FCC Test Report

Report No.:	RF150519C22-1
FCC ID:	KA2CS960LA1
Test Model:	DCS-960L
Series Model:	DCS-960LH, DCS-96xLxx (x = any alphanumeric character or blank)
Received Date:	May 19, 2015
Test Date:	Jul. 07 ~ Aug. 27, 2015
Issued Date:	Aug. 27, 2015
Applicant:	D-LINK CORPORATION
Address:	17595 Mt. Hermann, Fountain Valley, CA 92708,U.S.A.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Lab Address:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
RF150519C22-1	Original release	Aug. 27, 2015

1 Certificate of Conformity

Product:	HD Ultra-Wide View Wi-Fi Camera
Brand:	D-Link
Test Model:	DCS-960L
Series Model:	DCS-960LH, DCS-96xLxx (x = any alphanumeric character or blank)
Sample Status:	Engineering Sample
Applicant:	D-LINK CORPORATION
Test Date:	Jul. 07 ~ Aug. 27, 2015
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : Celine Chou , **Date:** Aug. 27, 2015

Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Aug. 27, 2015

Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.207 15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -21.16dB at 4.12647MHz.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 11160.00, 5150.00, 5714.00, 5861.00MHz.
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	No antenna connector is used.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 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	HD Ultra-Wide View Wi-Fi Camera
Brand	D-Link
Test Model	DCS-960L
Series Model	DCS-960LH, DCS-96xLxx (x = any alphanumeric character or blank)
Model Difference	Refer to note
Sample Status	Engineering Sample
Power Supply Rating	5Vdc (Adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 135Mbps 802.11ac: up to 390Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz & 5745 ~ 5825MHz
Number of Channel	5180MHz ~ 5240MHz 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260MHz ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4, 802.11n (HT40), 802.11ac (VHT40): 2, 802.11ac (VHT80): 1 5500MHz ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 11, 802.11n (HT40), 802.11ac (VHT40): 5, 802.11ac (VHT80): 2 5745MHz ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5, 802.11n (HT40), 802.11ac (VHT40): 2, 802.11ac (VHT80): 1
Output Power	5180MHz ~ 5240MHz: 192.309mW 5260MHz ~ 5320MHz: 207.491mW 5500MHz ~ 5700MHz: 199.526mW 5745MHz ~ 5825MHz: 178.238mW
Antenna Type	PCB antenna with 0dBi gain
Antenna Connector	N/A
Accessory Device	Adapter
Data Cable Supplied	N/A

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
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)

2. All models are listed as below.

Brand	Model	Difference
D-Link	DCS-960L	All models are electrically identical, different model names are for marketing purpose.
	DCS-960LH	
	DCS-96xLxx (x = any alphanumeric character or blank)	

* The model of the DCS-960L was chosen for final test.

3. The EUT has two exterior colors for sale (white and black). The white device is identical to the black device including all the electrically design and RF parameters.

4. The EUT uses following adapters.

Adapter 1	
Brand	D-Link
Model	KSAS0050500120D5D (With Energy star V)
Input Power	100-240Vac, 50/60Hz, 0.18A
Output Power	5Vdc, 1.2A
Power Line	1.5m cable without core attached on adapter

Adapter 2	
Brand	D-Link
Model	KSAS0050500120D5D (With Energy star VI)
Input Power	100-240Vac, 50/60Hz, 0.18A
Output Power	5Vdc, 1.2A
Power Line	1.55m cable without core attached on adapter

* After pre-tested two adapters found adapter 1 was the worse, therefore chosen for final test and presented in the test report.

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	5210MHz

For 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

For 5500 ~ 5700MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530MHz	122	5610 MHz

For 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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

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

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

Radiated Emission Test (Above 1GHz):

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

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	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	29.3
-	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	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (VHT80)		106	106	OFDM	BPSK	29.3
-	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	29.3

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	5500-5700	100 to 140		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	5500-5700	100 to 140		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	29.3
-	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	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (VHT80)		106	106	OFDM	BPSK	29.3
-	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	29.3

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	27deg. C, 64%RH	120Vac, 60Hz	Chris Lin
RE<1G	29deg. C, 63%RH	120Vac, 60Hz	Chris Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Frank Liu

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98 %, duty factor shall be considered.

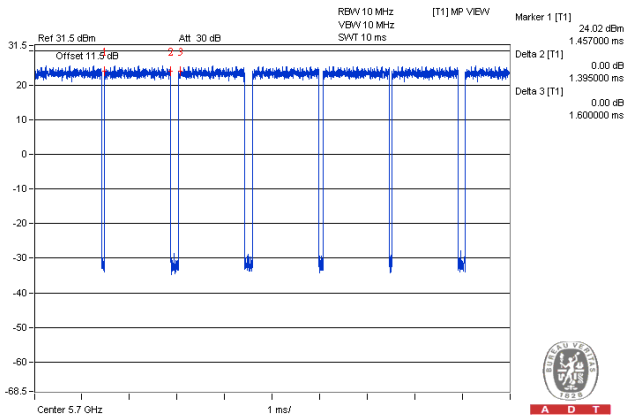
802.11a: Duty cycle = 1.395/1.600 = 0.872, Duty factor = 10 * log(1/0.872) = 0.60

802.11n (HT20): Duty cycle = 1.300/1.377 = 0.944, Duty factor = 10 * log(1/0.944) = 0.25

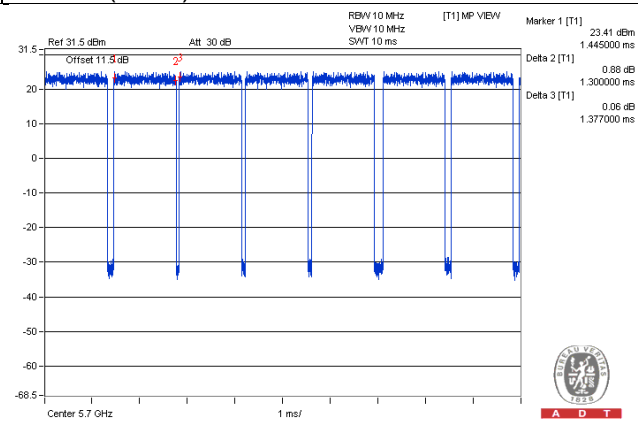
802.11n (HT40): Duty cycle = 0.646/0.756 = 0.854, Duty factor = 10 * log(1/0.854) = 0.68

802.11ac (VHT80): Duty cycle = 0.322/0.441 = 0.730, Duty factor = 10 * log(1/0.730) = 1.37

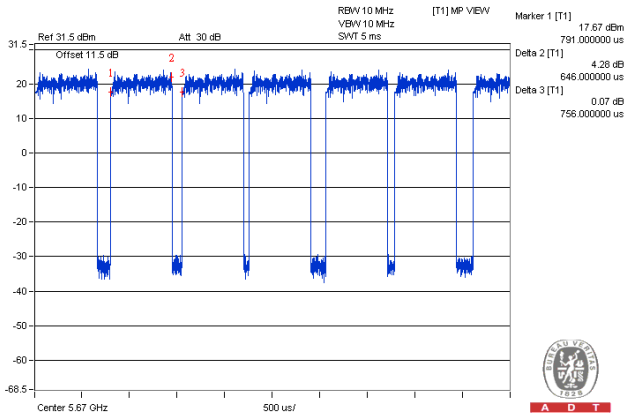
802.11a



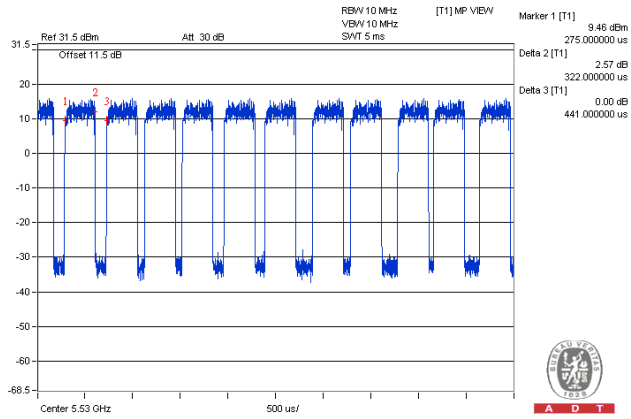
802.11n (HT20)



802.11n (HT40)



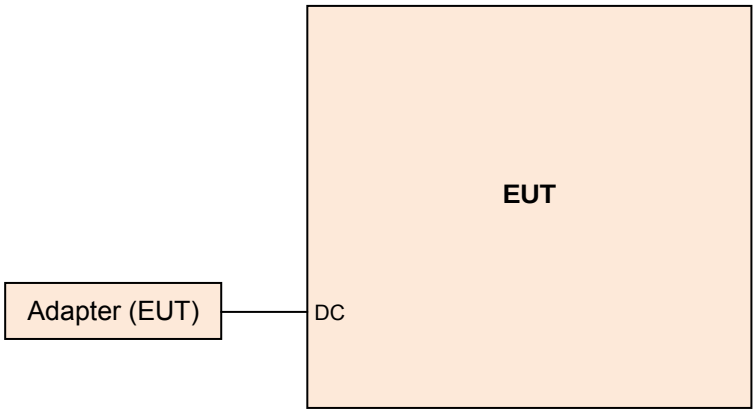
802.11ac (VHT80)



3.4 Description of Support Units

The EUT has been tested as an independent unit.

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedure New Rules v01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v01	FIELD STRENGTH AT 3m	
	PK:74 (dBμV/m)	AV:54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) [*1] PK:-17 (dBm/MHz) [*2]	PK: 68.2(dBμV/m) [*1] PK:78.2 (dBμV/m) [*2]

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 06, 2014	Oct. 05, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 08, 2014	Jul. 07, 2015
			Jul. 08, 2015	Jul. 07, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 06, 2015	Feb. 05, 2016
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Feb. 05, 2015	Feb. 04, 2016
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 09, 2015	Feb. 08, 2016
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2014	Aug. 08, 2015
			Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2014	Aug. 08, 2015
			Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309220/4	Aug. 09, 2014	Aug. 08, 2015
			Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250724/4	Aug. 09, 2014	Aug. 08, 2015
			Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 09, 2014	Aug. 08, 2015
			Aug. 09, 2015	Aug. 08, 2016
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 18, 2014	Oct. 17, 2015
High Speed Peak Power Meter	ML2495A	0824011	Jul. 09, 2014	Jul. 08, 2015
			Jul. 09, 2015	Jul. 08, 2016
Power Sensor	MA2411B	0738171	Jul. 09, 2014	Jul. 08, 2015
			Jul. 09, 2015	Jul. 08, 2016
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2014	Jun. 07, 2015
			Jun. 08, 2015	Jun. 07, 2016

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC7450F-4.

