

FCC Test Report

Report No.: RF161101C12E-1

FCC ID: M72-EEDII

Test Model: EagleEye Director II

Received Date: Nov. 01, 2016

Test Date: Nov. 15 ~ Nov. 18, 2016 (For all tests except Conducted power test)
Nov. 21, 2017 (For Conducted power test)

Issued Date: Jan. 10, 2018

Applicant: Polycom Inc.

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

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

FCC Registration: 788550

Designation Number: TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF161101C12E-1	Original release.	Jan. 10, 2018

1 Certificate of Conformity

Product: EagleEye Director II

Brand: Polycom

Test Model: EagleEye Director II

Sample Status: ENGINEERING SAMPLE

Applicant: Polycom Inc.

Test Date: Nov. 15 ~ Nov. 18, 2016 (For all tests except Conducted power test)
Nov. 21, 2017 (For Conducted power test)

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:** Jan. 10, 2018
Pettie Chen / Senior Specialist

Approved by :  , **Date:** Jan. 10, 2018
Bruce Chen / Project Engineer

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 -18.07dB at 0.15000MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5350.00, 11650.00MHz.
15.407(a) (1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(i), the OOB test plots were recorded in Annex A.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.64 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	EagleEye Director II
Brand	Polycorn
Test Model	EagleEye Director II
Status of EUT	Engineering sample
Power Supply Rating	12Vdc (Adapter)
Modulation Type	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 150Mbps 802.11ac: up to 433.4Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz & 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 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) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	5180 ~ 5240MHz: 15.171mW 5260 ~ 5320MHz: 15.241mW 5745 ~ 5825MHz: 21.827mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Adapter, L-type connector (brand: WIESON, model: G8230C163-002), RCA adapter (brand: CHANG YANG, model: CY-AS-HS0433)
Data Cable Supplied	3m shielded AV cable 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.: RF161101C12D-1. Differences compared with the original report are disabling 5500 ~ 5700MHz and updating KDB to the latest version. Due to no effect on any test item, we did not re-test.
2. The EUT provides one completed transmitter and one receiver.

Modulation Mode	TX Function
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT80)	1TX

* 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 consumes power from the following adapter.

Brand	FSP GROUP INC.
Model	FSP060-DIBAN2
Input Power	100-240Vac, 1.5A, 50-60Hz
Output Power	12.0Vdc, 5.0A MAX
Power Line	1.75m cable with 1 core attached on adapter

4. The EUT uses following antennas.

Ant. Type	Connector	Antenna Gain (dBi)			
		Frequency (GHz)			
		2.4	5.150	5.470	5.850
PCB	I-pex	2.25	2.84	2.37	2.27

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

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 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

Note: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-axis**.

Radiated Emission Test (Above 1GHz):

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

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11ac (VHT80)		42	42	OFDM	BPSK	32.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (VHT80)		58	58	OFDM	BPSK	32.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
-	802.11ac (VHT80)		155	155	OFDM	BPSK	32.5

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0

Power Line Conducted Emission Test:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11ac (VHT80)		42	42	OFDM	BPSK	32.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (VHT80)		58	58	OFDM	BPSK	32.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
-	802.11ac (VHT80)		155	155	OFDM	BPSK	32.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	21deg. C, 71%RH	120Vac, 60Hz	Jones Chang
RE<1G	21deg. C, 69%RH	120Vac, 60Hz	James Yang
PLC	16deg. C, 70%RH	120Vac, 60Hz	Nick Hsu
APCM	25deg. C, 60%RH	120Vac, 60Hz	Ted Chang

3.3 Duty Cycle of Test Signal

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

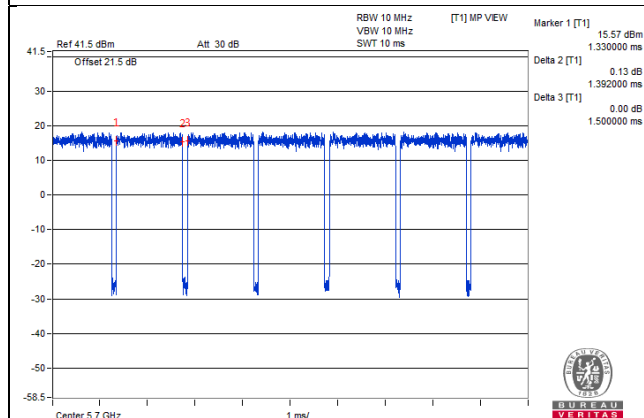
802.11a: Duty cycle = $1.392/1.50 = 0.928$, Duty factor = $10 * \log(1/0.928) = 0.32$

802.11n (HT20): Duty cycle = $1.30/1.412 = 0.921$, Duty factor = $10 * \log(1/0.921) = 0.36$

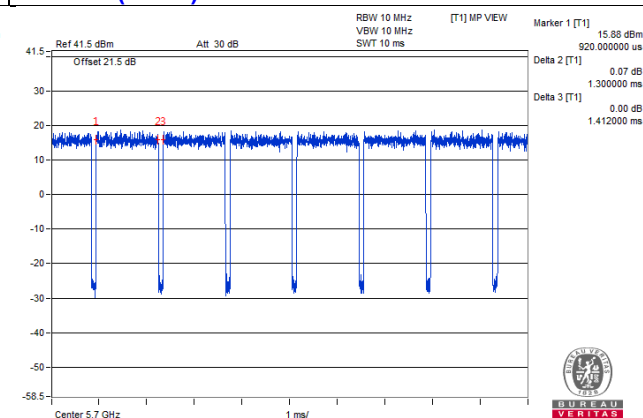
802.11n (HT40): Duty cycle = $0.661/0.766 = 0.863$, Duty factor = $10 * \log(1/0.863) = 0.64$

802.11ac (VHT80): Duty cycle = $0.331/0.434 = 0.763$, Duty factor = $10 * \log(1/0.763) = 1.18$

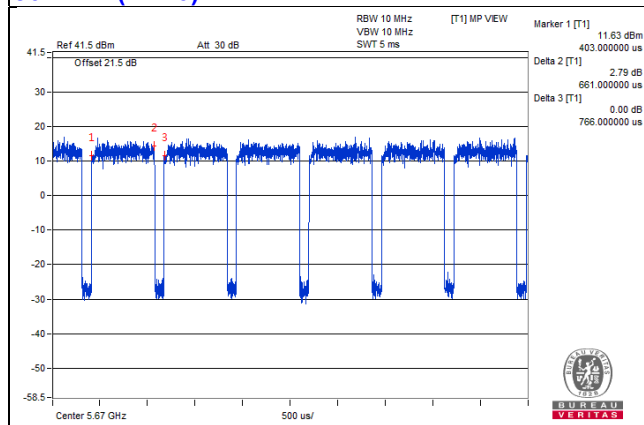
802.11a



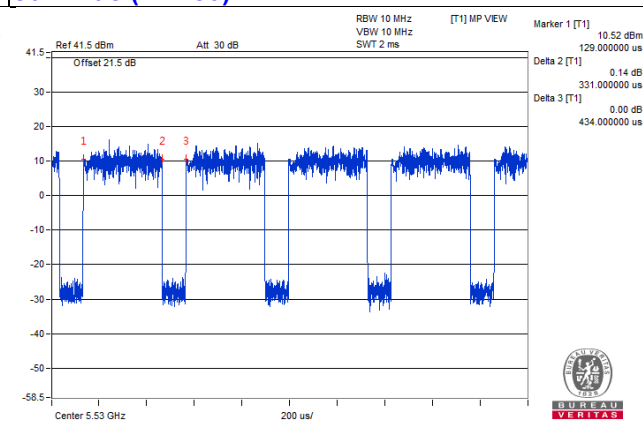
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

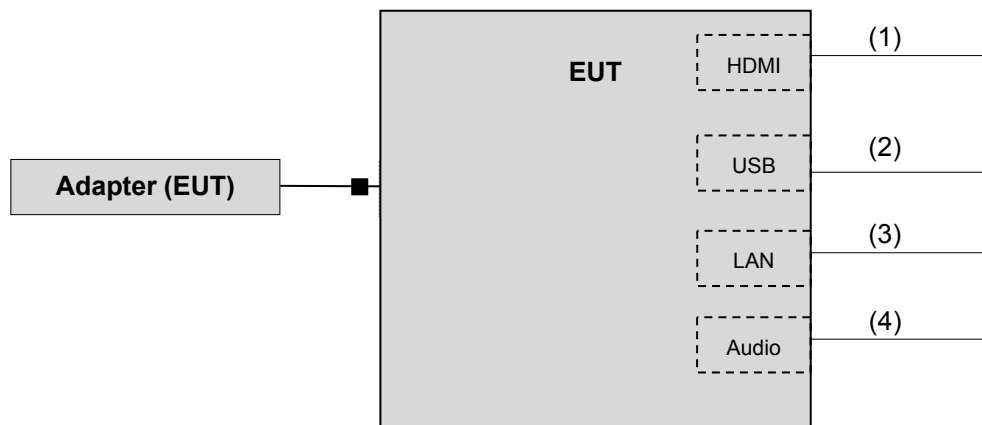


3.4 Description of Support Units

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	HDMI cable	2	1.8	-	0	-
2.	USB cable	2	1.8	Y	0	-
3.	RJ45 cable	1	1.8	N	0	-
4.	Audio cable	1	1.8	-	0	-

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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 v02r01			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

Test Date: Nov. 15 ~ Nov. 18, 2016

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 23, 2015	Dec. 22, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Apr. 19, 2016	Apr. 18, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Jan. 18, 2016	Jan. 17, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Jan. 08, 2016	Jan. 07, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8449B	3008A01911	Aug. 09, 2016	Aug. 08, 2017
Preamplifier Agilent	8447D	2944A10638	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-02 (309222 +248780)	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-03 (274092)	Aug. 09, 2016	Aug. 08, 2017
RF signal cable Woken	8D-FB	Cable-CH9-01	Aug. 09, 2016	Aug. 08, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0824012	Aug. 11, 2016	Aug. 10, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 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 4.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The IC Site Registration No. is IC 7450F-4.

Test Date: Nov. 21, 2017

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
High Speed Peak Power Meter	ML2495A	0824012	Aug. 18, 2017	Aug. 17, 2018
Power Sensor	MA2411B	0738171	Aug. 18, 2017	Aug. 17, 2018

- 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 measurement uncertainty is 1.393dB, which is calculated as per the document ETSI TR 100 028. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
3. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Both X and Y axes of the antenna are set to make the measurement.
- 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.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

- 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:

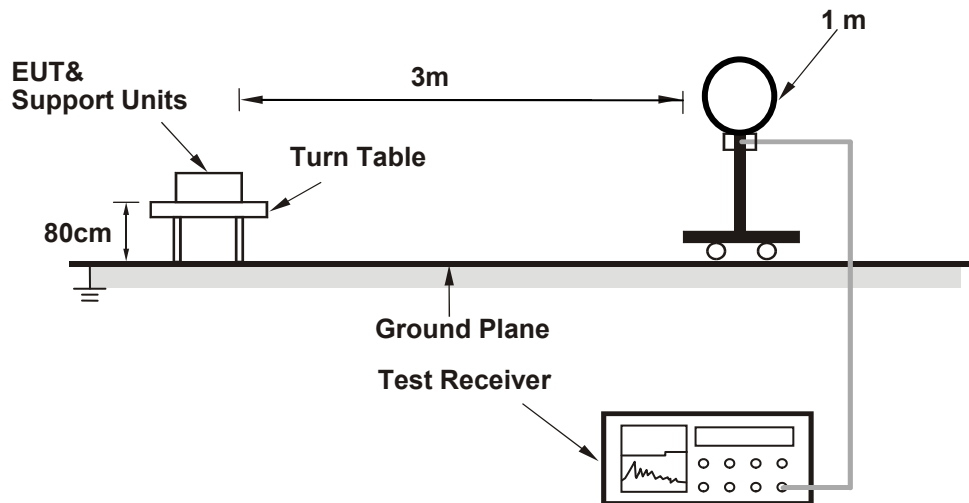
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

