FCC Test Report

Report No.:	RF190130C26-1
FCC ID:	2ASPU-HERA51
Test Model:	HERA51
Received Date:	Jan. 30, 2019
Test Date:	Feb. 05 ~ Mar. 14, 2019
Issued Date:	Mar. 15, 2019
Applicant:	mPLUS Technology Co., Ltd.
Address:	22F, 333 Dunhua S. Rd. Sec. 2, Taipei, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RF190130C26-1	Original release.	Mar. 14, 2019

1 Certificate of Conformity

Product:	mobile POS
Brand:	mPLUS
Test Model:	HERA51
Sample Status:	Engineering sample
Applicant:	mPLUS Technology Co., Ltd.
Test Date:	Feb. 05 ~ Mar. 14, 2019
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 RF characteristics under the conditions specified in this report.

Prepared by : Pettie Chen , **Date:** Mar. 15, 2019

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Mar. 15, 2019

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 -12.52dB at 0.56591MHz.
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 -8.0dB at 30.97MHz.
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.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	mobile POS
Brand	mPLUS
Test Model	HERA51
Sample Status	Engineering sample
Nominal Voltage	5Vdc (adapter) 3.75Vdc (battery)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180~5240MHz: 35.075mW 5260~5320MHz: 27.797mW 5500~5720MHz: 27.733mW 5745~5825MHz: 17.579mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Refer to Note
Cable Supplied	1.45m non-shielded snapon cable with one core

Note:

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

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

* The modulation and bandwidth are similar for 802.11n mode for HT20/HT40 and 802.11ac mode for VHT20/VHT40. After pre-testing, 802.11ac (VHT20/VHT40) power is lower than 802.11n (HT20/HT40), therefore 802.11n (HT20/HT40) is the worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT uses following antenna.

WLAN / BT EDR / BT LE					
Antenna Type	PIFA		Antenna Connector	Spring	
Gain (dBi)	Frequency (MHz)				
	2400	2442	2472	5150	5875
	2.68	2.70	3.00	2.26	3.30

3. The EUT uses following accessory devices.

Component	Vendor	Model	Specification
Adapter	Sunny COMPUTER TECHNOLOGY CO.,LTD.	SYS1561-1005	I/P: 100-240Vac, 1.0A MAX, 50-60Hz O/P: +5Vdc, 2A, 10W MAX.
Battery	CIPHERLAB	BA-0115A3	Rating: 3.75Vdc, 5300mAh, 19.88Wh

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500~5720MHz:

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz
138	5690 MHz		

5745~5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

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

Note:

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

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	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
	802.11ac (VHT80)		42	42	OFDM	29.3
-	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
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 120, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 120, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 118, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
-	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
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	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)
-	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)
-	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
	802.11ac (VHT80)		42	42	OFDM	29.3
-	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
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 120, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 120, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 118, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
-	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
	802.11ac (VHT80)		155	155	OFDM	29.3

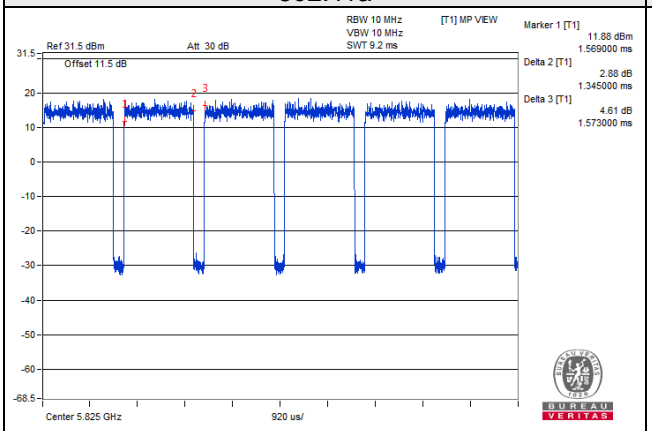
Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	22 deg. C, 68% RH	120Vac, 60Hz	Greg Lin
RE<1G	22 deg. C, 68% RH	120Vac, 60Hz	Greg Lin
PLC	25 deg. C, 75% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Chris Lin

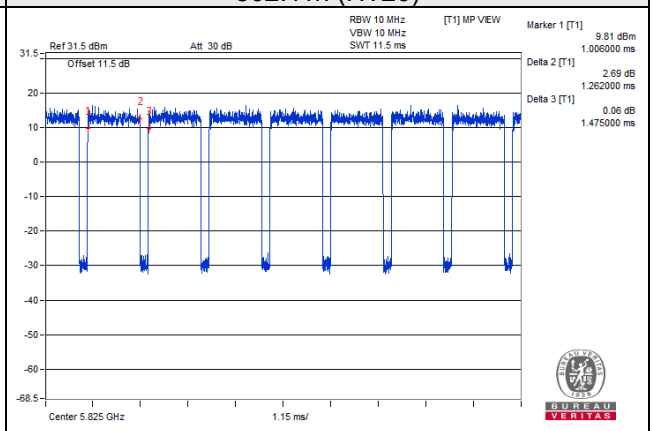
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98 %, duty factor is required
802.11a: Duty cycle = 1.345/1.573 =0.855, Duty factor = 10 * log(1/0.855) = 0.68
802.11n (HT20): Duty cycle = 1.262/1.475 =0.856, Duty factor = 10 * log(1/0.856) = 0.68
802.11n (HT40): Duty cycle = 0.630/0.833 =0.756, Duty factor = 10 * log(1/0.756) = 1.21
802.11ac (VHT80): Duty cycle = 0.246/0.452 =0.544, Duty factor = 10 * log(1/0.544) = 2.64

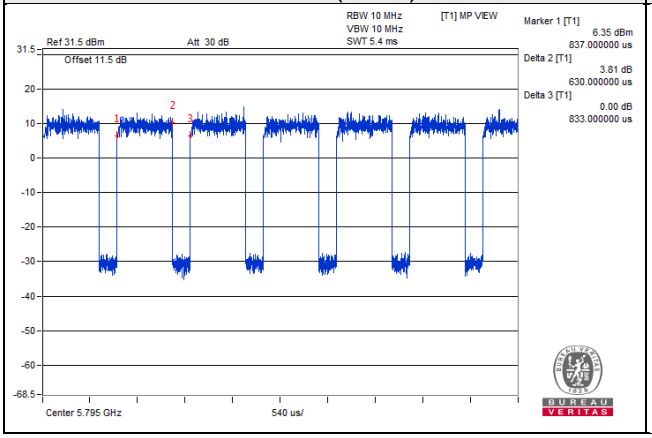
802.11a



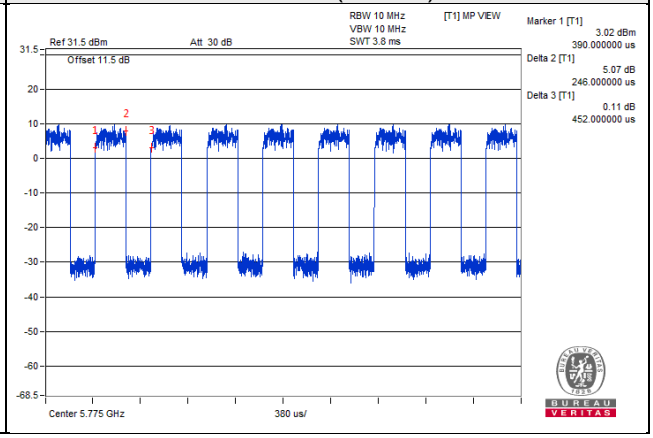
802.11n (HT20)



802.11n (HT40)



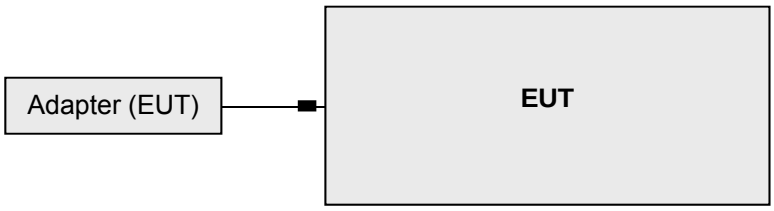
802.11ac (VHT80)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test 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><th colspan="3">Applicable To</th><th colspan="2">Limit</th></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

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jan. 03, 2019	Jan. 02, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 24, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 21, 2018	Nov. 20, 2019
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna EMCI	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Aug. 08, 2018	Aug. 07, 2019
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jul. 02, 2018	Jul. 01, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 08, 2018	Aug. 07, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 08, 2018	Aug. 07, 2019
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Nov. 14, 2018	Nov. 13, 2019
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 17, 2018	Jul. 16, 2019

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The 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 7450F-4.

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.

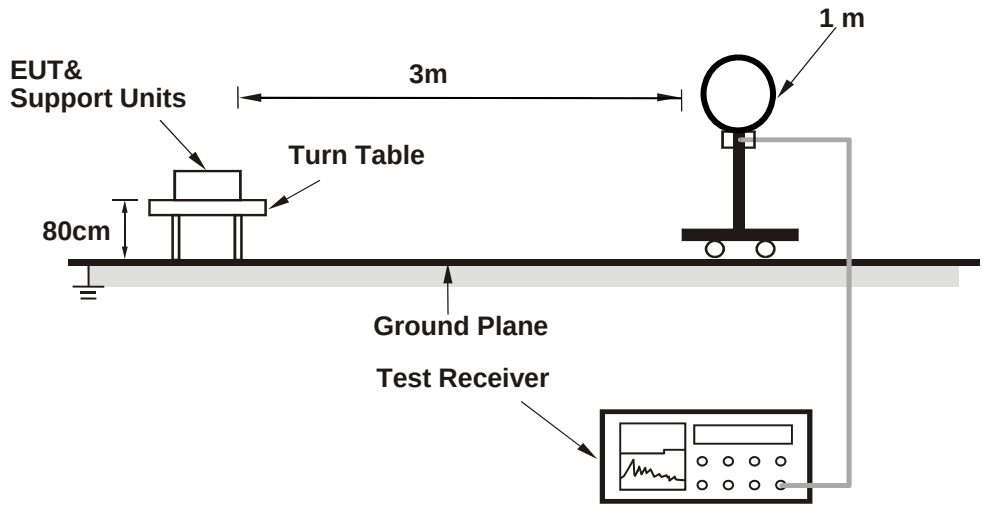
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

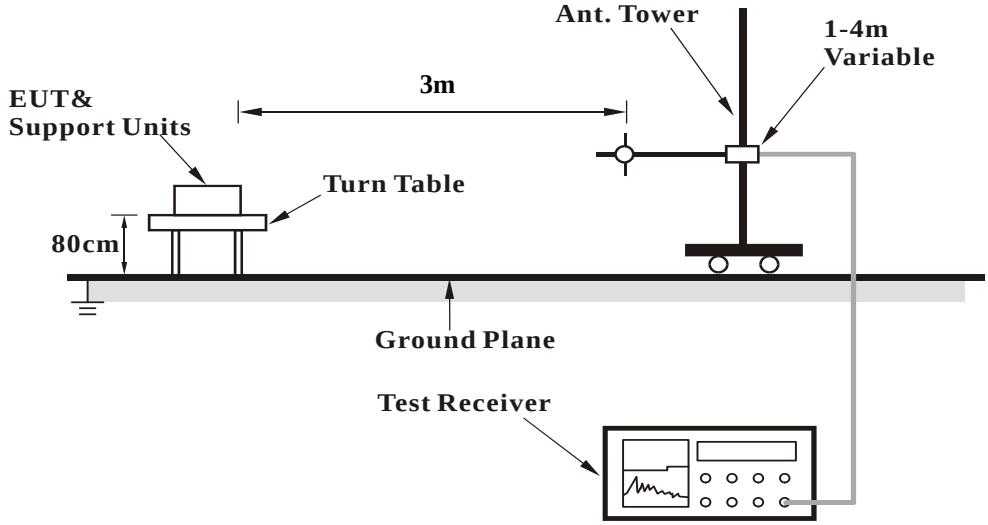
No deviation.

4.1.5 Test Set Up

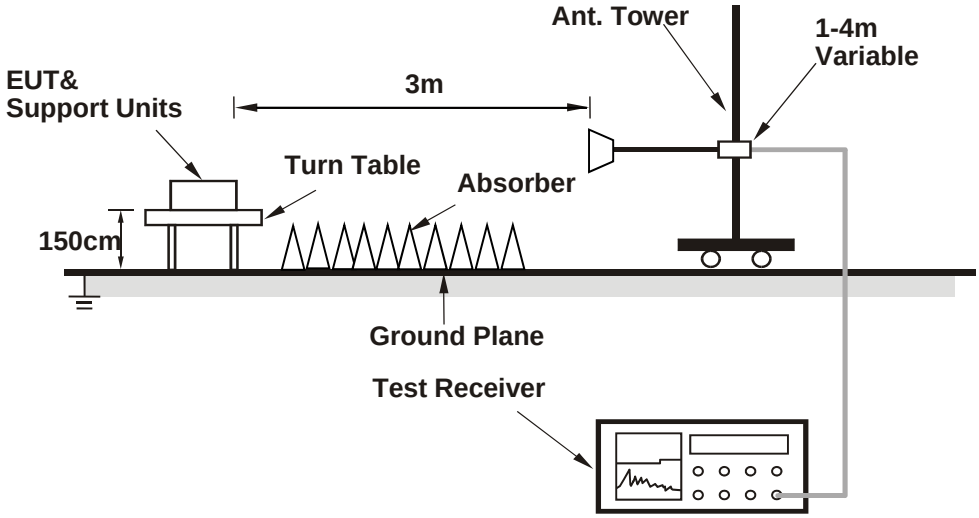
For Radiated emission below 30MHz



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

a. 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	59.1 PK	74.0	-14.9	1.00 H	77	57.4	1.7
2	5150.00	38.2 AV	54.0	-15.8	1.00 H	77	36.5	1.7
3	*5180.00	102.6 PK			1.00 H	82	64.0	38.6
4	*5180.00	87.3 AV			1.00 H	82	48.7	38.6
5	#10360.00	53.9 PK	68.2	-14.3	1.00 H	183	40.5	13.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.7 PK	74.0	-17.3	1.03 V	88	55.0	1.7
2	5150.00	38.1 AV	54.0	-15.9	1.03 V	88	36.4	1.7
3	*5180.00	98.2 PK			1.00 V	85	59.6	38.6
4	*5180.00	83.2 AV			1.00 V	85	44.6	38.6
5	#10360.00	53.9 PK	68.2	-14.3	1.00 V	189	40.5	13.4

