

FCC Test Report

Report No.: RF150714C42-1

FCC ID: PD5-WAP150

Test Model: WAP150

Received Date: Jul. 15, 2015

Test Date: Jul. 15 ~ Aug. 12, 2015

Issued Date: Aug. 19, 2015

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Release Control Record

Issue No.	Description	Date Issued
RF150714C42-1	Original release	Aug. 19, 2015

1 Certificate of Conformity

Product: Wireless-AC/N Dual Radio Access Point with PoE

Brand: Cisco

Test Model: WAP150

Sample Status: Engineering sample

Applicant: Delta Networks, Inc.

Test Date: Jul. 15 ~ Aug. 12, 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 :  , **Date:** Aug. 19, 2015
Pettie Chen / Senior Specialist

Approved by :  , **Date:** Aug. 19, 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
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -3.75dB at 0.42020MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.2dB at 5714.90MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is IPEX not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 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	Wireless-AC/N Dual Radio Access Point with PoE
Brand	Cisco
Test Model	WAP150
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter 48-56Vdc from PoE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5720MHz & 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5500 ~ 5720MHz: 8 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 3 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	5180 ~ 5240MHz: 22.315mW 5260 ~ 5320MHz: 78.018mW 5500 ~ 5720MHz: 101.033mW 5745 ~ 5825MHz: 81.350mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter
Data Cable Supplied	NA

Note:

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

Modulation Mode	TX Function
802.11b	1TX
802.11g	2TX
802.11a	2TX
802.11n (HT20), 802.11ac (VHT20)	2TX
802.11n (HT40), 802.11ac (VHT40)	2TX
802.11ac (VHT80)	2TX

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

2. The EUT consumes power from the following adapter and PoE.

Adapter	
Brand	DVE
Model	DSA-18PFM-12 FUS 120150
Input Power	100-240Vac, 50/60Hz, 0.6A
Output Power	+12Vdc, 1.5A
Power Line	DC 1.5m power cable w/o core attached on adapter

PoE (Support unit)	
Model	LM-GP201XRA
Output Power	56V

3. The following antennas were provided to the EUT.

Antenna Type	PCB				
Antenna Connector	IPEX				
Gain (dBi)	Frequency (MHz)				
	2400	2450	2500		
Ant. 1	2.93	3.03	3.61		
Ant. 2	2.52	3.13	2.84		
Antenna Type	PIFA				
Antenna Connector	IPEX				
Gain (dBi)	Frequency (MHz)				
	5150	5250	5350	5725	5825
Ant. 3	3.19	3.50	3.84	3.57	3.44
Ant. 4	3.42	2.92	3.53	3.85	3.77

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720MHz

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

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

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

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

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
106	5530 MHz

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	
A	√	√	√	√	Power from adapter
B	-	√	√	-	Power from PoE

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: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
2. "-" means no effect.

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)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
A	802.11a	5500-5720	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
A	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11ac (VHT80)		106	106	OFDM	BPSK	58.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
A	802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

Radiated Emission Test (Below 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11a	5180-5240	36 to 48	116	OFDM	BPSK	6.0
	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
	802.11a	5500-5720	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)
A, B	802.11a	5180-5240	36 to 48	116	OFDM	BPSK	6.0
	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
	802.11a	5500-5720	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)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11ac (VHT80)		42	42	OFDM	BPSK	58.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11ac (VHT80)		58	58	OFDM	BPSK	58.5
A	802.11a	5500-5720	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
A	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11ac (VHT80)		106	106	OFDM	BPSK	58.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5
A	802.11ac (VHT80)		155	155	OFDM	BPSK	58.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Tank Wu
RE $<$ 1G	25deg. C, 65%RH	120Vac, 60Hz 56Vdc	Tank Wu
PLC	25deg. C, 60%RH	120Vac, 60Hz 56Vdc	Tank Wu
APCM	25deg. C, 60%RH	120Vac, 60Hz	Nick Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is > 98 %, duty factor is not required

802.11a: Duty cycle = $2.063/2.093 = 0.986$

802.11n (HT20): Duty cycle = $1.917/1.947 = 0.985$

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

802.11n (HT40): Duty cycle = $0.937/0.972 = 0.964$, Duty factor = $10 * \log(1/0.964) = 0.16$

802.11ac (VHT80): Duty cycle = $0.458/0.49 = 0.935$, Duty factor = $10 * \log(1/0.935) = 0.29$



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5420	33MKMQ1	FCC DoC Approved	-
B.	PoE	NA	LM-GP201XRA	-	-	Provided by client

Note:

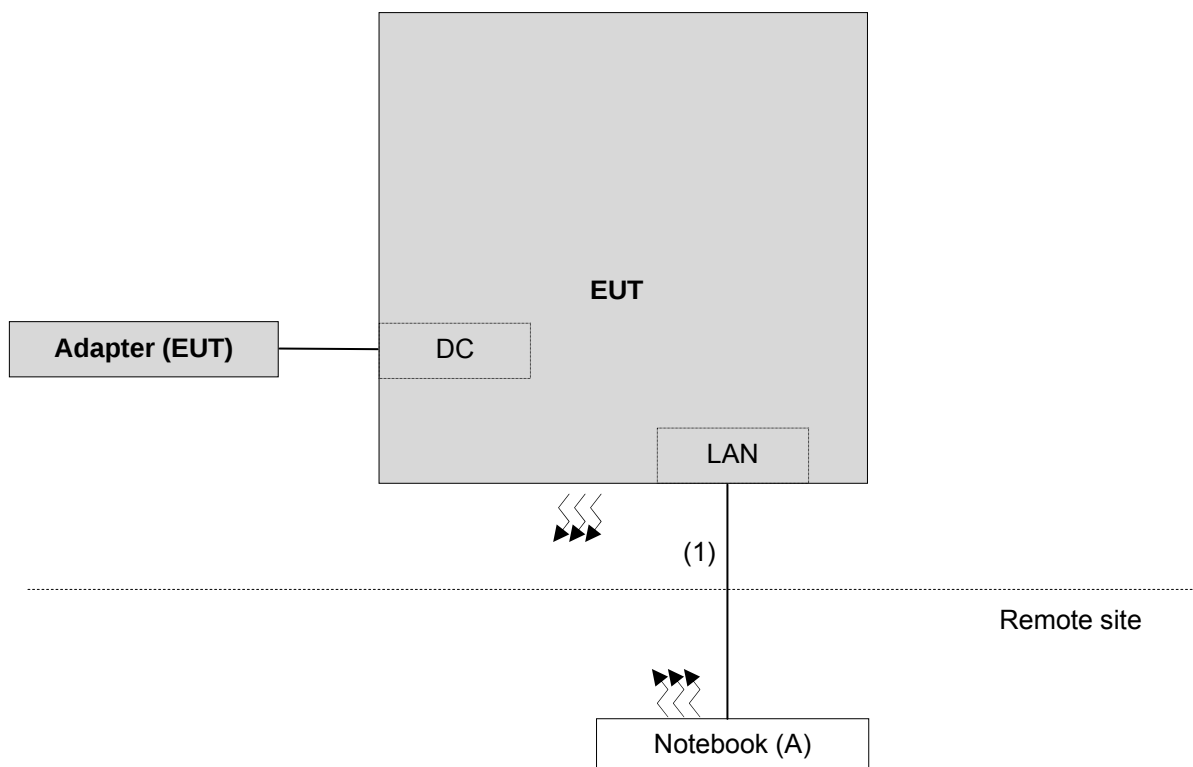
1. All power cords of the above support units are non-shielded (1.8m).
2. Items A, B acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN cable	1	3	N	0	-
2.	LAN cable	1	0.5	N	0	-

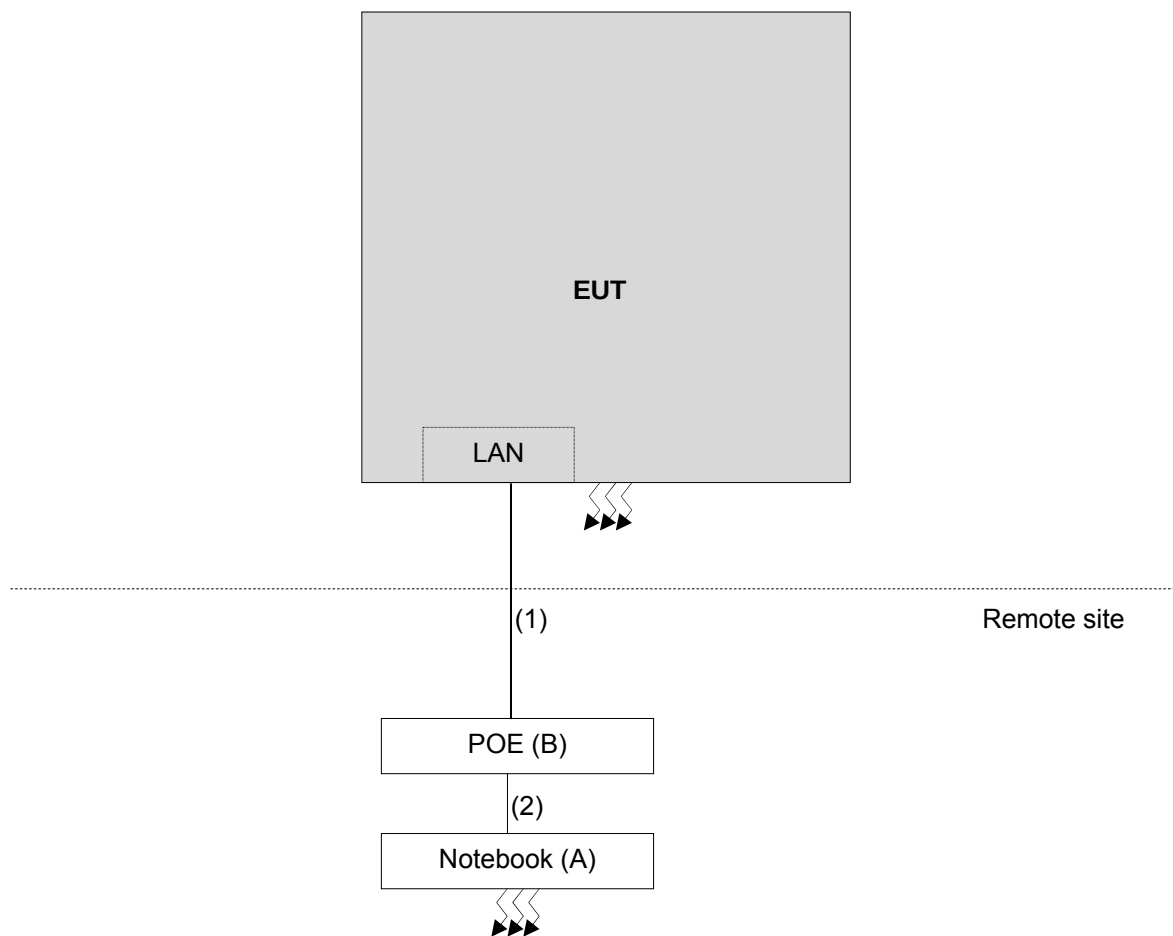
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Test Mode A



Test Mode B



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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 (dBuV/m)	AV:54 (dBuV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/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(dBuV/m) ^{*1} PK:78.2 (dBuV/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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 06, 2014	Oct. 05, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	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
Loop Antenna R&S	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309220/4	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250724/4	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	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, 2015	Jul. 08, 2016
Power Sensor	MA2411B	0738171	Jul. 09, 2015	Jul. 08, 2016

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 4.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 460141.
6. 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:

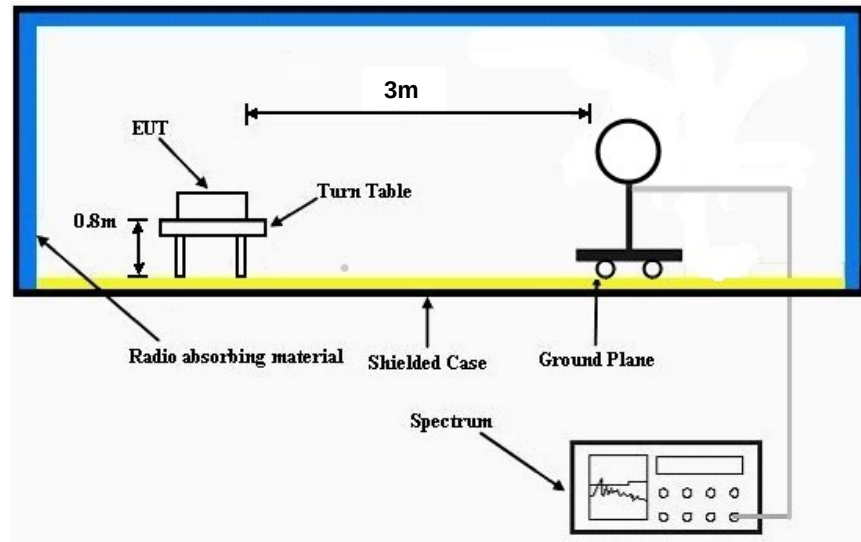
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

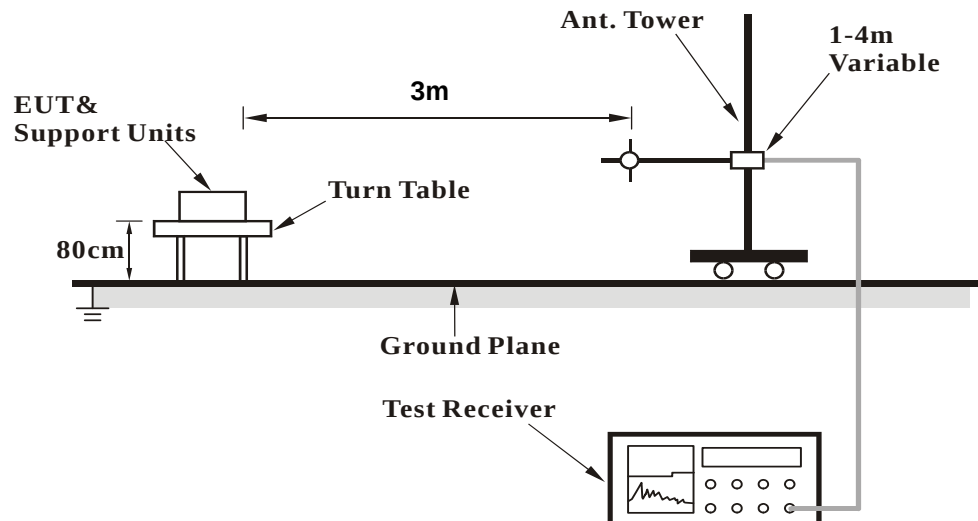
No deviation.

