

**FCC PART 15 SUBPART C TEST REPORT**

**for**

**17" Notebook**

**Model No.: RF9**

**FCC ID: IR5RF9**

of

**Applicant: CReTE Systems, Inc.**

**Address: 7F, NO.250, Sec.3, Pei Shen RD. Shen Keng Hsiang,  
Taipei County Taiwan R.O.C.**

Tested and Prepared

by

**Worldwide Testing Services (Taiwan) Co., Ltd.**

**FCC Registration No.: 930600**

**Industry Canada filed test laboratory Reg. No. IC 5679A-1**

**A2LA Accredited No.: 2732.01**



**Report No.: W6M21003-10512-C-1**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## **TABLE OF CONTENTS**

<b>1</b>	<b>GENERAL INFORMATION.....</b>	<b>2</b>
1.1	NOTES.....	2
1.2	TESTING LABORATORY .....	3
1.2.1	Location .....	3
1.2.2	Details of accreditation status .....	3
1.3	DETAILS OF APPROVAL HOLDER.....	3
1.4	APPLICATION DETAILS .....	4
1.5	GENERAL INFORMATION OF TEST ITEM .....	4
1.6	TEST STANDARDS.....	5
1.7	MODIFICATION INFORMATION .....	6
<b>2</b>	<b>TECHNICAL TEST.....</b>	<b>7</b>
2.1	SUMMARY OF TEST RESULTS .....	7
2.2	TEST ENVIRONMENT .....	7
2.3	TEST EQUIPMENT LIST.....	8
2.4	GENERAL TEST PROCEDURE .....	11
<b>3</b>	<b>TEST RESULTS (ENCLOSURE) .....</b>	<b>13</b>
3.1	PEAK OUTPUT POWER (TRANSMITTER).....	14
3.2	EQUIVALENT ISOTROPIC RADIATED POWER.....	16
3.3	RF EXPOSURE COMPLIANCE REQUIREMENTS .....	16
3.4	TRANSMITTER RADIATED EMISSIONS IN RESTRICTED BANDS.....	17
3.5	SPURIOUS EMISSIONS (TX) .....	18
3.6	RADIATED EMISSION ON THE BAND EDGE .....	32
3.7	MINIMUM 6 DB BANDWIDTH .....	34
3.8	PEAK POWER SPECTRAL DENSITY .....	36
3.9	RADIATED EMISSION FROM DIGITAL PART .....	38
3.10	POWER LINE CONDUCTED EMISSION .....	39



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## **1 General Information**

### **1.1 Notes**

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

#### **Specific Conditions:**

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

The test sample is able to work according IEEE 802.11 a/b/g/n.

This report is related to FCC Part 15 C (DSSS and OFDM device).

#### **Tester:**

June 2, 2010

Danny Sung

Date

WTS-Lab.

Name

Signature

#### **Technical responsibility for area of testing:**

June 2, 2010

Chang Tse-Ming

Date

WTS

Name

Signature



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS

No.5-1, Shuang Sing Village,  
LiShuei Rd., Wanli Township,  
Taipei County 207, Taiwan (R.O.C.)

Company

Worldwide Testing Services(Taiwan) Co., Ltd.  
6F, NO. 58, LANE 188, RUEY-KUANG RD.  
NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877

Fax : 886-2-66068879

### **1.2.2 Details of accreditation status**

Accredited testing laboratory

A2LA accredited number: 2732.01

FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1



**Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :**

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

Telephone: ./.

Fax: ./.

## **1.3 Details of approval holder**

Name: CReTE Systems, Inc.

Street: 7F, NO.250, Sec.3, Pei Shen RD.

City: Shen Keng Hsiang, Taipei County

Country: Taiwan R.O.C.

Telephone: +886 2 2662 6074

Fax: +886 2 2664 2662



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## 1.4 Application details

Date of receipt of test item: May 13, 2010

Date of test: from May 13, 2010 to May 31, 2010

## 1.5 General information of Test item

Type of test item: 17" Notebook

Model Number: RF9

Brand Name: CRETE

Multi-listing model number: ./.

Photos: see Appendix

### Technical data

Frequency band: 5.745 GHz-5.825 GHz, 2.4 GHz-2.4835 GHz

#### 802.11a

Frequency ( ch 149): 5.745 GHz

Frequency ( ch 157): 5.785 GHz

Frequency ( ch 165): 5.825 GHz

#### 802.11b, 11g, 11n 20MHz

Frequency ( ch 1): 2.412 GHz

Frequency ( ch 6): 2.437 GHz

Frequency ( ch 11): 2.462 GHz

#### 802.11n 40MHz

Frequency ( ch 1): 2.422 GHz

Frequency ( ch 4): 2.437 GHz

Frequency ( ch 7): 2.452 GHz

Number of Channels: 11a: 5 channels

11b, 11g, 11n 20MHz: 11 channels

11n 40MHz: 7 channels

Operation modes: duplex

Modulation Type: DSSS / OFDM

Fixed point-to-point operation:  Yes /  No

Type of Antenna: Omni-directional antenna

Antenna gain: 1.75 dBi

Power supply: Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 1.2 A,

O/P: 19 Vdc / 4.75 A )

Battery (11.1 V, 7.2 AH)

Emission designator: 11a: OFDM: 16M5W7D

11b: DSSS: 14M3G1D

11g: OFDM: 16M4W7D

11n 20MHz: OFDM: 18M1W7D

11n 40MHz: OFDM: 36M1W7D

Host device: none



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Classification :

Fixed Device	<input type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input checked="" type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>
Modular Radio Device	<input type="checkbox"/>

## Transmitter

## Unom

### **Peak power**

#### **Mode A (802.11a)**

Power ( ch 149): Conducted: 25.52 dBm

Power ( ch 157): Conducted: 23.77 dBm

Power ( ch 165): Conducted: 23.33 dBm

#### **Mode B (802.11b)**

Power ( ch 1): Conducted: 22.15 dBm

Power ( ch 6): Conducted: 22.58 dBm

Power ( ch 11): Conducted: 20.83 dBm

#### **Mode C (802.11g)**

Power ( ch 1): Conducted: 22.97 dBm

Power ( ch 6): Conducted: 23.78 dBm

Power ( ch 11): Conducted: 21.66 dBm

#### **Mode D (802.11n 20 MHz)**

Power ( ch 1): Conducted: 22.17 dBm

Power ( ch 6): Conducted: 22.79 dBm

Power ( ch 11): Conducted: 20.23 dBm

#### **Mode E (802.11n 40 MHz)**

Power ( ch 1): Conducted: 23.05 dBm

Power ( ch 4): Conducted: 22.67 dBm

Power ( ch 7): Conducted: 21.45 dBm

### **Average power**

Mode A (802.11a) : 15.48 dBm

Mode B (802.11b) : 14.97 dBm

Mode C (802.11g) : 15.39 dBm

Mode D (802.11n 20MHz) : 15.07 dBm

Mode E (802.11n 40MHz) : 15.42 dBm

### **Manufacturer: (if applicable)**

Name: ./.

Street: ./.

Town: ./.

Country: ./.

## **1.6 Test standards**

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2009-10)

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

## 1.7 Modification Information



Item	Component	Quantity	Model No.	Specification	Manufacturer
1	ferrite cores	1	RH-14.3*28.5*6.35	14.3*28.5*6.35	CORE-TECH corporation
2	ferrite cores	1	A8RI 17.7*5*9.5	17.7*5*9.5	Urite Corporation
3	ferrite cores	1	ZCAT1730-0730A-BK	23×7×16.5	TDK
4	ferrite cores	1	VE40308	7.6×3.3	GORE
5	ferrite cores	1	B15 RH-10x10x7	10×10×7	B&F

**Ferrite cores are used for EMI testing (FCC part 15B). When performing RF testing, ferrite cores are NOT used.**

**Any modification made previous to test by CReTE Systems, Inc. will be incorporated in each product sold in United States.**

**No modification was made by Worldwide Testing Services (Taiwan) Co., Ltd.**





Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## **2 Technical test**

### **2.1 Summary of test results**

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

**or**

The deviations as specified in 2.5 were ascertained in the course of the tests performed.

### **2.2 Test environment**

Temperature: 23 °C

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Power supply: Adaptor ( I/P: AC 100-240 V / 50-60 Hz / 1.2 A,  
O/P: 19 Vdc / 4.75 A )  
Battery (11.1 V, 7.2 AH)

Extreme conditions parameters: ./.





Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## 2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2009/9/10	2010/9/9
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2010/3/2	2011/3/1
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2009/9/9	2010/9/8
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2010/5/8	2011/5/7
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use NCR	
ETSTW-CE 008	HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2009/7/21	2010/7/20
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2009/9/12	2010/9/11
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2009/9/9	2010/9/8
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	Function Test	
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2009/10/1	2010/9/30
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2009/9/18	2010/9/17
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2009/9/11	2010/9/10
ETSTW-RE 006	Attenuator 10dB	50HF-010-5N-1	None	STEP	2010/3/5	2011/3/4
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2009/9/11	2010/9/10
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2009/10/1	2010/9/30
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2009/8/19	2010/8/18
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	2009/8/14	2011/8/13
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	2010/4/14	2011/4/13
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2010/4/14	2011/4/13
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2010/3/2	2011/3/1
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2009/8/23	2010/8/22
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERRUNNER 6100A	LCRY0604P14508	LeCroy	Function Test	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2009/8/23	2010/8/22
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2010/1/13	2011/1/12
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2010/4/29	2011/4/28
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2010/5/11	2011/5/10
ETSTW-RE 047	PSA SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	Pre-test Use NCR	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2009/8/31	2010/8/30
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2010/4/13	2011/4/12



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2009/6/10	2010/6/09
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	Pre-test Use NCR	
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2009/11/12	2010/11/11
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2009/11/12	2010/11/11
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2010/4/13	2011/4/12
ETSTW-RE 066	Highpass Filter	H1G013G1	206015	MICROWAVE CIRCUITS, INC.	2010/3/5	2011/3/4
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2009/10/2	2010/10/1
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2010/1/7	2011/1/6
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2010/1/7	2011/1/6
ETSTW-RE 081	Highpass Filter	H03G13G1	4260-02 DC0428	MICROWAVE CIRCUITS, INC.	2010/3/5	2011/3/4
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	Function Test	
ETSTW-RE 092	Match Pad	MDCS1510	None	WOKEN	Function Test	
ETSTW-RE 096	SIGNAL GENERATOR	SMIQ 03B	102274	R&S	2009/6/5	2010/6/4
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2010/3/25	2011/3/24
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2010/3/25	2011/3/24
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2009/9/22	2010/9/21
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	Function Test	
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	Function Test	
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	Function Test	
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	Function Test	
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2009/9/21	2010/9/20
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104 (S_Cable 7)	238093	HUBER+SUHNER	2009/9/16	2010/9/15
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104 (S_Cable 11)	209953	HUBER+SUHNER	2009/9/16	2010/9/15
ETSTW-Cable 006	Microwave Cable	SUCOFLEX 104 (S_Cable 8)	238095	HUBER+SUHNER	2010/3/5	2011/3/4
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2010/3/5	2011/3/4
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	2009/8/20	2010/8/19
ETSTW-Cable 012	BNC Cable	BNC Cable 2	None	JYE BAO CO.,LTD.	2009/8/20	2010/8/19
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104 (S_Cable 5)	232345	HUBER+SUHNER	2010/3/5	2011/3/4
ETSTW-Cable 022	N TYPE Cable	OATS Cable 3	0002	JYE BAO CO.,LTD.	2010/3/5	2011/3/4
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104 (S_Cable 19)	316739	HUBER+SUHNER	2010/3/5	2011/3/4
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18	



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMCC	None	Farad	Version ETS-03A1
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b
WTSTW-SW 005	GSM Fading Level Correction	GSMFadLevCor	None	R&S	Version 1.66



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## 2.4 General Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.4-2003 using a 50 $\mu$ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB $\mu$ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz)      METER READING + ACF + CABLE LOSS (to the receiver) = FS  
33                    20 dB $\mu$ V + 10.36 dB + 6 dB = 36.36 dB $\mu$ V/m @3m

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2003 Section 13.1.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.) The Registration Number: 930600.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

Duty Factor =  $20 \log (\text{dwell time}/T)$

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**3 Test results (enclosure)**

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent radiated Power	15.247(b)(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.247(c): 15.209	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band Edge Measurement	15.247(c)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum 6 dB Bandwidth	15.247(a)(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Peak Power Spectral Density	15.247(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Digital Part	15.109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**3.1 Peak Output Power (transmitter)**

FCC Rule: 15.247(b)(3)

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

Mode A

Test condition		Conducted Power		
		Channel 149	Channel 157	Channel 165
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	[dBm]	[dBm]	[dBm]
		25.52	23.77	23.33

Mode B

Test condition		Conducted Power		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	[dBm]	[dBm]	[dBm]
		22.15	22.58	20.83

Mode C

Test condition		Conducted Power		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	[dBm]	[dBm]	[dBm]
		22.97	23.78	21.66

Mode D

Test condition		Conducted Power		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	[dBm]	[dBm]	[dBm]
		22.17	22.79	20.23





Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

Mode E

Test condition		Conducted Power		
		Channel 1	Channel 4	Channel 7
T <sub>nom</sub> = 23°C	V <sub>nom</sub> = 120 V	[dBm]	[dBm]	[dBm]
		23.05	22.67	21.45

Test condition T <sub>nom</sub> = 23°C, V <sub>nom</sub> = 120 V	Signal Field strength TX highest power mode dB μV/m
Frequency [MHz]	--
--	

Limits:

Frequency MHz	Power dBm
902 - 928	30
2400 – 2483.5	30
5725 – 5850	30

In case of employing transmitter antennas having antenna gain > 6 dBi and using fixed point-to point operation consider §15.247 (b)(4)

Test equipment used: ETSTW-RE 055

Explanation: The diagrams for the peak output power measurements are included in Appendix.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**3.2 Equivalent isotropic radiated power**

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 25.52 dBm + 1.75 dBi

= 27.27 dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

**3.3 RF Exposure Compliance Requirements**

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

$$S = \frac{PG}{4\pi R^2}$$

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

Item	Unit	Value	Remarks
P	mW	356.45	Peak value
D	dB		
AG	dBi	1.75	
G		1.49	Calculated Value
R	cm	20	Assumed value
S	mW/cm <sup>2</sup>	0.105661	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density (mW/cm <sup>2</sup> )
1500 – 100.000	1.0



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

### 3.4 Transmitter Radiated Emissions in Restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26500 MHz.

For radiated emission tests, the analyzer setting was as followings:

Frequency  $\leq$  1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)

Frequency  $>$  1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)

Frequency  $>$  1 GHz , RBW:1 MHz , VBW: 10 Hz (Average measurements)

Limits.

For frequencies below 1GHz:

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction =  $20 \log (\text{dwell time} / 100\text{ms})$

Note: No duty cycle correction was added to the reading of this EUT.

Explanation: see attached diagrams in Appendix.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

### **3.5 Spurious Emissions (tx)**

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

FCC Rule: 15.247(c), 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

Limits:

For frequencies above 1GHz (Peak measurements).

Modified Limit for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

Max. reading – 20 dB

Guidance on Measurement of Digit Transmission Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction =  $20 \log (\text{dwell time}/100\text{ms})$

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044

Note: No duty cycle correction was added to the reading of EUT.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance with point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Correction Factor".

### Summary table with radiated data of the test plots

Model: RF9 Date: 2010/5/13  
 Mode: 802.11a(ch149) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.2867	24.80	peak	11.32	36.12	40.00	-3.88	100	150
612.8257	8.40	peak	23.70	32.10	46.00	-13.90	135	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1498.9980	45.94	---	-11.08	34.86	---	74.00	54.00	-39.14	135	150
3987.9760	44.62	---	-2.28	42.34	---	74.00	54.00	-31.66	145	150
11493.4870	35.98	---	15.25	51.23	---	74.00	54.00	-22.77	145	150
17235.0000	32.00	---	12.43	44.43	---	74.00	54.00	-29.57	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	23.32	peak	11.10	34.42	40.00	-5.58	120	150
611.4230	7.51	peak	23.69	31.20	46.00	-14.80	130	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1494.9900	48.81	---	-11.13	37.68	---	74.00	54.00	-36.32	135	150
3935.8720	44.58	---	-2.44	42.14	---	74.00	54.00	-31.86	130	150
11490.0000	31.75	---	15.24	46.99	---	74.00	54.00	-27.01	140	150
17235.0000	31.44	---	12.43	43.87	---	74.00	54.00	-30.13	150	150

Mode: 802.11a(ch157)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	24.29	peak	11.10	35.39	40.00	-4.61	120	150
610.0201	7.59	peak	23.67	31.26	46.00	-14.74	125	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1585.1700	45.16	---	-11.17	33.99	---	74.00	54.00	-40.01	140	150
3759.5190	44.52	---	-2.89	41.63	---	74.00	54.00	-32.37	130	150
11570.0000	32.01	---	15.00	47.01	---	74.00	54.00	-26.99	140	150
17355.0000	30.55	---	12.87	43.42	---	74.00	54.00	-30.58	150	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	22.85	peak	11.10	33.95	40.00	-6.05	110	150
611.4230	7.70	peak	23.69	31.39	46.00	-14.61	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1492.9860	49.80	---	-11.16	38.64	---	74.00	54.00	-35.36	140	150
3811.6230	44.67	---	-2.68	41.99	---	74.00	54.00	-32.01	145	150
11570.0000	31.32	---	15.00	46.32	---	74.00	54.00	-27.68	140	150
17355.0000	32.75	---	12.87	45.62	---	74.00	54.00	-28.38	140	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

Mode: 802.11a(ch165) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	22.22	peak	11.21	33.43	40.00	-6.57	120	150
611.4230	5.76	peak	23.69	29.45	46.00	-16.55	130	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1559.1180	45.49	---	-11.14	34.35	---	74.00	54.00	-39.65	140	150
3979.9600	43.77	---	-2.31	41.46	---	74.00	54.00	-32.54	150	150
11650.0000	32.39	---	14.88	47.27	---	74.00	54.00	-26.73	145	150
17475.0000	31.37	---	13.27	44.64	---	74.00	54.00	-29.36	135	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	21.06	peak	11.10	32.16	40.00	-7.84	115	150
611.4230	7.63	peak	23.69	31.32	46.00	-14.68	125	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
1494.9900	49.32	---	-11.13	38.19	---	74.00	54.00	-35.81	140	150
3767.5350	45.17	---	-2.85	42.32	---	74.00	54.00	-31.68	135	150
11650.0000	31.28	---	14.88	46.16	---	74.00	54.00	-27.84	140	150
17475.0000	31.33	---	13.27	44.60	---	74.00	54.00	-29.40	140	150

Mode: 802.11b(ch1) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	23.40	peak	11.21	34.61	40.00	-5.39	115	150
610.0201	5.81	peak	23.67	29.48	46.00	-16.52	125	150





# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	47.20	---	-4.94	42.26	---	74.00	54.00	-31.74	140	150
7236.0000	48.40	---	-2.37	46.03	---	74.00	54.00	-27.97	120	150
9648.0000	29.43	---	12.83	42.26	---	74.00	54.00	-31.74	135	150
12060.0000	30.01	---	15.92	45.93	---	74.00	54.00	-28.07	145	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	24.82	peak	11.10	35.92	40.00	-4.08	120	150
611.4230	7.09	peak	23.69	30.78	46.00	-15.22	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	46.29	---	-4.94	41.35	---	74.00	54.00	-32.65	155	150
7236.0000	48.35	---	-2.37	45.98	---	74.00	54.00	-28.02	145	150
9648.0000	28.8	---	12.83	41.63	---	74.00	54.00	-32.37	140	150
12060.0000	29.44	---	15.92	45.36	---	74.00	54.00	-28.64	130	150

Mode: 802.11b(ch6)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	24.62	peak	11.21	35.83	40.00	-4.17	105	150
608.6173	5.96	peak	23.65	29.61	46.00	-16.39	120	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.49	---	-4.86	41.63	---	74.00	54.00	-32.37	140	150
7311.0000	47.53	---	-2.76	44.77	---	74.00	54.00	-29.23	145	150
9748.0000	30.33	---	12.80	43.13	---	74.00	54.00	-30.87	150	150
12185.0000	29.69	---	16.40	46.09	---	74.00	54.00	-27.91	140	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	23.02	peak	11.10	34.12	40.00	-5.88	140	150
608.6173	7.12	peak	23.65	30.77	46.00	-15.23	120	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.47	---	-4.86	41.61	---	74.00	54.00	-32.39	135	150
7311.0000	48.01	---	-2.76	45.25	---	74.00	54.00	-28.75	145	150
9748.0000	29.77	---	12.80	42.57	---	74.00	54.00	-31.43	140	150
12185.0000	30.03	---	16.40	46.43	---	74.00	54.00	-27.57	150	150

Mode: 802.11b(ch11)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.2867	22.80	peak	11.32	34.12	40.00	-5.88	110	150
611.4230	6.53	peak	23.69	30.22	46.00	-15.78	130	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	45.34	---	-4.89	40.45	---	74.00	54.00	-33.55	135	150
7386.0000	48.36	---	-3.09	45.27	---	74.00	54.00	-28.73	145	150
9848.0000	30.04	---	13.02	43.06	---	74.00	54.00	-30.94	135	150
12310.0000	29.89	---	16.46	46.35	---	74.00	54.00	-27.65	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	24.04	peak	11.21	35.25	40.00	-4.75	105	150
612.8257	7.54	peak	23.70	31.24	46.00	-14.76	135	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	46.16	---	-4.89	41.27	---	74.00	54.00	-32.73	130	150
7386.0000	47.44	---	-3.09	44.35	---	74.00	54.00	-29.65	135	150
9848.0000	30.05	---	13.02	43.07	---	74.00	54.00	-30.93	145	150
12310.0000	30.86	---	16.46	47.32	---	74.00	54.00	-26.68	155	150

Mode: 802.11g(ch1)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	23.21	peak	11.21	34.42	40.00	-5.58	115	150
608.6173	6.98	peak	23.65	30.63	46.00	-15.37	130	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	46.58	---	-4.94	41.64	---	74.00	54.00	-32.36	140	150
7236.0000	47.90	---	-2.37	45.53	---	74.00	54.00	-28.47	130	150
9648.0000	30.84	---	12.83	43.67	---	74.00	54.00	-30.33	135	150
12060.0000	29.98	---	15.92	45.90	---	74.00	54.00	-28.10	145	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	23.05	peak	11.21	34.26	40.00	-5.74	110	150
611.4230	7.09	peak	23.69	30.78	46.00	-15.22	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	45.50	---	-4.94	40.56	---	74.00	54.00	-33.44	140	150
7236.0000	47.45	---	-2.37	45.08	---	74.00	54.00	-28.92	130	150
9648.0000	29.29	---	12.83	42.12	---	74.00	54.00	-31.88	140	150
12060.0000	29.9	---	15.92	45.82	---	74.00	54.00	-28.18	145	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

Mode: 802.11g(ch6) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.9100	23.52	peak	10.99	34.51	40.00	-5.49	100	150
608.6173	6.48	peak	23.65	30.13	46.00	-15.87	125	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.37	---	-4.86	41.51	---	74.00	54.00	-32.49	150	150
7311.0000	47.20	---	-2.76	44.44	---	74.00	54.00	-29.56	160	150
9748.0000	30.5	---	12.80	43.30	---	74.00	54.00	-30.70	145	150
12185.0000	30.14	---	16.40	46.54	---	74.00	54.00	-27.46	165	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	23.91	peak	11.10	35.01	40.00	-4.99	115	150
612.8257	7.26	peak	23.70	30.96	46.00	-15.04	135	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.19	---	-4.86	41.33	---	74.00	54.00	-32.67	140	150
7311.0000	47.56	---	-2.76	44.80	---	74.00	54.00	-29.20	150	150
9748.0000	30.04	---	12.80	42.84	---	74.00	54.00	-31.16	140	150
12185.0000	29.2	---	16.40	45.60	---	74.00	54.00	-28.40	130	150

Mode: 802.11g(ch11) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.9100	23.39	peak	10.99	34.38	40.00	-5.62	105	150
612.8257	7.23	peak	23.70	30.93	46.00	-15.07	135	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	46.48	---	-4.89	41.59	---	74.00	54.00	-32.41	145	150
7386.0000	48.06	---	-3.09	44.97	---	74.00	54.00	-29.03	150	150
9848.0000	29.74	---	13.02	42.76	---	74.00	54.00	-31.24	150	150
12310.0000	29.78	---	16.46	46.24	---	74.00	54.00	-27.76	155	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	23.70	peak	11.21	34.91	40.00	-5.09	120	150
612.8257	8.00	peak	23.70	31.70	46.00	-14.30	125	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	46.12	---	-4.89	41.23	---	74.00	54.00	-32.77	140	150
7386.0000	48.14	---	-3.09	45.05	---	74.00	54.00	-28.95	150	150
9848.0000	29.66	---	13.02	42.68	---	74.00	54.00	-31.32	150	150
12310.0000	30.49	---	16.46	46.95	---	74.00	54.00	-27.05	140	150

Mode: 802.11n 20 MHz (ch1)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.9100	24.67	peak	10.99	35.66	40.00	-4.34	100	150
610.0201	6.25	peak	23.67	29.92	46.00	-16.08	120	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	45.95	---	-4.94	41.01	---	74.00	54.00	-32.99	140	150
7236.0000	47.52	---	-2.37	45.15	---	74.00	54.00	-28.85	145	150
9648.0000	31.08	---	12.83	43.91	---	74.00	54.00	-30.09	135	150
12060.0000	29.00	---	15.92	44.92	---	74.00	54.00	-29.08	145	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	23.21	peak	11.10	34.31	40.00	-5.69	105	150
608.6173	7.25	peak	23.65	30.90	46.00	-15.10	120	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	46.37	---	-4.94	41.43	---	74.00	54.00	-32.57	145	150
7236.0000	46.92	---	-2.37	44.55	---	74.00	54.00	-29.45	150	150
9648.0000	29.33	---	12.83	42.16	---	74.00	54.00	-31.84	135	150
12060.0000	29.24	---	15.92	45.16	---	74.00	54.00	-28.84	150	150

Mode: 802.11n 20 MHz (ch6)

Temperature: 24 °C

Engineer: Danny

Polarization: Horizontal

Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
132.8057	14.53	peak	14.68	29.21	43.50	-14.29	120	150
611.4230	6.70	peak	23.69	30.39	46.00	-15.61	130	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.44	---	-4.86	41.58	---	74.00	54.00	-32.42	140	150
7311.0000	47.66	---	-2.76	44.90	---	74.00	54.00	-29.10	150	150
9748.0000	29.89	---	12.80	42.69	---	74.00	54.00	-31.31	145	150
12185.0000	28.90	---	16.40	45.30	---	74.00	54.00	-28.70	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.2867	22.74	peak	11.32	34.06	40.00	-5.94	100	150
612.8257	6.80	peak	23.70	30.50	46.00	-15.50	140	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	45.86	---	-4.86	41.00	---	74.00	54.00	-33.00	145	150
7311.0000	47.49	---	-2.76	44.73	---	74.00	54.00	-29.27	150	150
9748.0000	29.89	---	12.80	42.69	---	74.00	54.00	-31.31	140	150
12185.0000	29.15	---	16.40	45.55	---	74.00	54.00	-28.45	150	150

Mode: 802.11n 20 MHz (ch11) Temperature: 24 °C Engineer: Danny

Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	24.02	peak	11.21	35.23	40.00	-4.77	100	150
610.0201	6.06	peak	23.67	29.73	46.00	-16.27	135	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	46.36	---	-4.89	41.47	---	74.00	54.00	-32.53	140	150
7386.0000	47.28	---	-3.09	44.19	---	74.00	54.00	-29.81	145	150
9848.0000	29.54	---	13.02	42.56	---	74.00	54.00	-31.44	155	150
12310.0000	30.53	---	16.46	46.99	---	74.00	54.00	-27.01	150	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	23.36	peak	11.21	34.57	40.00	-5.43	100	150
612.8257	7.50	peak	23.70	31.20	46.00	-14.80	115	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	45.50	---	-4.89	40.61	---	74.00	54.00	-33.39	140	150
7386.0000	46.89	---	-3.09	43.80	---	74.00	54.00	-30.20	145	150
9848.0000	29.5	---	13.02	42.52	---	74.00	54.00	-31.48	150	150
12310.0000	30.3	---	16.46	46.76	---	74.00	54.00	-27.24	155	150





# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Mode: 802.11n 40 MHz (ch1) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	25.21	peak	11.10	36.31	40.00	-3.69	105	150
611.4230	6.17	peak	23.69	29.86	46.00	-16.14	120	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4844.0000	45.64	---	-4.91	40.73	---	74.00	54.00	-33.27	135	150
7266.0000	46.97	---	-2.53	44.44	---	74.00	54.00	-29.56	145	150
9688.0000	29.53	---	12.65	42.18	---	74.00	54.00	-31.82	140	150
12110.0000	29.55	---	16.05	45.60	---	74.00	54.00	-28.40	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	22.77	peak	11.21	33.98	40.00	-6.02	105	150
610.0201	7.51	peak	23.67	31.18	46.00	-14.82	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4844.0000	46.23	---	-4.91	41.32	---	74.00	54.00	-32.68	140	150
7266.0000	47.13	---	-2.53	44.60	---	74.00	54.00	-29.40	150	150
9688.0000	31.29	---	12.65	43.94	---	74.00	54.00	-30.06	155	150
12110.0000	28.61	---	16.05	44.66	---	74.00	54.00	-29.34	145	150

Mode: 802.11n 40 MHz (ch4) Temperature: 24 °C Engineer: Danny  
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
73.8277	24.32	peak	11.21	35.53	40.00	-4.47	105	150
611.4230	6.56	peak	23.69	30.25	46.00	-15.75	120	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.25	---	-4.86	41.39	---	74.00	54.00	-32.61	135	150
7311.0000	47.60	---	-2.76	44.84	---	74.00	54.00	-29.16	145	150
9748.0000	30.63	---	12.80	43.43	---	74.00	54.00	-30.57	145	150
12185.0000	30.59	---	16.40	46.99	---	74.00	54.00	-27.01	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	23.33	peak	11.10	34.43	40.00	-5.57	110	150
611.4230	7.28	peak	23.69	30.97	46.00	-15.03	125	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.55	---	-4.86	41.69	---	74.00	54.00	-32.31	145	150
7311.0000	48.05	---	-2.76	45.29	---	74.00	54.00	-28.71	150	150
9748.0000	29.53	---	12.80	42.33	---	74.00	54.00	-31.67	150	150
12185.0000	28.6	---	16.40	45.00	---	74.00	54.00	-29.00	160	150

Mode: 802.11n 40 MHz (ch7) Temperature: 24 °C Engineer: Danny

Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	24.46	peak	11.10	35.56	40.00	-4.44	110	150
608.6173	5.81	peak	23.65	29.46	46.00	-16.54	130	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4904.0000	46.22	---	-4.83	41.39	---	74.00	54.00	-32.61	150	150
7356.0000	47.22	---	-2.96	44.26	---	74.00	54.00	-29.74	145	150
9808.0000	28.52	---	13.01	41.53	---	74.00	54.00	-32.47	140	150
12260.0000	29.4	---	16.46	45.86	---	74.00	54.00	-28.14	135	150



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
74.3688	24.02	peak	11.10	35.12	40.00	-4.88	105	150
610.0201	7.38	peak	23.67	31.05	46.00	-14.95	120	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4904.0000	46.21	---	-4.83	41.38	---	74.00	54.00	-32.62	135	150
7356.0000	47.18	---	-2.96	44.22	---	74.00	54.00	-29.78	155	150
9808.0000	28.18	---	13.01	41.19	---	74.00	54.00	-32.81	140	150
12260.0000	30.09	---	16.46	46.55	---	74.00	54.00	-27.45	145	150

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
  2. The formula of measured value as: Test Result = Reading + Correction Factor
  3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
  4. All not in the table noted test results are more than 20 dB below the relevant limits.
  5. See the attached diagram as appendix.

**TEST RESULT (Transmitter):** The unit DOES meet the FCC requirements.

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 028, ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**3.6 Radiated Emission on the band edge**

According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Mode A

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	36.88	49.12

Mode B

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	40.61	50.27

Mode C

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	34.43	40.17

Mode D

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	36.45	39.02

Mode E

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	34.52	36.82



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

Limit:

Frequency Range / MHz	Limit
902 – 928	- 20 dB
2400 – 2483.5	
5725 - 5850	

Test equipment used: ETSTW-RE 055

Explanation: Please see attached diagram as appendix.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**3.7 Minimum 6 dB Bandwidth**

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission.

The 6 dB bandwidth is the frequency difference between the two markers.

Mode A

Test conditions		6 dB Bandwidth		
		Channel 149	Channel 157	Channel 165
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	16.538461538 MHz	16.538461538 MHz	16.538461538 MHz

Mode B

Test conditions		6 dB Bandwidth		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	11.570512821 MHz	11.634615385 MHz	11.987179487 MHz

Mode C

Test conditions		6 dB Bandwidth		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	16.538461538 MHz	16.570512821 MHz	16.570512821 MHz

Mode D

Test conditions		6 dB Bandwidth		
		Channel 1	Channel 6	Channel 11
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	17.756410256 MHz	17.724358974 MHz	17.788461538 MHz

Mode E

Test conditions		6 dB Bandwidth		
		Channel 1	Channel 4	Channel 7
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	35.833333333 MHz	35.897435897 MHz	35.641025641 MHz



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

**Limits:**

Frequency Range MHz	Limits
902-928	min 500 kHz
2400-2483.5	min 500 kHz
5725-5850	min 500 kHz

Test equipment used: ETSTW-RE 055

Explanation: See attached diagrams in Appendix.





Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

**3.8 Peak Power Spectral Density**

Peak Power Spectral density is a measured at low, middle and high channel.

The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Mode A

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel 149 [dBm]	Channel 157 [dBm]	Channel 165 [dBm]
$T_{nom} = 23^{\circ}\text{C}$	$V_{nom} = 120 \text{ V}$	-8.25	-10.03	-11.74

Mode B

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel 1 [dBm]	Channel 6 [dBm]	Channel 11 [dBm]
$T_{nom} = 23^{\circ}\text{C}$	$V_{nom} = 120 \text{ V}$	-10.49	-10.42	-12.54

Mode C

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel 1 [dBm]	Channel 6 [dBm]	Channel 11 [dBm]
$T_{nom} = 23^{\circ}\text{C}$	$V_{nom} = 120 \text{ V}$	-10.85	-9.95	-12.27

Mode D

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel 1 [dBm]	Channel 6 [dBm]	Channel 11 [dBm]
$T_{nom} = 23^{\circ}\text{C}$	$V_{nom} = 120 \text{ V}$	-10.55	-10.85	-13.03

Mode E

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel 1 [dBm]	Channel 4 [dBm]	Channel 7 [dBm]
$T_{nom} = 23^{\circ}\text{C}$	$V_{nom} = 120 \text{ V}$	-11.53	-14.17	-13.79



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

**Limits:**

Frequency Range MHz	dBm
902-928	8
2400-2483.5	8
5725-5850	8

Test equipment used: ETSTW-RE 055

Explanation: See attached diagrams in Appendix.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

### **3.9 Radiated Emission from Digital Part**

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 018, ETSTW-RE 028,  
ETSTW-RE 029, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043,  
ETSTW-RE 044

Explanation: The test results of digital part are listed in test report no.: W6M21003-10512-P-15B.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

### 3.10 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Frequency	Level (dB $\mu$ V)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

Model: RF9 Date: 2010/5/24  
 Mode: 800x600 Temperature: 24 °C Engineer: Danny  
 Polarization: N Humidity: 60 %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1938	28.96	25.76	10.77	39.73	36.53	63.87	53.87	-17.34
0.2571	32.68	31.72	10.72	43.40	42.44	61.52	51.52	-9.08
0.2881	10.82	4.34	10.72	21.54	15.06	60.58	50.58	-35.52
0.5163	30.11	29.43	10.66	40.77	40.09	56.00	46.00	-5.91
1.6775	30.35	15.07	10.18	40.53	25.25	56.00	46.00	-15.47
6.7753	20.22	14.60	10.23	30.45	24.83	60.00	50.00	-25.17

Polarization: L1

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1520	25.15	11.27	10.75	35.90	22.02	65.89	55.89	-29.99
0.1568	24.95	12.70	10.75	35.70	23.45	65.63	55.63	-29.93
0.2587	31.92	30.92	10.73	42.65	41.65	61.47	51.47	-9.82
0.3240	33.91	33.21	10.72	44.63	43.93	59.60	49.60	-5.67
1.6762	30.05	17.26	10.19	40.24	27.45	56.00	46.00	-15.76
6.1294	24.06	19.84	10.26	34.32	30.10	60.00	50.00	-19.90



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

Mode: 1024x768      Temperature: 24 °C      Engineer: Danny  
Polarization: N      Humidity: 60 %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1513	24.03	9.49	10.74	34.77	20.23	65.93	55.93	-31.16
0.1635	20.31	3.86	10.75	31.06	14.61	65.28	55.28	-34.22
0.1934	28.90	25.93	10.77	39.67	36.70	63.89	53.89	-17.19
0.2576	32.98	31.99	10.72	43.70	42.71	61.51	51.51	-8.80
1.6795	30.07	16.22	10.18	40.25	26.40	56.00	46.00	-15.75
5.9368	22.88	17.65	10.22	33.10	27.87	60.00	50.00	-22.13

Polarization: L1

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1542	30.36	14.76	10.75	41.11	25.51	65.77	55.77	-24.66
0.1950	36.80	34.34	10.78	47.58	45.12	63.82	53.82	-8.70
0.2360	15.34	12.73	10.74	26.08	23.47	62.24	52.24	-28.77
0.3403	14.81	2.85	10.72	25.53	13.57	59.20	49.20	-33.67
1.6120	26.46	19.65	10.21	36.67	29.86	56.00	46.00	-16.14
5.9875	25.77	20.50	10.26	36.03	30.76	60.00	50.00	-19.24

Mode: 1440x900      Temperature: 24 °C      Engineer: Danny  
Polarization: N      Humidity: 60 %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1555	23.15	13.23	10.74	33.89	23.97	65.70	55.70	-31.73
0.1954	29.47	25.63	10.77	40.24	36.40	63.80	53.80	-17.40
0.2565	32.64	31.73	10.72	43.36	42.45	61.54	51.54	-9.09
0.2893	11.42	4.83	10.72	22.14	15.55	60.54	50.54	-34.99
0.5175	30.23	29.52	10.66	40.89	40.18	56.00	46.00	-5.82
1.6750	30.17	15.25	10.18	40.35	25.43	56.00	46.00	-15.65

Polarization: L1

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.1521	24.97	11.96	10.75	35.72	22.71	65.88	55.88	-30.16
0.1943	37.14	32.51	10.78	47.92	43.29	63.85	53.85	-10.56
0.2362	16.57	13.17	10.74	27.31	23.91	62.23	52.23	-28.32
0.2578	30.62	29.31	10.73	41.35	40.04	61.50	51.50	-11.46
0.5137	29.09	22.10	10.66	39.75	32.76	56.00	46.00	-13.24
1.6781	31.35	15.12	10.19	41.54	25.31	56.00	46.00	-14.46



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

**Note:**

1. **The formula of measured value as: Test Result = Reading + Correction Factor**
2. **The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
3. **Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
4. **All not in the table noted test results are more than 20 dB below the relevant limits.**
5. **Measurement uncertainty =  $\pm 1.77\text{dB}$ ; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .**
6. **See attached diagrams as appendix.**

**Limits:**

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 001, ETSTW-CE 004, ETSTW-CE 006

Explanation: See attached diagrams in Appendix.



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## **Appendix**

### **Measurement diagrams**

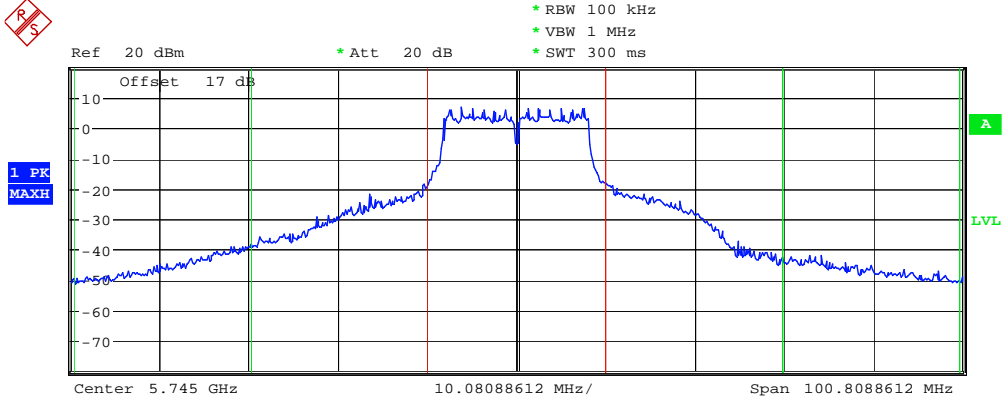
1. Peak Output Power
2. Spurious Emissions radiated
3. Band Edge Measurement
4. Minimum 6dB Bandwidth
5. Peak Power Spectral Density
6. Power Line Conducted Emission





Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Peak Output Power Mode A

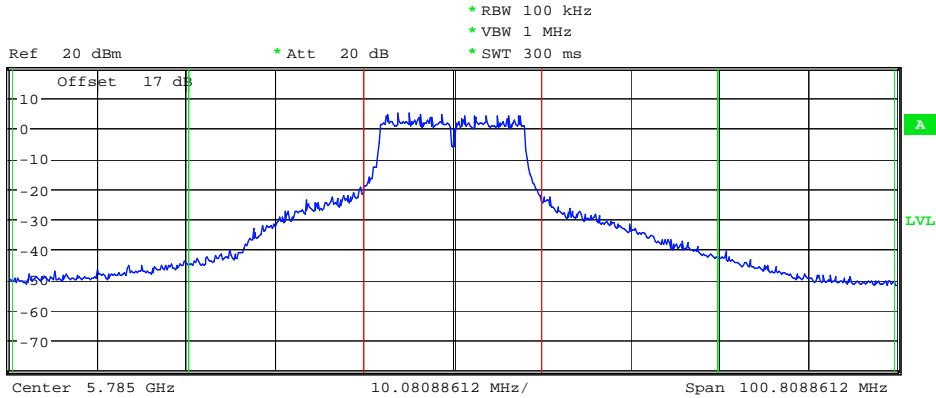


<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	25.52 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-29.45 dB
Spacing	20 MHz	Upper	-28.58 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-47.33 dB
Spacing	40 MHz	Upper	-49.30 dB

MAX OUTPUT POWER802.11a CH149  
Date: 26.MAY.2010 10:01:23



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	23.77 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-28.75 dB
Spacing	20 MHz	Upper	-31.88 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-49.11 dB
Spacing	40 MHz	Upper	-48.56 dB

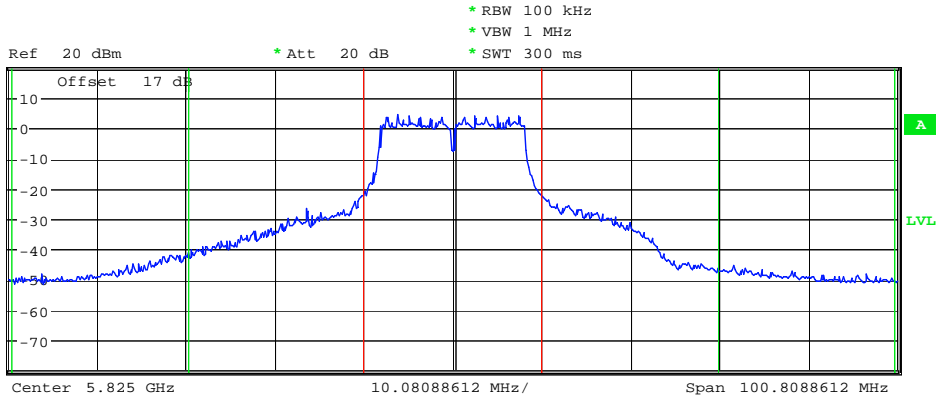
MAX OUTPUT POWER802.11a CH157

Date: 26.MAY.2010 10:01:46



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	23.33 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-31.47 dB
Spacing	20 MHz	Upper	-30.90 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-47.52 dB
Spacing	40 MHz	Upper	-49.58 dB

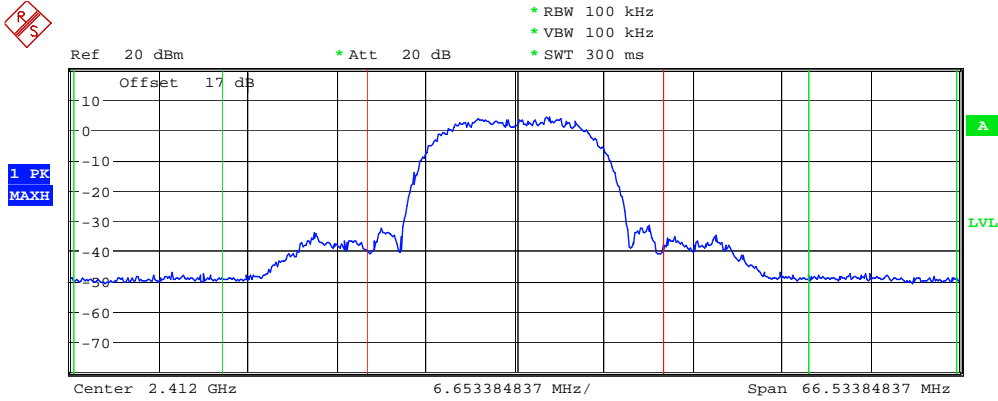
MAX OUTPUT POWER802.11a CH165

Date: 26.MAY.2010 10:02:25



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode B



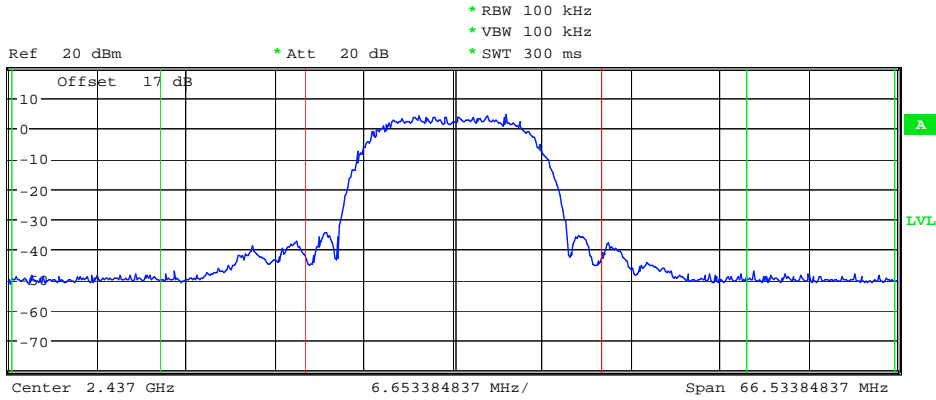
<b>Tx Channel</b>			
Bandwidth	22 MHz	Power	22.15 dBm
<b>Adjacent Channel</b>			
Bandwidth	11 MHz	Lower	-42.20 dB
Spacing	16.5 MHz	Upper	-42.41 dB
<b>Alternate Channel</b>			
Bandwidth	11 MHz	Lower	-51.66 dB
Spacing	27.5 MHz	Upper	-51.33 dB

MAX OUTPUT POWER802.11b CH1  
Date: 26.MAY.2010 10:03:03



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



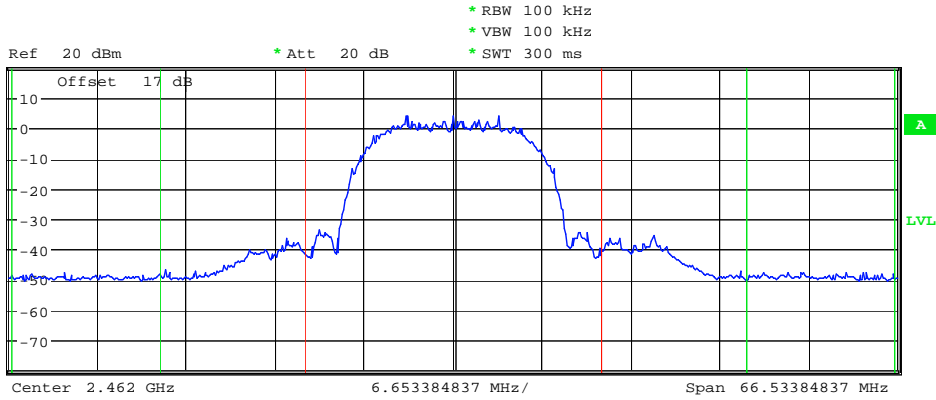
<b>Tx Channel</b>			
Bandwidth	22 MHz	Power	22.58 dBm
<b>Adjacent Channel</b>			
Bandwidth	11 MHz	Lower	-46.04 dB
Spacing	16.5 MHz	Upper	-47.81 dB
<b>Alternate Channel</b>			
Bandwidth	11 MHz	Lower	-52.40 dB
Spacing	27.5 MHz	Upper	-52.47 dB

MAX OUTPUT POWER 802.11b CH6

Date: 26.MAY.2010 10:03:21



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>		Power	20.83 dBm
Bandwidth	22 MHz		
<b>Adjacent Channel</b>		Lower	-43.76 dB
Bandwidth	11 MHz	Upper	-42.06 dB
Spacing	16.5 MHz		
<b>Alternate Channel</b>		Lower	-50.24 dB
Bandwidth	11 MHz	Upper	-49.90 dB
Spacing	27.5 MHz		

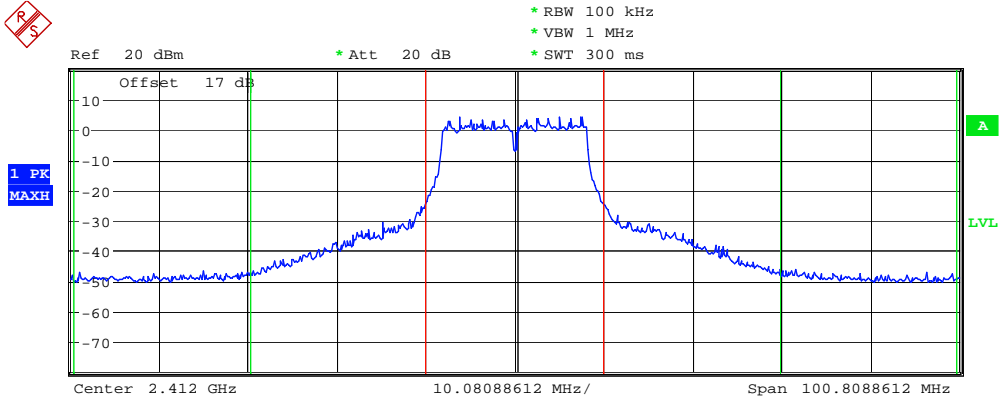
MAX OUTPUT POWER802.11b CH11

Date: 26.MAY.2010 10:03:51



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

## Mode C



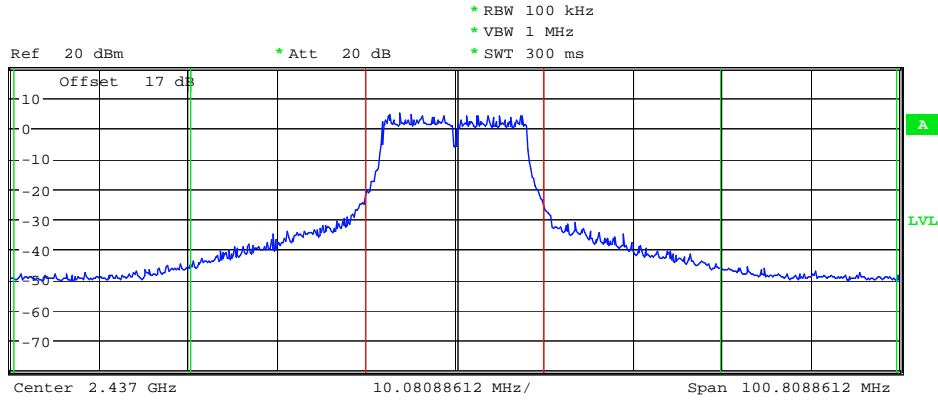
<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	22.97 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-35.01 dB
Spacing	20 MHz	Upper	-34.84 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-49.34 dB
Spacing	40 MHz	Upper	-49.28 dB

MAX OUTPUT POWER802.11g CH1  
 Date: 26.MAY.2010 10:04:55





Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>		Power	23.78 dBm
Bandwidth	20 MHz		
<b>Adjacent Channel</b>		Lower	-34.72 dB
Bandwidth	20 MHz		
Spacing	20 MHz	Upper	-37.32 dB
<b>Alternate Channel</b>		Lower	-49.66 dB
Bandwidth	20 MHz		
Spacing	40 MHz	Upper	-49.65 dB

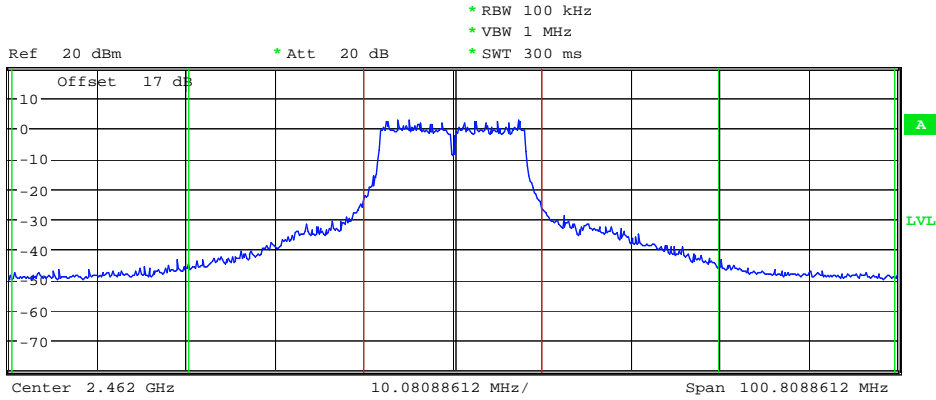
MAX OUTPUT POWER 802.11g CH6

Date: 26.MAY.2010 10:04:39



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	21.66 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-33.26 dB
Spacing	20 MHz	Upper	-33.40 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-47.17 dB
Spacing	40 MHz	Upper	-46.96 dB

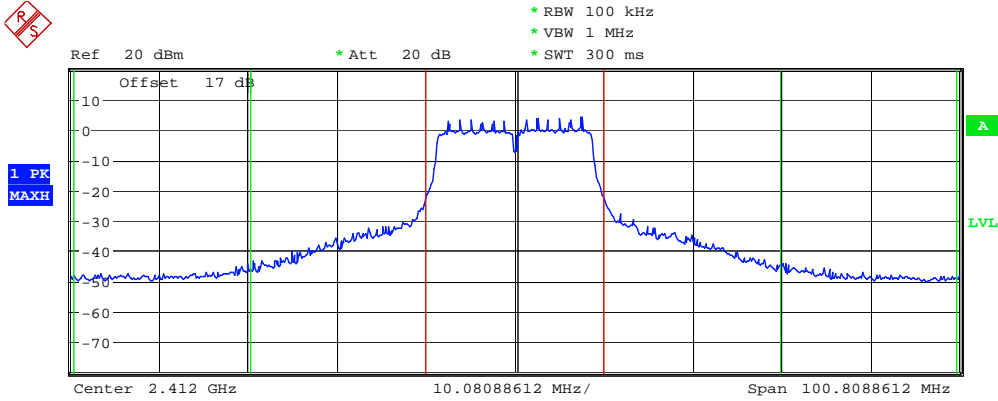
MAX OUTPUT POWER802.11g CH11

Date: 26.MAY.2010 10:04:22



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

## Mode D



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	22.17 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-33.79 dB
Spacing	20 MHz	Upper	-33.52 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-47.92 dB
Spacing	40 MHz	Upper	-47.73 dB

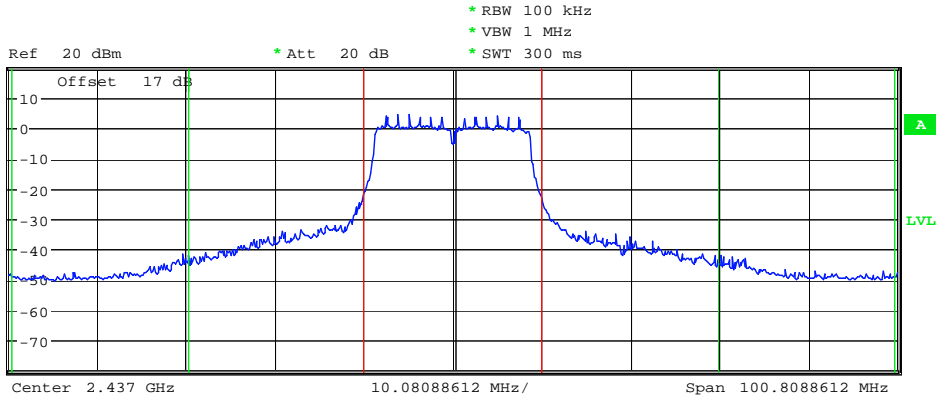
MAX OUTPUT POWER802.11n 20MHz CH1

Date: 26.MAY.2010 10:05:18



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	22.79 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-34.07 dB
Spacing	20 MHz	Upper	-35.70 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-48.01 dB
Spacing	40 MHz	Upper	-47.61 dB

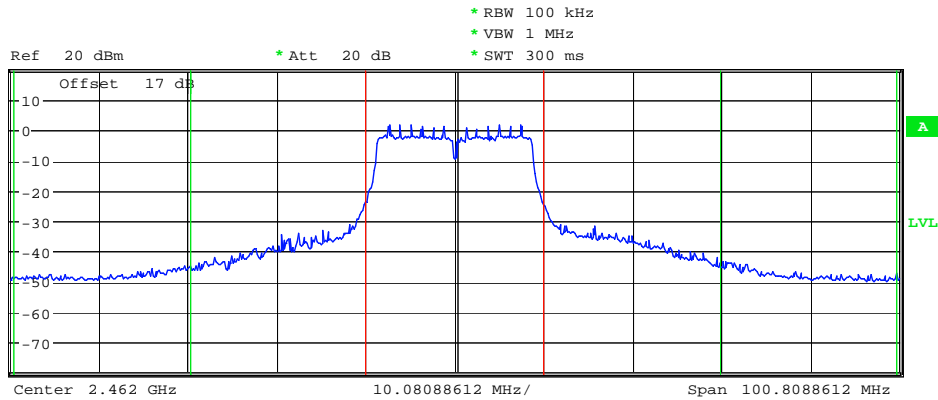
MAX OUTPUT POWER 802.11n 20MHz CH6

Date: 26.MAY.2010 10:05:38



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	20 MHz	Power	20.23 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-33.13 dB
Spacing	20 MHz	Upper	-32.62 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-45.61 dB
Spacing	40 MHz	Upper	-45.11 dB

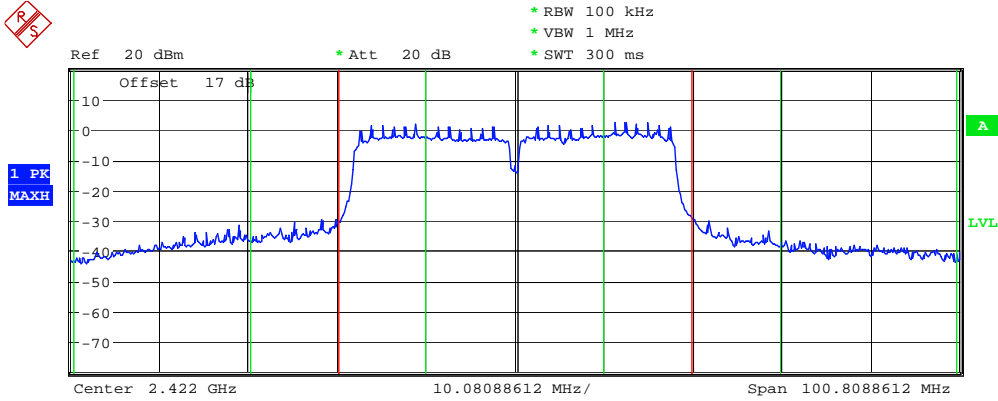
MAX OUTPUT POWER 802.11n 20MHz CH11

Date: 26.MAY.2010 10:06:01



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9

## Mode E



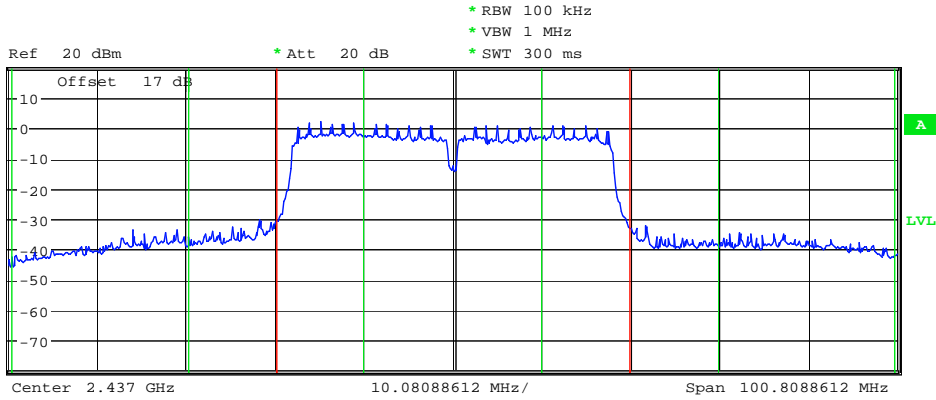
<b>Tx Channel</b>			
Bandwidth	40 MHz	Power	23.05 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-6.40 dB
Spacing	20 MHz	Upper	-5.62 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-38.62 dB
Spacing	40 MHz	Upper	-40.47 dB

