

FCC 47 CFR PART 15 SUBPART E

Applicant : EDIMAX TECHNOLOGY CO., LTD.

Product Type : 11ac Wireless Dual-Band Selectable USB Adapter

Trade Name : EDIMAX

Model Number : EW-7822UNC, EW-7822ULC

Test Specification : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2013

Receive Date : Jul. 27, 2016

Test Period : Jul. 29 ~ Nov. 10, 2016

Issue Date : Nov. 18, 2016

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Nov. 18, 2016	Initial Issue	Snow Wang



Verification of Compliance

Issued Date: Nov. 18, 2016

Applicant : EDIMAX TECHNOLOGY CO., LTD.
Product Type : 11ac Wireless Dual-Band Selectable USB Adapter
Trade Name : EDIMAX
Model Number : EW-7822UNC, EW-7822ULC
FCC ID : NDD9578221607
EUT Rated Voltage : DC 5V
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART E
ANSI C63.10:2013
Test Result : Complied
Performing Lab. : A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C)
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Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>

A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By : Fly Lu Reviewed By : Eric Ou Yang
(Manager) (Fly Lu) (Testing Engineer) (Eric Ou Yang)

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1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
FCC			
15.407(b)(6) 15.207	AC Power Conducted Emission	PASS	---
15.407(b) 15.205 / 15.209	Transmitter Radiated Emissions	PASS	---
15.407(a)	Maximum Conducted Output Power	PASS	---
15.407(a)	26dB RF Bandwidth	Reference	---
15.407(e)	6dB RF Bandwidth	PASS	----
15.407(a)	Peak Power Spectral Density	PASS	---
15.407(g)	Frequency Stability	PASS	---
15.407(a) 15.203	Antenna Requirement	PASS	---

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Emission	9kHz ~ 150KHz	2.7 dB
	150kHz ~ 30MHz	2.7 dB
Radiated Emission	9kHz ~ 30MHz	1.7 dB
	30MHz ~ 1000MHz	5.7 dB
	1000MHz ~ 18000MHz	5.5 dB
	18000MHz ~ 26500MHz	4.8 dB
	26500MHz ~ 40000MHz	4.8 dB
Conducted Output Power		+0.27 dB / -0.28 dB
RF Bandwidth		4.96%
Power Spectral Density		+0.71 dB / -0.77 dB
Frequency Stability		+ 2.212 x 10 ⁻⁷ % / - 2.170 x 10 ⁻⁷ %
Duty Cycle		1.06%
Time Occupancy		1.40%

2 EUT Description

Applicant	EDIMAX TECHNOLOGY CO., LTD. No.3,Wu-Chuan 3rd Road,Wu-Ku Industrial Park, New Taipei City, Taiwan			
Manufacturer	EDIMAX TECHNOLOGY CO., LTD. No.3,Wu-Chuan 3rd Road,Wu-Ku Industrial Park, New Taipei City, Taiwan			
Product Type	11ac Wireless Dual-Band Selectable USB Adapter			
Trade Name	EDIMAX			
Model No.	EW-7822UNC, EW-7822ULC			
Model Number Different Description	Those model numbers differ from each other in selling region.			
FCC ID	NDD9578221607			
Operate Frequency	Frequency Band		Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band I	5180 – 5240	4
		U-NII Band III	5745 – 5825	5
	IEEE 802.11n 20 MHz / IEEE 802.11ac 20 MHz	U-NII Band I	5180 – 5240	4
		U-NII Band III	5745 – 5825	5
	IEEE 802.11n 40 MHz / IEEE 802.11ac 40 MHz	U-NII Band I	5190 – 5230	2
		U-NII Band III	5755 – 5795	2
	IEEE 802.11ac 80 MHz	U-NII Band I	5210	1
		U-NII Band III	5775	1
Modulation Type	OFDM			
Equipment Type	Client devices			
Antenna information	Antenna	Model	Type	Max. Gain (dBi)
	ANT-0 (Main)	GY197HT632-003	Monopole Antenna	1.71
	ANT-1 (AUX)	GY197HT632-003	Monopole Antenna	-0.23
Antenna Delivery	IEEE 802.11a : 1TX + 1RX IEEE 802.11ac 20 MHz / 40 MHz / 80 MHz : 2TX + 2RX			
Frequency stability specification	± 20 ppm			



Frequency Band		RF Output Power (W)
IEEE 802.11a	U-NII Band I	0.032
	U-NII Band III	0.027
IEEE 802.11ac 20 MHz	U-NII Band I	0.057
	U-NII Band III	0.051
IEEE 802.11ac 40 MHz	U-NII Band I	0.052
	U-NII Band III	0.054
IEEE 802.11ac 80 MHz	U-NII Band I	0.041
	U-NII Band III	0.040
Beamforming on		
IEEE 802.11ac 20 MHz	U-NII Band I	0.056
	U-NII Band III	0.054
IEEE 802.11ac 40 MHz	U-NII Band I	0.050
	U-NII Band III	0.050
IEEE 802.11ac 80 MHz	U-NII Band I	0.021
	U-NII Band III	0.049

3 Test Methodology

3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal Operation Mode
Mode 2: IEEE 802.11a Link Mode
Mode 3: IEEE 802.11ac 20MHz Link Mode
Mode 4: IEEE 802.11ac 40MHz Link Mode
Mode 5: IEEE 802.11ac 80MHz Link Mode

Software used to control the EUT for staying in continuous transmitting mode was programmed.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

Equipment Type	
Outdoor access point	---
Indoor access point	---
Fixed point-to-point access points	---
Client devices	V

Test Mode	ANT-0	ANT-1	ANT-0+1
Mode 2	V	---	---
Mode 3	V	V	V
Mode 4	V	V	V
Mode 5	V	V	V

Test Mode	Band	Data Rate	Test Channel
Mode 2	U-NII Band I	6M	36, 40, 44, 48
	U-NII Band III		149,153,157,161,165
Mode 3	U-NII Band I	13M	36, 40, 44, 48
	U-NII Band III		149,153,157,161,165
Mode 4	U-NII Band I	27M	38, 46
	U-NII Band III		151,159
Mode 5	U-NII Band I	58.6M	42
	U-NII Band III		155

Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2: IEEE 802.11a Link Mode	5180.0	1.375	1.475	0.932	0.305	0.727
Mode 3: IEEE 802.11ac 20MHz Link Mode	5180.0	0.669	0.789	0.848	0.717	1.495
Mode 4: IEEE 802.11ac 40MHz Link Mode	5190.0	0.347	0.386	0.897	0.473	2.886
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	0.189	0.283	0.668	1.753	5.291
Beamforming on						
Mode 3: IEEE 802.11ac 20MHz Link Mode	5180.0	1.284	1.320	0.973	0.120	0.779
Mode 4: IEEE 802.11ac 40MHz Link Mode	5190.0	0.644	0.804	0.801	0.964	1.553
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	0.189	0.284	0.665	1.769	5.291



Duty Cycle Graphs



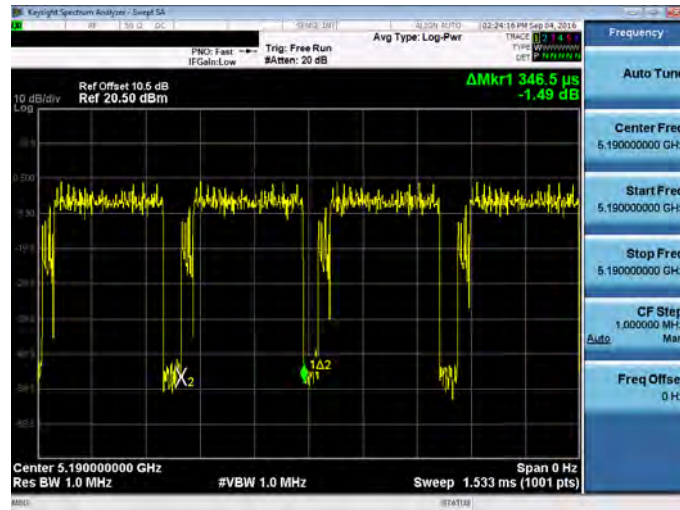


Mode 3: IEEE 802.11ac 20MHz Link Mode	
On time	
On+off time	



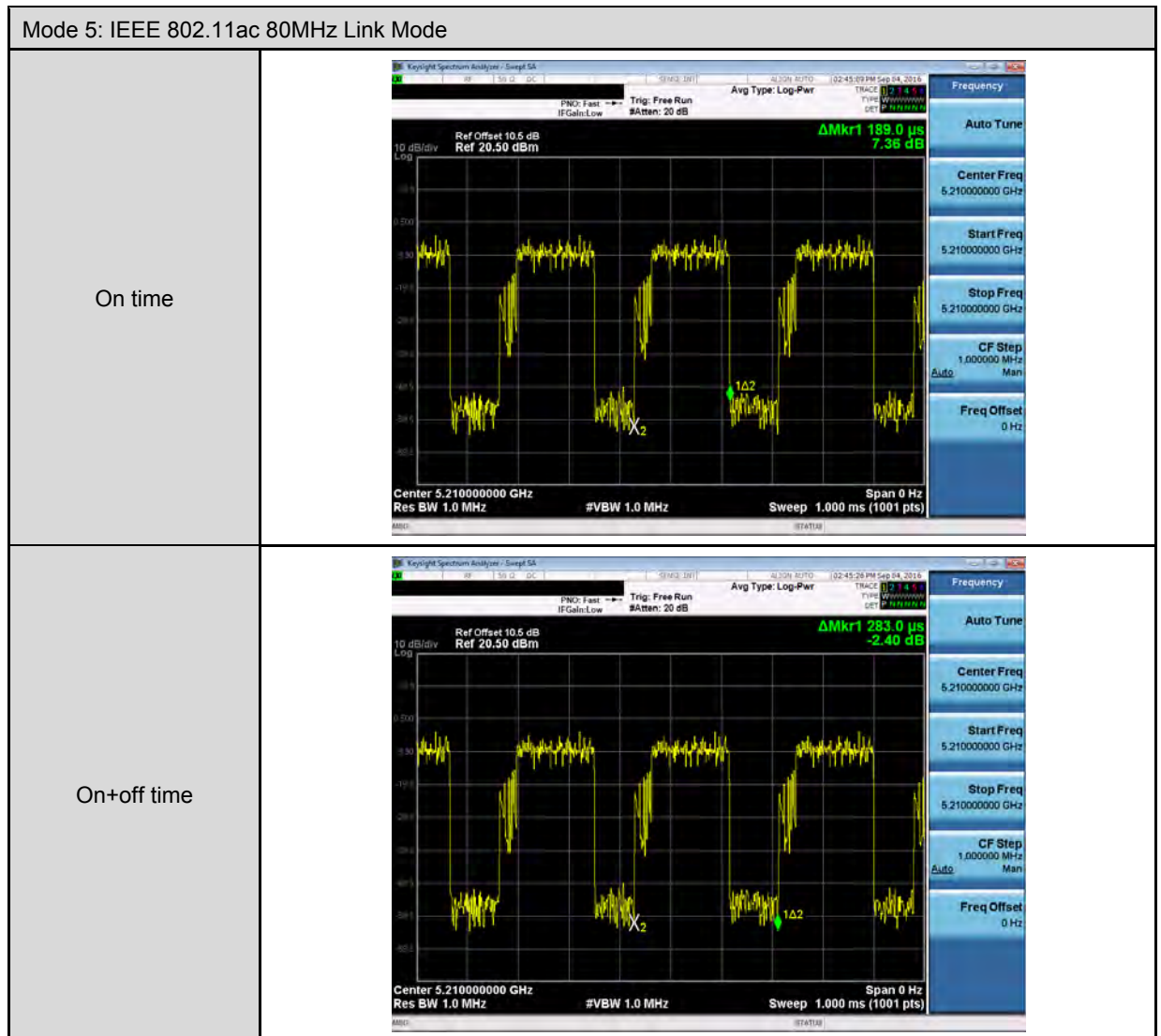
Mode 4: IEEE 802.11ac 40MHz Link Mode

On time

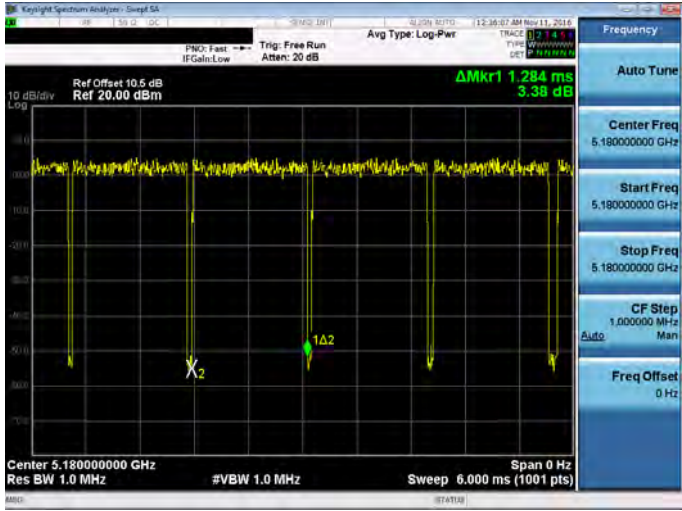
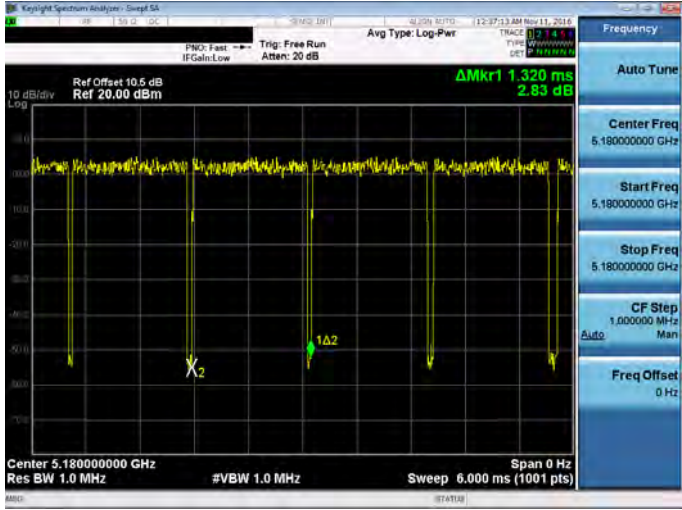


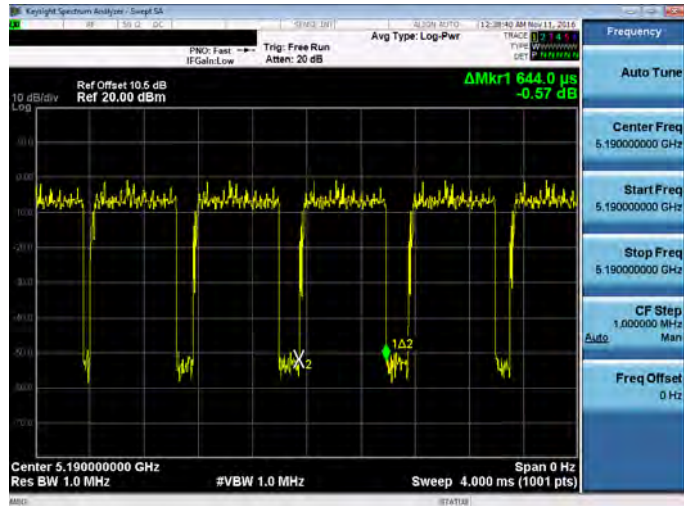
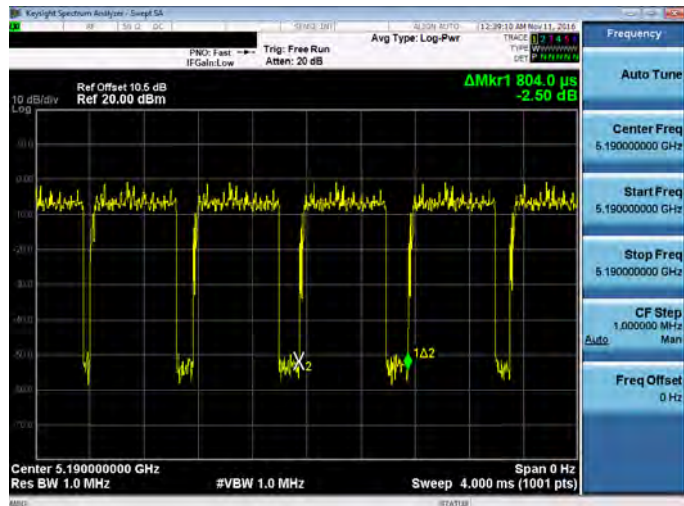
On+off time

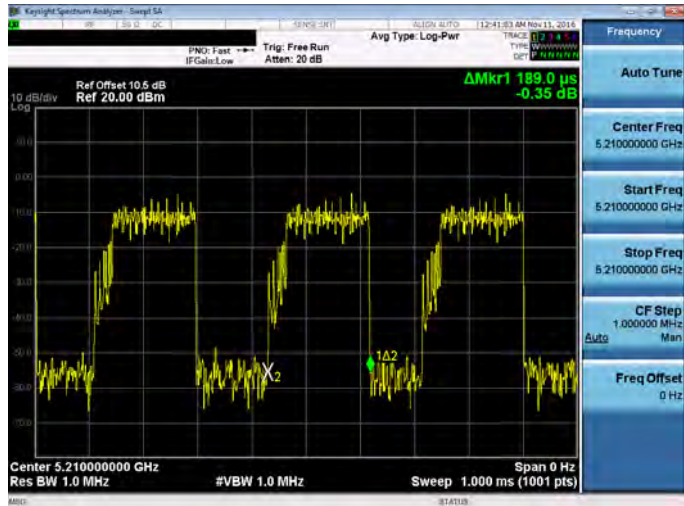






Mode 3: IEEE 802.11ac 20MHz Link Mode	
Beamforming on	
On time	
On+off time	

Mode 4: IEEE 802.11ac 40MHz Link Mode	
Beamforming on	
On time	
On+off time	

Mode 5: IEEE 802.11ac 80MHz Link Mode	
Beamforming on	
On time	
On+off time	

3.2. EUT Exercise Software

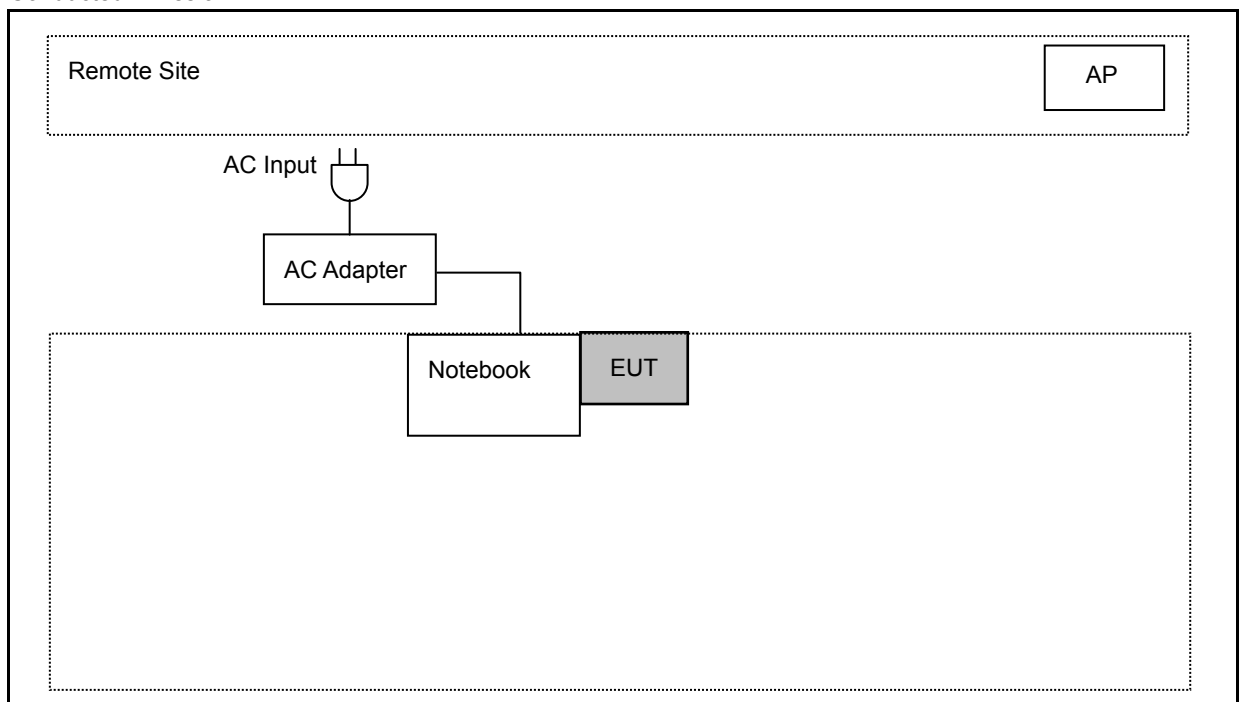
The EUT is operated in the engineering mode to fix the TX frequency for the purposes of measurement. According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

1.	Setup the EUT shown on 3.3.
2.	Turn on the power of all equipment.
3.	EUT run test program.

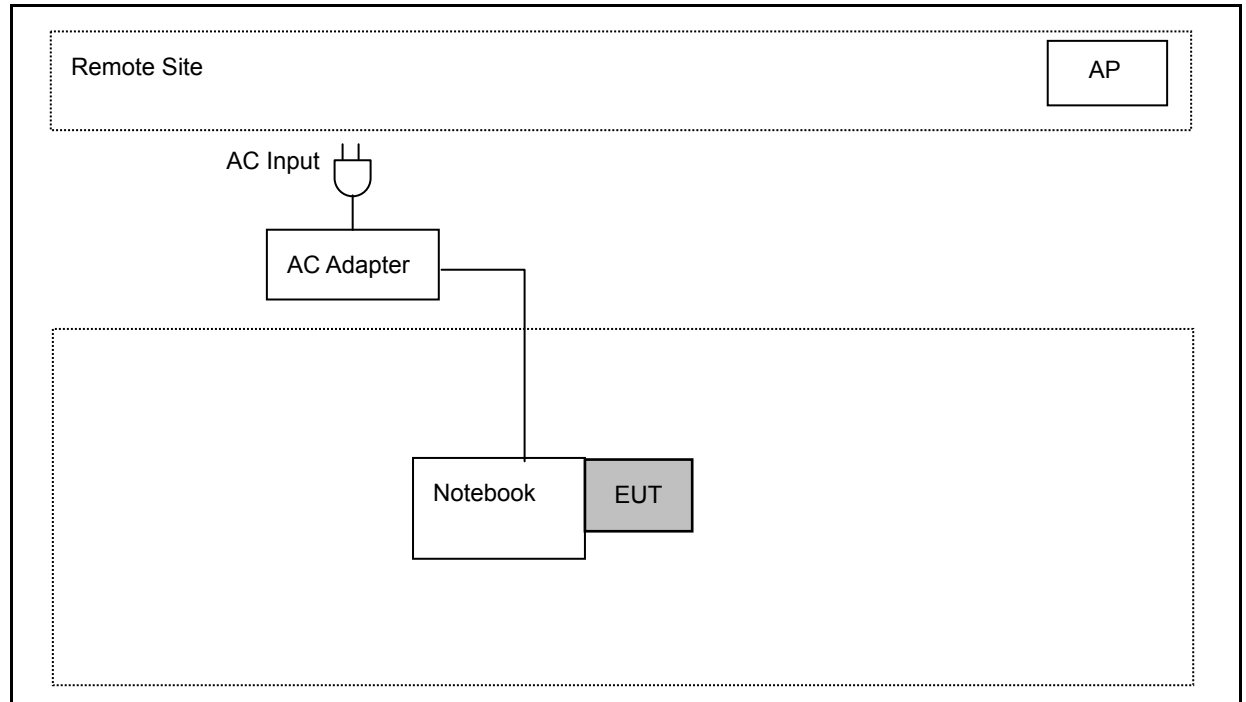
Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

3.3. Configuration of Test System Details

Conducted Emission



Radiated Emission



3.4. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

4 Test Results

4.1. AC Power Conducted Emission Measurement

■ Limit

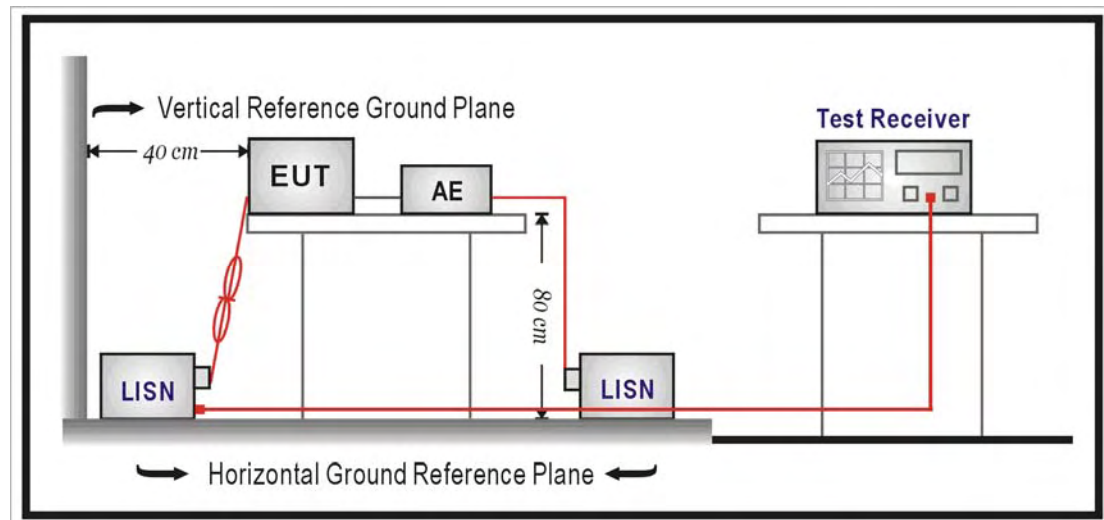
Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	05/31/2016	1 year
LISN	R&S	ENV216	101040	03/15/2016	1 year
LISN	R&S	ENV216	101041	03/07/2016	1 year
RF Cable	Woken	00100D1380194M	TE-02-02	05/31/2016	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Setup



4.2. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a $50\Omega // 50\mu\text{H}$ coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a $50\Omega // 50\mu\text{H}$ coupling impedance with 50ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12mm insulating material.

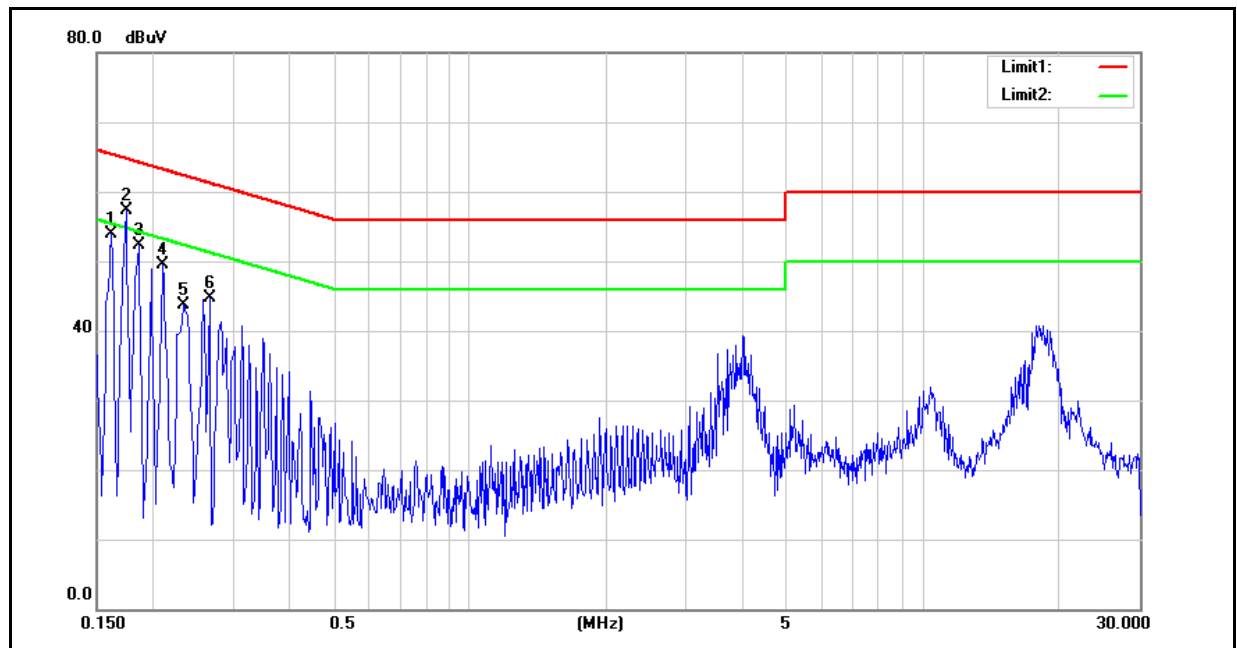
Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150kHz to 30MHz then quasi-peak and average measurement was unnecessary.

The AMN shall be placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0,8 m from the AMN. If the mains power cable is longer than 1m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4m. All of interconnecting cables that hang closer than 40cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1m. All 50 Ω ports of the LISN shall be resistively terminated into 50 Ω loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

Test Result

Standard:	FCC Part 15E	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	08/22/2016
		Test By:	Eric Ou Yang
Description:			



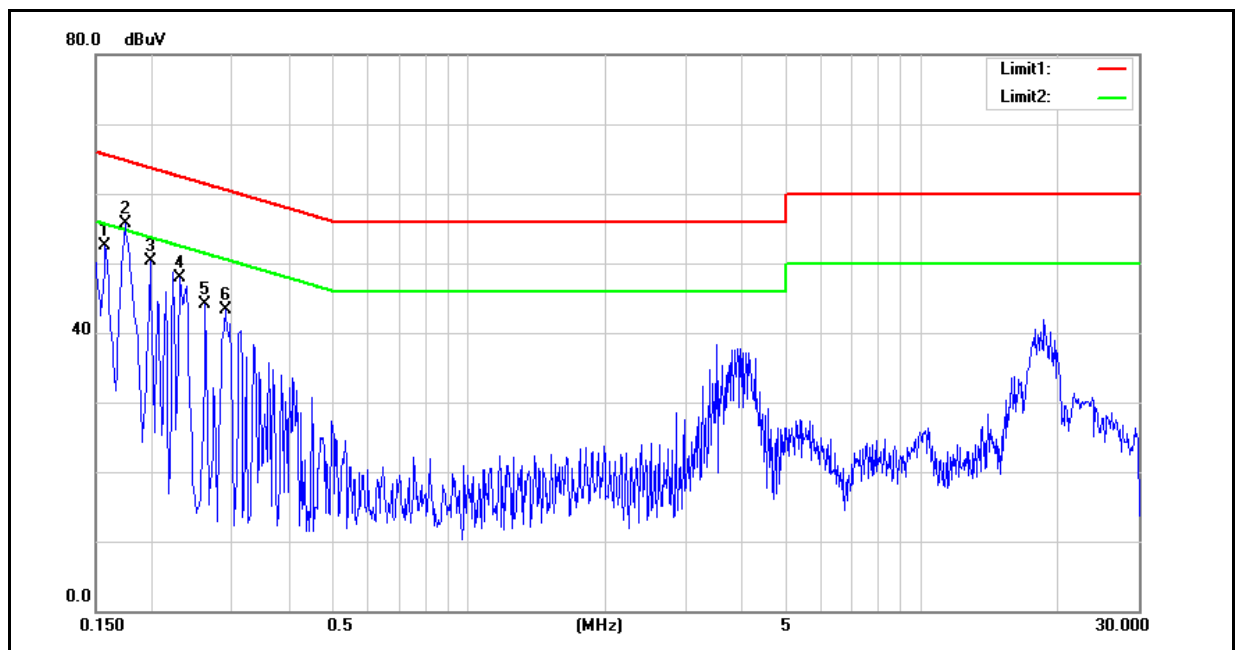
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1620	38.83	10.82	9.60	48.43	20.42	65.36	55.36	-16.93	-34.94	Pass
2	0.1740	42.40	29.74	9.60	52.00	39.34	64.77	54.77	-12.77	-15.43	Pass
3	0.1860	35.94	10.40	9.59	45.53	19.99	64.21	54.21	-18.68	-34.22	Pass
4	0.2100	32.89	5.70	9.59	42.48	15.29	63.21	53.21	-20.73	-37.92	Pass
5	0.2340	35.01	23.17	9.59	44.60	32.76	62.31	52.31	-17.71	-19.55	Pass
6	0.2660	27.38	1.90	9.60	36.98	11.50	61.24	51.24	-24.26	-39.74	Pass

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.



Standard:	FCC Part 15E	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 1	Date:	08/22/2016
		Test By:	Eric Ou Yang
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	39.57	10.79	9.59	49.16	20.38	65.57	55.57	-16.41	-35.19	Pass
2	0.1740	42.36	29.07	9.59	51.95	38.66	64.77	54.77	-12.82	-16.11	Pass
3	0.1980	34.19	7.25	9.58	43.77	16.83	63.69	53.69	-19.92	-36.86	Pass
4	0.2300	32.39	18.47	9.58	41.97	28.05	62.45	52.45	-20.48	-24.40	Pass
5	0.2620	27.72	2.17	9.59	37.31	11.76	61.37	51.37	-24.06	-39.61	Pass
6	0.2900	28.47	15.73	9.59	38.06	25.32	60.52	50.52	-22.46	-25.20	Pass

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

4.3. Transmitter Radiated Emissions Measurement

■ Limit

(1)Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(a)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(b)For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(c)For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(d)For transmitters operating in the 5.725-5.85 GHz band:

(i)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.

(2)Limits of Radiated Emission Measurement

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequency Range (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	10	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. As shown in 15.35(b), 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.

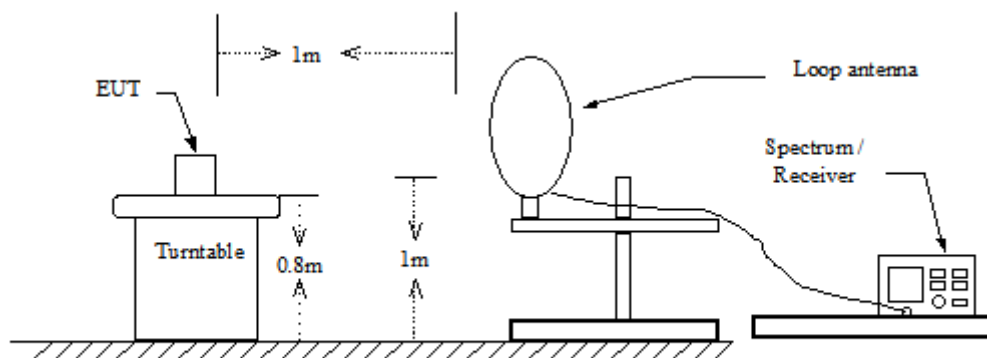
Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/08/2016	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/08/2016	1 year
Pre Amplifier	Agilent	8449B	3008A02237	10/11/2016	1 year
Pre Amplifier	Agilent	8447D	2944A11119	01/11/2016	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/13/2016	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/06/2016	1 year
Horn Antenna (18~40GHz)	ETS	3116	86467	09/05/2016	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	02/01/2016	1 year
Microwave Cable	EMCI	EMC102-KM-KM-1 4000	151001	02/23/2016	1 year
Microwave Cable	EMCI	EMC-104-SM-SM- 14000	140202	02/23/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-6 00	140301	02/23/2016	1 year
Test Site	ATL	TE01	888001	08/29/2016	1 year

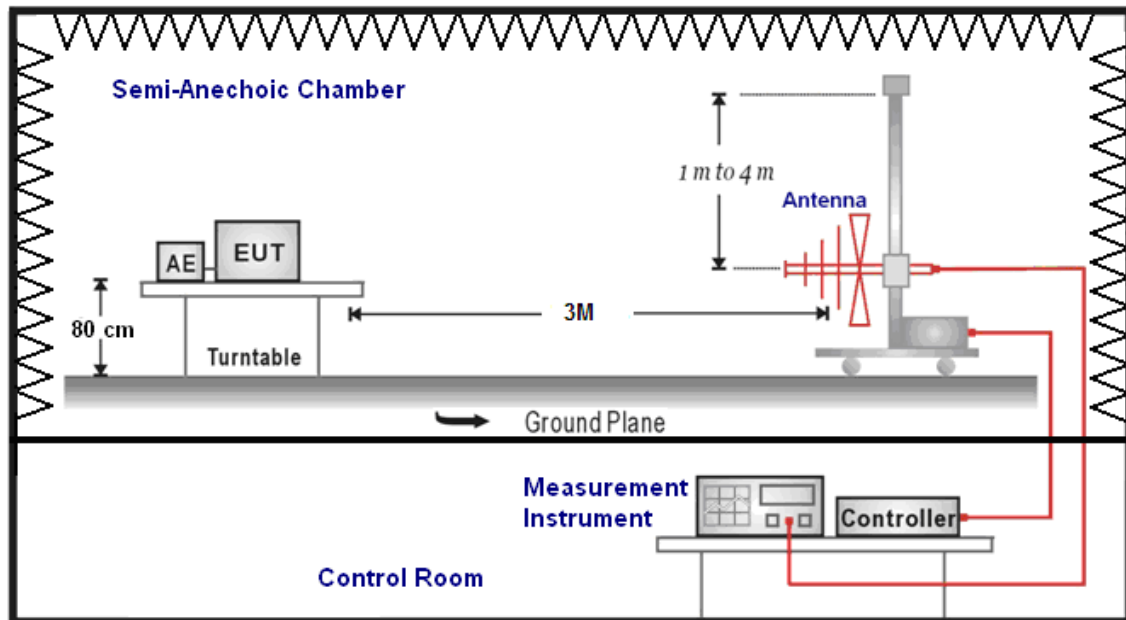
Note: N.C.R. = No Calibration Request.

Setup

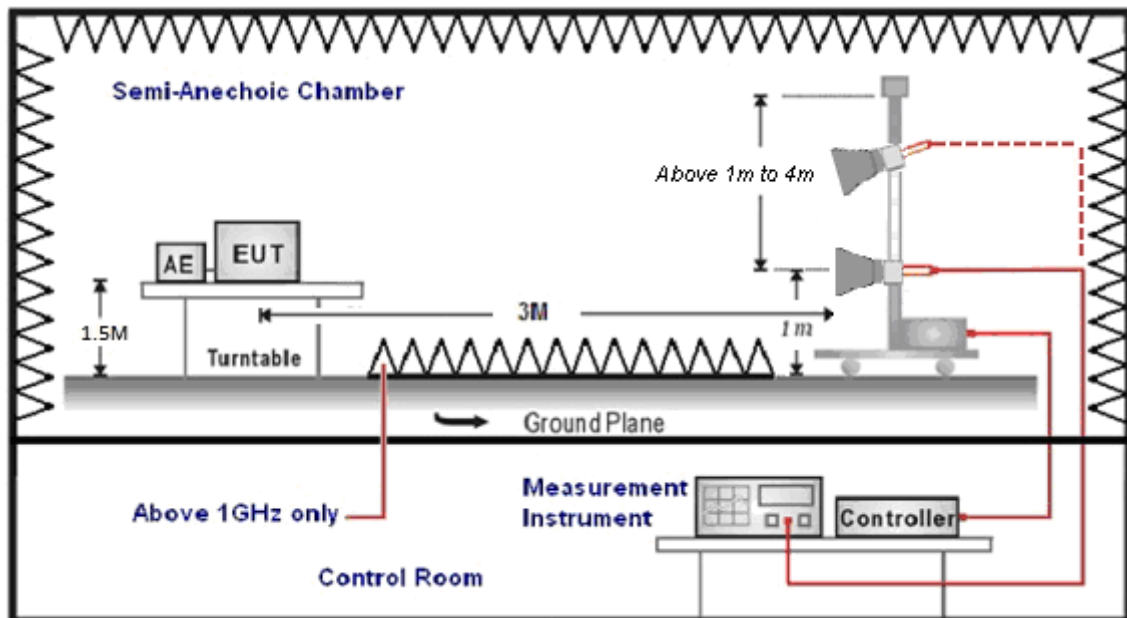
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



■ Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height (below 1GHz use 0.8m turntable / above 1GHz use 1.5m turntable), top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 40 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For restricted measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements and 10 Hz for average measurements when Duty cycle > 0.98 / 1/T for average measurements when Duty cycle < 0.98.

For out of band measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Trilog-Broadband Antenna at 3 Meter and the ETS-Lindgren Double-Ridged Waveguide Horn antenna Schwarzbeck Mess-Elektronik Broadband Horn Antenna was used in frequencies 1 – 40 GHz at a distance of 3 meter. The antenna at an angle toward the source of the emission. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts per meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

$$(1) \text{ Amplitude (dBuV/m) = FI (dBuV) + AF (dBuV) + CL (dBuV) - Gain (dB)}$$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

$$(2) \text{ Actual Amplitude (dBuV/m) = Amplitude (dBuV) - Dis(dB)}$$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Measuring Instruments and setting

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000MHz
Stop Frequency	40GHz
RBW/VBW(Emission in restricted band)	1MHz / 3MHz for Peak 1MHz / (1/T) for Average
RBW/VBW(Emission in non-restricted band)	1MHz / 3MHz for Peak



■ Test Result

Below 1GHz

Standard:		FCC Part 15E		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Model Number:		EW-7822UNC		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
Test Mode:		Mode 1		Date:		07/31/2016	
Description:				Test By: Eric Ou Yang			
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
177.5000	37.56	-6.00	31.56	43.50	-11.94	QP	H
202.5000	38.58	-7.77	30.81	43.50	-12.69	QP	H
343.0000	33.24	-2.78	30.46	46.00	-15.54	QP	H
457.5000	31.73	-0.03	31.70	46.00	-14.30	QP	H
505.5000	30.28	0.82	31.10	46.00	-14.90	QP	H
842.5000	28.12	7.43	35.55	46.00	-10.45	QP	H
191.0000	34.40	-7.44	26.96	43.50	-16.54	QP	V
228.5000	33.27	-7.22	26.05	46.00	-19.95	QP	V
344.0000	30.70	-2.77	27.93	46.00	-18.07	QP	V
457.5000	29.73	-0.03	29.70	46.00	-16.30	QP	V
505.5000	31.15	0.82	31.97	46.00	-14.03	QP	V
602.0000	29.77	2.95	32.72	46.00	-13.28	QP	V

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

2. Result = Correction factor + Reading

3. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.



