FCC Test Report (WLAN)

Report No.:	RF150126E05-1
FCC ID:	TLZ-CM2XXNF
Test Model:	AW-CM195NF
Series Model:	AW-CM217NF, AW-CM235NF
Received Date:	Jan. 26, 2015
Test Date:	Feb. 03 to 17, 2015
Issued Date:	Feb. 25, 2015
Applicant:	AzureWave Technologies, Inc.
Address:	8 F., No. 94, Baozhong Rd., Xindian,Taipei, Taiwan 231
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
RF150126E05-1	Original release.	Feb. 25, 2015

1 Certificate of Conformity

Product:	IEEE 802.11 a/b/g/n/ac Wireless LAN and Bluetooth M.2 Combo Module
Brand:	AzureWave
Test Model:	AW-CM195NF
Series Model:	AW-CM217NF, AW-CM235NF
Sample Status:	ENGINEERING SAMPLE
Applicant:	AzureWave Technologies, Inc.
Test Date:	Feb. 03 to 17, 2015
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2009

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

Prepared by : _____ **Date:** Feb. 25, 2015

Midoli Peng / Specialist

Approved by : _____ , **Date:** Feb. 25, 2015

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (SECTION 15.407 Under New Rule)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -18.78dB at 0.51719MHz.
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 5150.00MHz, 5350.00MHz, 5470.00MHz & 5850.00MHz.
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(e)	6dB bandwidth	PASS	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is i-pex(MHF) not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.37 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.65 dB
	6GHz ~ 18GHz	3.88 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 (WLAN)

Product	IEEE 802.11 a/b/g/n/ac Wireless LAN and Bluetooth M.2 Combo Module
Brand	AzureWave
Test Model	AW-CM195NF
Series Model	AW-CM217NF, AW-CM235NF
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n : up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	For 15.407 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.70GHz, 5.745 ~ 5.825GHz
	For 15.247 2.412 ~ 2.472GHz
Number of Channel	For 15.407 24 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 11 for 802.11n (HT40), 802.11ac (VHT40) 6 for 802.11ac (VHT80)
	For 15.247 11 for 802.11b/g, 802.11n (HT20), VHT20 7 for 802.11n (HT40), VHT40
Output Power	For 15.407 802.11a: 89.536mW 802.11ac (VHT20): 178.144mW 802.11ac (VHT40): 177.863mW 802.11ac (VHT80): 148.092mW
	For 15.247 802.11b: 179.473mW 802.11g: 270.396mW 802.11n (HT20): 466.771mW 802.11n (HT40): 233.435mW
Antenna Type	Please see Note
Antenna Connector	Please see Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. There are Bluetooth technology and WLAN technology used for the EUT.
2. For WLAN, 2.4GHz and 5GHz technology can not transmit at same time.
3. WLAN (5GHz) and Bluetooth technology can transmit at same time.
4. The EUT has three model names which are identical to each other in all aspects except for the following table. These solutions have same RF circuit /parameter and are pin to pin compatible. (Detail information please refer declaration letter by client)

AW model name	Difference. Broadcom solution
AW-CM195NF	BCM43540
AW-CM217NF	BCM4356
AW-CM235NF	BCM4354

From the above models, model: **AW-CM195NF** was selected as representative model for the test and its data was recorded in this report.

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

Antenna No	Chain No.	Brand	Model	Gain (dBi)	Antenna Type	Connector Type	Frequency range (GHz to GHz)	Cable Length (External only)
1	Chain (0) (Aux)	MAG.LAYERS	MSA-4008-25GC1-A1	2.98	PIFA	i-pex(MHF)	2.4~2.5	15cm
				5.16			4.9~5.9	
	Chain (1) (Main)	MAG.LAYERS	MSA-4008-25GC1-A1	2.98	PIFA	i-pex(MHF)	2.4~2.5	15cm
				5.16			4.9~5.9	
2	Chain (0) (Aux)	LUXSHARE ICT	Speedy	1.43	PIFA	i-pex(MHF)	2.4~2.5	507mm
				-3.12			4.9~5.9	
	Chain (1) (Main)	LUXSHARE ICT	Speedy	-2.46	PIFA	i-pex(MHF)	2.4~2.5	472mm
				-0.02			4.9~5.9	

Antenna 1 was chosen for final test.

6. The EUT incorporates a MIMO function.

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

Note: 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 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

FOR 5260 ~ 5320MHz

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

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

2 channels are provided for 802.11ac (VHT40), 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, 802.11ac (VHT20), 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 802.11ac (VHT40), 802.11ac (VHT40):

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

NOTE:

1. The EUT's antenna (PIFA) had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane** (for below 1GHz) and **Z-plane** (for above 1GHz).

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	13
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	27
802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	13
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	27
802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
802.11a	5500-5700	100 to 140	100, 120, 140	OFDM	BPSK	6.0
802.11ac (VHT20)		100 to 140	100, 120, 140	OFDM	BPSK	13
802.11ac (VHT40)		102 to 134	102, 118, 134	OFDM	BPSK	27
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	58.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	13
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	27
802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5745-5825	149 to 165	157	OFDM	BPSK	6.0

Power Line Conducted Emission Test:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5745-5825	149 to 165	157	OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	13
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	27
802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	13
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	27
802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
802.11a	5500-5700	100 to 140	100, 120, 140	OFDM	BPSK	6.0
802.11ac (VHT20)		100 to 140	100, 120, 140	OFDM	BPSK	13
802.11ac (VHT40)		102 to 134	102, 118, 134	OFDM	BPSK	27
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	58.5
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	13
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	27
802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

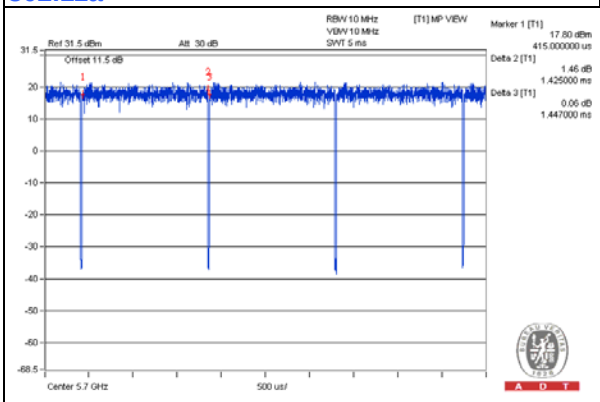
Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	23deg. C, 65%RH	120Vac, 60Hz	Robert Cheng
RE<1G	26deg. C, 67%RH	120Vac, 60Hz	Robert Cheng
PLC	22deg. C, 60%RH	120Vac, 60Hz	Barry Lee
APCM	25deg. C, 60%RH	120Vac, 60Hz	Robert Cheng

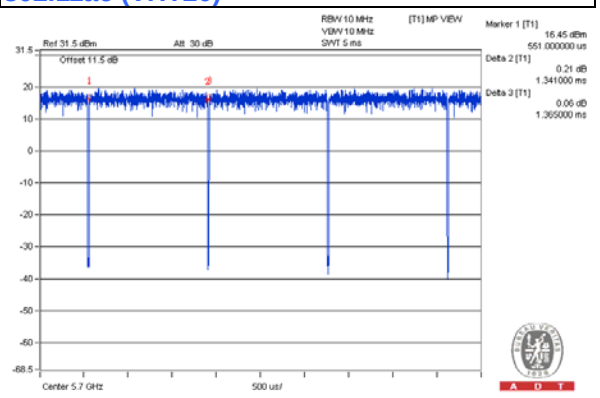
3.3 Duty Cycle of Test Signal

If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.
802.11a: Duty cycle = 1.425 ms/1.448 ms = 0.984
802.11ac (VHT20): Duty cycle = 1.341 ms/1.362 ms = 0.985
802.11ac (VHT40): Duty cycle = 0.668 ms/0.687 ms = 0.972, Duty factor = 10 * log(1/0.972) = 0.12
802.11ac (VHT80): Duty cycle = 0.333 ms/0.351 ms = 0.949, Duty factor = 10 * log(1/0.949) = 0.23

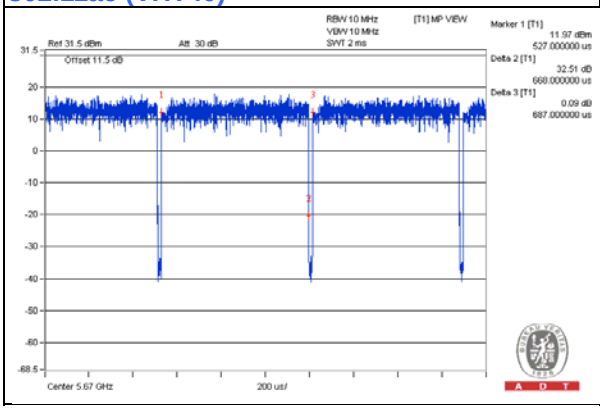
802.11a



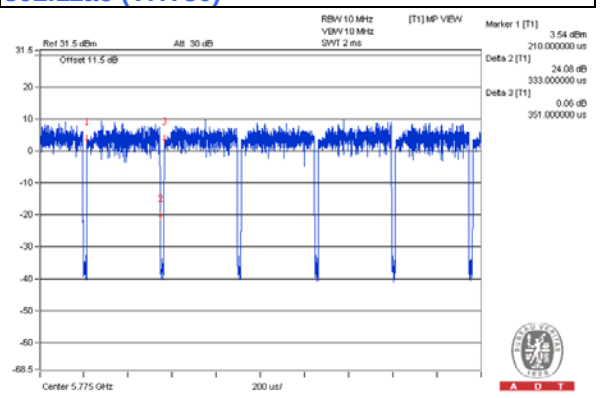
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

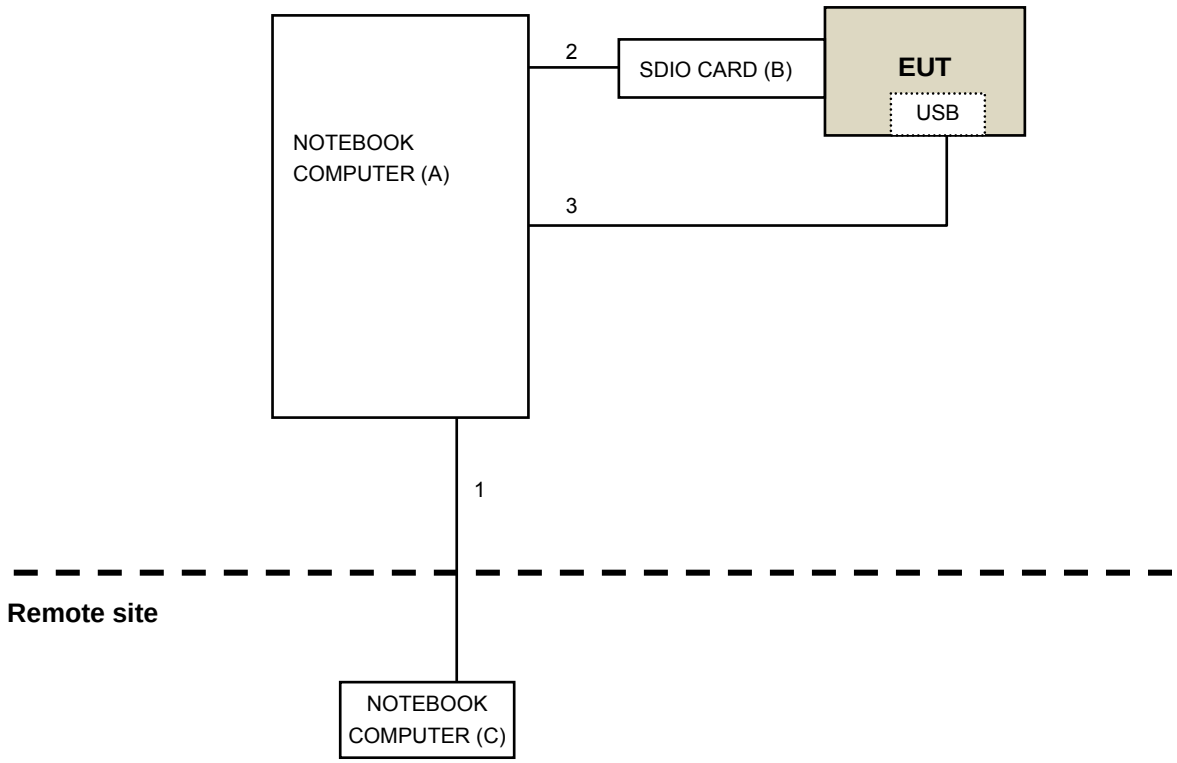
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	NOTEBOOK COMPUTER	ASUS	A42J	NA	FCC DoC	Supplied by Client
B	SDIO CARD	AzureWave	NA	NA	NA	Supplied by Client
C	NOTEBOOK COMPUTER	DELL	PP32LA	DSLB32S	NA	Provided by Lab

NOTE:

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

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	RJ45	1	10	No	0	Provided by Lab
2	USB	1	2	No	0	Provided by Lab
3	USB	1	1.8	No	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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 Procedures New Rules v01
662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2009

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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 Procedures New Rules v01	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:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY51210105	July 21, 2014	July 20, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 12, 2014	Nov. 11, 2015
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Feb. 26, 2014	Feb. 25, 2015
RF Cable	NA	CHGCAB_001	Oct. 04, 2014	Oct. 03, 2015
Horn_Antenna AISI	AIH.8018	0000320091110	Aug. 27, 2014	Aug. 26, 2015
Pre-Amplifier Agilent	8449B	3008A02578	June 24, 2014	June 23, 2015
RF Cable	NA	131205 131214 SNMY23684/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	July 05, 2014	July 04, 2015
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2015	Jan. 14, 2016
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Aug. 26, 2014	Aug. 25, 2015
RF Cable	NA	RF104-121 RF104-204	Dec. 11, 2014	Dec. 10, 2015
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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3 The test was performed in 966 Chamber No. G.
4. The FCC Site Registration No. is 966073.
5 The VCCI Site Registration No. is G-137.
6 The CANADA Site Registration No. is IC 7450H-2.
7 Tested Date: Feb. 03 to 04, 2015

