

FCC Test Report

Report No.: RF150624E07D-1

FCC ID: PY315300321

Test Model: WAC730

Received Date: Oct. 12, 2015

Test Date: Oct. 21 to Nov. 13, 2015

Issued Date: June 07, 2016

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Release Control Record

Issue No.	Description	Date Issued
RF150624E07D-1	Original release.	June 07, 2016



1 **Certificate of Conformity**

Product: ProSAFE Dual Band Wireless AC Access Point
Brand: NETGEAR
Test Model: WAC730
Sample Status: ENGINEERING SAMPLE
Applicant: NETGEAR, Inc.
Test Date: Oct. 21 to Nov. 13, 2015
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:** June 07, 2016
Wendy Wu / Specialist

Approved by : May Chen , **Date:** June 07, 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 -11.07dB at 0.31016MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5416.00MHz, 5385.50MHz, 5420.00MHz, 5460.00MHz, 5426.00MHz, 5470.00MHz & 5725.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
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 R-SMA and i-pex not a standard connector.

NOTE: 1. This report is prepared for FCC class II permissive change. (Add DFS band: 5.26GHz ~ 5.32GHz, 5.5GHz ~ 5.7GHz).

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	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~1GHz	5.19 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.72 dB
	6GHz ~ 18GHz	4.00 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	WAC730
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter or 55Vdc from POE
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n: up to 450Mbps 802.11ac: up to 1300Mbps
Operating Frequency	5.26GHz ~ 5.32GHz, 5.5GHz ~ 5.7GHz
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	CDD Mode: 802.11a: 95.048mW 802.11ac (VHT20): 94.136mW 802.11ac (VHT40): 164.945mW 802.11ac (VHT80): 199.429mW Beamforming Mode: 802.11ac (VHT20): 83.379mW 802.11ac (VHT40): 83.644mW 802.11ac (VHT80): 82.543mW
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.: RF150624E07-1 design is as the following:
 - ◆ Add DFS band <5.26GHz ~ 5.32GHz, 5.5GHz ~ 5.7GHz>
- According to above condition, all test items need to be performed. And all data weres verified to meet the requirements.
- The emission of the simultaneous operation (2.4GHz & 5GHz) has been evaluated and no non-compliance was found.
- The antennas provided to the EUT, please refer to the following table:

External Antenna									
PCB Chain No.	Brand	Model	Antenna Gain (dBi) (Excelude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Cable Length (mm)	Frequency range (GHz to GHz)	Antenna Type	Connector Type
Chain (0) (Left)	Master Wave Tech.	98364PRXS004	0.8	0.8	0	180	2.4~2.4835	Dipole	R-SMA
			1.5	1.5	0		5.15~5.25		
			1.6	1.5	0.1		5.25~5.35		
			0.7	1.5	-0.8		5.47~5.725		
			0.5	1.5	-1		5.725~5.85		
Chain (1) (Mid)	Master Wave Tech.	98364PRXS004	0.8	0.5	0.3	60	2.4~2.4835	Dipole	R-SMA
			1.5	0.9	0.6		5.15~5.25		
			1.6	0.9	0.7		5.25~5.35		
			0.7	0.9	-0.2		5.47~5.725		
			0.5	0.9	-0.4		5.725~5.85		
Chain (2) (Right)	Master Wave Tech.	98364PRXS004	0.8	0.9	-0.1	190	2.4~2.4835	Dipole	R-SMA
			1.4	1.7	-0.3		5.15~5.25		
			1.6	1.7	-0.1		5.25~5.35		
			0.7	1.7	-1		5.47~5.725		
			0.7	1.7	-1		5.725~5.85		
Internal Antenna									
PCB Chain No.	Brand	Model	Antenna Gain (dBi)		Frequency range (GHz to GHz)	Antenna Type	Connector Type		
Chain (0)	NA	NA	5		2.4~2.4835	PIFA	i-pex(MHF)		
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				
Chain (1)	NA	NA	5		2.4~2.4835	PIFA	i-pex(MHF)		
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				
Chain (2)	NA	NA	5		2.4~2.4835	PIFA	i-pex(MHF)		
			6		5.15~5.25				
			6		5.25~5.35				
			6		5.47~5.725				
			6		5.725~5.85				

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

Adapter				
No	Brand Name	Model No.	P/N	Spec.
1	NETGEAR	2ABL030F 1	332-10758-01	Input: 100-120V, 1.0A, 50/60Hz Output: 12V, 2.5A DC output cable: 1.8m, unshielded
2	NETGEAR	ADS-40FPA-12	332-10759-01	Input: 100-120V, 1.0A, 60Hz Output: 12V, 2.5A DC output cable: 1.8m, unshielded

POE (test only, not for sale)

No	Brand Name	Model No.	Spec.
1	Microsemi Corp.	PD-9001GR/AC	Input: 100-240V, 0.8A, 50/60Hz Output: 55V, 0.6A

From the above adapters & POE, the radiated emission worse case was found in adapter 2. Therefore only the test data of the mode was recorded in this report.

6. The EUT incorporates a MIMO function with beamforming. (Except for 802.11a/b/g)

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

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	5610MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE $<$ 1G	PLC	APCM	
1	√	√	√	√	With adapter 2 + Internal antenna
2	√	√	-	-	With adapter 2 + External antenna
3	-	-	√	-	With adapter 1 + Internal antenna
4	-	-	√	-	With POE + Internal antenna

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

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
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
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		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)
802.11ac (VHT40)	5260-5320 5500-5700	54 to 62 102 to 134	110	OFDM	BPSK	13.5

Power Line Conducted Emission Test:

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

CDD MODE						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT40)	5260-5320 5500-5700	54 to 62 102 to 134	110	OFDM	BPSK	13.5

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						
For Transmit Power / Power Spectral Density Measurement						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		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
Beamforming MODE						
For Transmit Power Measurement						
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_≥1G	25deg. C, 65%RH	120Vac, 60Hz	Andy Ho
RE_{<}1G	23deg. C, 66%RH	120Vac, 60Hz	Robert Cheng
PLC	26deg. C, 63%RH	120Vac, 60Hz	Gavin Peng
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

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

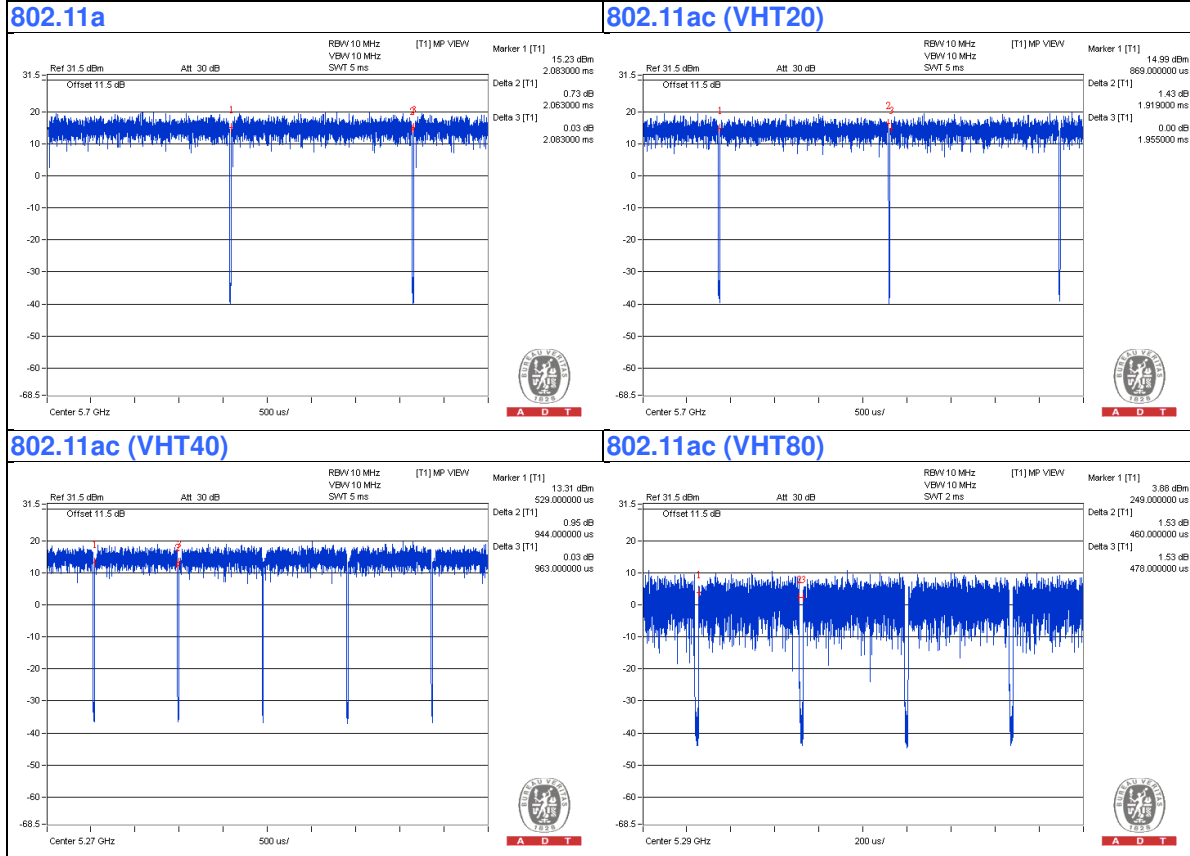
If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

802.11a: Duty cycle = $2.063 \text{ ms} / 2.083 \text{ ms} = 0.99$

802.11ac (VHT20): Duty cycle = $1.919 \text{ ms} / 1.955 \text{ ms} = 0.982$

802.11ac (VHT40): Duty cycle = $0.944 \text{ ms} / 0.963 \text{ ms} = 0.98$

802.11ac (VHT80): Duty cycle = $0.46 \text{ ms} / 0.478 \text{ ms} = 0.962$, Duty factor = $10 * \log(1/0.962) = 0.17$



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.

With adapter test Mode						
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	NOTEBOOK COMPUTER	DELL	PP32LA	DSL32S	FCC DoC	Provided by Lab

Note:

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

With adapter test Mode						
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC	1	1.8	No	0	Supplied by Client
2.	RJ-45	1	10	No	0	Provided by Lab
3.	RJ-45 to RS232	1	1	No	0	Provided by Lab

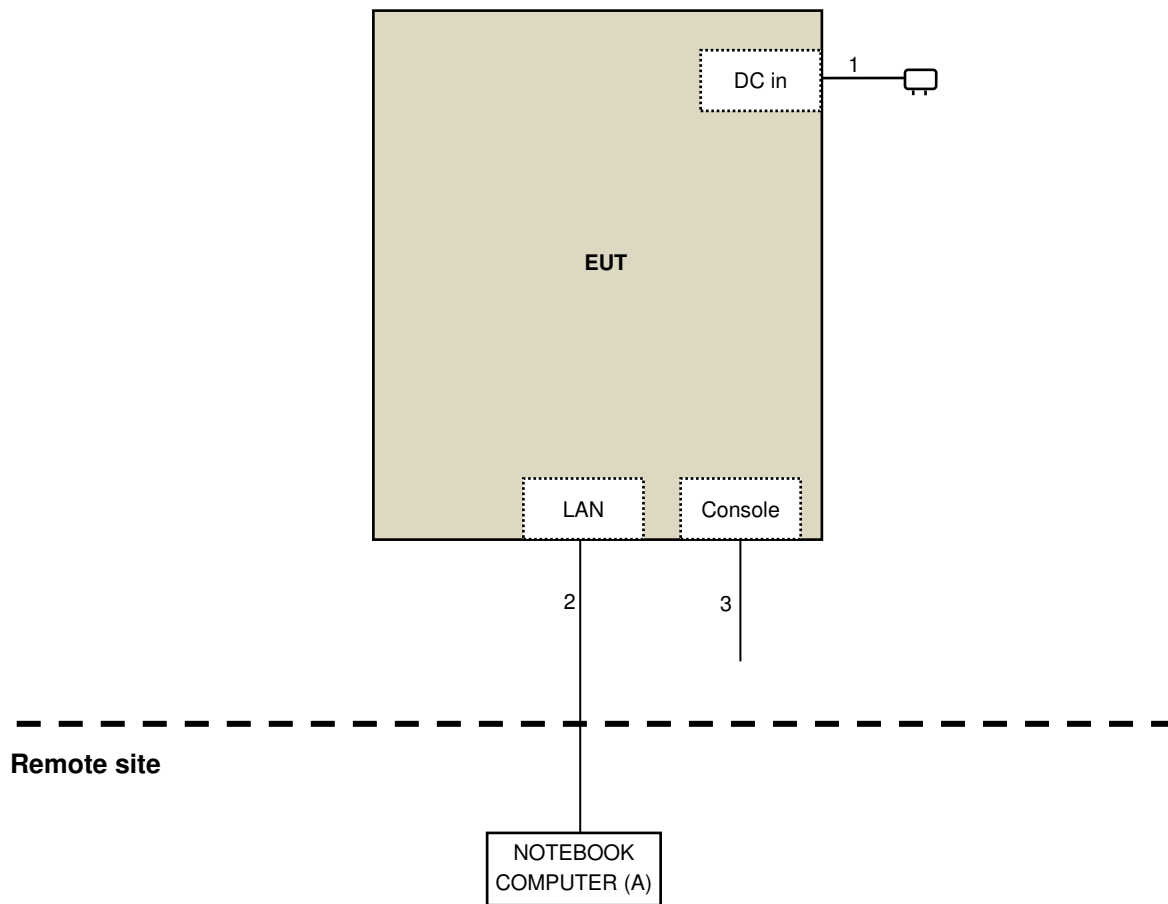
With POE test Mode						
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	NOTEBOOK COMPUTER	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B.	POE	Microsemi Corp.	PD-9001GR/AC	NA	NA	Supplied by Client

Note:

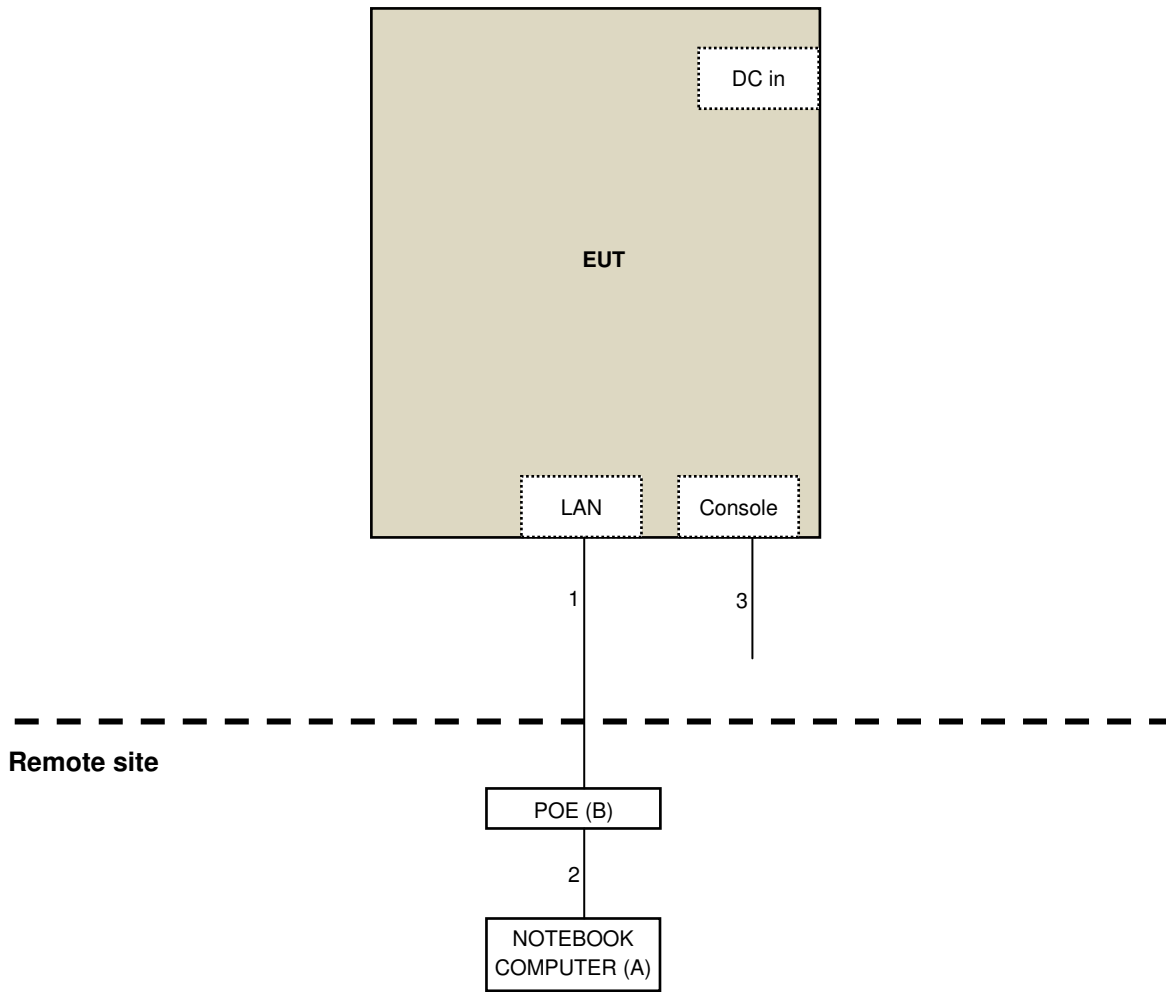
1. All power cords of the above support units are non-shielded (1.8m).

