FCC RF TEST REPORT

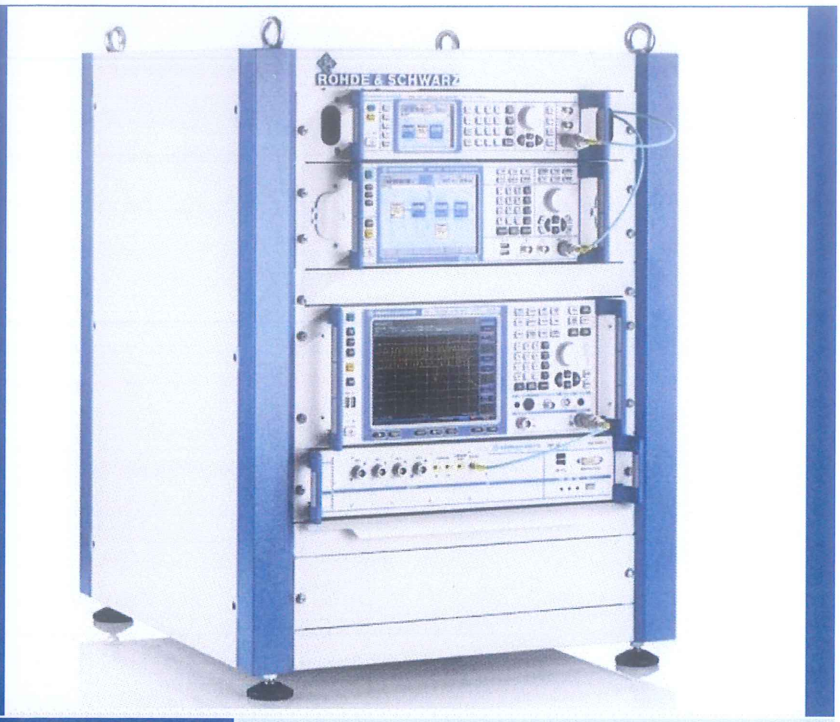
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

Tablet PC

ISSUED TO
AOC

14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan



Prepared by: Hu Chao
Hu Chao
(Engineer)
Date Jan. 22, 2018

Approved by:
Wei Yanquan
(Chief Engineer)
Date Jan. 22, 2018

Report No.:	BL-SZ1760430-604
EUT Name:	Tablet PC
Model Name:	A831L-D
Brand Name:	AOC
Test Standard:	47 CFR Part 15 Subpart E
FCC ID:	2AEB5-A831L-D
Test conclusion:	Pass
Test Date:	Jun. 20, 2017 ~ Jul. 24, 2017
Date of Issue:	Jan. 22, 2018

Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong, P. R. China 518055
TEL: +86-755-66850100, FAX: +86-755-61824271
Email: info@baluntek.com
www.baluntek.com

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Jan. 15, 2018	Initial Issue
Rev. 02	Jan. 22, 2018	Revise the product type on page 6.

TABLE OF CONTENTS

1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20 to 25℃
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

(1) The test report reference to the report template version v4.1.

(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

(3) The test report is invalid if there is any evidence and/or falsification.

(4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

(5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.

(6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant

Applicant	AOC
Address	14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan

2.2 Manufacturer

Manufacturer	China Greatwall Technology Group Co., Ltd
Address	No. Great wall Computer Industrial Park, Bao Shi East Road, Bao'an Bistrict, Shenzhen, P. R. China

2.3 Factory

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Type	Tablet PC
Model Name Under Test	A831L-D
Series Model Name	A831L-D, A831L
Description of Model name differentiation	The equipment model A831L-D and A831L are the Tablet PC model, the electrical parameters and internal structure of circuit are same, only the OS, Memory and Flash is different.
Hardware Version	N/A
Software Version	N/A
Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/5 4G Network FDD LTE Band 2/4/7/17 Bluetooth 3.0 + EDR, Bluetooth 4.0 Low Energy (BLE) WIFI 802.11a, 802.11b, 802.11g and 802.11n (HT20/40) GPS, FM

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	EU 31104107PV
	Serial No.	N/A
	Capacitance	5000 mAh
	Rated Voltage	3.8 V
	Limit Charge Voltage	4.2 V
Ancillary Equipment 2	Adapter	
	Brand Name	N/A
	Model No.	SC/10WA050200US
	Serial No.	N/A

	Rated Input	100-240 V~, 0.5 A, 50/60 Hz
	Rated Output	5 V⎓, 2 A
Ancillary Equipment 3	USB Cable	
	Length (Approx.)	0.8 m

2.6 Technical Information

Frequency Range	Band I: 5150 MHz to 5250 MHz, Band IV: 5725 MHz to 5850 MHz
Product Type	☐ Mobile ☒ Portable ☐ Fix Location
Modulation technology	OFDM
Modulation Type	64QAM, 16QAM, BPSK, QPSK
Product Type	Mobile and portable for FCC standard
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36 / 24 / 18/12 / 9/ 6 Mbps 802.11n: up to 150 Mbps
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz
Maximum Output Power	Band I: 11.84 dBm Band IV: 13.56 dBm
Antenna Type	PIFA Antenna
Antenna Gain	Band I: 5150 MHz to 5250 MHz:-3.6 dBi Band IV: 5725 MHz to 5850 MHz: -3.6 dBi
About the Product	The equipment is Tablet PC, intended for used with information technology equipment.

2.7 Additional Instructions

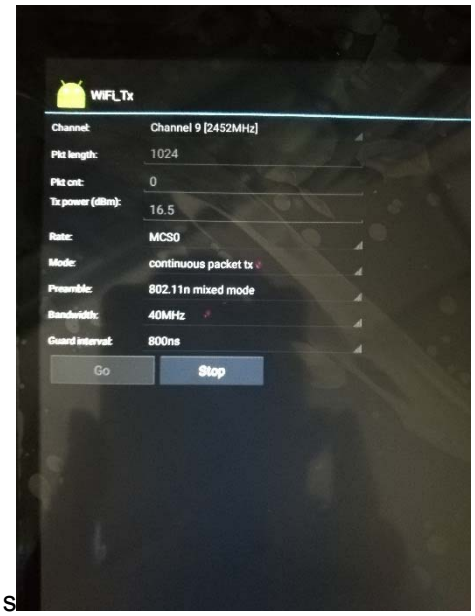
Mode	☒ Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.
EUT Software Settings:

Test Software Version	N/A		
Band I (5150 - 5250 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH36	5180	17
11a	CH44	5220	17
11a	CH48	5240	17
11n (HT20)	CH36	5180	17
11n (HT20)	CH44	5220	17
11n (HT20)	CH48	5240	17
11n (HT40)	CH38	5190	16.5
11n (HT40)	CH46	5230	16.5

Band IV (5725 - 5850 MHz) Power level setup in software			
Mode	Channel	Frequency (MHz)	Soft Set
11a	CH149	5745	17
11a	CH157	5785	17
11a	CH165	5825	17
11n (HT20)	CH149	5745	17
11n (HT20)	CH157	5785	17
11n (HT20)	CH165	5825	17
11n (HT40)	CH151	5755	16.5
11n (HT40)	CH159	5795	16.5

Run Software



2.8 Channel List

20 MHz		40 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	**5180**	**38**	**5190**
40	5200	**46**	**5230**
44	**5220**	**151**	**5755**
48	**5240**	**159**	**5795**
149	**5745**	/	/
153	5765	/	/
157	**5785**	/	/
161	5805	/	/
165	**5825**	/	/

The Lowest frequency, the middle frequency and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)

Band I (5150 - 5250 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	149	Low	5745
44	Mid	5220	157	Mid	5785
48	High	5240	165	High	5825

For 802.11n (HT40)

Band I (5150 - 5250 MHz)			Band IV (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	151	Low	5755
46	High	5230	159	High	5795

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Type	Band I	Band IV
				Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
6 dB bandwidth	11a	6	BPSK	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	165/157/149
	11n(40 MHz)	13.5		N/A	159/151
Power Spectral Density	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
Conducted Spurious Emission and Band Edge (Authorized-band)	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	165/157/149
	11n(20 MHz)	6.5		48/44/36	165/157/149
	11n(40 MHz)	13.5		46/38	159/151
Band Edge (Restricted-band)	11a	6	BPSK	48/36	165/149
	11n(20 MHz)	6.5		48/36	165/149
	11n(40 MHz)	13.5		46/38	159/151
Frequency Stability	Unmodulated	N/A	BPSK	36	N/A

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E (10-1-15 Edition)	Unlicensed National Information Infrastructure Devices
2	KDB Publication 789033 D02v01r03	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	--	Pass[Note1]
2	RF Output Power	15.407(a)	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	ANNEX A.4	Pass
6	Conducted Emission	15.207	ANNEX A.5	Pass
7	Conducted Spurious Emission and Band Edge (Authorized-band)	15.407(b) 15.209	ANNEX A.6	Pass
8	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	ANNEX A.7	Pass
9	Frequency Stability	15.407(g)	ANNEX A.8	Pass
Note [1]: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.				

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22℃ to +25℃
	LT (Low Temperature)	-10℃
	HT (High Temperature)	+50℃
Working Voltage of the EUT	NV (Normal Voltage)	3.7 V
	LV (Low Voltage)	3.4 V
	HV (High Voltage)	4.2 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2017.06.22	2018.06.21
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2017.06.22	2018.06.21
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2016.09.09	2017.09.08
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2017.06.22	2018.06.21
LISN	SCHWARZBECK	NSLK 8127	8127-687	2017.06.22	2018.06.21
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2017.06.22	2018.06.21
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2017.06.22	2018.06.21
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2017.06.22	2018.06.21
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2017.06.22	2018.06.21
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.06.22	2018.06.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2017.06.22	2018.06.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2017.06.22	2018.06.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2017.06.22	2018.06.21
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.24	2019.02.23
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2016.08.09	2018.08.08
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2017.06.22	2018.06.21
Power Amplifier	OPHIR RF	5225F	1037	2017.02.17	2018.02.16

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Power Amplifier	OPHIR RF	5273F	1016	2017.02.17	2018.02.16
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A
Feld Strength Meter	Narda	EP601	511WX51129	2017.02.23	2018.02.22
Mouth Simulator	B&K	4227	2423931	2016.11.15	2017.11.14
Sound Calibrator	B&K	4231	2430337	2016.11.09	2017.11.08
Sound Level Meter	B&K	NL-20	00844023	2016.11.11	2017.11.10
Ear Simulator	B&K	4185	2409449	2016.11.15	2017.11.14
Ear Simulator	B&K	4195	2418189	2016.11.15	2017.11.14
Audio analyzer	B&K	UPL 16	100129	2016.11.08	2017.11.07

4.3 Measurement Uncertainty

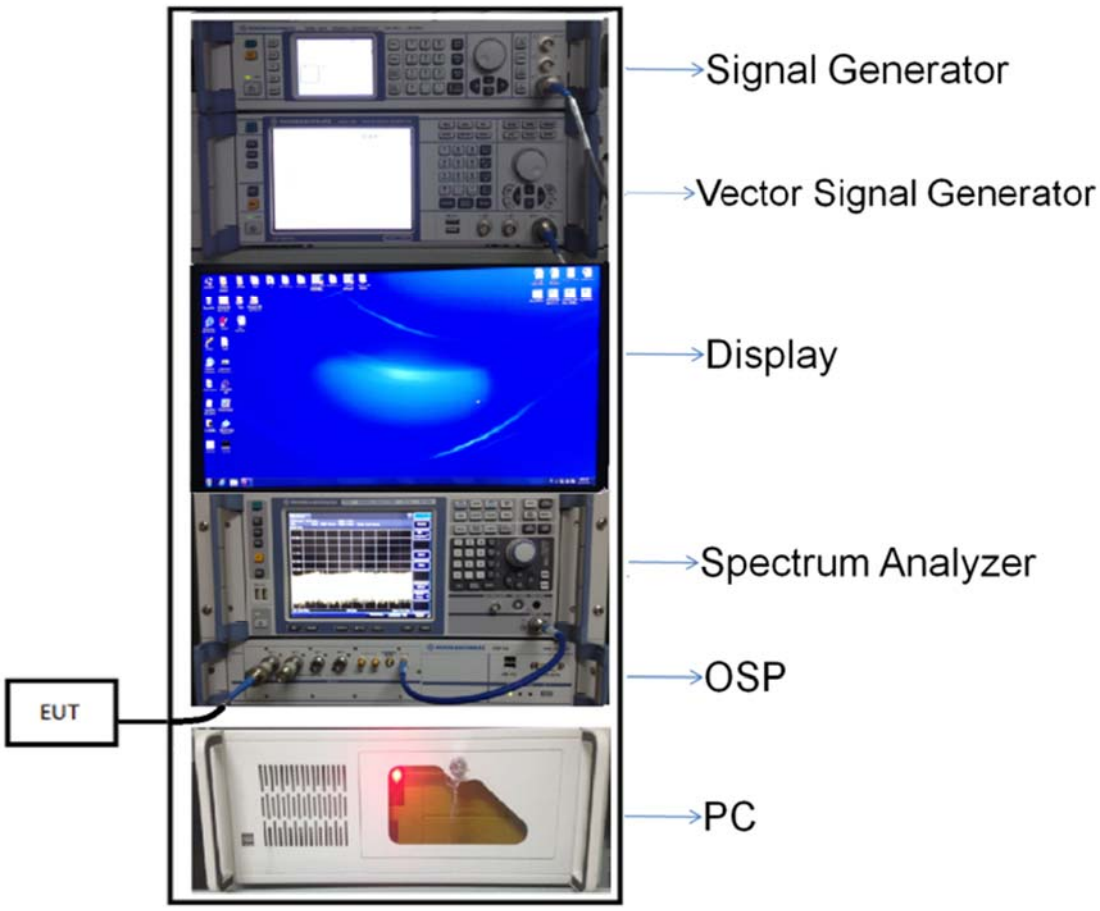
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Occupied Channel Bandwidth	±4%
RF output power, conducted	±1.4 dB
Power Spectral Density, conducted	±2.5 dB
Unwanted Emissions, conducted	±2.8 dB
All emissions, radiated	±5.4 dB
Temperature	±1°C
Humidity	±4%

