

## RF Test Report

Applicant : Mobile Action Technology Inc.  
Product Type : Bluetooth GPS Logger  
Trade Name : Mobile Action  
Model Number : GT-120B  
Applicable Standard : FCC 47 CFR PART 15 SUBPART C  
ANSI C63.10:2013  
Received Date : Oct. 08, 2021  
Test Period : Oct. 18 ~ Nov. 05, 2021  
Issued Date : Nov. 17, 2021

### Issued by

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

Frequency Range : 9 kHz to 40 GHz

Test Firm MRA designation number: TW0010

#### **Note:**

- 1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
- 2.This report shall not be reproduced except in full, without the written approval of A Test Lab Technology Corporation.
- 3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

**Revision History**

Rev.	Issued Date	Revisions	Revised By
00	Nov. 17, 2021	Initial Issue	Tobey Cheng

## Verification of Compliance

Applicant : Mobile Action Technology Inc.  
Product Type : Bluetooth GPS Logger  
Trade Name : Mobile Action  
Model Number : GT-120B  
FCC ID : Q7Z-21G120B  
EUT Rated Voltage : DC 5 V, 200 mA  
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. 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 )

## TABLE OF CONTENTS

<b>Appendix A. Test Setup Photographs .....</b>	<b>4</b>
<b>1 General Information .....</b>	<b>5</b>
1.1. Summary of Test Result.....	5
1.2. Measurement Uncertainty.....	6
<b>2 EUT Description .....</b>	<b>7</b>
<b>3 Test Methodology .....</b>	<b>8</b>
3.1. Mode of Operation.....	8
3.2. EUT Test Step.....	8
3.3. Configuration of Test System Details .....	9
3.4. Test Instruments .....	10
3.5. Test Site Environment.....	12
<b>4 Measurement Procedure .....</b>	<b>13</b>
4.1. AC Power Line Conducted Emission Measurement.....	13
4.2. Radiated Emission Measurement .....	15
4.3. Maximum Conducted Output Power Measurement.....	19
4.4. 6 dB RF Bandwidth Measurement .....	20
4.5. Maximum Power Density Measurement .....	21
4.6. Out of Band Conducted Emissions Measurement .....	22
4.7. Antenna Measurement .....	22
<b>5 Test Results.....</b>	<b>23</b>
5.1. Conducted Emission.....	23
5.2. Conducted Test Results .....	25
5.3. Radiated Emission Measurement .....	38

### Appendix A. Test Setup Photographs

# 1 General Information

## 1.1. Summary of Test Result

Standard	Item	Result	Remark
15.207	AC Power Conducted Emission	PASS	-----
15.247(d)	Transmitter Radiated Emissions	PASS	-----
15.247(b)(3)	Max. Output Power	PASS	-----
15.247(a)(2)	6 dB 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	-----

**Decision Rule**

- Uncertainty is not included.
- Uncertainty is included.

Standard	Description
CFR47, Part 15, Subpart C	Intentional Radiators
ANSI C63. 10: 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 15.247 Meas Guidance v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

## 1.2. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Emission	150 kHz ~ 30 MHz	2.7 dB
Radiated Emission	9 kHz ~ 30 MHz	2.2 dB
	30 MHz ~ 1000 MHz	5.1 dB
	1000 MHz ~ 18000 MHz	5.2 dB
	18000 MHz ~ 26500 MHz	4.6 dB
	26500 MHz ~ 40000 MHz	4.6 dB
Conducted Output Power	1.1 dB	
RF Bandwidth	4.7 %	
Power Spectral Density	1.1 dB	

## 2 EUT Description

Applicant	Mobile Action Technology Inc. 12F, NO.661, Bannan Rd., Zhonghe Dist. New Taipei City, Taiwan (R.O.C.) 235030	
Manufacturer	VALTEC Technology Co., Ltd. 5F, No.5, Alley 8, Lane 45, Pao Hsin Rd. Hsin-Tien Dist. New Taipei City 23145, Taiwan R.O.C.	
Product Type	Bluetooth GPS Logger	
Trade Name	Mobile Action	
Model No.	GT-120B	
FCC ID	Q7Z-21G120B	
Frequency Range	2402 ~ 2480 MHz	
Modulation Type	GFSK	
Operate Temp. Range	-10 ~ 50 °C	
Antenna information	Type	Max. Gain (dBi)
	Chip Antenna	2.5
RF Output Power	LE, GFSK:	0.00163 W
	2LE, GFSK:	0.00162 W
	BLR C2, GFSK:	0.00161 W
	BLR C8, GFSK:	0.00162 W

### 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: LE, GFSK Continuous TX Mode
Mode 3: 2LE, GFSK Continuous TX Mode
Mode 4: BLR C2, GFSK Continuous TX Mode
Mode 5: BLR C8, GFSK Continuous TX Mode

Final-Test Mode
Mode 1: Transmit Mode
Mode 2: LE, GFSK Continuous TX Mode
Mode 3: 2LE, GFSK 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.

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: The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98 %.

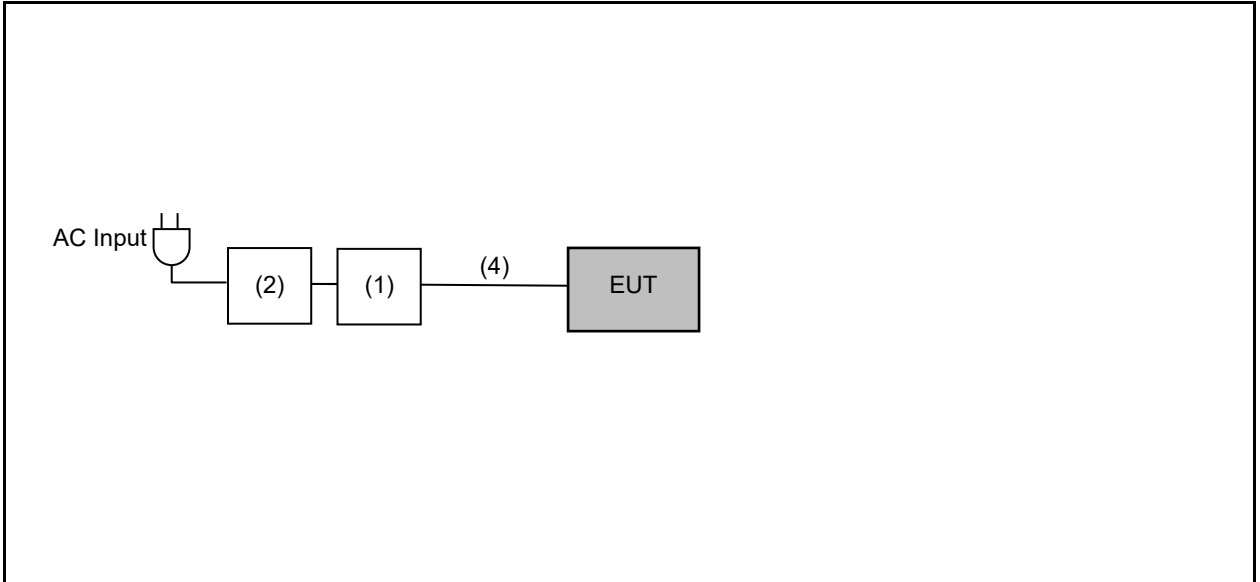
#### 3.2. EUT Test Step

1	Setup the EUT shown on "Configuration of Test System Details".
2	Turn on the power of all equipment.
3	Turn on TX function.
4	EUT run test program.

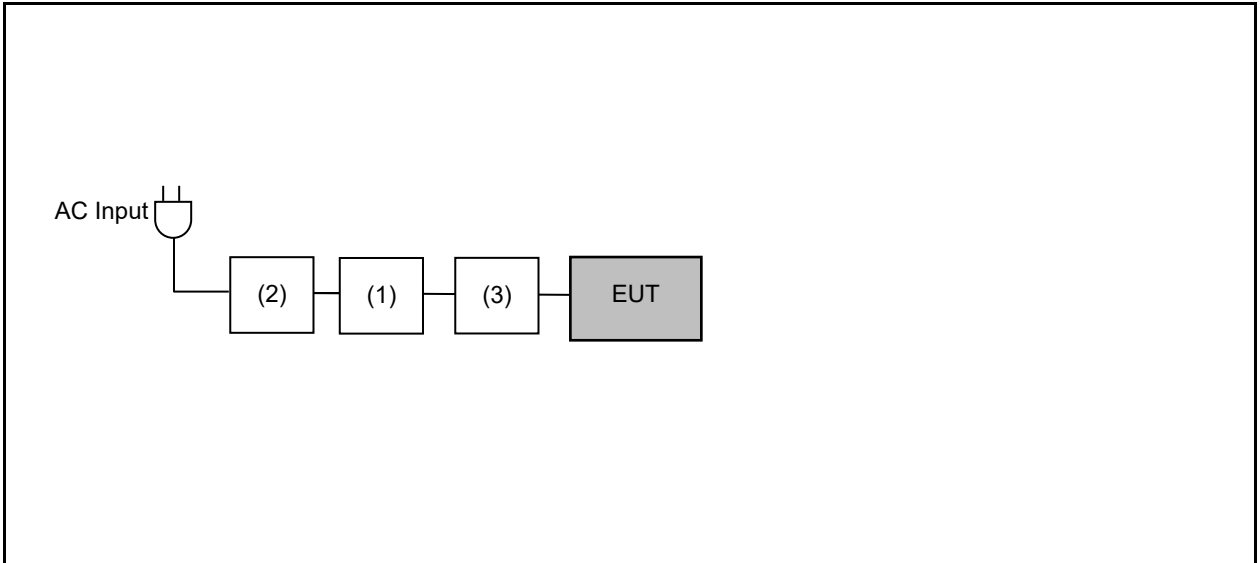


### 3.3. Configuration of Test System Details

#### Conducted Emission



#### Radiated Emission



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	Notebook	ASUS	P2430U	GANXCV04H86940A	---
(2)	Adapter	ASUS	ADP-65GD D	---	---
(3)	Fixture	Mobile Action	USB-UART	---	---
(4)	USB Cable	LG	EAD63769703	---	---

### 3.4. Test Instruments

For Conducted Emission

Test Period: Oct. 19 ~ Oct. 23, 2021

Testing Engineer: JS Liao, Louis Shen

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESCI	100367	05/21/2021	1 year
<input type="checkbox"/>	Test Receiver	R&S	ESCI	100722	10/28/2020	1 year
<input type="checkbox"/>	Test Receiver	R&S	ESCI	101000	11/27/2020	1 year
<input checked="" type="checkbox"/>	LISN	R&S	ENV216	101040	03/29/2021	1 year
<input checked="" type="checkbox"/>	LISN	R&S	ENV216	101041	04/08/2021	1 year
<input checked="" type="checkbox"/>	RF Cable	Woken	00100D1380194M	TE-02-03	05/28/2021	1 year
<input checked="" type="checkbox"/>	Software	EZ EMC	1.1.4.3	N/A	N.C.R.	---

For Conducted

Test Period: Oct. 18 ~ Nov. 05, 2021

Testing Engineer: Andy Lu, Peter Shui

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
<input type="checkbox"/>	Power Sensor	Anritsu	MA2411B	1126022	09/03/2021	1 year
<input type="checkbox"/>	Power Meter	Anritsu	ML2495A	1135009	09/03/2021	1 year
<input checked="" type="checkbox"/>	Power Sensor	Agilent	N1921A	MY45241957	12/09/2020	1 year
<input checked="" type="checkbox"/>	Power Meter	Agilent	N1911A	MY45101619	12/09/2020	1 year
<input type="checkbox"/>	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY59071418	03/17/2021	1 year
<input type="checkbox"/>	Spectrum Analyzer (9 kHz~26.5 GHz)	Agilent	N9010A	MY48030518	07/23/2021	1 year
<input checked="" type="checkbox"/>	Spectrum Analyzer (20 Hz~26.5 GHz)	Agilent	N9020A	US47520902	09/09/2021	1 year
<input type="checkbox"/>	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	01/08/2021	1 year
<input type="checkbox"/>	Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	03/30/2021	1 year
<input type="checkbox"/>	Signal Generator	Keysight	N5182B	MY53052569	04/20/2021	1 year
<input type="checkbox"/>	Signal Generator	Keysight	N5182BX07	MY59360221	04/20/2021	1 year
<input type="checkbox"/>	Bluetooth Tester	R&S	CBT	100350	03/17/2021	2 years
<input type="checkbox"/>	Wireless Connectivity Tester	R&S	CMW270	102208	06/02/2021	1 year
<input type="checkbox"/>	Power Supply	KEITHLEY	2303	4045290	02/01/2021	1 year
<input type="checkbox"/>	RF Communication Test Set	HP	8920A	3344A03297	08/10/2021	1 year

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

For Radiated Emissions

Test Period: Oct. 19, 2021

Testing Engineer: JS Liao

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
<input checked="" type="checkbox"/>	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	01/18/2021	1 year
<input type="checkbox"/>	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	01/08/2021	1 year
<input type="checkbox"/>	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/15/2021	1 year
<input checked="" type="checkbox"/>	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A10961	07/06/2021	1 year
<input checked="" type="checkbox"/>	Amplifier (1 GHz~26.5 GHz)	Agilent	8449B	3008A02237	10/21/2020	1 year
<input type="checkbox"/>	Preamplifier (1 GHz~26.5 GHz)	EMCI	EMC012645SE	980289	01/15/2021	1 year
<input type="checkbox"/>	Preamplifier (26.5 GHz~40 GHz)	EMCI	EMC2654045	980028	08/19/2021	1 year
<input checked="" type="checkbox"/>	Loop Antenna (9 kHz~30 MHz)	COM-POWER CORPORATION	AL-130	121014	04/07/2021	1 year
<input type="checkbox"/>	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	01146	07/19/2021	1 year
<input checked="" type="checkbox"/>	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	416	11/11/2020	1 year
<input type="checkbox"/>	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	02207	07/09/2021	1 year
<input checked="" type="checkbox"/>	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	9120D-550	08/24/2021	1 year
<input checked="" type="checkbox"/>	Broadband Horn Antenna (18 GHz~40 GHz)	Schwarzbeck Mess-Elektronik	9170	9170-320	08/24/2021	1 year
<input type="checkbox"/>	Horn Antenna (18 GHz~40 GHz)	ETS	3116	00086467	12/03/2020	1 year
<input checked="" type="checkbox"/>	Microwave Cable	EMCI	EMC104-SM-SM-1 3000	170814	02/19/2021	1 year
<input checked="" type="checkbox"/>	Microwave Cable	SUHNER	suflex104	313229/4	02/19/2021	1 year
<input type="checkbox"/>	Microwave Cable	EMCI	EMC102-KM-KM-1 4000	151001	02/19/2021	1 year
<input checked="" type="checkbox"/>	RF Cable	EMCI	EMC104-N-N-2000	TE01-2	02/19/2021	1 year
<input checked="" type="checkbox"/>	RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/19/2021	1 year
<input checked="" type="checkbox"/>	RF Cable	EMCI	EMC 106-SM-NM-1000	171219 (TE01-3)	02/19/2021	1 year
<input type="checkbox"/>	Bluetooth Tester	R&S	CBT	100350	03/17/2021	2 years
<input type="checkbox"/>	Wireless Connectivity Tester	R&S	CMW270	102208	06/02/2021	1 year
<input type="checkbox"/>	Power Supply	KEITHLEY	2303	4045290	02/01/2021	1 year
<input checked="" type="checkbox"/>	Software	EZ EMC	1.1.4.4	N/A	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	20-30
Humidity (%RH)	25-75	45-75

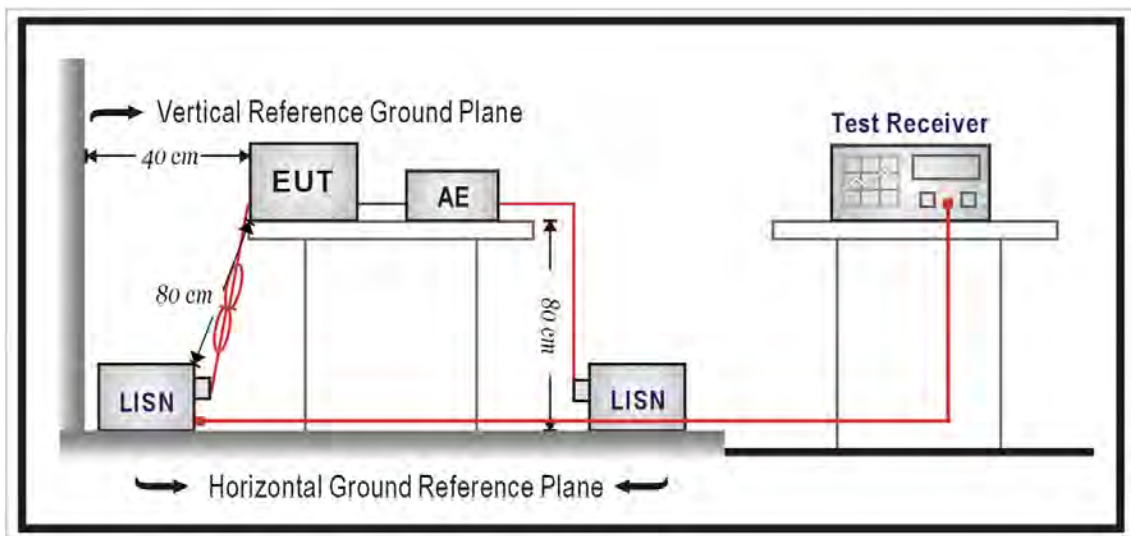
## 4 Measurement Procedure

### 4.1. AC Power Line 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 Setup



#### ■ 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 50 ohm 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 40 cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80 cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12 mm 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 150 kHz to 30 MHz 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 1 m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4 m. All of interconnecting cables that hang closer than 40 cm 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 0.1 m. All 50  $\Omega$  ports of the LISN shall be resistively terminated into 50  $\Omega$  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.