Remarks:

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

CHANNEL	TX Channel 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	102.1 PK			1.00 H	76	63.7	38.4
2	*5200.00	87.2 AV			1.00 H	76	48.8	38.4
3	#10400.00	54.0 PK	68.2	-14.2	1.02 H	83	40.1	13.9
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	97.7 PK			1.00 V	74	59.3	38.4
2	*5200.00	82.3 AV			1.00 V	74	43.9	38.4
3	#10400.00	53.6 PK	68.2	-14.6	1.00 V	176	39.7	13.9

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	103.3 PK			1.24 H	71	65.1	38.2
2	*5240.00	86.9 AV			1.24 H	71	48.7	38.2
3	5350.00	52.3 PK	74.0	-21.7	1.24 H	71	50.9	1.4
4	5350.00	37.9 AV	54.0	-16.1	1.24 H	71	36.5	1.4
5	#10480.00	54.2 PK	68.2	-14.0	1.00 H	180	40.3	13.9
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	97.6 PK			1.00 V	91	59.4	38.2
2	*5240.00	83.0 AV			1.00 V	91	44.8	38.2
3	5350.00	51.7 PK	74.0	-22.3	1.03 V	93	50.3	1.4
4	5350.00	37.5 AV	54.0	-16.5	1.03 V	93	36.1	1.4
5	#10480.00	53.5 PK	68.2	-14.7	1.00 V	185	39.6	13.9

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	51.8 PK	74.0	-22.2	1.26 H	63	50.1	1.7
2	5150.00	39.0 AV	54.0	-15.0	1.26 H	63	37.3	1.7
3	*5260.00	102.9 PK			1.26 H	61	64.8	38.1
4	*5260.00	87.6 AV			1.26 H	61	49.5	38.1
5	#10520.00	53.3 PK	68.2	-14.9	1.00 H	183	39.5	13.8
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	51.4 PK	68.2	-16.8	1.24 V	122	49.7	1.7
2	5150.00	38.6 AV	54.0	-15.4	1.24 V	122	36.9	1.7
3	*5260.00	99.5 PK			1.21 V	119	61.4	38.1
4	*5260.00	84.7 AV			1.21 V	119	46.6	38.1
5	#10520.00	53.9 PK	68.2	-14.3	1.00 V	183	40.1	13.8

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	103.6 PK			1.27 H	61	65.6	38.0
2	*5300.00	88.2 AV			1.27 H	61	50.2	38.0
3	10600.00	53.8 PK	74.0	-20.2	1.00 H	185	40.3	13.5
4	10600.00	38.7 AV	54.0	-15.3	1.00 H	185	25.2	13.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	99.5 PK			1.20 V	123	61.5	38.0
2	*5300.00	85.2 AV			1.20 V	123	47.2	38.0
3	10600.00	53.7 PK	74.0	-20.3	1.00 V	183	40.2	13.5
4	10600.00	39.0 AV	54.0	-15.0	1.00 V	183	25.5	13.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
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	103.7 PK			1.00 H	62	65.5	38.2
2	*5320.00	88.7 AV			1.00 H	62	50.5	38.2
3	5350.00	55.8 PK	74.0	-18.2	1.03 H	65	54.4	1.4
4	5350.00	38.4 AV	54.0	-15.6	1.03 H	65	37.0	1.4
5	10640.00	52.8 PK	74.0	-21.2	1.00 H	169	39.2	13.6
6	10640.00	39.6 AV	54.0	-14.4	1.00 H	169	26.0	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	100.2 PK			1.20 V	121	62.0	38.2
2	*5320.00	85.9 AV			1.20 V	121	47.7	38.2
3	5350.00	52.8 PK	74.0	-21.2	1.18 V	125	51.4	1.4
4	5350.00	37.8 AV	54.0	-16.2	1.18 V	125	36.4	1.4
5	10640.00	53.1 PK	74.0	-20.9	1.00 V	176	39.5	13.6
6	10640.00	39.8 AV	54.0	-14.2	1.00 V	176	26.2	13.6

Remarks:

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

CHANNEL	TX Channel 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	51.7 PK	74.0	-22.3	2.96 H	124	50.4	1.3
2	5460.00	41.6 AV	54.0	-12.4	2.96 H	124	40.3	1.3
3	#5470.00	52.1 PK	68.2	-16.1	2.87 H	122	50.8	1.3
4	*5500.00	106.6 PK			2.77 H	101	68.4	38.2
5	*5500.00	96.1 AV			2.77 H	101	57.9	38.2
6	11000.00	55.9 PK	74.0	-18.1	1.03 H	174	40.6	15.3
7	11000.00	41.7 AV	54.0	-12.3	1.03 H	174	26.4	15.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.1 PK	74.0	-22.9	2.93 V	17	49.8	1.3
2	5460.00	40.7 AV	54.0	-13.3	2.93 V	17	39.4	1.3
3	#5470.00	51.9 PK	68.2	-16.3	2.83 V	22	50.6	1.3
4	*5500.00	101.3 PK			2.88 V	12	63.1	38.2
5	*5500.00	91.2 AV			2.88 V	12	53.0	38.2
6	11000.00	55.5 PK	74.0	-18.5	2.13 V	302	40.2	15.3
7	11000.00	42.0 AV	54.0	-12.0	2.13 V	302	26.7	15.3

Remarks:

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

CHANNEL	TX Channel 120	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	54.4 PK	74.0	-19.6	2.63 H	114	50.5	3.9
2	5460.00	44.2 AV	54.0	-9.8	2.63 H	114	40.3	3.9
3	#5470.00	55.3 PK	68.2	-12.9	2.59 H	108	51.4	3.9
4	*5600.00	106.7 PK			2.51 H	103	68.4	38.3
5	*5600.00	95.3 AV			2.51 H	103	57.0	38.3
6	#5725.00	54.9 PK	68.2	-13.3	2.42 H	94	50.8	4.1
7	11200.00	57.1 PK	74.0	-16.9	1.09 H	182	41.2	15.9
8	11200.00	43.5 AV	54.0	-10.5	1.09 H	182	27.6	15.9
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	54.1 PK	74.0	-19.9	2.89 V	21	50.2	3.9
2	5460.00	43.5 AV	54.0	-10.5	2.89 V	21	39.6	3.9
3	#5470.00	54.9 PK	68.2	-13.3	2.91 V	26	51.0	3.9
4	*5600.00	100.9 PK			2.83 V	14	62.6	38.3
5	*5600.00	90.7 AV			2.83 V	14	52.4	38.3
6	#5725.00	54.3 PK	68.2	-13.9	2.73 V	9	50.2	4.1
7	11200.00	56.2 PK	74.0	-17.8	2.12 V	324	40.3	15.9
8	11200.00	42.6 AV	54.0	-11.4	2.12 V	324	26.7	15.9

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	105.5 PK			2.36 H	91	67.1	38.4
2	*5700.00	94.9 AV			2.36 H	91	56.5	38.4
3	#5725.00	53.4 PK	68.2	-14.8	2.32 H	89	51.8	1.6
4	11400.00	55.2 PK	74.0	-18.8	1.18 H	185	40.6	14.6
5	11400.00	42.3 AV	54.0	-11.7	1.18 H	185	27.7	14.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.7 PK			2.69 V	19	62.3	38.4
2	*5700.00	90.2 AV			2.69 V	19	51.8	38.4
3	#5725.00	52.5 PK	68.2	-15.7	2.93 V	24	50.9	1.6
4	11400.00	54.8 PK	74.0	-19.2	2.17 V	302	40.2	14.6
5	11400.00	41.0 AV	54.0	-13.0	2.17 V	302	26.4	14.6

Remarks:

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

CHANNEL	TX Channel 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	#5470.00	54.5 PK	68.2	-13.7	2.73 H	102	50.6	3.9
2	*5720.00	105.6 PK			2.65 H	91	67.2	38.4
3	*5720.00	95.2 AV			2.65 H	91	56.8	38.4
4	#5850.00	55.2 PK	68.2	-13.0	2.61 H	87	50.9	4.3
5	11440.00	57.6 PK	74.0	-16.4	1.14 H	176	41.5	16.1
6	11440.00	44.3 AV	54.0	-9.7	1.14 H	176	28.2	16.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.3 PK	68.2	-13.9	2.76 V	16	50.4	3.9
2	*5720.00	100.9 PK			2.67 V	9	62.5	38.4
3	*5720.00	90.6 AV			2.67 V	9	52.2	38.4
4	#5850.00	54.8 PK	68.2	-13.4	2.81 V	21	50.5	4.3
5	11440.00	56.7 PK	74.0	-17.3	2.21 V	308	40.6	16.1
6	11440.00	43.4 AV	54.0	-10.6	2.21 V	308	27.3	16.1

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	#5614.40	49.5 PK	68.2	-18.7	2.83 H	104	48.1	1.4
2	*5745.00	103.6 PK			2.83 H	104	65.1	38.5
3	*5745.00	92.4 AV			2.83 H	104	53.9	38.5
4	#5975.20	50.1 PK	68.2	-18.1	2.83 H	104	47.6	2.5
5	11490.00	54.8 PK	74.0	-19.2	1.26 H	197	40.9	13.9
6	11490.00	41.3 AV	54.0	-12.7	1.26 H	197	27.4	13.9
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	#5615.20	50.8 PK	68.2	-17.4	2.77 V	45	49.4	1.4
2	*5745.00	98.9 PK			2.77 V	45	60.4	38.5
3	*5745.00	87.9 AV			2.77 V	45	49.4	38.5
4	#5970.40	50.2 PK	68.2	-18.0	2.77 V	45	47.7	2.5
5	11490.00	53.4 PK	74.0	-20.6	1.96 V	325	39.5	13.9
6	11490.00	40.1 AV	54.0	-13.9	1.96 V	325	26.2	13.9

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	#5648.80	49.8 PK	68.2	-18.4	2.81 H	104	48.2	1.6
2	*5785.00	103.4 PK			2.81 H	104	64.7	38.7
3	*5785.00	92.2 AV			2.81 H	104	53.5	38.7
4	#5998.40	50.2 PK	68.2	-18.0	2.81 H	104	47.8	2.4
5	11570.00	54.5 PK	74.0	-19.5	1.16 H	184	40.7	13.8
6	11570.00	41.0 AV	54.0	-13.0	1.16 H	184	27.2	13.8
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	#5636.80	49.7 PK	68.2	-18.5	2.92 V	11	48.2	1.5
2	*5785.00	99.8 PK			2.92 V	11	61.1	38.7
3	*5785.00	89.4 AV			2.92 V	11	50.7	38.7
4	#5935.20	50.9 PK	68.2	-17.3	2.92 V	11	48.5	2.4
5	11570.00	53.6 PK	74.0	-20.4	2.03 V	317	39.8	13.8
6	11570.00	40.1 AV	54.0	-13.9	2.03 V	317	26.3	13.8

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	#5628.80	49.6 PK	68.2	-18.6	2.63 H	102	48.2	1.4
2	*5825.00	103.4 PK			2.63 H	102	64.6	38.8
3	*5825.00	92.2 AV			2.63 H	102	53.4	38.8
4	#5995.20	51.0 PK	68.2	-17.2	2.63 H	102	48.6	2.4
5	11650.00	54.4 PK	74.0	-19.6	1.26 H	176	40.6	13.8
6	11650.00	40.8 AV	54.0	-13.2	1.26 H	176	27.0	13.8
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	#5632.80	49.2 PK	68.2	-19.0	2.94 V	57	47.7	1.5
2	*5825.00	97.9 PK			2.94 V	57	59.1	38.8
3	*5825.00	87.6 AV			2.94 V	57	48.8	38.8
4	#5958.40	49.9 PK	68.2	-18.3	2.94 V	57	47.5	2.4
5	11650.00	53.9 PK	74.0	-20.1	2.08 V	297	40.1	13.8
6	11650.00	40.3 AV	54.0	-13.7	2.08 V	297	26.5	13.8

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	55.3 PK	74.0	-18.7	1.03 H	83	53.6	1.7
2	5150.00	37.7 AV	54.0	-16.3	1.03 H	83	36.0	1.7
3	*5180.00	99.5 PK			1.00 H	80	60.9	38.6
4	*5180.00	84.7 AV			1.00 H	80	46.1	38.6
5	#10360.00	54.0 PK	68.2	-14.2	1.00 H	181	40.6	13.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.22 V	84	53.2	1.7
2	5150.00	39.0 AV	54.0	-15.0	1.22 V	84	37.3	1.7
3	*5180.00	96.7 PK			1.25 V	86	58.1	38.6
4	*5180.00	81.4 AV			1.25 V	86	42.8	38.6
5	#10360.00	53.8 PK	68.2	-14.4	1.27 V	90	40.4	13.4

Remarks:

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

CHANNEL	TX Channel 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	99.0 PK			1.00 H	70	60.6	38.4
2	*5200.00	84.0 AV			1.00 H	70	45.6	38.4
3	#10400.00	54.3 PK	68.2	-13.9	1.00 H	178	40.4	13.9
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	97.8 PK			1.22 V	121	59.4	38.4
2	*5200.00	82.5 AV			1.22 V	121	44.1	38.4
3	#10400.00	53.7 PK	68.2	-14.5	1.00 V	174	39.8	13.9

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	99.6 PK			1.26 H	71	61.4	38.2
2	*5240.00	84.7 AV			1.26 H	71	46.5	38.2
3	5350.00	51.5 PK	74.0	-22.5	1.24 H	71	50.1	1.4
4	5350.00	37.9 AV	54.0	-16.1	1.24 H	71	36.5	1.4
5	#10480.00	54.3 PK	68.2	-13.9	1.00 H	186	40.4	13.9
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	97.3 PK			1.23 V	119	59.1	38.2
2	*5240.00	82.9 AV			1.23 V	119	44.7	38.2
3	5350.00	51.1 PK	74.0	-22.9	1.24 V	124	49.7	1.4
4	5350.00	37.6 AV	54.0	-16.4	1.24 V	124	36.2	1.4
5	#10480.00	53.8 PK	68.2	-14.4	1.00 V	185	39.9	13.9