With POE test Mode						
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45	1	10	No	0	Provided by Lab
2.	RJ-45	1	3	No	0	Provided by Lab
3.	RJ-45 to RS232	1	1	No	0	Provided by Lab

3.4.1 Configuration of System under Test
With adapter test Mode:



With POE test 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)
789033 D02 General UNII Test Procedure New Rules v01r02
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:

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedure New Rules v01r02	FIELD STRENGTH AT 3m	
	PK:74 (dBμV/m)	AV:54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) ^{*1} PK:-17 (dBm/MHz) ^{*2}	PK: 68.2(dBμV/m) ^{*1} PK:78.2 (dBμV/m) ^{*2}

NOTE: ^{*1} beyond 10MHz of the band edge ^{*2} within 10 MHz of band edge

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

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



4.1.2 Test Instruments

For above 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna AISI	AIH.8018	0000220091110	Feb. 06, 2015	Feb. 05, 2016
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 27, 2015	Oct. 26, 2016
RF Cable	NA	131206 131213 131215 SNMY23685/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. H.
3. The FCC Site Registration No. is 797305.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Tested Date: Nov. 09, 2015

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Pre-Amplifier(*) EMCI	EMC001340	980142	Jan. 13, 2014	Jan. 12, 2016
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2015	Jan. 17, 2016
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 11, 2015	Nov. 10, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Feb. 09, 2015	Feb. 08, 2016
RF Cable	8D-FB	CHHCAB-001-1 CHHCAB-001-2	Oct. 04, 2015	Oct. 03, 2016
	RF-141	CHHCAB-004	Oct. 04, 2015	Oct. 03, 2016
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The 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. H.
5. The FCC Site Registration No. is 797305.
- 6 The CANADA Site Registration No. is IC 7450H-3.
- 7 Tested Date: Nov. 13, 2015

4.1.3 Test Procedure

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 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:

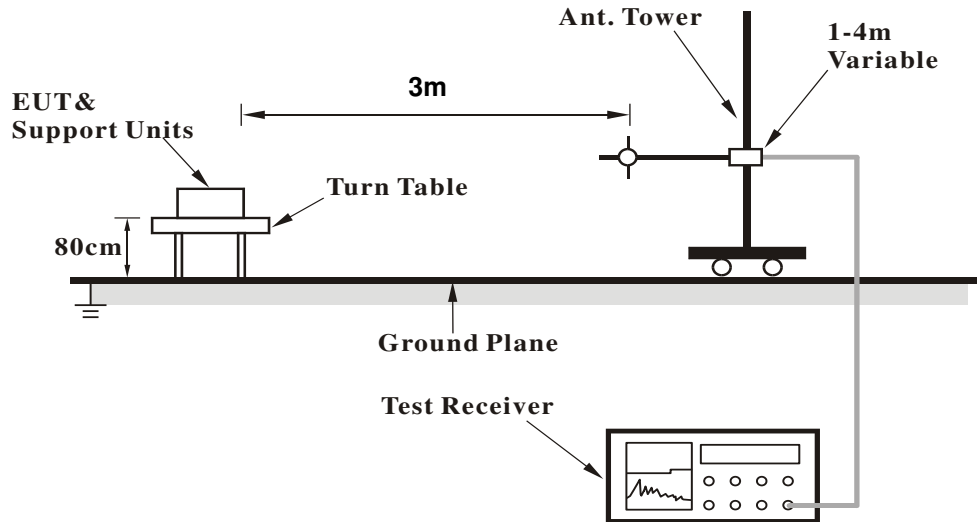
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle \geq 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

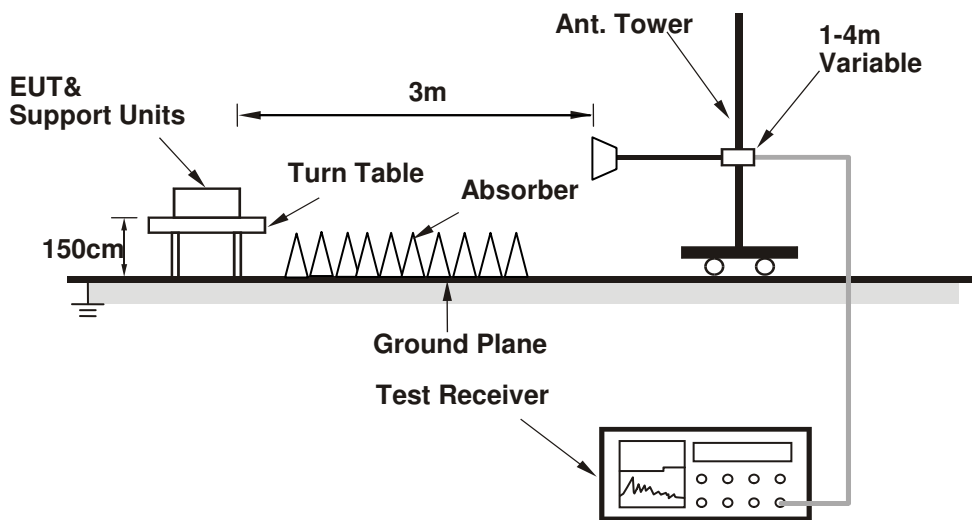
No deviation.

4.1.5 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Condition

1. Connect the EUT with the support unit A (NOTEBOOK COMPUTER) which is placed on remote site.
2. Controlling software (Mtool.exe V1.0.0.10) has been activated to set the EUT on specific status.

4.1.7 Test Results (Mode 1)

Above 1GHz Data:

CDD Mode

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	*5260.00	112.3 PK			1.79 H	360	106.89	5.41
2	*5260.00	102.0 AV			1.79 H	360	96.59	5.41
3	5416.00	61.4 PK	74.0	-12.6	1.36 H	56	55.64	5.76
4	5416.00	51.5 AV	54.0	-2.5	1.36 H	56	45.74	5.76
5	#10520.00	50.6 PK	74.0	-23.4	1.54 H	141	38.70	11.90
6	#10520.00	37.8 AV	54.0	-16.2	1.54 H	141	25.90	11.90
7	15780.00	53.5 PK	74.0	-20.5	1.56 H	130	37.00	16.50
8	15780.00	38.8 AV	54.0	-15.2	1.56 H	130	22.30	16.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	113.9 PK			1.62 V	12	108.49	5.41
2	*5260.00	102.4 AV			1.62 V	12	96.99	5.41
3	5416.00	63.7 PK	74.0	-10.3	1.65 V	15	57.94	5.76
4	5416.00	53.9 AV	54.0	-0.1	1.65 V	15	48.14	5.76
5	#10520.00	50.6 PK	74.0	-23.4	1.53 V	306	38.70	11.90
6	#10520.00	36.9 AV	54.0	-17.1	1.53 V	306	25.00	11.90
7	15780.00	53.3 PK	74.0	-20.7	1.50 V	91	36.80	16.50
8	15780.00	38.5 AV	54.0	-15.5	1.50 V	91	22.00	16.50

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	5138.90	57.0 PK	74.0	-17.0	1.72 H	10	51.93	5.07
2	5138.90	46.2 AV	54.0	-7.8	1.72 H	10	41.13	5.07
3	*5300.00	111.8 PK			1.72 H	10	106.32	5.48
4	*5300.00	98.7 AV			1.72 H	10	93.22	5.48
5	5385.50	61.1 PK	74.0	-12.9	1.72 H	10	55.42	5.68
6	5385.50	49.9 AV	54.0	-4.1	1.72 H	10	44.22	5.68
7	10600.00	50.6 PK	74.0	-23.4	1.56 H	152	39.20	11.40
8	10600.00	37.6 AV	54.0	-16.4	1.56 H	152	26.20	11.40
9	15900.00	52.8 PK	74.0	-21.2	1.61 H	121	36.54	16.26
10	15900.00	38.3 AV	54.0	-15.7	1.61 H	121	22.04	16.26

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	5138.90	57.7 PK	74.0	-16.3	1.87 V	21	52.63	5.07
2	5138.90	46.4 AV	54.0	-7.6	1.87 V	21	41.33	5.07
3	*5300.00	113.5 PK			1.64 V	18	108.02	5.48
4	*5300.00	102.2 AV			1.64 V	18	96.72	5.48
5	5385.50	64.4 PK	74.0	-9.6	1.68 V	360	58.72	5.68
6	5385.50	53.9 AV	54.0	-0.1	1.68 V	360	48.22	5.68
7	10600.00	50.8 PK	74.0	-23.2	1.53 V	303	39.40	11.40
8	10600.00	37.1 AV	54.0	-16.9	1.53 V	303	25.70	11.40
9	15900.00	53.2 PK	74.0	-20.8	1.44 V	90	36.94	16.26
10	15900.00	38.2 AV	54.0	-15.8	1.44 V	90	21.94	16.26

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.



A D T

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	113.6 PK			1.76 H	10	108.06	5.54
2	*5320.00	100.4 AV			1.76 H	10	94.86	5.54
3	5396.00	62.5 PK	74.0	-11.5	1.76 H	10	56.79	5.71
4	5396.00	51.3 AV	54.0	-2.7	1.76 H	10	45.59	5.71
5	#5475.00	53.7 PK	68.2	-14.5	1.76 H	10	47.83	5.87
6	10640.00	50.6 PK	74.0	-23.4	1.59 H	140	39.02	11.58
7	10640.00	37.8 AV	54.0	-16.2	1.59 H	140	26.22	11.58
8	15960.00	52.8 PK	74.0	-21.2	1.59 H	109	36.67	16.13
9	15960.00	38.4 AV	54.0	-15.6	1.59 H	109	22.27	16.13

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	114.2 PK			1.49 V	9	108.66	5.54
2	*5320.00	102.9 AV			1.49 V	9	97.36	5.54
3	5396.00	64.4 PK	74.0	-9.6	1.52 V	360	58.69	5.71
4	5396.00	53.8 AV	54.0	-0.2	1.52 V	360	48.09	5.71
5	#5475.00	65.4 PK	68.2	-2.8	1.89 V	2	59.53	5.87
6	10640.00	50.7 PK	74.0	-23.3	1.55 V	296	39.12	11.58
7	10640.00	37.1 AV	54.0	-16.9	1.55 V	296	25.52	11.58
8	15960.00	53.1 PK	74.0	-20.9	1.39 V	76	36.97	16.13
9	15960.00	38.0 AV	54.0	-16.0	1.39 V	76	21.87	16.13

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 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	5421.20	61.6 PK	74.0	-12.4	1.59 H	50	55.83	5.77
2	5421.20	50.6 AV	54.0	-3.4	1.59 H	50	44.83	5.77
3	#5470.00	63.2 PK	74.0	-10.8	1.26 H	50	57.34	5.86
4	#5470.00	44.5 AV	54.0	-9.5	1.26 H	50	38.64	5.86
5	*5500.00	112.3 PK			1.26 H	50	106.38	5.92
6	*5500.00	101.7 AV			1.26 H	50	95.78	5.92
7	11000.00	50.3 PK	74.0	-23.7	1.56 H	148	38.09	12.21
8	11000.00	37.5 AV	54.0	-16.5	1.56 H	148	25.29	12.21
9	#16500.00	52.8 PK	74.0	-21.2	1.60 H	114	34.67	18.13
10	#16500.00	38.1 AV	54.0	-15.9	1.60 H	114	19.97	18.13

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	5421.20	63.6 PK	74.0	-10.4	2.04 V	0	57.83	5.77
2	5421.20	53.8 AV	54.0	-0.2	2.04 V	0	48.03	5.77
3	#5470.00	70.4 PK	74.0	-3.6	2.01 V	360	64.54	5.86
4	#5470.00	48.7 AV	54.0	-5.3	2.01 V	360	42.84	5.86
5	*5500.00	115.6 PK			2.01 V	360	109.68	5.92
6	*5500.00	105.6 AV			2.01 V	360	99.68	5.92
7	11000.00	50.9 PK	74.0	-23.1	1.55 V	290	38.69	12.21
8	11000.00	37.4 AV	54.0	-16.6	1.55 V	290	25.19	12.21
9	#16500.00	53.3 PK	74.0	-20.7	1.49 V	75	35.17	18.13
10	#16500.00	38.5 AV	54.0	-15.5	1.49 V	75	20.37	18.13

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 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	5420.00	58.6 PK	74.0	-15.4	2.25 H	296	52.83	5.77
2	5420.00	46.3 AV	54.0	-7.7	2.25 H	296	40.53	5.77
3	*5580.00	112.4 PK			2.25 H	296	106.63	5.77
4	*5580.00	102.4 AV			2.25 H	296	96.63	5.77
5	#5742.00	63.6 PK	68.2	-4.6	2.25 H	296	57.71	5.89
6	11160.00	49.5 PK	74.0	-24.5	1.46 H	360	37.12	12.38
7	11160.00	34.6 AV	54.0	-19.4	1.46 H	360	22.22	12.38
8	#16740.00	53.5 PK	68.2	-14.7	1.43 H	341	34.23	19.27

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	5420.00	62.4 PK	74.0	-11.6	1.93 V	356	56.63	5.77
2	5420.00	52.7 AV	54.0	-1.3	1.93 V	356	46.93	5.77
3	*5580.00	116.9 PK			1.85 V	0	111.13	5.77
4	*5580.00	106.9 AV			1.85 V	0	101.13	5.77
5	#5742.00	67.9 PK	68.2	-0.3	1.83 V	0	62.01	5.89
6	11160.00	49.9 PK	74.0	-24.1	2.04 V	328	37.52	12.38
7	11160.00	37.1 AV	54.0	-16.9	2.04 V	328	24.72	12.38
8	#16740.00	53.8 PK	68.2	-14.4	1.83 V	358	34.53	19.27