## 4.2. Radiated Emission Measurement

### ■ Limit

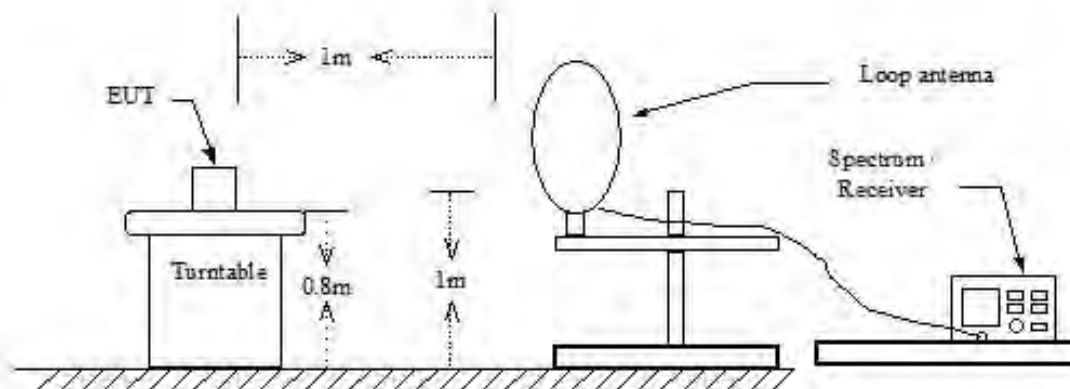
According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ( $\mu\text{V}/\text{m}$ 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

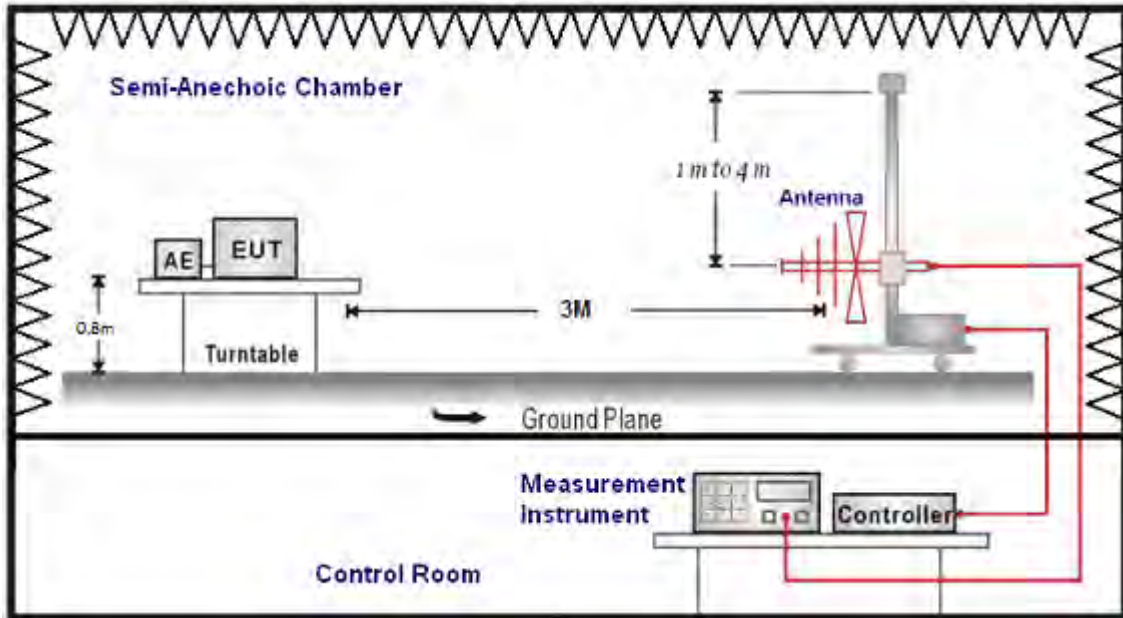
\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this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

### ■ Setup

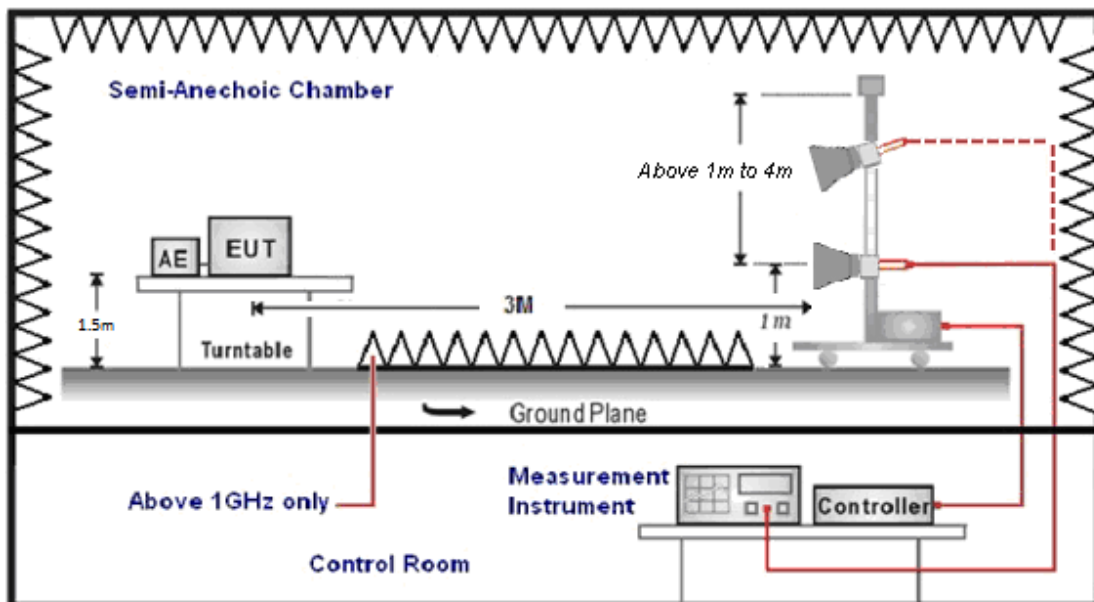
9 kHz ~ 30 MHz



Below 1 GHz



Above 1 GHz





## ■ 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, 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 3 MHz for peak measurements and 10 Hz for average measurements when Duty cycle  $>0.98$  /  $1/T$  for average measurements when Duty cycle  $<0.98$ . 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 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 (20 dB/decade).

For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB 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 ( $\mu\text{V}/\text{m}$ ).

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

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

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

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

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

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

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

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

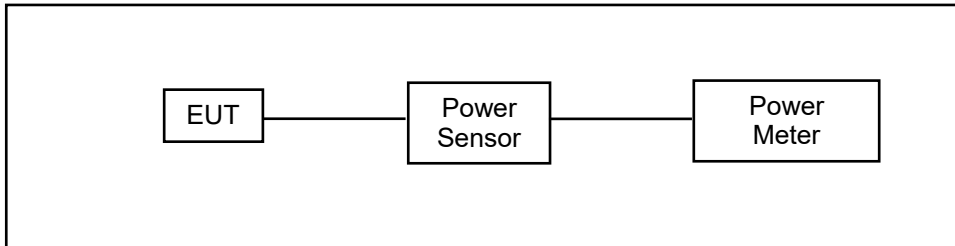
Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

### 4.3. Maximum Conducted Output Power Measurement

- **Limit**

For systems using digital modulation in the 2400-2483.5 MHz, the limit for peak output power is 30 dBm.

- **Test Setup**



- **Test Procedure**

The testing follows the Measurement Procedure of ANSI C63.10:2013 section 11.9.2.3.2 Method AVGPM.

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor..

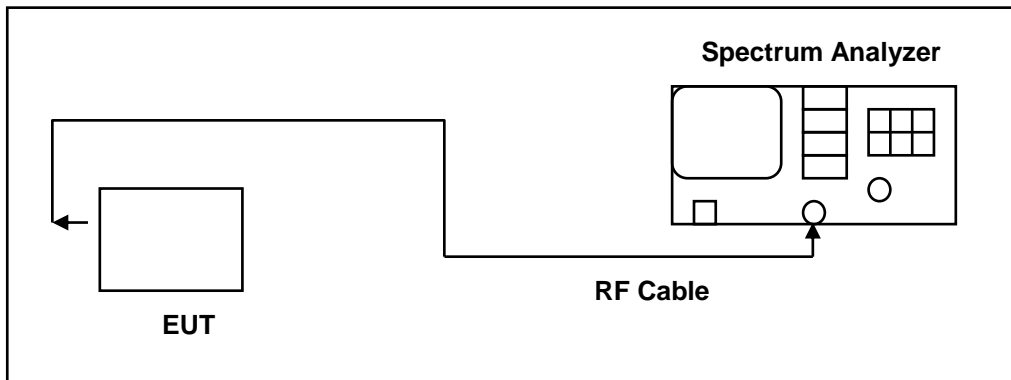
#### 4.4. 6 dB RF Bandwidth Measurement

##### ■ Limit

6 dB RF Bandwidth: Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

99 % Occupied Bandwidth: N/A

##### ■ Test Setup



##### ■ Test Procedure

The EUT tested to DTS test procedure of ANSI C63.10:2013 section 11.8.2 option2 for compliance to FCC 47CFR 15.247 requirements.

6 dB RF Bandwidth: The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW 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.

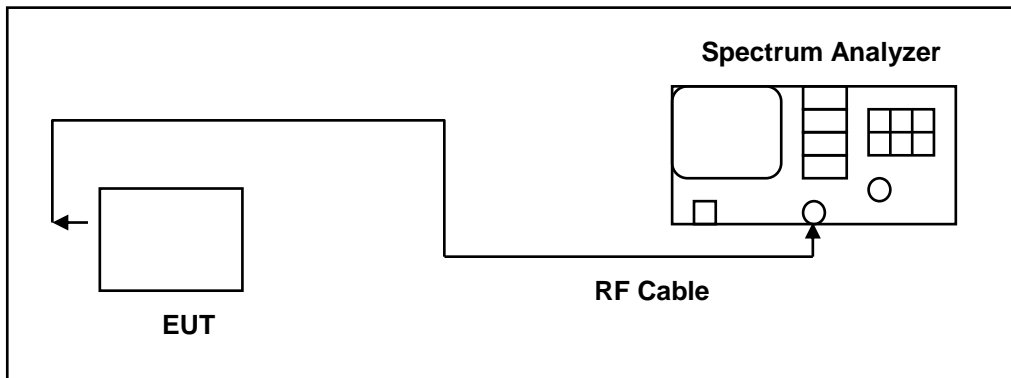
The test was performed at 3 channels (Channel low, middle, high)

## 4.5. Maximum Power Density Measurement

### ■ Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### ■ Test Setup



### ■ Test Procedure

The EUT tested to DTS test procedure of ANSI C63.10:2013 section 11.10.2 Method PKPSD.

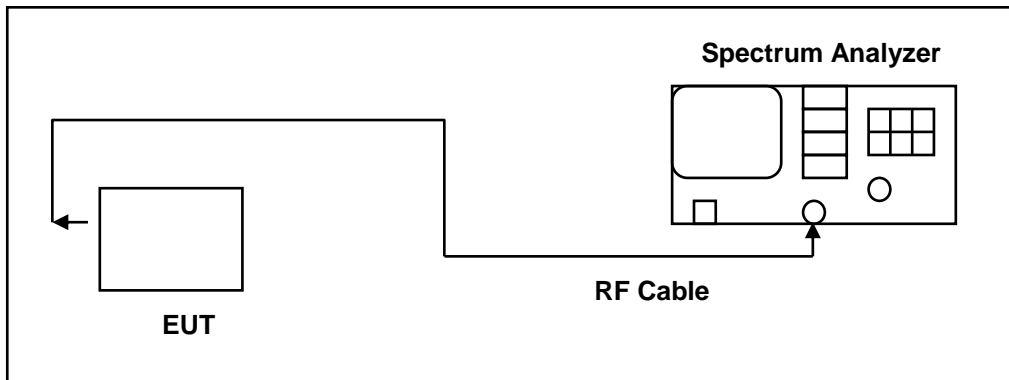
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

## 4.6. Out of Band Conducted Emissions Measurement

### ■ Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

### ■ Test Setup



### ■ Test Procedure

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band. The test was performed at 3 channels.

## 4.7. Antenna Measurement

### ■ 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 15.247 (b), 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 6 dBi.

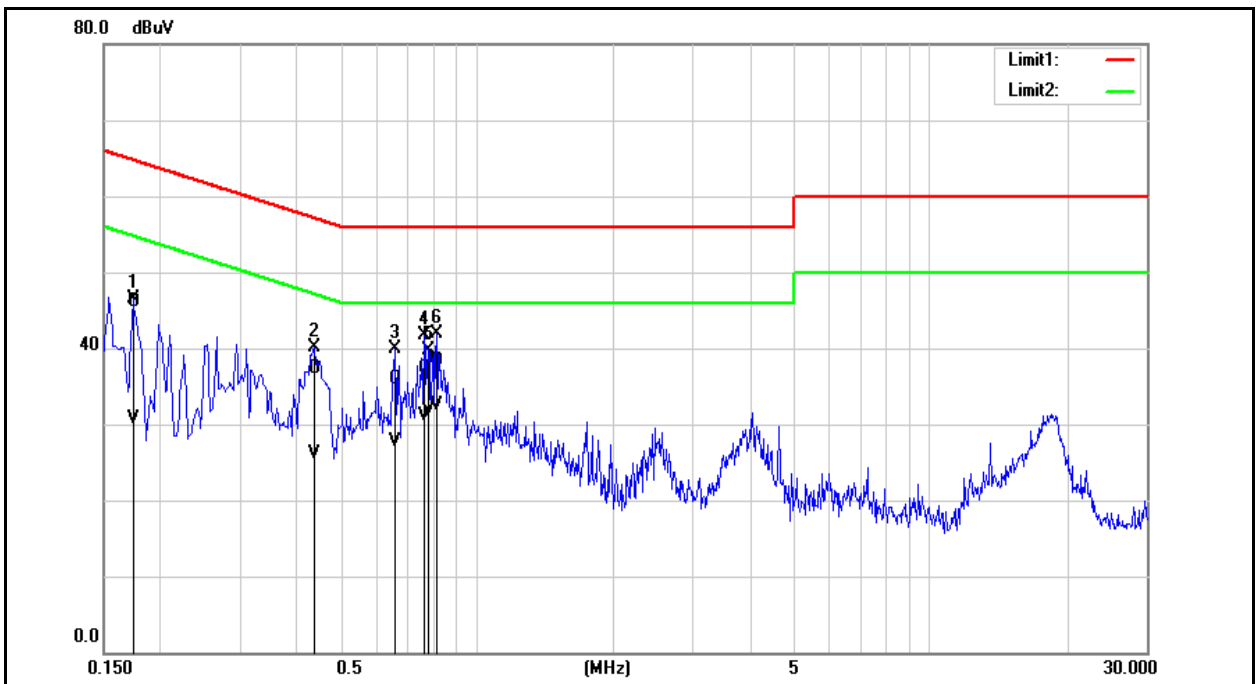
### ■ Antenna Connector Construction

See section 2 – antenna information.

## 5 Test Results

### 5.1. Conducted Emission

Standard:	FCC Part 15.247	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1		
Description:			

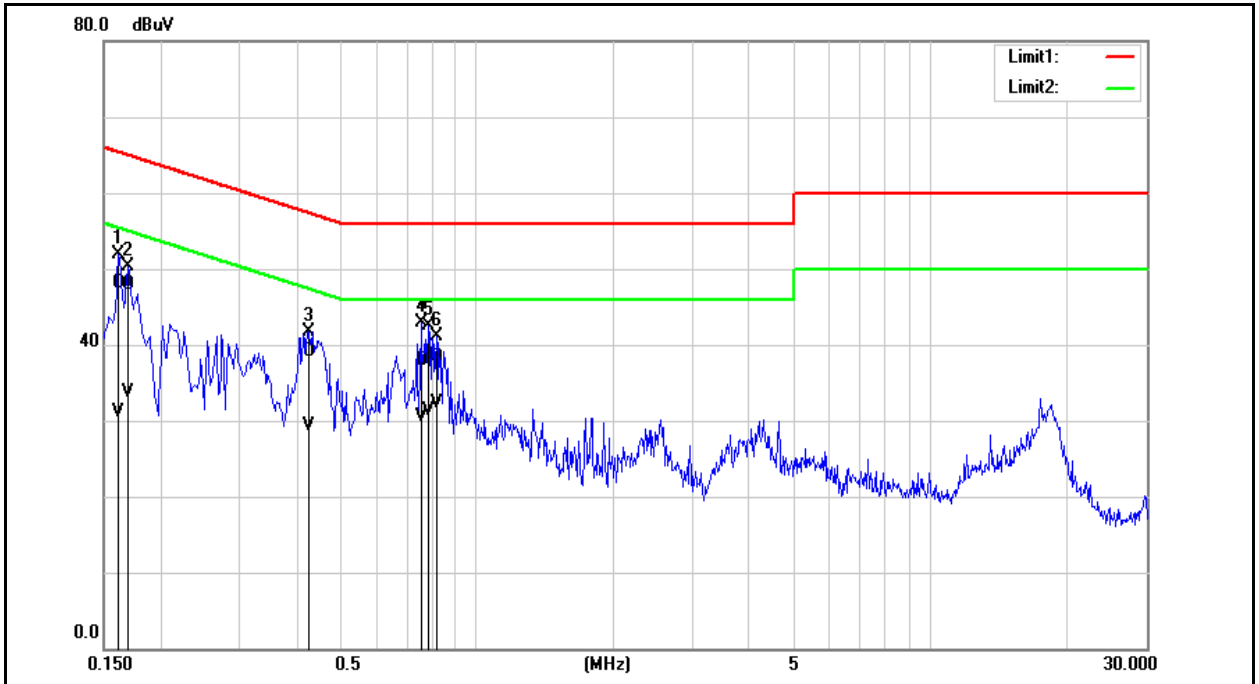


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1740	36.40	20.99	9.74	46.14	30.73	64.77	54.77	-18.63	-24.04	Pass
2	0.4380	27.61	16.31	9.74	37.35	26.05	57.10	47.10	-19.75	-21.05	Pass
3	0.6580	26.25	18.04	9.75	36.00	27.79	56.00	46.00	-20.00	-18.21	Pass
4	0.7660	27.61	21.30	9.75	37.36	31.05	56.00	46.00	-18.64	-14.95	Pass
5	0.7820	29.01	21.95	9.75	38.76	31.70	56.00	46.00	-17.24	-14.30	Pass
6	0.8140	28.60	22.85	9.75	38.35	32.60	56.00	46.00	-17.65	-13.40	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + 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 120 V/60 Hz
Mode:	Mode 1		
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	38.32	21.46	9.74	48.06	31.20	65.36	55.36	-17.30	-24.16	Pass
2	0.1700	38.09	23.88	9.74	47.83	33.62	64.96	54.96	-17.13	-21.34	Pass
3	0.4260	29.28	19.49	9.73	39.01	29.22	57.33	47.33	-18.32	-18.11	Pass
4	0.7540	28.10	20.77	9.75	37.85	30.52	56.00	46.00	-18.15	-15.48	Pass
5	0.7820	28.68	21.63	9.75	38.43	31.38	56.00	46.00	-17.57	-14.62	Pass
6	0.8140	28.49	22.57	9.75	38.24	32.32	56.00	46.00	-17.76	-13.68	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).  
2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).



