

FCC Test Report

Report No.: RF161214C23-1

FCC ID: Q3N-MR00002

Test Model: RS31

Series Model: BHT-1600 (refer to item 3.1 for more details)

Received Date: Nov. 30, 2016

Test Date: Dec. 03, 2016 ~ Jan. 09, 2017

Issued Date: Jan. 17, 2017

Applicant: CIPHERLAB CO., LTD

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

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Release Control Record

Issue No.	Description	Date Issued
RF161214C23-1	Original release	Jan. 17, 2017

1 Certificate of Conformity

Product: Mobile Computer

Brand: CIPHERLAB, DENSO (refer to item 3.1 for more details)

Test Model: RS31

Series Model: BHT-1600 (refer to item 3.1 for more details)

Sample Status: Engineering sample

Applicant: CIPHERLAB CO., LTD

Test Date: Dec. 03, 2016 ~ Jan. 09, 2017

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

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

Prepared by : Celine Chou , **Date:** Jan. 17, 2017
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Jan. 17, 2017
Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -10.63dB at 0.55265MHz.
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 -1.3dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is Patch not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.

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	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Mobile Computer
Brand	CIPHERLAB, DENSO (refer to note for more details)
Test Model	RS31
Series Model	BHT-1600
Model Difference	Refer to note as below
Sample Status	Engineering sample
Power Supply Rating	3.85Vdc (Battery) 5Vdc (Adapter)
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz & 5745 ~ 5825MHz
Number of Channel	5180MHz ~ 5240MHz 802.11a, 802.11n (HT20): 4 802.11n (HT40): 2 5260MHz ~ 5320MHz: 802.11a, 802.11n (HT20): 4 802.11n (HT40): 2 5500MHz ~ 5700MHz: 802.11a, 802.11n (HT20): 8 802.11n (HT40): 3 5745MHz ~ 5825MHz: 802.11a, 802.11n (HT20): 5 802.11n (HT40): 2
Output Power	5180MHz ~ 5240MHz: 39.994mW 5260MHz ~ 5320MHz: 37.497mW 5500MHz ~ 5700MHz: 35.318mW 5745MHz ~ 5825MHz: 39.628mW
Antenna Type	Refer to note as below
Antenna Connector	Refer to note as below
Accessory Device	Adapter, Battery
Data Cable Supplied	1m shielded USB cable without core 1.6m non-shielded snapon cable with one core

Note:

1. All models and brands are listed as below. Model RS31 is the representatives for final test.

Brand	Model	Difference
CIPHERLAB	RS31	All models are electrically identical, different colors, model names and brand names are for marketing purpose.
DENSO	BHT-1600	

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

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

3. The EUT with follow antenna gain is listed as table below.

Antenna Type	Connector	Gain (dBi)							
		2400MHz		2450MHz			2500MHz		
PIFA	Patch	1.61		0.66			0.93		
		5150MHz	5250MHz	5350MHz	5470MHz	5725MHz	5785MHz	5875MHz	
		3.13	2.33	2.69	2.20	0.50	0.48	1.03	

4. The EUT uses following adapter and battery.

Adapter	
Brand	Sunny COMPUTER TECHNOLOGY CO., LTD.
Model	SYS1561-1005
Input Power	100-240Vac, 1.0A MAX 50-60Hz
Output Power	+5Vdc, 2A

Battery	
Brand	CIPHERLAB, DENSO
Model	BA-0093A0
Rating	3.85Vdc, 2960mAh, 11.40Wh

5. The EUT has disabled the 5600-5650MHz band by S/W to avoid 5600-5650MHz.

3.2 Description of Test Modes

For 5180 ~ 5240MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

For 5260 ~ 5320MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

For 5500 ~ 5700MHz

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

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

3 channels are provided for 802.11n (HT40):

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

For 5745 ~ 5825MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT + USB Cable + Adapter + Battery
B	-	√	√	-	EUT + Snapon Cable + Adapter + Battery

Where RE $\geq$ 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 **Y-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1GHz):

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
A	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5

Radiated Emission Test (Below 1GHz):

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	802.11a	5180-5240	36 to 48	40	OFDM	BPSK	6.0
		5260-5320	52 to 64		OFDM	BPSK	6.0
		5500-5700	100 to 140		OFDM	BPSK	6.0
		5745-5825	149 to 165		OFDM	BPSK	6.0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	802.11a	5180-5240	36 to 48	40	OFDM	BPSK	6.0
		5260-5320	52 to 64		OFDM	BPSK	6.0
		5500-5700	100 to 140		OFDM	BPSK	6.0
		5745-5825	149 to 165		OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
A	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
A	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
A	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
A	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE _≥ 1G	24deg. C, 68%RH	120Vac, 60Hz	Chris Lin
RE _{<} 1G	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
PLC	25deg. C, 69%RH	120Vac, 60Hz	Bong Tseng
APCM	25deg. C, 60%RH	120Vac, 60Hz	Ted Chang

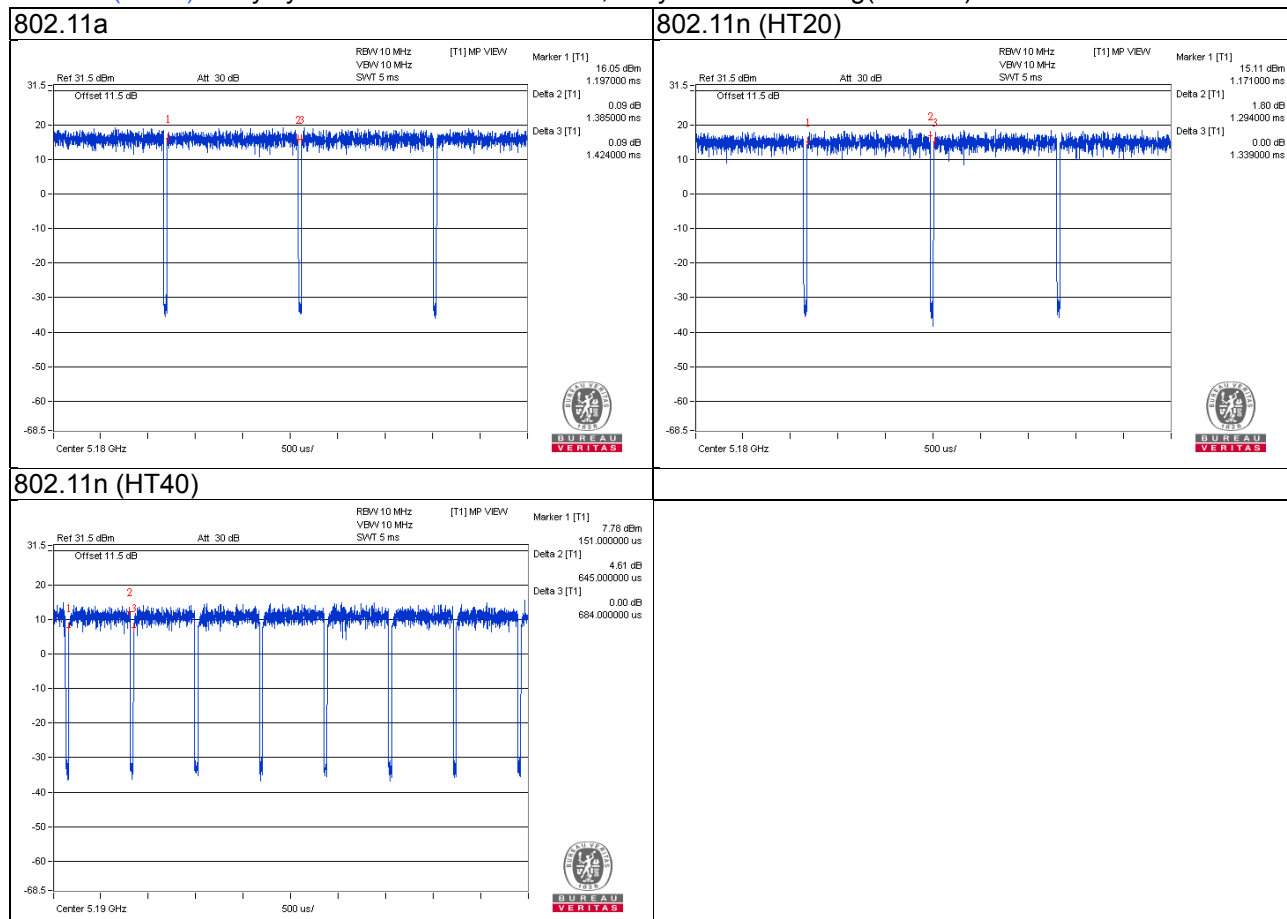
3.3 Duty Cycle of Test Signal

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

802.11a: Duty cycle = $1.385/1.424 = 0.973$, Duty factor = $10 * \log(1/0.973) = 0.12$

802.11n (HT20): Duty cycle = $1.294/1.339 = 0.966$, Duty factor = $10 * \log(1/0.966) = 0.15$

802.11n (HT40): Duty cycle = $0.645/0.684 = 0.943$, Duty factor = $10 * \log(1/0.943) = 0.25$

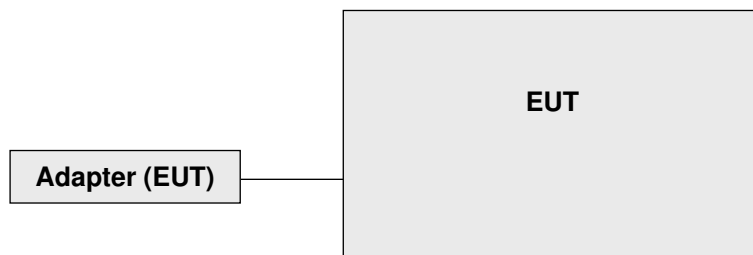


3.4 Description of Support Units

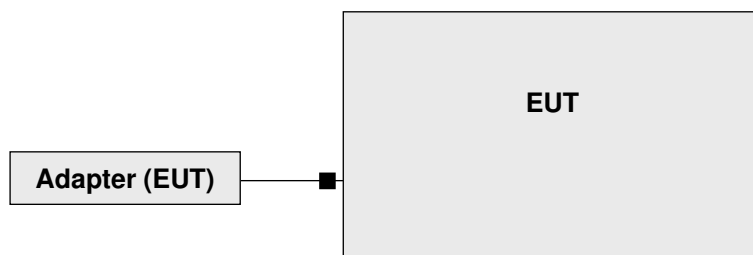
The EUT has been tested as an independent unit.

3.4.1 Configuration of System under Test

Test Mode A



Test Mode B



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedures New Rules v01r03

ANSI C63.10-2013

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

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC).
The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Aug. 16, 2016	Aug. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Dec. 28, 2015	Dec. 27, 2016
			Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Dec. 15, 2015	Dec. 14, 2016
			Dec. 15, 2016	Dec. 14, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2015	Dec. 13, 2016
			Dec. 14, 2016	Dec. 13, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2016	Aug. 08, 2017
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 09, 2016	Aug. 08, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 09, 2016	Aug. 08, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017
High Speed Peak Power Meter	ML2495A	0824012	Aug. 11, 2016	Aug. 10, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 2016	Aug. 10, 2017
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2016	Jun. 07, 2017

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

4.1.3 Test Procedures

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. Both X and Y axes 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:

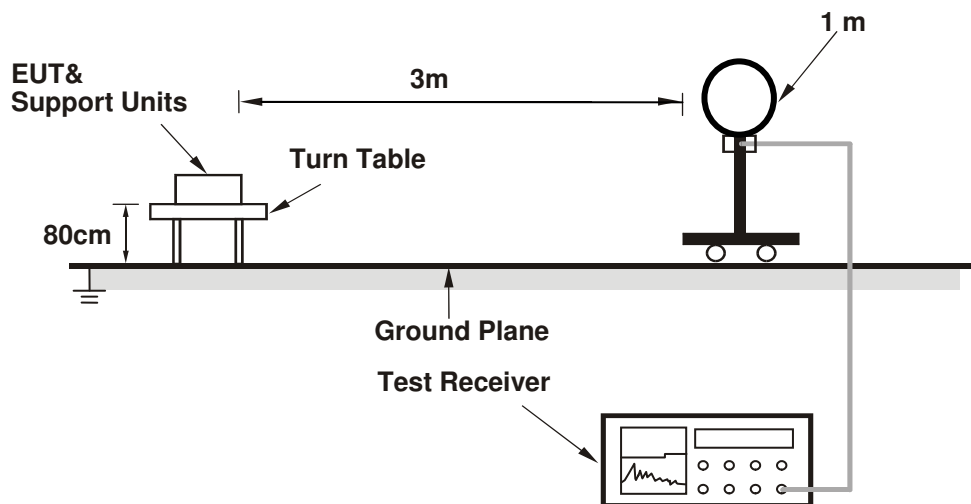
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) 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

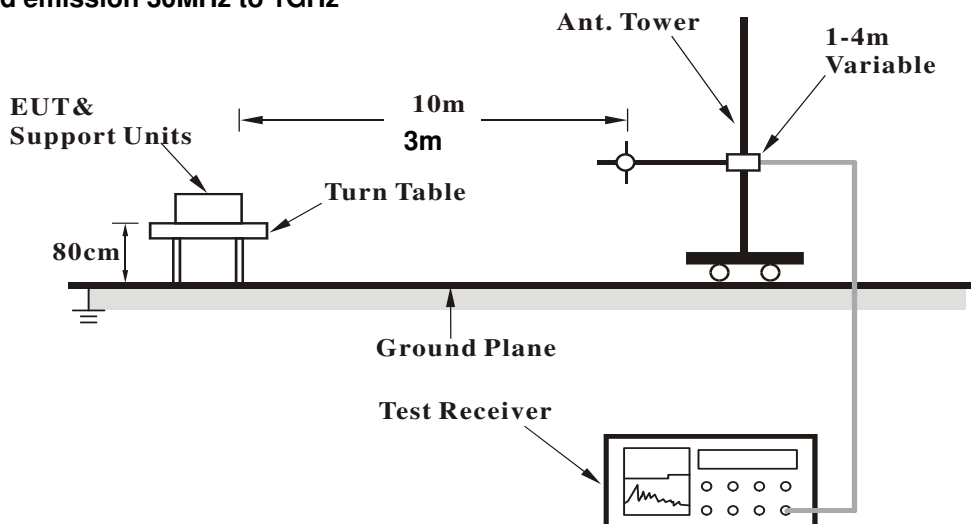
No deviation.

