

FCC Test Report

Report No.: RF150921D01-1

FCC ID: R48V3UP

Test Model: V3USP15

Series Model: V3US15

Received Date: Sep. 21, 2015

Test Date: Sep. 22 ~ Nov. 20, 2015

Issued Date: Nov. 24, 2015

Applicant: Meiloon Industrial Co., Ltd.

Address: No. 99, Xingfu Road, Taoyuan Dist., Taoyuan City 330, Taiwan.

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies

Table of Contents

Release Control Record.....	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty.....	6
2.2 Modification Record.....	6
3 General Information.....	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail.....	11
3.3 Duty Cycle of Test Signal.....	13
3.4 Description of Support Units.....	14
3.4.1 Configuration of System under Test	14
3.5 General Description of Applied Standard	15
4 Test Types and Results.....	16
4.1 Radiated Emission and Bandedge Measurement.....	16
4.1.1 Limits of Radiated Emission and Bandedge Measurement	16
4.1.2 Test Instruments	17
4.1.3 Test Procedure	18
4.1.4 Deviation from Test Standard	18
4.1.5 Test Setup	19
4.1.6 EUT Operating Condition.....	19
4.1.7 Test Results.....	20
4.2 Conducted Emission Measurement	56
4.2.1 Limits of Conducted Emission Measurement.....	56
4.2.2 Test Instruments	56
4.2.3 Test Procedure	57
4.2.4 Deviation from Test Standard	57
4.2.5 Test Setup	57
4.2.6 EUT Operating Condition.....	57
4.2.7 Test Results.....	58
4.3 Transmit Power Measurement.....	62
4.3.1 Limits of Transmit Power Measurement	62
4.3.2 Test Setup	62
4.3.3 Test Instruments.....	62
4.3.4 Test Procedure	63
4.3.5 Deviation from Test Standard	63
4.3.6 EUT Operating Condition.....	63
4.3.7 Test Result	64
4.4 Peak Power Spectral Density Measurement	72
4.4.1 Limits of Peak Power Spectral Density Measurement.....	72
4.4.2 Test Setup	72
4.4.3 Test Instruments.....	72
4.4.4 Test Procedure	73
4.4.5 Deviation from Test Standard	73
4.4.6 EUT Operating Condition.....	73
4.4.7 Test Results.....	74
4.5 Frequency Stability Measurement.....	78
4.5.1 Limits of Frequency Stability Measurement	78
4.5.2 Test Setup	78
4.5.3 Test Instruments.....	78
4.5.4 Test Procedure	78
4.5.5 Deviation from Test Standard	78

4.5.6 EUT Operating Condition.....	78
4.5.7 Test Results.....	79
4.6 6dB Bandwidth Measurement.....	80
4.6.1 Limits of 6dB Bandwidth Measurement	80
4.6.2 Test Setup	80
4.6.3 Test Instruments.....	80
4.6.4 Test Procedure	80
4.6.5 Deviation from Test Standard	80
4.6.6 EUT Operating Condition.....	80
4.6.7 Test Results.....	81
5 Pictures of Test Arrangements.....	83
Appendix – Information on the Testing Laboratories.....	84



A D T

Release Control Record

Issue No.	Description	Date Issued
RF150921D01-1	Original release.	Nov. 24, 2015

1 Certificate of Conformity

Product: network audio receiver

Brand: WREN

Test Model: V3USP15

Series Model: V3US15

Sample Status: Engineering sample

Applicant: Meiloon Industrial Co., Ltd.

Test Date: Sep. 22 ~ Nov. 20, 2015

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

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

Prepared by :



Date: Nov. 24, 2015

Jessica Cheng / Senior Specialist

Approved by :



Date: Nov. 24, 2015

Rex Lai / Assistant 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 -10.16dB at 0.41681MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -5.4dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(e)	6dB bandwidth	PASS	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

NOTE:For U-NII-3 band compliance with rule part 15.407(b)(i) (16-24).

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	3.43 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1000MHz	4.00 dB
Radiated Emissions above 1 GHz	Above 1GHz	3.36 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	network audio receiver
Brand	WREN
Test Model	V3USP15
Series Model	V3US15
Model Difference	Refer to table as below
Status of EUT	Engineering sample
Power Supply Rating	20Vdc from adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK 256QAM for 11ac mode only.
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps 802.11n: up to 150.0Mbps
Operating Frequency	5180 ~ 5240MHz 5260 ~ 5320MHz 5500 ~ 5700MHz 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n(40MHz), 5260 ~ 5320MHz 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5500 ~ 5700MHz 8 for 802.11a, 802.11(20MHz) 3 for 802.11n(40MHz) 5745 ~ 5825MHz 5 for 802.11a, 802.11n (20MHz)) 2 for 802.11n (40MHz)
Output Power	5180 ~ 5240MHz 21.979 mW 5260 ~ 5320MHz 20.37 mW 5500 ~ 5700MHz 20.137mW 5745 ~ 5825MHz 20.797mW
Antenna Type	PCB DIPOLE antenna with 6.62dBi gain
Antenna Connector	N/A
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

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

Modulation Mode	TX FUNCTION
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

2. All models are listed as below.

Model	V3US15	V3USP15
Power	AC adapter *2	AC adapter *2
Bluetooth module	2.4G Rayson "BTM-720 DID : B019599"	2.4G Rayson "BTM-720 DID : B019599"
Play-Fi module	Phorus-CAP-TSD-0010 2.4GHz/5GHz 802.11 a/b/g/n	Phorus-CAP-TSD-0010 2.4GHz/5GHz 802.11 a/b/g/n
Battery pack	without	with
I/O port	Ø USB Port*1 (for Service) Ø AUX in*1 Ø DC in*1	

3. The EUT uses following adapters.

Adapter	1
Brand	DYS
Model	DYS650-200200W-K
Input Power	100-240Vac 50/60Hz 1.3A Max
Output Power	20.0Vdc 2.0A
Power Line	AC 2-pin DC-Nonshielded (1.8m) cable
Adapter	2
Brand	EPS
Model	EW40-2020-AU
Input Power	100-240Vac 50-60Hz 1.8A Max
Output Power	20.0Vdc 2.0A
Power Line	AC 2-pin DC-Nonshielded (1.8m) cable with one core.

After pre-tested above adapters, **adapter 1** was selected as a representative one and therefore only its test data was recorded in this report.

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (20MHz)

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

2 channels are provided for 802.11n (40MHz)

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (20MHz)

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

2 channels are provided for 802.11n (40MHz)

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

FOR 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (20MHz)

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 (40MHz)

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

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (20MHz)

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

2 channels are provided for 802.11n (40MHz)

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE ³ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by adapter 1
B	-	-	√	-	Powered by adapter 2

Where **RE³1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

Radiated Emission Test (Above 1GHz):

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

EUT CONFIGURE MODE	MODE	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 (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5

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	802.11a	5180-5320	36 to 64	36	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	5180-5320	36 to 64	36	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 (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE ³ 1G	22deg. C, 75%RH	120Vac, 60Hz	Dalen Dai
RE<1G	26deg. C, 75%RH	120Vac, 60Hz	Aaron You
PLC	28deg. C, 72%RH	120Vac, 60Hz	Chiawei Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Saxon Lee

3.3 Duty Cycle of Test Signal

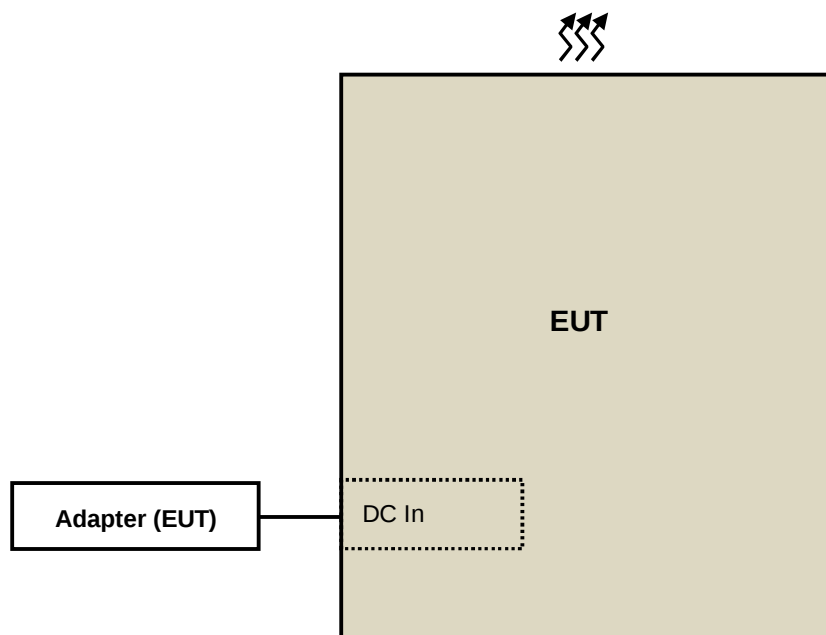
Duty cycle of test signal is 100 %



3.4 Description of Support Units

The EUT has been tested as an independent unit together without other necessary accessories or support units.

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedure New Rules v01r03

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v01r03			Field Strength at 3m	
			PK:74 (dBµV/m)	AV:54 (dBµV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK:-27 (dBm/MHz)	PK:68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBµV/m) ^{*1} PK:105.2 (dBµV/m) ^{*2} PK: 110.8(dBµV/m) ^{*3} PK:122.2 (dBµV/m) ^{*4}
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
^{*1} beyond 75 MHz or more above of the band edge.			^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.			^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2015	Feb. 25, 2016
HP Preamplifier	8449B	3008A01201	Feb. 26, 2015	Feb. 25, 2016
MITEQ Preamplifier	AMF-6F-260400-3 3-8P	892164	Mar. 01, 2015	Feb. 28, 2016
Agilent Spectrum	E4446A	MY51100009	May 30, 2015	May 29, 2016
Agilent TEST RECEIVER	N9038A	MY51210129	Jan. 20, 2015	Jan. 19, 2016
Schwarzbeck Antenna	VULB 9168	139	Feb. 04, 2015	Feb. 03, 2016
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2015	May 28, 2017
Schwarzbeck Horn Antenna	BBHA-9170	212	Feb. 09, 2015	Feb. 08, 2016
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Feb. 10, 2015	Feb. 09, 2016
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15. 9.4	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF104	CABLE-CH6	Aug. 15, 2015	Aug. 14, 2016
SUHNER RF cable With 3dB PAD	SF102	Cable-CH8-3.6m	Aug. 15, 2015	Aug. 14, 2016
EMCO Horn Antenna	3115	00028257	Feb. 05, 2015	Feb. 04, 2016
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 23, 2015	Sep. 22, 2016
Anritsu Power Sensor	MA2411B	0738404	Apr. 21, 2015	Apr. 20, 2016
Anritsu Power Meter	ML2495A	0842014	Apr. 21, 2015	Apr. 20, 2016

- NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

4.1.3 Test Procedure

- 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:

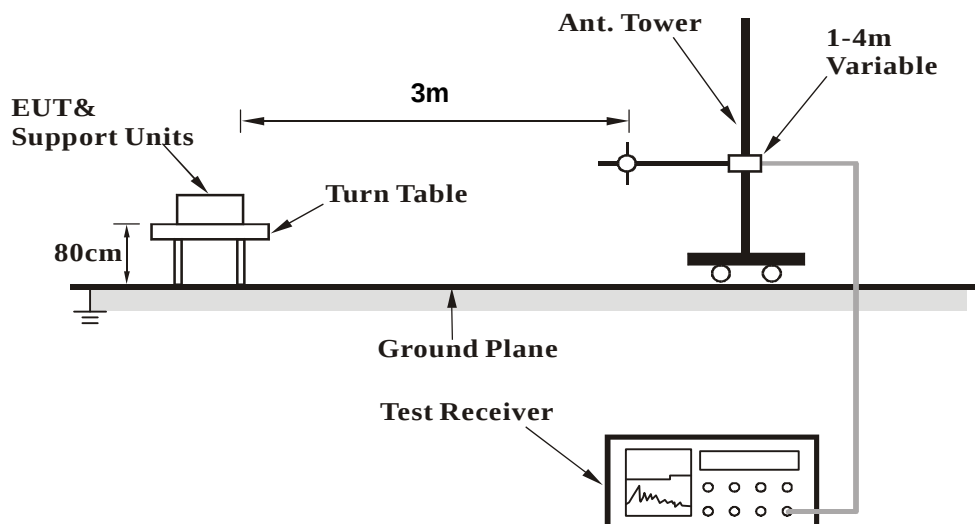
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

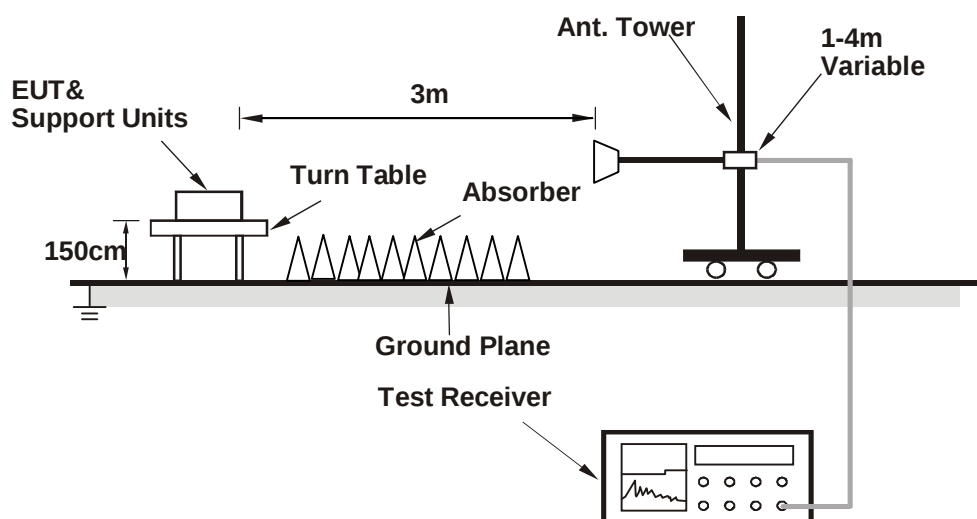
No deviation.

4.1.5 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Condition

- Connected the EUT to adapter.
- Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

BELOW 1GHz WORST-CASE DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	79.47	24.6 QP	40.0	-15.4	4.00 H	244	37.57	-12.98
2	123.70	26.7 QP	43.5	-16.8	3.99 H	138	37.23	-10.55
3	166.67	25.0 QP	43.5	-18.5	3.54 H	349	33.53	-8.50
4	253.39	23.0 QP	46.0	-23.0	2.86 H	285	31.75	-8.76
5	793.58	32.5 QP	46.0	-13.5	1.15 H	90	29.97	2.55
6	940.15	34.8 QP	46.0	-11.3	1.00 H	154	29.68	5.07
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	33.82	33.9 QP	40.0	-6.1	1.55 V	185	44.33	-10.39
2	47.75	30.9 QP	40.0	-9.1	1.38 V	57	39.67	-8.74
3	103.53	24.5 QP	43.5	-19.0	1.00 V	244	37.20	-12.66
4	253.39	23.1 QP	46.0	-23.0	1.00 V	185	31.81	-8.76
5	509.81	27.1 QP	46.0	-18.9	2.44 V	282	29.50	-2.43
6	781.75	31.9 QP	46.0	-14.2	2.98 V	173	29.31	2.54
7	966.68	34.8 QP	54.0	-19.2	1.83 V	213	29.09	5.74

REMARKS:

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

ABOVE 1GHz DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.1 PK	74.0	-20.9	1.25 H	327	44.64	8.43
2	5150.00	42.6 AV	54.0	-11.4	1.25 H	327	34.13	8.43
3	*5180.00	101.0 PK			1.25 H	327	92.47	8.54
4	*5180.00	91.5 AV			1.25 H	327	82.95	8.54
5	#10360.00	59.7 PK	74.0	-14.3	1.08 H	221	39.81	19.88
6	#10360.00	46.7 AV	54.0	-7.3	1.08 H	221	26.83	19.88
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	50.3 PK	74.0	-23.7	1.01 V	28	41.85	8.43
2	5150.00	39.3 AV	54.0	-14.7	1.01 V	28	30.88	8.43
3	*5180.00	92.6 PK			1.01 V	28	84.03	8.54
4	*5180.00	83.2 AV			1.01 V	28	74.61	8.54
5	#10360.00	58.6 PK	74.0	-15.4	1.00 V	154	38.74	19.88
6	#10360.00	46.1 AV	54.0	-7.9	1.00 V	154	26.23	19.88

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	98.8 PK			1.65 H	321	90.15	8.60
2	*5200.00	89.0 AV			1.65 H	321	80.37	8.60
3	#10400.00	59.8 PK	74.0	-14.2	1.14 H	205	39.88	19.93
4	#10400.00	46.5 AV	54.0	-7.6	1.14 H	205	26.52	19.93
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	91.7 PK			1.47 V	32	83.09	8.60
2	*5200.00	82.2 AV			1.47 V	32	73.58	8.60
3	#10400.00	58.7 PK	74.0	-15.4	1.00 V	165	38.72	19.93
4	#10400.00	46.3 AV	54.0	-7.8	1.00 V	165	26.32	19.93

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	100.1 PK			1.58 H	321	91.41	8.70
2	*5240.00	90.7 AV			1.58 H	321	82.02	8.70
3	5350.00	59.0 PK	74.0	-15.1	1.58 H	321	49.99	8.96
4	5350.00	43.8 AV	54.0	-10.2	1.58 H	321	34.87	8.96
5	#10480.00	59.9 PK	74.0	-14.1	1.20 H	211	39.75	20.13
6	#10480.00	46.7 AV	54.0	-7.3	1.20 H	211	26.58	20.13
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	91.7 PK			1.48 V	32	82.96	8.70
2	*5240.00	82.8 AV			1.48 V	32	74.14	8.70
3	5350.00	57.9 PK	74.0	-16.1	1.48 V	32	48.96	8.96
4	5350.00	43.4 AV	54.0	-10.6	1.48 V	32	34.41	8.96
5	#10480.00	59.0 PK	74.0	-15.0	1.03 V	172	38.87	20.13
6	#10480.00	46.3 AV	54.0	-7.7	1.03 V	172	26.19	20.13

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	59.0 PK	74.0	-15.0	1.48 H	322	50.53	8.43
2	5150.00	44.0 AV	54.0	-10.0	1.48 H	322	35.58	8.43
3	*5260.00	100.4 PK			1.49 H	322	91.66	8.74
4	*5260.00	91.5 AV			1.49 H	322	82.78	8.74
5	#10520.00	59.4 PK	74.0	-14.7	1.13 H	208	39.17	20.18
6	#10520.00	46.7 AV	54.0	-7.3	1.13 H	208	26.53	20.18
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	34	49.31	8.43
2	5150.00	43.8 AV	54.0	-10.2	1.47 V	34	35.36	8.43
3	*5260.00	92.1 PK			1.47 V	34	83.35	8.74
4	*5260.00	82.6 AV			1.47 V	34	73.87	8.74
5	#10520.00	58.9 PK	74.0	-15.1	1.00 V	165	38.74	20.18
6	#10520.00	46.5 AV	54.0	-7.5	1.00 V	165	26.28	20.18

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	100.6 PK			1.36 H	310	91.72	8.84
2	*5300.00	91.5 AV			1.36 H	310	82.64	8.84
3	10600.00	59.2 PK	74.0	-14.8	1.20 H	196	38.99	20.18
4	10600.00	46.7 AV	54.0	-7.3	1.20 H	196	26.48	20.18
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	91.0 PK			1.60 V	33	82.12	8.84
2	*5300.00	81.2 AV			1.60 V	33	72.32	8.84
3	10600.00	58.9 PK	74.0	-15.2	1.10 V	170	38.67	20.18
4	10600.00	46.5 AV	54.0	-7.5	1.10 V	170	26.31	20.18

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	99.3 PK			1.39 H	313	90.41	8.89
2	*5320.00	90.2 AV			1.39 H	313	81.30	8.89
3	5350.00	58.3 PK	74.0	-15.7	1.39 H	313	49.31	8.96
4	5350.00	44.5 AV	54.0	-9.5	1.39 H	313	35.56	8.96
5	10640.00	59.2 PK	74.0	-14.8	1.17 H	199	38.80	20.44
6	10640.00	47.2 AV	54.0	-6.9	1.17 H	199	26.71	20.44
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	90.0 PK			1.58 V	35	81.08	8.89
2	*5320.00	80.2 AV			1.58 V	35	71.34	8.89
3	5350.00	57.2 PK	74.0	-16.8	1.58 V	35	48.24	8.96
4	5350.00	43.7 AV	54.0	-10.3	1.58 V	35	34.77	8.96
5	10640.00	59.2 PK	74.0	-14.9	1.00 V	159	38.71	20.44
6	10640.00	46.9 AV	54.0	-7.1	1.00 V	159	26.50	20.44