4.1.3 Test Procedures

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

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

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

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

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

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

Note:

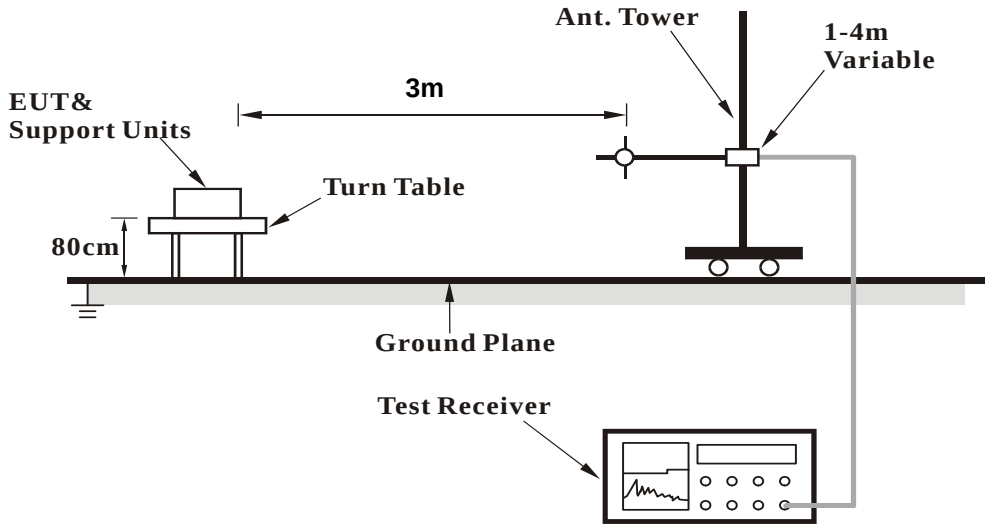
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

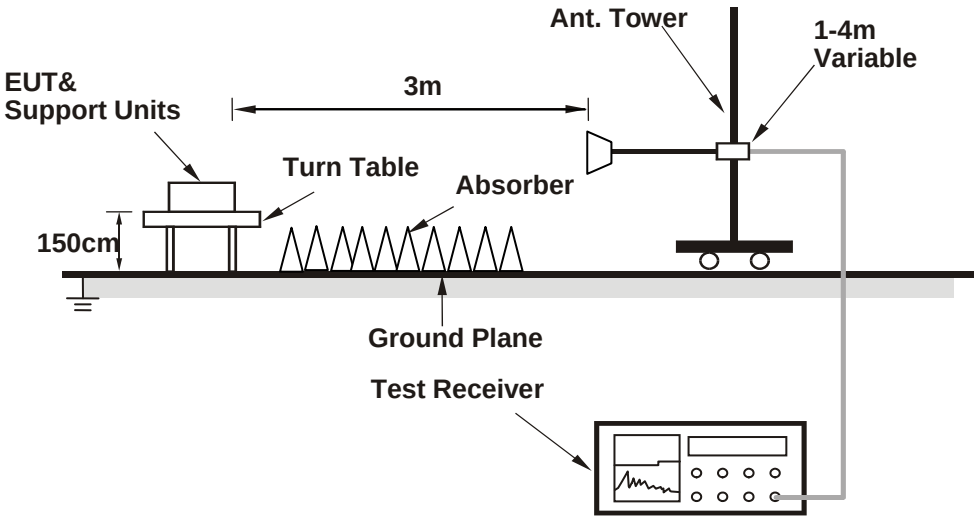
No deviation.

4.1.5 Test Set Up

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Conditions

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.5 PK	74.0	-11.5	1.20 H	66	57.20	5.30
2	5150.00	47.0 AV	54.0	-7.0	1.20 H	66	41.70	5.30
3	*5180.00	109.1 PK			1.20 H	66	69.90	39.20
4	*5180.00	99.5 AV			1.20 H	66	60.30	39.20
5	#10360.00	64.0 PK	74.0	-10.0	1.10 H	206	45.60	18.40
6	#10360.00	50.9 AV	54.0	-3.1	1.10 H	206	32.50	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.6 PK	74.0	-12.4	1.00 V	85	56.30	5.30
2	5150.00	47.0 AV	54.0	-7.0	1.00 V	85	41.70	5.30
3	*5180.00	109.5 PK			1.00 V	85	70.30	39.20
4	*5180.00	98.0 AV			1.00 V	85	58.80	39.20
5	#10360.00	65.2 PK	74.0	-8.8	1.00 V	351	46.80	18.40
6	**#10360.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**351**	**34.60**	**18.40**

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.8 PK			1.85 H	65	70.50	39.30
2	*5200.00	100.1 AV			1.85 H	65	60.80	39.30
3	#10400.00	64.0 PK	74.0	-10.0	1.07 H	205	45.80	18.20
4	#10400.00	50.3 AV	54.0	-3.7	1.07 H	205	32.10	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	110.5 PK			1.07 V	88	71.20	39.30
2	*5200.00	101.1 AV			1.07 V	88	61.80	39.30
3	#10400.00	63.9 PK	74.0	-10.1	1.10 V	354	45.70	18.20
4	#10400.00	52.5 AV	54.0	-1.5	1.10 V	354	34.30	18.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.2 PK			1.39 H	198	71.90	39.30
2	*5240.00	101.5 AV			1.39 H	198	62.20	39.30
3	5350.00	59.7 PK	74.0	-14.3	1.39 H	198	54.10	5.60
4	5350.00	49.4 AV	54.0	-4.6	1.39 H	198	43.80	5.60
5	#10480.00	59.2 PK	74.0	-14.8	1.46 H	19	41.60	17.60
6	#10480.00	48.4 AV	54.0	-5.6	1.46 H	19	30.80	17.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.3 PK			1.06 V	102	72.00	39.30
2	*5240.00	102.7 AV			1.06 V	102	63.40	39.30
3	5350.00	57.7 PK	74.0	-16.3	1.06 V	102	52.10	5.60
4	5350.00	47.8 AV	54.0	-6.2	1.06 V	102	42.20	5.60
5	#10480.00	62.9 PK	74.0	-11.1	1.25 V	233	45.30	17.60
6	#10480.00	50.9 AV	54.0	-3.1	1.25 V	233	33.30	17.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	1.54 H	318	54.10	5.30
2	5150.00	47.4 AV	54.0	-6.6	1.54 H	318	42.10	5.30
3	*5260.00	112.3 PK			1.52 H	311	73.00	39.30
4	*5260.00	102.3 AV			1.52 H	311	63.00	39.30
5	#10520.00	60.5 PK	74.0	-13.5	1.12 H	332	43.10	17.40
6	#10520.00	48.3 AV	54.0	-5.7	1.12 H	332	30.90	17.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.5 PK	74.0	-15.5	2.08 V	273	53.20	5.30
2	5150.00	47.1 AV	54.0	-6.9	2.08 V	273	41.80	5.30
3	*5260.00	111.3 PK			2.10 V	271	72.00	39.30
4	*5260.00	101.9 AV			2.10 V	271	62.60	39.30
5	#10520.00	62.4 PK	74.0	-11.6	1.00 V	351	45.00	17.40
6	#10520.00	49.5 AV	54.0	-4.5	1.00 V	351	32.10	17.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.7 PK			1.58 H	313	73.30	39.40
2	*5300.00	103.2 AV			1.58 H	313	63.80	39.40
3	10600.00	61.2 PK	74.0	-12.8	1.19 H	333	43.80	17.40
4	10600.00	48.4 AV	54.0	-5.6	1.19 H	333	31.00	17.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.6 PK			1.98 V	272	73.20	39.40
2	*5300.00	102.6 AV			1.98 V	272	63.20	39.40
3	10600.00	62.6 PK	74.0	-11.4	1.00 V	355	45.20	17.40
4	10600.00	49.8 AV	54.0	-4.2	1.00 V	355	32.40	17.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.8 PK			1.56 H	310	70.40	39.40
2	*5320.00	100.0 AV			1.56 H	310	60.60	39.40
3	5350.00	68.0 PK	74.0	-6.0	1.54 H	315	62.40	5.60
4	5350.00	52.8 AV	54.0	-1.2	1.54 H	315	47.20	5.60
5	10640.00	60.4 PK	74.0	-13.6	1.10 H	332	43.20	17.20
6	10640.00	47.6 AV	54.0	-6.4	1.10 H	332	30.40	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.7 PK			1.96 V	271	70.30	39.40
2	*5320.00	99.8 AV			1.96 V	271	60.40	39.40
3	5350.00	67.1 PK	74.0	-6.9	1.91 V	277	61.50	5.60
4	5350.00	52.4 AV	54.0	-1.6	1.91 V	277	46.80	5.60
5	10640.00	62.0 PK	74.0	-12.0	1.00 V	358	44.80	17.20
6	10640.00	49.2 AV	54.0	-4.8	1.00 V	358	32.00	17.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.4 PK	74.0	-9.6	1.75 H	302	58.50	5.90
2	5460.00	47.9 AV	54.0	-6.1	1.75 H	302	42.00	5.90
3	#5470.00	69.4 PK	74.0	-4.6	1.75 H	302	63.50	5.90
4	#5470.00	52.9 AV	54.0	-1.1	1.75 H	302	47.00	5.90
5	*5500.00	108.6 PK			1.73 H	302	68.90	39.70
6	*5500.00	98.9 AV			1.73 H	302	59.20	39.70
7	11000.00	61.1 PK	74.0	-12.9	1.02 H	343	42.60	18.50
8	11000.00	48.1 AV	54.0	-5.9	1.02 H	343	29.60	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.9 PK	74.0	-10.1	1.76 V	265	58.00	5.90
2	5460.00	47.6 AV	54.0	-6.4	1.76 V	265	41.70	5.90
3	#5470.00	68.9 PK	74.0	-5.1	1.76 V	265	63.00	5.90
4	#5470.00	52.7 AV	54.0	-1.3	1.76 V	265	46.80	5.90
5	*5500.00	108.0 PK			1.76 V	264	68.30	39.70
6	*5500.00	98.6 AV			1.76 V	264	58.90	39.70
7	11000.00	60.8 PK	74.0	-13.2	1.21 V	171	42.30	18.50
8	11000.00	47.7 AV	54.0	-6.3	1.21 V	171	29.20	18.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.2 PK			1.67 H	351	71.30	39.90
2	*5580.00	101.3 AV			1.67 H	351	61.40	39.90
3	11160.00	66.6 PK	74.0	-7.4	1.02 H	315	48.10	18.50
4	**11160.00**	**53.0 AV**	**54.0**	**-1.0**	**1.02 H**	**315**	**34.50**	**18.50**
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.7 PK			1.72 V	269	70.80	39.90
2	*5580.00	101.2 AV			1.72 V	269	61.30	39.90
3	11160.00	66.5 PK	74.0	-7.5	1.28 V	170	48.00	18.50
4	11160.00	52.8 AV	54.0	-1.2	1.28 V	170	34.30	18.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	108.4 PK			1.53 H	304	68.20	40.20
2	*5700.00	99.0 AV			1.53 H	304	58.80	40.20
3	#5725.00	70.9 PK	74.0	-3.1	1.53 H	344	64.60	6.30
4	#5725.00	52.6 AV	54.0	-1.4	1.53 H	344	46.30	6.30
5	11400.00	61.6 PK	74.0	-12.4	1.06 H	340	43.50	18.10
6	11400.00	48.9 AV	54.0	-5.1	1.06 H	340	30.80	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.8 PK			1.60 V	261	66.60	40.20
2	*5700.00	97.4 AV			1.60 V	261	57.20	40.20
3	#5725.00	67.8 PK	74.0	-6.2	1.57 V	261	61.50	6.30
4	#5725.00	50.4 AV	54.0	-3.6	1.57 V	261	44.10	6.30
5	11400.00	61.2 PK	74.0	-12.8	1.26 V	178	43.10	18.10
6	11400.00	47.9 AV	54.0	-6.1	1.26 V	178	29.80	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	67.7 PK	74.0	-6.3	1.46 H	207	61.40	6.30
2	#5714.00	49.9 AV	54.0	-4.1	1.46 H	207	43.60	6.30
3	#5722.00	73.4 PK	78.2	-4.8	1.46 H	207	67.10	6.30
4	#5725.00	71.0 PK	78.2	-7.2	1.46 H	207	64.70	6.30
5	*5745.00	109.7 PK			1.46 H	207	69.40	40.30
6	*5745.00	100.2 AV			1.46 H	207	59.90	40.30
7	11490.00	64.6 PK	74.0	-9.4	2.30 H	12	47.40	17.20
8	11490.00	51.6 AV	54.0	-2.4	2.30 H	12	34.40	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	66.8 PK	74.0	-7.2	1.08 V	266	60.50	6.30
2	#5714.00	50.2 AV	54.0	-3.8	1.08 V	266	43.90	6.30
3	#5722.00	74.0 PK	78.2	-4.2	1.08 V	266	67.70	6.30
4	#5725.00	66.8 PK	78.2	-11.4	1.08 V	266	60.50	6.30
5	*5745.00	108.7 PK			1.08 V	266	68.40	40.30
6	*5745.00	100.1 AV			1.08 V	266	59.80	40.30
7	11490.00	63.8 PK	74.0	-10.2	1.00 V	234	46.60	17.20
8	11490.00	51.0 AV	54.0	-3.0	1.00 V	234	33.80	17.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	110.0 PK			1.05 H	209	69.60	40.40
2	*5785.00	100.1 AV			1.05 H	209	59.70	40.40
3	11570.00	64.9 PK	74.0	-9.1	1.97 H	19	47.60	17.30
4	11570.00	52.0 AV	54.0	-2.0	1.97 H	19	34.70	17.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	106.8 PK			1.07 V	110	66.40	40.40
2	*5785.00	97.7 AV			1.07 V	110	57.30	40.40
3	11570.00	63.9 PK	74.0	-10.1	1.31 V	47	46.60	17.30
4	11570.00	50.5 AV	54.0	-3.5	1.31 V	47	33.20	17.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	110.0 PK			1.68 H	218	69.50	40.50
2	*5825.00	100.2 AV			1.68 H	218	59.70	40.50
3	#5850.00	58.8 PK	78.2	-19.4	1.68 H	218	52.20	6.60
4	#5853.00	67.1 PK	78.2	-11.1	1.68 H	218	60.50	6.60
5	#5861.00	63.0 PK	74.0	-11.0	1.68 H	218	56.40	6.60
6	#5861.00	48.1 AV	54.0	-5.9	1.68 H	218	41.50	6.60
7	11650.00	64.4 PK	74.0	-9.6	2.21 H	68	46.70	17.70
8	11650.00	51.7 AV	54.0	-2.3	2.21 H	68	34.00	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	108.5 PK			1.02 V	299	68.00	40.50
2	*5825.00	99.7 AV			1.02 V	299	59.20	40.50
3	#5850.00	58.2 PK	78.2	-20.0	1.02 V	299	51.60	6.60
4	#5853.00	65.3 PK	78.2	-12.9	1.02 V	299	58.70	6.60
5	#5861.00	62.1 PK	74.0	-11.9	1.02 V	299	55.50	6.60
6	#5861.00	47.3 AV	54.0	-6.7	1.02 V	299	40.70	6.60
7	11650.00	60.3 PK	74.0	-13.7	1.14 V	65	42.60	17.70
8	11650.00	48.4 AV	54.0	-5.6	1.14 V	65	30.70	17.70

