FCC Test Report

Report No.:	RF171025C07-1
FCC ID:	H8NTN154W2
Test Model:	TN154W2
Received Date:	Oct. 25, 2017
Test Date:	Dec. 07, 2017 ~ Aug. 16, 2018
Issued Date:	Aug. 17, 2018
Applicant:	ASKEY COMPUTER CORP.
Address:	10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW TAIPEI CITY 23585, TAIWAN, R.O.C.
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.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration:	788550
Designation Number:	TW0003

Testing Laboratory
2021

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF171025C07-1	Original release.	Aug. 17, 2018

1 Certificate of Conformity

Product:	IoT Wearable Device
Brand:	TURBONET
Test Model:	TN154W2
Sample Status:	Engineering sample
Applicant:	ASKEY COMPUTER CORP.
Test Date:	Dec. 07, 2017 ~ Aug. 16, 2018
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Aug. 17, 2018

Polly Chien / Specialist

Approved by : _____ , **Date:** Aug. 17, 2018

Bruce Chen / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -17.27dB at 0.58359MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -5.7dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is Spring not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IoT Wearable Device
Brand	TURBONET
Test Model	TN154W2
Sample Status	Engineering sample
HW Version	EV4
Power Supply Rating	3.7Vdc (battery) 3.85Vdc (Battery, Charging Voltage) 5.35Vdc (cradle) 5.0Vdc (host equipment)
Modulation Type	64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20): 4 802.11n (HT40): 2 5260~5320MHz: 802.11a, 802.11n (HT20): 4 802.11n (HT40): 2 5500~5720MHz: 802.11a, 802.11n (HT20): 12 802.11n (HT40): 6 5745~5825MHz: 802.11a, 802.11n (HT20): 5 802.11n (HT40): 2
Output Power	5180~5240MHz: 25.119mW 5260~5320MHz: 26.182mW 5500~5720MHz: 21.281mW 5745~5825MHz: 12.972mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery, Adapter, Cradle
Cable Supplied	NA

Note:

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

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX

2. The EUT with follow antennas gain is listed as table below.

Antenna Type	Connector	Gain(dBi)					
		2.4GHz	2.45GHz	2.5GHz	5.15GHz	5.55GHz	5.85GHz
PIFA	Spring	**-0.16**	-0.88	-1.18	**1.67**	0.23	-0.25

* The maximum antenna gain is chosen for final test.

3. The EUT uses following cradle, battery and adapter.

Cradle	
Brand	TURBONET
Model	DS12240
Rating	5.35Vdc,1A
Power Line	0.95m shielded USB cable without core

Adapter	
Brand	Sunny ELECTRONICS CORP.
Model	SYS1561-0505-1
Input	100-240Vac, 1.0A Max, 50-60Hz
Output	+5.35Vdc, 1A

Battery	
Brand	FUJI Electronics
Model	492003
Rating	3.7Vdc, 430mAh

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

5180~5240MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

5260~5320MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

5500~5720MHz:

12 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

5745~5825MHz:

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

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

2 channels are provided for 802.11n (HT40):

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≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from adapter
B	-	-	√	-	Power from host equipment

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

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

Note:

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

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
A	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5

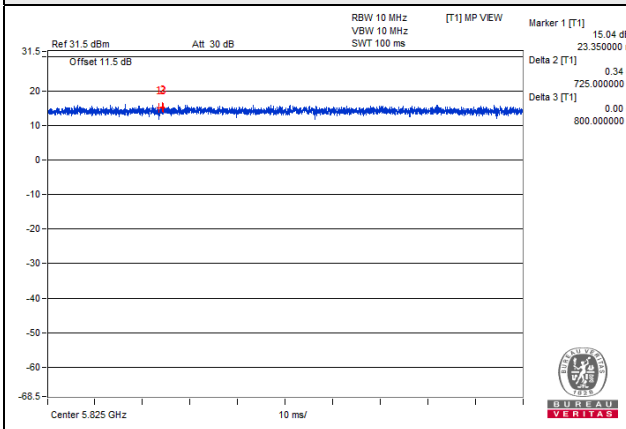
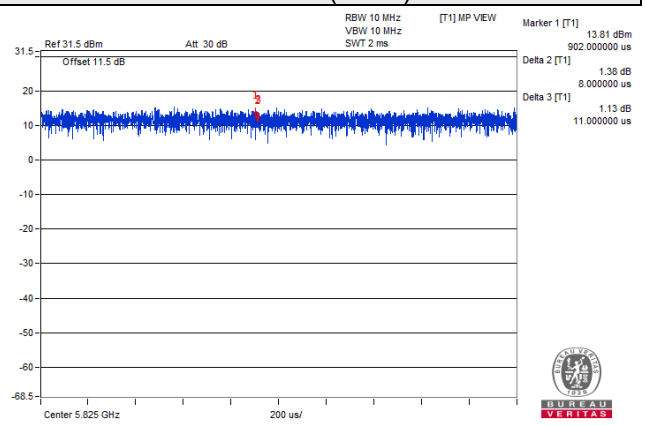
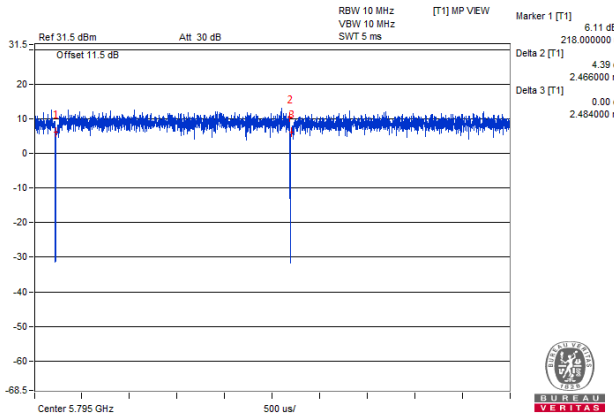
Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Greg Lin, James Yang
RE<1G	25deg. C, 66%RH	120Vac, 60Hz	James Yang
PLC	25deg. C, 75%RH	120Vac, 60Hz	Adair Peng
	25deg. C, 70%RH		Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Cedric Wu

3.3 Duty Cycle of Test Signal

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

802.11a: Duty cycle of test signal is > 98 %, duty factor is not required.
802.11n (HT20): Duty cycle of test signal is > 98 %, duty factor is not required.
802.11n (HT40): Duty cycle = 2.466/2.484 = 0.993

802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

3.4 Description of Support Units

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

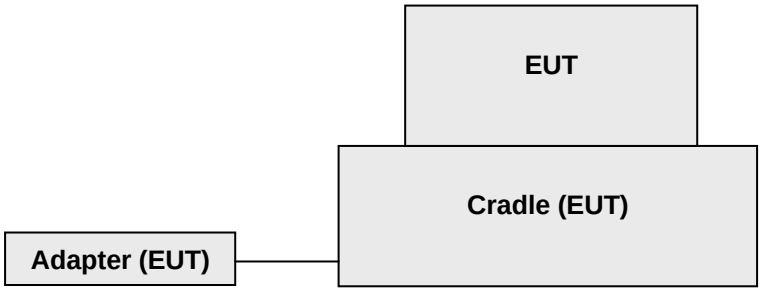
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5420	33MJMQ1	FCC DoC Approved	-

Note:

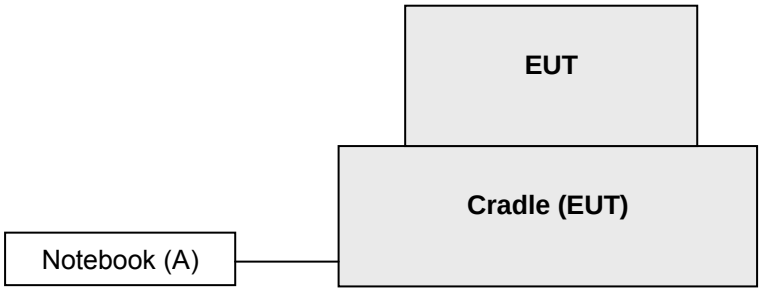
1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

3.4.1 Configuration of System under Test

Mode A



Mode B



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
ANSI C63.10:2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

<table>
<tr><td colspan="3">Applicable To</td><td colspan="2">Limit</td></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK: 74 (dBμV/m)</td><td>AV: 54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK: -27 (dBm/MHz) *1
PK: 10 (dBm/MHz) *2
PK: 15.6 (dBm/MHz) *3
PK: 27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK: 105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK: 122.2 (dBμV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

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

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

4.1.2 Test Instruments

Tested date: Dec. 07 ~ Dec. 25, 2017

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Mar. 27, 2017	Mar. 26, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	May 11, 2017	May 10, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
Loop Antenna EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Aug. 08, 2017	Aug. 07, 2018
Preamplifier Agilent (Above 1GHz)	8449B	3008A01638	Feb. 22, 2017	Feb. 21, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-02 (248780+MY13377)	Aug. 08, 2017	Aug. 07, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795 /4)	Aug. 08, 2017	Aug. 07, 2018
RF signal cable Woken	8D-FB	Cable-CH9-01	Aug. 01, 2017	Jul. 31, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
High Speed Peak Power Meter	ML2495A	0824012	Aug. 18, 2017	Aug. 17, 2018
Power Sensor	MA2411B	0738171	Aug. 18, 2017	Aug. 17, 2018
26GHz ~ 40GHz Amplifier Agilent	8449B	3008A1960	Aug. 08, 2017	Aug. 07, 2018

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The IC Site Registration No. is IC 7450F-9.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

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

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

Note:

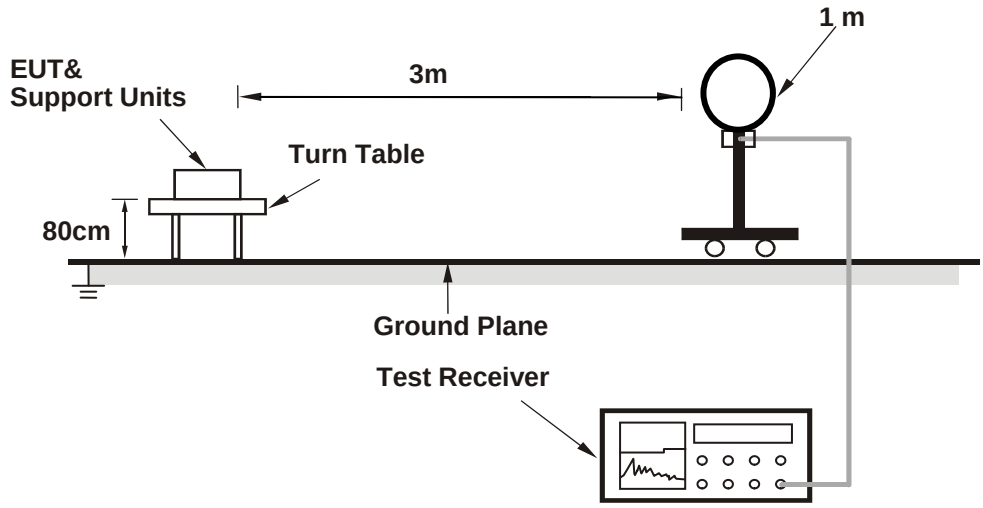
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

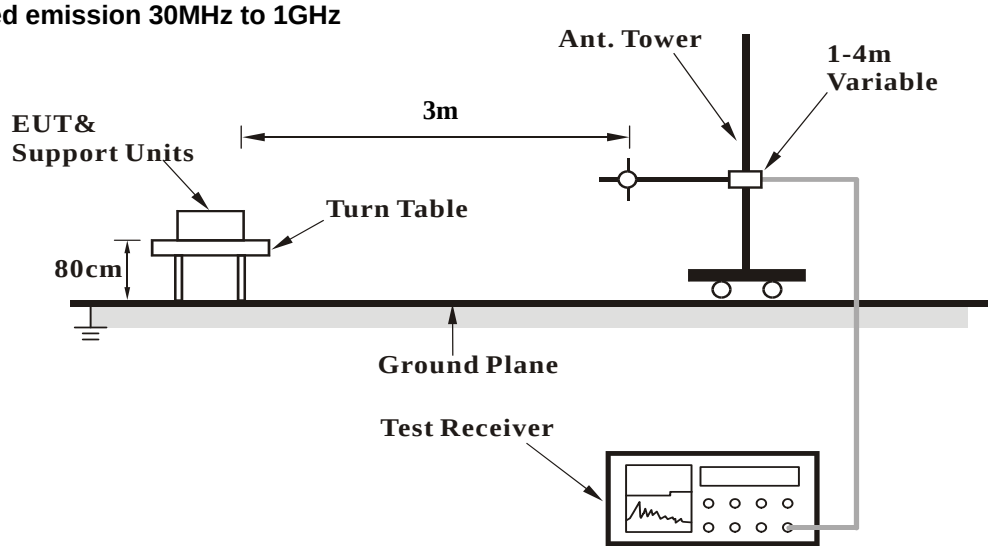
No deviation.

