FCC Test Report

Report No.:	RF151229C23A
FCC ID:	NDD9576791501
Test Model:	EW-7679OAP
Series Model:	GAP-679OAP, OAP1750
Received Date:	Jan. 11, 2016
Test Date:	Jan. 24 ~ Mar. 18, 2016
Issued Date:	Mar. 25, 2016
Applicant:	EDIMAX TECHNOLOGY CO., LTD.
Address:	No. 3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
RF151229C23A	Original release	Mar. 25, 2016

1 Certificate of Conformity

Product:	11ac Dual Band Concurrent Outdoor AP
Brand:	EDIMAX
Test Model:	EW-7679OAP
Series Model:	GAP-679OAP, OAP1750
Sample Status:	ENGINEERING SAMPLE
Applicant:	EDIMAX TECHNOLOGY CO., LTD.
Test Date:	Jan. 24 ~ Mar. 18, 2016
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Mar. 25, 2016

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Mar. 25, 2016

Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.207 15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -14.05dB at 0.43400MHz.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is N plug. (The device is professionally installed)

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	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	11ac Dual Band Concurrent Outdoor AP
Brand	EDIMAX
Test Model	EW-7679OAP
Series Model	GAP-679OAP, OAP1750
Model Difference	Refer to Note
Status of EUT	Engineering sample
Power Supply Rating	48-55Vdc (PoE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 450.0Mbps 802.11ac: up to 1300Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5700MHz
Number of Channel	5260MHz ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4, 802.11n (HT40), 802.11ac (VHT40): 2, 802.11ac (VHT80): 1 5500MHz ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 8, 802.11n (HT40), 802.11ac (VHT40): 3, 802.11ac (VHT80): 1
Output Power	5260 ~ 5320MHz: 242.103mW 5500 ~ 5700MHz: 248.886mW
Antenna Type	Dipole antenna with 5.6dBi gain
Antenna Connector	N Plug
Accessory Device	Bracket, Lightning protector
Data Cable Supplied	0.4m non-shielded RJ45 cable without core 0.95m non-shielded ground cable without core

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the original report (BV ADT report no.: RF151229C23) is adding 5.26GHz to 5.32GHz and 5.50GHz to 5.70GHz by software.
2. All models are listed as below.

Brand	Model	Remark
EDIMAX	EW-7679OAP	Main test model
EDIMAX	GAP-679OAP	Series models, for marketing purpose.
EDIMAX	OAP1750	

3. The EUT incorporates a MIMO function. Physically, the EUT provides 3 completed transmitters and 3 receivers.

Modulation Mode	TX Function
802.11a	1TX (Fixed chain 0)
802.11n (HT20)	3TX
802.11n (HT40)	3TX
802.11ac (VHT20)	3TX
802.11ac (VHT40)	3TX
802.11ac (VHT80)	3TX

4. The EUT uses following PoE. (Support unit only)

PoE	
Brand	Power Desine
Model	PD-9001GR/AC
Input Power	100-240Vac~50-60Hz, 0.67A
Output Power	55Vdc,0.6A

3.2 Description of Test Modes

For 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

For 5500 ~ 5700MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	134	5670 MHz
110	5550 MHz		

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
106	5530MHz

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 & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz

PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane.**

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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	15.0
-	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	19.5
-	802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	40.5
-	802.11ac (VHT80)		58	58	OFDM	BPSK	87.8
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	7.2
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
-	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	19.5
-	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	40.5
-	802.11ac (VHT80)		106	106	OFDM	BPSK	87.8

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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5260-5320	52 to 64	116	OFDM	BPSK	6.0
		5500-5700	100 to 140		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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5260-5320	52 to 64	116	OFDM	BPSK	6.0
		5500-5700	100 to 140		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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	15.0
-	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	19.5
-	802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	40.5
-	802.11ac (VHT80)		58	58	OFDM	BPSK	87.8
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	7.2
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
-	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	19.5
-	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	40.5
-	802.11ac (VHT80)		106	106	OFDM	BPSK	87.8

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	16deg. C, 70%RH	120Vac, 60Hz	Nick Hsu
RE<1G	16deg. C, 70%RH	120Vac, 60Hz	Nick Hsu
PLC	20deg. C, 70%RH	120Vac, 60Hz	Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Antony Lee

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = 2.675/2.812 = 0.951, Duty factor = 10 * log(1/0.951) = 0.22

802.11n (HT20): Duty cycle = 2.475/2.60 = 0.952, Duty factor = 10 * log(1/0.952) = 0.21

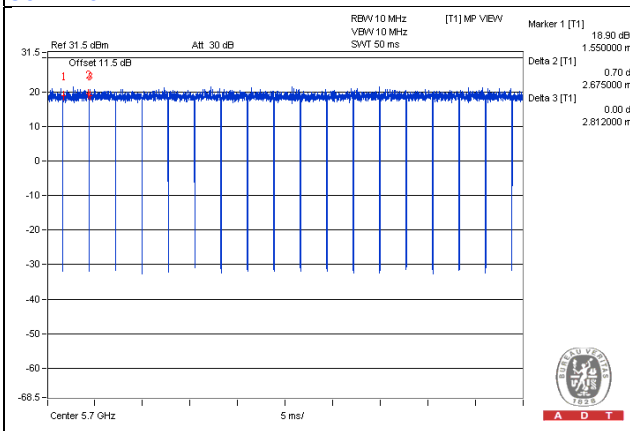
802.11n (HT40): Duty cycle = 1.162/1.287 = 0.903, Duty factor = 10 * log(1/0.903) = 0.44

802.11ac (VHT20): Duty cycle = 2.51/2.59 = 0.969, Duty factor = 10 * log(1/0.969) = 0.14

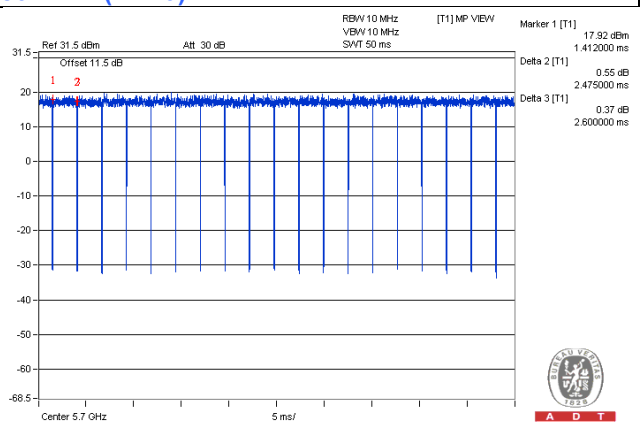
802.11ac (VHT40): Duty cycle = 1.217/1.302 = 0.935, Duty factor = 10 * log(1/0.935) = 0.29

802.11ac (VHT80): Duty cycle = 0.563/0.663 = 0.849, Duty factor = 10 * log(1/0.849) = 0.71

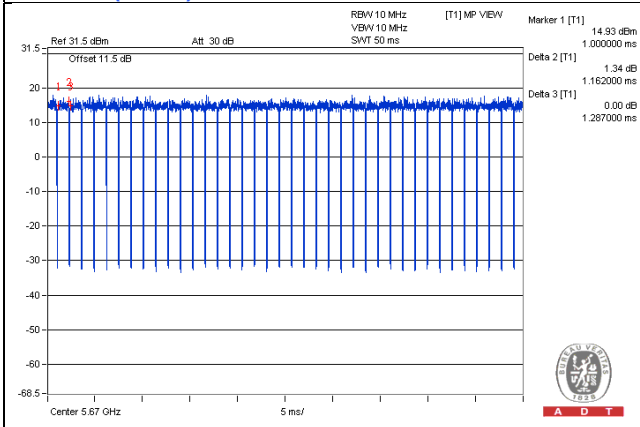
802.11a



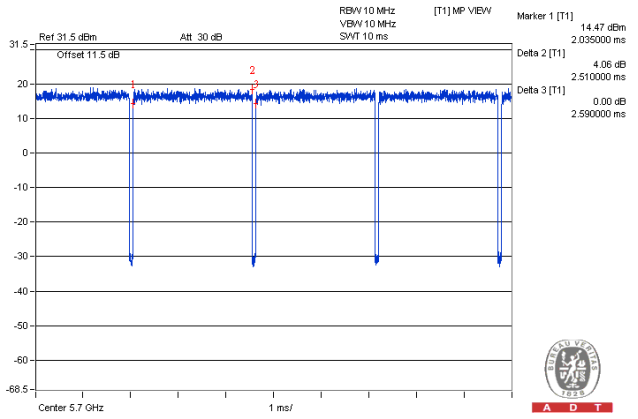
802.11n (HT20)



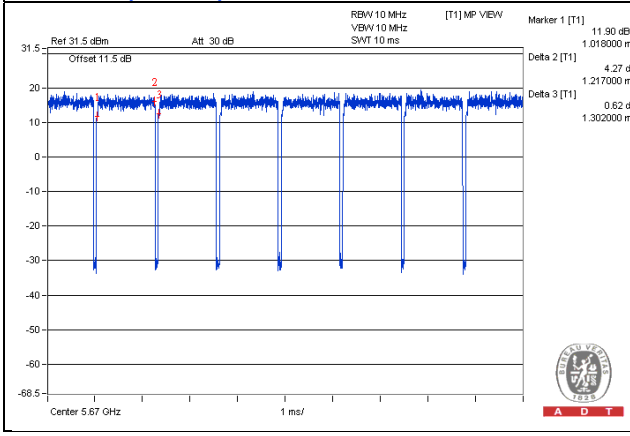
802.11n (HT40)



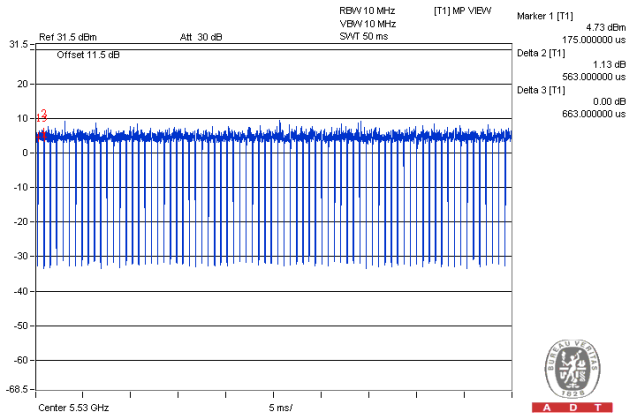
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

