RF Test Report

Applicant	:	Edimax Technology Co., Ltd.
Product Type	:	AC1300 Outdoor AP
Trade Name	:	EDIMAX
Model Number	:	EW-7429HOB, OAP1300, GAP-429HOB
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Receive Date	:	Jun. 23, 2017
Test Period	:	Jun. 29 ~ Aug. 28, 2017
Issue Date	:	Nov. 13, 2017

Issue by

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Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Nov. 13, 2017	Initial Issue	Nina Lin

Verification of Compliance

Issued Date: Nov. 13, 2017

Applicant	:	Edimax Technology Co., Ltd.
Product Type	:	AC1300 Outdoor AP
Trade Name	:	EDIMAX
Model Number	:	EW-7429HOB, OAP1300, GAP-429HOB
FCC ID	:	NDD9574291705
EUT Rated Voltage	:	DC 54V, 0.6A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C 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) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

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

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

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1 General Information

1.1 Summary of Test Result

Standard	Item	Result	Remark
15.247			
15.207	AC Power Conducted Emission	PASS	-----
Standard	Item	Result	Remark
15.247			
15.247(d)	Transmitter Radiated Emissions	PASS	-----
15.247(b)(3)	Max. Output Power	PASS	-----
15.247(a)(2)	6dB RF Bandwidth	PASS	-----
15.247(e)	Maximum Power Spectral Density	PASS	-----
15.247(d)	Out of Band Conducted Spurious Emission	PASS	-----
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	

2 EUT Description

Applicant	Edimax Technology Co., Ltd. No.278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan			
Manufacturer	Edimax Technology Co., Ltd. No.278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan			
Product Type	AC1300 Outdoor AP			
Trade Name	EDIMAX			
Model Number	EW-7429HOB, OAP1300, GAP-429HOB			
Model Different Description	Those model numbers differ from each other in selling region.			
FCC ID	NDD9574291705			
Operate Freq. Band	Frequency Range (MHz)	Modulation	Channel Bandwidth	Data Rate 400 / 800 GI (ns)
IEEE 802.11b	2412 ~ 2462	DSSS	20MHz	Up to 11Mbps
IEEE 802.11g	2412 ~ 2462	OFDM (64QAM)	20MHz	Up to 54Mbps
IEEE 802.11n 2.4GHz 20MHz	2412 ~ 2462	OFDM (64/256QAM)	20MHz	Up to 173.4Mbps
IEEE 802.11n 2.4GHz 40MHz	2422 ~ 2452	OFDM (64/256QAM)	40MHz	Up to 400Mbps
Antenna Information	ANT	Model	Type	Max. Gain (dBi)
	ANT-0 / ANT-1	98623PRSX000	Dipole Antenna (Reversed-SMA Connector)	4.58
	ANT-0 / ANT-1	C095-510399-A	Dipole Antenna (Reversed-SMA Connector)	3
Antenna Delivery	See section 3.1			
Operate Temp. Range	-40 ~ +60 ℃			

Frequency Band	Max. RF Output Power (W)
IEEE 802.11b	0.068
IEEE 802.11g	0.110
IEEE 802.11n 2.4GHz 20MHz	0.091
IEEE 802.11n 2.4GHz 40MHz	0.027

3 Test Methodology

3.1. Mode of Operation

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

Test Mode
Mode 1: Transmit mode
Mode 2: IEEE 802.11b Continuous TX mode
Mode 3: IEEE 802.11g Continuous TX mode
Mode 4: IEEE 802.11n 2.4GHz 20MHz Continuous TX mode
Mode 5: IEEE 802.11n 2.4GHz 40MHz Continuous TX 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 TX mode only.

By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that “X axis” position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

Note：worst case_ANT Model：98623PRSX000

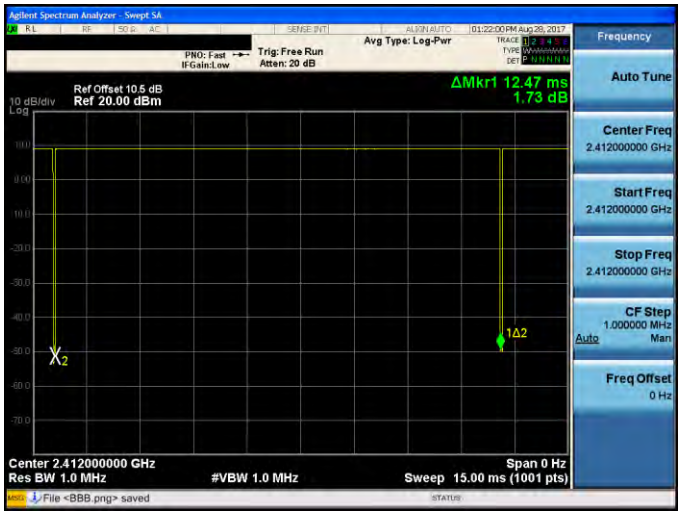
Test Mode	ANT-0	ANT-1	ANT-0+1
Mode 2	V	V	V
Mode 3	V	V	V
Mode 4	V	V	V
Mode 5	V	V	V

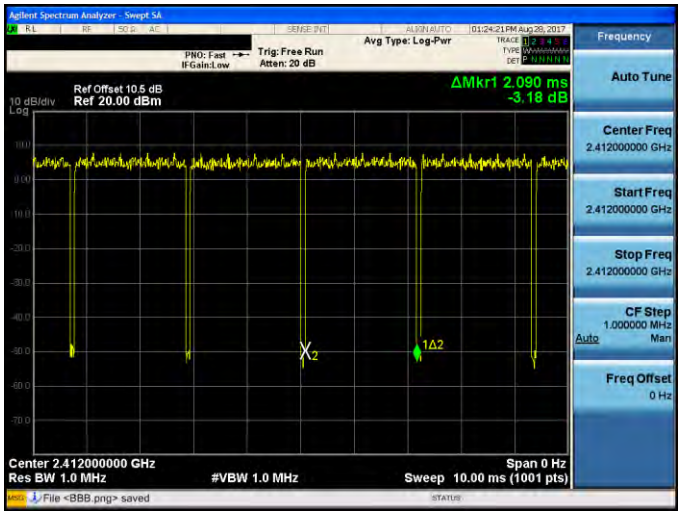
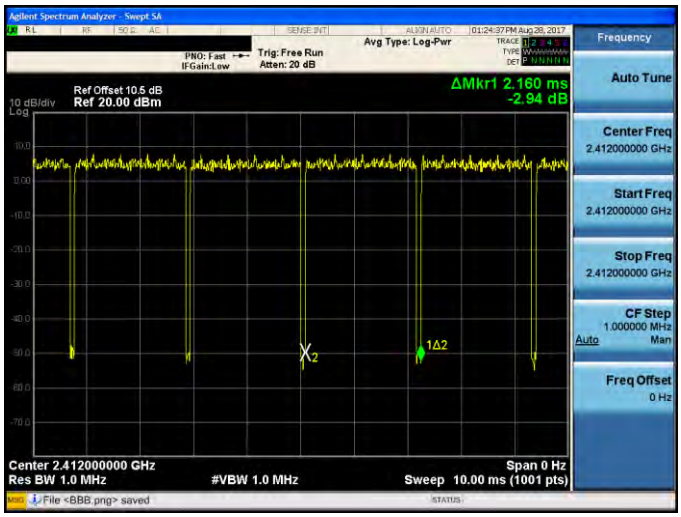
Test Mode	Antenna Delivery	Data Rate	Test Channel
Mode 2	2TX (CDD)	1M	1, 6, 11
Mode 3	2TX (CDD)	6M	1, 6, 11
Mode 4	2TX (CDD)	13M	1, 6, 11
Mode 5	2TX (CDD)	27M	3, 6, 9

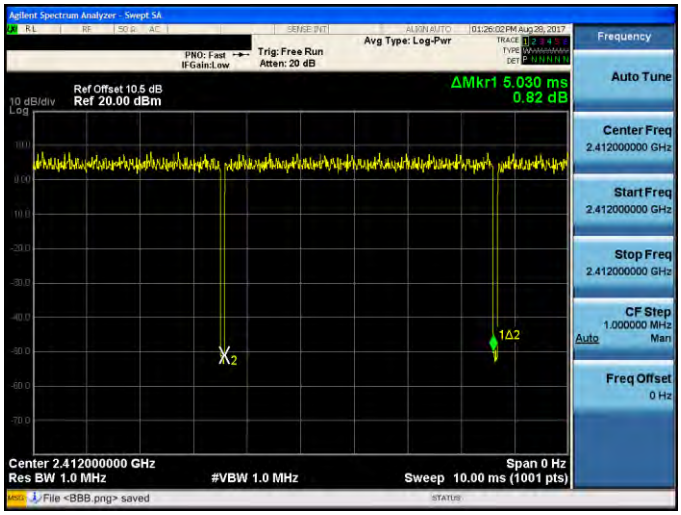
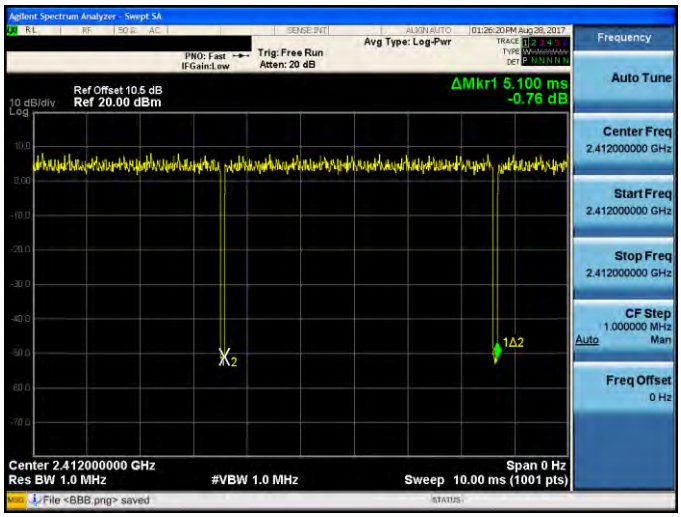
Duty cycle

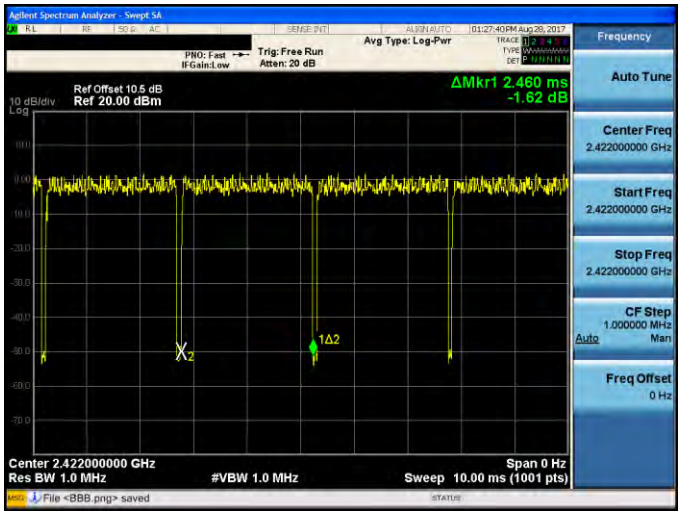
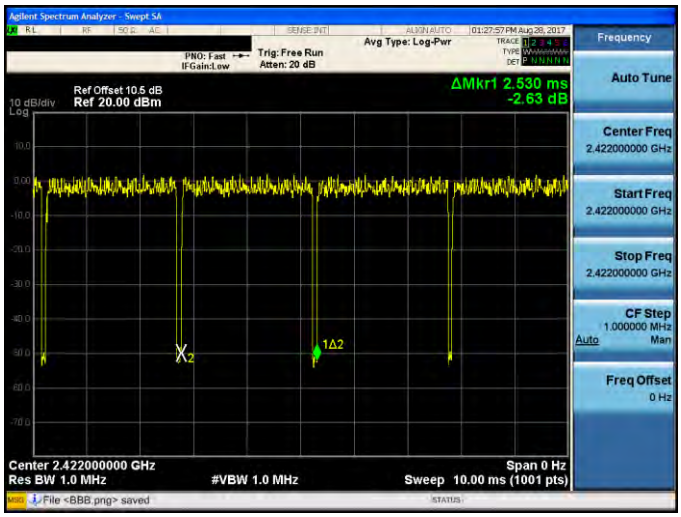
Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2	2412.0	12.470	12.530	0.995	0.021	0.010
Mode 3	2412.0	2.090	2.160	0.968	0.143	0.478
Mode 4	2412.0	5.030	5.100	0.986	0.060	0.010
Mode 5	2422.0	2.460	2.530	0.972	0.122	0.407

Duty Cycle Graphs

Mode 2: IEEE 802.11b Continuous TX mode	
On time	
On+off time	

Mode 3: IEEE 802.11g Continuous TX mode	
On time	
On+off time	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Continuous TX mode	
On time	
On+off time	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Continuous TX mode	
On time	
On+off time	

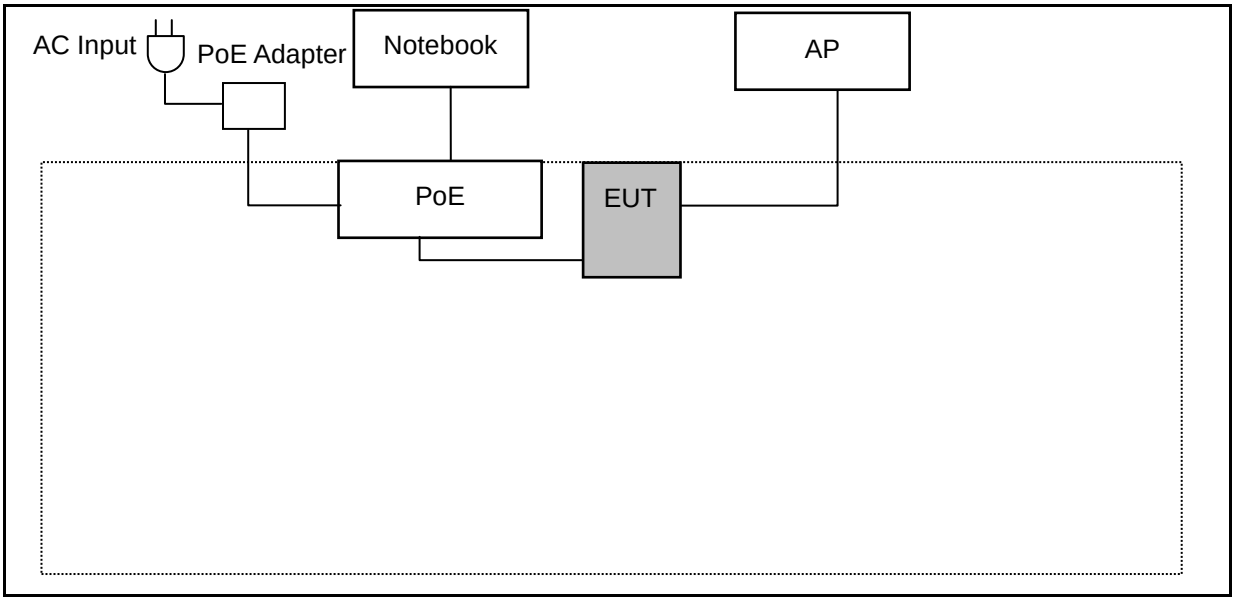
3.2. EUT Exercise Software

1.	Setup the EUT shown on “Configuration of Test System Details”.
2.	Turn on the power of all equipment.
3.	Turn Wi-Fi function link to Notebook
4.	EUT run test program.