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters 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:

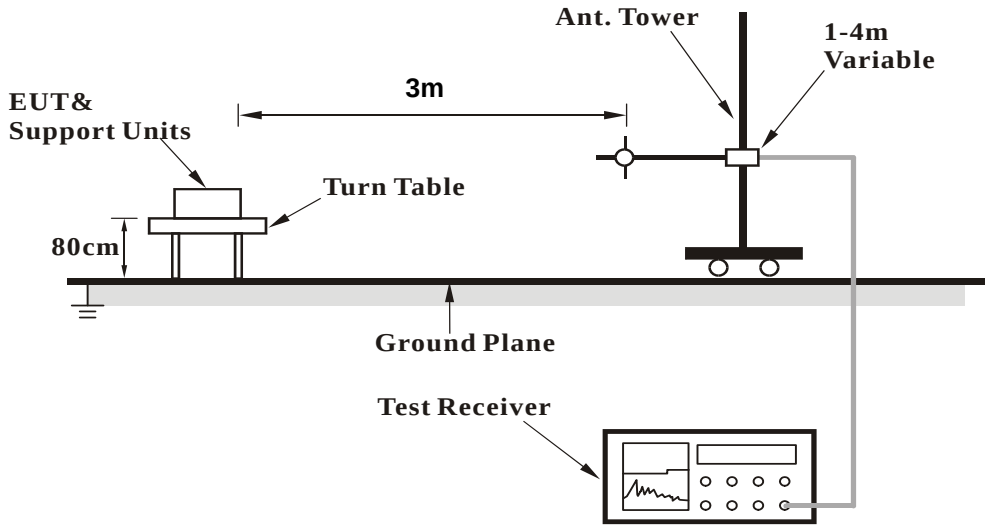
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 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

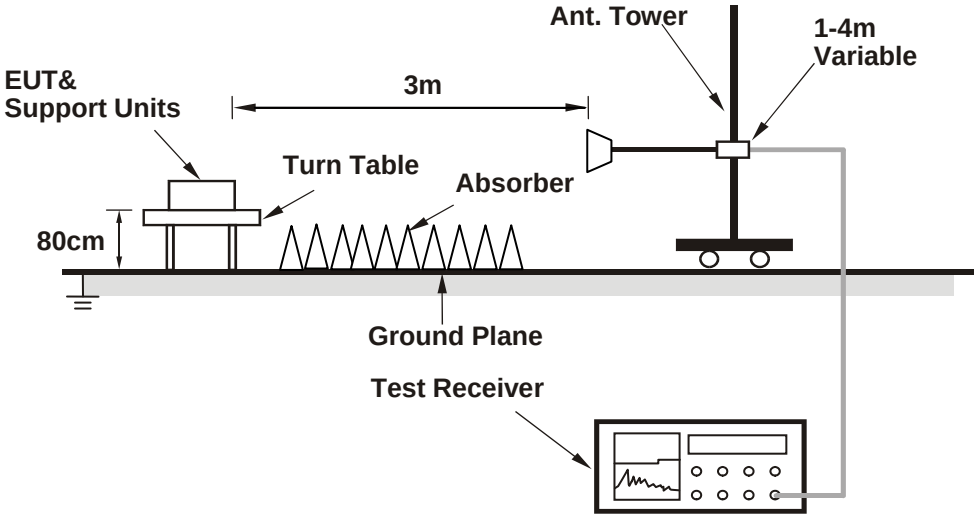
No deviation.

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 Conditions

1. Connect the EUT with the support unit A (Notebook computer) which is placed on a testing table.
2. The communication partner run test program “paste WiFi command” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.5 PK	74.0	-6.5	1.05 H	46	60.70	6.80
2	5150.00	52.9 AV	54.0	-1.1	1.05 H	46	46.10	6.80
3	*5180.00	107.2 PK			1.05 H	46	100.25	6.95
4	*5180.00	99.4 AV			1.05 H	46	92.45	6.95
5	#10360.00	53.9 PK	74.0	-20.1	1.04 H	66	40.79	13.11
6	#10360.00	41.7 AV	54.0	-12.3	1.04 H	66	28.59	13.11
7	15540.00	58.9 PK	74.0	-15.1	1.11 H	350	40.21	18.69
8	15540.00	47.0 AV	54.0	-7.0	1.11 H	350	28.31	18.69
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	66.2 PK	74.0	-7.8	1.10 V	168	59.40	6.80
2	5150.00	52.1 AV	54.0	-1.9	1.10 V	168	45.30	6.80
3	*5180.00	105.1 PK			1.08 V	169	98.15	6.95
4	*5180.00	97.1 AV			1.08 V	169	90.15	6.95
5	#10360.00	53.9 PK	74.0	-20.1	1.13 V	231	40.79	13.11
6	#10360.00	41.0 AV	54.0	-13.0	1.13 V	231	27.89	13.11
7	15540.00	60.7 PK	74.0	-13.3	1.14 V	10	42.01	18.69
8	15540.00	48.0 AV	54.0	-6.0	1.14 V	10	29.31	18.69

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.8 PK	74.0	-5.2	1.05 H	44	62.00	6.80
2	5150.00	52.6 AV	54.0	-1.4	1.05 H	44	45.80	6.80
3	*5200.00	109.7 PK			1.05 H	44	102.65	7.05
4	*5200.00	101.3 AV			1.05 H	44	94.25	7.05
5	#10400.00	53.7 PK	74.0	-20.3	1.00 H	70	40.48	13.22
6	#10400.00	41.3 AV	54.0	-12.7	1.00 H	70	28.08	13.22
7	15600.00	59.8 PK	74.0	-14.2	1.15 H	325	41.10	18.70
8	15600.00	47.7 AV	54.0	-6.3	1.15 H	325	29.00	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.5 PK	74.0	-6.5	1.04 V	172	60.70	6.80
2	5150.00	51.7 AV	54.0	-2.3	1.04 V	172	44.90	6.80
3	*5200.00	107.6 PK			1.02 V	183	100.55	7.05
4	*5200.00	99.7 AV			1.02 V	183	92.65	7.05
5	#10400.00	54.1 PK	74.0	-19.9	1.25 V	236	40.88	13.22
6	#10400.00	41.1 AV	54.0	-12.9	1.25 V	236	27.88	13.22
7	15600.00	60.8 PK	74.0	-13.2	1.09 V	13	42.10	18.70
8	15600.00	48.4 AV	54.0	-5.6	1.09 V	13	29.70	18.70

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.02 H	44	49.40	6.80
2	5150.00	41.6 AV	54.0	-12.4	1.02 H	44	34.80	6.80
3	*5240.00	110.8 PK			1.02 H	44	103.64	7.16
4	*5240.00	101.8 AV			1.02 H	44	94.64	7.16
5	#10480.00	54.3 PK	74.0	-19.7	1.01 H	60	41.14	13.16
6	#10480.00	41.8 AV	54.0	-12.2	1.01 H	60	28.64	13.16
7	15720.00	59.5 PK	74.0	-14.5	1.13 H	336	41.10	18.40
8	15720.00	47.4 AV	54.0	-6.6	1.13 H	336	29.00	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.02 V	5	49.40	6.80
2	5150.00	40.8 AV	54.0	-13.2	1.02 V	5	34.00	6.80
3	*5240.00	107.9 PK			1.00 V	164	100.74	7.16
4	*5240.00	100.0 AV			1.00 V	164	92.84	7.16
5	#10480.00	53.8 PK	74.0	-20.2	1.19 V	245	40.64	13.16
6	#10480.00	41.0 AV	54.0	-13.0	1.19 V	245	27.84	13.16
7	15720.00	60.7 PK	74.0	-13.3	1.12 V	12	42.30	18.40
8	15720.00	48.0 AV	54.0	-6.0	1.12 V	12	29.60	18.40

REMARKS:

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

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

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	109.7 PK			1.05 H	316	102.52	7.18
2	*5260.00	101.1 AV			1.05 H	316	93.92	7.18
3	#10520.00	54.0 PK	74.0	-20.0	1.00 H	46	40.78	13.22
4	#10520.00	41.7 AV	54.0	-12.3	1.00 H	46	28.48	13.22
5	15780.00	58.9 PK	74.0	-15.1	1.15 H	328	40.39	18.51
6	15780.00	46.9 AV	54.0	-7.1	1.15 H	328	28.39	18.51
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	106.9 PK			1.04 V	191	99.72	7.18
2	*5260.00	99.3 AV			1.04 V	191	92.12	7.18
3	#10520.00	53.9 PK	74.0	-20.1	1.21 V	247	40.68	13.22
4	#10520.00	41.0 AV	54.0	-13.0	1.21 V	247	27.78	13.22
5	15780.00	60.9 PK	74.0	-13.1	1.07 V	17	42.39	18.51
6	15780.00	48.2 AV	54.0	-5.8	1.07 V	17	29.69	18.51

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	110.1 PK			1.04 H	315	102.81	7.29
2	*5300.00	101.4 AV			1.04 H	315	94.11	7.29
3	5350.00	70.9 PK	74.0	-3.1	1.02 H	316	63.41	7.49
4	5350.00	53.4 AV	54.0	-0.6	1.02 H	316	45.91	7.49
5	10600.00	54.2 PK	74.0	-19.8	1.00 H	61	40.67	13.53
6	10600.00	42.0 AV	54.0	-12.0	1.00 H	61	28.47	13.53
7	15900.00	59.6 PK	74.0	-14.4	1.15 H	336	40.95	18.65
8	15900.00	47.4 AV	54.0	-6.6	1.15 H	336	28.75	18.65
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	107.0 PK			1.08 V	164	99.71	7.29
2	*5300.00	99.3 AV			1.08 V	164	92.01	7.29
3	5350.00	70.3 PK	74.0	-3.7	1.09 V	168	62.81	7.49
4	5350.00	52.3 AV	54.0	-1.7	1.09 V	168	44.81	7.49
5	10600.00	53.5 PK	74.0	-20.5	1.20 V	237	39.97	13.53
6	10600.00	40.9 AV	54.0	-13.1	1.20 V	237	27.37	13.53
7	15900.00	60.8 PK	74.0	-13.2	1.12 V	2	42.15	18.65
8	15900.00	47.9 AV	54.0	-6.1	1.12 V	2	29.25	18.65

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	107.1 PK			1.22 H	311	99.72	7.38
2	*5320.00	99.2 AV			1.22 H	311	91.82	7.38
3	5350.00	71.2 PK	74.0	-2.8	1.03 H	317	63.71	7.49
4	5350.00	53.2 AV	54.0	-0.8	1.03 H	317	45.71	7.49
5	10640.00	53.7 PK	74.0	-20.3	1.00 H	68	40.07	13.63
6	10640.00	41.4 AV	54.0	-12.6	1.00 H	68	27.77	13.63
7	15960.00	60.0 PK	74.0	-14.0	1.10 H	331	41.39	18.61
8	15960.00	47.6 AV	54.0	-6.4	1.10 H	331	28.99	18.61
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	104.9 PK			1.00 V	192	97.52	7.38
2	*5320.00	97.1 AV			1.00 V	192	89.72	7.38
3	5350.00	70.4 PK	74.0	-3.6	1.10 V	167	62.91	7.49
4	5350.00	52.6 AV	54.0	-1.4	1.10 V	167	45.11	7.49
5	10640.00	53.7 PK	74.0	-20.3	1.13 V	240	40.07	13.63
6	10640.00	40.7 AV	54.0	-13.3	1.13 V	240	27.07	13.63
7	15960.00	60.8 PK	74.0	-13.2	1.13 V	12	42.19	18.61
8	15960.00	48.4 AV	54.0	-5.6	1.13 V	12	29.79	18.61

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.4 PK	74.0	-10.6	1.24 H	313	55.50	7.90
2	5460.00	49.8 AV	54.0	-4.2	1.24 H	313	41.90	7.90
3	#5470.00	70.8 PK	74.0	-3.2	1.24 H	313	62.87	7.93
4	#5470.00	53.2 AV	54.0	-0.8	1.24 H	313	45.27	7.93
5	*5500.00	107.9 PK			1.24 H	313	99.88	8.02
6	*5500.00	99.9 AV			1.24 H	313	91.88	8.02
7	11000.00	54.1 PK	74.0	-19.9	1.01 H	61	39.68	14.42
8	11000.00	41.9 AV	54.0	-12.1	1.01 H	61	27.48	14.42
9	#16500.00	59.3 PK	74.0	-14.7	1.13 H	321	38.36	20.94
10	#16500.00	47.1 AV	54.0	-6.9	1.13 H	321	26.16	20.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	1.13 V	12	52.90	7.90
2	5460.00	48.1 AV	54.0	-5.9	1.13 V	12	40.20	7.90
3	#5470.00	69.9 PK	74.0	-4.1	1.13 V	100	61.97	7.93
4	#5470.00	52.5 AV	54.0	-1.5	1.13 V	100	44.57	7.93
5	*5500.00	105.1 PK			1.12 V	99	97.08	8.02
6	*5500.00	97.4 AV			1.12 V	99	89.38	8.02
7	11000.00	54.1 PK	74.0	-19.9	1.24 V	253	39.68	14.42
8	11000.00	41.1 AV	54.0	-12.9	1.24 V	253	26.68	14.42
9	#16500.00	60.3 PK	74.0	-13.7	1.15 V	0	39.36	20.94
10	#16500.00	47.6 AV	54.0	-6.4	1.15 V	0	26.66	20.94

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

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	*5600.00	110.0 PK			1.30 H	307	101.79	8.21
2	*5600.00	101.2 AV			1.30 H	307	92.99	8.21
3	11200.00	54.4 PK	74.0	-19.6	1.02 H	62	40.14	14.26
4	11200.00	41.7 AV	54.0	-12.3	1.02 H	62	27.44	14.26
5	#16800.00	59.2 PK	74.0	-14.8	1.14 H	336	37.90	21.30
6	#16800.00	47.2 AV	54.0	-6.8	1.14 H	336	25.90	21.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	107.1 PK			1.03 V	182	98.89	8.21
2	*5600.00	99.7 AV			1.03 V	182	91.49	8.21
3	11200.00	53.8 PK	74.0	-20.2	1.13 V	246	39.54	14.26
4	11200.00	40.8 AV	54.0	-13.2	1.13 V	246	26.54	14.26
5	#16800.00	60.7 PK	74.0	-13.3	1.11 V	17	39.40	21.30
6	#16800.00	48.0 AV	54.0	-6.0	1.11 V	17	26.70	21.30