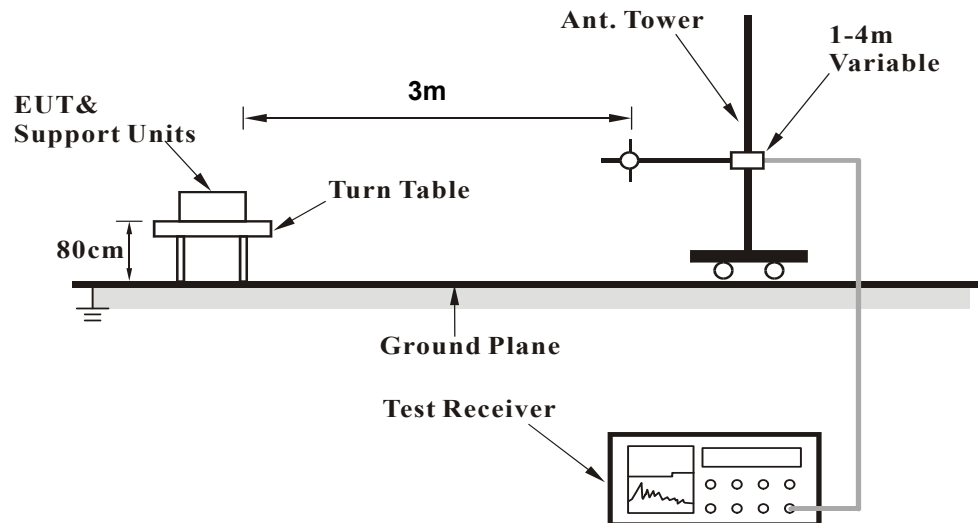
No deviation.

4.1.5 Test Setup

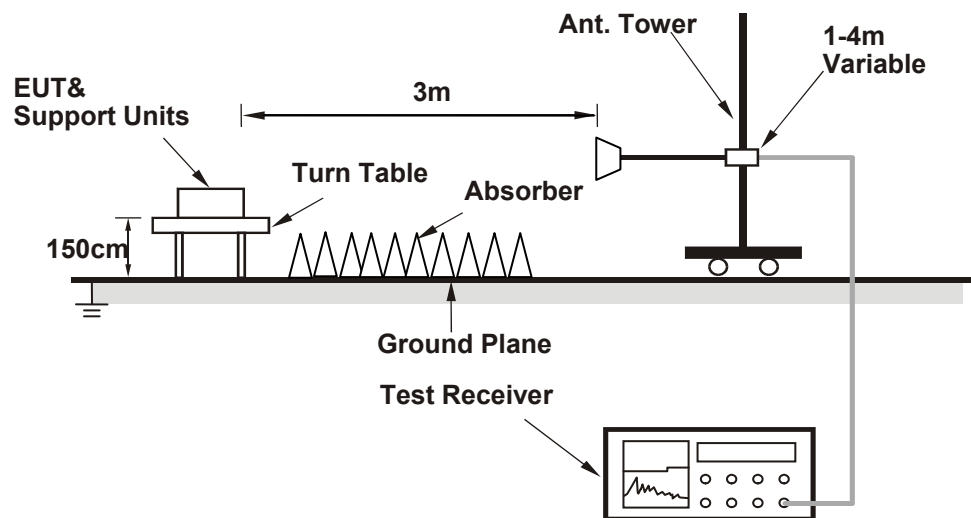
For Radiated emission below 30MHz



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

Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.1 PK	74.0	-8.9	1.60 H	258	60.3	4.8
2	5150.00	52.5 AV	54.0	-1.5	1.60 H	258	47.7	4.8
3	*5180.00	107.4 PK			3.06 H	231	68.7	38.7
4	*5180.00	97.7 AV			3.06 H	231	59.0	38.7
5	#10360.00	63.0 PK	74.0	-11.0	2.44 H	292	45.4	17.6
6	#10360.00	50.1 AV	54.0	-3.9	2.44 H	292	32.5	17.6
7	15540.00	66.8 PK	74.0	-7.2	2.46 H	277	47.5	19.3
8	15540.00	52.4 AV	54.0	-1.6	2.46 H	277	33.1	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	5150.00	60.6 PK	74.0	-13.4	1.44 V	302	55.8	4.8
2	5150.00	48.4 AV	54.0	-5.6	1.44 V	302	43.6	4.8
3	*5180.00	103.5 PK			1.31 V	0	64.8	38.7
4	*5180.00	94.1 AV			1.31 V	0	55.4	38.7
5	#10360.00	62.4 PK	74.0	-11.6	2.00 V	52	44.8	17.6
6	#10360.00	49.4 AV	54.0	-4.6	2.00 V	52	31.8	17.6
7	15540.00	64.3 PK	74.0	-9.7	2.02 V	19	45.0	19.3
8	15540.00	51.8 AV	54.0	-2.2	2.02 V	19	32.5	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.

CHANNEL	TX Channel 40	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	*5200.00	104.4 PK			1.39 H	275	65.7	38.7
2	*5200.00	94.8 AV			1.39 H	275	56.1	38.7
3	#10400.00	60.6 PK	74.0	-13.4	2.20 H	0	43.0	17.6
4	#10400.00	49.0 AV	54.0	-5.0	2.20 H	0	31.4	17.6
5	15600.00	67.2 PK	74.0	-6.8	2.20 H	280	47.9	19.3
6	15600.00	52.7 AV	54.0	-1.3	2.20 H	280	33.4	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	104.2 PK			1.02 V	0	65.5	38.7
2	*5200.00	94.3 AV			1.02 V	0	55.6	38.7
3	#10400.00	61.8 PK	74.0	-12.2	1.39 V	79	44.2	17.6
4	#10400.00	48.6 AV	54.0	-5.4	1.39 V	79	31.0	17.6
5	15600.00	65.5 PK	74.0	-8.5	1.28 V	146	46.2	19.3
6	15600.00	52.6 AV	54.0	-1.4	1.28 V	146	33.3	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.

CHANNEL	TX Channel 48	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	*5240.00	105.2 PK			3.03 H	229	66.3	38.9
2	*5240.00	95.6 AV			3.03 H	229	56.7	38.9
3	5350.00	58.0 PK	74.0	-16.0	1.80 H	200	52.5	5.5
4	5350.00	46.1 AV	54.0	-7.9	1.80 H	200	40.6	5.5
5	#10480.00	61.3 PK	74.0	-12.7	2.00 H	267	42.9	18.4
6	#10480.00	49.4 AV	54.0	-4.6	2.00 H	267	31.0	18.4
7	15720.00	66.8 PK	74.0	-7.2	2.23 H	298	48.1	18.7
8	15720.00	52.3 AV	54.0	-1.7	2.23 H	298	33.6	18.7
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	*5240.00	104.2 PK			1.08 V	5	65.3	38.9
2	*5240.00	94.3 AV			1.08 V	5	55.4	38.9
3	5350.00	59.1 PK	74.0	-14.9	1.72 V	245	53.6	5.5
4	5350.00	46.7 AV	54.0	-7.3	1.72 V	245	41.2	5.5
5	#10480.00	63.1 PK	74.0	-10.9	2.53 V	345	44.7	18.4
6	#10480.00	51.2 AV	54.0	-2.8	2.53 V	345	32.8	18.4
7	15720.00	65.1 PK	74.0	-8.9	1.35 V	133	46.4	18.7
8	15720.00	51.6 AV	54.0	-2.4	1.35 V	133	32.9	18.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.2 PK	74.0	-15.8	2.00 H	240	53.4	4.8
2	5150.00	47.6 AV	54.0	-6.4	2.00 H	240	42.8	4.8
3	*5260.00	107.2 PK			1.05 H	275	68.3	38.9
4	*5260.00	97.6 AV			1.05 H	275	58.7	38.9
5	#10520.00	64.4 PK	74.0	-9.6	1.27 H	10	45.8	18.6
6	#10520.00	51.6 AV	54.0	-2.4	1.27 H	10	33.0	18.6
7	15780.00	64.4 PK	74.0	-9.6	1.47 H	26	46.1	18.3
8	15780.00	51.5 AV	54.0	-2.5	1.47 H	26	33.2	18.3

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	5150.00	58.6 PK	74.0	-15.4	1.40 V	0	53.8	4.8
2	5150.00	45.4 AV	54.0	-8.6	1.40 V	0	40.6	4.8
3	*5260.00	105.3 PK			1.20 V	359	66.4	38.9
4	*5260.00	95.1 AV			1.20 V	359	56.2	38.9
5	#10520.00	66.5 PK	74.0	-7.5	1.10 V	12	47.9	18.6
6	#10520.00	52.4 AV	54.0	-1.6	1.10 V	12	33.8	18.6
7	15780.00	66.7 PK	74.0	-7.3	1.10 V	142	48.4	18.3
8	15780.00	52.8 AV	54.0	-1.2	1.10 V	142	34.5	18.3

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.

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	106.9 PK			1.20 H	276	67.8	39.1
2	*5300.00	96.9 AV			1.20 H	276	57.8	39.1
3	10600.00	61.9 PK	74.0	-12.1	2.30 H	279	43.4	18.5
4	10600.00	48.8 AV	54.0	-5.2	2.30 H	279	30.3	18.5
5	15900.00	63.6 PK	74.0	-10.4	1.44 H	270	45.2	18.4
6	15900.00	50.4 AV	54.0	-3.6	1.44 H	270	32.0	18.4
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	*5300.00	105.8 PK			1.24 V	1	66.7	39.1
2	*5300.00	96.4 AV			1.24 V	1	57.3	39.1
3	10600.00	67.1 PK	74.0	-6.9	1.00 V	12	48.6	18.5
4	10600.00	52.7 AV	54.0	-1.3	1.00 V	12	34.2	18.5
5	15900.00	65.3 PK	74.0	-8.7	1.05 V	143	46.9	18.4
6	15900.00	52.4 AV	54.0	-1.6	1.05 V	143	34.0	18.4

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.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	108.2 PK			1.21 H	277	69.1	39.1
2	*5320.00	98.4 AV			1.21 H	277	59.3	39.1
3	5350.00	67.2 PK	74.0	-6.8	1.07 H	277	61.7	5.5
4	5350.00	52.8 AV	54.0	-1.2	1.07 H	277	47.3	5.5
5	10640.00	62.1 PK	74.0	-11.9	2.46 H	278	43.6	18.5
6	10640.00	49.0 AV	54.0	-5.0	2.46 H	278	30.5	18.5
7	15960.00	62.0 PK	74.0	-12.0	1.00 H	301	44.0	18.0
8	15960.00	49.1 AV	54.0	-4.9	1.00 H	301	31.1	18.0

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	*5320.00	104.4 PK			1.33 V	0	65.3	39.1
2	*5320.00	95.2 AV			1.33 V	0	56.1	39.1
3	5350.00	67.3 PK	74.0	-6.7	1.25 V	0	61.8	5.5
4	5350.00	50.9 AV	54.0	-3.1	1.25 V	0	45.4	5.5
5	10640.00	66.1 PK	74.0	-7.9	1.00 V	10	47.6	18.5
6	10640.00	52.3 AV	54.0	-1.7	1.00 V	10	33.8	18.5
7	15960.00	63.0 PK	74.0	-11.0	1.11 V	141	45.0	18.0
8	15960.00	50.4 AV	54.0	-3.6	1.11 V	141	32.4	18.0

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.

