

FCC Test Report

(For 5.26GHz to 5.32GHz and 5.50GHz to 5.70GHz)

Report No.: RF150709C20E

FCC ID: RSL-TQ4400E

Test Model: AT-TQ4400e

Received Date: Jul. 09, 2015

Test Date: Aug. 01 ~ Oct. 17, 2016

Issued Date: Nov. 21, 2016

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Release Control Record

Issue No.	Description	Date Issued
RF150709C20E	Original release	Nov. 21, 2016

1 Certificate of Conformity

Product: Outdoor Wireless Access Point

Brand:



Test Model: AT-TQ4400e

Sample Status: Engineering sample

Applicant: Allied Telesis K.K.

Test Date: Aug. 01 ~ Oct. 17, 2016

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

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

Prepared by :  , **Date:** Nov. 21, 2016
Pettie Chen / Senior Specialist

Approved by :  , **Date:** Nov. 21, 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 -14.47dB at 0.44688MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.8dB at 5877.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is N-Type. (The device is professionally installed)

2.1 Measurement Uncertainty

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

Measurement	Frequency	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	Outdoor Wireless Access Point
Brand	
Test Model	AT-TQ4400e
Status of EUT	Engineering sample
Power Supply Rating	48Vdc (POE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps 802.11ac: up to 867.0Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5700MHz
Number of Channel	5260 ~ 5320MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 3 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	5260 ~ 5320MHz: 87.390mW 5500 ~ 5700MHz: 98.345mW
Antenna Type	Refer to Note 4
Antenna Connector	Refer to Note 4
Accessory Device	N/A
Data Cable Supplied	1.75m non-shielded ground line without core

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of the original report no.: RF150709C20-1. The differences compared with the original report are adding 3 antennas and antenna cable and updating standard to new rule version. Therefore, all tests for new antennas had been tested.
2. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	Data Rate (MCS)	TX & RX Function	
802.11a	6 ~ 54Mbps	2TX (CDD)	2RX
802.11n (HT20)	MCS 0 ~ 15	2TX (CDD)	2RX
802.11n (HT40)	MCS 0 ~ 15	2TX (CDD)	2RX
802.11ac (VHT20)	MCS 0 ~ 8	2TX (CDD)	2RX
802.11ac (VHT40)	MCS 0 ~ 9	2TX (CDD)	2RX
802.11ac (VHT80)	MCS 0 ~ 9	2TX (CDD)	2RX

*The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for 20MHz/40MHz, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

3. The EUT uses following adapter and PoE.

Adapter of PoE (Support unit only)	
Brand	Powertron Electronics Corp.
Model	PA1024-4DU
Input Power	100-240Vac, 50-60Hz, 0.6A
Output Power	48Vdc, 0.38A, 18.24W Max
Power Line	1.8m power cable with 1 core attached on adapter

PoE (Support unit only)	
Brand	EnGenius
Model	EPE-24GR
Power Rating	48Vdc

4. The following antennas are provided to the EUT.

Item	Model Number	Description	Band	Type	Gain (dBi)	Connector	Supplier's model name
1	AT-AN5158-19DP	5GHz, 19dBi gain, dual polarity, panel antenna	5GHz	Panel	19	N type, 2 feed	HG4958-19DP
2	AT-AN5158-16DP	5GHz, 16dBi gain, dual polarity, 120° sector antenna	5GHz	Sector	16	N type, 2 feed	HG5158-16DP-120
3	AT-AN2458-10DP	2.4/5GHz, 10dBi gain, dual polarity, panel antenna	2.4GHz/5GHz	Panel	8dBi/10dBi	N type, 2 feed	HG2458-10DP
4	98615MNXX003	Outdoor 2.4GHz dipole	2.4GHz	Dipole	5	N type	N/A
5	98615UNXX005	Outdoor 5GHz dipole	5GHz	Dipole	7	N type	N/A

5. EUT Category: The EUT could be outdoor product & indoor product.

FCC	5GHz	5GHz
	U-NII-2A	U-NII-2C
AT-AN5158-19DP	indoor/outdoor	indoor/outdoor
AT-AN5158-16DP	indoor/outdoor	indoor/outdoor
AT-AN2458-10DP	indoor/outdoor	indoor/outdoor

6. The following antenna cables are provided to the EUT.

Item	Model Number	Description	Cable Dia.	Length	Cable loss(dBi)		Supplier's model name
					2.4G	5G	
1	AT-AN0001	RF coaxial cable, 1.2m, N-male to N-male connector	0.240 in. (6.1mm)	4.0ft (1.2m)	-1.62	-3.18	CA-NMNMT004
2	AT-AN0002	RF coaxial cable, 3.0m, N-male to N-male connector	0.405 in. (10.3mm)	10.0ft (3.0m)	-1.82	-2.96	CA3N010
3	AT-AN0003	RF coaxial cable, 6.1m, N-male to N-male connector	0.405 in. (10.3mm)	20.0ft (6.1m)	-2.35	-3.56	CA3N020

*For 5GHz Band: Model: AT-AN0002 was the worst for the final test.

7. Spurious emission of the simultaneous operation (2.4GHz and 5GHz) has been evaluated and no non-compliance was found.
8. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

For 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	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	120	5600 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

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

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

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
106	5530MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT with antenna 1
B	√	√	√	√	EUT with antenna 2
C	√	√	√	√	EUT with antenna 3

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz & Bandedge Measurement

PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz

APCM: Antenna Port Conducted Measurement

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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A, B, C	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	7.2
A, B, C	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
B, C	802.11ac (VHT80)		58	58	OFDM	97.5
A, B, C	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A, B, C	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	7.2
A, B, C	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	15.0
B, C	802.11ac (VHT80)		106	106	OFDM	97.5

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5260-5320	52 to 64	100	OFDM	6
	802.11a	5500-5700	100 to 140		OFDM	6

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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5260-5320	52 to 64	100	OFDM	6
	802.11a	5500-5700	100 to 140		OFDM	6

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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B, C	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A, B, C	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	7.2
A, B, C	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
B, C	802.11ac (VHT80)		58	58	OFDM	97.5
A, B, C	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A, B, C	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	7.2
A, B, C	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	15.0
B, C	802.11ac (VHT80)		106	106	OFDM	97.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE _≥ 1G	19deg. C, 70%RH	48Vdc	Jones Chang
RE _{<} 1G	19deg. C, 70%RH	48Vdc	Jones Chang
PLC	20deg. C, 70%RH	48Vdc	Jones Chang
APCM	25deg. C, 60%RH	48Vdc	Ted Chang

3.3 Duty Cycle of Test Signal

Test Mode A:

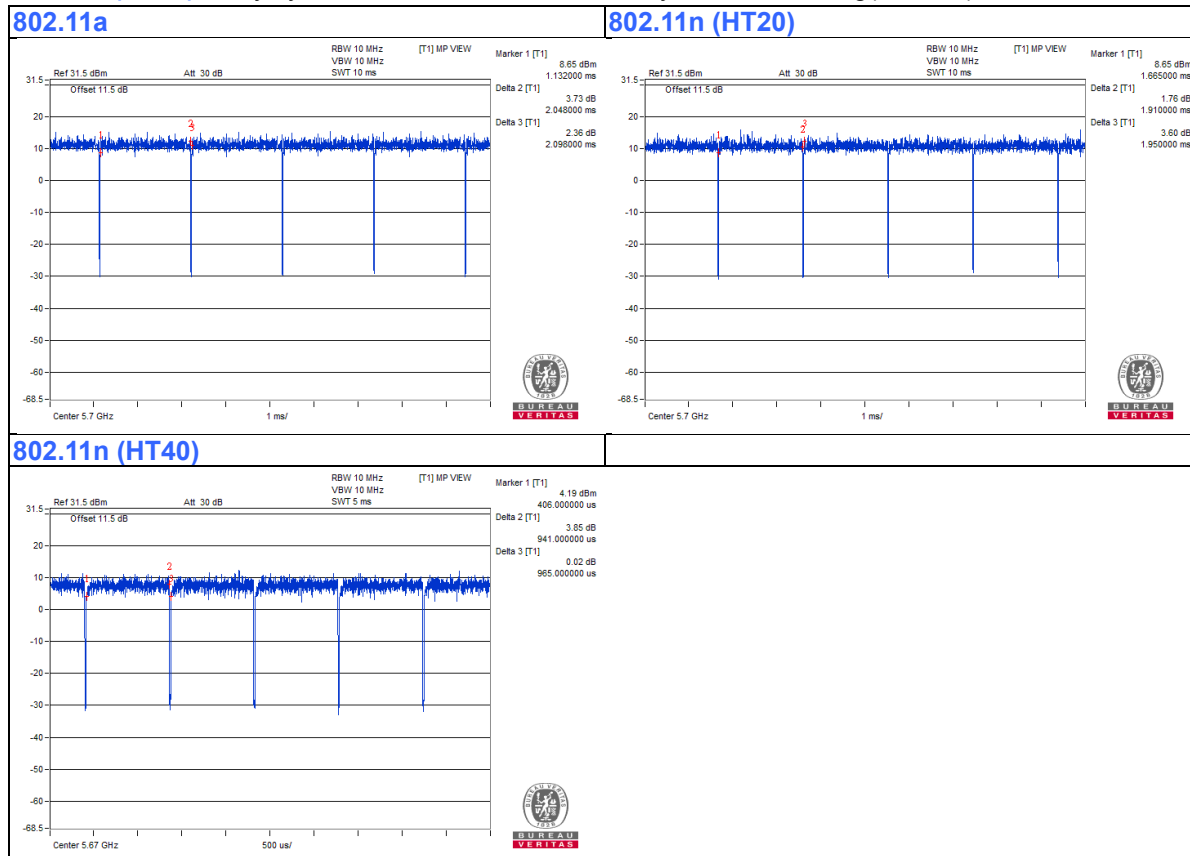
Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

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

802.11a: Duty cycle = $2.048/2.098 = 0.976$, Duty factor = $10 * \log(1/0.976) = 0.10$

802.11n (HT20): Duty cycle = $1.910/1.95 = 0.979$, Duty factor = $10 * \log(1/0.979) = 0.09$

802.11n (HT40): Duty cycle = $0.941/0.965 = 0.975$, Duty factor = $10 * \log(1/0.975) = 0.11$



Test Mode B:

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

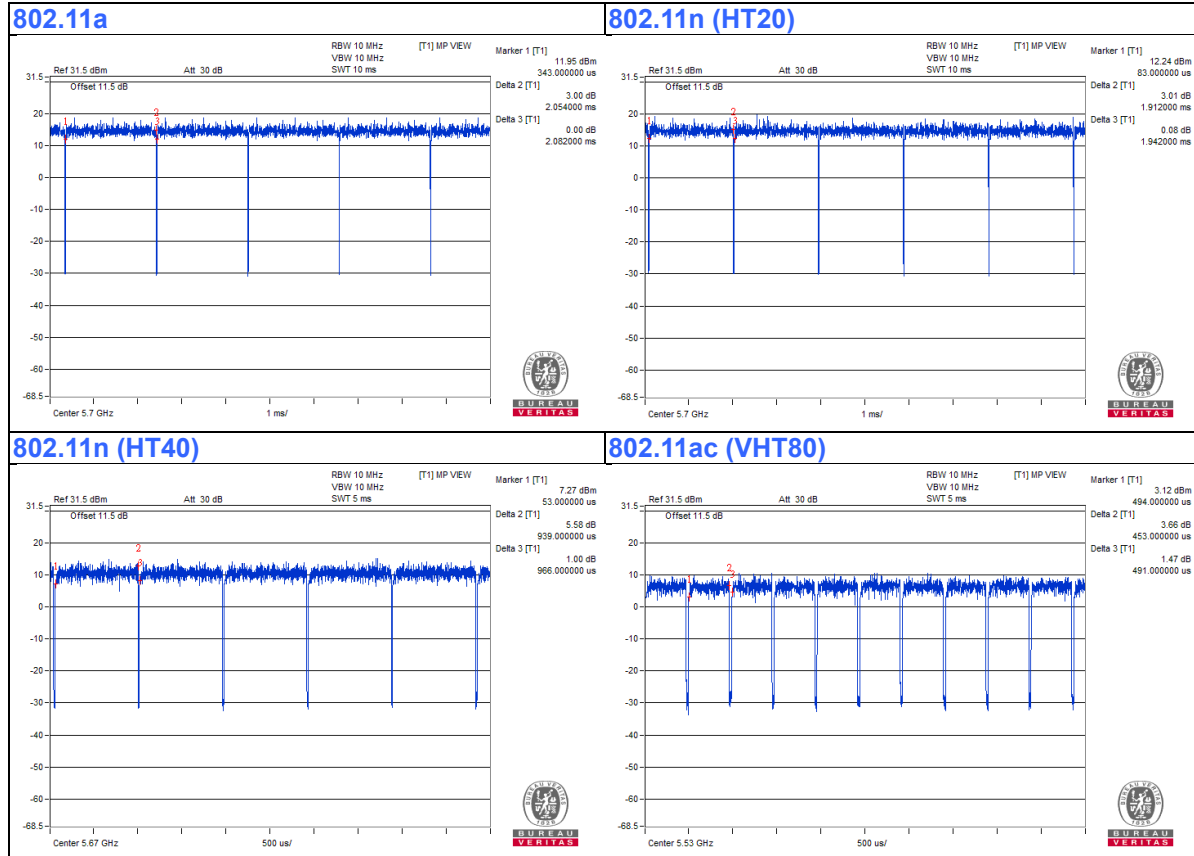
Duty cycle of test signal is $< 98\%$, duty factor is required

802.11a: Duty cycle = $2.054/2.082 = 0.987$

802.11n (HT20): Duty cycle = $1.912/1.942 = 0.985$

802.11n (HT40): Duty cycle = $0.939/0.966 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

802.11ac (VHT80): Duty cycle = $0.453/0.491 = 0.923$, Duty factor = $10 * \log(1/0.923) = 0.35$



Test Mode C:

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

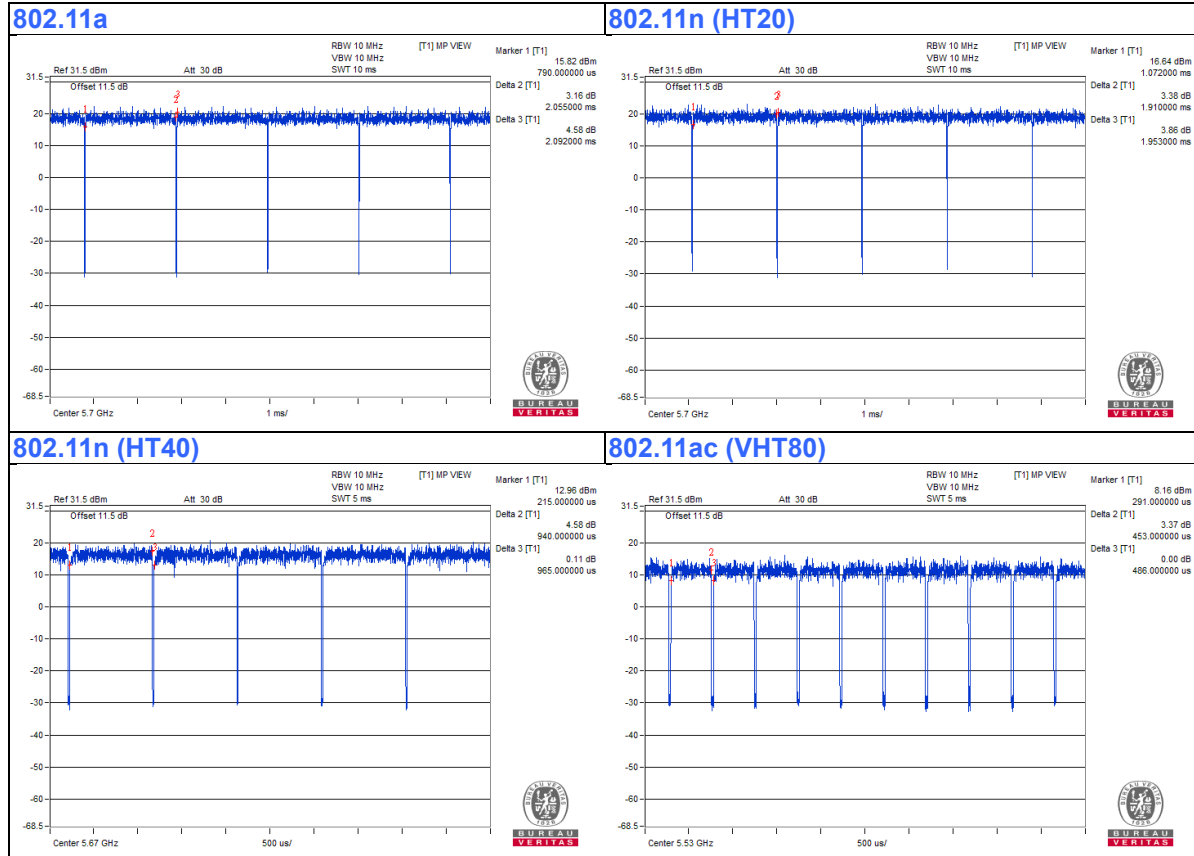
Duty cycle of test signal is $< 98\%$, duty factor is required

802.11a: Duty cycle = $2.055/2.092 = 0.982$

802.11n (HT20): Duty cycle = $1.910/1.953 = 0.978$, Duty factor = $10 * \log(1/0.978) = 0.10$

802.11n (HT40): Duty cycle = $0.940/0.965 = 0.974$, Duty factor = $10 * \log(1/0.974) = 0.11$

802.11ac (VHT80): Duty cycle = $0.453/0.486 = 0.932$, Duty factor = $10 * \log(1/0.932) = 0.31$



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.

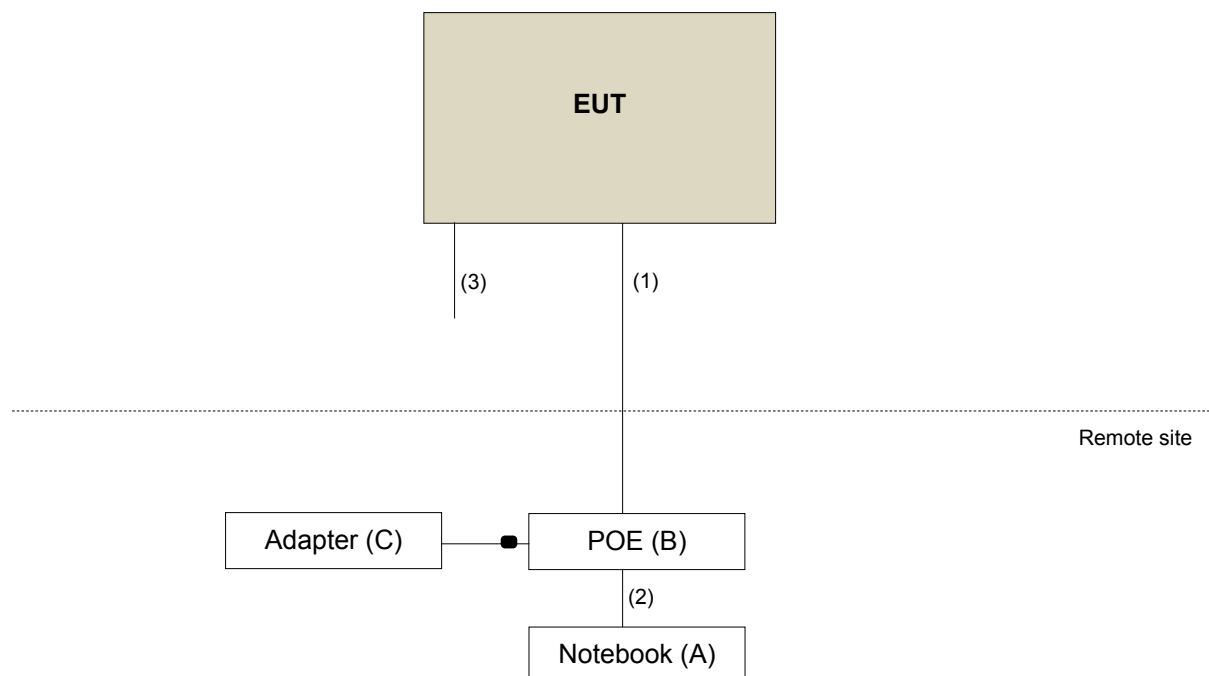
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	C654YM1	FCC DoC Approved	-
B.	PoE	EnGenius	EPE-24GR	NA	NA	Provided by the manufacturer
C.	Adapter	Powertron Electronics Corp.	PA1024-4DU	NA	NA	Provided by the manufacturer

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	5	N	0	-
2.	RJ45 cable	1	1.8	N	0	-
3.	Ground line	1	1.75	N	0	Accessory