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	109.4 PK			1.16 H	311	101.05	8.35
2	*5700.00	99.6 AV			1.16 H	311	91.25	8.35
3	#5725.00	71.2 PK	74.0	-2.8	1.16 H	312	62.81	8.39
4	#5725.00	50.6 AV	54.0	-3.4	1.16 H	312	42.21	8.39
5	11400.00	54.9 PK	74.0	-19.1	1.00 H	70	40.48	14.42
6	11400.00	42.2 AV	54.0	-11.8	1.00 H	70	27.78	14.42
7	#17100.00	59.7 PK	74.0	-14.3	1.10 H	335	37.93	21.77
8	#17100.00	47.5 AV	54.0	-6.5	1.10 H	335	25.73	21.77
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.7 PK			1.00 V	161	96.35	8.35
2	*5700.00	96.9 AV			1.00 V	161	88.55	8.35
3	#5725.00	66.7 PK	74.0	-7.3	1.03 V	176	58.31	8.39
4	#5725.00	48.4 AV	54.0	-5.6	1.03 V	176	40.01	8.39
5	11400.00	54.0 PK	74.0	-20.0	1.24 V	242	39.58	14.42
6	11400.00	41.0 AV	54.0	-13.0	1.24 V	242	26.58	14.42
7	#17100.00	61.0 PK	74.0	-13.0	1.12 V	20	39.23	21.77
8	#17100.00	48.3 AV	54.0	-5.7	1.12 V	20	26.53	21.77

REMARKS:

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

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

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	#5715.00	69.7 PK	74.0	-4.3	1.00 H	33	61.33	8.37
2	#5715.00	51.3 AV	54.0	-2.7	1.00 H	33	42.93	8.37
3	#5725.00	78.0 PK	78.2	-0.2	1.00 H	33	69.61	8.39
4	*5745.00	107.1 PK			1.09 H	33	98.68	8.42
5	*5745.00	98.1 AV			1.09 H	33	89.68	8.42
6	11490.00	54.5 PK	74.0	-19.5	1.10 H	50	40.15	14.35
7	11490.00	41.6 AV	54.0	-12.4	1.10 H	50	27.25	14.35
8	#17235.00	60.2 PK	74.0	-13.8	1.26 H	335	37.76	22.44
9	#17235.00	48.5 AV	54.0	-5.5	1.26 H	335	26.06	22.44
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	#5715.00	67.5 PK	74.0	-6.5	1.00 V	181	59.13	8.37
2	#5715.00	51.3 AV	54.0	-2.7	1.00 V	181	42.93	8.37
3	#5725.00	75.9 PK	78.2	-2.3	1.00 V	185	67.51	8.39
4	*5745.00	107.1 PK			1.00 V	172	98.68	8.42
5	*5745.00	97.1 AV			1.00 V	172	88.68	8.42
6	11490.00	54.2 PK	74.0	-19.8	1.27 V	239	39.85	14.35
7	11490.00	41.2 AV	54.0	-12.8	1.27 V	239	26.85	14.35
8	#17235.00	61.1 PK	74.0	-12.9	1.11 V	26	38.66	22.44
9	#17235.00	48.2 AV	54.0	-5.8	1.11 V	26	25.76	22.44

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	58.8 PK	74.0	-15.2	1.08 H	31	50.43	8.37
2	#5715.00	45.2 AV	54.0	-8.8	1.08 H	31	36.83	8.37
3	#5725.00	67.7 PK	78.2	-10.5	1.08 H	31	59.31	8.39
4	*5785.00	110.0 PK			1.08 H	31	101.51	8.49
5	*5785.00	101.6 AV			1.08 H	31	93.11	8.49
6	#5850.00	61.0 PK	78.2	-17.2	1.08 H	31	52.33	8.67
7	#5860.00	61.0 PK	74.0	-13.0	1.08 H	31	52.29	8.71
8	#5860.00	44.3 AV	54.0	-9.7	1.08 H	31	35.59	8.71
9	11570.00	54.8 PK	74.0	-19.2	1.01 H	60	40.49	14.31
10	11570.00	42.0 AV	54.0	-12.0	1.01 H	60	27.69	14.31
11	#17355.00	59.9 PK	74.0	-14.1	1.16 H	348	36.90	23.00
12	#17355.00	48.2 AV	54.0	-5.8	1.16 H	348	25.20	23.00
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	#5715.00	58.1 PK	74.0	-15.9	1.23 V	160	49.73	8.37
2	#5715.00	44.8 AV	54.0	-9.2	1.23 V	160	36.43	8.37
3	#5725.00	67.2 PK	78.2	-11.0	1.18 V	163	58.81	8.39
4	*5785.00	108.0 PK			1.05 V	182	99.51	8.49
5	*5785.00	97.9 AV			1.05 V	182	89.41	8.49
6	#5850.00	60.2 PK	78.2	-18.0	1.15 V	182	51.53	8.67
7	#5860.00	60.8 PK	74.0	-13.2	1.20 V	170	52.09	8.71
8	#5860.00	44.1 AV	54.0	-9.9	1.20 V	170	35.39	8.71
9	11570.00	53.4 PK	74.0	-20.6	1.29 V	236	39.09	14.31
10	11570.00	40.4 AV	54.0	-13.6	1.29 V	236	26.09	14.31
11	#17355.00	60.3 PK	74.0	-13.7	1.00 V	10	37.30	23.00
12	#17355.00	47.6 AV	54.0	-6.4	1.00 V	10	24.60	23.00

REMARKS:

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

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

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	*5825.00	107.4 PK			1.12 H	37	98.81	8.59
2	*5825.00	98.4 AV			1.12 H	37	89.81	8.59
3	**#5850.00**	**78.1 PK**	**78.2**	**-0.1**	**1.12 H**	**37**	**69.43**	**8.67**
4	#5860.00	68.0 PK	74.0	-6.0	1.12 H	37	59.29	8.71
5	#5860.00	51.3 AV	54.0	-2.7	1.12 H	37	42.59	8.71
6	11650.00	54.7 PK	74.0	-19.3	1.02 H	41	40.32	14.38
7	11650.00	41.9 AV	54.0	-12.1	1.02 H	41	27.52	14.38
8	#17475.00	59.9 PK	74.0	-14.1	1.23 H	330	36.60	23.30
9	#17475.00	48.1 AV	54.0	-5.9	1.23 H	330	24.80	23.30
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	*5825.00	108.1 PK			1.18 V	173	99.51	8.59
2	*5825.00	97.5 AV			1.18 V	173	88.91	8.59
3	#5850.00	77.2 PK	78.2	-1.0	1.18 V	186	68.53	8.67
4	#5860.00	67.2 PK	74.0	-6.8	1.18 V	186	58.49	8.71
5	#5860.00	50.1 AV	54.0	-3.9	1.18 V	186	41.39	8.71
6	11650.00	53.2 PK	74.0	-20.8	1.27 V	254	38.82	14.38
7	11650.00	40.5 AV	54.0	-13.5	1.27 V	254	26.12	14.38
8	#17475.00	60.9 PK	74.0	-13.1	1.07 V	8	37.60	23.30
9	#17475.00	48.3 AV	54.0	-5.7	1.07 V	8	25.00	23.30

REMARKS:

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

802.11ac (VHT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.5 PK	74.0	-6.5	1.07 H	315	60.70	6.80
2	5150.00	53.6 AV	54.0	-0.4	1.07 H	315	46.80	6.80
3	*5180.00	109.2 PK			1.06 H	309	102.25	6.95
4	*5180.00	99.9 AV			1.06 H	309	92.95	6.95
5	#10360.00	53.9 PK	74.0	-20.1	1.06 H	58	40.79	13.11
6	#10360.00	41.5 AV	54.0	-12.5	1.06 H	58	28.39	13.11
7	15540.00	59.4 PK	74.0	-14.6	1.11 H	333	40.71	18.69
8	15540.00	47.0 AV	54.0	-7.0	1.11 H	333	28.31	18.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.7 PK	74.0	-9.3	1.02 V	7	57.90	6.80
2	5150.00	49.2 AV	54.0	-4.8	1.02 V	7	42.40	6.80
3	*5180.00	107.5 PK			1.00 V	158	100.55	6.95
4	*5180.00	97.5 AV			1.00 V	158	90.55	6.95
5	#10360.00	53.7 PK	74.0	-20.3	1.22 V	235	40.59	13.11
6	#10360.00	40.5 AV	54.0	-13.5	1.22 V	235	27.39	13.11
7	15540.00	61.3 PK	74.0	-12.7	1.18 V	18	42.61	18.69
8	15540.00	48.5 AV	54.0	-5.5	1.18 V	18	29.81	18.69

REMARKS:

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

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

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	69.5 PK	74.0	-4.5	1.07 H	303	62.70	6.80
2	**5150.00**	**53.9 AV**	**54.0**	**-0.1**	**1.07 H**	**303**	**47.10**	**6.80**
3	*5200.00	115.0 PK			1.22 H	292	107.95	7.05
4	*5200.00	104.6 AV			1.22 H	292	97.55	7.05
5	#10400.00	54.4 PK	74.0	-19.6	1.05 H	60	41.18	13.22
6	#10400.00	41.9 AV	54.0	-12.1	1.05 H	60	28.68	13.22
7	15600.00	59.8 PK	74.0	-14.2	1.17 H	347	41.10	18.70
8	15600.00	47.9 AV	54.0	-6.1	1.17 H	347	29.20	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.0 PK	74.0	-10.0	1.00 V	0	57.20	6.80
2	5150.00	48.8 AV	54.0	-5.2	1.00 V	0	42.00	6.80
3	*5200.00	113.3 PK			1.00 V	160	106.25	7.05
4	*5200.00	102.7 AV			1.00 V	160	95.65	7.05
5	#10400.00	53.6 PK	74.0	-20.4	1.21 V	232	40.38	13.22
6	#10400.00	40.6 AV	54.0	-13.4	1.21 V	232	27.38	13.22
7	15600.00	60.5 PK	74.0	-13.5	1.17 V	16	41.80	18.70
8	15600.00	47.9 AV	54.0	-6.1	1.17 V	16	29.20	18.70

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	115.1 PK			1.20 H	310	107.94	7.16
2	*5240.00	104.8 AV			1.20 H	310	97.64	7.16
3	#10480.00	54.7 PK	74.0	-19.3	1.05 H	68	41.54	13.16
4	#10480.00	42.2 AV	54.0	-11.8	1.05 H	68	29.04	13.16
5	15720.00	59.2 PK	74.0	-14.8	1.07 H	327	40.80	18.40
6	15720.00	47.2 AV	54.0	-6.8	1.07 H	327	28.80	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.2 PK			1.02 V	159	106.04	7.16
2	*5240.00	102.6 AV			1.02 V	159	95.44	7.16
3	#10480.00	54.0 PK	74.0	-20.0	1.27 V	229	40.84	13.16
4	#10480.00	41.2 AV	54.0	-12.8	1.27 V	229	28.04	13.16
5	15720.00	60.7 PK	74.0	-13.3	1.18 V	4	42.30	18.40
6	15720.00	48.0 AV	54.0	-6.0	1.18 V	4	29.60	18.40

REMARKS:

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

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

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	115.0 PK			1.15 H	304	107.82	7.18
2	*5260.00	104.7 AV			1.15 H	304	97.52	7.18
3	#10520.00	54.0 PK	74.0	-20.0	1.00 H	62	40.78	13.22
4	#10520.00	41.3 AV	54.0	-12.7	1.00 H	62	28.08	13.22
5	15780.00	59.8 PK	74.0	-14.2	1.11 H	341	41.29	18.51
6	15780.00	47.5 AV	54.0	-6.5	1.11 H	341	28.99	18.51
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	113.4 PK			1.00 V	150	106.22	7.18
2	*5260.00	102.9 AV			1.00 V	150	95.72	7.18
3	#10520.00	53.2 PK	74.0	-20.8	1.27 V	242	39.98	13.22
4	#10520.00	40.5 AV	54.0	-13.5	1.27 V	242	27.28	13.22
5	15780.00	60.5 PK	74.0	-13.5	1.10 V	17	41.99	18.51
6	15780.00	47.8 AV	54.0	-6.2	1.10 V	17	29.29	18.51

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	1149.9 PK			1.28 H	295	1142.61	7.29
2	*5300.00	104.6 AV			1.28 H	295	97.31	7.29
3	5350.00	71.1 PK	74.0	-2.9	1.12 H	301	63.61	7.49
4	**5350.00**	**53.9 AV**	**54.0**	**-0.1**	**1.12 H**	**301**	**46.41**	**7.49**
5	10600.00	54.1 PK	74.0	-19.9	1.00 H	52	40.57	13.53
6	10600.00	41.5 AV	54.0	-12.5	1.00 H	52	27.97	13.53
7	15900.00	59.9 PK	74.0	-14.1	1.18 H	344	41.25	18.65
8	15900.00	47.8 AV	54.0	-6.2	1.18 H	344	29.15	18.65
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.5 PK			1.00 V	162	106.21	7.29
2	*5300.00	102.7 AV			1.00 V	162	95.41	7.29
3	5350.00	64.5 PK	74.0	-9.5	1.00 V	4	57.01	7.49
4	5350.00	49.0 AV	54.0	-5.0	1.00 V	4	41.51	7.49
5	10600.00	53.9 PK	74.0	-20.1	1.24 V	246	40.37	13.53
6	10600.00	41.0 AV	54.0	-13.0	1.24 V	246	27.47	13.53
7	15900.00	61.1 PK	74.0	-12.9	1.09 V	11	42.45	18.65
8	15900.00	48.5 AV	54.0	-5.5	1.09 V	11	29.85	18.65