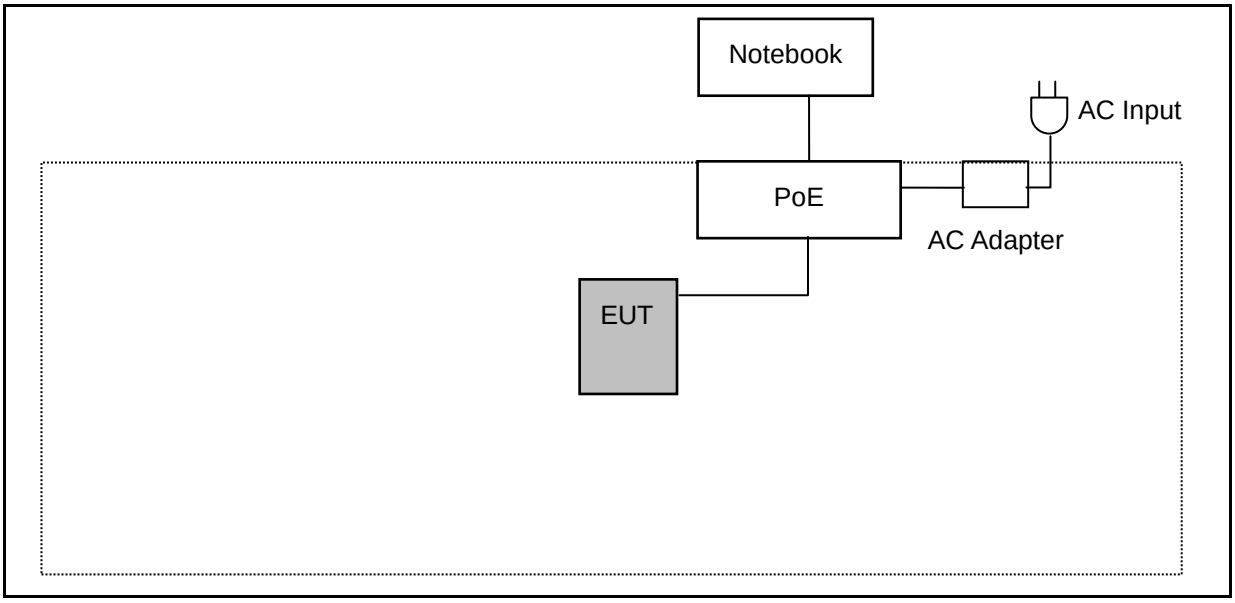
Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

3.3. Configuration of Test System Details

Conducted Emissions



Radiated Emission



3.4. Test Instruments

For Conducted Emission

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Test Receiver	R&S	ESCI	100367	05/18/2017	1 year
LISN	R&S	ENV216	101040	04/01/2017	1 year
LISN	R&S	ENV216	101041	03/15/2017	1 year
RF Cable	Woken	00100D1380194M	TE-02-02	05/19/2017	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

For Radiated Emissions

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector (9KHz~1GHz)	Agilent	N9039A	MY46520256	04/24/2017	1 year
Spectrum Analyzer (3Hz~44GHz)	Agilent	E4446A	MY46180578	04/24/2017	1 year
Pre Amplifier (1~26.5GHz)	Agilent	8449B	3008A02237	10/11/2016	1 year
Pre Amplifier (100KHz~1.3GHz)	Agilent	8447D	2944A11119	01/12/2017	1 year
Pre Amplifier (1~26.5GHz)	EMCI	EMC012645SE	980289	01/16/2017	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/13/2016	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/22/2017	1 year
Horn Antenna (18~40GHz)	ETS	3116	86467	09/05/2016	1 year
				09/11/2017	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	01/26/2017	1 year
Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	02/20/2017	1 year
Microwave Cable	EMCI	EMC-104-SM-SM-14000	140202	02/20/2017	1 year
Microwave Cable	EMCI	EMC104-SM-SM-600	140301	02/20/2017	1 year
Test Site	ATL	TE01	888001	08/29/2016	1 year
				08/29/2017	1 year

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

For Conducted

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/28/2017	1 year
Power Meter	Anritsu	ML2495A	1135009	08/28/2017	1 year
Spectrum Analyzer (3Hz~13.2GHz)	Agilent	E4445A	MY45300744	12/19/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1 500	140303	02/22/2017	1 year
Spectrum Analyzer (9KHz~26.5GHz)	Agilent	E4408B	MY45107753	08/14/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

3.5. Test Site Environment

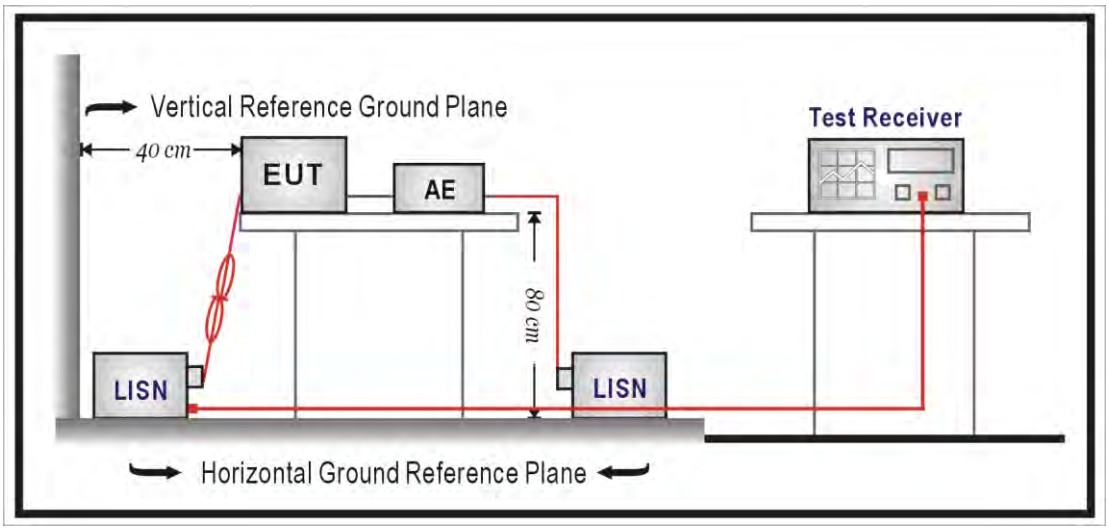
Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

4 AC Power Line Conducted Emission Measurement

4.1. 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

4.2. Test Setup



4.3. 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 50Ω// 50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50Ω// 50uH 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.

4.4. Test Result

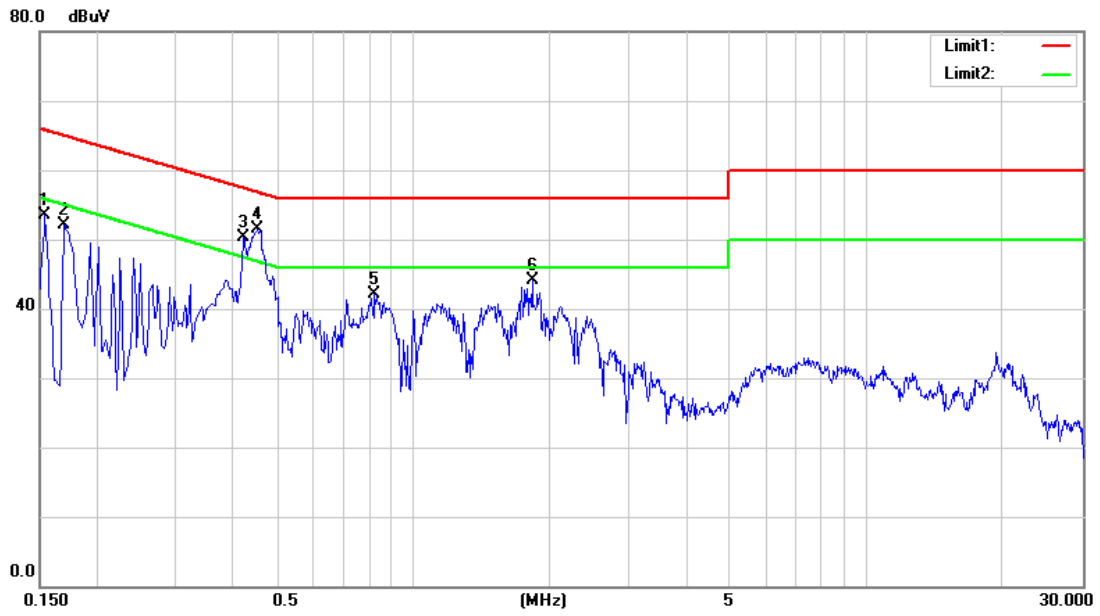
Standard:	FCC Part 15.247	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	06/29/2017
Description:			

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	41.85	27.88	9.54	51.39	37.42	65.78	55.78	-14.39	-18.36	Pass
2	0.1700	38.19	21.88	9.54	47.73	31.42	64.96	54.96	-17.23	-23.54	Pass
3	0.4220	36.26	28.79	9.54	45.80	38.33	57.41	47.41	-11.61	-9.08	Pass
4	0.4540	42.31	32.59	9.54	51.85	42.13	56.80	46.80	-4.95	-4.67	Pass
5	0.8260	30.34	23.76	9.56	39.90	33.32	56.00	46.00	-16.10	-12.68	Pass
6	1.8300	29.73	23.04	9.60	39.33	32.64	56.00	46.00	-16.67	-13.36	Pass

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

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.247	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	06/29/2017
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	41.85	27.88	9.54	51.39	37.42	65.78	55.78	-14.39	-18.36	Pass
2	0.1700	38.19	21.88	9.54	47.73	31.42	64.96	54.96	-17.23	-23.54	Pass
3	0.4220	36.26	28.79	9.54	45.80	38.33	57.41	47.41	-11.61	-9.08	Pass
4	0.4540	42.31	32.59	9.54	51.85	42.13	56.80	46.80	-4.95	-4.67	Pass
5	0.8260	30.34	23.76	9.56	39.90	33.32	56.00	46.00	-16.10	-12.68	Pass
6	1.8300	29.73	23.04	9.60	39.33	32.64	56.00	46.00	-16.67	-13.36	Pass

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

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

5 Radiated Emission Measurement

5.1. Limit

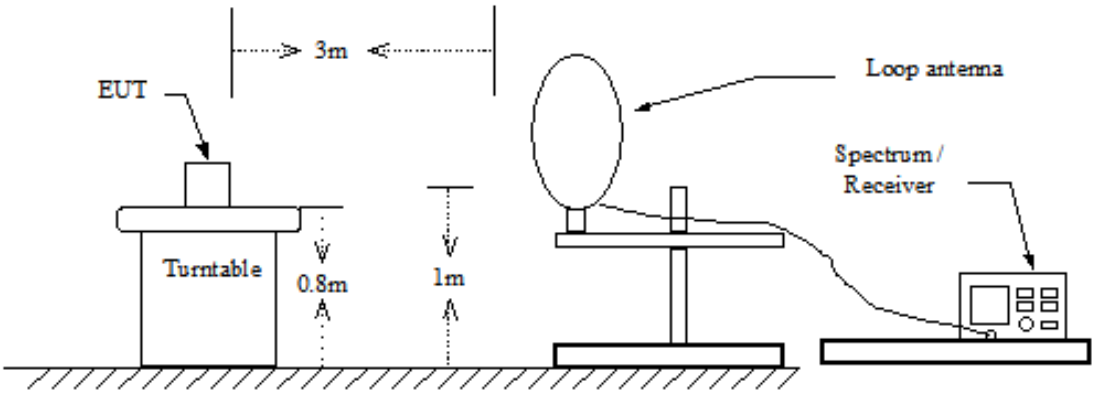
According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m at meter)	Measurement Distance (meters)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

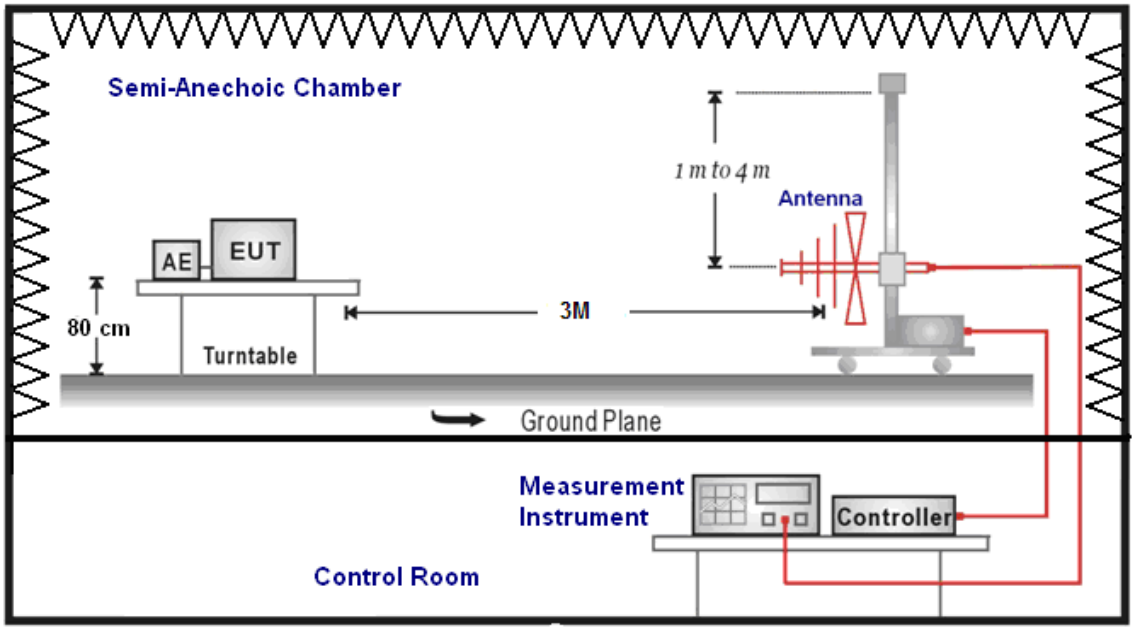
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

5.2. Setup

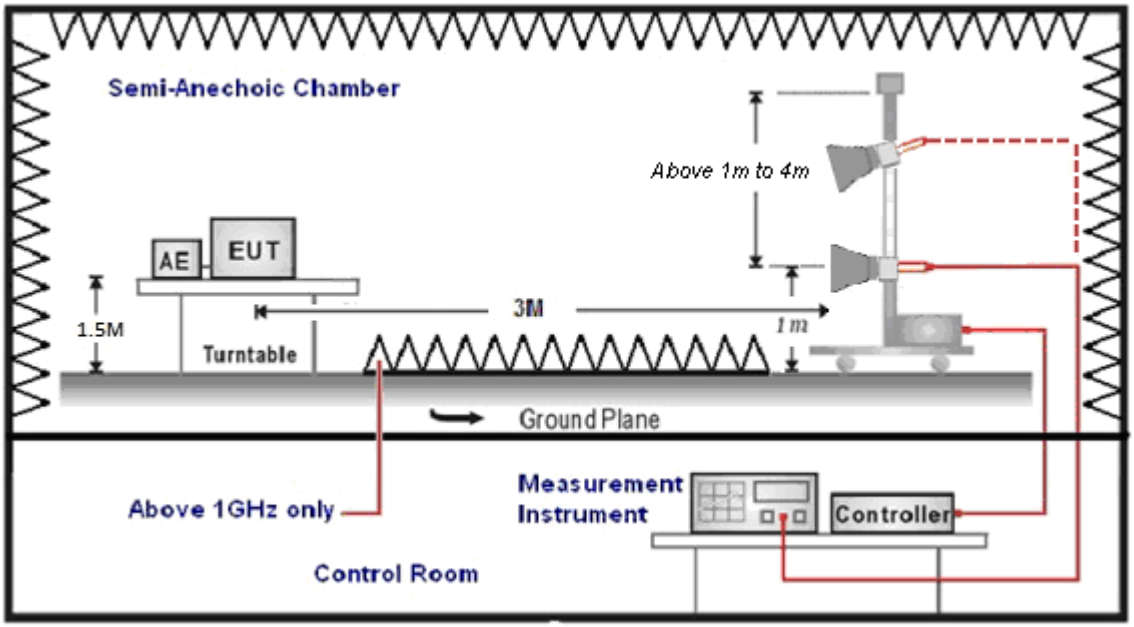
9kHz ~ 30MHz



Below 1GHz



Above 1GHz


Semi-Anechoic Chamber
Above 1m to 4m
AE
EUT
1.5M
3M
1 m
Turntable
Ground Plane
Above 1GHz only
Measurement
Instrument
Controller
Control Room

5.3. 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 26.5 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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 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. A nonconductive material surrounded the EUT to supporting the EUT for standing on tree 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 Biconilog Antenna at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna was used in frequencies 1 –26.5 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 pre meter (uV/m).