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.3 PK	74.0	-10.7	1.42 H	53	58.00	5.30
2	5150.00	47.3 AV	54.0	-6.7	1.42 H	53	42.00	5.30
3	*5180.00	108.3 PK			1.42 H	53	69.10	39.20
4	*5180.00	98.7 AV			1.42 H	53	59.50	39.20
5	#10360.00	62.4 PK	74.0	-11.6	1.00 H	206	44.00	18.40
6	#10360.00	50.0 AV	54.0	-4.0	1.00 H	206	31.60	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.6 PK	74.0	-10.4	1.00 V	85	58.30	5.30
2	5150.00	47.4 AV	54.0	-6.6	1.00 V	85	42.10	5.30
3	*5180.00	109.2 PK			1.00 V	85	70.00	39.20
4	*5180.00	100.4 AV			1.00 V	85	61.20	39.20
5	#10360.00	64.9 PK	74.0	-9.1	1.22 V	354	46.50	18.40
6	#10360.00	52.2 AV	54.0	-1.8	1.22 V	354	33.80	18.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	108.9 PK			1.55 H	55	69.60	39.30
2	*5200.00	99.5 AV			1.55 H	55	60.20	39.30
3	#10400.00	61.4 PK	74.0	-12.6	1.39 H	9	43.20	18.20
4	#10400.00	49.8 AV	54.0	-4.2	1.39 H	9	31.60	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.6 PK			1.00 V	113	70.30	39.30
2	*5200.00	100.8 AV			1.00 V	113	61.50	39.30
3	#10400.00	65.3 PK	74.0	-8.7	1.14 V	2	47.10	18.20
4	#10400.00	52.2 AV	54.0	-1.8	1.14 V	2	34.00	18.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.0 PK			1.55 H	196	72.70	39.30
2	*5240.00	102.0 AV			1.55 H	196	62.70	39.30
3	5350.00	59.0 PK	74.0	-15.0	1.55 H	196	53.40	5.60
4	5350.00	48.9 AV	54.0	-5.1	1.55 H	196	43.30	5.60
5	#10480.00	59.6 PK	74.0	-14.4	1.70 H	100	42.00	17.60
6	#10480.00	48.8 AV	54.0	-5.2	1.70 H	100	31.20	17.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.3 PK			1.00 V	90	72.00	39.30
2	*5240.00	102.5 AV			1.00 V	90	63.20	39.30
3	5350.00	56.8 PK	74.0	-17.2	1.00 V	90	51.20	5.60
4	5350.00	46.1 AV	54.0	-7.9	1.00 V	90	40.50	5.60
5	#10480.00	62.3 PK	74.0	-11.7	1.10 V	358	44.70	17.60
6	#10480.00	50.5 AV	54.0	-3.5	1.10 V	358	32.90	17.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.5 PK	74.0	-14.5	1.78 H	315	54.20	5.30
2	5150.00	47.8 AV	54.0	-6.2	1.78 H	315	42.50	5.30
3	*5260.00	113.2 PK			1.77 H	311	73.90	39.30
4	*5260.00	102.8 AV			1.77 H	311	63.50	39.30
5	#10520.00	61.1 PK	74.0	-12.9	1.13 H	333	43.70	17.40
6	#10520.00	48.8 AV	54.0	-5.2	1.13 H	333	31.40	17.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	2.08 V	274	53.40	5.30
2	5150.00	47.5 AV	54.0	-6.5	2.08 V	274	42.20	5.30
3	*5260.00	112.5 PK			2.10 V	272	73.20	39.30
4	*5260.00	101.9 AV			2.10 V	272	62.60	39.30
5	#10520.00	62.7 PK	74.0	-11.3	1.00 V	354	45.30	17.40
6	#10520.00	49.8 AV	54.0	-4.2	1.00 V	354	32.40	17.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.2 PK			1.57 H	310	73.80	39.40
2	*5300.00	102.7 AV			1.57 H	310	63.30	39.40
3	10600.00	61.5 PK	74.0	-12.5	1.11 H	337	44.10	17.40
4	10600.00	48.6 AV	54.0	-5.4	1.11 H	337	31.20	17.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.9 PK			2.18 V	272	72.50	39.40
2	*5300.00	101.9 AV			2.18 V	272	62.50	39.40
3	10600.00	62.7 PK	74.0	-11.3	1.00 V	350	45.30	17.40
4	10600.00	50.0 AV	54.0	-4.0	1.00 V	350	32.60	17.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.0 PK			1.56 H	305	69.60	39.40
2	*5320.00	99.0 AV			1.56 H	305	59.60	39.40
3	5350.00	67.5 PK	74.0	-6.5	1.56 H	302	61.90	5.60
4	5350.00	52.5 AV	54.0	-1.5	1.56 H	302	46.90	5.60
5	10640.00	60.9 PK	74.0	-13.1	1.14 H	338	43.70	17.20
6	10640.00	47.9 AV	54.0	-6.1	1.14 H	338	30.70	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	108.7 PK			1.96 V	271	69.30	39.40
2	*5320.00	98.1 AV			1.96 V	271	58.70	39.40
3	5350.00	67.4 PK	74.0	-6.6	1.94 V	276	61.80	5.60
4	5350.00	52.4 AV	54.0	-1.6	1.94 V	276	46.80	5.60
5	10640.00	62.2 PK	74.0	-11.8	1.00 V	352	45.00	17.20
6	10640.00	49.5 AV	54.0	-4.5	1.00 V	352	32.30	17.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.7 PK	74.0	-11.3	1.53 H	304	56.80	5.90
2	5460.00	47.6 AV	54.0	-6.4	1.53 H	304	41.70	5.90
3	#5470.00	69.3 PK	74.0	-4.7	1.53 H	304	63.40	5.90
4	#5470.00	52.7 AV	54.0	-1.3	1.53 H	304	46.80	5.90
5	*5500.00	108.5 PK			1.50 H	300	68.80	39.70
6	*5500.00	98.7 AV			1.50 H	300	59.00	39.70
7	11000.00	61.3 PK	74.0	-12.7	1.01 H	347	42.80	18.50
8	11000.00	48.5 AV	54.0	-5.5	1.01 H	347	30.00	18.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.5 PK	74.0	-11.5	1.94 V	252	56.60	5.90
2	5460.00	47.3 AV	54.0	-6.7	1.94 V	252	41.40	5.90
3	#5470.00	68.7 PK	74.0	-5.3	1.94 V	252	62.80	5.90
4	#5470.00	52.5 AV	54.0	-1.5	1.94 V	252	46.60	5.90
5	*5500.00	107.3 PK			1.96 V	256	67.60	39.70
6	*5500.00	97.0 AV			1.96 V	256	57.30	39.70
7	11000.00	60.9 PK	74.0	-13.1	1.22 V	176	42.40	18.50
8	11000.00	48.0 AV	54.0	-6.0	1.22 V	176	29.50	18.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	111.2 PK			1.81 H	347	71.30	39.90
2	*5580.00	101.0 AV			1.81 H	347	61.10	39.90
3	11160.00	66.4 PK	74.0	-7.6	1.00 H	314	47.90	18.50
4	**11160.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 H**	**314**	**34.50**	**18.50**
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.2 PK			1.71 V	266	70.30	39.90
2	*5580.00	100.0 AV			1.71 V	266	60.10	39.90
3	11160.00	66.2 PK	74.0	-7.8	1.20 V	172	47.70	18.50
4	11160.00	52.1 AV	54.0	-1.9	1.20 V	172	33.60	18.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.7 PK			1.52 H	304	67.50	40.20
2	*5700.00	97.8 AV			1.52 H	304	57.60	40.20
3	#5725.00	70.3 PK	74.0	-3.7	1.52 H	344	64.00	6.30
4	#5725.00	52.9 AV	54.0	-1.1	1.52 H	344	46.60	6.30
5	11400.00	62.2 PK	74.0	-11.8	1.02 H	344	44.10	18.10
6	11400.00	49.3 AV	54.0	-4.7	1.02 H	344	31.20	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	105.8 PK			1.58 V	258	65.60	40.20
2	*5700.00	96.1 AV			1.58 V	258	55.90	40.20
3	#5725.00	68.3 PK	74.0	-5.7	1.50 V	253	62.00	6.30
4	#5725.00	50.5 AV	54.0	-3.5	1.50 V	253	44.20	6.30
5	11400.00	61.4 PK	74.0	-12.6	1.23 V	173	43.30	18.10
6	11400.00	48.4 AV	54.0	-5.6	1.23 V	173	30.30	18.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	65.6 PK	74.0	-8.4	1.00 H	220	59.30	6.30
2	#5714.00	50.7 AV	54.0	-3.3	1.00 H	220	44.40	6.30
3	#5722.00	76.5 PK	78.2	-1.7	1.00 H	220	70.20	6.30
4	#5725.00	71.1 PK	78.2	-7.1	1.00 H	220	64.80	6.30
5	*5745.00	109.1 PK			1.00 H	220	68.80	40.30
6	*5745.00	99.9 AV			1.00 H	220	59.60	40.30
7	11490.00	63.6 PK	74.0	-10.4	1.25 H	26	46.40	17.20
8	11490.00	50.6 AV	54.0	-3.4	1.25 H	26	33.40	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	63.2 PK	74.0	-10.8	1.73 V	280	56.90	6.30
2	#5714.00	47.8 AV	54.0	-6.2	1.73 V	280	41.50	6.30
3	#5722.00	74.2 PK	78.2	-4.0	1.73 V	280	67.90	6.30
4	#5725.00	68.5 PK	78.2	-9.7	1.73 V	280	62.20	6.30
5	*5745.00	107.5 PK			1.73 V	280	67.20	40.30
6	*5745.00	97.9 AV			1.73 V	280	57.60	40.30
7	11490.00	61.8 PK	74.0	-12.2	2.14 V	249	44.60	17.20
8	11490.00	49.3 AV	54.0	-4.7	2.14 V	249	32.10	17.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	109.0 PK			1.00 H	226	68.60	40.40
2	*5785.00	101.0 AV			1.00 H	226	60.60	40.40
3	11570.00	63.4 PK	74.0	-10.6	1.18 H	19	46.10	17.30
4	11570.00	51.1 AV	54.0	-2.9	1.18 H	19	33.80	17.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	107.7 PK			1.01 V	139	67.30	40.40
2	*5785.00	98.2 AV			1.01 V	139	57.80	40.40
3	11570.00	62.9 PK	74.0	-11.1	1.17 V	59	45.60	17.30
4	11570.00	50.4 AV	54.0	-3.6	1.17 V	59	33.10	17.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	109.8 PK			1.66 H	220	69.30	40.50
2	*5825.00	100.0 AV			1.66 H	220	59.50	40.50
3	#5850.00	62.5 PK	78.2	-15.7	1.66 H	220	55.90	6.60
4	#5853.00	71.2 PK	78.2	-7.0	1.66 H	220	64.60	6.60
5	#5861.00	64.1 PK	74.0	-9.9	1.66 H	220	57.50	6.60
6	#5861.00	48.3 AV	54.0	-5.7	1.66 H	220	41.70	6.60
7	11650.00	63.0 PK	74.0	-11.0	1.17 H	70	45.30	17.70
8	11650.00	50.7 AV	54.0	-3.3	1.17 H	70	33.00	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	107.4 PK			1.42 V	283	66.90	40.50
2	*5825.00	97.9 AV			1.42 V	283	57.40	40.50
3	#5850.00	61.2 PK	78.2	-17.0	1.42 V	283	54.60	6.60
4	#5853.00	70.3 PK	78.2	-7.9	1.42 V	283	63.70	6.60
5	#5861.00	64.5 PK	74.0	-9.5	1.42 V	283	57.90	6.60
6	#5861.00	47.7 AV	54.0	-6.3	1.42 V	283	41.10	6.60
7	11650.00	59.4 PK	74.0	-14.6	1.23 V	213	41.70	17.70
8	11650.00	48.5 AV	54.0	-5.5	1.23 V	213	30.80	17.70