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			1.76 H	62	107.66	5.94
2	*5700.00	103.5 AV			1.76 H	62	97.56	5.94
3	#5725.00	68.8 PK	74.0	-5.2	1.76 H	62	62.89	5.91
4	#5725.00	48.2 AV	54.0	-5.8	1.76 H	62	42.29	5.91
5	11400.00	50.3 PK	74.0	-23.7	1.50 H	159	37.69	12.61
6	11400.00	37.3 AV	54.0	-16.7	1.50 H	159	24.69	12.61
7	#17100.00	53.4 PK	74.0	-20.6	1.61 H	111	33.25	20.15
8	#17100.00	38.7 AV	54.0	-15.3	1.61 H	111	18.55	20.15

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	117.0 PK			1.71 V	359	111.06	5.94
2	*5700.00	106.3 AV			1.71 V	359	100.36	5.94
3	#5725.00	73.4 PK	74.0	-0.6	1.71 V	359	67.49	5.91
4	#5725.00	51.7 AV	54.0	-2.3	1.71 V	359	45.79	5.91
5	11400.00	51.1 PK	74.0	-22.9	1.55 V	306	38.49	12.61
6	11400.00	37.3 AV	54.0	-16.7	1.55 V	306	24.69	12.61
7	#17100.00	52.9 PK	74.0	-21.1	1.40 V	91	32.75	20.15
8	#17100.00	38.1 AV	54.0	-15.9	1.40 V	91	17.95	20.15

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	*5260.00	112.3 PK			1.71 H	360	106.89	5.41
2	*5260.00	100.8 AV			1.71 H	360	95.39	5.41
3	5420.00	59.4 PK	74.0	-14.6	1.78 H	42	53.63	5.77
4	5420.00	49.5 AV	54.0	-4.5	1.78 H	42	43.73	5.77
5	#10520.00	51.3 PK	74.0	-22.7	1.59 H	149	39.40	11.90
6	#10520.00	38.3 AV	54.0	-15.7	1.59 H	149	26.40	11.90
7	15780.00	53.1 PK	74.0	-20.9	1.56 H	97	36.60	16.50
8	15780.00	38.6 AV	54.0	-15.4	1.56 H	97	22.10	16.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	112.8 PK			1.65 V	7	107.39	5.41
2	*5260.00	101.6 AV			1.65 V	7	96.19	5.41
3	5420.00	64.4 PK	74.0	-9.6	1.65 V	360	58.63	5.77
4	5420.00	53.9 AV	54.0	-0.1	1.65 V	360	48.13	5.77
5	#10520.00	50.9 PK	74.0	-23.1	1.49 V	317	39.00	11.90
6	#10520.00	37.2 AV	54.0	-16.8	1.49 V	317	25.30	11.90
7	15780.00	53.3 PK	74.0	-20.7	1.54 V	76	36.80	16.50
8	15780.00	38.4 AV	54.0	-15.6	1.54 V	76	21.90	16.50

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	111.8 PK			1.80 H	7	106.32	5.48
2	*5300.00	101.0 AV			1.80 H	7	95.52	5.48
3	5460.00	61.5 PK	74.0	-12.5	1.80 H	7	55.67	5.83
4	5460.00	48.9 AV	54.0	-5.1	1.80 H	7	43.07	5.83
5	10600.00	51.3 PK	74.0	-22.7	1.64 H	145	39.90	11.40
6	10600.00	38.2 AV	54.0	-15.8	1.64 H	145	26.80	11.40
7	15900.00	52.9 PK	74.0	-21.1	1.61 H	107	36.64	16.26
8	15900.00	38.7 AV	54.0	-15.3	1.61 H	107	22.44	16.26

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.0 PK			1.62 V	360	107.52	5.48
2	*5300.00	102.1 AV			1.62 V	360	96.62	5.48
3	5460.00	64.2 PK	74.0	-9.8	1.62 V	360	58.37	5.83
4	5460.00	53.9 AV	54.0	-0.1	1.62 V	360	48.07	5.83
5	10600.00	51.0 PK	74.0	-23.0	1.50 V	309	39.60	11.40
6	10600.00	37.3 AV	54.0	-16.7	1.50 V	309	25.90	11.40
7	15900.00	53.1 PK	74.0	-20.9	1.44 V	99	36.84	16.26
8	15900.00	38.4 AV	54.0	-15.6	1.44 V	99	22.14	16.26

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	112.9 PK			1.84 H	6	107.36	5.54
2	*5320.00	102.2 AV			1.84 H	6	96.66	5.54
3	5400.00	61.3 PK	74.0	-12.7	1.84 H	6	55.58	5.72
4	5400.00	50.3 AV	54.0	-3.7	1.84 H	6	44.58	5.72
5	#5480.00	61.0 PK	68.2	-7.2	1.84 H	6	55.12	5.88
6	10640.00	50.4 PK	74.0	-23.6	1.57 H	131	38.82	11.58
7	10640.00	37.7 AV	54.0	-16.3	1.57 H	131	26.12	11.58
8	15960.00	53.0 PK	74.0	-21.0	1.64 H	103	36.87	16.13
9	15960.00	38.6 AV	54.0	-15.4	1.64 H	103	22.47	16.13

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	114.3 PK			1.62 V	8	108.76	5.54
2	*5320.00	103.4 AV			1.62 V	8	97.86	5.54
3	5400.00	63.7 PK	74.0	-10.3	1.62 V	8	57.98	5.72
4	5400.00	53.8 AV	54.0	-0.2	1.62 V	8	48.08	5.72
5	#5480.00	65.2 PK	68.2	-3.0	1.62 V	8	59.32	5.88
6	10640.00	51.0 PK	74.0	-23.0	1.44 V	313	39.42	11.58
7	10640.00	37.5 AV	54.0	-16.5	1.44 V	313	25.92	11.58
8	15960.00	53.6 PK	74.0	-20.4	1.49 V	108	37.47	16.13
9	15960.00	38.6 AV	54.0	-15.4	1.49 V	108	22.47	16.13

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 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	5420.00	61.6 PK	74.0	-12.4	1.84 H	37	55.83	5.77
2	5420.00	50.9 AV	54.0	-3.1	1.84 H	37	45.13	5.77
3	#5470.00	66.4 PK	68.2	-1.8	1.84 H	37	60.54	5.86
4	*5500.00	113.2 PK			1.84 H	37	107.28	5.92
5	*5500.00	102.8 AV			1.84 H	37	96.88	5.92
6	11000.00	50.1 PK	74.0	-23.9	1.44 H	360	37.89	12.21
7	11000.00	35.1 AV	54.0	-18.9	1.44 H	360	22.89	12.21
8	#16500.00	54.1 PK	68.2	-14.1	1.45 H	333	35.97	18.13

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	5420.00	64.4 PK	74.0	-9.6	1.68 V	1	58.63	5.77
2	5420.00	53.9 AV	54.0	-0.1	1.68 V	1	48.13	5.77
3	#5470.00	63.9 PK	68.2	-4.3	1.76 V	6	58.04	5.86
4	*5500.00	115.8 PK			1.76 V	6	109.88	5.92
5	*5500.00	105.5 AV			1.76 V	6	99.58	5.92
6	11000.00	50.4 PK	74.0	-23.6	1.51 V	296	38.19	12.21
7	11000.00	36.8 AV	54.0	-17.2	1.51 V	296	24.59	12.21
8	#16500.00	53.8 PK	68.2	-14.4	1.47 V	115	35.67	18.13

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	5420.00	61.2 PK	74.0	-12.8	1.70 H	38	55.43	5.77
2	5420.00	50.8 AV	54.0	-3.2	1.70 H	38	45.03	5.77
3	*5580.00	114.9 PK			1.70 H	38	109.13	5.77
4	*5580.00	104.3 AV			1.70 H	38	98.53	5.77
5	#5740.70	64.1 PK	68.2	-4.1	1.70 H	38	58.21	5.89
6	11160.00	50.4 PK	74.0	-23.6	1.57 H	138	38.02	12.38
7	11160.00	37.6 AV	54.0	-16.4	1.57 H	138	25.22	12.38
8	#16740.00	53.0 PK	68.2	-15.2	1.62 H	108	33.73	19.27

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	5420.00	64.0 PK	74.0	-10.0	1.65 V	360	58.23	5.77
2	5420.00	53.1 AV	54.0	-0.9	1.65 V	360	47.33	5.77
3	*5580.00	116.6 PK			1.73 V	360	110.83	5.77
4	*5580.00	105.8 AV			1.73 V	360	100.03	5.77
5	#5740.70	67.9 PK	68.2	-0.3	1.75 V	6	62.01	5.89
6	11160.00	50.9 PK	74.0	-23.1	1.57 V	296	38.52	12.38
7	11160.00	37.1 AV	54.0	-16.9	1.57 V	296	24.72	12.38
8	#16740.00	53.1 PK	68.2	-15.1	1.40 V	110	33.83	19.27

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	112.1 PK			1.71 H	43	106.16	5.94
2	*5700.00	102.0 AV			1.71 H	43	96.06	5.94
3	#5725.00	65.6 PK	74.0	-8.4	1.71 H	43	59.69	5.91
4	#5725.00	52.3 AV	54.0	-1.7	1.71 H	43	46.39	5.91
5	11400.00	50.1 PK	74.0	-23.9	1.55 H	129	37.49	12.61
6	11400.00	37.5 AV	54.0	-16.5	1.55 H	129	24.89	12.61
7	#17100.00	53.2 PK	74.0	-20.8	1.60 H	124	33.05	20.15
8	#17100.00	38.8 AV	54.0	-15.2	1.60 H	124	18.65	20.15

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	115.8 PK			1.86 V	7	109.86	5.94
2	*5700.00	104.8 AV			1.86 V	7	98.86	5.94
3	#5725.00	73.4 PK	74.0	-0.6	1.86 V	7	67.49	5.91
4	#5725.00	53.6 AV	54.0	-0.4	1.86 V	7	47.69	5.91
5	11400.00	50.7 PK	74.0	-23.3	1.55 V	287	38.09	12.61
6	11400.00	37.0 AV	54.0	-17.0	1.55 V	287	24.39	12.61
7	#17100.00	53.0 PK	74.0	-21.0	1.38 V	122	32.85	20.15
8	#17100.00	38.5 AV	54.0	-15.5	1.38 V	122	18.35	20.15

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.

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	5105.00	56.9 PK	74.0	-17.1	1.88 H	7	51.95	4.95
2	5105.00	46.7 AV	54.0	-7.3	1.88 H	7	41.75	4.95
3	*5270.00	111.5 PK			1.88 H	7	106.07	5.43
4	*5270.00	99.7 AV			1.88 H	7	94.27	5.43
5	5426.00	61.8 PK	74.0	-12.2	1.88 H	7	56.03	5.77
6	5426.00	50.3 AV	54.0	-3.7	1.88 H	7	44.53	5.77
7	#10540.00	49.6 PK	74.0	-24.4	1.57 H	136	37.83	11.77
8	#10540.00	37.3 AV	54.0	-16.7	1.57 H	136	25.53	11.77
9	15810.00	52.9 PK	74.0	-21.1	1.61 H	117	36.34	16.56
10	15810.00	38.3 AV	54.0	-15.7	1.61 H	117	21.74	16.56

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	5105.00	60.1 PK	74.0	-13.9	1.74 V	6	55.15	4.95
2	5105.00	47.6 AV	54.0	-6.4	1.74 V	6	42.65	4.95
3	*5270.00	113.4 PK			1.70 V	6	107.97	5.43
4	*5270.00	101.7 AV			1.70 V	6	96.27	5.43
5	5426.00	63.6 PK	74.0	-10.4	1.70 V	8	57.83	5.77
6	5426.00	53.9 AV	54.0	-0.1	1.70 V	8	48.13	5.77
7	#10540.00	51.6 PK	74.0	-22.4	1.64 V	298	39.83	11.77
8	#10540.00	37.5 AV	54.0	-16.5	1.64 V	298	25.73	11.77
9	15810.00	53.3 PK	74.0	-20.7	1.38 V	109	36.74	16.56
10	15810.00	38.6 AV	54.0	-15.4	1.38 V	109	22.04	16.56

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	5145.00	55.0 PK	74.0	-19.0	1.86 H	6	49.90	5.10
2	5145.00	43.7 AV	54.0	-10.3	1.86 H	6	38.60	5.10
3	*5310.00	108.1 PK			1.86 H	6	102.59	5.51
4	*5310.00	95.8 AV			1.86 H	6	90.29	5.51
5	5350.00	68.5 PK	74.0	-5.5	1.86 H	6	62.90	5.60
6	5350.00	49.3 AV	54.0	-4.7	1.86 H	6	43.70	5.60
7	10620.00	49.9 PK	74.0	-24.1	1.54 H	141	38.42	11.48
8	10620.00	37.0 AV	54.0	-17.0	1.54 H	141	25.52	11.48
9	15930.00	52.8 PK	74.0	-21.2	1.65 H	117	36.61	16.19
10	15930.00	38.7 AV	54.0	-15.3	1.65 H	117	22.51	16.19

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	5145.00	55.7 PK	74.0	-18.3	1.80 V	360	50.60	5.10
2	5145.00	44.0 AV	54.0	-10.0	1.80 V	360	38.90	5.10
3	*5310.00	109.9 PK			1.66 V	360	104.39	5.51
4	*5310.00	98.1 AV			1.66 V	360	92.59	5.51
5	5350.00	73.1 PK	74.0	-0.9	1.66 V	360	67.50	5.60
6	5350.00	53.6 AV	54.0	-0.4	1.66 V	360	48.00	5.60
7	10620.00	50.9 PK	74.0	-23.1	1.63 V	296	39.42	11.48
8	10620.00	37.3 AV	54.0	-16.7	1.63 V	296	25.82	11.48
9	15930.00	53.1 PK	74.0	-20.9	1.36 V	110	36.91	16.19
10	15930.00	38.4 AV	54.0	-15.6	1.36 V	110	22.21	16.19

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	70.2 PK	74.0	-3.8	1.72 H	39	64.34	5.86
2	#5470.00	52.2 AV	54.0	-1.8	1.72 H	39	46.34	5.86
3	*5510.00	107.1 PK			1.72 H	39	101.20	5.90
4	*5510.00	96.9 AV			1.72 H	39	91.00	5.90
5	11020.00	50.4 PK	74.0	-23.6	1.49 H	135	38.16	12.24
6	11020.00	37.7 AV	54.0	-16.3	1.49 H	135	25.46	12.24
7	#16530.00	52.8 PK	74.0	-21.2	1.58 H	113	34.44	18.36
8	#16530.00	38.3 AV	54.0	-15.7	1.58 H	113	19.94	18.36

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	73.0 PK	74.0	-1.0	1.75 V	9	67.14	5.86
2	#5470.00	53.9 AV	54.0	-0.1	1.75 V	9	48.04	5.86
3	*5510.00	110.6 PK			1.75 V	9	104.70	5.90
4	*5510.00	99.4 AV			1.75 V	9	93.50	5.90
5	11020.00	51.2 PK	74.0	-22.8	1.63 V	297	38.96	12.24
6	11020.00	37.5 AV	54.0	-16.5	1.63 V	297	25.26	12.24
7	#16530.00	52.7 PK	74.0	-21.3	1.38 V	87	34.34	18.36
8	#16530.00	37.8 AV	54.0	-16.2	1.38 V	87	19.44	18.36

