

FCC Test Report (DFS Band)

Report No.: RF160419E08A-1

FCC ID: PY326200345

Test Model: WAC740

Received Date: June 16, 2016

Test Date: June 21 to Sep. 14, 2016

Issued Date: Dec. 29, 2016

Applicant: NETGEAR, Inc.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location (1): E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin
Chu Hsien 307, Taiwan R.O.C.



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT (DFS Band)	7
3.2 Description of Test Modes	10
3.2.1 Test Mode Applicability and Tested Channel Detail	11
3.3 Duty Cycle of Test Signal	13
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standard	17
4 Test Types and Results	18
4.1 Radiated Emission and Bandedge Measurement.....	18
4.1.1 Limits of Radiated Emission and Bandedge Measurement	18
4.1.2 Test Instruments	19
4.1.3 Test Procedure	21
4.1.4 Deviation from Test Standard	21
4.1.5 Test Setup.....	22
4.1.6 EUT Operating Condition	23
4.1.7 Test Results (Mode 1).....	24
4.1.8 Test Results (Mode 2).....	45
4.2 Conducted Emission Measurement	66
4.2.1 Limits of Conducted Emission Measurement	66
4.2.2 Test Instruments	66
4.2.3 Test Procedure	67
4.2.4 Deviation from Test Standard	67
4.2.5 Test Setup.....	67
4.2.6 EUT Operating Condition	67
4.2.7 Test Results (Mode 1).....	68
4.2.8 Test Results (Mode 3).....	70
4.2.9 Test Results (Mode 4).....	72
4.3 Transmit Power Measurement	74
4.3.1 Limits of Transmit Power Measurement	74
4.3.2 Test Setup.....	75
4.3.3 Test Instruments	75
4.3.4 Test Procedure	75
4.3.5 Deviation from Test Standard	75
4.3.6 EUT Operating Condition	75
4.3.7 Test Result.....	76
4.4 Occupied Bandwidth Measurement	81
4.4.1 Test Setup.....	81
4.4.2 Test Instruments	81
4.4.3 Test Procedure	81
4.4.4 Test Results	82
4.5 Peak Power Spectral Density Measurement	84
4.5.1 Limits of Peak Power Spectral Density Measurement	84
4.5.2 Test Setup.....	84
4.5.3 Test Instruments	84
4.5.4 Test Procedure	84
4.5.5 Deviation from Test Standard	84
4.5.6 EUT Operating Condition	85

4.5.7 Test Results	86
4.6 Frequency Stability Measurement.....	89
4.6.1 Limits of Frequency Stability Measurement	89
4.6.2 Test Setup.....	89
4.6.3 Test Instruments	89
4.6.4 Test Procedure	89
4.6.5 Deviation from Test Standard	89
4.6.6 EUT Operating Condition	89
4.6.7 Test Results	90
5 Pictures of Test Arrangements.....	91
Appendix – Information on the Testing Laboratories	92

Release Control Record

Issue No.	Description	Date Issued
RF160419E08A-1	Original release.	Dec. 29, 2016

1 Certificate of Conformity

Product: ProSAFE Dual Band Wireless AC Access Point

Brand: NETGEAR

Test Model: WAC740

Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, Inc.

Test Date: June 21 to Sep. 14, 2016

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

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

Prepared by : Wendy Wu , **Date:** Dec. 29, 2016
Wendy Wu / Specialist

Approved by : May Chen , **Date:** Dec. 29, 2016
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 -3.01dB at 0.47031MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5470.00MHz, 5725.00MHz
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is RSMA and i-pec (MHF) not a standard connector.

NOTE: 1. This report is prepared for FCC class II permissive change.
2. The DFS report was recorded in another test report.

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	Expended Uncertainty (k=2) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.19 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.43 dB
	6GHz ~ 18GHz	3.49 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (DFS Band)

Product	ProSAFE Dual Band Wireless AC Access Point
Brand	NETGEAR
Test Model	WAC740
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter or 48-55Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only.
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	5.26GH ~ 5.32GHz, 5.50GHz ~ 5.70GHz
Number of Channel	15 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 7 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (VHT80)
Output Power	5.26GHz ~ 5.32GHz CDD Mode 243.743mW Beamforming Mode 246.234mW 5.50GHz ~ 5.70GHz CDD Mode 245.833mW Beamforming Mode 245.976mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	NA

Note:

- This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF160419E08-1 as the following:
 - ◆ Add DFS band <5.26GHz ~ 5.32GHz, 5.5GHz ~ 5.70GHz>
- According to above condition, all test items need to be performed. And all data weres verified to meet the requirements.

3. The EUT must be supplied with POE or a power adapter and following different models could be chosen as following table:

as following table:

Adapter				
No	Brand Name	Model No.	PN	Spec.
1	NETGEAR	2ABL030F 1	332-10758-01	Input: 100-120Vac, 50/60Hz, 0.9A Output: 12Vdc, 2.5A Power cord (Unshielded, 1.8m)
2		ADS-40FPA-12	332-10759-01	Input: 100-120Vac, 60Hz, 0.9A Output: 12Vdc, 2.5A Power cord (Unshielded, 1.8m)
POE (test only, not for sale)				
No	Brand Name	Model No.	PN	Spec.
1	Microsemi Corp.	PD-9001-10G/AC	NA	Input: 100-240V, 50-60Hz, 1.5A Output: 55V, 0.63A
Note: From the above adapters & POE, the radiated emission worse case was found in POE. Therefore only the test data of the mode was recorded in this report.				

4. Simultaneously transmission condition.

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

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

Frequency range (GHz)	Directional Antenna Gain (dBi)
5.25~5.35	5.98
5.47~5.725	5.88

6. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	4TX	4RX
802.11g	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS16~23	4TX	4RX
	MCS 24~31	4TX	4RX
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
	MCS16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11ac (VHT20)	MCS 0~8, Nss=1	4TX	4RX
	MCS 0~8, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~8, Nss=4	4TX	4RX
802.11ac (VHT40)	MCS 0~9, Nss=1	4TX	4RX
	MCS 0~9, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~9, Nss=4	4TX	4RX
802.11ac (VHT80)	MCS 0~9, Nss=1	4TX	4RX
	MCS 0~9, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~9, Nss=4	4TX	4RX

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

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	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

FOR 5500 ~ 5700MHz

11 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		

5 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		

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530MHz	122	5610 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
1	√	√	√	√	Power from POE + Internal antenna
2	√	√	-	-	Power from POE + External antenna
3	-	-	√	-	Power from adapter 1 + Internal antenna
4	-	-	√	-	Power from adapter 2 + Internal antenna

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

NOTE: 1. The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **Y-plane (Internal antenna) & X-plane (External antenna for above 1GHz) & Y-plane (External antenna for below 1GHz)**.
2. "-" means no effect.

Radiated Emission Test (Above 1GHz):

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

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
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
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)	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	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)
802.11a	5260-5320	52 to 64	116	OFDM	BPSK	6
	5500-5700	100 to 140				

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)
802.11a	5260-5320	52 to 64	116	OFDM	BPSK	6
	5500-5700	100 to 140				

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
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
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)	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	29.3

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	23deg. C, 66%RH	120Vac, 60Hz	Tim Ho
RE<1G	24deg. C, 66%RH	120Vac, 60Hz	Andy Ho
PLC	26deg. C, 65%RH	120Vac, 60Hz	Jyunchun Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen
	24deg. C, 65%RH		

3.3 Duty Cycle of Test Signal

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

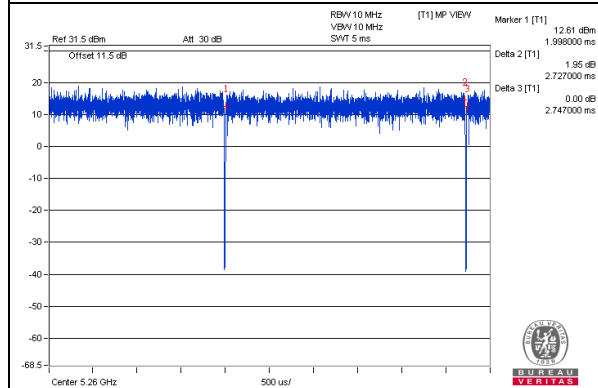
802.11a: Duty cycle = 2.727 ms/2.747 ms = 0.993

802.11ac (VHT20): Duty cycle = 2.534 ms/2.555 ms = 0.992

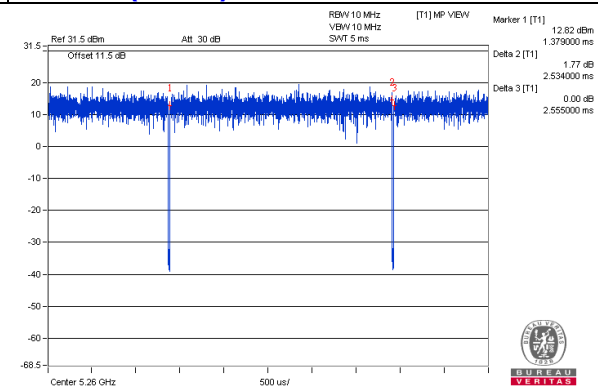
802.11ac (VHT40): Duty cycle = 1.24 ms/1.26 ms = 0.984

802.11ac (VHT80): Duty cycle = 0.599 ms/0.618 ms = 0.969, Duty factor = $10 * \log(1/0.969) = 0.14$

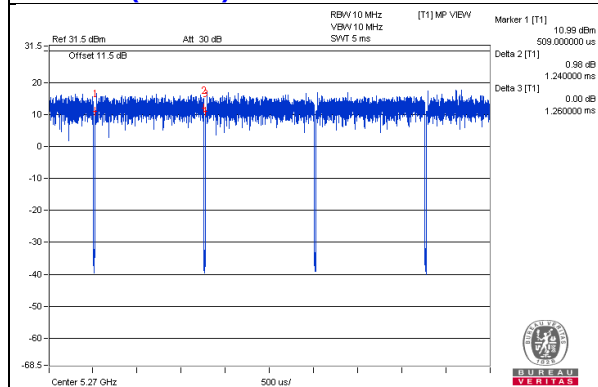
802.11a



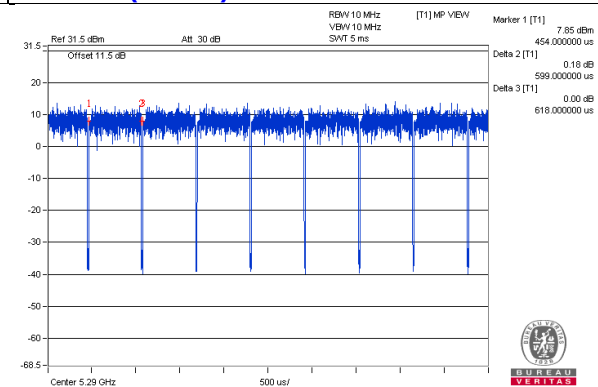
802.11ac (VHT20)



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.	Notebook Computer	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B.	POE	Microsemi Corp.	PD-9001-10G/AC	NA	NA	Supplied by client
C.	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC	Provided by Lab

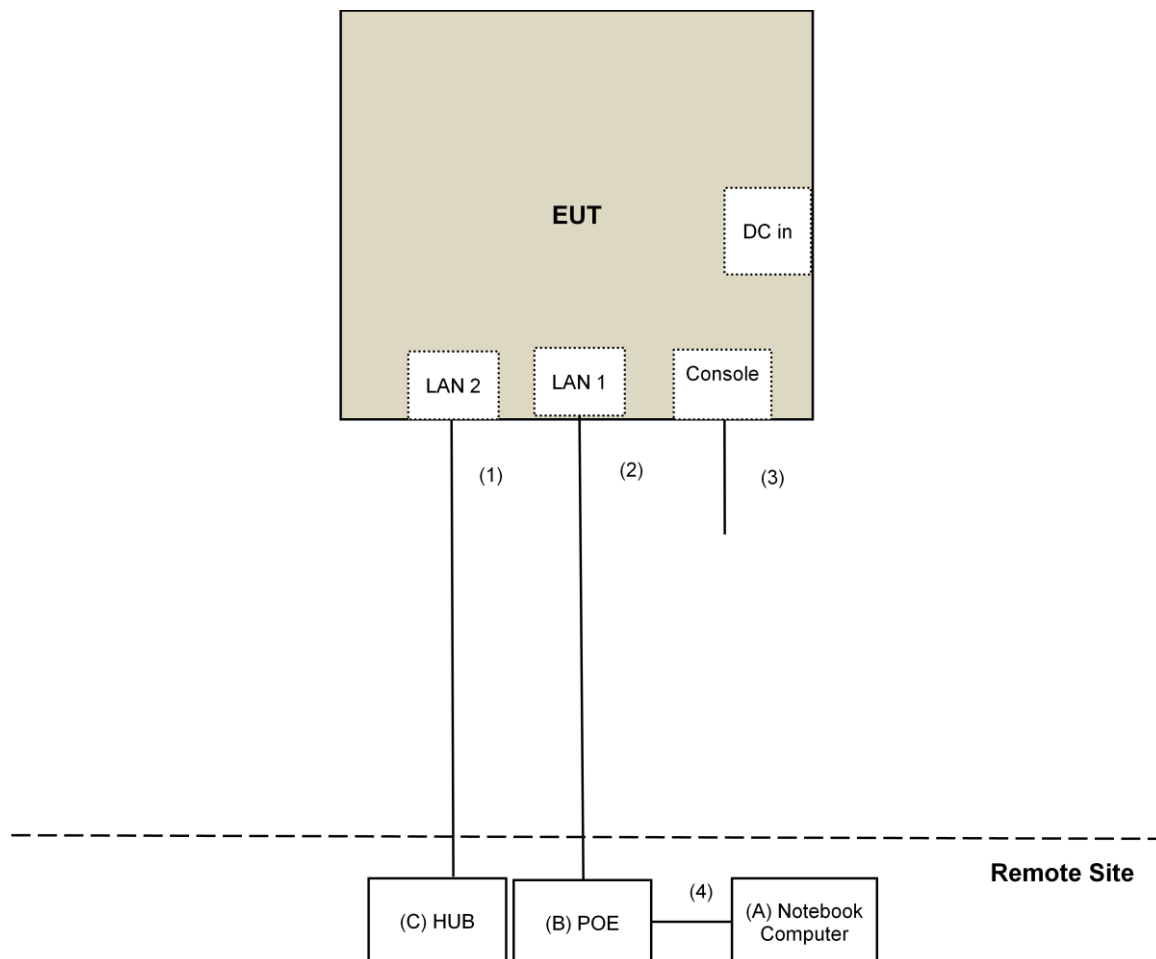
Note:

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

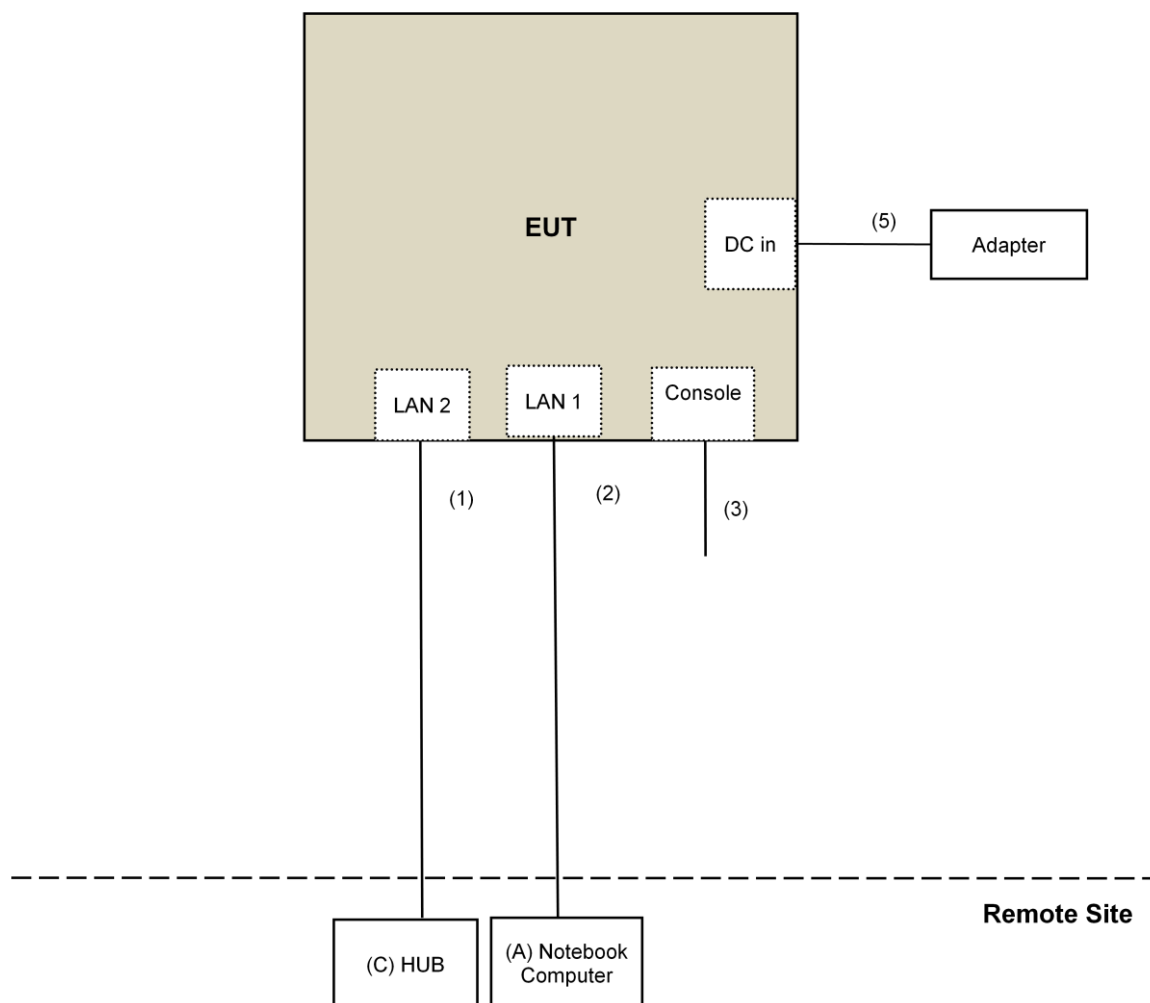
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	RJ45 to RS232 Cable	1	1.5	No	0	Provided by Lab
4.	RJ-45 Cable	1	1	No	0	Supplied by client
5.	DC Cable	1	1.8	No	0	Supplied by client

3.4.1 Configuration of System under Test

POE Mode:



Adapter Mode:



3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedure New Rules v01r03

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v01r02			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, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-01	Nov. 11, 2015	Nov. 10, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Jan. 04, 2016	Jan. 03, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 02, 2016	Apr. 01, 2017
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Jan. 19, 2016	Jan. 18, 2017
Pre-Amplifier Agilent	8449B	3008A01922	Sep. 19, 2015	Sep. 18, 2016
RF Cable	EMC104-SM- SM-2000 EMC104-SM- SM-5000 EMC104-SM- SM-5000	150318 150323 150324	Mar. 30, 2016	Mar. 29, 2017
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2016	Jan. 14, 2017
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Jan. 08, 2016	Jan. 07, 2017
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 16, 2016	Jan. 15, 2017
Software	ADT_Radiated _V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSP40	100036	Jan. 27, 2016	Jan. 26, 2017
AC Power Source Extech Electronics	6502	1140503	NA	NA
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 03, 2015	Dec. 02, 2016
Power meter Anritsu	ML2495A	0824006	May 26, 2016	May 25, 2017
Power sensor Anritsu	MA2411B	0738172	May 26, 2016	May 25, 2017
Digital Multimeter FLUKE	87III	73680266	Nov. 10, 2015	Nov. 09, 2016

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Loop antenna was used for all emissions below 30 MHz.
4. The test was performed in 966 Chamber No. 4.
5. The FCC Site Registration No. is 292998
6. The CANADA Site Registration No. is 20331-2
- 7 Tested Date: Sep. 10 to 14, 2016

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

NOTE:

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

For Radiated emission above 30MHz

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

Note:

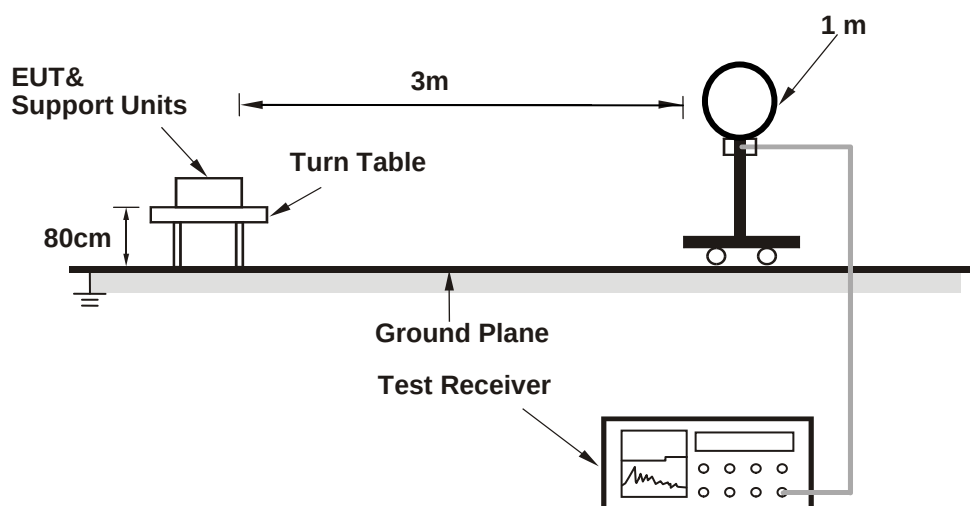
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
1. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

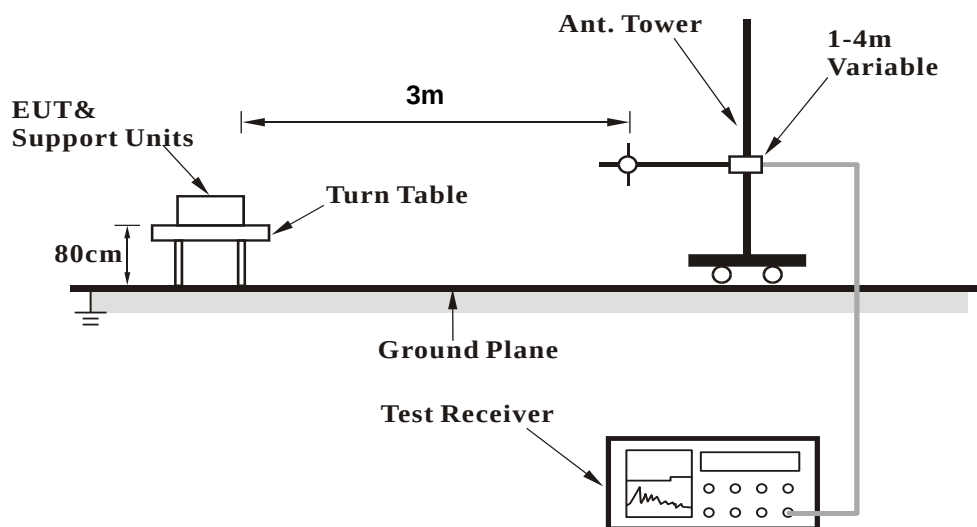
No deviation.

4.1.5 Test Setup

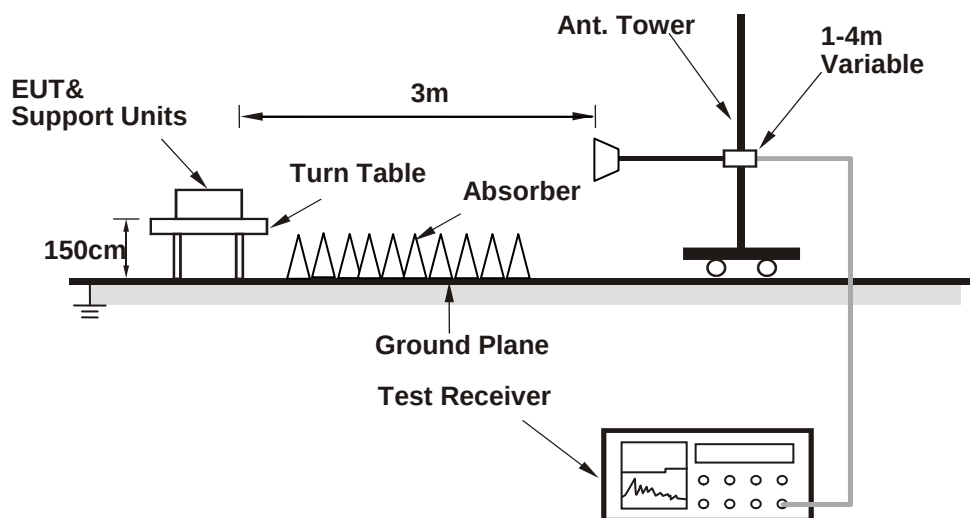
For Radiated emission below 30MHz



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 Notebook Computer which is placed on remote site.
- Contorlling software (MTool REL 2.0.2.7) has been activated to set the EUT on specific status.

4.1.7 Test Results (Mode 1)

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	55.6 PK	74.0	-18.4	2.42 H	206	54.0	1.6
2	5150.00	42.2 AV	54.0	-11.8	2.42 H	206	40.6	1.6
3	*5260.00	116.6 PK			2.42 H	206	114.7	1.9
4	*5260.00	106.2 AV			2.42 H	206	104.3	1.9
5	#10520.00	50.8 PK	74.0	-23.2	1.47 H	68	38.3	12.5
6	#10520.00	39.2 AV	54.0	-14.8	1.47 H	68	26.7	12.5
7	15780.00	52.6 PK	74.0	-21.4	1.80 H	238	39.5	13.1
8	15780.00	39.9 AV	54.0	-14.1	1.80 H	238	26.8	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	53.3 PK	74.0	-20.7	3.92 V	182	51.7	1.6
2	5150.00	40.7 AV	54.0	-13.3	3.92 V	182	39.1	1.6
3	*5260.00	115.7 PK			3.92 V	182	113.8	1.9
4	*5260.00	104.2 AV			3.92 V	182	102.3	1.9
5	#10520.00	50.2 PK	74.0	-23.8	1.71 V	204	37.7	12.5
6	#10520.00	39.5 AV	54.0	-14.5	1.71 V	204	27.0	12.5
7	15780.00	53.2 PK	74.0	-20.8	1.43 V	108	40.1	13.1
8	15780.00	40.5 AV	54.0	-13.5	1.43 V	108	27.4	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	116.6 PK			2.36 H	183	114.6	2.0
2	*5300.00	106.3 AV			2.36 H	183	104.3	2.0
3	10600.00	50.4 PK	74.0	-23.6	1.50 H	75	37.7	12.7
4	10600.00	39.1 AV	54.0	-14.9	1.50 H	75	26.4	12.7
5	15900.00	52.9 PK	74.0	-21.1	1.75 H	245	39.6	13.3
6	15900.00	39.9 AV	54.0	-14.1	1.75 H	245	26.6	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.7 PK			3.91 V	187	113.7	2.0
2	*5300.00	104.4 AV			3.91 V	187	102.4	2.0
3	10600.00	50.4 PK	74.0	-23.6	1.76 V	215	37.7	12.7
4	10600.00	39.5 AV	54.0	-14.5	1.76 V	215	26.8	12.7
5	15900.00	52.8 PK	74.0	-21.2	1.47 V	100	39.5	13.3
6	15900.00	40.2 AV	54.0	-13.8	1.47 V	100	26.9	13.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.2 PK			2.41 H	193	115.2	2.0
2	*5320.00	106.6 AV			2.41 H	193	104.6	2.0
3	5350.00	70.3 PK	74.0	-3.7	2.41 H	193	68.2	2.1
4	5350.00	48.9 AV	54.0	-5.1	2.41 H	193	46.8	2.1
5	10640.00	51.1 PK	74.0	-22.9	1.49 H	82	38.4	12.7
6	10640.00	39.3 AV	54.0	-14.7	1.49 H	82	26.6	12.7
7	15960.00	52.8 PK	74.0	-21.2	1.83 H	232	39.7	13.1
8	15960.00	40.1 AV	54.0	-13.9	1.83 H	232	27.0	13.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	115.7 PK			3.91 V	191	113.7	2.0
2	*5320.00	104.3 AV			3.91 V	191	102.3	2.0
3	5350.00	72.0 PK	74.0	-2.0	3.91 V	191	69.9	2.1
4	5350.00	47.6 AV	54.0	-6.4	3.91 V	191	45.5	2.1
5	10640.00	50.4 PK	74.0	-23.6	1.71 V	205	37.7	12.7
6	10640.00	39.5 AV	54.0	-14.5	1.71 V	205	26.8	12.7
7	15960.00	52.7 PK	74.0	-21.3	1.51 V	115	39.6	13.1
8	15960.00	39.9 AV	54.0	-14.1	1.51 V	115	26.8	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.

