

## FCC Test Report

**Report No.:** RF160725C02B

**FCC ID:** UDX-60052010

**Test Model:** MR33-HW

**Received Date:** Jul. 25, 2016

**Test Date:** Jul. 25 ~ Aug. 31, 2016

**Issued Date:** Sep. 12, 2016

**Applicant:** Cisco Systems, Inc.

**Address:** 170 West Tasman Drive, San Jose, CA 95134

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

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**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
RF160725C02B	Original release	Sep. 12, 2016

## 1 Certificate of Conformity

**Product:** Wireless 802.11 abgn/ac indoor AP

**Brand:** Cisco

**Test Model:** MR33-HW

**Sample Status:** Engineering sample

**Applicant:** Cisco Systems, Inc.

**Test Date:** Jul. 25 ~ Aug. 31, 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 :** Celine Chou , **Date:** Sep. 12, 2016  
Celine Chou / Specialist

**Approved by :** Ken Liu , **Date:** Sep. 12, 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
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -12.99dB at 0.15000MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.1dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

### 2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) ( $\pm$ )
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	Wireless 802.11 abgn/ac indoor AP
Brand	Cisco
Test Model	MR33-HW
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter 48Vdc or 55Vdc from POE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
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 450Mbps 802.11ac: up to 1300Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5700MHz
Number of Channel	5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500 ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 8 802.11n (HT40), 802.11ac (VHT40): 3 802.11ac (VHT80): 1
Output Power	Radio 2: CDD Mode 5260 ~ 5320MHz: 193.163mW 5500 ~ 5700MHz: 192.196mW Beamforming Mode 5260 ~ 5320MHz: 135.392mW 5500 ~ 5700MHz: 134.931mW Radio 3: CDD Mode 5260 ~ 5320MHz: 63.973mW 5500 ~ 5700MHz: 45.082mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Data Cable Supplied	NA

**Note:**

1. This report is prepared for FCC class III permissive change. The difference compared with the original report (BV ADT report no.: RF160725C02-1) is adding 5.26GHz to 5.32GHz and 5.50GHz to 5.70GHz by software.

2. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	TX Function	Beamforming	Remark
802.11a	2TX	Not Support	Radio 2
802.11n (HT20)	2TX	Support	
802.11n (HT40)	2TX	Support	
802.11ac (VHT20)	2TX	Support	
802.11ac (VHT40)	2TX	Support	
802.11ac (VHT80)	2TX	Support	
802.11a	1TX	Not Support	Radio 3
802.11n (HT20)	1TX	Not Support	
802.11n (HT40)	1TX	Not Support	
802.11ac (VHT20)	1TX	Not Support	
802.11ac (VHT40)	1TX	Not Support	
802.11ac (VHT80)	1TX	Not Support	

\*The modulation and bandwidth are similar for 802.11n mode for HT20/HT40 and 802.11ac mode for VHT20/VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

\* For 5GHz band, CDD mode is the worst case for final radiated emission below 1GHz and power line conducted emission tests after pretesting CDD mode and beamforming mode.

3. The EUT consumes power from the following adapter and POE. (Support unit only)

Adapter	
Brand	CISCO
Model	KSAS0361200250HU
Input Power	100-240Vac, 50/60Hz, 1.0A
Output Power	12Vdc, 2.5A
Power Line	1.5m cable without core attached on adapter

POE	
Brand	CISCO
Model	MA-INJ-4
Input Power	100-240Vac, 50/60Hz, 0.67A
Output Power	55Vdc/ 0.6A
Power Line	1.4m non-shielded Power cable without core

4. The EUT with follow antennas gain is listed as table below.

No.	Type	Connector	Gain(dBi)		Remark
			2.4GHz	5GHz	
1	PIFA	IPEX	4.17	-	Radio 1 (WLAN)
2	PIFA	IPEX	3.74	-	
3	PIFA	IPEX	-	5.34	Radio 2 (WLAN)
4	PIFA	IPEX	-	5.71	
5	Printed	IPEX	5.67	-	Radio 4 (BT LE)
6	Printed	IPEX	4.65	5.50	Radio 3 (WLAN)



5. 2.4GHz, 5GHz and BT LE technology can transmit at same time.
6. Spurious emission of the simultaneous operation (2.4GHz, 5GHz and BT LE) has been evaluated and no non-compliance was found.
7. The EUT has disabled the 5600-5650MHz band by S/W to avoid 5600-5650MHz.

### 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	5290 MHz

#### 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	5530 MHz

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by POE
B	-	√	√	-	Powered by adapter

Where **RE $\geq$ 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 **Z-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)	REMARK
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0	Radio 2 (2TX)
			52 to 64	52, 60, 64	OFDM	BPSK	6.0	Radio 3 (1TX)
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5	Radio 2 (2TX)
			52 to 64	52, 60, 64	OFDM	BPSK	6.5	Radio 3 (1TX)
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5	Radio 2 (2TX)
			54 to 62	54, 62	OFDM	BPSK	13.5	Radio 3 (1TX)
A	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5	Radio 2 (2TX)
			58	58	OFDM	BPSK	29.3	Radio 3 (1TX)
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0	Radio 2 (2TX)
			100 to 140	100, 116, 140	OFDM	BPSK	6.0	Radio 3 (1TX)
A	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5	Radio 2 (2TX)
			100 to 140	100, 116, 140	OFDM	BPSK	6.5	Radio 3 (1TX)
A	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5	Radio 2 (2TX)
			102 to 134	102, 110, 134	OFDM	BPSK	13.5	Radio 3 (1TX)
A	802.11ac (VHT80)		106	106	OFDM	BPSK	58.5	Radio 2 (2TX)
			106	106	OFDM	BPSK	29.3	Radio 3 (1TX)

#### 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)	REMARK
A, B	802.11a	5260-5320, 5500-5700	52 to 140	52	OFDM	BPSK	6.0	Radio 2 (2TX)
			52 to 140	52	OFDM	BPSK	6.0	Radio 3 (1TX)

### 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)	REMARK
A, B	802.11a	5260-5320, 5500-5700	52 to 140	52	OFDM	BPSK	6.0	Radio 2 (2TX)
			52 to 140	52	OFDM	BPSK	6.0	Radio 3 (1TX)

### 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)	REMARK	
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0	Radio 2 (2TX)	
			52 to 64	52, 60, 64	OFDM	BPSK	6.0	Radio 3 (1TX)	
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5	Radio 2 (2TX)	
			52 to 64	52, 60, 64	OFDM	BPSK	6.5	Radio 3 (1TX)	
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5	Radio 2 (2TX)	
			54 to 62	54, 62	OFDM	BPSK	13.5	Radio 3 (1TX)	
A	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5	Radio 2 (2TX)	
			58	58	OFDM	BPSK	29.3	Radio 3 (1TX)	
A	802.11a		5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0	Radio 2 (2TX)
				100 to 140	100, 116, 140	OFDM	BPSK	6.0	Radio 3 (1TX)
A	802.11n (HT20)	100 to 140		100, 116, 140	OFDM	BPSK	6.5	Radio 2 (2TX)	
		100 to 140		100, 116, 140	OFDM	BPSK	6.5	Radio 3 (1TX)	
A	802.11n (HT40)	102 to 134		102, 110, 134	OFDM	BPSK	13.5	Radio 2 (2TX)	
		102 to 134		102, 110, 134	OFDM	BPSK	13.5	Radio 3 (1TX)	
A	802.11ac (VHT80)	106		106	OFDM	BPSK	58.5	Radio 2 (2TX)	
		106		106	OFDM	BPSK	29.3	Radio 3 (1TX)	

### Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	16deg. C, 70%RH	120Vac, 60Hz	James Yang
RE<1G	19deg. C, 70%RH	120Vac, 60Hz 55Vdc	James Yang
PLC	23deg. C, 70%RH	120Vac, 60Hz 55Vdc	Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Ted Chang Frank Liu

### 3.3 Duty Cycle of Test Signal

#### Radio 2: CDD Mode

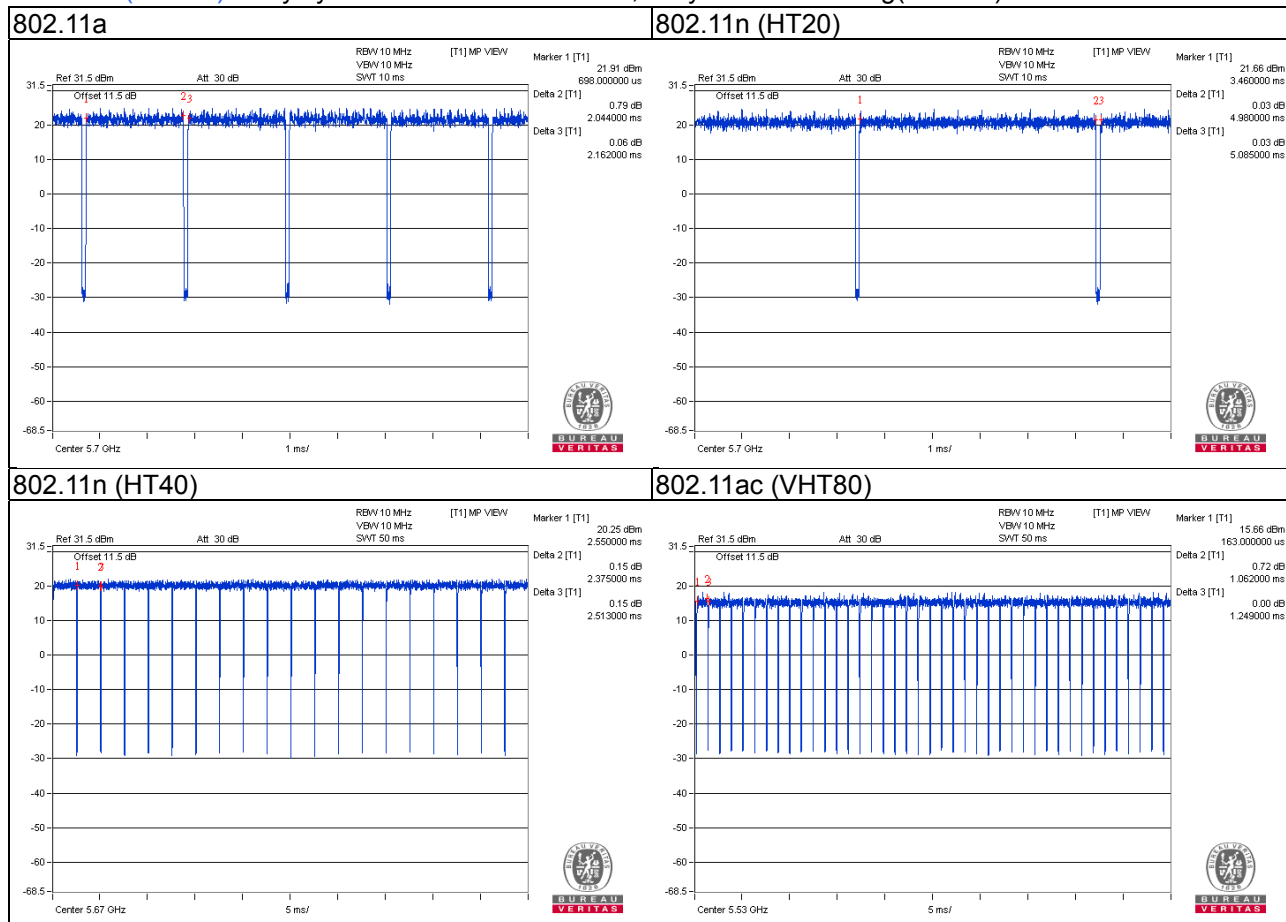
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle =  $2.044/2.162 = 0.945$ , Duty factor =  $10 * \log(1/0.945) = 0.24$

802.11n (HT20): Duty cycle =  $4.980/5.085 = 0.979$ , Duty factor =  $10 * \log(1/0.979) = 0.09$

802.11n (HT40): Duty cycle =  $2.375/2.513 = 0.945$ , Duty factor =  $10 * \log(1/0.945) = 0.25$

802.11ac (VHT80): Duty cycle =  $1.062/1.249 = 0.850$ , Duty factor =  $10 * \log(1/0.850) = 0.70$



## Radio 2: Beamforming Mode

802.11ac (VHT20): Duty cycle of test signal is > 98 %, duty factor is not required.

802.11ac (VHT40), 802.11ac (VHT80): Duty cycle of test signal is < 98 %, duty factor is required.

802.11ac (VHT20): Duty cycle =  $4.962/5.050 = 0.983$

802.11ac (VHT40): Duty cycle =  $2.375/2.500 = 0.950$ , Duty factor =  $10 * \log(1/0.950) = 0.22$

802.11ac (VHT80): Duty cycle =  $1.120/1.217 = 0.920$ , Duty factor =  $10 * \log(1/0.920) = 0.36$



### Radio 3: CDD Mode

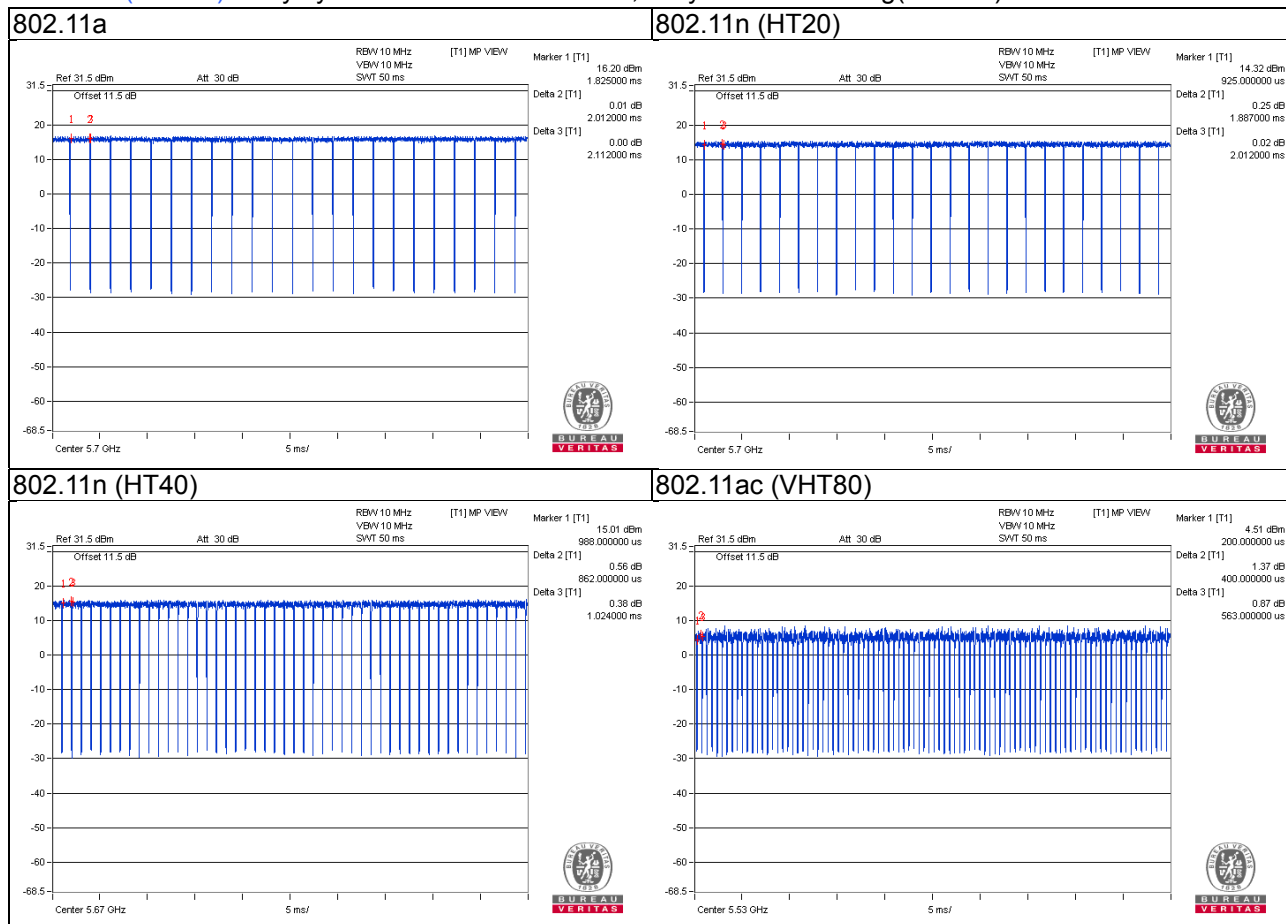
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle =  $2.012/2.112 = 0.953$ , Duty factor =  $10 * \log(1/0.953) = 0.21$

802.11n (HT20): Duty cycle =  $1.887/2.012 = 0.938$ , Duty factor =  $10 * \log(1/0.938) = 0.28$

802.11n (HT40): Duty cycle =  $0.862/1.024 = 0.842$ , Duty factor =  $10 * \log(1/0.842) = 0.75$

802.11ac (VHT80): Duty cycle =  $0.400/0.563 = 0.710$ , Duty factor =  $10 * \log(1/0.710) = 1.48$



### 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	6RP2YM1	FCC DoC Approved	-
B.	Adapter	CISCO	KSAS0361200250HU	N/A	N/A	Provided by manufacturer For test mode A only
C.	POE	CISCO	MA-INJ-4	N/A	N/A	Provided by manufacturer For test mode B only

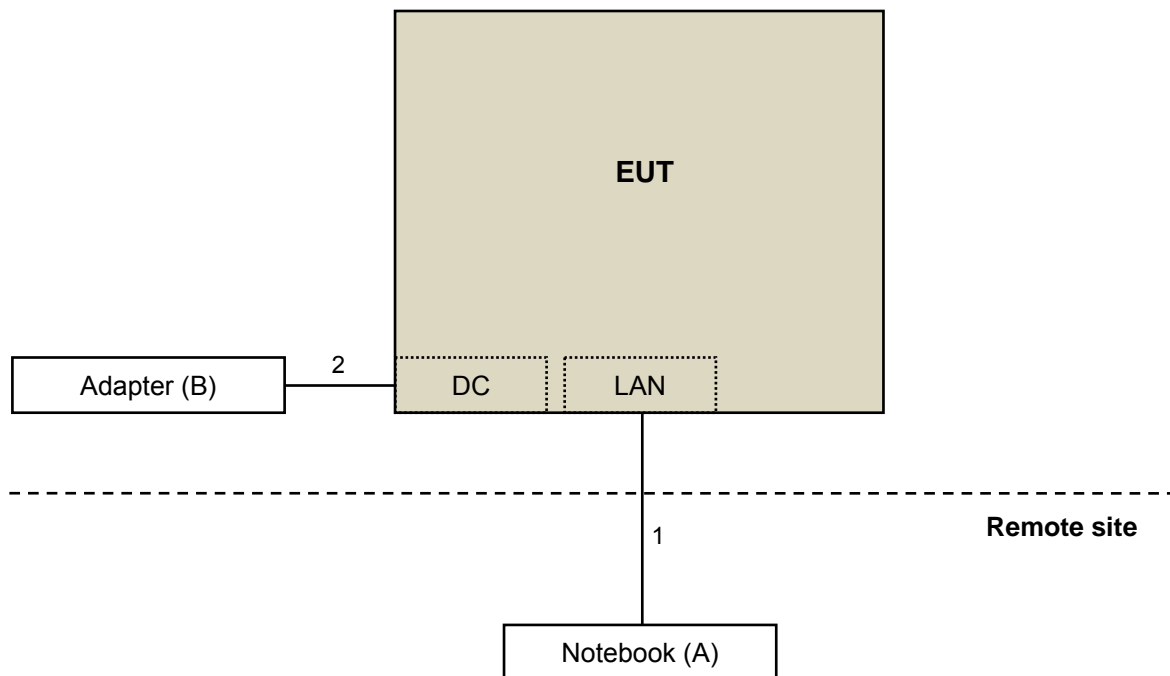
Note:

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

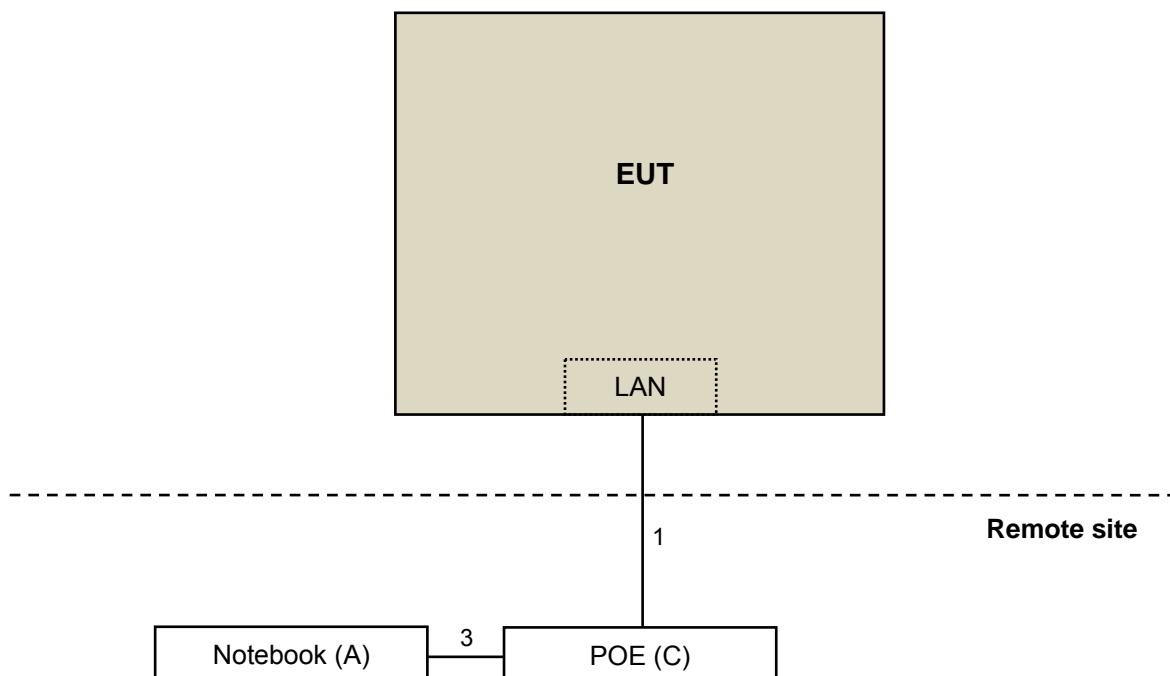
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 Cable	1	3	N	0	Cat5e
2.	Power Cable	1	1.5	N	0	For test mode A only
3.	RJ45 Cable	1	1.8	N	0	Cat5e For test mode B only

### 3.4.1 Configuration of System under Test

#### Test Mode A



#### Test Mode B





### **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 Procedure New Rules v01r03**

**KDB 662911 D01 Multiple Transmitter Output v02r01**

**ANSI C63.10-2013**

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

Note: The EUT 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 Procedure New Rules v01r03			Field Strength at 3m	
			PK:74 (dBµV/m)	AV:54 (dBµV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK:-27 (dBm/MHz)	PK:68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	<input checked="" type="checkbox"/>	15.407(b)(4)(i)	PK:-27 (dBm/MHz) <sup>*1</sup> PK:10 (dBm/MHz) <sup>*2</sup> PK:15.6 (dBm/MHz) <sup>*3</sup> PK:27 (dBm/MHz) <sup>*4</sup>	PK: 68.2(dBµV/m) <sup>*1</sup> PK:105.2 (dBµV/m) <sup>*2</sup> PK: 110.8(dBµV/m) <sup>*3</sup> PK:122.2 (dBµV/m) <sup>*4</sup>
	<input type="checkbox"/>	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
<sup>*1</sup> beyond 75 MHz or more above of the band edge.			<sup>*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
<sup>*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.			<sup>*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

#### 4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Apr. 18, 2016	Apr. 17, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Sep. 02, 2015	Sep. 01, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	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. 22, 2016	Aug. 21, 2016 Aug. 21, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (214378)	Aug. 22, 2015 Aug. 22, 2016	Aug. 21, 2016 Aug. 21, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 106	Cable-CH3-03 (309224+12738)	Aug. 22, 2015 Aug. 22, 2016	Aug. 21, 2016 Aug. 21, 2017
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. 09, 2016	Jul. 08, 2016 Jul. 08, 2017
Power Sensor	MA2411B	0738171	Jul. 09, 2015 Jul. 09, 2016	Jul. 08, 2016 Jul. 08, 2017
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2016	Jun. 07, 2017

- Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The 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:**

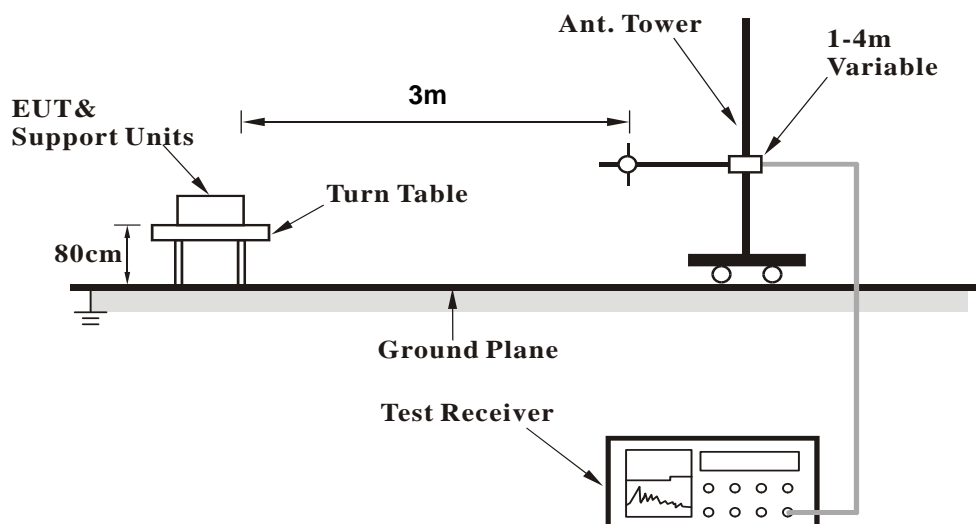
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

#### 4.1.4 Deviation from Test Standard

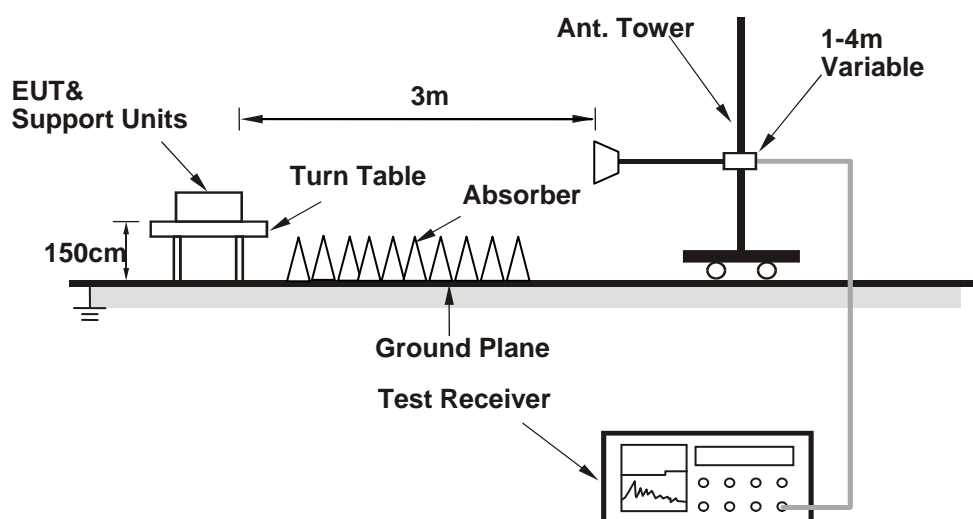
No deviation.

#### 4.1.5 Test 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

- Placed the EUT on the testing table.
- Prepared a notebook to act as a communication partner and placed it outside of testing area.
- 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.
- The communication partner sent data to EUT by command "PING".

#### 4.1.7 Test Results

Above 1GHz Worst-Case Data:

Radio 2: CDD Mode

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	1.78 H	211	50.8	6.0
2	5150.00	44.5 AV	54.0	-9.5	1.78 H	211	38.5	6.0
3	*5260.00	116.2 PK			1.04 H	283	76.6	39.6
4	*5260.00	105.6 AV			1.04 H	283	66.0	39.6
5	#10520.00	60.0 PK	74.0	-14.0	1.66 H	332	41.1	18.9
6	#10520.00	47.3 AV	54.0	-6.7	1.66 H	332	28.4	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	2.23 V	163	50.9	6.0
2	5150.00	43.8 AV	54.0	-10.2	2.23 V	163	37.8	6.0
3	*5260.00	117.8 PK			2.38 V	345	78.2	39.6
4	*5260.00	107.2 AV			2.38 V	345	67.6	39.6
5	#10520.00	60.2 PK	74.0	-13.8	1.66 V	298	41.3	18.9
6	#10520.00	47.3 AV	54.0	-6.7	1.66 V	298	28.4	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.5 PK			1.18 H	283	75.8	39.7
2	*5300.00	105.4 AV			1.18 H	283	65.7	39.7
3	10600.00	60.7 PK	74.0	-13.3	1.96 H	301	41.8	18.9
4	10600.00	47.5 AV	54.0	-6.5	1.96 H	301	28.6	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	117.9 PK			2.46 V	348	78.2	39.7
2	*5300.00	107.4 AV			2.46 V	348	67.7	39.7
3	10600.00	60.0 PK	74.0	-14.0	3.01 V	333	41.1	18.9
4	10600.00	47.7 AV	54.0	-6.3	3.01 V	333	28.8	18.9

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	115.1 PK			1.02 H	283	75.4	39.7
2	*5320.00	105.0 AV			1.02 H	283	65.3	39.7
3	5350.00	68.6 PK	74.0	-5.4	1.07 H	281	62.1	6.5
4	5350.00	52.1 AV	54.0	-1.9	1.07 H	281	45.6	6.5
5	10640.00	60.8 PK	74.0	-13.2	1.88 H	147	42.0	18.8
6	10640.00	47.0 AV	54.0	-7.0	1.88 H	147	28.2	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.0 PK			2.02 V	342	77.3	39.7
2	*5320.00	106.5 AV			2.02 V	342	66.8	39.7
3	5350.00	67.7 PK	74.0	-6.3	3.06 V	328	61.2	6.5
4	5350.00	52.7 AV	54.0	-1.3	3.06 V	328	46.2	6.5
5	10640.00	59.8 PK	74.0	-14.2	2.55 V	182	41.0	18.8
6	10640.00	46.7 AV	54.0	-7.3	2.55 V	182	27.9	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.5 PK	74.0	-13.5	3.01 H	348	53.6	6.9
2	5460.00	47.3 AV	54.0	-6.7	3.01 H	348	40.4	6.9
3	#5470.00	66.9 PK	74.0	-7.1	3.06 H	3	60.0	6.9
4	#5470.00	50.9 AV	54.0	-3.1	3.06 H	3	44.0	6.9
5	*5500.00	115.9 PK			3.07 H	4	75.7	40.2
6	*5500.00	105.7 AV			3.07 H	4	65.5	40.2
7	11000.00	61.1 PK	74.0	-12.9	2.31 H	267	41.2	19.9
8	11000.00	48.5 AV	54.0	-5.5	2.31 H	267	28.6	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.3 PK	74.0	-10.7	2.35 V	339	56.4	6.9
2	5460.00	47.9 AV	54.0	-6.1	2.35 V	339	41.0	6.9
3	#5470.00	69.0 PK	74.0	-5.0	2.82 V	335	62.1	6.9
4	#5470.00	52.6 AV	54.0	-1.4	2.82 V	335	45.7	6.9
5	*5500.00	117.1 PK			3.05 V	317	76.9	40.2
6	*5500.00	106.8 AV			3.05 V	317	66.6	40.2
7	11000.00	61.4 PK	74.0	-12.6	1.99 V	139	41.5	19.9
8	11000.00	48.1 AV	54.0	-5.9	1.99 V	139	28.2	19.9

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	116.2 PK			2.99 H	299	75.9	40.3
2	*5580.00	106.1 AV			2.99 H	299	65.8	40.3
3	11160.00	59.7 PK	74.0	-14.3	1.84 H	119	40.3	19.4
4	11160.00	47.1 AV	54.0	-6.9	1.84 H	119	27.7	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	116.5 PK			2.40 V	5	76.2	40.3
2	*5580.00	106.1 AV			2.40 V	5	65.8	40.3
3	11160.00	59.7 PK	74.0	-14.3	2.42 V	245	40.3	19.4
4	11160.00	47.3 AV	54.0	-6.7	2.42 V	245	27.9	19.4

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	115.4 PK			3.01 H	302	75.0	40.4
2	*5700.00	105.2 AV			3.01 H	302	64.8	40.4
3	#5725.00	67.4 PK	74.0	-6.6	3.06 H	22	60.0	7.4
4	#5725.00	52.6 AV	54.0	-1.4	3.06 H	22	45.2	7.4
5	11400.00	60.6 PK	74.0	-13.4	1.57 H	166	41.8	18.8
6	11400.00	47.4 AV	54.0	-6.6	1.57 H	166	28.6	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	116.0 PK			2.30 V	342	75.6	40.4
2	*5700.00	105.5 AV			2.30 V	342	65.1	40.4
3	#5725.00	68.6 PK	74.0	-5.4	2.60 V	349	61.2	7.4
4	#5725.00	52.7 AV	54.0	-1.3	2.60 V	349	45.3	7.4
5	11400.00	60.5 PK	74.0	-13.5	2.43 V	266	41.7	18.8
6	11400.00	47.4 AV	54.0	-6.6	2.43 V	266	28.6	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

## 802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.59 H	261	51.2	6.0
2	5150.00	44.8 AV	54.0	-9.2	1.59 H	261	38.8	6.0
3	*5260.00	117.6 PK			1.14 H	281	78.0	39.6
4	*5260.00	106.2 AV			1.14 H	281	66.6	39.6
5	#10520.00	59.8 PK	74.0	-14.2	2.68 H	47	40.9	18.9
6	#10520.00	47.2 AV	54.0	-6.8	2.68 H	47	28.3	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.0 PK	74.0	-17.0	1.75 V	268	51.0	6.0
2	5150.00	44.5 AV	54.0	-9.5	1.75 V	268	38.5	6.0
3	*5260.00	118.3 PK			2.37 V	345	78.7	39.6
4	*5260.00	107.6 AV			2.37 V	345	68.0	39.6
5	#10520.00	60.4 PK	74.0	-13.6	1.47 V	45	41.5	18.9
6	#10520.00	47.2 AV	54.0	-6.8	1.47 V	45	28.3	18.9

### 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	116.6 PK			1.04 H	281	76.9	39.7
2	*5300.00	105.5 AV			1.04 H	281	65.8	39.7
3	10600.00	61.5 PK	74.0	-12.5	2.87 H	65	42.6	18.9
4	10600.00	48.4 AV	54.0	-5.6	2.87 H	65	29.5	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	117.4 PK			2.22 V	341	77.7	39.7
2	*5300.00	106.6 AV			2.22 V	341	66.9	39.7
3	10600.00	60.4 PK	74.0	-13.6	2.98 V	301	41.5	18.9
4	10600.00	47.2 AV	54.0	-6.8	2.98 V	301	28.3	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	116.0 PK			1.04 H	283	76.3	39.7
2	*5320.00	104.9 AV			1.04 H	283	65.2	39.7
3	5350.00	64.3 PK	74.0	-9.7	1.13 H	284	57.8	6.5
4	5350.00	49.2 AV	54.0	-4.8	1.13 H	284	42.7	6.5
5	10640.00	61.1 PK	74.0	-12.9	1.47 H	169	42.3	18.8
6	10640.00	48.0 AV	54.0	-6.0	1.47 H	169	29.2	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	117.0 PK			2.45 V	343	77.3	39.7
2	*5320.00	106.2 AV			2.45 V	343	66.5	39.7
3	5350.00	69.2 PK	74.0	-4.8	2.40 V	352	62.7	6.5
4	5350.00	52.6 AV	54.0	-1.4	2.40 V	352	46.1	6.5
5	10640.00	59.5 PK	74.0	-14.5	2.13 V	246	40.7	18.8
6	10640.00	46.9 AV	54.0	-7.1	2.13 V	246	28.1	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	3.00 H	38	54.2	6.9
2	5460.00	47.4 AV	54.0	-6.6	3.00 H	38	40.5	6.9
3	#5470.00	68.6 PK	74.0	-5.4	3.17 H	19	61.7	6.9
4	#5470.00	50.8 AV	54.0	-3.2	3.17 H	19	43.9	6.9
5	*5500.00	115.4 PK			3.19 H	2	75.2	40.2
6	*5500.00	105.1 AV			3.19 H	2	64.9	40.2
7	11000.00	61.1 PK	74.0	-12.9	2.11 H	122	41.2	19.9
8	11000.00	47.7 AV	54.0	-6.3	2.11 H	122	27.8	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.5 PK	74.0	-11.5	2.05 V	339	55.6	6.9
2	5460.00	47.1 AV	54.0	-6.9	2.05 V	339	40.2	6.9
3	#5470.00	69.7 PK	74.0	-4.3	2.25 V	355	62.8	6.9
4	#5470.00	52.7 AV	54.0	-1.3	2.25 V	355	45.8	6.9
5	*5500.00	116.6 PK			2.01 V	339	76.4	40.2
6	*5500.00	106.3 AV			2.01 V	339	66.1	40.2
7	11000.00	61.1 PK	74.0	-12.9	2.50 V	219	41.2	19.9
8	11000.00	47.8 AV	54.0	-6.2	2.50 V	219	27.9	19.9

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	115.9 PK			3.39 H	304	75.6	40.3
2	*5580.00	105.2 AV			3.39 H	304	64.9	40.3
3	11160.00	59.7 PK	74.0	-14.3	2.44 H	214	40.3	19.4
4	11160.00	47.5 AV	54.0	-6.5	2.44 H	214	28.1	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	117.2 PK			2.39 V	335	76.9	40.3
2	*5580.00	106.8 AV			2.39 V	335	66.5	40.3
3	11160.00	60.2 PK	74.0	-13.8	2.41 V	174	40.8	19.4
4	11160.00	47.0 AV	54.0	-7.0	2.41 V	174	27.6	19.4