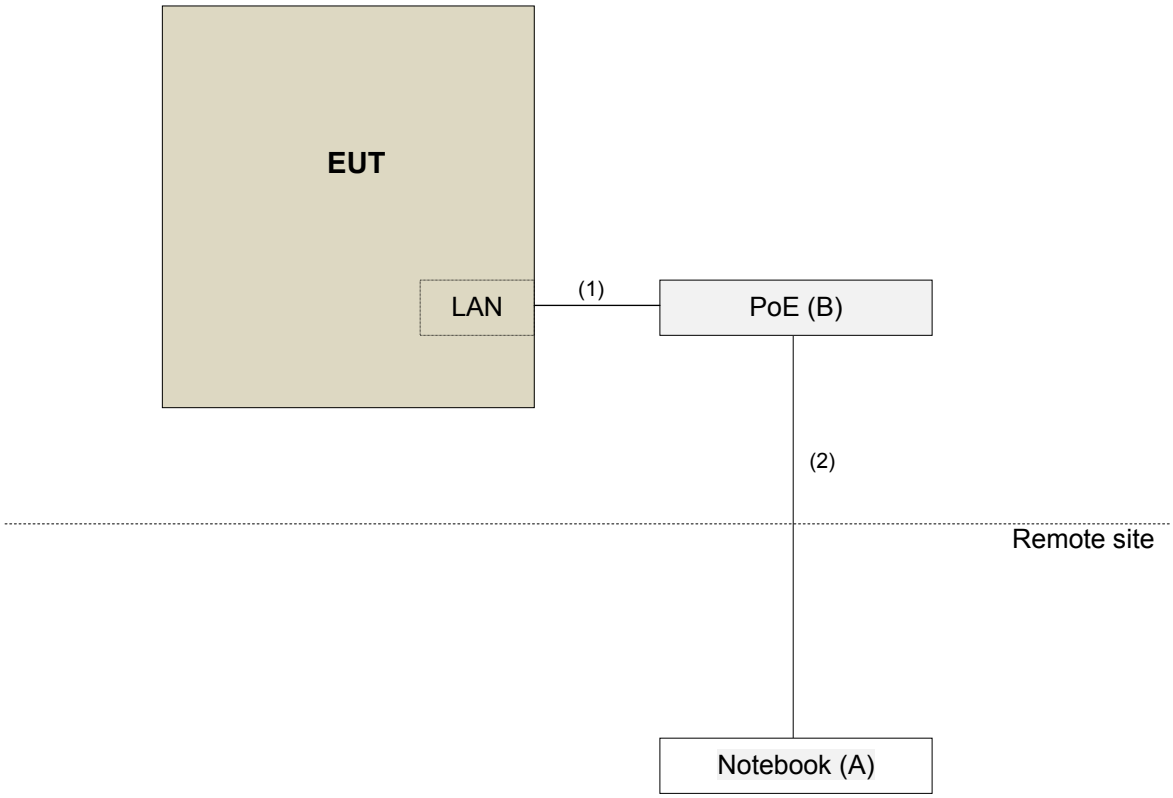
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Dell	E5410	1HC2XM1	FCC DoC Approved	-
B.	PoE	Power Desine	PD-9001GR/AC	N/A	N/A	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Items A acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	1.8	N	0	-
2.	RJ45 cable	1	10	N	0	-

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)

KDB 789033 D02 General UNII Test Procedures New Rules v01r02

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

Note: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Applicable To	Limit	
789033 D02 General UNII Test Procedures New Rules v01r02	FIELD STRENGTH AT 3m	
	PK:74 (dBμV/m)	AV:54 (dBμV/m)
Applicable To	EIRP Limit	Equivalent Field Strength at 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) [*1] PK:-17 (dBm/MHz) [*2]	PK: 68.2(dBμV/m) [*1] PK:78.2 (dBμV/m) [*2]

Note: [*1] beyond 10MHz of the band edge [*2] within 10 MHz of band edge

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Apr. 10, 2015	Apr. 09, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Sep. 02, 2015	Sep. 01, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-151	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna SCHWARZBECK	9120D	209	Jan. 20, 2016	Jan. 19, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Preamplifier Agilent	8447D	2944A10738	Oct. 18, 2015	Oct. 17, 2016
Preamplifier Agilent	8449B	3008A01964	Aug. 22, 2015	Aug. 21, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (214378)	Aug. 22, 2015	Aug. 21, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 106	Cable-CH3-03 (309224+12738)	Aug. 22, 2015	Aug. 21, 2016
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 18, 2015	Oct. 17, 2016
High Speed Peak Power Meter	ML2495A	0824011	Jul. 09, 2015	Jul. 08, 2016
Power Sensor	MA2411B	0738171	Jul. 09, 2015	Jul. 08, 2016

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 988962.
5. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

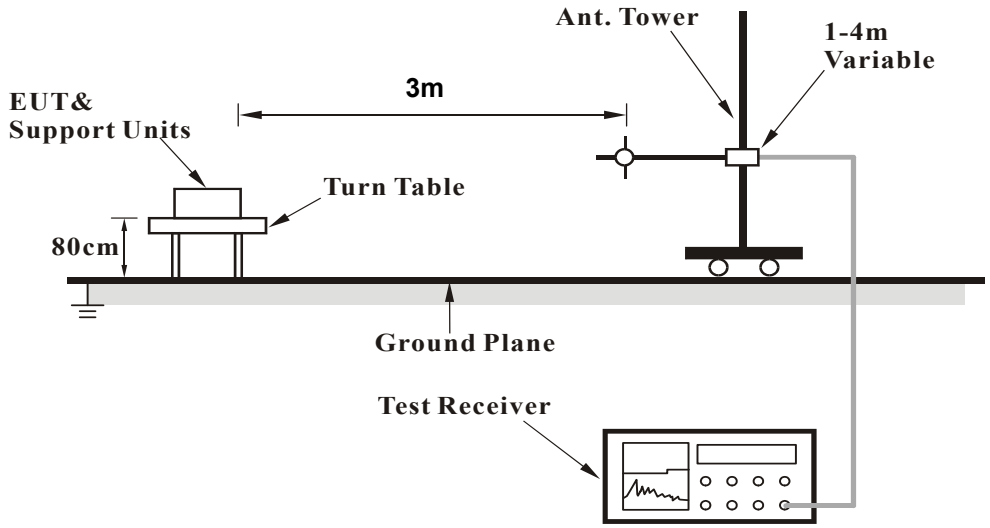
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/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

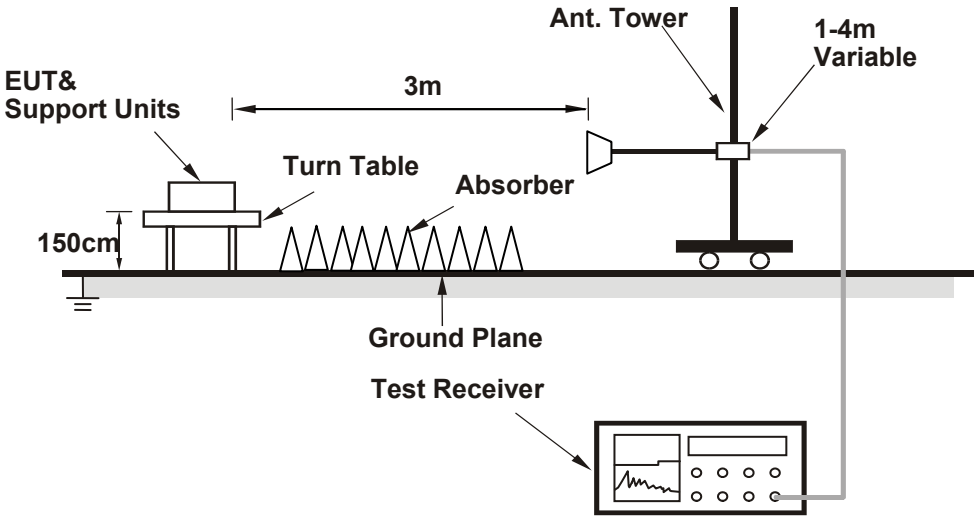
No deviation.

4.1.5 Test Set Up

<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

a. Placed the EUT on the testing table.
b. Prepared notebook to act as communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".
e. The necessary accessories enable the system in full functions.

4.1.7 Test Results

Above 1GHz Data

802.11a

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	104.7 PK			1.00 H	314	65.10	39.60
2	*5260.00	94.6 AV			1.00 H	314	55.00	39.60
3	5350.00	57.5 PK	74.0	-16.5	1.03 H	301	51.00	6.50
4	5350.00	44.5 AV	54.0	-9.5	1.03 H	301	38.00	6.50
5	#10520.00	58.3 PK	74.0	-15.7	1.16 H	38	39.40	18.90
6	#10520.00	45.8 AV	54.0	-8.2	1.16 H	38	26.90	18.90
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	*5260.00	119.9 PK			1.30 V	132	80.30	39.60
2	*5260.00	109.4 AV			1.30 V	132	69.80	39.60
3	5350.00	60.5 PK	74.0	-13.5	1.32 V	135	54.00	6.50
4	5350.00	48.1 AV	54.0	-5.9	1.32 V	135	41.60	6.50
5	#10520.00	58.9 PK	74.0	-15.1	1.46 V	133	40.00	18.90
6	#10520.00	46.3 AV	54.0	-7.7	1.46 V	133	27.40	18.90

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)
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	104.3 PK			1.06 H	313	64.60	39.70
2	*5300.00	94.0 AV			1.06 H	313	54.30	39.70
3	5350.00	56.8 PK	74.0	-17.2	1.17 H	297	50.30	6.50
4	5350.00	44.6 AV	54.0	-9.4	1.17 H	297	38.10	6.50
5	10600.00	59.1 PK	74.0	-14.9	1.04 H	211	40.20	18.90
6	10600.00	46.6 AV	54.0	-7.4	1.04 H	211	27.70	18.90
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	*5300.00	119.4 PK			1.23 V	134	79.70	39.70
2	*5300.00	108.6 AV			1.23 V	134	68.90	39.70
3	5350.00	67.1 PK	74.0	-6.9	1.23 V	135	60.60	6.50
4	5350.00	52.4 AV	54.0	-1.6	1.23 V	135	45.90	6.50
5	10600.00	58.8 PK	74.0	-15.2	1.07 V	88	39.90	18.90
6	10600.00	46.0 AV	54.0	-8.0	1.07 V	88	27.10	18.90

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)
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	99.9 PK			1.11 H	319	60.20	39.70
2	*5320.00	89.8 AV			1.11 H	319	50.10	39.70
3	5350.00	56.9 PK	74.0	-17.1	1.19 H	254	50.40	6.50
4	5350.00	44.3 AV	54.0	-9.7	1.19 H	254	37.80	6.50
5	10640.00	59.2 PK	74.0	-14.8	1.10 H	54	40.40	18.80
6	10640.00	46.0 AV	54.0	-8.0	1.10 H	54	27.20	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	114.3 PK			1.35 V	109	74.60	39.70
2	*5320.00	104.0 AV			1.35 V	109	64.30	39.70
3	5350.00	67.5 PK	74.0	-6.5	1.07 V	106	61.00	6.50
4	5350.00	52.4 AV	54.0	-1.6	1.07 V	106	45.90	6.50
5	10640.00	58.5 PK	74.0	-15.5	1.07 V	59	39.70	18.80
6	10640.00	45.3 AV	54.0	-8.7	1.07 V	59	26.50	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	57.1 PK	74.0	-16.9	1.16 H	312	50.20	6.90
2	5460.00	44.5 AV	54.0	-9.5	1.16 H	312	37.60	6.90
3	#5470.00	57.4 PK	74.0	-16.6	1.12 H	332	50.50	6.90
4	#5470.00	44.4 AV	54.0	-9.6	1.12 H	332	37.50	6.90
5	*5500.00	97.3 PK			1.00 H	310	57.10	40.20
6	*5500.00	86.9 AV			1.00 H	310	46.70	40.20
7	11000.00	59.1 PK	74.0	-14.9	1.14 H	69	39.20	19.90
8	11000.00	46.3 AV	54.0	-7.7	1.14 H	69	26.40	19.90
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	5460.00	61.9 PK	74.0	-12.1	1.09 V	274	55.00	6.90
2	5460.00	47.6 AV	54.0	-6.4	1.09 V	274	40.70	6.90
3	#5470.00	68.4 PK	74.0	-5.6	1.02 V	277	61.50	6.90
4	#5470.00	52.5 AV	54.0	-1.5	1.02 V	277	45.60	6.90
5	*5500.00	114.3 PK			1.01 V	259	74.10	40.20
6	*5500.00	104.3 AV			1.01 V	259	64.10	40.20
7	11000.00	59.1 PK	74.0	-14.9	1.20 V	218	39.20	19.90
8	11000.00	46.1 AV	54.0	-7.9	1.20 V	218	26.20	19.90

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) 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	*5580.00	102.7 PK			1.00 H	311	62.40	40.30
2	*5580.00	92.9 AV			1.00 H	311	52.60	40.30
3	11160.00	58.9 PK	74.0	-15.1	1.32 H	242	39.50	19.40
4	11160.00	46.0 AV	54.0	-8.0	1.32 H	242	26.60	19.40
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	*5580.00	118.8 PK			1.02 V	256	78.50	40.30
2	*5580.00	108.4 AV			1.02 V	256	68.10	40.30
3	11160.00	59.4 PK	74.0	-14.6	1.15 V	243	40.00	19.40
4	11160.00	46.9 AV	54.0	-7.1	1.15 V	243	27.50	19.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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	95.1 PK			1.00 H	309	54.70	40.40
2	*5700.00	85.5 AV			1.00 H	309	45.10	40.40
3	#5725.00	57.1 PK	74.0	-16.9	1.05 H	326	49.70	7.40
4	#5725.00	44.4 AV	54.0	-9.6	1.05 H	326	37.00	7.40
5	11400.00	60.4 PK	74.0	-13.6	1.16 H	261	41.60	18.80
6	11400.00	46.9 AV	54.0	-7.1	1.16 H	261	28.10	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.0 PK			1.00 V	259	70.60	40.40
2	*5700.00	101.2 AV			1.00 V	259	60.80	40.40
3	#5725.00	67.1 PK	74.0	-6.9	1.01 V	268	59.70	7.40
4	#5725.00	52.6 AV	54.0	-1.4	1.01 V	268	45.20	7.40
5	11400.00	59.6 PK	74.0	-14.4	1.10 V	202	40.80	18.80
6	11400.00	46.7 AV	54.0	-7.3	1.10 V	202	27.90	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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.