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	71.0 PK	74.0	-3.0	2.35 H	190	68.7	2.3
2	#5470.00	48.8 AV	54.0	-5.2	2.35 H	190	46.5	2.3
3	*5500.00	117.0 PK			2.35 H	190	114.7	2.3
4	*5500.00	106.1 AV			2.35 H	190	103.8	2.3
5	11000.00	50.9 PK	74.0	-23.1	1.42 H	54	37.5	13.4
6	11000.00	39.1 AV	54.0	-14.9	1.42 H	54	25.7	13.4
7	#16500.00	53.0 PK	74.0	-21.0	1.82 H	235	37.4	15.6
8	#16500.00	40.1 AV	54.0	-13.9	1.82 H	235	24.5	15.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	72.1 PK	74.0	-1.9	3.86 V	174	69.8	2.3
2	#5470.00	48.1 AV	54.0	-5.9	3.86 V	174	45.8	2.3
3	*5500.00	116.1 PK			3.86 V	174	113.8	2.3
4	*5500.00	104.6 AV			3.86 V	174	102.3	2.3
5	11000.00	50.4 PK	74.0	-23.6	1.73 V	200	37.0	13.4
6	11000.00	39.6 AV	54.0	-14.4	1.73 V	200	26.2	13.4
7	#16500.00	52.1 PK	74.0	-21.9	1.45 V	87	36.5	15.6
8	#16500.00	39.8 AV	54.0	-14.2	1.45 V	87	24.2	15.6

REMARKS:

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

CHANNEL	TX Channel 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	5412.00	60.1 PK	74.0	-13.9	2.35 H	187	57.9	2.2
2	5412.00	50.3 AV	54.0	-3.7	2.35 H	187	48.1	2.2
3	*5580.00	116.5 PK			2.35 H	187	114.0	2.5
4	*5580.00	105.6 AV			2.35 H	187	103.1	2.5
5	11160.00	50.7 PK	74.0	-23.3	1.38 H	58	37.4	13.3
6	11160.00	38.7 AV	54.0	-15.3	1.38 H	58	25.4	13.3
7	#16740.00	53.3 PK	74.0	-20.7	1.86 H	221	36.9	16.4
8	#16740.00	40.4 AV	54.0	-13.6	1.86 H	221	24.0	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5412.00	65.3 PK	74.0	-8.7	3.88 V	190	63.1	2.2
2	5412.00	47.8 AV	54.0	-6.2	3.88 V	190	45.6	2.2
3	*5580.00	115.6 PK			3.88 V	190	113.1	2.5
4	*5580.00	104.2 AV			3.88 V	190	101.7	2.5
5	11160.00	50.0 PK	74.0	-24.0	1.70 V	228	36.7	13.3
6	11160.00	39.4 AV	54.0	-14.6	1.70 V	228	26.1	13.3
7	#16740.00	52.6 PK	74.0	-21.4	1.42 V	113	36.2	16.4
8	#16740.00	40.1 AV	54.0	-13.9	1.42 V	113	23.7	16.4

REMARKS:

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

CHANNEL	TX Channel 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	113.6 PK			2.78 H	188	110.8	2.8
2	*5700.00	104.3 AV			2.78 H	188	101.5	2.8
3	#5725.00	69.4 PK	74.0	-4.6	2.78 H	188	66.6	2.8
4	#5725.00	48.1 AV	54.0	-5.9	2.78 H	188	45.3	2.8
5	11400.00	50.1 PK	74.0	-23.9	1.49 H	76	36.7	13.4
6	11400.00	39.1 AV	54.0	-14.9	1.49 H	76	25.7	13.4
7	#17100.00	52.9 PK	74.0	-21.1	1.77 H	253	35.0	17.9
8	#17100.00	40.2 AV	54.0	-13.8	1.77 H	253	22.3	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.1 PK			3.87 V	178	109.3	2.8
2	*5700.00	102.8 AV			3.87 V	178	100.0	2.8
3	#5725.00	71.8 PK	74.0	-2.2	3.87 V	178	69.0	2.8
4	#5725.00	47.4 AV	54.0	-6.6	3.87 V	178	44.6	2.8
5	11400.00	50.7 PK	74.0	-23.3	1.81 V	219	37.3	13.4
6	11400.00	39.9 AV	54.0	-14.1	1.81 V	219	26.5	13.4
7	#17100.00	52.8 PK	74.0	-21.2	1.48 V	103	34.9	17.9
8	#17100.00	40.1 AV	54.0	-13.9	1.48 V	103	22.2	17.9

REMARKS:

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

802.11ac (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	55.7 PK	74.0	-18.3	2.64 H	208	54.1	1.6
2	5150.00	42.4 AV	54.0	-11.6	2.64 H	208	40.8	1.6
3	*5260.00	117.8 PK			2.64 H	208	115.9	1.9
4	*5260.00	106.6 AV			2.64 H	208	104.7	1.9
5	#10520.00	50.9 PK	74.0	-23.1	1.42 H	42	38.4	12.5
6	#10520.00	39.4 AV	54.0	-14.6	1.42 H	42	26.9	12.5
7	15780.00	53.6 PK	74.0	-20.4	1.83 H	231	40.5	13.1
8	15780.00	40.5 AV	54.0	-13.5	1.83 H	231	27.4	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	53.2 PK	74.0	-20.8	3.88 V	180	51.6	1.6
2	5150.00	40.4 AV	54.0	-13.6	3.88 V	180	38.8	1.6
3	*5260.00	115.8 PK			3.88 V	180	113.9	1.9
4	*5260.00	104.2 AV			3.88 V	180	102.3	1.9
5	#10520.00	50.0 PK	74.0	-24.0	1.75 V	209	37.5	12.5
6	#10520.00	39.1 AV	54.0	-14.9	1.75 V	209	26.6	12.5
7	15780.00	52.8 PK	74.0	-21.2	1.50 V	112	39.7	13.1
8	15780.00	40.2 AV	54.0	-13.8	1.50 V	112	27.1	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	117.8 PK			2.71 H	189	115.8	2.0
2	*5300.00	106.1 AV			2.71 H	189	104.1	2.0
3	10600.00	51.0 PK	74.0	-23.0	1.38 H	44	38.3	12.7
4	10600.00	39.0 AV	54.0	-15.0	1.38 H	44	26.3	12.7
5	15900.00	52.9 PK	74.0	-21.1	1.87 H	238	39.6	13.3
6	15900.00	39.9 AV	54.0	-14.1	1.87 H	238	26.6	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	116.2 PK			3.86 V	171	114.2	2.0
2	*5300.00	104.6 AV			3.86 V	171	102.6	2.0
3	10600.00	50.0 PK	74.0	-24.0	1.71 V	206	37.3	12.7
4	10600.00	39.3 AV	54.0	-14.7	1.71 V	206	26.6	12.7
5	15900.00	52.8 PK	74.0	-21.2	1.51 V	108	39.5	13.3
6	15900.00	40.2 AV	54.0	-13.8	1.51 V	108	26.9	13.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.8 PK			2.70 H	197	115.8	2.0
2	*5320.00	106.4 AV			2.70 H	197	104.4	2.0
3	5350.00	73.5 PK	74.0	-0.5	2.70 H	197	71.4	2.1
4	5350.00	52.1 AV	54.0	-1.9	2.70 H	197	50.0	2.1
5	10640.00	51.3 PK	74.0	-22.7	1.41 H	69	38.6	12.7
6	10640.00	39.4 AV	54.0	-14.6	1.41 H	69	26.7	12.7
7	15960.00	53.4 PK	74.0	-20.6	1.86 H	231	40.3	13.1
8	15960.00	40.5 AV	54.0	-13.5	1.86 H	231	27.4	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	*5320.00	116.1 PK			3.89 V	180	114.1	2.0
2	*5320.00	104.5 AV			3.89 V	180	102.5	2.0
3	5350.00	67.1 PK	74.0	-6.9	3.89 V	180	65.0	2.1
4	5350.00	50.1 AV	54.0	-3.9	3.89 V	180	48.0	2.1
5	10640.00	50.4 PK	74.0	-23.6	1.76 V	222	37.7	12.7
6	10640.00	39.7 AV	54.0	-14.3	1.76 V	222	27.0	12.7
7	15960.00	52.1 PK	74.0	-21.9	1.52 V	103	39.0	13.1
8	15960.00	39.8 AV	54.0	-14.2	1.52 V	103	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.

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	73.8 PK	74.0	-0.2	2.31 H	193	71.5	2.3
2	#5470.00	48.8 AV	54.0	-5.2	2.31 H	193	46.5	2.3
3	*5500.00	117.8 PK			2.31 H	193	115.5	2.3
4	*5500.00	105.9 AV			2.31 H	193	103.6	2.3
5	11000.00	50.7 PK	74.0	-23.3	1.44 H	48	37.3	13.4
6	11000.00	38.7 AV	54.0	-15.3	1.44 H	48	25.3	13.4
7	#16500.00	53.5 PK	74.0	-20.5	1.80 H	244	37.9	15.6
8	#16500.00	40.5 AV	54.0	-13.5	1.80 H	244	24.9	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	72.0 PK	74.0	-2.0	3.87 V	183	69.7	2.3
2	#5470.00	47.8 AV	54.0	-6.2	3.87 V	183	45.5	2.3
3	*5500.00	115.7 PK			3.87 V	183	113.4	2.3
4	*5500.00	104.2 AV			3.87 V	183	101.9	2.3
5	11000.00	50.0 PK	74.0	-24.0	1.75 V	206	36.6	13.4
6	11000.00	39.3 AV	54.0	-14.7	1.75 V	206	25.9	13.4
7	#16500.00	53.4 PK	74.0	-20.6	1.44 V	104	37.8	15.6
8	#16500.00	40.6 AV	54.0	-13.4	1.44 V	104	25.0	15.6

REMARKS:

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

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
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	117.5 PK			2.27 H	193	115.0	2.5
2	*5580.00	105.4 AV			2.27 H	193	102.9	2.5
3	11160.00	51.1 PK	74.0	-22.9	1.46 H	57	37.8	13.3
4	11160.00	39.2 AV	54.0	-14.8	1.46 H	57	25.9	13.3
5	#16740.00	52.8 PK	74.0	-21.2	1.81 H	244	36.4	16.4
6	#16740.00	39.7 AV	54.0	-14.3	1.81 H	244	23.3	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	115.9 PK			3.91 V	176	113.4	2.5
2	*5580.00	104.1 AV			3.91 V	176	101.6	2.5
3	11160.00	50.4 PK	74.0	-23.6	1.80 V	202	37.1	13.3
4	11160.00	39.6 AV	54.0	-14.4	1.80 V	202	26.3	13.3
5	#16740.00	52.4 PK	74.0	-21.6	1.41 V	94	36.0	16.4
6	#16740.00	40.0 AV	54.0	-14.0	1.41 V	94	23.6	16.4

REMARKS:

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

CHANNEL	TX Channel 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	114.1 PK			2.39 H	191	111.3	2.8
2	*5700.00	102.7 AV			2.39 H	191	99.9	2.8
3	#5725.00	73.2 PK	74.0	-0.8	2.39 H	191	70.4	2.8
4	#5725.00	47.7 AV	54.0	-6.3	2.39 H	191	44.9	2.8
5	11400.00	51.3 PK	74.0	-22.7	1.42 H	62	37.9	13.4
6	11400.00	39.3 AV	54.0	-14.7	1.42 H	62	25.9	13.4
7	#17100.00	53.4 PK	74.0	-20.6	1.82 H	244	35.5	17.9
8	#17100.00	40.6 AV	54.0	-13.4	1.82 H	244	22.7	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.6 PK			3.86 V	175	109.8	2.8
2	*5700.00	101.1 AV			3.86 V	175	98.3	2.8
3	#5725.00	71.5 PK	74.0	-2.5	3.86 V	175	68.7	2.8
4	#5725.00	47.1 AV	54.0	-6.9	3.86 V	175	44.3	2.8
5	11400.00	50.4 PK	74.0	-23.6	1.76 V	217	37.0	13.4
6	11400.00	39.6 AV	54.0	-14.4	1.76 V	217	26.2	13.4
7	#17100.00	52.4 PK	74.0	-21.6	1.52 V	110	34.5	17.9
8	#17100.00	39.8 AV	54.0	-14.2	1.52 V	110	21.9	17.9

REMARKS:

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

802.11ac (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	56.2 PK	74.0	-17.8	1.30 H	360	54.6	1.6
2	5150.00	42.6 AV	54.0	-11.4	1.30 H	360	41.0	1.6
3	*5270.00	113.6 PK			1.30 H	360	111.6	2.0
4	*5270.00	101.5 AV			1.30 H	360	99.5	2.0
5	#10540.00	50.5 PK	74.0	-23.5	1.42 H	54	38.0	12.5
6	#10540.00	38.7 AV	54.0	-15.3	1.42 H	54	26.2	12.5
7	15810.00	52.6 PK	74.0	-21.4	1.77 H	233	39.5	13.1
8	15810.00	40.0 AV	54.0	-14.0	1.77 H	233	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	52.9 PK	74.0	-21.1	3.84 V	188	51.3	1.6
2	5150.00	40.4 AV	54.0	-13.6	3.84 V	188	38.8	1.6
3	*5270.00	112.1 PK			3.84 V	188	110.1	2.0
4	*5270.00	100.1 AV			3.84 V	188	98.1	2.0
5	#10540.00	50.0 PK	74.0	-24.0	1.77 V	218	37.5	12.5
6	#10540.00	39.0 AV	54.0	-15.0	1.77 V	218	26.5	12.5
7	15810.00	53.0 PK	74.0	-21.0	1.42 V	114	39.9	13.1
8	15810.00	40.3 AV	54.0	-13.7	1.42 V	114	27.2	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 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	113.2 PK			1.46 H	10	111.2	2.0
2	*5310.00	101.1 AV			1.46 H	10	99.1	2.0
3	5350.00	73.3 PK	74.0	-0.7	1.46 H	10	71.2	2.1
4	5350.00	52.8 AV	54.0	-1.2	1.46 H	10	50.7	2.1
5	10620.00	50.7 PK	74.0	-23.3	1.47 H	48	38.0	12.7
6	10620.00	38.9 AV	54.0	-15.1	1.47 H	48	26.2	12.7
7	15930.00	52.6 PK	74.0	-21.4	1.81 H	225	39.3	13.3
8	15930.00	39.9 AV	54.0	-14.1	1.81 H	225	26.6	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.8 PK			3.90 V	138	105.8	2.0
2	*5310.00	97.5 AV			3.90 V	138	95.5	2.0
3	5350.00	67.7 PK	74.0	-6.3	3.90 V	138	65.6	2.1
4	5350.00	48.4 AV	54.0	-5.6	3.90 V	138	46.3	2.1
5	10620.00	50.7 PK	74.0	-23.3	1.78 V	201	38.0	12.7
6	10620.00	39.7 AV	54.0	-14.3	1.78 V	201	27.0	12.7
7	15930.00	52.9 PK	74.0	-21.1	1.51 V	88	39.6	13.3
8	15930.00	40.4 AV	54.0	-13.6	1.51 V	88	27.1	13.3