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

The actual field is 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) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency : Transmitter Output < +30dBm
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5.4. Test Result

Below 1GHz

Standard:	FCC Part 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	08/31/2017

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
498.5100	34.46	0.55	35.01	46.00	-10.99	QP	H
516.9400	34.92	0.93	35.85	46.00	-10.15	QP	H
522.7600	36.32	1.07	37.39	46.00	-8.61	QP	H
744.8900	28.58	5.45	34.03	46.00	-11.97	QP	H
809.8800	29.21	6.51	35.72	46.00	-10.28	QP	H
917.5500	27.42	8.67	36.09	46.00	-9.91	QP	H
498.5100	40.37	0.55	40.92	46.00	-5.08	QP	V
514.0300	34.78	0.88	35.66	46.00	-10.34	QP	V
521.7900	31.79	1.05	32.84	46.00	-13.16	QP	V
538.2800	30.42	1.42	31.84	46.00	-14.16	QP	V
806.9700	32.55	6.44	38.99	46.00	-7.01	QP	V
893.3000	28.30	8.25	36.55	46.00	-9.45	QP	V

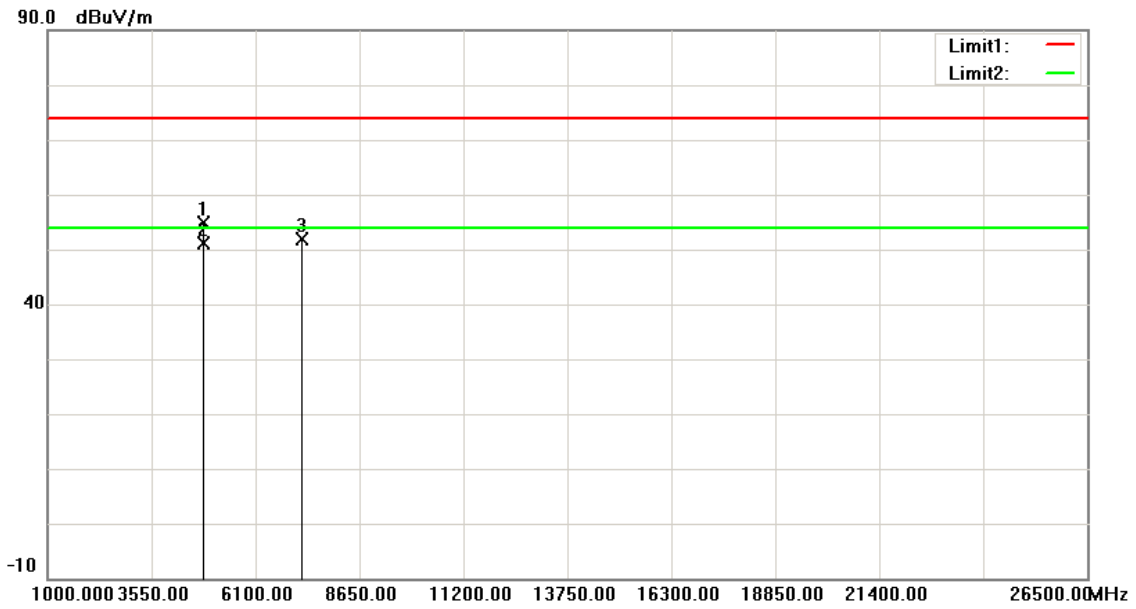
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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

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

Above 1GHz

Standard:	FCC Part 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



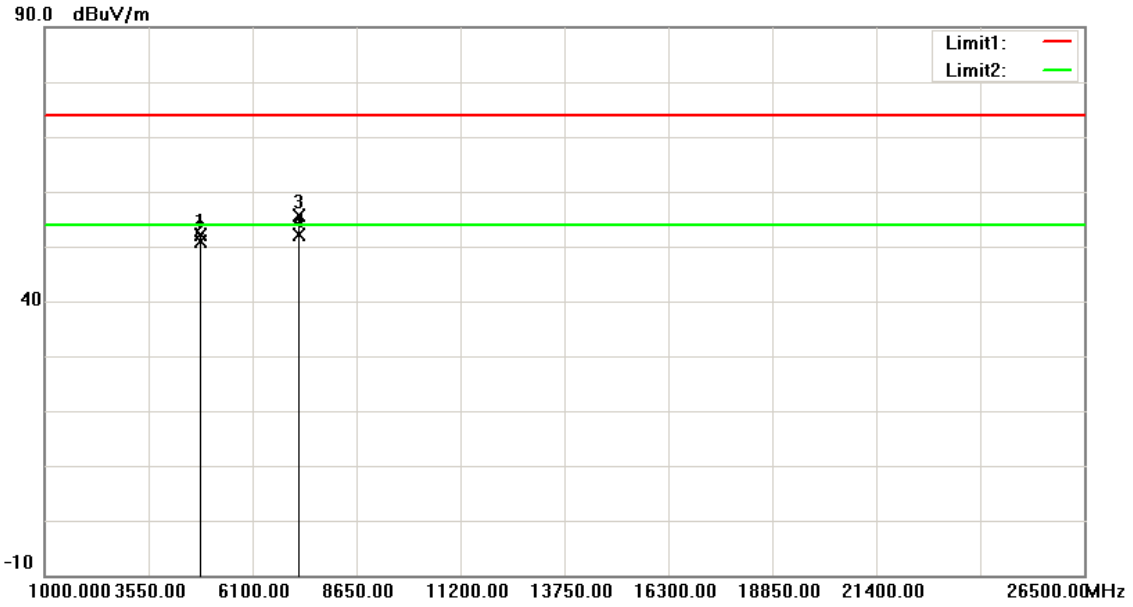
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	64.49	-9.64	54.85	74.00	-19.15	peak
2	4824.000	60.80	-9.64	51.16	54.00	-2.84	AVG
3	7236.000	54.54	-2.69	51.85	74.00	-22.15	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



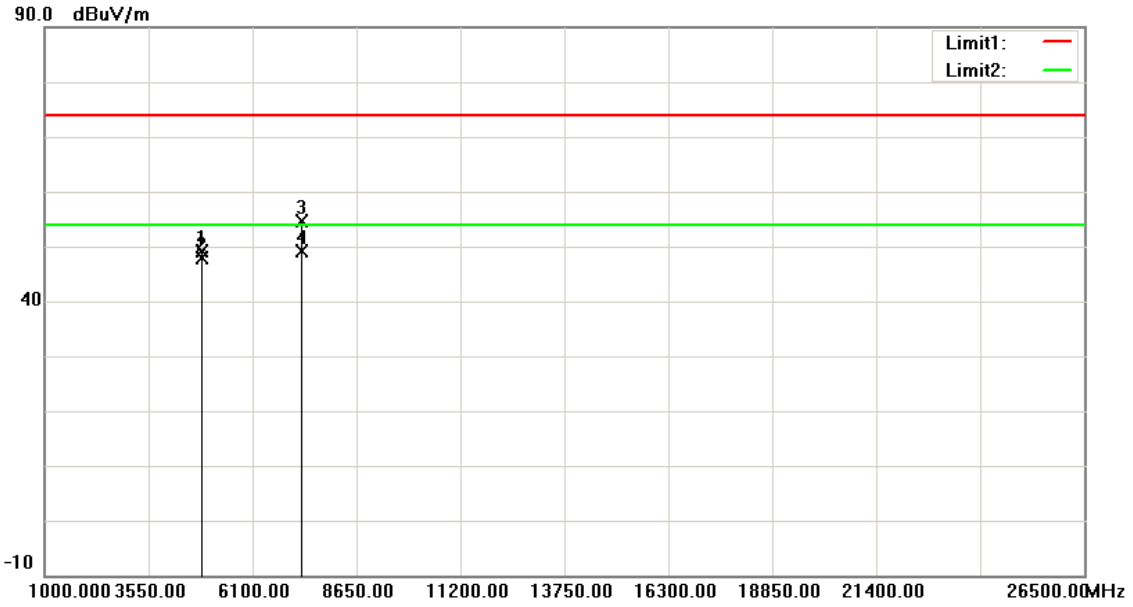
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	61.73	-9.64	52.09	74.00	-21.91	peak
2	4824.000	60.51	-9.64	50.87	54.00	-3.13	AVG
3	7236.000	58.31	-2.69	55.62	74.00	-18.38	peak
4	7236.000	54.77	-2.69	52.08	54.00	-1.92	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



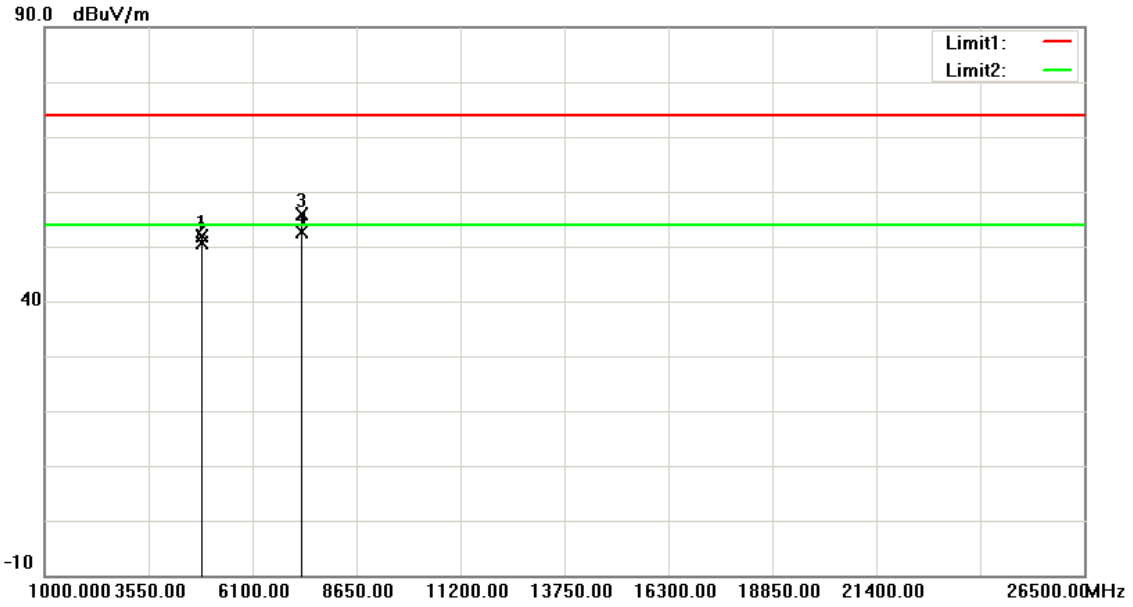
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	58.69	-9.50	49.19	74.00	-24.81	peak
2	4874.000	57.34	-9.50	47.84	54.00	-6.16	AVG
3	7311.000	56.96	-2.42	54.54	74.00	-19.46	peak
4	7311.000	51.50	-2.42	49.08	54.00	-4.92	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



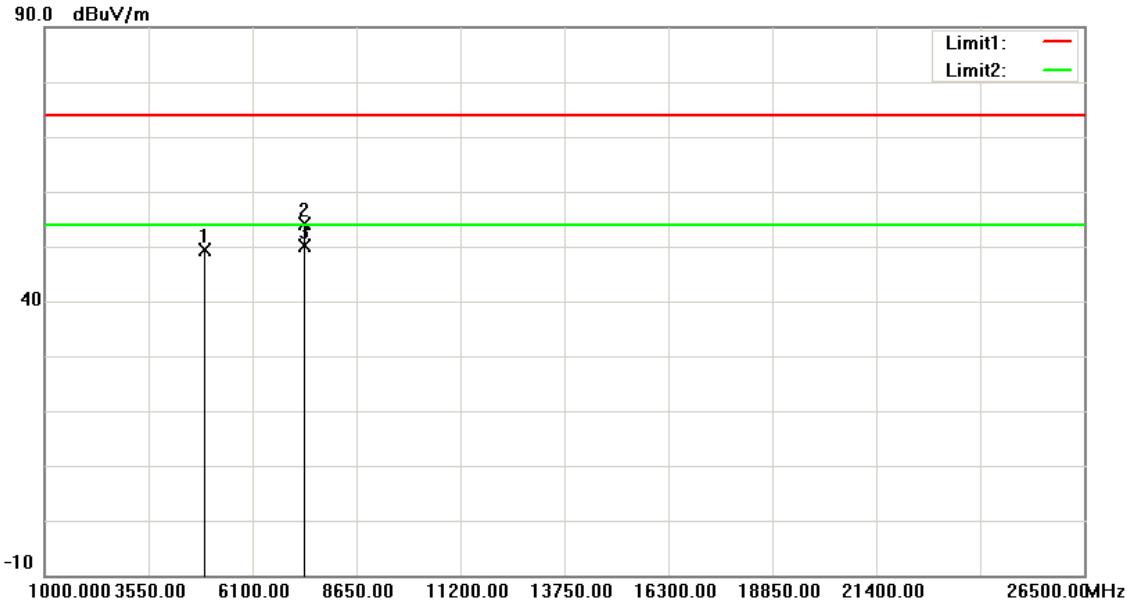
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	61.44	-9.50	51.94	74.00	-22.06	peak
2	4874.000	60.16	-9.50	50.66	54.00	-3.34	AVG
3	7311.000	58.34	-2.42	55.92	74.00	-18.08	peak
4	7311.000	55.01	-2.42	52.59	54.00	-1.41	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



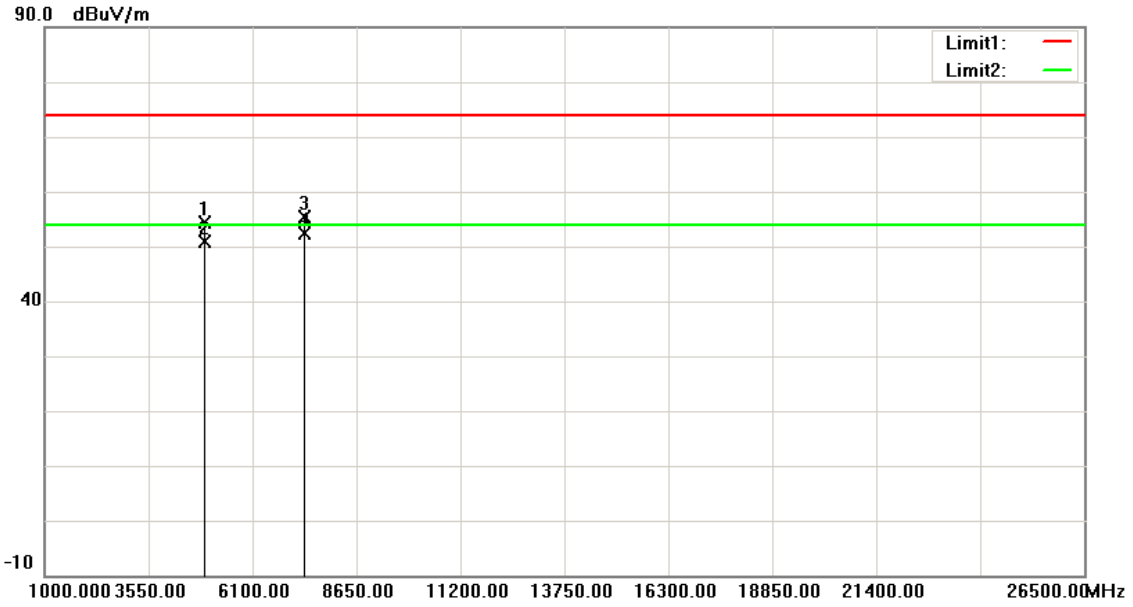
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	58.67	-9.37	49.30	74.00	-24.70	peak
2	7386.000	56.31	-2.16	54.15	74.00	-19.85	peak
3	7386.000	52.30	-2.16	50.14	54.00	-3.86	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



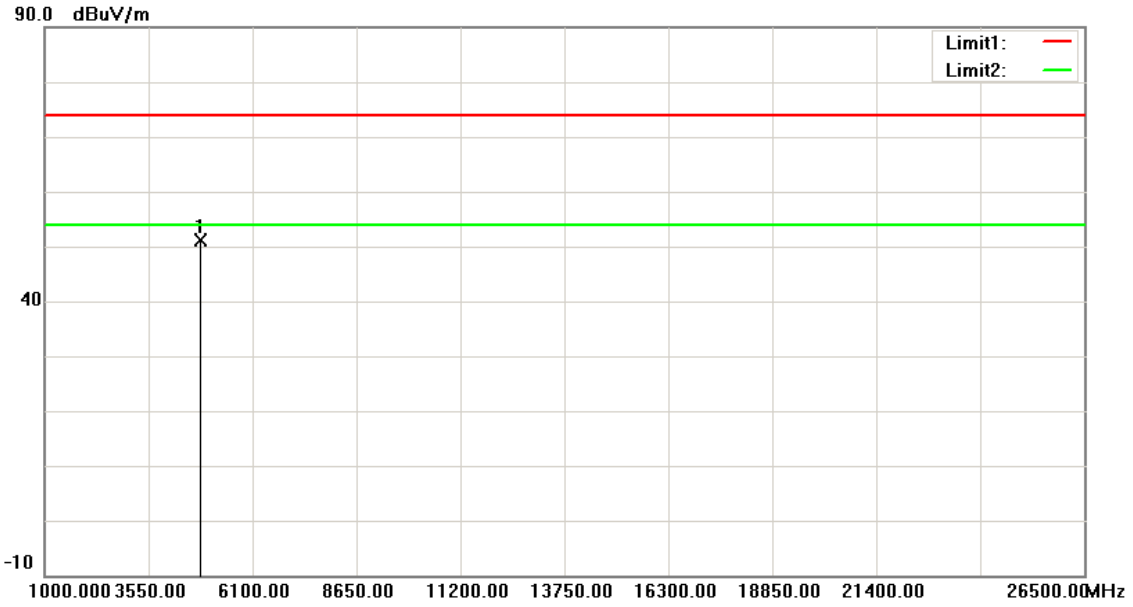
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	63.70	-9.37	54.33	74.00	-19.67	peak
2	4924.000	60.19	-9.37	50.82	54.00	-3.18	AVG
3	7386.000	57.64	-2.16	55.48	74.00	-18.52	peak
4	7386.000	54.54	-2.16	52.38	54.00	-1.62	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Horizontal		



