

FCC 47 CFR PART 15 SUBPART E

Applicant : Ocean Star Electronics Limited

Product Type : Bluetooth/Wi-Fi Wireless Stereo Smart Speaker

Trade Name : JENSEN, SOLIS, Ocean

Model Number : JSB-1000, JSB-1000XXXXX, SO-3000, SO-3000XXXXX,
SO-6000, SO-6000XXXXX,
iStation 20GC, iStation 4GC, iStation 8GC

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

Receive Date : Nov. 10, 2016

Test Period : Nov. 16 ~ Dec. 12, 2016

Issue Date : Feb. 16, 2017

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C)
Tel : +86-3-2710188 / Fax : +86-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jan. 20, 2017	Initial Issue	Snow Wang
01	Feb. 16, 2017	Revised report information.	Joyce Liao

Verification of Compliance

Issued Date: Feb. 16, 2017

Applicant : Ocean Star Electronics Limited
Product Type : Bluetooth/Wi-Fi Wireless Stereo Smart Speaker
Trade Name : JENSEN, SOLIS, Ocean
Model Number : JSB-1000, JSB-1000XXXXX, SO-3000, SO-3000XXXXX,
SO-6000, SO-6000XXXXX,
iStation 20GC, iStation 4GC, iStation 8GC

FCC ID : LMZ-250737476GC

EUT Rated Voltage : DC 18V, 1.5V

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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<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
(Manager) (Fly Lu)

Reviewed By : Eric Ou Yang
(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 (dB)
Conducted Emission	9kHz ~ 150KHz	2.7
	150kHz ~ 30MHz	2.7
Radiated Emission	9kHz ~ 30MHz	1.7
	30MHz ~ 1000MHz	5.7
	1000MHz ~ 18000MHz	5.5
	18000MHz ~ 26500MHz	4.8
	26500MHz ~ 40000MHz	4.8
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	Ocean Star Electronics Limited Unit 15, 8/F., Wah Wai Centre, 38-40 Au Pui Wan Street, Fo Tan, Hong Kong			
Manufacturer	Ocean Star Electronics Limited Unit 15, 8/F., Wah Wai Centre, 38-40 Au Pui Wan Street, Fo Tan, Hong Kong			
Product Type	Bluetooth/Wi-Fi Wireless Stereo Smart Speaker			
Trade Name	JENSEN, SOLIS, Ocean			
Model No.	JSB-1000, JSB-1000XXXXX, SO-3000, SO-3000XXXXX, SO-6000, SO-6000XXXXX, iStation 20GC, iStation 4GC, iStation 8GC			
FCC ID	LMZ-250737476GC			
Operate Frequency	Frequency Band		Frequency Range (MHz)	Number of Channels
	IEEE 802.11a	U-NII Band I	5180 – 5240	4
		U-NII Band II-A	5260 – 5320	4
		U-NII Band II-C	5500 – 5700	8
		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 II-A	5260 – 5320	4
		U-NII Band II-C	5500 – 5700	8
		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 II-A	5270 – 5310	2
		U-NII Band II-C	5510 – 5670	3
		U-NII Band III	5755 – 5795	2
	IEEE 802.11ac 80 MHz	U-NII Band I	5210	1
		U-NII Band II-A	5290	1
		U-NII Band II-C	5530	1
U-NII Band III		5775	1	
Modulation Type	OFDM			
Equipment Type	Client devices			
Antenna information	Model	Type	Max. Gain (dBi)	
	GY 9000	PCB Antenna	4	
Antenna Delivery	1TX + 1RX (Diversity)			
Frequency stability specification	± 20 ppm			



Frequency Band		RF Output Power (W)
IEEE 802.11a	U-NII Band I	0.033
	U-NII Band II-A	0.031
	U-NII Band II-C	0.030
	U-NII Band III	0.030
IEEE 802.11ac 20 MHz	U-NII Band I	0.024
	U-NII Band II-A	0.022
	U-NII Band II-C	0.022
	U-NII Band III	0.023
IEEE 802.11ac 40 MHz	U-NII Band I	0.019
	U-NII Band II-A	0.018
	U-NII Band II-C	0.018
	U-NII Band III	0.018
IEEE 802.11ac 80 MHz	U-NII Band I	0.011
	U-NII Band II-A	0.011
	U-NII Band II-C	0.011
	U-NII Band III	0.010

Component List				
Power adapter(1)	Trade Name	JIEDONG DLECFRON FACTORY	Model Number	JDA0301800150WUS
	I/P: 100-240VAC, 50-60Hz, 0.8A O/P: 18VDC, 1.5A Cable out: Shielded, 1.5m, Non-Detachable at Power Adapter			
Power adapter(2)	Trade Name	KINGWALL	Model Number	AS360-180.AA150
	I/P: 100-240VAC, 50-60Hz, 1.2A O/P: 18VDC, 1.5A Cable out: Shielded, 1.5m with one core, Non-Detachable at Power Adapter			

Trade name / model number and model different description :

Model Group	Trade Name	Model Number	Description
1	JENSEN	JSB-1000	JSB-1000XXXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)
		JSB-1000XXXXXX	
	Ocean	iStation 20GC	JSB-1000 and iStation 20GC differ is the model number only.
2	SOLIS	SO-3000	SO-3000XXXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)
		SO-3000XXXXXX	
	Ocean	iStation 4GC	SO-3000 and iStation 4GC differ is the model number only.
	SOLIS	SO-6000	SO-6000XXXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)
		SO-6000XXXXXX	
Ocean	iStation 8GC	SO-6000 and iStation 8GC differ is the model number only.	
The model group 1 and group 2 differ is the appearance and button.			



3 Test Methodology

3.1. Mode of Operation

In the test report use EUT model: JSB-1000 to operate testing.

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: Continuous TX 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.

Note:

1. Because ANT-1 power is greater than ANT-2, the ANT-1 is primary measured.
2. The device used two models of adapter, adapter number: JDA0301800150WUS is worst case to perform testing.

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

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



Test Mode	Band	Data Rate	Test Channel
Mode 2	U-NII Band I	6M	36, 40, 48
	U-NII Band II-A		52, 56, 64
	U-NII Band II-C		100, 112, 140
	U-NII Band III		149, 157,,165
Mode 3	U-NII Band I	6.5M	36, 40, 48
	U-NII Band II-A		52, 56, 64
	U-NII Band II-C		100, 112, 140
	U-NII Band III		149, 157,,165
Mode 4	U-NII Band I	13.5M	38, 46
	U-NII Band II-A		54, 62
	U-NII Band II-C		102, 110, 134
	U-NII Band III		151,159
Mode 5	U-NII Band I	29.3M	42
	U-NII Band II-A		58
	U-NII Band II-C		106
	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	20.000	20.000	1.000	0.000	0.010
Mode 3: IEEE 802.11ac 20MHz Link Mode	5180.0	20.000	20.000	1.000	0.000	0.010
Mode 4: IEEE 802.11ac 40MHz Link Mode	5190.0	40.000	40.000	1.000	0.000	0.010
Mode 5: IEEE 802.11ac 80MHz Link Mode	5210.0	40.000	40.000	1.000	0.000	0.010



Duty Cycle Graphs

Mode 2: IEEE 802.11a Link Mode	
On time	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 14.37 ms #Peak 10.62 dBm Log 10 dB/ Offst 12.3 dB LgAv W1 S2 S3 FS AA E(f): FTun Center 5.180 000 GHz Span 0 Hz Res BW 1 MHz *VBW 1 MHz Sweep 20 ms (601 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.1800000 GHz Start Freq 5.1800000 GHz Stop Freq 5.1800000 GHz CF Step 1.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off</p>
On+off time	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 14.37 ms #Peak 10.62 dBm Log 10 dB/ Offst 12.3 dB LgAv W1 S2 S3 FS AA E(f): FTun Center 5.180 000 GHz Span 0 Hz Res BW 1 MHz *VBW 1 MHz Sweep 20 ms (601 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.1800000 GHz Start Freq 5.1800000 GHz Stop Freq 5.1800000 GHz CF Step 1.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode	
On time	<p>Agilent R T Freq/Channel</p> <p>Ref 20 dBm Atten 20 dB Mkr1 4.233 ms #Peak 8.83 dBm</p> <p>Log 10 dB/ Offst 12.3 dB</p> <p>LgAv</p> <p>W1 S2 S3 FS AA</p> <p>E(f): FTun</p> <p>Center 5.180 000 GHz Span 0 Hz Res BW 1 MHz *VBW 1 MHz Sweep 20 ms (601 pts)</p> <p>Copyright 2000-2006 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 5.18000000 GHz</p> <p>Start Freq 5.18000000 GHz</p> <p>Stop Freq 5.18000000 GHz</p> <p>CF Step 1.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
On+off time	<p>Agilent R T Freq/Channel</p> <p>Ref 20 dBm Atten 20 dB Mkr1 4.233 ms #Peak 8.83 dBm</p> <p>Log 10 dB/ Offst 12.3 dB</p> <p>LgAv</p> <p>W1 S2 S3 FS AA</p> <p>E(f): FTun</p> <p>Center 5.180 000 GHz Span 0 Hz Res BW 1 MHz *VBW 1 MHz Sweep 20 ms (601 pts)</p> <p>Copyright 2000-2006 Agilent Technologies</p> <p>Freq/Channel</p> <p>Center Freq 5.18000000 GHz</p> <p>Start Freq 5.18000000 GHz</p> <p>Stop Freq 5.18000000 GHz</p> <p>CF Step 1.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>



Mode 4: IEEE 802.11ac 40MHz Link Mode	
<p>On time</p>	
<p>On+off time</p>	



Mode 5: IEEE 802.11ac 80MHz Link Mode	
<p>On time</p>	
<p>On+off time</p>	

3.2. EUT Exercise Software

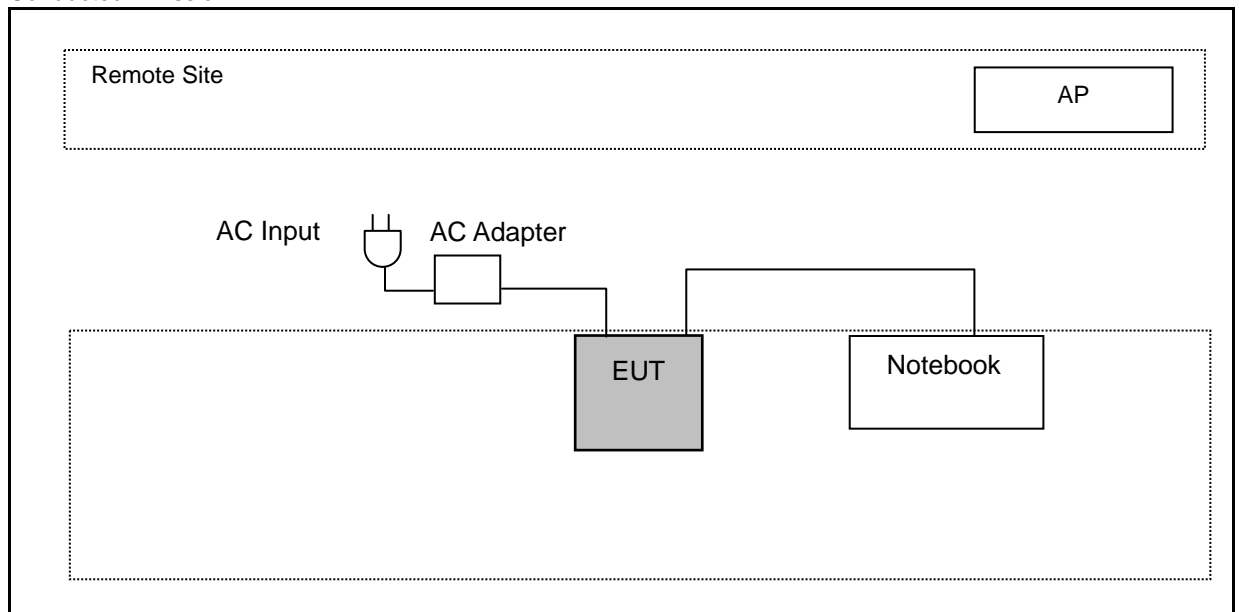
The EUT is operated in the engineering mode to fix the TX frequency for the purposes of measurement. According to its specifications, the EUT must comply with the requirements of Section 15.407 under the FCC Rules Part 15 Subpart E.

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

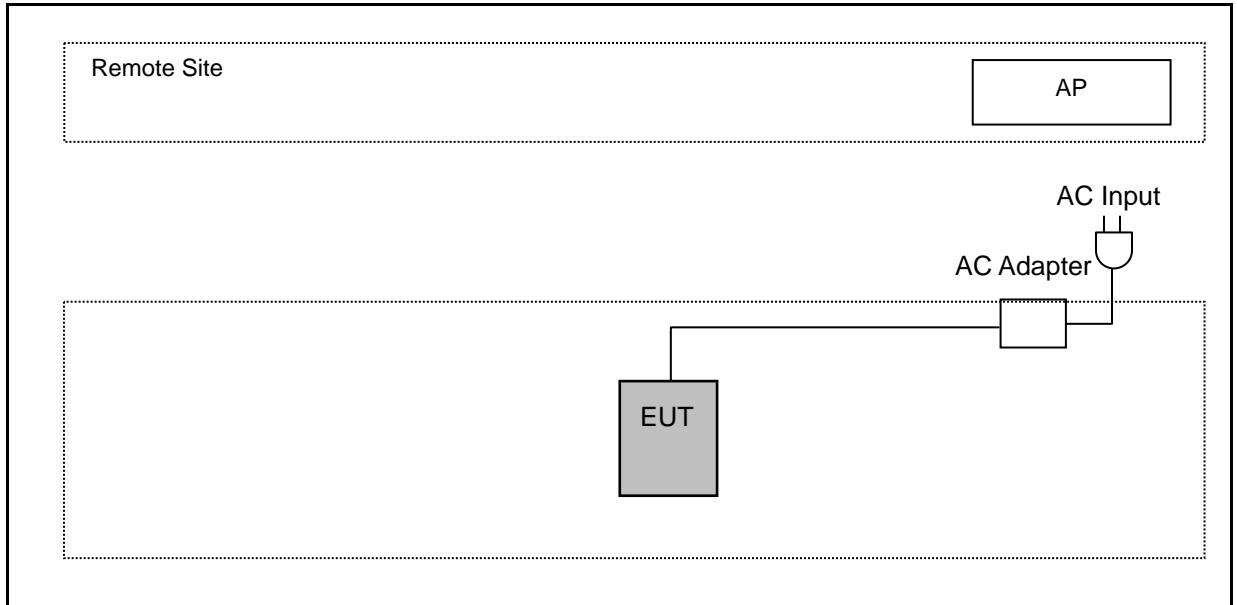
Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

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

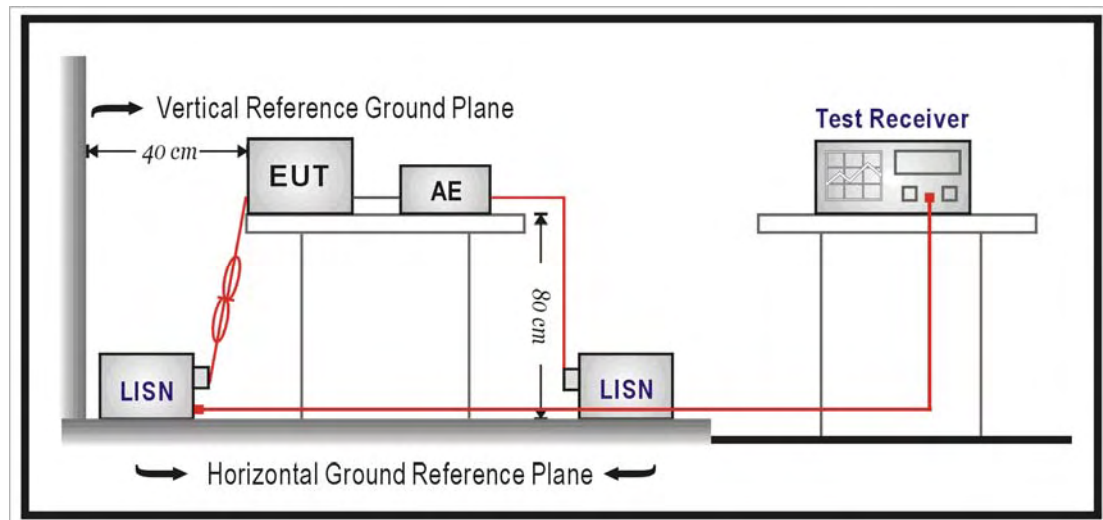
Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ 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.

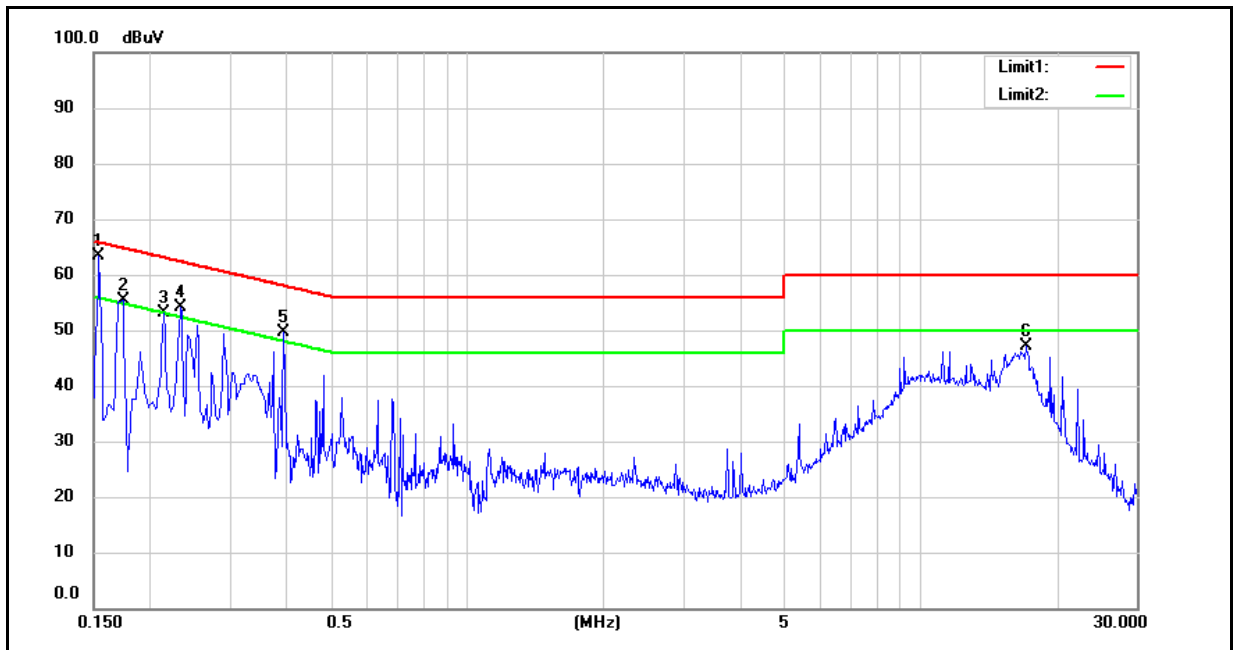
The AMN shall be placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 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
Test Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
		Date:	11/16/2016
Description:			



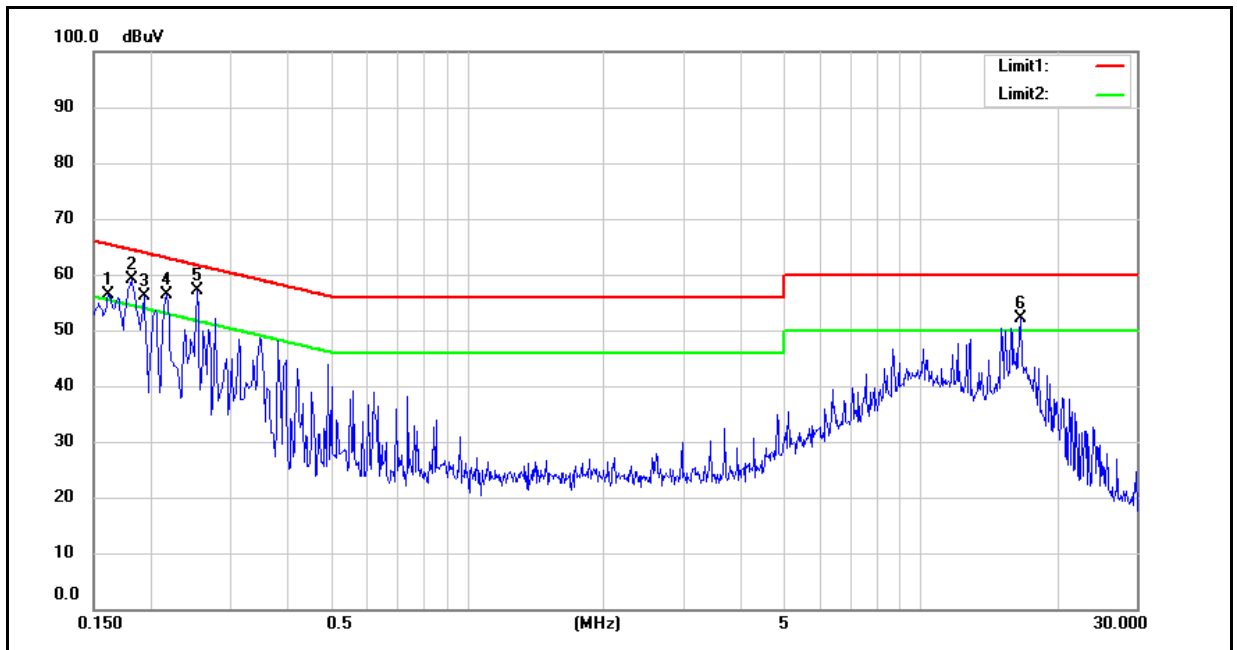
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	40.26	15.92	9.63	49.89	25.55	65.78	55.78	-15.89	-30.23	Pass
2	0.1740	37.43	9.68	9.64	47.07	19.32	64.77	54.77	-17.70	-35.45	Pass
3	0.2140	35.22	12.74	9.64	44.86	22.38	63.05	53.05	-18.19	-30.67	Pass
4	0.2340	32.45	14.31	9.64	42.09	23.95	62.31	52.31	-20.22	-28.36	Pass
5	0.3940	23.16	7.38	9.65	32.81	17.03	57.98	47.98	-25.17	-30.95	Pass
6	17.1220	29.79	22.31	10.21	40.00	32.52	60.00	50.00	-20.00	-17.48	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
Test Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
		Date:	11/16/2016
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	38.63	13.37	9.64	48.27	23.01	65.36	55.36	-17.09	-32.35	Pass
2	0.1820	36.81	9.06	9.64	46.45	18.70	64.39	54.39	-17.94	-35.69	Pass
3	0.1940	36.75	10.73	9.64	46.39	20.37	63.86	53.86	-17.47	-33.49	Pass
4	0.2180	34.27	9.30	9.64	43.91	18.94	62.89	52.89	-18.98	-33.95	Pass
5	0.2540	31.32	9.49	9.65	40.97	19.14	61.63	51.63	-20.66	-32.49	Pass
6	16.6620	27.90	21.36	10.21	38.11	31.57	60.00	50.00	-21.89	-18.43	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.

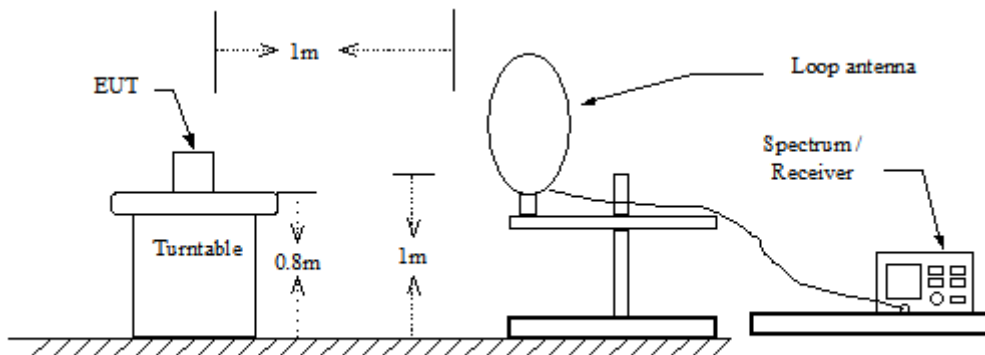
■ Test Instruments

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

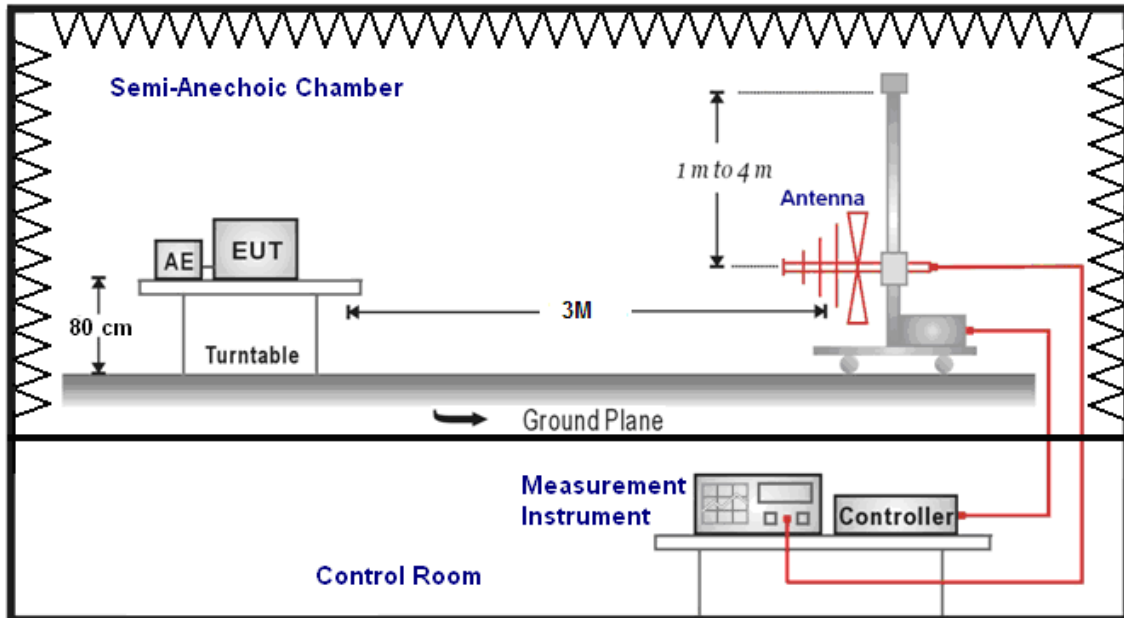
Note: N.C.R. = No Calibration Request.

■ Setup

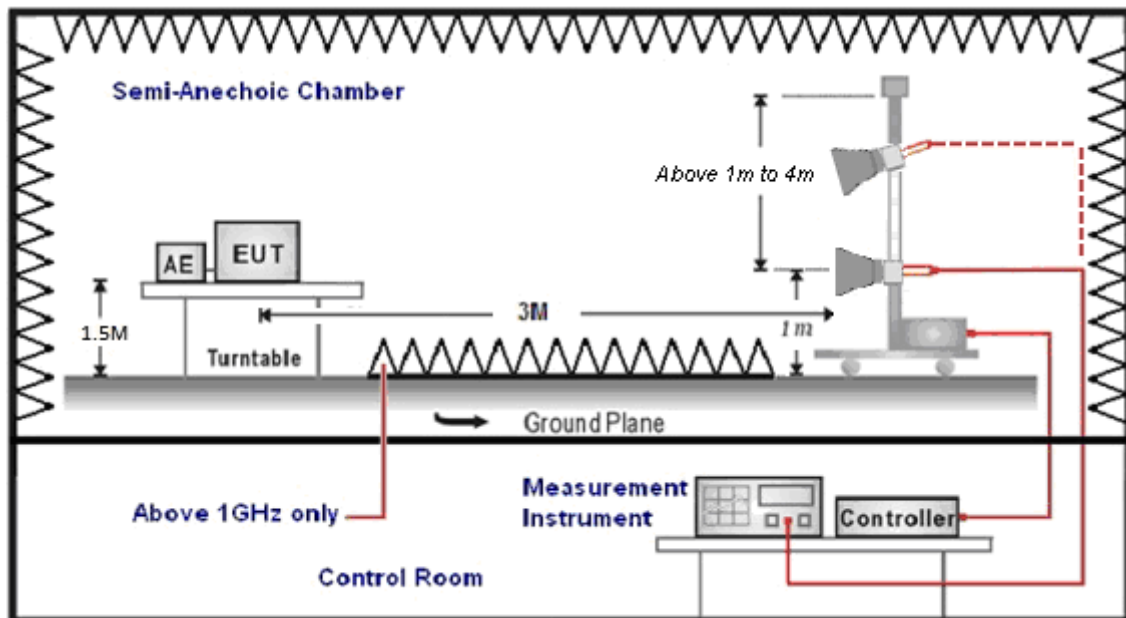
9kHz ~ 30MHz



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

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

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

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 15.407		Test Distance:		3m	
Test item:		Radiated Emission		Power:		AC 120V/60Hz	
Test Mode:		Mode 1		Temp.(°C)/Hum.(%RH):		26(°C)/60%RH	
				Date:		12/12/2016	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
196.5000	43.82	-7.67	36.15	43.50	-7.35	QP	H
270.5000	38.19	-4.43	33.76	46.00	-12.24	QP	H
319.5000	39.10	-3.10	36.00	46.00	-10.00	QP	H
502.0000	27.04	0.77	27.81	46.00	-18.19	QP	H
667.0000	25.64	4.16	29.80	46.00	-16.20	QP	H
883.0000	25.17	8.24	33.41	46.00	-12.59	QP	H
176.0000	33.36	-5.89	27.47	43.50	-16.03	QP	V
270.5000	29.47	-4.43	25.04	46.00	-20.96	QP	V
448.5000	26.96	-0.22	26.74	46.00	-19.26	QP	V
629.0000	28.11	3.49	31.60	46.00	-14.40	QP	V
827.5000	26.26	7.16	33.42	46.00	-12.58	QP	V
983.0000	26.39	9.80	36.19	54.00	-17.81	QP	V

Note:1.Result = Correction factor + Reading.

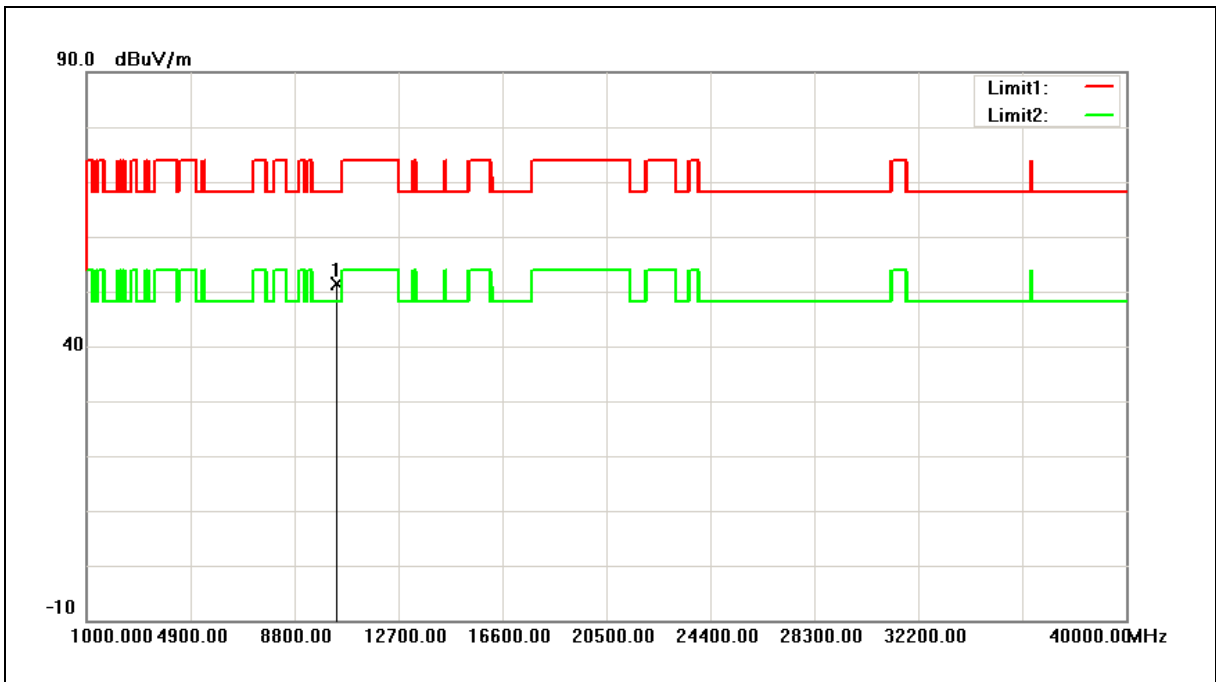
2.Correction factor = Antenna Factor + Cable loss – Pre-Amplifier gain.

3.No emission found between lowest internal used/generated frequencies to 30MHz (9 kHz~30MHz).



Above 1GHz

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10360.000	46.35	4.97	51.32	68.20	-16.88	peak

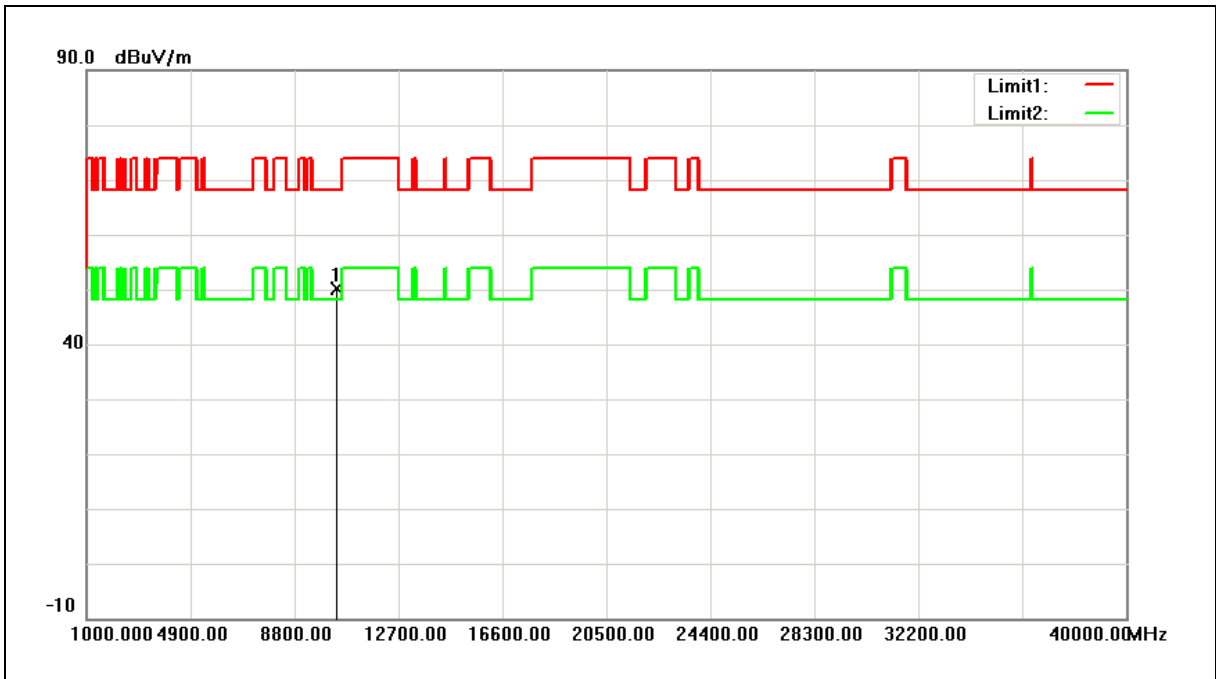
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

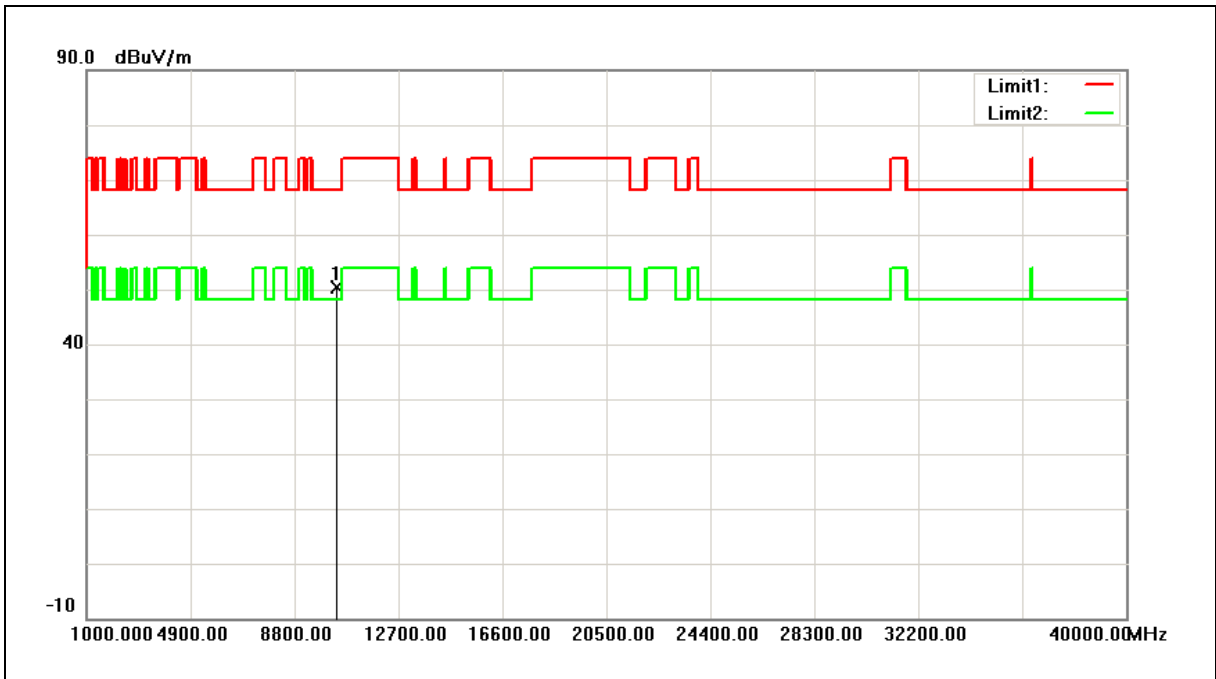


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10360.000	45.20	4.97	50.17	68.20	-18.03	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

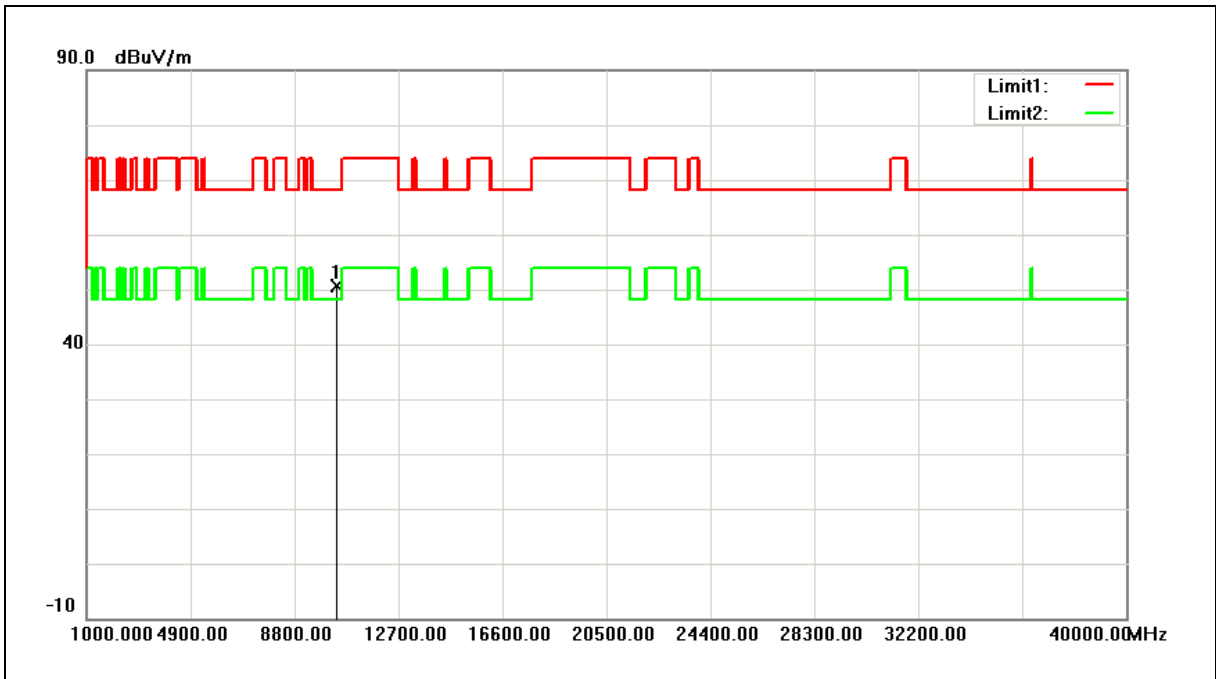


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10400.000	45.35	5.07	50.42	68.20	-17.78	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

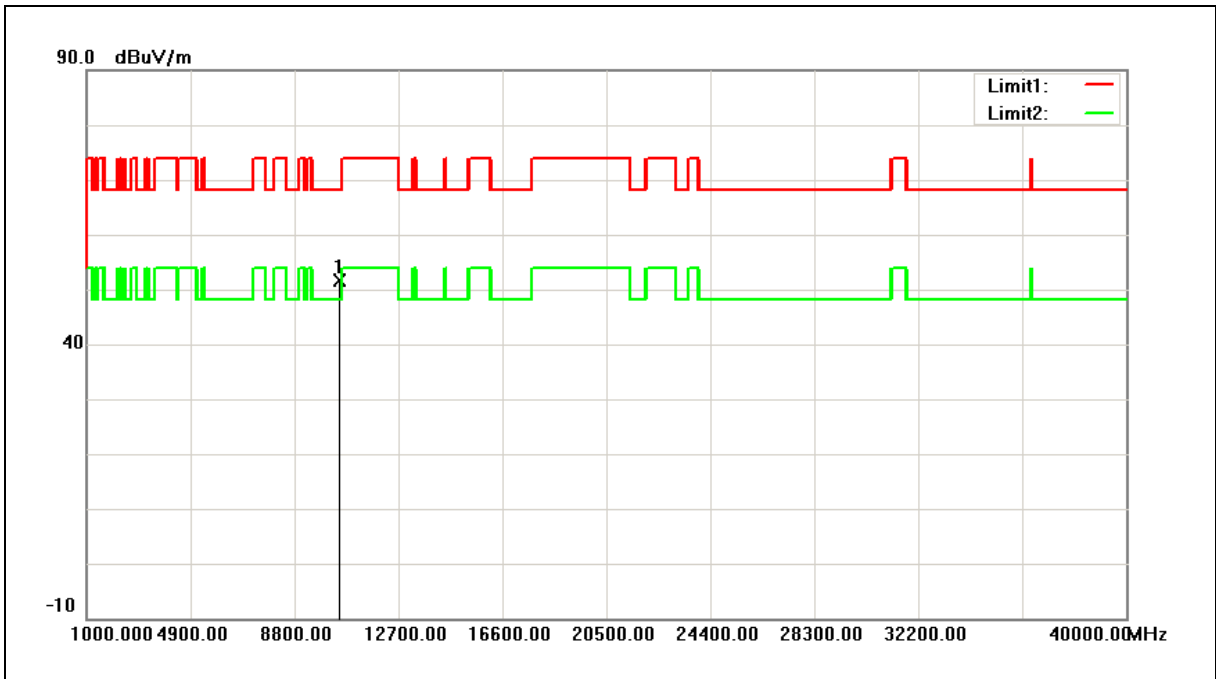


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10400.000	45.44	5.07	50.51	68.20	-17.69	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

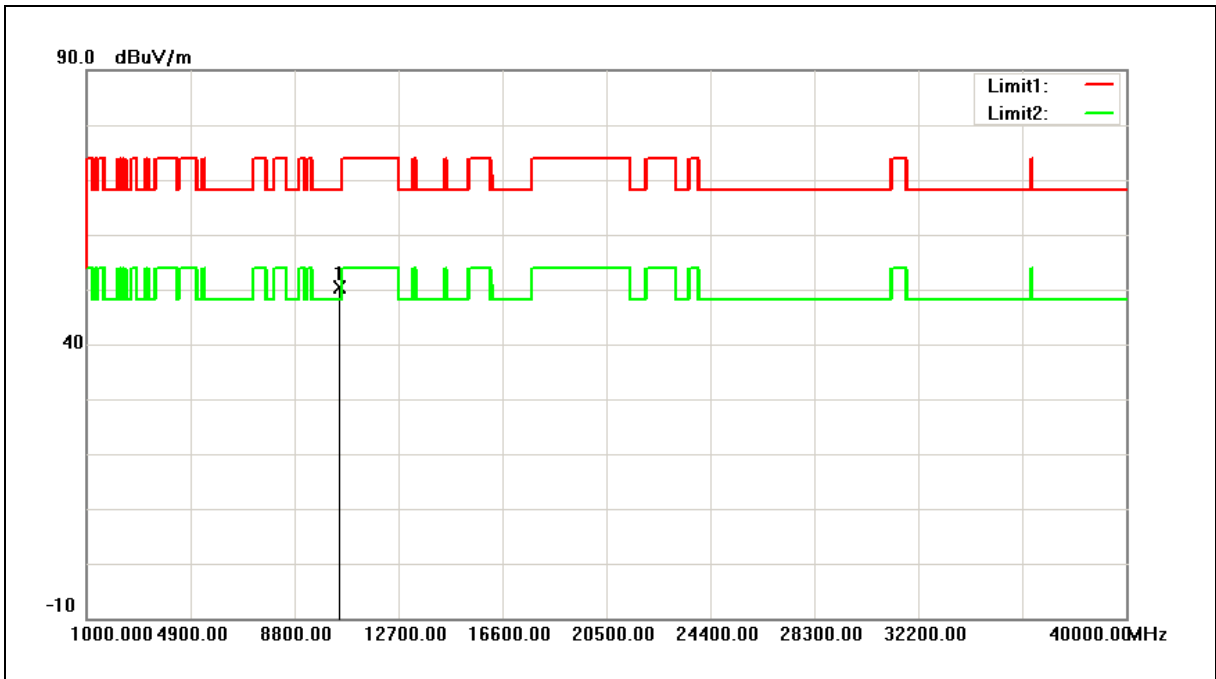


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10480.000	46.44	5.25	51.69	68.20	-16.51	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

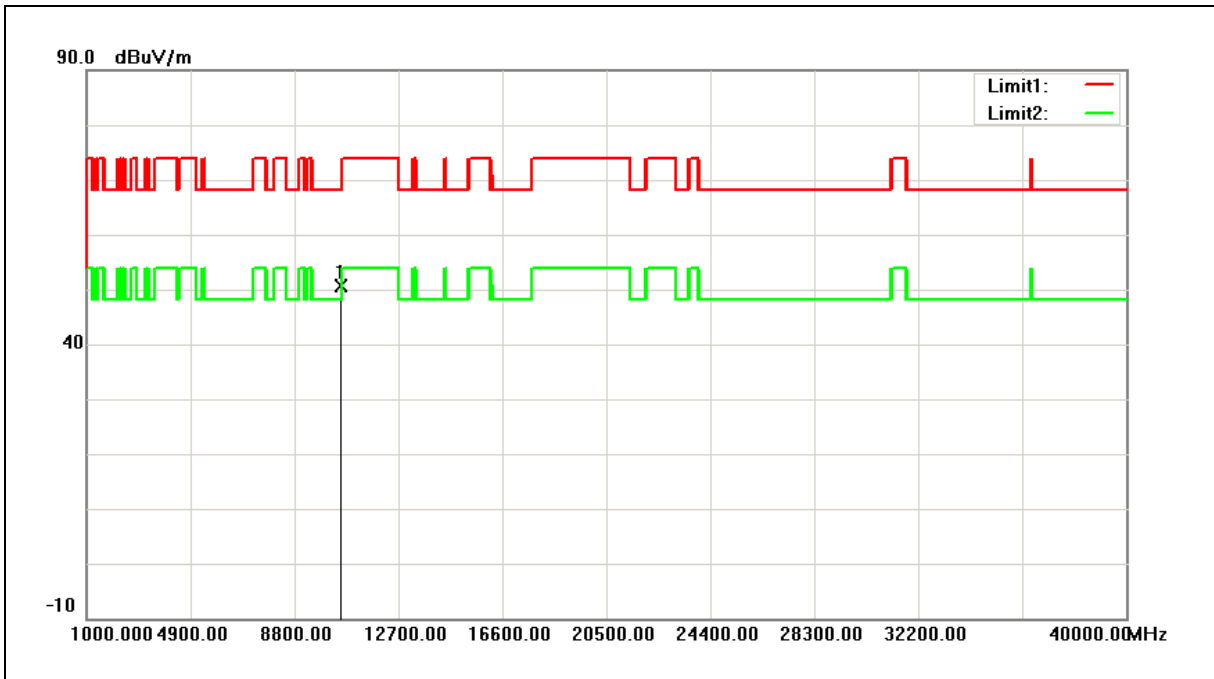


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10480.000	45.20	5.25	50.45	68.20	-17.75	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5260MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