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.9 PK	74.0	-6.1	1.41 H	13	65.6	2.3
2	#5470.00	53.9 AV	54.0	-0.1	1.41 H	13	51.6	2.3
3	*5510.00	109.3 PK			1.41 H	13	107.0	2.3
4	*5510.00	98.2 AV			1.41 H	13	95.9	2.3
5	11020.00	51.2 PK	74.0	-22.8	1.46 H	64	37.8	13.4
6	11020.00	39.5 AV	54.0	-14.5	1.46 H	64	26.1	13.4
7	#16530.00	52.6 PK	74.0	-21.4	1.76 H	225	36.8	15.8
8	#16530.00	39.9 AV	54.0	-14.1	1.76 H	225	24.1	15.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	68.1 PK	74.0	-5.9	3.87 V	187	65.8	2.3
2	#5470.00	50.6 AV	54.0	-3.4	3.87 V	187	48.3	2.3
3	*5510.00	108.4 PK			3.87 V	180	106.1	2.3
4	*5510.00	96.9 AV			3.87 V	180	94.6	2.3
5	11020.00	50.8 PK	74.0	-23.2	1.75 V	213	37.4	13.4
6	11020.00	39.9 AV	54.0	-14.1	1.75 V	213	26.5	13.4
7	#16530.00	53.0 PK	74.0	-21.0	1.48 V	91	37.2	15.8
8	#16530.00	40.3 AV	54.0	-13.7	1.48 V	91	24.5	15.8

REMARKS:

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
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	112.8 PK			1.23 H	360	110.3	2.5
2	*5550.00	101.3 AV			1.23 H	360	98.8	2.5
3	11100.00	50.4 PK	74.0	-23.6	1.37 H	56	37.2	13.2
4	11100.00	38.9 AV	54.0	-15.1	1.37 H	56	25.7	13.2
5	#16650.00	52.8 PK	74.0	-21.2	1.79 H	234	36.6	16.2
6	#16650.00	39.7 AV	54.0	-14.3	1.79 H	234	23.5	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	110.2 PK			3.92 V	185	107.7	2.5
2	*5550.00	99.8 AV			3.92 V	185	97.3	2.5
3	11100.00	50.0 PK	74.0	-24.0	1.82 V	215	36.8	13.2
4	11100.00	39.2 AV	54.0	-14.8	1.82 V	215	26.0	13.2
5	#16650.00	52.5 PK	74.0	-21.5	1.42 V	100	36.3	16.2
6	#16650.00	39.8 AV	54.0	-14.2	1.42 V	100	23.6	16.2

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	113.2 PK			1.28 H	360	110.6	2.6
2	*5670.00	101.4 AV			1.28 H	360	98.8	2.6
3	#5725.00	72.1 PK	74.0	-1.9	1.28 H	360	69.3	2.8
4	#5725.00	53.9 AV	54.0	-0.1	1.28 H	360	51.1	2.8
5	11340.00	51.4 PK	74.0	-22.6	1.41 H	47	37.6	13.8
6	11340.00	39.4 AV	54.0	-14.6	1.41 H	47	25.6	13.8
7	#17010.00	52.7 PK	74.0	-21.3	1.79 H	244	34.9	17.8
8	#17010.00	39.6 AV	54.0	-14.4	1.79 H	244	21.8	17.8
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	*5670.00	112.2 PK			3.86 V	186	109.6	2.6
2	*5670.00	100.5 AV			3.86 V	186	97.9	2.6
3	#5725.00	67.6 PK	74.0	-6.4	3.86 V	186	64.8	2.8
4	#5725.00	51.7 AV	54.0	-2.3	3.86 V	186	48.9	2.8
5	11340.00	50.9 PK	74.0	-23.1	1.78 V	204	37.1	13.8
6	11340.00	40.0 AV	54.0	-14.0	1.78 V	204	26.2	13.8
7	#17010.00	53.5 PK	74.0	-20.5	1.41 V	104	35.7	17.8
8	#17010.00	40.7 AV	54.0	-13.3	1.41 V	104	22.9	17.8

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.

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	55.7 PK	74.0	-18.3	1.18 H	357	54.1	1.6
2	5150.00	44.1 AV	54.0	-9.9	1.18 H	357	42.5	1.6
3	*5290.00	110.1 PK			1.18 H	357	108.1	2.0
4	*5290.00	96.5 AV			1.18 H	357	94.5	2.0
5	5350.00	69.5 PK	74.0	-4.5	1.18 H	357	67.4	2.1
6	5350.00	51.6 AV	54.0	-2.4	1.18 H	357	49.5	2.1
7	#10580.00	51.2 PK	74.0	-22.8	1.40 H	45	38.5	12.7
8	#10580.00	39.3 AV	54.0	-14.7	1.40 H	45	26.6	12.7
9	15870.00	52.5 PK	74.0	-21.5	1.86 H	232	39.2	13.3
10	15870.00	39.9 AV	54.0	-14.1	1.86 H	232	26.6	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.6 PK	74.0	-21.4	3.83 V	185	51.0	1.6
2	5150.00	39.8 AV	54.0	-14.2	3.83 V	185	38.2	1.6
3	*5290.00	108.8 PK			3.83 V	185	106.8	2.0
4	*5290.00	95.0 AV			3.83 V	185	93.0	2.0
5	5350.00	65.0 PK	74.0	-9.0	3.83 V	185	62.9	2.1
6	5350.00	47.6 AV	54.0	-6.4	3.83 V	185	45.5	2.1
7	#10580.00	50.8 PK	74.0	-23.2	1.76 V	208	38.1	12.7
8	#10580.00	40.0 AV	54.0	-14.0	1.76 V	208	27.3	12.7
9	15870.00	53.5 PK	74.0	-20.5	1.42 V	94	40.2	13.3
10	15870.00	40.6 AV	54.0	-13.4	1.42 V	94	27.3	13.3

REMARKS:

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

CHANNEL	TX Channel 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	67.1 PK	74.0	-6.9	1.18 H	360	64.8	2.3
2	#5470.00	53.0 AV	54.0	-1.0	1.18 H	360	50.7	2.3
3	*5530.00	104.9 PK			1.18 H	360	102.5	2.4
4	*5530.00	93.2 AV			1.18 H	360	90.8	2.4
5	11060.00	50.8 PK	74.0	-23.2	1.45 H	39	37.5	13.3
6	11060.00	39.2 AV	54.0	-14.8	1.45 H	39	25.9	13.3
7	#16590.00	52.9 PK	74.0	-21.1	1.83 H	245	36.6	16.3
8	#16590.00	40.1 AV	54.0	-13.9	1.83 H	245	23.8	16.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.7 PK	74.0	-6.3	3.85 V	178	65.4	2.3
2	#5470.00	50.4 AV	54.0	-3.6	3.85 V	178	48.1	2.3
3	*5530.00	103.4 PK			3.85 V	178	101.0	2.4
4	*5530.00	92.1 AV			3.85 V	178	89.7	2.4
5	11060.00	50.7 PK	74.0	-23.3	1.82 V	230	37.4	13.3
6	11060.00	39.7 AV	54.0	-14.3	1.82 V	230	26.4	13.3
7	#16590.00	53.1 PK	74.0	-20.9	1.51 V	93	36.8	16.3
8	#16590.00	40.6 AV	54.0	-13.4	1.51 V	93	24.3	16.3

REMARKS:

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

CHANNEL	TX Channel 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	109.7 PK			1.14 H	360	107.1	2.6
2	*5610.00	97.3 AV			1.14 H	360	94.7	2.6
3	#5725.00	68.5 PK	74.0	-5.5	1.14 H	360	65.7	2.8
4	#5725.00	51.4 AV	54.0	-2.6	1.14 H	360	48.6	2.8
5	11220.00	50.9 PK	74.0	-23.1	1.37 H	67	37.4	13.5
6	11220.00	39.2 AV	54.0	-14.8	1.37 H	67	25.7	13.5
7	#16830.00	52.7 PK	74.0	-21.3	1.84 H	237	35.6	17.1
8	#16830.00	39.9 AV	54.0	-14.1	1.84 H	237	22.8	17.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	108.7 PK			3.85 V	181	106.1	2.6
2	*5610.00	96.4 AV			3.85 V	181	93.8	2.6
3	#5725.00	65.1 PK	74.0	-8.9	3.85 V	181	62.3	2.8
4	#5725.00	47.8 AV	54.0	-6.2	3.85 V	181	45.0	2.8
5	11220.00	50.2 PK	74.0	-23.8	1.81 V	222	36.7	13.5
6	11220.00	39.1 AV	54.0	-14.9	1.81 V	222	25.6	13.5
7	#16830.00	52.1 PK	74.0	-21.9	1.51 V	95	35.0	17.1
8	#16830.00	39.8 AV	54.0	-14.2	1.51 V	95	22.7	17.1

REMARKS:

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

Below 1GHz Data:

802.11a

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	108.87	37.4 QP	43.5	-6.1	2.50 H	143	48.9	-11.5
2	134.20	34.2 QP	43.5	-9.3	2.00 H	221	43.5	-9.3
3	257.55	33.2 QP	46.0	-12.8	1.00 H	142	42.8	-9.6
4	326.09	35.2 QP	46.0	-10.8	1.00 H	214	42.3	-7.1
5	401.05	32.3 QP	46.0	-13.7	1.00 H	115	37.6	-5.3
6	608.25	29.6 QP	46.0	-16.4	1.00 H	149	29.9	-0.3
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	108.85	25.6 QP	43.5	-17.9	1.00 V	142	37.1	-11.5
2	130.01	31.3 QP	43.5	-12.2	1.50 V	205	41.2	-9.9
3	241.40	32.7 QP	46.0	-13.3	1.50 V	289	42.9	-10.2
4	331.85	38.4 QP	46.0	-7.6	1.50 V	79	45.5	-7.1
5	401.40	33.8 QP	46.0	-12.2	1.50 V	143	39.1	-5.3
6	609.78	33.2 QP	46.0	-12.8	1.03 V	360	33.4	-0.2

REMARKS:

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

4.1.8 Test Results (Mode 2)

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	52.5 PK	74.0	-21.5	1.28 H	243	50.9	1.6
2	5150.00	40.3 AV	54.0	-13.7	1.28 H	243	38.7	1.6
3	*5260.00	106.8 PK			1.28 H	243	104.9	1.9
4	*5260.00	97.2 AV			1.28 H	243	95.3	1.9
5	#10520.00	51.5 PK	74.0	-22.5	2.92 H	349	39.0	12.5
6	#10520.00	39.2 AV	54.0	-14.8	2.92 H	349	26.7	12.5
7	15780.00	51.1 PK	74.0	-22.9	1.54 H	90	38.0	13.1
8	15780.00	39.7 AV	54.0	-14.3	1.54 H	90	26.6	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	54.0 PK	74.0	-20.0	3.19 V	316	52.4	1.6
2	5150.00	41.6 AV	54.0	-12.4	3.19 V	316	40.0	1.6
3	*5260.00	118.7 PK			3.19 V	316	116.8	1.9
4	*5260.00	108.1 AV			3.19 V	316	106.2	1.9
5	#10520.00	51.1 PK	74.0	-22.9	1.56 V	286	38.6	12.5
6	#10520.00	39.2 AV	54.0	-14.8	1.56 V	286	26.7	12.5
7	15780.00	51.8 PK	74.0	-22.2	1.51 V	160	38.7	13.1
8	15780.00	39.5 AV	54.0	-14.5	1.51 V	160	26.4	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	106.3 PK			1.28 H	243	104.3	2.0
2	*5300.00	96.7 AV			1.28 H	243	94.7	2.0
3	10600.00	51.6 PK	74.0	-22.4	2.95 H	360	38.9	12.7
4	10600.00	39.5 AV	54.0	-14.5	2.95 H	360	26.8	12.7
5	15900.00	51.2 PK	74.0	-22.8	1.58 H	89	37.9	13.3
6	15900.00	39.8 AV	54.0	-14.2	1.58 H	89	26.5	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	118.4 PK			3.22 V	320	116.4	2.0
2	*5300.00	107.9 AV			3.22 V	320	105.9	2.0
3	10600.00	51.4 PK	74.0	-22.6	1.53 V	296	38.7	12.7
4	10600.00	39.2 AV	54.0	-14.8	1.53 V	296	26.5	12.7
5	15900.00	52.1 PK	74.0	-21.9	1.47 V	165	38.8	13.3
6	15900.00	39.9 AV	54.0	-14.1	1.47 V	165	26.6	13.3

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	106.2 PK			1.28 H	243	104.2	2.0
2	*5320.00	96.9 AV			1.28 H	243	94.9	2.0
3	5350.00	61.7 PK	74.0	-12.3	1.28 H	243	59.6	2.1
4	5350.00	43.2 AV	54.0	-10.8	1.28 H	243	41.1	2.1
5	10640.00	51.7 PK	74.0	-22.3	2.92 H	360	39.0	12.7
6	10640.00	39.3 AV	54.0	-14.7	2.92 H	360	26.6	12.7
7	15960.00	51.3 PK	74.0	-22.7	1.58 H	94	38.2	13.1
8	15960.00	39.8 AV	54.0	-14.2	1.58 H	94	26.7	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	*5320.00	118.1 PK			3.19 V	309	116.1	2.0
2	*5320.00	107.7 AV			3.19 V	309	105.7	2.0
3	5350.00	71.1 PK	74.0	-2.9	3.19 V	309	69.0	2.1
4	5350.00	49.1 AV	54.0	-4.9	3.19 V	309	47.0	2.1
5	10640.00	50.9 PK	74.0	-23.1	1.48 V	310	38.2	12.7
6	10640.00	38.7 AV	54.0	-15.3	1.48 V	310	26.0	12.7
7	15960.00	52.3 PK	74.0	-21.7	1.48 V	157	39.2	13.1
8	15960.00	40.0 AV	54.0	-14.0	1.48 V	157	26.9	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.