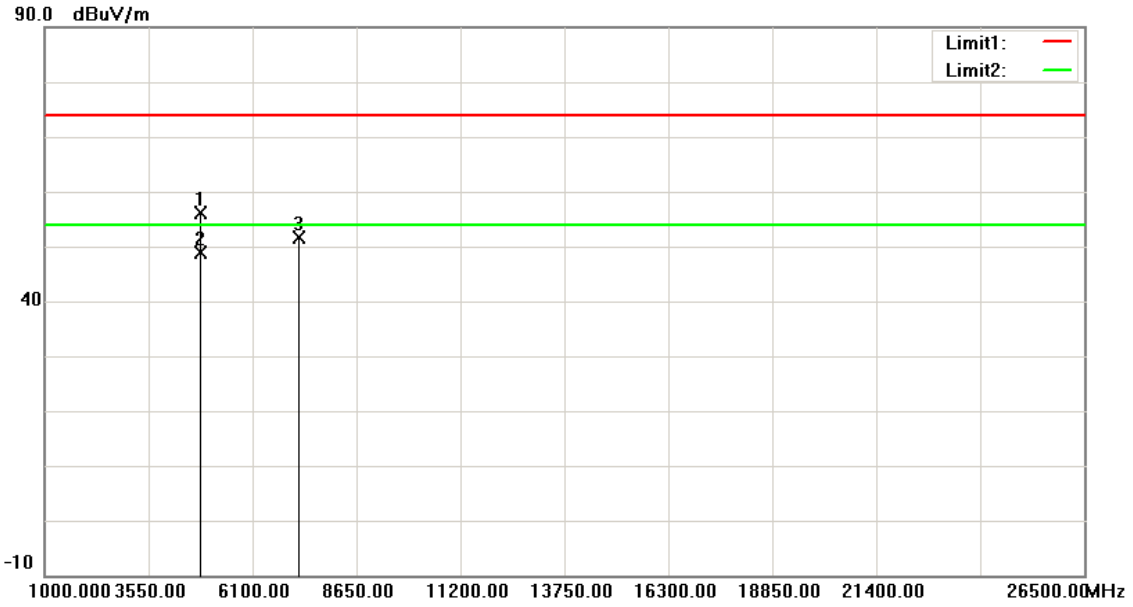
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	60.80	-9.64	51.16	74.00	-22.84	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Vertical		



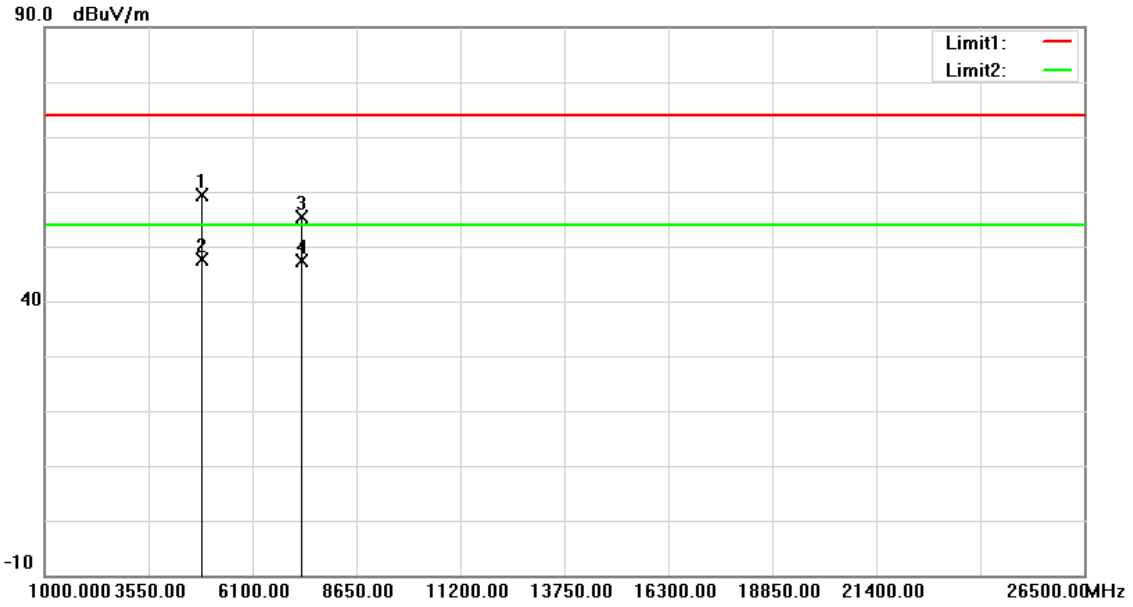
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	65.67	-9.64	56.03	74.00	-17.97	peak
2	4824.000	58.57	-9.64	48.93	54.00	-5.07	AVG
3	7236.000	54.34	-2.69	51.65	74.00	-22.35	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/28/2017
Ant.Polar.:	Horizontal		



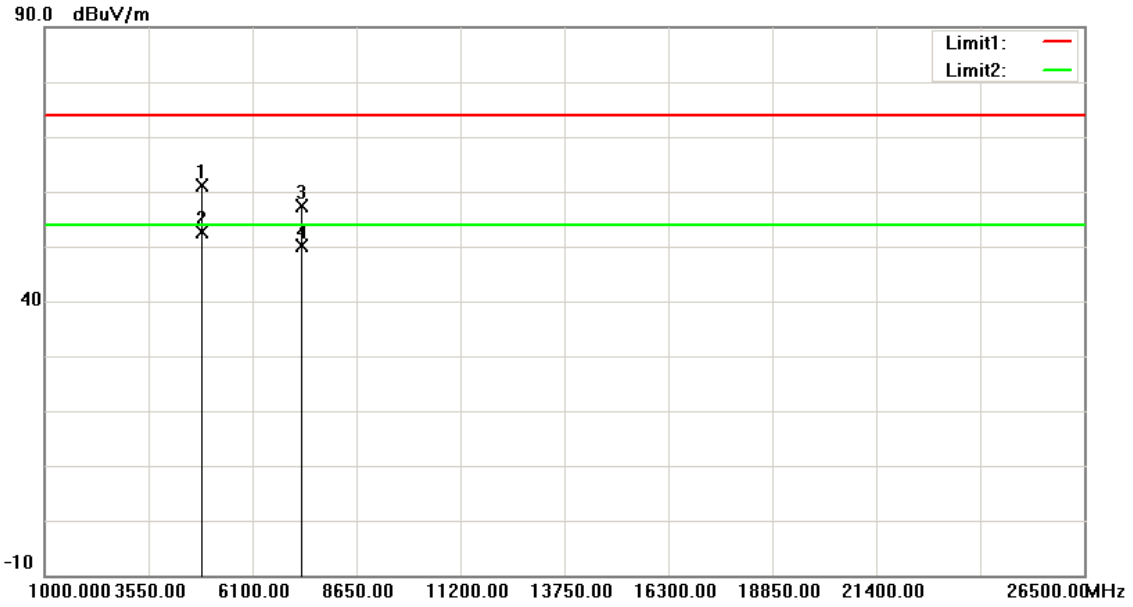
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	68.95	-9.50	59.45	74.00	-14.55	peak
2	4874.000	57.21	-9.50	47.71	54.00	-6.29	AVG
3	7311.000	57.77	-2.42	55.35	74.00	-18.65	peak
4	7311.000	49.91	-2.42	47.49	54.00	-6.51	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/28/2017
Ant.Polar.:	Vertical		



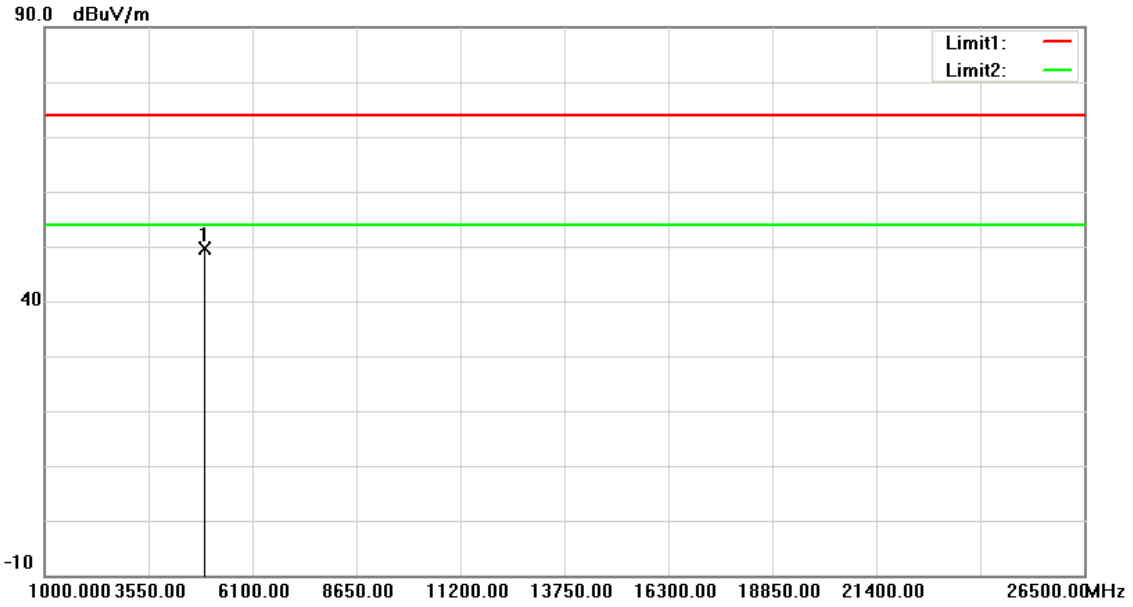
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	70.60	-9.50	61.10	74.00	-12.90	peak
2	4874.000	62.21	-9.50	52.71	54.00	-1.29	AVG
3	7311.000	59.84	-2.42	57.42	74.00	-16.58	peak
4	7311.000	52.63	-2.42	50.21	54.00	-3.79	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/28/2017
Ant.Polar.:	Horizontal		



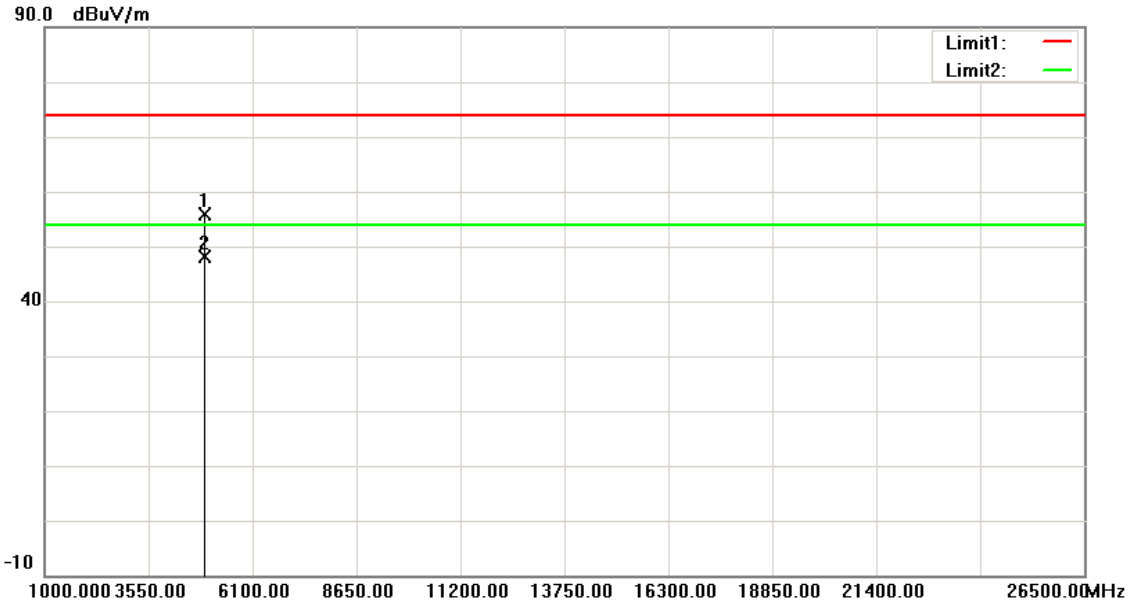
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	58.93	-9.37	49.56	74.00	-24.44	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/28/2017
Ant.Polar.:	Vertical		



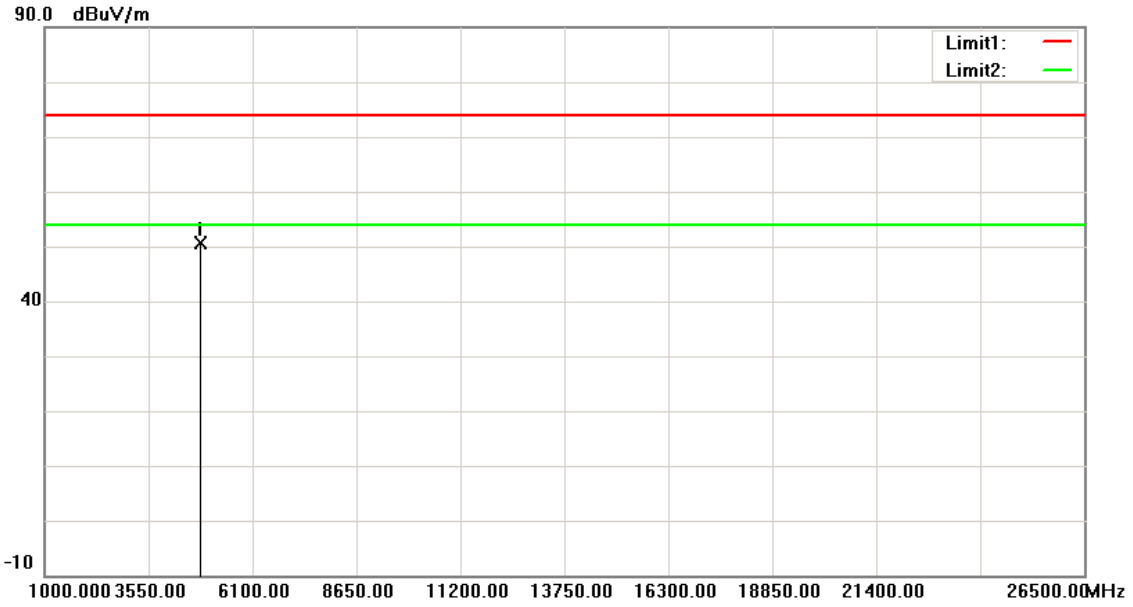
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	65.23	-9.37	55.86	74.00	-18.14	peak
2	4924.000	57.61	-9.37	48.24	54.00	-5.76	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Horizontal		



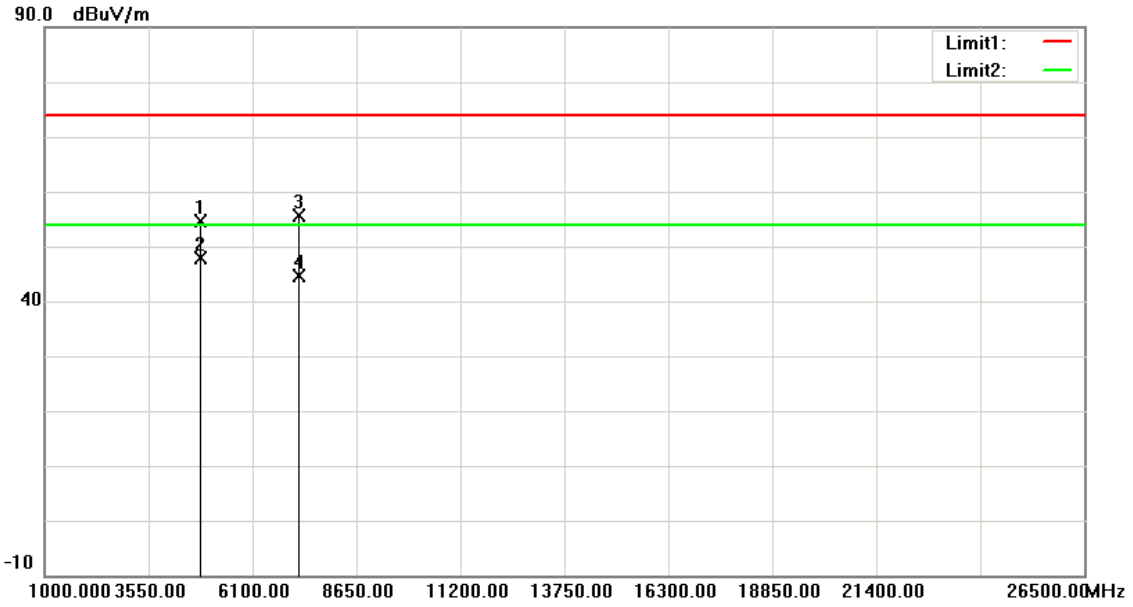
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	60.32	-9.64	50.68	74.00	-23.32	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Vertical		



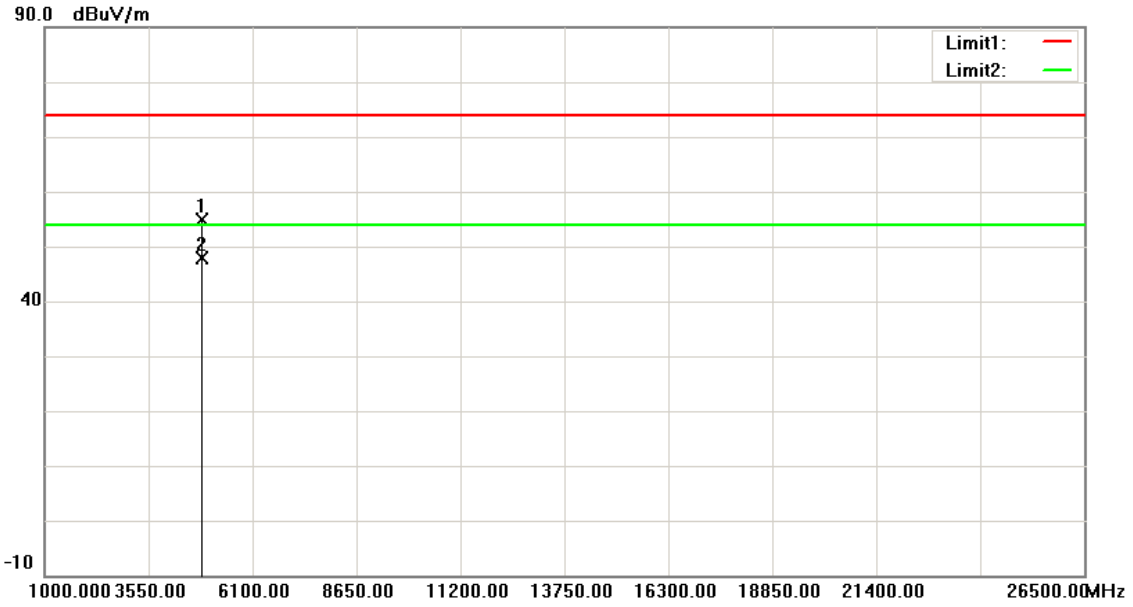
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	64.17	-9.64	54.53	74.00	-19.47	peak
2	4824.000	57.43	-9.64	47.79	54.00	-6.21	AVG
3	7236.000	58.44	-2.69	55.75	74.00	-18.25	peak
4	7236.000	47.41	-2.69	44.72	54.00	-9.28	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Horizontal		