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	114.5 PK			3.36 H	297	74.1	40.4
2	*5700.00	103.9 AV			3.36 H	297	63.5	40.4
3	#5725.00	67.8 PK	74.0	-6.2	3.21 H	22	60.4	7.4
4	#5725.00	52.8 AV	54.0	-1.2	3.21 H	22	45.4	7.4
5	11400.00	59.9 PK	74.0	-14.1	2.21 H	162	41.1	18.8
6	11400.00	46.9 AV	54.0	-7.1	2.21 H	162	28.1	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	114.7 PK			2.50 V	341	74.3	40.4
2	*5700.00	104.5 AV			2.50 V	341	64.1	40.4
3	#5725.00	65.8 PK	74.0	-8.2	2.37 V	352	58.4	7.4
4	#5725.00	52.2 AV	54.0	-1.8	2.37 V	352	44.8	7.4
5	11400.00	59.9 PK	74.0	-14.1	1.81 V	234	41.1	18.8
6	11400.00	47.5 AV	54.0	-6.5	1.81 V	234	28.7	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	112.9 PK			1.02 H	283	73.3	39.6
2	*5270.00	103.9 AV			1.02 H	283	64.3	39.6
3	5350.00	61.6 PK	74.0	-12.4	1.01 H	278	55.1	6.5
4	5350.00	47.2 AV	54.0	-6.8	1.01 H	278	40.7	6.5
5	#10540.00	61.7 PK	74.0	-12.3	1.87 H	246	42.7	19.0
6	#10540.00	47.3 AV	54.0	-6.7	1.87 H	246	28.3	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	114.6 PK			3.12 V	337	75.0	39.6
2	*5270.00	104.9 AV			3.12 V	337	65.3	39.6
3	5350.00	62.8 PK	74.0	-11.2	2.78 V	339	56.3	6.5
4	5350.00	47.1 AV	54.0	-6.9	2.78 V	339	40.6	6.5
5	#10540.00	60.6 PK	74.0	-13.4	1.87 V	240	41.6	19.0
6	#10540.00	47.5 AV	54.0	-6.5	1.87 V	240	28.5	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	110.6 PK			1.00 H	280	70.9	39.7
2	*5310.00	101.2 AV			1.00 H	280	61.5	39.7
3	5350.00	68.3 PK	74.0	-5.7	1.12 H	279	61.8	6.5
4	5350.00	51.7 AV	54.0	-2.3	1.12 H	279	45.2	6.5
5	10620.00	60.5 PK	74.0	-13.5	1.67 H	348	41.6	18.9
6	10620.00	47.4 AV	54.0	-6.6	1.67 H	348	28.5	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	113.0 PK			3.36 V	329	73.3	39.7
2	*5310.00	103.2 AV			3.36 V	329	63.5	39.7
3	5350.00	69.1 PK	74.0	-4.9	3.15 V	322	62.6	6.5
4	5350.00	52.7 AV	54.0	-1.3	3.15 V	322	46.2	6.5
5	10620.00	59.7 PK	74.0	-14.3	2.74 V	125	40.8	18.9
6	10620.00	47.2 AV	54.0	-6.8	2.74 V	125	28.3	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.3 PK	74.0	-6.7	2.67 H	19	60.4	6.9
2	5460.00	49.4 AV	54.0	-4.6	2.67 H	19	42.5	6.9
3	#5470.00	68.0 PK	74.0	-6.0	3.31 H	26	61.1	6.9
4	#5470.00	52.2 AV	54.0	-1.8	3.31 H	26	45.3	6.9
5	*5510.00	110.2 PK			2.81 H	35	70.0	40.2
6	*5510.00	101.1 AV			2.81 H	35	60.9	40.2
7	11020.00	61.6 PK	74.0	-12.4	1.98 H	212	41.8	19.8
8	11020.00	48.2 AV	54.0	-5.8	1.98 H	212	28.4	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.4 PK	74.0	-6.6	2.13 V	354	60.5	6.9
2	5460.00	50.5 AV	54.0	-3.5	2.13 V	354	43.6	6.9
3	#5470.00	72.3 PK	74.0	-1.7	2.32 V	339	65.4	6.9
4	#5470.00	52.7 AV	54.0	-1.3	2.32 V	339	45.8	6.9
5	*5510.00	112.6 PK			2.20 V	345	72.4	40.2
6	*5510.00	103.0 AV			2.20 V	345	62.8	40.2
7	11020.00	61.9 PK	74.0	-12.1	1.84 V	271	42.1	19.8
8	11020.00	47.8 AV	54.0	-6.2	1.84 V	271	28.0	19.8

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	113.7 PK			1.97 H	291	73.5	40.2
2	*5550.00	104.4 AV			1.97 H	291	64.2	40.2
3	11100.00	60.8 PK	74.0	-13.2	1.77 H	264	41.6	19.2
4	11100.00	47.7 AV	54.0	-6.3	1.77 H	264	28.5	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	113.6 PK			2.09 V	338	73.4	40.2
2	*5550.00	104.1 AV			2.09 V	338	63.9	40.2
3	11100.00	61.2 PK	74.0	-12.8	1.45 V	158	42.0	19.2
4	11100.00	47.6 AV	54.0	-6.4	1.45 V	158	28.4	19.2

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.3 PK			1.91 H	294	72.0	40.3
2	*5670.00	102.9 AV			1.91 H	294	62.6	40.3
3	#5725.00	57.8 PK	74.0	-16.2	1.92 H	290	50.4	7.4
4	#5725.00	51.5 AV	54.0	-2.5	1.92 H	290	44.1	7.4
5	11340.00	60.1 PK	74.0	-13.9	1.82 H	85	40.9	19.2
6	11340.00	47.6 AV	54.0	-6.4	1.82 H	85	28.4	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.3 PK			2.65 V	330	72.0	40.3
2	*5670.00	102.5 AV			2.65 V	330	62.2	40.3
3	#5725.00	68.2 PK	74.0	-5.8	2.07 V	339	60.8	7.4
4	#5725.00	52.5 AV	54.0	-1.5	2.07 V	339	45.1	7.4
5	11340.00	60.5 PK	74.0	-13.5	1.37 V	264	41.3	19.2
6	11340.00	47.5 AV	54.0	-6.5	1.37 V	264	28.3	19.2

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	105.6 PK			1.00 H	280	65.9	39.7
2	*5290.00	95.6 AV			1.00 H	280	55.9	39.7
3	5350.00	64.4 PK	74.0	-9.6	1.75 H	272	57.9	6.5
4	5350.00	52.0 AV	54.0	-2.0	1.75 H	272	45.5	6.5
5	#10580.00	60.8 PK	74.0	-13.2	1.66 H	247	41.8	19.0
6	#10580.00	47.8 AV	54.0	-6.2	1.66 H	247	28.8	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	106.2 PK			2.74 V	341	66.5	39.7
2	*5290.00	96.5 AV			2.74 V	341	56.8	39.7
3	5350.00	64.5 PK	74.0	-9.5	2.55 V	347	58.0	6.5
4	5350.00	52.6 AV	54.0	-1.4	2.55 V	347	46.1	6.5
5	#10580.00	60.9 PK	74.0	-13.1	1.97 V	236	41.9	19.0
6	#10580.00	47.9 AV	54.0	-6.1	1.97 V	236	28.9	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.1 PK	74.0	-9.9	1.31 H	285	57.2	6.9
2	5460.00	50.0 PK	54.0	-4.0	1.31 H	285	43.1	6.9
3	#5470.00	64.4 AV	74.0	-9.6	1.31 H	289	57.5	6.9
4	#5470.00	51.3 AV	54.0	-2.7	1.31 H	289	44.4	6.9
5	*5530.00	106.8 PK			1.00 H	290	66.6	40.2
6	*5530.00	97.5 AV			1.00 H	290	57.3	40.2
7	11060.00	61.2 PK	74.0	-12.8	1.66 H	258	41.7	19.5
8	11060.00	47.8 AV	54.0	-6.2	1.66 H	258	28.3	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.5 PK	74.0	-8.5	2.45 V	350	58.6	6.9
2	5460.00	52.0 AV	54.0	-2.0	2.45 V	350	45.1	6.9
3	#5470.00	67.4 PK	74.0	-6.6	2.46 V	341	60.5	6.9
4	#5470.00	52.7 AV	54.0	-1.3	2.46 V	341	45.8	6.9
5	*5530.00	107.1 PK			2.11 V	346	66.9	40.2
6	*5530.00	97.2 AV			2.11 V	346	57.0	40.2
7	11060.00	61.1 PK	74.0	-12.9	2.33 V	278	41.6	19.5
8	11060.00	48.0 AV	54.0	-6.0	2.33 V	278	28.5	19.5

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



## Radio 2: Beamforming Mode

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.7 PK	74.0	-16.3	1.39 H	259	51.7	6.0
2	5150.00	44.6 AV	54.0	-9.4	1.39 H	259	38.6	6.0
3	*5260.00	116.4 PK			1.41 H	292	76.8	39.6
4	*5260.00	104.0 AV			1.41 H	292	64.4	39.6
5	#10520.00	59.1 PK	74.0	-14.9	2.65 H	129	40.2	18.9
6	#10520.00	46.8 AV	54.0	-7.2	2.65 H	129	27.9	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.58 V	317	50.3	6.0
2	5150.00	43.4 AV	54.0	-10.6	1.58 V	317	37.4	6.0
3	*5260.00	117.8 PK			2.69 V	345	78.2	39.6
4	*5260.00	105.2 AV			2.69 V	345	65.6	39.6
5	#10520.00	60.0 PK	74.0	-14.0	1.29 V	118	41.1	18.9
6	#10520.00	46.5 AV	54.0	-7.5	1.29 V	118	27.6	18.9

### 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.7 PK			1.74 H	275	76.0	39.7
2	*5300.00	103.4 AV			1.74 H	275	63.7	39.7
3	10600.00	59.4 PK	74.0	-14.6	1.69 H	221	40.5	18.9
4	10600.00	46.8 AV	54.0	-7.2	1.69 H	221	27.9	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	117.4 PK			2.67 V	333	77.7	39.7
2	*5300.00	107.1 AV			2.67 V	333	67.4	39.7
3	10600.00	59.7 PK	74.0	-14.3	2.21 V	198	40.8	18.9
4	10600.00	46.5 AV	54.0	-7.5	2.21 V	198	27.6	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	115.1 PK			1.85 H	280	75.4	39.7
2	*5320.00	102.3 AV			1.85 H	280	62.6	39.7
3	5350.00	68.5 PK	74.0	-5.5	1.91 H	284	62.0	6.5
4	5350.00	48.4 AV	54.0	-5.6	1.91 H	284	41.9	6.5
5	10640.00	58.9 PK	74.0	-15.1	2.87 H	204	40.1	18.8
6	10640.00	46.3 AV	54.0	-7.7	2.87 H	204	27.5	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	114.7 PK			2.95 V	308	75.0	39.7
2	*5320.00	101.9 AV			2.95 V	308	62.2	39.7
3	5350.00	66.1 PK	74.0	-7.9	2.63 V	336	59.6	6.5
4	5350.00	48.2 AV	54.0	-5.8	2.63 V	336	41.7	6.5
5	10640.00	58.8 PK	74.0	-15.2	1.19 V	158	40.0	18.8
6	10640.00	46.2 AV	54.0	-7.8	1.19 V	158	27.4	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.2 PK	74.0	-14.8	1.17 H	288	52.3	6.9
2	5460.00	46.2 AV	54.0	-7.8	1.17 H	288	39.3	6.9
3	#5470.00	71.8 PK	74.0	-2.2	1.28 H	279	64.9	6.9
4	#5470.00	48.6 AV	54.0	-5.4	1.28 H	279	41.7	6.9
5	*5500.00	117.6 PK			1.00 H	278	77.4	40.2
6	*5500.00	104.5 AV			1.00 H	278	64.3	40.2
7	11000.00	60.9 PK	74.0	-13.1	1.35 H	164	41.0	19.9
8	11000.00	47.7 AV	54.0	-6.3	1.35 H	164	27.8	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	47.4 PK	74.0	-26.6	1.77 V	198	40.5	6.9
2	5460.00	44.7 AV	54.0	-9.3	1.77 V	198	37.8	6.9
3	#5470.00	57.6 PK	74.0	-16.4	1.82 V	203	50.7	6.9
4	#5470.00	45.2 AV	54.0	-8.8	1.82 V	203	38.3	6.9
5	*5500.00	115.7 PK			2.39 V	342	75.5	40.2
6	*5500.00	103.3 AV			2.39 V	342	63.1	40.2
7	11000.00	61.1 PK	74.0	-12.9	2.36 V	111	41.2	19.9
8	11000.00	47.8 AV	54.0	-6.2	2.36 V	111	27.9	19.9

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.3 PK			1.70 H	297	72.0	40.3
2	*5580.00	98.9 AV			1.70 H	297	58.6	40.3
3	11160.00	60.6 PK	74.0	-13.4	1.98 H	336	41.2	19.4
4	11160.00	47.3 AV	54.0	-6.7	1.98 H	336	27.9	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	118.7 PK			2.25 V	333	78.4	40.3
2	*5580.00	106.4 AV			2.25 V	333	66.1	40.3
3	11160.00	59.9 PK	74.0	-14.1	1.69 V	215	40.5	19.4
4	11160.00	46.8 AV	54.0	-7.2	1.69 V	215	27.4	19.4

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	113.6 PK			1.86 H	259	73.2	40.4
2	*5700.00	101.6 AV			1.86 H	259	61.2	40.4
3	#5725.00	67.5 PK	74.0	-6.5	1.87 H	296	60.1	7.4
4	#5725.00	48.6 AV	54.0	-5.4	1.87 H	296	41.2	7.4
5	11400.00	60.6 PK	74.0	-13.4	1.97 H	95	41.3	19.3
6	11400.00	47.7 AV	54.0	-6.3	1.97 H	95	28.4	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	114.3 PK			2.34 V	340	73.9	40.4
2	*5700.00	100.8 AV			2.34 V	340	60.4	40.4
3	#5725.00	72.5 PK	74.0	-1.5	2.24 V	347	65.1	7.4
4	#5725.00	50.8 AV	54.0	-3.2	2.24 V	347	43.4	7.4
5	11400.00	60.5 PK	74.0	-13.5	2.36 V	300	41.7	18.8
6	11400.00	47.9 AV	54.0	-6.1	2.36 V	300	29.1	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	1.69 H	224	50.9	6.0
2	5150.00	44.5 AV	54.0	-9.5	1.69 H	224	38.5	6.0
3	*5270.00	114.7 PK			1.01 H	274	75.1	39.6
4	*5270.00	102.3 AV			1.01 H	274	62.7	39.6
5	#10540.00	60.1 PK	74.0	-13.9	2.69 H	146	41.1	19.0
6	#10540.00	47.1 AV	54.0	-6.9	2.69 H	146	28.1	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.55 V	239	50.3	6.0
2	5150.00	43.4 AV	54.0	-10.6	1.55 V	239	37.4	6.0
3	*5270.00	115.7 PK			2.47 V	348	76.1	39.6
4	*5270.00	103.4 AV			2.47 V	348	63.8	39.6
5	#10540.00	59.6 PK	74.0	-14.4	1.29 V	224	40.6	19.0
6	#10540.00	46.8 AV	54.0	-7.2	1.29 V	224	27.8	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	110.6 PK			1.73 H	285	70.9	39.7
2	*5310.00	97.4 AV			1.73 H	285	57.7	39.7
3	5350.00	69.4 PK	74.0	-4.6	1.70 H	273	62.9	6.5
4	5350.00	48.0 AV	54.0	-6.0	1.70 H	273	41.5	6.5
5	10620.00	59.4 PK	74.0	-14.6	1.99 H	146	40.5	18.9
6	10620.00	46.8 AV	54.0	-7.2	1.99 H	146	27.9	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	111.1 PK			2.80 V	332	71.4	39.7
2	*5310.00	98.6 AV			2.80 V	332	58.9	39.7
3	5350.00	72.6 PK	74.0	-1.4	2.66 V	319	66.1	6.5
4	5350.00	50.9 AV	54.0	-3.1	2.66 V	319	44.4	6.5
5	10620.00	59.6 PK	74.0	-14.4	1.49 V	268	40.7	18.9
6	10620.00	46.6 AV	54.0	-7.4	1.49 V	268	27.7	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.8 PK	74.0	-10.2	2.46 H	288	56.9	6.9
2	5460.00	45.4 AV	54.0	-8.6	2.46 H	288	38.5	6.9
3	#5470.00	71.8 PK	74.0	-2.2	2.39 H	278	64.9	6.9
4	#5470.00	45.6 AV	54.0	-8.4	2.39 H	278	38.7	6.9
5	*5510.00	108.0 PK			1.90 H	42	67.8	40.2
6	*5510.00	96.3 AV			1.90 H	42	56.1	40.2
7	11020.00	60.0 PK	74.0	-14.0	1.38 H	94	40.2	19.8
8	11020.00	46.8 AV	54.0	-7.2	1.38 H	94	27.0	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.7 PK	74.0	-6.3	2.02 V	204	60.8	6.9
2	5460.00	44.8 AV	54.0	-9.2	2.02 V	204	37.9	6.9
3	#5470.00	72.0 PK	74.0	-2.0	1.78 V	225	65.1	6.9
4	#5470.00	48.1 AV	54.0	-5.9	1.78 V	225	41.2	6.9
5	*5510.00	110.7 PK			2.48 V	342	70.5	40.2
6	*5510.00	97.0 AV			2.48 V	342	56.8	40.2
7	11020.00	60.2 PK	74.0	-13.8	1.43 V	255	40.4	19.8
8	11020.00	47.4 AV	54.0	-6.6	1.43 V	255	27.6	19.8

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	68.3 PK	74.0	-5.7	1.33 H	295	61.4	6.9
2	#5470.00	46.7 AV	54.0	-7.3	1.33 H	295	39.8	6.9
3	*5550.00	113.6 PK			1.33 H	295	73.4	40.2
4	*5550.00	101.6 AV			1.33 H	295	61.4	40.2
5	11100.00	59.6 PK	74.0	-14.4	1.68 H	216	40.4	19.2
6	11100.00	46.9 AV	54.0	-7.1	1.68 H	216	27.7	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	72.3 PK	74.0	-1.7	2.34 V	339	65.4	6.9
2	#5470.00	47.0 AV	54.0	-7.0	2.34 V	339	40.1	6.9
3	*5550.00	113.5 PK			2.34 V	339	73.3	40.2
4	*5550.00	101.5 AV			2.34 V	339	61.3	40.2
5	11100.00	59.9 PK	74.0	-14.1	1.83 V	219	40.7	19.2
6	11100.00	46.7 AV	54.0	-7.3	1.83 V	219	27.5	19.2

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	113.0 PK			1.74 H	279	72.7	40.3
2	*5670.00	99.7 AV			1.74 H	279	59.4	40.3
3	#5725.00	72.2 PK	74.0	-1.8	1.66 H	289	64.8	7.4
4	#5725.00	46.5 AV	54.0	-7.5	1.66 H	289	39.1	7.4
5	11340.00	59.7 PK	74.0	-14.3	1.43 H	233	40.5	19.2
6	11340.00	47.0 AV	54.0	-7.0	1.43 H	233	27.8	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	110.5 PK			2.19 V	6	70.2	40.3
2	*5670.00	98.6 AV			2.19 V	6	58.3	40.3
3	#5725.00	71.8 PK	74.0	-2.2	2.14 V	338	64.4	7.4
4	#5725.00	47.3 AV	54.0	-6.7	2.14 V	338	39.9	7.4
5	11340.00	59.7 PK	74.0	-14.3	1.64 V	53	40.5	19.2
6	11340.00	47.1 AV	54.0	-6.9	1.64 V	53	27.9	19.2

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	108.0 PK			1.16 H	290	68.3	39.7
2	*5290.00	96.4 AV			1.16 H	290	56.7	39.7
3	5350.00	67.8 PK	74.0	-6.2	1.08 H	270	61.3	6.5
4	5350.00	49.3 AV	54.0	-4.7	1.08 H	270	42.8	6.5
5	#10580.00	60.7 PK	74.0	-13.3	1.69 H	55	41.7	19.0
6	#10580.00	47.0 AV	54.0	-7.0	1.69 H	55	28.0	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	107.7 PK			2.35 V	343	68.0	39.7
2	*5290.00	96.3 AV			2.35 V	343	56.6	39.7
3	5350.00	70.2 PK	74.0	-3.8	2.36 V	350	63.7	6.5
4	5350.00	49.4 AV	54.0	-4.6	2.36 V	350	42.9	6.5
5	#10580.00	60.2 PK	74.0	-13.8	2.11 V	146	41.2	19.0
6	#10580.00	47.1 AV	54.0	-6.9	2.11 V	146	28.1	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.6 PK	74.0	-10.4	1.20 H	275	56.7	6.9
2	5460.00	47.6 AV	54.0	-6.4	1.20 H	275	40.7	6.9
3	#5470.00	70.0 PK	74.0	-4.0	1.12 H	290	63.1	6.9
4	#5470.00	49.2 AV	54.0	-4.8	1.12 H	290	42.3	6.9
5	*5530.00	107.0 PK			1.14 H	282	66.8	40.2
6	*5530.00	95.5 AV			1.14 H	282	55.3	40.2
7	11060.00	60.4 PK	74.0	-13.6	1.44 H	284	40.9	19.5
8	11060.00	47.3 AV	54.0	-6.7	1.44 H	284	27.8	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	66.5 PK	74.0	-7.5	2.30 V	341	59.6	6.9
2	5460.00	50.8 AV	54.0	-3.2	2.30 V	341	43.9	6.9
3	#5470.00	72.0 PK	74.0	-2.0	2.31 V	335	65.1	6.9
4	#5470.00	50.0 AV	54.0	-4.0	2.31 V	335	43.1	6.9
5	*5530.00	107.0 PK			2.17 V	345	66.8	40.2
6	*5530.00	94.8 AV			2.17 V	345	54.6	40.2
7	11060.00	60.2 PK	74.0	-13.8	1.86 V	221	40.7	19.5
8	11060.00	46.9 AV	54.0	-7.1	1.86 V	221	27.4	19.5