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.7 PK	74.0	-6.3	1.60 H	199	62.40	5.30
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.60 H**	**199**	**47.70**	**5.30**
3	*5190.00	104.6 PK			1.60 H	199	65.40	39.20
4	*5190.00	94.3 AV			1.60 H	199	55.10	39.20
5	#10380.00	60.8 PK	74.0	-13.2	1.47 H	87	42.60	18.20
6	#10380.00	48.6 AV	54.0	-5.4	1.47 H	87	30.40	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.6 PK	74.0	-5.4	1.00 V	99	63.30	5.30
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**99**	**47.70**	**5.30**
3	*5190.00	104.3 PK			1.00 V	99	65.10	39.20
4	*5190.00	95.3 AV			1.00 V	99	56.10	39.20
5	#10380.00	60.8 PK	74.0	-13.2	1.23 V	302	42.60	18.20
6	#10380.00	46.9 AV	54.0	-7.1	1.23 V	302	28.70	18.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	108.5 PK			1.59 H	198	69.20	39.30
2	*5230.00	98.6 AV			1.59 H	198	59.30	39.30
3	5350.00	59.7 PK	74.0	-14.3	1.59 H	198	54.10	5.60
4	5350.00	48.8 AV	54.0	-5.2	1.59 H	198	43.20	5.60
5	#10460.00	60.3 PK	74.0	-13.7	1.47 H	89	42.60	17.70
6	#10460.00	48.1 AV	54.0	-5.9	1.47 H	89	30.40	17.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	107.6 PK			1.00 V	90	68.30	39.30
2	*5230.00	99.2 AV			1.00 V	90	59.90	39.30
3	5350.00	57.6 PK	74.0	-16.4	1.00 V	90	52.00	5.60
4	5350.00	47.1 AV	54.0	-6.9	1.00 V	90	41.50	5.60
5	#10460.00	60.3 PK	74.0	-13.7	1.47 V	87	42.60	17.70
6	#10460.00	48.1 AV	54.0	-5.9	1.47 V	87	30.40	17.70

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.9 PK	74.0	-12.1	1.51 H	307	56.60	5.30
2	5150.00	48.8 AV	54.0	-5.2	1.51 H	307	43.50	5.30
3	*5270.00	108.9 PK			1.52 H	309	69.60	39.30
4	*5270.00	98.6 AV			1.52 H	309	59.30	39.30
5	#10540.00	59.7 PK	74.0	-14.3	1.16 H	338	42.30	17.40
6	#10540.00	47.9 AV	54.0	-6.1	1.16 H	338	30.50	17.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.5 PK	74.0	-12.5	2.11 V	268	56.20	5.30
2	5150.00	48.6 AV	54.0	-5.4	2.11 V	268	43.30	5.30
3	*5270.00	108.7 PK			2.10 V	270	69.40	39.30
4	*5270.00	98.0 AV			2.10 V	270	58.70	39.30
5	#10540.00	62.1 PK	74.0	-11.9	1.00 V	359	44.70	17.40
6	#10540.00	48.8 AV	54.0	-5.2	1.00 V	359	31.40	17.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	104.2 PK			1.56 H	308	64.80	39.40
2	*5310.00	93.8 AV			1.56 H	308	54.40	39.40
3	5350.00	70.8 PK	74.0	-3.2	1.50 H	306	65.20	5.60
4	5350.00	52.8 AV	54.0	-1.2	1.50 H	306	47.20	5.60
5	10620.00	59.2 PK	74.0	-14.8	1.16 H	336	41.90	17.30
6	10620.00	47.2 AV	54.0	-6.8	1.16 H	336	29.90	17.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	103.7 PK			2.18 V	269	64.30	39.40
2	*5310.00	93.7 AV			2.18 V	269	54.30	39.40
3	5350.00	70.7 PK	74.0	-3.3	2.12 V	269	65.10	5.60
4	5350.00	52.0 AV	54.0	-2.0	2.12 V	269	46.40	5.60
5	10620.00	61.7 PK	74.0	-12.3	1.00 V	351	44.40	17.30
6	10620.00	48.0 AV	54.0	-6.0	1.00 V	351	30.70	17.30

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	66.1 PK	74.0	-7.9	1.50 H	307	60.20	5.90
2	5460.00	50.6 AV	54.0	-3.4	1.50 H	307	44.70	5.90
3	#5470.00	68.3 PK	74.0	-5.7	1.50 H	307	62.40	5.90
4	#5470.00	52.7 AV	54.0	-1.3	1.50 H	307	46.80	5.90
5	*5510.00	103.7 PK			1.58 H	303	64.00	39.70
6	*5510.00	93.1 AV			1.58 H	303	53.40	39.70
7	11020.00	60.7 PK	74.0	-13.3	1.00 H	317	42.30	18.40
8	11020.00	47.7 AV	54.0	-6.3	1.00 H	317	29.30	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.7 PK	74.0	-8.3	1.90 V	263	59.80	5.90
2	5460.00	50.3 AV	54.0	-3.7	1.90 V	263	44.40	5.90
3	#5470.00	68.1 PK	74.0	-5.9	1.90 V	263	62.20	5.90
4	#5470.00	52.6 AV	54.0	-1.4	1.90 V	263	46.70	5.90
5	*5510.00	103.0 PK			1.94 V	267	63.30	39.70
6	*5510.00	92.7 AV			1.94 V	267	53.00	39.70
7	11020.00	60.3 PK	74.0	-13.7	1.20 V	173	41.90	18.40
8	11020.00	47.3 AV	54.0	-6.7	1.20 V	173	28.90	18.40

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.5 PK	74.0	-6.5	1.58 H	340	61.60	5.90
2	#5470.00	52.8 AV	54.0	-1.2	1.58 H	340	46.90	5.90
3	*5550.00	108.3 PK			1.57 H	346	68.40	39.90
4	*5550.00	97.9 AV			1.57 H	346	58.00	39.90
5	11100.00	65.6 PK	74.0	-8.4	1.00 H	313	47.60	18.00
6	11100.00	51.6 AV	54.0	-2.4	1.00 H	313	33.60	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	67.2 PK	74.0	-6.8	1.75 V	267	61.30	5.90
2	#5470.00	52.5 AV	54.0	-1.5	1.75 V	267	46.60	5.90
3	*5550.00	108.1 PK			1.76 V	265	68.20	39.90
4	*5550.00	97.8 AV			1.76 V	265	57.90	39.90
5	11100.00	65.3 PK	74.0	-8.7	1.22 V	172	47.30	18.00
6	11100.00	50.7 AV	54.0	-3.3	1.22 V	172	32.70	18.00

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	107.3 PK			1.87 H	345	67.10	40.20
2	*5670.00	97.0 AV			1.87 H	345	56.80	40.20
3	#5725.00	67.7 PK	74.0	-6.3	1.81 H	345	61.40	6.30
4	#5725.00	52.8 AV	54.0	-1.2	1.81 H	345	46.50	6.30
5	11340.00	61.4 PK	74.0	-12.6	1.07 H	349	42.40	19.00
6	11340.00	48.7 AV	54.0	-5.3	1.07 H	349	29.70	19.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.8 PK			2.06 V	262	65.60	40.20
2	*5670.00	95.6 AV			2.06 V	262	55.40	40.20
3	#5725.00	66.7 PK	74.0	-7.3	2.03 V	263	60.40	6.30
4	#5725.00	51.0 AV	54.0	-3.0	2.03 V	263	44.70	6.30
5	11340.00	60.4 PK	74.0	-13.6	1.20 V	176	41.40	19.00
6	11340.00	47.1 AV	54.0	-6.9	1.20 V	176	28.10	19.00