4.1.5 Test Set Up

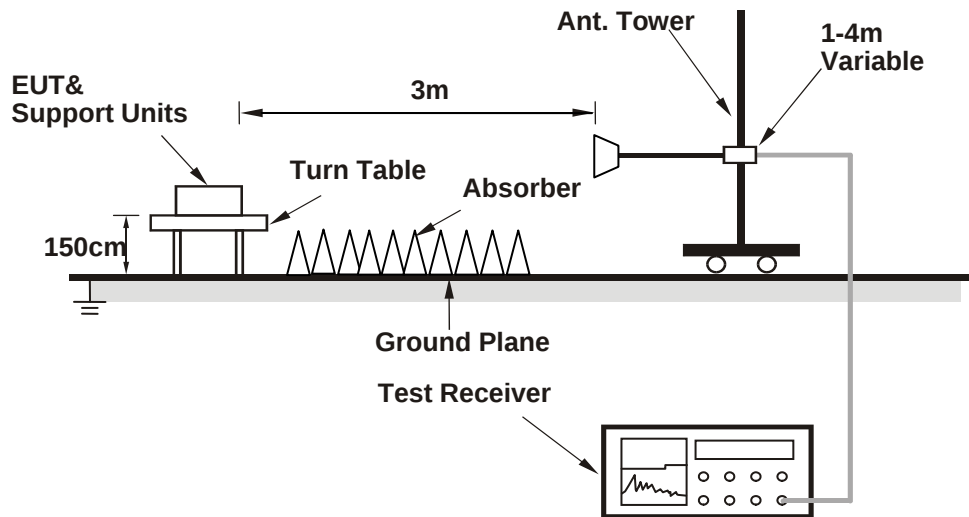
<Frequency Range 9k~30MHz>



<Frequency Range 30MHz ~ 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1GHz data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5100.00	57.7 PK	74.0	-16.3	1.74 H	16	55.80	1.90
2	5100.00	45.1 AV	54.0	-8.9	1.74 H	16	43.20	1.90
3	5150.00	56.3 PK	74.0	-17.7	1.70 H	18	54.30	2.00
4	5150.00	43.5 AV	54.0	-10.5	1.70 H	18	41.50	2.00
5	*5180.00	101.0 PK			1.68 H	11	61.00	40.00
6	*5180.00	90.8 AV			1.68 H	11	50.80	40.00
7	#10360.00	60.6 PK	74.0	-13.4	1.00 H	266	45.60	15.00
8	#10360.00	46.7 AV	54.0	-7.3	1.00 H	266	31.70	15.00
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	5100.00	56.7 PK	74.0	-17.3	1.26 V	15	54.80	1.90
2	5100.00	45.6 AV	54.0	-8.4	1.26 V	15	43.70	1.90
3	5150.00	56.9 PK	74.0	-17.1	1.00 V	85	54.90	2.00
4	5150.00	43.4 AV	54.0	-10.6	1.00 V	85	41.40	2.00
5	*5180.00	101.3 PK			1.14 V	34	61.30	40.00
6	*5180.00	92.3 AV			1.14 V	34	52.30	40.00
7	#10360.00	60.2 PK	74.0	-13.8	1.00 V	96	45.20	15.00
8	#10360.00	46.1 AV	54.0	-7.9	1.00 V	96	31.10	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.3 PK			1.95 H	42	61.20	40.10
2	*5200.00	91.2 AV			1.95 H	42	51.10	40.10
3	#10400.00	59.5 PK	74.0	-14.5	1.03 H	228	44.50	15.00
4	#10400.00	46.7 AV	54.0	-7.3	1.03 H	228	31.70	15.00
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	*5200.00	101.6 PK			1.46 V	5	61.50	40.10
2	*5200.00	92.5 AV			1.46 V	5	52.40	40.10
3	#10400.00	60.4 PK	74.0	-13.6	1.00 V	113	45.40	15.00
4	#10400.00	46.6 AV	54.0	-7.4	1.00 V	113	31.60	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	100.4 PK			1.68 H	332	60.30	40.10
2	*5240.00	90.0 AV			1.68 H	332	49.90	40.10
3	5350.00	57.1 PK	74.0	-16.9	1.70 H	16	55.10	2.00
4	5350.00	43.3 AV	54.0	-10.7	1.70 H	16	41.30	2.00
5	5400.00	57.5 PK	74.0	-16.5	1.72 H	15	55.40	2.10
6	5400.00	45.8 AV	54.0	-8.2	1.72 H	15	43.70	2.10
7	#10480.00	60.8 PK	74.0	-13.2	1.00 H	214	45.70	15.10
8	#10480.00	47.9 AV	54.0	-6.1	1.00 H	214	32.80	15.10
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	*5240.00	101.8 PK			1.86 V	5	61.70	40.10
2	*5240.00	92.5 AV			1.86 V	5	52.40	40.10
3	5350.00	56.8 PK	74.0	-17.2	1.82 V	331	54.80	2.00
4	5350.00	43.9 AV	54.0	-10.1	1.82 V	331	41.90	2.00
5	5400.00	59.0 PK	74.0	-15.0	1.83 V	332	56.90	2.10
6	5400.00	46.6 AV	54.0	-7.4	1.83 V	332	44.50	2.10
7	#10480.00	60.2 PK	74.0	-13.8	1.00 V	109	45.10	15.10
8	#10480.00	47.5 AV	54.0	-6.5	1.00 V	109	32.40	15.10

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.4 PK	74.0	-15.6	1.00 H	226	56.40	2.00
2	5150.00	44.8 AV	54.0	-9.2	1.00 H	226	42.80	2.00
3	*5260.00	105.7 PK			1.65 H	326	65.60	40.10
4	*5260.00	95.6 AV			1.65 H	326	55.50	40.10
5	5420.00	58.5 PK	74.0	-15.5	1.78 H	338	56.40	2.10
6	5420.00	46.5 AV	54.0	-7.5	1.78 H	338	44.40	2.10
7	#10520.00	60.9 PK	74.0	-13.1	1.00 H	311	45.60	15.30
8	#10520.00	48.0 AV	54.0	-6.0	1.00 H	311	32.70	15.30
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	5150.00	57.5 PK	74.0	-16.5	1.29 V	333	55.50	2.00
2	5150.00	44.9 AV	54.0	-9.1	1.29 V	333	42.90	2.00
3	*5260.00	107.0 PK			1.78 V	360	66.90	40.10
4	*5260.00	97.8 AV			1.78 V	360	57.70	40.10
5	5420.00	61.4 PK	74.0	-12.6	1.64 V	330	59.30	2.10
6	5420.00	49.9 AV	54.0	-4.1	1.64 V	330	47.80	2.10
7	#10520.00	60.6 PK	74.0	-13.4	1.00 V	109	45.30	15.30
8	#10520.00	47.8 AV	54.0	-6.2	1.00 V	109	32.50	15.30

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	106.7 PK			1.80 H	12	66.60	40.10
2	*5300.00	96.5 AV			1.80 H	12	56.40	40.10
3	5380.00	60.5 PK	74.0	-13.5	1.68 H	40	58.50	2.00
4	5380.00	49.5 AV	54.0	-4.5	1.68 H	40	47.50	2.00
5	5460.00	58.3 PK	74.0	-15.7	1.68 H	40	56.20	2.10
6	5460.00	47.1 AV	54.0	-6.9	1.68 H	40	45.00	2.10
7	10600.00	61.5 PK	74.0	-12.5	1.00 H	291	45.30	16.20
8	10600.00	48.6 AV	54.0	-5.4	1.00 H	291	32.40	16.20
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	*5300.00	107.0 PK			1.75 V	2	66.90	40.10
2	*5300.00	97.8 AV			1.75 V	2	57.70	40.10
3	5380.00	60.4 PK	74.0	-13.6	1.74 V	330	58.40	2.00
4	5380.00	49.6 AV	54.0	-4.4	1.74 V	330	47.60	2.00
5	5460.00	60.2 PK	74.0	-13.8	1.74 V	330	58.10	2.10
6	5460.00	49.3 AV	54.0	-4.7	1.74 V	330	47.20	2.10
7	10600.00	61.3 PK	74.0	-12.7	1.00 V	110	45.10	16.20
8	10600.00	48.1 AV	54.0	-5.9	1.00 V	110	31.90	16.20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	107.9 PK			1.71 H	41	67.70	40.20
2	*5320.00	97.9 AV			1.71 H	41	57.70	40.20
3	5350.00	56.9 PK	74.0	-17.1	1.75 H	355	54.90	2.00
4	5350.00	43.2 AV	54.0	-10.8	1.75 H	355	41.20	2.00
5	5400.00	58.7 PK	74.0	-15.3	1.75 H	355	56.60	2.10
6	5400.00	47.6 AV	54.0	-6.4	1.75 H	355	45.50	2.10
7	10640.00	62.0 PK	74.0	-12.0	1.00 H	345	45.70	16.30
8	10640.00	48.8 AV	54.0	-5.2	1.00 H	345	32.50	16.30

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	*5320.00	106.5 PK			1.42 V	338	66.30	40.20
2	*5320.00	97.3 AV			1.42 V	338	57.10	40.20
3	5350.00	57.1 PK	74.0	-16.9	1.82 V	330	55.10	2.00
4	5350.00	43.4 AV	54.0	-10.6	1.82 V	330	41.40	2.00
5	5400.00	60.6 PK	74.0	-13.4	1.82 V	330	58.50	2.10
6	5400.00	48.8 AV	54.0	-5.2	1.82 V	330	46.70	2.10
7	10640.00	62.1 PK	74.0	-11.9	1.00 V	133	45.80	16.30
8	10640.00	48.9 AV	54.0	-5.1	1.00 V	133	32.60	16.30

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	59.8 PK	74.0	-14.2	1.50 H	340	57.70	2.10
2	5420.00	47.2 AV	54.0	-6.8	1.50 H	340	45.10	2.10
3	5460.00	57.3 PK	74.0	-16.7	1.50 H	340	55.20	2.10
4	5460.00	43.9 AV	54.0	-10.1	1.50 H	340	41.80	2.10
5	#5470.00	58.1 PK	74.0	-15.9	1.40 H	115	55.90	2.20
6	#5470.00	44.1 AV	54.0	-9.9	1.40 H	115	41.90	2.20
7	*5500.00	106.6 PK			1.69 H	9	66.30	40.30
8	*5500.00	96.8 AV			1.69 H	9	56.50	40.30
9	11000.00	63.3 PK	74.0	-10.7	1.00 H	216	45.60	17.70
10	11000.00	49.9 AV	54.0	-4.1	1.00 H	216	32.20	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	5420.00	60.6 PK	74.0	-13.4	1.67 V	21	58.50	2.10
2	5420.00	49.5 AV	54.0	-4.5	1.67 V	21	47.40	2.10
3	5460.00	57.2 PK	74.0	-16.8	1.67 V	21	55.10	2.10
4	5460.00	44.2 AV	54.0	-9.8	1.67 V	21	42.10	2.10
5	#5470.00	58.2 PK	74.0	-15.8	1.58 V	3	56.00	2.20
6	#5470.00	44.7 AV	54.0	-9.3	1.58 V	3	42.50	2.20
7	*5500.00	107.2 PK			1.68 V	72	66.90	40.30
8	*5500.00	98.0 AV			1.68 V	72	57.70	40.30
9	11000.00	63.0 PK	74.0	-11.0	1.00 V	94	45.30	17.70
10	11000.00	49.8 AV	54.0	-4.2	1.00 V	94	32.10	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 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	107.8 PK			1.67 H	1	67.30	40.50
2	*5580.00	97.9 AV			1.67 H	1	57.40	40.50
3	11160.00	62.2 PK	74.0	-11.8	1.00 H	244	45.80	16.40
4	11160.00	49.0 AV	54.0	-5.0	1.00 H	244	32.60	16.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	107.9 PK			1.80 V	335	67.40	40.50
2	*5580.00	98.9 AV			1.80 V	335	58.40	40.50
3	11160.00	61.7 PK	74.0	-12.3	1.00 V	36	45.30	16.40
4	11160.00	48.5 AV	54.0	-5.5	1.00 V	36	32.10	16.40