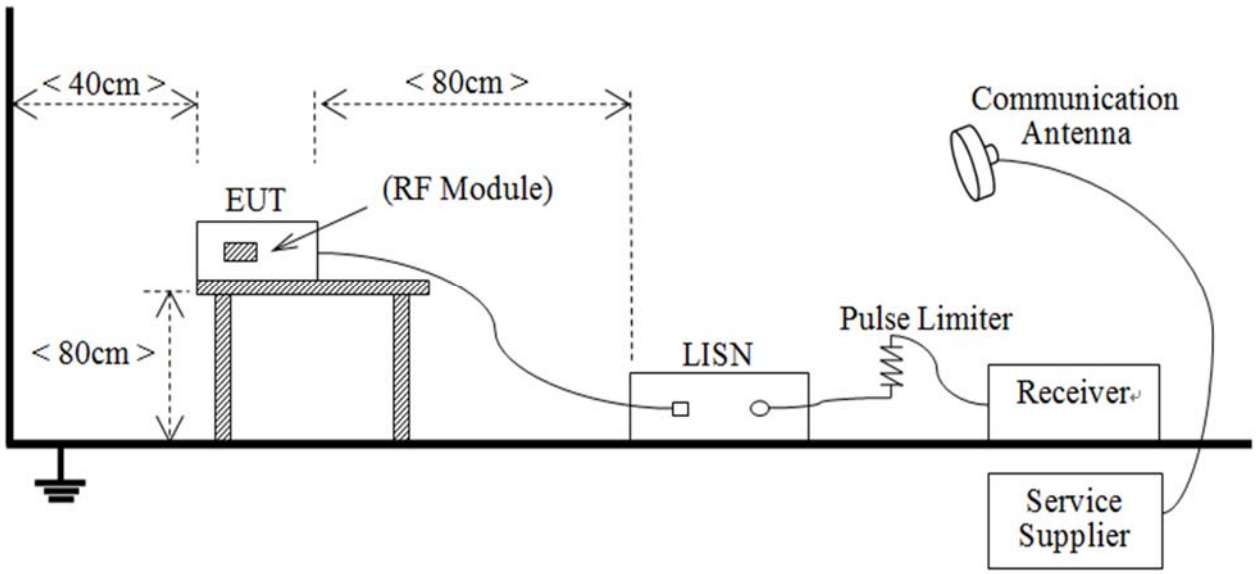
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



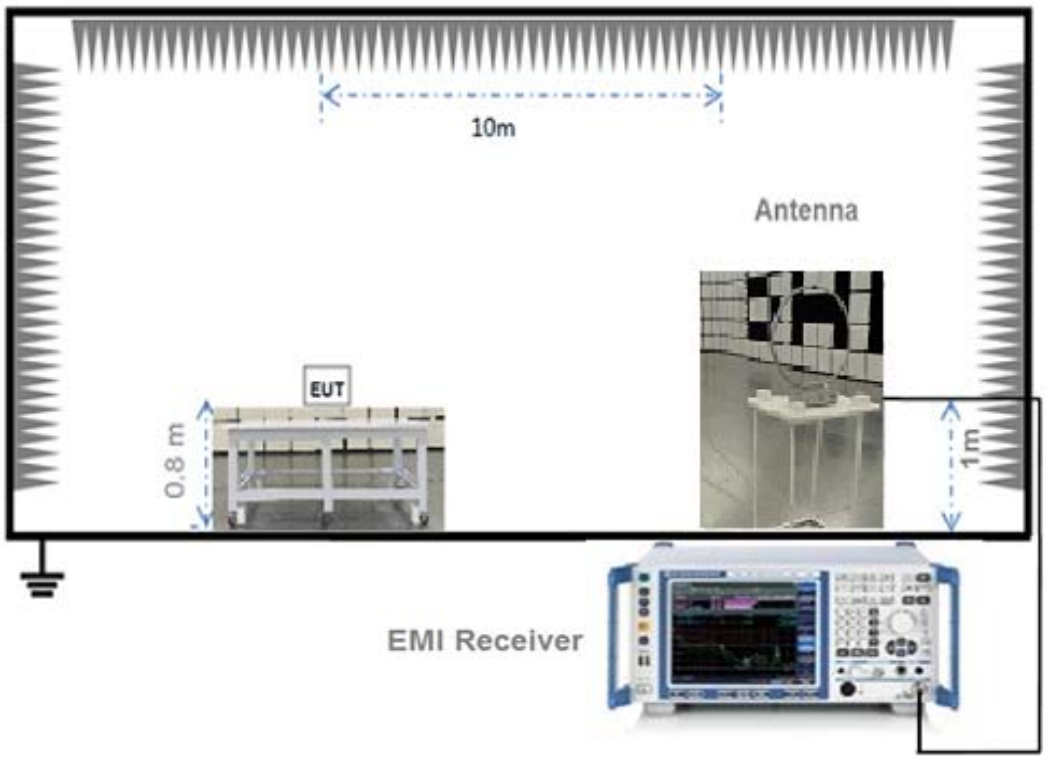
(Diagram 1)

4.4.2 For AC Power Supply Port Test



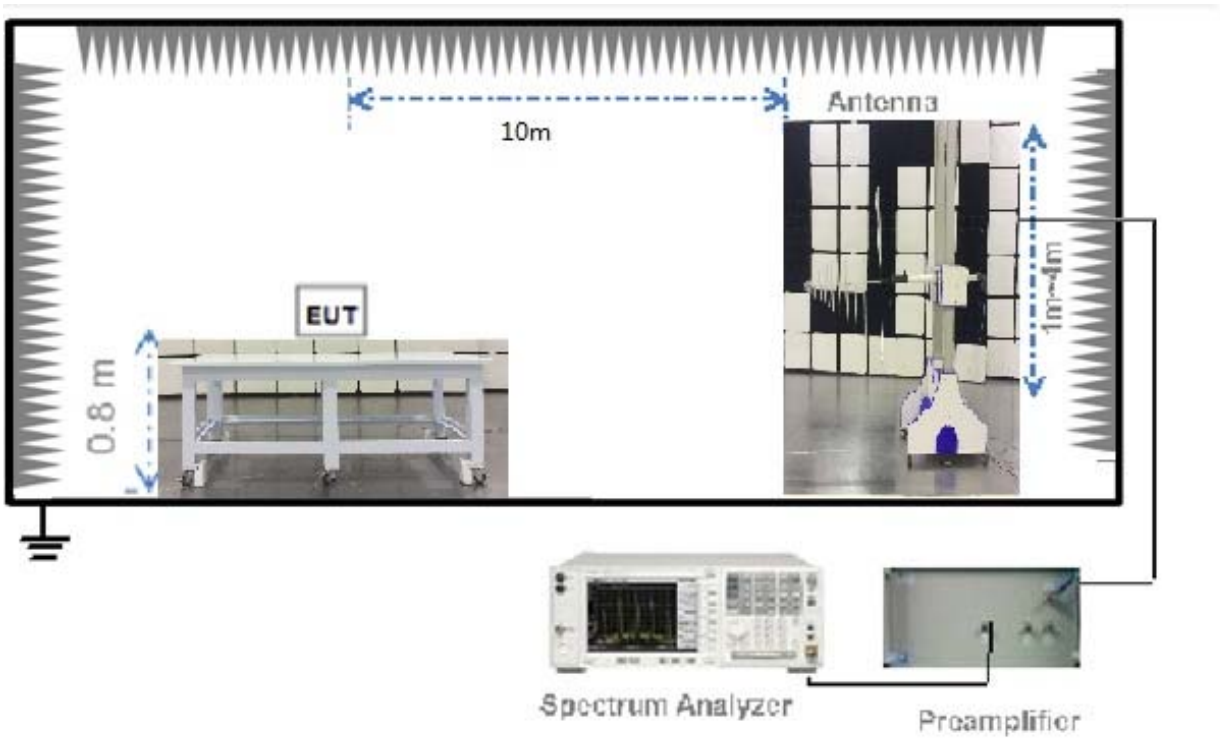
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



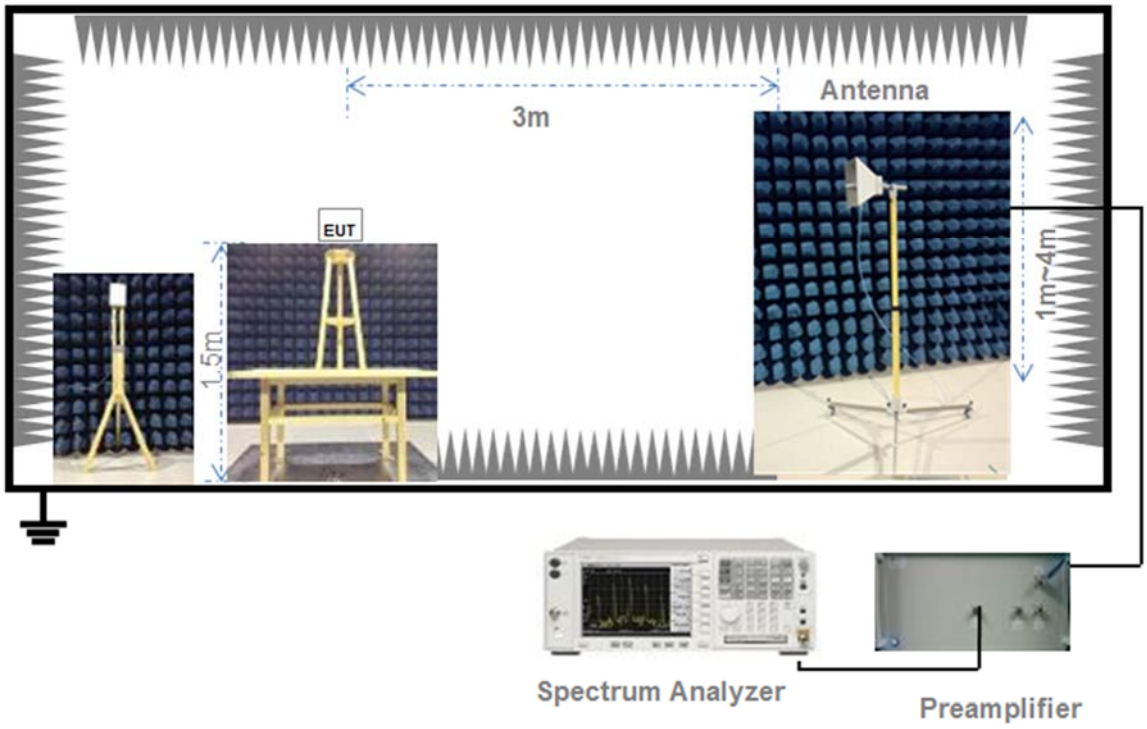
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



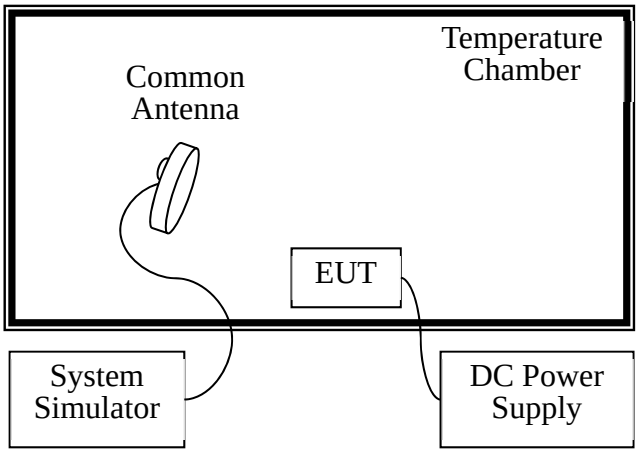
(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.4.6 For Frequency Stability Test



(Diagram 6)

5 TEST ITEMS

5.1 RF Output Power

5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

Frequency Band (MHz)	Limit
5150-5250	250 mW
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 26 dB emissions bandwidth in MHz.	

RSS-247, 6.2

The maximum conducted output power shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 99% emissions bandwidth in MHz.	

The maximum e.i.r.p. shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	200 mW or 10 dBm + 10log B, whichever is less.
5250-5350	1W or 17 dBm + 10log B, whichever is less.
5470-5725	1W or 17 dBm + 10log B, whichever is less.
5725-5850	N/A
Note: Where “B” is the 99% emissions bandwidth in MHz.	

5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

The maximum peak conducted output power may be measured using a broadband Average RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

The E.I.R.P used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Emission Bandwidth and 6 dB Bandwidth

5.2.1 Limit

FCC §15.407(a), RSS-247, 6.2

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.2.2 Test Setup

The test setup photo please refer to 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.

2. Set VBW ≥ 3*RBW,

3. Detector = Peak.

4. Trace mode = Max hold.

5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

1. Set Span = 1.5 times to 5.0 times the OBW

2. Set RBW = 1% to 5% of the OBW.

3. Set VBW ≥ 3*RBW, Detector = Peak.

4. Trace mode = Max hold.

5. Use the 99% power bandwidth function of the instrument.

6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.

2. Detector = Peak.Trace mode = Max hold.

3. Allow the trace to stabilize.

4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.2.4 Test Result

Please refer to ANNEX A.2 and ANNEX A.3.

5.3 Power Spectral density (PSD)

5.3.1 Limit

FCC §15.407(a)

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	11 dBm/MHz
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

RSS-247, 6.2

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

The e.i.r.p. spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	10 dBm/MHz
5250-5350	N/A
5470-5725	N/A
5725-5850	N/A

5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

1. Set RBW = 510 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS.
2. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak marker function to determine the maximum amplitude level.
4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.3.4 Test Result

Please refer to ANNEX A.4.