802.11n (HT20)

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	5097.00	54.8 PK	74.0	-19.2	1.07 H	172	49.00	5.80
2	5097.00	42.9 AV	54.0	-11.1	1.07 H	172	37.10	5.80
3	*5260.00	102.8 PK			1.00 H	219	63.20	39.60
4	*5260.00	93.2 AV			1.00 H	219	53.60	39.60
5	#10520.00	58.9 PK	74.0	-15.1	1.03 H	65	40.00	18.90
6	#10520.00	45.7 AV	54.0	-8.3	1.03 H	65	26.80	18.90
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	5097.00	59.9 PK	74.0	-14.1	1.75 V	128	54.10	5.80
2	5097.00	48.0 AV	54.0	-6.0	1.75 V	128	42.20	5.80
3	*5260.00	120.5 PK			1.71 V	132	80.90	39.60
4	*5260.00	110.6 AV			1.71 V	132	71.00	39.60
5	#10520.00	58.4 PK	74.0	-15.6	1.42 V	69	39.50	18.90
6	#10520.00	45.8 AV	54.0	-8.2	1.42 V	69	26.90	18.90

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)
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	5134.00	55.3 PK	74.0	-18.7	1.24 H	182	49.30	6.00
2	5134.00	43.0 AV	54.0	-11.0	1.24 H	182	37.00	6.00
3	*5300.00	103.3 PK			1.00 H	211	63.60	39.70
4	*5300.00	93.0 AV			1.00 H	211	53.30	39.70
5	10600.00	58.6 PK	74.0	-15.4	1.14 H	124	39.70	18.90
6	10600.00	45.8 AV	54.0	-8.2	1.14 H	124	26.90	18.90
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	5134.00	61.0 PK	74.0	-13.0	2.10 V	312	55.00	6.00
2	5134.00	48.6 AV	54.0	-5.4	2.10 V	312	42.60	6.00
3	*5300.00	120.5 PK			2.03 V	265	80.80	39.70
4	*5300.00	110.2 AV			2.03 V	265	70.50	39.70
5	10600.00	58.5 PK	74.0	-15.5	1.69 V	284	39.60	18.90
6	10600.00	45.8 AV	54.0	-8.2	1.69 V	284	26.90	18.90

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)
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	99.5 PK			1.01 H	211	59.80	39.70
2	*5320.00	89.5 AV			1.01 H	211	49.80	39.70
3	5350.00	56.5 PK	74.0	-17.5	1.07 H	217	50.00	6.50
4	5350.00	43.9 AV	54.0	-10.1	1.07 H	217	37.40	6.50
5	10640.00	57.7 PK	74.0	-16.3	1.01 H	152	38.90	18.80
6	10640.00	44.9 AV	54.0	-9.1	1.01 H	152	26.10	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.3 PK			1.83 V	112	77.60	39.70
2	*5320.00	107.2 AV			1.83 V	112	67.50	39.70
3	5350.00	69.0 PK	74.0	-5.0	1.98 V	181	62.50	6.50
4	**5350.00**	**53.0 AV**	**54.0**	**-1.0**	**1.98 V**	**181**	**46.50**	**6.50**
5	10640.00	58.3 PK	74.0	-15.7	1.34 V	69	39.50	18.80
6	10640.00	45.2 AV	54.0	-8.8	1.34 V	69	26.40	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	57.2 PK	74.0	-16.8	1.75 H	292	50.30	6.90
2	5460.00	44.4 AV	54.0	-9.6	1.75 H	292	37.50	6.90
3	#5470.00	56.6 PK	74.0	-17.4	2.10 H	318	49.70	6.90
4	#5470.00	44.6 AV	54.0	-9.4	2.10 H	318	37.70	6.90
5	*5500.00	103.2 PK			2.49 H	304	63.00	40.20
6	*5500.00	92.7 AV			2.49 H	304	52.50	40.20
7	11000.00	59.0 PK	74.0	-15.0	1.06 H	216	39.10	19.90
8	11000.00	46.5 AV	54.0	-7.5	1.06 H	216	26.60	19.90
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	5460.00	59.9 PK	74.0	-14.1	2.49 V	319	53.00	6.90
2	5460.00	47.1 AV	54.0	-6.9	2.49 V	319	40.20	6.90
3	#5470.00	68.9 PK	74.0	-5.1	2.56 V	333	62.00	6.90
4	#5470.00	52.4 AV	54.0	-1.6	2.56 V	333	45.50	6.90
5	*5500.00	116.7 PK			2.45 V	251	76.50	40.20
6	*5500.00	105.7 AV			2.45 V	251	65.50	40.20
7	11000.00	59.5 PK	74.0	-14.5	1.85 V	245	39.60	19.90
8	11000.00	46.9 AV	54.0	-7.1	1.85 V	245	27.00	19.90

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) 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	*5580.00	105.3 PK			2.53 H	306	65.00	40.30
2	*5580.00	94.4 AV			2.53 H	306	54.10	40.30
3	11160.00	58.6 PK	74.0	-15.4	1.21 H	228	39.20	19.40
4	11160.00	46.2 AV	54.0	-7.8	1.21 H	228	26.80	19.40
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	*5580.00	118.6 PK			2.65 V	334	78.30	40.30
2	*5580.00	108.4 AV			2.65 V	334	68.10	40.30
3	11160.00	59.3 PK	74.0	-14.7	1.35 V	52	39.90	19.40
4	11160.00	46.3 AV	54.0	-7.7	1.35 V	52	26.90	19.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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	101.9 PK			2.51 H	301	61.50	40.40
2	*5700.00	91.1 AV			2.51 H	301	50.70	40.40
3	#5725.00	57.9 PK	74.0	-16.1	1.24 H	301	50.50	7.40
4	#5725.00	44.7 AV	54.0	-9.3	1.24 H	301	37.30	7.40
5	11400.00	59.2 PK	74.0	-14.8	1.05 H	261	40.40	18.80
6	11400.00	46.7 AV	54.0	-7.3	1.05 H	261	27.90	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	114.5 PK			2.83 V	289	74.10	40.40
2	*5700.00	104.3 AV			2.83 V	289	63.90	40.40
3	#5725.00	66.8 PK	74.0	-7.2	2.51 V	112	59.40	7.40
4	#5725.00	52.5 AV	54.0	-1.5	2.51 V	112	45.10	7.40
5	11400.00	59.4 PK	74.0	-14.6	2.15 V	230	40.60	18.80
6	11400.00	47.0 AV	54.0	-7.0	2.15 V	230	28.20	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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.

802.11n (HT40)

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	98.4 PK			3.54 H	214	58.80	39.60
2	*5270.00	88.3 AV			3.54 H	214	48.70	39.60
3	5350.00	57.4 PK	74.0	-16.6	3.05 H	234	50.90	6.50
4	5350.00	44.9 AV	54.0	-9.1	3.05 H	234	38.40	6.50
5	#10540.00	59.2 PK	74.0	-14.8	1.88 H	135	40.20	19.00
6	#10540.00	46.8 AV	54.0	-7.2	1.88 H	135	27.80	19.00
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	*5270.00	116.5 PK			1.99 V	264	76.90	39.60
2	*5270.00	106.7 AV			1.99 V	264	67.10	39.60
3	5350.00	59.0 PK	74.0	-15.0	1.79 V	270	52.50	6.50
4	5350.00	46.6 AV	54.0	-7.4	1.79 V	270	40.10	6.50
5	#10540.00	59.6 PK	74.0	-14.4	1.84 V	324	40.60	19.00
6	#10540.00	47.2 AV	54.0	-6.8	1.84 V	324	28.20	19.00

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)
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	92.6 PK			3.61 H	213	52.90	39.70
2	*5310.00	82.7 AV			3.61 H	213	43.00	39.70
3	5350.00	58.1 PK	74.0	-15.9	2.84 H	176	51.60	6.50
4	5350.00	35.0 AV	54.0	-19.0	2.84 H	176	28.50	6.50
5	10620.00	59.2 PK	74.0	-14.8	2.34 H	133	40.30	18.90
6	10620.00	46.5 AV	54.0	-7.5	2.34 H	133	27.60	18.90
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	*5310.00	110.4 PK			1.76 V	110	70.70	39.70
2	*5310.00	100.5 AV			1.76 V	110	60.80	39.70
3	5350.00	67.0 PK	74.0	-7.0	1.76 V	113	60.50	6.50
4	5350.00	52.4 AV	54.0	-1.6	1.76 V	113	45.90	6.50
5	10620.00	59.8 PK	74.0	-14.2	1.53 V	76	40.90	18.90
6	10620.00	46.8 AV	54.0	-7.2	1.53 V	76	27.90	18.90

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)
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	5460.00	58.3 PK	74.0	-15.7	2.62 H	300	51.40	6.90
2	5460.00	45.4 AV	54.0	-8.6	2.62 H	300	38.50	6.90
3	#5470.00	58.1 PK	74.0	-15.9	2.85 H	322	51.20	6.90
4	#5470.00	45.0 AV	54.0	-9.0	2.85 H	322	38.10	6.90
5	*5510.00	95.9 PK			3.36 H	303	55.70	40.20
6	*5510.00	86.0 AV			3.36 H	303	45.80	40.20
7	11020.00	60.2 PK	74.0	-13.8	1.82 H	203	40.40	19.80
8	11020.00	47.1 AV	54.0	-6.9	1.82 H	203	27.30	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.1 PK	74.0	-11.9	2.38 V	14	55.20	6.90
2	5460.00	48.6 AV	54.0	-5.4	2.38 V	14	41.70	6.90
3	#5470.00	66.5 PK	74.0	-7.5	2.34 V	46	59.60	6.90
4	#5470.00	52.6 AV	54.0	-1.4	2.34 V	46	45.70	6.90
5	*5510.00	112.2 PK			2.57 V	332	72.00	40.20
6	*5510.00	101.5 AV			2.57 V	332	61.30	40.20
7	11020.00	59.2 PK	74.0	-14.8	1.94 V	217	39.40	19.80
8	11020.00	46.9 AV	54.0	-7.1	1.94 V	217	27.10	19.80