CHANNEL	TX Channel 149	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	#5649.60	57.9 PK	68.2	-10.3	2.45 H	253	51.8	6.1
2	*5745.00	105.9 PK			2.45 H	253	65.9	40.0
3	*5745.00	95.6 AV			2.45 H	253	55.6	40.0
4	#5928.80	59.9 PK	68.2	-8.3	2.45 H	253	53.3	6.6
5	11490.00	66.6 PK	74.0	-7.4	2.79 H	286	47.3	19.3
6	11490.00	52.5 AV	54.0	-1.5	2.79 H	286	33.2	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	#5611.20	58.7 PK	68.2	-9.5	1.23 V	7	52.6	6.1
2	*5745.00	103.5 PK			1.23 V	7	63.5	40.0
3	*5745.00	93.1 AV			1.23 V	7	53.1	40.0
4	#5946.40	59.2 PK	68.2	-9.0	1.23 V	7	52.6	6.6
5	11490.00	66.0 PK	74.0	-8.0	1.11 V	31	46.7	19.3
6	11490.00	52.6 AV	54.0	-1.4	1.11 V	31	33.3	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5616.80	58.7 PK	68.2	-9.5	3.40 H	261	52.6	6.1
2	*5785.00	106.9 PK			3.40 H	261	66.8	40.1
3	*5785.00	96.8 AV			3.40 H	261	56.7	40.1
4	#5937.60	59.1 PK	68.2	-9.1	3.40 H	261	52.5	6.6
5	11570.00	65.9 PK	74.0	-8.1	2.67 H	286	46.7	19.2
6	11570.00	52.3 AV	54.0	-1.7	2.67 H	286	33.1	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	#5628.00	58.4 PK	68.2	-9.8	1.16 V	5	52.3	6.1
2	*5785.00	103.2 PK			1.16 V	5	63.1	40.1
3	*5785.00	92.9 AV			1.16 V	5	52.8	40.1
4	#5932.80	59.5 PK	68.2	-8.7	1.16 V	5	52.9	6.6
5	11570.00	66.8 PK	74.0	-7.2	1.04 V	26	47.6	19.2
6	11570.00	52.7 AV	54.0	-1.3	1.04 V	26	33.5	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 165	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	#5604.00	58.2 PK	68.2	-10.0	3.20 H	260	52.1	6.1
2	*5825.00	106.9 PK			3.20 H	260	66.8	40.1
3	*5825.00	96.6 AV			3.20 H	260	56.5	40.1
4	#5926.40	60.1 PK	68.2	-8.1	3.20 H	260	53.5	6.6
5	11650.00	65.7 PK	74.0	-8.3	2.82 H	286	46.4	19.3
6	11650.00	53.0 AV	54.0	-1.0	2.82 H	286	33.7	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	#5635.20	58.6 PK	68.2	-9.6	1.29 V	9	52.5	6.1
2	*5825.00	102.2 PK			1.29 V	9	62.1	40.1
3	*5825.00	91.8 AV			1.29 V	9	51.7	40.1
4	#5956.80	59.4 PK	68.2	-8.8	1.29 V	9	52.8	6.6
5	11650.00	66.1 PK	74.0	-7.9	1.10 V	28	46.8	19.3
6	11650.00	52.3 AV	54.0	-1.7	1.10 V	28	33.0	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 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.1 PK	74.0	-22.9	3.00 H	230	46.3	4.8
2	5150.00	49.2 AV	54.0	-4.8	3.00 H	230	44.4	4.8
3	*5180.00	106.1 PK			3.03 H	229	67.4	38.7
4	*5180.00	95.8 AV			3.03 H	229	57.1	38.7
5	#10360.00	60.8 PK	74.0	-13.2	2.04 H	237	43.2	17.6
6	#10360.00	47.9 AV	54.0	-6.1	2.04 H	237	30.3	17.6
7	15400.00	65.7 PK	74.0	-8.3	2.44 H	278	45.7	20.0
8	15400.00	52.3 AV	54.0	-1.7	2.44 H	278	32.3	20.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.7 PK	74.0	-12.3	1.33 V	19	56.9	4.8
2	5150.00	46.5 AV	54.0	-7.5	1.33 V	19	41.7	4.8
3	*5180.00	104.4 PK			1.29 V	0	65.7	38.7
4	*5180.00	94.2 AV			1.29 V	0	55.5	38.7
5	#10360.00	60.0 PK	74.0	-14.0	1.57 V	255	42.4	17.6
6	#10360.00	47.1 AV	54.0	-6.9	1.57 V	255	29.5	17.6
7	15400.00	63.5 PK	74.0	-10.5	2.10 V	233	43.5	20.0
8	15400.00	50.8 AV	54.0	-3.2	2.10 V	233	30.8	20.0

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 40	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	*5200.00	105.2 PK			2.80 H	217	66.5	38.7
2	*5200.00	94.4 AV			2.80 H	217	55.7	38.7
3	#10400.00	60.7 PK	74.0	-13.3	2.12 H	244	43.1	17.6
4	#10400.00	47.9 AV	54.0	-6.1	2.12 H	244	30.3	17.6
5	15600.00	66.5 PK	74.0	-7.5	2.32 H	279	47.2	19.3
6	15600.00	52.5 AV	54.0	-1.5	2.32 H	279	33.2	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	*5200.00	104.4 PK			1.30 V	2	65.7	38.7
2	*5200.00	93.4 AV			1.30 V	2	54.7	38.7
3	#10400.00	59.8 PK	74.0	-14.2	1.66 V	62	42.2	17.6
4	#10400.00	46.6 AV	54.0	-7.4	1.66 V	62	29.0	17.6
5	15600.00	62.1 PK	74.0	-11.9	2.00 V	133	42.8	19.3
6	15600.00	49.7 AV	54.0	-4.3	2.00 V	133	30.4	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.

CHANNEL	TX Channel 48	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	*5240.00	105.6 PK			2.54 H	264	66.7	38.9
2	*5240.00	95.4 AV			2.54 H	264	56.5	38.9
3	5350.00	57.1 PK	74.0	-16.9	1.90 H	289	51.6	5.5
4	5350.00	46.3 AV	54.0	-7.7	1.90 H	289	40.8	5.5
5	#10480.00	61.9 PK	74.0	-12.1	2.22 H	254	43.5	18.4
6	#10480.00	48.9 AV	54.0	-5.1	2.22 H	254	30.5	18.4
7	15720.00	65.9 PK	74.0	-8.1	2.50 H	322	47.2	18.7
8	15720.00	52.5 AV	54.0	-1.5	2.50 H	322	33.8	18.7
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	*5240.00	103.3 PK			1.47 V	359	64.4	38.9
2	*5240.00	93.6 AV			1.47 V	359	54.7	38.9
3	5350.00	59.2 PK	74.0	-14.8	1.47 V	0	53.7	5.5
4	5350.00	45.8 AV	54.0	-8.2	1.47 V	0	40.3	5.5
5	#10480.00	60.7 PK	74.0	-13.3	1.60 V	333	42.3	18.4
6	#10480.00	47.7 AV	54.0	-6.3	1.60 V	333	29.3	18.4
7	15720.00	62.4 PK	74.0	-11.6	2.77 V	123	43.7	18.7
8	15720.00	49.2 AV	54.0	-4.8	2.77 V	123	30.5	18.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.5 PK	74.0	-16.5	1.20 H	280	52.7	4.8
2	5150.00	45.1 AV	54.0	-8.9	1.20 H	280	40.3	4.8
3	*5260.00	106.9 PK			1.26 H	270	68.0	38.9
4	*5260.00	96.3 AV			1.26 H	270	57.4	38.9
5	#10520.00	61.6 PK	74.0	-12.4	2.44 H	290	43.0	18.6
6	#10520.00	49.5 AV	54.0	-4.5	2.44 H	290	30.9	18.6
7	15780.00	62.8 PK	74.0	-11.2	1.50 H	323	44.5	18.3
8	15780.00	50.9 AV	54.0	-3.1	1.50 H	323	32.6	18.3
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	5150.00	56.4 PK	74.0	-17.6	1.55 V	208	51.6	4.8
2	5150.00	45.3 AV	54.0	-8.7	1.55 V	208	40.5	4.8
3	*5260.00	106.3 PK			1.45 V	0	67.4	38.9
4	*5260.00	95.3 AV			1.45 V	0	56.4	38.9
5	#10520.00	65.0 PK	74.0	-9.0	1.00 V	10	46.4	18.6
6	#10520.00	51.7 AV	54.0	-2.3	1.00 V	10	33.1	18.6
7	15780.00	65.8 PK	74.0	-8.2	1.11 V	17	47.5	18.3
8	15780.00	52.3 AV	54.0	-1.7	1.11 V	17	34.0	18.3

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.

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	108.4 PK			1.38 H	277	69.3	39.1
2	*5300.00	98.0 AV			1.38 H	277	58.9	39.1
3	10600.00	61.8 PK	74.0	-12.2	1.34 H	265	43.3	18.5
4	10600.00	48.7 AV	54.0	-5.3	1.34 H	265	30.2	18.5
5	15780.00	63.9 PK	74.0	-10.1	2.11 H	291	45.6	18.3
6	15780.00	50.8 AV	54.0	-3.2	2.11 H	291	32.5	18.3
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	*5300.00	105.5 PK			1.51 V	0	66.4	39.1
2	*5300.00	94.8 AV			1.51 V	0	55.7	39.1
3	10600.00	65.9 PK	74.0	-8.1	1.08 V	11	47.4	18.5
4	10600.00	52.4 AV	54.0	-1.6	1.08 V	11	33.9	18.5
5	15780.00	63.6 PK	74.0	-10.4	1.30 V	128	45.3	18.3
6	15780.00	50.6 AV	54.0	-3.4	1.30 V	128	32.3	18.3

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.

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	107.5 PK			1.25 H	277	68.4	39.1
2	*5320.00	97.8 AV			1.25 H	277	58.7	39.1
3	5350.00	66.0 PK	74.0	-8.0	1.07 H	277	60.5	5.5
4	5350.00	53.0 AV	54.0	-1.0	1.07 H	277	47.5	5.5
5	10640.00	61.4 PK	74.0	-12.6	2.00 H	307	42.9	18.5
6	10640.00	48.3 AV	54.0	-5.7	2.00 H	307	29.8	18.5
7	15960.00	61.5 PK	74.0	-12.5	1.00 H	359	43.5	18.0
8	15960.00	48.2 AV	54.0	-5.8	1.00 H	359	30.2	18.0
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	*5320.00	105.1 PK			1.38 V	0	66.0	39.1
2	*5320.00	94.5 AV			1.38 V	0	55.4	39.1
3	5350.00	66.8 PK	74.0	-7.2	1.25 V	0	61.3	5.5
4	5350.00	51.7 AV	54.0	-2.3	1.25 V	0	46.2	5.5
5	10640.00	66.4 PK	74.0	-7.6	1.00 V	11	47.9	18.5
6	10640.00	52.5 AV	54.0	-1.5	1.00 V	11	34.0	18.5
7	15960.00	64.3 PK	74.0	-9.7	1.19 V	33	46.3	18.0
8	15960.00	50.6 AV	54.0	-3.4	1.19 V	33	32.6	18.0

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.