Above 1GHz

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5180MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10360.000	54.44	4.97	59.41	68.20	-8.79	peak	H
10360.000	52.42	4.97	57.39	68.20	-10.81	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5200MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10400.000	56.66	5.07	61.73	68.20	-6.47	peak	H
10400.000	53.40	5.07	58.47	68.20	-9.73	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5240MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10480.000	55.86	5.25	61.11	68.20	-7.09	peak	H
10480.000	54.87	5.25	60.12	68.20	-8.08	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5745MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11490.000	55.73	6.14	61.87	74.00	-12.13	peak	H
11490.000	46.72	6.14	52.86	54.00	-1.14	AVG	H
11490.000	55.07	6.14	61.21	74.00	-12.79	peak	V
11490.000	44.63	6.14	50.77	54.00	-3.23	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5785MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11570.000	54.99	6.35	61.34	74.00	-12.66	peak	H
11570.000	46.58	6.35	52.93	54.00	-1.07	AVG	H
11570.000	53.42	6.35	59.77	74.00	-14.23	peak	V
11570.000	43.99	6.35	50.34	54.00	-3.66	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 2	Date:	07/31/2016				
Frequency:	5825MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11650.000	55.77	6.58	62.35	74.00	-11.65	peak	H
11650.000	46.37	6.58	52.95	54.00	-1.05	AVG	H
11650.000	53.63	6.58	60.21	74.00	-13.79	peak	V
11650.000	44.45	6.58	51.03	54.00	-2.97	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5180MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10360.000	54.79	4.97	59.76	68.20	-8.44	peak	H
10360.000	53.55	4.97	58.52	68.20	-9.68	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5200MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10400.000	54.72	5.07	59.79	68.20	-8.41	peak	H
10400.000	51.95	5.07	57.02	68.20	-11.18	peak	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5240MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10480.000	56.67	5.25	61.92	68.20	-6.28	peak	H
10480.000	55.14	5.25	60.39	68.20	-7.81	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5745MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11490.000	56.46	6.14	62.60	74.00	-11.40	peak	H
11490.000	46.75	6.14	52.89	54.00	-1.11	AVG	H
11490.000	54.56	6.14	60.70	74.00	-13.30	peak	V
11490.000	45.05	6.14	51.19	54.00	-2.81	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5785MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11570.000	56.99	6.35	63.34	74.00	-10.66	peak	H
11570.000	46.50	6.35	52.85	54.00	-1.15	AVG	H
11570.000	54.61	6.35	60.96	74.00	-13.04	peak	V
11570.000	43.63	6.35	49.98	54.00	-4.02	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	07/31/2016				
Frequency:	5825MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11650.000	55.08	6.58	61.66	74.00	-12.34	peak	H
11650.000	46.32	6.58	52.90	54.00	-1.10	AVG	H
11650.000	53.23	6.58	59.81	74.00	-14.19	peak	V
11650.000	43.75	6.58	50.33	54.00	-3.67	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	EW-7822UNC		Temp.(°C)/Hum.(%RH):	26(°C)/60%RH			
Test Mode:	Mode 4		Date:	07/31/2016			
Frequency:	5190MHz		Test By:	Eric Ou Yang			
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10380.000	51.46	5.01	56.47	68.20	-11.73	peak	H
10380.000	48.54	5.01	53.55	68.20	-14.65	peak	V

Standard:	FCC Part 15E		Test Distance:	3m			
Test item:	Radiated Emission		Power:	AC 120V/60Hz			
Model Number:	EW-7822UNC		Temp.(℃)/Hum.(%RH):	26(℃)/60%RH			
Test Mode:	Mode 4		Date:	07/31/2016			
Frequency:	5230MHz		Test By:	Eric Ou Yang			
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10460.000	53.33	5.22	58.55	68.20	-9.65	peak	H
10460.000	51.85	5.22	57.07	68.20	-11.13	peak	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	07/31/2016				
Frequency:	5755MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11510.000	55.13	6.17	61.30	74.00	-12.70	peak	H
11510.000	46.69	6.17	52.86	54.00	-1.14	AVG	H
11510.000	53.20	6.17	59.37	74.00	-14.63	peak	V
11510.000	43.62	6.17	49.79	54.00	-4.21	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	07/31/2016				
Frequency:	5795MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11590.000	54.53	6.41	60.94	74.00	-13.06	peak	H
11590.000	46.41	6.41	52.82	54.00	-1.18	AVG	H
11590.000	53.19	6.41	59.60	74.00	-14.40	peak	V
11590.000	44.02	6.41	50.43	54.00	-3.57	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 5	Date:	07/31/2016				
Frequency:	5210MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10420.000	47.05	5.11	52.16	68.20	-16.04	peak	H
10420.000	47.86	5.11	52.97	68.20	-15.23	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 5	Date:	07/31/2016				
Frequency:	5775MHz	Test By:	Eric Ou Yang				
Description:							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11550.000	58.06	6.29	64.35	74.00	-9.65	peak	H
11550.000	45.26	6.29	51.55	54.00	-2.45	AVG	H
11550.000	55.93	6.29	62.22	74.00	-11.78	peak	V
11550.000	41.36	6.29	47.65	54.00	-6.35	AVG	V

Note: 1. Result = Correction factor + Reading

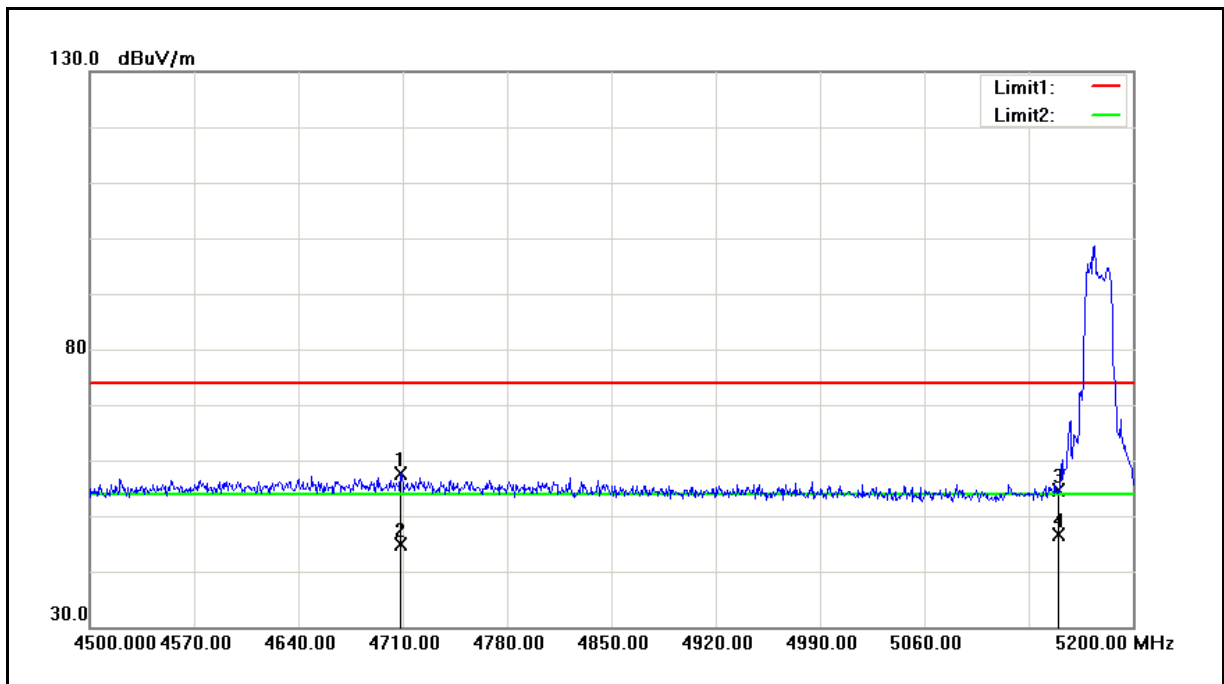
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Band Edge

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

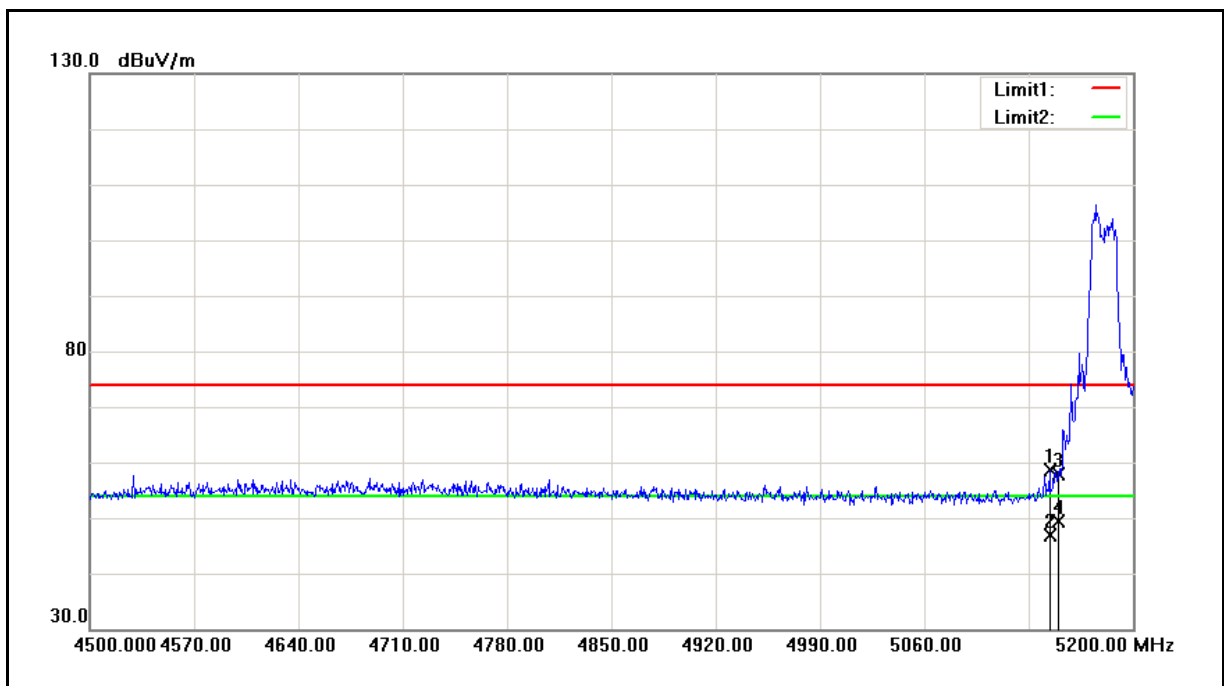


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4708.600	50.76	6.99	57.75	74.00	-16.25	peak
2	4708.600	37.95	6.99	44.94	54.00	-9.06	AVG
3	5150.000	46.45	8.16	54.61	74.00	-19.39	peak
4	5150.000	38.59	8.16	46.75	54.00	-7.25	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



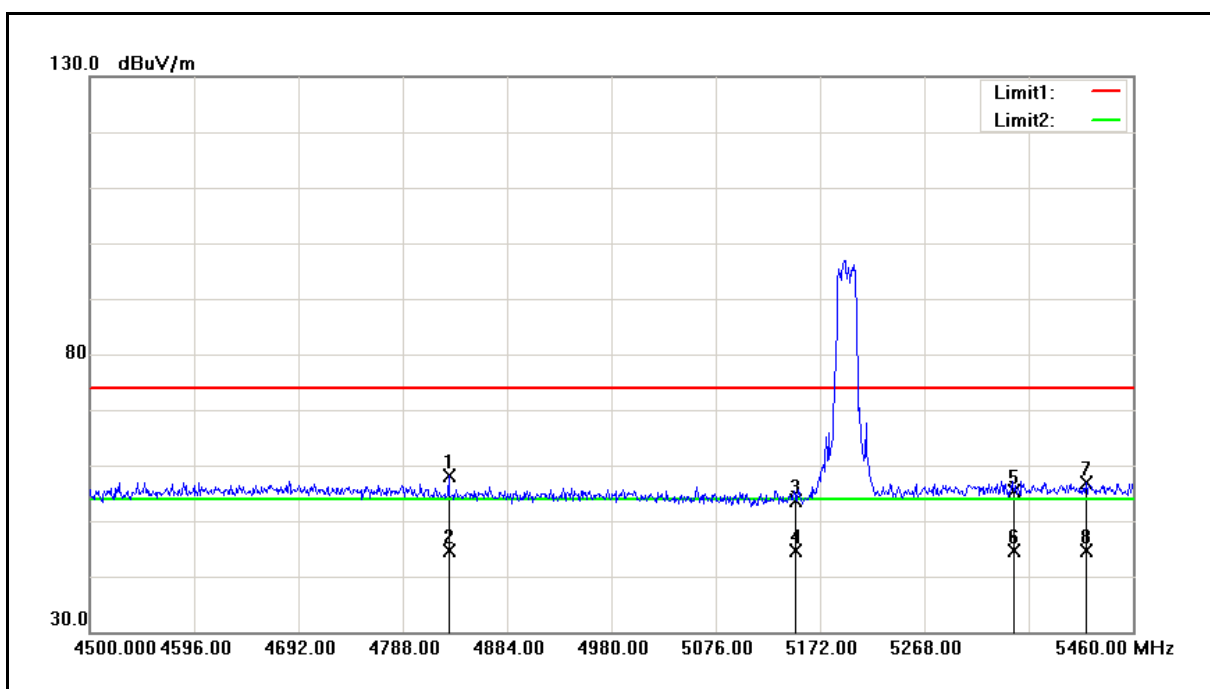
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5144.000	50.42	8.15	58.57	74.00	-15.43	peak
2	5144.000	38.80	8.15	46.95	54.00	-7.05	AVG
3	5150.000	49.65	8.16	57.81	74.00	-16.19	peak
4	5150.000	41.16	8.16	49.32	54.00	-4.68	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

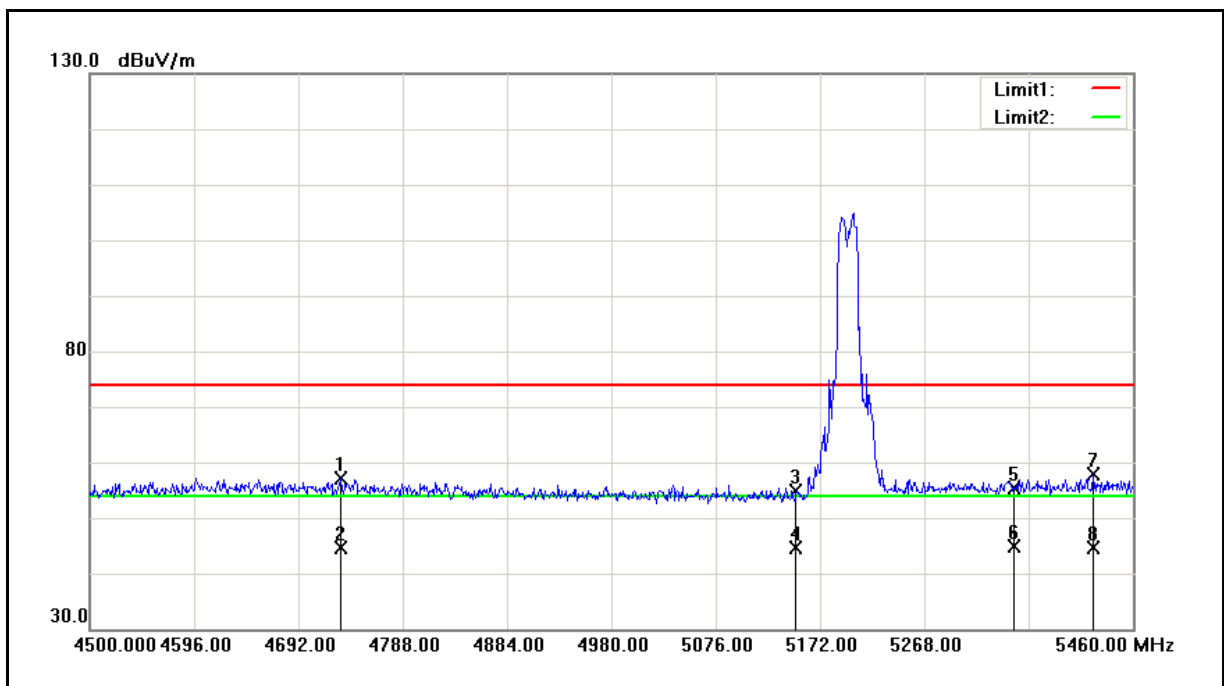


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4830.240	50.64	7.43	58.07	74.00	-15.93	peak
2	4830.240	37.25	7.43	44.68	54.00	-9.32	AVG
3	5150.000	45.58	8.16	53.74	74.00	-20.26	peak
4	5150.000	36.58	8.16	44.74	54.00	-9.26	AVG
5	5350.000	46.93	8.33	55.26	74.00	-18.74	peak
6	5350.000	36.26	8.33	44.59	54.00	-9.41	AVG
7	5416.800	48.48	8.39	56.87	74.00	-17.13	peak
8	5416.800	36.27	8.39	44.66	54.00	-9.34	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

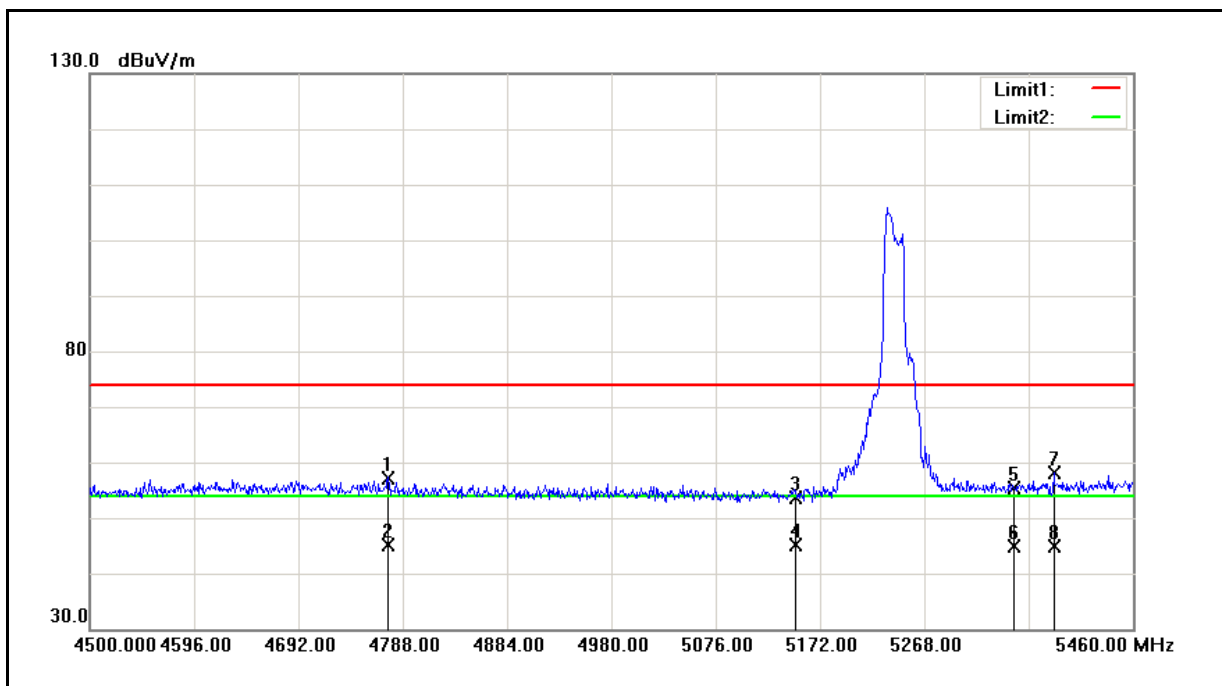


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4730.400	50.08	7.08	57.16	74.00	-16.84	peak
2	4730.400	37.45	7.08	44.53	54.00	-9.47	AVG
3	5150.000	46.79	8.16	54.95	74.00	-19.05	peak
4	5150.000	36.53	8.16	44.69	54.00	-9.31	AVG
5	5350.000	47.16	8.33	55.49	74.00	-18.51	peak
6	5350.000	36.44	8.33	44.77	54.00	-9.23	AVG
7	5423.520	49.59	8.40	57.99	74.00	-16.01	peak
8	5423.520	36.29	8.40	44.69	54.00	-9.31	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

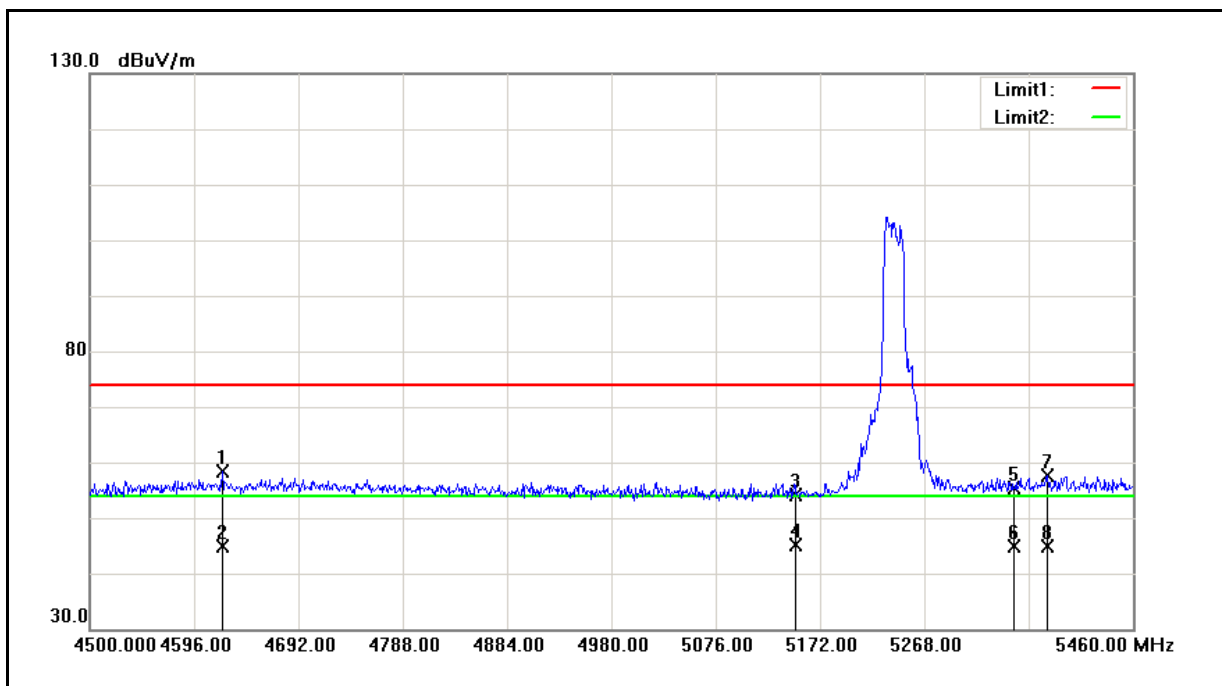


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4774.560	50.02	7.23	57.25	74.00	-16.75	peak
2	4774.560	37.88	7.23	45.11	54.00	-8.89	AVG
3	5150.000	45.55	8.16	53.71	74.00	-20.29	peak
4	5150.000	36.86	8.16	45.02	54.00	-8.98	AVG
5	5350.000	47.04	8.33	55.37	74.00	-18.63	peak
6	5350.000	36.63	8.33	44.96	54.00	-9.04	AVG
7	5387.040	49.79	8.36	58.15	74.00	-15.85	peak
8	5387.040	36.55	8.36	44.91	54.00	-9.09	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



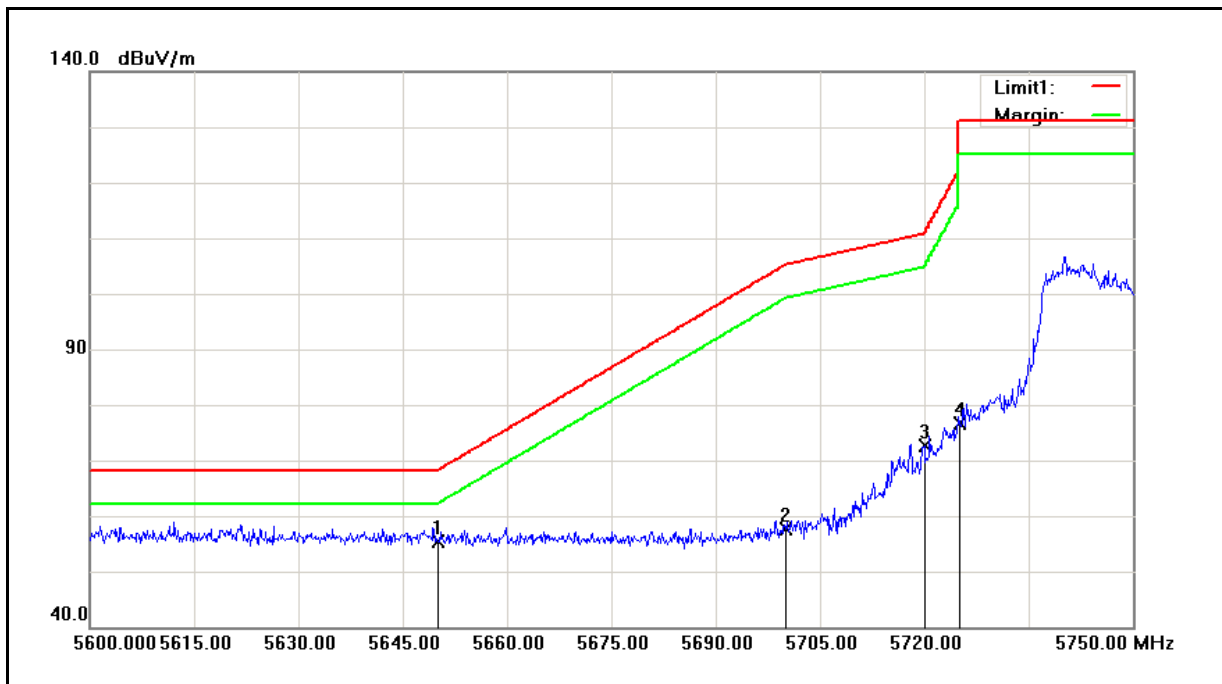
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4621.920	51.74	6.70	58.44	74.00	-15.56	peak
2	4621.920	38.16	6.70	44.86	54.00	-9.14	AVG
3	5150.000	45.90	8.16	54.06	74.00	-19.94	peak
4	5150.000	36.88	8.16	45.04	54.00	-8.96	AVG
5	5350.000	46.93	8.33	55.26	74.00	-18.74	peak
6	5350.000	36.43	8.33	44.76	54.00	-9.24	AVG
7	5381.280	49.17	8.36	57.53	74.00	-16.47	peak
8	5381.280	36.44	8.36	44.80	54.00	-9.20	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

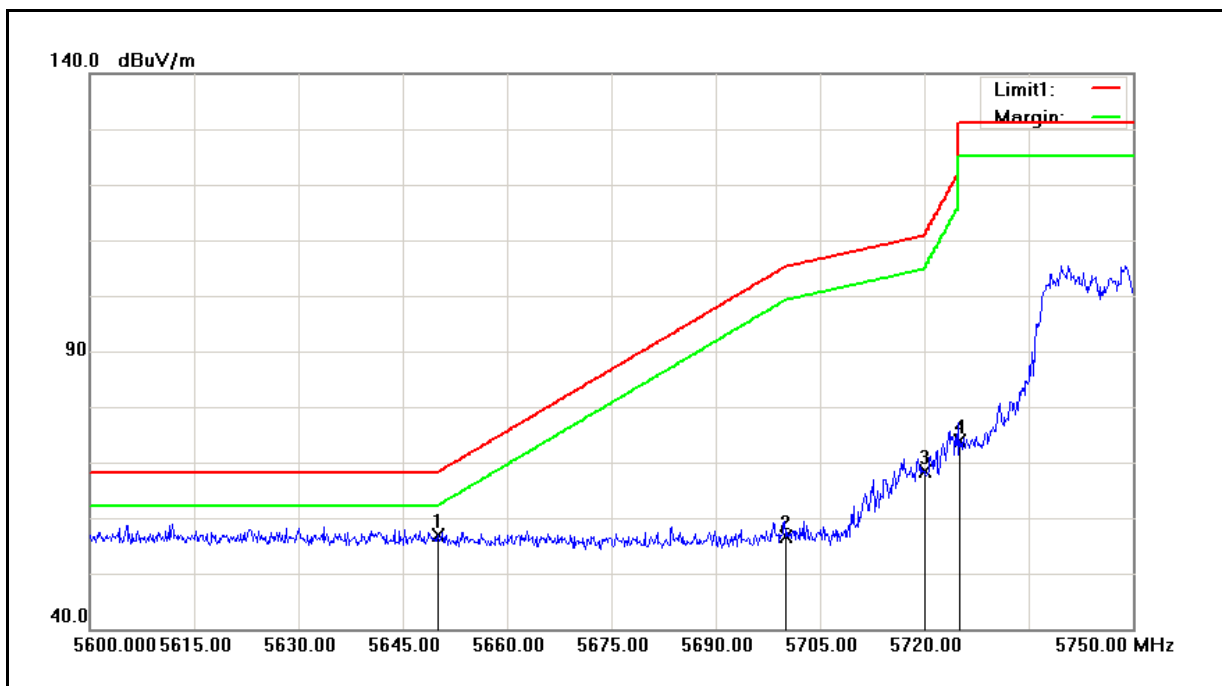


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.55	8.84	55.39	68.20	-12.81	peak
2	5700.000	48.58	8.97	57.55	105.20	-47.65	peak
3	5720.000	63.72	9.01	72.73	110.80	-38.07	peak
4	5725.000	67.66	9.03	76.69	122.20	-45.51	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

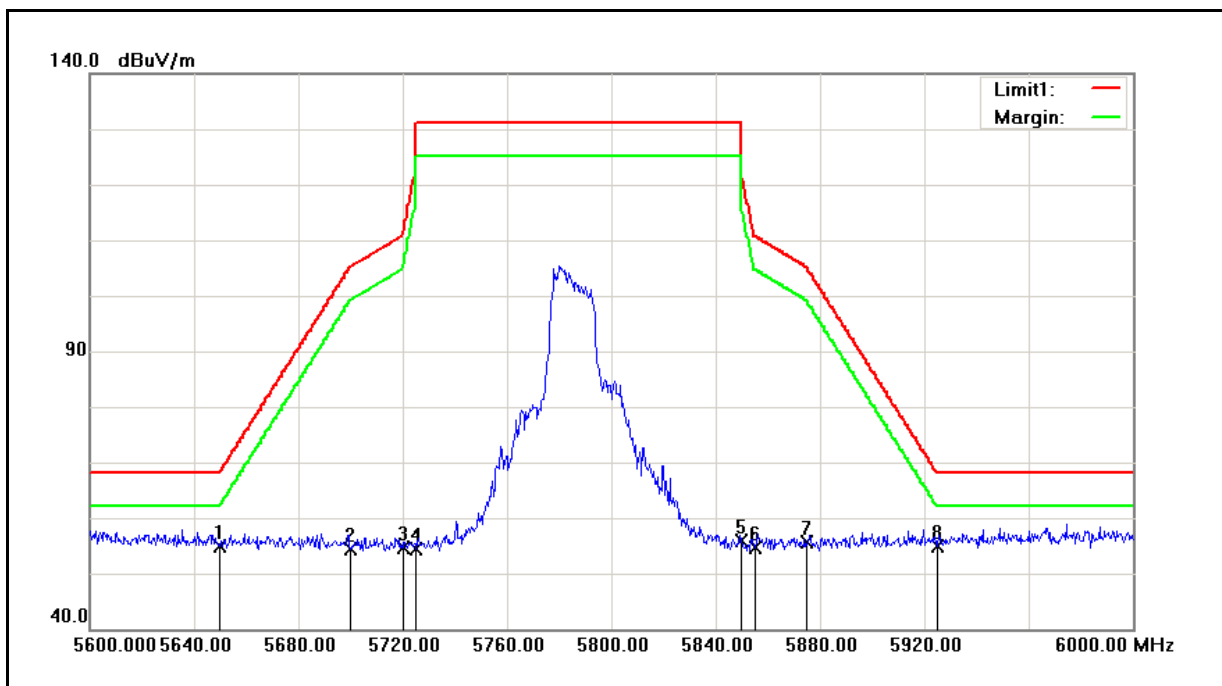


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.96	8.84	56.80	68.20	-11.40	peak
2	5700.000	47.54	8.97	56.51	105.20	-48.69	peak
3	5720.000	59.36	9.01	68.37	110.80	-42.43	peak
4	5725.000	64.96	9.03	73.99	122.20	-48.21	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

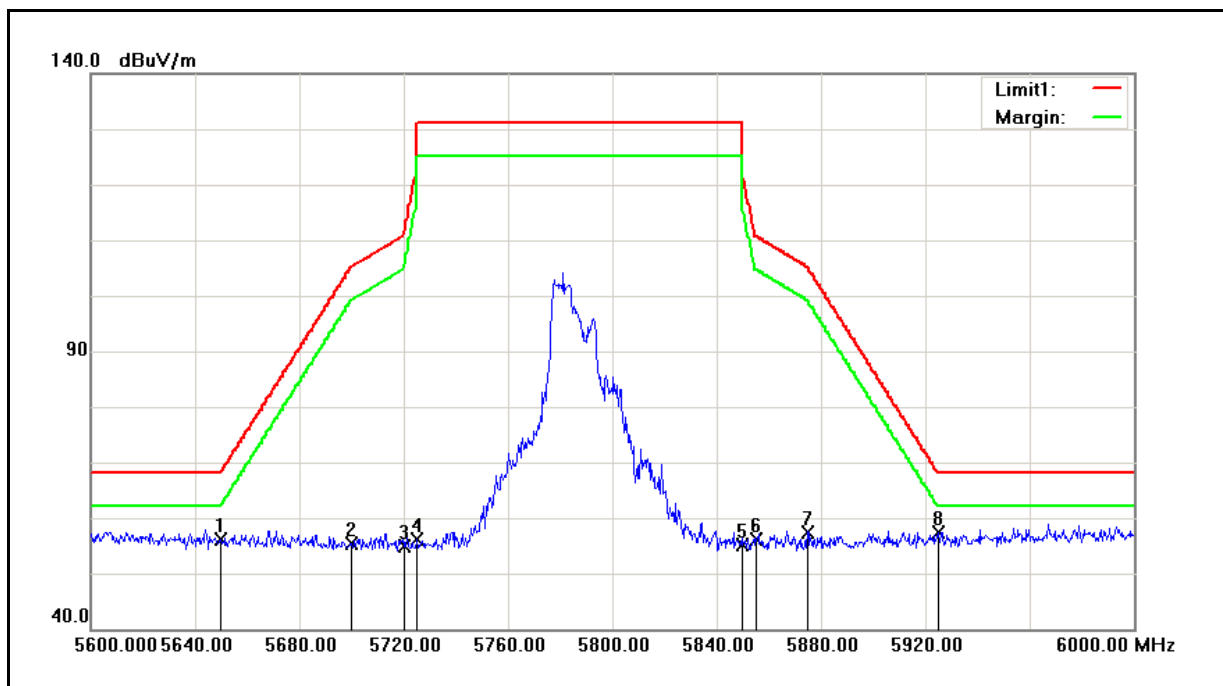


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.09	8.84	54.93	68.20	-13.27	peak
2	5700.000	45.38	8.97	54.35	105.20	-50.85	peak
3	5720.000	45.60	9.01	54.61	110.80	-56.19	peak
4	5725.000	45.44	9.03	54.47	122.20	-67.73	peak
5	5850.000	46.57	9.33	55.90	122.20	-66.30	peak
6	5855.000	45.35	9.35	54.70	110.80	-56.10	peak
7	5875.000	46.20	9.40	55.60	105.20	-49.60	peak
8	5925.000	45.38	9.53	54.91	68.20	-13.29	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

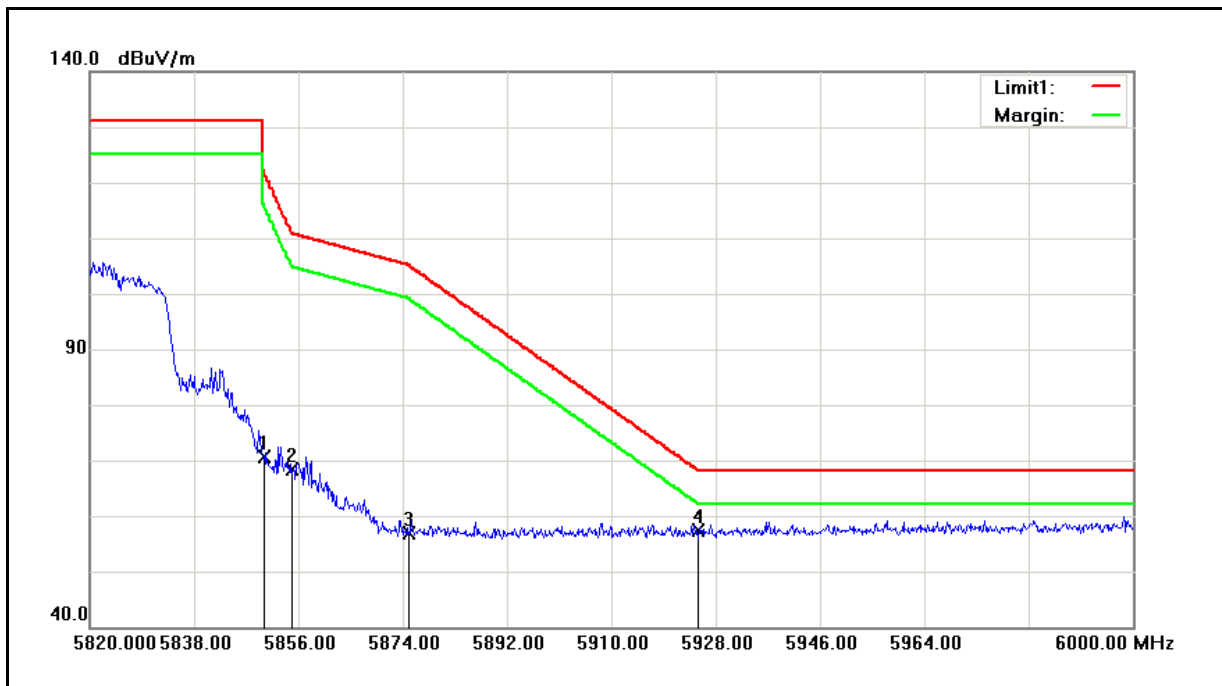


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.27	8.84	56.11	68.20	-12.09	peak
2	5700.000	46.38	8.97	55.35	105.20	-49.85	peak
3	5720.000	45.89	9.01	54.90	110.80	-55.90	peak
4	5725.000	46.98	9.03	56.01	122.20	-66.19	peak
5	5850.000	45.78	9.33	55.11	122.20	-67.09	peak
6	5855.000	46.89	9.35	56.24	110.80	-54.56	peak
7	5875.000	47.87	9.40	57.27	105.20	-47.93	peak
8	5925.000	47.97	9.53	57.50	68.20	-10.70	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

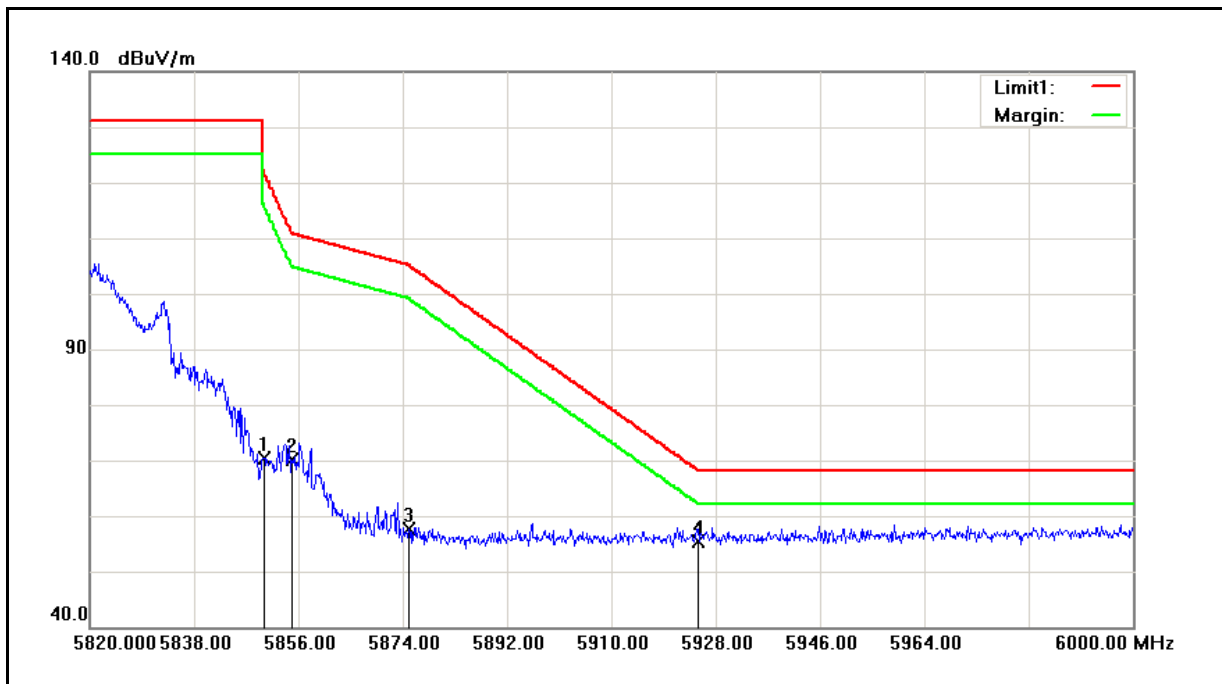


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	61.35	9.33	70.68	122.20	-51.52	peak
2	5855.000	58.96	9.35	68.31	110.80	-42.49	peak
3	5875.000	47.43	9.40	56.83	105.20	-48.37	peak
4	5925.000	47.79	9.53	57.32	68.20	-10.88	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 2	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

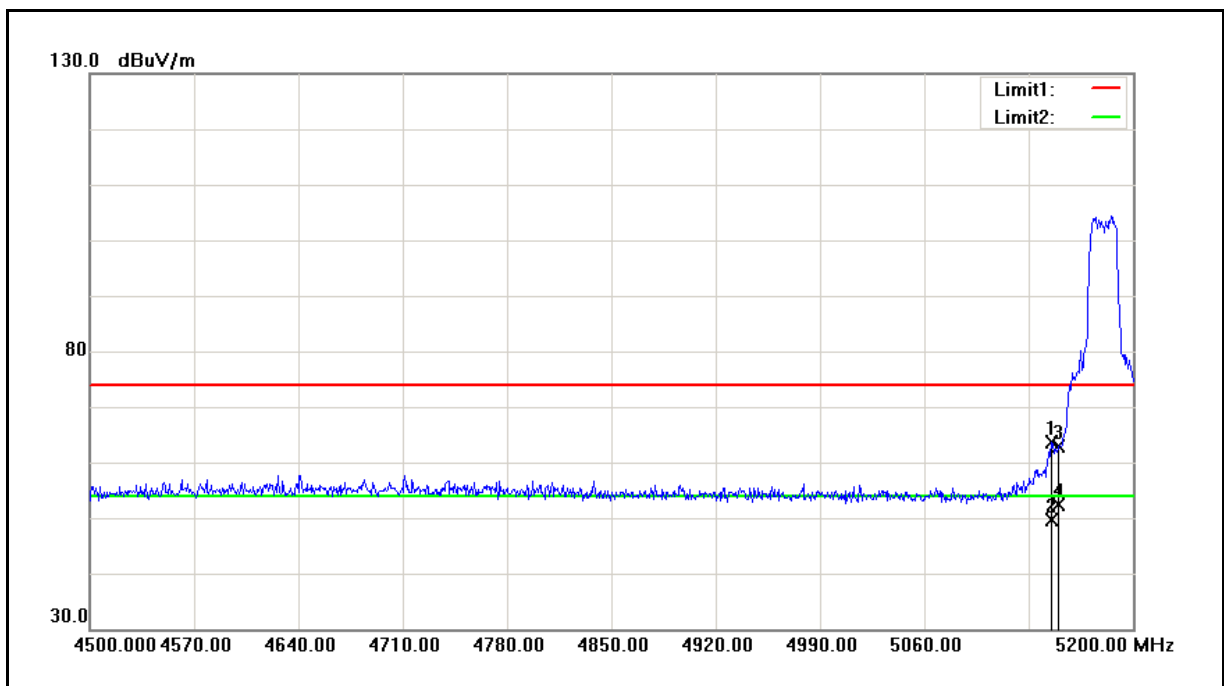


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	61.05	9.33	70.38	122.20	-51.82	peak
2	5855.000	60.68	9.35	70.03	110.80	-40.77	peak
3	5875.000	48.19	9.40	57.59	105.20	-47.61	peak
4	5925.000	45.80	9.53	55.33	68.20	-12.87	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