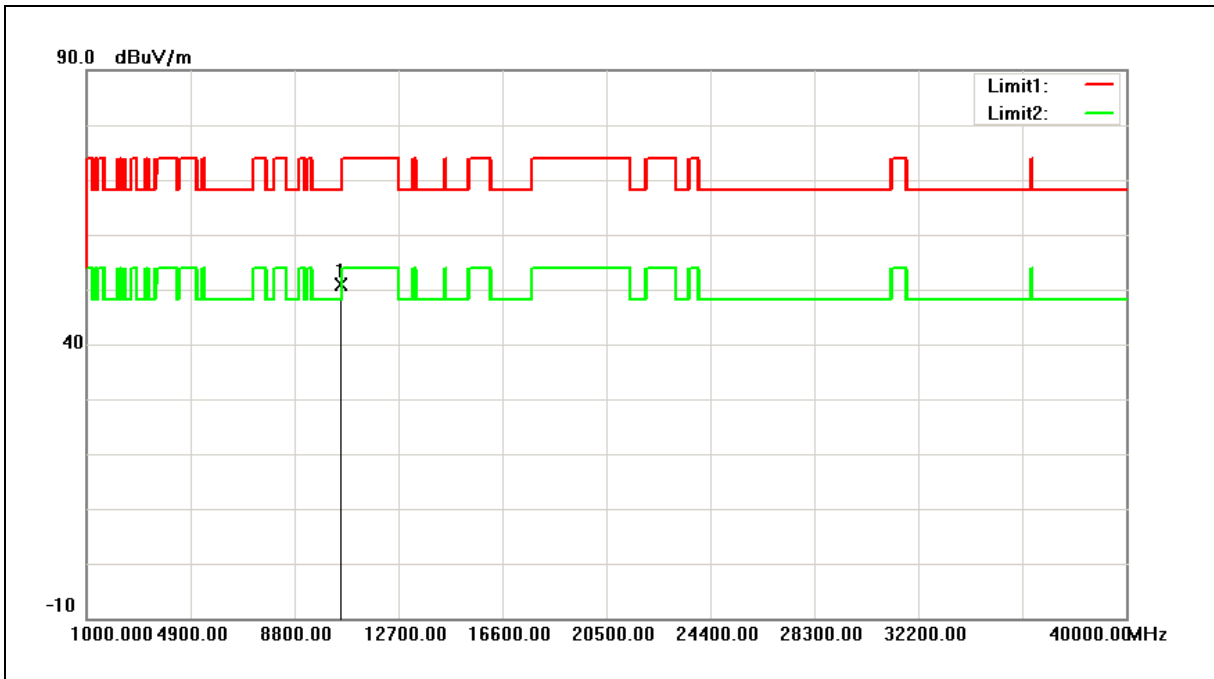


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10520.000	45.42	5.33	50.75	68.20	-17.45	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5260MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

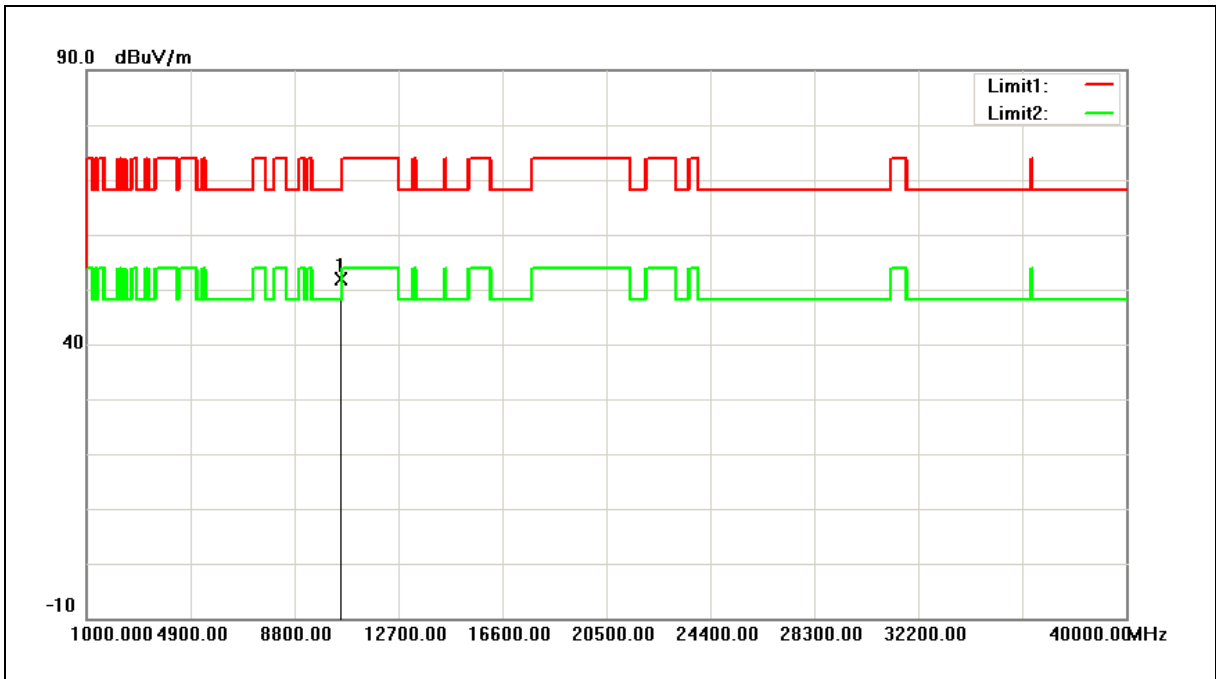


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10520.000	45.61	5.33	50.94	68.20	-17.26	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5280MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

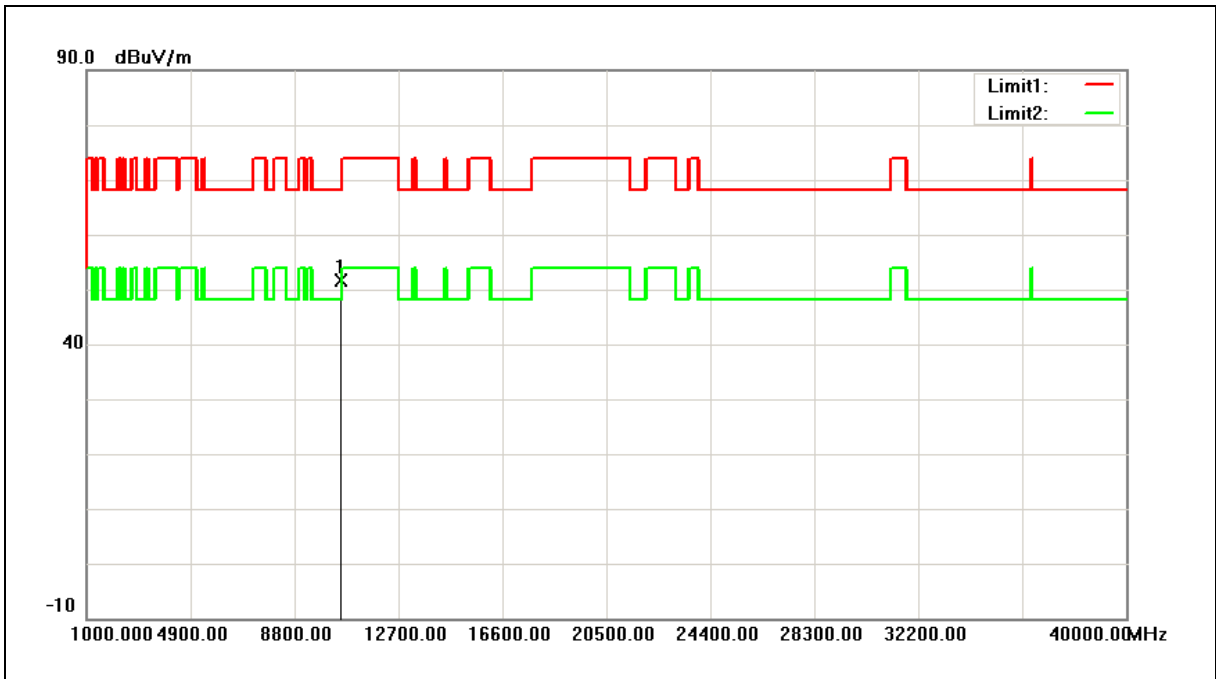


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10560.000	46.59	5.37	51.96	68.20	-16.24	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5280MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

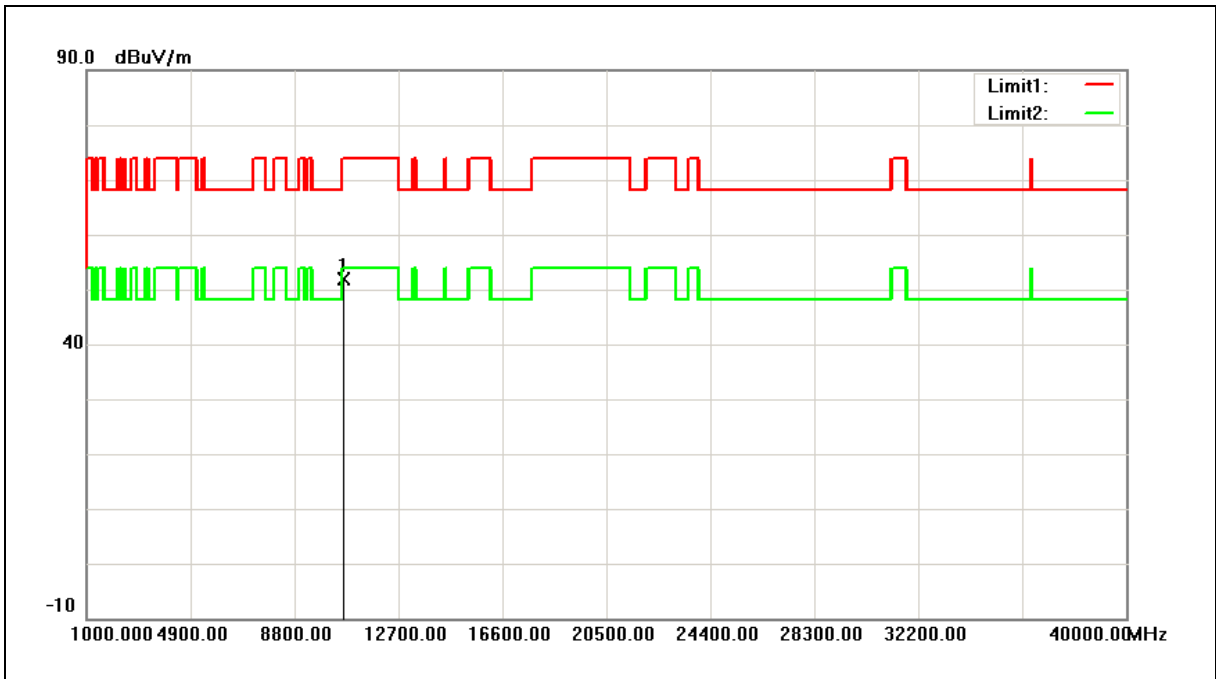


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10560.000	46.31	5.37	51.68	68.20	-16.52	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

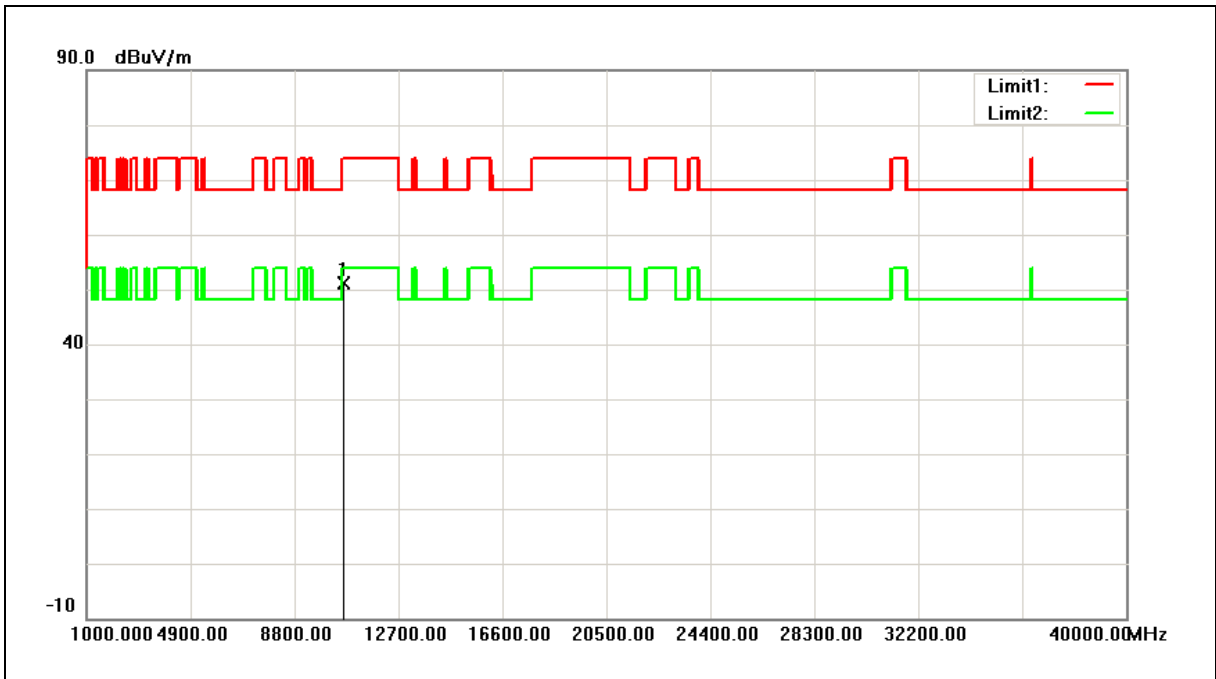


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10640.000	46.52	5.45	51.97	74.00	-22.03	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

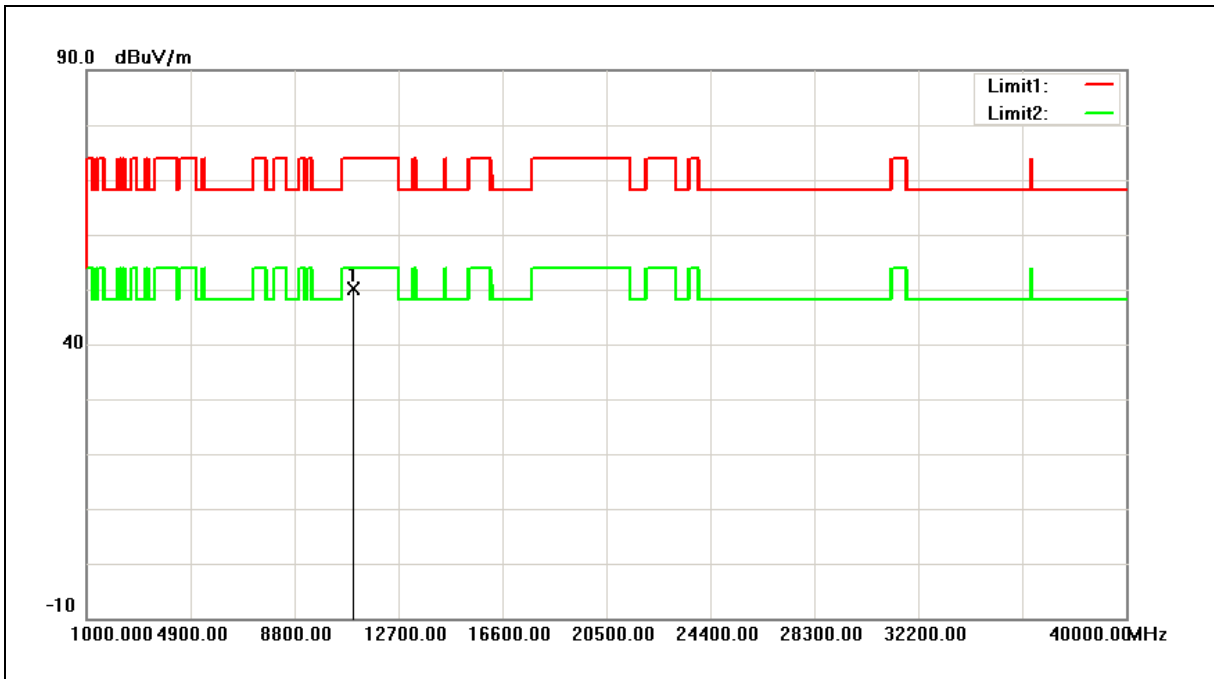


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10640.000	45.76	5.45	51.21	74.00	-22.79	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

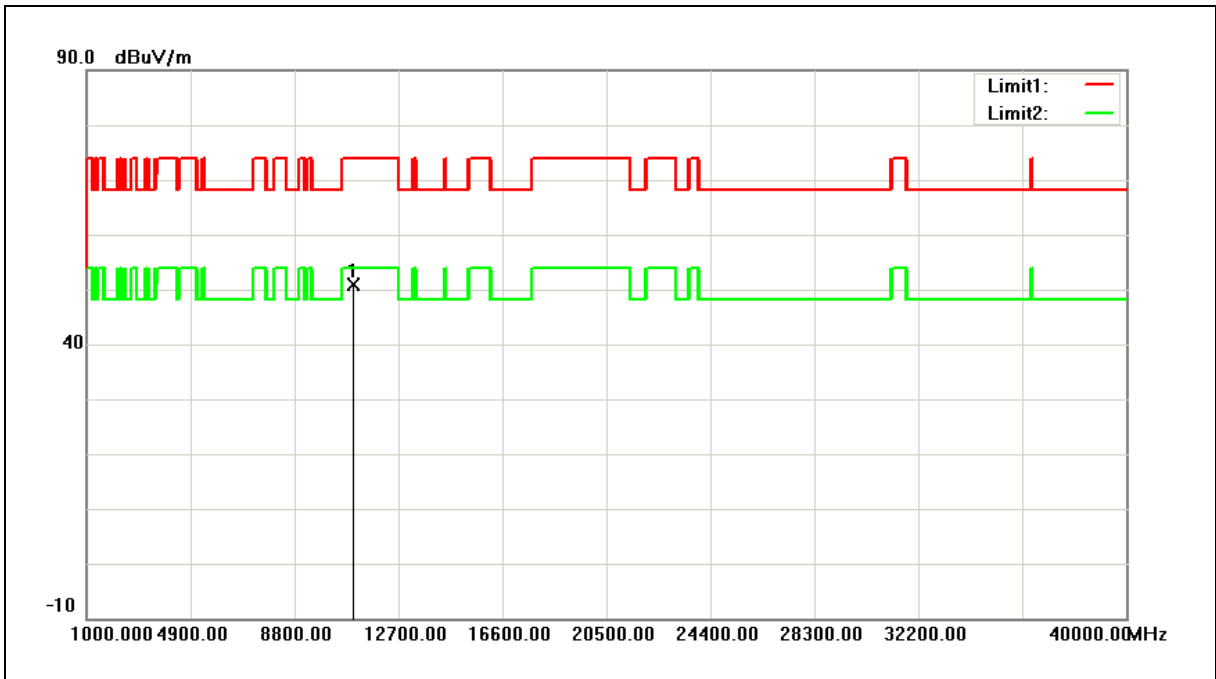


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11000.000	44.41	5.78	50.19	74.00	-23.81	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

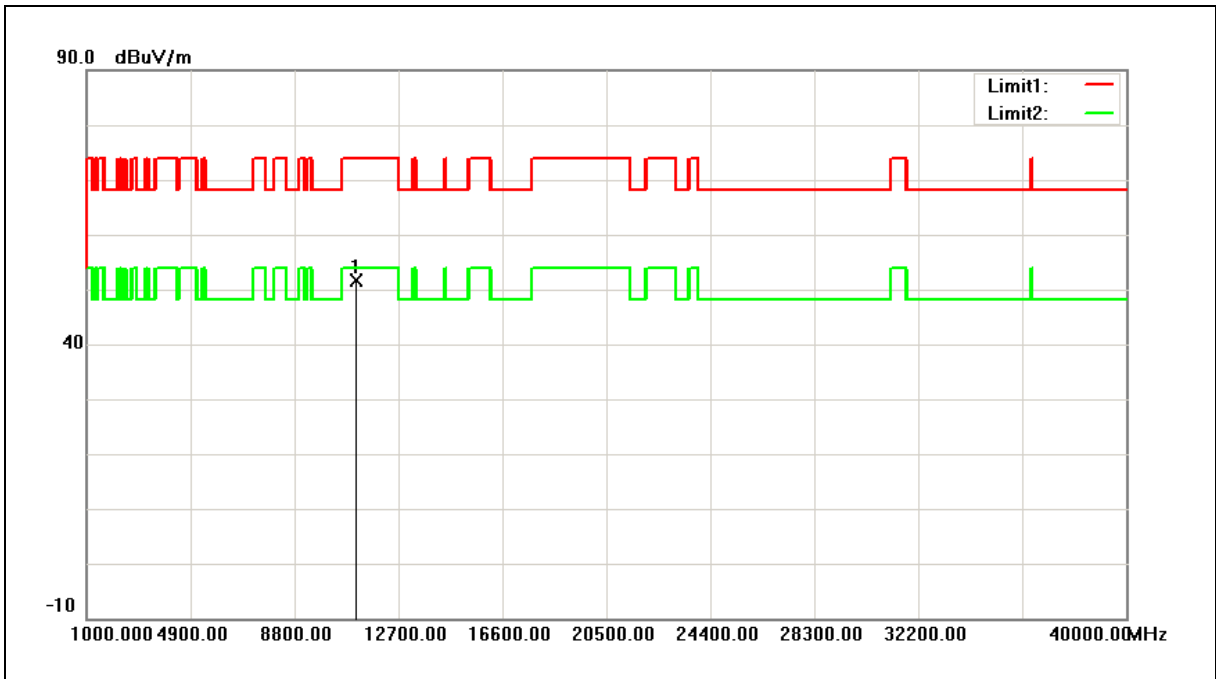


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11000.000	45.07	5.78	50.85	74.00	-23.15	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5560MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

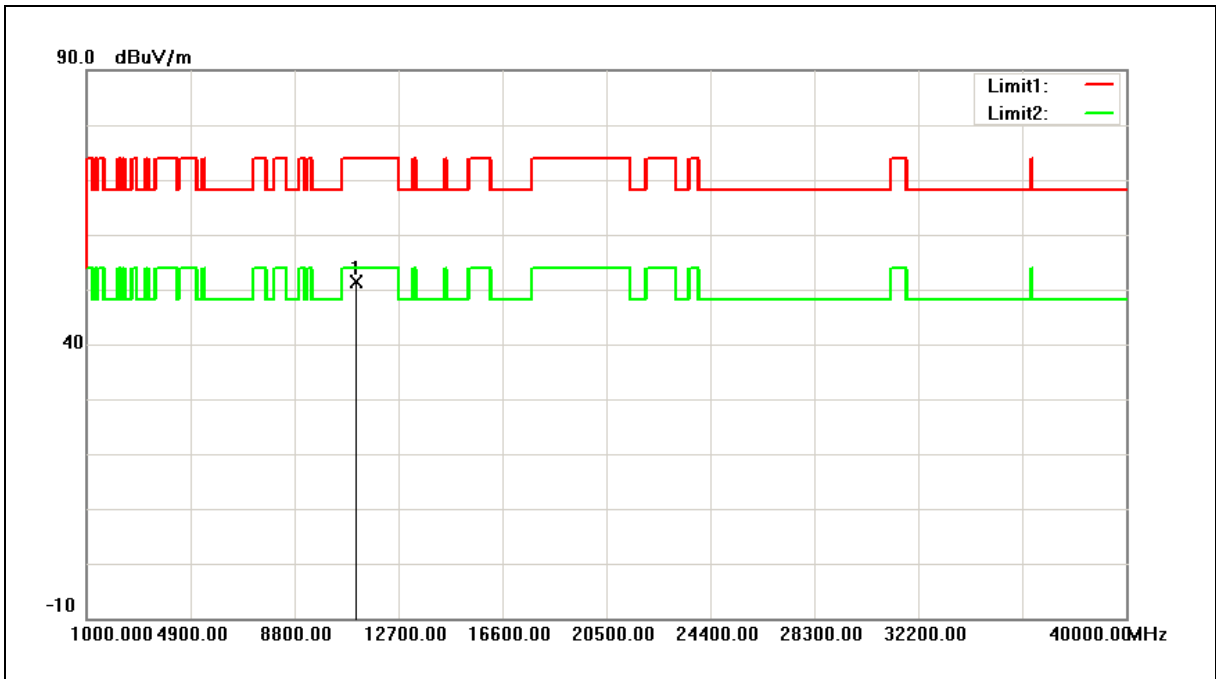


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11120.000	45.76	5.87	51.63	74.00	-22.37	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5560MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

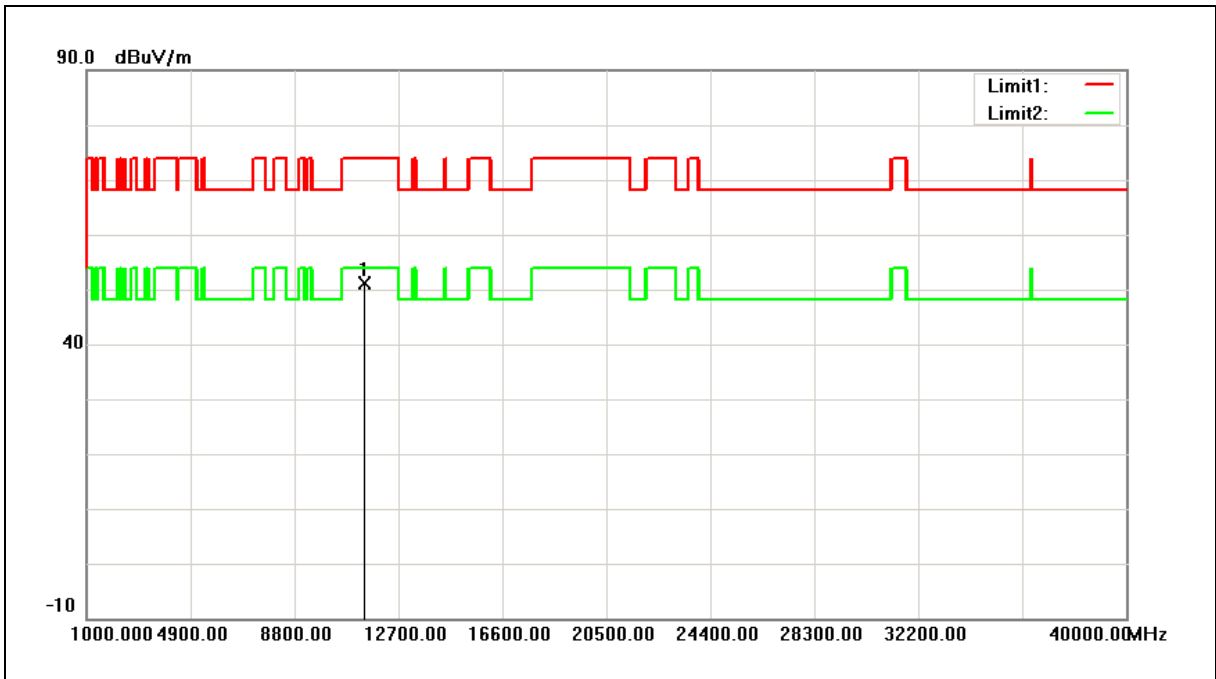


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11120.000	45.41	5.87	51.28	74.00	-22.72	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5700MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

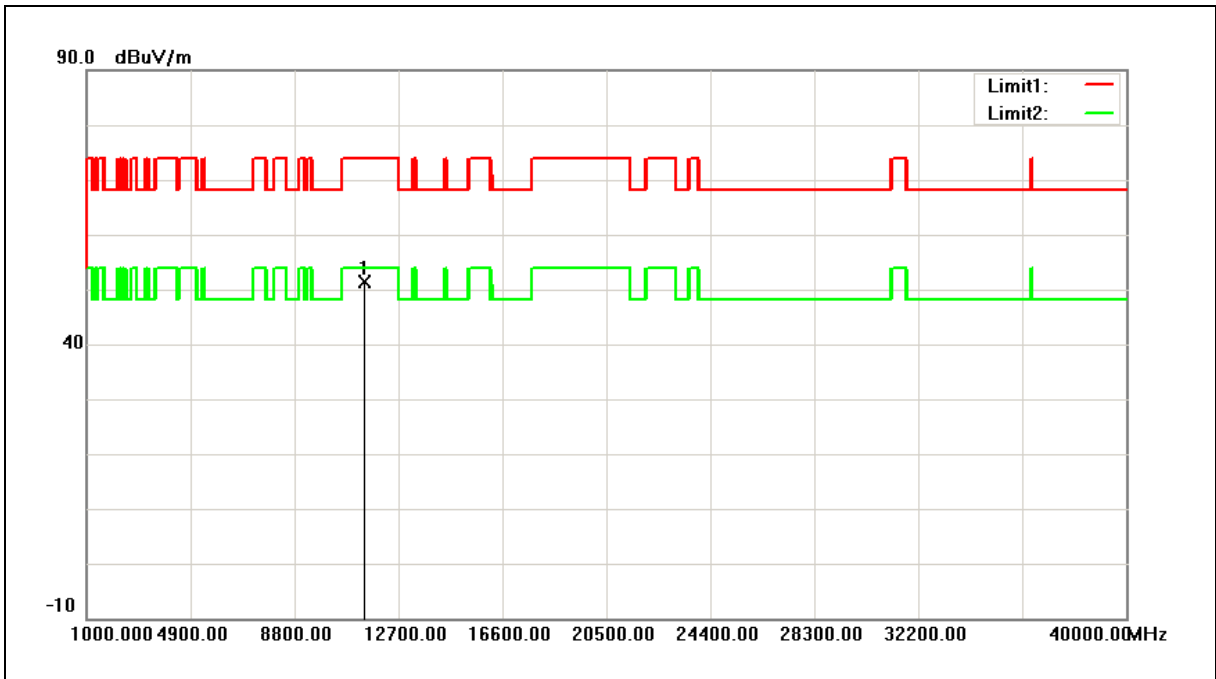


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11400.000	45.03	6.07	51.10	74.00	-22.90	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5700MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

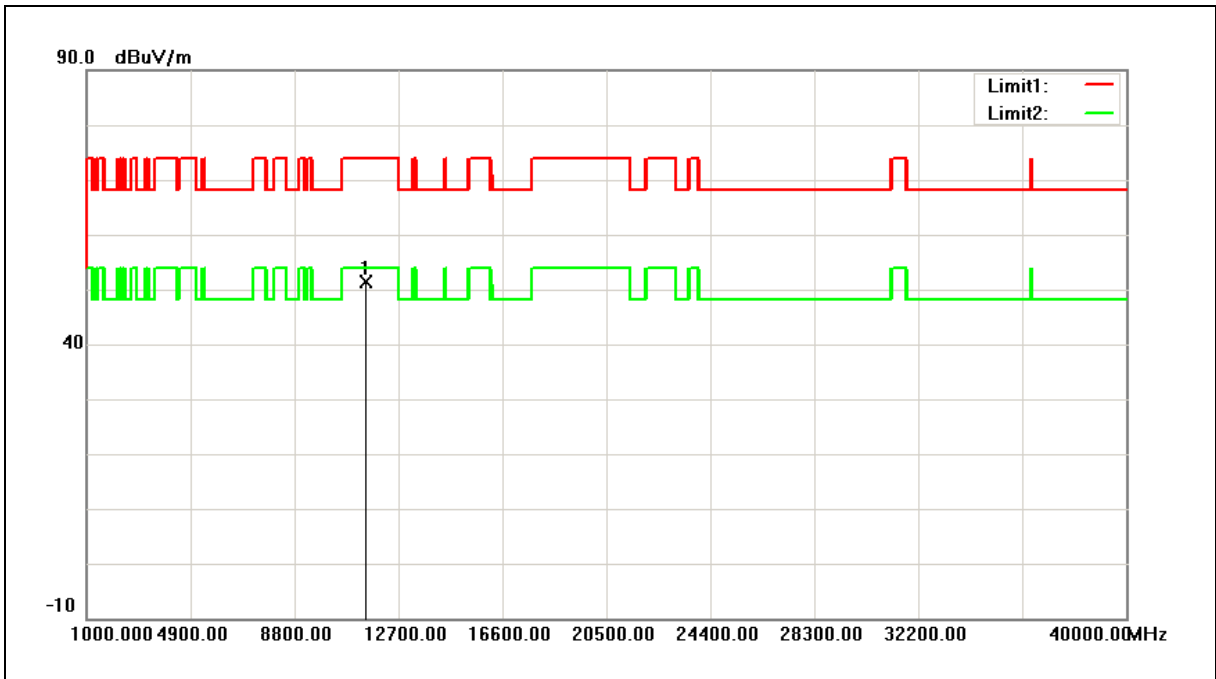


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11400.000	45.38	6.07	51.45	74.00	-22.55	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

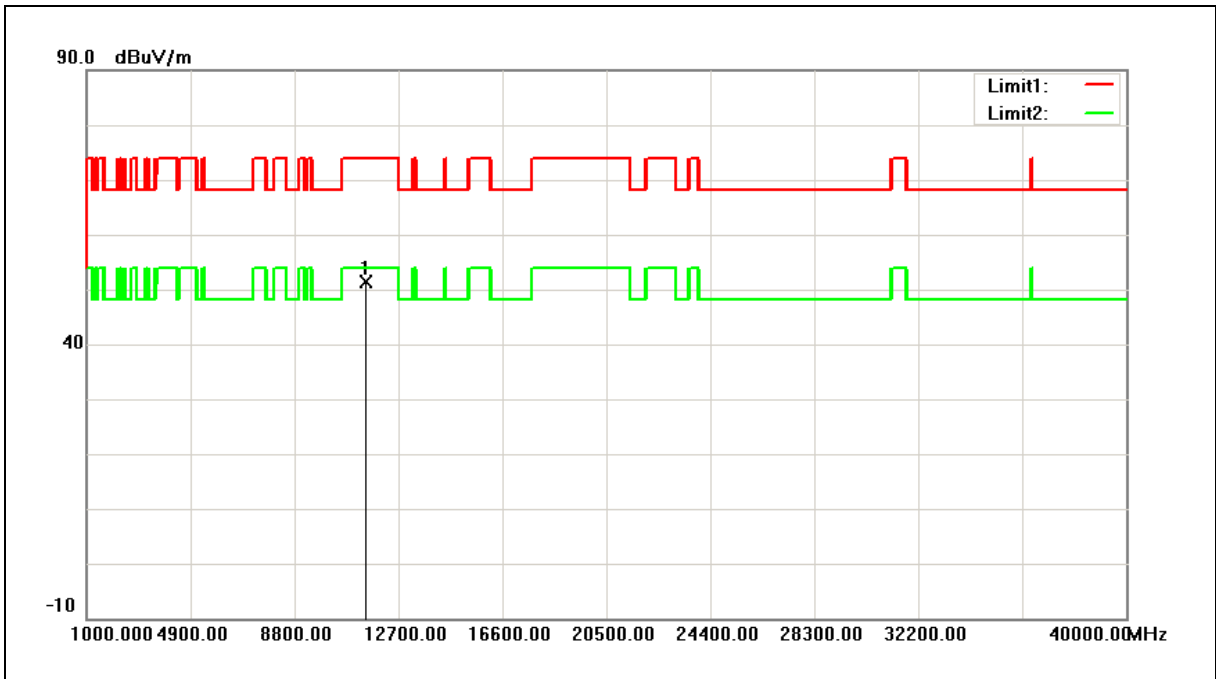


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11490.000	45.29	6.14	51.43	74.00	-22.57	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

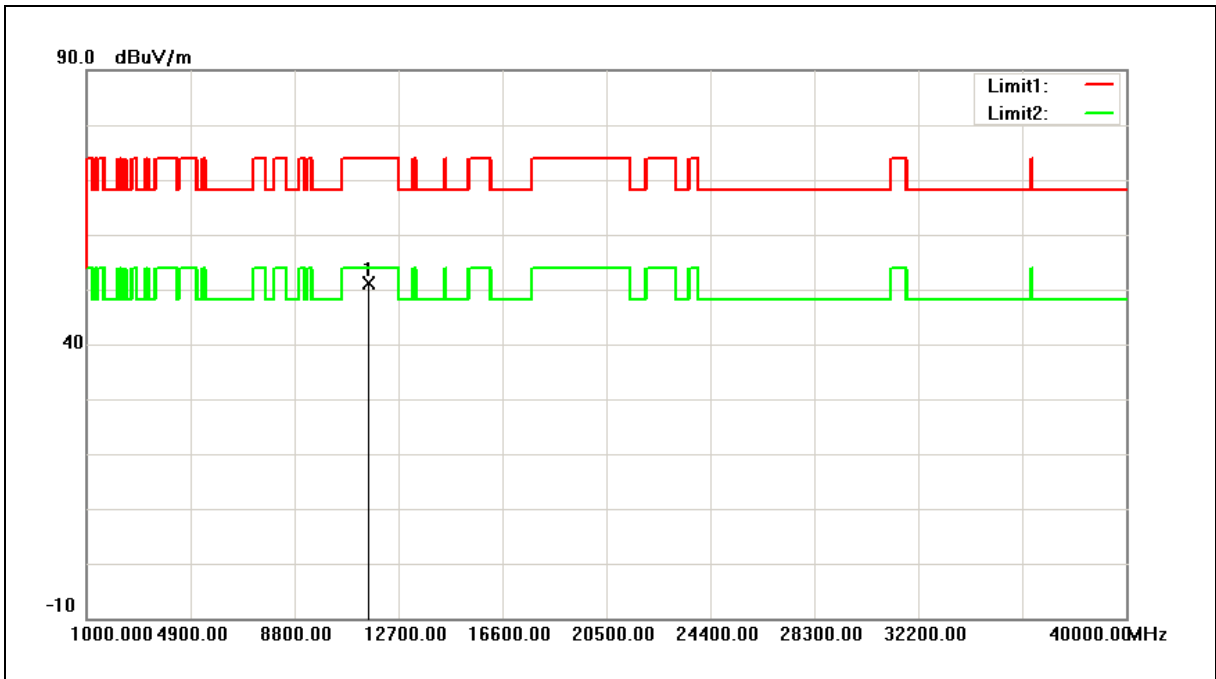


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11490.000	45.13	6.14	51.27	74.00	-22.73	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

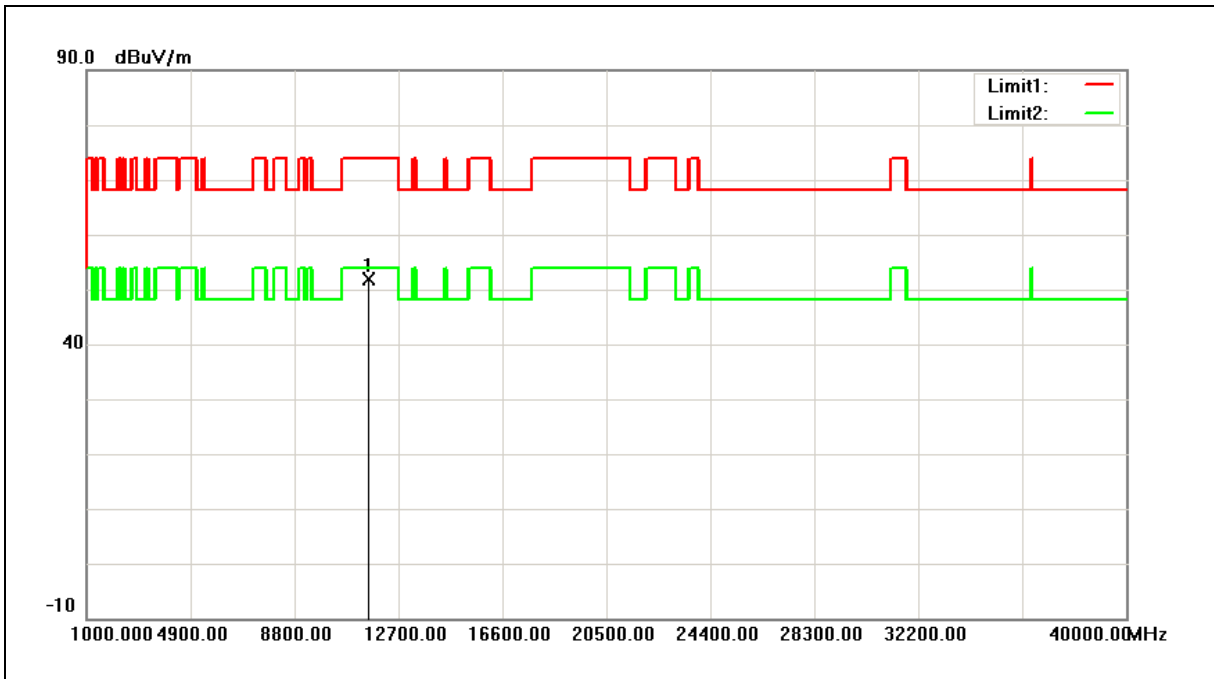


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11570.000	44.78	6.35	51.13	74.00	-22.87	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

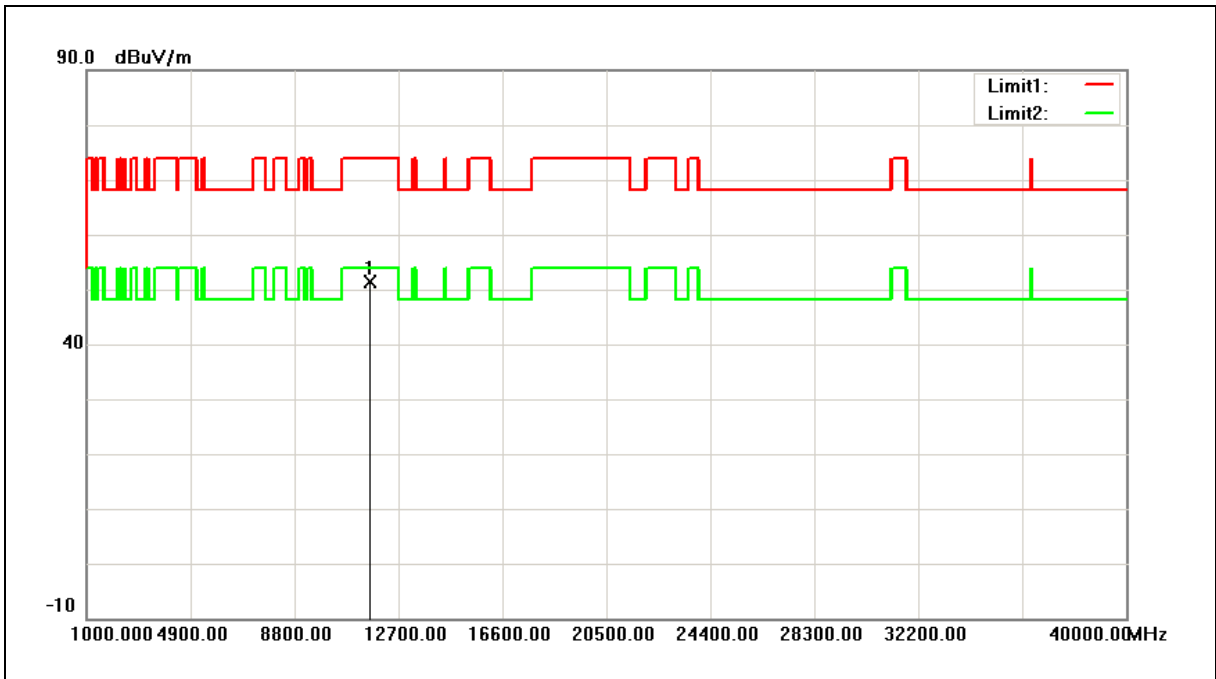


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11570.000	45.53	6.35	51.88	74.00	-22.12	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Horizontal		

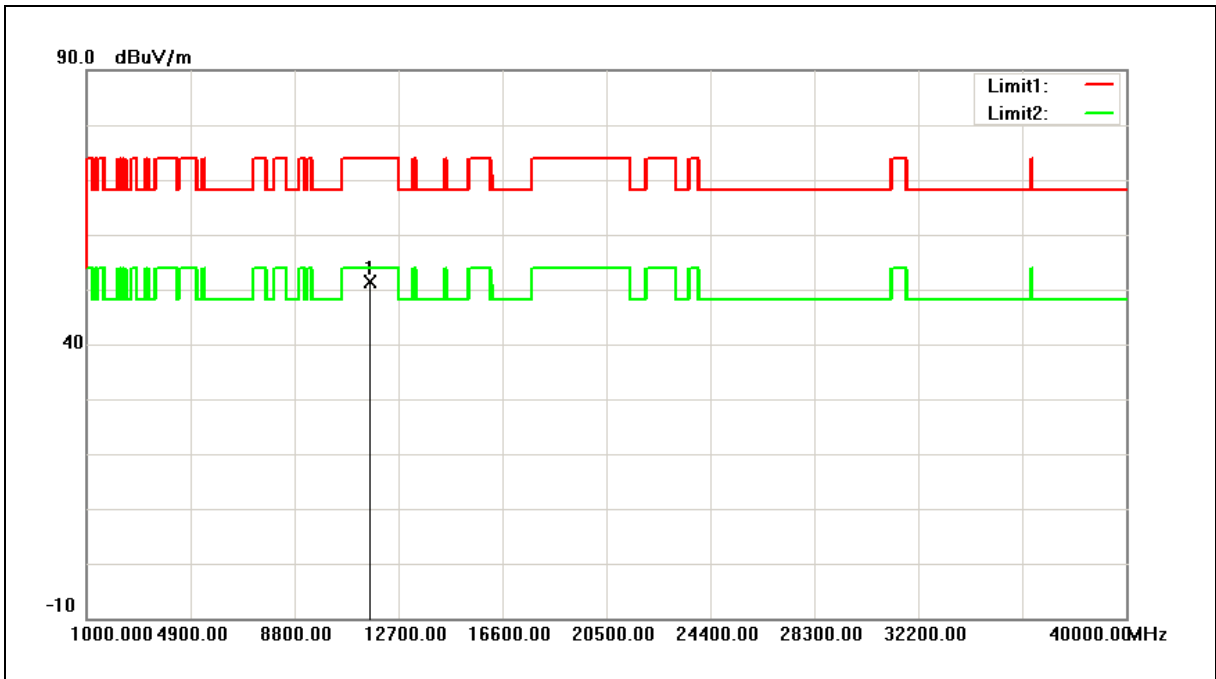


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11650.000	44.81	6.58	51.39	74.00	-22.61	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/10/2016
Ant.Polar.:	Vertical		

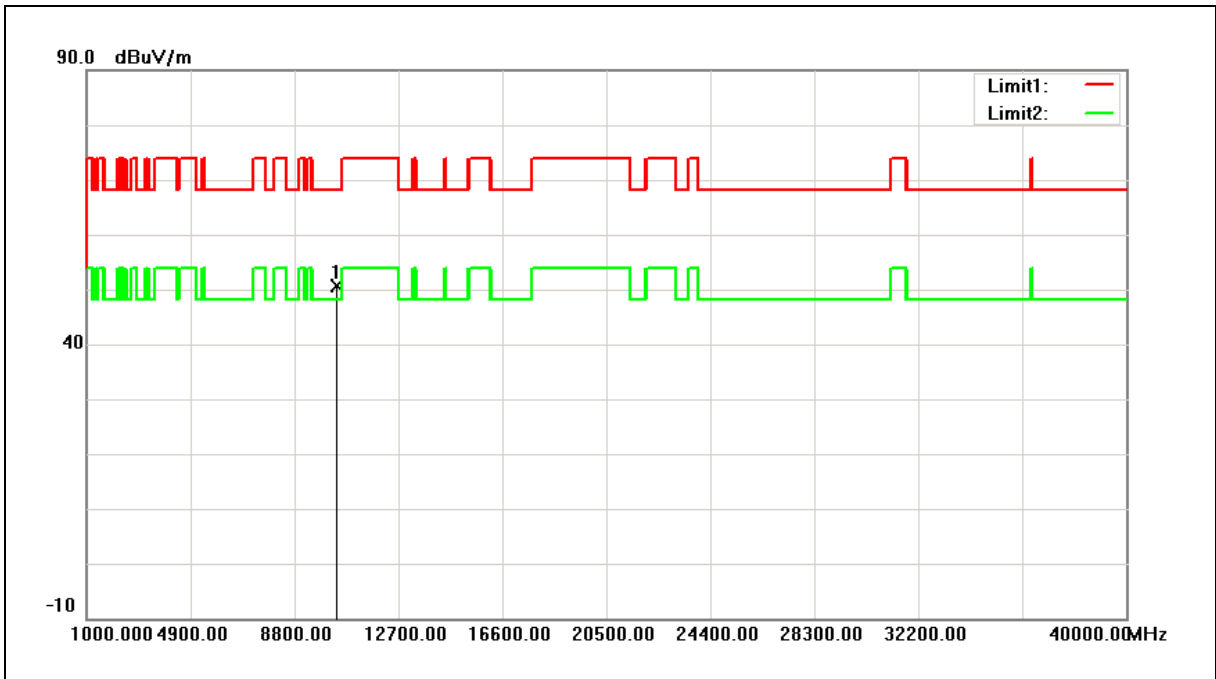


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11650.000	44.89	6.58	51.47	74.00	-22.53	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