4.1.5 Test Set Up

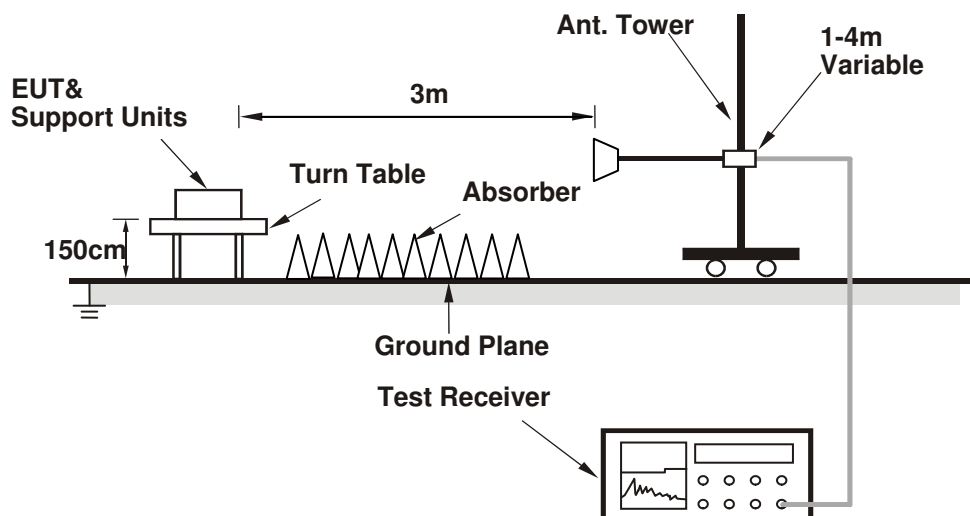
For Radiated emission below 30MHz



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.0 PK	74.0	-16.0	1.95 H	210	52.0	6.0
2	5150.00	46.7 AV	54.0	-7.3	1.95 H	210	40.7	6.0
3	*5180.00	109.1 PK			1.99 H	202	69.0	40.1
4	*5180.00	100.0 AV			1.99 H	202	59.9	40.1
5	#10360.00	59.2 PK	74.0	-14.8	1.84 H	126	41.5	17.7
6	#10360.00	47.8 AV	54.0	-6.2	1.84 H	126	30.1	17.7
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	57.6 PK	74.0	-16.4	1.75 V	153	51.6	6.0
2	5150.00	45.9 AV	54.0	-8.1	1.75 V	153	39.9	6.0
3	*5180.00	108.1 PK			1.73 V	148	68.0	40.1
4	*5180.00	97.9 AV			1.73 V	148	57.8	40.1
5	#10360.00	58.0 PK	74.0	-16.0	1.12 V	30	40.3	17.7
6	#10360.00	45.8 AV	54.0	-8.2	1.12 V	30	28.1	17.7

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	108.4 PK			2.21 H	30	68.2	40.2
2	*5200.00	99.2 AV			2.21 H	30	59.0	40.2
3	#10400.00	59.1 PK	74.0	-14.9	1.72 H	225	40.9	18.2
4	#10400.00	46.2 AV	54.0	-7.8	1.72 H	225	28.0	18.2
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	108.0 PK			1.36 V	332	67.8	40.2
2	*5200.00	98.1 AV			1.36 V	332	57.9	40.2
3	#10400.00	59.2 PK	74.0	-14.8	1.00 V	75	41.0	18.2
4	#10400.00	46.4 AV	54.0	-7.6	1.00 V	75	28.2	18.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	108.9 PK			2.10 H	31	68.7	40.2
2	*5240.00	99.1 AV			2.10 H	31	58.9	40.2
3	5350.00	59.2 PK	74.0	-14.8	2.15 H	35	53.0	6.2
4	5350.00	47.0 AV	54.0	-7.0	2.15 H	35	40.8	6.2
5	#10480.00	60.7 PK	74.0	-13.3	1.36 H	98	42.5	18.2
6	#10480.00	48.3 AV	54.0	-5.7	1.36 H	98	30.1	18.2
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	107.7 PK			1.81 V	329	67.5	40.2
2	*5240.00	97.5 AV			1.81 V	329	57.3	40.2
3	5350.00	47.0 PK	74.0	-27.0	1.32 V	68	40.8	6.2
4	5350.00	46.1 AV	54.0	-7.9	1.32 V	68	39.9	6.2
5	#10480.00	58.7 PK	74.0	-15.3	1.32 V	98	40.5	18.2
6	#10480.00	48.1 AV	54.0	-5.9	1.32 V	98	29.9	18.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	2.05 H	32	53.6	6.0
2	5150.00	46.8 AV	54.0	-7.2	2.05 H	32	40.8	6.0
3	*5260.00	108.2 PK			2.00 H	30	68.0	40.2
4	*5260.00	98.3 AV			2.00 H	30	58.1	40.2
5	#10520.00	59.5 PK	74.0	-14.5	1.23 H	64	41.2	18.3
6	#10520.00	48.3 AV	54.0	-5.7	1.23 H	64	30.0	18.3
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	5150.00	58.1 PK	74.0	-15.9	1.74 V	336	52.1	6.0
2	5150.00	46.1 AV	54.0	-7.9	1.74 V	336	40.1	6.0
3	*5260.00	107.6 PK			1.65 V	335	67.4	40.2
4	*5260.00	97.1 AV			1.65 V	335	56.9	40.2
5	#10520.00	59.6 PK	74.0	-14.4	1.15 V	32	41.3	18.3
6	#10520.00	48.2 AV	54.0	-5.8	1.15 V	32	29.9	18.3

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	107.9 PK			2.13 H	24	67.4	40.5
2	*5300.00	97.9 AV			2.13 H	24	57.4	40.5
3	10600.00	60.3 PK	74.0	-13.7	1.74 H	248	41.5	18.8
4	10600.00	47.9 AV	54.0	-6.1	1.74 H	248	29.1	18.8
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	*5300.00	106.7 PK			1.41 V	328	66.2	40.5
2	*5300.00	97.0 AV			1.41 V	328	56.5	40.5
3	10600.00	59.8 PK	74.0	-14.2	1.19 V	80	41.0	18.8
4	10600.00	47.5 AV	54.0	-6.5	1.19 V	80	28.7	18.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	108.9 PK			2.06 H	205	68.7	40.2
2	*5320.00	99.2 AV			2.06 H	205	59.0	40.2
3	5350.00	62.2 PK	74.0	-11.8	2.10 H	210	56.0	6.2
4	5350.00	47.1 AV	54.0	-6.9	2.10 H	210	40.9	6.2
5	10640.00	60.5 PK	74.0	-13.5	1.16 H	57	41.5	19.0
6	10640.00	49.1 AV	54.0	-4.9	1.16 H	57	30.1	19.0
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	*5320.00	105.4 PK			1.73 V	99	65.2	40.2
2	*5320.00	94.8 AV			1.73 V	99	54.6	40.2
3	5350.00	58.1 PK	74.0	-15.9	1.64 V	105	51.9	6.2
4	5350.00	46.1 AV	54.0	-7.9	1.64 V	105	39.9	6.2
5	10640.00	59.3 PK	74.0	-14.7	1.16 V	35	40.3	19.0
6	10640.00	47.4 AV	54.0	-6.6	1.16 V	35	28.4	19.0

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.8 PK	74.0	-14.2	2.16 H	217	53.5	6.3
2	5460.00	46.3 AV	54.0	-7.7	2.16 H	217	40.0	6.3
3	#5470.00	62.3 PK	74.0	-11.7	2.16 H	205	56.0	6.3
4	#5470.00	47.1 AV	54.0	-6.9	2.16 H	205	40.8	6.3
5	*5500.00	108.2 PK			2.14 H	199	67.8	40.4
6	*5500.00	98.2 AV			2.14 H	199	57.8	40.4
7	11000.00	61.1 PK	74.0	-12.9	1.05 H	78	41.6	19.5
8	11000.00	49.2 AV	54.0	-4.8	1.05 H	78	29.7	19.5
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	5460.00	57.5 PK	74.0	-16.5	1.39 V	154	51.2	6.3
2	5460.00	45.1 AV	54.0	-8.9	1.39 V	154	38.8	6.3
3	#5470.00	60.3 PK	74.0	-13.7	1.35 V	150	54.0	6.3
4	#5470.00	46.1 AV	54.0	-7.9	1.35 V	150	39.8	6.3
5	*5500.00	103.6 PK			1.33 V	146	63.2	40.4
6	*5500.00	93.9 AV			1.33 V	146	53.5	40.4
7	11000.00	59.8 PK	74.0	-14.2	1.26 V	85	40.3	19.5
8	11000.00	48.2 AV	54.0	-5.8	1.26 V	85	28.7	19.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	107.7 PK			2.02 H	1	66.7	41.0
2	*5580.00	97.4 AV			2.02 H	1	56.4	41.0
3	11160.00	61.1 PK	74.0	-12.9	1.69 H	301	41.3	19.8
4	11160.00	48.9 AV	54.0	-5.1	1.69 H	301	29.1	19.8
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	*5580.00	103.5 PK			1.40 V	329	62.5	41.0
2	*5580.00	93.7 AV			1.40 V	329	52.7	41.0
3	11160.00	60.6 PK	74.0	-13.4	1.25 V	56	40.8	19.8
4	11160.00	48.1 AV	54.0	-5.9	1.25 V	56	28.3	19.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	109.6 PK			1.58 H	48	68.7	40.9
2	*5700.00	98.5 AV			1.58 H	48	57.6	40.9
3	#5725.00	65.7 PK	74.0	-8.3	1.68 H	50	59.0	6.7
4	#5725.00	48.0 AV	54.0	-6.0	1.68 H	50	41.3	6.7
5	11400.00	62.1 PK	74.0	-11.9	1.05 H	64	41.5	20.6
6	11400.00	50.7 AV	54.0	-3.3	1.05 H	64	30.1	20.6
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	107.1 PK			1.49 V	46	66.2	40.9
2	*5700.00	97.3 AV			1.49 V	46	56.4	40.9
3	#5725.00	58.6 PK	74.0	-15.4	1.58 V	54	51.9	6.7
4	#5725.00	46.6 AV	54.0	-7.4	1.58 V	54	39.9	6.7
5	11400.00	61.5 PK	74.0	-12.5	1.32 V	65	40.9	20.6
6	11400.00	49.3 AV	54.0	-4.7	1.32 V	65	28.7	20.6