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

### Radio 3: CDD Mode

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	1.12 H	98	50.5	6.0
2	5150.00	43.9 AV	54.0	-10.1	1.12 H	98	37.9	6.0
3	*5260.00	105.9 PK			1.07 H	104	66.3	39.6
4	*5260.00	95.9 AV			1.07 H	104	56.3	39.6
5	#10520.00	60.6 PK	74.0	-13.4	1.98 H	320	41.7	18.9
6	#10520.00	47.3 AV	54.0	-6.7	1.98 H	320	28.4	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.4 PK	74.0	-16.6	2.08 V	53	51.4	6.0
2	5150.00	44.2 AV	54.0	-9.8	2.08 V	53	38.2	6.0
3	*5260.00	114.8 PK			2.24 V	43	75.2	39.6
4	*5260.00	104.6 AV			2.24 V	43	65.0	39.6
5	#10520.00	61.3 PK	74.0	-12.7	1.65 V	188	42.4	18.9
6	#10520.00	47.0 AV	54.0	-7.0	1.65 V	188	28.1	18.9

#### 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.3 PK			1.04 H	106	65.6	39.7
2	*5300.00	94.7 AV			1.04 H	106	55.0	39.7
3	10600.00	60.9 PK	74.0	-13.1	2.31 H	257	42.0	18.9
4	10600.00	47.2 AV	54.0	-6.8	2.31 H	257	28.3	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.9 PK			1.99 V	41	74.2	39.7
2	*5300.00	103.6 AV			1.99 V	41	63.9	39.7
3	10600.00	60.6 PK	74.0	-13.4	2.01 V	300	41.7	18.9
4	10600.00	47.3 AV	54.0	-6.7	2.01 V	300	28.4	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.0 PK			1.02 H	105	65.3	39.7
2	*5320.00	94.7 AV			1.02 H	105	55.0	39.7
3	5350.00	60.1 PK	74.0	-13.9	1.01 H	106	53.6	6.5
4	5350.00	46.5 AV	54.0	-7.5	1.01 H	106	40.0	6.5
5	10640.00	60.8 PK	74.0	-13.2	1.65 H	149	41.9	18.9
6	10640.00	47.0 AV	54.0	-7.0	1.65 H	149	28.1	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.6 PK			2.04 V	44	73.9	39.7
2	*5320.00	102.9 AV			2.04 V	44	63.2	39.7
3	5350.00	65.9 PK	74.0	-8.1	2.27 V	46	59.4	6.5
4	5350.00	52.3 AV	54.0	-1.7	2.27 V	46	45.8	6.5
5	10640.00	60.0 PK	74.0	-14.0	2.54 V	165	41.2	18.8
6	10640.00	47.0 AV	54.0	-7.0	2.54 V	165	28.2	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.4 PK	74.0	-16.6	2.91 H	31	50.5	6.9
2	5460.00	46.6 AV	54.0	-7.4	2.91 H	31	39.7	6.9
3	#5470.00	60.5 PK	74.0	-13.5	2.88 H	30	53.6	6.9
4	#5470.00	47.7 AV	54.0	-6.3	2.88 H	30	40.8	6.9
5	*5500.00	103.5 PK			2.90 H	28	63.3	40.2
6	*5500.00	93.5 AV			2.90 H	28	53.3	40.2
7	11000.00	60.6 PK	74.0	-13.4	1.90 H	349	40.7	19.9
8	11000.00	47.5 AV	54.0	-6.5	1.90 H	349	27.6	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.3 PK	74.0	-15.7	1.69 V	46	51.4	6.9
2	5460.00	47.1 AV	54.0	-6.9	1.69 V	46	40.2	6.9
3	#5470.00	65.6 PK	74.0	-8.4	1.50 V	44	58.7	6.9
4	#5470.00	52.3 AV	54.0	-1.7	1.50 V	44	45.4	6.9
5	*5500.00	110.8 PK			1.60 V	40	70.6	40.2
6	*5500.00	100.8 AV			1.60 V	40	60.6	40.2
7	11000.00	61.2 PK	74.0	-12.8	2.12 V	345	41.3	19.9
8	11000.00	48.5 AV	54.0	-5.5	2.12 V	345	28.6	19.9

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	106.2 PK			2.89 H	27	65.9	40.3
2	*5580.00	96.2 AV			2.89 H	27	55.9	40.3
3	11160.00	60.1 PK	74.0	-13.9	1.99 H	211	40.7	19.4
4	11160.00	47.4 AV	54.0	-6.6	1.99 H	211	28.0	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.4 PK			1.68 V	46	73.1	40.3
2	*5580.00	103.4 AV			1.68 V	46	63.1	40.3
3	11160.00	61.5 PK	74.0	-12.5	2.12 V	346	42.1	19.4
4	11160.00	48.4 AV	54.0	-5.6	2.12 V	346	29.0	19.4

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.8 PK			2.80 H	24	64.4	40.4
2	*5700.00	94.4 AV			2.80 H	24	54.0	40.4
3	#5725.00	60.8 PK	74.0	-13.2	3.06 H	25	53.4	7.4
4	#5725.00	48.6 AV	54.0	-5.4	3.06 H	25	41.2	7.4
5	11400.00	59.8 PK	74.0	-14.2	2.33 H	339	41.0	18.8
6	11400.00	46.7 AV	54.0	-7.3	2.33 H	339	27.9	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.4 PK			1.43 V	51	71.0	40.4
2	*5700.00	101.5 AV			1.43 V	51	61.1	40.4
3	#5725.00	67.8 PK	74.0	-6.2	1.61 V	49	60.4	7.4
4	#5725.00	52.4 AV	54.0	-1.6	1.61 V	49	45.0	7.4
5	11400.00	60.5 PK	74.0	-13.5	2.10 V	101	41.7	18.8
6	11400.00	47.8 AV	54.0	-6.2	2.10 V	101	29.0	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.1 PK	74.0	-17.9	1.20 H	99	50.1	6.0
2	5150.00	44.8 AV	54.0	-9.2	1.20 H	99	38.8	6.0
3	*5260.00	104.9 PK			1.00 H	118	65.3	39.6
4	*5260.00	95.3 AV			1.00 H	118	55.7	39.6
5	#10520.00	59.9 PK	74.0	-14.1	1.89 H	298	41.0	18.9
6	#10520.00	47.0 AV	54.0	-7.0	1.89 H	298	28.1	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.5 PK	74.0	-15.5	2.04 V	0	52.5	6.0
2	5150.00	47.1 AV	54.0	-6.9	2.04 V	0	41.1	6.0
3	*5260.00	114.9 PK			2.24 V	41	75.3	39.6
4	*5260.00	104.6 AV			2.24 V	41	65.0	39.6
5	#10520.00	61.4 PK	74.0	-12.6	1.66 V	307	42.5	18.9
6	#10520.00	48.4 AV	54.0	-5.6	1.66 V	307	29.5	18.9

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	105.0 PK			1.11 H	97	65.3	39.7
2	*5300.00	94.7 AV			1.11 H	97	55.0	39.7
3	10600.00	60.4 PK	74.0	-13.6	1.46 H	210	41.5	18.9
4	10600.00	47.7 AV	54.0	-6.3	1.46 H	210	28.8	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.3 PK			2.26 V	49	73.6	39.7
2	*5300.00	103.0 AV			2.26 V	49	63.3	39.7
3	10600.00	61.1 PK	74.0	-12.9	1.59 V	345	42.2	18.9
4	10600.00	48.3 AV	54.0	-5.7	1.59 V	345	29.4	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.7 PK			1.13 H	103	64.0	39.7
2	*5320.00	93.6 AV			1.13 H	103	53.9	39.7
3	5350.00	57.0 PK	74.0	-17.0	1.20 H	100	50.5	6.5
4	5350.00	46.2 AV	54.0	-7.8	1.20 H	100	39.7	6.5
5	10640.00	60.2 PK	74.0	-13.8	1.60 H	204	41.4	18.8
6	10640.00	47.1 AV	54.0	-6.9	1.60 H	204	28.3	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.0 PK			1.94 V	41	72.3	39.7
2	*5320.00	101.9 AV			1.94 V	41	62.2	39.7
3	5350.00	66.5 PK	74.0	-7.5	2.24 V	45	60.0	6.5
4	5350.00	52.4 AV	54.0	-1.6	2.24 V	45	45.9	6.5
5	10640.00	60.7 PK	74.0	-13.3	1.76 V	352	41.9	18.8
6	10640.00	47.8 AV	54.0	-6.2	1.76 V	352	29.0	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.8 PK	74.0	-17.2	2.98 H	37	49.9	6.9
2	5460.00	45.3 AV	54.0	-8.7	2.98 H	37	38.4	6.9
3	#5470.00	57.0 PK	74.0	-17.0	2.98 H	37	50.1	6.9
4	#5470.00	46.1 AV	54.0	-7.9	2.98 H	37	39.2	6.9
5	*5500.00	102.8 PK			3.06 H	29	62.6	40.2
6	*5500.00	92.8 AV			3.06 H	29	52.6	40.2
7	11000.00	60.5 PK	74.0	-13.5	2.28 H	313	40.6	19.9
8	11000.00	47.6 AV	54.0	-6.4	2.28 H	313	27.7	19.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.50 V	66	50.6	6.9
2	5460.00	46.8 AV	54.0	-7.2	1.50 V	66	39.9	6.9
3	#5470.00	64.6 PK	74.0	-9.4	1.60 V	47	57.7	6.9
4	#5470.00	52.3 AV	54.0	-1.7	1.60 V	47	45.4	6.9
5	*5500.00	110.5 PK			1.31 V	51	70.3	40.2
6	*5500.00	100.2 AV			1.31 V	51	60.0	40.2
7	11000.00	60.3 PK	74.0	-13.7	1.89 V	312	41.1	19.2
8	11000.00	47.5 AV	54.0	-6.5	1.89 V	312	28.3	19.2

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	105.7 PK			3.06 H	25	65.4	40.3
2	*5580.00	95.3 AV			3.06 H	25	55.0	40.3
3	11160.00	61.0 PK	74.0	-13.0	2.16 H	346	41.6	19.4
4	11160.00	48.2 AV	54.0	-5.8	2.16 H	346	28.8	19.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.9 PK			1.45 V	44	72.6	40.3
2	*5580.00	102.9 AV			1.45 V	44	62.6	40.3
3	11160.00	61.6 PK	74.0	-12.4	2.02 V	337	42.2	19.4
4	11160.00	48.7 AV	54.0	-5.3	2.02 V	337	29.3	19.4

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.0 PK			3.01 H	29	62.6	40.4
2	*5700.00	92.9 AV			3.01 H	29	52.5	40.4
3	#5725.00	62.0 PK	74.0	-12.0	2.98 H	22	54.6	7.4
4	#5725.00	49.8 AV	54.0	-4.2	2.98 H	22	42.4	7.4
5	11400.00	59.0 PK	74.0	-15.0	1.96 H	325	40.2	18.8
6	11400.00	45.8 AV	54.0	-8.2	1.96 H	325	27.0	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	109.5 PK			1.54 V	49	69.1	40.4
2	*5700.00	99.3 AV			1.54 V	49	58.9	40.4
3	#5725.00	68.5 PK	74.0	-5.5	1.31 V	54	61.1	7.4
4	#5725.00	52.3 AV	54.0	-1.7	1.31 V	54	44.9	7.4
5	11400.00	60.0 PK	74.0	-14.0	2.04 V	341	41.2	18.8
6	11400.00	47.2 AV	54.0	-6.8	2.04 V	341	28.4	18.8

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	102.5 PK			1.09 H	104	62.9	39.6
2	*5270.00	92.2 AV			1.09 H	104	52.6	39.6
3	5350.00	58.4 PK	74.0	-15.6	1.23 H	111	51.9	6.5
4	5350.00	45.6 AV	54.0	-8.4	1.23 H	111	39.1	6.5
5	#10540.00	60.6 PK	74.0	-13.4	1.54 H	189	41.6	19.0
6	#10540.00	47.5 AV	54.0	-6.5	1.54 H	189	28.5	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	111.2 PK			2.31 V	42	71.6	39.6
2	*5270.00	101.0 AV			2.31 V	42	61.4	39.6
3	5350.00	67.2 PK	74.0	-6.8	2.31 V	40	60.7	6.5
4	5350.00	51.6 AV	54.0	-2.4	2.31 V	40	45.1	6.5
5	#10540.00	60.7 PK	74.0	-13.3	1.59 V	19	41.7	19.0
6	#10540.00	47.8 AV	54.0	-6.2	1.59 V	19	28.8	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	94.9 PK			1.08 H	103	55.2	39.7
2	*5310.00	85.4 AV			1.08 H	103	45.7	39.7
3	5350.00	59.0 PK	74.0	-15.0	1.10 H	123	52.5	6.5
4	5350.00	46.9 AV	54.0	-7.1	1.10 H	123	40.4	6.5
5	10620.00	59.4 PK	74.0	-14.6	1.50 H	200	40.5	18.9
6	10620.00	46.1 AV	54.0	-7.9	1.50 H	200	27.2	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	103.5 PK			2.00 V	44	63.8	39.7
2	*5310.00	93.6 AV			2.00 V	44	53.9	39.7
3	5350.00	64.2 PK	74.0	-9.8	2.31 V	43	57.7	6.5
4	<b>5350.00</b>	<b>52.9 AV</b>	<b>54.0</b>	<b>-1.1</b>	<b>2.31 V</b>	<b>43</b>	<b>46.4</b>	<b>6.5</b>
5	10620.00	60.2 PK	74.0	-13.8	1.71 V	210	41.3	18.9
6	10620.00	47.5 AV	54.0	-6.5	1.71 V	210	28.6	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.1 PK	74.0	-16.9	2.85 H	27	50.2	6.9
2	5460.00	46.4 AV	54.0	-7.6	2.85 H	27	39.5	6.9
3	#5470.00	59.3 PK	74.0	-14.7	2.85 H	27	52.4	6.9
4	#5470.00	47.7 AV	54.0	-6.3	2.85 H	27	40.8	6.9
5	*5510.00	96.3 PK			3.05 H	32	56.1	40.2
6	*5510.00	86.3 AV			3.05 H	32	46.1	40.2
7	11020.00	60.4 PK	74.0	-13.6	2.25 H	232	40.6	19.8
8	11020.00	47.2 AV	54.0	-6.8	2.25 H	232	27.4	19.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.0 PK	74.0	-15.0	1.51 V	49	52.1	6.9
2	5460.00	47.5 AV	54.0	-6.5	1.51 V	49	40.6	6.9
3	#5470.00	65.8 PK	74.0	-8.2	1.31 V	51	58.9	6.9
4	#5470.00	52.4 AV	54.0	-1.6	1.31 V	51	45.5	6.9
5	*5510.00	103.4 PK			1.44 V	52	63.2	40.2
6	*5510.00	93.6 AV			1.44 V	52	53.4	40.2
7	11020.00	61.1 PK	74.0	-12.9	1.92 V	359	41.3	19.8
8	11020.00	47.9 AV	54.0	-6.1	1.92 V	359	28.1	19.8

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	61.2 PK	74.0	-12.8	3.20 H	106	54.3	6.9
2	#5470.00	48.0 AV	54.0	-6.0	3.20 H	106	41.1	6.9
3	*5550.00	102.5 PK			3.02 H	27	62.3	40.2
4	*5550.00	92.7 AV			3.02 H	27	52.5	40.2
5	11100.00	60.7 PK	74.0	-13.3	2.56 H	279	41.5	19.2
6	11100.00	48.0 AV	54.0	-6.0	2.56 H	279	28.8	19.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.4 PK	74.0	-10.6	1.52 V	356	56.5	6.9
2	#5470.00	52.3 AV	54.0	-1.7	1.52 V	356	45.4	6.9
3	*5550.00	109.8 PK			1.32 V	47	69.6	40.2
4	*5550.00	99.7 AV			1.32 V	47	59.5	40.2
5	11100.00	61.0 PK	74.0	-13.0	1.96 V	279	41.8	19.2
6	11100.00	48.4 AV	54.0	-5.6	1.96 V	279	29.2	19.2

**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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	100.9 PK			2.79 H	33	60.6	40.3
2	*5670.00	90.8 AV			2.79 H	33	50.5	40.3
3	#5725.00	58.9 PK	74.0	-15.1	2.67 H	27	51.5	7.4
4	#5725.00	47.5 AV	54.0	-6.5	2.67 H	27	40.1	7.4
5	11340.00	60.1 PK	74.0	-13.9	2.22 H	329	40.6	19.5
6	11340.00	47.2 AV	54.0	-6.8	2.22 H	329	27.7	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	109.0 PK			1.41 V	50	68.7	40.3
2	*5670.00	98.9 AV			1.41 V	50	58.6	40.3
3	#5725.00	67.6 PK	74.0	-6.4	1.46 V	51	60.2	7.4
4	#5725.00	52.3 AV	54.0	-1.7	1.46 V	51	44.9	7.4
5	11340.00	60.1 PK	74.0	-13.9	1.89 V	340	40.9	19.2
6	11340.00	47.2 AV	54.0	-6.8	1.89 V	340	28.0	19.2

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

# 802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	1.50 H	100	50.9	6.0
2	5150.00	45.9 AV	54.0	-8.1	1.50 H	100	39.9	6.0
3	*5290.00	89.6 PK			1.03 H	105	49.9	39.7
4	*5290.00	78.6 AV			1.03 H	105	38.9	39.7
5	5350.00	60.1 PK	74.0	-13.9	1.34 H	145	53.6	6.5
6	5350.00	47.0 AV	54.0	-7.0	1.34 H	145	40.5	6.5
7	#10580.00	60.1 PK	74.0	-13.9	1.11 H	0	41.1	19.0
8	#10580.00	47.3 AV	54.0	-6.7	1.11 H	0	28.3	19.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.94 V	34	54.1	6.0
2	5150.00	47.0 AV	54.0	-7.0	1.94 V	34	41.0	6.0
3	*5290.00	97.6 PK			1.00 V	39	57.9	39.7
4	*5290.00	86.0 AV			1.00 V	39	46.3	39.7
5	5350.00	64.8 PK	74.0	-9.2	2.30 V	45	58.3	6.5
6	5350.00	52.3 AV	54.0	-1.7	2.30 V	45	45.8	6.5
7	#10580.00	60.5 PK	74.0	-13.5	1.80 V	121	41.5	19.0
8	#10580.00	47.7 AV	54.0	-6.3	1.80 V	121	28.7	19.0

## 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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.9 PK	74.0	-15.1	2.84 H	32	52.0	6.9
2	5460.00	46.2 AV	54.0	-7.8	2.84 H	32	39.3	6.9
3	#5470.00	59.9 PK	74.0	-14.1	2.87 H	30	53.0	6.9
4	#5470.00	47.3 AV	54.0	-6.7	2.87 H	30	40.4	6.9
5	*5530.00	91.2 PK			2.81 H	27	51.0	40.2
6	*5530.00	79.5 AV			2.81 H	27	39.3	40.2
7	#5725.00	58.5 PK	74.0	-15.5	2.53 H	150	51.1	7.4
8	#5725.00	47.3 AV	54.0	-6.7	2.53 H	150	39.9	7.4
9	11060.00	59.8 PK	74.0	-14.2	1.64 H	333	40.3	19.5
10	11060.00	46.6 AV	54.0	-7.4	1.64 H	333	27.1	19.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.68 V	41	54.3	6.9
2	5460.00	47.8 AV	54.0	-6.2	1.68 V	41	40.9	6.9
3	#5470.00	64.0 PK	74.0	-10.0	1.64 V	44	57.1	6.9
4	#5470.00	52.5 AV	54.0	-1.5	1.64 V	44	45.6	6.9
5	*5530.00	98.6 PK			1.26 V	48	58.4	40.2
6	*5530.00	86.7 AV			1.26 V	48	46.5	40.2
7	#5725.00	60.3 PK	74.0	-13.7	1.50 V	50	52.9	7.4
8	#5725.00	48.0 AV	54.0	-6.0	1.50 V	50	40.6	7.4
9	11060.00	59.8 PK	74.0	-14.2	2.06 V	224	40.9	18.9
10	11060.00	46.8 AV	54.0	-7.2	2.06 V	224	27.9	18.9