4.1.5 Test Set Up

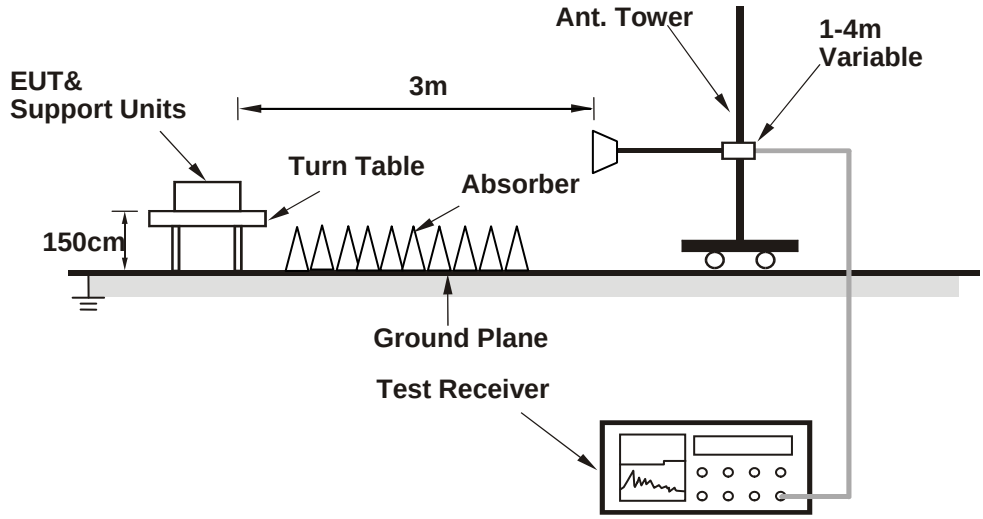
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1GHz data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.24 H	339	53.30	3.90
2	5150.00	44.8 AV	54.0	-9.2	1.24 H	339	40.90	3.90
3	*5180.00	100.9 PK			1.00 H	337	60.20	40.70
4	*5180.00	90.6 AV			1.00 H	337	49.90	40.70
5	#10360.00	58.9 PK	74.0	-15.1	1.27 H	216	43.40	15.50
6	#10360.00	46.3 AV	54.0	-7.7	1.27 H	216	30.80	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	41.8 PK	74.0	-32.2	1.22 V	310	37.90	3.90
2	5150.00	30.2 AV	54.0	-23.8	1.22 V	310	26.30	3.90
3	*5180.00	102.3 PK			1.00 V	282	61.60	40.70
4	*5180.00	92.1 AV			1.00 V	282	51.40	40.70
5	#10360.00	57.7 PK	74.0	-16.3	1.35 V	351	42.20	15.50
6	#10360.00	45.3 AV	54.0	-8.7	1.35 V	351	29.80	15.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.7 PK			1.02 H	334	59.90	40.80
2	*5200.00	90.6 AV			1.02 H	334	49.80	40.80
3	#10400.00	57.7 PK	74.0	-16.3	3.62 H	209	42.20	15.50
4	#10400.00	45.1 AV	54.0	-8.9	3.62 H	209	29.60	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.1 PK			1.09 V	296	61.30	40.80
2	*5200.00	92.0 AV			1.09 V	296	51.20	40.80
3	#10400.00	58.7 PK	74.0	-15.3	3.37 V	130	43.20	15.50
4	#10400.00	46.1 AV	54.0	-7.9	3.37 V	130	30.60	15.50

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.1 PK			1.00 H	339	60.30	40.80
2	*5240.00	90.8 AV			1.00 H	339	50.00	40.80
3	5350.00	57.0 PK	74.0	-17.0	1.06 H	341	52.60	4.40
4	5350.00	43.8 AV	54.0	-10.2	1.06 H	341	39.40	4.40
5	#10480.00	57.3 PK	74.0	-16.7	2.14 H	159	42.20	15.10
6	#10480.00	44.5 AV	54.0	-9.5	2.14 H	159	29.40	15.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.5 PK			1.05 V	298	61.70	40.80
2	*5240.00	92.4 AV			1.05 V	298	51.60	40.80
3	5350.00	57.3 PK	74.0	-16.7	1.34 V	247	52.90	4.40
4	5350.00	44.1 AV	54.0	-9.9	1.34 V	247	39.70	4.40
5	#10480.00	58.2 PK	74.0	-15.8	2.47 V	154	43.10	15.10
6	#10480.00	45.7 AV	54.0	-8.3	2.47 V	154	30.60	15.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.12 H	342	51.40	4.00
2	5150.00	43.5 AV	54.0	-10.5	1.12 H	342	39.50	4.00
3	*5260.00	101.5 PK			1.00 H	338	61.00	40.50
4	*5260.00	91.0 AV			1.00 H	338	50.50	40.50
5	#10520.00	57.3 PK	74.0	-16.7	1.17 H	215	41.80	15.50
6	#10520.00	44.9 AV	54.0	-9.1	1.17 H	215	29.40	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.11 V	324	52.20	4.00
2	5150.00	43.4 AV	54.0	-10.6	1.11 V	324	39.40	4.00
3	*5260.00	101.9 PK			1.00 V	298	61.40	40.50
4	*5260.00	91.8 AV			1.00 V	298	51.30	40.50
5	#10520.00	57.8 PK	74.0	-16.2	2.47 V	232	42.30	15.50
6	#10520.00	45.8 AV	54.0	-8.2	2.47 V	232	30.30	15.50

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	100.5 PK			1.03 H	340	60.00	40.50
2	*5300.00	90.3 AV			1.03 H	340	49.80	40.50
3	10600.00	58.0 PK	74.0	-16.0	3.01 H	243	42.20	15.80
4	10600.00	45.3 AV	54.0	-8.7	3.01 H	243	29.50	15.80
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	101.3 PK			1.12 V	300	60.80	40.50
2	*5300.00	91.2 AV			1.12 V	300	50.70	40.50
3	10600.00	59.0 PK	74.0	-15.0	2.17 V	328	43.20	15.80
4	10600.00	46.2 AV	54.0	-7.8	2.17 V	328	30.40	15.80

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	100.5 PK			1.07 H	337	59.90	40.60
2	*5320.00	90.4 AV			1.07 H	337	49.80	40.60
3	5350.00	61.0 PK	74.0	-13.0	1.11 H	351	56.90	4.10
4	**5350.00**	**48.3 AV**	**54.0**	**-5.7**	**1.11 H**	**351**	**44.20**	**4.10**
5	10640.00	58.4 PK	74.0	-15.6	2.18 H	307	42.60	15.80
6	10640.00	45.4 AV	54.0	-8.6	2.18 H	307	29.60	15.80
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	101.2 PK			1.01 V	298	60.60	40.60
2	*5320.00	91.0 AV			1.01 V	298	50.40	40.60
3	5350.00	62.0 PK	74.0	-12.0	1.18 V	301	57.90	4.10
4	5350.00	46.9 AV	54.0	-7.1	1.18 V	301	42.80	4.10
5	10640.00	58.9 PK	74.0	-15.1	1.09 V	236	43.10	15.80
6	10640.00	46.1 AV	54.0	-7.9	1.09 V	236	30.30	15.80

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	45.6 PK	74.0	-28.4	1.65 H	347	41.30	4.30
2	5460.00	44.7 AV	54.0	-9.3	1.65 H	347	40.40	4.30
3	#5470.00	56.9 PK	74.0	-17.1	1.57 H	340	52.50	4.40
4	#5470.00	44.9 AV	54.0	-9.1	1.57 H	340	40.50	4.40
5	*5500.00	99.7 PK			1.50 H	331	58.40	41.30
6	*5500.00	89.6 AV			1.50 H	331	48.30	41.30
7	11000.00	60.7 PK	74.0	-13.3	2.54 H	147	43.20	17.50
8	11000.00	47.9 AV	54.0	-6.1	2.54 H	147	30.40	17.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.12 V	329	53.30	4.30
2	5460.00	44.6 AV	54.0	-9.4	1.12 V	329	40.30	4.30
3	#5470.00	57.9 PK	74.0	-16.1	1.35 V	357	53.50	4.40
4	#5470.00	44.9 AV	54.0	-9.1	1.35 V	357	40.50	4.40
5	*5500.00	97.5 PK			1.11 V	299	56.20	41.30
6	*5500.00	86.9 AV			1.11 V	299	45.60	41.30
7	11000.00	60.8 PK	74.0	-13.2	1.53 V	247	43.30	17.50
8	11000.00	48.1 AV	54.0	-5.9	1.53 V	247	30.60	17.50

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	101.3 PK			1.46 H	330	59.90	41.40
2	*5580.00	91.0 AV			1.46 H	330	49.60	41.40
3	11160.00	59.6 PK	74.0	-14.4	2.64 H	133	43.60	16.00
4	11160.00	46.6 AV	54.0	-7.4	2.64 H	133	30.60	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	98.2 PK			1.00 V	298	56.80	41.40
2	*5580.00	87.7 AV			1.00 V	298	46.30	41.40
3	11160.00	59.3 PK	74.0	-14.7	1.24 V	219	43.30	16.00
4	11160.00	46.6 AV	54.0	-7.4	1.24 V	219	30.60	16.00

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.3 PK			1.48 H	330	58.80	41.50
2	*5700.00	90.1 AV			1.48 H	330	48.60	41.50
3	#5725.00	58.2 PK	74.0	-15.8	1.57 H	340	53.30	4.90
4	#5725.00	45.3 AV	54.0	-8.7	1.57 H	340	40.40	4.90
5	11400.00	59.6 PK	74.0	-14.4	1.09 H	197	43.50	16.10
6	11400.00	46.8 AV	54.0	-7.2	1.09 H	197	30.70	16.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	97.4 PK			1.06 V	298	55.90	41.50
2	*5700.00	87.1 AV			1.06 V	298	45.60	41.50
3	#5725.00	57.3 PK	74.0	-16.7	1.14 V	321	52.40	4.90
4	#5725.00	45.2 AV	54.0	-8.8	1.14 V	321	40.30	4.90
5	11400.00	59.5 PK	74.0	-14.5	3.17 V	251	43.40	16.10
6	11400.00	46.7 AV	54.0	-7.3	3.17 V	251	30.60	16.10

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	1.50 H	344	52.60	4.30
2	5460.00	43.4 AV	54.0	-10.6	1.50 H	344	39.10	4.30
3	#5470.00	56.8 PK	74.0	-17.2	1.53 H	341	52.40	4.40
4	#5470.00	43.8 AV	54.0	-10.2	1.53 H	341	39.40	4.40
5	*5720.00	100.6 PK			1.51 H	324	59.00	41.60
6	*5720.00	90.3 AV			1.51 H	324	48.70	41.60
7	#5850.00	58.2 PK	74.0	-15.8	1.55 H	334	52.90	5.30
8	#5850.00	44.8 AV	54.0	-9.2	1.55 H	334	39.50	5.30
9	11440.00	57.9 PK	74.0	-16.1	2.53 H	184	41.90	16.00
10	11440.00	43.9 AV	54.0	-10.1	2.53 H	184	27.90	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.2 PK	74.0	-16.8	1.05 V	295	52.90	4.30
2	5460.00	43.5 AV	54.0	-10.5	1.05 V	295	39.20	4.30
3	#5470.00	58.2 PK	74.0	-15.8	1.04 V	291	53.80	4.40
4	#5470.00	44.0 AV	54.0	-10.0	1.04 V	291	39.60	4.40
5	*5720.00	97.3 PK			1.11 V	295	55.70	41.60
6	*5720.00	87.2 AV			1.11 V	295	45.60	41.60
7	#5850.00	57.6 PK	74.0	-16.4	1.14 V	287	52.30	5.30
8	#5850.00	44.5 AV	54.0	-9.5	1.14 V	287	39.20	5.30
9	11440.00	59.2 PK	74.0	-14.8	2.10 V	189	43.20	16.00
10	11440.00	46.2 AV	54.0	-7.8	2.10 V	189	30.20	16.00

REMARKS:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.40	59.1 PK	68.2	-9.1	1.25 H	325	54.40	4.70
2	*5745.00	97.6 PK			1.25 H	325	55.90	41.70
3	*5745.00	87.2 AV			1.25 H	325	45.50	41.70
4	#5959.20	59.4 PK	68.2	-8.8	1.25 H	325	54.00	5.40
5	11490.00	57.9 PK	74.0	-16.1	1.73 H	59	41.90	16.00
6	11490.00	44.8 AV	54.0	-9.2	1.73 H	59	28.80	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5617.60	58.8 PK	68.2	-9.4	2.97 V	355	54.10	4.70
2	*5745.00	99.1 PK			2.97 V	355	57.40	41.70
3	*5745.00	88.5 AV			2.97 V	355	46.80	41.70
4	#5948.80	59.9 PK	68.2	-8.3	2.97 V	355	54.50	5.40
5	11490.00	57.1 PK	74.0	-16.9	1.64 V	155	41.10	16.00
6	11490.00	44.5 AV	54.0	-9.5	1.64 V	155	28.50	16.00