CHANNEL	TX Channel 149	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	#5639.20	58.8 PK	68.2	-9.4	3.11 H	248	52.7	6.1
2	*5745.00	107.7 PK			3.11 H	248	67.7	40.0
3	*5745.00	96.8 AV			3.11 H	248	56.8	40.0
4	#5928.80	59.7 PK	68.2	-8.5	3.11 H	248	53.1	6.6
5	11490.00	65.8 PK	74.0	-8.2	2.79 H	286	46.5	19.3
6	11490.00	52.6 AV	54.0	-1.4	2.79 H	286	33.3	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	#5611.20	58.3 PK	68.2	-9.9	1.30 V	5	52.2	6.1
2	*5745.00	104.8 PK			1.30 V	5	64.8	40.0
3	*5745.00	93.6 AV			1.30 V	5	53.6	40.0
4	#5964.00	60.0 PK	68.2	-8.2	1.30 V	5	53.3	6.7
5	11490.00	66.3 PK	74.0	-7.7	1.10 V	31	47.0	19.3
6	11490.00	52.5 AV	54.0	-1.5	1.10 V	31	33.2	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.00	58.7 PK	68.2	-9.5	3.13 H	256	52.6	6.1
2	*5785.00	107.8 PK			3.13 H	256	67.7	40.1
3	*5785.00	96.4 AV			3.13 H	256	56.3	40.1
4	#5929.60	59.8 PK	68.2	-8.4	3.13 H	256	53.2	6.6
5	11570.00	65.5 PK	74.0	-8.5	2.69 H	285	46.3	19.2
6	11570.00	52.5 AV	54.0	-1.5	2.69 H	285	33.3	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	#5631.20	58.2 PK	68.2	-10.0	1.18 V	6	52.1	6.1
2	*5785.00	104.5 PK			1.18 V	6	64.4	40.1
3	*5785.00	93.1 AV			1.18 V	6	53.0	40.1
4	#5947.20	59.3 PK	68.2	-8.9	1.18 V	6	52.7	6.6
5	11570.00	66.3 PK	74.0	-7.7	1.12 V	27	47.1	19.2
6	11570.00	52.9 AV	54.0	-1.1	1.12 V	27	33.7	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 165	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	#5608.80	58.3 PK	68.2	-9.9	3.32 H	262	52.2	6.1
2	*5825.00	107.2 PK			3.32 H	262	67.1	40.1
3	*5825.00	97.0 AV			3.32 H	262	56.9	40.1
4	#5945.60	59.7 PK	68.2	-8.5	3.32 H	262	53.1	6.6
5	11650.00	66.0 PK	74.0	-8.0	2.81 H	287	46.7	19.3
6	11650.00	52.6 AV	54.0	-1.4	2.81 H	287	33.3	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	#5639.20	59.4 PK	68.2	-8.8	1.17 V	6	53.3	6.1
2	*5825.00	103.9 PK			1.17 V	6	63.8	40.1
3	*5825.00	92.6 AV			1.17 V	6	52.5	40.1
4	#5982.40	60.0 PK	68.2	-8.2	1.17 V	6	53.3	6.7
5	11650.00	66.5 PK	74.0	-7.5	1.13 V	28	47.2	19.3
6	11650.00	52.4 AV	54.0	-1.6	1.13 V	28	33.1	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 (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	2.76 H	220	61.6	4.8
2	5150.00	52.8 AV	54.0	-1.2	2.76 H	220	48.0	4.8
3	*5190.00	100.0 PK			2.94 H	237	61.3	38.7
4	*5190.00	90.2 AV			2.94 H	237	51.5	38.7
5	#10380.00	59.9 PK	74.0	-14.1	2.22 H	140	42.3	17.6
6	#10380.00	47.1 AV	54.0	-6.9	2.22 H	140	29.5	17.6
7	15570.00	62.4 PK	74.0	-11.6	1.88 H	307	43.2	19.2
8	15570.00	49.5 AV	54.0	-4.5	1.88 H	307	30.3	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	5150.00	64.8 PK	74.0	-9.2	1.58 V	0	60.0	4.8
2	5150.00	51.1 AV	54.0	-2.9	1.58 V	0	46.3	4.8
3	*5190.00	97.8 PK			1.38 V	359	59.1	38.7
4	*5190.00	89.4 AV			1.38 V	359	50.7	38.7
5	#10380.00	59.6 PK	74.0	-14.4	1.88 V	212	42.0	17.6
6	#10380.00	46.7 AV	54.0	-7.3	1.88 V	212	29.1	17.6
7	15570.00	61.1 PK	74.0	-12.9	2.20 V	32	41.9	19.2
8	15570.00	48.1 AV	54.0	-5.9	2.20 V	32	28.9	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.5 PK	74.0	-12.5	2.95 H	227	56.7	4.8
2	5150.00	48.4 AV	54.0	-5.6	2.95 H	227	43.6	4.8
3	*5230.00	104.0 PK			3.14 H	237	65.1	38.9
4	*5230.00	94.5 AV			3.14 H	237	55.6	38.9
5	#10460.00	61.7 PK	74.0	-12.3	2.31 H	277	43.5	18.2
6	#10460.00	48.9 AV	54.0	-5.1	2.31 H	277	30.7	18.2
7	15690.00	65.4 PK	74.0	-8.6	2.51 H	235	46.4	19.0
8	15690.00	52.6 AV	54.0	-1.4	2.51 H	235	33.6	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	5150.00	56.8 PK	74.0	-17.2	1.69 V	311	52.0	4.8
2	5150.00	45.3 AV	54.0	-8.7	1.69 V	311	40.5	4.8
3	*5230.00	101.5 PK			1.79 V	2	62.6	38.9
4	*5230.00	93.1 AV			1.79 V	2	54.2	38.9
5	#10460.00	60.6 PK	74.0	-13.4	1.90 V	133	42.4	18.2
6	#10460.00	47.8 AV	54.0	-6.2	1.90 V	133	29.6	18.2
7	15690.00	63.4 PK	74.0	-10.6	1.66 V	92	44.4	19.0
8	15690.00	49.5 AV	54.0	-4.5	1.66 V	92	30.5	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 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	105.0 PK			1.15 H	277	66.0	39.0
2	*5270.00	95.2 AV			1.15 H	277	56.2	39.0
3	5350.00	63.0 PK	74.0	-11.0	1.17 H	279	57.5	5.5
4	5350.00	49.8 AV	54.0	-4.2	1.17 H	279	44.3	5.5
5	#10540.00	62.6 PK	74.0	-11.4	2.46 H	290	44.0	18.6
6	#10540.00	49.6 AV	54.0	-4.4	2.46 H	290	31.0	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	102.5 PK			1.68 V	3	63.5	39.0
2	*5270.00	59.8 AV			1.68 V	3	54.5	5.3
3	5350.00	57.4 PK	74.0	-16.6	1.70 V	22	51.9	5.5
4	5350.00	46.0 AV	54.0	-8.0	1.70 V	22	40.5	5.5
5	#10540.00	63.9 PK	74.0	-10.1	1.12 V	338	45.3	18.6
6	#10540.00	52.3 AV	54.0	-1.7	1.12 V	338	33.7	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	103.9 PK			1.23 H	276	64.8	39.1
2	*5310.00	93.8 AV			1.23 H	276	54.7	39.1
3	5350.00	65.9 PK	74.0	-8.1	1.26 H	278	60.4	5.5
4	5350.00	52.7 AV	54.0	-1.3	1.26 H	278	47.2	5.5
5	10620.00	62.8 PK	74.0	-11.2	1.49 H	20	44.3	18.5
6	10620.00	49.8 AV	54.0	-4.2	1.49 H	20	31.3	18.5
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	*5310.00	100.0 PK			1.33 V	0	60.9	39.1
2	*5310.00	90.2 AV			1.33 V	0	51.1	39.1
3	5350.00	68.6 PK	74.0	-5.4	1.25 V	359	63.1	5.5
4	5350.00	52.3 AV	54.0	-1.7	1.25 V	359	46.8	5.5
5	10620.00	63.5 PK	74.0	-10.5	1.20 V	9	45.0	18.5
6	10620.00	49.4 AV	54.0	-4.6	1.20 V	9	30.9	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 151	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	#5647.20	59.7 PK	68.2	-8.5	3.31 H	254	53.6	6.1
2	*5755.00	105.1 PK			3.31 H	254	65.1	40.0
3	*5755.00	95.4 AV			3.31 H	254	55.4	40.0
4	#5975.20	59.9 PK	68.2	-8.3	3.31 H	254	53.2	6.7
5	11510.00	65.0 PK	74.0	-9.0	2.76 H	285	45.7	19.3
6	11510.00	51.8 AV	54.0	-2.2	2.76 H	285	32.5	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	#5608.80	58.5 PK	68.2	-9.7	1.19 V	6	52.4	6.1
2	*5755.00	103.0 PK			1.19 V	6	63.0	40.0
3	*5755.00	91.6 AV			1.19 V	6	51.6	40.0
4	#5925.60	59.3 PK	68.2	-8.9	1.19 V	6	52.7	6.6
5	11510.00	65.5 PK	74.0	-8.5	1.10 V	31	46.2	19.3
6	11510.00	52.4 AV	54.0	-1.6	1.10 V	31	33.1	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.

CHANNEL	TX Channel 159	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	#5620.00	59.2 PK	68.2	-9.0	3.26 H	250	53.1	6.1
2	*5795.00	105.3 PK			3.26 H	250	65.2	40.1
3	*5795.00	95.4 AV			3.26 H	250	55.3	40.1
4	#5995.20	59.9 PK	68.2	-8.3	3.26 H	250	53.2	6.7
5	11590.00	65.0 PK	74.0	-9.0	2.69 H	302	45.8	19.2
6	11590.00	52.7 AV	54.0	-1.3	2.69 H	302	33.5	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	#5619.20	58.4 PK	68.2	-9.8	1.19 V	7	52.3	6.1
2	*5795.00	102.8 PK			1.19 V	7	62.7	40.1
3	*5795.00	91.4 AV			1.19 V	7	51.3	40.1
4	#5948.00	59.7 PK	68.2	-8.5	1.19 V	7	53.1	6.6
5	11590.00	64.9 PK	74.0	-9.1	1.19 V	29	45.7	19.2
6	11590.00	52.8 AV	54.0	-1.2	1.19 V	29	33.6	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.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.1 PK	74.0	-6.9	1.09 H	271	62.3	4.8
2	5150.00	52.4 AV	54.0	-1.6	1.09 H	271	47.6	4.8
3	*5210.00	98.3 PK			1.30 H	272	59.6	38.7
4	*5210.00	89.4 AV			1.30 H	272	50.7	38.7
5	5350.00	62.3 PK	74.0	-11.7	1.21 H	279	56.8	5.5
6	5350.00	48.2 AV	54.0	-5.8	1.21 H	279	42.7	5.5
7	#10420.00	62.2 PK	74.0	-11.8	2.40 H	260	44.4	17.8
8	#10420.00	50.3 AV	54.0	-3.7	2.40 H	260	32.5	17.8
9	15630.00	64.8 PK	74.0	-9.2	2.57 H	281	45.5	19.3
10	15630.00	52.3 AV	54.0	-1.7	2.57 H	281	33.0	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	5150.00	58.3 PK	74.0	-15.7	1.77 V	10	53.5	4.8
2	5150.00	47.9 AV	54.0	-6.1	1.77 V	10	43.1	4.8
3	*5210.00	94.6 PK			1.61 V	3	55.9	38.7
4	*5210.00	84.3 AV			1.61 V	3	45.6	38.7
5	5350.00	60.0 PK	74.0	-14.0	2.22 V	237	54.5	5.5
6	5350.00	47.7 AV	54.0	-6.3	2.22 V	237	42.2	5.5
7	#10420.00	60.3 PK	74.0	-13.7	1.80 V	200	42.5	17.8
8	#10420.00	47.6 AV	54.0	-6.4	1.80 V	200	29.8	17.8
9	15630.00	63.5 PK	74.0	-10.5	1.90 V	0	44.2	19.3
10	15630.00	50.4 AV	54.0	-3.6	1.90 V	0	31.1	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.6 PK	74.0	-16.4	1.40 H	31	52.8	4.8
2	5150.00	46.4 AV	54.0	-7.6	1.40 H	31	41.6	4.8
3	*5290.00	99.9 PK			1.24 H	278	60.8	39.1
4	*5290.00	90.9 AV			1.24 H	278	51.8	39.1
5	5350.00	65.9 PK	74.0	-8.1	1.08 H	277	60.4	5.5
6	5350.00	52.3 AV	54.0	-1.7	1.08 H	277	46.8	5.5
7	#10580.00	62.1 PK	74.0	-11.9	1.60 H	300	43.5	18.6
8	#10580.00	50.3 AV	54.0	-3.7	1.60 H	300	31.7	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	5150.00	58.3 PK	74.0	-15.7	1.13 V	0	53.5	4.8
2	5150.00	46.3 AV	54.0	-7.7	1.13 V	0	41.5	4.8
3	*5290.00	98.8 PK			1.39 V	5	59.7	39.1
4	*5290.00	88.6 AV			1.39 V	5	49.5	39.1
5	5350.00	65.4 PK	74.0	-8.6	1.10 V	359	59.9	5.5
6	5350.00	51.4 AV	54.0	-2.6	1.10 V	359	45.9	5.5
7	#10580.00	62.1 PK	74.0	-11.9	1.29 V	33	43.5	18.6
8	#10580.00	50.5 AV	54.0	-3.5	1.29 V	33	31.9	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 155	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	#5648.00	59.4 PK	68.2	-8.8	3.24 H	251	53.3	6.1
2	*5775.00	102.8 PK			3.24 H	251	62.8	40.0
3	*5775.00	92.9 AV			3.24 H	251	52.9	40.0
4	#5952.80	59.3 PK	68.2	-8.9	3.24 H	251	52.7	6.6
5	11550.00	65.2 PK	74.0	-8.8	2.67 H	293	46.0	19.2
6	11550.00	51.7 AV	54.0	-2.3	2.67 H	293	32.5	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	#5641.60	58.7 PK	68.2	-9.5	1.22 V	10	52.6	6.1
2	*5775.00	100.8 PK			1.22 V	10	60.8	40.0
3	*5775.00	90.2 AV			1.22 V	10	50.2	40.0
4	#5928.80	59.7 PK	68.2	-8.5	1.22 V	10	53.1	6.6
5	11550.00	66.1 PK	74.0	-7.9	1.00 V	325	46.9	19.2
6	11550.00	52.9 AV	54.0	-1.1	1.00 V	325	33.7	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.