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.5 PK			1.50 H	357	66.70	40.80
2	*5700.00	96.6 AV			1.50 H	357	55.80	40.80
3	#5725.00	59.9 PK	74.0	-14.1	1.66 H	10	57.30	2.60
4	#5725.00	44.0 AV	54.0	-10.0	1.66 H	10	41.40	2.60
5	#5780.00	60.4 PK	74.0	-13.6	1.69 H	0	57.70	2.70
6	#5780.00	48.9 AV	54.0	-5.1	1.69 H	0	46.20	2.70
7	11400.00	61.7 PK	74.0	-12.3	1.00 H	247	45.50	16.20
8	11400.00	48.5 AV	54.0	-5.5	1.00 H	247	32.30	16.20
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	*5700.00	106.5 PK			1.71 V	336	65.70	40.80
2	*5700.00	97.6 AV			1.71 V	336	56.80	40.80
3	#5725.00	59.1 PK	74.0	-14.9	1.81 V	198	56.50	2.60
4	#5725.00	44.0 AV	54.0	-10.0	1.81 V	198	41.40	2.60
5	#5780.00	59.6 PK	74.0	-14.4	1.81 V	198	56.90	2.70
6	#5780.00	48.6 AV	54.0	-5.4	1.81 V	198	45.90	2.70
7	11400.00	61.5 PK	74.0	-12.5	1.00 V	85	45.30	16.20
8	11400.00	48.2 AV	54.0	-5.8	1.00 V	85	32.00	16.20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	56.8 PK	74.0	-17.2	1.95 H	356	54.20	2.60
2	#5714.90	43.5 AV	54.0	-10.5	1.95 H	356	40.90	2.60
3	#5722.90	66.4 PK	78.2	-11.8	1.94 H	360	63.80	2.60
4	#5725.00	48.9 PK	78.2	-29.3	1.92 H	357	46.30	2.60
5	*5745.00	107.2 PK			1.90 H	27	66.20	41.00
6	*5745.00	97.4 AV			1.90 H	27	56.40	41.00
7	11490.00	60.8 PK	74.0	-13.2	1.32 H	353	44.90	15.90
8	11490.00	48.0 AV	54.0	-6.0	1.32 H	353	32.10	15.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	56.7 PK	74.0	-17.3	1.79 V	331	54.10	2.60
2	#5714.90	43.6 AV	54.0	-10.4	1.79 V	331	41.00	2.60
3	#5722.90	67.9 PK	78.2	-10.3	1.70 V	332	65.30	2.60
4	#5725.00	51.1 PK	78.2	-27.1	1.68 V	332	48.50	2.60
5	*5745.00	105.7 PK			1.77 V	331	64.70	41.00
6	*5745.00	96.0 AV			1.77 V	331	55.00	41.00
7	11490.00	60.5 PK	74.0	-13.5	1.20 V	93	44.60	15.90
8	11490.00	47.2 AV	54.0	-6.8	1.20 V	93	31.30	15.90

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	107.2 PK			1.78 H	26	66.10	41.10
2	*5785.00	97.4 AV			1.78 H	26	56.30	41.10
3	11570.00	61.1 PK	74.0	-12.9	1.19 H	341	45.50	15.60
4	11570.00	48.2 AV	54.0	-5.8	1.19 H	341	32.60	15.60
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	*5785.00	105.0 PK			1.77 V	210	63.90	41.10
2	*5785.00	95.9 AV			1.77 V	210	54.80	41.10
3	11570.00	60.1 PK	74.0	-13.9	1.43 V	20	44.50	15.60
4	11570.00	47.0 AV	54.0	-7.0	1.43 V	20	31.40	15.60

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.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	106.4 PK			1.76 H	355	65.30	41.10
2	*5825.00	96.5 AV			1.76 H	355	55.40	41.10
3	#5850.00	44.8 PK	78.2	-33.4	1.75 H	9	41.80	3.00
4	#5852.10	61.2 PK	78.2	-17.0	1.83 H	2	58.20	3.00
5	#5860.10	57.3 PK	74.0	-16.7	1.76 H	2	54.30	3.00
6	#5860.10	43.9 AV	54.0	-10.1	1.76 H	2	40.90	3.00
7	11650.00	62.3 PK	74.0	-11.7	1.12 H	14	46.70	15.60
8	11650.00	48.6 AV	54.0	-5.4	1.12 H	14	33.00	15.60
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	*5825.00	105.6 PK			1.77 V	51	64.50	41.10
2	*5825.00	96.1 AV			1.77 V	51	55.00	41.10
3	#5850.00	45.0 PK	78.2	-33.2	1.47 V	119	42.00	3.00
4	#5852.10	59.0 PK	78.2	-19.2	1.33 V	122	56.00	3.00
5	#5860.10	57.2 PK	74.0	-16.8	1.32 V	121	54.20	3.00
6	#5860.10	44.0 AV	54.0	-10.0	1.32 V	121	41.00	3.00
7	11650.00	59.6 PK	74.0	-14.4	1.01 V	244	44.00	15.60
8	11650.00	47.0 AV	54.0	-7.0	1.01 V	244	31.40	15.60

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.

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5100.00	57.1 PK	74.0	-16.9	2.07 H	38	55.20	1.90
2	5100.00	44.1 AV	54.0	-9.9	2.07 H	38	42.20	1.90
3	5150.00	56.5 PK	74.0	-17.5	1.85 H	38	54.50	2.00
4	5150.00	42.8 AV	54.0	-11.2	1.85 H	38	40.80	2.00
5	*5180.00	101.8 PK			1.51 H	334	61.80	40.00
6	*5180.00	90.8 AV			1.51 H	334	50.80	40.00
7	#10360.00	60.3 PK	74.0	-13.7	1.00 H	276	45.30	15.00
8	#10360.00	46.5 AV	54.0	-7.5	1.00 H	276	31.50	15.00
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	5100.00	58.4 PK	74.0	-15.6	1.38 V	92	56.50	1.90
2	5100.00	45.2 AV	54.0	-8.8	1.38 V	92	43.30	1.90
3	5150.00	56.9 PK	74.0	-17.1	1.31 V	92	54.90	2.00
4	5150.00	43.5 AV	54.0	-10.5	1.31 V	92	41.50	2.00
5	*5180.00	103.5 PK			1.07 V	95	63.50	40.00
6	*5180.00	93.6 AV			1.07 V	95	53.60	40.00
7	#10360.00	60.1 PK	74.0	-13.9	1.00 V	101	45.10	15.00
8	#10360.00	46.3 AV	54.0	-7.7	1.00 V	101	31.30	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.5 PK			1.82 H	2	62.40	40.10
2	*5200.00	91.5 AV			1.82 H	2	51.40	40.10
3	#10400.00	59.2 PK	74.0	-14.8	1.10 H	217	44.20	15.00
4	#10400.00	46.5 AV	54.0	-7.5	1.10 H	217	31.50	15.00
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	*5200.00	104.1 PK			1.05 V	53	64.00	40.10
2	*5200.00	93.6 AV			1.05 V	53	53.50	40.10
3	#10400.00	60.2 PK	74.0	-13.8	1.00 V	108	45.20	15.00
4	#10400.00	46.4 AV	54.0	-7.6	1.00 V	108	31.40	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.9 PK			1.81 H	5	62.80	40.10
2	*5240.00	91.9 AV			1.81 H	5	51.80	40.10
3	5350.00	57.5 PK	74.0	-16.5	1.52 H	12	55.50	2.00
4	5350.00	44.7 AV	54.0	-9.3	1.52 H	12	42.70	2.00
5	5400.00	57.4 PK	74.0	-16.6	1.68 H	11	55.30	2.10
6	5400.00	44.6 AV	54.0	-9.4	1.68 H	11	42.50	2.10
7	#10480.00	60.6 PK	74.0	-13.4	1.00 H	231	45.50	15.10
8	#10480.00	47.7 AV	54.0	-6.3	1.00 H	231	32.60	15.10
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	*5240.00	104.8 PK			1.19 V	79	64.70	40.10
2	*5240.00	93.7 AV			1.19 V	79	53.60	40.10
3	5350.00	56.5 PK	74.0	-17.5	1.94 V	62	54.50	2.00
4	5350.00	43.9 AV	54.0	-10.1	1.94 V	62	41.90	2.00
5	5400.00	59.0 PK	74.0	-15.0	1.94 V	61	56.90	2.10
6	5400.00	46.8 AV	54.0	-7.2	1.94 V	61	44.70	2.10
7	#10480.00	60.2 PK	74.0	-13.8	1.00 V	111	45.10	15.10
8	#10480.00	47.6 AV	54.0	-6.4	1.00 V	111	32.50	15.10

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.4 PK	74.0	-16.6	1.00 H	246	55.40	2.00
2	5150.00	44.9 AV	54.0	-9.1	1.00 H	246	42.90	2.00
3	*5260.00	108.0 PK			1.73 H	5	67.90	40.10
4	*5260.00	96.7 AV			1.73 H	5	56.60	40.10
5	5420.00	58.1 PK	74.0	-15.9	1.54 H	322	56.00	2.10
6	5420.00	46.2 AV	54.0	-7.8	1.54 H	322	44.10	2.10
7	#10520.00	60.6 PK	74.0	-13.4	1.00 H	327	45.30	15.30
8	#10520.00	47.7 AV	54.0	-6.3	1.00 H	327	32.40	15.30
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	5150.00	57.6 PK	74.0	-16.4	1.06 V	306	55.60	2.00
2	5150.00	43.9 AV	54.0	-10.1	1.06 V	306	41.90	2.00
3	*5260.00	109.1 PK			1.41 V	90	69.00	40.10
4	*5260.00	98.2 AV			1.41 V	90	58.10	40.10
5	5420.00	61.6 PK	74.0	-12.4	1.43 V	60	59.50	2.10
6	5420.00	50.5 AV	54.0	-3.5	1.43 V	60	48.40	2.10
7	#10520.00	60.8 PK	74.0	-13.2	1.00 V	119	45.50	15.30
8	#10520.00	48.0 AV	54.0	-6.0	1.00 V	119	32.70	15.30

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	107.5 PK			1.55 H	36	67.40	40.10
2	*5300.00	96.8 AV			1.55 H	36	56.70	40.10
3	5380.00	59.7 PK	74.0	-14.3	1.43 H	338	57.70	2.00
4	5380.00	48.2 AV	54.0	-5.8	1.43 H	338	46.20	2.00
5	5460.00	58.7 PK	74.0	-15.3	1.43 H	338	56.60	2.10
6	5460.00	46.9 AV	54.0	-7.1	1.43 H	338	44.80	2.10
7	10600.00	61.6 PK	74.0	-12.4	1.00 H	285	45.40	16.20
8	10600.00	48.8 AV	54.0	-5.2	1.00 H	285	32.60	16.20
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	*5300.00	107.3 PK			1.41 V	109	67.20	40.10
2	*5300.00	98.1 AV			1.41 V	109	58.00	40.10
3	5380.00	50.6 PK	74.0	-23.4	1.50 V	56	48.60	2.00
4	5380.00	48.8 AV	54.0	-5.2	1.50 V	56	46.80	2.00
5	5460.00	61.0 PK	74.0	-13.0	1.50 V	56	58.90	2.10
6	5460.00	49.6 AV	54.0	-4.4	1.50 V	56	47.50	2.10
7	10600.00	61.8 PK	74.0	-12.2	1.00 V	93	45.60	16.20
8	10600.00	48.4 AV	54.0	-5.6	1.00 V	93	32.20	16.20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	108.2 PK			1.68 H	35	68.00	40.20
2	*5320.00	97.4 AV			1.68 H	35	57.20	40.20
3	5350.00	57.3 PK	74.0	-16.7	1.73 H	360	55.30	2.00
4	5350.00	44.3 AV	54.0	-9.7	1.73 H	360	42.30	2.00
5	5400.00	60.5 PK	74.0	-13.5	1.72 H	339	58.40	2.10
6	5400.00	48.7 AV	54.0	-5.3	1.72 H	339	46.60	2.10
7	10640.00	61.7 PK	74.0	-12.3	1.00 H	323	45.40	16.30
8	10640.00	48.7 AV	54.0	-5.3	1.00 H	323	32.40	16.30
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	*5320.00	108.1 PK			1.42 V	107	67.90	40.20
2	*5320.00	98.3 AV			1.42 V	107	58.10	40.20
3	5350.00	57.8 PK	74.0	-16.2	1.24 V	340	55.80	2.00
4	5350.00	44.6 AV	54.0	-9.4	1.24 V	340	42.60	2.00
5	5400.00	60.2 PK	74.0	-13.8	1.24 V	340	58.10	2.10
6	5400.00	48.5 AV	54.0	-5.5	1.24 V	340	46.40	2.10
7	10640.00	62.0 PK	74.0	-12.0	1.00 V	142	45.70	16.30
8	10640.00	48.7 AV	54.0	-5.3	1.00 V	142	32.40	16.30

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5420.00	59.7 PK	74.0	-14.3	1.80 H	31	57.60	2.10
2	5420.00	48.0 AV	54.0	-6.0	1.80 H	31	45.90	2.10
3	5460.00	58.0 PK	74.0	-16.0	1.84 H	35	55.90	2.10
4	5460.00	44.0 AV	54.0	-10.0	1.84 H	35	41.90	2.10
5	#5470.00	58.7 PK	74.0	-15.3	1.84 H	33	56.50	2.20
6	#5470.00	44.6 AV	54.0	-9.4	1.84 H	33	42.40	2.20
7	*5500.00	108.8 PK			1.84 H	7	68.50	40.30
8	*5500.00	97.2 AV			1.84 H	7	56.90	40.30
9	11000.00	63.1 PK	74.0	-10.9	1.00 H	211	45.40	17.70
10	11000.00	49.8 AV	54.0	-4.2	1.00 H	211	32.10	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	5420.00	60.2 PK	74.0	-13.8	1.66 V	51	58.10	2.10
2	5420.00	49.2 AV	54.0	-4.8	1.66 V	51	47.10	2.10
3	5460.00	58.6 PK	74.0	-15.4	1.66 V	50	56.50	2.10
4	5460.00	44.1 AV	54.0	-9.9	1.66 V	50	42.00	2.10
5	#5470.00	61.1 PK	74.0	-12.9	1.66 V	52	58.90	2.20
6	#5470.00	44.9 AV	54.0	-9.1	1.66 V	52	42.70	2.20
7	*5500.00	109.2 PK			1.81 V	27	68.90	40.30
8	*5500.00	99.5 AV			1.81 V	27	59.20	40.30
9	11000.00	62.9 PK	74.0	-11.1	1.00 V	117	45.20	17.70
10	11000.00	49.7 AV	54.0	-4.3	1.00 V	117	32.00	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 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.7 PK			1.62 H	18	68.20	40.50
2	*5580.00	97.7 AV			1.62 H	18	57.20	40.50
3	11160.00	62.3 PK	74.0	-11.7	1.00 H	262	45.90	16.40
4	11160.00	49.2 AV	54.0	-4.8	1.00 H	262	32.80	16.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	109.0 PK			1.57 V	326	68.50	40.50
2	*5580.00	99.5 AV			1.57 V	326	59.00	40.50
3	11160.00	61.8 PK	74.0	-12.2	1.00 V	66	45.40	16.40
4	11160.00	48.7 AV	54.0	-5.3	1.00 V	66	32.30	16.40