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	61.5 PK	74.0	-12.5	1.28 H	243	59.2	2.3
2	#5470.00	42.8 AV	54.0	-11.2	1.28 H	243	40.5	2.3
3	*5500.00	105.2 PK			1.28 H	243	102.9	2.3
4	*5500.00	95.8 AV			1.28 H	243	93.5	2.3
5	11000.00	51.7 PK	74.0	-22.3	2.94 H	347	38.3	13.4
6	11000.00	39.4 AV	54.0	-14.6	2.94 H	347	26.0	13.4
7	#16500.00	50.6 PK	74.0	-23.4	1.52 H	94	35.0	15.6
8	#16500.00	39.3 AV	54.0	-14.7	1.52 H	94	23.7	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	72.1 PK	74.0	-1.9	2.49 V	136	69.8	2.3
2	#5470.00	49.2 AV	54.0	-4.8	2.49 V	136	46.9	2.3
3	*5500.00	116.3 PK			2.49 V	136	114.0	2.3
4	*5500.00	106.4 AV			2.49 V	136	104.1	2.3
5	11000.00	51.3 PK	74.0	-22.7	1.48 V	281	37.9	13.4
6	11000.00	39.1 AV	54.0	-14.9	1.48 V	281	25.7	13.4
7	#16500.00	52.2 PK	74.0	-21.8	1.48 V	158	36.6	15.6
8	#16500.00	39.7 AV	54.0	-14.3	1.48 V	158	24.1	15.6

REMARKS:

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

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
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	105.0 PK			1.28 H	243	102.5	2.5
2	*5580.00	95.4 AV			1.28 H	243	92.9	2.5
3	11160.00	51.4 PK	74.0	-22.6	2.92 H	340	38.1	13.3
4	11160.00	39.2 AV	54.0	-14.8	2.92 H	340	25.9	13.3
5	#16740.00	50.8 PK	74.0	-23.2	1.55 H	96	34.4	16.4
6	#16740.00	39.7 AV	54.0	-14.3	1.55 H	96	23.3	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	116.2 PK			2.52 V	125	113.7	2.5
2	*5580.00	106.5 AV			2.52 V	125	104.0	2.5
3	11160.00	50.8 PK	74.0	-23.2	1.50 V	287	37.5	13.3
4	11160.00	38.7 AV	54.0	-15.3	1.50 V	287	25.4	13.3
5	#16740.00	52.1 PK	74.0	-21.9	1.51 V	165	35.7	16.4
6	#16740.00	40.0 AV	54.0	-14.0	1.51 V	165	23.6	16.4

REMARKS:

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

CHANNEL	TX Channel 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	105.0 PK			1.28 H	243	102.2	2.8
2	*5700.00	95.1 AV			1.28 H	243	92.3	2.8
3	#5725.00	61.9 PK	74.0	-12.1	1.28 H	243	59.1	2.8
4	#5725.00	43.2 AV	54.0	-10.8	1.28 H	243	40.4	2.8
5	11400.00	51.0 PK	74.0	-23.0	2.91 H	334	37.6	13.4
6	11400.00	39.0 AV	54.0	-15.0	2.91 H	334	25.6	13.4
7	#17100.00	51.2 PK	74.0	-22.8	1.58 H	102	33.3	17.9
8	#17100.00	39.8 AV	54.0	-14.2	1.58 H	102	21.9	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	116.2 PK			2.08 V	92	113.4	2.8
2	*5700.00	106.0 AV			2.08 V	92	103.2	2.8
3	#5725.00	73.9 PK	74.0	-0.1	2.08 V	92	71.1	2.8
4	#5725.00	50.5 AV	54.0	-3.5	2.08 V	92	47.7	2.8
5	11400.00	51.1 PK	74.0	-22.9	1.53 V	299	37.7	13.4
6	11400.00	39.0 AV	54.0	-15.0	1.53 V	299	25.6	13.4
7	#17100.00	52.4 PK	74.0	-21.6	1.52 V	173	34.5	17.9
8	#17100.00	40.0 AV	54.0	-14.0	1.52 V	173	22.1	17.9

REMARKS:

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

802.11ac (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	52.6 PK	74.0	-21.4	1.28 H	243	51.0	1.6
2	5150.00	40.2 AV	54.0	-13.8	1.28 H	243	38.6	1.6
3	*5260.00	106.8 PK			1.28 H	243	104.9	1.9
4	*5260.00	96.9 AV			1.28 H	243	95.0	1.9
5	#10520.00	51.7 PK	74.0	-22.3	2.92 H	345	39.2	12.5
6	#10520.00	39.6 AV	54.0	-14.4	2.92 H	345	27.1	12.5
7	15780.00	50.6 PK	74.0	-23.4	1.54 H	93	37.5	13.1
8	15780.00	39.4 AV	54.0	-14.6	1.54 H	93	26.3	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	2.34 V	121	52.5	1.6
2	5150.00	41.7 AV	54.0	-12.3	2.34 V	121	40.1	1.6
3	*5260.00	118.2 PK			2.34 V	121	116.3	1.9
4	*5260.00	107.3 AV			2.34 V	121	105.4	1.9
5	#10520.00	50.8 PK	74.0	-23.2	1.50 V	282	38.3	12.5
6	#10520.00	38.6 AV	54.0	-15.4	1.50 V	282	26.1	12.5
7	15780.00	52.5 PK	74.0	-21.5	1.50 V	169	39.4	13.1
8	15780.00	40.2 AV	54.0	-13.8	1.50 V	169	27.1	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	106.6 PK			1.28 H	243	104.6	2.0
2	*5300.00	96.8 AV			1.28 H	243	94.8	2.0
3	10600.00	51.4 PK	74.0	-22.6	2.96 H	356	38.7	12.7
4	10600.00	39.0 AV	54.0	-15.0	2.96 H	356	26.3	12.7
5	15900.00	51.4 PK	74.0	-22.6	1.57 H	103	38.1	13.3
6	15900.00	39.8 AV	54.0	-14.2	1.57 H	103	26.5	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	118.4 PK			2.31 V	117	116.4	2.0
2	*5300.00	107.0 AV			2.31 V	117	105.0	2.0
3	10600.00	51.2 PK	74.0	-22.8	1.49 V	292	38.5	12.7
4	10600.00	38.8 AV	54.0	-15.2	1.49 V	292	26.1	12.7
5	15900.00	51.9 PK	74.0	-22.1	1.42 V	171	38.6	13.3
6	15900.00	39.5 AV	54.0	-14.5	1.42 V	171	26.2	13.3

REMARKS:

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

CHANNEL	TX Channel 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	106.5 PK			1.28 H	243	104.5	2.0
2	*5320.00	96.6 AV			1.28 H	243	94.6	2.0
3	5350.00	62.4 PK	74.0	-11.6	1.28 H	243	60.3	2.1
4	5350.00	43.7 AV	54.0	-10.3	1.28 H	243	41.6	2.1
5	10640.00	51.6 PK	74.0	-22.4	2.94 H	343	38.9	12.7
6	10640.00	39.4 AV	54.0	-14.6	2.94 H	343	26.7	12.7
7	15960.00	51.1 PK	74.0	-22.9	1.50 H	82	38.0	13.1
8	15960.00	39.8 AV	54.0	-14.2	1.50 H	82	26.7	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	*5320.00	118.0 PK			2.36 V	115	116.0	2.0
2	*5320.00	106.9 AV			2.36 V	115	104.9	2.0
3	5350.00	73.8 PK	74.0	-0.2	2.36 V	115	71.7	2.1
4	5350.00	52.7 AV	54.0	-1.3	2.36 V	115	50.6	2.1
5	10640.00	51.1 PK	74.0	-22.9	1.59 V	291	38.4	12.7
6	10640.00	39.1 AV	54.0	-14.9	1.59 V	291	26.4	12.7
7	15960.00	51.9 PK	74.0	-22.1	1.50 V	171	38.8	13.1
8	15960.00	39.5 AV	54.0	-14.5	1.50 V	171	26.4	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.

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	61.6 PK	74.0	-12.4	1.28 H	243	59.3	2.3
2	#5470.00	42.8 AV	54.0	-11.2	1.28 H	243	40.5	2.3
3	*5500.00	104.1 PK			1.28 H	243	101.8	2.3
4	*5500.00	94.3 AV			1.28 H	243	92.0	2.3
5	11000.00	51.9 PK	74.0	-22.1	2.87 H	346	38.5	13.4
6	11000.00	39.3 AV	54.0	-14.7	2.87 H	346	25.9	13.4
7	#16500.00	51.0 PK	74.0	-23.0	1.55 H	97	35.4	15.6
8	#16500.00	39.6 AV	54.0	-14.4	1.55 H	97	24.0	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	72.4 PK	74.0	-1.6	2.50 V	135	70.1	2.3
2	#5470.00	49.3 AV	54.0	-4.7	2.50 V	135	47.0	2.3
3	*5500.00	114.6 PK			2.50 V	135	112.3	2.3
4	*5500.00	104.3 AV			2.50 V	135	102.0	2.3
5	11000.00	51.3 PK	74.0	-22.7	1.53 V	300	37.9	13.4
6	11000.00	39.1 AV	54.0	-14.9	1.53 V	300	25.7	13.4
7	#16500.00	52.6 PK	74.0	-21.4	1.51 V	160	37.0	15.6
8	#16500.00	40.2 AV	54.0	-13.8	1.51 V	160	24.6	15.6

REMARKS:

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

CHANNEL	TX Channel 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	104.9 PK			1.28 H	243	102.4	2.5
2	*5580.00	94.6 AV			1.28 H	243	92.1	2.5
3	11160.00	51.8 PK	74.0	-22.2	2.98 H	360	38.5	13.3
4	11160.00	39.6 AV	54.0	-14.4	2.98 H	360	26.3	13.3
5	#16740.00	50.6 PK	74.0	-23.4	1.56 H	104	34.2	16.4
6	#16740.00	39.3 AV	54.0	-14.7	1.56 H	104	22.9	16.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	115.4 PK			2.32 V	127	112.9	2.5
2	*5580.00	104.6 AV			2.32 V	127	102.1	2.5
3	11160.00	51.2 PK	74.0	-22.8	1.47 V	291	37.9	13.3
4	11160.00	39.2 AV	54.0	-14.8	1.47 V	291	25.9	13.3
5	#16740.00	51.7 PK	74.0	-22.3	1.47 V	180	35.3	16.4
6	#16740.00	39.7 AV	54.0	-14.3	1.47 V	180	23.3	16.4

REMARKS:

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

CHANNEL	TX Channel 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	103.2 PK			1.28 H	243	100.4	2.8
2	*5700.00	93.1 AV			1.28 H	243	90.3	2.8
3	#5728.70	61.3 PK	74.0	-12.7	1.28 H	243	58.5	2.8
4	#5728.70	42.9 AV	54.0	-11.1	1.28 H	243	40.1	2.8
5	11400.00	51.8 PK	74.0	-22.2	2.92 H	357	38.4	13.4
6	11400.00	39.4 AV	54.0	-14.6	2.92 H	357	26.0	13.4
7	#17100.00	50.7 PK	74.0	-23.3	1.59 H	94	32.8	17.9
8	#17100.00	39.2 AV	54.0	-14.8	1.59 H	94	21.3	17.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	114.0 PK			2.12 V	55	111.2	2.8
2	*5700.00	103.5 AV			2.12 V	55	100.7	2.8
3	#5728.70	73.5 PK	74.0	-0.5	2.12 V	55	70.7	2.8
4	#5728.70	50.9 AV	54.0	-3.1	2.12 V	55	48.1	2.8
5	11400.00	51.3 PK	74.0	-22.7	1.48 V	281	37.9	13.4
6	11400.00	38.8 AV	54.0	-15.2	1.48 V	281	25.4	13.4
7	#17100.00	51.7 PK	74.0	-22.3	1.43 V	181	33.8	17.9
8	#17100.00	39.7 AV	54.0	-14.3	1.43 V	181	21.8	17.9

REMARKS:

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

802.11ac (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	52.3 PK	74.0	-21.7	1.28 H	243	50.7	1.6
2	5150.00	40.1 AV	54.0	-13.9	1.28 H	243	38.5	1.6
3	*5270.00	104.7 PK			1.28 H	243	102.7	2.0
4	*5270.00	93.2 AV			1.28 H	243	91.2	2.0
5	#10540.00	51.6 PK	74.0	-22.4	2.87 H	336	39.1	12.5
6	#10540.00	39.6 AV	54.0	-14.4	2.87 H	336	27.1	12.5
7	15810.00	50.5 PK	74.0	-23.5	1.57 H	79	37.4	13.1
8	15810.00	39.2 AV	54.0	-14.8	1.57 H	79	26.1	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	53.9 PK	74.0	-20.1	2.35 V	226	52.3	1.6
2	5150.00	41.4 AV	54.0	-12.6	2.35 V	226	39.8	1.6
3	*5270.00	115.7 PK			2.35 V	226	113.7	2.0
4	*5270.00	103.2 AV			2.35 V	226	101.2	2.0
5	#10540.00	51.0 PK	74.0	-23.0	1.50 V	273	38.5	12.5
6	#10540.00	38.4 AV	54.0	-15.6	1.50 V	273	25.9	12.5
7	15810.00	52.1 PK	74.0	-21.9	1.45 V	191	39.0	13.1
8	15810.00	39.9 AV	54.0	-14.1	1.45 V	191	26.8	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 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	101.0 PK			1.28 H	243	99.0	2.0
2	*5310.00	90.3 AV			1.28 H	243	88.3	2.0
3	5350.00	58.2 PK	74.0	-15.8	1.28 H	243	56.1	2.1
4	5350.00	42.2 AV	54.0	-11.8	1.28 H	243	40.1	2.1
5	10620.00	51.9 PK	74.0	-22.1	2.84 H	325	39.2	12.7
6	10620.00	40.0 AV	54.0	-14.0	2.84 H	325	27.3	12.7
7	15930.00	50.6 PK	74.0	-23.4	1.53 H	66	37.3	13.3
8	15930.00	39.2 AV	54.0	-14.8	1.53 H	66	25.9	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	112.7 PK			2.56 V	240	110.7	2.0
2	*5310.00	102.0 AV			2.56 V	240	100.0	2.0
3	5350.00	70.6 PK	74.0	-3.4	2.56 V	240	68.5	2.1
4	5350.00	53.7 AV	54.0	-0.3	2.56 V	240	51.6	2.1
5	10620.00	51.7 PK	74.0	-22.3	1.43 V	293	39.0	12.7
6	10620.00	39.1 AV	54.0	-14.9	1.43 V	293	26.4	12.7
7	15930.00	51.8 PK	74.0	-22.2	1.40 V	193	38.5	13.3
8	15930.00	39.7 AV	54.0	-14.3	1.40 V	193	26.4	13.3

REMARKS:

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

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
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	57.8 PK	74.0	-16.2	1.28 H	243	55.5	2.3
2	#5470.00	43.8 AV	54.0	-10.2	1.28 H	243	41.5	2.3
3	*5510.00	99.2 PK			1.28 H	243	96.9	2.3
4	*5510.00	88.1 AV			1.28 H	243	85.8	2.3
5	11020.00	51.4 PK	74.0	-22.6	2.82 H	345	38.0	13.4
6	11020.00	39.6 AV	54.0	-14.4	2.82 H	345	26.2	13.4
7	#16530.00	50.8 PK	74.0	-23.2	1.59 H	87	35.0	15.8
8	#16530.00	39.5 AV	54.0	-14.5	1.59 H	87	23.7	15.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	69.7 PK	74.0	-4.3	2.89 V	217	67.4	2.3
2	#5470.00	53.2 AV	54.0	-0.8	2.89 V	217	50.9	2.3
3	*5510.00	109.6 PK			2.89 V	217	107.3	2.3
4	*5510.00	98.3 AV			2.89 V	217	96.0	2.3
5	11020.00	51.7 PK	74.0	-22.3	1.51 V	266	38.3	13.4
6	11020.00	39.3 AV	54.0	-14.7	1.51 V	266	25.9	13.4
7	#16530.00	51.8 PK	74.0	-22.2	1.49 V	175	36.0	15.8
8	#16530.00	39.6 AV	54.0	-14.4	1.49 V	175	23.8	15.8