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5615.20	58.8 PK	68.2	-9.4	1.80 H	317	52.4	6.4
2	*5745.00	103.9 PK			1.80 H	317	63.0	40.9
3	*5745.00	93.9 AV			1.80 H	317	53.0	40.9
4	#5972.80	59.3 PK	68.2	-8.9	1.80 H	317	52.1	7.2
5	11490.00	62.1 PK	74.0	-11.9	1.05 H	64	41.6	20.5
6	11490.00	50.4 AV	54.0	-3.6	1.05 H	64	29.9	20.5
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	#5631.20	58.3 PK	68.2	-9.9	1.55 V	145	51.8	6.5
2	*5745.00	103.8 PK			1.55 V	145	62.9	40.9
3	*5745.00	93.4 AV			1.55 V	145	52.5	40.9
4	#5932.80	58.8 PK	68.2	-9.4	1.55 V	145	51.7	7.1
5	11450.00	60.7 PK	74.0	-13.3	1.32 V	85	40.1	20.6
6	11450.00	49.6 AV	54.0	-4.4	1.32 V	85	29.0	20.6

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5608.80	59.0 PK	68.2	-9.2	1.68 H	355	52.1	6.9
2	*5785.00	106.5 PK			1.68 H	355	64.9	41.6
3	*5785.00	96.4 AV			1.68 H	355	54.8	41.6
4	#5949.60	59.5 PK	68.2	-8.7	1.68 H	355	51.7	7.8
5	11570.00	61.9 PK	74.0	-12.1	1.09 H	102	41.8	20.1
6	11570.00	48.8 AV	54.0	-5.2	1.09 H	102	28.7	20.1
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	#5644.00	59.5 PK	68.2	-8.7	1.18 V	330	52.4	7.1
2	*5785.00	102.1 PK			1.18 V	330	60.5	41.6
3	*5785.00	92.1 AV			1.18 V	330	50.5	41.6
4	#5960.80	59.7 PK	68.2	-8.5	1.18 V	330	51.8	7.9
5	11570.00	60.7 PK	74.0	-13.3	1.00 V	155	40.6	20.1
6	11570.00	48.5 AV	54.0	-5.5	1.00 V	155	28.4	20.1

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.80	58.5 PK	68.2	-9.7	1.58 H	52	52.0	6.5
2	*5825.00	108.7 PK			1.58 H	52	67.5	41.2
3	*5825.00	97.0 AV			1.58 H	52	55.8	41.2
4	#5976.00	58.2 PK	68.2	-10.0	1.58 H	52	51.0	7.2
5	11650.00	61.1 PK	74.0	-12.9	1.25 H	97	41.2	19.9
6	11650.00	50.0 AV	54.0	-4.0	1.25 H	97	30.1	19.9
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	#5639.20	58.4 PK	68.2	-9.8	1.47 V	323	51.9	6.5
2	*5825.00	107.3 PK			1.47 V	323	66.1	41.2
3	*5825.00	96.9 AV			1.47 V	323	55.7	41.2
4	#5992.80	59.4 PK	68.2	-8.8	1.47 V	323	52.2	7.2
5	11650.00	60.4 PK	74.0	-13.6	1.36 V	98	40.5	19.9
6	11650.00	48.6 AV	54.0	-5.4	1.36 V	98	28.7	19.9

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.98 H	26	54.6	6.0
2	5150.00	47.2 AV	54.0	-6.8	1.98 H	26	41.2	6.0
3	*5180.00	107.9 PK			1.96 H	24	67.8	40.1
4	*5180.00	97.4 AV			1.96 H	24	57.3	40.1
5	#10360.00	59.6 PK	74.0	-14.4	1.05 H	97	41.9	17.7
6	#10360.00	47.8 AV	54.0	-6.2	1.05 H	97	30.1	17.7
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	58.6 PK	74.0	-15.4	1.55 V	331	52.6	6.0
2	5150.00	45.5 AV	54.0	-8.5	1.55 V	331	39.5	6.0
3	*5180.00	106.6 PK			1.50 V	324	66.5	40.1
4	*5180.00	95.7 AV			1.50 V	324	55.6	40.1
5	#10360.00	58.2 PK	74.0	-15.8	1.39 V	64	40.5	17.7
6	#10360.00	46.1 AV	54.0	-7.9	1.39 V	64	28.4	17.7

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.2 PK			2.02 H	30	67.0	40.2
2	*5200.00	96.7 AV			2.02 H	30	56.5	40.2
3	#10400.00	59.9 PK	74.0	-14.1	1.80 H	235	41.7	18.2
4	#10400.00	46.6 AV	54.0	-7.4	1.80 H	235	28.4	18.2
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	107.3 PK			1.34 V	329	67.1	40.2
2	*5200.00	97.7 AV			1.34 V	329	57.5	40.2
3	#10400.00	46.2 PK	74.0	-27.8	1.00 V	89	28.0	18.2
4	#10400.00	33.4 AV	54.0	-20.6	1.00 V	89	15.2	18.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.8 PK			1.82 H	28	67.6	40.2
2	*5240.00	98.5 AV			1.82 H	28	58.3	40.2
3	5350.00	59.8 PK	74.0	-14.2	1.85 H	30	53.6	6.2
4	5350.00	46.8 AV	54.0	-7.2	1.85 H	30	40.6	6.2
5	#10480.00	59.4 PK	74.0	-14.6	1.25 H	87	41.2	18.2
6	#10480.00	48.3 AV	54.0	-5.7	1.25 H	87	30.1	18.2
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	108.0 PK			1.56 V	329	67.8	40.2
2	*5240.00	97.1 AV			1.56 V	329	56.9	40.2
3	5350.00	57.4 PK	74.0	-16.6	1.58 V	314	51.2	6.2
4	5350.00	45.6 AV	54.0	-8.4	1.58 V	314	39.4	6.2
5	#10480.00	58.5 PK	74.0	-15.5	1.06 V	85	40.3	18.2
6	#10480.00	46.8 AV	54.0	-7.2	1.06 V	85	28.6	18.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.3 PK	74.0	-14.7	1.89 H	31	53.3	6.0
2	5150.00	46.1 AV	54.0	-7.9	1.89 H	31	40.1	6.0
3	*5260.00	107.3 PK			1.86 H	29	67.1	40.2
4	*5260.00	97.8 AV			1.86 H	29	57.6	40.2
5	#10520.00	59.8 PK	74.0	-14.2	1.06 H	85	41.5	18.3
6	#10520.00	48.5 AV	54.0	-5.5	1.06 H	85	30.2	18.3
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	5150.00	57.2 PK	74.0	-16.8	1.70 V	331	51.2	6.0
2	5150.00	45.4 AV	54.0	-8.6	1.70 V	331	39.4	6.0
3	*5260.00	106.1 PK			1.64 V	328	65.9	40.2
4	*5260.00	95.9 AV			1.64 V	328	55.7	40.2
5	#10520.00	58.9 PK	74.0	-15.1	1.32 V	69	40.6	18.3
6	#10520.00	47.0 AV	54.0	-7.0	1.32 V	69	28.7	18.3

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	107.2 PK			2.10 H	25	66.7	40.5
2	*5300.00	98.0 AV			2.10 H	25	57.5	40.5
3	10600.00	60.1 PK	74.0	-13.9	1.80 H	251	41.3	18.8
4	10600.00	47.6 AV	54.0	-6.4	1.80 H	251	28.8	18.8
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	*5300.00	105.9 PK			1.54 V	332	65.4	40.5
2	*5300.00	95.7 AV			1.54 V	332	55.2	40.5
3	10600.00	59.7 PK	74.0	-14.3	1.15 V	77	40.9	18.8
4	10600.00	47.3 AV	54.0	-6.7	1.15 V	77	28.5	18.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	107.3 PK			2.00 H	29	67.1	40.2
2	*5320.00	98.0 AV			2.00 H	29	57.8	40.2
3	5350.00	59.7 PK	74.0	-14.3	2.05 H	35	53.5	6.2
4	5350.00	36.3 AV	54.0	-17.7	2.05 H	35	30.1	6.2
5	10640.00	60.5 PK	74.0	-13.5	1.32 H	64	41.5	19.0
6	10640.00	49.1 AV	54.0	-4.9	1.32 H	64	30.1	19.0
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	*5320.00	105.0 PK			1.61 V	330	64.8	40.2
2	*5320.00	95.4 AV			1.61 V	330	55.2	40.2
3	5350.00	58.0 PK	74.0	-16.0	1.65 V	341	51.8	6.2
4	5350.00	45.7 AV	54.0	-8.3	1.65 V	341	39.5	6.2
5	10640.00	60.2 PK	74.0	-13.8	1.32 V	64	41.2	19.0
6	10640.00	48.0 AV	54.0	-6.0	1.32 V	64	29.0	19.0

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.7 PK	74.0	-15.3	1.98 H	55	52.4	6.3
2	5460.00	46.0 AV	54.0	-8.0	1.98 H	55	39.7	6.3
3	#5470.00	66.7 PK	74.0	-7.3	1.96 H	55	60.4	6.3
4	#5470.00	47.8 AV	54.0	-6.2	1.96 H	55	41.5	6.3
5	*5500.00	107.7 PK			1.95 H	52	67.3	40.4
6	*5500.00	97.6 AV			1.95 H	52	57.2	40.4
7	11000.00	60.7 PK	74.0	-13.3	1.32 H	64	41.2	19.5
8	11000.00	49.6 AV	54.0	-4.4	1.32 H	64	30.1	19.5
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	5460.00	57.3 PK	74.0	-16.7	1.68 V	321	51.0	6.3
2	5460.00	45.1 AV	54.0	-8.9	1.68 V	321	38.8	6.3
3	#5470.00	58.6 PK	74.0	-15.4	1.65 V	326	52.3	6.3
4	#5470.00	46.4 AV	54.0	-7.6	1.65 V	326	40.1	6.3
5	*5500.00	105.8 PK			1.63 V	325	65.4	40.4
6	*5500.00	95.4 AV			1.63 V	325	55.0	40.4
7	11000.00	59.8 PK	74.0	-14.2	1.32 V	65	40.3	19.5
8	11000.00	48.2 AV	54.0	-5.8	1.32 V	65	28.7	19.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	107.2 PK			2.17 H	3	66.2	41.0
2	*5580.00	97.0 AV			2.17 H	3	56.0	41.0
3	11160.00	60.6 PK	74.0	-13.4	1.66 H	309	40.8	19.8
4	11160.00	48.6 AV	54.0	-5.4	1.66 H	309	28.8	19.8
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	*5580.00	103.2 PK			1.40 V	333	62.2	41.0
2	*5580.00	92.9 AV			1.40 V	333	51.9	41.0
3	11160.00	60.4 PK	74.0	-13.6	1.22 V	88	40.6	19.8
4	11160.00	48.1 AV	54.0	-5.9	1.22 V	88	28.3	19.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	106.4 PK			1.73 H	29	65.5	40.9
2	*5700.00	96.4 AV			1.73 H	29	55.5	40.9
3	#5725.00	64.5 PK	74.0	-9.5	1.75 H	32	57.8	6.7
4	#5725.00	47.1 AV	54.0	-6.9	1.75 H	32	40.4	6.7
5	11400.00	62.1 PK	74.0	-11.9	1.32 H	68	41.5	20.6
6	11400.00	50.7 AV	54.0	-3.3	1.32 H	68	30.1	20.6
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	105.4 PK			1.51 V	81	64.5	40.9
2	*5700.00	94.4 AV			1.51 V	81	53.5	40.9
3	#5725.00	58.4 PK	74.0	-15.6	1.56 V	89	51.7	6.7
4	#5725.00	46.1 AV	54.0	-7.9	1.56 V	89	39.4	6.7
5	11400.00	61.2 PK	74.0	-12.8	1.06 V	39	40.6	20.6
6	11400.00	48.7 AV	54.0	-5.3	1.06 V	39	28.1	20.6

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5638.40	59.0 PK	68.2	-9.2	1.93 H	54	52.5	6.5
2	*5745.00	106.4 PK			1.93 H	54	65.5	40.9
3	*5745.00	96.3 AV			1.93 H	54	55.4	40.9
4	#5974.40	59.2 PK	68.2	-9.0	1.93 H	54	52.0	7.2
5	11490.00	61.7 PK	74.0	-12.3	1.32 H	65	41.2	20.5
6	11490.00	50.6 AV	54.0	-3.4	1.32 H	65	30.1	20.5
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	#5644.00	59.6 PK	68.2	-8.6	1.00 V	41	53.1	6.5
2	*5745.00	104.4 PK			1.00 V	41	63.5	40.9
3	*5745.00	93.9 AV			1.00 V	41	53.0	40.9
4	#5936.00	60.1 PK	68.2	-8.1	1.00 V	41	53.0	7.1
5	11490.00	61.4 PK	74.0	-12.6	1.06 V	35	40.9	20.5
6	11490.00	49.2 AV	54.0	-4.8	1.06 V	35	28.7	20.5