Remarks:

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) 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	*5550.00	101.8 PK			2.77 H	308	61.60	40.20
2	*5550.00	91.4 AV			2.77 H	308	51.20	40.20
3	11100.00	59.9 PK	74.0	-14.1	2.24 H	302	40.70	19.20
4	11100.00	47.2 AV	54.0	-6.8	2.24 H	302	28.00	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	116.4 PK			3.07 V	21	76.20	40.20
2	*5550.00	105.6 AV			3.07 V	21	65.40	40.20
3	11100.00	60.2 PK	74.0	-13.8	2.29 V	280	41.00	19.20
4	11100.00	47.4 AV	54.0	-6.6	2.29 V	280	28.20	19.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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	99.8 PK			3.07 H	322	59.50	40.30
2	*5670.00	89.3 AV			3.07 H	322	49.00	40.30
3	#5725.00	57.1 PK	74.0	-16.9	2.86 H	338	49.70	7.40
4	#5725.00	44.8 AV	54.0	-9.2	2.86 H	338	37.40	7.40
5	11340.00	59.5 PK	74.0	-14.5	1.97 H	267	40.30	19.20
6	11340.00	46.5 AV	54.0	-7.5	1.97 H	267	27.30	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.7 PK			2.78 V	322	72.40	40.30
2	*5670.00	103.0 AV			2.78 V	322	62.70	40.30
3	#5725.00	64.4 PK	74.0	-9.6	3.45 V	10	57.00	7.40
4	#5725.00	52.3 AV	54.0	-1.7	3.45 V	10	44.90	7.40
5	11340.00	59.2 PK	74.0	-14.8	2.18 V	268	40.00	19.20
6	11340.00	46.4 AV	54.0	-7.6	2.18 V	268	27.20	19.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT20)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) 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	5097.00	54.4 PK	74.0	-19.6	1.03 H	167	48.60	5.80
2	5097.00	42.3 AV	54.0	-11.7	1.03 H	167	36.50	5.80
3	*5260.00	93.2 PK			1.03 H	211	53.60	39.60
4	*5260.00	92.8 AV			1.03 H	211	53.20	39.60
5	#10520.00	58.6 PK	74.0	-15.4	1.12 H	69	39.70	18.90
6	#10520.00	45.4 AV	54.0	-8.6	1.12 H	69	26.50	18.90
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	5097.00	59.6 PK	74.0	-14.4	1.64 V	132	53.80	5.80
2	5097.00	47.5 AV	54.0	-6.5	1.64 V	132	41.70	5.80
3	*5260.00	120.0 PK			1.64 V	135	80.40	39.60
4	*5260.00	109.7 AV			1.64 V	135	70.10	39.60
5	#10520.00	58.2 PK	74.0	-15.8	1.31 V	72	39.30	18.90
6	#10520.00	45.3 AV	54.0	-8.7	1.31 V	72	26.40	18.90

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)
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	5134.00	55.0 PK	74.0	-19.0	1.22 H	167	49.00	6.00
2	5134.00	42.5 AV	54.0	-11.5	1.22 H	167	36.50	6.00
3	*5300.00	102.8 PK			1.01 H	142	63.10	39.70
4	*5300.00	92.2 AV			1.01 H	142	52.50	39.70
5	10600.00	58.3 PK	74.0	-15.7	1.19 H	130	39.40	18.90
6	10600.00	45.2 AV	54.0	-8.8	1.19 H	130	26.30	18.90
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	5134.00	60.7 PK	74.0	-13.3	2.13 V	241	54.70	6.00
2	5134.00	48.1 AV	54.0	-5.9	2.13 V	241	42.10	6.00
3	*5300.00	119.9 PK			1.84 V	238	80.20	39.70
4	*5300.00	109.6 AV			1.84 V	238	69.90	39.70
5	10600.00	58.3 PK	74.0	-15.7	1.62 V	267	39.40	18.90
6	10600.00	45.3 AV	54.0	-8.7	1.62 V	267	26.40	18.90

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)
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	98.8 PK			1.05 H	194	59.10	39.70
2	*5320.00	88.7 AV			1.05 H	194	49.00	39.70
3	5350.00	56.2 PK	74.0	-17.8	1.03 H	227	49.70	6.50
4	5350.00	43.2 AV	54.0	-10.8	1.03 H	227	36.70	6.50
5	10640.00	57.4 PK	74.0	-16.6	1.06 H	137	38.60	18.80
6	10640.00	44.4 AV	54.0	-9.6	1.06 H	137	25.60	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	116.8 PK			1.67 V	122	77.10	39.70
2	*5320.00	106.4 AV			1.67 V	122	66.70	39.70
3	5350.00	68.8 PK	74.0	-5.2	1.93 V	169	62.30	6.50
4	5350.00	52.6 AV	54.0	-1.4	1.93 V	169	46.10	6.50
5	10640.00	58.1 PK	74.0	-15.9	1.32 V	61	39.30	18.80
6	10640.00	44.8 AV	54.0	-9.2	1.32 V	61	26.00	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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	56.6 PK	74.0	-17.4	1.63 H	252	49.70	6.90
2	5460.00	43.7 AV	54.0	-10.3	1.63 H	252	36.80	6.90
3	#5470.00	56.3 PK	74.0	-17.7	2.02 H	305	49.40	6.90
4	#5470.00	44.1 AV	54.0	-9.9	2.02 H	305	37.20	6.90
5	*5500.00	102.5 PK			2.28 H	256	62.30	40.20
6	*5500.00	101.8 AV			2.28 H	256	61.60	40.20
7	11000.00	58.7 PK	74.0	-15.3	1.03 H	186	38.80	19.90
8	11000.00	46.2 AV	54.0	-7.8	1.03 H	186	26.30	19.90
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	5460.00	59.5 PK	74.0	-14.5	2.42 V	285	52.60	6.90
2	5460.00	46.4 AV	54.0	-7.6	2.42 V	285	39.50	6.90
3	#5470.00	69.0 PK	74.0	-5.0	2.38 V	315	62.10	6.90
4	#5470.00	52.2 AV	54.0	-1.8	2.38 V	315	45.30	6.90
5	*5500.00	116.0 PK			2.38 V	269	75.80	40.20
6	*5500.00	104.8 AV			2.38 V	269	64.60	40.20
7	11000.00	59.3 PK	74.0	-14.7	1.69 V	238	39.40	19.90
8	11000.00	46.5 AV	54.0	-7.5	1.69 V	238	26.60	19.90

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) 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	*5580.00	104.5 PK			2.33 H	302	64.20	40.30
2	*5580.00	93.4 AV			2.33 H	302	53.10	40.30
3	11160.00	58.2 PK	74.0	-15.8	1.34 H	209	38.80	19.40
4	11160.00	45.5 AV	54.0	-8.5	1.34 H	209	26.10	19.40
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	*5580.00	117.8 PK			2.52 V	341	77.50	40.30
2	*5580.00	107.5 AV			2.52 V	341	67.20	40.30
3	11160.00	59.0 PK	74.0	-15.0	1.38 V	60	39.60	19.40
4	11160.00	45.7 AV	54.0	-8.3	1.38 V	60	26.30	19.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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	101.2 PK			2.38 H	282	60.80	40.40
2	*5700.00	90.4 AV			2.38 H	282	50.00	40.40
3	#5725.00	57.7 PK	74.0	-16.3	1.28 H	292	50.30	7.40
4	#5725.00	44.4 AV	54.0	-9.6	1.28 H	292	37.00	7.40
5	11400.00	58.9 PK	74.0	-15.1	1.08 H	252	40.10	18.80
6	11400.00	46.3 AV	54.0	-7.7	1.08 H	252	27.50	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	113.7 PK			2.54 V	267	73.30	40.40
2	*5700.00	103.5 AV			2.54 V	267	63.10	40.40
3	#5725.00	66.4 PK	74.0	-7.6	2.18 V	134	59.00	7.40
4	#5725.00	52.2 AV	54.0	-1.8	2.18 V	134	44.80	7.40
5	11400.00	59.0 PK	74.0	-15.0	2.11 V	251	40.20	18.80
6	11400.00	46.5 AV	54.0	-7.5	2.11 V	251	27.70	18.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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.

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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	97.8 PK			3.24 H	202	58.20	39.60
2	*5270.00	87.6 AV			3.24 H	202	48.00	39.60
3	5350.00	57.1 PK	74.0	-16.9	2.41 H	262	50.60	6.50
4	5350.00	44.5 AV	54.0	-9.5	2.41 H	262	38.00	6.50
5	#10540.00	59.0 PK	74.0	-15.0	1.82 H	139	40.00	19.00
6	#10540.00	46.5 AV	54.0	-7.5	1.82 H	139	27.50	19.00
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	*5270.00	115.8 PK			1.63 V	284	76.20	39.60
2	*5270.00	105.7 AV			1.63 V	284	66.10	39.60
3	5350.00	58.8 PK	74.0	-15.2	1.77 V	258	52.30	6.50
4	5350.00	46.2 AV	54.0	-7.8	1.77 V	258	39.70	6.50
5	#10540.00	59.3 PK	74.0	-14.7	1.67 V	311	40.30	19.00
6	#10540.00	46.6 AV	54.0	-7.4	1.67 V	311	27.60	19.00

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)
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	91.9 PK			3.32 H	168	52.20	39.70
2	*5310.00	81.8 AV			3.32 H	168	42.10	39.70
3	5350.00	57.7 PK	74.0	-16.3	2.63 H	182	51.20	6.50
4	5350.00	34.5 AV	54.0	-19.5	2.63 H	182	28.00	6.50
5	10620.00	58.9 PK	74.0	-15.1	2.38 H	157	40.00	18.90
6	10620.00	46.0 AV	54.0	-8.0	2.38 H	157	27.10	18.90
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	*5310.00	109.7 PK			1.63 V	117	70.00	39.70
2	*5310.00	99.7 AV			1.63 V	117	60.00	39.70
3	5350.00	66.7 PK	74.0	-7.3	1.61 V	134	60.20	6.50
4	5350.00	52.2 AV	54.0	-1.8	1.61 V	134	45.70	6.50
5	10620.00	59.5 PK	74.0	-14.5	1.28 V	69	40.60	18.90
6	10620.00	46.3 AV	54.0	-7.7	1.28 V	69	27.40	18.90

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)
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	5460.00	58.1 PK	74.0	-15.9	2.38 H	241	51.20	6.90
2	5460.00	45.1 AV	54.0	-8.9	2.38 H	241	38.20	6.90
3	#5470.00	57.9 PK	74.0	-16.1	2.52 H	308	51.00	6.90
4	#5470.00	44.6 AV	54.0	-9.4	2.52 H	308	37.70	6.90
5	*5510.00	95.2 PK			3.05 H	285	55.00	40.20
6	*5510.00	85.2 AV			3.05 H	285	45.00	40.20
7	11020.00	59.9 PK	74.0	-14.1	1.64 H	182	40.10	19.80
8	11020.00	46.6 AV	54.0	-7.4	1.64 H	182	26.80	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.9 PK	74.0	-12.1	2.41 V	29	55.00	6.90
2	5460.00	48.2 AV	54.0	-5.8	2.41 V	29	41.30	6.90
3	#5470.00	66.1 PK	74.0	-7.9	2.22 V	61	59.20	6.90
4	#5470.00	52.2 AV	54.0	-1.8	2.22 V	61	45.30	6.90
5	*5510.00	111.6 PK			2.39 V	305	71.40	40.20
6	*5510.00	101.6 AV			2.39 V	305	61.40	40.20
7	11020.00	59.0 PK	74.0	-15.0	1.67 V	205	39.20	19.80
8	11020.00	46.5 AV	54.0	-7.5	1.67 V	205	26.70	19.80

Remarks:

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) 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	*5550.00	101.3 PK			2.54 H	296	61.10	40.20
2	*5550.00	90.8 AV			2.54 H	296	50.60	40.20
3	11100.00	59.6 PK	74.0	-14.4	2.31 H	267	40.40	19.20
4	11100.00	46.7 AV	54.0	-7.3	2.31 H	267	27.50	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	115.8 PK			2.86 V	30	75.60	40.20
2	*5550.00	105.0 AV			2.86 V	30	64.80	40.20
3	11100.00	59.9 PK	74.0	-14.1	2.08 V	234	40.70	19.20
4	11100.00	47.0 AV	54.0	-7.0	2.08 V	234	27.80	19.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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	99.2 PK			2.95 H	313	58.90	40.30
2	*5670.00	88.6 AV			2.95 H	313	48.30	40.30
3	#5725.00	56.5 PK	74.0	-17.5	2.82 H	331	49.10	7.40
4	#5725.00	43.9 AV	54.0	-10.1	2.82 H	331	36.50	7.40
5	11340.00	59.2 PK	74.0	-14.8	1.69 H	254	40.00	19.20
6	11340.00	46.0 AV	54.0	-8.0	1.69 H	254	26.80	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.0 PK			2.56 V	308	71.70	40.30
2	*5670.00	102.0 AV			2.56 V	308	61.70	40.30
3	#5725.00	64.3 PK	74.0	-9.7	3.40 V	13	56.90	7.40
4	#5725.00	52.2 AV	54.0	-1.8	3.40 V	13	44.80	7.40
5	11340.00	58.0 PK	74.0	-16.0	2.11 V	258	38.80	19.20
6	11340.00	46.1 AV	54.0	-7.9	2.11 V	258	26.90	19.20

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)
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.