## 5.2. Conducted Test Results

### Maximum Conducted Output Power Measurement

Test Mode	Mode 2				
Frequency (MHz)	Average Power		Peak Power		Limit (dBm)
	(dBm)	(W)	(dBm)	(W)	
2402	1.32	0.00136	1.45	0.00140	≤ 30
2440	1.97	0.00157	<b>2.11</b>	<b>0.00163</b>	≤ 30
2480	1.31	0.00135	1.42	0.00139	≤ 30

Test Mode	Mode 3				
Frequency (MHz)	Average Power		Peak Power		Limit (dBm)
	(dBm)	(W)	(dBm)	(W)	
2402	1.24	0.00133	1.38	0.00137	≤ 30
2440	1.95	0.00157	<b>2.09</b>	<b>0.00162</b>	≤ 30
2480	1.29	0.00135	1.40	0.00138	≤ 30

Test Mode	Mode 4				
Frequency (MHz)	Average Power		Peak Power		Limit (dBm)
	(dBm)	(W)	(dBm)	(W)	
2402	1.30	0.00135	1.44	0.00139	≤ 30
2440	1.95	0.00157	<b>2.08</b>	<b>0.00161</b>	≤ 30
2480	1.28	0.00134	1.39	0.00138	≤ 30

Test Mode	Mode 5				
Frequency (MHz)	Average Power		Peak Power		Limit (dBm)
	(dBm)	(W)	(dBm)	(W)	
2402	1.29	0.00135	1.42	0.00139	≤ 30
2440	1.96	0.00157	<b>2.10</b>	<b>0.00162</b>	≤ 30
2480	1.27	0.00134	1.37	0.00137	≤ 30

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

**6 dB RF Bandwidth Measurement**

Test Mode	Mode 2	
Frequency (MHz)	Measurement Results (kHz)	Limit (kHz)
2402	688.600	≥ 500
2440	664.600	≥ 500
2480	675.200	≥ 500

Test Mode	Mode 3	
Frequency (MHz)	Measurement Results (kHz)	Limit (kHz)
2402	1140.000	≥ 500
2440	1146.000	≥ 500
2480	1155.000	≥ 500

■ Test Graphs

Mode 2	
2402 MHz	
2440 MHz	
2480 MHz	

Mode 3	
<p>2402 MHz</p>	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: 1/1 Radio Device: BTS</p> <p>Ref Offset: 0.5 dB Ref: 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.0685 MHz Total Power: 8.12 dBm</p> <p>Transmit Freq Error: 61.060 kHz OBW Power: 99.00 % x dB Bandwidth: 1.140 MHz x dB: -6.00 dB</p> <p>File &lt;BBB.png&gt; saved</p>
<p>2440 MHz</p>	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: 1/1 Radio Device: BTS</p> <p>Ref Offset: 0.5 dB Ref: 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.0725 MHz Total Power: 9.00 dBm</p> <p>Transmit Freq Error: 61.257 kHz OBW Power: 99.00 % x dB Bandwidth: 1.146 MHz x dB: -6.00 dB</p> <p>File name not found: D:\User_My_Documents\Instrument\My...</p>
<p>2480 MHz</p>	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Atten: 20 dB Avg/Hold: 1/1 Radio Device: BTS</p> <p>Ref Offset: 0.5 dB Ref: 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 100 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.0710 MHz Total Power: 8.20 dBm</p> <p>Transmit Freq Error: 66.222 kHz OBW Power: 99.00 % x dB Bandwidth: 1.155 MHz x dB: -6.00 dB</p> <p>File name not found: D:\User_My_Documents\Instrument\My...</p>

**Maximum Power Density Measurement**

Test Mode	Mode 2	
Frequency (MHz)	Measurement Results (dBm/ 3kHz)	Limit (dBm)
2402	-14.151	≤ 8
2440	-13.635	≤ 8
2480	-14.293	≤ 8

Test Mode	Mode 3	
Frequency (MHz)	Measurement Results (dBm/ 3kHz)	Limit (dBm)
2402	-16.675	≤ 8
2440	-15.957	≤ 8
2480	-16.736	≤ 8

■ Test Graphs




Mode 2	
<p>2402 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.402 027 04 GHz -14.151 dBm</p> <p>Center 2.4020000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 109.7 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 2.40200000 GHz Start Freq: 2.401480000 GHz Stop Freq: 2.402520000 GHz CF Step: 104.000 kHz Freq Offset: 0 Hz</p>
<p>2440 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.440 027 GHz -13.635 dBm</p> <p>Center 2.4400000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 105.5 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 2.44000000 GHz Start Freq: 2.439500000 GHz Stop Freq: 2.440500000 GHz CF Step: 100.000 kHz Freq Offset: 0 Hz</p>
<p>2480 MHz</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.480 011 22 GHz -14.293 dBm</p> <p>Center 2.4800000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 107.6 ms (1001 pts)</p> <p>Frequency: Auto Tune Center Freq: 2.48000000 GHz Start Freq: 2.479490000 GHz Stop Freq: 2.480510000 GHz CF Step: 102.000 kHz Freq Offset: 0 Hz</p>

Mode 3	
2402 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.402 046 17 GHz -16.675 dBm</p> <p>Center 2.4020000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 180.3 ms (1001 pts)</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.40200000 GHz</p> <p>Start Freq 2.401145000 GHz</p> <p>Stop Freq 2.402855000 GHz</p> <p>CF Step 171.000 kHz</p> <p>Freq Offset 0 Hz</p>
2440 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.440 046 44 GHz -15.957 dBm</p> <p>Center 2.4400000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 181.4 ms (1001 pts)</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.44000000 GHz</p> <p>Start Freq 2.439140000 GHz</p> <p>Stop Freq 2.440860000 GHz</p> <p>CF Step 172.000 kHz</p> <p>Freq Offset 0 Hz</p>
2480 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.480 048 7 GHz -16.736 dBm</p> <p>Center 2.4800000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 183.5 ms (1001 pts)</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.48000000 GHz</p> <p>Start Freq 2.479130000 GHz</p> <p>Stop Freq 2.480870000 GHz</p> <p>CF Step 174.000 kHz</p> <p>Freq Offset 0 Hz</p>

### Out of Band Conducted Emissions Measurement

■ Test Graphs

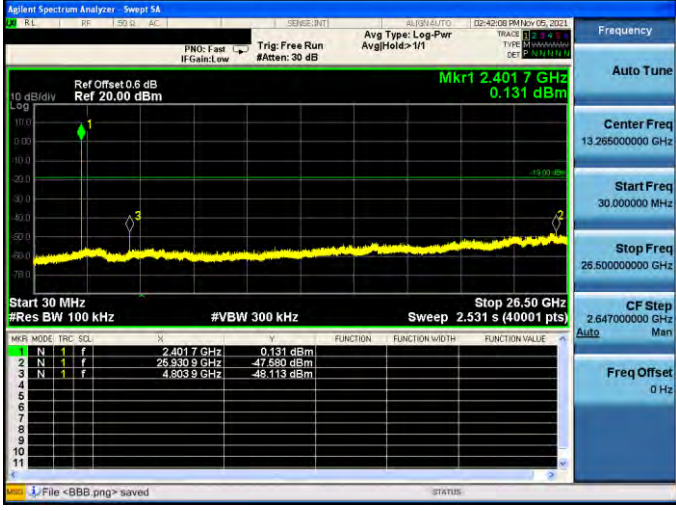
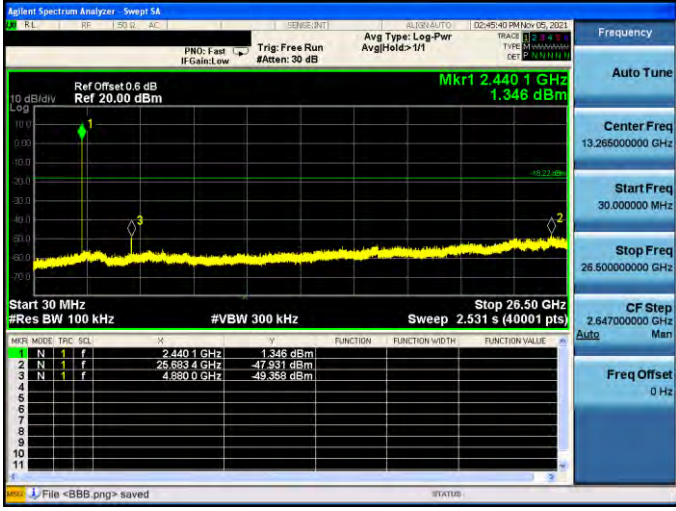
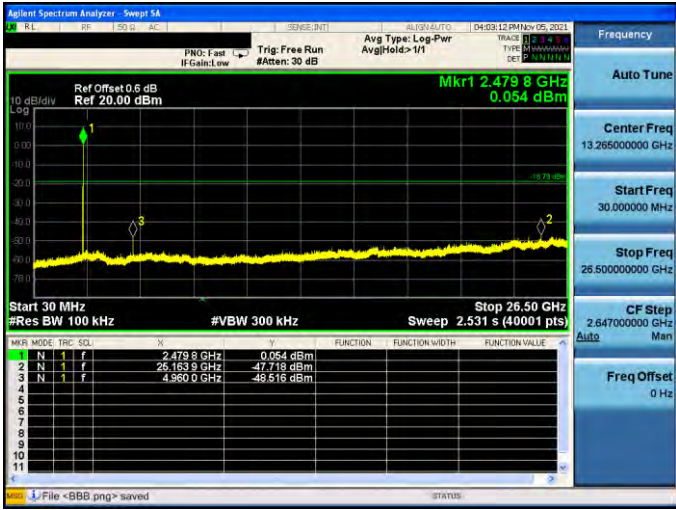
Reference level

Mode 2	
2402 MHz	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset: 0.6 dB          Ref: 10.00 dBm          Mkr1 2.402 050 96 GHz          1.004 dBm          Center 2.4020000 GHz          #Res BW 100 kHz          #VBW 300 kHz          Sweep 1.000 ms (1001 pts)          Span 1.040 MHz</p>
2440 MHz	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset: 0.6 dB          Ref: 10.00 dBm          Mkr1 2.440 054 GHz          1.783 dBm          Center 2.4400000 GHz          #Res BW 100 kHz          #VBW 300 kHz          Sweep 1.000 ms (1001 pts)          Span 1.000 MHz</p>
2480 MHz	 <p>Agilent Spectrum Analyzer - Swept SA          Ref Offset: 0.6 dB          Ref: 10.00 dBm          Mkr1 2.480 051 00 GHz          1.220 dBm          Center 2.4800000 GHz          #Res BW 100 kHz          #VBW 300 kHz          Sweep 1.000 ms (1001 pts)          Span 1.020 MHz</p>



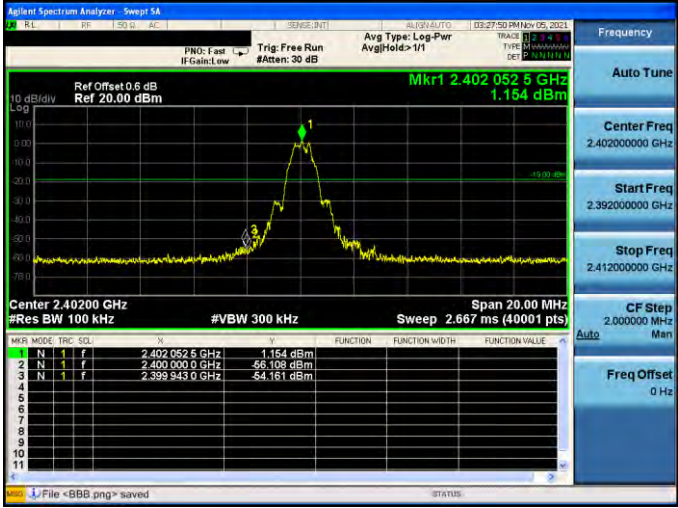
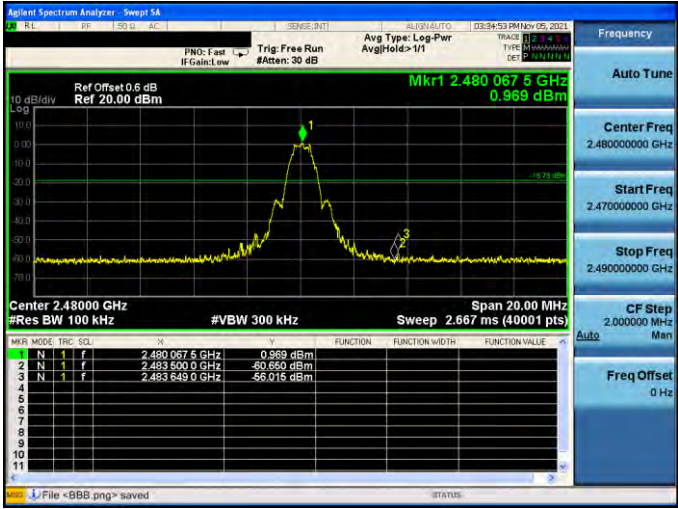
Mode 3	
2402 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.402 044 46 GHz 0.940 dBm</p> <p>Center 2.4020000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)</p>
2440 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.440 048 16 GHz 1.778 dBm</p> <p>Center 2.4400000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)</p>
2480 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 10.00 dBm</p> <p>Mkr1 2.480 057 4 GHz 1.211 dBm</p> <p>Center 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)</p>

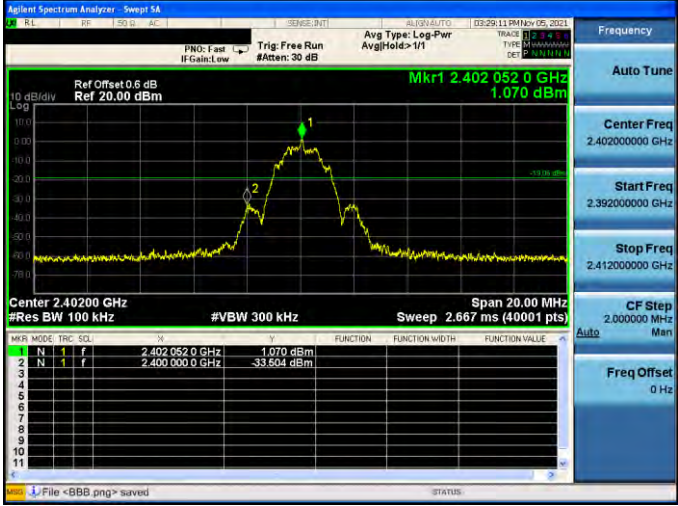
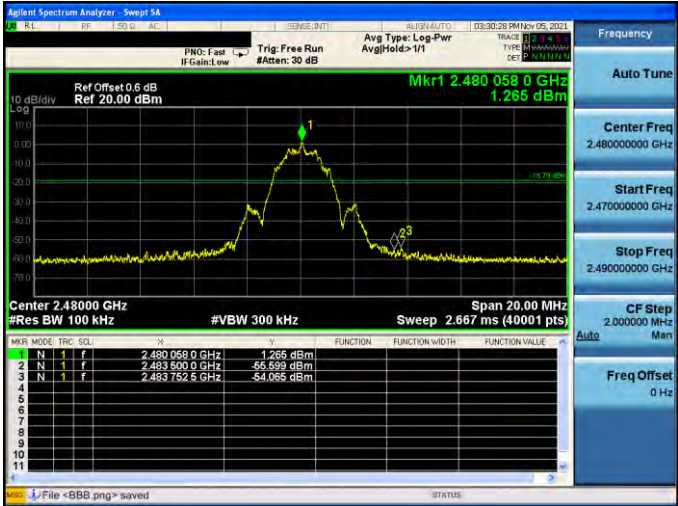
**Out of Band Conducted Emissions**

Mode 2																																					
2402 MHz	 <table border="1" data-bbox="646 772 1212 929"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRIG</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4017 GHz</td> <td>0.131 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>26.9309 GHz</td> <td>-47.580 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>4.8039 GHz</td> <td>-48.113 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4017 GHz	0.131 dBm				2	N	1	f	26.9309 GHz	-47.580 dBm				3	N	1	f	4.8039 GHz	-48.113 dBm			
MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.4017 GHz	0.131 dBm																																
2	N	1	f	26.9309 GHz	-47.580 dBm																																
3	N	1	f	4.8039 GHz	-48.113 dBm																																
2440 MHz	 <table border="1" data-bbox="646 1299 1212 1456"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRIG</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4401 GHz</td> <td>1.346 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>26.8834 GHz</td> <td>-47.931 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>4.8800 GHz</td> <td>-49.358 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4401 GHz	1.346 dBm				2	N	1	f	26.8834 GHz	-47.931 dBm				3	N	1	f	4.8800 GHz	-49.358 dBm			
MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.4401 GHz	1.346 dBm																																
2	N	1	f	26.8834 GHz	-47.931 dBm																																
3	N	1	f	4.8800 GHz	-49.358 dBm																																
2480 MHz	 <table border="1" data-bbox="646 1825 1212 1982"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRIG</th> <th>SQL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4798 GHz</td> <td>0.054 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>26.1639 GHz</td> <td>-47.718 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>4.9800 GHz</td> <td>-48.516 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4798 GHz	0.054 dBm				2	N	1	f	26.1639 GHz	-47.718 dBm				3	N	1	f	4.9800 GHz	-48.516 dBm			
MKR	MODE	TRIG	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.4798 GHz	0.054 dBm																																
2	N	1	f	26.1639 GHz	-47.718 dBm																																
3	N	1	f	4.9800 GHz	-48.516 dBm																																

