.41	21.97	19.21	32.38	29.62	60.00	50.00	-27.62	-20.38
5	15.31250	11.07	3.88	-1.50	14.95	9.57	60.00	50.00	-45.05	-40.43
6	26.16016	11.44	8.20	4.04	19.64	15.48	60.00	50.00	-40.36	-34.52

REMARKS:

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

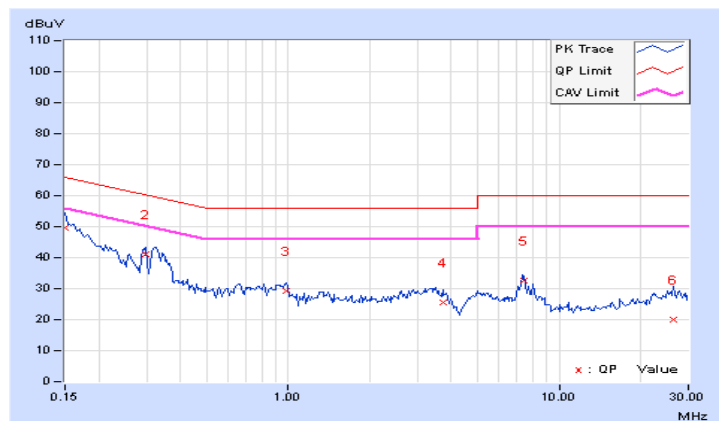


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.18	39.55	25.44	49.73	35.62	66.00	56.00	-16.27	-20.38
2	0.29844	10.18	30.75	21.06	40.93	31.24	60.29	50.29	-19.36	-19.05
3	0.98594	10.23	18.90	7.93	29.13	18.16	56.00	46.00	-26.87	-27.84
4	3.73438	10.18	15.38	8.93	25.56	19.11	56.00	46.00	-30.44	-26.89
5	7.37109	10.35	22.07	19.27	32.42	29.62	60.00	50.00	-27.58	-20.38
6	26.50391	11.07	8.81	1.84	19.88	12.91	60.00	50.00	-40.12	-37.09

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	$\sqrt{\quad}$		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	$\sqrt{\quad}$		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	$\sqrt{\quad}$		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

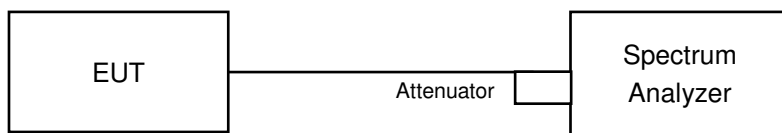
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

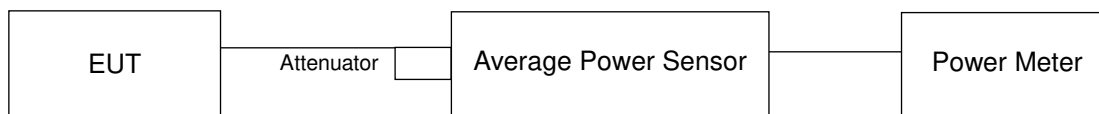
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

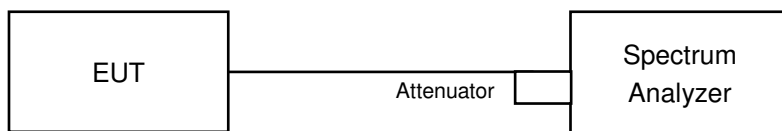
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For channel straddling 5725MHz:

802.11ac (VHT20), 802.11ac (VHT40)

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.

802.11a, 802.11ac (VHT80)

Method SA-2

1. Set span to encompass the 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. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

For other channels:

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

FOR 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Result

CDD Mode

802.11a

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	13.96	13.21	13.42	14.39	95.288	19.79	24.00	Pass
60	5300	13.81	13.26	13.39	14.18	93.237	19.70	24.00	Pass
64	5320	13.47	13.59	13.55	13.92	92.395	19.66	24.00	Pass
100	5500	13.70	12.98	12.03	13.89	83.753	19.23	24.00	Pass
116	5580	13.63	12.77	12.12	13.74	81.942	19.14	24.00	Pass
140	5700	13.58	13.13	12.05	13.60	82.303	19.15	24.00	Pass
*144 (UNII-2C Band)	5720	9.43	9.55	8.96	9.48	35.349	15.48	23.19	Pass
*144 (UNII-3 Band)	5720	3.06	3.63	3.53	3.53	9.048	9.57	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	44.397	16.47

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

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	23.20	23.65	23.03	23.55
60	5300	23.14	23.94	22.94	23.59
64	5320	23.21	23.79	22.61	23.52
100	5500	23.32	23.48	23.07	23.88
116	5580	23.08	23.24	23.20	23.53
140	5700	23.20	23.49	22.62	23.60
144 (UNII-2C Band)	5720	16.81	16.94	16.57	16.67

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	23.03	24.62 > 24
60	5300	22.94	24.6 > 24
64	5320	22.61	24.54 > 24
100	5500	23.07	24.63 > 24
116	5580	23.08	24.63 > 24
140	5700	22.62	24.54 > 24
144 (UNII-2C Band)	5720	16.57	23.19 < 24

802.11ac (VHT20)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	13.46	13.54	13.40	14.12	92.477	19.66	24.00	Pass
60	5300	13.78	13.63	13.51	14.14	95.326	19.79	24.00	Pass
64	5320	13.57	13.66	13.68	14.02	94.548	19.76	24.00	Pass
100	5500	13.08	13.28	11.56	14.05	81.337	19.10	24.00	Pass
116	5580	13.14	12.99	11.37	14.28	81.014	19.09	24.00	Pass
140	5700	13.11	13.26	11.43	14.14	81.49	19.11	24.00	Pass
*144 (UNII-2C Band)	5720	9.73	8.88	8.07	9.77	33.02	15.19	23.35	Pass
*144 (UNII-3 Band)	5720	3.88	3.40	3.12	4.22	9.324	9.70	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	42.344	16.27