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	71.9 PK	74.0	-2.1	1.00 H	231	65.60	6.30
2	**#5714.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 H**	**231**	**46.70**	**6.30**
3	#5722.00	73.1 PK	78.2	-5.1	1.00 H	231	66.80	6.30
4	#5725.00	63.3 PK	78.2	-14.9	1.00 H	231	57.00	6.30
5	*5755.00	105.0 PK			1.00 H	231	64.70	40.30
6	*5755.00	94.3 AV			1.00 H	231	54.00	40.30
7	11510.00	58.7 PK	74.0	-15.3	1.34 H	110	41.60	17.10
8	11510.00	46.1 AV	54.0	-7.9	1.34 H	110	29.00	17.10
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	#5714.00	68.0 PK	74.0	-6.0	1.16 V	122	61.70	6.30
2	#5714.00	51.1 AV	54.0	-2.9	1.16 V	122	44.80	6.30
3	#5722.00	72.1 PK	78.2	-6.1	1.16 V	122	65.80	6.30
4	#5725.00	63.0 PK	78.2	-15.2	1.16 V	122	56.70	6.30
5	*5755.00	103.1 PK			1.16 V	122	62.80	40.30
6	*5755.00	93.2 AV			1.16 V	122	52.90	40.30
7	11510.00	59.7 PK	74.0	-14.3	1.47 V	77	42.60	17.10
8	11510.00	47.0 AV	54.0	-7.0	1.47 V	77	29.90	17.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	107.6 PK			1.00 H	219	67.20	40.40
2	*5795.00	97.3 AV			1.00 H	219	56.90	40.40
3	#5850.00	57.5 PK	78.2	-20.7	1.00 H	219	50.90	6.60
4	#5853.00	66.0 PK	78.2	-12.2	1.00 H	219	59.40	6.60
5	#5861.00	65.3 PK	74.0	-8.7	1.00 H	219	58.70	6.60
6	#5861.00	48.7 AV	54.0	-5.3	1.00 H	219	42.10	6.60
7	11550.00	60.1 PK	74.0	-13.9	1.47 H	87	43.00	17.10
8	11550.00	47.0 AV	54.0	-7.0	1.47 H	87	29.90	17.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	104.1 PK			1.01 V	128	63.70	40.40
2	*5795.00	94.2 AV			1.01 V	128	53.80	40.40
3	#5850.00	52.6 PK	78.2	-25.6	1.01 V	128	46.00	6.60
4	#5853.00	61.2 PK	78.2	-17.0	1.01 V	128	54.60	6.60
5	#5861.00	59.1 PK	74.0	-14.9	1.01 V	128	52.50	6.60
6	#5861.00	47.0 AV	54.0	-7.0	1.01 V	128	40.40	6.60
7	11550.00	60.1 PK	74.0	-13.9	1.47 V	87	43.00	17.10
8	11550.00	45.8 AV	54.0	-8.2	1.47 V	87	28.70	17.10

Remarks:

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

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.2 PK	74.0	-5.8	1.40 H	311	62.90	5.30
2	5150.00	52.6 AV	54.0	-1.4	1.40 H	311	47.30	5.30
3	*5210.00	102.6 PK			1.44 H	310	63.30	39.30
4	*5210.00	91.1 AV			1.44 H	310	51.80	39.30
5	#10420.00	60.6 PK	74.0	-13.4	1.00 H	342	42.60	18.00
6	#10420.00	46.2 AV	54.0	-7.8	1.00 H	342	28.20	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.2 PK	74.0	-12.8	1.07 V	67	55.90	5.30
2	5150.00	50.1 AV	54.0	-3.9	1.07 V	67	44.80	5.30
3	*5210.00	99.5 PK			1.05 V	70	60.20	39.30
4	*5210.00	87.5 AV			1.05 V	70	48.20	39.30
5	#10420.00	60.7 PK	74.0	-13.3	2.14 V	350	42.70	18.00
6	#10420.00	48.2 AV	54.0	-5.8	2.14 V	350	30.20	18.00

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	102.2 PK			1.82 H	310	62.90	39.30
2	*5290.00	90.4 AV			1.82 H	310	51.10	39.30
3	5350.00	66.7 PK	74.0	-7.3	1.88 H	307	61.10	5.60
4	5350.00	52.7 AV	54.0	-1.3	1.88 H	307	47.10	5.60
5	#10580.00	58.4 PK	74.0	-15.6	1.11 H	335	41.10	17.30
6	#10580.00	46.5 AV	54.0	-7.5	1.11 H	335	29.20	17.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	101.5 PK			2.08 V	270	62.20	39.30
2	*5290.00	90.1 AV			2.08 V	270	50.80	39.30
3	5350.00	66.3 PK	74.0	-7.7	2.05 V	268	60.70	5.60
4	5350.00	51.9 AV	54.0	-2.1	2.05 V	268	46.30	5.60
5	#10580.00	61.4 PK	74.0	-12.6	1.00 V	353	44.10	17.30
6	#10580.00	47.1 AV	54.0	-6.9	1.00 V	353	29.80	17.30

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.9 PK	74.0	-6.1	1.54 H	309	62.00	5.90
2	5460.00	52.4 AV	54.0	-1.6	1.54 H	309	46.50	5.90
3	#5470.00	68.6 PK	74.0	-5.4	1.54 H	309	62.70	5.90
4	#5470.00	52.9 AV	54.0	-1.1	1.54 H	309	47.00	5.90
5	*5530.00	100.4 PK			1.58 H	301	60.60	39.80
6	*5530.00	88.8 AV			1.58 H	301	49.00	39.80
7	11060.00	60.4 PK	74.0	-13.6	1.00 H	313	42.20	18.20
8	11060.00	46.9 AV	54.0	-7.1	1.00 H	313	28.70	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.6 PK	74.0	-6.4	1.95 V	260	61.70	5.90
2	5460.00	52.1 AV	54.0	-1.9	1.95 V	260	46.20	5.90
3	#5470.00	68.4 PK	74.0	-5.6	1.95 V	260	62.50	5.90
4	#5470.00	52.7 AV	54.0	-1.3	1.95 V	260	46.80	5.90
5	*5530.00	100.0 PK			1.94 V	261	60.20	39.80
6	*5530.00	86.5 AV			1.94 V	261	46.70	39.80
7	11060.00	60.0 PK	74.0	-14.0	1.25 V	170	41.80	18.20
8	11060.00	46.3 AV	54.0	-7.7	1.25 V	170	28.10	18.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.00	70.9 PK	74.0	-3.1	1.72 H	222	64.60	6.30
2	#5714.00	52.9 AV	54.0	-1.1	1.72 H	222	46.60	6.30
3	#5722.00	75.0 PK	78.2	-3.2	1.72 H	222	68.70	6.30
4	#5725.00	64.5 PK	78.2	-13.7	1.72 H	222	58.20	6.30
5	*5775.00	103.1 PK			1.72 H	222	62.70	40.40
6	*5775.00	93.7 AV			1.72 H	222	53.30	40.40
7	#5850.00	61.2 PK	78.2	-17.0	1.72 H	222	54.60	6.60
8	#5853.00	71.2 PK	78.2	-7.0	1.72 H	222	64.60	6.60
9	#5861.00	71.6 PK	74.0	-2.4	1.72 H	222	65.00	6.60
10	**#5861.00**	**53.0 AV**	**54.0**	**-1.0**	**1.72 H**	**222**	**46.40**	**6.60**
11	11550.00	59.7 PK	74.0	-14.3	1.36 H	97	42.60	17.10
12	11550.00	46.1 AV	54.0	-7.9	1.36 H	97	29.00	17.10
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	#5714.00	68.5 PK	74.0	-5.5	1.15 V	127	62.20	6.30
2	#5714.00	50.0 AV	54.0	-4.0	1.15 V	127	43.70	6.30
3	#5722.00	71.5 PK	78.2	-6.7	1.15 V	127	65.20	6.30
4	#5725.00	65.3 PK	78.2	-12.9	1.15 V	127	59.00	6.30
5	*5775.00	99.6 PK			1.15 V	127	59.20	40.40
6	*5775.00	88.6 AV			1.15 V	127	48.20	40.40
7	#5850.00	61.6 PK	78.2	-16.6	1.15 V	127	55.00	6.60
8	#5853.00	63.8 PK	78.2	-14.4	1.15 V	127	57.20	6.60
9	#5861.00	65.2 PK	74.0	-8.8	1.15 V	127	58.60	6.60
10	#5861.00	48.1 AV	54.0	-5.9	1.15 V	127	41.50	6.60
11	11550.00	59.7 PK	74.0	-14.3	1.39 V	87	42.60	17.10
12	11550.00	45.8 AV	54.0	-8.2	1.39 V	87	28.70	17.10

Remarks:

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

Below 1GHz 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	41.54	22.0 QP	40.0	-18.0	1.49 H	6	36.50	-14.50
2	177.37	24.3 QP	43.5	-19.2	1.99 H	245	39.20	-14.90
3	249.17	35.0 QP	46.0	-11.0	1.24 H	87	49.40	-14.40
4	375.29	29.0 QP	46.0	-17.0	1.00 H	43	40.20	-11.20
5	499.48	29.5 QP	46.0	-16.5	1.49 H	155	38.40	-8.90
6	837.11	32.8 QP	46.0	-13.2	1.99 H	1	35.30	-2.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	51.24	26.0 QP	40.0	-14.0	1.25 V	25	40.10	-14.10
2	249.17	25.8 QP	46.0	-20.2	1.25 V	159	40.20	-14.40
3	375.29	27.0 QP	46.0	-19.0	1.51 V	267	38.20	-11.20
4	602.32	28.1 QP	46.0	-17.9	1.51 V	262	34.80	-6.70
5	792.48	31.9 QP	46.0	-14.1	1.25 V	6	35.20	-3.30
6	938.01	36.6 QP	46.0	-9.4	2.00 V	8	37.60	-1.00

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 11, 2014	Nov. 10, 2015
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 26, 2014	Dec. 25, 2015
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2015	Feb. 25, 2016
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2014	Jul. 23, 2015
			Jul. 24, 2015	Jul. 23, 2016
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Notes: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

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

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

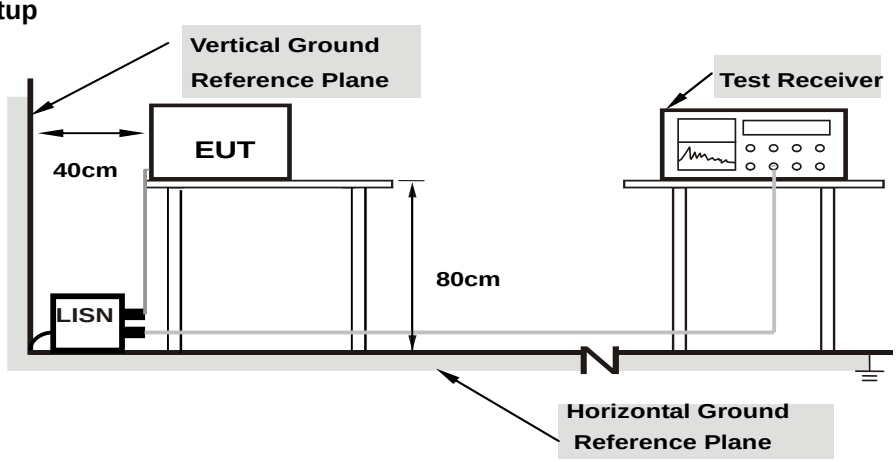
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