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	51.3 PK	74.0	-22.7	1.23 H	62	49.6	1.7
2	5150.00	37.4 AV	54.0	-16.6	1.23 H	62	35.7	1.7
3	*5260.00	100.6 PK			1.25 H	60	62.5	38.1
4	*5260.00	85.3 AV			1.25 H	60	47.2	38.1
5	#10520.00	53.4 PK	68.2	-14.8	1.00 H	173	39.6	13.8
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	51.8 PK	74.0	-22.2	1.24 V	114	50.1	1.7
2	5150.00	37.7 AV	54.0	-16.3	1.24 V	114	36.0	1.7
3	*5260.00	98.1 PK			1.23 V	117	60.0	38.1
4	*5260.00	83.1 AV			1.23 V	117	45.0	38.1
5	#10520.00	53.9 PK	68.2	-14.3	1.00 V	175	40.1	13.8

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	101.0 PK			1.23 H	59	63.0	38.0
2	*5300.00	85.7 AV			1.23 H	59	47.7	38.0
3	10600.00	54.0 PK	74.0	-20.0	1.25 H	63	40.5	13.5
4	10600.00	39.1 AV	54.0	-14.9	1.25 H	63	25.6	13.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	97.9 PK			1.26 V	124	59.9	38.0
2	*5300.00	82.5 AV			1.26 V	124	44.5	38.0
3	10600.00	53.6 PK	74.0	-20.4	1.00 V	172	40.1	13.5
4	10600.00	39.4 AV	54.0	-14.6	1.00 V	172	25.9	13.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
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	101.8 PK			1.22 H	61	63.6	38.2
2	*5320.00	86.3 AV			1.22 H	61	48.1	38.2
3	5350.00	55.3 PK	74.0	-18.7	1.20 H	65	53.9	1.4
4	5350.00	38.3 AV	54.0	-15.7	1.20 H	65	36.9	1.4
5	10640.00	53.7 PK	74.0	-20.3	1.00 H	174	40.1	13.6
6	10640.00	39.9 AV	54.0	-14.1	1.00 H	174	26.3	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	98.4 PK			1.29 V	122	60.2	38.2
2	*5320.00	83.6 AV			1.29 V	122	45.4	38.2
3	5350.00	54.6 PK	74.0	-19.4	1.18 V	127	53.2	1.4
4	5350.00	38.0 AV	54.0	-16.0	1.18 V	127	36.6	1.4
5	10640.00	53.3 PK	74.0	-20.7	1.00 V	187	39.7	13.6
6	10640.00	40.2 AV	54.0	-13.8	1.00 V	187	26.6	13.6

Remarks:

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

CHANNEL	TX Channel 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	52.5 PK	74.0	-21.5	2.81 H	102	51.2	1.3
2	5460.00	41.6 AV	54.0	-12.4	2.81 H	102	40.3	1.3
3	#5470.00	52.9 PK	68.2	-15.3	2.87 H	96	51.6	1.3
4	*5500.00	104.1 PK			2.92 H	95	65.9	38.2
5	*5500.00	93.1 AV			2.92 H	95	54.9	38.2
6	11000.00	56.0 PK	74.0	-18.0	1.02 H	176	40.7	15.3
7	11000.00	42.6 AV	54.0	-11.4	1.02 H	176	27.3	15.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.7 PK	74.0	-22.3	2.83 V	21	50.4	1.3
2	5460.00	41.1 AV	54.0	-12.9	2.83 V	21	39.8	1.3
3	#5470.00	51.9 PK	68.2	-16.3	2.81 V	27	50.6	1.3
4	*5500.00	99.0 PK			2.87 V	13	60.8	38.2
5	*5500.00	88.3 AV			2.87 V	13	50.1	38.2
6	11000.00	54.9 PK	74.0	-19.1	2.08 V	291	39.6	15.3
7	11000.00	41.6 AV	54.0	-12.4	2.08 V	291	26.3	15.3

Remarks:

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

CHANNEL	TX Channel 120	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	54.1 PK	74.0	-19.9	2.58 H	104	50.2	3.9
2	5460.00	43.9 AV	54.0	-10.1	2.58 H	104	40.0	3.9
3	#5470.00	54.8 PK	68.2	-13.4	2.61 H	107	50.9	3.9
4	*5600.00	105.0 PK			2.50 H	96	66.7	38.3
5	*5600.00	94.8 AV			2.50 H	96	56.5	38.3
6	#5725.00	54.7 PK	68.2	-13.5	2.42 H	91	50.6	4.1
7	11200.00	56.7 PK	74.0	-17.3	1.05 H	183	40.8	15.9
8	11200.00	43.2 AV	54.0	-10.8	1.05 H	183	27.3	15.9
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	53.7 PK	74.0	-20.3	2.83 V	14	49.8	3.9
2	5460.00	43.4 AV	54.0	-10.6	2.83 V	14	39.5	3.9
3	#5470.00	54.4 PK	68.2	-13.8	3.01 V	18	50.5	3.9
4	*5600.00	100.6 PK			2.76 V	9	62.3	38.3
5	*5600.00	90.4 AV			2.76 V	9	52.1	38.3
6	#5725.00	54.5 PK	68.2	-13.7	2.86 V	16	50.4	4.1
7	11200.00	56.0 PK	74.0	-18.0	2.02 V	314	40.1	15.9
8	11200.00	42.5 AV	54.0	-11.5	2.02 V	314	26.6	15.9

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	103.2 PK			2.49 H	102	64.8	38.4
2	*5700.00	91.7 AV			2.49 H	102	53.3	38.4
3	#5725.00	52.2 PK	68.2	-16.0	2.56 H	113	50.6	1.6
4	11400.00	55.4 PK	74.0	-18.6	1.19 H	194	40.8	14.6
5	11400.00	41.8 AV	54.0	-12.2	1.19 H	194	27.2	14.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	98.4 PK			2.81 V	14	60.0	38.4
2	*5700.00	87.0 AV			2.81 V	14	48.6	38.4
3	#5725.00	51.8 PK	68.2	-16.4	2.73 V	24	50.2	1.6
4	11400.00	54.3 PK	74.0	-19.7	2.10 V	293	39.7	14.6
5	11400.00	40.7 AV	54.0	-13.3	2.10 V	293	26.1	14.6

Remarks:

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

CHANNEL	TX Channel 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	#5470.00	54.8 PK	68.2	-13.4	2.73 H	104	50.9	3.9
2	*5720.00	105.8 PK			2.64 H	98	67.4	38.4
3	*5720.00	95.1 AV			2.64 H	98	56.7	38.4
4	#5850.00	55.5 PK	68.2	-12.7	2.57 H	91	51.2	4.3
5	11440.00	57.4 PK	74.0	-16.6	1.16 H	184	41.3	16.1
6	11440.00	44.5 AV	54.0	-9.5	1.16 H	184	28.4	16.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.2 PK	68.2	-14.0	2.81 V	15	50.3	3.9
2	*5720.00	101.1 PK			2.82 V	10	62.7	38.4
3	*5720.00	90.5 AV			2.82 V	10	52.1	38.4
4	#5850.00	55.0 PK	68.2	-13.2	2.70 V	7	50.7	4.3
5	11440.00	56.3 PK	74.0	-17.7	2.15 V	305	40.2	16.1
6	11440.00	43.4 AV	54.0	-10.6	2.15 V	305	27.3	16.1

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	#5613.60	49.4 PK	68.2	-18.8	2.47 H	101	48.0	1.4
2	*5745.00	100.7 PK			2.47 H	101	62.2	38.5
3	*5745.00	90.2 AV			2.47 H	101	51.7	38.5
4	#5980.80	50.1 PK	68.2	-18.1	2.47 H	101	47.6	2.5
5	11490.00	55.0 PK	74.0	-19.0	1.25 H	183	41.1	13.9
6	11490.00	41.5 AV	54.0	-12.5	1.25 H	183	27.6	13.9
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	49.5 PK	68.2	-18.7	2.94 V	42	47.9	1.6
2	*5745.00	96.4 PK			2.94 V	42	57.9	38.5
3	*5745.00	85.6 AV			2.94 V	42	47.1	38.5
4	#5977.60	50.6 PK	68.2	-17.6	2.94 V	42	48.1	2.5
5	11490.00	53.7 PK	74.0	-20.3	1.97 V	314	39.8	13.9
6	11490.00	40.4 AV	54.0	-13.6	1.97 V	314	26.5	13.9

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	#5632.80	50.7 PK	68.2	-17.5	2.61 H	101	49.2	1.5
2	*5785.00	100.3 PK			2.61 H	101	61.6	38.7
3	*5785.00	89.7 AV			2.61 H	101	51.0	38.7
4	#5996.00	51.2 PK	68.2	-17.0	2.61 H	101	48.8	2.4
5	11570.00	54.7 PK	74.0	-19.3	1.09 H	179	40.9	13.8
6	11570.00	41.2 AV	54.0	-12.8	1.09 H	179	27.4	13.8
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	#5613.60	49.0 PK	68.2	-19.2	2.92 V	5	47.6	1.4
2	*5785.00	97.2 PK			2.92 V	5	58.5	38.7
3	*5785.00	86.8 AV			2.92 V	5	48.1	38.7
4	#5998.40	50.2 PK	68.2	-18.0	2.92 V	5	47.8	2.4
5	11570.00	53.5 PK	74.0	-20.5	2.14 V	316	39.7	13.8
6	11570.00	40.0 AV	54.0	-14.0	2.14 V	316	26.2	13.8

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	#5632.80	50.9 PK	68.2	-17.3	2.63 H	103	49.4	1.5
2	*5825.00	100.7 PK			2.63 H	103	61.9	38.8
3	*5825.00	89.7 AV			2.63 H	103	50.9	38.8
4	#5975.20	50.6 PK	68.2	-17.6	2.63 H	103	48.1	2.5
5	11650.00	54.5 PK	74.0	-19.5	1.06 H	181	40.7	13.8
6	11650.00	41.0 AV	54.0	-13.0	1.06 H	181	27.2	13.8
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	#5634.40	49.5 PK	68.2	-18.7	2.94 V	57	48.0	1.5
2	*5825.00	96.3 PK			2.94 V	57	57.5	38.8
3	*5825.00	85.3 AV			2.94 V	57	46.5	38.8
4	#5995.20	50.3 PK	68.2	-17.9	2.94 V	57	47.9	2.4
5	11650.00	53.9 PK	74.0	-20.1	2.03 V	315	40.1	13.8
6	11650.00	40.3 AV	54.0	-13.7	2.03 V	315	26.5	13.8

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	52.6 PK	74.0	-21.4	1.25 H	76	50.9	1.7
2	5150.00	37.8 AV	54.0	-16.2	1.25 H	76	36.1	1.7
3	*5190.00	97.2 PK			1.25 H	71	58.8	38.4
4	*5190.00	80.0 AV			1.25 H	71	41.6	38.4
5	#10380.00	53.8 PK	68.2	-14.4	1.00 H	181	40.1	13.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.2 PK	74.0	-21.8	1.21 V	118	50.5	1.7
2	5150.00	37.3 AV	54.0	-16.7	1.21 V	118	35.6	1.7
3	*5190.00	94.8 PK			1.23 V	121	56.4	38.4
4	*5190.00	77.6 AV			1.23 V	121	39.2	38.4
5	#10380.00	53.4 PK	68.2	-14.8	1.00 V	171	39.7	13.7

Remarks:

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

CHANNEL	TX Channel 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	96.8 PK			2.35 H	83	58.6	38.2
2	*5230.00	79.5 AV			2.35 H	83	41.3	38.2
3	5350.00	50.5 PK	74.0	-23.5	1.23 H	69	49.1	1.4
4	5350.00	38.1 AV	54.0	-15.9	1.23 H	69	36.7	1.4
5	#10460.00	54.4 PK	68.2	-13.8	1.00 H	182	40.5	13.9
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	94.7 PK			1.24 V	121	56.5	38.2
2	*5230.00	78.1 AV			1.24 V	121	39.9	38.2
3	5350.00	51.6 PK	74.0	-22.4	1.25 V	117	50.2	1.4
4	5350.00	37.8 AV	54.0	-16.2	1.25 V	117	36.4	1.4
5	#10460.00	54.0 PK	68.2	-14.2	1.00 V	184	40.1	13.9

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	51.9 PK	74.0	-22.1	1.21 H	62	50.2	1.7
2	5150.00	37.5 AV	54.0	-16.5	1.21 H	62	35.8	1.7
3	*5270.00	98.1 PK			1.23 H	59	60.0	38.1
4	*5270.00	80.7 AV			1.23 H	59	42.6	38.1
5	#10540.00	54.3 PK	68.2	-13.9	1.00 H	186	40.6	13.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.3 PK	74.0	-21.7	1.29 V	123	50.6	1.7
2	5150.00	37.9 AV	54.0	-16.1	1.29 V	123	36.2	1.7
3	*5270.00	94.9 PK			1.20 V	115	56.8	38.1
4	*5270.00	77.8 AV			1.20 V	115	39.7	38.1
5	#10540.00	53.4 PK	68.2	-14.8	1.00 V	188	39.7	13.7

Remarks:

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

CHANNEL	TX Channel 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	98.8 PK			1.22 H	360	60.6	38.2
2	*5310.00	81.5 AV			1.22 H	360	43.3	38.2
3	5350.00	55.8 PK	74.0	-18.2	1.26 H	66	54.4	1.4
4	5350.00	37.7 AV	54.0	-16.3	1.26 H	66	36.3	1.4
5	10620.00	53.4 PK	74.0	-20.6	1.00 H	182	39.7	13.7
6	10620.00	39.5 AV	54.0	-14.5	1.00 H	182	25.8	13.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	95.4 PK			1.29 V	113	57.2	38.2
2	*5310.00	78.6 AV			1.29 V	113	40.4	38.2
3	5350.00	55.3 PK	74.0	-18.7	1.23 V	117	53.9	1.4
4	5350.00	37.5 AV	54.0	-16.5	1.23 V	117	36.1	1.4
5	10620.00	53.2 PK	74.0	-20.8	1.29 V	124	39.5	13.7
6	10620.00	39.1 AV	54.0	-14.9	1.29 V	124	25.4	13.7