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

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	24.71	24.58	24.79	24.12
60	5300	25.38	25.09	24.18	24.53
64	5320	25.49	24.98	24.65	24.82
100	5500	24.95	24.77	24.59	24.16
116	5580	25.04	24.84	24.70	24.16
140	5700	26.01	24.69	24.49	25.45
144 (UNII-2C Band)	5720	17.75	17.76	17.30	17.18

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	24.12	24.82 > 24
60	5300	24.18	24.83 > 24
64	5320	24.65	24.91 > 24
100	5500	24.16	24.83 > 24
116	5580	24.16	24.83 > 24
140	5700	24.49	24.88 > 24
144 (UNII-2C Band)	5720	17.18	23.35 < 24

802.11ac (VHT40)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	16.59	16.51	16.81	17.10	189.634	22.78	24.00	Pass
62	5310	16.61	16.71	16.77	16.83	188.424	22.75	24.00	Pass
102	5510	16.21	16.51	15.37	17.23	173.834	22.40	24.00	Pass
110	5550	16.25	16.48	15.31	17.09	171.764	22.35	24.00	Pass
134	5670	16.19	16.59	15.21	17.04	170.966	22.33	24.00	Pass
*142 (UNII-2C Band)	5710	12.94	13.53	12.48	13.27	81.154	19.09	24.00	Pass
*142 (UNII-3 Band)	5710	2.57	2.86	1.93	2.67	7.148	8.54	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	88.302	19.46

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

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.40	44.02	43.91	43.14
62	5310	44.71	43.46	43.93	43.36
102	5510	44.21	43.99	43.97	43.76
110	5550	44.27	43.72	43.97	43.34
134	5670	44.27	44.06	45.02	43.45
142 (UNII-2C Band)	5710	37.30	37.10	38.61	36.76

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	43.14	27.34 > 24
62	5310	43.36	27.37 > 24
102	5510	43.76	27.41 > 24
110	5550	43.34	27.36 > 24
134	5670	43.45	27.37 > 24
142 (UNII-2C Band)	5710	36.76	26.65 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	16.54	16.59	16.80	17.63	196.492	22.93	24.00	Pass
106	5530	17.71	18.00	16.82	18.58	242.311	23.84	24.00	Pass
122	5610	17.66	17.97	16.74	18.78	243.721	23.87	24.00	Pass
*138 (UNII-2C Band)	5690	14.26	14.45	13.54	15.28	113.372	20.55	24.00	Pass
*138 (UNII-3 Band)	5690	-0.28	0.34	-1.09	0.58	4.0294	6.05	30.00	Pass

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	117.4014	20.7

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

26dB BANDWIDTH

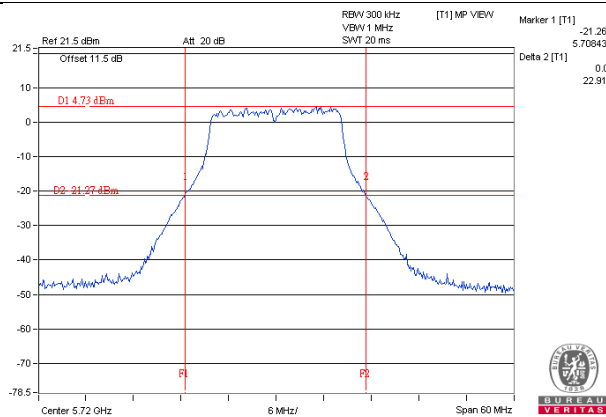
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.47	82.45	83.01	83.31
106	5530	83.61	82.28	83.11	82.52
122	5610	83.14	82.80	81.90	82.21
138 (UNII-2C Band)	5690	76.74	76.60	76.26	76.57

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

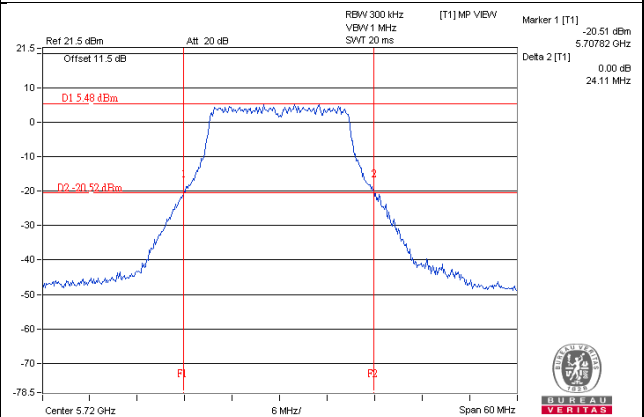
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.45	30.16 > 24
106	5530	82.28	30.15 > 24
122	5610	81.90	30.13 > 24
138 (UNII-2C Band)	5690	76.26	29.82 > 24

Spectrum Plot of Worst Value

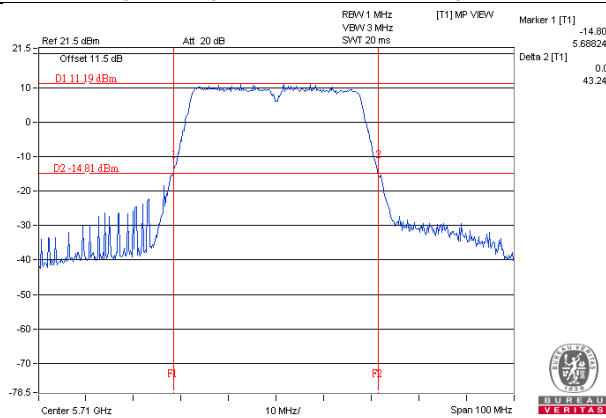
802.11a_Chain 2 / CH144 (UNII-2C Band)