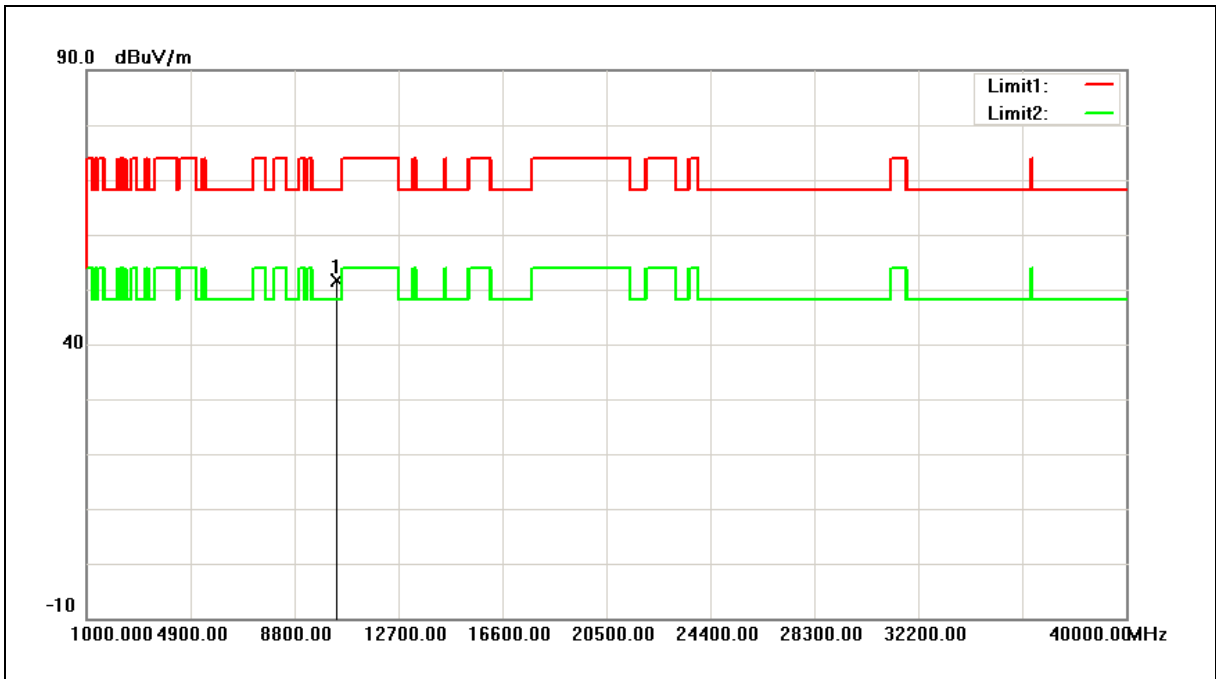


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10360.000	45.64	4.97	50.61	68.20	-17.59	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

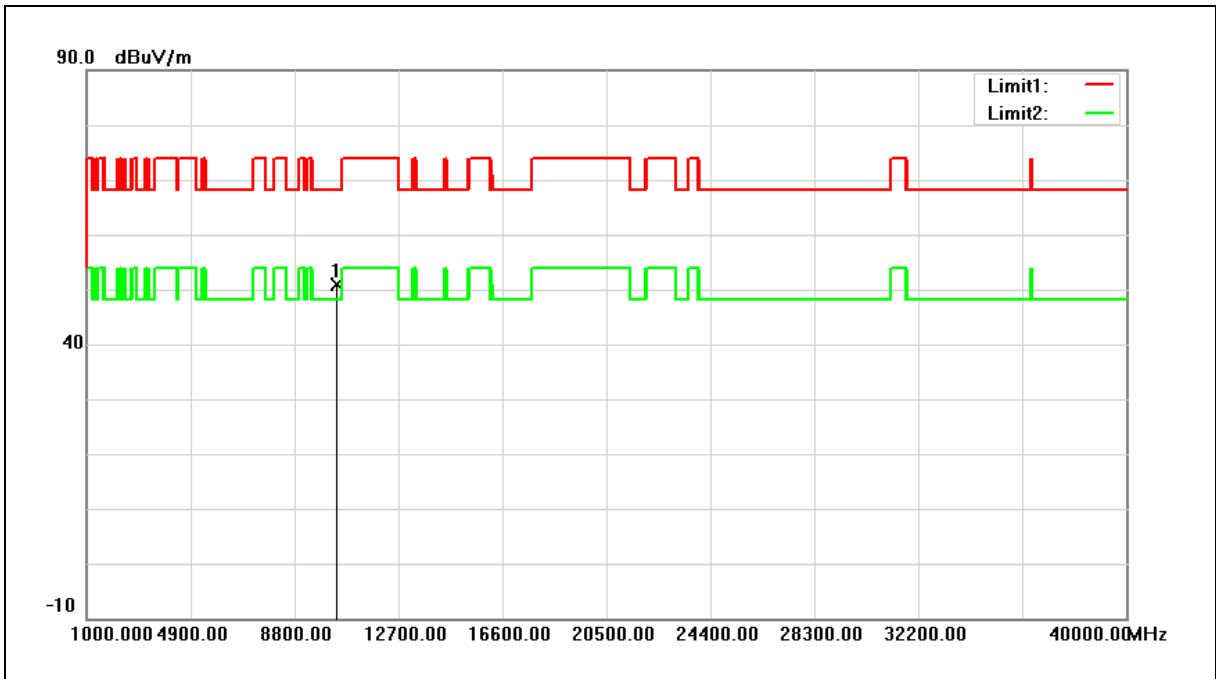


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10360.000	46.68	4.97	51.65	68.20	-16.55	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

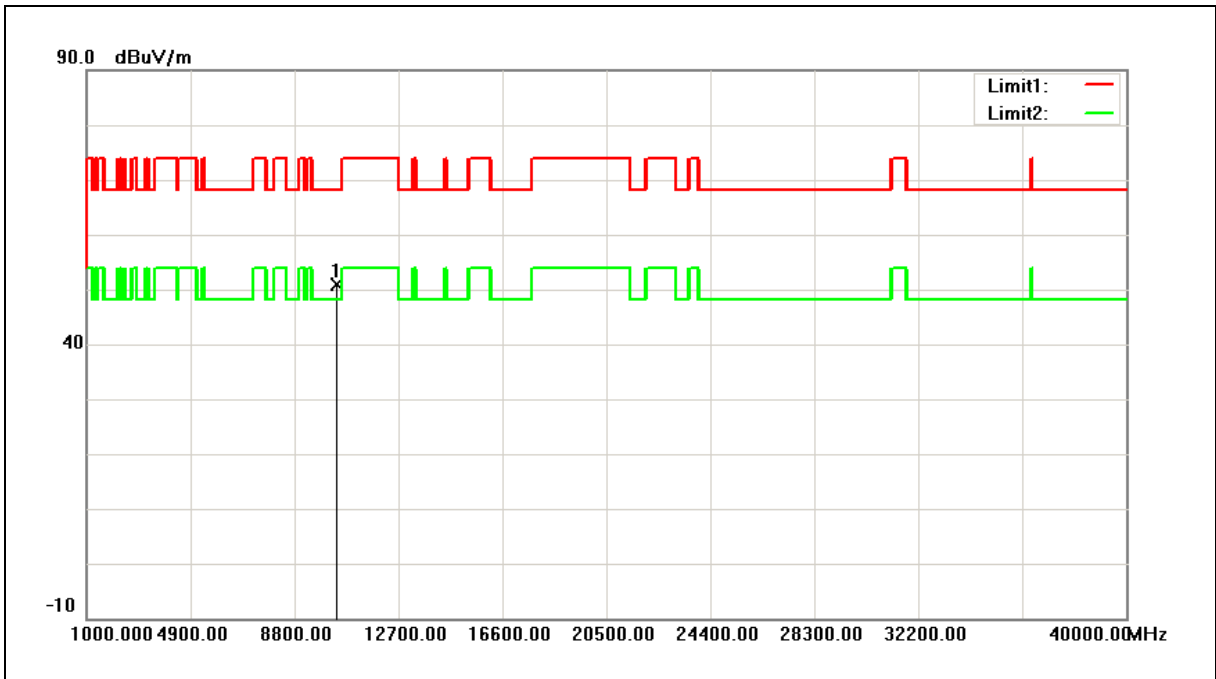


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10400.000	45.81	5.07	50.88	68.20	-17.32	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

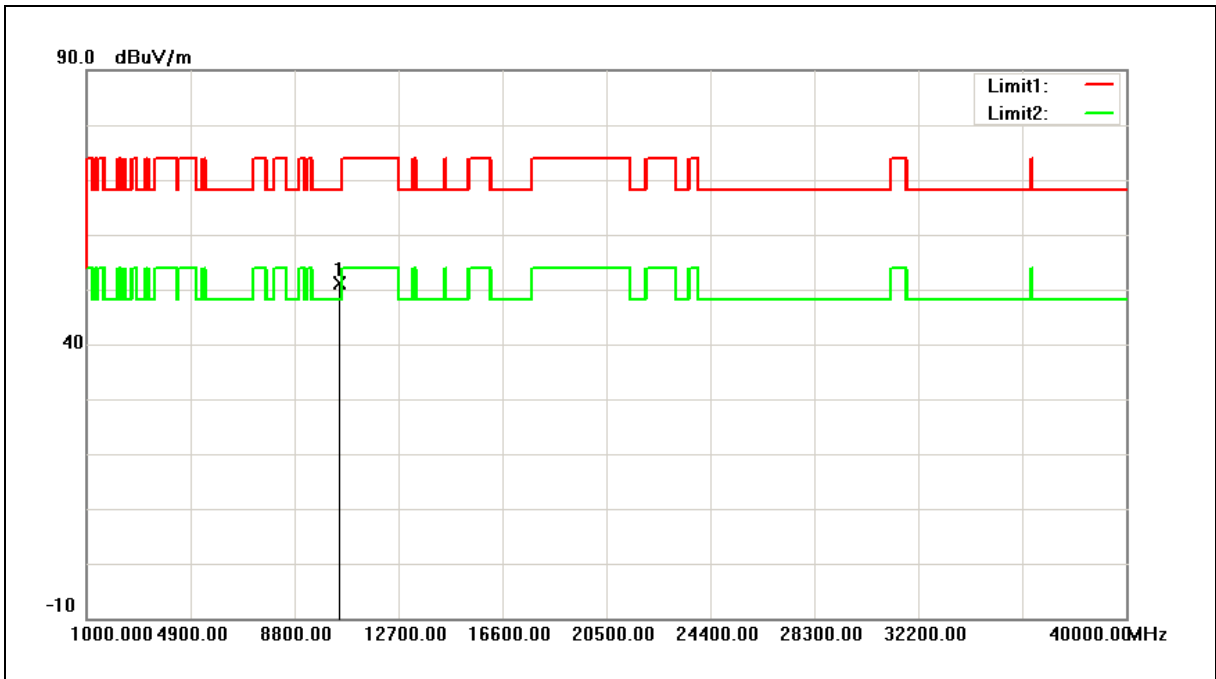


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10400.000	45.90	5.07	50.97	68.20	-17.23	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

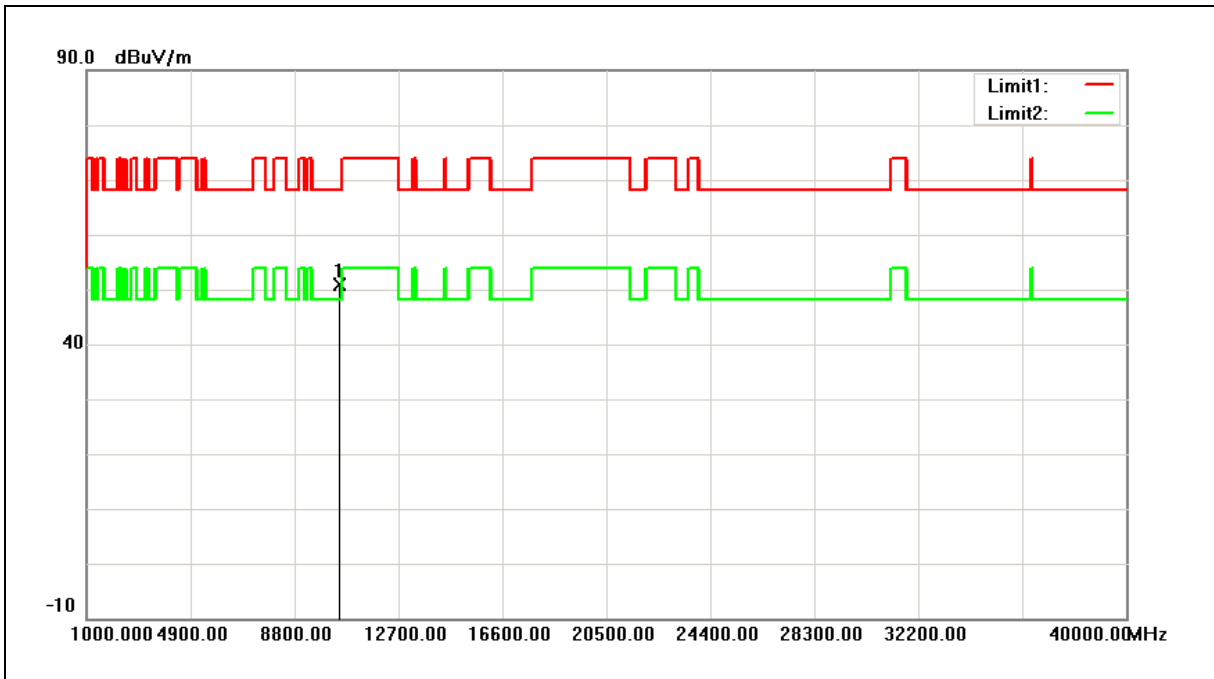


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10480.000	45.84	5.25	51.09	68.20	-17.11	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

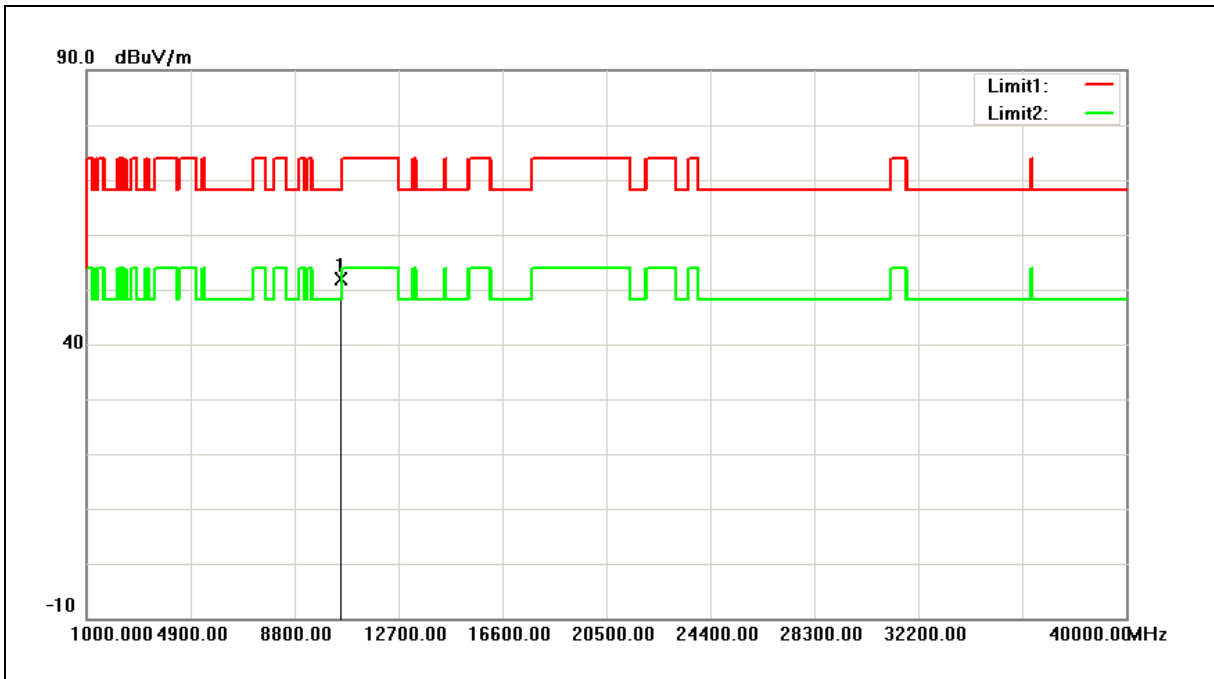


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10480.000	45.55	5.25	50.80	68.20	-17.40	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5260MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

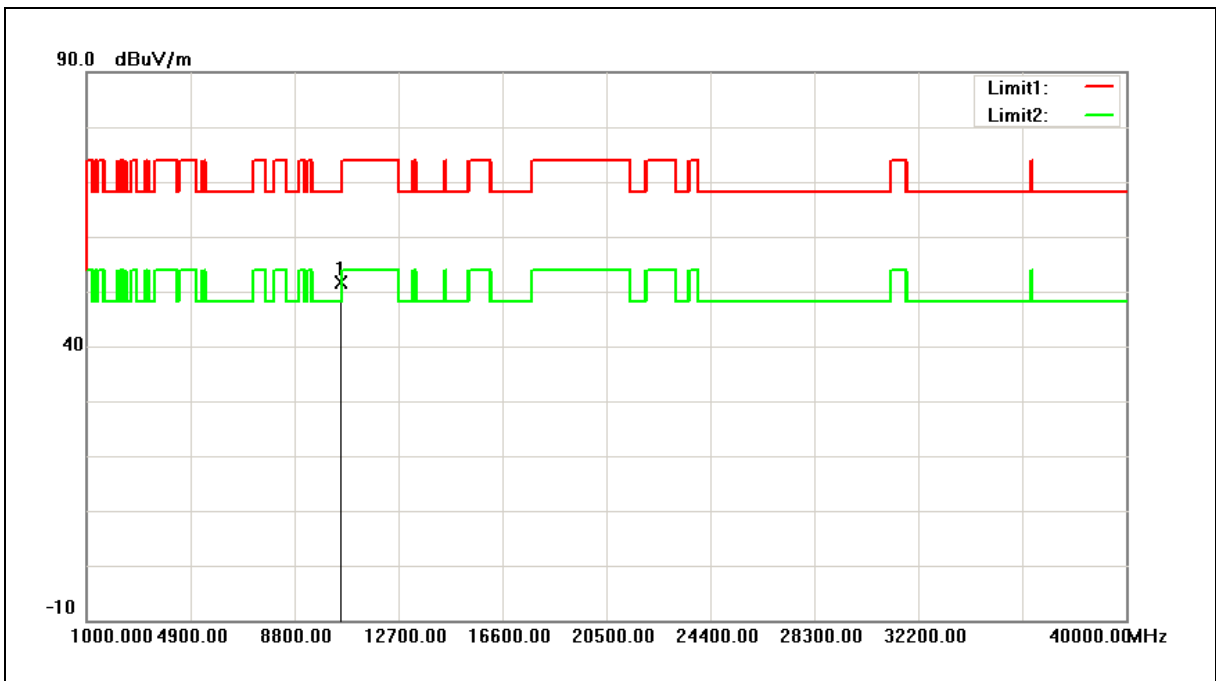


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10520.000	46.55	5.33	51.88	68.20	-16.32	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5260MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

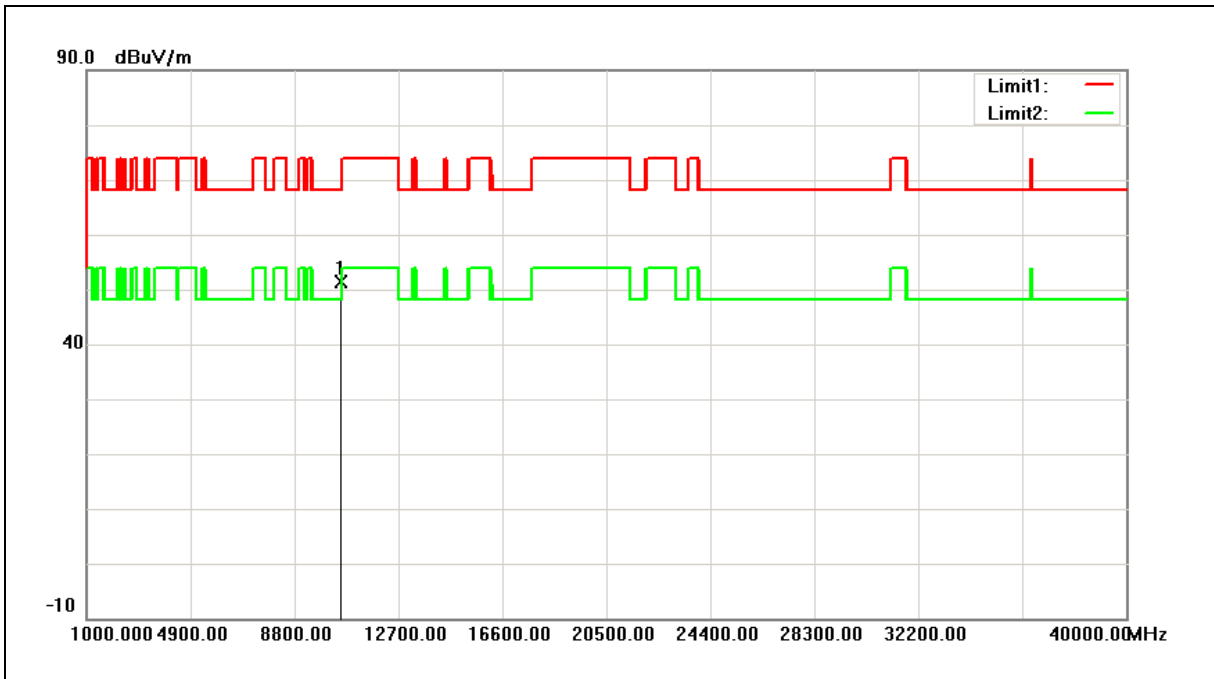


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10520.000	46.31	5.33	51.64	68.20	-16.56	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5280MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

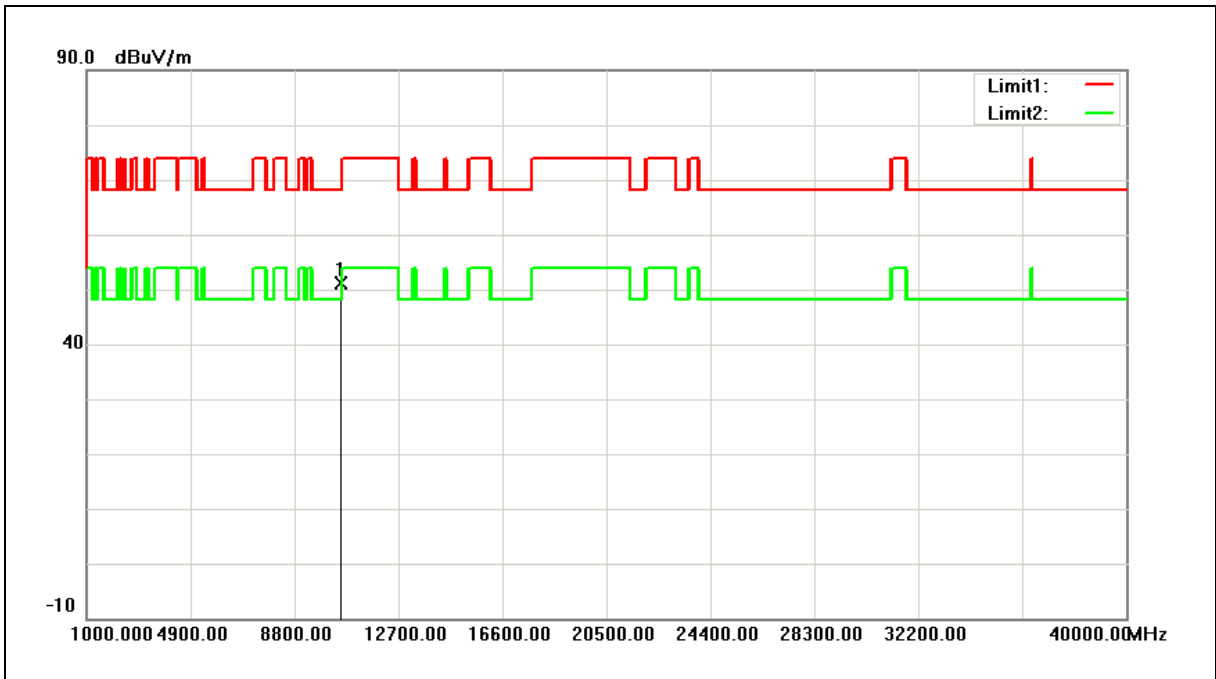


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10560.000	45.92	5.37	51.29	68.20	-16.91	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5280MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

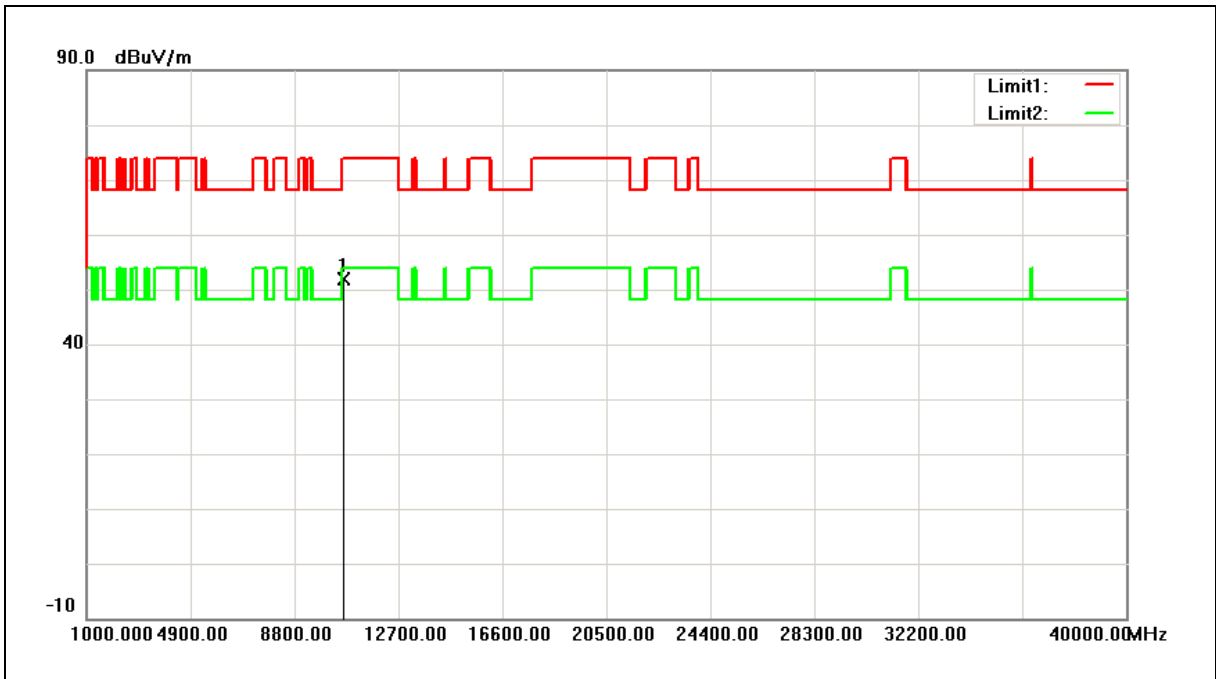


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10560.000	45.88	5.37	51.25	68.20	-16.95	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

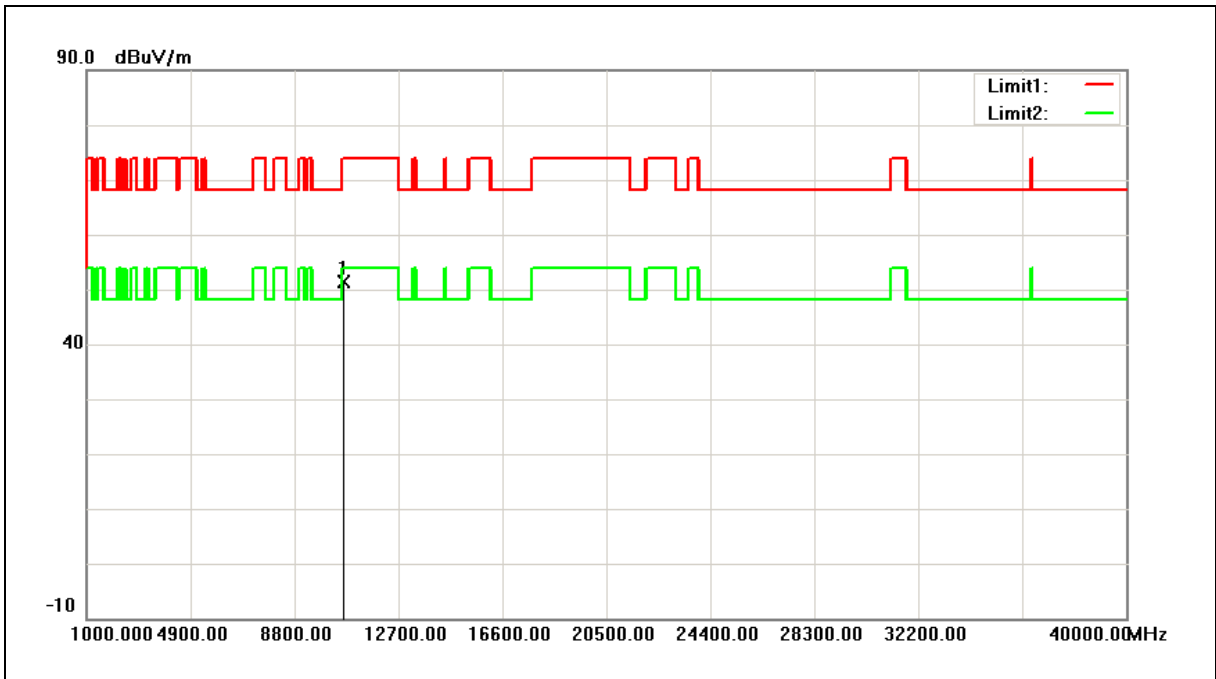


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10640.000	46.38	5.45	51.83	74.00	-22.17	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

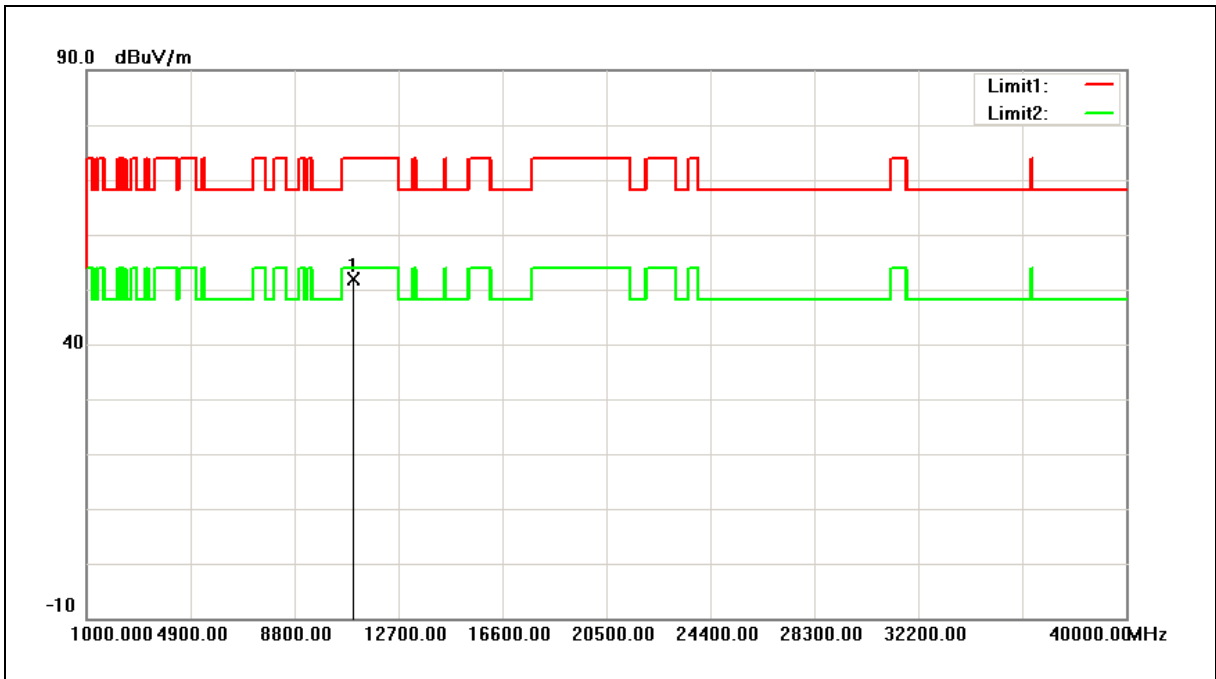


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10640.000	46.00	5.45	51.45	74.00	-22.55	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

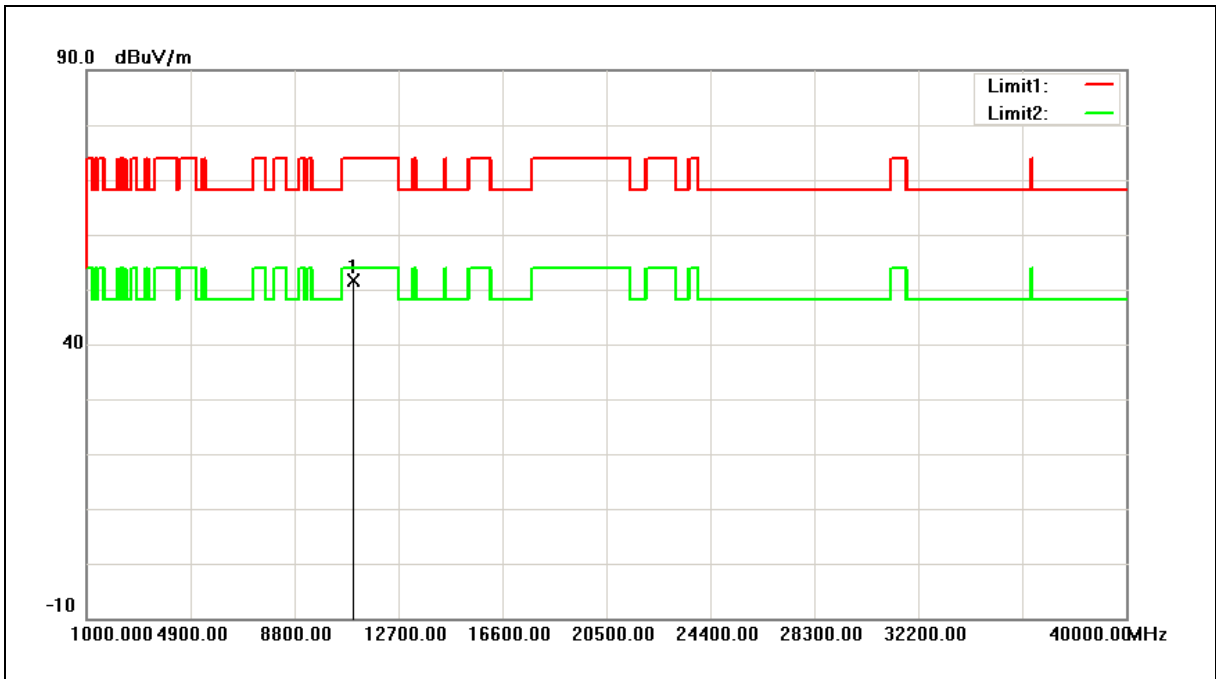


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11000.000	46.19	5.78	51.97	74.00	-22.03	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

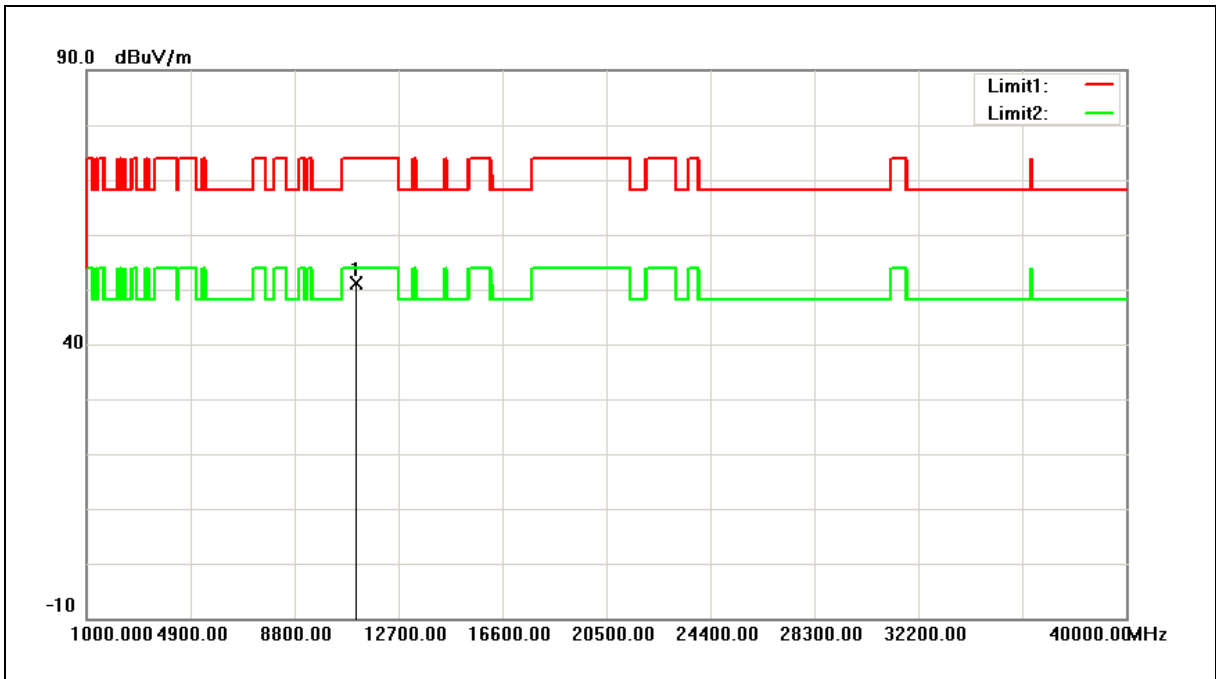


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11000.000	45.89	5.78	51.67	74.00	-22.33	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5560MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

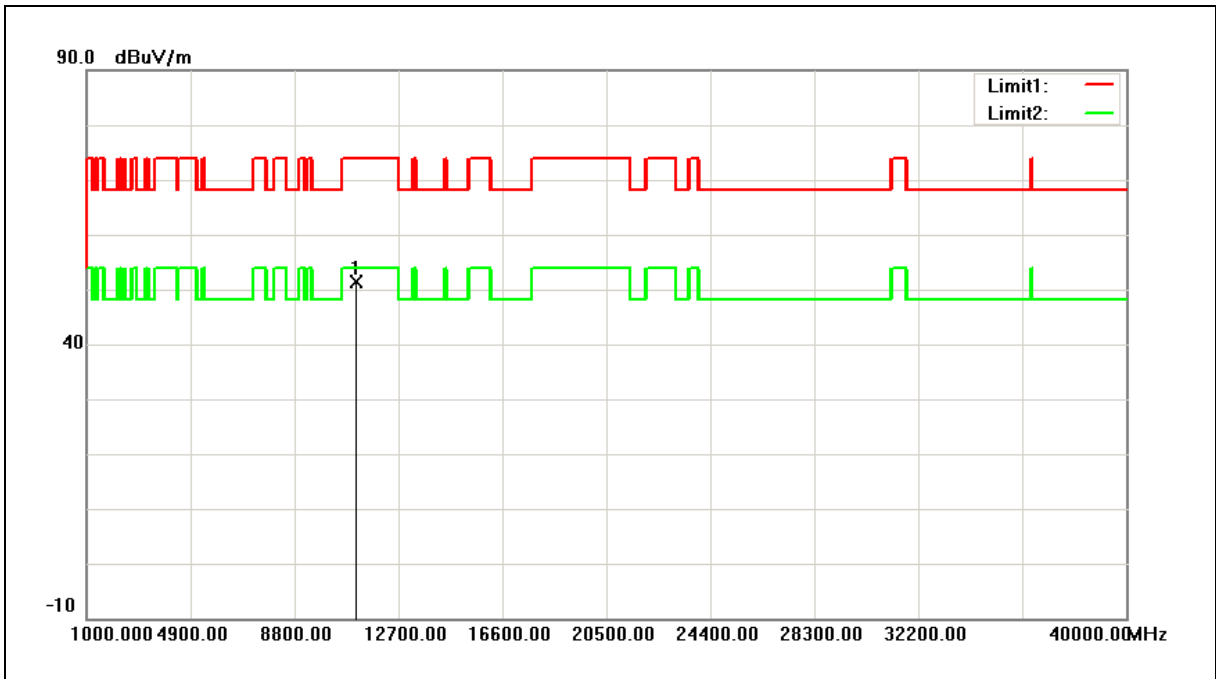


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11120.000	45.33	5.87	51.20	74.00	-22.80	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5560MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

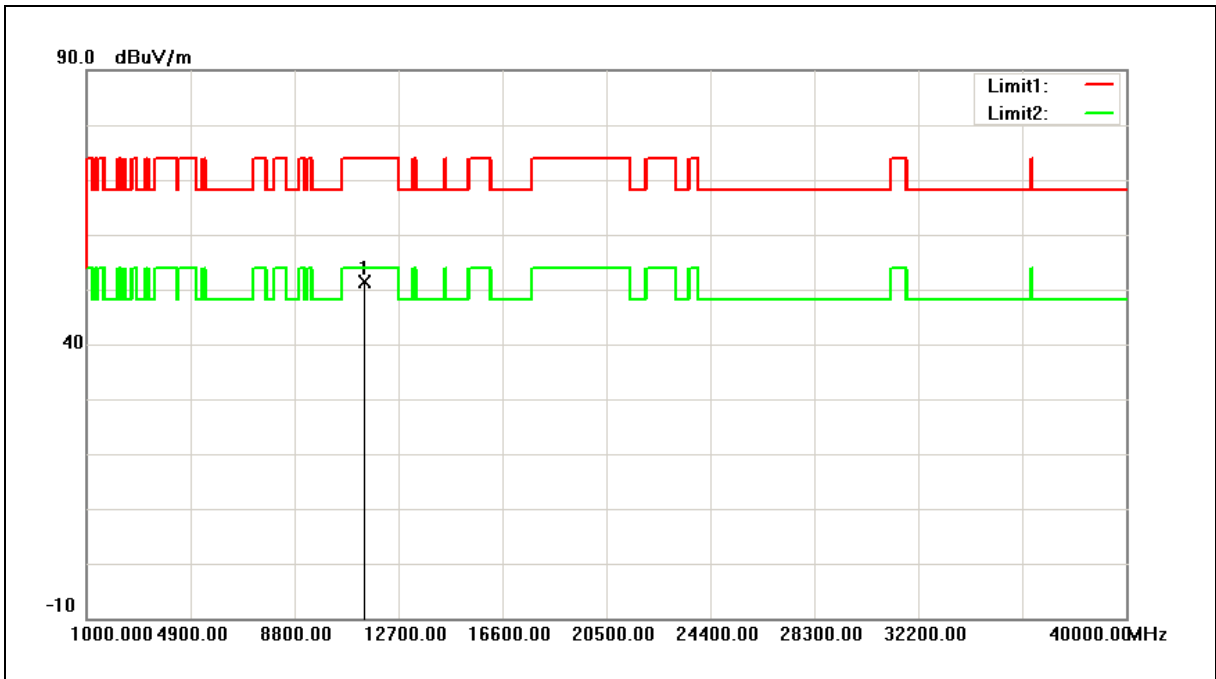


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11120.000	45.51	5.87	51.38	74.00	-22.62	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5700MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

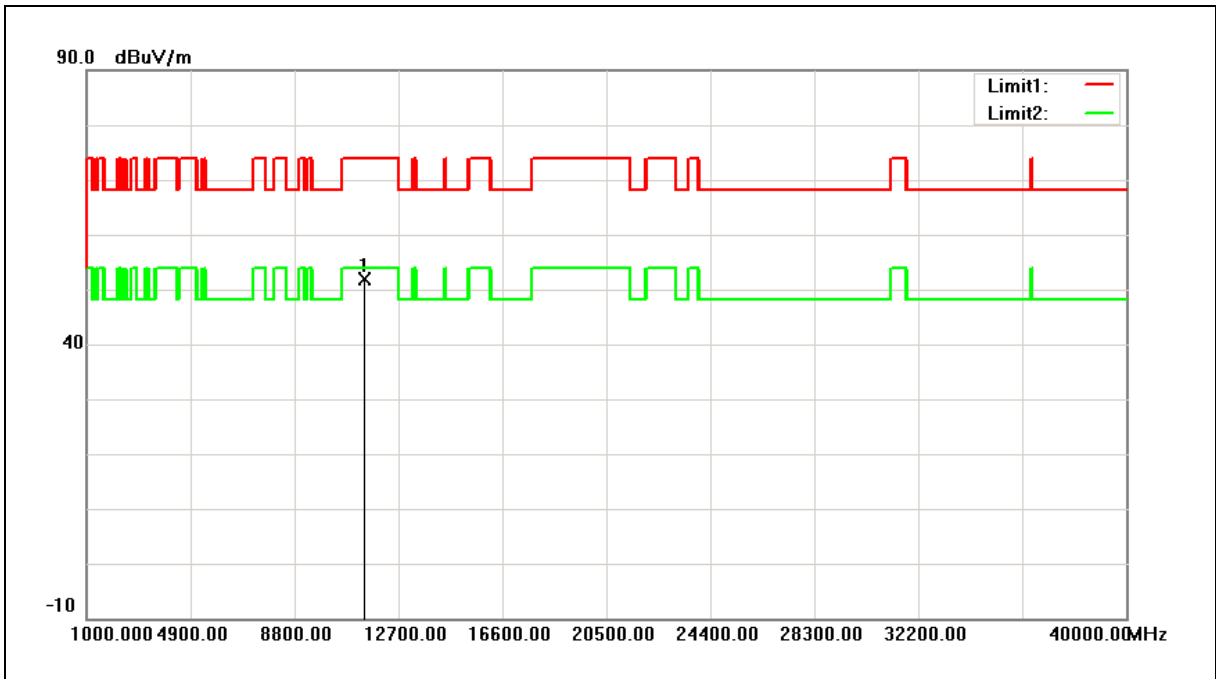


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11400.000	45.40	6.07	51.47	74.00	-22.53	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5700MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

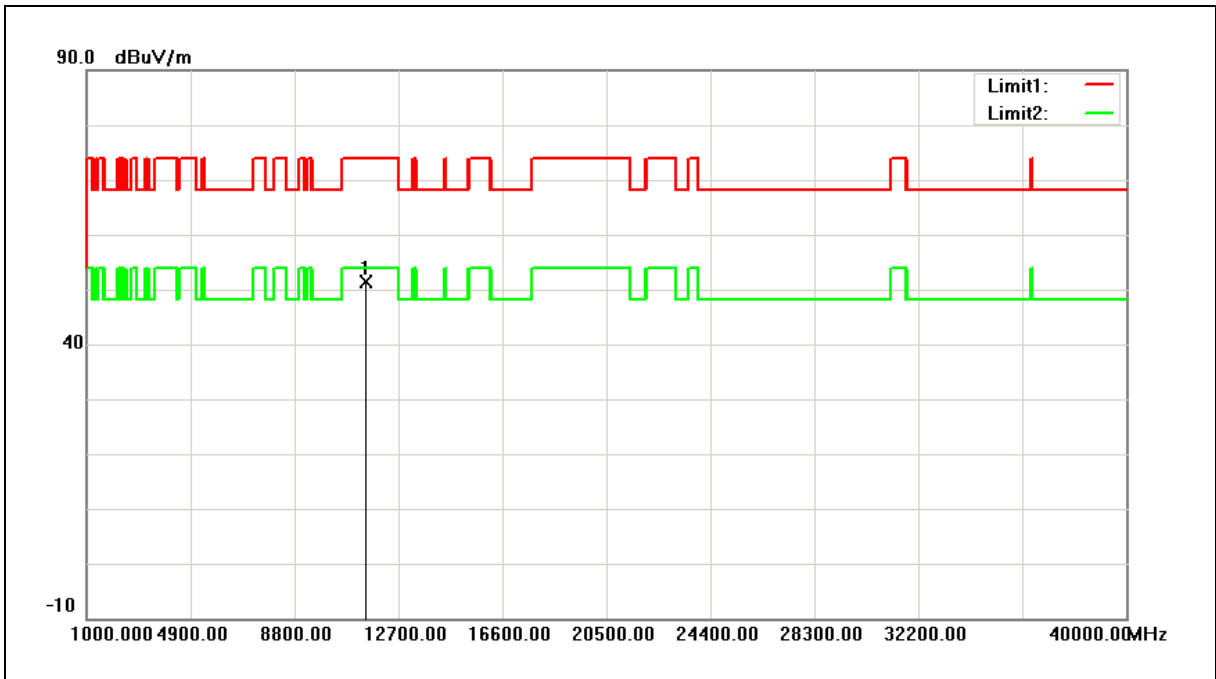


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11400.000	45.72	6.07	51.79	74.00	-22.21	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

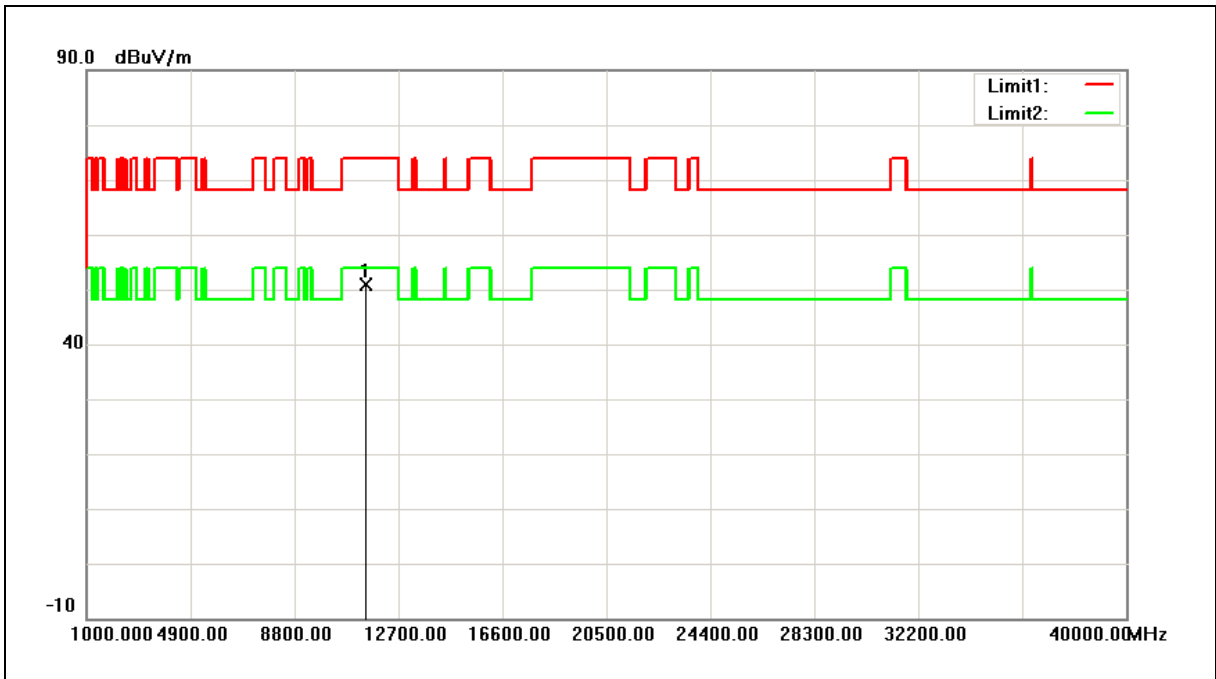


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11490.000	45.30	6.14	51.44	74.00	-22.56	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