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedures New Rules v01r03

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBµV/m) ^{*1} PK:105.2 (dBµV/m) ^{*2} PK: 110.8(dBµV/m) ^{*3} PK:122.2 (dBµV/m) ^{*4}
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
^{*1} beyond 75 MHz or more above of the band edge.			^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.			^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

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	100040	Jul. 08, 2015 Aug. 16, 2016	Jul. 07, 2016 Aug. 15, 2017
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
Loop Antenna	EM-6879	269	Aug. 05, 2015 Aug. 11, 2016	Aug. 04, 2016 Aug. 10, 2017
Preamplifier Agilent	8447D	2944A10738	Aug. 18, 2015 Aug. 22, 2016	Aug. 17, 2016 Aug. 21, 2017
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	Oct. 17, 2016 Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0842014	Apr. 28, 2016	Apr. 27, 2017
Power Sensor	MA2411B	0738171	Jul. 09, 2015 Aug. 11, 2016	Jul. 08, 2016 Aug. 10, 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

For Radiated emission below 30MHz

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

NOTE:

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

For Radiated emission above 30MHz

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

Note:

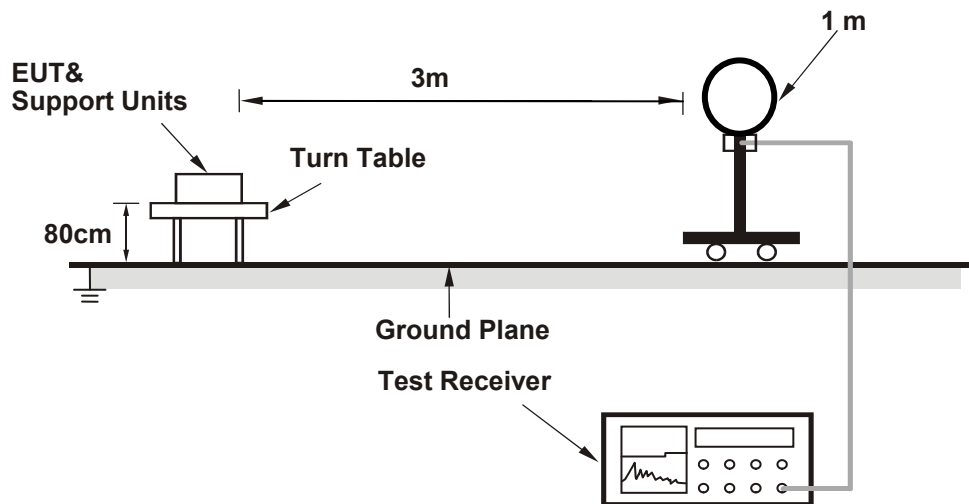
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

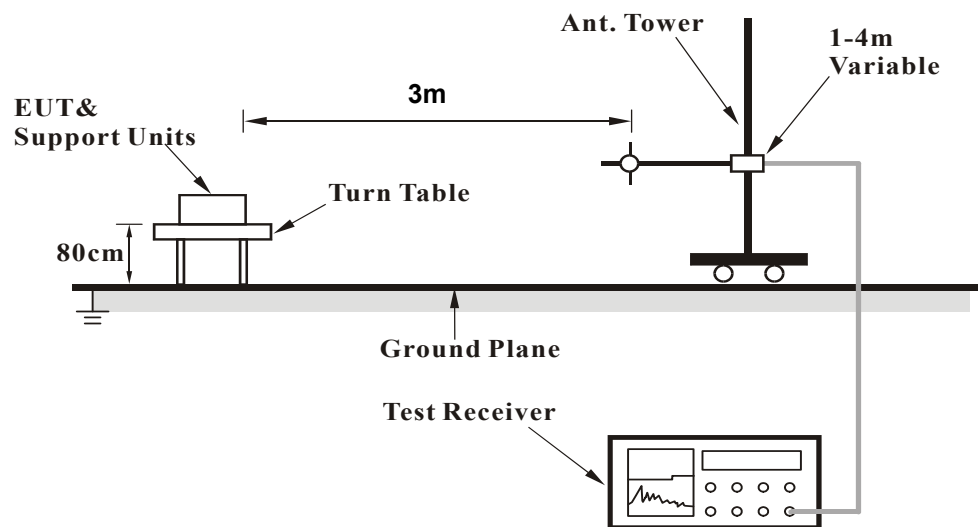
No deviation.

4.1.5 Test Setup

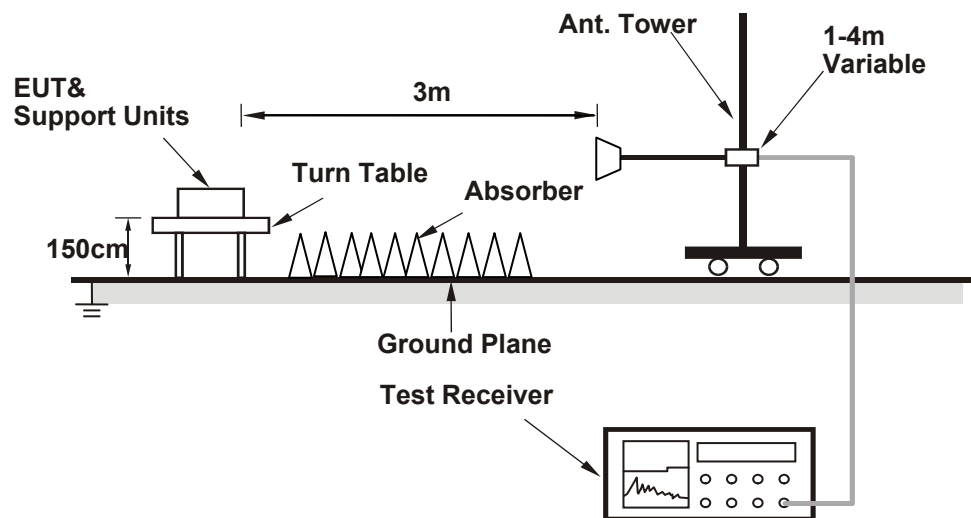
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- Placed the EUT on the testing table.
- Prepared 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 data:

Test Mode A:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	111.6 PK			1.85 H	349	72.0	39.6
2	*5260.00	101.1 AV			1.85 H	349	61.5	39.6
3	#5470.00	58.8 PK	74.0	-15.2	1.89 H	300	51.9	6.9
4	#5470.00	47.3 AV	54.0	-6.7	1.89 H	300	40.4	6.9
5	#10520.00	60.7 PK	74.0	-13.3	1.61 H	19	41.8	18.9
6	#10520.00	47.7 AV	54.0	-6.3	1.61 H	19	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	*5260.00	111.3 PK			1.58 V	345	71.7	39.6
2	*5260.00	101.6 AV			1.58 V	345	62.0	39.6
3	#5470.00	60.8 PK	74.0	-13.2	1.68 V	345	53.9	6.9
4	#5470.00	49.7 AV	54.0	-4.3	1.68 V	345	42.8	6.9
5	#10520.00	61.1 PK	74.0	-12.9	2.08 V	349	42.2	18.9
6	#10520.00	48.0 AV	54.0	-6.0	2.08 V	349	29.1	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.5 PK			1.84 H	350	71.8	39.7
2	*5300.00	100.9 AV			1.84 H	350	61.2	39.7
3	5380.00	64.1 PK	74.0	-9.9	1.78 H	350	57.4	6.7
4	5380.00	52.5 AV	54.0	-1.5	1.78 H	350	45.8	6.7
5	10600.00	60.4 PK	74.0	-13.6	1.91 H	300	41.5	18.9
6	10600.00	47.4 AV	54.0	-6.6	1.91 H	300	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	*5300.00	111.0 PK			1.68 V	346	71.3	39.7
2	*5300.00	101.5 AV			1.68 V	346	61.8	39.7
3	5380.00	63.6 PK	74.0	-10.4	1.64 V	345	56.9	6.7
4	5380.00	52.9 AV	54.0	-1.1	1.64 V	345	46.2	6.7
5	10600.00	61.4 PK	74.0	-12.6	1.51 V	50	42.5	18.9
6	10600.00	48.2 AV	54.0	-5.8	1.51 V	50	29.3	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.2 PK			1.81 H	351	72.5	39.7
2	*5320.00	101.2 AV			1.81 H	351	61.5	39.7
3	5400.00	63.0 PK	74.0	-11.0	1.74 H	351	56.3	6.7
4	5400.00	51.1 AV	54.0	-2.9	1.74 H	351	44.4	6.7
5	10640.00	60.4 PK	74.0	-13.6	2.22 H	359	41.6	18.8
6	10640.00	47.2 AV	54.0	-6.8	2.22 H	359	28.4	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	110.9 PK			1.59 V	345	71.2	39.7
2	*5320.00	101.5 AV			1.59 V	345	61.8	39.7
3	5400.00	62.2 PK	74.0	-11.8	1.73 V	348	55.5	6.7
4	5400.00	50.6 AV	54.0	-3.4	1.73 V	348	43.9	6.7
5	10640.00	60.7 PK	74.0	-13.3	1.63 V	30	41.9	18.8
6	10640.00	47.8 AV	54.0	-6.2	1.63 V	30	29.0	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	61.9 PK	74.0	-12.1	1.76 H	352	56.2	5.7
2	5420.00	49.2 AV	54.0	-4.8	1.76 H	352	43.5	5.7
3	#5470.00	58.3 PK	74.0	-15.7	1.90 H	358	52.6	5.7
4	#5470.00	45.5 AV	54.0	-8.5	1.90 H	358	39.8	5.7
5	*5500.00	113.0 PK			1.77 H	352	73.4	39.6
6	*5500.00	102.3 AV			1.77 H	352	62.7	39.6
7	11000.00	60.2 PK	74.0	-13.8	1.66 H	288	40.5	19.7
8	11000.00	47.6 AV	54.0	-6.4	1.66 H	288	27.9	19.7
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	5420.00	62.5 PK	74.0	-11.5	1.47 V	346	55.7	6.8
2	5420.00	50.3 AV	54.0	-3.7	1.47 V	346	43.5	6.8
3	#5470.00	59.7 PK	74.0	-14.3	1.52 V	343	52.8	6.9
4	#5470.00	46.8 AV	54.0	-7.2	1.52 V	343	39.9	6.9
5	*5500.00	112.0 PK			1.49 V	344	71.8	40.2
6	*5500.00	102.4 AV			1.49 V	344	62.2	40.2
7	11000.00	60.9 PK	74.0	-13.1	1.65 V	313	41.0	19.9
8	11000.00	48.0 AV	54.0	-6.0	1.65 V	313	28.1	19.9

REMARKS:

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

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	112.8 PK			1.64 H	351	73.0	39.8
2	*5580.00	102.3 AV			1.64 H	351	62.5	39.8
3	11160.00	61.8 PK	74.0	-12.2	1.47 H	100	42.3	19.5
4	11160.00	48.7 AV	54.0	-5.3	1.47 H	100	29.2	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	*5580.00	112.1 PK			1.48 V	343	71.8	40.3
2	*5580.00	101.9 AV			1.48 V	343	61.6	40.3
3	11160.00	61.7 PK	74.0	-12.3	1.39 V	350	42.3	19.4
4	11160.00	48.7 AV	54.0	-5.3	1.39 V	350	29.3	19.4

REMARKS:

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

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	113.3 PK			1.67 H	354	73.4	39.9
2	*5700.00	102.7 AV			1.67 H	354	62.8	39.9
3	#5779.00	64.4 PK	68.2	-3.8	1.69 H	355	58.1	6.3
4	11400.00	60.3 PK	74.0	-13.7	1.46 H	264	41.0	19.3
5	11400.00	47.6 AV	54.0	-6.4	1.46 H	264	28.3	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	111.0 PK			1.47 V	348	71.1	39.9
2	*5700.00	100.7 AV			1.47 V	348	60.8	39.9
3	#5779.00	63.0 PK	68.2	-5.2	1.44 V	347	56.7	6.3
4	11400.00	61.0 PK	74.0	-13.0	1.37 V	203	41.7	19.3
5	11400.00	47.7 AV	54.0	-6.3	1.37 V	203	28.4	19.3

REMARKS:

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

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	*5260.00	112.3 PK			1.82 H	348	72.7	39.6
2	*5260.00	100.9 AV			1.82 H	348	61.3	39.6
3	5420.00	59.2 PK	74.0	-14.8	1.63 H	350	52.4	6.8
4	5420.00	47.9 AV	54.0	-6.1	1.63 H	350	41.1	6.8
5	#10520.00	60.4 PK	74.0	-13.6	1.99 H	359	41.5	18.9
6	#10520.00	47.4 AV	54.0	-6.6	1.99 H	359	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	*5260.00	111.4 PK			1.70 V	346	71.8	39.6
2	*5260.00	101.2 AV			1.70 V	346	61.6	39.6
3	5420.00	61.2 PK	74.0	-12.8	1.63 V	349	54.4	6.8
4	5420.00	48.8 AV	54.0	-5.2	1.63 V	349	42.0	6.8
5	#10520.00	60.6 PK	74.0	-13.4	1.39 V	34	41.7	18.9
6	#10520.00	47.6 AV	54.0	-6.4	1.39 V	34	28.7	18.9

REMARKS:

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

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	113.2 PK			1.75 H	350	73.5	39.7
2	*5300.00	101.3 AV			1.75 H	350	61.6	39.7
3	5380.00	64.6 PK	74.0	-9.4	1.73 H	353	57.9	6.7
4	5380.00	52.7 AV	54.0	-1.3	1.73 H	353	46.0	6.7
5	10600.00	59.9 PK	74.0	-14.1	1.47 H	230	41.0	18.9
6	10600.00	47.1 AV	54.0	-6.9	1.47 H	230	28.2	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	*5300.00	111.6 PK			1.60 V	346	71.9	39.7
2	*5300.00	101.4 AV			1.60 V	346	61.7	39.7
3	5380.00	63.7 PK	74.0	-10.3	1.59 V	346	57.0	6.7
4	5380.00	53.0 AV	54.0	-1.0	1.59 V	346	46.3	6.7
5	10600.00	60.8 PK	74.0	-13.2	2.33 V	146	41.9	18.9
6	10600.00	48.2 AV	54.0	-5.8	2.33 V	146	29.3	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.4 PK			1.72 H	351	73.7	39.7
2	*5320.00	101.4 AV			1.72 H	351	61.7	39.7
3	5400.00	63.2 PK	74.0	-10.8	1.79 H	351	56.5	6.7
4	5400.00	50.3 AV	54.0	-3.7	1.79 H	351	43.6	6.7
5	10640.00	59.9 PK	74.0	-14.1	1.29 H	77	41.1	18.8
6	10640.00	47.2 AV	54.0	-6.8	1.29 H	77	28.4	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	111.6 PK			1.64 V	345	71.9	39.7
2	*5320.00	101.0 AV			1.64 V	345	61.3	39.7
3	5400.00	62.2 PK	74.0	-11.8	1.65 V	347	55.5	6.7
4	5400.00	50.4 AV	54.0	-3.6	1.65 V	347	43.7	6.7
5	10640.00	60.7 PK	74.0	-13.3	1.44 V	22	41.9	18.8
6	10640.00	47.7 AV	54.0	-6.3	1.44 V	22	28.9	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	63.5 PK	74.0	-10.5	1.69 H	350	56.7	6.8
2	5420.00	49.7 AV	54.0	-4.3	1.69 H	350	42.9	6.8
3	#5470.00	59.0 PK	74.0	-15.0	1.73 H	350	52.1	6.9
4	#5470.00	47.9 AV	54.0	-6.1	1.73 H	350	41.0	6.9
5	*5500.00	113.9 PK			1.73 H	350	73.7	40.2
6	*5500.00	102.4 AV			1.73 H	350	62.2	40.2
7	11000.00	61.7 PK	74.0	-12.3	2.01 H	284	41.8	19.9
8	11000.00	48.1 AV	54.0	-5.9	2.01 H	284	28.2	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	5420.00	61.3 PK	74.0	-12.7	1.38 V	348	54.5	6.8
2	5420.00	49.3 AV	54.0	-4.7	1.38 V	348	42.5	6.8
3	#5470.00	58.8 PK	74.0	-15.2	1.38 V	348	51.9	6.9
4	#5470.00	47.5 AV	54.0	-6.5	1.38 V	348	40.6	6.9
5	*5500.00	111.9 PK			1.39 V	345	71.7	40.2
6	*5500.00	101.8 AV			1.39 V	345	61.6	40.2
7	11000.00	60.9 PK	74.0	-13.1	1.80 V	35	41.0	19.9
8	11000.00	47.5 AV	54.0	-6.5	1.80 V	35	27.6	19.9

REMARKS:

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

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	113.6 PK			1.72 H	349	73.3	40.3
2	*5580.00	102.2 AV			1.72 H	349	61.9	40.3
3	11160.00	60.6 PK	74.0	-13.4	2.00 H	296	41.2	19.4
4	11160.00	47.8 AV	54.0	-6.2	2.00 H	296	28.4	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	111.9 PK			1.44 V	345	71.6	40.3
2	*5580.00	101.3 AV			1.44 V	345	61.0	40.3
3	11160.00	60.9 PK	74.0	-13.1	1.94 V	200	41.5	19.4
4	11160.00	47.4 AV	54.0	-6.6	1.94 V	200	28.0	19.4

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.5 PK			1.69 H	354	72.1	40.4
2	*5700.00	101.3 AV			1.69 H	354	60.9	40.4
3	#5780.00	64.2 PK	74.0	-9.8	1.79 H	354	56.7	7.5
4	#5780.00	52.8 AV	54.0	-1.2	1.79 H	354	45.3	7.5
5	11400.00	60.4 PK	74.0	-13.6	1.55 H	276	41.6	18.8
6	11400.00	47.3 AV	54.0	-6.7	1.55 H	276	28.5	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	*5700.00	109.9 PK			1.29 V	344	69.5	40.4
2	*5700.00	100.1 AV			1.29 V	344	59.7	40.4
3	#5780.00	61.9 PK	74.0	-12.1	1.32 V	340	54.4	7.5
4	#5780.00	51.8 AV	54.0	-2.2	1.32 V	340	44.3	7.5
5	11400.00	59.7 PK	74.0	-14.3	1.66 V	43	40.9	18.8
6	11400.00	46.5 AV	54.0	-7.5	1.66 V	43	27.7	18.8

REMARKS:

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

802.11n (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	110.4 PK			1.74 H	350	71.4	39.0
2	*5270.00	98.8 AV			1.74 H	350	59.8	39.0
3	5350.00	63.0 PK	74.0	-11.0	1.68 H	353	57.5	5.5
4	5350.00	51.5 AV	54.0	-2.5	1.68 H	353	46.0	5.5
5	#10540.00	60.5 PK	74.0	-13.5	2.00 H	359	41.9	18.6
6	#10540.00	47.5 AV	54.0	-6.5	2.00 H	359	28.9	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	107.9 PK			1.44 V	345	68.9	39.0
2	*5270.00	97.9 AV			1.44 V	345	58.9	39.0
3	5350.00	60.6 PK	74.0	-13.4	1.50 V	347	55.1	5.5
4	5350.00	49.8 AV	54.0	-4.2	1.50 V	347	44.3	5.5
5	#10540.00	60.1 PK	74.0	-13.9	1.66 V	331	41.5	18.6
6	#10540.00	47.4 AV	54.0	-6.6	1.66 V	331	28.8	18.6

REMARKS:

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

CHANNEL	TX Channel 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	110.7 PK			1.63 H	352	71.0	39.7
2	*5310.00	99.3 AV			1.63 H	352	59.6	39.7
3	5400.00	62.2 PK	74.0	-11.8	1.65 H	352	55.5	6.7
4	5400.00	50.2 AV	54.0	-3.8	1.65 H	352	43.5	6.7
5	10620.00	60.3 PK	74.0	-13.7	1.55 H	344	41.4	18.9
6	10620.00	47.3 AV	54.0	-6.7	1.55 H	344	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	*5310.00	107.3 PK			1.61 V	348	68.2	39.1
2	*5310.00	97.5 AV			1.61 V	348	58.4	39.1
3	5400.00	59.6 PK	74.0	-14.4	1.65 V	347	54.1	5.5
4	5400.00	48.0 AV	54.0	-6.0	1.65 V	347	42.5	5.5
5	10620.00	59.9 PK	74.0	-14.1	1.75 V	332	41.4	18.5
6	10620.00	46.7 AV	54.0	-7.3	1.75 V	332	28.2	18.5