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.5 PK	74.0	-15.5	1.39 H	305	49.18	9.29
2	5460.00	45.2 AV	54.0	-8.8	1.39 H	305	35.87	9.29
3	#5470.00	59.1 PK	68.2	-9.1	1.39 H	305	49.76	9.34
4	*5500.00	99.4 PK			1.39 H	305	89.93	9.45
5	*5500.00	90.3 AV			1.39 H	305	80.86	9.45
6	11000.00	60.2 PK	74.0	-13.8	1.15 H	217	39.02	21.21
7	11000.00	47.7 AV	54.0	-6.3	1.15 H	217	26.48	21.21
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.48 V	39	48.21	9.29
2	5460.00	44.4 AV	54.0	-9.6	1.48 V	39	35.15	9.29
3	#5470.00	57.6 PK	68.2	-10.6	1.48 V	39	48.29	9.34
4	*5500.00	91.5 PK			1.48 V	39	82.04	9.45
5	*5500.00	83.3 AV			1.48 V	39	73.83	9.45
6	11000.00	59.8 PK	74.0	-14.2	1.05 V	172	38.57	21.21
7	11000.00	47.4 AV	54.0	-6.6	1.05 V	172	26.23	21.21

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	100.9 PK			1.23 H	315	91.30	9.57
2	*5580.00	91.7 AV			1.23 H	315	82.11	9.57
3	11160.00	60.0 PK	74.0	-14.1	1.17 H	203	38.93	21.02
4	11160.00	47.8 AV	54.0	-6.2	1.17 H	203	26.75	21.02
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	92.9 PK			1.42 V	37	83.34	9.57
2	*5580.00	83.7 AV			1.42 V	37	74.08	9.57
3	11160.00	59.6 PK	74.0	-14.4	1.00 V	168	38.57	21.02
4	11160.00	47.1 AV	54.0	-6.9	1.00 V	168	26.06	21.02

REMARKS:

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

CHANNEL	TX Channel 132	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	*5660.00	99.9 PK			1.00 H	314	90.26	9.68
2	*5660.00	91.0 AV			1.00 H	314	81.27	9.68
3	11320.00	60.3 PK	74.0	-13.7	1.23 H	203	38.67	21.61
4	11320.00	48.4 AV	54.0	-5.6	1.23 H	203	26.77	21.61
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	*5660.00	94.1 PK			1.50 V	39	84.46	9.68
2	*5660.00	84.7 AV			1.50 V	39	75.05	9.68
3	11320.00	59.9 PK	74.0	-14.1	1.07 V	124	38.29	21.61
4	11320.00	47.8 AV	54.0	-6.2	1.07 V	124	26.18	21.61

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.4 PK			1.01 H	316	90.65	9.75
2	*5700.00	90.2 AV			1.01 H	316	80.45	9.75
3	#5725.00	59.6 PK	68.2	-8.6	1.01 H	316	49.83	9.80
4	11400.00	60.0 PK	74.0	-14.0	1.19 H	218	38.92	21.06
5	11400.00	47.9 AV	54.0	-6.1	1.19 H	218	26.81	21.06
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	92.5 PK			1.57 V	42	82.76	9.75
2	*5700.00	83.4 AV			1.57 V	42	73.63	9.75
3	#5725.00	59.0 PK	68.2	-9.3	1.57 V	42	49.15	9.80
4	11400.00	59.7 PK	74.0	-14.3	1.00 V	135	38.62	21.06
5	11400.00	47.6 AV	54.0	-6.4	1.00 V	135	26.51	21.06

REMARKS:

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

CHANNEL	TX Channel 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	#5714.99	59.8 PK	109.4	-49.6	1.00 H	316	50.01	9.79
2	#5725.00	65.5 PK	122.2	-56.7	1.00 H	316	55.74	9.80
3	*5745.00	99.6 PK			1.00 H	316	89.72	9.85
4	*5745.00	90.5 AV			1.00 H	316	80.64	9.85
5	11490.00	59.6 PK	74.0	-14.4	1.20 H	220	38.25	21.38
6	11490.00	47.8 AV	54.0	-6.3	1.20 H	220	26.37	21.38
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	#5714.99	58.9 PK	109.4	-50.5	1.48 V	5	49.06	9.79
2	#5725.00	60.7 PK	122.2	-61.5	1.48 V	5	50.87	9.80
3	*5745.00	90.1 PK			1.48 V	5	80.20	9.85
4	*5745.00	80.7 AV			1.48 V	5	70.83	9.85
5	11490.00	59.5 PK	74.0	-14.5	1.00 V	163	38.10	21.38
6	11490.00	47.6 AV	54.0	-6.4	1.00 V	163	26.24	21.38

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	98.1 PK			1.00 H	317	88.19	9.94
2	*5785.00	89.2 AV			1.00 H	317	79.24	9.94
3	11570.00	59.8 PK	74.0	-14.2	1.13 H	203	38.37	21.44
4	11570.00	47.8 AV	54.0	-6.2	1.13 H	203	26.33	21.44
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	89.7 PK			1.49 V	6	79.79	9.94
2	*5785.00	80.6 AV			1.49 V	6	70.64	9.94
3	11570.00	59.7 PK	74.0	-14.3	1.01 V	155	38.25	21.44
4	11570.00	47.6 AV	54.0	-6.4	1.01 V	155	26.13	21.44

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	96.7 PK			1.00 H	310	86.62	10.04
2	*5825.00	87.6 AV			1.00 H	310	77.56	10.04
3	#5850.00	62.5 PK	122.2	-59.7	1.00 H	310	52.39	10.07
4	#5860.01	61.2 PK	109.4	-48.2	1.00 H	310	51.06	10.09
5	11650.00	59.5 PK	74.0	-14.5	1.29 H	199	38.59	20.90
6	11650.00	47.3 AV	54.0	-6.7	1.29 H	199	26.37	20.90
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	*5825.00	87.4 PK			1.41 V	4	77.35	10.04
2	*5825.00	79.2 AV			1.41 V	4	69.14	10.04
3	#5850.00	59.8 PK	122.2	-62.4	1.41 V	4	49.69	10.07
4	#5860.01	59.5 PK	109.4	-49.9	1.41 V	4	49.37	10.09
5	11650.00	59.1 PK	74.0	-14.9	1.07 V	144	38.20	20.90
6	11650.00	47.2 AV	54.0	-6.8	1.07 V	144	26.31	20.90

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

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.4 PK	74.0	-17.6	1.62 H	308	47.94	8.43
2	5150.00	43.0 AV	54.0	-11.1	1.62 H	308	34.52	8.43
3	*5180.00	99.4 PK			1.62 H	308	90.86	8.54
4	*5180.00	88.5 AV			1.62 H	308	79.93	8.54
5	#10360.00	59.5 PK	74.0	-14.5	1.17 H	208	39.65	19.88
6	#10360.00	46.6 AV	54.0	-7.4	1.17 H	208	26.71	19.88
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	55.7 PK	74.0	-18.3	1.33 V	34	47.25	8.43
2	5150.00	42.5 AV	54.0	-11.5	1.33 V	34	34.11	8.43
3	*5180.00	89.7 PK			1.33 V	34	81.14	8.54
4	*5180.00	80.2 AV			1.33 V	34	71.65	8.54
5	#10360.00	58.8 PK	74.0	-15.2	1.02 V	160	38.92	19.88
6	#10360.00	46.4 AV	54.0	-7.6	1.02 V	160	26.50	19.88

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	98.0 PK			1.49 H	306	89.41	8.60
2	*5200.00	87.7 AV			1.49 H	306	79.08	8.60
3	#10400.00	59.6 PK	74.0	-14.4	1.15 H	200	39.71	19.93
4	#10400.00	46.6 AV	54.0	-7.4	1.15 H	200	26.65	19.93
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	90.5 PK			1.49 V	31	81.91	8.60
2	*5200.00	80.9 AV			1.49 V	31	72.25	8.60
3	#10400.00	58.2 PK	74.0	-15.8	1.00 V	151	38.24	19.93
4	#10400.00	46.3 AV	54.0	-7.7	1.00 V	151	26.39	19.93

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	98.5 PK			1.55 H	322	89.76	8.70
2	*5240.00	88.0 AV			1.55 H	322	79.31	8.70
3	5350.00	58.6 PK	74.0	-15.4	1.55 H	322	49.63	8.96
4	5350.00	43.3 AV	54.0	-10.7	1.55 H	322	34.31	8.96
5	#10480.00	59.1 PK	74.0	-14.9	1.21 H	220	38.99	20.13
6	#10480.00	46.6 AV	54.0	-7.4	1.21 H	220	26.45	20.13
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	90.6 PK			1.55 V	33	81.86	8.70
2	*5240.00	81.2 AV			1.55 V	33	72.54	8.70
3	5350.00	57.8 PK	74.0	-16.2	1.55 V	33	48.84	8.96
4	5350.00	43.3 AV	54.0	-10.8	1.55 V	33	34.29	8.96
5	#10480.00	58.4 PK	74.0	-15.6	1.00 V	149	38.30	20.13
6	#10480.00	46.4 AV	54.0	-7.6	1.00 V	149	26.28	20.13

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	58.7 PK	74.0	-15.3	1.48 H	314	50.28	8.43
2	5150.00	43.6 AV	54.0	-10.4	1.48 H	314	35.17	8.43
3	*5260.00	98.9 PK			1.48 H	314	90.11	8.74
4	*5260.00	89.6 AV			1.48 H	314	80.86	8.74
5	#10520.00	59.2 PK	74.0	-14.8	1.08 H	210	39.05	20.18
6	#10520.00	46.8 AV	54.0	-7.2	1.08 H	210	26.66	20.18
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.3 PK	74.0	-15.7	1.48 V	34	49.87	8.43
2	5150.00	42.7 AV	54.0	-11.3	1.48 V	34	34.26	8.43
3	*5260.00	91.2 PK			1.48 V	34	82.45	8.74
4	*5260.00	81.7 AV			1.48 V	34	73.00	8.74
5	#10520.00	58.9 PK	74.0	-15.1	1.02 V	154	38.71	20.18
6	#10520.00	46.6 AV	54.0	-7.4	1.02 V	154	26.40	20.18

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	99.3 PK			1.46 H	312	90.45	8.84
2	*5300.00	89.9 AV			1.46 H	312	81.10	8.84
3	10600.00	58.9 PK	74.0	-15.1	1.17 H	185	38.68	20.18
4	10600.00	46.8 AV	54.0	-7.3	1.17 H	185	26.57	20.18
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	89.7 PK			1.47 V	36	80.86	8.84
2	*5300.00	80.3 AV			1.47 V	36	71.49	8.84
3	10600.00	58.4 PK	74.0	-15.6	1.00 V	137	38.25	20.18
4	10600.00	46.4 AV	54.0	-7.6	1.00 V	137	26.19	20.18