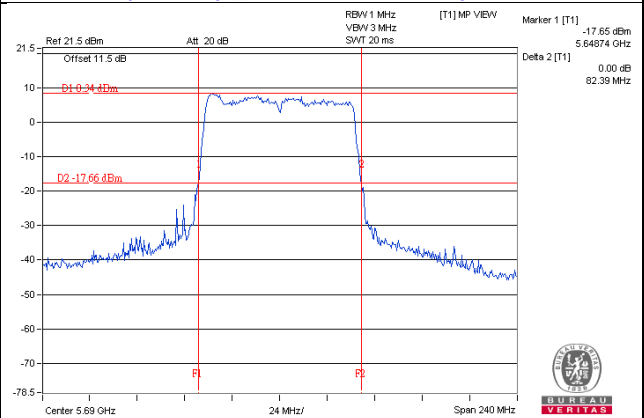
802.11ac (VHT20)_Chain 3 / CH144 (UNII-2C Band)



802.11ac (VHT40)_Chain 3 / CH142 (UNII-2C Band)



802.11ac (VHT80)_Chain 2 / 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

Beamforming Mode

802.11ac (VHT20)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	13.14	13.64	13.47	13.98	90.963	19.59	19.81	Pass
60	5300	13.85	13.39	13.18	14.47	94.88	19.77	19.81	Pass
64	5320	13.25	13.29	13.72	14.27	92.745	19.67	19.81	Pass
100	5500	12.80	13.06	11.70	14.04	79.427	19.00	19.43	Pass
116	5580	13.03	12.68	11.32	14.12	78.001	18.92	19.43	Pass
140	5700	12.86	12.94	11.44	14.32	79.971	19.03	19.43	Pass
*144 (UNII-2C Band)	5720	9.61	9.83	7.66	10.62	36.126	15.58	18.80	Pass
*144 (UNII-3 Band)	5720	3.97	4.55	2.51	5.08	10.349	10.15	25.43	Pass

- Note:** 1. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to "Determined Conducted Limit"-(10.19-6).
2. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to "Determined Conducted Limit"-(10.57-6).
3. For UNII-3: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $30-(10.57-6) = 25.43\text{dBm}$.

* 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	46.475	16.67

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

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	25.17	25.07	24.21	24.62
60	5300	25.50	25.24	24.67	24.80
64	5320	25.17	25.18	24.44	24.58
100	5500	25.41	25.05	24.38	24.41
116	5580	25.13	24.67	24.31	25.02
140	5700	24.97	24.74	24.71	24.11
144 (UNII-2C Band)	5720	17.81	17.76	17.41	17.27

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	24.21	24.83 > 24
60	5300	24.67	24.92 > 24
64	5320	24.44	24.88 > 24
100	5500	24.38	24.87 > 24
116	5580	24.31	24.85 > 24
140	5700	24.11	24.82 > 24
144 (UNII-2C Band)	5720	17.27	23.37 < 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	13.60	13.57	13.74	14.17	95.441	19.80	19.81	Pass
62	5310	13.77	13.33	13.69	13.87	93.117	19.69	19.81	Pass
102	5510	13.22	13.22	12.43	14.08	85.062	19.30	19.43	Pass
110	5550	12.97	13.23	12.41	14.06	83.739	19.23	19.43	Pass
134	5670	13.35	13.29	12.17	13.98	84.442	19.27	19.43	Pass
*142 (UNII-2C Band)	5710	10.10	10.11	9.10	10.98	41.149	16.14	19.43	Pass
*142 (UNII-3 Band)	5710	-0.10	-0.37	-1.10	0.50	3.7937	5.79	25.43	Pass

- Note:**
1. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $24 - (10.19 - 6) = 19.81\text{dBm}$.
 2. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $24 - (10.57 - 6) = 19.43\text{dBm}$.
 3. For UNII-3: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

* 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	44.9427	16.53

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

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.29	44.06	43.63	43.17
62	5310	44.20	44.27	43.96	43.52
102	5510	44.64	44.10	43.97	43.58
110	5550	44.42	43.62	43.76	43.30
134	5670	44.17	44.06	44.50	43.36
142 (UNII-2C Band)	5710	37.27	36.99	39.21	37.04

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	43.17	27.35 > 24
62	5310	43.52	27.38 > 24
102	5510	43.58	27.39 > 24
110	5550	43.30	27.36 > 24
134	5670	43.36	27.37 > 24
142 (UNII-2C Band)	5710	36.99	26.68 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	12.99	12.50	13.26	14.17	84.996	19.29	19.81	Pass
106	5530	13.14	13.35	12.11	13.79	82.421	19.16	19.43	Pass
122	5610	13.01	13.17	11.97	13.91	81.092	19.09	19.43	Pass
*138 (UNII-2C Band)	5690	10.47	11.08	9.92	10.88	47.075	16.73	19.43	Pass
*138 (UNII-3 Band)	5690	-4.12	-2.86	-4.76	-3.97	1.6773	2.25	25.43	Pass

- Note:**
1. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $24 - (10.19 - 6) = 19.81\text{dBm}$.
 2. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $24 - (10.57 - 6) = 19.43\text{dBm}$.
 3. For UNII-3: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

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

The Total Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	48.7523	16.88

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

26dB OCCUPIED BANDWIDTH

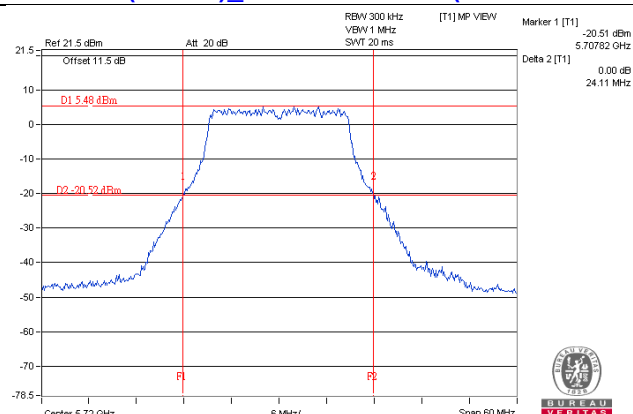
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.60	82.08	82.98	82.42
106	5530	83.88	81.04	83.03	83.04
122	5610	82.70	82.95	81.76	82.40
138 (UNII-2C Band)	5690	76.91	76.68	76.01	76.54