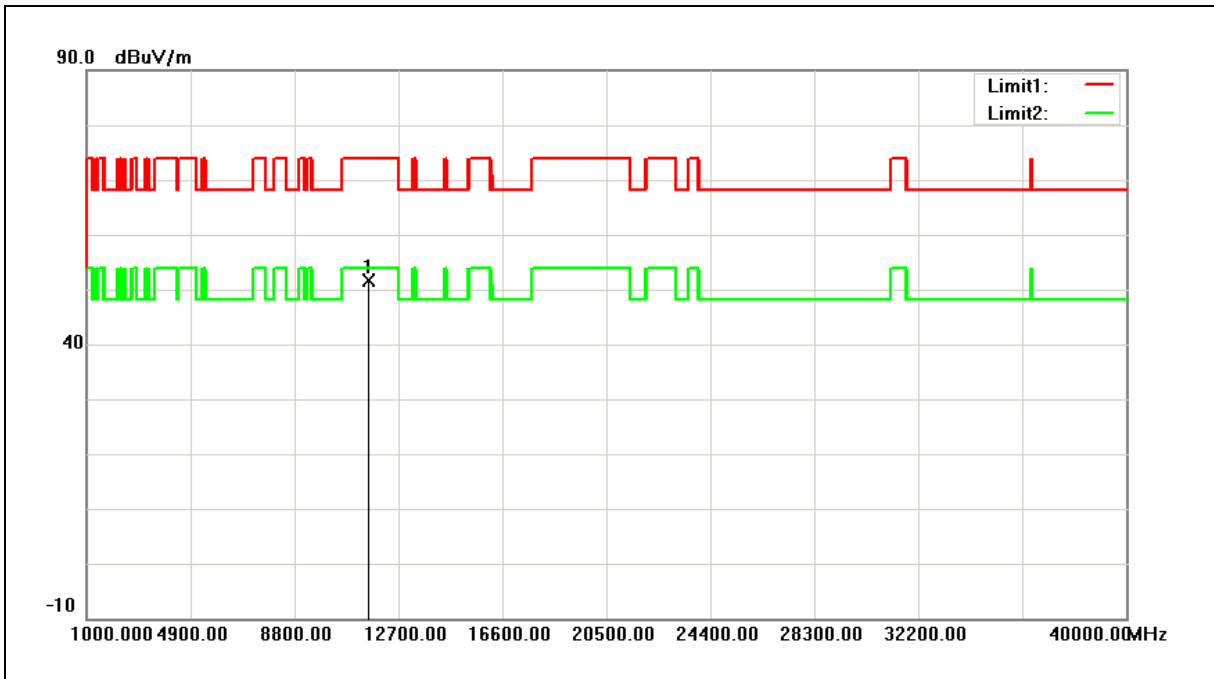


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11490.000	44.83	6.14	50.97	74.00	-23.03	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

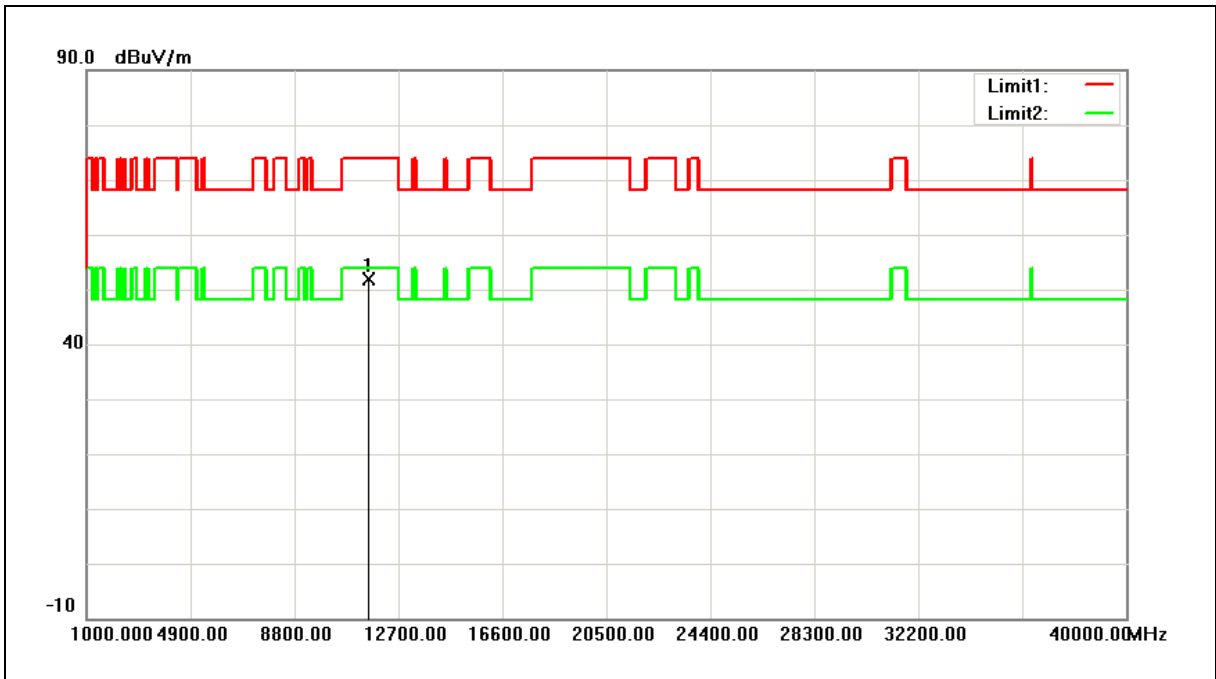


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11570.000	45.31	6.35	51.66	74.00	-22.34	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

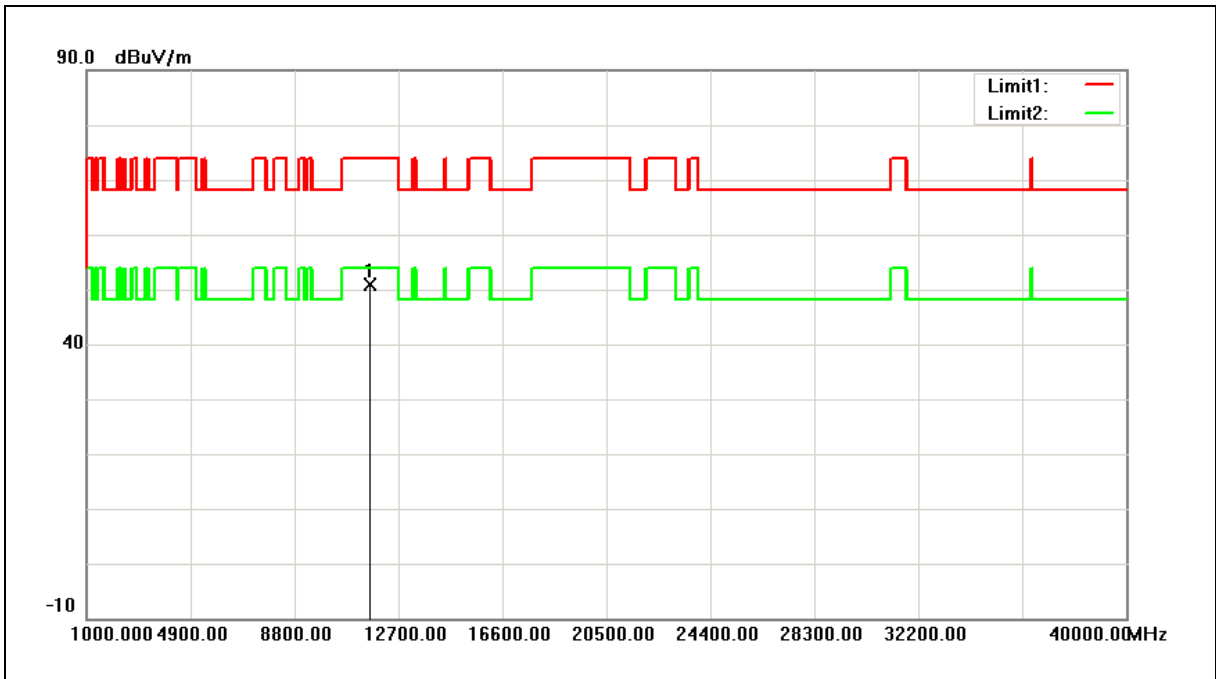


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11570.000	45.61	6.35	51.96	74.00	-22.04	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Horizontal		

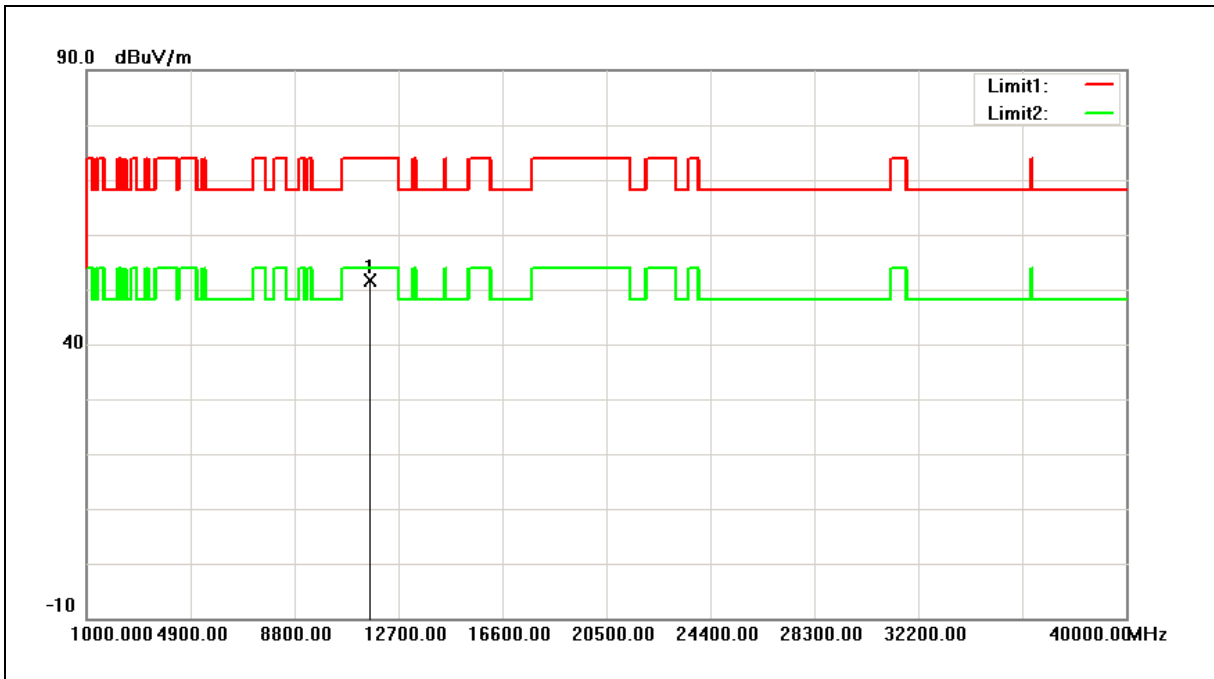


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11650.000	44.31	6.58	50.89	74.00	-23.11	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/10/2016
Ant.Polar.:	Vertical		

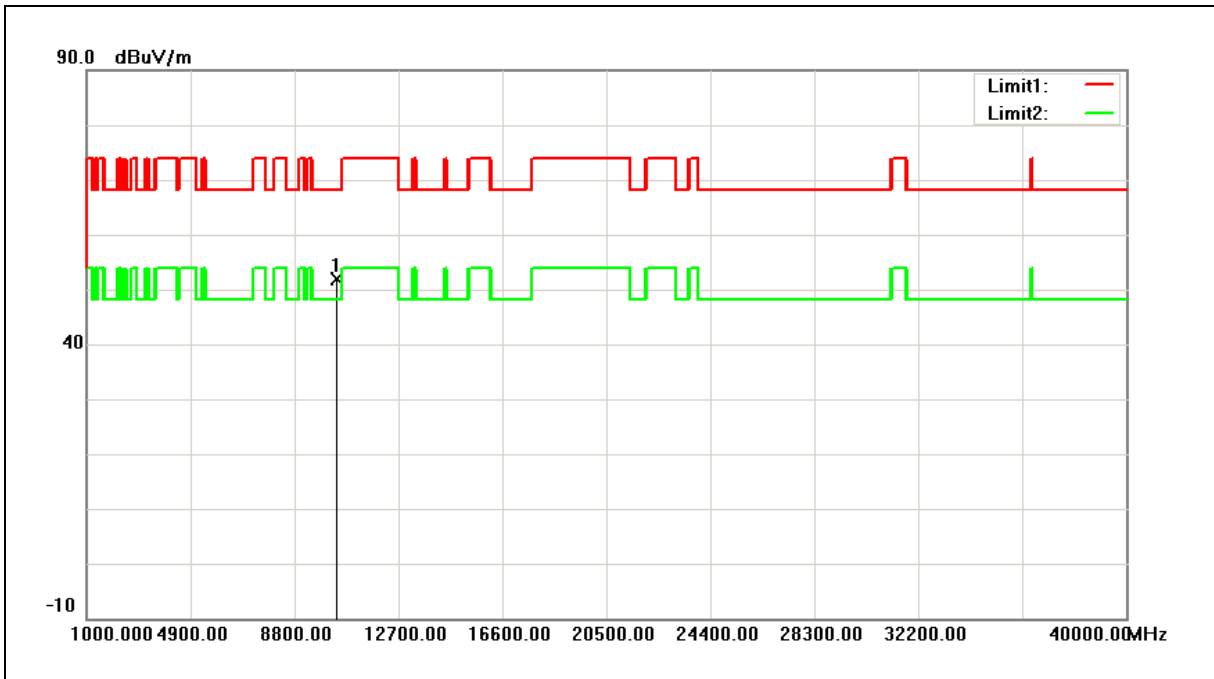


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11650.000	45.10	6.58	51.68	74.00	-22.32	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

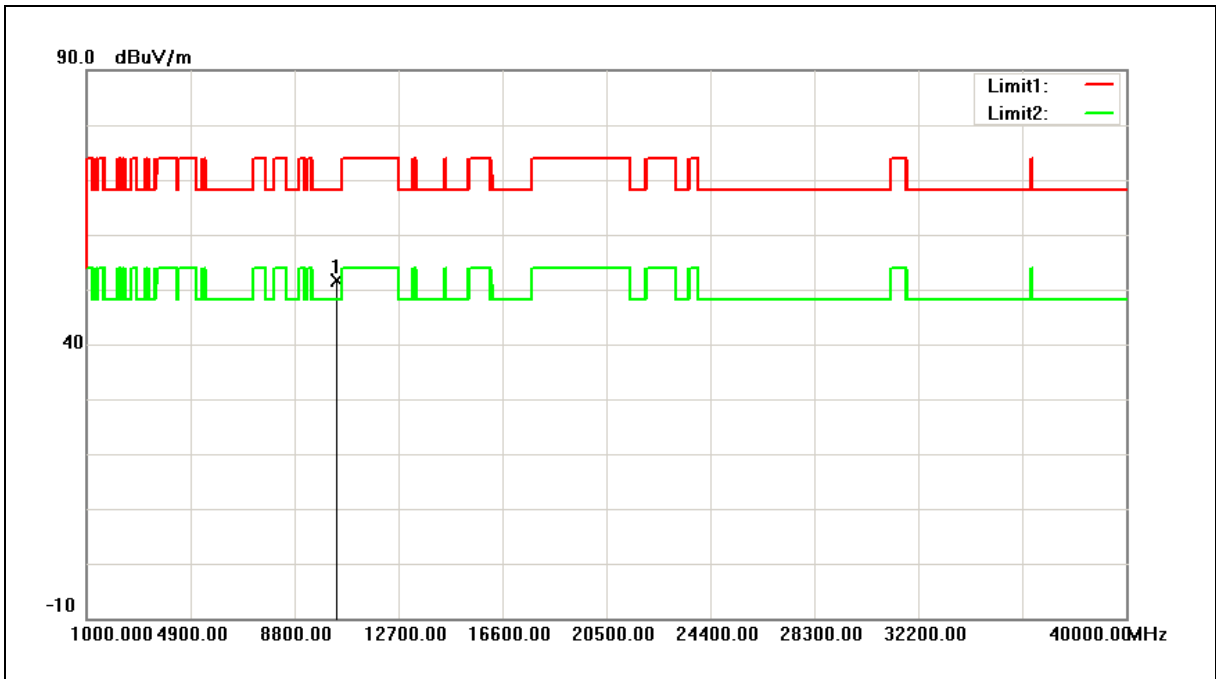


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10380.000	46.81	5.01	51.82	68.20	-16.38	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

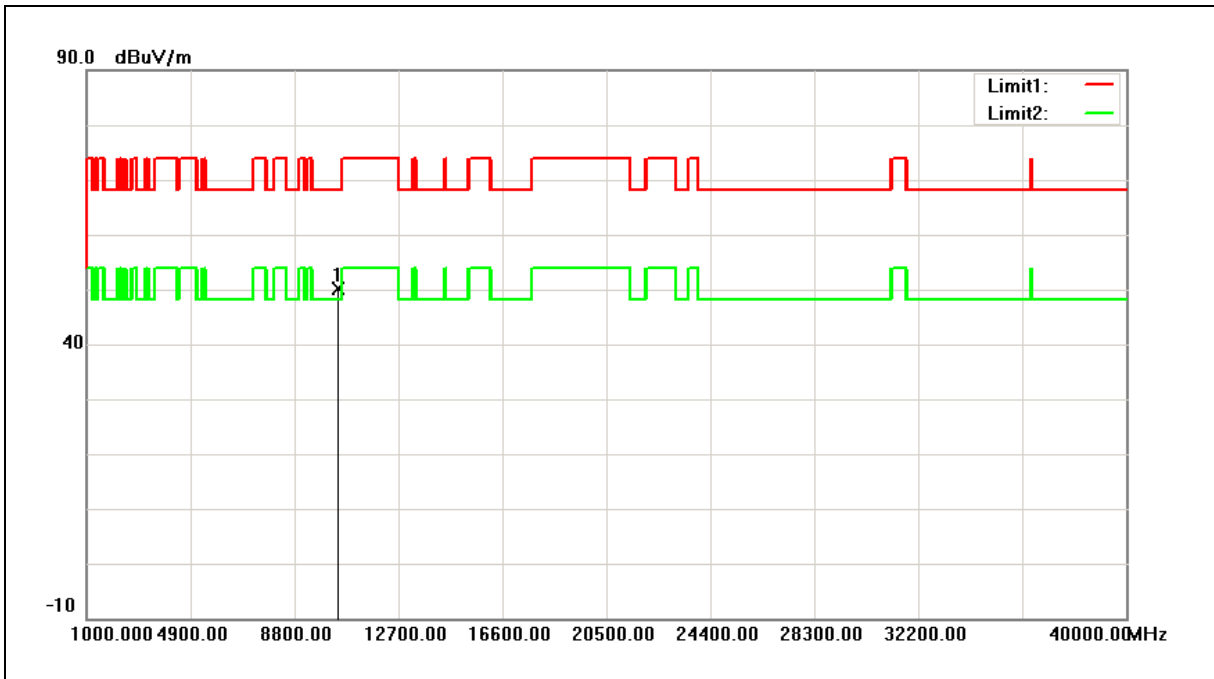


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10380.000	46.65	5.01	51.66	68.20	-16.54	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

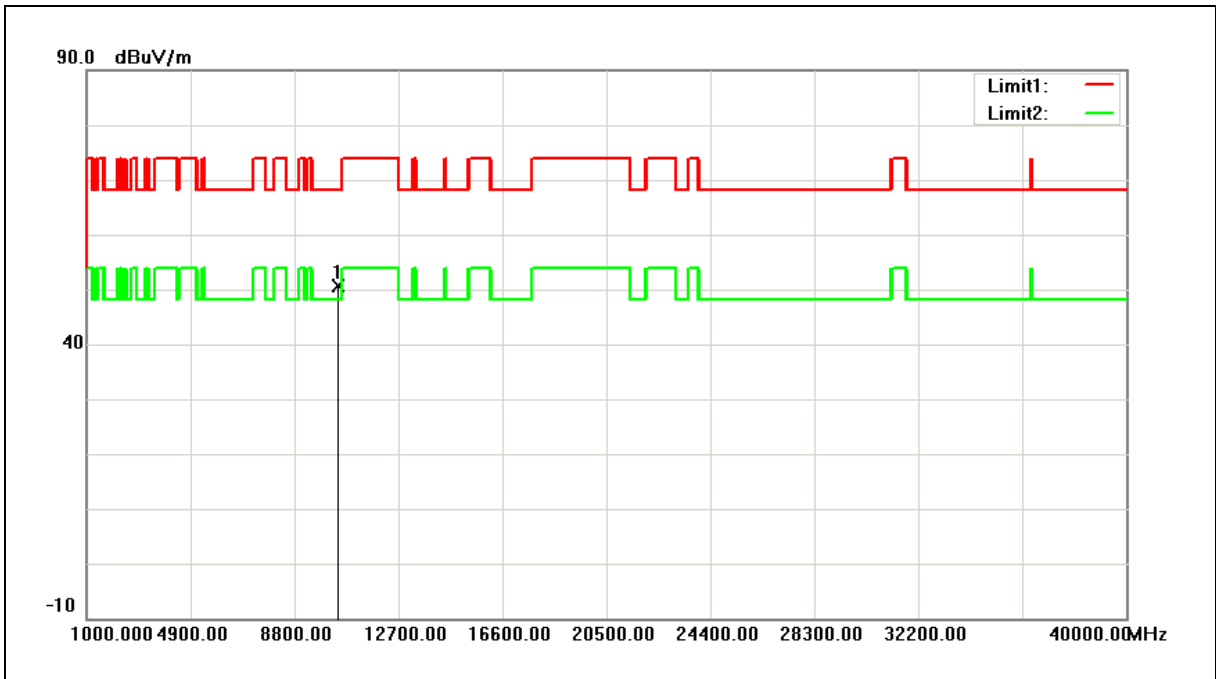


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10460.000	44.81	5.22	50.03	68.20	-18.17	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

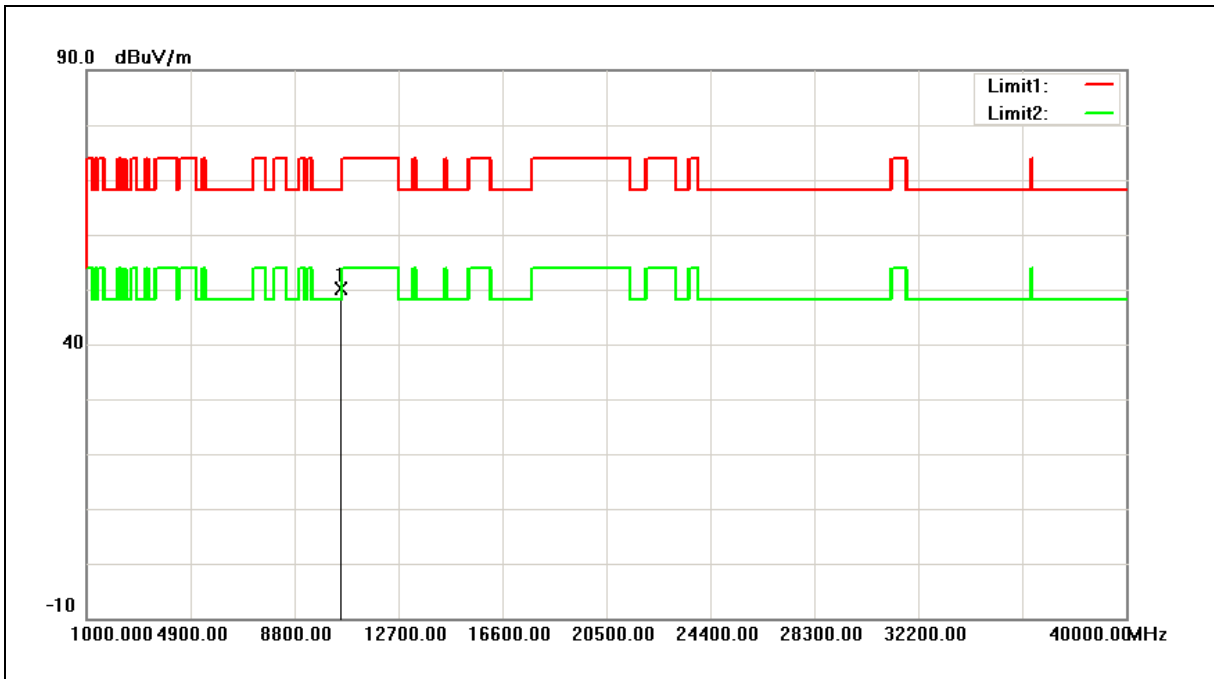


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10460.000	45.31	5.22	50.53	68.20	-17.67	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

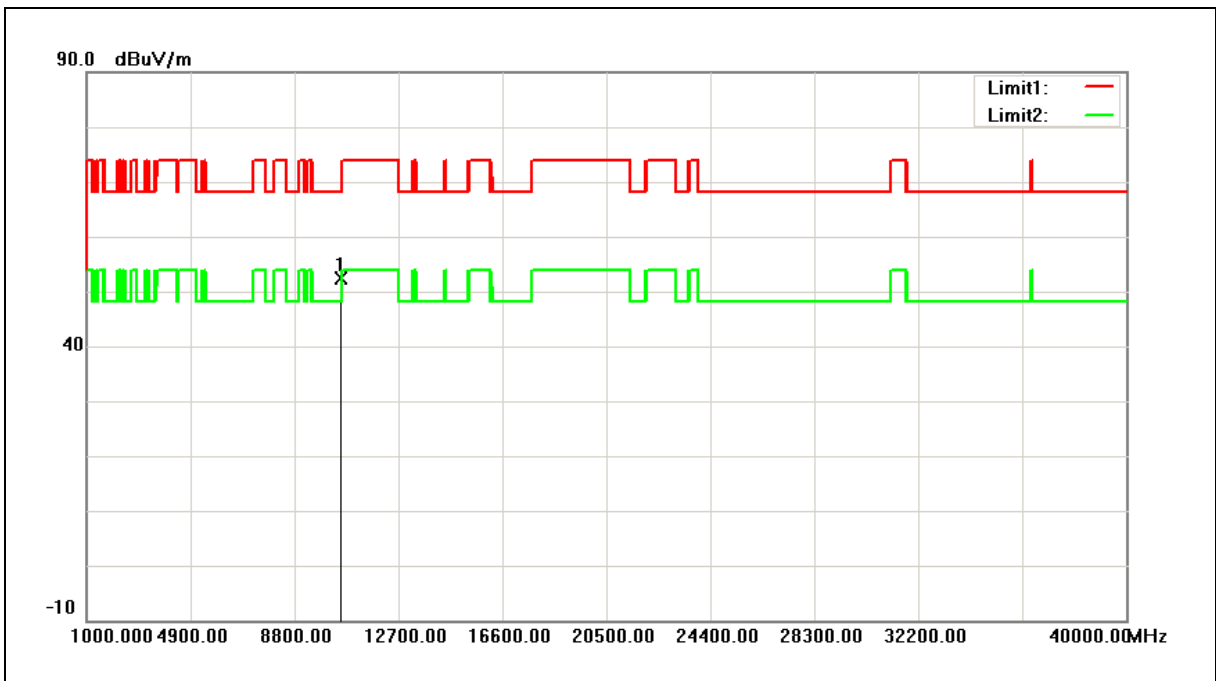


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10540.000	44.88	5.35	50.23	68.20	-17.97	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

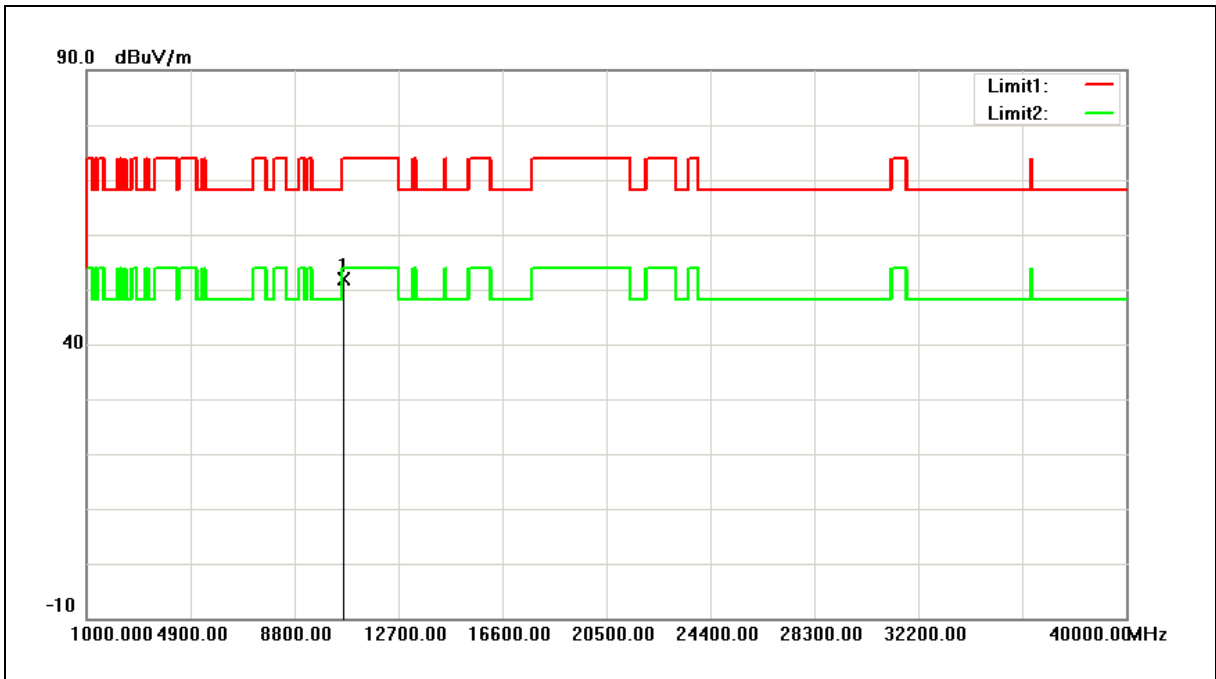


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10540.000	47.05	5.35	52.40	68.20	-15.80	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

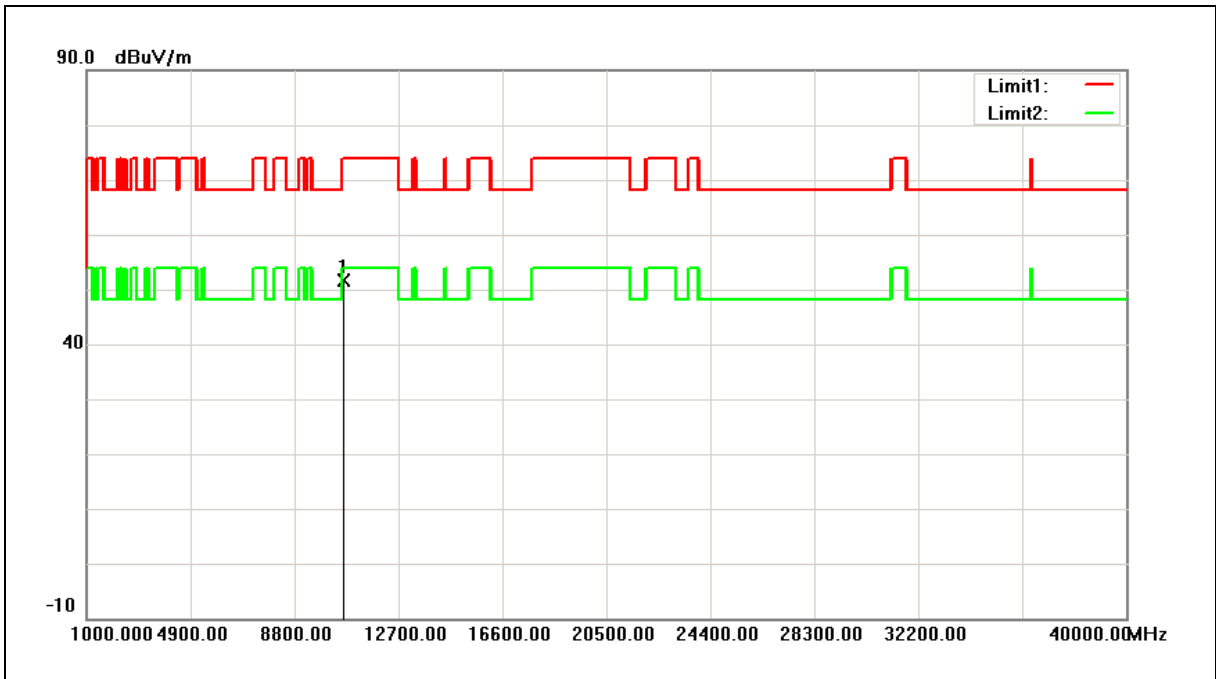


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10620.000	46.40	5.42	51.82	74.00	-22.18	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

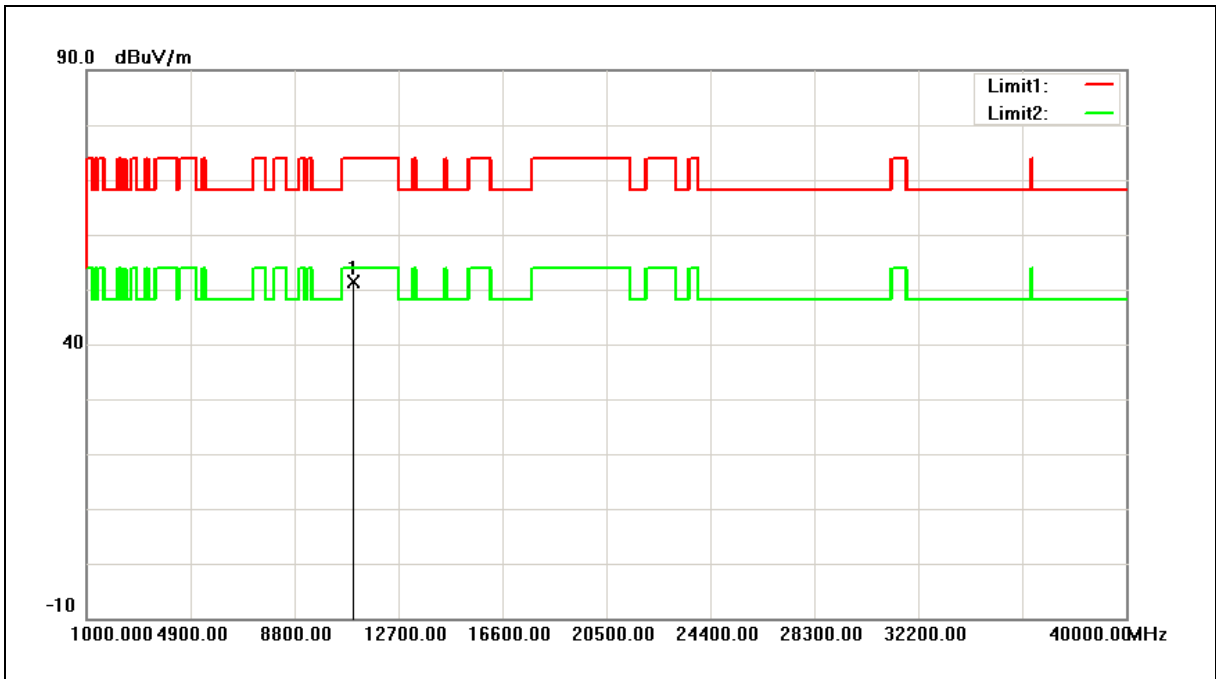


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10640.000	46.29	5.45	51.74	74.00	-22.26	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

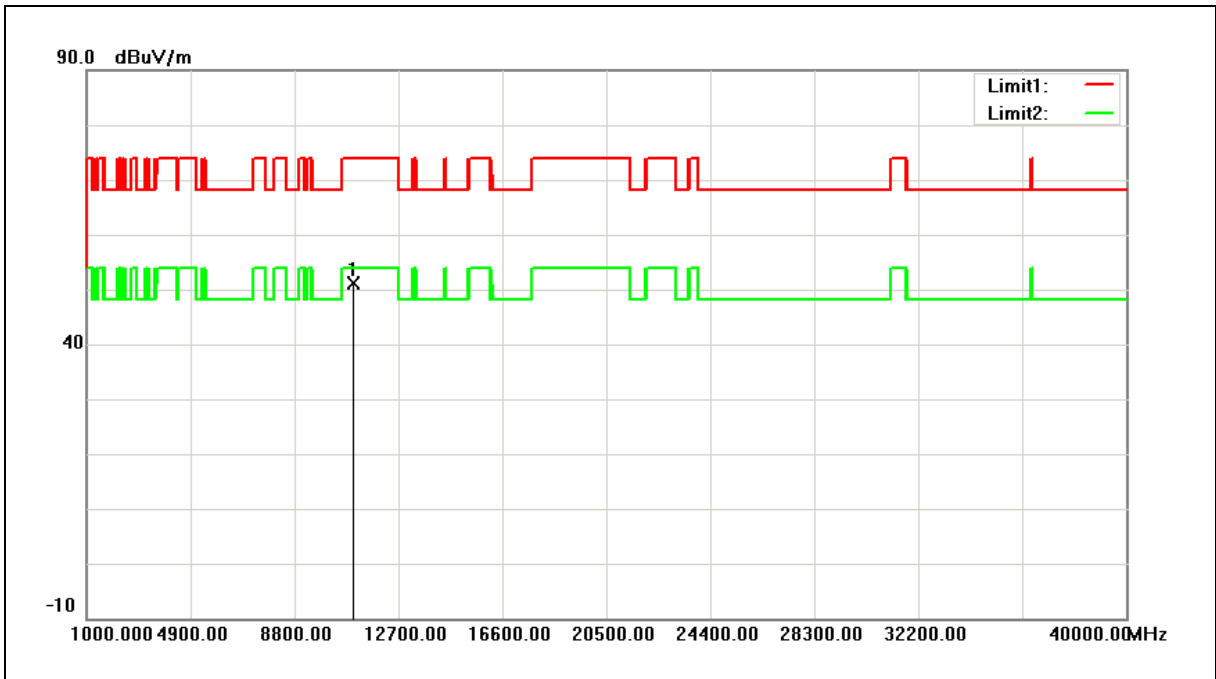


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11020.000	45.68	5.80	51.48	74.00	-22.52	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

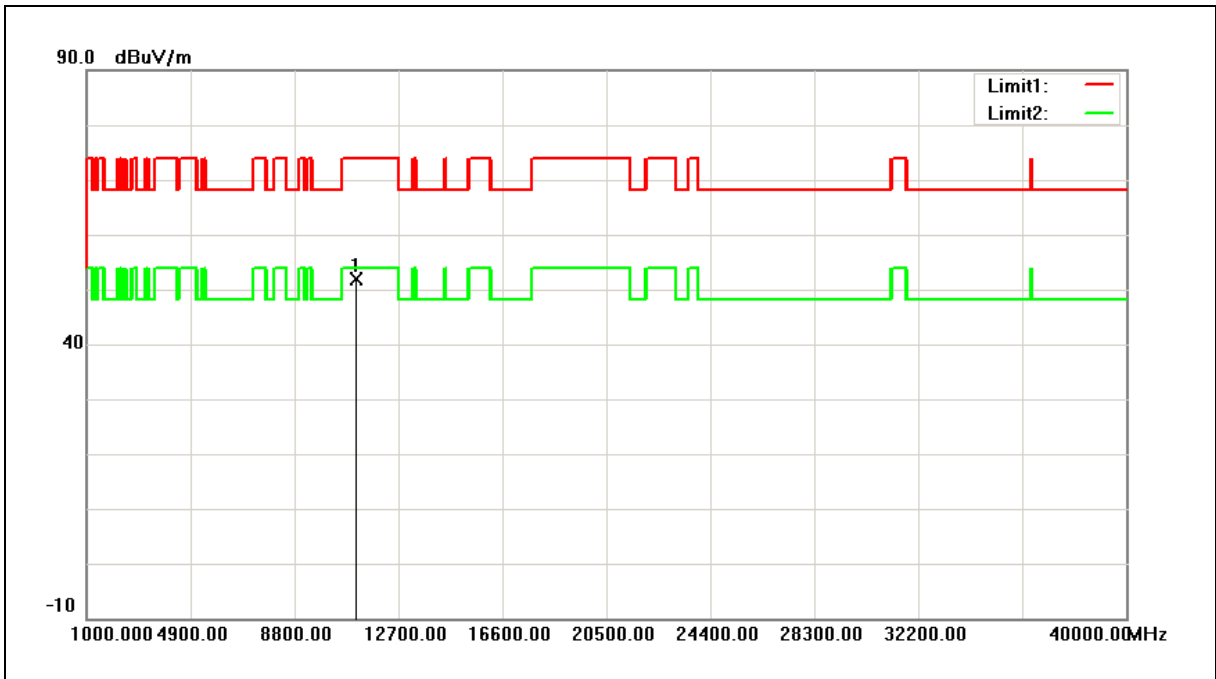


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11020.000	45.40	5.80	51.20	74.00	-22.80	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5550MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

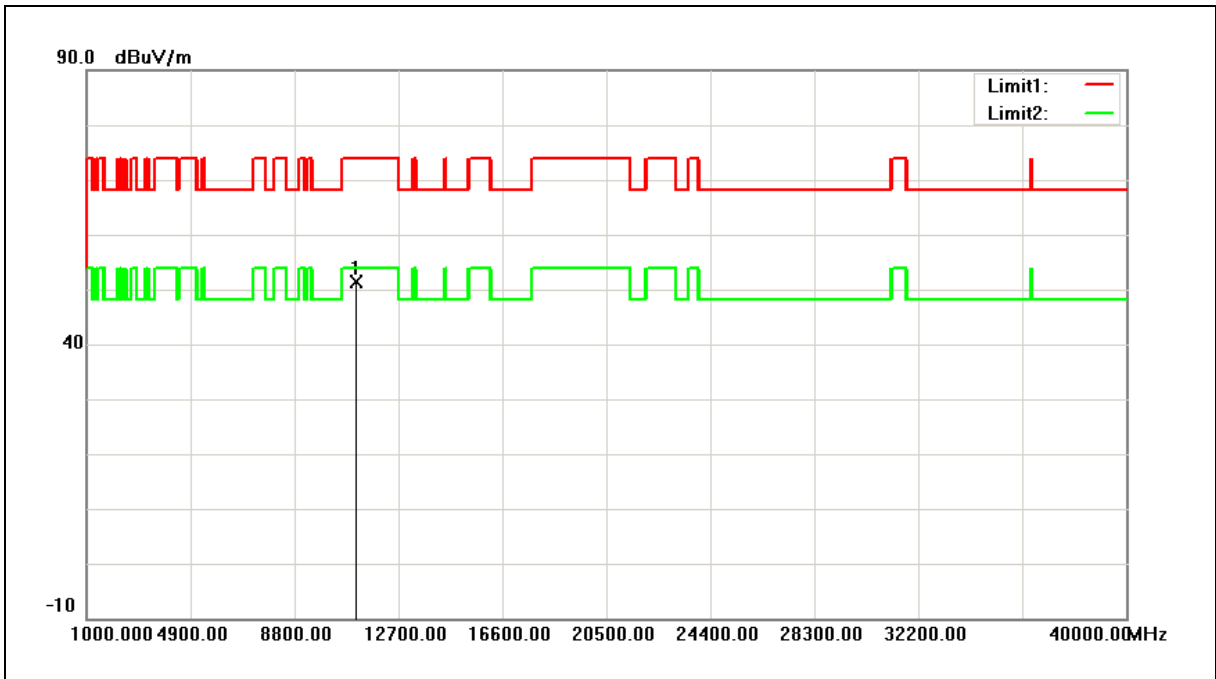


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11100.000	46.02	5.85	51.87	74.00	-22.13	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5550MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

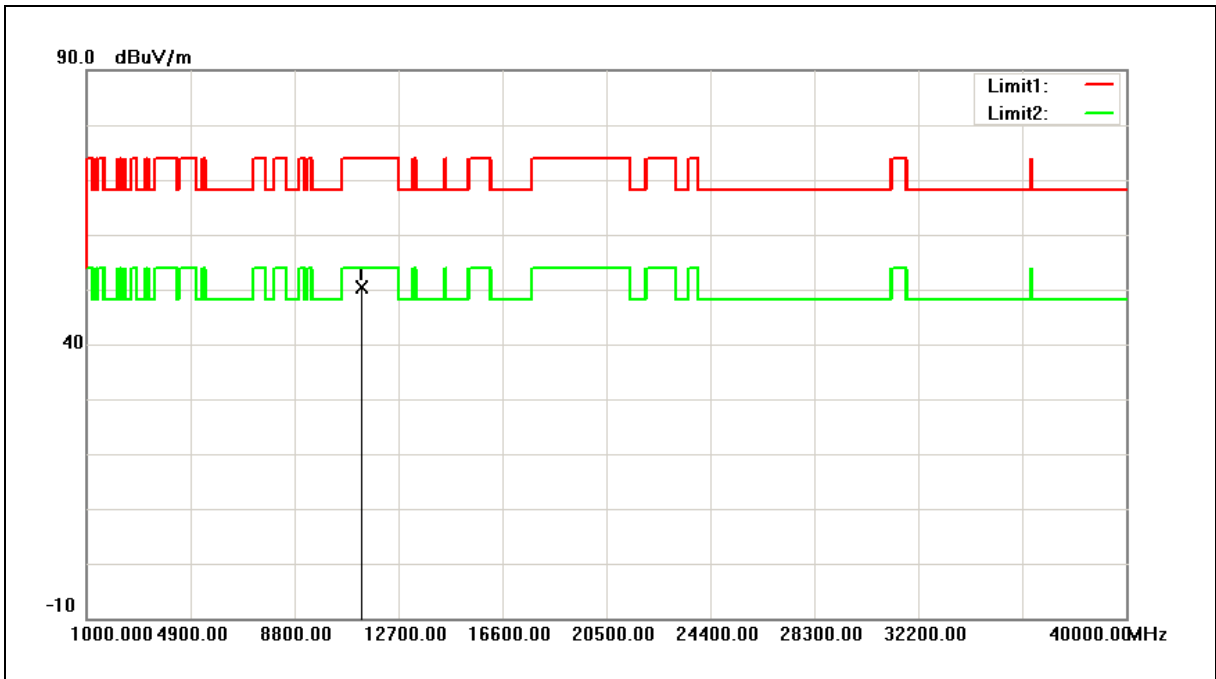


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11100.000	45.52	5.85	51.37	74.00	-22.63	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5670MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

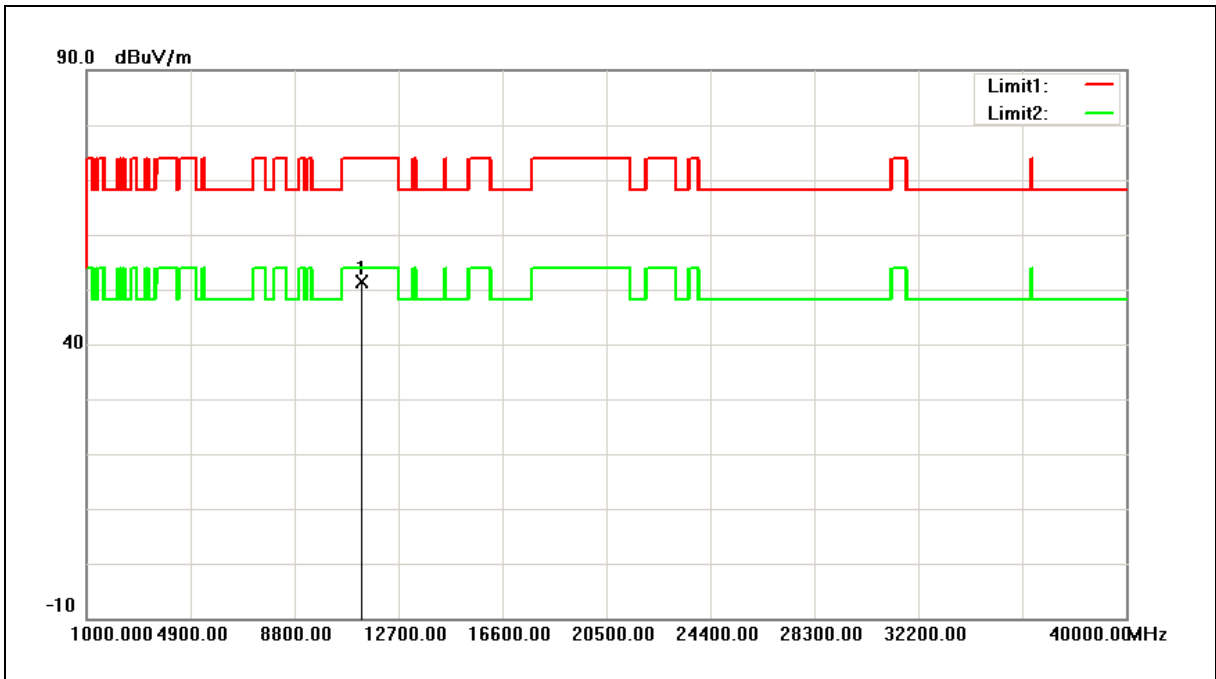


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11340.000	44.41	6.03	50.44	74.00	-23.56	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5670MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