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	5455.90	62.5 PK	74.0	-11.5	1.69 H	39	56.67	5.83
2	5455.90	50.8 AV	54.0	-3.2	1.69 H	39	44.97	5.83
3	*5550.00	112.2 PK			1.69 H	39	106.37	5.83
4	*5550.00	100.4 AV			1.69 H	39	94.57	5.83
5	#5725.00	62.2 PK	74.0	-11.8	1.69 H	39	56.29	5.91
6	#5725.00	50.9 AV	54.0	-3.1	1.69 H	39	44.99	5.91
7	11100.00	50.0 PK	74.0	-24.0	1.52 H	126	37.66	12.34
8	11100.00	37.5 AV	54.0	-16.5	1.52 H	126	25.16	12.34
9	#16650.00	53.5 PK	74.0	-20.5	1.61 H	124	34.46	19.04
10	#16650.00	38.8 AV	54.0	-15.2	1.61 H	124	19.76	19.04

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	5455.90	64.3 PK	74.0	-9.7	1.74 V	360	58.47	5.83
2	5455.90	52.8 AV	54.0	-1.2	1.74 V	360	46.97	5.83
3	*5550.00	115.5 PK			1.78 V	8	109.67	5.83
4	*5550.00	103.9 AV			1.78 V	8	98.07	5.83
5	#5725.00	67.6 PK	74.0	-6.4	1.78 V	8	61.69	5.91
6	#5725.00	53.8 AV	54.0	-0.2	1.78 V	8	47.89	5.91
7	11100.00	51.3 PK	74.0	-22.7	1.66 V	313	38.96	12.34
8	11100.00	37.3 AV	54.0	-16.7	1.66 V	313	24.96	12.34
9	#16650.00	53.0 PK	74.0	-21.0	1.34 V	90	33.96	19.04
10	#16650.00	38.4 AV	54.0	-15.6	1.34 V	90	19.36	19.04

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 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	110.5 PK			1.64 H	38	104.63	5.87
2	*5670.00	100.2 AV			1.64 H	38	94.33	5.87
3	#5725.00	65.0 PK	74.0	-9.0	1.64 H	38	59.09	5.91
4	#5725.00	50.9 AV	54.0	-3.1	1.64 H	38	44.99	5.91
5	11340.00	50.7 PK	74.0	-23.3	1.59 H	129	38.31	12.39
6	11340.00	37.8 AV	54.0	-16.2	1.59 H	129	25.41	12.39
7	#17010.00	53.2 PK	74.0	-20.8	1.58 H	129	32.62	20.58
8	#17010.00	38.6 AV	54.0	-15.4	1.58 H	129	18.02	20.58

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			1.86 V	8	108.33	5.87
2	*5670.00	102.3 AV			1.86 V	8	96.43	5.87
3	#5725.00	68.9 PK	74.0	-5.1	1.86 V	8	62.99	5.91
4	#5725.00	53.9 AV	54.0	-0.1	1.86 V	8	47.99	5.91
5	11340.00	50.5 PK	74.0	-23.5	1.60 V	316	38.11	12.39
6	11340.00	36.8 AV	54.0	-17.2	1.60 V	316	24.41	12.39
7	#17010.00	52.6 PK	74.0	-21.4	1.34 V	112	32.02	20.58
8	#17010.00	37.9 AV	54.0	-16.1	1.34 V	112	17.32	20.58

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	53.2 PK	74.0	-20.8	1.57 H	12	48.09	5.11
2	5150.00	41.1 AV	54.0	-12.9	1.57 H	12	35.99	5.11
3	*5290.00	103.1 PK			1.57 H	12	97.64	5.46
4	*5290.00	89.8 AV			1.57 H	12	84.34	5.46
5	5350.00	68.5 PK	74.0	-5.5	1.57 H	12	62.90	5.60
6	5350.00	50.3 AV	54.0	-3.7	1.57 H	12	44.70	5.60
7	#10580.00	51.5 PK	74.0	-22.5	1.64 H	320	39.98	11.52
8	#10580.00	37.8 AV	54.0	-16.2	1.64 H	320	26.28	11.52
9	15870.00	52.0 PK	74.0	-22.0	1.42 H	95	35.64	16.36
10	15870.00	37.5 AV	54.0	-16.5	1.42 H	95	21.14	16.36

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	56.3 PK	74.0	-17.7	1.73 V	360	51.19	5.11
2	5150.00	42.5 AV	54.0	-11.5	1.73 V	360	37.39	5.11
3	*5290.00	106.0 PK			1.73 V	360	100.54	5.46
4	*5290.00	93.3 AV			1.73 V	360	87.84	5.46
5	5350.00	73.0 PK	74.0	-1.0	1.73 V	360	67.40	5.60
6	5350.00	53.7 AV	54.0	-0.3	1.73 V	360	48.10	5.60
7	#10580.00	50.9 PK	74.0	-23.1	1.65 V	325	39.38	11.52
8	#10580.00	36.8 AV	54.0	-17.2	1.65 V	325	25.28	11.52
9	15870.00	52.8 PK	74.0	-21.2	1.33 V	100	36.44	16.36
10	15870.00	38.4 AV	54.0	-15.6	1.33 V	100	22.04	16.36

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 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	67.0 PK	74.0	-7.0	1.61 H	43	61.14	5.86
2	#5470.00	50.4 AV	54.0	-3.6	1.61 H	43	44.54	5.86
3	*5530.00	102.4 PK			1.61 H	43	96.54	5.86
4	*5530.00	89.7 AV			1.61 H	43	83.84	5.86
5	#5725.00	54.6 PK	74.0	-19.4	1.61 H	43	48.69	5.91
6	#5725.00	43.8 AV	54.0	-10.2	1.61 H	43	37.89	5.91
7	11060.00	51.3 PK	74.0	-22.7	1.64 H	301	39.02	12.28
8	11060.00	37.5 AV	54.0	-16.5	1.64 H	301	25.22	12.28
9	#16590.00	53.3 PK	74.0	-20.7	1.43 H	100	34.50	18.80
10	#16590.00	38.4 AV	54.0	-15.6	1.43 H	100	19.60	18.80

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	68.9 PK	74.0	-5.1	1.83 V	10	63.04	5.86
2	#5470.00	53.9 AV	54.0	-0.1	1.83 V	10	48.04	5.86
3	*5530.00	105.7 PK			1.83 V	10	99.84	5.86
4	*5530.00	94.0 AV			1.83 V	10	88.14	5.86
5	#5725.00	57.9 PK	74.0	-16.1	1.83 V	10	51.99	5.91
6	#5725.00	46.3 AV	54.0	-7.7	1.83 V	10	40.39	5.91
7	11060.00	51.8 PK	74.0	-22.2	1.63 V	317	39.52	12.28
8	11060.00	37.7 AV	54.0	-16.3	1.63 V	317	25.42	12.28
9	#16590.00	52.8 PK	74.0	-21.2	1.33 V	98	34.00	18.80
10	#16590.00	38.3 AV	54.0	-15.7	1.33 V	98	19.50	18.80

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	#5470.00	65.3 PK	74.0	-8.7	1.80 H	4	59.44	5.86
2	#5470.00	49.2 AV	54.0	-4.8	1.80 H	4	43.34	5.86
3	*5610.00	108.6 PK			1.80 H	40	102.86	5.74
4	*5610.00	95.6 AV			1.80 H	40	89.86	5.74
5	#5725.00	64.1 PK	74.0	-9.9	1.80 H	40	58.19	5.91
6	#5725.00	51.5 AV	54.0	-2.5	1.80 H	40	45.59	5.91
7	11220.00	51.0 PK	74.0	-23.0	1.61 H	285	38.64	12.36
8	11220.00	37.0 AV	54.0	-17.0	1.61 H	285	24.64	12.36
9	#16830.00	53.0 PK	74.0	-21.0	1.45 H	89	33.56	19.44
10	#16830.00	38.2 AV	54.0	-15.8	1.45 H	89	18.76	19.44

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	67.0 PK	74.0	-7.0	1.83 V	6	61.14	5.86
2	#5470.00	51.1 AV	54.0	-2.9	1.83 V	6	45.24	5.86
3	*5610.00	112.0 PK			1.83 V	6	106.26	5.74
4	*5610.00	99.3 AV			1.83 V	6	93.56	5.74
5	#5725.00	69.3 PK	74.0	-4.7	1.83 V	6	63.39	5.91
6	#5725.00	53.9 AV	54.0	-0.1	1.83 V	6	47.99	5.91
7	11220.00	51.8 PK	74.0	-22.2	1.63 V	317	39.44	12.36
8	11220.00	37.7 AV	54.0	-16.3	1.63 V	317	25.34	12.36
9	#16830.00	52.8 PK	74.0	-21.2	1.33 V	98	33.36	19.44
10	#16830.00	38.3 AV	54.0	-15.7	1.33 V	98	18.86	19.44

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.

Below 1GHz Data:
CDD Mode
802.11ac (VHT40)

CHANNEL	TX Channel 110	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	161.74	24.9 QP	43.5	-18.6	2.00 H	89	37.90	-13.01
2	228.04	30.6 QP	46.0	-15.4	1.25 H	265	46.28	-15.69
3	311.98	37.6 QP	46.0	-8.4	1.00 H	355	49.01	-11.42
4	409.42	29.5 QP	46.0	-16.5	1.00 H	355	38.86	-9.35
5	535.74	28.8 QP	46.0	-17.2	1.50 H	335	35.35	-6.57
6	574.12	31.8 QP	46.0	-14.2	1.50 H	331	37.44	-5.67

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	174.19	18.9 QP	43.5	-24.6	1.00 V	271	32.64	-13.78
2	273.64	28.6 QP	46.0	-17.4	1.50 V	302	41.53	-12.93
3	369.72	30.4 QP	46.0	-15.7	1.50 V	360	40.63	-10.28
4	397.83	28.9 QP	46.0	-17.1	1.50 V	10	38.64	-9.70
5	793.51	27.8 QP	46.0	-18.2	2.00 V	250	29.23	-1.44
6	957.20	31.6 QP	46.0	-14.4	1.50 V	101	30.47	1.16

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:

CDD Mode

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	53.1 PK	74.0	-20.9	2.34 H	255	47.99	5.11
2	5150.00	39.8 AV	54.0	-14.2	2.34 H	255	34.69	5.11
3	*5260.00	101.0 PK			2.34 H	255	95.59	5.41
4	*5260.00	89.1 AV			2.34 H	255	83.69	5.41
5	5350.00	52.5 PK	74.0	-21.5	2.34 H	255	46.90	5.60
6	5350.00	40.8 AV	54.0	-13.2	2.34 H	255	35.20	5.60
7	#10520.00	50.4 PK	74.0	-23.6	1.53 H	357	38.50	11.90
8	#10520.00	36.9 AV	54.0	-17.1	1.53 H	357	25.00	11.90
9	15780.00	52.4 PK	74.0	-21.6	1.43 H	335	35.90	16.50
10	15780.00	38.5 AV	54.0	-15.5	1.43 H	335	22.00	16.50

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	56.7 PK	74.0	-17.3	2.54 V	360	51.59	5.11
2	5150.00	46.3 AV	54.0	-7.7	2.54 V	360	41.19	5.11
3	*5260.00	110.3 PK			2.54 V	360	104.89	5.41
4	*5260.00	97.8 AV			2.54 V	360	92.39	5.41
5	5350.00	61.3 PK	74.0	-12.7	2.54 V	360	55.70	5.60
6	5350.00	50.3 AV	54.0	-3.7	2.54 V	360	44.70	5.60
7	#10520.00	50.7 PK	74.0	-23.3	2.07 V	305	38.80	11.90
8	#10520.00	37.3 AV	54.0	-16.7	2.07 V	305	25.40	11.90
9	15780.00	51.5 PK	74.0	-22.5	1.83 V	357	35.00	16.50
10	15780.00	38.6 AV	54.0	-15.4	1.83 V	357	22.10	16.50

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	5150.00	51.4 PK	74.0	-22.6	2.27 H	252	46.29	5.11
2	5150.00	39.4 AV	54.0	-14.6	2.27 H	252	34.29	5.11
3	*5300.00	100.6 PK			2.27 H	252	95.12	5.48
4	*5300.00	88.8 AV			2.27 H	252	83.32	5.48
5	5350.00	53.2 PK	74.0	-20.8	2.27 H	252	47.60	5.60
6	5350.00	40.8 AV	54.0	-13.2	2.27 H	252	35.20	5.60
7	10600.00	59.7 PK	74.0	-14.3	1.49 H	355	48.30	11.40
8	10600.00	36.2 AV	54.0	-17.8	1.49 H	355	24.80	11.40
9	15900.00	51.6 PK	74.0	-22.4	1.42 H	336	35.34	16.26
10	15900.00	37.7 AV	54.0	-16.3	1.42 H	336	21.44	16.26

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	55.9 PK	74.0	-18.1	2.53 V	360	50.79	5.11
2	5150.00	45.6 AV	54.0	-8.4	2.53 V	360	40.49	5.11
3	*5300.00	109.5 PK			2.53 V	360	104.02	5.48
4	*5300.00	97.3 AV			2.53 V	360	91.82	5.48
5	5350.00	62.2 PK	74.0	-11.8	2.53 V	360	56.60	5.60
6	5350.00	50.1 AV	54.0	-3.9	2.53 V	360	44.50	5.60
7	10600.00	50.8 PK	74.0	-23.2	2.08 V	322	39.40	11.40
8	10600.00	37.1 AV	54.0	-16.9	2.08 V	322	25.70	11.40
9	15900.00	51.1 PK	74.0	-22.9	1.92 V	356	34.84	16.26
10	15900.00	37.8 AV	54.0	-16.2	1.92 V	356	21.54	16.26

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	100.8 PK			2.22 H	239	95.26	5.54
2	*5320.00	89.2 AV			2.22 H	239	83.66	5.54
3	5350.00	52.7 PK	74.0	-21.3	2.22 H	239	47.10	5.60
4	5350.00	40.5 AV	54.0	-13.5	2.22 H	239	34.90	5.60
5	10640.00	50.4 PK	74.0	-23.6	1.49 H	360	38.82	11.58
6	10640.00	37.1 AV	54.0	-16.9	1.49 H	360	25.52	11.58
7	15960.00	52.0 PK	74.0	-22.0	1.43 H	351	35.87	16.13
8	15960.00	38.2 AV	54.0	-15.8	1.43 H	351	22.07	16.13

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.7 PK			2.53 V	360	104.16	5.54
2	*5320.00	97.6 AV			2.53 V	360	92.06	5.54
3	5350.00	64.5 PK	74.0	-9.5	2.53 V	360	58.90	5.60
4	5350.00	50.6 AV	54.0	-3.4	2.53 V	360	45.00	5.60
5	10640.00	50.9 PK	74.0	-23.1	2.08 V	318	39.32	11.58
6	10640.00	37.2 AV	54.0	-16.8	2.08 V	318	25.62	11.58
7	15960.00	51.3 PK	74.0	-22.7	1.87 V	355	35.17	16.13
8	15960.00	38.2 AV	54.0	-15.8	1.87 V	355	22.07	16.13