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

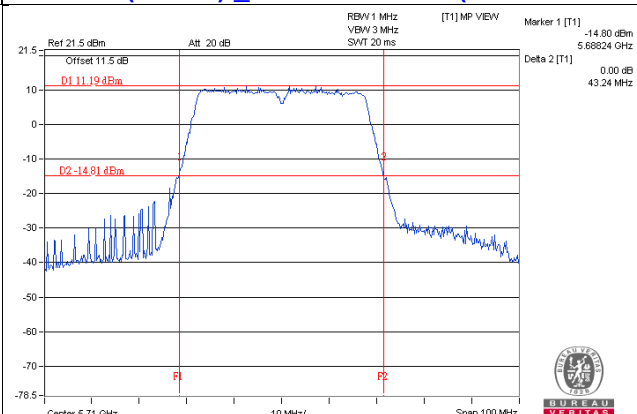
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.08	30.14 > 24
106	5530	81.04	30.08 > 24
122	5610	81.76	30.12 > 24
138 (UNII-2C Band)	5690	76.01	29.8 > 24

Spectrum Plot of Worst Value

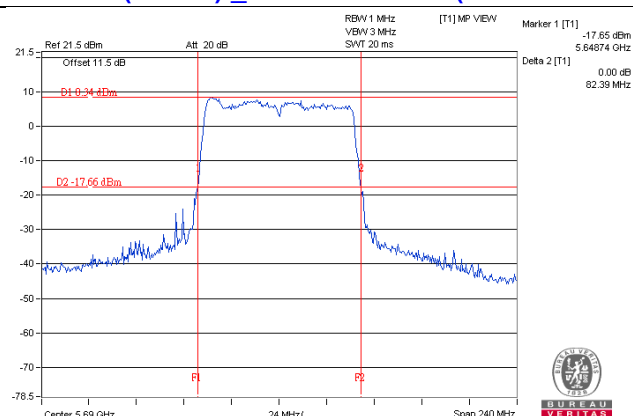
802.11ac (VHT20)_Chain 3 / CH144 (UNII-2C Band)



802.11ac (VHT40)_Chain 3 / CH142 (UNII-2C Band)



802.11ac (VHT80)_Chain 2 / CH138 (UNII-2C Band)

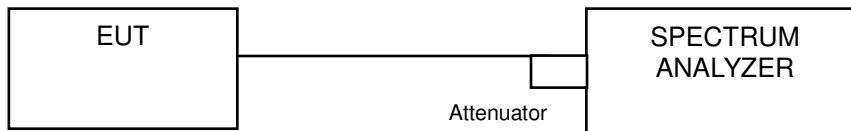


NOTE:

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

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 3
52	5260	16.92	17.16	16.92	17.04
60	5300	16.92	17.04	16.92	16.92
64	5320	17.04	17.04	16.92	16.92
100	5500	16.92	17.16	17.04	16.92
116	5580	17.04	16.92	16.92	17.04
140	5700	16.92	16.80	16.80	16.80
144 (UNII-2C Band)	5720	13.76	13.64	13.52	13.64
144 (UNII-3 Band)	5720	3.28	3.40	3.40	3.40

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 3
52	5260	18.12	18.24	18.12	18.12
60	5300	18.12	18.24	18.12	18.12
64	5320	18.12	18.24	18.12	18.12
100	5500	18.12	18.24	18.12	18.00
116	5580	18.24	18.24	18.12	18.12
140	5700	18.12	18.00	18.12	18.12
144 (UNII-2C Band)	5720	14.12	14.12	14.24	14.24
144 (UNII-3 Band)	5720	3.88	3.88	3.88	3.88

802.11ac (VHT40)

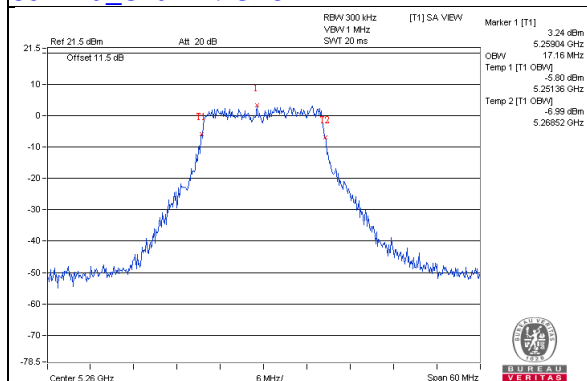
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 3
54	5270	36.48	36.96	36.48	36.96
62	5310	36.72	36.48	36.72	36.72
102	5510	36.72	36.72	36.96	36.72
110	5550	36.72	36.72	36.96	36.72
134	5670	36.72	36.96	36.48	36.96
142 (UNII-2C Band)	5710	33.60	33.60	33.80	33.60
142 (UNII-3 Band)	5710	3.20	3.00	3.20	3.20

802.11ac (VHT80)