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	58.9 PK	68.2	-9.3	1.69 H	356	51.8	7.1
2	*5785.00	105.4 PK			1.69 H	356	63.8	41.6
3	*5785.00	95.3 AV			1.69 H	356	53.7	41.6
4	#5955.20	59.5 PK	68.2	-8.7	1.69 H	356	51.6	7.9
5	11570.00	61.1 PK	74.0	-12.9	1.30 H	184	41.0	20.1
6	11570.00	49.1 AV	54.0	-4.9	1.30 H	184	29.0	20.1
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	#5627.20	59.2 PK	68.2	-9.0	1.17 V	329	52.2	7.0
2	*5785.00	101.9 PK			1.17 V	329	60.3	41.6
3	*5785.00	91.9 AV			1.17 V	329	50.3	41.6
4	#5932.00	59.7 PK	68.2	-8.5	1.17 V	329	51.9	7.8
5	11570.00	60.6 PK	74.0	-13.4	1.06 V	47	40.5	20.1
6	11570.00	48.5 AV	54.0	-5.5	1.06 V	47	28.4	20.1

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.80	57.6 PK	68.2	-10.6	1.89 H	52	51.1	6.5
2	*5825.00	105.4 PK			1.89 H	52	64.2	41.2
3	*5825.00	95.9 AV			1.89 H	52	54.7	41.2
4	#5940.00	58.3 PK	68.2	-9.9	1.89 H	52	51.2	7.1
5	11650.00	61.4 PK	74.0	-12.6	1.32 H	65	41.5	19.9
6	11650.00	50.1 AV	54.0	-3.9	1.32 H	65	30.2	19.9
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	#5638.40	57.9 PK	68.2	-10.3	1.32 V	327	51.4	6.5
2	*5825.00	104.0 PK			1.32 V	327	62.8	41.2
3	*5825.00	94.2 AV			1.32 V	327	53.0	41.2
4	#5940.00	58.3 PK	68.2	-9.9	1.32 V	327	51.2	7.1
5	11650.00	60.2 PK	74.0	-13.8	1.25 V	98	40.3	19.9
6	11650.00	48.3 AV	54.0	-5.7	1.25 V	98	28.4	19.9

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.0 PK	74.0	-7.0	2.07 H	23	61.0	6.0
2	5150.00	52.6 AV	54.0	-1.4	2.07 H	23	46.6	6.0
3	*5190.00	104.7 PK			2.03 H	24	64.6	40.1
4	*5190.00	94.8 AV			2.03 H	24	54.7	40.1
5	#10380.00	59.3 PK	74.0	-14.7	1.25 H	87	41.5	17.8
6	#10380.00	47.9 AV	54.0	-6.1	1.25 H	87	30.1	17.8
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	65.0 PK	74.0	-9.0	1.39 V	325	59.0	6.0
2	5150.00	49.3 AV	54.0	-4.7	1.39 V	325	43.3	6.0
3	*5190.00	102.4 PK			1.36 V	322	62.3	40.1
4	*5190.00	91.1 AV			1.36 V	322	51.0	40.1
5	#10380.00	58.3 PK	74.0	-15.7	1.06 V	68	40.5	17.8
6	#10380.00	46.3 AV	54.0	-7.7	1.06 V	68	28.5	17.8

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	105.1 PK			2.11 H	23	64.9	40.2
2	*5230.00	94.8 AV			2.11 H	23	54.6	40.2
3	5350.00	57.8 PK	74.0	-16.2	2.15 H	25	51.6	6.2
4	5350.00	46.7 AV	54.0	-7.3	2.15 H	25	40.5	6.2
5	#10460.00	59.5 PK	74.0	-14.5	1.33 H	25	41.5	18.0
6	#10460.00	48.1 AV	54.0	-5.9	1.33 H	25	30.1	18.0
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	*5230.00	103.8 PK			1.65 V	321	63.6	40.2
2	*5230.00	92.3 AV			1.65 V	321	52.1	40.2
3	5350.00	56.6 PK	74.0	-17.4	1.68 V	325	50.4	6.2
4	5350.00	45.7 AV	54.0	-8.3	1.68 V	325	39.5	6.2
5	#10460.00	58.8 PK	74.0	-15.2	1.06 V	38	40.8	18.0
6	#10460.00	46.4 AV	54.0	-7.6	1.06 V	38	28.4	18.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.9 PK	74.0	-16.1	2.00 H	30	51.9	6.0
2	5150.00	46.5 AV	54.0	-7.5	2.00 H	30	40.5	6.0
3	*5270.00	105.0 PK			1.98 H	27	64.8	40.2
4	*5270.00	94.9 AV			1.98 H	27	54.7	40.2
5	#10540.00	59.6 PK	74.0	-14.4	1.05 H	87	41.2	18.4
6	#10540.00	48.5 AV	54.0	-5.5	1.05 H	87	30.1	18.4
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	58.6 PK	74.0	-15.4	1.75 V	331	52.6	6.0
2	5150.00	44.7 AV	54.0	-9.3	1.75 V	331	38.7	6.0
3	*5270.00	103.1 PK			1.72 V	329	62.9	40.2
4	*5270.00	92.5 AV			1.72 V	329	52.3	40.2
5	#10540.00	59.6 PK	74.0	-14.4	1.06 V	38	41.2	18.4
6	#10540.00	46.5 AV	54.0	-7.5	1.06 V	38	28.1	18.4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	104.7 PK			2.04 H	29	64.5	40.2
2	*5310.00	94.5 AV			2.04 H	29	54.3	40.2
3	5350.00	67.3 PK	74.0	-6.7	2.04 H	29	61.1	6.2
4	5350.00	52.7 AV	54.0	-1.3	2.04 H	29	46.5	6.2
5	10620.00	60.3 PK	74.0	-13.7	1.32 H	64	41.5	18.8
6	10620.00	48.9 AV	54.0	-5.1	1.32 H	64	30.1	18.8
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	*5310.00	102.1 PK			1.61 V	331	61.9	40.2
2	*5310.00	91.8 AV			1.61 V	331	51.6	40.2
3	5350.00	62.6 PK	74.0	-11.4	1.65 V	335	56.4	6.2
4	5350.00	49.7 AV	54.0	-4.3	1.65 V	335	43.5	6.2
5	10620.00	59.0 PK	74.0	-15.0	1.06 V	35	40.2	18.8
6	10620.00	46.9 AV	54.0	-7.1	1.06 V	35	28.1	18.8

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.93 H	54	54.8	6.3
2	5460.00	46.8 AV	54.0	-7.2	1.93 H	54	40.5	6.3
3	#5470.00	68.8 PK	74.0	-5.2	1.93 H	58	62.5	6.3
4	#5470.00	52.3 AV	54.0	-1.7	1.93 H	58	46.0	6.3
5	*5510.00	104.9 PK			1.91 H	54	64.5	40.4
6	*5510.00	94.4 AV			1.91 H	54	54.0	40.4
7	11020.00	61.0 PK	74.0	-13.0	1.05 H	69	41.5	19.5
8	11020.00	49.6 AV	54.0	-4.4	1.05 H	69	30.1	19.5
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	5460.00	59.5 PK	74.0	-14.5	1.74 V	331	53.2	6.3
2	5460.00	45.3 AV	54.0	-8.7	1.74 V	331	39.0	6.3
3	#5470.00	64.9 PK	74.0	-9.1	1.75 V	331	58.6	6.3
4	#5470.00	49.1 AV	54.0	-4.9	1.75 V	331	42.8	6.3
5	*5510.00	101.7 PK			1.70 V	329	61.3	40.4
6	*5510.00	91.6 AV			1.70 V	329	51.2	40.4
7	11020.00	60.1 PK	74.0	-13.9	1.07 V	41	40.6	19.5
8	11020.00	47.9 AV	54.0	-6.1	1.07 V	41	28.4	19.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	103.0 PK			2.25 H	2	62.0	41.0
2	*5550.00	92.5 AV			2.25 H	2	51.5	41.0
3	11100.00	61.1 PK	74.0	-12.9	1.79 H	189	41.3	19.8
4	11100.00	48.4 AV	54.0	-5.6	1.79 H	189	28.6	19.8
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	*5550.00	98.5 PK			1.33 V	332	57.5	41.0
2	*5550.00	89.9 AV			1.33 V	332	48.9	41.0
3	11100.00	60.7 PK	74.0	-13.3	1.18 V	75	40.9	19.8
4	11100.00	48.1 AV	54.0	-5.9	1.18 V	75	28.3	19.8

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	103.9 PK			1.90 H	55	63.2	40.7
2	*5670.00	94.0 AV			1.90 H	55	53.3	40.7
3	#5725.00	62.3 PK	74.0	-11.7	1.95 H	60	55.6	6.7
4	#5725.00	47.2 AV	54.0	-6.8	1.95 H	60	40.5	6.7
5	11340.00	62.0 PK	74.0	-12.0	1.06 H	98	41.5	20.5
6	11340.00	50.6 AV	54.0	-3.4	1.06 H	98	30.1	20.5
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	*5670.00	101.1 PK			1.66 V	66	60.4	40.7
2	*5670.00	91.5 AV			1.66 V	66	50.8	40.7
3	#5725.00	57.9 PK	74.0	-16.1	1.70 V	70	51.2	6.7
4	#5725.00	45.5 AV	54.0	-8.5	1.70 V	70	38.8	6.7
5	11340.00	61.1 PK	74.0	-12.9	1.25 V	96	40.6	20.5
6	11340.00	48.9 AV	54.0	-5.1	1.25 V	96	28.4	20.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5612.80	59.2 PK	68.2	-9.0	1.80 H	36	52.9	6.3
2	*5755.00	102.8 PK			1.80 H	36	61.8	41.0
3	*5755.00	92.9 AV			1.80 H	36	51.9	41.0
4	#5976.00	59.0 PK	68.2	-9.2	1.80 H	36	51.8	7.2
5	11490.00	61.8 PK	74.0	-12.2	1.32 H	65	41.3	20.5
6	11490.00	50.6 AV	54.0	-3.4	1.32 H	65	30.1	20.5
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	#5604.80	58.9 PK	68.2	-9.3	1.69 V	42	52.6	6.3
2	*5755.00	101.4 PK			1.69 V	42	60.4	41.0
3	*5755.00	90.8 AV			1.69 V	42	49.8	41.0
4	#5928.80	59.6 PK	68.2	-8.6	1.69 V	42	52.5	7.1
5	11510.00	60.9 PK	74.0	-13.1	1.36 V	97	40.5	20.4
6	11510.00	48.8 AV	54.0	-5.2	1.36 V	97	28.4	20.4

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	58.3 PK	68.2	-9.9	1.85 H	60	51.8	6.5
2	*5795.00	103.6 PK			1.85 H	60	62.5	41.1
3	*5795.00	92.9 AV			1.85 H	60	51.8	41.1
4	#5925.60	57.1 PK	68.2	-11.1	1.85 H	60	50.0	7.1
5	11590.00	61.7 PK	74.0	-12.3	1.06 H	85	41.5	20.2
6	11590.00	50.4 AV	54.0	-3.6	1.06 H	85	30.2	20.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5600.80	58.1 PK	68.2	-10.1	1.52 V	44	51.8	6.3
2	*5795.00	101.0 PK			1.52 V	44	59.9	41.1
3	*5795.00	90.6 AV			1.52 V	44	49.5	41.1
4	#5941.60	58.8 PK	68.2	-9.4	1.52 V	44	51.7	7.1
5	11590.00	60.3 PK	74.0	-13.7	1.06 V	31	40.1	20.2
6	11590.00	48.4 AV	54.0	-5.6	1.06 V	31	28.2	20.2

Remarks:

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

Below 1GHz worst-case data:

802.11a

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	90.05	28.6 QP	43.5	-14.9	2.00 H	152	47.9	-19.3
2	256.93	27.3 QP	46.0	-18.7	1.00 H	214	41.4	-14.1
3	421.86	23.4 QP	46.0	-22.6	2.00 H	306	33.3	-9.9
4	561.57	23.8 QP	46.0	-22.2	1.50 H	277	31.4	-7.6
5	747.85	27.6 QP	46.0	-18.4	1.00 H	7	30.6	-3.0
6	939.95	34.0 QP	46.0	-12.0	1.50 H	202	34.0	0.0
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	33.78	28.1 QP	40.0	-11.9	2.00 V	45	43.3	-15.2
2	90.05	24.5 QP	43.5	-19.0	1.51 V	167	43.8	-19.3
3	416.04	20.8 QP	46.0	-25.2	1.01 V	198	31.0	-10.2
4	604.26	23.6 QP	46.0	-22.4	1.26 V	81	29.6	-6.0
5	782.78	27.2 QP	46.0	-18.8	1.01 V	68	29.6	-2.4
6	939.95	33.9 QP	46.0	-12.1	1.26 V	269	33.9	0.0