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.9 PK			1.05 H	304	102.52	7.38
2	*5320.00	100.4 AV			1.05 H	304	93.02	7.38
3	5350.00	65.1 PK	74.0	-8.9	1.12 H	301	57.61	7.49
4	5350.00	49.5 AV	54.0	-4.5	1.12 H	301	42.01	7.49
5	10640.00	54.0 PK	74.0	-20.0	1.03 H	39	40.37	13.63
6	10640.00	41.7 AV	54.0	-12.3	1.03 H	39	28.07	13.63
7	15960.00	60.1 PK	74.0	-13.9	1.16 H	331	41.49	18.61
8	15960.00	47.7 AV	54.0	-6.3	1.16 H	331	29.09	18.61
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	107.3 PK			1.00 V	172	99.92	7.38
2	*5320.00	97.9 AV			1.00 V	172	90.52	7.38
3	5350.00	63.9 PK	74.0	-10.1	1.03 V	65	56.41	7.49
4	5350.00	48.5 AV	54.0	-5.5	1.03 V	65	41.01	7.49
5	10640.00	53.9 PK	74.0	-20.1	1.30 V	254	40.27	13.63
6	10640.00	41.2 AV	54.0	-12.8	1.30 V	254	27.57	13.63
7	15960.00	61.1 PK	74.0	-12.9	1.07 V	3	42.49	18.61
8	15960.00	48.7 AV	54.0	-5.3	1.07 V	3	30.09	18.61

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	66.7 PK	74.0	-7.3	1.08 H	305	58.77	7.93
2	#5470.00	49.8 AV	54.0	-4.2	1.08 H	305	41.87	7.93
3	*5500.00	109.9 PK			1.09 H	302	101.88	8.02
4	*5500.00	100.2 AV			1.09 H	302	92.18	8.02
5	11000.00	54.8 PK	74.0	-19.2	1.00 H	37	40.38	14.42
6	11000.00	42.0 AV	54.0	-12.0	1.00 H	37	27.58	14.42
7	#16500.00	59.6 PK	74.0	-14.4	1.22 H	350	38.66	20.94
8	#16500.00	47.5 AV	54.0	-6.5	1.22 H	350	26.56	20.94
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	62.7 PK	74.0	-11.3	1.00 V	53	54.77	7.93
2	#5470.00	47.7 AV	54.0	-6.3	1.00 V	53	39.77	7.93
3	*5500.00	106.6 PK			1.00 V	174	98.58	8.02
4	*5500.00	97.4 AV			1.00 V	174	89.38	8.02
5	11000.00	54.6 PK	74.0	-19.4	1.25 V	243	40.18	14.42
6	11000.00	41.5 AV	54.0	-12.5	1.25 V	243	27.08	14.42
7	#16500.00	61.7 PK	74.0	-12.3	1.10 V	0	40.76	20.94
8	#16500.00	48.8 AV	54.0	-5.2	1.10 V	0	27.86	20.94

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

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	*5600.00	114.3 PK			1.25 H	309	106.09	8.21
2	*5600.00	104.5 AV			1.25 H	309	96.29	8.21
3	11200.00	54.0 PK	74.0	-20.0	1.04 H	56	39.74	14.26
4	11200.00	41.4 AV	54.0	-12.6	1.04 H	56	27.14	14.26
5	#16800.00	59.7 PK	74.0	-14.3	1.13 H	346	38.40	21.30
6	#16800.00	47.3 AV	54.0	-6.7	1.13 H	346	26.00	21.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	107.1 PK			1.03 V	182	98.89	8.21
2	*5600.00	99.7 AV			1.03 V	182	91.49	8.21
3	11200.00	53.8 PK	74.0	-20.2	1.13 V	246	39.54	14.26
4	11200.00	40.8 AV	54.0	-13.2	1.13 V	246	26.54	14.26
5	#16800.00	60.7 PK	74.0	-13.3	1.11 V	17	39.40	21.30
6	#16800.00	48.0 AV	54.0	-6.0	1.11 V	17	26.70	21.30

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	108.9 PK			1.05 H	304	100.55	8.35
2	*5700.00	98.8 AV			1.05 H	304	90.45	8.35
3	#5725.00	69.6 PK	74.0	-4.4	1.04 H	288	61.21	8.39
4	#5725.00	50.4 AV	54.0	-3.6	1.04 H	288	42.01	8.39
5	11400.00	53.9 PK	74.0	-20.1	1.01 H	54	39.48	14.42
6	11400.00	41.1 AV	54.0	-12.9	1.01 H	54	26.68	14.42
7	#17100.00	59.3 PK	74.0	-14.7	1.20 H	360	37.53	21.77
8	#17100.00	47.5 AV	54.0	-6.5	1.20 H	360	25.73	21.77
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	106.9 PK			1.00 V	171	98.55	8.35
2	*5700.00	96.5 AV			1.00 V	171	88.15	8.35
3	#5725.00	62.7 PK	74.0	-11.3	1.01 V	62	54.31	8.39
4	#5725.00	47.7 AV	54.0	-6.3	1.01 V	62	39.31	8.39
5	11400.00	54.0 PK	74.0	-20.0	1.24 V	233	39.58	14.42
6	11400.00	41.1 AV	54.0	-12.9	1.24 V	233	26.68	14.42
7	#17100.00	60.9 PK	74.0	-13.1	1.12 V	17	39.13	21.77
8	#17100.00	48.5 AV	54.0	-5.5	1.12 V	17	26.73	21.77

REMARKS:

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

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

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	#5715.00	64.1 PK	74.0	-9.9	1.09 H	307	55.73	8.37
2	#5715.00	47.4 AV	54.0	-6.6	1.09 H	307	39.03	8.37
3	#5725.00	77.6 PK	78.2	-0.6	1.09 H	307	69.21	8.39
4	*5745.00	109.9 PK			1.03 H	41	101.48	8.42
5	*5745.00	99.2 AV			1.03 H	41	90.78	8.42
6	11490.00	54.1 PK	74.0	-19.9	1.10 H	39	39.75	14.35
7	11490.00	41.6 AV	54.0	-12.4	1.10 H	39	27.25	14.35
8	#17235.00	60.0 PK	74.0	-14.0	1.22 H	354	37.56	22.44
9	#17235.00	47.7 AV	54.0	-6.3	1.22 H	354	25.26	22.44
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	#5715.00	63.4 PK	74.0	-10.6	1.00 V	184	55.03	8.37
2	#5715.00	46.5 AV	54.0	-7.5	1.00 V	184	38.13	8.37
3	#5725.00	76.2 PK	78.2	-2.0	1.00 V	184	67.81	8.39
4	*5745.00	108.1 PK			1.00 V	188	99.68	8.42
5	*5745.00	97.1 AV			1.00 V	188	88.68	8.42
6	11490.00	53.4 PK	74.0	-20.6	1.32 V	246	39.05	14.35
7	11490.00	40.3 AV	54.0	-13.7	1.32 V	246	25.95	14.35
8	#17235.00	60.7 PK	74.0	-13.3	1.03 V	0	38.26	22.44
9	#17235.00	47.8 AV	54.0	-6.2	1.03 V	0	25.36	22.44

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.

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

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	#5715.00	58.2 PK	74.0	-15.8	1.21 H	304	49.83	8.37
2	#5715.00	44.8 AV	54.0	-9.2	1.21 H	304	36.43	8.37
3	#5725.00	67.2 PK	78.2	-11.0	1.21 H	304	58.81	8.39
4	*5785.00	115.1 PK			1.21 H	304	106.61	8.49
5	*5785.00	104.3 AV			1.21 H	304	95.81	8.49
6	#5850.00	61.5 PK	78.2	-16.7	1.21 H	304	52.83	8.67
7	#5860.00	60.4 PK	74.0	-13.6	1.21 H	304	51.69	8.71
8	#5860.00	43.9 AV	54.0	-10.1	1.21 H	304	35.19	8.71
9	11570.00	54.9 PK	74.0	-19.1	1.06 H	55	40.59	14.31
10	11570.00	42.1 AV	54.0	-11.9	1.06 H	55	27.79	14.31
11	#17355.00	59.7 PK	74.0	-14.3	1.25 H	333	36.70	23.00
12	#17355.00	47.8 AV	54.0	-6.2	1.25 H	333	24.80	23.00
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	#5715.00	57.6 PK	74.0	-16.4	1.19 V	175	49.23	8.37
2	#5715.00	43.7 AV	54.0	-10.3	1.19 V	175	35.33	8.37
3	#5725.00	66.4 PK	78.2	-11.8	1.19 V	175	58.01	8.39
4	*5785.00	113.1 PK			1.00 V	161	104.61	8.49
5	*5785.00	102.7 AV			1.00 V	161	94.21	8.49
6	#5850.00	60.5 PK	78.2	-17.7	1.19 V	175	51.83	8.67
7	#5860.00	59.2 PK	74.0	-14.8	1.19 V	175	50.49	8.71
8	#5860.00	42.8 AV	54.0	-11.2	1.19 V	175	34.09	8.71
9	11570.00	53.8 PK	74.0	-20.2	1.23 V	257	39.49	14.31
10	11570.00	41.0 AV	54.0	-13.0	1.23 V	257	26.69	14.31
11	#17355.00	61.2 PK	74.0	-12.8	1.03 V	4	38.20	23.00
12	#17355.00	48.4 AV	54.0	-5.6	1.03 V	4	25.40	23.00

REMARKS:

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

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

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	*5825.00	113.2 PK			1.00 H	42	104.61	8.59
2	*5825.00	101.4 AV			1.00 H	42	92.81	8.59
3	#5850.00	77.9 PK	78.2	-0.3	1.01 H	41	69.23	8.67
4	#5860.00	68.1 PK	74.0	-5.9	1.01 H	41	59.39	8.71
5	#5860.00	52.4 AV	54.0	-1.6	1.01 H	41	43.69	8.71
6	11650.00	55.3 PK	74.0	-18.7	1.02 H	39	40.92	14.38
7	11650.00	42.4 AV	54.0	-11.6	1.02 H	39	28.02	14.38
8	#17475.00	60.5 PK	74.0	-13.5	1.17 H	352	37.20	23.30
9	#17475.00	48.6 AV	54.0	-5.4	1.17 H	352	25.30	23.30
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	*5825.00	110.1 PK			1.14 V	196	101.51	8.59
2	*5825.00	99.1 AV			1.14 V	196	90.51	8.59
3	#5850.00	76.5 PK	78.2	-1.7	1.17 V	187	67.83	8.67
4	#5860.00	67.5 PK	74.0	-6.5	1.17 V	187	58.79	8.71
5	#5860.00	51.4 AV	54.0	-2.6	1.17 V	187	42.69	8.71
6	11650.00	54.0 PK	74.0	-20.0	1.25 V	240	39.62	14.38
7	11650.00	41.1 AV	54.0	-12.9	1.25 V	240	26.72	14.38
8	#17475.00	60.1 PK	74.0	-13.9	1.07 V	12	36.80	23.30
9	#17475.00	47.5 AV	54.0	-6.5	1.07 V	12	24.20	23.30

REMARKS:

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

802.11ac (VHT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.9 PK	74.0	-5.1	1.07 H	315	62.10	6.80
2	5150.00	53.4 AV	54.0	-0.6	1.07 H	315	46.60	6.80
3	*5190.00	105.2 PK			1.07 H	314	98.20	7.00
4	*5190.00	95.4 AV			1.07 H	314	88.40	7.00
5	#10380.00	54.8 PK	74.0	-19.2	1.05 H	49	41.63	13.17
6	#10380.00	42.0 AV	54.0	-12.0	1.05 H	49	28.83	13.17
7	15570.00	60.2 PK	74.0	-13.8	1.22 H	344	41.51	18.69
8	15570.00	48.2 AV	54.0	-5.8	1.22 H	344	29.51	18.69
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.9 PK	74.0	-9.1	1.08 V	9	58.10	6.80
2	5150.00	49.2 AV	54.0	-4.8	1.08 V	9	42.40	6.80
3	*5190.00	102.8 PK			1.00 V	157	95.80	7.00
4	*5190.00	92.9 AV			1.00 V	157	85.90	7.00
5	#10380.00	53.7 PK	74.0	-20.3	1.27 V	251	40.53	13.17
6	#10380.00	40.8 AV	54.0	-13.2	1.27 V	251	27.63	13.17
7	15570.00	60.7 PK	74.0	-13.3	1.05 V	12	42.01	18.69
8	15570.00	48.0 AV	54.0	-6.0	1.05 V	12	29.31	18.69

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.1 PK	74.0	-8.9	1.07 H	313	58.30	6.80
2	5150.00	53.0 AV	54.0	-1.0	1.07 H	313	46.20	6.80
3	*5230.00	101.3 PK			1.30 H	304	94.18	7.12
4	*5230.00	99.1 AV			1.30 H	304	91.98	7.12
5	#10460.00	53.7 PK	74.0	-20.3	1.01 H	49	40.52	13.18
6	#10460.00	41.3 AV	54.0	-12.7	1.01 H	49	28.12	13.18
7	15690.00	60.0 PK	74.0	-14.0	1.22 H	335	41.62	18.38
8	15690.00	47.8 AV	54.0	-6.2	1.22 H	335	29.42	18.38
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.7 PK	74.0	-9.3	1.01 V	10	57.90	6.80
2	5150.00	49.3 AV	54.0	-4.7	1.01 V	10	42.50	6.80
3	*5230.00	99.1 PK			1.00 V	168	91.98	7.12
4	*5230.00	96.8 AV			1.00 V	168	89.68	7.12
5	#10460.00	53.3 PK	74.0	-20.7	1.21 V	259	40.12	13.18
6	#10460.00	40.7 AV	54.0	-13.3	1.21 V	259	27.52	13.18
7	15690.00	61.2 PK	74.0	-12.8	1.06 V	0	42.82	18.38
8	15690.00	48.4 AV	54.0	-5.6	1.06 V	0	30.02	18.38

REMARKS:

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

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

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	*5270.00	111.0 PK			1.13 H	307	103.78	7.22
2	*5270.00	101.1 AV			1.13 H	307	93.88	7.22
3	5350.00	71.4 PK	74.0	-2.6	1.10 H	306	63.91	7.49
4	**5350.00**	**53.9 AV**	**54.0**	**-0.1**	**1.10 H**	**306**	**46.41**	**7.49**
5	#10540.00	54.5 PK	74.0	-19.5	1.00 H	56	41.21	13.29
6	#10540.00	41.8 AV	54.0	-12.2	1.00 H	56	28.51	13.29
7	15810.00	60.3 PK	74.0	-13.7	1.19 H	335	41.73	18.57
8	15810.00	48.0 AV	54.0	-6.0	1.19 H	335	29.43	18.57
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	*5270.00	109.9 PK			1.00 V	176	102.68	7.22
2	*5270.00	99.8 AV			1.00 V	176	92.58	7.22
3	5350.00	65.1 PK	74.0	-8.9	1.06 V	17	57.61	7.49
4	5350.00	49.5 AV	54.0	-4.5	1.06 V	17	42.01	7.49
5	#10540.00	54.6 PK	74.0	-19.4	1.26 V	242	41.31	13.29
6	#10540.00	41.4 AV	54.0	-12.6	1.26 V	242	28.11	13.29
7	15810.00	60.8 PK	74.0	-13.2	1.09 V	25	42.23	18.57
8	15810.00	48.5 AV	54.0	-5.5	1.09 V	25	29.93	18.57

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	104.4 PK			1.23 H	286	97.07	7.33
2	*5310.00	95.1 AV			1.23 H	286	87.77	7.33
3	5350.00	70.1 PK	74.0	-3.9	1.12 H	303	62.61	7.49
4	5350.00	53.3 AV	54.0	-0.7	1.12 H	303	45.81	7.49
5	10620.00	54.1 PK	74.0	-19.9	1.00 H	41	40.51	13.59
6	10620.00	41.2 AV	54.0	-12.8	1.00 H	41	27.61	13.59
7	15930.00	59.6 PK	74.0	-14.4	1.16 H	334	40.96	18.64
8	15930.00	47.4 AV	54.0	-6.6	1.16 H	334	28.76	18.64
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	102.3 PK			1.00 V	165	94.97	7.33
2	*5310.00	92.5 AV			1.00 V	165	85.17	7.33
3	5350.00	64.3 PK	74.0	-9.7	1.01 V	12	56.81	7.49
4	5350.00	49.0 AV	54.0	-5.0	1.01 V	12	41.51	7.49
5	10620.00	54.0 PK	74.0	-20.0	1.28 V	258	40.41	13.59
6	10620.00	40.9 AV	54.0	-13.1	1.28 V	258	27.31	13.59
7	15930.00	61.7 PK	74.0	-12.3	1.03 V	14	43.06	18.64
8	15930.00	48.9 AV	54.0	-5.1	1.03 V	14	30.26	18.64

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	69.3 PK	74.0	-4.7	1.08 H	305	61.37	7.93
2	#5470.00	53.6 AV	54.0	-0.4	1.08 H	305	45.67	7.93
3	*5510.00	103.7 PK			1.25 H	301	95.66	8.04
4	*5510.00	94.2 AV			1.25 H	301	86.16	8.04
5	11020.00	54.0 PK	74.0	-20.0	1.00 H	62	39.63	14.37
6	11020.00	41.5 AV	54.0	-12.5	1.00 H	62	27.13	14.37
7	#16530.00	59.5 PK	74.0	-14.5	1.14 H	346	38.58	20.92
8	#16530.00	47.4 AV	54.0	-6.6	1.14 H	346	26.48	20.92
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	64.8 PK	74.0	-9.2	1.00 V	19	56.87	7.93
2	#5470.00	49.1 AV	54.0	-4.9	1.00 V	19	41.17	7.93
3	*5510.00	102.5 PK			1.00 V	176	94.46	8.04
4	*5510.00	92.8 AV			1.00 V	176	84.76	8.04
5	11020.00	53.4 PK	74.0	-20.6	1.28 V	235	39.03	14.37
6	11020.00	40.7 AV	54.0	-13.3	1.28 V	235	26.33	14.37
7	#16530.00	61.0 PK	74.0	-13.0	1.07 V	5	40.08	20.92
8	#16530.00	48.6 AV	54.0	-5.4	1.07 V	5	27.68	20.92

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

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	64.9 PK	74.0	-9.1	1.31 H	309	56.97	7.93
2	#5470.00	50.3 AV	54.0	-3.7	1.31 H	309	42.37	7.93
3	*5590.00	111.6 PK			1.26 H	307	103.41	8.19
4	*5590.00	101.5 AV			1.26 H	307	93.31	8.19
5	11180.00	54.0 PK	74.0	-20.0	1.00 H	60	39.75	14.25
6	11180.00	41.2 AV	54.0	-12.8	1.00 H	60	26.95	14.25
7	#16770.00	59.5 PK	74.0	-14.5	1.20 H	339	38.29	21.21
8	#16770.00	47.5 AV	54.0	-6.5	1.20 H	339	26.29	21.21
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.2 PK	74.0	-10.8	1.00 V	65	55.27	7.93
2	#5470.00	48.1 AV	54.0	-5.9	1.00 V	65	40.17	7.93
3	*5590.00	109.6 PK			1.00 V	161	101.41	8.19
4	*5590.00	99.7 AV			1.00 V	161	91.51	8.19
5	11180.00	54.2 PK	74.0	-19.8	1.19 V	241	39.95	14.25
6	11180.00	41.3 AV	54.0	-12.7	1.19 V	241	27.05	14.25
7	#16770.00	60.9 PK	74.0	-13.1	1.11 V	17	39.69	21.21
8	#16770.00	48.4 AV	54.0	-5.6	1.11 V	17	27.19	21.21

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.9 PK			1.24 H	308	97.59	8.31
2	*5670.00	96.2 AV			1.24 H	308	87.89	8.31
3	#5725.00	65.6 PK	74.0	-8.4	1.23 H	308	57.21	8.39
4	#5725.00	51.2 AV	54.0	-2.8	1.23 H	308	42.81	8.39
5	11340.00	53.5 PK	74.0	-20.5	1.00 H	64	39.18	14.32
6	11340.00	41.0 AV	54.0	-13.0	1.00 H	64	26.68	14.32
7	#17010.00	59.8 PK	74.0	-14.2	1.15 H	337	38.27	21.53
8	#17010.00	47.9 AV	54.0	-6.1	1.15 H	337	26.37	21.53
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	103.2 PK			1.02 V	189	94.89	8.31
2	*5670.00	93.3 AV			1.02 V	189	84.99	8.31
3	#5725.00	62.2 PK	74.0	-11.8	1.02 V	189	53.81	8.39
4	#5725.00	48.3 AV	54.0	-5.7	1.02 V	189	39.91	8.39
5	11340.00	54.2 PK	74.0	-19.8	1.21 V	253	39.88	14.32
6	11340.00	41.0 AV	54.0	-13.0	1.21 V	253	26.68	14.32
7	#17010.00	61.3 PK	74.0	-12.7	1.05 V	13	39.77	21.53
8	#17010.00	48.9 AV	54.0	-5.1	1.05 V	13	27.37	21.53

REMARKS:

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

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

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	#5715.00	70.5 PK	74.0	-3.5	1.10 H	308	62.13	8.37
2	#5715.00	53.8 AV	54.0	-0.2	1.10 H	308	45.43	8.37
3	#5725.00	71.4 PK	78.2	-6.8	1.10 H	308	63.01	8.39
4	*5755.00	104.2 PK			1.10 H	307	95.76	8.44
5	*5755.00	93.8 AV			1.10 H	307	85.36	8.44
6	11510.00	54.4 PK	74.0	-19.6	1.05 H	57	40.06	14.34
7	11510.00	41.6 AV	54.0	-12.4	1.05 H	57	27.26	14.34
8	#17265.00	60.0 PK	74.0	-14.0	1.24 H	336	37.32	22.68
9	#17265.00	47.9 AV	54.0	-6.1	1.24 H	336	25.22	22.68
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	#5715.00	69.5 PK	74.0	-4.5	1.17 V	186	61.13	8.37
2	#5715.00	52.8 AV	54.0	-1.2	1.17 V	186	44.43	8.37
3	#5725.00	70.1 PK	78.2	-8.1	1.17 V	186	61.71	8.39
4	*5755.00	102.8 PK			1.22 V	191	94.36	8.44
5	*5755.00	91.5 AV			1.22 V	191	83.06	8.44
6	11510.00	53.2 PK	74.0	-20.8	1.27 V	265	38.86	14.34
7	11510.00	40.5 AV	54.0	-13.5	1.27 V	265	26.16	14.34
8	#17265.00	60.6 PK	74.0	-13.4	1.07 V	19	37.92	22.68
9	#17265.00	47.8 AV	54.0	-6.2	1.07 V	19	25.12	22.68

REMARKS:

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

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

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	*5795.00	106.1 PK			1.09 H	306	97.60	8.50
2	*5795.00	95.6 AV			1.09 H	306	87.10	8.50
3	#5850.00	71.5 PK	78.2	-6.7	1.09 H	307	62.83	8.67
4	#5860.00	68.4 PK	74.0	-5.6	1.09 H	307	59.69	8.71
5	#5860.00	52.1 AV	54.0	-1.9	1.09 H	307	43.39	8.71
6	11590.00	54.8 PK	74.0	-19.2	1.01 H	44	40.50	14.30
7	11590.00	42.3 AV	54.0	-11.7	1.01 H	44	28.00	14.30
8	#17385.00	60.1 PK	74.0	-13.9	1.21 H	330	37.07	23.03
9	#17385.00	48.0 AV	54.0	-6.0	1.21 H	330	24.97	23.03
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	*5795.00	103.4 PK			1.19 V	186	94.90	8.50
2	*5795.00	93.9 AV			1.19 V	186	85.40	8.50
3	#5850.00	70.1 PK	78.2	-8.1	1.16 V	186	61.43	8.67
4	#5860.00	67.4 PK	74.0	-6.6	1.16 V	186	58.69	8.71
5	#5860.00	51.1 AV	54.0	-2.9	1.16 V	186	42.39	8.71
6	11590.00	53.4 PK	74.0	-20.6	1.26 V	244	39.10	14.30
7	11590.00	40.5 AV	54.0	-13.5	1.26 V	244	26.20	14.30
8	#17385.00	60.8 PK	74.0	-13.2	1.05 V	16	37.77	23.03
9	#17385.00	48.0 AV	54.0	-6.0	1.05 V	16	24.97	23.03

REMARKS:

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

802.11ac (VHT80)

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

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	66.2 PK	74.0	-7.8	1.06 H	312	59.40	6.80
2	5150.00	53.4 AV	54.0	-0.6	1.06 H	312	46.60	6.80
3	*5210.00	103.2 PK			1.15 H	302	96.14	7.06
4	*5210.00	92.8 AV			1.15 H	302	85.74	7.06
5	#10420.00	53.8 PK	74.0	-20.2	1.00 H	52	40.60	13.20
6	#10420.00	41.3 AV	54.0	-12.7	1.00 H	52	28.10	13.20
7	15630.00	59.4 PK	74.0	-14.6	1.16 H	353	40.80	18.60
8	15630.00	47.3 AV	54.0	-6.7	1.16 H	353	28.70	18.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.8 PK	74.0	-9.2	1.01 V	8	58.00	6.80
2	5150.00	52.6 AV	54.0	-1.4	1.01 V	8	45.80	6.80
3	*5210.00	101.7 PK			1.01 V	6	94.64	7.06
4	*5210.00	91.8 AV			1.01 V	6	84.74	7.06
5	#10420.00	54.1 PK	74.0	-19.9	1.27 V	232	40.90	13.20
6	#10420.00	41.3 AV	54.0	-12.7	1.27 V	232	28.10	13.20
7	15630.00	61.1 PK	74.0	-12.9	1.13 V	1	42.50	18.60
8	15630.00	48.4 AV	54.0	-5.6	1.13 V	1	29.80	18.60

REMARKS:

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

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

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	*5290.00	103.8 PK			1.02 H	339	96.52	7.28
2	*5290.00	92.7 AV			1.02 H	339	85.42	7.28
3	5350.00	69.3 PK	74.0	-4.7	1.10 H	314	61.81	7.49
4	5350.00	53.3 AV	54.0	-0.7	1.10 H	314	45.81	7.49
5	#10580.00	53.8 PK	74.0	-20.2	1.01 H	53	40.35	13.45
6	#10580.00	41.3 AV	54.0	-12.7	1.01 H	53	27.85	13.45
7	15870.00	60.2 PK	74.0	-13.8	1.22 H	341	41.58	18.62
8	15870.00	48.0 AV	54.0	-6.0	1.22 H	341	29.38	18.62
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	*5290.00	101.9 PK			1.00 V	167	94.62	7.28
2	*5290.00	91.1 AV			1.00 V	167	83.82	7.28
3	5350.00	68.4 PK	74.0	-5.6	1.06 V	10	60.91	7.49
4	5350.00	52.4 AV	54.0	-1.6	1.06 V	10	44.91	7.49
5	#10580.00	54.2 PK	74.0	-19.8	1.22 V	234	40.75	13.45
6	#10580.00	41.1 AV	54.0	-12.9	1.22 V	234	27.65	13.45
7	15870.00	60.9 PK	74.0	-13.1	1.13 V	11	42.28	18.62
8	15870.00	48.1 AV	54.0	-5.9	1.13 V	11	29.48	18.62