Remarks:

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

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	51.6 PK	74.0	-22.4	2.81 H	114	50.3	1.3
2	5460.00	41.5 AV	54.0	-12.5	2.81 H	114	40.2	1.3
3	#5470.00	52.6 PK	68.2	-15.6	2.87 H	94	51.3	1.3
4	*5510.00	101.5 PK			2.76 H	101	63.2	38.3
5	*5510.00	91.5 AV			2.76 H	101	53.2	38.3
6	11020.00	56.1 PK	74.0	-17.9	1.04 H	187	40.8	15.3
7	11020.00	42.7 AV	54.0	-11.3	1.04 H	187	27.4	15.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.4 PK	74.0	-22.6	2.88 V	19	50.1	1.3
2	5460.00	41.0 AV	54.0	-13.0	2.88 V	19	39.7	1.3
3	#5470.00	52.1 PK	68.2	-16.1	2.94 V	27	50.8	1.3
4	*5510.00	97.1 PK			2.79 V	11	58.8	38.3
5	*5510.00	87.0 AV			2.79 V	11	48.7	38.3
6	11020.00	55.1 PK	74.0	-18.9	2.07 V	318	39.8	15.3
7	11020.00	41.8 AV	54.0	-12.2	2.07 V	318	26.5	15.3

Remarks:

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

CHANNEL	TX Channel 118	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	54.1 PK	74.0	-19.9	2.57 H	104	50.2	3.9
2	5460.00	44.2 AV	54.0	-9.8	2.57 H	104	40.3	3.9
3	#5470.00	55.0 PK	68.2	-13.2	2.62 H	108	51.1	3.9
4	*5590.00	103.0 PK			2.52 H	98	64.8	38.2
5	*5590.00	92.8 AV			2.52 H	98	54.6	38.2
6	#5725.00	55.4 PK	68.2	-12.8	2.45 H	92	51.3	4.1
7	11180.00	56.6 PK	74.0	-17.4	1.09 H	178	40.7	15.9
8	11180.00	43.3 AV	54.0	-10.7	1.09 H	178	27.4	15.9
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	53.6 PK	74.0	-20.4	2.83 V	17	49.7	3.9
2	5460.00	43.5 AV	54.0	-10.5	2.83 V	17	39.6	3.9
3	#5470.00	54.4 PK	68.2	-13.8	2.87 V	20	50.5	3.9
4	*5590.00	98.6 PK			2.77 V	13	60.4	38.2
5	*5590.00	88.4 AV			2.77 V	13	50.2	38.2
6	#5725.00	54.5 PK	68.2	-13.7	2.74 V	6	50.4	4.1
7	11180.00	55.6 PK	74.0	-18.4	2.03 V	312	39.7	15.9
8	11180.00	42.3 AV	54.0	-11.7	2.03 V	312	26.4	15.9

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	100.4 PK			2.66 H	102	61.9	38.5
2	*5670.00	90.0 AV			2.66 H	102	51.5	38.5
3	#5725.00	52.3 PK	68.2	-15.9	2.74 H	115	50.7	1.6
4	11340.00	55.5 PK	74.0	-18.5	1.21 H	178	40.8	14.7
5	11340.00	42.0 AV	54.0	-12.0	1.21 H	178	27.3	14.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	95.7 PK			2.73 V	13	57.2	38.5
2	*5670.00	85.4 AV			2.73 V	13	46.9	38.5
3	#5725.00	51.9 PK	68.2	-16.3	2.82 V	23	50.3	1.6
4	11340.00	54.4 PK	74.0	-19.6	2.13 V	302	39.7	14.7
5	11340.00	41.0 AV	54.0	-13.0	2.13 V	302	26.3	14.7

Remarks:

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

CHANNEL	TX Channel 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	#5470.00	54.5 PK	68.2	-13.7	2.73 H	101	50.6	3.9
2	*5710.00	103.5 PK			2.65 H	97	65.1	38.4
3	*5710.00	93.1 AV			2.65 H	97	54.7	38.4
4	#5850.00	55.1 PK	68.2	-13.1	2.61 H	90	50.8	4.3
5	11420.00	57.1 PK	74.0	-16.9	1.18 H	180	40.8	16.3
6	11420.00	44.3 AV	54.0	-9.7	1.18 H	180	28.0	16.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.2 PK	68.2	-14.0	2.84 V	19	50.3	3.9
2	*5710.00	99.0 PK			2.72 V	13	60.6	38.4
3	*5710.00	88.6 AV			2.72 V	13	50.2	38.4
4	#5850.00	54.8 PK	68.2	-13.4	2.68 V	23	50.5	4.3
5	11420.00	56.6 PK	74.0	-17.4	2.12 V	305	40.3	16.3
6	11420.00	43.4 AV	54.0	-10.6	2.12 V	305	27.1	16.3

Remarks:

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

CHANNEL	TX Channel 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	#5604.80	49.2 PK	68.2	-19.0	2.48 H	105	47.8	1.4
2	*5755.00	98.2 PK			2.48 H	105	59.6	38.6
3	*5755.00	87.7 AV			2.48 H	105	49.1	38.6
4	#5948.00	50.3 PK	68.2	-17.9	2.48 H	105	47.9	2.4
5	11510.00	54.9 PK	74.0	-19.1	1.14 H	185	41.0	13.9
6	11510.00	41.0 AV	54.0	-13.0	1.14 H	185	27.1	13.9
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	#5644.00	50.1 PK	68.2	-18.1	2.93 V	13	48.5	1.6
2	*5755.00	96.2 PK			2.93 V	13	57.6	38.6
3	*5755.00	85.4 AV			2.93 V	13	46.8	38.6
4	#5989.60	49.8 PK	68.2	-18.4	2.93 V	13	47.4	2.4
5	11510.00	54.1 PK	74.0	-19.9	2.01 V	319	40.2	13.9
6	11510.00	40.7 AV	54.0	-13.3	2.01 V	319	26.8	13.9

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	#5604.80	49.7 PK	68.2	-18.5	2.63 H	100	48.3	1.4
2	*5795.00	98.0 PK			2.63 H	100	59.3	38.7
3	*5795.00	87.6 AV			2.63 H	100	48.9	38.7
4	#5955.20	50.3 PK	68.2	-17.9	2.63 H	100	47.9	2.4
5	11590.00	54.4 PK	74.0	-19.6	1.08 H	187	40.6	13.8
6	11590.00	40.7 AV	54.0	-13.3	1.08 H	187	26.9	13.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5608.00	49.2 PK	68.2	-19.0	2.91 V	3	47.8	1.4
2	*5795.00	95.2 PK			2.91 V	3	56.5	38.7
3	*5795.00	83.8 AV			2.91 V	3	45.1	38.7
4	#5993.60	50.0 PK	68.2	-18.2	2.91 V	3	47.6	2.4
5	11590.00	53.6 PK	74.0	-20.4	2.17 V	312	39.8	13.8
6	11590.00	40.2 AV	54.0	-13.8	2.17 V	312	26.4	13.8

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.8 PK	74.0	-22.2	1.00 H	73	50.1	1.7
2	5150.00	38.4 AV	54.0	-15.6	1.00 H	73	36.7	1.7
3	*5210.00	92.4 PK			1.00 H	72	54.1	38.3
4	*5210.00	79.0 AV			1.00 H	72	40.7	38.3
5	5350.00	51.7 PK	74.0	-22.3	1.00 H	70	50.3	1.4
6	5350.00	37.0 AV	54.0	-17.0	1.00 H	70	35.6	1.4
7	#10420.00	53.9 PK	68.2	-14.3	1.00 H	184	40.0	13.9
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	51.4 PK	74.0	-22.6	1.21 V	120	49.7	1.7
2	5150.00	38.1 AV	54.0	-15.9	1.21 V	120	36.4	1.7
3	*5210.00	91.6 PK			1.26 V	119	53.3	38.3
4	*5210.00	76.8 AV			1.26 V	119	38.5	38.3
5	5350.00	50.9 PK	74.0	-23.1	1.29 V	126	49.5	1.4
6	5350.00	37.3 AV	54.0	-16.7	1.29 V	126	35.9	1.4
7	#10420.00	54.2 PK	68.2	-14.0	1.00 V	173	40.3	13.9

Remarks:

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

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK) 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	51.2 PK	74.0	-22.8	1.22 H	65	49.5	1.7
2	5150.00	37.4 AV	54.0	-16.6	1.22 H	65	35.7	1.7
3	*5290.00	95.2 PK			1.25 H	64	57.1	38.1
4	*5290.00	70.3 AV			1.25 H	64	32.2	38.1
5	5350.00	54.5 PK	74.0	-19.5	1.21 H	62	53.1	1.4
6	5350.00	38.2 AV	54.0	-15.8	1.21 H	62	36.8	1.4
7	#10580.00	54.1 PK	68.2	-14.1	1.00 H	186	40.5	13.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.9 PK	74.0	-22.1	1.26 V	111	50.2	1.7
2	5150.00	37.8 AV	54.0	-16.2	1.26 V	111	36.1	1.7
3	*5290.00	93.1 PK			1.27 V	121	55.0	38.1
4	*5290.00	68.2 AV			1.27 V	121	30.1	38.1
5	5350.00	53.9 PK	74.0	-20.1	1.27 V	113	52.5	1.4
6	5350.00	37.7 AV	54.0	-16.3	1.27 V	113	36.3	1.4
7	#10580.00	53.9 PK	68.2	-14.3	1.00 V	182	40.3	13.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	52.0 PK	74.0	-22.0	2.86 H	116	50.7	1.3
2	5460.00	41.6 AV	54.0	-12.4	2.86 H	116	40.3	1.3
3	#5470.00	54.2 PK	68.2	-14.0	2.80 H	99	52.9	1.3
4	*5530.00	103.8 PK			2.92 H	104	65.6	38.2
5	*5530.00	93.8 AV			2.92 H	104	55.6	38.2
6	#5725.00	52.4 PK	68.2	-15.8	2.76 H	102	50.8	1.6
7	11060.00	56.2 PK	74.0	-17.8	1.27 H	171	41.2	15.0
8	11060.00	42.6 AV	54.0	-11.4	1.27 H	171	27.6	15.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.7 PK	74.0	-22.3	2.79 V	15	50.4	1.3
2	5460.00	41.0 AV	54.0	-13.0	2.79 V	15	39.7	1.3
3	#5470.00	53.0 PK	68.2	-15.2	2.84 V	24	51.7	1.3
4	*5530.00	99.3 PK			2.76 V	13	61.1	38.2
5	*5530.00	89.1 AV			2.76 V	13	50.9	38.2
6	#5725.00	52.1 PK	68.2	-16.1	2.78 V	21	50.5	1.6
7	11060.00	55.2 PK	74.0	-18.8	2.03 V	317	40.2	15.0
8	11060.00	41.4 AV	54.0	-12.6	2.03 V	317	26.4	15.0

Remarks:

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

CHANNEL	TX Channel 122	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	51.9 PK	74.0	-22.1	2.87 H	99	50.6	1.3
2	5460.00	41.7 AV	54.0	-12.3	2.87 H	99	40.4	1.3
3	#5470.00	52.0 PK	68.2	-16.2	2.94 H	102	50.7	1.3
4	*5610.00	97.5 PK			2.84 H	94	59.2	38.3
5	*5610.00	86.8 AV			2.84 H	94	48.5	38.3
6	#5725.00	52.1 PK	68.2	-16.1	2.77 H	91	50.5	1.6
7	11220.00	55.5 PK	74.0	-18.5	1.06 H	189	40.8	14.7
8	11220.00	42.0 AV	54.0	-12.0	1.06 H	189	27.3	14.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.6 PK	74.0	-22.4	2.92 V	28	50.3	1.3
2	5460.00	41.1 AV	54.0	-12.9	2.92 V	28	39.8	1.3
3	#5470.00	51.7 PK	68.2	-16.5	2.89 V	23	50.4	1.3
4	*5610.00	92.9 PK			2.79 V	15	54.6	38.3
5	*5610.00	82.2 AV			2.79 V	15	43.9	38.3
6	#5725.00	51.8 PK	68.2	-16.4	2.77 V	26	50.2	1.6
7	11220.00	54.5 PK	74.0	-19.5	2.06 V	314	39.8	14.7
8	11220.00	41.3 AV	54.0	-12.7	2.06 V	314	26.6	14.7

Remarks:

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

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.7 PK	68.2	-13.5	2.73 H	105	50.8	3.9
2	*5690.00	100.2 PK			2.66 H	95	61.8	38.4
3	*5690.00	89.1 AV			2.66 H	95	50.7	38.4
4	#5850.00	55.7 PK	68.2	-12.5	2.61 H	89	51.4	4.3
5	11380.00	57.9 PK	74.0	-16.1	1.16 H	187	41.4	16.5
6	11380.00	44.8 AV	54.0	-9.2	1.16 H	187	28.3	16.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	54.3 PK	68.2	-13.9	2.83 V	15	50.4	3.9
2	*5690.00	95.5 PK			2.77 V	12	57.1	38.4
3	*5690.00	84.6 AV			2.77 V	12	46.2	38.4
4	#5850.00	55.0 PK	68.2	-13.2	2.87 V	14	50.7	4.3
5	11380.00	56.9 PK	74.0	-17.1	2.15 V	304	40.4	16.5
6	11380.00	44.0 AV	54.0	-10.0	2.15 V	304	27.5	16.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5633.60	49.6 PK	68.2	-18.6	2.46 H	102	48.1	1.5
2	#5650.00	50.8 PK	68.2	-17.4	2.41 H	97	49.3	1.5
3	*5775.00	94.4 PK			2.46 H	102	55.8	38.6
4	*5775.00	84.0 AV			2.46 H	102	45.4	38.6
5	#5925.00	51.0 PK	68.2	-17.2	2.57 H	116	48.6	2.4
6	#5992.80	50.3 PK	68.2	-17.9	2.46 H	102	47.9	2.4
7	11550.00	54.7 PK	74.0	-19.3	1.28 H	186	40.9	13.8
8	11550.00	41.2 AV	54.0	-12.8	1.28 H	186	27.4	13.8
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	#5623.20	49.9 PK	68.2	-18.3	2.92 V	11	48.5	1.4
2	#5650.00	50.7 PK	68.2	-17.5	2.87 V	24	49.2	1.5
3	*5775.00	92.1 PK			2.60 V	61	53.5	38.6
4	*5775.00	81.7 AV			2.60 V	61	43.1	38.6
5	#5925.00	51.8 PK	68.2	-16.4	2.88 V	31	49.4	2.4
6	#5996.00	50.9 PK	68.2	-17.3	2.92 V	11	48.5	2.4
7	11550.00	54.1 PK	74.0	-19.9	2.17 V	302	40.3	13.8
8	11550.00	40.7 AV	54.0	-13.3	2.17 V	302	26.9	13.8