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5618.40	58.7 PK	68.2	-9.5	1.29 H	328	54.00	4.70
2	*5785.00	98.9 PK			1.29 H	328	57.00	41.90
3	*5785.00	87.7 AV			1.29 H	328	45.80	41.90
4	#5972.00	59.6 PK	68.2	-8.6	1.29 H	328	54.20	5.40
5	11570.00	57.0 PK	74.0	-17.0	2.51 H	304	41.40	15.60
6	11570.00	44.4 AV	54.0	-9.6	2.51 H	304	28.80	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	59.2 PK	68.2	-9.0	3.07 V	355	54.50	4.70
2	*5785.00	100.8 PK			3.07 V	355	58.90	41.90
3	*5785.00	90.0 AV			3.07 V	355	48.10	41.90
4	#5992.80	59.1 PK	68.2	-9.1	3.07 V	355	53.60	5.50
5	11570.00	58.2 PK	74.0	-15.8	2.17 V	145	42.60	15.60
6	11570.00	44.2 AV	54.0	-9.8	2.17 V	145	28.60	15.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.20	60.4 PK	68.2	-7.8	1.32 H	343	55.70	4.70
2	*5825.00	97.5 PK			1.32 H	343	55.40	42.10
3	*5825.00	87.3 AV			1.32 H	343	45.20	42.10
4	#5968.80	59.6 PK	68.2	-8.6	1.32 H	343	54.20	5.40
5	11650.00	56.2 PK	74.0	-17.8	1.94 H	107	40.90	15.30
6	11650.00	43.1 AV	54.0	-10.9	1.94 H	107	27.80	15.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.40	59.0 PK	68.2	-9.2	3.05 V	352	54.30	4.70
2	*5825.00	100.8 PK			3.05 V	352	58.70	42.10
3	*5825.00	90.0 AV			3.05 V	352	47.90	42.10
4	#5997.60	59.2 PK	68.2	-9.0	3.05 V	352	53.70	5.50
5	11650.00	57.7 PK	74.0	-16.3	2.64 V	153	42.40	15.30
6	11650.00	43.7 AV	54.0	-10.3	2.64 V	153	28.40	15.30

Remarks:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.8 PK	74.0	-18.2	1.18 H	356	51.90	3.90
2	5150.00	43.7 AV	54.0	-10.3	1.18 H	356	39.80	3.90
3	*5180.00	98.2 PK			1.10 H	334	57.50	40.70
4	*5180.00	88.0 AV			1.10 H	334	47.30	40.70
5	#10360.00	57.3 PK	74.0	-16.7	3.07 H	125	41.80	15.50
6	#10360.00	45.1 AV	54.0	-8.9	3.07 H	125	29.60	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.31 V	312	52.70	3.90
2	5150.00	45.0 AV	54.0	-9.0	1.31 V	312	41.10	3.90
3	*5180.00	100.5 PK			1.15 V	297	59.80	40.70
4	*5180.00	90.4 AV			1.15 V	297	49.70	40.70
5	#10360.00	58.3 PK	74.0	-15.7	2.34 V	125	42.80	15.50
6	#10360.00	46.0 AV	54.0	-8.0	2.34 V	125	30.50	15.50

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	98.2 PK			1.01 H	337	57.40	40.80
2	*5200.00	88.0 AV			1.01 H	337	47.20	40.80
3	#10400.00	57.3 PK	74.0	-16.7	3.09 H	114	41.80	15.50
4	#10400.00	45.1 AV	54.0	-8.9	3.09 H	114	29.60	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.5 PK			1.10 V	300	59.70	40.80
2	*5200.00	90.3 AV			1.10 V	300	49.50	40.80
3	#10400.00	58.7 PK	74.0	-15.3	2.31 V	204	43.20	15.50
4	#10400.00	46.1 AV	54.0	-7.9	2.31 V	204	30.60	15.50

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	98.0 PK			1.00 H	339	57.20	40.80
2	*5240.00	87.8 AV			1.00 H	339	47.00	40.80
3	5350.00	56.7 PK	74.0	-17.3	1.14 H	343	52.30	4.40
4	5350.00	43.8 AV	54.0	-10.2	1.14 H	343	39.40	4.40
5	#10480.00	57.8 PK	74.0	-16.2	1.78 H	209	42.70	15.10
6	#10480.00	44.6 AV	54.0	-9.4	1.78 H	209	29.50	15.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	100.2 PK			1.03 V	299	59.40	40.80
2	*5240.00	90.1 AV			1.03 V	299	49.30	40.80
3	5350.00	56.4 PK	74.0	-17.6	1.16 V	316	52.00	4.40
4	5350.00	44.1 AV	54.0	-9.9	1.16 V	316	39.70	4.40
5	#10480.00	58.3 PK	74.0	-15.7	2.30 V	307	43.20	15.10
6	#10480.00	45.7 AV	54.0	-8.3	2.30 V	307	30.60	15.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	1.17 H	342	51.70	3.90
2	5150.00	43.7 AV	54.0	-10.3	1.17 H	342	39.80	3.90
3	*5260.00	99.1 PK			1.11 H	337	58.20	40.90
4	*5260.00	88.9 AV			1.11 H	337	48.00	40.90
5	#10520.00	56.9 PK	74.0	-17.1	2.17 H	185	41.70	15.20
6	#10520.00	44.8 AV	54.0	-9.2	2.17 H	185	29.60	15.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	1.14 V	308	52.60	3.90
2	5150.00	44.2 AV	54.0	-9.8	1.14 V	308	40.30	3.90
3	*5260.00	99.7 PK			1.06 V	300	58.80	40.90
4	*5260.00	89.7 AV			1.06 V	300	48.80	40.90
5	#10520.00	58.5 PK	74.0	-15.5	1.13 V	254	43.30	15.20
6	#10520.00	45.6 AV	54.0	-8.4	1.13 V	254	30.40	15.20

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	98.2 PK			1.11 H	350	57.20	41.00
2	*5300.00	88.2 AV			1.11 H	350	47.20	41.00
3	10600.00	58.7 PK	74.0	-15.3	1.62 H	194	42.60	16.10
4	10600.00	45.8 AV	54.0	-8.2	1.62 H	194	29.70	16.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	99.3 PK			1.00 V	299	58.30	41.00
2	*5300.00	88.9 AV			1.00 V	299	47.90	41.00
3	10600.00	59.2 PK	74.0	-14.8	1.35 V	324	43.10	16.10
4	10600.00	46.4 AV	54.0	-7.6	1.35 V	324	30.30	16.10

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	98.2 PK			1.13 H	349	57.20	41.00
2	*5320.00	88.0 AV			1.13 H	349	47.00	41.00
3	5350.00	56.4 PK	74.0	-17.6	1.28 H	358	52.00	4.40
4	5350.00	44.9 AV	54.0	-9.1	1.28 H	358	40.50	4.40
5	10640.00	58.2 PK	74.0	-15.8	3.11 H	243	42.20	16.00
6	10640.00	45.4 AV	54.0	-8.6	3.11 H	243	29.40	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	98.7 PK			1.01 V	298	57.70	41.00
2	*5320.00	88.6 AV			1.01 V	298	47.60	41.00
3	5350.00	59.8 PK	74.0	-14.2	1.14 V	324	55.40	4.40
4	5350.00	46.7 AV	54.0	-7.3	1.14 V	324	42.30	4.40
5	10640.00	59.4 PK	74.0	-14.6	1.26 V	238	43.40	16.00
6	10640.00	46.6 AV	54.0	-7.4	1.26 V	238	30.60	16.00

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.0 PK	74.0	-17.0	1.56 H	337	52.60	4.40
2	5460.00	44.7 AV	54.0	-9.3	1.56 H	337	40.30	4.40
3	#5470.00	57.0 PK	74.0	-17.0	1.47 H	327	52.50	4.50
4	#5470.00	44.9 AV	54.0	-9.1	1.47 H	327	40.40	4.50
5	*5500.00	98.4 PK			1.50 H	332	57.10	41.30
6	*5500.00	87.8 AV			1.50 H	332	46.50	41.30
7	11000.00	61.0 PK	74.0	-13.0	1.76 H	208	43.50	17.50
8	11000.00	48.1 AV	54.0	-5.9	1.76 H	208	30.60	17.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	46.3 PK	74.0	-27.7	1.04 V	307	41.90	4.40
2	5460.00	43.0 AV	54.0	-11.0	1.04 V	307	38.60	4.40
3	#5470.00	56.7 PK	74.0	-17.3	1.12 V	309	52.20	4.50
4	#5470.00	44.3 AV	54.0	-9.7	1.12 V	309	39.80	4.50
5	*5500.00	94.6 PK			1.00 V	299	53.30	41.30
6	*5500.00	84.5 AV			1.00 V	299	43.20	41.30
7	11000.00	59.9 PK	74.0	-14.1	2.35 V	219	42.40	17.50
8	11000.00	47.1 AV	54.0	-6.9	2.35 V	219	29.60	17.50

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	99.1 PK			1.43 H	340	57.60	41.50
2	*5580.00	89.0 AV			1.43 H	340	47.50	41.50
3	11160.00	59.6 PK	74.0	-14.4	1.17 H	263	43.20	16.40
4	11160.00	47.0 AV	54.0	-7.0	1.17 H	263	30.60	16.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	95.7 PK			1.05 V	300	54.20	41.50
2	*5580.00	85.5 AV			1.05 V	300	44.00	41.50
3	11160.00	58.2 PK	74.0	-15.8	3.04 V	127	41.80	16.40
4	11160.00	45.7 AV	54.0	-8.3	3.04 V	127	29.30	16.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	98.0 PK			1.41 H	325	56.40	41.60
2	*5700.00	88.0 AV			1.41 H	325	46.40	41.60
3	#5725.00	57.5 PK	74.0	-16.5	1.52 H	332	52.70	4.80
4	#5725.00	45.2 AV	54.0	-8.8	1.52 H	332	40.40	4.80
5	11400.00	59.6 PK	74.0	-14.4	2.18 H	192	43.40	16.20
6	11400.00	46.5 AV	54.0	-7.5	2.18 H	192	30.30	16.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	94.8 PK			1.02 V	299	53.20	41.60
2	*5700.00	84.7 AV			1.02 V	299	43.10	41.60
3	#5725.00	57.2 PK	74.0	-16.8	1.13 V	311	52.40	4.80
4	#5725.00	44.6 AV	54.0	-9.4	1.13 V	311	39.80	4.80
5	11400.00	58.3 PK	74.0	-15.7	2.28 V	352	42.10	16.20
6	11400.00	45.7 AV	54.0	-8.3	2.28 V	352	29.50	16.20

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 144	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.6 PK	74.0	-17.4	1.48 H	314	52.30	4.30
2	5460.00	43.3 AV	54.0	-10.7	1.48 H	314	39.00	4.30
3	#5470.00	56.8 PK	74.0	-17.2	1.55 H	333	52.40	4.40
4	#5470.00	43.6 AV	54.0	-10.4	1.55 H	333	39.20	4.40
5	*5720.00	98.3 PK			1.52 H	319	56.70	41.60
6	*5720.00	88.1 AV			1.52 H	319	46.50	41.60
7	#5850.00	57.9 PK	74.0	-16.1	1.57 H	314	52.60	5.30
8	#5850.00	44.4 AV	54.0	-9.6	1.57 H	314	39.10	5.30
9	11440.00	59.2 PK	74.0	-14.8	2.22 H	186	43.20	16.00
10	11440.00	46.1 AV	54.0	-7.9	2.22 H	186	30.10	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.11 V	294	53.00	4.30
2	5460.00	43.3 AV	54.0	-10.7	1.11 V	294	39.00	4.30
3	#5470.00	57.6 PK	74.0	-16.4	1.08 V	295	53.20	4.40
4	#5470.00	43.5 AV	54.0	-10.5	1.08 V	295	39.10	4.40
5	*5720.00	94.6 PK			1.14 V	304	53.00	41.60
6	*5720.00	84.5 AV			1.14 V	304	42.90	41.60
7	#5850.00	58.0 PK	74.0	-16.0	1.04 V	302	52.70	5.30
8	#5850.00	44.5 AV	54.0	-9.5	1.04 V	302	39.20	5.30
9	11440.00	58.0 PK	74.0	-16.0	1.56 V	310	42.00	16.00
10	11440.00	45.3 AV	54.0	-8.7	1.56 V	310	29.30	16.00