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	69.7 PK	74.0	-4.3	1.11 H	323	61.77	7.93
2	**#5470.00**	**53.9 AV**	**54.0**	**-0.1**	**1.11 H**	**323**	**45.97**	**7.93**
3	*5530.00	104.2 PK			1.10 H	332	96.12	8.08
4	*5530.00	93.2 AV			1.10 H	332	85.12	8.08
5	11060.00	53.9 PK	74.0	-20.1	1.04 H	37	39.60	14.30
6	11060.00	41.2 AV	54.0	-12.8	1.04 H	37	26.90	14.30
7	#16590.00	59.6 PK	74.0	-14.4	1.14 H	331	38.70	20.90
8	#16590.00	47.4 AV	54.0	-6.6	1.14 H	331	26.50	20.90
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	68.0 PK	74.0	-6.0	1.00 V	9	60.07	7.93
2	#5470.00	52.3 AV	54.0	-1.7	1.00 V	9	44.37	7.93
3	*5530.00	102.3 PK			1.00 V	153	94.22	8.08
4	*5530.00	91.7 AV			1.00 V	153	83.62	8.08
5	11060.00	53.5 PK	74.0	-20.5	1.25 V	255	39.20	14.30
6	11060.00	40.5 AV	54.0	-13.5	1.25 V	255	26.20	14.30
7	#16590.00	61.5 PK	74.0	-12.5	1.05 V	3	40.60	20.90
8	#16590.00	48.8 AV	54.0	-5.2	1.05 V	3	27.90	20.90

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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.9 PK	74.0	-6.1	1.02 H	332	59.97	7.93
2	#5470.00	53.5 AV	54.0	-0.5	1.02 H	332	45.57	7.93
3	*5610.00	106.9 PK			1.08 H	321	98.67	8.23
4	*5610.00	95.9 AV			1.08 H	321	87.67	8.23
5	#5725.00	66.2 PK	74.0	-7.8	1.29 H	327	57.81	8.39
6	#5725.00	51.9 AV	54.0	-2.1	1.29 H	327	43.51	8.39
7	11220.00	53.4 PK	74.0	-20.6	1.00 H	44	39.14	14.26
8	11220.00	41.0 AV	54.0	-13.0	1.00 H	44	26.74	14.26
9	#16830.00	60.4 PK	74.0	-13.6	1.15 H	357	39.05	21.35
10	#16830.00	48.1 AV	54.0	-5.9	1.15 H	357	26.75	21.35
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	66.5 PK	74.0	-7.5	1.04 V	8	58.57	7.93
2	#5470.00	52.2 AV	54.0	-1.8	1.04 V	8	44.27	7.93
3	*5610.00	104.9 PK			1.01 V	170	96.67	8.23
4	*5610.00	93.7 AV			1.01 V	170	85.47	8.23
5	#5725.00	64.5 PK	74.0	-9.5	1.01 V	11	56.11	8.39
6	#5725.00	49.0 AV	54.0	-5.0	1.01 V	11	40.61	8.39
7	11220.00	53.7 PK	74.0	-20.3	1.28 V	256	39.44	14.26
8	11220.00	41.0 AV	54.0	-13.0	1.28 V	256	26.74	14.26
9	#16830.00	61.9 PK	74.0	-12.1	1.06 V	1	40.55	21.35
10	#16830.00	49.0 AV	54.0	-5.0	1.06 V	1	27.65	21.35

REMARKS:

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

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

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	#5715.00	67.8 PK	74.0	-6.2	1.00 H	311	59.43	8.37
2	#5715.00	53.4 AV	54.0	-0.6	1.00 H	311	45.03	8.37
3	#5725.00	69.5 PK	78.2	-8.7	1.00 H	311	61.11	8.39
4	*5775.00	100.4 PK			1.10 H	305	91.93	8.47
5	*5775.00	89.3 AV			1.10 H	305	80.83	8.47
6	#5850.00	65.6 PK	78.2	-12.6	1.07 H	355	56.93	8.67
7	#5860.00	55.1 PK	74.0	-18.9	1.07 H	305	46.39	8.71
8	#5860.00	42.5 AV	54.0	-11.5	1.07 H	305	33.79	8.71
9	11550.00	55.2 PK	74.0	-18.8	1.06 H	62	40.88	14.32
10	11550.00	42.1 AV	54.0	-11.9	1.06 H	62	27.78	14.32
11	#17325.00	60.5 PK	74.0	-13.5	1.18 H	341	37.52	22.98
12	#17325.00	48.6 AV	54.0	-5.4	1.18 H	341	25.62	22.98
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	#5715.00	66.8 PK	74.0	-7.2	1.00 V	182	58.43	8.37
2	#5715.00	52.8 AV	54.0	-1.2	1.00 V	182	44.43	8.37
3	#5725.00	68.1 PK	78.2	-10.1	1.00 V	182	59.71	8.39
4	*5775.00	99.1 PK			1.00 V	182	90.63	8.47
5	*5775.00	88.2 AV			1.00 V	182	79.73	8.47
6	#5850.00	63.8 PK	78.2	-14.4	1.00 V	182	55.13	8.67
7	#5860.00	56.1 PK	74.0	-17.9	1.00 V	182	47.39	8.71
8	#5860.00	43.9 AV	54.0	-10.1	1.00 V	182	35.19	8.71
9	11550.00	53.9 PK	74.0	-20.1	1.25 V	240	39.58	14.32
10	11550.00	41.1 AV	54.0	-12.9	1.25 V	240	26.78	14.32
11	#17325.00	61.1 PK	74.0	-12.9	1.10 V	0	38.12	22.98
12	#17325.00	48.2 AV	54.0	-5.8	1.10 V	0	25.22	22.98

REMARKS:

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

Below 1GHz Data

802.11ac (VHT20)

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	62.45	34.1 QP	40.0	-5.9	1.24 H	134	48.18	-14.07
2	96.25	39.5 QP	43.5	-4.0	1.45 H	164	57.76	-18.22
3	273.35	39.5 QP	46.0	-6.5	1.67 H	55	52.39	-12.88
4	345.24	41.8 QP	46.0	-4.3	1.64 H	201	52.56	-10.81
5	539.34	42.2 QP	46.0	-3.8	1.24 H	304	48.13	-5.93
6	791.51	42.6 QP	46.0	-3.4	1.45 H	201	43.28	-0.64
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	96.11	35.5 QP	43.5	-8.1	1.34 V	271	53.69	-18.24
2	276.32	39.7 QP	46.0	-6.4	1.45 V	301	52.36	-12.71
3	324.11	38.4 QP	46.0	-7.6	1.34 V	304	49.58	-11.16
4	432.21	41.6 QP	46.0	-4.4	1.45 V	45	49.68	-8.06
5	744.11	42.3 QP	46.0	-3.7	1.42 V	64	43.85	-1.51
6	912.14	41.3 QP	46.0	-4.7	1.45 V	301	40.22	1.12

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 ROHDE & SCHWARZ	ESCS 30	100375	Apr. 29, 2014	Apr. 28, 2015
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-522	Sep. 15, 2014	Sep. 14, 2015
Line-Impedance Stabilization Network (for Peripheral) ROHDE & SCHWARZ	ENV216	100071	Nov. 10, 2014	Nov. 09, 2015
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 10 , 2014	Mar. 09, 2015
50 ohms Terminator	N/A	EMC-03	Sep. 22, 2014	Sep. 21, 2015
50 ohms Terminator	N/A	EMC-02	Sep. 30, 2014	Sep. 29, 2015
Software ADT	BV ADT_Cond_V7.3.7.3	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 Shielded Room No. C.
3 The VCCI Con C Registration No. is C-3611.
4 Tested Date: Feb. 03, 2015

4.2.3 Test Procedures

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.

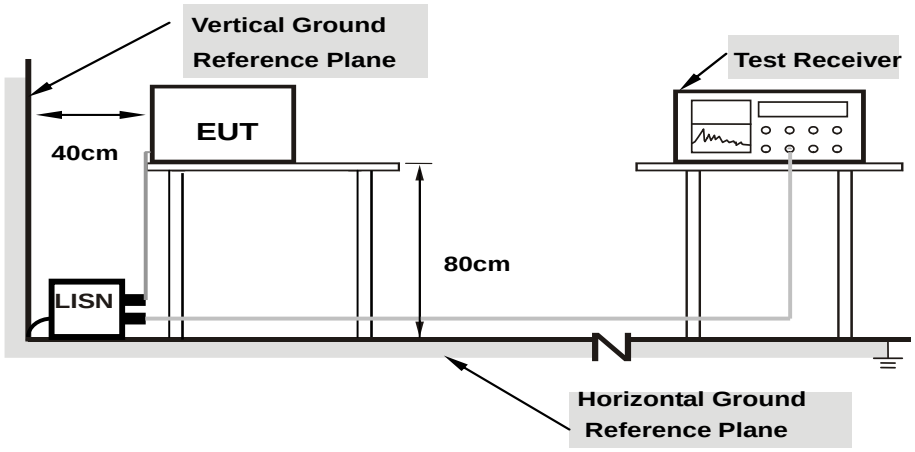
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

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 Conditions

Same as 4.1.6.

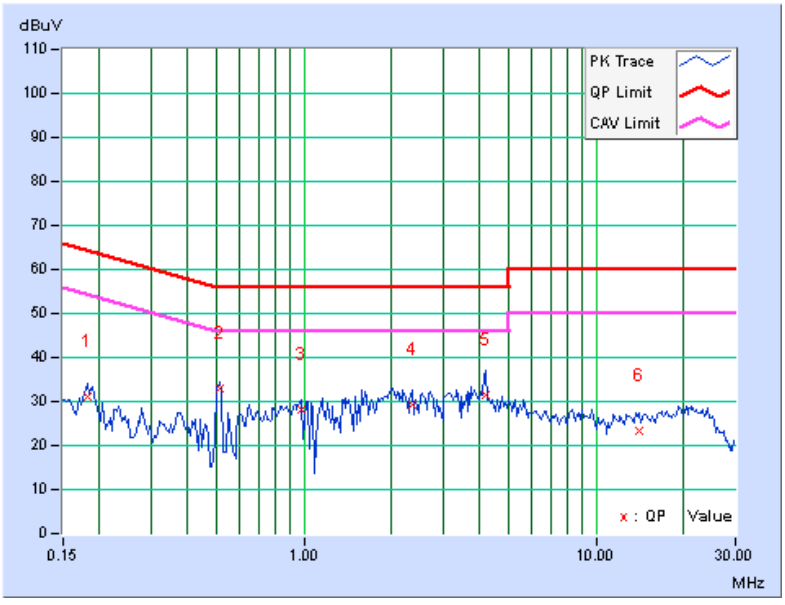
4.2.7 Test Results

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	0.07	31.22	24.58	31.29	24.65	64.43	54.43	-33.14	-29.78
2	**0.51719**	**0.10**	**32.84**	**27.12**	**32.94**	**27.22**	**56.00**	**46.00**	**-23.06**	**-18.78**
3	0.97813	0.13	28.10	22.14	28.23	22.27	56.00	46.00	-27.77	-23.73
4	2.35547	0.19	29.24	23.56	29.43	23.75	56.00	46.00	-26.57	-22.25
5	4.18359	0.26	31.38	21.78	31.64	22.04	56.00	46.00	-24.36	-23.96
6	14.00391	0.56	22.72	16.20	23.28	16.76	60.00	50.00	-36.72	-33.24

REMARKS:

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

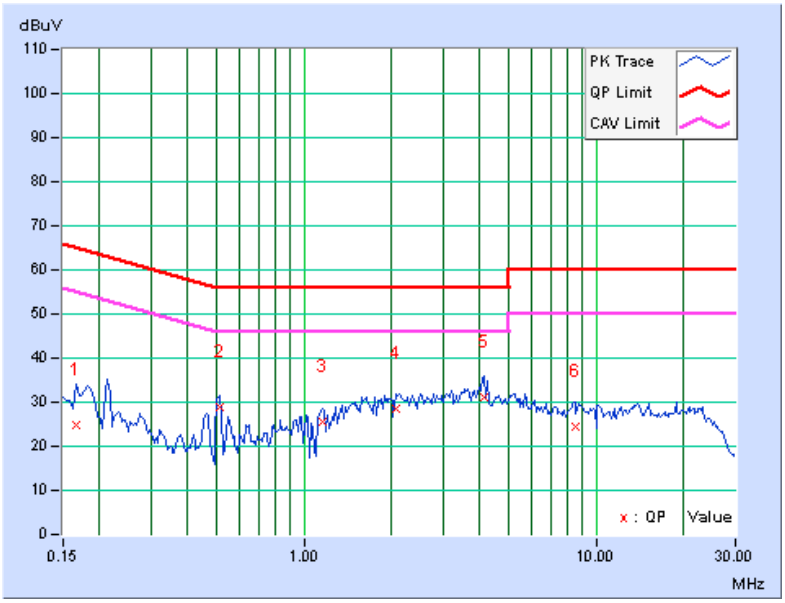


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.06	24.72	13.32	24.78	13.38	65.18	55.18	-40.39	-41.79
2	0.51328	0.10	28.78	26.16	28.88	26.26	56.00	46.00	-27.12	-19.74
3	1.15234	0.14	25.42	18.18	25.56	18.32	56.00	46.00	-30.44	-27.68
4	2.06250	0.18	28.40	20.12	28.58	20.30	56.00	46.00	-27.42	-25.70
5	4.14063	0.26	30.92	21.08	31.18	21.34	56.00	46.00	-24.82	-24.66
6	8.51172	0.41	24.10	18.72	24.51	19.13	60.00	50.00	-35.49	-30.87

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 Measurment

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 ≦ 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,

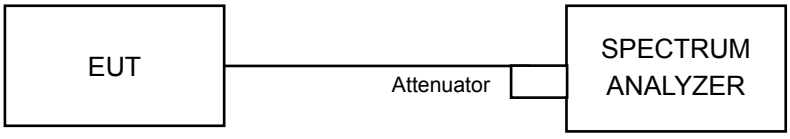
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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. 30, 2014	Apr. 29, 2015
Power Sensor Anritsu	MA2411B	0917122	Apr. 30, 2014	Apr. 29, 2015

NOTE: 1. The test was performed in Oven room B.
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: Feb. 17, 2015

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2014	May 07, 2015

NOTE: 1. The test was performed in Oven room B.
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: Feb. 17, 2015

4.3.4 Test Procedures

FOR POWER OUTPUT MEASUREMENT

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

FOR 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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 Results