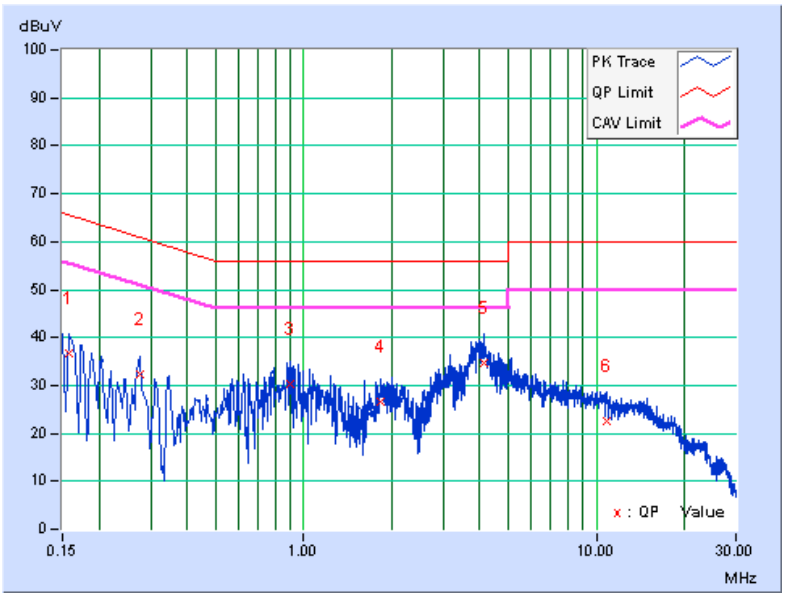
4.2.7 Test Results

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15802	0.08	36.55	23.01	36.63	23.09	65.57	55.57	-28.93	-32.47
2	0.27512	0.12	32.24	26.49	32.36	26.61	60.96	50.96	-28.60	-24.35
3	0.90072	0.16	30.06	18.71	30.22	18.87	56.00	46.00	-25.78	-27.13
4	1.84303	0.21	26.40	14.96	26.61	15.17	56.00	46.00	-29.39	-30.83
5	**4.12647**	**0.25**	**34.59**	**23.68**	**34.84**	**23.93**	**56.00**	**46.00**	**-21.16**	**-22.07**
6	10.81257	0.52	21.92	12.93	22.44	13.45	60.00	50.00	-37.56	-36.55

Remarks:

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

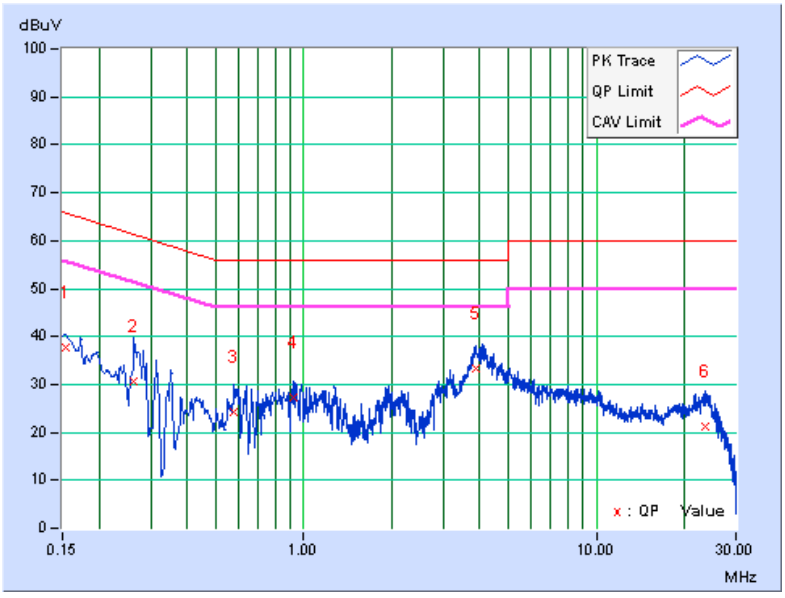


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.13	37.50	26.78	37.63	26.91	65.79	55.79	-28.16	-28.88
2	0.26346	0.22	30.58	16.04	30.80	16.26	61.32	51.32	-30.52	-35.06
3	0.58010	0.17	23.96	12.56	24.13	12.73	56.00	46.00	-31.87	-33.27
4	0.92809	0.18	27.24	12.45	27.42	12.63	56.00	46.00	-28.58	-33.37
5	3.86841	0.38	32.99	23.68	33.37	24.06	56.00	46.00	-22.63	-21.94
6	23.54744	0.91	20.40	5.53	21.31	6.44	60.00	50.00	-38.69	-43.56

Remarks:

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



4.3 Transmit Power Measurment

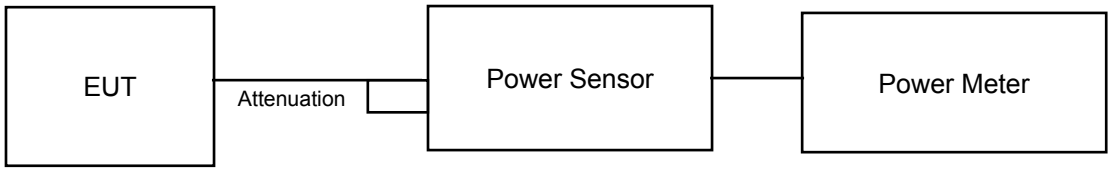
4.3.1 Limits of Transmit Power Measurement

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

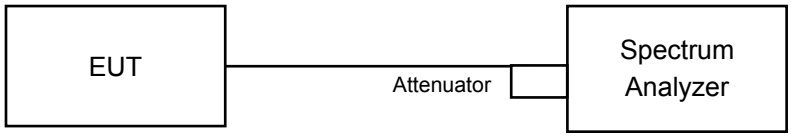
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output Measurement



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)

a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

b. Set sweep trigger to “free run”.

c. Set RBW = 1 MHz.

d. 4Set VBW ≥ 3 MHz

e. Number of points in sweep ≥ 2 Span / RBW.

f. Sweep time ≤ (number of points in sweep) * T

g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.

h. Detector = RMS.

i. Trace mode = max hold.

j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

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	166.341	22.21	24	Pass
40	5200	186.209	22.70	24	Pass
48	5240	105.196	20.22	24	Pass
52	5260	203.236	23.08	24	Pass
60	5300	199.986	23.01	24	Pass
64	5320	141.254	21.50	24	Pass
100	5500	112.202	20.50	24	Pass
116	5580	185.780	22.69	24	Pass
140	5700	109.144	20.38	24	Pass
149	5745	168.267	22.26	30	Pass
157	5785	160.694	22.06	30	Pass
165	5825	174.582	22.42	30	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log (48.21) = 27.83 > 24dBm
2. 11dBm + 10log (48.61) = 27.87 > 24dBm
3. 11dBm + 10log (42.33) = 27.27 > 24dBm
4. 11dBm + 10log (39.20) = 26.93 > 24dBm
5. 11dBm + 10log (47.00) = 27.72 > 24dBm
6. 11dBm + 10log (39.27) = 26.94 > 24dBm

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	162.930	22.12	24	Pass
40	5200	**192.309**	22.84	24	Pass
48	5240	106.414	20.27	24	Pass
52	5260	**207.491**	23.17	24	Pass
60	5300	195.884	22.92	24	Pass
64	5320	150.661	21.78	24	Pass
100	5500	101.391	20.06	24	Pass
116	5580	195.434	22.91	24	Pass
140	5700	103.753	20.16	24	Pass
149	5745	149.968	21.76	30	Pass
157	5785	171.396	22.34	30	Pass
165	5825	**178.238**	22.51	30	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log (52.36) = 28.19 > 24dBm
2. 11dBm + 10log (53.34) = 28.27 > 24dBm
3. 11dBm + 10log (45.53) = 27.58 > 24dBm
4. 11dBm + 10log (39.42) = 26.96 > 24dBm
5. 11dBm + 10log (50.17) = 28.00 > 24dBm
6. 11dBm + 10log (39.56) = 26.97 > 24dBm

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	118.304	20.73	24	Pass
46	5230	86.099	19.35	24	Pass
54	5270	205.116	23.12	24	Pass
62	5310	105.439	20.23	24	Pass
102	5510	75.336	18.77	24	Pass
110	5550	**199.526**	23.00	24	Pass
134	5670	120.226	20.80	24	Pass
151	5755	125.893	21.00	30	Pass
159	5795	160.325	22.05	30	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log (99.36) = 30.97 > 24dBm
2. 11dBm + 10log (85.90) = 30.34 > 24dBm
3. 11dBm + 10log (80.37) = 30.05 > 24dBm
4. 11dBm + 10log (99.40) = 30.97 > 24dBm
5. 11dBm + 10log (96.31) = 30.84 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	97.949	19.91	24	Pass
58	5290	78.705	18.96	24	Pass
106	5530	48.306	16.84	24	Pass
155	5775	126.474	21.02	30	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log (110.34) = 31.43 > 24dBm
2. 11dBm + 10log (97.07) = 30.87 > 24dBm

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
36	5180	46.38	Pass
40	5200	47.32	Pass
48	5240	34.82	Pass
52	5260	48.21	Pass
60	5300	48.61	Pass
64	5320	42.33	Pass
100	5500	39.20	Pass
116	5580	47.00	Pass
140	5700	39.27	Pass

802.11n (HT20)

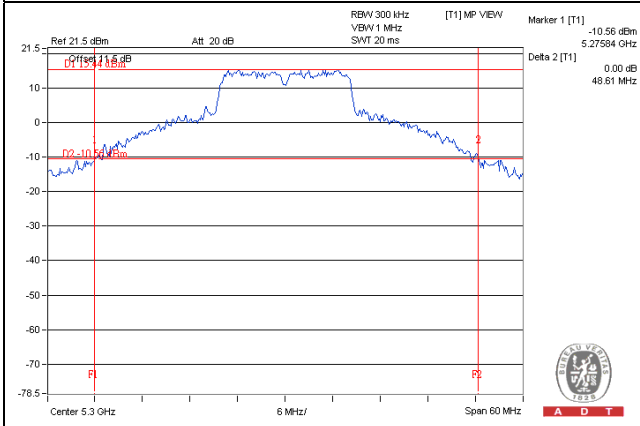
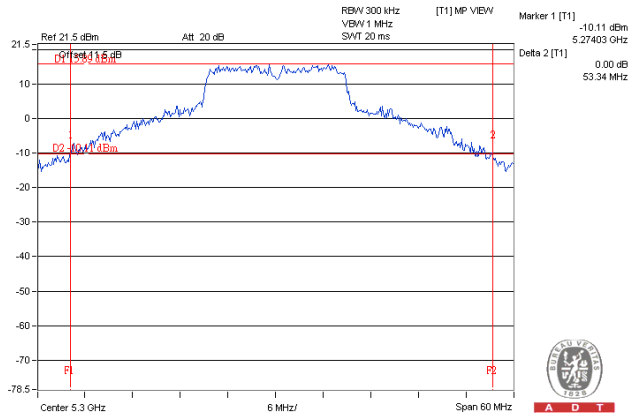
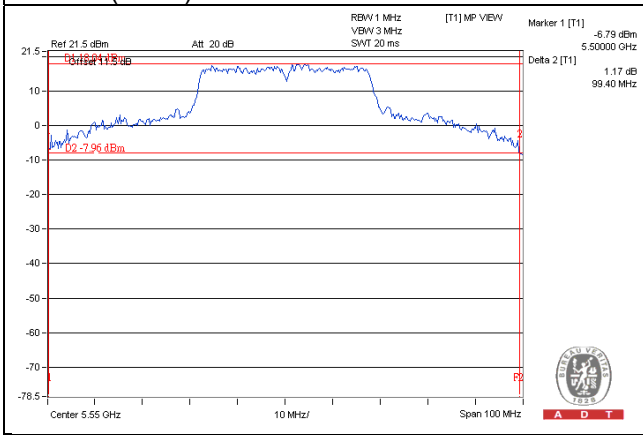
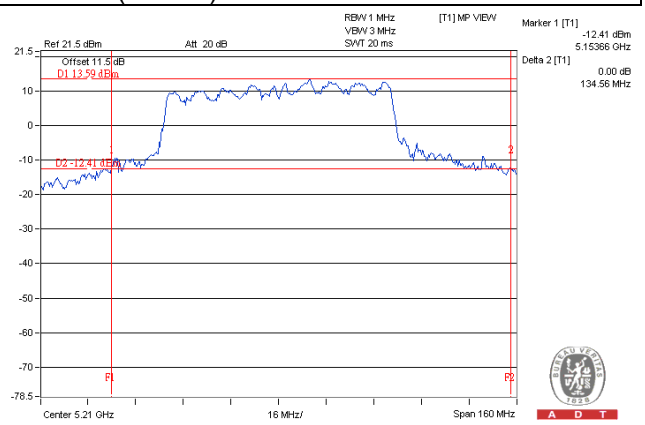
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
36	5180	49.01	Pass
40	5200	49.72	Pass
48	5240	34.45	Pass
52	5260	52.36	Pass
60	5300	53.34	Pass
64	5320	45.53	Pass
100	5500	39.42	Pass
116	5580	50.17	Pass
140	5700	39.56	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
38	5190	89.66	Pass
46	5230	82.59	Pass
54	5270	99.36	Pass
62	5310	85.90	Pass
102	5510	80.37	Pass
110	5550	99.40	Pass
134	5670	96.31	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
42	5210	134.56	Pass
58	5290	110.34	Pass
106	5530	97.07	Pass