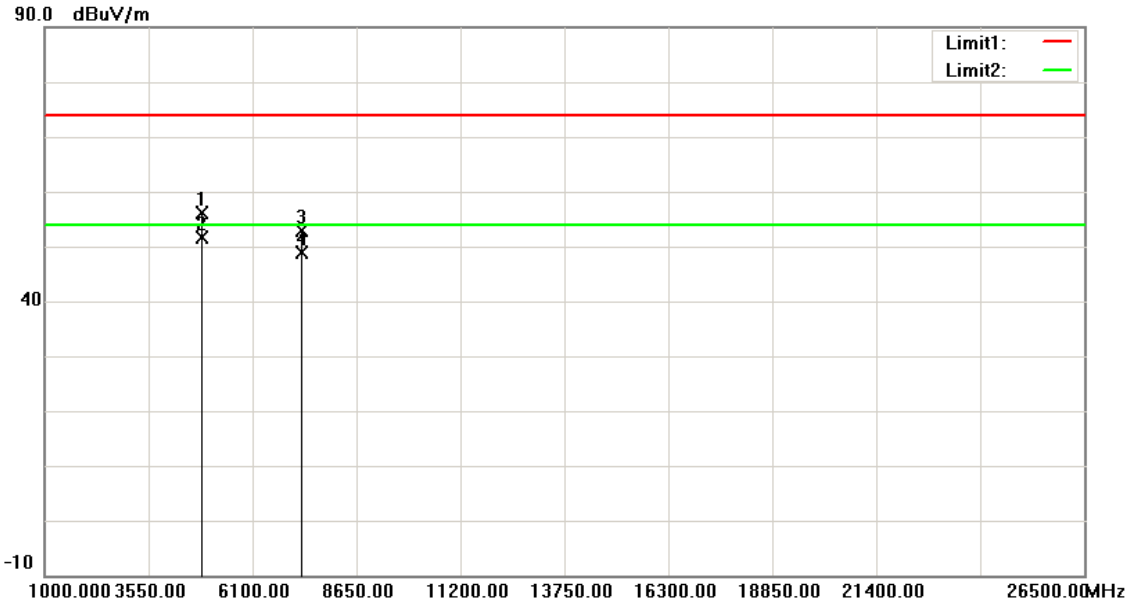
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	64.38	-9.50	54.88	74.00	-19.12	peak
2	4874.000	57.42	-9.50	47.92	54.00	-6.08	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Vertical		



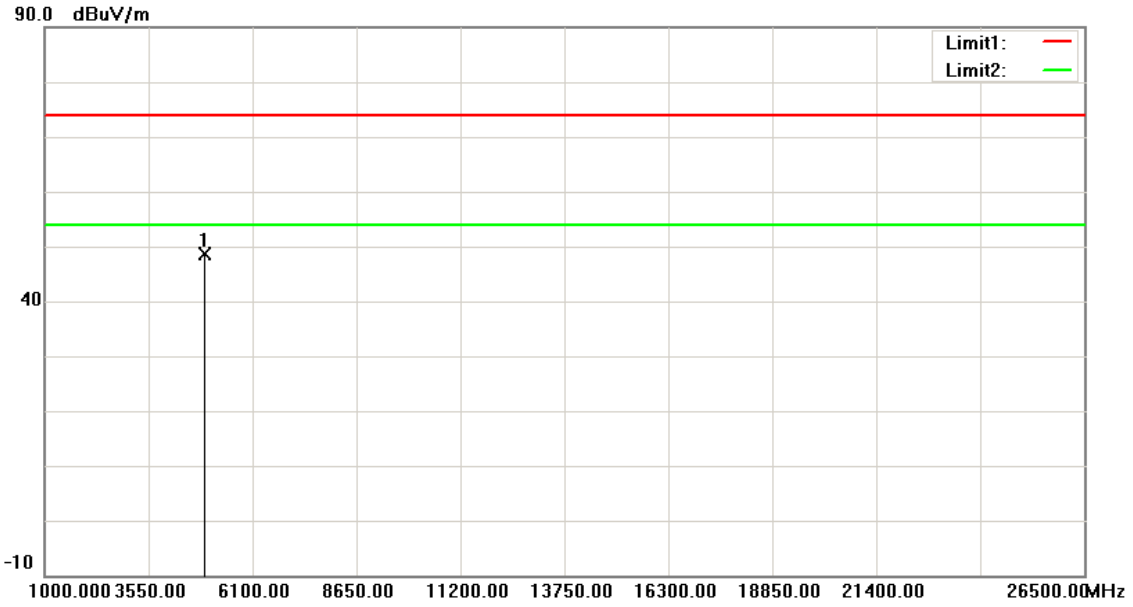
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	65.72	-9.50	56.22	74.00	-17.78	peak
2	4874.000	61.02	-9.50	51.52	54.00	-2.48	AVG
3	7311.000	55.18	-2.42	52.76	74.00	-21.24	peak
4	7311.000	51.38	-2.42	48.96	54.00	-5.04	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Horizontal		



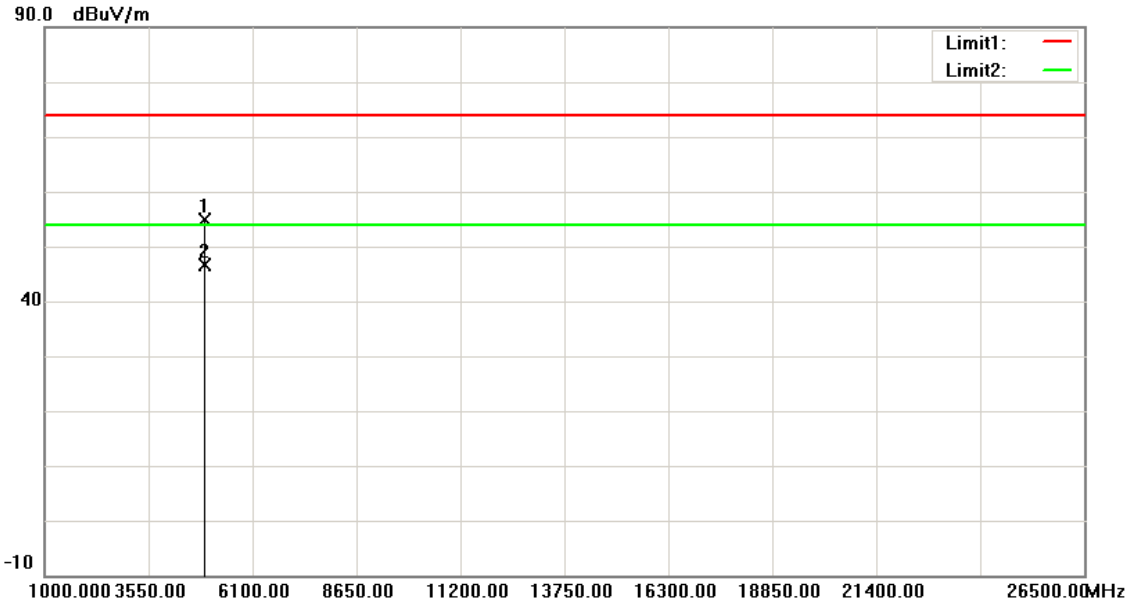
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	58.03	-9.37	48.66	74.00	-25.34	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/28/2017
Ant.Polar.:	Vertical		



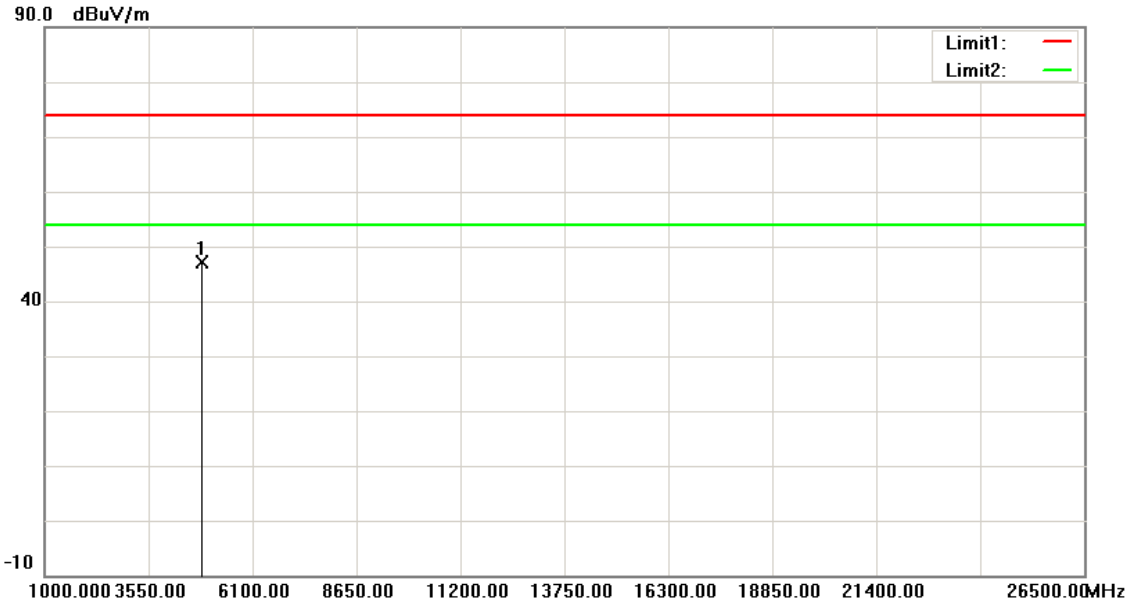
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	64.20	-9.37	54.83	74.00	-19.17	peak
2	4924.000	55.99	-9.37	46.62	54.00	-7.38	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2422MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Horizontal		



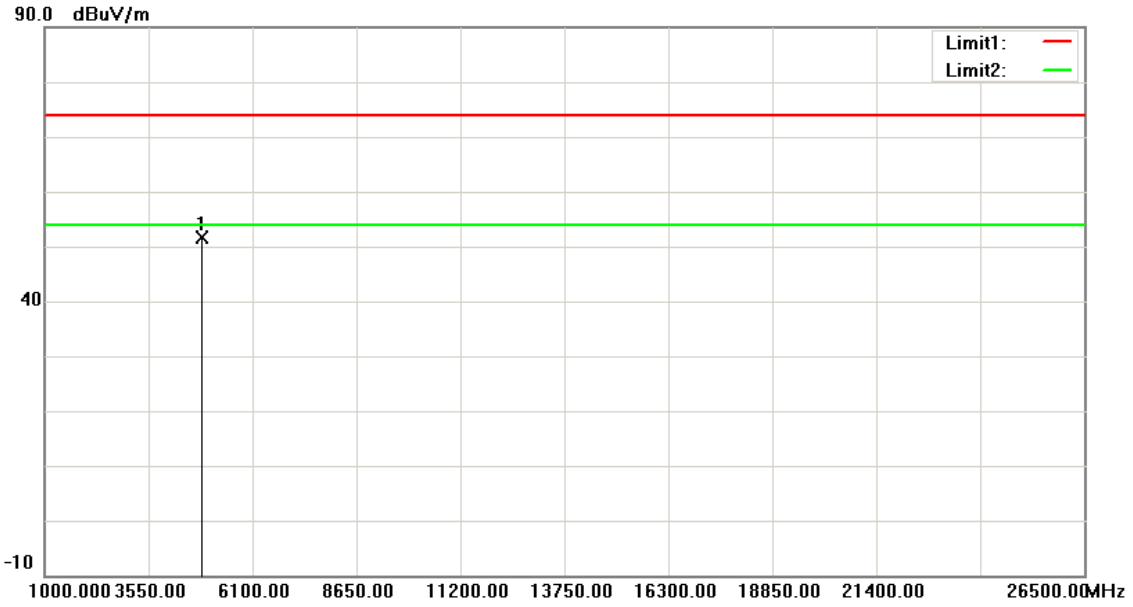
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	56.61	-9.57	47.04	74.00	-26.96	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2422MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Vertical		



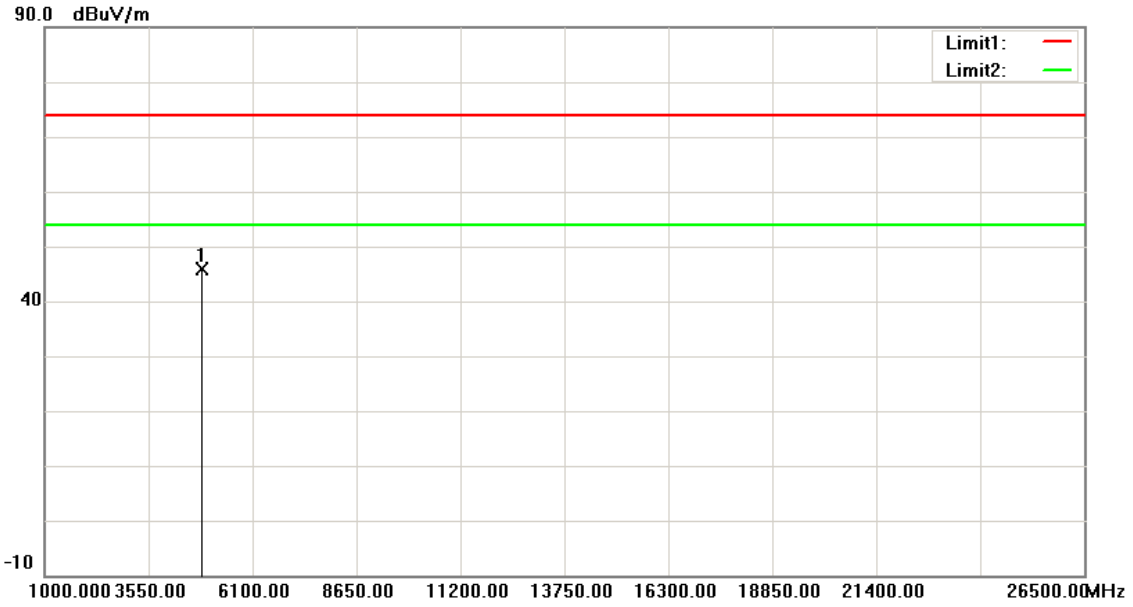
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	61.14	-9.57	51.57	74.00	-22.43	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Horizontal		



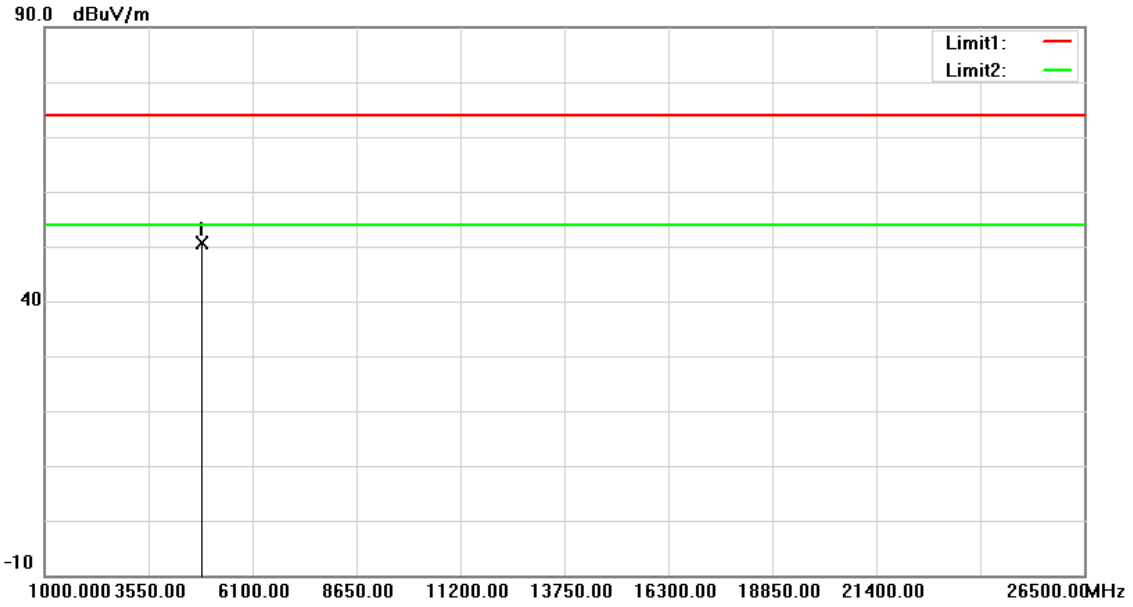
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	55.37	-9.50	45.87	74.00	-28.13	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Vertical		



