RF Test Report

Applicant	:	Synology Inc.
Product Name	:	Synology 11ax router
Trade Name	:	Synology
Model Number	:	WRX560
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Received Date	:	Jan. 19, 2022
Test Period	:	Apr. 15 ~ Jun. 18, 2022
Issued Date	:	Aug. 18, 2022

Issued by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
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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	Aug. 11, 2022	Initial Issue	Nicole Chu
01	Aug. 18, 2022	Update 3.1 chapter (P.10) Update 3.4 chapter (P.17)	Nicole Chu

Verification of Compliance

Applicant	:	Synology Inc.
Product Name	:	Synology 11ax router
Trade Name	:	Synology
Model Number	:	WRX560
FCC ID	:	YOR-WRX560
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 334025, Taiwan (R.O.C.) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330

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 : Kai Yu Yang

(Kai Yu Yang)

TABLE OF CONTENTS

1 General Information 5
1.1. Summary of Test Result 5
1.2. Measurement Uncertainty 6
2 EUT Description 7
3 Test Methodology 9
3.1. Mode of Operation 9
3.2. EUT Test Step 14
3.3. Configuration of Test System Details 14
3.4. Test Instruments 15
3.5. Test Site Environment 18
4 Measurement Procedure 19
4.1. AC Power Line Conducted Emission Measurement 19
4.2. Radiated Emission Measurement 21
4.3. Maximum Conducted Output Power Measurement 25
4.4. 6 dB RF Bandwidth Measurement 26
4.5. Maximum Power Spectral Density Measurement 27
4.6. Out of Band Conducted Emissions Measurement 28
4.7. Antenna Measurement 29
5 Test Results 30
5.1. Conducted Emission 30
5.2. Conducted Test Results 32
5.3. Radiated Emission Measurement 81
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
KDB 662911 D01 v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)

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	Synology Inc. 9F., No.1, Yuandong Rd., Banqiao Dist., New Taipei City 220632			
Product Name	Synology 11ax router			
Trade Name	Synology			
Model Number	WRX560			
FCC ID	YOR-WRX560			
Operate Freq. Band	Frequency Range (MHz)	Modulation	Channel Bandwidth	Data Rate
IEEE 802.11b	2412 ~ 2462	DSSS	20 MHz	Up to 11 Mbps
IEEE 802.11g	2412 ~ 2462	OFDM	20 MHz	Up to 54 Mbps
IEEE 802.11n 2.4 GHz 20 MHz	2412 ~ 2462	OFDM (HT)	20 MHz	Up to 144.4 Mbps
IEEE 802.11n 2.4 GHz 40 MHz	2422 ~ 2452	OFDM (HT)	40 MHz	Up to 300 Mbps
IEEE 802.11n 2.4 GHz 20 MHz	2412 ~ 2462	OFDM (VHT)	20 MHz	Up to 173.4 Mbps
IEEE 802.11n 2.4 GHz 40 MHz	2422 ~ 2452	OFDM (VHT)	40 MHz	Up to 400 Mbps
IEEE 802.11ax 2.4 GHz 20 MHz	2412 ~ 2462	OFDMA	20 MHz	Up to 286.8 Mbps
IEEE 802.11ax 2.4 GHz 40 MHz	2422 ~ 2452	OFDMA	40 MHz	Up to 573.5 Mbps
Antenna information	ANT	Model Number	Type	Max. Gain (dBi)
	Ant1	MLX22M-121AA0-A	DIPOLE	3.0
	Ant2	MLX22M-121AA0-A	DIPOLE	3.0
Antenna Delivery	See section 3.1			
Operate Temp. Range	5 ~ +40 ℃			
EUT Power Rating	12 V, 2.5 A			

Frequency Band	Max. RF Output Power (W)
IEEE 802.11b	0.839
IEEE 802.11g	0.705
IEEE 802.11n 2.4 GHz 20 MHz (HT)	0.735
IEEE 802.11n 2.4 GHz 40 MHz (HT)	0.166
IEEE 802.11n 2.4 GHz 20 MHz (VHT)	0.741
IEEE 802.11n 2.4 GHz 40 MHz (VHT)	0.170
IEEE 802.11ax 2.4 GHz 20 MHz	0.762
IEEE 802.11ax 2.4 GHz 40 MHz	0.174

Beamforming on

Frequency Band	Max. RF Output Power (W)
IEEE 802.11n 2.4 GHz 20 MHz (HT)	0.365
IEEE 802.11n 2.4 GHz 40 MHz (HT)	0.080
IEEE 802.11n 2.4 GHz 20 MHz (VHT)	0.369
IEEE 802.11n 2.4 GHz 40 MHz (VHT)	0.081
IEEE 802.11ax 2.4 GHz 20 MHz	0.376
IEEE 802.11ax 2.4 GHz 40 MHz	0.082

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:

Pre-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 2.4 GHz 20 MHz(HT) Continuous TX Mode
Mode 5: IEEE 802.11n 2.4 GHz 40 MHz(HT) Continuous TX Mode
Mode 6: IEEE 802.11n 2.4 GHz 20 MHz(VHT) Continuous TX Mode
Mode 7: IEEE 802.11n 2.4 GHz 40 MHz(VHT) Continuous TX Mode
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX Mode
Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX Mode

Final-Test Mode
Mode 1: Transmit Mode
Mode 2: IEEE 802.11b Continuous TX Mode
Mode 3: IEEE 802.11g Continuous TX Mode
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX Mode
Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz 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.

Note 1: This product supports normal mode and Beamforming on mode. According to power table, the normal mode is worst power. So, normal mode has to test and record results for Conducted.

Note 2: Investigation has been done on all the possible configurations for searching the worst cases (HE20/HE40 covers HT20/HT40/VHT20/VHT40). The table is a list of the test modes show in this test report.

Note 3: 802.11 ax only support full RU.

Note 4: The device is used with adapter (number：2AEJ042FC) performing the test.

Note 5 : Test item Bandedge has been evaluated and only the worst case is recorded in this report.

Test Mode	Ant1	Ant2	Ant1+2
Mode 2	V	V	V
Mode 3	V	V	V
Mode 4	V	V	V
Mode 5	V	V	V
Mode 6	V	V	V
Mode 7	V	V	V
Mode 8	V	V	V
Mode 9	V	V	V

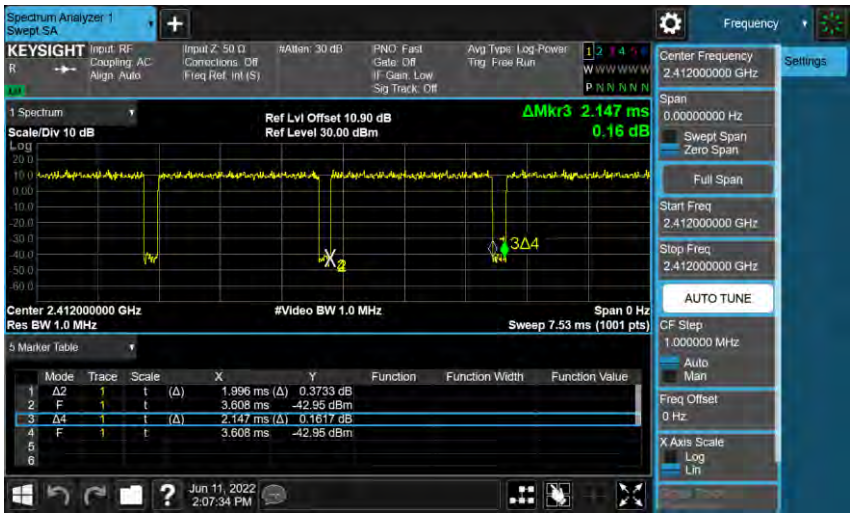
Test Mode	Antenna Delivery	Data Rate (Mbps)	Test Channel
Mode 2	2TX (CDD)	1	1, 6, 11
Mode 3	2TX (CDD)	6	1, 6, 11
Mode 4	2TX (CDD / Beamforming)	13	1, 6, 11
Mode 5	2TX (CDD / Beamforming)	27	3, 6, 9
Mode 6	2TX (CDD / Beamforming)	13	1, 6, 11
Mode 7	2TX (CDD / Beamforming)	27	3, 6, 9
Mode 8	2TX (CDD / Beamforming)	MCS0	1, 6, 11
Mode 9	2TX (CDD / Beamforming)	MCS0	3, 6, 9

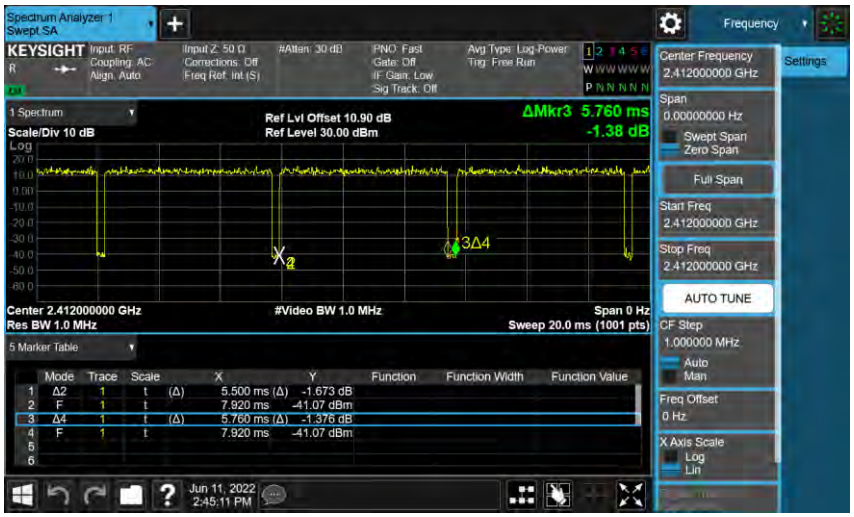
Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimum VBW (kHz)
Mode 2	2412	0.696	1.194	0.583	2.344	1.437
Mode 3	2412	1.996	2.147	0.930	0.317	0.501
Mode 8	2412	5.500	5.760	0.955	0.201	0.182
Mode 9	2422	5.480	5.720	0.958	0.186	0.182

Duty Cycle Graphs

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

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

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode	
On+off time	

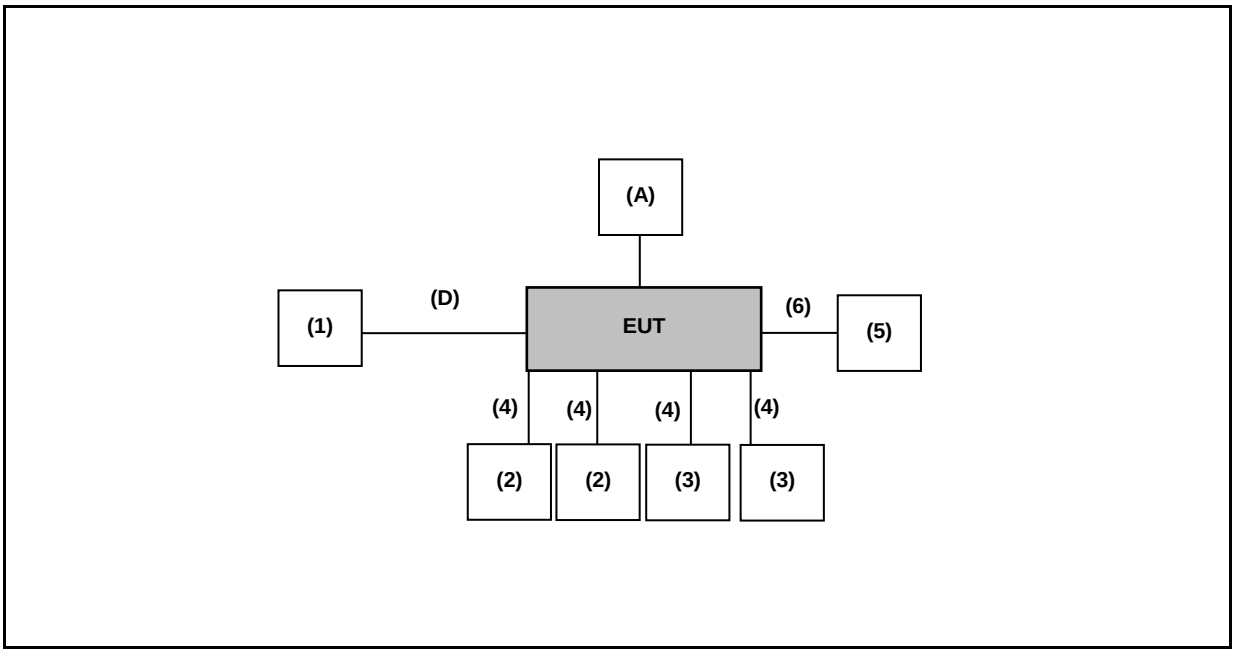
Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode	
On+off time	

3.2. EUT Test Step

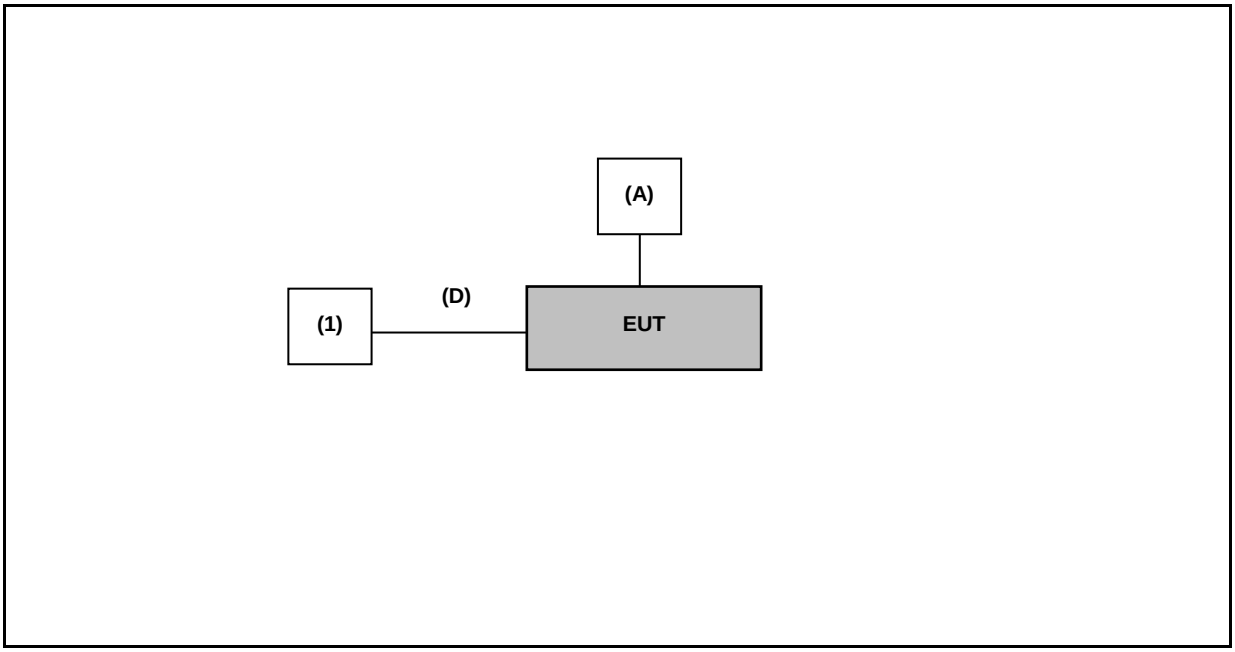
1.	Setup the EUT shown on “Configuration of Test System Details”.
2.	Turn on the power of all equipment.
3.	Turn on TX function.
4.	EUT run test program.

3.3. Configuration of Test System Details

Conduction Emission & Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.4. Test Instruments

For Conducted Emission
Test Period: Jun. 18, 2022
Testing Engineer: Chi Chang

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Test Receiver	R&S	ESCI	100367	May 19, 2022	1 year
☐	Test Receiver	R&S	ESCI	100722	Nov. 02, 2021	1 year
☐	Test Receiver	R&S	ESCI	101000	Nov. 26, 2021	1 year
☒	LISN	R&S	ENV216	101040	Apr. 06, 2022	1 year
☒	LISN	R&S	ENV216	101041	Apr. 15, 2022	1 year
☒	RF Cable	Woken	00100D1380194M	TE-02-03	May 27, 2022	1 year
☒	Software	EZ EMC	1.1.4.3	N/A	N.C.R.	---

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

For Conducted
Test Period: May 26 ~ Jun. 11, 2022
Testing Engineer: Brian Lin

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	Power Sensor	Anritsu	MA2411B	1126022	Sep. 03, 2021	1 year
☐	Power Meter	Anritsu	ML2495A	1135009	Sep. 03, 2021	1 year
☒	Power Sensor	Agilent	N1921A	MY45241957	Dec. 06, 2021	1 year
☒	Power Meter	Agilent	N1911A	MY45101619	Dec. 06, 2021	1 year
☒	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY59071418	Mar. 16, 2022	1 year
☐	Spectrum Analyzer (9 kHz~26.5 GHz)	Agilent	N9010A	MY48030518	Jul. 23, 2021	1 year
☐	Spectrum Analyzer (20 Hz~26.5 GHz)	Agilent	N9020A	US47520902	Sep. 09, 2021	1 year
☐	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	Jan. 05, 2022	1 year
☐	Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	Mar. 28, 2022	1 year
☐	Signal Generator	Keysight	N5182B	MY53052569	Apr. 16, 2022	1 year
☐	Signal Generator	Keysight	N5182BX07	MY59360221	Apr. 16, 2022	1 year
☐	Bluetooth Tester	R&S	CBT	100350	Mar. 17, 2021	2 years
☐	Wireless Connectivity Tester	R&S	CMW270	102208	Jun. 02, 2021	1 year
☐	Power Supply	KEITHLEY	2303	4045290	Jan. 19, 2022	1 year
☐	RF Communication Test Set	HP	8920A	3344A03297	Aug. 10, 2021	1 year

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

For Radiated Emissions
Test Period: Apr. 15 ~ Jun. 04, 2022
Testing Engineer: Amy Wen , Hung Chou , Marc Yeh

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	Jan. 13, 2022	1 year
☐	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	Jan. 05, 2022	1 year
☒	Spectrum Analyzer (2 Hz~50 GHz)	Keysight	N9030B	MY57143537	Apr. 14, 2022	1 year
☐	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9020B	MY60112363	Feb. 27, 2022	1 year
☒	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	Jan. 14, 2022	1 year
☐	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A10961	Jul. 06, 2021	1 year
☐	Broadband Amplifier (100 kHz~1 GHz)	Titan	T0910E00014330 A1F	001	Jul. 23, 2021	1 year
☐	Amplifier (1 GHz~26.5 GHz)	Agilent	8449B	3008A02237	Oct. 21, 2021	1 year
☒	Broadband Amplifier (1 GHz~26.5 GHz)	Titan	T0912E01263025 A1F	002	Jul. 26, 2021	1 year
☐	Preamplifier (26.5 GHz~40 GHz)	EMCI	EMC2654045	980028	Aug. 19, 2021	1 year
☒	Loop Antenna (9 kHz~30 MHz)	COM-POWER CORPORATION	AL-130	121014	Mar. 28, 2022	1 year
☐	Active Loop Antenna (9 kHz~30 MHz)	Schwarzbeck Mess-Elektronik	FMZB 1513-60	1513-60-031	Feb. 17, 2022	1 year
☒	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	01146	Jul. 19, 2021	1 year
☐	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	416	Nov. 17, 2021	1 year
☒	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	02207	Jul. 09, 2021	1 year
☐	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	9120D-550	Aug. 24, 2021	1 year
☒	Broadband Horn Antenna (18 GHz~40 GHz)	Schwarzbeck Mess-Elektronik	9170	9170-320	Aug. 24, 2021	1 year
☐	Horn Antenna (18 GHz~40 GHz)	ETS	3116	00086467	Dec. 03, 2021	1 year

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	RF Cable	EMCI	EMC104-N-N-6000	TE01-1	Feb. 18, 2022	1 year
☐	Microwave Cable	EMCI	EMC104-SM-SM-13000	170814	Feb. 18, 2022	1 year
☐	Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	Feb. 18, 2022	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A100	J11005	Aug. 06, 2021	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A900	J11004	Aug. 06, 2021	1 year
☒	Coaxial Cable	Titan	CFD400NL-LW	001	Aug. 06, 2021	1 year
☐	Bluetooth Tester	R&S	CBT	100350	Mar. 17, 2021	2 years
☐	Wireless Connectivity Tester	R&S	CMW270	102208	Jun. 02, 2021	1 year
☐	Power Supply	KEITHLEY	2303	4045290	Jan. 19, 2022	1 year
☒	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

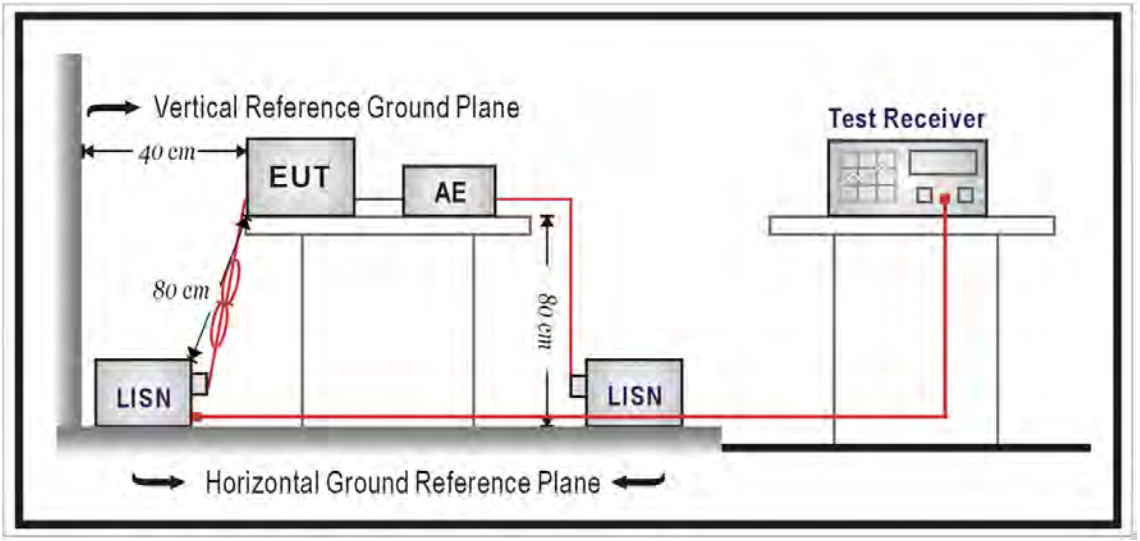
4 Measurement Procedure

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

4.2. Radiated Emission Measurement

■ **Limit**

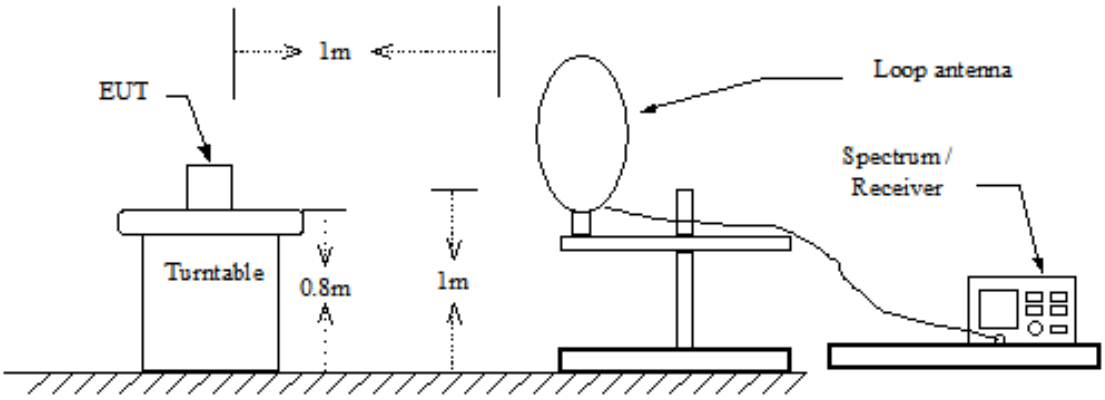
According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (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

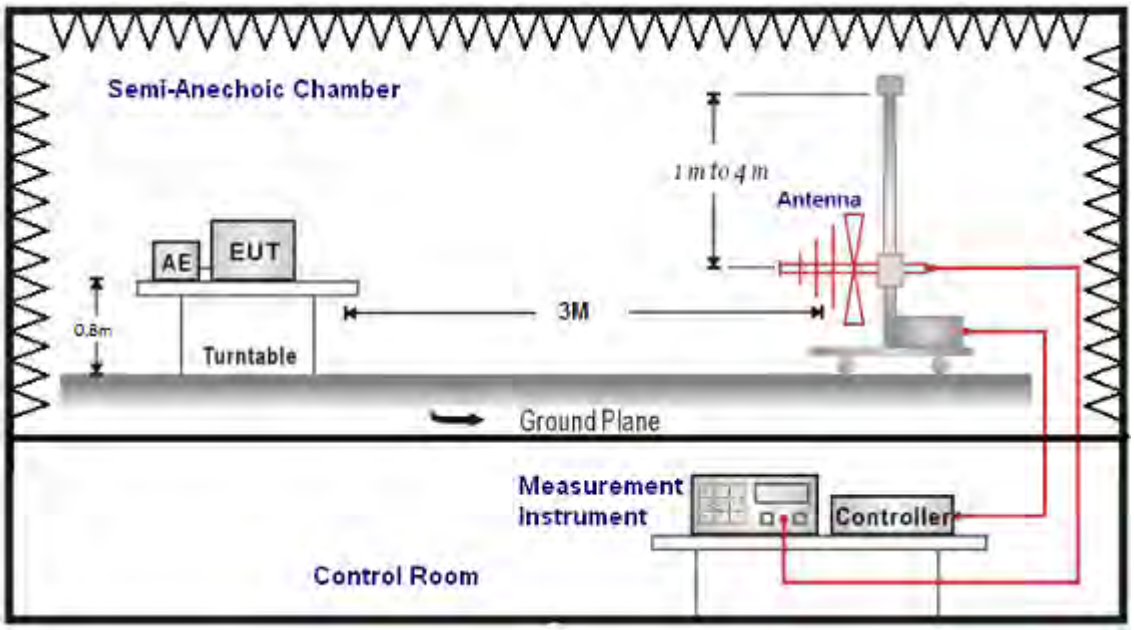
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this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

■ **Setup**

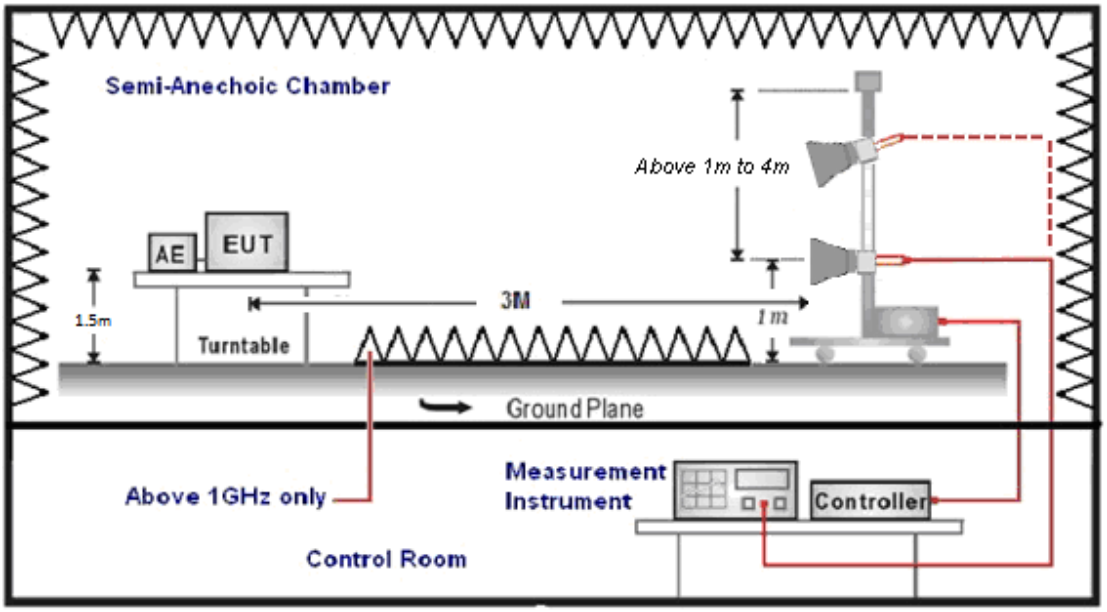
9 kHz ~ 30 MHz



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 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 (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 (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 < +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 maximum output power is 30 dBm.

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.

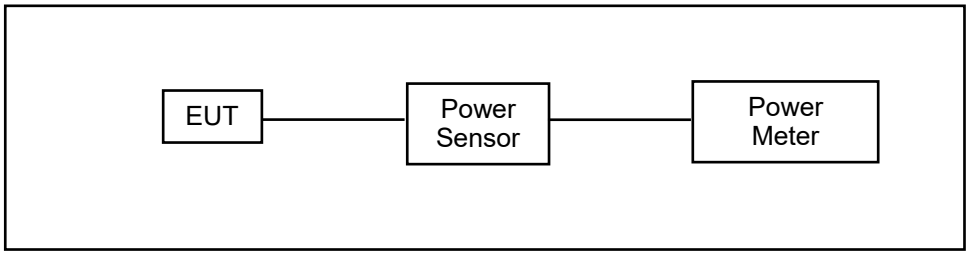
IEEE 802.11n 2.4 GHz 20 MHz / IEEE 802.11n 2.4 GHz 40 MHz /
IEEE 802.11ax 2.4 GHz 20 MHz / IEEE 802.11ax 2.4 GHz 40 MHz

BF mode:

Directional Gain = 10*log{[10^(G1/20)+10^(G2/20)+…+10^(Gn/20)]^2/NANT} = 6.01 dBi > 6 dBi

Power Limit = 30 - 0.01 = 29.99 dBm

■ **Test Setup**



■ **Test Procedure**

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

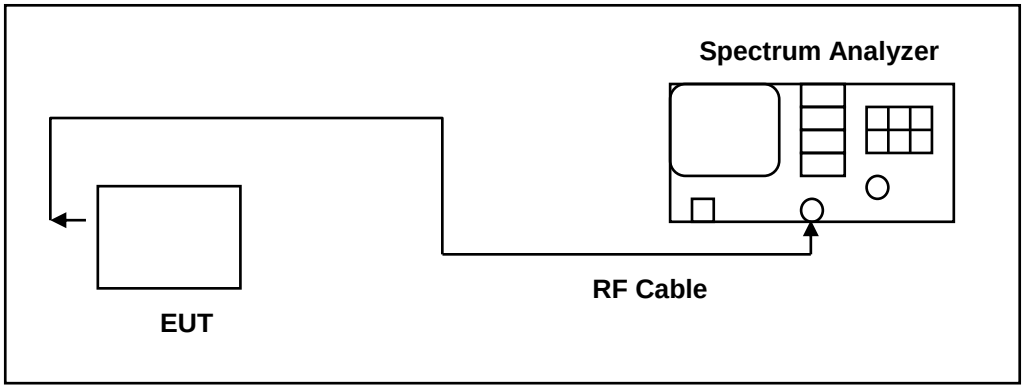
The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor.

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.

■ **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 Spectral 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.

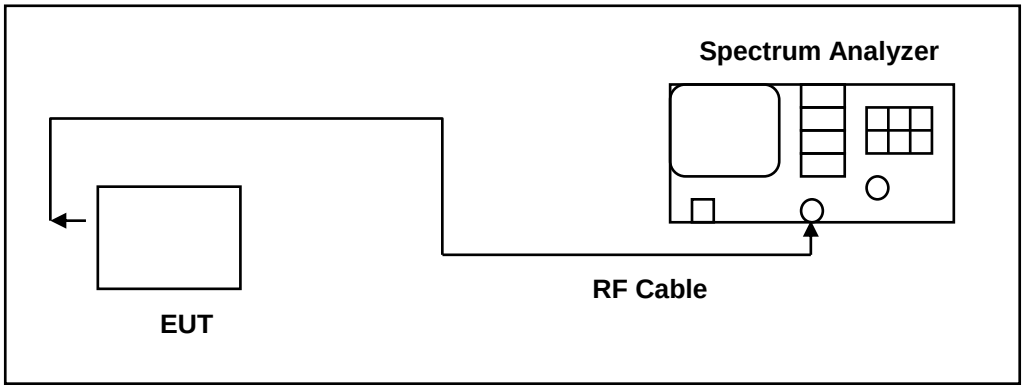
IEEE 802.11b / IEEE 802.11g / IEEE 802.11n 2.4 GHz 20 MHz / IEEE 802.11n 2.4 GHz 40 MHz / IEEE 802.11ax 2.4 GHz 20 MHz / IEEE 802.11ax 2.4 GHz 40 MHz

CDD/BF mode:

Directional Gain = 10*log{[10^(G1/20)+10^(G2/20)+…+10^(Gn/20)]^2/NANT} = 6.01 dBi > 6 dBi

Power Limit = 8 - 0.01 = 7.99 dBm

■ **Test Setup**



■ **Test Procedure**

The EUT tested to DTS test procedure of ANSI C63.10:2013 section 11.10.2 Method PKPSD for compliance to FCC 47CFR 15.247 requirements.

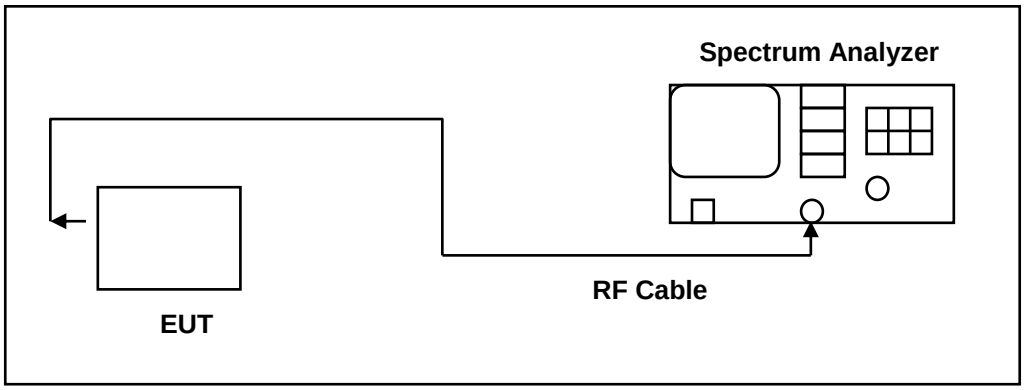
1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 × RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the 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 30 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 30 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 Description**

See section 2 – antenna information.

■ **Directional Gain Calculated**

Directional Gain = 10*log{[10^(G1/10)+10^(G2/10)+…+10^(Gn/10)]/NANT}

Operate Freq. Band	Directional Gain (dBi)
IEEE 802.11b	3.00
IEEE 802.11g	3.00
IEEE 802.11n 2.4 GHz 20 MHz (HT)	3.00
IEEE 802.11n 2.4 GHz 40 MHz (HT)	3.00
IEEE 802.11n 2.4 GHz 20 MHz (VHT)	3.00
IEEE 802.11n 2.4 GHz 40 MHz (VHT)	3.00
IEEE 802.11ax 2.4 GHz 20 MHz	3.00
IEEE 802.11ax 2.4 GHz 40 MHz	3.00

Beamforming on

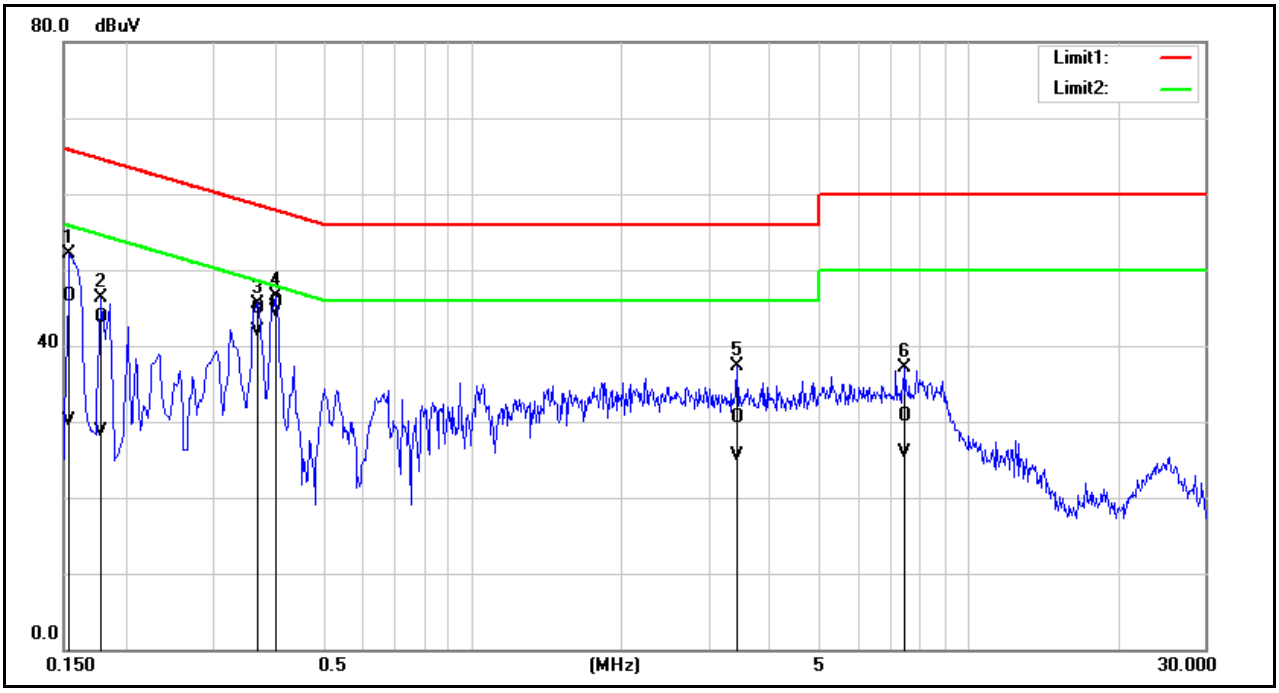
Directional Gain = 10*log{[10^(G1/20)+10^(G2/20)+…+10^(Gn/20)]/NANT}

Operate Freq. Band	Directional Gain (dBi)
IEEE 802.11b	6.01
IEEE 802.11g	6.01
IEEE 802.11n 2.4 GHz 20 MHz (HT)	6.01
IEEE 802.11n 2.4 GHz 40 MHz (HT)	6.01
IEEE 802.11n 2.4 GHz 20 MHz (VHT)	6.01
IEEE 802.11n 2.4 GHz 40 MHz (VHT)	6.01
IEEE 802.11ax 2.4 GHz 20 MHz	6.01
IEEE 802.11ax 2.4 GHz 40 MHz	6.01

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	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Description:			

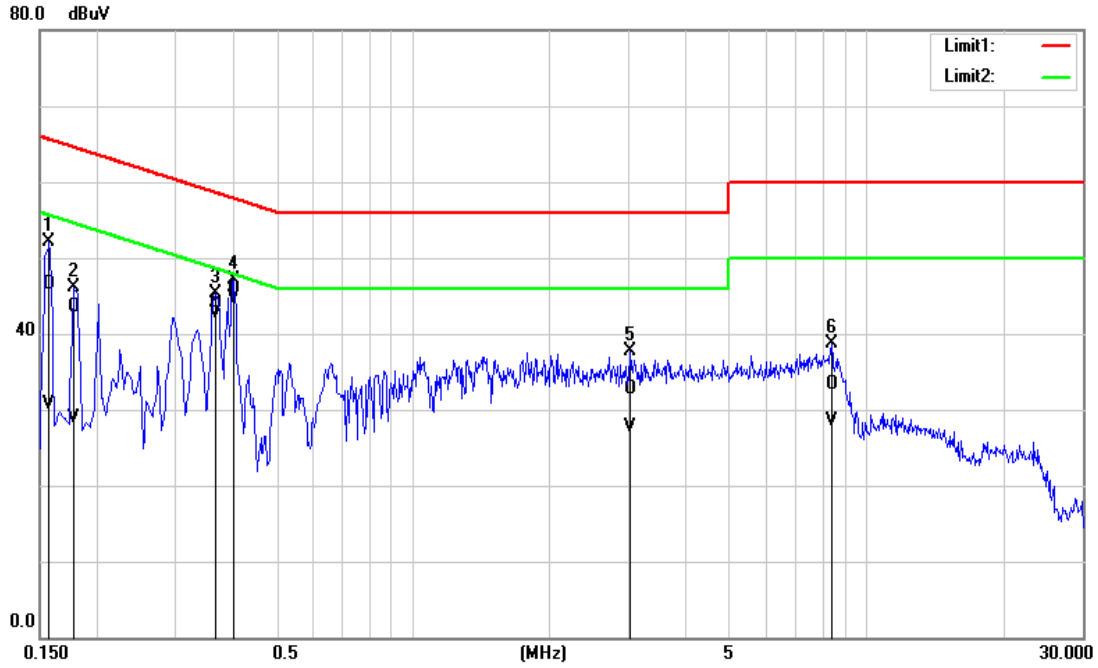


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	36.91	20.57	9.60	46.51	30.17	65.78	55.78	-19.27	-25.61	Pass
2	0.1780	34.02	19.07	9.60	43.62	28.67	64.58	54.58	-20.96	-25.91	Pass
3	0.3700	35.34	32.20	9.61	44.95	41.81	58.50	48.50	-13.55	-6.69	Pass
4	0.4020	36.06	34.99	9.61	45.67	44.60	57.81	47.81	-12.14	-3.21	Pass
5	3.4180	20.71	15.89	9.70	30.41	25.59	56.00	46.00	-25.59	-20.41	Pass
6	7.4540	20.94	16.05	9.78	30.72	25.83	60.00	50.00	-29.28	-24.17	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	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	36.85	21.11	9.66	46.51	30.77	65.57	55.57	-19.06	-24.80	Pass
2	0.1780	33.84	19.18	9.66	43.50	28.84	64.58	54.58	-21.08	-25.74	Pass
3	0.3660	34.51	32.94	9.67	44.18	42.61	58.59	48.59	-14.41	-5.98	Pass
4	0.4020	36.24	35.08	9.67	45.91	44.75	57.81	47.81	-11.90	-3.06	Pass
5	3.0140	23.03	18.01	9.77	32.80	27.78	56.00	46.00	-23.20	-18.22	Pass
6	8.3940	23.45	18.54	9.88	33.33	28.42	60.00	50.00	-26.67	-21.58	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	Frequency (MHz)	RF Power setting in Test Software		Test Software Version
		Ant1	Ant2	
Mode 2	2412	24.0	24.0	QSPR Version 5.0.00188
	2437	26.0	26.0	
	2462	24.0	24.0	
Mode 3	2412	17.5	17.5	
	2437	25.5	25.5	
	2462	18.5	18.5	
Mode 4	2412	19.0	19.0	
	2437	29.0	29.0	
	2462	20.0	20.0	
Mode 5	2422	17.5	17.5	
	2437	19.0	19.0	
	2452	16.5	16.5	
Mode 6	2412	19.0	19.0	
	2437	29.0	29.0	
	2462	20.0	20.0	
Mode 7	2422	17.5	17.5	
	2437	19.0	19.0	
	2452	16.5	16.5	
Mode 8	2412	19.0	19.0	
	2437	29.0	29.0	
	2462	20.0	20.0	
Mode 9	2422	17.5	17.5	
	2437	19.0	19.0	
	2452	16.5	16.5	