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	107.6 PK			1.62 H	352	66.80	40.80
2	*5700.00	96.1 AV			1.62 H	352	55.30	40.80
3	#5725.00	61.4 PK	74.0	-12.6	1.87 H	24	58.80	2.60
4	#5725.00	45.9 AV	54.0	-8.1	1.87 H	24	43.30	2.60
5	#5780.00	60.7 PK	74.0	-13.3	1.99 H	19	58.00	2.70
6	#5780.00	48.5 AV	54.0	-5.5	1.99 H	19	45.80	2.70
7	11400.00	61.9 PK	74.0	-12.1	1.00 H	265	45.70	16.20
8	11400.00	48.8 AV	54.0	-5.2	1.00 H	265	32.60	16.20
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	*5700.00	104.6 PK			1.00 V	289	63.80	40.80
2	*5700.00	95.3 AV			1.00 V	289	54.50	40.80
3	#5725.00	63.6 PK	74.0	-10.4	1.57 V	73	61.00	2.60
4	#5725.00	46.9 AV	54.0	-7.1	1.57 V	73	44.30	2.60
5	#5780.00	59.5 PK	74.0	-14.5	1.32 V	58	56.80	2.70
6	#5780.00	47.9 AV	54.0	-6.1	1.32 V	58	45.20	2.70
7	11400.00	61.6 PK	74.0	-12.4	1.00 V	96	45.40	16.20
8	11400.00	48.3 AV	54.0	-5.7	1.00 V	96	32.10	16.20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	60.9 PK	74.0	-13.1	1.87 H	351	58.30	2.60
2	#5714.90	43.6 AV	54.0	-10.4	1.87 H	351	41.00	2.60
3	#5722.90	70.1 PK	78.2	-8.1	1.88 H	350	67.50	2.60
4	#5725.00	53.9 PK	78.2	-24.3	1.87 H	349	51.30	2.60
5	*5745.00	107.2 PK			1.79 H	26	66.20	41.00
6	*5745.00	97.2 AV			1.79 H	26	56.20	41.00
7	11490.00	61.0 PK	74.0	-13.0	1.22 H	347	45.10	15.90
8	11490.00	48.1 AV	54.0	-5.9	1.22 H	347	32.20	15.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	57.7 PK	74.0	-16.3	1.70 V	327	55.10	2.60
2	#5714.90	43.6 AV	54.0	-10.4	1.70 V	327	41.00	2.60
3	#5722.90	73.2 PK	78.2	-5.0	1.67 V	336	70.60	2.60
4	#5725.00	54.1 PK	78.2	-24.1	N/A V	N/A	51.50	2.60
5	*5745.00	106.8 PK			1.69 V	332	65.80	41.00
6	*5745.00	96.0 AV			1.69 V	332	55.00	41.00
7	11490.00	60.7 PK	74.0	-13.3	1.19 V	100	44.80	15.90
8	11490.00	47.7 AV	54.0	-6.3	1.19 V	100	31.80	15.90

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	108.3 PK			1.63 H	349	67.20	41.10
2	*5785.00	97.3 AV			1.63 H	349	56.20	41.10
3	11570.00	61.3 PK	74.0	-12.7	1.18 H	312	45.70	15.60
4	11570.00	48.4 AV	54.0	-5.6	1.18 H	312	32.80	15.60
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	*5785.00	107.1 PK			1.70 V	48	66.00	41.10
2	*5785.00	96.3 AV			1.70 V	48	55.20	41.10
3	11570.00	60.8 PK	74.0	-13.2	1.31 V	36	45.20	15.60
4	11570.00	47.4 AV	54.0	-6.6	1.31 V	36	31.80	15.60

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.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	107.8 PK			1.67 H	350	66.70	41.10
2	*5825.00	96.5 AV			1.67 H	350	55.40	41.10
3	#5850.00	44.5 PK	78.2	-33.7	1.78 H	50	41.50	3.00
4	#5852.10	61.8 PK	78.2	-16.4	1.77 H	44	58.80	3.00
5	#5860.10	58.4 PK	74.0	-15.6	1.78 H	51	55.40	3.00
6	#5860.10	44.0 AV	54.0	-10.0	1.78 H	51	41.00	3.00
7	11650.00	62.2 PK	74.0	-11.8	1.13 H	19	46.60	15.60
8	11650.00	48.8 AV	54.0	-5.2	1.13 H	19	33.20	15.60
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	*5825.00	106.6 PK			1.60 V	47	65.50	41.10
2	*5825.00	96.5 AV			1.60 V	47	55.40	41.10
3	#5850.00	46.9 PK	78.2	-31.3	1.45 V	48	43.90	3.00
4	#5852.10	60.2 PK	78.2	-18.0	1.45 V	49	57.20	3.00
5	#5860.10	57.3 PK	74.0	-16.7	1.45 V	49	54.30	3.00
6	#5860.10	44.4 AV	54.0	-9.6	1.45 V	49	41.40	3.00
7	11650.00	60.7 PK	74.0	-13.3	1.03 V	262	45.10	15.60
8	11650.00	47.8 AV	54.0	-6.2	1.03 V	262	32.20	15.60

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.

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.31 H	30	54.60	2.00
2	5150.00	44.3 AV	54.0	-9.7	1.31 H	30	42.30	2.00
3	*5190.00	99.2 PK			1.68 H	331	59.20	40.00
4	*5190.00	87.5 AV			1.68 H	331	47.50	40.00
5	#10380.00	59.9 PK	74.0	-14.1	1.00 H	196	44.90	15.00
6	#10380.00	46.8 AV	54.0	-7.2	1.00 H	196	31.80	15.00
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	56.4 PK	74.0	-17.6	1.70 V	51	54.40	2.00
2	5150.00	43.9 AV	54.0	-10.1	1.70 V	51	41.90	2.00
3	*5190.00	100.6 PK			1.43 V	90	60.60	40.00
4	*5190.00	90.1 AV			1.43 V	90	50.10	40.00
5	#10380.00	59.2 PK	74.0	-14.8	1.00 V	321	44.20	15.00
6	#10380.00	46.2 AV	54.0	-7.8	1.00 V	321	31.20	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	99.5 PK			1.75 H	344	59.40	40.10
2	*5230.00	88.0 AV			1.75 H	344	47.90	40.10
3	5350.00	57.1 PK	74.0	-16.9	1.49 H	84	55.10	2.00
4	5350.00	42.9 AV	54.0	-11.1	1.49 H	84	40.90	2.00
5	5390.00	57.0 PK	74.0	-17.0	1.50 H	86	54.90	2.10
6	5390.00	44.1 AV	54.0	-9.9	1.50 H	86	42.00	2.10
7	#10460.00	59.8 PK	74.0	-14.2	1.00 H	109	44.80	15.00
8	#10460.00	46.7 AV	54.0	-7.3	1.00 H	109	31.70	15.00
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	*5230.00	101.8 PK			1.21 V	53	61.70	40.10
2	*5230.00	91.2 AV			1.21 V	53	51.10	40.10
3	5350.00	57.4 PK	74.0	-16.6	1.70 V	350	55.40	2.00
4	5350.00	43.1 AV	54.0	-10.9	1.70 V	350	41.10	2.00
5	5390.00	58.6 PK	74.0	-15.4	1.74 V	351	56.50	2.10
6	5390.00	46.2 AV	54.0	-7.8	1.74 V	351	44.10	2.10
7	#10460.00	60.7 PK	74.0	-13.3	1.02 V	219	45.70	15.00
8	#10460.00	46.5 AV	54.0	-7.5	1.02 V	219	31.50	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.3 PK	74.0	-16.7	1.53 H	32	55.30	2.00
2	5150.00	44.3 AV	54.0	-9.7	1.53 H	32	42.30	2.00
3	*5270.00	104.8 PK			1.82 H	327	64.70	40.10
4	*5270.00	93.7 AV			1.82 H	327	53.60	40.10
5	5350.00	57.6 PK	74.0	-16.4	1.79 H	39	55.60	2.00
6	5350.00	45.8 AV	54.0	-8.2	1.79 H	39	43.80	2.00
7	5430.00	58.6 PK	74.0	-15.4	1.70 H	36	56.50	2.10
8	5430.00	45.8 AV	54.0	-8.2	1.70 H	36	43.70	2.10
9	#10540.00	61.2 PK	74.0	-12.8	1.00 H	113	45.60	15.60
10	#10540.00	47.7 AV	54.0	-6.3	1.00 H	113	32.10	15.60
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	5150.00	57.7 PK	74.0	-16.3	1.47 V	131	55.70	2.00
2	5150.00	44.5 AV	54.0	-9.5	1.47 V	131	42.50	2.00
3	*5270.00	106.4 PK			1.20 V	54	66.30	40.10
4	*5270.00	96.4 AV			1.20 V	54	56.30	40.10
5	5350.00	49.8 PK	74.0	-24.2	1.70 V	55	47.80	2.00
6	5350.00	48.0 AV	54.0	-6.0	1.70 V	55	46.00	2.00
7	5430.00	59.7 PK	74.0	-14.3	1.86 V	54	57.60	2.10
8	5430.00	48.2 AV	54.0	-5.8	1.86 V	54	46.10	2.10
9	#10540.00	61.0 PK	74.0	-13.0	1.00 V	267	45.40	15.60
10	#10540.00	47.6 AV	54.0	-6.4	1.00 V	267	32.00	15.60

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	103.9 PK			1.72 H	46	63.80	40.10
2	*5310.00	93.5 AV			1.72 H	46	53.40	40.10
3	5350.00	69.6 PK	74.0	-4.4	1.77 H	11	67.60	2.00
4	5350.00	50.6 AV	54.0	-3.4	1.77 H	11	48.60	2.00
5	5390.00	59.0 PK	74.0	-15.0	1.55 H	12	56.90	2.10
6	5390.00	46.8 AV	54.0	-7.2	1.55 H	12	44.70	2.10
7	10620.00	61.1 PK	74.0	-12.9	1.00 H	100	44.90	16.20
8	10620.00	48.2 AV	54.0	-5.8	1.00 H	100	32.00	16.20
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	*5310.00	106.2 PK			1.65 V	27	66.10	40.10
2	*5310.00	96.4 AV			1.65 V	27	56.30	40.10
3	5350.00	71.6 PK	74.0	-2.4	1.56 V	93	69.60	2.00
4	5350.00	52.0 AV	54.0	-2.0	1.56 V	93	50.00	2.00
5	5390.00	60.9 PK	74.0	-13.1	1.47 V	96	58.80	2.10
6	5390.00	48.3 AV	54.0	-5.7	1.47 V	96	46.20	2.10
7	10620.00	60.9 PK	74.0	-13.1	1.00 V	267	44.70	16.20
8	10620.00	48.1 AV	54.0	-5.9	1.00 V	267	31.90	16.20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	1.68 H	340	58.70	2.10
2	5460.00	45.6 AV	54.0	-8.4	1.68 H	340	43.50	2.10
3	#5470.00	69.6 PK	74.0	-4.4	1.73 H	341	67.40	2.20
4	#5470.00	49.2 AV	54.0	-4.8	1.73 H	341	47.00	2.20
5	*5510.00	103.9 PK			1.56 H	333	63.60	40.30
6	*5510.00	92.5 AV			1.56 H	333	52.20	40.30
7	11020.00	60.8 PK	74.0	-13.2	1.00 H	142	43.40	17.40
8	11020.00	48.0 AV	54.0	-6.0	1.00 H	142	30.60	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	5460.00	61.9 PK	74.0	-12.1	1.44 V	67	59.80	2.10
2	5460.00	47.4 AV	54.0	-6.6	1.44 V	67	45.30	2.10
3	#5470.00	72.6 PK	74.0	-1.4	1.36 V	70	70.40	2.20
4	#5470.00	52.3 AV	54.0	-1.7	1.36 V	70	50.10	2.20
5	*5510.00	107.2 PK			1.49 V	68	66.90	40.30
6	*5510.00	96.8 AV			1.49 V	68	56.50	40.30
7	11020.00	61.2 PK	74.0	-12.8	1.03 V	248	43.80	17.40
8	11020.00	47.8 AV	54.0	-6.2	1.03 V	248	30.40	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 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	107.4 PK			1.71 H	9	67.00	40.40
2	*5550.00	95.8 AV			1.71 H	9	55.40	40.40
3	11100.00	62.2 PK	74.0	-11.8	1.04 H	241	45.60	16.60
4	11100.00	48.7 AV	54.0	-5.3	1.04 H	241	32.10	16.60
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	*5550.00	108.9 PK			1.56 V	68	68.50	40.40
2	*5550.00	98.5 AV			1.56 V	68	58.10	40.40
3	11100.00	61.4 PK	74.0	-12.6	1.02 V	202	44.80	16.60
4	11100.00	48.5 AV	54.0	-5.5	1.02 V	202	31.90	16.60