5.4 Conducted Emission

5.4.1 Limit

FCC §15.207, RSS-GEN, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

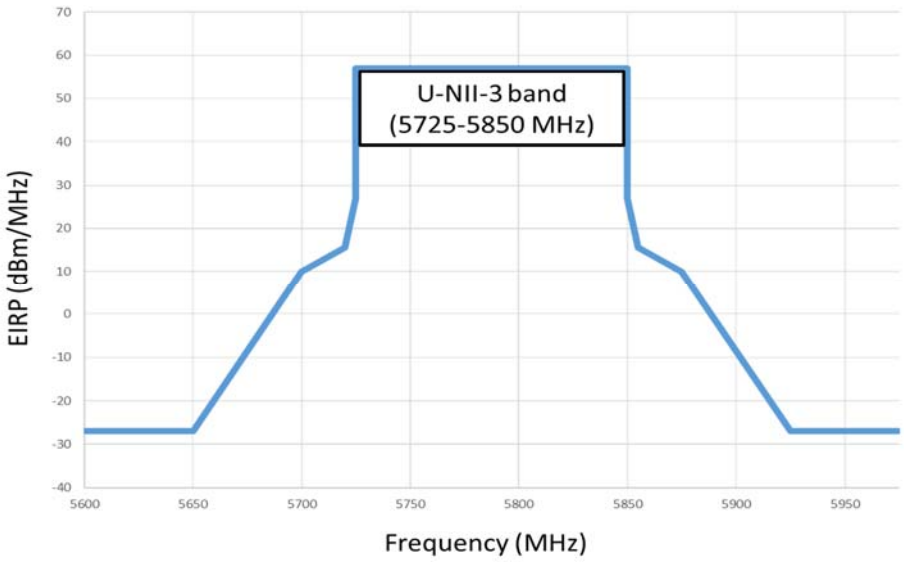
5.4.4 Test Result

Please refer to ANNEX A.5.

5.5 Conducted Spurious Emission and Band Edge (Authorized-band)

5.5.1 Limit

FCC §15.407(b)

Un-restricted band emissions	
Frequency Band (MHz)	Limit
5150 - 5250	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm
5250 - 5350	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm
5470 - 5725	Outside of the 5.47-5.725 GHz band: e.i.r.p. -27 dBm
5725 - 5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. 

RSS-247, 6.2

Un-restricted band emissions	
Frequency Band (MHz)	Limit
5150 - 5250	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm, However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz.
5250 - 5350	Outside of the 5.15-5.35 GHz band: e.i.r.p. -27 dBm. And any emissions within the band 5150-5250 MHz shall meet the power spectral density limits of 10 dBm/MHz, The device shall be labelled “for indoor use only.”
5470 - 5725	Outside of the 5.47-5.725 GHz band: e.i.r.p. -27 dBm
5725 - 5850	5715 -5725 MHz: e.i.r.p. -17 dBm 5850 -5860 MHz: e.i.r.p. -17 dBm Other un-restricted band: e.i.r.p .-27 dBm

5.5.2 Test Setup

See section 4.4.2 (Diagram 2) for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold
Allow the trace to stabilize

5.5.4 Test Result

Please refer to ANNEX A.6.

5.6 Radiated Spurious Emissions and Band Edge (Restricted-band)

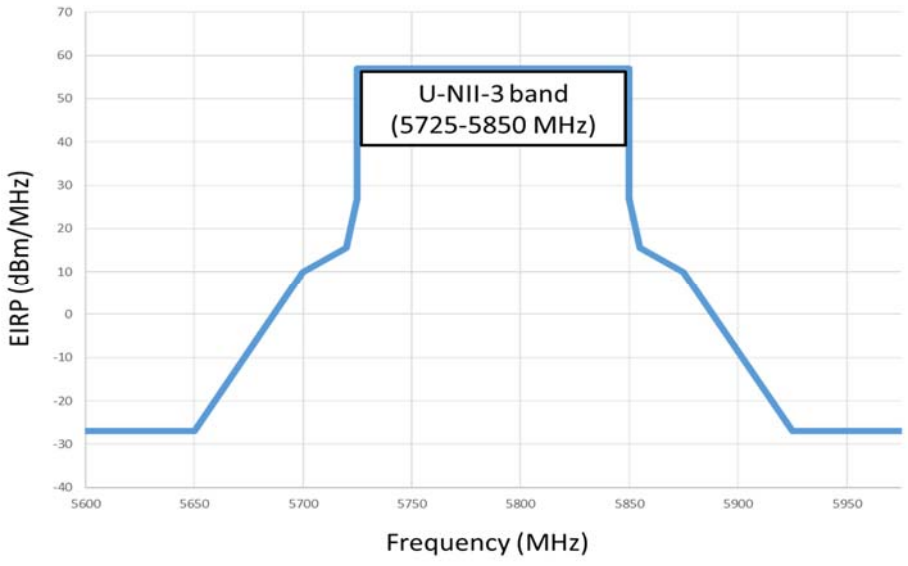
5.6.1 Limit

FCC §15.209 & 15.407(b), RSS-247, 6.2

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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 Limit for radiated test was performed according to FCC Part 15C

Note [2]: The tighter limit applies at the band edge.

Un-restricted band emissions	
Out Operating Band (MHz）	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and 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.

5.6.2 Test Setup

The section 4.4.3-4.4.5 (Diagram 3 - Diagram 5) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

E = EIRP – 20log D + 104.8

where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

f) Compare the resultant electric field strength level to the applicable limit.

g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

a) RBW = as specified in Table 1.

b) VBW ≥ 3 x RBW.

c) Detector = Peak.

d) Sweep time = auto.

e) Trace mode = max hold.

f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

a) The EUT shall be configured to operate at the maximum achievable duty cycle.

b) Measure the duty cycle, x, of the transmitter output signal as described in section 6.0.

c) RBW = 1 MHz (unless otherwise specified).

d) VBW ≥ 3 x RBW.

e) Detector = RMS, if span/(# of points in sweep) ≤ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.

f) Averaging type = power (i.e., RMS).

1) As an alternative, the detector and averaging type may be set for linear voltage averaging.

2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

g) Sweep time = auto.

h) Perform a trace average of at least 100 traces.

i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is 10 log(1/x), where x is the duty cycle.

2) If linear voltage averaging mode was used in step f), then the applicable correction factor is 20 log(1/x), where x is the duty cycle.

3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

5.6.4 Test Result

Please refer to ANNEX A.7 and Please refer to ANNEX A.9

5.7 Frequency Stability

5.7.1 Limit

FCC §15.407(g)

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

5.7.2 Test Setup

The section 4.4.6 (Diagram 6) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

The EUT is installed in an environment test chamber with external power source.
Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
A sufficient stabilization period at each temperatures is used prior to each frequency measurement.
When temperature is stabled, measure the frequency stability.
The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage.
Change setting of chamber and external power source to complete all conditions.

5.7.4 Test Result

Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 RF Output Power

Note [1]: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Data

Conducted Power

Band I (5150 - 5250 MHz)						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	5180	11.66	14.66	250	Pass
11a	CH44	5220	11.73	14.89	250	Pass
11a	CH48	5240	11.84	15.28	250	Pass
11n (HT20)	CH36	5180	11.44	13.93	250	Pass
11n (HT20)	CH44	5220	11.10	12.88	250	Pass
11n (HT20)	CH48	5240	11.19	13.15	250	Pass
11n (HT40)	CH38	5190	10.95	12.45	250	Pass
11n (HT40)	CH46	5230	11.28	13.43	250	Pass

Band IV (5725 - 5850 MHz)						
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (W)	Verdict
11a	CH149	5745	13.45	22.13	1000	Pass
11a	CH157	5785	12.86	19.32	1000	Pass
11a	CH165	5825	12.44	17.54	1000	Pass
11n (HT20)	CH149	5745	13.56	22.70	1000	Pass
11n (HT20)	CH157	5785	13.24	21.09	1000	Pass
11n (HT20)	CH165	5825	12.88	19.41	1000	Pass
11n (HT40)	CH151	5755	12.62	18.28	1000	Pass
11n (HT40)	CH159	5795	13.36	21.68	1000	Pass

A.2 Emission Bandwidth & 99% Bandwidth

Note: Test plots please refer to the document “Annex No.: BL-SZ1760430-604 Data Part 1.pdf”.

Test Data

Band I (5150 - 5250 MHz)				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	5180	19.72	16.70
11a	CH44	5220	20.62	16.86
11a	CH48	5240	27.18	17.20
11n (HT20)	CH36	5180	21.46	17.72
11n (HT20)	CH44	5220	20.70	17.76
11n (HT20)	CH48	5240	20.36	17.88
11n (HT40)	CH38	5190	39.56	36.14
11n (HT40)	CH46	5230	40.24	36.34

Band IV (5725 - 5850 MHz)				
Mode	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	5745	19.92	16.98
11a	CH157	5785	19.90	16.62
11a	CH165	5825	19.62	16.66
11n (HT20)	CH149	5745	21.52	17.86
11n (HT20)	CH157	5785	19.90	17.76
11n (HT20)	CH165	5825	20.56	17.80
11n (HT40)	CH151	5755	39.90	36.38
11n (HT40)	CH159	5795	39.64	36.04

A.3 6 dB Bandwidth

Note: Test plots please refer to the document “Annex No.: BL-SZ157760430-604 Data Part 2.pdf”.

Test Data

Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency(MHz)	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	5745	16.47	500	Pass
11a	CH157	5785	16.42	500	Pass
11a	CH165	5825	16.42	500	Pass
11n (HT20)	CH149	5745	17.72	500	Pass
11n (HT20)	CH157	5785	17.72	500	Pass
11n (HT20)	CH165	5825	17.72	500	Pass
11n (HT40)	CH151	5755	36.17	500	Pass
11n (HT40)	CH159	5795	36.02	500	Pass

A.4 Power Spectral Density

Note: Test plots please refer to the document “Annex No.: BL-SZ1760430-604 Data Part 3.pdf”.

Test Data

Band I (5150 - 5250 MHz)					
Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	FCC Limit(dBm/MHz)	Verdict
11a	CH36	5180	0.95	11	Pass
11a	CH44	5220	-0.12	11	Pass
11a	CH48	5240	1.23	11	Pass
11n (HT20)	CH36	5180	0.44	11	Pass
11n (HT20)	CH44	5220	0.23	11	Pass
11n (HT20)	CH48	5240	0.33	11	Pass
11n (HT40)	CH38	5190	-3.48	11	Pass
11n (HT40)	CH46	5230	-3.02	11	Pass

Band IV (5725 - 5850 MHz)					
Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	FCC/IC Limit(dBm/ 500 kHz)	Verdict
11a	CH149	5745	0.14	30	Pass
11a	CH157	5785	-0.35	30	Pass
11a	CH165	5825	-1.00	30	Pass
11n (HT20)	CH149	5745	-0.30	30	Pass
11n (HT20)	CH157	5785	0.07	30	Pass
11n (HT20)	CH165	5825	0.53	30	Pass
11n (HT40)	CH151	5755	-3.79	30	Pass
11n (HT40)	CH159	5795	-4.67	30	Pass

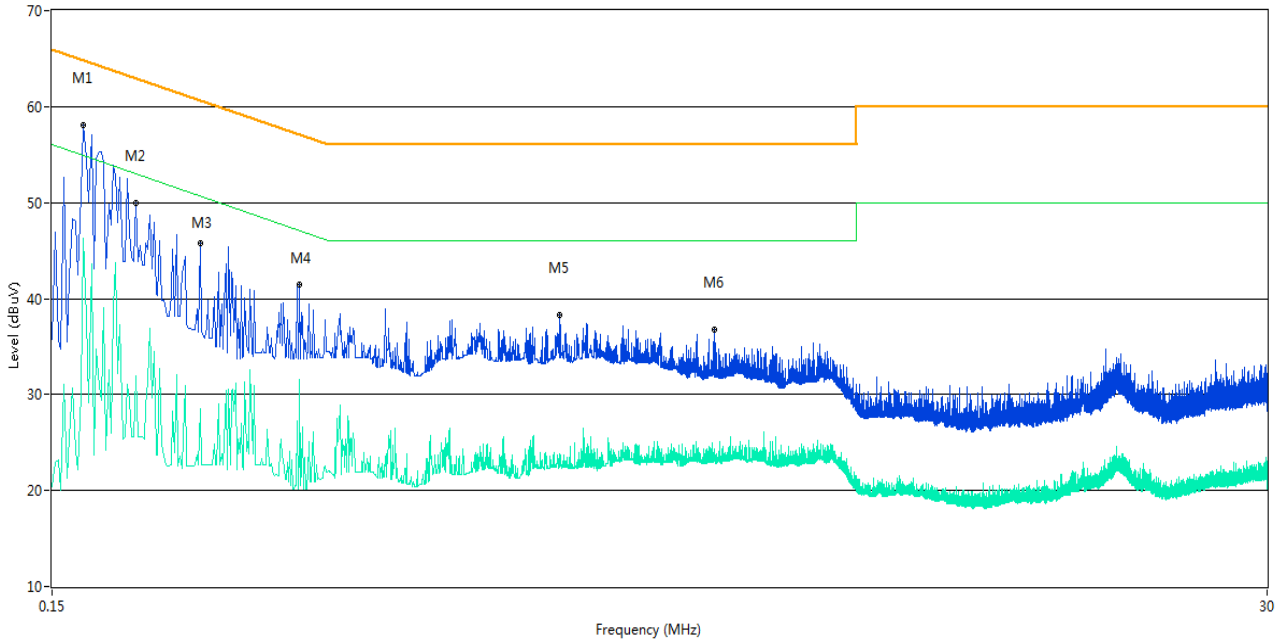
A.5 Conducted Emissions

Note [1]: The EUT is working in the Normal link mode.