Beamforming on

Test Mode	Frequency (MHz)	RF Power setting in Test Software		Test Software Version
		Ant1	Ant2	
Mode 4	2412	15.50	15.50	QSPR Version 5.0.00188
	2437	22.50	22.50	
	2462	16.50	16.50	
Mode 5	2422	14.00	14.00	
	2437	15.50	15.50	
	2452	13.00	13.00	
Mode 6	2412	15.50	15.50	
	2437	22.50	22.50	
	2462	16.50	16.50	
Mode 7	2422	14.00	14.00	
	2437	15.50	15.50	
	2452	13.00	13.00	
Mode 8	2412	15.50	15.50	
	2437	22.50	22.50	
	2462	16.50	16.50	
Mode 9	2422	14.00	14.00	
	2437	15.50	15.50	
	2452	13.00	13.00	

Ant1 / Ant2							
Test Mode	Frequency (MHz)	Data Rate	Average Output Power Measurement Results Ant1		Average Output Power Measurement Results Ant2		Limit
			dBm	W	dBm	W	dBm
Mode 2	2412	1M	24.51	0.282	24.62	0.290	≤ 30
	2437		26.28	0.425	26.18	0.415	≤ 30
	2462		24.05	0.254	23.93	0.247	≤ 30
Mode 3	2412	6M	18.18	0.066	18.23	0.067	≤ 30
	2437		25.51	0.356	25.42	0.348	≤ 30
	2462		18.49	0.071	18.61	0.073	≤ 30
Mode 4	2412	13M	19.50	0.089	19.76	0.095	≤ 30
	2437		25.77	0.378	25.52	0.356	≤ 30
	2462		19.88	0.097	19.85	0.097	≤ 30
Mode 5	2422	27M	17.41	0.055	17.49	0.056	≤ 30
	2437		19.26	0.084	19.14	0.082	≤ 30
	2452		17.24	0.053	17.14	0.052	≤ 30
Mode 6	2412	13M	19.58	0.091	19.80	0.095	≤ 30
	2437		25.81	0.381	25.56	0.360	≤ 30
	2462		20.00	0.100	19.90	0.098	≤ 30
Mode 7	2422	27M	17.55	0.057	17.57	0.057	≤ 30
	2437		19.34	0.086	19.23	0.084	≤ 30
	2452		17.37	0.055	17.28	0.053	≤ 30
Mode 8	2412	MCS0	19.61	0.091	19.86	0.097	≤ 30
	2437		25.92	0.391	25.69	0.371	≤ 30
	2462		20.08	0.102	19.95	0.099	≤ 30
Mode 9	2422	MCS0	17.60	0.058	17.63	0.058	≤ 30
	2437		19.41	0.087	19.36	0.086	≤ 30
	2452		17.41	0.055	17.42	0.055	≤ 30

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

Ant1+2					
Test Mode	Frequency (MHz)	Data Rate	Average Output Power		
			Measurement Results		Limit
			dBm	W	dBm
Mode 2	2412	1M	27.58	0.573	≤ 30
	2437		29.24	0.839	≤ 30
	2462		27.00	0.501	≤ 30
Mode 3	2412	6M	21.22	0.132	≤ 30
	2437		28.48	0.705	≤ 30
	2462		21.56	0.143	≤ 30
Mode 4	2412	13M	22.64	0.184	≤ 30
	2437		28.66	0.735	≤ 30
	2462		22.88	0.194	≤ 30
Mode 5	2422	27M	20.46	0.111	≤ 30
	2437		22.21	0.166	≤ 30
	2452		20.20	0.105	≤ 30
Mode 6	2412	13M	22.70	0.186	≤ 30
	2437		28.70	0.741	≤ 30
	2462		22.96	0.198	≤ 30
Mode 7	2422	27M	20.57	0.114	≤ 30
	2437		22.30	0.170	≤ 30
	2452		20.34	0.108	≤ 30
Mode 8	2412	MCS0	22.75	0.188	≤ 30
	2437		28.82	0.762	≤ 30
	2462		23.03	0.201	≤ 30
Mode 9	2422	MCS0	20.63	0.116	≤ 30
	2437		22.40	0.174	≤ 30
	2452		20.43	0.110	≤ 30

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

Beamforming on

Ant1 / Ant2							
Test Mode	Frequency (MHz)	Data Rate	Average Output Power Measurement Results Ant1		Average Output Power Measurement Results Ant2		Limit
			dBm	W	dBm	W	dBm
Mode 4	2412	13M	16.15	0.041	16.30	0.043	≤ 29.99
	2437		22.68	0.185	22.53	0.179	≤ 29.99
	2462		16.70	0.047	16.57	0.045	≤ 29.99
Mode 5	2422	27M	14.15	0.026	14.03	0.025	≤ 29.99
	2437		16.16	0.041	15.91	0.039	≤ 29.99
	2452		13.96	0.025	13.94	0.025	≤ 29.99
Mode 6	2412	13M	16.23	0.042	16.39	0.044	≤ 29.99
	2437		22.74	0.188	22.58	0.181	≤ 29.99
	2462		16.73	0.047	16.70	0.047	≤ 29.99
Mode 7	2422	27M	14.23	0.026	14.05	0.025	≤ 29.99
	2437		16.17	0.041	15.96	0.039	≤ 29.99
	2452		13.99	0.025	14.02	0.025	≤ 29.99
Mode 8	2412	MCS0	16.37	0.043	16.51	0.045	≤ 29.99
	2437		22.87	0.194	22.61	0.182	≤ 29.99
	2462		16.78	0.048	16.81	0.048	≤ 29.99
Mode 9	2422	MCS0	14.28	0.027	14.19	0.026	≤ 29.99
	2437		16.26	0.042	15.97	0.040	≤ 29.99
	2452		14.06	0.025	14.11	0.026	≤ 29.99

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

Ant1+2					
Test Mode	Frequency (MHz)	Data Rate	Average Output Power		
			Measurement Results		Limit
			dBm	W	dBm
Mode 4	2412	13M	19.24	0.084	≤ 29.99
	2437		25.62	0.365	≤ 29.99
	2462		19.65	0.092	≤ 29.99
Mode 5	2422	27M	17.10	0.051	≤ 29.99
	2437		19.05	0.080	≤ 29.99
	2452		16.96	0.050	≤ 29.99
Mode 6	2412	13M	19.32	0.086	≤ 29.99
	2437		25.67	0.369	≤ 29.99
	2462		19.73	0.094	≤ 29.99
Mode 7	2422	27M	17.15	0.052	≤ 29.99
	2437		19.08	0.081	≤ 29.99
	2452		17.02	0.050	≤ 29.99
Mode 8	2412	MCS0	19.45	0.088	≤ 29.99
	2437		25.75	0.376	≤ 29.99
	2462		19.81	0.096	≤ 29.99
Mode 9	2422	MCS0	17.25	0.053	≤ 29.99
	2437		19.13	0.082	≤ 29.99
	2452		17.10	0.051	≤ 29.99

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

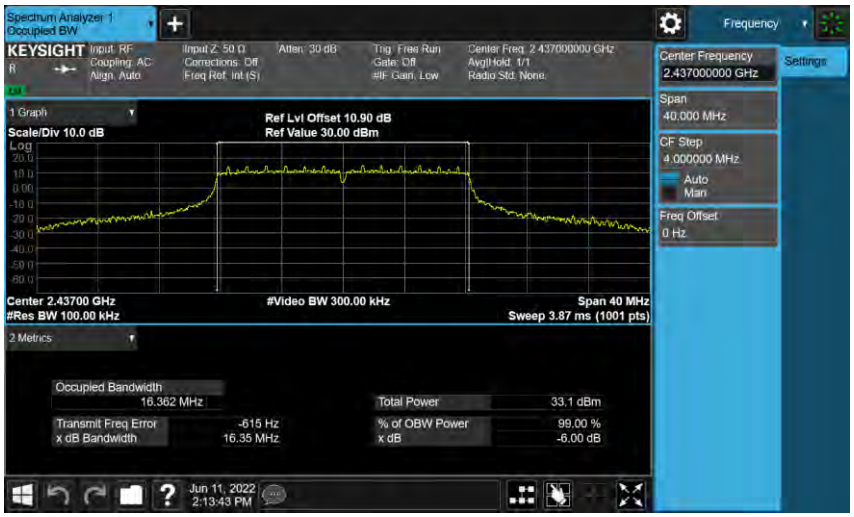
6 dB RF Bandwidth Measurement

Ant1			
Test Mode	Frequency (MHz)	Measurement (kHz)	Limit (kHz)
Mode 2	2412	8093	≥ 500
	2437	8094	≥ 500
	2462	8092	≥ 500
Mode 3	2412	16370	≥ 500
	2437	16350	≥ 500
	2462	16360	≥ 500
Mode 8	2412	18920	≥ 500
	2437	18790	≥ 500
	2462	18910	≥ 500
Mode 9	2422	37980	≥ 500
	2437	37940	≥ 500
	2452	37970	≥ 500

Ant2			
Test Mode	Frequency (MHz)	Measurement (kHz)	Limit (kHz)
Mode 2	2412	8087	≥ 500
	2437	8092	≥ 500
	2462	8090	≥ 500
Mode 3	2412	16330	≥ 500
	2437	16090	≥ 500
	2462	16340	≥ 500
Mode 8	2412	18930	≥ 500
	2437	18910	≥ 500
	2462	18970	≥ 500
Mode 9	2422	38100	≥ 500
	2437	38070	≥ 500
	2452	38130	≥ 500

■ Test Graphs

Mode 2: IEEE 802.11b Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

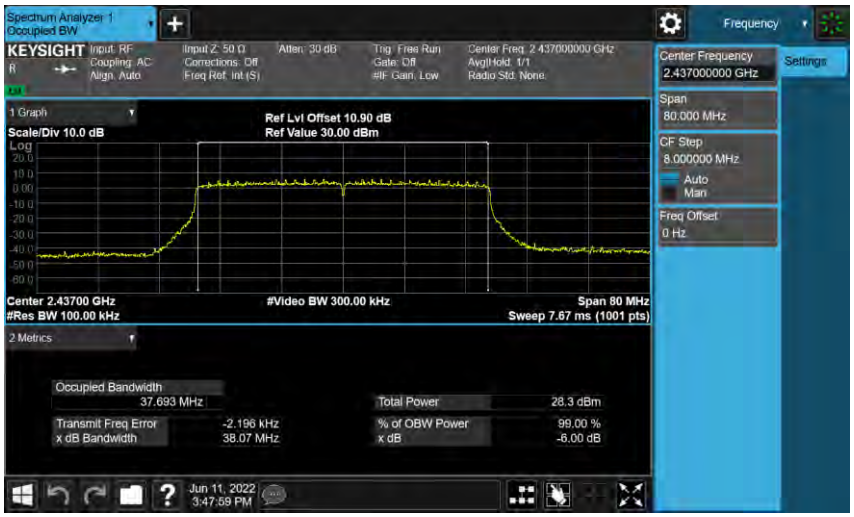
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant1	
2422 MHz	
2437 MHz	
2452 MHz	

Mode 2: IEEE 802.11b Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

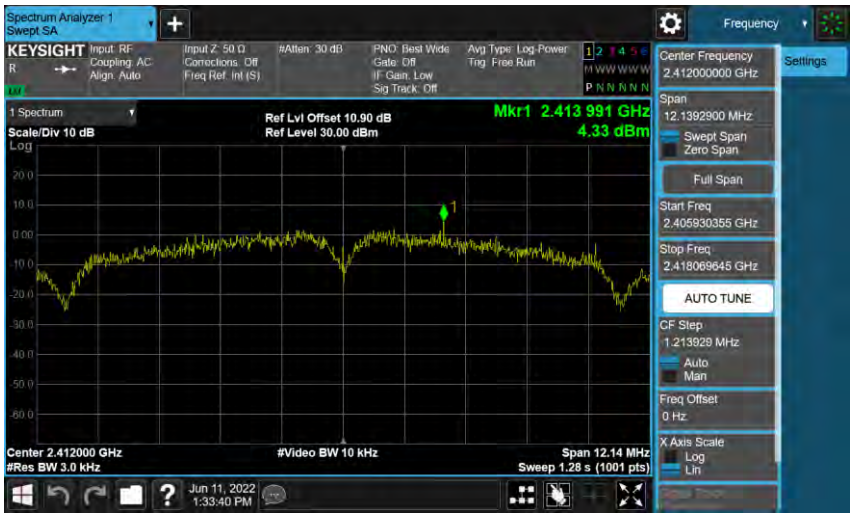
Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant2	
2422 MHz	
2437 MHz	
2452 MHz	

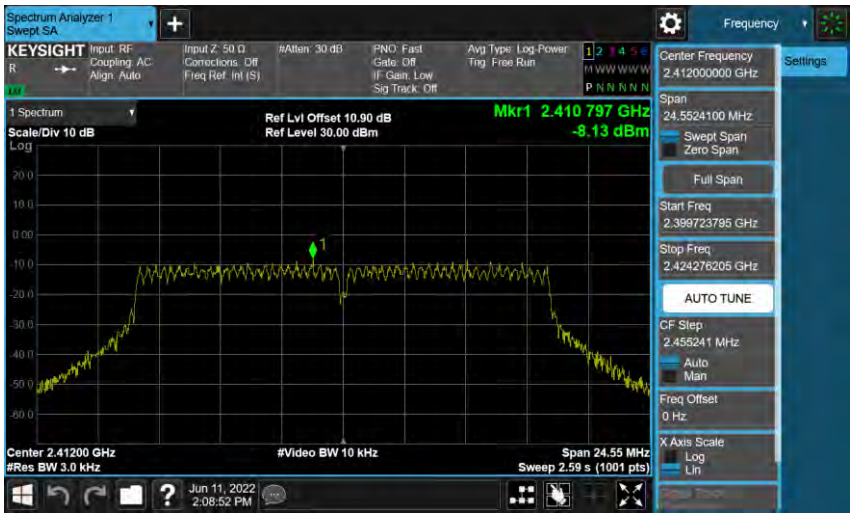
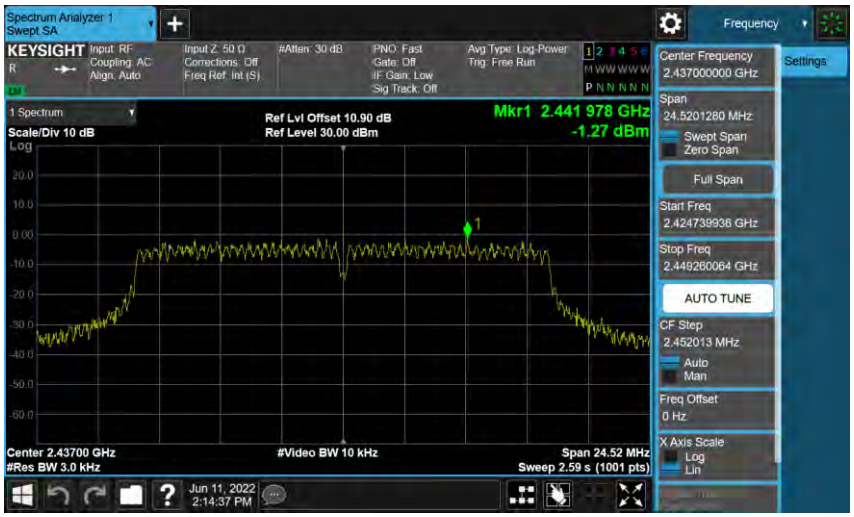
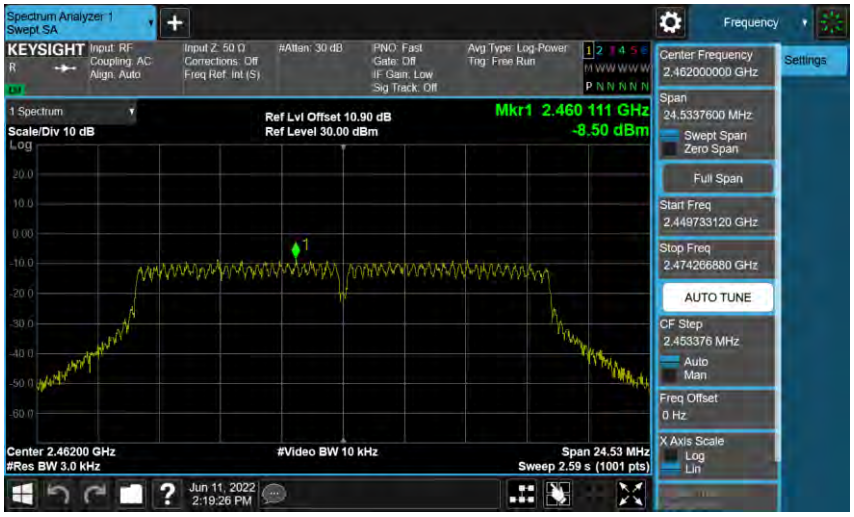
Maximum Power Spectral Density Measurement

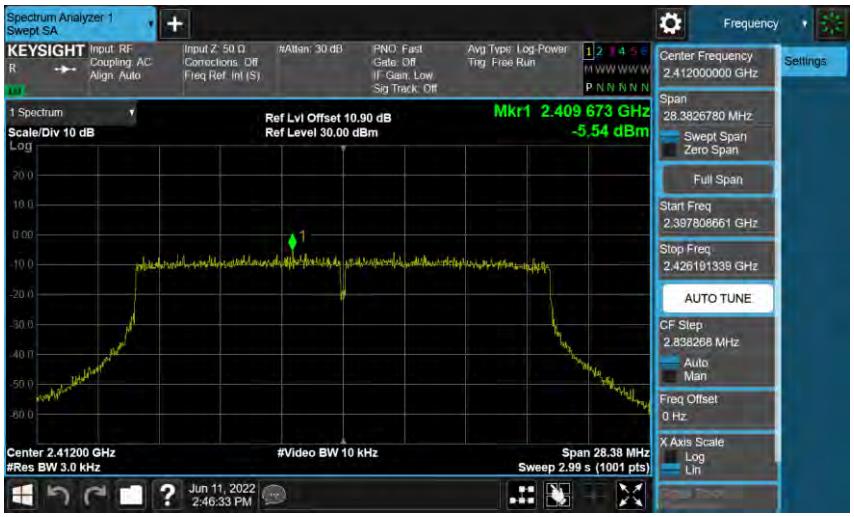
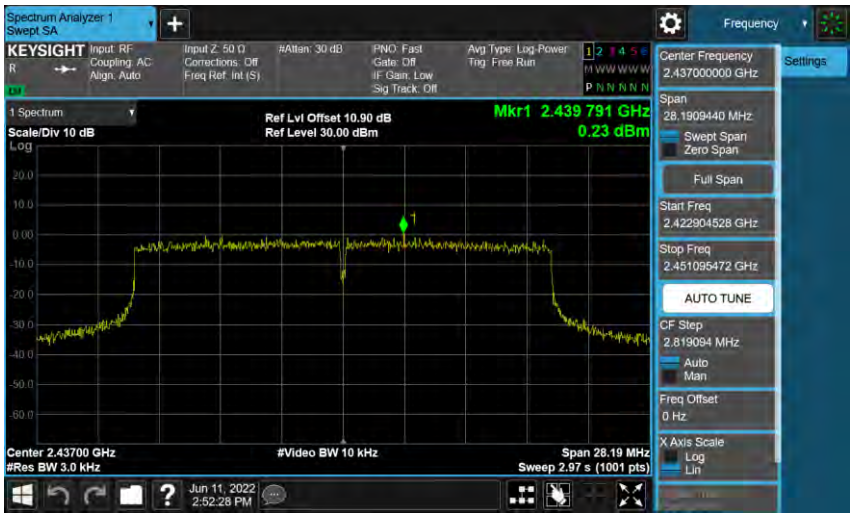
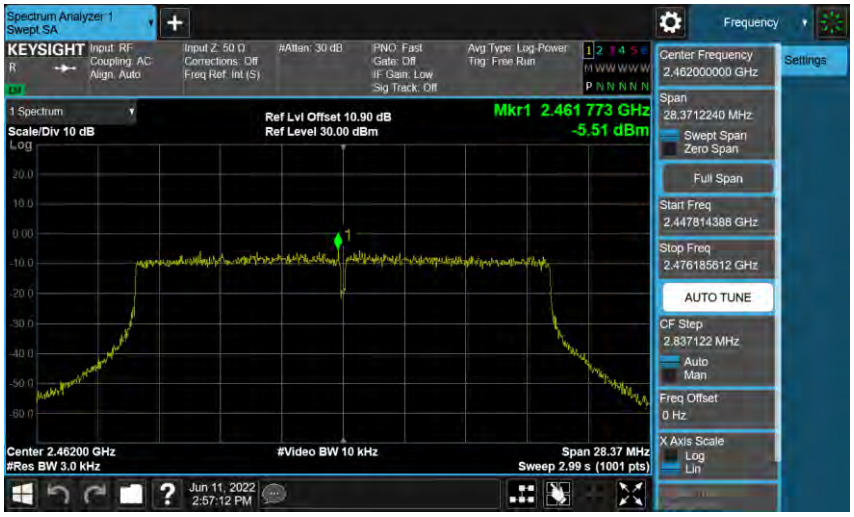
Ant1			
Test Mode	Frequency (MHz)	Measurement (dBm/3 kHz)	Limit (dBm/ 3 kHz)
Mode 2	2412	4.330	≤ 7.99
	2437	4.790	≤ 7.99
	2462	1.640	≤ 7.99
Mode 3	2412	-8.130	≤ 7.99
	2437	-1.270	≤ 7.99
	2462	-8.500	≤ 7.99
Mode 8	2412	-5.540	≤ 7.99
	2437	0.230	≤ 7.99
	2462	-5.510	≤ 7.99
Mode 9	2422	-11.770	≤ 7.99
	2437	-8.590	≤ 7.99
	2452	-10.940	≤ 7.99

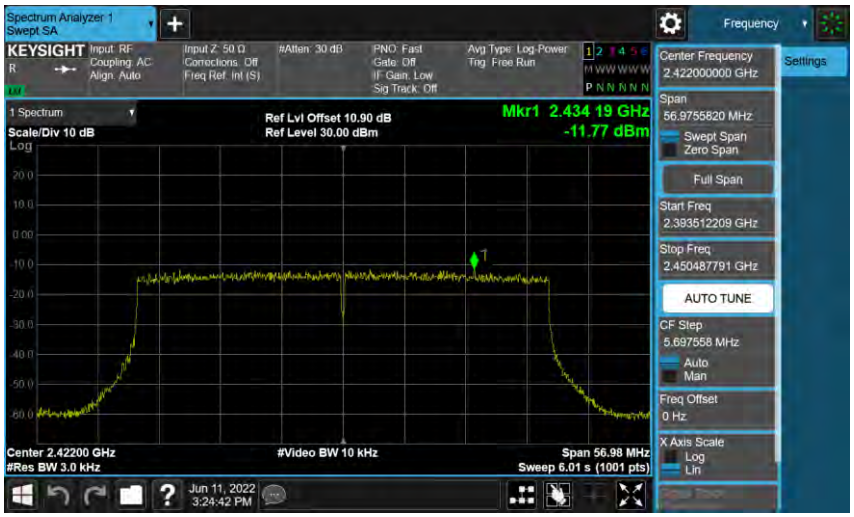
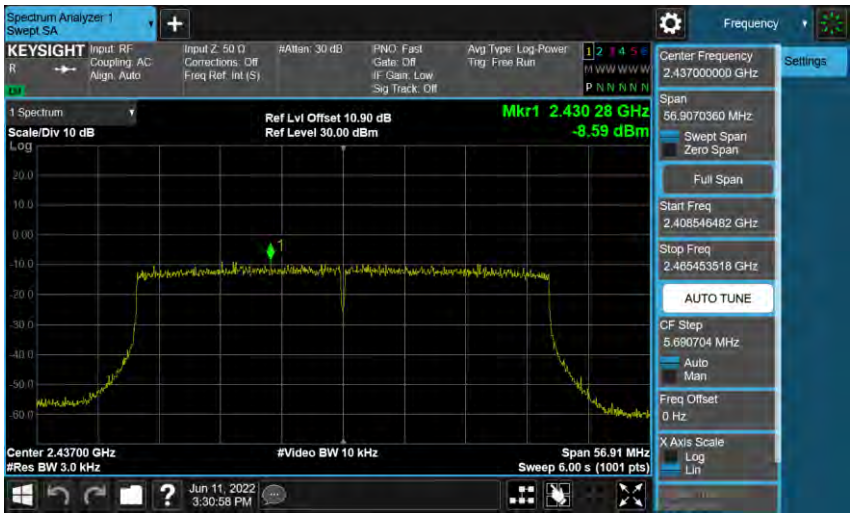
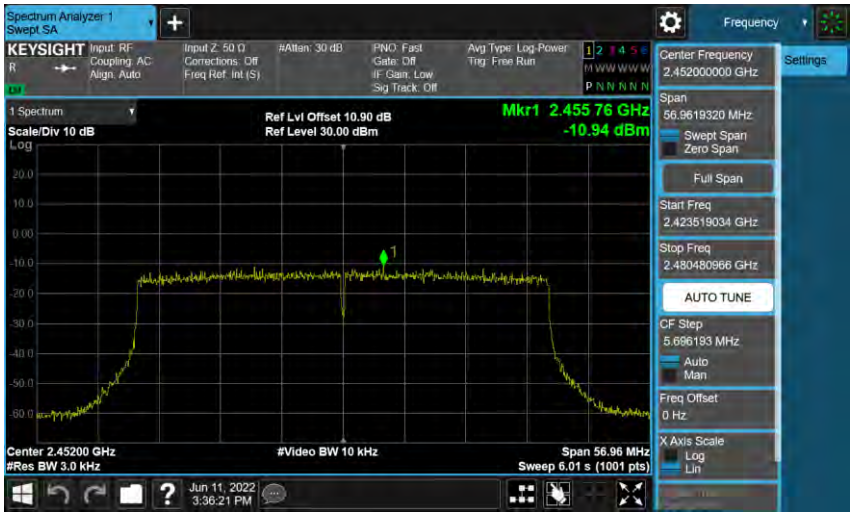
Ant2			
Test Mode	Frequency (MHz)	Measurement (dBm/3 kHz)	Limit (dBm/ 3 kHz)
Mode 2	2412	2.320	≤ 7.99
	2437	3.850	≤ 7.99
	2462	4.510	≤ 7.99
Mode 3	2412	-6.800	≤ 7.99
	2437	-1.420	≤ 7.99
	2462	-7.980	≤ 7.99
Mode 8	2412	-6.250	≤ 7.99
	2437	-0.400	≤ 7.99
	2462	-4.600	≤ 7.99
Mode 9	2422	-11.260	≤ 7.99
	2437	-9.040	≤ 7.99
	2452	-10.720	≤ 7.99

Ant1+2			
Test Mode	Frequency (MHz)	Measurement (dBm/3 kHz)	Limit (dBm/ 3 kHz)
Mode 2	2412	6.451	≤ 7.99
	2437	7.356	≤ 7.99
	2462	6.318	≤ 7.99
Mode 3	2412	-4.404	≤ 7.99
	2437	1.666	≤ 7.99
	2462	-5.222	≤ 7.99
Mode 4	2412	-2.870	≤ 7.99
	2437	2.937	≤ 7.99
	2462	-2.021	≤ 7.99
Mode 5	2422	-8.497	≤ 7.99
	2437	-5.799	≤ 7.99
	2452	-7.818	≤ 7.99

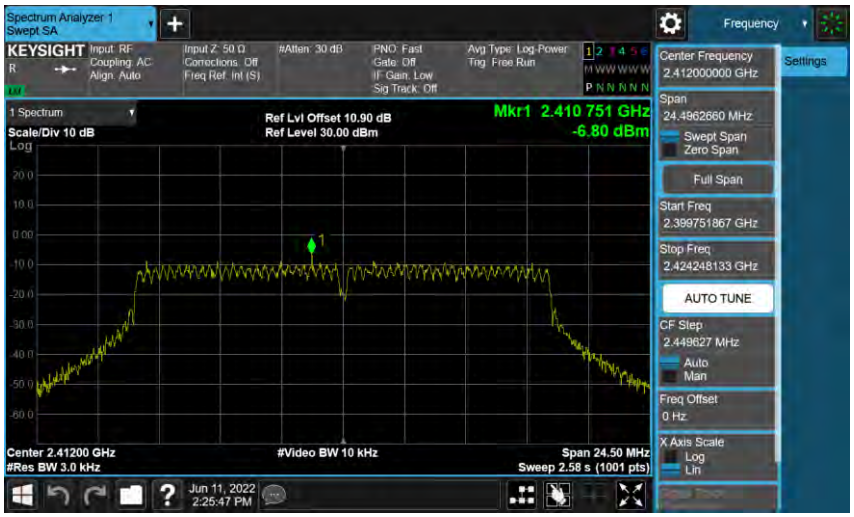
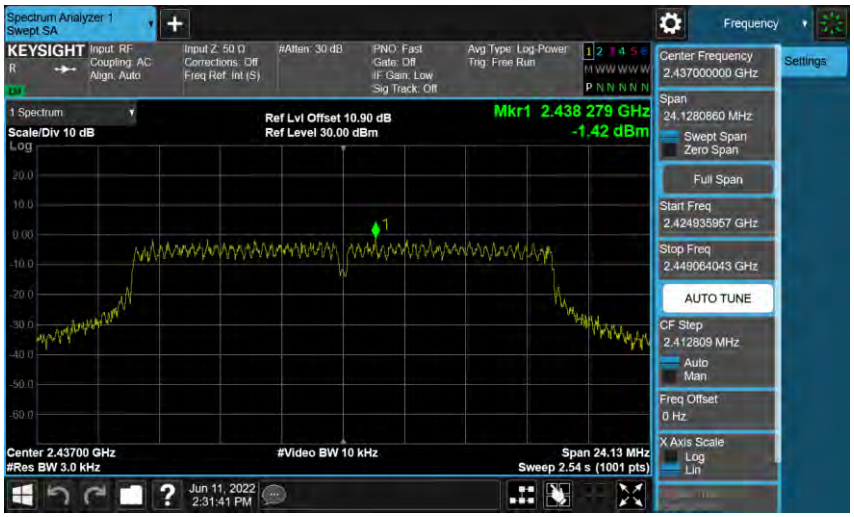
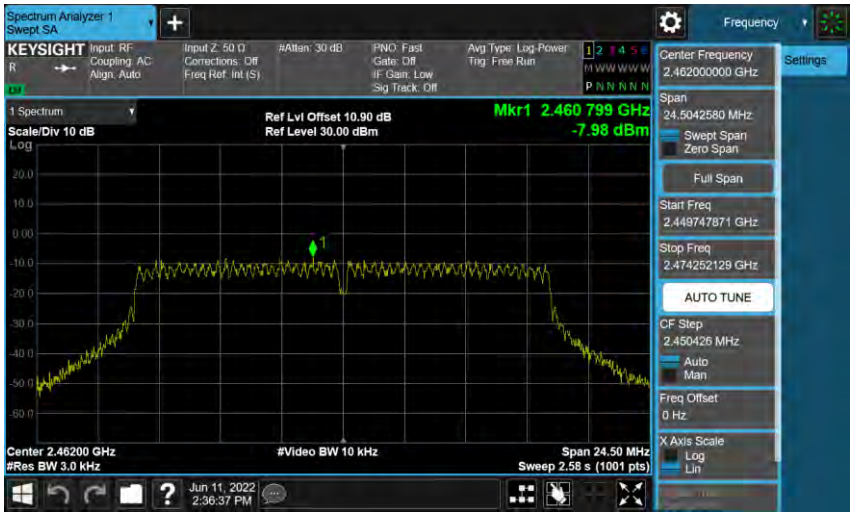
Mode 2: IEEE 802.11b Continuous TX mode_ Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

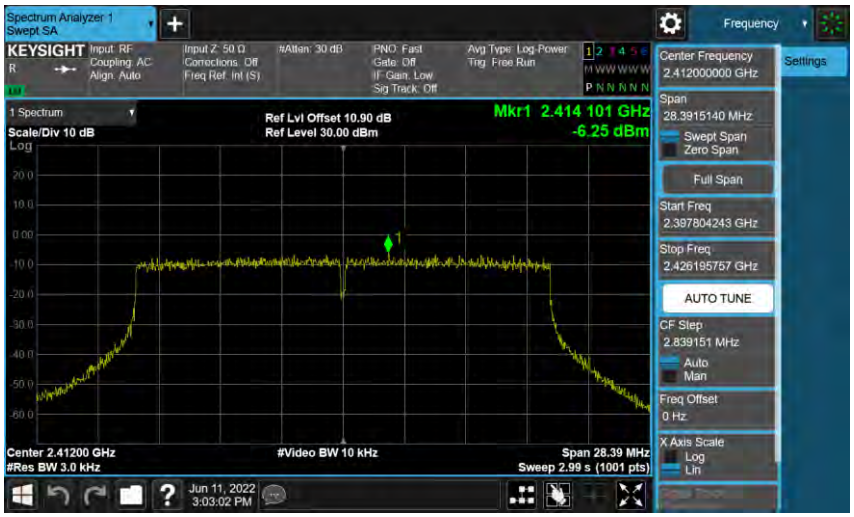
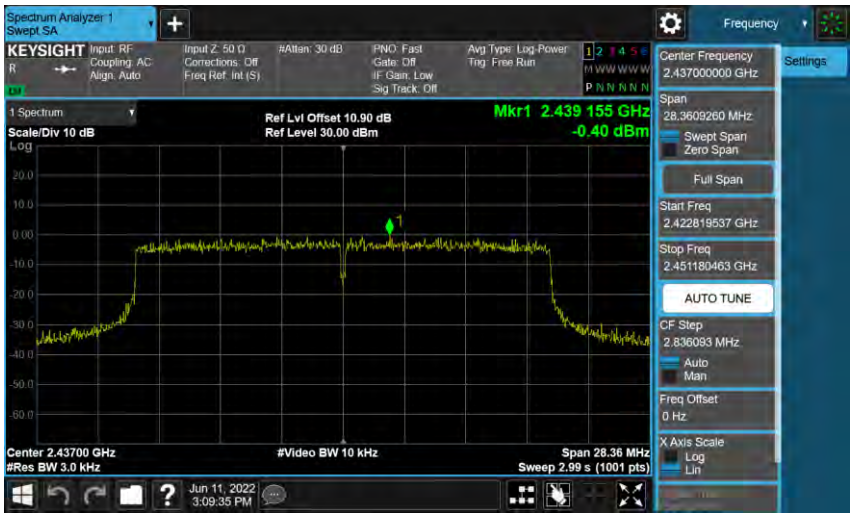
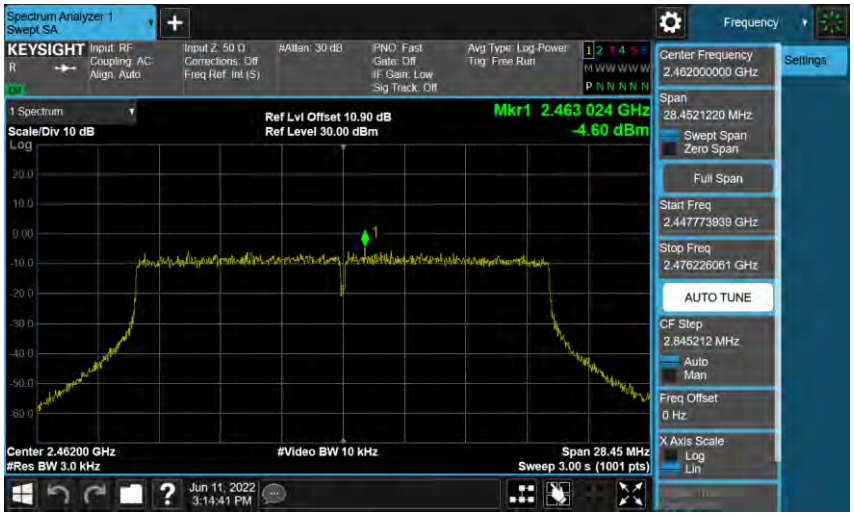
Mode 3: IEEE 802.11g Continuous TX mode_ Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

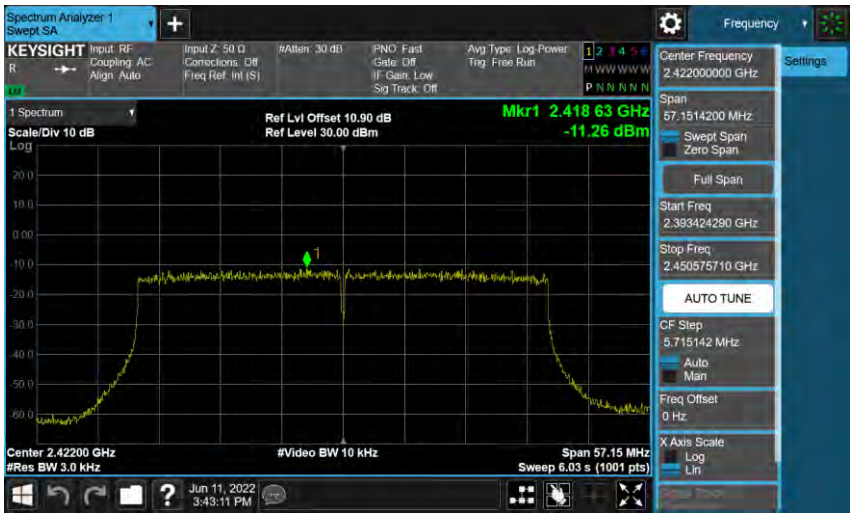
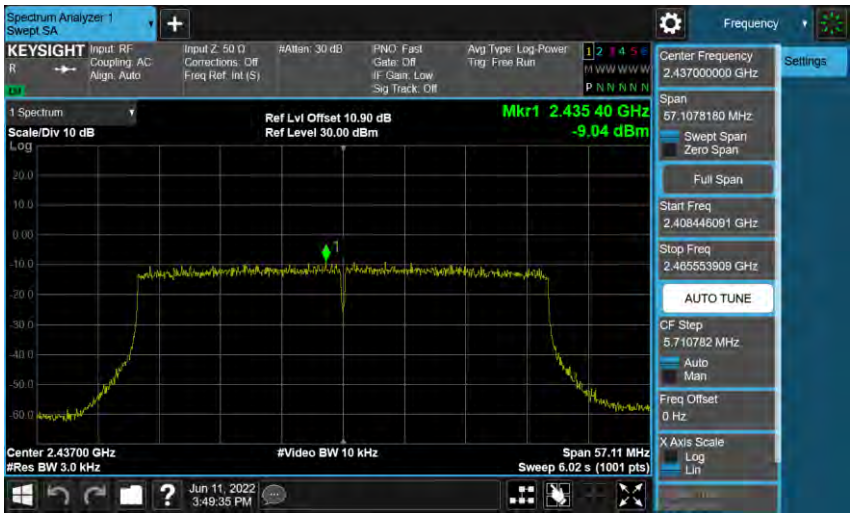
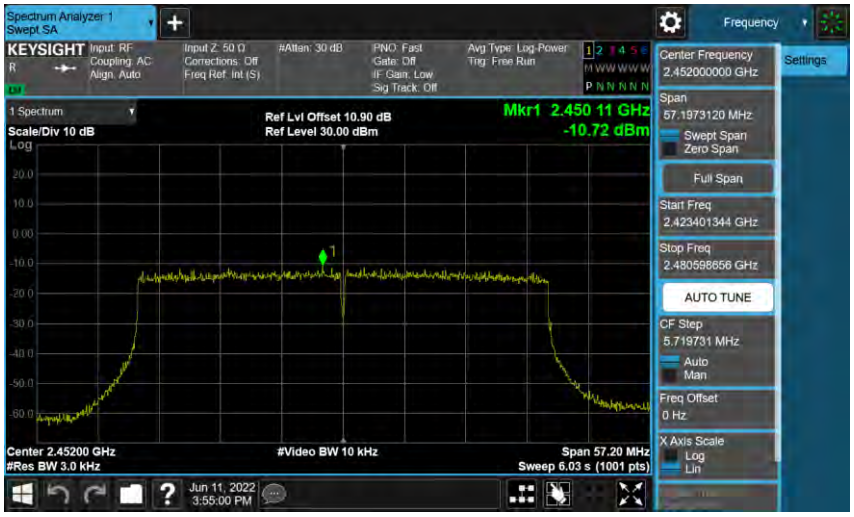
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_ Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_ Ant1	
2422 MHz	
2437 MHz	
2452 MHz	

Mode 2: IEEE 802.11b Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant2	
2422 MHz	
2437 MHz	
2452 MHz	

Out of Band Conducted Emissions Measurement

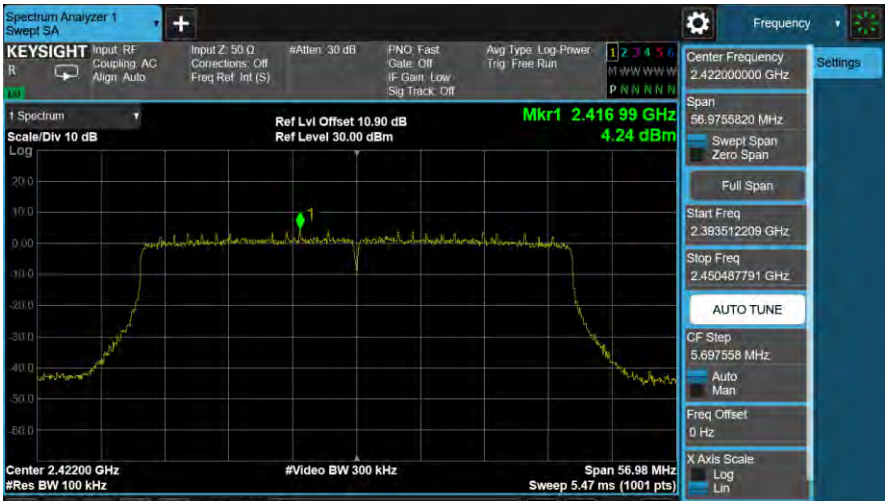
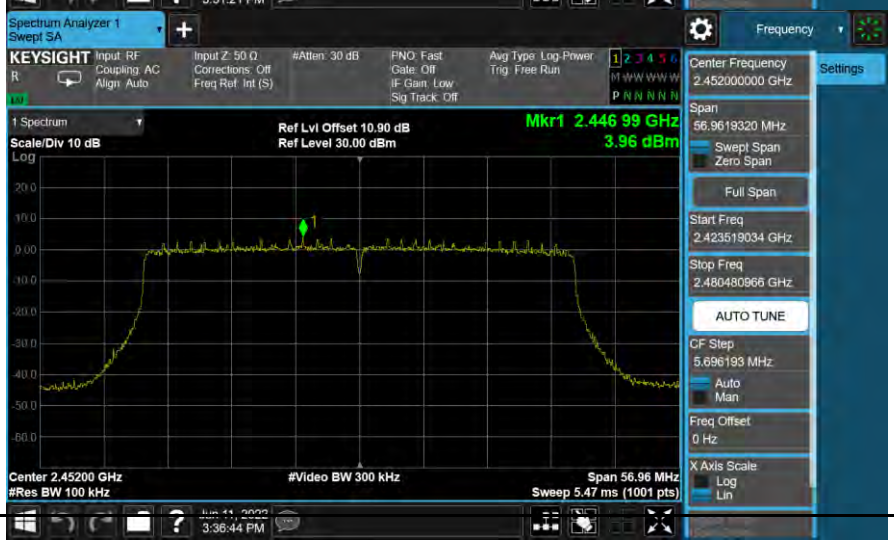
- **Test Graphs**