MAX OUTPUT POWER802.11n 40MHz CH1

Date: 26.MAY.2010 10:06:39



Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	40 MHz	Power	22.67 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-5.60 dB
Spacing	20 MHz	Upper	-6.78 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-39.15 dB
Spacing	40 MHz	Upper	-38.49 dB

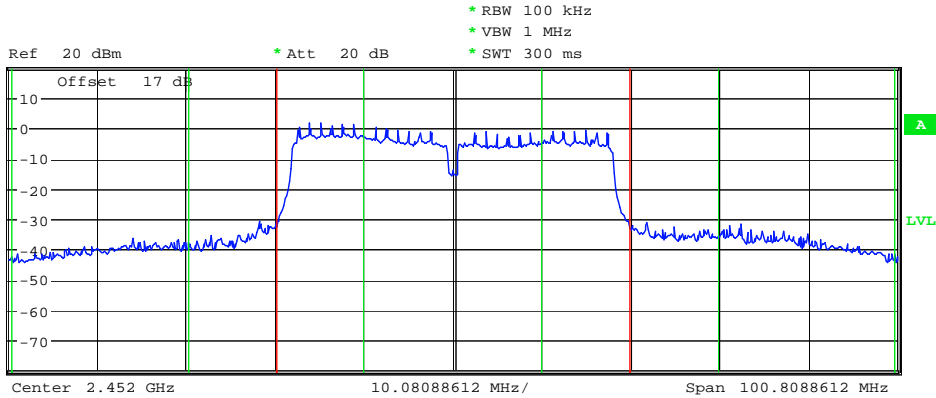
MAX OUTPUT POWER 802.11n 40MHz CH4

Date: 26.MAY.2010 10:07:04





Registration number: W6M21003-10512-C-1  
 FCC ID: IR5RF9



<b>Tx Channel</b>			
Bandwidth	40 MHz	Power	21.45 dBm
<b>Adjacent Channel</b>			
Bandwidth	20 MHz	Lower	-4.73 dB
Spacing	20 MHz	Upper	-6.88 dB
<b>Alternate Channel</b>			
Bandwidth	20 MHz	Lower	-39.09 dB
Spacing	40 MHz	Upper	-36.16 dB

MAX OUTPUT POWER 802.11n 40MHz CH7

Date: 26.MAY.2010 10:07:21

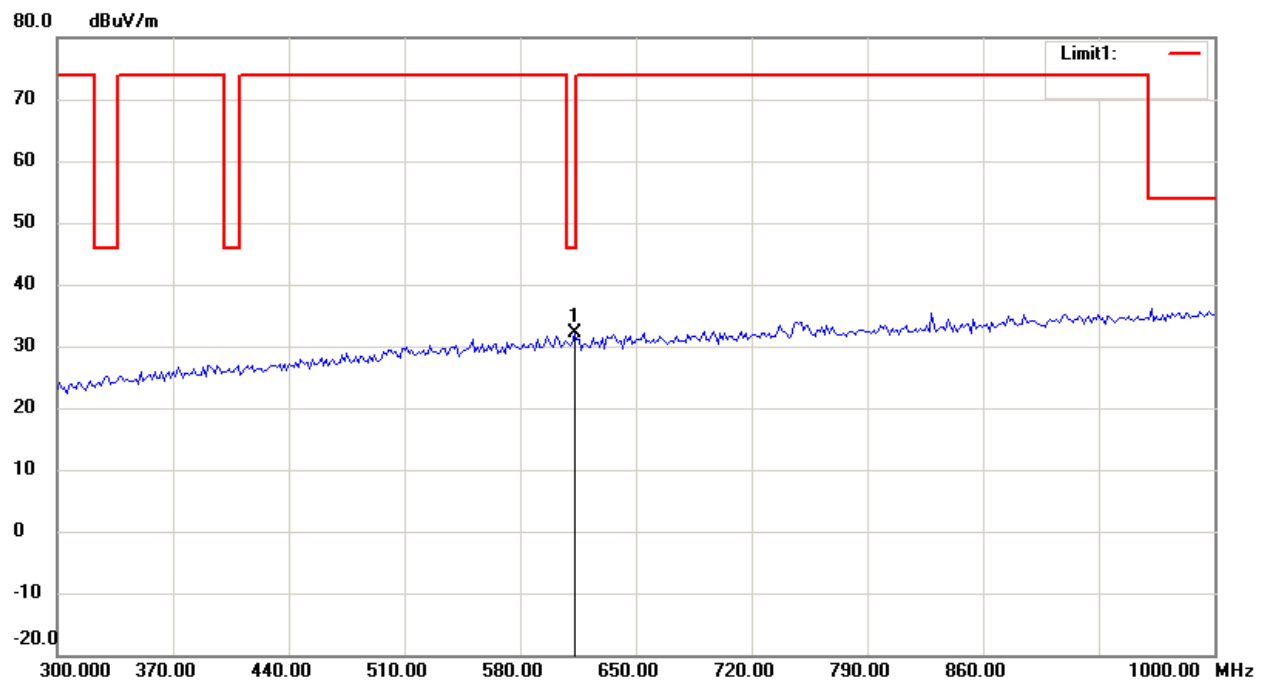
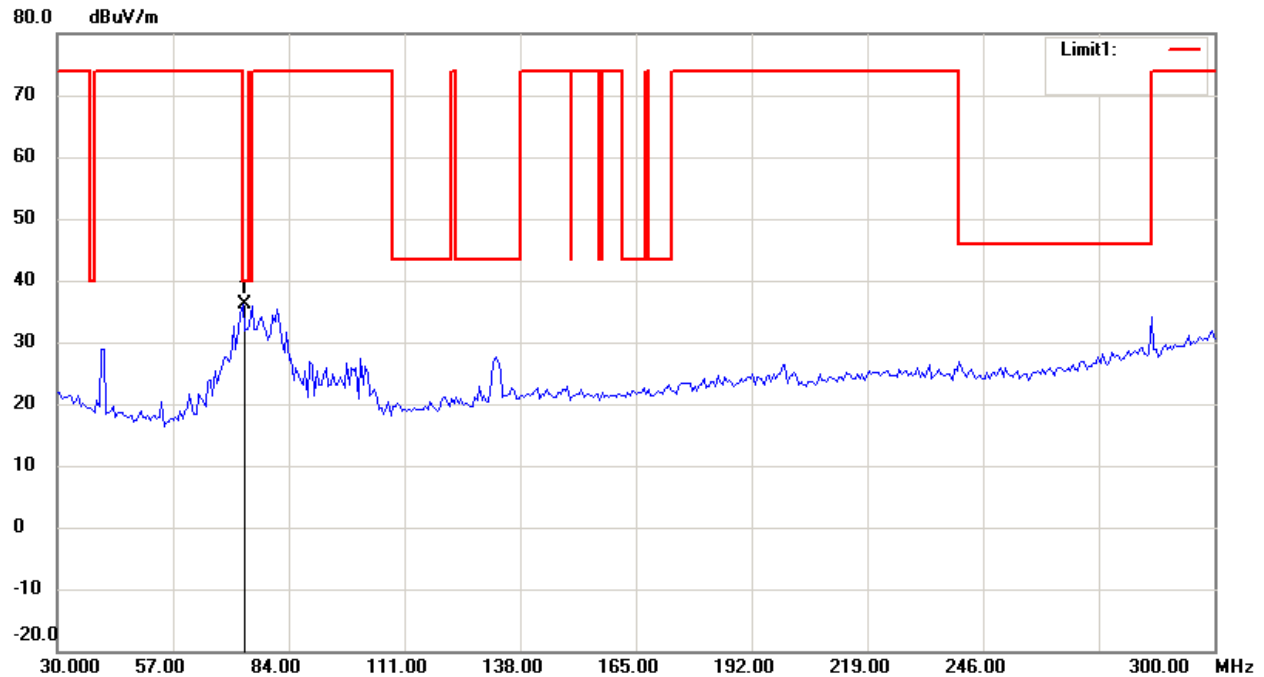


Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Spurious Emissions radiated

802.11a ch149

Antenna Polarization H



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

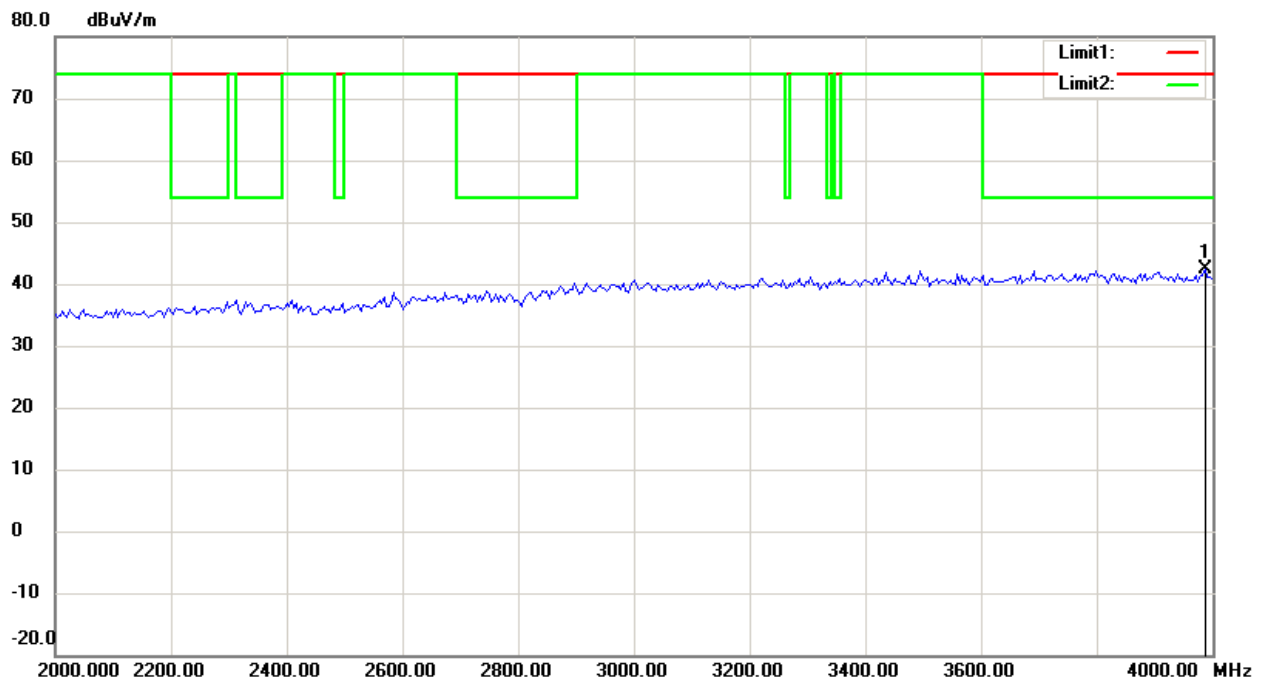
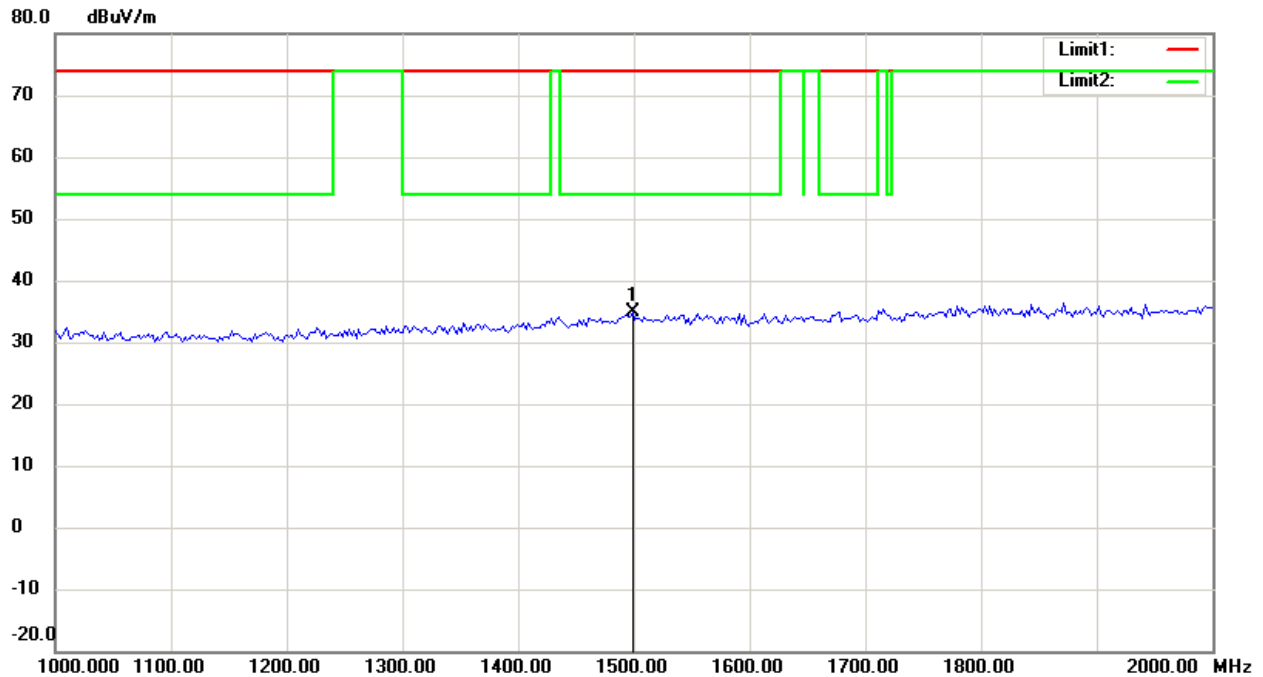
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

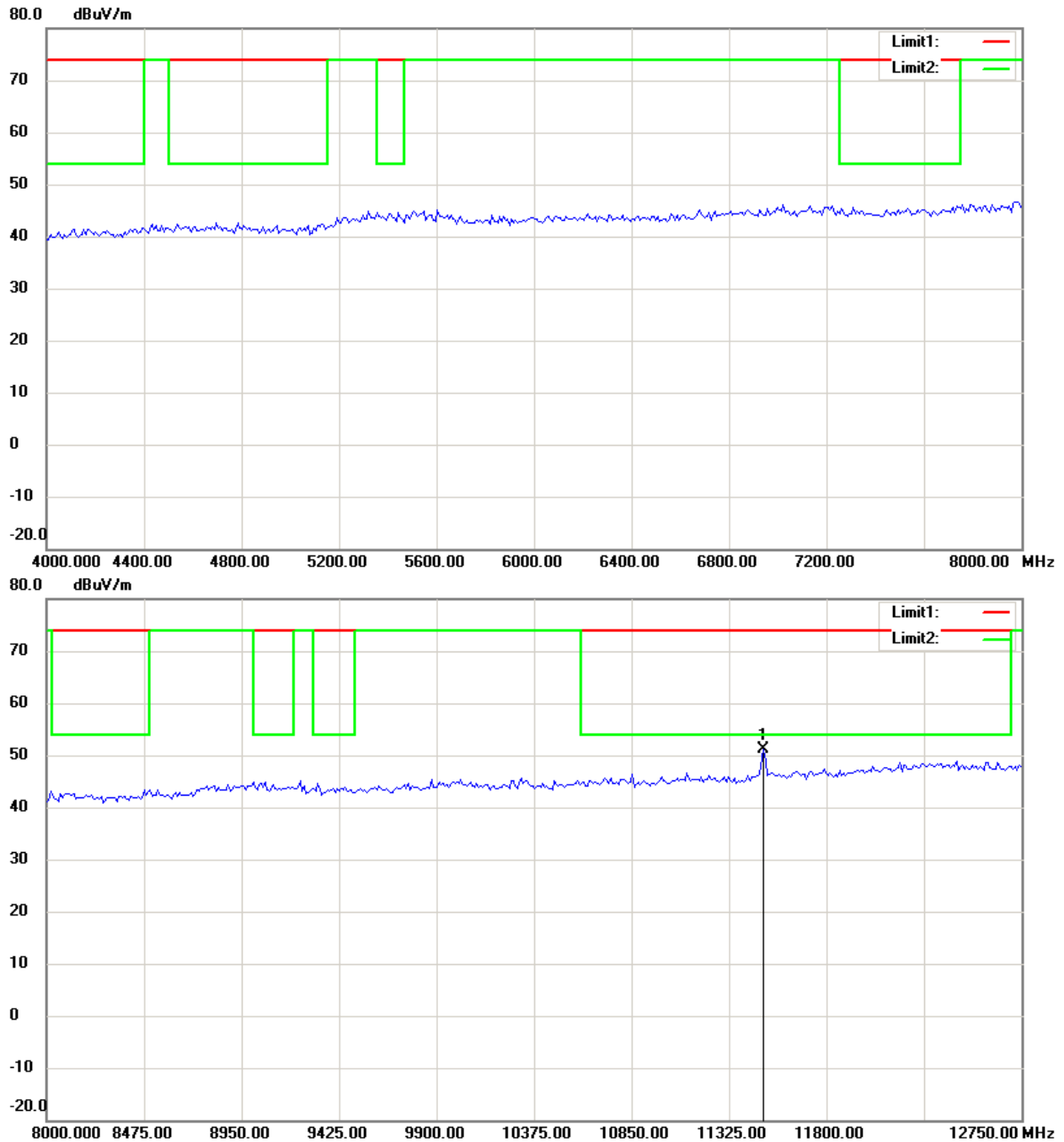
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

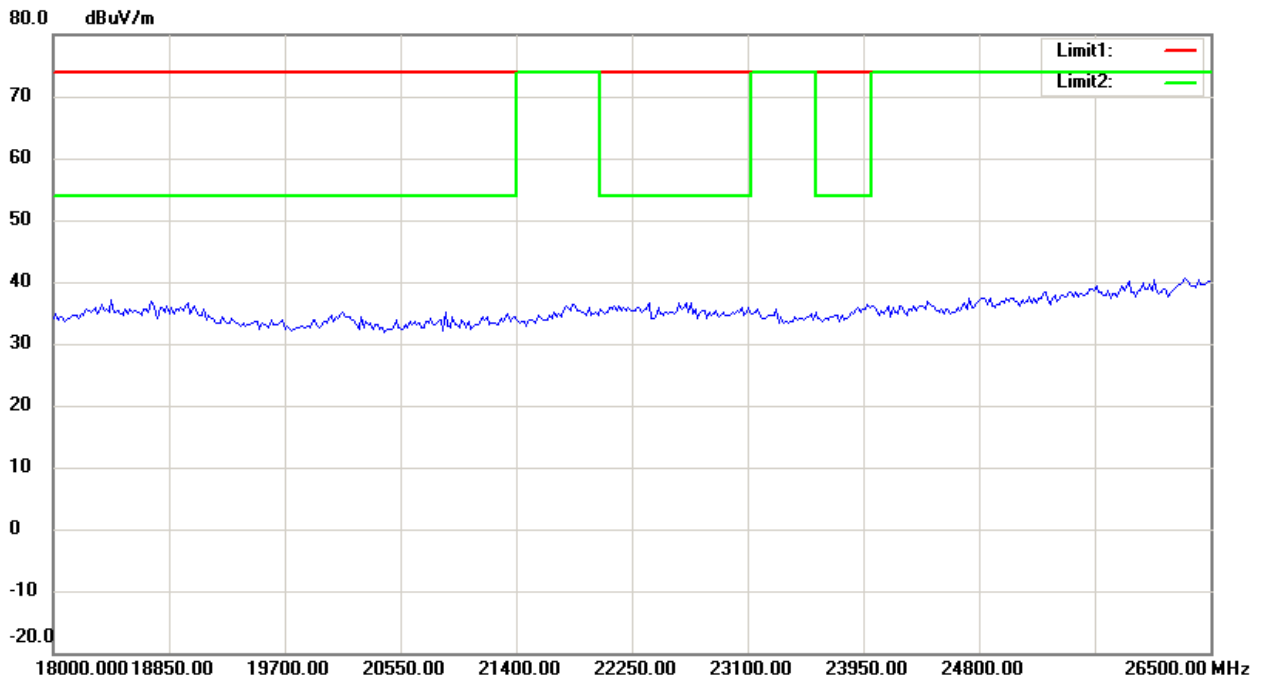
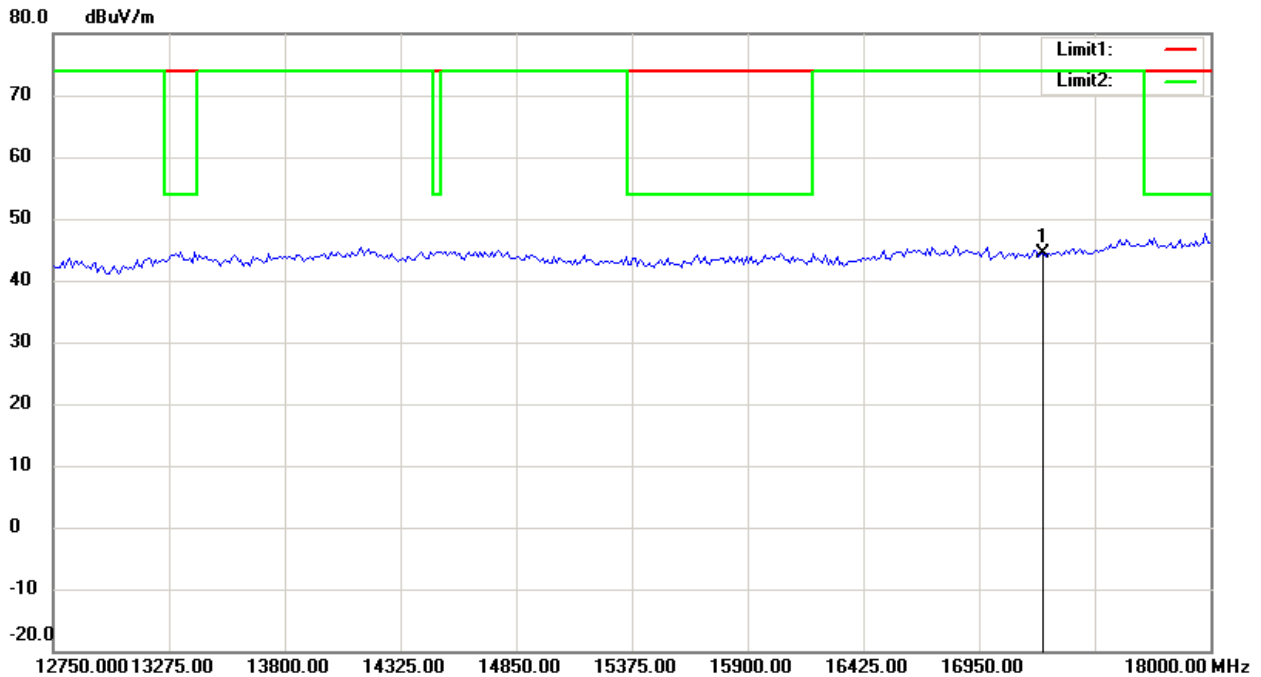
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

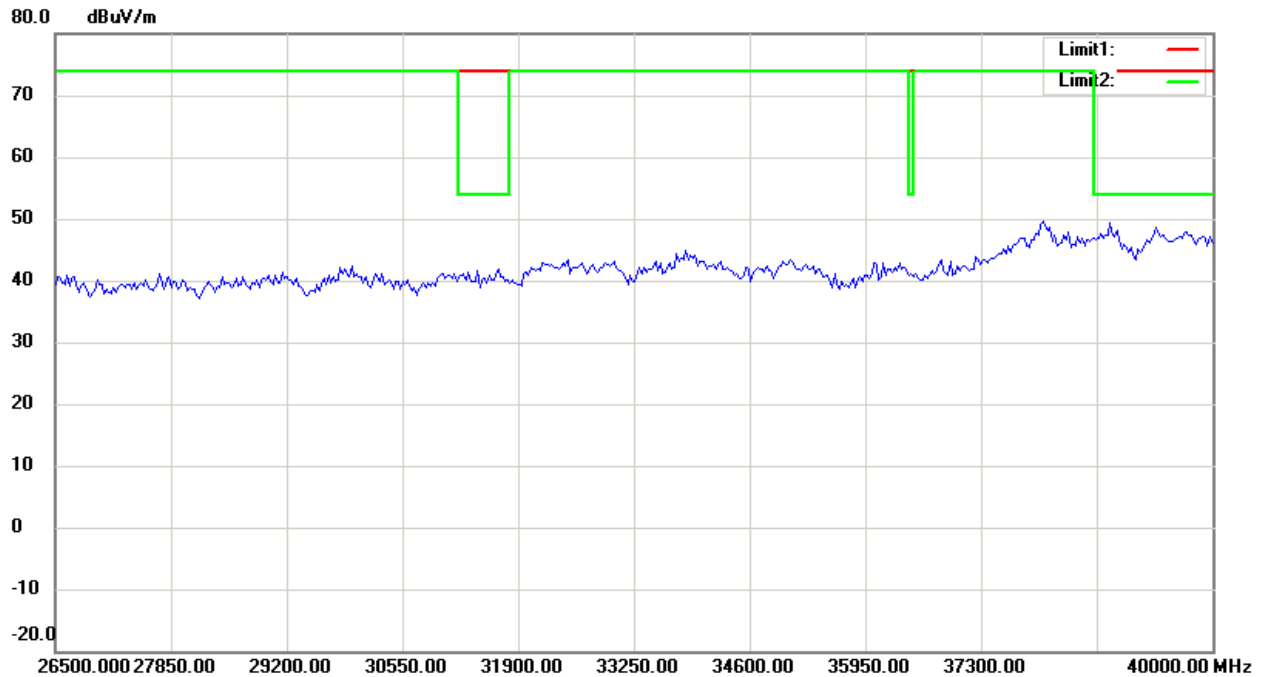
**Up Line: Peak Limit Line Down Line: Ave Limit Line**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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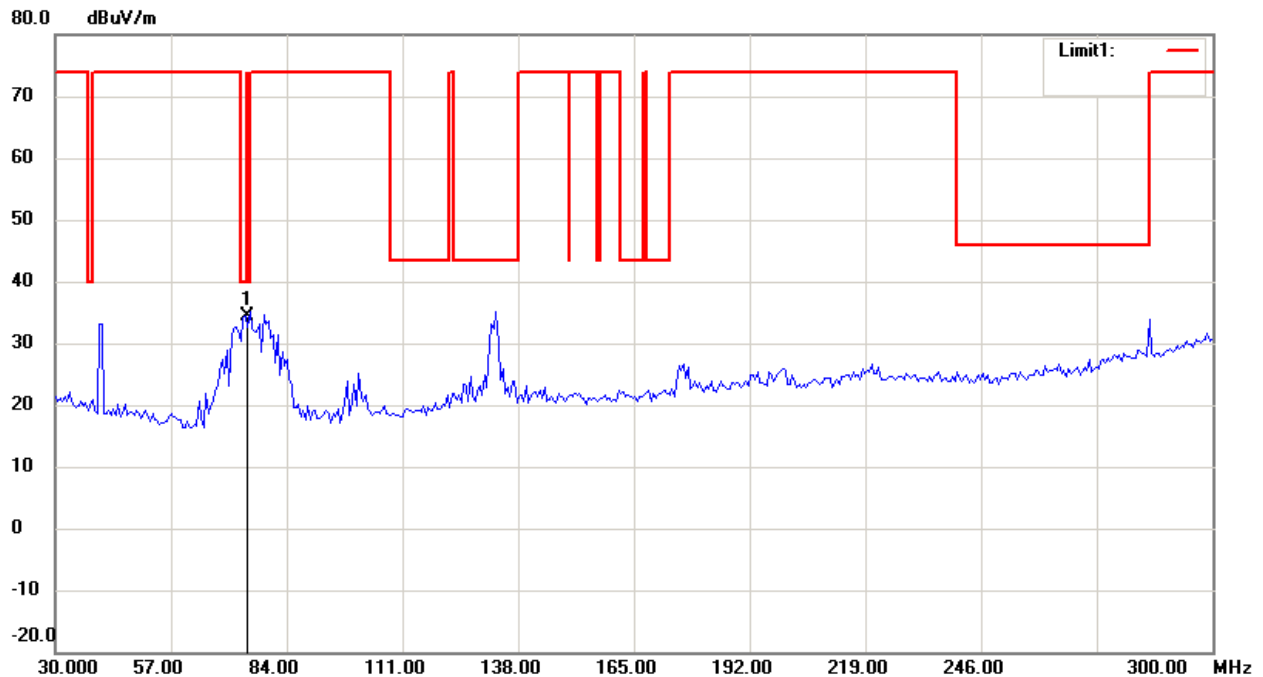


Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

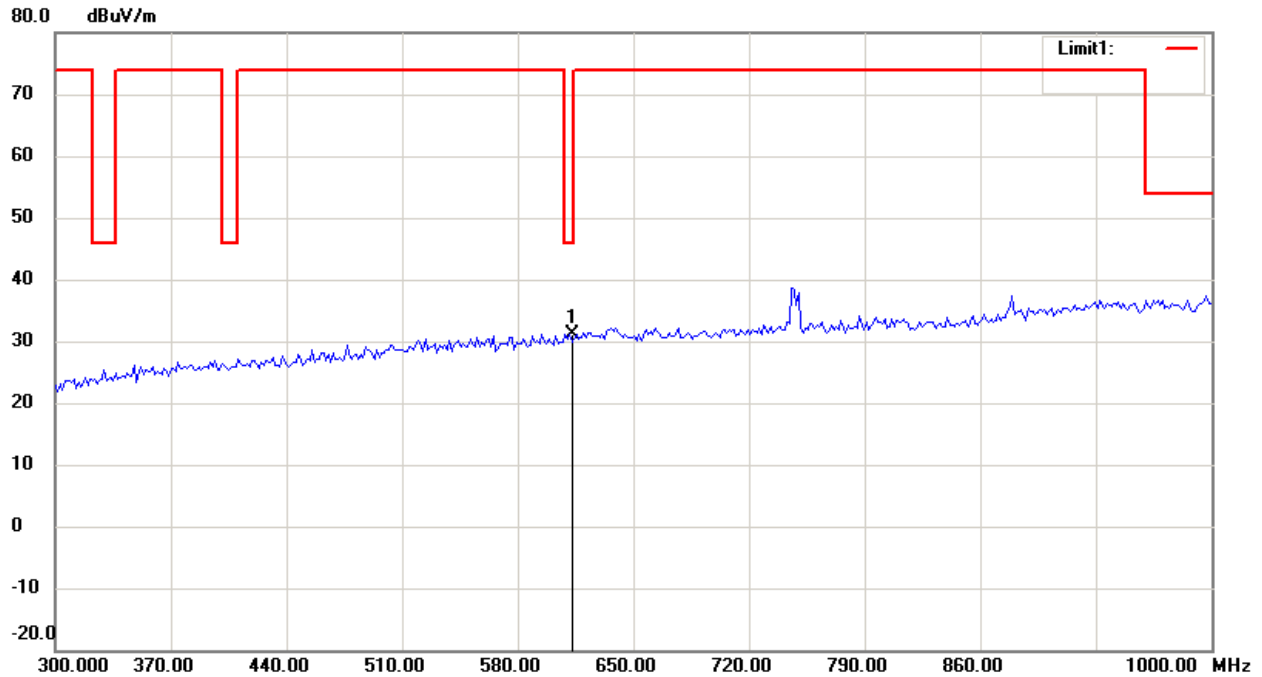
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



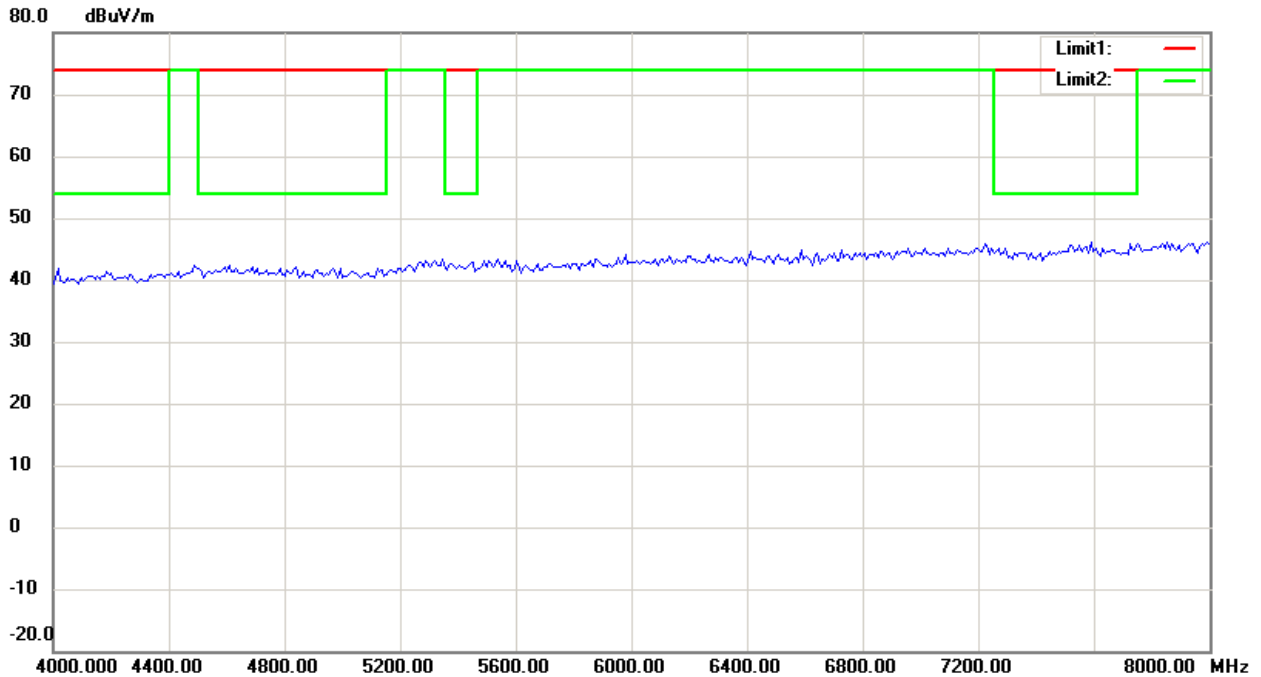
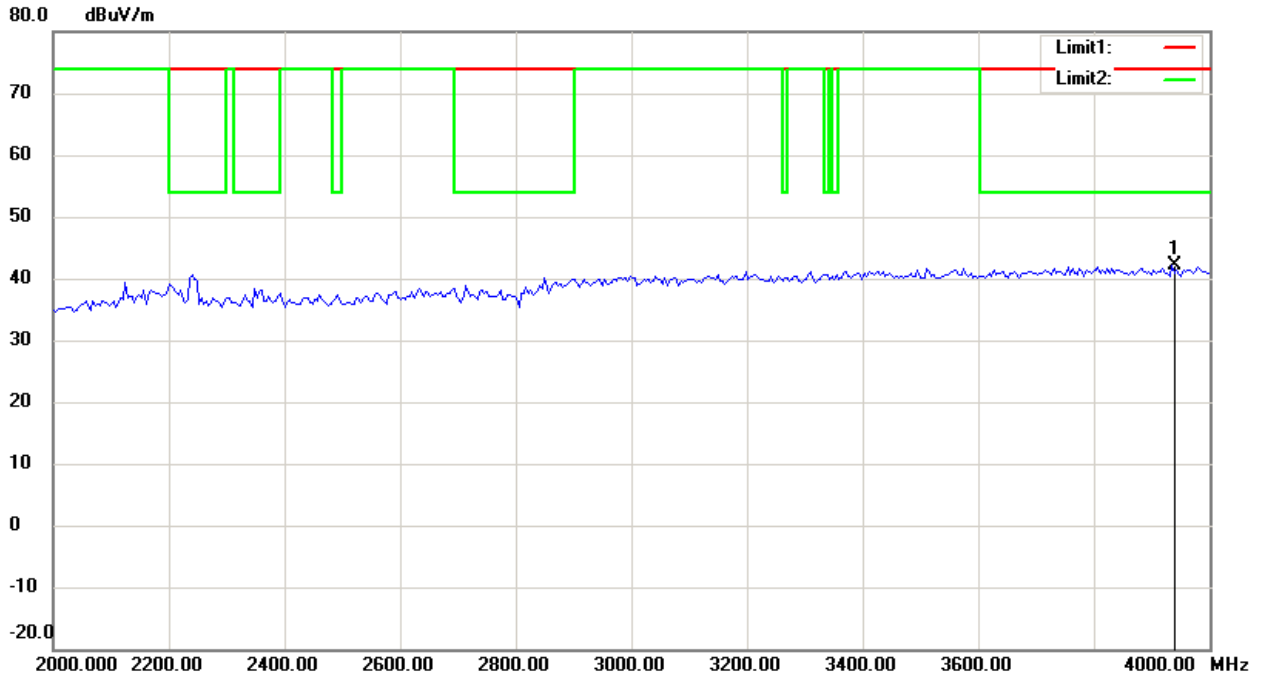
**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

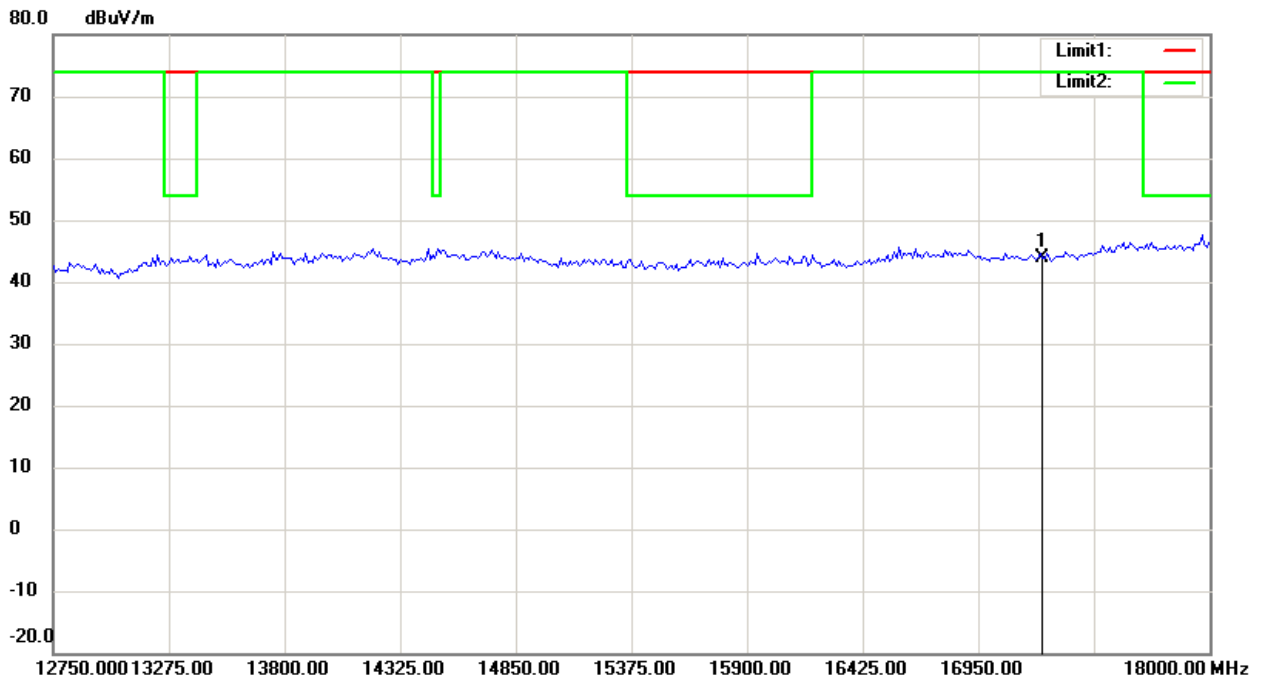
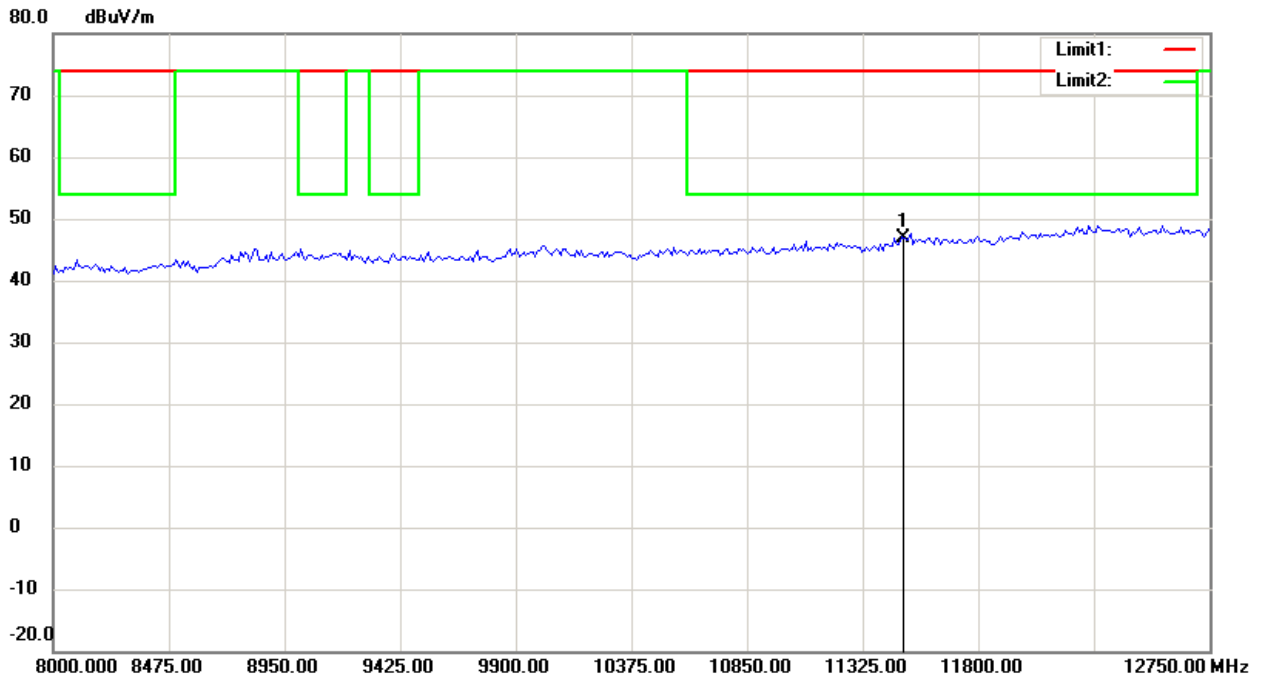
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

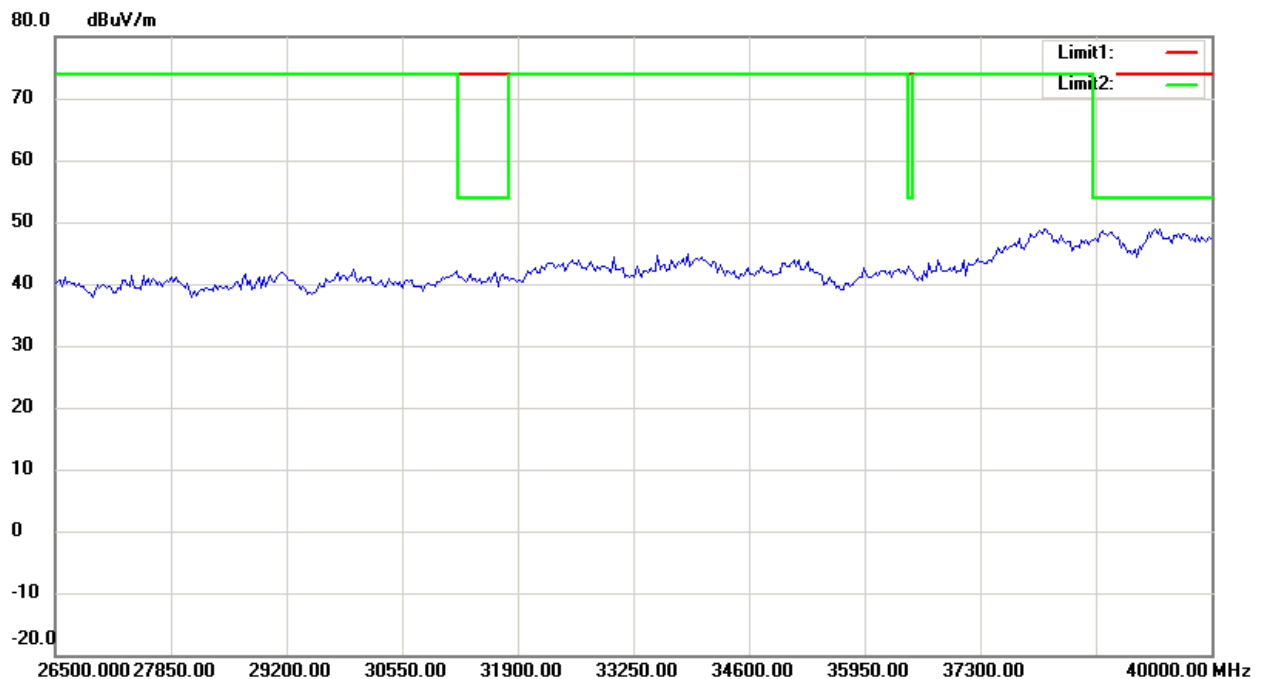
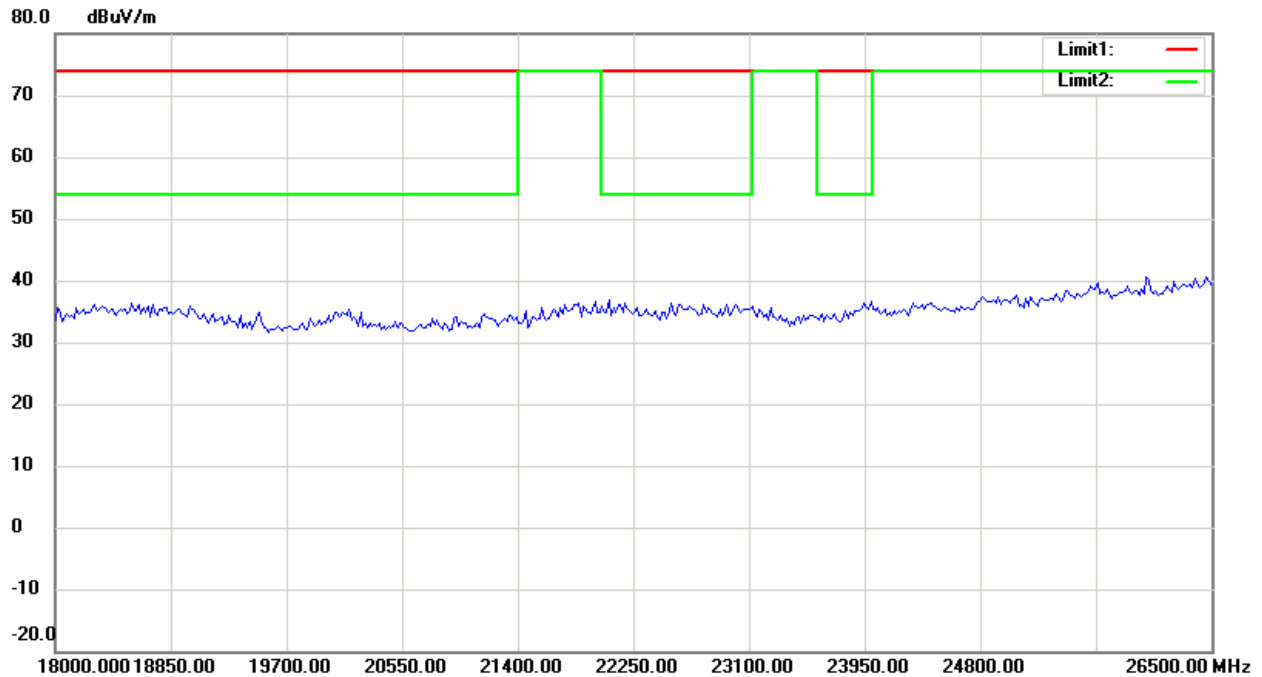
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Registration number: W6M21003-10512-C-1

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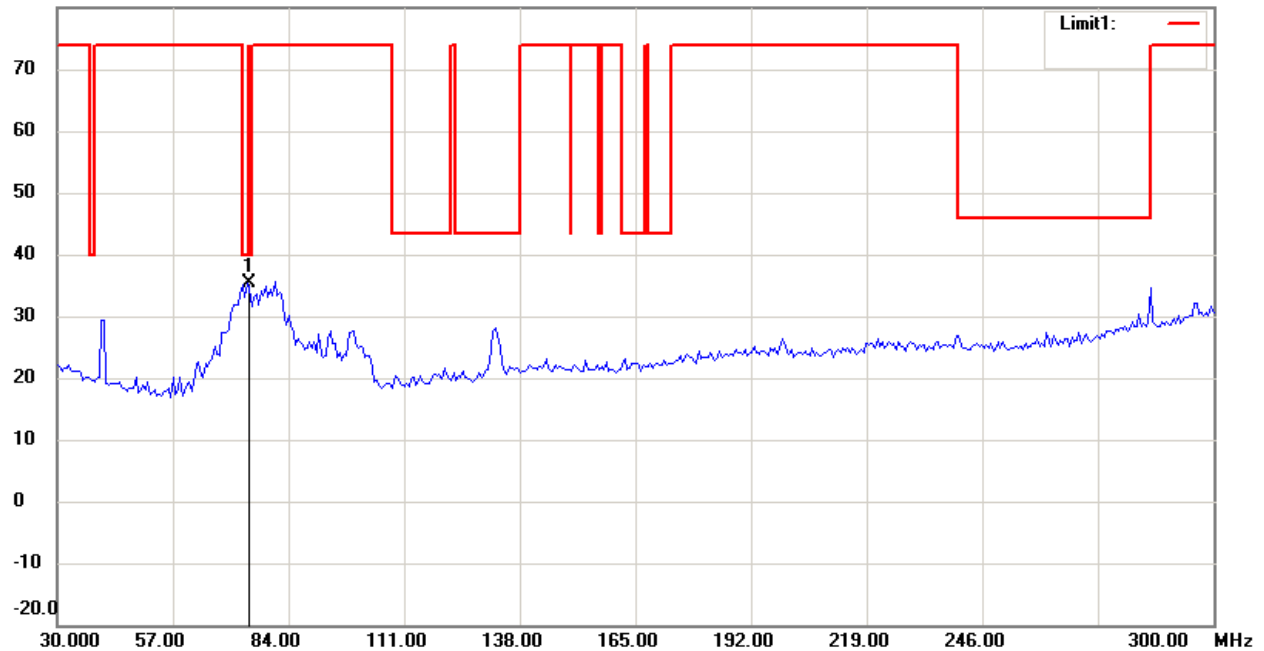
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

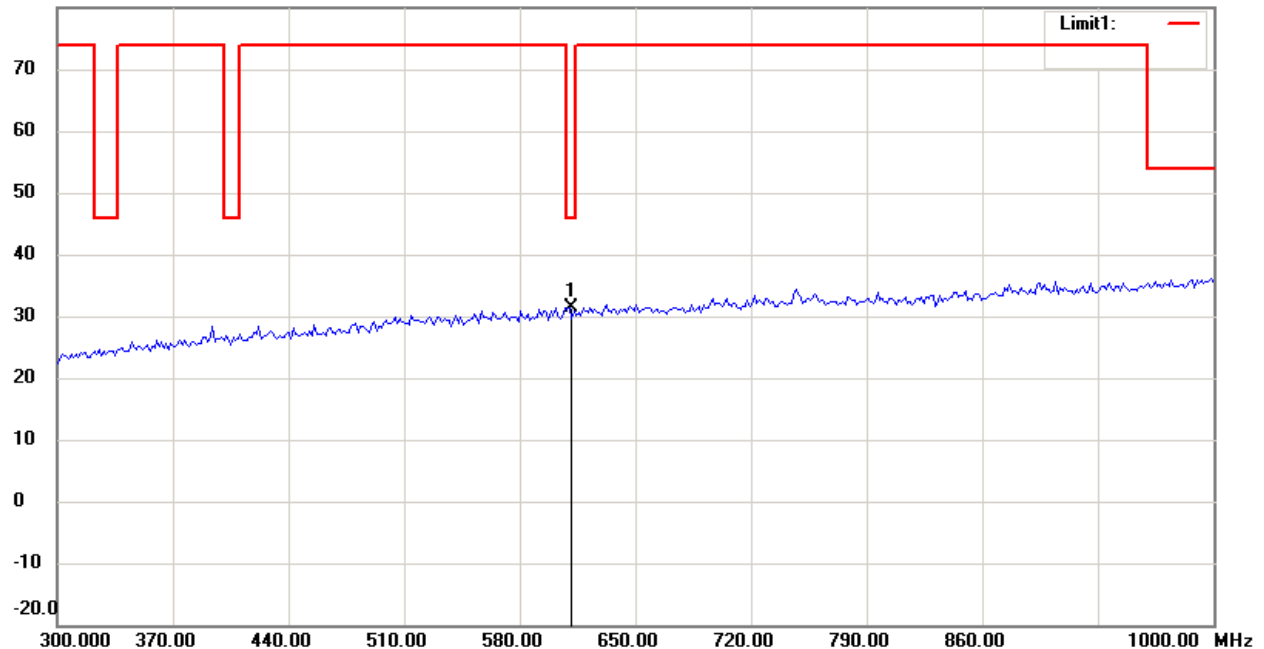
802.11a ch157

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



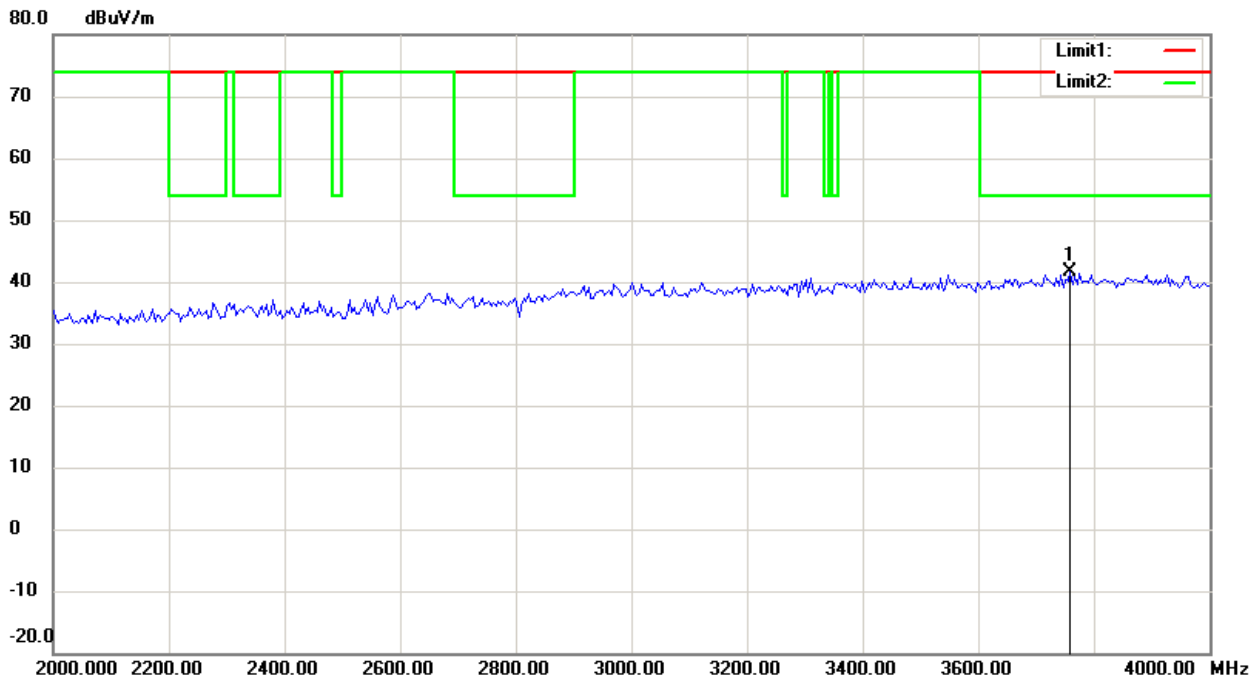
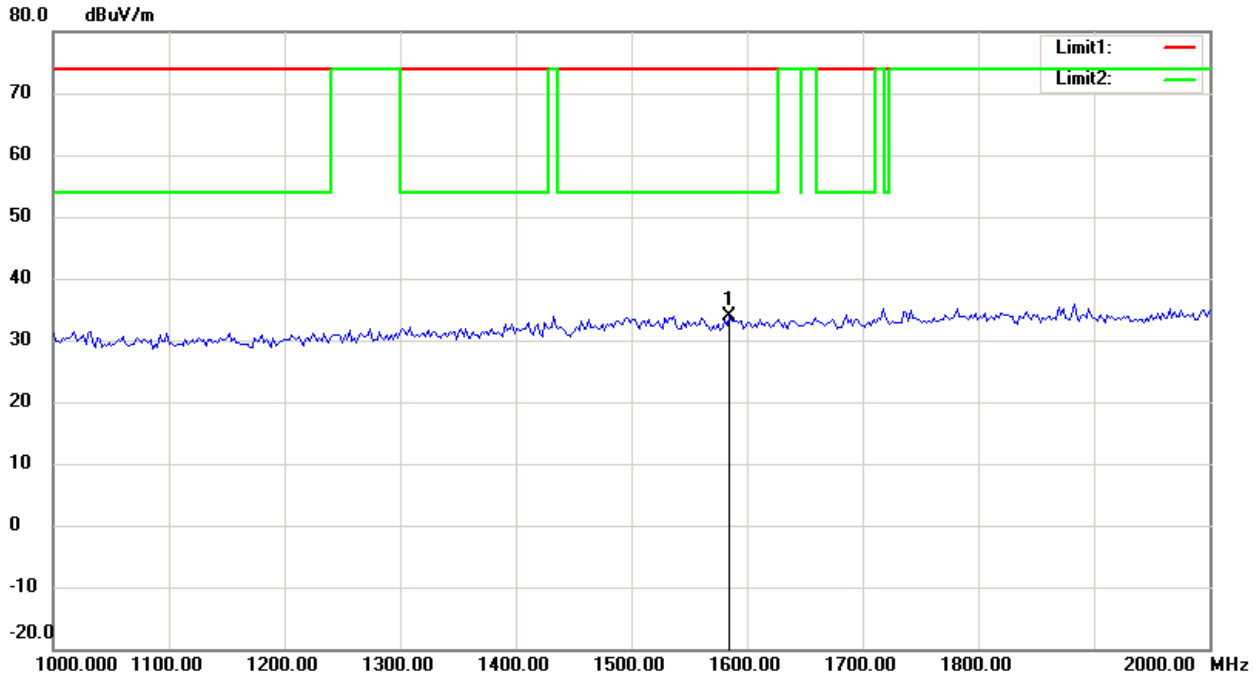
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

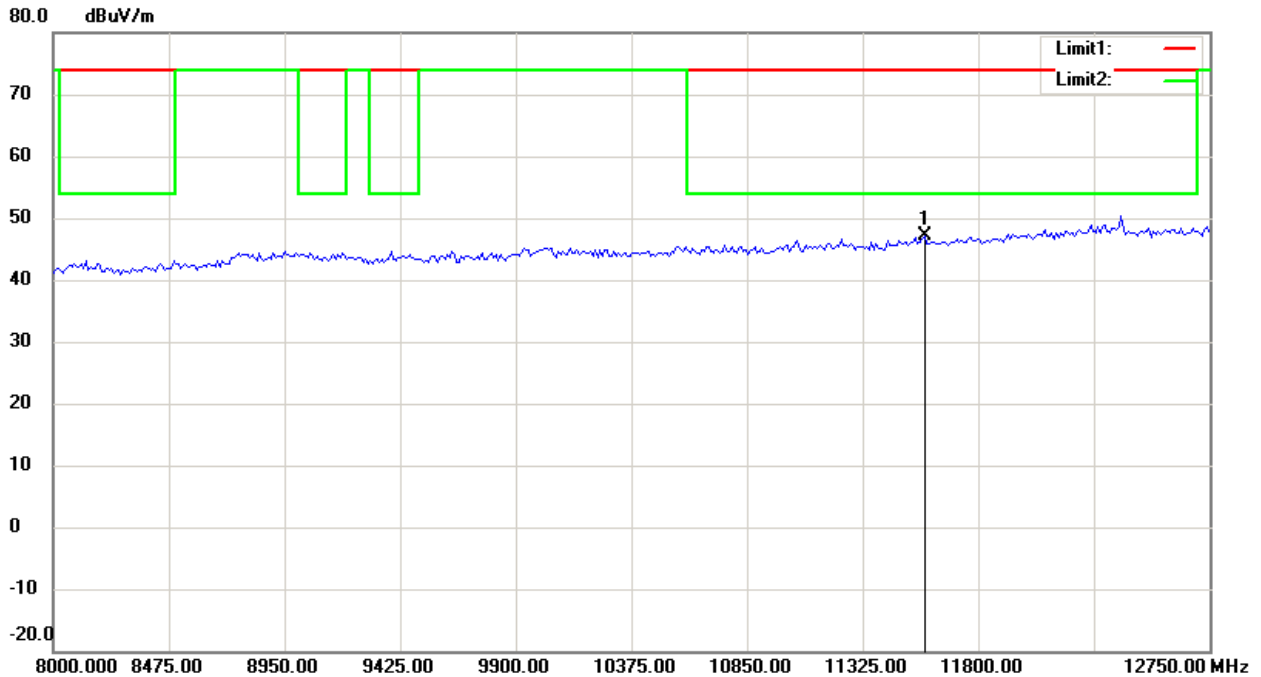
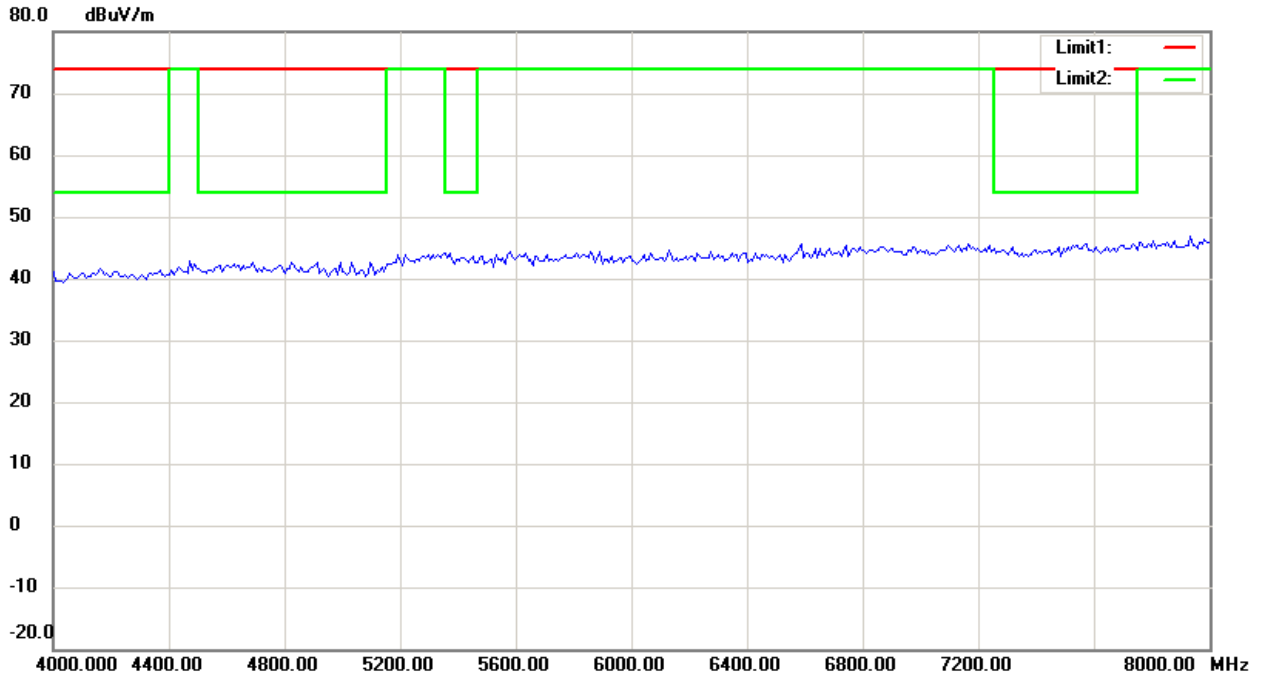
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