Note [2]: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

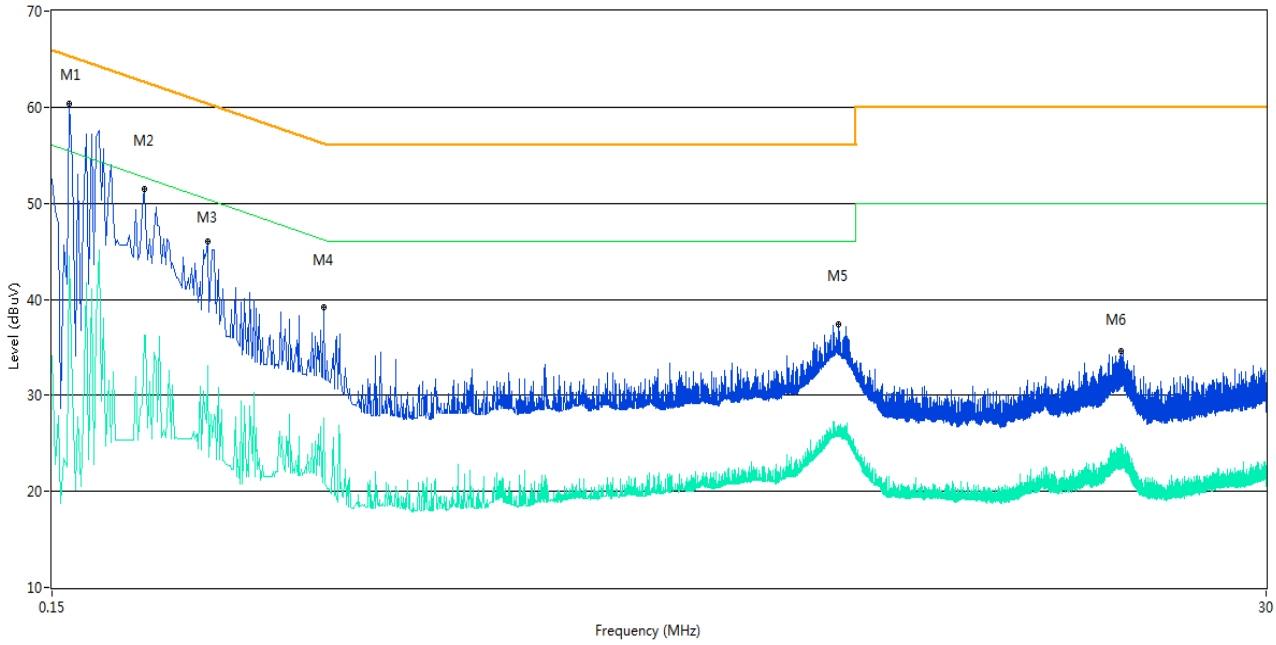
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.172	58.0	9.39	64.9	6.90	Peak	L Line	Pass
1**	0.172	46.3	9.39	54.9	8.60	AV	L Line	Pass
2	0.216	49.9	10.82	63.0	13.10	Peak	L Line	Pass
2**	0.216	31.9	10.82	53.0	21.10	AV	L Line	Pass
3	0.286	45.8	9.08	60.6	14.80	Peak	L Line	Pass
3**	0.286	28.5	9.08	50.6	22.10	AV	L Line	Pass
4	0.442	41.4	10.54	57.0	15.60	Peak	L Line	Pass
4**	0.442	31.6	10.54	47.0	15.40	AV	L Line	Pass
5	1.374	38.3	10.11	56.0	17.70	Peak	L Line	Pass
5**	1.374	22.6	10.11	46.0	23.40	AV	L Line	Pass
6	2.690	36.7	10.78	56.0	19.30	Peak	L Line	Pass
6**	2.690	24.3	10.78	46.0	21.70	AV	L Line	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.162	60.4	9.85	65.4	5.00	Peak	N Line	Pass
1**	0.162	44.5	9.85	55.4	10.90	AV	N Line	Pass
2	0.224	51.5	10.30	62.7	11.20	Peak	N Line	Pass
2**	0.224	36.2	10.30	52.7	16.50	AV	N Line	Pass
3	0.296	46.1	9.65	60.4	14.30	Peak	N Line	Pass
3**	0.296	33.1	9.65	50.4	17.30	AV	N Line	Pass
4	0.492	39.2	9.99	56.1	16.90	Peak	N Line	Pass
4**	0.492	27.7	9.99	46.1	18.40	AV	N Line	Pass
5	4.650	37.4	10.16	56.0	18.60	Peak	N Line	Pass
5**	4.650	26.4	10.16	46.0	19.60	AV	N Line	Pass
6	15.938	34.6	11.38	60.0	25.40	Peak	N Line	Pass
6**	15.938	23.7	11.38	50.0	26.30	AV	N Line	Pass

A.6 Conducted Spurious Emission and Band Edge (Authorized-band)

Note [1]: Test plots please refer to the document “Annex No.: BL-SZ1760430-604 Data Part 4.pdf”.

Test Band	Mode	Channel	Verdict
Band I	802.11a	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
Band IV	802.11a	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		Middle	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass

A.7 Radiated Spurious Emissions and Band Edge (Restricted-band)

Test Data

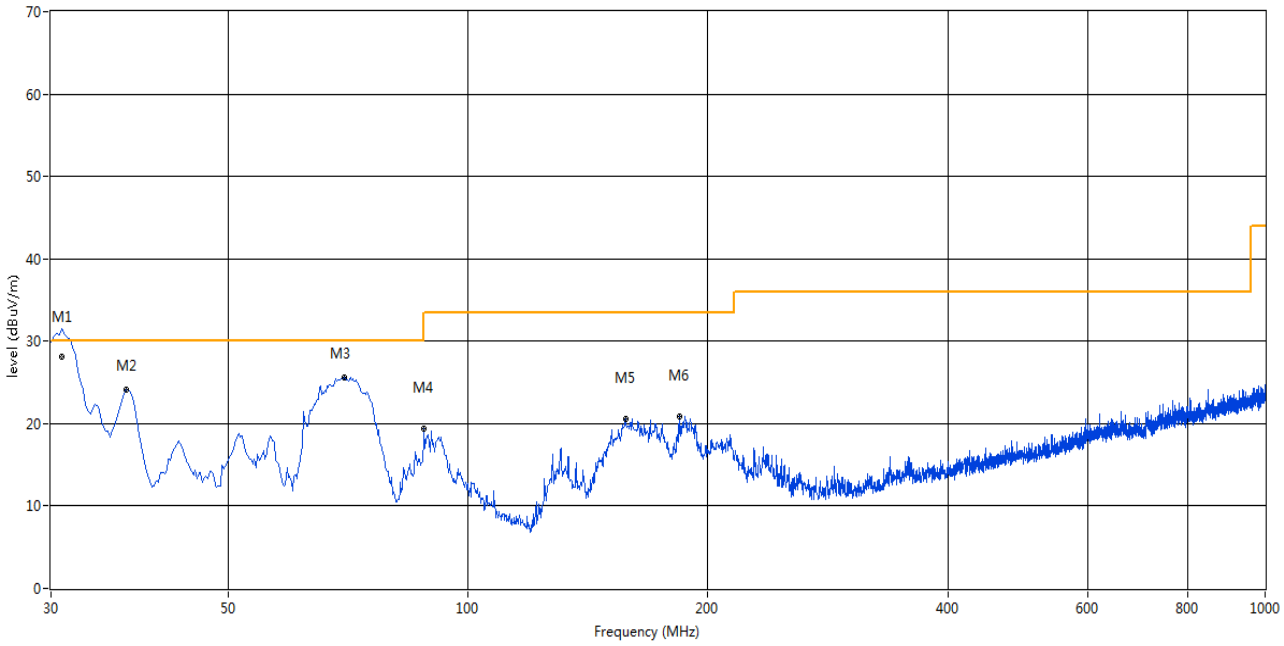
Note [1]: The symbol of "--" in the table which means not application.

Note [2]: For the test data above 1 GHz，According the ANSI C63.10, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note [3]: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

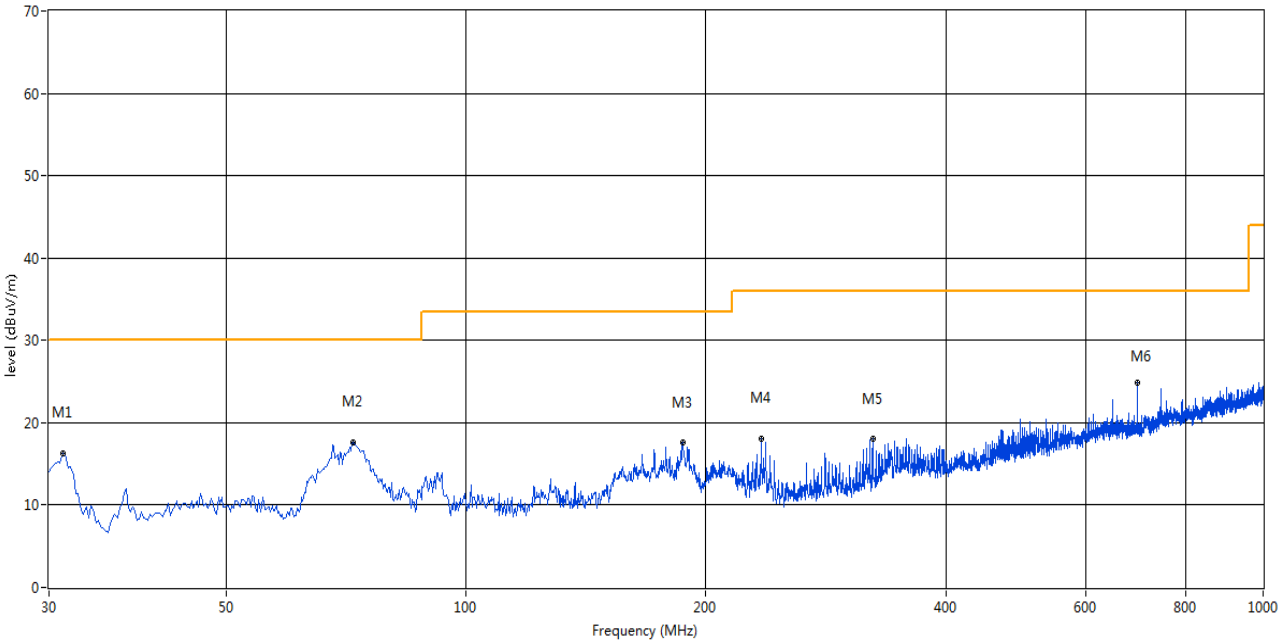
Note [4]: The EUT is working in the Normal link mode below 1 GHz.

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	31.157	31.53	-16.82	30.0	-1.53	Peak	353.00	100.00	Vertical	N/A
1*	31.157	28.12	-16.82	30.0	1.88	QP	353.00	100.00	Vertical	Pass
2	37.273	24.11	-15.21	30.0	5.89	Peak	5.00	100	Vertical	Pass
3	70.002	25.67	-17.50	30.0	4.33	Peak	117.00	300	Vertical	Pass
4	88.185	19.41	-17.58	33.5	14.09	Peak	63.00	100	Vertical	Pass
5	157.766	20.54	-18.18	33.5	12.96	Peak	222.00	200	Vertical	Pass
6	184.191	20.91	-16.60	33.5	12.59	Peak	208.00	200	Vertical	Pass

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	31.212	16.34	-16.84	30.0	13.66	Peak	280.00	400	Horizontal	Pass
2	72.184	17.65	-18.46	30.0	12.35	Peak	287.00	400	Horizontal	Pass
3	187.101	17.55	-16.19	33.5	15.95	Peak	291.00	400	Horizontal	Pass
4	234.861	18.02	-13.89	36.0	17.98	Peak	44.00	400	Horizontal	Pass
5	323.837	17.99	-11.66	36.0	18.01	Peak	92.00	400	Horizontal	Pass
6	695.981	24.89	-4.10	36.0	11.11	Peak	343.00	100	Horizontal	Pass

Note [1]: The device was evaluated/tested in XYZ orientation for radiated spurious emissions. And only the worst orientation of EUT was reported, which is the horizontal orientation.

Note [2]: The test results of 18 GHz to 40 GHz were lower than 20 dB, so it was not shown in this report.