REMARKS:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.40	58.8 PK	68.2	-9.4	1.32 H	343	54.10	4.70
2	*5745.00	96.8 PK			1.32 H	343	55.10	41.70
3	*5745.00	86.5 AV			1.32 H	343	44.80	41.70
4	#5971.20	59.6 PK	68.2	-8.6	1.32 H	343	54.20	5.40
5	11490.00	56.9 PK	74.0	-17.1	1.68 H	146	40.90	16.00
6	11490.00	44.1 AV	54.0	-9.9	1.68 H	146	28.10	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.00	59.1 PK	68.2	-9.1	3.13 V	355	54.40	4.70
2	*5745.00	99.2 PK			3.13 V	355	57.50	41.70
3	*5745.00	88.5 AV			3.13 V	355	46.80	41.70
4	#5990.40	60.1 PK	68.2	-8.1	3.13 V	355	54.60	5.50
5	11490.00	56.8 PK	74.0	-17.2	2.27 V	240	40.80	16.00
6	11490.00	43.9 AV	54.0	-10.1	2.27 V	240	27.90	16.00

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5613.60	59.1 PK	68.2	-9.1	1.54 H	323	54.40	4.70
2	*5785.00	97.6 PK			1.54 H	323	55.70	41.90
3	*5785.00	86.6 AV			1.54 H	323	44.70	41.90
4	#5985.60	60.0 PK	68.2	-8.2	1.54 H	323	54.50	5.50
5	11570.00	57.4 PK	74.0	-16.6	2.65 H	148	41.80	15.60
6	11570.00	44.3 AV	54.0	-9.7	2.65 H	148	28.70	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	59.4 PK	68.2	-8.8	3.19 V	343	54.70	4.70
2	*5785.00	98.7 PK			3.19 V	343	56.80	41.90
3	*5785.00	88.2 AV			3.19 V	343	46.30	41.90
4	#5946.40	59.9 PK	68.2	-8.3	3.19 V	343	54.50	5.40
5	11570.00	56.9 PK	74.0	-17.1	1.10 V	247	41.30	15.60
6	11570.00	44.4 AV	54.0	-9.6	1.10 V	247	28.80	15.60

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	58.4 PK	68.2	-9.8	1.43 H	339	53.70	4.70
2	*5825.00	97.7 PK			1.43 H	339	55.60	42.10
3	*5825.00	87.1 AV			1.43 H	339	45.00	42.10
4	#5980.00	58.8 PK	68.2	-9.4	1.43 H	339	53.30	5.50
5	11650.00	56.0 PK	74.0	-18.0	1.84 H	222	40.70	15.30
6	11650.00	42.5 AV	54.0	-11.5	1.84 H	222	27.20	15.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5622.40	59.0 PK	68.2	-9.2	3.07 V	348	54.30	4.70
2	*5825.00	99.7 PK			3.07 V	348	57.60	42.10
3	*5825.00	89.3 AV			3.07 V	348	47.20	42.10
4	#5997.60	59.2 PK	68.2	-9.0	3.07 V	348	53.70	5.50
5	11650.00	55.8 PK	74.0	-18.2	1.94 V	120	40.50	15.30
6	11650.00	42.5 AV	54.0	-11.5	1.94 V	120	27.20	15.30

Remarks:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.7 PK	74.0	-16.3	1.14 H	341	53.80	3.90
2	5150.00	44.9 AV	54.0	-9.1	1.14 H	341	41.00	3.90
3	*5190.00	94.4 PK			1.01 H	334	53.60	40.80
4	*5190.00	84.2 AV			1.01 H	334	43.40	40.80
5	#10380.00	57.7 PK	74.0	-16.3	3.14 H	285	42.10	15.60
6	#10380.00	45.1 AV	54.0	-8.9	3.14 H	285	29.50	15.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.0 PK	74.0	-16.0	1.19 V	360	54.10	3.90
2	5150.00	45.2 AV	54.0	-8.8	1.19 V	360	41.30	3.90
3	*5190.00	96.2 PK			1.00 V	298	55.40	40.80
4	*5190.00	86.1 AV			1.00 V	298	45.30	40.80
5	#10380.00	58.8 PK	74.0	-15.2	3.47 V	206	43.20	15.60
6	#10380.00	46.2 AV	54.0	-7.8	3.47 V	206	30.60	15.60

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	94.3 PK			1.02 H	337	53.50	40.80
2	*5230.00	84.1 AV			1.02 H	337	43.30	40.80
3	5350.00	57.3 PK	74.0	-16.7	1.20 H	356	52.90	4.40
4	5350.00	44.0 AV	54.0	-10.0	1.20 H	356	39.60	4.40
5	#10460.00	57.0 PK	74.0	-17.0	3.04 H	261	41.80	15.20
6	#10460.00	44.7 AV	54.0	-9.3	3.04 H	261	29.50	15.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	96.6 PK			1.16 V	298	55.80	40.80
2	*5230.00	86.1 AV			1.16 V	298	45.30	40.80
3	5350.00	57.8 PK	74.0	-16.2	1.30 V	328	53.40	4.40
4	5350.00	43.9 AV	54.0	-10.1	1.30 V	328	39.50	4.40
5	#10460.00	57.9 PK	74.0	-16.1	3.32 V	351	42.70	15.20
6	#10460.00	45.6 AV	54.0	-8.4	3.32 V	351	30.40	15.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	1.18 H	323	51.80	3.90
2	5150.00	43.7 AV	54.0	-10.3	1.18 H	323	39.80	3.90
3	*5270.00	96.7 PK			1.13 H	337	55.70	41.00
4	*5270.00	86.7 AV			1.13 H	337	45.70	41.00
5	#10540.00	57.6 PK	74.0	-16.4	3.10 H	207	42.20	15.40
6	#10540.00	45.0 AV	54.0	-9.0	3.10 H	207	29.60	15.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.08 V	296	52.40	3.90
2	5150.00	44.3 AV	54.0	-9.7	1.08 V	296	40.40	3.90
3	*5270.00	98.3 PK			1.02 V	300	57.30	41.00
4	*5270.00	88.2 AV			1.02 V	300	47.20	41.00
5	#10540.00	58.9 PK	74.0	-15.1	1.73 V	253	43.50	15.40
6	#10540.00	46.0 AV	54.0	-8.0	1.73 V	253	30.60	15.40

Remarks:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	96.3 PK			1.34 H	352	55.30	41.00
2	*5310.00	86.1 AV			1.34 H	352	45.10	41.00
3	5350.00	60.1 PK	74.0	-13.9	1.27 H	348	55.70	4.40
4	5350.00	47.2 AV	54.0	-6.8	1.27 H	348	42.80	4.40
5	10620.00	58.2 PK	74.0	-15.8	1.36 H	217	42.20	16.00
6	10620.00	45.4 AV	54.0	-8.6	1.36 H	217	29.40	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	97.6 PK			1.09 V	299	56.60	41.00
2	*5310.00	87.5 AV			1.09 V	299	46.50	41.00
3	5350.00	61.3 PK	74.0	-12.7	1.23 V	288	56.90	4.40
4	5350.00	47.6 AV	54.0	-6.4	1.23 V	288	43.20	4.40
5	10620.00	59.5 PK	74.0	-14.5	3.12 V	189	43.50	16.00
6	10620.00	46.4 AV	54.0	-7.6	3.12 V	189	30.40	16.00

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 102	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.0 PK	74.0	-17.0	1.37 H	348	52.60	4.40
2	5460.00	44.6 AV	54.0	-9.4	1.37 H	348	40.20	4.40
3	#5470.00	57.3 PK	74.0	-16.7	1.37 H	347	52.80	4.50
4	#5470.00	44.9 AV	54.0	-9.1	1.37 H	347	40.40	4.50
5	*5510.00	95.9 PK			1.32 H	351	54.60	41.30
6	*5510.00	85.7 AV			1.32 H	351	44.40	41.30
7	11020.00	60.5 PK	74.0	-13.5	1.36 H	248	43.30	17.20
8	11020.00	47.7 AV	54.0	-6.3	1.36 H	248	30.50	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.5 PK	74.0	-17.5	1.03 V	301	52.10	4.40
2	5460.00	44.0 AV	54.0	-10.0	1.03 V	301	39.60	4.40
3	#5470.00	56.8 PK	74.0	-17.2	1.05 V	311	52.30	4.50
4	#5470.00	44.3 AV	54.0	-9.7	1.05 V	311	39.80	4.50
5	*5510.00	93.6 PK			1.00 V	298	52.30	41.30
6	*5510.00	83.5 AV			1.00 V	298	42.20	41.30
7	11020.00	59.5 PK	74.0	-14.5	2.30 V	145	42.30	17.20
8	11020.00	46.6 AV	54.0	-7.4	2.30 V	145	29.40	17.20

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	95.1 PK			1.34 H	353	53.60	41.50
2	*5550.00	85.0 AV			1.34 H	353	43.50	41.50
3	11100.00	59.7 PK	74.0	-14.3	1.65 H	237	43.30	16.40
4	11100.00	46.8 AV	54.0	-7.2	1.65 H	237	30.40	16.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	93.0 PK			1.02 V	301	51.50	41.50
2	*5550.00	82.9 AV			1.02 V	301	41.40	41.50
3	11100.00	58.2 PK	74.0	-15.8	3.17 V	162	41.80	16.40
4	11100.00	46.0 AV	54.0	-8.0	3.17 V	162	29.60	16.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 134	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	96.1 PK			1.46 H	342	54.60	41.50
2	*5670.00	85.9 AV			1.46 H	342	44.40	41.50
3	#5725.00	57.3 PK	74.0	-16.7	1.31 H	339	52.50	4.80
4	#5725.00	45.1 AV	54.0	-8.9	1.31 H	339	40.30	4.80
5	11340.00	59.7 PK	74.0	-14.3	2.47 H	168	43.10	16.60
6	11340.00	47.0 AV	54.0	-7.0	2.47 H	168	30.40	16.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	94.9 PK			1.00 V	295	53.40	41.50
2	*5670.00	84.3 AV			1.00 V	295	42.80	41.50
3	#5725.00	56.6 PK	74.0	-17.4	1.16 V	310	51.70	4.90
4	#5725.00	44.1 AV	54.0	-9.9	1.16 V	310	39.20	4.90
5	11340.00	58.6 PK	74.0	-15.4	1.48 V	157	42.20	16.40
6	11340.00	45.9 AV	54.0	-8.1	1.48 V	157	29.50	16.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 142	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.3 PK	74.0	-17.7	1.28 H	355	52.00	4.30
2	5460.00	43.2 AV	54.0	-10.8	1.28 H	355	38.90	4.30
3	#5470.00	56.5 PK	74.0	-17.5	1.29 H	344	52.10	4.40
4	#5470.00	43.6 AV	54.0	-10.4	1.29 H	344	39.20	4.40
5	*5710.00	94.8 PK			1.38 H	352	53.20	41.60
6	*5710.00	84.9 AV			1.38 H	352	43.30	41.60
7	#5850.00	56.7 PK	74.0	-17.3	1.32 H	350	51.40	5.30
8	#5850.00	44.4 AV	54.0	-9.6	1.32 H	350	39.10	5.30
9	11420.00	58.9 PK	74.0	-15.1	2.45 H	157	42.90	16.00
10	11420.00	46.1 AV	54.0	-7.9	2.45 H	157	30.10	16.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.6 PK	74.0	-17.4	1.00 V	297	52.30	4.30
2	5460.00	43.5 AV	54.0	-10.5	1.00 V	297	39.20	4.30
3	#5470.00	56.6 PK	74.0	-17.4	1.07 V	304	52.20	4.40
4	#5470.00	43.4 AV	54.0	-10.6	1.07 V	304	39.00	4.40
5	*5710.00	93.3 PK			1.06 V	301	51.70	41.60
6	*5710.00	83.1 AV			1.06 V	301	41.50	41.60
7	#5850.00	57.0 PK	74.0	-17.0	1.10 V	304	51.70	5.30
8	#5850.00	44.4 AV	54.0	-9.6	1.10 V	304	39.10	5.30
9	11420.00	57.9 PK	74.0	-16.1	2.46 V	108	41.90	16.00
10	11420.00	45.8 AV	54.0	-8.2	2.46 V	108	29.80	16.00