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.4 PK	74.0	-13.6	1.57 H	352	53.5	6.9
2	5460.00	47.5 AV	54.0	-6.5	1.57 H	352	40.6	6.9
3	#5470.00	65.0 PK	74.0	-9.0	1.57 H	352	58.1	6.9
4	#5470.00	50.7 AV	54.0	-3.3	1.57 H	352	43.8	6.9
5	*5510.00	111.6 PK			1.59 H	354	71.4	40.2
6	*5510.00	100.1 AV			1.59 H	354	59.9	40.2
7	11020.00	60.8 PK	74.0	-13.2	1.59 H	230	41.0	19.8
8	11020.00	47.9 AV	54.0	-6.1	1.59 H	230	28.1	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	62.0 PK	74.0	-12.0	1.21 V	346	55.1	6.9
2	5460.00	48.1 AV	54.0	-5.9	1.21 V	346	41.2	6.9
3	#5470.00	62.0 PK	74.0	-12.0	1.21 V	346	55.1	6.9
4	#5470.00	49.4 AV	54.0	-4.6	1.21 V	346	42.5	6.9
5	*5510.00	109.6 PK			1.32 V	345	69.4	40.2
6	*5510.00	99.1 AV			1.32 V	345	58.9	40.2
7	11020.00	60.4 PK	74.0	-13.6	1.10 V	69	40.6	19.8
8	11020.00	47.4 AV	54.0	-6.6	1.10 V	69	27.6	19.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	111.5 PK			1.58 H	351	71.3	40.2
2	*5550.00	100.1 AV			1.58 H	351	59.9	40.2
3	11100.00	60.7 PK	74.0	-13.3	1.46 H	217	41.5	19.2
4	11100.00	47.5 AV	54.0	-6.5	1.46 H	217	28.3	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	108.9 PK			1.29 V	345	68.7	40.2
2	*5550.00	99.0 AV			1.29 V	345	58.8	40.2
3	11100.00	60.1 PK	74.0	-13.9	1.00 V	55	40.9	19.2
4	11100.00	47.1 AV	54.0	-6.9	1.00 V	55	27.9	19.2

REMARKS:

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

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	111.3 PK			1.61 H	350	71.0	40.3
2	*5670.00	99.7 AV			1.61 H	350	59.4	40.3
3	#5750.00	63.2 PK	74.0	-10.8	1.59 H	353	55.8	7.4
4	#5750.00	51.5 AV	54.0	-2.5	1.59 H	353	44.1	7.4
5	11340.00	60.7 PK	74.0	-13.3	1.44 H	301	41.5	19.2
6	11340.00	47.5 AV	54.0	-6.5	1.44 H	301	28.3	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	107.2 PK			1.43 V	347	66.9	40.3
2	*5670.00	97.1 AV			1.43 V	347	56.8	40.3
3	#5750.00	60.8 PK	74.0	-13.2	1.23 V	346	53.4	7.4
4	#5750.00	49.7 AV	54.0	-4.3	1.23 V	346	42.3	7.4
5	11340.00	60.2 PK	74.0	-13.8	1.09 V	350	41.0	19.2
6	11340.00	47.2 AV	54.0	-6.8	1.09 V	350	28.0	19.2

REMARKS:

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

Test Mode B:

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	5100.00	58.8 PK	74.0	-15.2	1.97 H	348	53.0	5.8
2	5100.00	48.1 AV	54.0	-5.9	1.97 H	348	42.3	5.8
3	*5260.00	114.3 PK			1.97 H	357	74.7	39.6
4	*5260.00	103.6 AV			1.97 H	357	64.0	39.6
5	#10520.00	60.4 PK	74.0	-13.6	2.00 H	57	41.5	18.9
6	#10520.00	47.2 AV	54.0	-6.8	2.00 H	57	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	5100.00	58.9 PK	74.0	-15.1	2.17 V	352	53.1	5.8
2	5100.00	47.0 AV	54.0	-7.0	2.17 V	352	41.2	5.8
3	*5260.00	111.4 PK			2.10 V	340	71.8	39.6
4	*5260.00	101.7 AV			2.10 V	340	62.1	39.6
5	#10520.00	59.5 PK	74.0	-14.5	1.55 V	359	40.6	18.9
6	#10520.00	46.0 AV	54.0	-8.0	1.55 V	359	27.1	18.9

REMARKS:

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

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	114.2 PK			1.98 H	0	74.5	39.7
2	*5300.00	103.7 AV			1.98 H	0	64.0	39.7
3	5380.00	65.4 PK	74.0	-8.6	1.94 H	355	58.7	6.7
4	5380.00	52.8 AV	54.0	-1.2	1.94 H	355	46.1	6.7
5	10600.00	59.5 PK	74.0	-14.5	1.77 H	35	40.6	18.9
6	10600.00	46.3 AV	54.0	-7.7	1.77 H	35	27.4	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	*5300.00	108.3 PK			2.12 V	343	68.6	39.7
2	*5300.00	99.3 AV			2.12 V	343	59.6	39.7
3	5380.00	63.5 PK	74.0	-10.5	2.10 V	340	56.8	6.7
4	5380.00	52.0 AV	54.0	-2.0	2.10 V	340	45.3	6.7
5	10600.00	58.9 PK	74.0	-15.1	1.54 V	239	40.0	18.9
6	10600.00	46.1 AV	54.0	-7.9	1.54 V	239	27.2	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.6 PK			1.99 H	355	73.9	39.7
2	*5320.00	103.2 AV			1.99 H	355	63.5	39.7
3	5400.00	62.8 PK	74.0	-11.2	1.94 H	1	56.1	6.7
4	5400.00	52.0 AV	54.0	-2.0	1.94 H	1	45.3	6.7
5	10640.00	59.8 PK	74.0	-14.2	1.99 H	25	41.0	18.8
6	10640.00	47.0 AV	54.0	-7.0	1.99 H	25	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	110.6 PK			2.12 V	343	70.9	39.7
2	*5320.00	101.2 AV			2.12 V	343	61.5	39.7
3	5400.00	62.0 PK	74.0	-12.0	2.15 V	355	55.3	6.7
4	5400.00	50.7 AV	54.0	-3.3	2.15 V	355	44.0	6.7
5	10640.00	59.7 PK	74.0	-14.3	2.40 V	66	40.9	18.8
6	10640.00	46.2 AV	54.0	-7.8	2.40 V	66	27.4	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	61.7 PK	74.0	-12.3	1.88 H	327	54.9	6.8
2	5420.00	50.3 AV	54.0	-3.7	1.88 H	327	43.5	6.8
3	#5470.00	58.9 PK	74.0	-15.1	1.70 H	0	52.0	6.9
4	#5470.00	47.5 AV	54.0	-6.5	1.70 H	0	40.6	6.9
5	*5500.00	113.1 PK			1.89 H	326	72.9	40.2
6	*5500.00	102.6 AV			1.89 H	326	62.4	40.2
7	11000.00	61.6 PK	74.0	-12.4	1.77 H	37	41.7	19.9
8	11000.00	48.9 AV	54.0	-5.1	1.77 H	37	29.0	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	5420.00	61.4 PK	74.0	-12.6	2.25 V	11	54.6	6.8
2	5420.00	50.1 AV	54.0	-3.9	2.25 V	11	43.3	6.8
3	#5470.00	59.8 PK	74.0	-14.2	2.25 V	11	52.9	6.9
4	#5470.00	47.8 AV	54.0	-6.2	2.25 V	11	40.9	6.9
5	*5500.00	111.0 PK			2.28 V	8	70.8	40.2
6	*5500.00	101.7 AV			2.28 V	8	61.5	40.2
7	11000.00	61.3 PK	74.0	-12.7	1.62 V	268	41.4	19.9
8	11000.00	47.8 AV	54.0	-6.2	1.62 V	268	27.9	19.9

REMARKS:

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

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	113.7 PK			1.94 H	323	73.4	40.3
2	*5580.00	103.0 AV			1.94 H	323	62.7	40.3
3	11160.00	61.3 PK	74.0	-12.7	1.84 H	281	41.9	19.4
4	11160.00	48.2 AV	54.0	-5.8	1.84 H	281	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	110.7 PK			2.26 V	347	70.4	40.3
2	*5580.00	100.8 AV			2.26 V	347	60.5	40.3
3	11160.00	60.8 PK	74.0	-13.2	1.65 V	299	41.4	19.4
4	11160.00	47.7 AV	54.0	-6.3	1.65 V	299	28.3	19.4

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.9 PK			1.84 H	319	72.5	40.4
2	*5700.00	102.0 AV			1.84 H	319	61.6	40.4
3	#5780.00	65.6 PK	68.2	-2.6	1.91 H	320	58.1	7.5
4	11400.00	60.7 PK	74.0	-13.3	1.69 H	19	41.9	18.8
5	11400.00	47.5 AV	54.0	-6.5	1.69 H	19	28.7	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	111.1 PK			2.26 V	356	70.7	40.4
2	*5700.00	101.0 AV			2.26 V	356	60.6	40.4
3	#5780.00	65.4 PK	68.2	-2.8	2.20 V	4	57.9	7.5
4	11400.00	59.7 PK	74.0	-14.3	1.86 V	60	40.9	18.8
5	11400.00	46.9 AV	54.0	-7.1	1.86 V	60	28.1	18.8

REMARKS:

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

802.11n (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	5100.00	58.7 PK	74.0	-15.3	1.90 H	315	52.9	5.8
2	5100.00	46.8 AV	54.0	-7.2	1.90 H	315	41.0	5.8
3	*5260.00	114.7 PK			1.93 H	0	75.1	39.6
4	*5260.00	103.1 AV			1.93 H	0	63.5	39.6
5	#10520.00	60.2 PK	74.0	-13.8	1.89 H	29	41.3	18.9
6	#10520.00	47.3 AV	54.0	-6.7	1.89 H	29	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	5100.00	59.1 PK	74.0	-14.9	2.14 V	337	53.3	5.8
2	5100.00	46.3 AV	54.0	-7.7	2.14 V	337	40.5	5.8
3	*5260.00	111.6 PK			2.16 V	349	72.0	39.6
4	*5260.00	101.7 AV			2.16 V	349	62.1	39.6
5	#10520.00	60.3 PK	74.0	-13.7	2.40 V	10	41.4	18.9
6	#10520.00	46.7 AV	54.0	-7.3	2.40 V	10	27.8	18.9

REMARKS:

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

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	112.2 PK			1.99 H	355	72.5	39.7
2	*5300.00	100.9 AV			1.99 H	355	61.2	39.7
3	5380.00	63.9 PK	74.0	-10.1	1.95 H	354	57.2	6.7
4	5380.00	52.0 AV	54.0	-2.0	1.95 H	354	45.3	6.7
5	10600.00	60.0 PK	74.0	-14.0	1.86 H	66	41.1	18.9
6	10600.00	47.1 AV	54.0	-6.9	1.86 H	66	28.2	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	*5300.00	108.6 PK			2.16 V	352	68.9	39.7
2	*5300.00	99.0 AV			2.16 V	352	59.3	39.7
3	5380.00	61.6 PK	74.0	-12.4	2.23 V	355	54.9	6.7
4	5380.00	50.8 AV	54.0	-3.2	2.23 V	355	44.1	6.7
5	10600.00	59.8 PK	74.0	-14.2	1.70 V	45	40.9	18.9
6	10600.00	46.5 AV	54.0	-7.5	1.70 V	45	27.6	18.9

REMARKS:

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

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	114.9 PK			1.97 H	357	75.2	39.7
2	*5320.00	103.1 AV			1.97 H	357	63.4	39.7
3	5400.00	63.0 PK	74.0	-11.0	1.96 H	351	56.3	6.7
4	5400.00	52.2 AV	54.0	-1.8	1.96 H	351	45.5	6.7
5	10640.00	60.6 PK	74.0	-13.4	1.96 H	233	41.8	18.8
6	10640.00	47.8 AV	54.0	-6.2	1.96 H	233	29.0	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	*5320.00	110.2 PK			2.19 V	344	70.5	39.7
2	*5320.00	100.7 AV			2.19 V	344	61.0	39.7
3	5400.00	61.6 PK	74.0	-12.4	2.15 V	347	54.9	6.7
4	5400.00	50.2 AV	54.0	-3.8	2.15 V	347	43.5	6.7
5	10640.00	59.4 PK	74.0	-14.6	2.11 V	0	40.6	18.8
6	10640.00	46.3 AV	54.0	-7.7	2.11 V	0	27.5	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	62.9 PK	74.0	-11.1	1.94 H	4	56.1	6.8
2	5420.00	50.3 AV	54.0	-3.7	1.94 H	4	43.5	6.8
3	#5470.00	58.9 PK	74.0	-15.1	1.94 H	4	52.0	6.9
4	#5470.00	47.3 AV	54.0	-6.7	1.94 H	4	40.4	6.9
5	*5500.00	113.9 PK			1.89 H	323	73.7	40.2
6	*5500.00	102.2 AV			1.89 H	323	62.0	40.2
7	11000.00	61.4 PK	74.0	-12.6	1.80 H	23	41.5	19.9
8	11000.00	48.5 AV	54.0	-5.5	1.80 H	23	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	5420.00	60.5 PK	74.0	-13.5	2.28 V	354	53.7	6.8
2	5420.00	50.1 AV	54.0	-3.9	2.28 V	354	43.3	6.8
3	#5470.00	58.7 PK	74.0	-15.3	2.28 V	354	51.8	6.9
4	#5470.00	47.8 AV	54.0	-6.2	2.28 V	354	40.9	6.9
5	*5500.00	111.5 PK			2.28 V	354	71.3	40.2
6	*5500.00	101.3 AV			2.28 V	354	61.1	40.2
7	11000.00	60.9 PK	74.0	-13.1	1.90 V	0	41.0	19.9
8	11000.00	48.1 AV	54.0	-5.9	1.90 V	0	28.2	19.9

REMARKS:

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

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	114.7 PK			1.85 H	324	74.4	40.3
2	*5580.00	102.6 AV			1.85 H	324	62.3	40.3
3	11160.00	61.0 PK	74.0	-13.0	1.65 H	267	41.6	19.4
4	11160.00	48.3 AV	54.0	-5.7	1.65 H	267	28.9	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	111.3 PK			2.25 V	3	71.0	40.3
2	*5580.00	100.8 AV			2.25 V	3	60.5	40.3
3	11160.00	60.7 PK	74.0	-13.3	2.00 V	13	41.3	19.4
4	11160.00	47.5 AV	54.0	-6.5	2.00 V	13	28.1	19.4

REMARKS:

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

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	114.3 PK			1.89 H	322	73.9	40.4
2	*5700.00	102.2 AV			1.89 H	322	61.8	40.4
3	#5780.00	66.7 PK	68.2	-1.5	1.94 H	321	59.2	7.5
4	11400.00	60.6 PK	74.0	-13.4	1.75 H	282	41.8	18.8
5	11400.00	47.9 AV	54.0	-6.1	1.75 H	282	29.1	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	111.3 PK			2.26 V	359	70.9	40.4
2	*5700.00	101.3 AV			2.26 V	359	60.9	40.4
3	#5780.00	64.0 PK	68.2	-4.2	2.22 V	1	56.5	7.5
4	11400.00	60.1 PK	74.0	-13.9	1.94 V	59	41.3	18.8
5	11400.00	46.8 AV	54.0	-7.2	1.94 V	59	28.0	18.8

REMARKS:

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

802.11n (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	111.6 PK			1.95 H	2	72.0	39.6
2	*5270.00	99.2 AV			1.95 H	2	59.6	39.6
3	5350.00	63.4 PK	74.0	-10.6	1.90 H	355	56.9	6.5
4	5350.00	51.8 AV	54.0	-2.2	1.90 H	355	45.3	6.5
5	#7026.00	61.6 PK	68.2	-6.6	1.71 H	344	48.1	13.5
6	#10540.00	61.4 PK	74.0	-12.6	1.84 H	342	42.4	19.0
7	#10540.00	47.9 AV	54.0	-6.1	1.84 H	342	28.9	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	108.5 PK			2.12 V	341	68.9	39.6
2	*5270.00	97.1 AV			2.12 V	341	57.5	39.6
3	5350.00	61.4 PK	74.0	-12.6	2.13 V	348	54.9	6.5
4	5350.00	49.8 AV	54.0	-4.2	2.13 V	348	43.3	6.5
5	#7026.00	61.4 PK	68.2	-6.8	2.32 V	320	47.9	13.5
6	#10540.00	60.7 PK	74.0	-13.3	1.86 V	243	41.7	19.0
7	#10540.00	48.0 AV	54.0	-6.0	1.86 V	243	29.0	19.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	112.2 PK			1.89 H	358	72.5	39.7
2	*5310.00	100.0 AV			1.89 H	358	60.3	39.7
3	5400.00	62.0 PK	74.0	-12.0	1.93 H	355	55.3	6.7
4	5400.00	50.3 AV	54.0	-3.7	1.93 H	355	43.6	6.7
5	#7080.00	61.2 PK	68.2	-7.0	1.77 H	345	47.6	13.6
6	10620.00	60.3 PK	74.0	-13.7	1.87 H	0	41.4	18.9
7	10620.00	47.7 AV	54.0	-6.3	1.87 H	0	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	*5310.00	108.0 PK			2.13 V	348	68.3	39.7
2	*5310.00	97.7 AV			2.13 V	348	58.0	39.7
3	5400.00	61.6 PK	74.0	-12.4	2.14 V	356	54.9	6.7
4	5400.00	48.9 AV	54.0	-5.1	2.14 V	356	42.2	6.7
5	#7080.00	59.6 PK	68.2	-8.6	2.19 V	315	46.0	13.6
6	10620.00	60.4 PK	74.0	-13.6	2.31 V	327	41.5	18.9
7	10620.00	47.7 AV	54.0	-6.3	2.31 V	327	28.8	18.9

REMARKS:

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

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	5420.00	62.2 PK	74.0	-11.8	1.83 H	358	55.4	6.8
2	5420.00	49.5 AV	54.0	-4.5	1.83 H	358	42.7	6.8
3	#5470.00	65.0 PK	74.0	-9.0	1.83 H	347	58.1	6.9
4	#5470.00	50.1 AV	54.0	-3.9	1.83 H	347	43.2	6.9
5	*5510.00	111.4 PK			1.79 H	356	71.2	40.2
6	*5510.00	99.7 AV			1.79 H	356	59.5	40.2
7	11020.00	62.1 PK	74.0	-11.9	1.88 H	309	42.3	19.8
8	11020.00	49.0 AV	54.0	-5.0	1.88 H	309	29.2	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	5420.00	60.5 PK	74.0	-13.5	2.21 V	348	53.7	6.8
2	5420.00	48.2 AV	54.0	-5.8	2.21 V	348	41.4	6.8
3	#5470.00	62.1 PK	74.0	-11.9	2.11 V	351	55.2	6.9
4	#5470.00	48.8 AV	54.0	-5.2	2.11 V	351	41.9	6.9
5	*5510.00	108.6 PK			2.23 V	341	68.4	40.2
6	*5510.00	98.0 AV			2.23 V	341	57.8	40.2
7	11020.00	61.8 PK	74.0	-12.2	1.94 V	331	42.0	19.8
8	11020.00	48.8 AV	54.0	-5.2	1.94 V	331	29.0	19.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	63.5 PK	74.0	-10.5	1.86 H	351	56.6	6.9
2	#5470.00	50.8 AV	54.0	-3.2	1.86 H	351	43.9	6.9
3	*5550.00	112.1 PK			1.85 H	322	71.9	40.2
4	*5550.00	99.9 AV			1.85 H	322	59.7	40.2
5	11100.00	61.2 PK	74.0	-12.8	1.95 H	352	42.0	19.2
6	11100.00	48.2 AV	54.0	-5.8	1.95 H	352	29.0	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	61.3 PK	74.0	-12.7	2.22 V	354	54.4	6.9
2	#5470.00	49.8 AV	54.0	-4.2	2.22 V	354	42.9	6.9
3	*5550.00	108.2 PK			2.21 V	349	68.0	40.2
4	*5550.00	98.5 AV			2.21 V	349	58.3	40.2
5	11100.00	61.5 PK	74.0	-12.5	2.00 V	328	42.3	19.2
6	11100.00	48.3 AV	54.0	-5.7	2.00 V	328	29.1	19.2

REMARKS:

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

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	111.6 PK			1.86 H	314	71.3	40.3
2	*5670.00	99.4 AV			1.86 H	314	59.1	40.3
3	#5755.00	63.9 PK	74.0	-10.1	1.82 H	318	56.4	7.5
4	#5755.00	52.4 AV	54.0	-1.6	1.82 H	318	44.9	7.5
5	11340.00	60.8 PK	74.0	-13.2	1.92 H	344	41.6	19.2
6	11340.00	48.7 AV	54.0	-5.3	1.92 H	344	29.5	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	*5670.00	108.3 PK			2.20 V	346	68.0	40.3
2	*5670.00	97.8 AV			2.20 V	346	57.5	40.3
3	#5755.00	62.4 PK	74.0	-11.6	2.14 V	348	54.9	7.5
4	#5755.00	51.2 AV	54.0	-2.8	2.14 V	348	43.7	7.5
5	11340.00	61.9 PK	74.0	-12.1	2.02 V	359	42.7	19.2
6	11340.00	48.3 AV	54.0	-5.7	2.02 V	359	29.1	19.2