1 GHz to 18 GHz, ANT V Band I 11a Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1936.000	47.37	-0.50	68.2	20.83	Peak	338.90	100	Vertical	Pass
2	2739.500	51.82	5.07	68.2	16.38	Peak	139.30	100	Vertical	Pass
3	5184.000	91.54	10.99	74.0	-17.54	Peak	12.80	100	Vertical	N/A
4	6756.000	48.90	12.11	68.2	19.30	Peak	22.60	100	Vertical	Pass
5	10357.750	52.48	16.01	68.2	15.72	Peak	212.60	100	Vertical	Pass
6	16900.000	60.36	25.83	68.2	7.84	Peak	193.20	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11a Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1473.500	46.12	-2.97	68.2	22.08	Peak	52.80	100	Horizontal	Pass
2	2809.500	52.01	4.95	68.2	16.19	Peak	216.70	100	Horizontal	Pass
3	5183.000	99.19	11.01	74.0	-25.19	Peak	238.80	100	Horizontal	N/A
4	8287.000	51.30	14.40	68.2	16.90	Peak	293.10	100	Horizontal	Pass
5	10357.750	51.23	16.01	68.2	16.97	Peak	199.30	100	Horizontal	Pass
6	16897.250	60.25	25.83	68.2	7.95	Peak	36.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11a Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1343.000	46.44	-2.99	68.2	21.76	Peak	351.20	100	Vertical	Pass
2	2241.000	50.00	1.88	68.2	18.20	Peak	200.70	100	Vertical	Pass
3	5221.000	91.72	10.83	74.0	-17.72	Peak	355.00	100	Vertical	N/A
4	6726.000	49.51	11.84	68.2	18.69	Peak	312.40	100	Vertical	Pass
5	10432.000	53.40	16.49	68.2	14.80	Peak	133.50	100	Vertical	Pass
6	14540.500	54.64	22.72	68.2	13.56	Peak	148.20	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11a Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1938.000	47.49	-0.45	68.2	20.71	Peak	304.90	100	Horizontal	Pass
2	3624.000	45.08	7.51	68.2	23.12	Peak	145.70	100	Horizontal	Pass
3	5217.000	100.66	10.84	74.0	-26.66	Peak	245.80	100	Horizontal	N/A
4	8353.000	49.80	13.66	68.2	18.40	Peak	243.10	100	Horizontal	Pass
5	10440.250	49.99	16.54	68.2	18.21	Peak	171.90	100	Horizontal	Pass
6	14515.750	54.47	22.16	68.2	13.73	Peak	167.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11a High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1963.000	47.51	-0.47	68.2	20.69	Peak	5.40	100	Vertical	Pass
2	3768.000	45.79	8.14	68.2	22.41	Peak	115.10	100	Vertical	Pass
3	5242.000	91.90	11.08	74.0	-17.90	Peak	0.40	100	Vertical	N/A
4	6191.000	49.37	11.49	68.2	18.83	Peak	105.30	100	Vertical	Pass
5	10476.000	52.74	16.76	68.2	15.46	Peak	117.40	100	Vertical	Pass
6	16297.750	58.37	22.93	68.2	9.83	Peak	63.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11a High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1329.500	46.78	-3.26	68.2	21.42	Peak	357.70	100	Horizontal	Pass
2	3751.000	44.84	8.39	68.2	23.36	Peak	14.20	100	Horizontal	Pass
3	5243.000	99.62	11.08	74.0	-25.62	Peak	241.00	100	Horizontal	N/A
4	8383.250	49.96	14.16	68.2	18.24	Peak	253.10	100	Horizontal	Pass
5	10478.750	52.09	16.74	68.2	16.11	Peak	184.60	100	Horizontal	Pass
6	15582.750	56.45	22.79	68.2	11.75	Peak	12.30	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11n20 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1368.000	45.70	-2.76	68.2	22.50	Peak	353.60	100	Vertical	Pass
2	4237.000	45.71	8.89	68.2	22.49	Peak	7.50	100	Vertical	Pass
3	5181.000	92.25	11.02	74.0	-18.25	Peak	358.50	100	Vertical	N/A
4	6589.000	50.39	12.02	68.2	17.81	Peak	127.50	100	Vertical	Pass
5	10355.000	53.92	15.99	68.2	14.28	Peak	131.40	100	Vertical	Pass
6	15552.500	56.39	22.11	68.2	11.81	Peak	193.60	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11n20 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1672.000	46.42	-2.14	68.2	21.78	Peak	113.40	100	Horizontal	Pass
2	3570.000	45.04	6.75	68.2	23.16	Peak	298.40	100	Horizontal	Pass
3	5182.000	99.32	11.01	74.0	-25.32	Peak	243.70	100	Horizontal	N/A
4	8287.000	50.87	14.40	68.2	17.33	Peak	238.50	100	Horizontal	Pass
5	10366.000	51.33	16.06	68.2	16.87	Peak	172.60	100	Horizontal	Pass
6	12293.750	52.47	18.76	68.2	15.73	Peak	341.60	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11n20 Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1479.000	46.14	-2.88	68.2	22.06	Peak	326.20	100	Vertical	Pass
2	3866.000	45.14	7.97	68.2	23.06	Peak	243.50	100	Vertical	Pass
3	5219.000	91.56	10.83	74.0	-17.56	Peak	355.40	100	Vertical	N/A
4	6049.000	49.12	11.64	68.2	19.08	Peak	195.80	100	Vertical	Pass
5	10440.250	52.24	16.54	68.2	15.96	Peak	130.60	100	Vertical	Pass
6	14205.000	54.38	21.26	68.2	13.82	Peak	126.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11n20 Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1270.000	46.89	-3.50	68.2	21.31	Peak	171.30	100	Horizontal	Pass
2	4267.000	45.66	9.08	68.2	22.54	Peak	129.30	100	Horizontal	Pass
3	5218.000	99.16	10.84	74.0	-25.16	Peak	242.50	100	Horizontal	N/A
4	6760.000	49.44	12.18	68.2	18.76	Peak	1.90	100	Horizontal	Pass
5	8353.000	50.08	13.66	68.2	18.12	Peak	270.00	100	Horizontal	Pass
6	14155.500	54.65	21.71	68.2	13.55	Peak	13.60	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11n20 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1435.500	45.91	-3.14	68.2	22.29	Peak	352.20	100	Vertical	Pass
2	3508.000	44.34	6.55	68.2	23.86	Peak	301.90	100	Vertical	Pass
3	5239.000	91.34	11.03	74.0	-17.34	Peak	357.20	100	Vertical	N/A
4	6593.000	49.23	11.99	68.2	18.97	Peak	317.00	100	Vertical	Pass
5	10481.500	54.04	16.72	68.2	14.16	Peak	135.30	100	Vertical	Pass
6	12313.000	52.08	18.51	68.2	16.12	Peak	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11n20 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1531.500	46.62	-2.91	68.2	21.58	Peak	279.10	100	Horizontal	Pass
2	3961.000	45.02	8.32	68.2	23.18	Peak	75.30	100	Horizontal	Pass
3	5239.000	100.64	11.03	74.0	-26.64	Peak	242.60	100	Horizontal	N/A
4	8383.250	50.82	14.16	68.2	17.38	Peak	243.30	100	Horizontal	Pass
5	10484.250	50.84	16.70	68.2	17.36	Peak	187.50	100	Horizontal	Pass
6	15618.500	56.44	22.74	68.2	11.76	Peak	45.20	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11n40 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1558.000	46.17	-2.99	68.2	22.03	Peak	2.70	100	Vertical	Pass
2	3751.000	44.77	8.39	68.2	23.43	Peak	294.90	100	Vertical	Pass
3	5186.000	89.72	10.98	74.0	-15.72	Peak	0.30	100	Vertical	N/A
4	8834.250	47.94	15.69	68.2	20.26	Peak	130.30	100	Vertical	Pass
5	12029.750	51.56	18.57	68.2	16.64	Peak	27.20	100	Vertical	Pass
6	16440.750	58.86	23.84	68.2	9.34	Peak	317.30	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11n40 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1452.500	45.77	-2.95	68.2	22.43	Peak	89.40	100	Horizontal	Pass
2	3986.000	44.86	8.52	68.2	23.34	Peak	82.90	100	Horizontal	Pass
3	5195.000	97.80	10.93	74.0	-23.80	Peak	237.90	100	Horizontal	N/A
4	8303.500	51.41	14.66	68.2	16.79	Peak	252.80	100	Horizontal	Pass
5	10379.750	49.90	16.15	68.2	18.30	Peak	175.10	100	Horizontal	Pass
6	14205.000	54.56	21.26	68.2	13.64	Peak	161.40	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band I 11n40 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1713.000	46.07	-2.19	68.2	22.13	Peak	176.80	100	Vertical	Pass
2	4094.000	44.81	8.41	68.2	23.39	Peak	42.80	100	Vertical	Pass
3	5232.000	88.57	10.95	74.0	-14.57	Peak	342.20	100	Vertical	N/A
4	6761.000	49.54	12.17	68.2	18.66	Peak	67.60	100	Vertical	Pass
5	10467.750	50.49	16.72	68.2	17.71	Peak	141.50	100	Vertical	Pass
6	14174.750	54.27	21.53	68.2	13.93	Peak	241.80	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band I 11n40 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2474.000	58.86	1.37	68.2	9.34	Peak	50.10	100	Horizontal	Pass
2	4161.000	45.28	8.55	68.2	22.92	Peak	80.70	100	Horizontal	Pass
3	5223.000	97.31	10.86	74.0	-23.31	Peak	239.40	100	Horizontal	N/A
4	8369.500	50.99	13.93	68.2	17.21	Peak	240.20	100	Horizontal	Pass
5	10313.750	49.61	15.73	68.2	18.59	Peak	342.30	100	Horizontal	Pass
6	15615.750	56.31	22.78	68.2	11.89	Peak	113.10	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11a Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1400.500	45.85	-2.91	68.2	22.35	Peak	154.10	100	Vertical	Pass
2	4014.000	45.42	8.75	68.2	22.78	Peak	57.90	100	Vertical	Pass
3	5747.000	86.28	11.63	122.2	35.92	Peak	38.00	100	Vertical	N/A
4	6464.000	49.51	11.76	68.2	18.69	Peak	195.00	100	Vertical	Pass
5	9546.500	48.22	14.84	68.2	19.98	Peak	78.40	100	Vertical	Pass
6	12533.000	51.46	19.09	68.2	16.74	Peak	360.60	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11a Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1304.000	46.72	-3.02	68.2	21.48	Peak	91.30	100	Horizontal	Pass
2	3597.000	44.48	7.20	68.2	23.72	Peak	263.00	100	Horizontal	Pass
3	5743.000	96.57	11.58	122.2	25.63	Peak	231.70	100	Horizontal	N/A
4	9365.000	49.20	17.10	68.2	19.00	Peak	114.10	100	Horizontal	Pass
5	12533.000	51.19	19.09	68.2	17.01	Peak	3.40	100	Horizontal	Pass
6	15569.000	56.80	22.48	68.2	11.40	Peak	278.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11a Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1747.000	46.32	-1.73	68.2	21.88	Peak	148.00	100	Vertical	Pass
2	4260.000	45.49	9.03	68.2	22.71	Peak	359.10	100	Vertical	Pass
3	5786.000	87.62	11.51	122.2	34.58	Peak	115.10	100	Vertical	N/A
4	8611.500	47.27	15.15	68.2	20.93	Peak	42.30	100	Vertical	Pass
5	11908.750	50.84	18.04	68.2	17.36	Peak	313.40	100	Vertical	Pass
6	14587.250	54.64	21.86	68.2	13.56	Peak	185.70	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11a Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1663.500	45.90	-2.33	68.2	22.30	Peak	23.00	100	Horizontal	Pass
2	3745.000	45.12	8.36	68.2	23.08	Peak	141.90	100	Horizontal	Pass
3	5786.000	95.98	11.51	122.2	26.22	Peak	242.20	100	Horizontal	N/A
4	8567.500	47.80	15.23	68.2	20.40	Peak	359.70	100	Horizontal	Pass
5	10850.000	49.42	17.45	68.2	18.78	Peak	34.80	100	Horizontal	Pass
6	14504.750	54.72	21.91	68.2	13.48	Peak	172.30	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11a High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1516.500	45.90	-3.14	68.2	22.30	Peak	3.40	100	Vertical	Pass
2	3684.000	45.56	7.59	68.2	22.64	Peak	296.70	100	Vertical	Pass
3	5827.000	87.98	11.36	122.2	34.22	Peak	341.00	100	Vertical	N/A
4	8848.000	47.80	15.73	68.2	20.40	Peak	24.90	100	Vertical	Pass
5	11853.750	50.39	18.33	68.2	17.81	Peak	90.60	100	Vertical	Pass
6	14532.250	54.74	22.54	68.2	13.46	Peak	184.10	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11a High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2106.000	48.05	0.45	68.2	20.15	Peak	8.40	100	Horizontal	Pass
2	4744.000	47.13	10.51	68.2	21.07	Peak	355.30	100	Horizontal	Pass
3	5822.000	95.74	11.34	122.2	26.46	Peak	234.30	100	Horizontal	N/A
4	8383.250	46.66	14.16	68.2	21.54	Peak	247.70	100	Horizontal	Pass
5	12214.000	50.96	18.28	68.2	17.24	Peak	57.40	100	Horizontal	Pass
6	15992.500	57.68	23.05	68.2	10.52	Peak	327.50	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11n20 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2104.000	49.42	0.30	68.2	18.78	Peak	222.10	100	Vertical	Pass
2	4501.000	46.37	9.26	68.2	21.83	Peak	271.70	100	Vertical	Pass
3	5743.000	86.31	11.58	122.2	35.89	Peak	122.60	100	Vertical	N/A
4	7649.000	46.59	14.08	68.2	21.61	Peak	98.00	100	Vertical	Pass
5	11488.000	50.42	17.98	68.2	17.78	Peak	242.60	100	Vertical	Pass
6	15291.250	55.81	21.57	68.2	12.39	Peak	31.30	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11n20 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1672.500	46.61	-2.14	68.2	21.59	Peak	292.70	100	Horizontal	Pass
2	4742.000	47.06	10.53	68.2	21.14	Peak	33.50	100	Horizontal	Pass
3	5743.000	95.87	11.58	122.2	26.33	Peak	244.20	100	Horizontal	N/A
4	8177.000	46.43	14.25	68.2	21.77	Peak	0.30	100	Horizontal	Pass
5	11856.500	50.90	18.32	68.2	17.30	Peak	303.30	100	Horizontal	Pass
6	15623.999	56.73	22.66	68.2	11.47	Peak	88.80	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11n20 Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1897.500	47.29	-1.30	68.2	20.91	Peak	204.50	100	Vertical	Pass
2	3558.000	44.49	6.68	68.2	23.71	Peak	59.20	100	Vertical	Pass
3	5782.000	86.82	11.61	122.2	35.38	Peak	121.00	100	Vertical	N/A
4	7673.750	46.96	13.50	68.2	21.24	Peak	297.30	100	Vertical	Pass
5	12483.500	51.60	18.43	68.2	16.60	Peak	360.20	100	Vertical	Pass
6	16009.000	57.25	23.12	68.2	10.95	Peak	335.70	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11n20 Middle channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2042.500	48.75	0.27	68.2	19.45	Peak	177.30	100	Horizontal	Pass
2	4167.000	46.05	8.53	68.2	22.15	Peak	331.40	100	Horizontal	Pass
3	5778.000	94.69	11.66	122.2	27.51	Peak	223.60	100	Horizontal	N/A
4	9378.750	47.79	17.51	68.2	20.41	Peak	16.10	100	Horizontal	Pass
5	13039.000	51.69	19.70	68.2	16.51	Peak	108.80	100	Horizontal	Pass
6	15274.750	56.14	21.59	68.2	12.06	Peak	16.10	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11n20 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2420.000	55.07	1.25	68.2	13.13	Peak	338.00	100	Vertical	Pass
2	4100.000	45.16	8.28	68.2	23.04	Peak	252.90	100	Vertical	Pass
3	5826.000	88.49	11.38	122.2	33.71	Peak	325.90	100	Vertical	N/A
4	8386.000	47.22	14.14	68.2	20.98	Peak	251.30	100	Vertical	Pass
5	11067.250	50.16	16.90	68.2	18.04	Peak	0.50	100	Vertical	Pass
6	16223.500	57.77	22.23	68.2	10.43	Peak	210.90	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11n20 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1362.500	46.01	-2.81	68.2	22.19	Peak	116.40	100	Horizontal	Pass
2	4034.000	45.13	8.76	68.2	23.07	Peak	270.00	100	Horizontal	Pass
3	5827.000	96.01	11.36	122.2	26.19	Peak	225.90	100	Horizontal	N/A
4	6472.000	49.01	11.83	68.2	19.19	Peak	8.00	100	Horizontal	Pass
5	9945.250	49.56	17.20	68.2	18.64	Peak	287.70	100	Horizontal	Pass
6	15214.250	56.16	21.35	68.2	12.04	Peak	24.70	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11n40 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1673.000	45.51	-2.13	68.2	22.69	Peak	89.60	100	Vertical	Pass
2	3724.000	45.36	8.15	68.2	22.84	Peak	150.00	100	Vertical	Pass
3	5756.000	84.63	11.74	122.2	37.57	Peak	120.00	100	Vertical	N/A
4	9029.500	47.57	15.30	68.2	20.63	Peak	351.90	100	Vertical	Pass
5	11892.250	50.97	18.13	68.2	17.23	Peak	165.50	100	Vertical	Pass
6	14551.500	55.04	22.72	68.2	13.16	Peak	79.20	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11n40 Low channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1319.000	46.02	-3.38	68.2	22.18	Peak	332.30	100	Horizontal	Pass
2	4734.000	47.35	10.51	68.2	20.85	Peak	120.50	100	Horizontal	Pass
3	5751.000	93.75	11.69	122.2	28.45	Peak	229.20	100	Horizontal	N/A
4	8559.250	48.62	15.18	68.2	19.58	Peak	358.40	100	Horizontal	Pass
5	11864.750	50.89	18.27	68.2	17.31	Peak	359.90	100	Horizontal	Pass
6	15965.000	58.05	22.94	68.2	10.15	Peak	151.60	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V Band IV 11n40 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2258.000	50.24	1.75	68.2	17.96	Peak	25.90	100	Vertical	Pass
2	4244.000	45.39	8.92	68.2	22.81	Peak	37.30	100	Vertical	Pass
3	5788.000	84.25	11.48	122.2	37.95	Peak	117.00	100	Vertical	N/A
4	7871.750	47.60	14.10	68.2	20.60	Peak	47.50	100	Vertical	Pass
5	10852.750	49.84	17.45	68.2	18.36	Peak	152.10	100	Vertical	Pass
6	15261.000	56.56	21.54	68.2	11.64	Peak	62.50	100	Vertical	Pass