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:

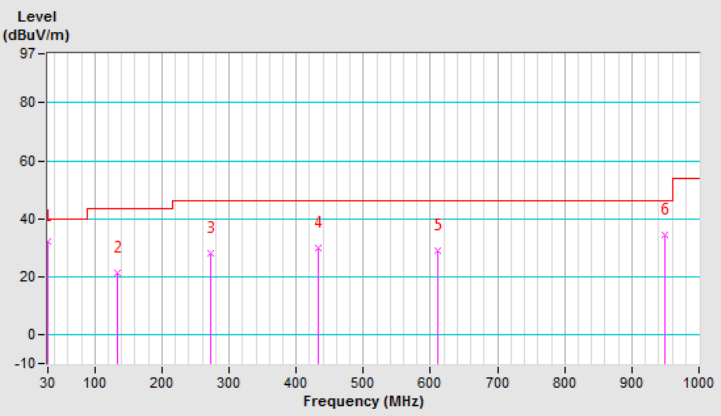
802.11a

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	**30.97**	**32.0 QP**	**40.0**	**-8.0**	**1.25 H**	**72**	**43.4**	**-11.4**
2	132.82	21.1 QP	43.5	-22.4	1.00 H	114	31.6	-10.5
3	271.53	28.2 QP	46.0	-17.8	1.50 H	130	36.9	-8.7
4	433.52	30.0 QP	46.0	-16.0	1.50 H	154	35.5	-5.5
5	610.06	29.0 QP	46.0	-17.0	1.25 H	94	31.1	-2.1
6	949.56	34.4 QP	46.0	-11.6	1.00 H	38	30.3	4.1

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

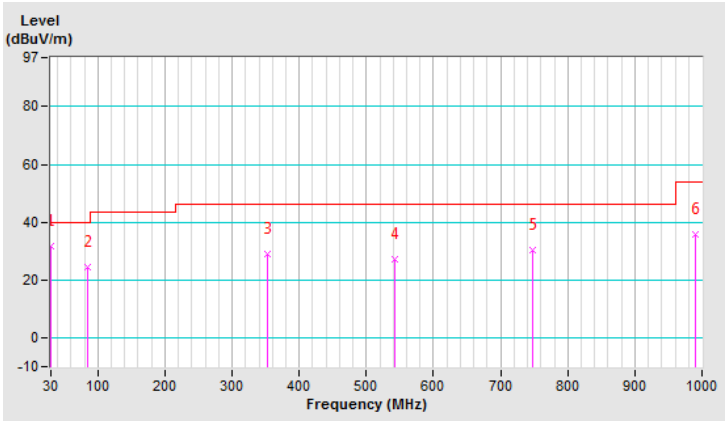


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	31.5 QP	40.0	-8.5	1.00 V	291	42.7	-11.2
2	85.29	24.5 QP	40.0	-15.5	1.25 V	66	39.2	-14.7
3	353.01	28.8 QP	46.0	-17.2	1.00 V	158	36.1	-7.3
4	542.16	27.3 QP	46.0	-18.7	1.50 V	232	31.2	-3.9
5	747.80	30.4 QP	46.0	-15.6	1.00 V	15	29.7	0.7
6	990.30	35.6 QP	54.0	-18.4	1.50 V	144	31.2	4.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jan. 03, 2019	Jan. 02, 2020
RF signal cable Woken	5D-FB	Cable-cond2-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 30, 2019	Jan. 29, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2018	Aug. 12, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	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.

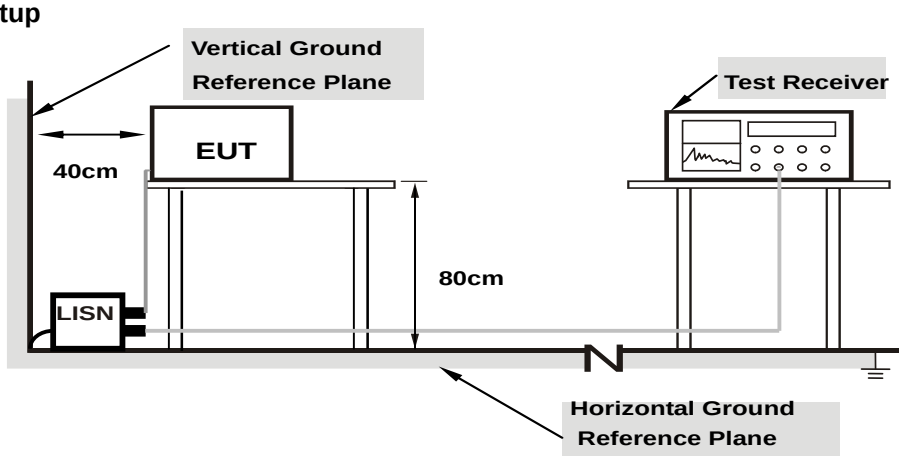
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

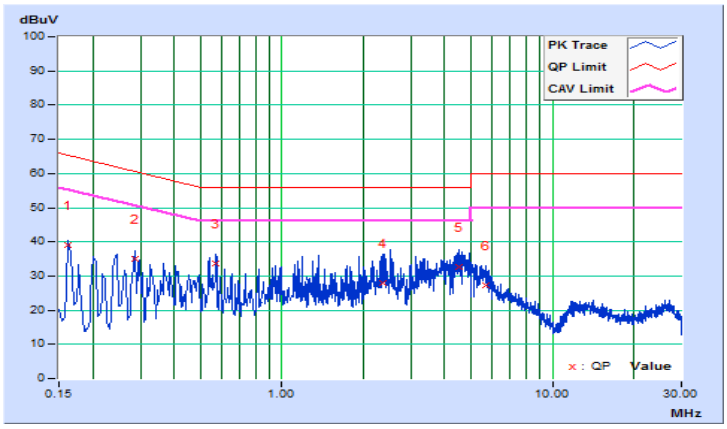
802.11a

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16200	10.21	28.83	17.11	39.04	27.32	65.36	55.36	-26.32	-28.04
2	0.28600	10.27	24.91	13.83	35.18	24.10	60.64	50.64	-25.46	-26.54
3	0.57040	10.29	23.54	14.33	33.83	24.62	56.00	46.00	-22.17	-21.38
4	2.36200	10.34	17.70	8.84	28.04	19.18	56.00	46.00	-27.96	-26.82
5	4.53800	10.42	22.09	10.32	32.51	20.74	56.00	46.00	-23.49	-25.26
6	5.69000	10.45	16.90	8.13	27.35	18.58	60.00	50.00	-32.65	-31.42

REMARKS:

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

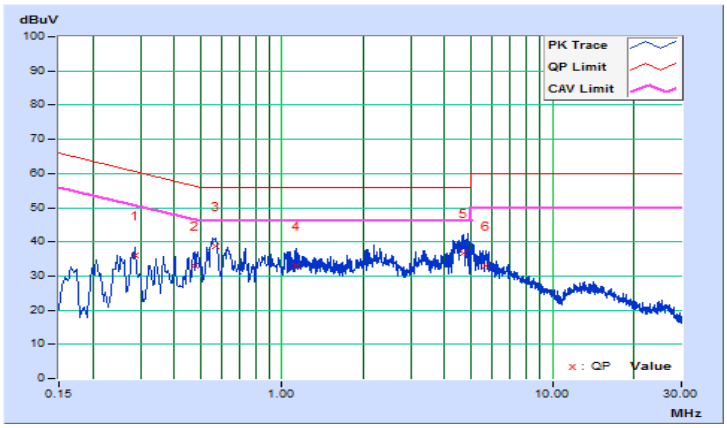


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.28602	10.23	25.69	19.76	35.92	29.99	60.64	50.64	-24.72	-20.65
2	0.47400	10.25	22.72	16.22	32.97	26.47	56.44	46.44	-23.47	-19.97
3	**0.56591**	**10.26**	**28.38**	**23.22**	**38.64**	**33.48**	**56.00**	**46.00**	**-17.36**	**-12.52**
4	1.13800	10.29	22.80	15.22	33.09	25.51	56.00	46.00	-22.91	-20.49
5	4.67000	10.43	26.11	16.51	36.54	26.94	56.00	46.00	-19.46	-19.06
6	5.65400	10.47	22.64	14.98	33.11	25.45	60.00	50.00	-26.89	-24.55

REMARKS:

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



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

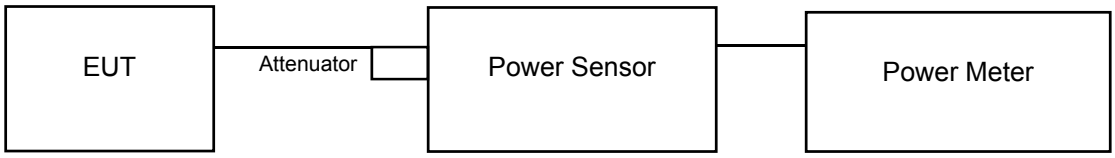
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

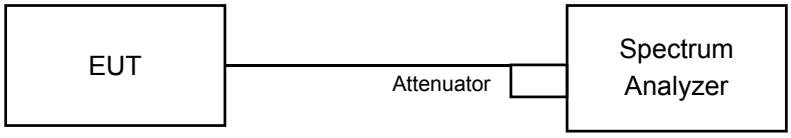
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

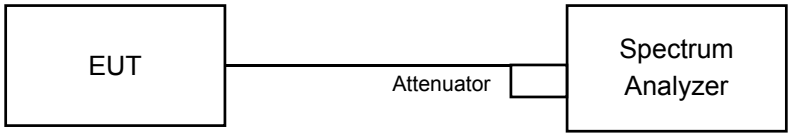
For Power Output
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)
Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to AVERAGE. Duty factor is not added to measured value.

For 802.11ac (VHT80)
a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS
i. Trace mode = max hold
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

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	35.075	15.45	24.00	Pass
40	5200	31.769	15.02	24.00	Pass
48	5240	31.046	14.92	24.00	Pass
52	5260	27.733	14.43	24.00	Pass
60	5300	27.606	14.41	24.00	Pass
64	5320	**27.797**	14.44	24.00	Pass
100	5500	27.102	14.33	24.00	Pass
120	5600	**27.733**	14.43	24.00	Pass
140	5700	22.029	13.43	24.00	Pass
144	5720 For U-NII-2C	2.666	4.26	23.19	Pass
144	5720 For U-NII-3	0.641	-1.93	30.00	Pass
149	5745	17.579	12.45	30.00	Pass
157	5785	15.631	11.94	30.00	Pass
165	5825	14.060	11.48	30.00	Pass

Note:

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

1. 11dBm + 10log (22.94) = 24.60 > 24dBm
2. 11dBm + 10log (22.90) = 24.59 > 24dBm
3. 11dBm + 10log (22.68) = 24.55 > 24dBm
4. 11dBm + 10log (22.61) = 24.54 > 24dBm
5. 11dBm + 10log (22.25) = 24.47 > 24dBm
6. 11dBm + 10log (22.48) = 24.51 > 24dBm
7. 11dBm + 10log (5725.00 - 5708.44) = 23.19 < 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	3.3072	5.19

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	19.454	12.89	24.00	Pass
40	5200	19.724	12.95	24.00	Pass
48	5240	19.275	12.85	24.00	Pass
52	5260	19.275	12.85	24.00	Pass
60	5300	17.579	12.45	24.00	Pass
64	5320	17.701	12.48	24.00	Pass
100	5500	19.770	12.96	24.00	Pass
120	5600	17.620	12.46	24.00	Pass
140	5700	12.474	10.96	24.00	Pass
144	5720 For U-NII-2C	1.694	2.29	23.25	Pass
144	5720 For U-NII-3	0.533	-2.73	30.00	Pass
149	5745	11.220	10.50	30.00	Pass
157	5785	9.908	9.96	30.00	Pass
165	5825	9.795	9.91	30.00	Pass

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

1. 11dBm + 10log (22.78) = 24.57 > 24dBm
2. 11dBm + 10log (22.38) = 24.49 > 24dBm
3. 11dBm + 10log (22.72) = 24.56 > 24dBm
4. 11dBm + 10log (22.51) = 24.52 > 24dBm
5. 11dBm + 10log (22.75) = 24.56 > 24dBm
6. 11dBm + 10log (23.00) = 24.61 > 24dBm
7. 11dBm + 10log (5725.00 - 5708.21) = 23.25 < 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	2.227	3.48

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	21.727	13.37	24.00	Pass
46	5230	22.131	13.45	24.00	Pass
54	5270	19.679	12.94	24.00	Pass
62	5310	19.320	12.86	24.00	Pass
102	5510	21.281	13.28	24.00	Pass
118	5590	19.498	12.90	24.00	Pass
134	5670	15.668	11.95	24.00	Pass
142	5710 For U-NII-2C	0.713	-1.47	24.00	Pass
142	5710 For U-NII-3	0.105	-9.78	30.00	Pass
151	5755	11.117	10.46	30.00	Pass
159	5795	11.220	10.50	30.00	Pass