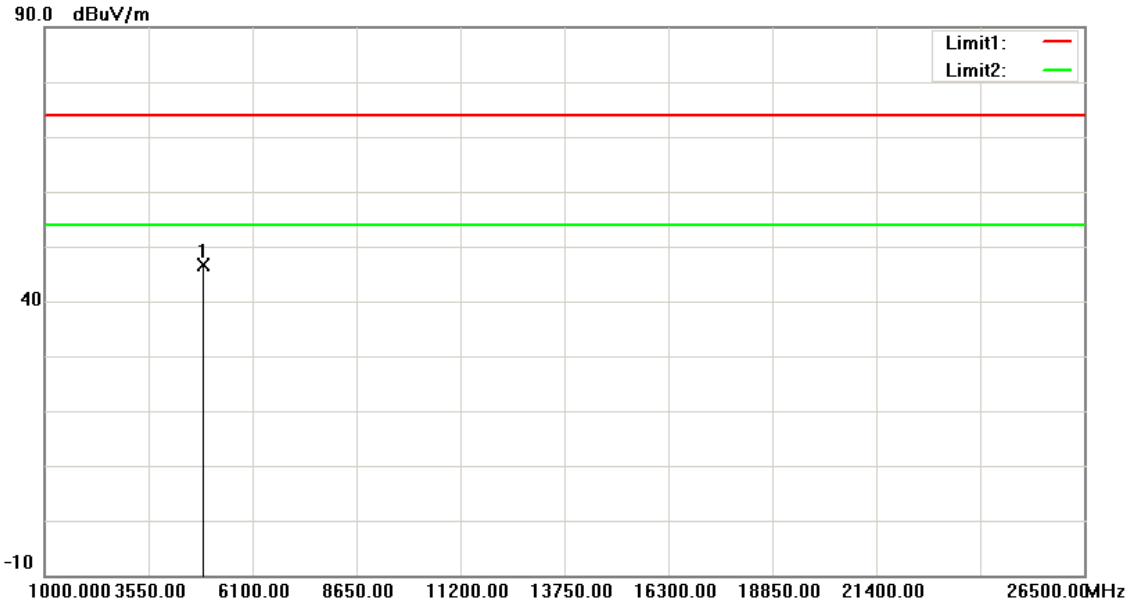
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	60.05	-9.50	50.55	74.00	-23.45	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2452MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Horizontal		



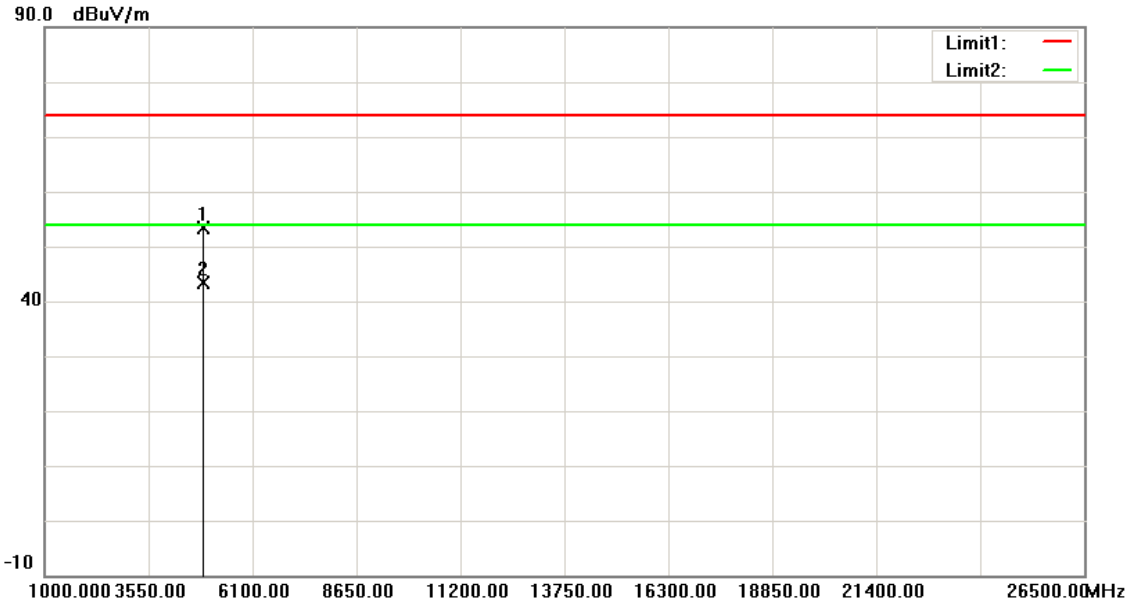
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	56.08	-9.41	46.67	74.00	-27.33	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 110V/60Hz
Frequency:	2452MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 5	Date:	08/28/2017
Ant.Polar.:	Vertical		



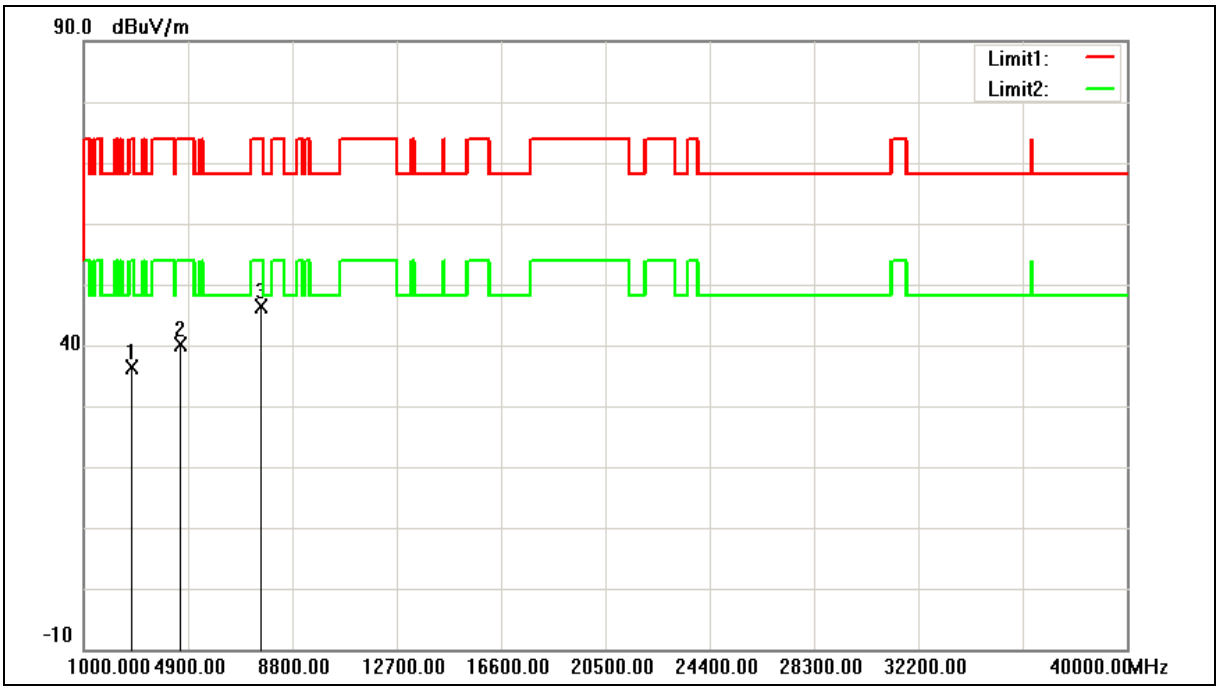
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	62.71	-9.41	53.30	74.00	-20.70	peak
2	4904.000	52.83	-9.41	43.42	54.00	-10.58	AVG

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Test Mode:	Simultaneous Transmitting	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
	(DTS+NII)	Date:	08/31/2017
Ant.Polar.:	Horizontal		



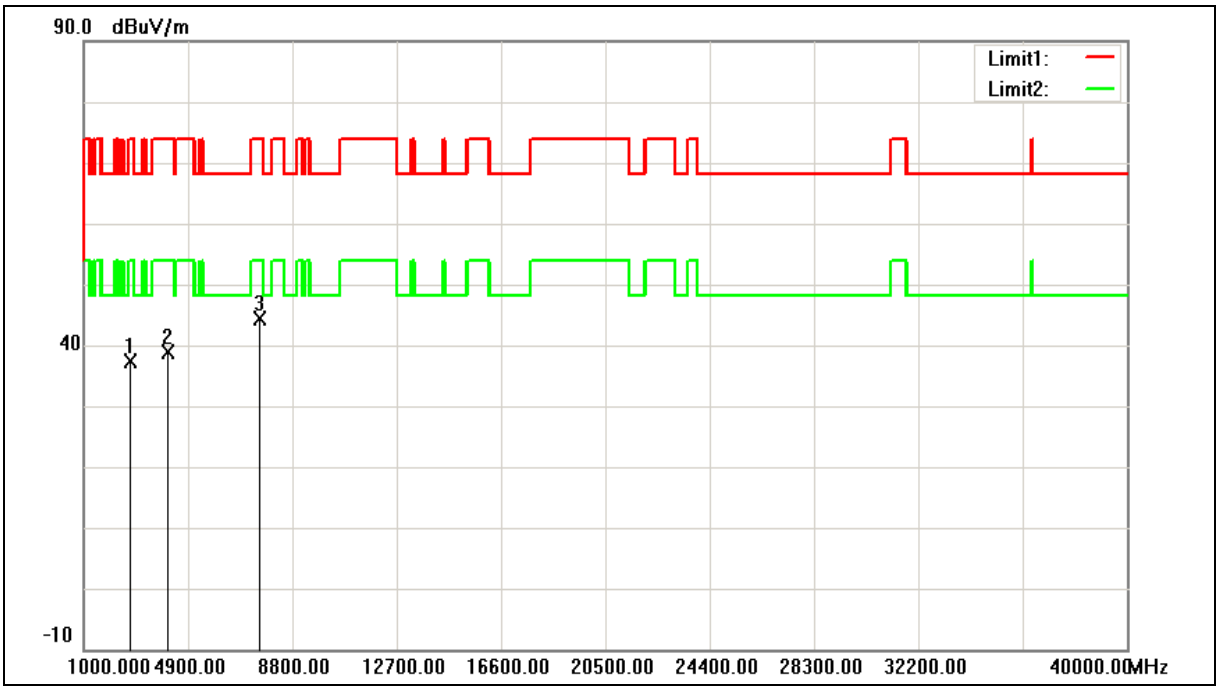
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2785.000	50.76	-14.28	36.48	74.00	-37.52	peak
2	4621.000	50.28	-10.18	40.10	74.00	-33.90	peak
3	7647.000	47.95	-1.45	46.50	74.00	-27.50	peak

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 15.247	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Test Mode:	Simultaneous Transmitting	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
	(DTS+NII)	Date:	08/31/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2751.000	51.63	-14.37	37.26	74.00	-36.74	peak
2	4145.000	50.33	-11.35	38.98	74.00	-35.02	peak
3	7545.000	45.92	-1.66	44.26	74.00	-29.74	peak

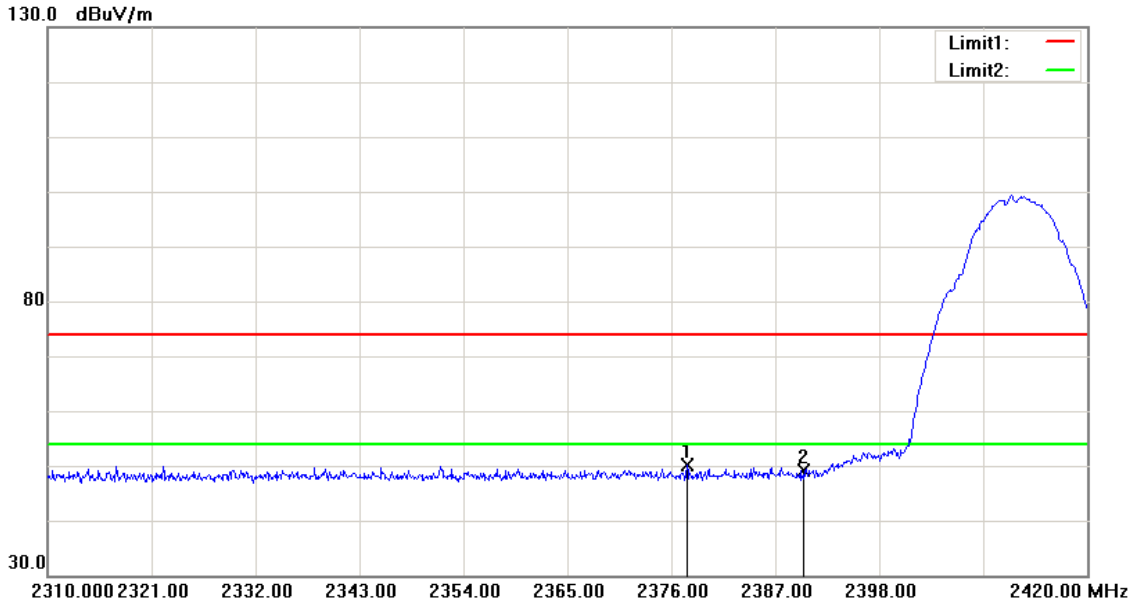
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



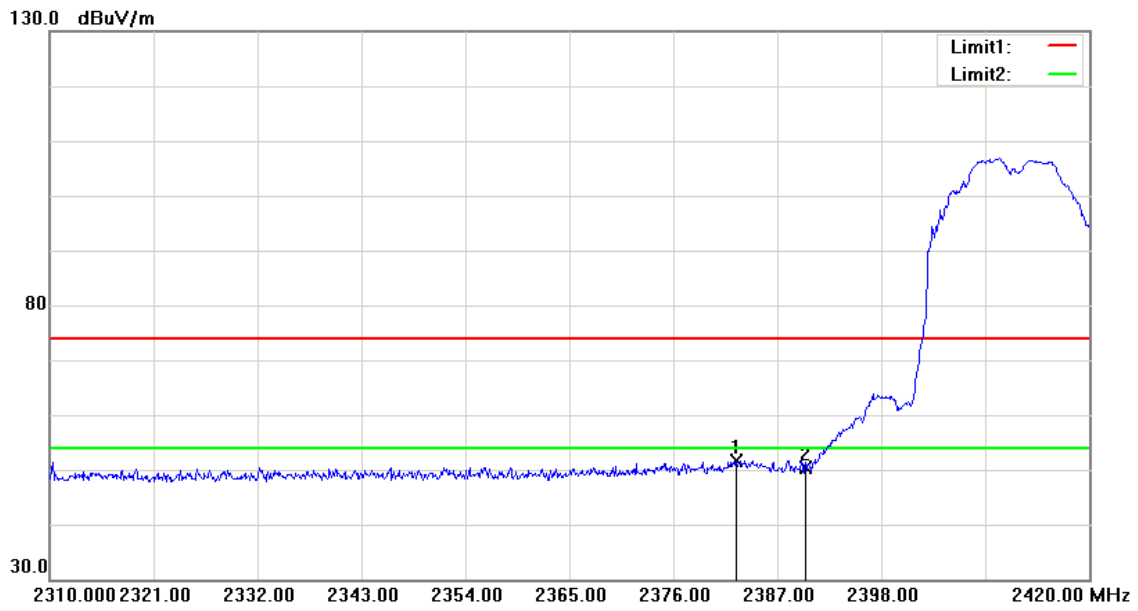
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.650	52.00	-1.90	50.10	74.00	-23.90	peak
2	2390.000	51.04	-1.86	49.18	74.00	-24.82	peak

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



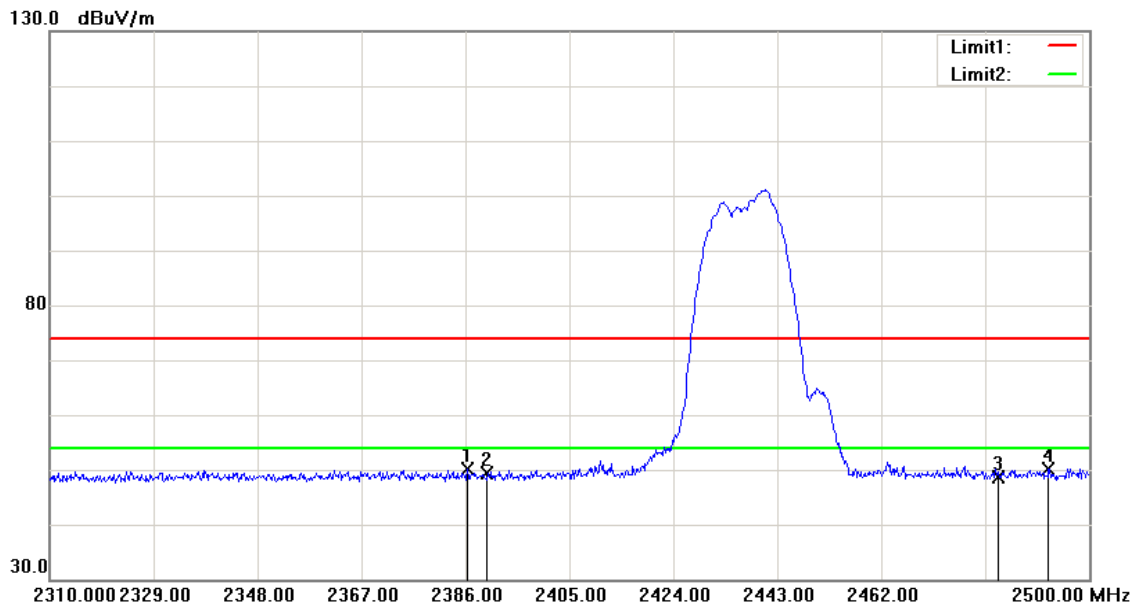
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2382.710	53.52	-1.88	51.64	74.00	-22.36	peak
2	2390.000	52.23	-1.86	50.37	74.00	-23.63	peak