Reference level

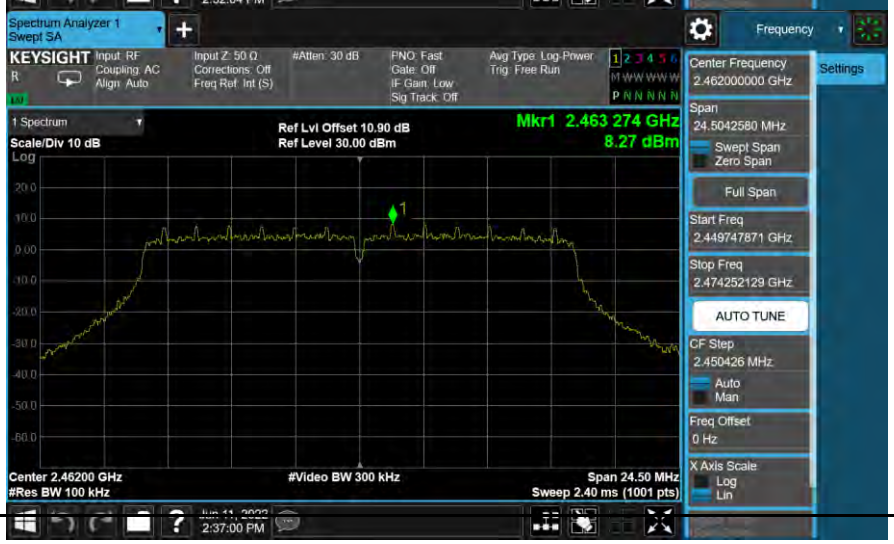
Mode 2: IEEE 802.11b Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

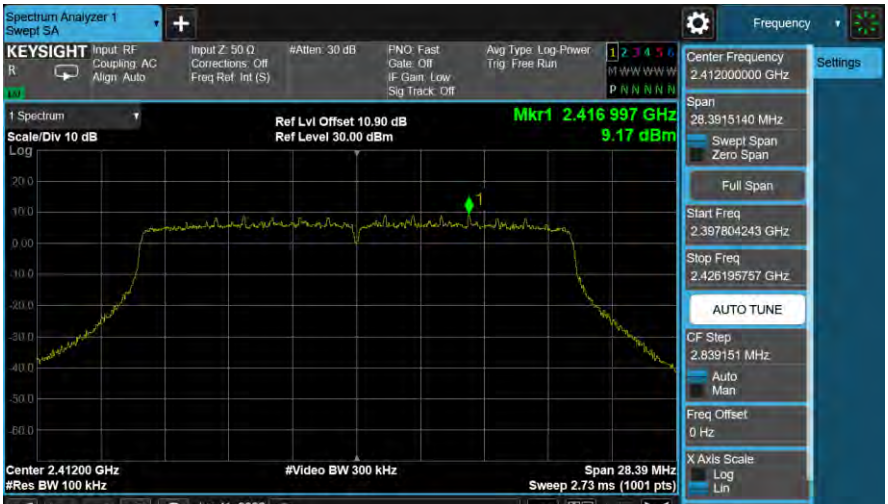
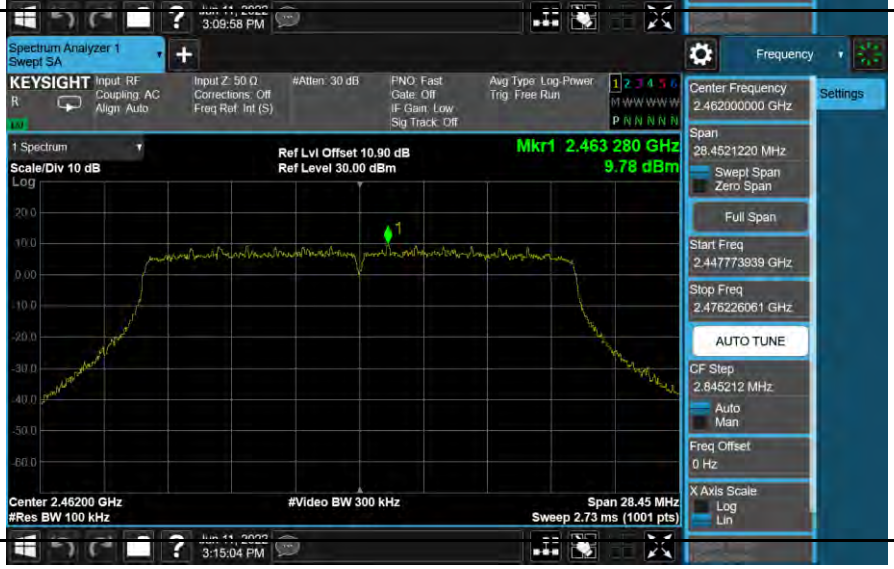
Mode 3: IEEE 802.11g Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

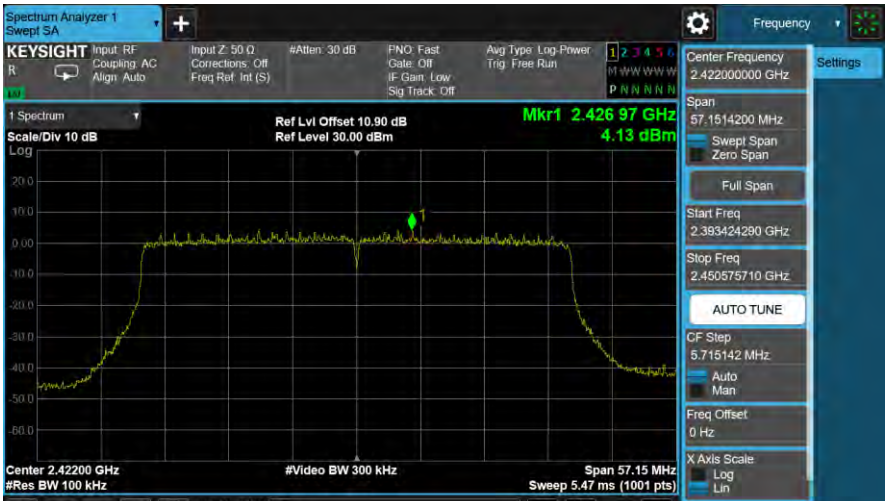
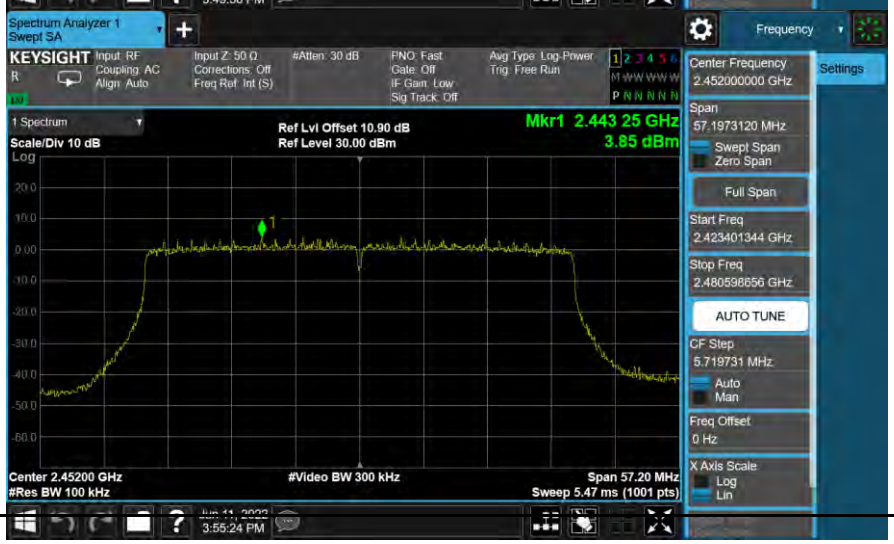
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant1	
2422 MHz	
2437 MHz	
2452 MHz	

Mode 2: IEEE 802.11b Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant2	
2422 MHz	
2437 MHz	
2452 MHz	

Out of Band Conducted Emissions

Mode 2: IEEE 802.11b Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant1	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant1	
2422 MHz	
2437 MHz	
2452 MHz	

Mode 2: IEEE 802.11b Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant2	
2412 MHz	
2437 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant2	
2422 MHz	
2437 MHz	
2452 MHz	

Conducted Band Edge

Mode 2: IEEE 802.11b Continuous TX mode_Ant1	
2412 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant1	
2412 MHz	
2462 MHz	

Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant1	
2412 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant1	
2422 MHz	
2452 MHz	

Mode 2: IEEE 802.11b Continuous TX mode_Ant2	
2412 MHz	
2462 MHz	

Mode 3: IEEE 802.11g Continuous TX mode_Ant2	
2412 MHz	
2462 MHz	

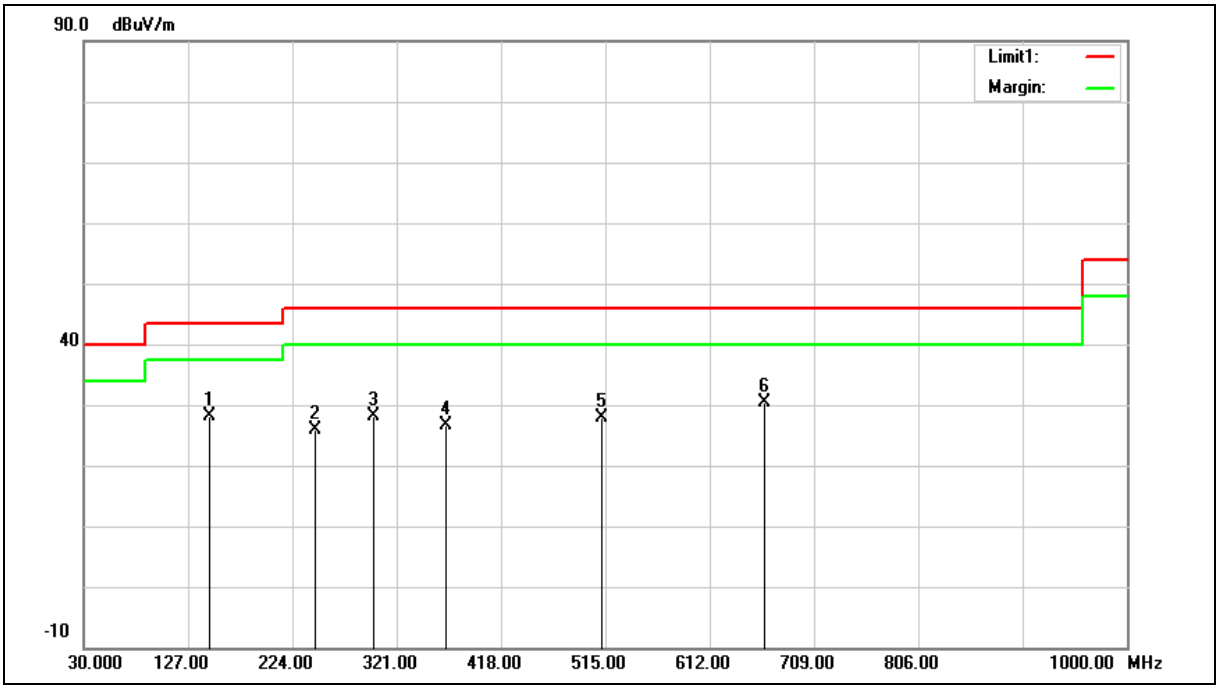
Mode 8: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode_Ant2	
2412 MHz	
2462 MHz	

Mode 9: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode_Ant2	
2422 MHz	
2452 MHz	

5.3. Radiated Emission Measurement

Below 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3m
Mode:	Mode 1		
Ant.Polar.:	Horizontal		



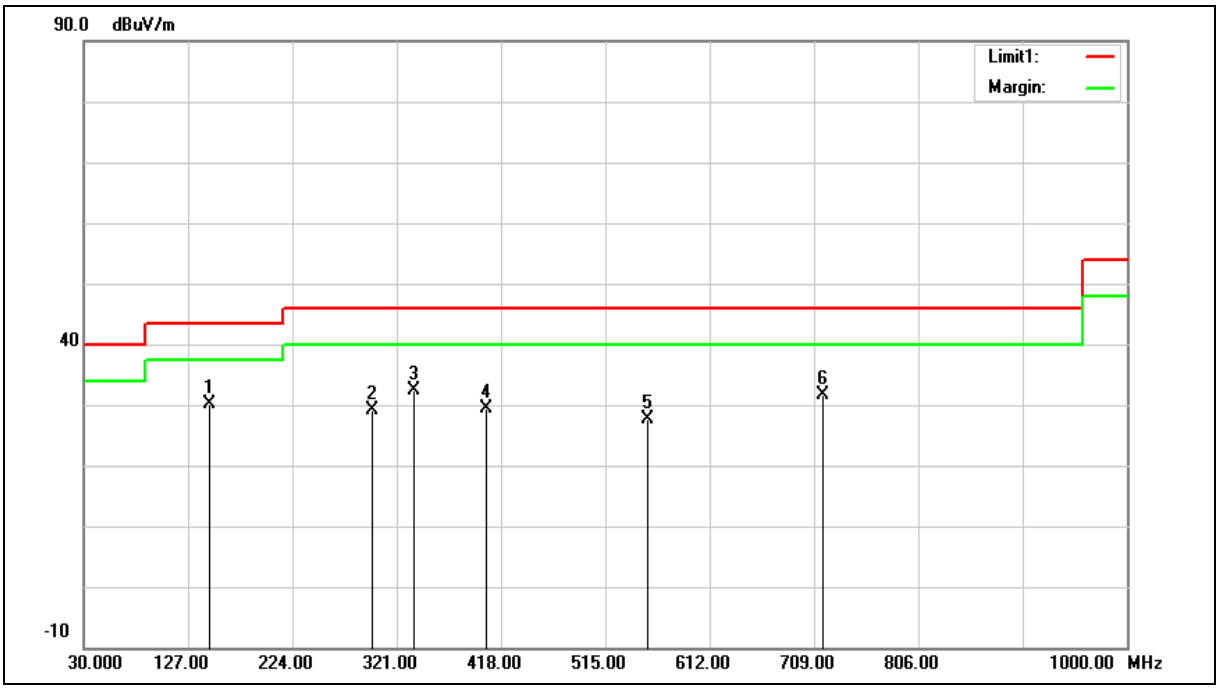
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.3700	35.35	-7.19	28.16	43.50	-15.34	QP
2	245.3400	34.01	-8.13	25.88	46.00	-20.12	QP
3	299.6600	34.63	-6.62	28.01	46.00	-17.99	QP
4	366.5900	31.82	-5.13	26.69	46.00	-19.31	QP
5	511.1200	30.39	-2.56	27.83	46.00	-18.17	QP
6	662.4400	29.39	0.96	30.35	46.00	-15.65	QP

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
Mode:	Mode 1		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	147.3700	37.40	-7.19	30.21	43.50	-13.29	QP
2	298.6900	35.65	-6.64	29.01	46.00	-16.99	QP
3	336.5200	38.11	-5.82	32.29	46.00	-13.71	QP
4	404.4200	33.51	-4.20	29.31	46.00	-16.69	QP
5	554.7700	29.12	-1.41	27.71	46.00	-18.29	QP
6	717.7300	29.42	2.09	31.51	46.00	-14.49	QP

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

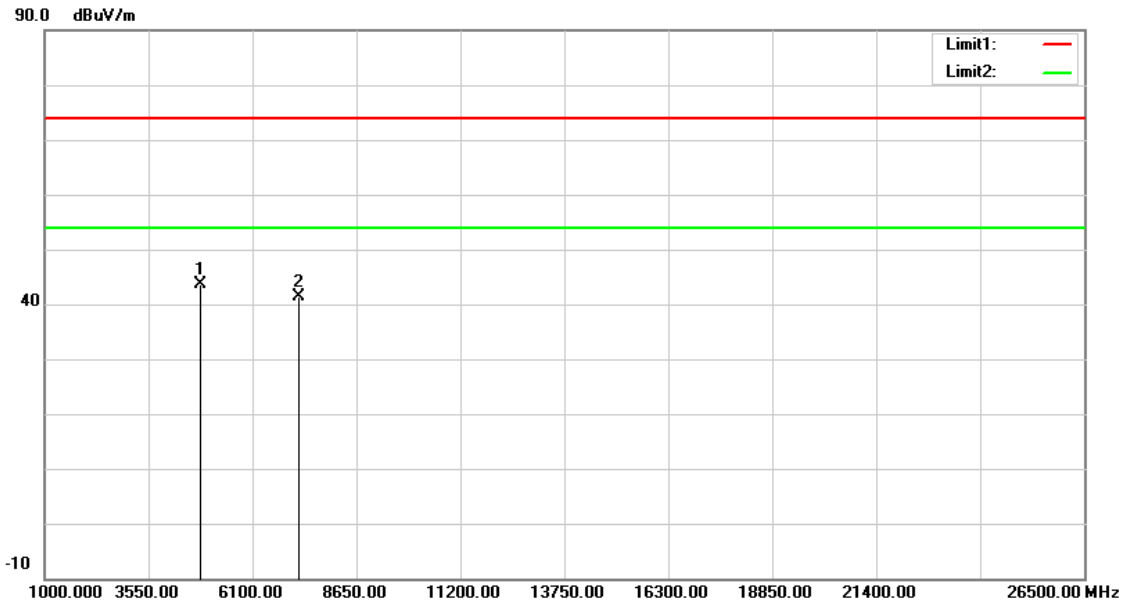
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

Harmonic

Above 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



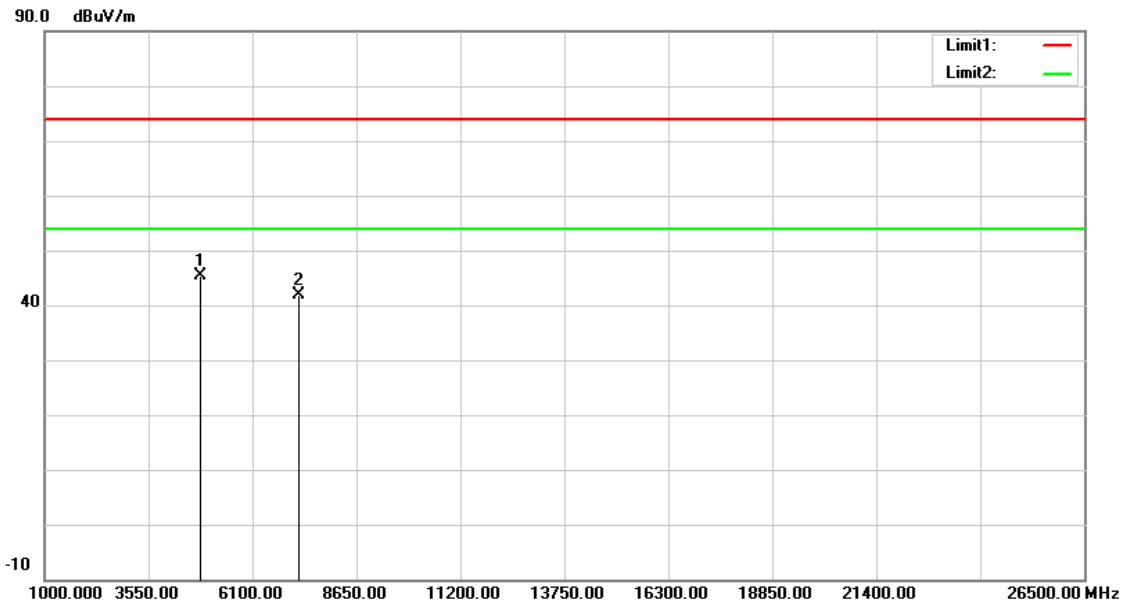
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	44.54	-0.98	43.56	74.00	-30.44	peak
2	7236.000	35.10	6.16	41.26	74.00	-32.74	peak

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.

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



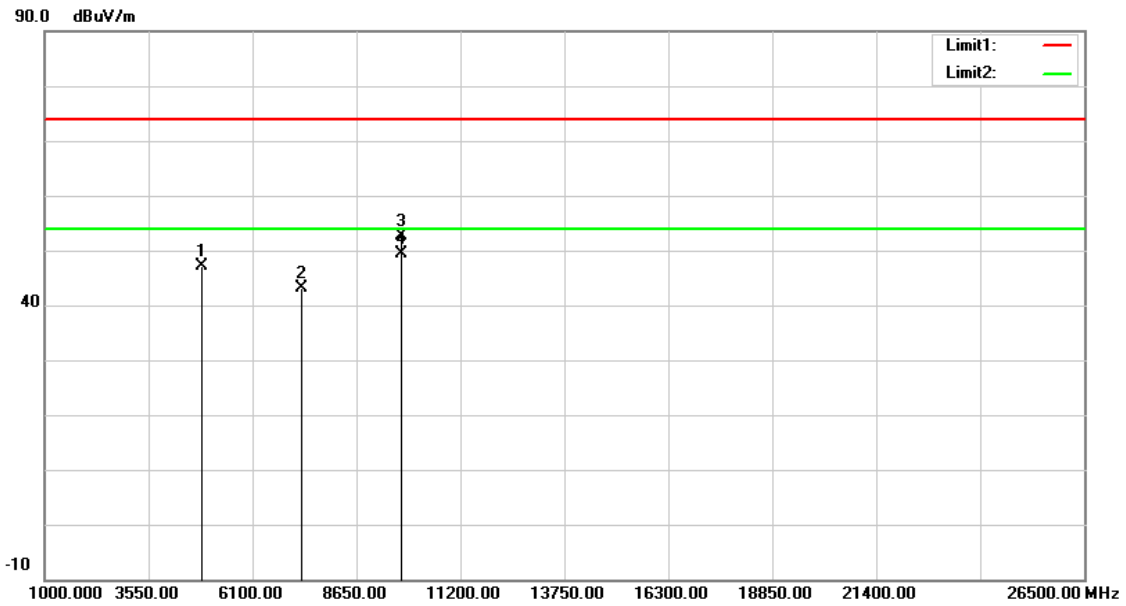
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	46.41	-0.98	45.43	74.00	-28.57	peak
2	7236.000	35.73	6.16	41.89	74.00	-32.11	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



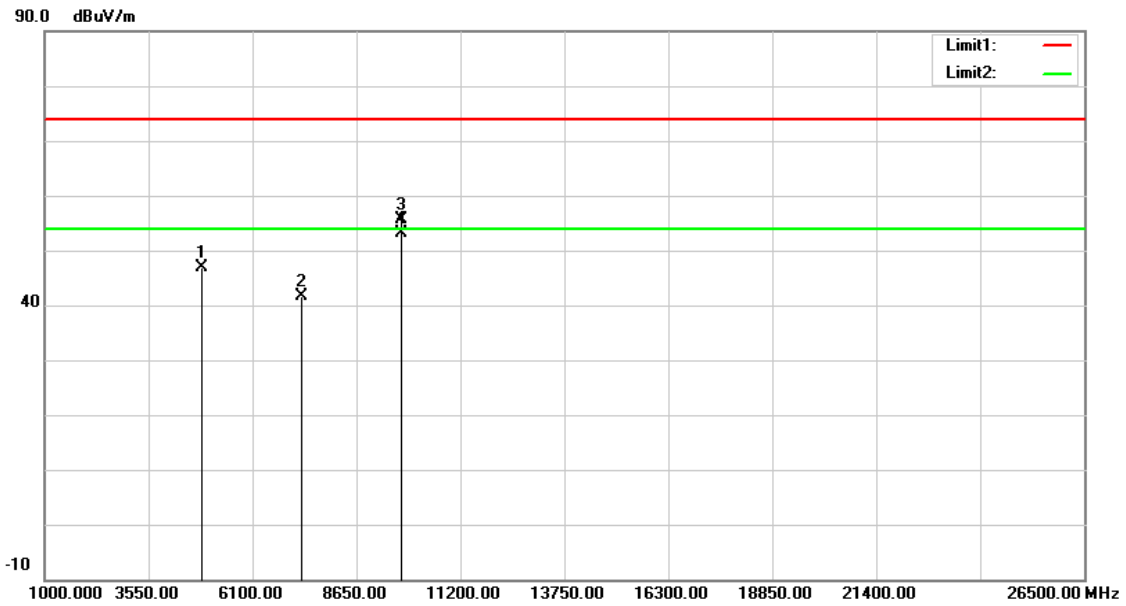
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	47.83	-0.80	47.03	74.00	-26.97	peak
2	7311.000	36.57	6.46	43.03	74.00	-30.97	peak
3	9748.000	39.59	12.95	52.54	74.00	-21.46	peak
4	9748.000	36.34	12.95	49.29	54.00	-4.71	AVG

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



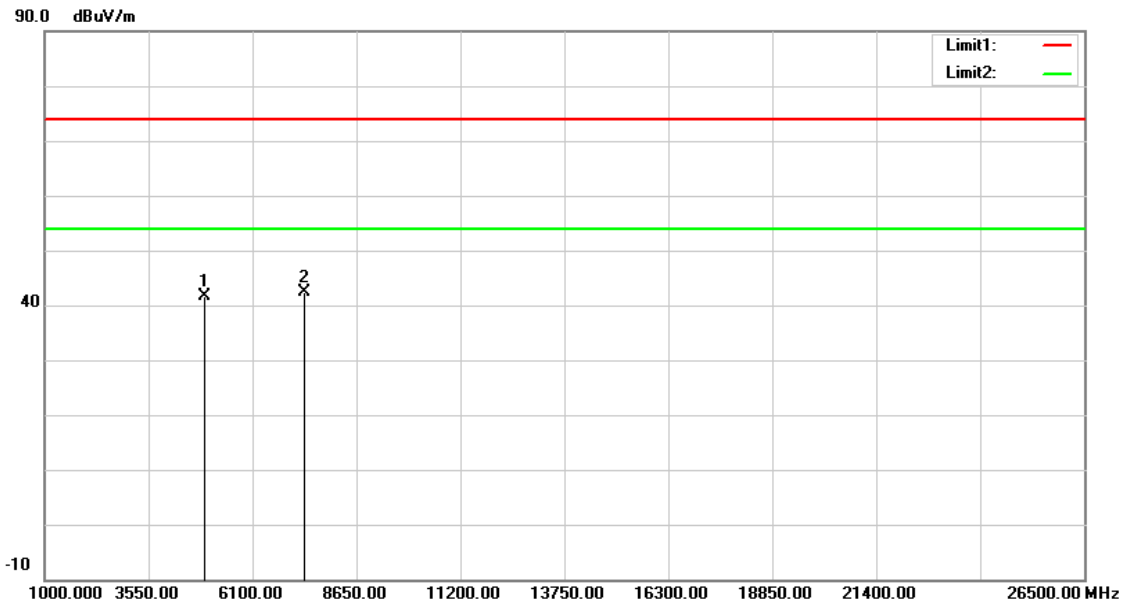
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	47.63	-0.80	46.83	74.00	-27.17	peak
2	7311.000	35.28	6.46	41.74	74.00	-32.26	peak
3	9748.000	42.76	12.95	55.71	74.00	-18.29	peak
4	9748.000	40.06	12.95	53.01	54.00	-0.99	AVG

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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



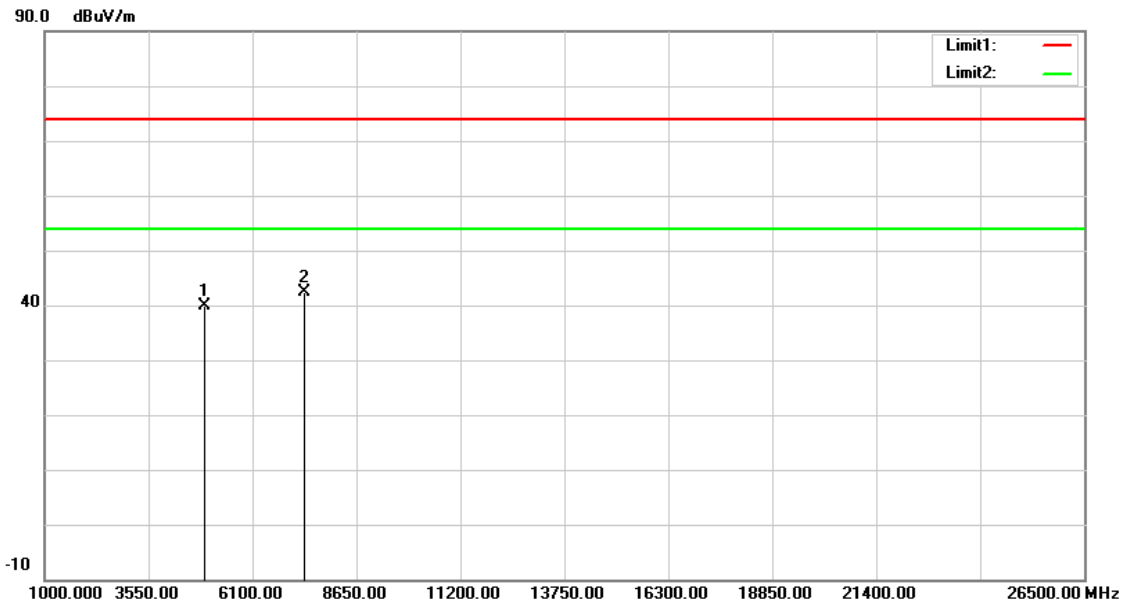
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	42.32	-0.63	41.69	74.00	-32.31	peak
2	7386.000	35.62	6.75	42.37	74.00	-31.63	peak

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:	3 m
Test item:	Harmonic		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



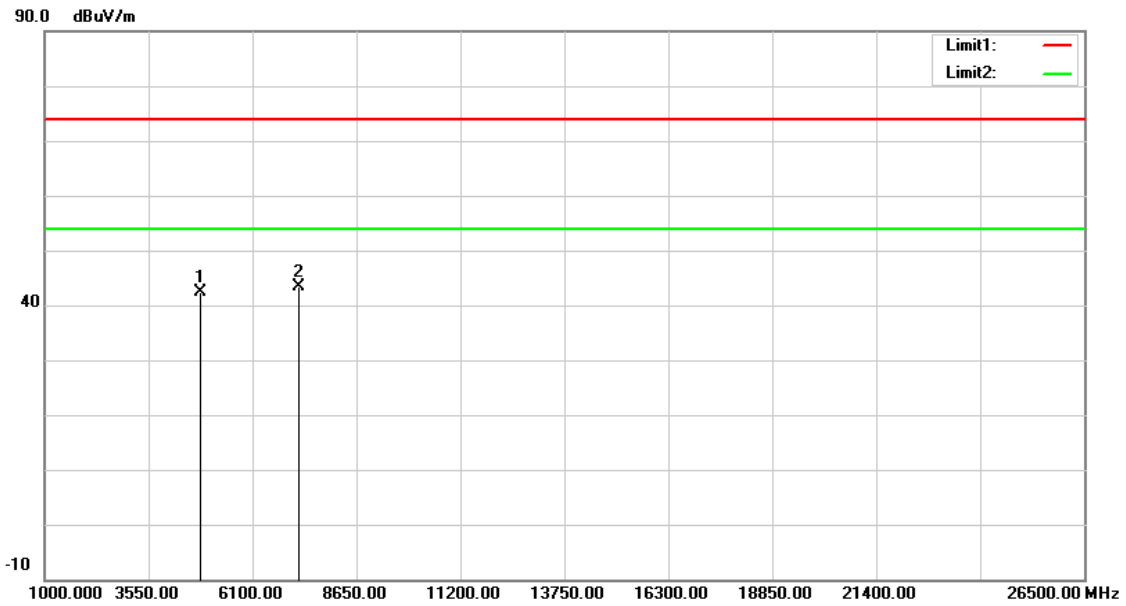
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	40.59	-0.63	39.96	74.00	-34.04	peak
2	7386.000	35.75	6.75	42.50	74.00	-31.50	peak

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:	3 m
Test item:	Harmonic		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



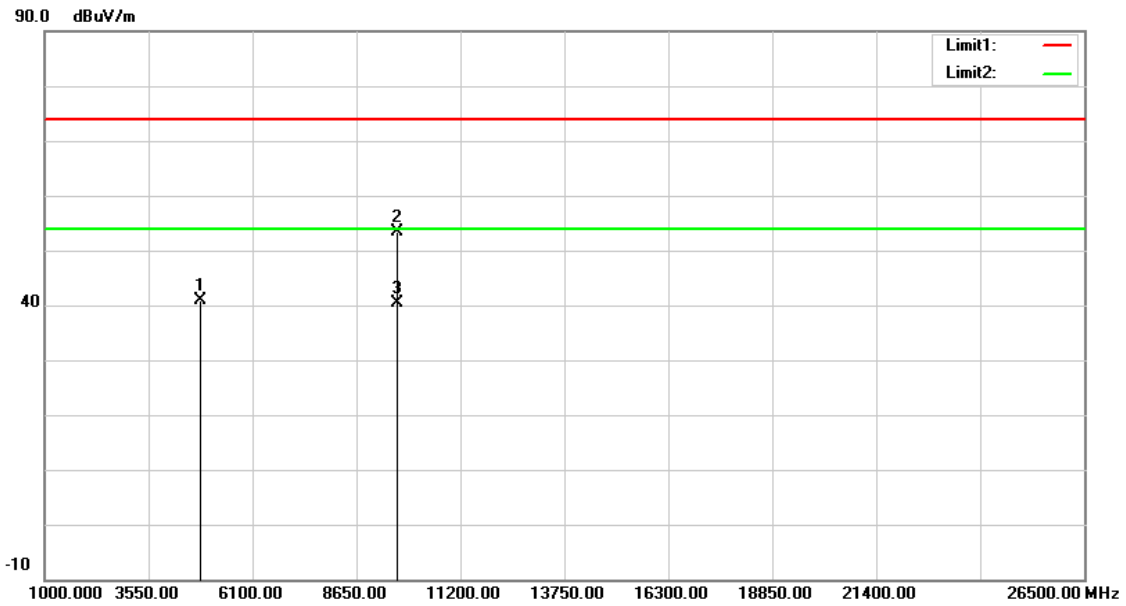
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	43.30	-0.98	42.32	74.00	-31.68	peak
2	7236.000	37.11	6.16	43.27	74.00	-30.73	peak

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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



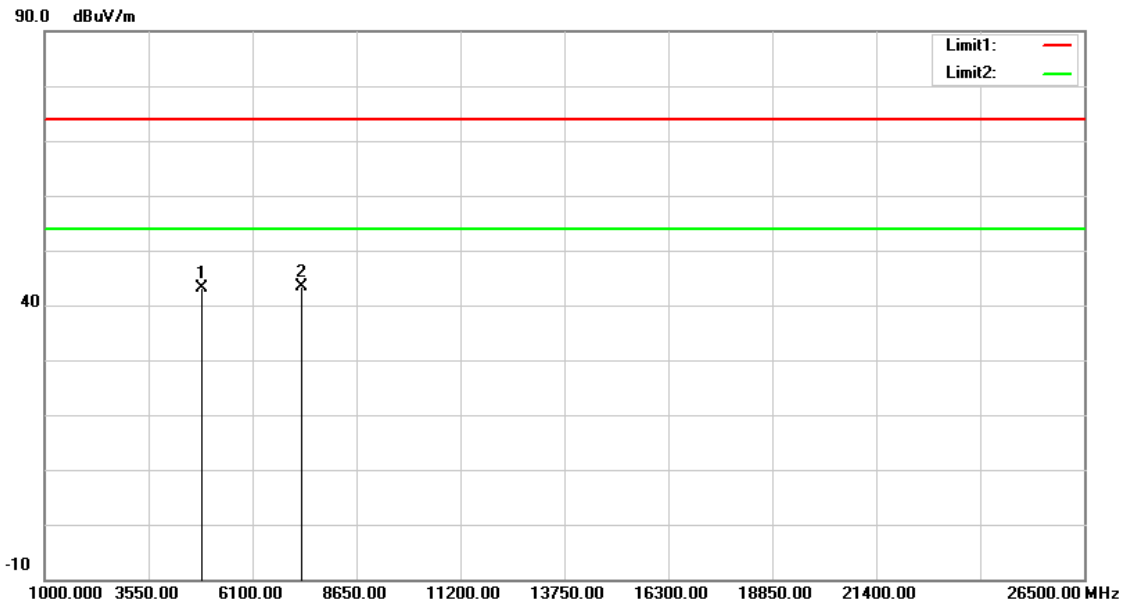
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	41.91	-0.98	40.93	74.00	-33.07	peak
2	9648.000	40.59	12.71	53.30	74.00	-20.70	peak
3	9648.000	27.72	12.71	40.43	54.00	-13.57	AVG

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:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



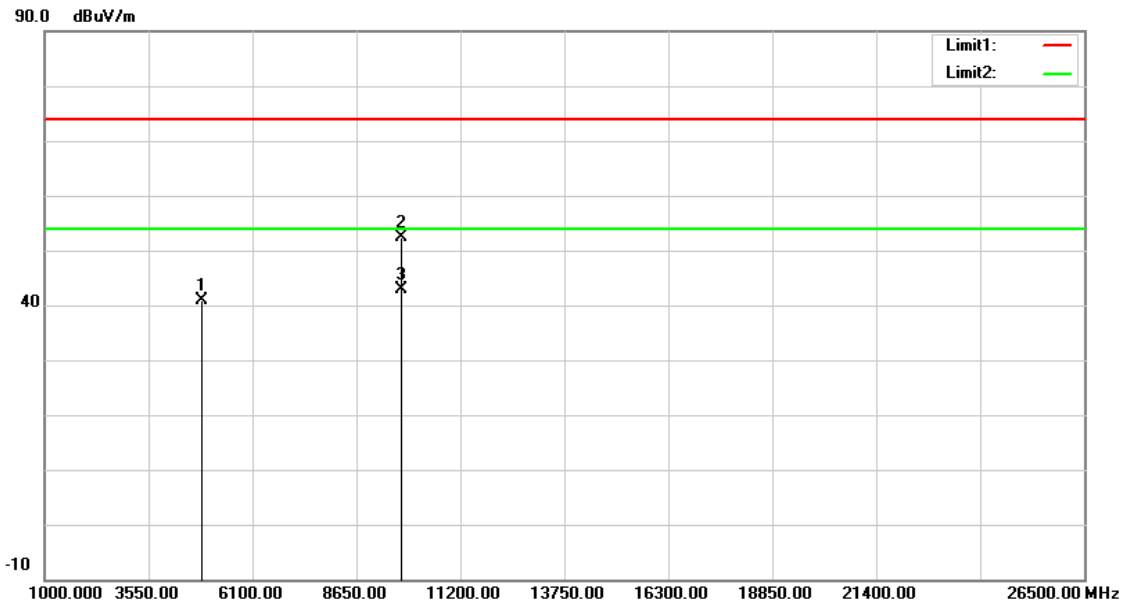
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	43.92	-0.80	43.12	74.00	-30.88	peak
2	7311.000	36.89	6.46	43.35	74.00	-30.65	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



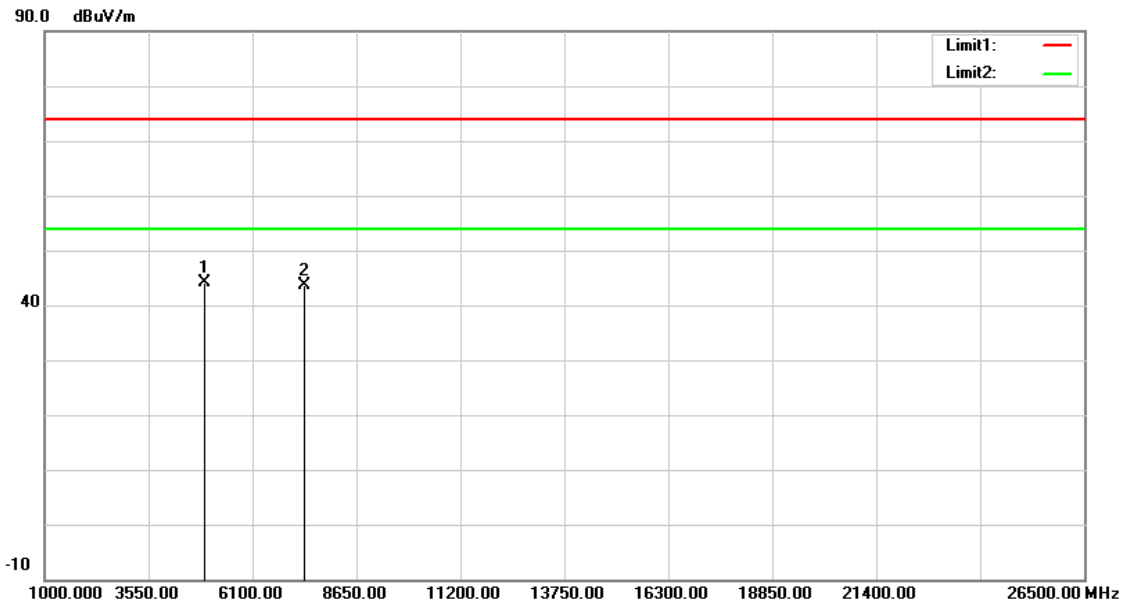
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	41.62	-0.80	40.82	74.00	-33.18	peak
2	9748.000	39.54	12.95	52.49	74.00	-21.51	peak
3	9748.000	29.87	12.95	42.82	54.00	-11.18	AVG

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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



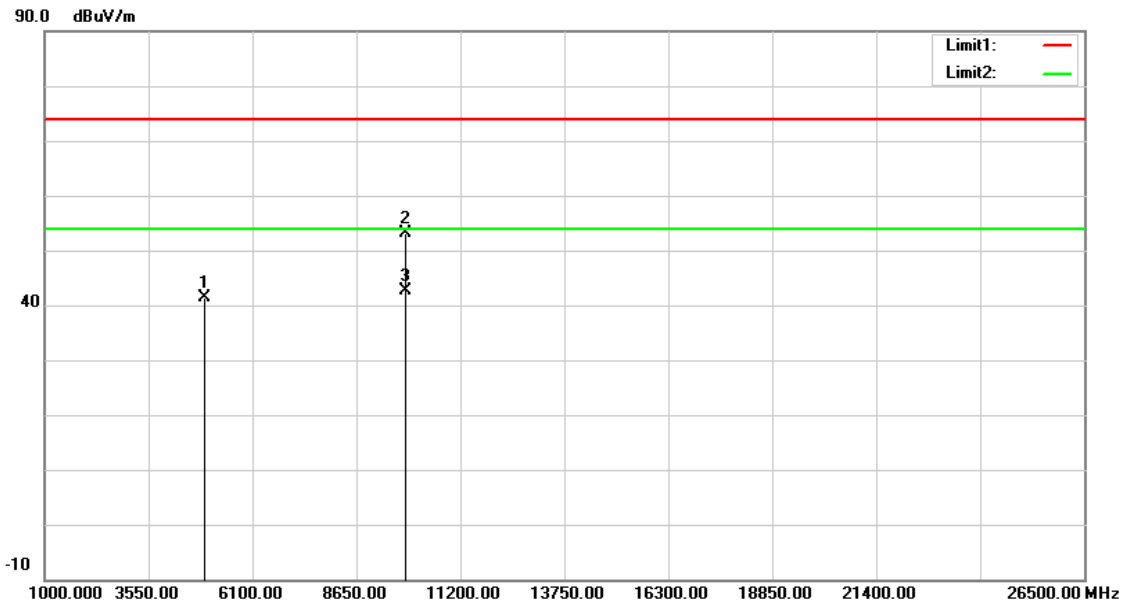
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	44.79	-0.63	44.16	74.00	-29.84	peak
2	7386.000	36.80	6.75	43.55	74.00	-30.45	peak