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

1. 11dBm + 10log (46.24) = 27.65 > 24dBm
2. 11dBm + 10log (46.40) = 27.66 > 24dBm
3. 11dBm + 10log (45.74) = 27.60 > 24dBm
4. 11dBm + 10log (45.83) = 27.61 > 24dBm
5. 11dBm + 10log (45.89) = 27.61 > 24dBm
6. 11dBm + 10log (5725.00 - 5686.76) = 26.82 > 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	0.819	-0.87

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	21.979	13.42	24.00	Pass
58	5290	19.143	12.82	24.00	Pass
106	5530	24.378	13.87	24.00	Pass
122	5610	22.646	13.55	24.00	Pass
138	5690 For U-NII-2C	0.191	-7.19	24.00	Pass
138	5690 For U-NII-3	0.008	-20.88	24.00	Pass
155	5775	11.272	10.52	30.00	Pass

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

1. 11dBm + 10log (85.51) = 30.32 > 24dBm
2. 11dBm + 10log (85.37) = 30.31 > 24dBm
3. 11dBm + 10log (85.51) = 30.32 > 24dBm
4. 11dBm + 10log (5725.00 - 5647.43) = 29.89 > 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)
138	5690	0.199	-7.01

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	22.32
40	5200	22.56
48	5240	22.35
52	5260	22.94
60	5300	22.90
64	5320	22.68
100	5500	22.61
120	5600	22.25
140	5700	22.48
144	5720 For U-NII-2C	16.56

802.11n (HT20)

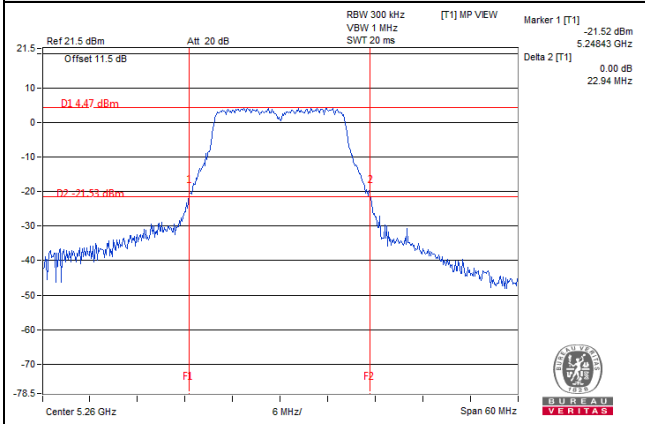
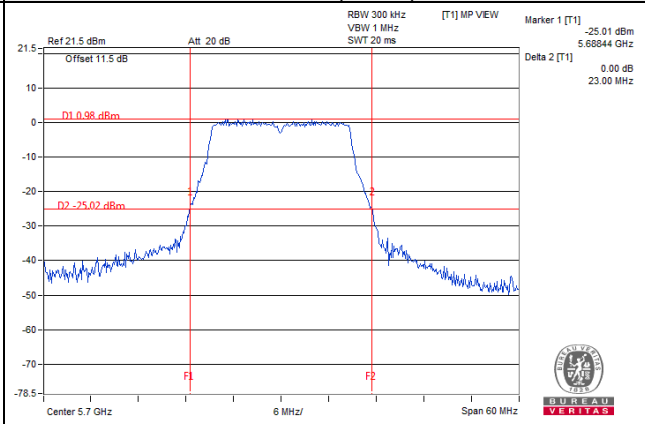
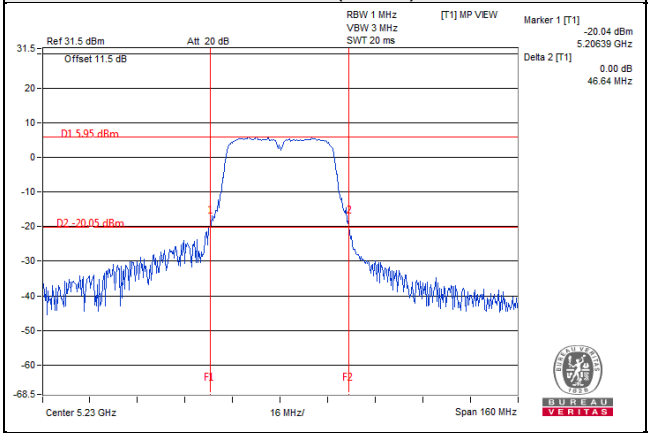
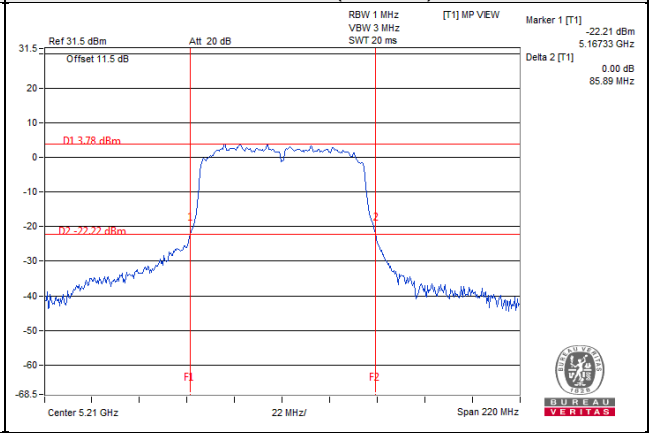
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	22.47
40	5200	22.65
48	5240	22.36
52	5260	22.78
60	5300	22.38
64	5320	22.72
100	5500	22.51
120	5600	22.75
140	5700	23.00
144	5720 For U-NII-2C	16.79

802.11n (HT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	45.63
46	5230	46.64
54	5270	46.24
62	5310	46.40
102	5510	45.74
118	5590	45.83
134	5670	45.89
142	5710 For U-NII-2C	38.24

802.11ac (VHT80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	85.89
58	5290	85.51
106	5530	85.37
122	5610	85.51
138	5690 For U-NII-2C	77.57

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

EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	27.797	14.44
5470~5725	27.733	14.43

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	19.275	12.85
5470~5725	19.770	12.96

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	19.679	12.94
5470~5725	21.281	13.28

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

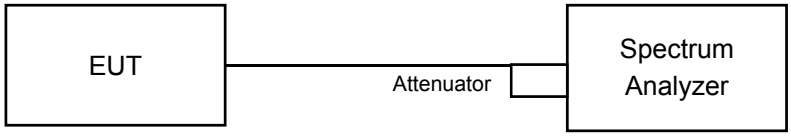
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	19.143	12.82
5470~5725	24.378	13.87

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	17.04
40	5200	17.16
48	5240	17.16
52	5260	17.16
60	5300	17.28
64	5320	17.04
100	5500	17.16
120	5600	17.16
140	5700	17.16
144	5720 For U-NII-2C	13.40
144	5720 For U-NII-3	3.16
149	5745	17.16
157	5785	17.28
165	5825	17.04

802.11n (HT20)

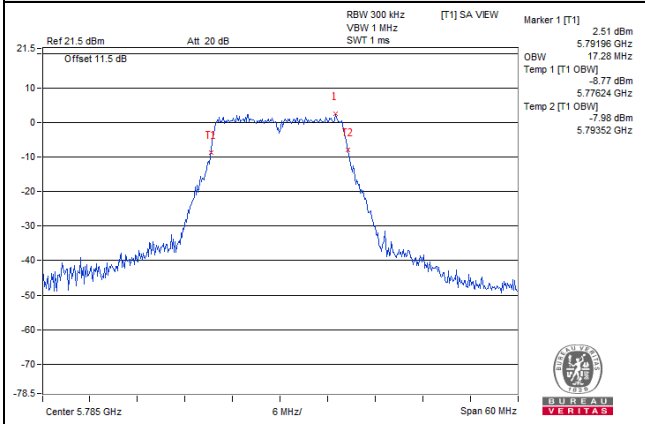
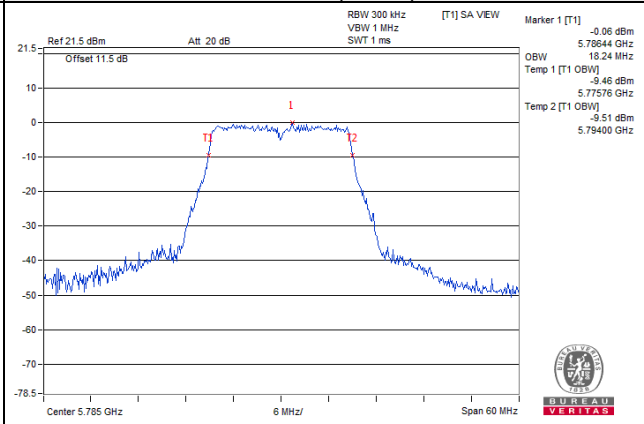
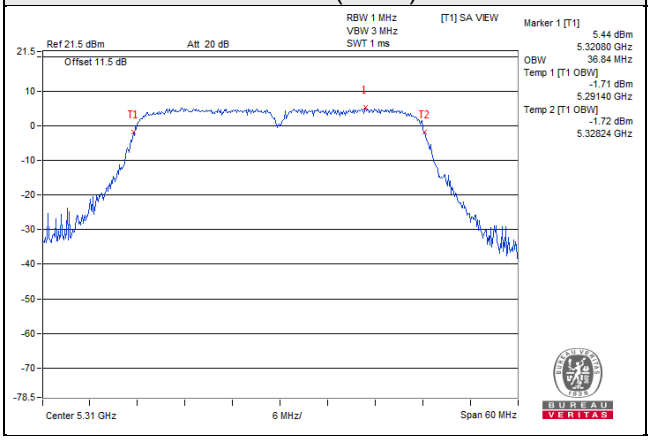
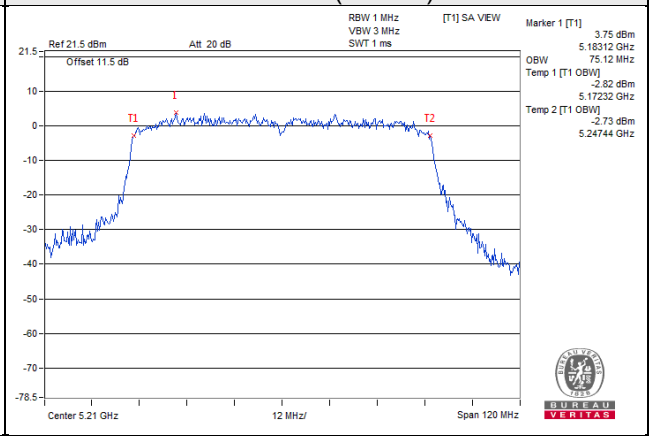
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.16
40	5200	17.16
48	5240	17.04
52	5260	17.16
60	5300	17.04
64	5320	17.16
100	5500	18.24
120	5600	18.12
140	5700	18.00
144	5720 For U-NII-2C	14.00
144	5720 For U-NII-3	3.76
149	5745	18.12
157	5785	18.24
165	5825	18.12

802.11n (HT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.72
54	5270	36.72
62	5310	36.84
102	5510	36.72
118	5590	36.72
134	5670	36.84
142	5710 For U-NII-2C	33.60
142	5710 For U-NII-3	3.12
151	5755	36.72
159	5795	36.78

802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.12
58	5290	74.88
106	5530	74.88
122	5610	75.12
138	5690 For U-NII-2C	72.68
138	5690 For U-NII-3	2.44
155	5775	74.88

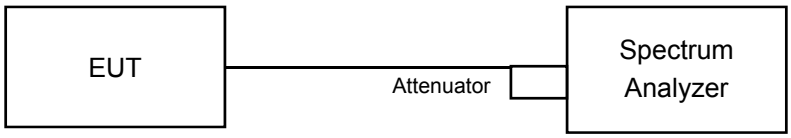
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

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-2
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 and add 10 log (1/duty cycle)

For U-NII-3 band:
Duty cycle of test signal is < 98%
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 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 and add 10 log (1/duty cycle)

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 W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.02	0.68	0.70	11	Pass
40	5200	-0.20	0.68	0.48	11	Pass
48	5240	-0.47	0.68	0.21	11	Pass
52	5260	-0.75	0.68	-0.07	11	Pass
60	5300	-0.78	0.68	-0.10	11	Pass
64	5320	-0.53	0.68	0.15	11	Pass
100	5500	-0.24	0.68	0.44	11	Pass
120	5600	-0.71	0.68	-0.03	11	Pass
140	5700	-1.86	0.68	-1.18	11	Pass
144	5720 For U-NII-2C	-1.42	0.68	-0.74	11	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	-2.16	0.68	-1.48	11	Pass
40	5200	-2.27	0.68	-1.59	11	Pass
48	5240	-2.75	0.68	-2.07	11	Pass
52	5260	-2.80	0.68	-2.12	11	Pass
60	5300	-2.93	0.68	-2.25	11	Pass
64	5320	-2.75	0.68	-2.07	11	Pass
100	5500	-2.63	0.68	-1.95	11	Pass
120	5600	-3.25	0.68	-2.57	11	Pass
140	5700	-4.19	0.68	-3.51	11	Pass
144	5720 For U-NII-2C	-4.34	0.68	-3.66	11	Pass

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

802.11n (HT40)