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	179.31	24.4 QP	43.5	-19.1	1.24 H	76	39.4	-15.0
2	381.11	23.7 QP	46.0	-22.3	1.00 H	217	34.4	-10.7
3	515.00	23.1 QP	46.0	-22.9	1.24 H	254	31.2	-8.1
4	604.26	26.2 QP	46.0	-19.8	1.24 H	280	32.2	-6.0
5	740.09	29.9 QP	46.0	-16.1	1.00 H	156	33.1	-3.2
6	965.17	30.7 QP	54.0	-23.3	1.49 H	259	30.2	0.5
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	95.87	17.2 QP	43.5	-26.3	2.00 V	267	36.2	-19.0
2	245.28	18.5 QP	46.0	-27.5	1.49 V	149	32.8	-14.3
3	381.11	22.8 QP	46.0	-23.2	1.49 V	330	33.5	-10.7
4	604.26	26.8 QP	46.0	-19.2	1.00 V	7	32.8	-6.0
5	740.09	32.0 QP	46.0	-14.0	1.49 V	147	35.2	-3.2
6	939.95	35.2 QP	46.0	-10.8	1.00 V	7	35.2	0.0

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 22, 2015	Dec. 21, 2016
			Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Conc_ V7.3.7.3	NA	NA	NA

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

4.2.3 Test Procedures

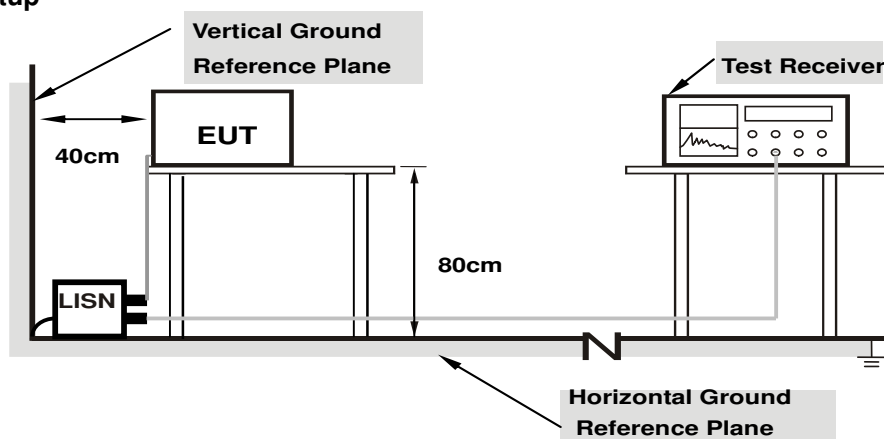
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

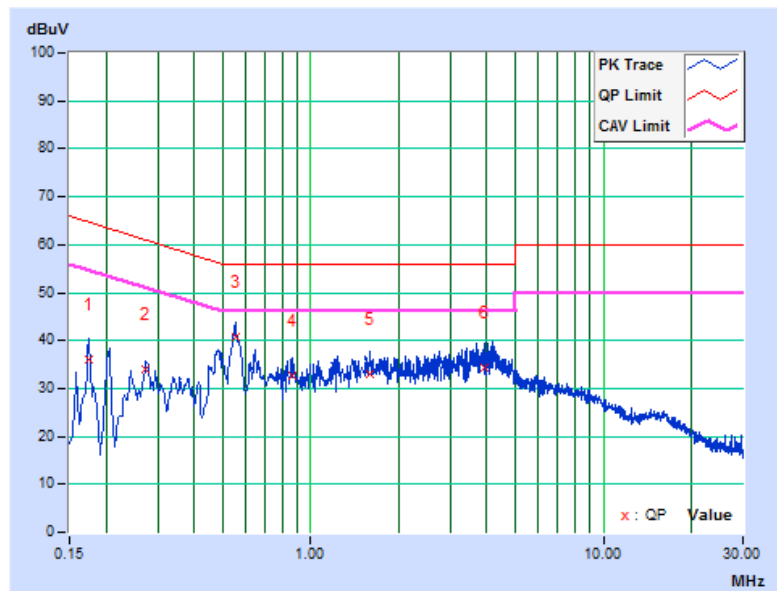
Worst-case data: 802.11a

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17400	10.18	25.75	13.26	35.93	23.44	64.77	54.77	-28.84	-31.33
2	0.27400	10.20	23.64	19.78	33.84	29.98	61.00	51.00	-27.16	-21.02
3	0.55265	10.23	30.52	25.14	40.75	35.37	56.00	46.00	-15.25	-10.63
4	0.86200	10.26	22.43	15.97	32.69	26.23	56.00	46.00	-23.31	-19.77
5	1.59000	10.32	22.70	15.94	33.02	26.26	56.00	46.00	-22.98	-19.74
6	3.94600	10.43	23.94	15.69	34.37	26.12	56.00	46.00	-21.63	-19.88

Remarks:

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

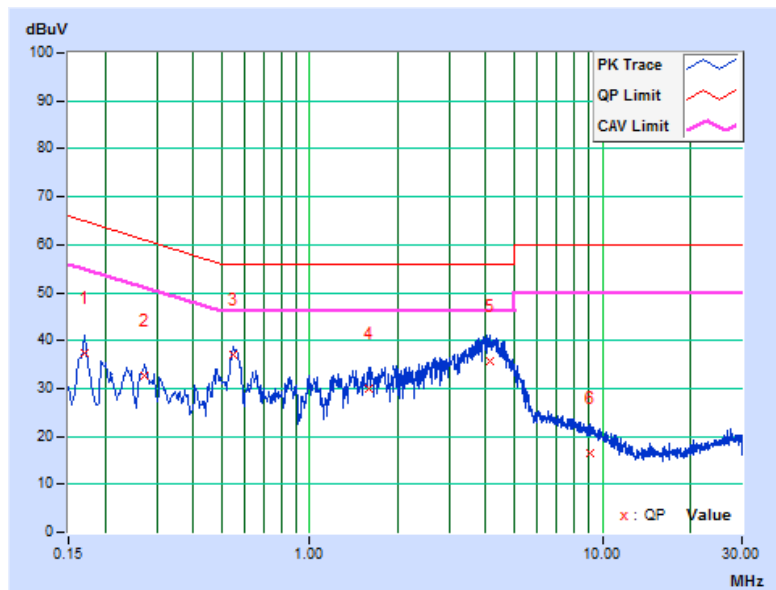


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	10.19	27.14	17.49	37.33	27.68	64.96	54.96	-27.63	-27.28
2	0.27400	10.23	22.33	15.10	32.56	25.33	61.00	51.00	-28.44	-25.67
3	0.54975	10.29	26.71	15.73	37.00	26.02	56.00	46.00	-19.00	-19.98
4	1.59793	10.33	19.51	8.68	29.84	19.01	56.00	46.00	-26.16	-26.99
5	4.15000	10.56	25.12	11.04	35.68	21.60	56.00	46.00	-20.32	-24.40
6	9.12200	10.78	5.83	-0.25	16.61	10.53	60.00	50.00	-43.39	-39.47

Remarks:

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

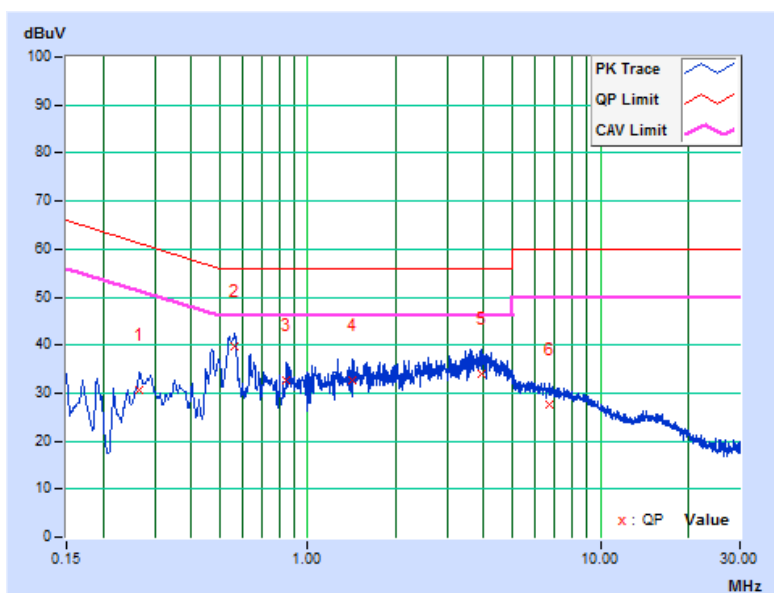


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.26569	10.20	20.48	15.64	30.68	25.84	61.25	51.25	-30.57	-25.41
2	0.56294	10.23	29.45	24.58	39.68	34.81	56.00	46.00	-16.32	-11.19
3	0.84685	10.26	22.33	15.65	32.59	25.91	56.00	46.00	-23.41	-20.09
4	1.41800	10.30	22.36	15.24	32.66	25.54	56.00	46.00	-23.34	-20.46
5	3.91800	10.43	23.44	15.12	33.87	25.55	56.00	46.00	-22.13	-20.45
6	6.65800	10.57	16.91	11.81	27.48	22.38	60.00	50.00	-32.52	-27.62

Remarks:

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

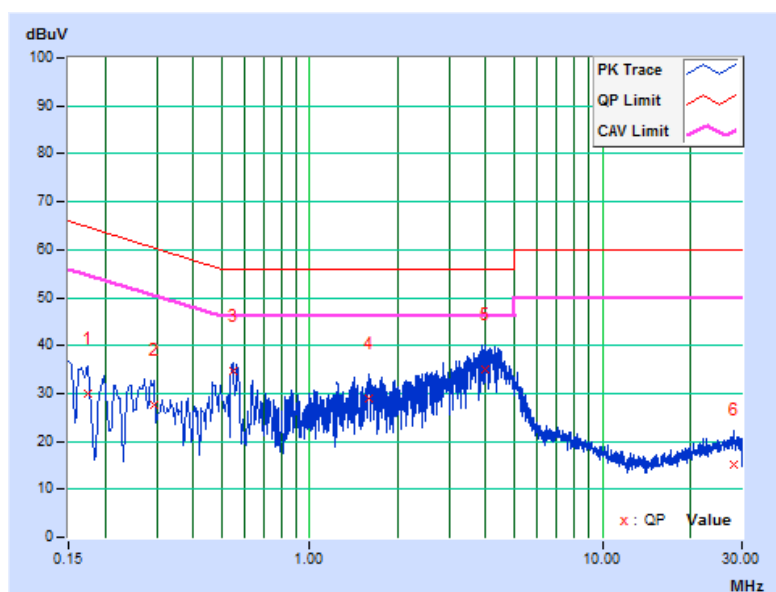


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17384	10.19	19.80	10.31	29.99	20.50	64.77	54.77	-34.78	-34.27
2	0.29366	10.24	17.23	8.79	27.47	19.03	60.42	50.42	-32.95	-31.39
3	0.54542	10.29	24.23	13.20	34.52	23.49	56.00	46.00	-21.48	-22.51
4	1.60214	10.33	18.50	7.64	28.83	17.97	56.00	46.00	-27.17	-28.03
5	3.97800	10.55	24.34	10.28	34.89	20.83	56.00	46.00	-21.11	-25.17
6	28.27000	12.17	2.88	-2.22	15.05	9.95	60.00	50.00	-44.95	-40.05

Remarks:

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



4.3 Transmit Power Measurement

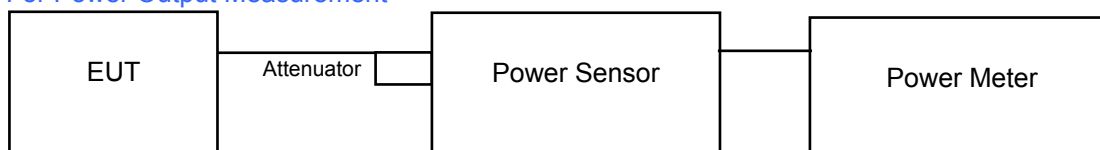
4.3.1 Limits of Transmit Power Measurement

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

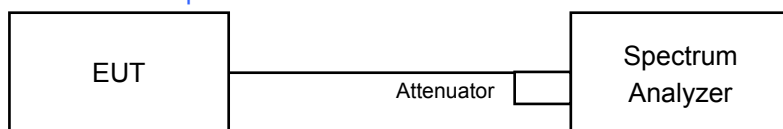
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output Measurement



For 26dB 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 Power Output Measurement