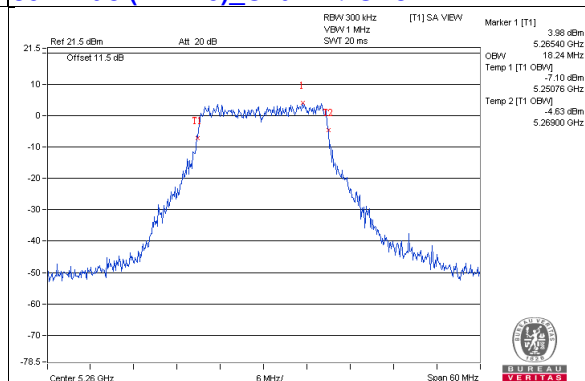
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		CHAIN 0	CHAIN 1	CHAIN 2	CHAIN 3
58	5290	75.36	75.84	75.84	75.36
106	5530	75.36	75.84	75.36	75.36
122	5610	75.36	75.36	75.84	75.84
138 (UNII-2C Band)	5690	72.92	72.92	72.92	72.92
138 (UNII-3 Band)	5690	2.44	2.44	2.44	2.44

Spectrum Plot of Worst Value

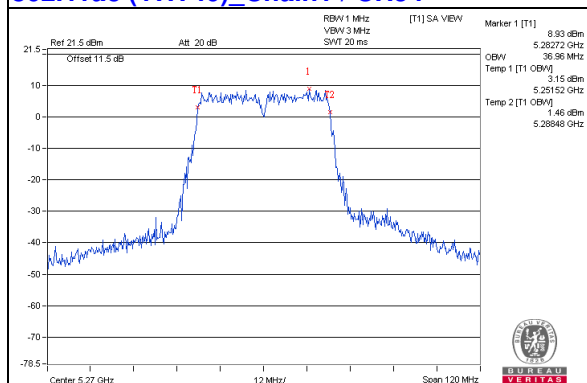
802.11a_Chain1 / CH52



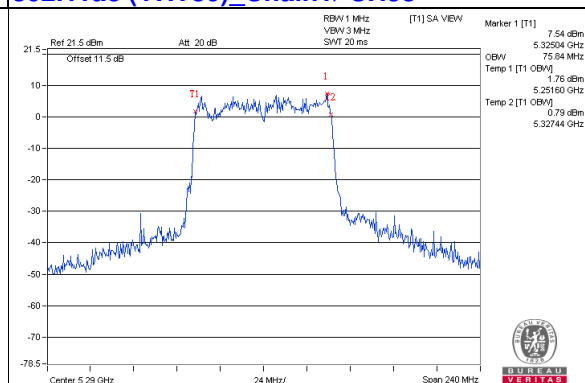
802.11ac (VHT20)_Chain1 / CH52



802.11ac (VHT40)_Chain1 / CH54



802.11ac (VHT80)_Chain1 / CH58

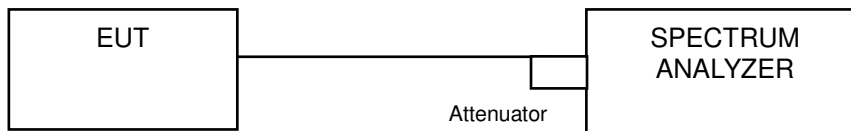


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

802.11ac (VHT20), 802.11ac (VHT40)

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

802.11a, 802.11ac (VHT80)

Using method SA-2

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 and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

802.11a

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. EIRP Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain	Chain 3				
52	5260	0.14	-0.69	-0.31	0.98	0.10	6.20	6.81	Pass
60	5300	0.22	0.05	0.57	0.71	0.10	6.52	6.81	Pass
64	5320	0.32	-0.23	0.94	-0.21	0.10	6.35	6.81	Pass
100	5500	-0.42	-2.31	-1.71	-0.11	0.10	5.08	6.43	Pass
116	5580	-0.03	-1.51	-1.70	-0.18	0.10	5.33	6.43	Pass
140	5700	-0.32	-0.35	-0.83	-0.76	0.10	5.56	6.43	Pass
144 (UNII-2C Band)	5720	-0.55	-0.47	-0.90	-0.45	0.10	5.53	6.43	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.19 - 6) = 6.81\text{dBm}$.
3. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.57 - 6) = 6.43\text{dBm}$.
4. Refer to section 3.3 for duty cycle spectrum plot.

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			
52	5260	-0.51	0.01	0.01	-0.49	5.78	6.81	Pass
60	5300	0.23	0.17	-0.41	-0.21	5.97	6.81	Pass
64	5320	0.35	0.21	0.11	-0.21	6.14	6.81	Pass
100	5500	-0.68	0.13	-2.68	0.10	5.38	6.43	Pass
116	5580	-0.96	-0.73	-1.95	0.74	5.40	6.43	Pass
140	5700	-0.96	-0.58	-1.61	-0.63	5.09	6.43	Pass
144 (UNII-2C Band)	5720	-0.80	-1.58	-2.36	-0.60	4.74	6.43	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.19 - 6) = 6.81\text{dBm}$.
3. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.57 - 6) = 6.43\text{dBm}$.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
54	5270	-0.67	-1.10	-0.61	0.08	5.47	6.81	Pass
62	5310	-0.27	-0.52	0.51	-1.01	5.73	6.81	Pass
102	5510	-0.63	-0.86	-1.83	-0.48	5.10	6.43	Pass
110	5550	-0.21	-0.87	-1.44	-0.23	5.36	6.43	Pass
134	5670	-0.27	-2.11	-0.90	-0.86	5.04	6.43	Pass
142 (UNII-2C Band)	5710	-1.41	-0.40	-0.97	-0.77	5.15	6.43	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.19 - 6) = 6.81\text{dBm}$.
3. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.57 - 6) = 6.43\text{dBm}$.