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



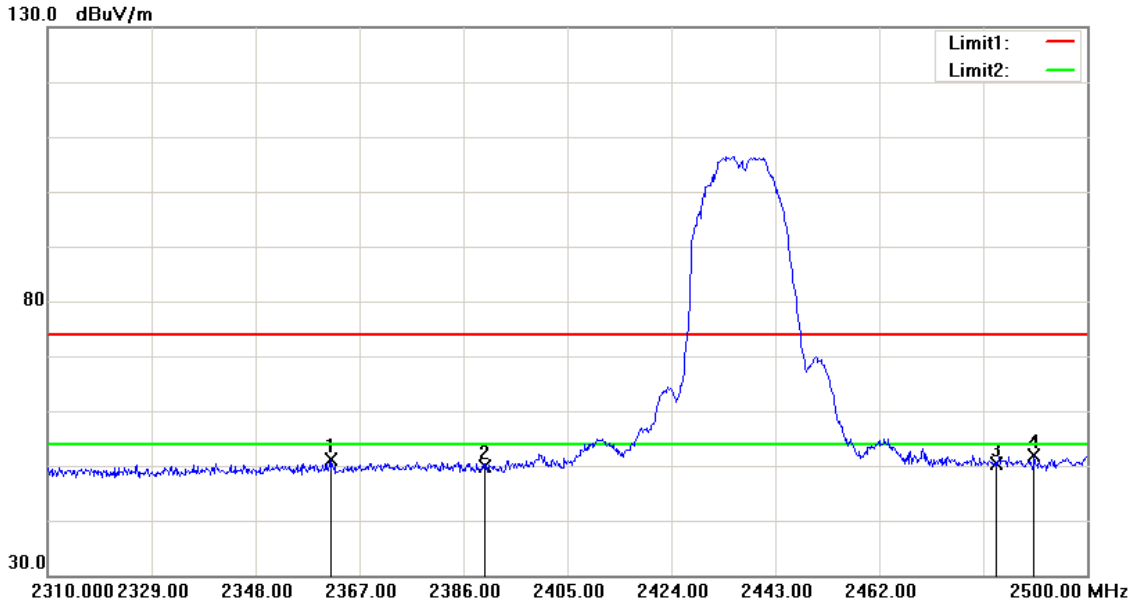
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.380	51.99	-1.87	50.12	74.00	-23.88	peak
2	2390.000	51.35	-1.86	49.49	74.00	-24.51	peak
3	2483.500	50.02	-1.50	48.52	74.00	-25.48	peak
4	2492.590	51.66	-1.46	50.20	74.00	-23.80	peak

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



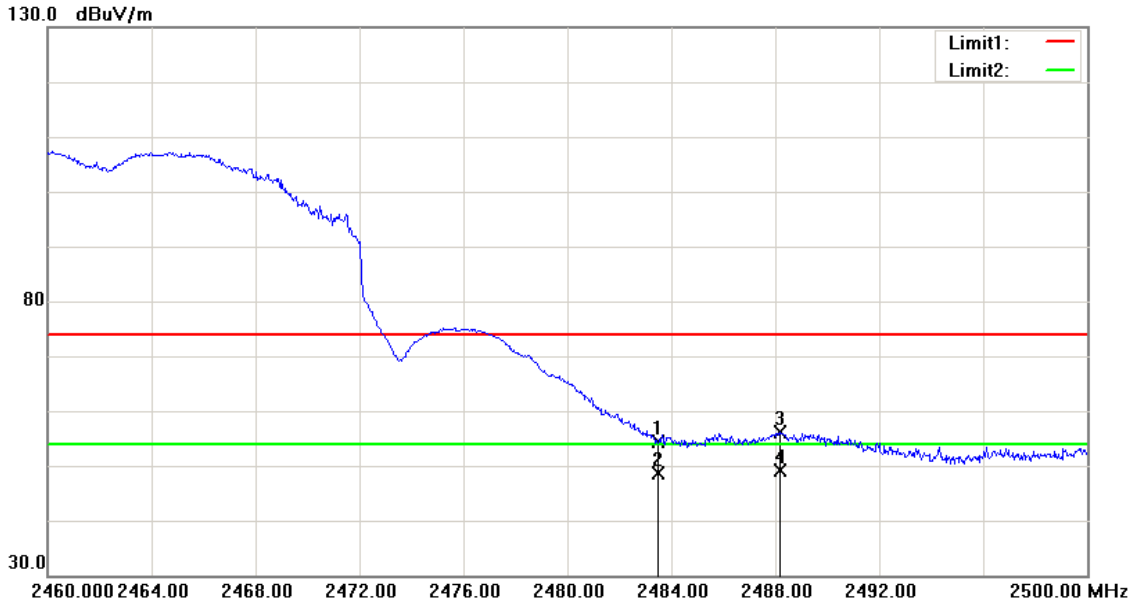
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2361.680	53.15	-1.97	51.18	74.00	-22.82	peak
2	2390.000	51.83	-1.86	49.97	74.00	-24.03	peak
3	2483.500	51.77	-1.50	50.27	74.00	-23.73	peak
4	2490.310	53.31	-1.47	51.84	74.00	-22.16	peak

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Horizontal		



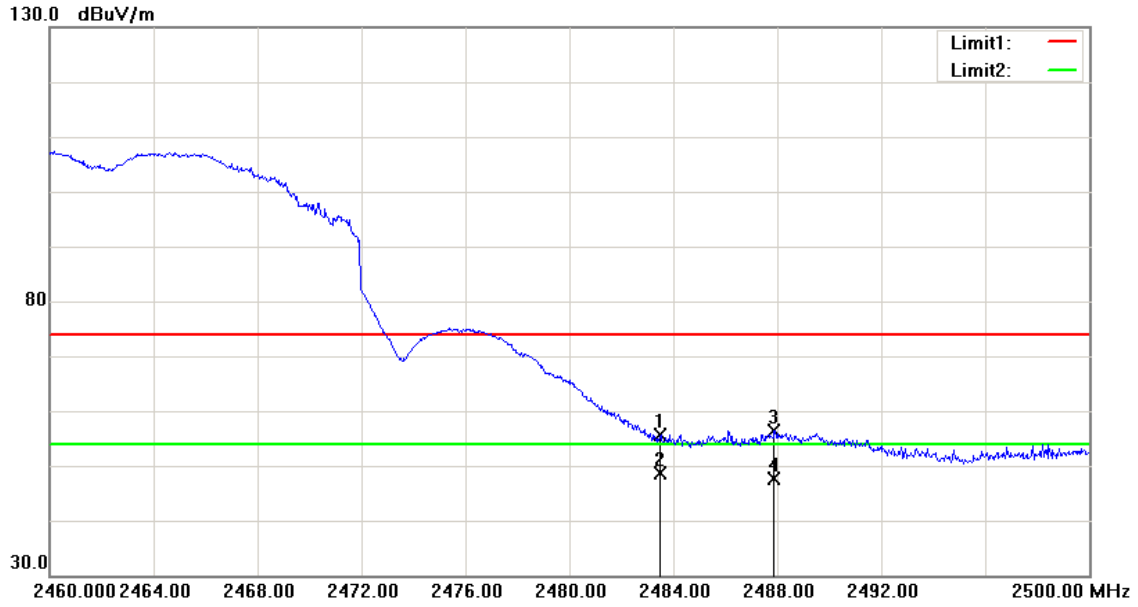
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	55.80	-1.50	54.30	74.00	-19.70	peak
2	2483.500	50.22	-1.50	48.72	54.00	-5.28	AVG
3	2488.160	57.52	-1.47	56.05	74.00	-17.95	peak
4	2488.160	50.71	-1.47	49.24	54.00	-4.76	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 2	Date:	08/27/2017
Ant.Polar.:	Vertical		



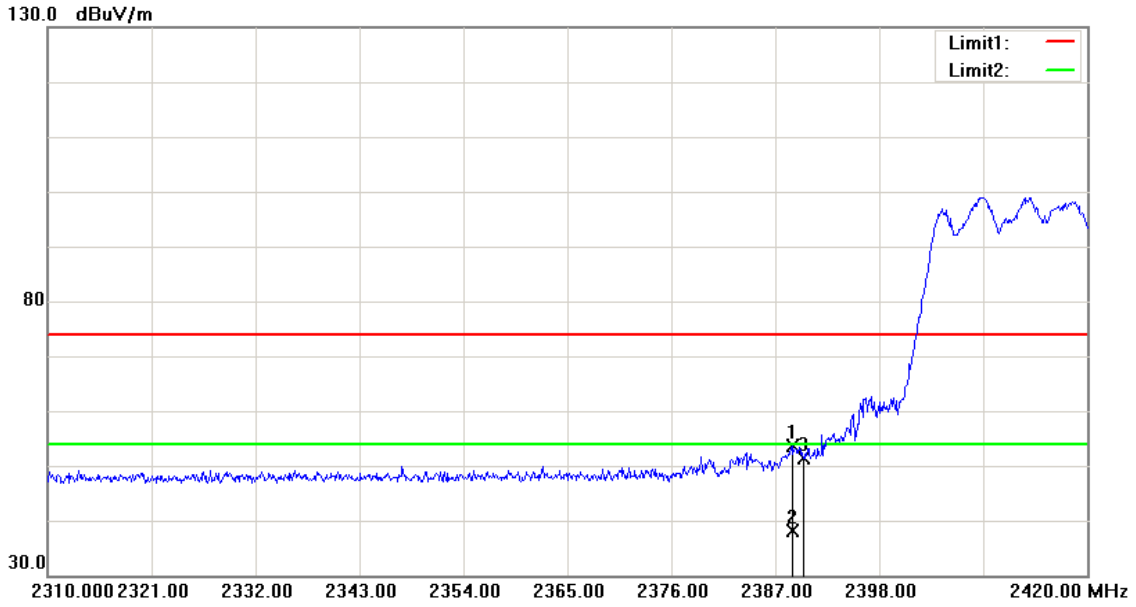
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	57.05	-1.50	55.55	74.00	-18.45	peak
2	2483.500	50.20	-1.50	48.70	54.00	-5.30	AVG
3	2487.880	57.95	-1.47	56.48	74.00	-17.52	peak
4	2487.880	49.11	-1.47	47.64	54.00	-6.36	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Horizontal		



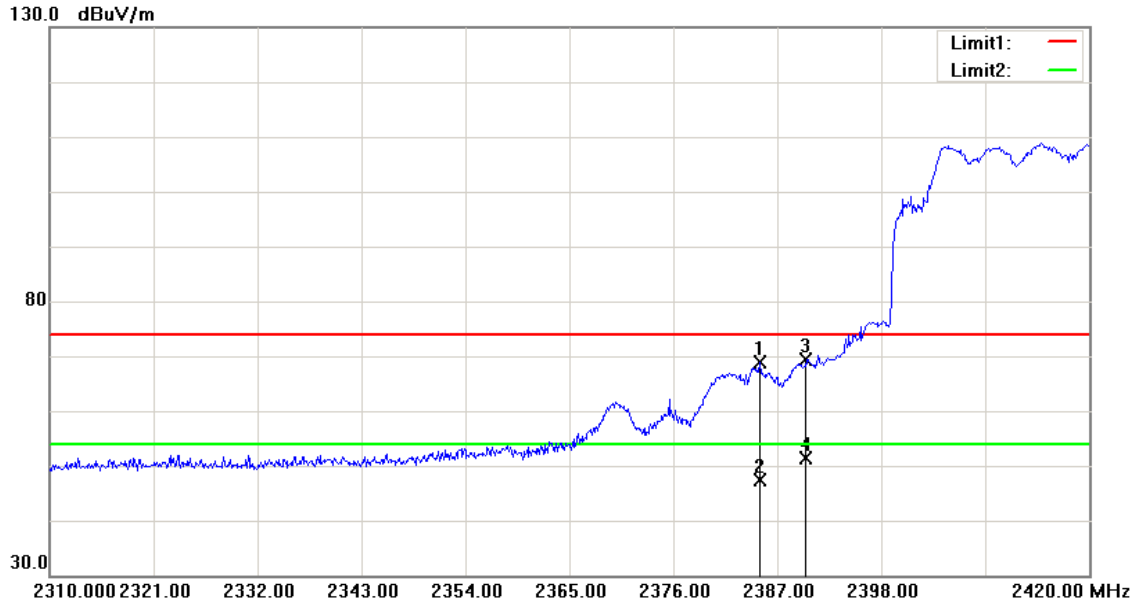
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.760	55.51	-1.86	53.65	74.00	-20.35	peak
2	2388.760	40.10	-1.86	38.24	54.00	-15.76	AVG
3	2390.000	53.16	-1.86	51.30	74.00	-22.70	peak

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Vertical		



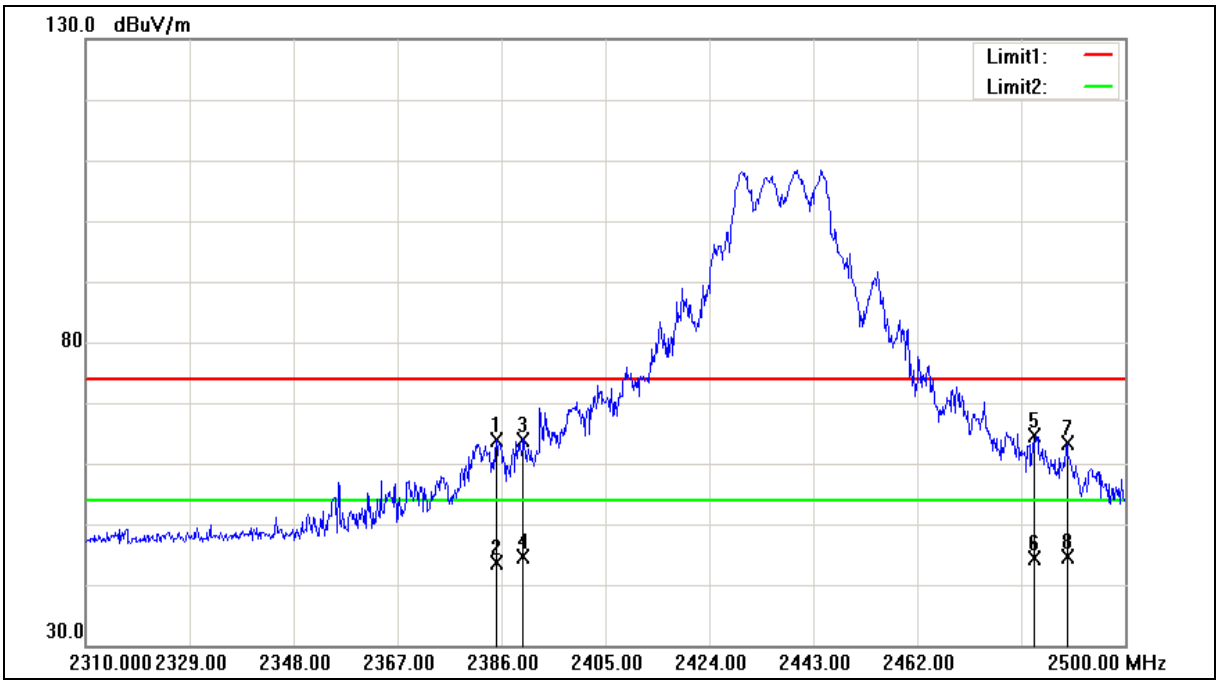
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.130	70.70	-1.87	68.83	74.00	-5.17	peak
2	2385.130	49.31	-1.87	47.44	54.00	-6.56	AVG
3	2390.000	71.21	-1.86	69.35	74.00	-4.65	peak
4	2390.000	53.13	-1.86	51.27	54.00	-2.73	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Horizontal		



Standard:	FCC Part 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Horizontal		