REMARKS:

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

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	102.1 PK			1.93 H	3	62.4	39.7
2	*5290.00	91.0 AV			1.93 H	3	51.3	39.7
3	5350.00	63.9 PK	74.0	-10.1	1.84 H	9	57.4	6.5
4	5350.00	47.8 AV	54.0	-6.2	1.84 H	9	41.3	6.5
5	#5877.00	67.4 PK	68.2	-0.8	1.81 H	318	59.7	7.7
6	#7053.00	61.2 PK	68.2	-7.0	1.74 H	345	47.6	13.6
7	#10580.00	61.4 PK	74.0	-12.6	1.88 H	357	42.4	19.0
8	#10580.00	47.0 AV	54.0	-7.0	1.88 H	357	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	97.9 PK			2.10 V	346	58.2	39.7
2	*5290.00	88.4 AV			2.10 V	346	48.7	39.7
3	5350.00	60.0 PK	74.0	-14.0	2.19 V	352	53.5	6.5
4	5350.00	46.5 AV	54.0	-7.5	2.19 V	352	40.0	6.5
5	#5877.00	63.8 PK	68.2	-4.4	2.18 V	9	56.1	7.7
6	#7053.00	59.5 PK	68.2	-8.7	2.20 V	318	45.9	13.6
7	#10580.00	60.7 PK	74.0	-13.3	2.05 V	334	41.7	19.0
8	#10580.00	47.8 AV	54.0	-6.2	2.05 V	334	28.8	19.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.9 PK	74.0	-8.1	1.80 H	345	59.0	6.9
2	5460.00	52.0 AV	54.0	-2.0	1.80 H	345	45.1	6.9
3	#5470.00	67.6 PK	74.0	-6.4	1.82 H	327	60.7	6.9
4	#5470.00	52.9 AV	54.0	-1.1	1.82 H	327	46.0	6.9
5	*5530.00	107.0 PK			1.76 H	342	66.8	40.2
6	*5530.00	96.1 AV			1.76 H	342	55.9	40.2
7	#6144.00	55.9 PK	68.2	-12.3	1.93 H	335	46.4	9.5
8	11060.00	61.1 PK	74.0	-12.9	1.86 H	353	41.6	19.5
9	11060.00	48.1 AV	54.0	-5.9	1.86 H	353	28.6	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	62.4 PK	74.0	-11.6	2.17 V	357	55.5	6.9
2	5460.00	49.8 AV	54.0	-4.2	2.17 V	357	42.9	6.9
3	#5470.00	65.5 PK	74.0	-8.5	2.12 V	349	58.6	6.9
4	#5470.00	50.7 AV	54.0	-3.3	2.12 V	349	43.8	6.9
5	*5530.00	104.8 PK			2.19 V	351	64.6	40.2
6	*5530.00	94.9 AV			2.19 V	351	54.7	40.2
7	#6144.00	52.5 PK	68.2	-15.7	2.02 V	322	43.0	9.5
8	11060.00	61.2 PK	74.0	-12.8	1.94 V	317	41.7	19.5
9	11060.00	48.6 AV	54.0	-5.4	1.94 V	317	29.1	19.5

REMARKS:

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

Test Mode C:

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	5100.00	57.9 PK	74.0	-16.1	1.66 H	352	52.1	5.8
2	5100.00	45.7 AV	54.0	-8.3	1.66 H	352	39.9	5.8
3	*5260.00	115.0 PK			3.66 H	348	75.4	39.6
4	*5260.00	105.2 AV			3.66 H	348	65.6	39.6
5	5419.00	59.5 PK	74.0	-14.5	1.55 H	8	52.7	6.8
6	5419.00	47.0 AV	54.0	-7.0	1.55 H	8	40.2	6.8
7	#10520.00	60.4 PK	74.0	-13.6	2.04 H	25	41.5	18.9
8	#10520.00	47.6 AV	54.0	-6.4	2.04 H	25	28.7	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	5100.00	59.9 PK	74.0	-14.1	1.93 V	330	54.1	5.8
2	5100.00	46.6 AV	54.0	-7.4	1.93 V	330	40.8	5.8
3	*5260.00	115.6 PK			1.29 V	335	76.0	39.6
4	*5260.00	106.2 AV			1.29 V	335	66.6	39.6
5	5419.00	61.9 PK	74.0	-12.1	1.32 V	341	55.1	6.8
6	5419.00	50.0 AV	54.0	-4.0	1.32 V	341	43.2	6.8
7	#10520.00	60.2 PK	74.0	-13.8	1.65 V	154	41.3	18.9
8	#10520.00	47.0 AV	54.0	-7.0	1.65 V	154	28.1	18.9

REMARKS:

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

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	110.0 PK			3.40 H	349	70.3	39.7
2	*5300.00	100.2 AV			3.40 H	349	60.5	39.7
3	5379.00	63.6 PK	74.0	-10.4	3.66 H	349	56.9	6.7
4	5379.00	52.6 AV	54.0	-1.4	3.66 H	349	45.9	6.7
5	10600.00	60.6 PK	74.0	-13.4	3.20 H	154	41.7	18.9
6	10600.00	47.4 AV	54.0	-6.6	3.20 H	154	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	*5300.00	110.5 PK			1.48 V	334	70.8	39.7
2	*5300.00	101.0 AV			1.48 V	334	61.3	39.7
3	5379.00	63.6 PK	74.0	-10.4	1.50 V	336	56.9	6.7
4	5379.00	52.9 AV	54.0	-1.1	1.50 V	336	46.2	6.7
5	10600.00	60.1 PK	74.0	-13.9	1.78 V	263	41.2	18.9
6	10600.00	47.1 AV	54.0	-6.9	1.78 V	263	28.2	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.2 PK			3.74 H	351	72.5	39.7
2	*5320.00	102.7 AV			3.74 H	351	63.0	39.7
3	5400.00	64.0 PK	74.0	-10.0	3.46 H	351	57.3	6.7
4	5400.00	52.3 AV	54.0	-1.7	3.46 H	351	45.6	6.7
5	#5480.00	63.3 PK	68.2	-4.9	3.07 H	349	56.3	7.0
6	#5560.00	60.4 PK	68.2	-7.8	3.26 H	354	53.4	7.0
7	10640.00	60.0 PK	74.0	-14.0	2.85 H	330	41.2	18.8
8	10640.00	46.9 AV	54.0	-7.1	2.85 H	330	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	*5320.00	113.5 PK			1.50 V	332	73.8	39.7
2	*5320.00	103.3 AV			1.50 V	332	63.6	39.7
3	5400.00	64.9 PK	74.0	-9.1	1.35 V	338	58.2	6.7
4	5400.00	52.7 AV	54.0	-1.3	1.35 V	338	46.0	6.7
5	#5480.00	62.7 PK	68.2	-5.5	1.61 V	339	55.7	7.0
6	#5560.00	60.0 PK	68.2	-8.2	1.67 V	336	53.0	7.0
7	10640.00	59.6 PK	74.0	-14.4	1.55 V	26	40.8	18.8
8	10640.00	46.9 AV	54.0	-7.1	1.55 V	26	28.1	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	62.4 PK	74.0	-11.6	2.99 H	348	55.6	6.8
2	5420.00	51.4 AV	54.0	-2.6	2.99 H	348	44.6	6.8
3	#5470.00	63.6 PK	74.0	-10.4	3.00 H	349	56.7	6.9
4	#5470.00	46.8 AV	54.0	-7.2	3.00 H	349	39.9	6.9
5	*5500.00	113.9 PK			3.17 H	342	73.7	40.2
6	*5500.00	104.2 AV			3.17 H	342	64.0	40.2
7	11000.00	61.8 PK	74.0	-12.2	2.39 H	105	41.9	19.9
8	11000.00	49.0 AV	54.0	-5.0	2.39 H	105	29.1	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	5420.00	63.1 PK	74.0	-10.9	1.53 V	320	56.3	6.8
2	5420.00	52.3 AV	54.0	-1.7	1.53 V	320	45.5	6.8
3	#5470.00	67.6 PK	74.0	-6.4	1.63 V	321	60.7	6.9
4	#5470.00	48.6 AV	54.0	-5.4	1.63 V	321	41.7	6.9
5	*5500.00	115.1 PK			1.21 V	327	74.9	40.2
6	*5500.00	105.1 AV			1.21 V	327	64.9	40.2
7	11000.00	61.6 PK	74.0	-12.4	1.77 V	227	41.7	19.9
8	11000.00	48.9 AV	54.0	-5.1	1.77 V	227	29.0	19.9

REMARKS:

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

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	113.8 PK			2.95 H	347	73.5	40.3
2	*5580.00	104.1 AV			2.95 H	347	63.8	40.3
3	11160.00	61.4 PK	74.0	-12.6	2.65 H	47	42.0	19.4
4	11160.00	48.5 AV	54.0	-5.5	2.65 H	47	29.1	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	113.8 PK			1.34 V	325	73.5	40.3
2	*5580.00	104.1 AV			1.34 V	325	63.8	40.3
3	11160.00	60.6 PK	74.0	-13.4	1.79 V	254	41.2	19.4
4	11160.00	47.9 AV	54.0	-6.1	1.79 V	254	28.5	19.4

REMARKS:

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

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	110.5 PK			2.93 H	338	70.1	40.4
2	*5700.00	100.9 AV			2.93 H	338	60.5	40.4
3	#5725.00	61.3 PK	74.0	-12.7	2.89 H	340	53.9	7.4
4	#5725.00	47.7 AV	54.0	-6.3	2.89 H	340	40.3	7.4
5	#5780.00	64.7 PK	74.0	-9.3	3.00 H	342	57.2	7.5
6	#5780.00	52.4 AV	54.0	-1.6	3.00 H	342	44.9	7.5
7	11400.00	60.3 PK	74.0	-13.7	2.34 H	28	41.5	18.8
8	11400.00	47.3 AV	54.0	-6.7	2.34 H	28	28.5	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	*5700.00	111.5 PK			1.42 V	325	71.1	40.4
2	*5700.00	102.4 AV			1.42 V	325	62.0	40.4
3	#5725.00	58.9 PK	74.0	-15.1	1.27 V	323	51.5	7.4
4	#5725.00	48.8 AV	54.0	-5.2	1.27 V	323	41.4	7.4
5	#5780.00	67.1 PK	74.0	-6.9	1.27 V	322	59.6	7.5
6	#5780.00	52.6 AV	54.0	-1.4	1.27 V	322	45.1	7.5
7	11400.00	60.2 PK	74.0	-13.8	1.69 V	289	41.4	18.8
8	11400.00	47.3 AV	54.0	-6.7	1.69 V	289	28.5	18.8

REMARKS:

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

802.11n (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	*5260.00	115.1 PK			2.99 H	345	75.5	39.6
2	*5260.00	104.5 AV			2.99 H	345	64.9	39.6
3	#5500.00	61.1 PK	74.0	-12.9	2.46 H	351	54.1	7.0
4	#5500.00	51.5 AV	54.0	-2.5	2.46 H	351	44.5	7.0
5	#10520.00	61.4 PK	74.0	-12.6	2.05 H	290	42.5	18.9
6	#10520.00	48.5 AV	54.0	-5.5	2.05 H	290	29.6	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	5040.00	59.2 PK	74.0	-14.8	1.74 V	340	53.4	5.8
2	5040.00	47.1 AV	54.0	-6.9	1.74 V	340	41.3	5.8
3	5100.00	59.8 PK	74.0	-14.2	1.69 V	324	54.0	5.8
4	5100.00	46.9 AV	54.0	-7.1	1.69 V	324	41.1	5.8
5	*5260.00	115.2 PK			1.45 V	333	75.6	39.6
6	*5260.00	105.8 AV			1.45 V	333	66.2	39.6
7	5419.00	61.9 PK	74.0	-12.1	1.45 V	338	55.1	6.8
8	5419.00	50.3 AV	54.0	-3.7	1.45 V	338	43.5	6.8
9	#5489.00	61.4 PK	68.2	-6.8	1.47 V	347	54.4	7.0
10	#10520.00	61.5 PK	74.0	-12.5	1.68 V	247	42.6	18.9
11	#10520.00	48.2 AV	54.0	-5.8	1.68 V	247	29.3	18.9

REMARKS:

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

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	110.2 PK			3.25 H	346	70.5	39.7
2	*5300.00	99.6 AV			3.25 H	346	59.9	39.7
3	5380.00	62.3 PK	74.0	-11.7	3.15 H	343	55.6	6.7
4	5380.00	50.6 AV	54.0	-3.4	3.15 H	343	43.9	6.7
5	#5539.00	58.7 PK	68.2	-9.5	2.97 H	343	51.7	7.0
6	10600.00	60.1 PK	74.0	-13.9	2.43 H	129	41.2	18.9
7	10600.00	47.3 AV	54.0	-6.7	2.43 H	129	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	*5300.00	110.6 PK			1.61 V	335	70.9	39.7
2	*5300.00	100.6 AV			1.61 V	335	60.9	39.7
3	5380.00	63.5 PK	74.0	-10.5	1.49 V	335	56.8	6.7
4	5380.00	52.7 AV	54.0	-1.3	1.49 V	335	46.0	6.7
5	#5539.00	58.9 PK	68.2	-9.3	1.54 V	338	51.9	7.0
6	10600.00	60.3 PK	74.0	-13.7	1.89 V	225	41.4	18.9
7	10600.00	47.2 AV	54.0	-6.8	1.89 V	225	28.3	18.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	112.6 PK			3.07 H	343	72.9	39.7
2	*5320.00	102.0 AV			3.07 H	343	62.3	39.7
3	5400.00	62.6 PK	74.0	-11.4	2.74 H	343	55.9	6.7
4	5400.00	51.0 AV	54.0	-3.0	2.74 H	343	44.3	6.7
5	#5480.00	61.0 PK	68.2	-7.2	3.37 H	346	54.0	7.0
6	#5550.00	60.1 PK	68.2	-8.1	3.27 H	343	53.1	7.0
7	10640.00	59.3 PK	74.0	-14.7	2.75 H	169	40.5	18.8
8	10640.00	46.8 AV	54.0	-7.2	2.75 H	169	28.0	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	*5320.00	113.2 PK			1.52 V	336	73.5	39.7
2	*5320.00	103.8 AV			1.52 V	336	64.1	39.7
3	5400.00	62.8 PK	74.0	-11.2	1.22 V	336	56.1	6.7
4	5400.00	52.7 AV	54.0	-1.3	1.22 V	336	46.0	6.7
5	#5480.00	63.0 PK	68.2	-5.2	1.54 V	336	56.0	7.0
6	#5550.00	60.6 PK	68.2	-7.6	1.40 V	339	53.6	7.0
7	10640.00	59.3 PK	74.0	-14.7	2.41 V	15	40.5	18.8
8	10640.00	46.8 AV	54.0	-7.2	2.41 V	15	28.0	18.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	64.7 PK	74.0	-9.3	3.20 H	341	57.9	6.8
2	5420.00	51.3 AV	54.0	-2.7	3.20 H	341	44.5	6.8
3	#5470.00	63.9 PK	74.0	-10.1	2.96 H	341	57.0	6.9
4	#5470.00	47.5 AV	54.0	-6.5	2.96 H	341	40.6	6.9
5	*5500.00	114.3 PK			3.03 H	342	74.1	40.2
6	*5500.00	108.3 AV			3.03 H	342	68.1	40.2
7	11000.00	62.0 PK	74.0	-12.0	2.26 H	241	42.1	19.9
8	11000.00	49.2 AV	54.0	-4.8	2.26 H	241	29.3	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	5420.00	62.2 PK	74.0	-11.8	1.19 V	329	55.4	6.8
2	5420.00	51.1 AV	54.0	-2.9	1.19 V	329	44.3	6.8
3	#5470.00	65.1 PK	74.0	-8.9	1.20 V	330	58.2	6.9
4	#5470.00	47.0 AV	54.0	-7.0	1.20 V	330	40.1	6.9
5	*5500.00	113.5 PK			1.45 V	325	73.3	40.2
6	*5500.00	103.5 AV			1.45 V	325	63.3	40.2
7	11000.00	61.5 PK	74.0	-12.5	1.02 V	31	41.6	19.9
8	11000.00	48.2 AV	54.0	-5.8	1.02 V	31	28.3	19.9

REMARKS:

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

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	113.4 PK			2.91 H	342	73.1	40.3
2	*5580.00	103.9 AV			2.91 H	342	63.6	40.3
3	11160.00	60.6 PK	74.0	-13.4	2.48 H	23	41.2	19.4
4	11160.00	48.3 AV	54.0	-5.7	2.48 H	23	28.9	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	112.6 PK			1.53 V	330	72.3	40.3
2	*5580.00	103.6 AV			1.53 V	330	63.3	40.3
3	11160.00	60.8 PK	74.0	-13.2	1.99 V	12	41.4	19.4
4	11160.00	48.1 AV	54.0	-5.9	1.99 V	12	28.7	19.4

REMARKS:

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

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	111.6 PK			2.95 H	343	71.2	40.4
2	*5700.00	101.3 AV			2.95 H	343	60.9	40.4
3	#5725.00	64.1 PK	74.0	-9.9	1.00 H	342	56.7	7.4
4	#5725.00	49.1 AV	54.0	-4.9	1.00 H	342	41.7	7.4
5	#5780.00	66.7 PK	74.0	-7.3	2.88 H	342	59.2	7.5
6	#5780.00	53.0 AV	54.0	-1.0	2.88 H	342	45.5	7.5
7	11400.00	60.7 PK	74.0	-13.3	2.42 H	43	41.9	18.8
8	11400.00	47.6 AV	54.0	-6.4	2.42 H	43	28.8	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	111.0 PK			1.34 V	317	70.6	40.4
2	*5700.00	101.9 AV			1.34 V	317	61.5	40.4
3	#5725.00	65.0 PK	74.0	-9.0	1.41 V	320	57.6	7.4
4	#5725.00	49.5 AV	54.0	-4.5	1.41 V	320	42.1	7.4
5	#5780.00	65.0 PK	74.0	-9.0	1.34 V	317	57.5	7.5
6	#5780.00	52.9 AV	54.0	-1.1	1.34 V	317	45.4	7.5
7	11400.00	60.2 PK	74.0	-13.8	1.89 V	222	41.4	18.8
8	11400.00	47.3 AV	54.0	-6.7	1.89 V	222	28.5	18.8

REMARKS:

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

802.11n (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	111.5 PK			2.84 H	346	71.9	39.6
2	*5270.00	100.9 AV			2.84 H	346	61.3	39.6
3	5350.00	62.8 PK	74.0	-11.2	2.90 H	342	56.3	6.5
4	5350.00	52.4 AV	54.0	-1.6	2.90 H	342	45.9	6.5
5	#10540.00	60.6 PK	74.0	-13.4	1.94 H	312	41.6	19.0
6	#10540.00	47.6 AV	54.0	-6.4	1.94 H	312	28.6	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	110.7 PK			1.74 V	327	71.1	39.6
2	*5270.00	101.5 AV			1.74 V	327	61.9	39.6
3	5355.00	63.9 PK	74.0	-10.1	1.64 V	328	57.4	6.5
4	5355.00	52.6 AV	54.0	-1.4	1.64 V	328	46.1	6.5
5	#10540.00	60.7 PK	74.0	-13.3	2.12 V	30	41.7	19.0
6	#10540.00	47.8 AV	54.0	-6.2	2.12 V	30	28.8	19.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	109.0 PK			2.93 H	344	69.3	39.7
2	*5310.00	98.3 AV			2.93 H	344	58.6	39.7
3	5350.00	70.9 PK	74.0	-3.1	2.86 H	346	64.4	6.5
4	5350.00	51.8 AV	54.0	-2.2	2.86 H	346	45.3	6.5
5	10620.00	60.9 PK	74.0	-13.1	1.77 H	32	42.0	18.9
6	10620.00	48.1 AV	54.0	-5.9	1.77 H	32	29.2	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	109.4 PK			1.48 V	327	69.7	39.7
2	*5310.00	100.2 AV			1.48 V	327	60.5	39.7
3	5350.00	72.5 PK	74.0	-1.5	1.65 V	330	66.0	6.5
4	5350.00	51.4 AV	54.0	-2.6	1.65 V	330	44.9	6.5
5	10640.00	59.7 PK	74.0	-14.3	1.68 V	27	40.9	18.8
6	10640.00	46.8 AV	54.0	-7.2	1.68 V	27	28.0	18.8

REMARKS:

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

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	5430.00	64.8 PK	74.0	-9.2	3.57 H	340	58.0	6.8
2	5430.00	49.0 AV	54.0	-5.0	3.57 H	340	42.2	6.8
3	#5470.00	68.6 PK	74.0	-5.4	3.57 H	340	61.7	6.9
4	#5470.00	51.3 AV	54.0	-2.7	3.57 H	340	44.4	6.9
5	*5510.00	109.9 PK			2.98 H	342	69.7	40.2
6	*5510.00	99.8 AV			2.98 H	342	59.6	40.2
7	11020.00	60.6 PK	74.0	-13.4	2.57 H	303	40.8	19.8
8	11020.00	47.4 AV	54.0	-6.6	2.57 H	303	27.6	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	5430.00	63.1 PK	74.0	-10.9	1.40 V	320	56.3	6.8
2	5430.00	50.3 AV	54.0	-3.7	1.40 V	320	43.5	6.8
3	#5470.00	71.1 PK	74.0	-2.9	1.39 V	324	64.2	6.9
4	#5470.00	52.5 AV	54.0	-1.5	1.39 V	324	45.6	6.9
5	*5510.00	109.8 PK			1.33 V	328	69.6	40.2
6	*5510.00	100.3 AV			1.33 V	328	60.1	40.2
7	11020.00	60.8 PK	74.0	-13.2	1.74 V	359	41.0	19.8
8	11020.00	47.9 AV	54.0	-6.1	1.74 V	359	28.1	19.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	109.7 PK			2.99 H	341	69.5	40.2
2	*5550.00	100.0 AV			2.99 H	341	59.8	40.2
3	11100.00	60.2 PK	74.0	-13.8	1.99 H	240	41.0	19.2
4	11100.00	47.1 AV	54.0	-6.9	1.99 H	240	27.9	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	109.5 PK			1.40 V	326	69.3	40.2
2	*5550.00	100.7 AV			1.40 V	326	60.5	40.2
3	11100.00	61.1 PK	74.0	-12.9	1.85 V	26	41.9	19.2
4	11100.00	47.8 AV	54.0	-6.2	1.85 V	26	28.6	19.2

REMARKS:

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

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	109.6 PK			3.11 H	342	69.3	40.3
2	*5670.00	99.5 AV			3.11 H	342	59.2	40.3
3	#5745.00	63.3 PK	74.0	-10.7	3.10 H	340	55.9	7.4
4	#5745.00	51.3 AV	54.0	-2.7	3.10 H	340	43.9	7.4
5	11340.00	59.7 PK	74.0	-14.3	2.11 H	135	40.5	19.2
6	11340.00	46.9 AV	54.0	-7.1	2.11 H	135	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	*5670.00	109.9 PK			1.39 V	320	69.6	40.3
2	*5670.00	100.3 AV			1.39 V	320	60.0	40.3
3	#5745.00	65.2 PK	74.0	-8.8	1.22 V	326	57.8	7.4
4	#5745.00	52.4 AV	54.0	-1.6	1.22 V	326	45.0	7.4
5	11340.00	60.3 PK	74.0	-13.7	1.60 V	36	41.1	19.2
6	11340.00	47.1 AV	54.0	-6.9	1.60 V	36	27.9	19.2

REMARKS:

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

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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	104.6 PK			2.92 H	346	64.9	39.7
2	*5290.00	93.7 AV			2.92 H	346	54.0	39.7
3	5350.00	68.5 PK	74.0	-5.5	3.18 H	345	62.0	6.5
4	5350.00	52.7 AV	54.0	-1.3	3.18 H	345	46.2	6.5
5	#5877.00	65.2 PK	68.2	-3.0	2.77 H	342	57.5	7.7
6	#10580.00	60.0 PK	74.0	-14.0	1.77 H	42	41.0	19.0
7	#10580.00	47.1 AV	54.0	-6.9	1.77 H	42	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	*5290.00	104.3 PK			1.89 V	322	64.6	39.7
2	*5290.00	95.8 AV			1.89 V	322	56.1	39.7
3	5350.00	66.0 PK	74.0	-8.0	1.90 V	324	59.5	6.5
4	5350.00	52.6 AV	54.0	-1.4	1.90 V	324	46.1	6.5
5	#5877.00	64.0 PK	68.2	-4.2	1.67 V	314	56.3	7.7
6	#10580.00	60.2 PK	74.0	-13.8	1.77 V	0	41.2	19.0
7	#10580.00	47.4 AV	54.0	-6.6	1.77 V	0	28.4	19.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.6 PK	74.0	-10.4	2.93 H	340	56.7	6.9
2	5460.00	50.5 AV	54.0	-3.5	2.93 H	340	43.6	6.9
3	#5470.00	67.8 PK	74.0	-6.2	2.92 H	343	60.9	6.9
4	#5470.00	52.5 AV	54.0	-1.5	2.92 H	343	45.6	6.9
5	*5530.00	104.8 PK			3.00 H	342	64.6	40.2
6	*5530.00	94.8 AV			3.00 H	342	54.6	40.2
7	11060.00	60.0 PK	74.0	-14.0	2.19 H	42	40.5	19.5
8	11060.00	46.8 AV	54.0	-7.2	2.19 H	42	27.3	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	62.8 PK	74.0	-11.2	1.15 V	319	55.9	6.9
2	5460.00	50.8 AV	54.0	-3.2	1.15 V	319	43.9	6.9
3	#5470.00	67.8 PK	74.0	-6.2	1.14 V	318	60.9	6.9
4	#5470.00	51.6 AV	54.0	-2.4	1.14 V	318	44.7	6.9
5	*5530.00	103.9 PK			1.58 V	322	63.7	40.2
6	*5530.00	95.2 AV			1.58 V	322	55.0	40.2
7	11060.00	59.8 PK	74.0	-14.2	1.84 V	18	40.3	19.5
8	11060.00	47.4 AV	54.0	-6.6	1.84 V	18	27.9	19.5

REMARKS:

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

Below 1GHz worst-case data:

802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 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	39.62	25.2 QP	40.0	-14.8	2.00 H	140	40.4	-15.2
2	57.12	30.3 QP	40.0	-9.7	2.00 H	277	44.9	-14.6
3	78.51	29.0 QP	40.0	-11.0	1.00 H	254	47.3	-18.3
4	148.50	32.7 QP	43.5	-10.8	1.49 H	251	46.4	-13.7
5	166.00	30.2 QP	43.5	-13.3	2.00 H	291	44.1	-13.9
6	204.89	28.5 QP	43.5	-15.0	1.00 H	62	45.0	-16.5
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	37.68	36.8 QP	40.0	-3.2	1.00 V	177	52.1	-15.3
2	55.18	36.8 QP	40.0	-3.2	1.00 V	343	51.2	-14.4
3	78.51	33.4 QP	40.0	-6.6	1.00 V	216	51.7	-18.3
4	96.01	29.3 QP	43.5	-14.2	1.00 V	139	48.7	-19.4
5	148.50	30.2 QP	43.5	-13.3	1.00 V	236	43.9	-13.7
6	467.36	24.3 QP	46.0	-21.7	1.00 V	197	32.8	-8.5

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 100	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 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	41.57	25.5 QP	40.0	-14.5	2.00 H	134	40.6	-15.1
2	57.12	30.9 QP	40.0	-9.1	2.00 H	132	45.5	-14.6
3	78.51	28.1 QP	40.0	-11.9	1.51 H	247	46.4	-18.3
4	148.50	32.3 QP	43.5	-11.2	2.00 H	258	46.0	-13.7
5	166.00	30.8 QP	43.5	-12.7	1.51 H	264	44.7	-13.9
6	204.89	27.7 QP	43.5	-15.8	2.00 H	78	44.2	-16.5
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	37.68	37.7 QP	40.0	-2.3	1.00 V	181	53.0	-15.3
2	64.90	38.2 QP	40.0	-1.8	2.00 V	94	53.4	-15.2
3	109.62	26.7 QP	43.5	-16.8	1.00 V	232	44.1	-17.4
4	148.50	30.5 QP	43.5	-13.0	1.50 V	210	44.2	-13.7
5	204.89	24.3 QP	43.5	-19.2	1.00 V	212	40.8	-16.5
6	280.71	22.2 QP	46.0	-23.8	2.00 V	3	34.7	-12.5

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 100	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C

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	30.5 QP	40.0	-9.5	1.99 H	10	45.1	-14.6
2	103.78	29.7 QP	43.5	-13.8	1.50 H	211	47.8	-18.1
3	166.00	27.2 QP	43.5	-16.3	1.50 H	273	41.1	-13.9
4	228.22	24.3 QP	46.0	-21.7	1.50 H	239	40.2	-15.9
5	269.05	23.8 QP	46.0	-22.2	1.50 H	75	37.0	-13.2
6	315.71	26.2 QP	46.0	-19.8	1.00 H	90	37.8	-11.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	41.57	35.1 QP	40.0	-4.9	1.00 V	243	50.2	-15.1
2	53.23	34.1 QP	40.0	-5.9	1.00 V	5	48.3	-14.2
3	84.34	32.1 QP	40.0	-7.9	1.00 V	180	51.4	-19.3
4	150.45	32.0 QP	43.5	-11.5	1.00 V	259	45.7	-13.7
5	269.05	23.8 QP	46.0	-22.2	1.49 V	16	37.0	-13.2
6	313.77	23.0 QP	46.0	-23.0	1.49 V	326	34.7	-11.7

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 ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Conc_ 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

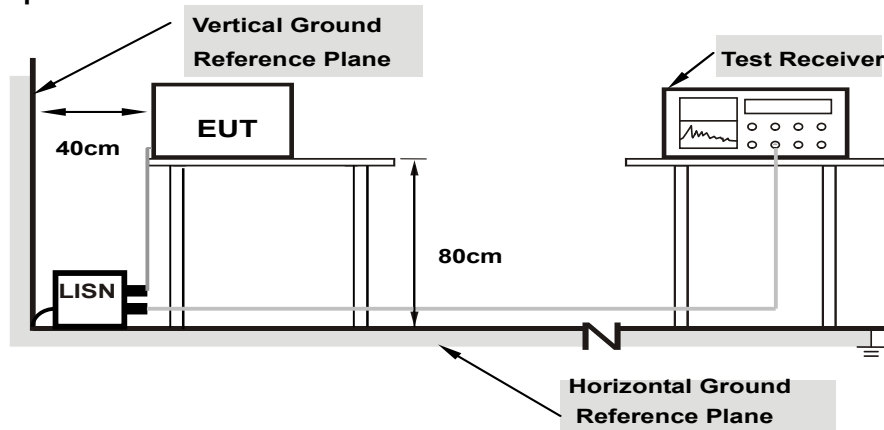
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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.

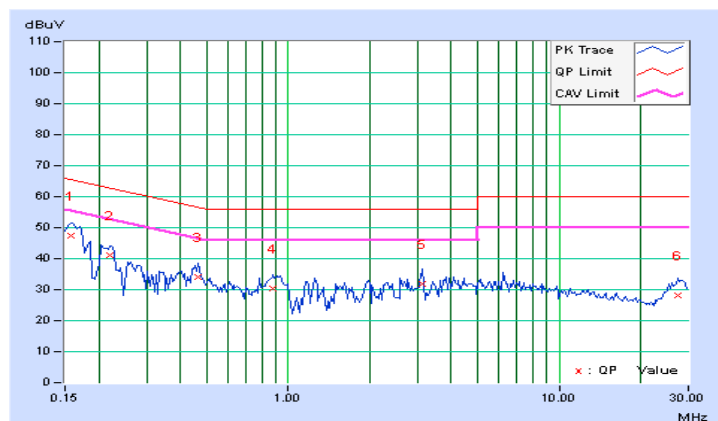
4.2.7 Test Results

Phase	Line (L)	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	0.15781	10.18	37.38	21.53	47.56	31.71	65.58	55.58	-18.02	-23.87
2	0.22031	10.21	30.84	17.22	41.05	27.43	62.81	52.81	-21.76	-25.38
3	0.46250	10.25	23.67	15.37	33.92	25.62	56.65	46.65	-22.73	-21.03
4	0.88047	10.30	19.99	14.32	30.29	24.62	56.00	46.00	-25.71	-21.38
5	3.12109	10.40	21.32	14.15	31.72	24.55	56.00	46.00	-24.28	-21.45
6	27.30469	10.53	17.70	13.33	28.23	23.86	60.00	50.00	-31.77	-26.14

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.

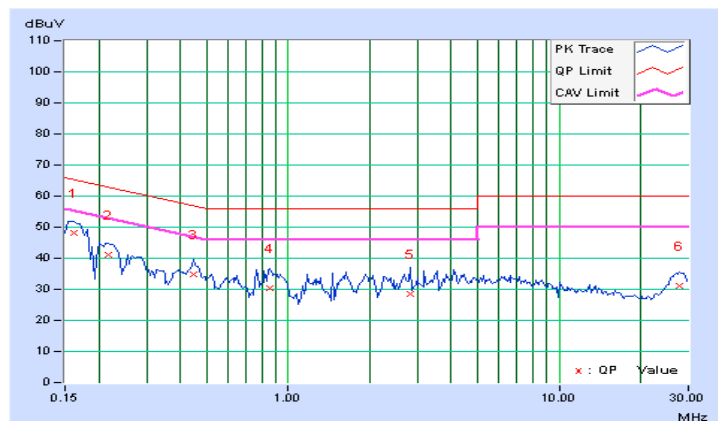


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.19	37.92	23.48	48.11	33.67	65.38	55.38	-17.27	-21.71
2	0.21641	10.21	31.06	16.34	41.27	26.55	62.96	52.96	-21.69	-26.41
3	0.44688	10.30	24.66	17.65	34.96	27.95	56.93	46.93	-21.97	-18.98
4	0.85703	10.29	20.08	12.99	30.37	23.28	56.00	46.00	-25.63	-22.72
5	2.80859	10.47	18.03	9.99	28.50	20.46	56.00	46.00	-27.50	-25.54
6	27.80859	10.69	20.43	15.13	31.12	25.82	60.00	50.00	-28.88	-24.18

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.

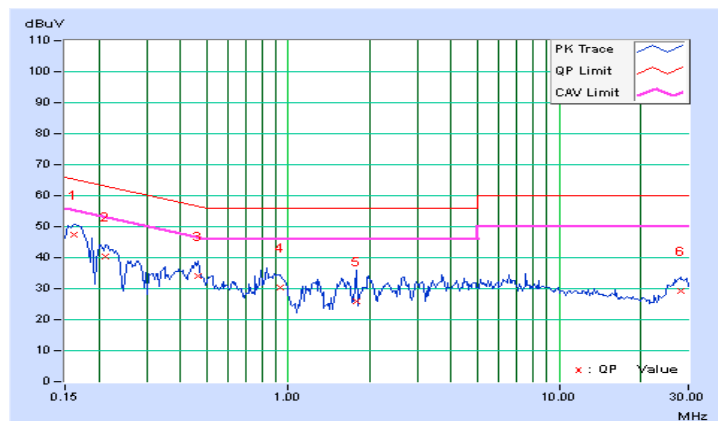


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.16172	10.19	37.16	23.03	47.35	33.22	65.38	55.38	-18.03	-22.16
2	0.21250	10.21	30.31	14.17	40.52	24.38	63.11	53.11	-22.59	-28.73
3	0.46250	10.25	23.84	15.45	34.09	25.70	56.65	46.65	-22.56	-20.95
4	0.93125	10.30	20.14	13.76	30.44	24.06	56.00	46.00	-25.56	-21.94
5	1.78516	10.36	15.62	6.28	25.98	16.64	56.00	46.00	-30.02	-29.36
6	27.98438	10.52	18.76	13.56	29.28	24.08	60.00	50.00	-30.72	-25.92

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.

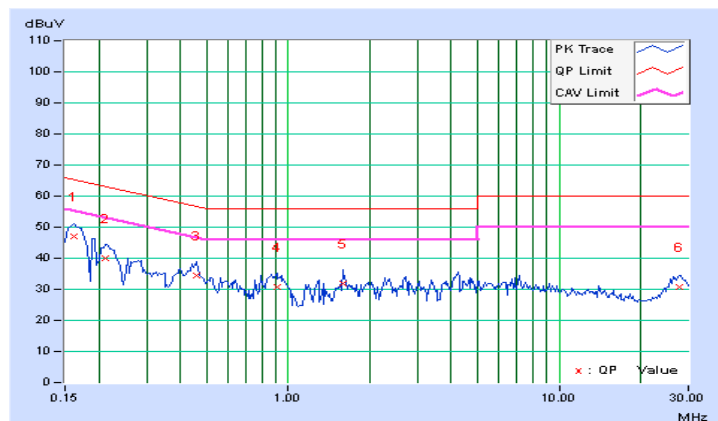


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.19	36.98	22.40	47.17	32.59	65.38	55.38	-18.21	-22.79
2	0.21250	10.21	29.78	13.79	39.99	24.00	63.11	53.11	-23.12	-29.11
3	0.45859	10.30	24.22	16.52	34.52	26.82	56.72	46.72	-22.20	-19.90
4	0.90781	10.29	20.62	14.39	30.91	24.68	56.00	46.00	-25.09	-21.32
5	1.58594	10.36	21.58	14.48	31.94	24.84	56.00	46.00	-24.06	-21.16
6	27.97266	10.69	20.19	14.83	30.88	25.52	60.00	50.00	-29.12	-24.48

REMARKS:

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

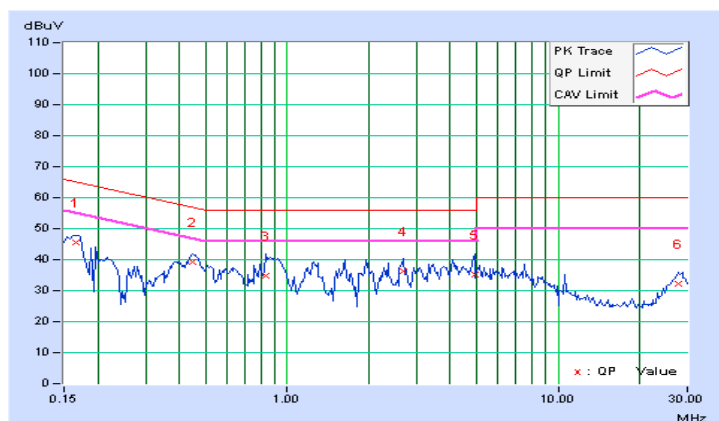


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.16562	10.19	35.21	23.54	45.40	33.73	65.18	55.18	-19.78	-21.45
2	0.44688	10.25	28.97	22.21	39.22	32.46	56.93	46.93	-17.71	-14.47
3	0.83359	10.29	24.48	17.92	34.77	28.21	56.00	46.00	-21.23	-17.79
4	2.68359	10.39	25.89	20.48	36.28	30.87	56.00	46.00	-19.72	-15.13
5	4.91797	10.43	24.67	17.88	35.10	28.31	56.00	46.00	-20.90	-17.69
6	27.63672	10.52	21.65	16.44	32.17	26.96	60.00	50.00	-27.83	-23.04

REMARKS:

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

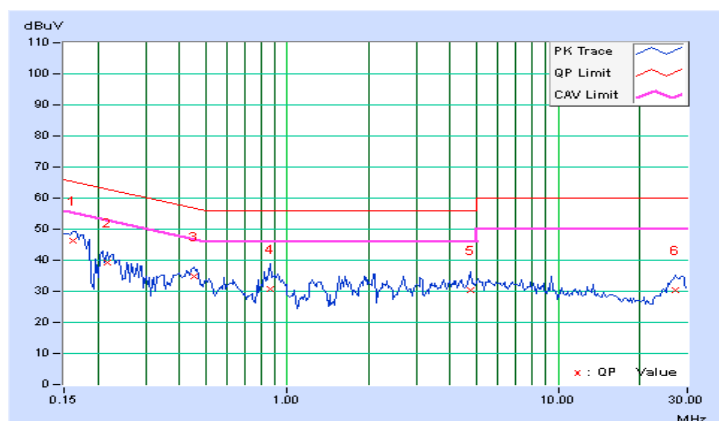


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.19	35.97	21.41	46.16	31.60	65.38	55.38	-19.22	-23.78
2	0.21641	10.21	29.03	14.83	39.24	25.04	62.96	52.96	-23.72	-27.92
3	0.45078	10.30	24.46	17.93	34.76	28.23	56.86	46.86	-22.10	-18.63
4	0.86094	10.29	20.52	13.32	30.81	23.61	56.00	46.00	-25.19	-22.39
5	4.73828	10.56	19.75	12.02	30.31	22.58	56.00	46.00	-25.69	-23.42
6	27.09375	10.71	19.81	14.43	30.52	25.14	60.00	50.00	-29.48	-24.86

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

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

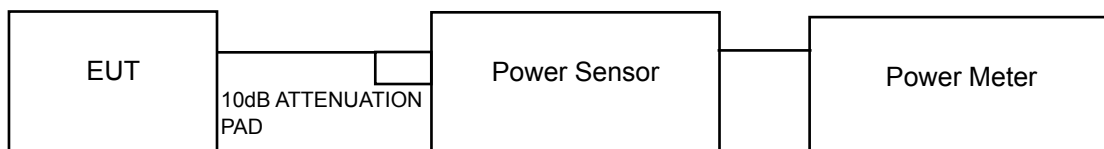
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