Below 1GHz worst-case data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.12	27.2 QP	40.0	-12.8	2.00 H	10	41.8	-14.6
2	129.06	35.2 QP	43.5	-8.3	2.00 H	221	50.8	-15.6
3	222.38	40.9 QP	46.0	-5.1	1.50 H	150	56.8	-15.9
4	407.09	42.0 QP	46.0	-4.0	2.00 H	182	51.9	-9.9
5	669.57	37.4 QP	46.0	-8.6	1.00 H	305	41.7	-4.3
6	792.06	39.3 QP	46.0	-6.7	1.00 H	305	40.7	-1.4
7	949.55	38.0 QP	46.0	-8.0	1.50 H	14	36.4	1.6
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	47.40	36.4 QP	40.0	-3.6	1.00 V	288	50.9	-14.5
2	131.00	32.9 QP	43.5	-10.6	1.00 V	275	48.3	-15.4
3	409.04	39.7 QP	46.0	-6.3	2.00 V	140	49.5	-9.8
4	480.97	42.1 QP	46.0	-3.9	1.00 V	187	50.5	-8.4
5	714.29	36.1 QP	46.0	-9.9	1.50 V	34	39.4	-3.3
6	792.06	37.8 QP	46.0	-8.2	1.00 V	16	39.2	-1.4
7	949.55	35.6 QP	46.0	-10.4	1.50 V	185	34.0	1.6

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)
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.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
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_Cond_ V7.3.7.3	NA	NA	NA

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

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

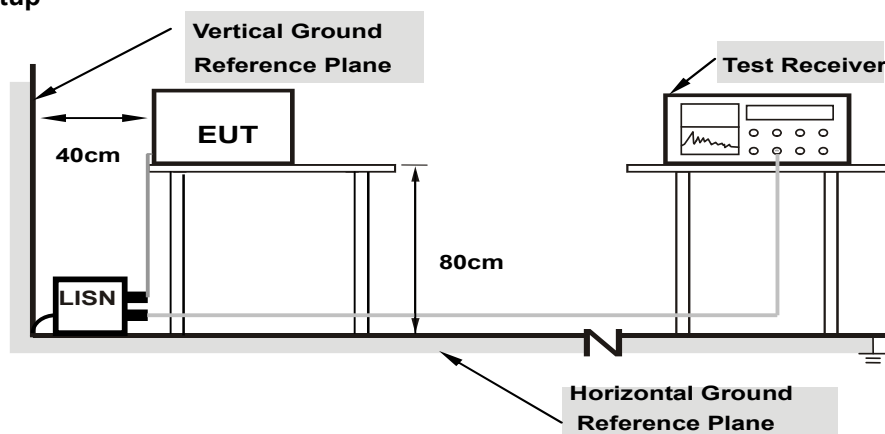
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

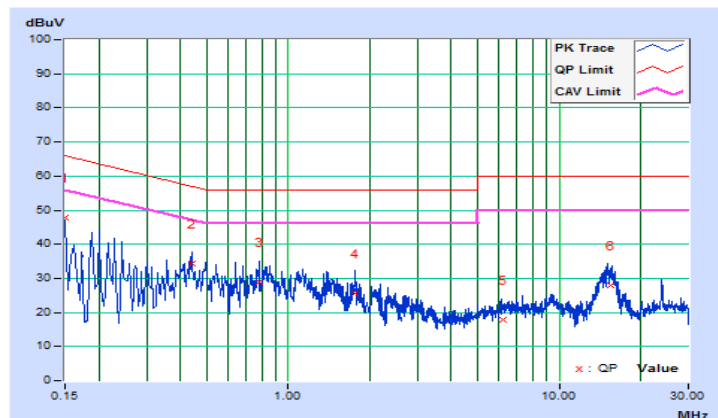
4.2.7 Test Results

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.01	37.92	17.39	47.93	27.40	66.00	56.00	-18.07	-28.60
2	0.43924	10.13	24.38	14.45	34.51	24.58	57.08	47.08	-22.57	-22.50
3	0.77808	10.17	18.88	10.81	29.05	20.98	56.00	46.00	-26.95	-25.02
4	1.75638	10.25	15.49	8.90	25.74	19.15	56.00	46.00	-30.26	-26.85
5	6.17531	10.53	7.36	2.46	17.89	12.99	60.00	50.00	-42.11	-37.01
6	15.40291	11.04	16.94	7.48	27.98	18.52	60.00	50.00	-32.02	-31.48

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.

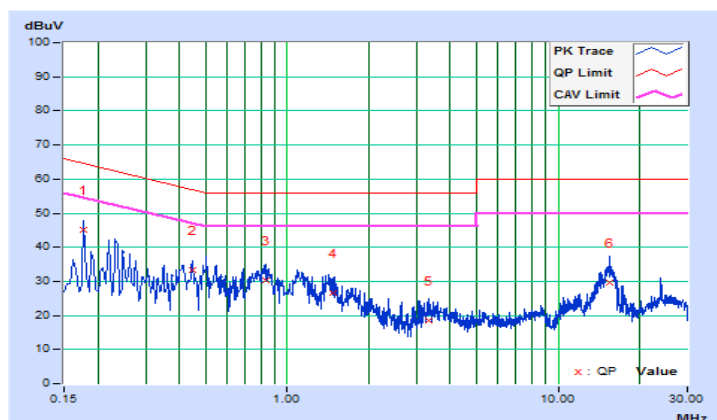


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

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	0.17605	10.03	34.97	18.37	45.00	28.40	64.67	54.67	-19.67	-26.27
2	0.44507	10.14	23.36	15.32	33.50	25.46	56.97	46.97	-23.47	-21.51
3	0.83325	10.19	19.99	10.78	30.18	20.97	56.00	46.00	-25.82	-25.03
4	1.47214	10.24	16.43	9.75	26.67	19.99	56.00	46.00	-29.33	-26.01
5	3.31710	10.38	8.04	2.28	18.42	12.66	56.00	46.00	-37.58	-33.34
6	15.40682	11.14	18.33	8.59	29.47	19.73	60.00	50.00	-30.53	-30.27

REMARKS:

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



4.3 Transmit Power Measurement

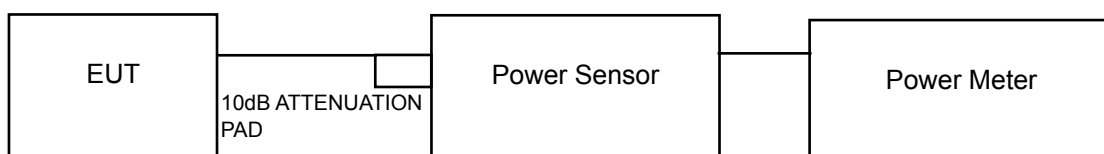
4.3.1 Limits of Transmit Power Measurement

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

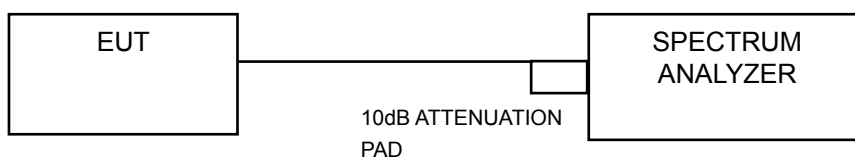
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

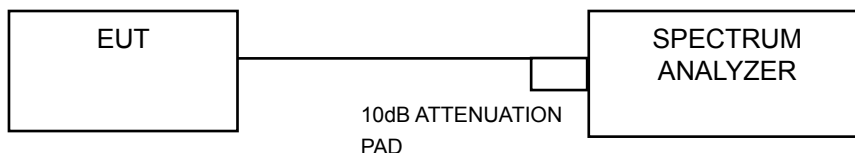
For 802.11a, 802.11n (HT20), 802.11n (HT40)



For 802.11ac (VHT80)



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

FOR AVERAGE POWER MEASUREMENT

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

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

For 802.11ac (VHT80)

- 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%.

FOR OCCUPIED BANDWIDTH

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 Sampling. 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.

4.3.5 Deviation fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

POWER OUTPUT:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	15.171	11.81	24.00	Pass
40	5200	14.689	11.67	24.00	Pass
48	5240	14.158	11.51	24.00	Pass
52	5260	15.241	11.83	24.00	Pass
60	5300	14.997	11.76	24.00	Pass
64	5320	15.066	11.78	24.00	Pass
149	5745	20.845	13.19	30.00	Pass
157	5785	20.749	13.17	30.00	Pass
165	5825	20.893	13.20	30.00	Pass

NOTE:

For U-NII-2A Band:

1. $11\text{dBm} + 10\log(21.84) = 24.39\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(21.92) = 24.41\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(21.91) = 24.41\text{ dBm} > 24\text{dBm}$.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	11.429	10.58	24.00	Pass
40	5200	11.272	10.52	24.00	Pass
48	5240	10.666	10.28	24.00	Pass
52	5260	11.641	10.66	24.00	Pass
60	5300	11.776	10.71	24.00	Pass
64	5320	11.803	10.72	24.00	Pass
149	5745	19.999	13.01	30.00	Pass
157	5785	21.038	13.23	30.00	Pass
165	5825	21.827	13.39	30.00	Pass

NOTE:

For U-NII-2A Band:

1. $11\text{dBm} + 10\log(22.00) = 24.42\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(21.96) = 24.42\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(21.94) = 24.41\text{ dBm} > 24\text{dBm}$.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	10.520	10.22	24.00	Pass
46	5230	10.046	10.02	24.00	Pass
54	5270	10.186	10.08	24.00	Pass
62	5310	10.544	10.23	24.00	Pass
151	5755	15.668	11.95	30.00	Pass
159	5795	15.560	11.92	30.00	Pass

NOTE:

For U-NII-2A Band:

1. $11\text{dBm} + 10\log(57.86) = 28.62\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(41.70) = 27.20\text{ dBm} > 24\text{dBm}$.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	10.814	10.34	24.00	Pass
58	5290	10.520	10.22	24.00	Pass
155	5775	16.982	12.30	30.00	Pass

NOTE:

For U-NII-2A Band:

1. $11\text{dBm} + 10\log(82.19) = 30.15\text{ dBm} > 24\text{dBm}$.