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	99.4 PK			1.46 H	310	90.51	8.89
2	*5320.00	89.9 AV			1.46 H	310	80.98	8.89
3	5350.00	58.7 PK	74.0	-15.3	1.46 H	310	49.76	8.96
4	5350.00	44.3 AV	54.0	-9.7	1.46 H	310	35.36	8.96
5	10640.00	59.6 PK	74.0	-14.5	1.24 H	205	39.11	20.44
6	10640.00	47.0 AV	54.0	-7.0	1.24 H	205	26.58	20.44
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	89.6 PK			1.39 V	164	80.68	8.89
2	*5320.00	80.8 AV			1.39 V	164	71.90	8.89
3	5350.00	57.2 PK	74.0	-16.8	1.39 V	164	48.25	8.96
4	5350.00	43.1 AV	54.0	-10.9	1.39 V	164	34.11	8.96
5	10640.00	59.0 PK	74.0	-15.0	1.09 V	142	38.57	20.44
6	10640.00	46.8 AV	54.0	-7.2	1.09 V	142	26.35	20.44

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.0 PK	74.0	-16.0	1.42 H	311	48.73	9.29
2	5460.00	44.5 AV	54.0	-9.5	1.42 H	311	35.22	9.29
3	#5470.00	58.6 PK	68.2	-9.6	1.42 H	311	49.27	9.34
4	*5500.00	98.2 PK			1.42 H	311	88.71	9.45
5	*5500.00	88.7 AV			1.42 H	311	79.25	9.45
6	11000.00	60.1 PK	74.0	-13.9	1.12 H	200	38.89	21.21
7	11000.00	47.5 AV	54.0	-6.6	1.12 H	200	26.24	21.21
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	56.8 PK	74.0	-17.2	1.52 V	37	47.53	9.29
2	5460.00	44.2 AV	54.0	-9.8	1.52 V	37	34.88	9.29
3	#5470.00	57.5 PK	68.2	-10.7	1.52 V	37	48.17	9.34
4	*5500.00	90.1 PK			1.52 V	37	80.62	9.45
5	*5500.00	80.5 AV			1.52 V	37	71.05	9.45
6	11000.00	59.5 PK	74.0	-14.5	1.00 V	168	38.29	21.21
7	11000.00	47.4 AV	54.0	-6.6	1.00 V	168	26.17	21.21

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	99.4 PK			1.27 H	308	89.84	9.57
2	*5580.00	89.7 AV			1.27 H	308	80.15	9.57
3	11160.00	59.8 PK	74.0	-14.2	1.23 H	205	38.79	21.02
4	11160.00	47.6 AV	54.0	-6.4	1.23 H	205	26.55	21.02
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	90.7 PK			1.48 V	38	81.10	9.57
2	*5580.00	81.7 AV			1.48 V	38	72.11	9.57
3	11160.00	59.2 PK	74.0	-14.8	1.02 V	155	38.15	21.02
4	11160.00	47.0 AV	54.0	-7.0	1.02 V	155	26.00	21.02

REMARKS:

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

CHANNEL	TX Channel 132	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	*5660.00	98.4 PK			1.27 H	308	88.73	9.68
2	*5660.00	89.7 AV			1.27 H	308	80.05	9.68
3	11320.00	60.2 PK	74.0	-13.8	1.24 H	195	38.59	21.61
4	11320.00	48.0 AV	54.0	-6.0	1.24 H	195	26.38	21.61
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	*5660.00	91.9 PK			1.48 V	31	82.26	9.68
2	*5660.00	82.1 AV			1.48 V	31	72.38	9.68
3	11320.00	60.1 PK	74.0	-13.9	1.02 V	130	38.52	21.61
4	11320.00	47.9 AV	54.0	-6.1	1.02 V	130	26.30	21.61

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	98.5 PK			1.05 H	320	88.75	9.75
2	*5700.00	88.9 AV			1.05 H	320	79.13	9.75
3	#5725.00	58.3 PK	68.2	-9.9	1.05 H	320	48.51	9.80
4	11400.00	59.8 PK	74.0	-14.2	1.11 H	185	38.73	21.06
5	11400.00	47.6 AV	54.0	-6.4	1.11 H	185	26.50	21.06
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	89.9 PK			1.55 V	40	80.18	9.75
2	*5700.00	81.0 AV			1.55 V	40	71.25	9.75
3	#5725.00	57.7 PK	68.2	-10.5	1.55 V	40	47.93	9.80
4	11400.00	59.1 PK	74.0	-14.9	1.00 V	128	38.06	21.06
5	11400.00	47.1 AV	54.0	-6.9	1.00 V	128	26.05	21.06

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	#5714.99	59.2 PK	109.4	-50.2	1.03 H	327	49.38	9.79
2	#5725.00	63.0 PK	122.2	-59.2	1.03 H	327	53.15	9.80
3	*5745.00	98.0 PK			1.03 H	327	88.13	9.85
4	*5745.00	89.4 AV			1.03 H	327	79.52	9.85
5	11490.00	59.9 PK	74.0	-14.1	1.14 H	217	38.49	21.38
6	11490.00	47.8 AV	54.0	-6.2	1.14 H	217	26.41	21.38
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	#5714.99	58.1 PK	109.4	-51.3	1.51 V	3	48.26	9.79
2	#5724.00	58.2 PK	122.2	-64.0	1.51 V	3	48.39	9.80
3	*5745.00	88.4 PK			1.51 V	3	78.56	9.85
4	*5745.00	79.3 AV			1.51 V	3	69.45	9.85
5	11490.00	59.5 PK	74.0	-14.5	1.00 V	159	38.12	21.38
6	11490.00	47.4 AV	54.0	-6.6	1.00 V	159	26.04	21.38

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	97.2 PK			1.00 H	314	87.25	9.94
2	*5785.00	88.6 AV			1.00 H	314	78.63	9.94
3	11570.00	60.3 PK	74.0	-13.7	1.10 H	194	38.85	21.44
4	11570.00	48.2 AV	54.0	-5.9	1.10 H	194	26.71	21.44
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	88.6 PK			1.44 V	8	78.63	9.94
2	*5785.00	80.0 AV			1.44 V	8	70.02	9.94
3	11570.00	59.6 PK	74.0	-14.4	1.00 V	166	38.19	21.44
4	11570.00	47.7 AV	54.0	-6.3	1.00 V	166	26.25	21.44

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	96.4 PK			1.00 H	313	86.39	10.04
2	*5825.00	87.5 AV			1.00 H	313	77.48	10.04
3	#5850.00	62.3 PK	122.2	-59.9	1.00 H	313	52.21	10.07
4	#5860.01	61.0 PK	109.4	-48.4	1.00 H	313	50.89	10.09
5	11650.00	59.6 PK	74.0	-14.4	1.27 H	245	38.66	20.90
6	11650.00	47.4 AV	54.0	-6.6	1.27 H	245	26.53	20.90
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	*5825.00	87.0 PK			1.47 V	5	76.93	10.04
2	*5825.00	79.1 AV			1.47 V	5	69.05	10.04
3	#5850.00	59.6 PK	122.2	-62.6	1.47 V	5	49.53	10.07
4	#5860.01	58.3 PK	109.4	-51.1	1.47 V	5	48.22	10.09
5	11650.00	59.5 PK	74.0	-14.5	1.00 V	138	38.57	20.90
6	11650.00	47.2 AV	54.0	-6.8	1.00 V	138	26.34	20.90

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

802.11n (40MHz)

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	60.3 PK	74.0	-13.7	1.68 H	314	51.84	8.43
2	5150.00	46.2 AV	54.0	-7.8	1.68 H	314	37.78	8.43
3	*5190.00	94.2 PK			1.68 H	314	85.61	8.57
4	*5190.00	84.3 AV			1.68 H	314	75.75	8.57
5	#10380.00	58.8 PK	74.0	-15.2	1.12 H	209	38.87	19.90
6	#10380.00	46.4 AV	54.0	-7.6	1.12 H	209	26.53	19.90
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	5150.00	55.7 PK	74.0	-18.3	1.52 V	39	47.28	8.43
2	5150.00	43.5 AV	54.0	-10.5	1.52 V	39	35.11	8.43
3	*5190.00	86.5 PK			1.52 V	39	77.93	8.57
4	*5190.00	77.5 AV			1.52 V	39	68.89	8.57
5	#10380.00	58.2 PK	74.0	-15.8	1.05 V	153	38.29	19.90
6	#10380.00	46.1 AV	54.0	-7.9	1.05 V	153	26.22	19.90

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	95.0 PK			1.28 H	307	86.29	8.67
2	*5230.00	85.7 AV			1.28 H	307	77.01	8.67
3	5350.00	57.9 PK	74.0	-16.2	1.28 H	307	48.89	8.96
4	5350.00	43.7 AV	54.0	-10.3	1.28 H	307	34.75	8.96
5	#10460.00	59.0 PK	74.0	-15.0	1.00 H	243	38.91	20.08
6	#10460.00	46.6 AV	54.0	-7.4	1.00 H	243	26.50	20.08
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	86.8 PK			1.56 V	34	78.11	8.67
2	*5230.00	77.9 AV			1.56 V	34	69.27	8.67
3	5350.00	57.8 PK	74.0	-16.3	1.56 V	34	48.79	8.96
4	5350.00	43.3 AV	54.0	-10.7	1.56 V	34	34.33	8.96
5	#10460.00	58.4 PK	74.0	-15.6	1.02 V	150	38.35	20.08
6	#10460.00	46.4 AV	54.0	-7.6	1.02 V	150	26.29	20.08

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	58.6 PK	74.0	-15.4	1.57 H	315	50.18	8.43
2	5150.00	43.5 AV	54.0	-10.5	1.57 H	315	35.10	8.43
3	*5270.00	97.1 PK			1.57 H	315	88.30	8.77
4	*5270.00	87.7 AV			1.57 H	315	78.88	8.77
5	#10540.00	59.4 PK	74.0	-14.6	1.12 H	224	39.20	20.18
6	#10540.00	46.9 AV	54.0	-7.1	1.12 H	224	26.71	20.18
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	1.96 V	230	49.27	8.43
2	5150.00	43.0 AV	54.0	-11.0	1.96 V	230	34.55	8.43
3	*5270.00	88.4 PK			1.96 V	230	79.65	8.77
4	*5270.00	78.7 AV			1.96 V	230	69.94	8.77
5	#10540.00	58.6 PK	74.0	-15.4	1.03 V	155	38.46	20.18
6	#10540.00	46.7 AV	54.0	-7.3	1.03 V	155	26.53	20.18

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	97.8 PK			1.40 H	311	88.94	8.86
2	*5310.00	87.8 AV			1.40 H	311	78.92	8.86
3	5350.00	64.7 PK	74.0	-9.3	1.40 H	311	55.71	8.96
4	5350.00	48.6 AV	54.0	-5.4	1.40 H	311	39.67	8.96
5	10620.00	59.8 PK	74.0	-14.2	1.15 H	230	39.51	20.32
6	10620.00	47.1 AV	54.0	-6.9	1.15 H	230	26.80	20.32
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	88.6 PK			1.74 V	163	79.73	8.86
2	*5310.00	79.1 AV			1.74 V	163	70.23	8.86
3	5350.00	60.5 PK	74.0	-13.5	1.74 V	163	51.50	8.96
4	5350.00	45.3 AV	54.0	-8.8	1.74 V	163	36.29	8.96
5	10620.00	59.0 PK	74.0	-15.0	1.02 V	161	38.71	20.32
6	10620.00	46.6 AV	54.0	-7.4	1.02 V	161	26.25	20.32