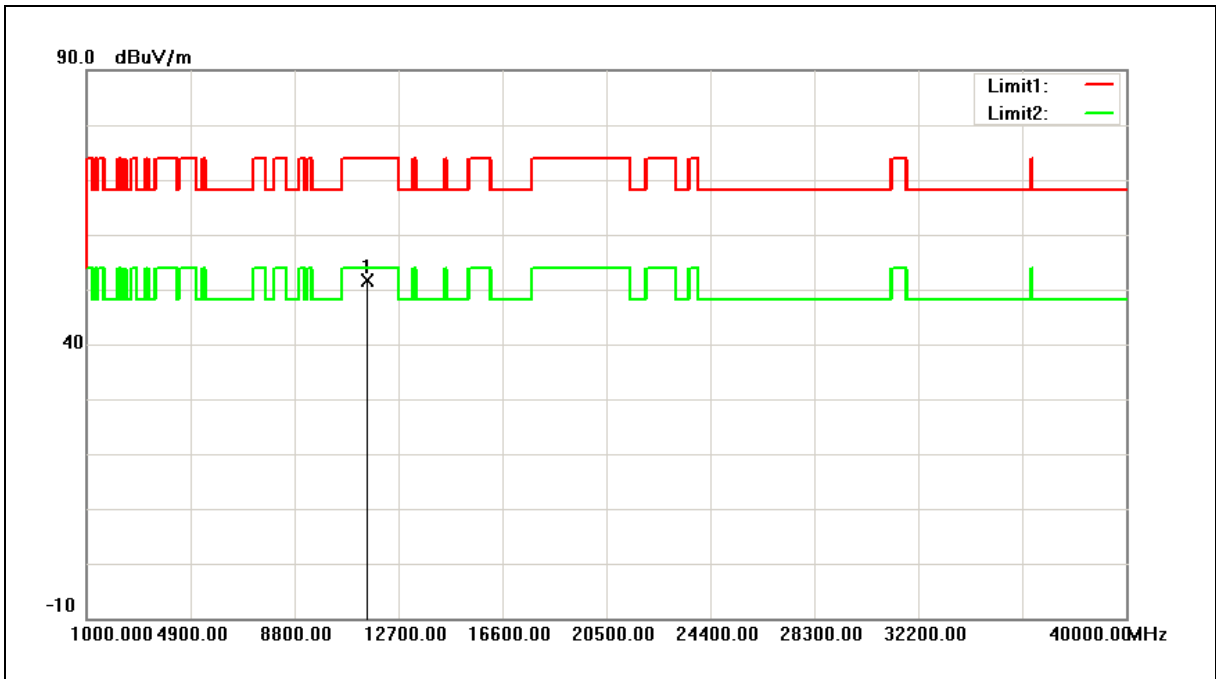


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11340.000	45.38	6.03	51.41	74.00	-22.59	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

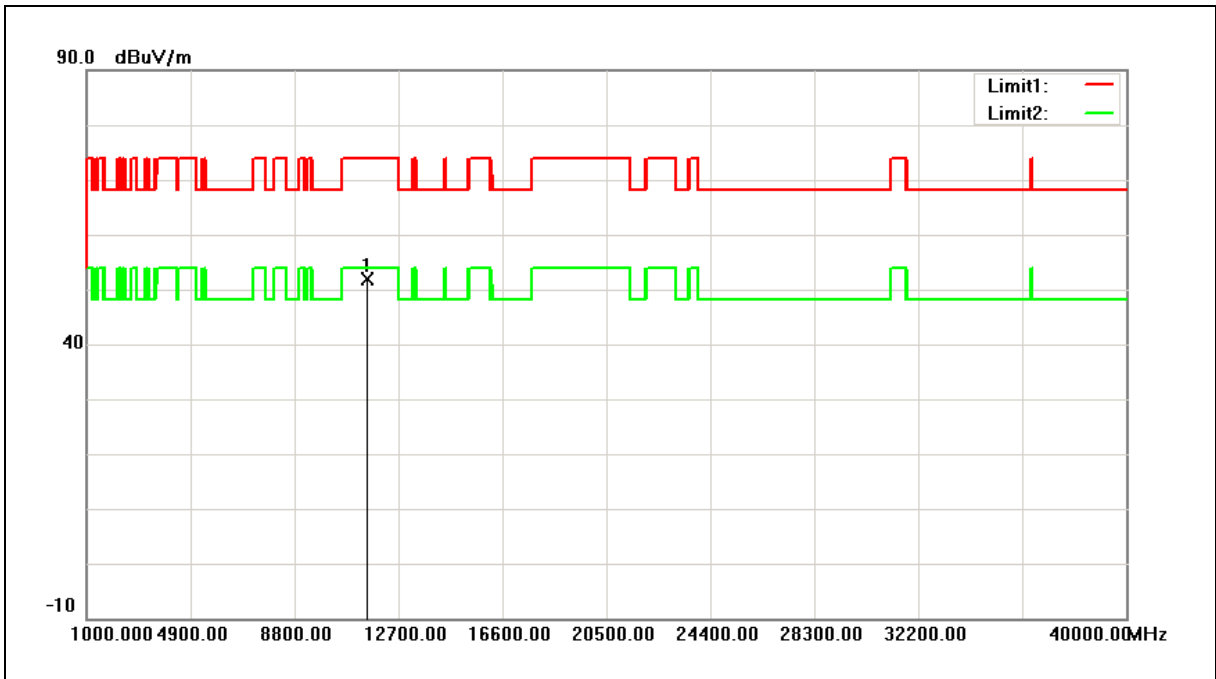


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11510.000	45.40	6.17	51.57	74.00	-22.43	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

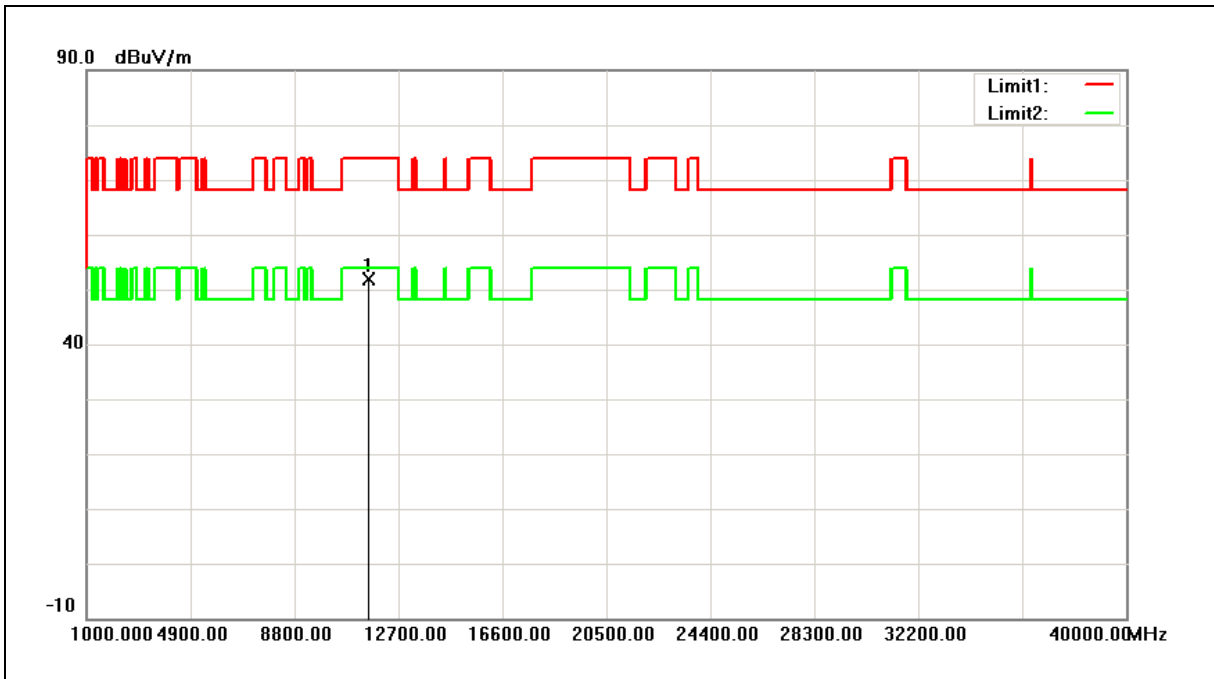


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11510.000	45.72	6.17	51.89	74.00	-22.11	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Horizontal		

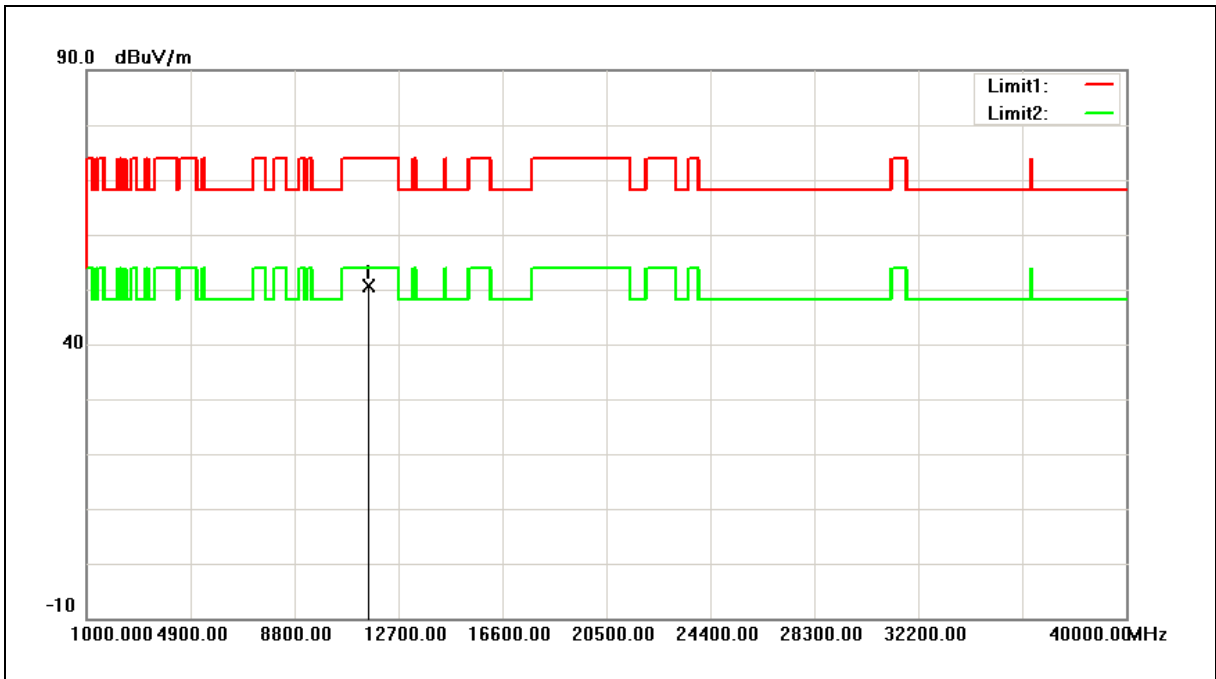


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	45.53	6.41	51.94	74.00	-22.06	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/10/2016
Ant.Polar.:	Vertical		

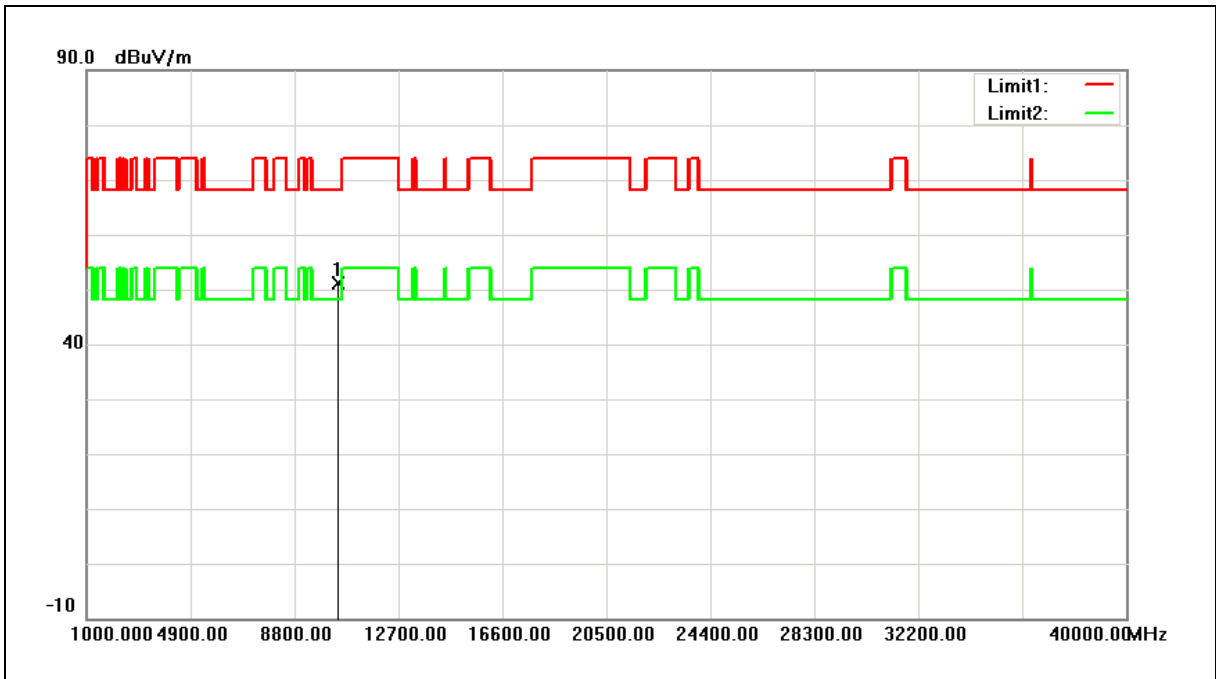


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	44.28	6.41	50.69	74.00	-23.31	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Horizontal		

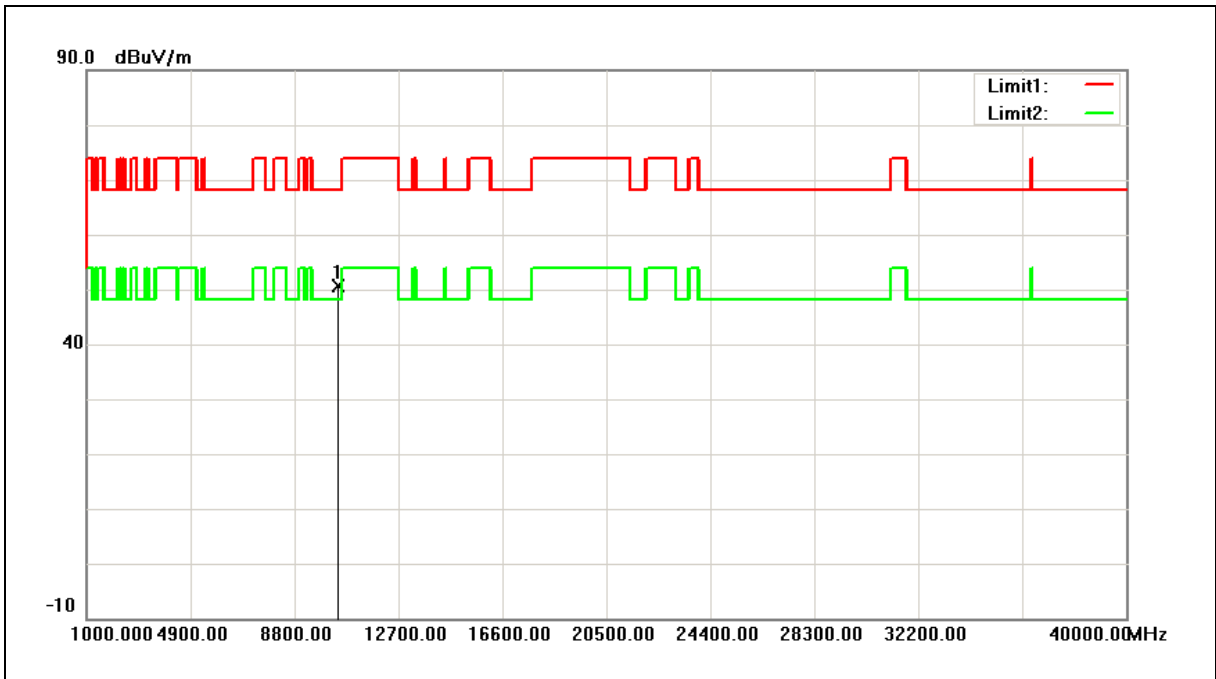


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	46.12	5.11	51.23	68.20	-16.97	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Vertical		

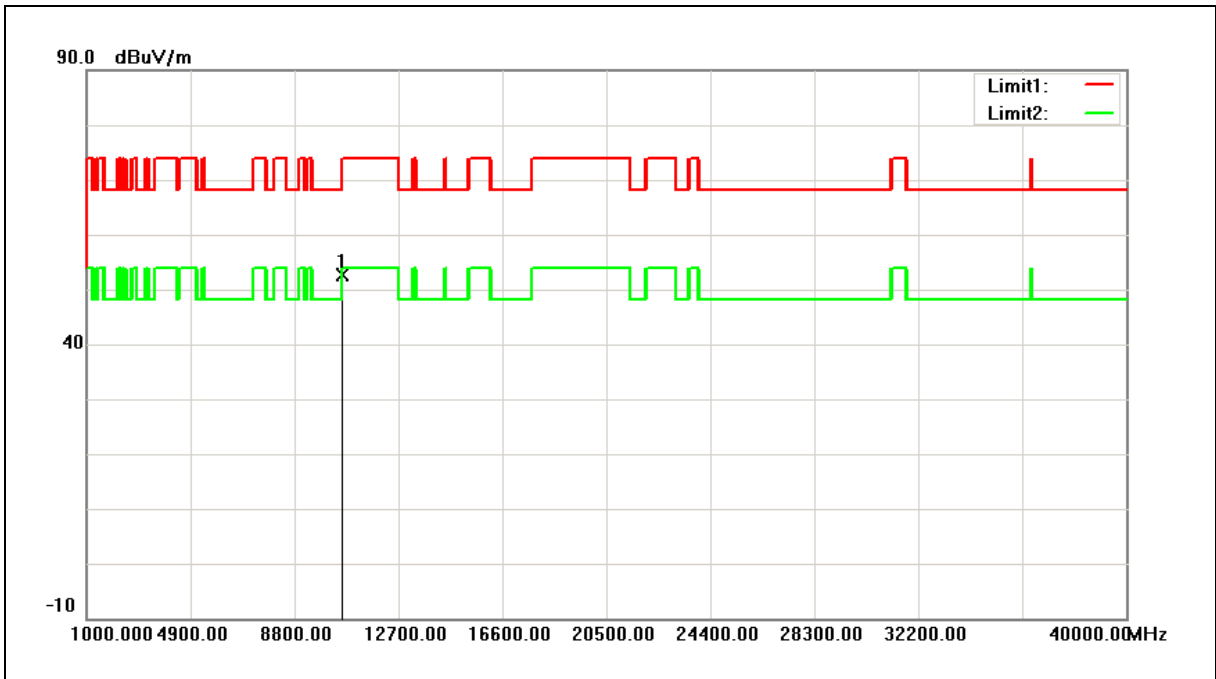


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	45.60	5.11	50.71	68.20	-17.49	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5290MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Horizontal		

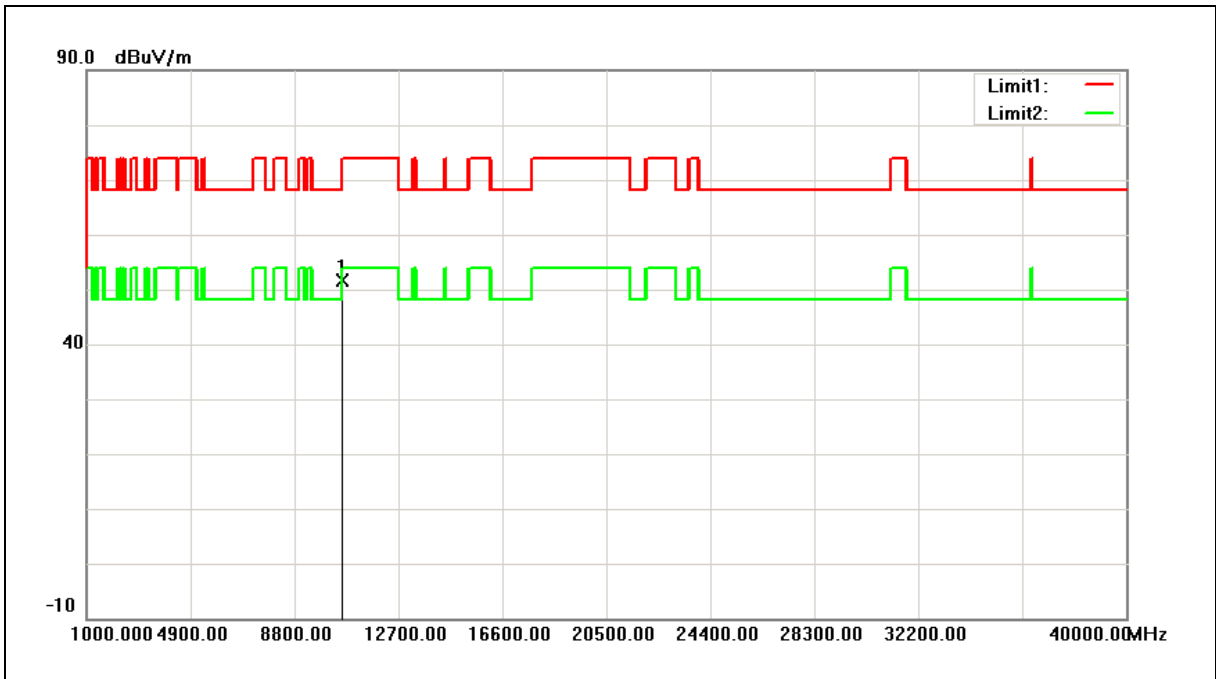


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10580.000	47.14	5.39	52.53	68.20	-15.67	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5290MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Vertical		

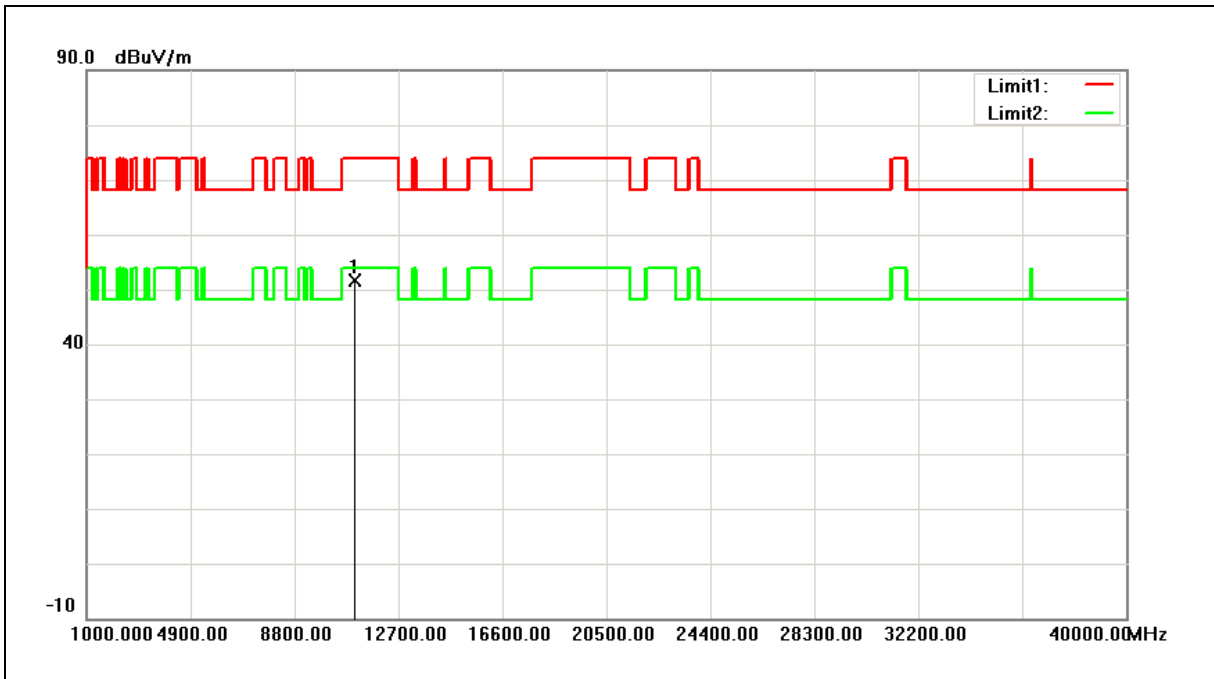


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10580.000	46.25	5.39	51.64	68.20	-16.56	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5530MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Horizontal		

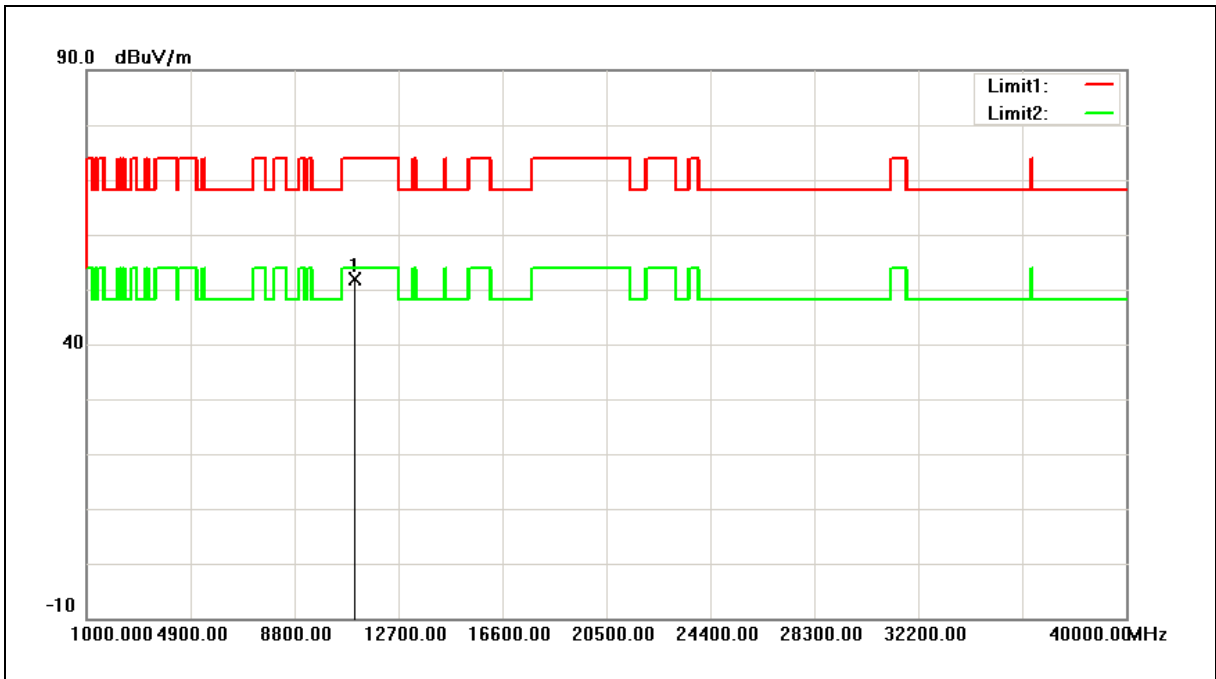


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11060.000	45.85	5.82	51.67	74.00	-22.33	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5530MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Vertical		

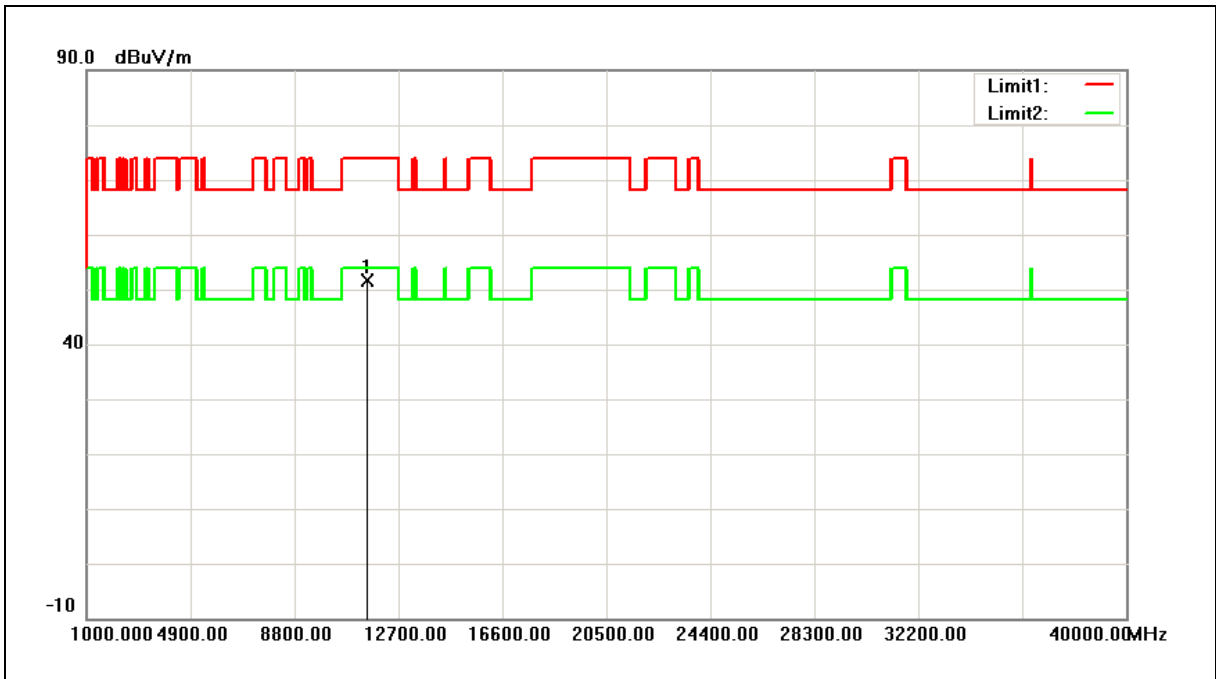


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11060.000	46.05	5.82	51.87	74.00	-22.13	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Horizontal		

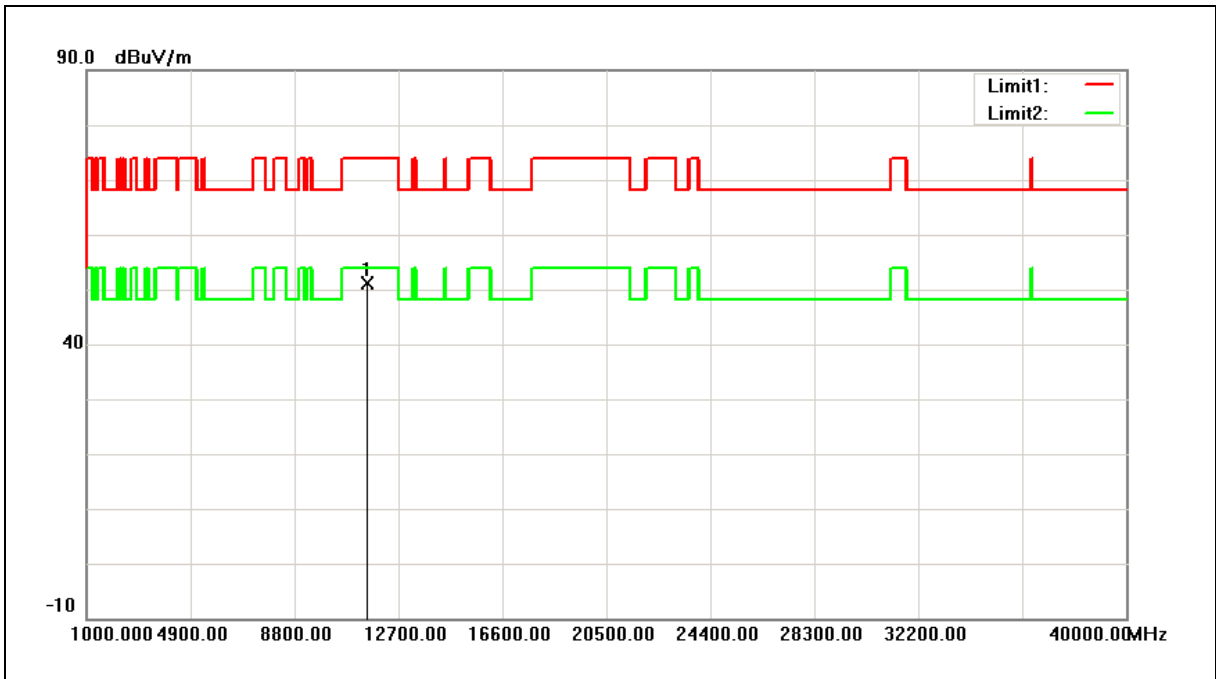


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	45.45	6.29	51.74	74.00	-22.26	peak

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/10/2016
Ant.Polar.:	Vertical		



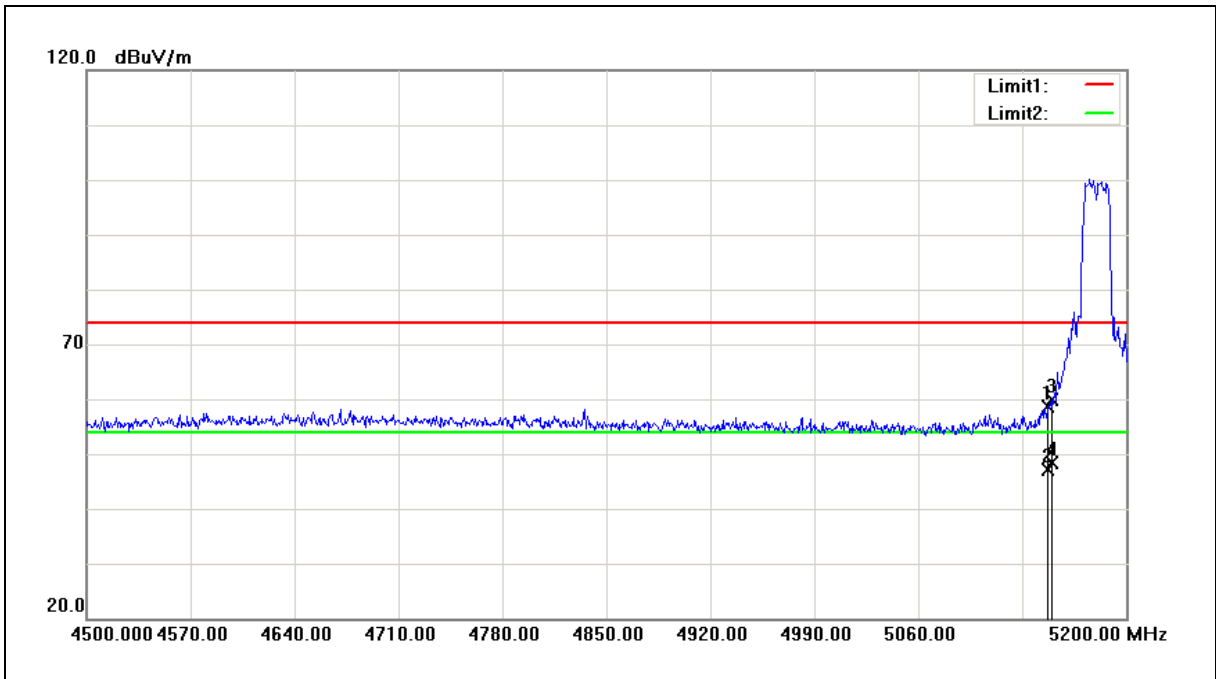
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	44.86	6.29	51.15	74.00	-22.85	peak

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



Band Edge

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5147.500	50.49	8.24	58.73	74.00	-15.27	peak
2	5147.500	38.91	8.24	47.15	54.00	-6.85	AVG
3	5150.000	51.54	8.25	59.79	74.00	-14.21	peak
4	5150.000	40.15	8.25	48.40	54.00	-5.60	AVG

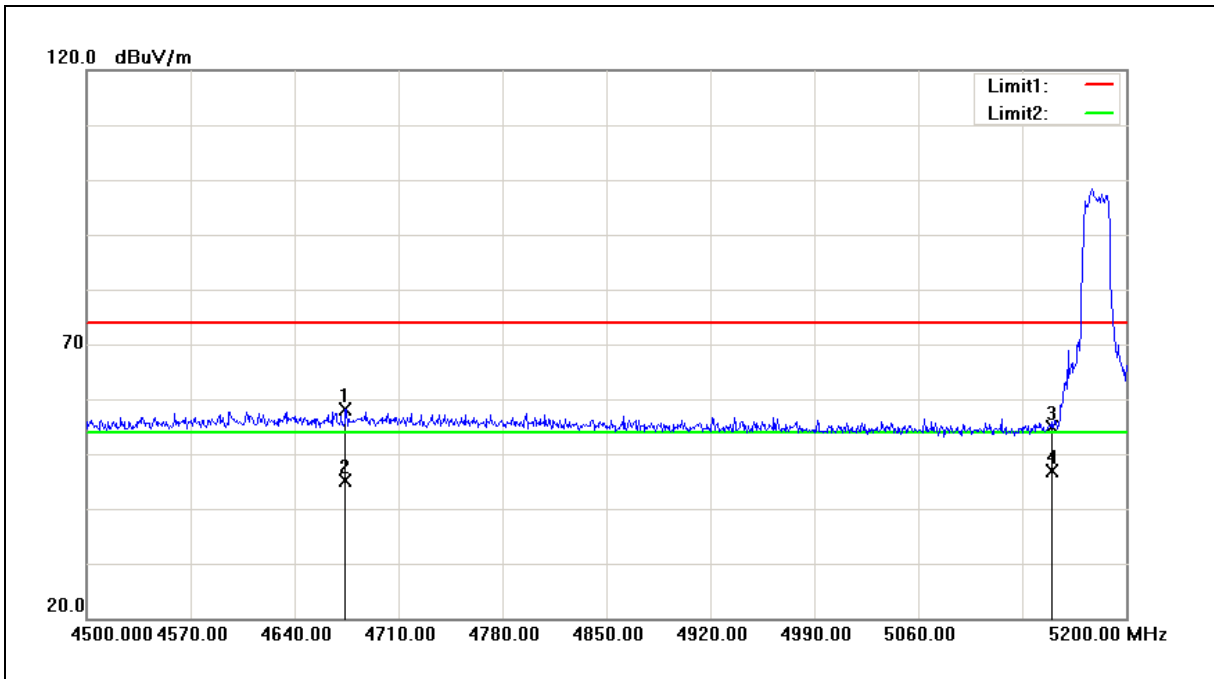
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4674.300	51.19	6.97	58.16	74.00	-15.84	peak
2	4674.300	38.25	6.97	45.22	54.00	-8.78	AVG
3	5150.000	46.73	8.25	54.98	74.00	-19.02	peak
4	5150.000	38.59	8.25	46.84	54.00	-7.16	AVG

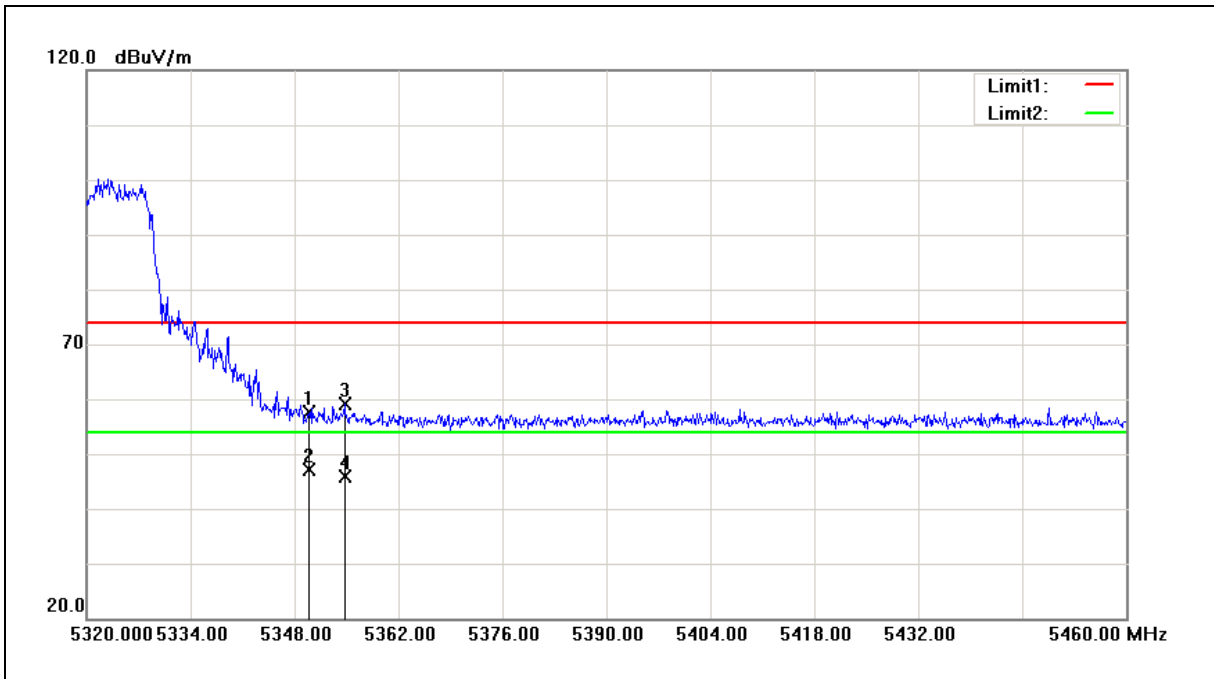
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	49.24	8.41	57.65	74.00	-16.35	peak
2	5350.000	38.71	8.41	47.12	54.00	-6.88	AVG
3	5354.720	50.59	8.42	59.01	74.00	-14.99	peak
4	5354.720	37.52	8.42	45.94	54.00	-8.06	AVG

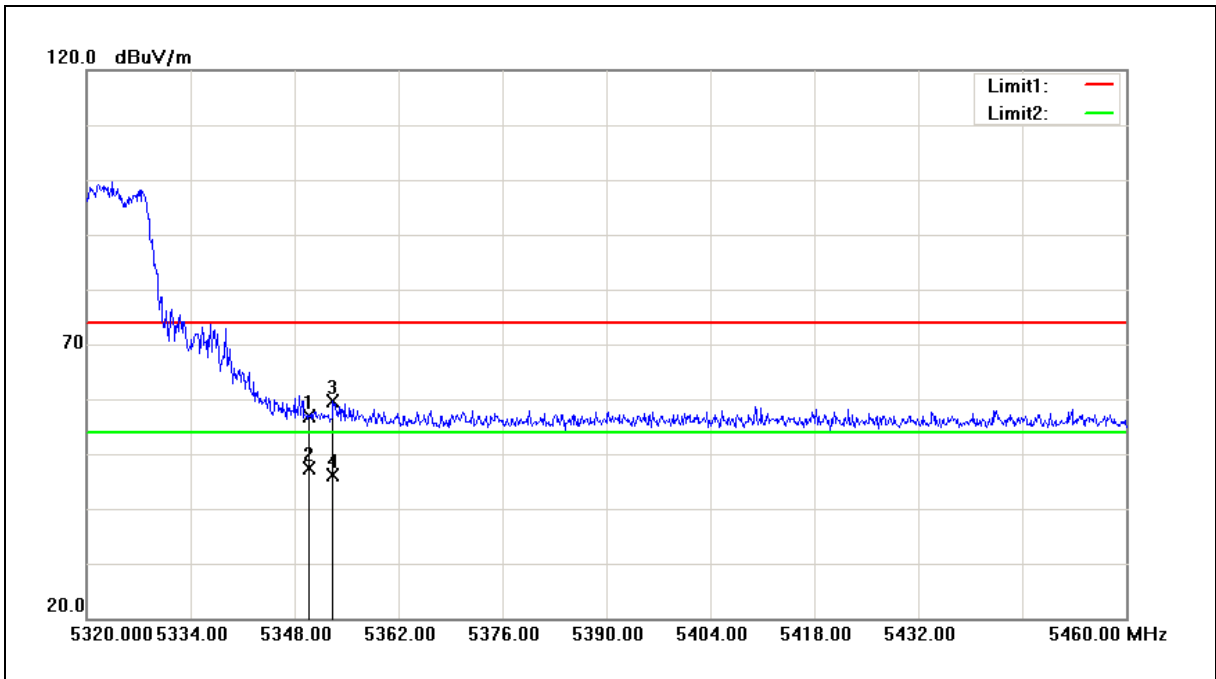
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Vertical		

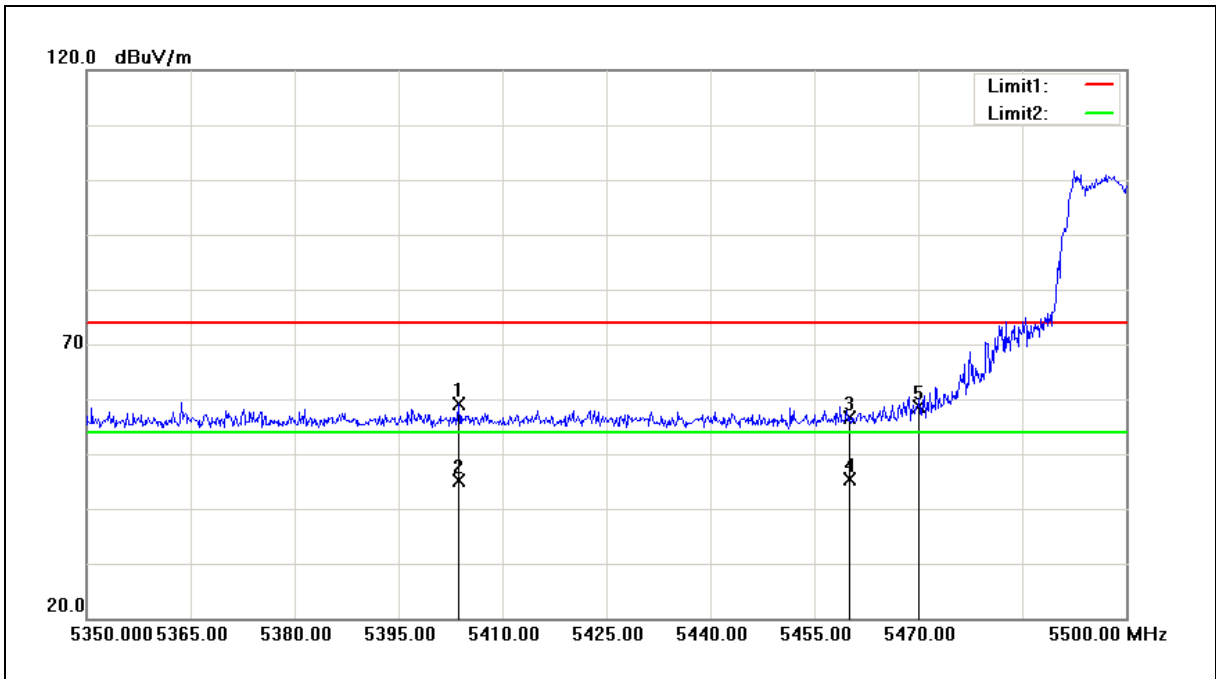


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	48.39	8.41	56.80	74.00	-17.20	peak
2	5350.000	38.89	8.41	47.30	54.00	-6.70	AVG
3	5353.180	51.16	8.42	59.58	74.00	-14.42	peak
4	5353.180	37.83	8.42	46.25	54.00	-7.75	AVG

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5403.700	50.59	8.47	59.06	74.00	-14.94	peak
2	5403.700	36.76	8.47	45.23	54.00	-8.77	AVG
3	5460.000	48.16	8.51	56.67	74.00	-17.33	peak
4	5460.000	36.95	8.51	45.46	54.00	-8.54	AVG
5	5470.000	50.02	8.53	58.55	68.20	-9.65	peak