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – 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 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.60	59.1 PK	68.2	-9.1	1.46 H	326	54.40	4.70
2	*5755.00	93.7 PK			1.46 H	326	51.90	41.80
3	*5755.00	83.6 AV			1.46 H	326	41.80	41.80
4	#5976.80	59.3 PK	68.2	-8.9	1.46 H	326	53.90	5.40
5	11510.00	57.4 PK	74.0	-16.6	2.17 H	143	41.50	15.90
6	11510.00	44.7 AV	54.0	-9.3	2.17 H	143	28.80	15.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5607.20	58.8 PK	68.2	-9.4	3.11 V	348	54.10	4.70
2	*5755.00	94.1 PK			3.11 V	348	52.30	41.80
3	*5755.00	83.8 AV			3.11 V	348	42.00	41.80
4	#5936.00	61.1 PK	68.2	-7.1	3.11 V	348	55.70	5.40
5	11510.00	57.4 PK	74.0	-16.6	2.60 V	118	41.50	15.90
6	11510.00	44.5 AV	54.0	-9.5	2.60 V	118	28.60	15.90

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.60	58.7 PK	68.2	-9.5	1.51 H	340	54.00	4.70
2	*5795.00	94.5 PK			1.51 H	340	52.50	42.00
3	*5795.00	83.6 AV			1.51 H	340	41.60	42.00
4	#5994.40	59.6 PK	68.2	-8.6	1.51 H	340	54.10	5.50
5	11590.00	57.2 PK	74.0	-16.8	3.10 H	287	41.70	15.50
6	11590.00	44.5 AV	54.0	-9.5	3.10 H	287	29.00	15.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5610.40	58.3 PK	68.2	-9.9	3.07 V	355	53.60	4.70
2	*5795.00	96.0 PK			3.07 V	355	54.00	42.00
3	*5795.00	85.3 AV			3.07 V	355	43.30	42.00
4	#5944.80	58.9 PK	68.2	-9.3	3.07 V	355	53.50	5.40
5	11590.00	56.7 PK	74.0	-17.3	1.77 V	305	41.20	15.50
6	11590.00	43.9 AV	54.0	-10.1	1.77 V	305	28.40	15.50

Remarks:

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

Below 1GHz Worst-Case Data: 802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 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	30.00	33.2 QP	40.0	-6.8	1.00 H	12	48.30	-15.10
2	95.96	24.1 QP	43.5	-19.4	1.49 H	295	42.50	-18.40
3	185.20	30.4 QP	43.5	-13.1	1.49 H	263	45.60	-15.20
4	278.32	30.0 QP	46.0	-16.0	1.00 H	181	42.70	-12.70
5	443.22	21.0 QP	46.0	-25.0	1.49 H	0	30.90	-9.90
6	899.12	34.1 QP	46.0	-11.9	1.49 H	207	36.70	-2.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	32.95	31.0 QP	40.0	-9.0	1.50 V	15	45.80	-14.80
2	55.22	31.9 QP	40.0	-8.1	1.01 V	261	45.40	-13.50
3	139.61	25.4 QP	43.5	-18.1	1.01 V	299	39.40	-14.00
4	185.20	24.0 QP	43.5	-19.5	1.01 V	164	39.20	-15.20
5	295.78	23.1 QP	46.0	-22.9	1.01 V	188	35.50	-12.40
6	910.76	26.7 QP	46.0	-19.3	1.01 V	15	29.00	-2.30

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Tested date: Dec. 19, 2017

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCS 30	100288	Aug. 17, 2017	Aug. 16, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 08, 2017	Sep. 07, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 17, 2017	Jan. 16, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 02, 2017	Aug. 01, 2018
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2.
3. The VCCI Site Registration No. is C-2047.

Tested date: Aug. 16, 2018

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Feb. 08, 2018	Feb. 07, 2019
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 08, 2017	Sep. 07, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Feb. 05, 2018	Feb. 04, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2018	Aug. 12, 2019
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2.
3. The VCCI Site Registration No. is C-2047.

4.2.3 Test Procedures

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

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

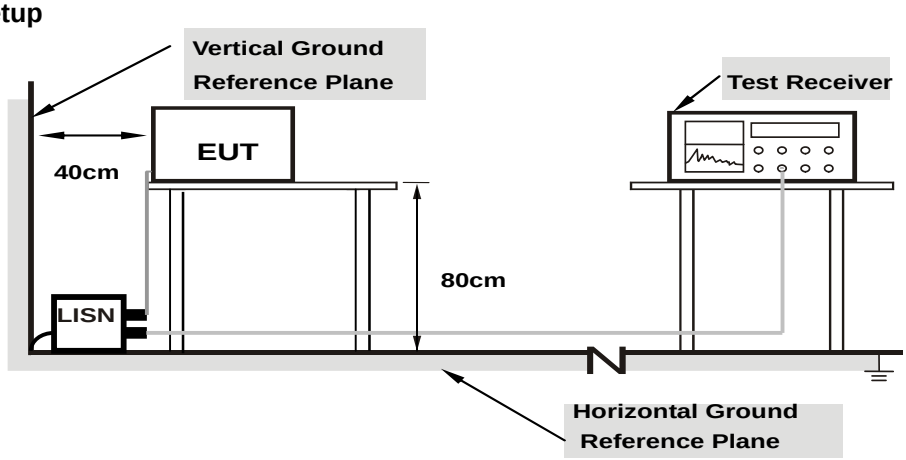
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

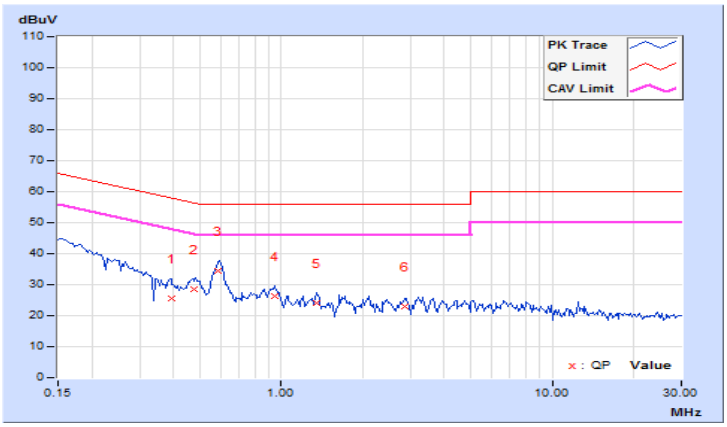
4.2.7 Test Results

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.39219	10.29	15.23	5.48	25.52	15.77	58.02	48.02	-32.50	-32.25
2	0.47422	10.31	18.18	13.85	28.49	24.16	56.44	46.44	-27.95	-22.28
3	**0.58359**	**10.33**	**23.97**	**18.40**	**34.30**	**28.73**	**56.00**	**46.00**	**-21.70**	**-17.27**
4	0.94297	10.40	16.00	11.07	26.40	21.47	56.00	46.00	-29.60	-24.53
5	1.34375	10.40	13.53	9.24	23.93	19.64	56.00	46.00	-32.07	-26.36
6	2.85938	10.41	12.43	7.38	22.84	17.79	56.00	46.00	-33.16	-28.21

REMARKS:

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

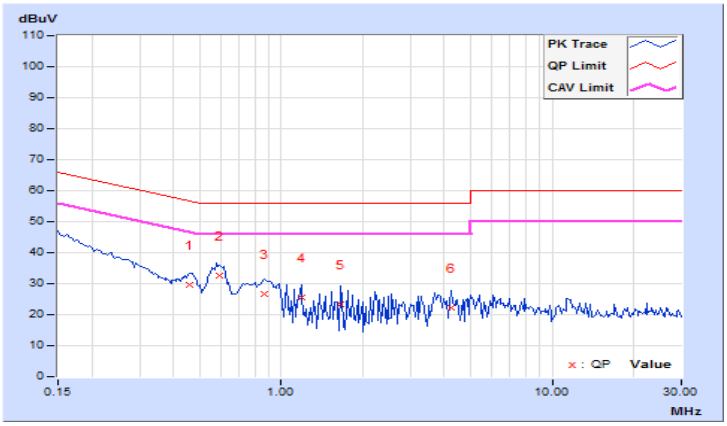


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.45859	10.33	19.19	10.00	29.52	20.33	56.72	46.72	-27.20	-26.39
2	0.59531	10.33	22.14	13.40	32.47	23.73	56.00	46.00	-23.53	-22.27
3	0.86094	10.33	16.43	6.37	26.76	16.70	56.00	46.00	-29.24	-29.30
4	1.18359	10.34	15.20	5.72	25.54	16.06	56.00	46.00	-30.46	-29.94
5	1.65234	10.38	13.07	3.36	23.45	13.74	56.00	46.00	-32.55	-32.26
6	4.24609	10.60	11.53	1.22	22.13	11.82	56.00	46.00	-33.87	-34.18

REMARKS:

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

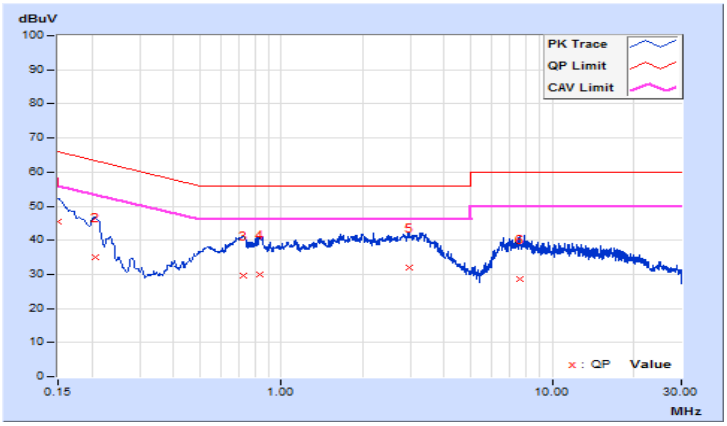


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.24	35.07	15.52	45.31	25.76	66.00	56.00	-20.69	-30.24
2	0.20518	10.25	24.72	9.04	34.97	19.29	63.40	53.40	-28.43	-34.11
3	0.72600	10.30	19.28	7.74	29.58	18.04	56.00	46.00	-26.42	-27.96
4	0.83813	10.31	19.80	8.97	30.11	19.28	56.00	46.00	-25.89	-26.72
5	2.96250	10.41	21.73	13.71	32.14	24.12	56.00	46.00	-23.86	-21.88
6	7.58400	10.53	18.22	12.02	28.75	22.55	60.00	50.00	-31.25	-27.45

REMARKS:

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

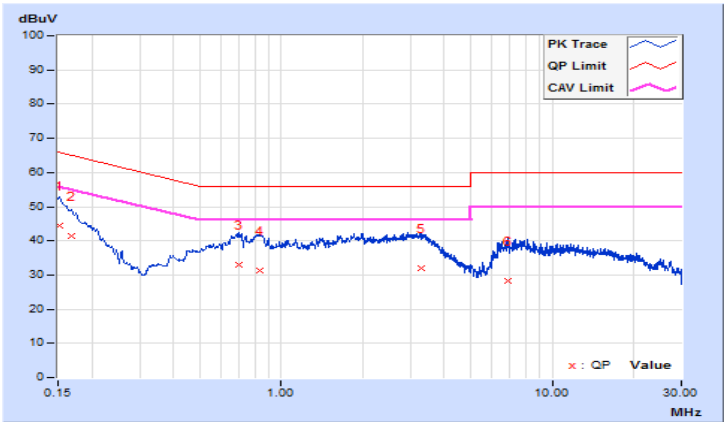


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15225	10.25	34.05	15.88	44.30	26.13	65.88	55.88	-21.58	-29.75
2	0.16743	10.26	31.27	14.70	41.53	24.96	65.09	55.09	-23.56	-30.13
3	0.69450	10.31	22.62	9.08	32.93	19.39	56.00	46.00	-23.07	-26.61
4	0.83592	10.32	21.07	9.58	31.39	19.90	56.00	46.00	-24.61	-26.10
5	3.29075	10.44	21.44	13.49	31.88	23.93	56.00	46.00	-24.12	-22.07
6	6.83700	10.55	17.58	10.87	28.13	21.42	60.00	50.00	-31.87	-28.58

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

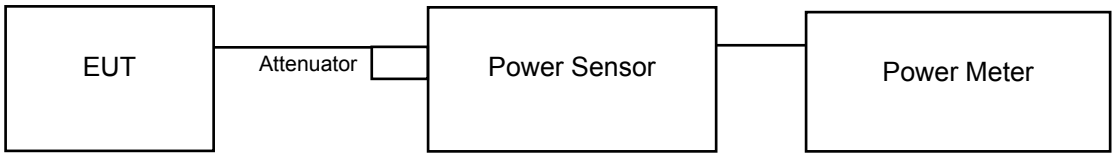
4.3.1 Limits of Transmit Power Measurement

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

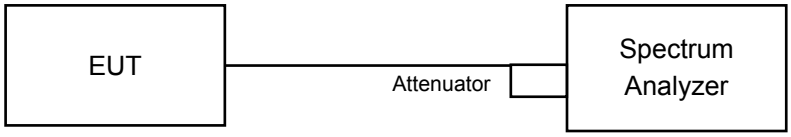
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

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



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

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

For 26dB Bandwidth

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

For Occupied Bandwidth

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	**25.119**	14.00	24.00	Pass
40	5200	24.831	13.95	24.00	Pass
48	5240	25.003	13.98	24.00	Pass
52	5260	25.823	14.12	24.00	Pass
60	5300	**26.182**	14.18	24.00	Pass
64	5320	26.002	14.15	24.00	Pass
100	5500	**21.281**	13.28	24.00	Pass
116	5580	21.038	13.23	24.00	Pass
140	5700	20.045	13.02	24.00	Pass
144	5720 For U-NII-2C	13.122	11.18	24.00	Pass
144	5720 For U-NII-3	3.499	5.44	30.00	Pass
149	5745	12.190	10.86	30.00	Pass
157	5785	**12.972**	11.13	30.00	Pass
165	5825	12.445	10.95	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(36.34) = 26.60 dBm > 24dBm
2. 11dBm + 10log(35.42) = 26.49 dBm > 24dBm
3. 11dBm + 10log(37.43) = 26.73 dBm > 24dBm
4. 11dBm + 10log(38.11) = 26.81 dBm > 24dBm
5. 11dBm + 10log(38.13) = 26.81 dBm > 24dBm
6. 11dBm + 10log(40.26) = 27.05 dBm > 24dBm
7. 11dBm + 10log(5725.00 - 5698.49) = 25.23 dBm > 24dBm.