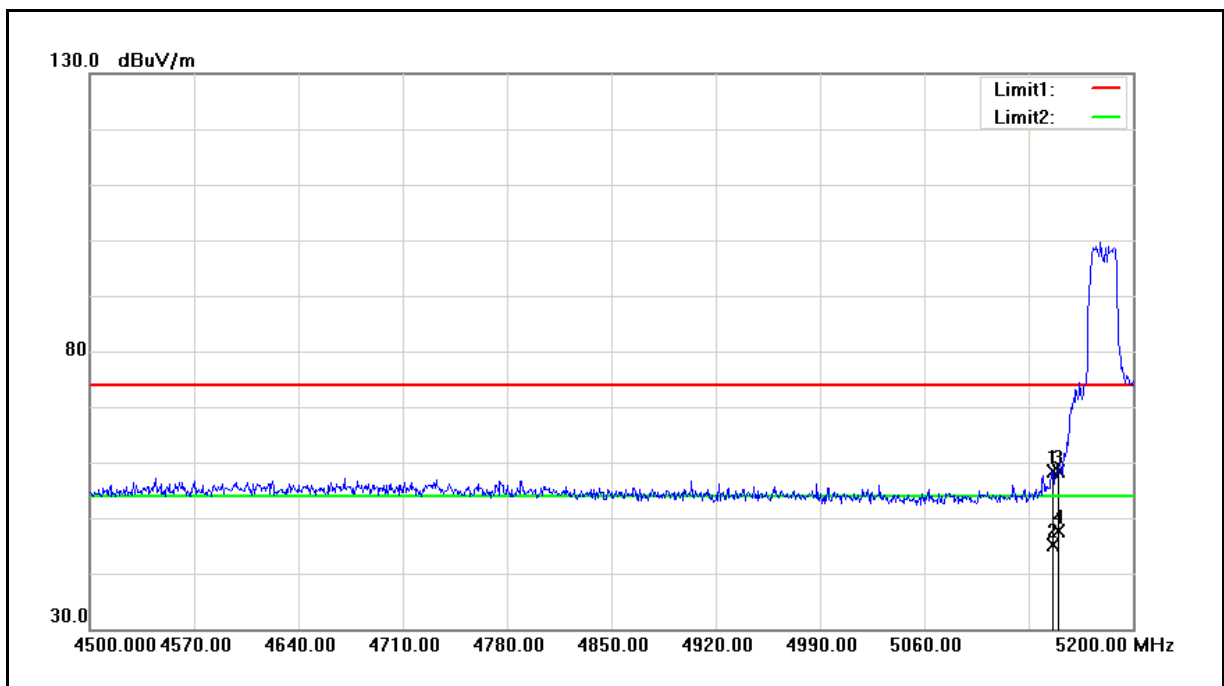


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5145.400	55.40	8.15	63.55	74.00	-10.45	peak
2	5145.400	41.46	8.15	49.61	54.00	-4.39	AVG
3	5150.000	54.72	8.16	62.88	74.00	-11.12	peak
4	5150.000	44.21	8.16	52.37	54.00	-1.63	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

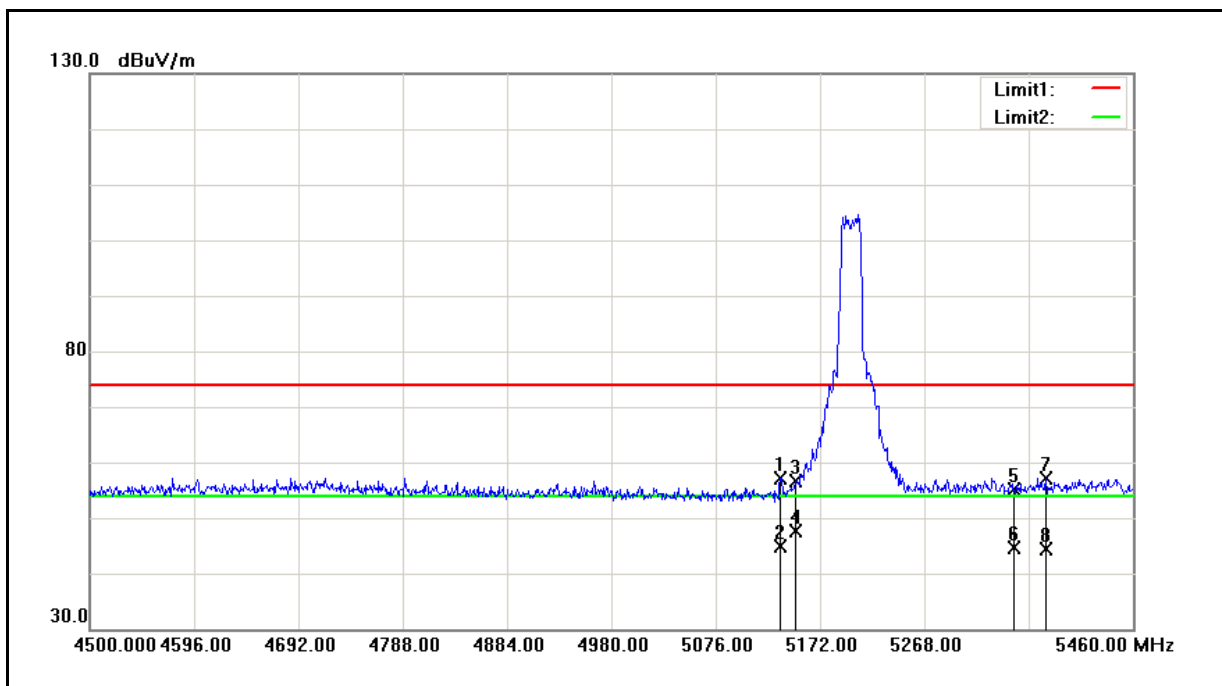


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5146.100	50.26	8.15	58.41	74.00	-15.59	peak
2	5146.100	37.07	8.15	45.22	54.00	-8.78	AVG
3	5150.000	50.24	8.16	58.40	74.00	-15.60	peak
4	5150.000	39.53	8.16	47.69	54.00	-6.31	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

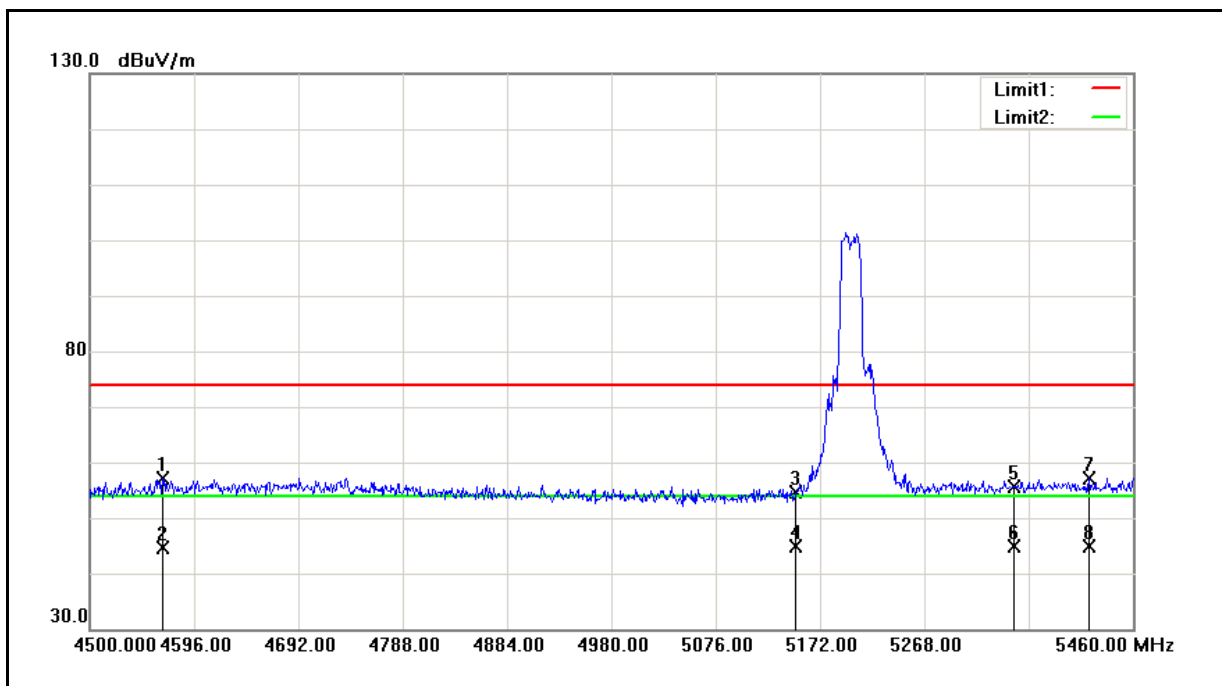


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5135.520	49.11	8.14	57.25	74.00	-16.75	peak
2	5135.520	36.62	8.14	44.76	54.00	-9.24	AVG
3	5150.000	48.36	8.16	56.52	74.00	-17.48	peak
4	5150.000	39.47	8.16	47.63	54.00	-6.37	AVG
5	5350.000	46.75	8.33	55.08	74.00	-18.92	peak
6	5350.000	36.35	8.33	44.68	54.00	-9.32	AVG
7	5379.360	48.86	8.36	57.22	74.00	-16.78	peak
8	5379.360	36.13	8.36	44.49	54.00	-9.51	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

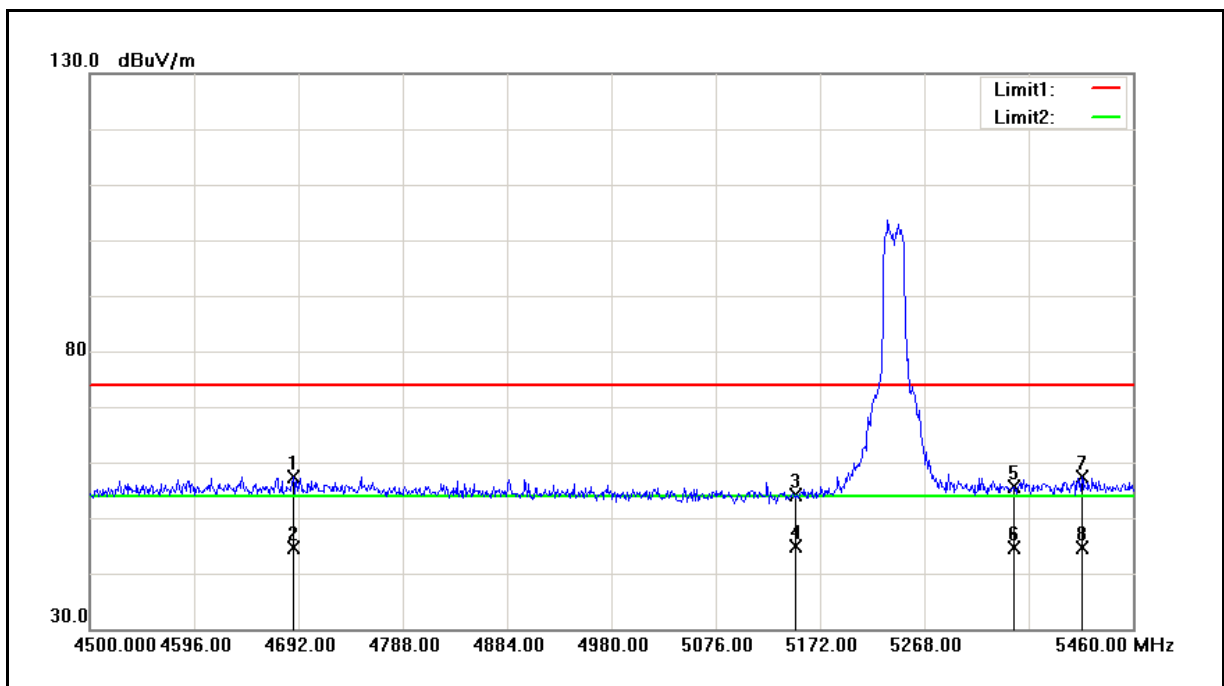


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4567.200	50.72	6.51	57.23	74.00	-16.77	peak
2	4567.200	38.09	6.51	44.60	54.00	-9.40	AVG
3	5150.000	46.55	8.16	54.71	74.00	-19.29	peak
4	5150.000	36.75	8.16	44.91	54.00	-9.09	AVG
5	5350.000	47.41	8.33	55.74	74.00	-18.26	peak
6	5350.000	36.50	8.33	44.83	54.00	-9.17	AVG
7	5419.680	48.72	8.39	57.11	74.00	-16.89	peak
8	5419.680	36.40	8.39	44.79	54.00	-9.21	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



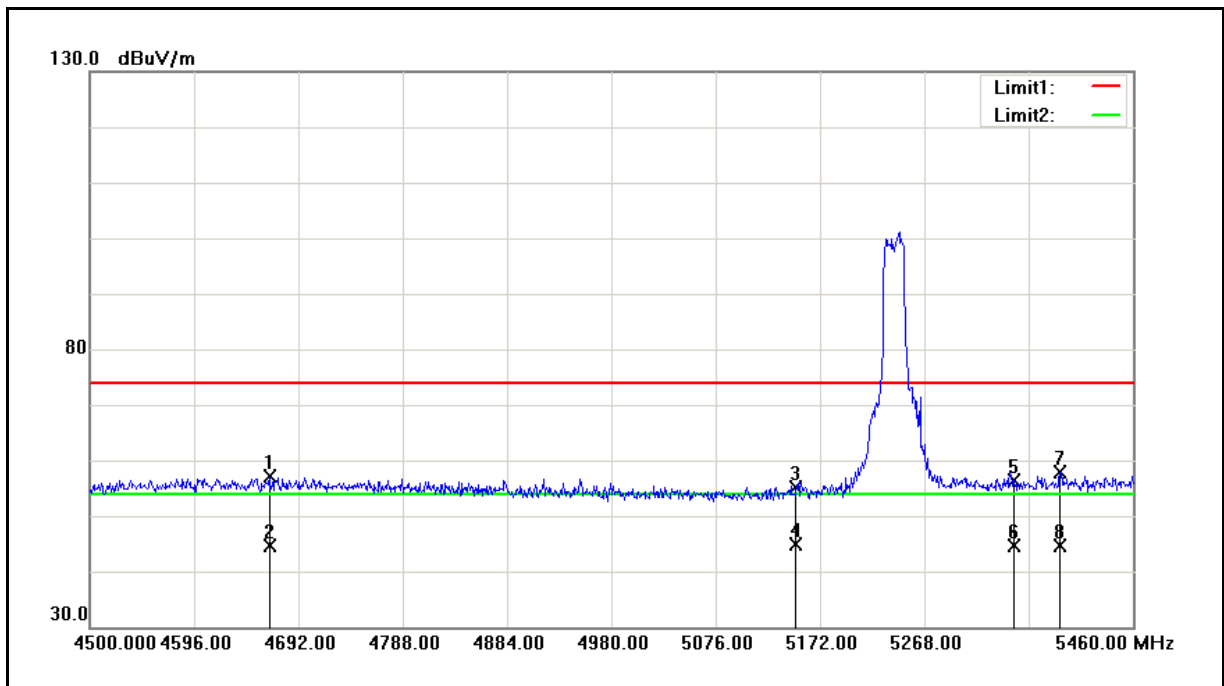
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4687.200	50.57	6.92	57.49	74.00	-16.51	peak
2	4687.200	37.60	6.92	44.52	54.00	-9.48	AVG
3	5150.000	45.97	8.16	54.13	74.00	-19.87	peak
4	5150.000	36.60	8.16	44.76	54.00	-9.24	AVG
5	5350.000	47.41	8.33	55.74	74.00	-18.26	peak
6	5350.000	36.25	8.33	44.58	54.00	-9.42	AVG
7	5412.960	48.88	8.39	57.27	74.00	-16.73	peak
8	5412.960	36.25	8.39	44.64	54.00	-9.36	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

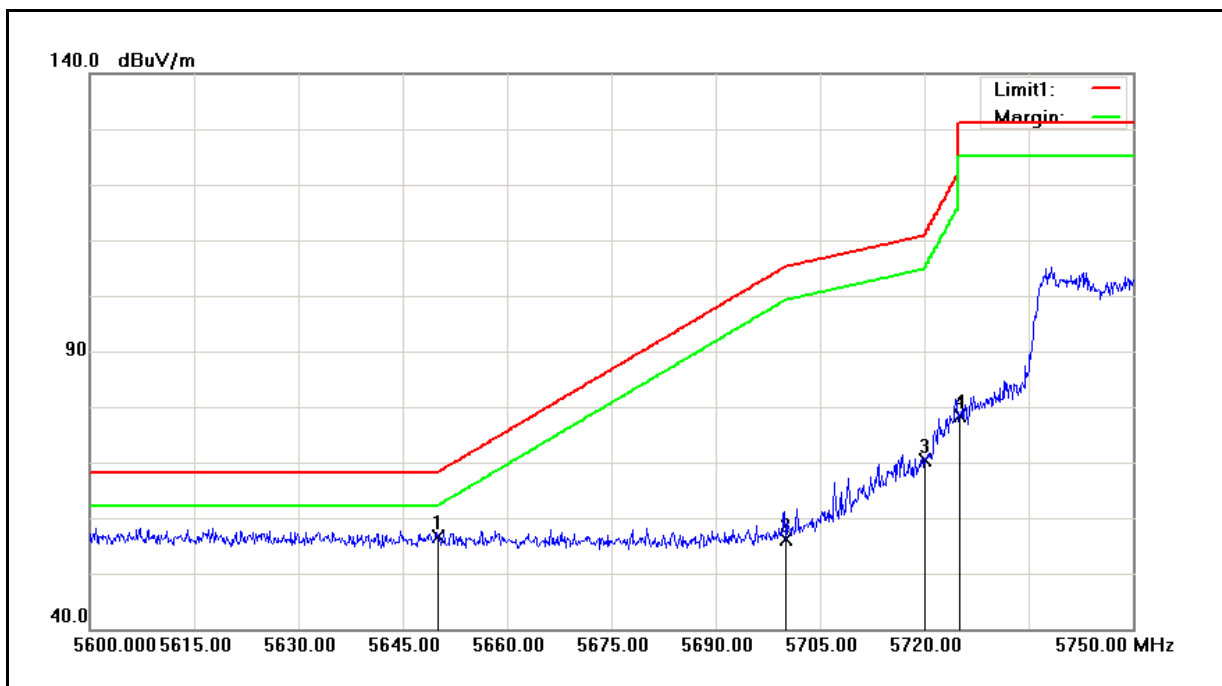


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4665.120	50.38	6.84	57.22	74.00	-16.78	peak
2	4665.120	37.81	6.84	44.65	54.00	-9.35	AVG
3	5150.000	47.00	8.16	55.16	74.00	-18.84	peak
4	5150.000	36.71	8.16	44.87	54.00	-9.13	AVG
5	5350.000	48.14	8.33	56.47	74.00	-17.53	peak
6	5350.000	36.26	8.33	44.59	54.00	-9.41	AVG
7	5392.800	49.51	8.37	57.88	74.00	-16.12	peak
8	5392.800	36.34	8.37	44.71	54.00	-9.29	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

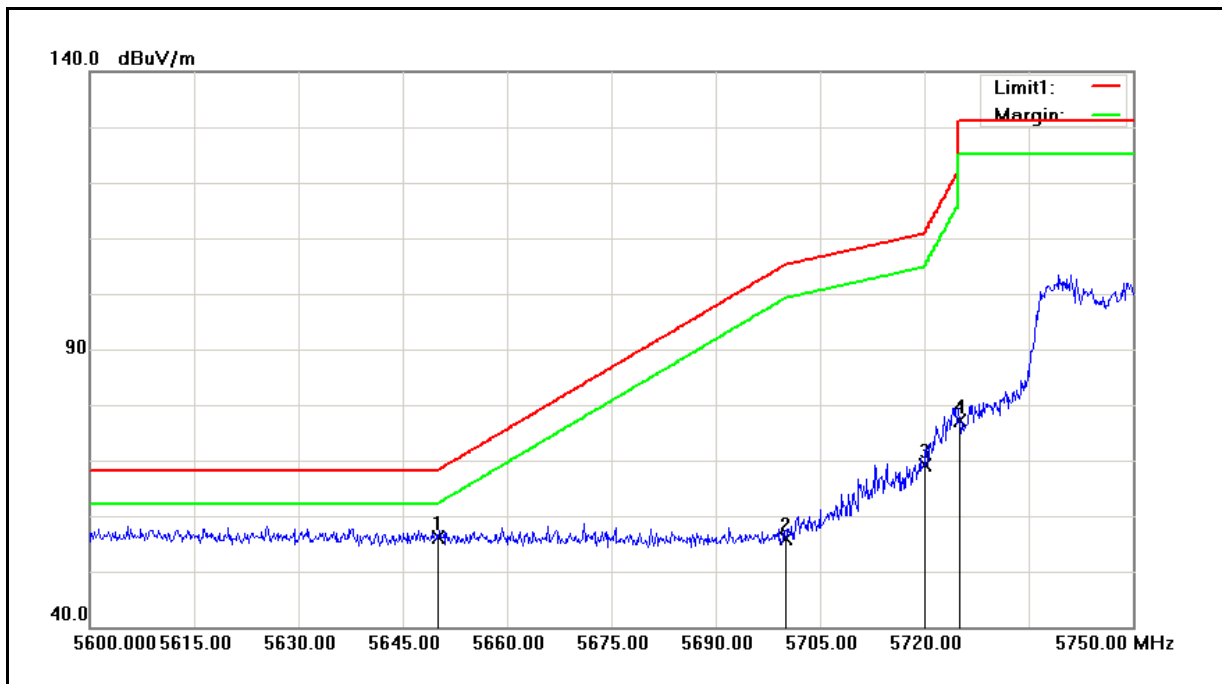


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.91	8.84	56.75	68.20	-11.45	peak
2	5700.000	47.22	8.97	56.19	105.20	-49.01	peak
3	5720.000	61.46	9.01	70.47	110.80	-40.33	peak
4	5725.000	69.41	9.03	78.44	122.20	-43.76	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

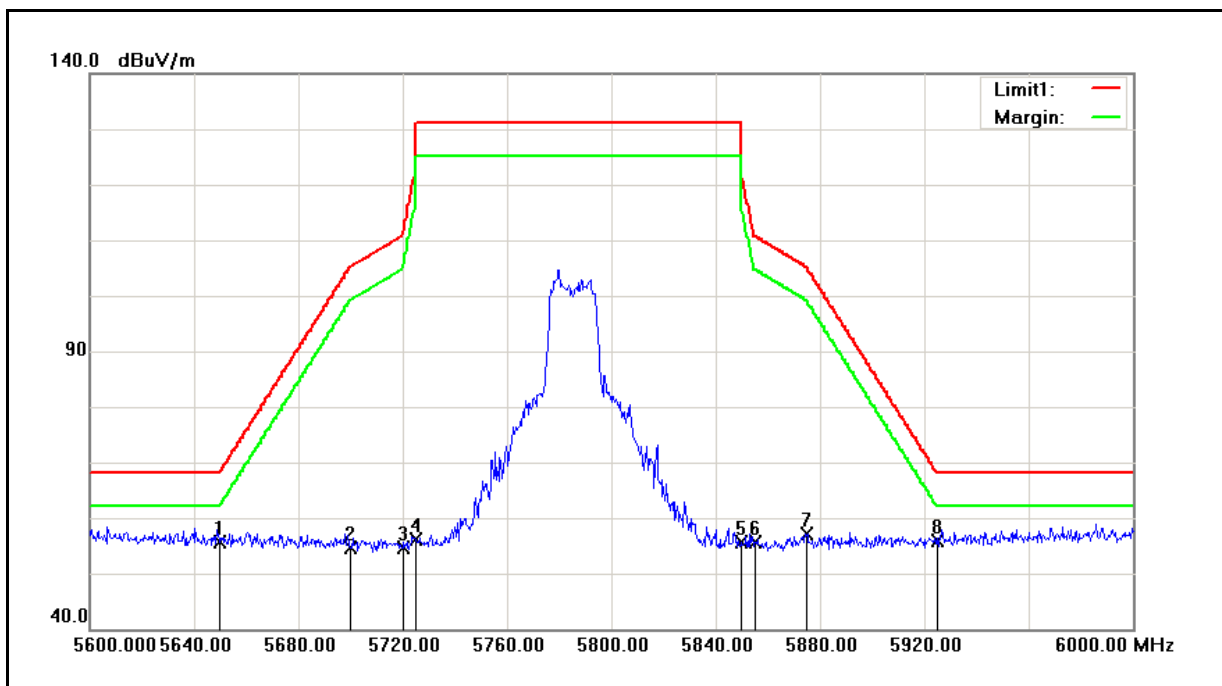


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.25	8.84	56.09	68.20	-12.11	peak
2	5700.000	46.88	8.97	55.85	105.20	-49.35	peak
3	5720.000	60.05	9.01	69.06	110.80	-41.74	peak
4	5725.000	68.17	9.03	77.20	122.20	-45.00	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



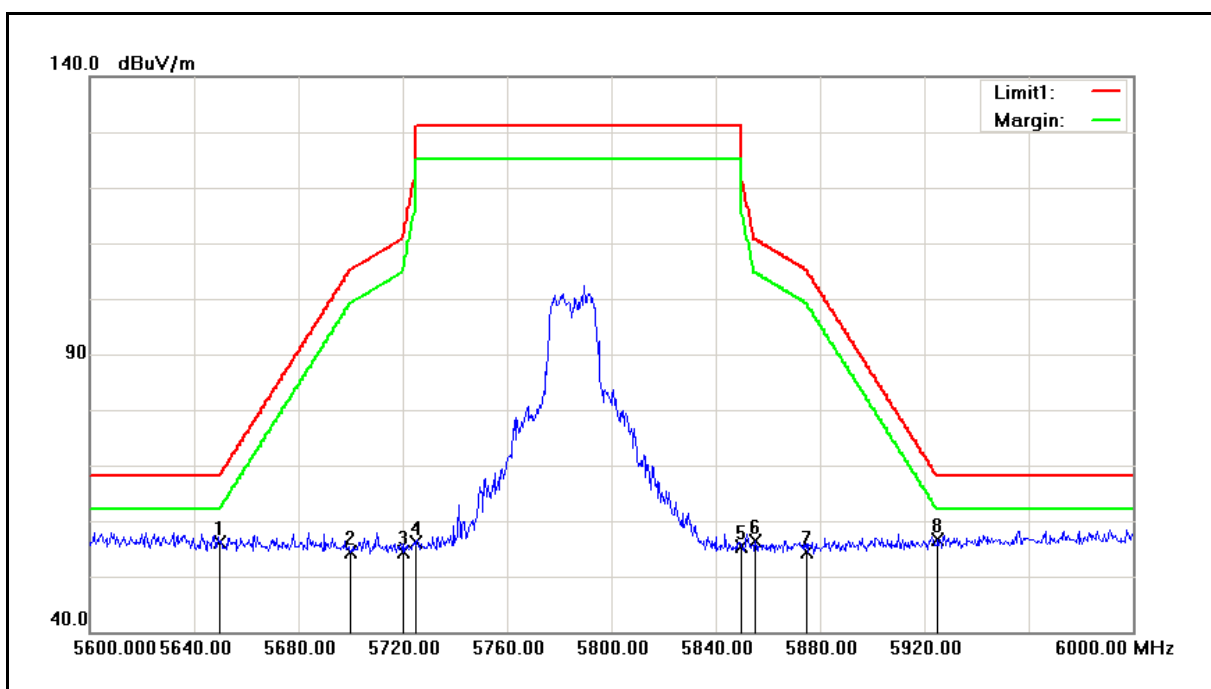
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Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.71	8.84	55.55	68.20	-12.65	peak
2	5700.000	45.68	8.97	54.65	105.20	-50.55	peak
3	5720.000	45.66	9.01	54.67	110.80	-56.13	peak
4	5725.000	47.00	9.03	56.03	122.20	-66.17	peak
5	5850.000	46.37	9.33	55.70	122.20	-66.50	peak
6	5855.000	46.40	9.35	55.75	110.80	-55.05	peak
7	5875.000	47.78	9.40	57.18	105.20	-48.02	peak
8	5925.000	46.30	9.53	55.83	68.20	-12.37	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

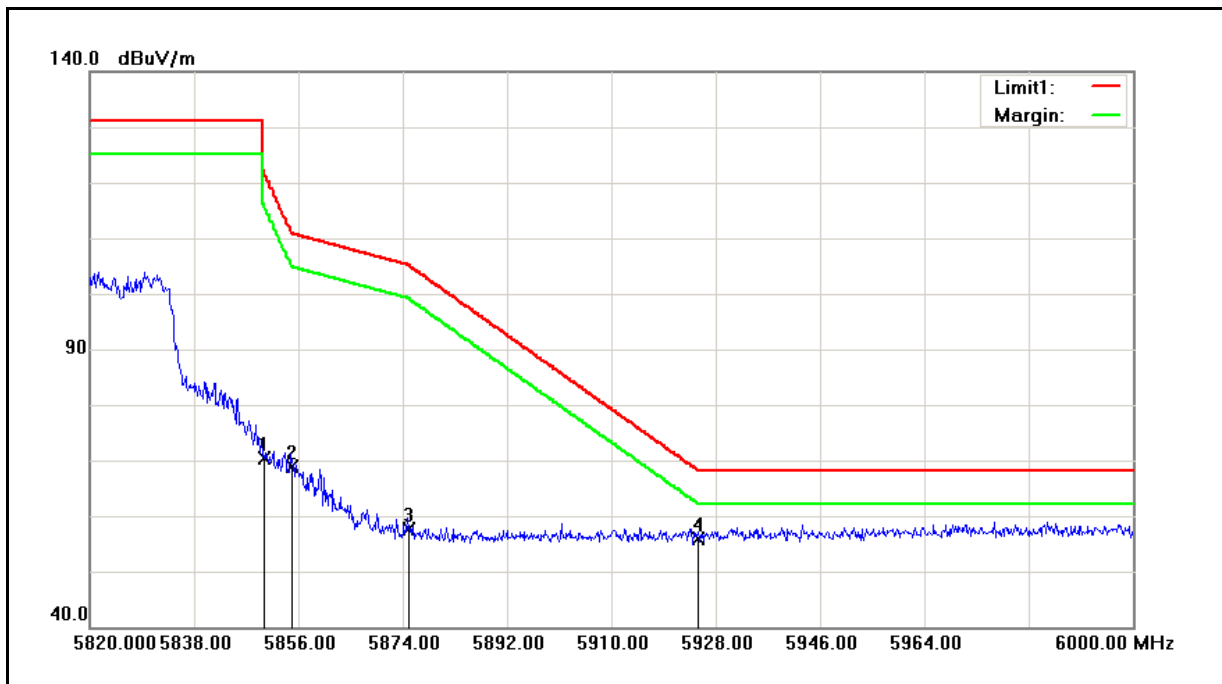
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.26	8.84	56.10	68.20	-12.10	peak
2	5700.000	45.46	8.97	54.43	105.20	-50.77	peak
3	5720.000	45.49	9.01	54.50	110.80	-56.30	peak
4	5725.000	47.12	9.03	56.15	122.20	-66.05	peak
5	5850.000	45.96	9.33	55.29	122.20	-66.91	peak
6	5855.000	47.04	9.35	56.39	110.80	-54.41	peak
7	5875.000	44.99	9.40	54.39	105.20	-50.81	peak
8	5925.000	47.12	9.53	56.65	68.20	-11.55	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

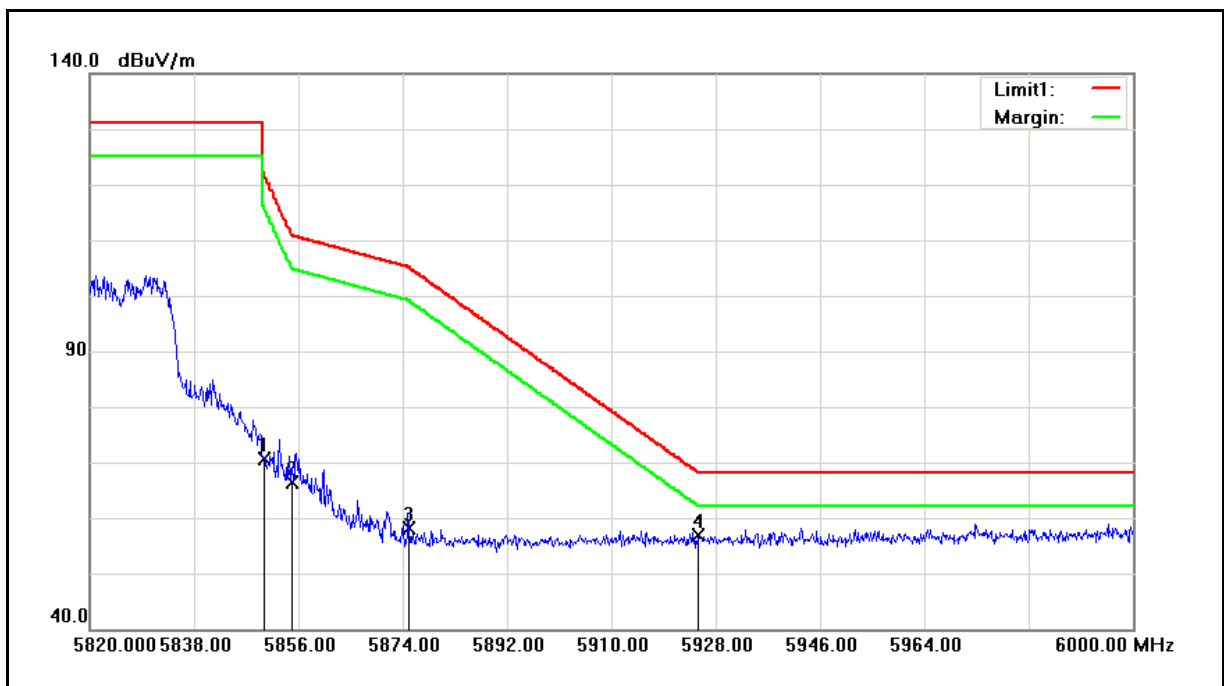


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	61.01	9.33	70.34	122.20	-51.86	peak
2	5855.000	59.57	9.35	68.92	110.80	-41.88	peak
3	5875.000	48.30	9.40	57.70	105.20	-47.50	peak
4	5925.000	46.45	9.53	55.98	68.20	-12.22	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

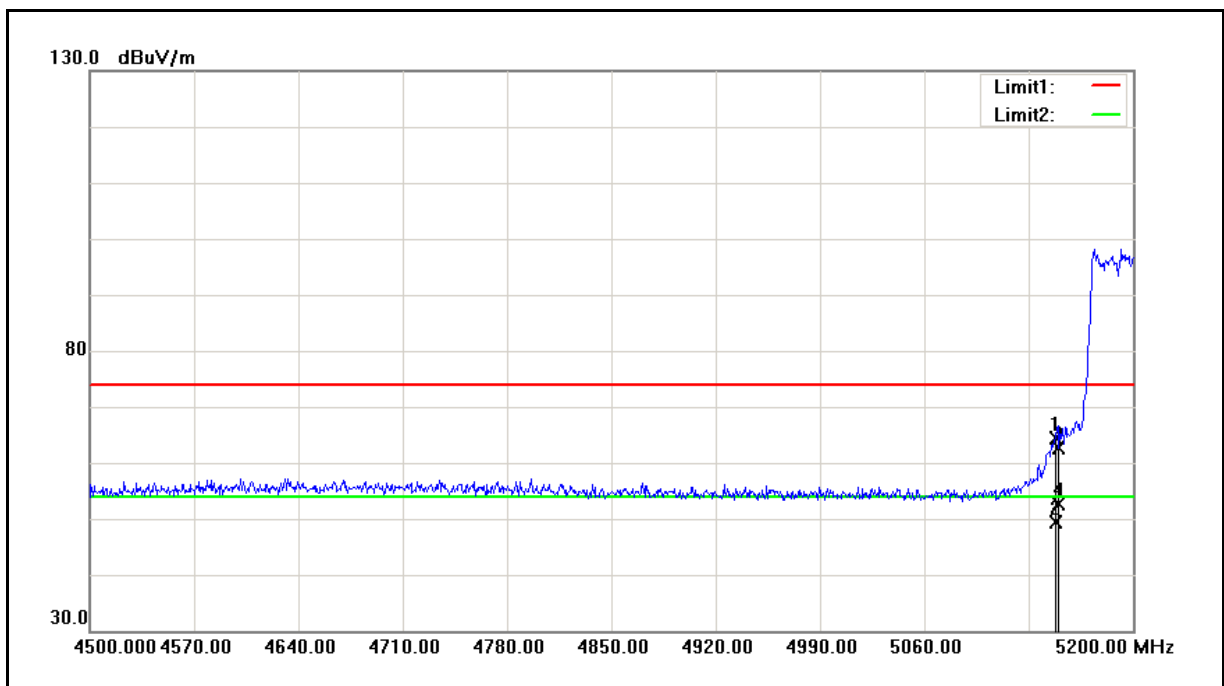


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	61.24	9.33	70.57	122.20	-51.63	peak
2	5855.000	57.14	9.35	66.49	110.80	-44.31	peak
3	5875.000	48.71	9.40	58.11	105.20	-47.09	peak
4	5925.000	47.46	9.53	56.99	68.20	-11.21	peak

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5190 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

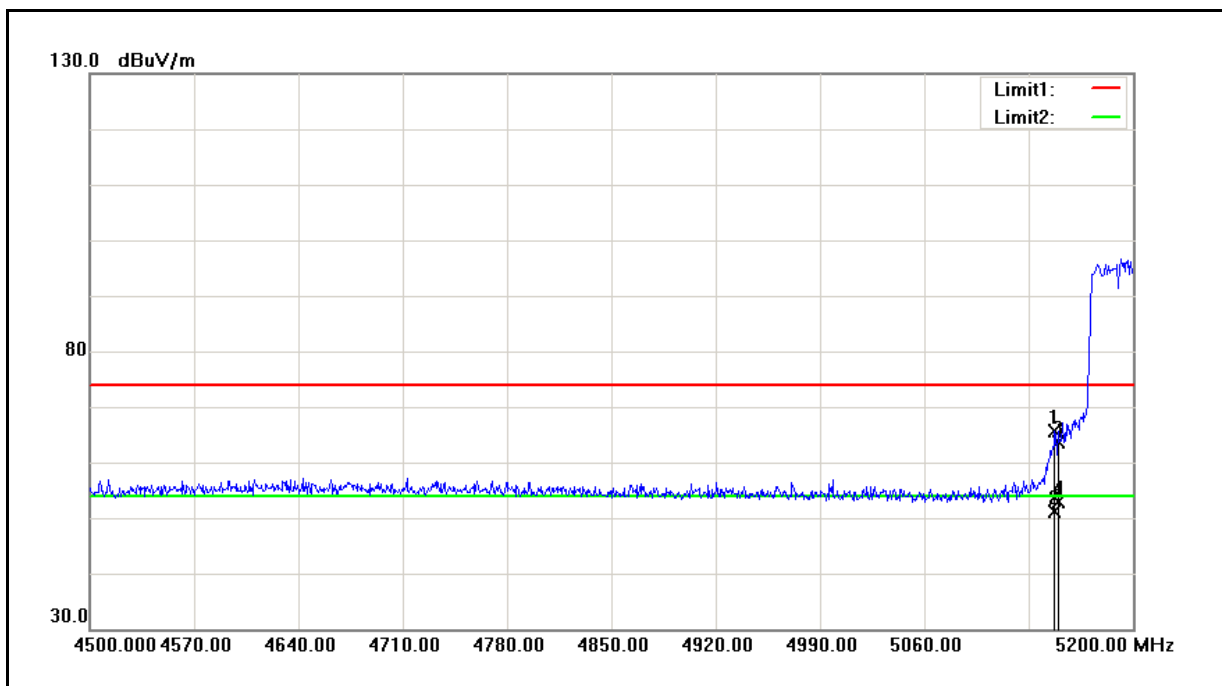


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5148.200	56.32	8.16	64.48	74.00	-9.52	peak
2	5148.200	41.30	8.16	49.46	54.00	-4.54	AVG
3	5150.000	54.48	8.16	62.64	74.00	-11.36	peak
4	5150.000	44.56	8.16	52.72	54.00	-1.28	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5190 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

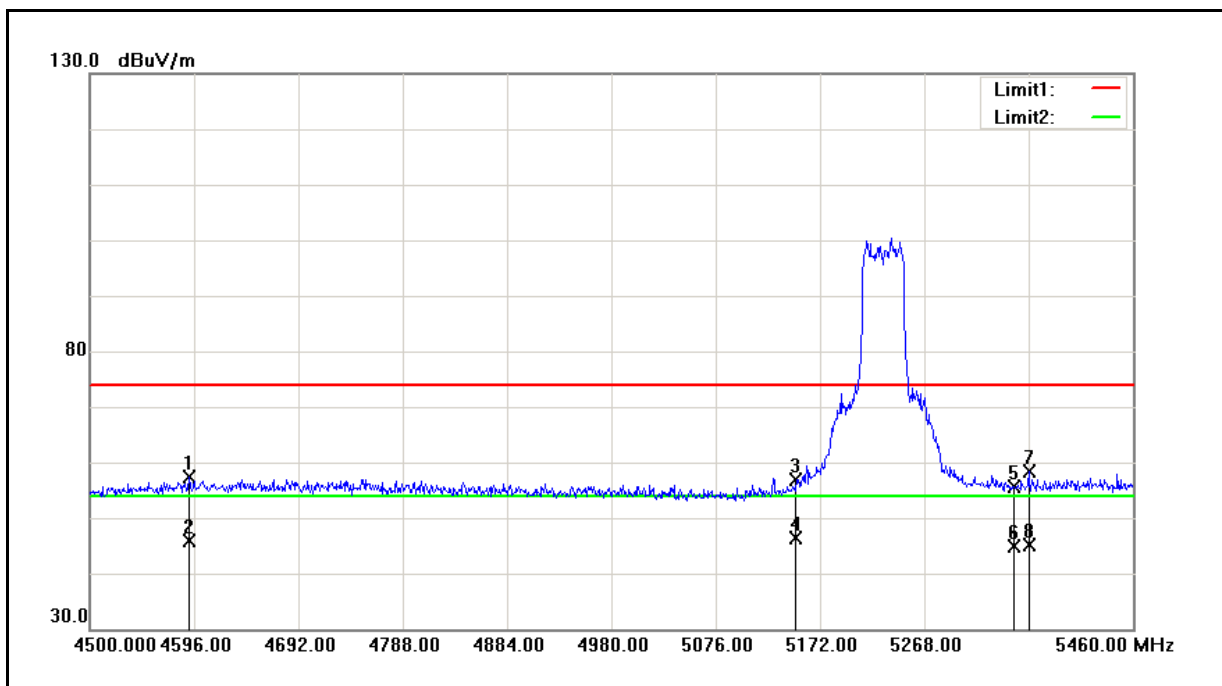


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5147.500	57.40	8.15	65.55	74.00	-8.45	peak
2	5147.500	43.05	8.15	51.20	54.00	-2.80	AVG
3	5150.000	55.35	8.16	63.51	74.00	-10.49	peak
4	5150.000	44.64	8.16	52.80	54.00	-1.20	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5230 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