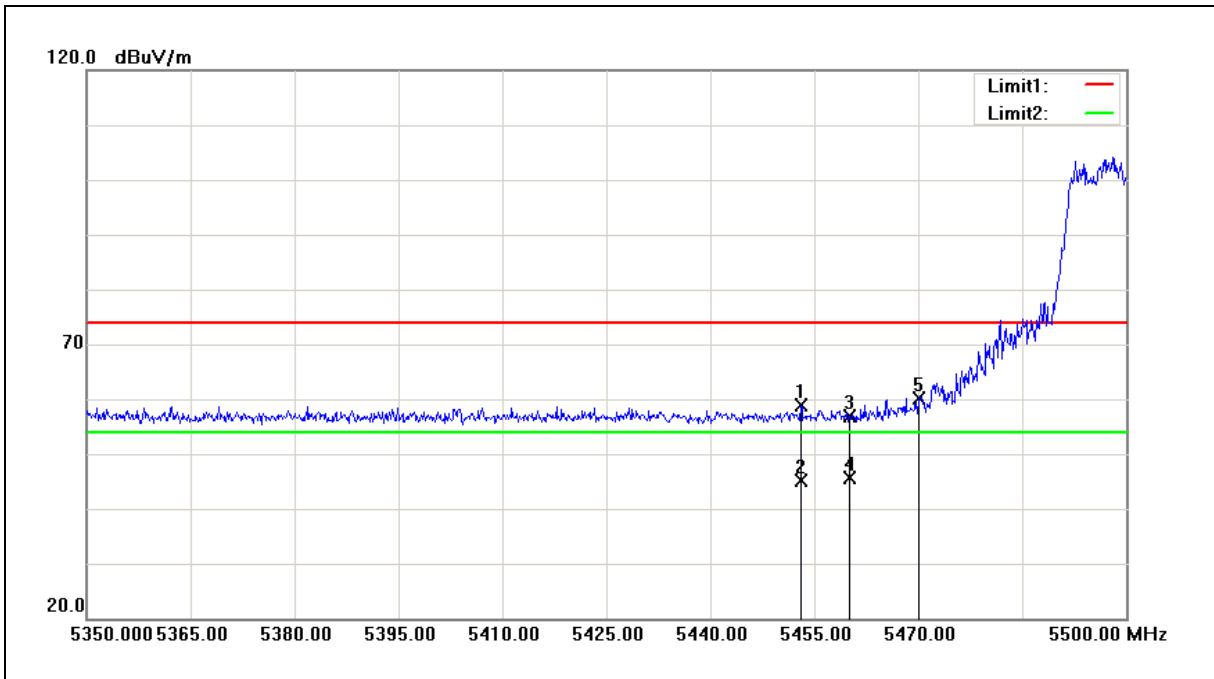
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5453.050	50.28	8.51	58.79	74.00	-15.21	peak
2	5453.050	36.63	8.51	45.14	54.00	-8.86	AVG
3	5460.000	48.33	8.51	56.84	74.00	-17.16	peak
4	5460.000	37.17	8.51	45.68	54.00	-8.32	AVG
5	5470.000	51.49	8.53	60.02	68.20	-8.18	peak

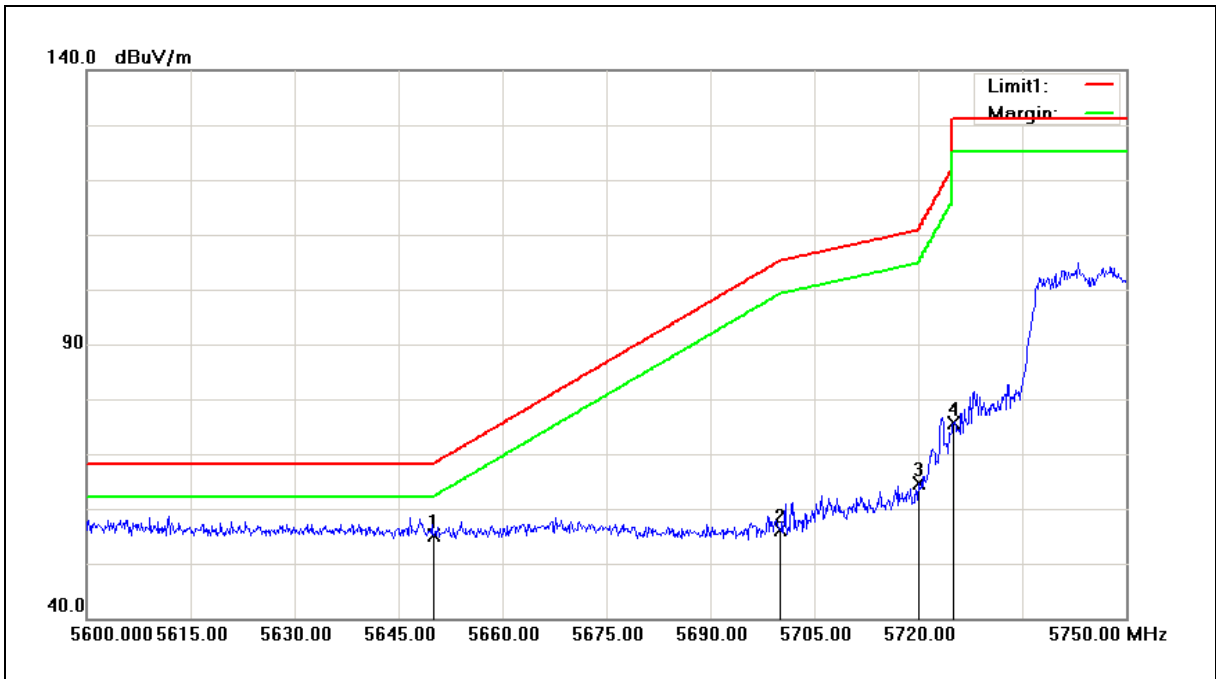
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.18	8.93	55.11	68.20	-13.09	peak
2	5700.000	47.03	9.05	56.08	105.20	-49.12	peak
3	5720.000	55.43	9.09	64.52	110.80	-46.28	peak
4	5725.000	66.43	9.11	75.54	122.20	-46.66	peak

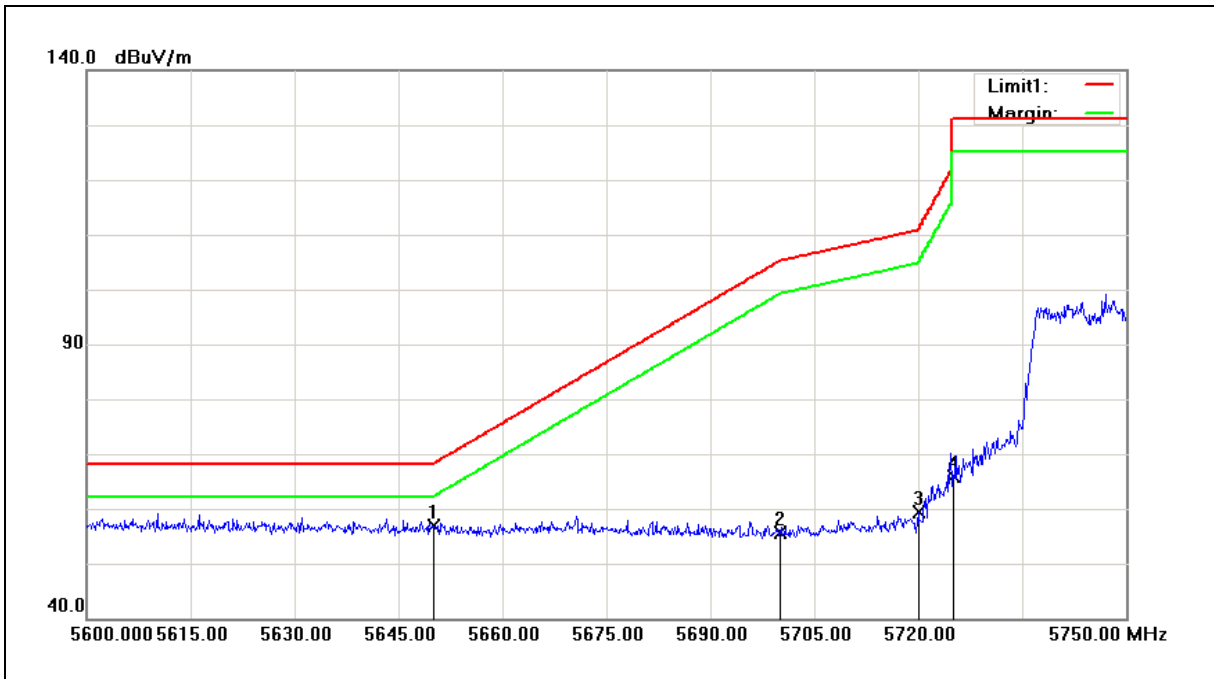
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	48.03	8.93	56.96	68.20	-11.24	peak
2	5700.000	46.47	9.05	55.52	105.20	-49.68	peak
3	5720.000	50.27	9.09	59.36	110.80	-51.44	peak
4	5725.000	56.82	9.11	65.93	122.20	-56.27	peak

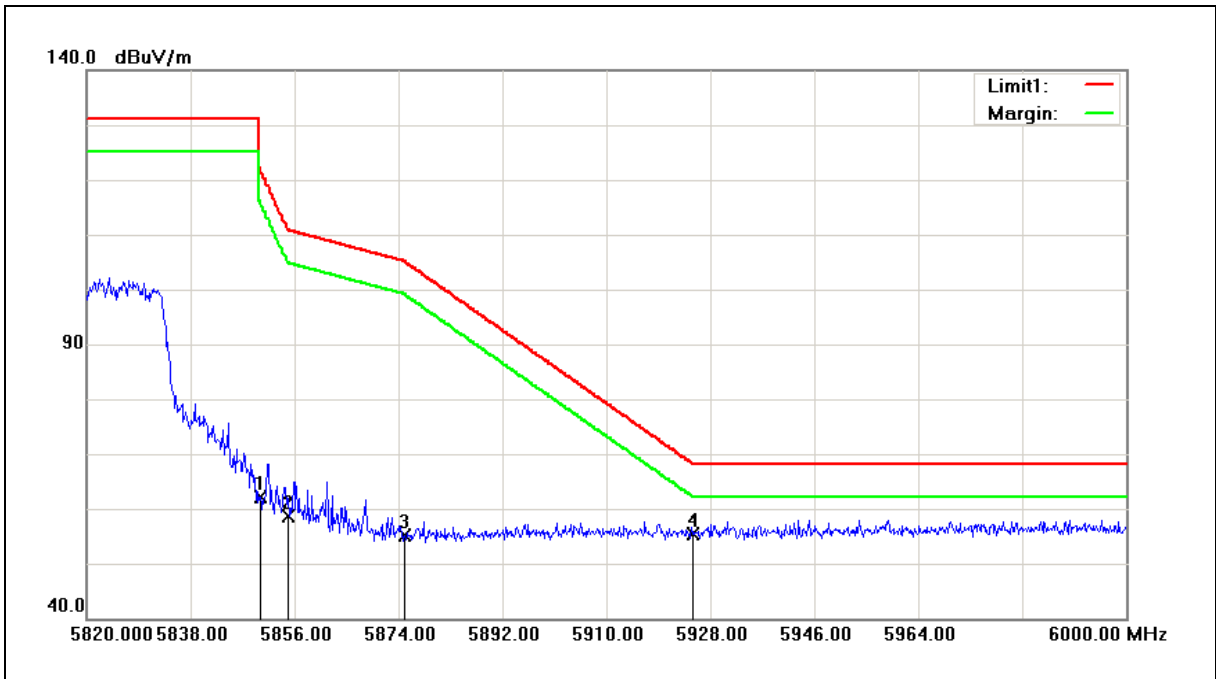
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	52.82	9.41	62.23	122.20	-59.97	peak
2	5855.000	49.12	9.43	58.55	110.80	-52.25	peak
3	5875.000	45.68	9.48	55.16	105.20	-50.04	peak
4	5925.000	45.89	9.61	55.50	68.20	-12.70	peak

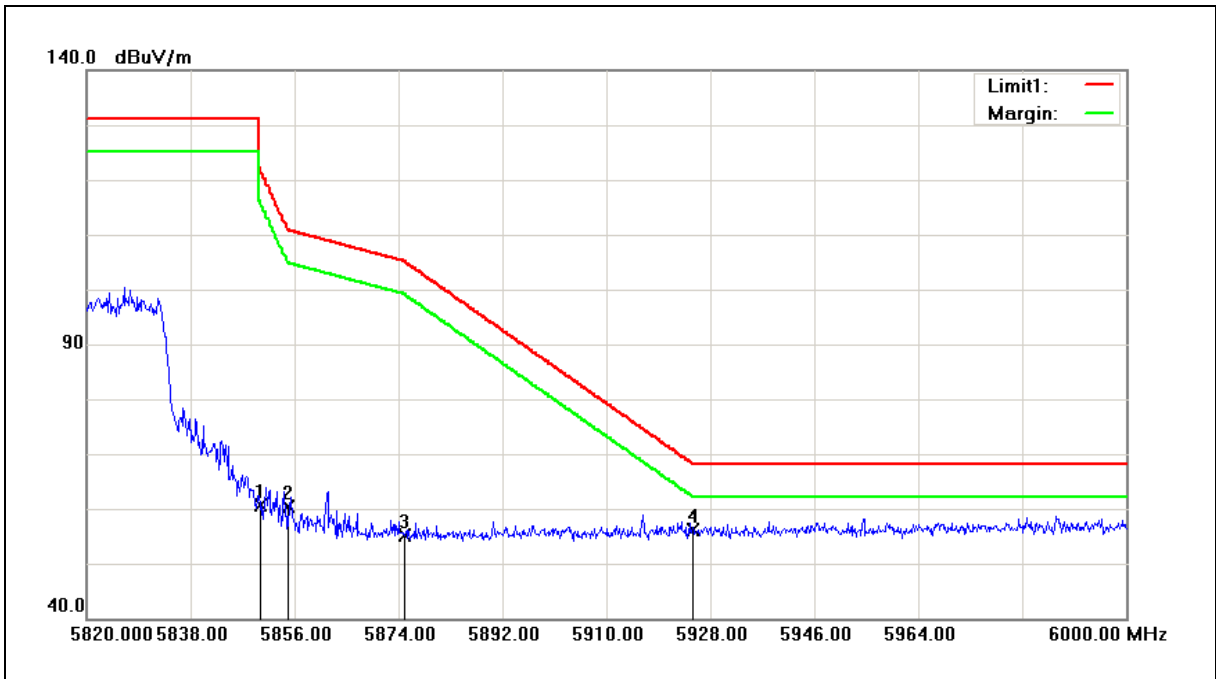
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 2	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	51.18	9.41	60.59	122.20	-61.61	peak
2	5855.000	51.06	9.43	60.49	110.80	-50.31	peak
3	5875.000	45.55	9.48	55.03	105.20	-50.17	peak
4	5925.000	46.59	9.61	56.20	68.20	-12.00	peak

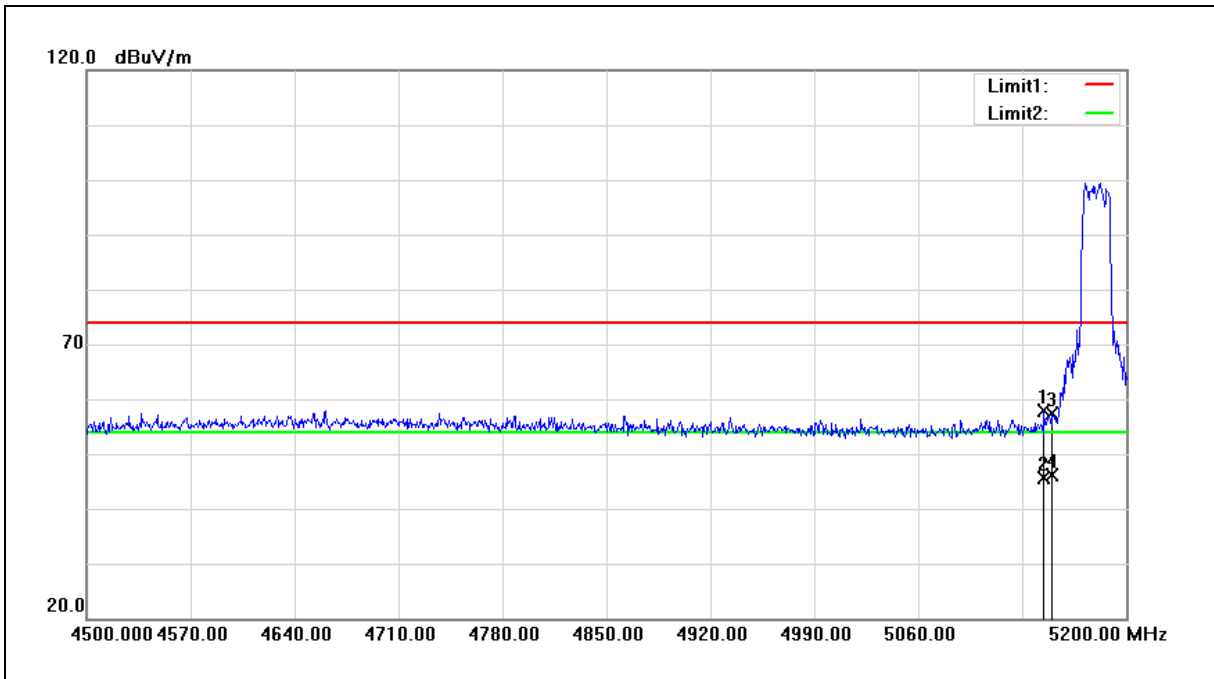
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5144.700	49.75	8.24	57.99	74.00	-16.01	peak
2	5144.700	37.45	8.24	45.69	54.00	-8.31	AVG
3	5150.000	49.18	8.25	57.43	74.00	-16.57	peak
4	5150.000	38.00	8.25	46.25	54.00	-7.75	AVG

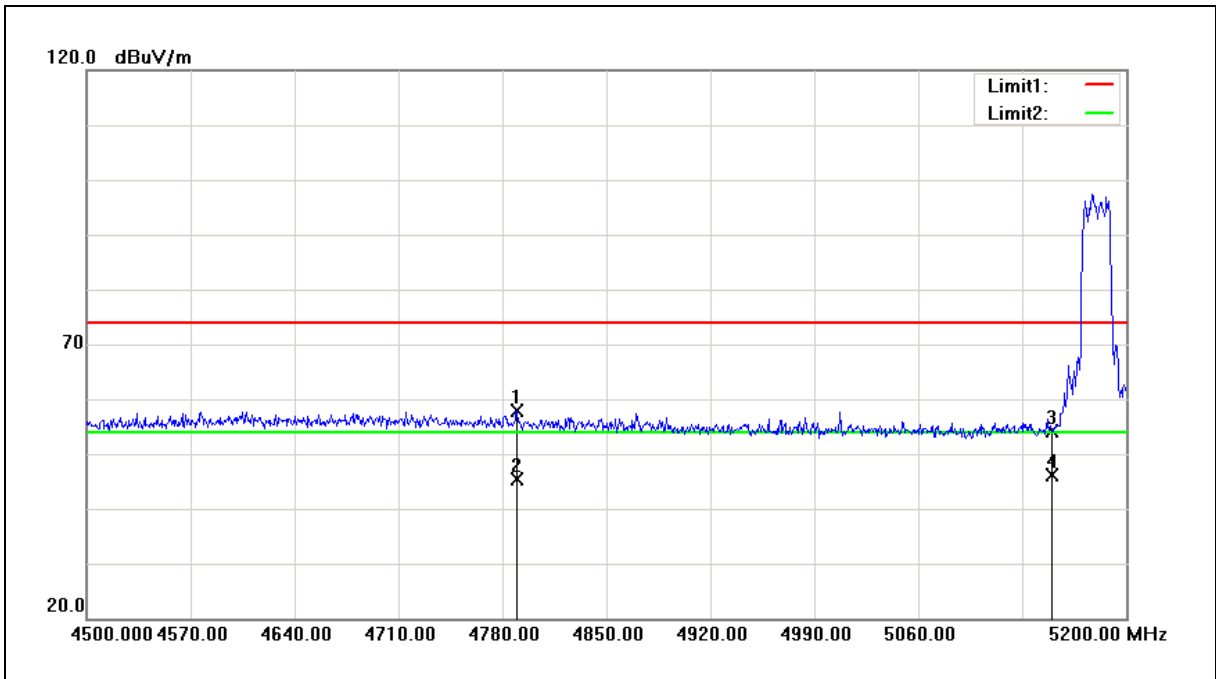
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4789.800	50.57	7.37	57.94	74.00	-16.06	peak
2	4789.800	37.99	7.37	45.36	54.00	-8.64	AVG
3	5150.000	45.96	8.25	54.21	74.00	-19.79	peak
4	5150.000	37.86	8.25	46.11	54.00	-7.89	AVG

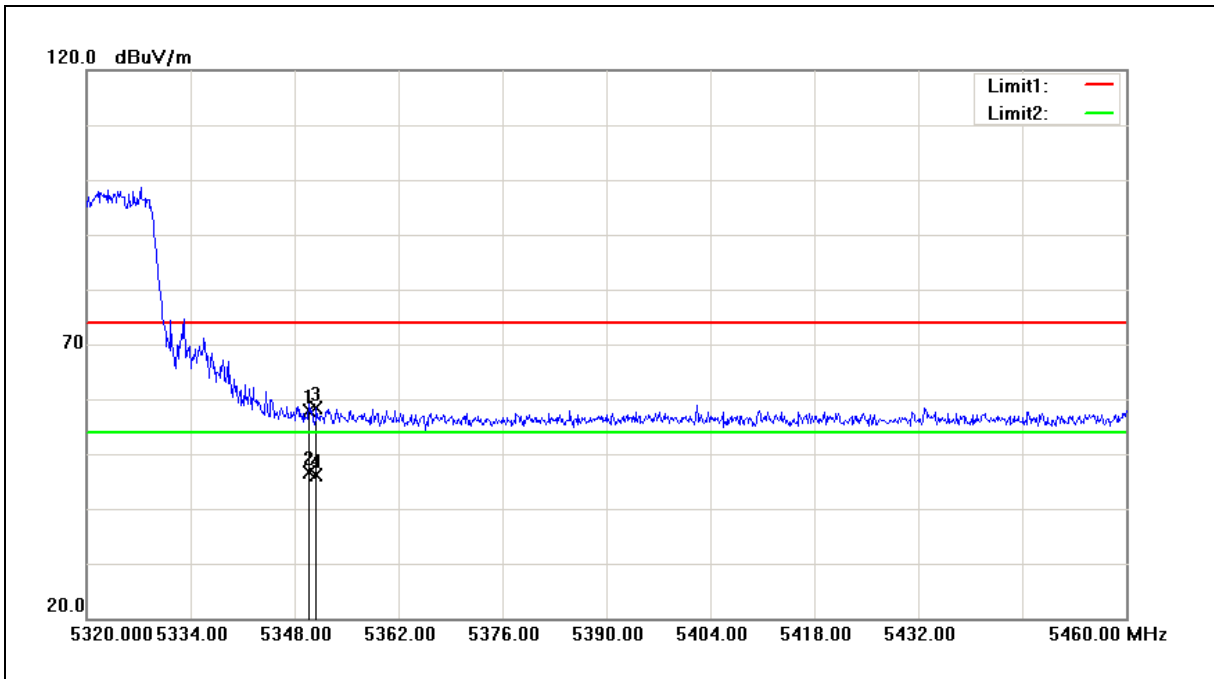
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	49.53	8.41	57.94	74.00	-16.06	peak
2	5350.000	38.30	8.41	46.71	54.00	-7.29	AVG
3	5350.940	50.08	8.41	58.49	74.00	-15.51	peak
4	5350.940	37.83	8.41	46.24	54.00	-7.76	AVG

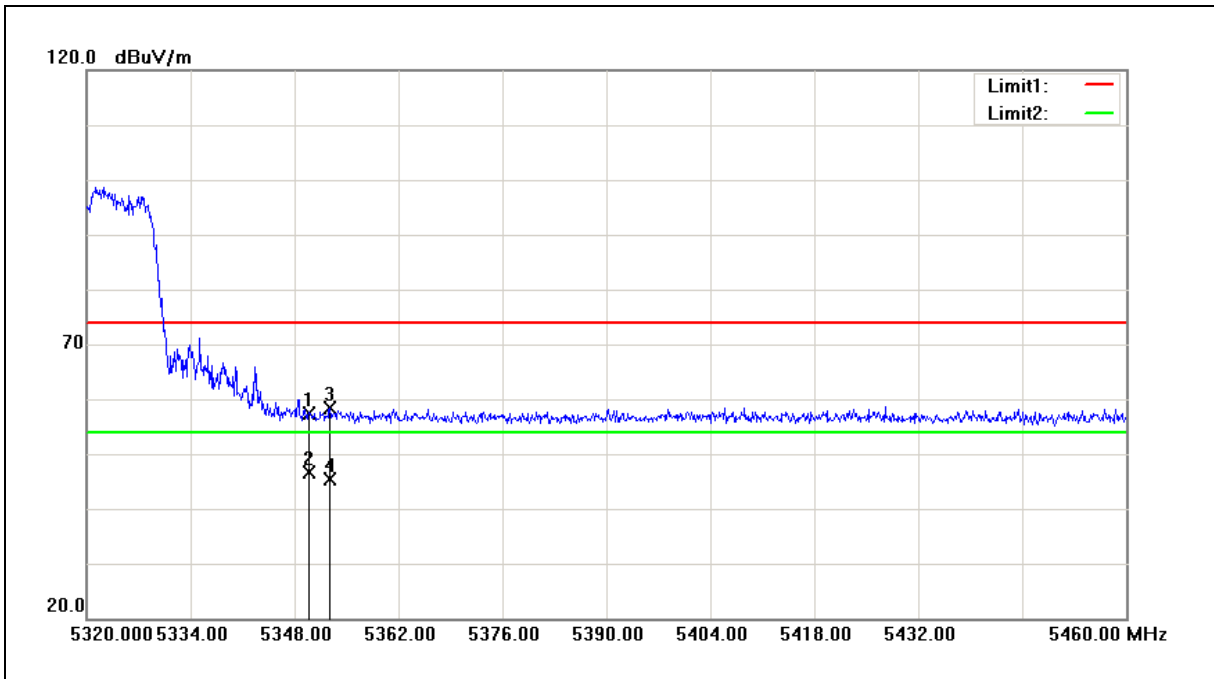
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5320MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	49.03	8.41	57.44	74.00	-16.56	peak
2	5350.000	38.13	8.41	46.54	54.00	-7.46	AVG
3	5352.760	49.89	8.42	58.31	74.00	-15.69	peak
4	5352.760	36.91	8.42	45.33	54.00	-8.67	AVG

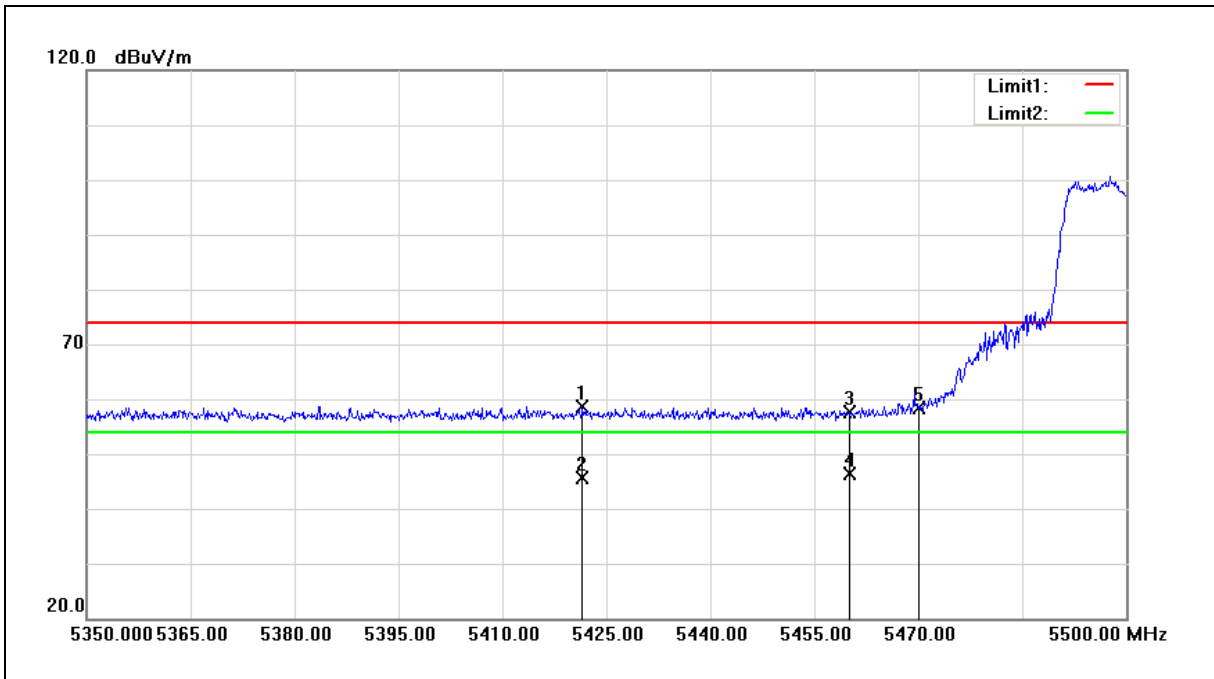
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5421.550	50.26	8.49	58.75	74.00	-15.25	peak
2	5421.550	37.13	8.49	45.62	54.00	-8.38	AVG
3	5460.000	49.15	8.51	57.66	74.00	-16.34	peak
4	5460.000	37.76	8.51	46.27	54.00	-7.73	AVG
5	5470.000	49.94	8.53	58.47	68.20	-9.73	peak

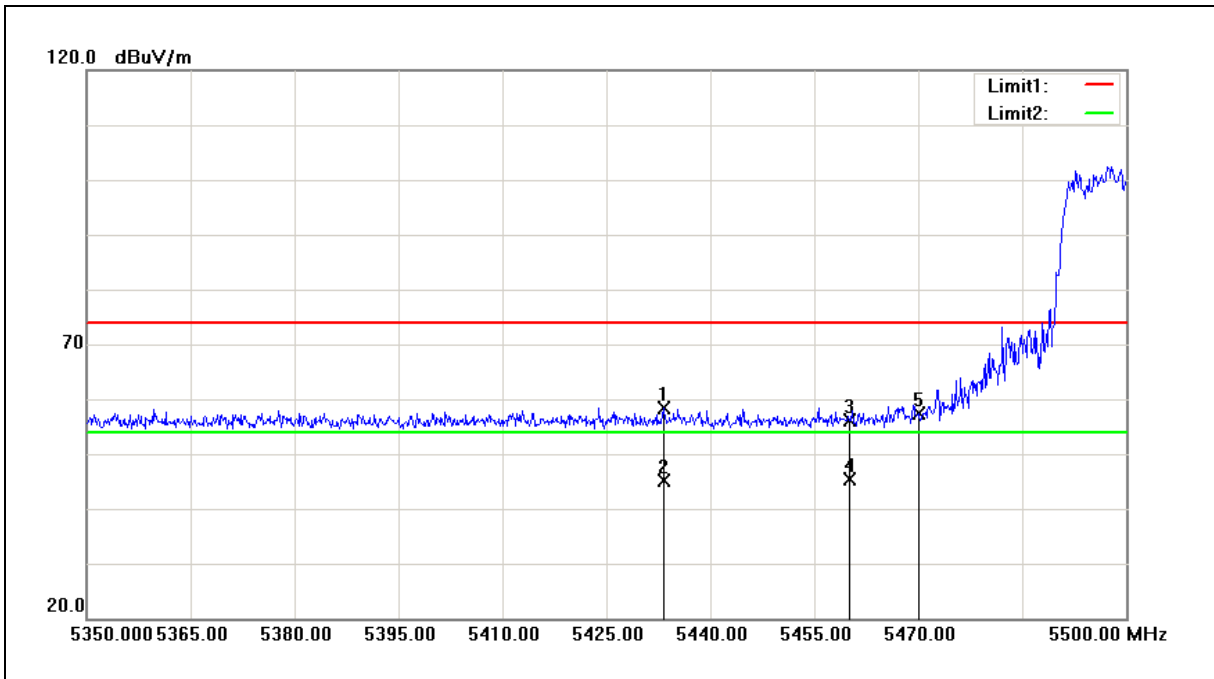
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5500MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5433.250	50.01	8.49	58.50	74.00	-15.50	peak
2	5433.250	36.57	8.49	45.06	54.00	-8.94	AVG
3	5460.000	47.60	8.51	56.11	74.00	-17.89	peak
4	5460.000	36.87	8.51	45.38	54.00	-8.62	AVG
5	5470.000	48.95	8.53	57.48	68.20	-10.72	peak

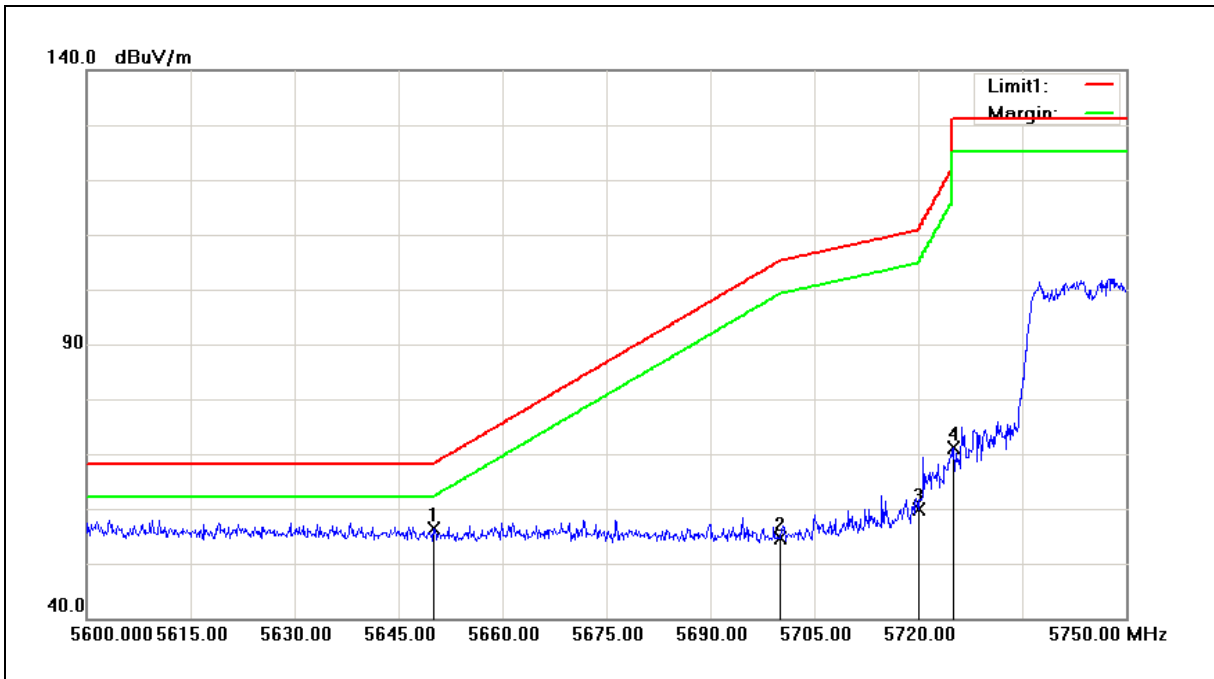
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.41	8.93	56.34	68.20	-11.86	peak
2	5700.000	45.53	9.05	54.58	105.20	-50.62	peak
3	5720.000	50.76	9.09	59.85	110.80	-50.95	peak
4	5725.000	62.06	9.11	71.17	122.20	-51.03	peak

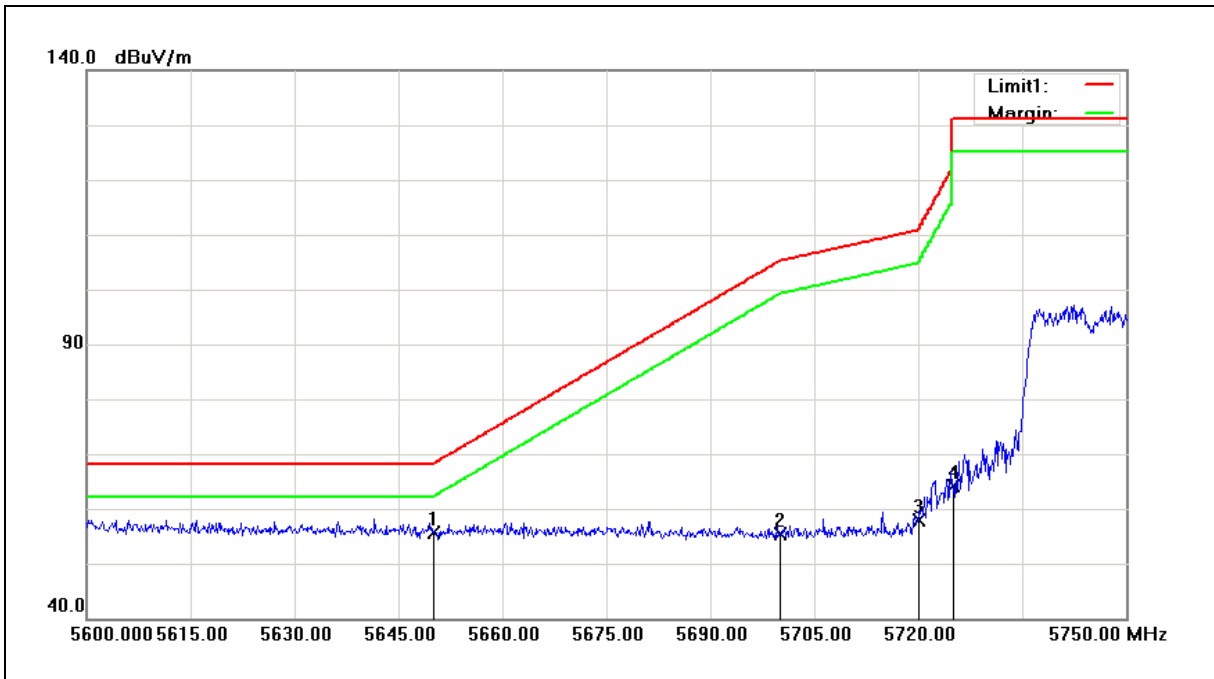
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.73	8.93	55.66	68.20	-12.54	peak
2	5700.000	46.45	9.05	55.50	105.20	-49.70	peak
3	5720.000	48.83	9.09	57.92	110.80	-52.88	peak
4	5725.000	54.96	9.11	64.07	122.20	-58.13	peak

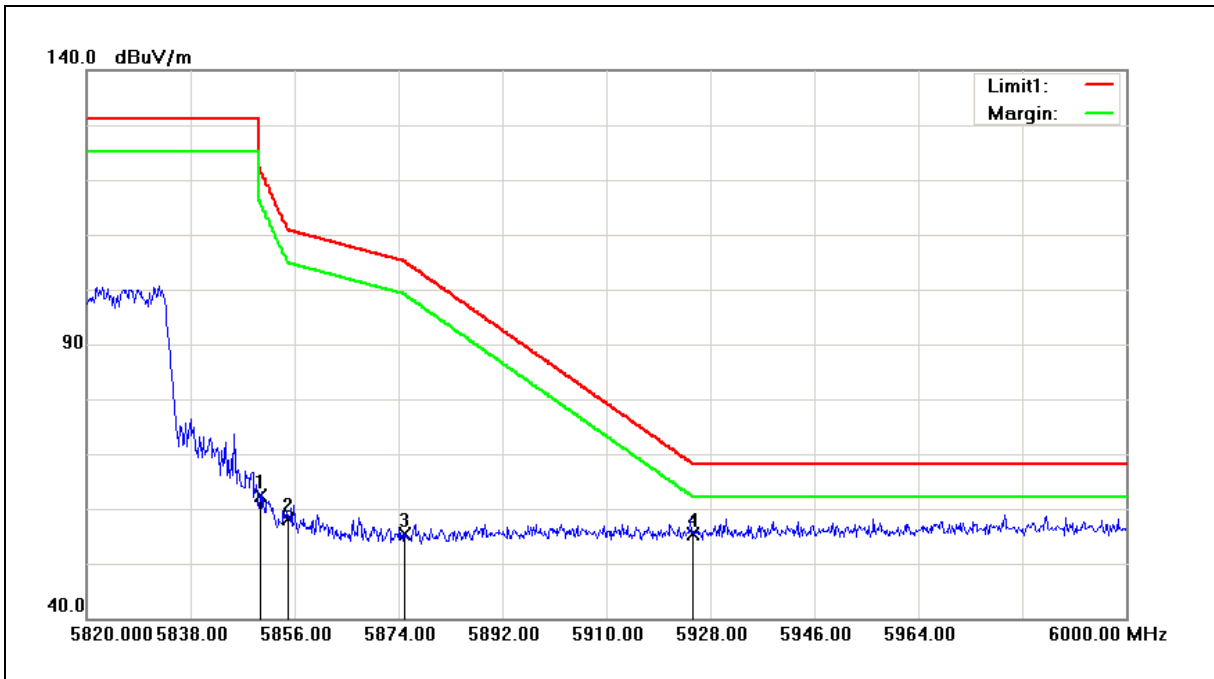
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	53.08	9.41	62.49	122.20	-59.71	peak
2	5855.000	48.76	9.43	58.19	110.80	-52.61	peak
3	5875.000	45.92	9.48	55.40	105.20	-49.80	peak
4	5925.000	45.80	9.61	55.41	68.20	-12.79	peak

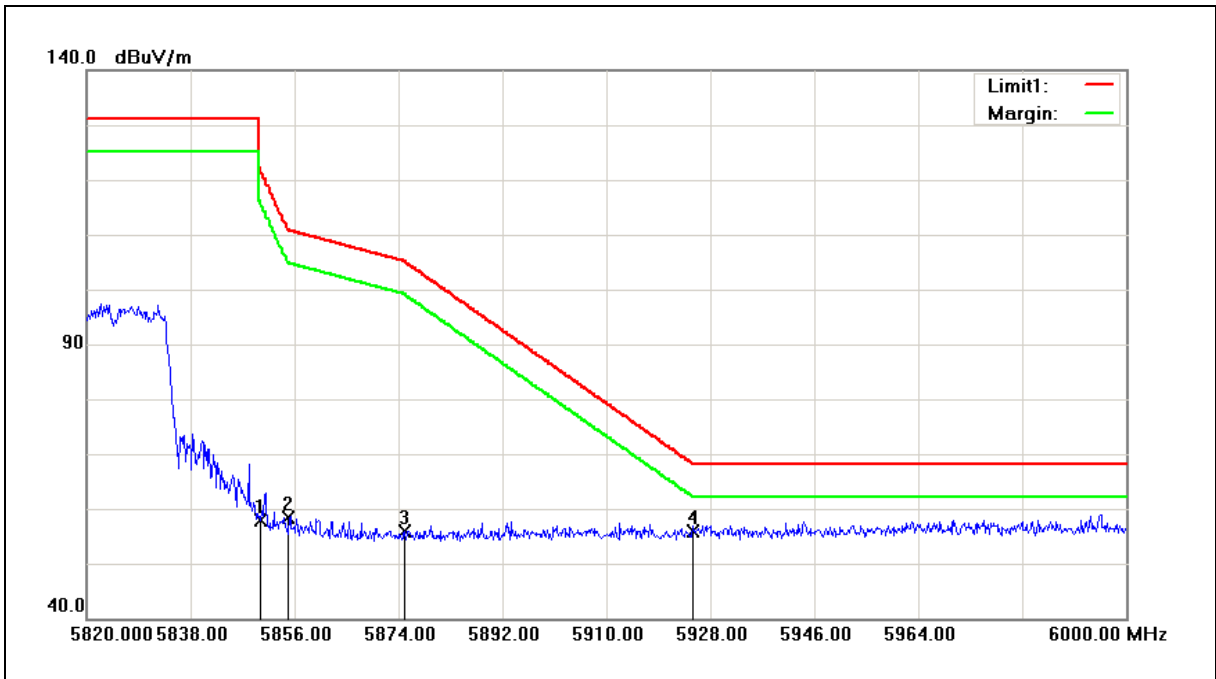
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	48.38	9.41	57.79	122.20	-64.41	peak
2	5855.000	48.92	9.43	58.35	110.80	-52.45	peak
3	5875.000	46.35	9.48	55.83	105.20	-49.37	peak
4	5925.000	46.17	9.61	55.78	68.20	-12.42	peak

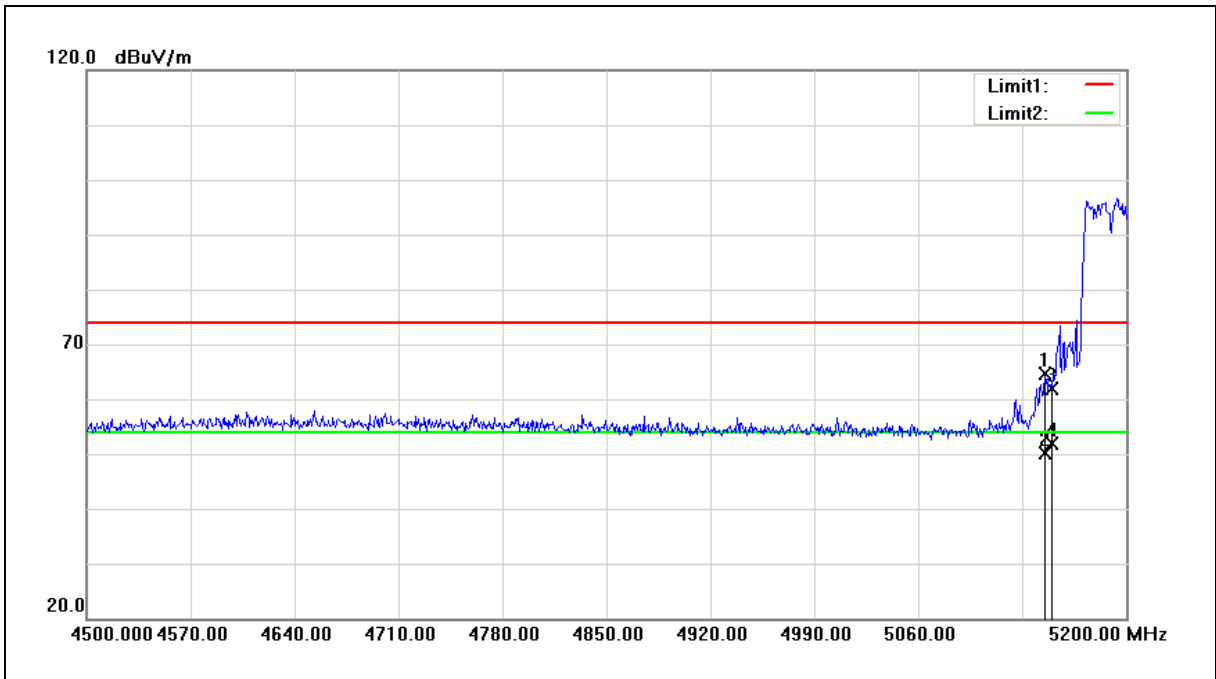
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5145.400	56.45	8.24	64.69	74.00	-9.31	peak
2	5145.400	41.81	8.24	50.05	54.00	-3.95	AVG
3	5150.000	53.67	8.25	61.92	74.00	-12.08	peak
4	5150.000	43.62	8.25	51.87	54.00	-2.13	AVG

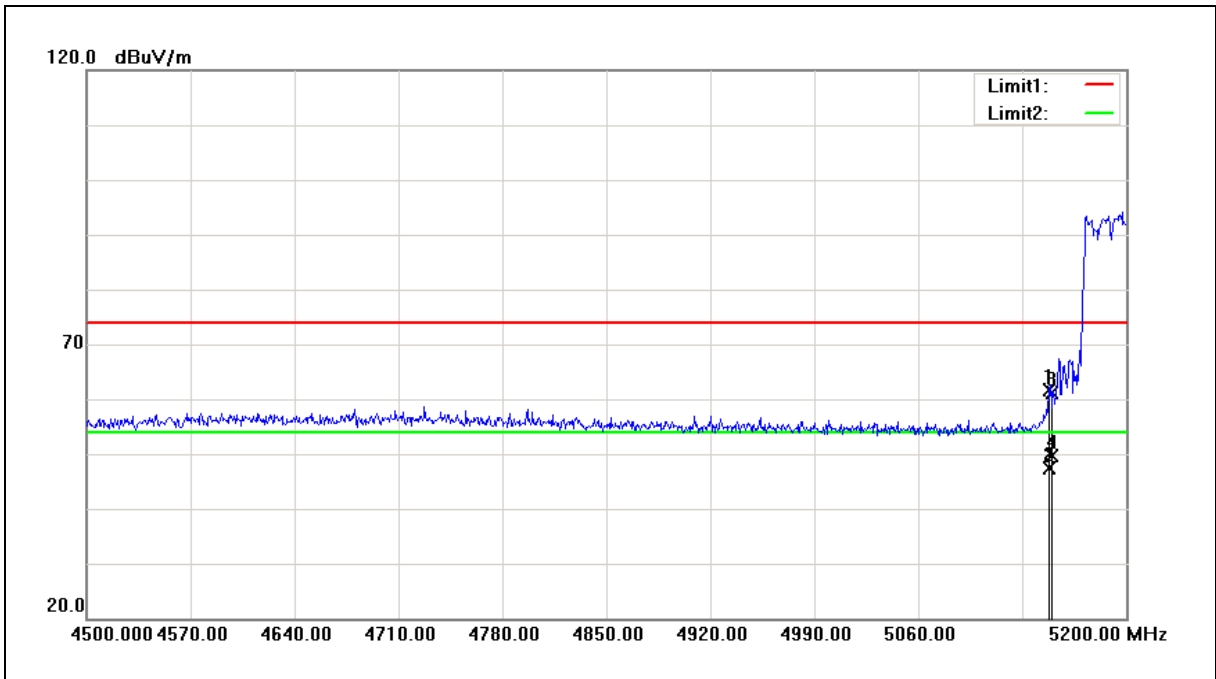
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5148.200	53.31	8.25	61.56	74.00	-12.44	peak
2	5148.200	39.13	8.25	47.38	54.00	-6.62	AVG
3	5150.000	52.81	8.25	61.06	74.00	-12.94	peak
4	5150.000	41.31	8.25	49.56	54.00	-4.44	AVG