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:	3 m
Test item:	Harmonic		
Frequency:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



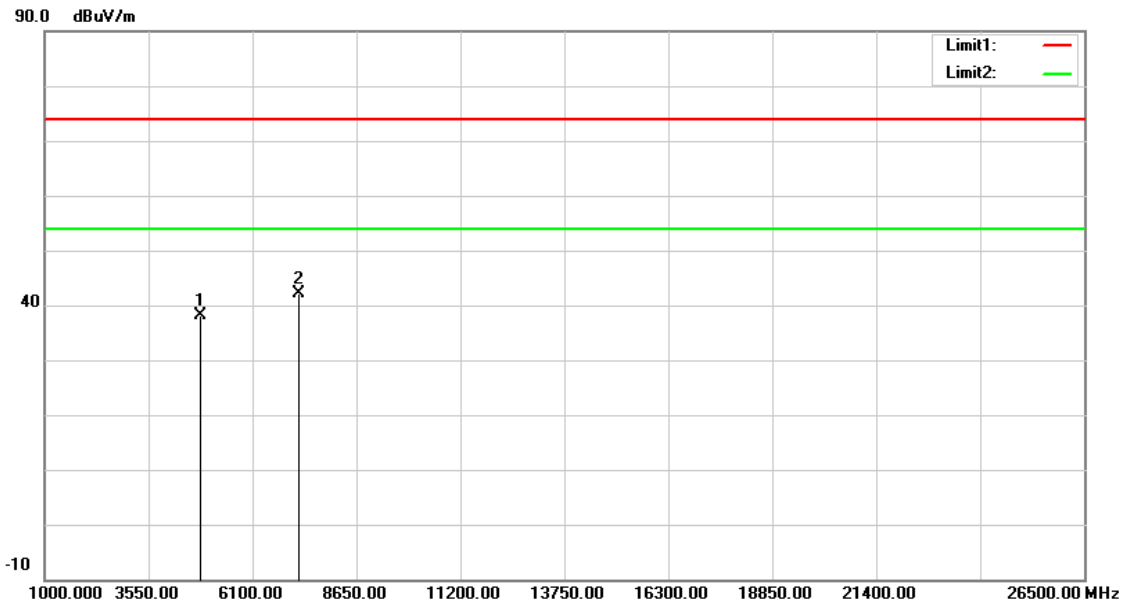
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	42.13	-0.63	41.50	74.00	-32.50	peak
2	9848.000	40.00	13.18	53.18	74.00	-20.82	peak
3	9848.000	29.39	13.18	42.57	54.00	-11.43	AVG

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:	Harmonic		
Frequency:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



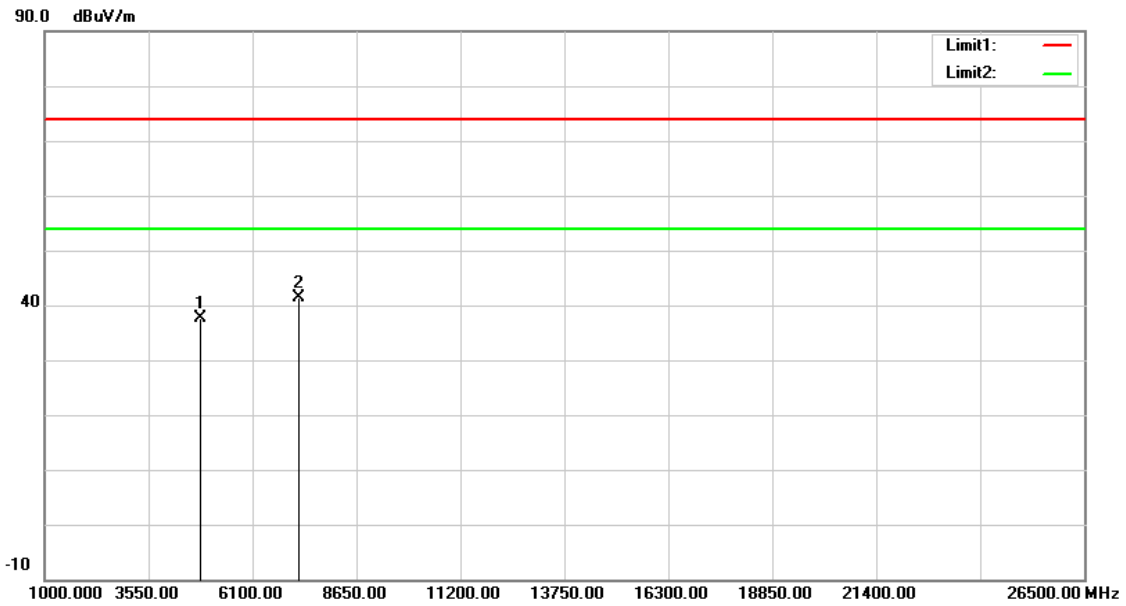
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	39.12	-0.98	38.14	74.00	-35.86	peak
2	7236.000	35.86	6.16	42.02	74.00	-31.98	peak

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:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



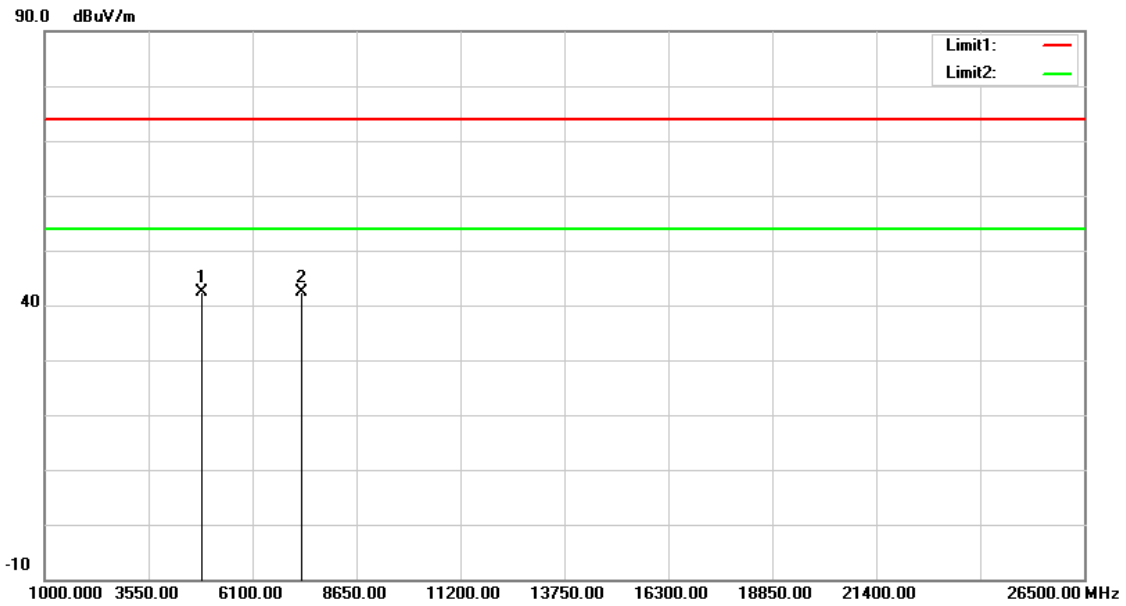
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	38.49	-0.98	37.51	74.00	-36.49	peak
2	7236.000	35.31	6.16	41.47	74.00	-32.53	peak

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:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



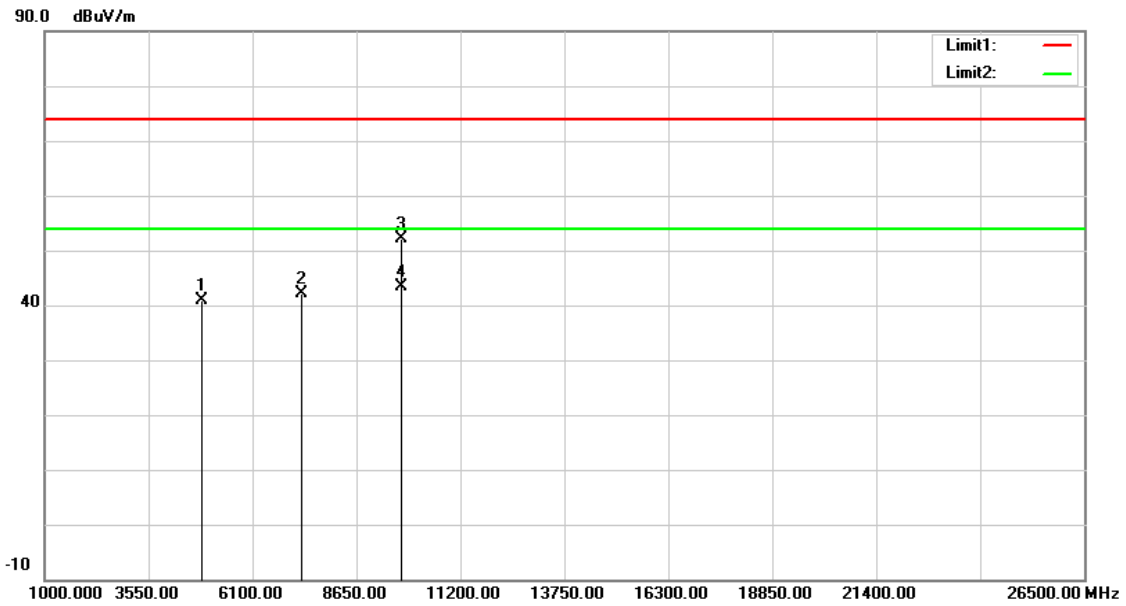
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	43.27	-0.80	42.47	74.00	-31.53	peak
2	7311.000	35.99	6.46	42.45	74.00	-31.55	peak

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:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



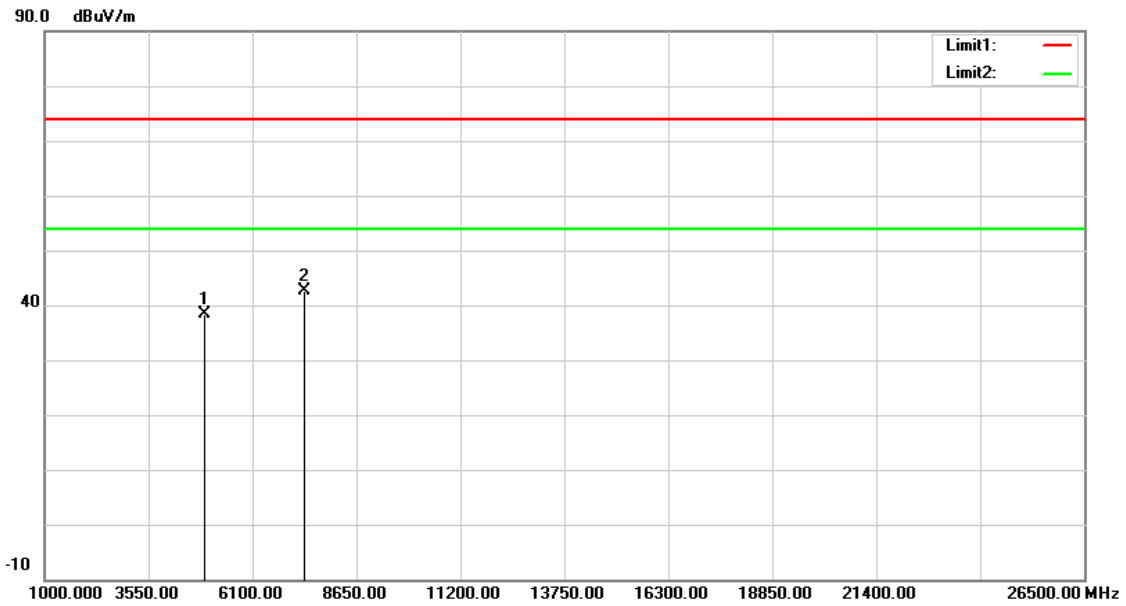
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	41.67	-0.80	40.87	74.00	-33.13	peak
2	7311.000	35.65	6.46	42.11	74.00	-31.89	peak
3	9748.000	39.21	12.95	52.16	74.00	-21.84	peak
4	9748.000	30.55	12.95	43.50	54.00	-10.50	AVG

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:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



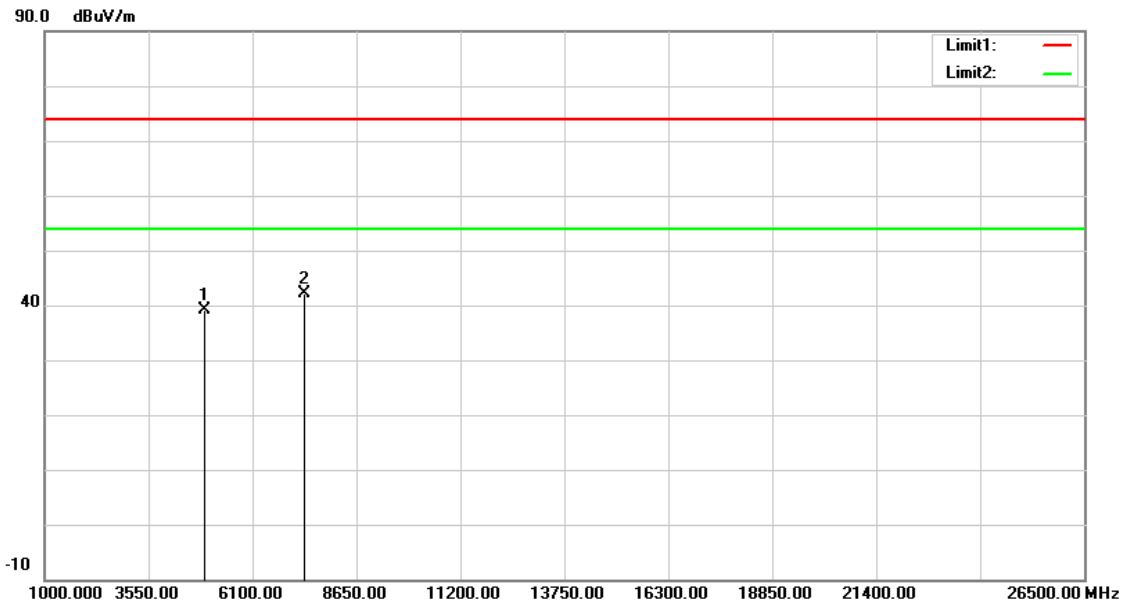
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	39.02	-0.63	38.39	74.00	-35.61	peak
2	7386.000	35.96	6.75	42.71	74.00	-31.29	peak

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:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



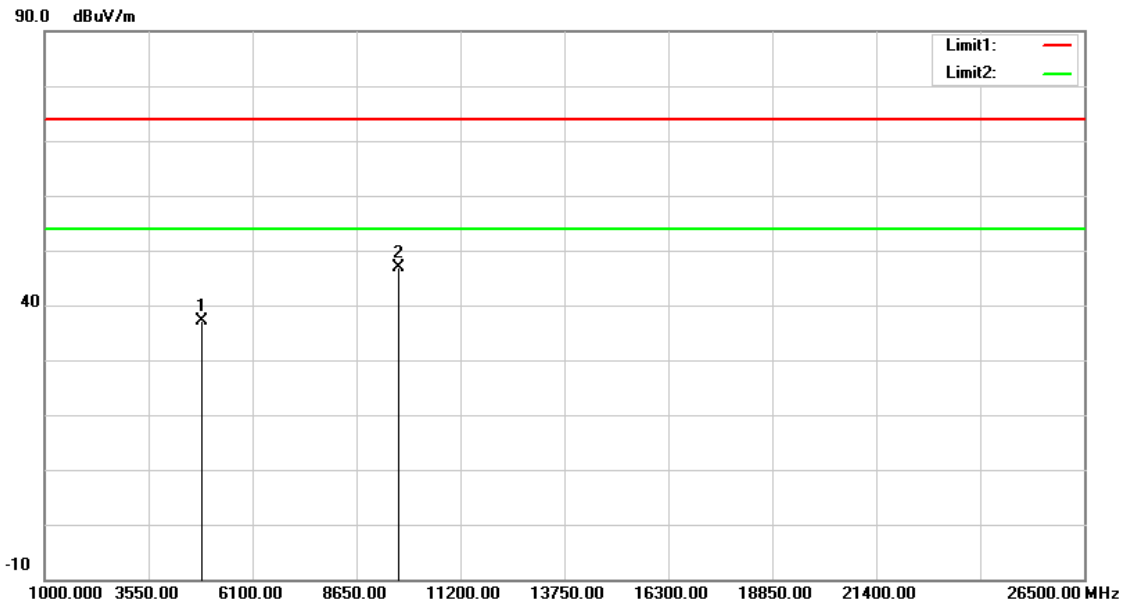
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	39.80	-0.63	39.17	74.00	-34.83	peak
2	7386.000	35.26	6.75	42.01	74.00	-31.99	peak

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:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



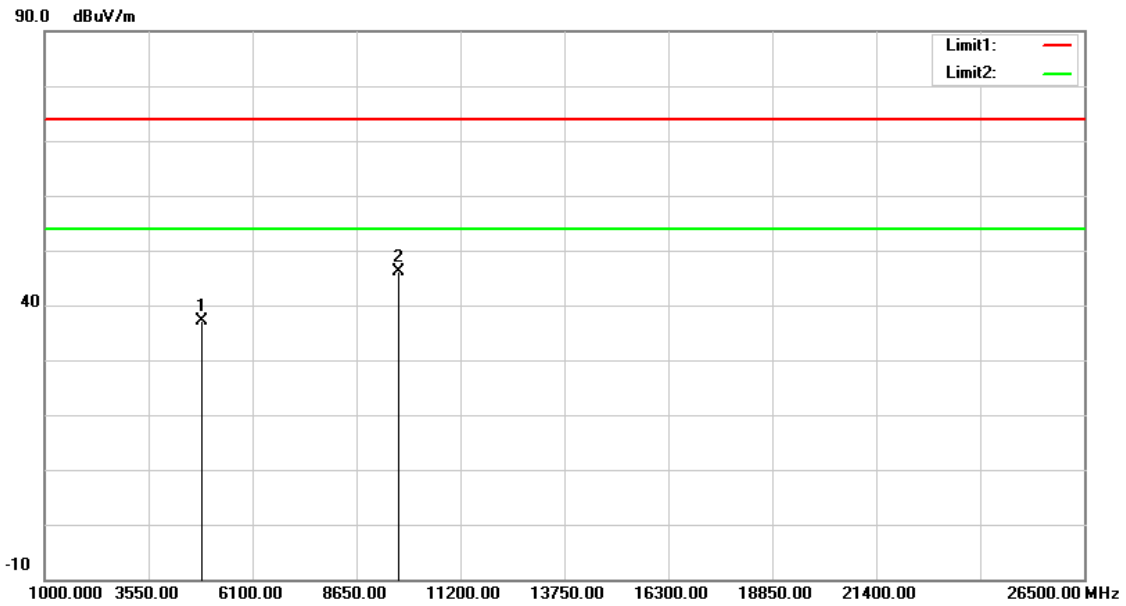
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	37.93	-0.90	37.03	74.00	-36.97	peak
2	9688.000	34.01	12.80	46.81	74.00	-27.19	peak

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:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



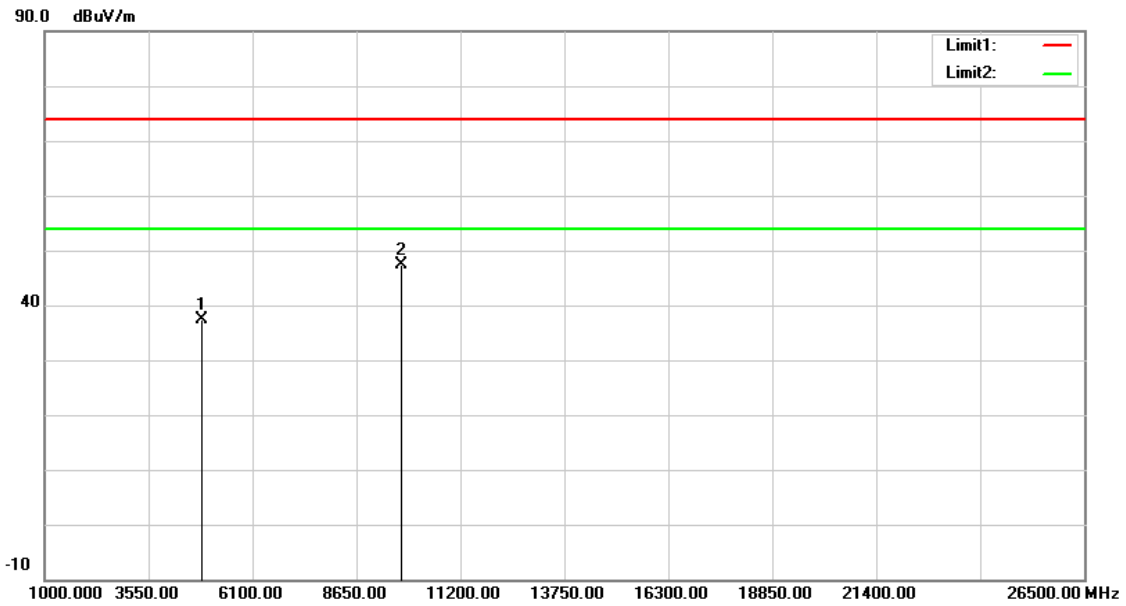
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	38.13	-0.90	37.23	74.00	-36.77	peak
2	9688.000	33.34	12.80	46.14	74.00	-27.86	peak

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



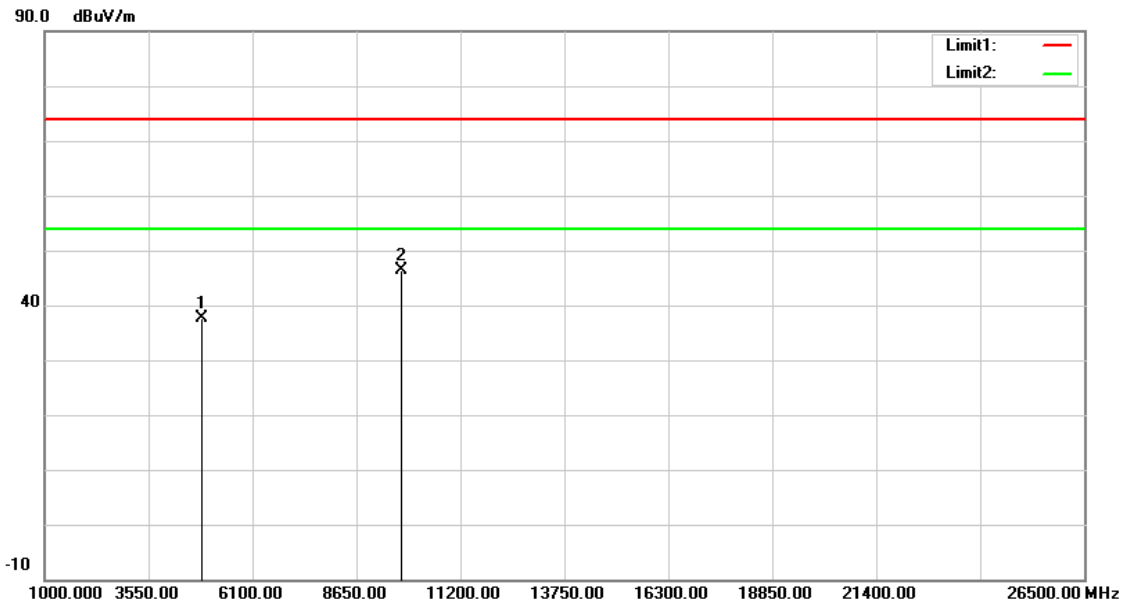
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	38.22	-0.80	37.42	74.00	-36.58	peak
2	9748.000	34.48	12.95	47.43	74.00	-26.57	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



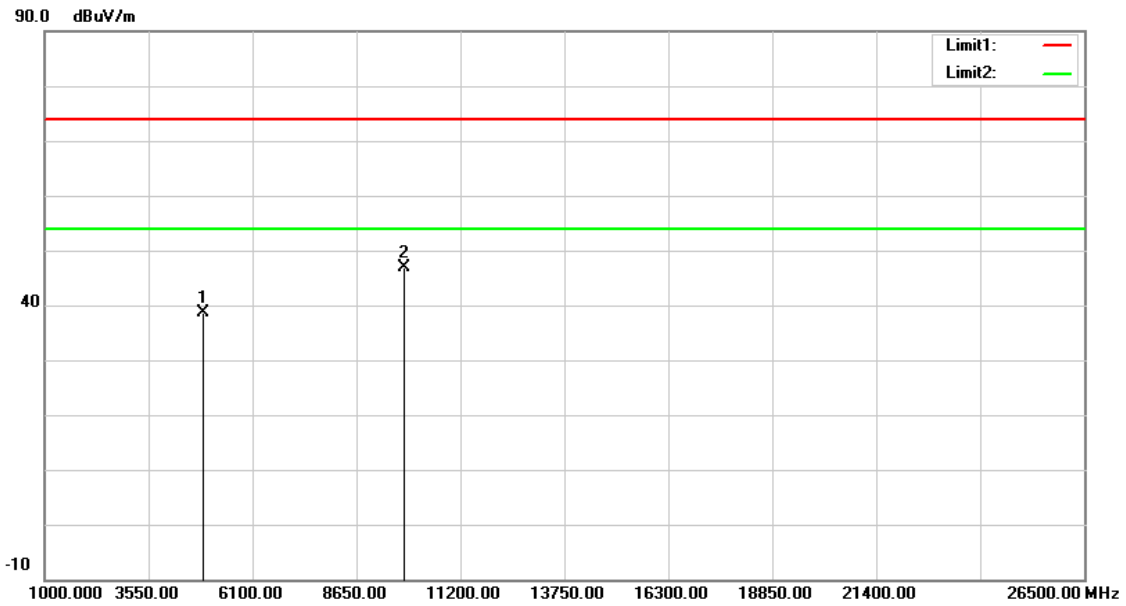
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	38.39	-0.80	37.59	74.00	-36.41	peak
2	9748.000	33.48	12.95	46.43	74.00	-27.57	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



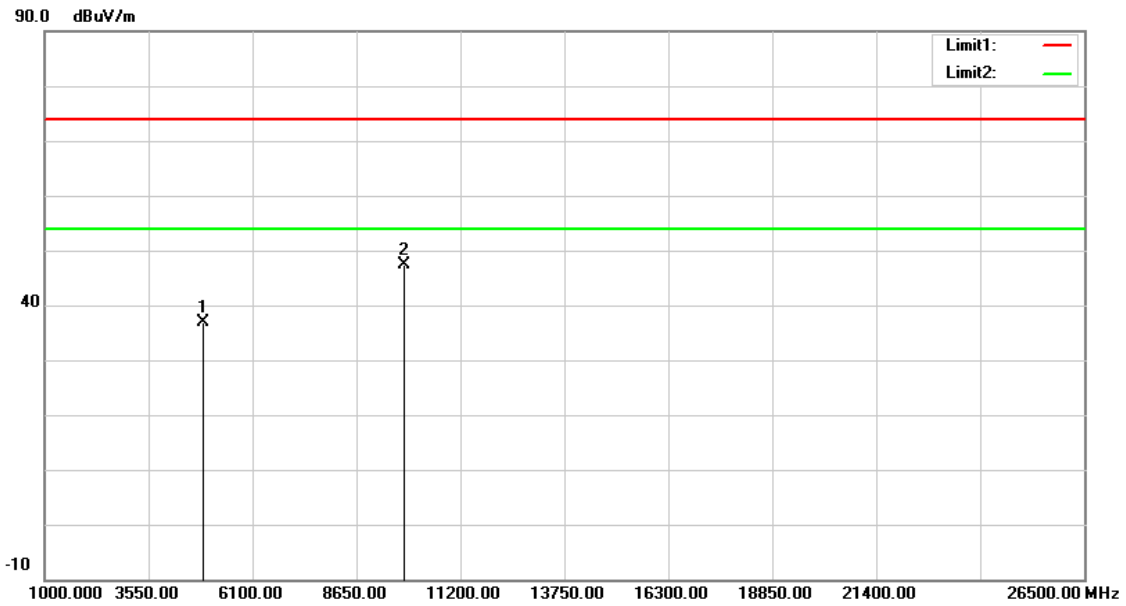
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	39.24	-0.69	38.55	74.00	-35.45	peak
2	9808.000	33.82	13.08	46.90	74.00	-27.10	peak

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:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



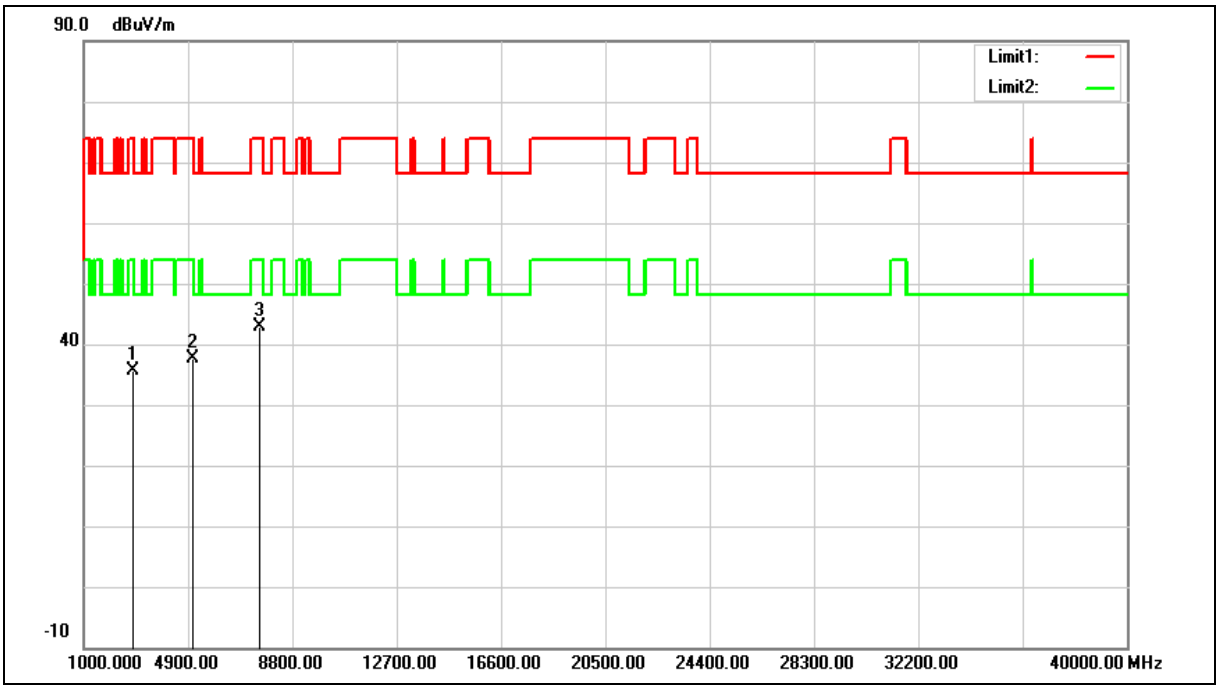
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	37.64	-0.69	36.95	74.00	-37.05	peak
2	9808.000	34.32	13.08	47.40	74.00	-26.60	peak

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:	Harmonic		
Mode:	Simultaneous Transmitting		
	(WLAN 2.4 + 5 GHz)		
Ant.Polar.:	Horizontal		



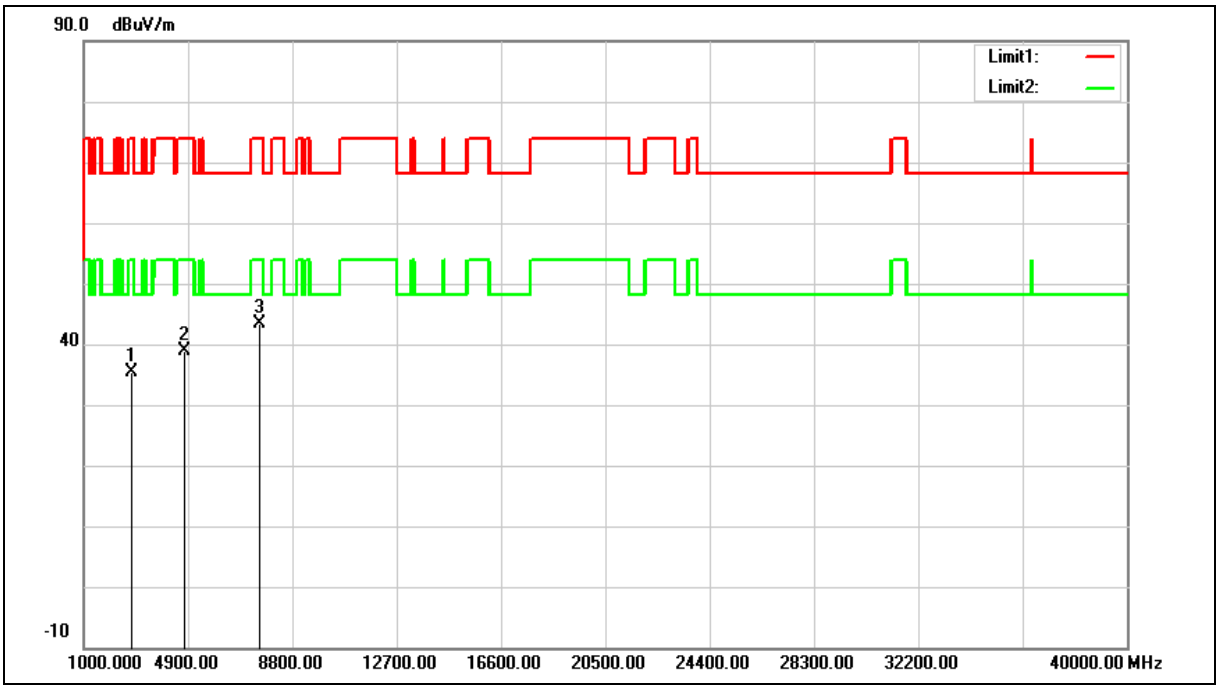
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2819.000	41.60	-5.89	35.71	74.00	-38.29	peak
2	5063.000	37.98	-0.24	37.74	74.00	-36.26	peak
3	7562.000	35.66	7.33	42.99	74.00	-31.01	peak

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		
Mode:	Simultaneous Transmitting		
	(WLAN 2.4 + 5 GHz)		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2802.000	41.32	-5.94	35.38	74.00	-38.62	peak
2	4757.000	40.13	-1.21	38.92	74.00	-35.08	peak
3	7562.000	36.04	7.33	43.37	74.00	-30.63	peak

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

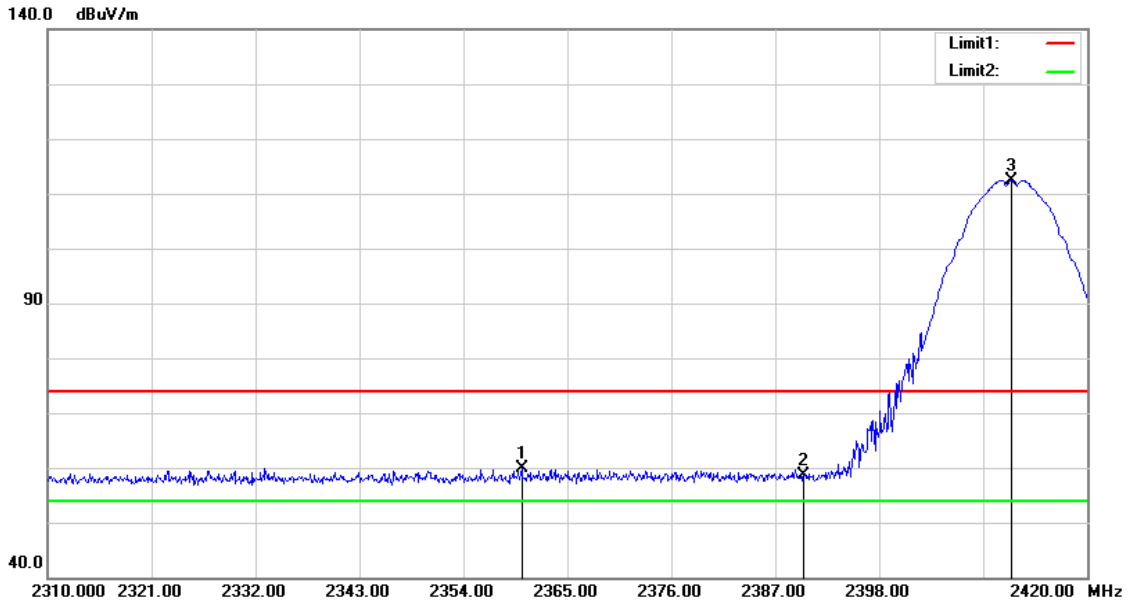
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

Band Edge

Peak

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



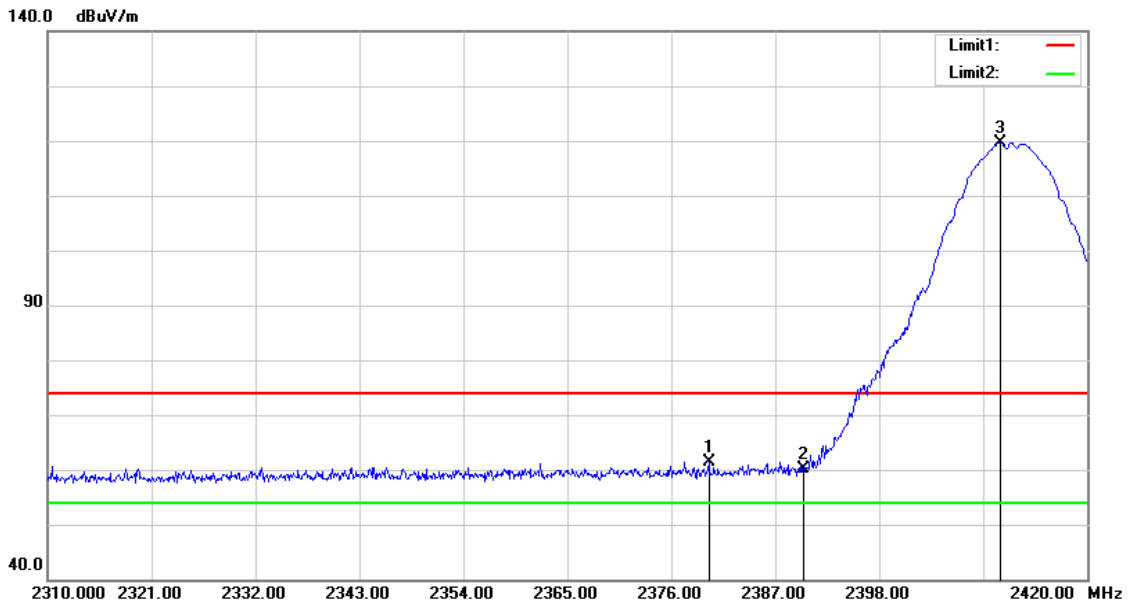
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2360.160	67.27	-7.42	59.85	74.00	-14.15	peak
2	2390.000	65.85	-7.30	58.55	74.00	-15.45	peak
3	2411.970	119.65	-7.22	112.43	74.00	38.43	peak

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:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



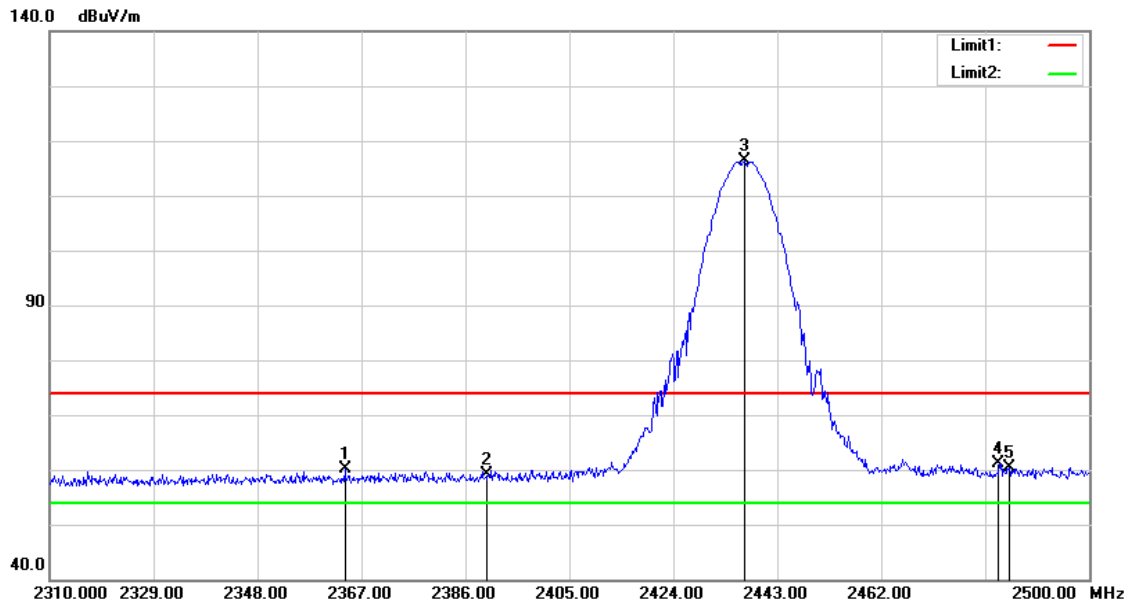
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2379.960	68.71	-7.35	61.36	74.00	-12.64	peak
2	2390.000	67.45	-7.30	60.15	74.00	-13.85	peak
3	2410.870	126.88	-7.22	119.66	74.00	45.66	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