1 GHz to 18 GHz, ANT H Band IV 11n40 High channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2265.000	50.70	2.24	68.2	17.50	Peak	212.50	100	Horizontal	Pass
2	4233.000	45.52	8.88	68.2	22.68	Peak	222.10	100	Horizontal	Pass
3	5791.000	93.13	11.42	122.2	29.07	Peak	231.50	100	Horizontal	N/A
4	7541.750	47.28	12.88	68.2	20.92	Peak	71.10	100	Horizontal	Pass
5	10003.000	49.52	17.15	68.2	18.68	Peak	359.60	100	Horizontal	Pass
6	15948.500	57.54	22.87	68.2	10.66	Peak	0.00	100	Horizontal	Pass

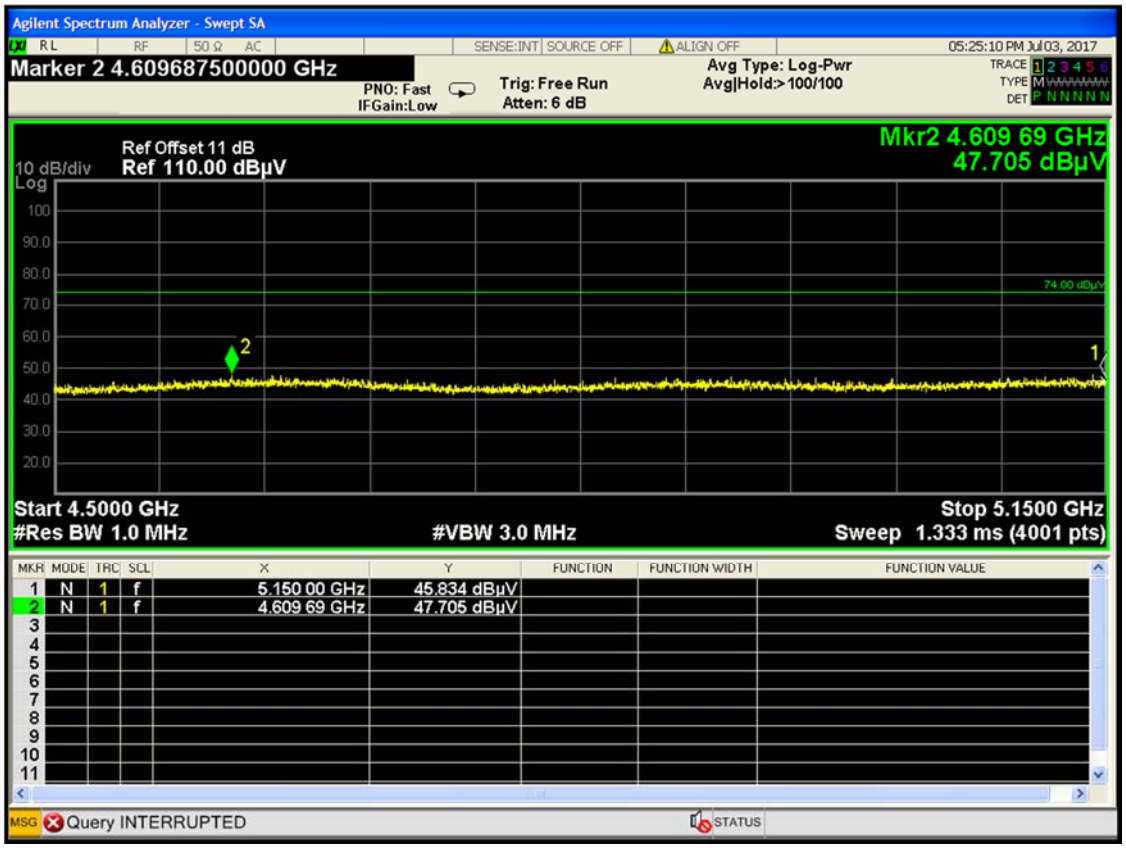
A.7.2 Band Edge (Restricted-band)

Note: Test plots please refer to the document “Annex No.: BL-SZ1680175-604 Data Part 5.pdf”.

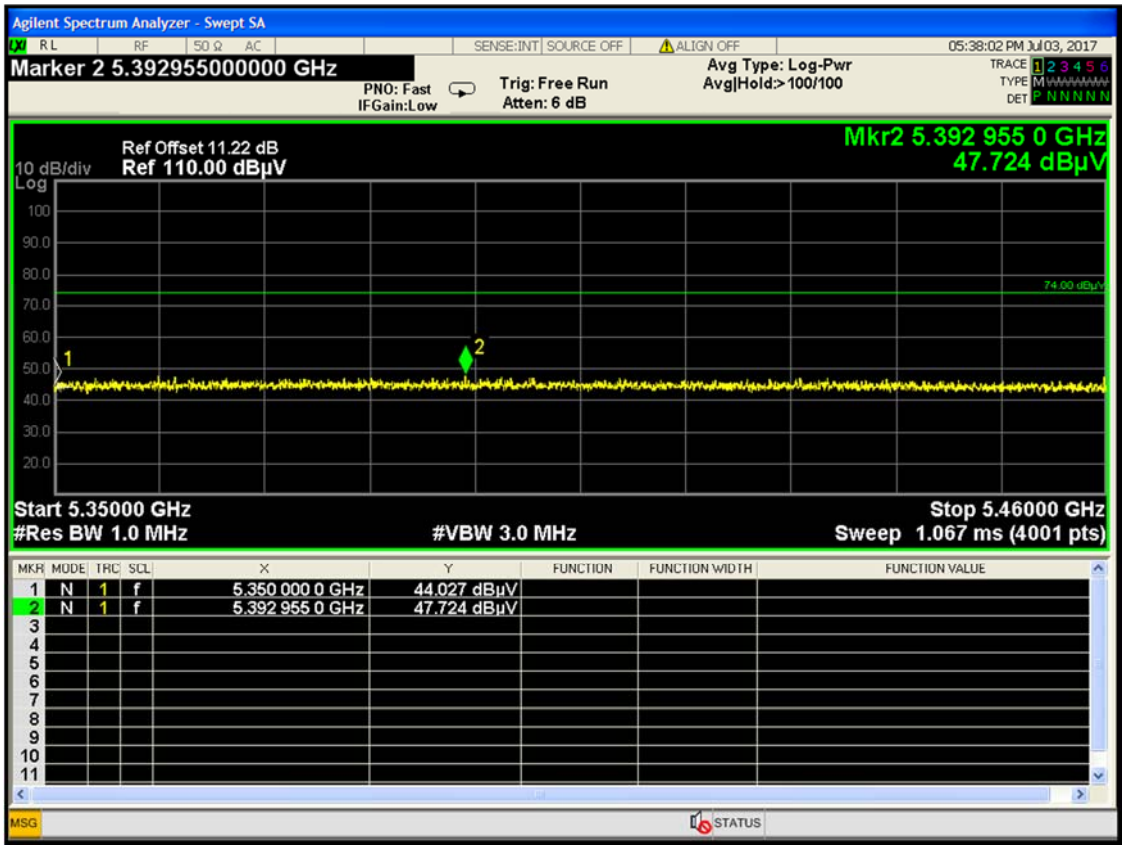
Test Band	Mode	Channel	Verdict
Band I	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
Band IV	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass