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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	84.6 PK			1.57 H	318	44.90	39.70
2	*5290.00	75.7 AV			1.57 H	318	36.00	39.70
3	5350.00	57.0 PK	74.0	-17.0	1.46 H	306	50.50	6.50
4	5350.00	45.1 AV	54.0	-8.9	1.46 H	306	38.60	6.50
5	#10580.00	59.2 PK	74.0	-14.8	1.17 H	264	40.20	19.00
6	#10580.00	46.5 AV	54.0	-7.5	1.17 H	264	27.50	19.00
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	*5290.00	104.1 PK			1.80 V	258	64.40	39.70
2	*5290.00	93.3 AV			1.80 V	258	53.60	39.70
3	5350.00	66.0 PK	74.0	-8.0	1.97 V	109	59.50	6.50
4	5350.00	52.4 AV	54.0	-1.6	1.97 V	109	45.90	6.50
5	#10580.00	59.7 PK	74.0	-14.3	1.64 V	182	40.70	19.00
6	#10580.00	48.2 AV	54.0	-5.8	1.64 V	182	29.20	19.00

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)
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	5460.00	57.8 PK	74.0	-16.2	2.56 H	352	50.90	6.90
2	5460.00	45.6 AV	54.0	-8.4	2.56 H	352	38.70	6.90
3	#5470.00	57.0 PK	74.0	-17.0	2.95 H	328	50.10	6.90
4	#5470.00	44.6 AV	54.0	-9.4	2.95 H	328	37.70	6.90
5	*5530.00	86.3 PK			3.28 H	306	46.10	40.20
6	*5530.00	76.6 AV			3.28 H	306	36.40	40.20
7	11060.00	59.9 PK	74.0	-14.1	1.84 H	254	40.40	19.50
8	11060.00	47.0 AV	54.0	-7.0	1.84 H	254	27.50	19.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.4 PK	74.0	-11.6	2.42 V	181	55.50	6.90
2	5460.00	49.1 AV	54.0	-4.9	2.42 V	181	42.20	6.90
3	#5470.00	68.3 PK	74.0	-5.7	2.62 V	195	61.40	6.90
4	#5470.00	52.5 AV	54.0	-1.5	2.62 V	195	45.60	6.90
5	*5530.00	103.4 PK			2.80 V	317	63.20	40.20
6	*5530.00	93.6 AV			2.80 V	317	53.40	40.20
7	11060.00	59.6 PK	74.0	-14.4	2.42 V	273	40.10	19.50
8	11060.00	46.2 AV	54.0	-7.8	2.42 V	273	26.70	19.50

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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 worst-case data

802.11a

CHANNEL	TX Channel 116	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	57.12	32.4 QP	40.0	-7.6	2.00 H	74	46.90	-14.50
2	90.17	40.0 QP	43.5	-3.5	2.00 H	243	59.60	-19.60
3	160.17	36.7 QP	43.5	-6.8	1.00 H	255	50.30	-13.60
4	253.49	32.6 QP	46.0	-13.4	1.50 H	114	46.60	-14.00
5	624.85	34.0 QP	46.0	-12.0	1.00 H	218	39.10	-5.10
6	751.23	39.9 QP	46.0	-6.1	1.00 H	133	42.70	-2.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.12	38.4 QP	40.0	-1.6	1.50 V	17	52.90	-14.50
2	86.66	38.9 QP	40.0	-1.1	1.00 V	144	58.50	-19.60
3	160.17	35.0 QP	43.5	-8.5	1.00 V	144	48.60	-13.60
4	249.60	38.2 QP	46.0	-7.8	1.99 V	176	52.30	-14.10
5	342.93	29.8 QP	46.0	-16.2	1.00 V	176	41.10	-11.30
6	751.23	40.8 QP	46.0	-5.2	1.00 V	190	43.60	-2.80

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable 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.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 16, 2015	Nov. 15, 2016
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2015	Dec. 25, 2016
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2015	Jul. 23, 2016
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 HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

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.

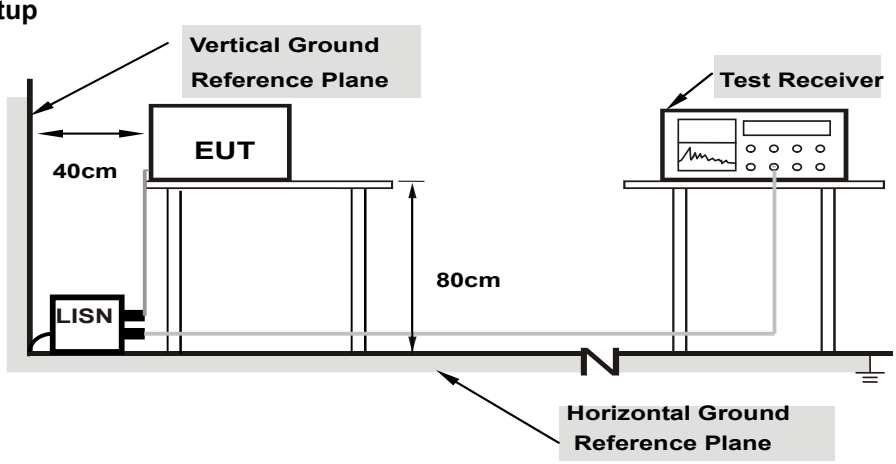
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

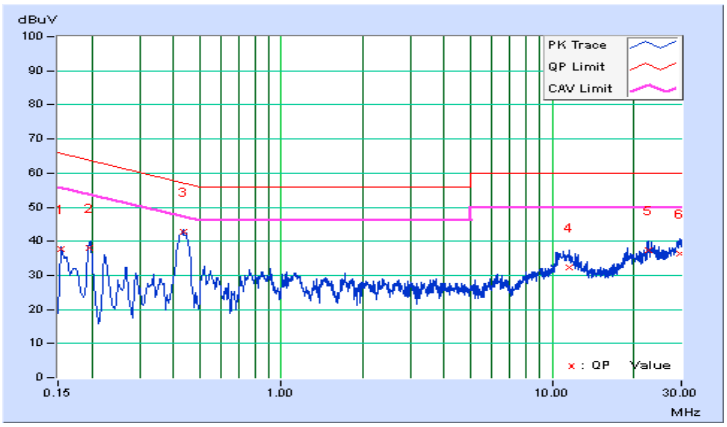
4.2.7 Test Results

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	0.15400	10.08	27.67	14.65	37.75	24.73	65.78	55.78	-28.04	-31.06
2	0.19676	10.08	28.13	18.05	38.21	28.13	63.75	53.75	-25.54	-25.62
3	**0.43400**	**10.18**	**32.59**	**22.95**	**42.77**	**33.13**	**57.18**	**47.18**	**-14.41**	**-14.05**
4	11.55400	10.86	21.59	16.33	32.45	27.19	60.00	50.00	-27.55	-22.81
5	22.73800	11.59	25.89	22.30	37.48	33.89	60.00	50.00	-22.52	-16.11
6	29.78200	12.06	24.17	18.90	36.23	30.96	60.00	50.00	-23.77	-19.04

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.

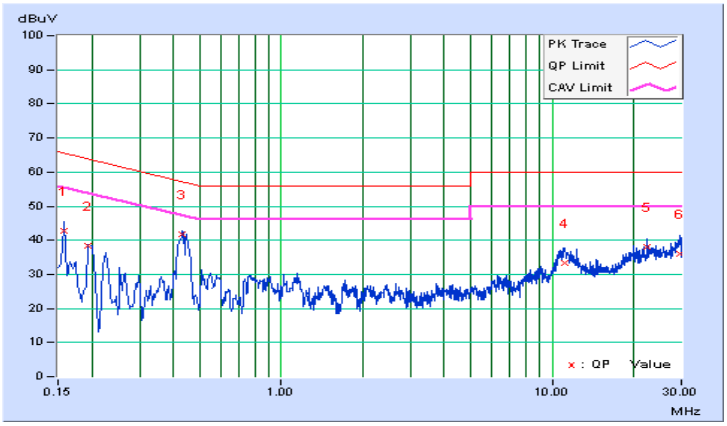


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.15800	10.08	32.84	21.33	42.92	31.41	65.57	55.57	-22.64	-24.15
2	0.19418	10.08	28.28	17.65	38.36	27.73	63.86	53.86	-25.50	-26.13
3	0.43028	10.24	31.38	22.70	41.62	32.94	57.25	47.25	-15.62	-14.30
4	11.13800	10.93	22.41	17.04	33.34	27.97	60.00	50.00	-26.66	-22.03
5	22.46200	11.75	26.21	23.53	37.96	35.28	60.00	50.00	-22.04	-14.72
6	29.76200	12.26	23.90	18.54	36.16	30.80	60.00	50.00	-23.84	-19.20

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

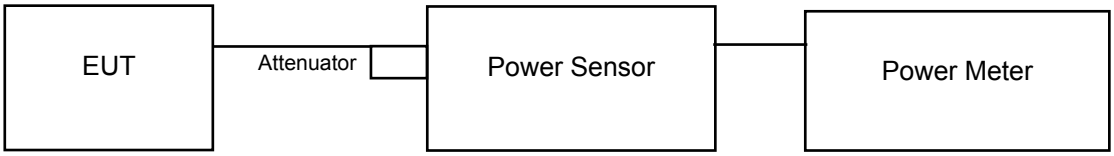
4.3.1 Limits of Transmit Power Measurement

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



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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.