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	106.6 PK			1.60 H	352	65.90	40.70
2	*5670.00	95.2 AV			1.60 H	352	54.50	40.70
3	#5725.00	59.4 PK	74.0	-14.6	1.79 H	20	56.80	2.60
4	#5725.00	47.2 AV	54.0	-6.8	1.79 H	20	44.60	2.60
5	11340.00	62.9 PK	74.0	-11.1	1.04 H	218	46.40	16.50
6	11340.00	48.2 AV	54.0	-5.8	1.04 H	218	31.70	16.50
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	*5670.00	107.9 PK			1.44 V	69	67.20	40.70
2	*5670.00	106.3 AV			1.44 V	69	65.60	40.70
3	#5725.00	61.8 PK	74.0	-12.2	1.63 V	69	59.20	2.60
4	#5725.00	47.7 AV	54.0	-6.3	1.63 V	69	45.10	2.60
5	11340.00	61.1 PK	74.0	-12.9	1.03 V	214	44.60	16.50
6	11340.00	47.9 AV	54.0	-6.1	1.03 V	214	31.40	16.50

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	68.6 PK	74.0	-5.4	1.72 H	354	66.00	2.60
2	#5714.90	50.4 AV	54.0	-3.6	1.72 H	354	47.80	2.60
3	#5722.90	73.7 PK	78.2	-4.5	1.72 H	0	71.10	2.60
4	#5725.00	57.8 PK	78.2	-20.4	1.73 H	1	55.20	2.60
5	*5755.00	105.2 PK			1.77 H	358	64.20	41.00
6	*5755.00	94.3 AV			1.77 H	358	53.30	41.00
7	11510.00	61.1 PK	74.0	-12.9	1.00 H	324	45.40	15.70
8	11510.00	47.2 AV	54.0	-6.8	1.00 H	324	31.50	15.70
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	#5714.90	72.5 PK	74.0	-1.5	1.09 V	74	69.90	2.60
2	#5714.90	51.3 AV	54.0	-2.7	1.09 V	74	48.70	2.60
3	#5722.90	75.2 PK	78.2	-3.0	1.23 V	61	72.60	2.60
4	#5725.00	59.4 PK	78.2	-18.8	1.23 V	61	56.80	2.60
5	*5755.00	106.1 PK			1.09 V	75	65.10	41.00
6	*5755.00	95.5 AV			1.09 V	75	54.50	41.00
7	11510.00	60.0 PK	74.0	-14.0	1.02 V	341	44.30	15.70
8	11510.00	46.5 AV	54.0	-7.5	1.02 V	341	30.80	15.70

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	105.8 PK			1.40 H	354	64.70	41.10
2	*5795.00	94.4 AV			1.40 H	354	53.30	41.10
3	#5850.00	44.6 PK	78.2	-33.6	1.45 H	0	41.60	3.00
4	#5852.10	59.4 PK	78.2	-18.8	1.48 H	355	56.40	3.00
5	#5860.10	59.7 PK	74.0	-14.3	1.37 H	356	56.70	3.00
6	#5860.10	47.2 AV	54.0	-6.8	1.37 H	356	44.20	3.00
7	11590.00	62.1 PK	74.0	-11.9	1.00 H	241	46.50	15.60
8	11590.00	47.9 AV	54.0	-6.1	1.00 H	241	32.30	15.60
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	*5795.00	105.0 PK			1.21 V	73	63.90	41.10
2	*5795.00	94.7 AV			1.21 V	73	53.60	41.10
3	#5850.00	44.8 PK	78.2	-33.4	1.54 V	66	41.80	3.00
4	#5852.10	59.9 PK	78.2	-18.3	1.54 V	62	56.90	3.00
5	#5860.10	61.9 PK	74.0	-12.1	1.45 V	74	58.90	3.00
6	#5860.10	48.9 AV	54.0	-5.1	1.45 V	74	45.90	3.00
7	11590.00	60.3 PK	74.0	-13.7	1.02 V	214	44.70	15.60
8	11590.00	46.8 AV	54.0	-7.2	1.02 V	214	31.20	15.60

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.

802.11ac (VHT80)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.5 PK	74.0	-16.5	1.19 H	195	55.50	2.00
2	5150.00	44.7 AV	54.0	-9.3	1.19 H	195	42.70	2.00
3	*5210.00	97.4 PK			1.84 H	7	57.30	40.10
4	*5210.00	86.5 AV			1.84 H	7	46.40	40.10
5	5350.00	57.1 PK	74.0	-16.9	1.52 H	165	55.10	2.00
6	5350.00	44.0 AV	54.0	-10.0	1.52 H	165	42.00	2.00
7	#10420.00	60.3 PK	74.0	-13.7	1.00 H	333	45.30	15.00
8	#10420.00	47.1 AV	54.0	-6.9	1.00 H	333	32.10	15.00
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	58.1 PK	74.0	-15.9	1.53 V	72	56.10	2.00
2	5150.00	44.9 AV	54.0	-9.1	1.53 V	72	42.90	2.00
3	*5210.00	99.9 PK			1.20 V	72	59.80	40.10
4	*5210.00	88.9 AV			1.20 V	72	48.80	40.10
5	5350.00	58.1 PK	74.0	-15.9	1.23 V	77	56.10	2.00
6	5350.00	45.3 AV	54.0	-8.7	1.23 V	77	43.30	2.00
7	#10420.00	60.6 PK	74.0	-13.4	1.02 V	177	45.60	15.00
8	#10420.00	47.8 AV	54.0	-6.2	1.02 V	177	32.80	15.00

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	100.9 PK			1.78 H	331	60.80	40.10
2	*5290.00	90.1 AV			1.78 H	331	50.00	40.10
3	5350.00	65.3 PK	74.0	-8.7	1.74 H	41	63.30	2.00
4	5350.00	50.4 AV	54.0	-3.6	1.74 H	41	48.40	2.00
5	#10580.00	61.0 PK	74.0	-13.0	1.00 H	311	45.10	15.90
6	#10580.00	47.8 AV	54.0	-6.2	1.00 H	311	31.90	15.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	103.1 PK			1.34 V	114	63.00	40.10
2	*5290.00	92.0 AV			1.34 V	114	51.90	40.10
3	5350.00	69.5 PK	74.0	-4.5	1.97 V	54	67.50	2.00
4	5350.00	52.5 AV	54.0	-1.5	1.97 V	54	50.50	2.00
5	#10580.00	61.2 PK	74.0	-12.8	1.00 V	166	45.30	15.90
6	#10580.00	48.0 AV	54.0	-6.0	1.00 V	166	32.10	15.90

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.0 PK	74.0	-9.0	1.77 H	337	62.90	2.10
2	5460.00	49.3 AV	54.0	-4.7	1.77 H	337	47.20	2.10
3	#5470.00	65.7 PK	74.0	-8.3	1.77 H	337	63.50	2.20
4	#5470.00	50.5 AV	54.0	-3.5	1.77 H	337	48.30	2.20
5	*5530.00	99.8 PK			1.56 H	41	59.40	40.40
6	*5530.00	89.0 AV			1.56 H	41	48.60	40.40
7	11060.00	61.6 PK	74.0	-12.4	1.00 H	297	44.50	17.10
8	11060.00	48.8 AV	54.0	-5.2	1.00 H	297	31.70	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	5460.00	69.0 PK	74.0	-5.0	1.64 V	72	66.90	2.10
2	5460.00	51.4 AV	54.0	-2.6	1.64 V	72	49.30	2.10
3	#5470.00	70.0 PK	74.0	-4.0	1.64 V	72	67.80	2.20
4	#5470.00	52.6 AV	54.0	-1.4	1.64 V	72	50.40	2.20
5	*5530.00	102.8 PK			1.48 V	71	62.40	40.40
6	*5530.00	92.7 AV			1.48 V	71	52.30	40.40
7	11060.00	61.7 PK	74.0	-12.3	1.01 V	165	44.60	17.10
8	11060.00	48.9 AV	54.0	-5.1	1.01 V	165	31.80	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 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5714.90	66.1 PK	74.0	-7.9	1.60 H	24	63.50	2.60
2	#5714.90	50.9 AV	54.0	-3.1	1.60 H	24	48.30	2.60
3	#5722.90	68.9 PK	78.2	-9.3	1.61 H	22	66.30	2.60
4	#5725.00	54.2 PK	78.2	-24.0	1.60 H	23	51.60	2.60
5	*5775.00	100.3 PK			1.68 H	356	59.30	41.00
6	*5775.00	89.7 AV			1.68 H	356	48.70	41.00
7	#5850.00	52.0 PK	78.2	-26.2	1.82 H	356	49.00	3.00
8	#5852.10	64.2 PK	78.2	-14.0	1.82 H	355	61.20	3.00
9	#5860.10	62.2 PK	74.0	-11.8	1.80 H	355	59.20	3.00
10	#5860.10	47.8 AV	54.0	-6.2	1.80 H	355	44.80	3.00
11	11550.00	60.7 PK	74.0	-13.3	1.00 H	216	45.10	15.60
12	11550.00	47.8 AV	54.0	-6.2	1.00 H	216	32.20	15.60

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	#5714.90	69.7 PK	74.0	-4.3	1.64 V	67	67.10	2.60
2	#5714.90	52.8 AV	54.0	-1.2	1.64 V	67	50.20	2.60
3	#5722.90	71.7 PK	78.2	-6.5	1.65 V	65	69.10	2.60
4	#5725.00	55.9 PK	78.2	-22.3	1.64 V	60	53.30	2.60
5	*5775.00	100.3 PK			1.64 V	75	59.30	41.00
6	*5775.00	89.8 AV			1.64 V	75	48.80	41.00
7	#5850.00	50.6 PK	78.2	-27.6	1.61 V	74	47.60	3.00
8	#5852.10	69.4 PK	78.2	-8.8	1.62 V	71	66.40	3.00
9	#5860.10	63.7 PK	74.0	-10.3	1.60 V	75	60.70	3.00
10	#5860.10	48.3 AV	54.0	-5.7	1.60 V	75	45.30	3.00
11	11550.00	60.8 PK	74.0	-13.2	1.00 V	132	45.20	15.60
12	11550.00	48.1 AV	54.0	-5.9	1.00 V	132	32.50	15.60

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.

Below 1GHz worst-case data:

802.11a

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	20.2 QP	40.0	-19.8	1.50 H	16	36.00	-15.80
2	59.10	19.7 QP	40.0	-20.3	1.50 H	16	34.40	-14.70
3	142.52	35.1 QP	43.5	-8.4	2.00 H	11	49.70	-14.60
4	284.14	33.0 QP	46.0	-13.0	1.01 H	277	45.90	-12.90
5	361.74	29.1 QP	46.0	-16.9	1.01 H	200	40.50	-11.40
6	526.64	30.3 QP	46.0	-15.7	1.50 H	16	38.50	-8.20
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	30.00	33.9 QP	40.0	-6.1	1.00 V	106	49.70	-15.80
2	55.22	32.8 QP	40.0	-7.2	1.99 V	205	47.30	-14.50
3	142.52	36.2 QP	43.5	-7.3	1.24 V	16	50.80	-14.60
4	282.20	28.4 QP	46.0	-17.6	1.24 V	50	41.40	-13.00
5	317.12	26.5 QP	46.0	-19.5	1.24 V	354	38.60	-12.10
6	965.08	31.8 QP	54.0	-22.2	1.99 V	15	32.00	-0.20

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

802.11a

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.88	19.5 QP	40.0	-20.5	2.00 H	83	35.30	-15.80
2	130.88	18.9 QP	43.5	-24.6	2.00 H	309	34.30	-15.40
3	165.80	20.2 QP	43.5	-23.3	1.51 H	233	34.50	-14.30
4	274.44	29.7 QP	46.0	-16.3	1.01 H	329	43.00	-13.30
5	348.16	25.7 QP	46.0	-20.3	1.01 H	246	37.50	-11.80
6	528.58	29.1 QP	46.0	-16.9	1.51 H	174	37.30	-8.20
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	35.82	31.8 QP	40.0	-8.2	1.00 V	121	47.40	-15.60
2	53.28	28.0 QP	40.0	-12.0	1.24 V	321	42.20	-14.20
3	128.94	21.5 QP	43.5	-22.0	1.49 V	204	37.00	-15.50
4	272.50	24.5 QP	46.0	-21.5	1.00 V	5	37.90	-13.40
5	326.82	24.8 QP	46.0	-21.2	1.24 V	203	36.70	-11.90
6	489.78	25.9 QP	46.0	-20.1	1.49 V	15	34.80	-8.90

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 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, 2015	Jul. 23, 2016
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

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

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

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

4.2.3 Test Procedures

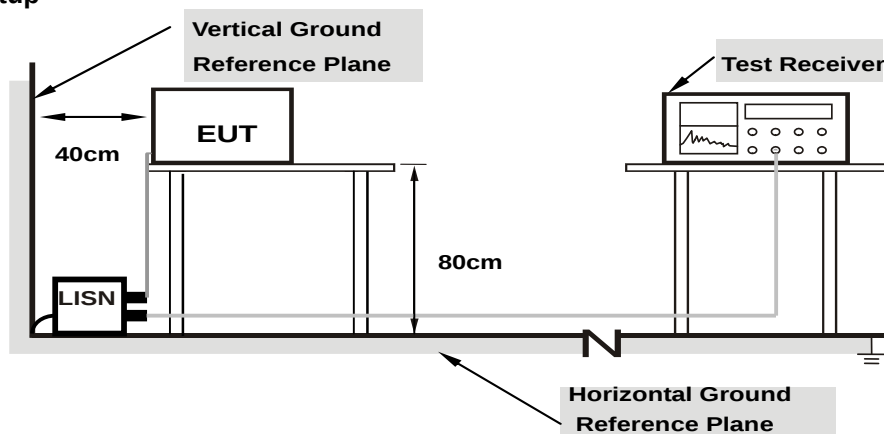
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