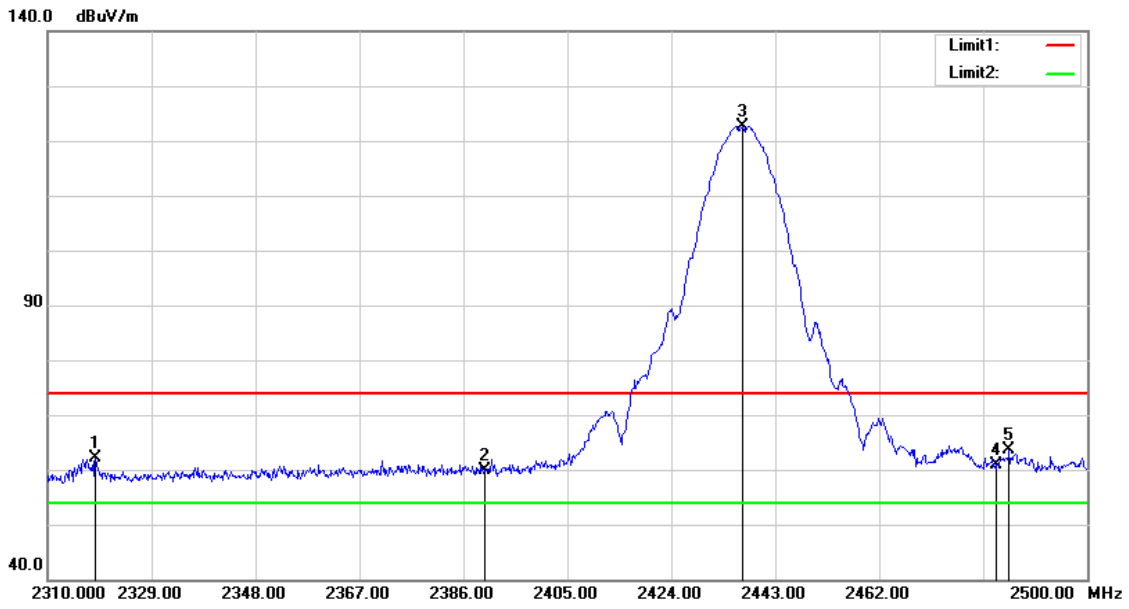
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2363.960	67.42	-7.41	60.01	74.00	-13.99	peak
2	2390.000	66.34	-7.30	59.04	74.00	-14.96	peak
3	2437.110	123.42	-7.12	116.30	74.00	42.30	peak
4	2483.500	68.14	-6.94	61.20	74.00	-12.80	peak
5	2485.370	67.27	-6.92	60.35	74.00	-13.65	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



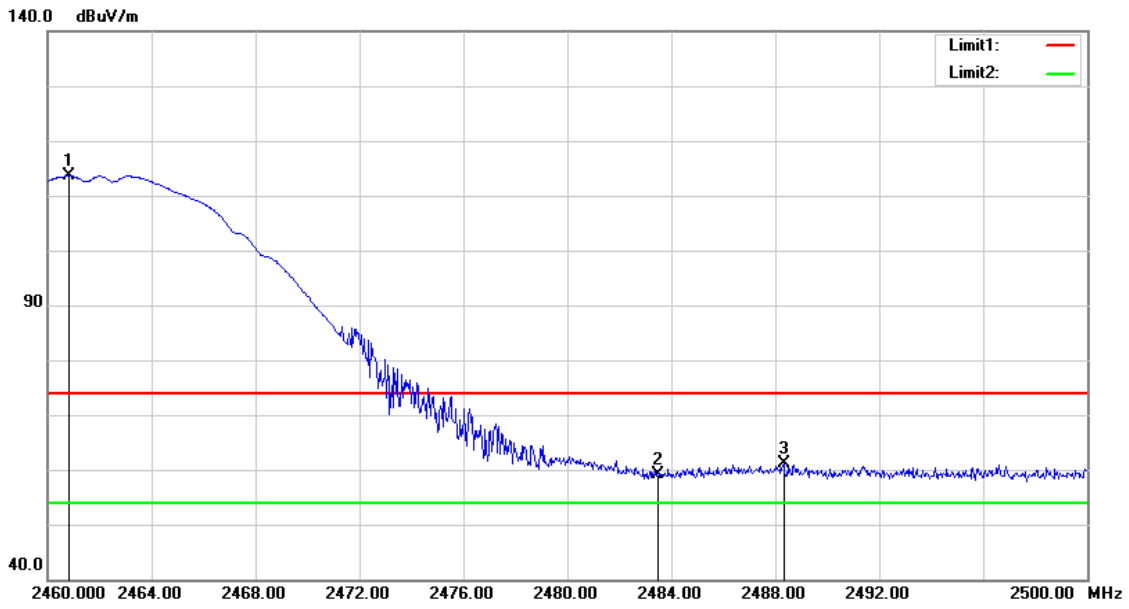
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2318.740	69.70	-7.59	62.11	74.00	-11.89	peak
2	2390.000	67.09	-7.30	59.79	74.00	-14.21	peak
3	2436.920	129.78	-7.12	122.66	74.00	48.66	peak
4	2483.500	67.70	-6.94	60.76	74.00	-13.24	peak
5	2485.750	70.53	-6.92	63.61	74.00	-10.39	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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



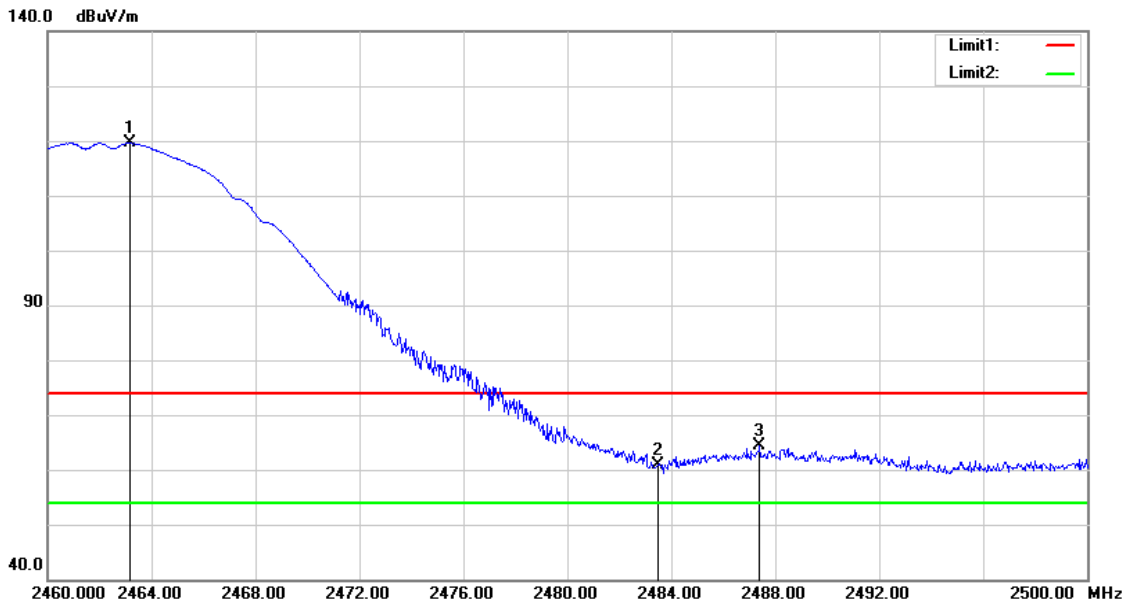
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.800	120.63	-7.03	113.60	74.00	39.60	peak
2	2483.500	66.11	-6.94	59.17	74.00	-14.83	peak
3	2488.320	67.93	-6.91	61.02	74.00	-12.98	peak

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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



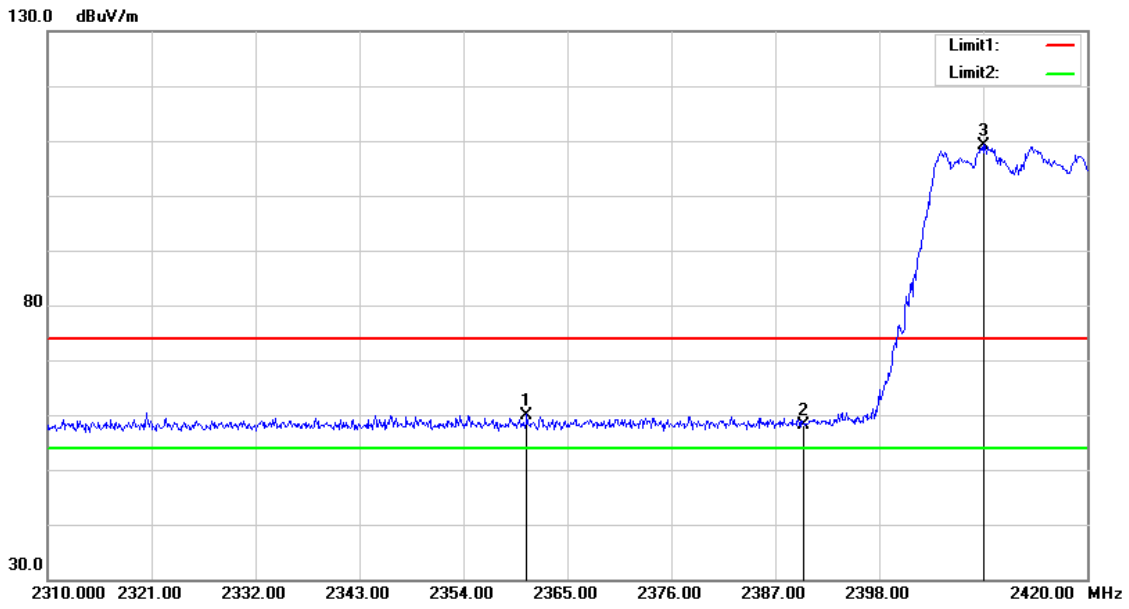
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.160	126.60	-7.00	119.60	74.00	45.60	peak
2	2483.500	67.91	-6.94	60.97	74.00	-13.03	peak
3	2487.400	71.25	-6.92	64.33	74.00	-9.67	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



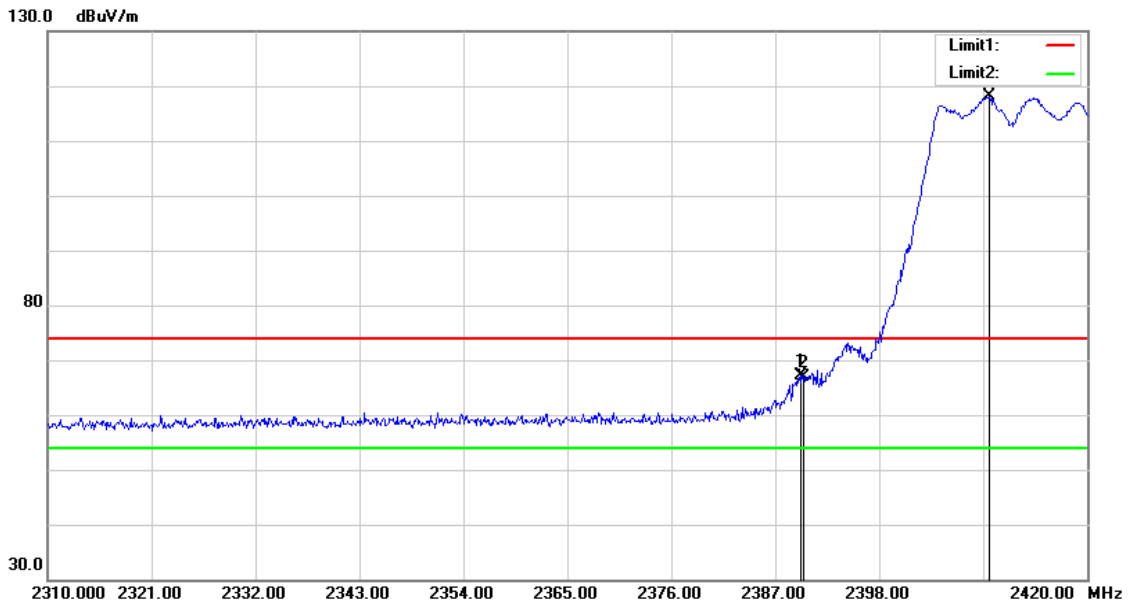
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2360.710	67.42	-7.42	60.00	74.00	-14.00	peak
2	2390.000	65.45	-7.30	58.15	74.00	-15.85	peak
3	2409.110	116.48	-7.23	109.25	74.00	35.25	peak

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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



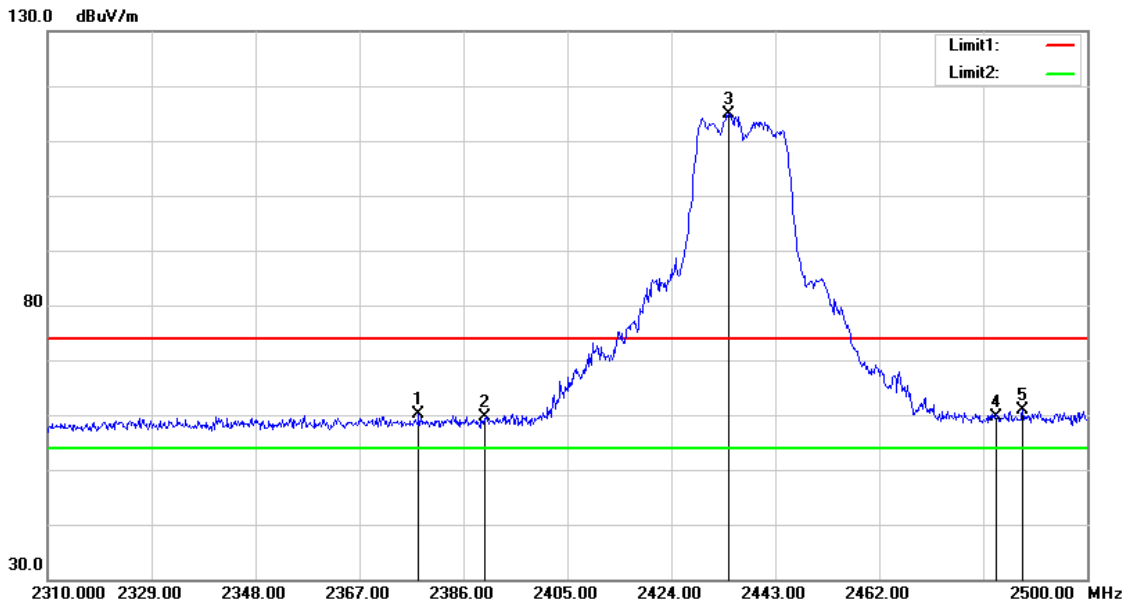
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.640	74.54	-7.30	67.24	74.00	-6.76	peak
2	2390.000	74.24	-7.30	66.94	74.00	-7.06	peak
3	2409.660	125.25	-7.22	118.03	74.00	44.03	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



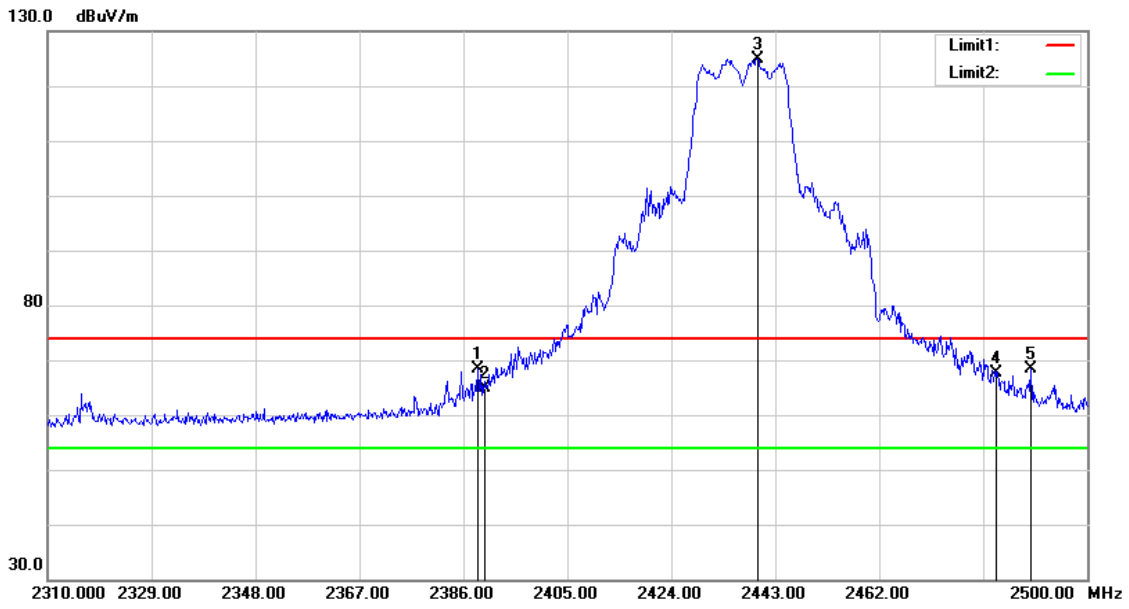
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.830	67.45	-7.35	60.10	74.00	-13.90	peak
2	2390.000	66.86	-7.30	59.56	74.00	-14.44	peak
3	2434.450	122.09	-7.12	114.97	74.00	40.97	peak
4	2483.500	66.55	-6.94	59.61	74.00	-14.39	peak
5	2488.220	67.80	-6.91	60.89	74.00	-13.11	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



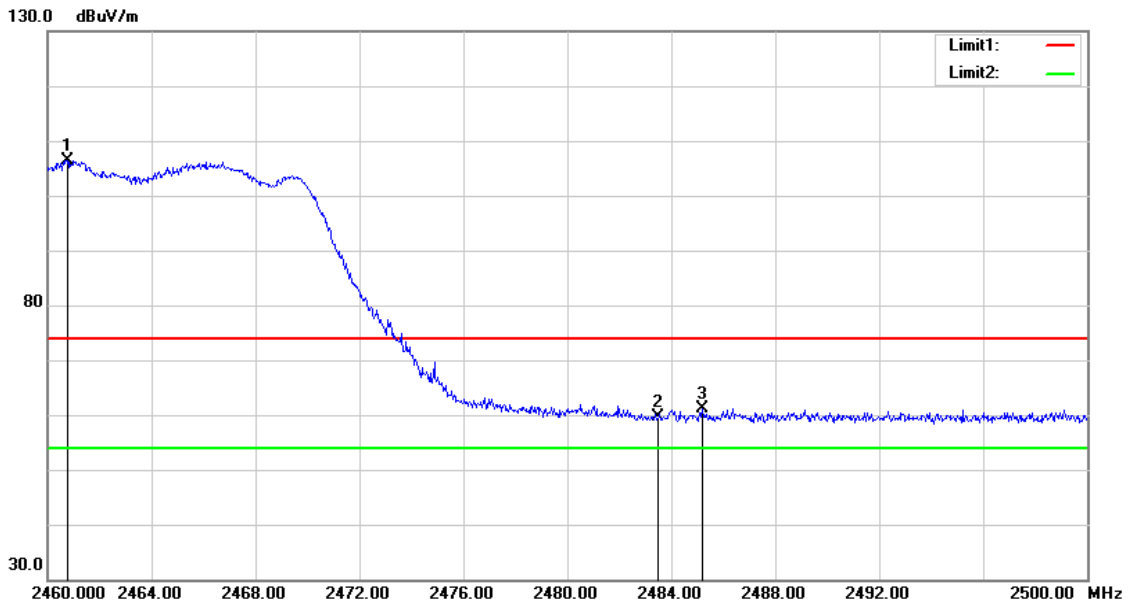
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.660	75.79	-7.31	68.48	74.00	-5.52	peak
2	2390.000	72.11	-7.30	64.81	74.00	-9.19	peak
3	2439.770	132.09	-7.11	124.98	74.00	50.98	peak
4	2483.500	74.61	-6.94	67.67	74.00	-6.33	peak
5	2489.740	75.18	-6.91	68.27	74.00	-5.73	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:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



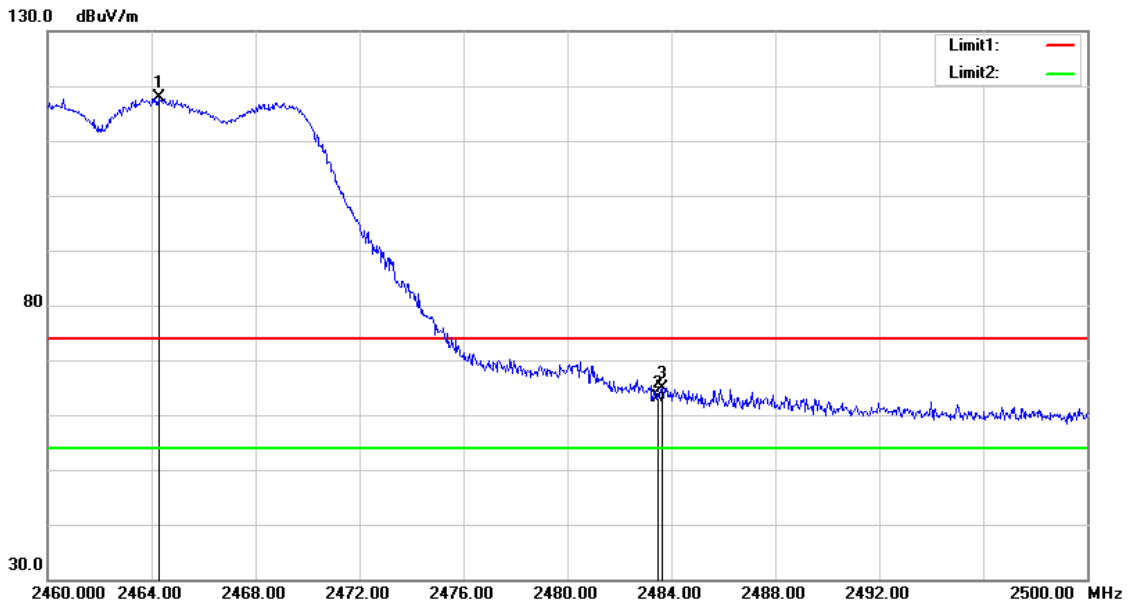
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.760	113.52	-7.03	106.49	74.00	32.49	peak
2	2483.500	66.68	-6.94	59.74	74.00	-14.26	peak
3	2485.200	68.09	-6.92	61.17	74.00	-12.83	peak

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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



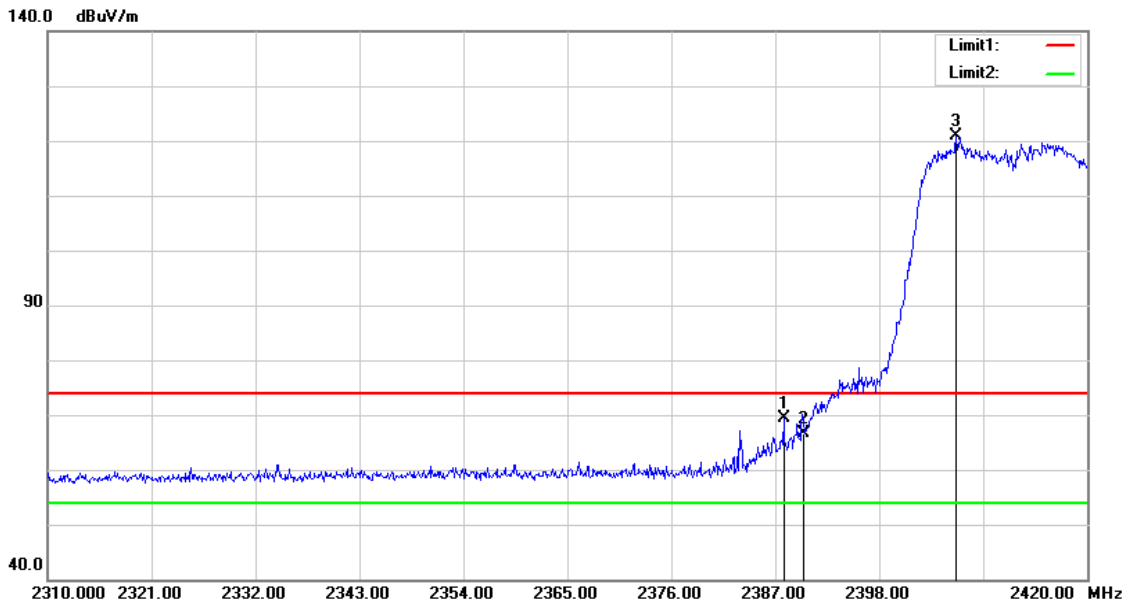
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2464.280	124.83	-7.00	117.83	74.00	43.83	peak
2	2483.500	70.07	-6.94	63.13	74.00	-10.87	peak
3	2483.640	71.94	-6.94	65.00	74.00	-9.00	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



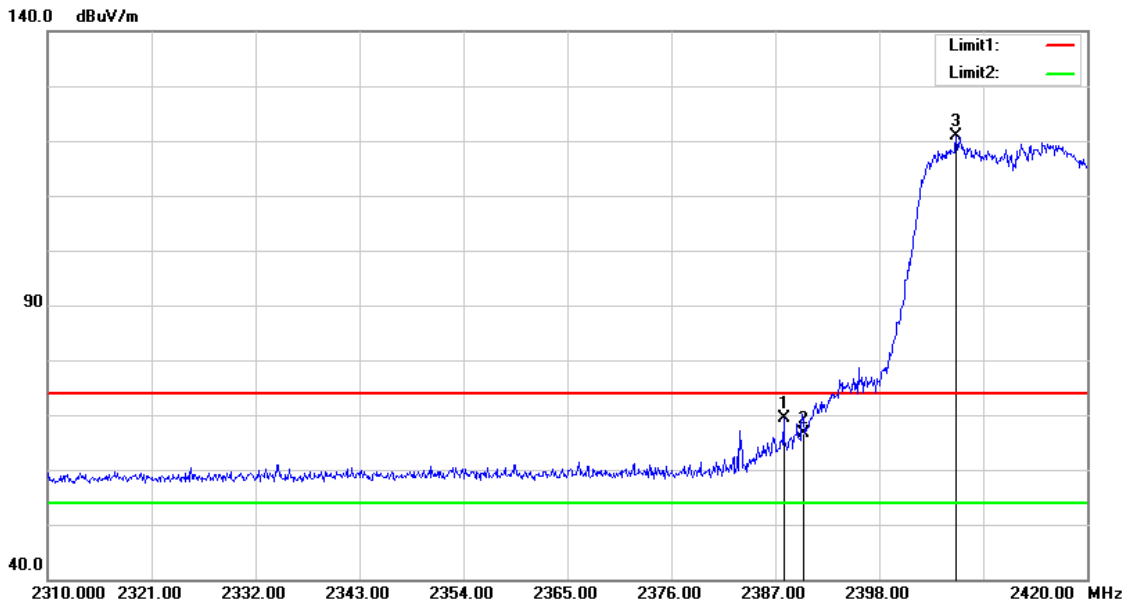
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.880	76.71	-7.32	69.39	74.00	-4.61	peak
2	2390.000	73.82	-7.30	66.52	74.00	-7.48	peak
3	2406.140	128.02	-7.24	120.78	74.00	46.78	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



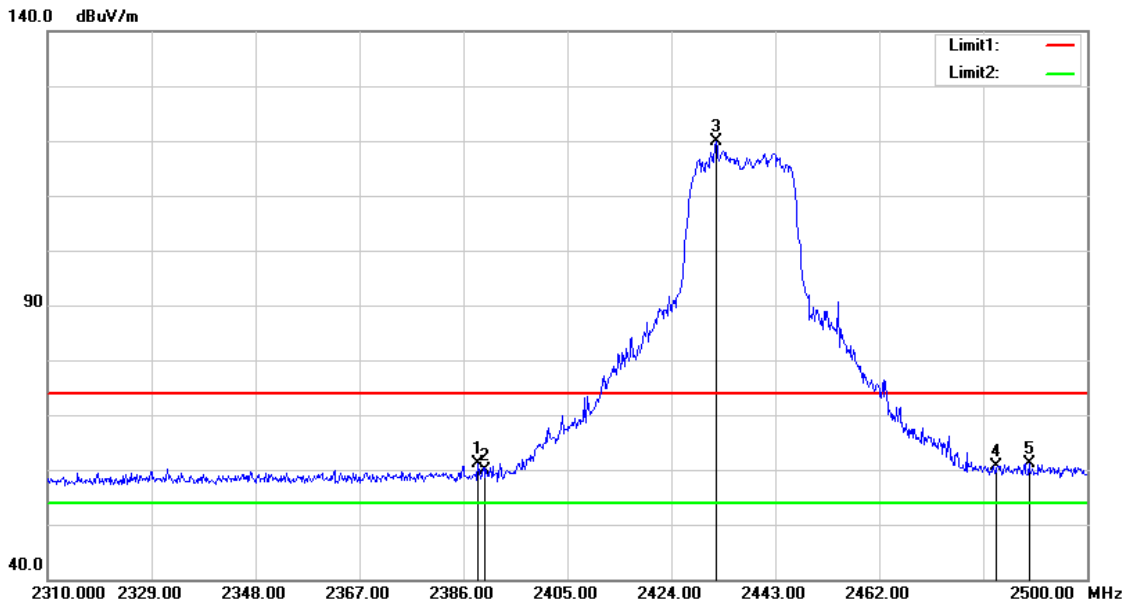
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.880	76.71	-7.32	69.39	74.00	-4.61	peak
2	2390.000	73.82	-7.30	66.52	74.00	-7.48	peak
3	2406.140	128.02	-7.24	120.78	74.00	46.78	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



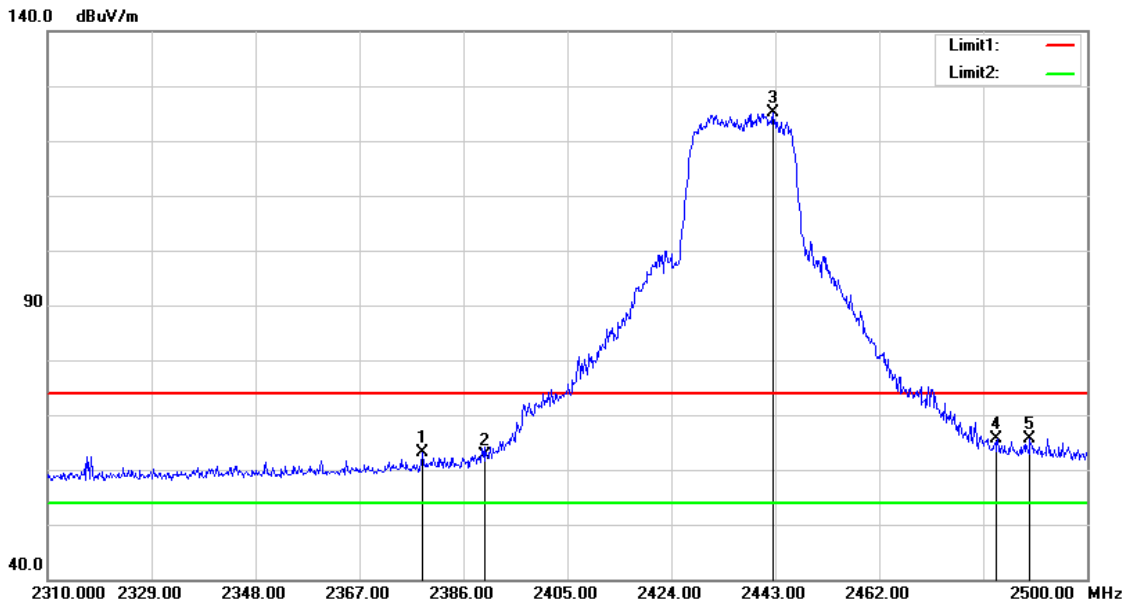
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.660	68.39	-7.31	61.08	74.00	-12.92	peak
2	2390.000	67.12	-7.30	59.82	74.00	-14.18	peak
3	2432.170	127.01	-7.13	119.88	74.00	45.88	peak
4	2483.500	67.53	-6.94	60.59	74.00	-13.41	peak
5	2489.360	68.03	-6.91	61.12	74.00	-12.88	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



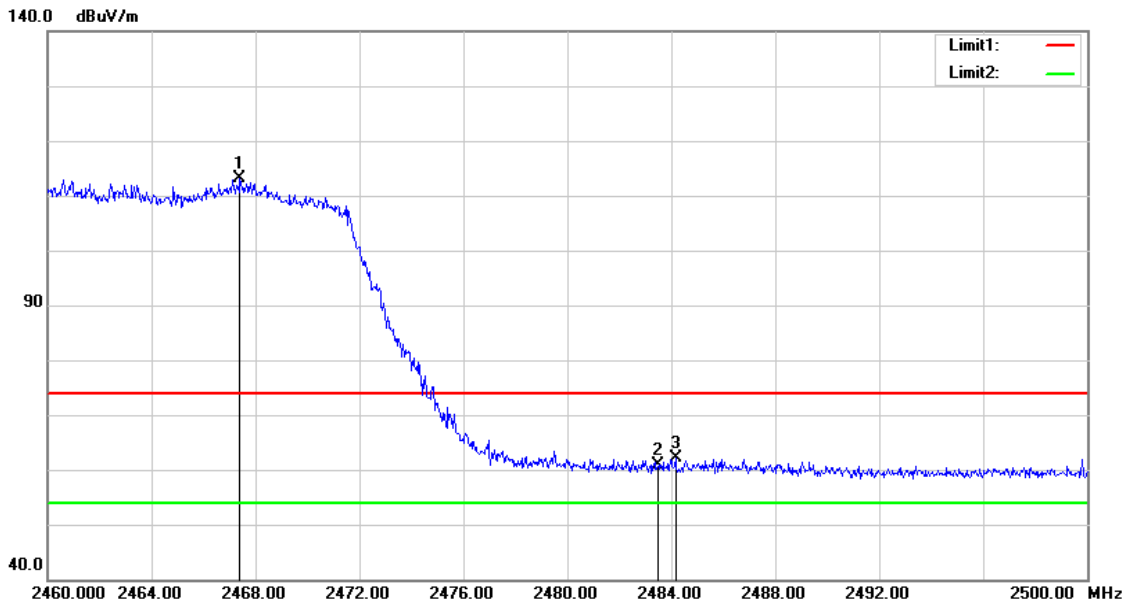
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.590	70.55	-7.35	63.20	74.00	-10.80	peak
2	2390.000	69.82	-7.30	62.52	74.00	-11.48	peak
3	2442.620	132.19	-7.09	125.10	74.00	51.10	peak
4	2483.500	72.53	-6.94	65.59	74.00	-8.41	peak
5	2489.550	72.65	-6.91	65.74	74.00	-8.26	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:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



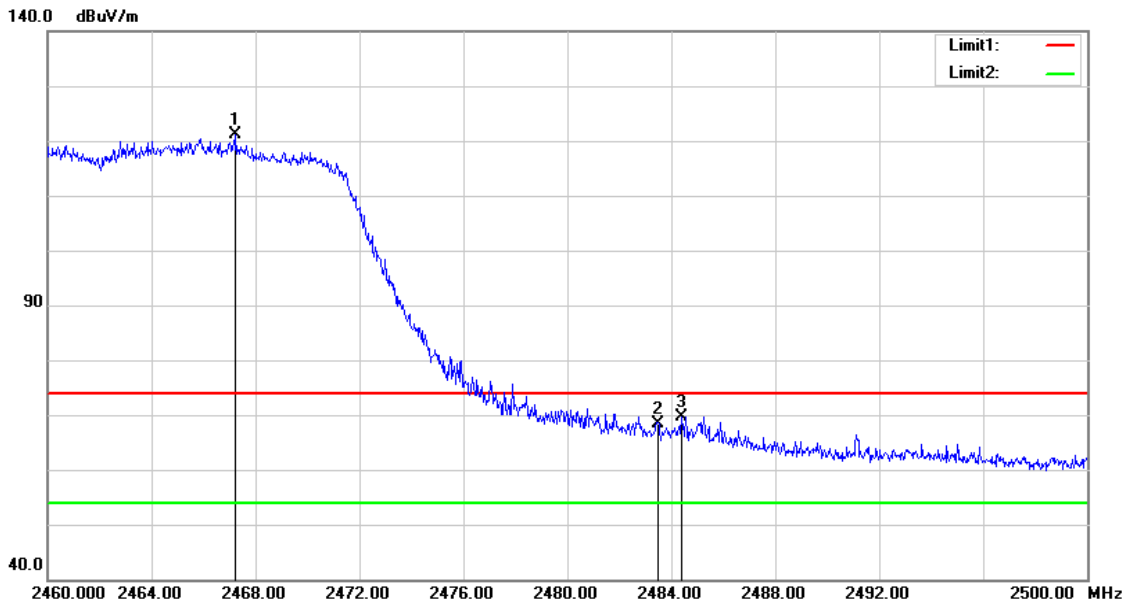
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.400	120.05	-6.99	113.06	74.00	39.06	peak
2	2483.500	67.82	-6.94	60.88	74.00	-13.12	peak
3	2484.160	68.93	-6.92	62.01	74.00	-11.99	peak

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:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



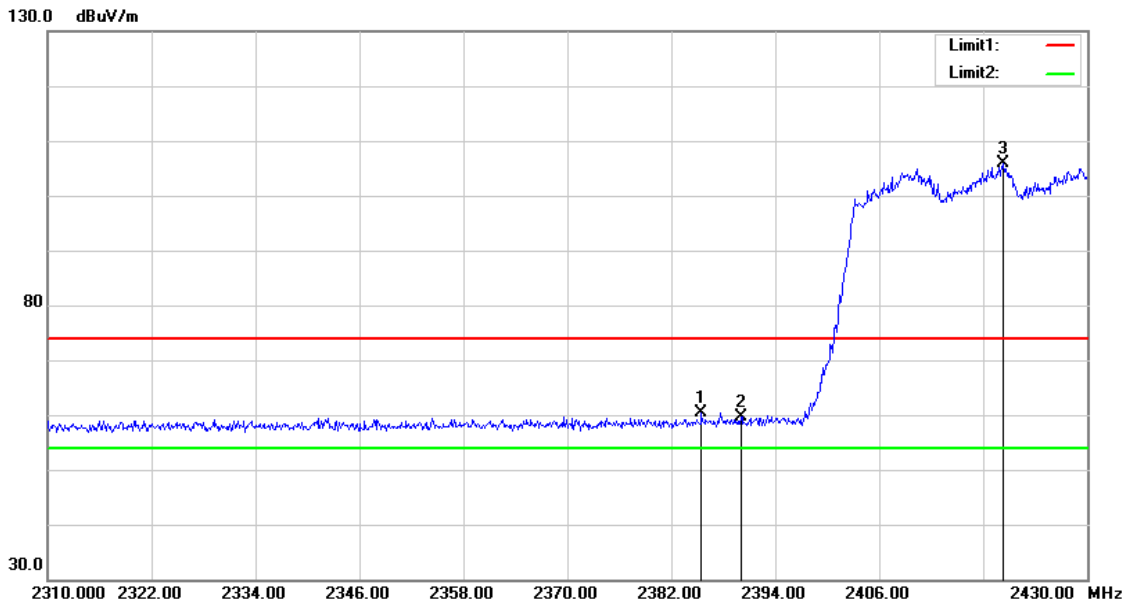
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.240	128.09	-6.99	121.10	74.00	47.10	peak
2	2483.500	75.34	-6.94	68.40	74.00	-5.60	peak
3	2484.400	76.65	-6.92	69.73	74.00	-4.27	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



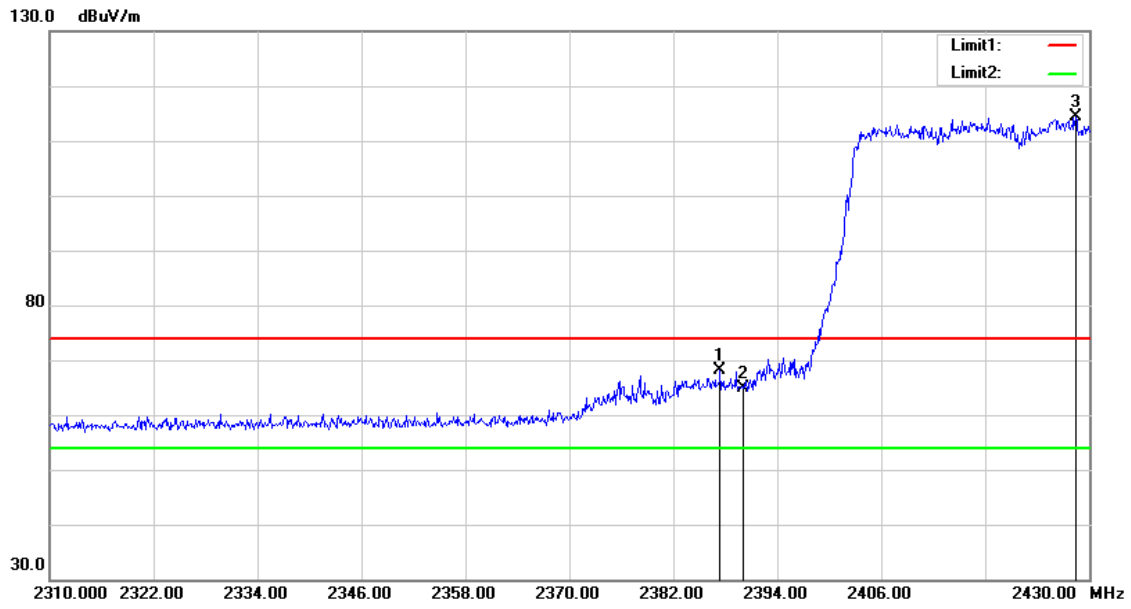
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.480	67.69	-7.33	60.36	74.00	-13.64	peak
2	2390.000	66.95	-7.30	59.65	74.00	-14.35	peak
3	2420.280	113.11	-7.18	105.93	74.00	31.93	peak

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:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



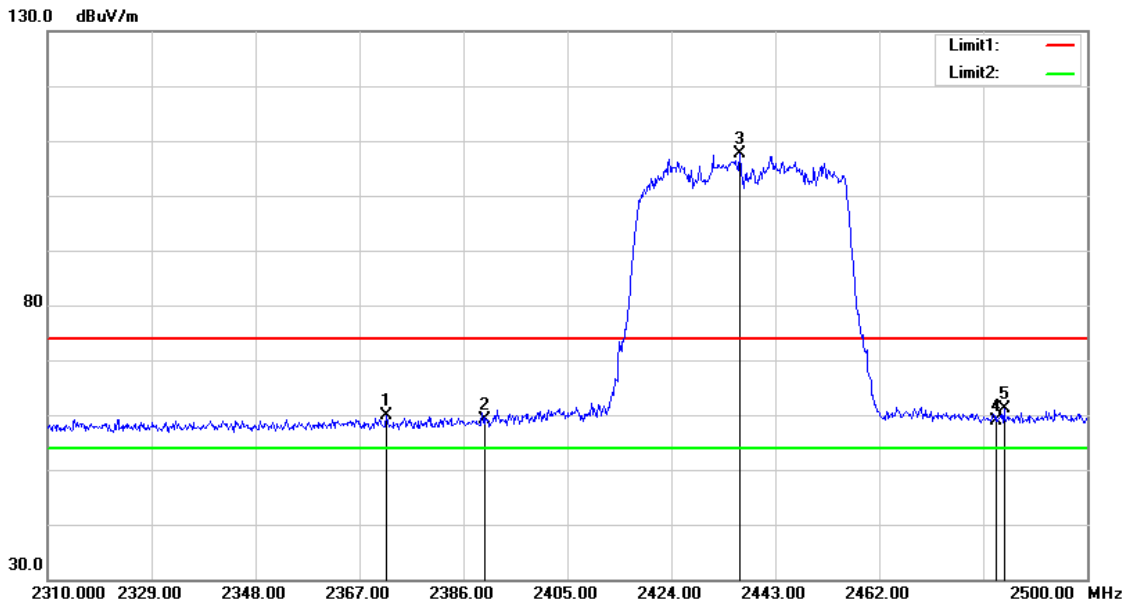
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.400	75.44	-7.33	68.11	74.00	-5.89	peak
2	2390.000	72.12	-7.30	64.82	74.00	-9.18	peak
3	2428.440	121.51	-7.15	114.36	74.00	40.36	peak