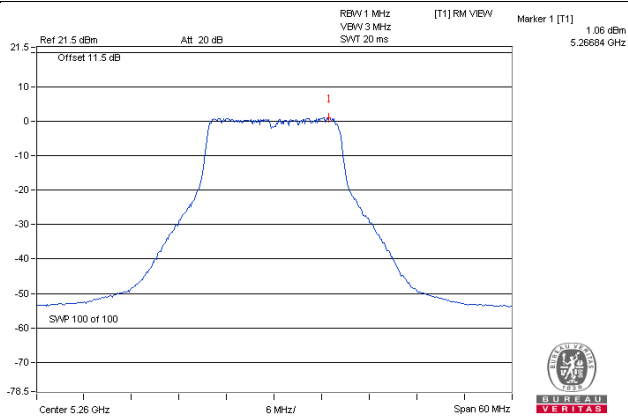
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-2.78	-1.84	-4.65	-2.77	0.10	3.22	6.81	Pass
106	5530	-1.47	-1.08	-2.86	-1.17	0.10	4.53	6.43	Pass
122	5610	-1.16	-1.62	-2.66	-0.16	0.10	4.81	6.43	Pass
138 (UNII-2C Band)	5690	-2.02	-3.05	-2.49	-1.13	0.10	4.00	6.43	Pass

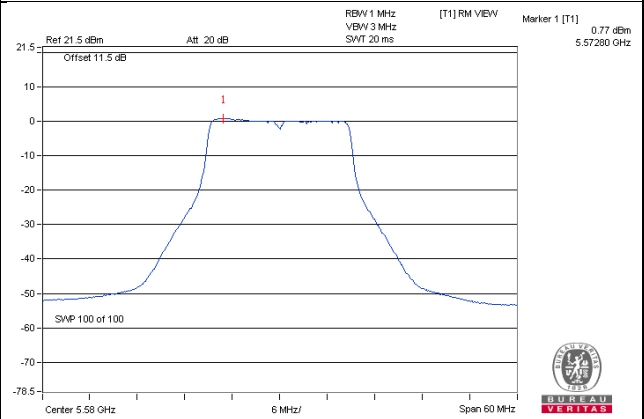
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.19\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.19 - 6) = 6.81\text{dBm}$.
3. For UNII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.57 - 6) = 6.43\text{dBm}$.
4. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

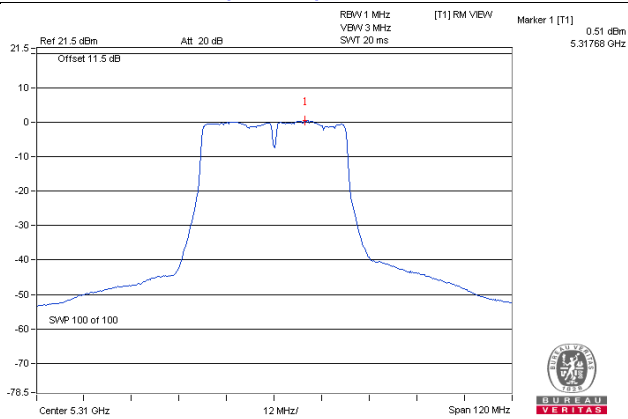
802.11a_Chain 3 / CH52



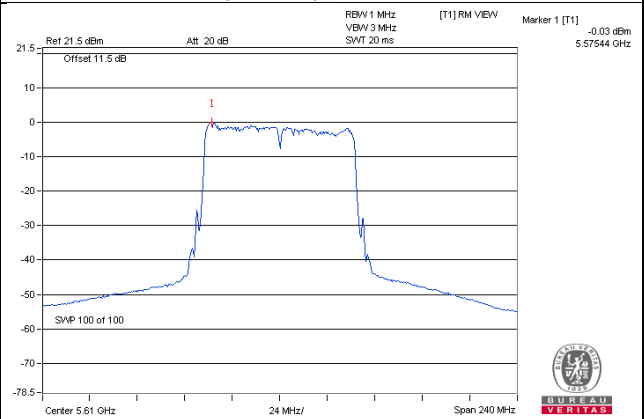
802.11ac (VHT20)_Chain 3 / CH116



802.11ac (VHT40)_Chain 2 / CH62



802.11ac (VHT80)_Chain 3 / CH122



For U_NII-3

802.11a

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	144 (UNII-3 Band)	5720	-8.88	-6.66	6.02	0.10	-0.54	25.43	Pass
1	144 (UNII-3 Band)	5720	-8.41	-6.19	6.02	0.10	-0.07	25.43	Pass
2	144 (UNII-3 Band)	5720	-8.26	-6.04	6.02	0.10	0.08	25.43	Pass
3	144 (UNII-3 Band)	5720	-8.97	-6.75	6.02	0.10	-0.63	25.43	Pass

Note: 1. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

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

802.11ac (VHT20)

TX chain	Chan.	Chan. Freq. (MHz)	PSD		10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	144 (UNII-3 Band)	5720	-9.27	-7.05	6.02	-1.03	25.43	Pass
1	144 (UNII-3 Band)	5720	-9.37	-7.15	6.02	-1.13	25.43	Pass
2	144 (UNII-3 Band)	5720	-9.91	-7.69	6.02	-1.67	25.43	Pass
3	144 (UNII-3 Band)	5720	-9.00	-6.78	6.02	-0.76	25.43	Pass

Note: 1. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

802.11ac (VHT40)

TX chain	Chan.	Chan. Freq. (MHz)	PSD		10 log (N=4) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	142 (UNII-3 Band)	5720	-9.81	-7.59	6.02	-1.57	25.43	Pass
1	142 (UNII-3 Band)	5720	-9.35	-7.13	6.02	-1.11	25.43	Pass
2	142 (UNII-3 Band)	5720	-10.52	-8.30	6.02	-2.28	25.43	Pass
3	142 (UNII-3 Band)	5720	-9.63	-7.41	6.02	-1.39	25.43	Pass

Note: 1. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

802.11ac (VHT80)