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	53.2 PK	74.0	-20.8	2.25 H	223	47.34	5.86
2	#5470.00	38.3 AV	54.0	-15.7	2.25 H	223	32.44	5.86
3	*5500.00	100.1 PK			2.25 H	223	94.18	5.92
4	*5500.00	88.4 AV			2.25 H	223	82.48	5.92
5	11000.00	50.2 PK	74.0	-23.8	1.52 H	360	37.99	12.21
6	11000.00	36.7 AV	54.0	-17.3	1.52 H	360	24.49	12.21
7	#16500.00	51.6 PK	74.0	-22.4	1.56 H	317	33.47	18.13
8	#16500.00	37.8 AV	54.0	-16.2	1.56 H	317	19.67	18.13

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	59.9 PK	74.0	-14.1	2.54 V	201	54.04	5.86
2	#5470.00	43.7 AV	54.0	-10.3	2.54 V	201	37.84	5.86
3	*5500.00	108.9 PK			2.54 V	201	102.98	5.92
4	*5500.00	96.5 AV			2.54 V	201	90.58	5.92
5	11000.00	50.4 PK	74.0	-23.6	2.13 V	308	38.19	12.21
6	11000.00	37.6 AV	54.0	-16.4	2.13 V	308	25.39	12.21
7	#16500.00	51.4 PK	74.0	-22.6	2.14 V	307	33.27	18.13
8	#16500.00	37.8 AV	54.0	-16.2	2.14 V	307	19.67	18.13

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	52.5 PK	74.0	-21.5	2.19 H	217	46.64	5.86
2	#5470.00	38.8 AV	54.0	-15.2	2.19 H	217	32.94	5.86
3	*5580.00	100.5 PK			2.19 H	217	94.73	5.77
4	*5580.00	88.8 AV			2.19 H	217	83.03	5.77
5	#5725.00	53.1 PK	74.0	-20.9	2.19 H	217	47.19	5.91
6	#5725.00	41.1 AV	54.0	-12.9	2.19 H	217	35.19	5.91
7	11160.00	50.3 PK	74.0	-23.7	2.11 H	317	37.92	12.38
8	11160.00	36.8 AV	54.0	-17.2	2.11 H	317	24.42	12.38
9	#16740.00	51.7 PK	74.0	-22.3	2.08 H	306	32.43	19.27
10	#16740.00	37.6 AV	54.0	-16.4	2.08 H	306	18.33	19.27

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	57.3 PK	74.0	-16.7	2.29 V	214	51.44	5.86
2	#5470.00	44.6 AV	54.0	-9.4	2.29 V	214	38.74	5.86
3	*5580.00	108.6 PK			2.29 V	214	102.83	5.77
4	*5580.00	96.7 AV			2.29 V	214	90.93	5.77
5	#5725.00	59.6 PK	74.0	-14.4	2.29 V	214	53.69	5.91
6	#5725.00	49.4 AV	54.0	-4.6	2.29 V	214	43.49	5.91
7	11160.00	50.6 PK	74.0	-23.4	2.10 V	317	38.22	12.38
8	11160.00	37.5 AV	54.0	-16.5	2.10 V	317	25.12	12.38
9	#16740.00	52.0 PK	74.0	-22.0	2.18 V	309	32.73	19.27
10	#16740.00	37.8 AV	54.0	-16.2	2.18 V	309	18.53	19.27

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	102.8 PK			2.34 H	331	96.86	5.94
2	*5700.00	91.4 AV			2.34 H	331	85.46	5.94
3	#5725.00	56.3 PK	74.0	-17.7	2.34 H	331	50.39	5.91
4	#5725.00	45.2 AV	54.0	-8.8	2.34 H	331	39.29	5.91
5	11400.00	50.1 PK	74.0	-23.9	2.08 H	314	37.49	12.61
6	11400.00	36.8 AV	54.0	-17.2	2.08 H	314	24.19	12.61
7	#17100.00	51.6 PK	74.0	-22.4	2.10 H	305	31.45	20.15
8	#17100.00	38.2 AV	54.0	-15.8	2.10 H	305	18.05	20.15

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.9 PK			2.10 V	220	101.96	5.94
2	*5700.00	96.0 AV			2.10 V	220	90.06	5.94
3	#5725.00	61.9 PK	74.0	-12.1	2.10 V	220	55.99	5.91
4	#5725.00	49.2 AV	54.0	-4.8	2.10 V	220	43.29	5.91
5	11400.00	50.1 PK	74.0	-23.9	2.07 V	327	37.49	12.61
6	11400.00	37.0 AV	54.0	-17.0	2.07 V	327	24.39	12.61
7	#17100.00	51.9 PK	74.0	-22.1	2.14 V	317	31.75	20.15
8	#17100.00	38.1 AV	54.0	-15.9	2.14 V	317	17.95	20.15

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	51.3 PK	74.0	-22.7	2.31 H	256	46.19	5.11
2	5150.00	38.8 AV	54.0	-15.2	2.31 H	256	33.69	5.11
3	*5260.00	101.1 PK			2.31 H	256	95.69	5.41
4	*5260.00	89.0 AV			2.31 H	256	83.59	5.41
5	#10520.00	49.6 PK	74.0	-24.4	1.48 H	360	37.70	11.90
6	#10520.00	37.0 AV	54.0	-17.0	1.48 H	360	25.10	11.90
7	15780.00	52.6 PK	74.0	-21.4	1.41 H	341	36.10	16.50
8	15780.00	38.6 AV	54.0	-15.4	1.41 H	341	22.10	16.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.7 PK	74.0	-19.3	2.08 V	88	49.59	5.11
2	5150.00	43.6 AV	54.0	-10.4	2.08 V	88	38.49	5.11
3	*5260.00	110.1 PK			2.08 V	88	104.69	5.41
4	*5260.00	98.4 AV			2.08 V	88	92.99	5.41
5	#10520.00	50.5 PK	74.0	-23.5	2.01 V	319	38.60	11.90
6	#10520.00	37.3 AV	54.0	-16.7	2.01 V	319	25.40	11.90
7	15780.00	51.4 PK	74.0	-22.6	1.88 V	360	34.90	16.50
8	15780.00	38.7 AV	54.0	-15.3	1.88 V	360	22.20	16.50

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	5150.00	51.3 PK	74.0	-22.7	2.29 H	252	46.19	5.11
2	5150.00	39.6 AV	54.0	-14.4	2.29 H	252	34.49	5.11
3	*5300.00	99.7 PK			2.29 H	252	94.22	5.48
4	*5300.00	88.5 AV			2.29 H	252	83.02	5.48
5	5350.00	53.8 PK	74.0	-20.2	2.29 H	252	48.20	5.60
6	5350.00	41.3 AV	54.0	-12.7	2.29 H	252	35.70	5.60
7	10600.00	49.4 PK	74.0	-24.6	2.09 H	324	38.00	11.40
8	10600.00	36.1 AV	54.0	-17.9	2.09 H	324	24.70	11.40
9	15900.00	50.4 PK	74.0	-23.6	1.85 H	360	34.14	16.26
10	15900.00	37.3 AV	54.0	-16.7	1.85 H	360	21.04	16.26

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	55.6 PK	74.0	-18.4	1.64 V	152	50.49	5.11
2	5150.00	43.7 AV	54.0	-10.3	1.64 V	152	38.59	5.11
3	*5300.00	110.3 PK			1.64 V	152	104.82	5.48
4	*5300.00	98.6 AV			1.64 V	152	93.12	5.48
5	5350.00	60.3 PK	74.0	-13.7	1.64 V	152	54.70	5.60
6	5350.00	49.2 AV	54.0	-4.8	1.64 V	152	43.60	5.60
7	10600.00	49.4 PK	74.0	-24.6	2.03 V	328	38.00	11.40
8	10600.00	35.8 AV	54.0	-18.2	2.03 V	328	24.40	11.40
9	15900.00	50.4 PK	74.0	-23.6	1.93 V	341	34.14	16.26
10	15900.00	37.4 AV	54.0	-16.6	1.93 V	341	21.14	16.26

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	101.9 PK			2.31 H	247	96.36	5.54
2	*5320.00	89.8 AV			2.31 H	247	84.26	5.54
3	5350.00	52.4 PK	74.0	-21.6	2.31 H	247	46.80	5.60
4	5350.00	40.8 AV	54.0	-13.2	2.31 H	247	35.20	5.60
5	10640.00	51.4 PK	74.0	-22.6	2.02 H	310	39.82	11.58
6	10640.00	37.6 AV	54.0	-16.4	2.02 H	310	26.02	11.58
7	15960.00	51.3 PK	74.0	-22.7	1.87 H	359	35.17	16.13
8	15960.00	37.9 AV	54.0	-16.1	1.87 H	359	21.77	16.13

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.2 PK			2.60 V	199	106.66	5.54
2	*5320.00	99.6 AV			2.60 V	199	94.06	5.54
3	5350.00	60.1 PK	74.0	-13.9	2.60 V	199	54.50	5.60
4	5350.00	49.4 AV	54.0	-4.6	2.60 V	199	43.80	5.60
5	10640.00	50.6 PK	74.0	-23.4	2.06 V	332	39.02	11.58
6	10640.00	36.8 AV	54.0	-17.2	2.06 V	332	25.22	11.58
7	15960.00	51.2 PK	74.0	-22.8	1.87 V	346	35.07	16.13
8	15960.00	37.9 AV	54.0	-16.1	1.87 V	346	21.77	16.13

REMARKS:

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.9 PK	74.0	-19.1	2.43 H	258	49.04	5.86
2	#5470.00	38.5 AV	54.0	-15.5	2.43 H	258	32.64	5.86
3	*5500.00	100.2 PK			2.43 H	258	94.28	5.92
4	*5500.00	88.7 AV			2.43 H	258	82.78	5.92
5	11000.00	51.2 PK	74.0	-22.8	2.13 H	315	38.99	12.21
6	11000.00	37.8 AV	54.0	-16.2	2.13 H	315	25.59	12.21
7	#16500.00	50.7 PK	74.0	-23.3	1.88 H	360	32.57	18.13
8	#16500.00	37.9 AV	54.0	-16.1	1.88 H	360	19.77	18.13

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	64.2 PK	74.0	-9.8	2.57 V	188	58.34	5.86
2	#5470.00	42.9 AV	54.0	-11.1	2.57 V	188	37.04	5.86
3	*5500.00	111.0 PK			2.57 V	188	105.08	5.92
4	*5500.00	99.1 AV			2.57 V	188	93.18	5.92
5	11000.00	51.2 PK	74.0	-22.8	2.13 V	309	38.99	12.21
6	11000.00	37.4 AV	54.0	-16.6	2.13 V	309	25.19	12.21
7	#16500.00	51.7 PK	74.0	-22.3	1.81 V	352	33.57	18.13
8	#16500.00	37.8 AV	54.0	-16.2	1.81 V	352	19.67	18.13

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	52.6 PK	74.0	-21.4	2.44 H	270	46.74	5.86
2	#5470.00	39.1 AV	54.0	-14.9	2.44 H	270	33.24	5.86
3	*5580.00	99.0 PK			2.44 H	270	93.23	5.77
4	*5580.00	86.7 AV			2.44 H	270	80.93	5.77
5	#5725.00	52.6 PK	74.0	-21.4	2.44 H	270	46.69	5.91
6	#5725.00	41.2 AV	54.0	-12.8	2.44 H	270	35.29	5.91
7	11160.00	51.2 PK	74.0	-22.8	2.11 H	297	38.82	12.38
8	11160.00	37.7 AV	54.0	-16.3	2.11 H	297	25.32	12.38
9	#16740.00	52.1 PK	74.0	-21.9	1.82 H	360	32.83	19.27
10	#16740.00	37.6 AV	54.0	-16.4	1.82 H	360	18.33	19.27

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	55.2 PK	74.0	-18.8	2.57 V	236	49.34	5.86
2	#5470.00	42.9 AV	54.0	-11.1	2.57 V	236	37.04	5.86
3	*5580.00	109.9 PK			2.57 V	236	104.13	5.77
4	*5580.00	98.7 AV			2.57 V	236	92.93	5.77
5	#5725.00	60.0 PK	74.0	-14.0	2.57 V	236	54.09	5.91
6	#5725.00	50.1 AV	54.0	-3.9	2.57 V	236	44.19	5.91
7	11160.00	51.6 PK	74.0	-22.4	2.14 V	306	39.22	12.38
8	11160.00	37.6 AV	54.0	-16.4	2.14 V	306	25.22	12.38
9	#16740.00	51.6 PK	74.0	-22.4	1.79 V	341	32.33	19.27
10	#16740.00	37.7 AV	54.0	-16.3	1.79 V	341	18.43	19.27

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	100.4 PK			2.45 H	290	94.46	5.94
2	*5700.00	88.9 AV			2.45 H	290	82.96	5.94
3	#5725.00	54.7 PK	74.0	-19.3	2.45 H	290	48.79	5.91
4	#5725.00	42.6 AV	54.0	-11.4	2.45 H	290	36.69	5.91
5	11400.00	51.4 PK	74.0	-22.6	2.14 H	305	38.79	12.61
6	11400.00	37.6 AV	54.0	-16.4	2.14 H	305	24.99	12.61
7	#17100.00	51.4 PK	74.0	-22.6	1.85 H	353	31.25	20.15
8	#17100.00	37.5 AV	54.0	-16.5	1.85 H	353	17.35	20.15

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	110.3 PK			2.57 V	240	104.36	5.94
2	*5700.00	99.2 AV			2.57 V	240	93.26	5.94
3	#5725.00	61.3 PK	74.0	-12.7	2.57 V	240	55.39	5.91
4	#5725.00	49.5 AV	54.0	-4.5	2.57 V	240	43.59	5.91
5	11400.00	51.9 PK	74.0	-22.1	2.16 V	302	39.29	12.61
6	11400.00	38.0 AV	54.0	-16.0	2.16 V	302	25.39	12.61
7	#17100.00	52.0 PK	74.0	-22.0	1.73 V	326	31.85	20.15
8	#17100.00	37.9 AV	54.0	-16.1	1.73 V	326	17.75	20.15

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	51.0 PK	74.0	-23.0	2.31 H	253	45.89	5.11
2	5150.00	39.5 AV	54.0	-14.5	2.31 H	253	34.39	5.11
3	*5270.00	100.8 PK			2.31 H	253	95.37	5.43
4	*5270.00	89.1 AV			2.31 H	253	83.67	5.43
5	#10540.00	50.3 PK	74.0	-23.7	1.99 H	314	38.53	11.77
6	#10540.00	37.7 AV	54.0	-16.3	1.99 H	314	25.93	11.77
7	15810.00	51.5 PK	74.0	-22.5	1.82 H	360	34.94	16.56
8	15810.00	38.8 AV	54.0	-15.2	1.82 H	360	22.24	16.56

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.4 PK	74.0	-16.6	2.57 V	16	52.29	5.11
2	5150.00	46.1 AV	54.0	-7.9	2.57 V	16	40.99	5.11
3	*5270.00	111.0 PK			2.57 V	16	105.57	5.43
4	*5270.00	99.0 AV			2.57 V	16	93.57	5.43
5	#10540.00	50.6 PK	74.0	-23.4	2.03 V	321	38.83	11.77
6	#10540.00	37.9 AV	54.0	-16.1	2.03 V	321	26.13	11.77
7	15810.00	51.3 PK	74.0	-22.7	1.87 V	354	34.74	16.56
8	15810.00	38.8 AV	54.0	-15.2	1.87 V	354	22.24	16.56