Test Plots

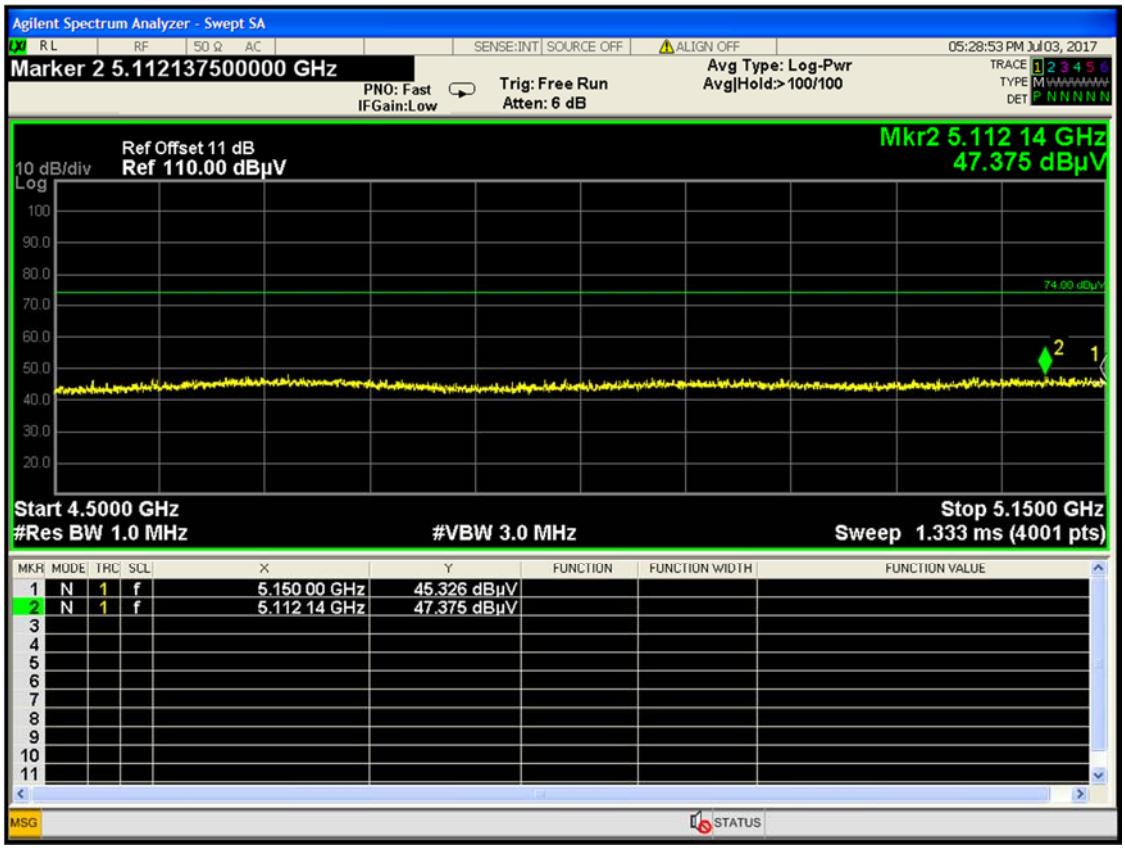
Band I 11a CH36



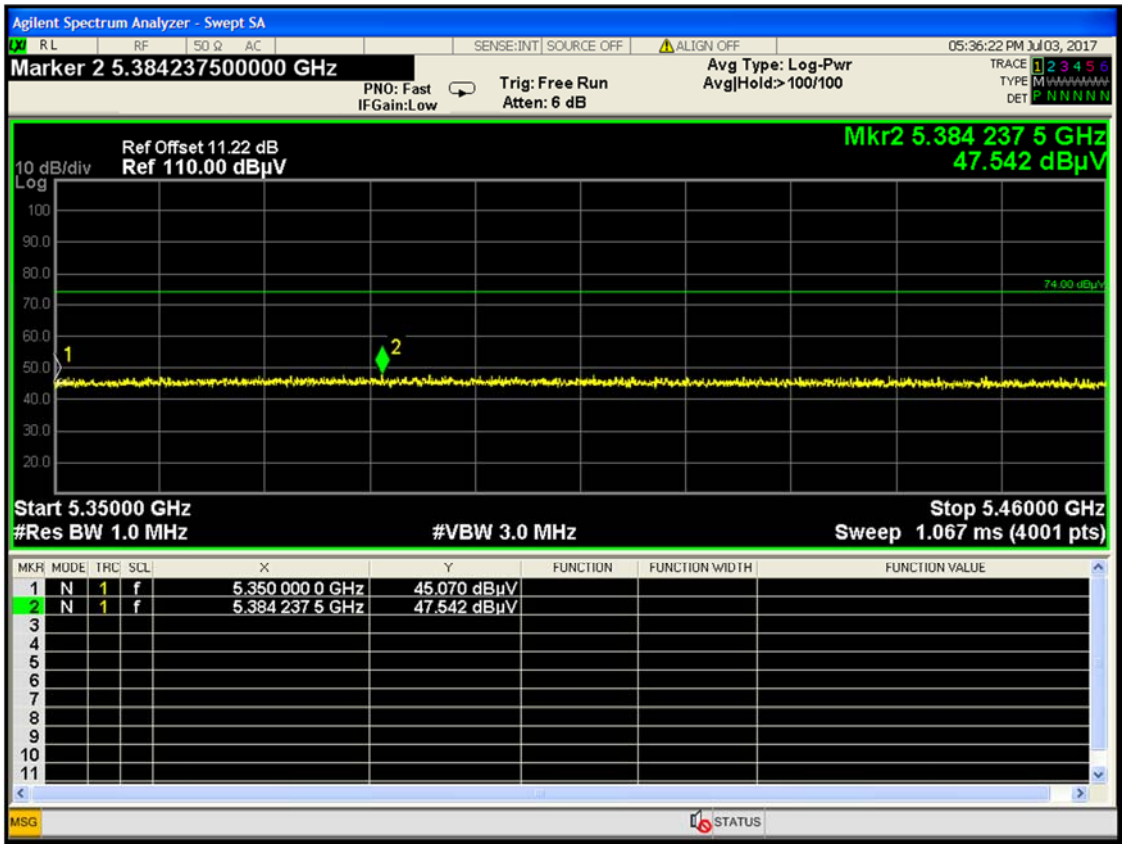
Band I 11a CH48



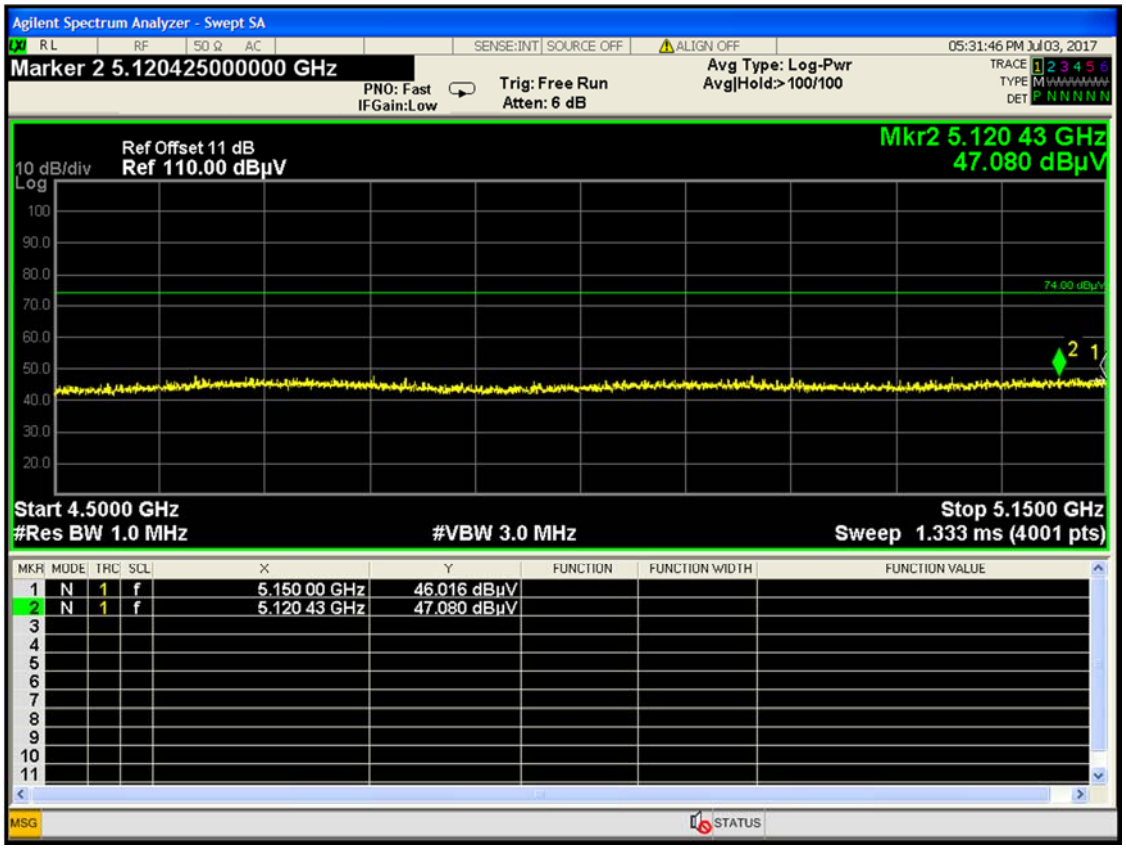
Band I 11n(HT20) CH36



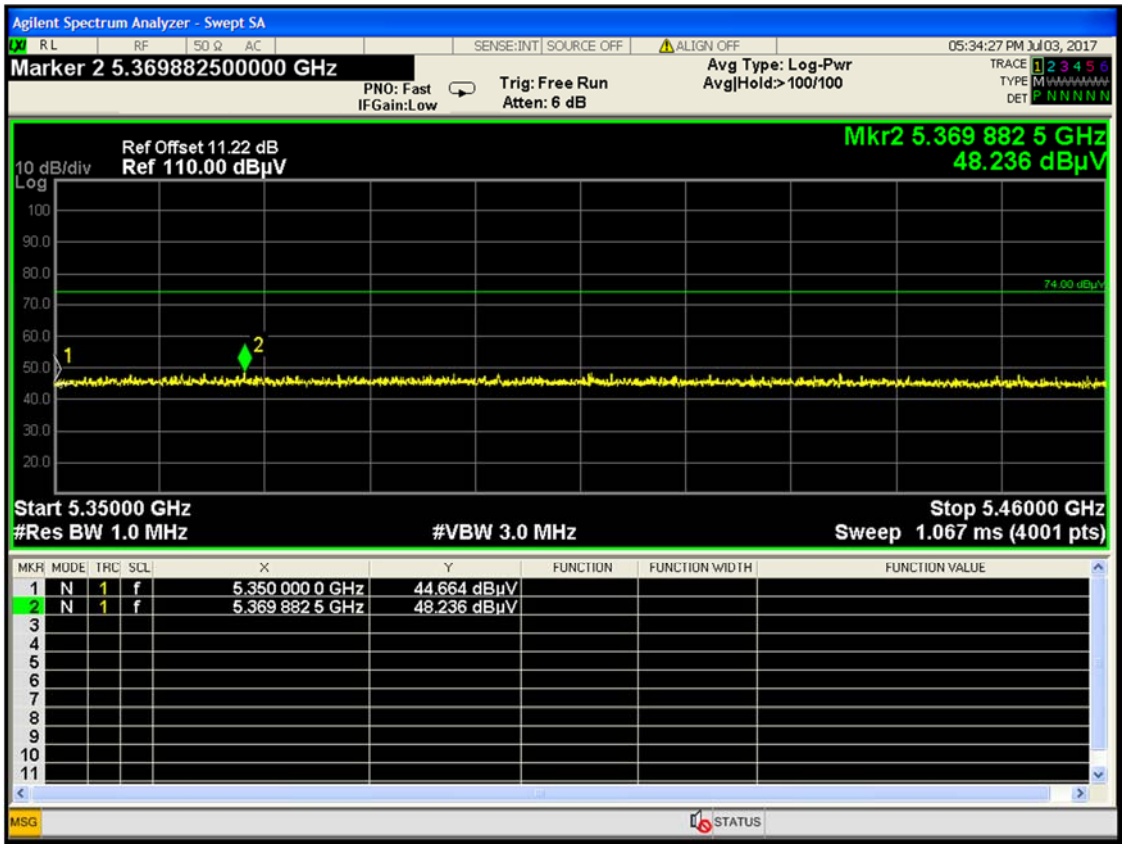
Band I 11n(HT20) CH48



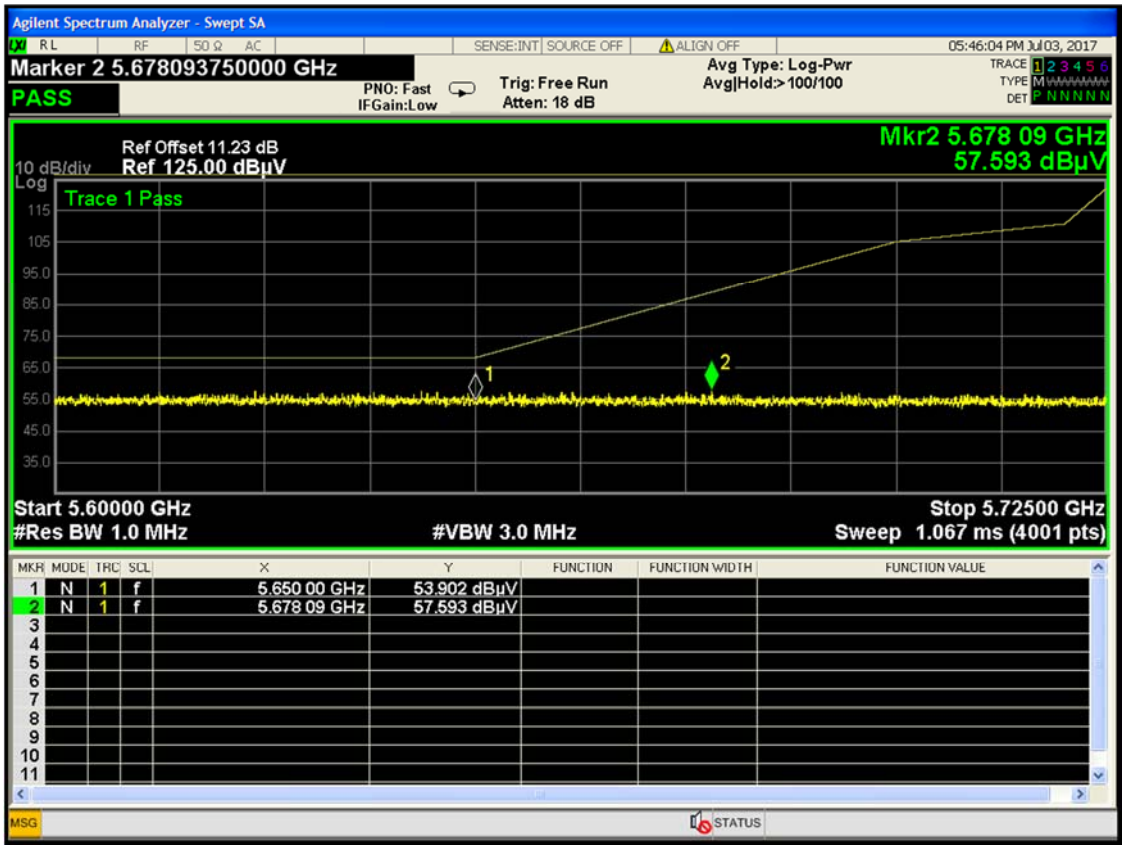
Band I 11n(HT40) CH38



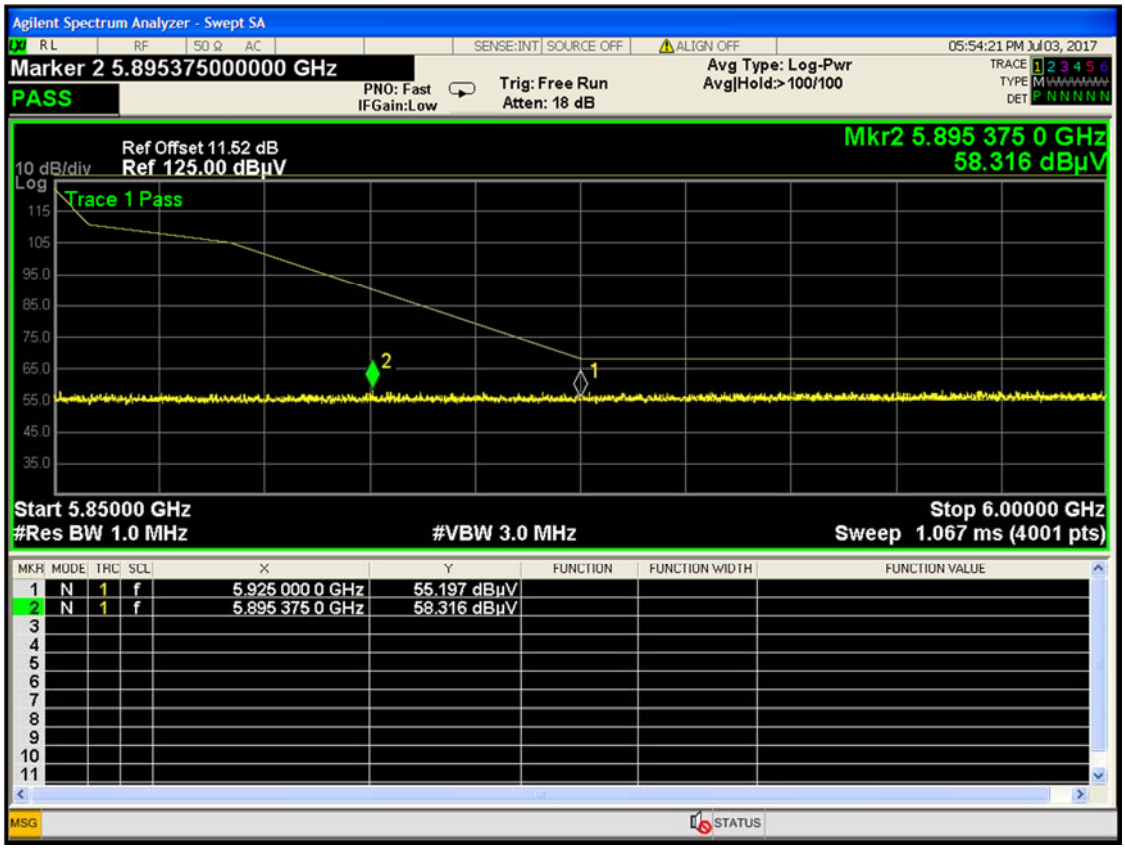
Band I 11n(HT40) CH46



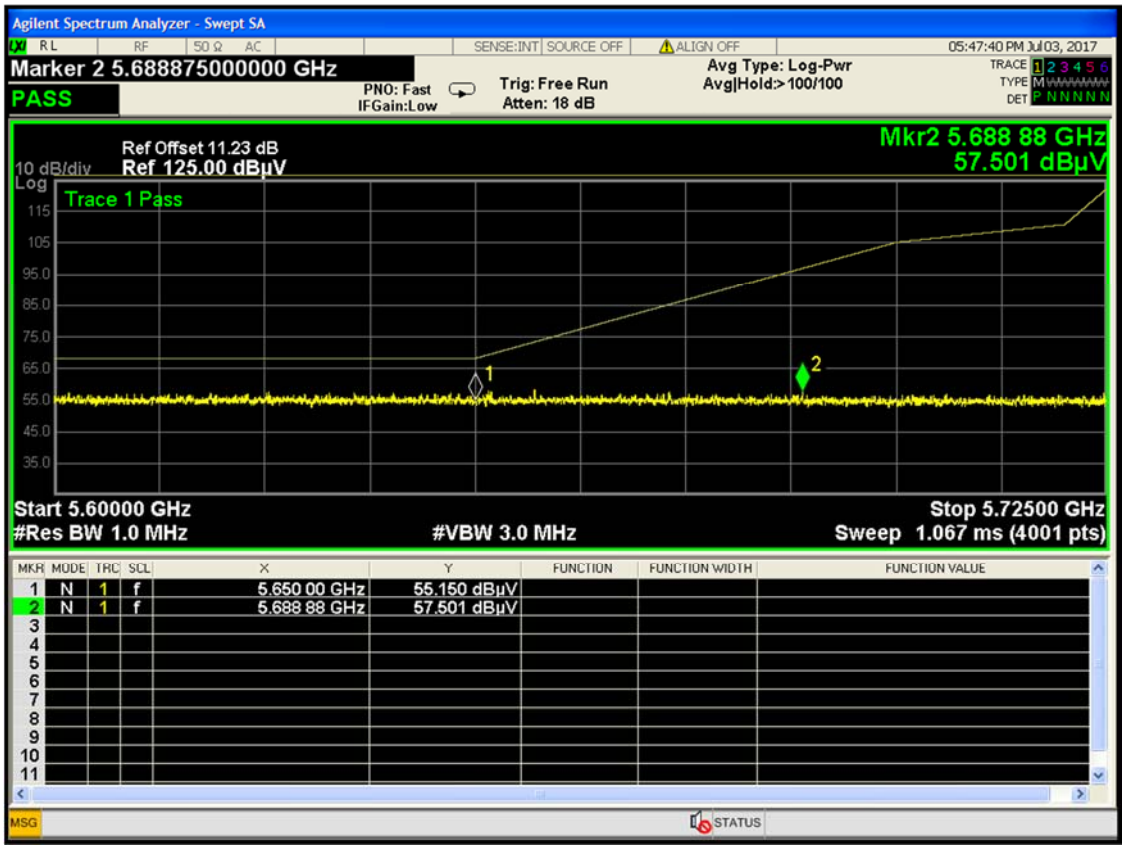
Band IV 11a CH149



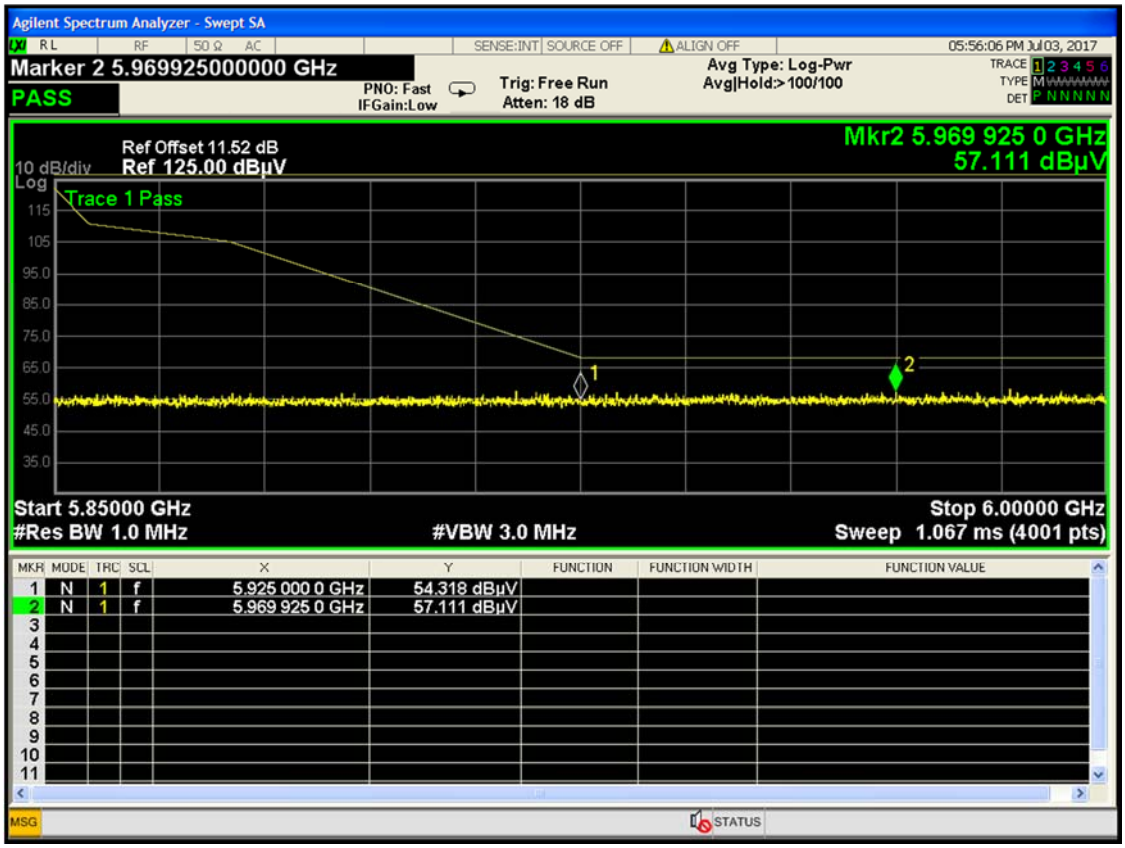
Band IV 11a CH165



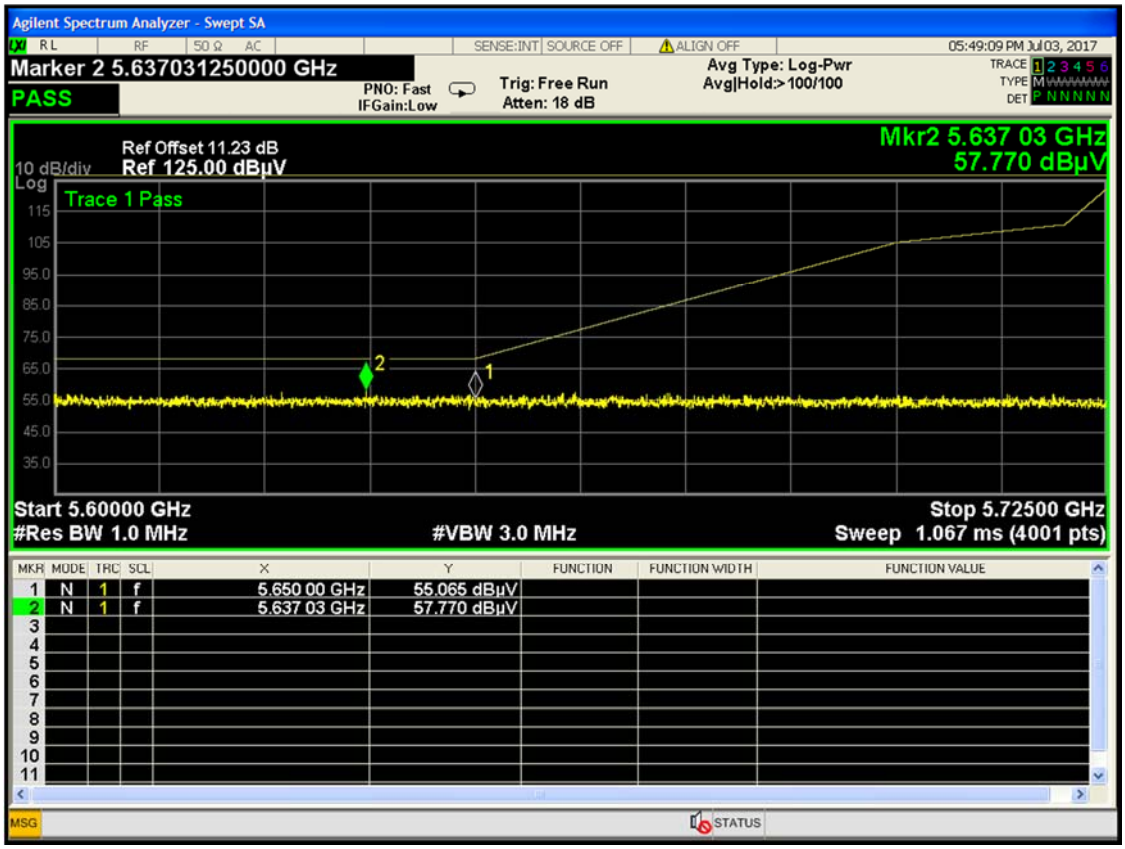
Band IV 11n(HT20) CH149



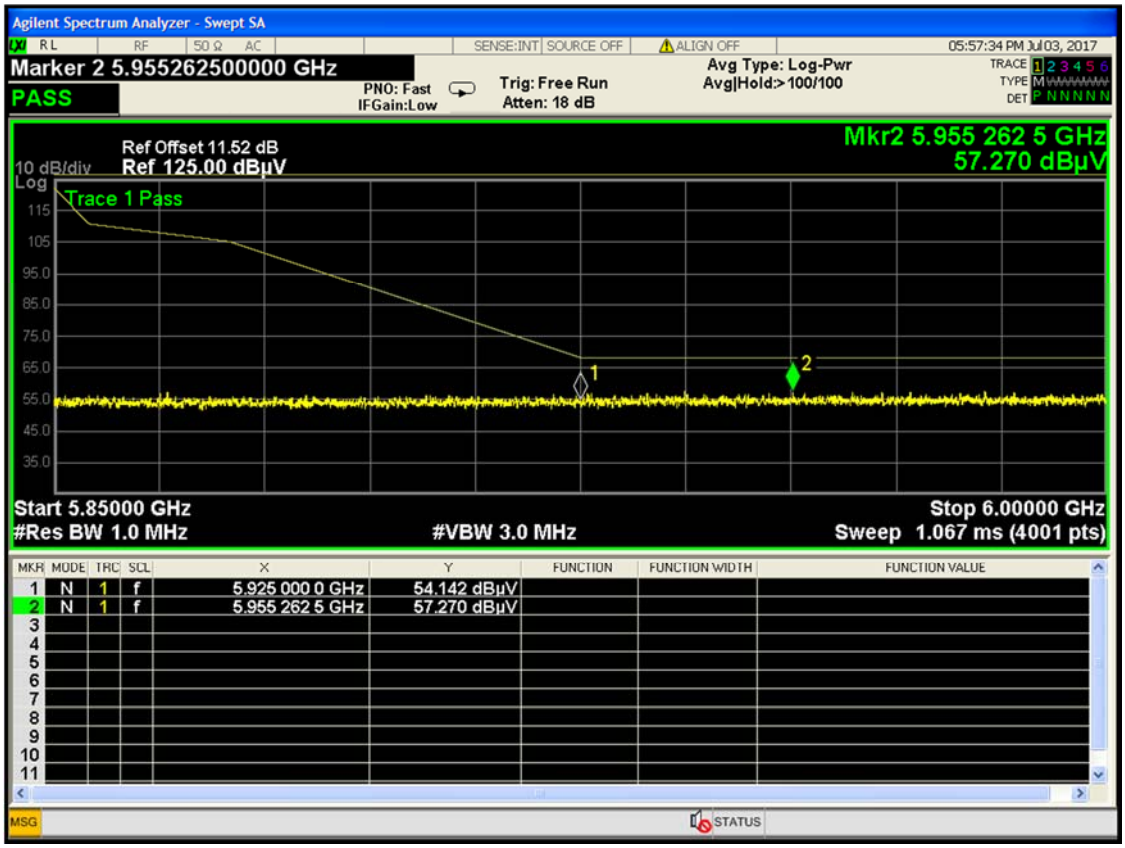
Band IV 11n(HT20) CH165



Band IV 11n(HT40) CH151



Band IV 11n(HT40) CH159



est Data and Plot

A.8 Frequency Stability

Measurement Data (the worst channel)

ANT 0

Voltage vs. Frequency Stability (5180 MHz)

Test Conditions		Test Frequency (MHz)	0 Minute		2 Minute		5 Minute		10Minute	
TEMP. (°C)	Voltage (VDC)		Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)
20	3.4	5180	5179.998771	-0.24	5180.011476	2.22	5180.013591	2.62	5180.019088	3.68
	3.7	5180	5180.009513	1.84	5180.006441	1.24	5180.011939	2.30	5180.005302	1.02
	4.2	5180	5180.005810	1.12	5180.014645	2.83	5180.004188	0.81	5180.015670	3.03