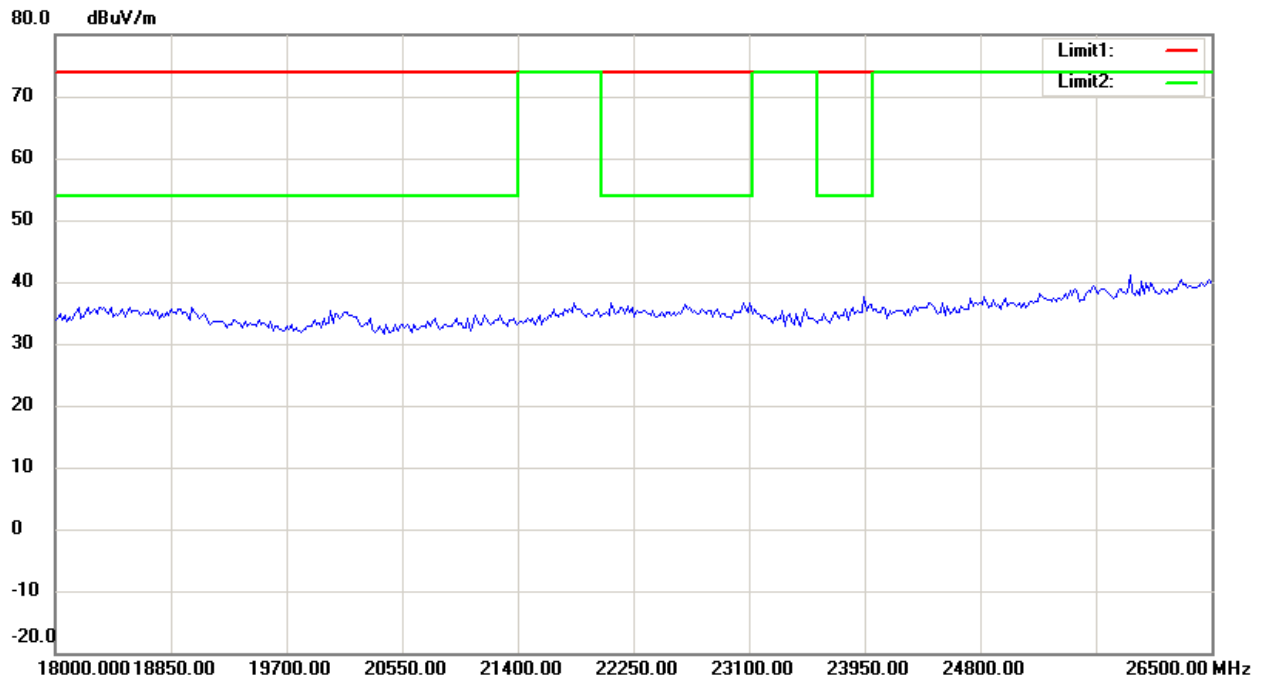
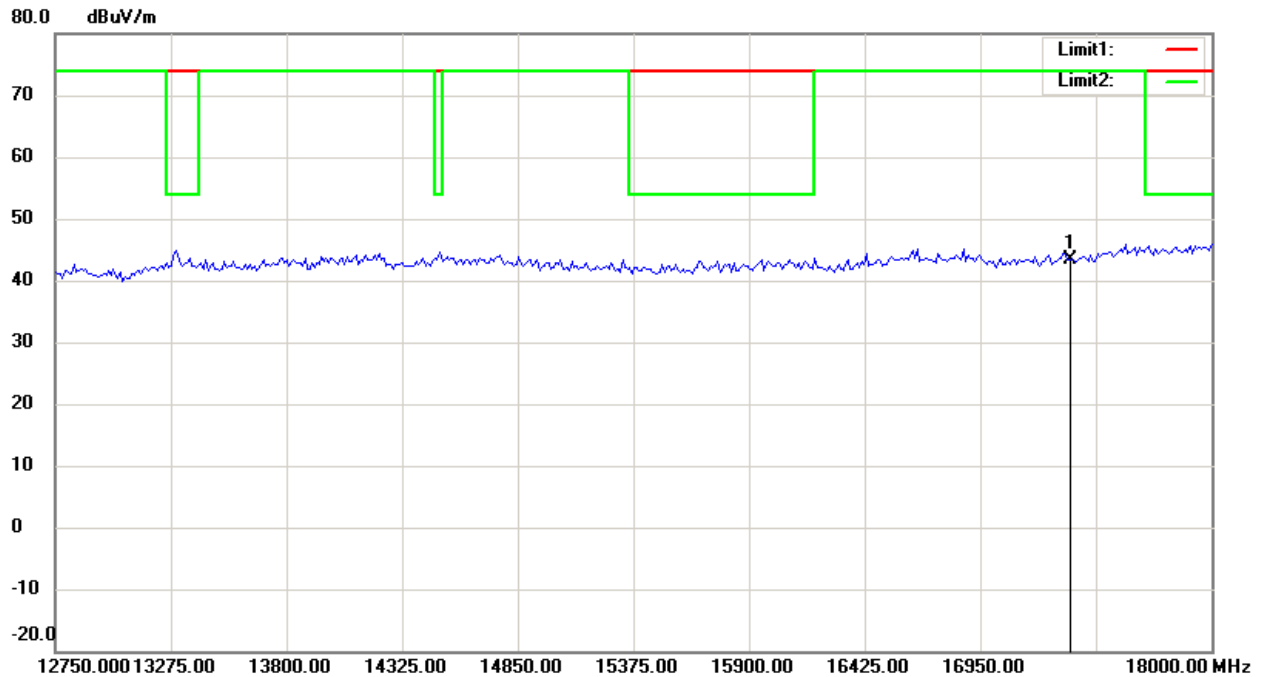
Up Line: Peak Limit Line Down Line: Ave Limit Line

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FCC ID: IR5RF9



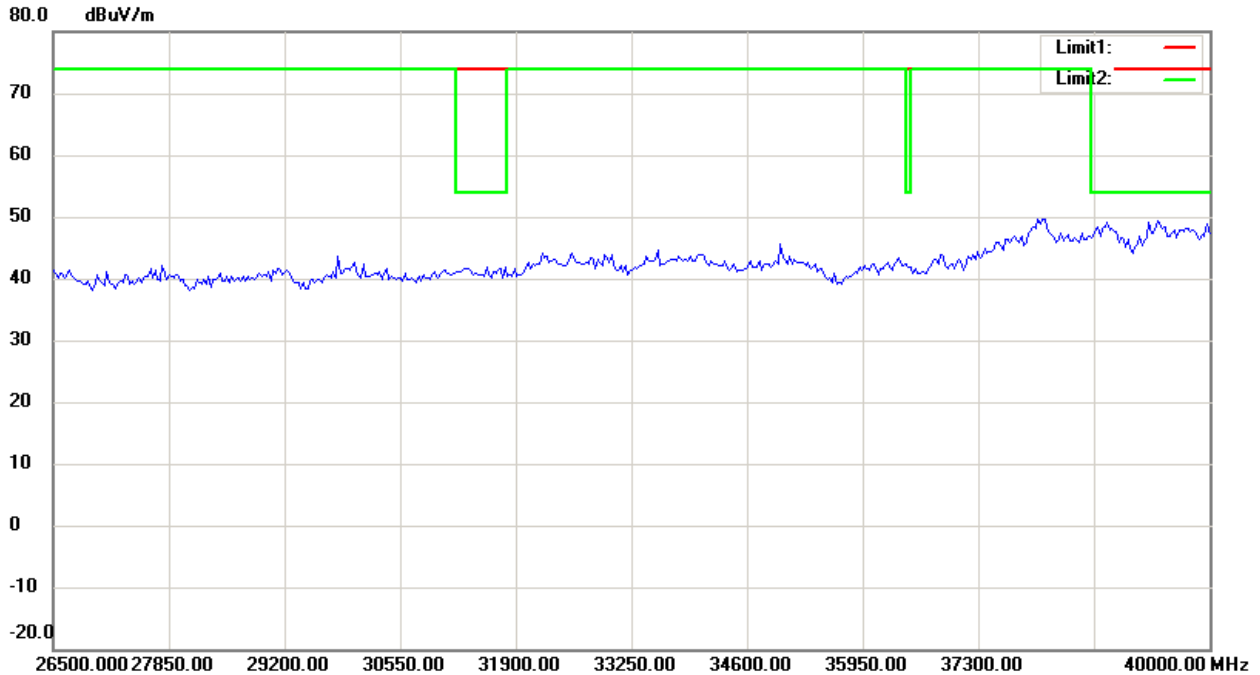
**Note:**

**Up Line: Peak Limit Line Down Line: Ave Limit Line**

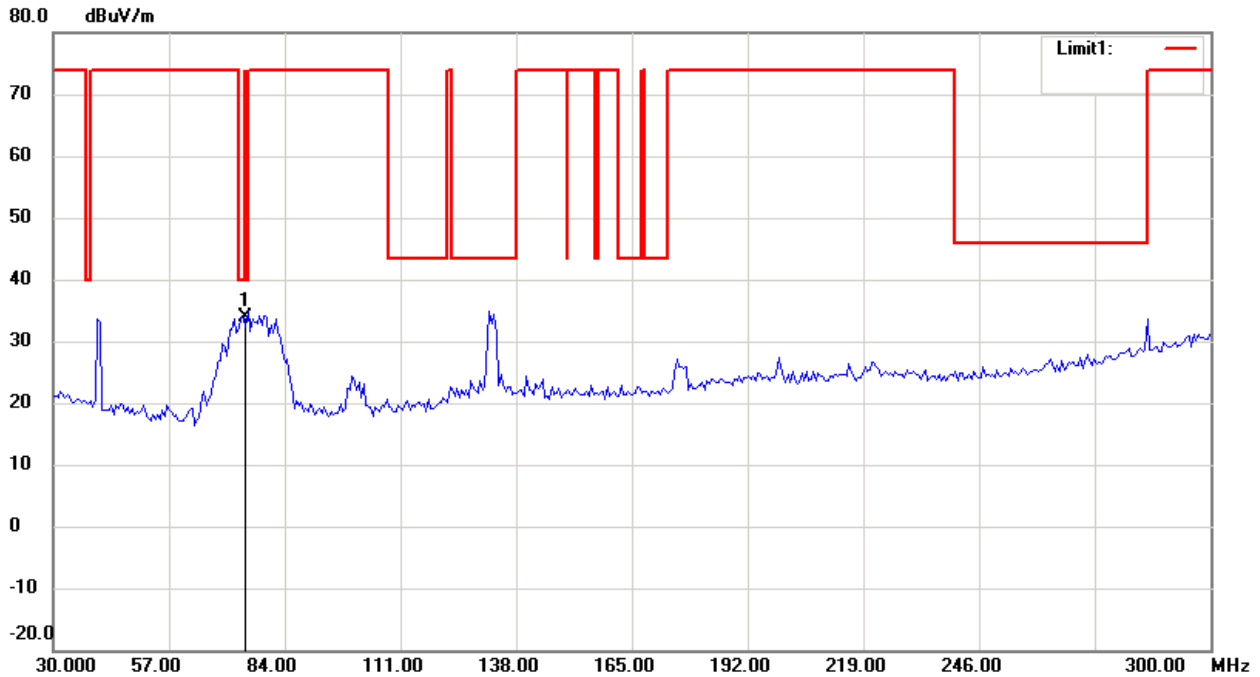
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



## Antenna Polarization V



### Note:

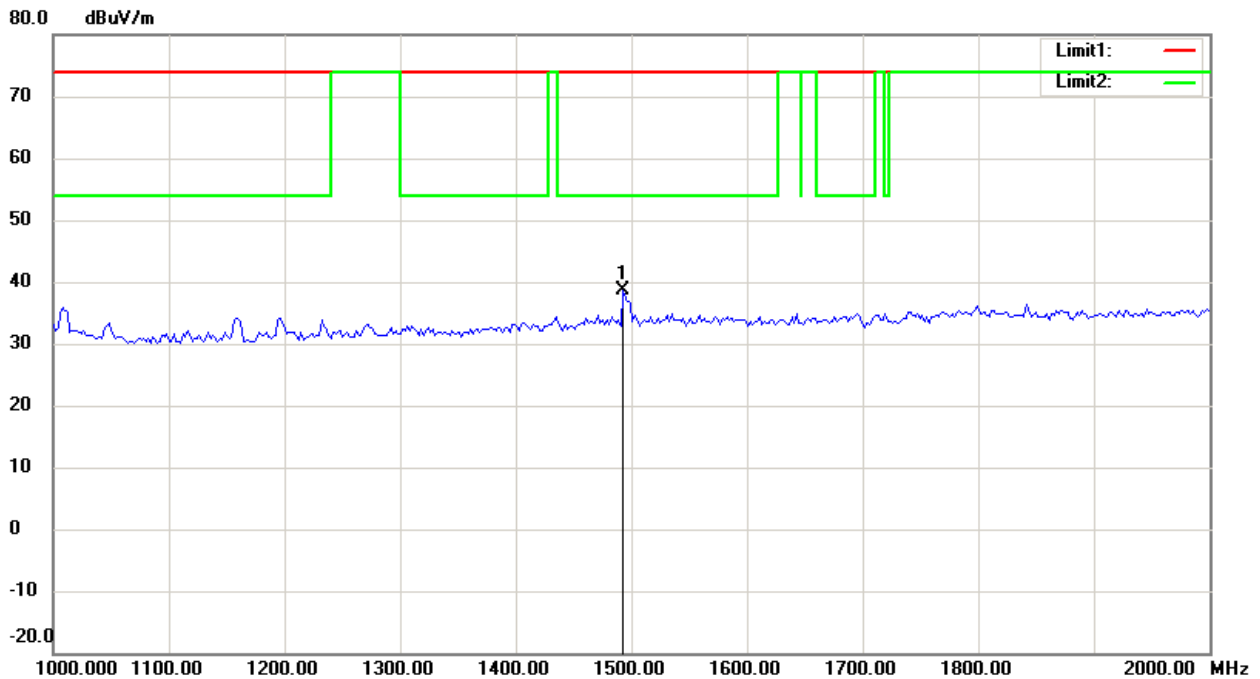
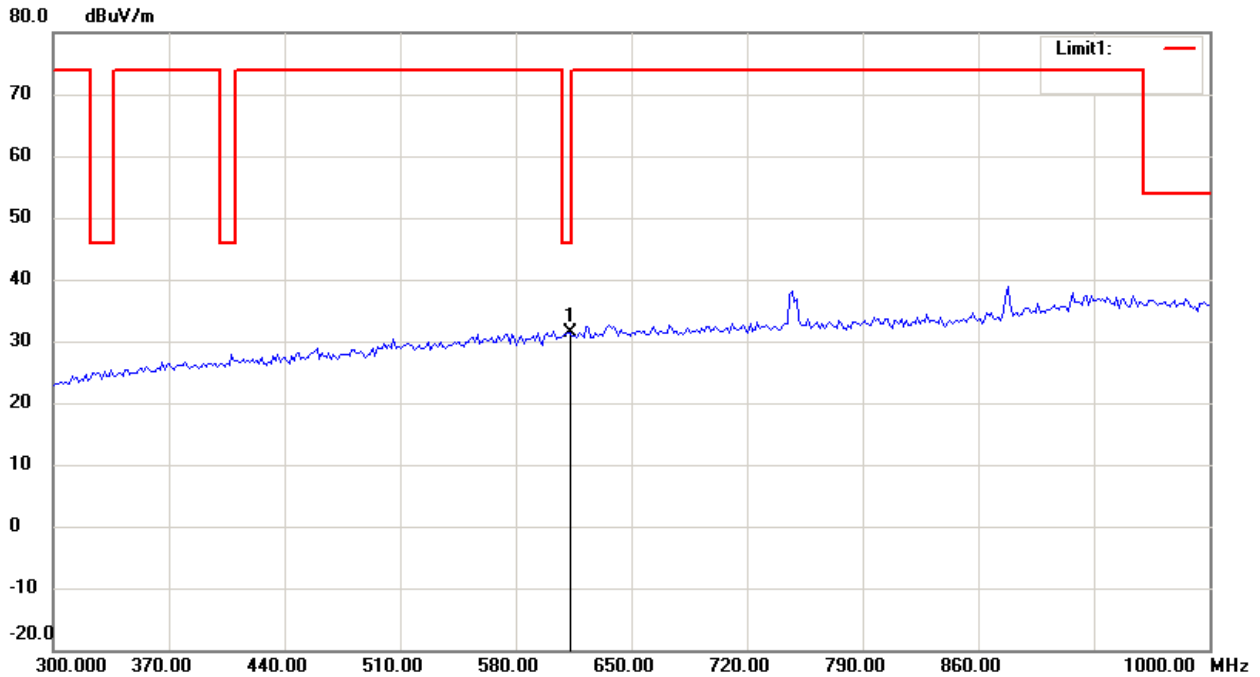
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

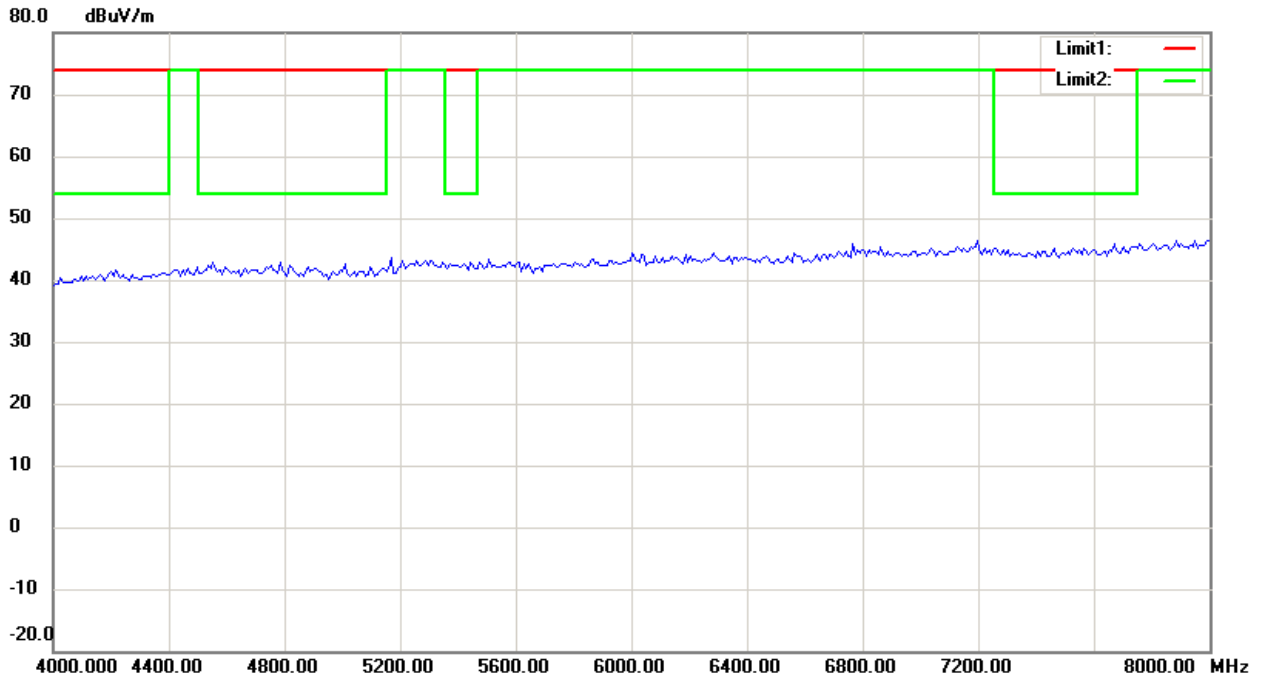
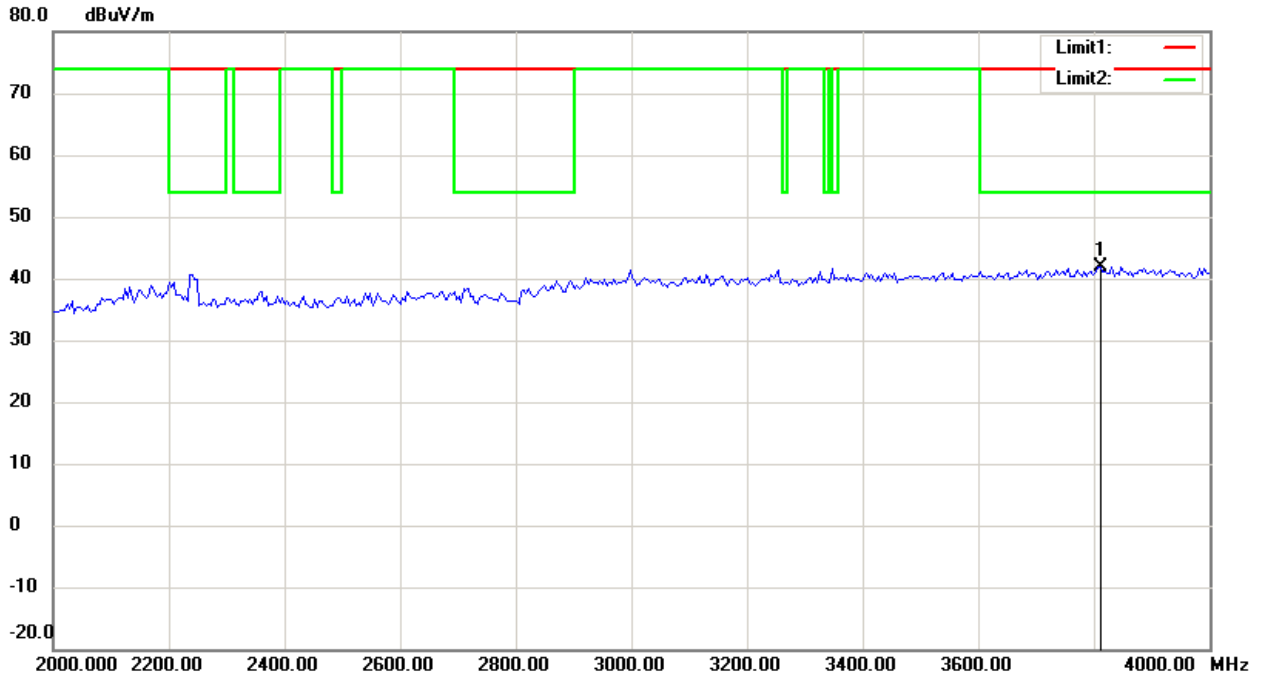
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**Note:**

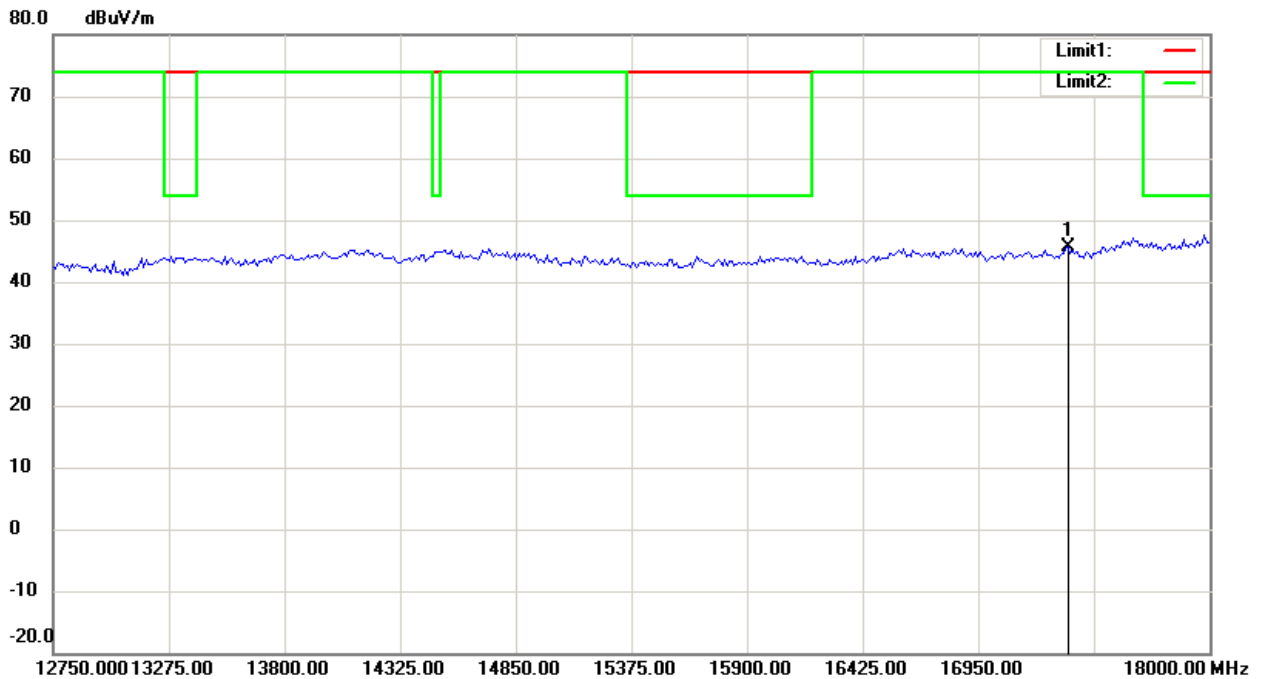
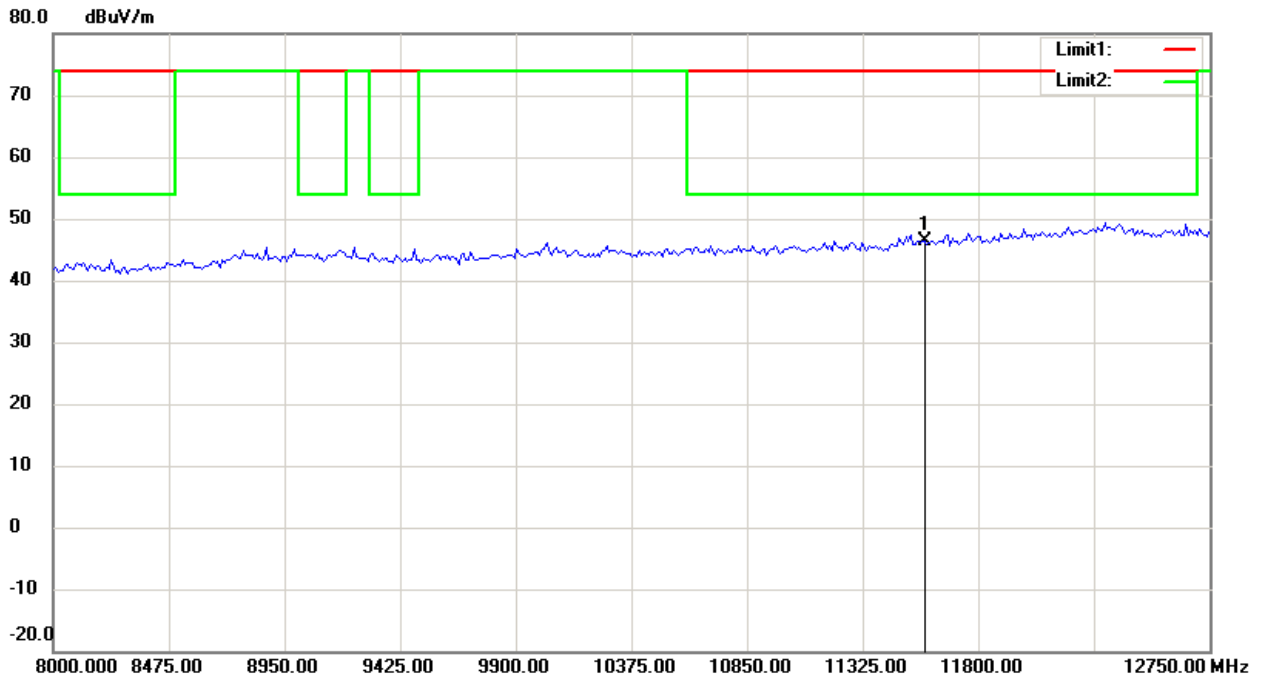
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FCC ID: IR5RF9



**Note:**

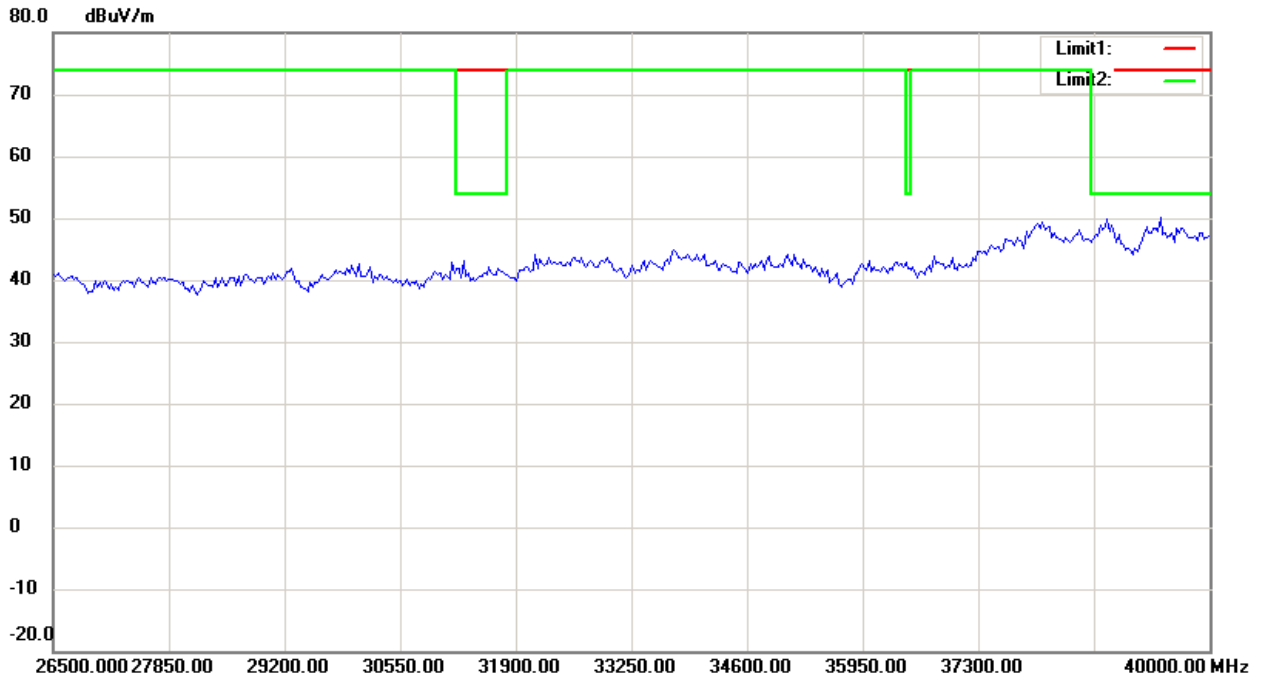
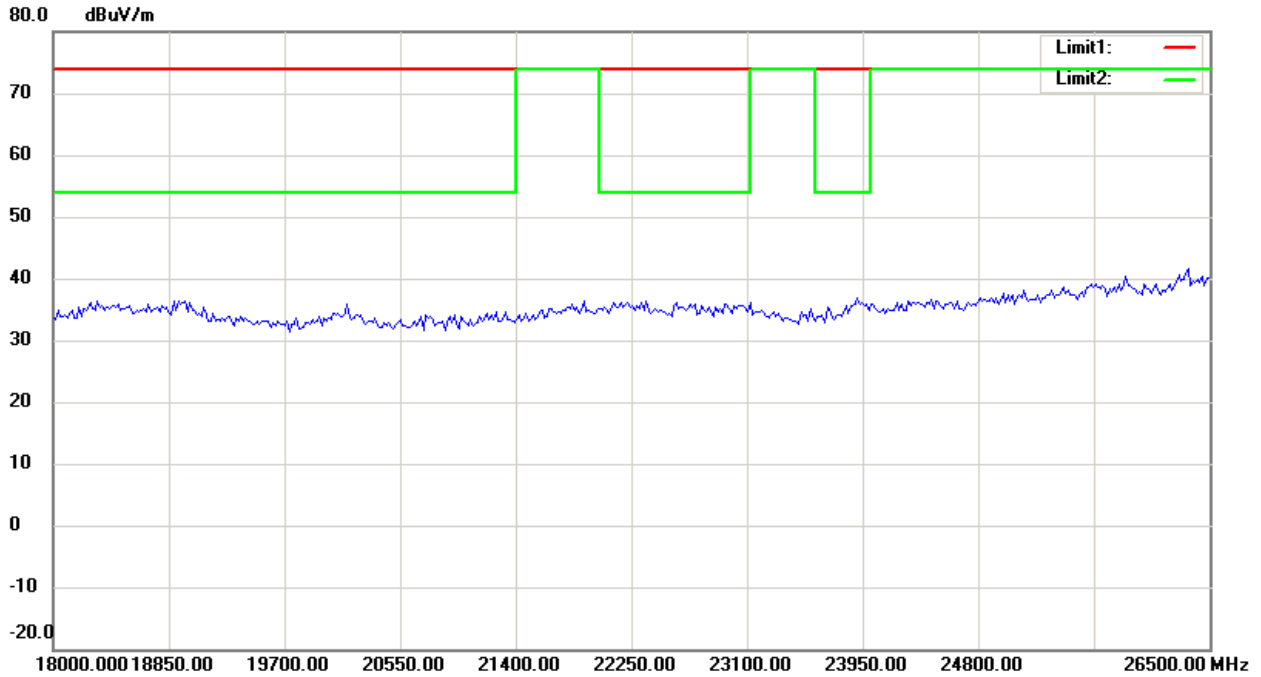
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

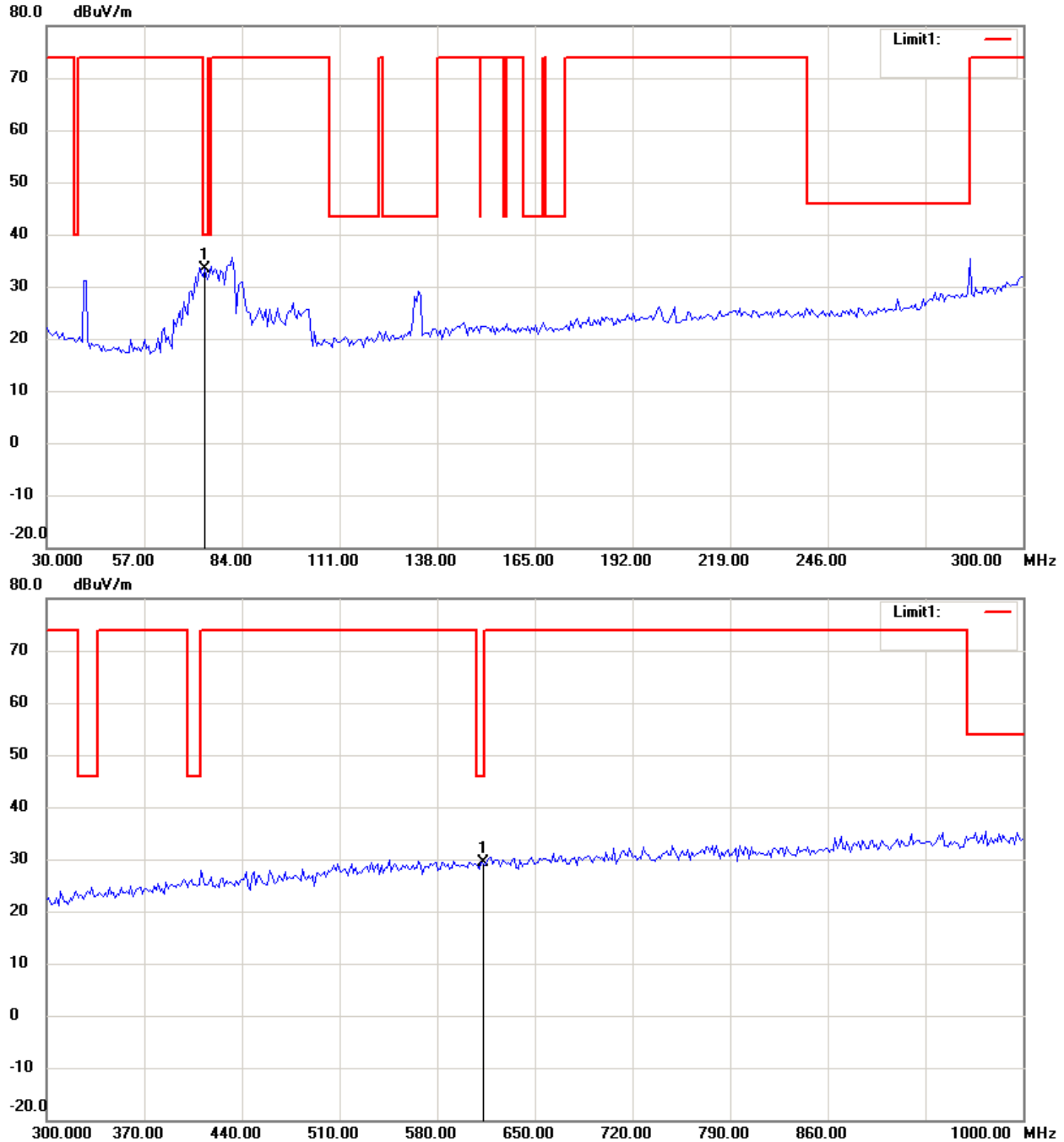
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

802.11a ch165

Antenna Polarization H



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

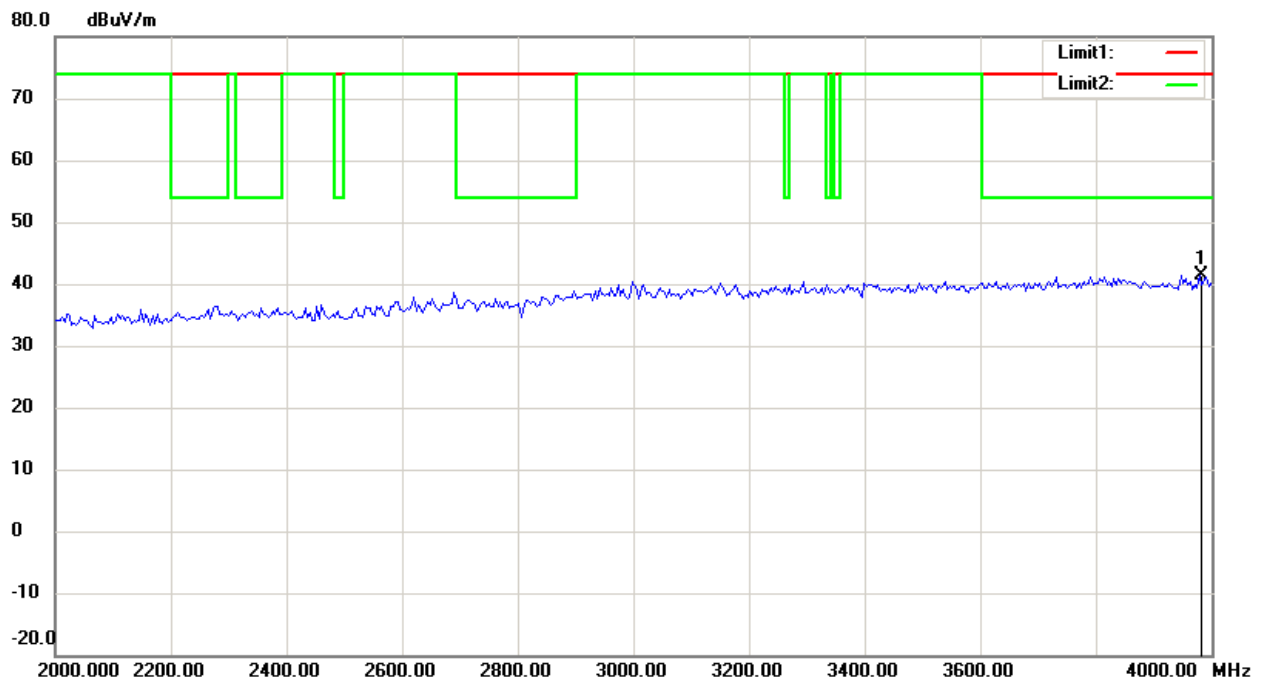
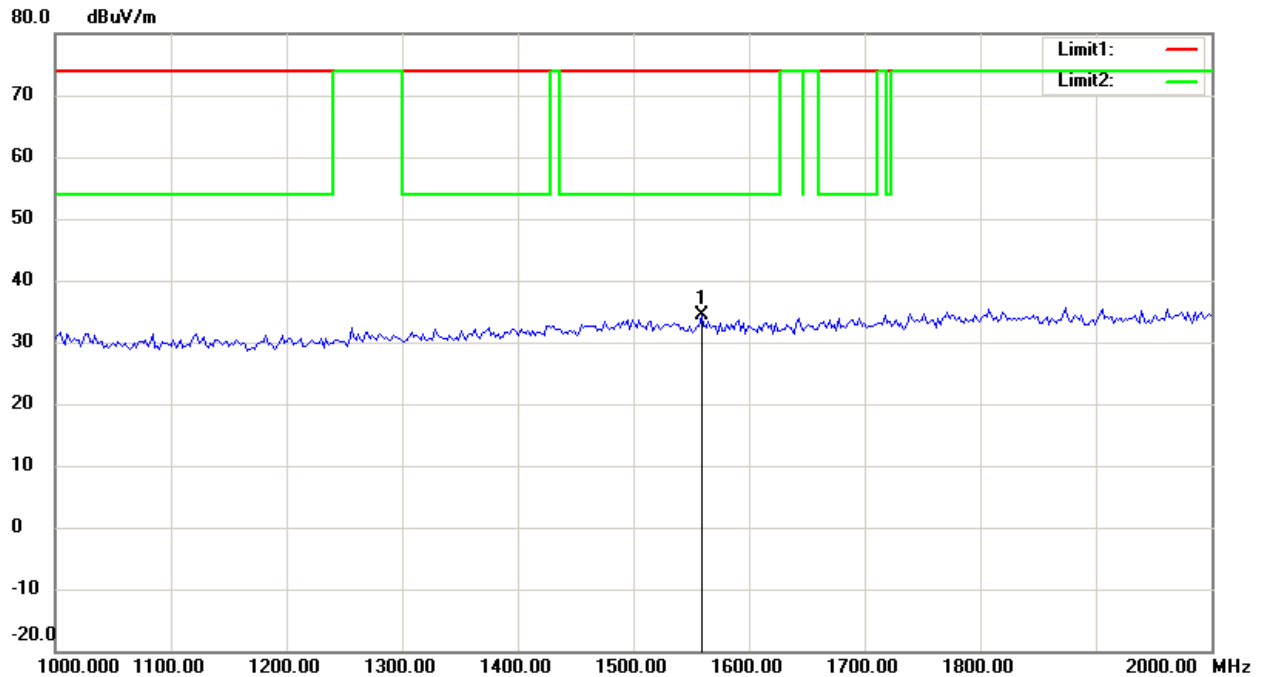
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

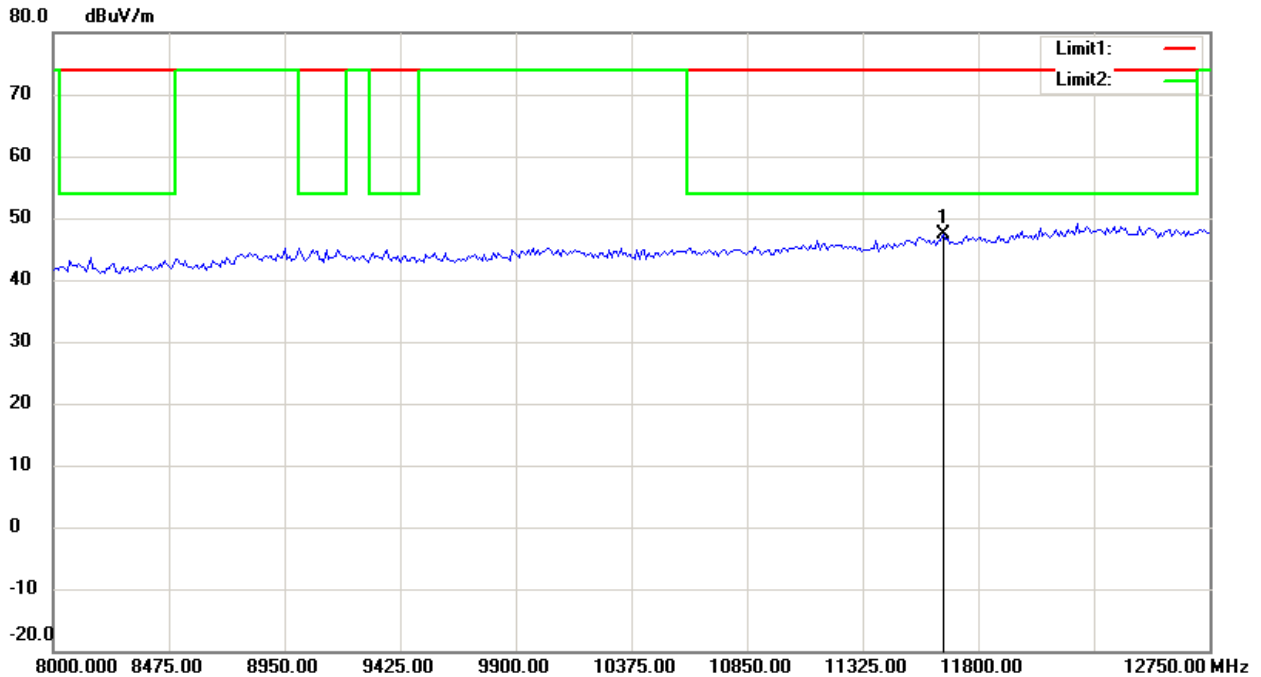
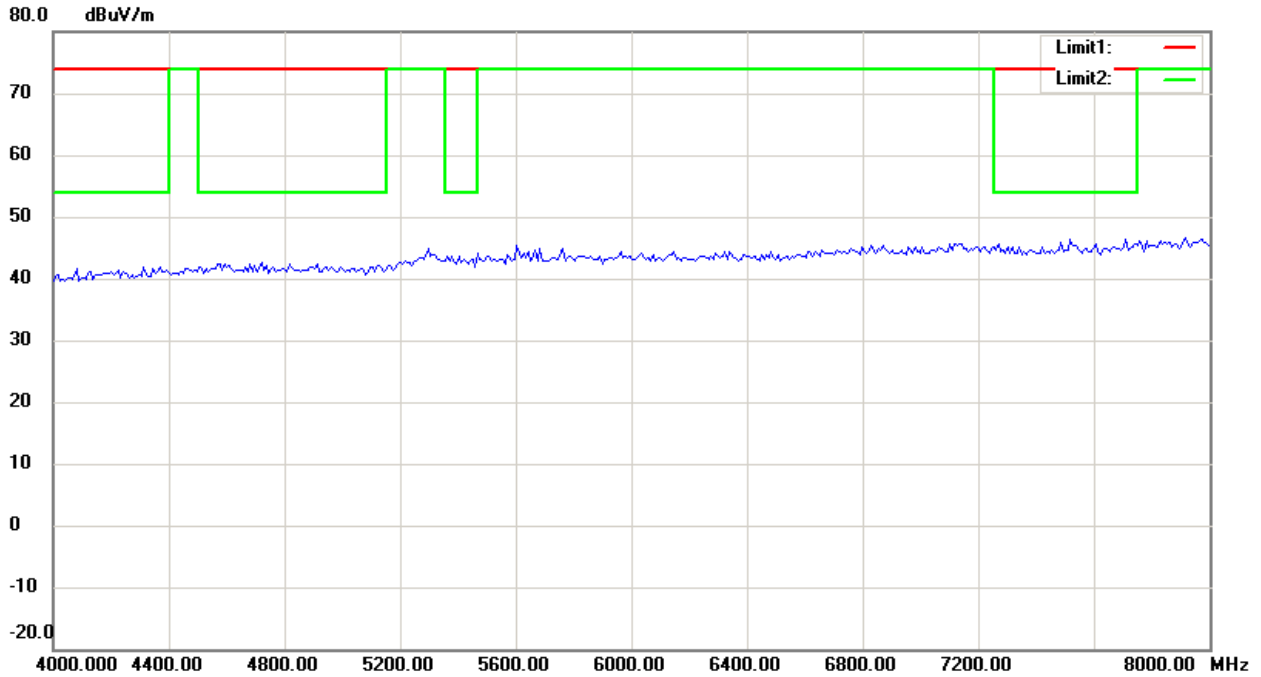
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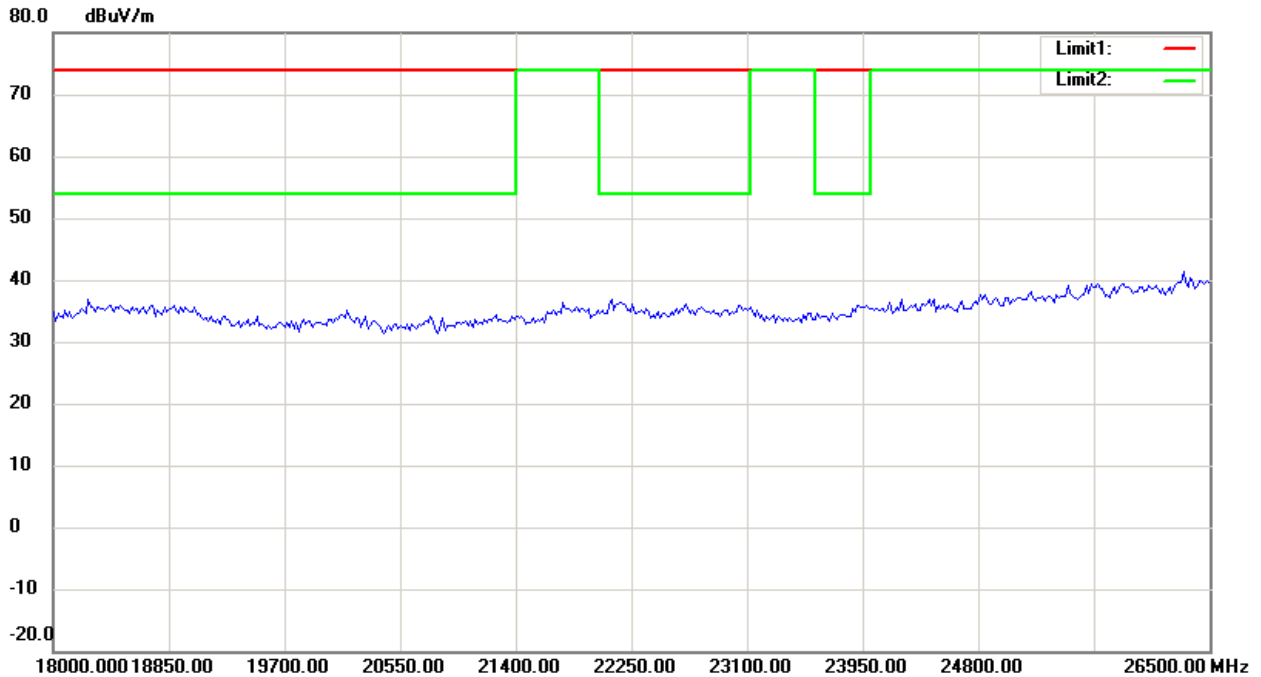
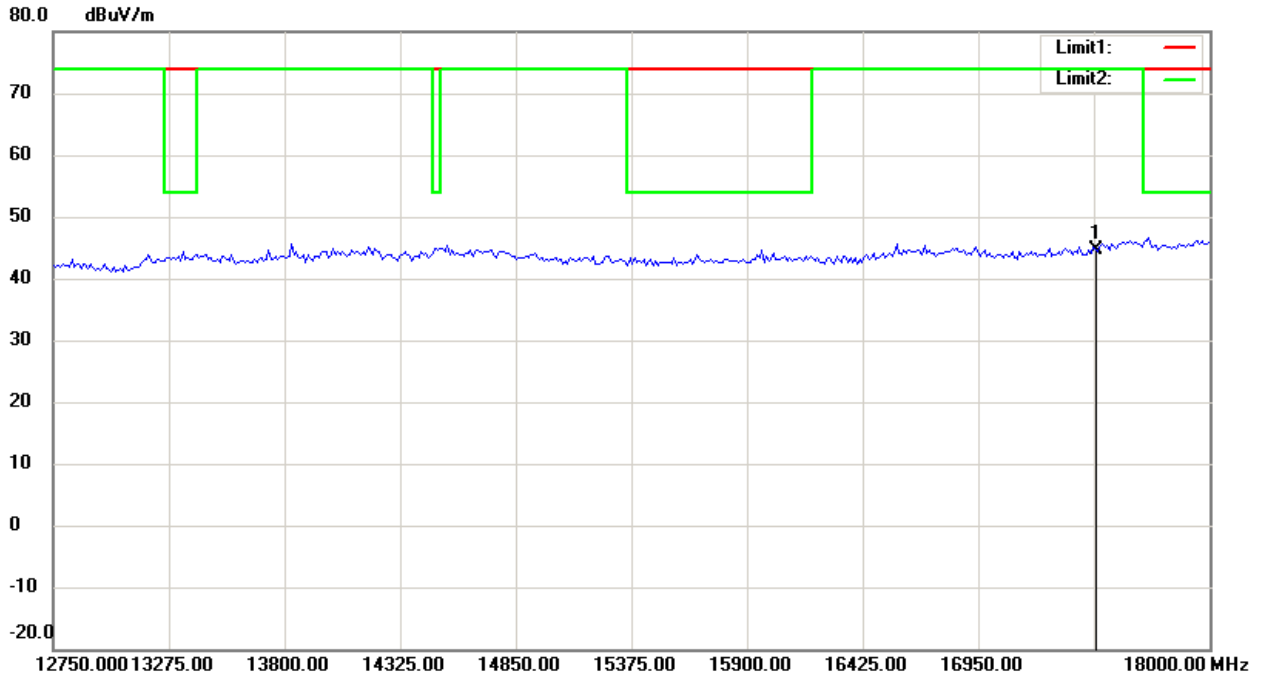
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**Note:**

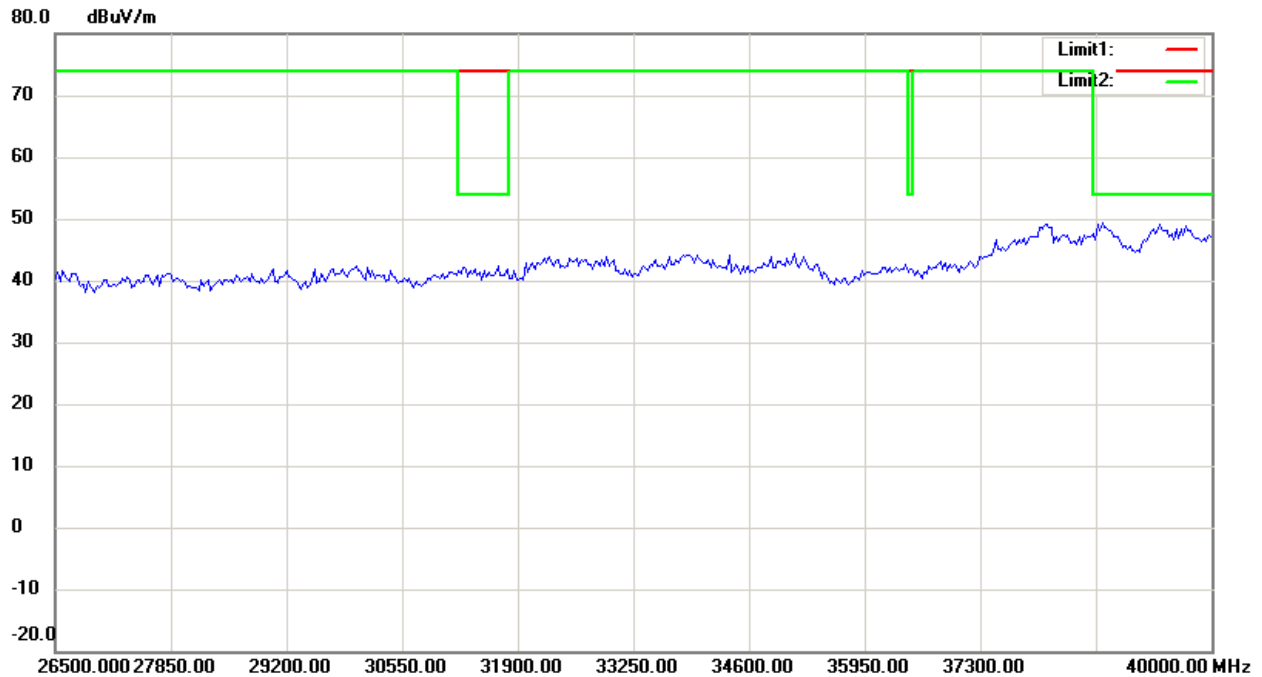
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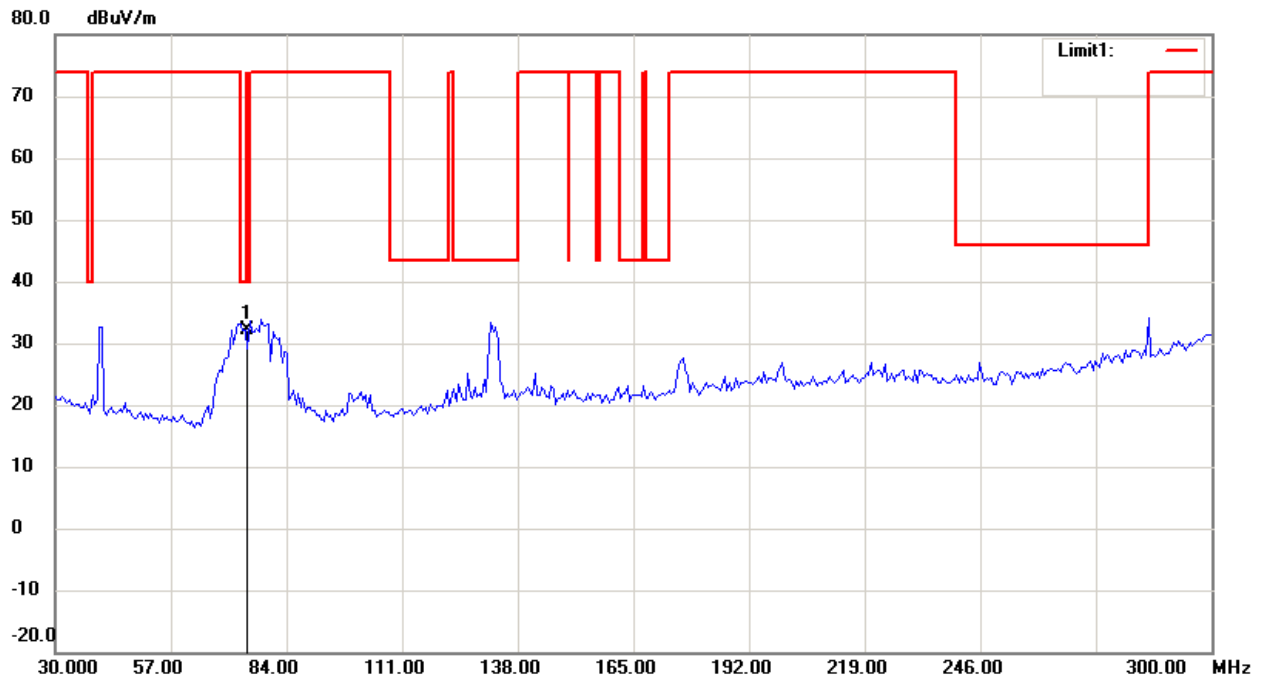


Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

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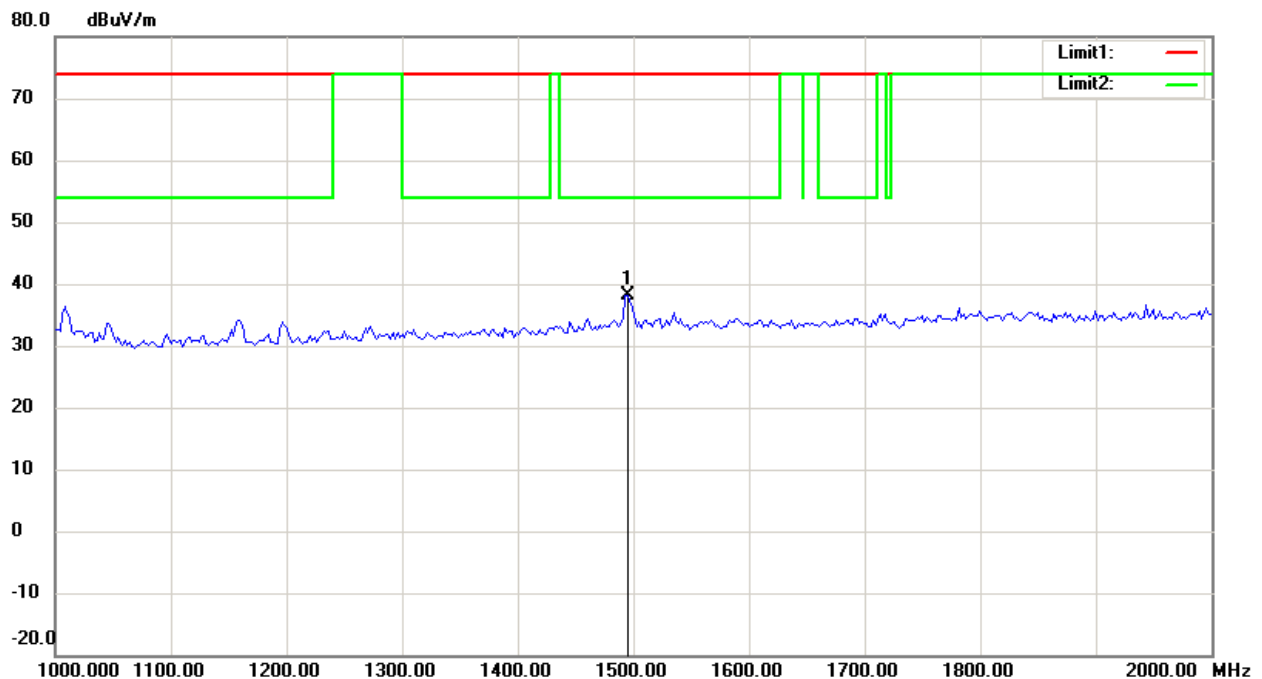
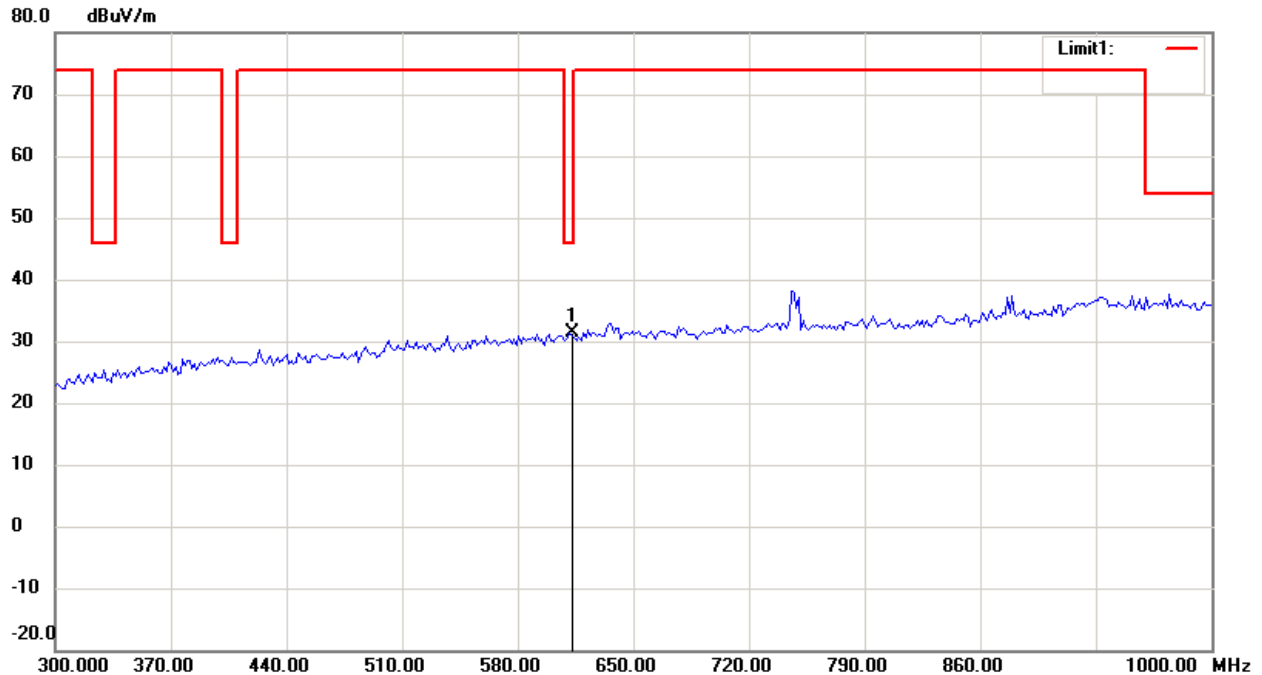




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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Note:

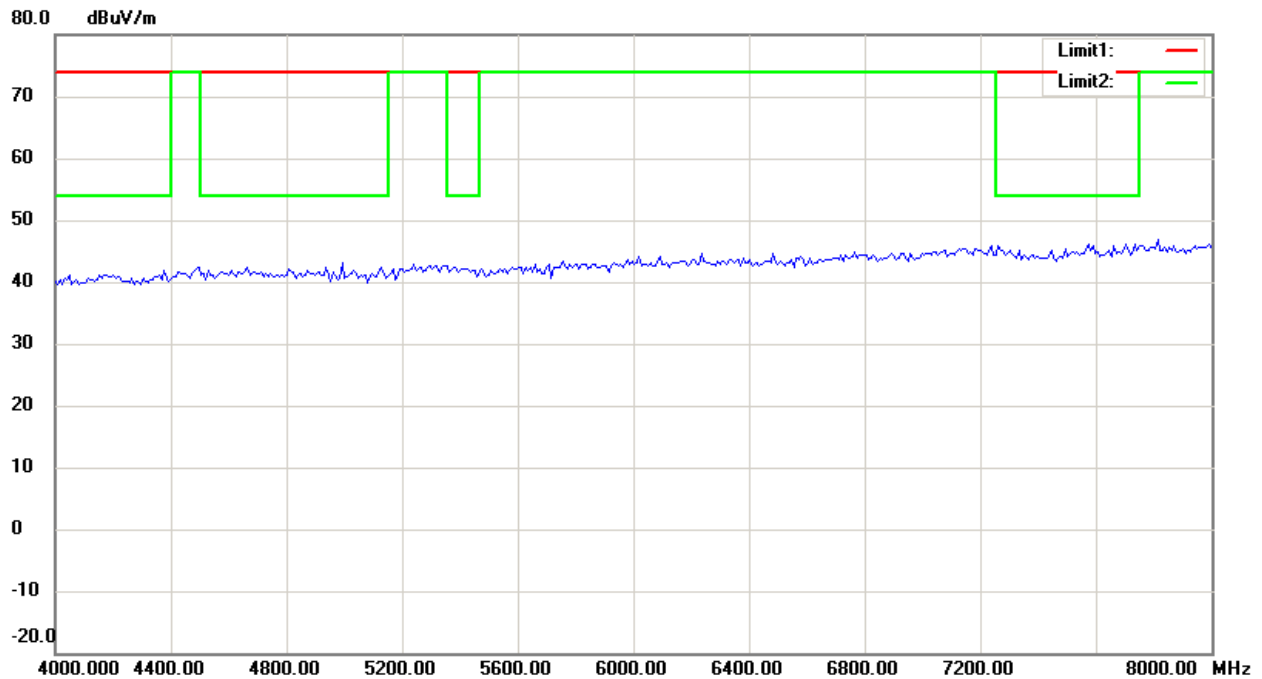
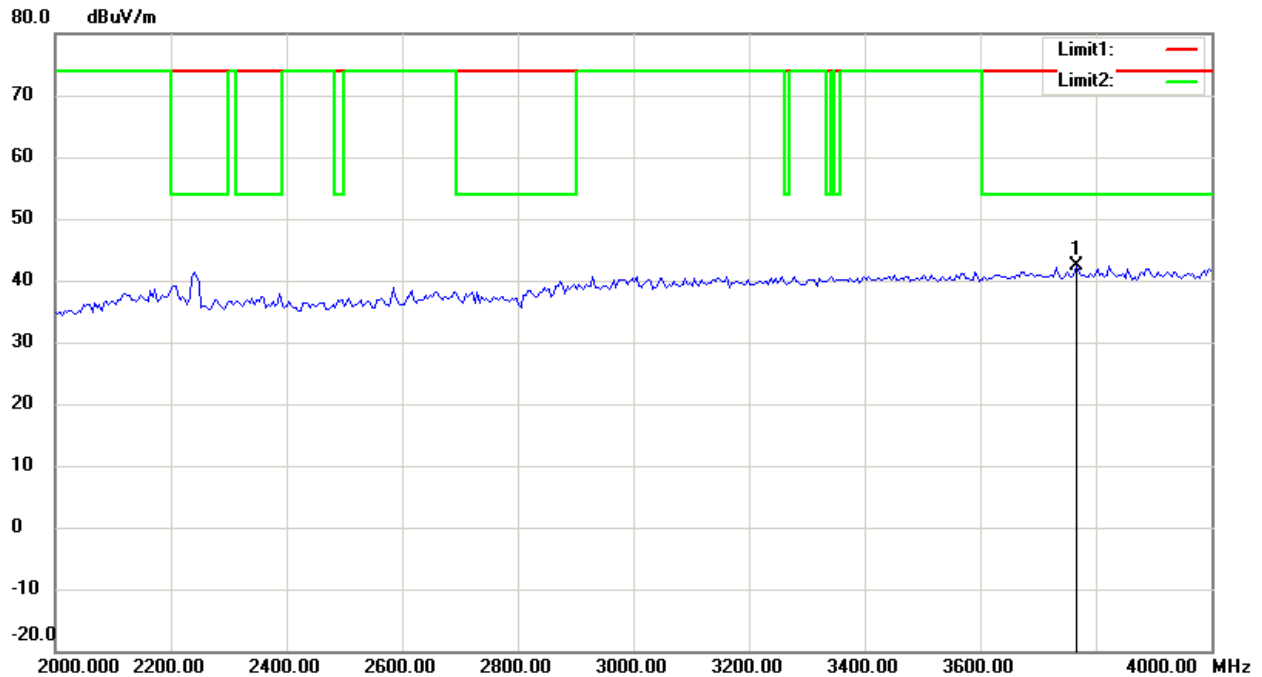
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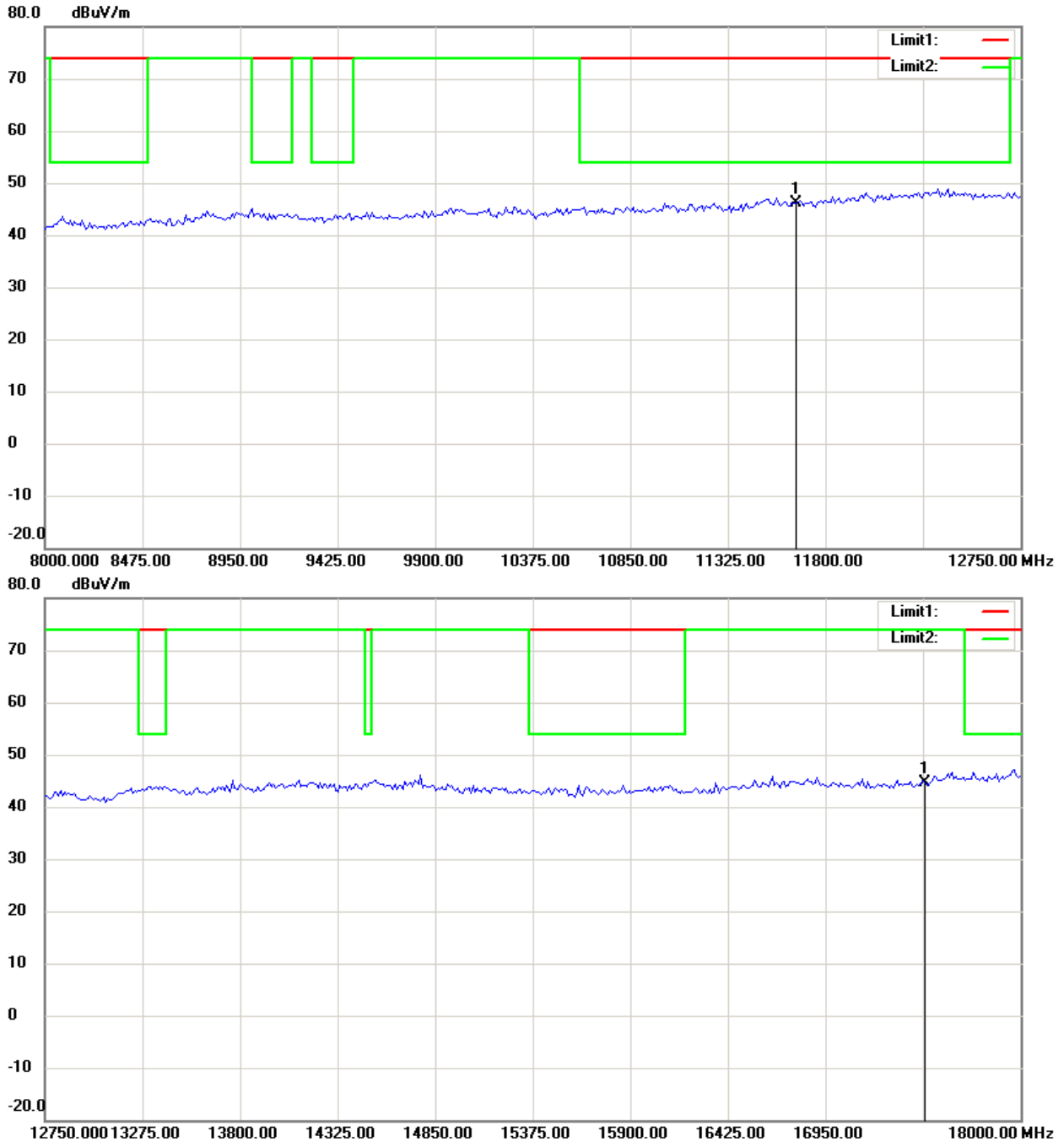
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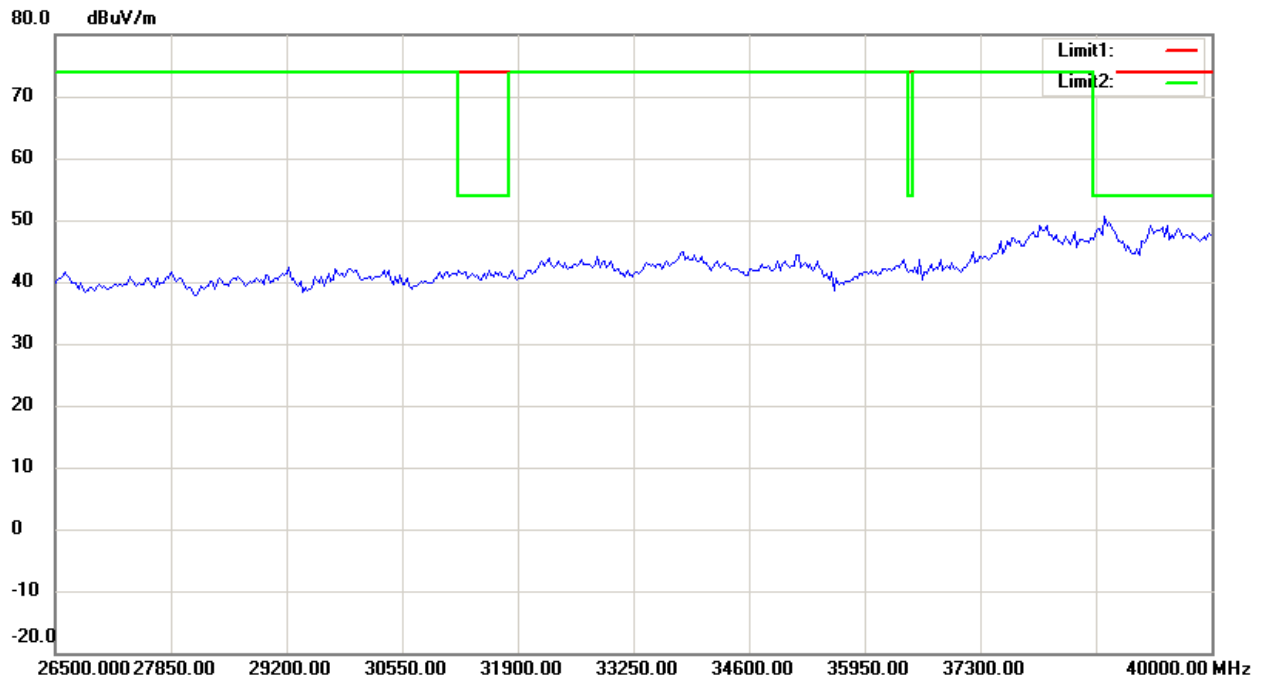
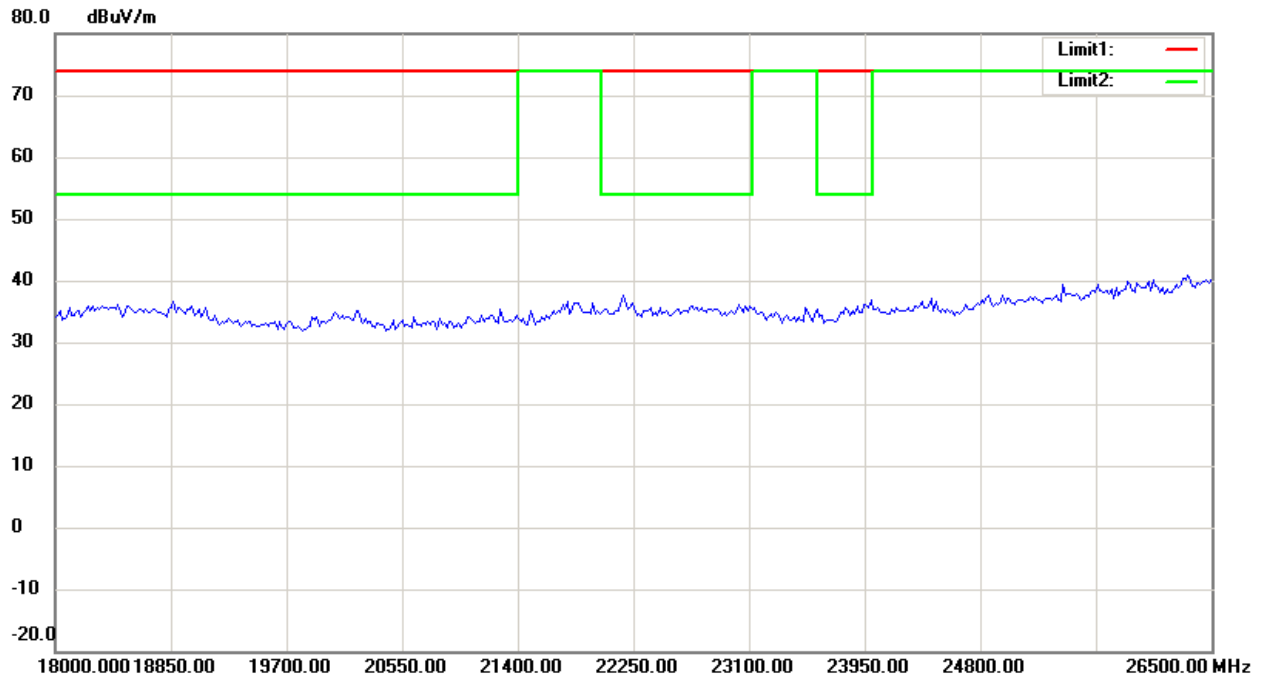
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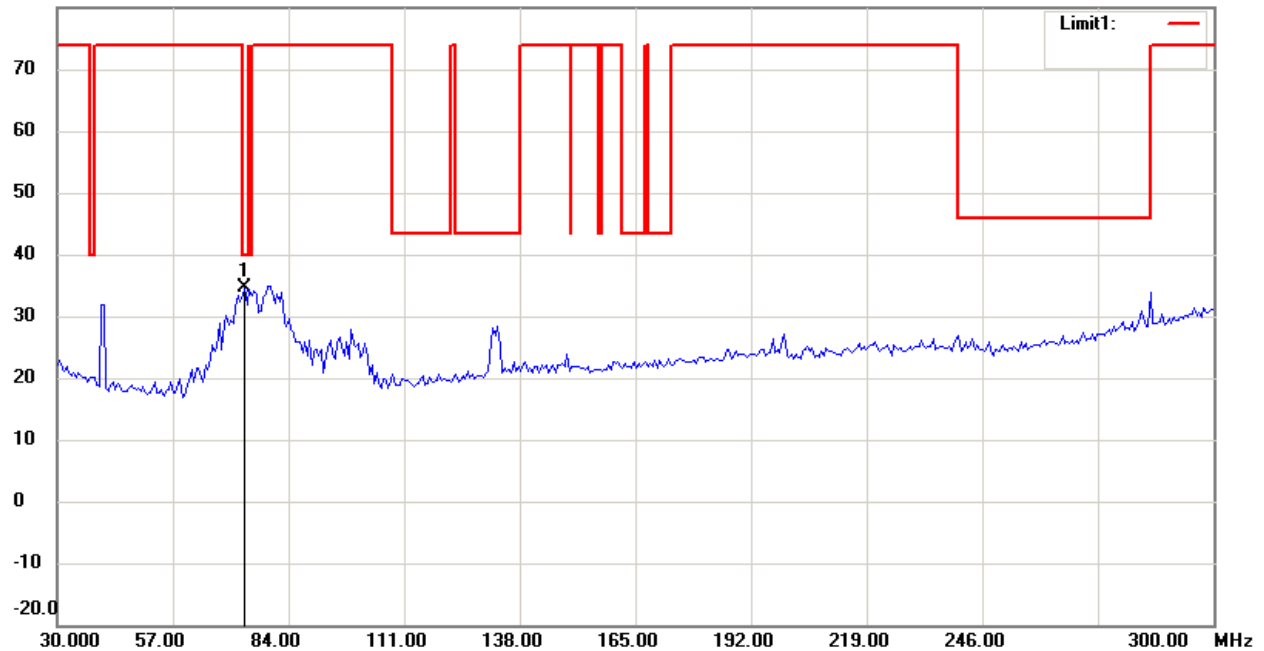
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

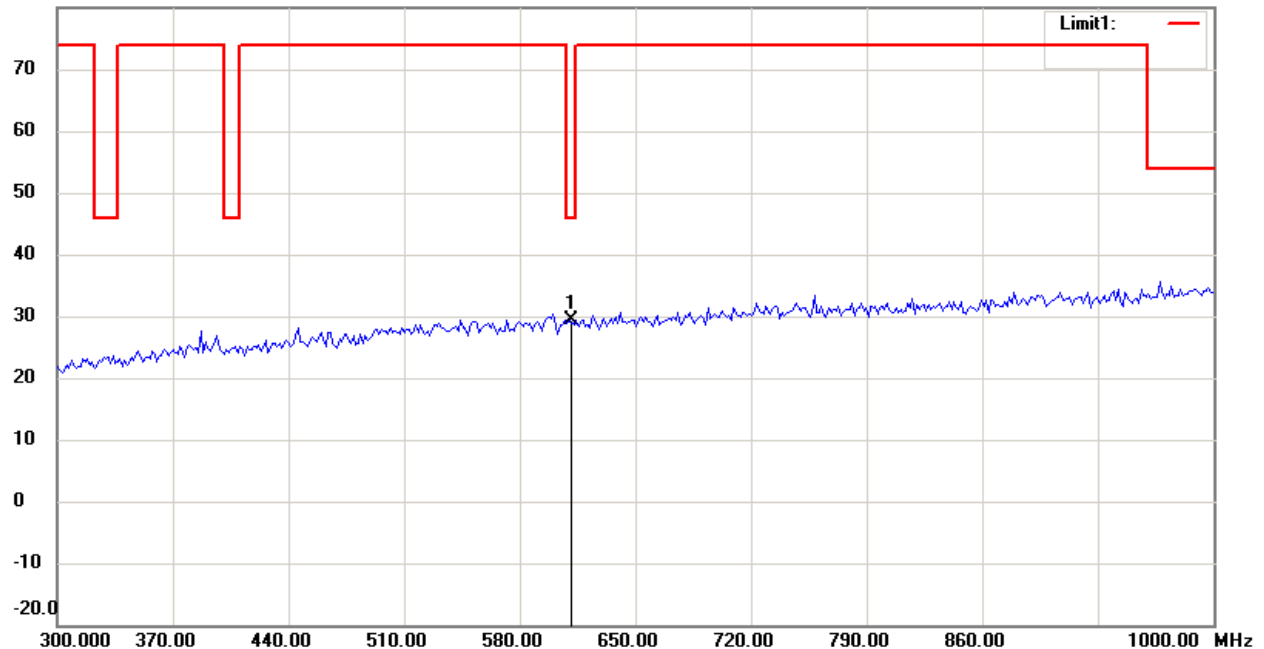
802.11b ch1

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

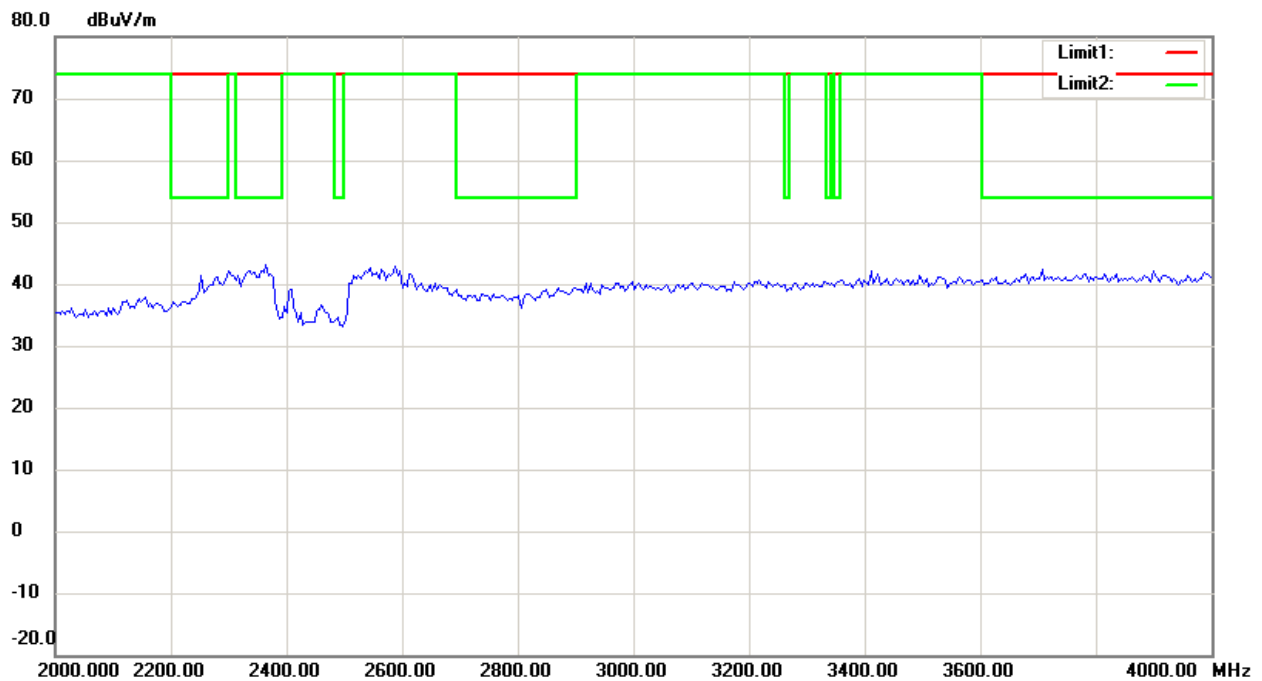
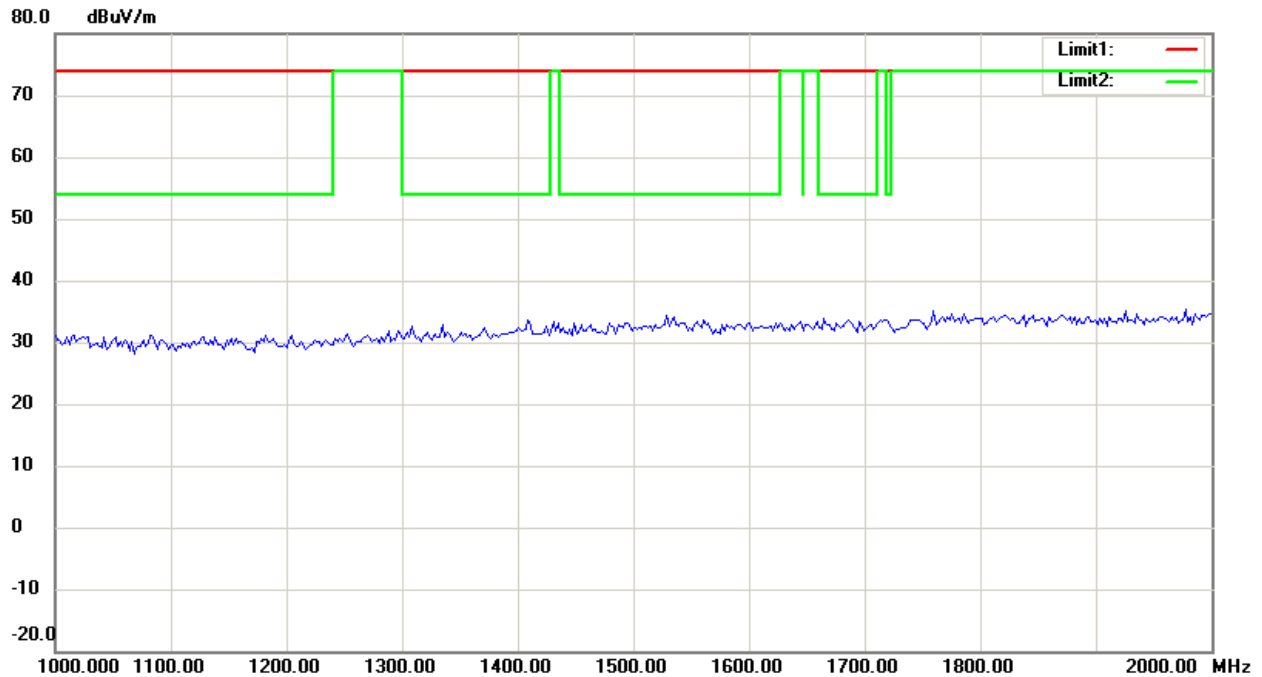
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FCC ID: IR5RF9



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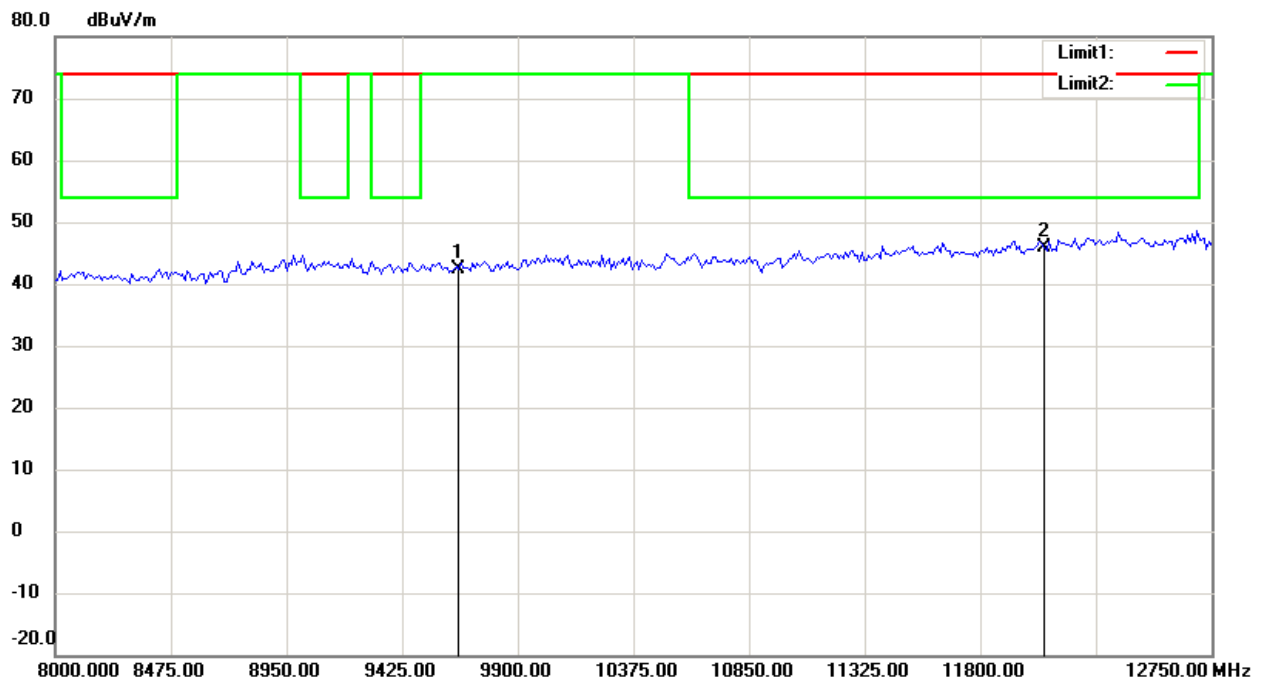
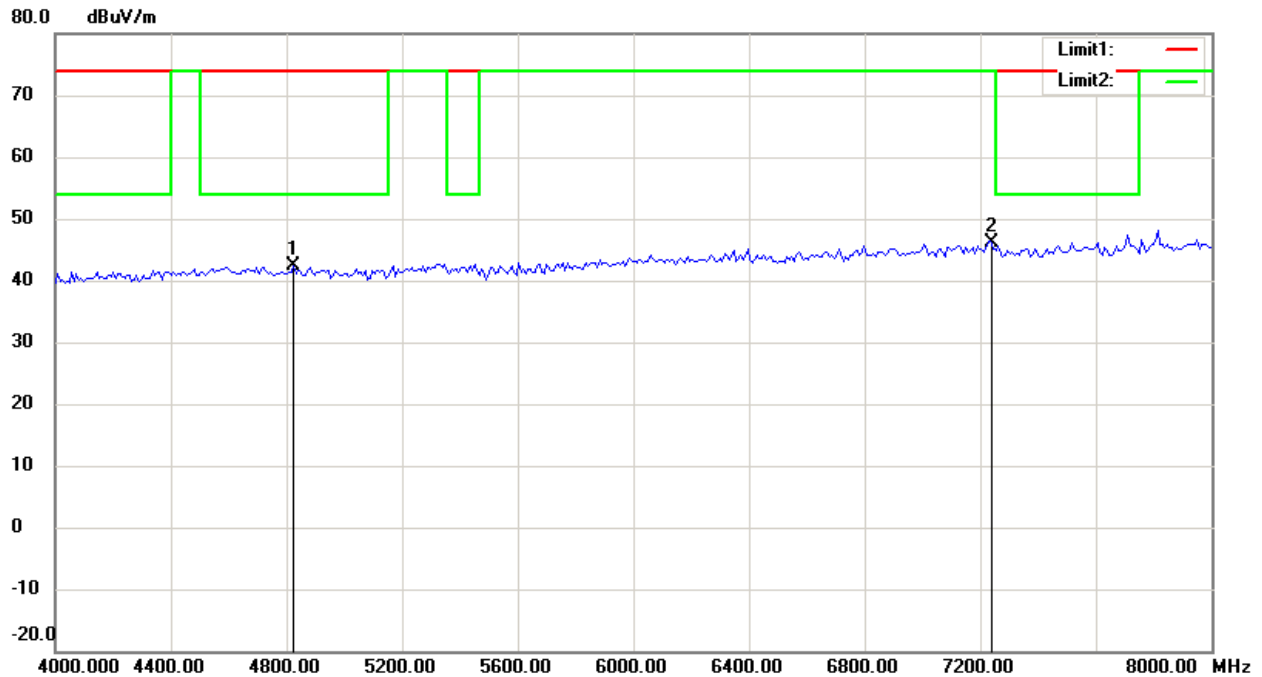
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**Note:**

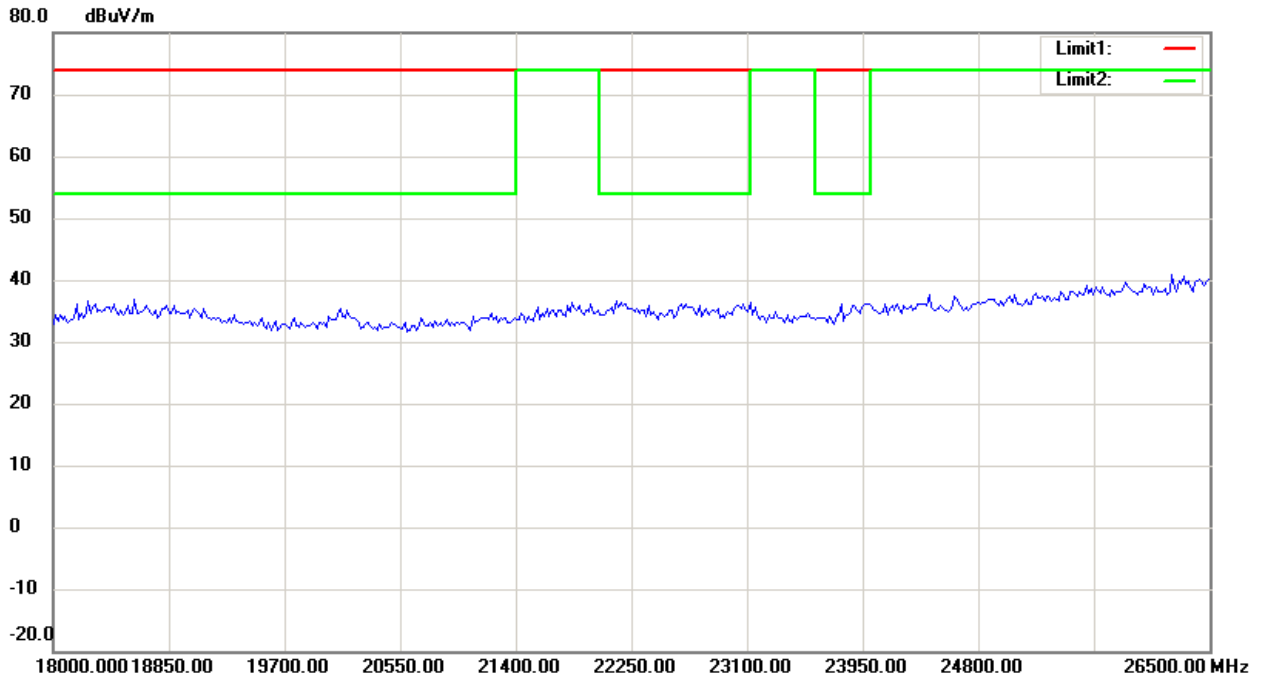
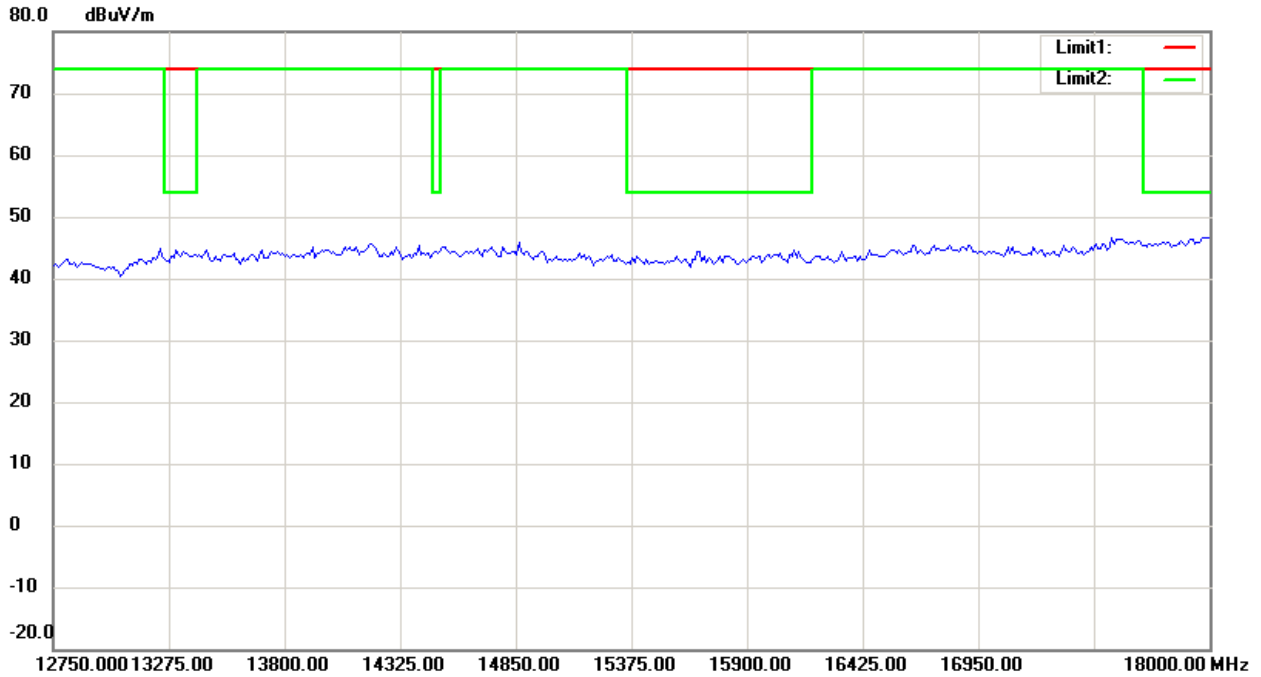
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

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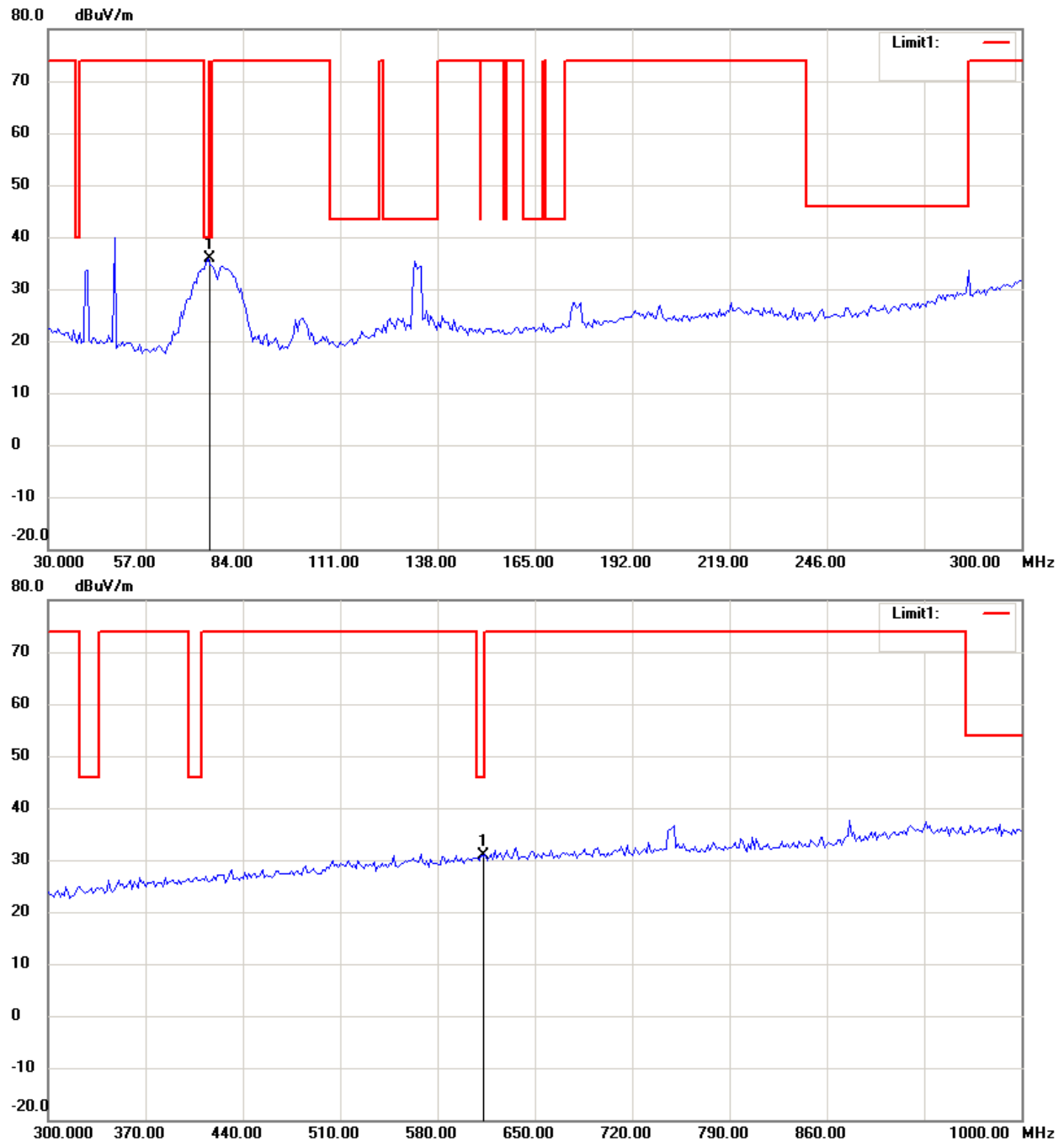




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

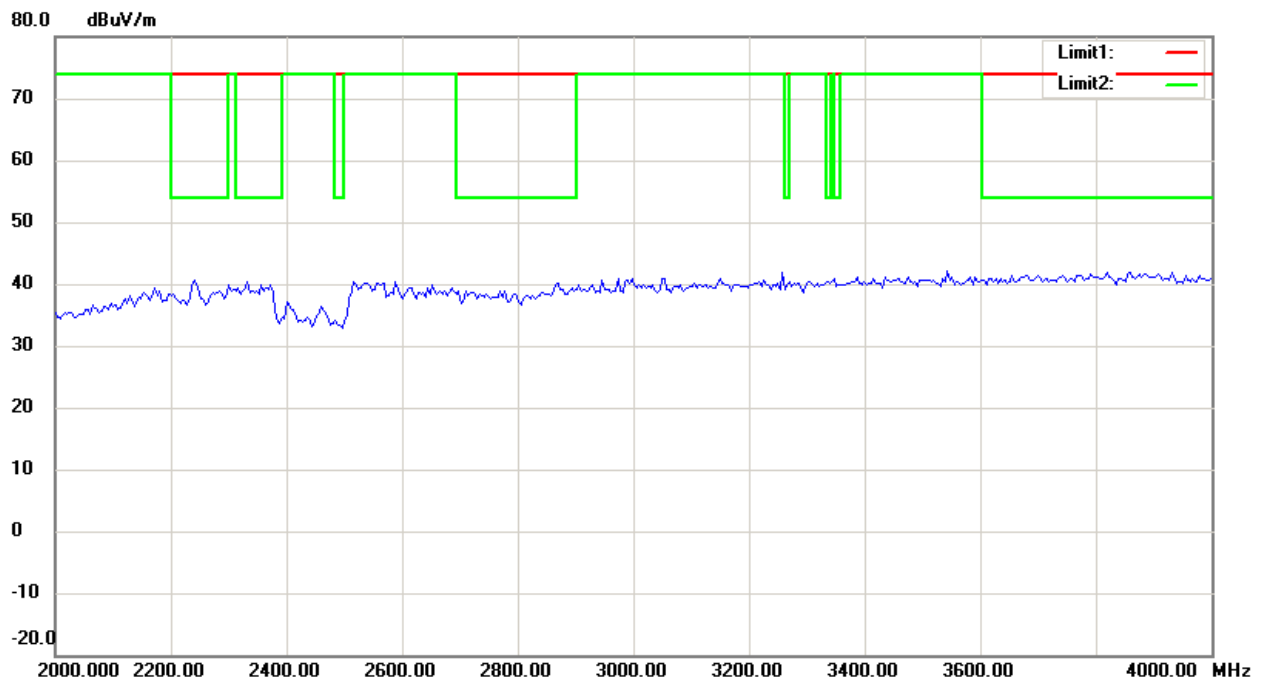
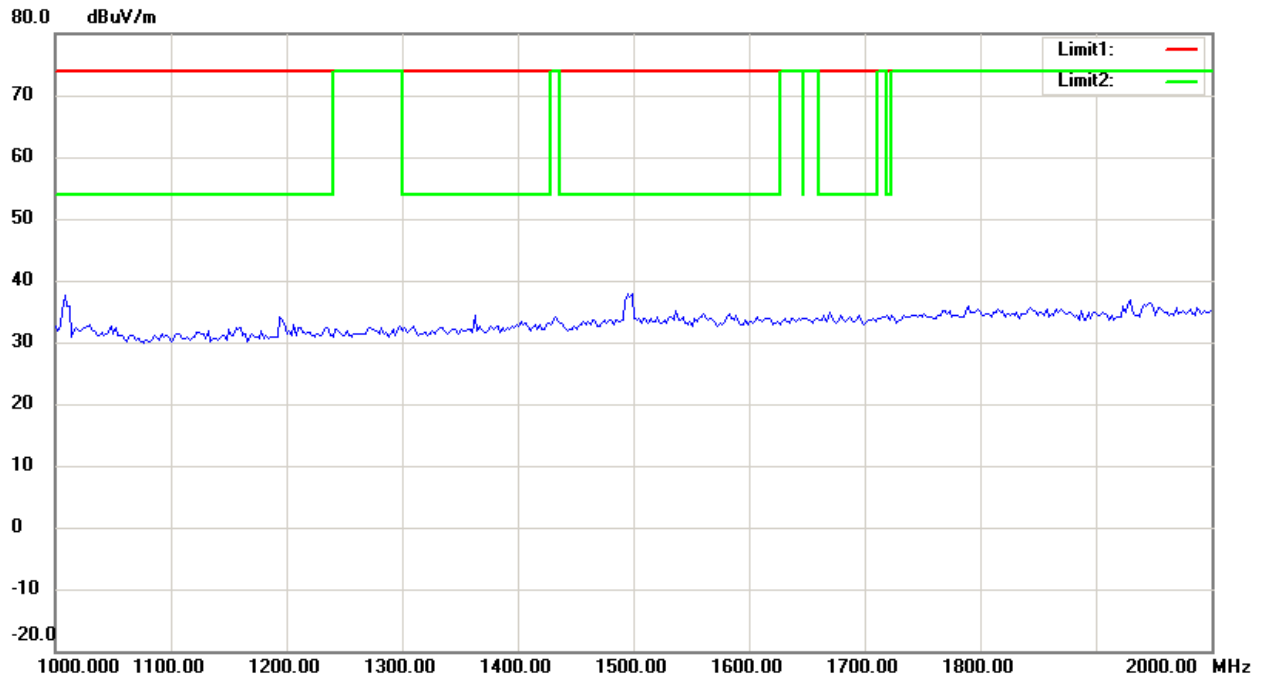
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Registration number: W6M21003-10512-C-1

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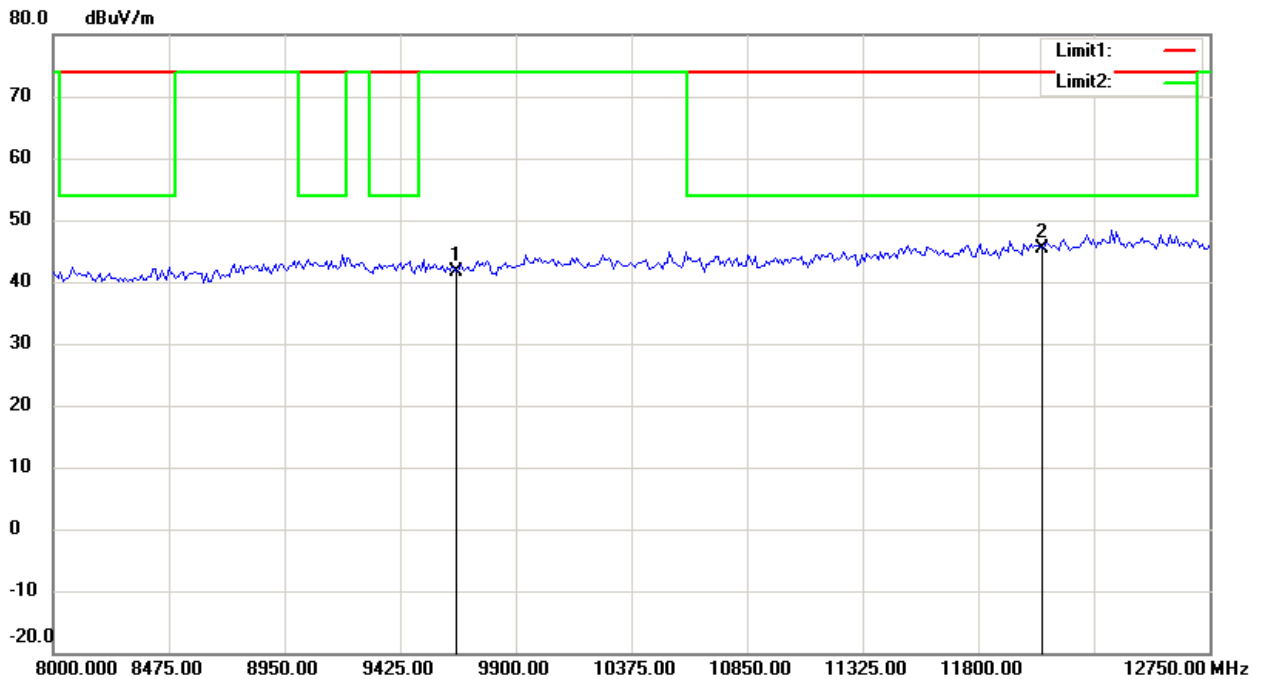
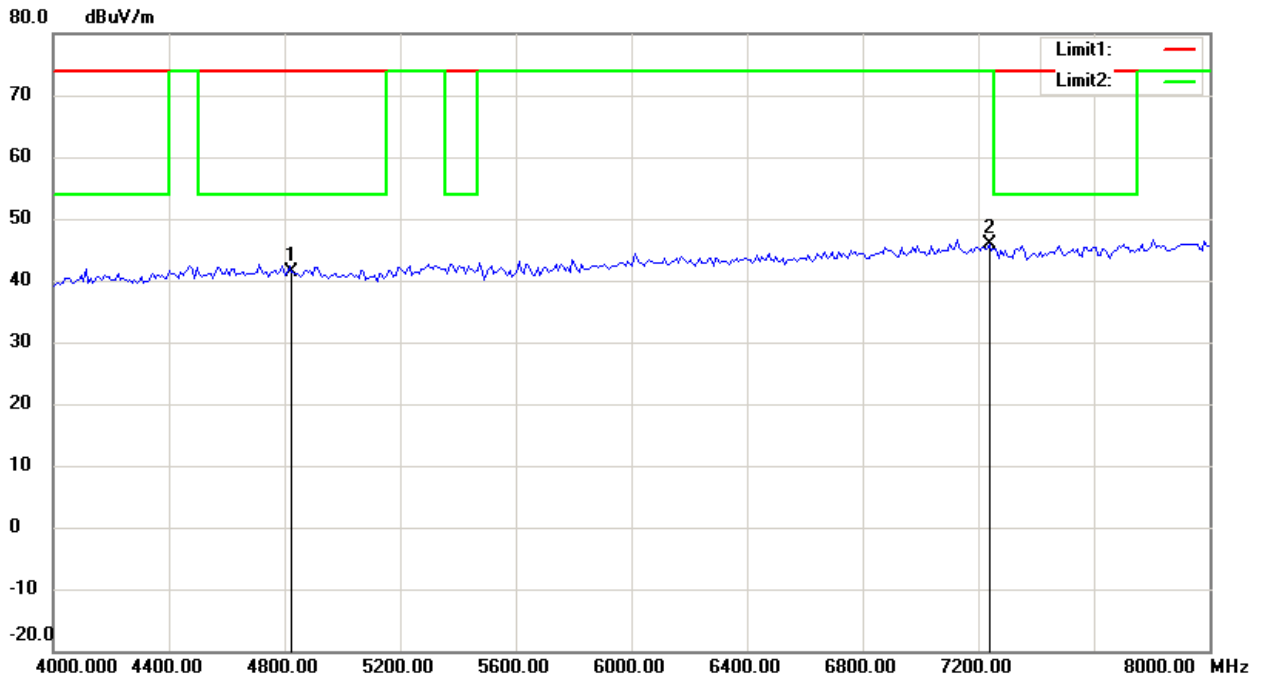
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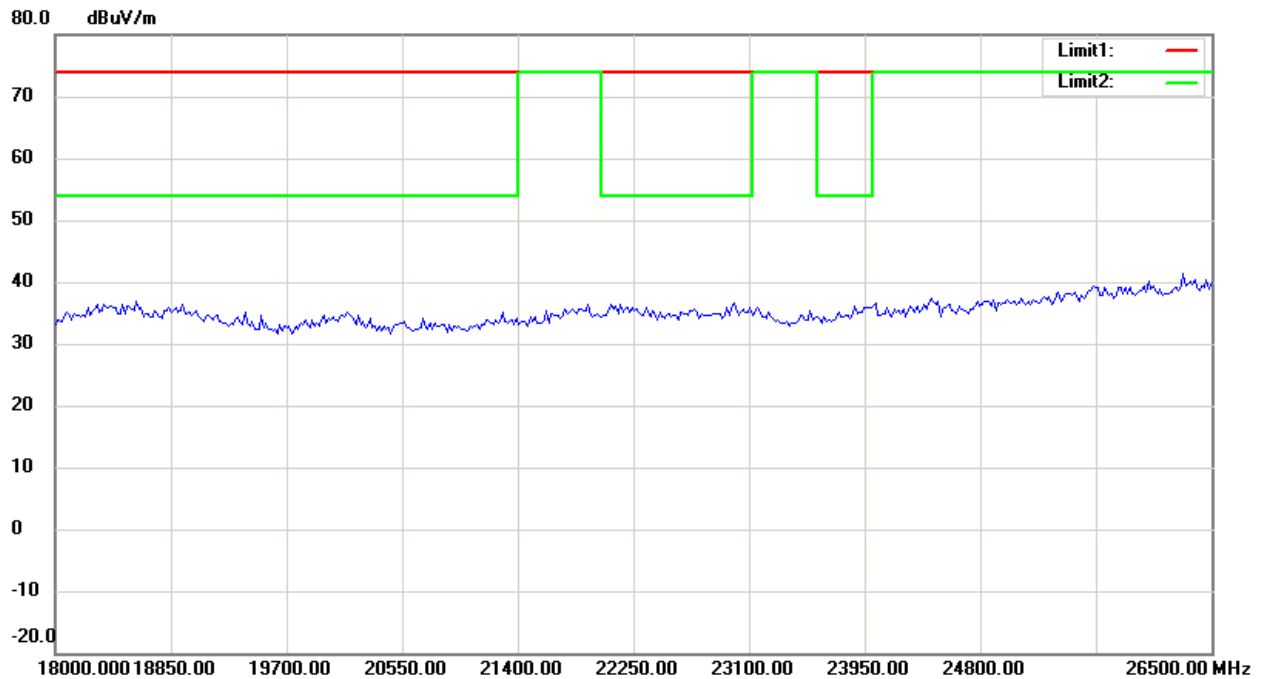
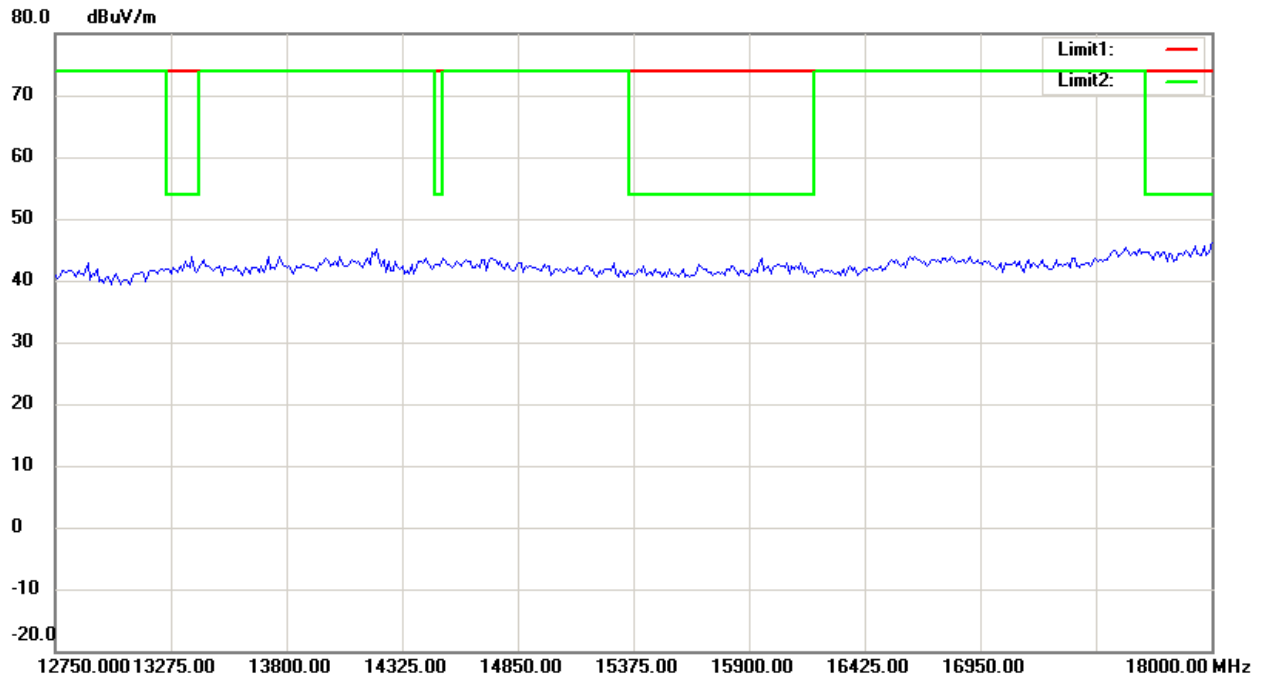
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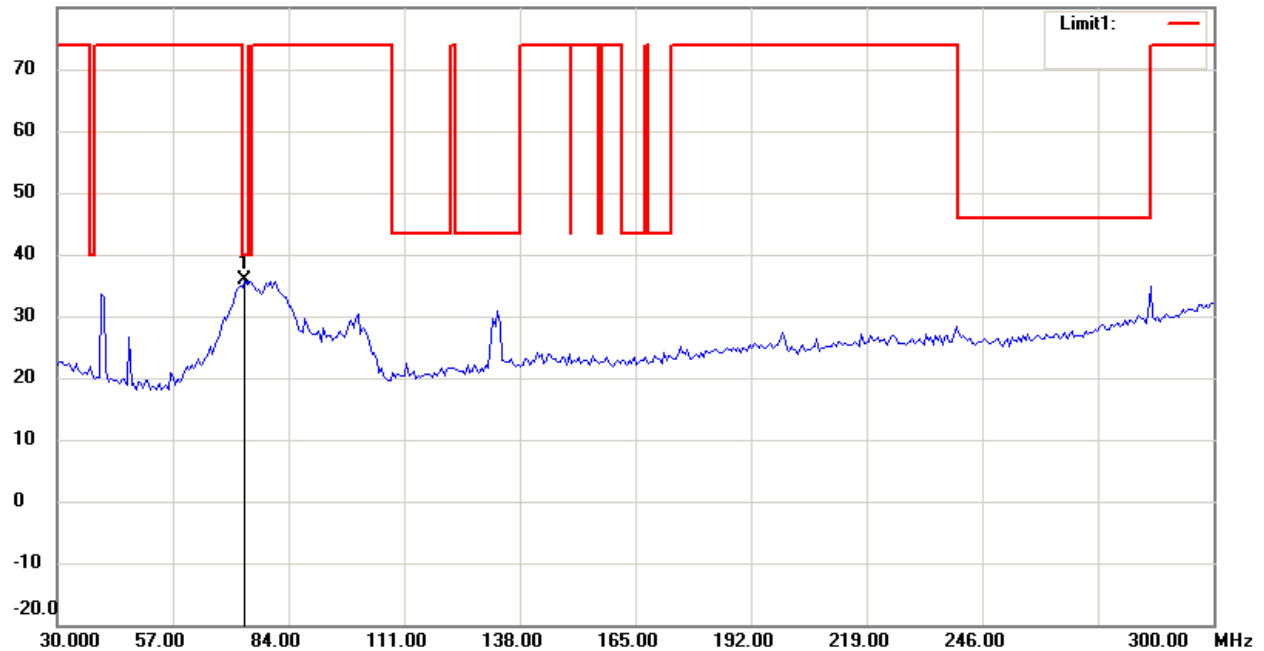
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