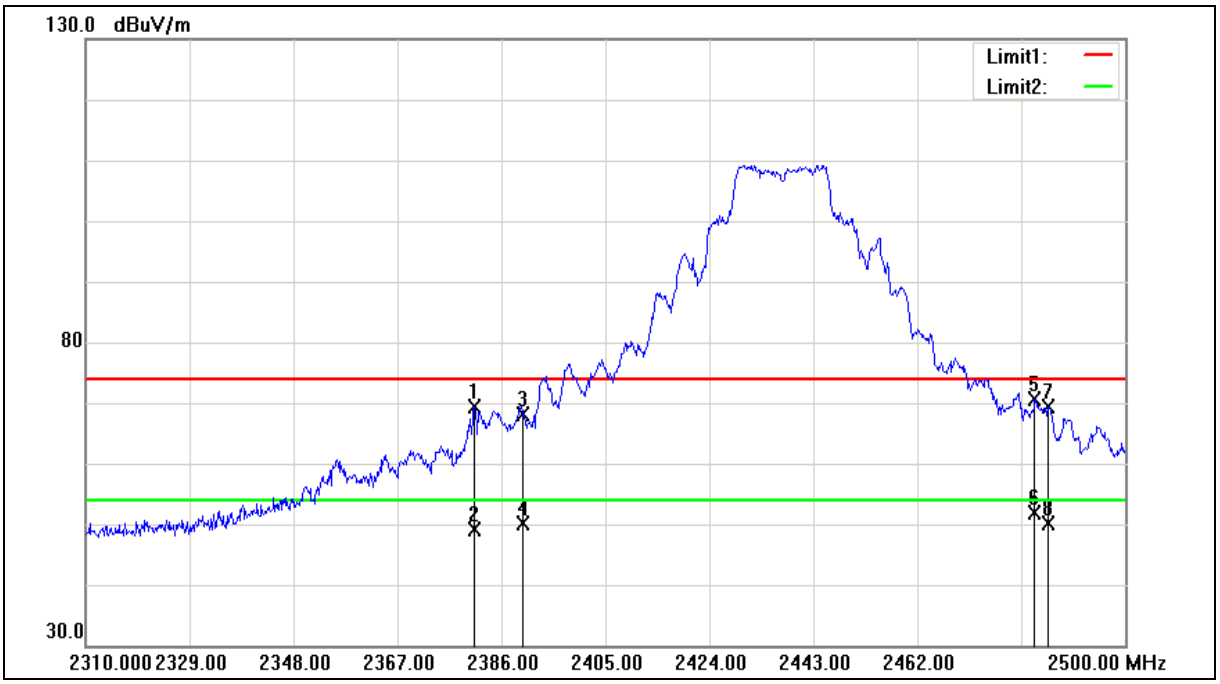
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.050	65.82	-1.87	63.95	74.00	-10.05	peak
2	2385.050	45.43	-1.87	43.56	54.00	-10.44	AVG
3	2390.000	65.71	-1.86	63.85	74.00	-10.15	peak
4	2390.000	46.48	-1.86	44.62	54.00	-9.38	AVG
5	2483.500	66.15	-1.50	64.65	74.00	-9.35	peak
6	2483.500	45.89	-1.50	44.39	54.00	-9.61	AVG
7	2489.360	64.73	-1.47	63.26	74.00	-10.74	peak
8	2489.360	45.99	-1.47	44.52	54.00	-9.48	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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Vertical		



Standard:	FCC Part 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Vertical		

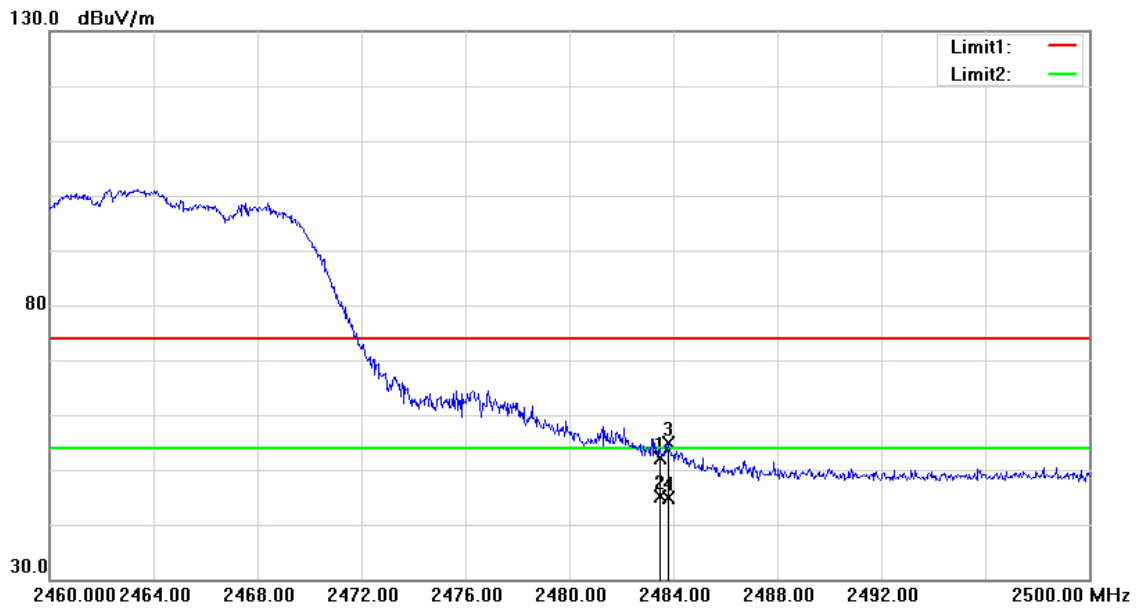
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2381.060	71.22	-1.89	69.33	74.00	-4.67	peak
2	2381.060	51.11	-1.89	49.22	54.00	-4.78	AVG
3	2390.000	69.88	-1.86	68.02	74.00	-5.98	peak
4	2390.000	51.93	-1.86	50.07	54.00	-3.93	AVG
5	2483.500	72.12	-1.50	70.62	74.00	-3.38	peak
6	2483.500	53.43	-1.50	51.93	54.00	-2.07	AVG
7	2485.940	70.95	-1.49	69.46	74.00	-4.54	peak
8	2485.940	51.65	-1.49	50.16	54.00	-3.84	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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Horizontal		



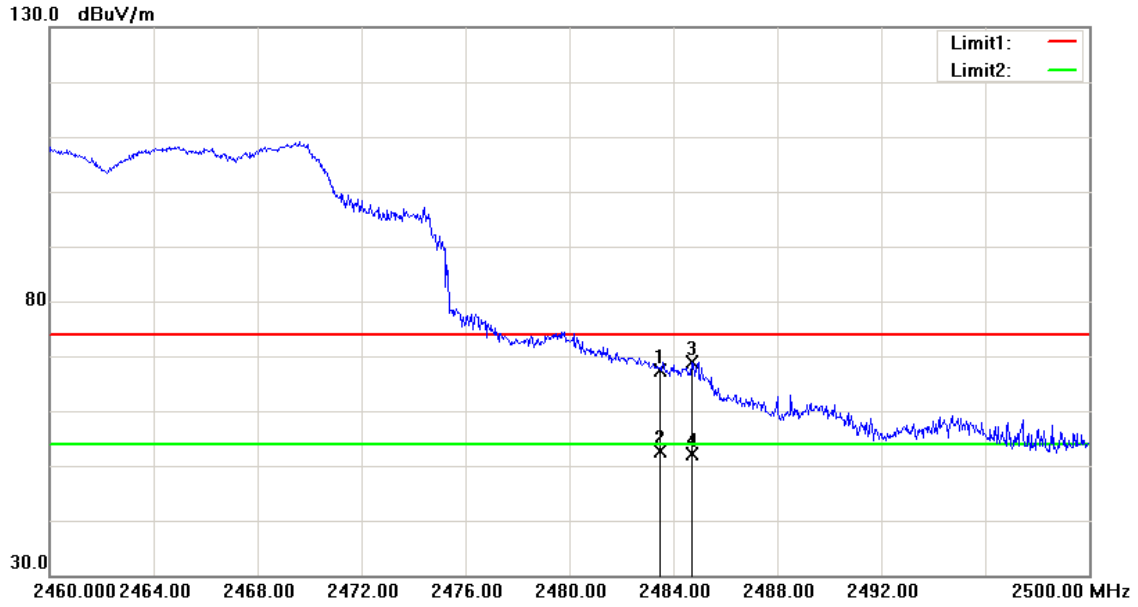
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	53.66	-1.50	52.16	74.00	-21.84	peak
2	2483.500	46.70	-1.50	45.20	54.00	-8.80	AVG
3	2483.800	56.28	-1.50	54.78	74.00	-19.22	peak
4	2483.800	46.42	-1.50	44.92	54.00	-9.08	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2462MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 3	Date:	08/27/2017
Ant.Polar.:	Vertical		



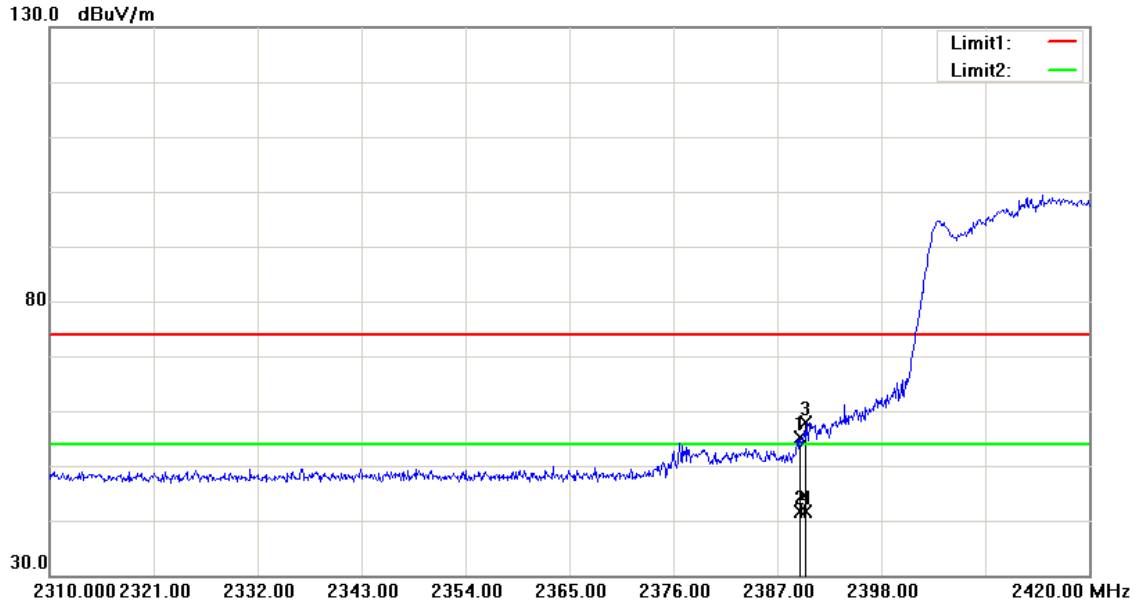
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	68.92	-1.50	67.42	74.00	-6.58	peak
2	2483.500	54.17	-1.50	52.67	54.00	-1.33	AVG
3	2484.720	70.33	-1.49	68.84	74.00	-5.16	peak
4	2484.720	53.62	-1.49	52.13	54.00	-1.87	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/27/2017
Ant.Polar.:	Horizontal		



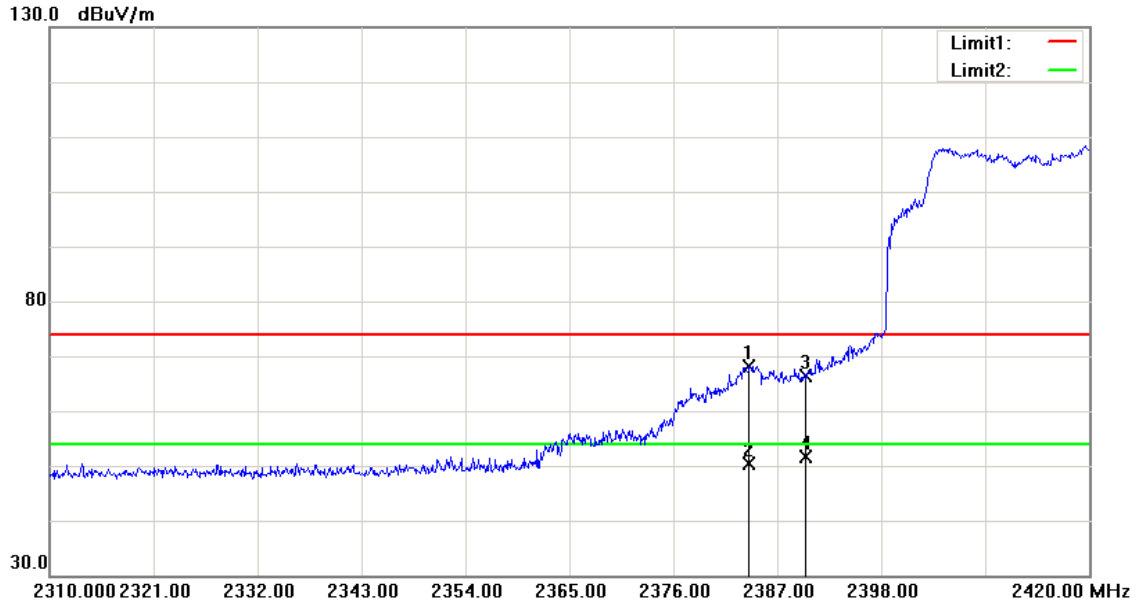
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	57.01	-1.86	55.15	74.00	-18.85	peak
2	2389.420	43.39	-1.86	41.53	54.00	-12.47	AVG
3	2390.000	59.69	-1.86	57.83	74.00	-16.17	peak
4	2390.000	43.57	-1.86	41.71	54.00	-12.29	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2412MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/27/2017
Ant.Polar.:	Vertical		



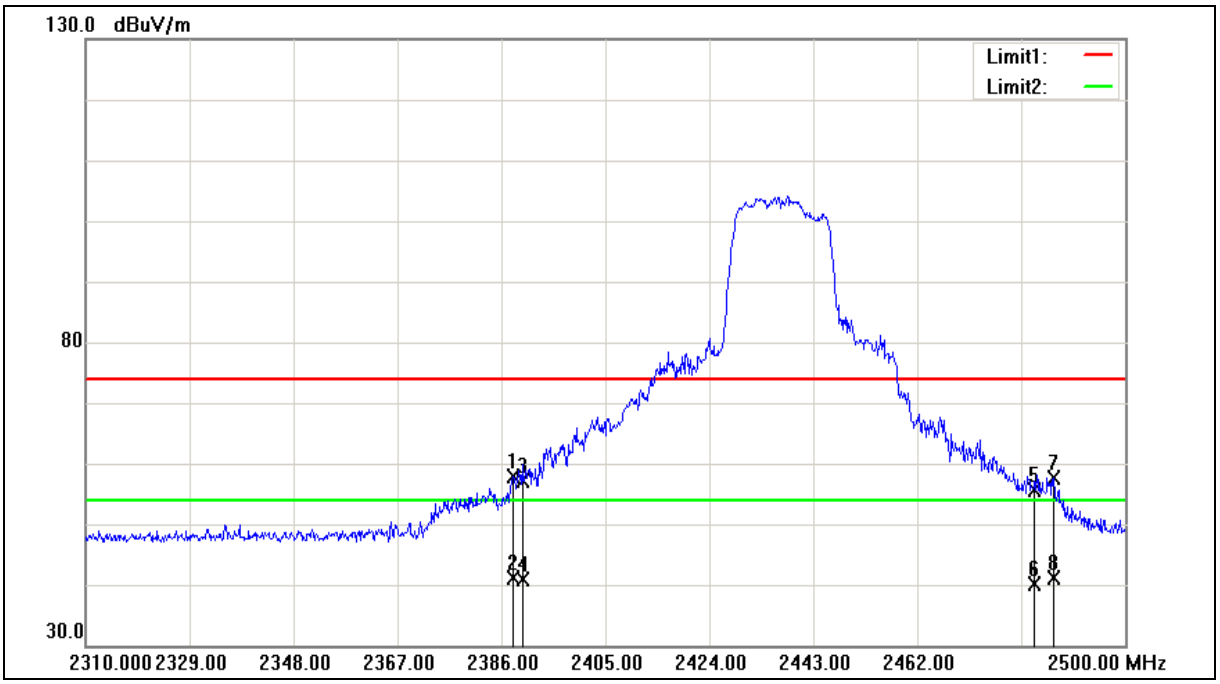
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2384.030	70.06	-1.87	68.19	74.00	-5.81	peak
2	2384.030	52.19	-1.87	50.32	54.00	-3.68	AVG
3	2390.000	68.26	-1.86	66.40	74.00	-7.60	peak
4	2390.000	53.41	-1.86	51.55	54.00	-2.45	AVG

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 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/27/2017
Ant.Polar.:	Horizontal		



Standard:	FCC Part 15.247	Test Distance:	3m
Test item:	Band edge	Power:	AC 110V/60Hz
Frequency:	2437MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	Mode 4	Date:	08/27/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.090	59.67	-1.86	57.81	74.00	-16.19	peak
2	2388.090	42.93	-1.86	41.07	54.00	-12.93	AVG
3	2390.000	59.06	-1.86	57.20	74.00	-16.80	peak
4	2390.000	42.75	-1.86	40.89	54.00	-13.11	AVG
5	2483.500	57.10	-1.50	55.60	74.00	-18.40	peak
6	2483.500	41.69	-1.50	40.19	54.00	-13.81	AVG
7	2486.890	59.14	-1.48	57.66	74.00	-16.34	peak
8	2486.890	42.52	-1.48	41.04	54.00	-12.96	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.