4.3.5 Deviation fromTest 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 Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	**242.103**	23.84	24.00	Pass
60	5300	209.411	23.21	24.00	Pass
64	5320	77.446	18.89	24.00	Pass
100	5500	72.946	18.63	24.00	Pass
116	5580	**248.886**	23.96	24.00	Pass
140	5700	38.194	15.82	24.00	Pass

Note:
1. 11dBm + 10log(28.76)= 25.59>24dBm
2. 11dBm + 10log(25.81)= 25.12>24dBm
3. 11dBm + 10log(22.24)= 24.47>24dBm
4. 11dBm + 10log(21.95)= 24.41>24dBm
5. 11dBm + 10log(30.64)= 25.86>24dBm
6. 11dBm + 10log(22.14)= 24.45>24dBm

802.11n (HT20)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
52	5260	15.23	15.20	15.28	100.185	20.01	24.00	Pass
60	5300	15.76	15.66	15.80	112.502	20.51	24.00	Pass
64	5320	16.28	16.15	16.17	125.072	20.97	24.00	Pass
100	5500	16.31	16.19	16.91	133.438	21.25	24.00	Pass
116	5580	15.86	15.93	16.20	119.409	20.77	24.00	Pass
140	5700	15.08	15.29	14.75	95.871	19.82	24.00	Pass

Note:
Chain 0
1. 11dBm + 10log(22.79)= 24.58>24dBm
2. 11dBm + 10log(22.48)= 24.52>24dBm
3. 11dBm + 10log(22.13)= 24.45>24dBm
4. 11dBm + 10log(22.41)= 24.50>24dBm
5. 11dBm + 10log(21.89)= 24.40>24dBm
6. 11dBm + 10log(23.42)= 24.70>24dBm
Chain 1
1. 11dBm + 10log(22.24)= 24.47>24dBm
2. 11dBm + 10log(22.18)= 24.46>24dBm
3. 11dBm + 10log(22.01)= 24.43>24dBm
4. 11dBm + 10log(22.50)= 24.52>24dBm
5. 11dBm + 10log(22.62)= 24.54>24dBm
6. 11dBm + 10log(23.07)= 24.63>24dBm
Chain 2
1. 11dBm + 10log(22.20)= 24.46>24dBm
2. 11dBm + 10log(22.04)= 24.43>24dBm
3. 11dBm + 10log(22.07)= 24.44>24dBm
4. 11dBm + 10log(22.57)= 24.54>24dBm
5. 11dBm + 10log(21.99)= 24.42>24dBm
6. 11dBm + 10log(23.56)= 24.72>24dBm

802.11n (HT40)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
54	5270	18.91	18.64	19.04	231.086	23.64	24.00	Pass
62	5310	12.17	12.31	12.72	52.211	17.18	24.00	Pass
102	5510	13.32	13.48	14.86	74.382	18.71	24.00	Pass
110	5550	18.55	18.77	20.01	247.181	23.93	24.00	Pass
134	5670	15.97	16.36	15.56	118.763	20.75	24.00	Pass

Note:
Chain 0
1. 11dBm + 10log(46.23)= 27.65>24dBm
2. 11dBm + 10log(47.07)= 27.73>24dBm
3. 11dBm + 10log(46.43)= 27.67>24dBm
4. 11dBm + 10log(44.85)= 27.52>24dBm
5. 11dBm + 10log(45.57)= 27.59>24dBm

Chain 1
1. 11dBm + 10log(45.49)= 27.58>24dBm
2. 11dBm + 10log(44.61)= 27.49>24dBm
3. 11dBm + 10log(44.61)= 27.49>24dBm
4. 11dBm + 10log(44.59)= 27.49>24dBm
5. 11dBm + 10log(44.76)= 27.51>24dBm

Chain 2
1. 11dBm + 10log(45.79)= 27.61>24dBm
2. 11dBm + 10log(46.57)= 27.68>24dBm
3. 11dBm + 10log(45.85)= 27.61>24dBm
4. 11dBm + 10log(44.99)= 27.53>24dBm
5. 11dBm + 10log(47.09)= 27.73>24dBm

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
52	5260	15.30	15.36	15.33	102.359	20.10	24.00	Pass
60	5300	15.79	15.71	15.86	113.718	20.56	24.00	Pass
64	5320	15.88	15.79	15.74	114.154	20.57	24.00	Pass
100	5500	15.92	15.75	16.51	121.439	20.84	24.00	Pass
116	5580	15.43	15.63	15.76	109.143	20.38	24.00	Pass
140	5700	14.76	14.82	14.32	87.302	19.41	24.00	Pass

Note:
Chain 0
1. 11dBm + 10log(24.00)= 24.80>24dBm
2. 11dBm + 10log(23.52)= 24.71>24dBm
3. 11dBm + 10log(24.04)= 24.81>24dBm
4. 11dBm + 10log(23.17)= 24.65>24dBm
5. 11dBm + 10log(23.87)= 24.78>24dBm
6. 11dBm + 10log(23.72)= 24.75>24dBm

Chain 1
1. 11dBm + 10log(23.76)= 24.76>24dBm
2. 11dBm + 10log(23.82)= 24.77>24dBm
3. 11dBm + 10log(24.00)= 24.80>24dBm
4. 11dBm + 10log(23.43)= 24.70>24dBm
5. 11dBm + 10log(22.99)= 24.62>24dBm
6. 11dBm + 10log(23.69)= 24.75>24dBm

Chain 2
1. 11dBm + 10log(23.49)= 24.71>24dBm
2. 11dBm + 10log(24.07)= 24.81>24dBm
3. 11dBm + 10log(23.05)= 24.63>24dBm
4. 11dBm + 10log(23.34)= 24.68>24dBm
5. 11dBm + 10log(23.24)= 24.66>24dBm
6. 11dBm + 10log(23.76)= 24.76>24dBm

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
54	5270	17.88	17.58	18.01	181.897	22.60	24.00	Pass
62	5310	12.23	12.36	12.74	52.723	17.22	24.00	Pass
102	5510	13.35	13.52	14.88	74.879	18.74	24.00	Pass
110	5550	17.02	17.34	18.52	175.671	22.45	24.00	Pass
134	5670	15.99	16.39	15.61	119.662	20.78	24.00	Pass

Note:
Chain 0
1. 11dBm + 10log(46.35)= 27.66>24dBm
2. 11dBm + 10log(46.42)= 27.67>24dBm
3. 11dBm + 10log(47.07)= 27.73>24dBm
4. 11dBm + 10log(45.18)= 27.55>24dBm
5. 11dBm + 10log(46.26)= 27.65>24dBm
Chain 1
1. 11dBm + 10log(45.31)= 27.56>24dBm
2. 11dBm + 10log(45.61)= 27.59>24dBm
3. 11dBm + 10log(44.86)= 27.52>24dBm
4. 11dBm + 10log(44.74)= 27.51>24dBm
5. 11dBm + 10log(46.06)= 27.63>24dBm
Chain 2
1. 11dBm + 10log(45.55)= 27.58>24dBm
2. 11dBm + 10log(45.96)= 27.62>24dBm
3. 11dBm + 10log(45.55)= 27.58>24dBm
4. 11dBm + 10log(44.51)= 27.48>24dBm
5. 11dBm + 10log(44.39)= 27.47>24dBm

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (dBm)			Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
58	5290	8.36	8.48	8.86	21.593	13.34	24.00	Pass
106	5530	8.90	9.18	10.65	27.655	14.42	24.00	Pass

Note:
Chain 0
1. 11dBm + 10log(88.74)= 30.48>24dBm
2. 11dBm + 10log(90.06)= 30.55>24dBm
Chain 1
1. 11dBm + 10log(88.12)= 30.45>24dBm
2. 11dBm + 10log(87.61)= 30.43>24dBm
Chain 2
1. 11dBm + 10log(87.98)= 30.44>24dBm
2. 11dBm + 10log(89.79)= 30.53>24dBm

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
52	5260	28.76
60	5300	25.81
64	5320	22.24
100	5500	21.95
116	5580	30.64
140	5700	22.14

802.11n (HT20)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
52	5260	22.79	22.24	22.20
60	5300	22.48	22.18	22.04
64	5320	22.13	22.01	22.07
100	5500	22.41	22.50	22.57
116	5580	21.89	22.62	21.99
140	5700	23.42	23.07	23.56

802.11n (HT40)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
54	5270	46.23	45.49	45.79
62	5310	47.07	44.61	46.57
102	5510	46.43	44.61	45.85
110	5550	44.85	44.59	44.99
134	5670	45.57	44.76	47.09

802.11ac (VHT20)

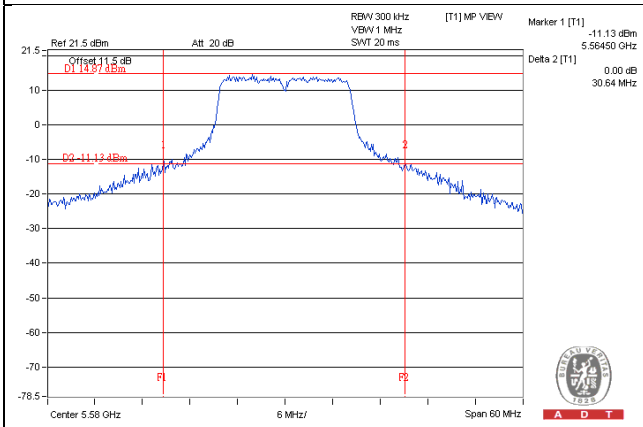
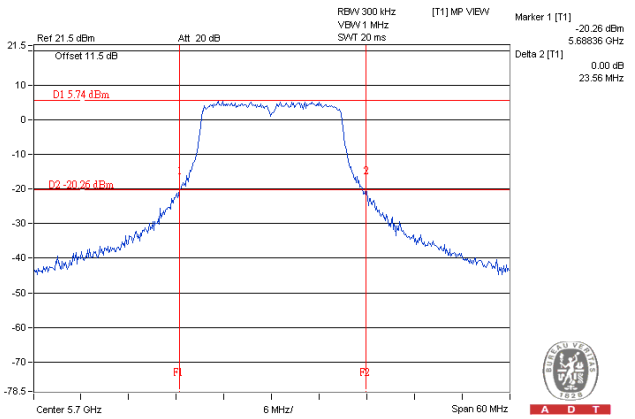
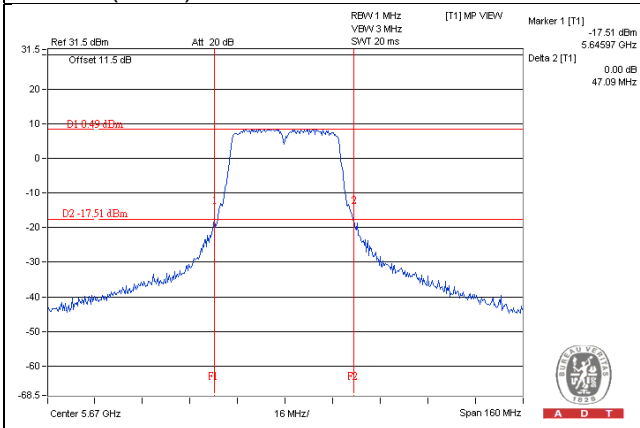
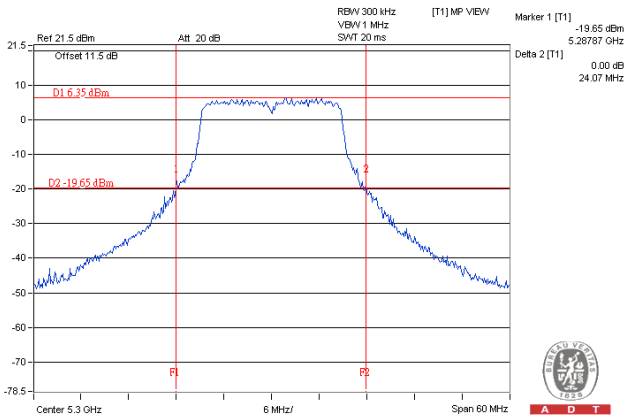
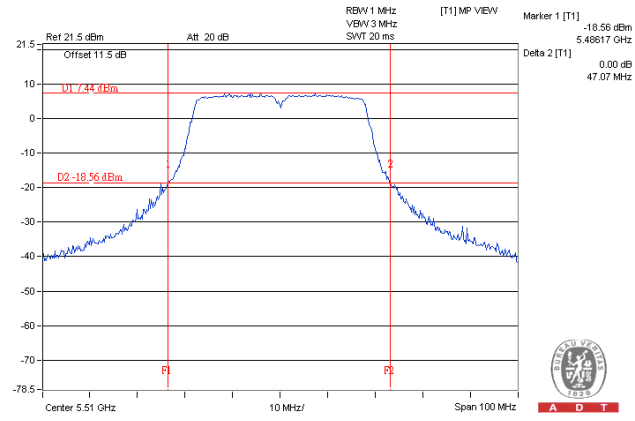
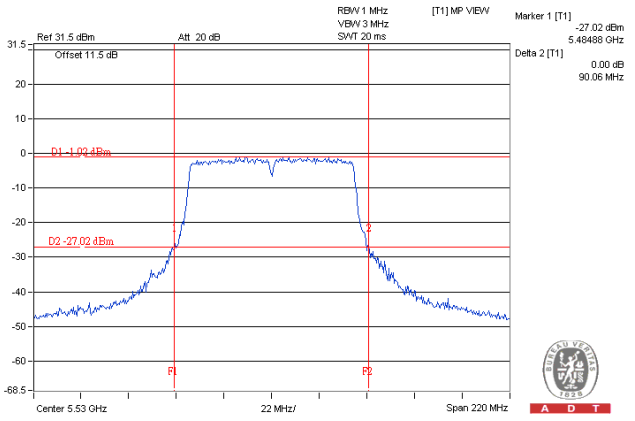
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
52	5260	24.00	23.76	23.49
60	5300	23.52	23.82	24.07
64	5320	24.04	24.00	23.05
100	5500	23.17	23.43	23.34
116	5580	23.87	22.99	23.24
140	5700	23.72	23.69	23.76