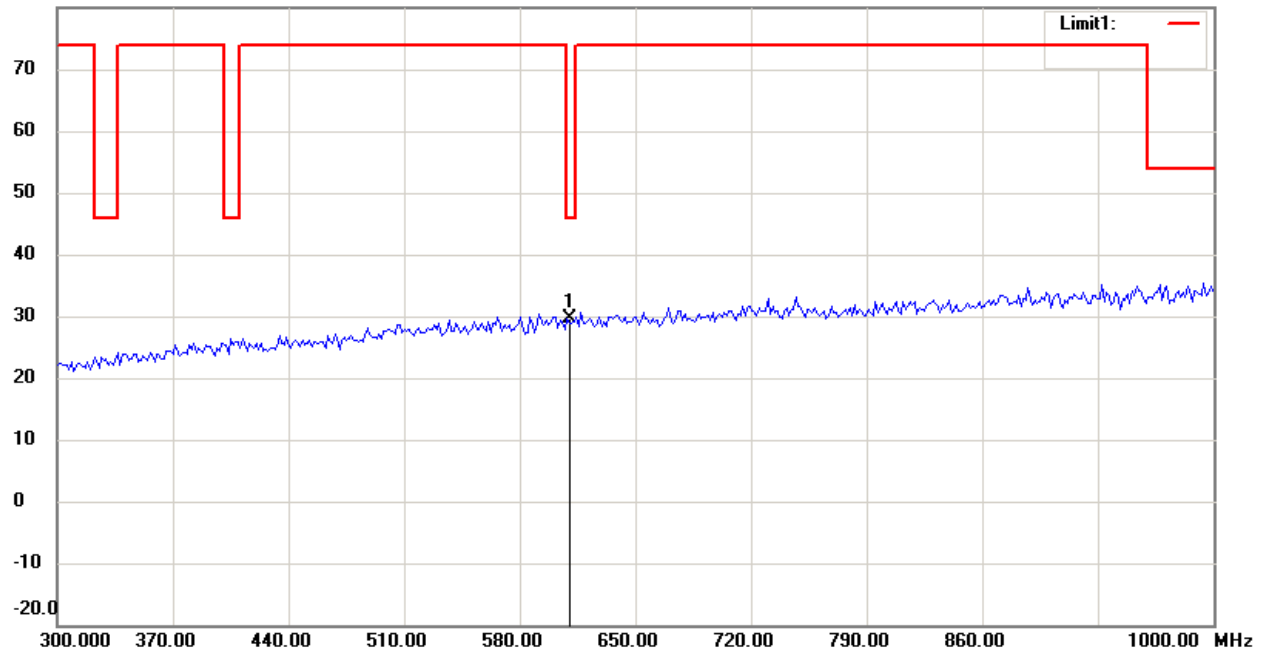
802.11b ch6

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

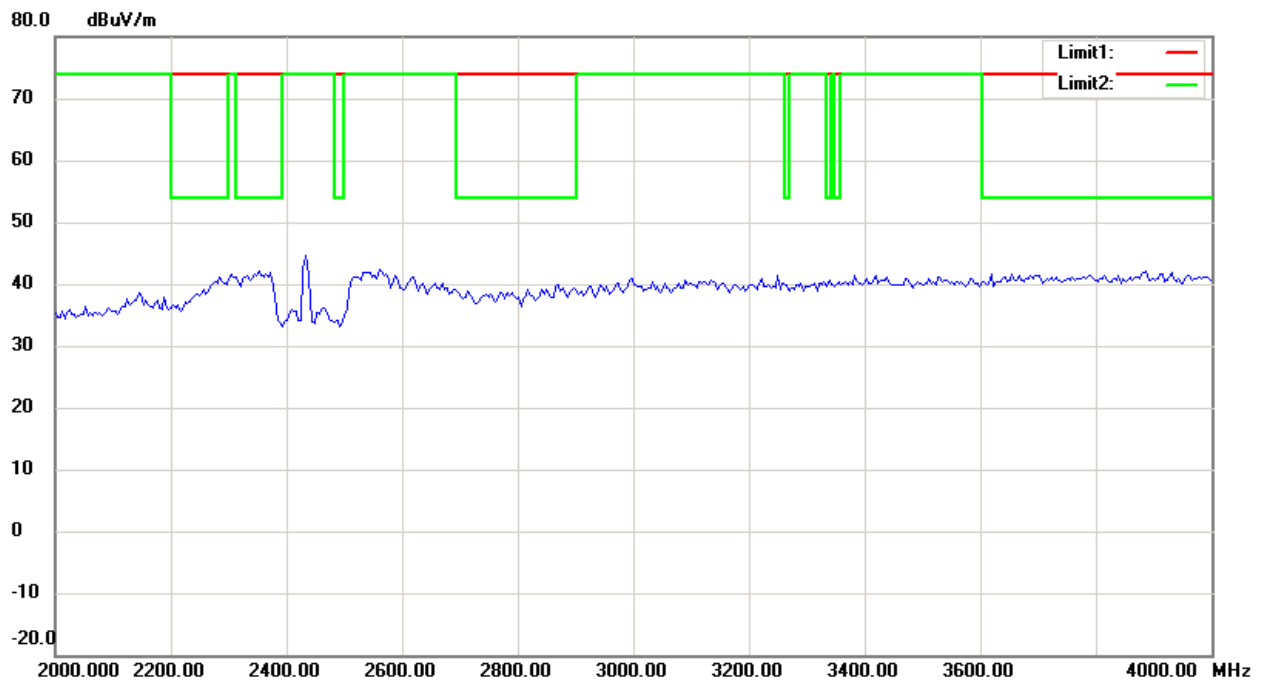
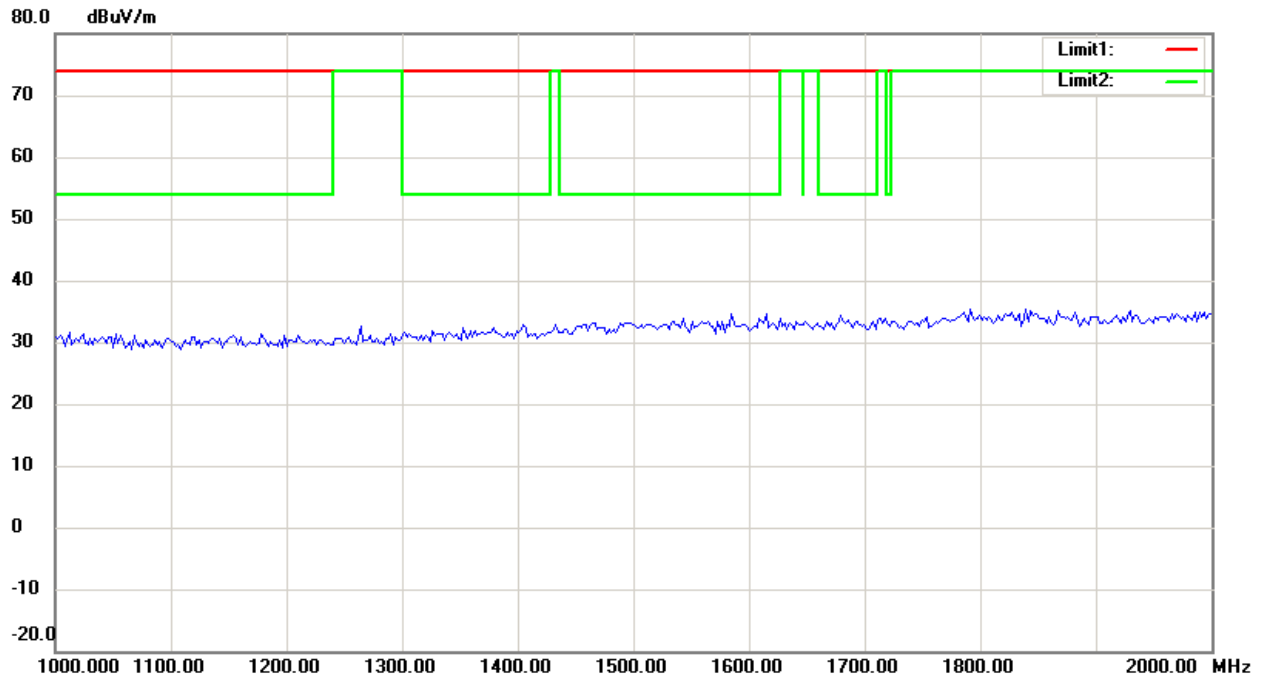
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

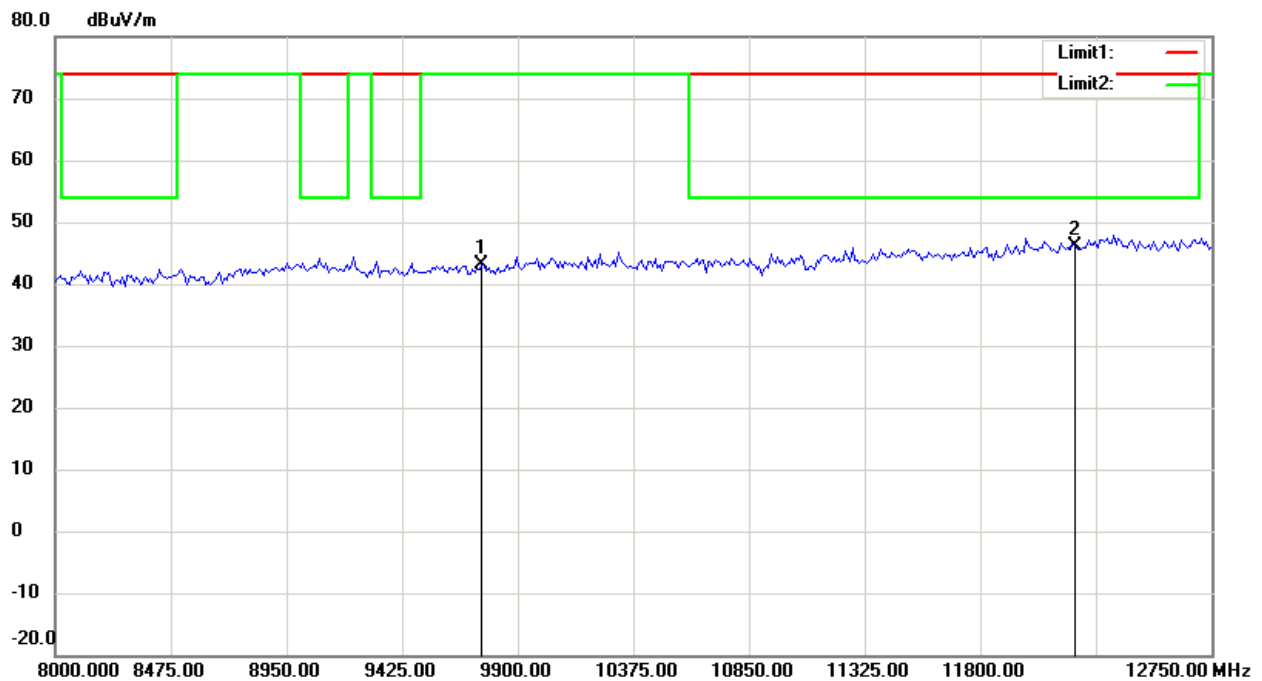
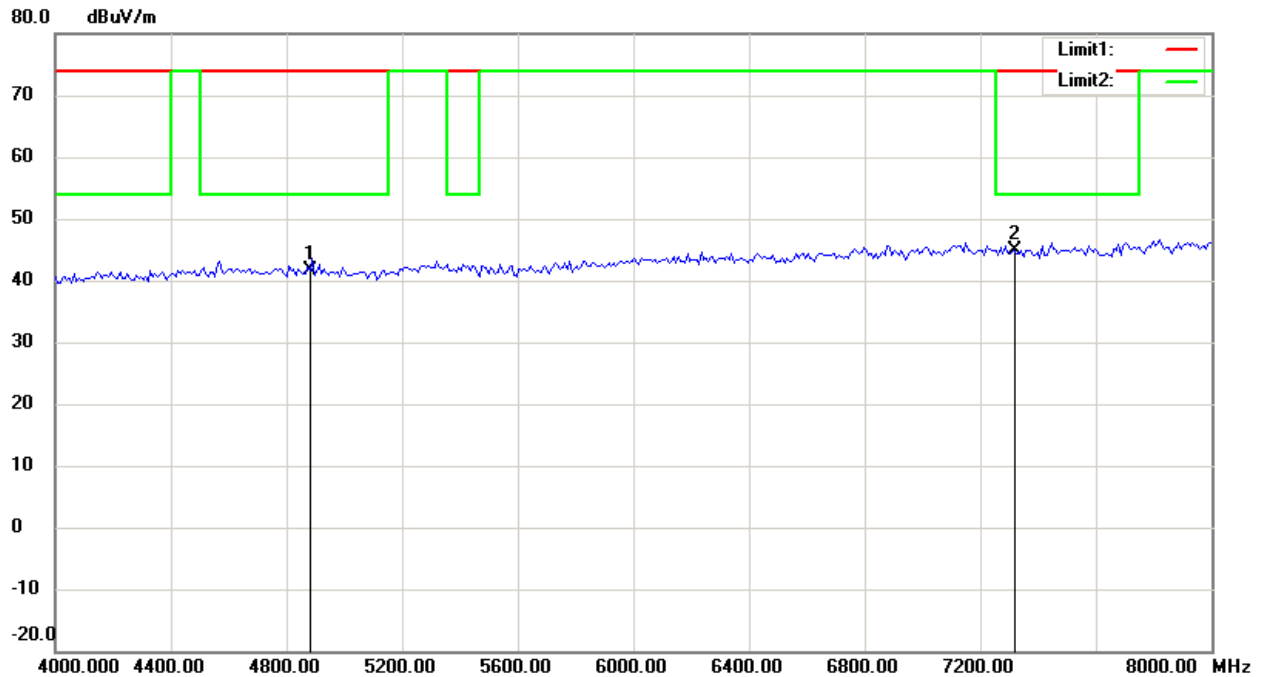
Up Line: Peak Limit Line Down Line: Ave Limit Line

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**Note:**

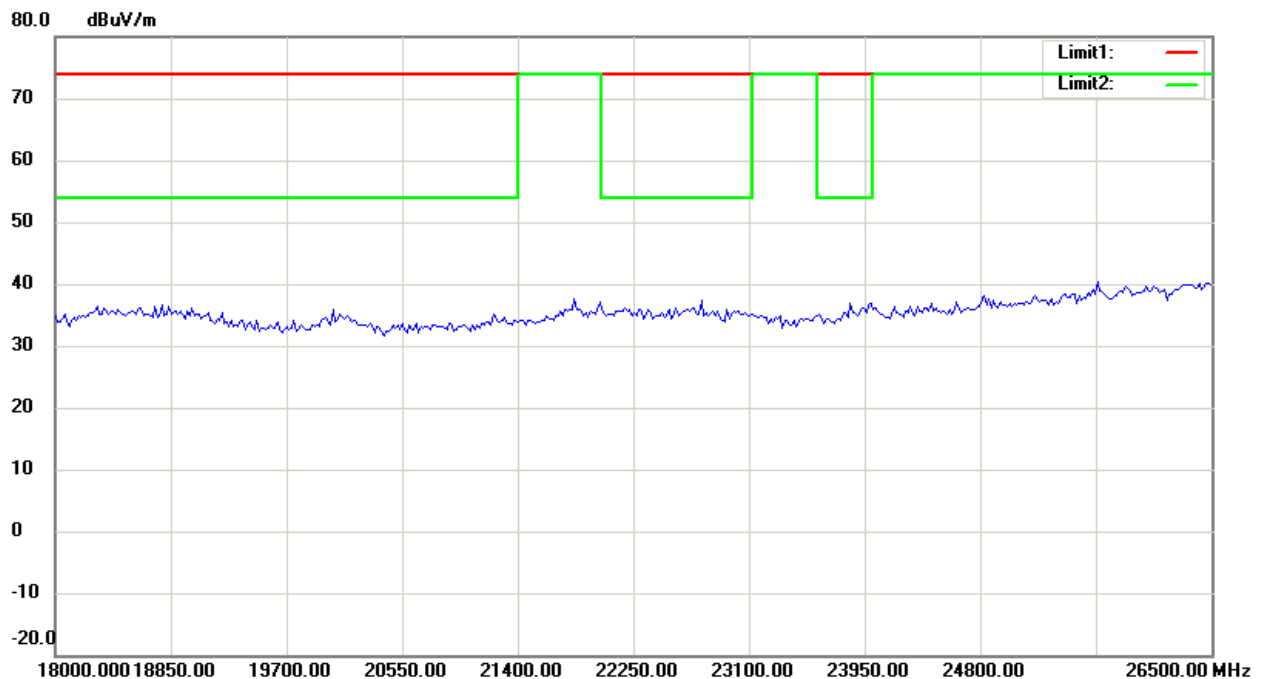
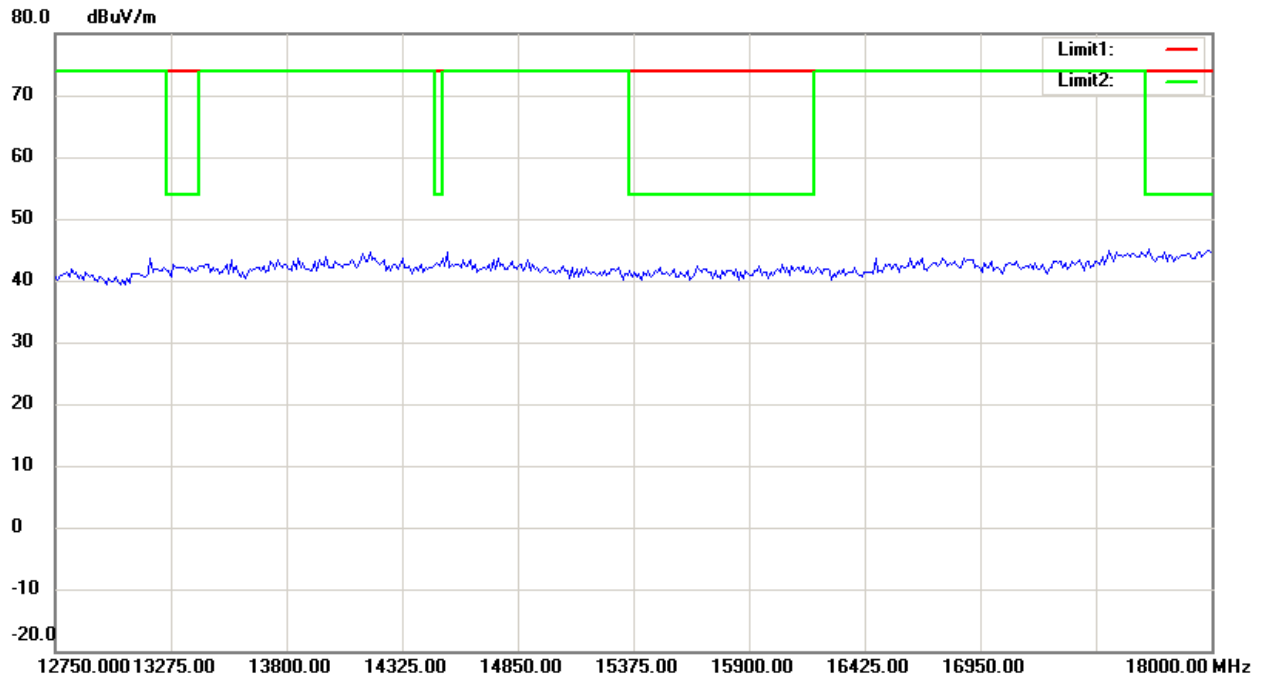
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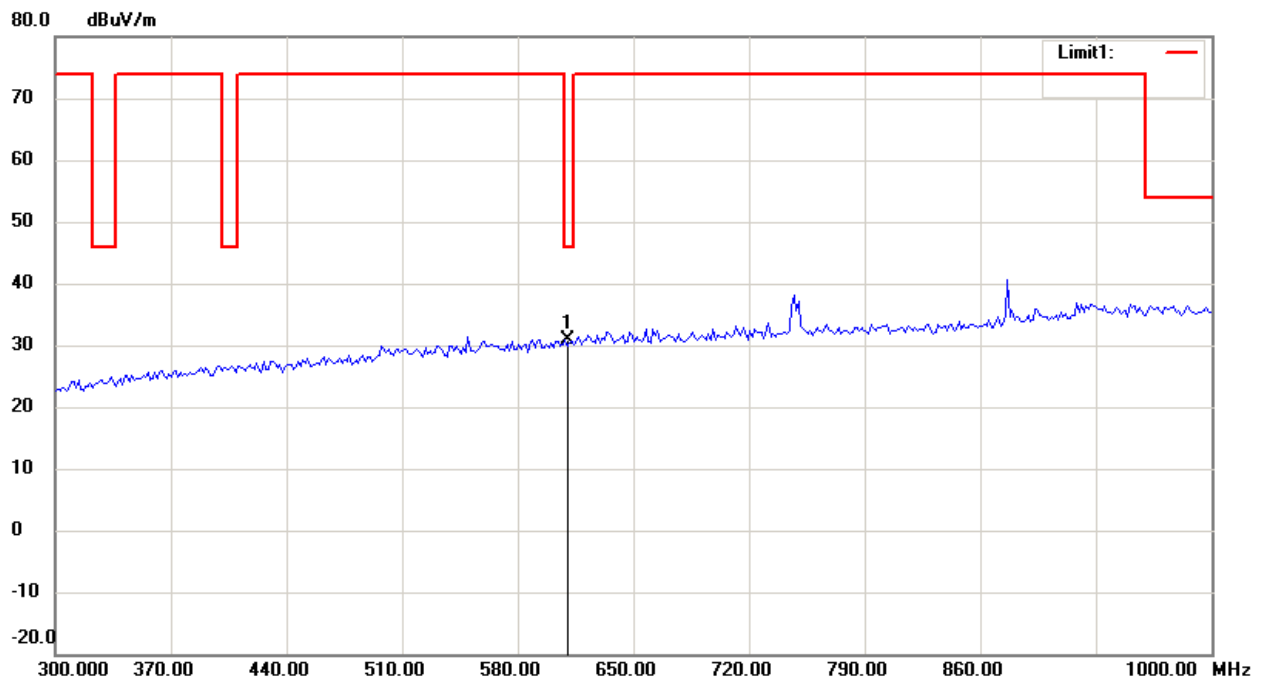
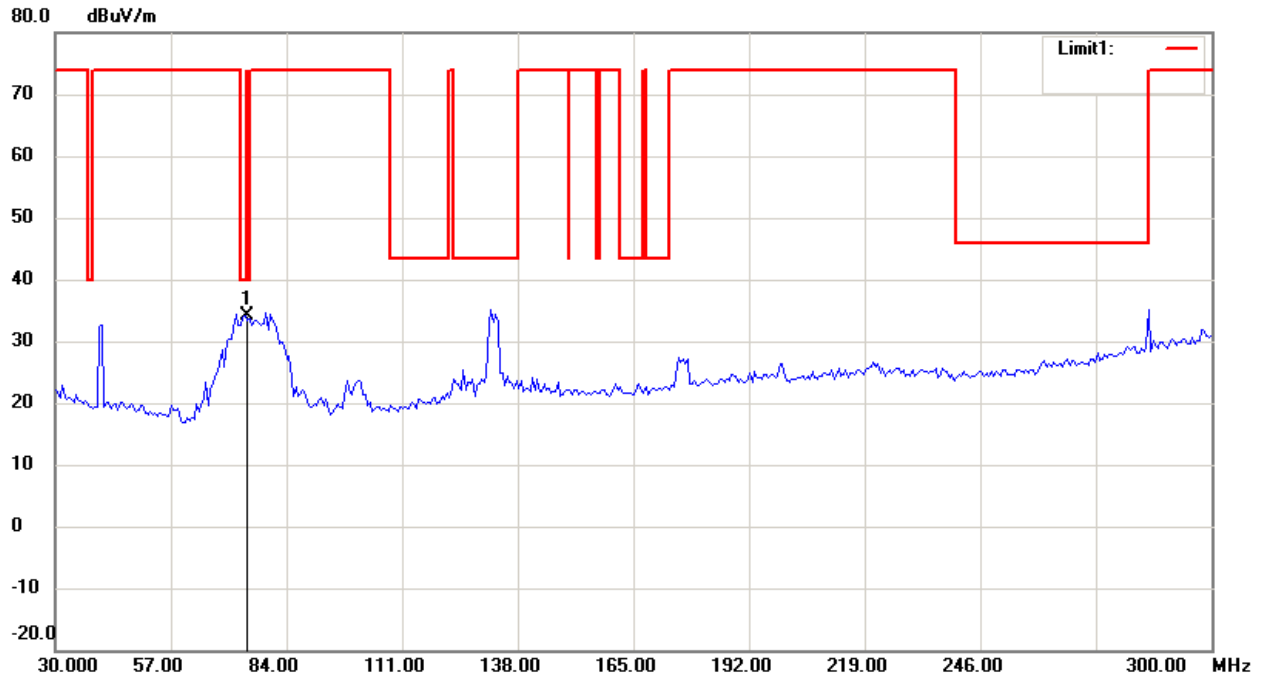




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

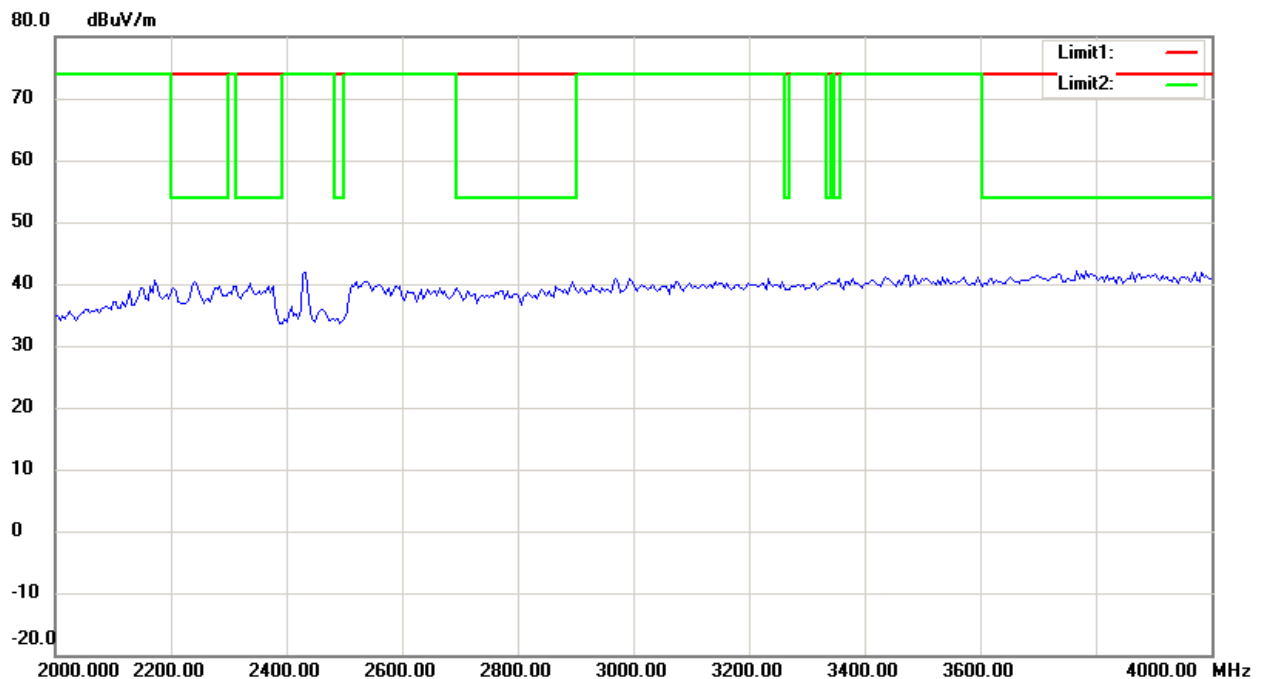
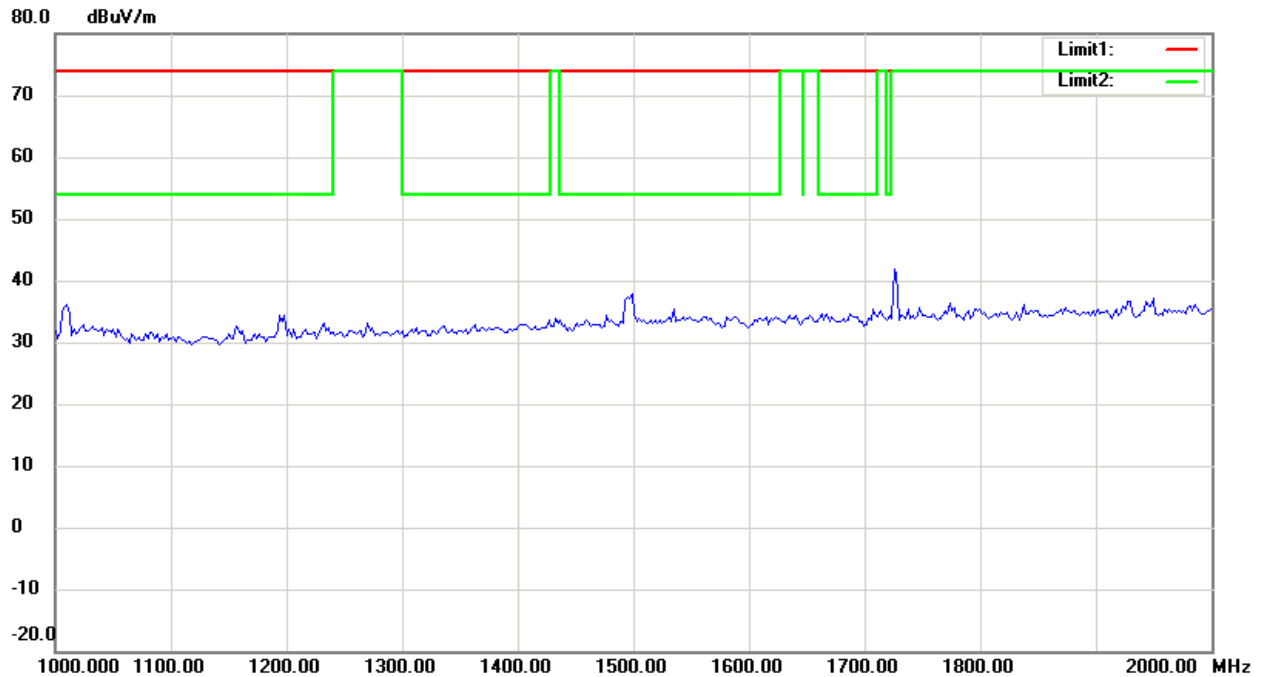
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**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

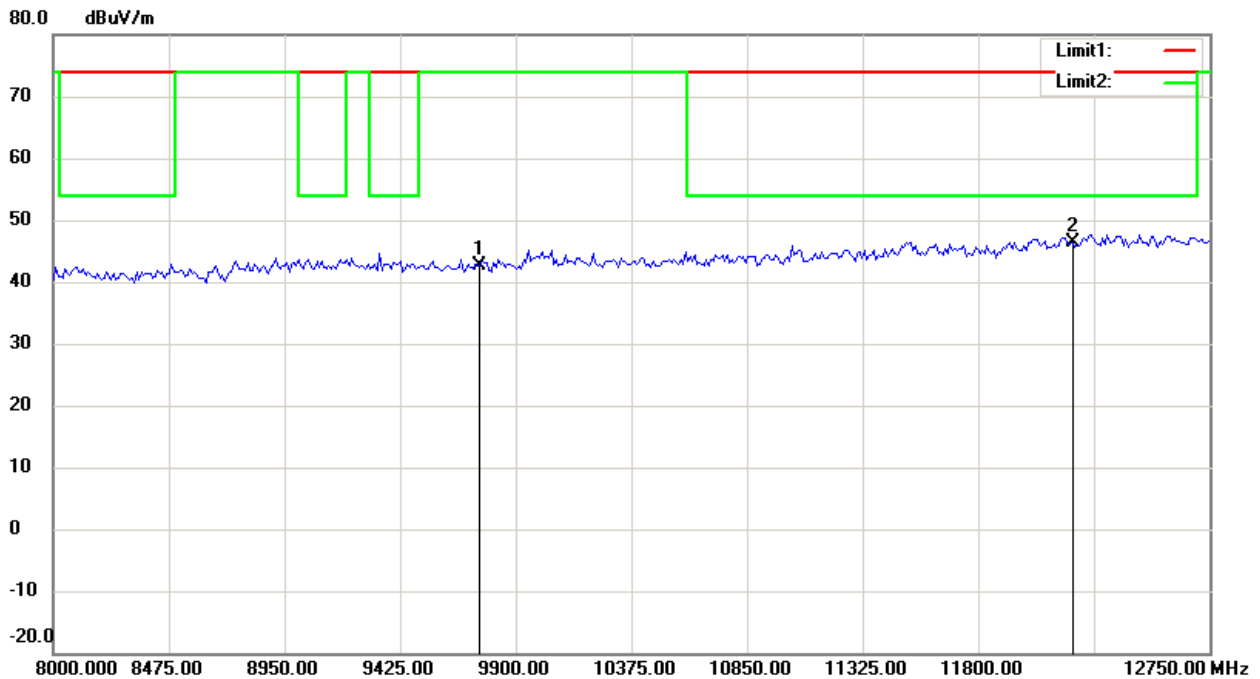
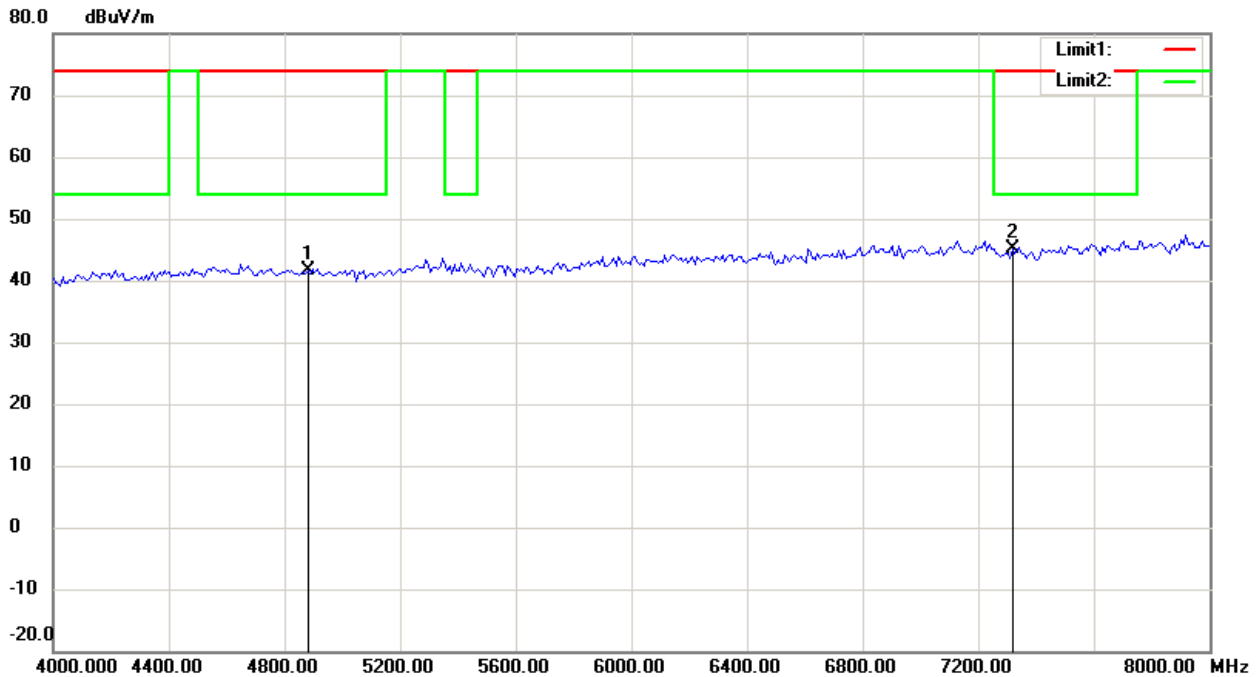
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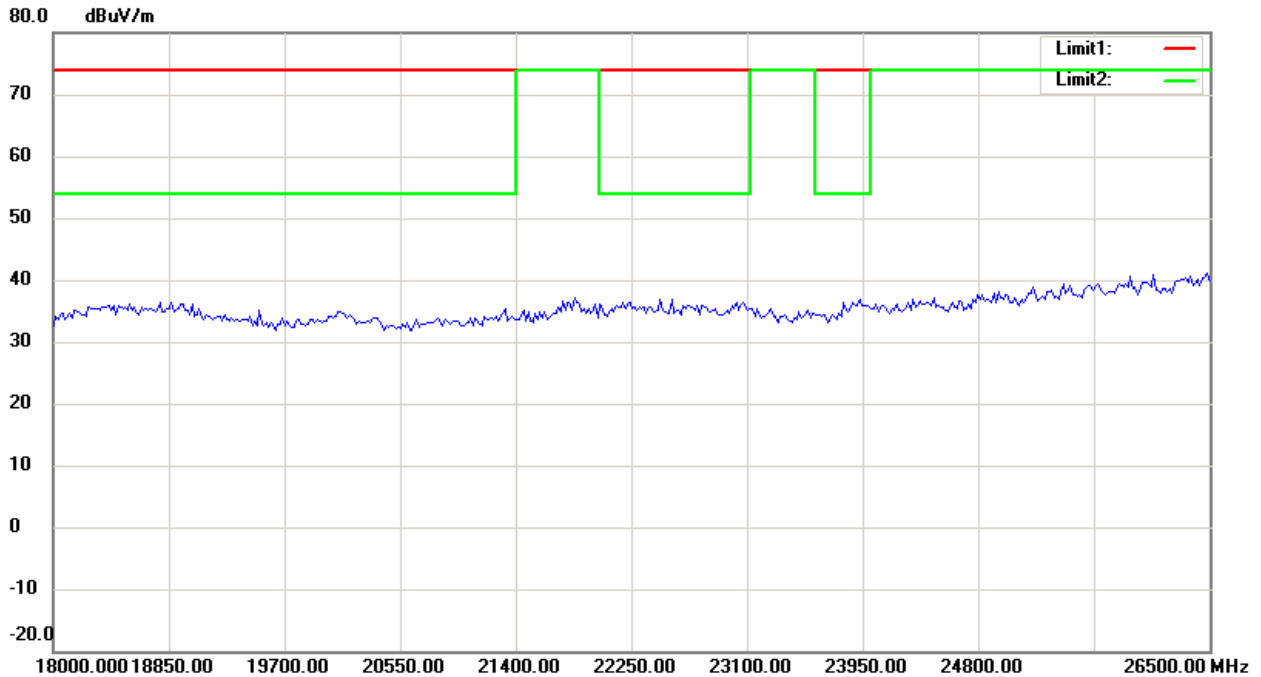
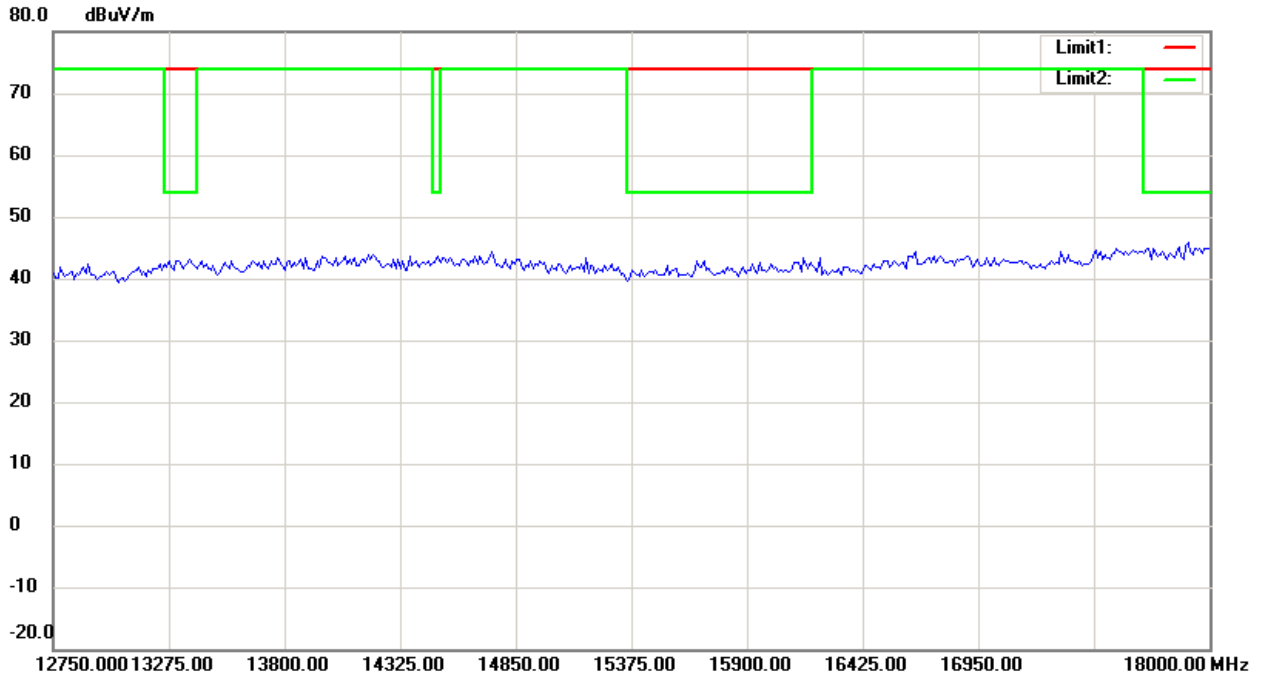
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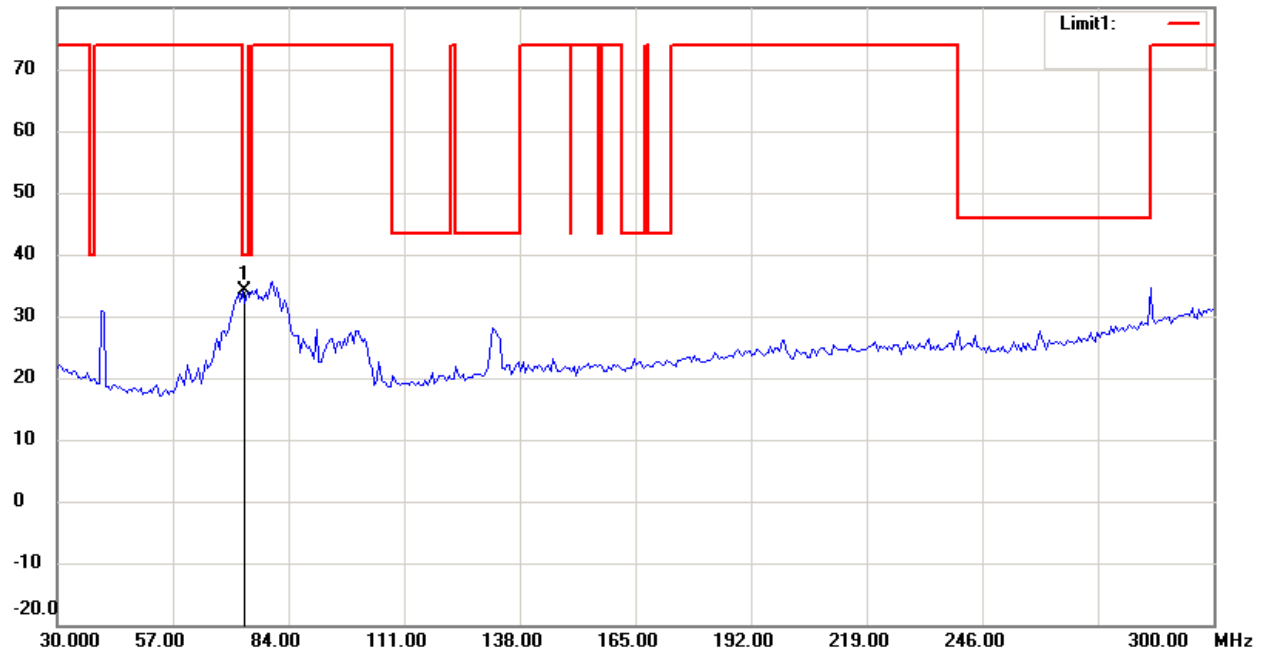
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