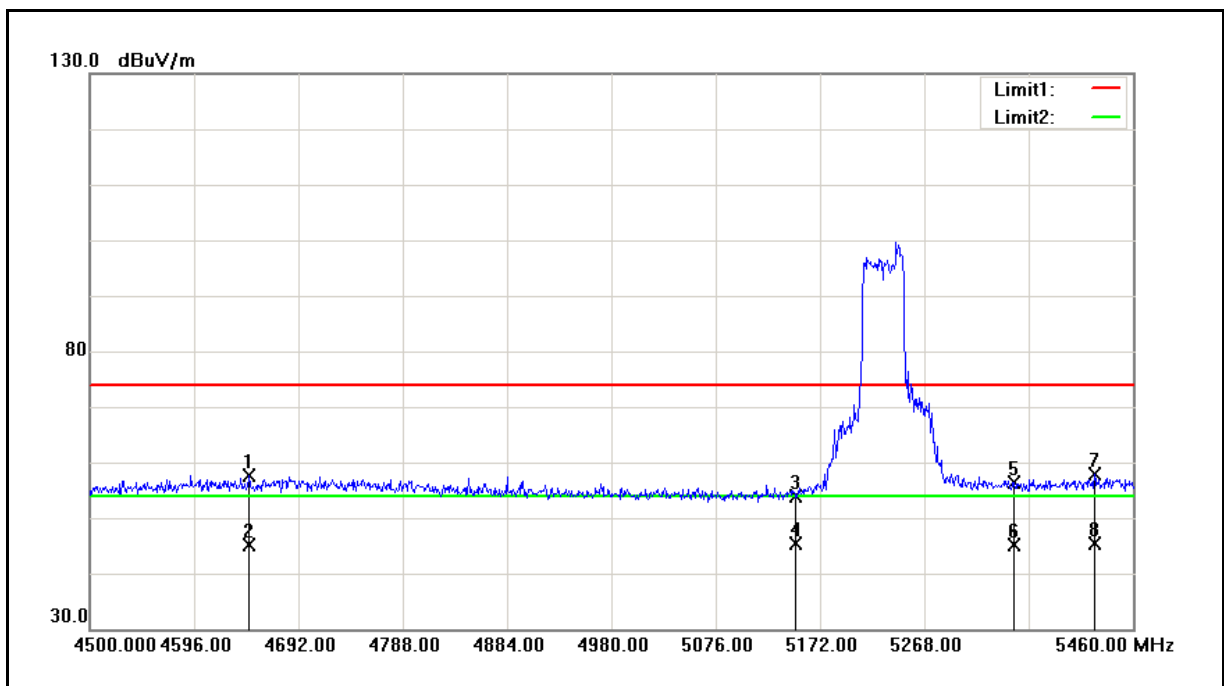


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4591.200	50.78	6.58	57.36	74.00	-16.64	peak
2	4591.200	39.21	6.58	45.79	54.00	-8.21	AVG
3	5150.000	48.78	8.16	56.94	74.00	-17.06	peak
4	5150.000	38.29	8.16	46.45	54.00	-7.55	AVG
5	5350.000	47.40	8.33	55.73	74.00	-18.27	peak
6	5350.000	36.60	8.33	44.93	54.00	-9.07	AVG
7	5364.000	50.07	8.35	58.42	74.00	-15.58	peak
8	5364.000	36.77	8.35	45.12	54.00	-8.88	AVG

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5230 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

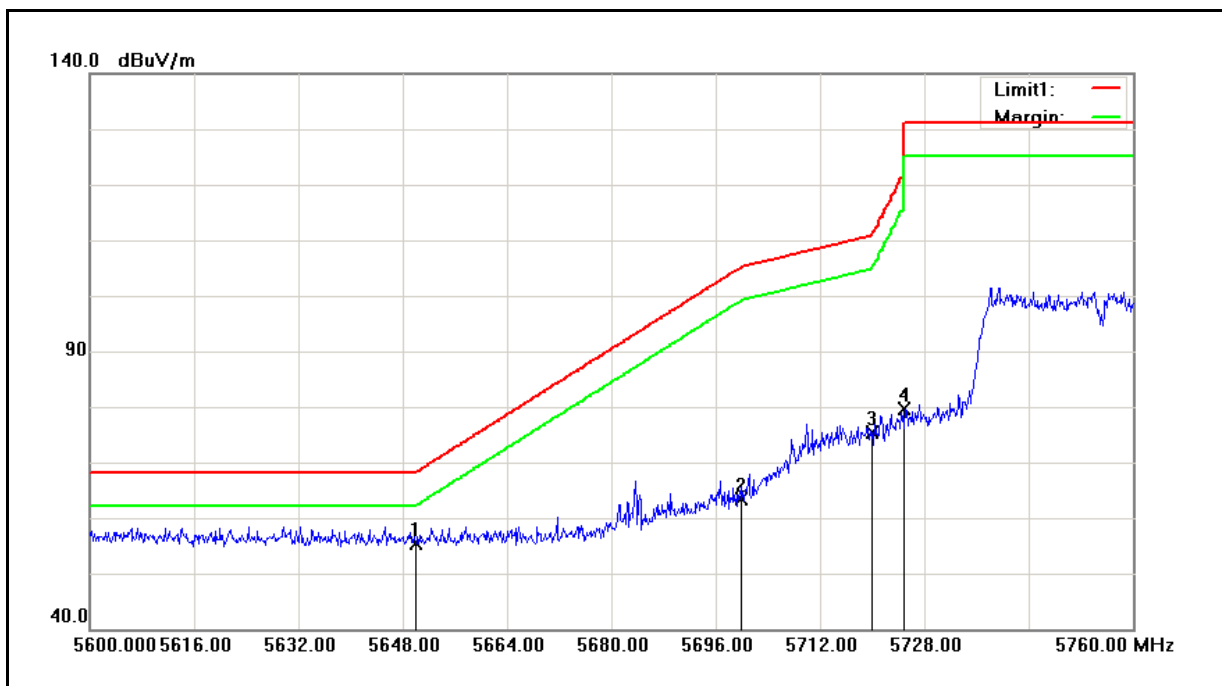


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4646.880	50.76	6.77	57.53	74.00	-16.47	peak
2	4646.880	38.36	6.77	45.13	54.00	-8.87	AVG
3	5150.000	45.82	8.16	53.98	74.00	-20.02	peak
4	5150.000	37.22	8.16	45.38	54.00	-8.62	AVG
5	5350.000	48.12	8.33	56.45	74.00	-17.55	peak
6	5350.000	36.89	8.33	45.22	54.00	-8.78	AVG
7	5424.480	49.41	8.40	57.81	74.00	-16.19	peak
8	5424.480	36.91	8.40	45.31	54.00	-8.69	AVG

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



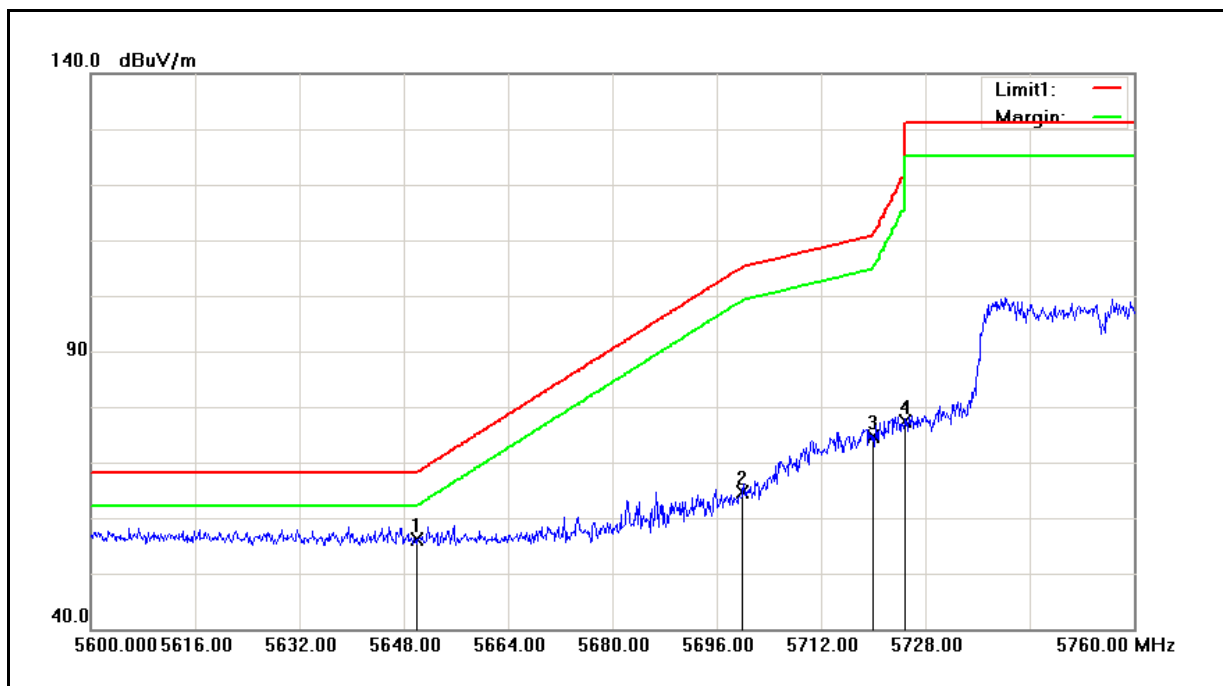
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5755 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.65	8.84	55.49	68.20	-12.71	peak
2	5700.000	54.51	8.97	63.48	105.20	-41.72	peak
3	5720.000	66.32	9.01	75.33	110.80	-35.47	peak
4	5725.000	70.61	9.03	79.64	122.20	-42.56	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5755 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

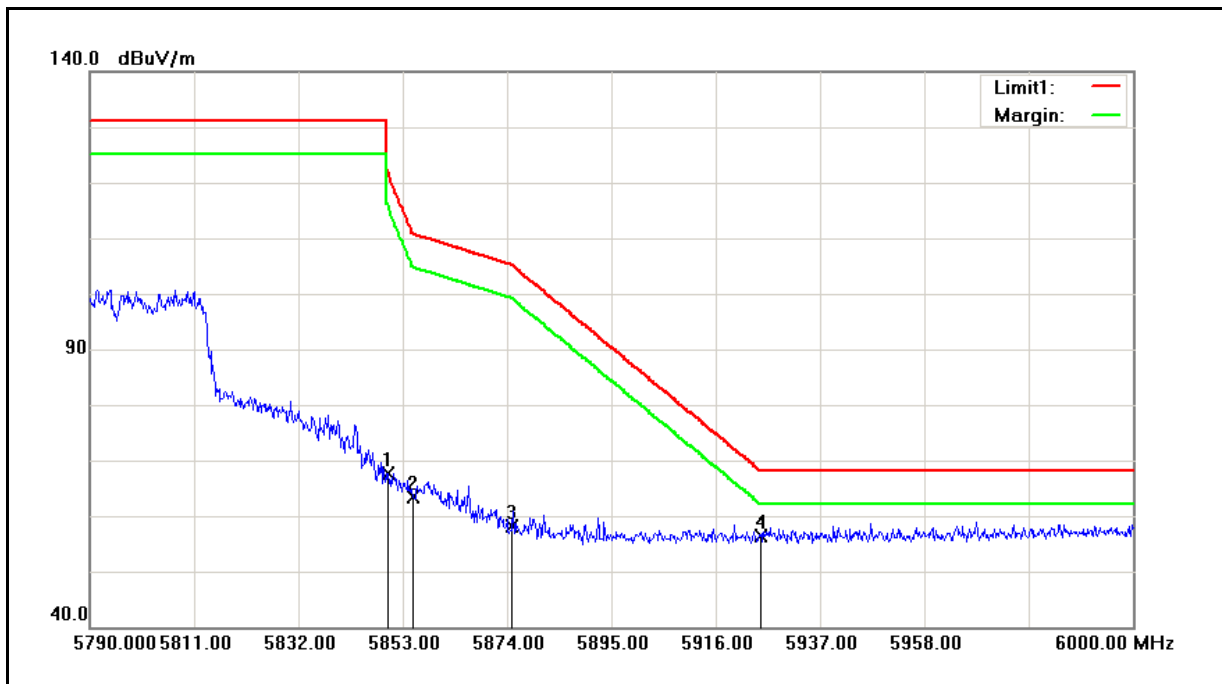


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.22	8.84	56.06	68.20	-12.14	peak
2	5700.000	55.71	8.97	64.68	105.20	-40.52	peak
3	5720.000	65.59	9.01	74.60	110.80	-36.20	peak
4	5725.000	68.32	9.03	77.35	122.20	-44.85	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



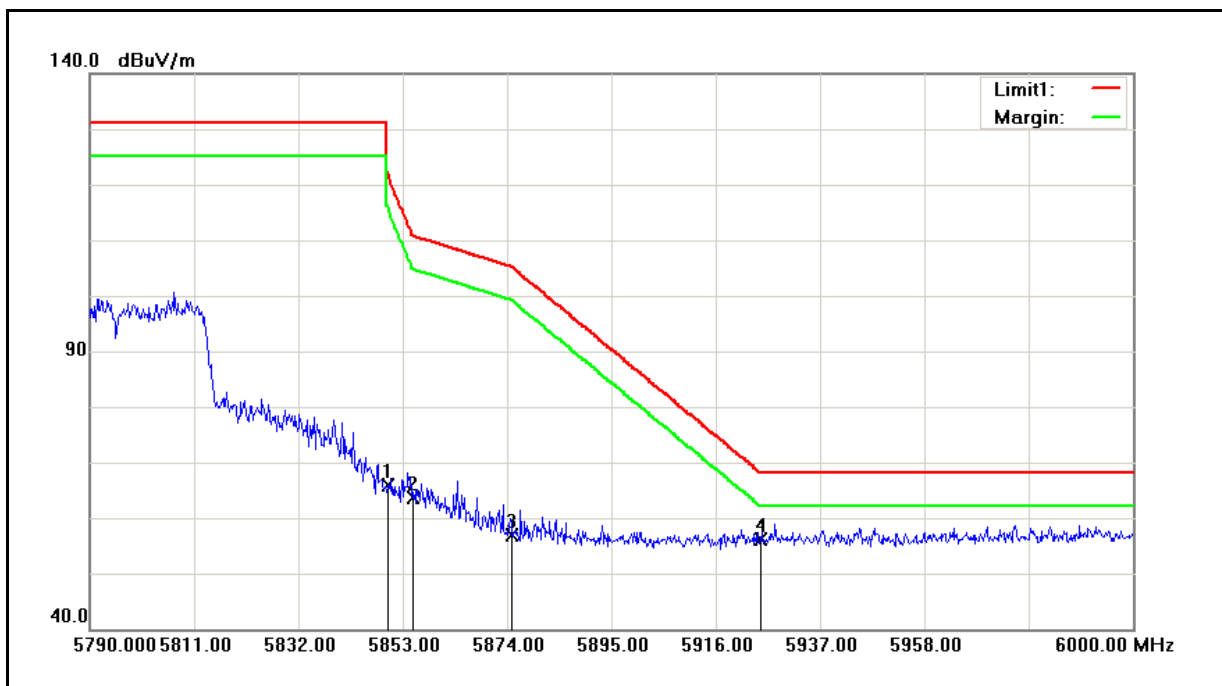
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5795 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	58.37	9.33	67.70	122.20	-54.50	peak
2	5855.000	54.12	9.35	63.47	110.80	-47.33	peak
3	5875.000	48.69	9.40	58.09	105.20	-47.11	peak
4	5925.000	46.97	9.53	56.50	68.20	-11.70	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5795 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		

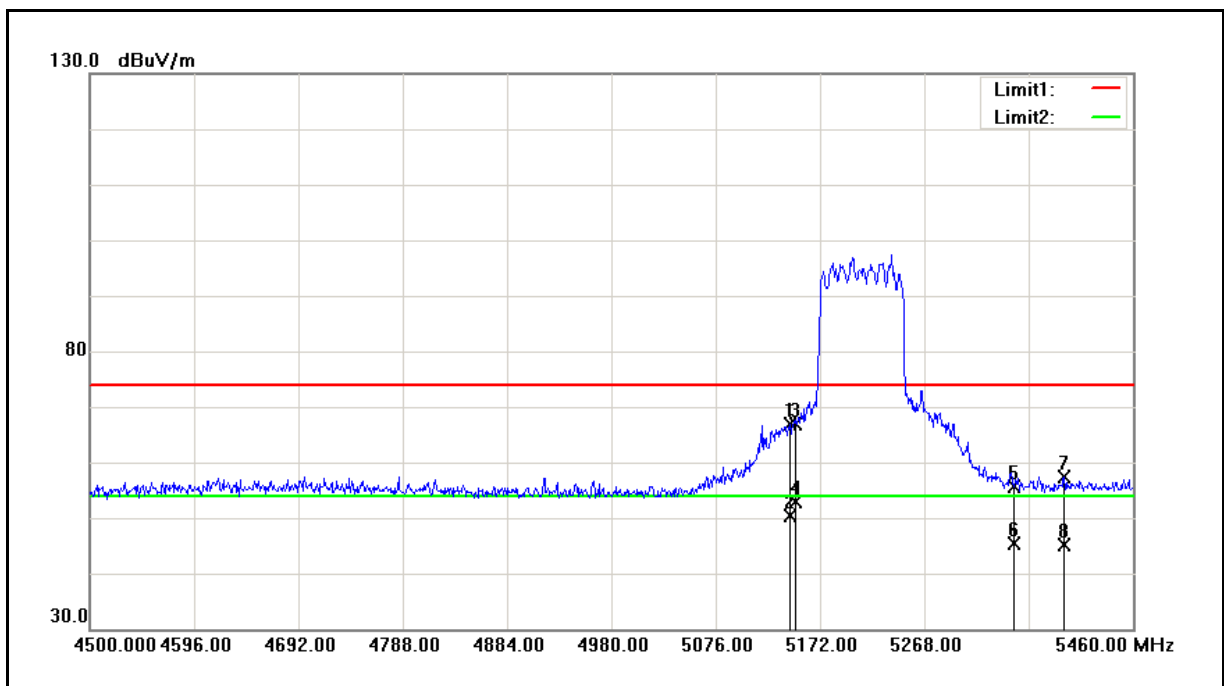


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	56.64	9.33	65.97	122.20	-56.23	peak
2	5855.000	54.26	9.35	63.61	110.80	-47.19	peak
3	5875.000	47.44	9.40	56.84	105.20	-48.36	peak
4	5925.000	46.63	9.53	56.16	68.20	-12.04	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5210 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		

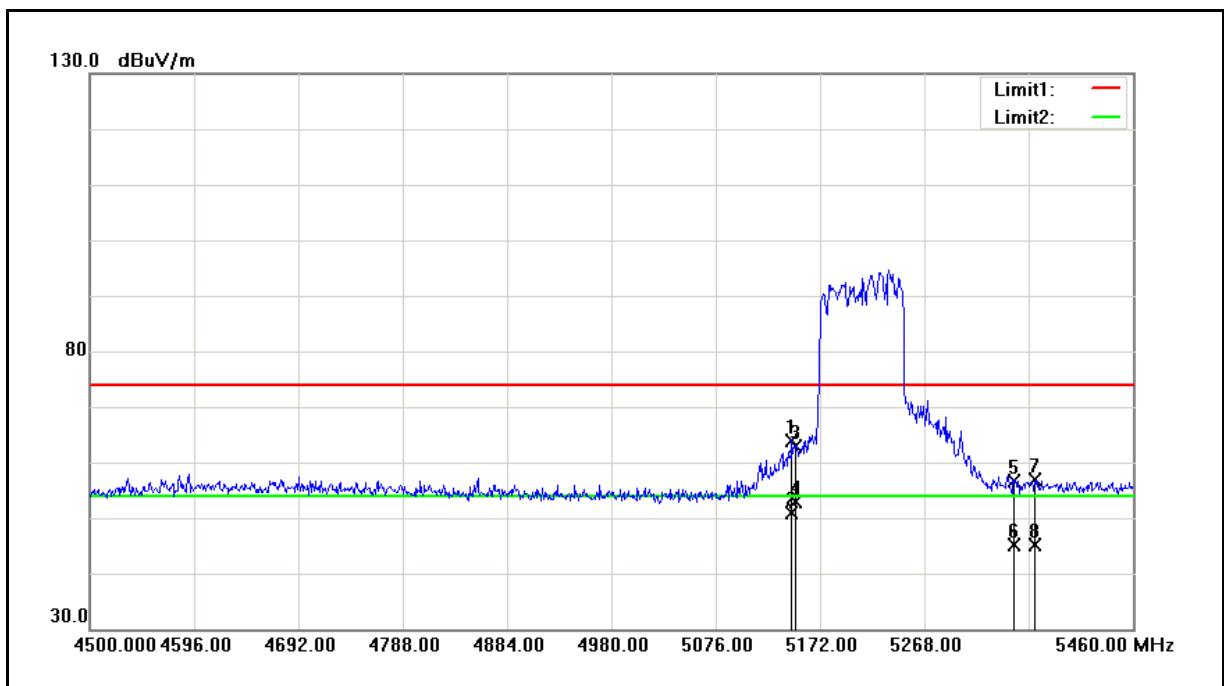


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5144.160	58.62	8.15	66.77	74.00	-7.23	peak
2	5144.160	42.29	8.15	50.44	54.00	-3.56	AVG
3	5150.000	58.71	8.16	66.87	74.00	-7.13	peak
4	5150.000	44.75	8.16	52.91	54.00	-1.09	AVG
5	5350.000	47.28	8.33	55.61	74.00	-18.39	peak
6	5350.000	36.96	8.33	45.29	54.00	-8.71	AVG
7	5396.640	49.12	8.37	57.49	74.00	-16.51	peak
8	5396.640	36.84	8.37	45.21	54.00	-8.79	AVG

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



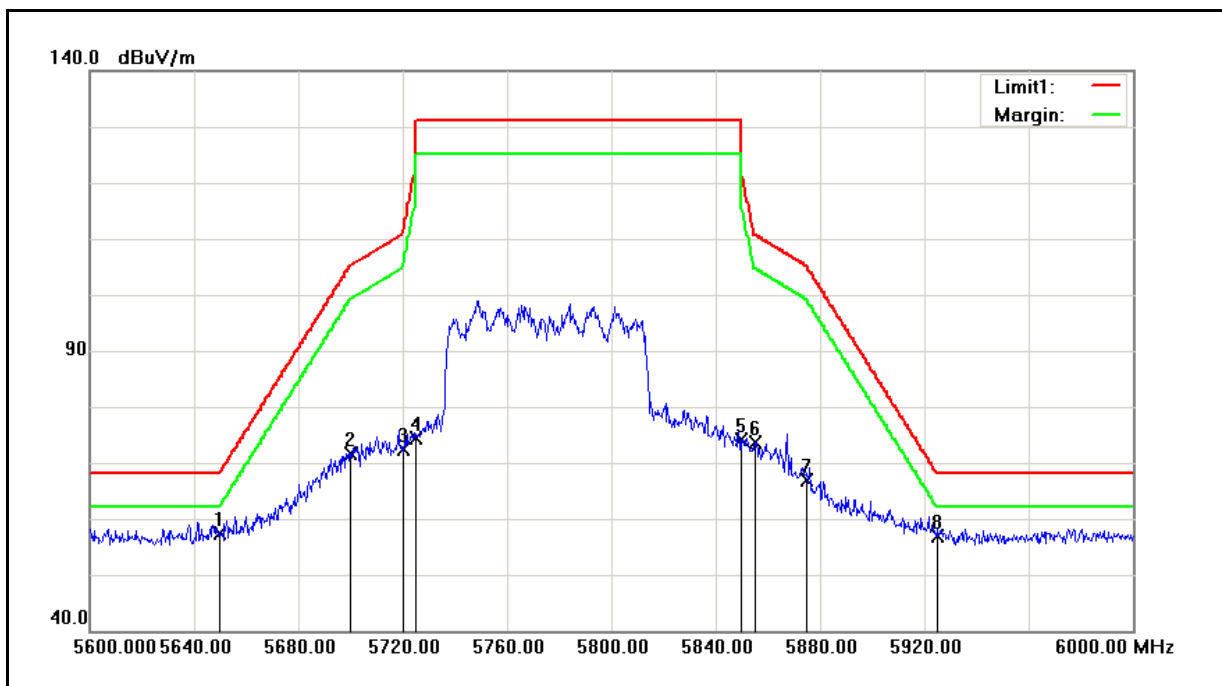
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5210 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5146.080	55.85	8.15	64.00	74.00	-10.00	peak
2	5146.080	42.79	8.15	50.94	54.00	-3.06	AVG
3	5150.000	54.68	8.16	62.84	74.00	-11.16	peak
4	5150.000	44.73	8.16	52.89	54.00	-1.11	AVG
5	5350.000	48.30	8.33	56.63	74.00	-17.37	peak
6	5350.000	36.89	8.33	45.22	54.00	-8.78	AVG
7	5369.760	48.64	8.35	56.99	74.00	-17.01	peak
8	5369.760	36.82	8.35	45.17	54.00	-8.83	AVG

Note: 1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

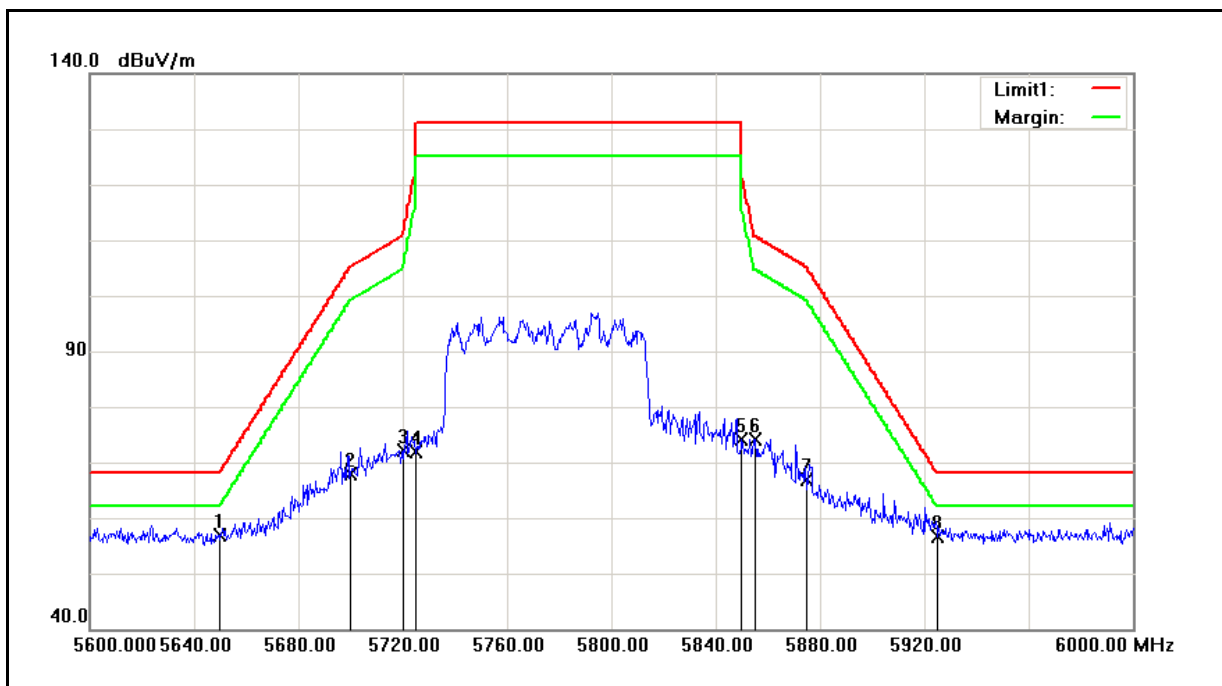
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5775 MHz	Date:	07/29/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	48.53	8.84	57.37	68.20	-10.83	peak
2	5700.000	62.65	8.97	71.62	105.20	-33.58	peak
3	5720.000	63.46	9.01	72.47	110.80	-38.33	peak
4	5725.000	65.39	9.03	74.42	122.20	-47.78	peak
5	5850.000	64.71	9.33	74.04	122.20	-48.16	peak
6	5855.000	64.27	9.35	73.62	110.80	-37.18	peak
7	5875.000	57.48	9.40	66.88	105.20	-38.32	peak
8	5925.000	47.31	9.53	56.84	68.20	-11.36	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5775 MHz	Date:	07/29/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.93	8.84	56.77	68.20	-11.43	peak
2	5700.000	58.87	8.97	67.84	105.20	-37.36	peak
3	5720.000	63.05	9.01	72.06	110.80	-38.74	peak
4	5725.000	62.94	9.03	71.97	122.20	-50.23	peak
5	5850.000	64.77	9.33	74.10	122.20	-48.10	peak
6	5855.000	64.87	9.35	74.22	110.80	-36.58	peak
7	5875.000	57.52	9.40	66.92	105.20	-38.28	peak
8	5925.000	47.10	9.53	56.63	68.20	-11.57	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Below 1GHz

Standard:	FCC Part 15E			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	EW-7822UNC			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Test Mode:	Mode 1			Date:	10/09/2016		
Description:				Test By:	Eric Ou Yang		
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
190.5000	37.18	-7.41	29.77	43.50	-13.73	QP	H
268.0000	31.34	-4.56	26.78	46.00	-19.22	QP	H
313.0000	31.27	-3.20	28.07	46.00	-17.93	QP	H
515.0000	28.77	0.95	29.72	46.00	-16.28	QP	H
602.0000	27.96	2.95	30.91	46.00	-15.09	QP	H
891.0000	26.64	8.41	35.05	46.00	-10.95	QP	H
203.0000	28.71	-7.77	20.94	43.50	-22.56	QP	V
267.0000	28.72	-4.62	24.10	46.00	-21.90	QP	V
400.0000	27.79	-1.70	26.09	46.00	-19.91	QP	V
535.0000	27.15	1.25	28.40	46.00	-17.60	QP	V
687.0000	25.43	4.45	29.88	46.00	-16.12	QP	V
794.5000	25.49	6.61	32.10	46.00	-13.90	QP	V

Note: 1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

2. Result = Correction factor + Reading

3. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

Above 1GHz

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5180MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10360.000	56.32	4.97	61.29	68.20	-6.91	peak	H
10360.000	54.84	4.97	59.81	68.20	-8.39	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5200MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10400.000	56.22	5.07	61.29	68.20	-6.91	peak	H
10400.000	53.90	5.07	58.97	68.20	-9.23	peak	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5240MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10480.000	58.49	5.25	63.74	68.20	-4.46	peak	H
10480.000	56.21	5.25	61.46	68.20	-6.74	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5745MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11490.000	58.11	6.14	64.25	74.00	-9.75	peak	H
11490.000	46.81	6.14	52.95	54.00	-1.05	AVG	H
11490.000	55.83	6.14	61.97	74.00	-12.03	peak	V
11490.000	45.35	6.14	51.49	54.00	-2.51	AVG	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5785MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11570.000	56.99	6.35	63.34	74.00	-10.66	peak	H
11570.000	46.55	6.35	52.90	54.00	-1.10	AVG	H
11570.000	55.78	6.35	62.13	74.00	-11.87	peak	V
11570.000	44.03	6.35	50.38	54.00	-3.62	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 3	Date:	10/09/2016				
Frequency:	5825MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11650.000	56.24	6.58	62.82	74.00	-11.18	peak	H
11650.000	46.23	6.58	52.81	54.00	-1.19	AVG	H
11650.000	54.82	6.58	61.40	74.00	-12.60	peak	V
11650.000	44.21	6.58	50.79	54.00	-3.21	AVG	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	10/09/2016				
Frequency:	5190MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10380.000	53.20	5.01	58.21	68.20	-9.99	peak	H
10380.000	50.15	5.01	55.16	68.20	-13.04	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	10/09/2016				
Frequency:	5230MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10460.000	54.80	5.22	60.02	68.20	-8.18	peak	H
10460.000	53.08	5.22	58.30	68.20	-9.90	peak	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	10/09/2016				
Frequency:	5755MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11510.000	56.38	6.17	62.55	74.00	-11.45	peak	H
11510.000	46.46	6.17	52.63	54.00	-1.37	AVG	H
11510.000	54.55	6.17	60.72	74.00	-13.28	peak	V
11510.000	44.10	6.17	50.27	54.00	-3.73	AVG	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 4	Date:	10/09/2016				
Frequency:	5795MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11590.000	55.47	6.41	61.88	74.00	-12.12	peak	H
11590.000	46.49	6.41	52.90	54.00	-1.10	AVG	H
11590.000	54.88	6.41	61.29	74.00	-12.71	peak	V
11590.000	44.35	6.41	50.76	54.00	-3.24	AVG	V

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.



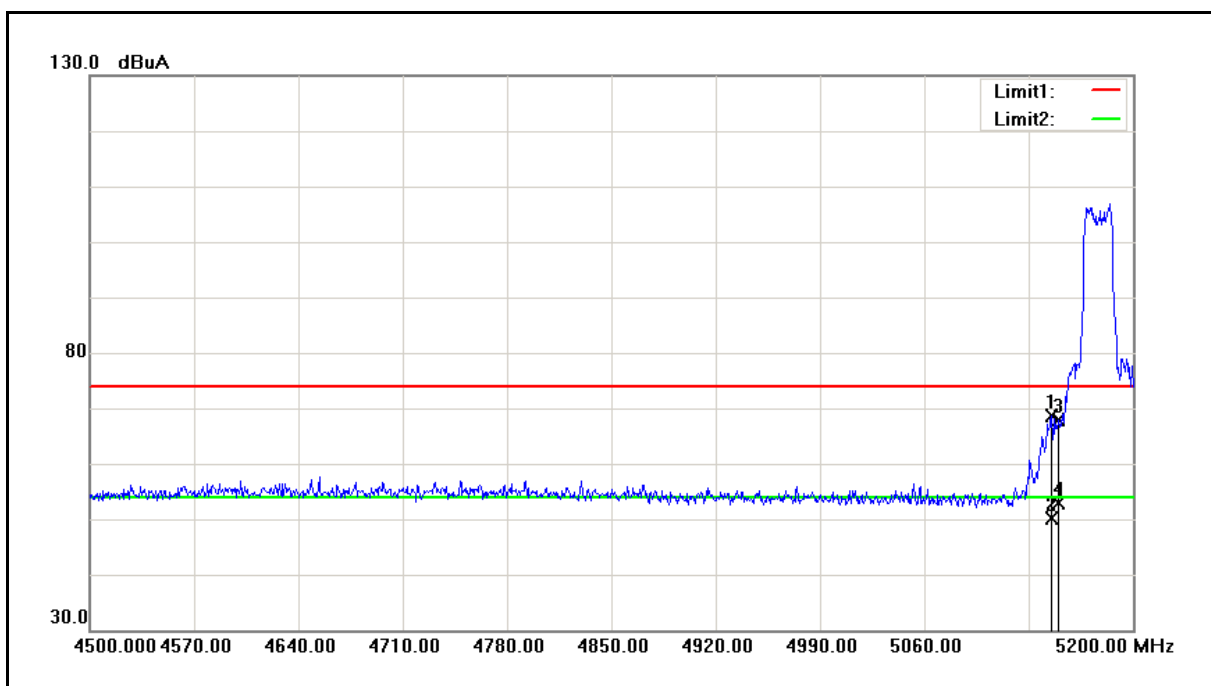
Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 5	Date:	10/09/2016				
Frequency:	5210MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
10420.000	47.44	5.11	52.55	68.20	-15.65	peak	H
10420.000	47.27	5.11	52.38	68.20	-15.82	peak	V

Standard:	FCC Part 15E	Test Distance:	3m				
Test item:	Radiated Emission	Power:	AC 120V/60Hz				
Model Number:	EW-7822UNC	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH				
Test Mode:	Mode 5	Date:	10/09/2016				
Frequency:	5775MHz	Test By:	Eric Ou Yang				
Description:							
Beamforming on							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
11550.000	60.73	6.29	67.02	74.00	-6.98	peak	H
11550.000	46.63	6.29	52.92	54.00	-1.08	AVG	H
11550.000	57.30	6.29	63.59	74.00	-10.41	peak	V
11550.000	43.01	6.29	49.30	54.00	-4.70	AVG	V

- Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Band Edge

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			

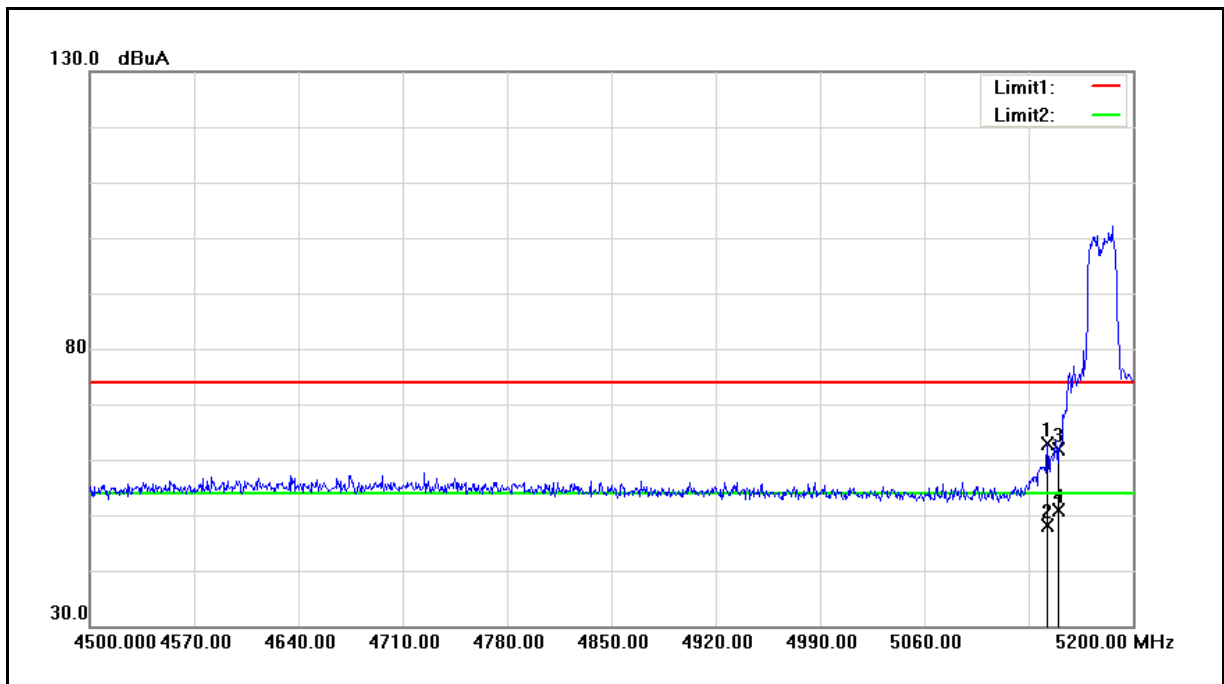


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5145.400	60.47	8.15	68.62	74.00	-5.38	peak
2	5145.400	41.96	8.15	50.11	54.00	-3.89	AVG
3	5150.000	59.65	8.16	67.81	74.00	-6.19	peak
4	5150.000	44.65	8.16	52.81	54.00	-1.19	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.