Mode 3																																					
2402 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 20.00 dBm</p> <p>Mkr1 2.402 4 GHz 0.109 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.531 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SQL</th> <th>F</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 4 GHz</td> <td>0.109 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>26.684 7 GHz</td> <td>-47.779 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>4.804 5 GHz</td> <td>-52.215 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.402 4 GHz	0.109 dBm				2	N	1	f	26.684 7 GHz	-47.779 dBm				3	N	1	f	4.804 5 GHz	-52.215 dBm			
MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.402 4 GHz	0.109 dBm																																
2	N	1	f	26.684 7 GHz	-47.779 dBm																																
3	N	1	f	4.804 5 GHz	-52.215 dBm																																
2440 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 20.00 dBm</p> <p>Mkr1 2.440 1 GHz 1.361 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.531 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SQL</th> <th>F</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.440 1 GHz</td> <td>1.361 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>4.879 3 GHz</td> <td>-47.484 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.440 1 GHz	1.361 dBm				2	N	1	f	4.879 3 GHz	-47.484 dBm												
MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.440 1 GHz	1.361 dBm																																
2	N	1	f	4.879 3 GHz	-47.484 dBm																																
2480 MHz	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Ref Offset 0.6 dB Ref 20.00 dBm</p> <p>Mkr1 2.479 8 GHz 0.620 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.531 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SQL</th> <th>F</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.479 8 GHz</td> <td>0.620 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>4.960 0 GHz</td> <td>-42.723 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.479 8 GHz	0.620 dBm				2	N	1	f	4.960 0 GHz	-42.723 dBm												
MKR	MODE	TRC	SQL	F	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	f	2.479 8 GHz	0.620 dBm																																
2	N	1	f	4.960 0 GHz	-42.723 dBm																																

### Conducted Band Edge

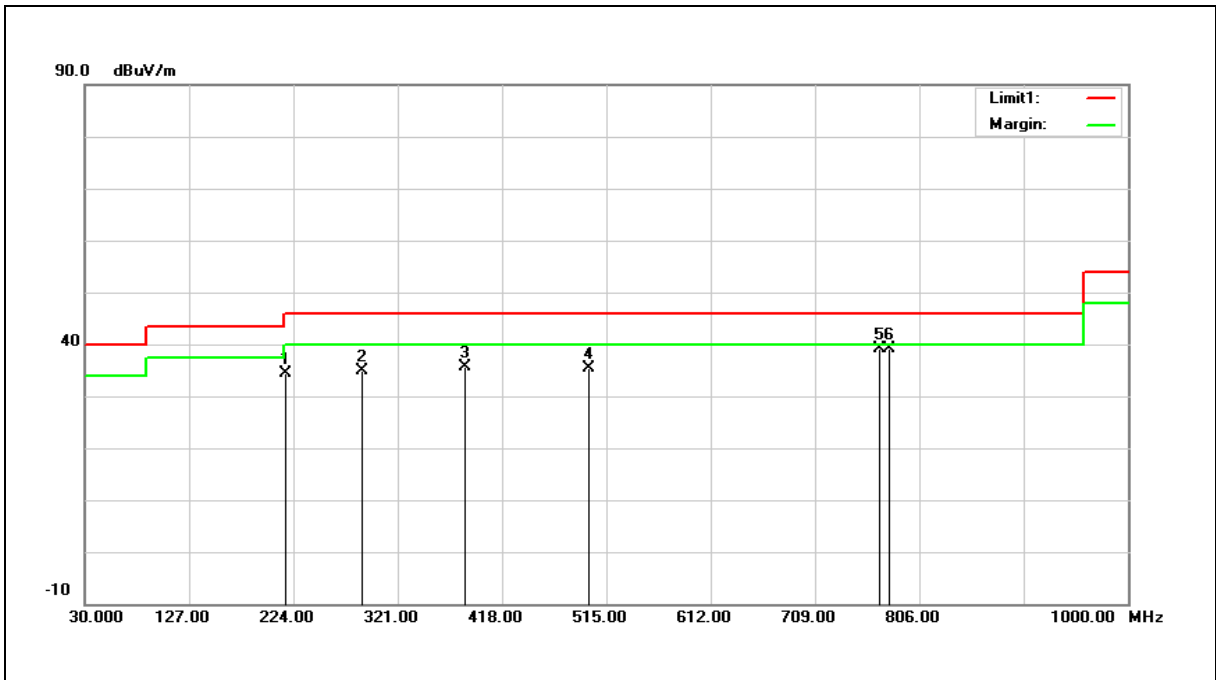
Mode 2	
2402 MHz	
2480 MHz	

Mode 3																																					
2402 MHz	 <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Ref Offset 0.6 dB Ref 20.00 dBm</p> <p>Mkr1 2.402052 0 GHz 1.070 dBm</p> <p>Center 2.40200 GHz #Res BW 100 kHz #VBW 300 kHz Span 20.00 MHz Sweep 2.667 ms (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRIG</th> <th>SQ</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.402052 0 GHz</td> <td></td> <td></td> <td>1.070 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.400000 0 GHz</td> <td></td> <td></td> <td>-33.604 dBm</td> </tr> </tbody> </table>	MKR	MODE	TRIG	SQ	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	F		2.402052 0 GHz			1.070 dBm	2	N	1	F		2.400000 0 GHz			-33.604 dBm									
MKR	MODE	TRIG	SQ	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	F		2.402052 0 GHz			1.070 dBm																													
2	N	1	F		2.400000 0 GHz			-33.604 dBm																													
2480 MHz	 <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Ref Offset 0.6 dB Ref 20.00 dBm</p> <p>Mkr1 2.480058 0 GHz 1.265 dBm</p> <p>Center 2.48000 GHz #Res BW 100 kHz #VBW 300 kHz Span 20.00 MHz Sweep 2.667 ms (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRIG</th> <th>SQ</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.480058 0 GHz</td> <td></td> <td></td> <td>1.265 dBm</td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.483500 0 GHz</td> <td></td> <td></td> <td>-56.689 dBm</td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>F</td> <td></td> <td>2.483752 5 GHz</td> <td></td> <td></td> <td>-54.086 dBm</td> </tr> </tbody> </table>	MKR	MODE	TRIG	SQ	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	F		2.480058 0 GHz			1.265 dBm	2	N	1	F		2.483500 0 GHz			-56.689 dBm	3	N	1	F		2.483752 5 GHz			-54.086 dBm
MKR	MODE	TRIG	SQ	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																													
1	N	1	F		2.480058 0 GHz			1.265 dBm																													
2	N	1	F		2.483500 0 GHz			-56.689 dBm																													
3	N	1	F		2.483752 5 GHz			-54.086 dBm																													

### 5.3. Radiated Emission Measurement

Below 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3m
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	216.2400	41.78	-7.50	34.28	46.00	-11.72	QP
2	288.0200	39.28	-4.36	34.92	46.00	-11.08	QP
3	384.0500	38.46	-2.88	35.58	46.00	-10.42	QP
4	498.5100	35.87	-0.46	35.41	46.00	-10.59	QP
5	769.1400	33.61	5.46	39.07	46.00	-6.93	QP
6	777.8700	33.66	5.57	39.23	46.00	-6.77	QP

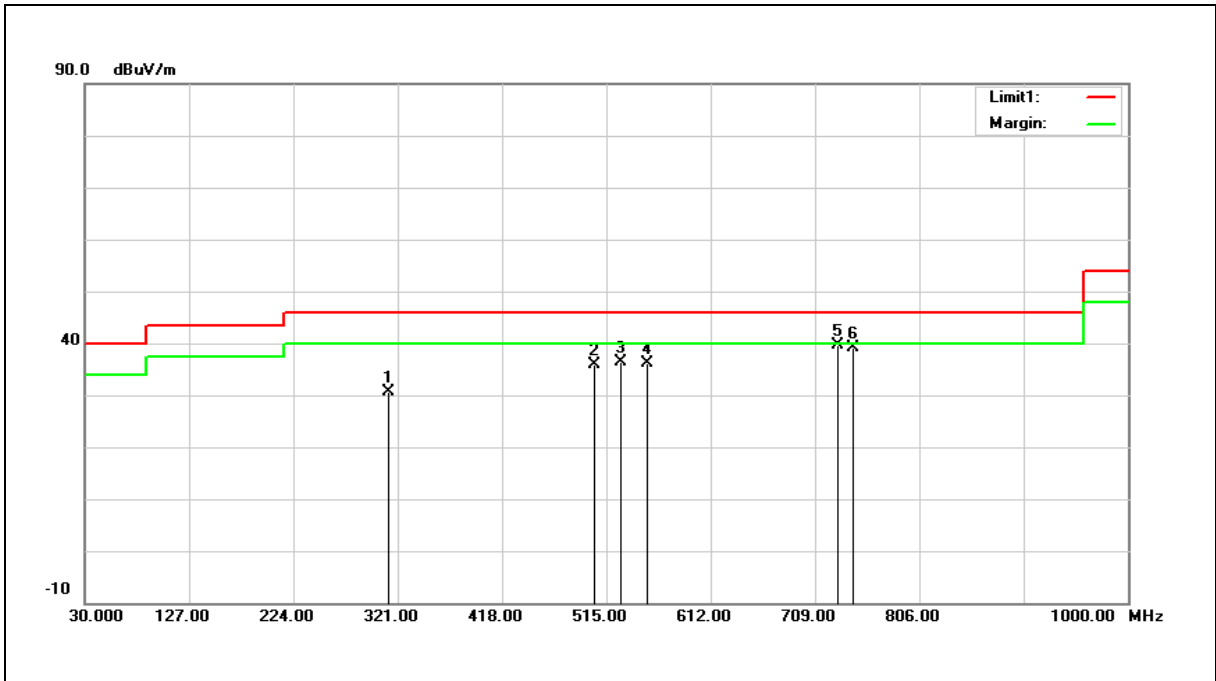
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example:  $34.28 = -7.50 + 41.78$

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
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	312.2700	34.68	-4.05	30.63	46.00	-15.37	QP
2	504.3300	36.23	-0.33	35.90	46.00	-10.10	QP
3	528.5800	36.14	0.28	36.42	46.00	-9.58	QP
4	552.8300	35.16	0.91	36.07	46.00	-9.93	QP
5	730.3400	35.00	4.67	39.67	46.00	-6.33	QP
6	743.9200	34.19	5.04	39.23	46.00	-6.77	QP

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

Example: 30.63 = -4.05 + 34.68

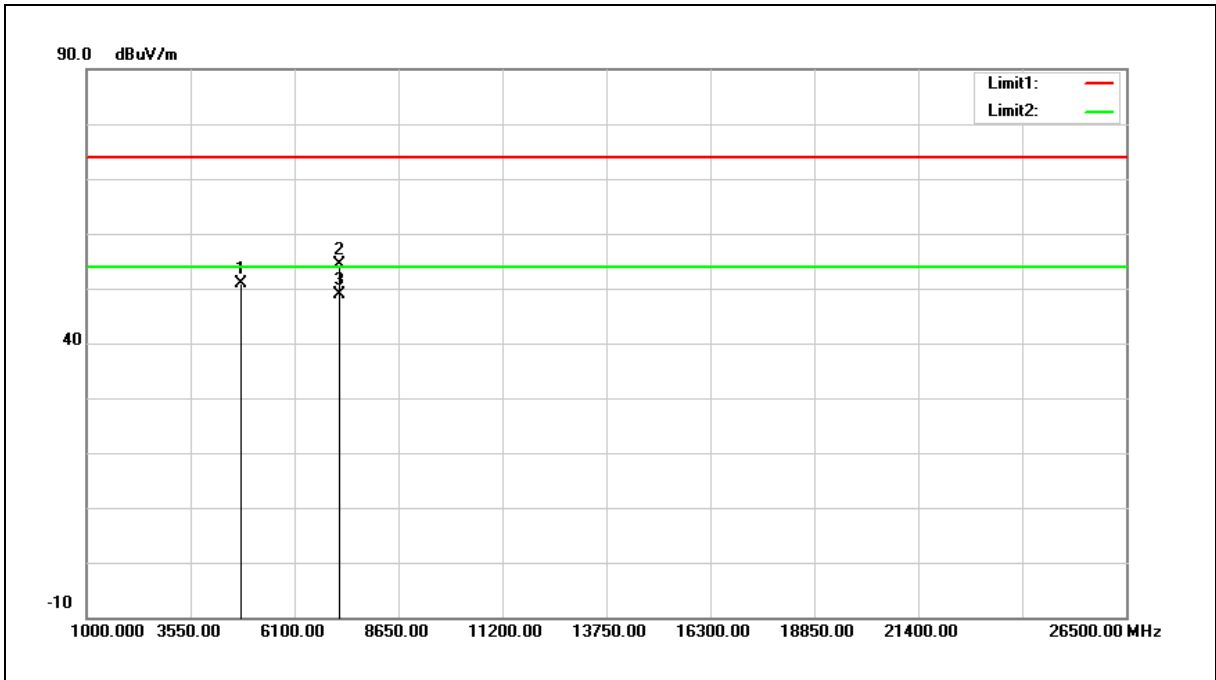
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

### Harmonic

Above 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	45.93	5.00	50.93	74.00	-23.07	peak
2	7206.000	42.15	12.19	54.34	74.00	-19.66	peak
3	7206.000	36.63	12.19	48.82	54.00	-5.18	AVG

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

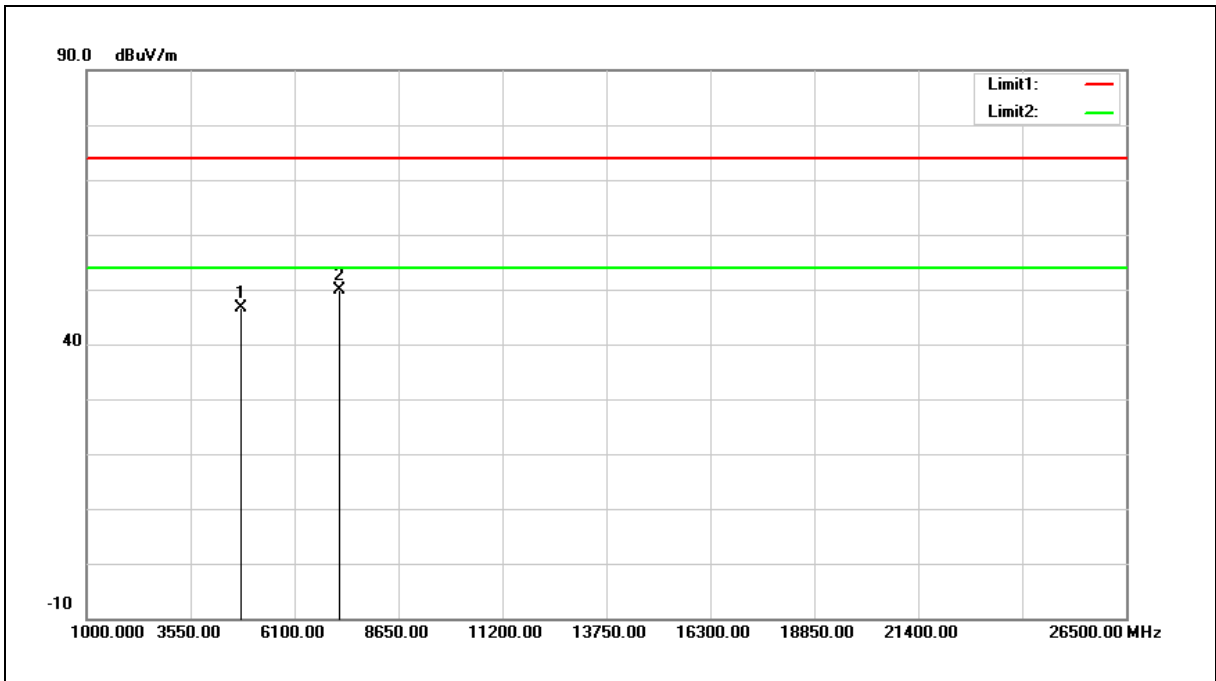
Example: 50.93 = 5.00 + 45.93

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:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	41.63	5.00	46.63	74.00	-27.37	peak
2	7206.000	37.63	12.19	49.82	74.00	-24.18	peak

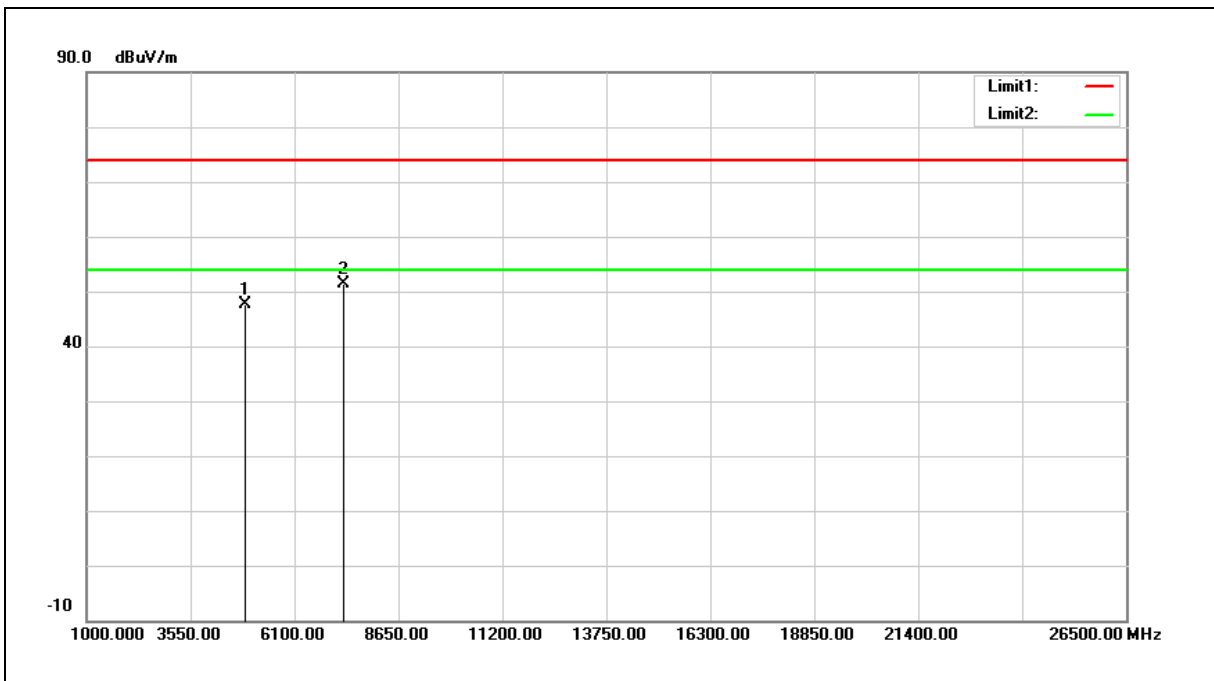
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example:  $46.63 = 5.00 + 41.63$