REMARKS:

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
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	111.8 PK			1.28 H	243	109.3	2.5
2	*5550.00	90.1 AV			1.28 H	243	87.6	2.5
3	11100.00	51.3 PK	74.0	-22.7	2.85 H	346	38.1	13.2
4	11100.00	39.1 AV	54.0	-14.9	2.85 H	346	25.9	13.2
5	#16650.00	50.5 PK	74.0	-23.5	1.53 H	92	34.3	16.2
6	#16650.00	39.3 AV	54.0	-14.7	1.53 H	92	23.1	16.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	112.9 PK			2.60 V	260	110.4	2.5
2	*5550.00	100.5 AV			2.60 V	260	98.0	2.5
3	11100.00	51.0 PK	74.0	-23.0	1.46 V	274	37.8	13.2
4	11100.00	38.8 AV	54.0	-15.2	1.46 V	274	25.6	13.2
5	#16650.00	52.4 PK	74.0	-21.6	1.46 V	183	36.2	16.2
6	#16650.00	40.2 AV	54.0	-13.8	1.46 V	183	24.0	16.2

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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	103.4 PK			1.28 H	243	100.8	2.6
2	*5670.00	90.8 AV			1.28 H	243	88.2	2.6
3	#5725.00	57.9 PK	74.0	-16.1	1.28 H	243	55.1	2.8
4	#5725.00	44.1 AV	54.0	-9.9	1.28 H	243	41.3	2.8
5	11340.00	51.9 PK	74.0	-22.1	2.89 H	326	38.1	13.8
6	11340.00	39.7 AV	54.0	-14.3	2.89 H	326	25.9	13.8
7	#17010.00	50.9 PK	74.0	-23.1	1.56 H	92	33.1	17.8
8	#17010.00	39.6 AV	54.0	-14.4	1.56 H	92	21.8	17.8
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	*5670.00	114.2 PK			2.57 V	265	111.6	2.6
2	*5670.00	101.3 AV			2.57 V	265	98.7	2.6
3	#5725.00	70.1 PK	74.0	-3.9	2.57 V	265	67.3	2.8
4	#5725.00	53.9 AV	54.0	-0.1	2.57 V	265	51.1	2.8
5	11340.00	51.0 PK	74.0	-23.0	1.42 V	274	37.2	13.8
6	11340.00	38.3 AV	54.0	-15.7	1.42 V	274	24.5	13.8
7	#17010.00	51.2 PK	74.0	-22.8	1.43 V	195	33.4	17.8
8	#17010.00	39.2 AV	54.0	-14.8	1.43 V	195	21.4	17.8

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.

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	52.4 PK	74.0	-21.6	1.28 H	243	50.8	1.6
2	5150.00	39.9 AV	54.0	-14.1	1.28 H	243	38.3	1.6
3	*5290.00	99.4 PK			1.28 H	243	97.4	2.0
4	*5290.00	86.1 AV			1.28 H	243	84.1	2.0
5	5350.00	58.4 PK	74.0	-15.6	1.28 H	243	56.3	2.1
6	5350.00	44.2 AV	54.0	-9.8	1.28 H	243	42.1	2.1
7	#10580.00	51.7 PK	74.0	-22.3	2.89 H	331	39.0	12.7
8	#10580.00	39.6 AV	54.0	-14.4	2.89 H	331	26.9	12.7
9	15870.00	50.8 PK	74.0	-23.2	1.58 H	86	37.5	13.3
10	15870.00	39.3 AV	54.0	-14.7	1.58 H	86	26.0	13.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	2.56 V	238	54.6	1.6
2	5150.00	42.1 AV	54.0	-11.9	2.56 V	238	40.5	1.6
3	*5290.00	110.1 PK			2.56 V	238	108.1	2.0
4	*5290.00	96.9 AV			2.56 V	238	94.9	2.0
5	5350.00	73.4 PK	74.0	-0.6	2.56 V	238	71.3	2.1
6	5350.00	52.5 AV	54.0	-1.5	2.56 V	238	50.4	2.1
7	#10580.00	51.0 PK	74.0	-23.0	1.49 V	281	38.3	12.7
8	#10580.00	38.4 AV	54.0	-15.6	1.49 V	281	25.7	12.7
9	15870.00	52.0 PK	74.0	-22.0	1.49 V	173	38.7	13.3
10	15870.00	40.1 AV	54.0	-13.9	1.49 V	173	26.8	13.3

REMARKS:

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

CHANNEL	TX Channel 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	57.4 PK	74.0	-16.6	1.28 H	243	55.1	2.3
2	#5470.00	43.6 AV	54.0	-10.4	1.28 H	243	41.3	2.3
3	*5530.00	94.2 PK			1.28 H	243	91.8	2.4
4	*5530.00	82.3 AV			1.28 H	243	79.9	2.4
5	11060.00	51.8 PK	74.0	-22.2	2.90 H	338	38.5	13.3
6	11060.00	39.8 AV	54.0	-14.2	2.90 H	338	26.5	13.3
7	#16590.00	50.0 PK	74.0	-24.0	1.63 H	82	33.7	16.3
8	#16590.00	38.7 AV	54.0	-15.3	1.63 H	82	22.4	16.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	68.7 PK	74.0	-5.3	2.59 V	266	66.4	2.3
2	#5470.00	53.6 AV	54.0	-0.4	2.59 V	266	51.3	2.3
3	*5530.00	105.0 PK			2.59 V	266	102.6	2.4
4	*5530.00	93.0 AV			2.59 V	266	90.6	2.4
5	11060.00	51.4 PK	74.0	-22.6	1.53 V	285	38.1	13.3
6	11060.00	38.9 AV	54.0	-15.1	1.53 V	285	25.6	13.3
7	#16590.00	51.0 PK	74.0	-23.0	1.38 V	192	34.7	16.3
8	#16590.00	39.2 AV	54.0	-14.8	1.38 V	192	22.9	16.3

REMARKS:

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

CHANNEL	TX Channel 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	100.1 PK			1.28 H	243	97.5	2.6
2	*5610.00	86.1 AV			1.28 H	243	83.5	2.6
3	#5725.00	58.0 PK	74.0	-16.0	1.28 H	243	55.2	2.8
4	#5725.00	43.9 AV	54.0	-10.1	1.28 H	243	41.1	2.8
5	11220.00	51.8 PK	74.0	-22.2	2.91 H	335	38.3	13.5
6	11220.00	40.1 AV	54.0	-13.9	2.91 H	335	26.6	13.5
7	#16830.00	50.7 PK	74.0	-23.3	1.60 H	87	33.6	17.1
8	#16830.00	39.3 AV	54.0	-14.7	1.60 H	87	22.2	17.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5610.00	110.7 PK			2.46 V	216	108.1	2.6
2	*5610.00	96.8 AV			2.46 V	216	94.2	2.6
3	#5725.00	67.5 PK	74.0	-6.5	2.46 V	216	64.7	2.8
4	#5725.00	52.6 AV	54.0	-1.4	2.46 V	216	49.8	2.8
5	11220.00	51.4 PK	74.0	-22.6	1.44 V	265	37.9	13.5
6	11220.00	38.7 AV	54.0	-15.3	1.44 V	265	25.2	13.5
7	#16830.00	51.5 PK	74.0	-22.5	1.38 V	185	34.4	17.1
8	#16830.00	39.6 AV	54.0	-14.4	1.38 V	185	22.5	17.1

REMARKS:

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

Below 1GHz Data:

802.11a

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	109.16	30.2 QP	43.5	-13.3	1.50 H	144	41.7	-11.5
2	125.02	32.8 QP	43.5	-10.7	1.50 H	247	43.2	-10.4
3	257.10	31.1 QP	46.0	-14.9	1.00 H	302	40.7	-9.6
4	326.02	33.3 QP	46.0	-12.7	1.00 H	116	40.4	-7.1
5	401.00	31.4 QP	46.0	-14.6	1.50 H	236	36.7	-5.3
6	608.88	31.2 QP	46.0	-14.8	1.50 H	184	31.5	-0.3
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	108.85	27.3 QP	43.5	-16.2	1.50 V	183	38.8	-11.5
2	130.00	31.1 QP	43.5	-12.4	1.50 V	241	41.0	-9.9
3	241.40	33.1 QP	46.0	-12.9	1.00 V	302	43.3	-10.2
4	331.84	36.9 QP	46.0	-9.1	1.50 V	173	44.0	-7.1
5	401.40	34.9 QP	46.0	-11.1	1.50 V	116	40.2	-5.3
6	609.78	33.2 QP	46.0	-12.8	1.50 V	174	33.4	-0.2

REMARKS:

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

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. 23, 2015	Oct. 22, 2016
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 28, 2015	Oct. 27, 2016
RF Cable	5D-FB	COACAB-002	Mar. 04, 2016	Mar. 03, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	Jun. 20, 2016	Jun. 19, 2017
Software BVADT	BVADT_Cond_ V7.3.7.3	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: June 21 to July 12, 2016

4.2.3 Test Procedure

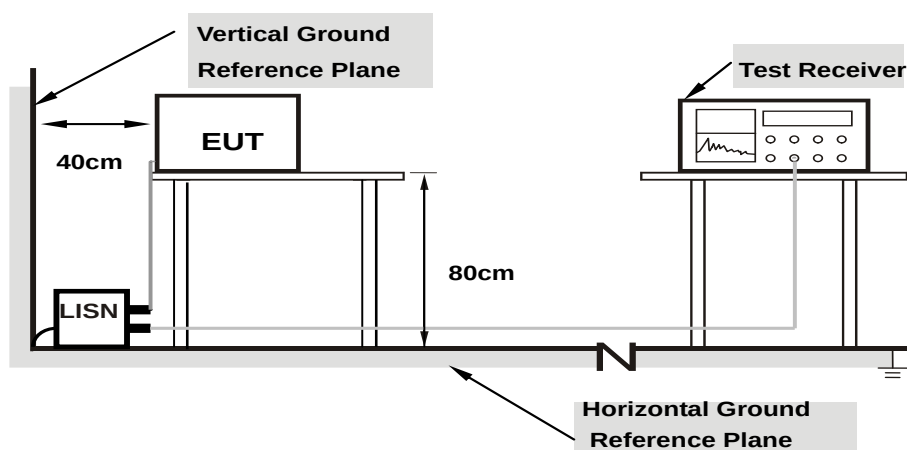
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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.

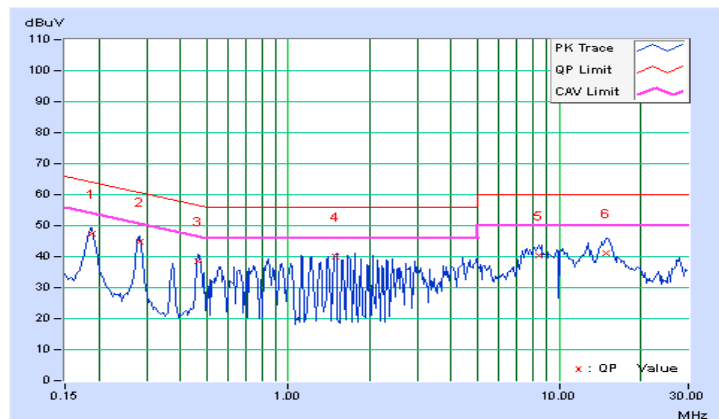
4.2.7 Test Results (Mode 1)

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	10.22	37.25	36.84	47.47	47.06	64.08	54.08	-16.61	-7.02
2	0.28281	10.22	34.55	34.04	44.77	44.26	60.73	50.73	-15.96	-6.47
3	0.46641	10.22	28.41	27.96	38.63	38.18	56.58	46.58	-17.94	-8.39
4	1.50347	10.29	29.75	25.27	40.04	35.56	56.00	46.00	-15.96	-10.44
5	8.36719	10.53	29.84	18.67	40.37	29.20	60.00	50.00	-19.63	-20.80
6	14.96094	11.06	30.20	19.41	41.26	30.47	60.00	50.00	-18.74	-19.53

Remarks:

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

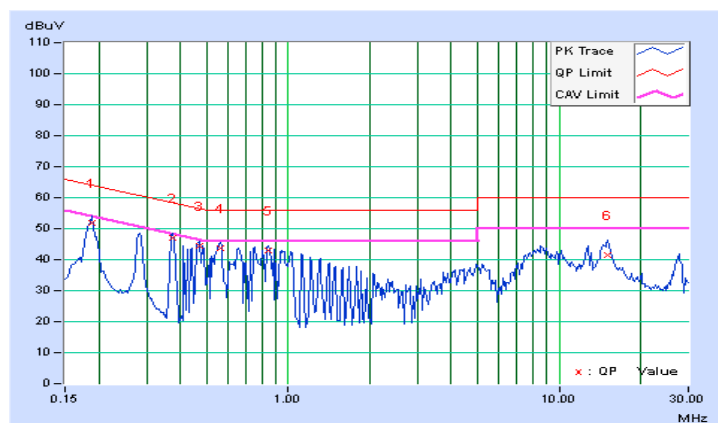


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	10.21	41.82	40.81	52.03	51.02	64.08	54.08	-12.05	-3.06
2	0.37266	10.20	36.83	34.99	47.03	45.19	58.44	48.44	-11.41	-3.25
3	0.47031	10.20	34.30	33.29	44.50	43.49	56.51	46.51	-12.00	-3.01
4	0.56406	10.21	33.37	31.73	43.58	41.94	56.00	46.00	-12.42	-4.06
5	0.84141	10.23	32.78	30.91	43.01	41.14	56.00	46.00	-12.99	-4.86
6	15.17578	10.90	30.76	19.56	41.66	30.46	60.00	50.00	-18.34	-19.54

Remarks:

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



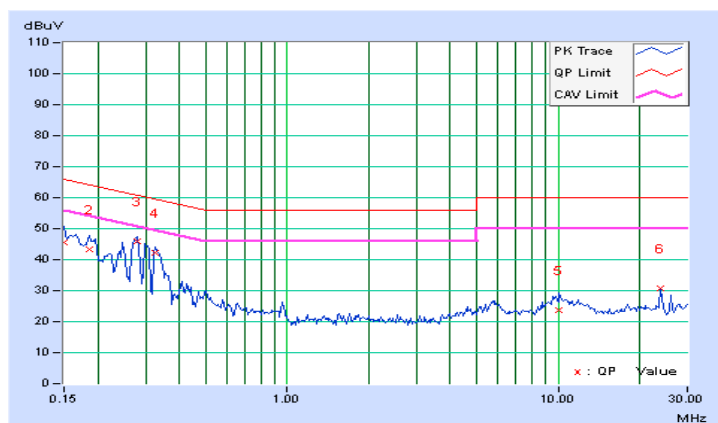
4.2.8 Test Results (Mode 3)