802.11a

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (dBm)	Power (mW)	Limit (dBm)	Pass / Fail
36	5180	17.21	52.602	24	Pass
40	5200	18.62	72.778	24	Pass
48	5240	18.73	74.645	24	Pass
52	5260	18.61	72.611	24	Pass
60	5300	18.58	72.111	24	Pass
64	5320	17.43	55.335	24	Pass
100	5500	17.23	52.845	24	Pass
120	5600	19.00	79.433	24	Pass
140	5700	17.45	55.59	24	Pass
149	5745	16.72	46.989	30	Pass
157	5785	19.52	89.536	30	Pass
165	5825	17.32	53.951	30	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	26.39
40	5200	30.15
48	5240	27.11
52	5260	27.33
60	5300	28.14
64	5320	21.55
100	5500	21.48
120	5600	32.51
140	5700	21.49

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	27.33	25.36 > 24
60	5300	28.14	25.49 > 24
64	5320	21.55	24.33 > 24
100	5500	21.48	24.32 > 24
120	5600	32.51	26.12 > 24
140	5700	21.49	24.32 > 24

802.11ac (VHT20)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.84	15.65	75.099	18.76	24	Pass
40	5200	18.57	18.43	141.608	21.51	24	Pass
48	5240	19.57	19.37	177.07	22.48	24	Pass
52	5260	19.62	19.36	177.92	22.50	24	Pass
60	5300	18.47	18.45	140.291	21.47	24	Pass
64	5320	15.78	15.53	73.571	18.67	24	Pass
100	5500	16.22	15.76	79.549	19.01	24	Pass
120	5600	19.52	19.37	176.033	22.46	24	Pass
140	5700	15.83	16.05	78.554	18.95	24	Pass
149	5745	14.76	14.72	59.571	17.75	30	Pass
157	5785	19.64	19.35	178.144	22.51	30	Pass
165	5825	16.51	16.37	88.122	19.45	30	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	22.02	22.08
40	5200	29.38	29.96
48	5240	31.02	26.92
52	5260	32.50	22.01
60	5300	27.87	25.70
64	5320	21.89	22.10
100	5500	21.78	22.06
120	5600	34.09	27.30
140	5700	21.81	21.93

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.01	24.42 > 24
60	5300	25.70	25.09 > 24
64	5320	21.89	24.4 > 24
100	5500	21.78	24.38 > 24
120	5600	27.30	25.36 > 24
140	5700	21.81	24.38 > 24

802.11ac (VHT40)

POWER OUTPUT

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	15.05	14.51	60.238	17.80	24	Pass
46	5230	18.70	18.41	143.474	21.57	24	Pass
54	5270	19.52	19.44	177.438	22.49	24	Pass
62	5310	14.71	14.64	58.687	17.69	24	Pass
102	5510	14.27	14.18	52.912	17.24	24	Pass
118	5590	19.56	19.42	177.863	22.50	24	Pass
134	5670	16.13	15.84	79.391	19.00	24	Pass
151	5755	13.35	13.37	43.354	16.37	30	Pass
159	5795	15.21	15.27	66.84	18.25	30	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	41.51	41.87
46	5230	91.67	94.71
54	5270	98.12	93.08
62	5310	41.26	41.51
102	5510	41.22	41.69
118	5590	99.53	98.84
134	5670	41.66	41.70

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	93.08	30.68 > 24
62	5310	41.26	27.15 > 24
102	5510	41.22	27.15 > 24
110	5550	98.84	30.94 > 24
134	5670	41.66	27.19 > 24

802.11ac (VHT80)

POWER OUTPUT

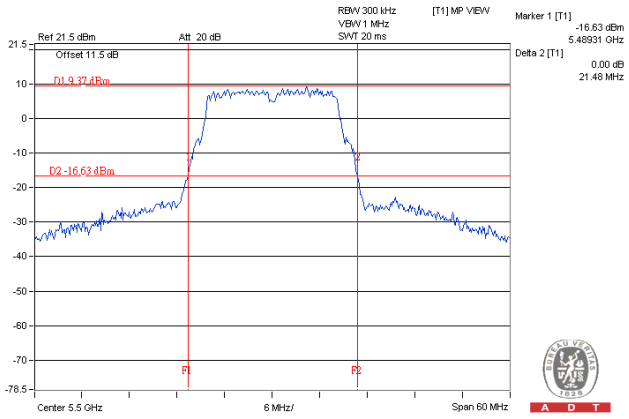
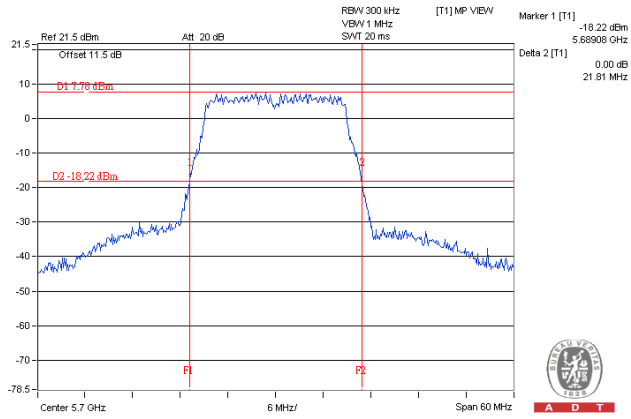
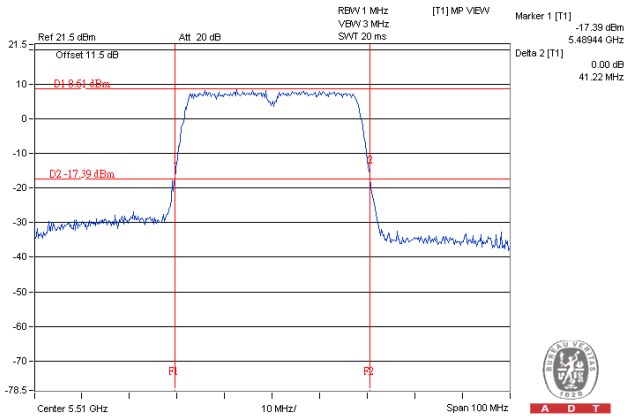
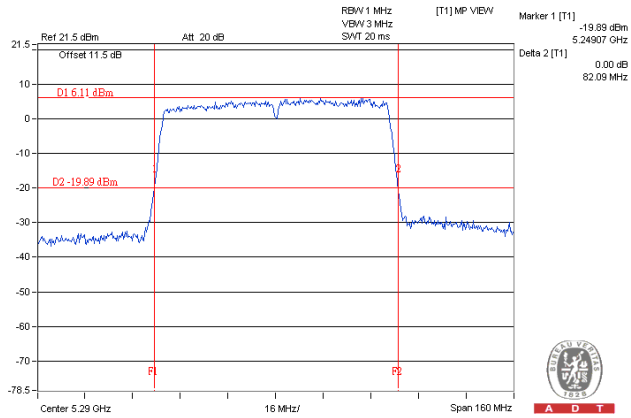
Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	15.80	15.42	72.853	18.62	24	Pass
58	5290	14.31	14.54	55.422	17.44	24	Pass
106	5530	15.42	15.53	70.561	18.49	24	Pass
122	5610	18.71	18.68	148.092	21.71	24	Pass
155	5775	11.07	11.01	25.412	14.05	30	Pass

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	82.69	82.73
58	5290	82.09	82.72
106	5530	82.69	82.49
122	5610	99.48	126.28

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.09	30.14 > 24
106	5530	82.49	30.16 > 24
122	5610	99.48	30.97 > 24

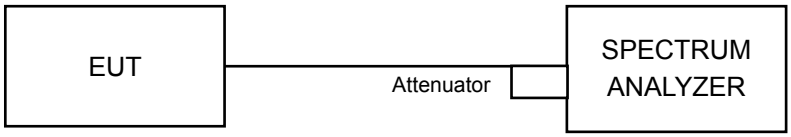
Spectrum Plot of Worst Value	
802.11a / CH100	**802.11ac (VHT20)_Chain 0 / CH140**
	
802.11ac (VHT40)_Chain 0 / CH102	**802.11ac (VHT80)_Chain 0 / CH58**
	

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/ MHz

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, 2014	May 07, 2015

NOTE: 1. The test was performed in Oven room B.
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: Feb. 17, 2015

4.4.4 Test Procedures

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

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep time = auto, trigger set to “free run”.
d. Trace average at least 100 traces in power averaging mode.
e. Record the max value and for duty cycle of test signal is < 98% add 10 log (1/duty cycle)
f. Record the max value

For U-NII-3:

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Record the max value and for duty cycle of test signal is < 98% add 10 log (1/duty cycle)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm)	Total Power Density (dBm)	MAX. Limit (dBm)	Pass / Fail
36	5180	4.04	4.04	11	Pass
40	5200	4.20	4.20	11	Pass
48	5240	4.04	4.04	11	Pass
52	5260	3.86	3.86	11	Pass
60	5300	4.00	4.00	11	Pass
64	5320	2.38	2.38	11	Pass
100	5500	3.08	3.08	11	Pass
120	5600	4.57	4.57	11	Pass
140	5700	2.68	2.68	11	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.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm)		Total Power Density (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
36	5180	3.05	3.15	6.11	11	Pass
40	5200	3.78	4.07	6.94	11	Pass
48	5240	3.60	4.03	6.83	11	Pass
52	5260	3.37	3.48	6.44	11	Pass
60	5300	3.56	3.63	6.61	11	Pass
64	5320	0.84	0.97	3.92	11	Pass
100	5500	1.47	1.95	4.73	11	Pass
120	5600	3.99	3.43	6.73	11	Pass
140	5700	1.05	1.45	4.26	11	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.

802.11ac (VHT40)

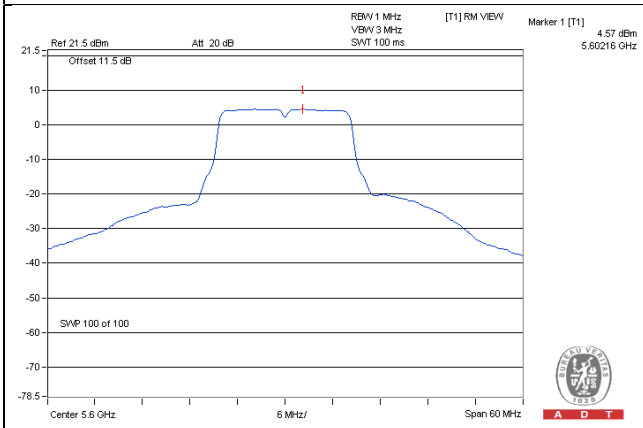
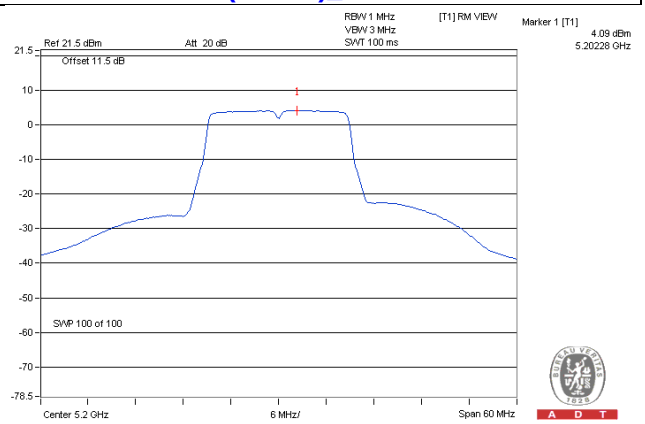
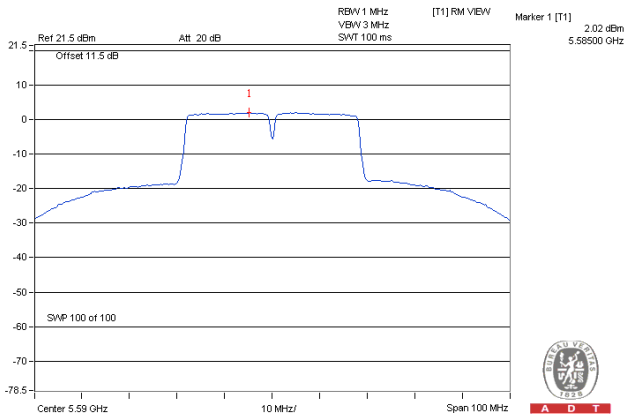
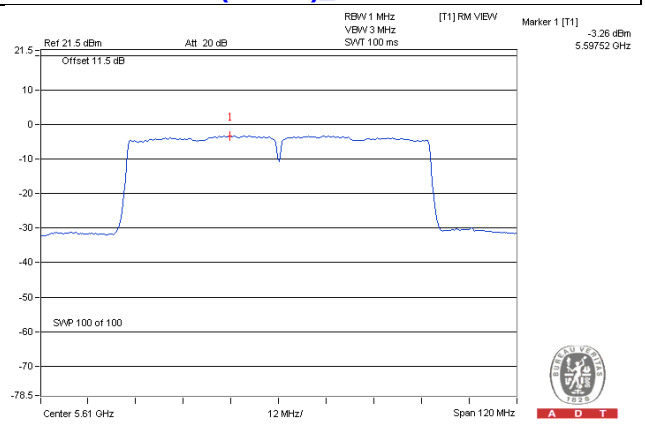
Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-3.02	-2.70	0.12	0.28	11	Pass
46	5230	1.30	0.81	0.12	4.20	11	Pass
54	5270	1.38	0.94	0.12	4.30	11	Pass
62	5310	-3.22	-3.29	0.12	-0.12	11	Pass
102	5510	-3.31	-3.21	0.12	-0.13	11	Pass
118	5590	2.02	1.91	0.12	5.10	11	Pass
134	5670	-1.38	-2.01	0.12	1.45	11	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. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-5.64	-5.15	0.23	-2.15	11	Pass
58	5290	-5.96	-5.70	0.23	-2.59	11	Pass
106	5530	-4.93	-4.75	0.23	-1.60	11	Pass
122	5610	-3.60	-3.30	0.23	-0.21	11	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. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / CH120	**802.11ac (VHT20)_Chain 1 / CH40**
	