26dB BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
36	5180	22.02
40	5200	21.87
48	5240	21.93
52	5260	21.84
60	5300	21.92
64	5320	21.91

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
36	5180	22.05
40	5200	22.11
48	5240	22.10
52	5260	22.00
60	5300	21.96
64	5320	21.94

802.11n (HT40)

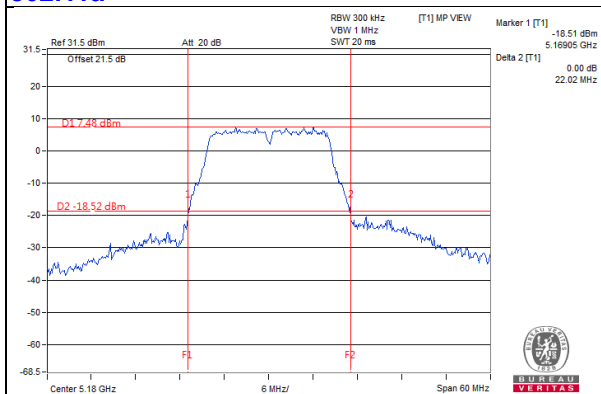
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
38	5190	41.82
46	5230	70.24
54	5270	57.86
62	5310	41.70

802.11ac (VHT80)

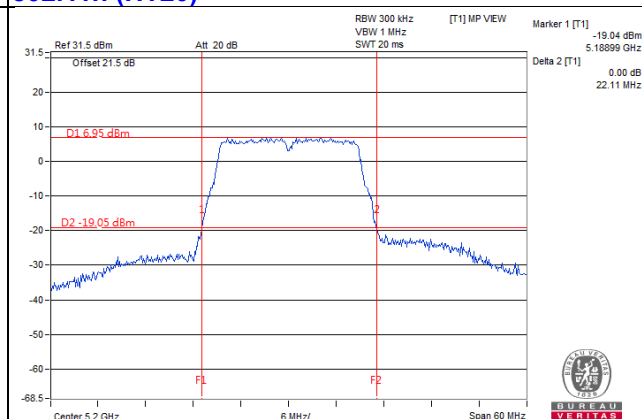
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
42	5210	82.23
58	5290	82.19

Spectrum Plot of Worst Value

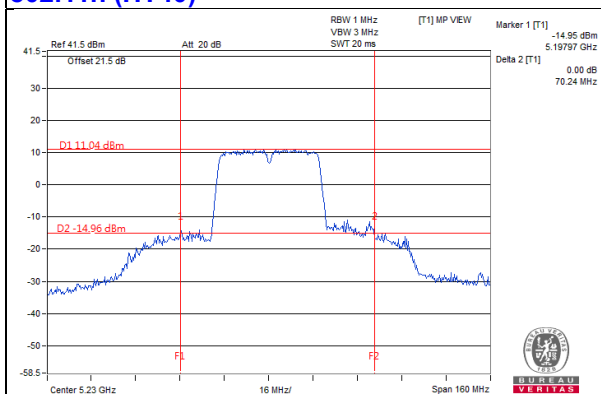
802.11a



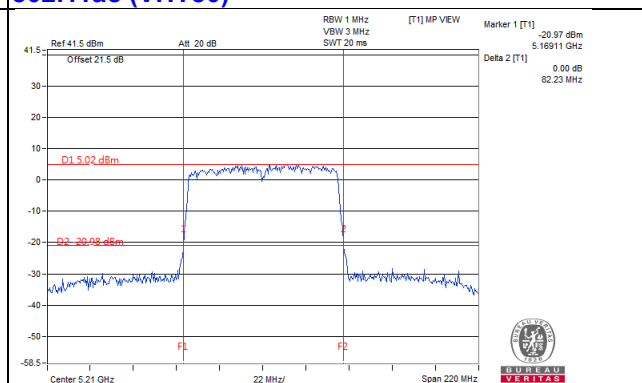
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



OCCUPIED BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	17.16
40	5200	17.16
48	5240	17.28
52	5260	17.28
60	5300	17.16
64	5320	17.04
149	5745	17.11
157	5785	17.28
165	5825	17.04

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.12
48	5240	18.12
52	5260	18.24
60	5300	18.24
64	5320	18.24
149	5745	18.12
157	5785	18.12
165	5825	18.12

802.11n (HT40)

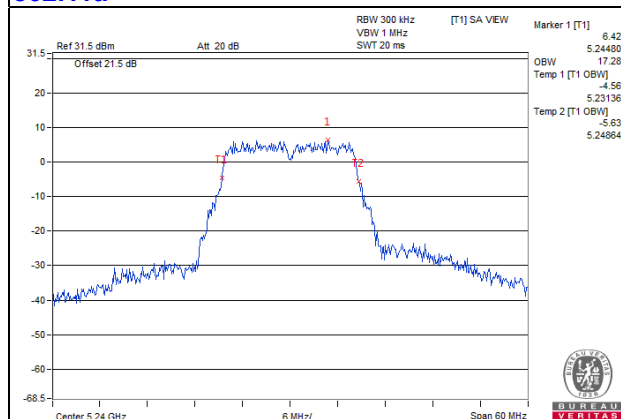
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.72
54	5270	36.72
62	5310	36.72
151	5755	36.60
159	5795	36.60

802.11ac (VHT80)

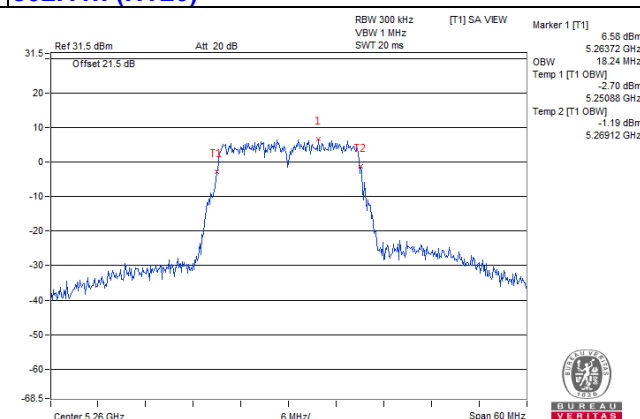
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	75.84
155	5775	76.08

Spectrum Plot of Worst Value

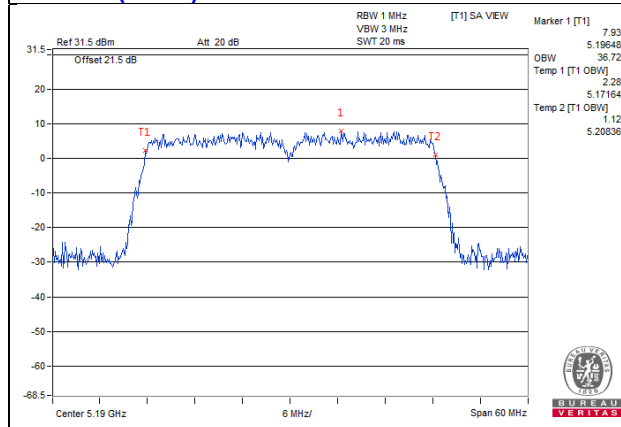
802.11a



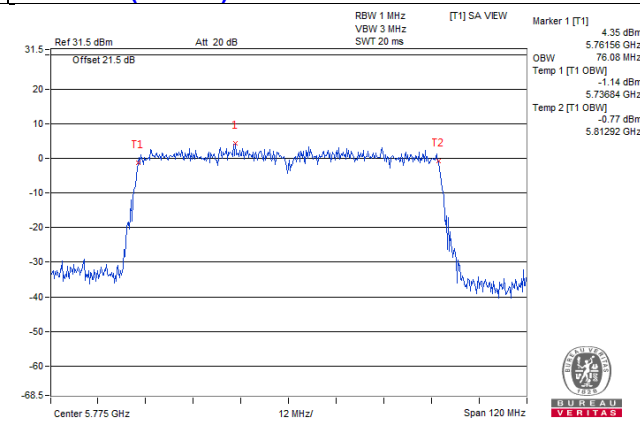
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	15.241	11.83

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	11.803	10.72

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	10.544	10.23

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	10.520	10.22

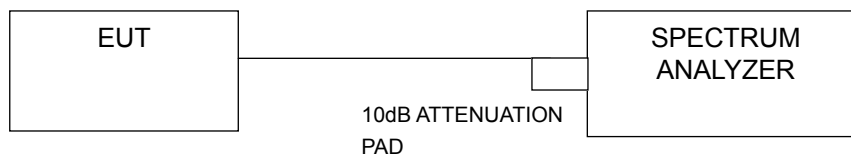
NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

For U-NII-1, U-NII-2A band:

Without duty cycle (Using method SA-1):

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW $\geq$ 3MHz, 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

With duty cycle (Using method SA-2):

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW $\geq$ 3MHz, 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 and add $10 \log (1/\text{duty cycle})$

For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- 4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500\text{kHz}/300\text{kHz})$
- 5) Sweep time = auto, trigger set to "free run".
- 6) Trace average at least 100 traces in power averaging mode.
- 7) Record the max value and add $10 \log (1/\text{duty cycle})$

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

For U-NII-1, U-NII-2A Band

802.11a

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
36	5180	1.79	0.32	2.11	11.00	Pass
40	5200	1.99	0.32	2.31	11.00	Pass
48	5240	1.92	0.32	2.24	11.00	Pass
52	5260	2.26	0.32	2.58	11.00	Pass
60	5300	2.24	0.32	2.56	11.00	Pass
64	5320	2.49	0.32	2.81	11.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
36	5180	1.49	0.36	1.85	11.00	Pass
40	5200	1.52	0.36	1.88	11.00	Pass
48	5240	1.61	0.36	1.97	11.00	Pass
52	5260	1.84	0.36	2.20	11.00	Pass
60	5300	1.96	0.36	2.32	11.00	Pass
64	5320	1.06	0.36	1.42	11.00	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
38	5190	-2.79	0.64	-2.15	11.00	Pass
46	5230	-0.76	0.64	-0.12	11.00	Pass
54	5270	-0.53	0.64	0.11	11.00	Pass
62	5310	-3.08	0.64	-2.44	11.00	Pass

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

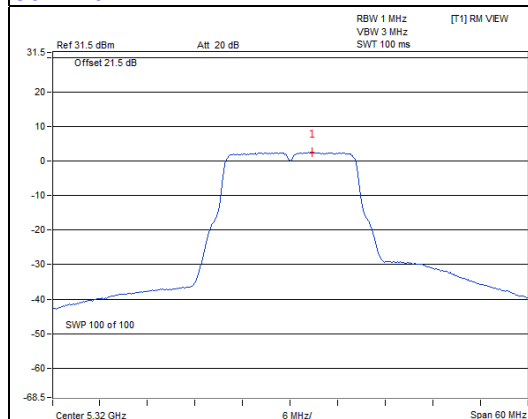
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
42	5210	-7.00	1.18	-5.83	11.00	Pass
58	5290	-5.73	1.18	-4.56	11.00	Pass

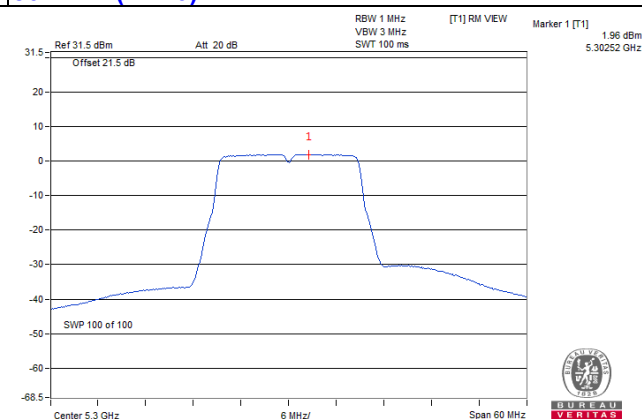
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