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



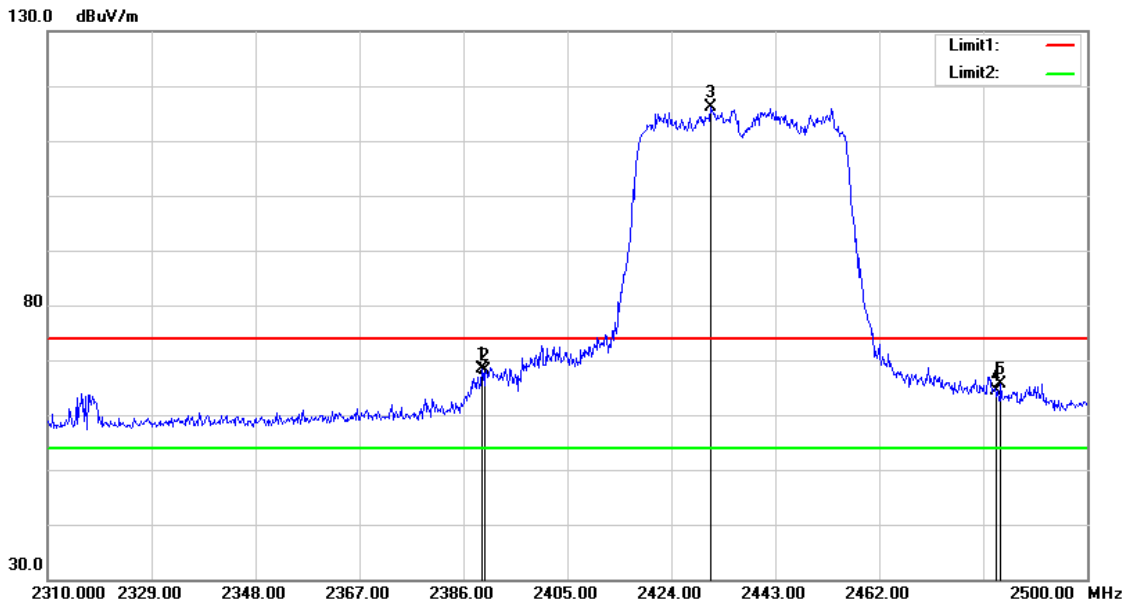
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.940	67.26	-7.38	59.88	74.00	-14.12	peak
2	2390.000	66.39	-7.30	59.09	74.00	-14.91	peak
3	2436.540	114.68	-7.12	107.56	74.00	33.56	peak
4	2483.500	65.87	-6.94	58.93	74.00	-15.07	peak
5	2484.800	68.02	-6.92	61.10	74.00	-12.90	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



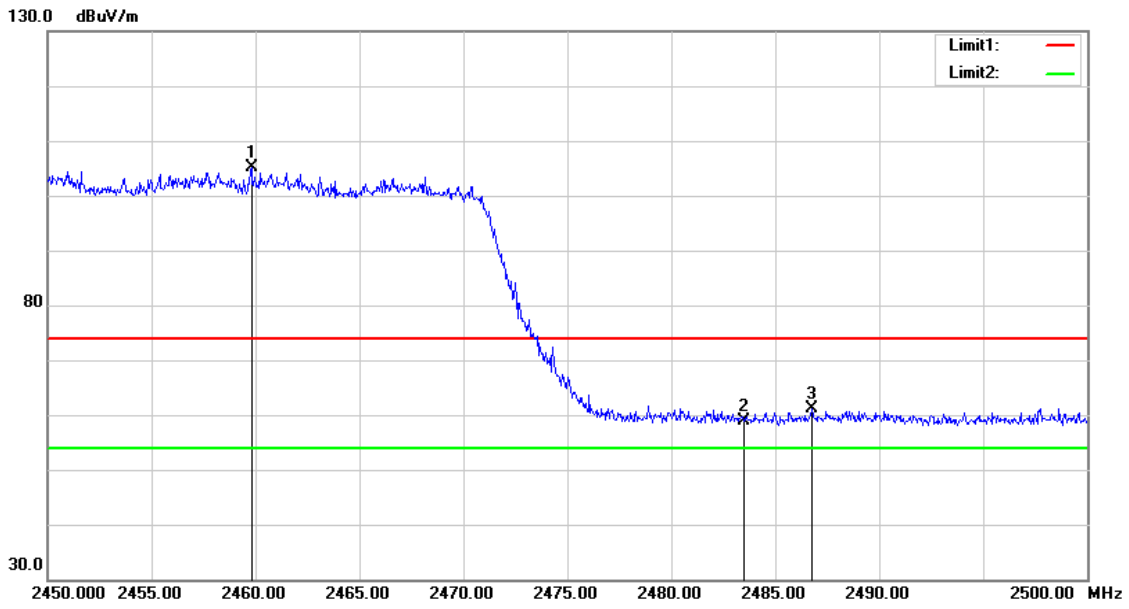
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	75.73	-7.30	68.43	74.00	-5.57	peak
2	2390.000	75.34	-7.30	68.04	74.00	-5.96	peak
3	2431.220	123.16	-7.13	116.03	74.00	42.03	peak
4	2483.500	71.33	-6.94	64.39	74.00	-9.61	peak
5	2484.230	72.57	-6.92	65.65	74.00	-8.35	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:	3 m
Test item:	Band edge		
Frequency:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



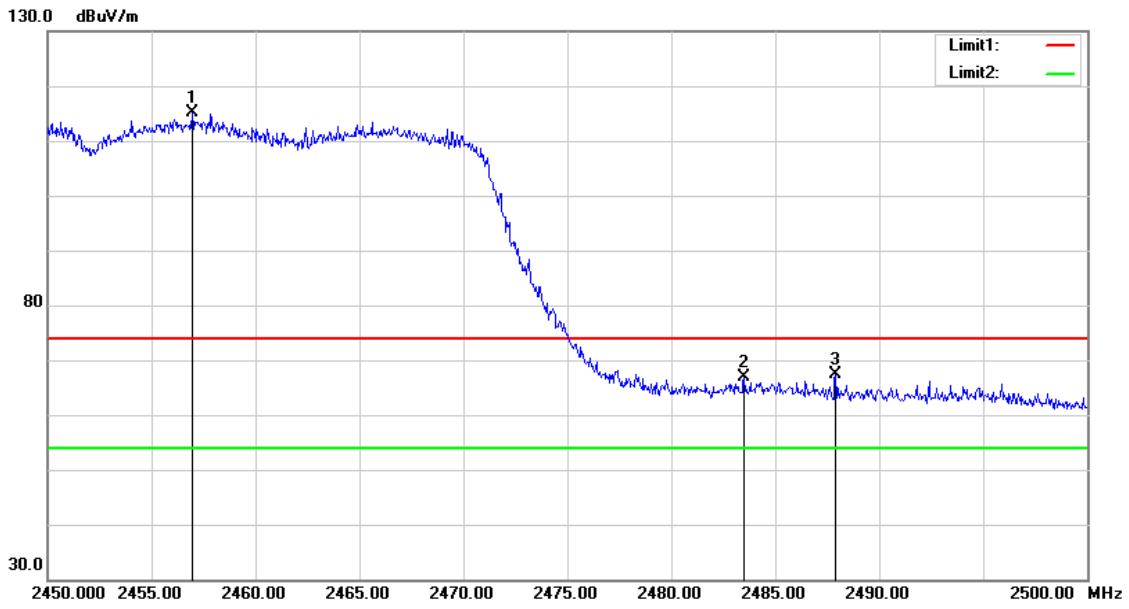
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.800	112.19	-7.03	105.16	74.00	31.16	peak
2	2483.500	65.92	-6.94	58.98	74.00	-15.02	peak
3	2486.750	68.01	-6.92	61.09	74.00	-12.91	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2456.950	122.06	-7.04	115.02	74.00	41.02	peak
2	2483.500	73.86	-6.94	66.92	74.00	-7.08	peak
3	2487.900	74.30	-6.91	67.39	74.00	-6.61	peak

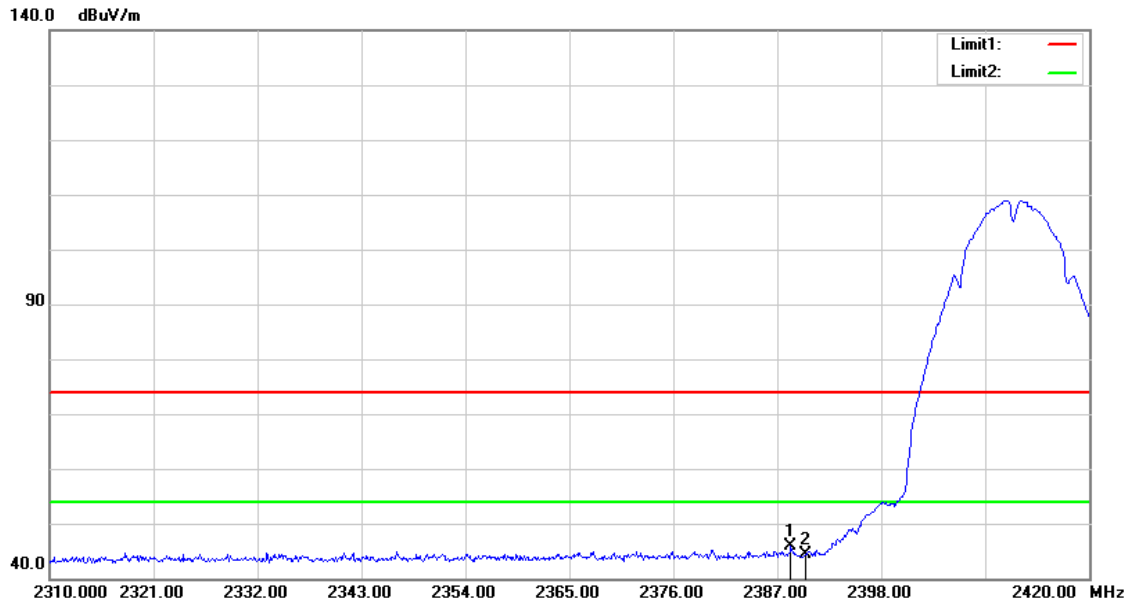
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

Average

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



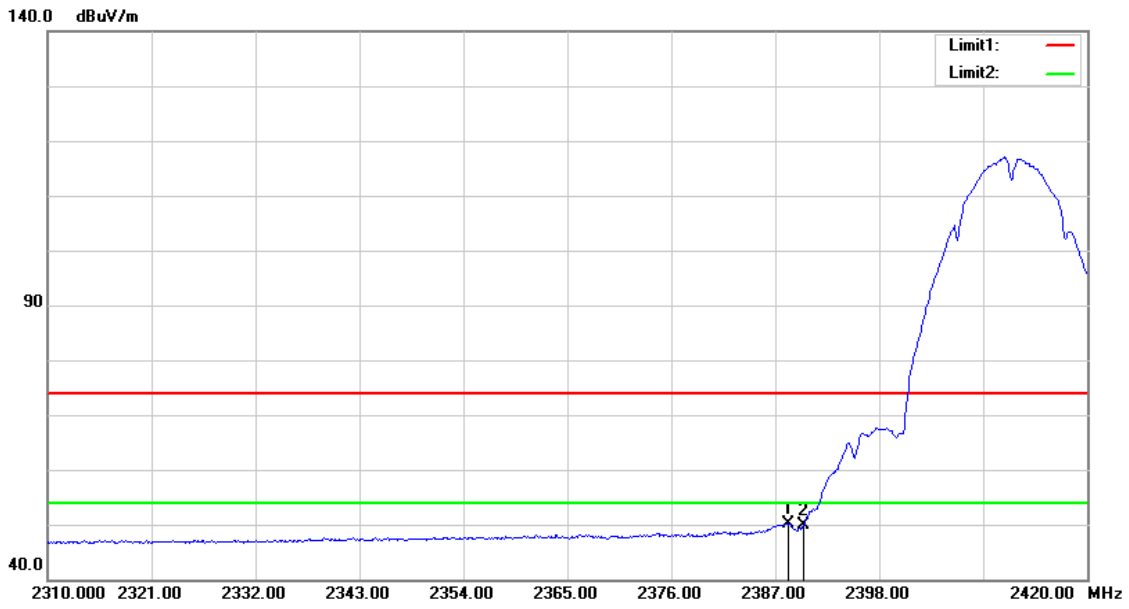
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.430	53.09	-7.31	45.78	54.00	-8.22	AVG
2	2390.000	51.56	-7.30	44.26	54.00	-9.74	AVG

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:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



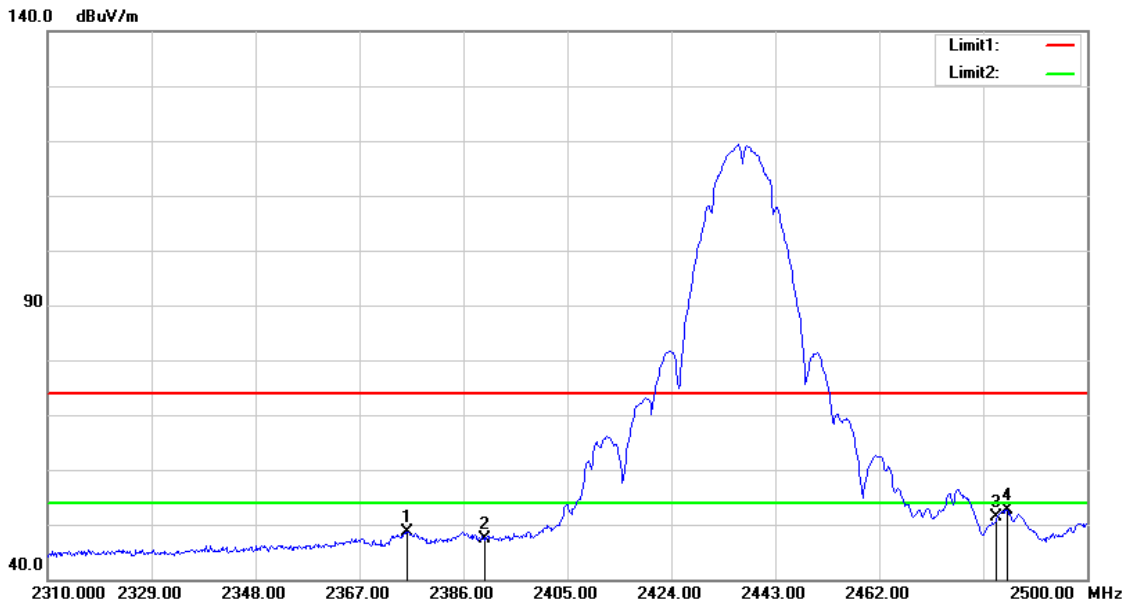
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.430	57.37	-7.31	50.06	54.00	-3.94	AVG
2	2390.000	57.25	-7.30	49.95	54.00	-4.05	AVG

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



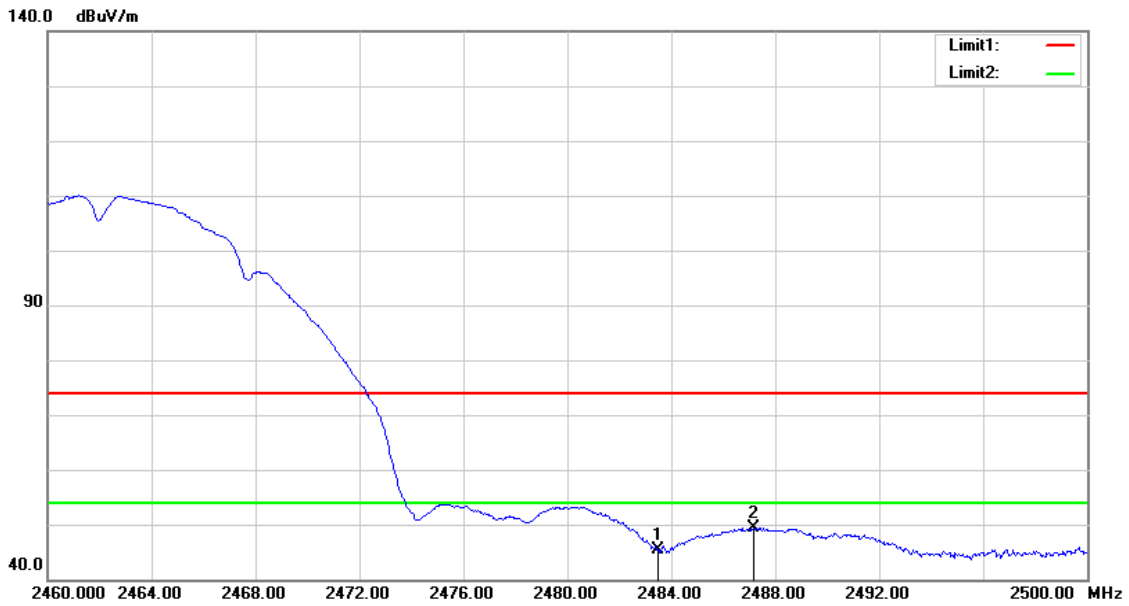
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.740	56.09	-7.37	48.72	54.00	-5.28	AVG
2	2390.000	54.72	-7.30	47.42	54.00	-6.58	AVG
3	2483.500	58.22	-6.94	51.28	54.00	-2.72	AVG
4	2485.370	59.59	-6.92	52.67	54.00	-1.33	AVG

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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



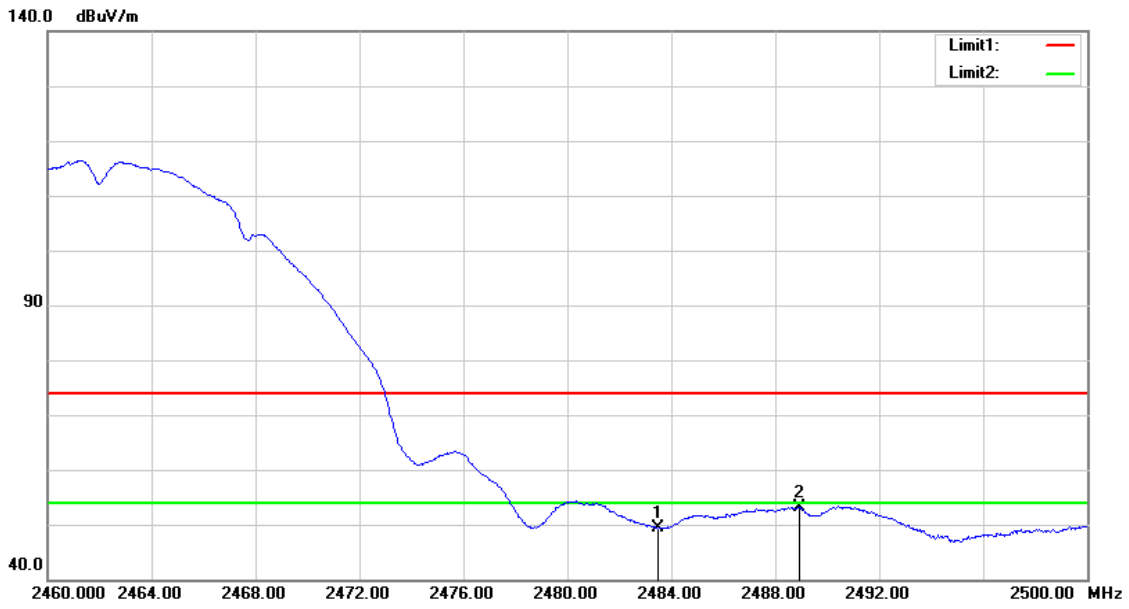
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	52.29	-6.94	45.35	54.00	-8.65	AVG
2	2487.160	56.29	-6.92	49.37	54.00	-4.63	AVG

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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



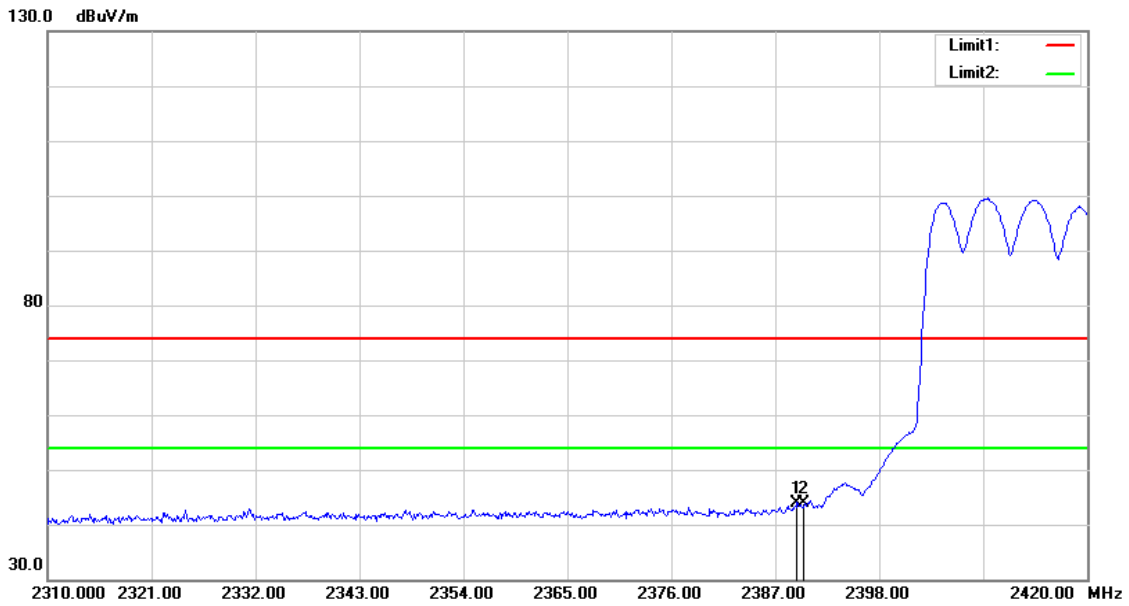
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	56.22	-6.94	49.28	54.00	-4.72	AVG
2	2488.920	60.07	-6.91	53.16	54.00	-0.84	AVG

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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



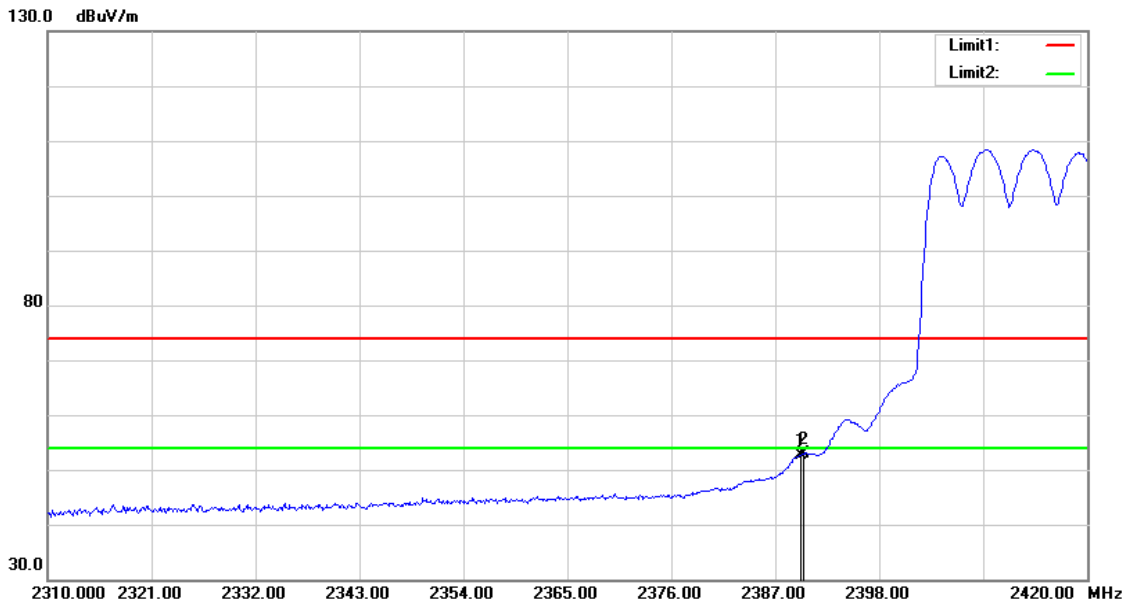
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.310	51.30	-7.30	44.00	74.00	-30.00	peak
2	2390.000	51.23	-7.30	43.93	74.00	-30.07	peak

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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



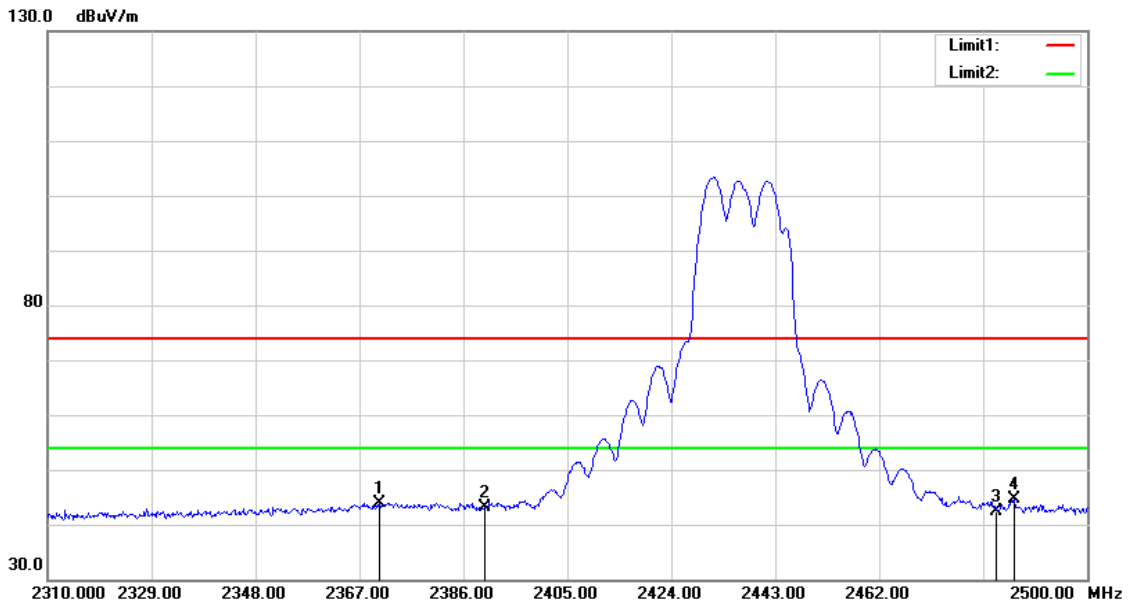
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.640	60.03	-7.30	52.73	54.00	-1.27	AVG
2	2390.000	60.28	-7.30	52.98	54.00	-1.02	AVG

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:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



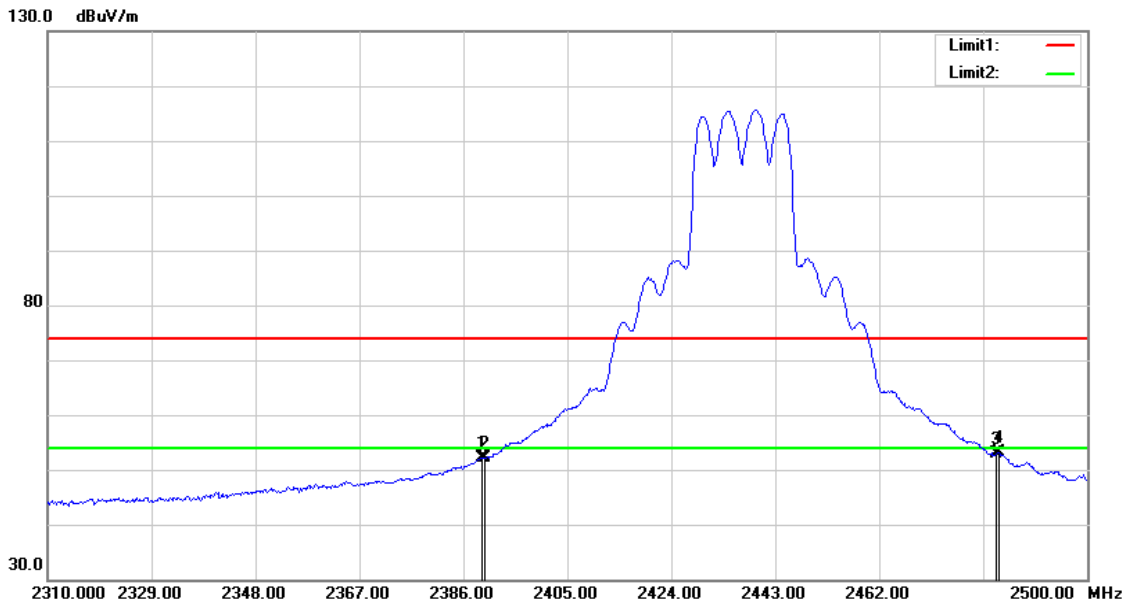
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2370.610	51.36	-7.38	43.98	54.00	-10.02	AVG
2	2390.000	50.53	-7.30	43.23	54.00	-10.77	AVG
3	2483.500	49.41	-6.94	42.47	54.00	-11.53	AVG
4	2486.700	51.58	-6.92	44.66	54.00	-9.34	AVG

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:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



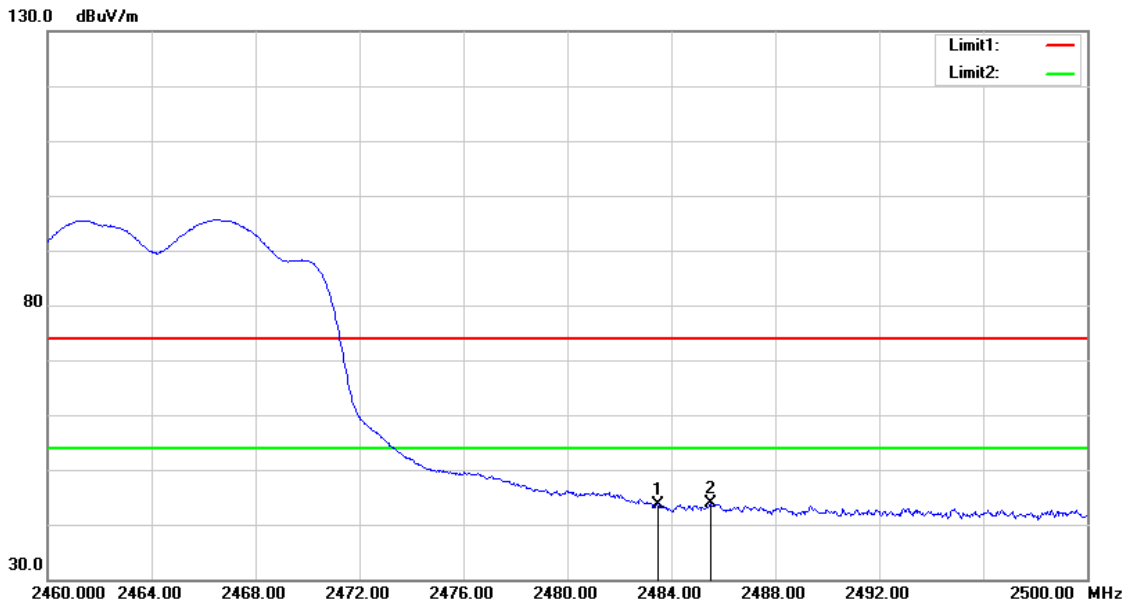
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	59.41	-7.30	52.11	54.00	-1.89	AVG
2	2390.000	59.54	-7.30	52.24	54.00	-1.76	AVG
3	2483.500	59.94	-6.94	53.00	54.00	-1.00	AVG
4	2483.850	59.95	-6.94	53.01	54.00	-0.99	AVG

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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



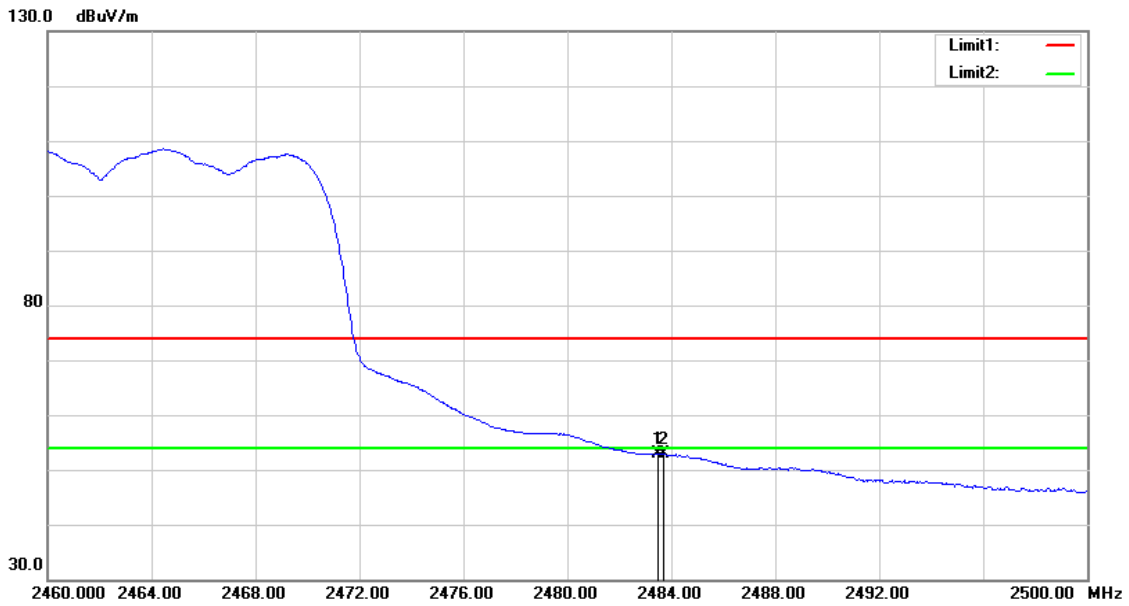
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	50.47	-6.94	43.53	54.00	-10.47	AVG
2	2485.520	50.85	-6.92	43.93	54.00	-10.07	AVG

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



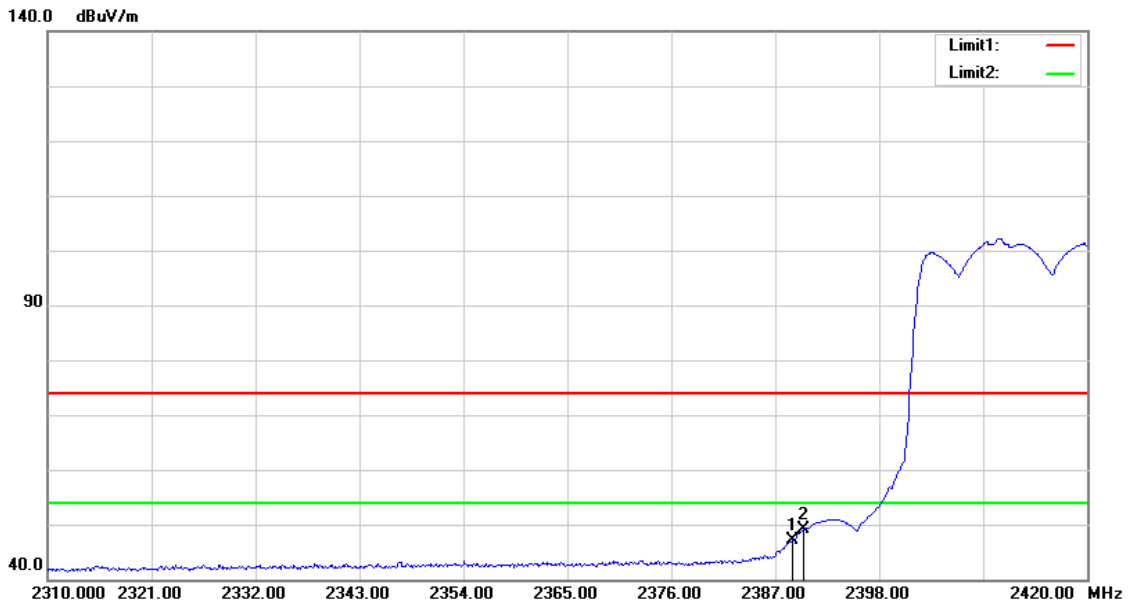
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	59.79	-6.94	52.85	54.00	-1.15	AVG
2	2483.680	59.78	-6.94	52.84	54.00	-1.16	AVG

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



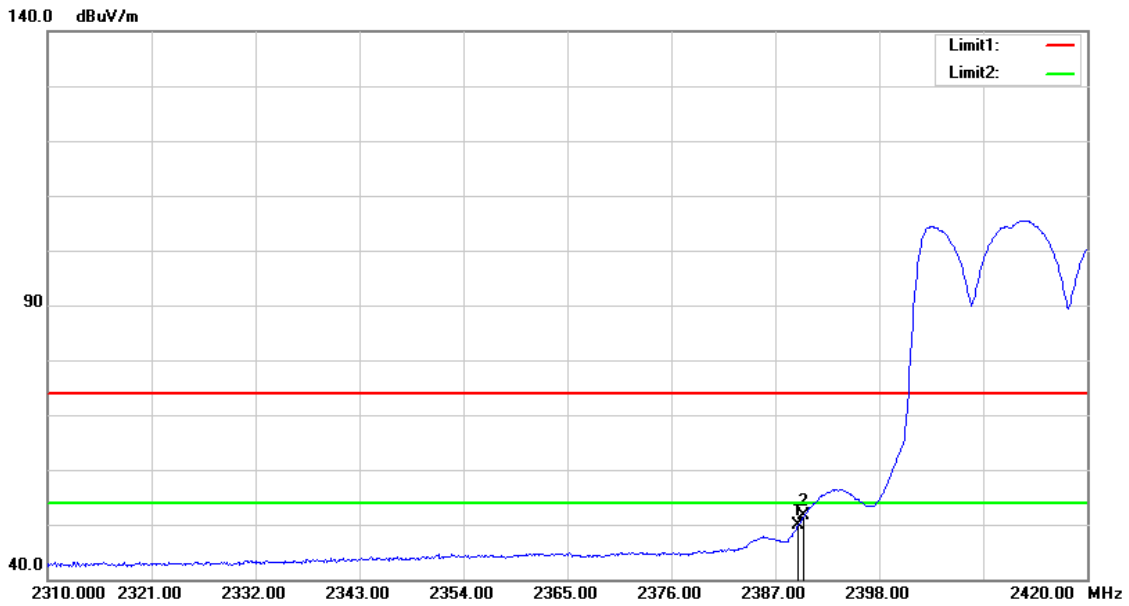
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.760	54.54	-7.31	47.23	54.00	-6.77	AVG
2	2390.000	56.54	-7.30	49.24	54.00	-4.76	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



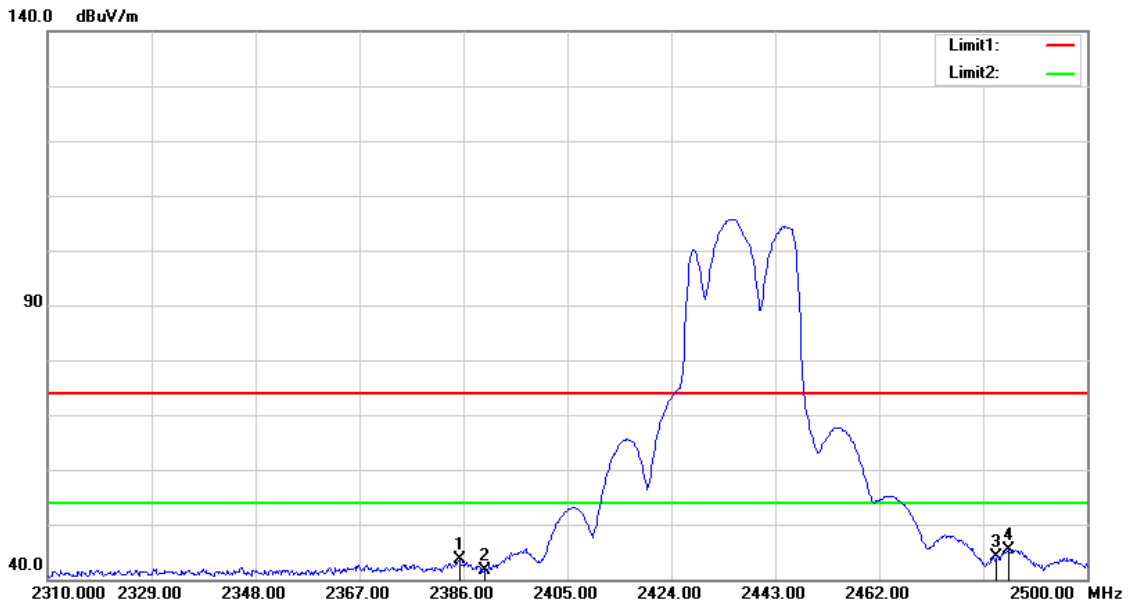
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	57.15	-7.30	49.85	54.00	-4.15	AVG
2	2390.000	58.90	-7.30	51.60	54.00	-2.40	AVG

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:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



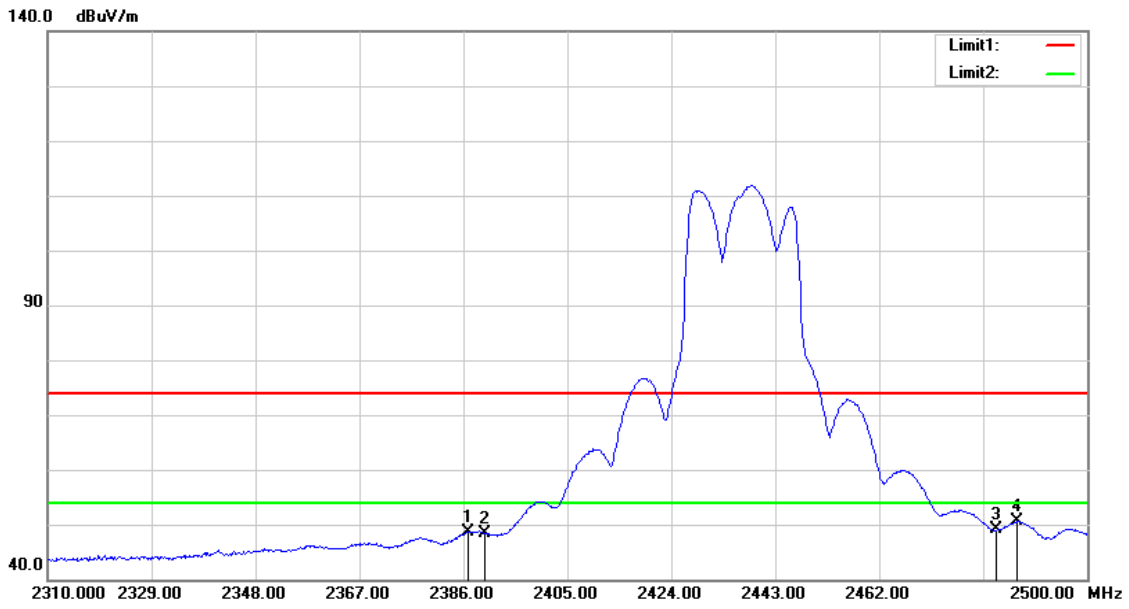
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.240	50.99	-7.33	43.66	54.00	-10.34	AVG
2	2390.000	48.87	-7.30	41.57	54.00	-12.43	AVG
3	2483.500	50.96	-6.94	44.02	54.00	-9.98	AVG
4	2485.750	52.30	-6.92	45.38	54.00	-8.62	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