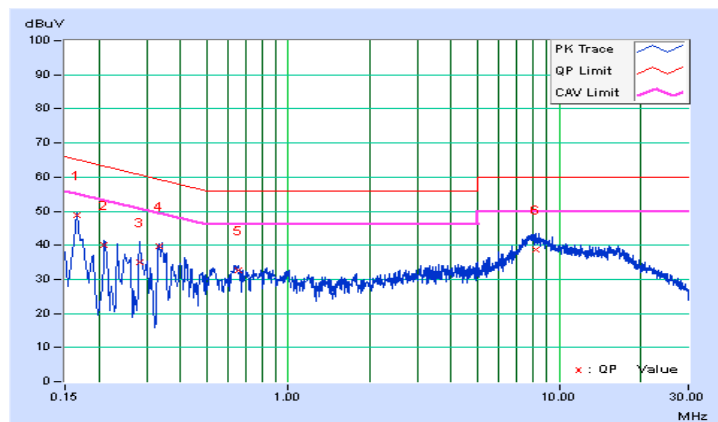
4.2.7 Test Results

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16600	0.05	48.90	37.66	48.95	37.71	65.16	55.16	-16.20	-17.44
2	0.21000	0.06	39.84	26.16	39.90	26.22	63.21	53.21	-23.31	-26.99
3	0.28200	0.06	34.93	19.28	34.99	19.34	60.76	50.76	-25.77	-31.42
4	0.33325	0.06	39.76	30.27	39.82	30.33	59.37	49.37	-19.55	-19.04
5	0.65243	0.07	32.74	22.08	32.81	22.15	56.00	46.00	-23.19	-23.85
6	8.21000	0.37	38.46	32.00	38.83	32.37	60.00	50.00	-21.17	-17.63

REMARKS:

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

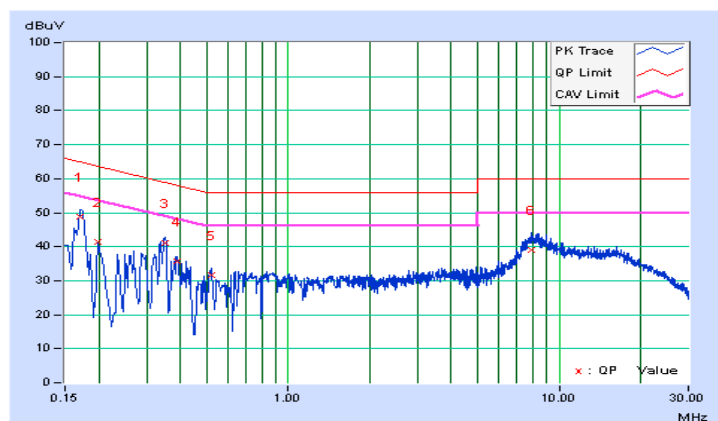


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17022	0.05	48.82	39.22	48.87	39.27	64.95	54.95	-16.08	-15.68
2	0.19832	0.05	41.22	22.41	41.27	22.46	63.68	53.68	-22.41	-31.22
3	0.35000	0.06	40.89	31.10	40.95	31.16	58.96	48.96	-18.01	-17.80
4	0.39000	0.06	35.62	26.72	35.68	26.78	58.06	48.06	-22.38	-21.28
5	0.52200	0.06	31.65	21.25	31.71	21.31	56.00	46.00	-24.29	-24.69
6	7.85800	0.34	38.80	32.10	39.14	32.44	60.00	50.00	-20.86	-17.56

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.

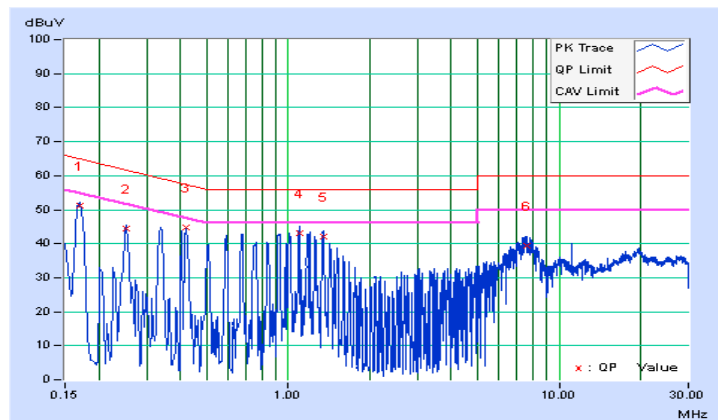


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16977	0.05	51.22	47.29	51.27	47.34	64.97	54.97	-13.70	-7.63
2	0.25400	0.06	44.25	41.31	44.31	41.37	61.63	51.63	-17.32	-10.26
3	0.42020	0.06	44.87	43.63	44.93	43.69	57.44	47.44	-12.51	-3.75
4	1.09800	0.08	43.11	37.05	43.19	37.13	56.00	46.00	-12.81	-8.87
5	1.34289	0.09	42.02	36.48	42.11	36.57	56.00	46.00	-13.89	-9.43
6	7.60600	0.35	38.97	19.81	39.32	20.16	60.00	50.00	-20.68	-29.84

REMARKS:

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

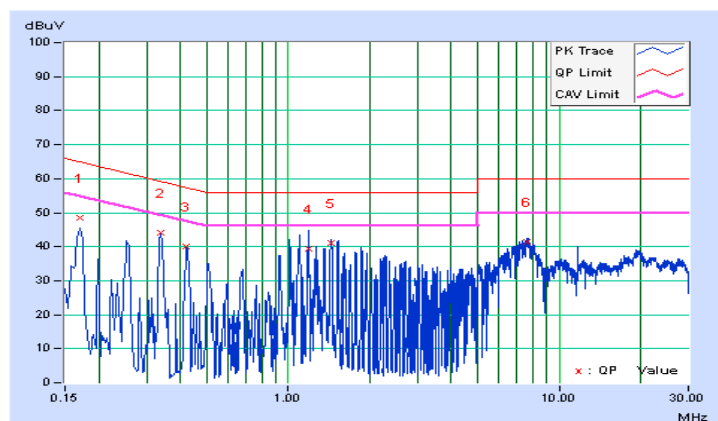


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	0.05	48.56	42.95	48.61	43.00	64.96	54.96	-16.35	-11.96
2	0.33800	0.06	43.89	42.93	43.95	42.99	59.25	49.25	-15.31	-6.27
3	0.42242	0.06	39.85	39.64	39.91	39.70	57.40	47.40	-17.49	-7.70
4	1.18600	0.09	39.40	35.86	39.49	35.95	56.00	46.00	-16.51	-10.05
5	1.43432	0.09	40.86	34.06	40.95	34.15	56.00	46.00	-15.05	-11.85
6	7.60600	0.33	40.92	29.38	41.25	29.71	60.00	50.00	-18.75	-20.29

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

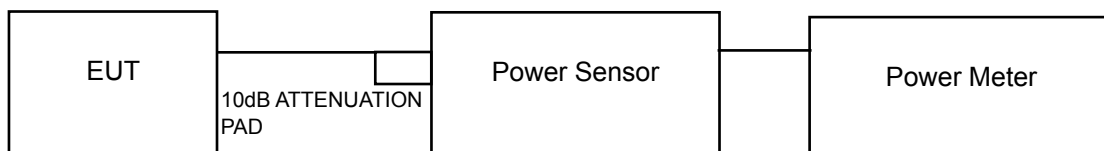
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

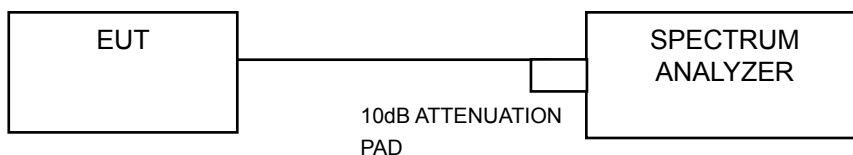
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

For Power Output Measurement



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

FOR AVERAGE POWER MEASUREMENT

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

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

For 802.11ac (VHT80)

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

POWER OUTPUT:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	10.62	10.31	22.275	13.48	30	Pass
40	5200	10.88	10.03	22.315	13.49	30	Pass
48	5240	10.64	10.30	22.303	13.48	30	Pass
52	5260	15.97	15.73	76.948	18.86	24	Pass
60	5300	16.00	15.60	76.119	18.81	24	Pass
64	5320	16.07	15.73	77.869	18.91	24	Pass
100	5500	17.28	16.54	98.538	19.94	24	Pass
116	5580	17.26	16.65	99.449	19.98	24	Pass
140	5700	17.27	16.57	98.727	19.94	24	Pass
149	5745	16.42	15.69	80.921	19.08	30	Pass
157	5785	16.34	15.42	77.887	18.91	30	Pass
165	5825	16.52	15.62	81.350	19.10	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(20.64) = 24.15\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(20.56) = 24.13\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(20.74) = 24.17\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(21.94) = 24.41\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(21.38) = 24.30\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(21.97) = 24.42\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(20.71) = 24.16\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(20.69) = 24.16\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(20.65) = 24.15\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(25.13) = 25.00\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(21.70) = 24.36\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(24.16) = 24.83\text{ dBm} > 24\text{dBm}$.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	10.72	10.10	22.036	13.43	30	Pass
40	5200	10.71	10.21	22.271	13.48	30	Pass
48	5240	10.73	10.16	22.205	13.46	30	Pass
52	5260	15.86	15.66	75.361	18.77	24	Pass
60	5300	16.09	15.46	75.800	18.80	24	Pass
64	5320	15.83	15.70	75.436	18.78	24	Pass
100	5500	17.21	16.70	99.376	19.97	24	Pass
116	5580	17.29	16.58	99.079	19.96	24	Pass
140	5700	17.26	16.48	97.674	19.90	24	Pass
149	5745	16.44	15.62	80.530	19.06	30	Pass
157	5785	16.35	15.56	79.127	18.98	30	Pass
165	5825	16.45	15.55	80.049	19.03	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(20.93) = 24.21\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(21.00) = 24.22\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(21.03) = 24.23\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(28.47) = 25.54\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(25.29) = 25.03\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(29.89) = 25.76\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(20.85) = 24.19\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(20.63) = 24.14\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(20.76) = 24.17\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(23.01) = 24.62\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(23.26) = 24.67\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(24.02) = 24.81\text{ dBm} > 24\text{dBm}$.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	10.73	10.18	22.253	13.47	30	Pass
46	5230	10.81	10.05	22.166	13.46	30	Pass
54	5270	16.03	15.79	78.018	18.92	30	Pass
62	5310	16.11	15.59	77.056	18.87	24	Pass
102	5510	15.71	15.34	71.437	18.54	24	Pass
110	5550	17.26	16.78	100.854	20.04	24	Pass
134	5670	17.31	16.74	101.033	20.04	24	Pass
151	5755	16.01	15.31	73.865	18.68	30	Pass
159	5795	16.41	15.43	78.666	18.96	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(45.37) = 27.57\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(43.46) = 27.38\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(43.25) = 27.36\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(64.49) = 29.09\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(68.50) = 29.36\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(43.36) = 27.37\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(43.69) = 27.40\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(42.36) = 27.27\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(55.48) = 28.44\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(55.51) = 28.44\text{ dBm} > 24\text{dBm}$.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	10.64	10.28	22.254	13.47	30	Pass
58	5290	15.06	14.65	61.237	17.87	24	Pass
106	5530	15.30	14.81	64.153	18.07	24	Pass
155	5775	15.84	15.17	71.256	18.53	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. $11\text{dBm} + 10\log(83.02) = 30.19\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(83.33) = 30.21\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(82.76) = 30.18\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(82.70) = 30.18\text{ dBm} > 24\text{dBm}$.

26dB BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
36	5180	20.53	20.62	Pass
40	5200	20.61	20.60	Pass
48	5240	20.40	20.51	Pass
52	5260	20.64	20.71	Pass
60	5300	20.56	20.69	Pass
64	5320	20.74	20.65	Pass
100	5500	21.94	25.13	Pass
116	5580	21.38	21.70	Pass
140	5700	21.97	24.16	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
36	5180	20.93	20.52	Pass
40	5200	20.86	20.62	Pass
48	5240	20.96	20.49	Pass
52	5260	20.93	20.85	Pass
60	5300	21.00	20.63	Pass
64	5320	21.03	20.76	Pass
100	5500	28.47	23.01	Pass
116	5580	25.29	23.26	Pass
140	5700	29.89	24.02	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
38	5190	41.09	40.89	Pass
46	5230	41.08	40.85	Pass
54	5270	45.37	43.36	Pass
62	5310	43.46	43.69	Pass
102	5510	43.25	42.36	Pass
110	5550	64.49	55.48	Pass
134	5670	68.50	55.51	Pass

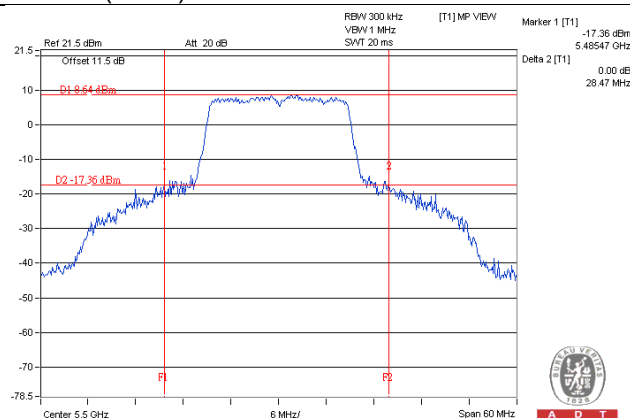
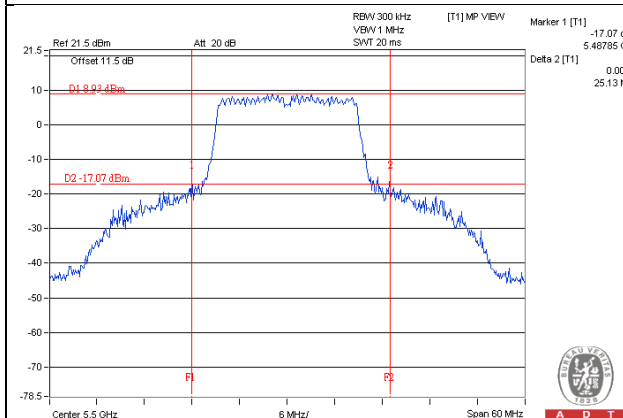
802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
42	5210	82.92	82.57	Pass
58	5290	83.02	82.76	Pass
106	5530	83.33	82.70	Pass