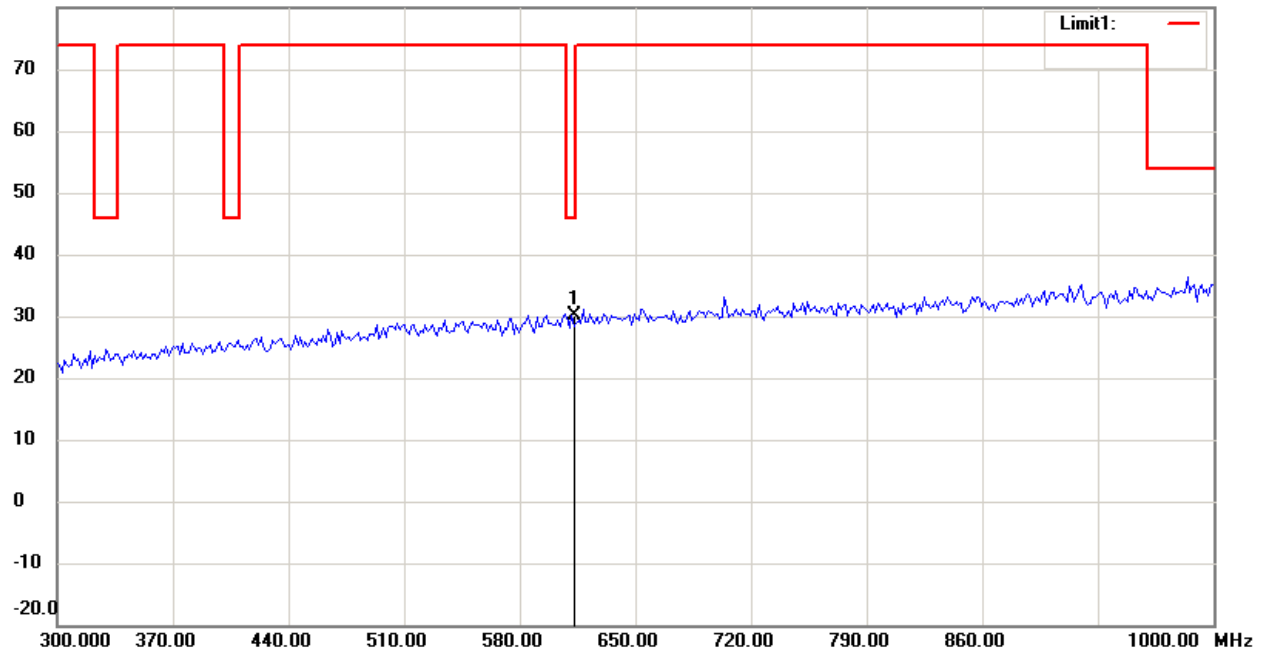
802.11b ch11

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

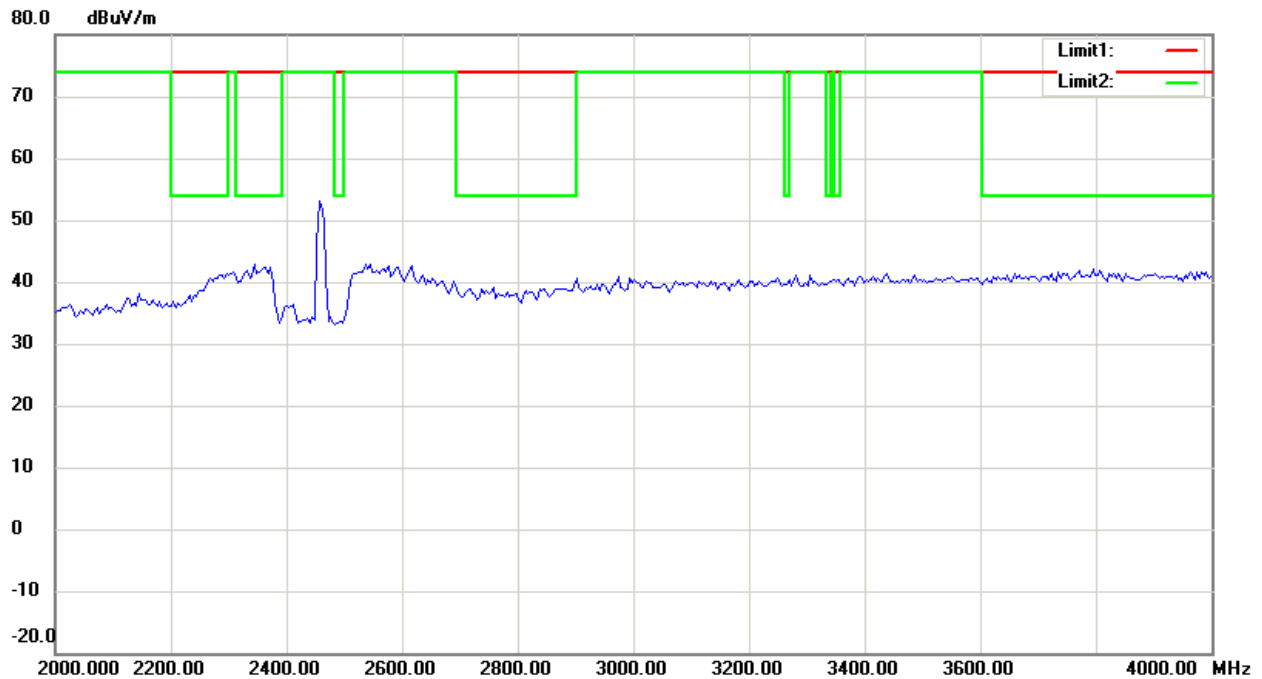
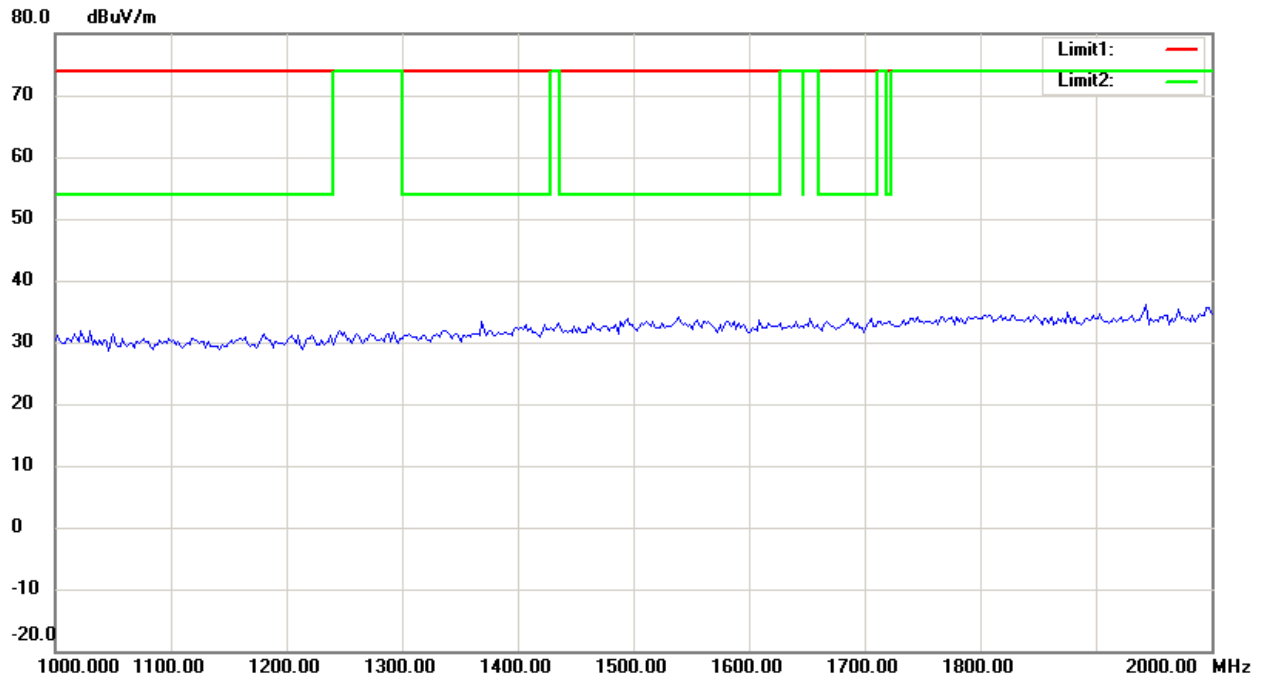
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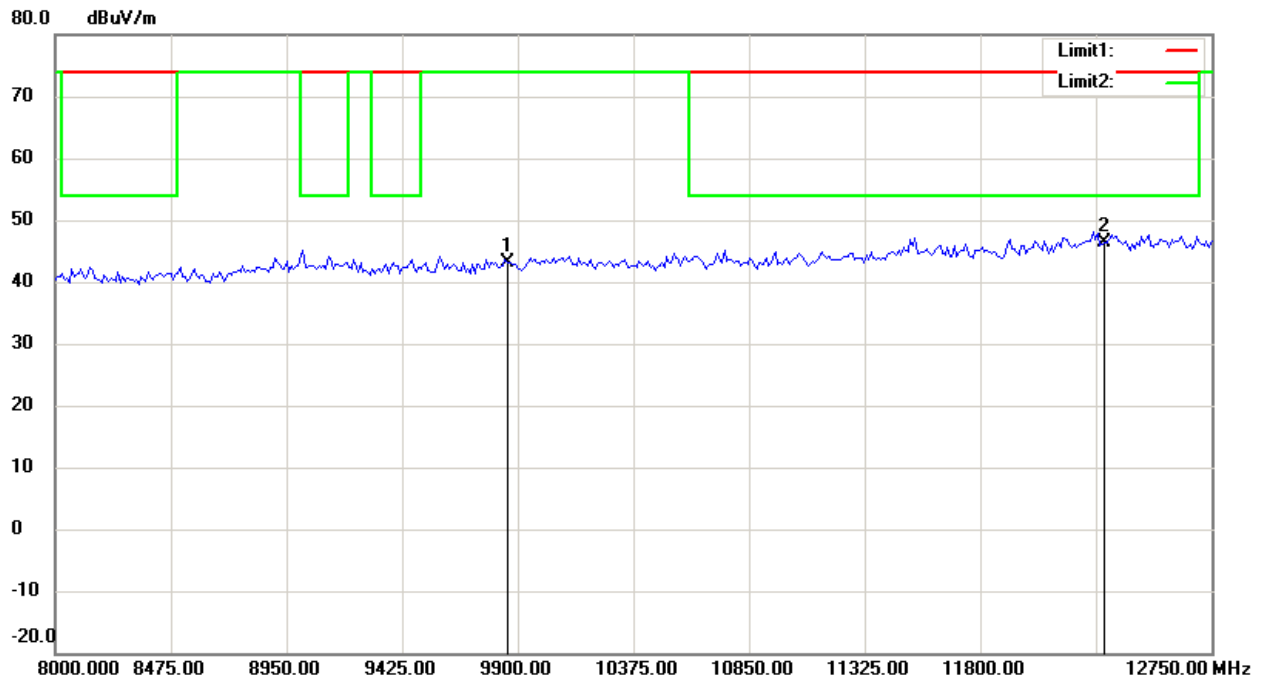
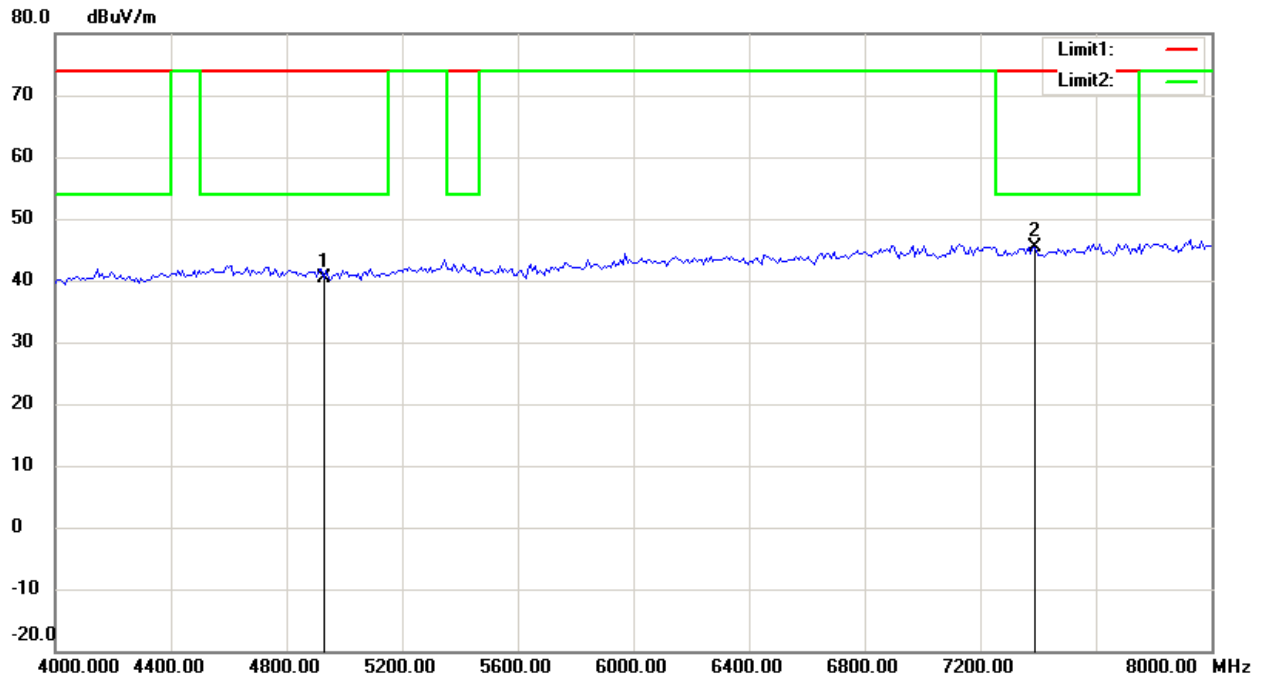
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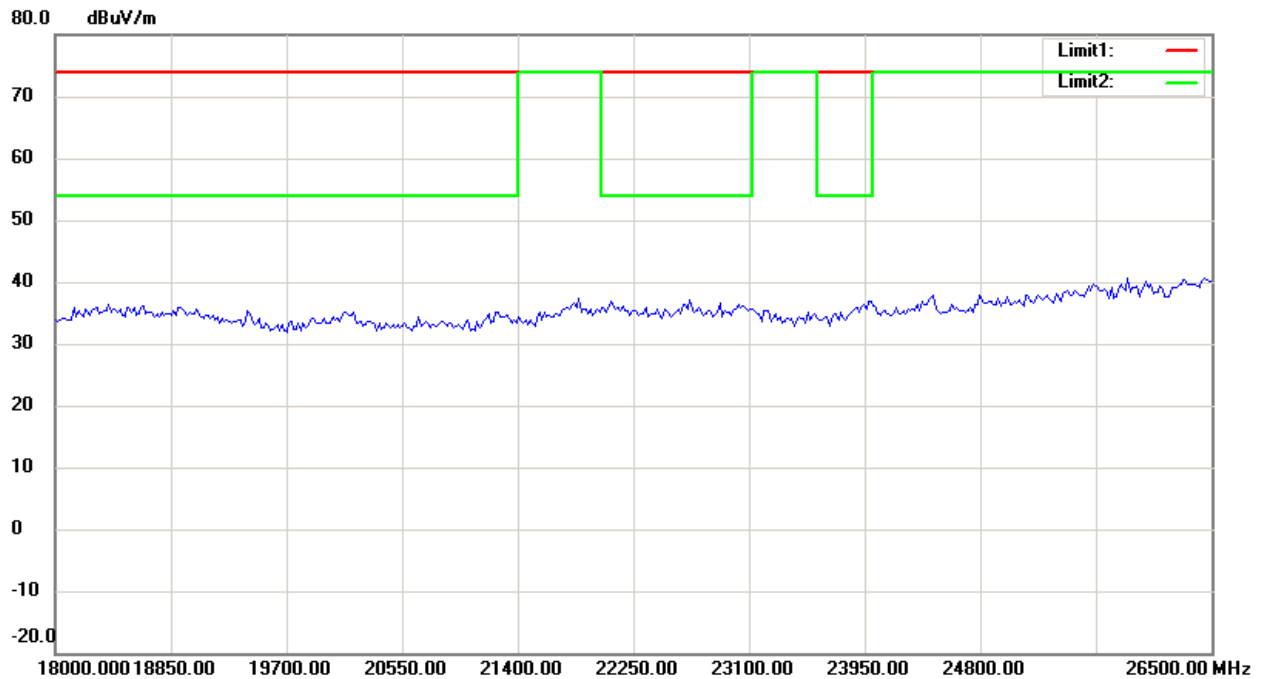
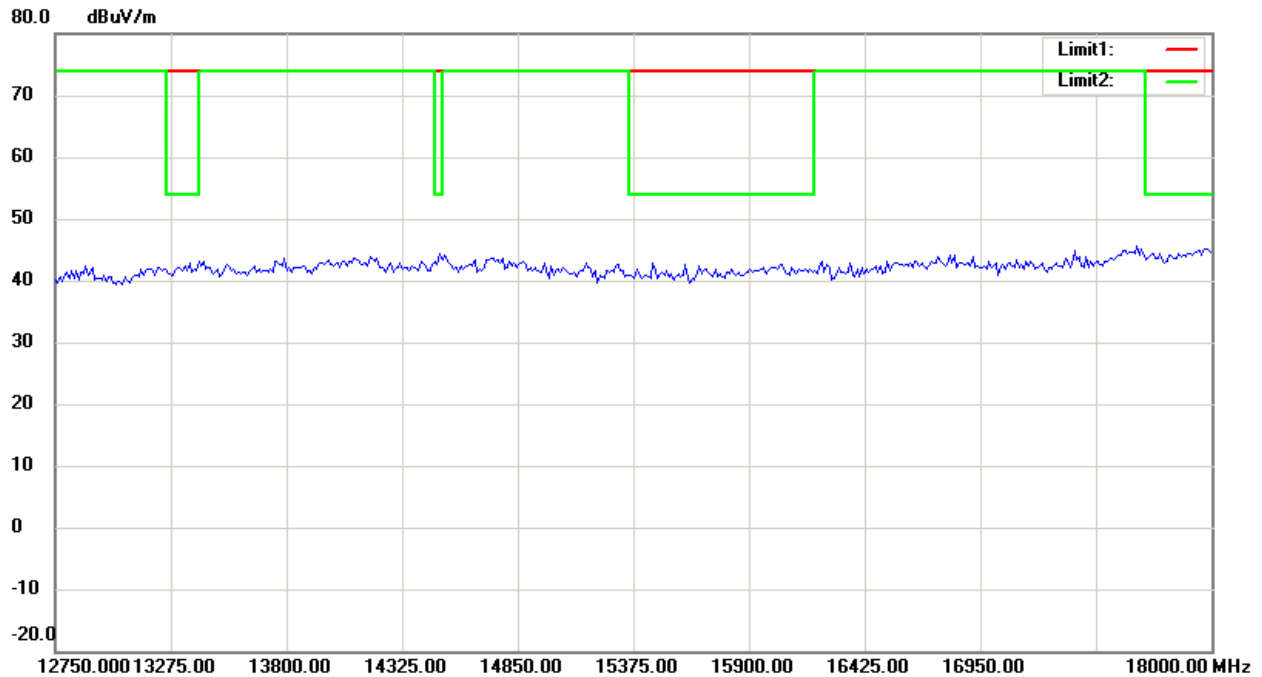
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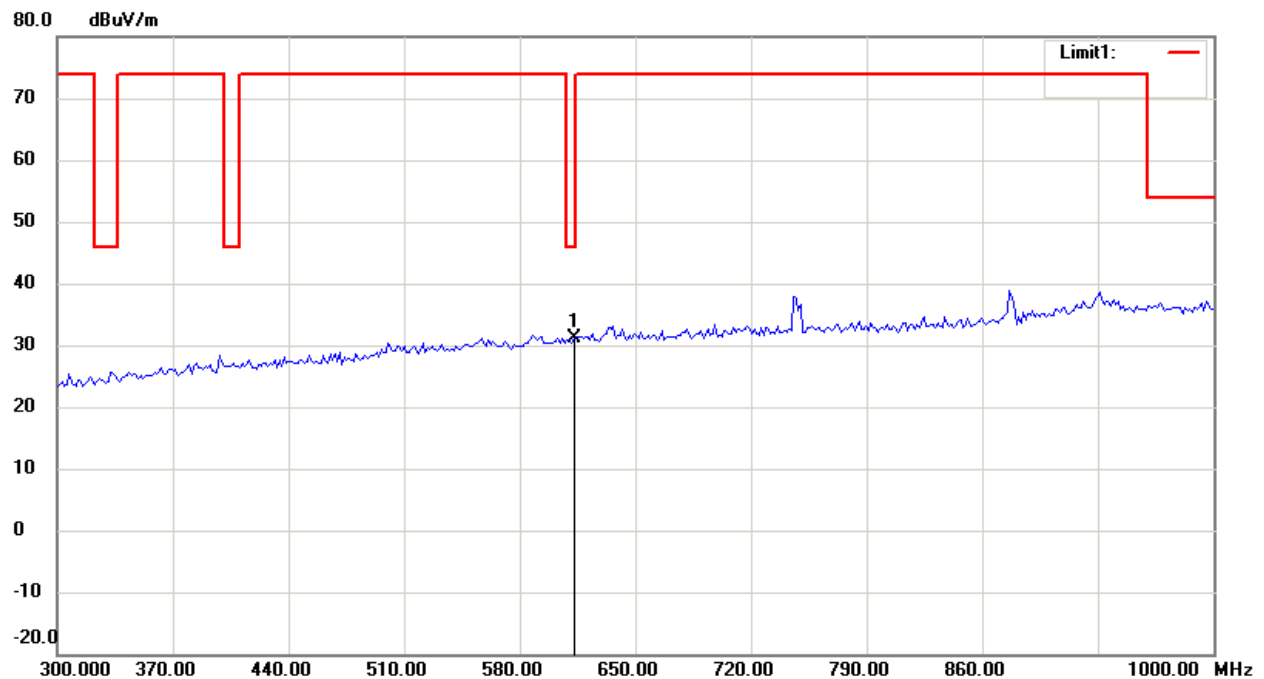
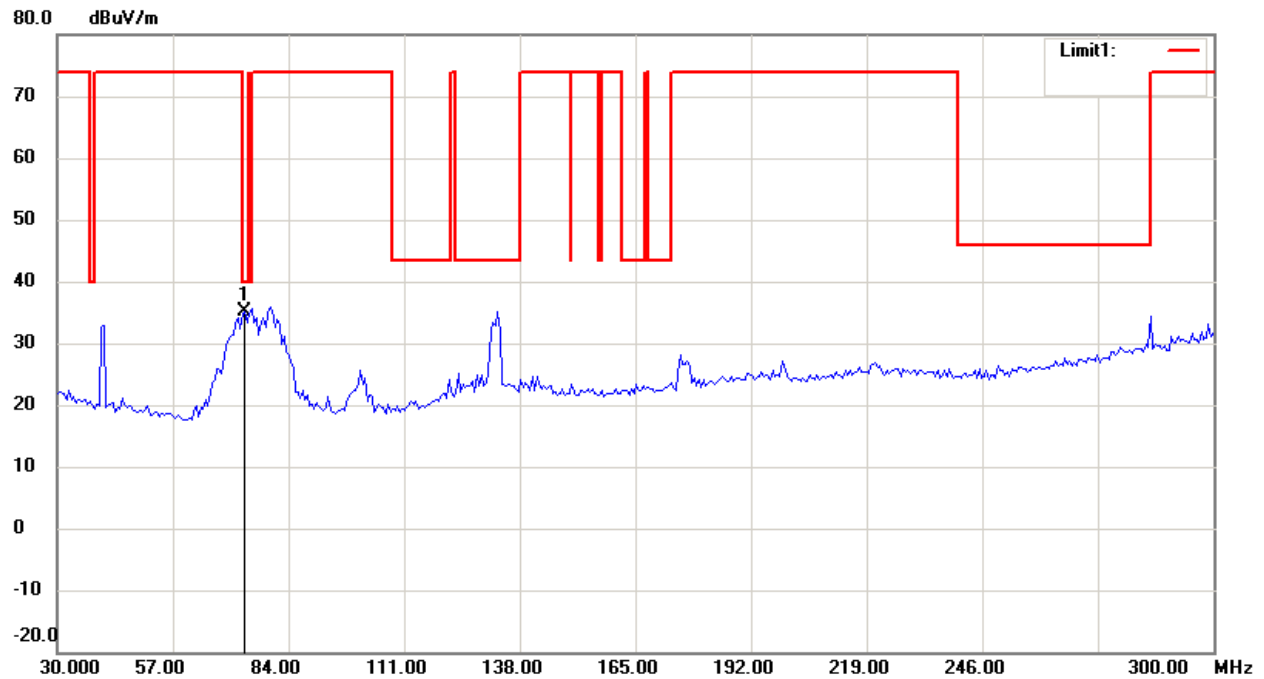




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

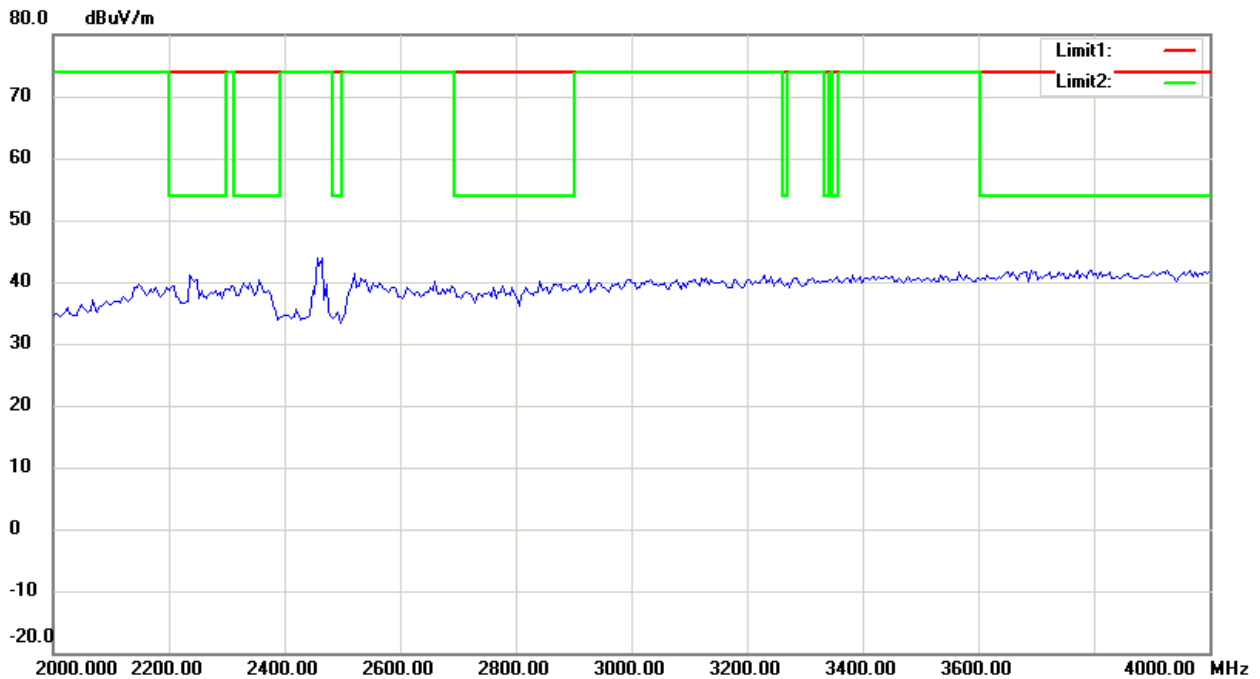
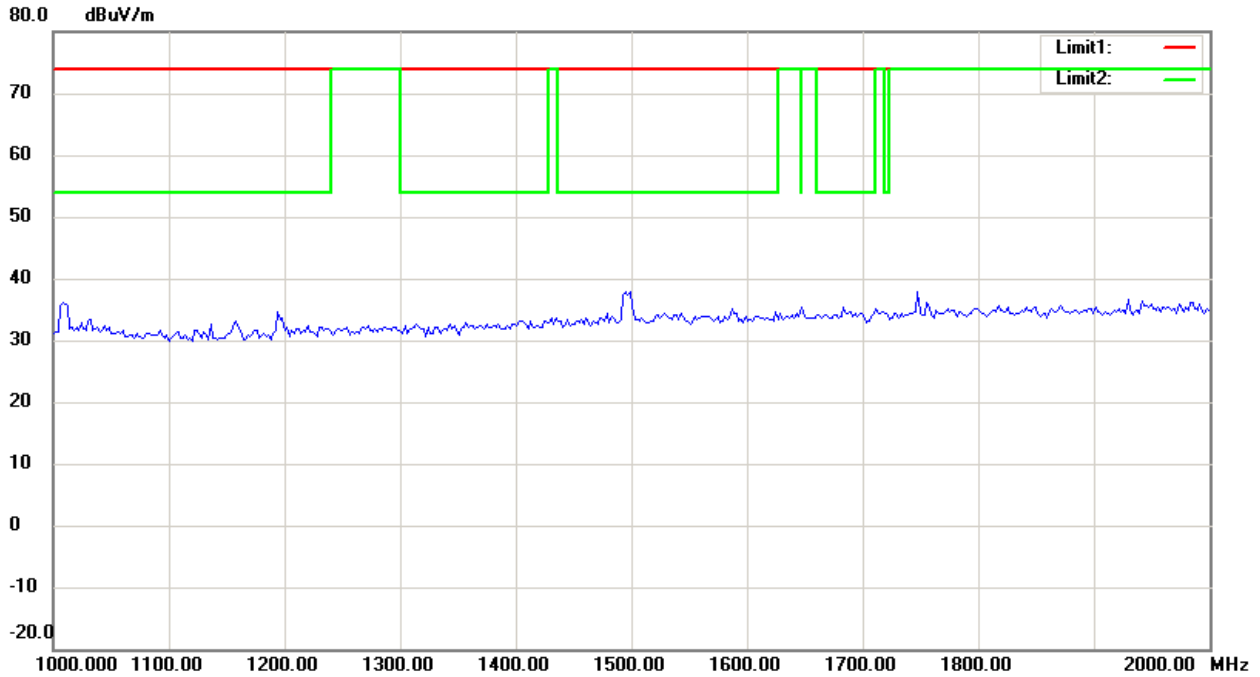
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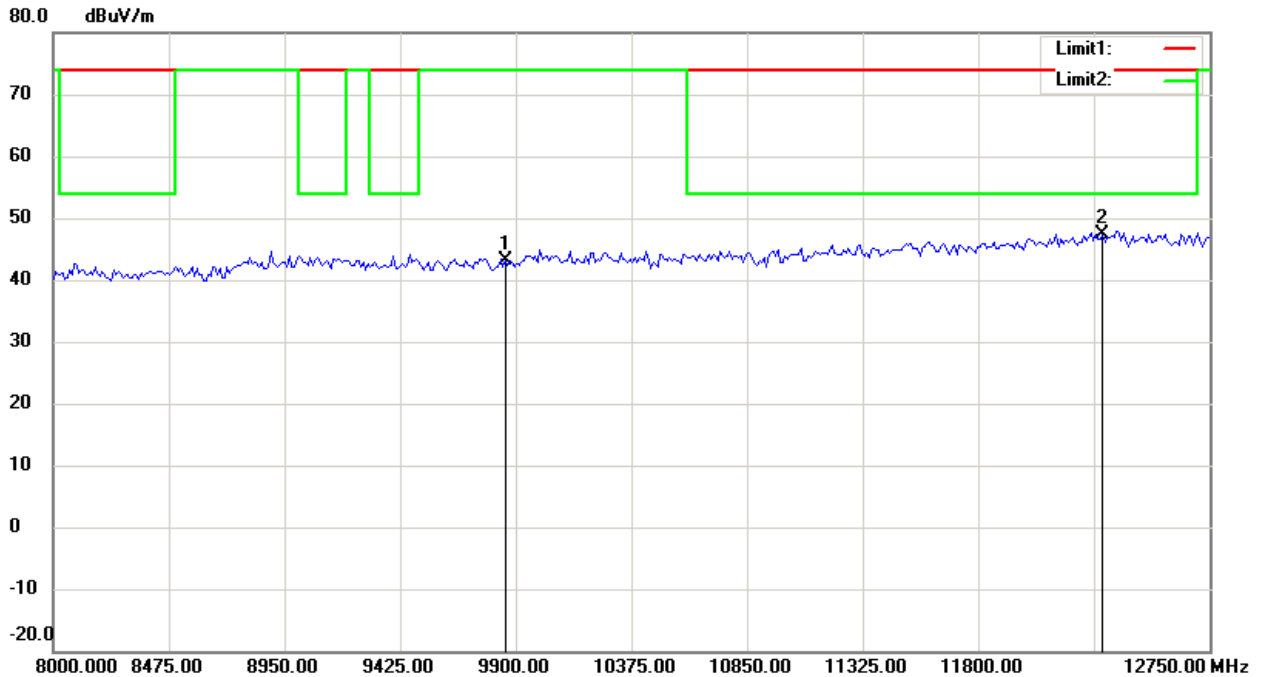
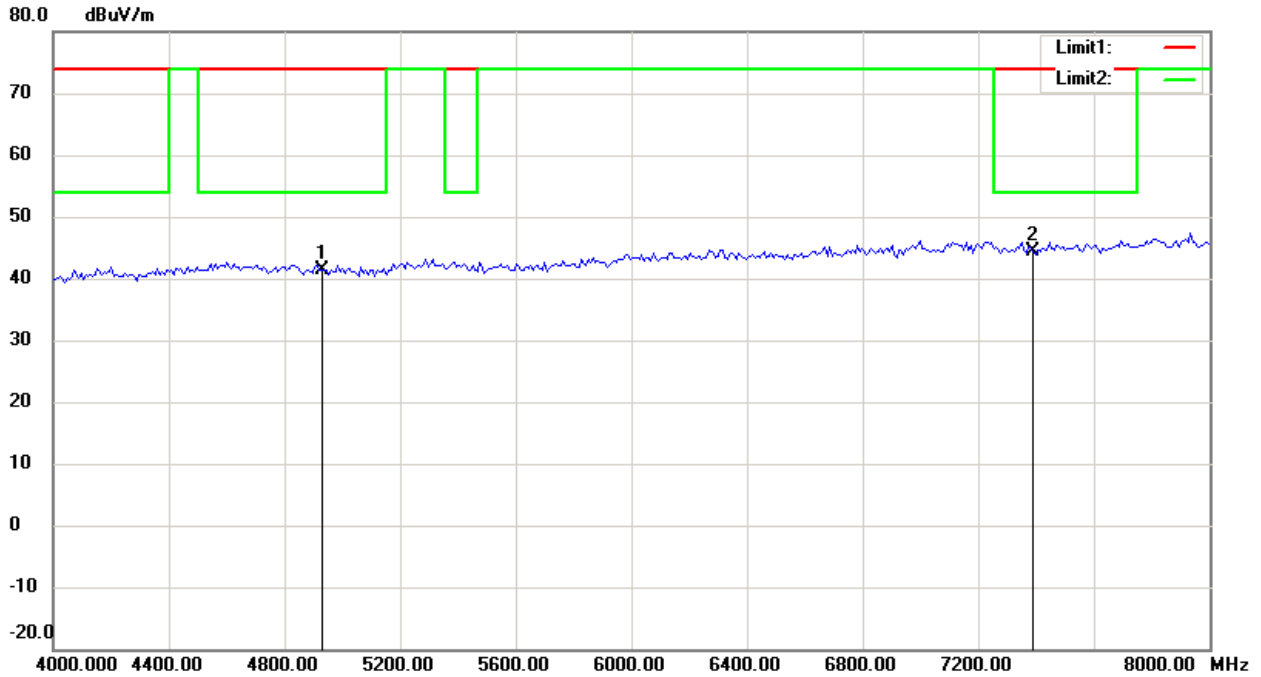
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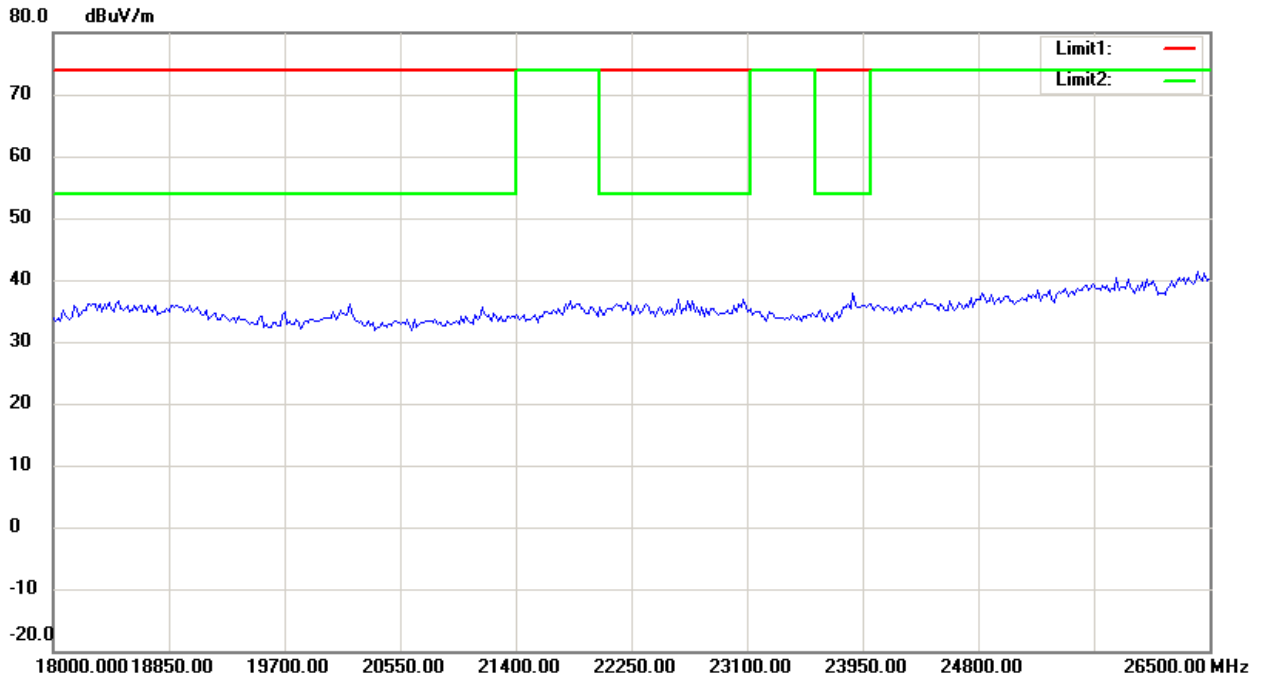
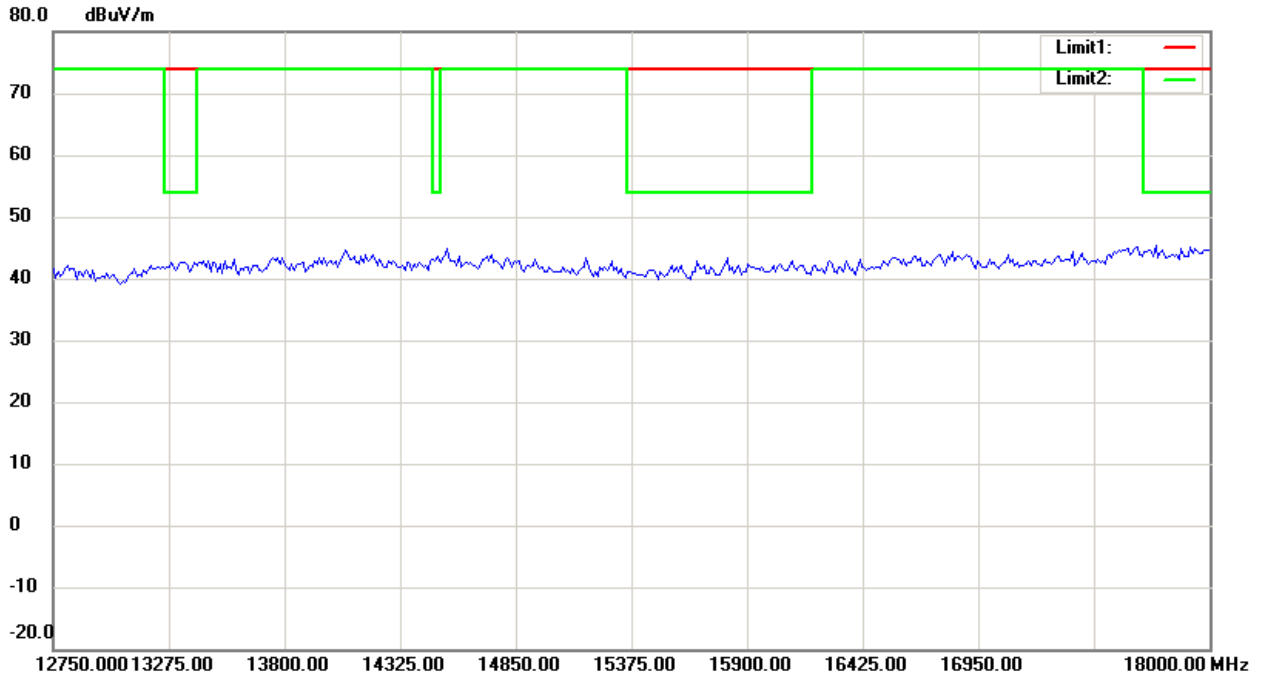
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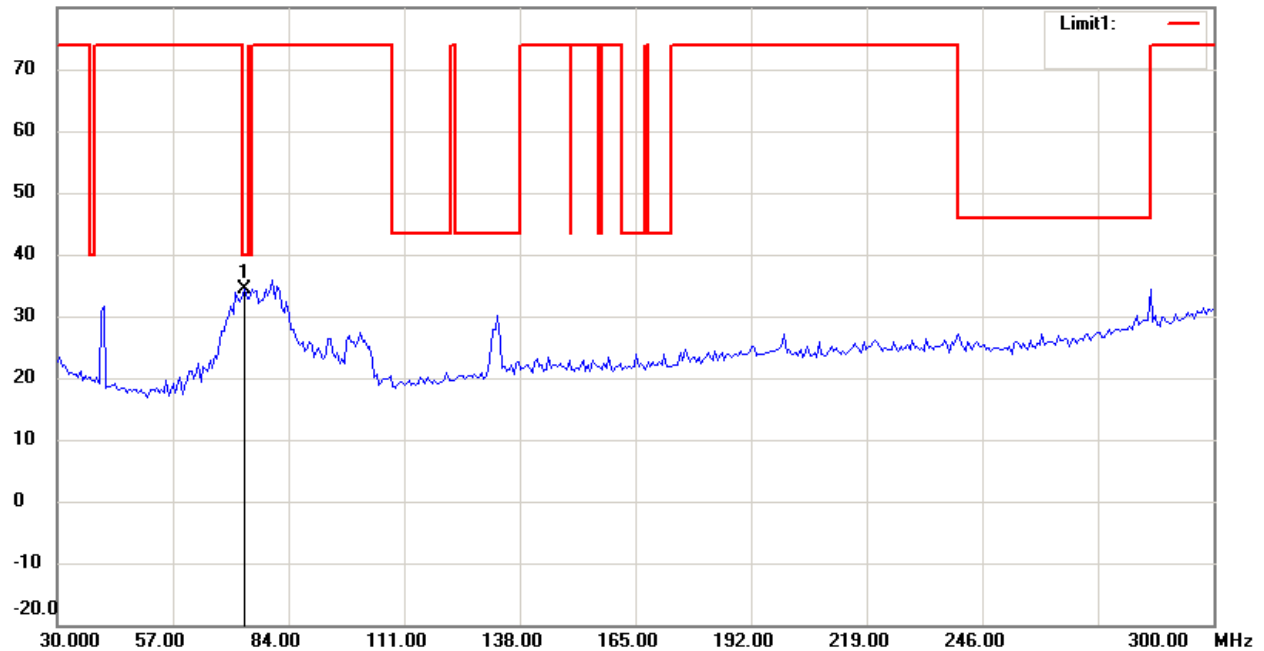
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

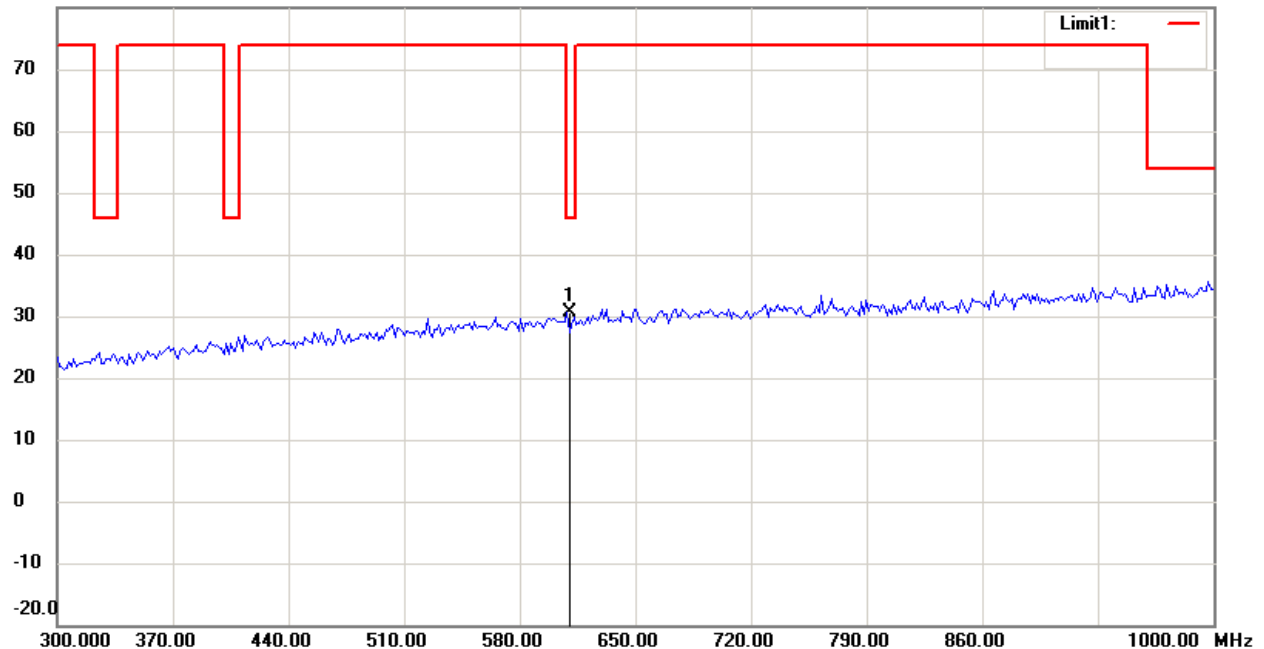
802.11g ch1

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

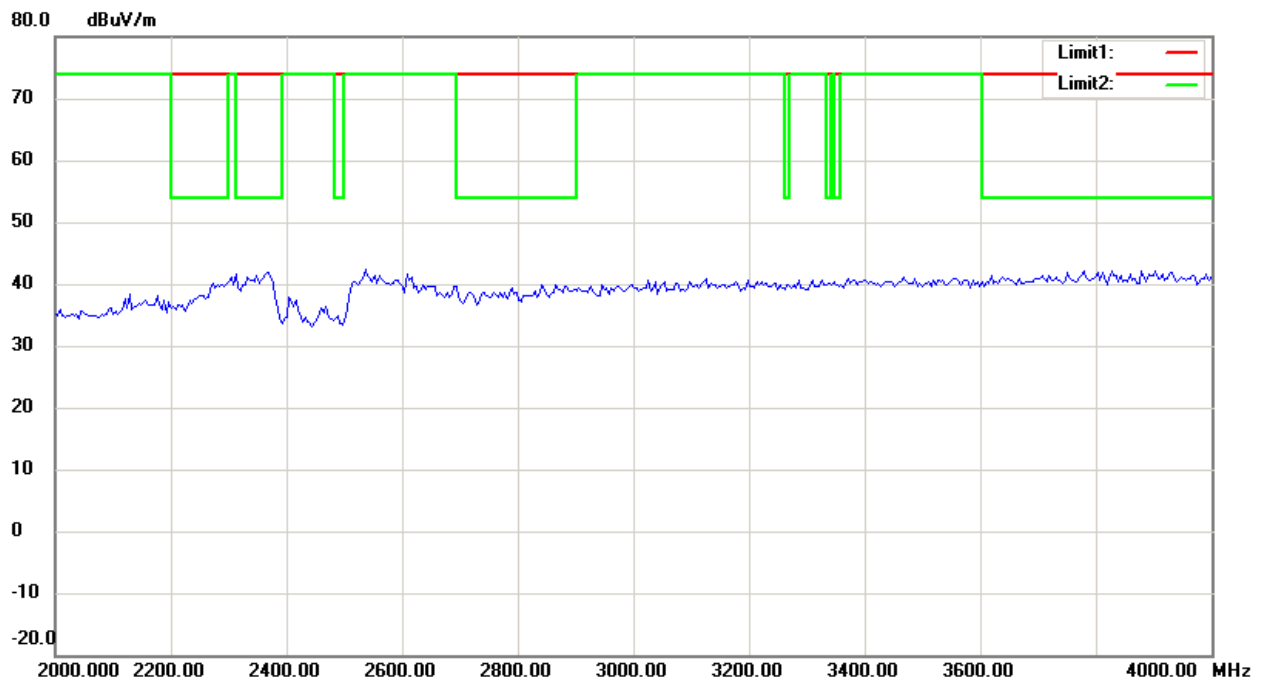
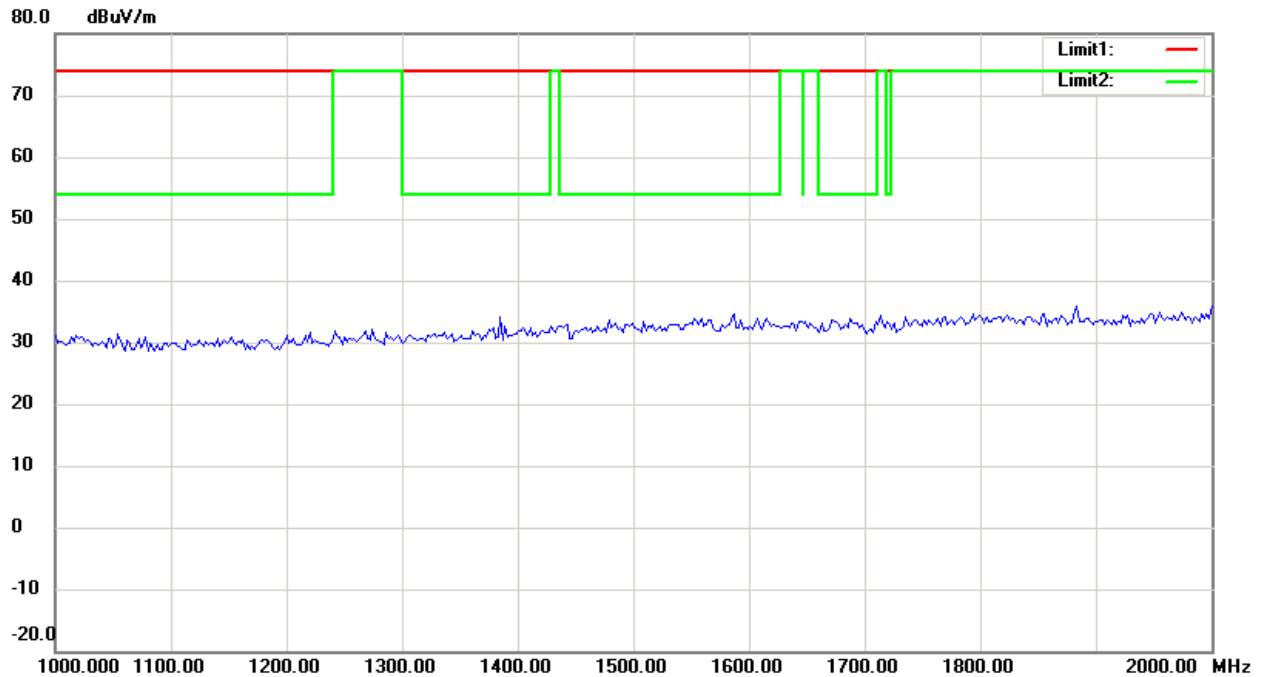
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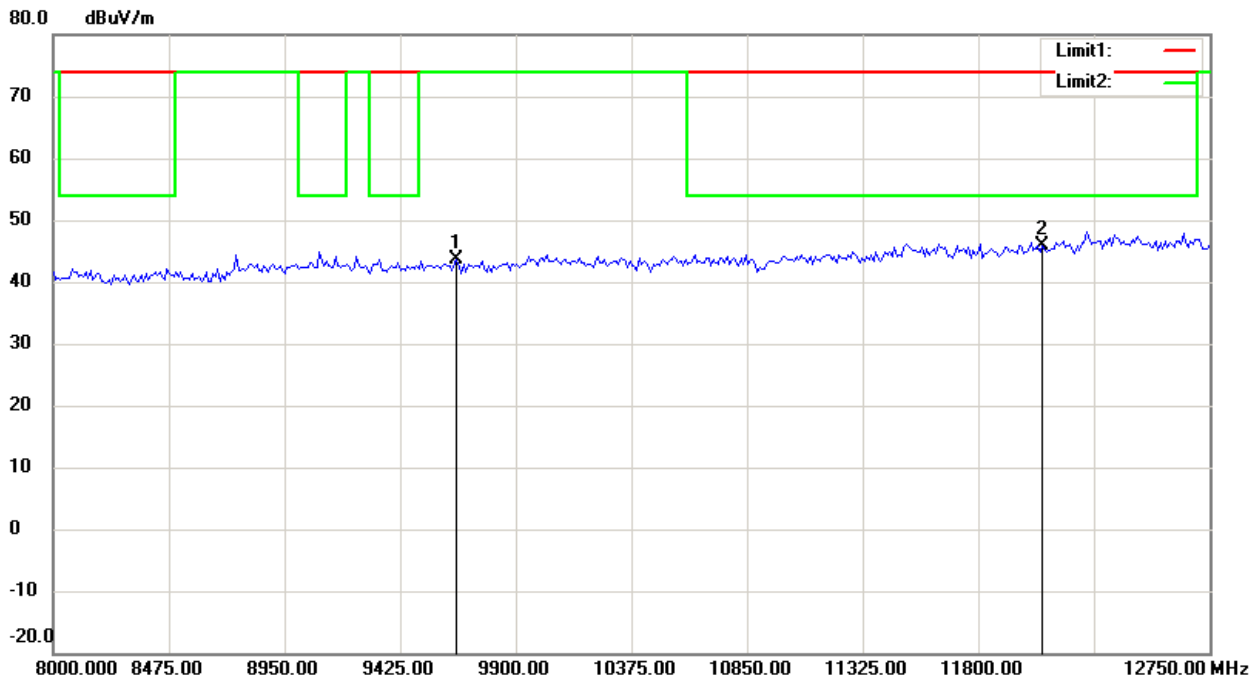
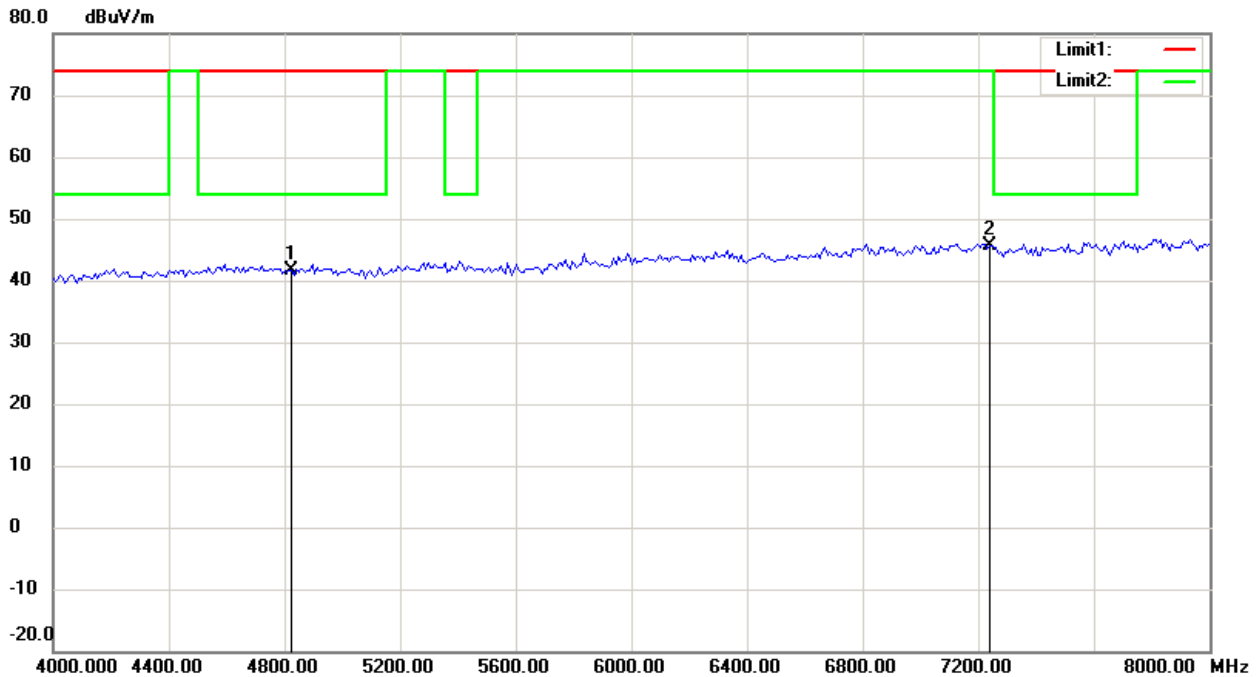
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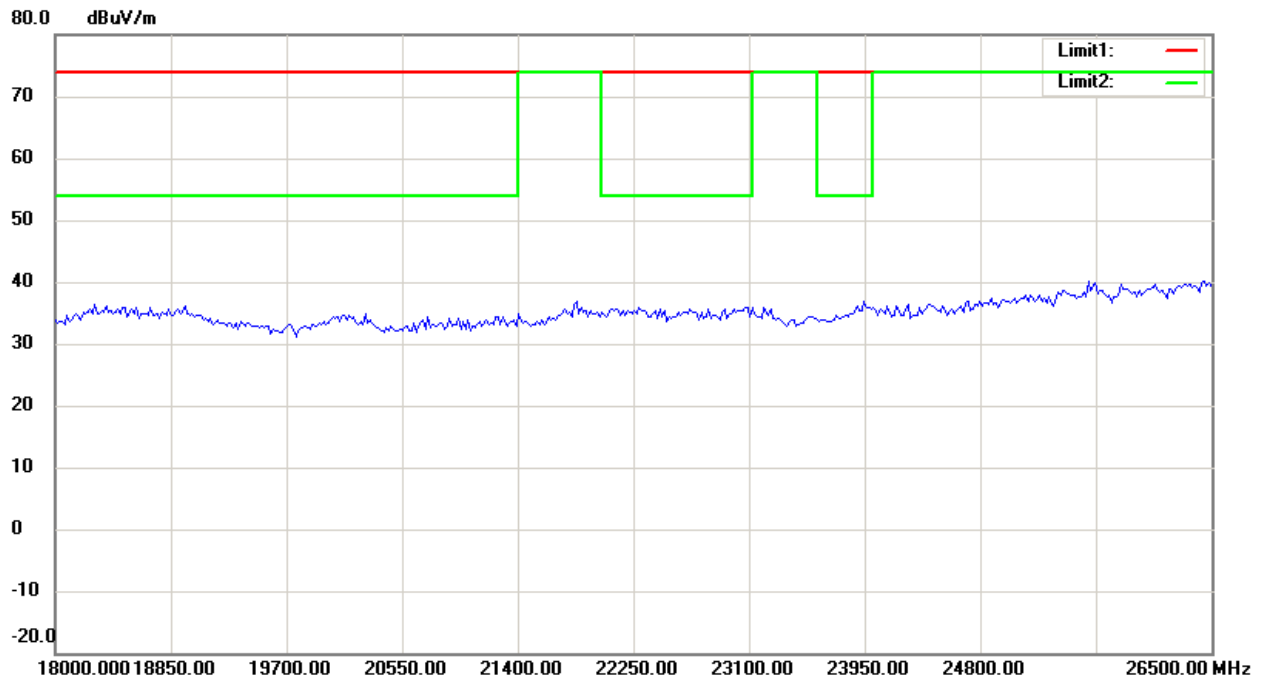
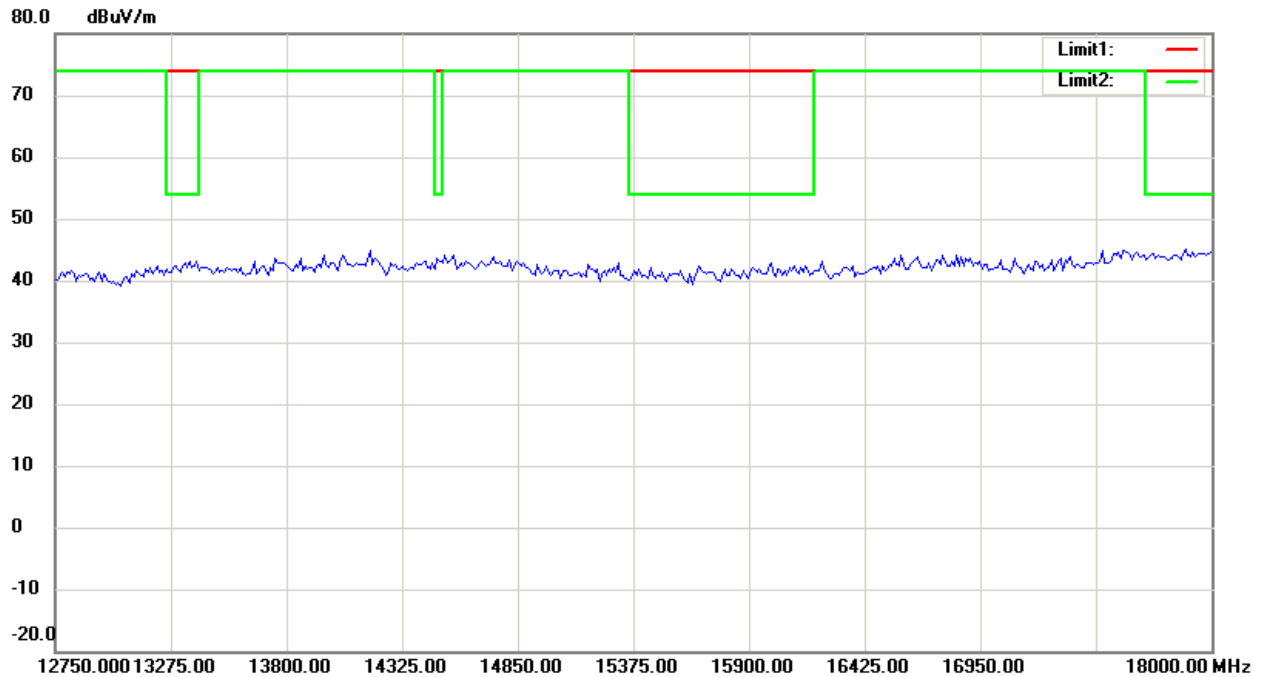
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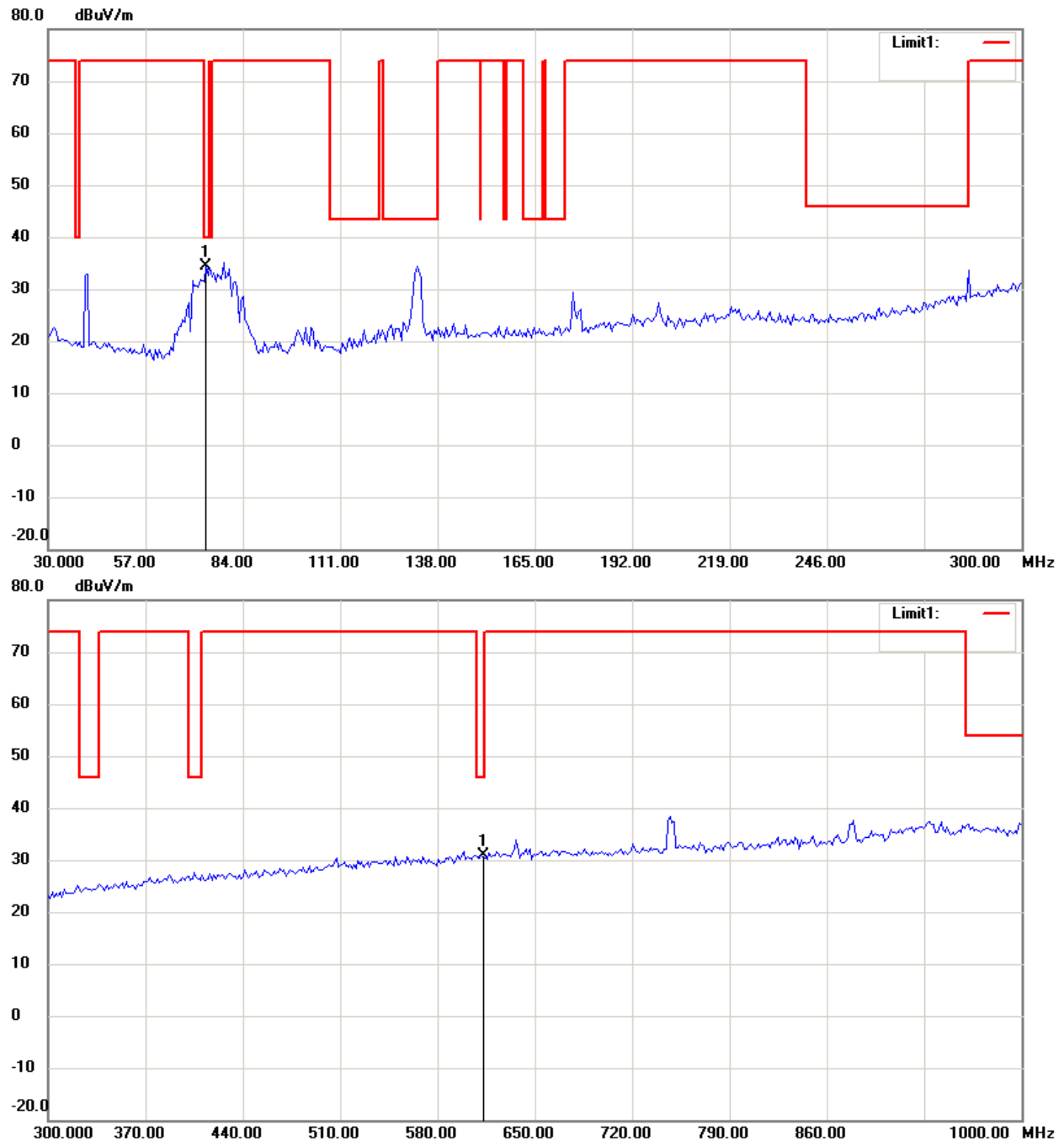




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

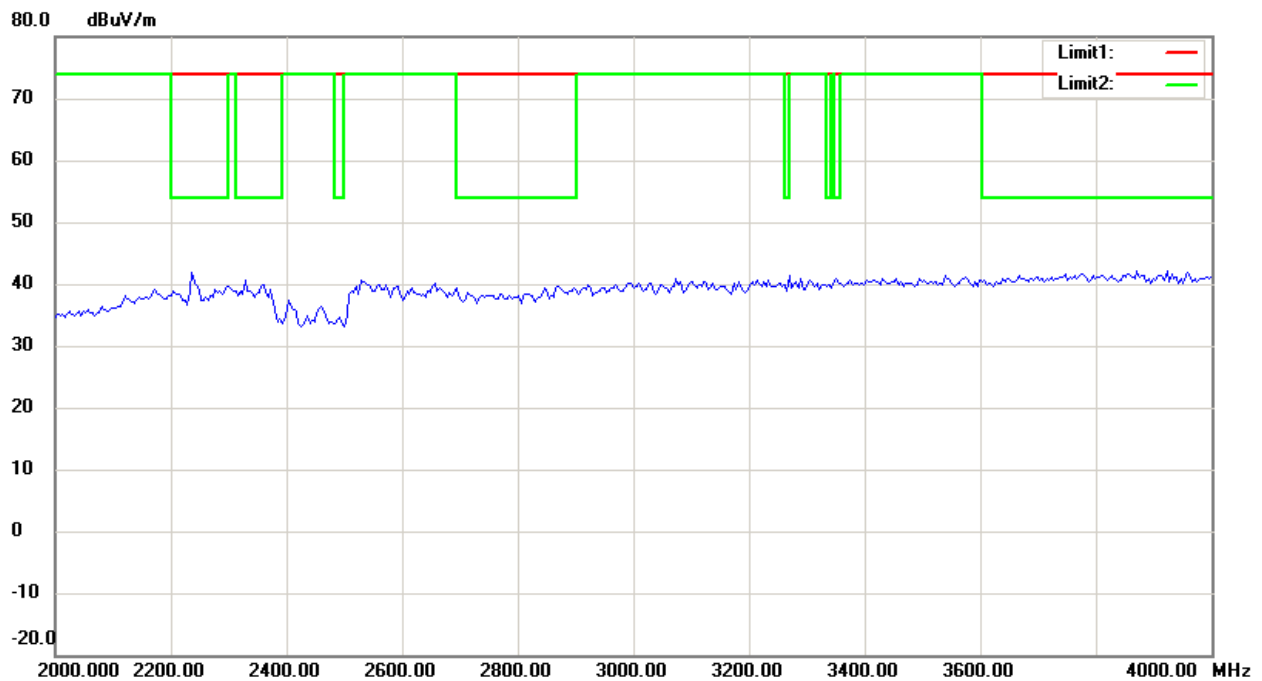
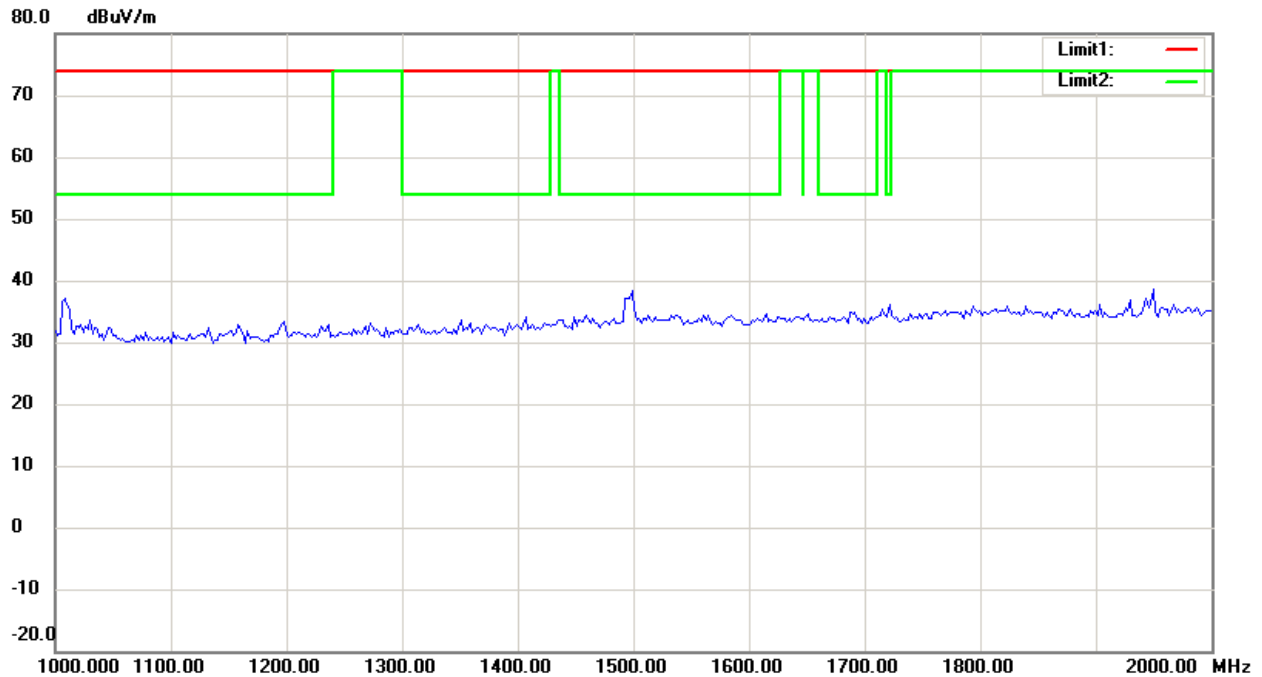
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**Note:**

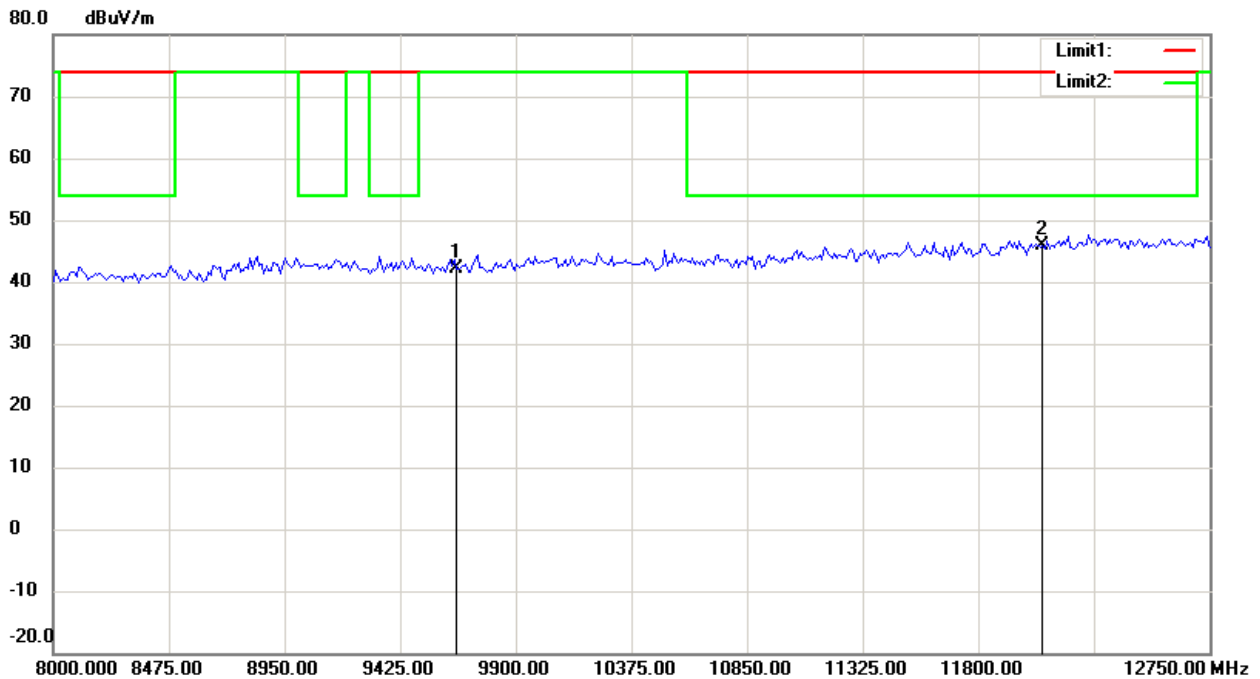
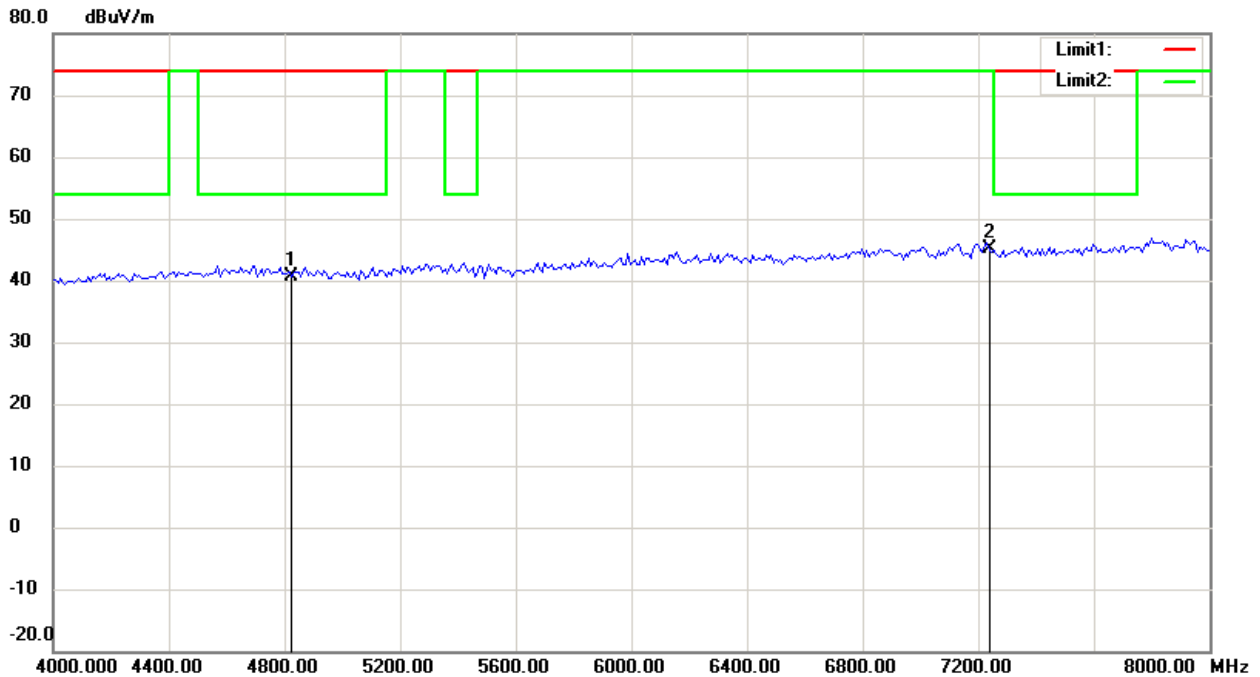
**Up Line: Peak Limit Line Down Line: Ave Limit Line**