802.11ac (VHT40)_Chain 0 / CH118	**802.11ac (VHT80)_Chain 1 / CH122**
	

For U-NII-3:

802.11a

Chan.	Chan. Freq. (MHz)	PSD		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
		(dBm/300kHz)	(dBm/500kHz)			
149	5745	-4.65	-2.43	-2.43	30	Pass
157	5785	-3.37	-1.15	-1.15	30	Pass
165	5825	-3.95	-1.73	-1.73	30	Pass

802.11ac (VHT20)

TX chain	Chan.	Chan. Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-7.24	-5.02	3.01	-2.01	30	Pass
	157	5785	-3.52	-1.30	3.01	1.71	30	Pass
	165	5825	-5.44	-3.22	3.01	-0.21	30	Pass
1	149	5745	-7.36	-5.14	3.01	-2.13	30	Pass
	157	5785	-3.42	-1.20	3.01	1.81	30	Pass
	165	5825	-5.37	-3.15	3.01	-0.14	30	Pass

802.11ac (VHT40)

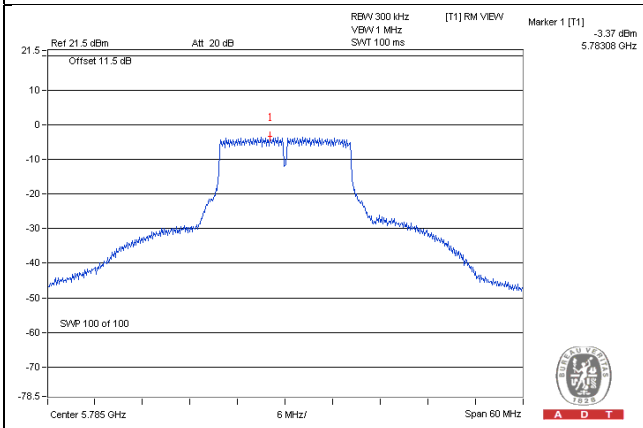
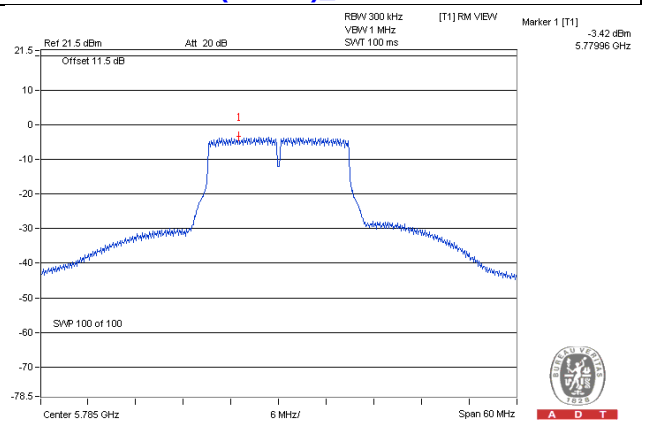
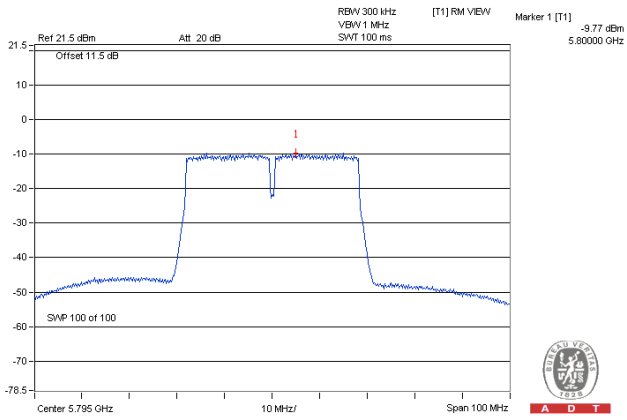
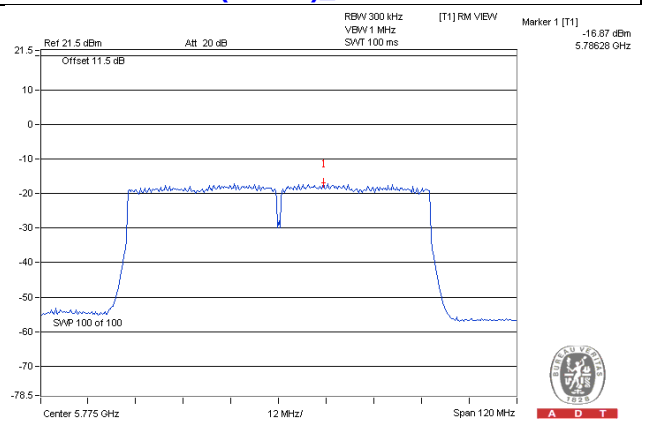
TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-11.65	-9.43	3.01	0.12	-6.30	30	Pass
	159	5795	-10.10	-7.88	3.01	0.12	-4.75	30	Pass
1	151	5755	-11.35	-9.13	3.01	0.12	-6.00	30	Pass
	159	5795	-9.77	-7.55	3.01	0.12	-4.42	30	Pass

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-17.28	-15.06	3.01	0.23	-11.82	30	Pass
1	155	5775	-16.87	-14.65	3.01	0.23	-11.41	30	Pass

NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.

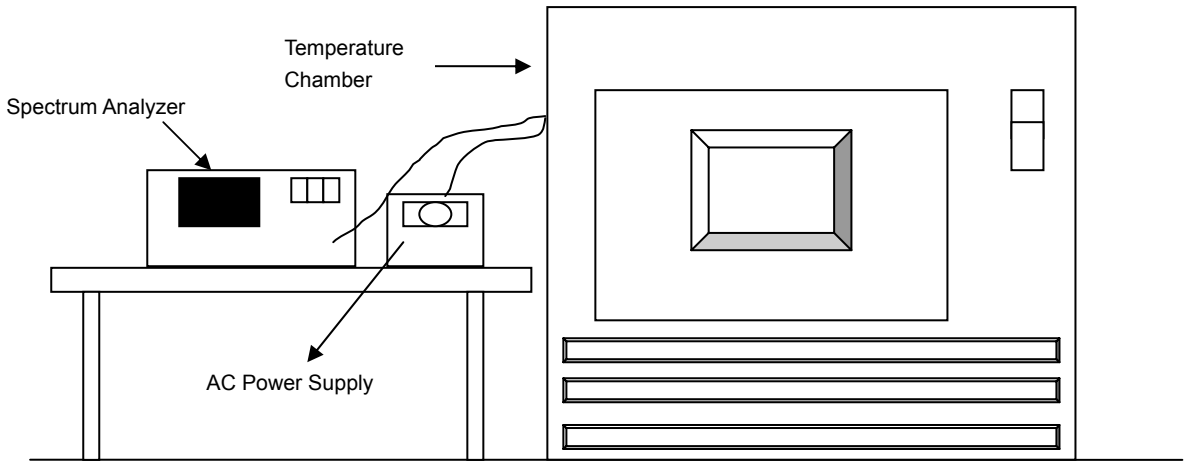
Spectrum Plot of Worst Value	
802.11a / CH157	**802.11ac (VHT20)_Chain 1 / CH157**
	
802.11ac (VHT40)_Chain 1 / CH159	**802.11ac (VHT80)_Chain 1 / CH155**
	

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, 2014	May 07, 2015
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-SP-AR	MAA0812-008	Jan. 12, 2015	Jan. 11, 2016

NOTE: 1. The test was performed in Oven room B.
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: Feb. 17, 2015

4.5.4 Test Procedures

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 Conditions

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

4.5.7 Test Results

Frequemcy Stability Versus Temp.									
Operating Frequency: 5700MHz									
Temp. (℃)	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	5700.0192	0.00034	5700.016	0.00028	5700.0206	0.00036	5700.0204	0.00036
40	120	5700.0069	0.00012	5700.0108	0.00019	5700.008	0.00014	5700.0124	0.00022
30	120	5700.0264	0.00046	5700.0248	0.00044	5700.0268	0.00047	5700.0244	0.00043
20	120	5699.9803	-0.00035	5699.9816	-0.00032	5699.9818	-0.00032	5699.9831	-0.00030
10	120	5700.0283	0.00050	5700.025	0.00044	5700.0274	0.00048	5700.0244	0.00043
0	120	5700.0009	0.00002	5699.9983	-0.00003	5699.9999	0.00000	5700.0015	0.00003
-10	120	5700.0223	0.00039	5700.0212	0.00037	5700.0241	0.00042	5700.0232	0.00041
-20	120	5700.0068	0.00012	5700.0029	0.00005	5700.0052	0.00009	5700.0059	0.00010
-30	120	5700.0284	0.00050	5700.0275	0.00048	5700.0279	0.00049	5700.0257	0.00045

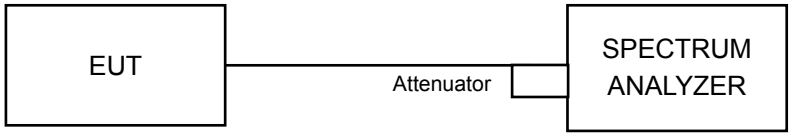
Frequemcy Stability Versus Temp.									
Operating Frequency: 5700MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5699.9792	-0.00036	5699.9826	-0.00031	5699.9808	-0.00034	5699.9826	-0.00031
	120	5699.9803	-0.00035	5699.9816	-0.00032	5699.9818	-0.00032	5699.9831	-0.00030
	102	5699.9793	-0.00036	5699.9807	-0.00034	5699.9829	-0.00030	5699.9838	-0.00028

4.6 6dB Bandwidth Measurment

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power Meter Anritsu	ML2495A	1014008	Apr. 30, 2014	Apr. 29, 2015
Power Sensor Anritsu	MA2411B	0917122	Apr. 30, 2014	Apr. 29, 2015

NOTE: 1. The test was performed in Oven room B.
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: Feb. 17, 2015

4.6.4 Test Procedures

MEASUREMENT PROCEDURE REF

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Conditions

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.42	0.5	Pass
157	5785	16.40	0.5	Pass
165	5825	16.40	0.5	Pass

802.11ac (VHT20)

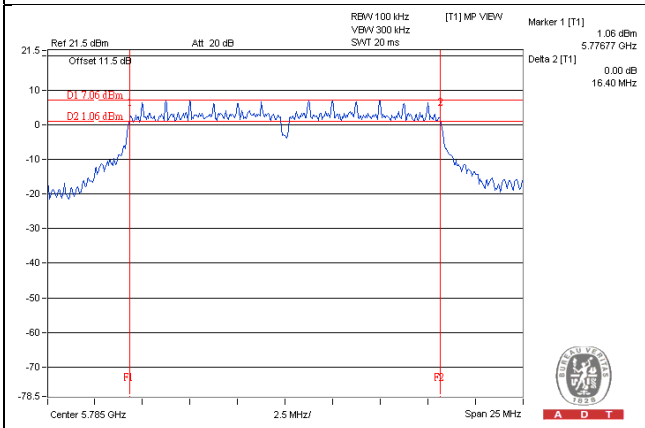
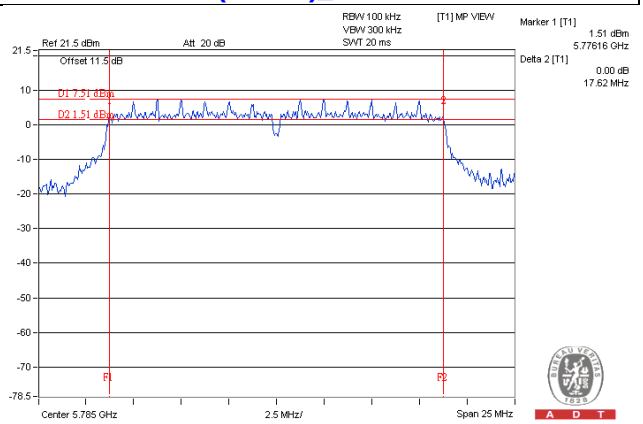
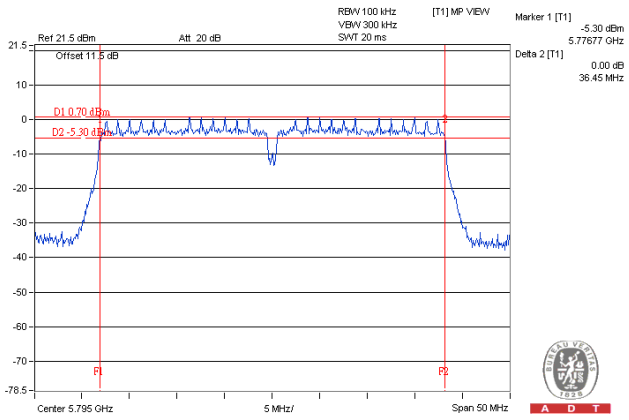
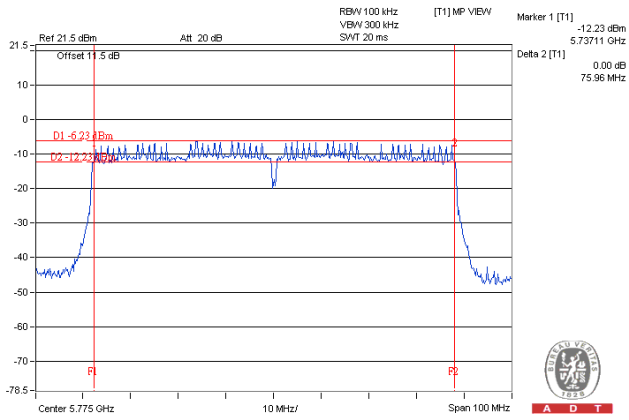
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.66	17.68	0.5	Pass
157	5785	17.62	17.65	0.5	Pass
165	5825	17.62	17.65	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.46	36.48	0.5	Pass
159	5795	36.45	36.49	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.96	76.20	0.5	Pass

Spectrum Plot of Worst Value	
802.11a / CH157	**802.11ac (VHT20)_Chain 0 / CH157**
	
802.11ac (VHT40)_Chain 0 / CH159	**802.11ac (VHT80)_Chain 0 / CH155**
	

5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
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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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