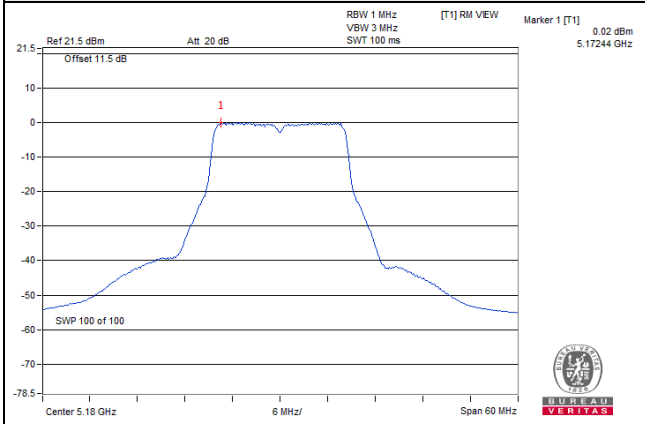
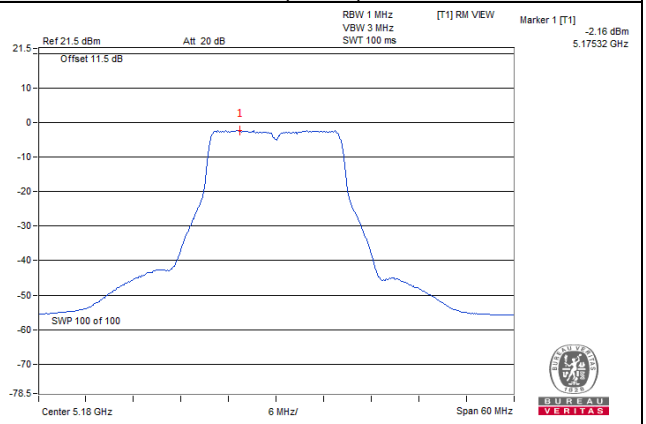
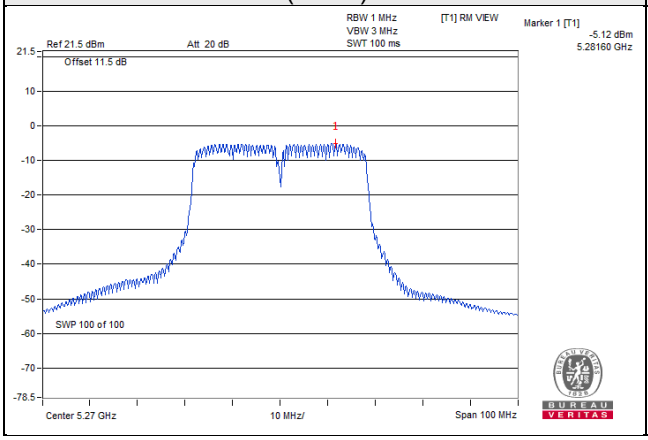
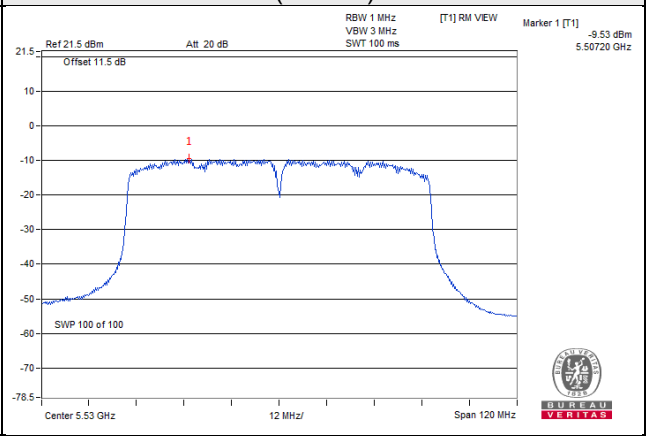
Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-5.28	1.21	-4.07	11	Pass
46	5230	-5.67	1.21	-4.46	11	Pass
54	5270	-5.12	1.21	-3.91	11	Pass
62	5310	-6.09	1.21	-4.88	11	Pass
102	5510	-5.42	1.21	-4.21	11	Pass
118	5590	-6.10	1.21	-4.89	11	Pass
134	5670	-7.05	1.21	-5.84	11	Pass
142	5710 For U-NII-2C	-7.62	1.21	-6.41	11	Pass

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

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-9.83	2.64	-7.19	11	Pass
58	5290	-10.15	2.64	-7.51	11	Pass
106	5530	-9.53	2.64	-6.89	11	Pass
122	5610	-10.55	2.64	-7.91	11	Pass
138	5690 For U-NII-2C	-11.48	2.64	-8.84	11	Pass

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

Spectrum Plot of Worst Value	
802.11a / CH 36	802.11n (HT20) / CH 36
	
802.11n (HT40) / CH 54	802.11ac (VHT80) / CH 106
	

For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 For U-NII-3	-10.64	-8.42	0.68	-7.74	30	Pass
149	5745	-10.96	-8.74	0.68	-8.06	30	Pass
157	5785	-10.88	-8.66	0.68	-7.98	30	Pass
165	5825	-11.24	-9.02	0.68	-8.34	30	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 For U-NII-3	-12.75	-10.53	0.68	-9.85	30	Pass
149	5745	-13.00	-10.78	0.68	-10.10	30	Pass
157	5785	-13.23	-11.01	0.68	-10.33	30	Pass
165	5825	-13.57	-11.35	0.68	-10.67	30	Pass

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

802.11n (HT40)

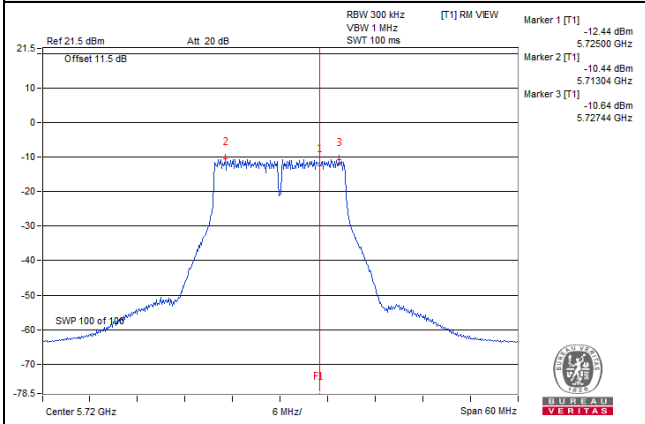
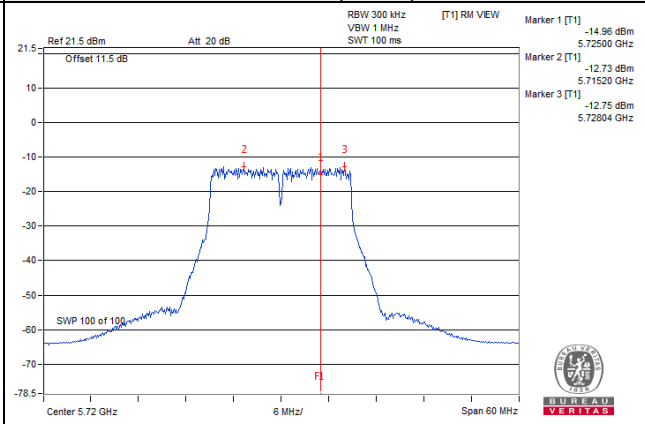
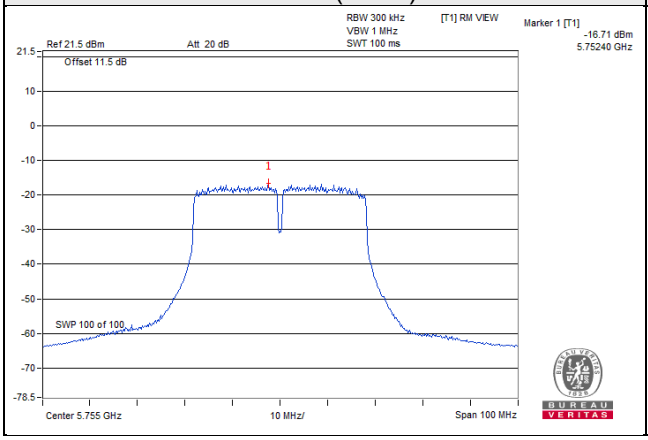
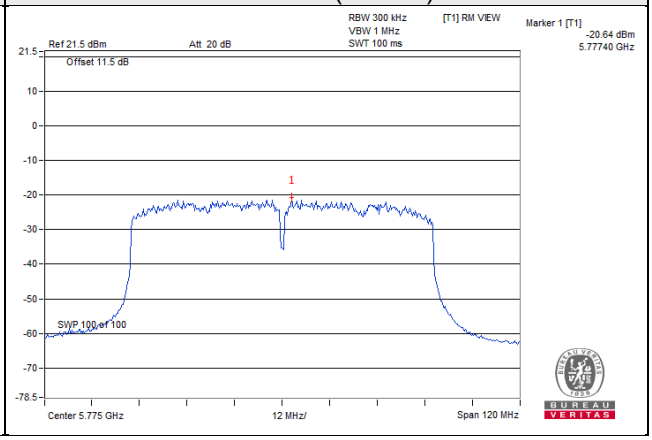
Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
142	5710 For U-NII-3	-17.69	-15.47	1.21	-14.26	30	Pass
151	5755	-16.71	-14.49	1.21	-13.28	30	Pass
159	5795	-16.81	-14.59	1.21	-13.38	30	Pass

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

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
138	5690 For U-NII-3	-23.92	-21.70	2.64	-19.06	30	Pass
155	5775	-20.64	-18.42	2.64	-15.78	30	Pass

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

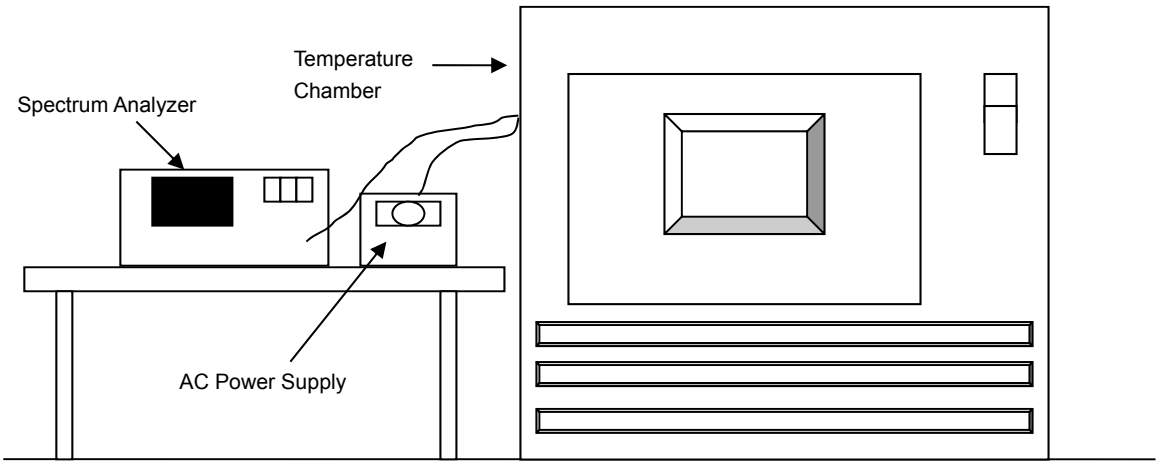
Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

4.6 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

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 11, 2018	Jun. 10, 2019
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 04, 2018	Jun. 03, 2019
Digital Multimeter Fluke	87-III	70360742	Jun. 29, 2018	Jun. 28, 2019
AC Power Supply Extech	CFW-105	E000603	NA	NA

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. Repeated step d with the temperature chamber sets to each desired 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)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
55	120	5180.0147	PASS	5180.0171	PASS	5180.0184	PASS	5180.0182	PASS
50	120	5180.0172	PASS	5180.0153	PASS	5180.0152	PASS	5180.0174	PASS
40	120	5180.0000	PASS	5180.0029	PASS	5180.0025	PASS	5180.0007	PASS
30	120	5180.0093	PASS	5180.0107	PASS	5180.0090	PASS	5180.0085	PASS
20	120	5179.9981	PASS	5179.9985	PASS	5179.9982	PASS	5179.9943	PASS
10	120	5179.9800	PASS	5179.9779	PASS	5179.9803	PASS	5179.9790	PASS
0	120	5179.9753	PASS	5179.9783	PASS	5179.9746	PASS	5179.9761	PASS
-10	120	5179.9978	PASS	5179.9991	PASS	5179.9963	PASS	5179.9987	PASS
-20	120	5179.9826	PASS	5179.9842	PASS	5179.9855	PASS	5179.9825	PASS

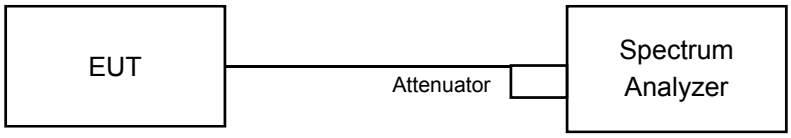
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0092	PASS	5180.0101	PASS	5180.0090	PASS	5180.0079	PASS
	120	5180.0093	PASS	5180.0107	PASS	5180.0090	PASS	5180.0085	PASS
	102	5180.0090	PASS	5180.0113	PASS	5180.0100	PASS	5180.0079	PASS

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	3.13	0.5	Pass
149	5745	16.46	0.5	Pass
157	5785	16.46	0.5	Pass
165	5825	16.44	0.5	Pass

802.11n (HT20)