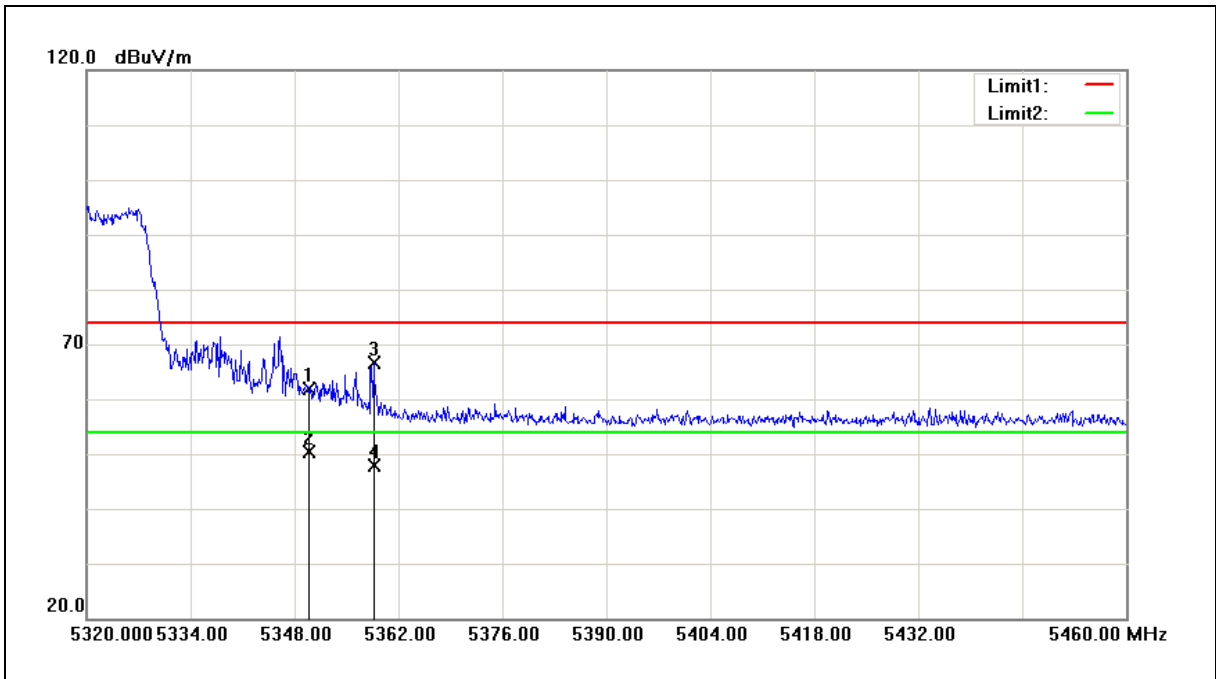
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	53.38	8.41	61.79	74.00	-12.21	peak
2	5350.000	41.85	8.41	50.26	54.00	-3.74	AVG
3	5358.640	58.22	8.42	66.64	74.00	-7.36	peak
4	5358.640	39.51	8.42	47.93	54.00	-6.07	AVG

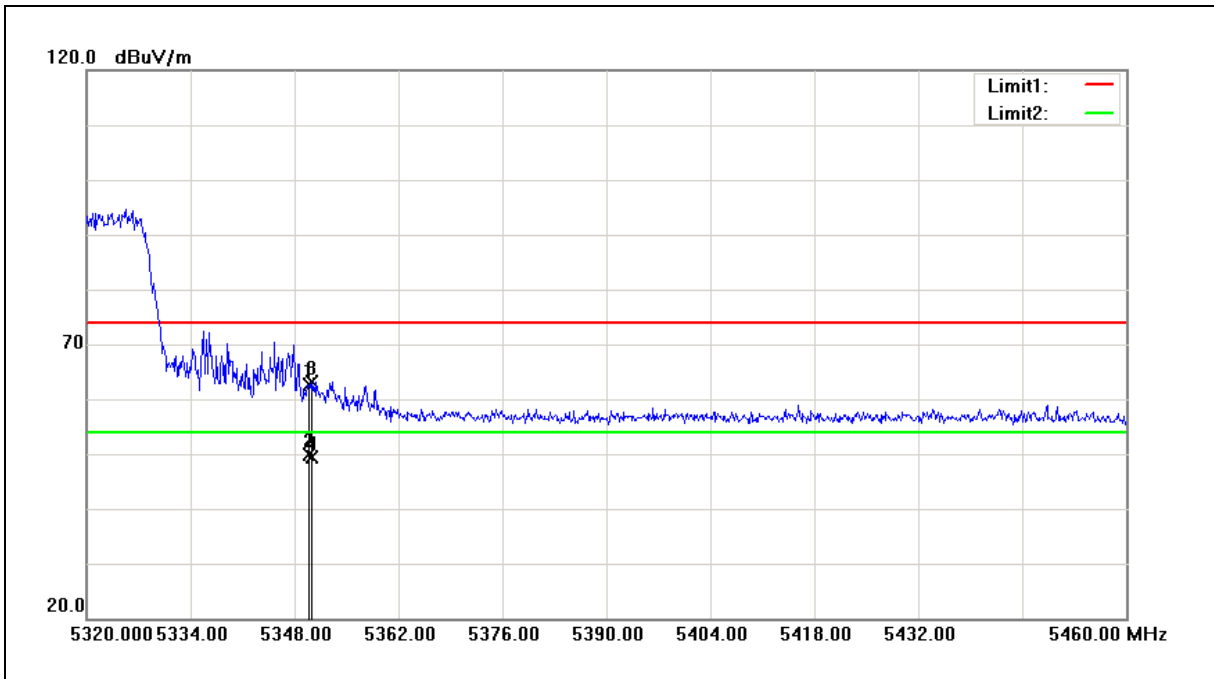
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	54.20	8.41	62.61	74.00	-11.39	peak
2	5350.000	41.54	8.41	49.95	54.00	-4.05	AVG
3	5350.380	54.74	8.41	63.15	74.00	-10.85	peak
4	5350.380	40.89	8.41	49.30	54.00	-4.70	AVG

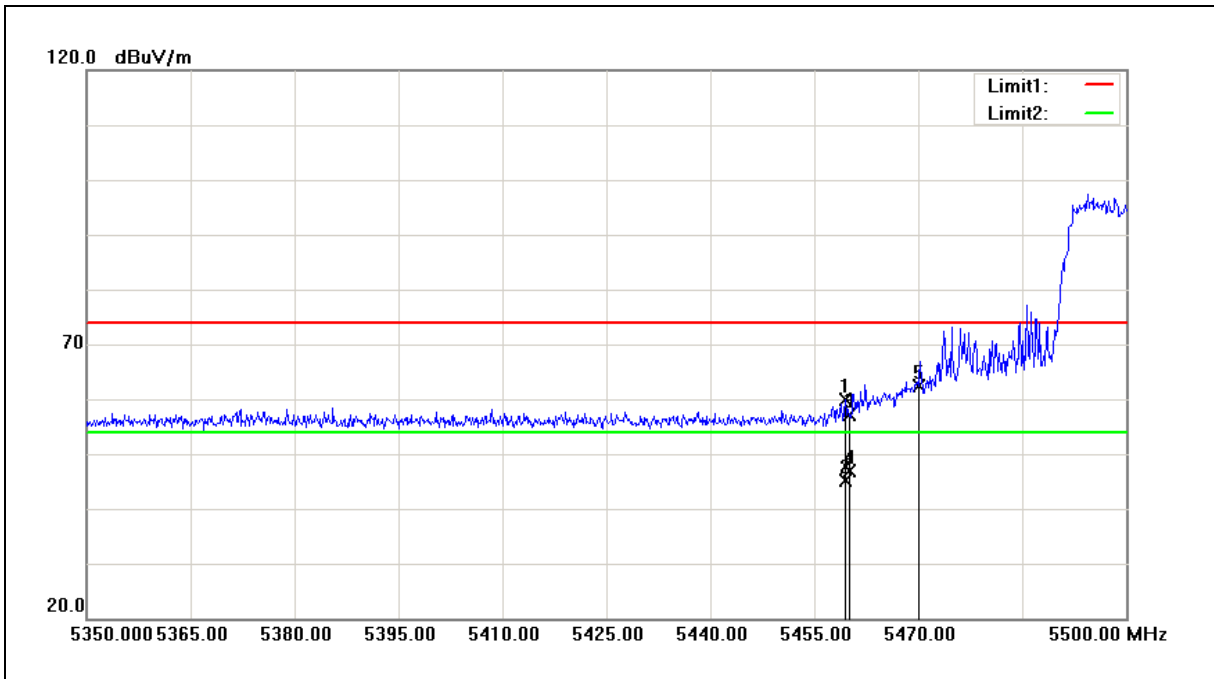
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5459.500	51.31	8.51	59.82	74.00	-14.18	peak
2	5459.500	36.71	8.51	45.22	54.00	-8.78	AVG
3	5460.000	48.64	8.51	57.15	74.00	-16.85	peak
4	5460.000	38.36	8.51	46.87	54.00	-7.13	AVG
5	5470.000	53.89	8.53	62.42	68.20	-5.78	peak

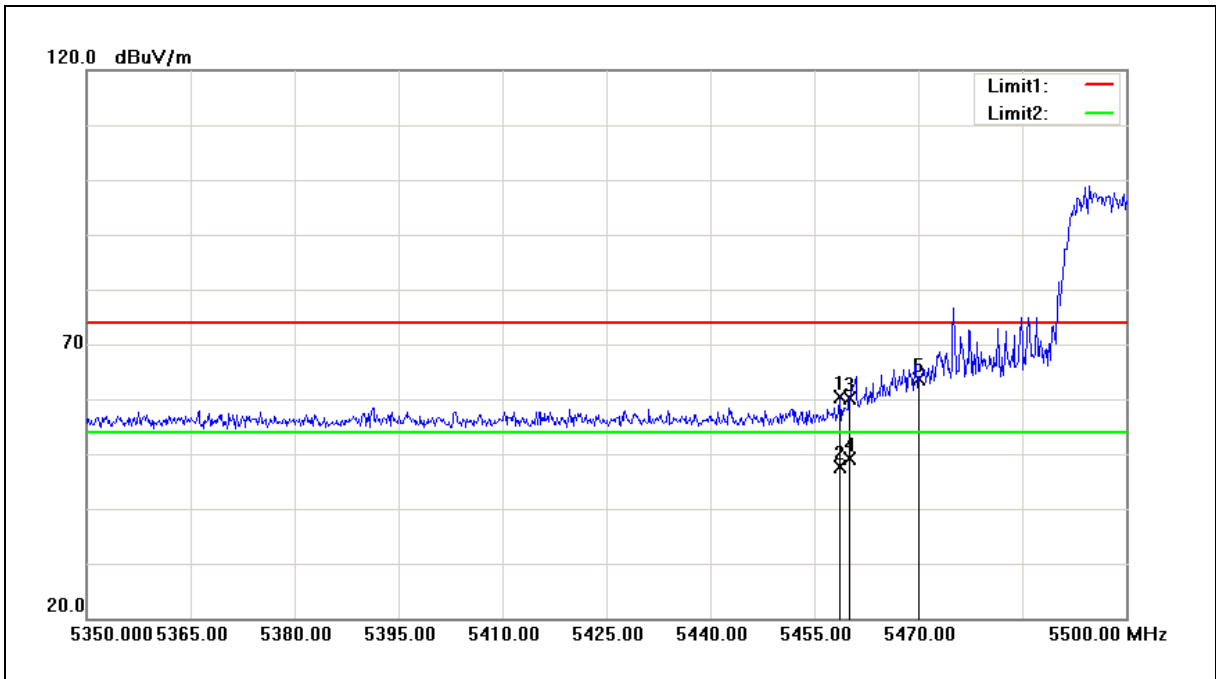
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5458.750	51.84	8.51	60.35	74.00	-13.65	peak
2	5458.750	39.22	8.51	47.73	54.00	-6.27	AVG
3	5460.000	51.71	8.51	60.22	74.00	-13.78	peak
4	5460.000	40.60	8.51	49.11	54.00	-4.89	AVG
5	5470.000	55.14	8.53	63.67	68.20	-4.53	peak

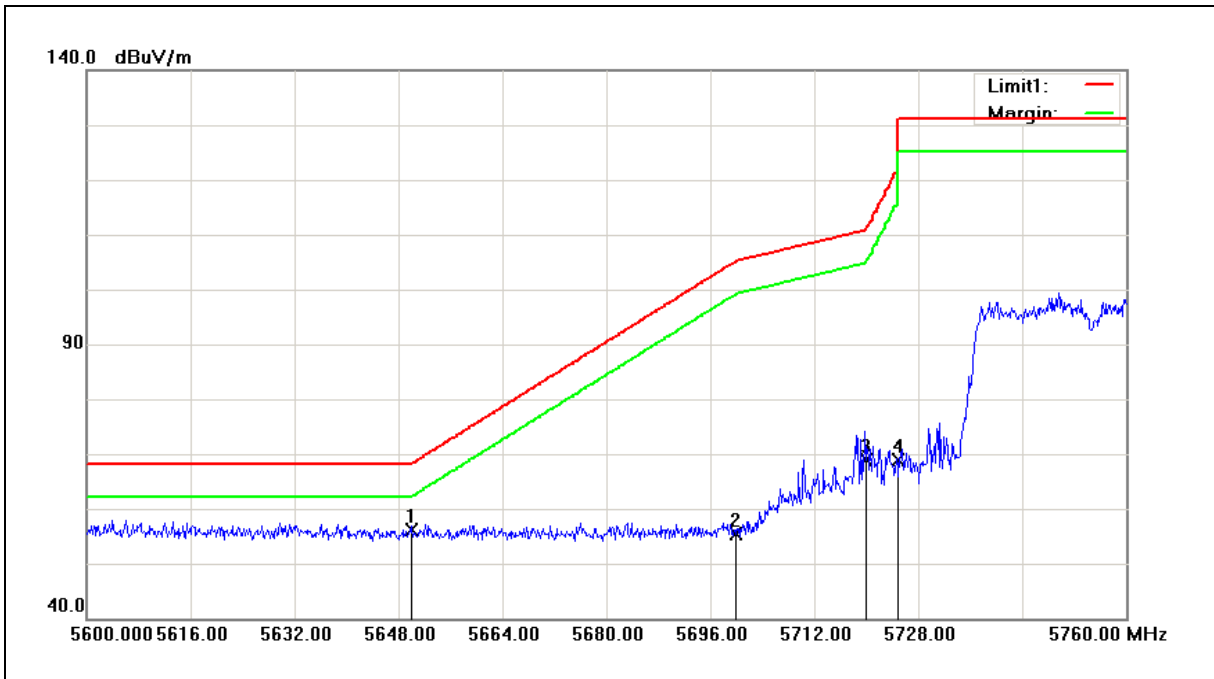
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	47.20	8.93	56.13	68.20	-12.07	peak
2	5700.000	46.34	9.05	55.39	105.20	-49.81	peak
3	5720.000	59.68	9.09	68.77	110.80	-42.03	peak
4	5725.000	59.83	9.11	68.94	122.20	-53.26	peak

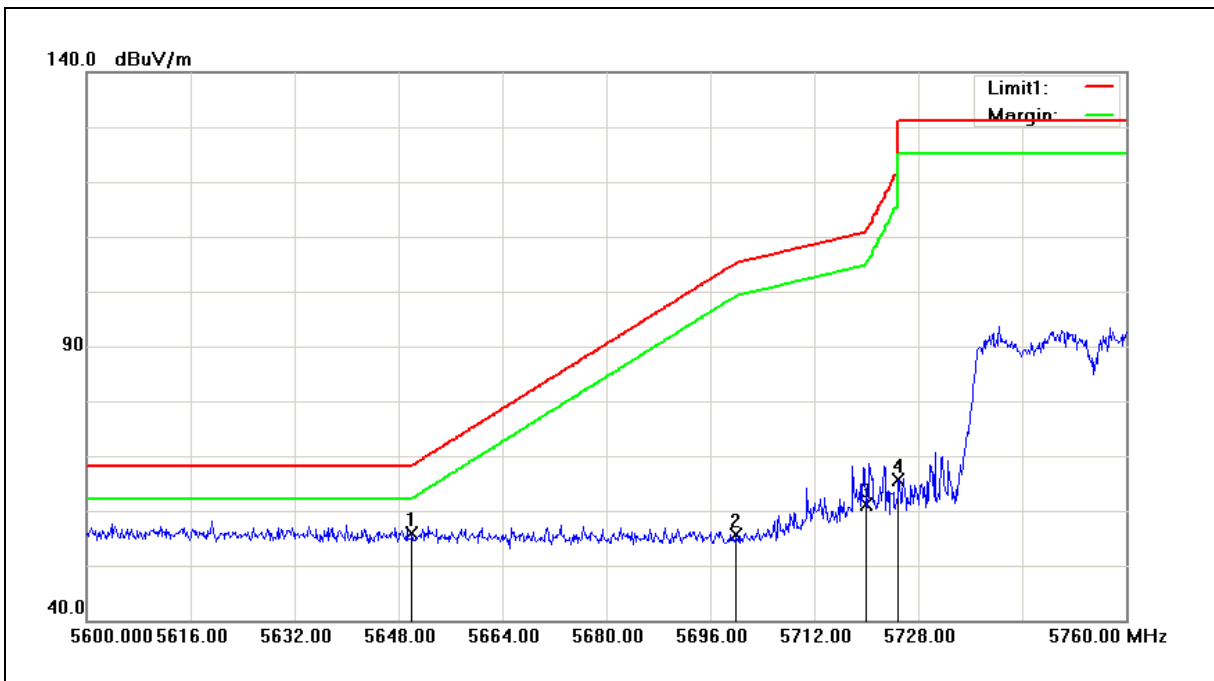
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.97	8.93	55.90	68.20	-12.30	peak
2	5700.000	46.57	9.05	55.62	105.20	-49.58	peak
3	5720.000	52.11	9.09	61.20	110.80	-49.60	peak
4	5725.000	56.60	9.11	65.71	122.20	-56.49	peak

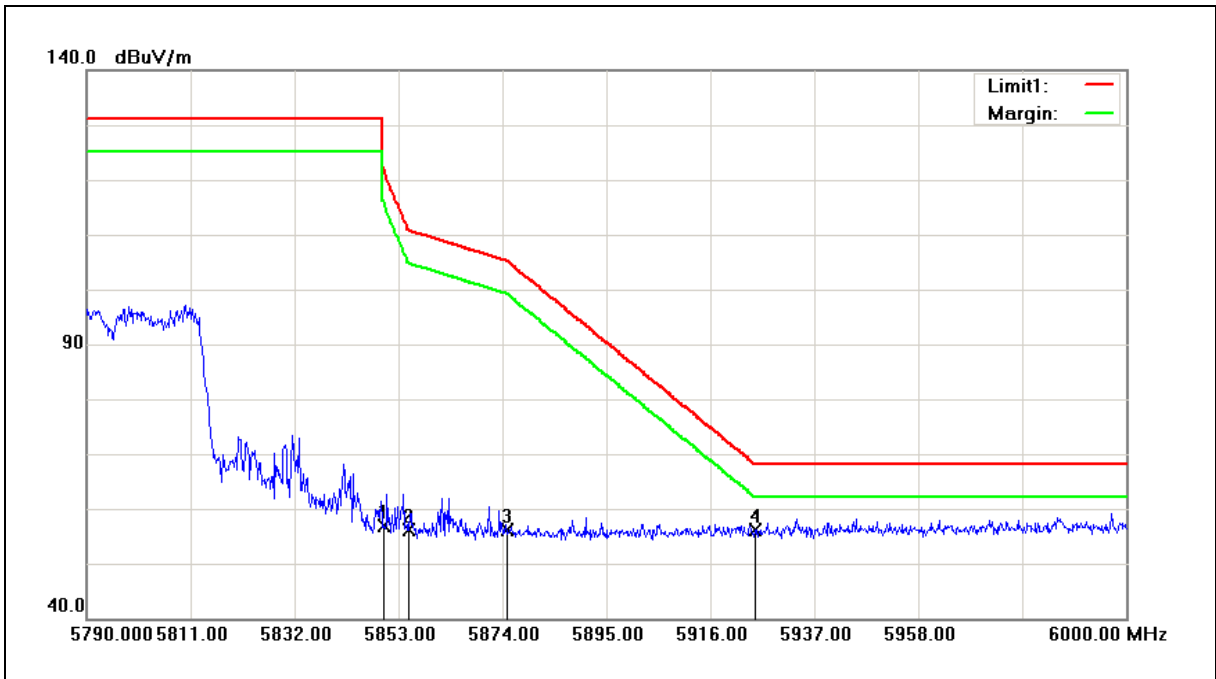
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	47.53	9.41	56.94	122.20	-65.26	peak
2	5855.000	46.67	9.43	56.10	110.80	-54.70	peak
3	5875.000	46.57	9.48	56.05	105.20	-49.15	peak
4	5925.000	46.62	9.61	56.23	68.20	-11.97	peak

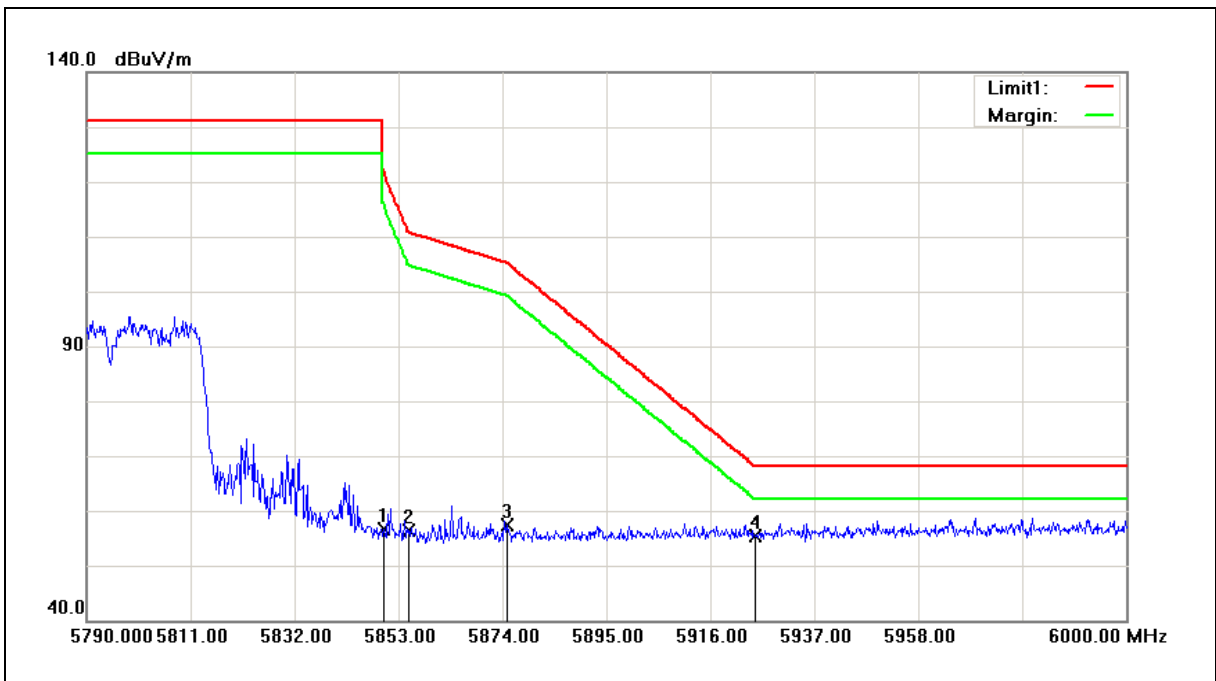
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	47.17	9.41	56.58	122.20	-65.62	peak
2	5855.000	46.95	9.43	56.38	110.80	-54.42	peak
3	5875.000	47.82	9.48	57.30	105.20	-47.90	peak
4	5925.000	45.70	9.61	55.31	68.20	-12.89	peak

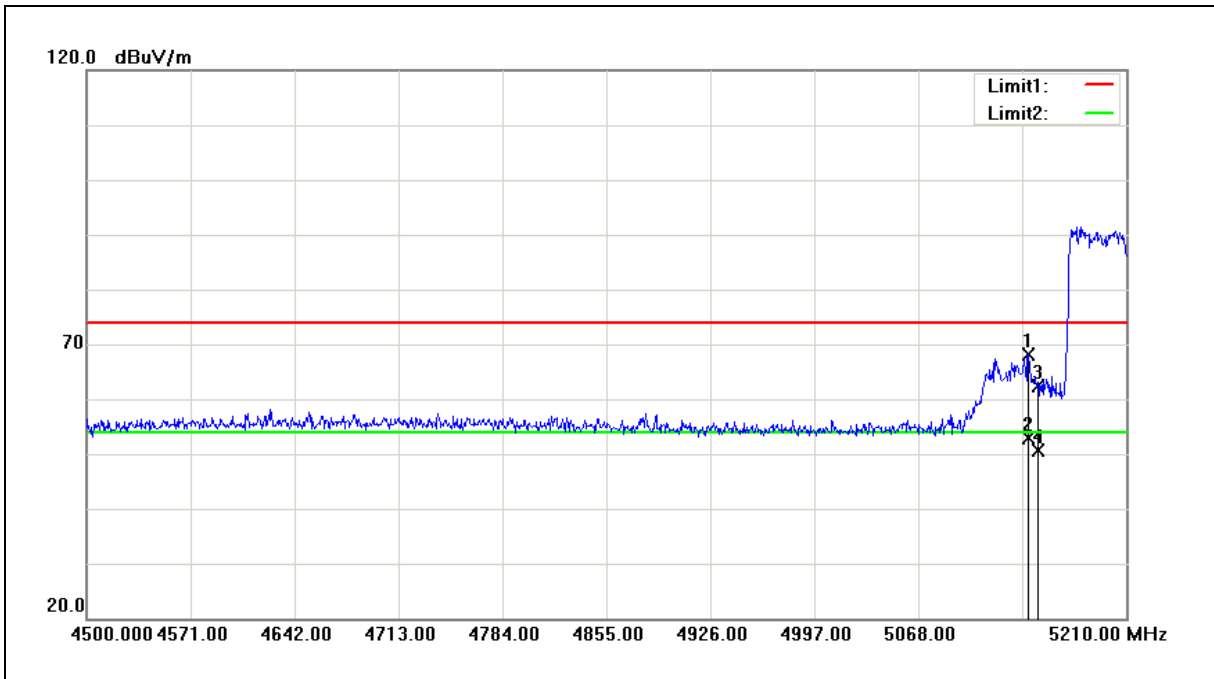
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5143.260	59.84	8.24	68.08	74.00	-5.92	peak
2	5143.260	44.62	8.24	52.86	54.00	-1.14	AVG
3	5150.000	54.02	8.25	62.27	74.00	-11.73	peak
4	5150.000	42.36	8.25	50.61	54.00	-3.39	AVG

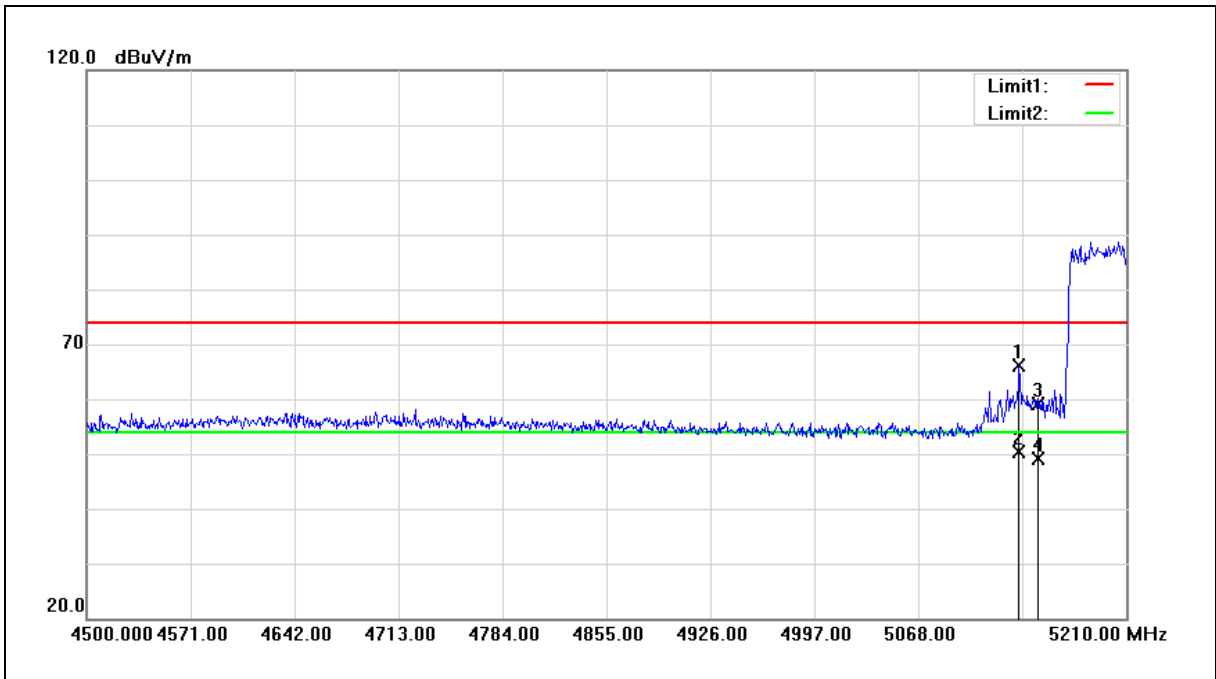
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5136.870	57.89	8.23	66.12	74.00	-7.88	peak
2	5136.870	42.16	8.23	50.39	54.00	-3.61	AVG
3	5150.000	50.84	8.25	59.09	74.00	-14.91	peak
4	5150.000	40.88	8.25	49.13	54.00	-4.87	AVG

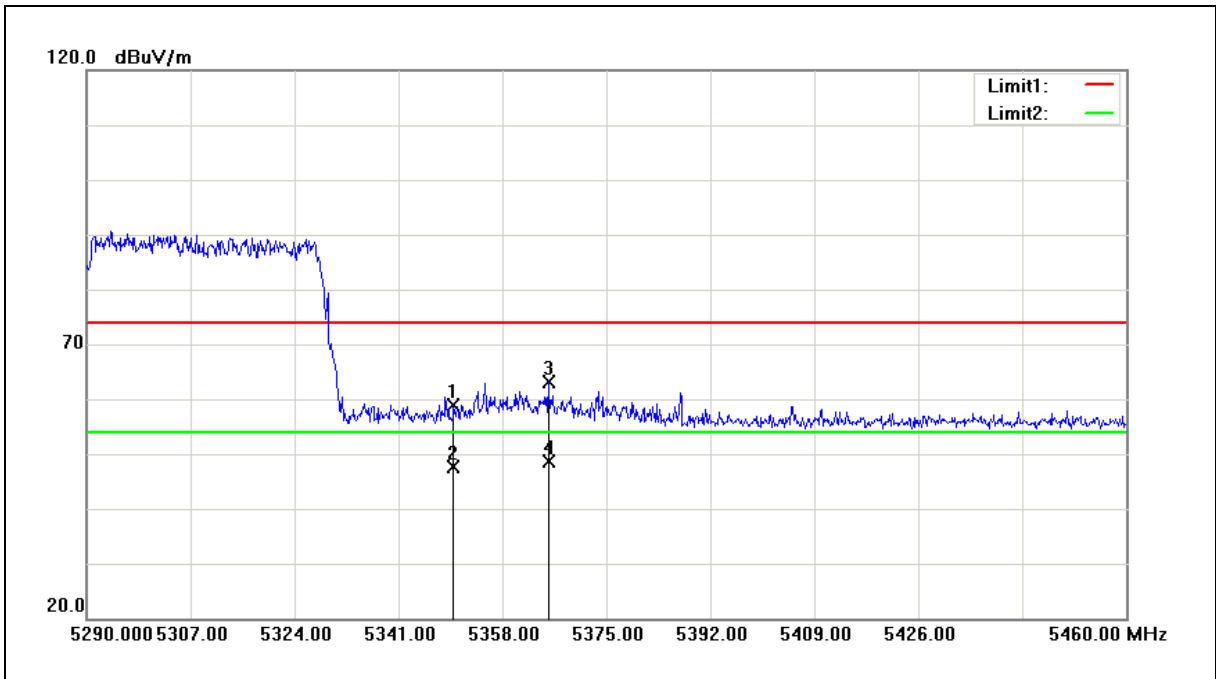
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5290MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	50.48	8.41	58.89	74.00	-15.11	peak
2	5350.000	39.14	8.41	47.55	54.00	-6.45	AVG
3	5365.480	54.64	8.43	63.07	74.00	-10.93	peak
4	5365.480	40.20	8.43	48.63	54.00	-5.37	AVG

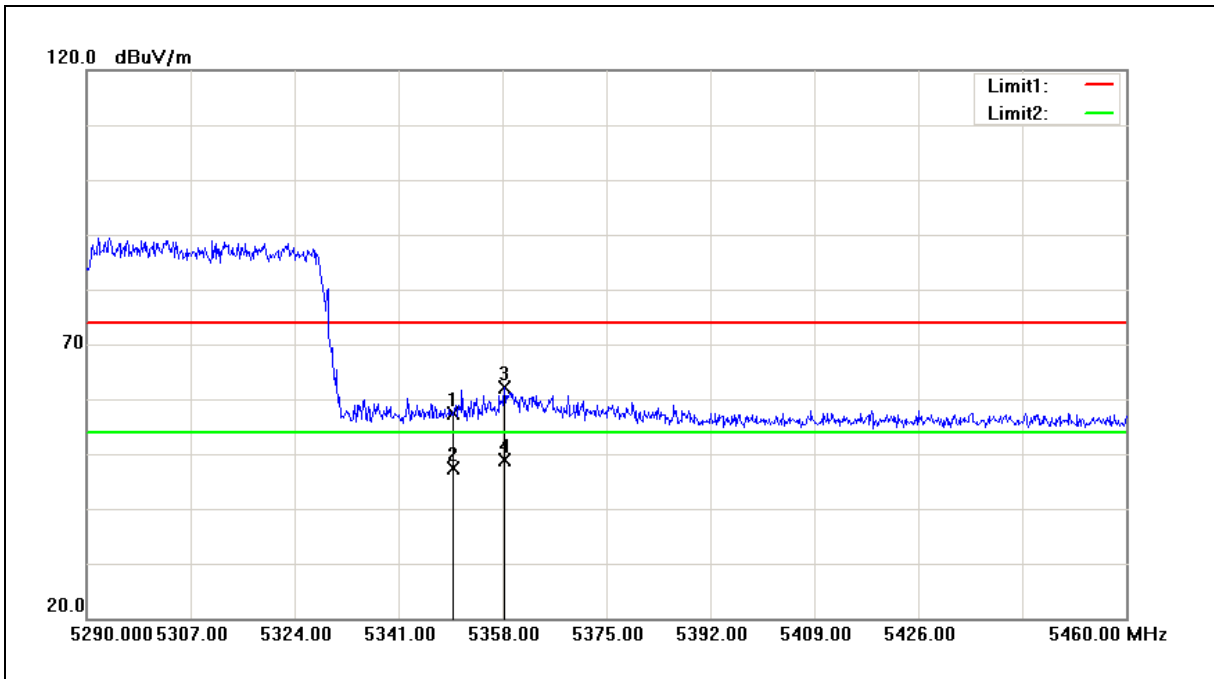
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5290MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	48.92	8.41	57.33	74.00	-16.67	peak
2	5350.000	39.07	8.41	47.48	54.00	-6.52	AVG
3	5358.340	53.74	8.42	62.16	74.00	-11.84	peak
4	5358.340	40.35	8.42	48.77	54.00	-5.23	AVG

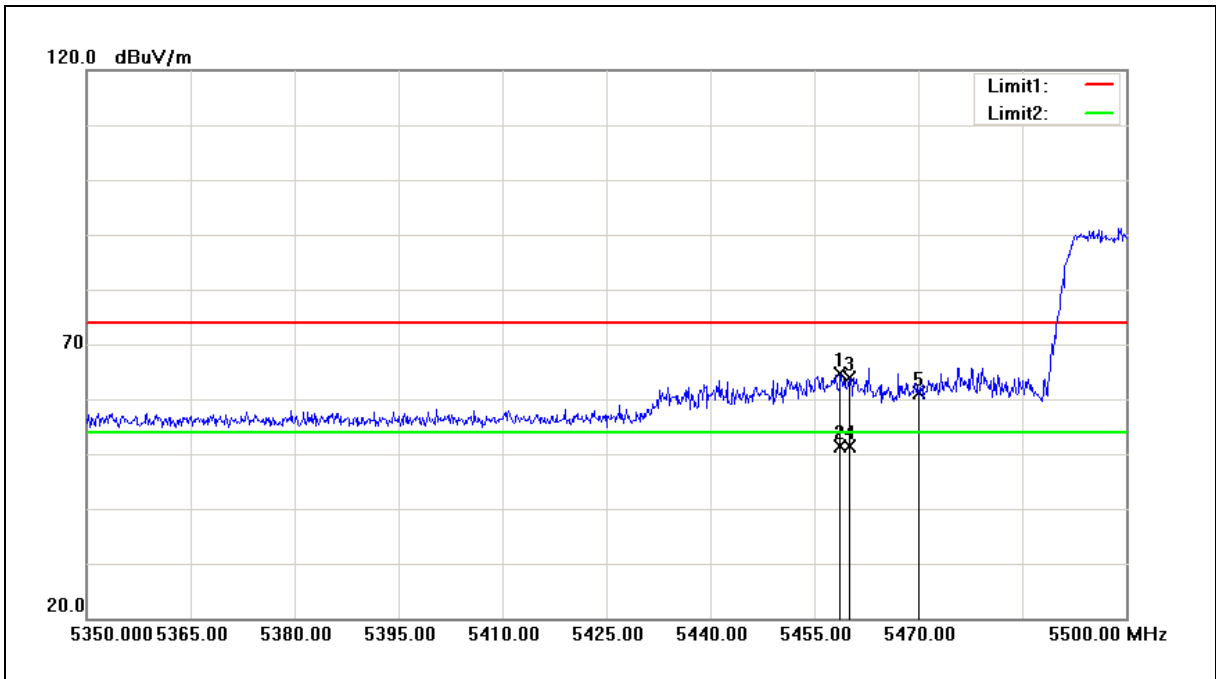
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5530MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5458.750	56.05	8.51	64.56	74.00	-9.44	peak
2	5458.750	42.80	8.51	51.31	54.00	-2.69	AVG
3	5460.000	55.35	8.51	63.86	74.00	-10.14	peak
4	5460.000	42.78	8.51	51.29	54.00	-2.71	AVG
5	5470.000	52.65	8.53	61.18	68.20	-7.02	peak

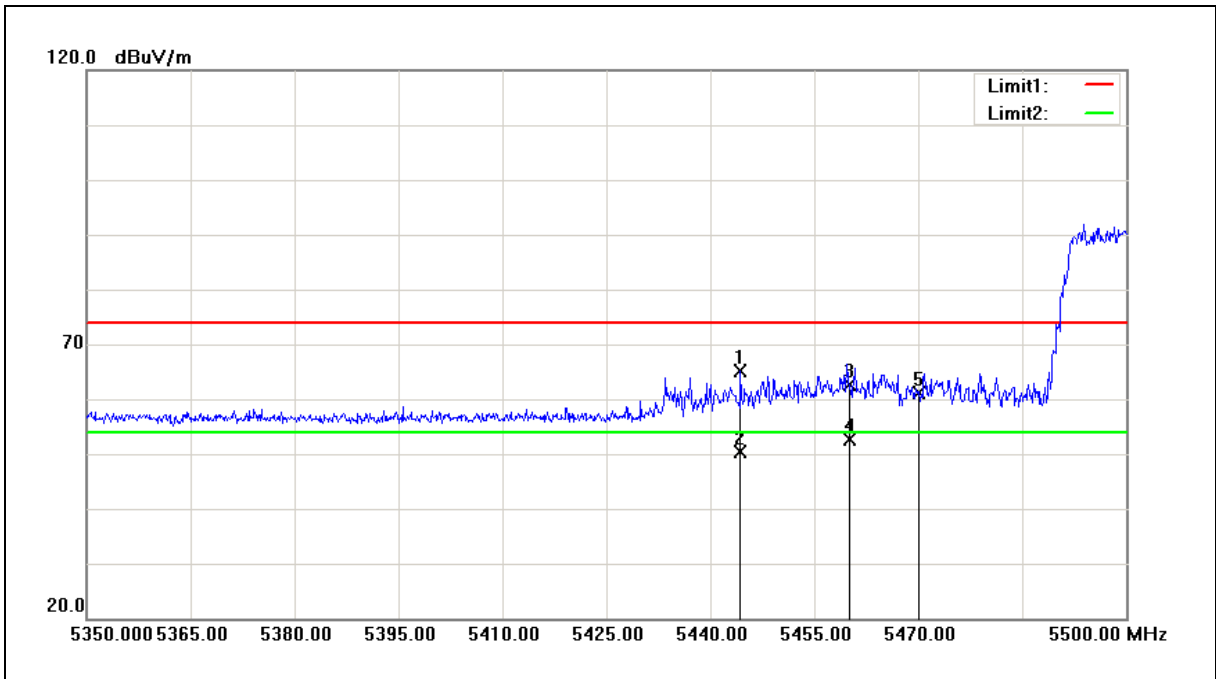
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5530MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5444.350	56.65	8.51	65.16	74.00	-8.84	peak
2	5444.350	41.82	8.51	50.33	54.00	-3.67	AVG
3	5460.000	54.23	8.51	62.74	74.00	-11.26	peak
4	5460.000	44.10	8.51	52.61	54.00	-1.39	AVG
5	5470.000	52.50	8.53	61.03	68.20	-7.17	peak

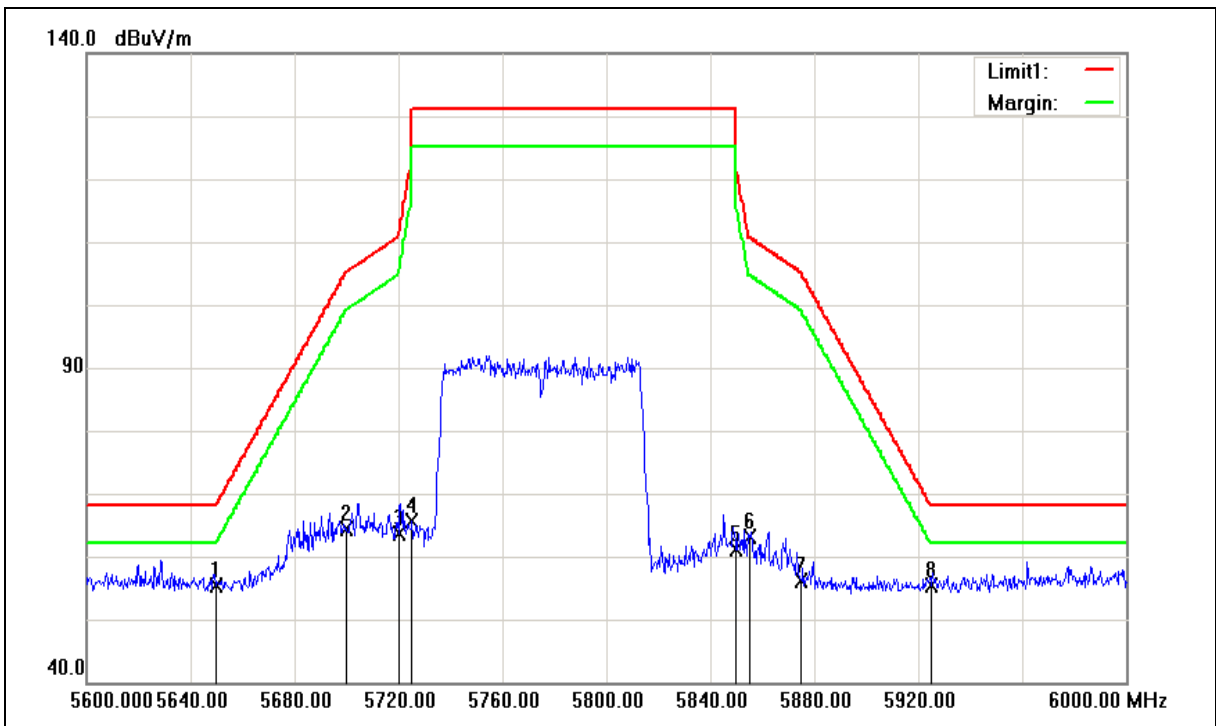
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.40	8.93	55.33	68.20	-12.87	peak
2	5700.000	55.37	9.05	64.42	105.20	-40.78	peak
3	5720.000	54.49	9.09	63.58	110.80	-47.22	peak
4	5725.000	56.46	9.11	65.57	122.20	-56.63	peak
5	5850.000	51.61	9.41	61.02	122.20	-61.18	peak
6	5855.000	53.75	9.43	63.18	110.80	-47.62	peak
7	5875.000	46.76	9.48	56.24	105.20	-48.96	peak
8	5925.000	45.81	9.61	55.42	68.20	-12.78	peak

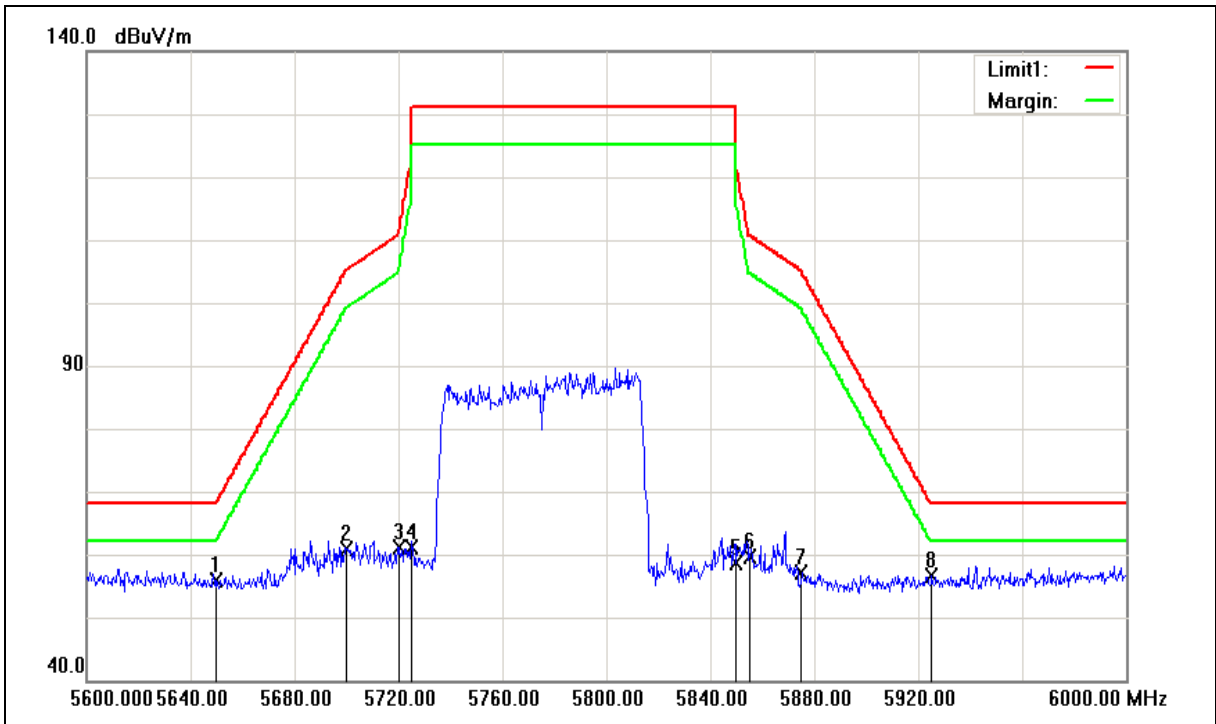
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	12/09/2016
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.87	8.93	55.80	68.20	-12.40	peak
2	5700.000	51.95	9.05	61.00	105.20	-44.20	peak
3	5720.000	52.09	9.09	61.18	110.80	-49.62	peak
4	5725.000	51.96	9.11	61.07	122.20	-61.13	peak
5	5850.000	49.23	9.41	58.64	122.20	-63.56	peak
6	5855.000	50.26	9.43	59.69	110.80	-51.11	peak
7	5875.000	47.73	9.48	57.21	105.20	-47.99	peak
8	5925.000	47.07	9.61	56.68	68.20	-11.52	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

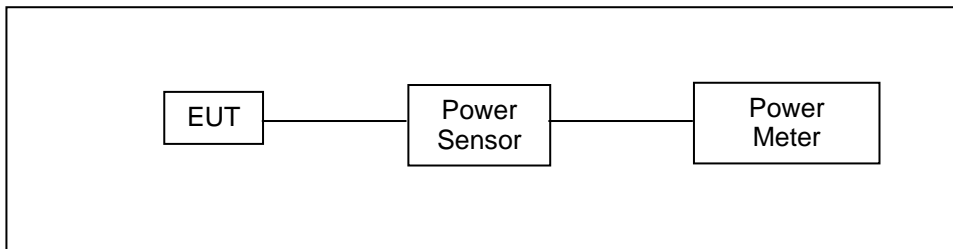
4.4. Maximum Conducted Output Power Measurement

■ **Limit**

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Client
5.150 ~ 5.250 GHz	The lesser of 250mW (24dBm)
5.250 ~ 5.350 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.470 ~ 5.725 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

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

■ **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

Test Mode		Mode 2: IEEE 802.11a Link Mode				
Date of Test		11/16/2016				
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180	6M	14.99	0.032	14.89	0.031	≤ 24
5200		15.13	0.033	15.10	0.032	
5220		15.14	0.033	15.11	0.032	
5240		14.98	0.031	14.93	0.031	
5260		14.93	0.031	14.85	0.031	
5280		14.85	0.031	14.81	0.030	
5300		14.67	0.029	14.64	0.029	
5320		14.58	0.029	14.52	0.028	
5500		14.36	0.027	14.29	0.027	
5520		14.46	0.028	14.39	0.027	
5540		14.53	0.028	14.43	0.028	
5560		14.67	0.029	14.58	0.029	
5580		14.47	0.028	14.37	0.027	
5660		14.79	0.030	14.77	0.030	
5680		14.73	0.030	14.68	0.029	
5700		14.66	0.029	14.63	0.029	
5745		14.82	0.030	14.72	0.030	
5765		14.77	0.030	14.71	0.030	
5785		14.72	0.030	14.68	0.029	
5805		14.67	0.029	14.60	0.029	
5825	14.55	0.029	14.46	0.028		

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



Test Mode		Mode 2: IEEE 802.11a Link Mode				
Date of Test		11/16/2016				
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180	54M	14.95	0.031	14.89	0.031	≤ 24
5200		15.04	0.032	14.96	0.031	
5220		15.10	0.032	15.01	0.032	
5240		14.96	0.031	14.89	0.031	
5260		14.83	0.030	14.79	0.030	
5280		14.81	0.030	14.77	0.030	
5300		14.59	0.029	14.56	0.029	
5320		14.49	0.028	14.45	0.028	
5500		14.33	0.027	14.31	0.027	
5520		14.43	0.028	14.38	0.027	
5540		14.49	0.028	14.44	0.028	
5560		14.65	0.029	14.61	0.029	
5580		14.40	0.028	14.31	0.027	
5660		14.76	0.030	14.71	0.030	
5680		14.63	0.029	14.58	0.029	
5700		14.63	0.029	14.55	0.029	
5745		14.80	0.030	14.73	0.030	≤ 30
5765		14.72	0.030	14.69	0.029	
5785		14.66	0.029	14.56	0.029	
5805		14.59	0.029	14.54	0.028	
5825	14.51	0.028	14.44	0.028		



Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode				
Date of Test		11/16/2016				
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180	6.5M	13.82	0.024	13.78	0.024	≤ 24
5200		13.61	0.023	13.58	0.023	
5220		13.56	0.023	13.47	0.022	
5240		13.53	0.023	13.48	0.022	
5260		13.28	0.021	13.21	0.021	
5280		13.35	0.022	13.32	0.021	
5300		13.26	0.021	13.18	0.021	
5320		13.29	0.021	13.25	0.021	
5500		13.13	0.021	13.10	0.020	
5520		13.21	0.021	13.17	0.021	
5540		13.24	0.021	13.15	0.021	
5560		13.14	0.021	13.11	0.020	
5580		13.26	0.021	13.22	0.021	
5660		13.32	0.021	13.28	0.021	
5680		13.45	0.022	13.36	0.022	
5700		13.52	0.022	13.49	0.022	
5745		13.61	0.023	13.57	0.023	
5765		13.51	0.022	13.49	0.022	
5785		13.38	0.022	13.35	0.022	
5805		13.35	0.022	13.27	0.021	
5825	13.43	0.022	13.37	0.022		

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



Test Mode		Mode 3: IEEE 802.11ac 20MHz Link Mode					
Date of Test		11/16/2016					
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)	
		Max. Output Power					
		(dBm)	(W)	(dBm)	(W)		
5180	78M	13.78	0.024	13.70	0.023	≤ 24	
5200		13.58	0.023	13.48	0.022		
5220		13.48	0.022	13.46	0.022		
5240		13.51	0.022	13.46	0.022		
5260		13.24	0.021	13.22	0.021		
5280		13.33	0.022	13.23	0.021		
5300		13.21	0.021	13.16	0.021		
5320		13.25	0.021	13.21	0.021		
5500		13.04	0.020	12.99	0.020		
5520		13.15	0.021	13.12	0.021		
5540		13.17	0.021	13.13	0.021		
5560		13.07	0.020	13.01	0.020		
5580		13.17	0.021	13.09	0.020		
5660		13.29	0.021	13.25	0.021		
5680		13.38	0.022	13.33	0.022		
5700		13.43	0.022	13.35	0.022		
5745		13.58	0.023	13.51	0.022		≤ 30
5765		13.44	0.022	13.42	0.022		
5785	13.30	0.021	13.25	0.021			
5805	13.31	0.021	13.23	0.021			
5825	13.38	0.022	13.32	0.021			

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



Test Mode		Mode 4: IEEE 802.11ac 40MHz Link Mode				
Date of Test		11/16/2016				
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5190	13.5M	12.83	0.019	12.78	0.019	≤ 24
5230		12.76	0.019	12.68	0.019	
5270		12.43	0.017	12.38	0.017	
5310		12.49	0.018	12.46	0.018	
5510		12.38	0.017	12.32	0.017	
5550		12.46	0.018	12.43	0.017	
5670		12.56	0.018	12.51	0.018	≤ 30
5755		12.59	0.018	12.56	0.018	
5795		12.46	0.018	12.41	0.017	
5190	180M	12.74	0.019	12.67	0.018	≤ 24
5230		12.69	0.019	12.67	0.018	
5270		12.40	0.017	12.35	0.017	
5310		12.42	0.017	12.35	0.017	
5510		12.36	0.017	12.33	0.017	
5550		12.40	0.017	12.36	0.017	
5670		12.49	0.018	12.43	0.017	≤ 30
5795		12.55	0.018	12.47	0.018	
5190		12.39	0.017	12.37	0.017	

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



Test Mode		Mode 5: IEEE 802.11ac 80MHz Link Mode				
Date of Test		11/16/2016				
Frequency (MHz)	Data Rate	ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5210	29.3M	10.56	0.011	10.53	0.011	≤ 24
5290		10.42	0.011	10.35	0.011	
5530		10.25	0.011	10.17	0.010	
5775		10.21	0.010	10.11	0.010	
5210	390M	10.49	0.011	10.45	0.011	≤ 24
5290		10.33	0.011	10.25	0.011	
5530		10.18	0.010	10.14	0.010	
5775		10.17	0.010	10.12	0.010	

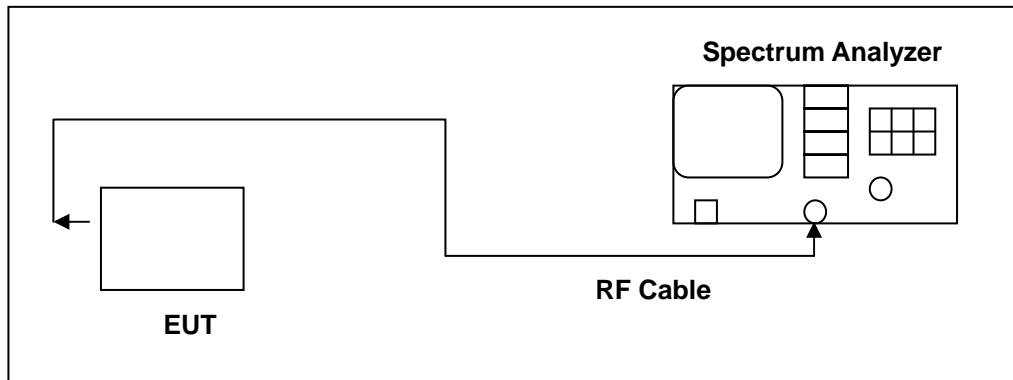
Note: The relevant measured result has the offset with cable loss already.