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBUV)		Emission Level (dBUV)		Limit (dBUV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.21	35.23	23.62	45.44	33.83	66.00	56.00	-20.56	-22.17
2	0.18516	10.22	33.27	22.80	43.49	33.02	64.25	54.25	-20.76	-21.23
3	0.27891	10.22	35.72	31.57	45.94	41.79	60.85	50.85	-14.91	-9.06
4	0.32578	10.22	32.13	25.41	42.35	35.63	59.56	49.56	-17.21	-13.93
5	10.01563	10.62	12.93	8.38	23.55	19.00	60.00	50.00	-36.45	-31.00
6	24.00000	11.43	19.14	18.69	30.57	30.12	60.00	50.00	-29.43	-19.88

Remarks:

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

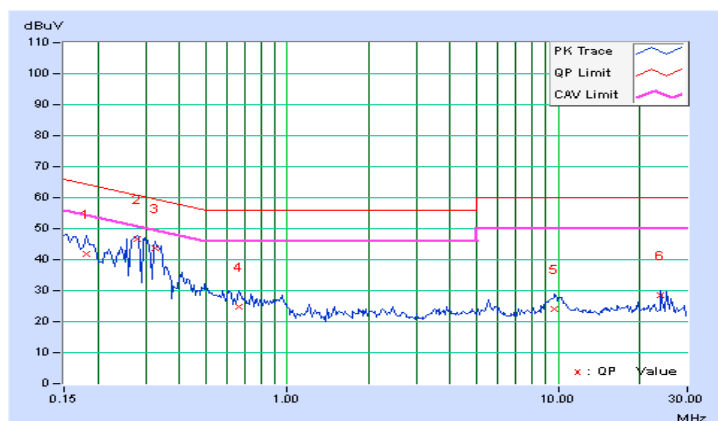


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	10.20	31.55	19.66	41.75	29.86	64.43	54.43	-22.68	-24.57
2	0.27891	10.21	36.44	31.75	46.65	41.96	60.85	50.85	-14.20	-8.89
3	0.32578	10.20	33.55	26.90	43.75	37.10	59.56	49.56	-15.80	-12.45
4	0.66563	10.22	14.43	6.45	24.65	16.67	56.00	46.00	-31.35	-29.33
5	9.73828	10.49	13.75	9.32	24.24	19.81	60.00	50.00	-35.76	-30.19
6	24.00000	11.13	17.55	16.97	28.68	28.10	60.00	50.00	-31.32	-21.90

Remarks:

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



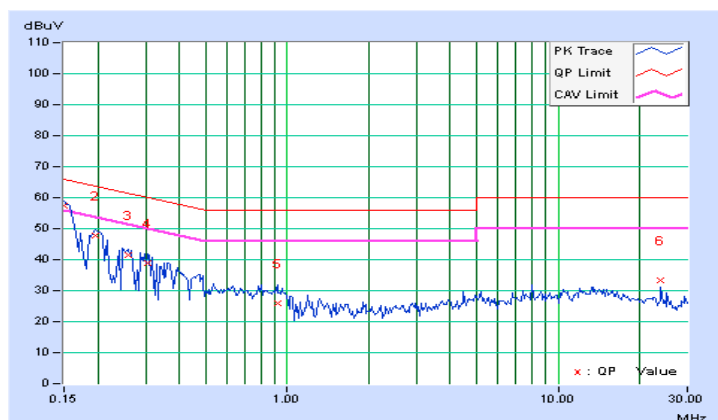
4.2.9 Test Results (Mode 4)

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.21	47.03	33.53	57.24	43.74	66.00	56.00	-8.76	-12.26
2	0.19687	10.22	37.65	22.69	47.87	32.91	63.74	53.74	-15.87	-20.83
3	0.25938	10.22	31.39	19.27	41.61	29.49	61.45	51.45	-19.84	-21.96
4	0.30625	10.22	28.71	17.12	38.93	27.34	60.07	50.07	-21.14	-22.73
5	0.91953	10.25	15.82	5.87	26.07	16.12	56.00	46.00	-29.93	-29.88
6	24.00000	11.43	22.00	21.68	33.43	33.11	60.00	50.00	-26.57	-16.89

Remarks:

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

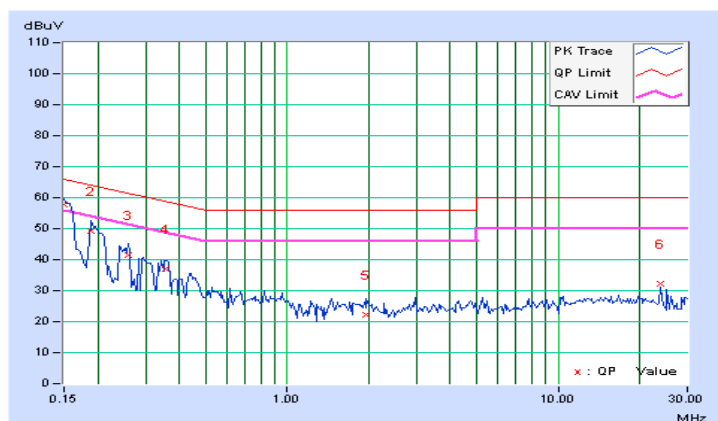


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBUV)		Emission Level (dBUV)		Limit (dBUV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.19	47.45	34.09	57.64	44.28	66.00	56.00	-8.36	-11.72
2	0.18906	10.21	39.02	19.74	49.23	29.95	64.08	54.08	-14.85	-24.13
3	0.25938	10.21	31.25	15.48	41.46	25.69	61.45	51.45	-19.99	-25.76
4	0.35703	10.20	26.81	10.92	37.01	21.12	58.80	48.80	-21.79	-27.68
5	1.96094	10.29	11.99	3.43	22.28	13.72	56.00	46.00	-33.72	-32.28
6	24.00000	11.13	21.25	20.76	32.38	31.89	60.00	50.00	-27.62	-18.11

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	---		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 $N_{ANT} \leq 4$;

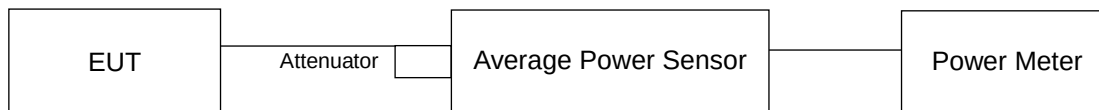
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

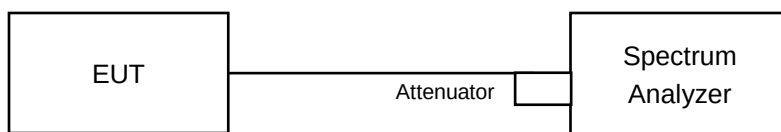
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT



FOR 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

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	17.68	17.72	17.73	17.96	239.58	23.79	24.00	Pass
60	5300	17.77	17.51	17.81	18.27	243.743	23.87	24.00	Pass
64	5320	17.81	17.61	17.76	18.07	241.897	23.84	24.00	Pass
100	5500	17.78	17.65	17.74	18.02	241.005	23.82	24.00	Pass
116	5580	17.79	17.87	17.86	18.02	245.833	23.91	24.00	Pass
140	5700	16.26	16.06	16.41	16.56	171.674	22.35	24.00	Pass

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	21.82	21.81	21.80	21.64
60	5300	22.08	21.72	21.81	21.90
64	5320	25.06	21.76	21.89	23.71
100	5500	21.68	21.83	21.86	21.70
116	5580	22.13	21.95	21.88	21.86
140	5700	21.76	21.75	21.70	21.69

Note: For FCC output power limitation is determined based on 26dB bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	21.64	24.35 > 24
60	5300	21.72	24.36 > 24
64	5320	21.76	24.37 > 24
100	5500	21.68	24.36 > 24
116	5580	21.86	24.39 > 24
140	5700	21.69	24.36 > 24

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	17.72	17.70	17.85	18.02	242.381	23.84	24.00	Pass
60	5300	17.75	17.73	17.97	18.11	246.234	23.91	24.00	Pass
64	5320	17.63	17.72	17.74	18.11	241.242	23.82	24.00	Pass
100	5500	17.26	17.18	17.21	17.47	213.9	23.30	24.00	Pass
116	5580	17.77	17.71	17.91	18.15	245.976	23.91	24.00	Pass
140	5700	15.81	15.50	15.83	15.96	151.316	21.80	24.00	Pass

- Note:** 1. For UNII-2A: Directional gain = 5.98dBi < 6dBi, so the power limit shall not be reduced.
2. For UNII-2C: Directional gain = 5.88dBi < 6dBi, so the power limit shall not be reduced.

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	31.82	27.77	28.94	26.90
60	5300	35.78	22.06	30.20	33.17
64	5320	29.67	27.78	30.53	31.47
100	5500	26.21	24.61	25.09	23.08
116	5580	34.95	26.64	28.22	29.29
140	5700	21.91	21.73	21.76	21.87

Note: For FCC output power limitation is determined based on 26dB bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	26.90	25.29 > 24
60	5300	22.06	24.43 > 24
64	5320	27.78	25.43 > 24
100	5500	23.08	24.63 > 24
116	5580	26.64	25.25 > 24
140	5700	21.73	24.37 > 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	17.78	17.50	17.84	18.23	243.554	23.87	24.00	Pass
62	5310	15.02	14.88	15.17	15.37	129.85	21.13	24.00	Pass
102	5510	14.23	13.81	13.62	13.81	97.587	19.89	24.00	Pass
110	5550	17.96	17.65	17.71	17.86	240.841	23.82	24.00	Pass
134	5670	17.55	17.51	17.64	17.76	231.029	23.64	24.00	Pass

- Note:**
1. For UNII-2A: Directional gain = 5.98dBi < 6dBi, so the power limit shall not be reduced.
 2. For UNII-2C: Directional gain = 5.88dBi < 6dBi, so the power limit shall not be reduced.

26dB BANDWIDTH:

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	70.69	63.93	69.06	67.58
62	5310	41.77	47.56	41.44	41.30
102	5510	41.38	41.19	41.24	41.29
110	5550	68.25	61.82	67.14	65.29
134	5670	66.32	65.62	71.60	67.09

Note: For FCC output power limitation is determined based on 26dB bandwidth.

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	63.93	29.05 > 24
62	5310	41.30	27.15 > 24
102	5510	41.19	27.14 > 24
110	5550	61.82	28.91 > 24
134	5670	65.62	29.17 > 24

802.11ac (VHT80)

OUTPUT POWER:

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	14.11	13.95	14.39	14.84	108.552	20.36	24.00	Pass
106	5530	13.18	12.61	13.24	13.54	82.716	19.18	24.00	Pass
122	5610	17.88	17.46	17.79	18.01	240.453	23.81	24.00	Pass

- Note:**
1. For UNII-2A: Directional gain = 5.98dBi < 6dBi, so the power limit shall not be reduced.
 2. For UNII-2C: Directional gain = 5.99dBi < 6dBi, so the power limit shall not be reduced.

26dB BANDWIDTH:

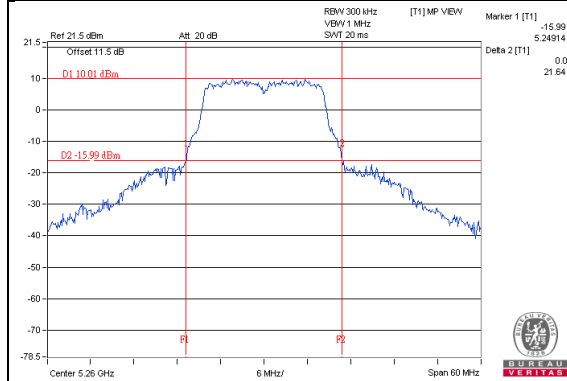
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	82.65	82.36	82.14	82.18
106	5530	82.92	82.64	82.25	82.53
122	5610	111.17	92.89	107.77	129.16

Note: For FCC output power limitation is determined based on 26dB bandwidth.

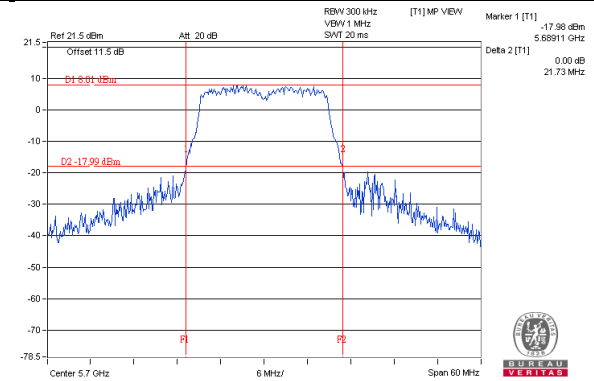
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.14	30.14 > 24
106	5530	82.25	30.15 > 24
122	5610	92.89	30.67 > 24

Spectrum Plot of Worst Value

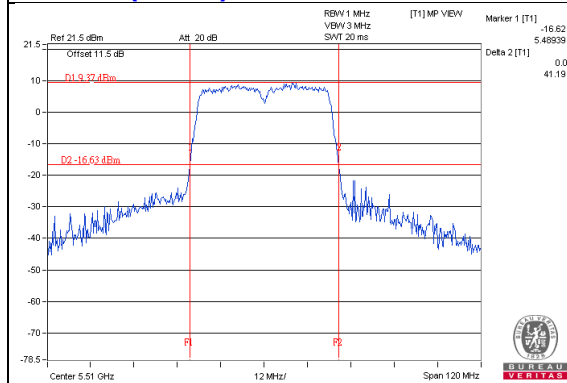
802.11a_Chain 3 / CH52



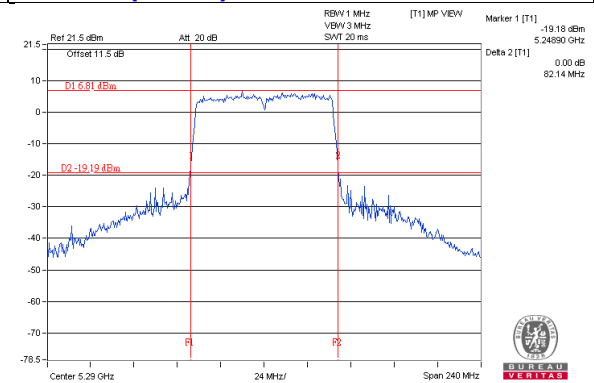
802.11ac (VHT20)_Chain 1 / CH140



802.11ac (VHT40)_Chain 1 / CH102

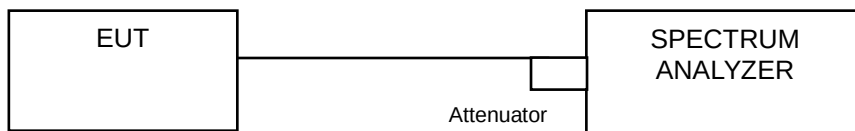


802.11ac (VHT80)_Chain 2 / CH58



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

CDD Mode

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	17.16	17.16	16.92	16.92
60	5300	17.04	17.04	17.04	16.92
64	5320	17.04	17.04	16.92	17.04
100	5500	17.04	16.92	16.92	16.92
116	5580	17.16	16.92	16.92	16.92
140	5700	16.92	16.92	16.92	16.80