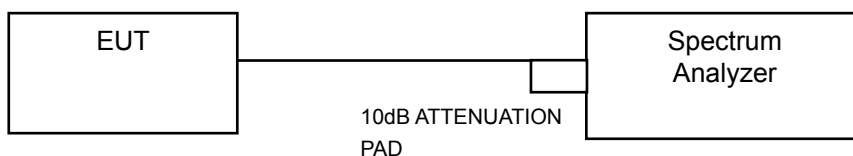
4.3.2 Test Setup

For Power Output Measurement

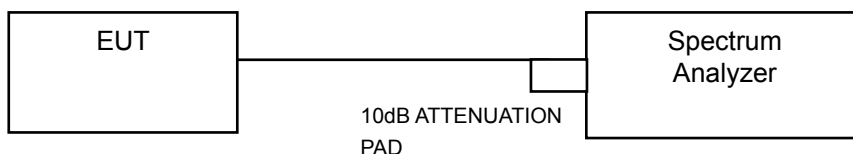
For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40)



For 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), 802.11ac (VHT20), 802.11ac (VHT40)

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)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to "free run".
- 3) Set RBW = 1 MHz.
- 4) Set VBW $\geq$ 3 MHz
- 5) Number of points in sweep $\geq$ 2 Span / RBW.
- 6) Sweep time $\leq$ (number of points in sweep) * T
- 7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- 8) Detector = RMS.
- 9) Trace mode = max hold.
- 10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

For 26dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

POWER OUTPUT:

Test Mode A:

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	7.73	7.30	11.299	10.53	13.96	Pass
60	5300	7.62	7.17	10.993	10.41	13.96	Pass
64	5320	7.64	7.22	11.080	10.45	13.96	Pass
100	5500	7.53	7.01	10.685	10.29	13.96	Pass
116	5580	7.43	7.07	10.627	10.26	13.96	Pass
140	5700	7.64	7.35	11.241	10.51	13.96	Pass

*Gain=19dBi+Cable loss(-2.96)=16.04dBi>6dBi, so the power limit shall be reduced to 24-(16.04-6)=13.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.52) = 24.12 > 13.96dBm
2. 11dBm + 10log (20.40) = 24.10 > 13.96dBm
3. 11dBm + 10log (20.45) = 24.11 > 13.96dBm
4. 11dBm + 10log (20.49) = 24.12 > 13.96dBm
5. 11dBm + 10log (20.50) = 24.12 > 13.96dBm
6. 11dBm + 10log (20.45) = 24.11 > 13.96dBm

Chain 1

1. 11dBm + 10log (20.45) = 24.11 > 13.96dBm
2. 11dBm + 10log (20.47) = 24.11 > 13.96dBm
3. 11dBm + 10log (20.47) = 24.11 > 13.96dBm
4. 11dBm + 10log (20.46) = 24.11 > 13.96dBm
5. 11dBm + 10log (20.45) = 24.11 > 13.96dBm
6. 11dBm + 10log (20.44) = 24.10 > 13.96dBm

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	8.10	7.65	12.278	10.89	13.96	Pass
60	5300	8.06	7.66	12.231	10.87	13.96	Pass
64	5320	7.25	6.66	9.943	9.98	13.96	Pass
100	5500	7.60	7.42	11.275	10.52	13.96	Pass
116	5580	7.62	7.37	11.239	10.51	13.96	Pass
140	5700	7.59	7.38	11.211	10.50	13.96	Pass

*Gain=19dBi+Cable loss(-2.96)=16.04dBi>6dBi, so the power limit shall be reduced to 24-(16.04-6)=13.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.85) = 24.19 > 13.96dBm
2. 11dBm + 10log (20.68) = 24.16 > 13.96dBm
3. 11dBm + 10log (20.86) = 24.19 > 13.96dBm
4. 11dBm + 10log (20.84) = 24.19 > 13.96dBm
5. 11dBm + 10log (20.88) = 24.20 > 13.96dBm
6. 11dBm + 10log (20.82) = 24.18 > 13.96dBm

Chain 1

1. 11dBm + 10log (20.52) = 24.12 > 13.96dBm
2. 11dBm + 10log (20.47) = 24.11 > 13.96dBm
3. 11dBm + 10log (20.52) = 24.12 > 13.96dBm
4. 11dBm + 10log (20.58) = 24.13 > 13.96dBm
5. 11dBm + 10log (20.60) = 24.14 > 13.96dBm
6. 11dBm + 10log (20.51) = 24.12 > 13.96dBm

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	8.17	7.32	11.956	10.78	13.96	Pass
62	5310	7.93	7.33	11.617	10.65	13.96	Pass
102	5510	7.60	7.16	10.954	10.40	13.96	Pass
110	5550	8.01	7.79	12.336	10.91	13.96	Pass
134	5670	7.85	7.56	11.797	10.72	13.96	Pass

*Gain=19dBi+Cable loss(-2.96)=16.04dBi>6dBi, so the power limit shall be reduced to 24-(16.04-6)=13.96dBm.

Note:

Chain 0

1. 11dBm + 10log (41.17) = 27.15 > 13.96dBm
2. 11dBm + 10log (41.16) = 27.14 > 13.96dBm
3. 11dBm + 10log (41.08) = 27.14 > 13.96dBm
4. 11dBm + 10log (41.30) = 27.16 > 13.96dBm
5. 11dBm + 10log (41.25) = 27.15 > 13.96dBm

Chain 1

1. 11dBm + 10log (40.82) = 27.11 > 13.96dBm
2. 11dBm + 10log (40.74) = 27.10 > 13.96dBm
3. 11dBm + 10log (40.82) = 27.11 > 13.96dBm
4. 11dBm + 10log (40.97) = 27.12 > 13.96dBm
5. 11dBm + 10log (40.97) = 27.12 > 13.96dBm

Test Mode B:

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	10.54	10.10	21.557	13.34	16.96	Pass
60	5300	8.92	8.87	15.507	11.91	16.96	Pass
64	5320	10.46	9.83	20.733	13.17	16.96	Pass
100	5500	10.86	10.45	23.282	13.67	16.96	Pass
116	5580	10.47	9.85	20.804	13.18	16.96	Pass
140	5700	10.31	9.57	19.797	12.97	16.96	Pass

*Gain=16dBi+Cable loss(-2.96)=13.04dBi>6dBi, so the power limit shall be reduced to 24-(13.04-6) = 16.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.38) = 24.09 > 16.96dBm
2. 11dBm + 10log (20.46) = 24.11 > 16.96dBm
3. 11dBm + 10log (20.45) = 24.11 > 16.96dBm
4. 11dBm + 10log (20.37) = 24.09 > 16.96dBm
5. 11dBm + 10log (20.40) = 24.10 > 16.96dBm
6. 11dBm + 10log (20.50) = 24.12 > 16.96dBm

Chain 1

1. 11dBm + 10log (20.50) = 24.12 > 16.96dBm
2. 11dBm + 10log (20.43) = 24.10 > 16.96dBm
3. 11dBm + 10log (20.35) = 24.09 > 16.96dBm
4. 11dBm + 10log (20.40) = 24.10 > 16.96dBm
5. 11dBm + 10log (20.48) = 24.11 > 16.96dBm
6. 11dBm + 10log (20.49) = 24.12 > 16.96dBm

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	10.68	9.62	20.857	13.19	16.96	Pass
60	5300	8.88	8.92	15.525	11.91	16.96	Pass
64	5320	10.29	9.65	19.917	12.99	16.96	Pass
100	5500	11.05	10.58	24.164	13.83	16.96	Pass
116	5580	10.27	9.68	19.931	13.00	16.96	Pass
140	5700	10.63	10.27	22.202	13.46	16.96	Pass

*Gain=16dBi+Cable loss(-2.96)=13.04dBi>6dBi, so the power limit shall be reduced to 24-(13.04-6) = 16.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.87) = 24.20 > 16.96dBm
2. 11dBm + 10log (20.86) = 24.19 > 16.96dBm
3. 11dBm + 10log (20.68) = 24.16 > 16.96dBm
4. 11dBm + 10log (20.87) = 24.20 > 16.96dBm
5. 11dBm + 10log (20.89) = 24.20 > 16.96dBm
6. 11dBm + 10log (20.75) = 24.17 > 16.96dBm

Chain 1

1. 11dBm + 10log (20.57) = 24.13 > 16.96dBm
2. 11dBm + 10log (20.60) = 24.14 > 16.96dBm
3. 11dBm + 10log (20.62) = 24.14 > 16.96dBm
4. 11dBm + 10log (20.48) = 24.11 > 16.96dBm
5. 11dBm + 10log (20.48) = 24.11 > 16.96dBm
6. 11dBm + 10log (20.61) = 24.14 > 16.96dBm

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	11.00	10.21	23.084	13.63	16.96	Pass
62	5310	10.71	10.22	22.296	13.48	16.96	Pass
102	5510	10.95	10.61	23.953	13.79	16.96	Pass
110	5550	11.12	10.50	24.162	13.83	16.96	Pass
134	5670	10.76	10.43	22.953	13.61	16.96	Pass

*Gain=16dBi+Cable loss(-2.96)=13.04dBi>6dBi, so the power limit shall be reduced to 24-(13.04-6) = 16.96dBm.

Note:

Chain 0

1. 11dBm + 10log (41.12) = 27.14 > 16.96dBm
2. 11dBm + 10log (41.11) = 27.14 > 16.96dBm
3. 11dBm + 10log (41.61) = 27.19 > 16.96dBm
4. 11dBm + 10log (41.20) = 27.15 > 16.96dBm
5. 11dBm + 10log (41.10) = 27.14 > 16.96dBm

Chain 1

1. 11dBm + 10log (40.95) = 27.12 > 16.96dBm
2. 11dBm + 10log (40.85) = 27.11 > 16.96dBm
3. 11dBm + 10log (40.97) = 27.12 > 16.96dBm
4. 11dBm + 10log (40.81) = 27.11 > 16.96dBm
5. 11dBm + 10log (40.82) = 27.11 > 16.96dBm

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	4.04	3.93	5.007	7.00	16.96	Pass
106	5530	10.01	9.42	18.773	12.74	16.96	Pass

*Gain=16dBi+Cable loss(-2.96)=13.04dBi>6dBi, so the power limit shall be reduced to 24-(13.04-6) = 16.96dBm.

Note:

Chain 0

1. 11dBm + 10log (83.57) = 30.22 > 16.96dBm
2. 11dBm + 10log (83.54) = 30.22 > 16.96dBm

Chain 1

1. 11dBm + 10log (82.77) = 30.18 > 16.96dBm
2. 11dBm + 10log (82.71) = 30.18 > 16.96dBm

Test Mode C:

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	16.30	15.67	79.556	19.01	22.96	Pass
60	5300	13.09	12.15	36.776	15.66	22.96	Pass
64	5320	15.05	14.16	58.051	17.64	22.96	Pass
100	5500	16.94	16.40	93.083	19.69	22.96	Pass
116	5580	16.72	16.17	88.389	19.46	22.96	Pass
140	5700	14.86	14.10	56.324	17.51	22.96	Pass

*Gain=10dBi+Cable loss(-2.96)=7.04dBi>6dBi, so the power limit shall be reduced to 24-(7.04-6) = 22.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.46) = 24.11 > 22.96dBm
2. 11dBm + 10log (20.41) = 24.10 > 22.96dBm
3. 11dBm + 10log (20.49) = 24.12 > 22.96dBm
4. 11dBm + 10log (20.40) = 24.10 > 22.96dBm
5. 11dBm + 10log (20.47) = 24.11 > 22.96dBm
6. 11dBm + 10log (20.51) = 24.12 > 22.96dBm

Chain 1

1. 11dBm + 10log (20.53) = 24.12 > 22.96dBm
2. 11dBm + 10log (20.45) = 24.11 > 22.96dBm
3. 11dBm + 10log (20.50) = 24.12 > 22.96dBm
4. 11dBm + 10log (20.46) = 24.11 > 22.96dBm
5. 11dBm + 10log (20.45) = 24.11 > 22.96dBm
6. 11dBm + 10log (20.49) = 24.12 > 22.96dBm

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	16.21	15.80	79.802	19.02	22.96	Pass
60	5300	12.85	12.10	35.493	15.50	22.96	Pass
64	5320	15.80	14.94	69.208	18.40	22.96	Pass
100	5500	16.86	16.28	90.991	19.59	22.96	Pass
116	5580	16.84	16.29	90.866	19.58	22.96	Pass
140	5700	15.88	15.35	73.003	18.63	22.96	Pass

*Gain=10dBi+Cable loss(-2.96)=7.04dBi>6dBi, so the power limit shall be reduced to 24-(7.04-6) = 22.96dBm.

Note:

Chain 0

1. 11dBm + 10log (20.77) = 24.17 > 22.96dBm
2. 11dBm + 10log (20.78) = 24.18 > 22.96dBm
3. 11dBm + 10log (20.80) = 24.18 > 22.96dBm
4. 11dBm + 10log (20.78) = 24.18 > 22.96dBm
5. 11dBm + 10log (20.81) = 24.18 > 22.96dBm
6. 11dBm + 10log (20.75) = 24.17 > 22.96dBm

Chain 1

1. 11dBm + 10log (20.62) = 24.14 > 22.96dBm
2. 11dBm + 10log (20.59) = 24.14 > 22.96dBm
3. 11dBm + 10log (20.51) = 24.12 > 22.96dBm
4. 11dBm + 10log (20.44) = 24.10 > 22.96dBm
5. 11dBm + 10log (20.47) = 24.11 > 22.96dBm
6. 11dBm + 10log (20.61) = 24.14 > 22.96dBm

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	16.84	15.92	87.390	19.41	22.96	Pass
62	5310	16.18	15.37	75.930	18.80	22.96	Pass
102	5510	16.85	16.43	92.371	19.66	22.96	Pass
110	5550	17.16	16.66	98.345	19.93	22.96	Pass
134	5670	16.50	16.03	84.755	19.28	22.96	Pass

*Gain=10dBi+Cable loss(-2.96)=7.04dBi>6dBi, so the power limit shall be reduced to 24-(7.04-6) = 22.96dBm.

Note:

Chain 0

1. 11dBm + 10log (41.30) = 27.16 > 22.96dBm
2. 11dBm + 10log (41.07) = 27.14 > 22.96dBm
3. 11dBm + 10log (41.34) = 27.16 > 22.96dBm
4. 11dBm + 10log (41.19) = 27.15 > 22.96dBm
5. 11dBm + 10log (41.30) = 27.16 > 22.96dBm

Chain 1

1. 11dBm + 10log (40.93) = 27.12 > 22.96dBm
2. 11dBm + 10log (40.96) = 27.12 > 22.96dBm
3. 11dBm + 10log (40.83) = 27.11 > 22.96dBm
4. 11dBm + 10log (40.96) = 27.12 > 22.96dBm
5. 11dBm + 10log (40.94) = 27.12 > 22.96dBm

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	14.44	14.09	53.442	17.28	22.96	Pass
106	5530	15.06	15.08	64.274	18.08	22.96	Pass

*Gain=10dBi+Cable loss(-2.96)=7.04dBi>6dBi, so the power limit shall be reduced to 24-(7.04-6) = 22.96dBm.

Note:

Chain 0

1. 11dBm + 10log (83.06) = 30.19 > 22.96dBm
2. 11dBm + 10log (83.13) = 30.20 > 22.96dBm

Chain 1

1. 11dBm + 10log (82.70) = 30.18 > 22.96dBm
2. 11dBm + 10log (82.90) = 30.19 > 22.96dBm

26dB BANDWIDTH:

Test Mode A:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.52	20.45
60	5300	20.40	20.47
64	5320	20.45	20.47
100	5500	20.49	20.46
116	5580	20.50	20.45
140	5700	20.45	20.44

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.85	20.52
60	5300	20.68	20.47
64	5320	20.86	20.52
100	5500	20.84	20.58
116	5580	20.88	20.60
140	5700	20.82	20.51

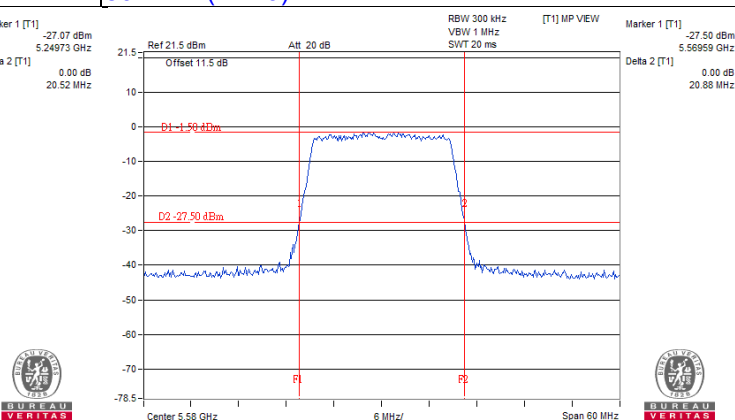
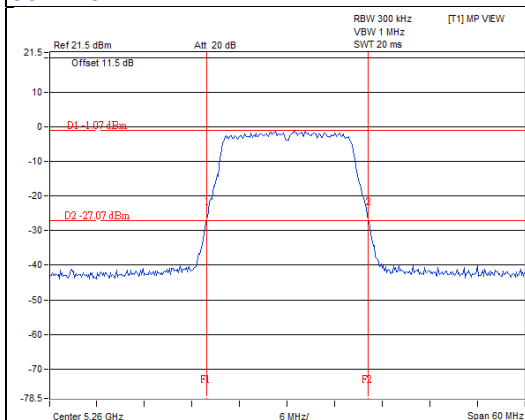
802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.17	40.82
62	5310	41.16	40.74
102	5510	41.08	40.82
110	5550	41.30	40.97
134	5670	41.25	40.97

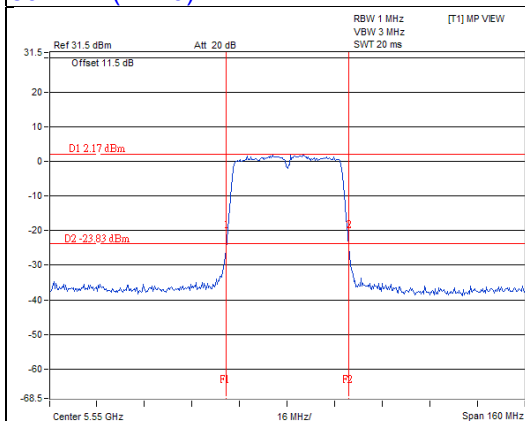
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)



Test Mode B:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.38	20.50
60	5300	20.46	20.43
64	5320	20.45	20.35
100	5500	20.37	20.40
116	5580	20.40	20.48
140	5700	20.50	20.49

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.87	20.57
60	5300	20.86	20.60
64	5320	20.68	20.62
100	5500	20.87	20.48
116	5580	20.89	20.48
140	5700	20.75	20.61

802.11n (HT40)

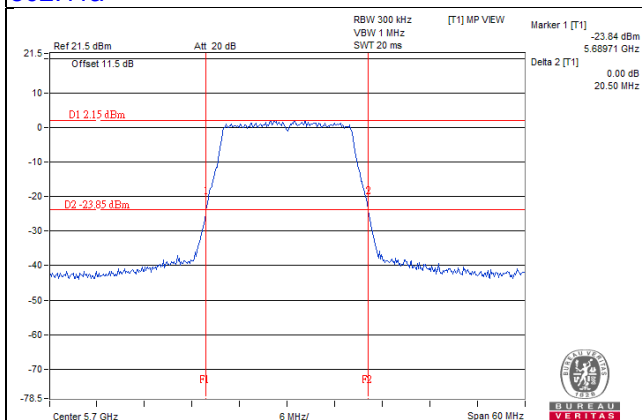
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.12	40.95
62	5310	41.11	40.85
102	5510	41.61	40.97
110	5550	41.20	40.81
134	5670	41.10	40.82

802.11ac (VHT80)

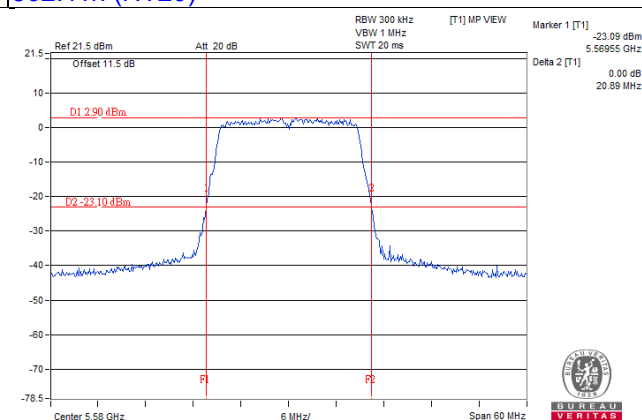
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.57	82.77
106	5530	83.54	82.71