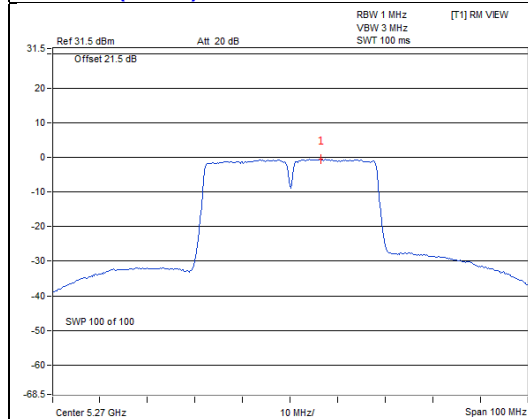
802.11a



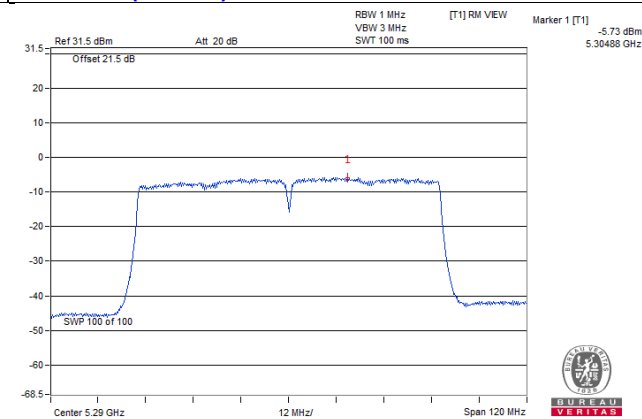
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
149	5745	-9.89	-7.67	0.32	-7.35	30.00	Pass
157	5785	-10.07	-7.85	0.32	-7.53	30.00	Pass
165	5825	-9.65	-7.43	0.32	-7.11	30.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
149	5745	-10.00	-7.78	0.36	-7.42	30.00	Pass
157	5785	-10.22	-8.00	0.36	-7.64	30.00	Pass
165	5825	-9.80	-7.58	0.36	-7.22	30.00	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
151	5755	-12.11	-9.89	0.64	-9.25	30.00	Pass
159	5795	-11.92	-9.70	0.64	-9.06	30.00	Pass

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

802.11ac (VHT80)

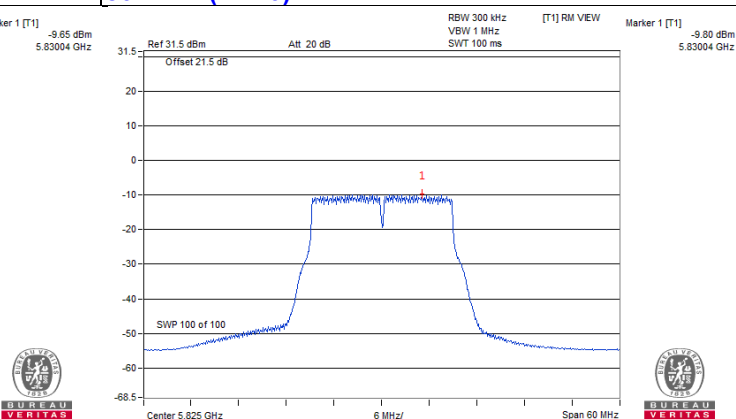
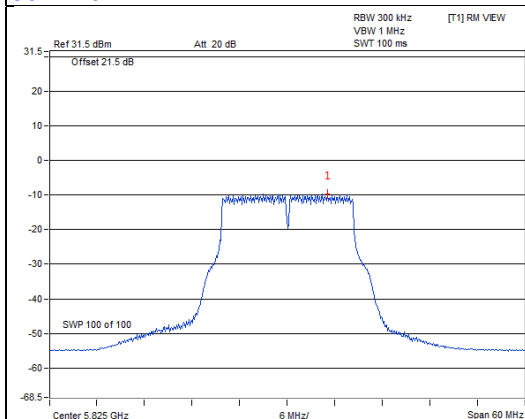
Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
155	5775	-15.34	-13.12	1.18	-11.94	30.00	Pass

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

Spectrum Plot of Worst Value

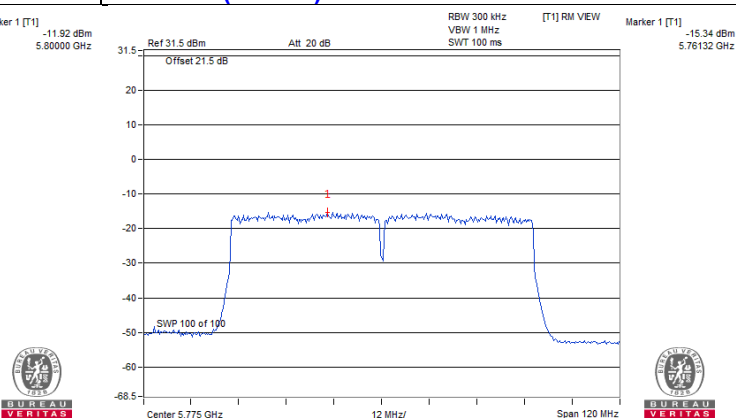
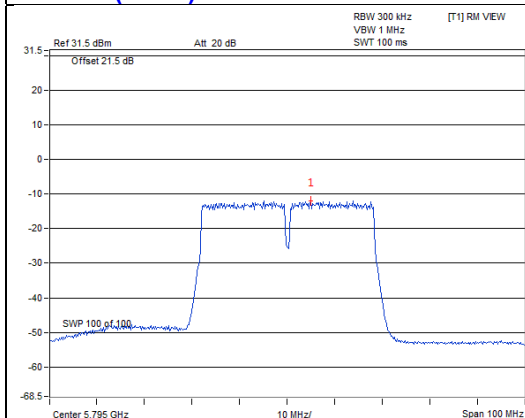
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)

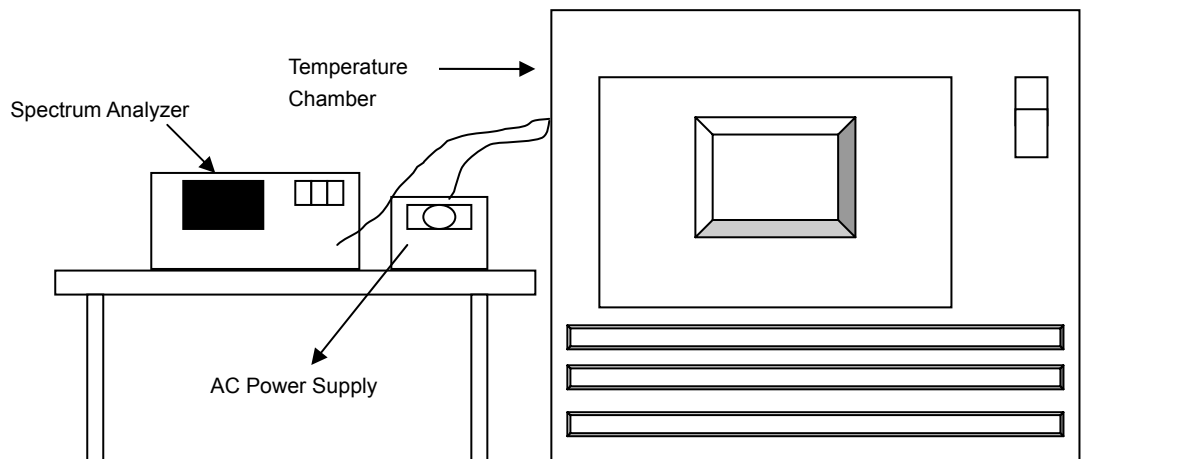


4.5 Frequency Stability

4.5.1 Limits of Frequency Stability Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

- 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.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
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	5179.9858	-0.00027	5179.9844	-0.00030	5179.9843	-0.00030	5179.9857	-0.00028
40	120	5179.9962	-0.00007	5180.0005	0.00001	5179.9998	0.00000	5179.9962	-0.00007
30	120	5180.0142	0.00027	5180.0123	0.00024	5180.0133	0.00026	5180.0149	0.00029
20	120	5179.9923	-0.00015	5179.9929	-0.00014	5179.9913	-0.00017	5179.9929	-0.00014
10	120	5180.0010	0.00002	5180.0017	0.00003	5180.0033	0.00006	5180.0015	0.00003
0	120	5180.0115	0.00022	5180.0118	0.00023	5180.0148	0.00029	5180.0145	0.00028
-10	120	5179.9764	-0.00046	5179.9763	-0.00046	5179.9790	-0.00041	5179.9796	-0.00039
-20	120	5180.0089	0.00017	5180.0121	0.00023	5180.0111	0.00021	5180.0110	0.00021
-30	120	5180.0265	0.00051	5180.0253	0.00049	5180.0272	0.00053	5180.0249	0.00048

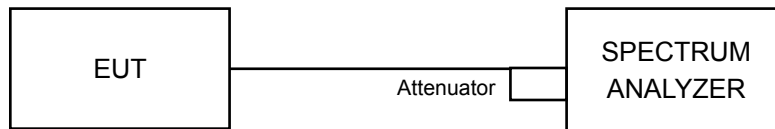
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9928	-0.00014	5179.9930	-0.00014	5179.9912	-0.00017	5179.9928	-0.00014
	120	5179.9923	-0.00015	5179.9929	-0.00014	5179.9913	-0.00017	5179.9929	-0.00014
	102	5179.9930	-0.00014	5179.9921	-0.00015	5179.9913	-0.00017	5179.9937	-0.00012

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.41	0.5	Pass
165	5825	16.41	0.5	Pass

802.11n (HT20)

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

802.11n (HT40)

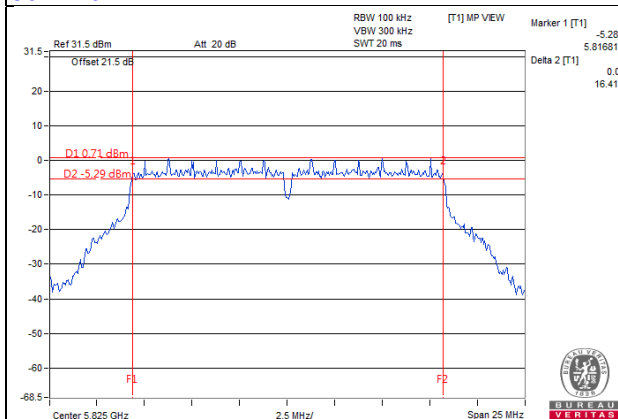
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.46	0.5	Pass
159	5795	36.44	0.5	Pass

802.11ac (VHT80)

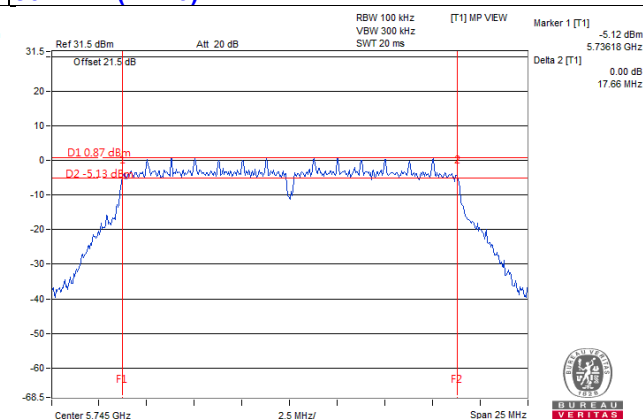
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	76.27	0.5	Pass