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	16.621	12.21

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	16.406	12.15	24.00	Pass
40	5200	16.558	12.19	24.00	Pass
48	5240	16.406	12.15	24.00	Pass
52	5260	16.368	12.14	24.00	Pass
60	5300	16.596	12.20	24.00	Pass
64	5320	15.812	11.99	24.00	Pass
100	5500	12.531	10.98	24.00	Pass
116	5580	12.359	10.92	24.00	Pass
140	5700	13.062	11.16	24.00	Pass
144	5720 For U-NII-2C	8.730	9.41	24.00	Pass
144	5720 For U-NII-3	2.630	4.20	30.00	Pass
149	5745	9.931	9.97	30.00	Pass
157	5785	10.069	10.03	30.00	Pass
165	5825	10.593	10.25	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(26.48) = 25.23 dBm > 24dBm
2. 11dBm + 10log(26.52) = 25.24 dBm > 24dBm
3. 11dBm + 10log(24.26) = 24.85 dBm > 24dBm
4. 11dBm + 10log(26.16) = 25.18 dBm > 24dBm
5. 11dBm + 10log(27.81) = 25.44 dBm > 24dBm
6. 11dBm + 10log(28.32) = 25.52 dBm > 24dBm
7. 11dBm + 10log(5725.00 - 5699.47) = 25.07 dBm > 24dBm.

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	11.36	10.55

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	16.482	12.17	24.00	Pass
46	5230	16.293	12.12	24.00	Pass
54	5270	15.524	11.91	24.00	Pass
62	5310	15.382	11.87	24.00	Pass
102	5510	13.213	11.21	24.00	Pass
110	5550	12.794	11.07	24.00	Pass
134	5670	12.942	11.12	24.00	Pass
142	5710 For U-NII-2C	9.506	9.78	24.00	Pass
142	5710 For U-NII-3	0.7907	-1.02	30.00	Pass
151	5755	10.447	10.19	30.00	Pass
159	5795	9.863	9.94	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
1. 11dBm + 10log(54.90) = 28.40 dBm > 24dBm
2. 11dBm + 10log(59.18) = 28.72 dBm > 24dBm
3. 11dBm + 10log(81.41) = 30.11 dBm > 24dBm
4. 11dBm + 10log(56.45) = 28.52 dBm > 24dBm
5. 11dBm + 10log(79.43) = 30.00 dBm > 24dBm
6. 11dBm + 10log(5725.00 - 5666.11) = 28.70 dBm > 24dBm.

For Reference only-Power meter value
The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
142	5710	10.297	10.13

26dB Bandwidth:

802.11a

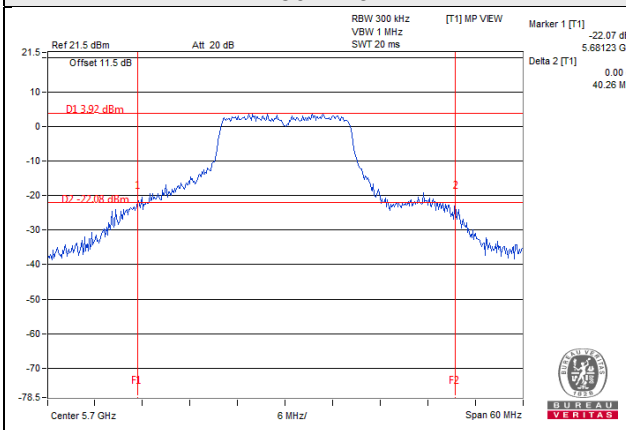
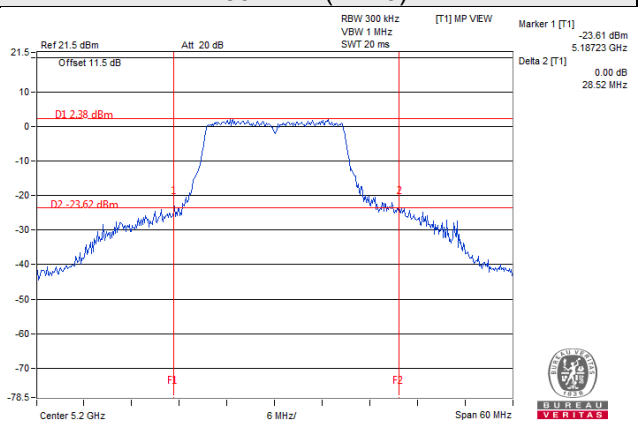
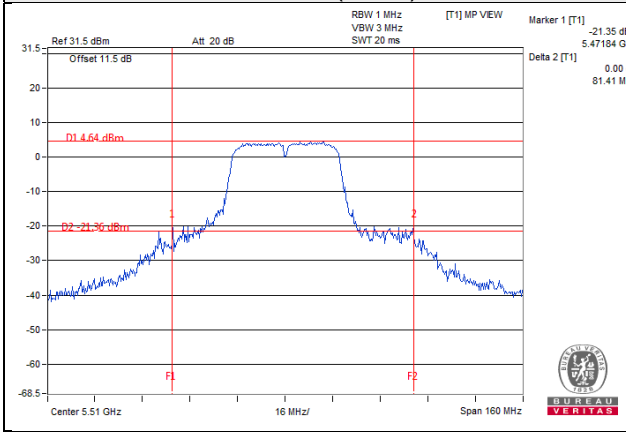
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	36.33
40	5200	37.26
48	5240	36.14
52	5260	36.34
60	5300	35.42
64	5320	37.43
100	5500	38.11
116	5580	38.13
140	5700	40.26
144	5720 For U-NII-2C	26.51

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	27.45
40	5200	28.52
48	5240	24.54
52	5260	26.48
60	5300	26.52
64	5320	24.26
100	5500	26.16
116	5580	27.81
140	5700	28.32
144	5720 For U-NII-2C	25.53

802.11n (HT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	56.02
46	5230	59.30
54	5270	54.90
62	5310	59.18
102	5510	81.41
110	5550	56.45
134	5670	79.43
142	5710 For U-NII-2C	58.89

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

EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	26.182	14.18
5470~5725	21.281	13.28

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	16.596	12.20
5470~5725	13.062	11.16

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

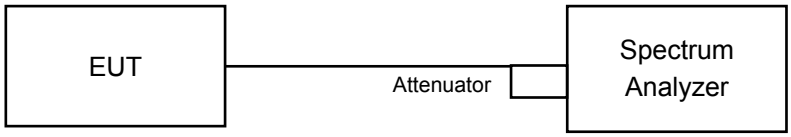
802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	15.524	11.91
5470~5725	13.213	11.21

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

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.4.4 Test Result

802.11a

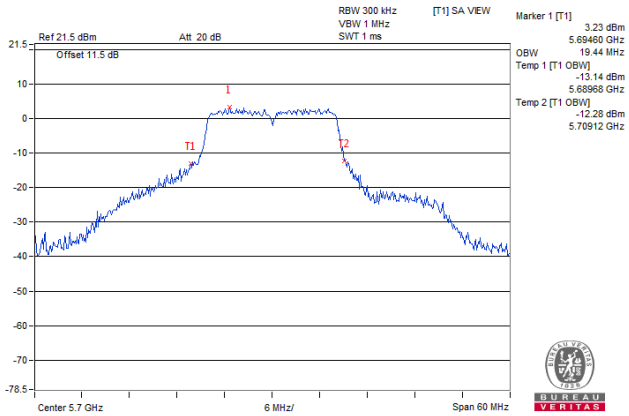
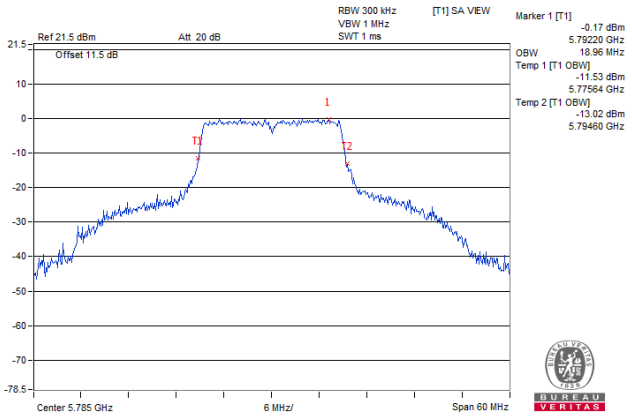
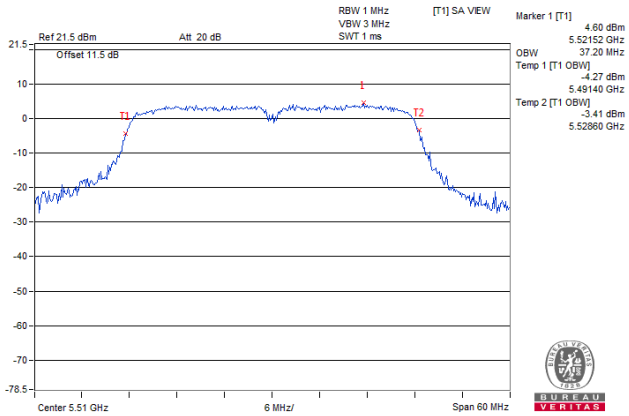
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.36
48	5240	18.00
52	5260	18.12
60	5300	17.76
64	5320	18.48
100	5500	18.60
116	5580	19.08
140	5700	19.44
144	5720 For U-NII-2C	16.76
144	5720 For U-NII-3	4.96
149	5745	18.96
157	5785	18.96
165	5825	18.00

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.24
48	5240	18.12
52	5260	18.12
60	5300	18.36
64	5320	17.16
100	5500	18.48
116	5580	18.36
140	5700	18.36
144	5720 For U-NII-2C	14.48
144	5720 For U-NII-3	4.12
149	5745	18.72
157	5785	18.96
165	5825	18.72

802.11n (HT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.84
54	5270	36.72
62	5310	36.84
102	5510	37.20
110	5550	36.96
134	5670	37.08
142	5710 For U-NII-2C	33.60
142	5710 For U-NII-3	3.48
151	5755	37.20
159	5795	36.95

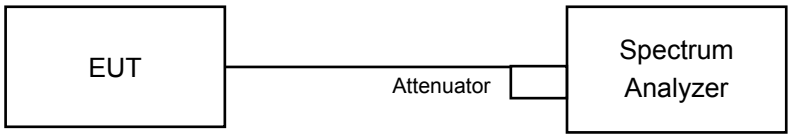
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:
Duty cycle of test signal is ≥ 98%
Using method SA-1
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value

For U-NII-3 band:
Duty cycle of test signal is ≥ 98%
Using method SA-1
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS.
3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured 1) power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5) Sweep time = auto, trigger set to “free run”.
6) Trace average at least 100 traces in power averaging mode.
7) Record the max value.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