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
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



Below 1GHz Worst-Case Data:

Radio 2: CDD Mode

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	A		

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	30.7 QP	40.0	-9.3	1.99 H	205	45.3	-14.6
2	249.60	26.3 QP	46.0	-19.7	1.00 H	78	40.3	-14.0
3	374.04	35.0 QP	46.0	-11.0	1.00 H	120	45.5	-10.5
4	624.85	38.1 QP	46.0	-7.9	1.00 H	134	42.8	-4.7
5	751.23	40.9 QP	46.0	-5.1	1.00 H	313	43.1	-2.2
6	875.67	41.3 QP	46.0	-4.7	1.49 H	9	41.4	-0.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	40.48	37.4 QP	40.0	-2.6	1.00 V	4	52.6	-15.2
2	389.59	33.8 QP	46.0	-12.2	1.00 V	156	44.0	-10.2
3	500.42	31.4 QP	46.0	-14.6	1.99 V	189	39.3	-7.9
4	624.85	39.5 QP	46.0	-6.5	1.00 V	7	44.2	-4.7
5	751.23	37.1 QP	46.0	-8.9	1.49 V	1	39.3	-2.2
6	875.67	37.5 QP	46.0	-8.5	1.00 V	228	37.6	-0.1

Remarks:

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

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	B		

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	70.73	30.1 QP	40.0	-9.9	1.51 H	142	46.6	-16.5
2	374.04	37.3 QP	46.0	-8.7	1.01 H	124	47.8	-10.5
3	500.42	34.3 QP	46.0	-11.7	2.00 H	126	42.2	-7.9
4	624.85	40.3 QP	46.0	-5.7	1.51 H	139	45.0	-4.7
5	751.23	40.3 QP	46.0	-5.7	1.01 H	346	42.5	-2.2
6	875.67	41.9 QP	46.0	-4.1	1.51 H	13	42.0	-0.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	29.90	36.1 QP	40.0	-3.9	1.00 V	248	52.4	-16.3
2	374.04	34.2 QP	46.0	-11.8	1.50 V	319	44.7	-10.5
3	494.58	23.4 QP	46.0	-22.6	1.00 V	276	31.5	-8.1
4	624.85	42.9 QP	46.0	-3.1	1.00 V	7	47.6	-4.7
5	751.23	36.9 QP	46.0	-9.1	1.99 V	9	39.1	-2.2
6	875.67	38.8 QP	46.0	-7.2	1.50 V	288	38.9	-0.1

Remarks:

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

### Radio 3: CDD Mode

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	A		

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	30.0 QP	40.0	-10.0	2.00 H	295	44.6	-14.6
2	125.17	30.4 QP	43.5	-13.1	2.00 H	266	46.5	-16.1
3	249.60	28.0 QP	46.0	-18.0	1.00 H	258	42.0	-14.0
4	391.54	39.1 QP	46.0	-6.9	2.00 H	17	49.2	-10.1
5	500.42	33.0 QP	46.0	-13.0	1.50 H	127	40.9	-7.9
6	729.84	32.0 QP	46.0	-14.0	1.00 H	336	34.7	-2.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	41.10	38.3 QP	40.0	-1.7	1.48 V	238	53.4	-15.1
2	154.33	26.2 QP	43.5	-17.3	1.49 V	327	39.9	-13.7
3	249.60	25.7 QP	46.0	-20.3	1.49 V	156	39.7	-14.0
4	391.54	42.5 QP	46.0	-3.5	1.00 V	136	52.6	-10.1
5	500.42	35.1 QP	46.0	-10.9	1.00 V	258	43.0	-7.9
6	939.83	32.6 QP	46.0	-13.4	1.49 V	13	31.2	1.4

#### Remarks:

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

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	B		

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	125.17	26.5 QP	43.5	-17.0	1.49 H	246	42.6	-16.1
2	249.60	29.1 QP	46.0	-16.9	1.00 H	99	43.1	-14.0
3	374.04	37.4 QP	46.0	-8.6	1.00 H	116	47.9	-10.5
4	541.25	36.0 QP	46.0	-10.0	1.49 H	130	43.2	-7.2
5	722.07	32.1 QP	46.0	-13.9	1.00 H	310	35.2	-3.1
6	760.95	31.6 QP	46.0	-14.4	1.00 H	4	33.6	-2.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	68.79	29.6 QP	40.0	-10.4	1.49 V	11	45.8	-16.2
2	249.60	28.8 QP	46.0	-17.2	1.99 V	149	42.8	-14.0
3	385.70	41.7 QP	46.0	-4.3	1.49 V	299	52.1	-10.4
4	500.42	39.7 QP	46.0	-6.3	1.00 V	264	47.6	-7.9
5	671.52	32.7 QP	46.0	-13.3	1.49 V	144	36.8	-4.1
6	854.28	30.5 QP	46.0	-15.5	1.49 V	11	30.8	-0.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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/AMN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100220	Nov. 13, 2015	Nov. 12, 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

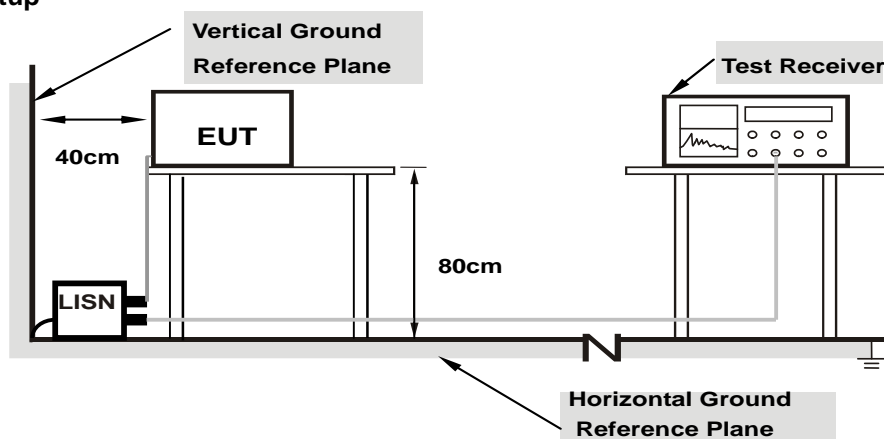
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

**Note:** 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

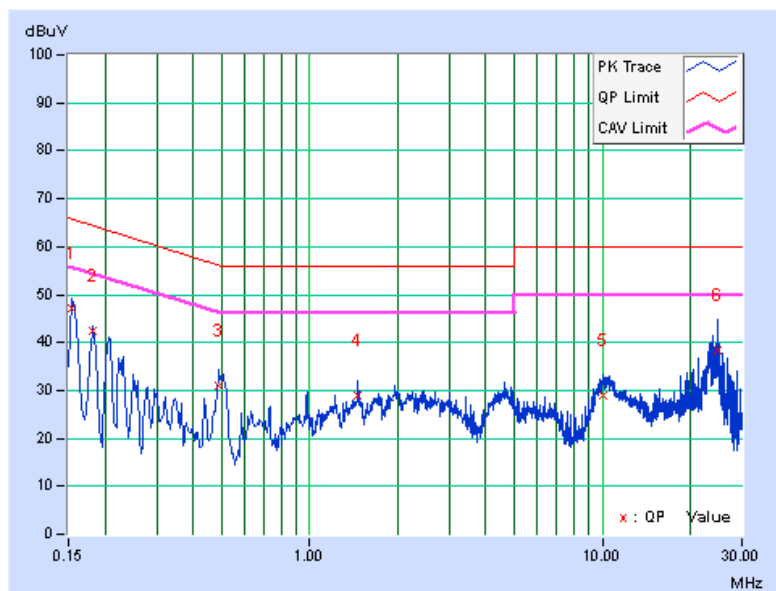
### Radio 2: CDD Mode

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.08	37.16	23.96	47.24	34.04	65.78	55.78	-18.54	-21.74
2	0.18180	10.08	32.48	18.14	42.56	28.22	64.40	54.40	-21.84	-26.18
3	0.49000	10.19	20.80	15.84	30.99	26.03	56.17	46.17	-25.18	-20.14
4	1.46600	10.33	18.79	15.02	29.12	25.35	56.00	46.00	-26.88	-20.65
5	10.00200	10.77	18.30	12.99	29.07	23.76	60.00	50.00	-30.93	-26.24
6	24.88200	11.73	26.55	22.09	38.28	33.82	60.00	50.00	-21.72	-16.18

#### 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.

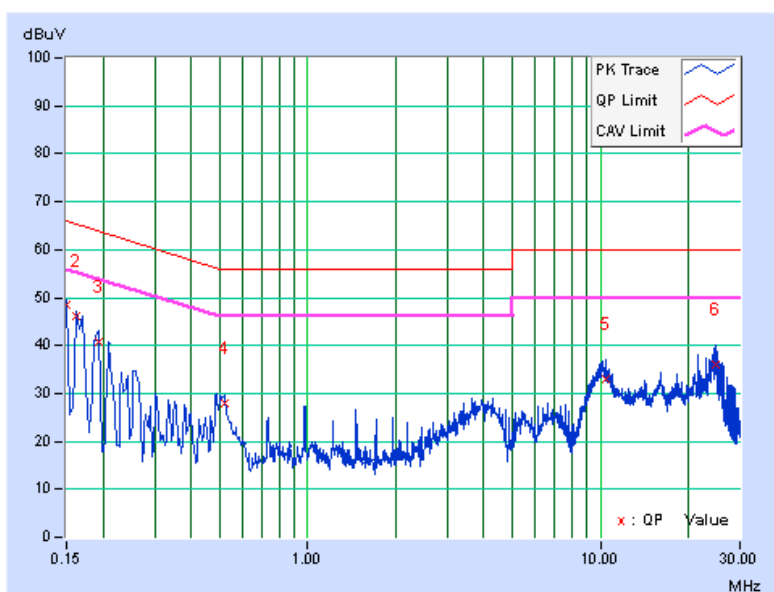


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	38.34	22.94	48.42	33.02	66.00	56.00	-17.58	-22.98
2	0.16200	10.08	36.13	20.38	46.21	30.46	65.36	55.36	-19.15	-24.90
3	0.19316	10.08	30.71	15.52	40.79	25.60	63.90	53.90	-23.11	-28.30
4	0.51800	10.25	17.55	12.18	27.80	22.43	56.00	46.00	-28.20	-23.57
5	10.49000	10.88	22.02	16.85	32.90	27.73	60.00	50.00	-27.10	-22.27
6	24.65000	11.90	24.27	18.50	36.17	30.40	60.00	50.00	-23.83	-19.60

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.



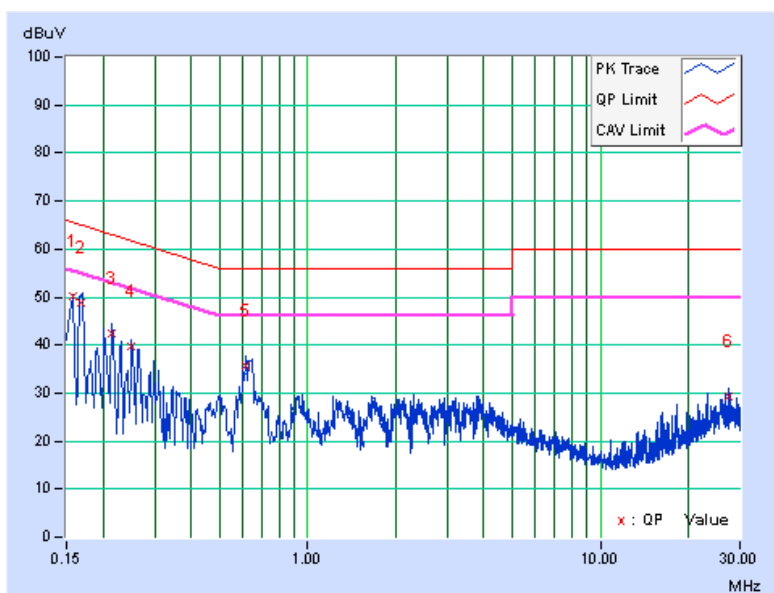


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15800	10.08	40.11	20.36	50.19	30.44	65.57	55.57	-15.38	-25.13
2	0.16843	10.08	38.78	21.28	48.86	31.36	65.04	55.04	-16.18	-23.68
3	0.21406	10.09	32.44	15.56	42.53	25.65	63.05	53.05	-20.52	-27.40
4	0.25006	10.10	29.55	14.48	39.65	24.58	61.76	51.76	-22.11	-27.18
5	0.61800	10.21	25.53	17.06	35.74	27.27	56.00	46.00	-20.26	-18.73
6	27.41800	11.90	17.40	11.93	29.30	23.83	60.00	50.00	-30.70	-26.17

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.

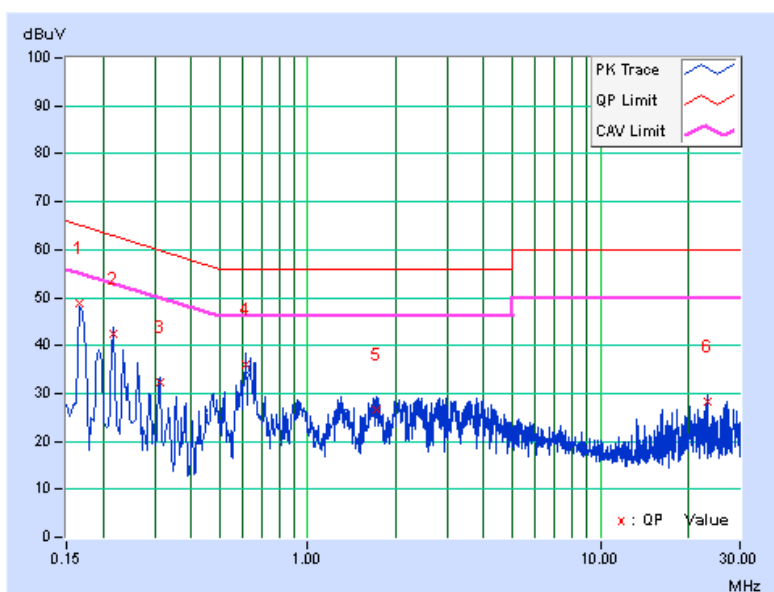


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16623	10.08	38.76	22.12	48.84	32.20	65.15	55.15	-16.31	-22.95
2	0.21800	10.09	32.42	15.40	42.51	25.49	62.89	52.89	-20.38	-27.40
3	0.31283	10.17	22.23	8.04	32.40	18.21	59.90	49.90	-27.50	-31.69
4	0.61800	10.26	25.72	17.36	35.98	27.62	56.00	46.00	-20.02	-18.38
5	1.71400	10.36	16.33	8.99	26.69	19.35	56.00	46.00	-29.31	-26.65
6	23.13000	11.79	16.58	14.21	28.37	26.00	60.00	50.00	-31.63	-24.00

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.



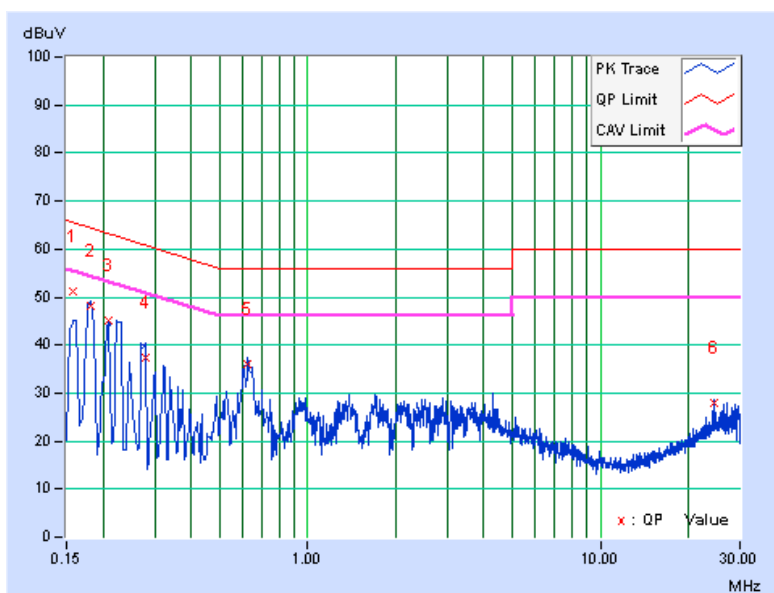
### Radio 3: CDD Mode

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15687	10.08	41.16	21.27	51.24	31.35	65.63	55.63	-14.39	-24.28
2	0.18180	10.08	38.03	19.95	48.11	30.03	64.40	54.40	-16.29	-24.37
3	0.20960	10.08	35.09	17.37	45.17	27.45	63.22	53.22	-18.05	-25.77
4	0.27800	10.12	27.20	11.86	37.32	21.98	60.88	50.88	-23.56	-28.90
5	0.62221	10.21	25.74	17.59	35.95	27.80	56.00	46.00	-20.05	-18.20
6	24.51000	11.70	16.39	10.84	28.09	22.54	60.00	50.00	-31.91	-27.46

#### 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.

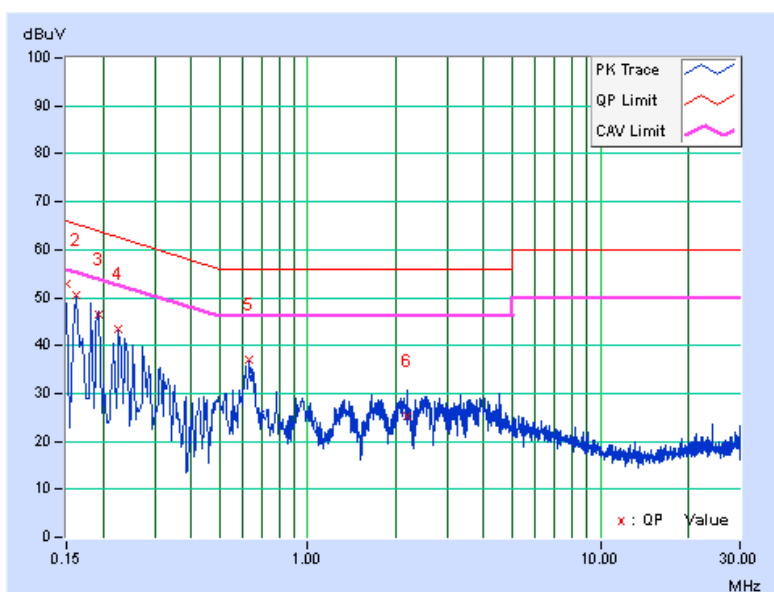


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	42.93	24.36	53.01	34.44	66.00	56.00	-12.99	-21.56
2	0.16190	10.08	40.31	23.78	50.39	33.86	65.37	55.37	-14.98	-21.51
3	0.19316	10.08	36.38	19.18	46.46	29.26	63.90	53.90	-17.44	-24.64
4	0.22600	10.10	33.43	17.60	43.53	27.70	62.60	52.60	-19.07	-24.90
5	0.63046	10.26	26.65	18.73	36.91	28.99	56.00	46.00	-19.09	-17.01
6	2.18600	10.41	14.87	6.88	25.28	17.29	56.00	46.00	-30.72	-28.71

Remarks:

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

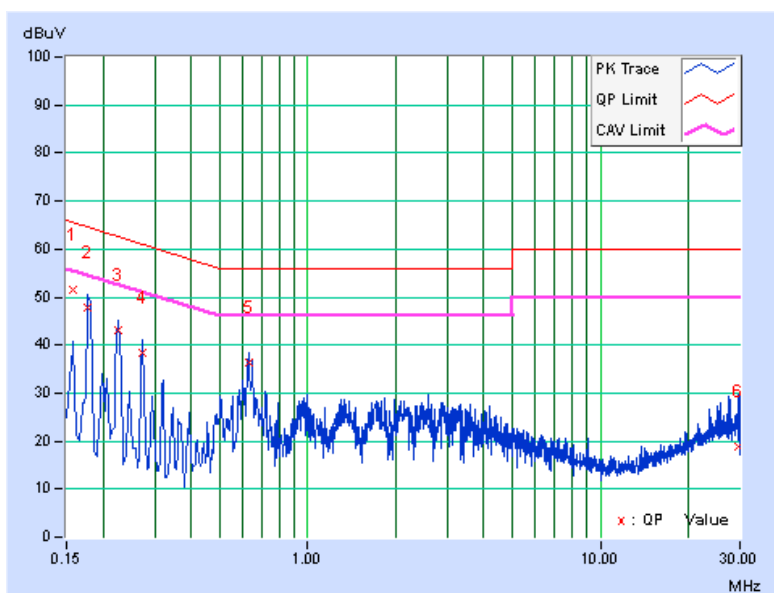


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15800	10.08	41.35	21.91	51.43	31.99	65.57	55.57	-14.14	-23.58
2	0.17801	10.08	37.87	20.39	47.95	30.47	64.58	54.58	-16.63	-24.11
3	0.22600	10.09	33.02	17.11	43.11	27.20	62.60	52.60	-19.49	-25.40
4	0.27400	10.11	28.29	14.15	38.40	24.26	61.00	51.00	-22.60	-26.74
5	0.63000	10.22	26.20	17.93	36.42	28.15	56.00	46.00	-19.58	-17.85
6	29.57000	12.04	6.89	1.27	18.93	13.31	60.00	50.00	-41.07	-36.69

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.