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:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



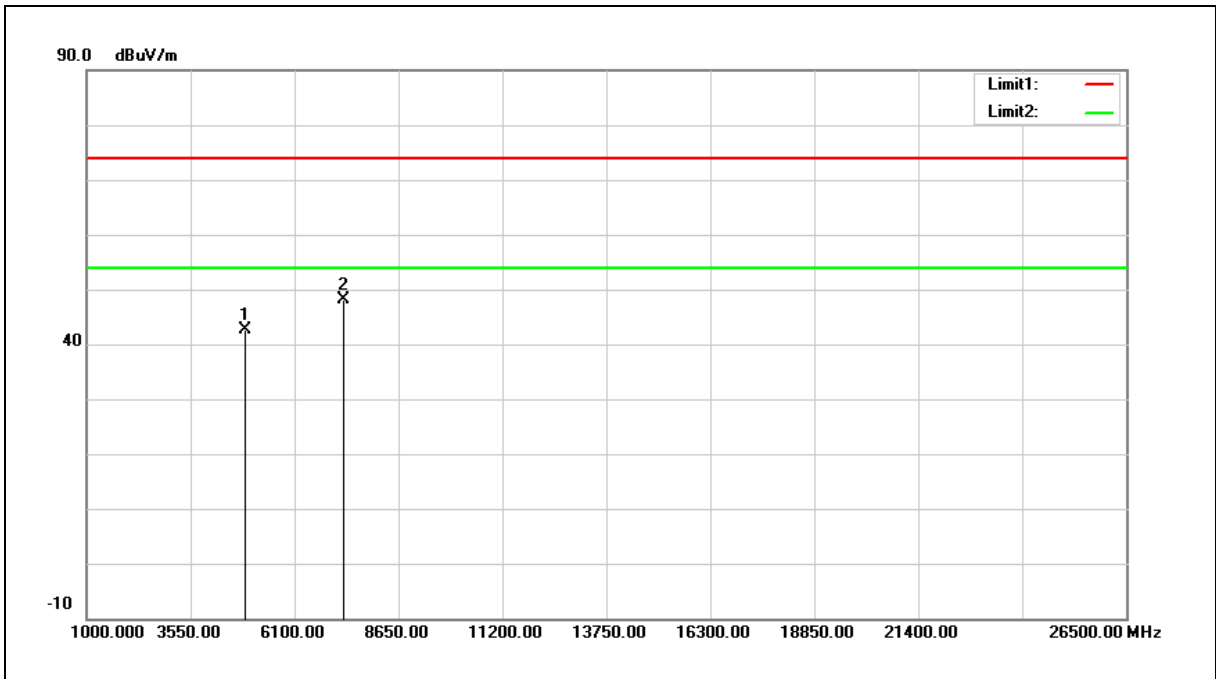
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	42.30	5.24	47.54	74.00	-26.46	peak
2	7320.000	39.07	12.40	51.47	74.00	-22.53	peak

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.

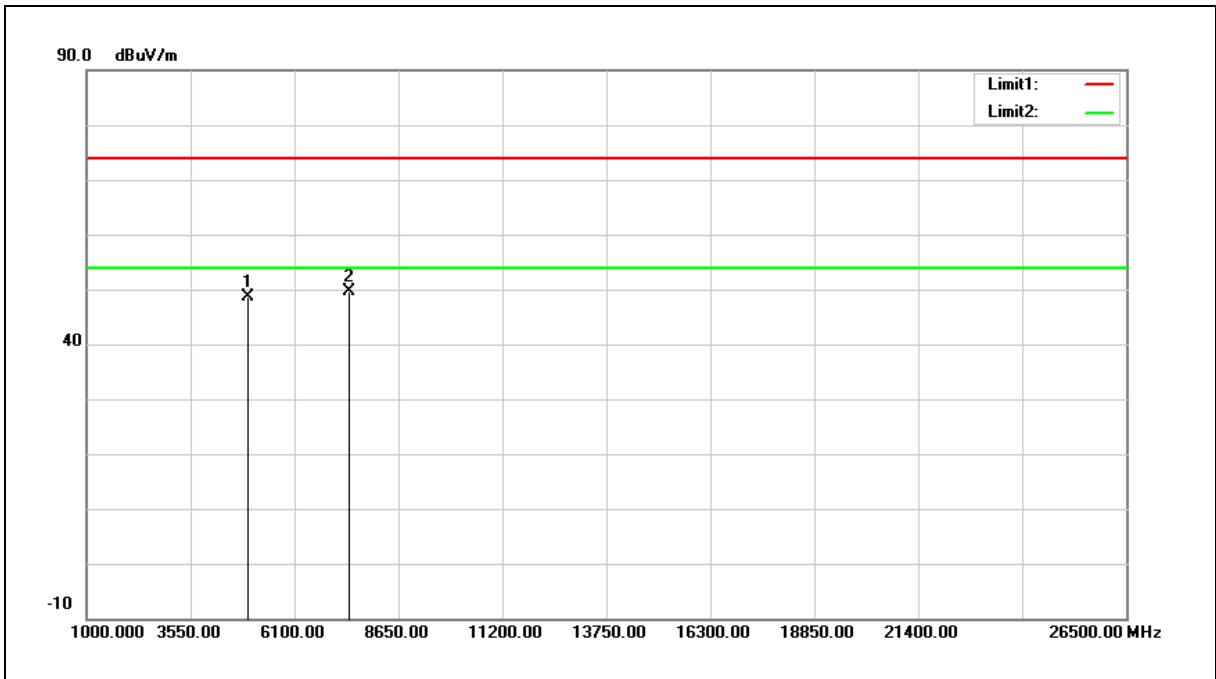
Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.32	5.24	42.56	74.00	-31.44	peak
2	7320.000	35.71	12.40	48.11	74.00	-25.89	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.

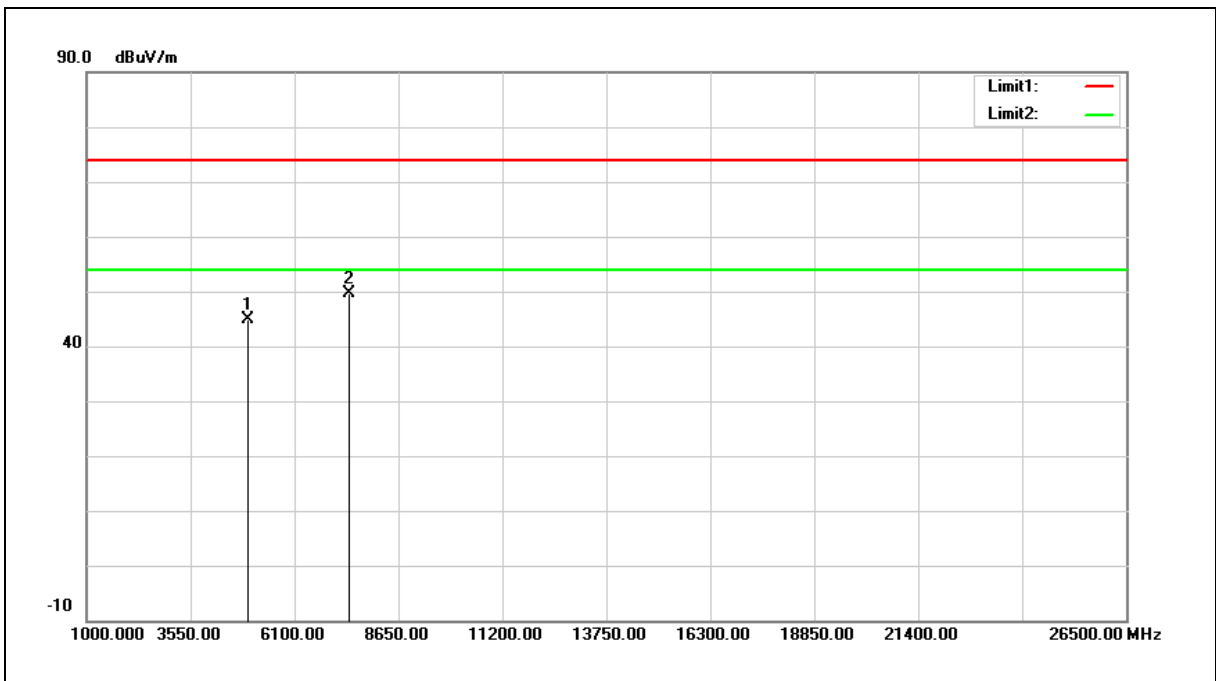
Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	43.06	5.51	48.57	74.00	-25.43	peak
2	7440.000	36.96	12.62	49.58	74.00	-24.42	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 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



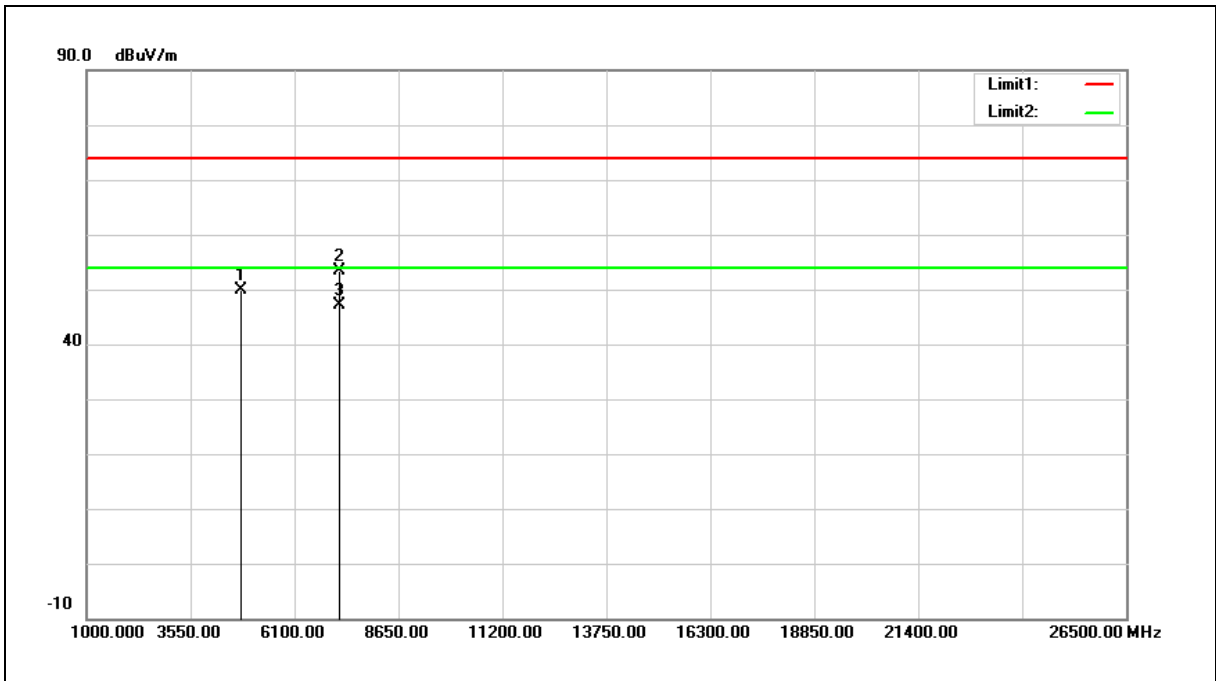
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	39.40	5.51	44.91	74.00	-29.09	peak
2	7440.000	37.05	12.62	49.67	74.00	-24.33	peak

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:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



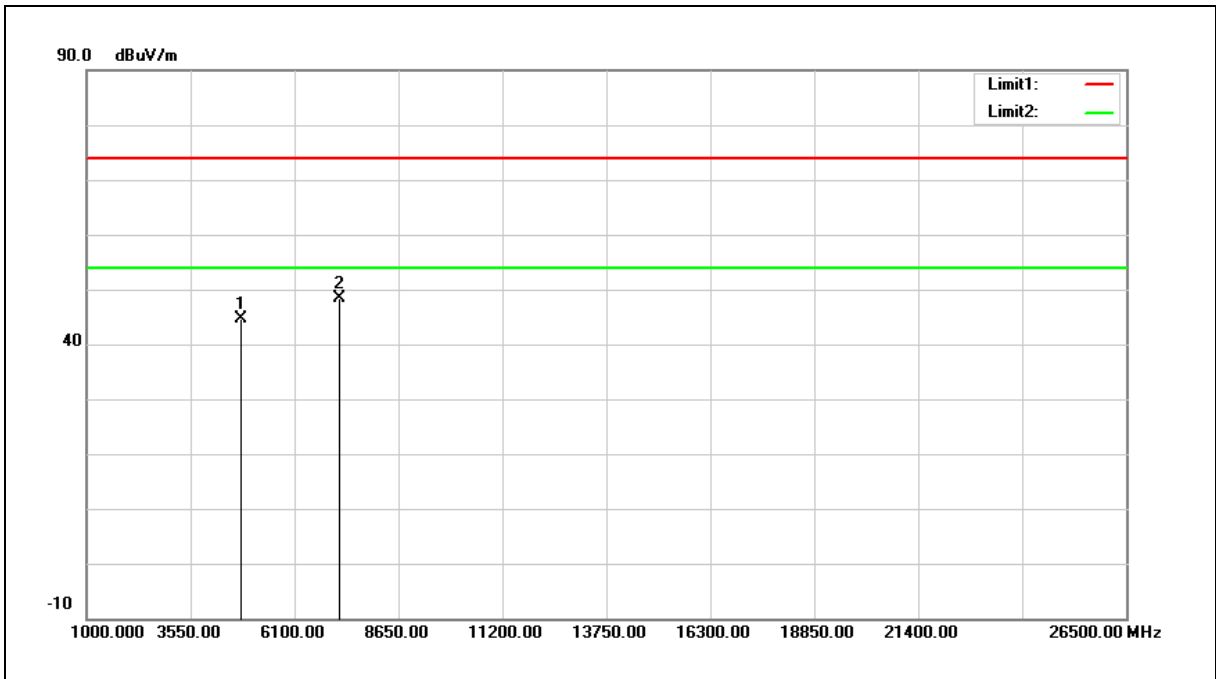
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	44.88	5.00	49.88	74.00	-24.12	peak
2	7206.000	41.10	12.19	53.29	74.00	-20.71	peak
3	7206.000	34.84	12.19	47.03	54.00	-6.97	AVG

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:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



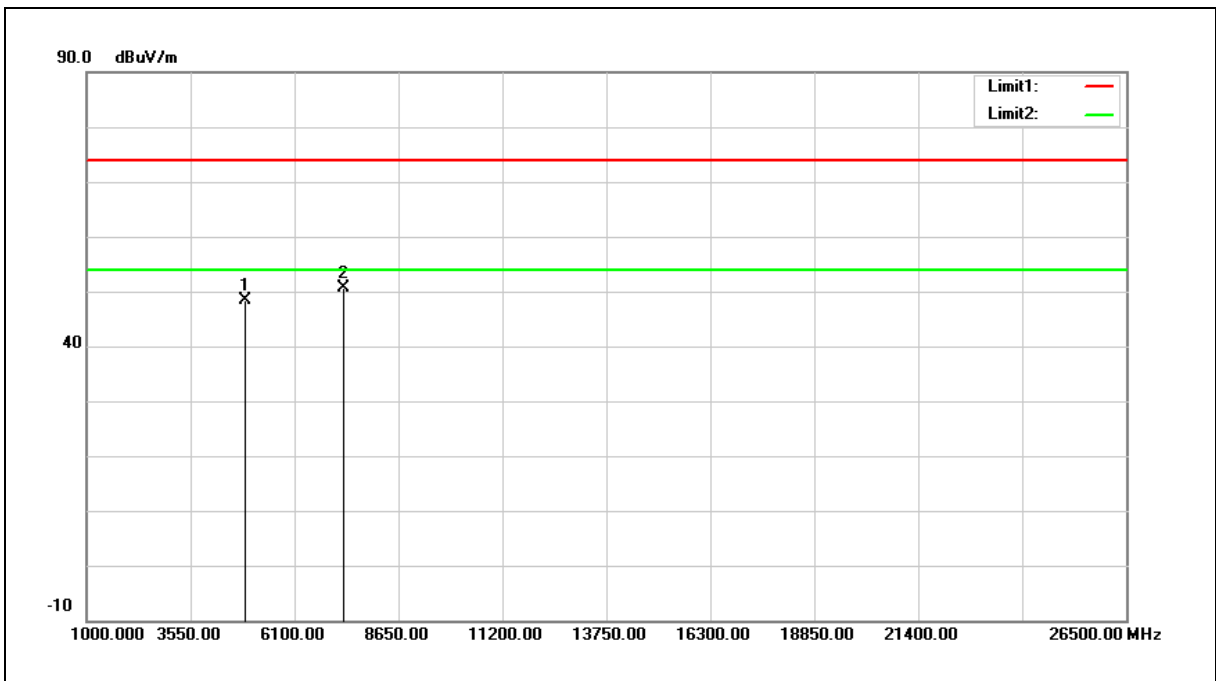
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	39.70	5.00	44.70	74.00	-29.30	peak
2	7206.000	36.20	12.19	48.39	74.00	-25.61	peak

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 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		