4.5. 26dB RF 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

Date of Test	12/10/2016	
Mode	Frequency (MHz)	26dB Bandwidth (MHz)
		ANT-1
Mode 2	5180	21.011
	5200	21.558
	5240	20.214
	5260	20.363
	5280	21.685
	5320	20.201
	5500	22.080
	5560	21.346
	5700	20.495
Mode 3	5180	21.742
	5200	20.188
	5240	20.142
	5260	20.141
	5280	20.537
	5320	20.024
	5500	20.458
	5560	20.003
	5700	21.066
Mode 4	5190	44.085
	5230	44.826
	5270	44.888
	5310	43.969
	5510	43.688
	5550	43.626
	5670	43.751
Mode 5	5210	82.909
	5290	83.986
	5530	82.679

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



■ Test Graphs

Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5180 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.18 GHz Trig Free</p> <p>Center Freq 5.18000000 GHz</p> <p>Start Freq 5.16500000 GHz</p> <p>Stop Freq 5.19500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.180 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.7752 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -7.704 kHz</p> <p>x dB Bandwidth 21.011 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5200 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.2 GHz Trig Free</p> <p>Center Freq 5.20000000 GHz</p> <p>Start Freq 5.18500000 GHz</p> <p>Stop Freq 5.21500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.200 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.6753 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -11.314 kHz</p> <p>x dB Bandwidth 21.558 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5240 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.24 GHz Trig Free</p> <p>Center Freq 5.24000000 GHz</p> <p>Start Freq 5.22500000 GHz</p> <p>Stop Freq 5.25500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.240 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.7742 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -8.049 kHz</p> <p>x dB Bandwidth 20.214 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5260 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Center Freq 5.26000000 GHz</p> <p>Start Freq 5.24500000 GHz</p> <p>Stop Freq 5.27500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.260 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.6762 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -34.383 kHz</p> <p>x dB Bandwidth 20.363 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5280 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Center Freq 5.28000000 GHz</p> <p>Start Freq 5.26500000 GHz</p> <p>Stop Freq 5.29500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.280 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.7315 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -53.123 kHz</p> <p>x dB Bandwidth 21.685 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5320 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Center Freq 5.32000000 GHz</p> <p>Start Freq 5.30500000 GHz</p> <p>Stop Freq 5.33500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Start 5.305 00 GHz Stop 5.335 00 GHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.6883 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -57.841 kHz</p> <p>x dB Bandwidth 20.201 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5500 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.5 GHz Trig Free</p> <p>Center Freq 5.5000000 GHz</p> <p>Start Freq 5.4850000 GHz</p> <p>Stop Freq 5.5150000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.500 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.7502 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -17.755 kHz</p> <p>x dB Bandwidth 22.080 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5560 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.56 GHz Trig Free</p> <p>Center Freq 5.5600000 GHz</p> <p>Start Freq 5.5450000 GHz</p> <p>Stop Freq 5.5750000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.560 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.6757 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 38.235 kHz</p> <p>x dB Bandwidth 21.346 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5700 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.7 GHz Trig Free</p> <p>Center Freq 5.7000000 GHz</p> <p>Start Freq 5.6850000 GHz</p> <p>Stop Freq 5.7150000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.700 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 16.7052 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -42.648 kHz</p> <p>x dB Bandwidth 20.495 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1	
5180 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.18 GHz Trig Free</p> <p>Center Freq 5.18000000 GHz</p> <p>Start Freq 5.16500000 GHz</p> <p>Stop Freq 5.19500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.180 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6453 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 3.249 kHz</p> <p>x dB Bandwidth 21.742 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5200 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.2 GHz Trig Free</p> <p>Center Freq 5.20000000 GHz</p> <p>Start Freq 5.18500000 GHz</p> <p>Stop Freq 5.21500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Start 5.185 00 GHz Stop 5.215 00 GHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6759 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -6.473 kHz</p> <p>x dB Bandwidth 20.188 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5240 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.24 GHz Trig Free</p> <p>Center Freq 5.24000000 GHz</p> <p>Start Freq 5.22500000 GHz</p> <p>Stop Freq 5.25500000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.240 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6600 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -9.035 kHz</p> <p>x dB Bandwidth 20.142 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1	
5260 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.26 GHz Trig Free</p> <p>Center Freq 5.26000000 GHz</p> <p>Start Freq 5.24500000 GHz</p> <p>Stop Freq 5.27500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.260 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6859 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 282.950 Hz</p> <p>x dB Bandwidth 20.141 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5280 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.28 GHz Trig Free</p> <p>Center Freq 5.28000000 GHz</p> <p>Start Freq 5.26500000 GHz</p> <p>Stop Freq 5.29500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.280 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6613 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -13.448 kHz</p> <p>x dB Bandwidth 20.537 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5320 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.32 GHz Trig Free</p> <p>Center Freq 5.32000000 GHz</p> <p>Start Freq 5.30500000 GHz</p> <p>Stop Freq 5.33500000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.320 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6318 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -18.666 kHz</p> <p>x dB Bandwidth 20.024 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 3: IEEE 802.11ac 20MHz Link Mode_ ANT-1	
5500 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.5 GHz Trig Free</p> <p>Center Freq 5.5000000 GHz</p> <p>Start Freq 5.4850000 GHz</p> <p>Stop Freq 5.5150000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.500 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6527 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 4.521 kHz</p> <p>x dB Bandwidth 20.458 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5560 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.56 GHz Trig Free</p> <p>Center Freq 5.5600000 GHz</p> <p>Start Freq 5.5450000 GHz</p> <p>Stop Freq 5.5750000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Start 5.545 00 GHz Stop 5.575 00 GHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6549 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 2.156 kHz</p> <p>x dB Bandwidth 20.003 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5700 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.7 GHz Trig Free</p> <p>Center Freq 5.7000000 GHz</p> <p>Start Freq 5.6850000 GHz</p> <p>Stop Freq 5.7150000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.700 00 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.6685 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 3.780 kHz</p> <p>x dB Bandwidth 21.066 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5190 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.19 GHz Trig Free</p> <p>Center Freq 5.19000000 GHz</p> <p>Start Freq 5.16000000 GHz</p> <p>Stop Freq 5.22000000 GHz</p> <p>CF Step 6.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.190 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.2010 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -16.144 kHz</p> <p>x dB Bandwidth 44.085 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5230 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.23 GHz Trig Free</p> <p>Center Freq 5.23000000 GHz</p> <p>Start Freq 5.20000000 GHz</p> <p>Stop Freq 5.26000000 GHz</p> <p>CF Step 6.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.230 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.2828 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 8.380 kHz</p> <p>x dB Bandwidth 44.826 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5270 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.27 GHz Trig Free</p> <p>Center Freq 5.27000000 GHz</p> <p>Start Freq 5.24000000 GHz</p> <p>Stop Freq 5.30000000 GHz</p> <p>CF Step 6.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.270 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.1990 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -36.378 kHz</p> <p>x dB Bandwidth 44.888 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5310 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.31 GHz Trig Free</p> <p>Center Freq 5.31000000 GHz</p> <p>Start Freq 5.28000000 GHz</p> <p>Stop Freq 5.34000000 GHz</p> <p>CF Step 6.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Start 5.280 00 GHz Stop 5.340 00 GHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.2253 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -18.381 kHz</p> <p>x dB Bandwidth 43.969 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5510 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.51 GHz Trig Free</p> <p>Center Freq 5.51000000 GHz</p> <p>Start Freq 5.48000000 GHz</p> <p>Stop Freq 5.54000000 GHz</p> <p>CF Step 6.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.510 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.1760 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -28.714 kHz</p> <p>x dB Bandwidth 43.688 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5550 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.55 GHz Trig Free</p> <p>Center Freq 5.55000000 GHz</p> <p>Start Freq 5.52000000 GHz</p> <p>Stop Freq 5.58000000 GHz</p> <p>CF Step 6.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.550 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.2175 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 11.358 kHz</p> <p>x dB Bandwidth 43.626 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5670 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.67 GHz Trig Free</p> <p>Center Freq 5.67000000 GHz</p> <p>Start Freq 5.64000000 GHz</p> <p>Stop Freq 5.70000000 GHz</p> <p>CF Step 6.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 12.3 dB</p> <p>Center 5.670 00 GHz Span 60 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 36.3214 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -81.797 kHz</p> <p>x dB Bandwidth 43.751 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



Mode 5: IEEE 802.11ac 80MHz Link Mode_ ANT-1	
5210 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.21 GHz Trig Free</p> <p>Center Freq 5.21000000 GHz</p> <p>Start Freq 5.16000000 GHz</p> <p>Stop Freq 5.26000000 GHz</p> <p>CF Step 10.0000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.210 0 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 76.2610 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 13.131 kHz</p> <p>x dB Bandwidth 82.909 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5290 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.29 GHz Trig Free</p> <p>Center Freq 5.29000000 GHz</p> <p>Start Freq 5.24000000 GHz</p> <p>Stop Freq 5.34000000 GHz</p> <p>CF Step 10.0000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.290 0 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 76.0897 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -17.561 kHz</p> <p>x dB Bandwidth 83.986 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5530 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.53 GHz Trig Free</p> <p>Center Freq 5.53000000 GHz</p> <p>Start Freq 5.48000000 GHz</p> <p>Stop Freq 5.58000000 GHz</p> <p>CF Step 10.0000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak 10</p> <p>Log dB/Offst 12.3 dB</p> <p>Center 5.530 0 GHz Span 100 MHz</p> <p>#Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 75.9571 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 41.058 kHz</p> <p>x dB Bandwidth 82.679 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>

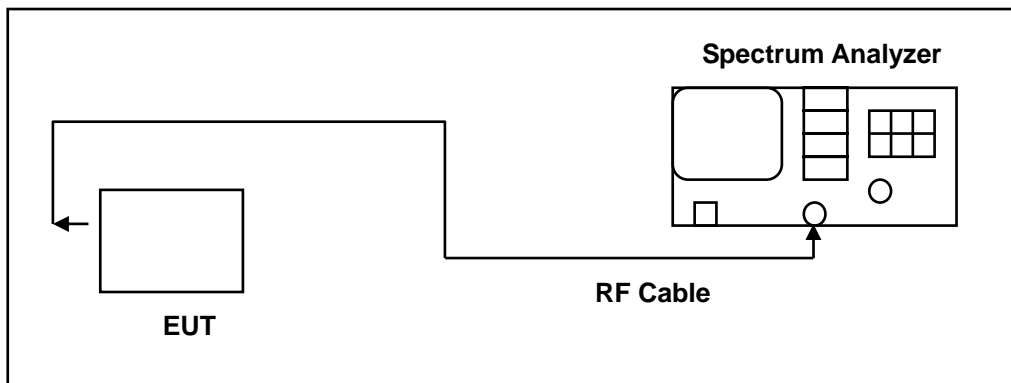
4.6. 6dB RF Bandwidth Measurement

■ **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

Date of Test	12/10/2016		
Mode	Frequency (MHz)	6dB Bandwidth (kHz)	Limit (kHz)
		ANT-1	
Mode 2	5745	16368	> 500
	5785	16396	> 500
	5825	16454	> 500
Mode 3	5745	16996	> 500
	5785	17341	> 500
	5825	17569	> 500
Mode 4	5755	35512	> 500
	5795	35370	> 500
Mode 5	5775	76468	> 500



■ Test Graphs

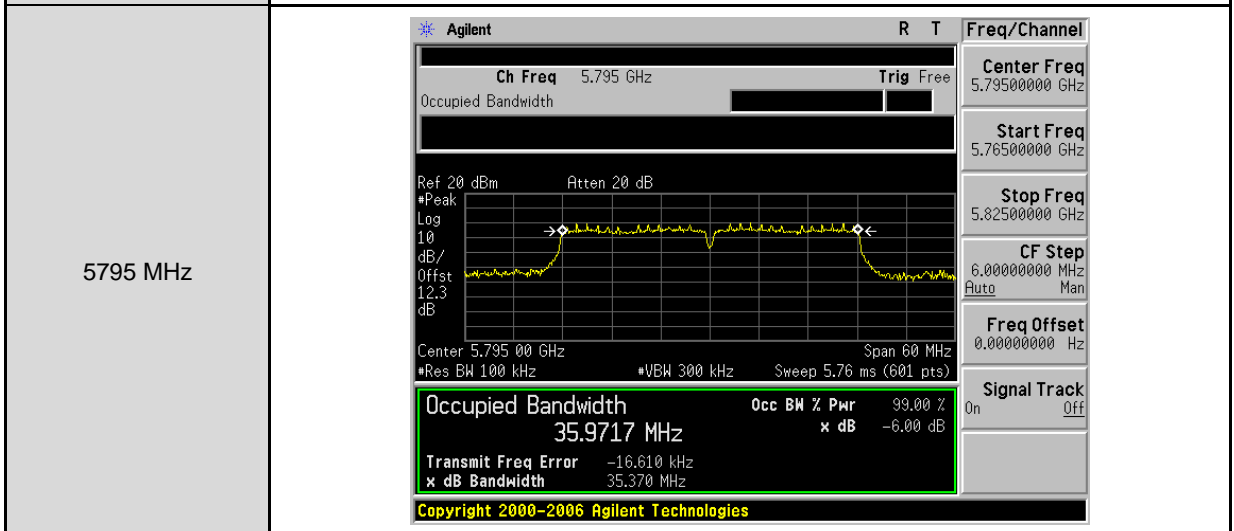
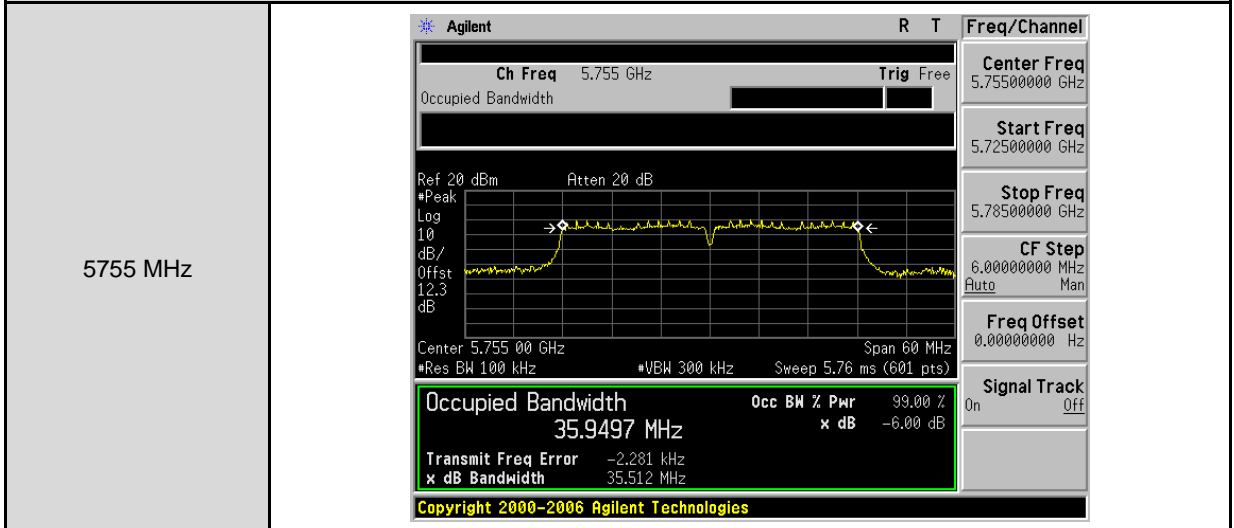
Mode 2: IEEE 802.11a Link Mode_ANT-1	
5745 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.745 GHz Trig Free</p> <p>Center Freq 5.7450000 GHz</p> <p>Start Freq 5.7300000 GHz</p> <p>Stop Freq 5.7600000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak</p> <p>Log 10</p> <p>dB/ Offst 12.3 dB</p> <p>Center 5.745 00 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 2.88 ms (601 pts)</p> <p>Occupied Bandwidth 16.4755 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -6.00 dB</p> <p>Transmit Freq Error -8.038 kHz</p> <p>x dB Bandwidth 16.368 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5785 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.785 GHz Trig Free</p> <p>Center Freq 5.7850000 GHz</p> <p>Start Freq 5.7700000 GHz</p> <p>Stop Freq 5.8000000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak</p> <p>Log 10</p> <p>dB/ Offst 12.3 dB</p> <p>Center 5.785 00 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 2.88 ms (601 pts)</p> <p>Occupied Bandwidth 16.4830 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -6.00 dB</p> <p>Transmit Freq Error -16.859 kHz</p> <p>x dB Bandwidth 16.396 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>
5825 MHz	<p>Agilent R T Freq/Channel</p> <p>Ch Freq 5.825 GHz Trig Free</p> <p>Center Freq 5.8250000 GHz</p> <p>Start Freq 5.8100000 GHz</p> <p>Stop Freq 5.8400000 GHz</p> <p>CF Step 3.0000000 MHz Auto Man</p> <p>Freq Offset 0.0000000 Hz</p> <p>Signal Track On Off</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak</p> <p>Log 10</p> <p>dB/ Offst 12.3 dB</p> <p>Center 5.825 00 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 2.88 ms (601 pts)</p> <p>Occupied Bandwidth 16.4931 MHz</p> <p>Occ BW % Pwr 99.00 %</p> <p>x dB -6.00 dB</p> <p>Transmit Freq Error -9.626 kHz</p> <p>x dB Bandwidth 16.454 MHz</p> <p>Copyright 2000-2006 Agilent Technologies</p>



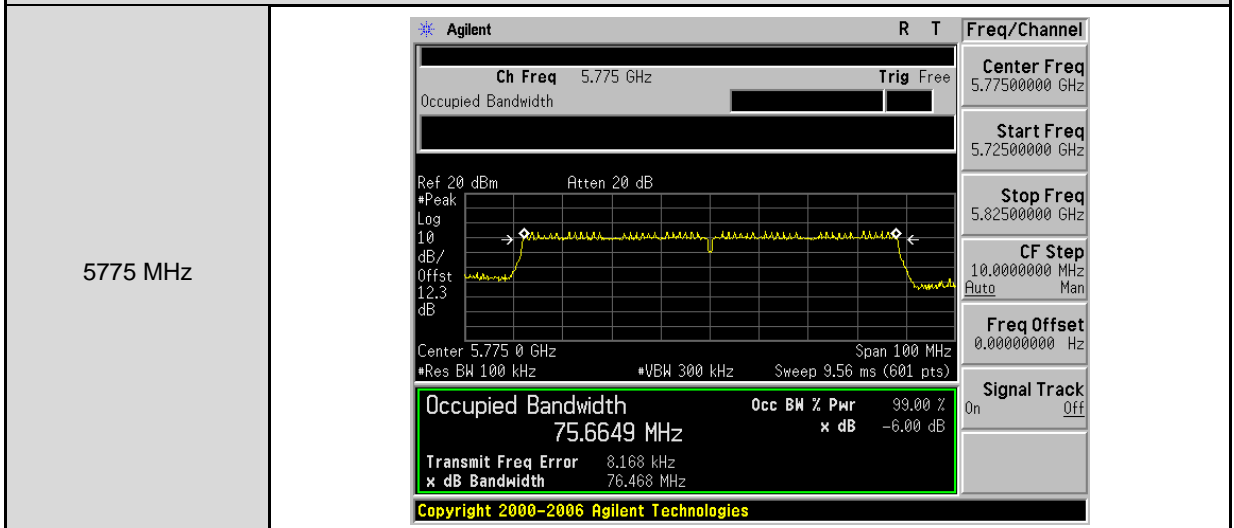
Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	



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



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



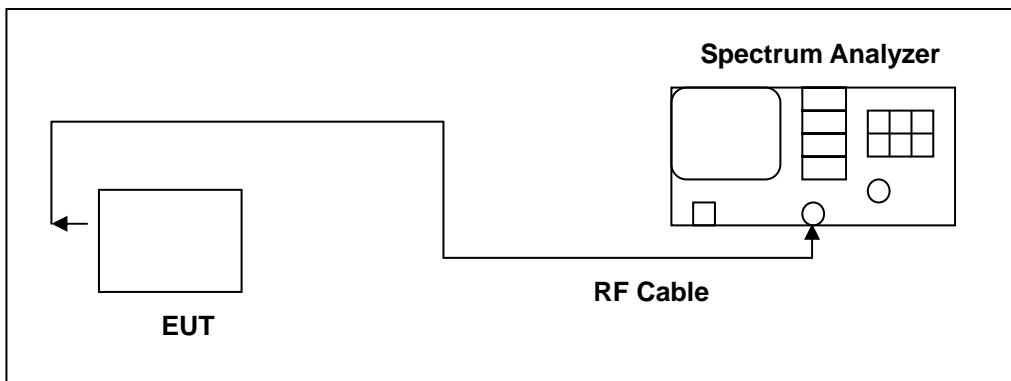
4.7. Peak Power Spectral Density Measurement

■ **Limit**

Conducted power spectral density

Frequency Range (MHz)	FCC Limit
	Client
5.150 ~ 5.250 GHz	11 dBm/MHz
5.250 ~ 5.350 GHz	11 dBm/MHz
5.470 ~ 5.725 GHz	11 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500KHz

■ **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

Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.389	0.000	5.389	< 11
5200	5.568	0.000	5.568	
5240	5.237	0.000	5.237	
5260	5.210	0.000	5.210	
5280	5.702	0.000	5.702	
5320	5.005	0.000	5.005	
5500	5.431	0.000	5.431	
5560	5.529	0.000	5.529	
5700	5.054	0.000	5.054	

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

Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-3.40	0.000	3.592	< 30
5785	-3.58	0.000	3.409	
5825	-4.23	0.000	2.760	

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 Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	3.950	0.000	3.950	< 11
5200	3.844	0.000	3.844	
5240	4.008	0.000	4.008	
5260	3.880	0.000	3.880	
5280	3.719	0.000	3.719	
5320	3.413	0.000	3.413	
5500	3.446	0.000	3.446	
5560	3.461	0.000	3.461	
5700	3.875	0.000	3.875	

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

Test Mode	Mode 3: IEEE 802.11ac 20MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-4.97	0.000	2.017	< 30
5785	-5.51	0.000	1.476	
5825	-5.53	0.000	1.462	

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 Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	0.051	0.000	0.051	< 11
5230	-0.095	0.000	-0.095	
5270	0.028	0.000	0.028	
5310	-0.010	0.000	-0.010	
5510	-0.212	0.000	-0.212	
5550	-0.220	0.000	-0.220	
5670	-0.291	0.000	-0.291	

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

Test Mode	Mode 4: IEEE 802.11ac 40MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-8.67	0.000	-1.679	< 30
5795	-8.47	0.000	-1.478	

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 Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-5.539	0.000	-5.539	< 11
5290	-5.919	0.000	-5.919	
5530	-5.949	0.000	-5.949	

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

Test Mode	Mode 5: IEEE 802.11ac 80MHz Link Mode			
Date of Test	12/10/2016			
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-14.596	0.000	-7.606	< 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-1	
5180 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.182 73 GHz #Avg 5.389 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.180 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.18000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.20000000 GHz CF Step 4.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off</p>
5200 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.202 92 GHz #Avg 5.568 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.200 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.20000000 GHz Start Freq 5.18000000 GHz Stop Freq 5.22000000 GHz CF Step 4.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off</p>
5240 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.242 83 GHz #Avg 5.237 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.240 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.24000000 GHz Start Freq 5.22000000 GHz Stop Freq 5.26000000 GHz CF Step 4.00000000 MHz Freq Offset 0.00000000 Hz Signal Track On Off</p>



Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5260 MHz	
5280 MHz	
5320 MHz	



Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5500 MHz	
5560 MHz	
5700 MHz	



Mode 2: IEEE 802.11a Link Mode_ ANT-1	
5745 MHz	<p>Agilent R T Freq/Channel Mkr1 5.742 51 GHz Ref 20 dBm Atten 20 dB -3.398 dBm Center Freq 5.74500000 GHz Start Freq 5.73000000 GHz Stop Freq 5.76000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.745 00 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.283 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>
5785 MHz	<p>Agilent R T Freq/Channel Mkr1 5.787 49 GHz Ref 20 dBm Atten 20 dB -3.581 dBm Center Freq 5.78500000 GHz Start Freq 5.77000000 GHz Stop Freq 5.80000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.785 00 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.283 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>
5825 MHz	<p>Agilent R T Freq/Channel Mkr1 5.822 51 GHz Ref 20 dBm Atten 20 dB -4.230 dBm Center Freq 5.82500000 GHz Start Freq 5.81000000 GHz Stop Freq 5.84000000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.825 00 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.283 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>



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



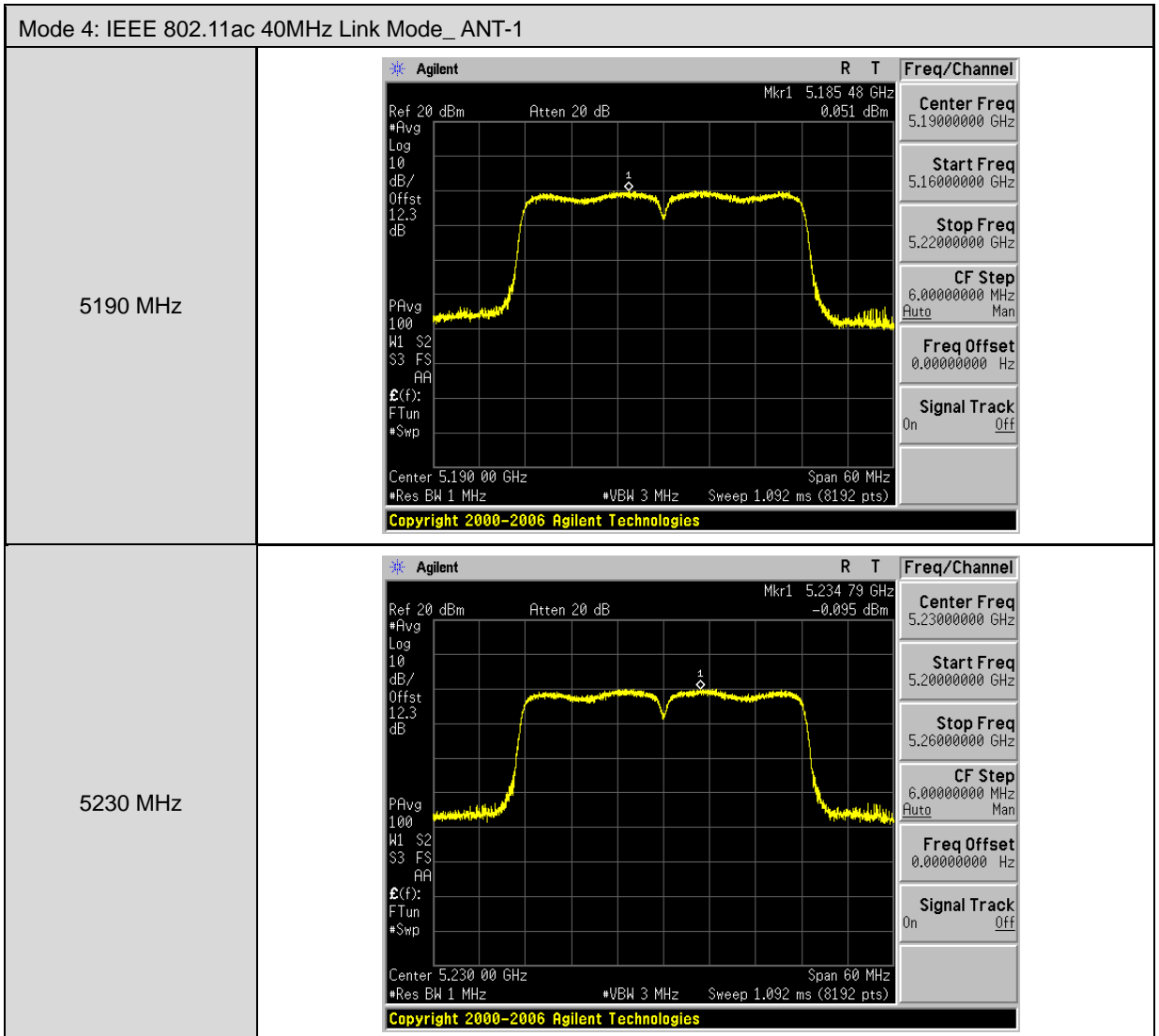
Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5260 MHz	
5280 MHz	
5320 MHz	

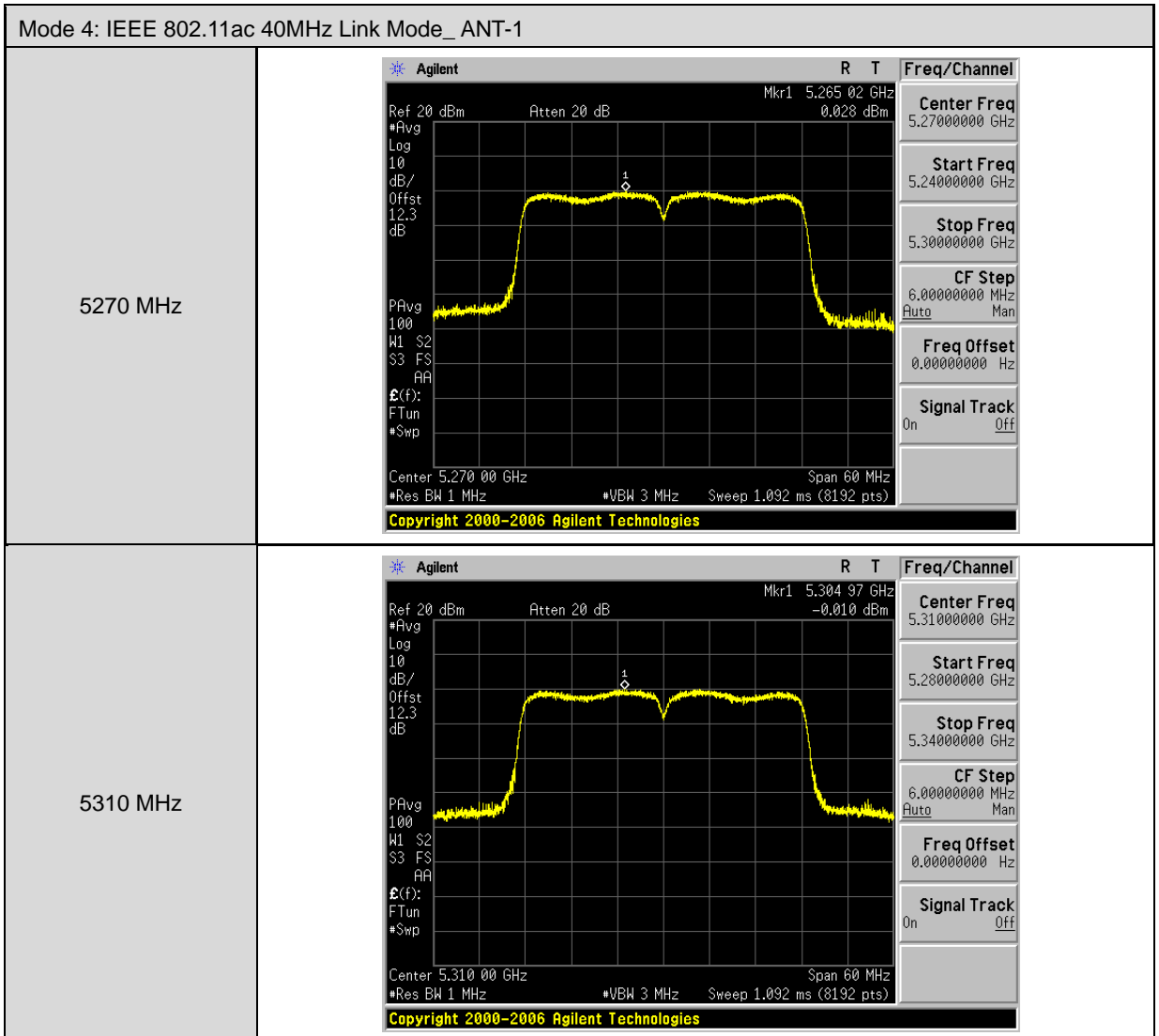


Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5500 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.497 44 GHz #Avg 3.446 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.500 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.5000000 GHz Start Freq 5.4800000 GHz Stop Freq 5.5200000 GHz CF Step 4.0000000 MHz Freq Offset 0.0000000 Hz Signal Track On Off</p>
5560 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.562 44 GHz #Avg 3.461 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.560 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.5600000 GHz Start Freq 5.5400000 GHz Stop Freq 5.5800000 GHz CF Step 4.0000000 MHz Freq Offset 0.0000000 Hz Signal Track On Off</p>
5700 MHz	<p>Agilent R T Freq/Channel Ref 20 dBm Atten 20 dB Mkr1 5.702 44 GHz #Avg 3.875 dBm Log 10 dB/ Offst 12 3 dB PAvg 100 W1 S2 S3 FS AA E(f): FTun #Swp Center 5.700 00 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p> <p>Center Freq 5.7000000 GHz Start Freq 5.6800000 GHz Stop Freq 5.7200000 GHz CF Step 4.0000000 MHz Freq Offset 0.0000000 Hz Signal Track On Off</p>



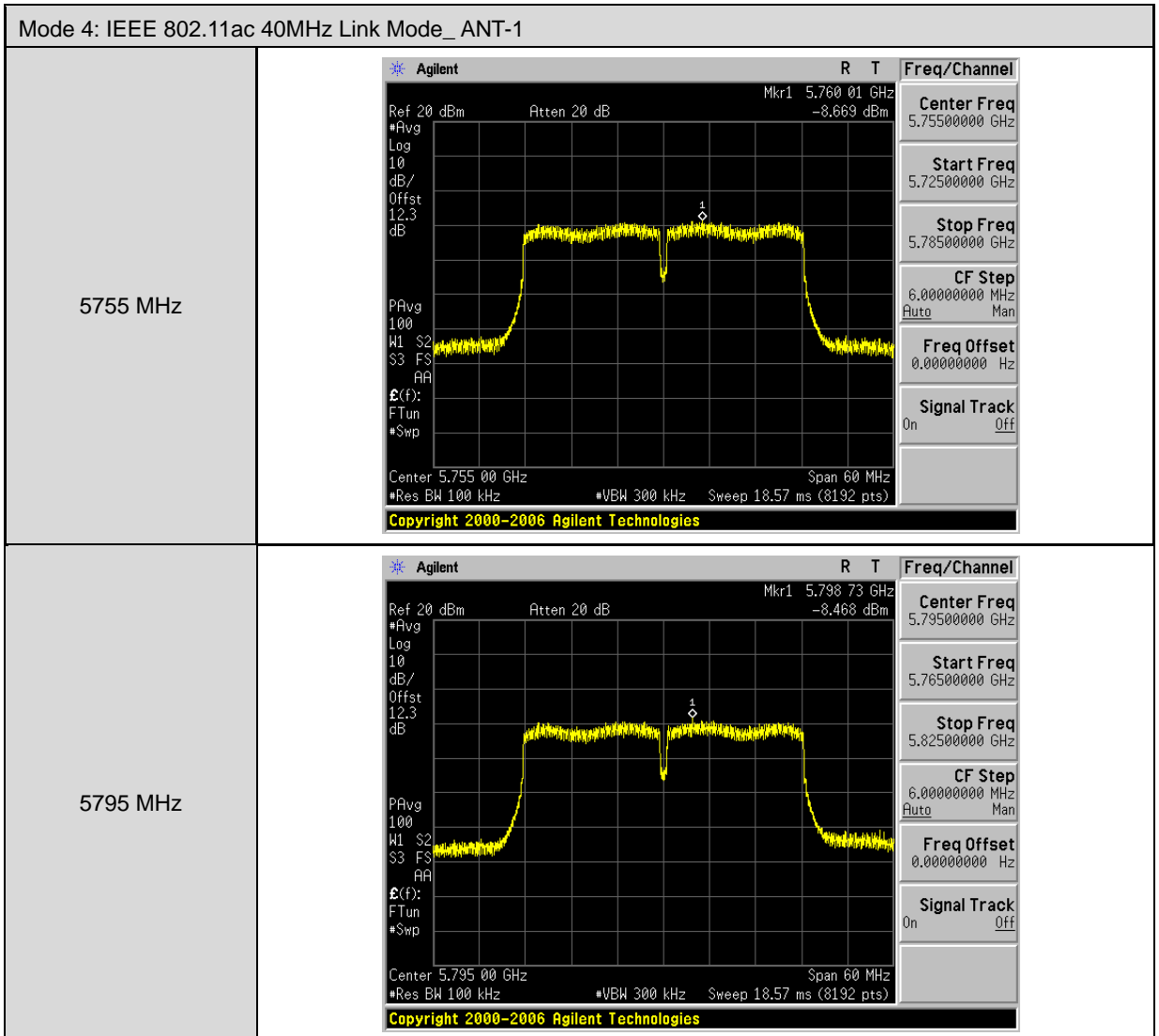
Mode 3: IEEE 802.11ac 20MHz Link Mode _ ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	





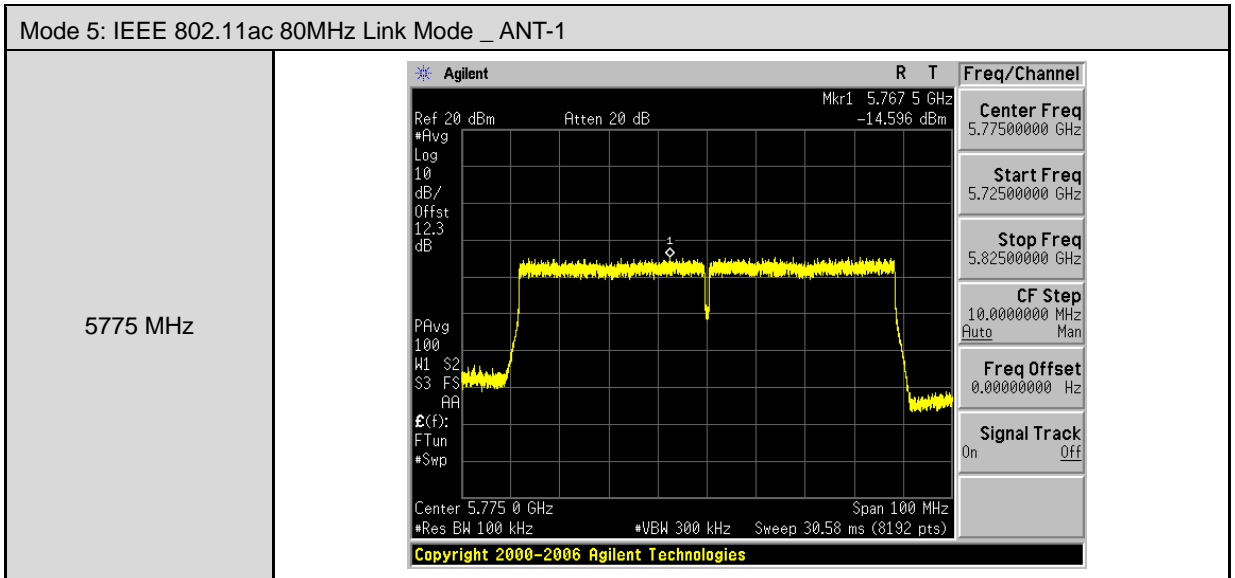


Mode 4: IEEE 802.11ac 40MHz Link Mode_ ANT-1	
5510 MHz	
5550 MHz	
5670 MHz	





Mode 5: IEEE 802.11ac 80MHz Link Mode _ ANT-1	
5210 MHz	<p>Agilent R T Freq/Channel Mkr1 5.222 2 GHz Ref 20 dBm Atten 20 dB -5.539 dBm Center Freq 5.21000000 GHz Start Freq 5.16000000 GHz Stop Freq 5.26000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.210 0 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>
5290 MHz	<p>Agilent R T Freq/Channel Mkr1 5.293 2 GHz Ref 20 dBm Atten 20 dB -5.919 dBm Center Freq 5.29000000 GHz Start Freq 5.24000000 GHz Stop Freq 5.34000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.290 0 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>
5530 MHz	<p>Agilent R T Freq/Channel Mkr1 5.564 0 GHz Ref 20 dBm Atten 20 dB -5.949 dBm Center Freq 5.53000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.58000000 GHz CF Step 10.0000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Center 5.530 0 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.092 ms (8192 pts) Copyright 2000-2006 Agilent Technologies</p>

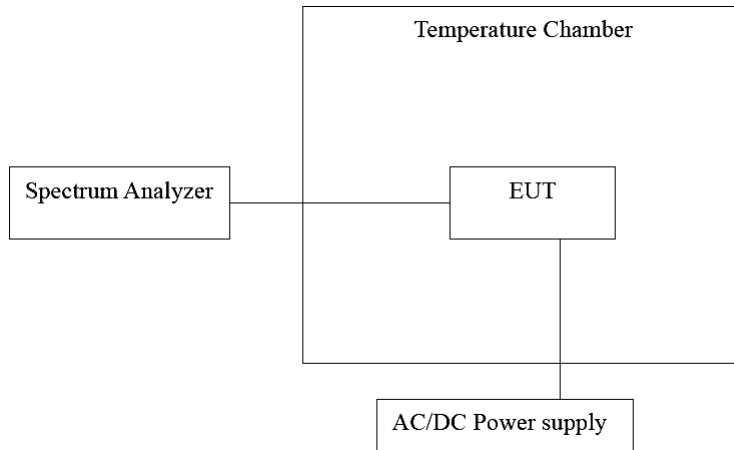


4.8. Frequency Stability Measurement

■ 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

Date of Test	11/16/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0001	100	0.019	Pass
	10		5199.9930	-7000	-1.346	Pass
	20		5200.0061	6100	1.173	Pass
	30		5199.9978	-2200	-0.423	Pass
	40		5199.9944	-5600	-1.077	Pass
	50		5199.9904	-9600	-1.846	Pass
5280 MHz	0	120	5279.9904	-9600	-1.818	Pass
	10		5280.0082	8200	1.553	Pass
	20		5280.0096	9600	1.818	Pass
	30		5279.9997	-300	-0.057	Pass
	40		5280.0032	3200	0.606	Pass
	50		5280.0052	5200	0.985	Pass
5560 MHz	0	120	5559.9923	-7700	-1.385	Pass
	10		5559.9999	-100	-0.018	Pass
	20		5560.0062	6200	1.115	Pass
	30		5559.9977	-2300	-0.414	Pass
	40		5560.0053	5300	0.953	Pass
	50		5559.9967	-3300	-0.594	Pass
5785 MHz	0	120	5785.0044	4400	0.761	Pass
	10		5784.9916	-8400	-1.452	Pass
	20		5784.9981	-1900	-0.328	Pass
	30		5784.9942	-5800	-1.003	Pass
	40		5784.9928	-7200	-1.245	Pass
	50		5785.0020	2000	0.346	Pass

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

**Voltage Variations**

Date of Test	11/16/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5199.9913	-8700	-1.673	Pass
		120.00	5199.9925	-7500	-1.442	Pass
		102.00	5200.0029	2900	0.558	Pass
5280 MHz	20	138.00	5280.0092	9200	1.742	Pass
		120.00	5280.0053	5300	1.004	Pass
		102.00	5279.9982	-1800	-0.341	Pass
5560 MHz	20	138.00	5559.9975	-2500	-0.450	Pass
		120.00	5559.9997	-300	-0.054	Pass
		102.00	5559.9979	-2100	-0.378	Pass
5785 MHz	20	138.00	5785.0013	1300	0.225	Pass
		120.00	5784.9934	-6600	-1.141	Pass
		102.00	5785.0067	6700	1.158	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.