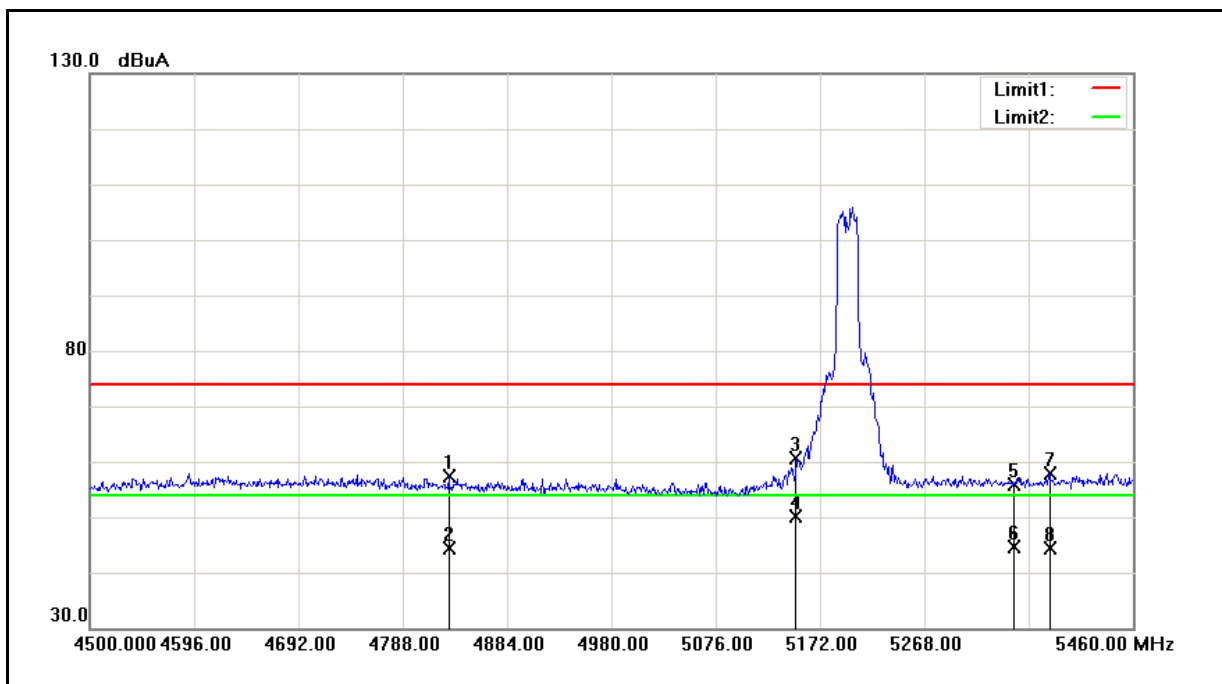
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5180 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5142.600	54.66	8.15	62.81	74.00	-11.19	peak
2	5142.600	39.91	8.15	48.06	54.00	-5.94	AVG
3	5150.000	53.76	8.16	61.92	74.00	-12.08	peak
4	5150.000	42.71	8.16	50.87	54.00	-3.13	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

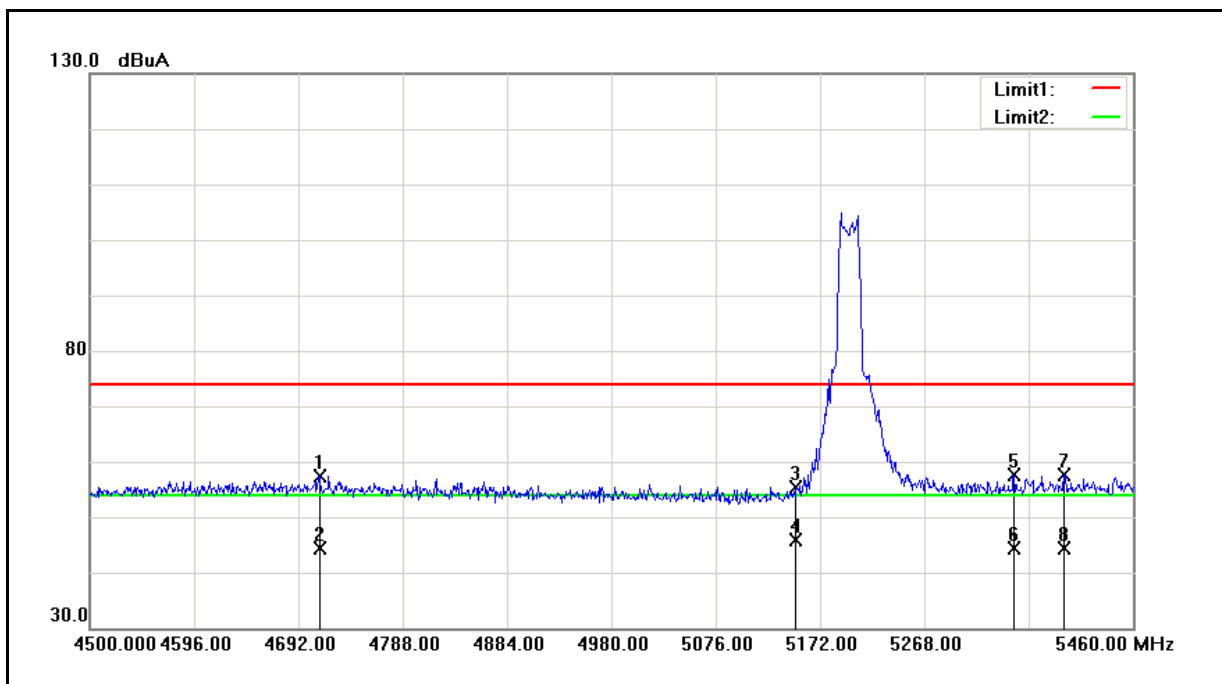
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4830.240	49.98	7.43	57.41	74.00	-16.59	peak
2	4830.240	36.88	7.43	44.31	54.00	-9.69	AVG
3	5150.000	52.50	8.16	60.66	74.00	-13.34	peak
4	5150.000	42.06	8.16	50.22	54.00	-3.78	AVG
5	5350.000	47.65	8.33	55.98	74.00	-18.02	peak
6	5350.000	36.21	8.33	44.54	54.00	-9.46	AVG
7	5383.200	49.51	8.36	57.87	74.00	-16.13	peak
8	5383.200	36.06	8.36	44.42	54.00	-9.58	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

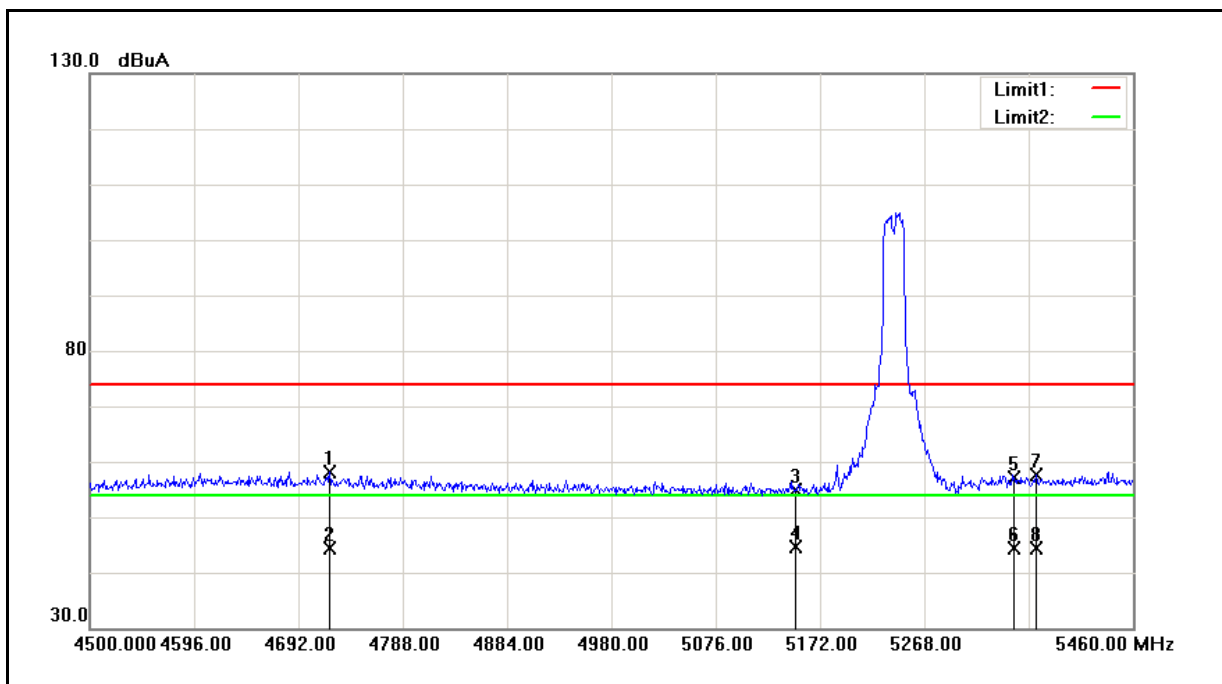
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5200 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4711.200	50.40	7.01	57.41	74.00	-16.59	peak
2	4711.200	37.41	7.01	44.42	54.00	-9.58	AVG
3	5150.000	47.17	8.16	55.33	74.00	-18.67	peak
4	5150.000	37.60	8.16	45.76	54.00	-8.24	AVG
5	5350.000	49.19	8.33	57.52	74.00	-16.48	peak
6	5350.000	36.04	8.33	44.37	54.00	-9.63	AVG
7	5396.640	49.26	8.37	57.63	74.00	-16.37	peak
8	5396.640	35.95	8.37	44.32	54.00	-9.68	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

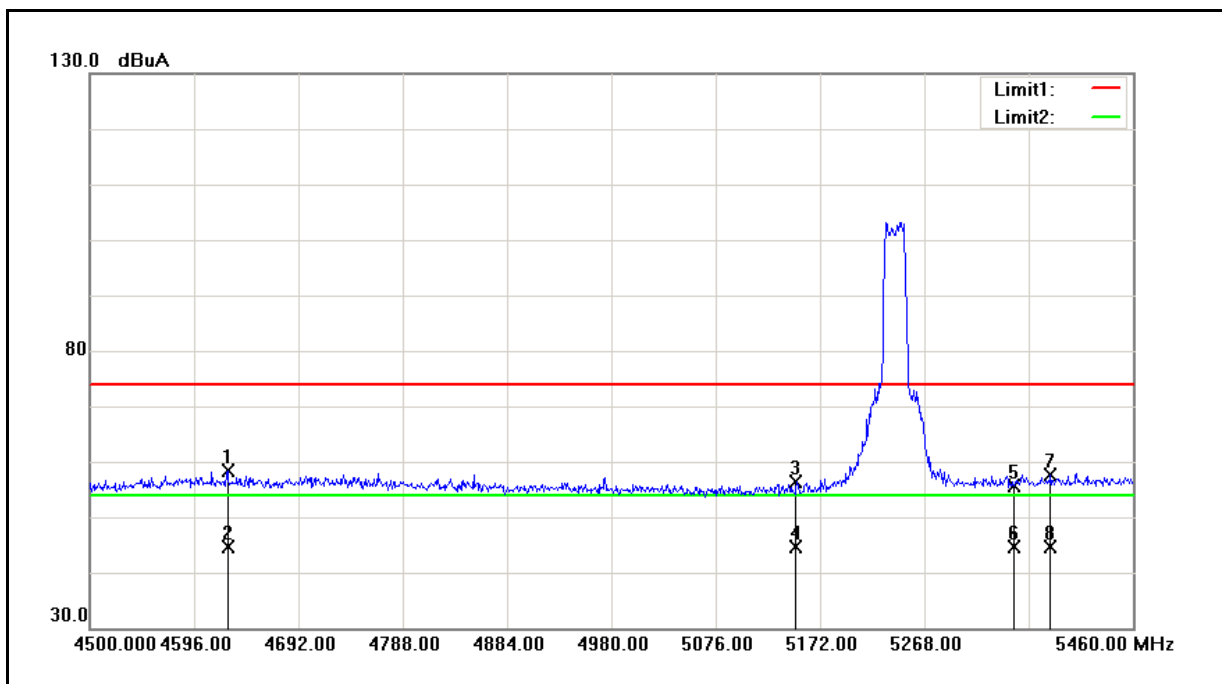
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4720.800	51.07	7.05	58.12	74.00	-15.88	peak
2	4720.800	37.42	7.05	44.47	54.00	-9.53	AVG
3	5150.000	46.72	8.16	54.88	74.00	-19.12	peak
4	5150.000	36.40	8.16	44.56	54.00	-9.44	AVG
5	5350.000	48.89	8.33	57.22	74.00	-16.78	peak
6	5350.000	35.99	8.33	44.32	54.00	-9.68	AVG
7	5370.720	49.20	8.35	57.55	74.00	-16.45	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

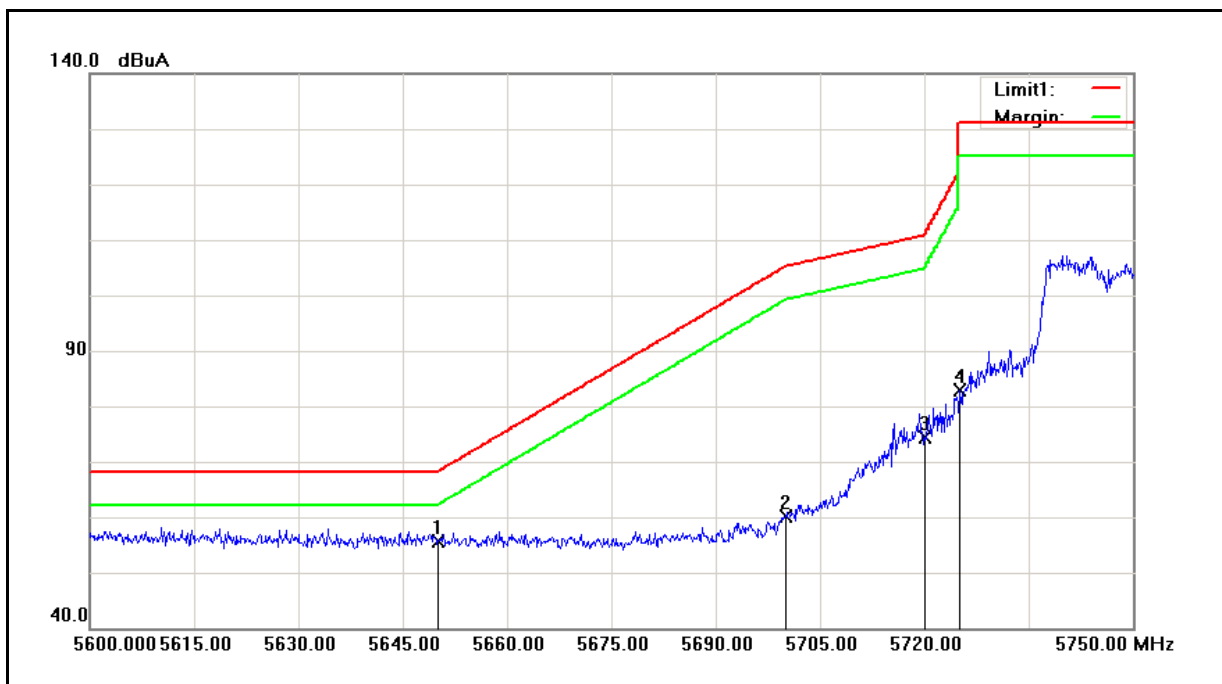
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5240 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4626.720	51.56	6.71	58.27	74.00	-15.73	peak
2	4626.720	37.91	6.71	44.62	54.00	-9.38	AVG
3	5150.000	48.21	8.16	56.37	74.00	-17.63	peak
4	5150.000	36.53	8.16	44.69	54.00	-9.31	AVG
5	5350.000	47.25	8.33	55.58	74.00	-18.42	peak
6	5350.000	36.38	8.33	44.71	54.00	-9.29	AVG
7	5384.160	49.20	8.36	57.56	74.00	-16.44	peak
8	5384.160	36.23	8.36	44.59	54.00	-9.41	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

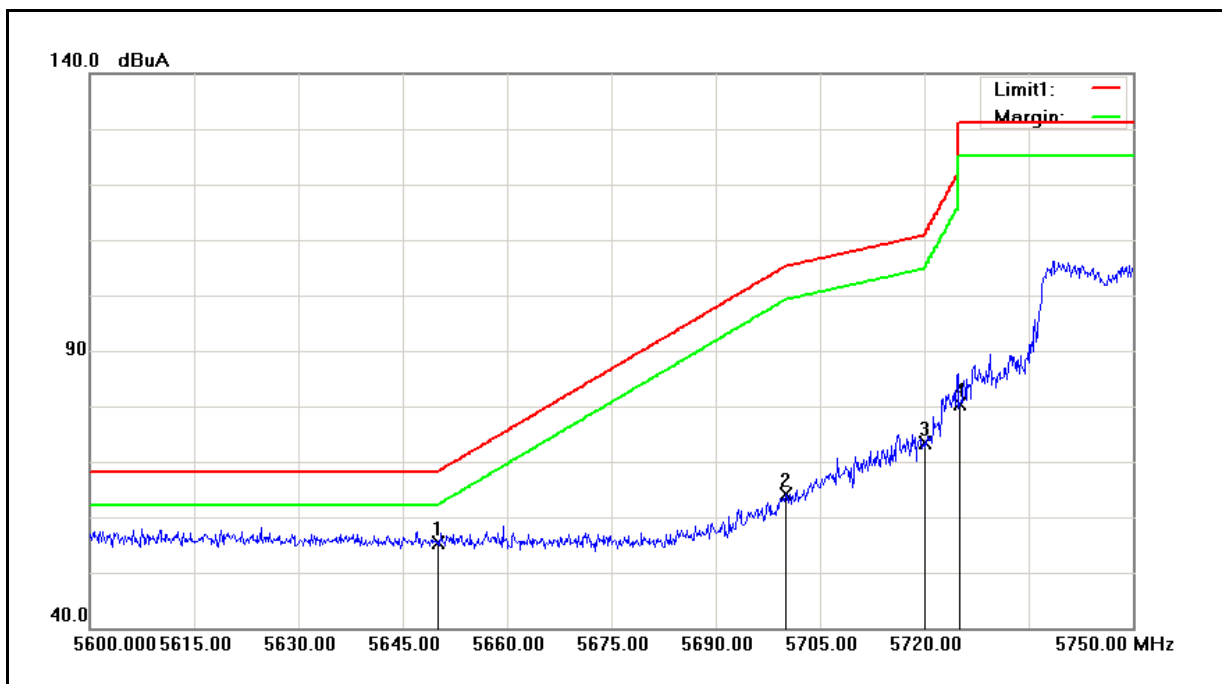
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.73	8.84	55.57	68.20	-12.63	peak
2	5700.000	51.22	8.97	60.19	105.20	-45.01	peak
3	5720.000	65.34	9.01	74.35	110.80	-36.45	peak
4	5725.000	73.84	9.03	82.87	122.20	-39.33	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

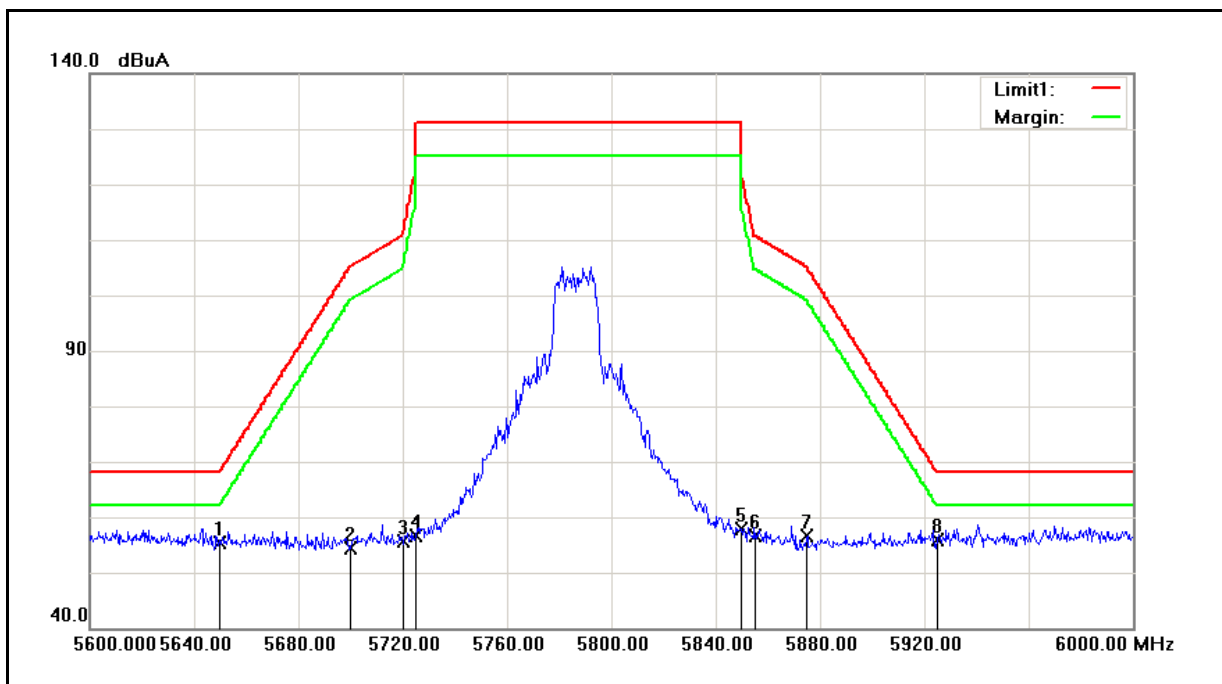
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5745 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.50	8.84	55.34	68.20	-12.86	peak
2	5700.000	55.15	8.97	64.12	105.20	-41.08	peak
3	5720.000	64.43	9.01	73.44	110.80	-37.36	peak
4	5725.000	71.44	9.03	80.47	122.20	-41.73	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



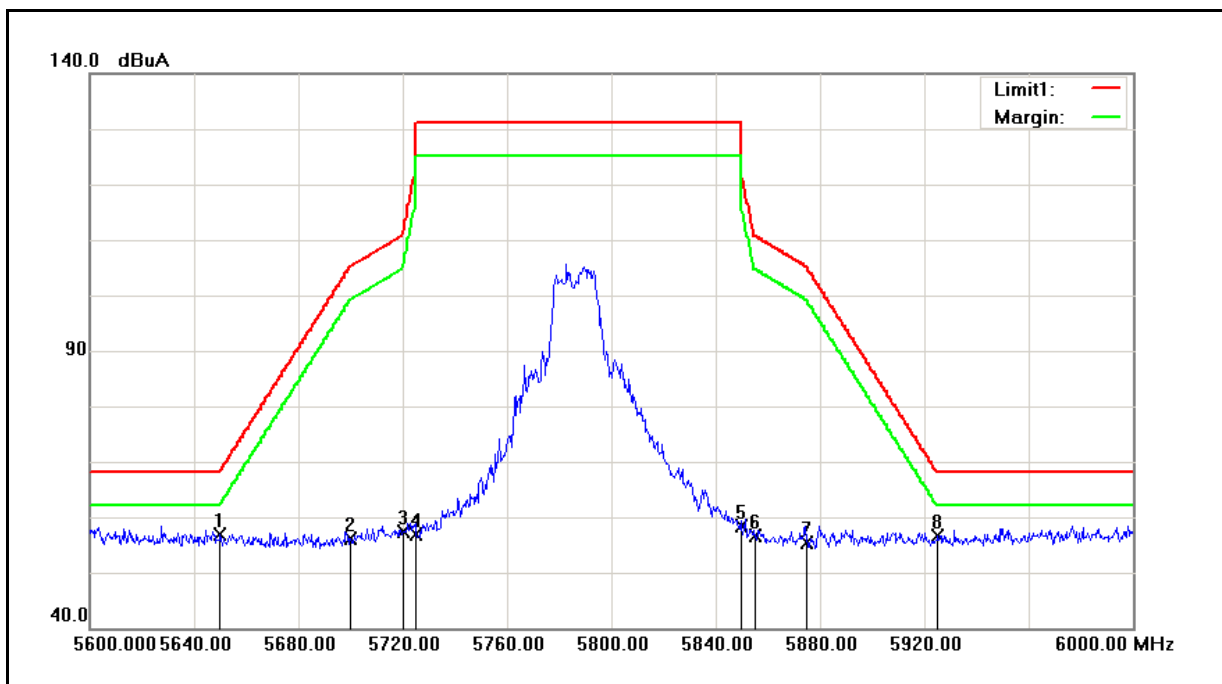
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.58	8.84	55.42	68.20	-12.78	peak
2	5700.000	45.38	8.97	54.35	105.20	-50.85	peak
3	5720.000	46.52	9.01	55.53	110.80	-55.27	peak
4	5725.000	47.61	9.03	56.64	122.20	-65.56	peak
5	5850.000	48.50	9.33	57.83	122.20	-64.37	peak
6	5855.000	47.16	9.35	56.51	110.80	-54.29	peak
7	5875.000	47.32	9.40	56.72	105.20	-48.48	peak
8	5925.000	46.23	9.53	55.76	68.20	-12.44	peak

Note: 1. Result = Correction factor + Reading

2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3. When the peak results are less than average limit, so not need to evaluate the average.

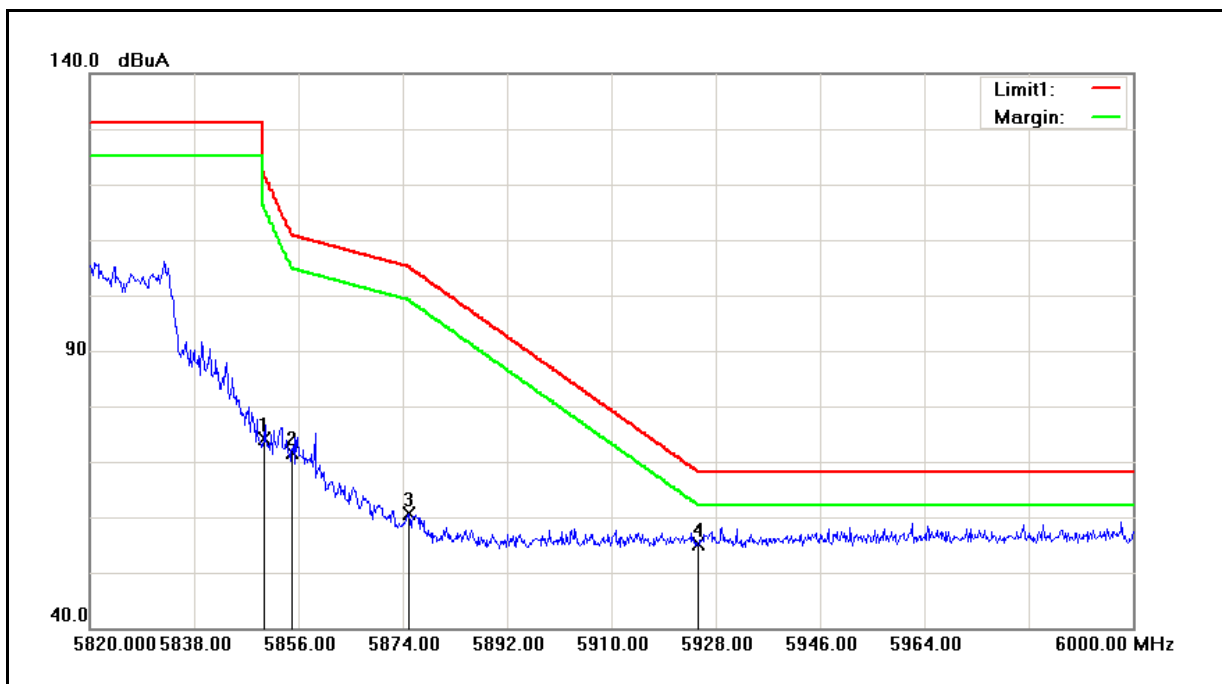
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5785 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	48.04	8.84	56.88	68.20	-11.32	peak
2	5700.000	47.10	8.97	56.07	105.20	-49.13	peak
3	5720.000	48.40	9.01	57.41	110.80	-53.39	peak
4	5725.000	47.86	9.03	56.89	122.20	-65.31	peak
5	5850.000	49.03	9.33	58.36	122.20	-63.84	peak
6	5855.000	47.29	9.35	56.64	110.80	-54.16	peak
7	5875.000	45.90	9.40	55.30	105.20	-49.90	peak
8	5925.000	47.04	9.53	56.57	68.20	-11.63	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

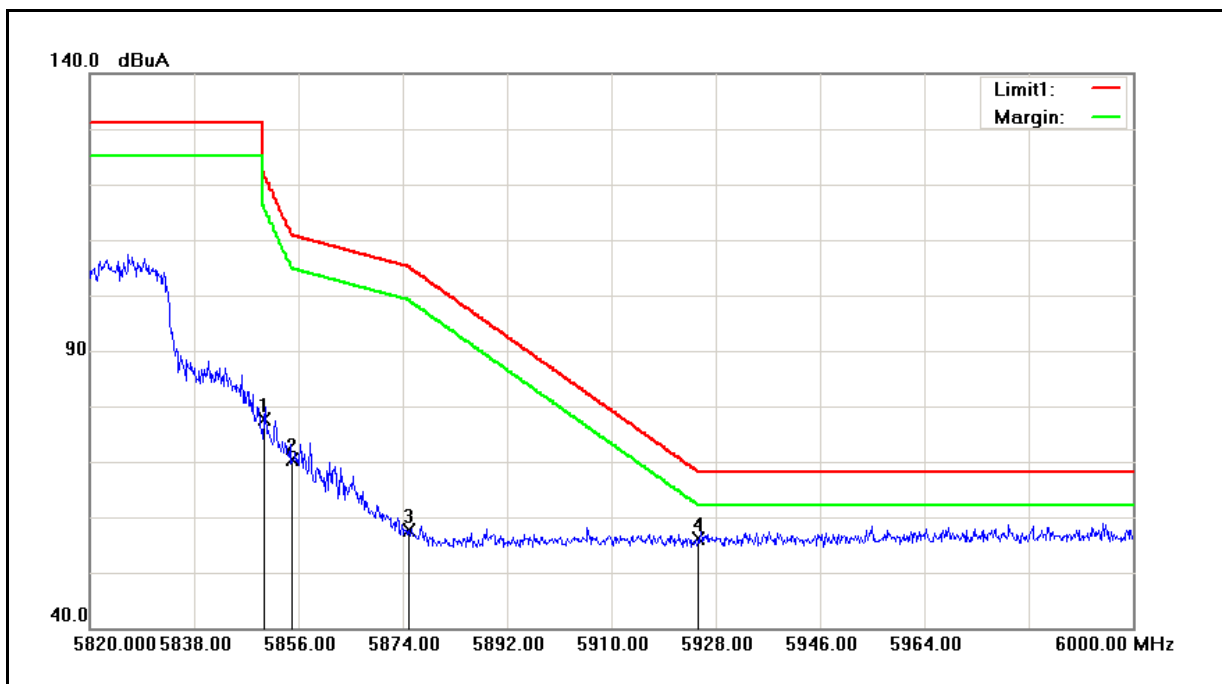
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	64.83	9.33	74.16	122.20	-48.04	peak
2	5855.000	62.40	9.35	71.75	110.80	-39.05	peak
3	5875.000	51.13	9.40	60.53	105.20	-44.67	peak
4	5925.000	45.48	9.53	55.01	68.20	-13.19	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

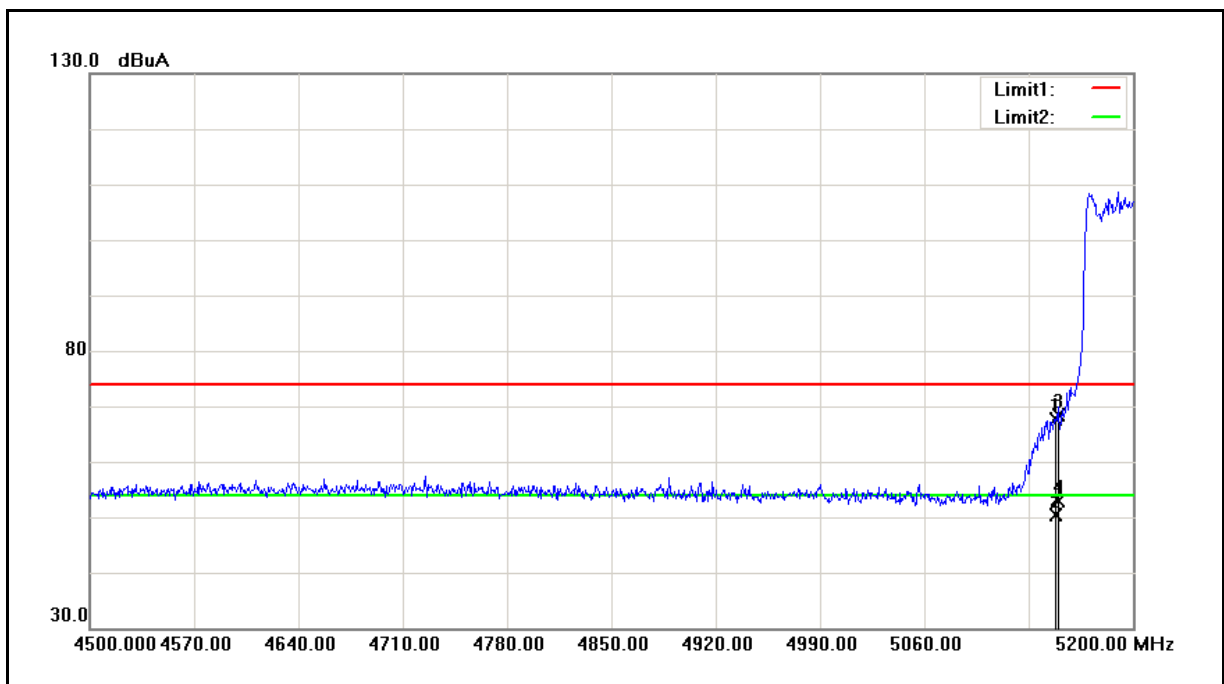
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 3	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5825 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	68.28	9.33	77.61	122.20	-44.59	peak
2	5855.000	60.98	9.35	70.33	110.80	-40.47	peak
3	5875.000	48.11	9.40	57.51	105.20	-47.69	peak
4	5925.000	46.67	9.53	56.20	68.20	-12.00	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5190 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



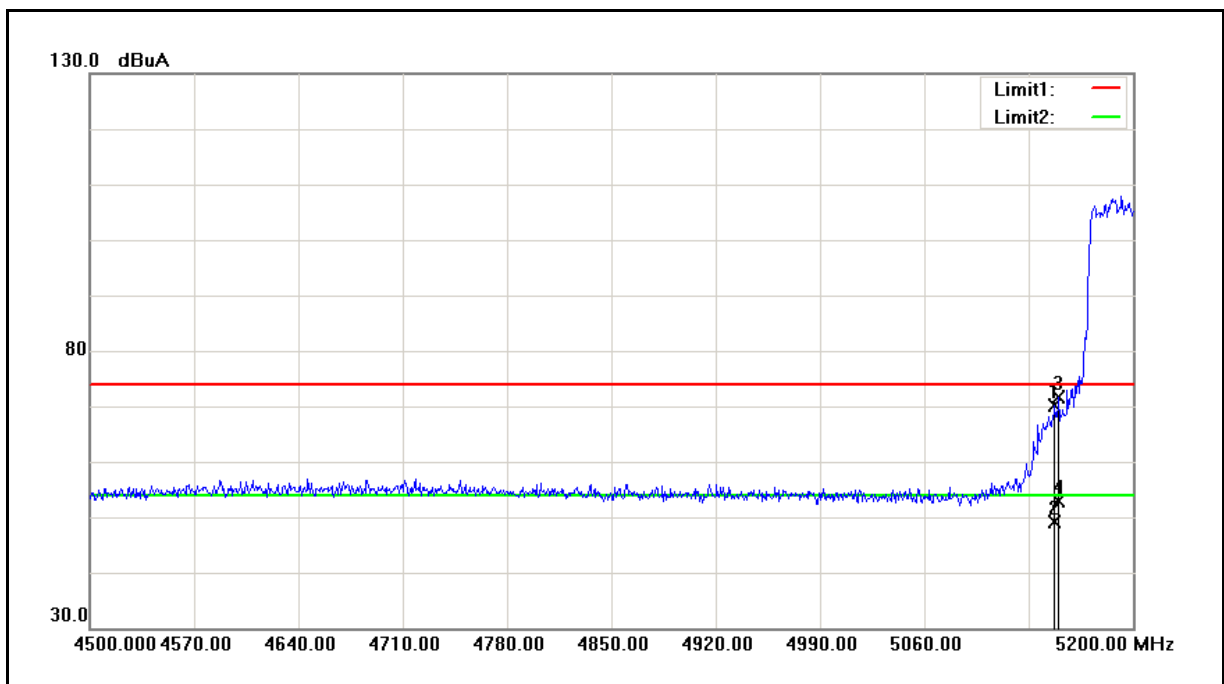
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5148.200	59.47	8.16	67.63	74.00	-6.37	peak
2	5148.200	42.15	8.16	50.31	54.00	-3.69	AVG
3	5150.000	60.13	8.16	68.29	74.00	-5.71	peak
4	5150.000	44.81	8.16	52.97	54.00	-1.03	AVG

Note:

1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.



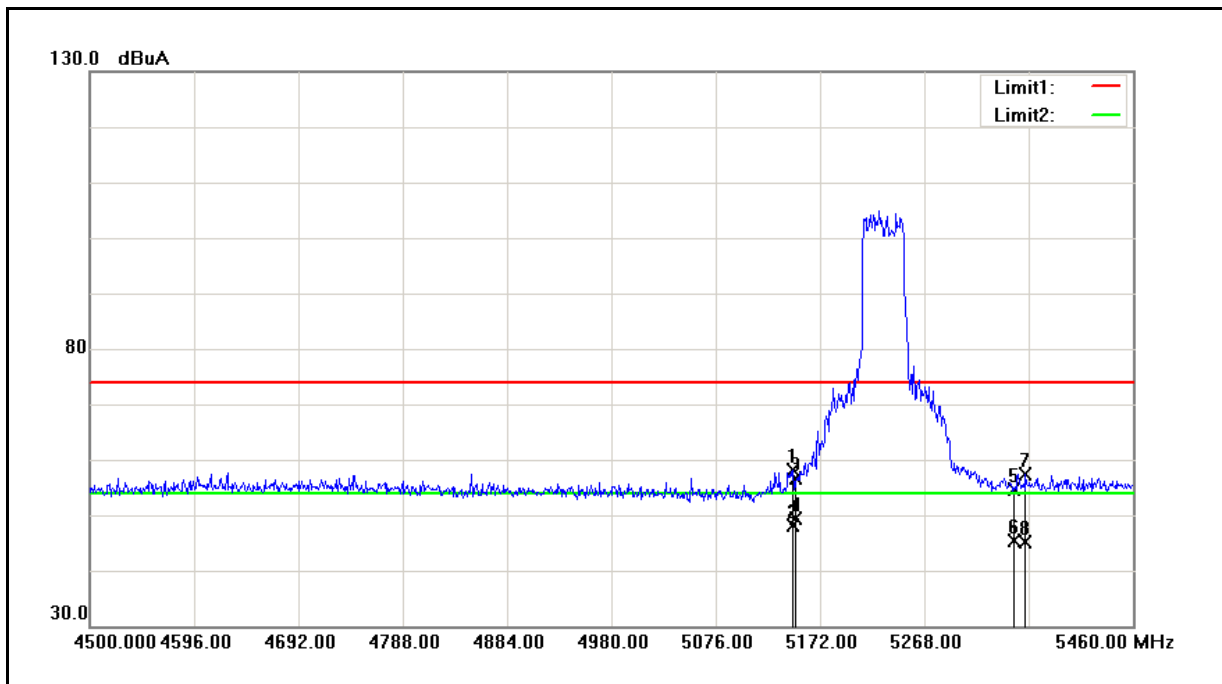
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5190 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5147.500	61.87	8.15	70.02	74.00	-3.98	peak
2	5147.500	41.09	8.15	49.24	54.00	-4.76	AVG
3	5150.000	63.37	8.16	71.53	74.00	-2.47	peak
4	5150.000	44.73	8.16	52.89	54.00	-1.11	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

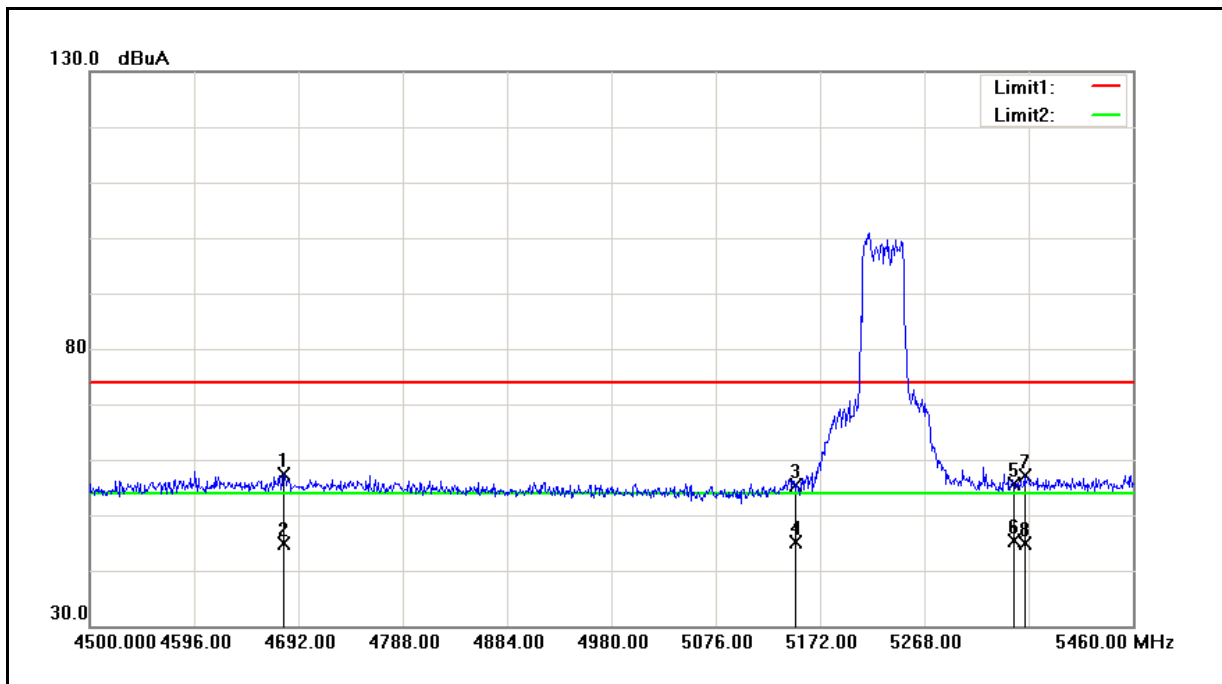
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5230 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5147.040	49.97	8.15	58.12	74.00	-15.88	peak
2	5147.040	40.02	8.15	48.17	54.00	-5.83	AVG
3	5150.000	48.55	8.16	56.71	74.00	-17.29	peak
4	5150.000	41.23	8.16	49.39	54.00	-4.61	AVG
5	5350.000	46.29	8.33	54.62	74.00	-19.38	peak
6	5350.000	36.93	8.33	45.26	54.00	-8.74	AVG
7	5361.120	48.93	8.34	57.27	74.00	-16.73	peak
8	5361.120	36.87	8.34	45.21	54.00	-8.79	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

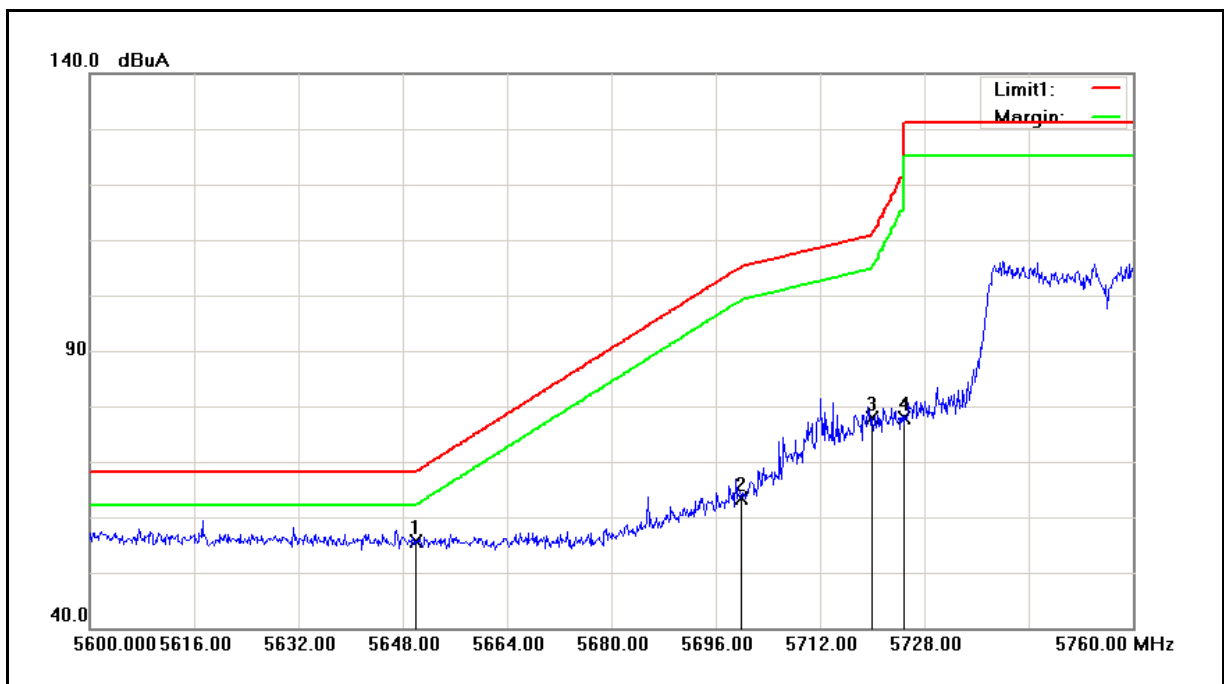
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5230 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4678.560	50.51	6.89	57.40	74.00	-16.60	peak
2	4678.560	38.04	6.89	44.93	54.00	-9.07	AVG
3	5150.000	47.17	8.16	55.33	74.00	-18.67	peak
4	5150.000	37.01	8.16	45.17	54.00	-8.83	AVG
5	5350.000	47.22	8.33	55.55	74.00	-18.45	peak
6	5350.000	37.05	8.33	45.38	54.00	-8.62	AVG
7	5360.160	48.84	8.34	57.18	74.00	-16.82	peak
8	5360.160	36.52	8.34	44.86	54.00	-9.14	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

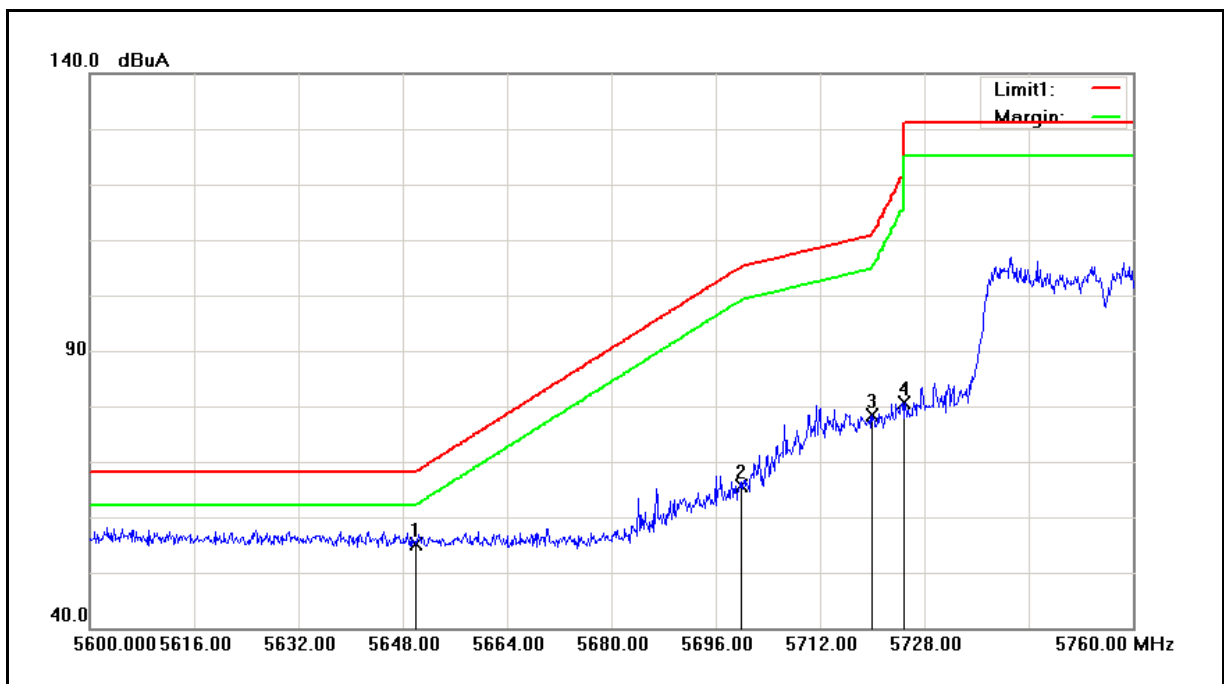
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5755 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.76	8.84	55.60	68.20	-12.60	peak
2	5700.000	54.49	8.97	63.46	105.20	-41.74	peak
3	5720.000	68.90	9.01	77.91	110.80	-32.89	peak
4	5725.000	68.79	9.03	77.82	122.20	-44.38	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