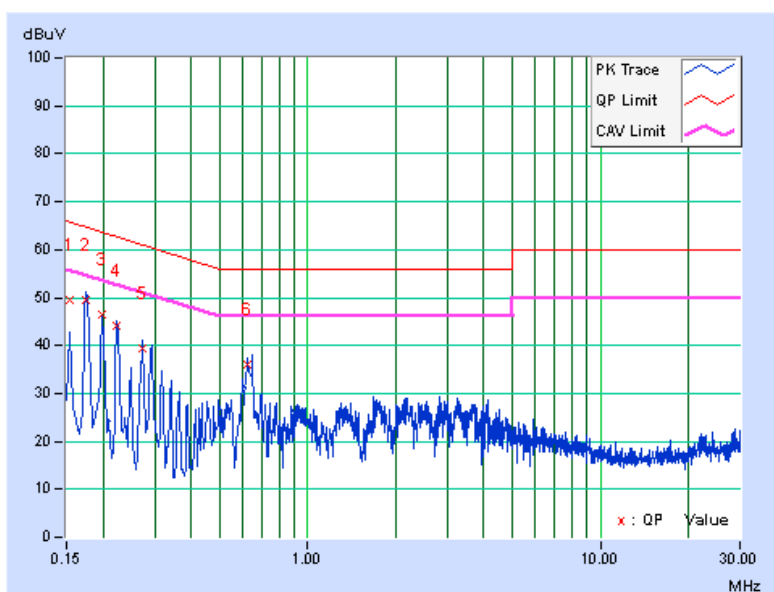


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.08	39.33	21.77	49.41	31.85	65.78	55.78	-16.37	-23.93
2	0.17430	10.08	39.27	21.63	49.35	31.71	64.75	54.75	-15.40	-23.04
3	0.19800	10.08	36.24	19.66	46.32	29.74	63.69	53.69	-17.37	-23.95
4	0.22211	10.10	33.84	18.15	43.94	28.25	62.74	52.74	-18.80	-24.49
5	0.27400	10.14	29.16	15.31	39.30	25.45	61.00	51.00	-21.70	-25.55
6	0.62221	10.26	25.76	18.05	36.02	28.31	56.00	46.00	-19.98	-17.69

Remarks:

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



### 4.3 Transmit Power Measurement

#### 4.3.1 Limits of Transmit Power Measurement

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

\*B is the 26 dB emission bandwidth in megahertz

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

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

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

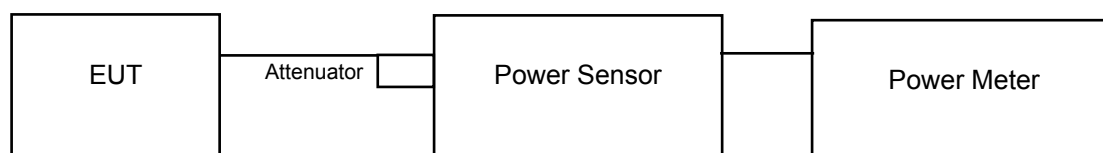
Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

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

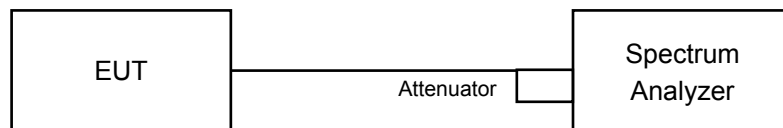
#### 4.3.2 Test Setup

For Power Output Measurement

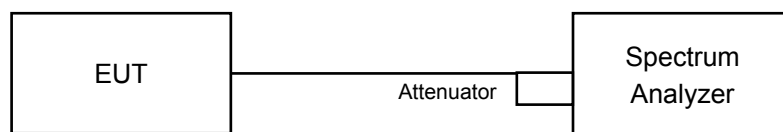
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB Bandwidth



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 Test Procedure

##### For Average Power Measurement

##### For 802.11a, 802.11n (HT20), 802.11n (HT40)

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

##### For 802.11ac (VHT80)

- a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- b. Set sweep trigger to “free run”.
- c. Set RBW = 1 MHz.
- d. Set VBW  $\geq$  3 MHz
- e. Number of points in sweep  $\geq$  2 Span / RBW.
- f. Sweep time  $\leq$  (number of points in sweep) \* T
- g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- h. Detector = RMS.
- i. Trace mode = max hold.
- j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

##### For 26dB Bandwidth

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

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Conditions

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



#### 4.3.7 Test Result

Power Output:

Radio 2: CDD Mode

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	17.41	17.23	107.926	20.33	23.83	Pass
60	5300	16.85	17.12	99.940	20.00	23.83	Pass
64	5320	16.95	17.34	103.745	20.16	23.84	Pass
100	5500	17.19	17.55	109.245	20.38	23.84	Pass
116	5580	17.18	17.52	108.734	20.36	23.86	Pass
140	5700	16.79	17.32	101.704	20.07	23.84	Pass

Note:

Chain 0

1.  $11\text{dBm} + 10\log ( 19.52 ) = 23.90 < 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 19.45 ) = 23.89 < 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 19.53 ) = 23.91 < 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 19.53 ) = 23.91 < 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 19.40 ) = 23.88 < 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 19.42 ) = 23.88 < 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log ( 19.23 ) = 23.83 < 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 19.23 ) = 23.83 < 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 19.26 ) = 23.84 < 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 19.24 ) = 23.84 < 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 19.35 ) = 23.86 < 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 19.27 ) = 23.84 < 24\text{dBm}$

### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	17.30	17.40	108.657	20.36	24	Pass
60	5300	17.43	17.49	111.440	20.47	24	Pass
64	5320	16.97	17.46	105.493	20.23	24	Pass
100	5500	17.21	17.60	110.146	20.42	24	Pass
116	5580	17.14	17.34	105.961	20.25	24	Pass
140	5700	16.73	17.25	100.186	20.01	24	Pass

Note:

Chain 0

1.  $11\text{dBm} + 10\log ( 20.39 ) = 24.09 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 20.36 ) = 24.09 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 20.29 ) = 24.07 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 20.35 ) = 24.09 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 20.18 ) = 24.05 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 20.31 ) = 24.08 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log ( 20.27 ) = 24.07 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 20.26 ) = 24.07 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 20.33 ) = 24.08 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 20.30 ) = 24.07 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 20.30 ) = 24.07 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 20.30 ) = 24.07 > 24\text{dBm}$

### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	19.66	20.03	<b>193.163</b>	22.86	24	Pass
62	5310	17.89	18.01	124.759	20.96	24	Pass
102	5510	17.61	18.14	122.840	20.89	24	Pass
110	5550	19.49	20.14	<b>192.196</b>	22.84	24	Pass
134	5670	17.99	18.75	137.940	21.40	24	Pass

Note:

Chain 0

1.  $11\text{dBm} + 10\log ( 40.80 ) = 27.11 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 40.69 ) = 27.09 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 40.66 ) = 27.09 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 40.92 ) = 27.12 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 40.77 ) = 27.10 > 24\text{dBm}$

Chain 1

1.  $11\text{dBm} + 10\log ( 41.02 ) = 27.13 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 40.64 ) = 27.09 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 40.92 ) = 27.12 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 40.93 ) = 27.12 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 40.98 ) = 27.13 > 24\text{dBm}$

# 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	15.74	15.84	75.868	18.80	24	Pass
106	5530	15.98	16.63	85.654	19.33	24	Pass

Note:

Chain 0

$$1. 11\text{dBm} + 10\log ( 84.28 ) = 30.26 > 24\text{dBm}$$

$$2. 11\text{dBm} + 10\log ( 83.89 ) = 30.24 > 24\text{dBm}$$

Chain 1

$$1. 11\text{dBm} + 10\log ( 84.00 ) = 30.24 > 24\text{dBm}$$

$$2. 11\text{dBm} + 10\log ( 83.69 ) = 30.23 > 24\text{dBm}$$

## Radio 2: Beamforming Mode

### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
52	5260	18.09	18.05	128.243	21.08	21.46	Pass
60	5300	18.11	18.01	127.955	21.07	21.46	Pass
64	5320	18.10	18.06	128.538	21.09	21.46	Pass
100	5500	18.13	18.12	129.876	21.14	21.46	Pass
116	5580	18.06	18.17	129.588	21.13	21.46	Pass
140	5700	15.56	16.09	76.619	18.84	21.46	Pass

\* Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power limit shall be reduced to  $24 - (8.54 - 6) = 21.46 \text{ dBm}$ .

Note:

Chain 0

1.  $11 \text{ dBm} + 10 \log(20.35) = 24.09 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(20.50) = 24.12 > 21.46 \text{ dBm}$
3.  $11 \text{ dBm} + 10 \log(20.39) = 24.09 > 21.46 \text{ dBm}$
4.  $11 \text{ dBm} + 10 \log(20.44) = 24.10 > 21.46 \text{ dBm}$
5.  $11 \text{ dBm} + 10 \log(20.45) = 24.11 > 21.46 \text{ dBm}$
6.  $11 \text{ dBm} + 10 \log(20.42) = 24.10 > 21.46 \text{ dBm}$

Chain 1

1.  $11 \text{ dBm} + 10 \log(20.57) = 24.13 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(20.55) = 24.13 > 21.46 \text{ dBm}$
3.  $11 \text{ dBm} + 10 \log(20.39) = 24.09 > 21.46 \text{ dBm}$
4.  $11 \text{ dBm} + 10 \log(20.52) = 24.12 > 21.46 \text{ dBm}$
5.  $11 \text{ dBm} + 10 \log(20.37) = 24.09 > 21.46 \text{ dBm}$
6.  $11 \text{ dBm} + 10 \log(20.30) = 24.07 > 21.46 \text{ dBm}$

### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
54	5270	18.38	18.23	<b>135.392</b>	21.32	21.46	Pass
62	5310	15.59	15.74	73.721	18.68	21.46	Pass
102	5510	14.82	15.10	62.698	17.97	21.46	Pass
110	5550	18.06	18.51	<b>134.931</b>	21.30	21.46	Pass
134	5670	14.85	15.53	66.276	18.21	21.46	Pass

\* Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power limit shall be reduced to  $24 - (8.54 - 6) = 21.46 \text{ dBm}$ .

Note:

Chain 0

1.  $11 \text{ dBm} + 10 \log(40.65) = 27.09 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(40.80) = 27.11 > 21.46 \text{ dBm}$
3.  $11 \text{ dBm} + 10 \log(40.75) = 27.10 > 21.46 \text{ dBm}$
4.  $11 \text{ dBm} + 10 \log(40.62) = 27.09 > 21.46 \text{ dBm}$
5.  $11 \text{ dBm} + 10 \log(40.78) = 27.10 > 21.46 \text{ dBm}$

Chain 1

1.  $11 \text{ dBm} + 10 \log(41.19) = 27.15 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(41.00) = 27.13 > 21.46 \text{ dBm}$
3.  $11 \text{ dBm} + 10 \log(41.01) = 27.13 > 21.46 \text{ dBm}$
4.  $11 \text{ dBm} + 10 \log(40.91) = 27.12 > 21.46 \text{ dBm}$
5.  $11 \text{ dBm} + 10 \log(41.03) = 27.13 > 21.46 \text{ dBm}$

### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
58	5290	15.36	15.42	69.190	18.40	21.46	Pass
106	5530	14.42	14.93	58.786	17.69	21.46	Pass

\* Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power limit shall be reduced to  $24 - (8.54 - 6) = 21.46 \text{ dBm}$ .

Note:

Chain 0

1.  $11 \text{ dBm} + 10 \log(83.14) = 30.20 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(83.37) = 30.21 > 21.46 \text{ dBm}$

Chain 1

1.  $11 \text{ dBm} + 10 \log(83.13) = 30.20 > 21.46 \text{ dBm}$
2.  $11 \text{ dBm} + 10 \log(84.32) = 30.26 > 21.46 \text{ dBm}$

### Radio 3: CDD Mode

#### 802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	59.704	17.76	24	Pass
60	5300	<b>63.973</b>	18.06	24	Pass
64	5320	59.156	17.72	24	Pass
100	5500	28.510	14.55	24	Pass
116	5580	<b>45.082</b>	16.54	24	Pass
140	5700	19.454	12.89	24	Pass

Note:

1.  $11\text{dBm} + 10\log ( 37.73 ) = 26.77 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 36.02 ) = 26.57 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 34.26 ) = 26.35 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 30.56 ) = 25.85 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 41.44 ) = 27.17 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 25.93 ) = 25.14 > 24\text{dBm}$

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	56.234	17.50	24	Pass
60	5300	57.677	17.61	24	Pass
64	5320	51.168	17.09	24	Pass
100	5500	25.942	14.14	24	Pass
116	5580	43.954	16.43	24	Pass
140	5700	13.490	11.30	24	Pass

Note:

1.  $11\text{dBm} + 10\log ( 40.67 ) = 27.09 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 39.47 ) = 26.96 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 32.84 ) = 26.16 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 29.30 ) = 25.67 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 45.27 ) = 27.56 > 24\text{dBm}$
6.  $11\text{dBm} + 10\log ( 27.30 ) = 25.36 > 24\text{dBm}$

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
54	5270	56.885	17.55	24	Pass
62	5310	13.614	11.34	24	Pass
102	5510	10.789	10.33	24	Pass
110	5550	42.855	16.32	24	Pass
134	5670	24.378	13.87	24	Pass

Note:

1.  $11\text{dBm} + 10\log ( 79.00 ) = 29.98 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 52.26 ) = 28.18 > 24\text{dBm}$
3.  $11\text{dBm} + 10\log ( 52.32 ) = 28.19 > 24\text{dBm}$
4.  $11\text{dBm} + 10\log ( 81.21 ) = 30.10 > 24\text{dBm}$
5.  $11\text{dBm} + 10\log ( 59.19 ) = 28.72 > 24\text{dBm}$

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
58	5290	4.426	6.46	24	Pass
106	5530	4.955	6.95	24	Pass

Note:

1.  $11\text{dBm} + 10\log ( 101.80 ) = 31.08 > 24\text{dBm}$
2.  $11\text{dBm} + 10\log ( 102.37 ) = 31.10 > 24\text{dBm}$

26dB Bandwidth:

Radio 2: CDD Mode

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
52	5260	19.52	19.23	Pass
60	5300	19.45	19.23	Pass
64	5320	19.53	19.26	Pass
100	5500	19.53	19.24	Pass
116	5580	19.40	19.35	Pass
140	5700	19.42	19.27	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
52	5260	20.39	20.27	Pass
60	5300	20.36	20.26	Pass
64	5320	20.29	20.33	Pass
100	5500	20.35	20.30	Pass
116	5580	20.18	20.30	Pass
140	5700	20.31	20.30	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
54	5270	40.80	41.02	Pass
62	5310	40.69	40.64	Pass
102	5510	40.66	40.92	Pass
110	5550	40.92	40.93	Pass
134	5670	40.77	40.98	Pass

802.11ac (VHT80)

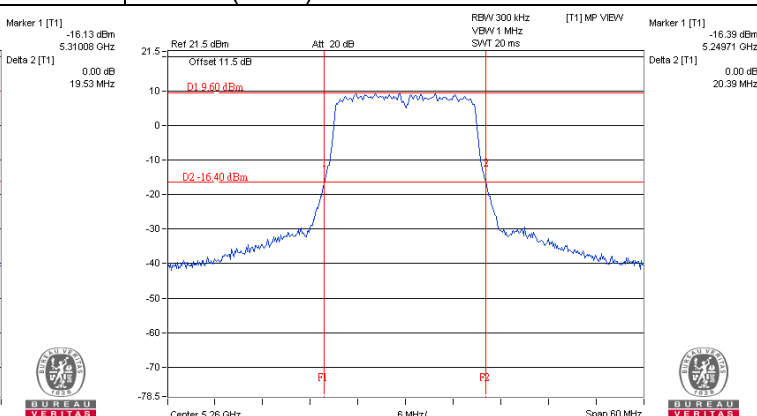
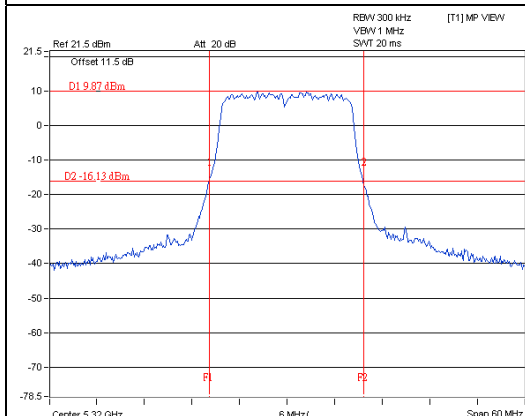
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
58	5290	84.28	84.00	Pass
106	5530	83.89	83.69	Pass



# Spectrum Plot of Worst Value

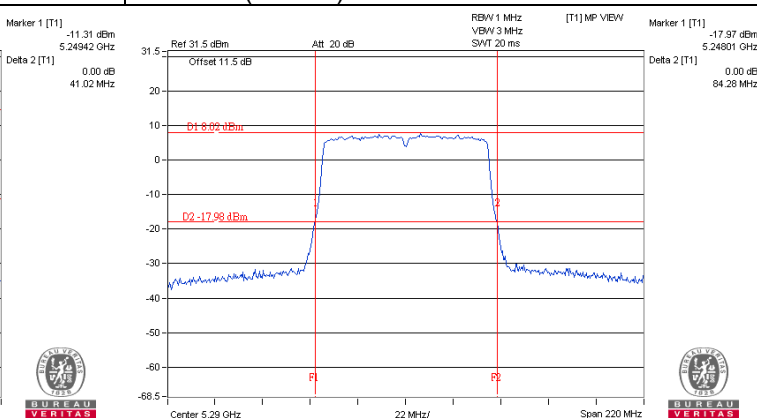
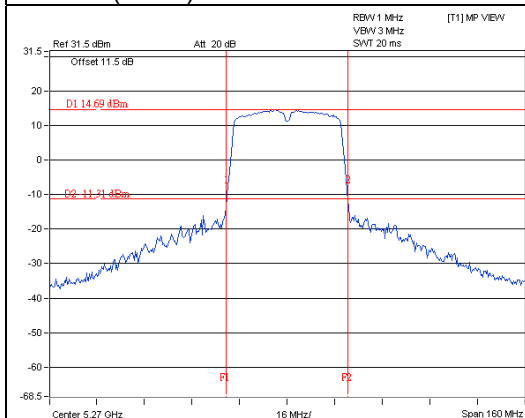
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



## Radio 2: Beamforming Mode

### 802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
52	5260	20.35	20.57	Pass
60	5300	20.50	20.55	Pass
64	5320	20.39	20.39	Pass
100	5500	20.44	20.52	Pass
116	5580	20.45	20.37	Pass
140	5700	20.42	20.30	Pass

### 802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
54	5270	40.65	41.19	Pass
62	5310	40.80	41.00	Pass
102	5510	40.75	41.01	Pass
110	5550	40.62	40.91	Pass
134	5670	40.78	41.03	Pass