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
54	5270	46.35	45.31	45.55
62	5310	46.42	45.61	45.96
102	5510	47.07	44.86	45.55
110	5550	45.18	44.74	44.51
134	5670	46.26	46.06	44.39

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
58	5290	88.74	88.12	87.98
106	5530	90.06	87.61	89.79

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Occupied Bandwidth:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
52	5260	17.04
60	5300	16.92
64	5320	16.80
100	5500	16.68
116	5580	17.28
140	5700	16.80

802.11n (HT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
52	5260	16.80	16.68	16.80
60	5300	16.80	16.80	16.68
64	5320	16.80	16.80	16.68
100	5500	16.68	16.80	16.68
116	5580	16.80	16.80	16.80
140	5700	17.88	17.88	17.88

802.11n (HT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
54	5270	36.72	36.72	36.72
62	5310	36.72	36.72	36.60
102	5510	36.72	36.72	36.60
110	5550	36.60	36.72	36.72
134	5670	36.72	36.60	36.60

802.11ac (VHT20)

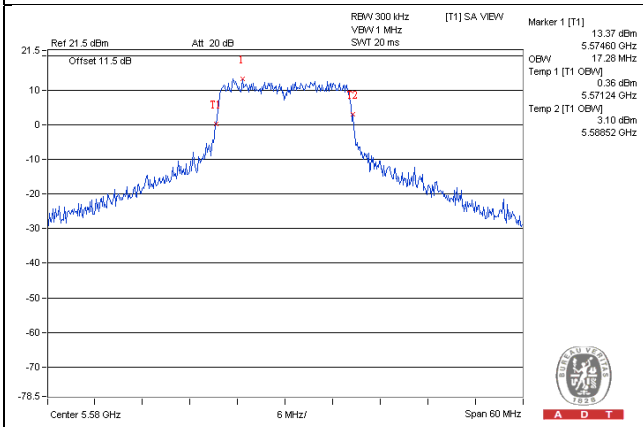
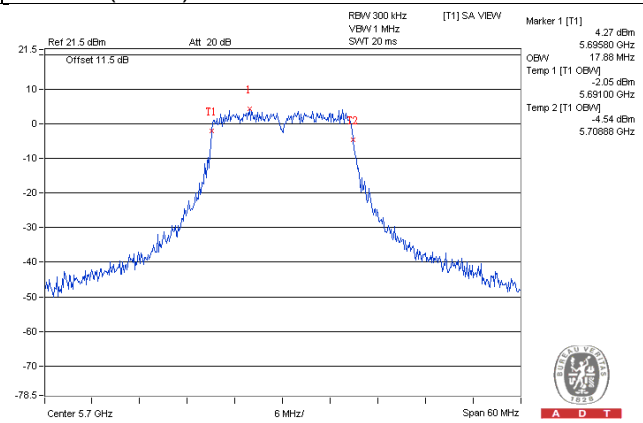
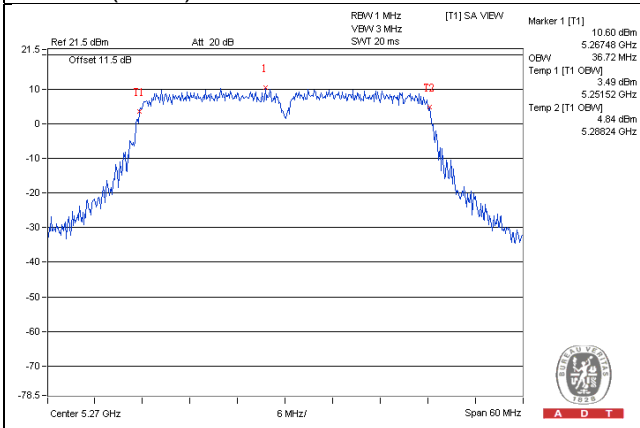
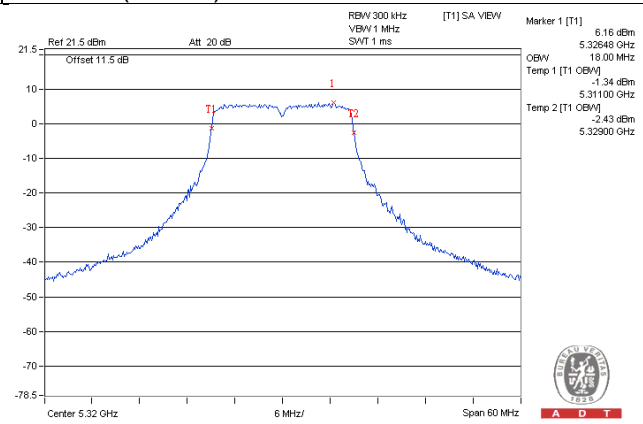
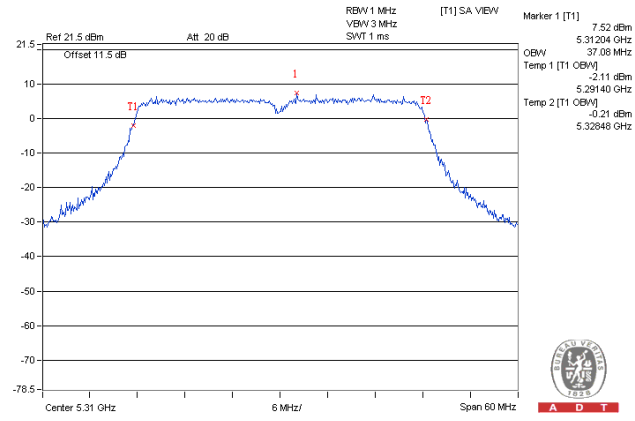
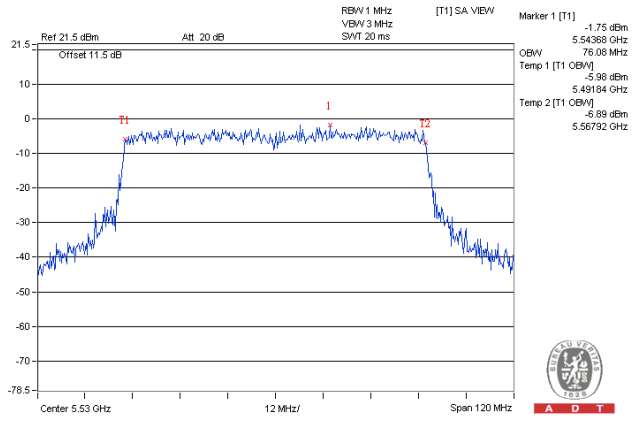
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
52	5260	17.88	17.88	17.88
60	5300	17.88	17.88	17.88
64	5320	18.00	17.88	17.88
100	5500	17.88	17.88	17.88
116	5580	17.88	17.88	17.88
140	5700	18.00	17.88	17.88

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
54	5270	36.96	36.96	36.84
62	5310	36.96	36.84	37.08
102	5510	36.96	36.96	36.84
110	5550	36.96	36.84	36.84
134	5670	36.96	36.96	36.84

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)		
		Chain 0	Chain 1	Chain 2
58	5290	76.08	76.08	75.84
106	5530	76.08	76.08	76.08

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	242.103	23.84
5470~5725	248.886	23.96

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	125.072	20.97
5470~5725	133.438	21.25

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	231.086	23.64
5470~5725	247.181	23.93

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	114.154	20.57
5470~5725	121.439	20.84

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	181.897	22.60
5470~5725	175.671	22.45

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	21.593	13.34
5470~5725	27.655	14.42

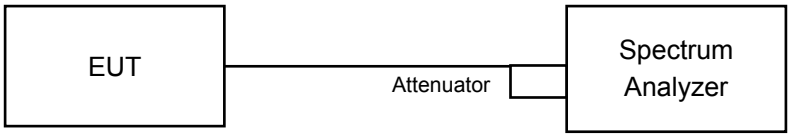
Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

Using method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, 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 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

802.11a

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
52	5260	8.92	0.22	9.14	11.00	Pass
60	5300	8.24	0.22	8.46	11.00	Pass
64	5320	3.81	0.22	4.03	11.00	Pass
100	5500	3.82	0.22	4.04	11.00	Pass
116	5580	9.09	0.22	9.31	11.00	Pass
140	5700	1.58	0.22	1.80	11.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Frequency (MHz)	PSD (dBm/MHz)			Total PSD W/O Duty Factor (dBm/MHz)	Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2					
52	5260	0.70	0.76	0.76	5.51	0.21	5.72	6.63	Pass
60	5300	0.76	0.85	1.16	5.70	0.21	5.91	6.63	Pass
64	5320	0.85	1.28	1.39	5.95	0.21	6.16	6.63	Pass
100	5500	0.45	0.99	1.85	5.91	0.21	6.12	6.63	Pass
116	5580	0.58	1.24	1.31	5.83	0.21	6.04	6.63	Pass
140	5700	-0.10	-0.08	0.04	4.73	0.21	4.94	6.63	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.6dBi + 10log(3) = 10.37dBi > 6dBi, so the power density limit shall be reduced to 11-(10.37-6) = 6.63dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Frequency (MHz)	PSD (dBm/MHz)			Total PSD W/O Duty Factor (dBm/MHz)	Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2					
54	5270	0.04	1.03	0.86	5.44	0.44	5.88	6.63	Pass
62	5310	-6.83	-5.83	-6.19	-1.49	0.44	-1.05	6.63	Pass
102	5510	-5.21	-3.74	-5.41	0.05	0.44	0.49	6.63	Pass
110	5550	0.54	1.45	0.74	5.70	0.44	6.14	6.63	Pass
134	5670	-2.59	-2.63	-2.44	2.22	0.44	2.66	6.63	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.6dBi + 10log(3) = 10.37dBi > 6dBi, so the power density limit shall be reduced to 11-(10.37-6) = 6.63dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Frequency (MHz)	PSD (dBm/MHz)			Total PSD W/O Duty Factor (dBm/MHz)	Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2					
52	5260	0.20	1.21	0.66	5.48	0.14	5.62	6.63	Pass
60	5300	0.85	1.42	1.37	5.99	0.14	6.13	6.63	Pass
64	5320	0.64	0.67	0.89	5.50	0.14	5.64	6.63	Pass
100	5500	0.28	0.86	1.32	5.61	0.14	5.75	6.63	Pass
116	5580	0.41	0.49	1.15	5.46	0.14	5.60	6.63	Pass
140	5700	0.28	1.12	0.14	5.30	0.14	5.44	6.63	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.6dBi + 10log(3) = 10.37dBi > 6dBi, so the power density limit shall be reduced to 11-(10.37-6) = 6.63dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