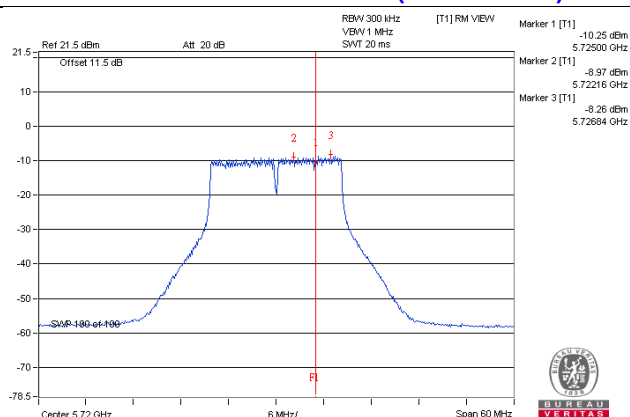
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	138 (UNII-3 Band)	5690	-11.86	-9.64	6.02	0.10	-3.52	25.43	Pass
1	138 (UNII-3 Band)	5690	-11.56	-9.34	6.02	0.10	-3.22	25.43	Pass
2	138 (UNII-3 Band)	5690	-13.72	-11.50	6.02	0.10	-5.38	25.43	Pass
2	138 (UNII-3 Band)	5690	-10.59	-8.37	6.02	0.10	-2.25	25.43	Pass

Note: 1. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 10.57 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.57 - 6) = 25.43\text{dBm}$.

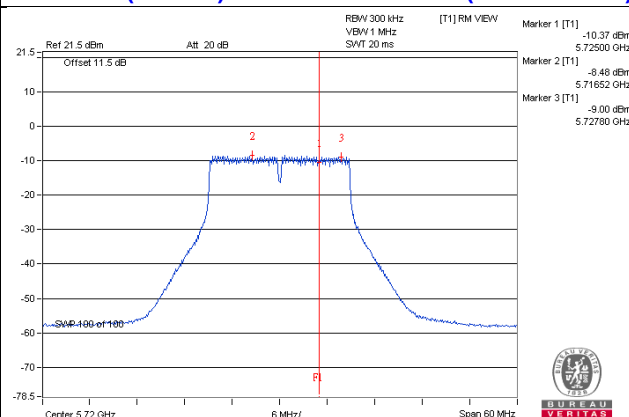
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

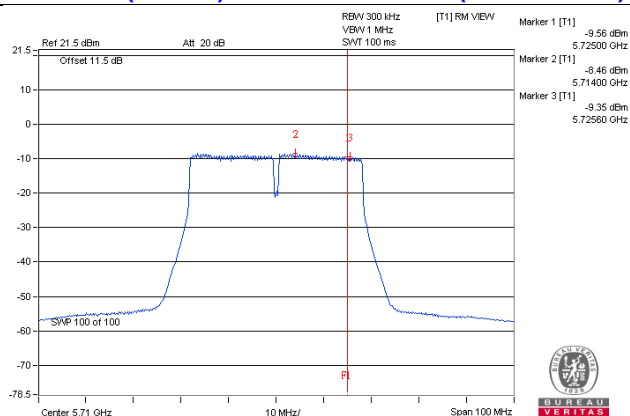
802.11a / Chain 2 – CH144(UNII-3 Band)



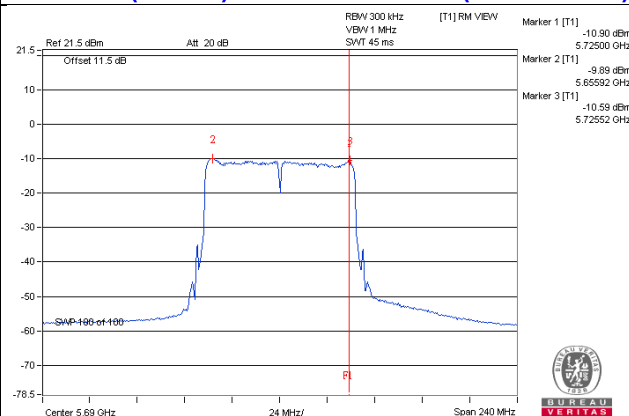
802.11ac (VHT20) / Chain 3 – CH144 (UNII-3 Band)



802.11ac (VHT40) / Chain 1 – CH142(UNII-3 Band)