Spectrum Plot of Worst Value

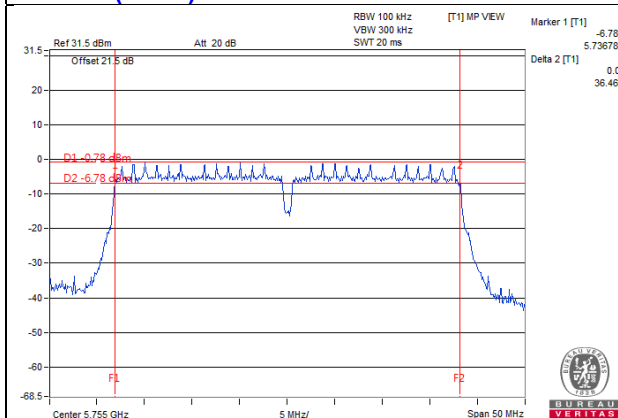
802.11a



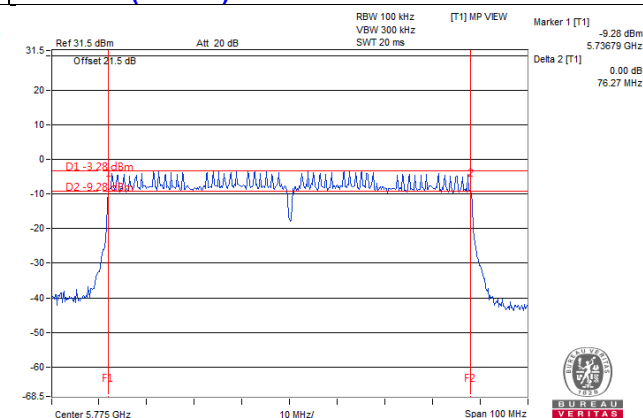
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



5 Pictures of Test Arrangements

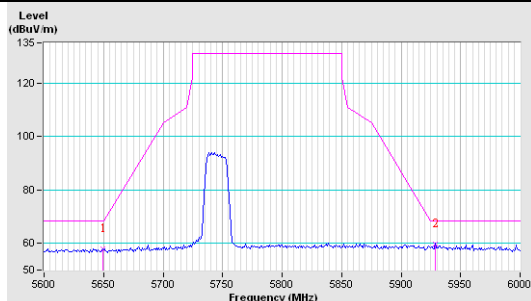
Please refer to the attached file (Test Setup Photo).

Annex A- Radiated Out of Band Emisison (OOBE) Measurement (For U-NII-3 band)

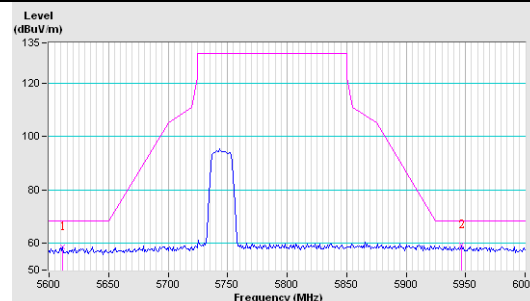
802.11a

CH149

Horizontal

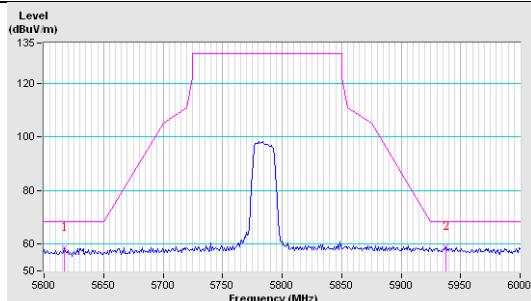


Vertical

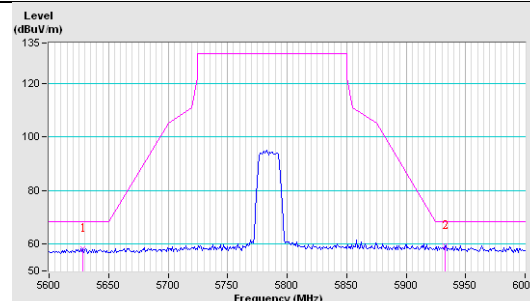


CH157

Horizontal

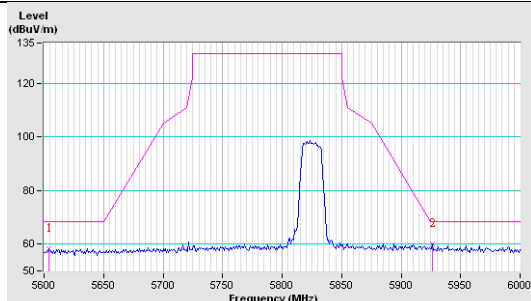


Vertical

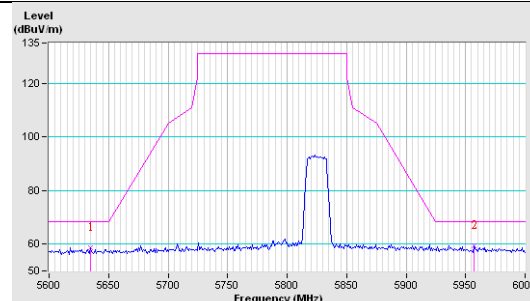


CH165

Horizontal



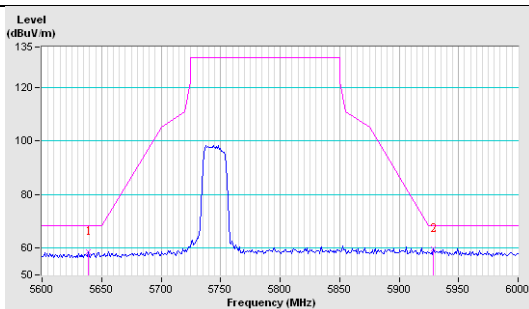
Vertical



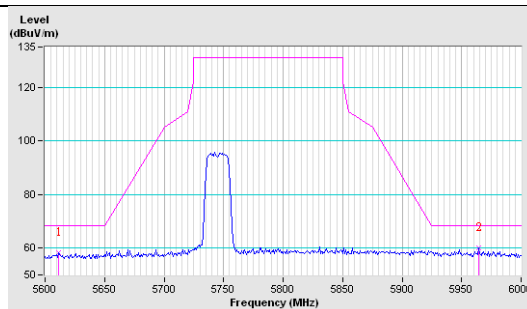
802.11n (HT20)

CH149

Horizontal

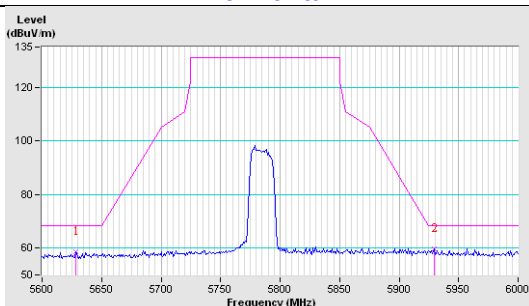


Vertical

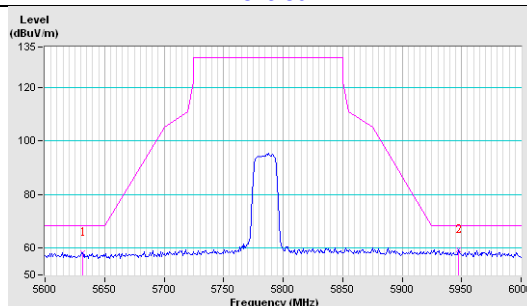


CH157

Horizontal

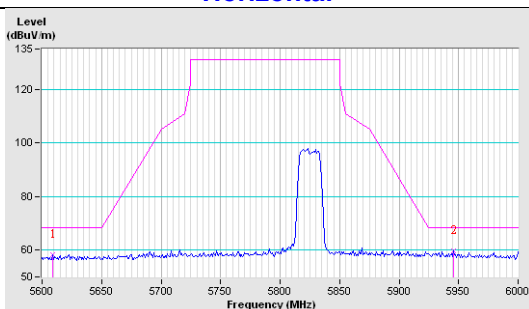


Vertical

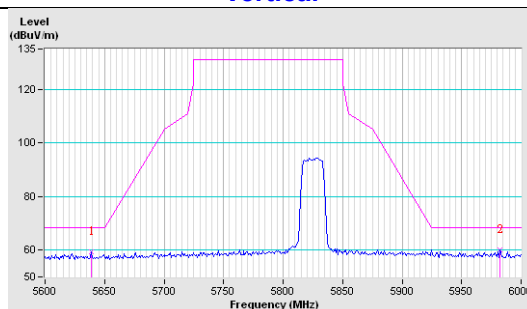


CH165

Horizontal



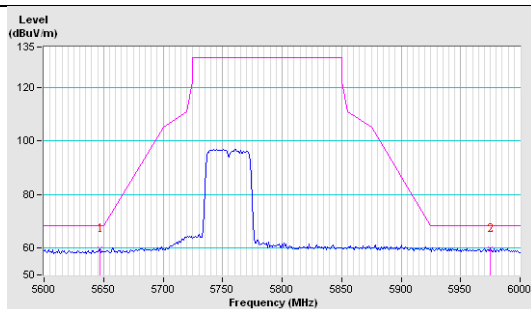
Vertical



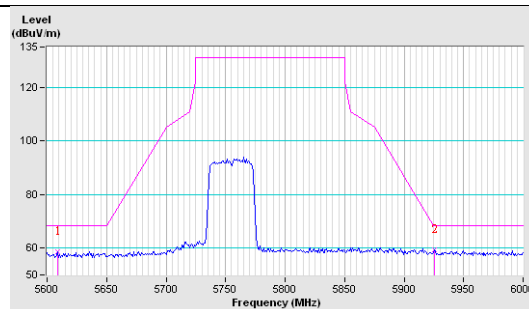
802.11n (HT40)

CH151

Horizontal

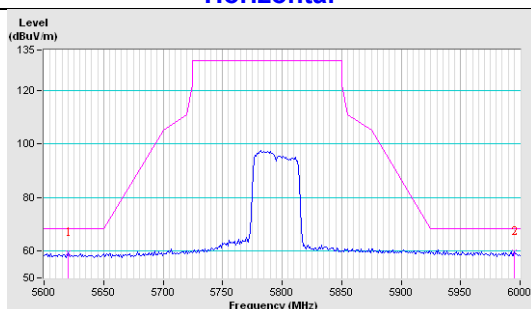


Vertical

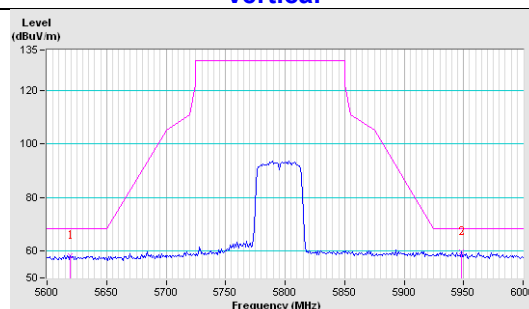


CH159

Horizontal



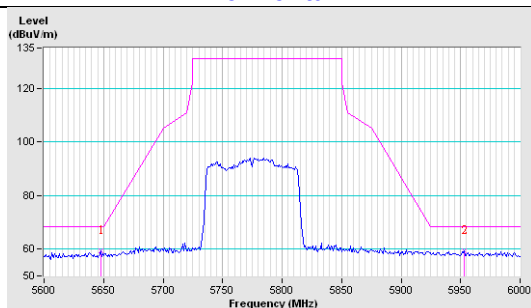
Vertical



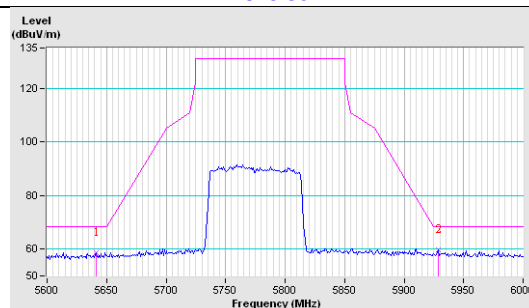
802.11ac (VHT80)

CH155

Horizontal



Vertical



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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