Temperature vs. Frequency Stability (5230 MHz)

Test Conditions		Test Frequency (MHz)	0 Minute		2 Minute		5 Minute		10Minute	
Voltage (VDC)	TEMP. (°C)		Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)	Measurement Frequency (MHz)	Max. Deviation (ppm)
3.7	-10	5180	5180.000490	0.09	5180.016294	3.15	5179.986217	-2.66	5180.001101	0.21
	0	5180	5180.007942	1.53	5180.010469	2.02	5180.008866	1.71	5180.000523	0.10
	10	5180	5180.017313	3.34	5180.000872	0.17	5179.991322	-1.68	5180.019728	3.81
	15	5180	5180.000820	0.16	5180.009281	1.79	5180.011853	2.29	5180.013053	2.52
	20	5180	5180.015071	2.91	5180.014941	2.88	5180.027676	5.34	5180.000545	0.11
	30	5180	5180.022669	4.38	5180.019608	3.79	5180.005669	1.09	5180.026460	5.11
	35	5180	5180.010719	2.07	5180.004638	0.90	5179.984482	-3.00	5180.022777	4.40
	40	5180	5180.009862	1.90	5180.001885	0.36	5180.005261	1.02	5180.0171	3.30
	50	5180	5180.010983	2.12	5180.007949	1.53	5179.965555	-6.65	5179.994031	-1.15

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1760430-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL- SZ1760430-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL- SZ1760430-AI.PDF”.

--END OF REPORT--