Beamforming Mode

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	18.24	18.00	18.00	18.00
60	5300	18.24	18.00	18.12	18.00
64	5320	18.12	18.24	18.12	18.12
100	5500	18.12	18.12	18.00	18.12
116	5580	18.24	18.00	18.12	18.00
140	5700	18.00	18.00	18.00	18.00

802.11ac (VHT40)

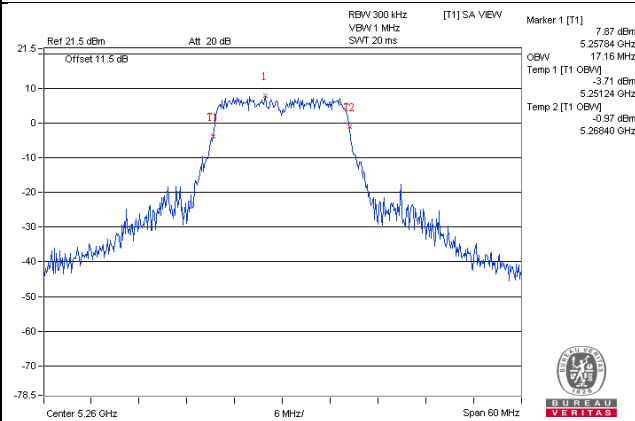
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	36.72	36.72	36.72	36.72
62	5310	36.72	36.72	36.72	36.72
102	5510	36.72	36.48	36.72	36.72
110	5550	36.72	36.72	36.72	36.72
134	5670	36.72	36.72	36.96	36.96

802.11ac (VHT80)

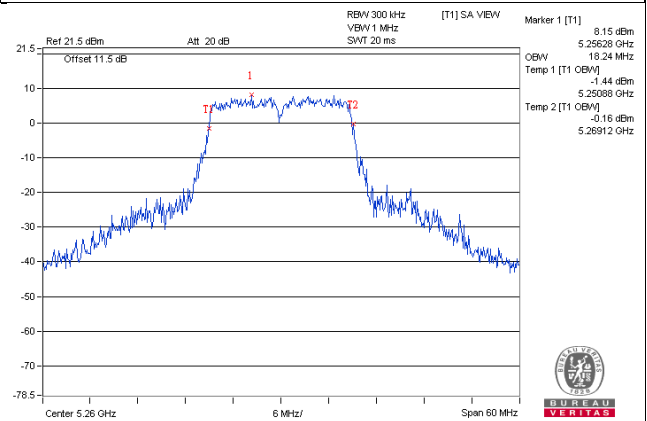
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	76.32	76.32	76.32	76.32
106	5530	75.84	75.84	75.36	75.84
122	5610	76.32	76.32	76.32	76.32

Spectrum Plot of Worst Value

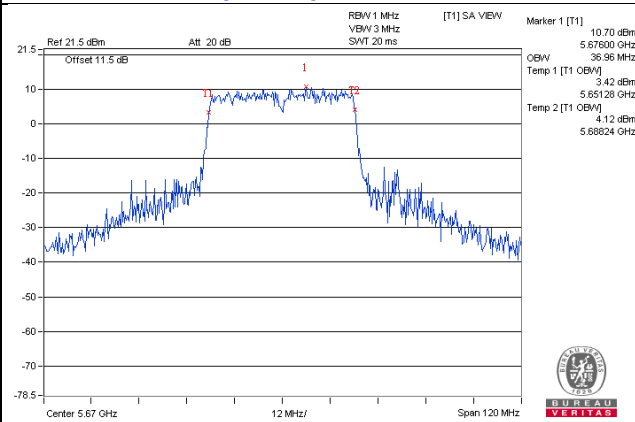
802.11a_Chain 0 / CH52



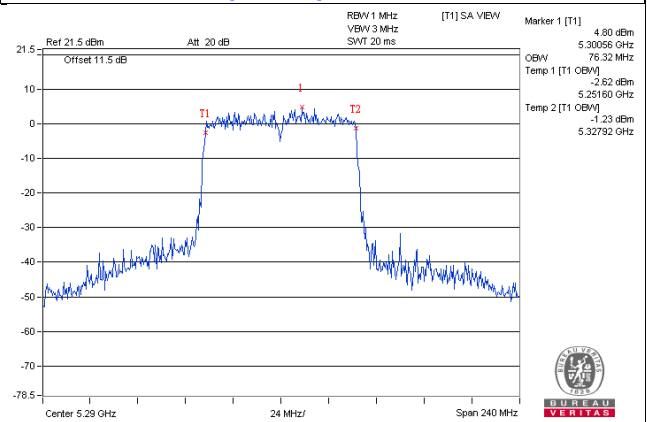
802.11ac (VHT20)_Chain 0 / CH52



802.11ac (VHT40)_Chain 2 / CH134



802.11ac (VHT80)_Chain 0 / CH58

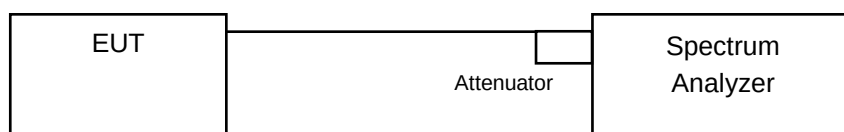


4.5 Peak Power Spectral Density Measurement

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

802.11a, 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 ≥ 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

802.11ac (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 ≥ 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

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
52	5260	4.08	3.89	4.06	4.54	10.17	11.00	Pass
60	5300	4.20	3.99	4.32	4.74	10.34	11.00	Pass
64	5320	4.32	4.07	4.37	4.57	10.36	11.00	Pass
100	5500	4.38	4.30	4.92	4.75	10.62	11.00	Pass
116	5580	4.57	4.26	5.25	4.80	10.76	11.00	Pass
140	5700	3.03	2.45	3.45	3.32	9.10	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = 5.98dBi < 6dBi , so the power density limit shall not be reduced.
3. For UNII-2C: Directional gain = 5.88dBi < 6dBi , so the power density limit shall not be reduced.

Beamforming Mode

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	4.26	3.71	3.88	4.31	10.07	11.00	Pass
60	5300	4.43	3.92	4.25	4.67	10.35	11.00	Pass
64	5320	4.04	3.70	4.13	4.51	10.13	11.00	Pass
100	5500	3.91	3.50	4.10	4.01	9.91	11.00	Pass
116	5580	4.44	4.18	4.62	4.62	10.49	11.00	Pass
140	5700	2.23	1.92	2.63	2.33	8.31	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = 5.98dBi < 6dBi , so the power density limit shall not be reduced.
3. For UNII-2C: Directional gain = 5.88dBi < 6dBi , so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
54	5270	1.26	0.66	1.03	1.35	7.10	11.00	Pass
62	5310	-1.50	-2.11	-1.24	-1.31	4.49	11.00	Pass
102	5510	-1.93	-2.99	-2.46	-2.57	3.55	11.00	Pass
110	5550	1.86	1.08	1.42	1.41	7.47	11.00	Pass
134	5670	0.90	0.55	1.25	1.10	6.98	11.00	Pass

- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = 5.98dBi < 6dBi , so the power density limit shall not be reduced.
3. For UNII-2C: Directional gain = 5.88dBi < 6dBi , so the power density limit shall not be reduced.

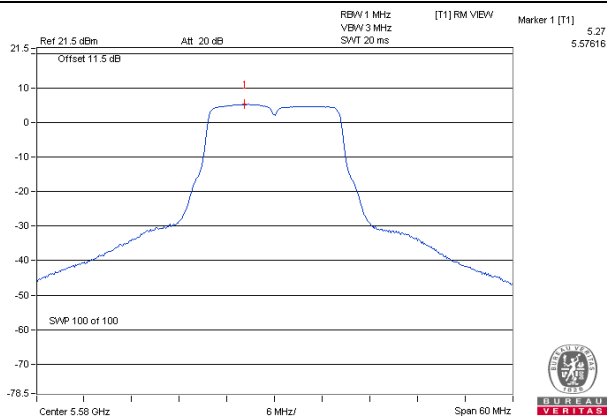
802.11ac (VHT80)

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	-5.66	-5.84	-5.30	-4.96	0.14	0.73	11.00	Pass
106	5530	-6.12	-6.86	-5.84	-6.00	0.14	-0.03	11.00	Pass
122	5610	-1.83	-2.41	-1.93	-1.68	0.14	4.20	11.00	Pass

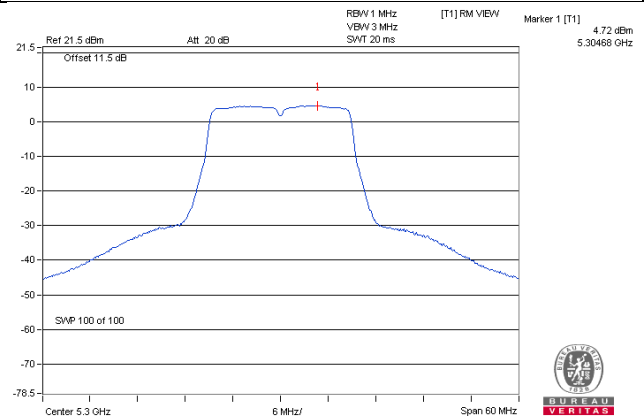
- Note:** 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For UNII-2A: Directional gain = 5.98dBi < 6dBi , so the power density limit shall not be reduced.
3. For UNII-2C: Directional gain = 5.88dBi < 6dBi , so the power density limit shall not be reduced.
4. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

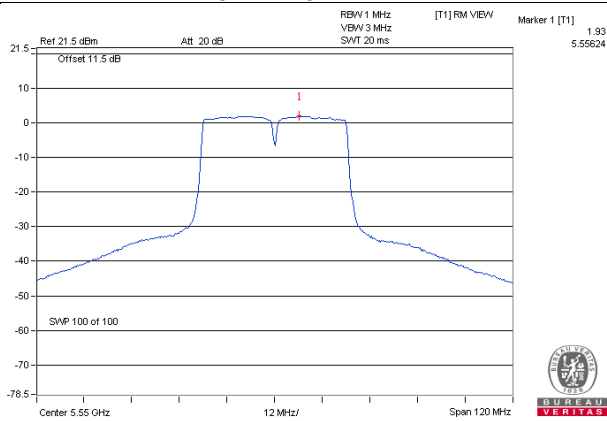
802.11a_Chain 2 / CH116



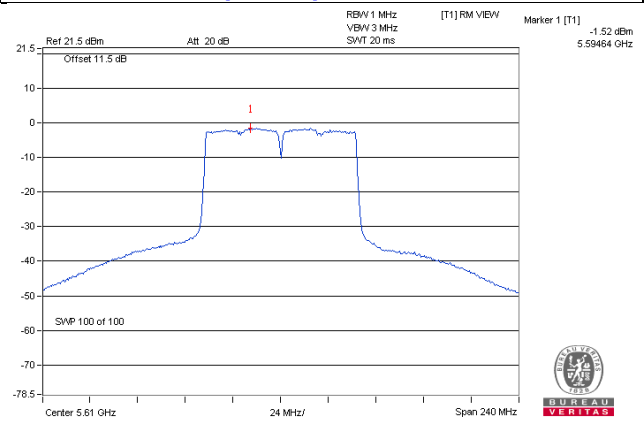
802.11ac (VHT20)_Chain 3 / CH60



802.11ac (VHT40)_Chain 0 / CH110



802.11ac (VHT80)_Chain 3 / CH122

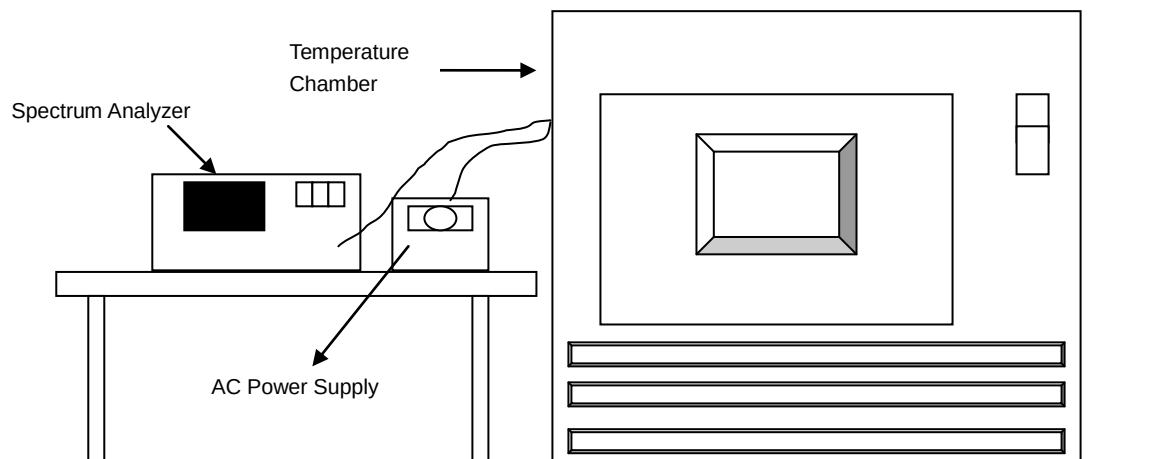


4.6 Frequency Stability Measurement

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	5260.0205	Pass	5260.0207	Pass	5260.0225	Pass	5260.0183	Pass
40	120	5260.0056	Pass	5260.0048	Pass	5260.004	Pass	5260.0048	Pass
30	120	5259.9824	Pass	5259.9863	Pass	5259.9844	Pass	5259.9822	Pass
20	120	5259.9929	Pass	5259.9936	Pass	5259.9946	Pass	5259.9952	Pass
10	120	5259.9837	Pass	5259.9841	Pass	5259.9831	Pass	5259.984	Pass
0	120	5259.9995	Pass	5259.9991	Pass	5259.9993	Pass	5259.9958	Pass
-10	120	5260.0145	Pass	5260.0132	Pass	5260.0135	Pass	5260.0138	Pass
-20	120	5259.9823	Pass	5259.9853	Pass	5259.9827	Pass	5259.9839	Pass
-30	120	5259.9913	Pass	5259.9895	Pass	5259.9896	Pass	5259.9877	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	5259.9922	Pass	5259.994	Pass	5259.9937	Pass	5259.9944	Pass
	120	5259.9929	Pass	5259.9936	Pass	5259.9946	Pass	5259.9952	Pass
	102	5259.9919	Pass	5259.9935	Pass	5259.9952	Pass	5259.9949	Pass

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 accredited and approved according to ISO/IEC 17025.

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

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---