Spectrum Plot of Worst Value

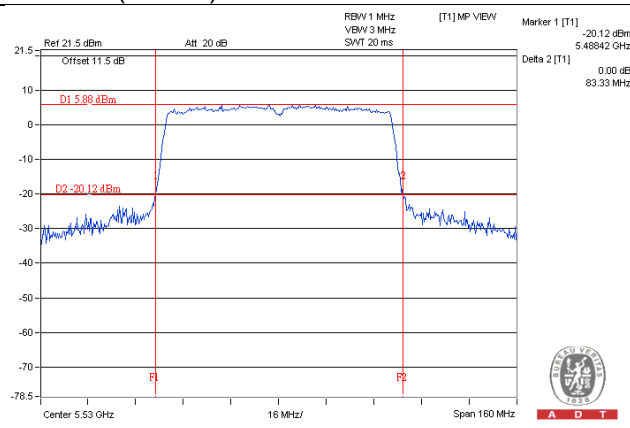
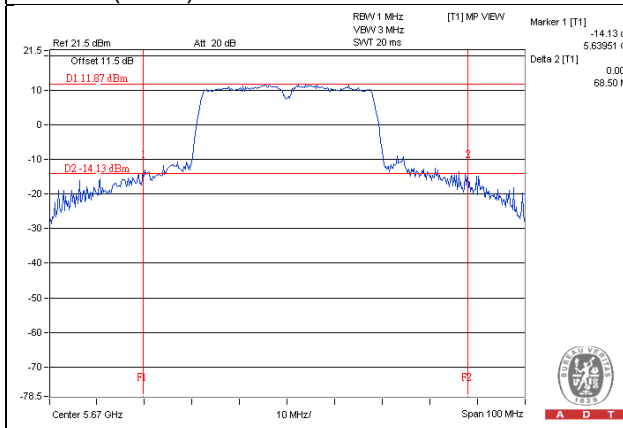
802.11a

802.11n (HT20)



802.11n (HT40)

802.11ac (VHT80)



OCCUPIED BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.92	17.76
40	5200	17.04	17.76
48	5240	16.80	17.76
52	5260	16.92	17.76
60	5300	17.04	17.76
64	5320	17.04	17.76
100	5500	17.04	17.88
116	5580	17.04	18.00
140	5700	17.04	17.88
149	5745	16.87	16.78
157	5785	16.92	16.80
165	5825	16.92	16.80

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.00	17.76
40	5200	18.00	17.76
48	5240	18.00	17.76
52	5260	18.00	17.88
60	5300	18.00	17.76
64	5320	18.00	17.76
100	5500	18.12	18.00
116	5580	18.12	17.88
140	5700	18.00	17.76
149	5745	18.00	17.76
157	5785	18.00	17.76
165	5825	18.00	17.76

802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.60	36.48
46	5230	36.72	36.48
54	5270	36.72	36.72
62	5310	36.72	36.60
102	5510	36.72	36.60
110	5550	36.84	36.72
134	5670	36.96	36.72
151	5755	36.72	36.72
159	5795	36.84	36.72

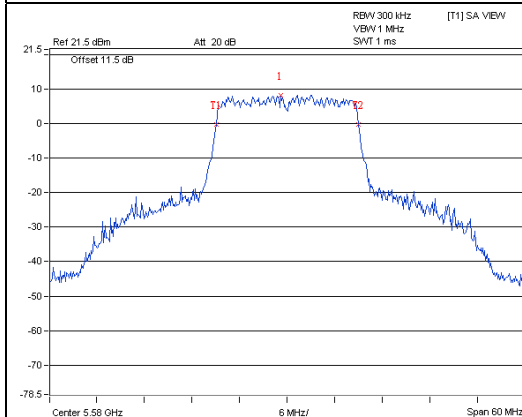
802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
58	5290	75.84	75.84
106	5530	75.84	75.84
155	5775	75.84	75.84

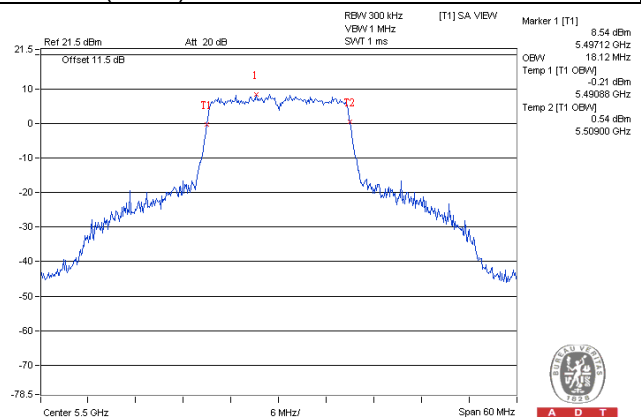
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



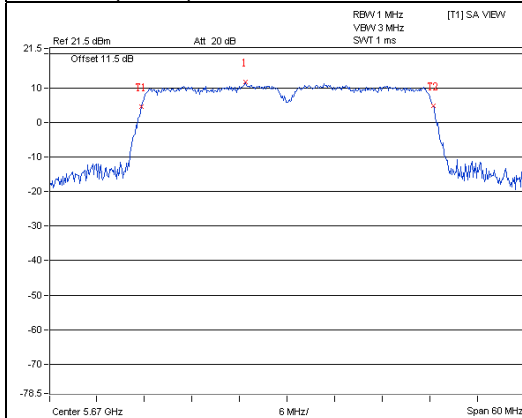
A D T



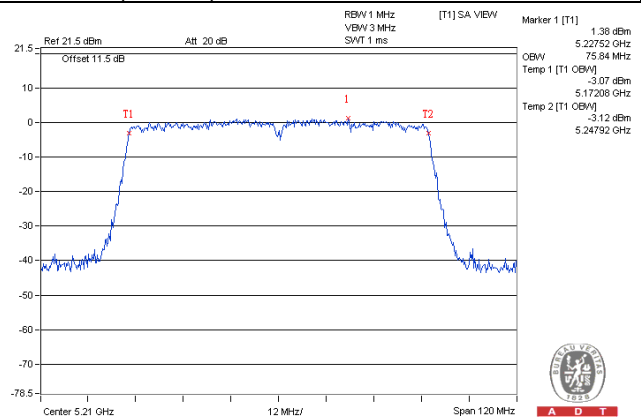
A D T

802.11n (HT40)

802.11ac (VHT80)



A D T



A D T

EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	77.869	18.91
5470~5725	99.449	19.98

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	75.800	18.80
5470~5725	99.376	19.97

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	78.018	18.92
5470~5725	101.033	20.04

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	61.237	17.87
5470~5725	64.153	18.07

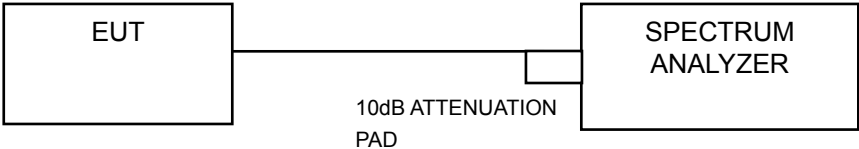
NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

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	11dBm/ MHz
		Mobile and Portable client device	
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:

802.11a, 802.11n (HT20):

Using method SA-1

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

802.11n (HT40), 802.11ac (VHT80):

Using method SA-2

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

For U-NII-3 band:

802.11a, 802.11n (HT20):

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

802.11n (HT40), 802.11ac (VHT80):

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- 4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- 5) Sweep time = auto, trigger set to "free run".
- 6) Trace average at least 100 traces in power averaging mode.
- 7) Record the max value and add 10 log (1/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 (dBm)		Total PSD (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-1.79	-2.48	0.89	16.53	Pass
40	5200	-1.70	-2.28	1.03	16.53	Pass
48	5240	-1.61	-2.40	1.02	16.53	Pass
52	5260	3.47	2.93	6.22	10.30	Pass
60	5300	3.42	2.83	6.15	10.30	Pass
64	5320	3.48	2.89	6.21	10.30	Pass
100	5500	5.00	3.89	7.49	10.28	Pass
116	5580	4.92	3.87	7.44	10.28	Pass
140	5700	4.68	3.76	7.25	10.28	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.47\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (6.47 - 6) = 16.53\text{dBm}$.
For U-NII-2A Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.70\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.70 - 6) = 10.30\text{dBm}$.
For U-NII-2C Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.72 - 6) = 10.28\text{dBm}$.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
36	5180	-2.00	-2.23	0.90	16.53	Pass
40	5200	-1.96	-2.46	0.81	16.53	Pass
48	5240	-1.85	-2.43	0.88	16.53	Pass
52	5260	3.00	3.03	6.03	10.30	Pass
60	5300	3.09	2.85	5.98	10.30	Pass
64	5320	2.98	2.84	5.92	10.30	Pass
100	5500	4.22	3.90	7.07	10.28	Pass
116	5580	4.35	3.57	6.99	10.28	Pass
140	5700	4.26	3.76	7.03	10.28	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.47\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (6.47 - 6) = 16.53\text{dBm}$.
For U-NII-2A Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.70\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.70 - 6) = 10.30\text{dBm}$.
For U-NII-2C Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.72 - 6) = 10.28\text{dBm}$.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
38	5190	-4.86	-5.33	-2.08	0.16	-1.92	16.53	Pass
46	5230	-4.95	-5.36	-2.14	0.16	-1.98	16.53	Pass
54	5270	0.18	0.09	3.14	0.16	3.30	10.30	Pass
62	5310	0.18	-0.09	3.06	0.16	3.22	10.30	Pass
102	5510	-0.60	-1.32	2.06	0.16	2.22	10.28	Pass
110	5550	1.48	0.87	4.20	0.16	4.36	10.28	Pass
134	5670	1.87	1.13	4.53	0.16	4.69	10.28	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.47\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(6.47-6) = 16.53\text{dBm}$.
For U-NII-2A Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.70\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11-(6.70-6) = 10.30\text{dBm}$.
For U-NII-2C Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11-(6.72-6) = 10.28\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
42	5210	-8.54	-8.87	-5.69	0.29	-5.40	16.53	Pass
58	5290	-4.86	-4.89	-1.86	0.29	-1.57	10.30	Pass
106	5530	-4.70	-4.97	-1.82	0.29	-1.53	10.28	Pass

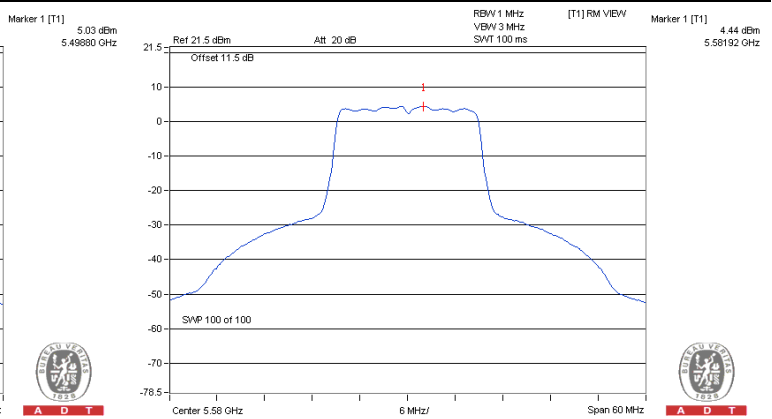
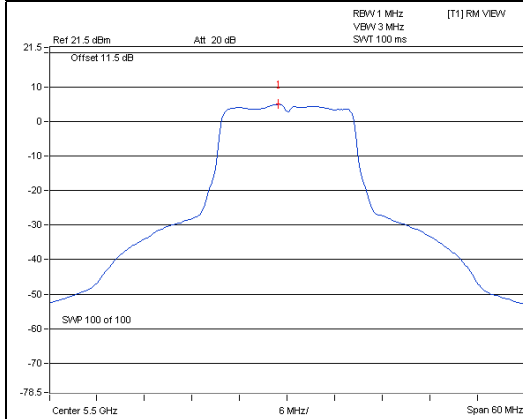
Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.47\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(6.47-6) = 16.53\text{dBm}$.
For U-NII-2A Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.70\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11-(6.70-6) = 10.30\text{dBm}$.
For U-NII-2C Band: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11-(6.72-6) = 10.28\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