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

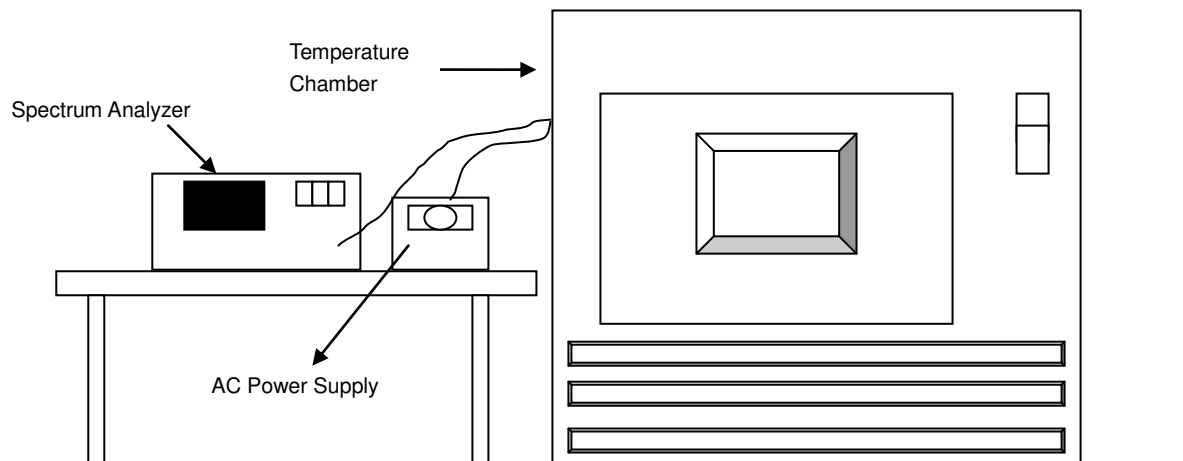


4.6 Frequency Stability Measurement

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

Frequency Stability Versus Temp.									
Operating Frequency: 5260 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	5259.9853	PASS	5259.9871	PASS	5259.9885	PASS	5259.9886	PASS
40	120	5259.979	PASS	5259.9784	PASS	5259.9802	PASS	5259.9799	PASS
30	120	5259.9926	PASS	5259.9894	PASS	5259.9895	PASS	5259.9922	PASS
20	120	5259.9802	PASS	5259.9801	PASS	5259.9784	PASS	5259.9812	PASS
10	120	5259.9953	PASS	5259.9934	PASS	5259.9929	PASS	5259.9952	PASS
0	120	5260.0082	PASS	5260.0093	PASS	5260.0081	PASS	5260.0107	PASS
-10	120	5259.9814	PASS	5259.9794	PASS	5259.9836	PASS	5259.9832	PASS
-20	120	5259.9996	PASS	5259.9996	PASS	5260.0011	PASS	5259.9993	PASS
-30	120	5259.9993	PASS	5260.0003	PASS	5260.0014	PASS	5259.9996	PASS

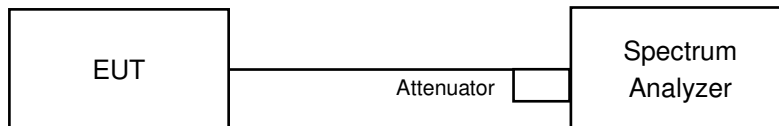
Frequency Stability Versus Voltage									
Operating Frequency: 5260 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5259.9809	PASS	5259.98	PASS	5259.9777	PASS	5259.9822	PASS
	120	5259.9802	PASS	5259.9801	PASS	5259.9784	PASS	5259.9812	PASS
	102	5259.9793	PASS	5259.9804	PASS	5259.9782	PASS	5259.9804	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 (Mode 1)

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	3.14	3.14	3.16	3.15	0.5	Pass

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	3.79	3.81	3.82	3.79	0.5	Pass

802.11ac (VHT40)

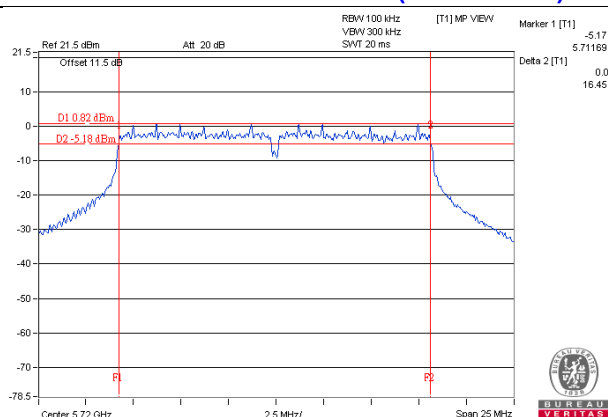
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
142 (UNII-3 Band)	5710	3.18	3.15	3.18	3.17	0.5	Pass

802.11ac (VHT80)

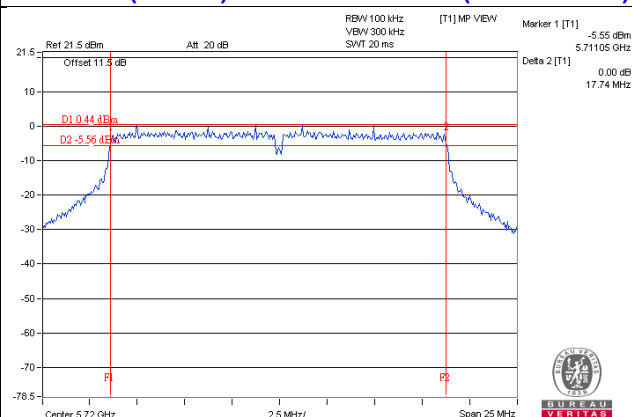
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (UNII-3 Band)	5690	2.60	2.63	2.71	2.81	0.5	Pass

Spectrum Plot of Worst Value

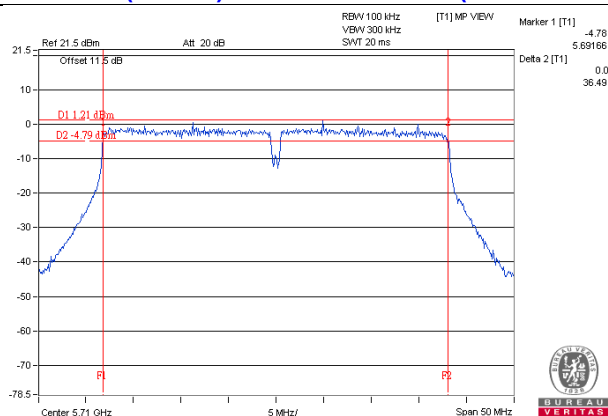
802.11a / Chain 0 - CH144 (UNII-3 Band)



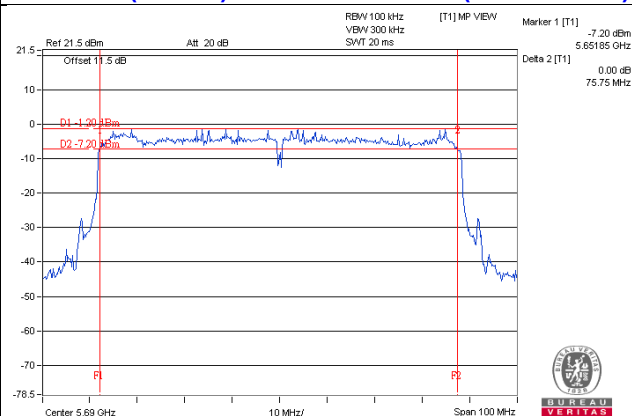
802.11ac (VHT20) / Chain 0 - CH144 (UNII-3 Band)



802.11ac (VHT40) / Chain 1 - CH142 (UNII-3 Band)



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



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).

Appendix – Information on the Testing Laboratories

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

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

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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