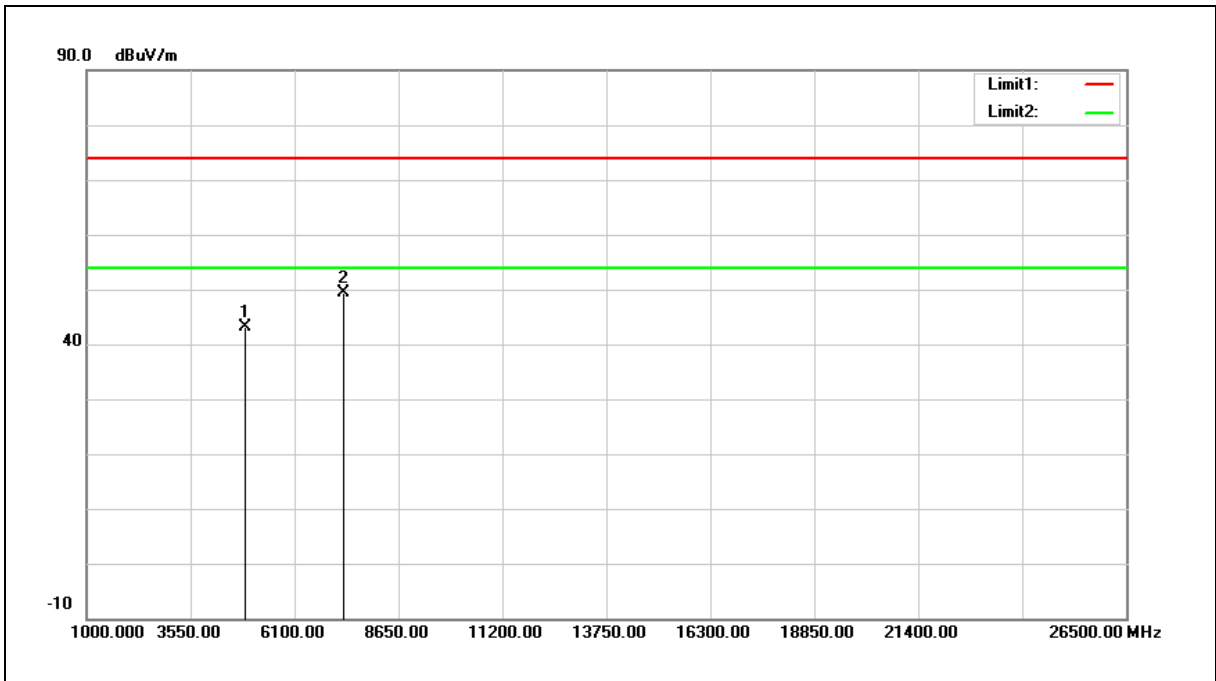


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	43.06	5.24	48.30	74.00	-25.70	peak
2	7320.000	38.34	12.40	50.74	74.00	-23.26	peak

- 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 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



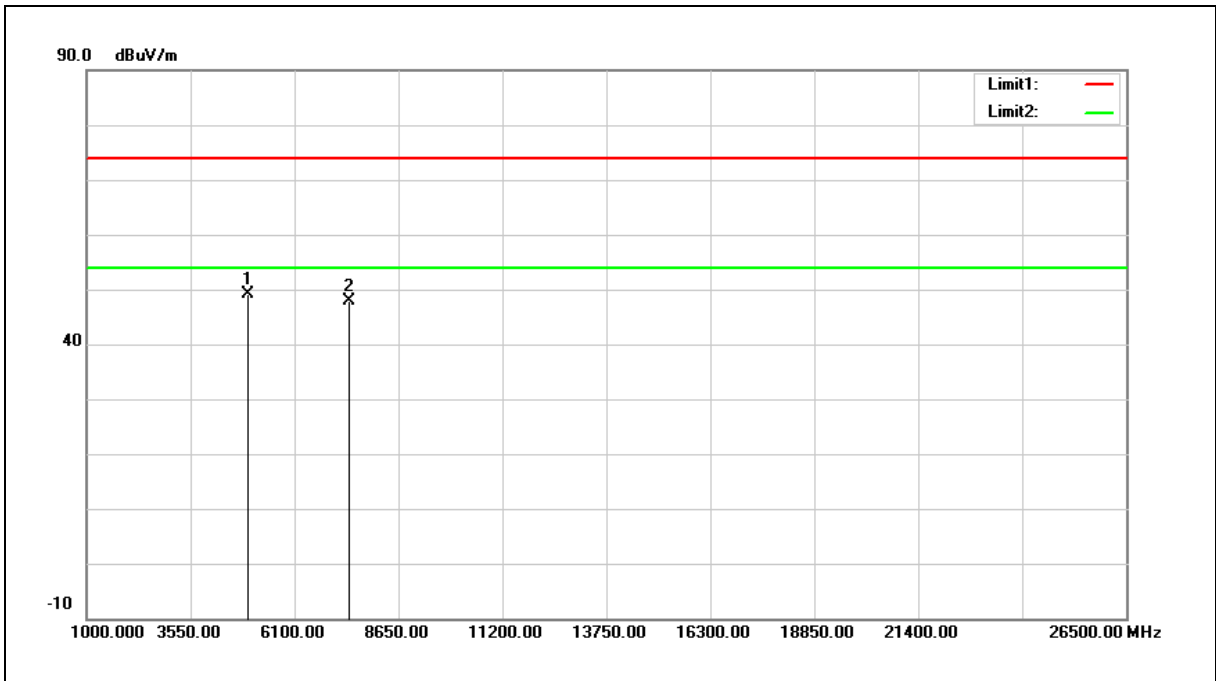
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.90	5.24	43.14	74.00	-30.86	peak
2	7320.000	36.87	12.40	49.27	74.00	-24.73	peak

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 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



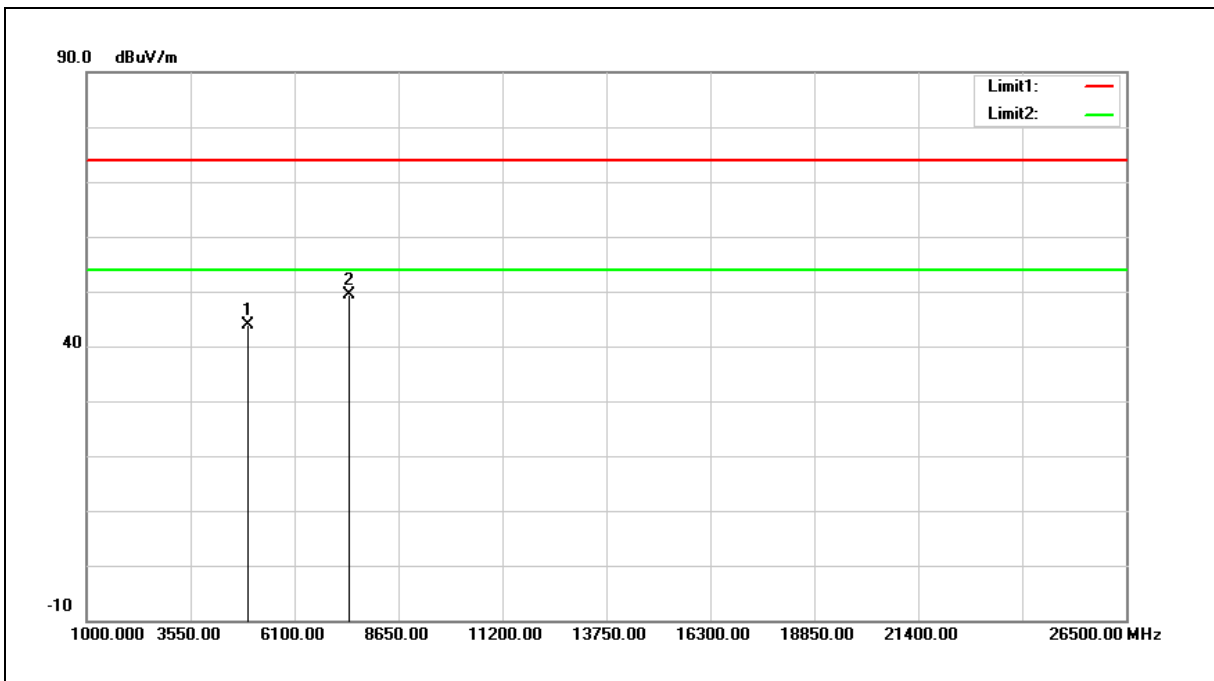
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	43.53	5.51	49.04	74.00	-24.96	peak
2	7440.000	35.21	12.62	47.83	74.00	-26.17	peak

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 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.38	5.51	43.89	74.00	-30.11	peak
2	7440.000	36.74	12.62	49.36	74.00	-24.64	peak

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

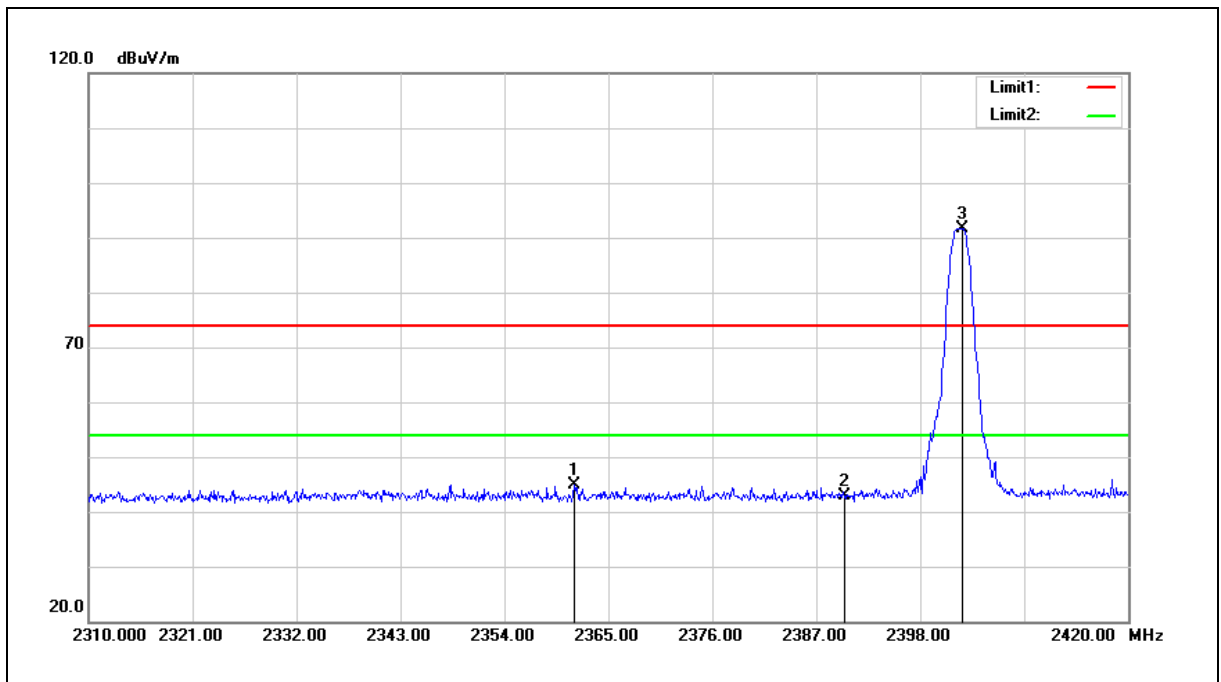
2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

**Band Edge**

**Peak**

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



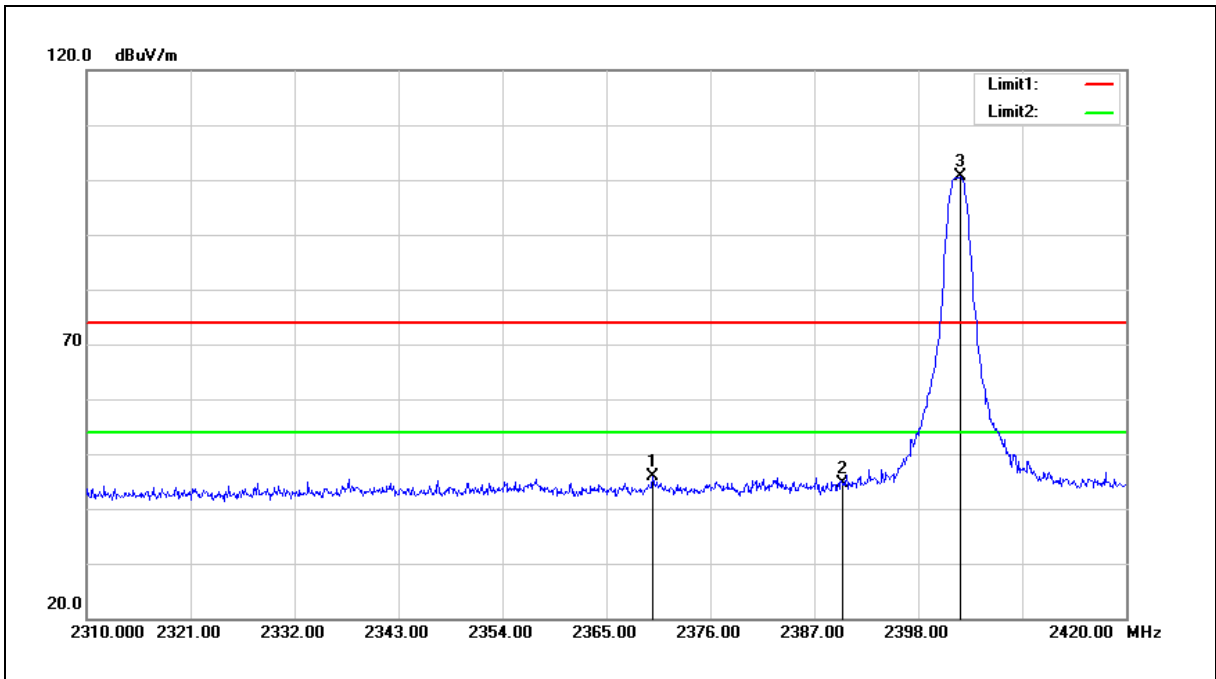
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2361.370	47.26	-2.40	44.86	74.00	-29.14	peak
2	2390.000	45.24	-2.28	42.96	74.00	-31.04	peak
3	2402.400	93.93	-2.22	91.71	--	--	peak

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:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



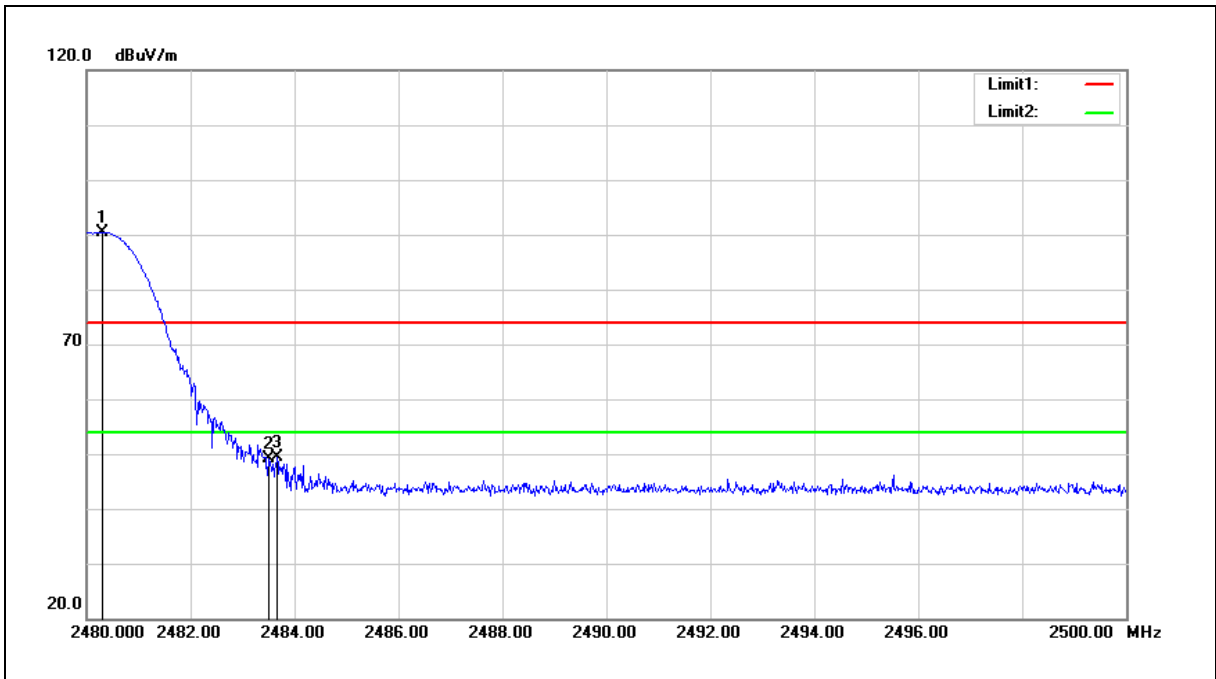
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.950	48.23	-2.36	45.87	74.00	-28.13	peak
2	2390.000	46.87	-2.28	44.59	74.00	-29.41	peak
3	2402.400	102.77	-2.22	100.55	--	--	peak