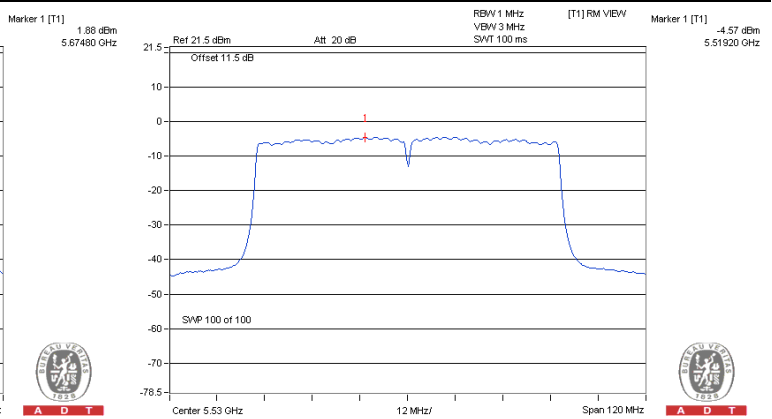
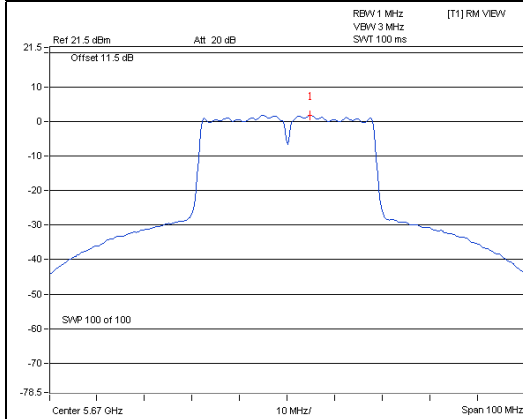
802.11a / Ch 100 / Chain 0

802.11n (HT20) / Ch 116 / Chain 0



802.11n (HT40) / Ch 134 / Chain 0

802.11ac (VHT80) / Ch 106 / Chain 0



For U-NII-3 Band

802.11a

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-4.70	-2.48	3.01	0.53	29.28	Pass
	157	5785	-4.52	-2.30	3.01	0.71	29.28	Pass
	165	5825	-4.39	-2.17	3.01	0.84	29.28	Pass
1	149	5745	-5.26	-3.04	3.01	-0.03	29.28	Pass
	157	5785	-5.24	-3.02	3.01	-0.01	29.28	Pass
	165	5825	-5.28	-3.06	3.01	-0.05	29.28	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (6.72 - 6) = 29.28\text{dBm}$.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-4.65	-2.43	3.01	0.58	29.28	Pass
	157	5785	-4.86	-2.64	3.01	0.37	29.28	Pass
	165	5825	-4.82	-2.60	3.01	0.41	29.28	Pass
1	149	5745	-5.65	-3.43	3.01	-0.42	29.28	Pass
	157	5785	-5.47	-3.25	3.01	-0.24	29.28	Pass
	165	5825	-5.45	-3.23	3.01	-0.22	29.28	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (6.72 - 6) = 29.28\text{dBm}$.

802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	151	5755	-8.79	-6.57	3.01	0.16	-3.40	29.28	Pass
	159	5795	-7.71	-5.49	3.01	0.16	-2.32	29.28	Pass
1	151	5755	-9.71	-7.49	3.01	0.16	-4.32	29.28	Pass
	159	5795	-8.88	-6.66	3.01	0.16	-3.49	29.28	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (6.72 - 6) = 29.28\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	155	5775	-12.51	-10.29	3.01	0.29	-6.99	29.28	Pass
1	155	5775	-13.26	-11.04	3.01	0.29	-7.74	29.28	Pass

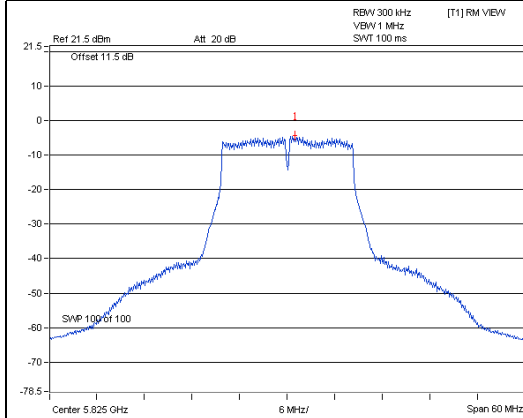
Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 6.72\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (6.72 - 6) = 29.28\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

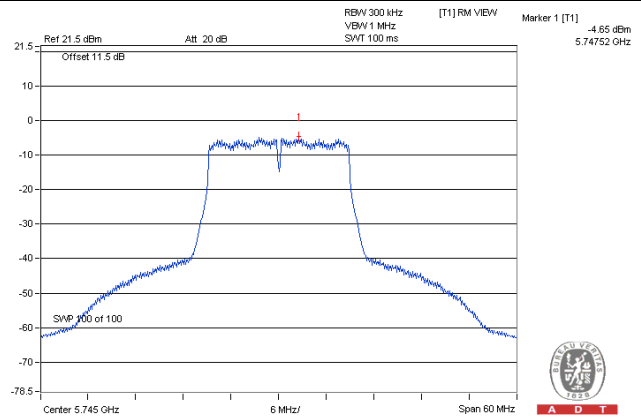
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



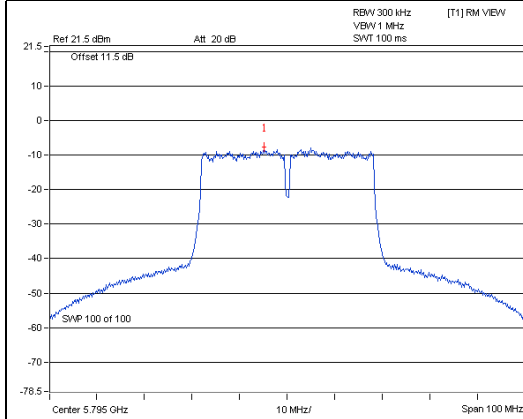
A D T



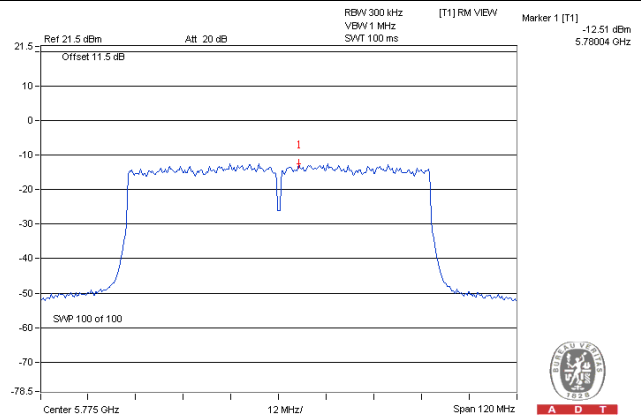
A D T

802.11n (HT40)

802.11ac (VHT80)



A D T



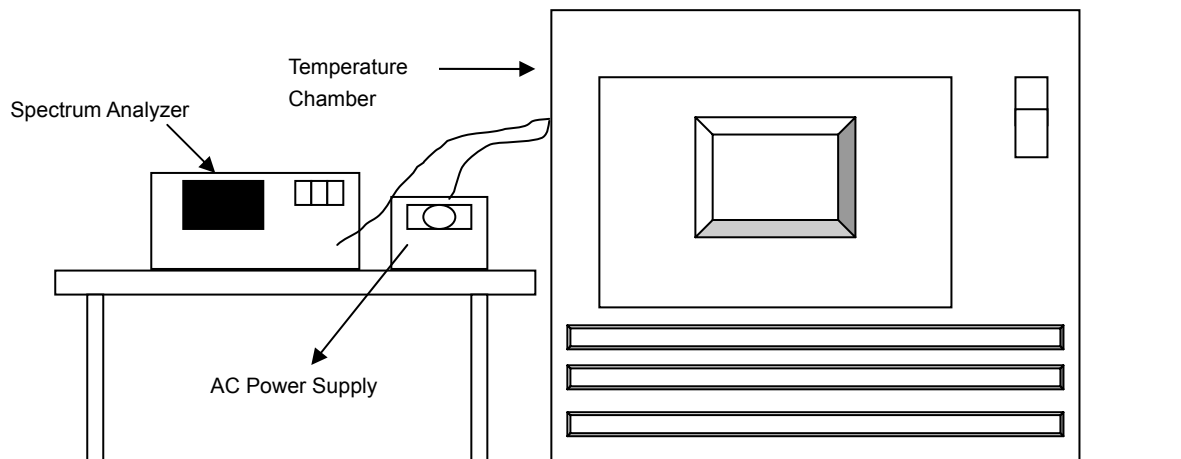
A D T

4.5 Frequency Stability

4.5.1 Limits of Frequency Stability Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.0089	0.00017	5180.0113	0.00022	5180.0103	0.00020	5180.0133	0.00026
40	120	5179.9755	-0.00047	5179.9756	-0.00047	5179.9762	-0.00046	5179.9766	-0.00045
30	120	5180.0210	0.00041	5180.0217	0.00042	5180.0180	0.00035	5180.0199	0.00038
20	120	5179.9774	-0.00044	5179.9771	-0.00044	5179.9745	-0.00049	5179.9744	-0.00049
10	120	5180.0042	0.00008	5180.0019	0.00004	5180.0026	0.00005	5180.0023	0.00004
0	120	5179.9936	-0.00012	5179.9918	-0.00016	5179.9900	-0.00019	5179.9914	-0.00017
-10	120	5179.9793	-0.00040	5179.9813	-0.00036	5179.9809	-0.00037	5179.9820	-0.00035
-20	120	5180.0027	0.00005	5180.0017	0.00003	5180.0047	0.00009	5180.0033	0.00006
-30	120	5180.0012	0.00002	5180.0031	0.00006	5180.0014	0.00003	5180.0038	0.00007

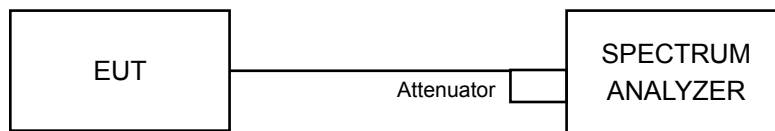
Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9781	-0.00042	5179.9763	-0.00046	5179.9735	-0.00051	5179.9751	-0.00048
	120	5179.9774	-0.00044	5179.9771	-0.00044	5179.9745	-0.00049	5179.9744	-0.00049
	102	5179.9779	-0.00043	5179.977	-0.00044	5179.9750	-0.00048	5179.9747	-0.00049

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.36	16.38	0.5	Pass
157	5785	16.36	16.40	0.5	Pass
165	5825	16.36	16.41	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.41	17.66	0.5	Pass
157	5785	17.34	17.67	0.5	Pass
165	5825	17.58	17.66	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.18	36.45	0.5	Pass
159	5795	36.21	36.44	0.5	Pass

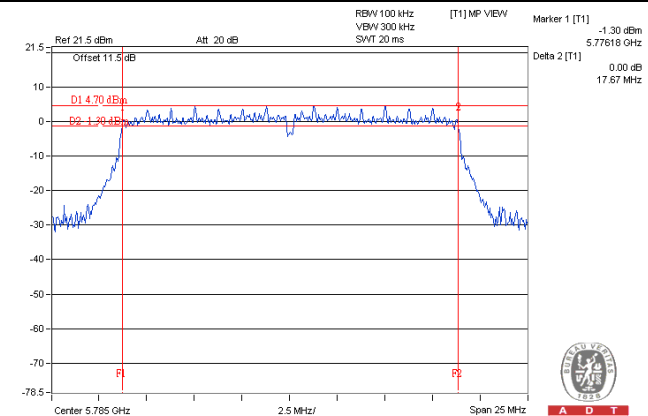
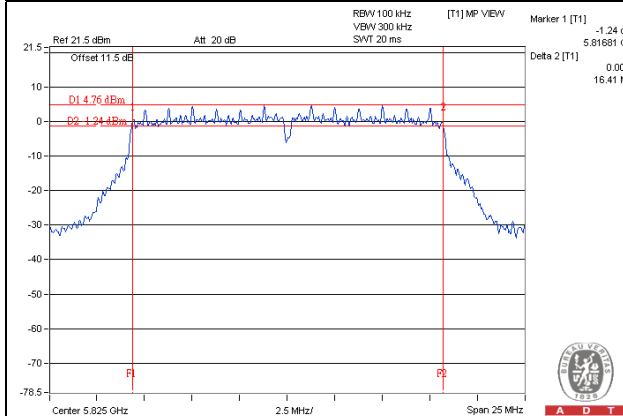
802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.12	76.04	0.5	Pass

Spectrum Plot of Worst Value

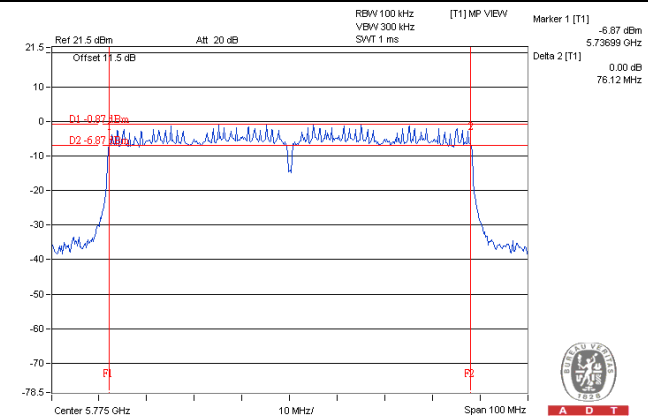
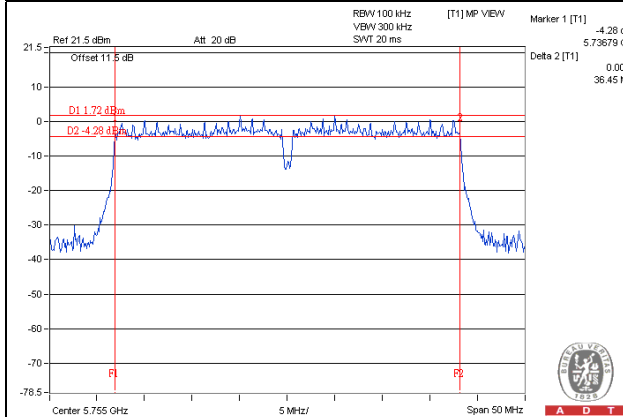
802.11a

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 Lab/Telecom Lab

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety

Tel: 886-3-3183232

Fax: 886-3-3270892

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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