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

For 26dB Occupied 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%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	35.237	15.47	24.00	Pass
40	5200	39.994	16.02	24.00	Pass
48	5240	34.356	15.36	24.00	Pass
52	5260	37.497	15.74	24.00	Pass
60	5300	33.574	15.26	24.00	Pass
64	5320	34.594	15.39	24.00	Pass
100	5500	35.318	15.48	24.00	Pass
116	5580	34.435	15.37	24.00	Pass
140	5700	35.237	15.47	24.00	Pass
149	5745	39.628	15.98	30.00	Pass
157	5785	30.269	14.81	30.00	Pass
165	5825	38.637	15.87	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log (26.07) = 25.16 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (25.32) = 25.03 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (25.62) = 25.09 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (27.19) = 25.34 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (27.08) = 25.33 > 24\text{dBm}$
6. $11\text{dBm} + 10\log (26.71) = 25.27 > 24\text{dBm}$

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	32.885	15.17	24.00	Pass
40	5200	28.708	14.58	24.00	Pass
48	5240	30.269	14.81	24.00	Pass
52	5260	29.717	14.73	24.00	Pass
60	5300	30.130	14.79	24.00	Pass
64	5320	29.785	14.74	24.00	Pass
100	5500	26.242	14.19	24.00	Pass
116	5580	27.542	14.40	24.00	Pass
140	5700	23.121	13.64	24.00	Pass
149	5745	30.479	14.84	30.00	Pass
157	5785	23.659	13.74	30.00	Pass
165	5825	28.576	14.56	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log (23.42) = 24.70 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (23.69) = 24.75 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (24.50) = 24.89 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (26.01) = 25.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (23.09) = 24.63 > 24\text{dBm}$
6. $11\text{dBm} + 10\log (25.27) = 25.03 > 24\text{dBm}$

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	24.491	13.89	24.00	Pass
46	5230	29.174	14.65	24.00	Pass
54	5270	28.249	14.51	24.00	Pass
62	5310	29.785	14.74	24.00	Pass
102	5510	23.014	13.62	24.00	Pass
110	5550	30.061	14.78	24.00	Pass
134	5670	29.040	14.63	24.00	Pass
151	5755	30.061	14.78	30.00	Pass
159	5795	28.576	14.56	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log (67.05) = 29.26 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (62.48) = 28.96 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (61.96) = 28.92 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (67.91) = 29.32 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (62.41) = 28.95 > 24\text{dBm}$

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
52	5260	26.07
60	5300	25.32
64	5320	25.62
100	5500	27.19
116	5580	27.08
140	5700	26.71

802.11n (HT20)

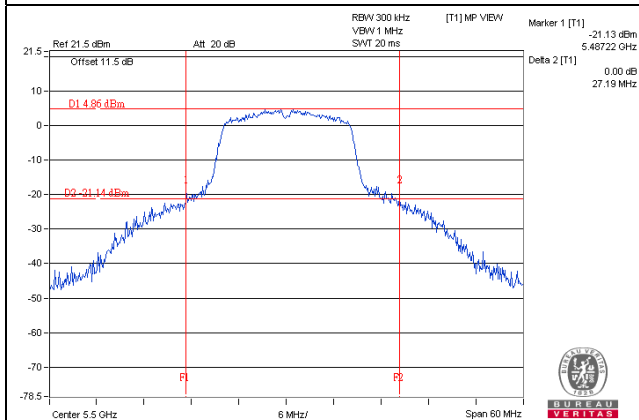
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
52	5260	23.42
60	5300	23.69
64	5320	24.50
100	5500	26.01
116	5580	23.09
140	5700	25.27

802.11n (HT40)

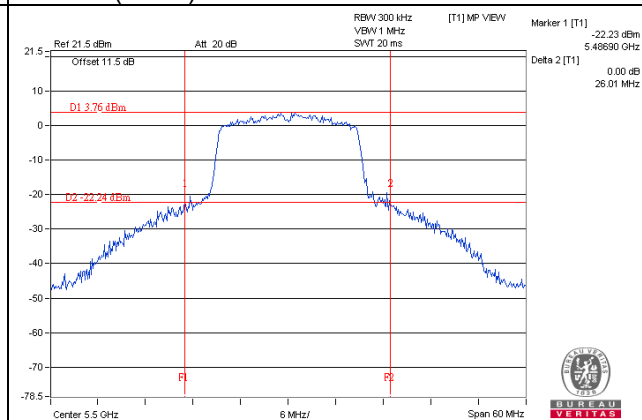
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
54	5270	67.05
62	5310	62.48
102	5510	61.96
110	5550	67.91
134	5670	62.41

Spectrum Plot of Worst Value

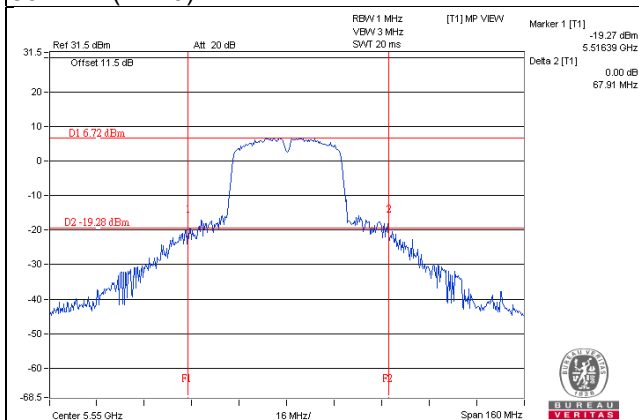
802.11a



802.11n (HT20)



802.11n (HT40)



EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	37.497	15.74
5470~5725	35.318	15.48

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	30.130	14.79
5470~5725	27.542	14.40

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

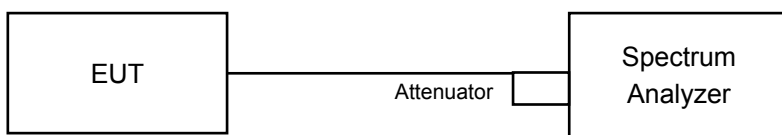
802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	29.785	14.74
5470~5725	30.061	14.78

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

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	16.80
40	5200	16.80
48	5240	16.80
52	5260	16.92
60	5300	16.68
64	5320	16.80
100	5500	16.92
116	5580	16.80
140	5700	16.68
149	5745	16.80
157	5785	16.68
165	5825	16.68

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	17.76
40	5200	17.76
48	5240	17.76
52	5260	17.76
60	5300	17.64
64	5320	17.76
100	5500	17.76
116	5580	17.76
140	5700	17.76
149	5745	17.76
157	5785	17.64
165	5825	17.76

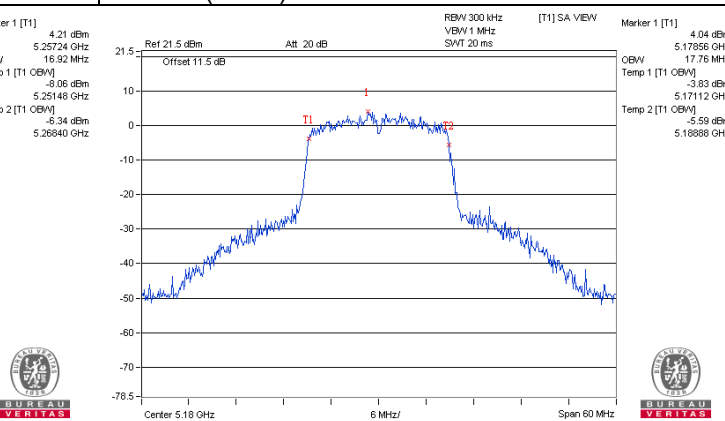
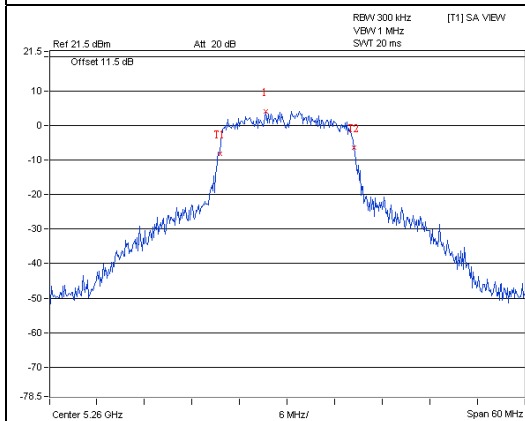
802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	36.24
46	5230	36.36
54	5270	36.36
62	5310	36.24
102	5510	36.36
110	5550	36.48
134	5670	36.24
151	5755	36.36
159	5795	36.24

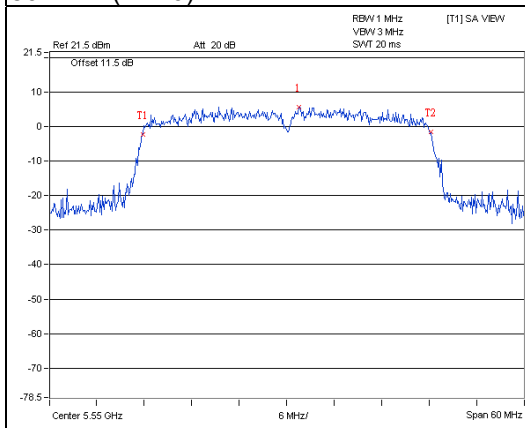
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)

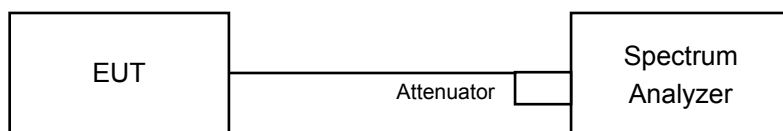


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- 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 Item 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	0.99	0.12	1.11	11.00	Pass
40	5200	0.87	0.12	0.99	11.00	Pass
48	5240	0.96	0.12	1.08	11.00	Pass
52	5260	0.75	0.12	0.87	11.00	Pass
60	5300	-0.19	0.12	-0.07	11.00	Pass
64	5320	0.09	0.12	0.21	11.00	Pass
100	5500	0.07	0.12	0.19	11.00	Pass
116	5580	0.17	0.12	0.29	11.00	Pass
140	5700	1.53	0.12	1.65	11.00	Pass

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

802.11n (HT20)

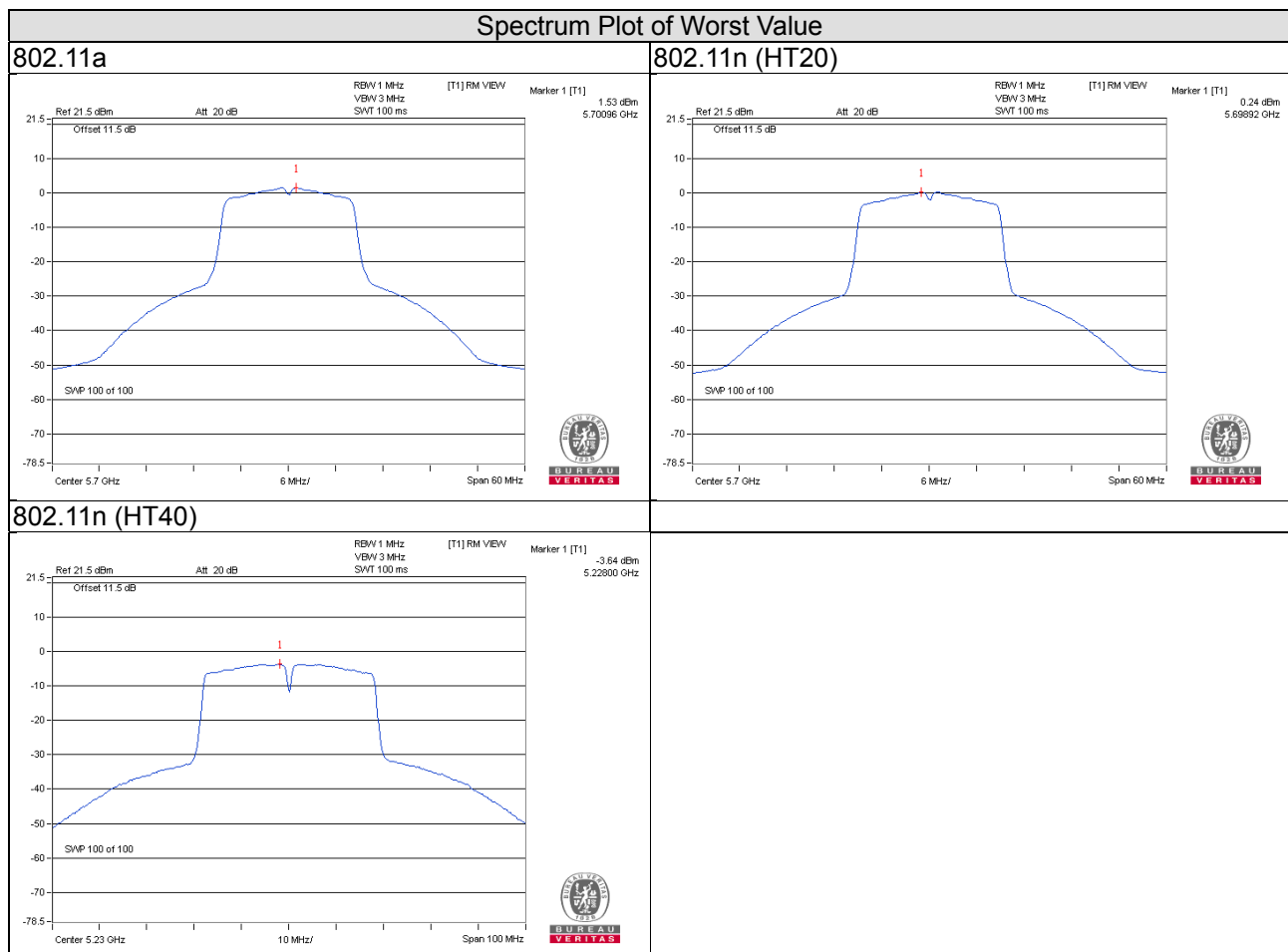
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	-0.07	0.15	0.08	11.00	Pass
40	5200	-0.45	0.15	-0.30	11.00	Pass
48	5240	-0.52	0.15	-0.37	11.00	Pass
52	5260	-0.47	0.15	-0.32	11.00	Pass
60	5300	-0.91	0.15	-0.76	11.00	Pass
64	5320	-1.11	0.15	-0.96	11.00	Pass
100	5500	-1.09	0.15	-0.94	11.00	Pass
116	5580	-0.40	0.15	-0.25	11.00	Pass
140	5700	0.24	0.15	0.39	11.00	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	-4.39	0.25	-4.14	11.00	Pass
46	5230	-3.64	0.25	-3.39	11.00	Pass
54	5270	-4.15	0.25	-3.90	11.00	Pass
62	5310	-4.42	0.25	-4.17	11.00	Pass
102	5510	-5.85	0.25	-5.60	11.00	Pass
110	5550	-3.99	0.25	-3.74	11.00	Pass
134	5670	-3.86	0.25	-3.61	11.00	Pass