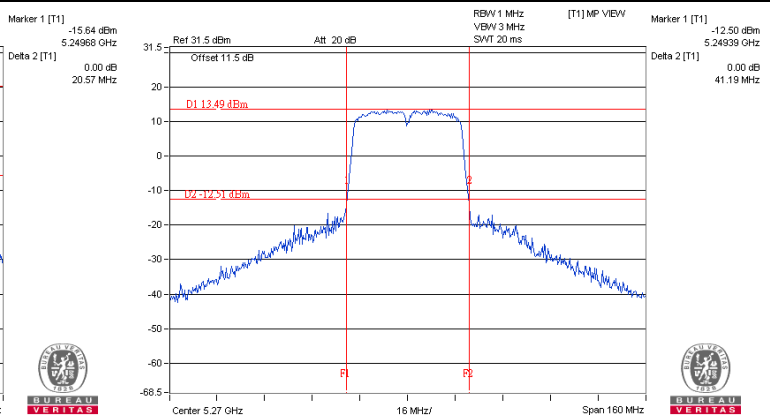
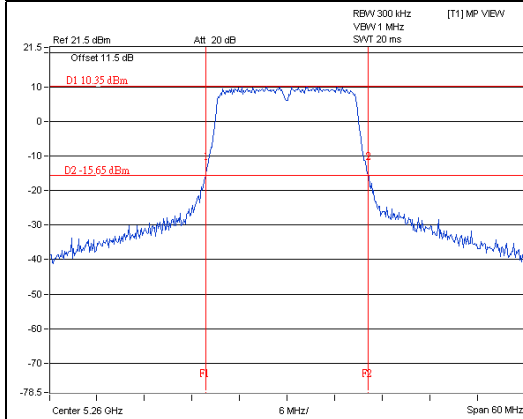
### 802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
58	5290	83.14	83.13	Pass
106	5530	83.37	84.32	Pass

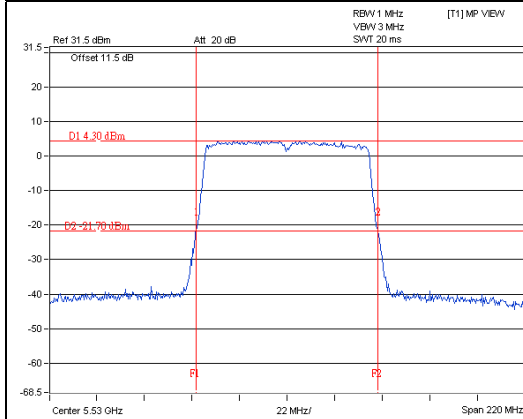
## Spectrum Plot of Worst Value

802.11n (HT20)

802.11n (HT40)



802.11ac (VHT80)



### Radio 3: CDD Mode

#### 802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
52	5260	37.73	Pass
60	5300	36.02	Pass
64	5320	34.26	Pass
100	5500	30.56	Pass
116	5580	41.44	Pass
140	5700	25.93	Pass

#### 802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
52	5260	40.67	Pass
60	5300	39.47	Pass
64	5320	32.84	Pass
100	5500	29.30	Pass
116	5580	45.27	Pass
140	5700	27.30	Pass

#### 802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
54	5270	79.00	Pass
62	5310	52.26	Pass
102	5510	52.32	Pass
110	5550	81.21	Pass
134	5670	59.19	Pass

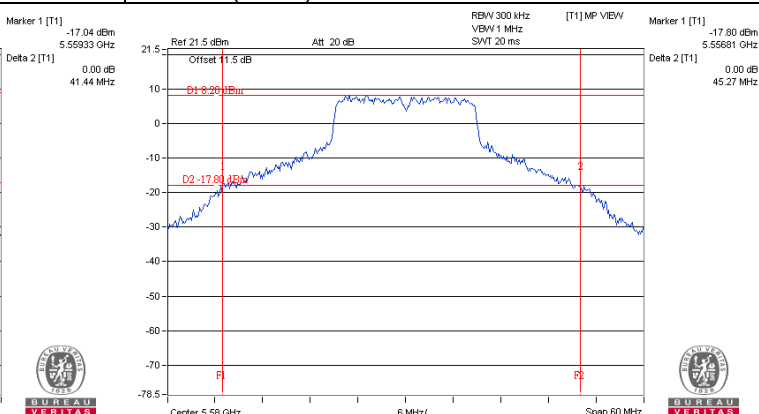
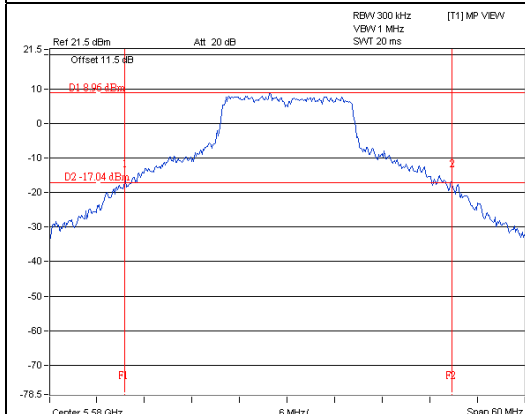
#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
58	5290	101.80	Pass
106	5530	102.37	Pass

## Spectrum Plot of Worst Value

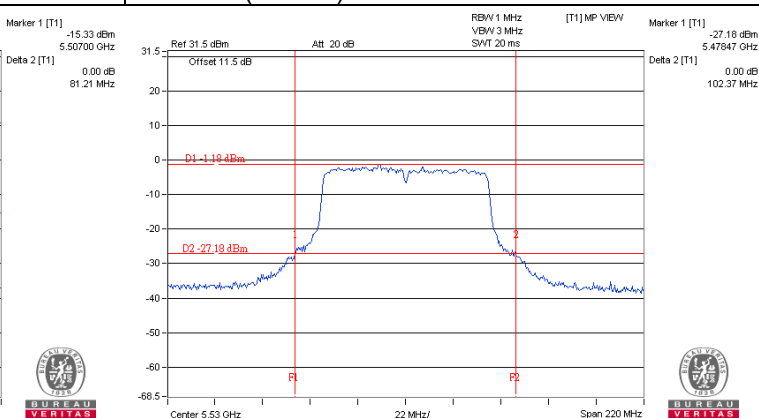
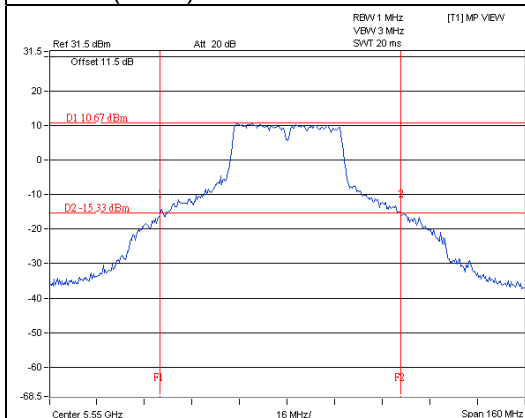
802.11a

802.11n (HT20)



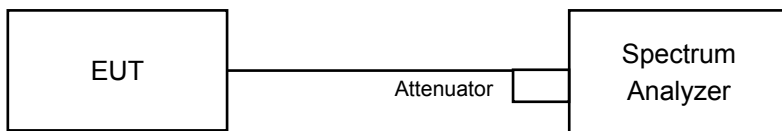
802.11n (HT40)

802.11ac (VHT80)



## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup



### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

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

#### 4.4.4 Test Result

Radio 2: CDD Mode

##### 802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.44	16.44
60	5300	16.44	16.44
64	5320	16.44	16.44
100	5500	16.44	16.44
116	5580	16.44	16.44
140	5700	16.56	16.44

##### 802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	17.64	17.64
60	5300	17.64	17.52
64	5320	17.64	17.64
100	5500	17.52	17.64
116	5580	17.52	17.76
140	5700	17.64	17.64

##### 802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	36.12	36.12
62	5310	36.12	36.12
102	5510	36.12	36.12
110	5550	36.12	36.12
134	5670	36.12	36.12

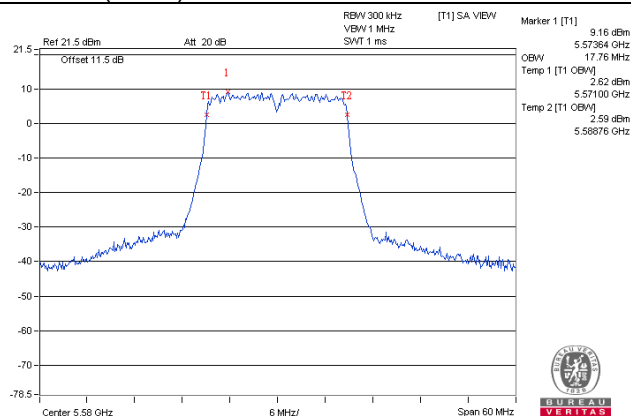
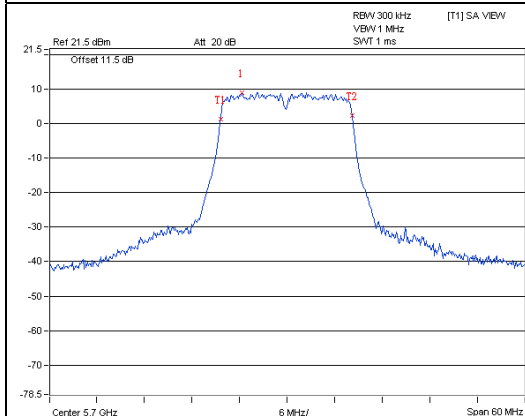
##### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	75.84	75.84
106	5530	75.84	75.84

## Spectrum Plot of Worst Value

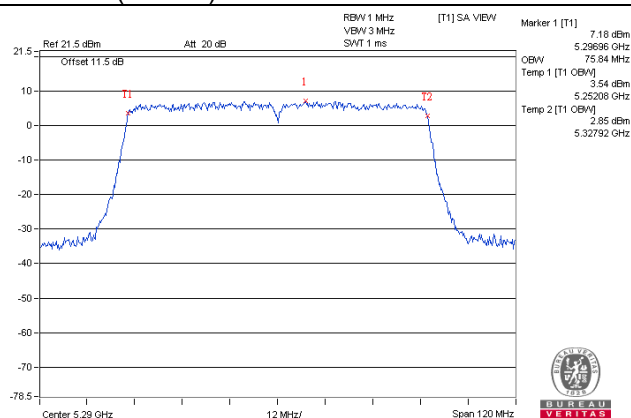
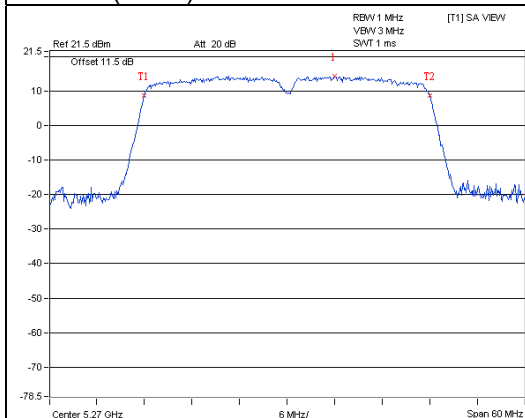
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)





## Radio 2: Beamforming Mode

### 802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.76	18.76
60	5300	18.64	18.76
64	5320	18.76	18.76
100	5500	18.76	18.76
116	5580	18.76	18.76
140	5700	18.76	18.76

### 802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	36.36	36.24
62	5310	36.36	36.24
102	5510	36.12	36.24
110	5550	36.24	36.36
134	5670	36.24	36.24

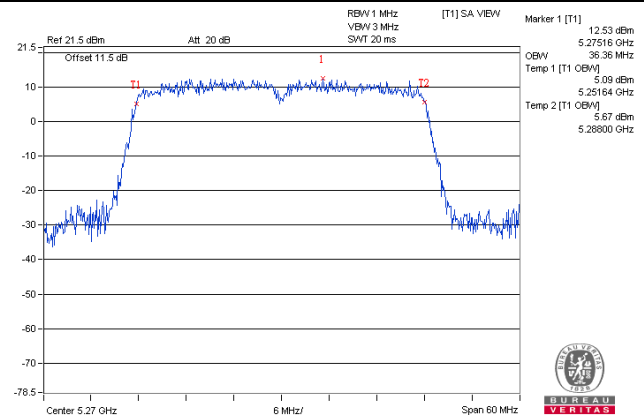
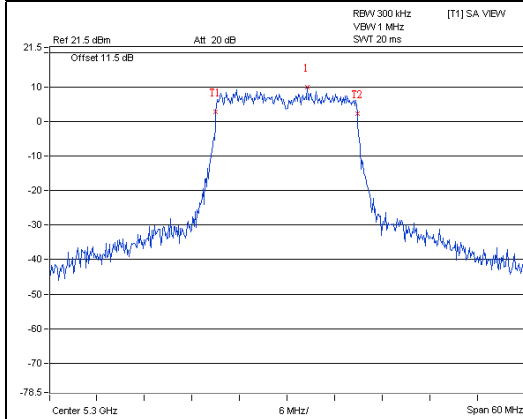
### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	75.84	75.84
106	5530	75.84	75.84

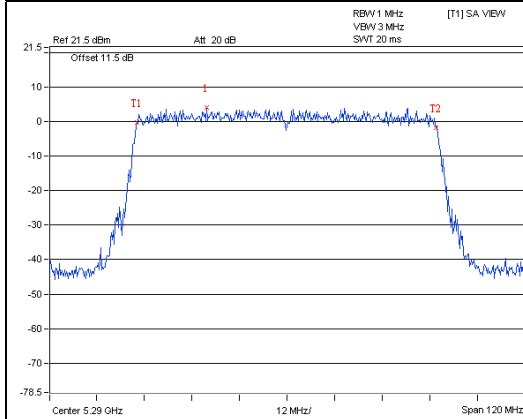
## Spectrum Plot of Worst Value

**802.11n (HT20)**

**802.11n (HT40)**



**802.11ac (VHT80)**



### Radio 3: CDD Mode

#### 802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
52	5260	22.56 (Note)
60	5300	21.36
64	5320	19.92
100	5500	18.00
116	5580	25.68
140	5700	17.16

Note: Refer to next page for spectral power density plot

#### 802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
52	5260	21.00 (Note)
60	5300	21.96
64	5320	19.56
100	5500	18.60
116	5580	25.92
140	5700	18.12

Note: Refer to next page for spectral power density plot

#### 802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
54	5270	38.52
62	5310	37.32
102	5510	37.32
110	5550	39.12
134	5670	37.80

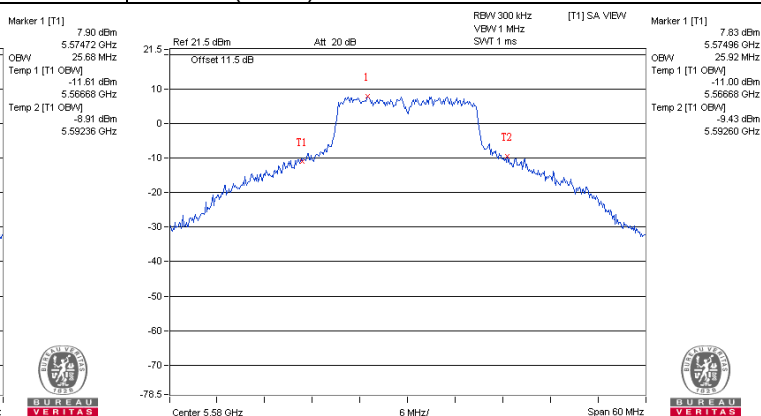
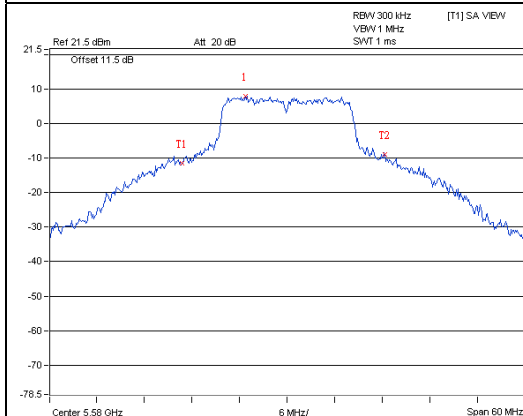
#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
58	5290	76.32
106	5530	76.56

## Spectrum Plot of Worst Value

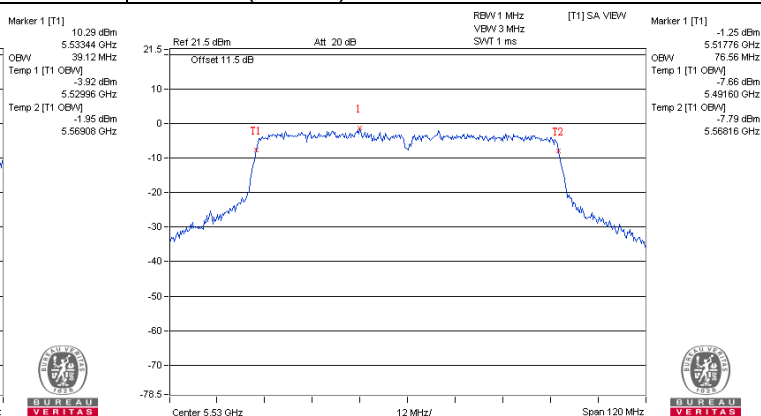
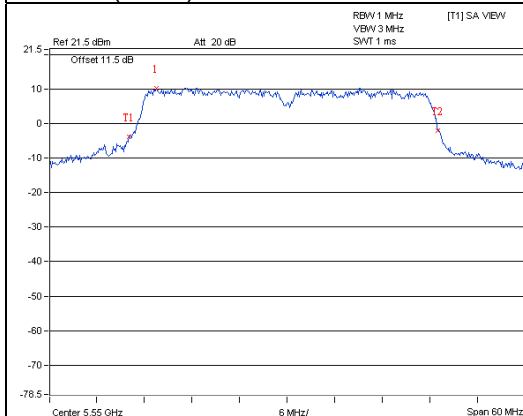
802.11a

802.11n (HT20)



802.11n (HT40)

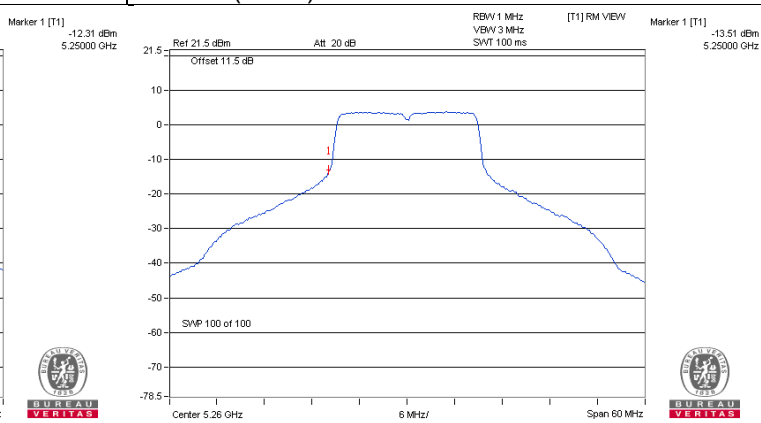
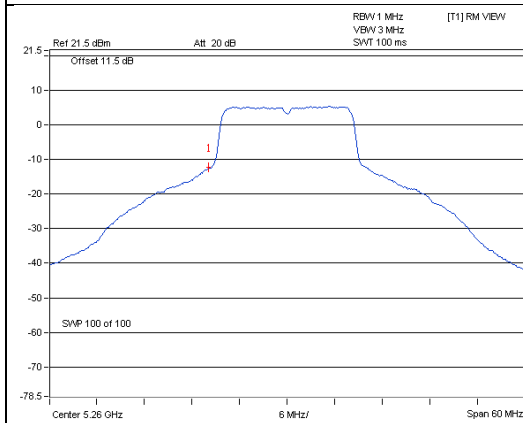
802.11ac (VHT80)



The spectral power density for operation within the band 5150-5250 MHz.