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

802.11a

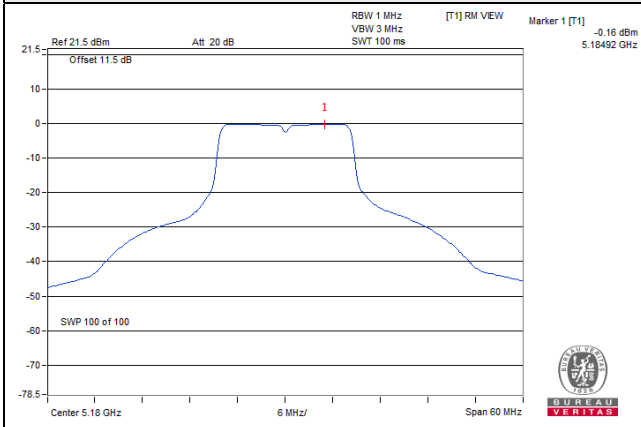
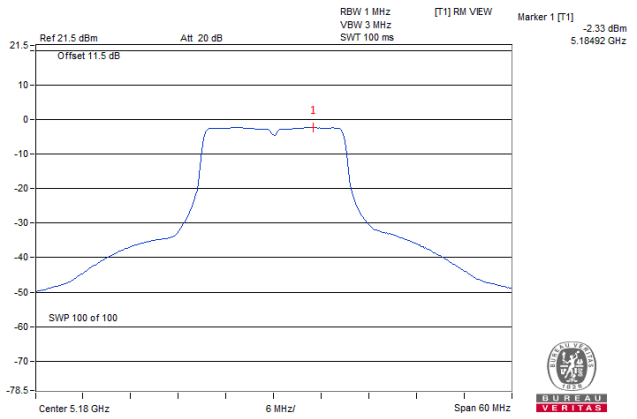
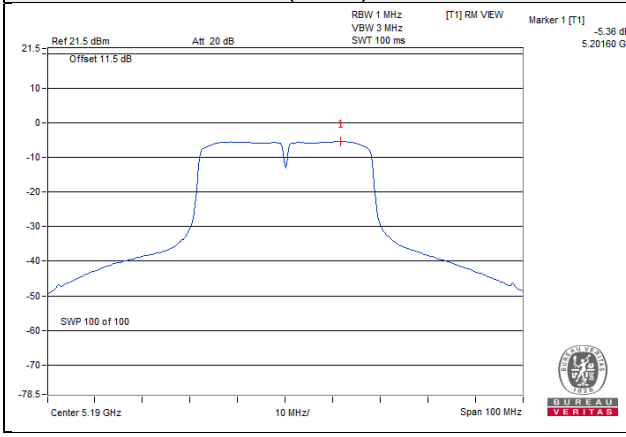
Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	-0.16	11	Pass
40	5200	-0.35	11	Pass
48	5240	-1.14	11	Pass
52	5260	-0.93	11	Pass
60	5300	-1.46	11	Pass
64	5320	-0.70	11	Pass
100	5500	-1.51	11	Pass
116	5580	-1.01	11	Pass
140	5700	-1.05	11	Pass
144	5720 For U-NII-2C	-0.42	11	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	-2.33	11	Pass
40	5200	-2.54	11	Pass
48	5240	-3.61	11	Pass
52	5260	-3.88	11	Pass
60	5300	-3.41	11	Pass
64	5320	-3.30	11	Pass
100	5500	-3.76	11	Pass
116	5580	-3.50	11	Pass
140	5700	-3.29	11	Pass
144	5720 For U-NII-2C	-2.36	11	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-5.36	11	Pass
46	5230	-5.67	11	Pass
54	5270	-5.61	11	Pass
62	5310	-6.41	11	Pass
102	5510	-5.87	11	Pass
110	5550	-6.58	11	Pass
134	5670	-5.97	11	Pass
142	5710 For U-NII-2C	-5.45	11	Pass

Spectrum Plot of Worst Value	
802.11a / CH 36	802.11n (HT20) / CH 36
	
802.11n (HT40) / CH 38	
	

For U-NII-3 band:

802.11a

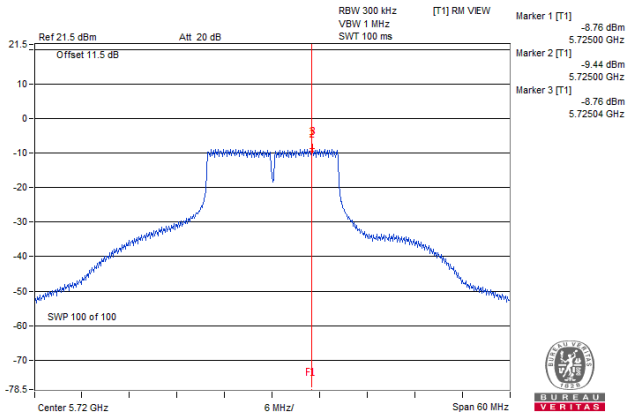
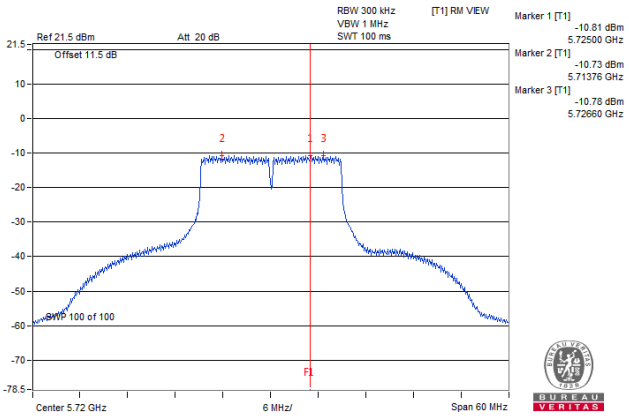
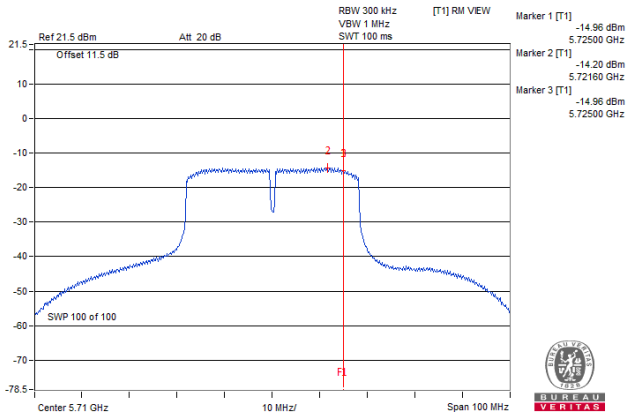
Chan.	Freq. (MHz)	PSD		Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)		
144	5720 For U-NII-3	-8.76	-6.54	30.00	Pass
149	5745	-11.37	-9.15	30.00	Pass
157	5785	-11.23	-9.01	30.00	Pass
165	5825	-11.70	-9.48	30.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD		Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)		
144	5720 For U-NII-3	-10.78	-8.56	30.00	Pass
149	5745	-12.52	-10.30	30.00	Pass
157	5785	-12.45	-10.23	30.00	Pass
165	5825	-11.81	-9.59	30.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	PSD		Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)		
142	5710 For U-NII-3	-14.96	-12.74	30.00	Pass
151	5755	-15.92	-13.70	30.00	Pass
159	5795	-16.10	-13.88	30.00	Pass

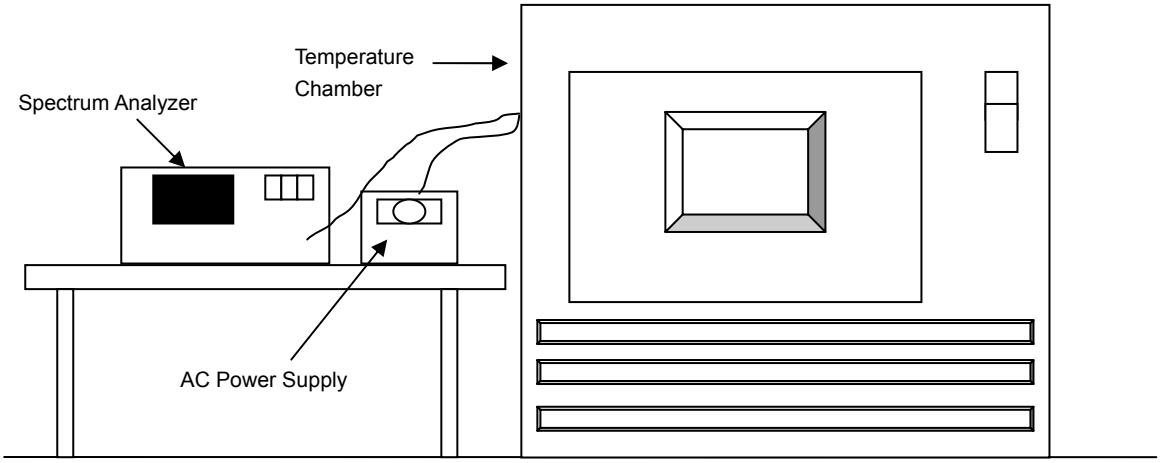
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5179.9802	-0.00038	5179.9763	-0.00046	5179.98	-0.00039	5179.9806	-0.00037
40	120	5180.0108	0.00021	5180.0142	0.00027	5180.0114	0.00022	5180.0129	0.00025
30	120	5180.0181	0.00035	5180.0184	0.00036	5180.0221	0.00043	5180.0188	0.00036
20	120	5179.9788	-0.00041	5179.9795	-0.00040	5179.9804	-0.00038	5179.9815	-0.00036
10	120	5180.0077	0.00015	5180.0088	0.00017	5180.0107	0.00021	5180.0083	0.00016
0	120	5180.0197	0.00038	5180.0192	0.00037	5180.0198	0.00038	5180.0205	0.00040
-10	120	5180.0196	0.00038	5180.0222	0.00043	5180.0213	0.00041	5180.0201	0.00039
-20	120	5180.0162	0.00031	5180.0176	0.00034	5180.0197	0.00038	5180.0172	0.00033
-30	120	5179.9948	-0.00010	5179.9935	-0.00013	5179.9922	-0.00015	5179.9945	-0.00011

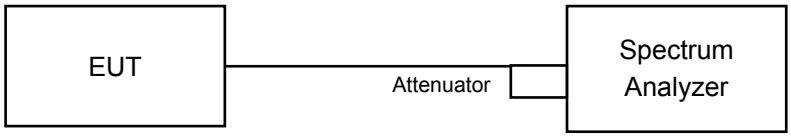
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9779	-0.00043	5179.9786	-0.00041	5179.9803	-0.00038	5179.9817	-0.00035
	120	5179.9788	-0.00041	5179.9795	-0.00040	5179.9804	-0.00038	5179.9815	-0.00036
	102	5179.9783	-0.00042	5179.9791	-0.00040	5179.9807	-0.00037	5179.9805	-0.00038

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

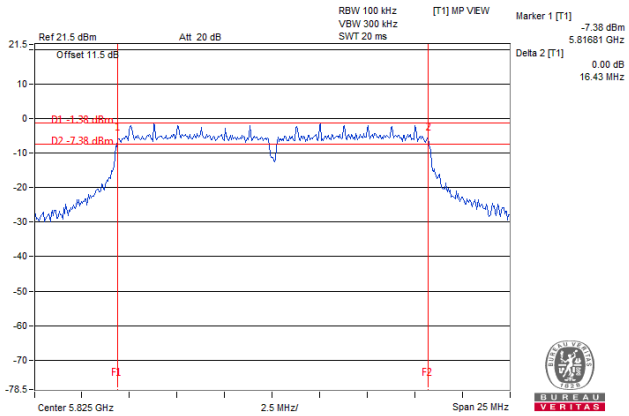
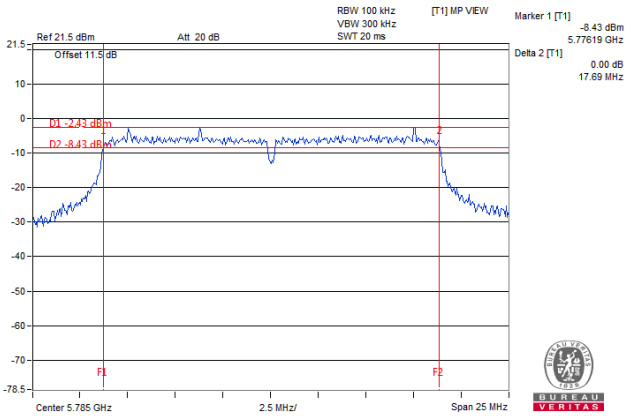
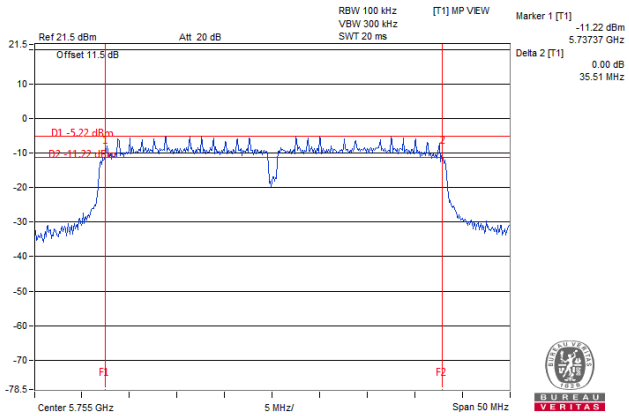
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.23	0.5	Pass
149	5745	16.42	0.5	Pass
157	5785	16.42	0.5	Pass
165	5825	16.43	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.85	0.5	Pass
149	5745	17.67	0.5	Pass
157	5785	17.69	0.5	Pass
165	5825	17.66	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	2.83	0.5	Pass
151	5755	35.51	0.5	Pass
159	5795	35.23	0.5	Pass