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	30.72
40	5200	31.20
48	5240	17.76
52	5260	33.84
60	5300	33.60
64	5320	25.68
100	5500	19.92
116	5580	31.56
140	5700	20.16
149	5745	26.64
157	5785	26.52
165	5825	25.92

802.11n (HT20)

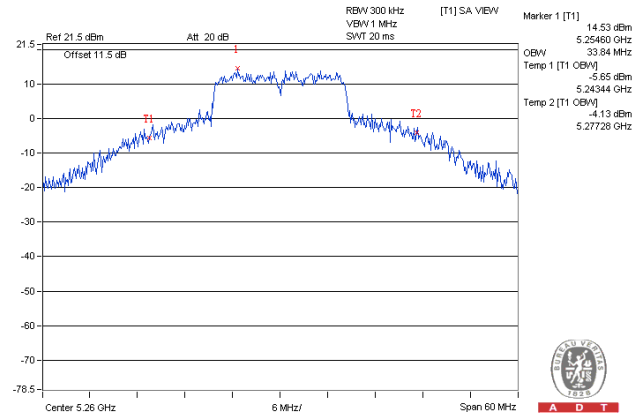
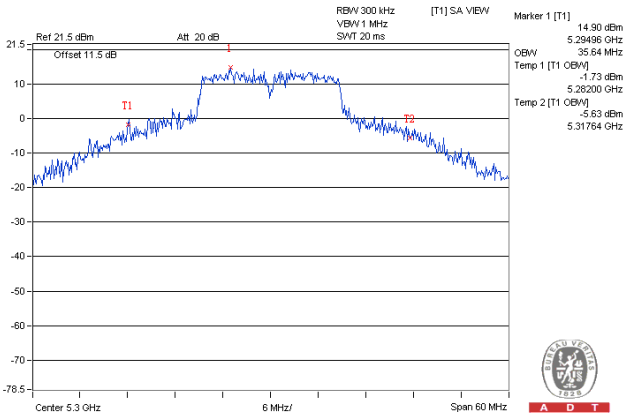
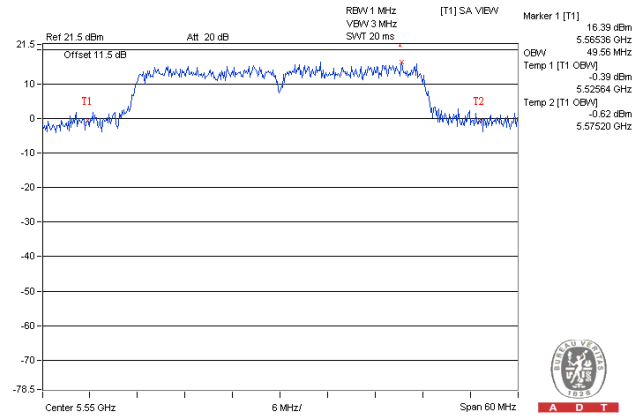
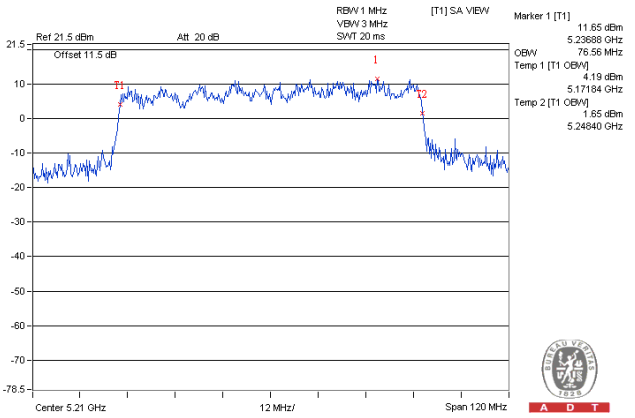
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	31.44
40	5200	33.00
48	5240	18.24
52	5260	34.56
60	5300	35.64
64	5320	26.52
100	5500	18.48
116	5580	32.64
140	5700	19.32
149	5745	26.28
157	5785	26.52
165	5825	26.16

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	37.68
46	5230	37.08
54	5270	49.20
62	5310	37.08
102	5510	36.96
110	5550	49.56
134	5670	38.88
151	5755	37.32
159	5795	39.84

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	76.56
58	5290	76.08
106	5530	76.08
155	5775	76.56

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	203.236	23.08
5470~5725	185.780	22.69

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	207.491	23.17
5470~5725	195.434	22.91

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

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	205.116	23.12
5470~5725	199.526	23.00

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

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	78.705	18.96
5470~5725	48.306	16.84

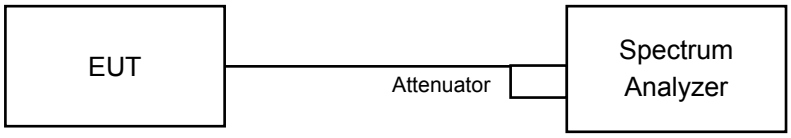
Note: Manufacturer provides Transmit Power Control description to meet this requirement.

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, U-NII-2C band:

Using method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS

c. Sweep time = auto, trigger set to “free run”.

d. Trace average at least 100 traces in power averaging mode.

e. Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS

c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.

d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)

e. Sweep time = auto, trigger set to “free run”.

f. Trace average at least 100 traces in power averaging mode.

g. Record the max value and add 10 log (1/duty cycle)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C 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	9.33	0.60	9.93	11.00	Pass
40	5200	9.65	0.60	10.25	11.00	Pass
48	5240	6.84	0.60	7.44	11.00	Pass
52	5260	10.08	0.60	10.68	11.00	Pass
60	5300	10.18	0.60	10.78	11.00	Pass
64	5320	8.58	0.60	9.18	11.00	Pass
100	5500	6.74	0.60	7.34	11.00	Pass
116	5580	9.43	0.60	10.03	11.00	Pass
140	5700	7.96	0.60	8.56	11.00	Pass

802.11n (HT20)

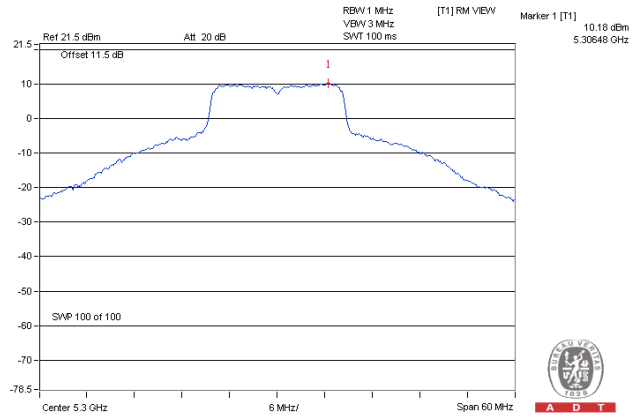
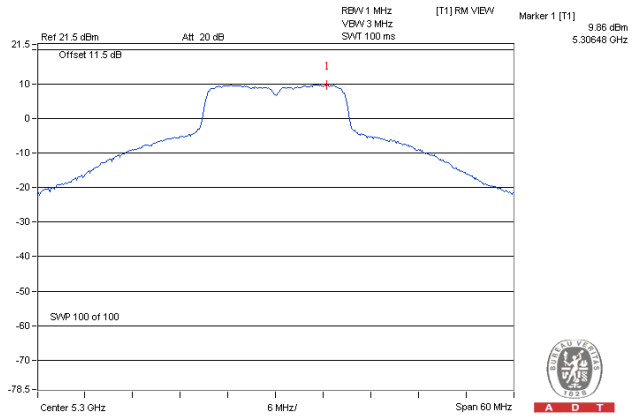
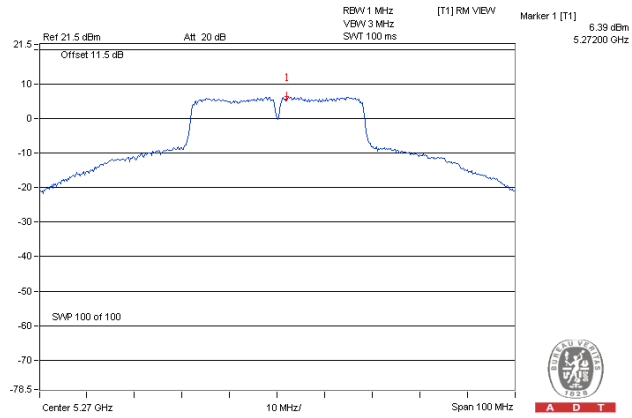
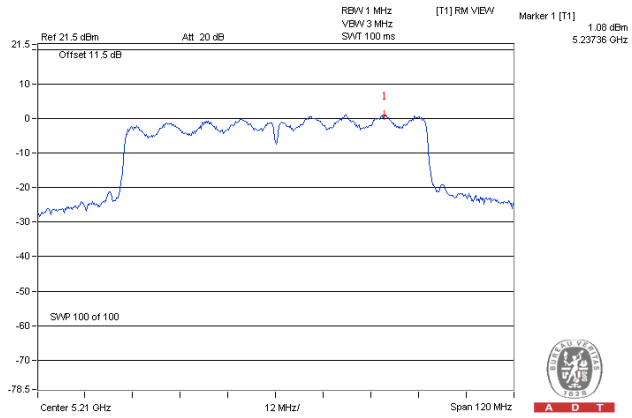
Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
36	5180	8.95	0.25	9.20	11.00	Pass
40	5200	9.47	0.25	9.72	11.00	Pass
48	5240	6.21	0.25	6.46	11.00	Pass
52	5260	9.76	0.25	10.01	11.00	Pass
60	5300	9.86	0.25	10.11	11.00	Pass
64	5320	8.24	0.25	8.49	11.00	Pass
100	5500	5.74	0.25	5.99	11.00	Pass
116	5580	9.21	0.25	9.46	11.00	Pass
140	5700	7.13	0.25	7.38	11.00	Pass

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	3.62	0.68	4.30	11.00	Pass
46	5230	3.09	0.68	3.77	11.00	Pass
54	5270	6.39	0.68	7.07	11.00	Pass
62	5310	2.87	0.68	3.55	11.00	Pass
102	5510	1.19	0.68	1.87	11.00	Pass
110	5550	5.44	0.68	6.12	11.00	Pass
134	5670	4.35	0.68	5.03	11.00	Pass

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	1.08	1.37	2.45	11.00	Pass
58	5290	-0.33	1.37	1.04	11.00	Pass
106	5530	-3.14	1.37	-1.77	11.00	Pass