Spectrum Plot of Worst Value

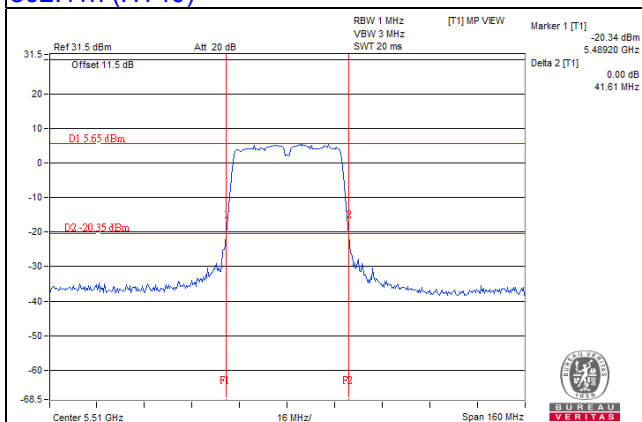
802.11a



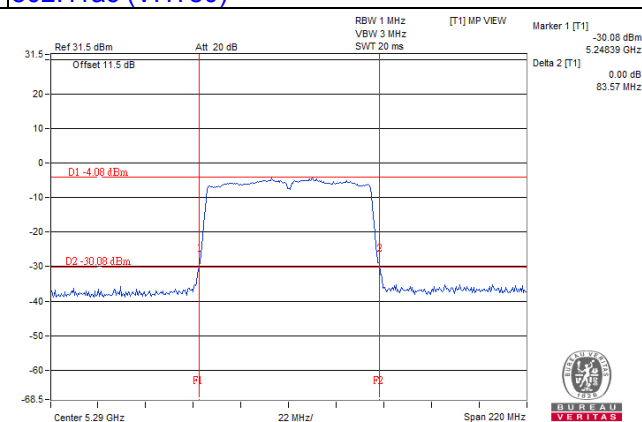
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.46	20.53
60	5300	20.41	20.45
64	5320	20.49	20.50
100	5500	20.40	20.46
116	5580	20.47	20.45
140	5700	20.51	20.49

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.77	20.62
60	5300	20.78	20.59
64	5320	20.80	20.51
100	5500	20.78	20.44
116	5580	20.81	20.47
140	5700	20.75	20.61

802.11n (HT40)

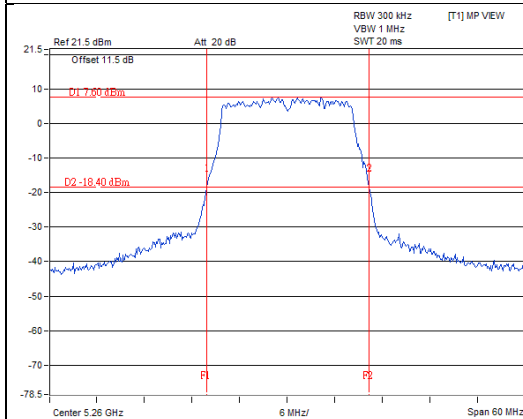
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.30	40.93
62	5310	41.07	40.96
102	5510	41.34	40.83
110	5550	41.19	40.96
134	5670	41.30	40.94

802.11ac (VHT80)

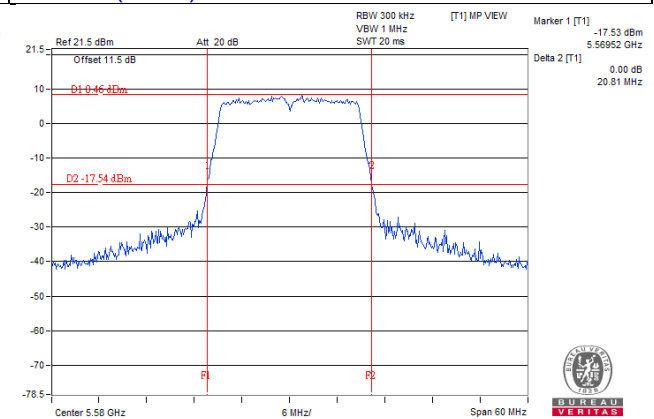
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.06	82.70
106	5530	83.13	82.90

Spectrum Plot of Worst Value

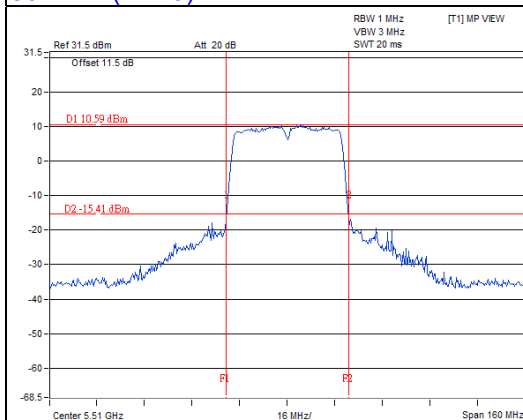
802.11a



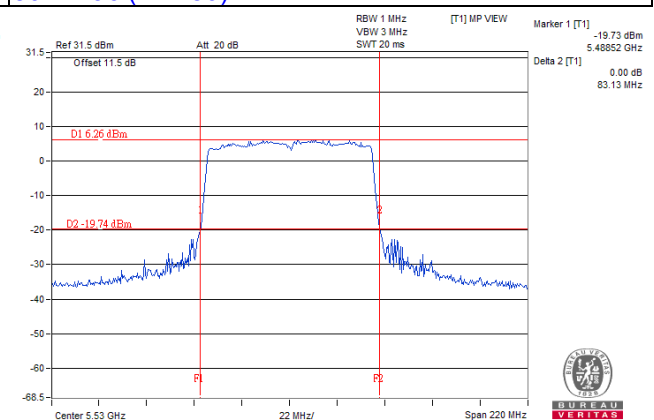
802.11n (HT20)



802.11n (HT40)

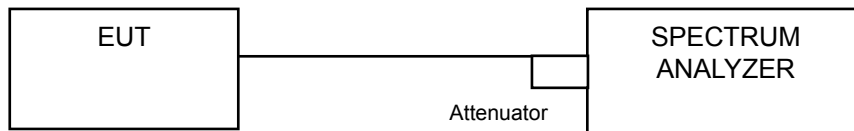


802.11ac (VHT80)



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 Results

Test Mode A:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.80	16.92
60	5300	16.92	16.80
64	5320	16.92	16.92
100	5500	16.92	16.92
116	5580	16.92	16.92
140	5700	16.92	16.92

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.00	17.76
60	5300	18.00	17.76
64	5320	18.00	17.76
100	5500	17.88	17.76
116	5580	17.88	17.76
140	5700	17.88	17.88

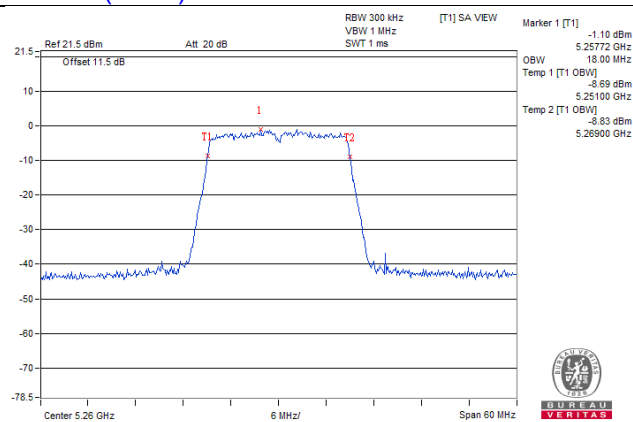
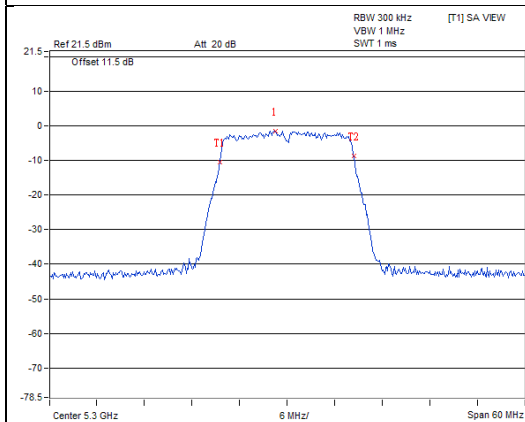
802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	36.72	36.60
62	5310	36.72	36.72
102	5510	36.72	36.60
110	5550	36.72	36.72
134	5670	36.72	36.72

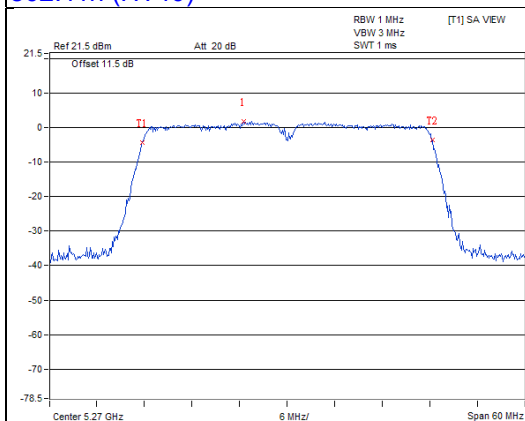
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)



Test Mode B:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.80	16.80
60	5300	16.92	16.80
64	5320	16.92	16.80
100	5500	16.92	16.80
116	5580	16.92	16.68
140	5700	16.92	16.80

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.00	17.76
60	5300	17.88	17.76
64	5320	17.88	17.76
100	5500	18.00	17.76
116	5580	17.88	17.76
140	5700	18.00	17.76

802.11n (HT40)

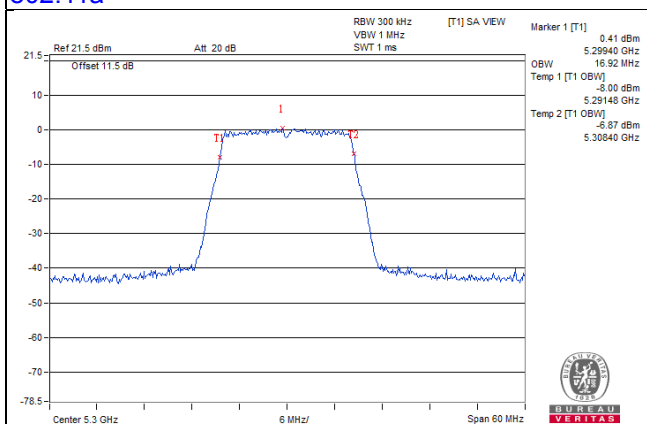
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	36.72	36.60
62	5310	36.72	36.60
102	5510	36.72	36.72
110	5550	36.72	36.72
134	5670	36.60	36.48

802.11ac (VHT80)

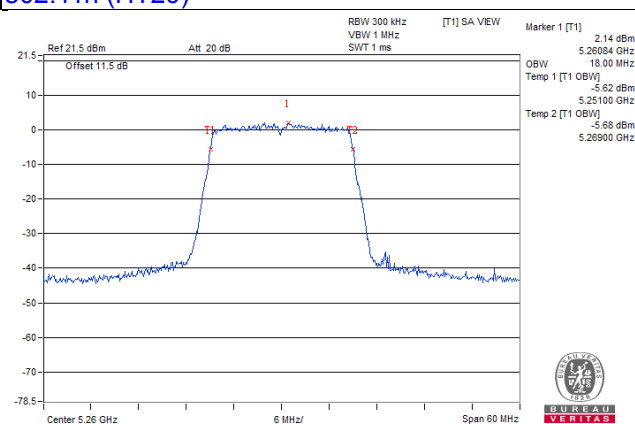
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	75.84	75.84
106	5530	75.84	75.84

Spectrum Plot of Worst Value

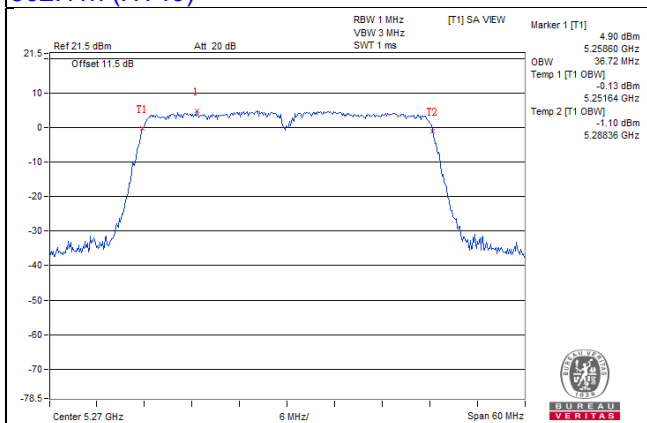
802.11a



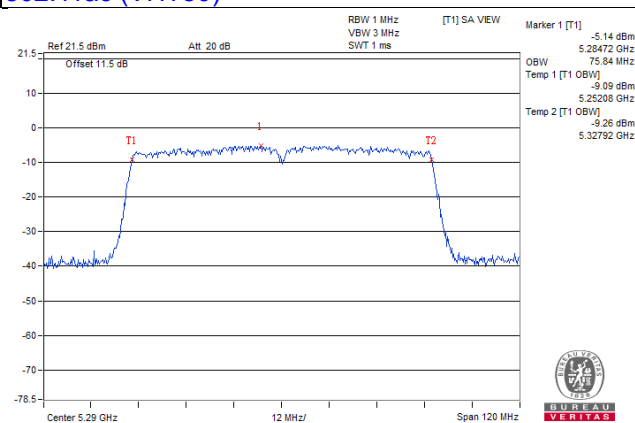
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.92	16.80
60	5300	16.80	16.80
64	5320	16.92	16.80
100	5500	16.92	16.68
116	5580	16.80	16.80
140	5700	16.92	16.80

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	17.88	17.76
60	5300	17.88	17.76
64	5320	17.88	17.76
100	5500	18.00	17.76
116	5580	18.00	17.76
140	5700	18.00	17.76

802.11n (HT40)

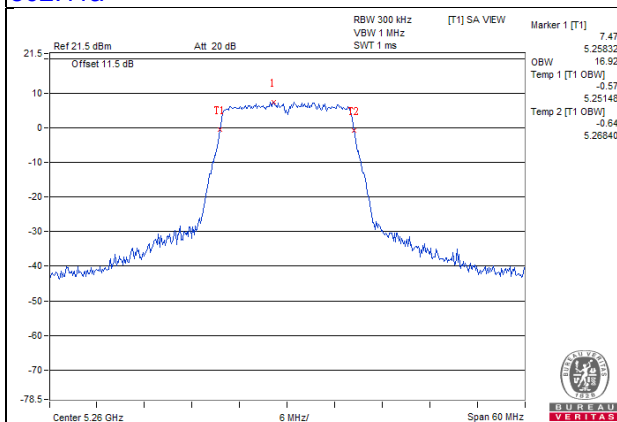
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	36.72	36.72
62	5310	36.72	36.72
102	5510	36.72	36.60
110	5550	36.60	36.72
134	5670	36.72	36.60

802.11ac (VHT80)

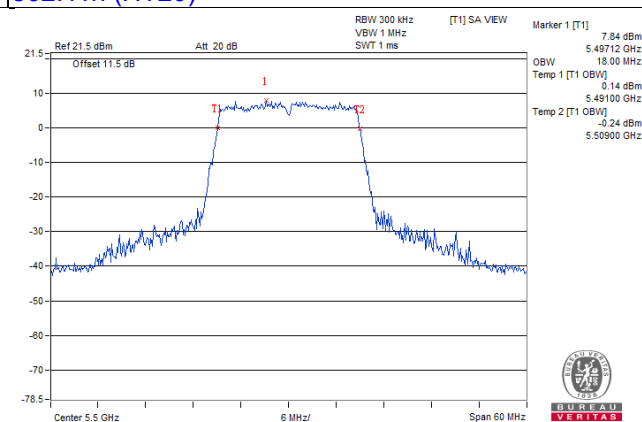
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	75.84	75.84
106	5530	75.84	75.84

Spectrum Plot of Worst Value

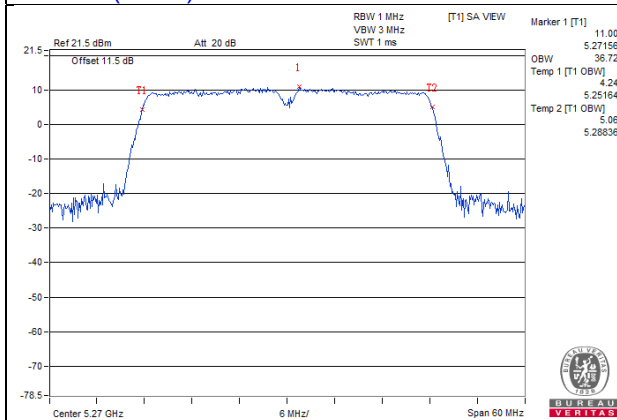
802.11a



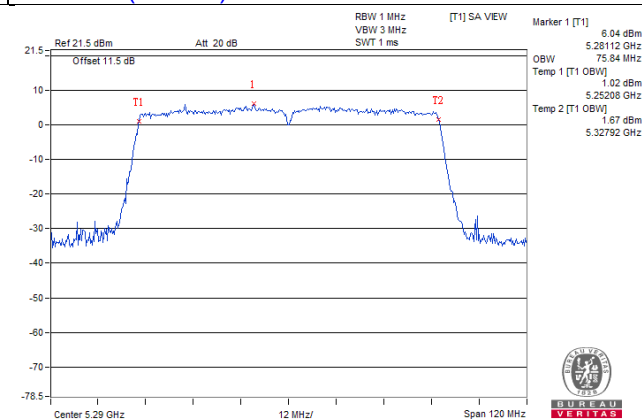
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



EUT MAXIMUM CONDUCTED POWER

Test Mode A:

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	11.299	10.53
5470~5725	11.241	10.51

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	12.278	10.89
5470~5725	11.275	10.52

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

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	11.956	10.78
5470~5725	12.336	10.91

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

Test Mode B:

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	21.557	13.34
5470~5725	23.282	13.67

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	20.857	13.19
5470~5725	24.164	13.83

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

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	23.084	13.63
5470~5725	24.162	13.83

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

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	5.007	7.00
5470~5725	18.773	12.74

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

Test Mode C:

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	58.051	17.64
5470~5725	93.083	19.69

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	79.802	19.02
5470~5725	90.991	19.59

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

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	87.390	19.41
5470~5725	98.345	19.93

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

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	53.442	17.28
5470~5725	64.274	18.08

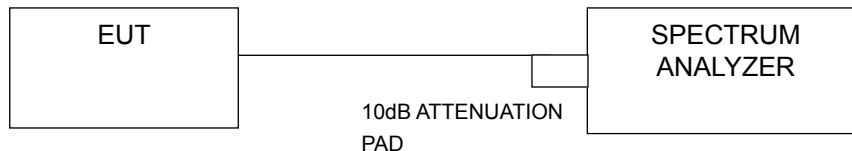
Note: Manufacturer provides Transmit Power Control description to meet this requirement.

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

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to “free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value

Using method SA-2

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as Item 4.3.6.