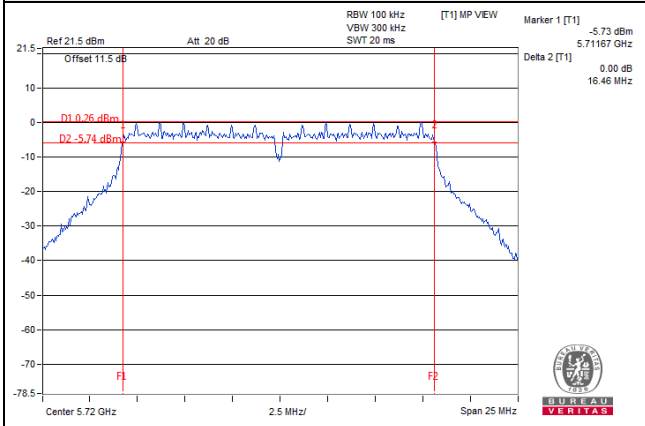
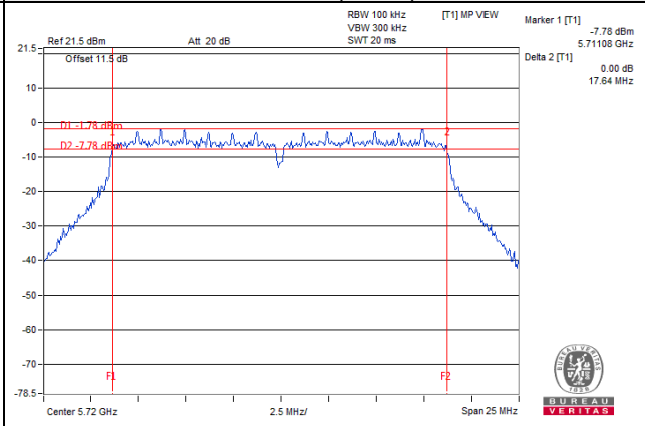
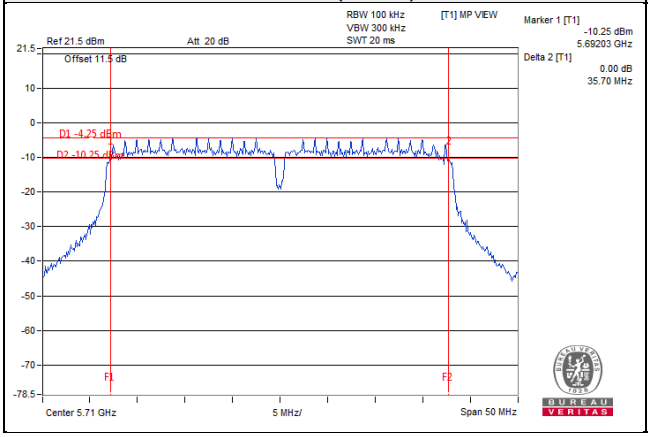
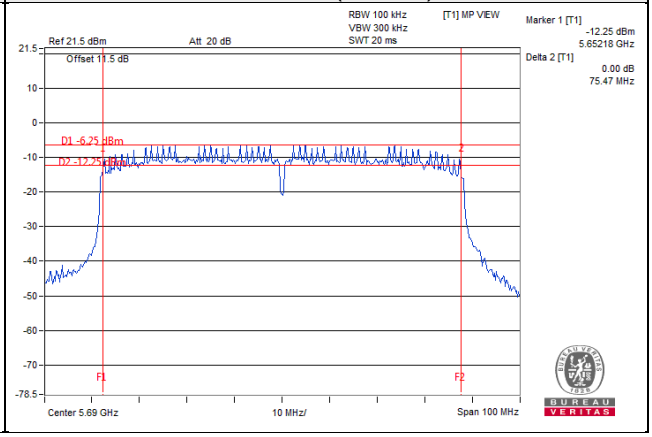
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.72	0.5	Pass
149	5745	17.66	0.5	Pass
157	5785	17.67	0.5	Pass
165	5825	17.65	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	2.73	0.5	Pass
151	5755	35.61	0.5	Pass
159	5795	35.47	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 For U-NII-3	2.65	0.5	Pass
155	5775	75.47	0.5	Pass

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

*802.11a: Ch 144 (5720MHz for U-NII-3): 16.46-(5725-5711.67) = 3.13

*802.11n (HT20): Ch 144 (5720MHz for U-NII-3): 17.64-(5725-5711.08) = 3.72

*802.11n (HT40): Ch 142 (5710MHz for U-NII-3): 35.70-(5725-5692.03) = 2.73

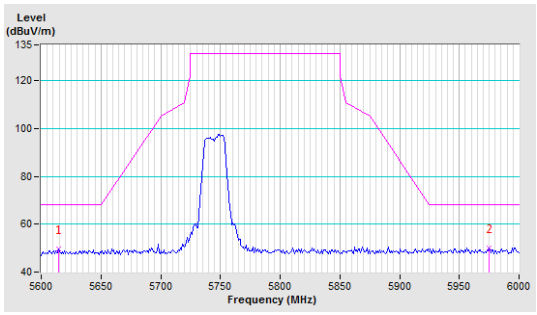
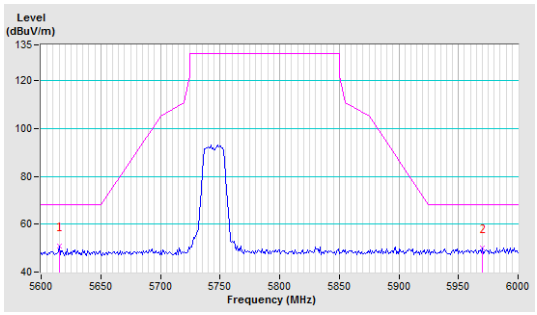
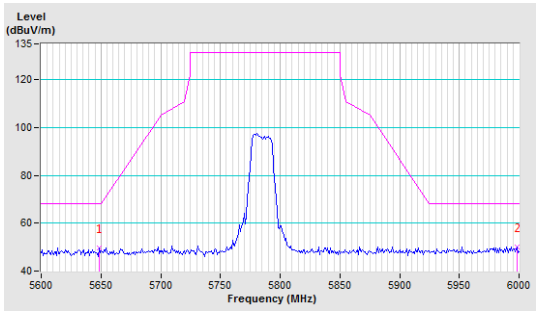
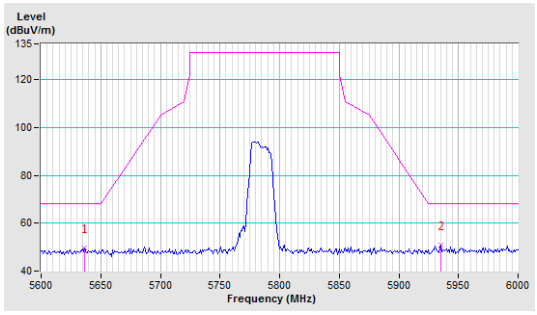
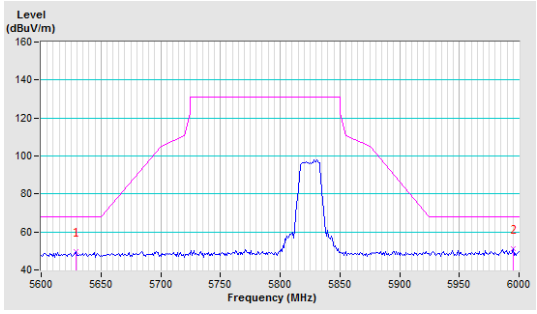
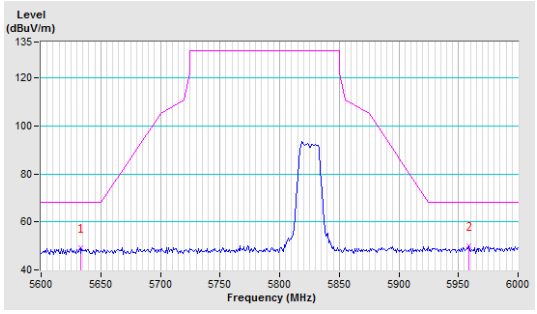
*802.11ac (VHT80): Ch 138 (5690MHz for U-NII-3): 75.47-(5725-5652.18) = 2.65

5 Pictures of Test Arrangements

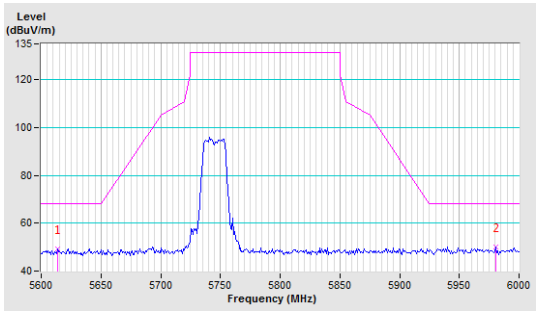
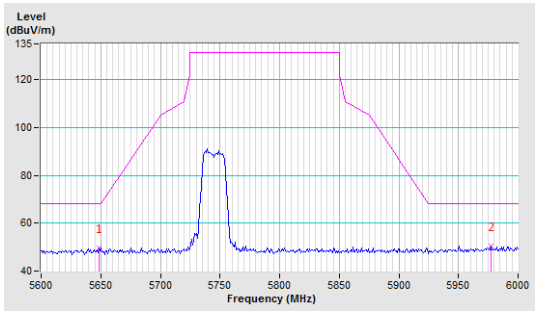
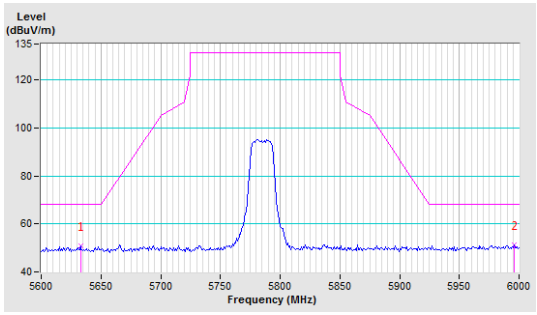
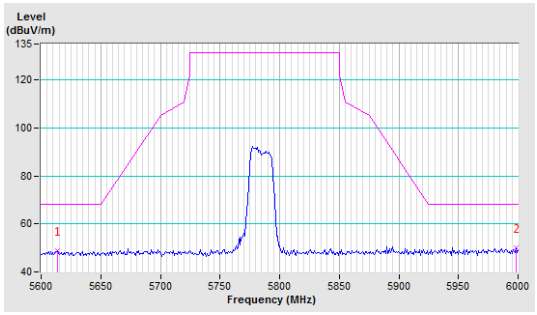
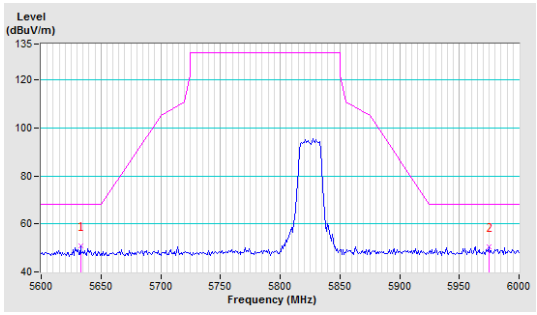
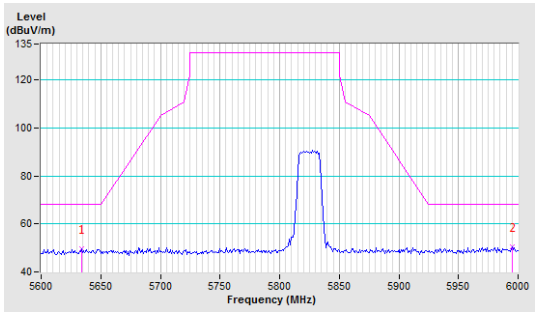
Please refer to the attached file (Test Setup Photo).

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

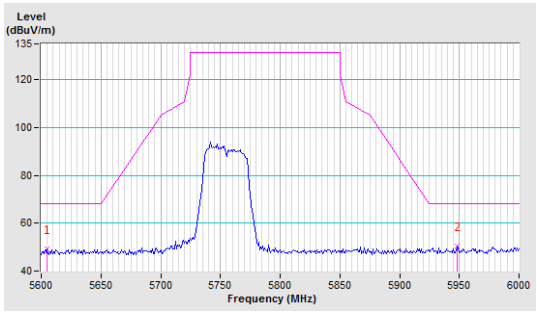
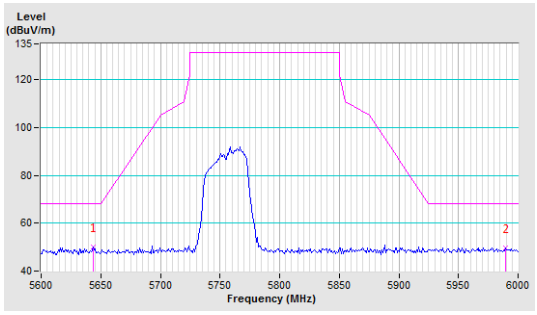
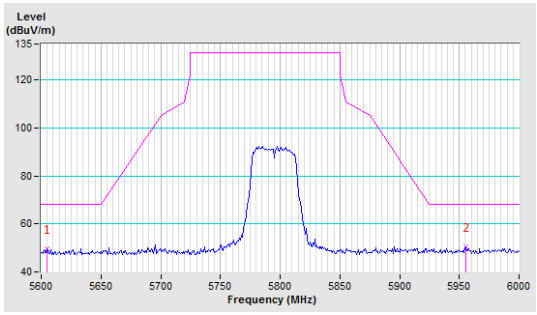
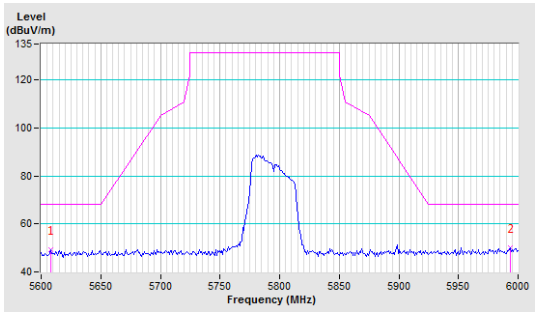
802.11a

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

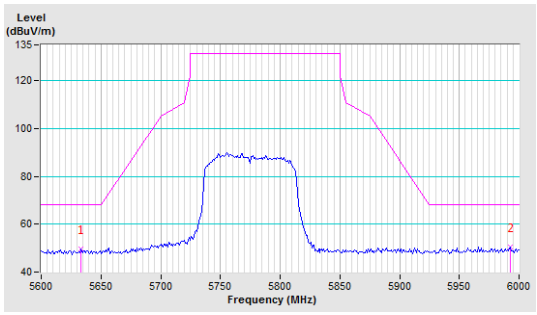
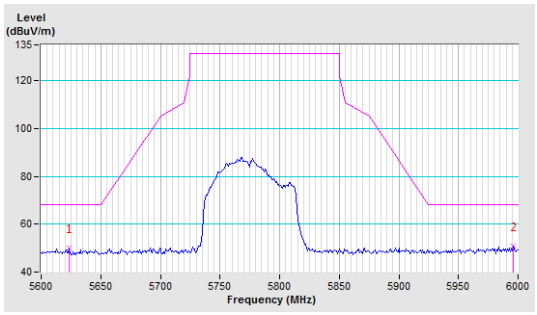
802.11n (HT20)

CH149	
Horizontal	Vertical
	
CH157	
Horizontal	Vertical
	
CH165	
Horizontal	Vertical
	

802.11n (HT40)

CH151	
Horizontal	Vertical
	
CH159	
Horizontal	Vertical
	

802.11ac (VHT80)

CH155	
Horizontal	Vertical
	

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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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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