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.2 PK	74.0	-14.8	1.00 H	311	49.91	9.29
2	5460.00	45.0 AV	54.0	-9.0	1.00 H	311	35.74	9.29
3	#5470.00	62.0 PK	68.2	-6.2	1.00 H	311	52.63	9.34
4	*5510.00	95.0 PK			1.00 H	311	85.55	9.46
5	*5510.00	85.6 AV			1.00 H	311	76.17	9.46
6	11020.00	59.6 PK	74.0	-14.4	1.24 H	220	38.42	21.18
7	11020.00	47.6 AV	54.0	-6.4	1.24 H	220	26.38	21.18
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.3 PK	74.0	-15.7	1.68 V	40	48.99	9.29
2	5460.00	44.2 AV	54.0	-9.8	1.68 V	40	34.92	9.29
3	#5470.00	59.2 PK	68.2	-9.0	1.68 V	40	49.89	9.34
4	*5510.00	89.9 PK			1.68 V	40	80.44	9.46
5	*5510.00	79.6 AV			1.68 V	40	70.11	9.46
6	11020.00	59.4 PK	74.0	-14.6	1.00 V	165	38.20	21.18
7	11020.00	47.4 AV	54.0	-6.6	1.00 V	165	26.19	21.18

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	94.9 PK			1.04 H	316	85.34	9.52
2	*5550.00	85.5 AV			1.04 H	316	75.99	9.52
3	11100.00	59.5 PK	74.0	-14.5	1.10 H	203	38.42	21.05
4	11100.00	47.6 AV	54.0	-6.4	1.10 H	203	26.57	21.05
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	89.6 PK			1.57 V	35	80.05	9.52
2	*5550.00	79.7 AV			1.57 V	35	70.13	9.52
3	11100.00	59.2 PK	74.0	-14.8	1.02 V	153	38.16	21.05
4	11100.00	47.4 AV	54.0	-6.6	1.02 V	153	26.33	21.05

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	93.9 PK			1.55 H	304	84.21	9.70
2	*5670.00	84.8 AV			1.55 H	304	75.06	9.70
3	#5725.00	58.9 PK	68.2	-9.3	1.55 H	304	49.10	9.80
4	11340.00	60.0 PK	74.0	-14.0	1.31 H	201	38.52	21.47
5	11340.00	48.2 AV	54.0	-5.8	1.31 H	201	26.77	21.47
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	89.5 PK			1.87 V	43	79.75	9.70
2	*5670.00	80.4 AV			1.87 V	43	70.67	9.70
3	#5725.00	58.3 PK	68.2	-9.9	1.87 V	43	48.52	9.80
4	11340.00	59.7 PK	74.0	-14.3	1.00 V	171	38.23	21.47
5	11340.00	47.6 AV	54.0	-6.4	1.00 V	171	26.15	21.47

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	#5714.99	64.2 PK	109.4	-45.2	1.00 H	311	54.45	9.79
2	#5725.00	65.4 PK	122.2	-56.8	1.00 H	311	55.59	9.80
3	*5755.00	93.7 PK			1.00 H	311	83.84	9.88
4	*5755.00	83.9 AV			1.00 H	311	74.02	9.88
5	11510.00	60.6 PK	74.0	-13.4	1.35 H	206	39.17	21.42
6	11510.00	48.0 AV	54.0	-6.0	1.35 H	206	26.57	21.42
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	#5714.99	58.4 PK	109.4	-51.0	1.55 V	6	48.56	9.79
2	#5725.00	58.7 PK	122.2	-63.5	1.55 V	6	48.85	9.80
3	*5755.00	85.9 PK			1.55 V	6	76.06	9.88
4	*5755.00	76.3 AV			1.55 V	6	66.42	9.88
5	11510.00	59.9 PK	74.0	-14.1	1.09 V	165	38.45	21.42
6	11510.00	47.7 AV	54.0	-6.3	1.09 V	165	26.30	21.42

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	93.2 PK			1.00 H	312	83.20	9.96
2	*5795.00	83.4 AV			1.00 H	312	73.46	9.96
3	#5850.00	59.5 PK	122.2	-62.7	1.00 H	312	49.47	10.07
4	#5860.01	59.4 PK	109.4	-50.0	1.00 H	312	49.30	10.09
5	11590.00	60.9 PK	74.0	-13.1	1.18 H	223	39.42	21.45
6	11590.00	48.3 AV	54.0	-5.7	1.18 H	223	26.83	21.45
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	84.7 PK			1.48 V	5	74.74	9.96
2	*5795.00	74.7 AV			1.48 V	5	64.71	9.96
3	#5850.00	59.3 PK	122.2	-62.9	1.48 V	5	49.26	10.07
4	#5860.01	58.6 PK	109.4	-50.8	1.48 V	5	48.47	10.09
5	11590.00	59.7 PK	74.0	-14.3	1.00 V	154	38.27	21.45
6	11590.00	47.7 AV	54.0	-6.3	1.00 V	154	26.26	21.45

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100276	Apr. 01, 2015	Mar. 31, 2016
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ENV216	101197	Apr. 27, 2015	Apr. 26, 2016
LISN With Adapter (for EUT)	AD10	C10Ada-002	Apr. 27, 2015	Apr. 26, 2016
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 25, 2014	Nov. 24, 2015
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 06, 2015	May 05, 2016
Software	Cond_V7.3.7	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C10.01	Feb. 17, 2015	Feb. 16, 2016
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-011484	May 19, 2015	May 18, 2016
ROHDE & SCHWARZ Artificial Mains Network (For TV EUT)	ESH3-Z5	100220	Nov. 20, 2014	Nov. 19, 2015
LISN With Adapter (for TV EUT)	100220	N/A	Nov. 20, 2014	Nov. 19, 2015

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

2. The test was performed in Shielded Room No. 10.

3. The VCCI Site Registration No. C-1852.

4.2.3 Test Procedure

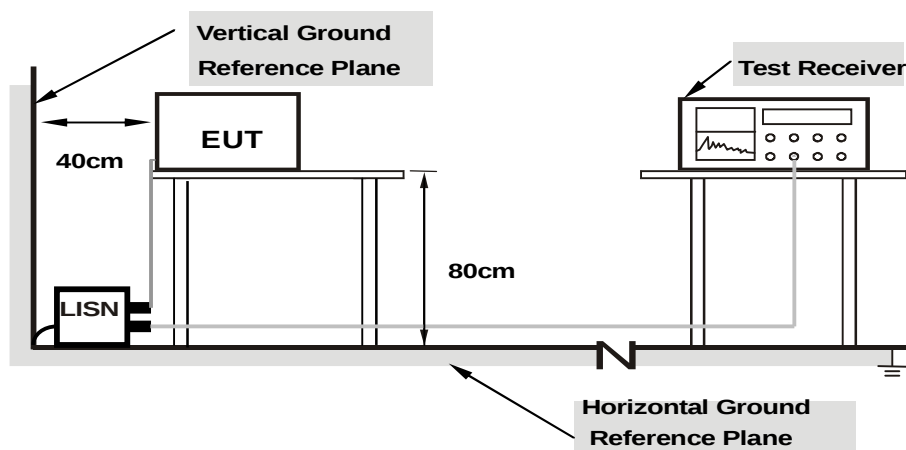
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

4.2.7 Test Results

802.11a Ch 36

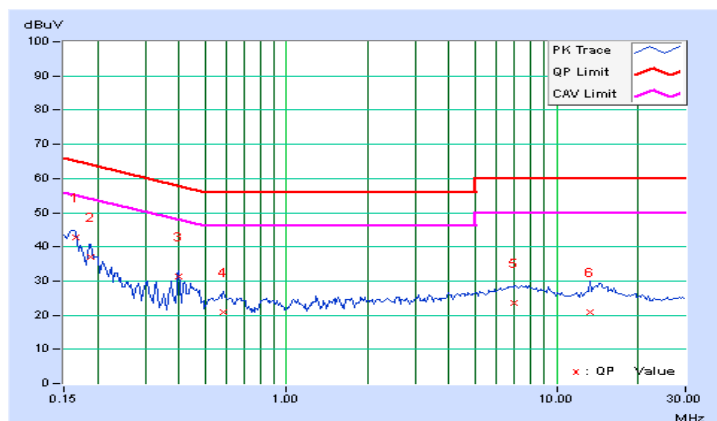
Mode A

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.67	33.10	19.41	42.77	29.08	65.18	55.18	-22.40	-26.09
2	0.18906	9.68	27.49	15.96	37.17	25.64	64.08	54.08	-26.91	-28.44
3	0.40000	9.69	21.70	17.27	31.39	26.96	57.85	47.85	-26.46	-20.89
4	0.58750	9.71	11.31	11.21	21.02	20.92	56.00	46.00	-34.98	-25.08
5	6.98828	10.01	13.52	6.34	23.53	16.35	60.00	50.00	-36.47	-33.65
6	13.34766	10.10	10.84	2.58	20.94	12.68	60.00	50.00	-39.06	-37.32

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

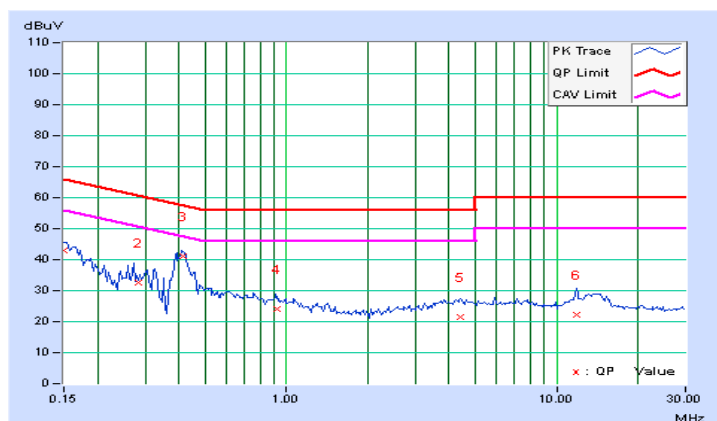


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.72	33.40	16.39	43.12	26.11	66.00	56.00	-22.88	-29.89
2	0.28382	9.73	22.88	16.38	32.61	26.11	60.70	50.70	-28.09	-24.59
3	0.41681	9.74	31.28	27.61	41.02	37.35	57.51	47.51	-16.49	-10.16
4	0.91965	9.78	14.32	6.67	24.10	16.45	56.00	46.00	-31.90	-29.55
5	4.41797	9.99	11.58	3.19	21.57	13.18	56.00	46.00	-34.43	-32.82
6	11.86719	10.14	12.13	4.45	22.27	14.59	60.00	50.00	-37.73	-35.41