802.11a

802.11n (HT20)



# EUT MAXIMUM CONDUCTED POWER

Radio 2: CDD Mode

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	107.926	20.33
5470~5725	109.245	20.38

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	111.440	20.47
5470~5725	110.146	20.42

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	193.163	22.86
5470~5725	192.196	22.84

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	75.868	18.80
5470~5725	85.654	19.33

## Radio 2: Beamforming Mode

### 802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	128.538	21.09
5470~5725	129.876	21.14

### 802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	135.392	21.32
5470~5725	134.931	21.30

### 802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	69.190	18.40
5470~5725	58.786	17.69

### Radio 3: CDD Mode

#### 802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	63.973	18.06
5470~5725	45.082	16.54

#### 802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	57.677	17.61
5470~5725	43.954	16.43

#### 802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	56.885	17.55
5470~5725	42.855	16.32

#### 802.11ac (VHT80)

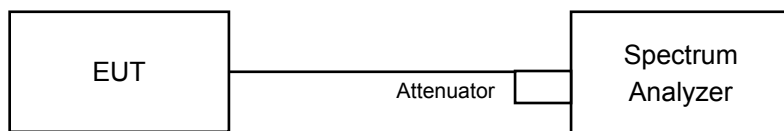
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	4.426	6.46
5470~5725	4.955	6.95

## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

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

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedures

Using method SA-1, Duty cycle >98%:

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Record the max value

Using method SA-2, Duty cycle <98%

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

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Conditions

Same as Item 4.3.6.



#### 4.5.7 Test Results

Radio 2: CDD Mode

802.11a

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
52	5260	5.12	4.90	8.03	0.24	8.27	8.46	Pass
60	5300	4.39	4.64	7.53	0.24	7.77	8.46	Pass
64	5320	4.53	4.77	7.67	0.24	7.91	8.46	Pass
100	5500	4.34	5.08	7.74	0.24	7.98	8.46	Pass
116	5580	4.33	5.04	7.72	0.24	7.96	8.46	Pass
140	5700	4.12	5.08	7.64	0.24	7.88	8.46	Pass

Note:

- 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.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.54-6) = 8.46\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
52	5260	4.79	4.94	7.88	0.09	7.97	8.46	Pass
60	5300	4.75	5.22	8.00	0.09	8.09	8.46	Pass
64	5320	4.83	5.26	8.06	0.09	8.15	8.46	Pass
100	5500	4.36	4.93	7.67	0.09	7.76	8.46	Pass
116	5580	4.21	4.64	7.44	0.09	7.53	8.46	Pass
140	5700	4.00	4.49	7.26	0.09	7.35	8.46	Pass

Note:

- 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.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.54-6) = 8.46\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
54	5270	4.44	4.52	7.49	0.25	7.74	8.46	Pass
62	5310	2.65	2.86	5.76	0.25	6.01	8.46	Pass
102	5510	1.55	2.07	4.82	0.25	5.07	8.46	Pass
110	5550	3.39	3.95	6.68	0.25	6.93	8.46	Pass
134	5670	2.32	2.94	5.65	0.25	5.90	8.46	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 =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power density limit shall be reduced to  $11 - (8.54 - 6) = 8.46 \text{ dBm}$ .
3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
58	5290	-3.02	-2.95	0.02	0.70	0.72	8.46	Pass
106	5530	-3.46	-2.91	-0.17	0.70	0.53	8.46	Pass

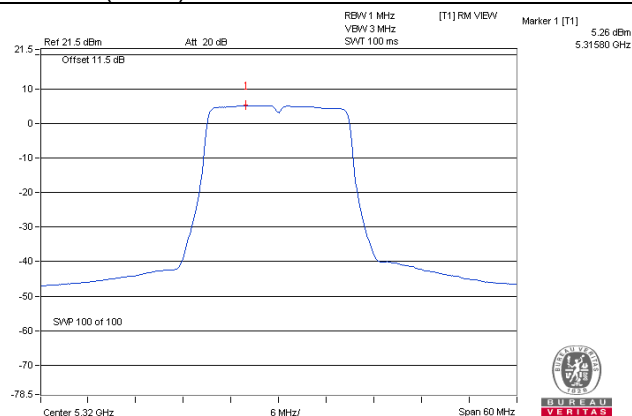
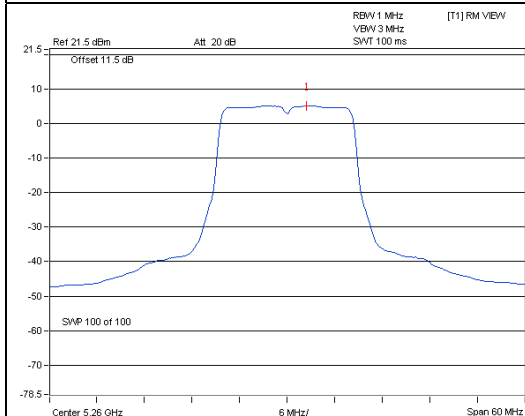
Note:

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 =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power density limit shall be reduced to  $11 - (8.54 - 6) = 8.46 \text{ dBm}$ .
3. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

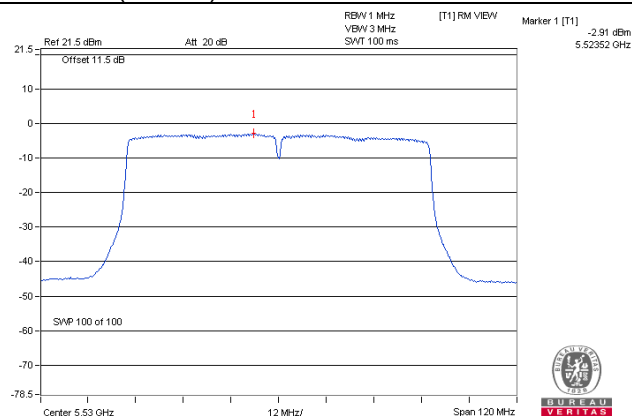
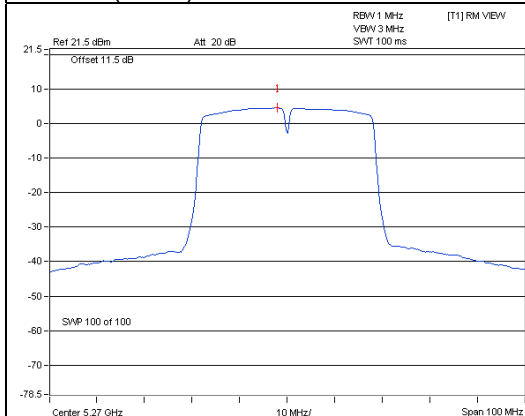
802.11a / Chain 0 / CH 52

802.11n (HT20) / Chain 1 / CH 64



802.11n (HT40) / Chain 1 / CH 54

802.11ac (VHT80) / Chain 1 / CH 106



## Radio 2: Beamforming Mode

### 802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
52	5260	5.36	4.93	8.16	8.46	Pass
60	5300	5.30	4.87	8.10	8.46	Pass
64	5320	4.36	3.88	7.14	8.46	Pass
100	5500	3.15	3.71	6.45	8.46	Pass
116	5580	4.52	4.02	7.29	8.46	Pass
140	5700	1.37	1.51	4.45	8.46	Pass

Note:

- 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.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.54-6) = 8.46\text{dBm}$ .

### 802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
54	5270	2.61	2.21	5.43	0.22	5.65	8.46	Pass
62	5310	-1.34	-1.60	1.54	0.22	1.76	8.46	Pass
102	5510	-3.02	-3.11	-0.05	0.22	0.17	8.46	Pass
110	5550	1.04	1.17	4.12	0.22	4.34	8.46	Pass
134	5670	-2.18	-2.24	0.8	0.22	1.02	8.46	Pass

Note:

- 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.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6\text{dBi}$ , so the power density limit shall be reduced to  $11-(8.54-6) = 8.46\text{dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

## 802.11ac (VHT80)

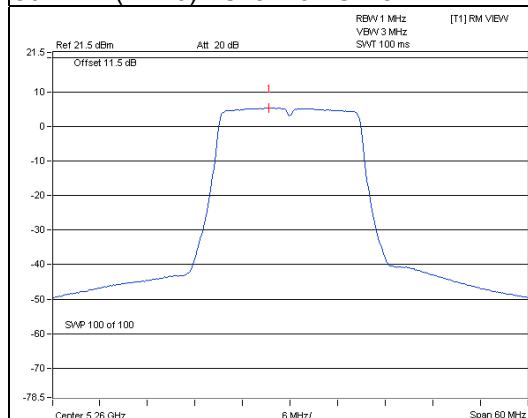
Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
58	5290	-6.16	-5.47	-2.79	0.36	-2.43	8.46	Pass
106	5530	-5.67	-6.71	-3.15	0.36	-2.79	8.46	Pass

Note:

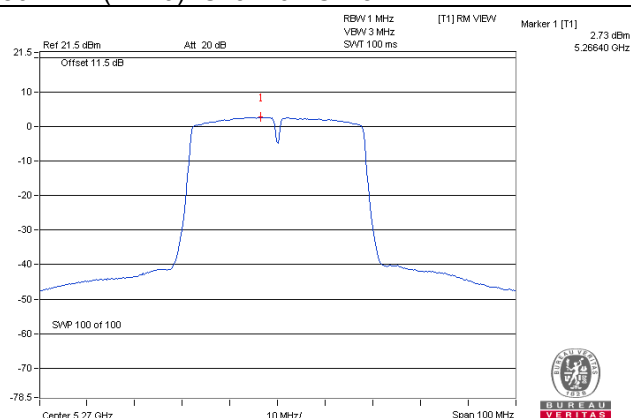
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.54 \text{ dBi} > 6 \text{ dBi}$ , so the power density limit shall be reduced to  $11 - (8.54 - 6) = 8.46 \text{ dBm}$ .
- Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

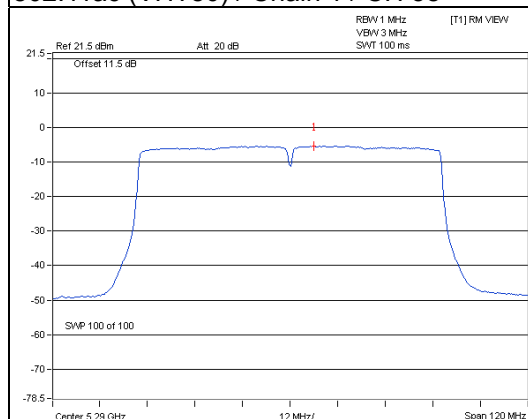
802.11n (HT20) / Chain 0 / CH 52



802.11n (HT40) / Chain 0 / CH 54



802.11ac (VHT80) / Chain 1 / CH 58



### Radio 3: CDD Mode

#### 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	5.31	0.21	5.52	11	Pass
60	5300	5.34	0.21	5.55	11	Pass
64	5320	4.39	0.21	4.60	11	Pass
100	5500	1.70	0.21	1.91	11	Pass
116	5580	3.85	0.21	4.06	11	Pass
140	5700	0.25	0.21	0.46	11	Pass

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

#### 802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
52	5260	3.81	0.28	4.09	11	Pass
60	5300	5.13	0.28	5.41	11	Pass
64	5320	3.78	0.28	4.06	11	Pass
100	5500	0.90	0.28	1.18	11	Pass
116	5580	3.38	0.28	3.66	11	Pass
140	5700	-1.63	0.28	-1.35	11	Pass

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

#### 802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
54	5270	1.72	0.75	2.47	11	Pass
62	5310	-5.09	0.75	-4.34	11	Pass
102	5510	-6.25	0.75	-5.50	11	Pass
110	5550	-0.05	0.75	0.70	11	Pass
134	5670	-2.06	0.75	-1.31	11	Pass

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

#### 802.11ac (VHT80)

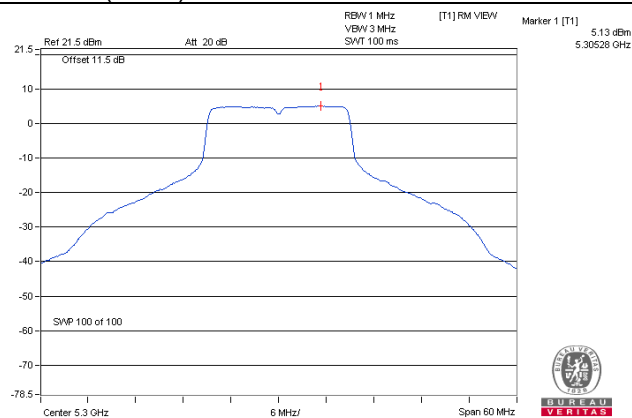
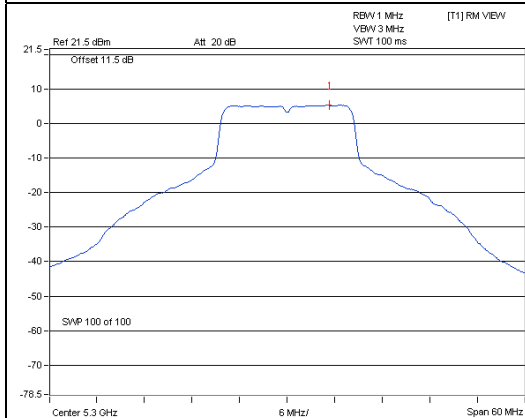
Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
58	5290	-12.59	1.48	-11.11	11	Pass
106	5530	-13.00	1.48	-11.52	11	Pass

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

## Spectrum Plot of Worst Value

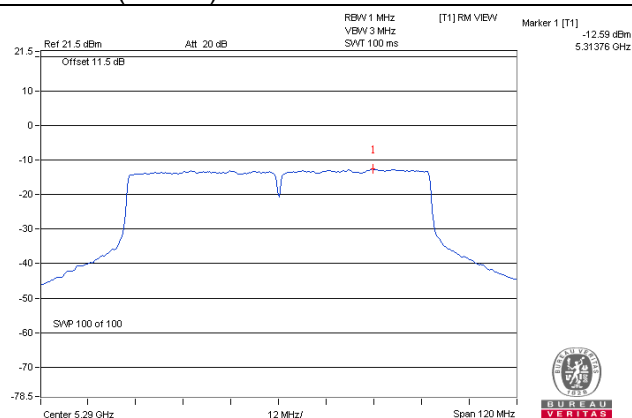
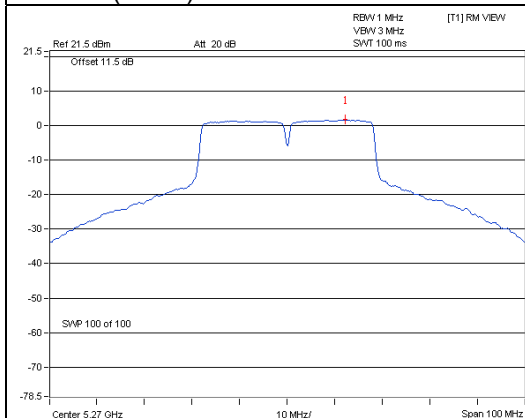
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)

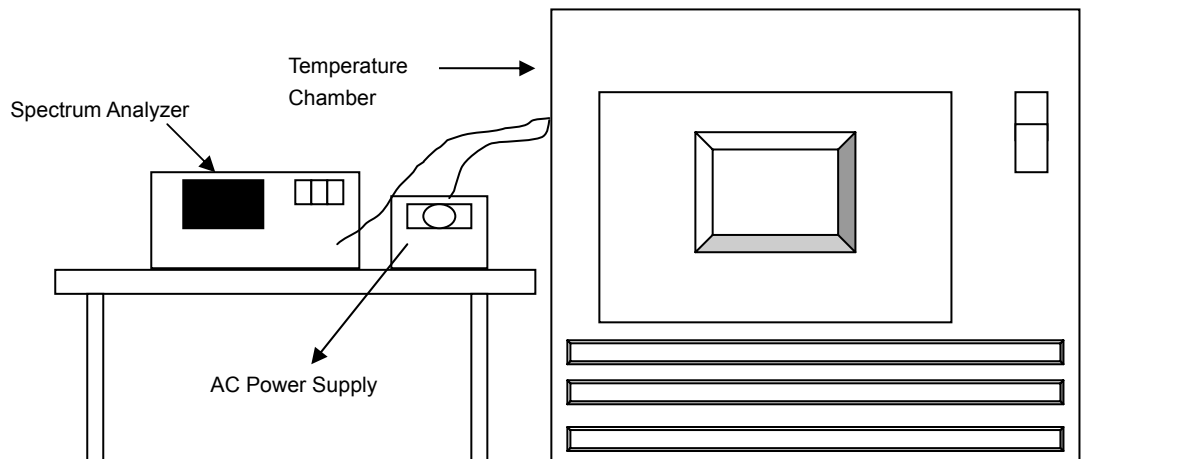


## 4.6 Frequency Stability

### 4.6.1 Limits of Frequency Stability Measurement

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

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.6.4 Test Procedure

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

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

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



#### 4.6.7 Test Results

##### Radio 2: CDD Mode

Frequency Stability Versus Temp.									
Operating Frequency: 5580MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)
50	120	5580.0175	0.00031	5580.015	0.00027	5580.017	0.00030	5580.0167	0.00030
40	120	5579.9764	-0.00042	5579.9773	-0.00041	5579.9739	-0.00047	5579.9773	-0.00041
30	120	5580.0014	0.00003	5579.9998	0.00000	5580.0015	0.00003	5579.9987	-0.00002
20	120	5579.9909	-0.00016	5579.9872	-0.00023	5579.9889	-0.00020	5579.9898	-0.00018
10	120	5579.9789	-0.00038	5579.9766	-0.00042	5579.9815	-0.00033	5579.9793	-0.00037
0	120	5579.9977	-0.00004	5579.9988	-0.00002	5579.9998	0.00000	5579.9972	-0.00005
-10	120	5579.9904	-0.00017	5579.9909	-0.00016	5579.9919	-0.00015	5579.9911	-0.00016
-20	120	5579.9807	-0.00035	5579.977	-0.00041	5579.9813	-0.00034	5579.9774	-0.00041
-30	120	5580.0149	0.00027	5580.0119	0.00021	5580.0113	0.00020	5580.0151	0.00027

Frequency Stability Versus Voltage									
Operating Frequency: 5580MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)
20	138	5579.9901	-0.00018	5579.9862	-0.00025	5579.9879	-0.00022	5579.9898	-0.00018
	120	5579.9909	-0.00016	5579.9872	-0.00023	5579.9889	-0.00020	5579.9898	-0.00018
	102	5579.991	-0.00016	5579.9879	-0.00022	5579.9889	-0.00020	5579.99	-0.00018

### Radio 3: CDD Mode

Frequency Stability Versus Temp.									
Operating Frequency: 5580MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)
50	120	5580.02	0.00036	5580.0186	0.00033	5580.0185	0.00033	5580.0212	0.00038
40	120	5579.9932	-0.00012	5579.9944	-0.00010	5579.9917	-0.00015	5579.9945	-0.00010
30	120	5580.0278	0.00050	5580.0264	0.00047	5580.0275	0.00049	5580.0265	0.00047
20	120	5580.0051	0.00009	5580.0033	0.00006	5580.0043	0.00008	5580.0031	0.00006
10	120	5580.0207	0.00037	5580.0227	0.00041	5580.0239	0.00043	5580.0221	0.00040
0	120	5579.9799	-0.00036	5579.9802	-0.00035	5579.979	-0.00038	5579.9803	-0.00035
-10	120	5579.9747	-0.00045	5579.9763	-0.00042	5579.9773	-0.00041	5579.9775	-0.00040
-20	120	5580.0154	0.00028	5580.0149	0.00027	5580.0176	0.00032	5580.0169	0.00030
-30	120	5579.9795	-0.00037	5579.9808	-0.00034	5579.9804	-0.00035	5579.9833	-0.00030

Frequency Stability Versus Voltage									
Operating Frequency: 5580MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)	Measured Frequency( MHz)	Frequency Drift (%)
20	138	5580.0059	0.00011	5580.0033	0.00006	5580.0052	0.00009	5580.0021	0.00004
	120	5580.0051	0.00009	5580.0033	0.00006	5580.0043	0.00008	5580.0031	0.00006
	102	5580.004	0.00007	5580.0036	0.00006	5580.0048	0.00009	5580.0021	0.00004

## 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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**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

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

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