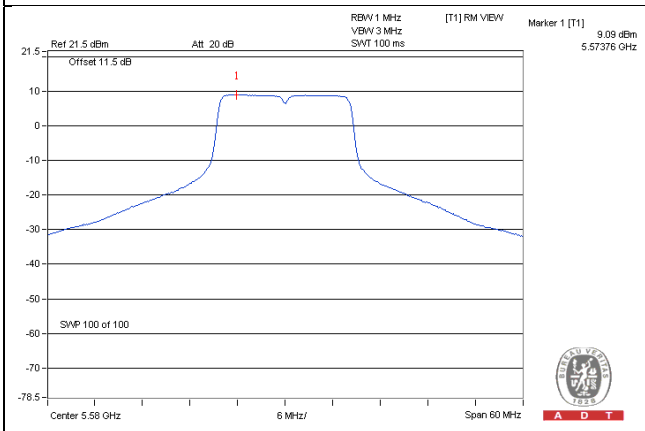
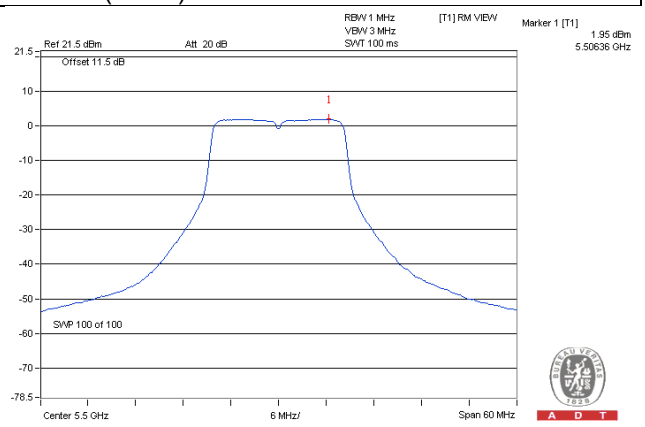
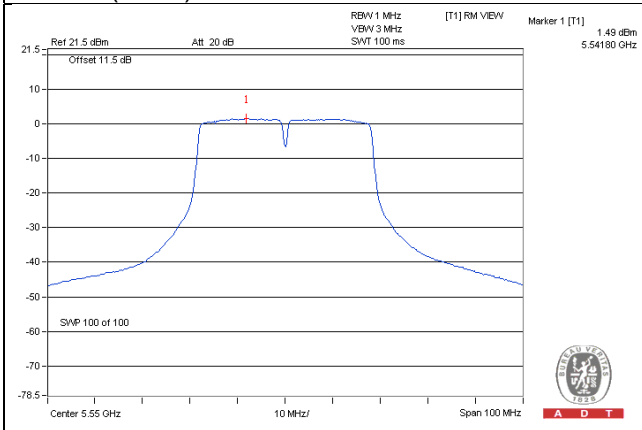
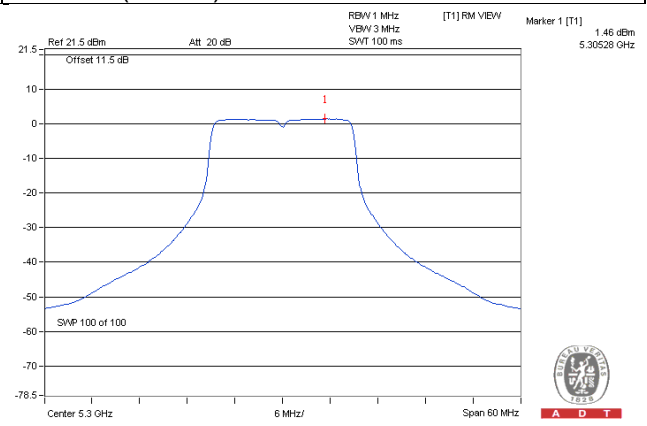
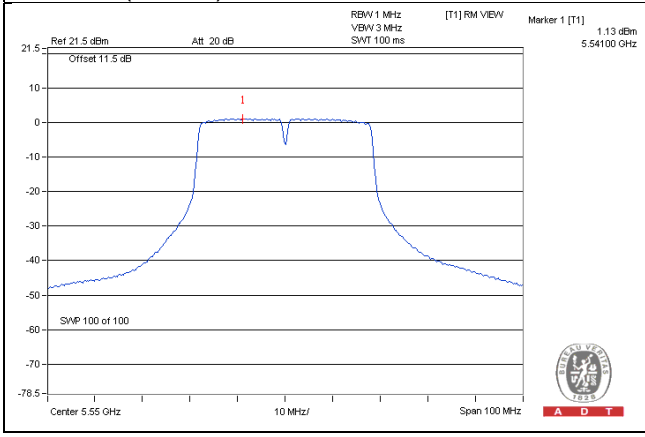
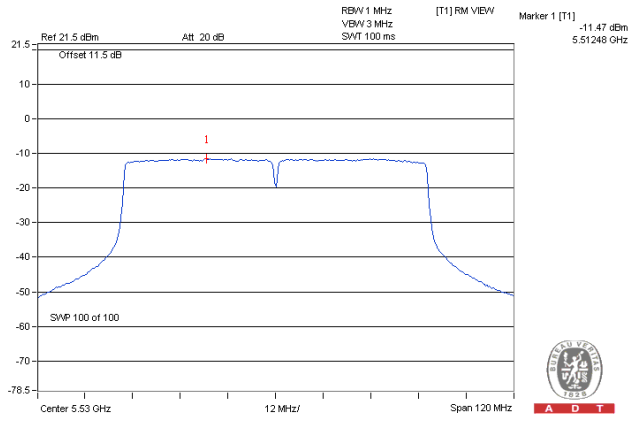
Chan.	Frequency (MHz)	PSD (dBm/MHz)			Total PSD W/O Duty Factor (dBm/MHz)	Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2					
54	5270	0.85	1.03	1.06	5.75	0.29	6.04	6.63	Pass
62	5310	-5.01	-4.13	-4.21	0.34	0.29	0.63	6.63	Pass
102	5510	-3.56	-2.84	-1.86	2.08	0.29	2.37	6.63	Pass
110	5550	0.08	0.71	1.08	5.42	0.29	5.71	6.63	Pass
134	5670	-1.03	-0.10	-0.98	4.09	0.29	4.38	6.63	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.6dBi + 10log(3) = 10.37dBi > 6dBi, so the power density limit shall be reduced to 11-(10.37-6) = 6.63dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Frequency (MHz)	PSD (dBm/MHz)			Total PSD W/O Duty Factor (dBm/MHz)	Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2					
58	5290	-13.54	-12.86	-12.88	-8.31	0.71	-7.60	6.63	Pass
106	5530	-12.73	-11.51	-12.89	-7.56	0.71	-6.85	6.63	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5.6dBi + 10log(3) = 10.37dBi > 6dBi, so the power density limit shall be reduced to 11-(10.37-6) = 6.63dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

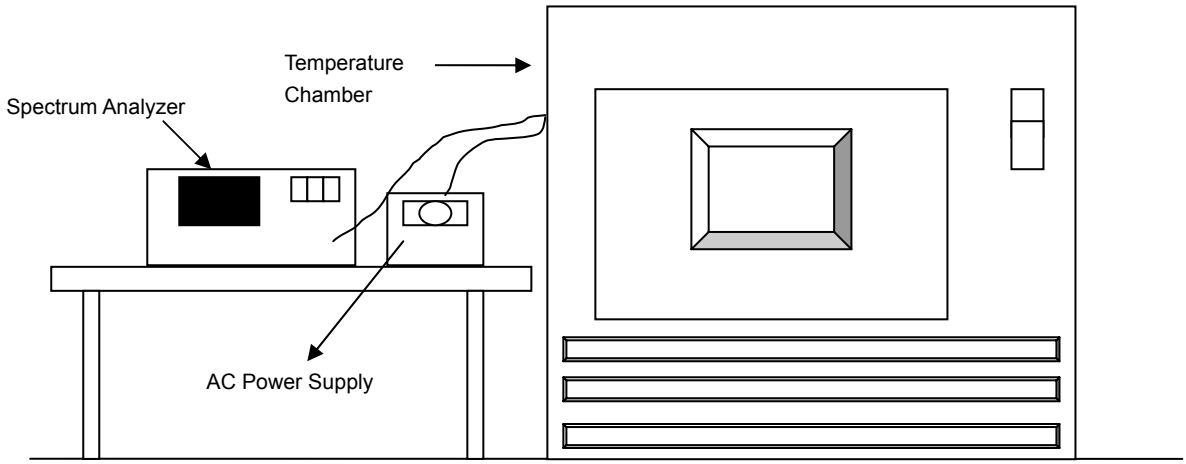
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20) / Ch 100 / Chain 2
	
802.11n (HT40) / Ch 110 / Chain 1	802.11ac (VHT20) / Ch 60 / Chain 1
	
802.11ac (VHT40) / Ch 110 / Chain 2	802.11ac (VHT80) / Ch 106 / Chain 1
	

4.5 Frequency Stability

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

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.

e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.

f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5260MHz									
Temp. (℃)	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 (%)
70	120	5259.9943	-0.00011	5259.9938	-0.00012	5259.9967	-0.00006	5259.9979	-0.00004
60	120	5259.9978	-0.00004	5259.9988	-0.00002	5260.0005	0.00001	5259.9965	-0.00007
50	120	5260.0239	0.00045	5260.0271	0.00052	5260.0259	0.00049	5260.0264	0.00050
40	120	5259.9916	-0.00016	5259.9909	-0.00017	5259.9915	-0.00016	5259.9910	-0.00017
30	120	5259.9967	-0.00006	5259.9959	-0.00008	5259.9960	-0.00008	5259.9959	-0.00008
20	120	5260.0056	0.00011	5260.0056	0.00011	5260.0050	0.00010	5260.0035	0.00007
10	120	5259.9965	-0.00007	5259.9973	-0.00005	5259.9954	-0.00009	5259.9949	-0.00010
0	120	5260.0061	0.00012	5260.0061	0.00012	5260.0052	0.00010	5260.0075	0.00014
-10	120	5259.9795	-0.00039	5259.9792	-0.00040	5259.9801	-0.00038	5259.9812	-0.00036
-20	120	5260.0267	0.00051	5260.0252	0.00048	5260.0246	0.00047	5260.0255	0.00048
-30	120	5260.0090	0.00017	5260.0121	0.00023	5260.0115	0.00022	5260.0087	0.00017
-40	120	5260.0263	0.00050	5260.0271	0.00052	5260.0276	0.00052	5260.0249	0.00047

Frequency Stability Versus Temp.									
Operating Frequency: 5260MHz									
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	5260.0050	0.00010	5260.0057	0.00011	5260.0040	0.00008	5260.0031	0.00006
	120	5260.0056	0.00011	5260.0056	0.00011	5260.0050	0.00010	5260.0035	0.00007
	102	5260.0065	0.00012	5260.0047	0.00009	5260.0050	0.00010	5260.0032	0.00006

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:

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

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