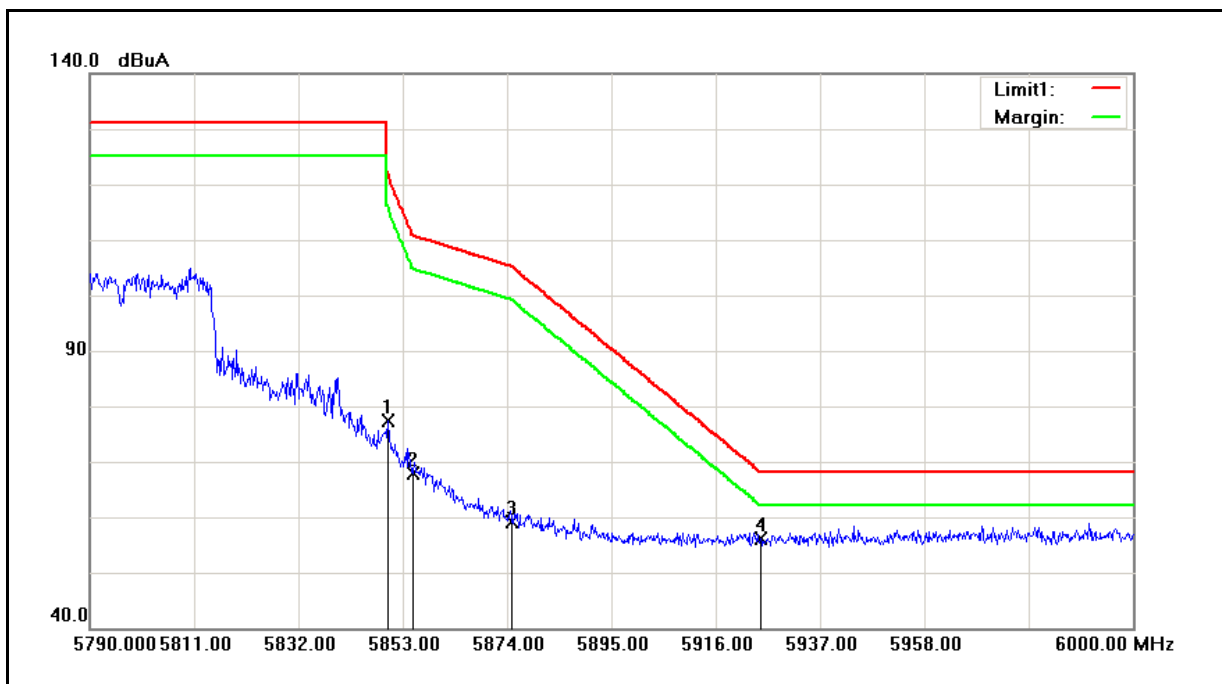
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5755 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.38	8.84	55.22	68.20	-12.98	peak
2	5700.000	56.62	8.97	65.59	105.20	-39.61	peak
3	5720.000	69.41	9.01	78.42	110.80	-32.38	peak
4	5725.000	71.48	9.03	80.51	122.20	-41.69	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

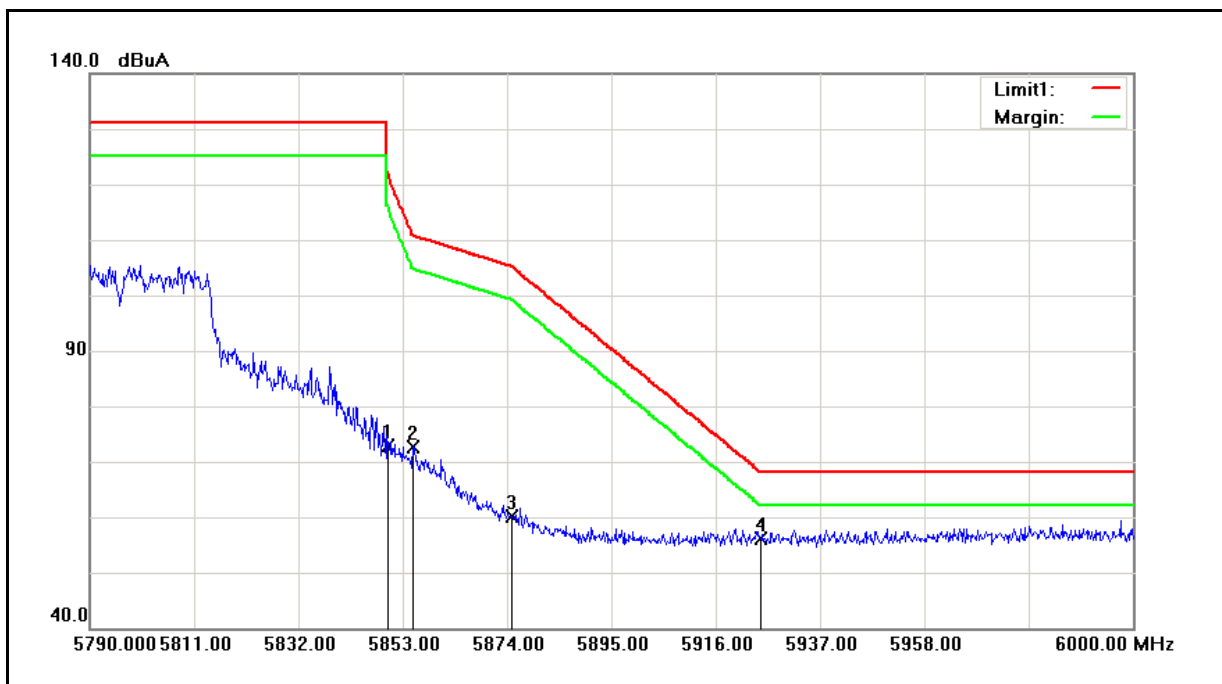
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5795 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	68.11	9.33	77.44	122.20	-44.76	peak
2	5855.000	58.64	9.35	67.99	110.80	-42.81	peak
3	5875.000	49.71	9.40	59.11	105.20	-46.09	peak
4	5925.000	46.48	9.53	56.01	68.20	-12.19	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

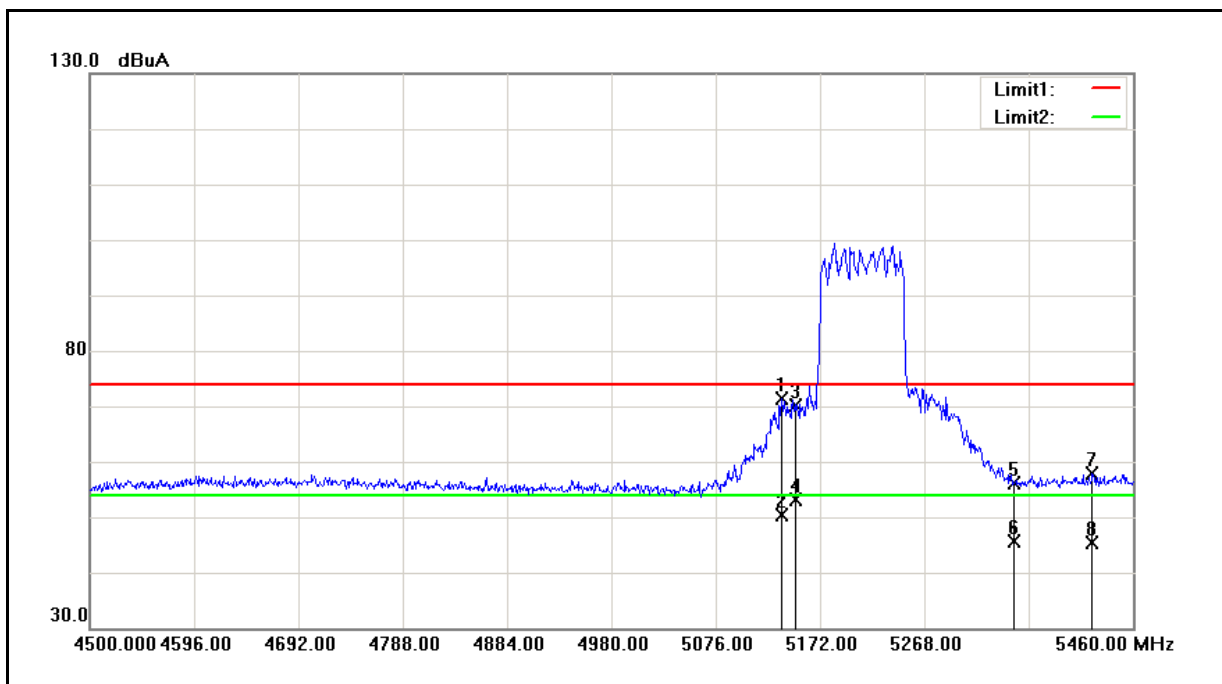
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 4	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5795 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	63.55	9.33	72.88	122.20	-49.32	peak
2	5855.000	63.23	9.35	72.58	110.80	-38.22	peak
3	5875.000	50.66	9.40	60.06	105.20	-45.14	peak
4	5925.000	46.69	9.53	56.22	68.20	-11.98	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

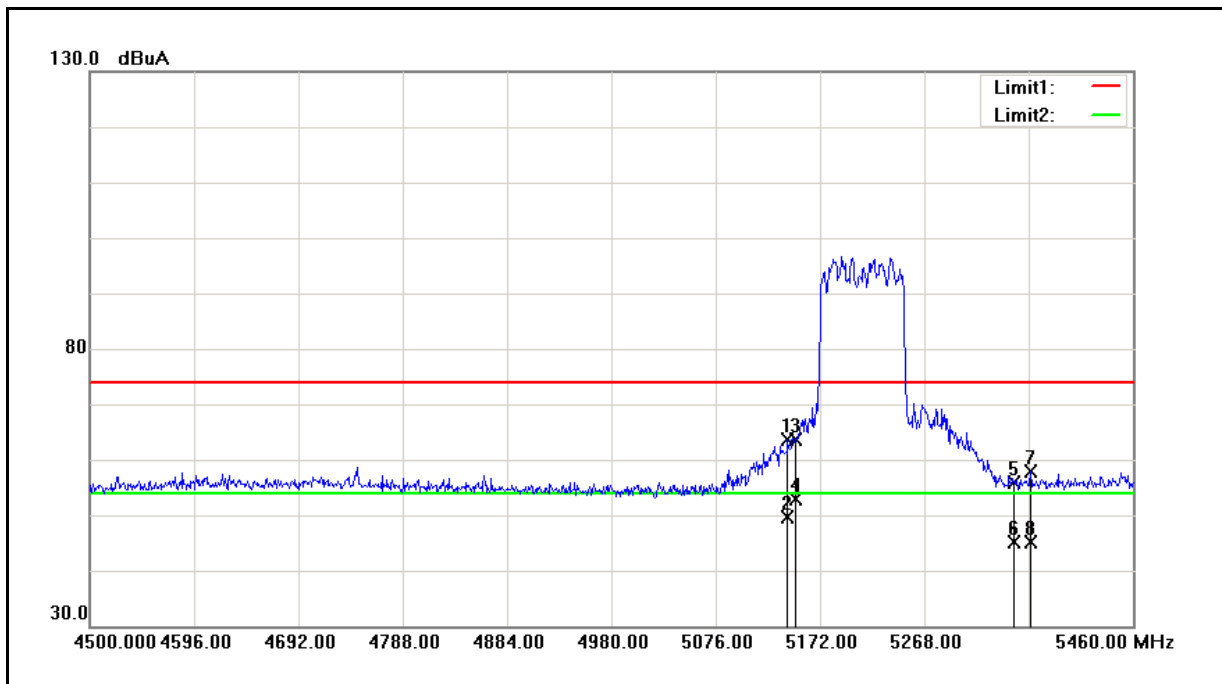
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5210 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5136.480	63.12	8.14	71.26	74.00	-2.74	peak
2	5136.480	42.23	8.14	50.37	54.00	-3.63	AVG
3	5150.000	61.96	8.16	70.12	74.00	-3.88	peak
4	5150.000	44.88	8.16	53.04	54.00	-0.96	AVG
5	5350.000	47.85	8.33	56.18	74.00	-17.82	peak
6	5350.000	37.33	8.33	45.66	54.00	-8.34	AVG
7	5422.560	49.39	8.40	57.79	74.00	-16.21	peak
8	5422.560	37.10	8.40	45.50	54.00	-8.50	AVG

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

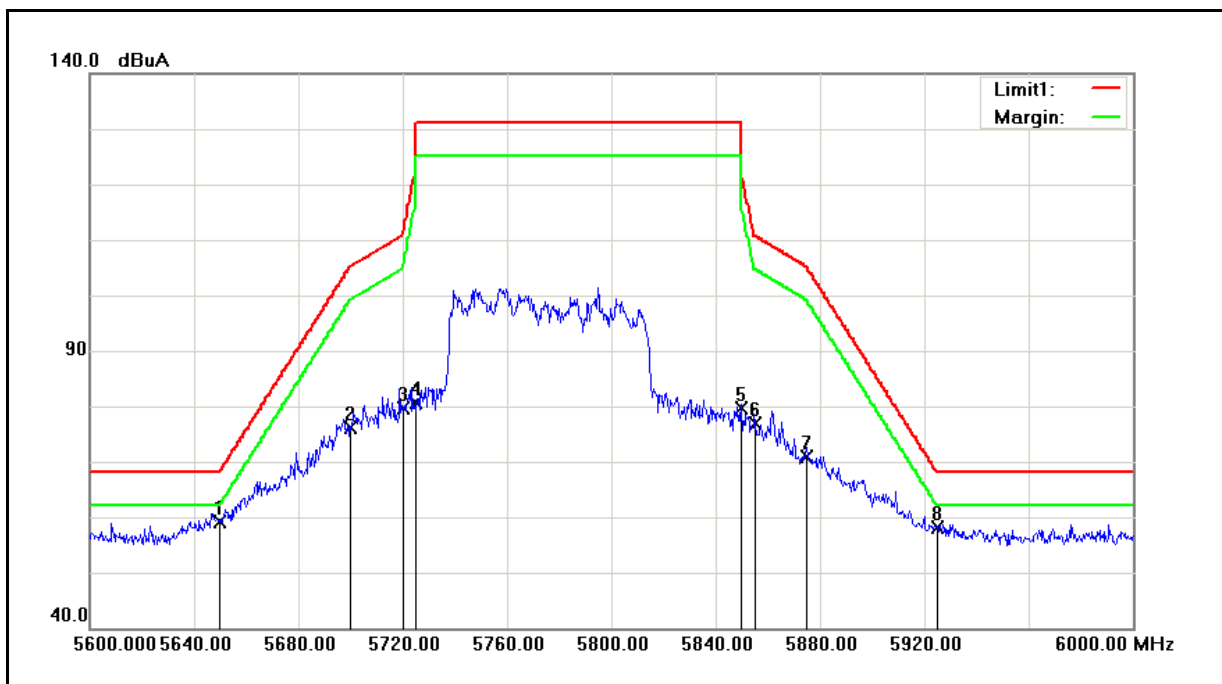
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5210 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5142.240	55.43	8.15	63.58	74.00	-10.42	peak
2	5142.240	41.42	8.15	49.57	54.00	-4.43	AVG
3	5150.000	55.51	8.16	63.67	74.00	-10.33	peak
4	5150.000	44.80	8.16	52.96	54.00	-1.04	AVG
5	5350.000	47.46	8.33	55.79	74.00	-18.21	peak
6	5350.000	36.76	8.33	45.09	54.00	-8.91	AVG
7	5365.920	49.48	8.35	57.83	74.00	-16.17	peak
8	5365.920	36.77	8.35	45.12	54.00	-8.88	AVG

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

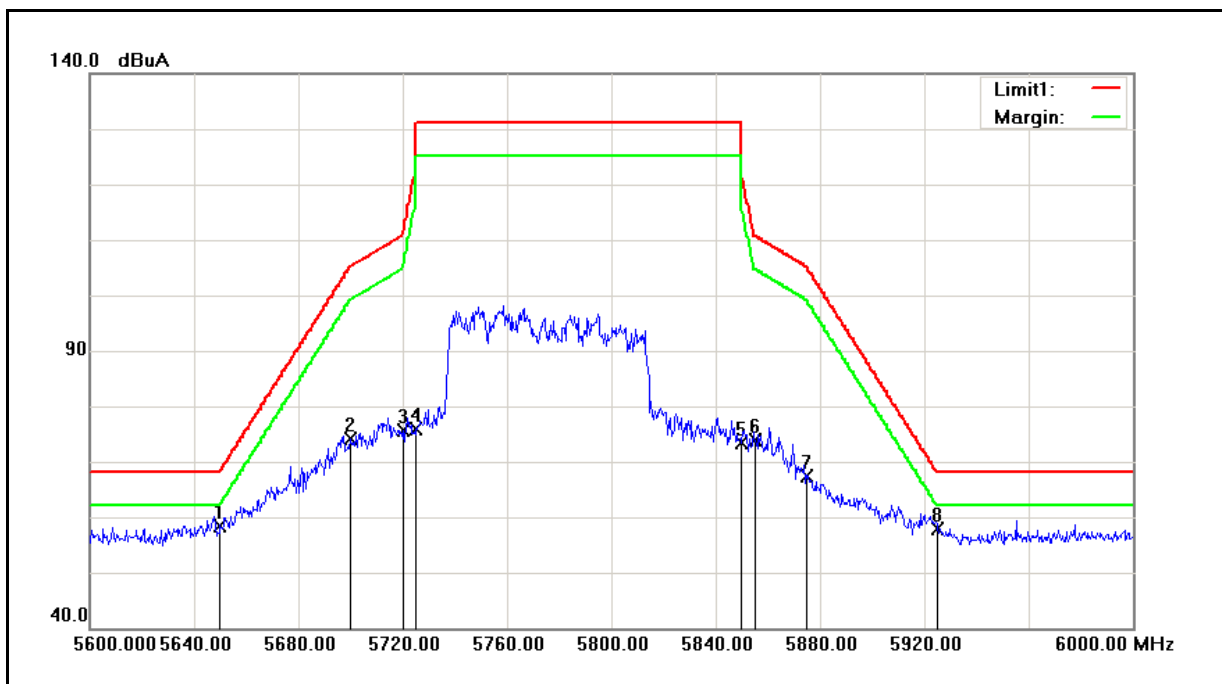
Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5775 MHz	Date:	10/09/2016
Ant.Polar.:	Horizontal		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	50.27	8.84	59.11	68.20	-9.09	peak
2	5700.000	67.09	8.97	76.06	105.20	-29.14	peak
3	5720.000	70.71	9.01	79.72	110.80	-31.08	peak
4	5725.000	71.72	9.03	80.75	122.20	-41.45	peak
5	5850.000	70.23	9.33	79.56	122.20	-42.64	peak
6	5855.000	67.41	9.35	76.76	110.80	-34.04	peak
7	5875.000	61.51	9.40	70.91	105.20	-34.29	peak
8	5925.000	48.63	9.53	58.16	68.20	-10.04	peak

Note: 1. Result = Correction factor + Reading
2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15E	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Test Mode:	Mode 5	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Frequency:	5775 MHz	Date:	10/09/2016
Ant.Polar.:	Vertical		
Beamforming on			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	49.66	8.84	58.50	68.20	-9.70	peak
2	5700.000	65.27	8.97	74.24	105.20	-30.96	peak
3	5720.000	66.52	9.01	75.53	110.80	-35.27	peak
4	5725.000	66.81	9.03	75.84	122.20	-46.36	peak
5	5850.000	64.16	9.33	73.49	122.20	-48.71	peak
6	5855.000	64.63	9.35	73.98	110.80	-36.82	peak
7	5875.000	57.91	9.40	67.31	105.20	-37.89	peak
8	5925.000	48.39	9.53	57.92	68.20	-10.28	peak

- Note:
1. Result = Correction factor + Reading
 2. Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.
 3. When the peak results are less than average limit, so not need to evaluate the average.

4.4. Maximum Conducted Output Power and Transmit power control Measurement

■ Limit

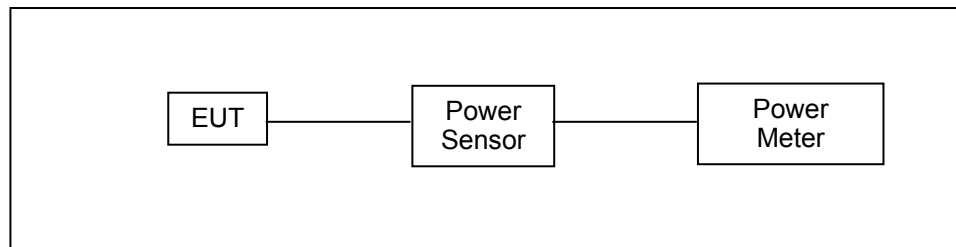
Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Client
5.150 ~ 5.250 GHz	The lesser of 250mW (24dBm)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

* SISO mode for ANT-0 : Max. Gain = 1.71 dBi < 6dBi

* MIMO/BF mode : Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / N_{ANT}\} = 3.8 \text{ dBi} < 6\text{dBi}$

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/29/2016	1 year
Power Meter	Anritsu	ML2495A	1135009	08/29/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1500	140303	02/23/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices

Section (E) Maximum Conducted Output Power

3. Measurement using a Power Meter (PM)

b) Method PM-G (Measurement using a gated RF average power meter)



Test Result

Model Number		EW-7822UNC		
Test Item		Maximum Conducted Output Power		
Test Mode		Mode 2: IEEE 802.11a Link Mode		
Date of Test		07/29/2016		
Frequency (MHz)	Data Rate	ANT-0		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6M	14.70	0.030	≤ 24
5200		15.08	0.032	
5220		14.96	0.031	
5240		14.66	0.029	
5745		13.67	0.023	≤ 30
5765		14.32	0.027	
5785		14.21	0.026	
5805		13.99	0.025	
5825		14.27	0.027	
5180	54M	14.65	0.029	≤ 24
5200		15.04	0.032	
5220		14.91	0.031	
5240		14.63	0.029	
5745		13.63	0.023	≤ 30
5765		14.28	0.027	
5785		14.17	0.026	
5805		13.95	0.025	
5825		14.23	0.026	

Note: The relevant measured result has the offset with cable loss already.



Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode						
Date of Test		07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13M	13.58	0.023	13.77	0.024	16.69	0.047	≤ 24
5200		13.53	0.023	15.43	0.035	17.59	0.057	
5220		13.75	0.024	15.27	0.034	17.59	0.057	
5240		13.65	0.023	15.20	0.033	17.50	0.056	
5745		14.24	0.027	13.55	0.023	16.92	0.049	≤ 30
5765		14.19	0.026	13.94	0.025	17.08	0.051	
5785		14.12	0.026	13.87	0.024	17.01	0.050	
5805		14.30	0.027	13.79	0.024	17.06	0.051	
5825		14.03	0.025	13.74	0.024	16.90	0.049	
5180	156M	13.56	0.023	13.72	0.024	16.65	0.046	≤ 24
5200		13.50	0.022	15.38	0.035	17.55	0.057	
5220		13.71	0.023	15.23	0.033	17.55	0.057	
5240		13.63	0.023	15.18	0.033	17.48	0.056	
5745		14.21	0.026	13.52	0.022	16.89	0.049	≤ 30
5765		14.16	0.026	13.92	0.025	17.05	0.051	
5785		14.10	0.026	13.82	0.024	16.97	0.050	
5805		14.26	0.027	13.77	0.024	17.03	0.051	
5825		13.98	0.025	13.69	0.023	16.85	0.048	

Note: The relevant measured result has the offset with cable loss already.



Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11ac 40MHz Link Mode						
Date of Test		07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27M	13.39	0.022	13.48	0.022	16.45	0.044	≤ 24
5230		14.22	0.026	14.11	0.026	17.18	0.052	
5755		14.23	0.026	14.33	0.027	17.29	0.054	≤ 30
5795		14.34	0.027	14.22	0.026	17.29	0.054	
5190	360M	13.33	0.022	13.46	0.022	16.41	0.044	≤ 24
5230		14.20	0.026	14.06	0.025	17.14	0.052	
5755		14.20	0.026	14.28	0.027	17.25	0.053	≤ 30
5755		14.30	0.027	14.19	0.026	17.26	0.053	

Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test		07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6M	13.06	0.020	13.15	0.021	16.12	0.041	≤ 24
5775		12.68	0.019	13.33	0.022	16.03	0.040	≤ 30
5210	780M	13.04	0.020	13.10	0.020	16.08	0.041	≤ 24
5775		12.67	0.018	13.30	0.021	16.01	0.040	≤ 30

Note: The relevant measured result has the offset with cable loss already.



Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode						
Date of Test		07/29/2016						
Beamforming on								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13M	13.22	0.021	13.17	0.021	16.21	0.042	≤ 24
5200		14.65	0.029	14.21	0.026	17.45	0.056	
5220		14.14	0.026	14.13	0.026	17.15	0.052	
5240		14.15	0.026	14.12	0.026	17.15	0.052	
5745		14.20	0.026	13.96	0.025	17.09	0.051	≤ 30
5765		14.36	0.027	14.22	0.026	17.30	0.054	
5785		14.39	0.027	14.26	0.027	17.34	0.054	
5805		14.43	0.028	13.57	0.023	17.03	0.050	
5825	14.01	0.025	12.62	0.018	16.38	0.043		
5180	156M	13.20	0.021	13.13	0.021	16.18	0.041	≤ 24
5200		14.60	0.029	14.14	0.026	17.39	0.055	
5220		14.10	0.026	14.08	0.026	17.10	0.051	
5240		14.09	0.026	14.07	0.026	17.09	0.051	
5745		14.17	0.026	13.94	0.025	17.07	0.051	≤ 30
5765		14.33	0.027	14.13	0.026	17.24	0.053	
5785		14.34	0.027	14.21	0.026	17.29	0.054	
5805		14.38	0.027	13.51	0.022	16.98	0.050	
5825	13.99	0.025	12.60	0.018	16.36	0.043		

Note: The relevant measured result has the offset with cable loss already.



Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11ac 40MHz Link Mode						
Date of Test		07/29/2016						
Beamforming on								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27M	11.82	0.015	11.03	0.013	14.45	0.028	≤ 24
5230		14.24	0.027	13.61	0.023	16.95	0.050	
5755		14.01	0.025	13.91	0.025	16.97	0.050	≤ 30
5795		14.04	0.025	13.60	0.023	16.84	0.048	
5190	360M	11.81	0.015	11.00	0.013	14.43	0.028	≤ 24
5230		14.20	0.026	13.57	0.023	16.91	0.049	
5755		13.99	0.025	13.88	0.024	16.95	0.049	≤ 30
5755		14.00	0.025	13.52	0.022	16.78	0.048	

Model Number		EW-7822UNC						
Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode						
Date of Test		07/29/2016						
Beamforming on								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6M	10.25	0.011	10.18	0.010	13.23	0.021	≤ 24
5775		14.24	0.027	13.53	0.023	16.91	0.049	≤ 30
5210	780M	10.23	0.011	10.10	0.010	13.18	0.021	≤ 24
5775		14.18	0.026	13.50	0.022	16.86	0.049	≤ 30

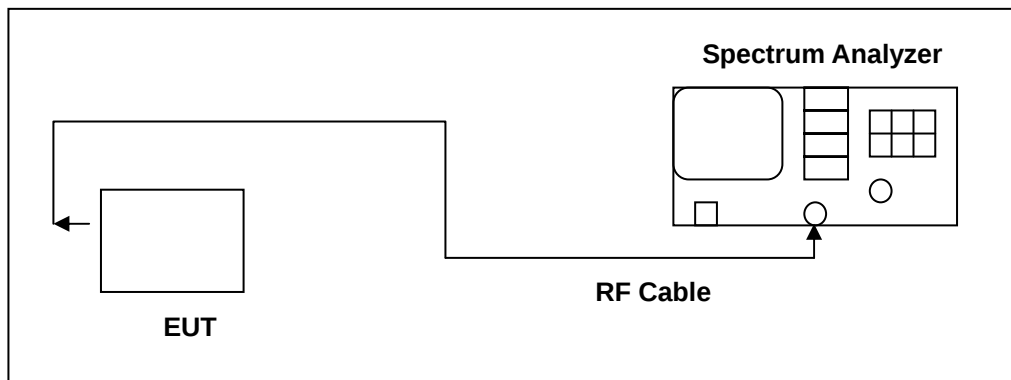
Note: The relevant measured result has the offset with cable loss already.

4.5. 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

■ Limit

N/A

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1 500	140303	02/23/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	>26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto



Test Result

Model Number	EW-7822UNC
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement
Test Mode	Mode 2: IEEE 802.11a Link Mode
Date of Test	09/04/2016
Frequency (MHz)	ANT-0
	26dB Bandwidth (MHz)
5180	24.180
5200	23.300
5240	24.510

Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5180	23.090	22.960
5200	24.860	24.730
5240	24.860	25.000

Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5190	46.340	46.140
5230	49.860	49.870

Note: The 99% occupied bandwidth not crossed 5250MHz.



Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5210	84.850	79.870

Note: The 99% occupied bandwidth not crossed 5250MHz.



Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5180	24.950	24.340
5200	24.220	24.100
5240	25.000	24.670

Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5190	46.720	43.220
5230	49.210	50.000

Model Number	EW-7822UNC	
Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5210	80.660	79.310

Note: The 99% occupied bandwidth not crossed 5250MHz.



■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ ANT-0

5180 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.18000000 GHz Trig: Free Run Ave/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 16.771 MHz Total Power 19.2 dBm Transmit Freq Error 59.217 kHz OBW Power 99.00 % x dB Bandwidth 24.18 MHz x dB -26.00 dB Frequency Center Freq 5.18000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5200 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.20000000 GHz Trig: Free Run Ave/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 16.855 MHz Total Power 19.0 dBm Transmit Freq Error 56.160 kHz OBW Power 99.00 % x dB Bandwidth 23.30 MHz x dB -26.00 dB Frequency Center Freq 5.20000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5240 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.24000000 GHz Trig: Free Run Ave/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 16.771 MHz Total Power 18.7 dBm Transmit Freq Error 52.515 kHz OBW Power 99.00 % x dB Bandwidth 24.51 MHz x dB -26.00 dB Frequency Center Freq 5.24000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz



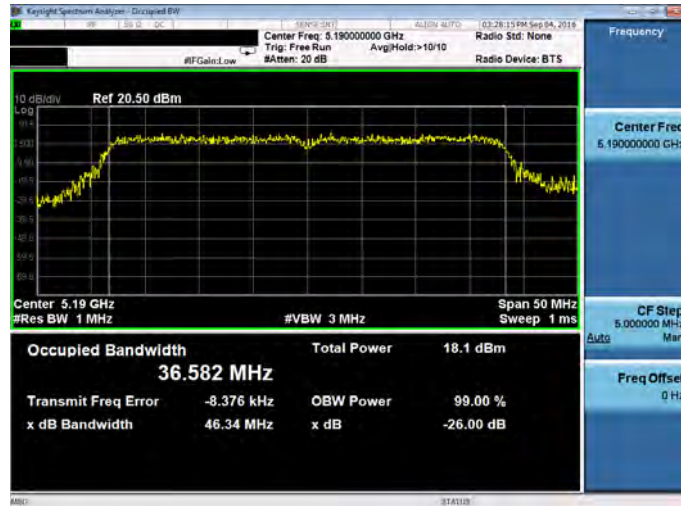
Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-0

5180 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.18000000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.820 MHz Total Power 17.8 dBm Transmit Freq Error 12.209 kHz OBW Power 99.00 % x dB Bandwidth 23.09 MHz x dB -26.00 dB Frequency Center Freq 5.18000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5200 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.20000000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.888 MHz Total Power 15.2 dBm Transmit Freq Error 70.429 kHz OBW Power 99.00 % x dB Bandwidth 24.86 MHz x dB -26.00 dB Frequency Center Freq 5.20000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5240 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.24000000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.890 MHz Total Power 19.6 dBm Transmit Freq Error 70.160 kHz OBW Power 99.00 % x dB Bandwidth 24.86 MHz x dB -26.00 dB Frequency Center Freq 5.24000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0

5190 MHz

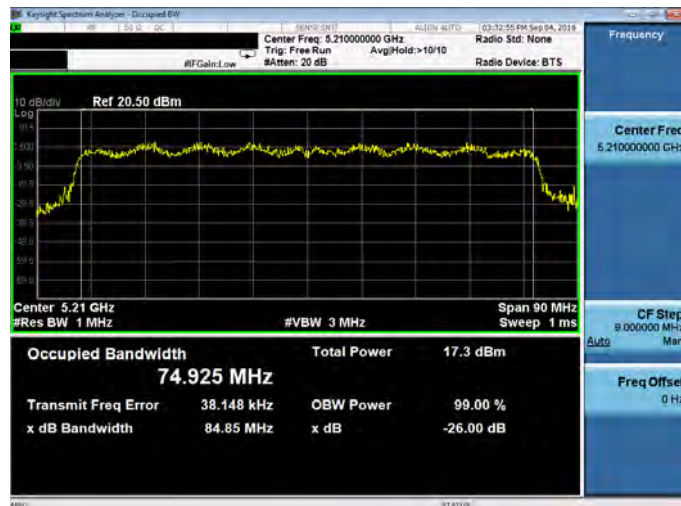


5230 MHz



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-0

5210 MHz



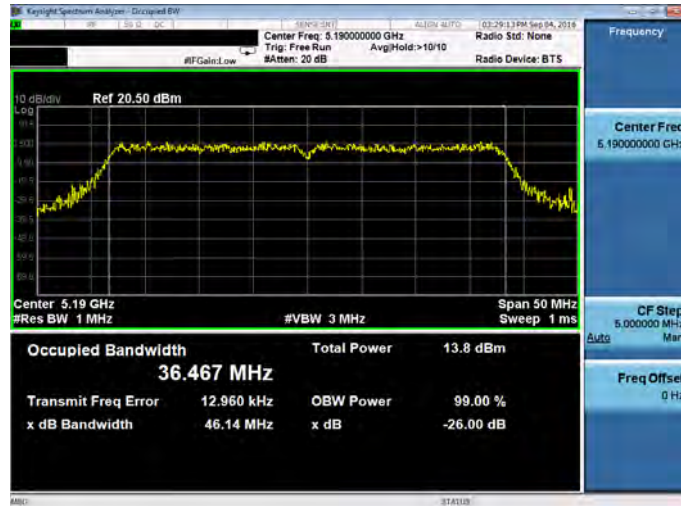


Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1

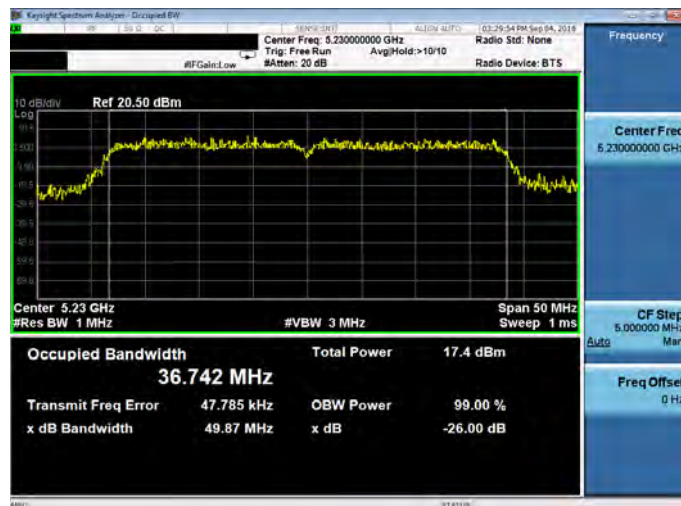
5180 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.18000000 GHz Trig: Free Run #FGain: Low #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.740 MHz Total Power 13.6 dBm Transmit Freq Error 54.668 kHz OBW Power 99.00 % x dB Bandwidth 22.96 MHz x dB -26.00 dB Frequency Center Freq 5.18000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5200 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.20000000 GHz Trig: Free Run #FGain: Low #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.944 MHz Total Power 19.5 dBm Transmit Freq Error 1.168 kHz OBW Power 99.00 % x dB Bandwidth 24.73 MHz x dB -26.00 dB Frequency Center Freq 5.20000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5240 MHz	Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.24000000 GHz Trig: Free Run #FGain: Low #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref 20.50 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.906 MHz Total Power 16.7 dBm Transmit Freq Error 24.299 kHz OBW Power 99.00 % x dB Bandwidth 25.00 MHz x dB -26.00 dB Frequency Center Freq 5.24000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz

Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1

5190 MHz

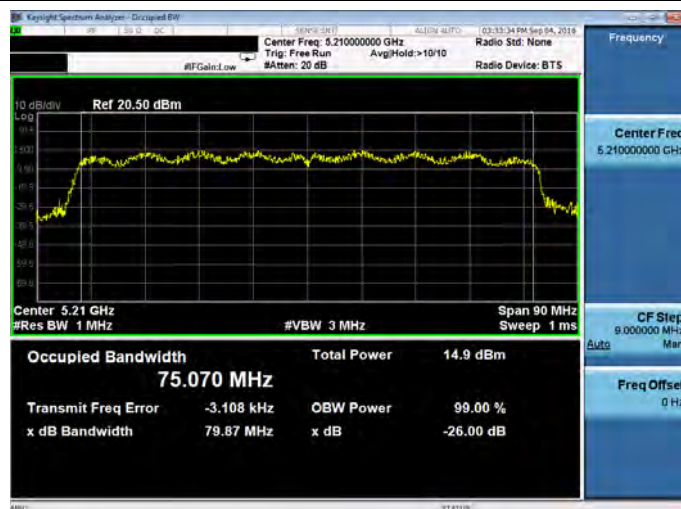


5230 MHz



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-1

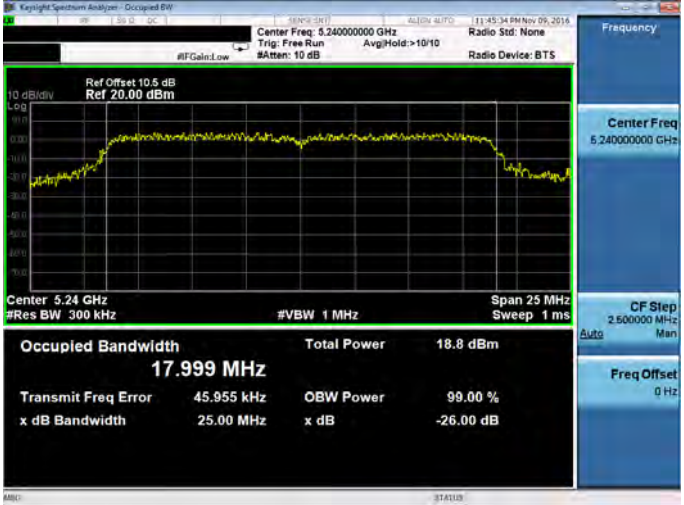
5210 MHz





Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-0

Beamforming on

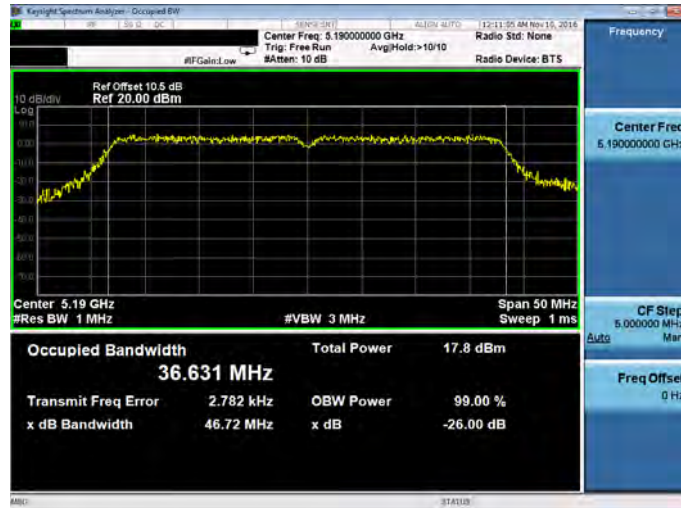
5180 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.180000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 10.5 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.910 MHz Total Power 18.7 dBm Transmit Freq Error 86.226 kHz OBW Power 99.00 % x dB Bandwidth 24.95 MHz x dB -26.00 dB Frequency Center Freq 5.180000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5200 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.200000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 10.5 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.950 MHz Total Power 18.8 dBm Transmit Freq Error 65.097 kHz OBW Power 99.00 % x dB Bandwidth 24.22 MHz x dB -26.00 dB Frequency Center Freq 5.200000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz
5240 MHz	 Keylight Spectrum Analyzer - Occupied BW Center Freq: 5.240000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 10.5 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.999 MHz Total Power 18.8 dBm Transmit Freq Error 45.955 kHz OBW Power 99.00 % x dB Bandwidth 25.00 MHz x dB -26.00 dB Frequency Center Freq 5.240000000 GHz CF Step 2.500000 MHz Freq Offset 0 Hz



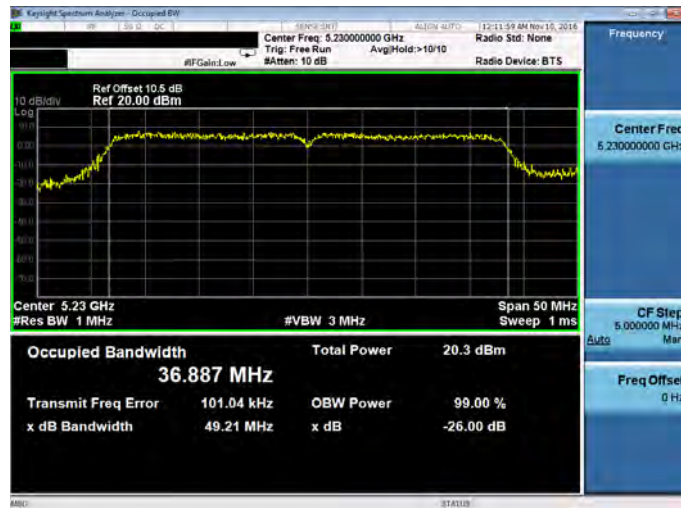
Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0

Beamforming on

5190 MHz



5230 MHz





Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-0

Beamforming on

5210 MHz





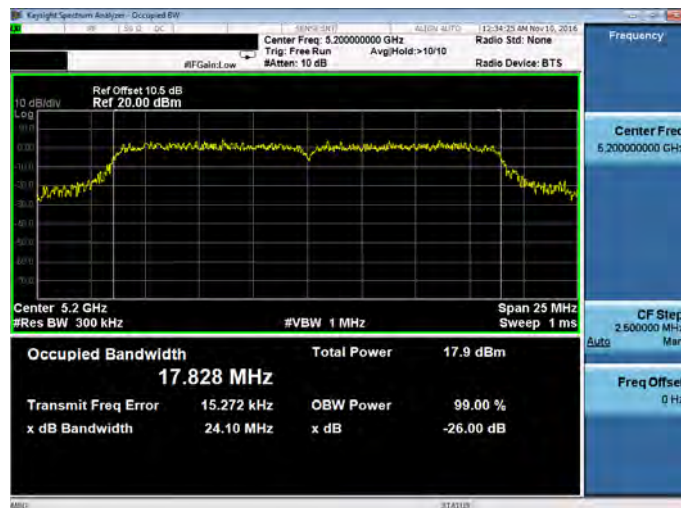
Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1

Beamforming on

5180 MHz



5200 MHz



5240 MHz





Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1

Beamforming on

5190 MHz



5230 MHz





Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-1

Beamforming on

5210 MHz



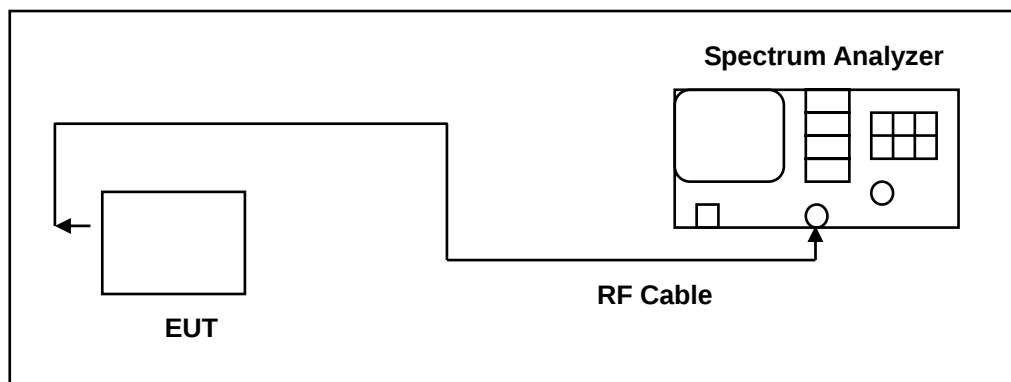
4.6. 6dB RF Bandwidth Measurement

■ Limit

6dB RF Bandwidth

Systems using digital modulation techniques may operate in the 5725~5850MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

6dB RF Bandwidth

The EUT tested to UNII test procedure of KDB789033 D02 for compliance to FCC 47CFR 15.407 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels.