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



802.11a Ch 36

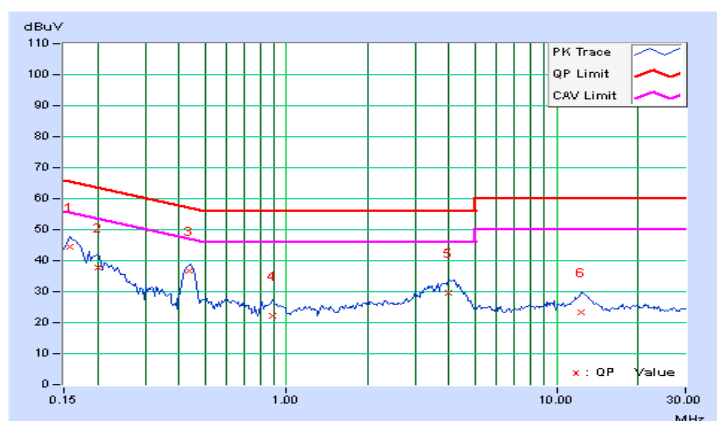
Mode B

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.67	34.78	18.79	44.45	28.46	65.58	55.58	-21.13	-27.12
2	0.20078	9.68	28.08	11.57	37.76	21.25	63.58	53.58	-25.82	-32.33
3	0.43651	9.69	27.03	18.31	36.72	28.00	57.13	47.13	-20.40	-19.12
4	0.88438	9.75	12.64	3.09	22.39	12.84	56.00	46.00	-33.61	-33.16
5	3.99219	9.95	19.77	7.37	29.72	17.32	56.00	46.00	-26.28	-28.68
6	12.30469	10.09	13.11	4.55	23.20	14.64	60.00	50.00	-36.80	-35.36

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

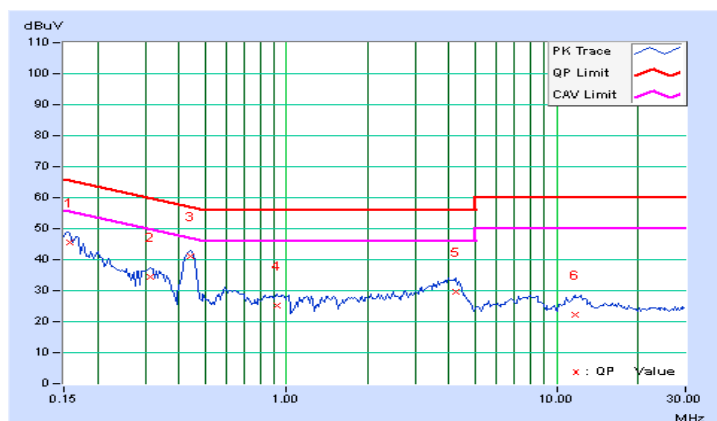


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.72	35.75	21.69	45.47	31.41	65.58	55.58	-20.11	-24.17
2	0.31406	9.74	24.58	15.83	34.32	25.57	59.86	49.86	-25.55	-24.30
3	0.43906	9.74	31.23	23.71	40.97	33.45	57.08	47.08	-16.11	-13.63
4	0.91953	9.78	15.59	6.73	25.37	16.51	56.00	46.00	-30.63	-29.49
5	4.25000	9.99	19.75	7.44	29.74	17.43	56.00	46.00	-26.26	-28.57
6	11.67578	10.14	12.17	5.23	22.31	15.37	60.00	50.00	-37.69	-34.63

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



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,

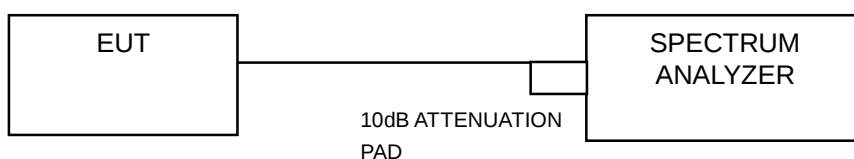
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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



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 (20MHz), 802.11n (40MHz)

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 26 BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	21.979	13.42	23.38	PASS
40	5200	20.184	13.05	23.38	PASS
48	5240	20.464	13.11	23.38	PASS
52	5260	20.045	13.02	23.38	PASS
60	5300	20.37	13.09	23.38	PASS
64	5320	19.953	13.00	23.38	PASS
100	5500	20.137	13.04	23.38	PASS
116	5580	20.045	13.02	23.38	PASS
132	5660	19.953	13.00	23.38	PASS
140	5700	19.953	13.00	23.38	PASS
149	5745	20.045	13.02	29.38	PASS
157	5785	20.797	13.18	29.38	PASS
165	5825	20.137	13.04	23.38	PASS

NOTE:

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

1. $11\text{dBm} + 10\log (25.36) = 25.04 > 23.38\text{dBm}$
2. $11\text{dBm} + 10\log (23.39) = 24.69 > 23.38\text{dBm}$
3. $11\text{dBm} + 10\log (23.00) = 24.62 > 23.38\text{dBm}$
4. $11\text{dBm} + 10\log (23.41) = 24.69 > 23.38\text{dBm}$
5. $11\text{dBm} + 10\log (25.57) = 25.08 > 23.38\text{dBm}$
6. $11\text{dBm} + 10\log (21.51) = 24.33 > 23.38\text{dBm}$
7. $11\text{dBm} + 10\log (20.51) = 24.12 > 23.38\text{dBm}$

For U-NII-1 & U-NII-2A & U-NII-2C:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $24 - (6.62 - 6) = 23.38\text{dBm}$.

For U-NII-3:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $30 - (6.62 - 6) = 29.38\text{dBm}$.

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	13.583	11.33	23.38	PASS
40	5200	13.836	11.41	23.38	PASS
48	5240	14.256	11.54	23.38	PASS
52	5260	13.868	11.42	23.38	PASS
60	5300	13.964	11.45	23.38	PASS
64	5320	13.122	11.18	23.38	PASS
100	5500	13.305	11.24	23.38	PASS
116	5580	13.836	11.41	23.38	PASS
132	5660	12.589	11.00	23.38	PASS
140	5700	12.647	11.02	23.38	PASS
149	5745	12.589	11.00	29.38	PASS
157	5785	13.243	11.22	29.38	PASS
165	5825	13.428	11.28	23.38	PASS

NOTE:

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

1. $11\text{dBm} + 10\log (25.67) = 25.09 > 23.38\text{dBm}$
2. $11\text{dBm} + 10\log (22.41) = 24.50 > 23.38\text{dBm}$
3. $11\text{dBm} + 10\log (20.79) = 24.18 > 23.38\text{dBm}$
4. $11\text{dBm} + 10\log (20.73) = 24.17 > 23.38\text{dBm}$
5. $11\text{dBm} + 10\log (20.94) = 24.21 > 23.38\text{dBm}$
6. $11\text{dBm} + 10\log (20.85) = 24.19 > 23.38\text{dBm}$
7. $11\text{dBm} + 10\log (20.69) = 24.16 > 23.38\text{dBm}$

For U-NII-1 & U-NII-2A & U-NII-2C:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $24 - (6.62 - 6) = 23.38\text{dBm}$.

For U-NII-3:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $30 - (6.62 - 6) = 29.38\text{dBm}$.

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	12.823	11.08	29.38	PASS
46	5230	13.335	11.25	29.38	PASS
54	5270	13.213	11.21	23.38	PASS
62	5310	13.305	11.24	23.38	PASS
102	5510	12.647	11.02	23.38	PASS
110	5550	12.589	11.00	23.38	PASS
134	5670	12.735	11.05	23.38	PASS
151	5755	13.002	11.14	29.38	PASS
159	5795	12.647	11.02	29.38	PASS

NOTE:

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

1. $11\text{dBm} + 10\log(51.75) = 28.14\text{ dBm} > 23.38\text{dBm}$
2. $11\text{dBm} + 10\log(42.47) = 27.28\text{ dBm} > 23.38\text{dBm}$
3. $11\text{dBm} + 10\log(42.41) = 27.27\text{ dBm} > 23.38\text{dBm}$
4. $11\text{dBm} + 10\log(42.30) = 27.26\text{ dBm} > 23.38\text{dBm}$
5. $11\text{dBm} + 10\log(42.31) = 27.26\text{ dBm} > 23.38\text{dBm}$

For U-NII-1 & U-NII-2A & U-NII-2C:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $24 - (6.62 - 6) = 23.38\text{dBm}$.

For U-NII-3:

Gain = 6.62dBi > 6dBi, so the conducted power limit shall be reduced to $30 - (6.62 - 6) = 29.38\text{dBm}$.

26dB BANDWIDTH:

802.11a

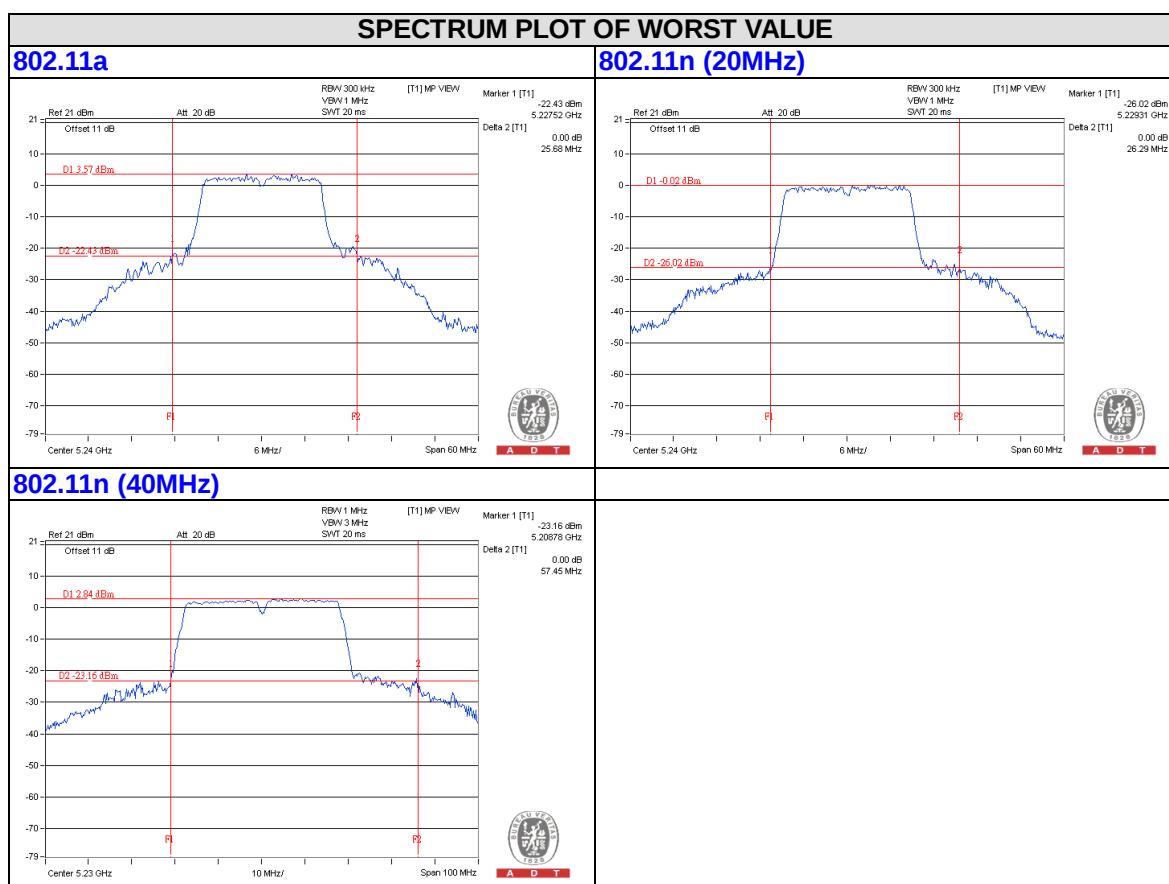
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	25.34	PASS
40	5200	25.57	PASS
48	5240	25.68	PASS
52	5260	25.36	PASS
60	5300	23.39	PASS
64	5320	23.00	PASS
100	5500	23.41	PASS
116	5580	25.57	PASS
132	5660	21.51	PASS
140	5700	20.51	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	20.77	PASS
40	5200	22.49	PASS
48	5240	26.29	PASS
52	5260	25.67	PASS
60	5300	22.41	PASS
64	5320	20.79	PASS
100	5500	20.73	PASS
116	5580	20.94	PASS
132	5660	20.85	PASS
140	5700	20.69	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	42.35	PASS
46	5230	57.45	PASS
54	5270	51.75	PASS
62	5310	42.47	PASS
102	5510	42.41	PASS
110	5550	42.30	PASS
134	5670	42.31	PASS



OCCUPIED BANDWIDTH:

802.11a

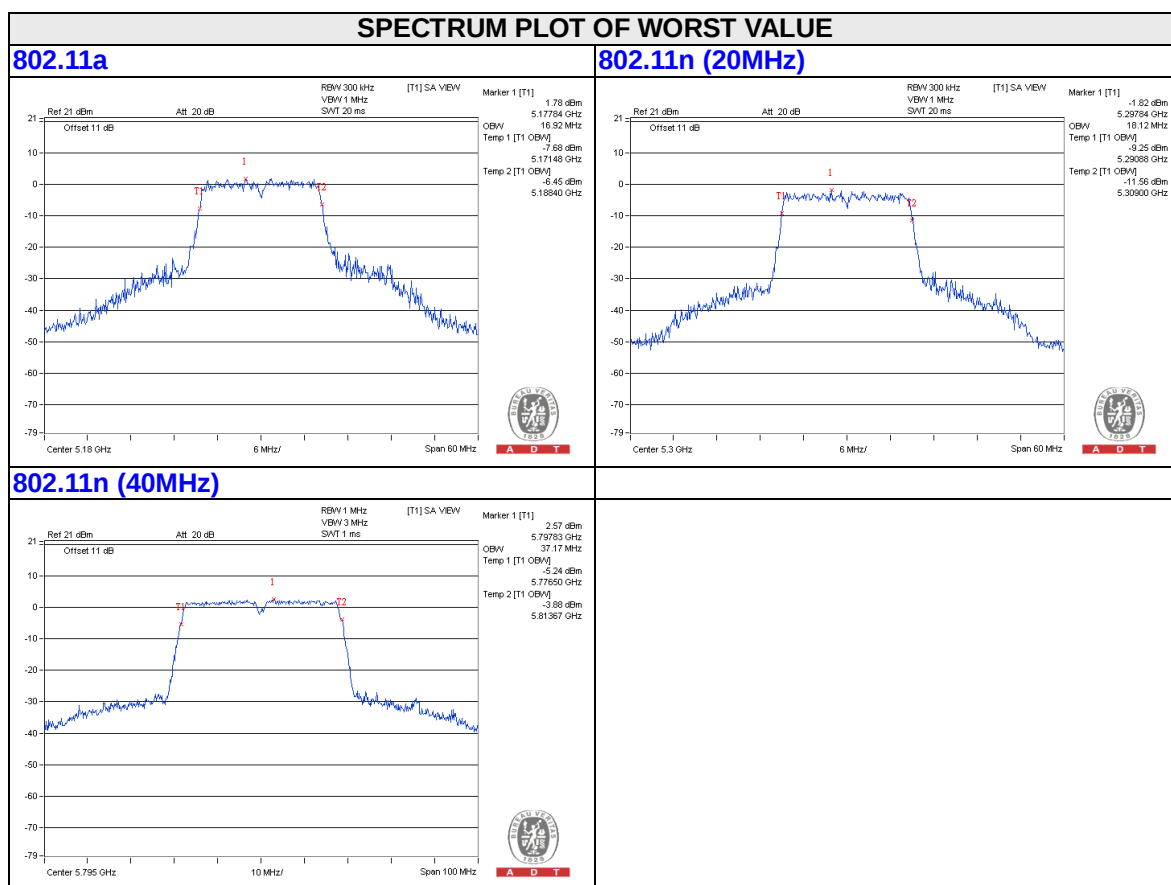
CHANNEL	CHANNEL FREQUENCY (MHz)	OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	16.92	PASS
40	5200	16.80	PASS
48	5240	16.92	PASS
52	5260	16.80	PASS
60	5300	16.80	PASS
64	5320	16.80	PASS
100	5500	16.92	PASS
116	5580	16.80	PASS
132	5660	16.68	PASS
140	5700	16.80	PASS
149	5745	16.87	PASS
157	5785	16.90	PASS
165	5825	16.90	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	18.00	PASS
40	5200	18.00	PASS
48	5240	18.00	PASS
52	5260	18.00	PASS
60	5300	18.12	PASS
64	5320	17.88	PASS
100	5500	17.88	PASS
116	5580	18.00	PASS
132	5660	18.00	PASS
140	5700	18.00	PASS
149	5745	17.91	PASS
157	5785	17.90	PASS
165	5825	17.90	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
38	5190	36.80	PASS
46	5230	36.80	PASS
54	5270	36.80	PASS
62	5310	37.00	PASS
102	5510	37.00	PASS
110	5550	36.60	PASS
134	5670	36.80	PASS
151	5755	37.10	PASS
159	5795	37.17	PASS



EUT MAXIMUM CONDUCTED POWER

802.11a

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	20.37	13.09
5470~5725	20.137	13.04

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

802.11n (20MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	13.964	11.45
5470~5725	13.836	11.41

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

802.11n (40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	13.305	11.24
5470~5725	12.735	11.05

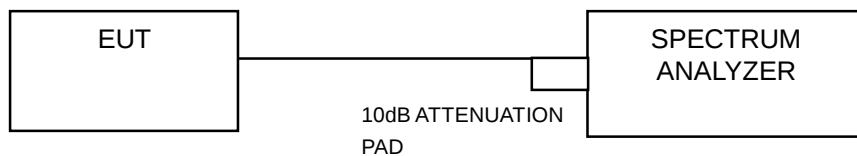
NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedure

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

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. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value

For U-NII-3:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 500 kHz, Set VBW $\geq$ 3 RBW, Detector = RMS
- 3) Sweep time = auto, trigger set to "free run".
- 4) Trace average at least 100 traces in power averaging mode.
- 5) Record the max value.

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Condition

Same as Item 4.3.6.

4.4.7 Test Results

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

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-1.58	10.38	PASS
40	5200	-2.64	10.38	PASS
48	5240	-2.17	10.38	PASS
52	5260	-1.77	10.38	PASS
60	5300	-1.29	10.38	PASS
64	5320	-1.81	10.38	PASS
100	5500	-1.64	10.38	PASS
116	5580	-1.04	10.38	PASS
132	5660	-2.11	10.38	PASS
140	5700	-2.52	10.38	PASS

Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to 11-(6.62-6) = 10.38dBm.

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-3.96	10.38	PASS
40	5200	-3.69	10.38	PASS
48	5240	-3.43	10.38	PASS
52	5260	-3.09	10.38	PASS
60	5300	-3.18	10.38	PASS
64	5320	-3.81	10.38	PASS
100	5500	-3.56	10.38	PASS
116	5580	-3.23	10.38	PASS
132	5660	-4.03	10.38	PASS
140	5700	-4.52	10.38	PASS

Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to 11-(6.62-6) = 10.38dBm.

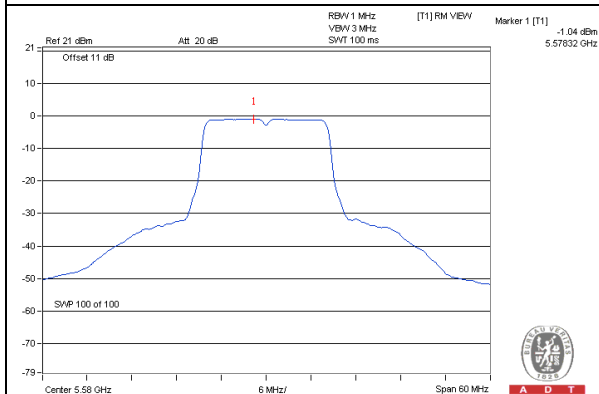
802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-6.71	10.38	PASS
46	5230	-6.39	10.38	PASS
54	5270	-6.37	10.38	PASS
62	5310	-6.81	10.38	PASS
102	5510	-6.95	10.38	PASS
110	5550	-6.66	10.38	PASS
134	5670	-7.77	10.38	PASS

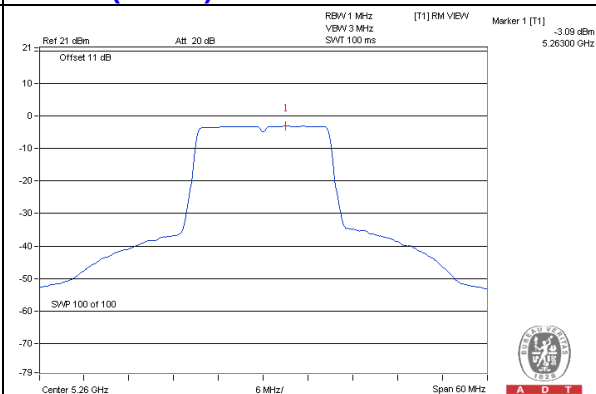
Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to 11-(6.62-6) = 10.38dBm.