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



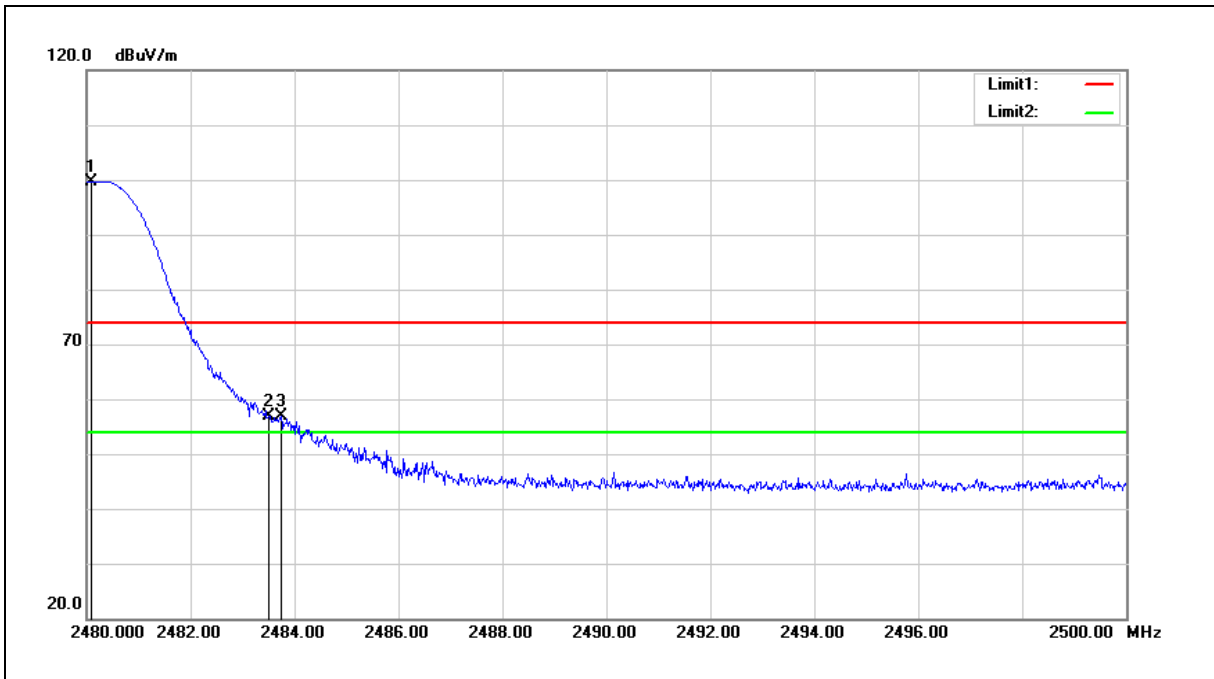
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.300	92.31	-1.91	90.40	--	--	peak
2	2483.500	50.99	-1.89	49.10	74.00	-24.90	peak
3	2483.660	51.17	-1.89	49.28	74.00	-24.72	peak

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



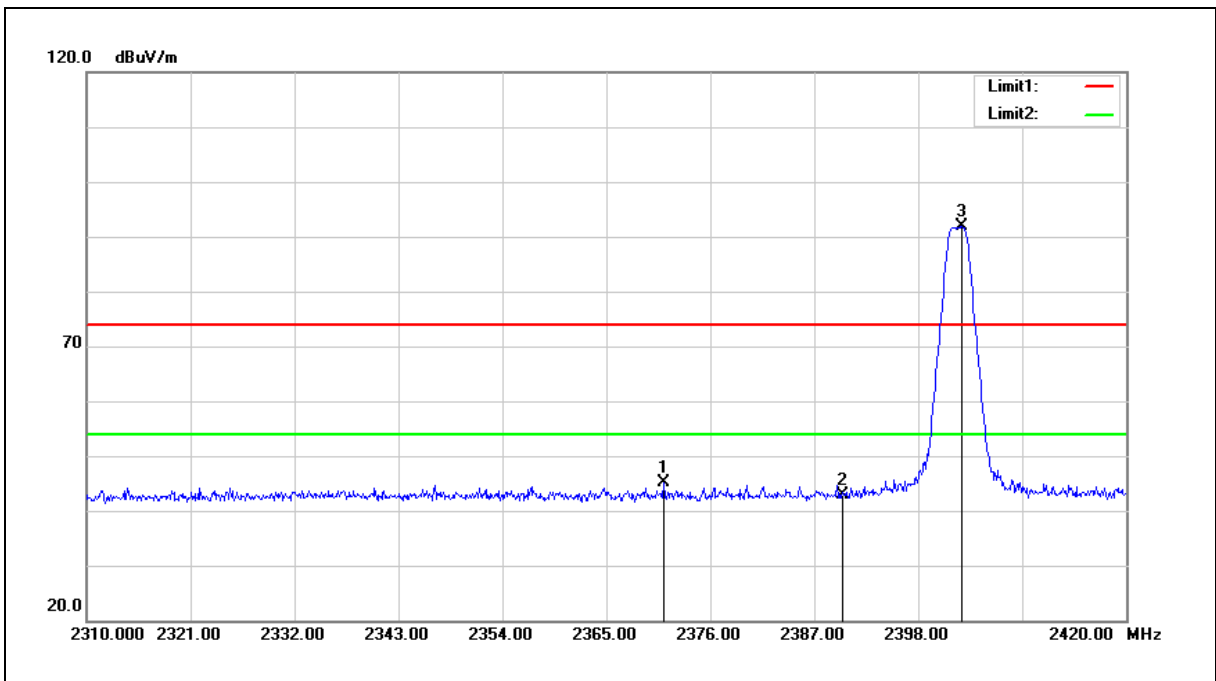
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.080	101.65	-1.91	99.74	--	--	peak
2	2483.500	58.66	-1.89	56.77	74.00	-17.23	peak
3	2483.740	58.77	-1.89	56.88	74.00	-17.12	peak

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.050	47.49	-2.36	45.13	74.00	-28.87	peak
2	2390.000	45.11	-2.28	42.83	74.00	-31.17	peak
3	2402.620	94.03	-2.22	91.81	--	--	peak

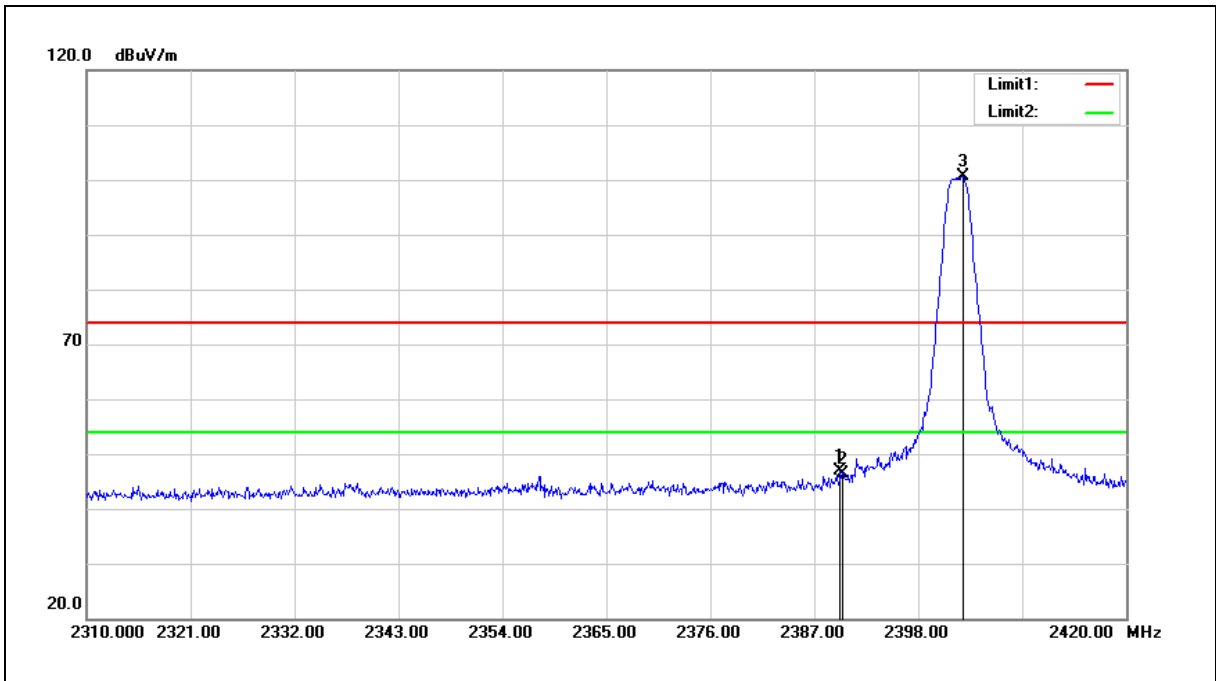
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



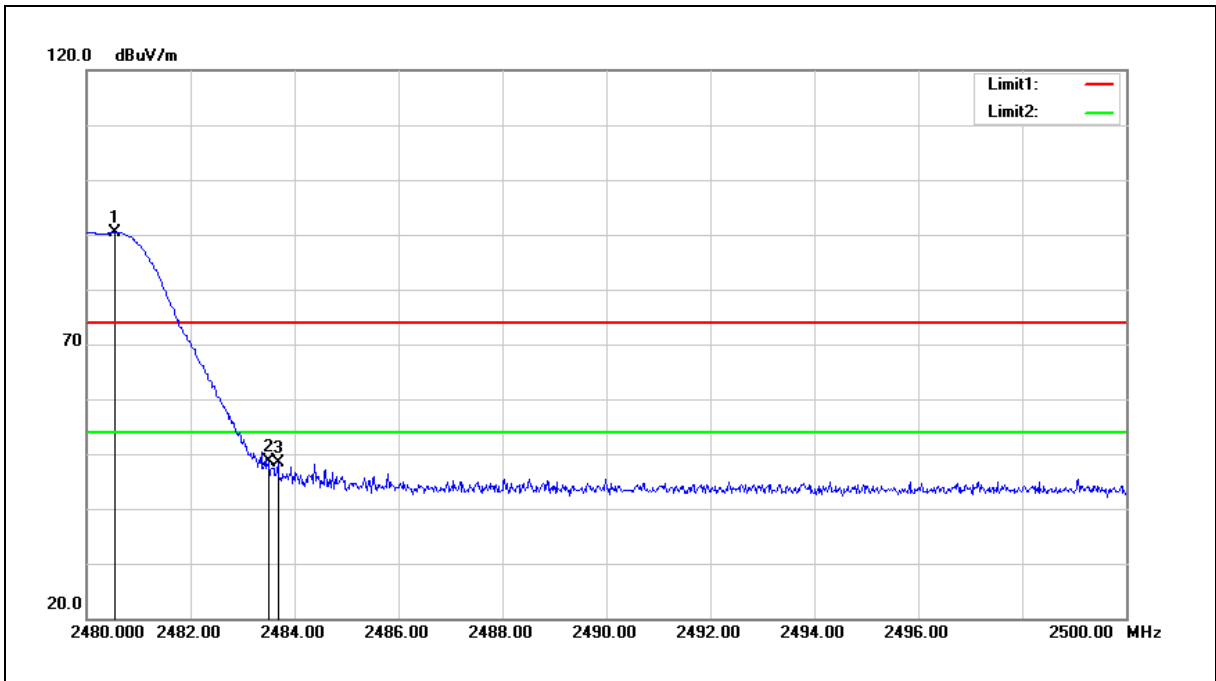
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.750	49.12	-2.28	46.84	74.00	-27.16	peak
2	2390.000	48.61	-2.28	46.33	74.00	-27.67	peak
3	2402.730	102.81	-2.22	100.59	--	--	peak

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



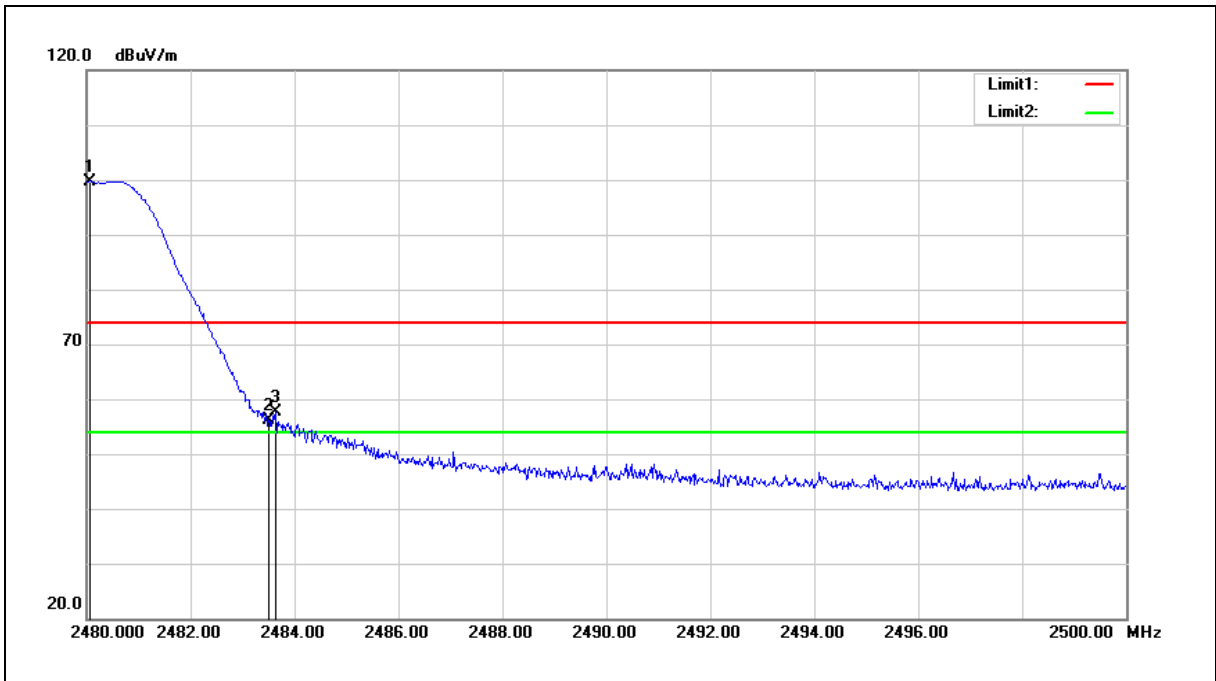
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.540	92.35	-1.90	90.45	--	--	peak
2	2483.500	50.58	-1.89	48.69	74.00	-25.31	peak
3	2483.680	50.29	-1.89	48.40	74.00	-25.60	peak

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:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.060	101.66	-1.91	99.75	--	--	peak
2	2483.500	57.90	-1.89	56.01	74.00	-17.99	peak
3	2483.640	59.57	-1.89	57.68	74.00	-16.32	peak

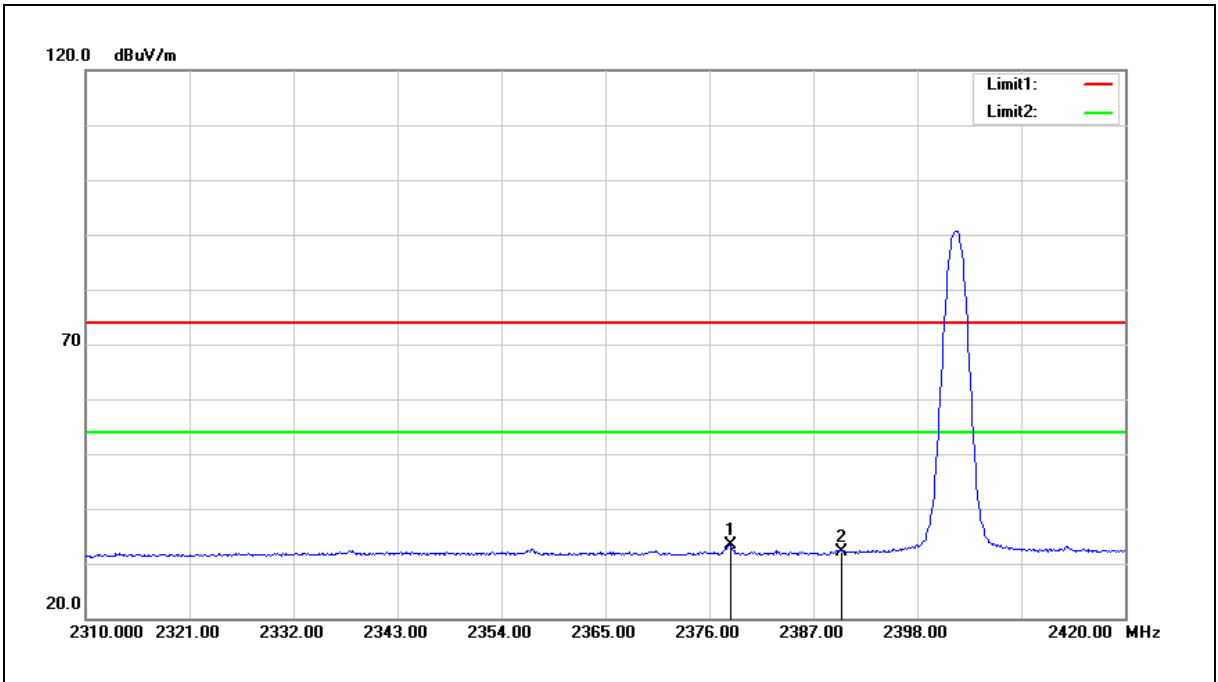
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

**Average**

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



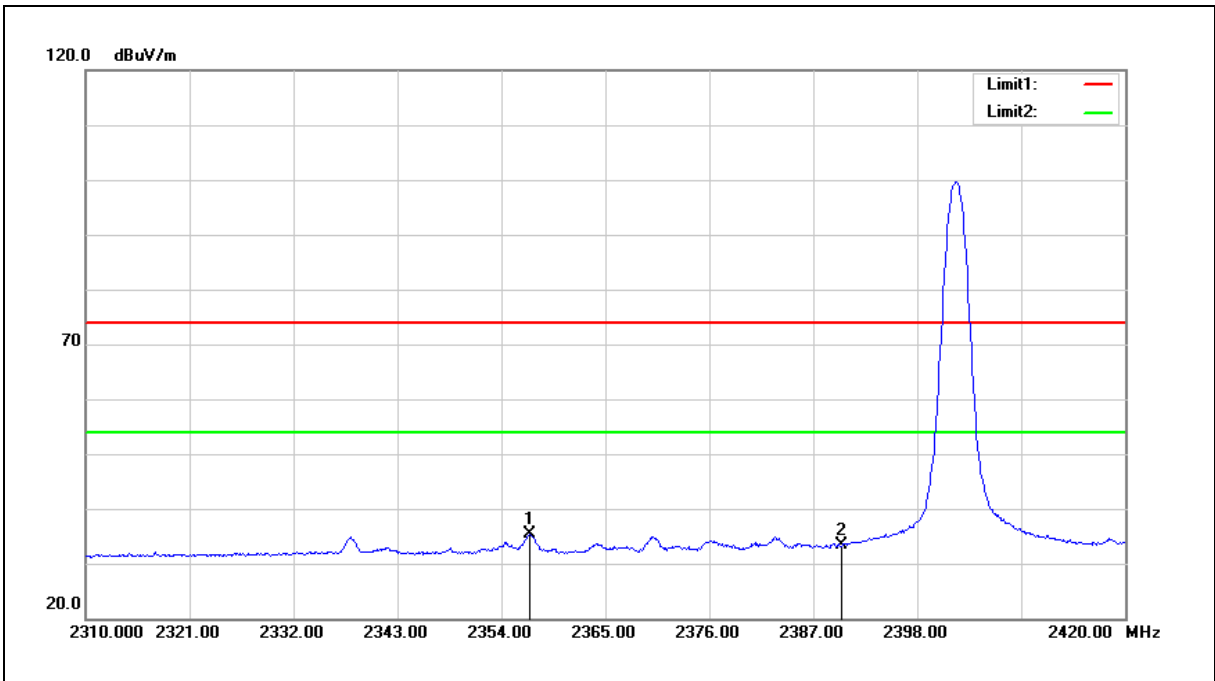
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.200	35.63	-2.33	33.30	54.00	-20.70	AVG
2	2390.000	34.47	-2.28	32.19	54.00	-21.81	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