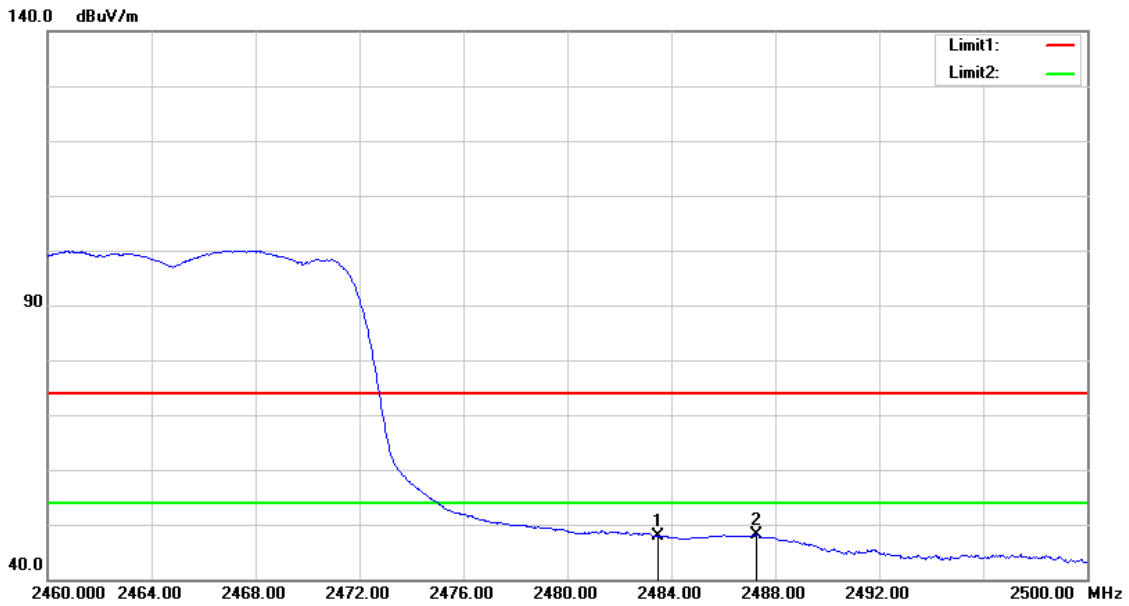
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.760	55.97	-7.33	48.64	54.00	-5.36	AVG
2	2390.000	55.57	-7.30	48.27	54.00	-5.73	AVG
3	2483.500	55.98	-6.94	49.04	54.00	-4.96	AVG
4	2487.270	57.47	-6.92	50.55	54.00	-3.45	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



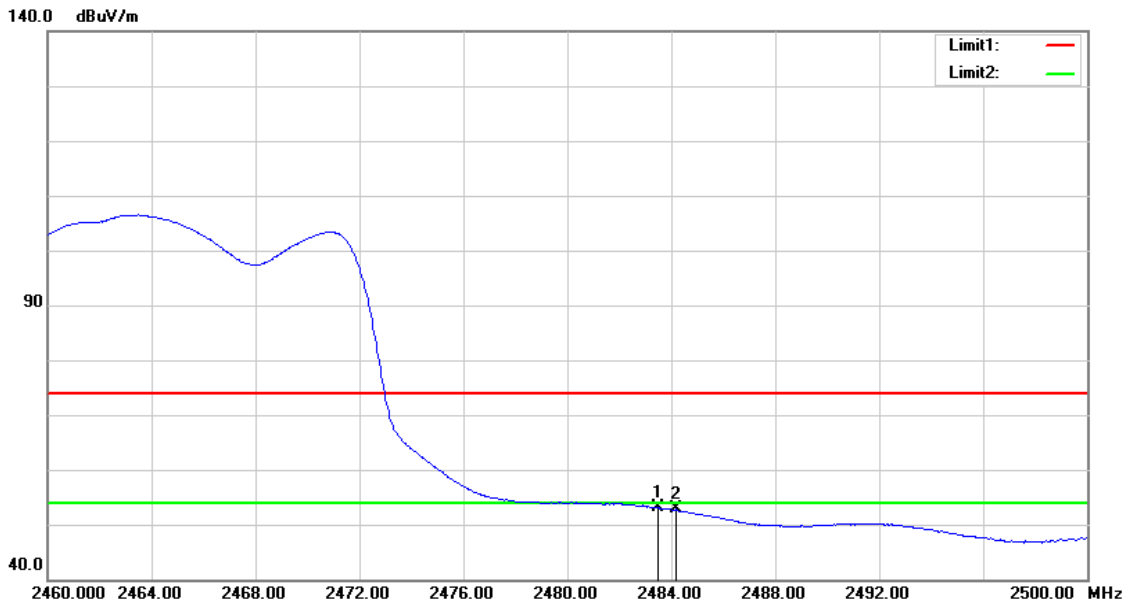
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	54.82	-6.94	47.88	54.00	-6.12	AVG
2	2487.280	55.06	-6.92	48.14	54.00	-5.86	AVG

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:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



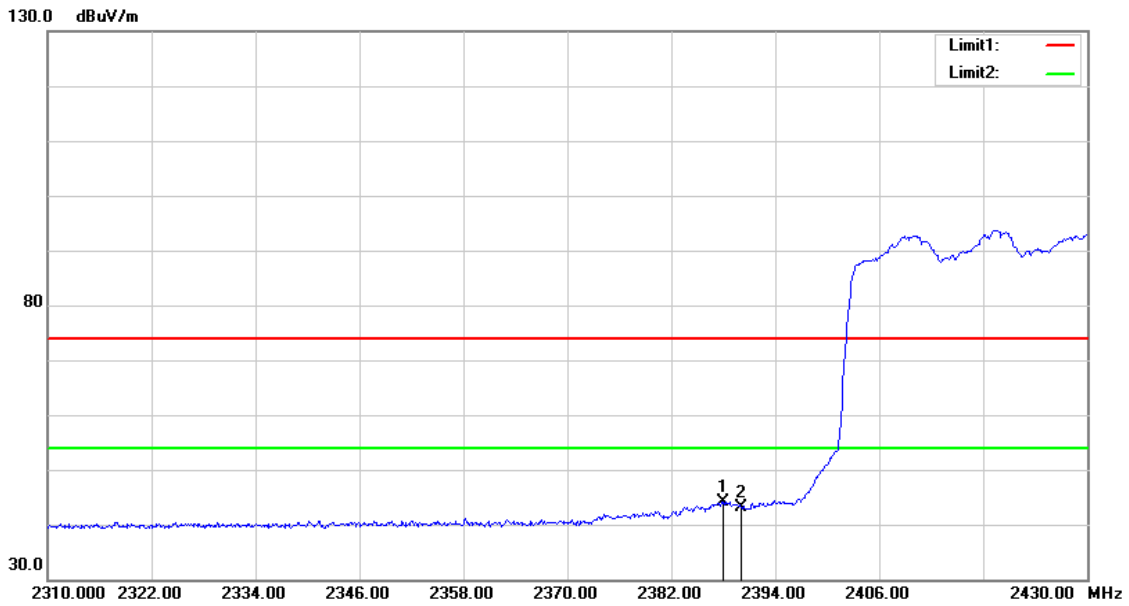
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	60.02	-6.94	53.08	54.00	-0.92	AVG
2	2484.160	59.69	-6.92	52.77	54.00	-1.23	AVG

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



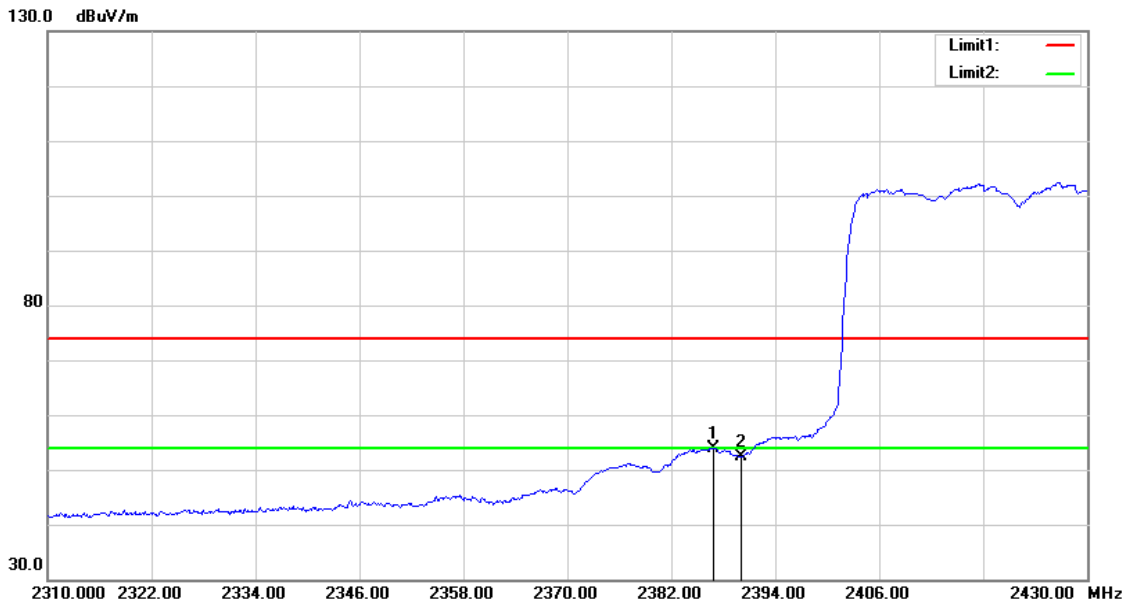
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.000	51.52	-7.32	44.20	54.00	-9.80	AVG
2	2390.000	50.48	-7.30	43.18	54.00	-10.82	AVG

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:	2422 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



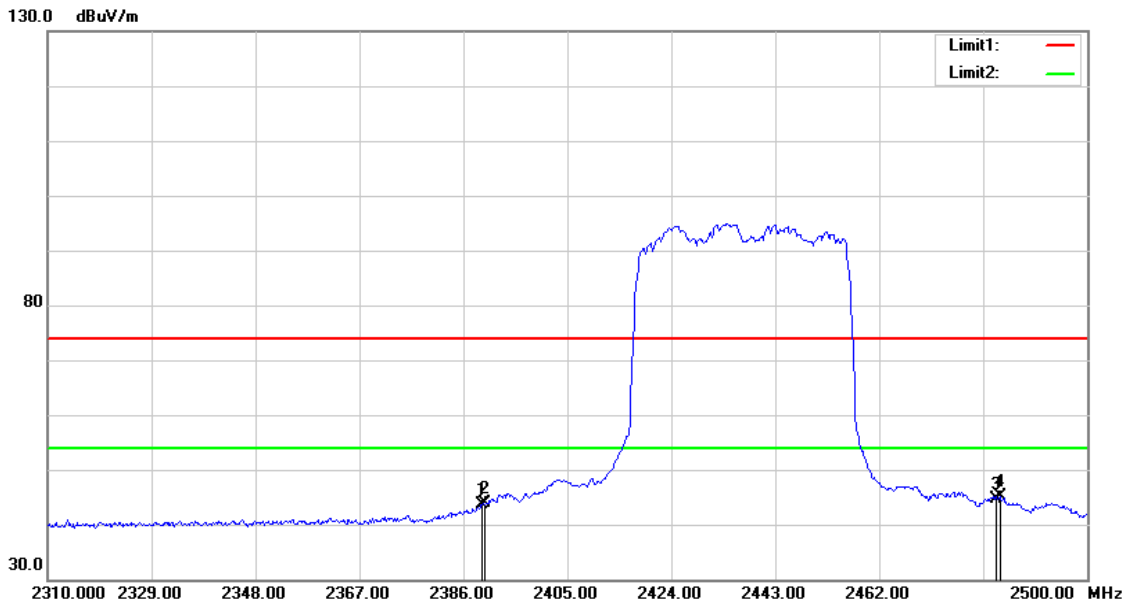
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.800	61.21	-7.33	53.88	54.00	-0.12	AVG
2	2390.000	59.61	-7.30	52.31	54.00	-1.69	AVG

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



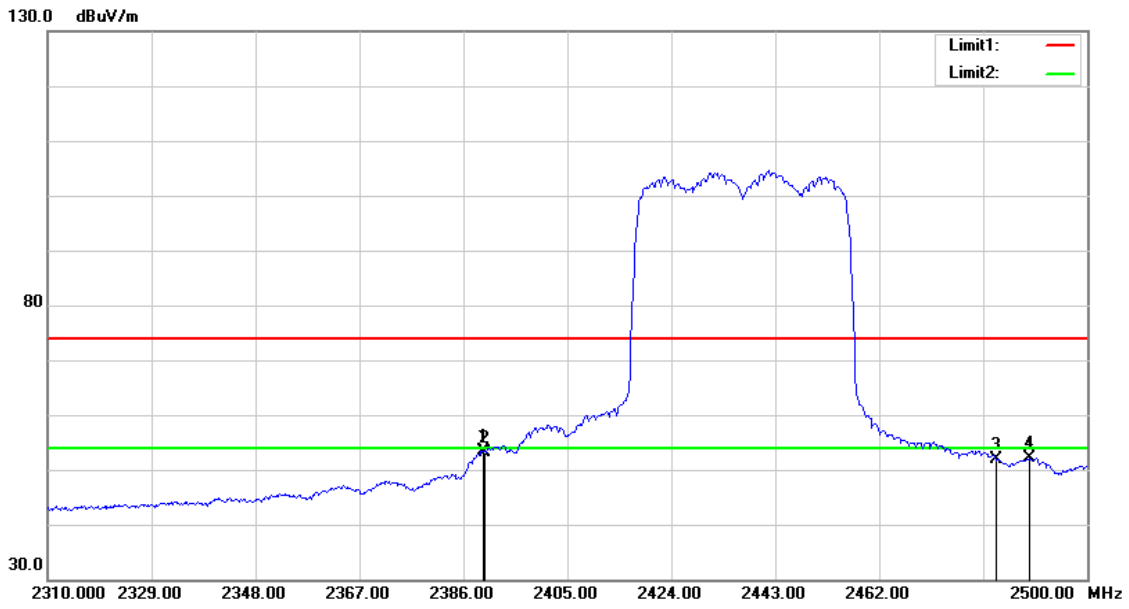
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	50.96	-7.30	43.66	54.00	-10.34	AVG
2	2390.000	51.29	-7.30	43.99	54.00	-10.01	AVG
3	2483.500	51.63	-6.94	44.69	54.00	-9.31	AVG
4	2484.040	51.99	-6.93	45.06	54.00	-8.94	AVG

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



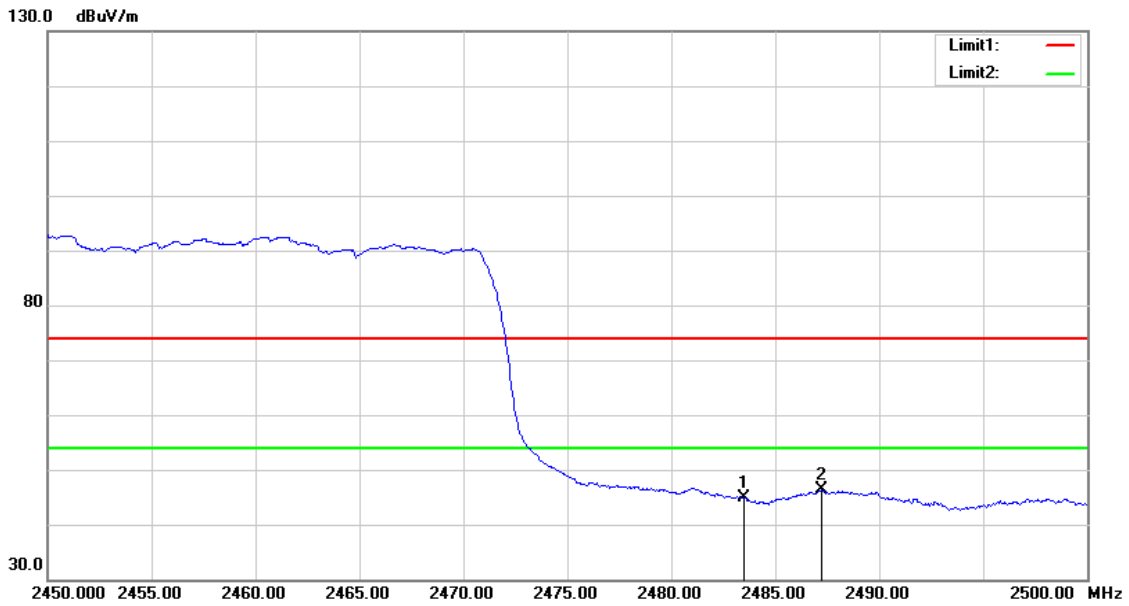
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.610	60.70	-7.30	53.40	54.00	-0.60	AVG
2	2390.000	60.55	-7.30	53.25	54.00	-0.75	AVG
3	2483.500	58.83	-6.94	51.89	54.00	-2.11	AVG
4	2489.550	58.97	-6.91	52.06	54.00	-1.94	AVG

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:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



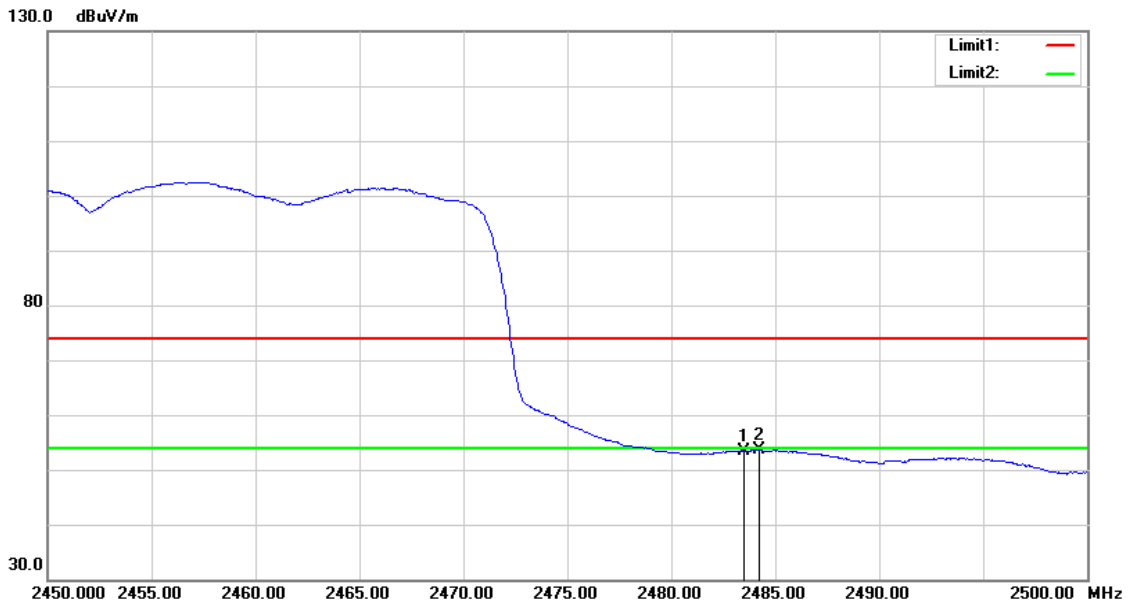
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	51.81	-6.94	44.87	54.00	-9.13	AVG
2	2487.200	53.21	-6.92	46.29	54.00	-7.71	AVG

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:	2452 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	60.33	-6.94	53.39	54.00	-0.61	AVG
2	2484.250	60.46	-6.92	53.54	54.00	-0.46	AVG

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

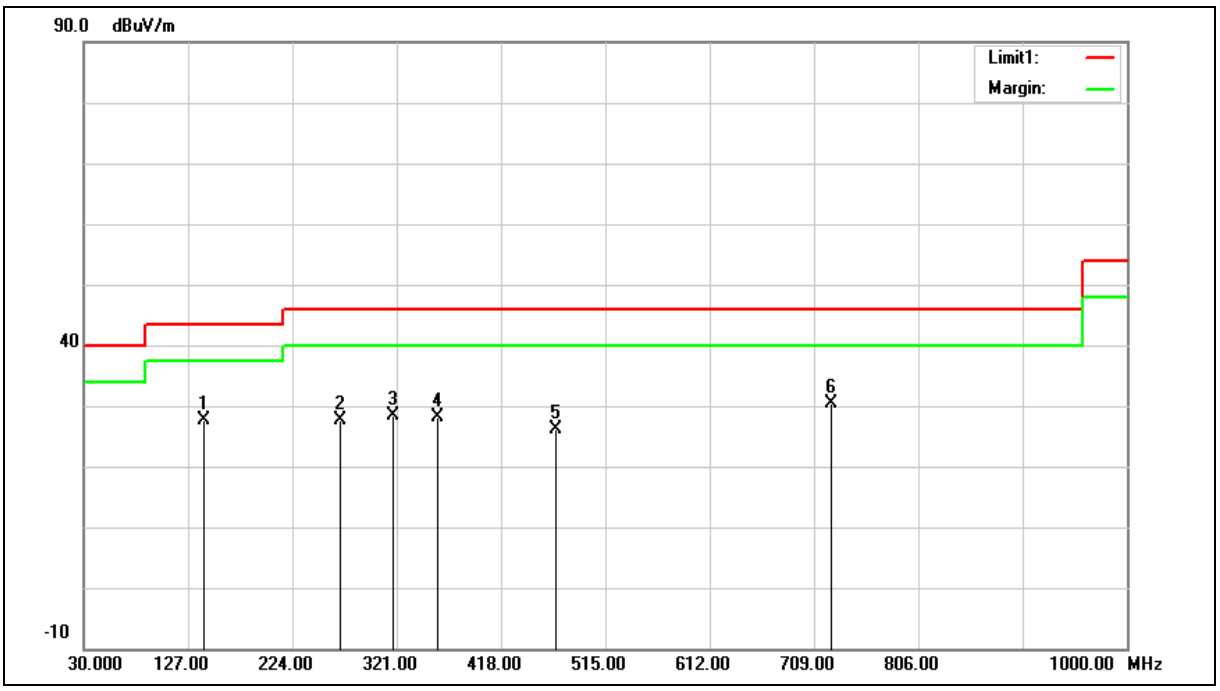
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

Beamforming on

Below 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3m
Mode:	Mode 1		
Ant.Polar.:	Horizontal		



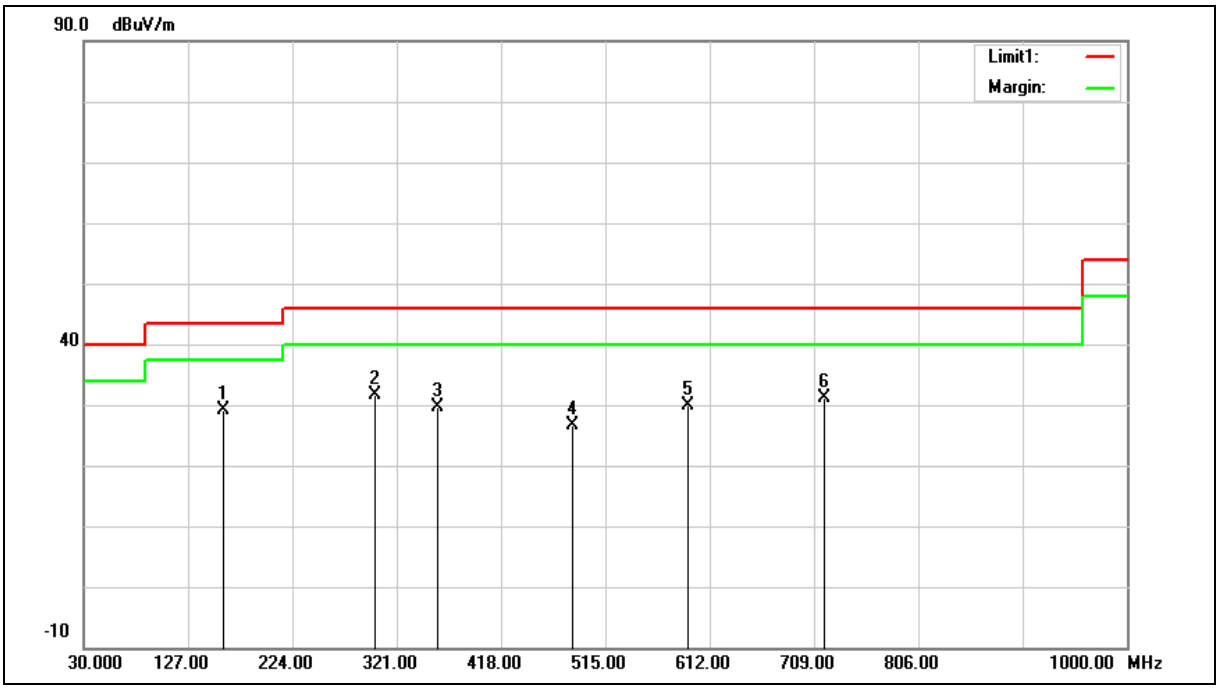
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	141.5500	35.10	-7.36	27.74	43.50	-15.76	QP
2	268.6200	35.18	-7.43	27.75	46.00	-18.25	QP
3	318.0900	34.62	-6.23	28.39	46.00	-17.61	QP
4	358.8300	33.39	-5.32	28.07	46.00	-17.93	QP
5	468.4400	29.23	-3.17	26.06	46.00	-19.94	QP
6	725.4900	28.14	2.20	30.34	46.00	-15.66	QP

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
Mode:	Mode 1		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	159.9800	36.11	-6.86	29.25	43.50	-14.25	QP
2	300.6300	38.11	-6.59	31.52	46.00	-14.48	QP
3	358.8300	35.05	-5.32	29.73	46.00	-16.27	QP
4	483.9600	29.77	-3.02	26.75	46.00	-19.25	QP
5	591.6300	30.22	-0.30	29.92	46.00	-16.08	QP
6	718.7000	28.99	2.10	31.09	46.00	-14.91	QP

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

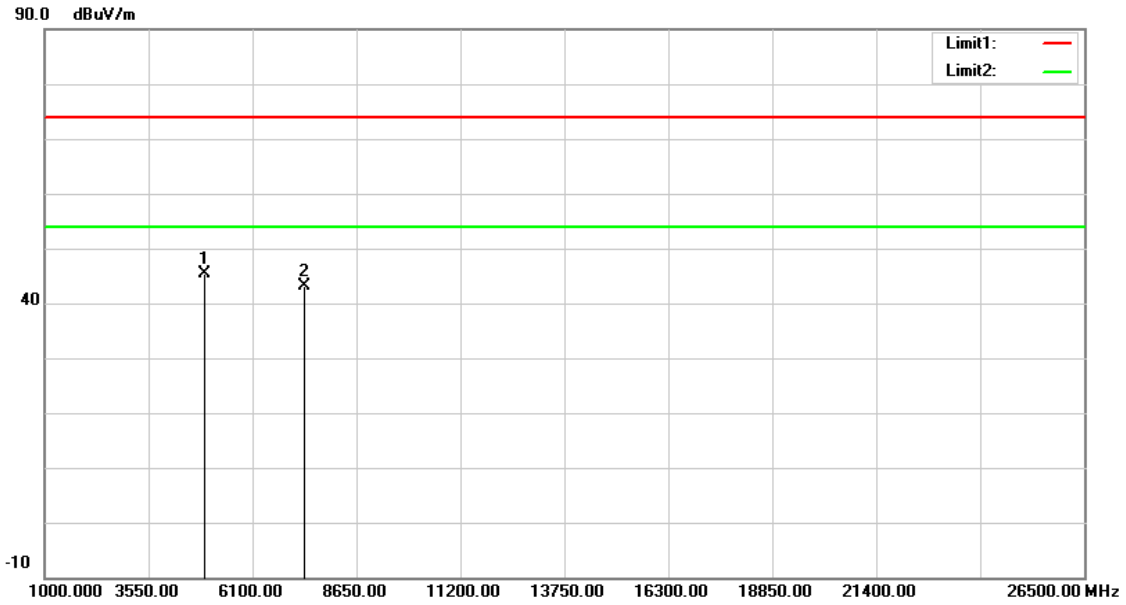
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

Harmonic

Above 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



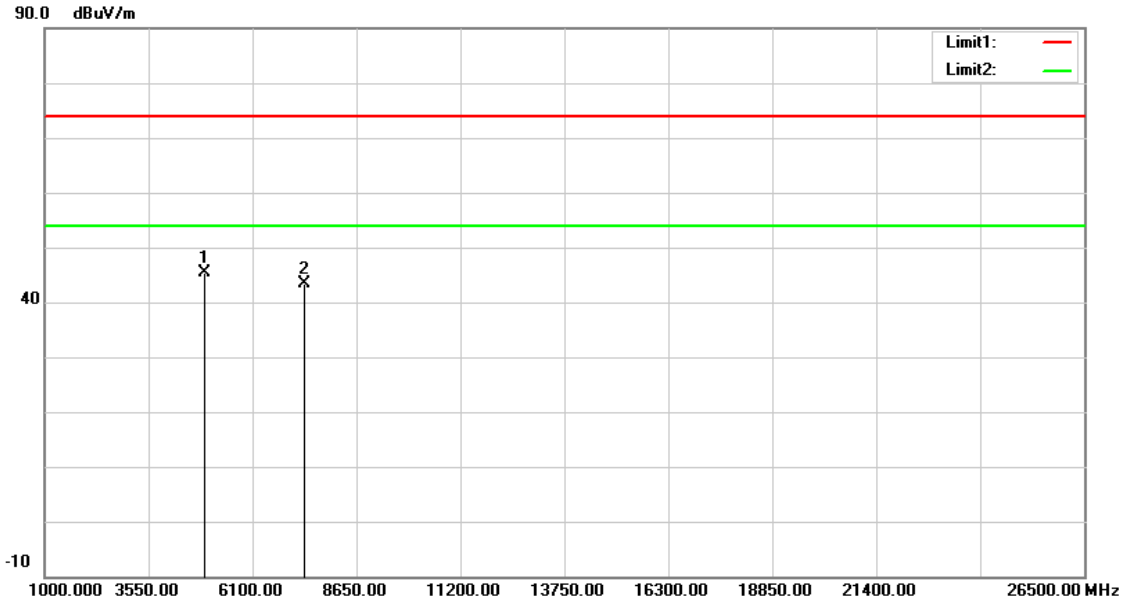
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	46.08	-0.63	45.45	74.00	-28.55	peak
2	7386.000	36.49	6.75	43.24	74.00	-30.76	peak

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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



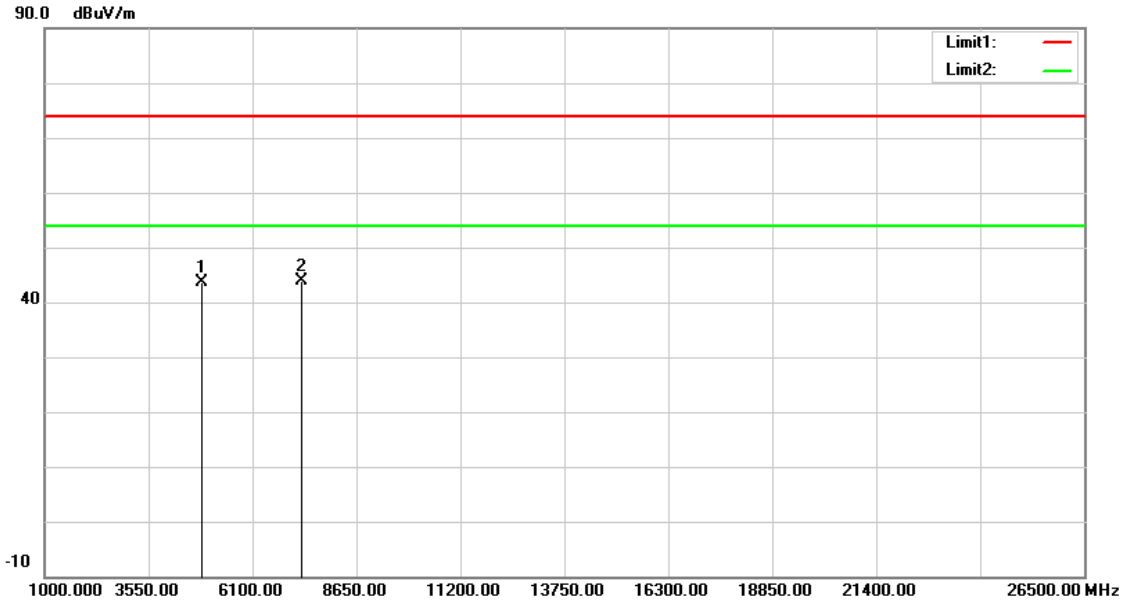
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	46.12	-0.63	45.49	74.00	-28.51	peak
2	7386.000	36.52	6.75	43.27	74.00	-30.73	peak

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:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



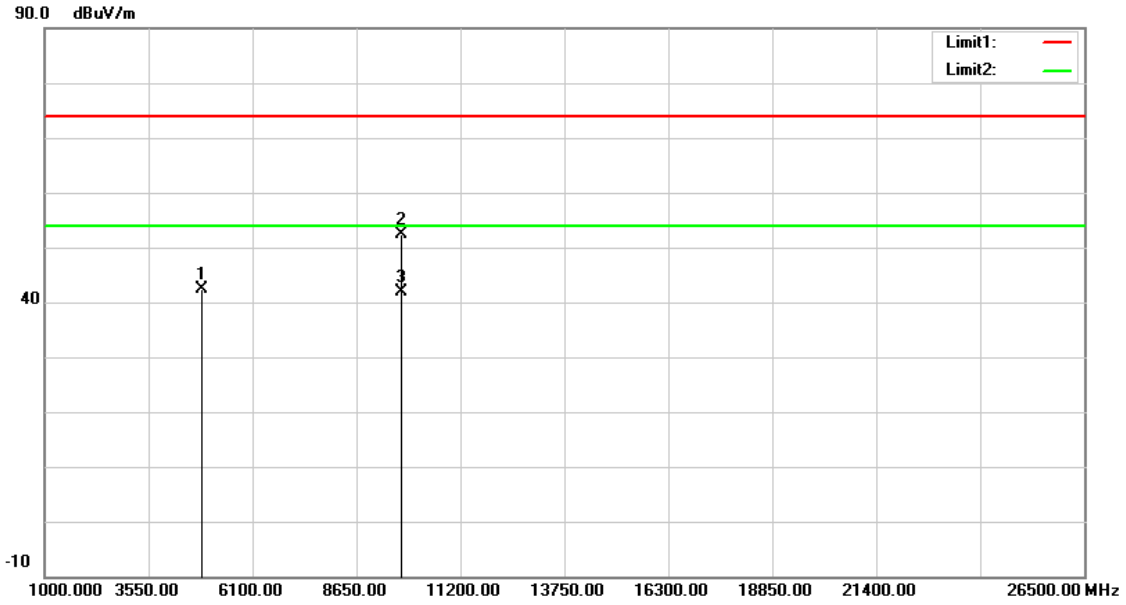
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	44.42	-0.80	43.62	74.00	-30.38	peak
2	7311.000	37.39	6.46	43.85	74.00	-30.15	peak

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:	3 m
Test item:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



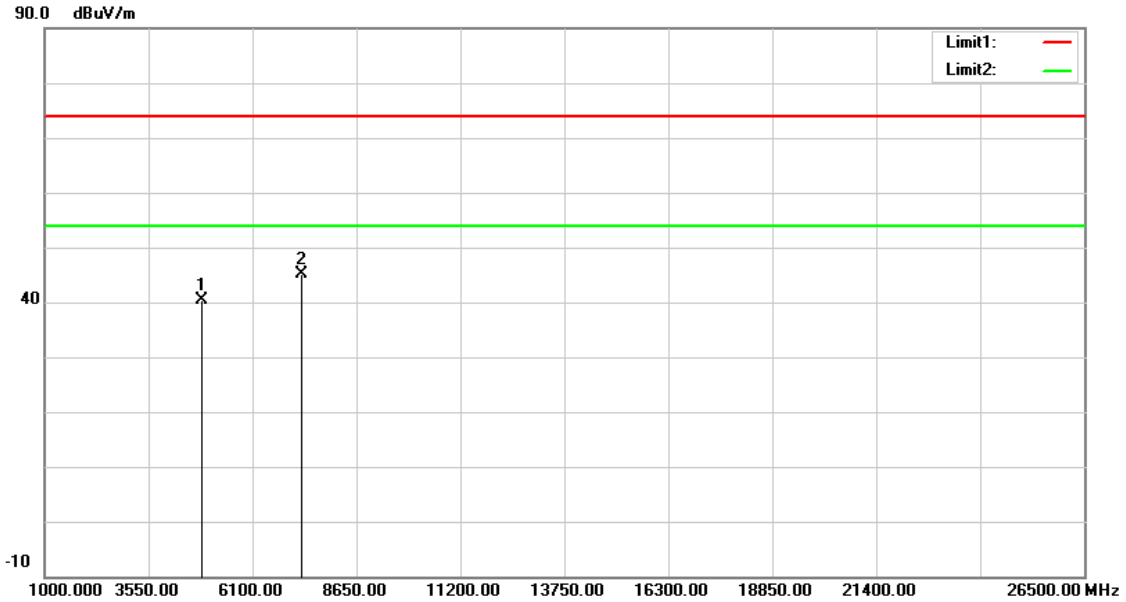
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	43.12	-0.80	42.32	74.00	-31.68	peak
2	9748.000	39.54	12.95	52.49	74.00	-21.51	peak
3	9748.000	29.04	12.95	41.99	54.00	-12.01	AVG

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:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



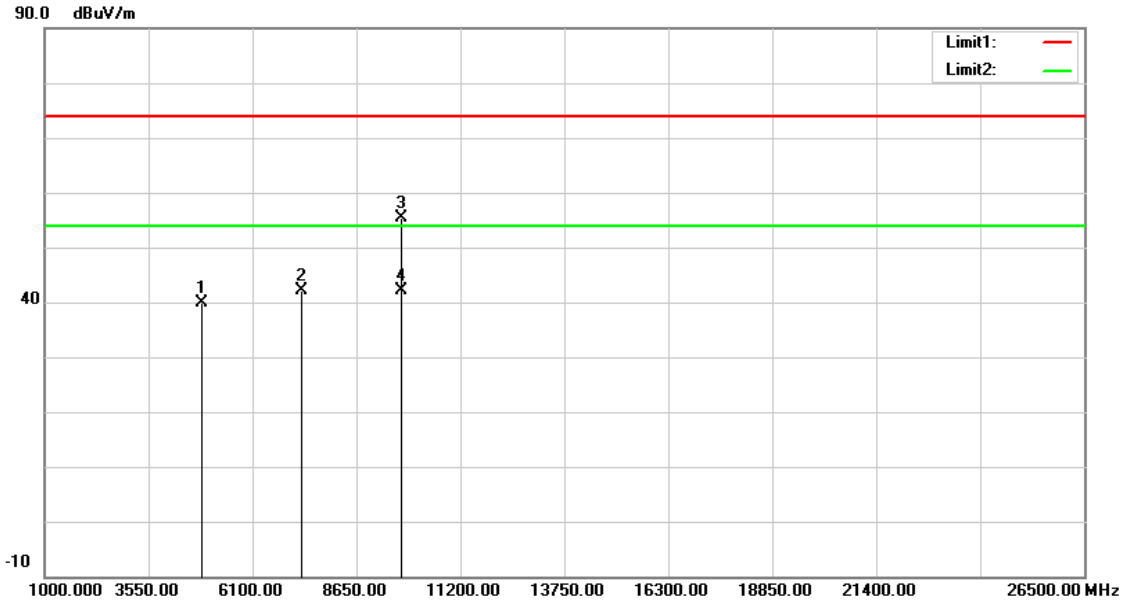
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	41.26	-0.80	40.46	74.00	-33.54	peak
2	7311.000	38.60	6.46	45.06	74.00	-28.94	peak

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:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



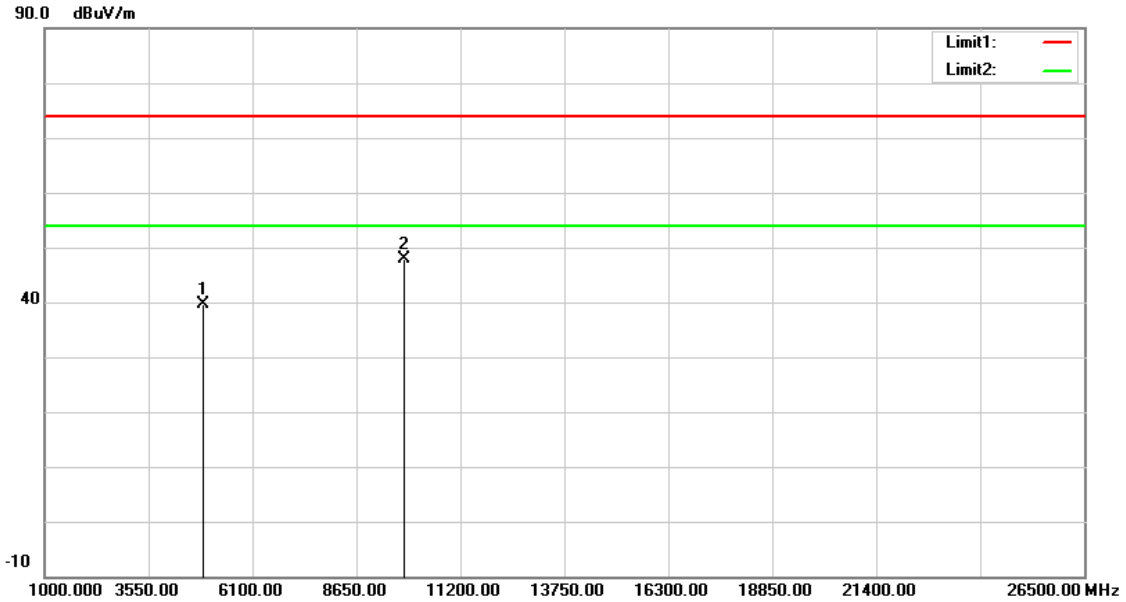
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	40.80	-0.80	40.00	74.00	-34.00	peak
2	7311.000	35.64	6.46	42.10	74.00	-31.90	peak
3	9748.000	42.52	12.95	55.47	74.00	-18.53	peak
4	9748.000	29.23	12.95	42.18	54.00	-11.82	AVG