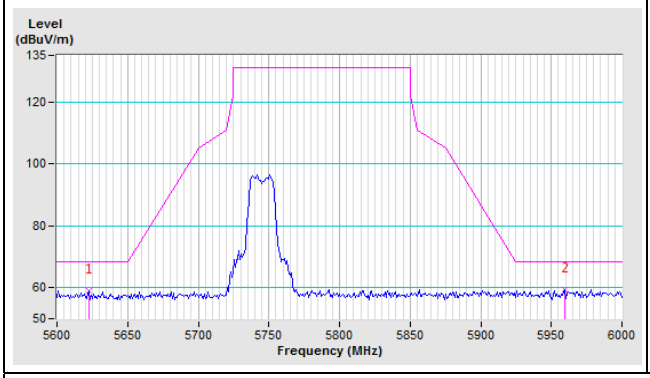
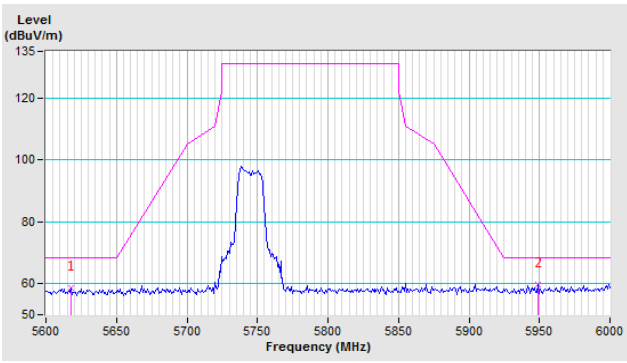
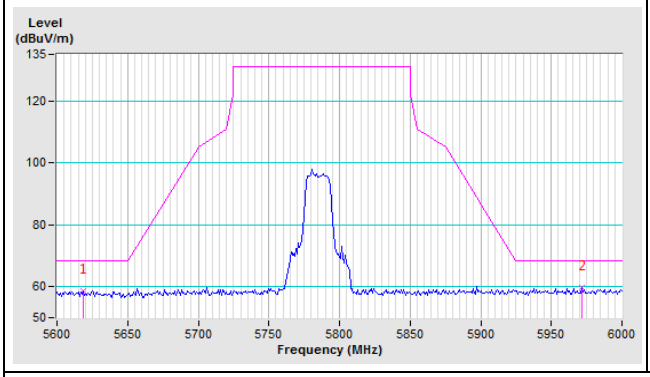
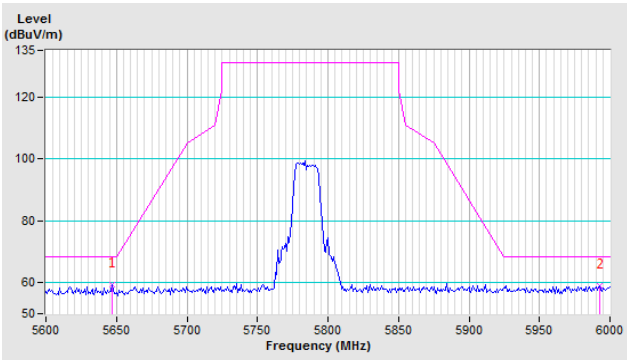
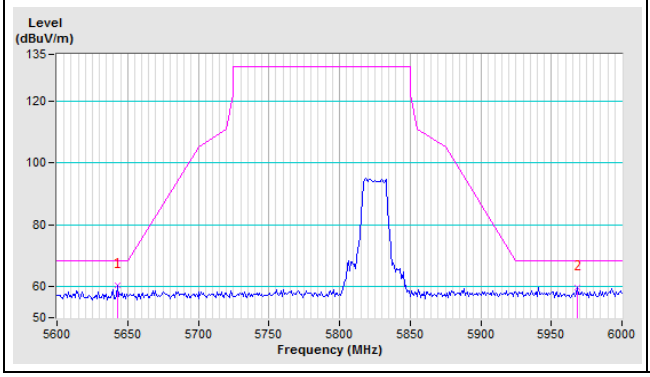
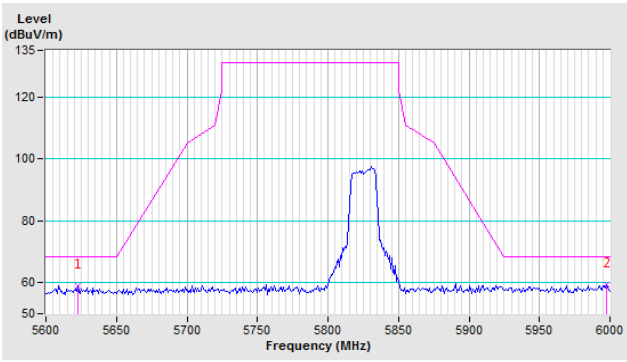
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

5 Pictures of Test Arrangements

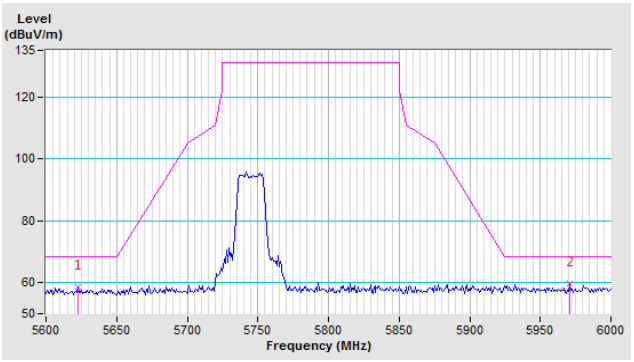
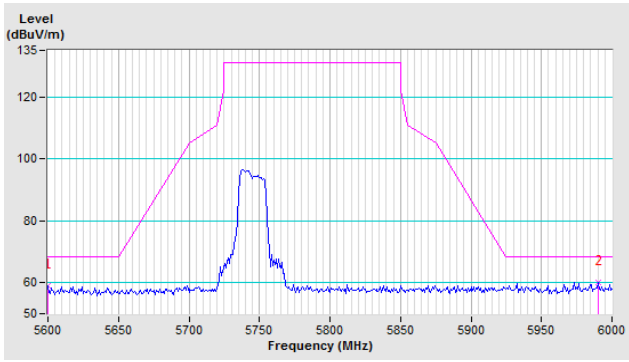
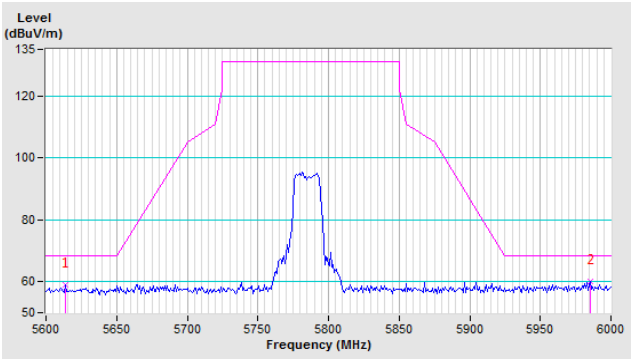
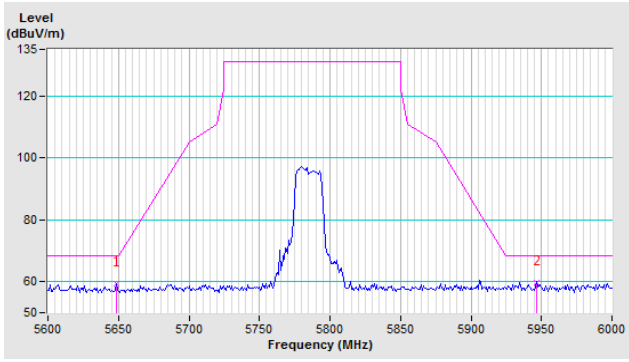
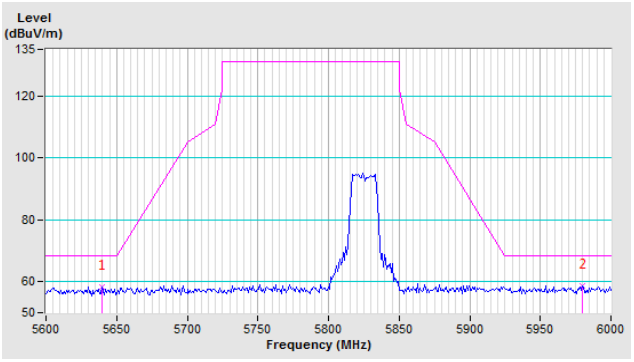
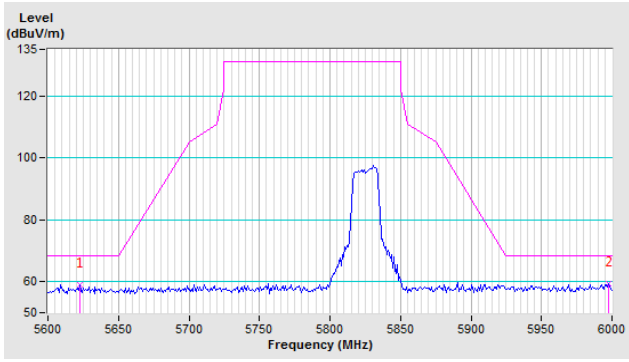
Please refer to the attached file (Test Setup Photo).

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

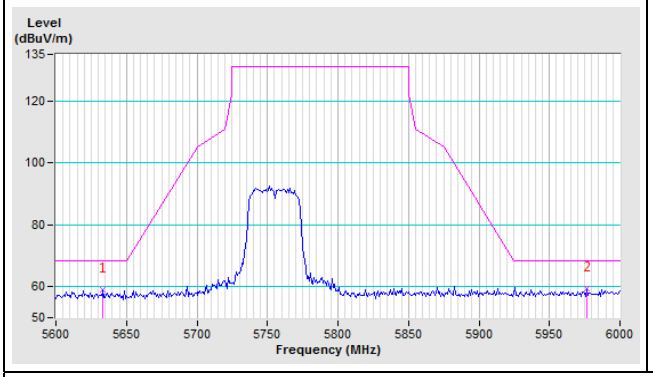
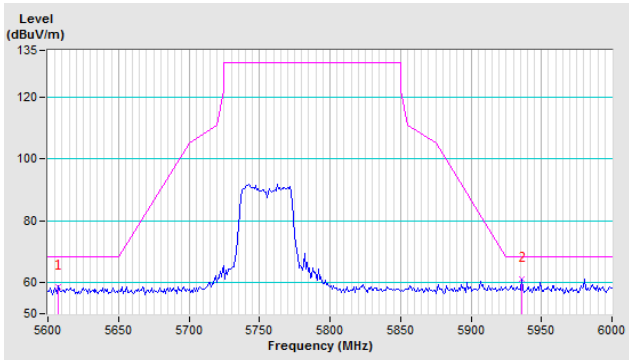
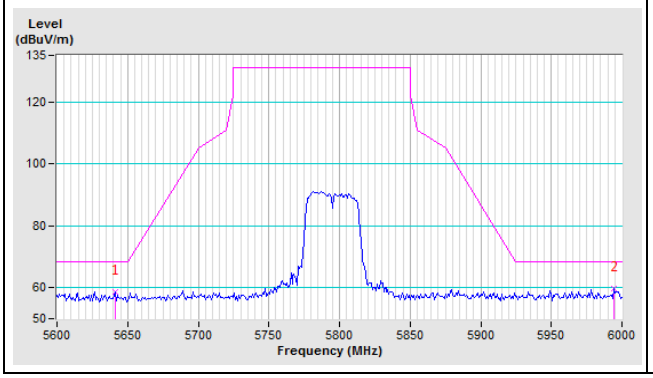
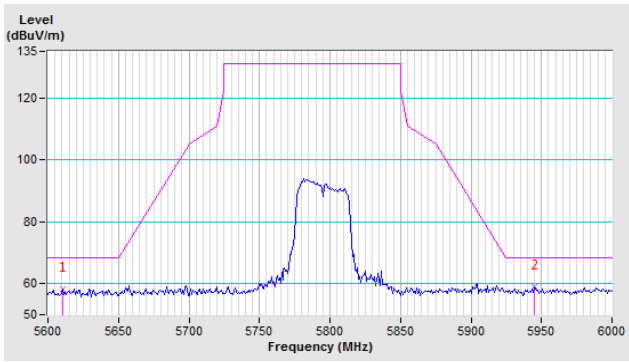
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

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 FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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

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