■ Test Result

Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 2: IEEE 802.11a Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0		
5745	16350		> 500
5785	16410		> 500
5825	15720		> 500

Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	17570	17200	> 500
5785	17600	16960	> 500
5825	17580	17550	> 500

Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	36060	35150	> 500
5795	36020	35720	> 500



Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	72720	75100	> 500



Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	16910	17050	> 500
5785	17300	17560	> 500
5825	16300	17300	> 500

Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	35100	35500	> 500
5795	35220	35570	> 500

Model Number	EW-7822UNC		
Test Item	6dB RF Bandwidth		
Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	75180	75070	> 500



■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ ANT-0

5745 MHz	 Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms Occupied Bandwidth 20.970 MHz Total Power 18.1 dBm Transmit Freq Error 440.02 kHz OBW Power 99.00 % x dB Bandwidth 16.35 MHz x dB -6.00 dB
5785 MHz	 Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms Occupied Bandwidth 19.270 MHz Total Power 18.0 dBm Transmit Freq Error 266.83 kHz OBW Power 99.00 % x dB Bandwidth 16.41 MHz x dB -6.00 dB
5825 MHz	 Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms Occupied Bandwidth 17.555 MHz Total Power 17.9 dBm Transmit Freq Error 173.18 kHz OBW Power 99.00 % x dB Bandwidth 15.72 MHz x dB -6.00 dB



Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-0

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40MHz Link Mode_ANT-0

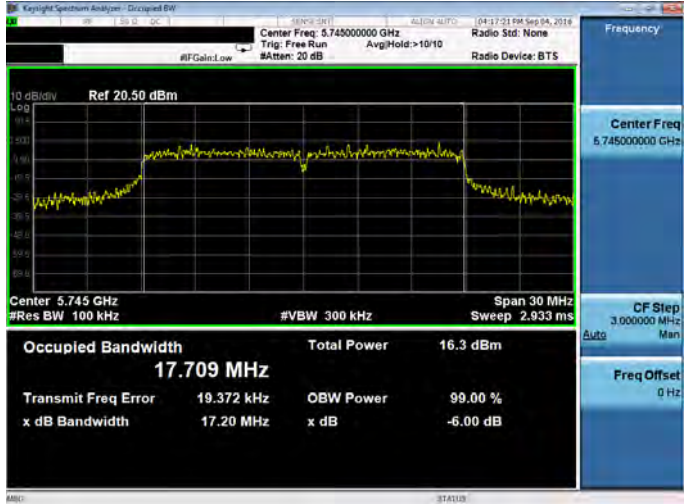
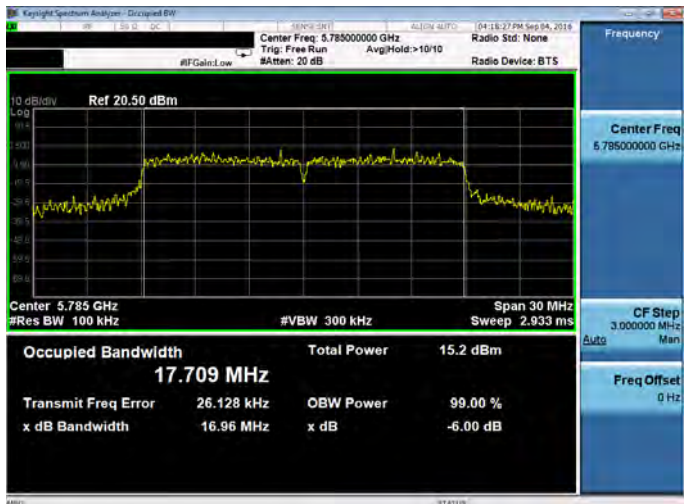
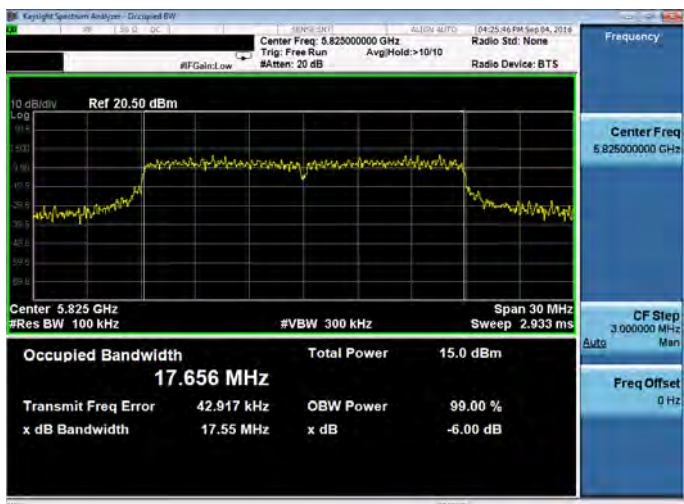
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0

5775 MHz	
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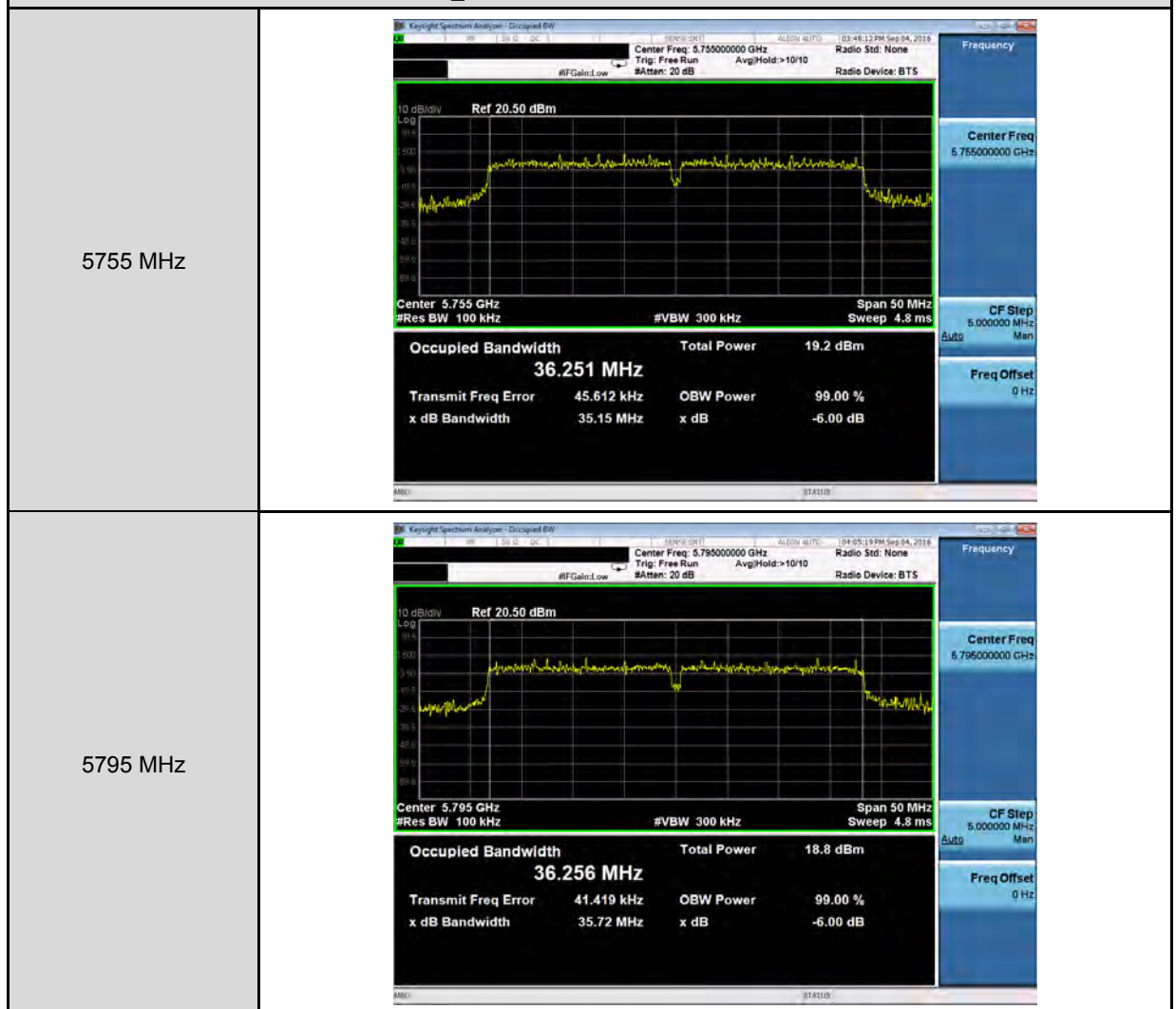


Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-1

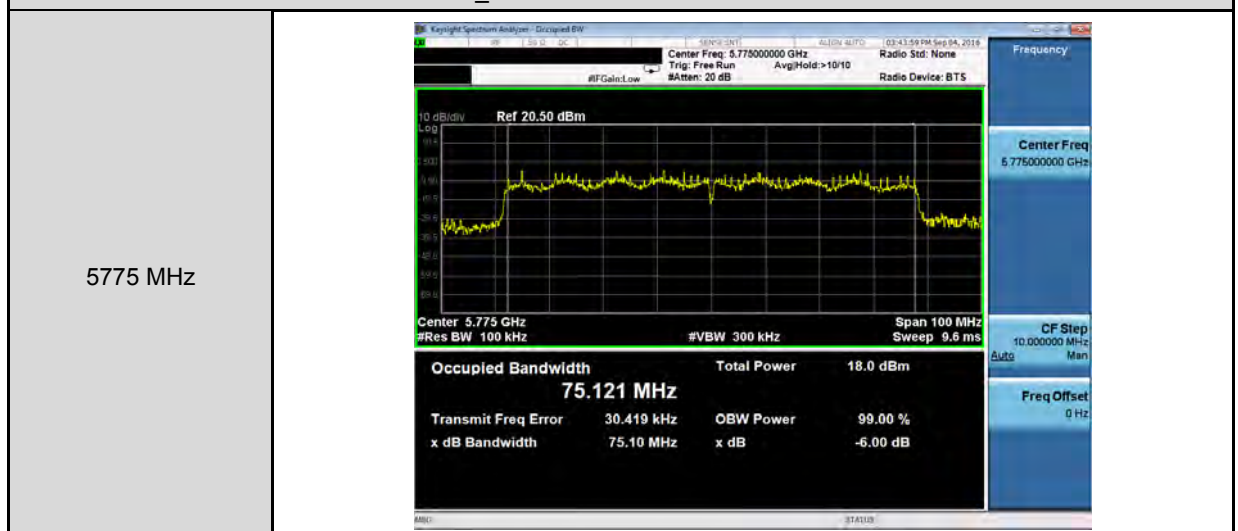
5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40MHz Link Mode_ANT-1



Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-1

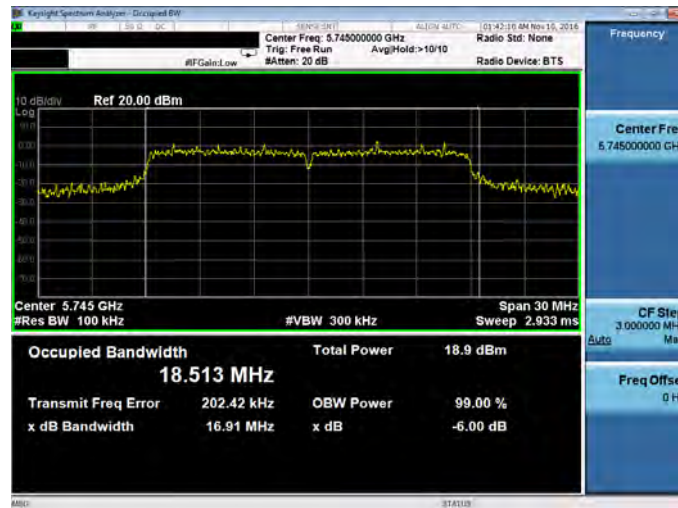




Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-0

Beamforming on

5745 MHz



5785 MHz



5825 MHz

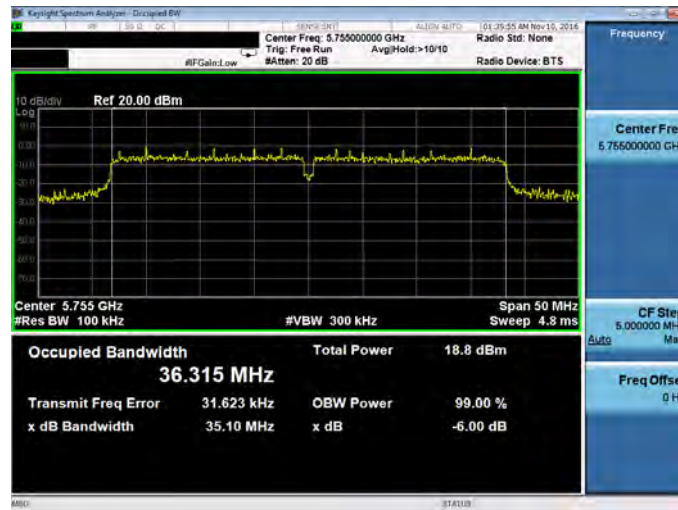




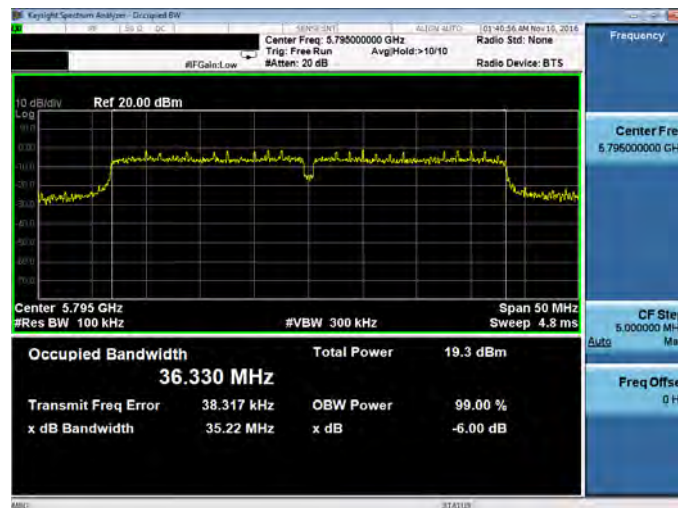
Mode 4: IEEE 802.11ac 40MHz Link Mode_ANT-0

Beamforming on

5755 MHz



5795 MHz

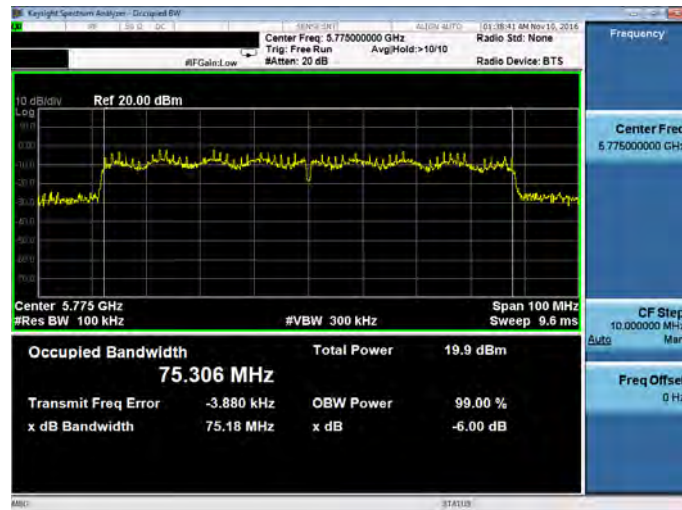




Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0

Beamforming on

5775 MHz

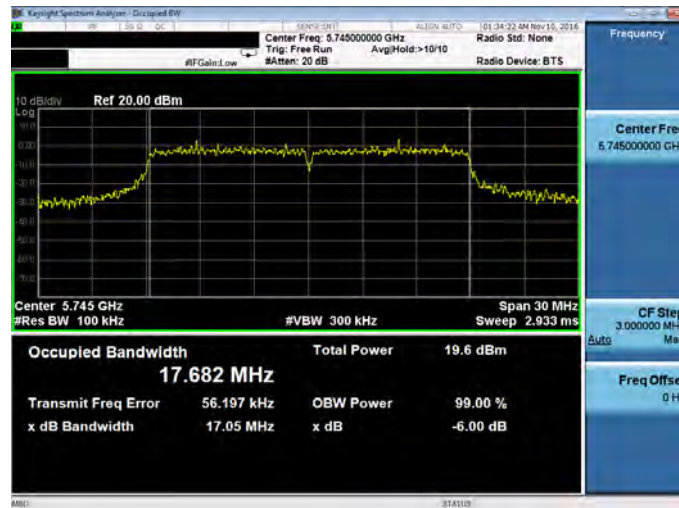




Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-1

Beamforming on

5745 MHz



5785 MHz



5825 MHz

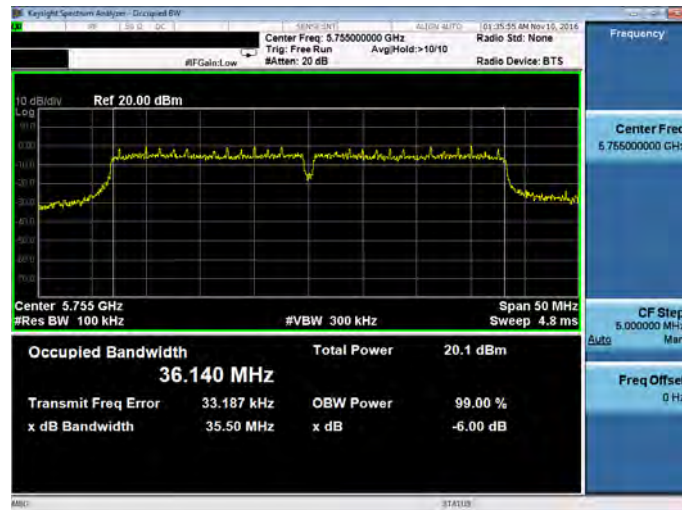




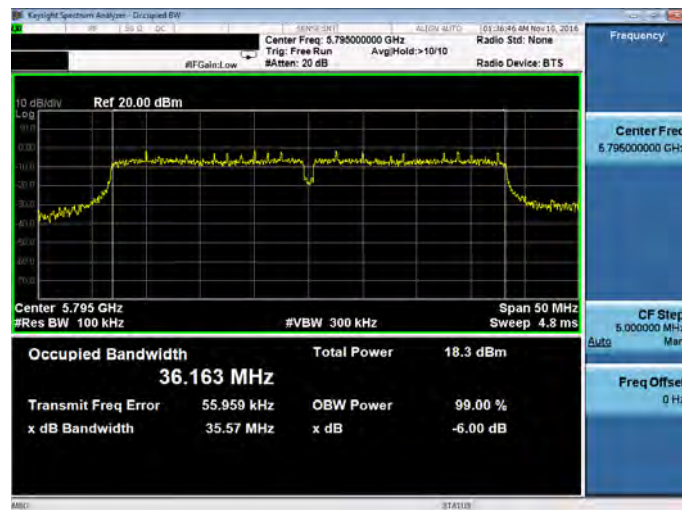
Mode 4: IEEE 802.11ac 40MHz Link Mode_ANT-1

Beamforming on

5755 MHz



5795 MHz

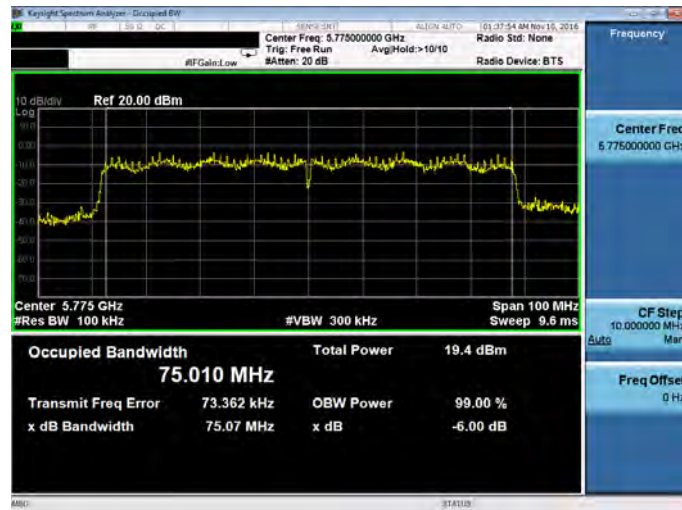




Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-1

Beamforming on

5775 MHz



4.7. Peak Power Spectral Density Measurement

■ Limit

Conducted power spectral density

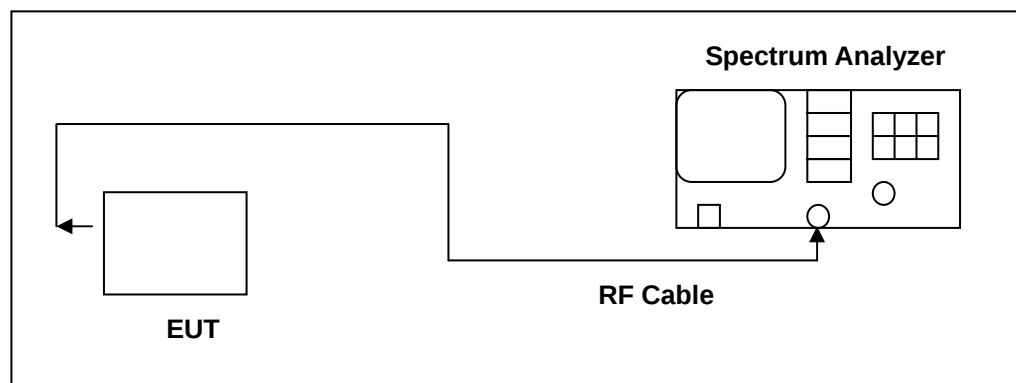
Frequency Range (MHz)	FCC Limit
	Client
5.150 ~ 5.250 GHz	11 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500KHz

According FCC KDB 662911 D01 v02r01 – for power spectral density measurements on IEEE802.11 devices,

* SISO mode for ANT-0 : Max. Gain = 1.71 dBi < 6dBi

* MIMO mode : Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / N_{ANT}\}$ = 3.8 dBi < 6dBi

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/15/2015	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

**■ Test Procedure**

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r02, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz (5725 ~ 5850MHz use 100 kHz)
VBW	3 MHz (5725 ~ 5850MHz use 300 kHz)
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/100\text{kHz})$ to the measured result.	



■ Test Result

Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	2.509	0.305	2.814	< 11
5200	1.975	0.305	2.280	
5240	2.312	0.305	2.617	

Note: Method SA-2, Power density = measured result + $10\log(1/\text{duty cycle})$ + Conversion ratio = measured result + duty factor.

Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-8.30	0.305	-1.00	< 30
5785	-8.83	0.305	-1.54	
5825	-9.25	0.305	-1.95	

Note: Method SA-2, Power density = measured result + $10\log(1/\text{duty cycle})$ + Conversion ratio = measured result + duty factor.

Conversion ratio = $10 \cdot \log(500\text{k}/100\text{k})$



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	1.892	0.717	2.609	< 11
5200	2.329	0.717	3.046	
5240	0.982	0.717	1.699	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-2.214	0.717	-1.497	< 11
5200	-1.313	0.717	-0.596	
5240	1.984	0.717	2.701	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5180	4.034			< 11
5200	4.606			
5240	5.239			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-6.67	0.717	1.03	< 30
5785	-6.84	0.717	0.87	
5825	-6.59	0.717	1.12	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-8.74	0.717	-1.03	< 30
5785	-9.61	0.717	-1.90	
5825	-11.52	0.717	-3.81	
Frequency (MHz)	ANT-0+1			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5745	3.13			< 30
5785	2.71			
5825	2.33			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-7.292	0.473	-6.819	< 11
5230	-6.462	0.473	-5.989	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.935	0.473	-3.462	< 11
5230	-4.394	0.473	-3.921	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5190	-1.813			< 11
5230	-1.822			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-15.34	0.473	-7.88	< 30
5795	-6.06	0.473	1.41	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-15.16	0.473	-7.69	< 30
5795	-10.14	0.473	-2.67	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500KHz)			Limit (dBm/500KHz)
5755	-4.77			< 30
5795	2.84			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.327	1.753	-5.574	< 11
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.929	1.753	-6.176	< 11
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-2.854			< 11

Note: Method SA-2, Power density = measured result + $10\log(1/\text{duty cycle})$ + Conversion ratio = measured result + duty factor.



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-7.80	1.753	0.95	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-14.76	1.753	-6.02	< 30
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500KHz)			Limit (dBm/MHz)
5775	1.74			< 30

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	0.365	0.120	0.485	< 11
5200	1.527	0.120	1.647	
5240	1.654	0.120	1.774	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	0.861	0.120	0.981	< 11
5200	1.004	0.120	1.124	
5240	1.349	0.120	1.469	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	3.750			< 11
5200	4.404			
5240	4.635			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-6.85	0.120	0.26	< 30
5785	-6.62	0.120	0.49	
5825	-7.27	0.120	-0.16	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-7.48	0.120	-0.37	< 30
5785	-6.69	0.120	0.42	
5825	-8.55	0.120	-1.44	
Frequency (MHz)	ANT-0+1			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5745	2.97			< 30
5785	3.47			
5825	2.26			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.539	0.964	-2.575	< 11
5230	-1.019	0.964	-0.055	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-5.321	0.964	-4.357	< 11
5230	-1.974	0.964	-1.010	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5190	-0.365			< 11
5230	2.504			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-10.65	0.964	-2.70	< 30
5795	-11.72	0.964	-3.76	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-9.80	0.964	-1.85	< 30
5795	-11.13	0.964	-3.17	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500KHz)			Limit (dBm/500KHz)
5755	0.76			< 30
5795	-0.45			

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)



Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-8.300	1.769	-6.531	< 11
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-9.225	1.769	-7.456	< 11
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-3.959			< 11

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.



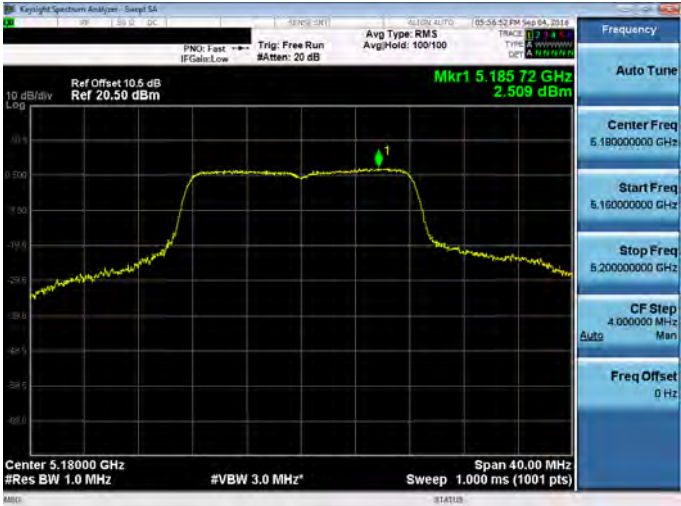
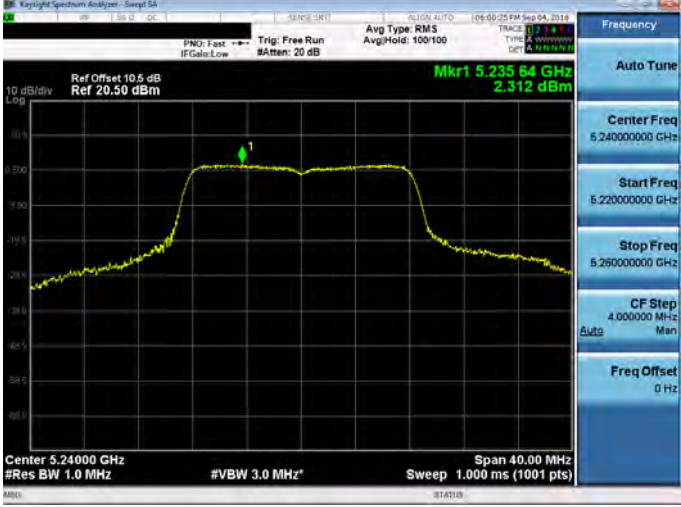
Model Number	EW-7822UNC			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-12.33	1.769	-3.57	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-12.16	1.769	-3.40	< 30
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500KHz)			Limit (dBm/MHz)
5775	-0.47			< 30

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

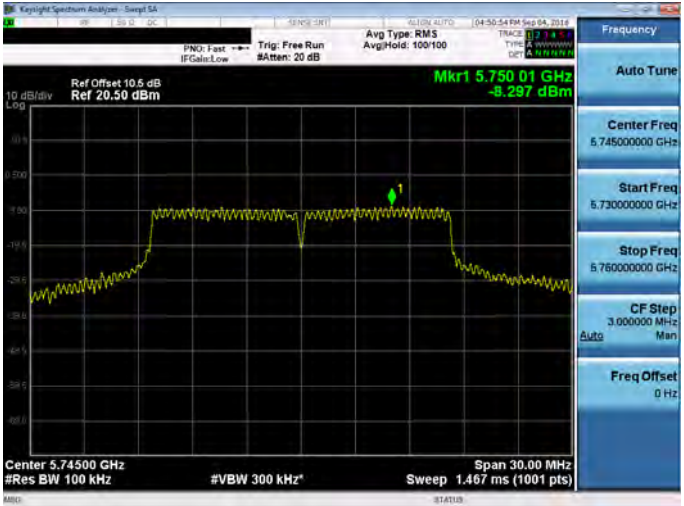
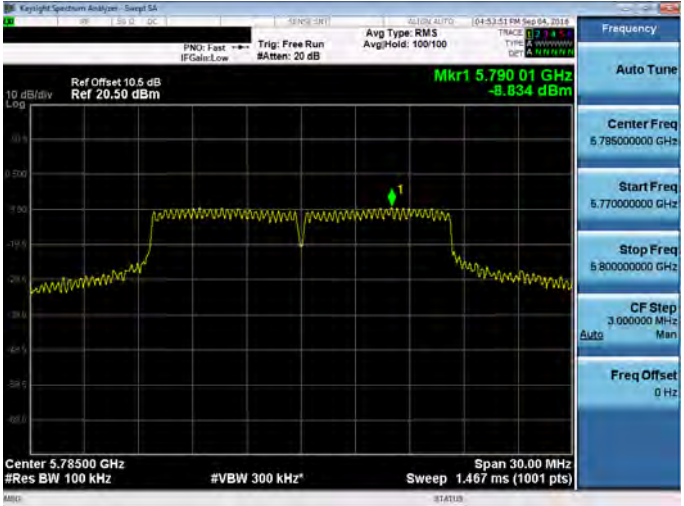
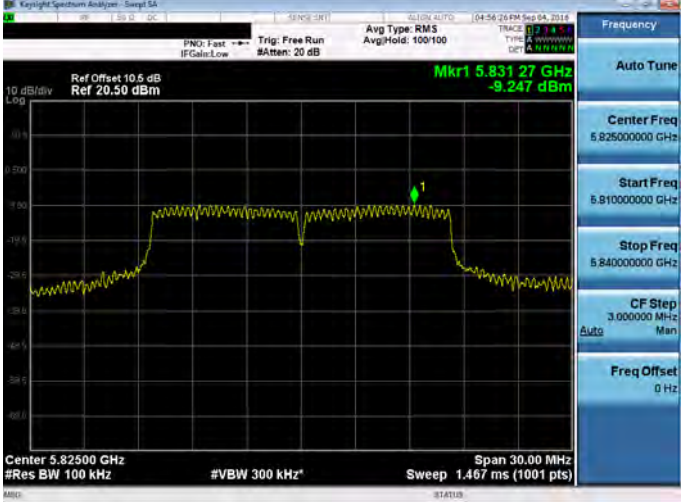
Conversion ratio = 10*Log(500k/100k)



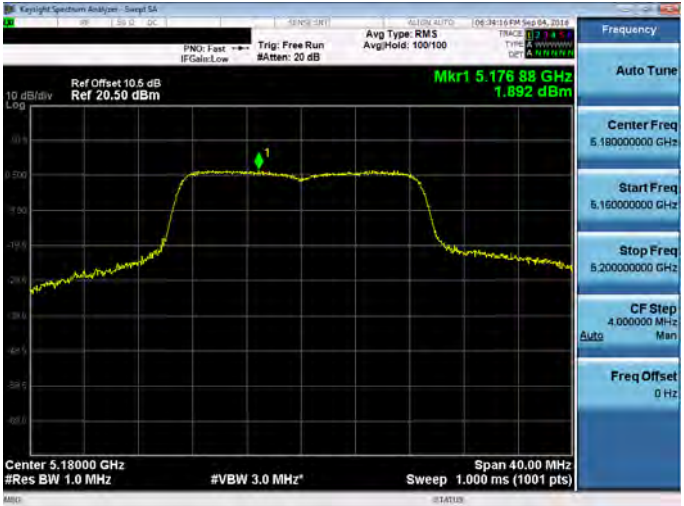
■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	

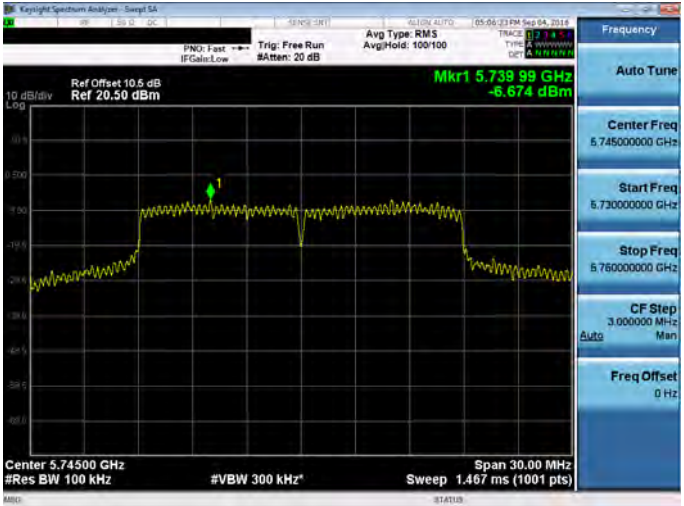
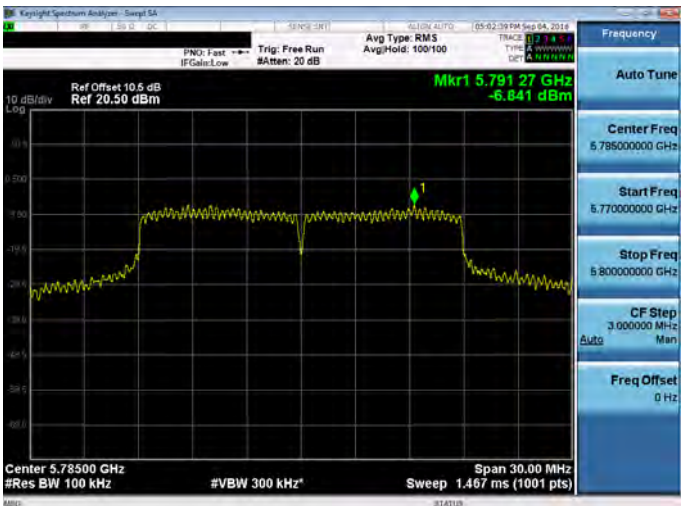
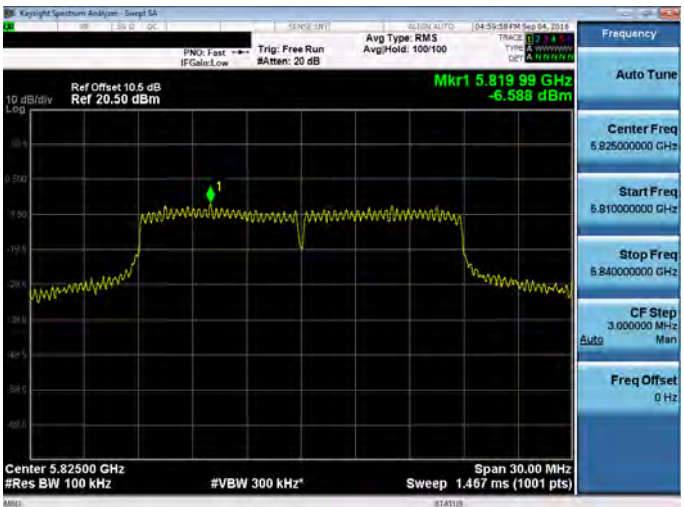


Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	



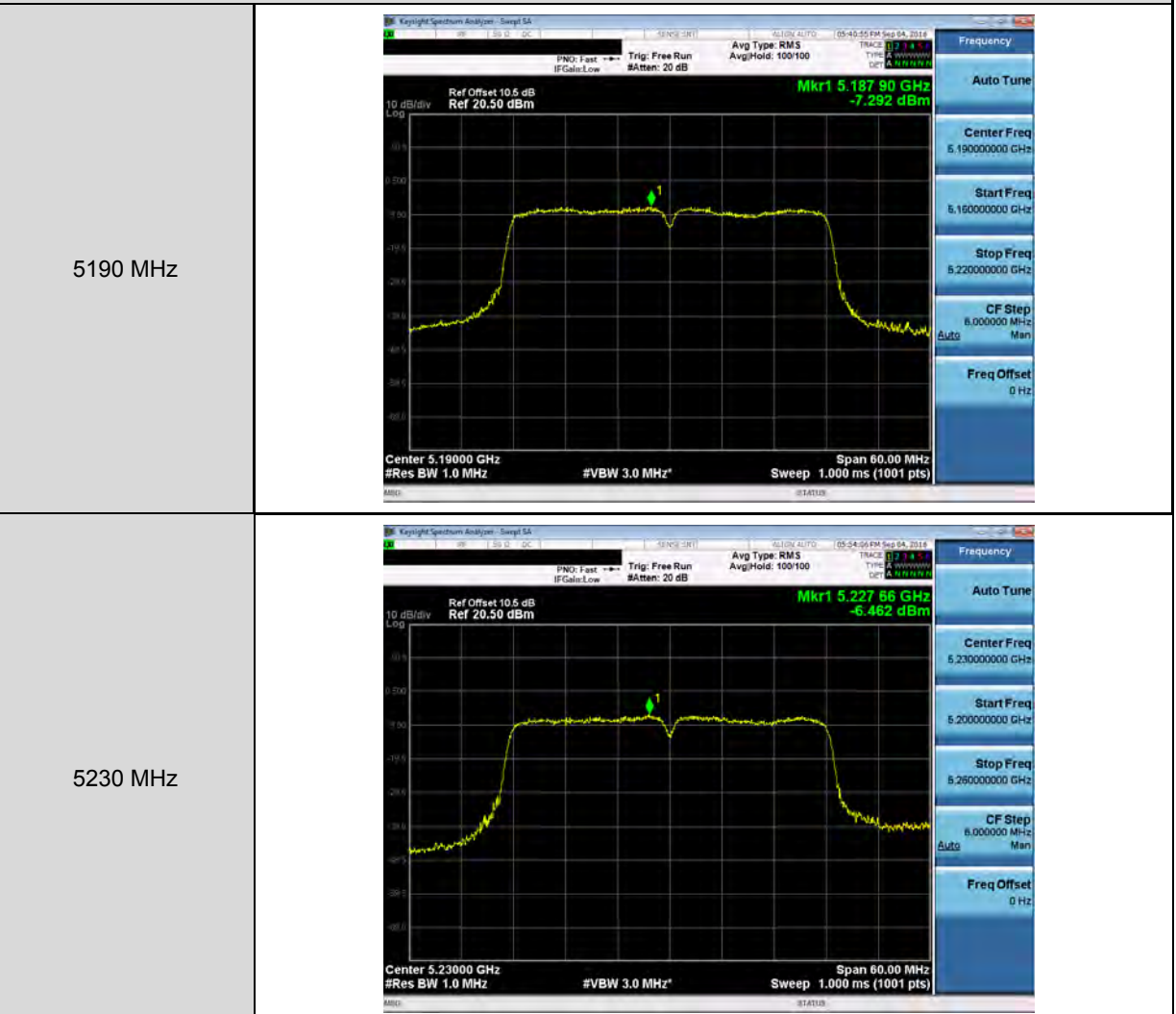
Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	



Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

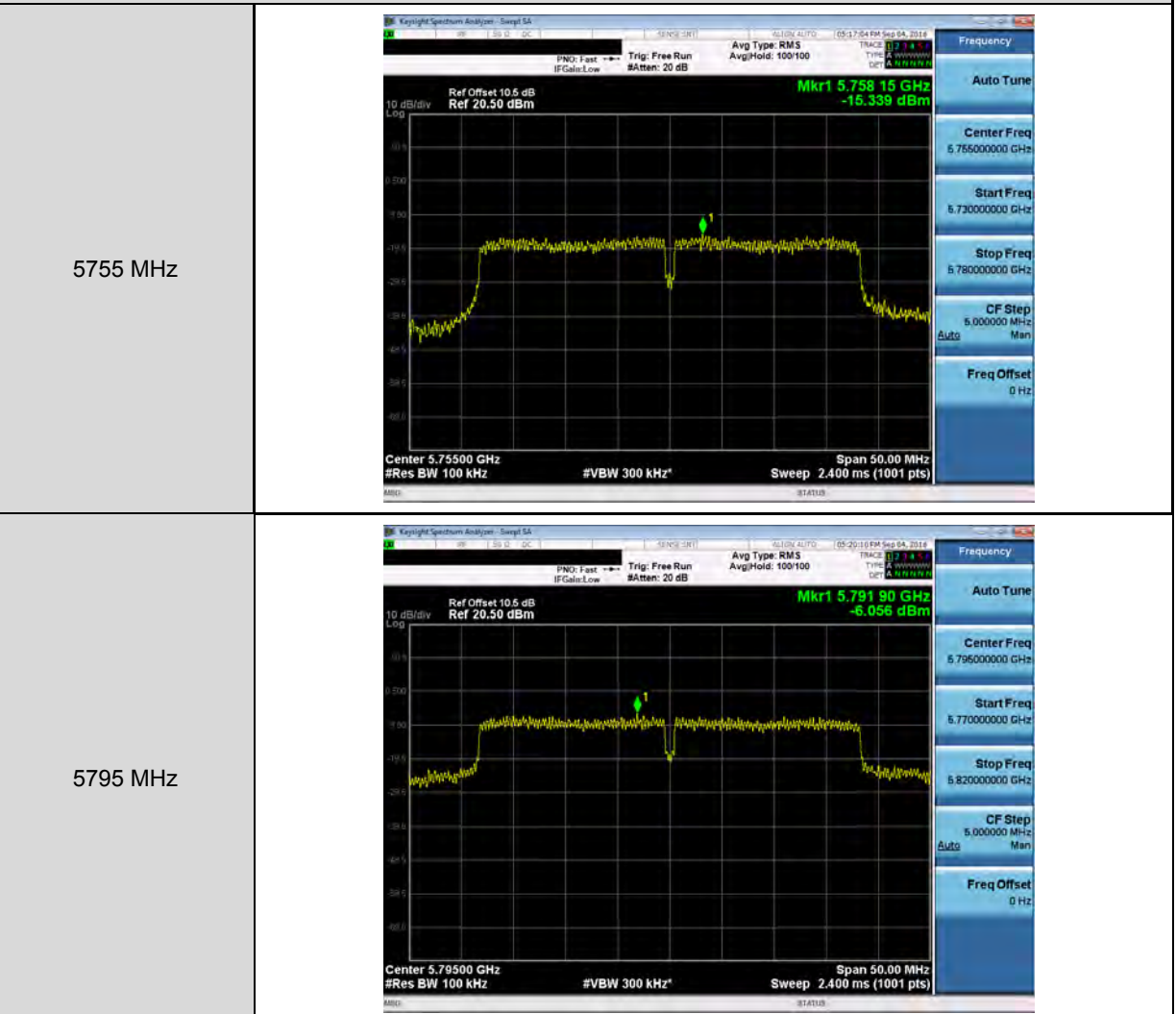


Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0





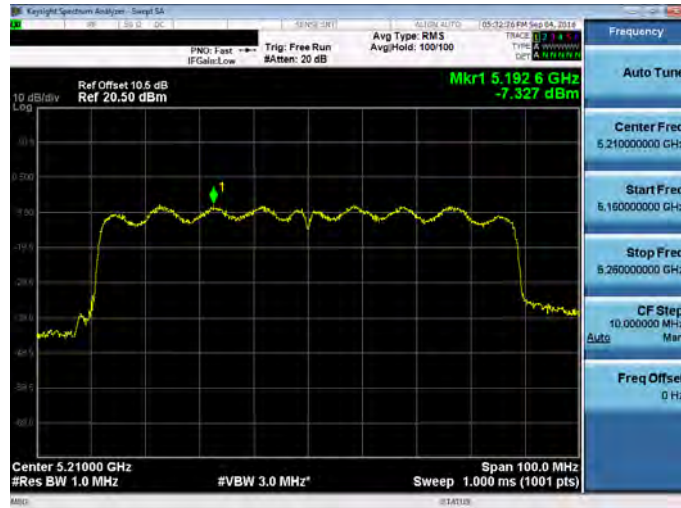
Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0





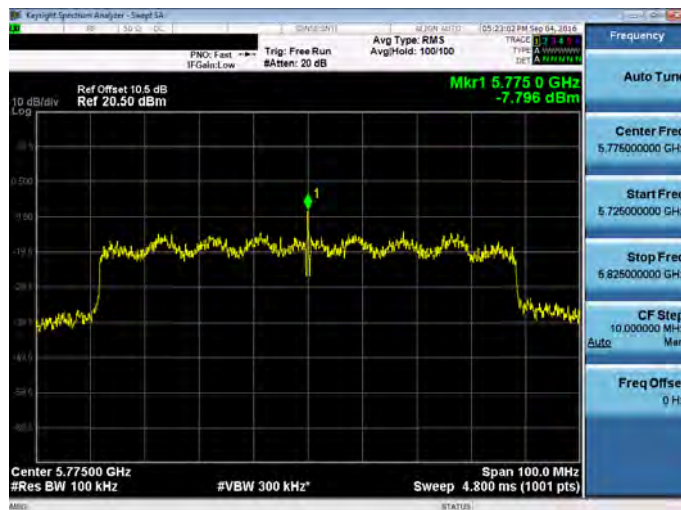
Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-0

5210 MHz



Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-0

5775 MHz

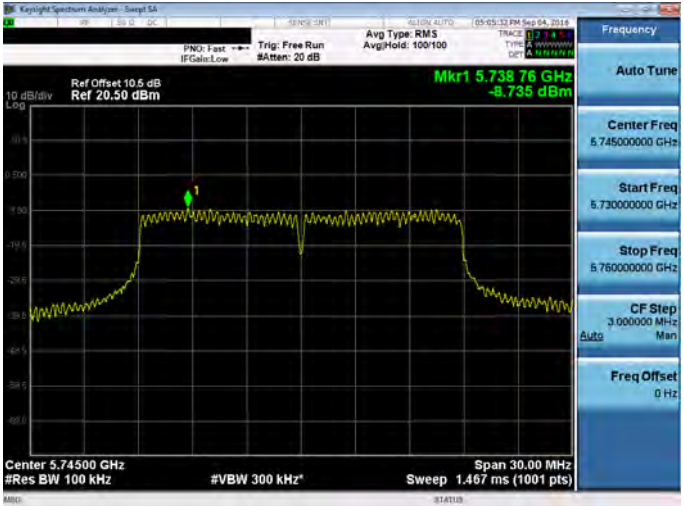
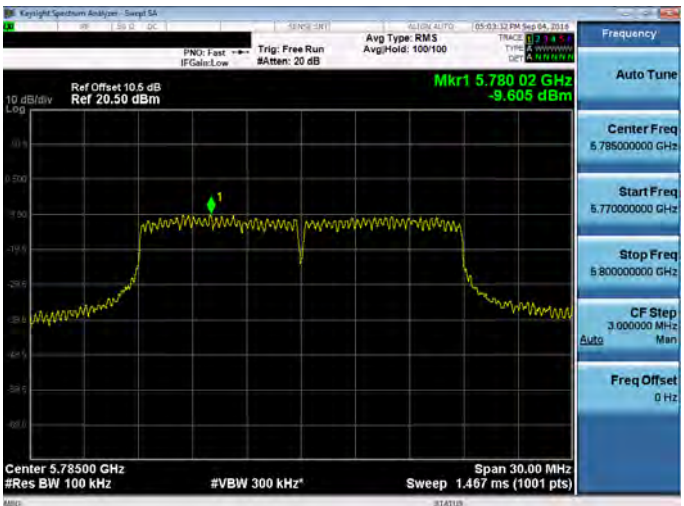
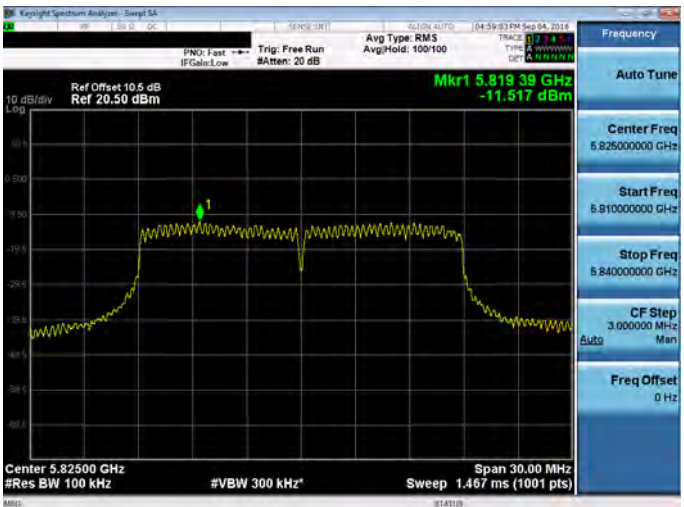




Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5180 MHz	
5200 MHz	
5240 MHz	

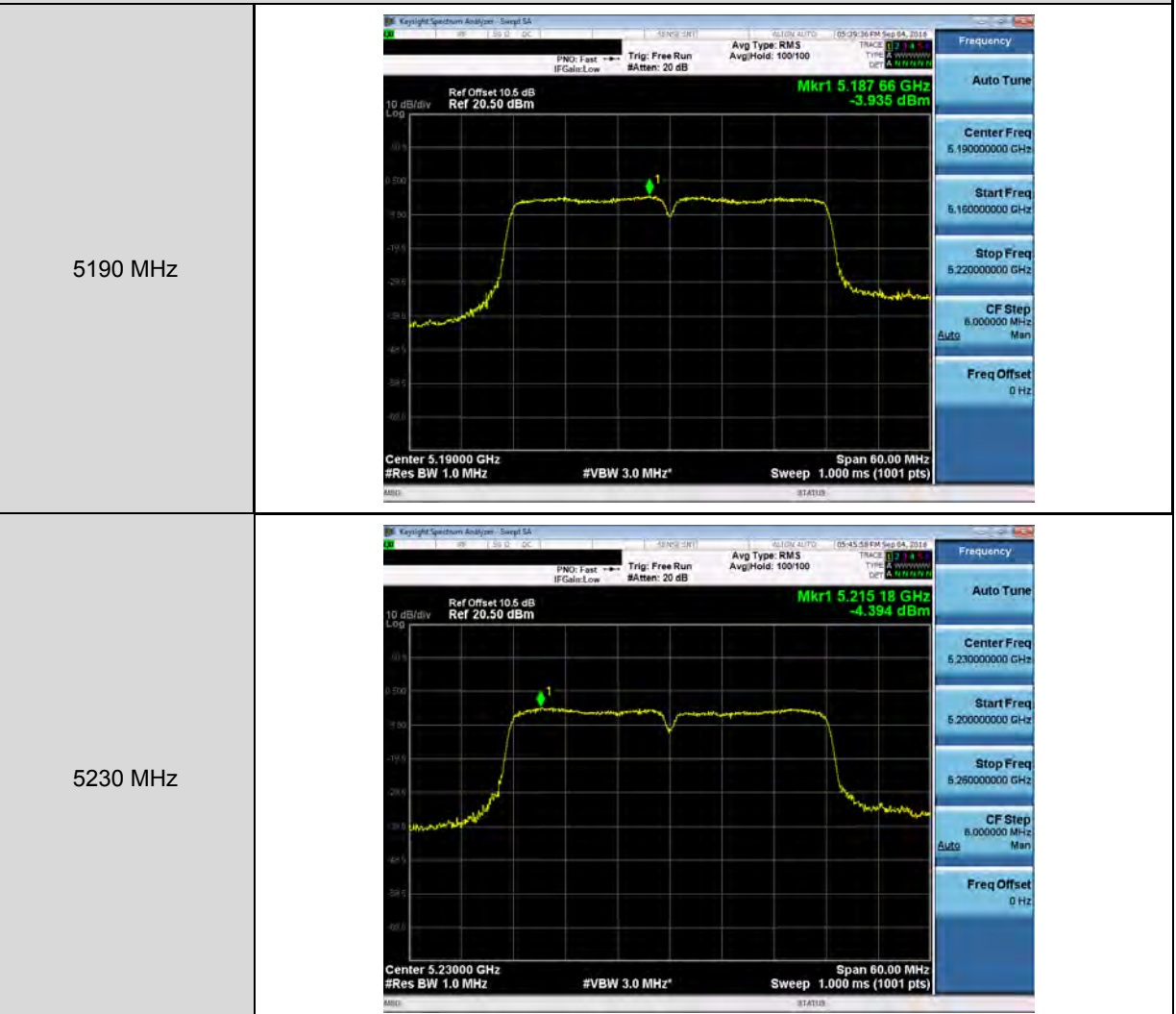


Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1

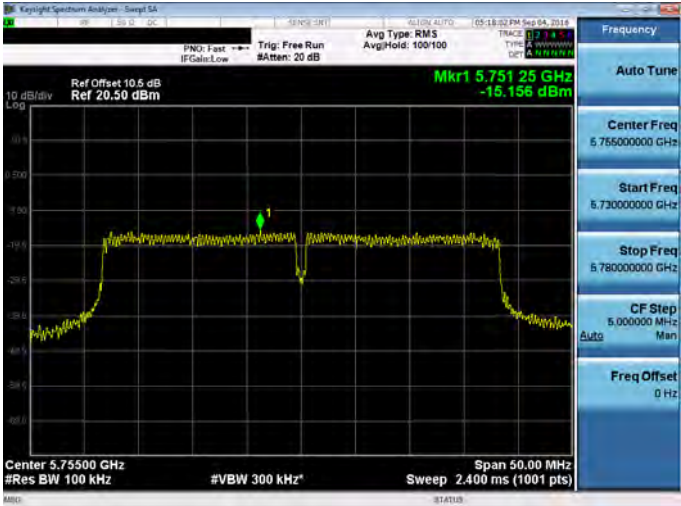
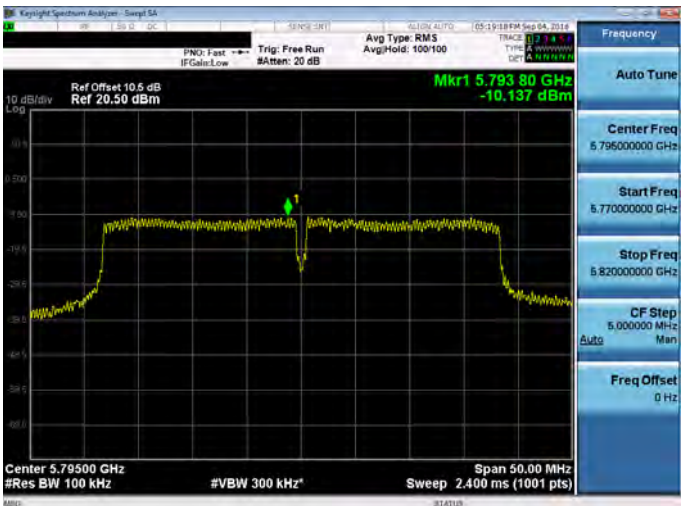
5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1





Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5755 MHz	
5795 MHz	



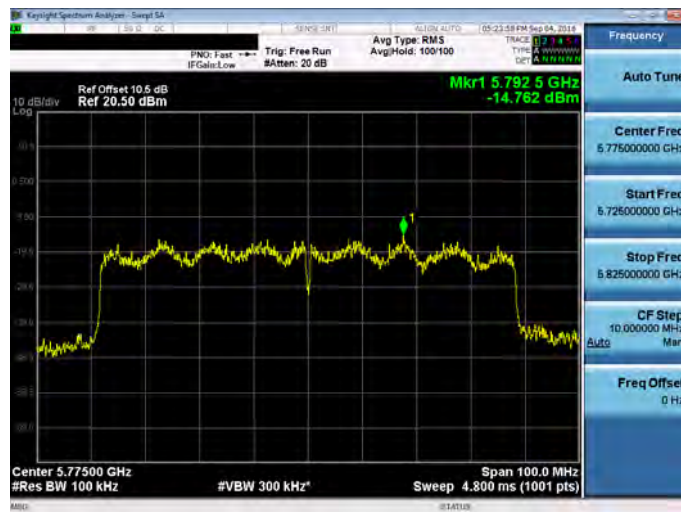
Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-1

5210 MHz

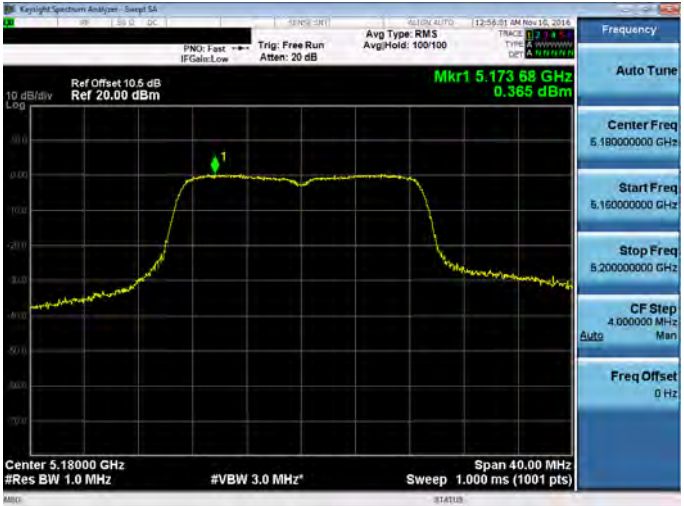
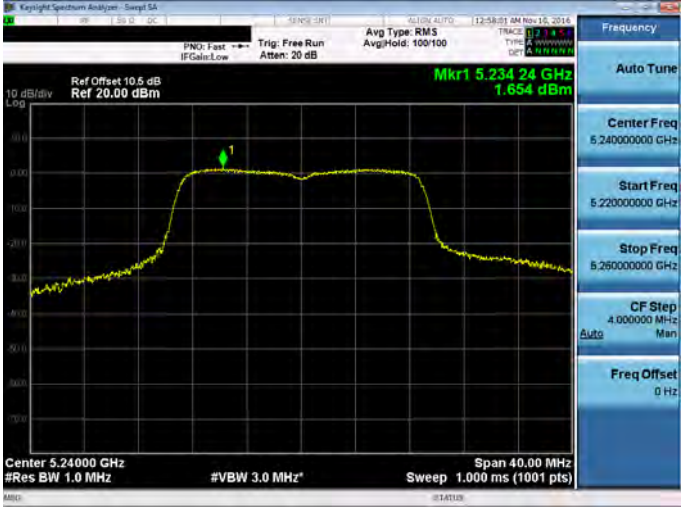


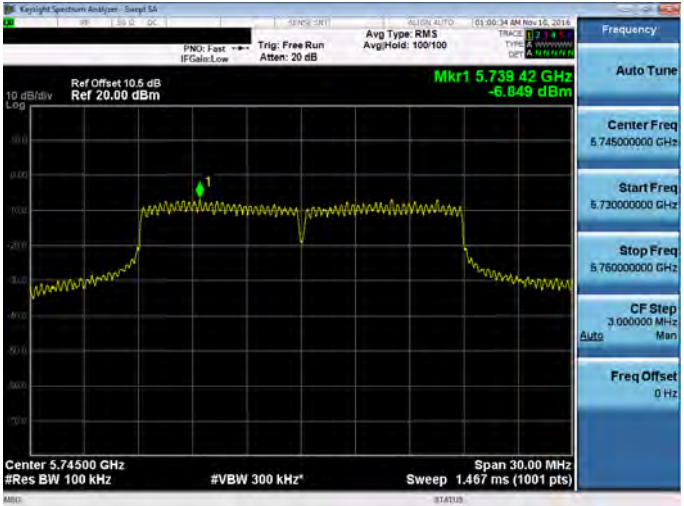
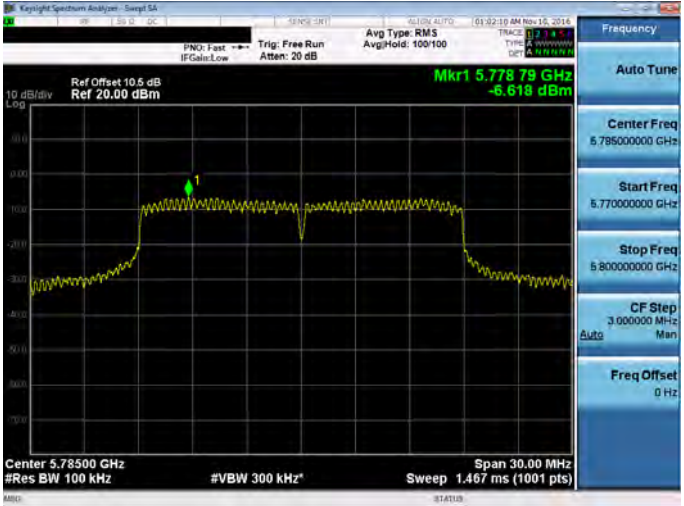
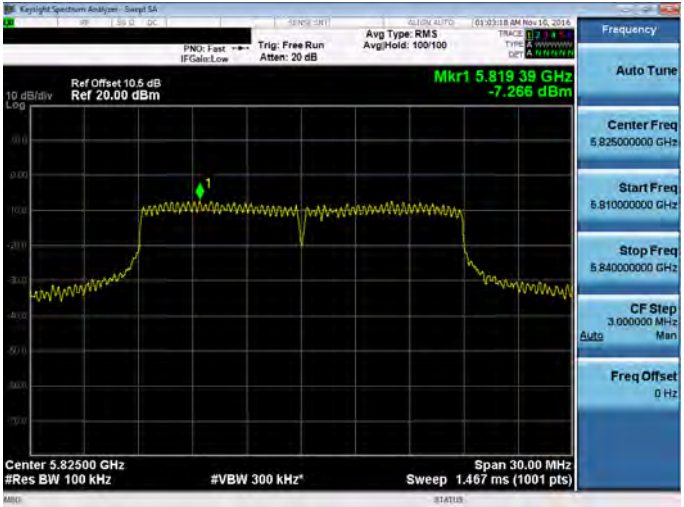
Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-1

5775 MHz





Mode 3: IEEE 802.11ac 20MHz Link Mode _ANT-0	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	

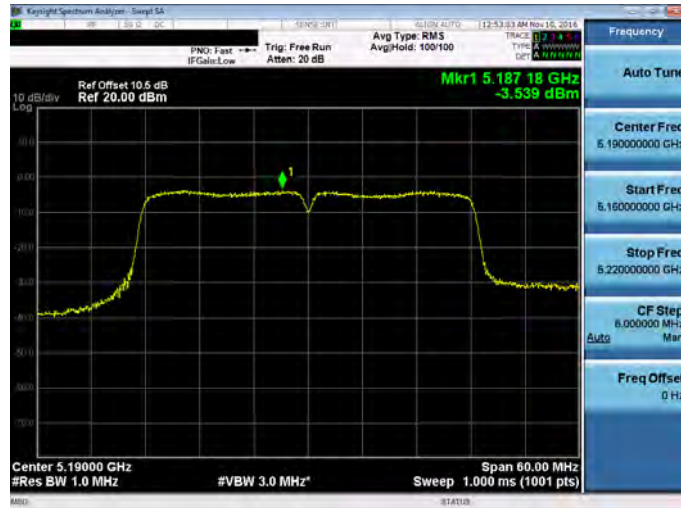
Mode 3: IEEE 802.11ac 20MHz Link Mode _ANT-0	
Beamforming on	
5745 MHz	
5785 MHz	
5825 MHz	



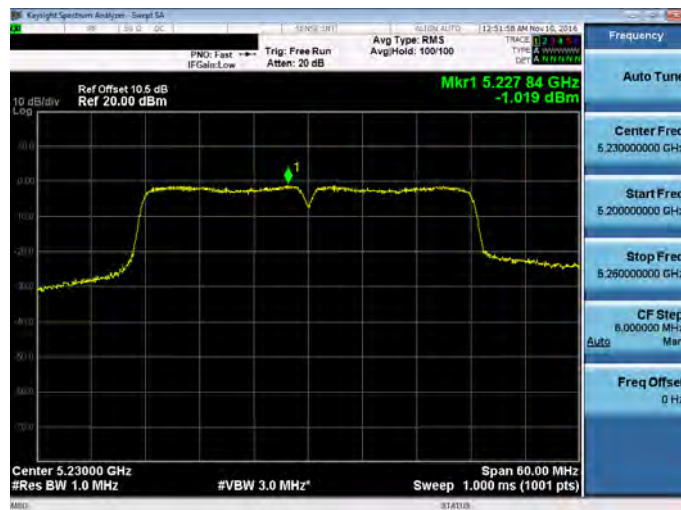
Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0

Beamforming on

5190 MHz



5230 MHz





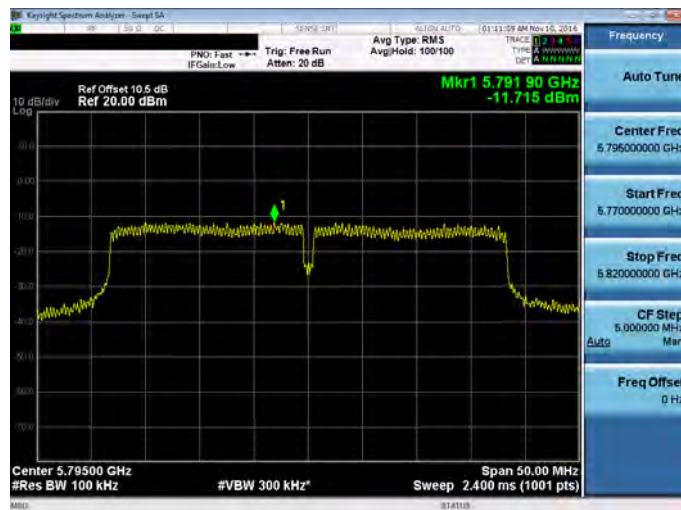
Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-0

Beamforming on

5755 MHz



5795 MHz

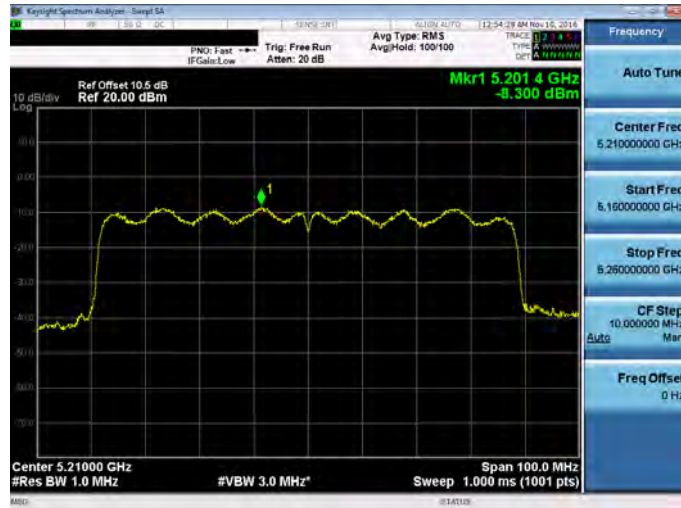




Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-0

Beamforming on

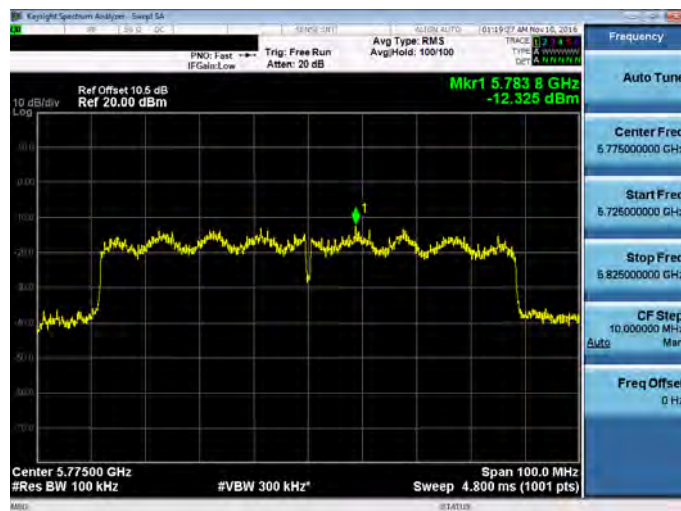
5210 MHz



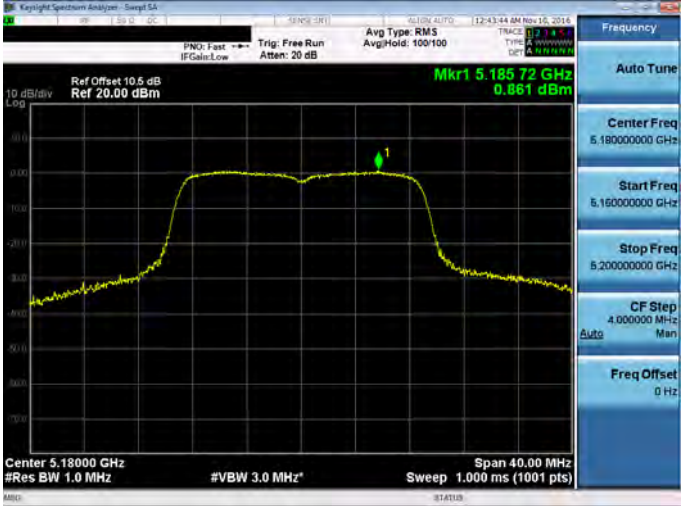
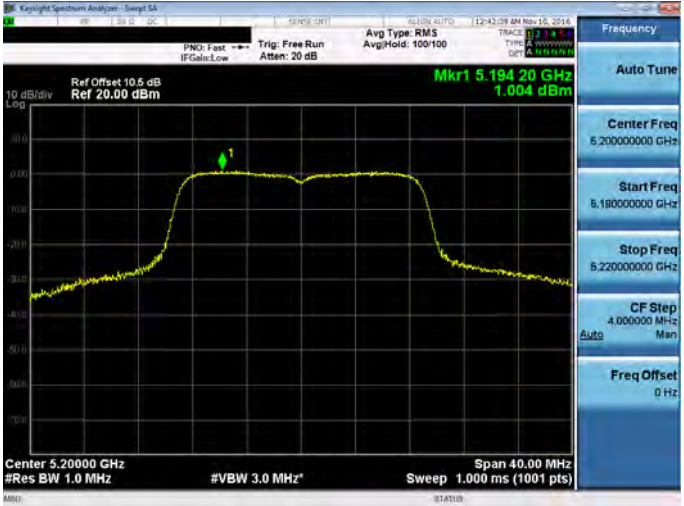
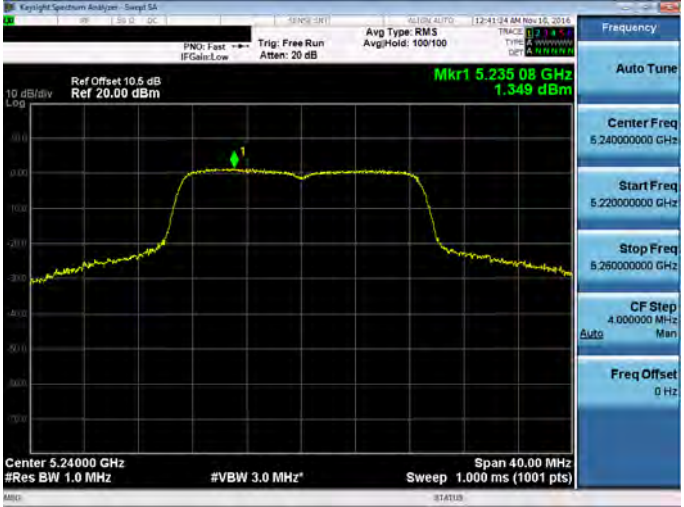
Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-0

Beamforming on

5775 MHz



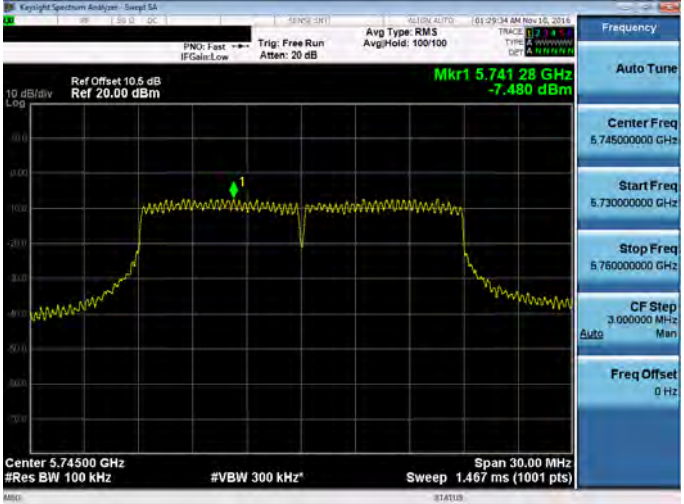
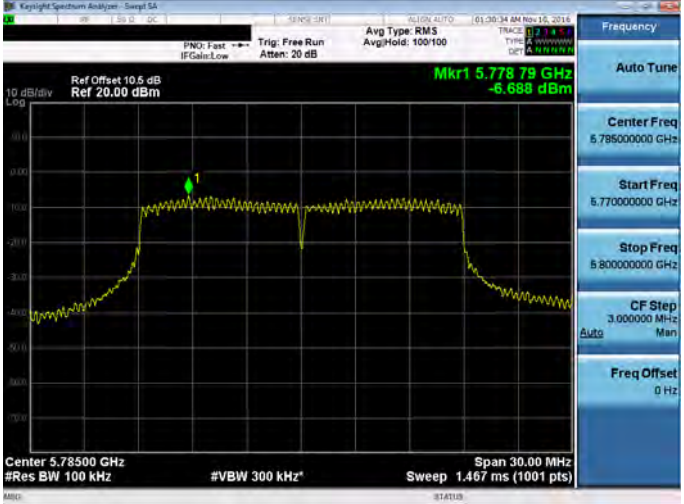
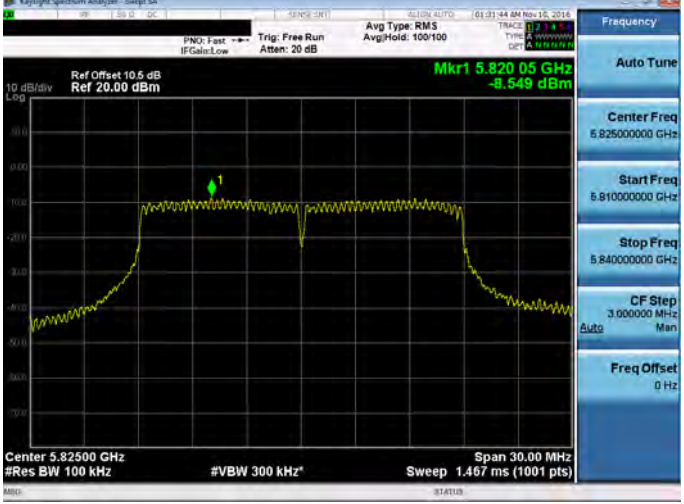


Mode 3: IEEE 802.11ac 20MHz Link Mode _ANT-1	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	



Mode 3: IEEE 802.11ac 20MHz Link Mode _ANT-1

Beamforming on

5745 MHz	
5785 MHz	
5825 MHz	



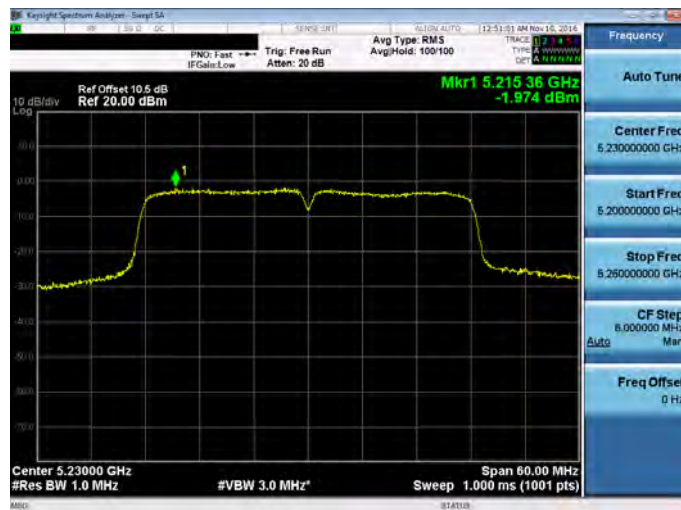
Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1

Beamforming on

5190 MHz



5230 MHz

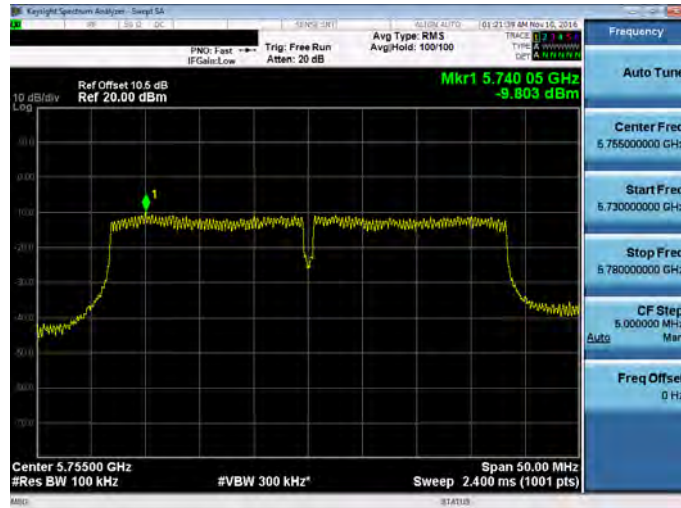




Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1

Beamforming on

5755 MHz



5795 MHz

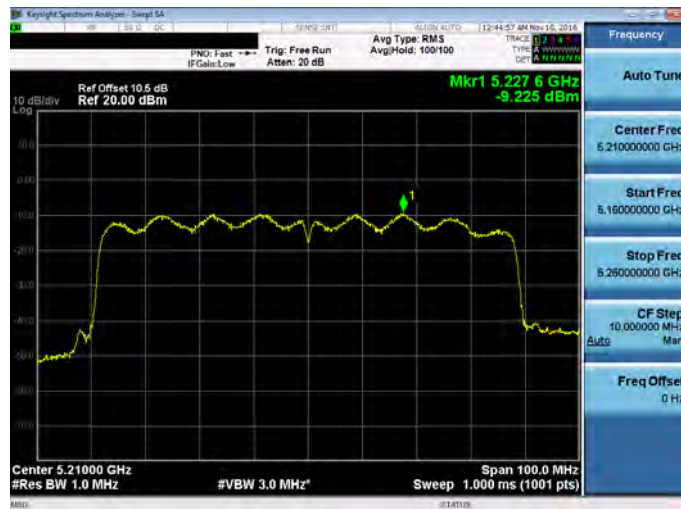




Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-1

Beamforming on

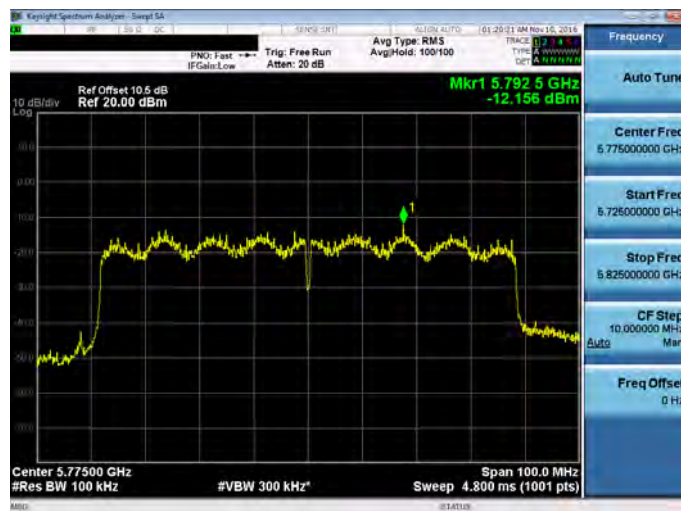
5210 MHz



Mode 5: IEEE 802.11ac 80MHz Link Mode _ANT-1

Beamforming on

5775 MHz

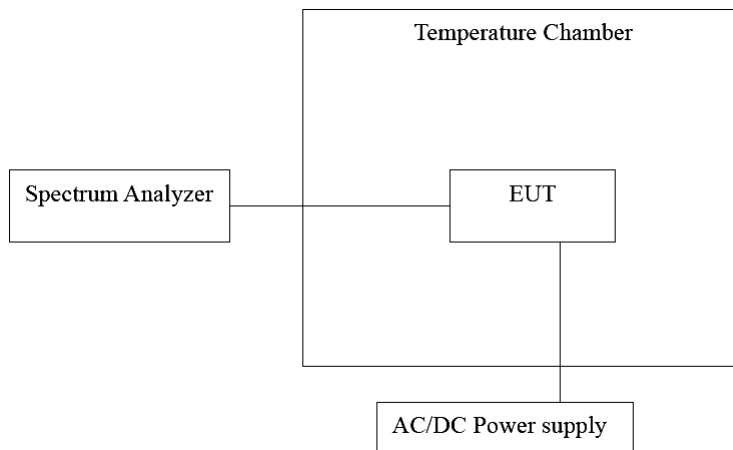


4.8. Frequency Stability Measurement

■ Limit

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 users manual.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	08/08/2016	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/18/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. 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.



■ Test Result

Temperature Variations

Model Number	EW-7822UNC					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0103	10300	1.981	Pass
	10		5200.0102	10200	1.962	Pass
	20		5200.0096	9600	1.846	Pass
	30		5200.0018	1800	0.346	Pass
	40		5200.0082	8200	1.577	Pass
5785 MHz	0	120	5785.0233	23300	4.028	Pass
	10		5785.0175	17500	3.025	Pass
	20		5785.0144	14400	2.489	Pass
	30		5785.0097	9700	1.677	Pass
	40		5785.0104	10400	1.798	Pass

Voltage Variations

Model Number	EW-7822UNC					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5200.0182	18200	3.500	Pass
		120.00	5200.0096	9600	1.846	Pass
		102.00	5200.0046	4600	0.885	Pass
5785 MHz	20	138.00	5785.0162	16200	2.800	Pass
		120.00	5785.0144	14400	2.489	Pass
		102.00	5785.0057	5700	0.985	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

**Temperature Variations**

Model Number	EW-7822UNC					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Beamforming on						
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0103	10300	1.981	Pass
	10		5200.0102	10200	1.962	Pass
	20		5200.0096	9600	1.846	Pass
	30		5200.0018	1800	0.346	Pass
	40		5200.0082	8200	1.577	Pass
5785 MHz	0	120	5785.0233	23300	4.028	Pass
	10		5785.0175	17500	3.025	Pass
	20		5785.0144	14400	2.489	Pass
	30		5785.0097	9700	1.677	Pass
	40		5785.0104	10400	1.798	Pass

Voltage Variations

Model Number	EW-7822UNC					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Beamforming on						
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
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		120.00	5200.0096	9600	1.846	Pass
		102.00	5200.0046	4600	0.885	Pass
5785 MHz	20	138.00	5785.0162	16200	2.800	Pass
		120.00	5785.0144	14400	2.489	Pass
		102.00	5785.0057	5700	0.985	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.



4.9. Antenna Requirement

■ Limit

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

■ Antenna Connector Construction

See section 2 – antenna information.

■ Directional Gain Calculated

Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / NANT\}$ = 3.8 dBi < 6dBi

Operate Freq. Band		Directional Gain (dBi)
IEEE 802.11ac 20MHz	U-NII Band I	3.8
	U-NII Band III	3.8
IEEE 802.11ac 40MHz	U-NII Band I	3.8
	U-NII Band III	3.8
IEEE 802.11ac 80MHz	U-NII Band I	3.8
	U-NII Band III	3.8