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	96.7 PK			2.33 H	247	91.19	5.51
2	*5310.00	85.1 AV			2.33 H	247	79.59	5.51
3	5350.00	55.9 PK	74.0	-18.1	2.33 H	247	50.30	5.60
4	5350.00	40.9 AV	54.0	-13.1	2.33 H	247	35.30	5.60
5	10620.00	50.5 PK	74.0	-23.5	2.02 H	329	39.02	11.48
6	10620.00	37.0 AV	54.0	-17.0	2.02 H	329	25.52	11.48
7	15930.00	51.2 PK	74.0	-22.8	1.89 H	338	35.01	16.19
8	15930.00	37.7 AV	54.0	-16.3	1.89 H	338	21.51	16.19

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	107.0 PK			2.57 V	19	101.49	5.51
2	*5310.00	95.2 AV			2.57 V	19	89.69	5.51
3	5350.00	68.7 PK	74.0	-5.3	2.57 V	19	63.10	5.60
4	5350.00	48.9 AV	54.0	-5.1	2.57 V	19	43.30	5.60
5	10620.00	50.6 PK	74.0	-23.4	2.05 V	333	39.12	11.48
6	10620.00	36.9 AV	54.0	-17.1	2.05 V	333	25.42	11.48
7	15930.00	51.1 PK	74.0	-22.9	1.91 V	350	34.91	16.19
8	15930.00	37.7 AV	54.0	-16.3	1.91 V	350	21.51	16.19

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	58.3 PK	74.0	-15.7	2.33 H	262	52.44	5.86
2	#5470.00	42.8 AV	54.0	-11.2	2.33 H	262	36.94	5.86
3	*5510.00	95.3 PK			2.33 H	262	89.40	5.90
4	*5510.00	83.7 AV			2.33 H	262	77.80	5.90
5	11020.00	50.6 PK	74.0	-23.4	2.11 H	342	38.36	12.24
6	11020.00	37.1 AV	54.0	-16.9	2.11 H	342	24.86	12.24
7	#16530.00	51.5 PK	74.0	-22.5	1.85 H	360	33.14	18.36
8	#16530.00	38.0 AV	54.0	-16.0	1.85 H	360	19.64	18.36

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	70.6 PK	74.0	-3.4	2.60 V	183	64.74	5.86
2	#5470.00	50.6 AV	54.0	-3.4	2.60 V	183	44.74	5.86
3	*5510.00	105.9 PK			2.60 V	183	100.00	5.90
4	*5510.00	94.3 AV			2.60 V	183	88.40	5.90
5	11020.00	50.7 PK	74.0	-23.3	2.02 V	327	38.46	12.24
6	11020.00	37.2 AV	54.0	-16.8	2.02 V	327	24.96	12.24
7	#16530.00	51.4 PK	74.0	-22.6	1.88 V	339	33.04	18.36
8	#16530.00	37.6 AV	54.0	-16.4	1.88 V	339	19.24	18.36

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.7 PK	74.0	-19.3	2.35 H	242	48.84	5.86
2	#5470.00	41.2 AV	54.0	-12.8	2.35 H	242	35.34	5.86
3	*5550.00	99.7 PK			2.35 H	242	93.87	5.83
4	*5550.00	88.6 AV			2.35 H	242	82.77	5.83
5	#5725.00	52.7 PK	74.0	-21.3	2.35 H	242	46.79	5.91
6	#5725.00	40.5 AV	54.0	-13.5	2.35 H	242	34.59	5.91
7	11100.00	51.1 PK	74.0	-22.9	2.03 H	328	38.76	12.34
8	11100.00	37.3 AV	54.0	-16.7	2.03 H	328	24.96	12.34
9	#16650.00	51.2 PK	74.0	-22.8	1.90 H	360	32.16	19.04
10	#16650.00	37.2 AV	54.0	-16.8	1.90 H	360	18.16	19.04

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	62.3 PK	74.0	-11.7	2.42 V	182	56.44	5.86
2	#5470.00	48.1 AV	54.0	-5.9	2.42 V	182	42.24	5.86
3	*5550.00	110.3 PK			2.42 V	182	104.47	5.83
4	*5550.00	98.3 AV			2.42 V	182	92.47	5.83
5	#5725.00	57.0 PK	74.0	-17.0	2.42 V	182	51.09	5.91
6	#5725.00	46.2 AV	54.0	-7.8	2.42 V	182	40.29	5.91
7	11100.00	50.9 PK	74.0	-23.1	2.04 V	332	38.56	12.34
8	11100.00	36.8 AV	54.0	-17.2	2.04 V	332	24.46	12.34
9	#16650.00	51.5 PK	74.0	-22.5	1.88 V	332	32.46	19.04
10	#16650.00	37.7 AV	54.0	-16.3	1.88 V	332	18.66	19.04

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	100.9 PK			2.40 H	257	95.03	5.87
2	*5670.00	88.9 AV			2.40 H	257	83.03	5.87
3	#5725.00	54.8 PK	74.0	-19.2	2.40 H	257	48.89	5.91
4	#5725.00	42.3 AV	54.0	-11.7	2.40 H	257	36.39	5.91
5	11340.00	50.6 PK	74.0	-23.4	2.10 H	334	38.21	12.39
6	11340.00	36.7 AV	54.0	-17.3	2.10 H	334	24.31	12.39
7	#17010.00	51.5 PK	74.0	-22.5	1.87 H	331	30.92	20.58
8	#17010.00	37.8 AV	54.0	-16.2	1.87 H	331	17.22	20.58

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	111.0 PK			2.35 V	183	105.13	5.87
2	*5670.00	99.0 AV			2.35 V	183	93.13	5.87
3	#5725.00	66.8 PK	74.0	-7.2	2.35 V	183	60.89	5.91
4	#5725.00	51.7 AV	54.0	-2.3	2.35 V	183	45.79	5.91
5	11340.00	50.9 PK	74.0	-23.1	2.08 V	328	38.51	12.39
6	11340.00	36.8 AV	54.0	-17.2	2.08 V	328	24.41	12.39
7	#17010.00	51.9 PK	74.0	-22.1	1.92 V	334	31.32	20.58
8	#17010.00	38.1 AV	54.0	-15.9	1.92 V	334	17.52	20.58

REMARKS:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.3 PK	74.0	-22.7	2.31 H	187	46.19	5.11
2	5150.00	37.7 AV	54.0	-16.3	2.31 H	187	32.59	5.11
3	*5290.00	91.1 PK			2.31 H	187	85.64	5.46
4	*5290.00	79.6 AV			2.31 H	187	74.14	5.46
5	5350.00	56.1 PK	74.0	-17.9	2.31 H	187	50.50	5.60
6	5350.00	41.0 AV	54.0	-13.0	2.31 H	187	35.40	5.60
7	#10580.00	50.2 PK	74.0	-23.8	2.08 H	320	38.68	11.52
8	#10580.00	36.7 AV	54.0	-17.3	2.08 H	320	25.18	11.52
9	15870.00	50.9 PK	74.0	-23.1	1.90 H	360	34.54	16.36
10	15870.00	37.3 AV	54.0	-16.7	1.90 H	360	20.94	16.36

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	53.0 PK	74.0	-21.0	2.48 V	179	47.89	5.11
2	5150.00	40.9 AV	54.0	-13.1	2.48 V	179	35.79	5.11
3	*5290.00	102.4 PK			2.48 V	179	96.94	5.46
4	*5290.00	89.6 AV			2.48 V	179	84.14	5.46
5	5350.00	68.6 PK	74.0	-5.4	2.48 V	179	63.00	5.60
6	5350.00	50.0 AV	54.0	-4.0	2.48 V	179	44.40	5.60
7	#10580.00	50.1 PK	74.0	-23.9	2.08 V	322	38.58	11.52
8	#10580.00	36.4 AV	54.0	-17.6	2.08 V	322	24.88	11.52
9	15870.00	50.6 PK	74.0	-23.4	1.95 V	344	34.24	16.36
10	15870.00	37.2 AV	54.0	-16.8	1.95 V	344	20.84	16.36

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 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	55.3 PK	74.0	-18.7	2.39 H	195	49.44	5.86
2	#5470.00	41.2 AV	54.0	-12.8	2.39 H	195	35.34	5.86
3	*5530.00	91.4 PK			2.39 H	195	85.54	5.86
4	*5530.00	79.3 AV			2.39 H	195	73.44	5.86
5	#5725.00	52.0 PK	74.0	-22.0	2.39 H	195	46.09	5.91
6	#5725.00	38.5 AV	54.0	-15.5	2.39 H	195	32.59	5.91
7	11060.00	50.0 PK	74.0	-24.0	2.00 H	343	37.72	12.28
8	11060.00	36.4 AV	54.0	-17.6	2.00 H	343	24.12	12.28
9	#16590.00	50.8 PK	74.0	-23.2	1.87 H	359	32.00	18.80
10	#16590.00	37.6 AV	54.0	-16.4	1.87 H	359	18.80	18.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	66.4 PK	74.0	-7.6	2.48 V	183	60.54	5.86
2	#5470.00	49.4 AV	54.0	-4.6	2.48 V	183	43.54	5.86
3	*5530.00	102.3 PK			2.48 V	183	96.44	5.86
4	*5530.00	89.3 AV			2.48 V	183	83.44	5.86
5	#5725.00	53.8 PK	74.0	-20.2	2.48 V	183	47.89	5.91
6	#5725.00	41.5 AV	54.0	-12.5	2.48 V	183	35.59	5.91
7	11060.00	50.9 PK	74.0	-23.1	2.00 V	343	38.62	12.28
8	11060.00	37.3 AV	54.0	-16.7	2.00 V	343	25.02	12.28
9	#16590.00	51.0 PK	74.0	-23.0	1.88 V	342	32.20	18.80
10	#16590.00	37.1 AV	54.0	-16.9	1.88 V	342	18.30	18.80

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	99.3 PK			2.40 H	327	93.56	5.74
2	*5610.00	86.7 AV			2.40 H	327	80.96	5.74
3	#5725.00	58.1 PK	74.0	-15.9	2.40 H	327	52.19	5.91
4	#5725.00	43.8 AV	54.0	-10.2	2.40 H	327	37.89	5.91
5	11220.00	50.0 PK	74.0	-24.0	2.03 H	340	37.64	12.36
6	11220.00	36.5 AV	54.0	-17.5	2.03 H	340	24.14	12.36
7	#16830.00	50.6 PK	74.0	-23.4	1.91 H	354	31.16	19.44
8	#16830.00	37.6 AV	54.0	-16.4	1.91 H	354	18.16	19.44

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	108.1 PK			2.40 V	183	102.36	5.74
2	*5610.00	95.1 AV			2.40 V	183	89.36	5.74
3	#5725.00	64.8 PK	74.0	-9.2	2.40 V	183	58.89	5.91
4	#5725.00	50.8 AV	54.0	-3.2	2.40 V	183	44.89	5.91
5	11220.00	50.7 PK	74.0	-23.3	2.04 V	321	38.34	12.36
6	11220.00	36.7 AV	54.0	-17.3	2.04 V	321	24.34	12.36
7	#16830.00	50.9 PK	74.0	-23.1	1.85 V	349	31.46	19.44
8	#16830.00	36.8 AV	54.0	-17.2	1.85 V	349	17.36	19.44

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:

CDD Mode

802.11ac (VHT40)

CHANNEL	TX Channel 110	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	161.96	25.0 QP	43.5	-18.5	2.00 H	89	38.03	-13.02
2	228.26	30.8 QP	46.0	-15.2	1.25 H	268	46.47	-15.66
3	312.20	37.8 QP	46.0	-8.2	1.00 H	357	49.22	-11.41
4	409.63	29.7 QP	46.0	-16.3	1.00 H	352	39.08	-9.35
5	535.96	29.1 QP	46.0	-16.9	1.50 H	355	35.67	-6.57
6	574.34	32.0 QP	46.0	-14.0	1.50 H	334	37.65	-5.66

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	174.33	19.2 QP	43.5	-24.3	1.00 V	277	32.98	-13.80
2	273.86	29.0 QP	46.0	-17.0	1.50 V	325	41.93	-12.92
3	370.04	30.7 QP	46.0	-15.3	1.50 V	357	40.95	-10.28
4	398.25	29.3 QP	46.0	-16.7	1.50 V	14	38.94	-9.68
5	793.82	28.1 QP	46.0	-17.9	2.00 V	253	29.54	-1.44
6	957.52	32.0 QP	46.0	-14.0	1.50 V	105	30.79	1.17

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	100287	Apr. 17, 2015	Apr. 16, 2016
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-523	Oct. 02, 2015	Oct. 01, 2016
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 11, 2015	June 10, 2016
RF Cable	5D-FB	COACAB-001	May 25, 2015	May 24, 2016
50 ohms Terminator	50	3	Oct. 21, 2015	Oct. 20, 2016
50 ohms Terminator	N/A	EMC-04	Oct. 28, 2015	Oct. 27, 2016
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. A.
3. The VCCI Con A Registration No. is C-817.
4. Tested Date: Nov. 02, 2015

4.2.3 Test Procedure

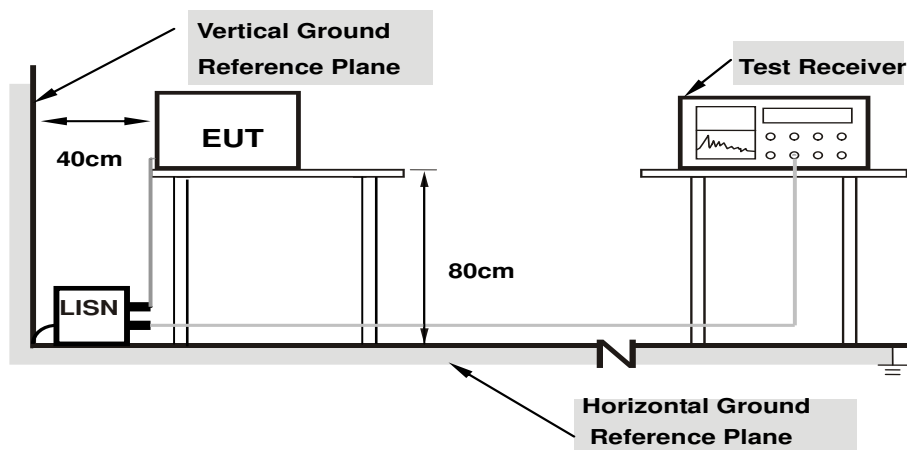
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. 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)

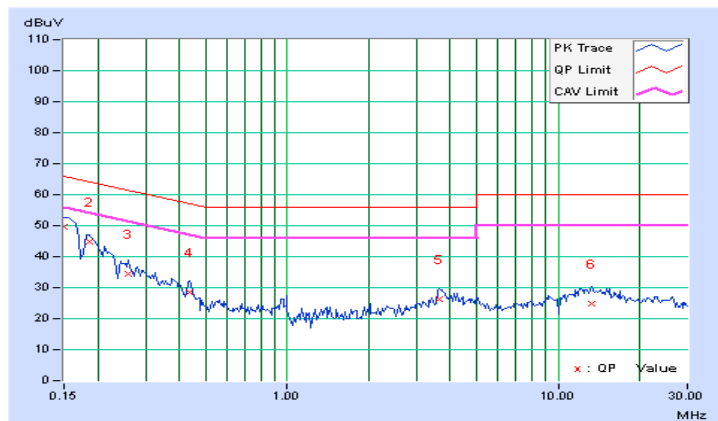
CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.15000	10.31	39.37	24.11	49.68	34.42	66.00	56.00	-16.32	-21.58
2	0.18516	10.33	34.64	22.47	44.97	32.80	64.25	54.25	-19.28	-21.45
3	0.25938	10.36	23.95	6.91	34.31	17.27	61.45	51.45	-27.14	-34.18
4	0.43516	10.40	18.30	6.62	28.70	17.02	57.15	47.15	-28.45	-30.13
5	3.62500	10.63	15.51	7.03	26.14	17.66	56.00	46.00	-29.86	-28.34
6	13.37109	11.17	13.82	8.42	24.99	19.59	60.00	50.00	-35.01	-30.41