SPECTRUM PLOT OF WORST VALUE

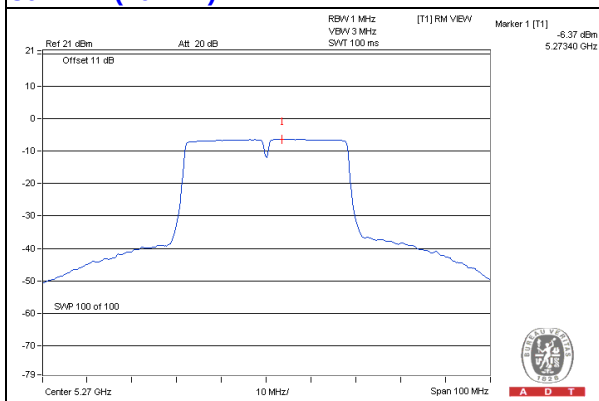
802.11a



802.11n (20MHz)



802.11n (40MHz)



For U-NII-3 Band

802.11a

Channel	Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	3.85	29.38	PASS
157	5785	4.77	29.38	PASS
165	5825	4.25	29.38	PASS

Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to $30-(6.62-6) = 29.38\text{dBm}$

802.11n (20MHz)

Channel	Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	1.77	29.38	PASS
157	5785	2.74	29.38	PASS
165	5825	2.55	29.38	PASS

Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to $30-(6.62-6) = 29.38\text{dBm}$

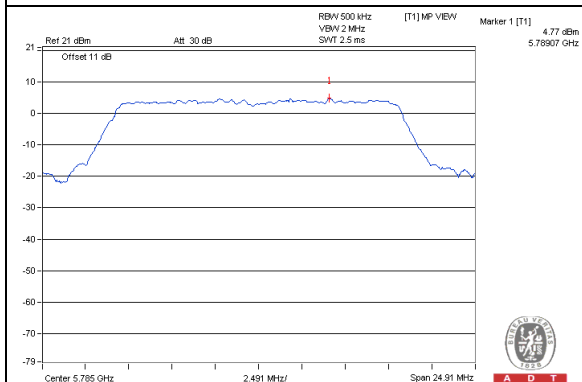
802.11n (40MHz)

Channel	Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
151	5755	-0.15	29.38	PASS
159	5795	-0.36	29.38	PASS

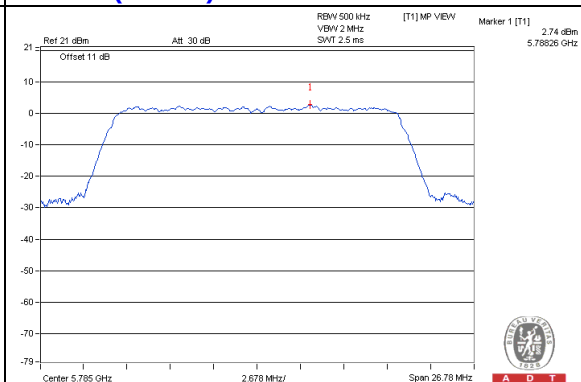
Directional gain = 6.62dBi = 6.62dBi > 6dBi , so the power density limit shall be reduced to $30-(6.62-6) = 29.38\text{dBm}$

SPECTRUM PLOT OF WORST VALUE

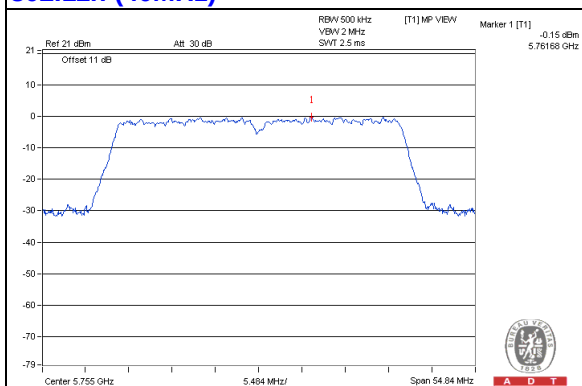
802.11a



802.11n (20MHz)



802.11n (40MHz)

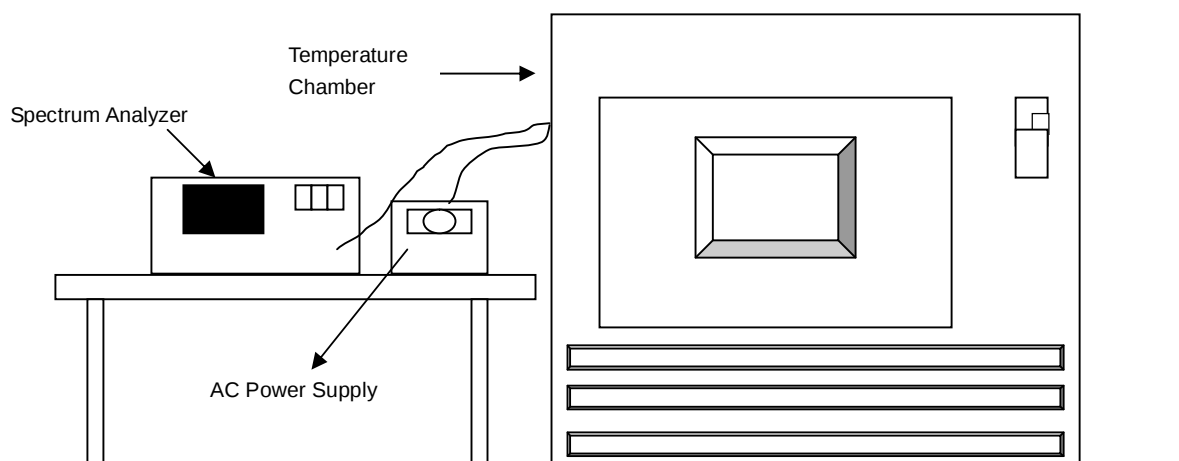


4.5 Frequency Stability Measurement

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 b and c 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 (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	120	5180.042694	8.2420223	5180.04236	8.1776062	5180.042463	8.1975318	5180.042361	8.1777992
50	120	5180.042616	8.2270925	5180.04275	8.2528958	5180.042879	8.2777945	5180.042987	8.2986486
40	120	5180.043039	8.3087623	5180.042705	8.2442085	5180.042925	8.2867706	5180.04288	8.2779923
30	120	5180.043631	8.4229943	5180.043681	8.4326255	5180.043535	8.4045079	5180.04347	8.3918919
20	120	5180.042764	8.2555735	5180.042755	8.2538610	5180.042981	8.2975505	5180.043003	8.3017375
10	120	5180.042655	8.2346482	5180.042626	8.2289575	5180.042569	8.2180498	5180.042665	8.2364865
0	120	5180.043233	8.3461434	5180.043364	8.3714286	5180.043017	8.3044208	5180.043132	8.3266409
-10	120	5180.043463	8.3905138	5180.042979	8.2971042	5180.043066	8.3139267	5180.0431	8.3204633
-20	120	5180.043182	8.3362928	5180.042768	8.2564668	5180.043497	8.3970857	5180.04297	8.2953750

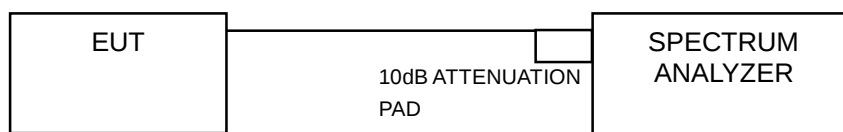
FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	138	5180.043238	8.3470697	5180.043274	8.3540541	5180.043390	8.3763912	5180.043285	8.3561776
	120	5180.042764	8.2555735	5180.042755	8.2538610	5180.042981	8.2975505	5180.043003	8.3017375
	102	5180.042159	8.1388545	5180.042142	8.1355212	5180.042303	8.1665179	5180.042364	8.1783784

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHZ)	MINIMUM LIMIT (MHZ)	PASS / FAIL
149	5745	16.60	0.5	PASS
157	5785	16.61	0.5	PASS
165	5825	16.53	0.5	PASS

802.11n (20MHz)

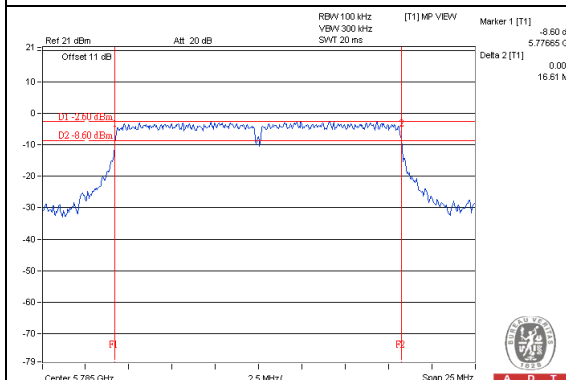
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHZ)	MINIMUM LIMIT (MHZ)	PASS / FAIL
149	5745	17.84	0.5	PASS
157	5785	17.86	0.5	PASS
165	5825	17.85	0.5	PASS

802.11n (40MHz)

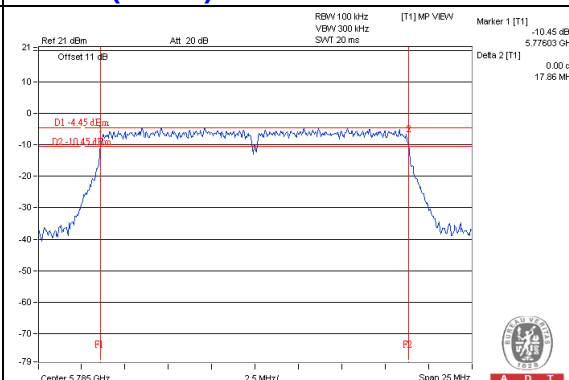
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHZ)	MINIMUM LIMIT (MHZ)	PASS / FAIL
151	5755	36.56	0.5	PASS
159	5795	36.64	0.5	PASS

SPECTRUM PLOT OF WORST VALUE

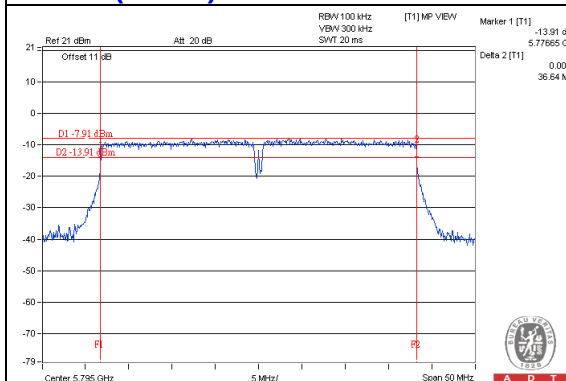
802.11a



802.11n (20MHz)



802.11n (40MHz)



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:

Linko EMC/RF Lab

Tel: 886-2-26052180

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.

--- END ---