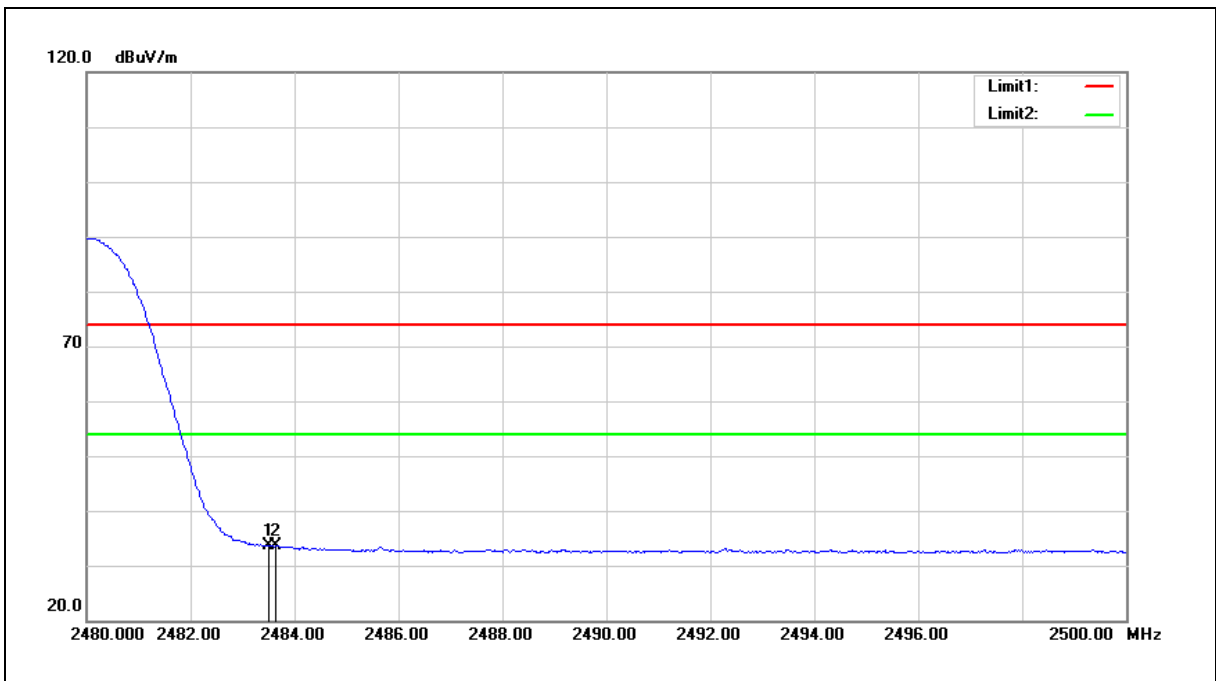
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2356.970	37.71	-2.42	35.29	54.00	-18.71	AVG
2	2390.000	35.70	-2.28	33.42	54.00	-20.58	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



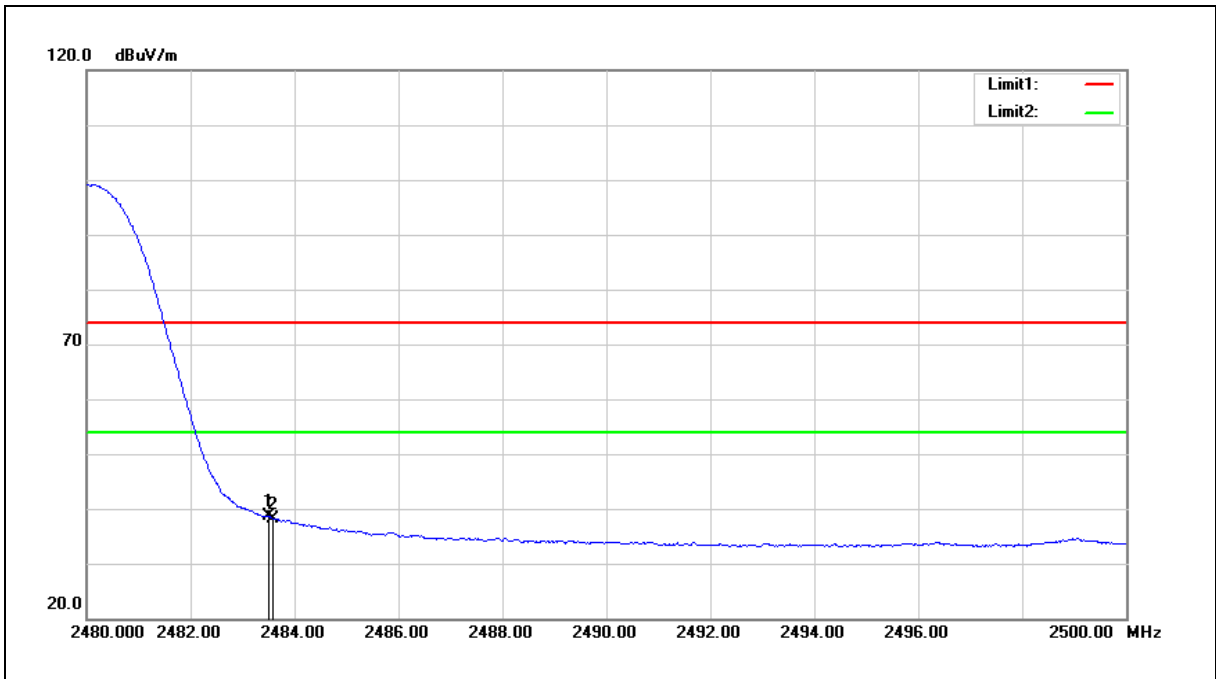
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.41	-1.89	33.52	54.00	-20.48	AVG
2	2483.640	35.49	-1.89	33.60	54.00	-20.40	AVG

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.

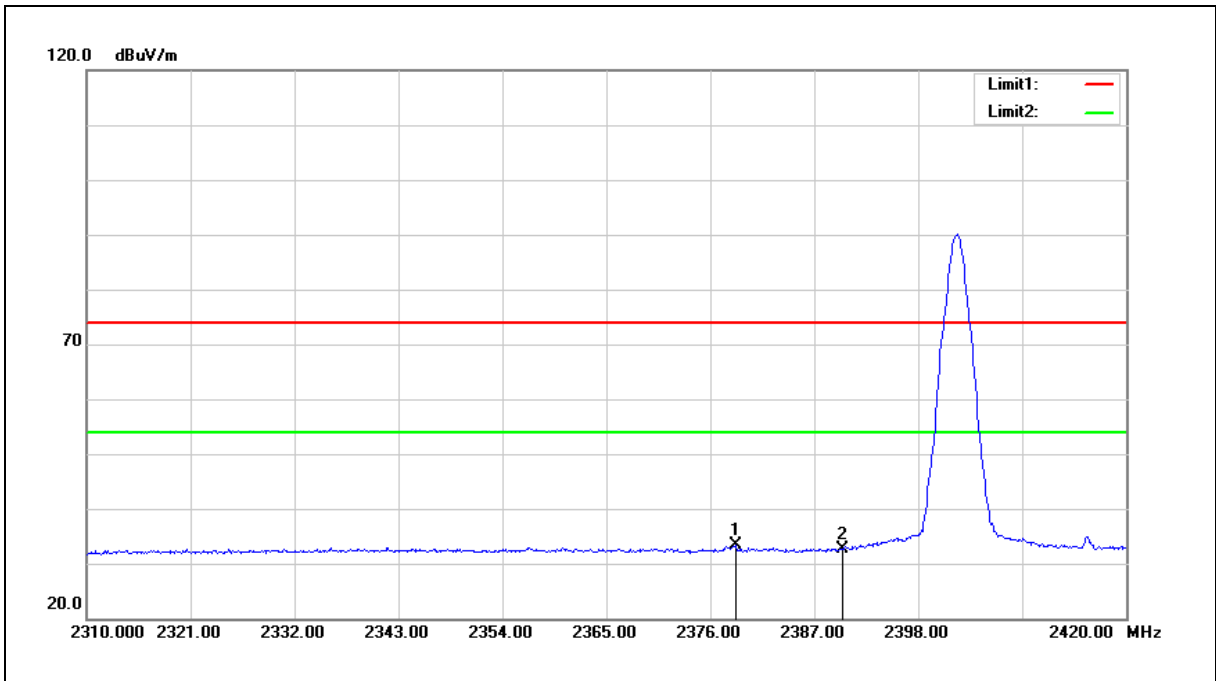
Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	40.44	-1.89	38.55	54.00	-15.45	AVG
2	2483.580	40.11	-1.89	38.22	54.00	-15.78	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:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.750	35.68	-2.33	33.35	54.00	-20.65	AVG
2	2390.000	34.85	-2.28	32.57	54.00	-21.43	AVG

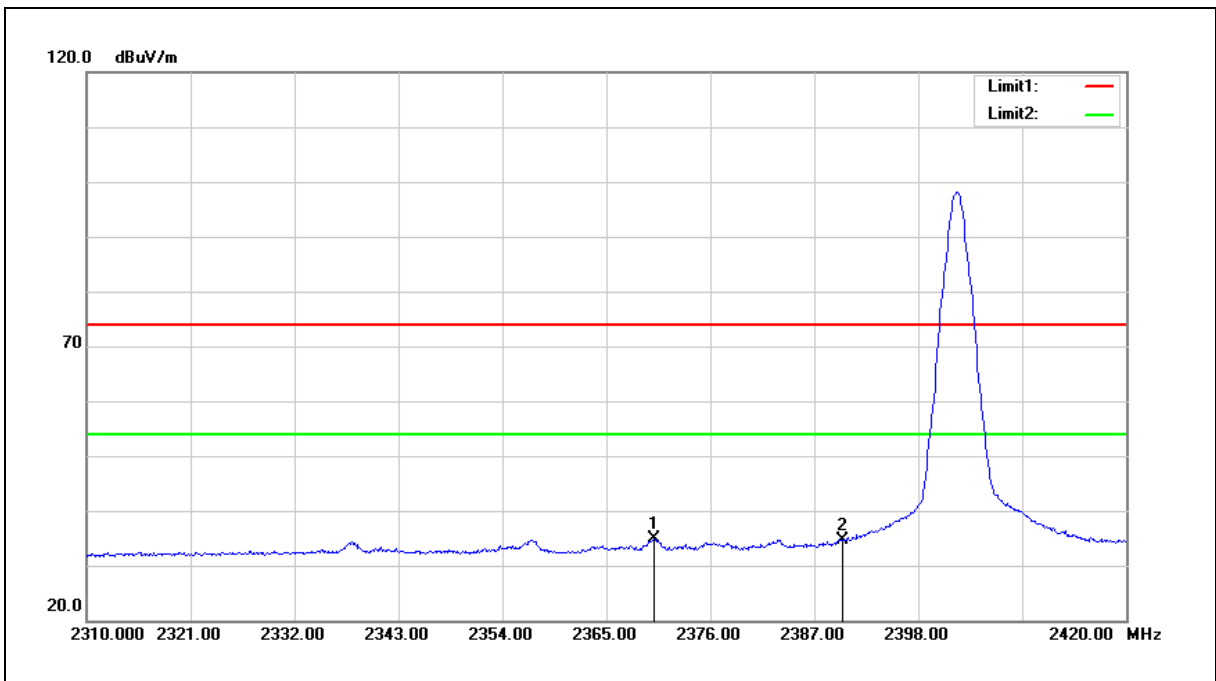
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

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:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



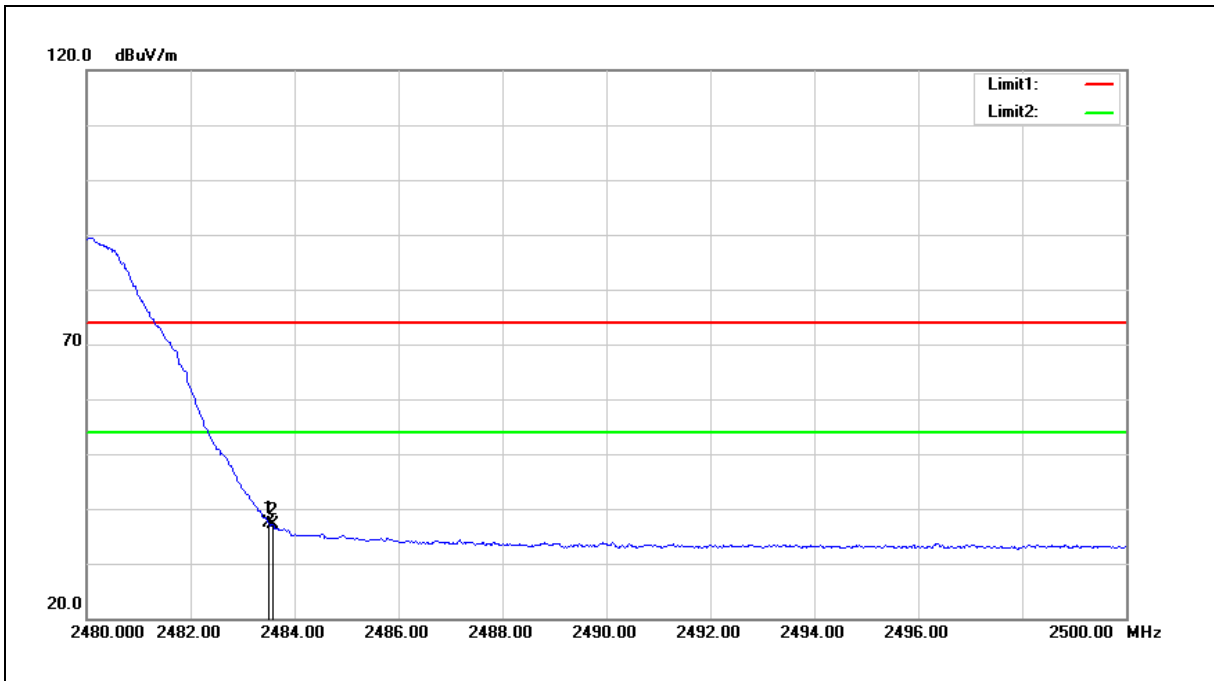
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2370.060	37.22	-2.36	34.86	54.00	-19.14	AVG
2	2390.000	36.89	-2.28	34.61	54.00	-19.39	AVG

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 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



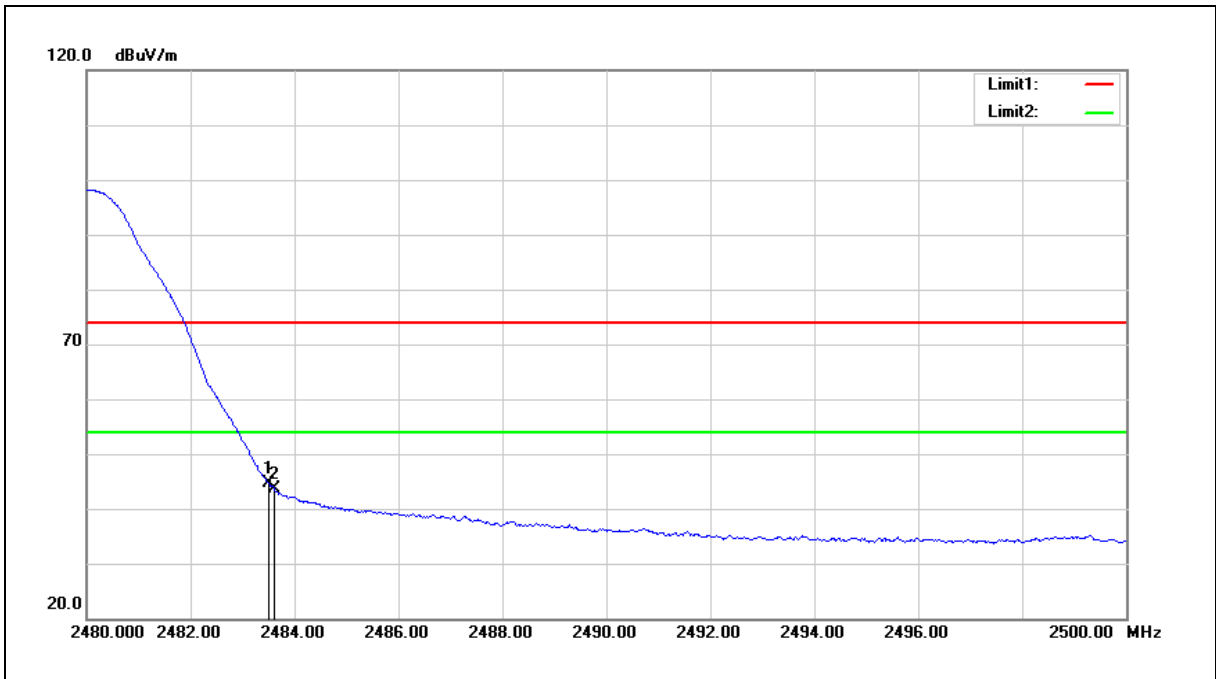
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	39.31	-1.89	37.42	54.00	-16.58	AVG
2	2483.580	39.05	-1.89	37.16	54.00	-16.84	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	46.59	-1.89	44.70	54.00	-9.30	AVG
2	2483.620	45.52	-1.89	43.63	54.00	-10.37	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.

---END---