4.5.7 Test Results

Test Mode A:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
52	5260	-5.01	-5.86	0.10	-2.30	-2.05	Pass
60	5300	-5.03	-5.61	0.10	-2.19	-2.05	Pass
64	5320	-4.86	-5.59	0.10	-2.09	-2.05	Pass
100	5500	-5.24	-5.48	0.10	-2.24	-2.05	Pass
116	5580	-5.48	-5.63	0.10	-2.44	-2.05	Pass
140	5700	-5.44	-5.37	0.10	-2.29	-2.05	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 = 19dBi+Cable loss(-2.96) + 10log(2)=19.05dBi > 6dBi, so the power density limit shall be reduced to 11-(19.05-6) = -2.05dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
52	5260	-5.02	-5.36	0.09	-2.08	-2.05	Pass
60	5300	-5.06	-5.34	0.09	-2.10	-2.05	Pass
64	5320	-5.48	-5.96	0.09	-2.61	-2.05	Pass
100	5500	-5.21	-6.03	0.09	-2.50	-2.05	Pass
116	5580	-5.68	-6.12	0.09	-2.79	-2.05	Pass
140	5700	-5.66	-5.77	0.09	-2.61	-2.05	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 = 19dBi+Cable loss(-2.96) + 10log(2)=19.05dBi > 6dBi, so the power density limit shall be reduced to 11-(19.05-6) = -2.05dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

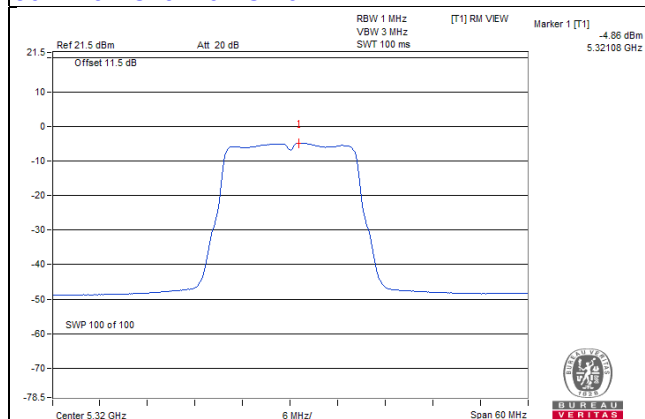
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
54	5270	-8.20	-8.49	0.11	-5.22	-2.05	Pass
62	5310	-7.91	-8.43	0.11	-5.04	-2.05	Pass
102	5510	-8.70	-9.07	0.11	-5.76	-2.05	Pass
110	5550	-8.07	-8.47	0.11	-5.15	-2.05	Pass
134	5670	-8.51	-8.80	0.11	-5.53	-2.05	Pass

Note:

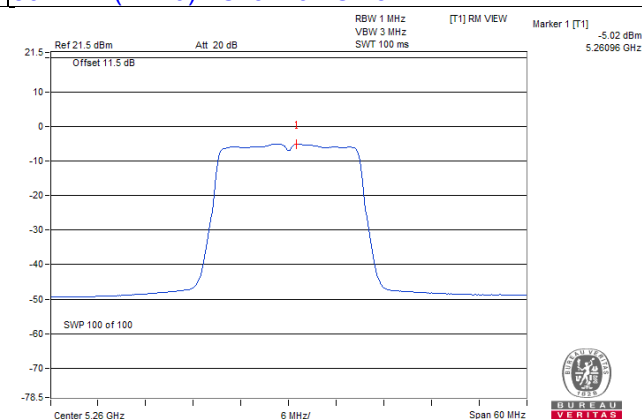
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = 19dBi+Cable loss(-2.96) + 10log(2)=19.05dBi > 6dBi, so the power density limit shall be reduced to 11-(19.05-6) = -2.05dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

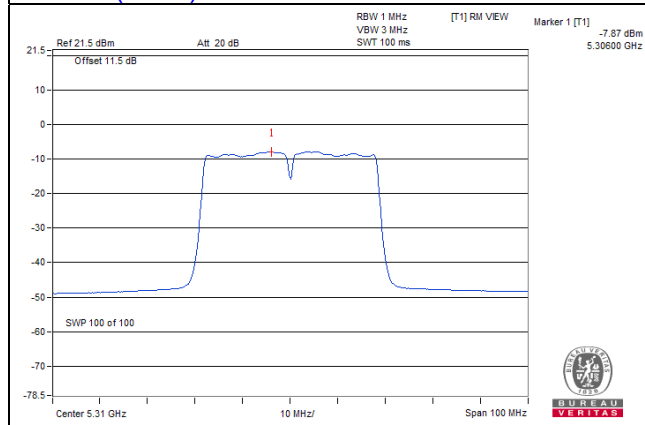
802.11a / Chain 0 / Ch 64



802.11n (HT20) / Chain 0 / Ch 52



802.11n (HT40) / Chain 0 / Ch 62



Test Mode B:

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
52	5260	-2.18	-3.00	0.44	0.95	Pass
60	5300	-2.84	-3.55	-0.17	0.95	Pass
64	5320	-1.95	-2.90	0.61	0.95	Pass
100	5500	-1.96	-2.48	0.80	0.95	Pass
116	5580	-2.29	-2.65	0.54	0.95	Pass
140	5700	-2.66	-3.04	0.16	0.95	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 = 16dBi+Cable loss(-2.96)+10log(2)=16.05dBi > 6dBi, so the power density limit shall be reduced to 11-(16.05-6) = 0.95dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
52	5260	-2.49	-3.07	0.24	0.95	Pass
60	5300	-3.10	-3.78	-0.42	0.95	Pass
64	5320	-2.29	-3.05	0.36	0.95	Pass
100	5500	-1.77	-2.62	0.84	0.95	Pass
116	5580	-2.39	-3.30	0.19	0.95	Pass
140	5700	-2.15	-2.87	0.51	0.95	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 = 16dBi+Cable loss(-2.96)+10log(2)=16.05dBi > 6dBi, so the power density limit shall be reduced to 11-(16.05-6) = 0.95dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
54	5270	-4.76	-5.38	0.12	-1.93	0.95	Pass
62	5310	-4.69	-5.25	0.12	-1.83	0.95	Pass
102	5510	-4.66	-5.28	0.12	-1.83	0.95	Pass
110	5550	-4.69	-5.32	0.12	-1.86	0.95	Pass
134	5670	-5.11	-5.71	0.12	-2.27	0.95	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 = 16dBi+Cable loss(-2.96)+10log(2)=16.05dBi > 6dBi, so the power density limit shall be reduced to 11-(16.05-6) = 0.95dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
58	5290	-14.64	-14.89	0.35	-11.40	0.95	Pass
106	5530	-9.33	-9.39	0.35	-6.00	0.95	Pass

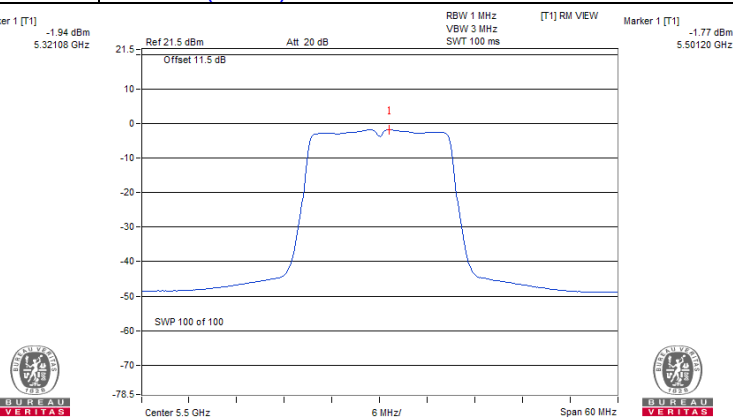
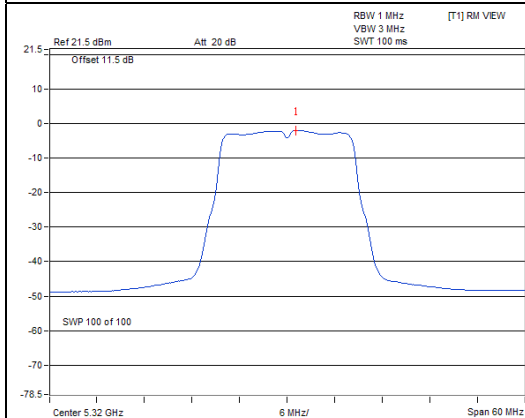
Note:

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 = 16dBi+Cable loss(-2.96)+10log(2)=16.05dBi > 6dBi, so the power density limit shall be reduced to 11-(16.05-6) = 0.95dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

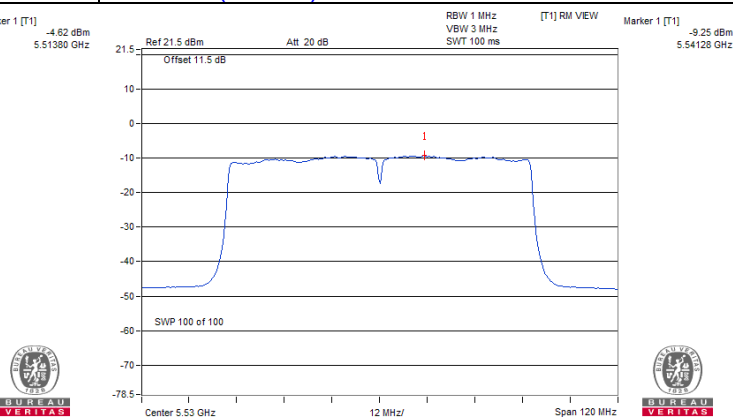
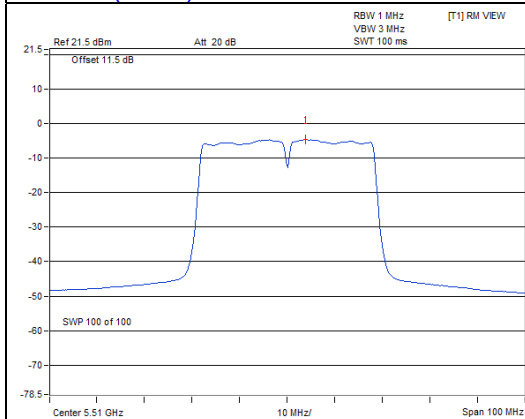
802.11a / Chain 0 / Ch 64

802.11n (HT20) / Chain 0 / Ch 100



802.11n (HT40) / Chain 0 / Ch 102

802.11ac (VHT80) / Chain 0 / Ch 106



Test Mode C:

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
52	5260	3.98	2.92	6.49	6.95	Pass
60	5300	0.80	-0.30	3.30	6.95	Pass
64	5320	2.79	1.85	5.36	6.95	Pass
100	5500	3.85	3.53	6.70	6.95	Pass
116	5580	3.91	3.52	6.73	6.95	Pass
140	5700	1.97	1.50	4.75	6.95	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 = 10dBi+Cable loss(-2.96)+10log(2)=10.05dBi > 6dBi, so the power density limit shall be reduced to 11-(10.05-6) = 6.95dBm.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
52	5260	3.63	2.69	0.10	6.29	6.95	Pass
60	5300	0.20	-0.41	0.10	3.01	6.95	Pass
64	5320	3.26	2.23	0.10	5.88	6.95	Pass
100	5500	3.52	2.93	0.10	6.34	6.95	Pass
116	5580	3.65	3.21	0.10	6.54	6.95	Pass
140	5700	2.67	2.21	0.10	5.55	6.95	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 = 10dBi+Cable loss(-2.96)+10log(2)=10.05dBi > 6dBi, so the power density limit shall be reduced to 11-(10.05-6) = 6.95dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
54	5270	0.88	-0.01	0.11	3.58	6.95	Pass
62	5310	0.73	-0.32	0.11	3.36	6.95	Pass
102	5510	0.23	-0.08	0.11	3.20	6.95	Pass
110	5550	1.06	0.64	0.11	3.98	6.95	Pass
134	5670	0.31	-0.35	0.11	3.12	6.95	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 = 10dBi+Cable loss(-2.96)+10log(2)=10.05dBi > 6dBi, so the power density limit shall be reduced to 11-(10.05-6) = 6.95dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty factor	Total PSD with duty factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
58	5290	-4.58	-5.12	0.31	-1.53	6.95	Pass
106	5530	-4.15	-4.44	0.31	-0.98	6.95	Pass

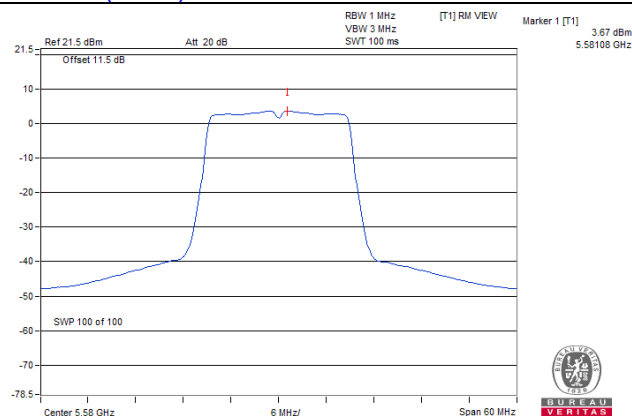
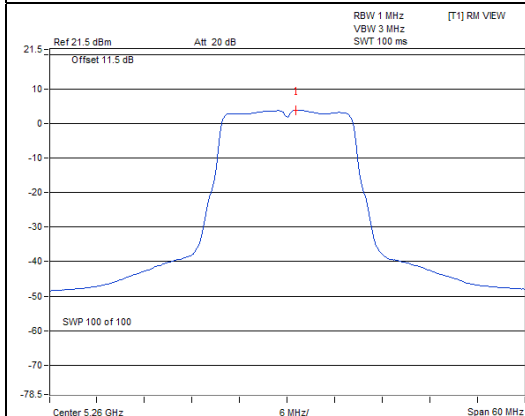
Note:

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 = 10dBi+Cable loss(-2.96)+10log(2)=10.05dBi > 6dBi, so the power density limit shall be reduced to 11-(10.05-6) = 6.95dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

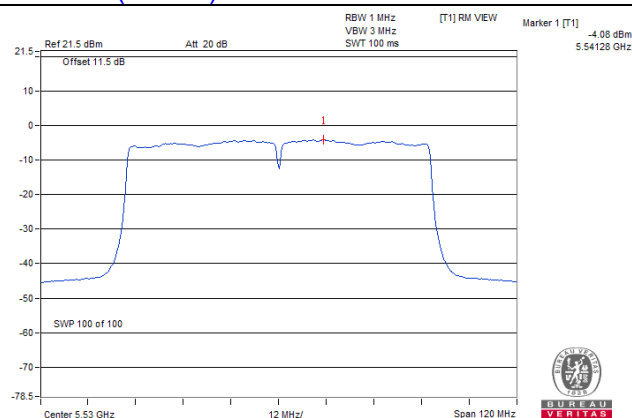
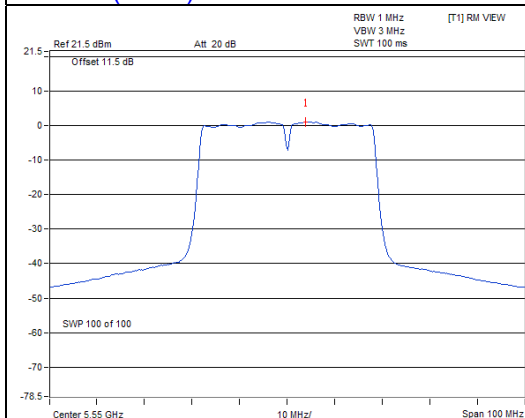
802.11a / Chain 0 / Ch 52

802.11n (HT20) / Chain 0 / Ch 116



802.11n (HT40) / Chain 0 / Ch 110

802.11ac (VHT80) / Chain 0 / Ch 106

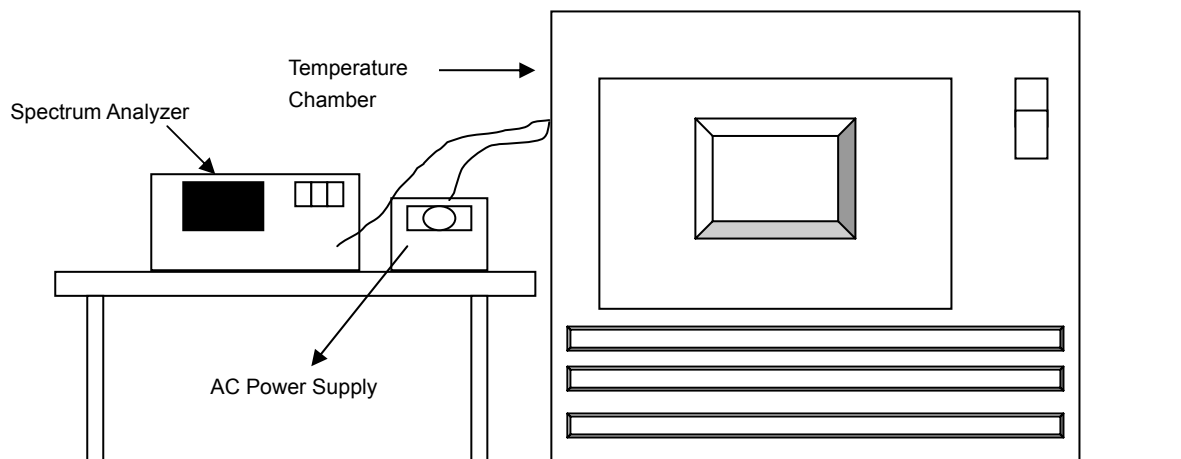


4.6 Frequency Stability

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

Test Mode A:

Frequency Stability Versus Temp.									
Operating Frequency: 5700MHz									
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	5700.0083	0.00015	5700.0048	0.00008	5700.0056	0.00010	5700.0081	0.00014
40	120	5700.0159	0.00028	5700.0173	0.00030	5700.0187	0.00033	5700.0146	0.00026
30	120	5699.9966	-0.00006	5699.9965	-0.00006	5699.9980	-0.00004	5699.9968	-0.00006
20	120	5700.0105	0.00018	5700.0069	0.00012	5700.0099	0.00017	5700.0096	0.00017
10	120	5700.0246	0.00043	5700.0208	0.00036	5700.0199	0.00035	5700.0235	0.00041
0	120	5699.9817	-0.00032	5699.9811	-0.00033	5699.9792	-0.00036	5699.9781	-0.00038
-10	120	5699.9944	-0.00010	5699.9971	-0.00005	5699.9927	-0.00013	5699.9962	-0.00007
-20	120	5699.9951	-0.00009	5699.9942	-0.00010	5699.9987	-0.00002	5699.9939	-0.00011
-30	120	5700.0162	0.00028	5700.0150	0.00026	5700.0176	0.00031	5700.0169	0.00030

Frequency Stability Versus Voltage									
Operating Frequency: 5700MHz									
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	5700.0094	0.00016	5700.0076	0.00013	5700.0092	0.00016	5700.0086	0.00015
	120	5700.0105	0.00018	5700.0069	0.00012	5700.0099	0.00017	5700.0096	0.00017
	102	5700.0098	0.00017	5700.0062	0.00011	5700.0109	0.00019	5700.0097	0.00017

Test Mode B:

Frequency Stability Versus Temp.									
Operating Frequency: 5700MHz									
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	5699.9954	-0.00008	5699.9943	-0.00010	5699.9927	-0.00013	5699.9930	-0.00012
40	120	5699.9821	-0.00031	5699.9834	-0.00029	5699.9871	-0.00023	5699.9868	-0.00023
30	120	5700.0056	0.00010	5700.0064	0.00011	5700.0101	0.00018	5700.0100	0.00018
20	120	5700.0054	0.00009	5700.0060	0.00011	5700.0101	0.00018	5700.0057	0.00010
10	120	5699.9708	-0.00051	5699.9723	-0.00049	5699.9717	-0.00050	5699.9710	-0.00051
0	120	5700.0167	0.00029	5700.0171	0.00030	5700.0201	0.00035	5700.0205	0.00036
-10	120	5700.0230	0.00040	5700.0198	0.00035	5700.0210	0.00037	5700.0214	0.00038
-20	120	5700.0226	0.00040	5700.0203	0.00036	5700.0196	0.00034	5700.0182	0.00032
-30	120	5699.9858	-0.00025	5699.9899	-0.00018	5699.9874	-0.00022	5699.9871	-0.00023

Frequency Stability Versus Voltage									
Operating Frequency: 5700MHz									
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	5700.0052	0.00009	5700.0052	0.00009	5700.0096	0.00017	5700.0057	0.00010
	120	5700.0054	0.00009	5700.006	0.00011	5700.0101	0.00018	5700.0057	0.00010
	102	5700.0044	0.00008	5700.0062	0.00011	5700.0095	0.00017	5700.0046	0.00008

Test Mode C:

Frequency Stability Versus Temp.									
Operating Frequency: 5700MHz									
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	5699.9696	-0.00053	5699.9718	-0.00049	5699.9736	-0.00046	5699.9697	-0.00053
40	120	5699.9887	-0.00020	5699.9909	-0.00016	5699.9868	-0.00023	5699.9858	-0.00025
30	120	5700.0114	0.00020	5700.0086	0.00015	5700.0108	0.00019	5700.0129	0.00023
20	120	5700.0174	0.00031	5700.0226	0.00040	5700.0215	0.00038	5700.0176	0.00031
10	120	5700.0093	0.00016	5700.0121	0.00021	5700.0097	0.00017	5700.0089	0.00016
0	120	5700.0071	0.00012	5700.0086	0.00015	5700.0089	0.00016	5700.0107	0.00019
-10	120	5700.0012	0.00002	5700.0016	0.00003	5700.0022	0.00004	5700.0017	0.00003
-20	120	5700.0002	0.00000	5700.0042	0.00007	5700.0051	0.00009	5700.0008	0.00001
-30	120	5699.9731	-0.00047	5699.9739	-0.00046	5699.9716	-0.00050	5699.9710	-0.00051

Frequency Stability Versus Voltage									
Operating Frequency: 5700MHz									
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	5700.0176	0.00031	5700.0227	0.00040	5700.0222	0.00039	5700.0180	0.00032
	120	5700.0174	0.00031	5700.0226	0.00040	5700.0215	0.00038	5700.0176	0.00031
	102	5700.0180	0.00032	5700.0234	0.00041	5700.0217	0.00038	5700.0183	0.00032

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

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

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