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



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)				
149	5745	-6.87	-4.65	0.12	-4.53	30.00	Pass
157	5785	-7.19	-4.97	0.12	-4.85	30.00	Pass
165	5825	-8.80	-6.58	0.12	-6.46	30.00	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)				
149	5745	-8.08	-5.86	0.15	-5.71	30.00	Pass
157	5785	-8.23	-6.01	0.15	-5.86	30.00	Pass
165	5825	-8.89	-6.67	0.15	-6.52	30.00	Pass

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

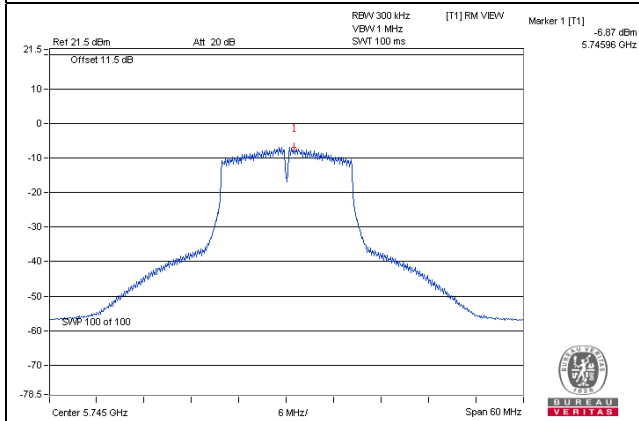
802.11n (HT40)

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)				
151	5755	-11.84	-9.62	0.25	-9.37	30.00	Pass
159	5795	-12.04	-9.82	0.25	-9.57	30.00	Pass

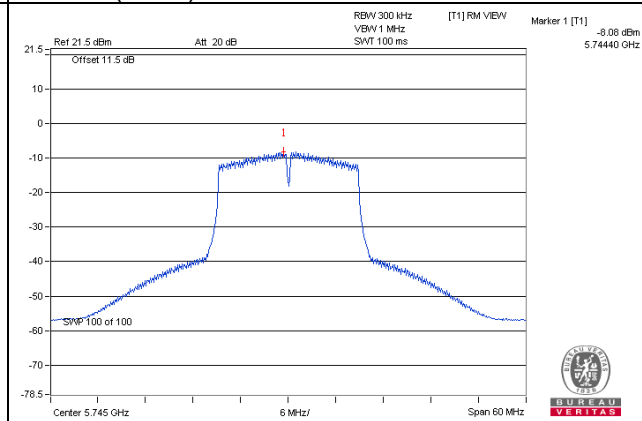
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

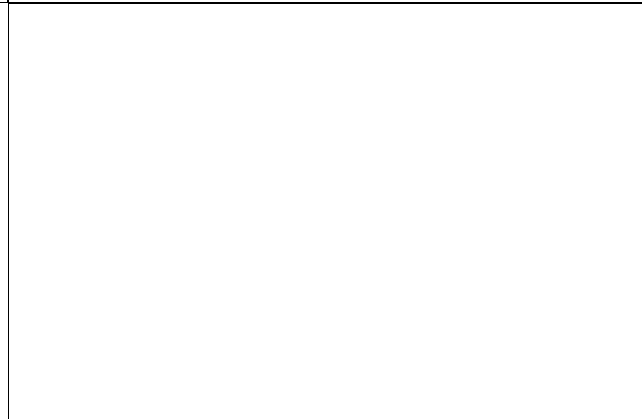
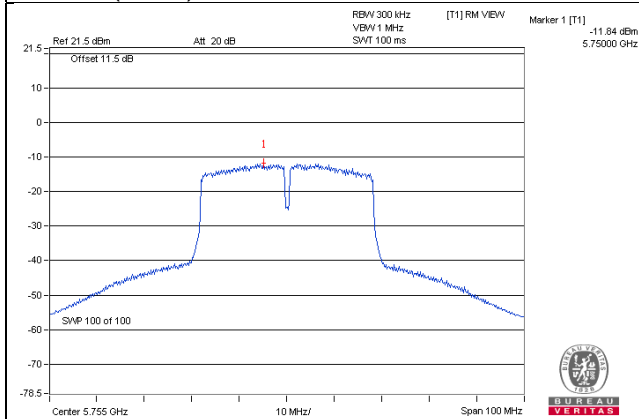
802.11a



802.11n (HT20)



802.11n (HT40)

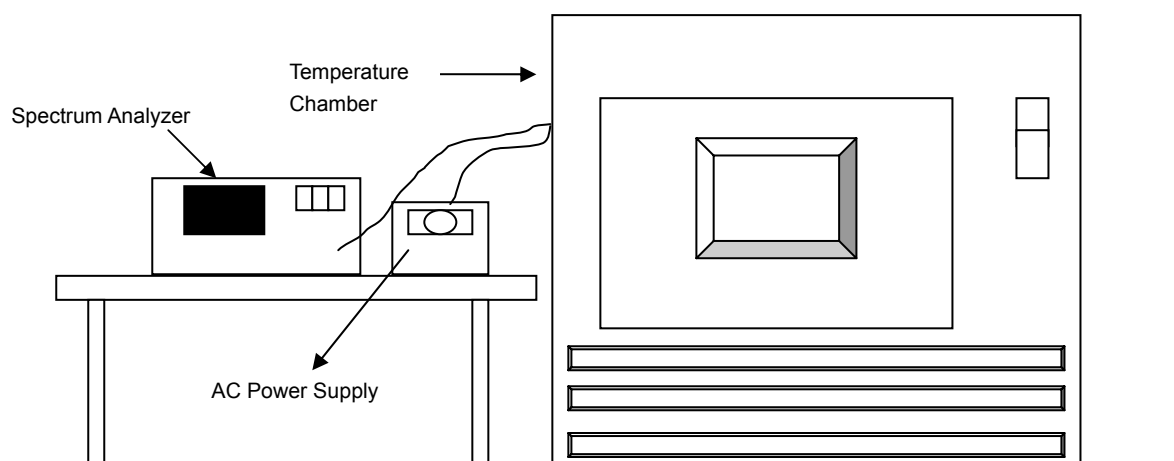


4.6 Frequency Stability

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 Procedure

- f. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- g. Turn the EUT on and couple its output to a spectrum analyzer.
- h. Turn the EUT off and set the chamber to the highest temperature specified.
- i. 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.
- j. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- k. 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.

4.6.4 Deviation from Test Standard

No deviation.

4.6.5 EUT Operating Condition

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

4.6.6 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5700MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)
50	120	5699.9951	-0.00009	5699.9974	-0.00005	5699.9976	-0.00004	5699.9977	-0.00004
40	120	5699.9839	-0.00028	5699.9892	-0.00019	5699.9844	-0.00027	5699.9841	-0.00028
30	120	5699.9958	-0.00007	5699.9961	-0.00007	5699.9941	-0.00010	5699.9941	-0.00010
20	120	5699.9874	-0.00022	5699.9863	-0.00024	5699.9913	-0.00015	5699.986	-0.00025
10	120	5700.007	0.00012	5700.0048	0.00008	5700.0041	0.00007	5700.0048	0.00008
0	120	5700.0179	0.00031	5700.0187	0.00033	5700.0228	0.00040	5700.0205	0.00036
-10	120	5700.0236	0.00041	5700.0198	0.00035	5700.0201	0.00035	5700.0205	0.00036
-20	120	5700.0222	0.00039	5700.0174	0.00031	5700.018	0.00032	5700.0212	0.00037
-30	120	5699.9998	0.00000	5699.9972	-0.00005	5699.9972	-0.00005	5699.9968	-0.00006

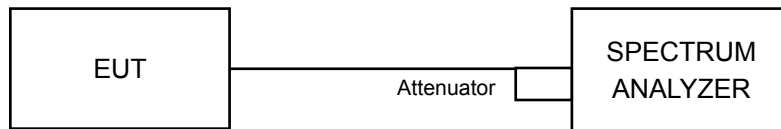
Frequency Stability Versus Voltage									
Operating Frequency: 5700MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)	Measured Frequency(MHz)	Frequency Drift (%)
20	138	5699.988	-0.00021	5699.986	-0.00025	5699.9906	-0.00016	5699.9853	-0.00026
	120	5699.9874	-0.00022	5699.9863	-0.00024	5699.9913	-0.00015	5699.986	-0.00025
	102	5699.9863	-0.00024	5699.9852	-0.00026	5699.9915	-0.00015	5699.9866	-0.00024

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

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

4.7.5 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
149	5745	15.61	0.5	Pass
157	5785	15.20	0.5	Pass
165	5825	15.46	0.5	Pass

802.11n (HT20)

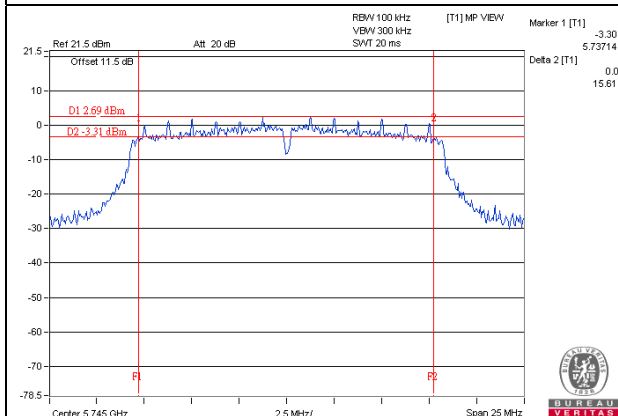
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	15.17	0.5	Pass
157	5785	16.16	0.5	Pass
165	5825	15.22	0.5	Pass

802.11n (HT40)

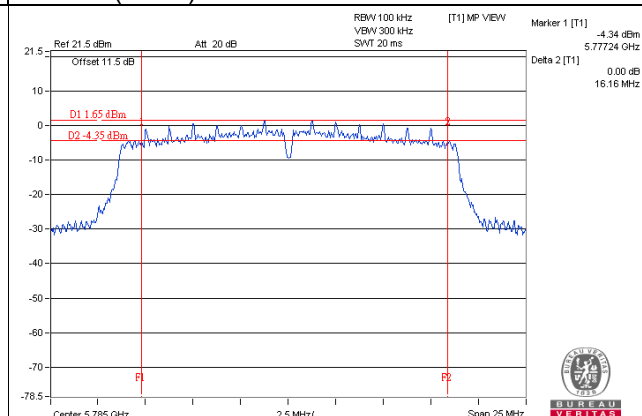
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.32	0.5	Pass
159	5795	35.24	0.5	Pass