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



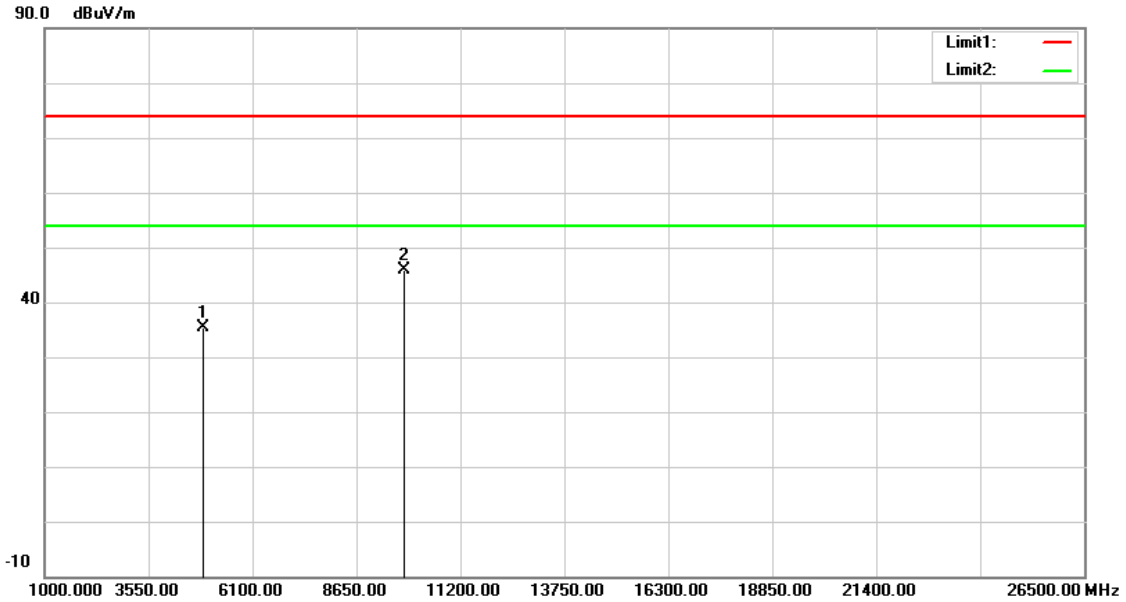
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	40.24	-0.69	39.55	74.00	-34.45	peak
2	9808.000	34.82	13.08	47.90	74.00	-26.10	peak

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.000	36.14	-0.69	35.45	74.00	-38.55	peak
2	9808.000	32.82	13.08	45.90	74.00	-28.10	peak

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

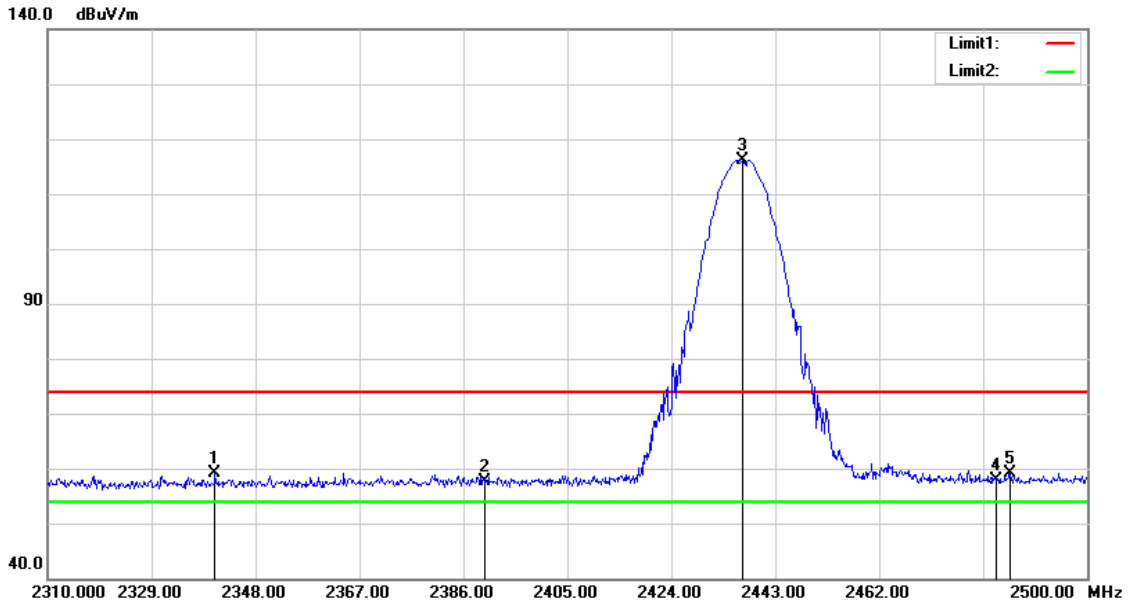
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



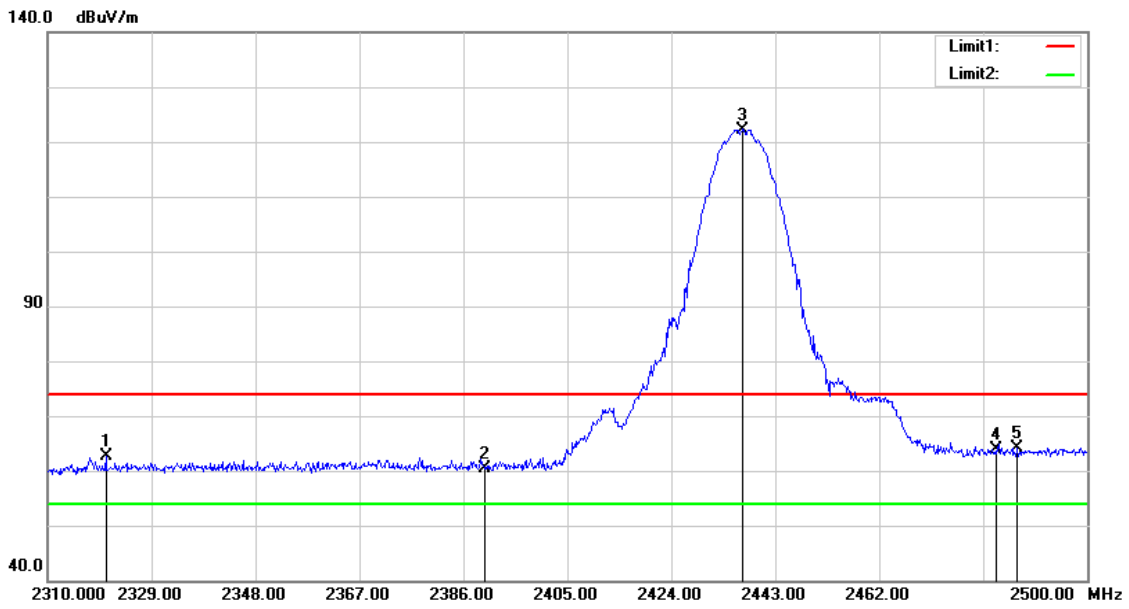
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2340.590	66.61	-7.51	59.10	74.00	-14.90	peak
2	2390.000	64.99	-7.30	57.69	74.00	-16.31	peak
3	2437.110	123.33	-7.12	116.21	74.00	42.21	peak
4	2483.500	64.70	-6.94	57.76	74.00	-16.24	peak
5	2485.940	65.99	-6.92	59.07	74.00	-14.93	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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



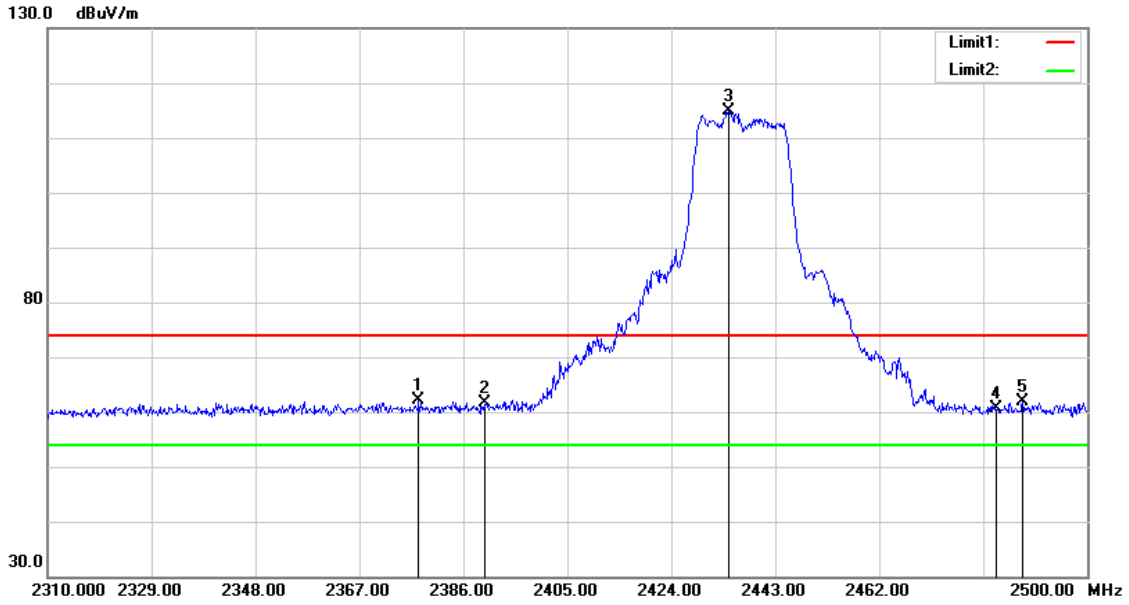
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2320.640	70.33	-7.58	62.75	74.00	-11.25	peak
2	2390.000	67.75	-7.30	60.45	74.00	-13.55	peak
3	2437.110	129.37	-7.12	122.25	74.00	48.25	peak
4	2483.500	70.70	-6.94	63.76	74.00	-10.24	peak
5	2487.270	71.10	-6.92	64.18	74.00	-9.82	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:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



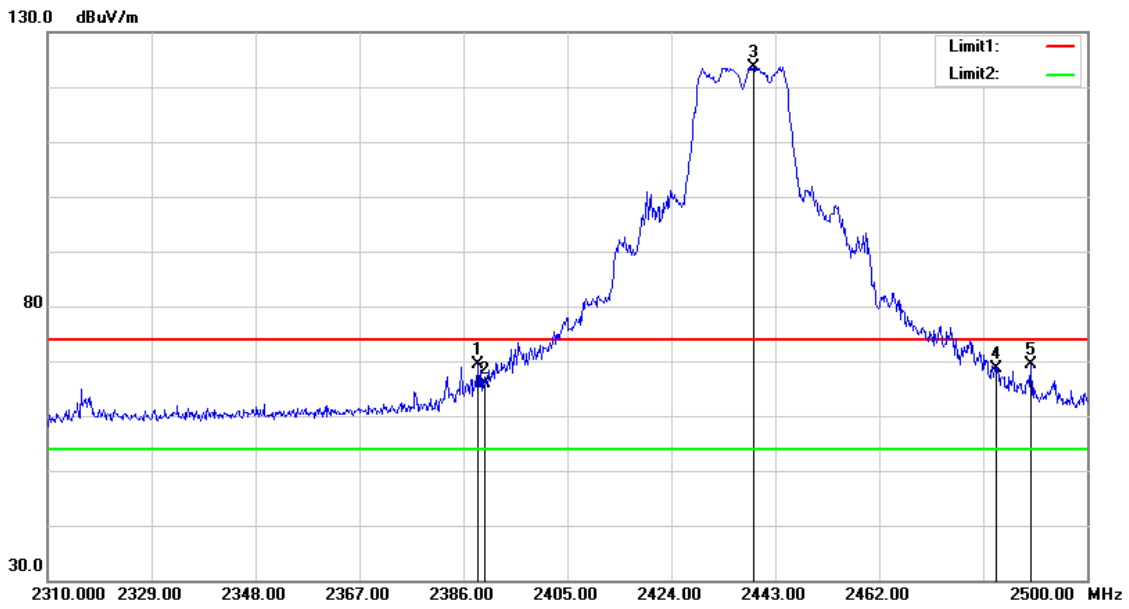
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.830	69.45	-7.35	62.10	74.00	-11.90	peak
2	2390.000	68.86	-7.30	61.56	74.00	-12.44	peak
3	2434.450	122.08	-7.12	114.96	74.00	40.96	peak
4	2483.500	67.55	-6.94	60.61	74.00	-13.39	peak
5	2488.220	68.80	-6.91	61.89	74.00	-12.11	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



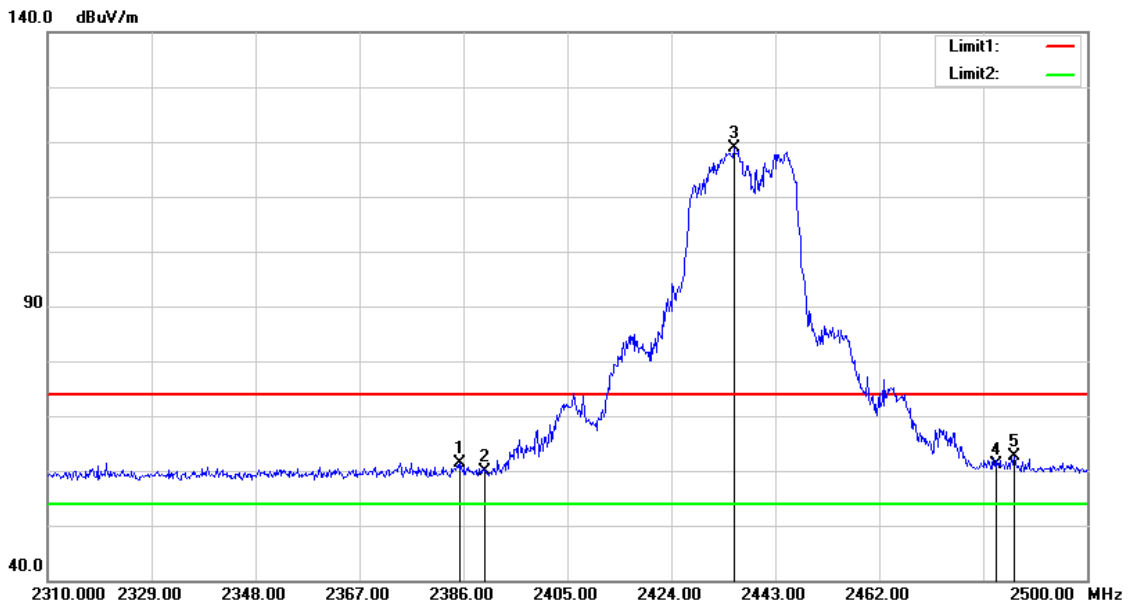
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.660	76.79	-7.31	69.48	74.00	-4.52	peak
2	2390.000	73.11	-7.30	65.81	74.00	-8.19	peak
3	2439.010	130.71	-7.11	123.60	74.00	49.60	peak
4	2483.500	75.61	-6.94	68.67	74.00	-5.33	peak
5	2489.740	76.18	-6.91	69.27	74.00	-4.73	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:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



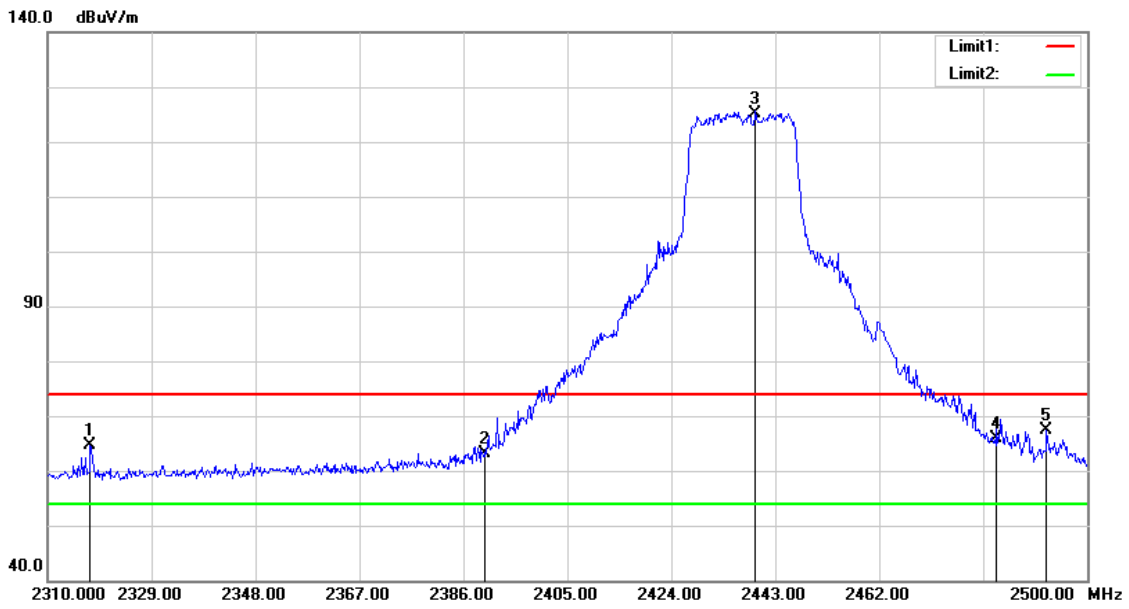
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.430	68.79	-7.33	61.46	74.00	-12.54	peak
2	2390.000	67.18	-7.30	59.88	74.00	-14.12	peak
3	2435.400	125.88	-7.12	118.76	74.00	44.76	peak
4	2483.500	68.05	-6.94	61.11	74.00	-12.89	peak
5	2486.700	69.53	-6.92	62.61	74.00	-11.39	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:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



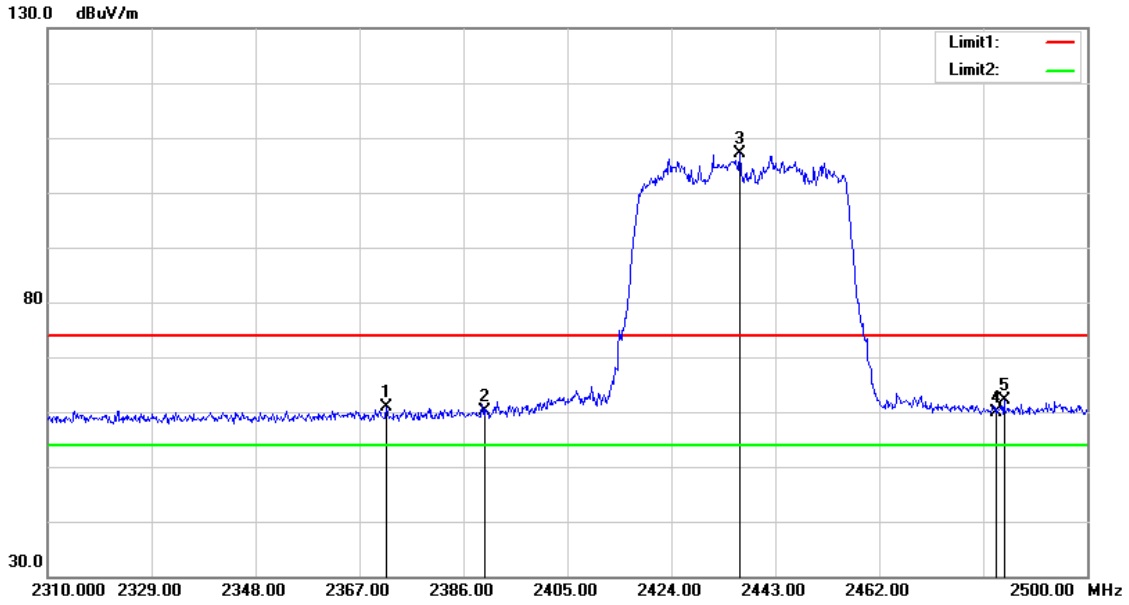
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2317.790	72.10	-7.59	64.51	74.00	-9.49	peak
2	2390.000	70.39	-7.30	63.09	74.00	-10.91	peak
3	2439.390	132.17	-7.11	125.06	74.00	51.06	peak
4	2483.500	72.83	-6.94	65.89	74.00	-8.11	peak
5	2492.590	74.23	-6.90	67.33	74.00	-6.67	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



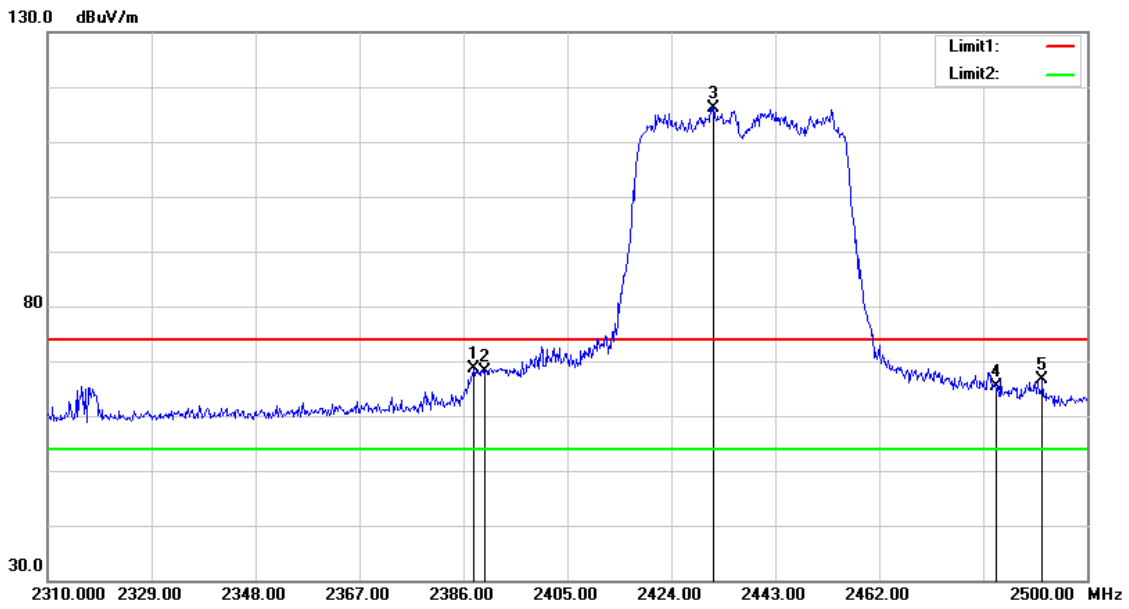
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.940	68.26	-7.38	60.88	74.00	-13.12	peak
2	2390.000	67.39	-7.30	60.09	74.00	-13.91	peak
3	2436.540	114.18	-7.12	107.06	74.00	33.06	peak
4	2483.500	66.87	-6.94	59.93	74.00	-14.07	peak
5	2484.800	69.02	-6.92	62.10	74.00	-11.90	peak

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.900	76.06	-7.32	68.74	74.00	-5.26	peak
2	2390.000	75.54	-7.30	68.24	74.00	-5.76	peak
3	2431.790	123.21	-7.13	116.08	74.00	42.08	peak
4	2483.500	72.33	-6.94	65.39	74.00	-8.61	peak
5	2491.830	73.49	-6.90	66.59	74.00	-7.41	peak

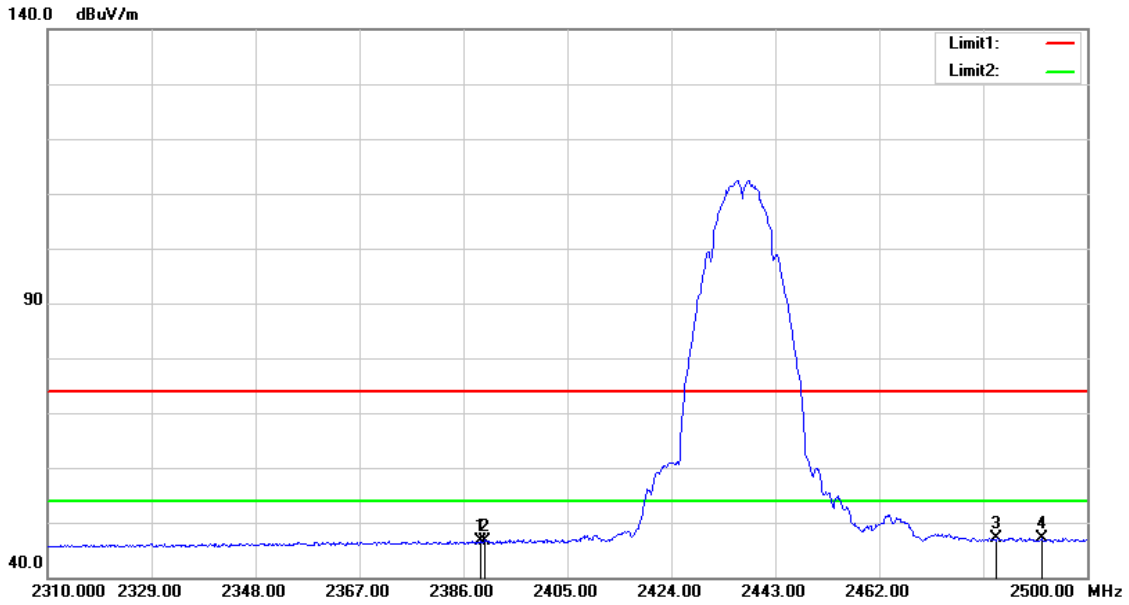
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	3m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



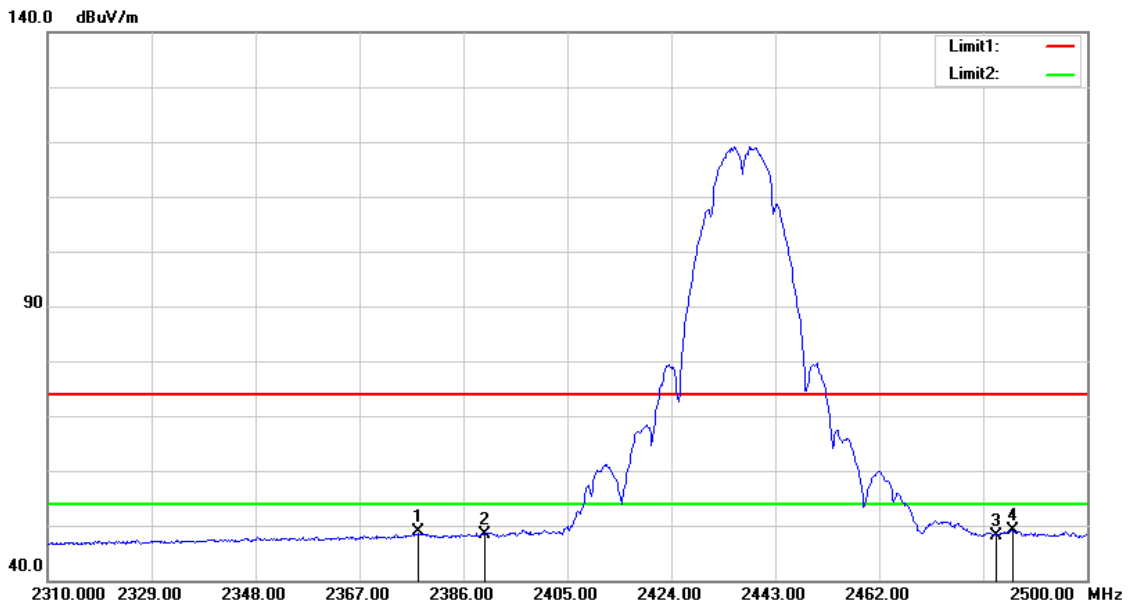
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.230	53.92	-7.30	46.62	54.00	-7.38	AVG
2	2390.000	53.87	-7.30	46.57	54.00	-7.43	AVG
3	2483.500	54.02	-6.94	47.08	54.00	-6.92	AVG
4	2491.830	54.10	-6.90	47.20	54.00	-6.80	AVG

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



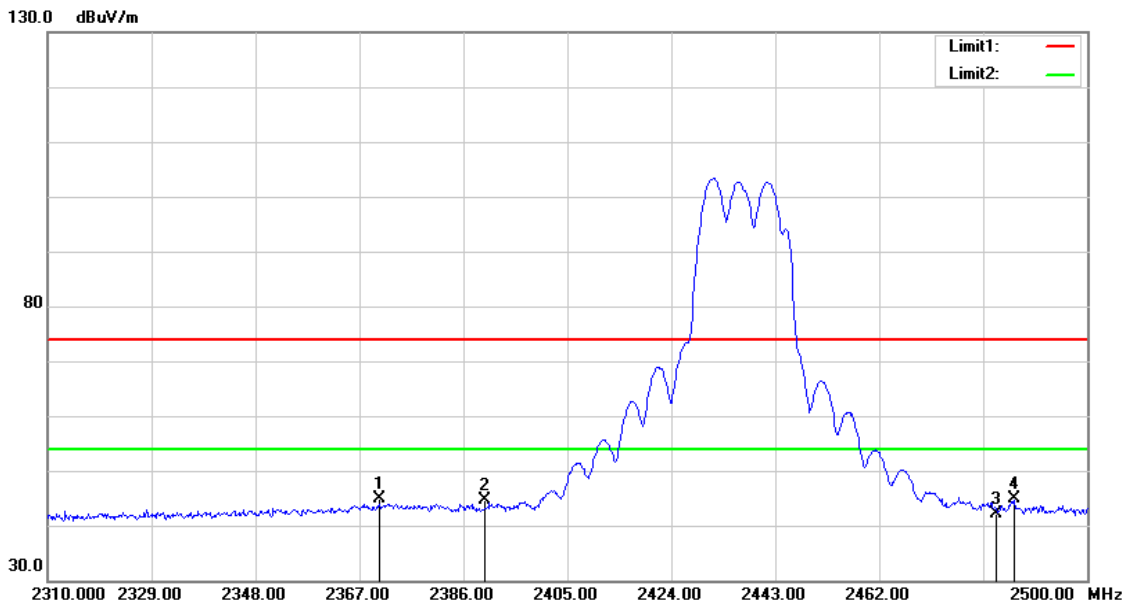
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.830	56.22	-7.35	48.87	54.00	-5.13	AVG
2	2390.000	55.70	-7.30	48.40	54.00	-5.60	AVG
3	2483.500	55.10	-6.94	48.16	54.00	-5.84	AVG
4	2486.510	56.05	-6.92	49.13	54.00	-4.87	AVG

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

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

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

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



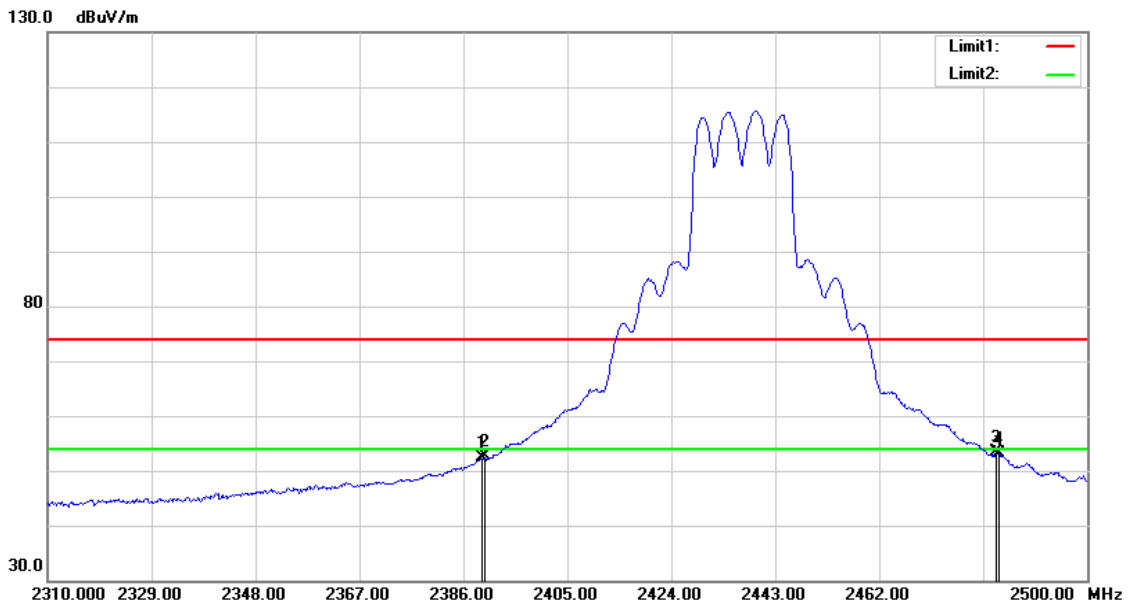
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2370.610	52.36	-7.38	44.98	54.00	-9.02	AVG
2	2390.000	51.83	-7.30	44.53	54.00	-9.47	AVG
3	2483.500	49.01	-6.94	42.07	54.00	-11.93	AVG
4	2486.700	51.88	-6.92	44.96	54.00	-9.04	AVG

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:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



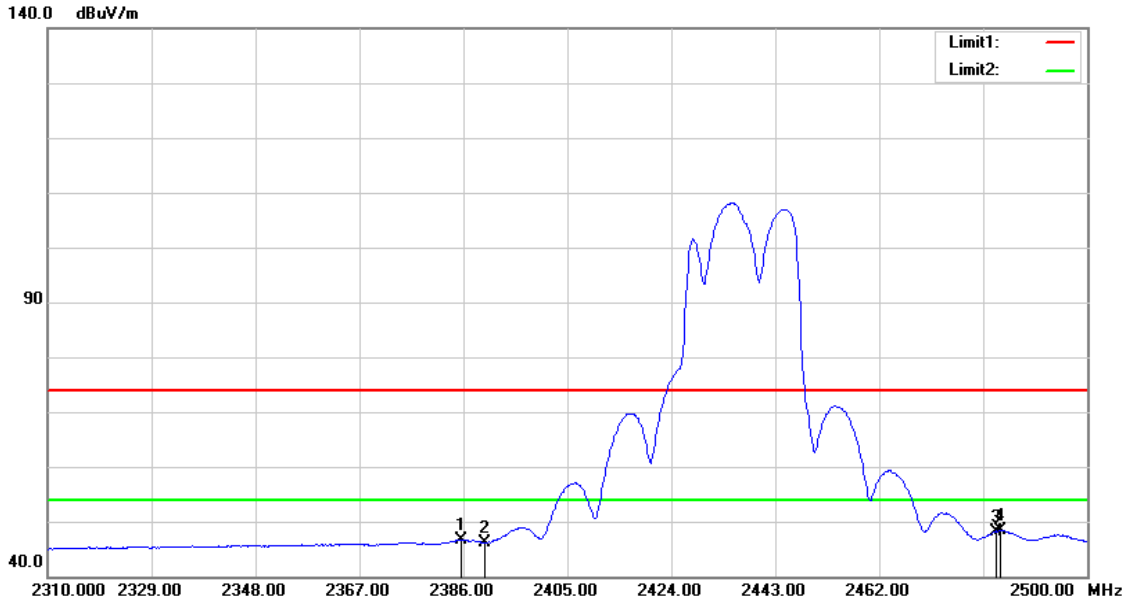
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	59.61	-7.30	52.31	54.00	-1.69	AVG
2	2390.000	59.84	-7.30	52.54	54.00	-1.46	AVG
3	2483.500	60.24	-6.94	53.30	54.00	-0.70	AVG
4	2483.850	60.15	-6.94	53.21	54.00	-0.79	AVG

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:	Band edge		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Horizontal		



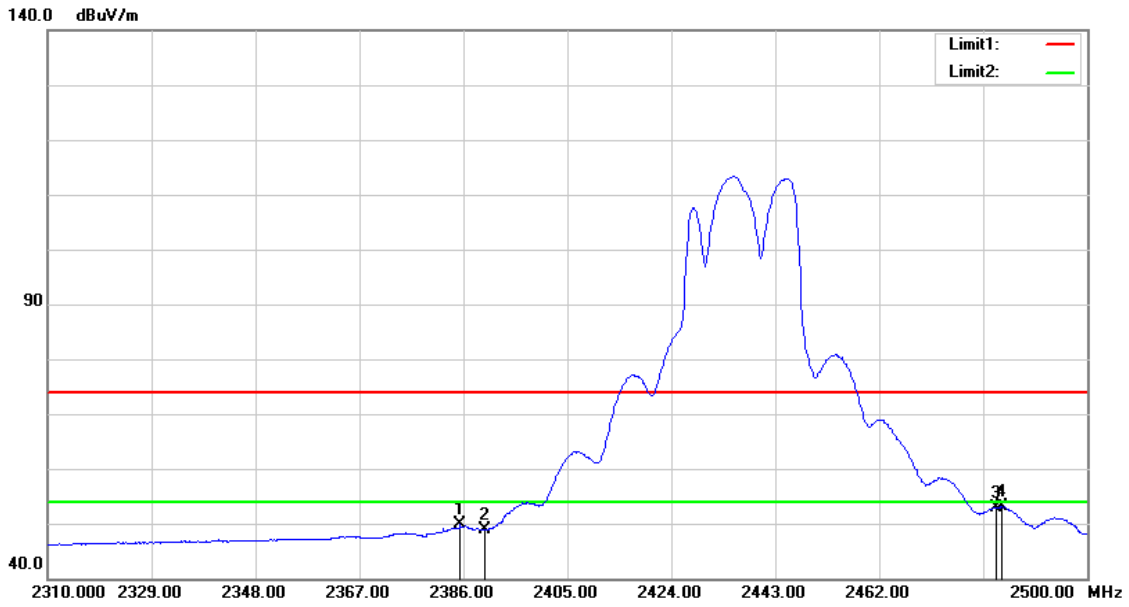
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.620	54.07	-7.33	46.74	54.00	-7.26	AVG
2	2390.000	53.54	-7.30	46.24	54.00	-7.76	AVG
3	2483.500	55.18	-6.94	48.24	54.00	-5.76	AVG
4	2484.230	55.24	-6.92	48.32	54.00	-5.68	AVG

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		
Frequency:	2437 MHz		
Mode:	Mode 8		
Ant.Polar.:	Vertical		



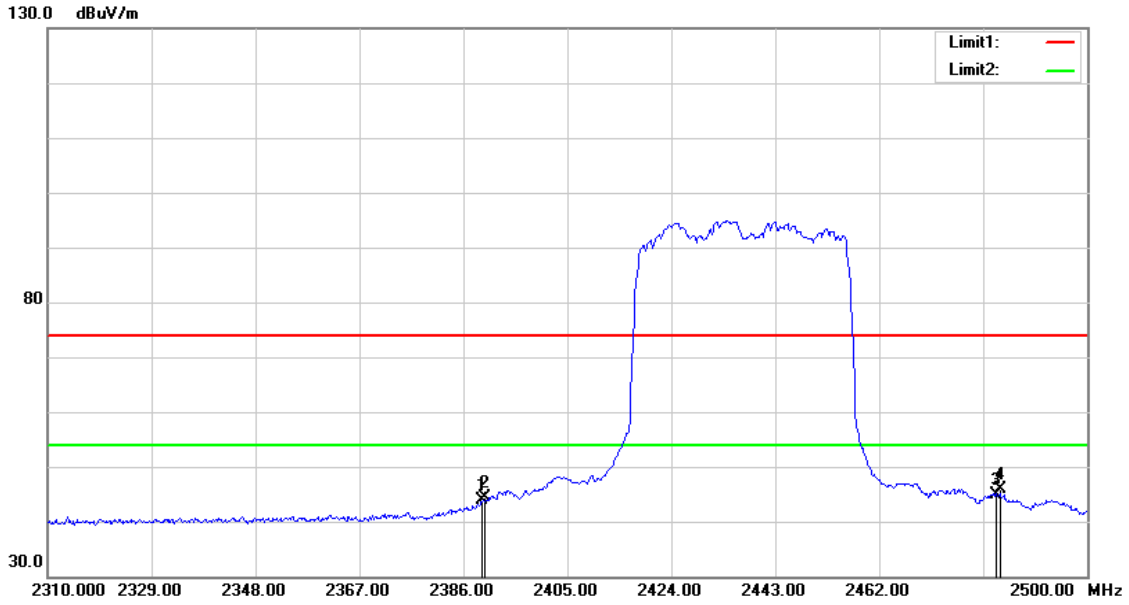
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.430	57.18	-7.33	49.85	54.00	-4.15	AVG
2	2390.000	56.14	-7.30	48.84	54.00	-5.16	AVG
3	2483.500	59.91	-6.94	52.97	54.00	-1.03	AVG
4	2484.420	60.07	-6.92	53.15	54.00	-0.85	AVG

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:	2437 MHz		
Mode:	Mode 9		
Ant.Polar.:	Horizontal		



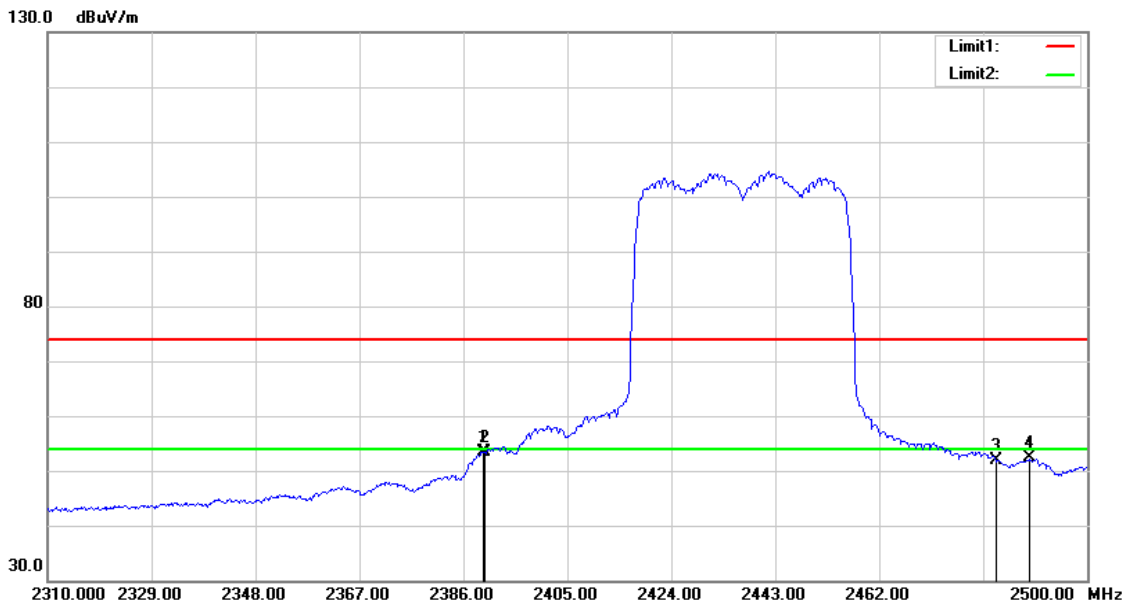
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.420	51.16	-7.30	43.86	54.00	-10.14	AVG
2	2390.000	51.69	-7.30	44.39	54.00	-9.61	AVG
3	2483.500	51.93	-6.94	44.99	54.00	-9.01	AVG
4	2484.040	52.79	-6.93	45.86	54.00	-8.14	AVG

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:			
Frequency:			
Mode:	Mode 9		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.610	60.80	-7.30	53.50	54.00	-0.50	AVG
2	2390.000	60.65	-7.30	53.35	54.00	-0.65	AVG
3	2483.500	58.93	-6.94	51.99	54.00	-2.01	AVG
4	2489.550	59.17	-6.91	52.26	54.00	-1.74	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.

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