REMARKS:

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

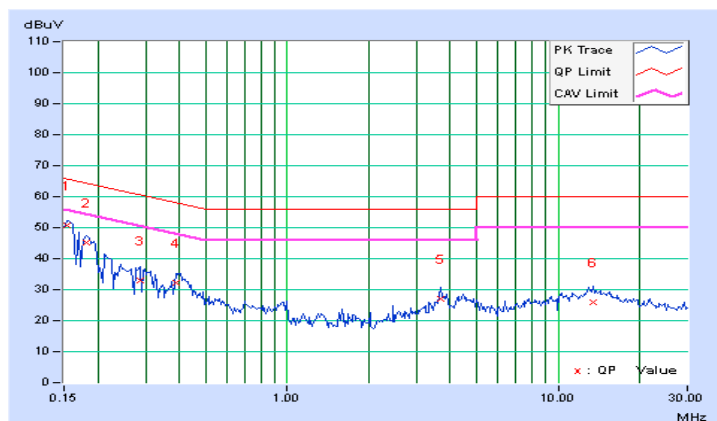


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.33	40.29	29.86	50.62	40.19	65.79	55.79	-15.17	-15.60
2	0.18125	10.35	34.80	21.31	45.15	31.66	64.43	54.43	-19.28	-22.77
3	0.28672	10.41	22.50	10.34	32.91	20.75	60.62	50.62	-27.71	-29.87
4	0.38828	10.46	21.78	11.57	32.24	22.03	58.10	48.10	-25.86	-26.07
5	3.67969	10.76	16.20	7.03	26.96	17.79	56.00	46.00	-29.04	-28.21
6	13.53906	11.17	14.77	9.35	25.94	20.52	60.00	50.00	-34.06	-29.48

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)

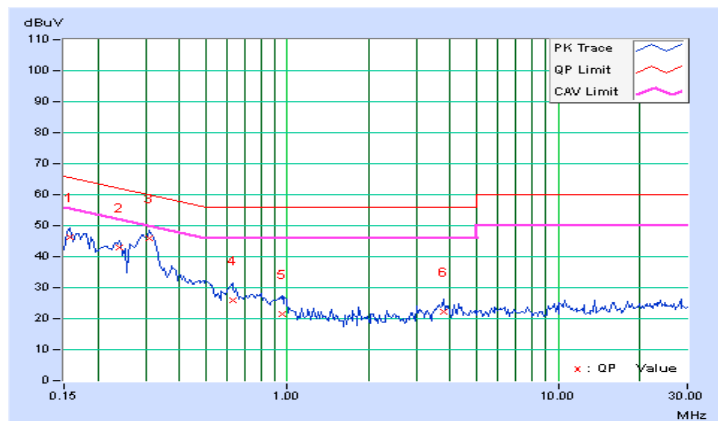
CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	10.32	35.90	21.93	46.22	32.25	65.58	55.58	-19.36	-23.33
2	0.23984	10.35	32.54	25.39	42.89	35.74	62.10	52.10	-19.21	-16.36
3	0.31016	10.37	35.48	28.52	45.85	38.89	59.97	49.97	-14.11	-11.07
4	0.62656	10.39	15.67	9.27	26.06	19.66	56.00	46.00	-29.94	-26.34
5	0.95469	10.38	10.95	5.51	21.33	15.89	56.00	46.00	-34.67	-30.11
6	3.76953	10.65	11.46	4.64	22.11	15.29	56.00	46.00	-33.89	-30.71

REMARKS:

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

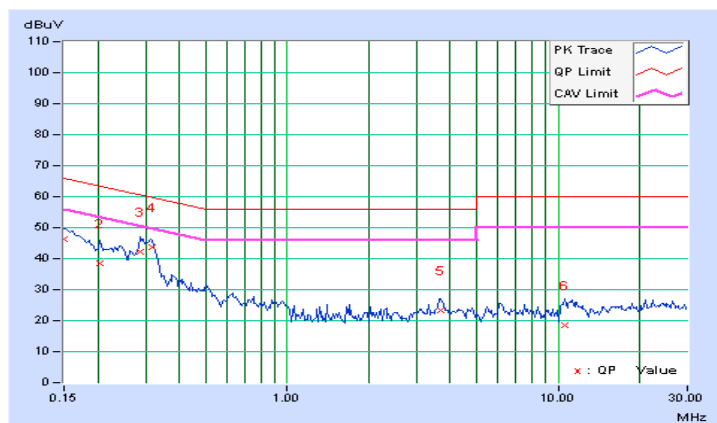


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.15000	10.32	36.08	24.25	46.40	34.57	66.00	56.00	-19.60	-21.43
2	0.20469	10.37	28.07	15.35	38.44	25.72	63.42	53.42	-24.98	-27.70
3	0.28672	10.41	31.94	25.62	42.35	36.03	60.62	50.62	-18.27	-14.59
4	0.31797	10.43	33.10	27.52	43.53	37.95	59.76	49.76	-16.23	-11.81
5	3.69922	10.77	12.54	2.98	23.31	13.75	56.00	46.00	-32.69	-32.25
6	10.55469	11.01	7.33	2.62	18.34	13.63	60.00	50.00	-41.66	-36.37

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)

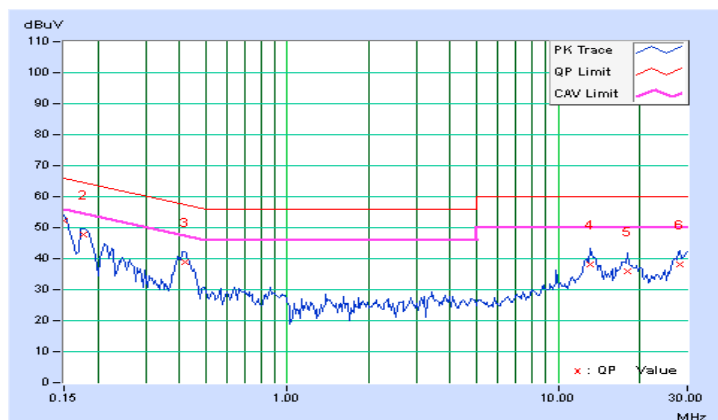
CDD Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.21	41.83	29.30	52.04	39.51	66.00	56.00	-13.96	-16.49
2	0.17734	10.22	37.56	26.77	47.78	36.99	64.61	54.61	-16.83	-17.62
3	0.41953	10.28	28.45	22.72	38.73	33.00	57.46	47.46	-18.73	-14.46
4	13.10938	10.77	27.54	21.98	38.31	32.75	60.00	50.00	-21.69	-17.25
5	18.08203	10.96	24.95	19.71	35.91	30.67	60.00	50.00	-24.09	-19.33
6	28.08984	11.21	26.89	21.57	38.10	32.78	60.00	50.00	-21.90	-17.22

REMARKS:

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

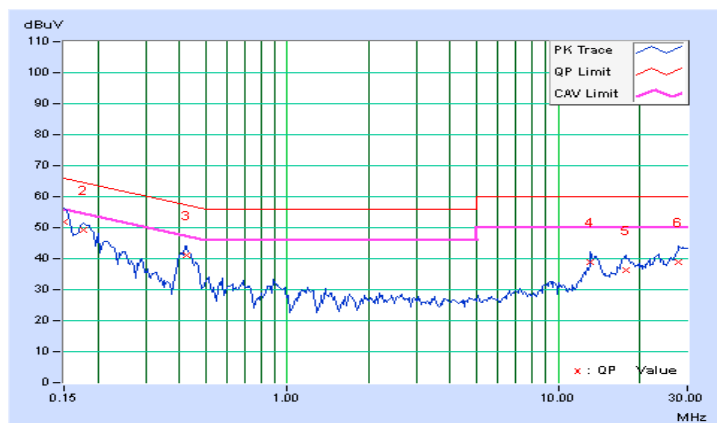


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.28	41.71	29.28	51.99	39.56	66.00	56.00	-14.01	-16.44
2	0.17734	10.30	38.79	27.85	49.09	38.15	64.61	54.61	-15.52	-16.46
3	0.42344	10.37	30.77	23.96	41.14	34.33	57.38	47.38	-16.24	-13.05
4	13.21875	10.79	27.93	24.13	38.72	34.92	60.00	50.00	-21.28	-15.08
5	17.74609	10.94	25.33	20.05	36.27	30.99	60.00	50.00	-23.73	-19.01
6	27.72266	11.10	27.65	22.31	38.75	33.41	60.00	50.00	-21.25	-16.59

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

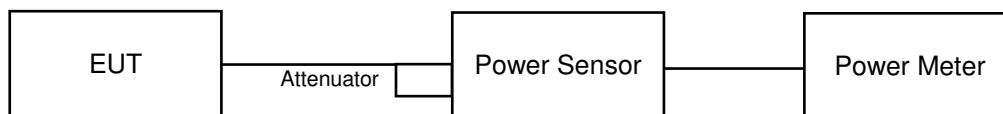
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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
FOR POWER OUTPUT MEASUREMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Oct. 21, 2015

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Oct. 21, 2015

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 with average sensor 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
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				
802.11a								
52	5260	14.76	15.37	14.87	95.048	19.78	24	PASS
60	5300	14.23	14.82	13.96	81.713	19.12	24	PASS
64	5320	14.61	15.43	14.09	89.466	19.52	24	PASS
100	5500	14.83	15.18	13.80	87.358	19.41	24	PASS
116	5580	15.12	15.43	13.80	91.411	19.61	24	PASS
140	5700	15.18	15.61	14.07	94.88	19.77	24	PASS
802.11ac (VHT20)								
52	5260	13.86	14.37	14.04	77.026	18.87	24	PASS
60	5300	13.98	14.56	13.91	78.183	18.93	24	PASS
64	5320	15.06	15.25	14.56	94.136	19.74	24	PASS
100	5500	14.90	15.36	13.60	88.168	19.45	24	PASS
116	5580	14.91	15.20	13.99	89.148	19.50	24	PASS
140	5700	14.93	15.29	14.11	90.686	19.58	24	PASS
802.11ac (VHT40)								
54	5270	17.18	17.53	17.05	159.563	22.03	24	PASS
62	5310	13.23	13.76	13.04	64.943	18.13	24	PASS
102	5510	13.65	14.15	13.01	69.175	18.40	24	PASS
110	5550	17.66	17.89	16.54	164.945	22.17	24	PASS
134	5670	17.46	17.56	16.81	160.708	22.06	24	PASS
802.11ac (VHT80)								
58	5290	12.49	12.97	12.33	54.657	17.38	24	PASS
106	5530	12.47	12.81	11.51	50.917	17.07	24	PASS
122	5610	18.43	18.68	17.48	199.429	23.00	24	PASS

26dB BANDWIDTH:

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
802.11a				
52	5260	20.52	20.52	20.71
60	5300	20.48	20.40	20.49
64	5320	20.59	20.50	20.64
100	5500	20.56	20.57	20.63
116	5580	20.36	20.41	20.72
140	5700	20.30	20.49	20.50
802.11ac (VHT20)				
52	5260	20.81	20.57	20.96
60	5300	20.63	20.60	20.85
64	5320	20.69	20.67	21.11
100	5500	20.74	21.56	20.99
116	5580	20.60	20.54	20.96
140	5700	20.58	20.51	20.85
802.11ac (VHT40)				
54	5270	69.27	75.31	64.28
62	5310	41.40	41.03	41.06
102	5510	41.56	43.46	40.99
110	5550	65.48	68.69	50.74
134	5670	65.34	71.03	60.55
802.11ac (VHT80)				
58	5290	82.95	83.13	82.15
106	5530	83.13	82.34	82.00
122	5610	130.32	148.28	124.59

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

Power Limit = 11dBm + 10logB < UNII Band 2A~2C>

802.11a

Channel Number	Freq.(MHz)	Min. B (MHz)	Determined Conducted Limit (dBm)
52	5260	20.52	24.12 > 24
60	5300	20.40	24.09 > 24
64	5320	20.50	24.11 > 24
100	5500	20.56	24.13 > 24
116	5580	20.36	24.08 > 24
140	5700	20.30	24.07 > 24

802.11ac (VHT20)

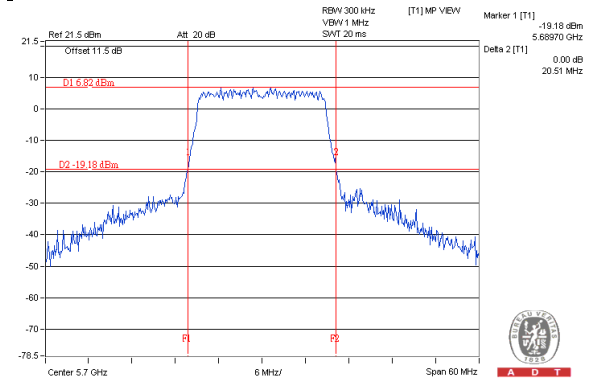
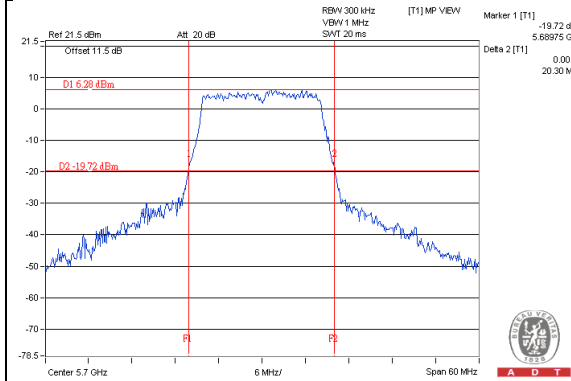
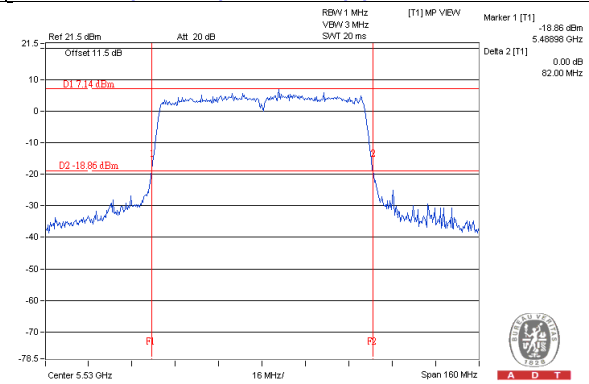
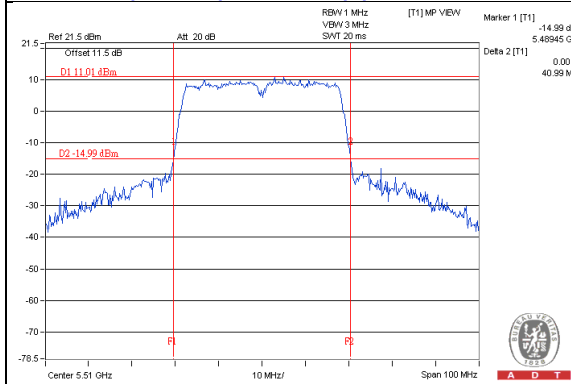
52	5260	20.57	24.13 > 24
60	5300	20.60	24.13 > 24
64	5320	20.67	24.15 > 24
100	5500	20.74	24.16 > 24
116	5580	20.54	24.12 > 24
140	5700	20.51	24.11 > 24