Spectrum Plot of Worst Value

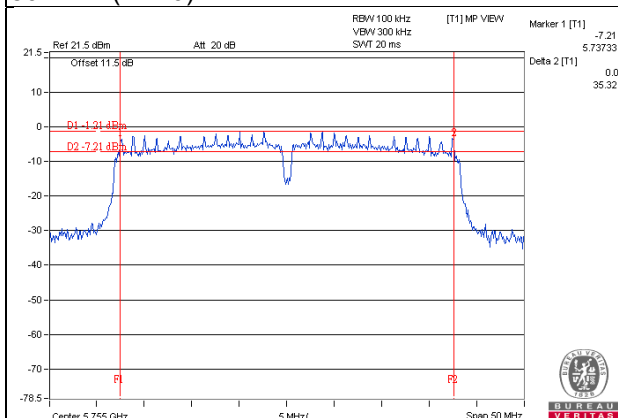
802.11a



802.11n (HT20)



802.11n (HT40)

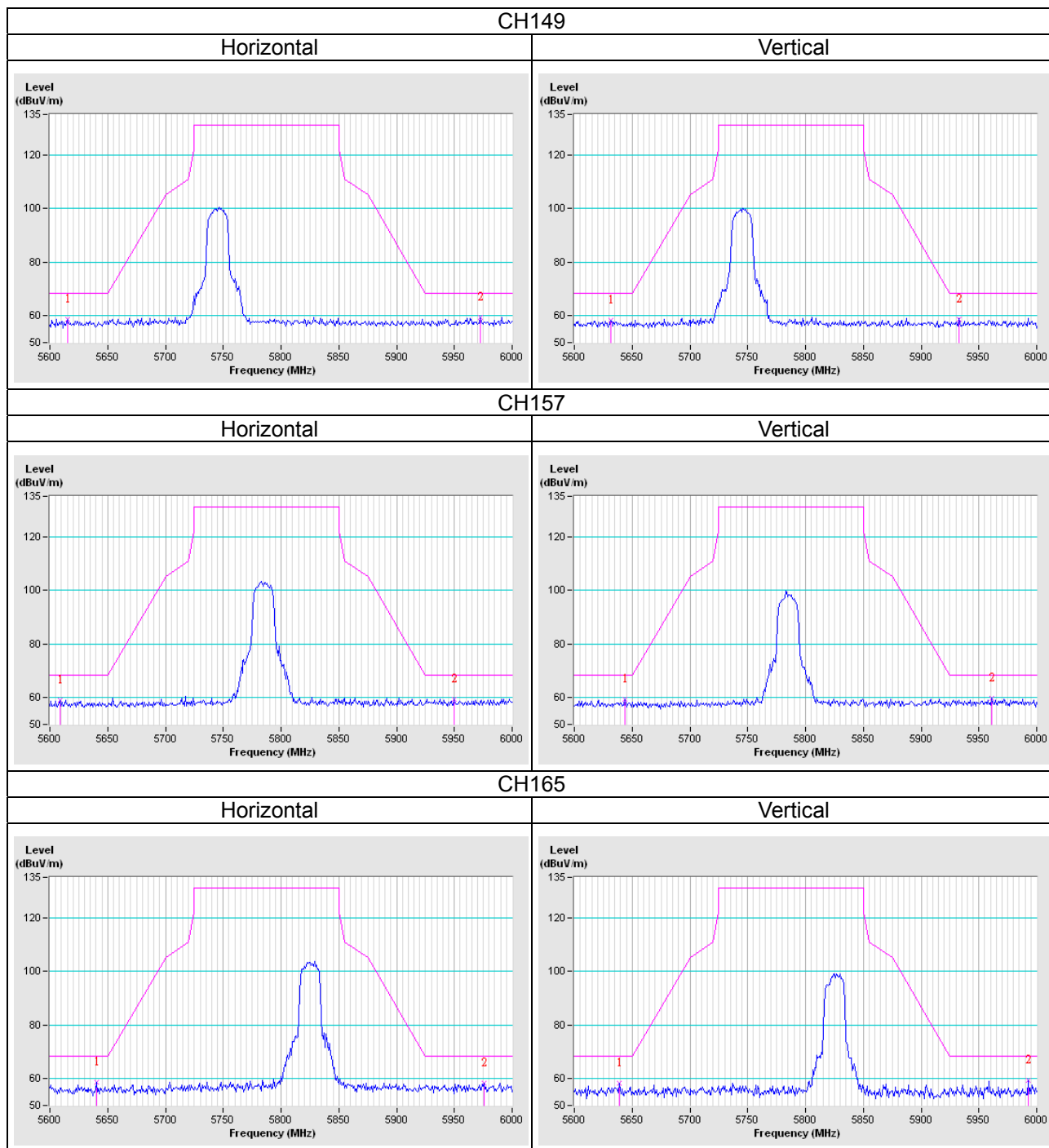


5 Pictures of Test Arrangements

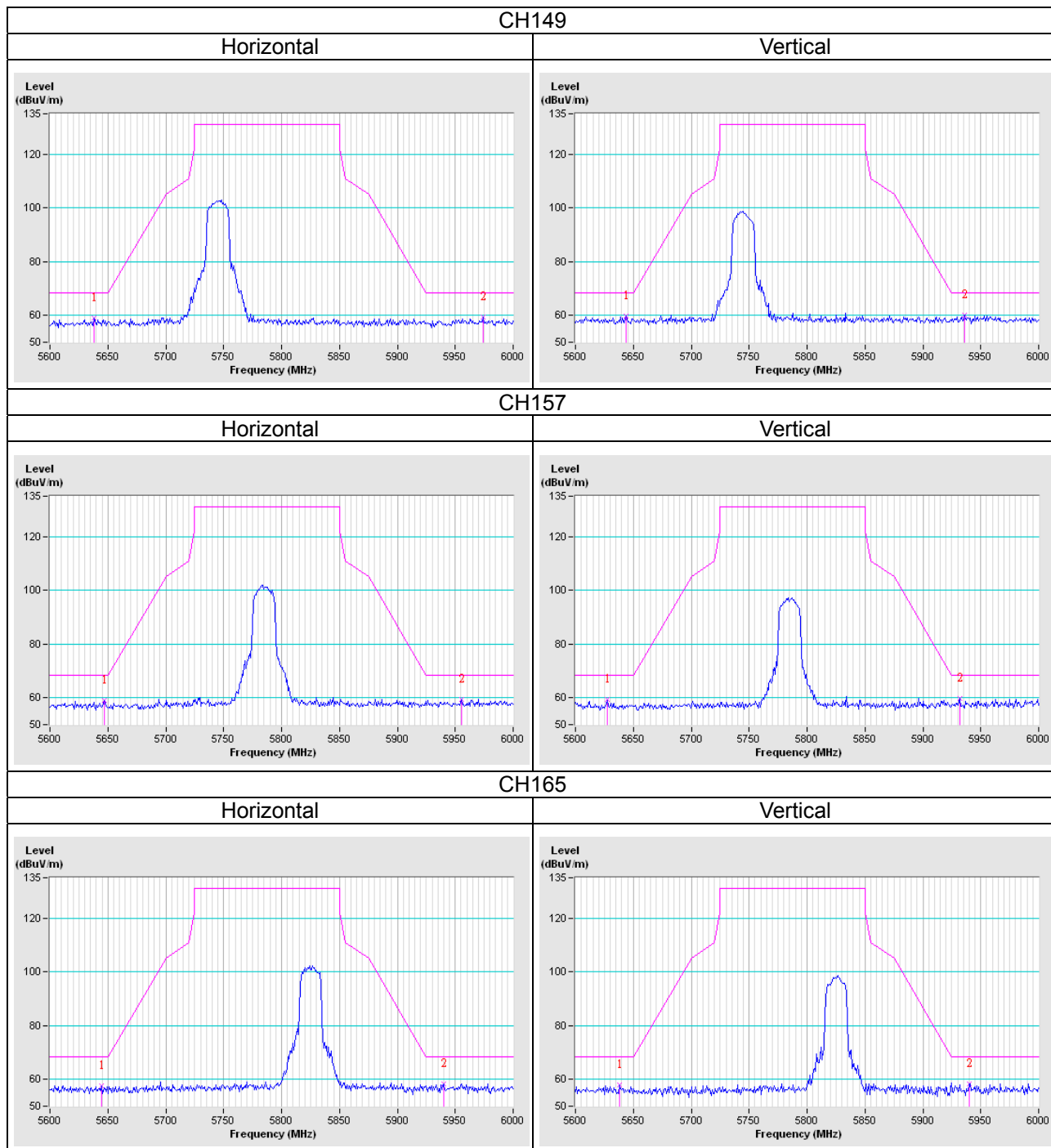
Please refer to the attached file (Test Setup Photo).

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

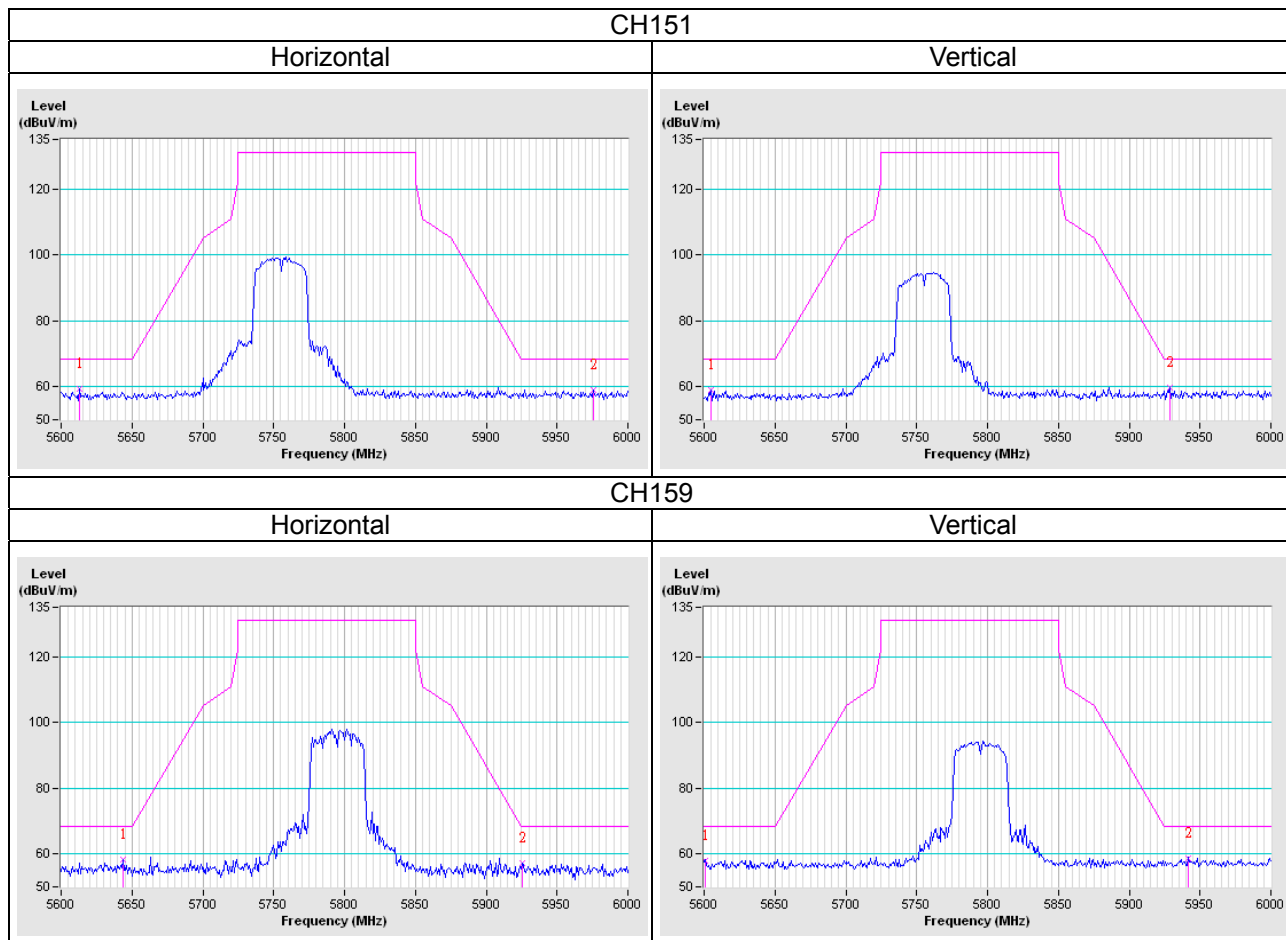
802.11a



802.11n (HT20)



802.11n (HT40)



Appendix – Information on the Testing Laboratories

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

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

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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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