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	1.03	3.25	0.60	3.85	30.00	Pass
157	5785	0.87	3.09	0.60	3.69	30.00	Pass
165	5825	0.89	3.11	0.60	3.71	30.00	Pass

802.11n (HT20)

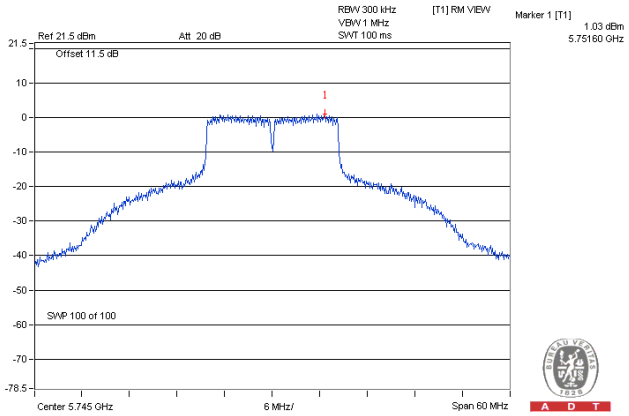
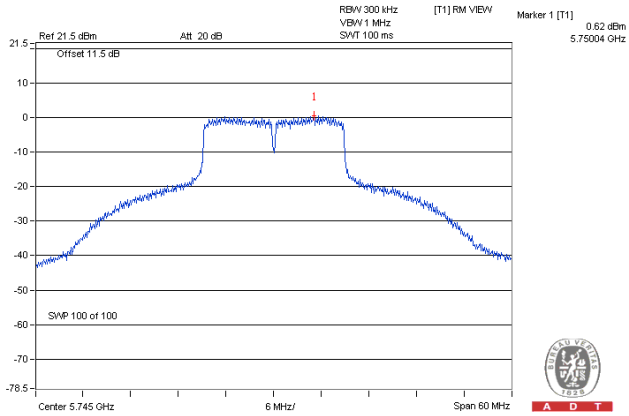
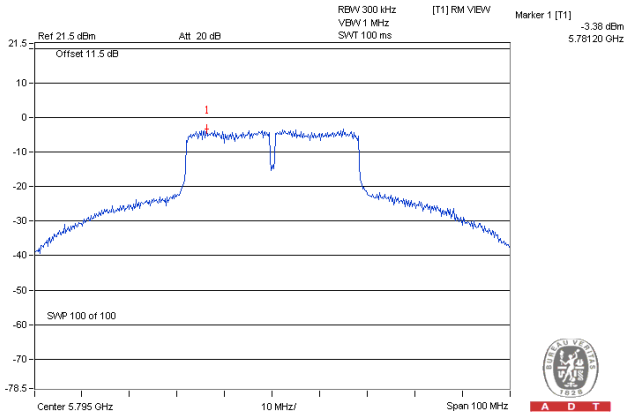
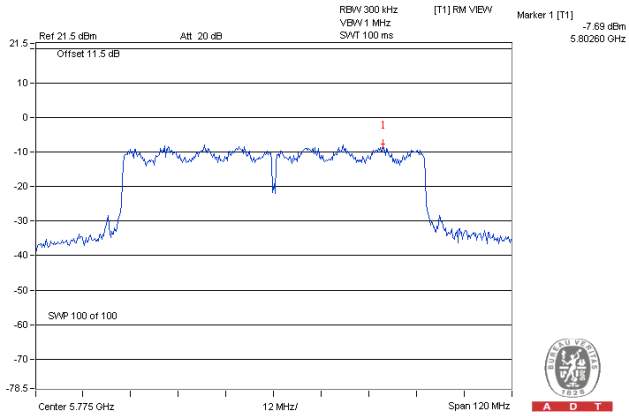
Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
149	5745	0.62	2.84	0.25	3.09	30.00	Pass
157	5785	0.40	2.62	0.25	2.87	30.00	Pass
165	5825	0.47	2.69	0.25	2.94	30.00	Pass

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	-5.08	-2.86	0.68	-2.18	30.00	Pass
159	5795	-3.38	-1.16	0.68	-0.48	30.00	Pass

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	-7.69	-5.47	1.37	-4.10	30.00	Pass

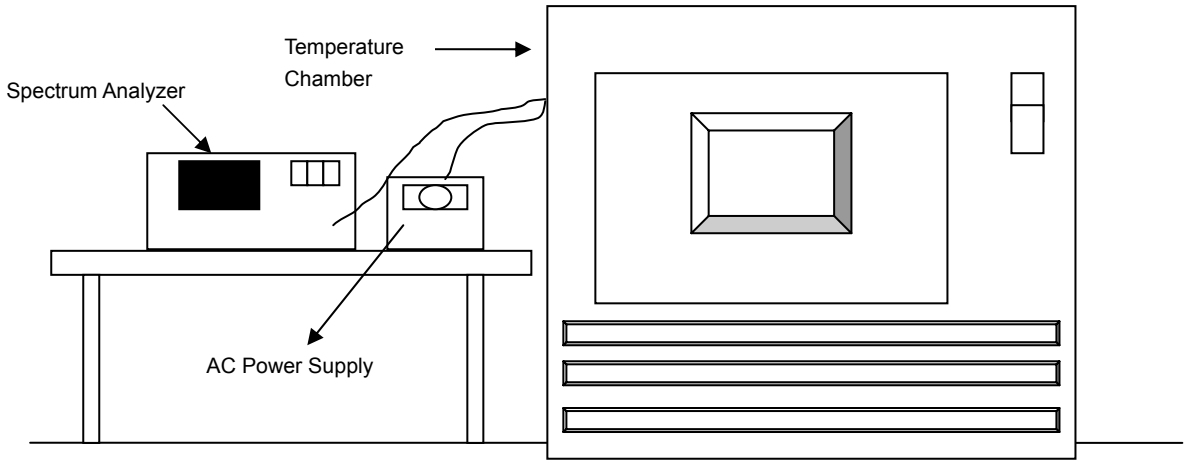
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

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

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

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

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

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

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

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequemcy Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.002	0.00004	5180.0052	0.00010	5180.0037	0.00007	5180.0033	0.00006
40	120	5179.9841	-0.00031	5179.9831	-0.00033	5179.9821	-0.00035	5179.9811	-0.00036
30	120	5179.9751	-0.00048	5179.9761	-0.00046	5179.9754	-0.00047	5179.9766	-0.00045
20	120	5180.0139	0.00027	5180.0157	0.00030	5180.0148	0.00029	5180.0164	0.00032
10	120	5179.9904	-0.00019	5179.9881	-0.00023	5179.9903	-0.00019	5179.9859	-0.00027
0	120	5179.9877	-0.00024	5179.9852	-0.00029	5179.9856	-0.00028	5179.9846	-0.00030
-10	120	5180.024	0.00046	5180.0257	0.00050	5180.025	0.00048	5180.0249	0.00048
-20	120	5179.9956	-0.00008	5179.9977	-0.00004	5179.9943	-0.00011	5179.9981	-0.00004
-30	120	5180.019	0.00037	5180.022	0.00042	5180.0186	0.00036	5180.0211	0.00041

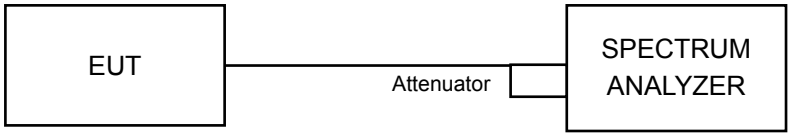
Frequemcy Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0141	0.00027	5180.0157	0.00030	5180.0147	0.00028	5180.0167	0.00032
	120	5180.0139	0.00027	5180.0157	0.00030	5180.0148	0.00029	5180.0164	0.00032
	102	5180.0147	0.00028	5180.0151	0.00029	5180.0151	0.00029	5180.0169	0.00033

4.6 6dB Bandwidth Measurment

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

a. Set resolution bandwidth (RBW) = 100kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating 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	16.35	0.5	Pass
165	5825	16.36	0.5	Pass

802.11n (HT20)

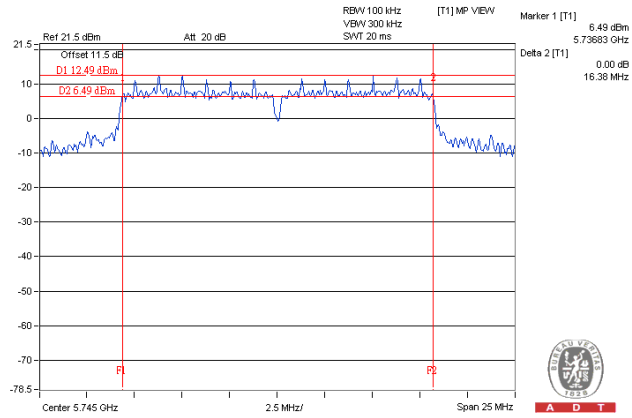
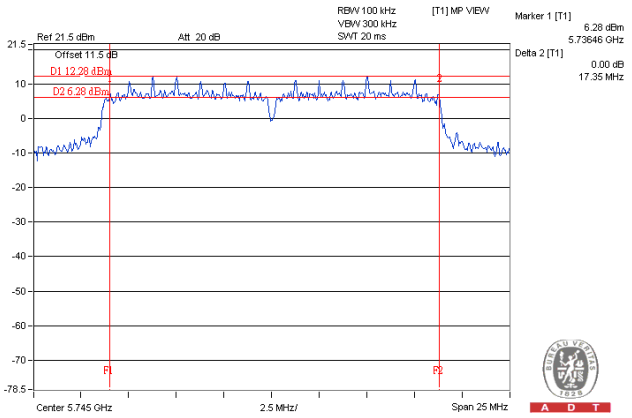
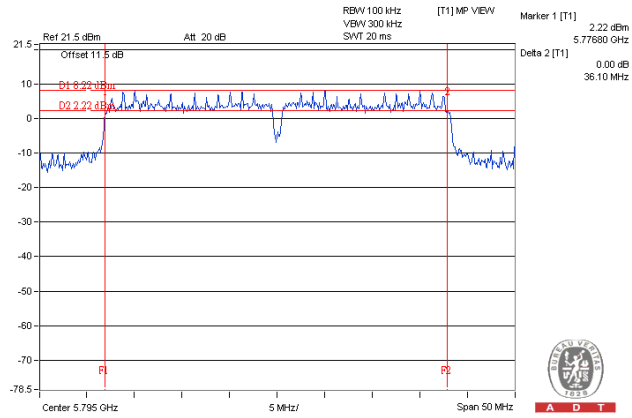
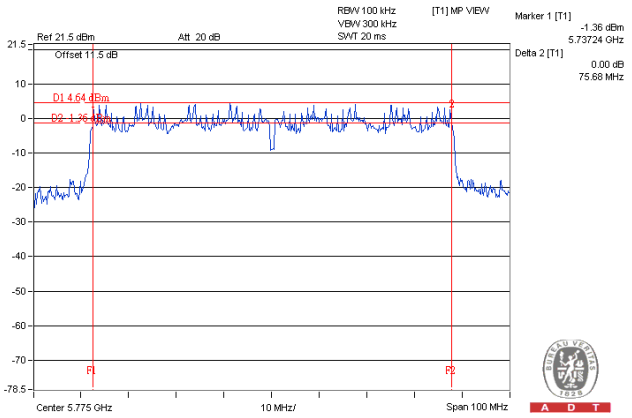
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.35	0.5	Pass
157	5785	17.34	0.5	Pass
165	5825	17.34	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.07	0.5	Pass
159	5795	36.10	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.68	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).

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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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
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Hwa Ya EMC/RF/Safety Lab
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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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