802.11ac (VHT40)

54	5270	64.28	29.08 > 24
62	5310	41.03	27.13 > 24
102	5510	40.99	27.12 > 24
110	5550	50.74	28.05 > 24
134	5670	60.55	28.82 > 24

802.11ac (VHT80)

58	5290	82.15	30.14 > 24
106	5530	82.00	30.13 > 24
122	5610	124.59	31.95 > 24

SPECTRUM PLOT OF WORST VALUE**802.11a – Chain (0): CH 140****802.11ac (VHT20) – Chain (1): CH 140****802.11ac (VHT40) – Chain (2): CH 102****802.11ac (VHT80) – Chain (2): CH 106**

Beamforming Mode
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				
802.11ac (VHT20)								
52	5260	13.86	14.37	14.04	77.026	18.87	19.23	PASS
60	5300	13.98	14.56	13.91	78.183	18.93	19.23	PASS
64	5320	14.38	14.94	13.94	83.379	19.21	19.23	PASS
100	5500	14.18	15.04	13.33	79.625	19.01	19.23	PASS
116	5580	14.53	14.81	13.30	80.028	19.03	19.23	PASS
140	5700	14.63	14.67	13.54	80.943	19.08	19.23	PASS
802.11ac (VHT40)								
54	5270	14.27	14.53	14.15	81.111	19.09	19.23	PASS
62	5310	13.23	13.76	13.04	64.943	18.13	19.23	PASS
102	5510	13.65	14.15	13.01	69.175	18.40	19.23	PASS
110	5550	14.71	14.95	13.58	83.644	19.22	19.23	PASS
134	5670	14.64	14.69	13.84	82.761	19.18	19.23	PASS
802.11ac (VHT80)								
58	5290	12.49	12.97	12.33	54.657	17.38	19.23	PASS
106	5530	12.47	12.81	11.51	50.917	17.07	19.23	PASS
122	5610	14.61	14.83	13.66	82.543	19.17	19.23	PASS

Note: 1. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to "Determined Conducted Limit-(10.77-6)"

**26dB BANDWIDTH:**

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
802.11ac (VHT20)				
52	5260	20.81	20.57	20.96
60	5300	20.63	20.60	20.85
64	5320	20.69	20.67	21.11
100	5500	20.74	21.56	20.99
116	5580	20.60	20.54	20.96
140	5700	20.58	20.51	20.85
802.11ac (VHT40)				
54	5270	69.27	75.31	64.28
62	5310	41.40	41.03	41.06
102	5510	41.56	43.46	40.99
110	5550	65.48	68.69	50.74
134	5670	65.34	71.03	60.55
802.11ac (VHT80)				
58	5290	82.95	83.13	82.15
106	5530	83.13	82.34	82.00
122	5610	130.32	148.28	124.59

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



Power Limit = $11\text{dBm} + 10\log B < \text{UNII Band 2A}\sim\text{2C}>$

802.11ac (VHT20)

52	5260	20.57	24.13 > 24
60	5300	20.60	24.13 > 24
64	5320	20.67	24.15 > 24
100	5500	20.74	24.16 > 24
116	5580	20.54	24.12 > 24
140	5700	20.51	24.11 > 24

802.11ac (VHT40)

54	5270	64.28	29.08 > 24
62	5310	41.03	27.13 > 24
102	5510	40.99	27.12 > 24
110	5550	50.74	28.05 > 24
134	5670	60.55	28.82 > 24

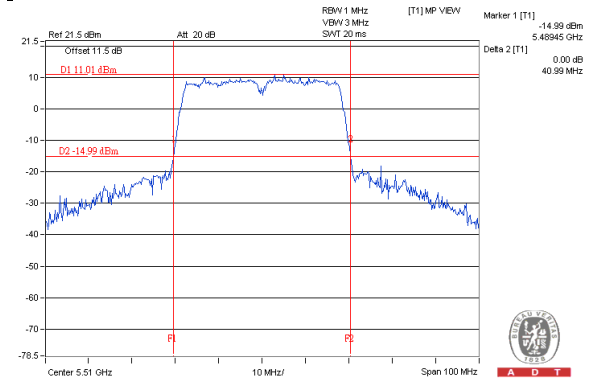
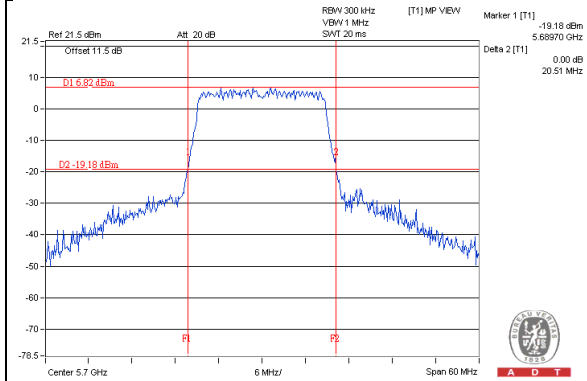
802.11ac (VHT80)

58	5290	82.15	30.14 > 24
106	5530	82.00	30.13 > 24
122	5610	124.59	31.95 > 24

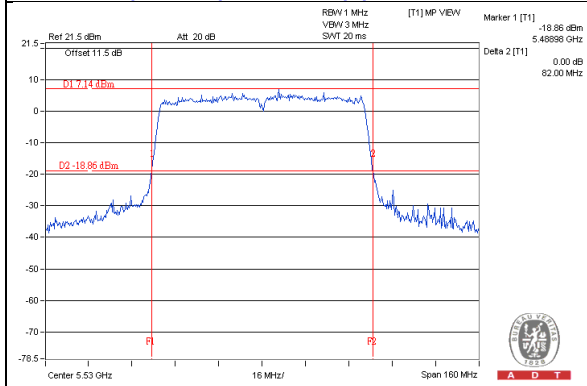
SPECTRUM PLOT OF WORST VALUE

802.11ac (VHT20) – Chain (1): CH 140

802.11ac (VHT40) – Chain (2): CH 102



802.11ac (VHT80) – Chain (2): CH 106

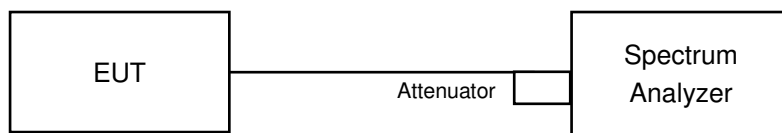


4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Oct. 21, 2015

4.4.4 Test Procedure

For 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

For 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)



4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Condition

Same as Item 4.3.6.

4.4.7 Test Results

CDD Mode

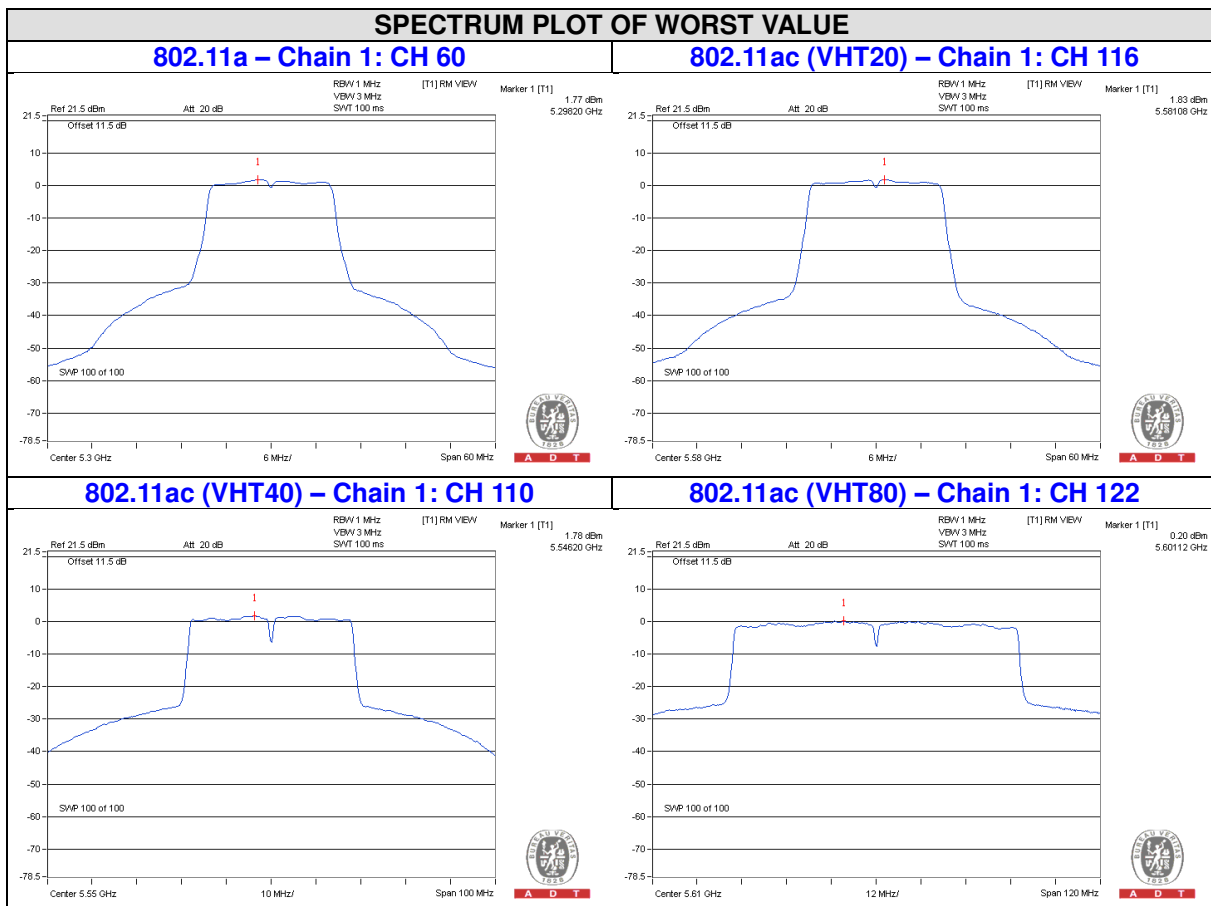
Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)			Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2			
802.11a							
52	5260	1.07	1.73	1.21	6.12	6.23	Pass
60	5300	1.12	1.76	1.37	6.20	6.23	Pass
64	5320	1.11	1.73	1.39	6.19	6.23	Pass
100	5500	1.40	1.61	1.33	6.22	6.23	Pass
116	5580	1.53	1.39	1.21	6.15	6.23	Pass
140	5700	0.94	1.71	1.44	6.15	6.23	Pass
802.11ac (VHT20)							
52	5260	-0.54	-0.17	-0.26	4.45	6.23	Pass
60	5300	-0.20	0.25	0.04	4.81	6.23	Pass
64	5320	1.08	1.42	1.50	6.11	6.23	Pass
100	5500	1.05	1.74	1.26	6.13	6.23	Pass
116	5580	0.82	1.83	1.34	6.12	6.23	Pass
140	5700	0.66	1.82	1.44	6.10	6.23	Pass
802.11ac (VHT40)							
54	5270	0.82	0.99	0.71	5.61	6.23	Pass
62	5310	-2.85	-2.55	-3.16	1.93	6.23	Pass
102	5510	-1.57	-0.74	-1.59	3.49	6.23	Pass
110	5550	1.39	1.57	1.18	6.15	6.23	Pass
134	5670	1.26	1.53	1.14	6.08	6.23	Pass

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

2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.77 - 6) = 6.23\text{dBm}$.

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				
802.11ac (VHT80)								
58	5290	-6.91	-6.67	-7.13	0.17	-1.96	6.23	Pass
106	5530	-6.12	-5.26	-6.02	0.17	-0.84	6.23	Pass
122	5610	-0.22	0.20	-0.19	0.17	4.87	6.23	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (10.77 - 6) = 6.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

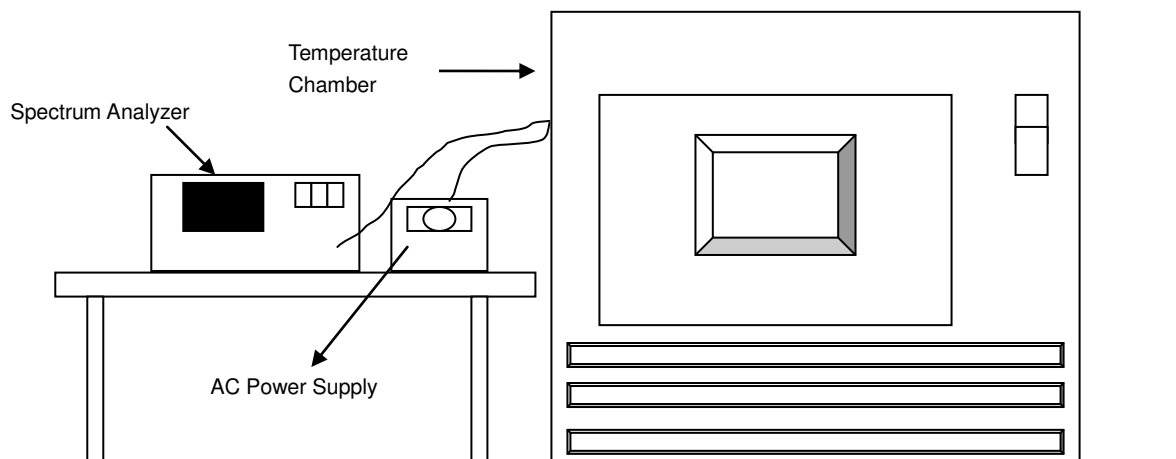


4.5 Frequency Stability Measurement

4.5.1 Limits of Frequency Stability Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-S P-AR	MAA0812-008	Jan. 12, 2015	Jan. 11, 2016

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Oct. 21, 2015

4.5.4 Test Procedure

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5260MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5259.9833	-0.00032	5259.9817	-0.00035	5259.9834	-0.00032	5259.9808	-0.00037
40	120	5259.9879	-0.00023	5259.9861	-0.00026	5259.9893	-0.00020	5259.9857	-0.00027
30	120	5259.9822	-0.00034	5259.9818	-0.00035	5259.9848	-0.00029	5259.982	-0.00034
20	120	5260.0231	0.00044	5260.0211	0.00040	5260.0231	0.00044	5260.0258	0.00049
10	120	5259.9774	-0.00043	5259.9769	-0.00044	5259.9783	-0.00041	5259.9782	-0.00041
0	120	5259.9834	-0.00032	5259.9787	-0.00040	5259.9824	-0.00033	5259.9814	-0.00035
-10	120	5260.0038	0.00007	5260.0037	0.00007	5260.0027	0.00005	5260	0.00000
-20	120	5259.9925	-0.00014	5259.9932	-0.00013	5259.9907	-0.00018	5259.9912	-0.00017
-30	120	5260.0121	0.00023	5260.0141	0.00027	5260.013	0.00025	5260.0157	0.00030

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5260MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5260.023	0.00044	5260.0209	0.00040	5260.0229	0.00044	5260.0258	0.00049
	120	5260.0231	0.00044	5260.0211	0.00040	5260.0231	0.00044	5260.0258	0.00049
	102	5260.0234	0.00044	5260.0201	0.00038	5260.0232	0.00044	5260.0251	0.00048



5 Pictures of Test Arrangements

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



A D T

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 Lab/Telecom Lab

Tel: 886-3-5935343

Fax: 886-3-5935342

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Tel: 886-3-3183232

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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