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3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

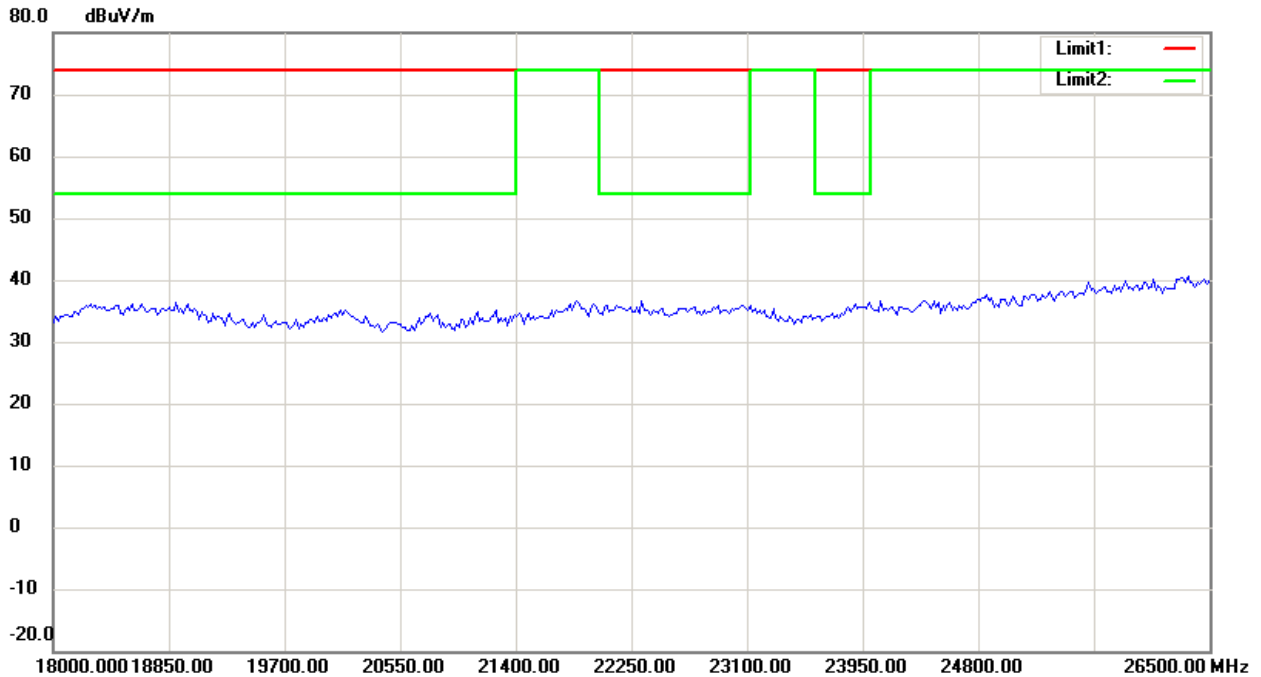
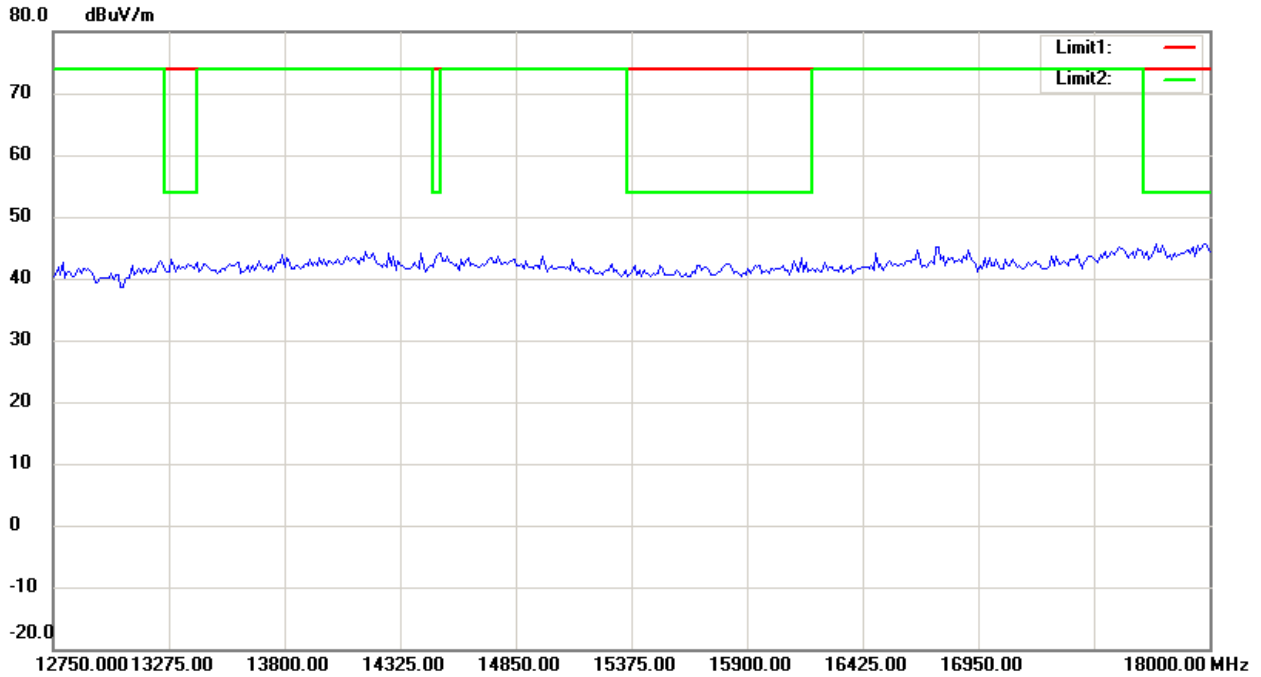
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

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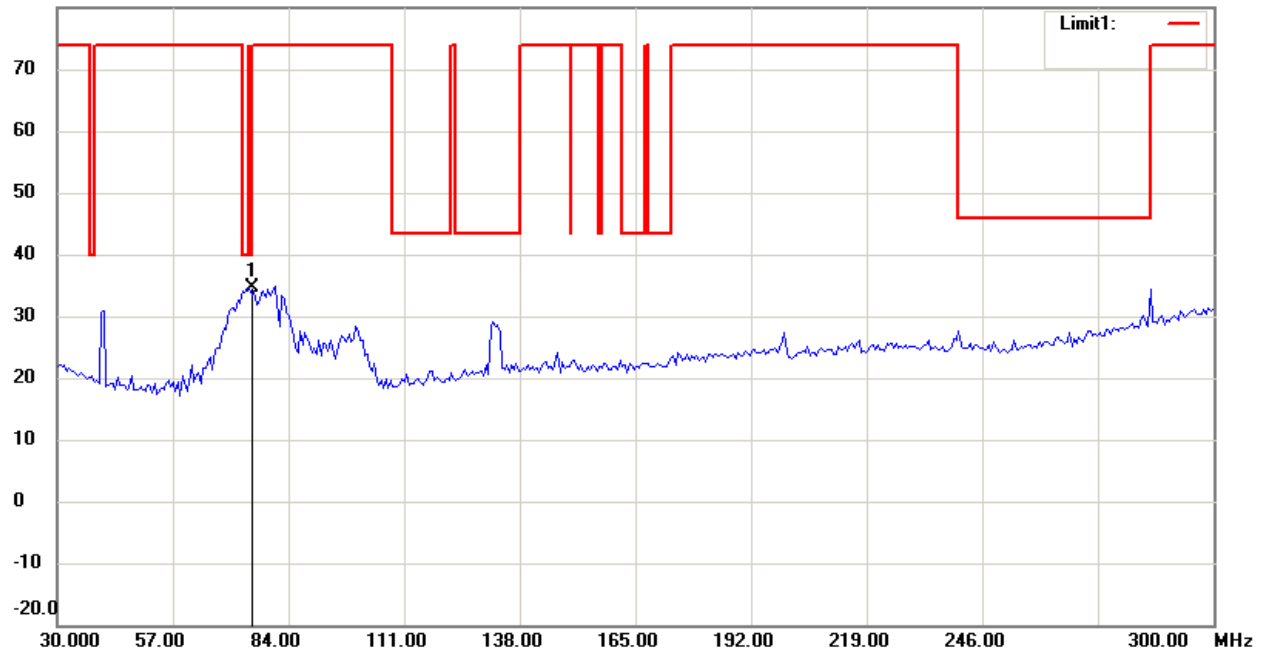
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

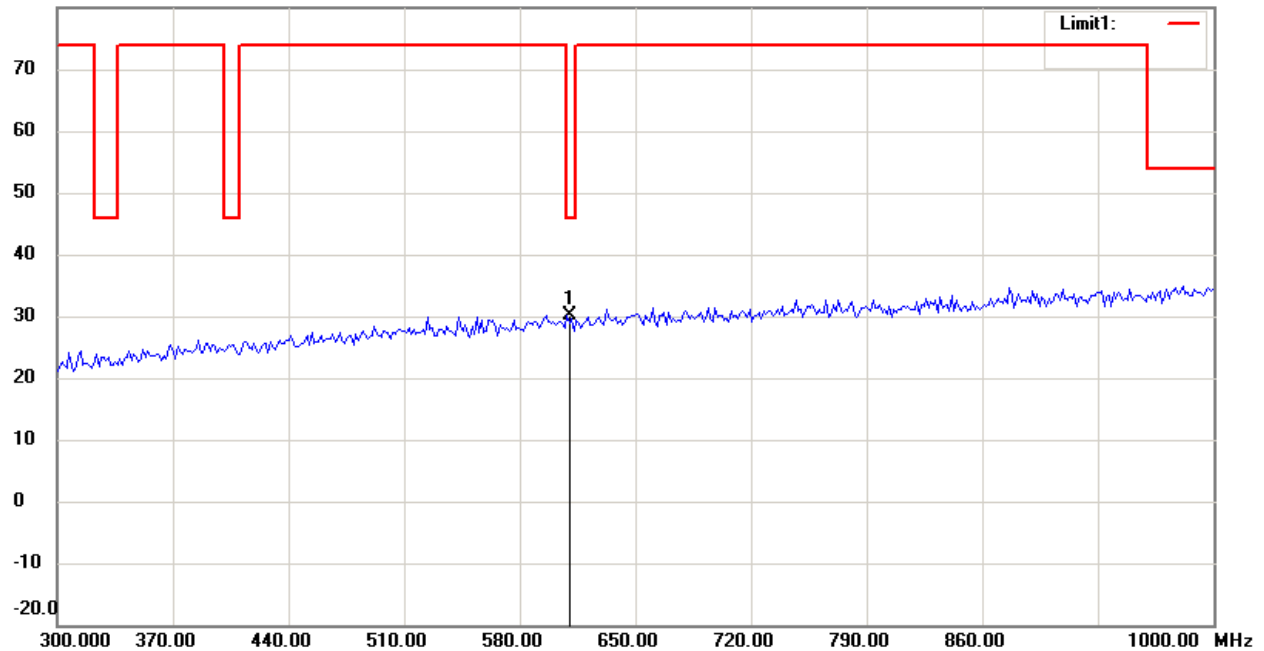
802.11g ch6

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



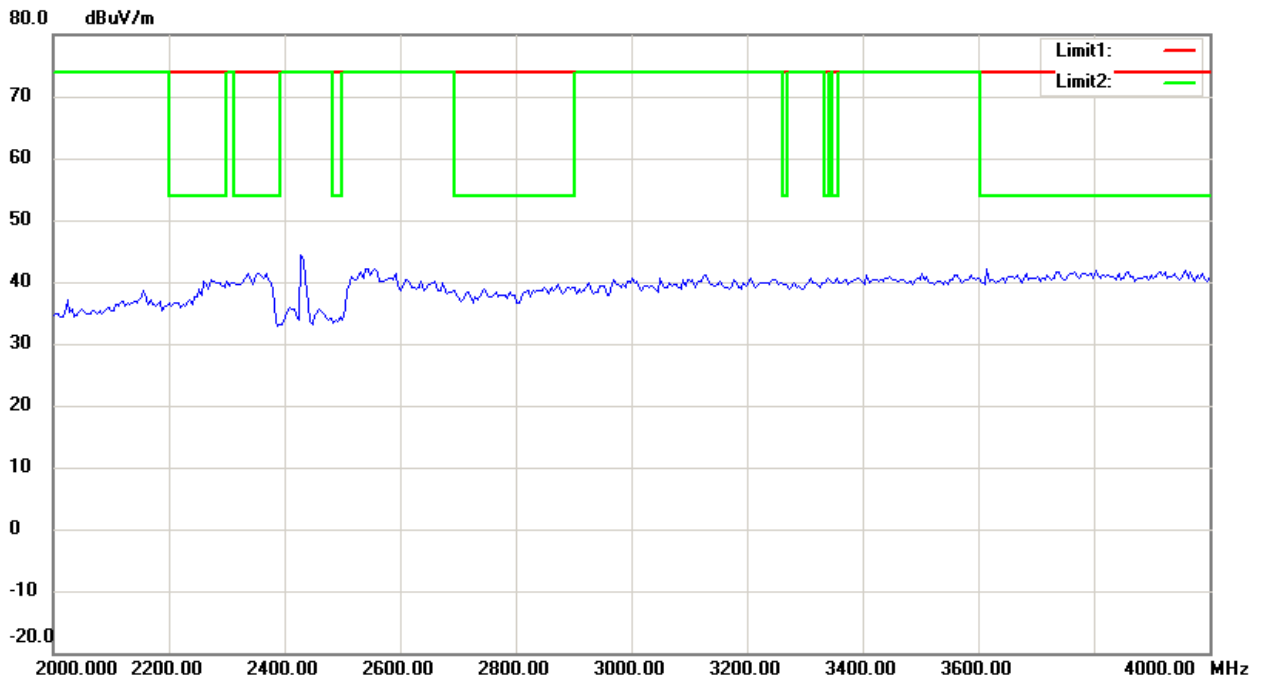
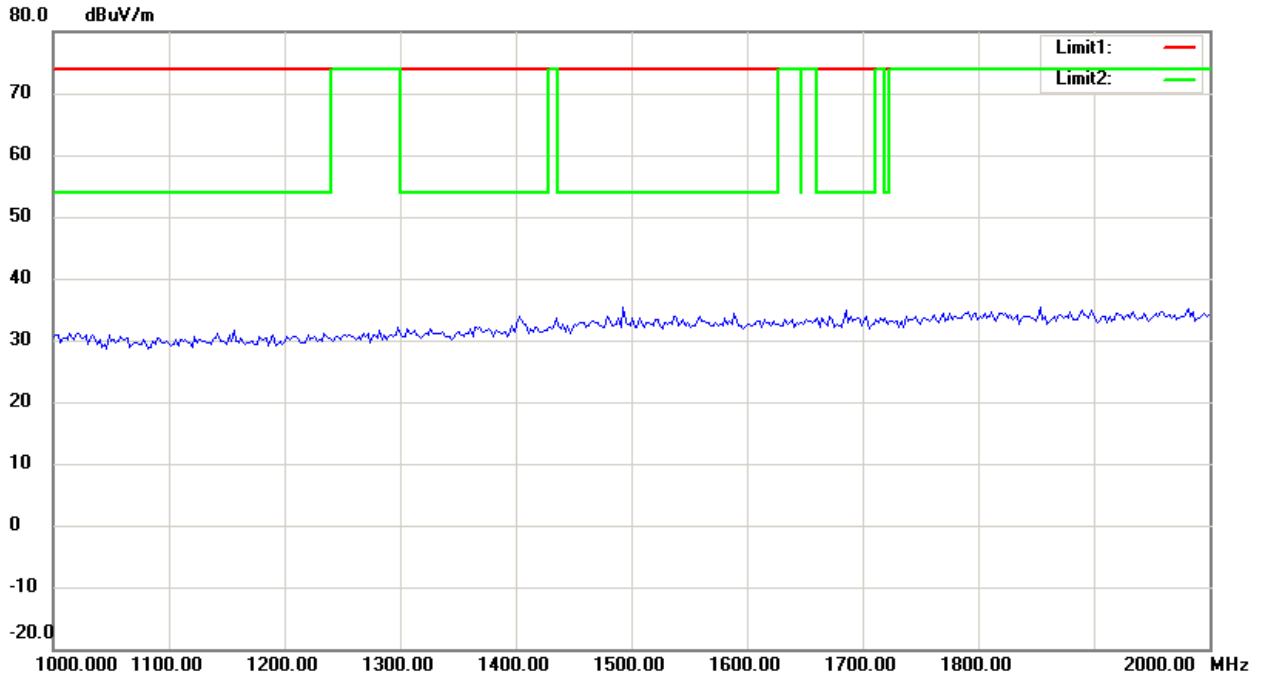
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Registration number: W6M21003-10512-C-1  
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**Note:**

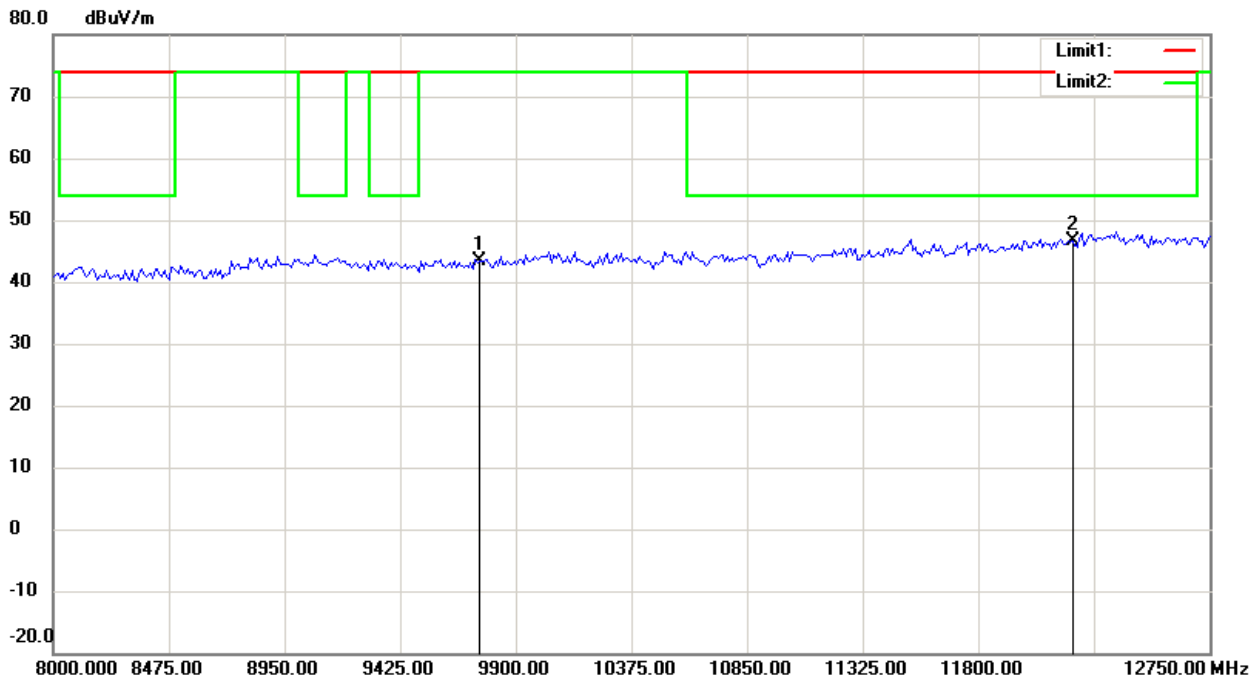
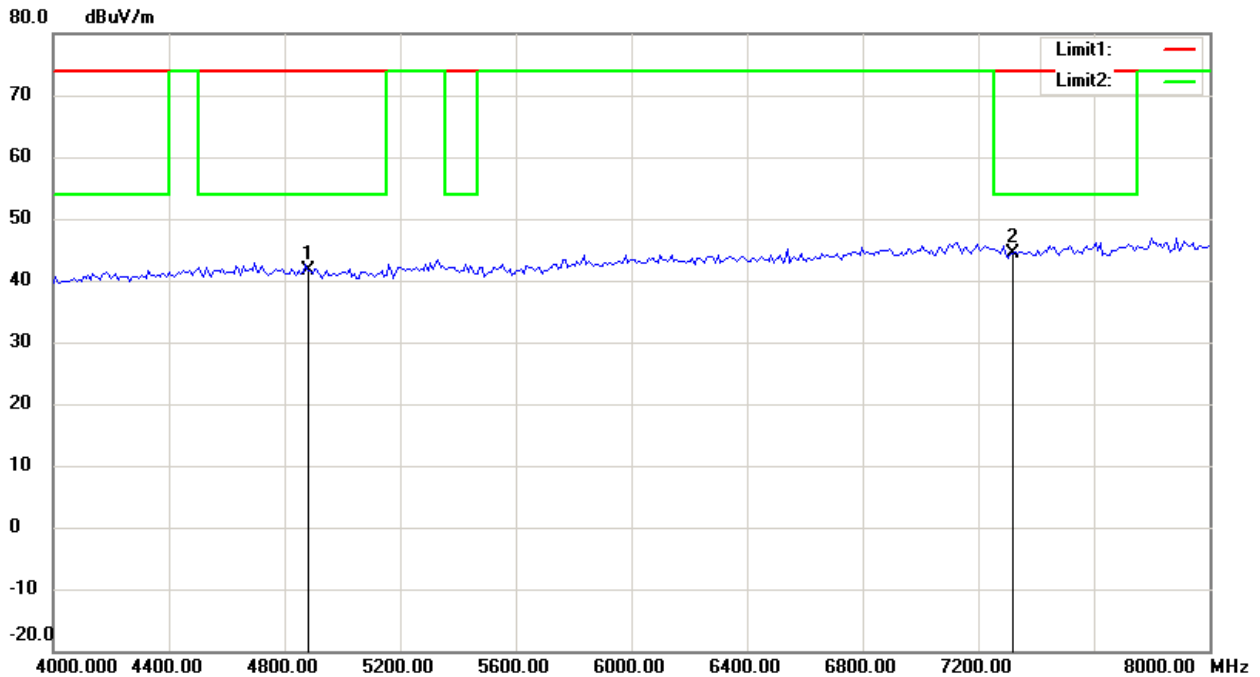
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

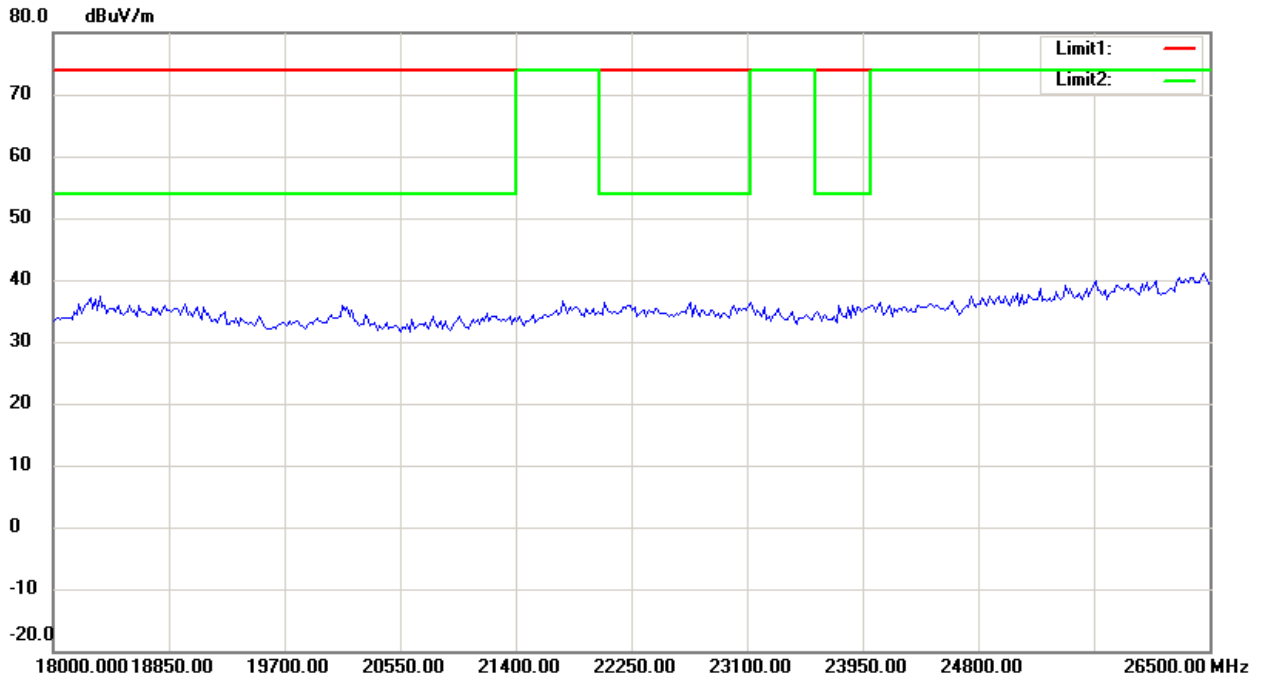
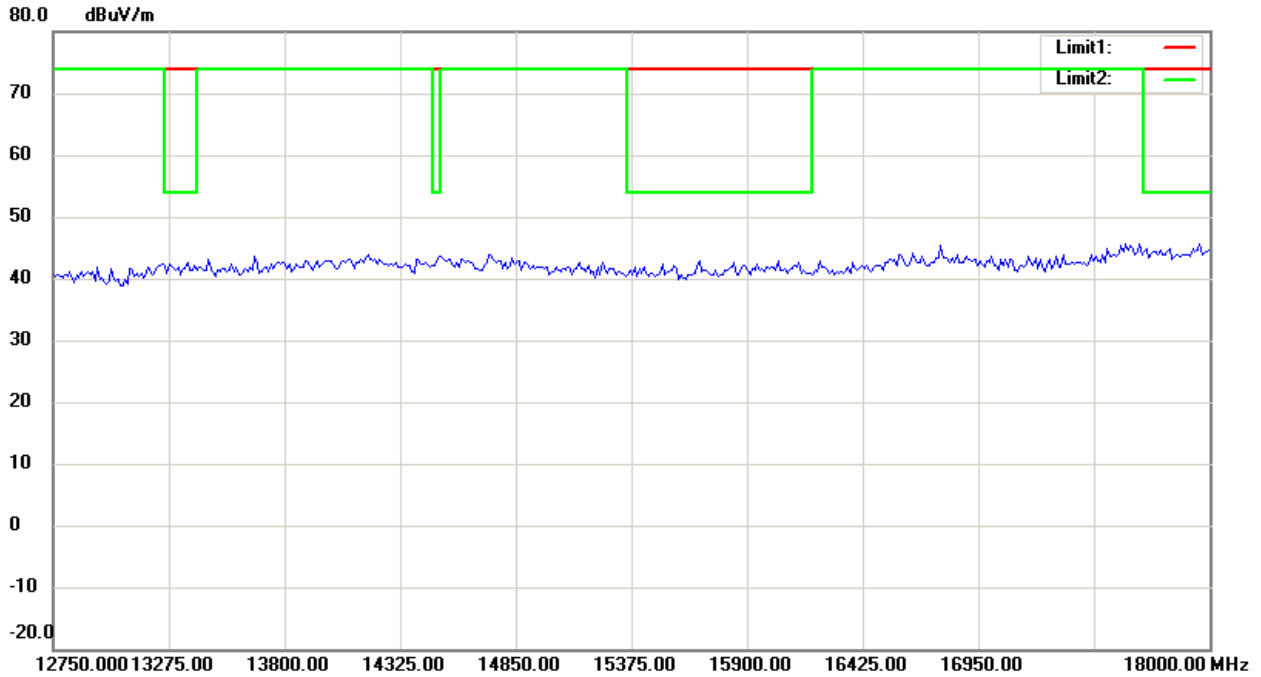
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

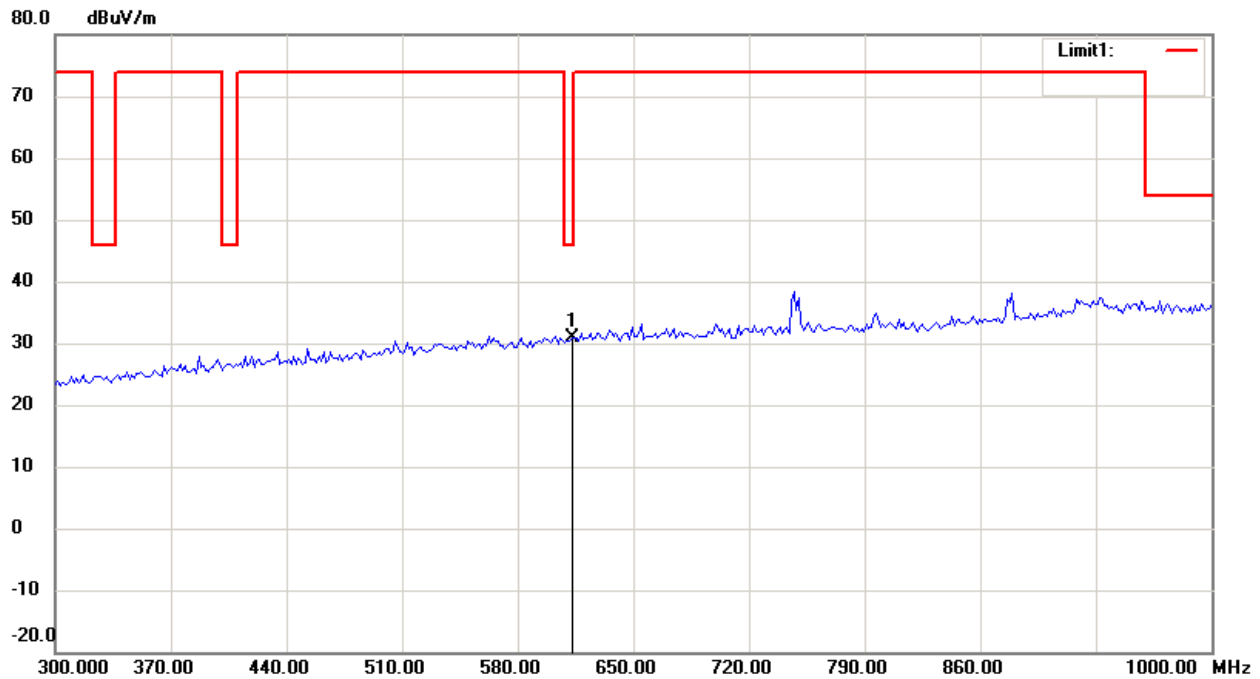
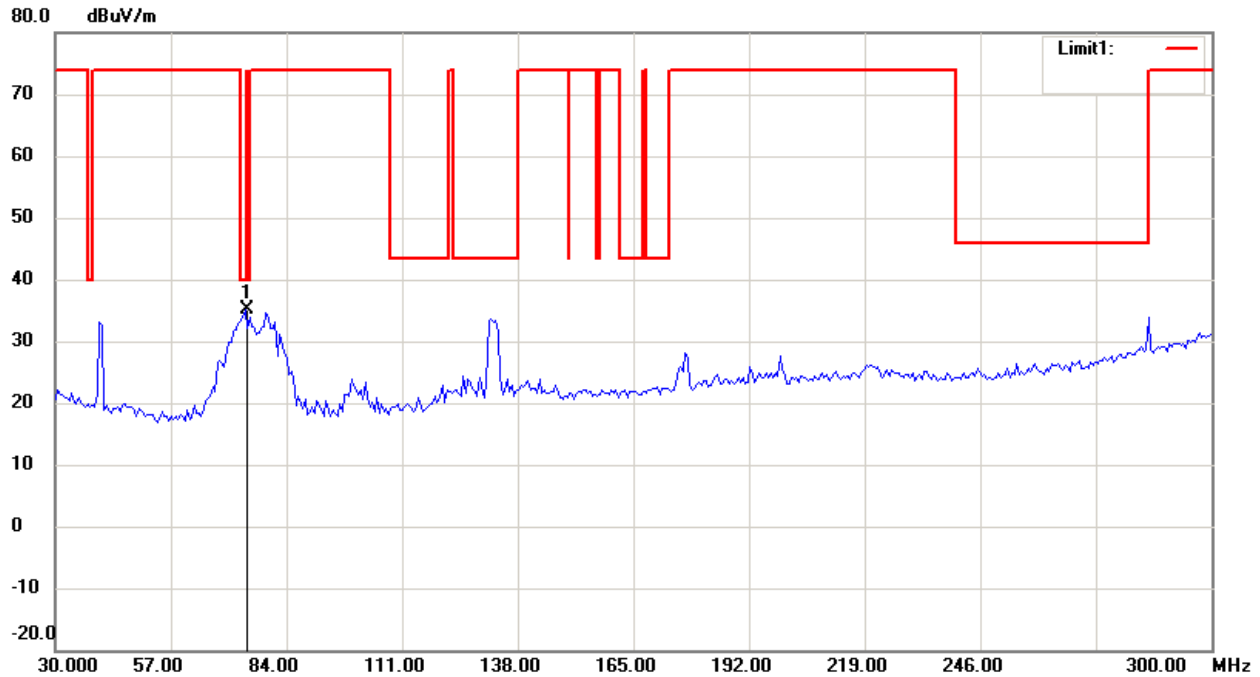
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Antenna Polarization V



### Note:

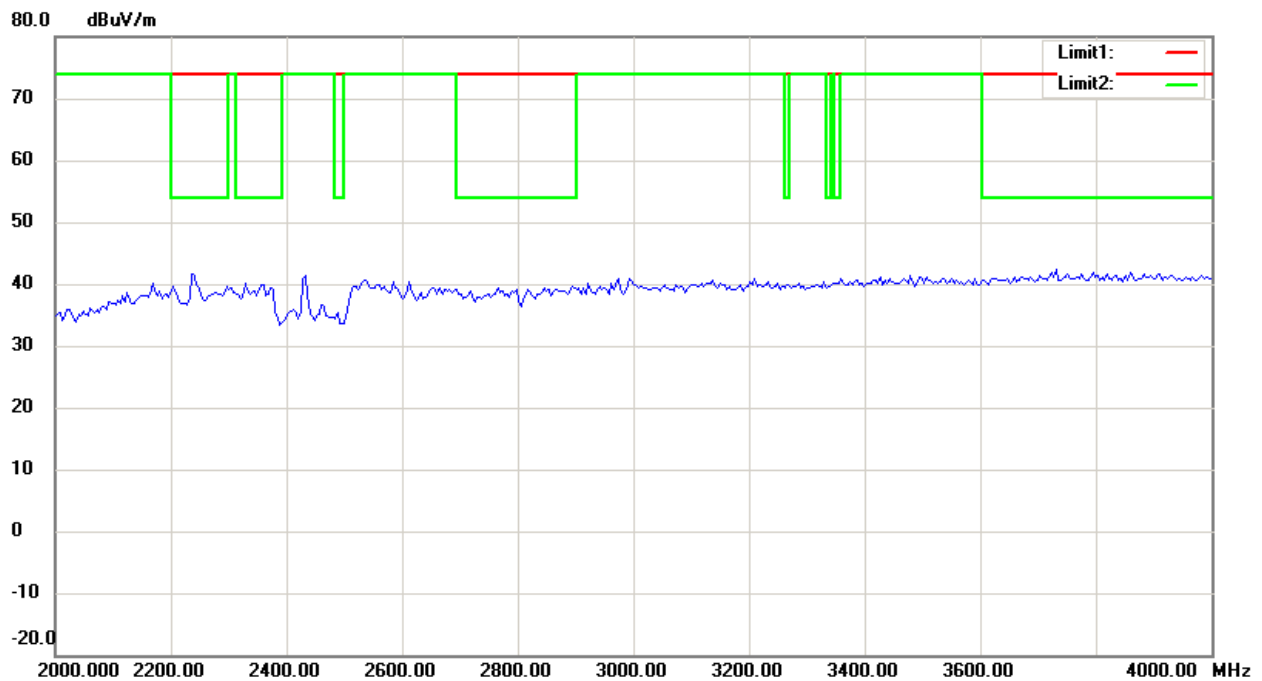
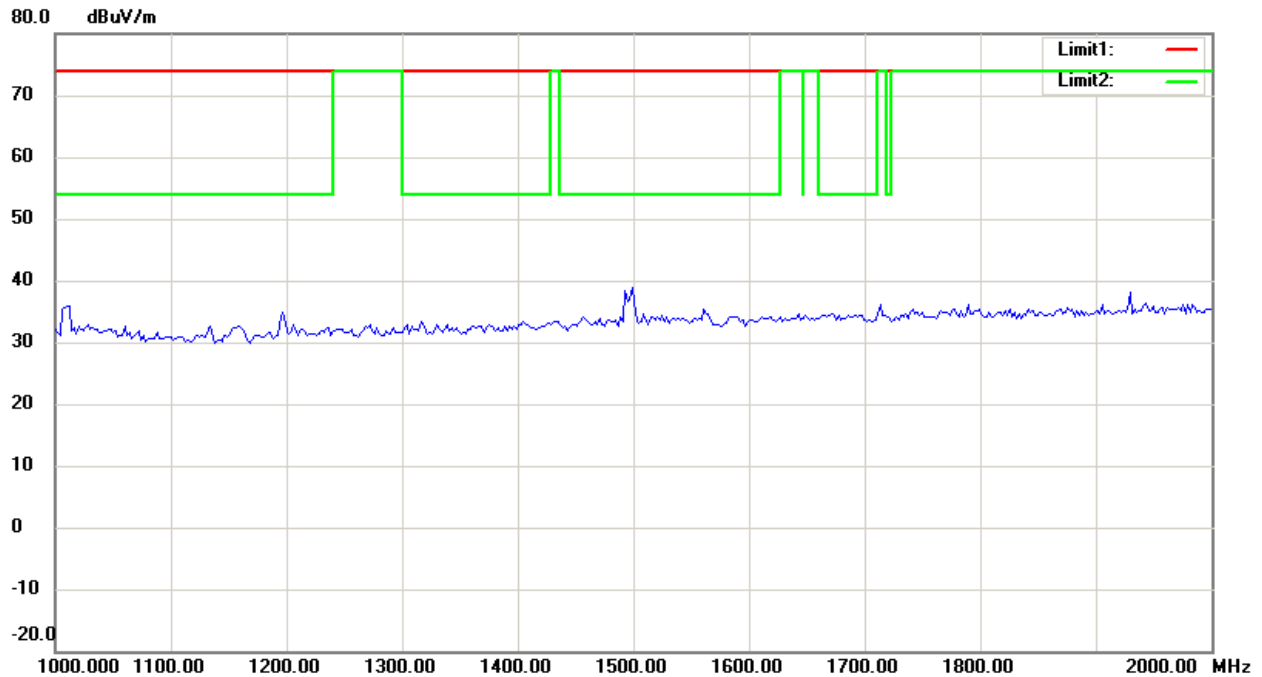
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

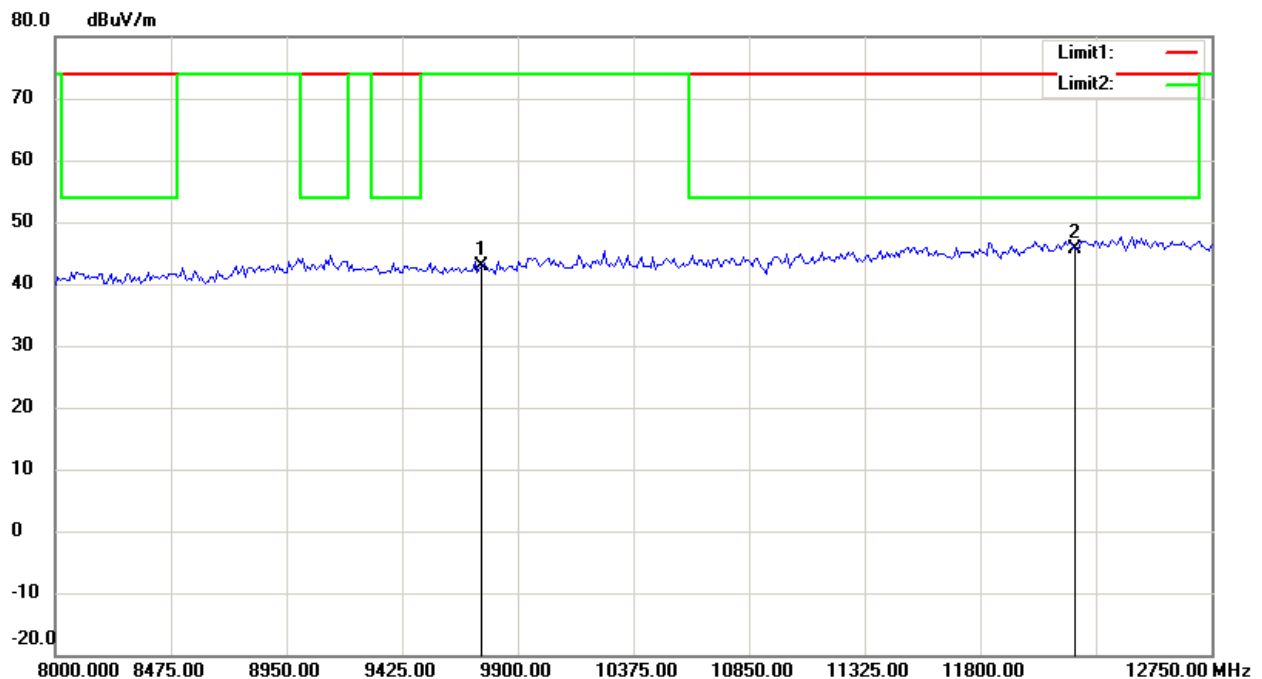
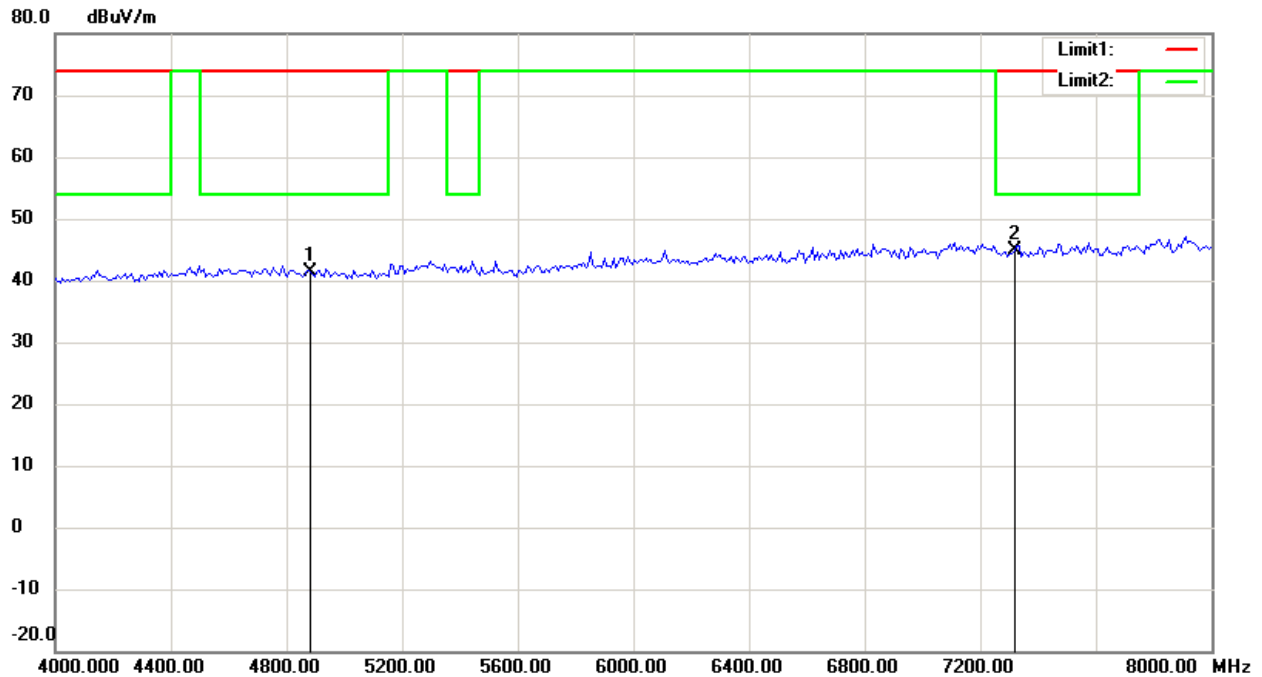
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

**Up Line: Peak Limit Line Down Line: Ave Limit Line**

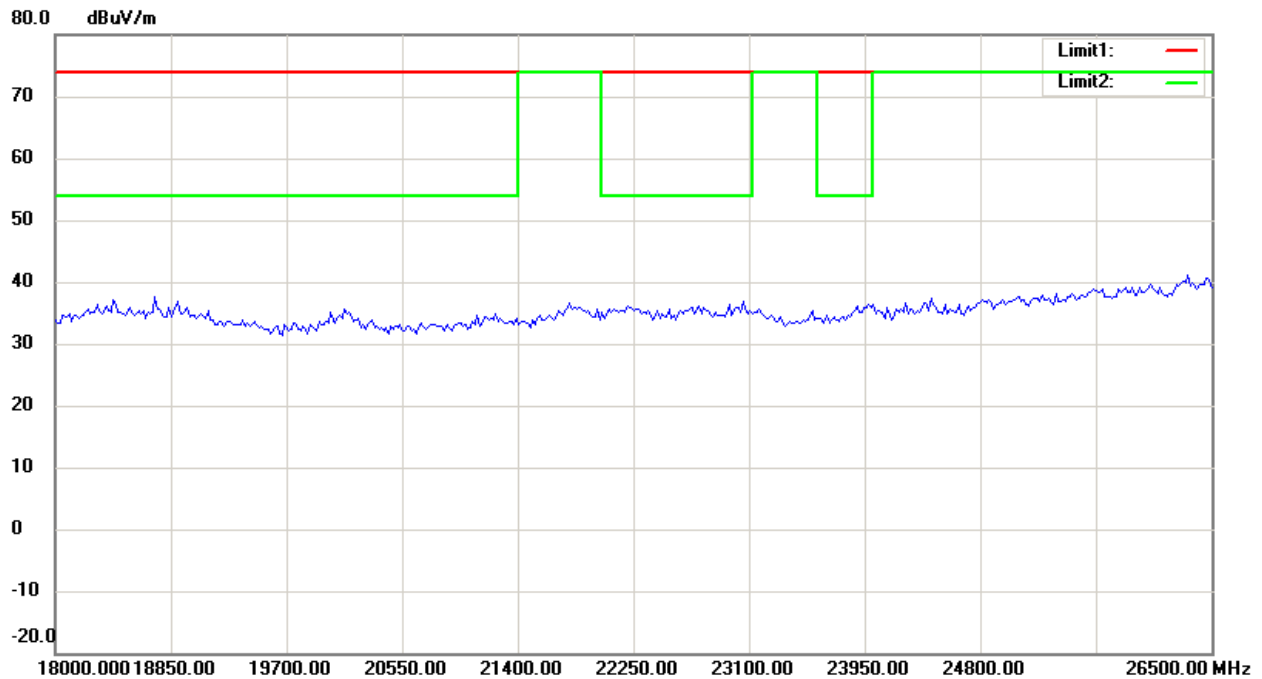
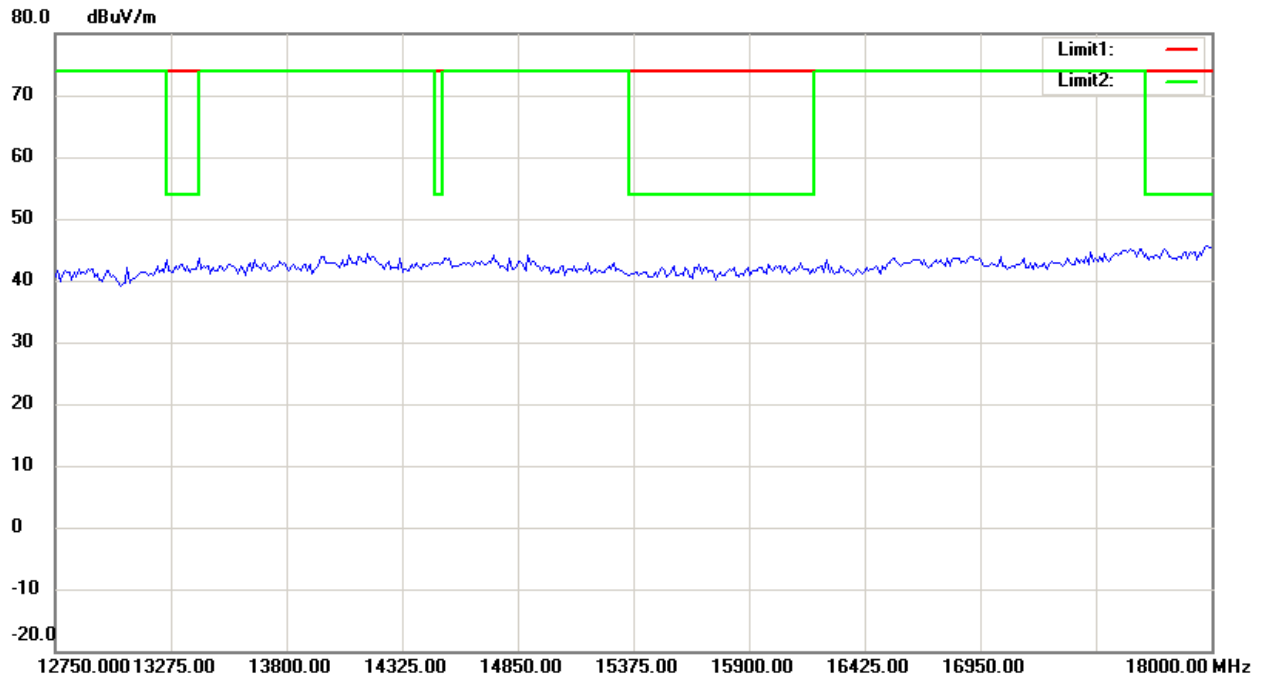
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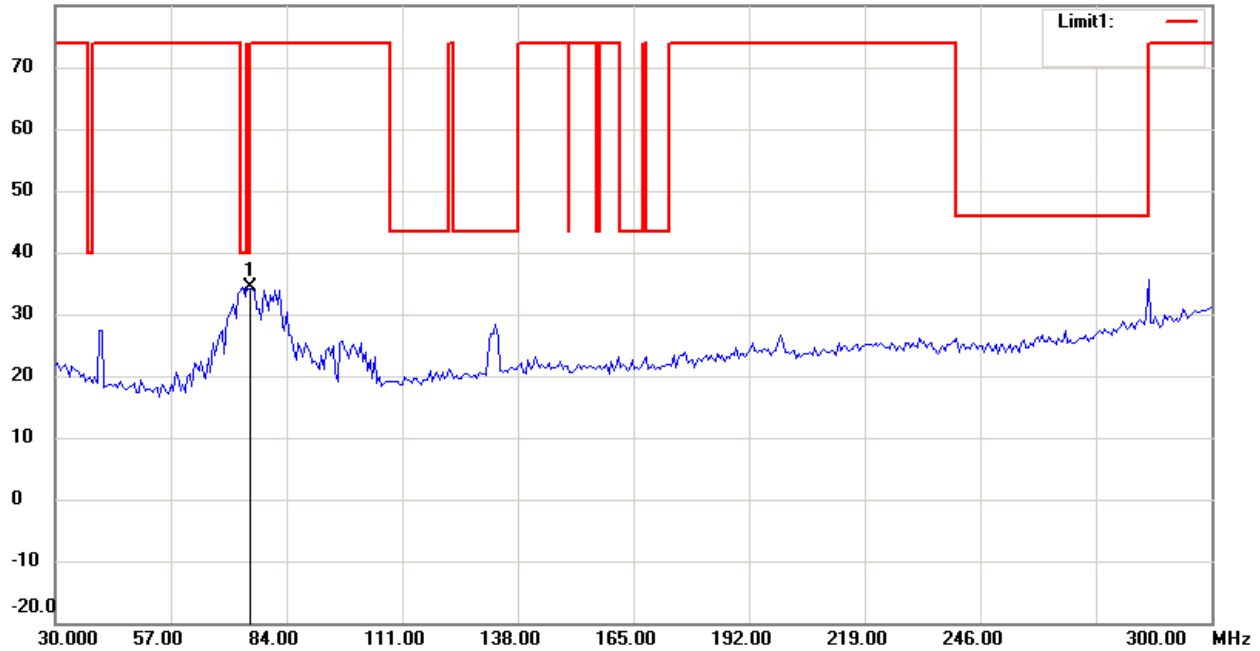


Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

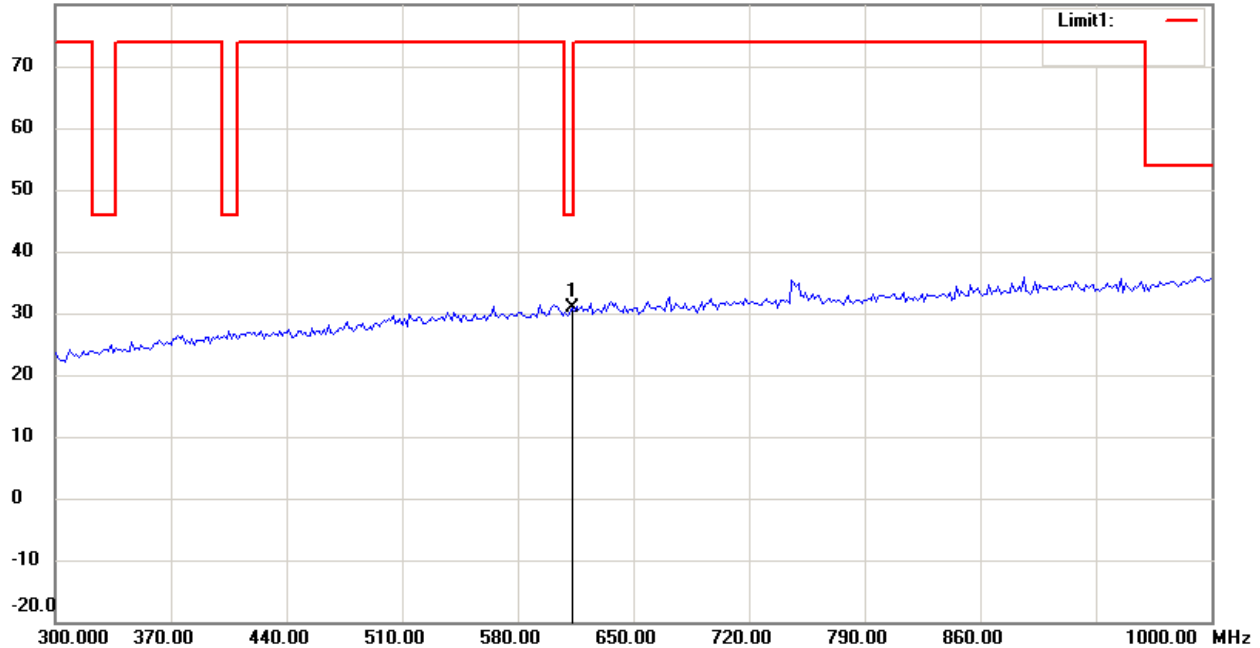
802.11g ch11

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

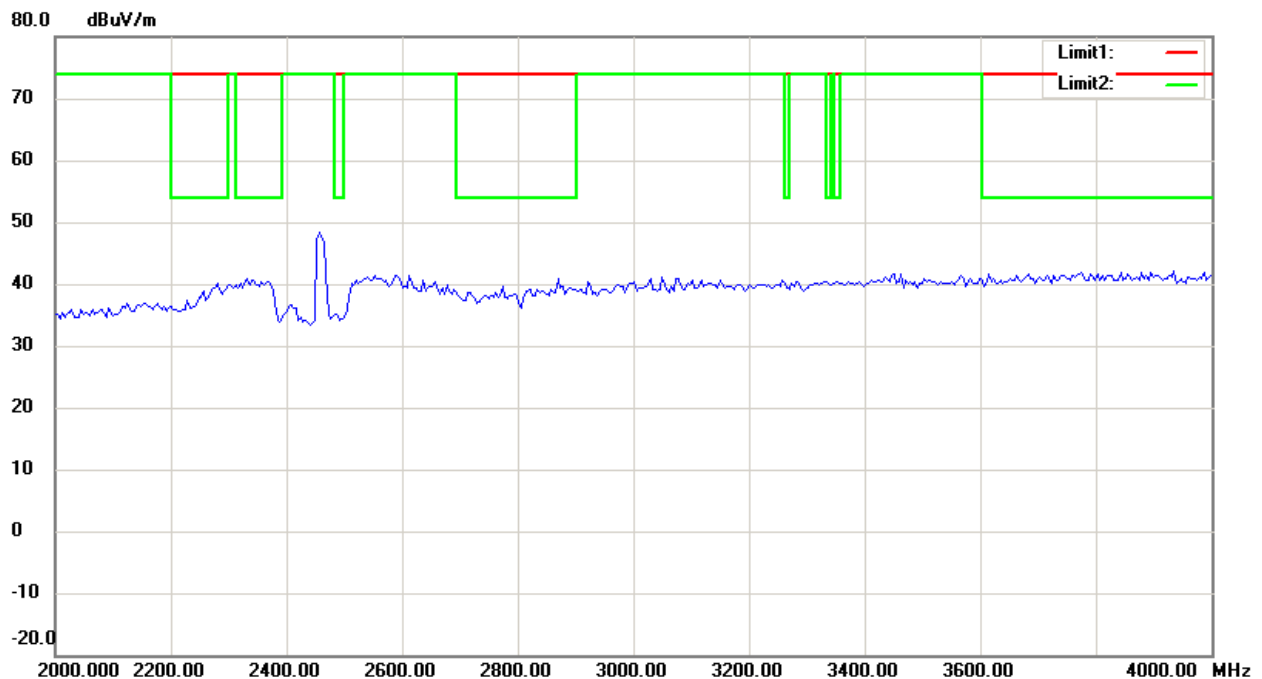
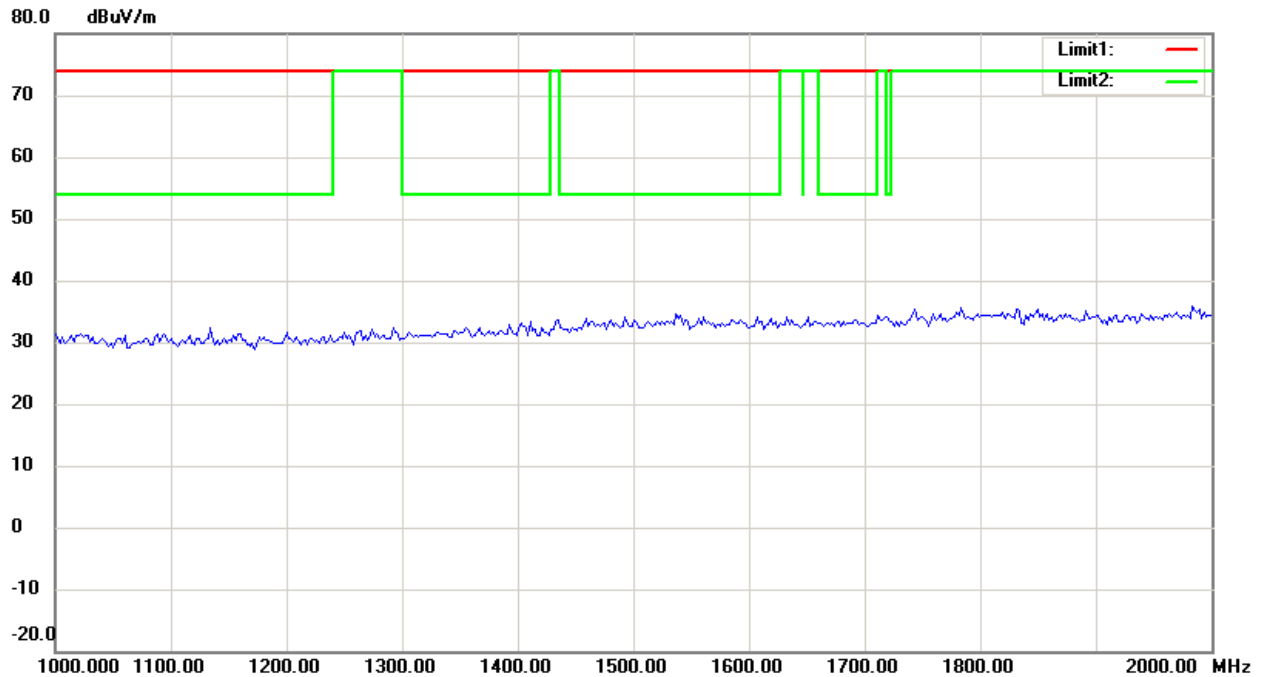
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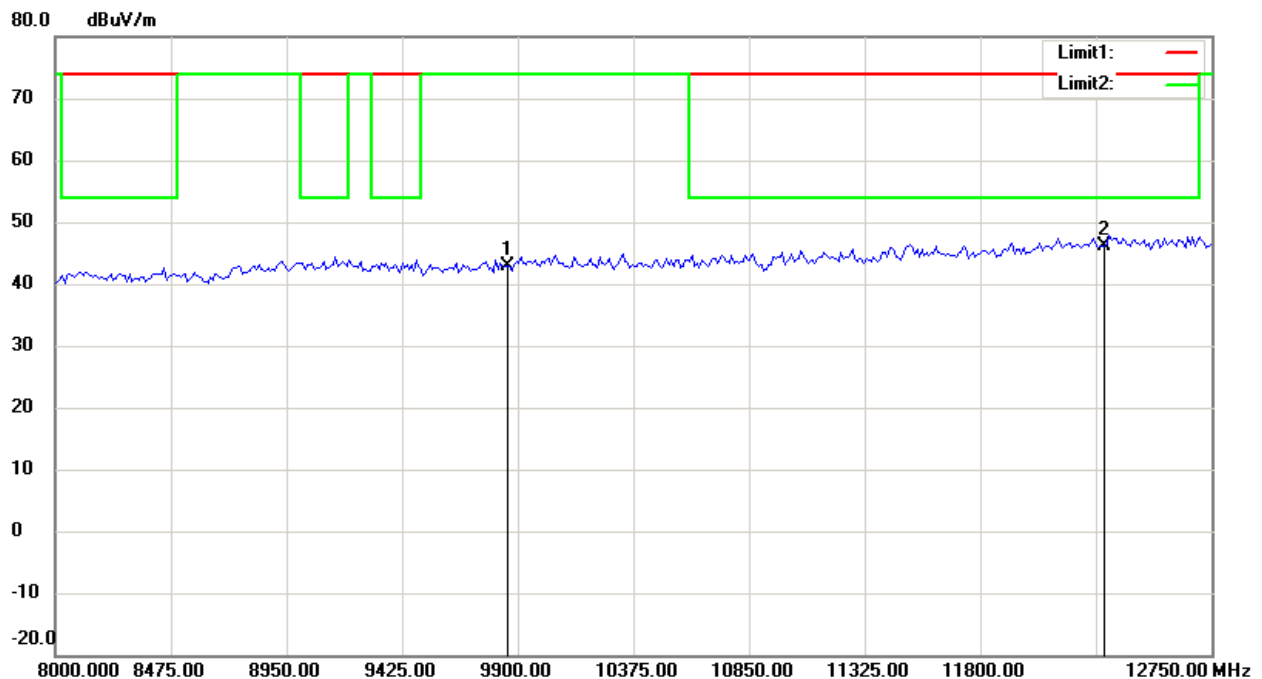
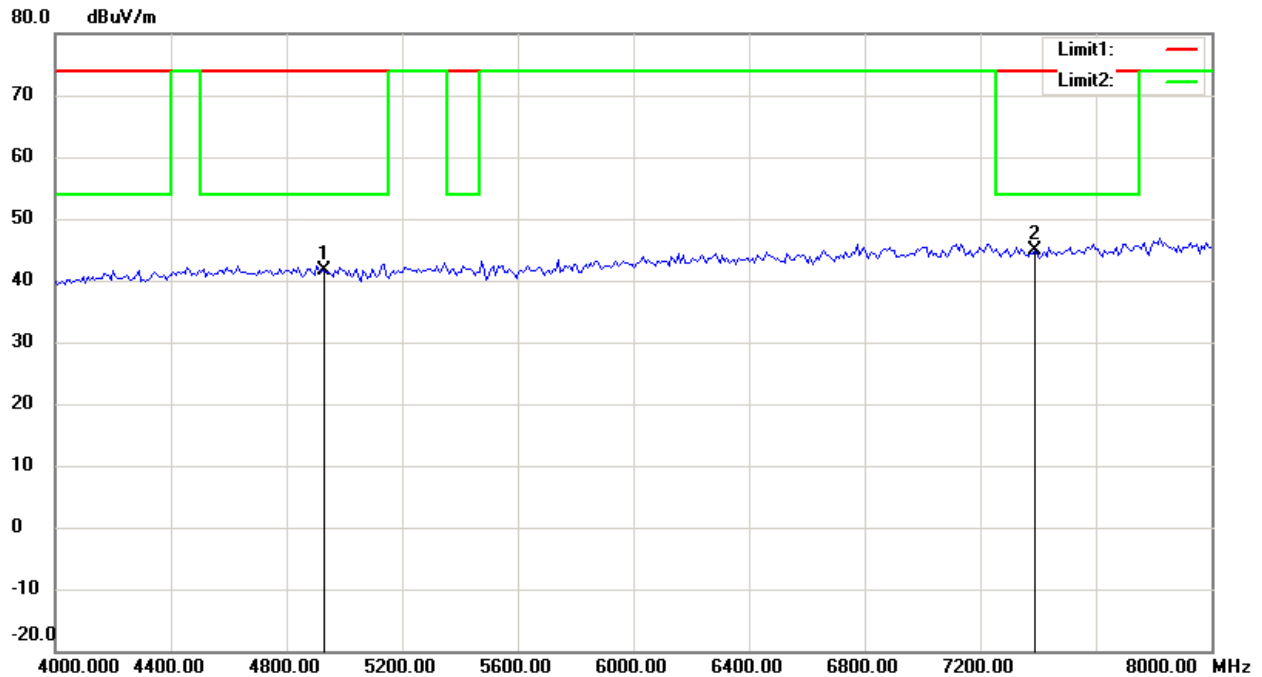
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**Note:**

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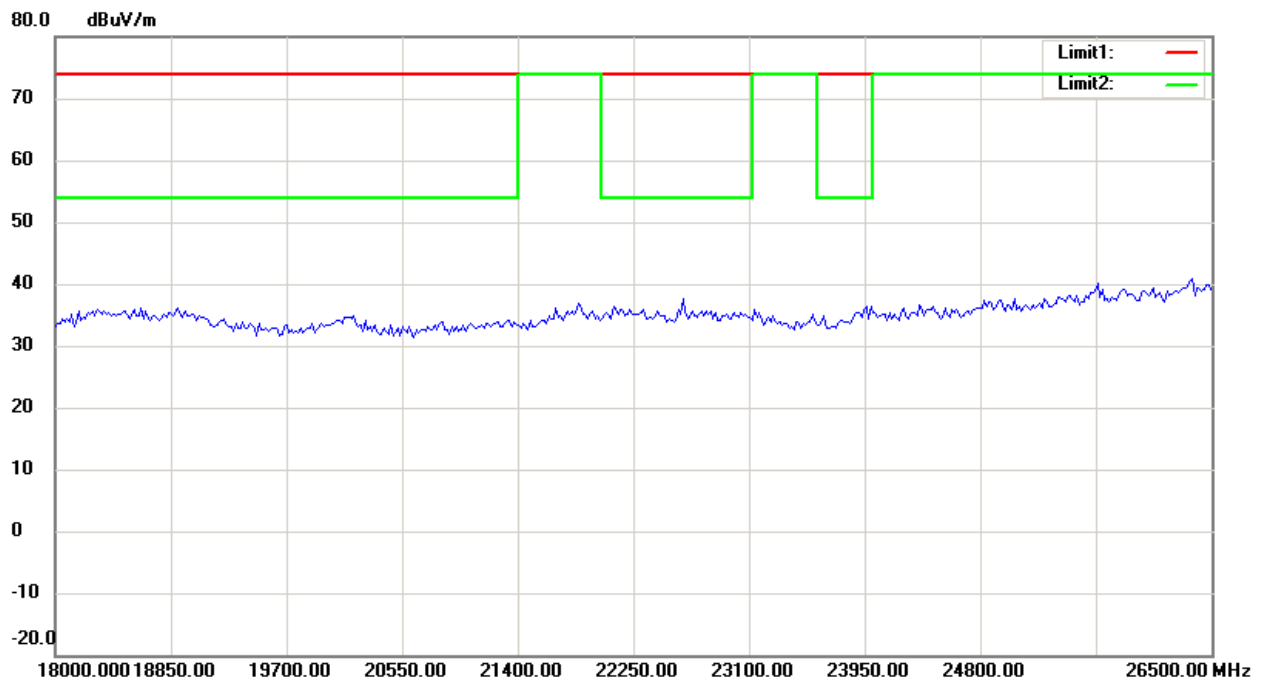
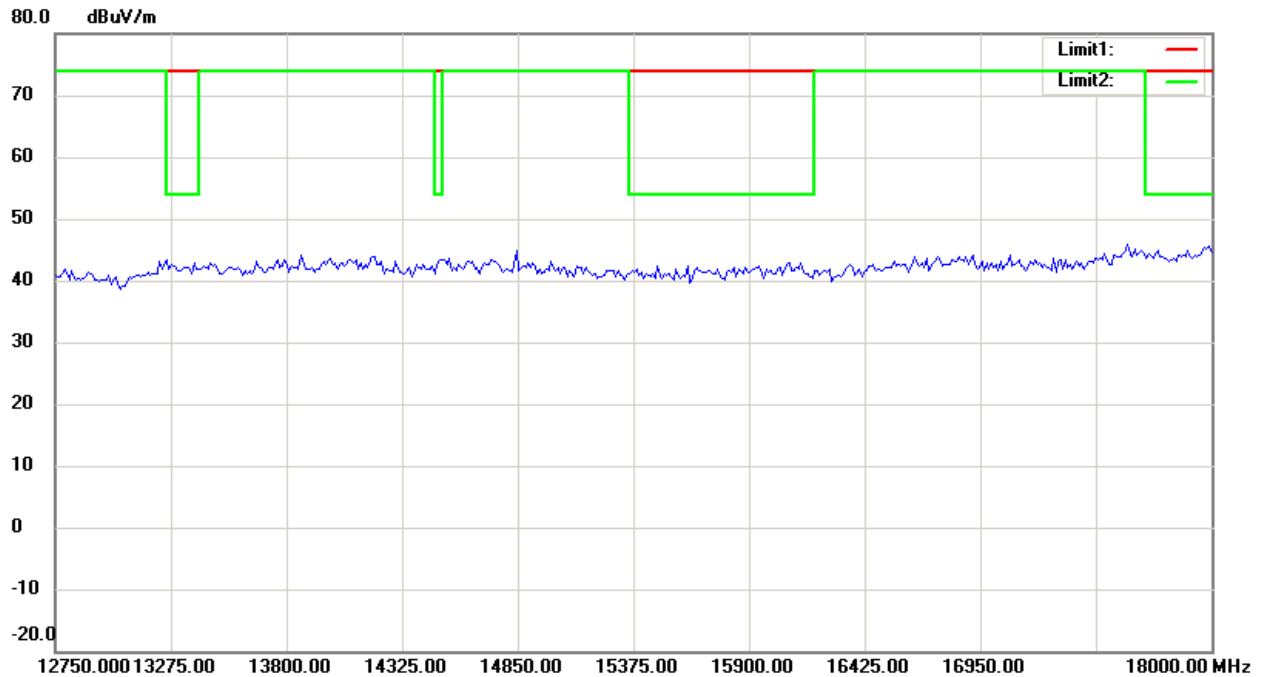
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FCC ID: IR5RF9



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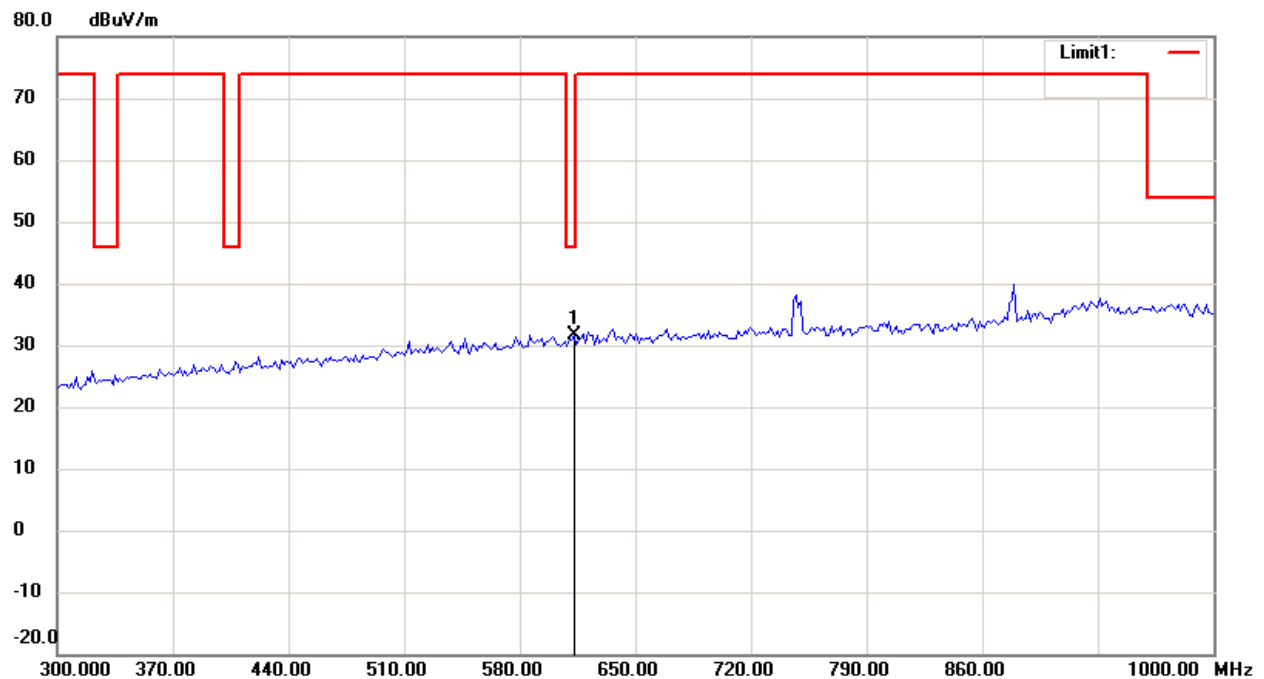
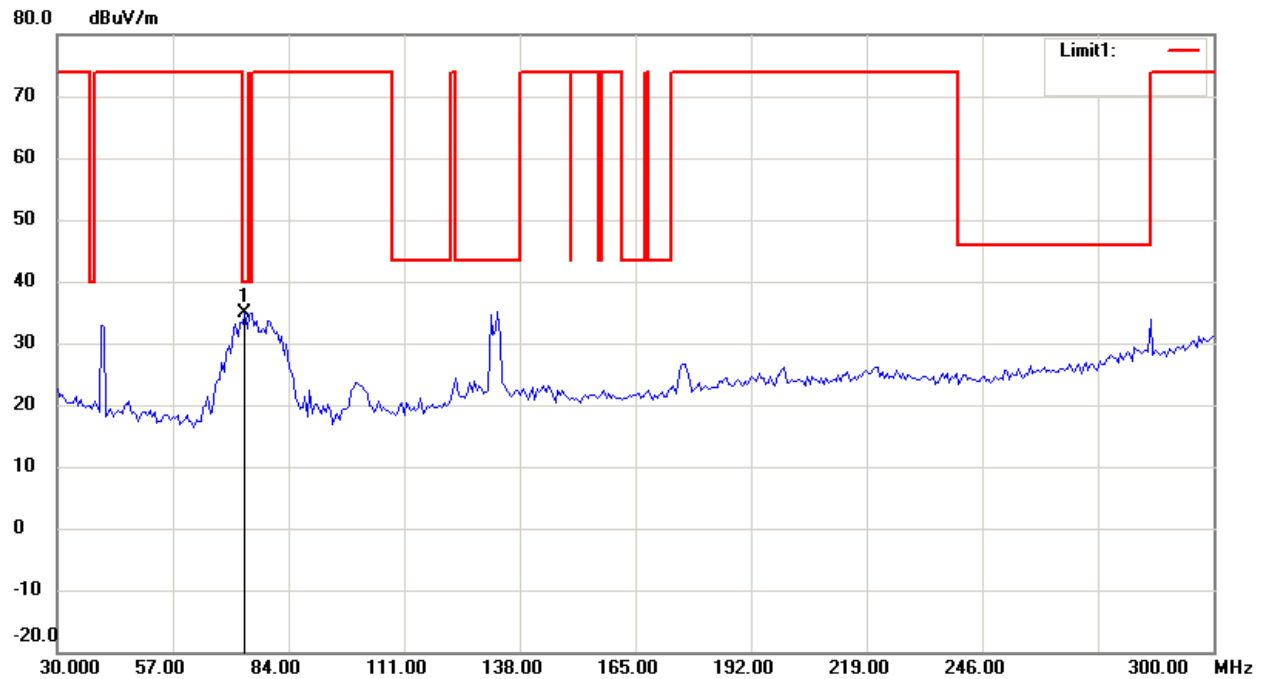




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

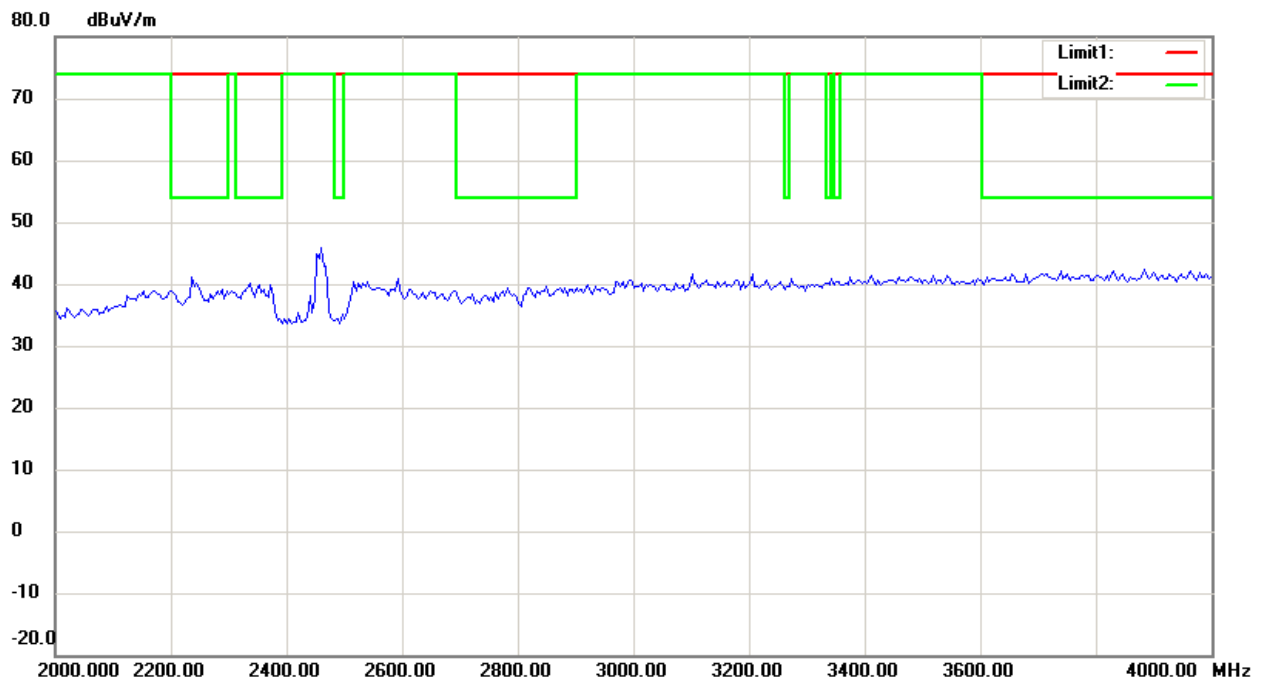
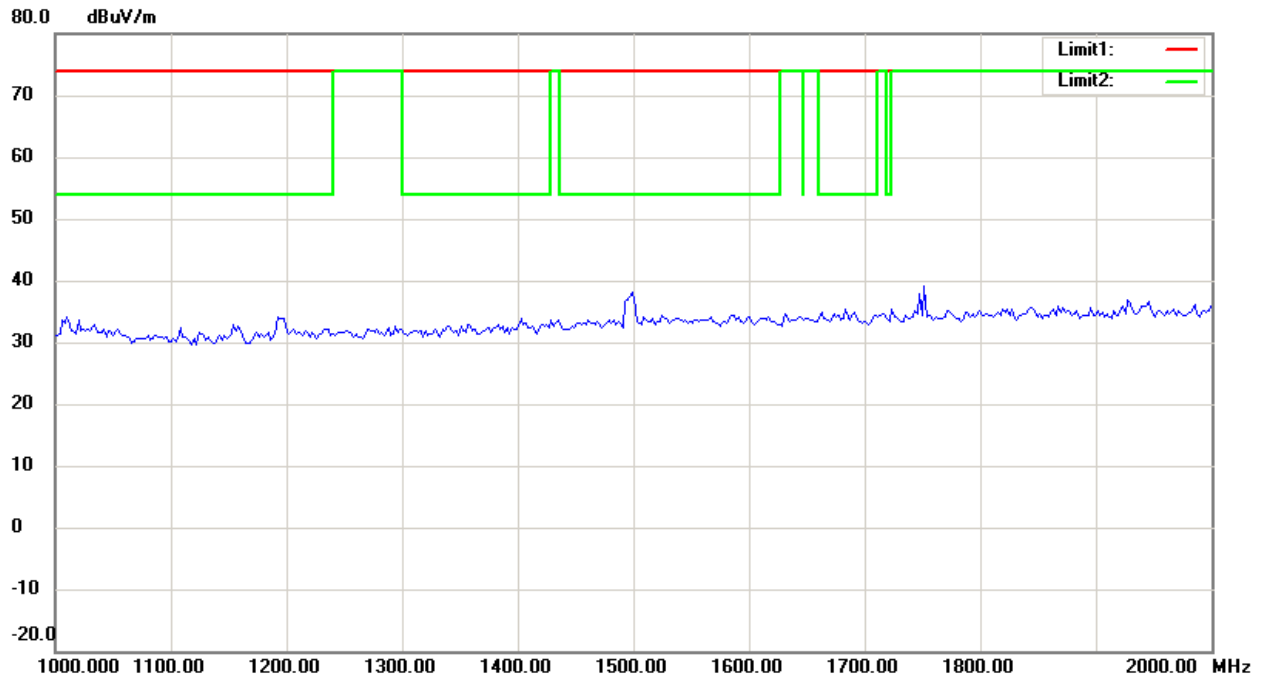
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FCC ID: IR5RF9



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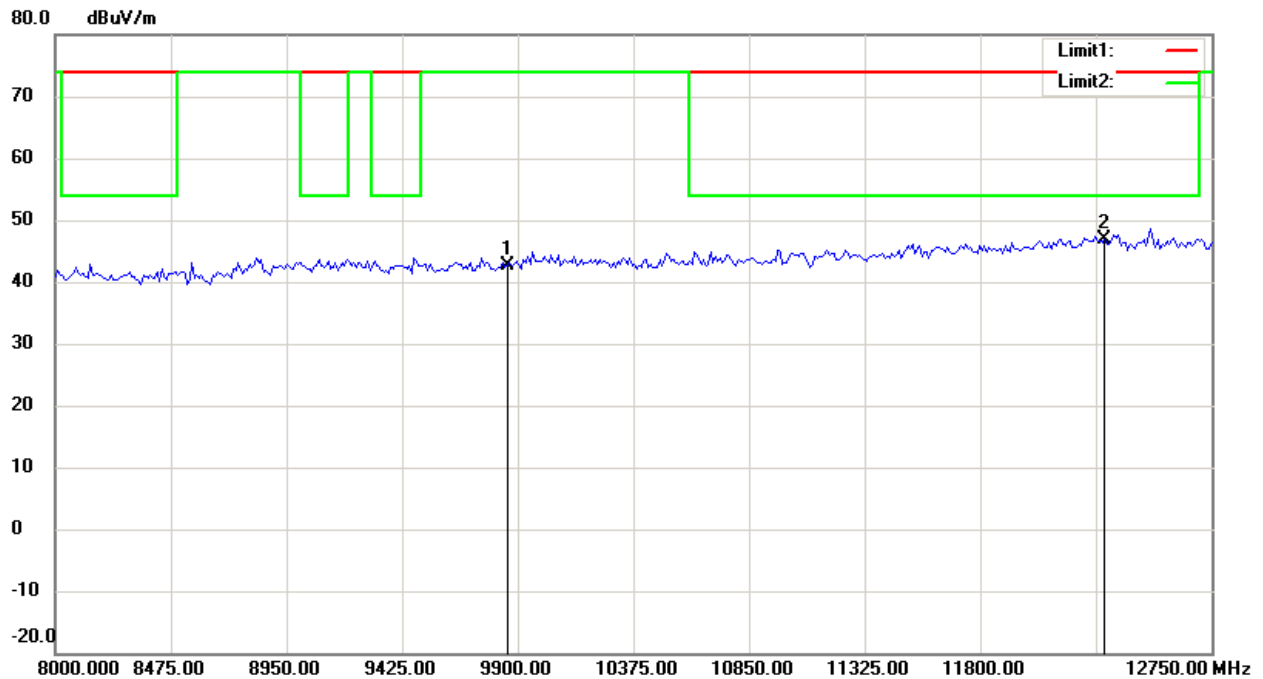
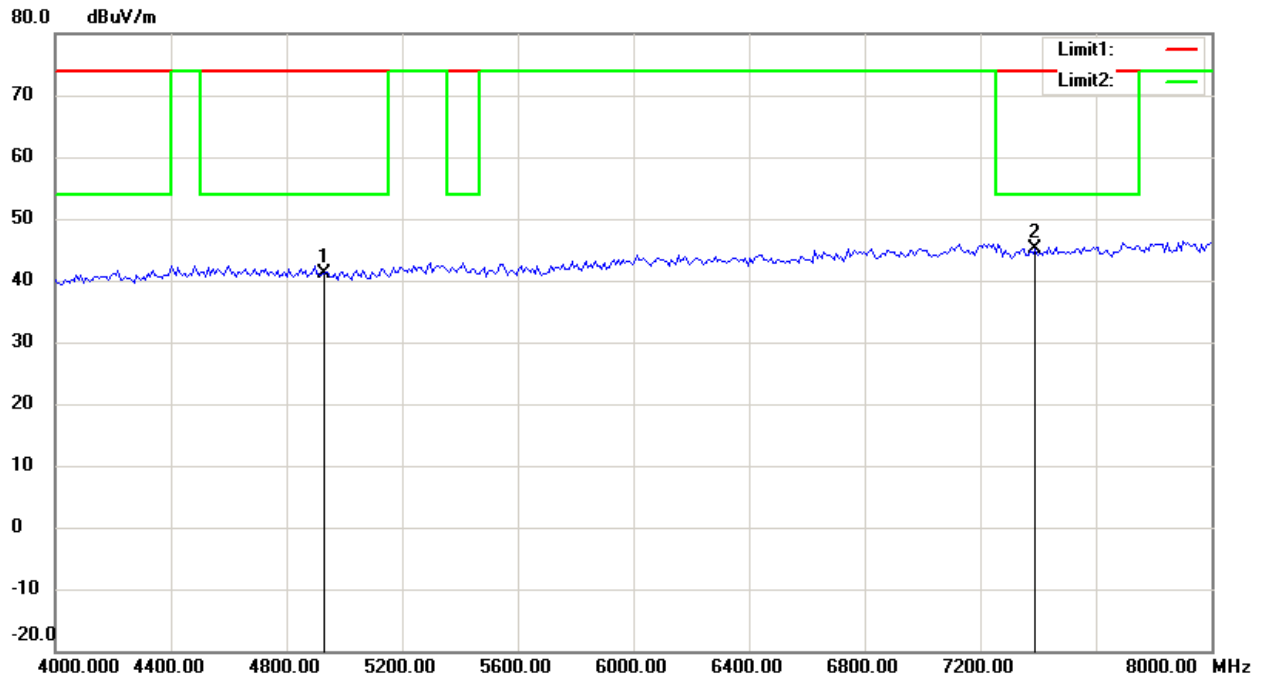
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**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

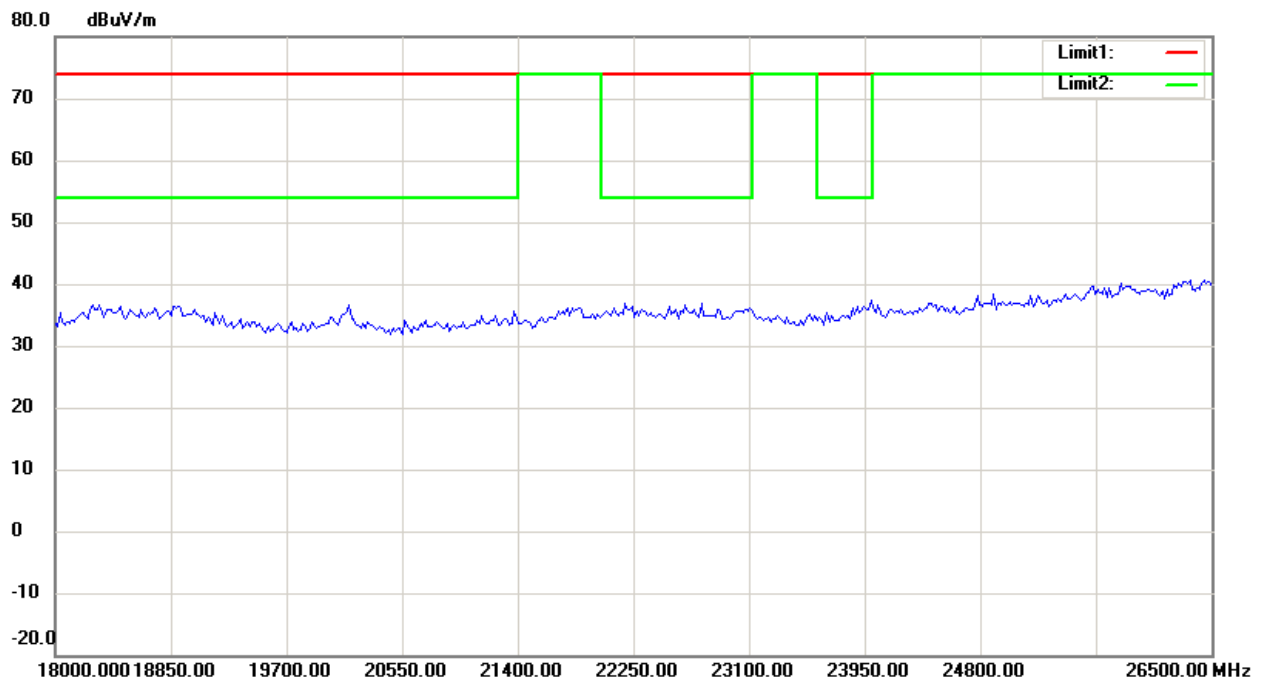
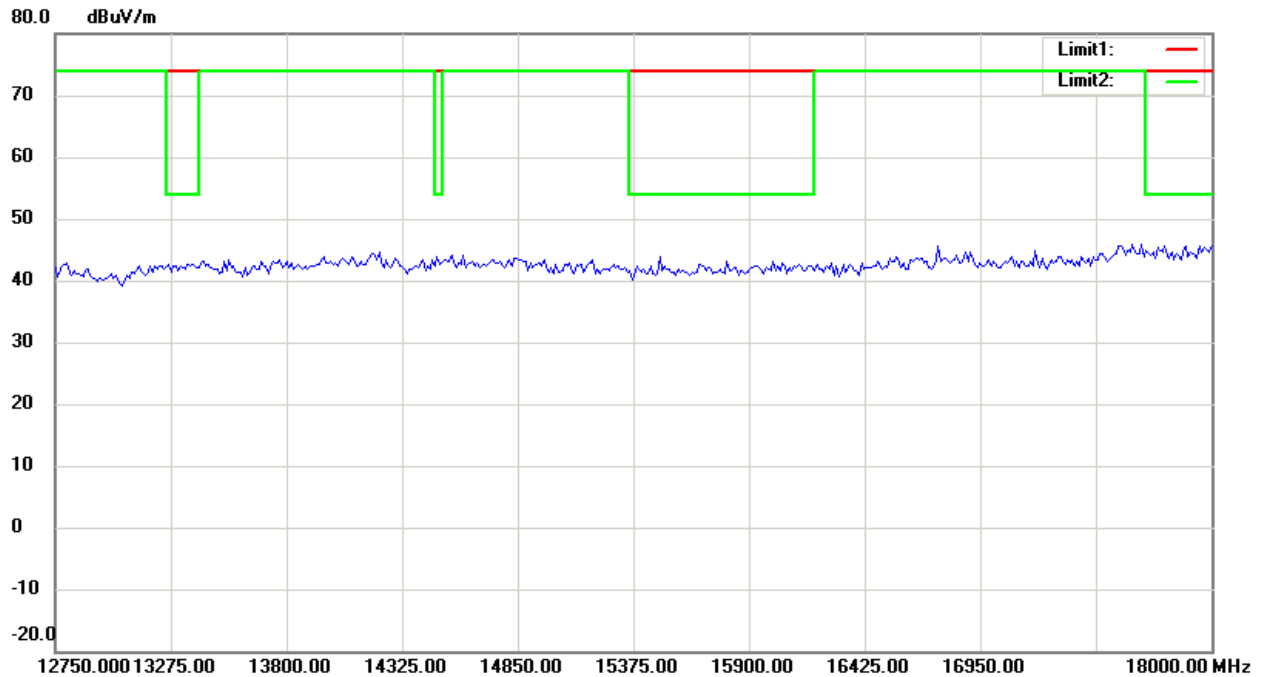
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**Note:**

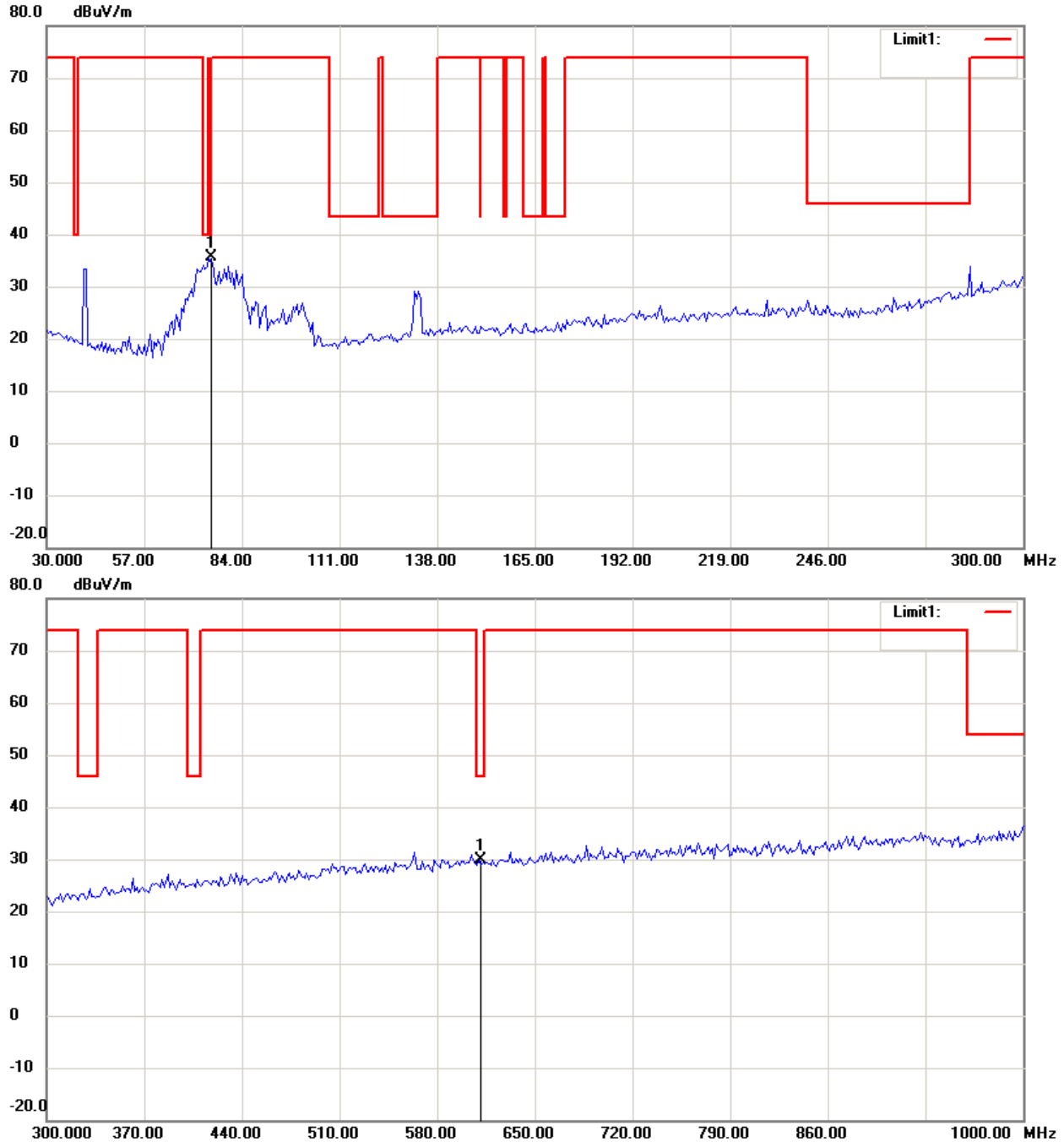
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802.11n 20MHz ch1  
Antenna Polarization H



**Note:**

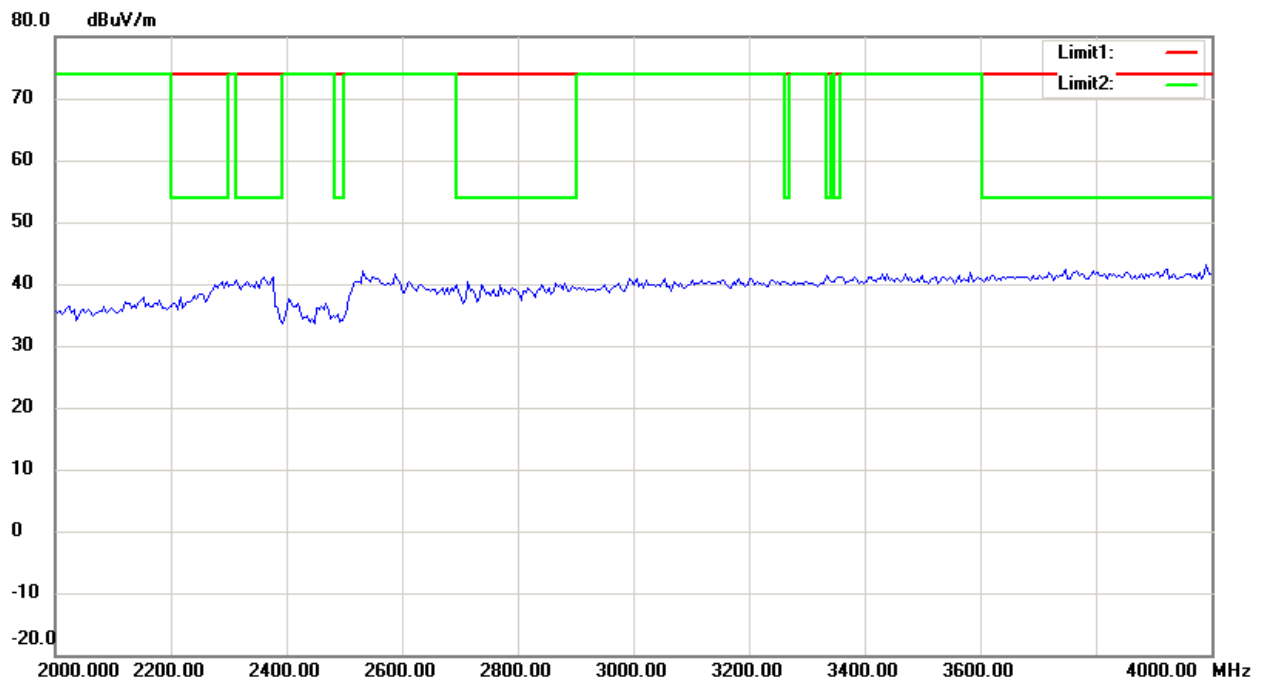
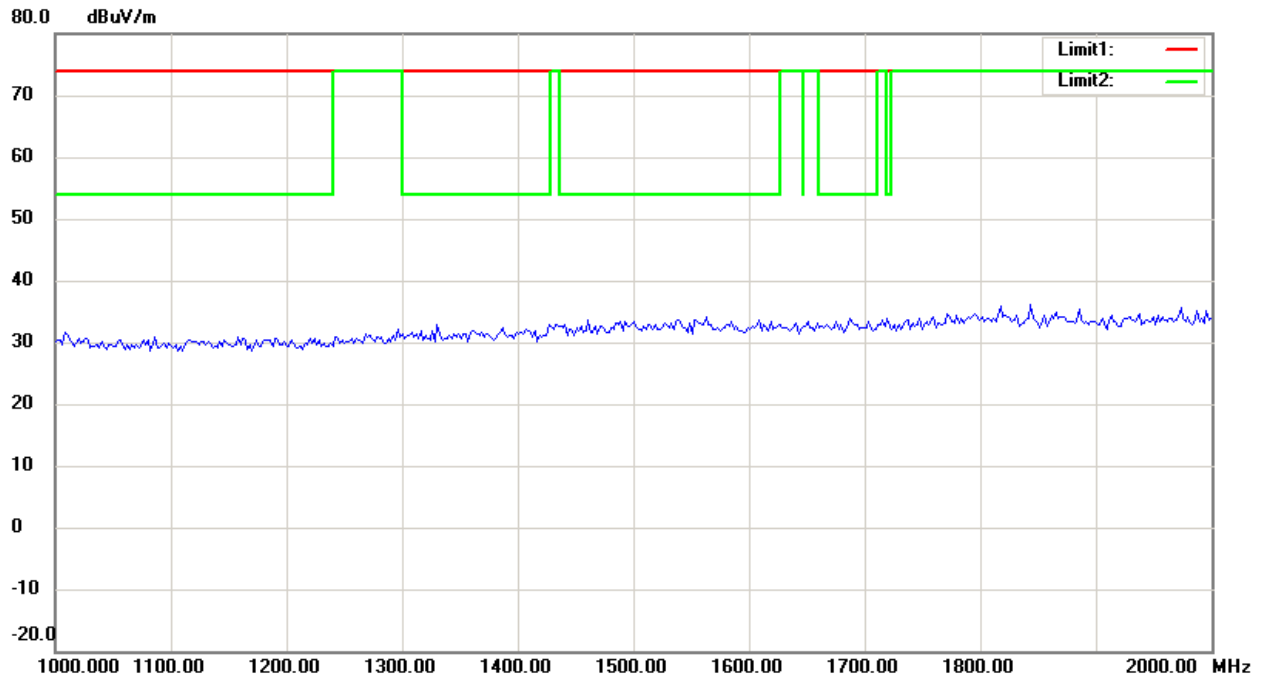
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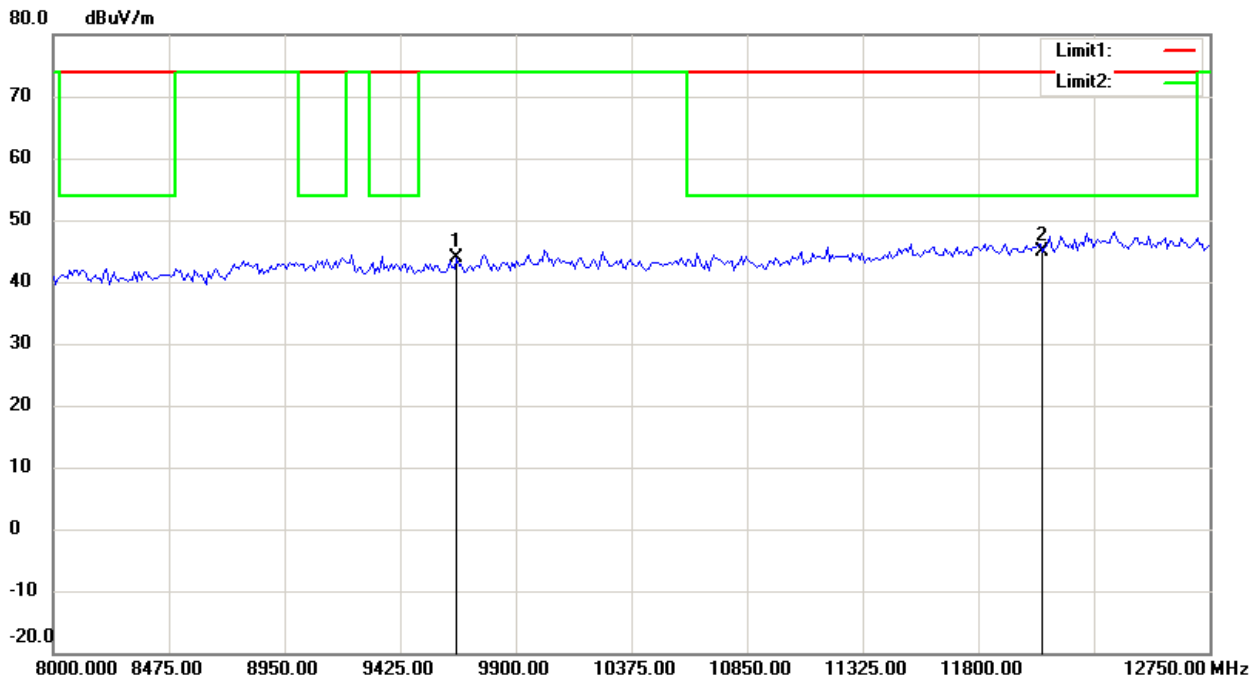
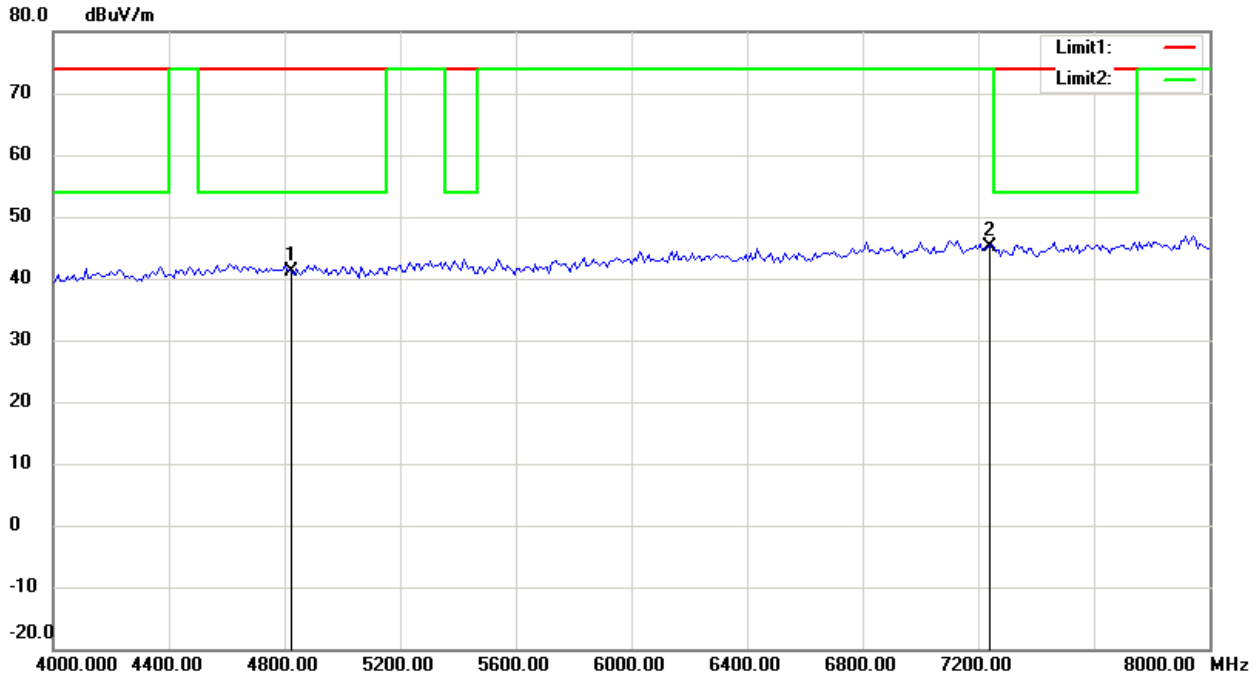
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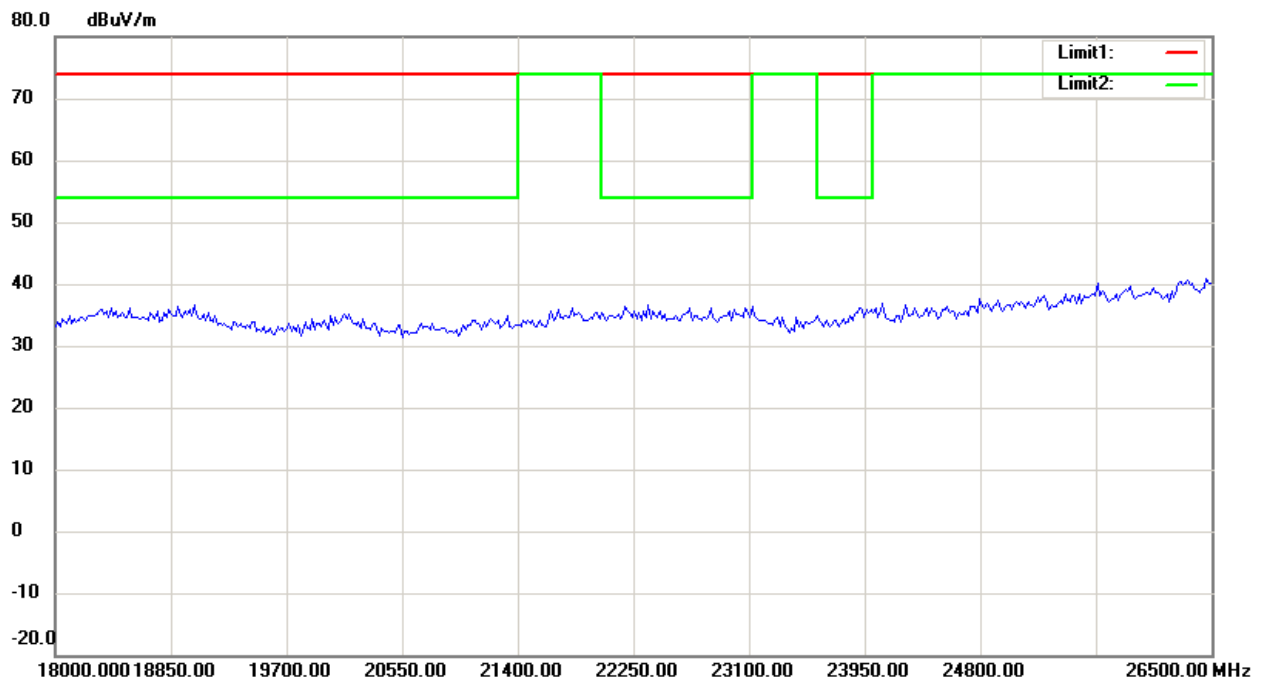
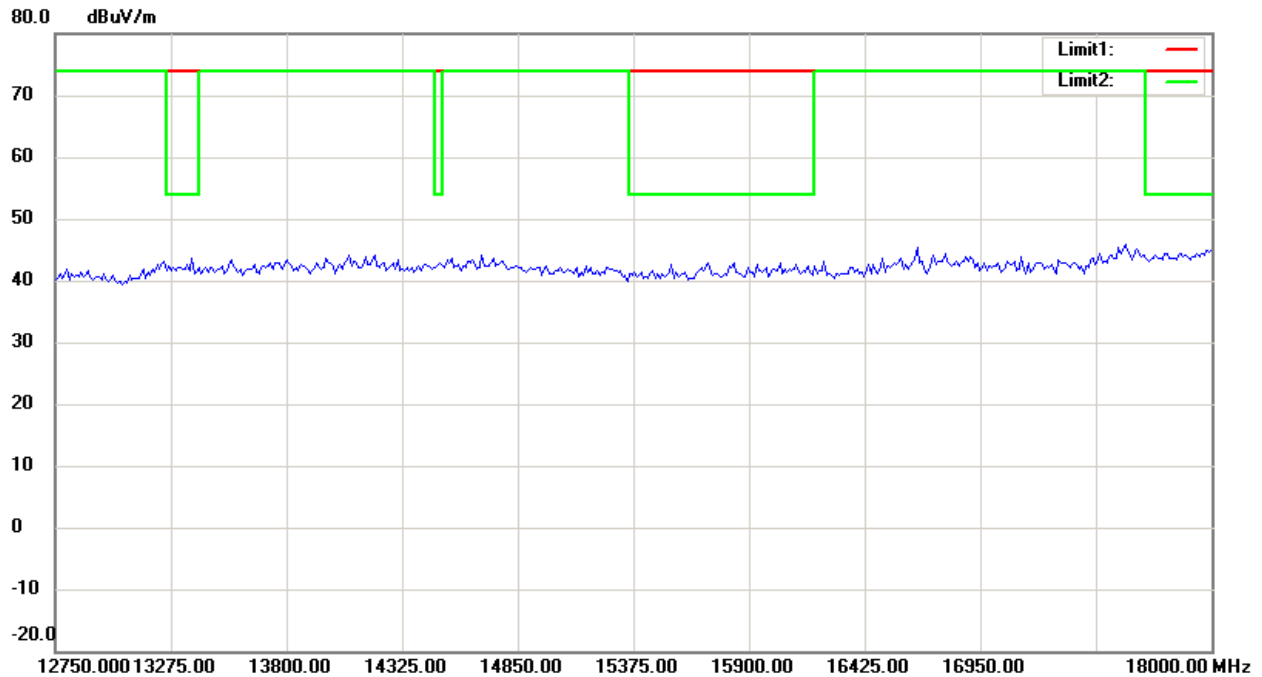
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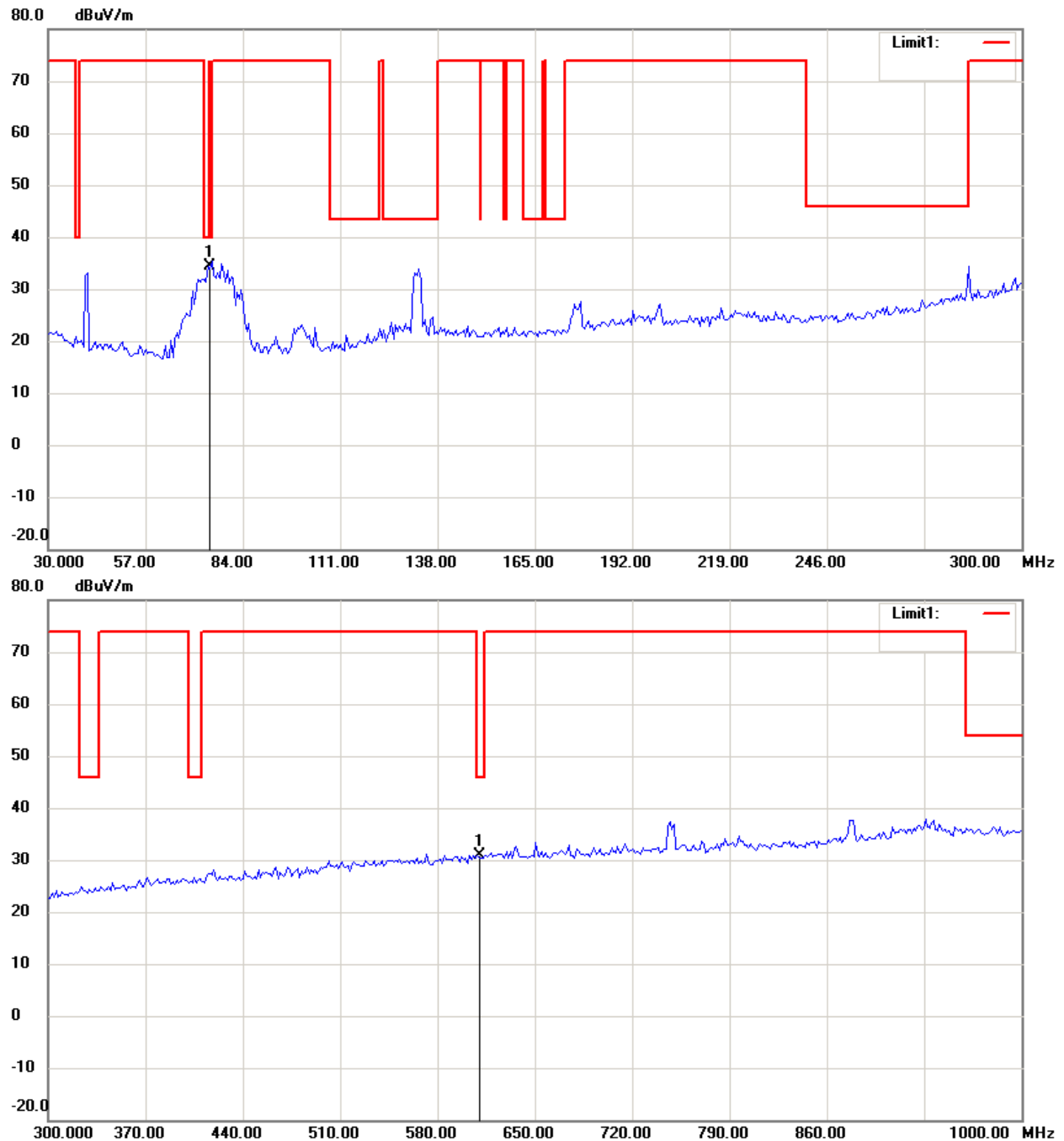




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

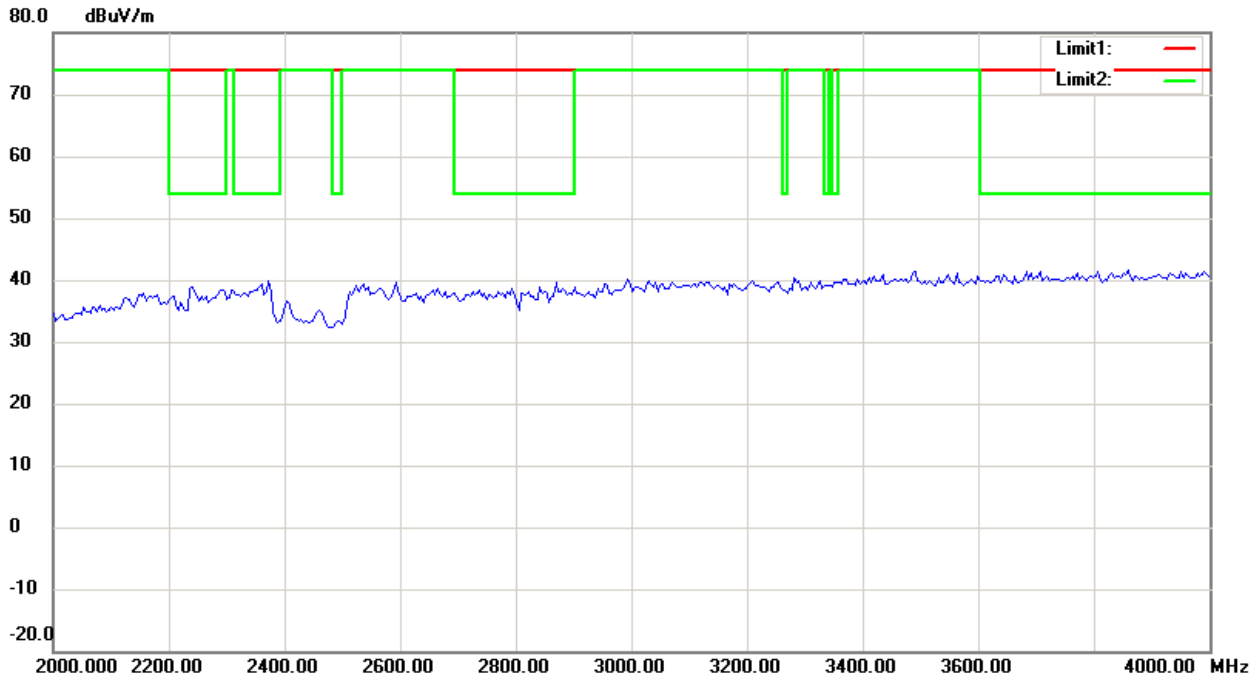
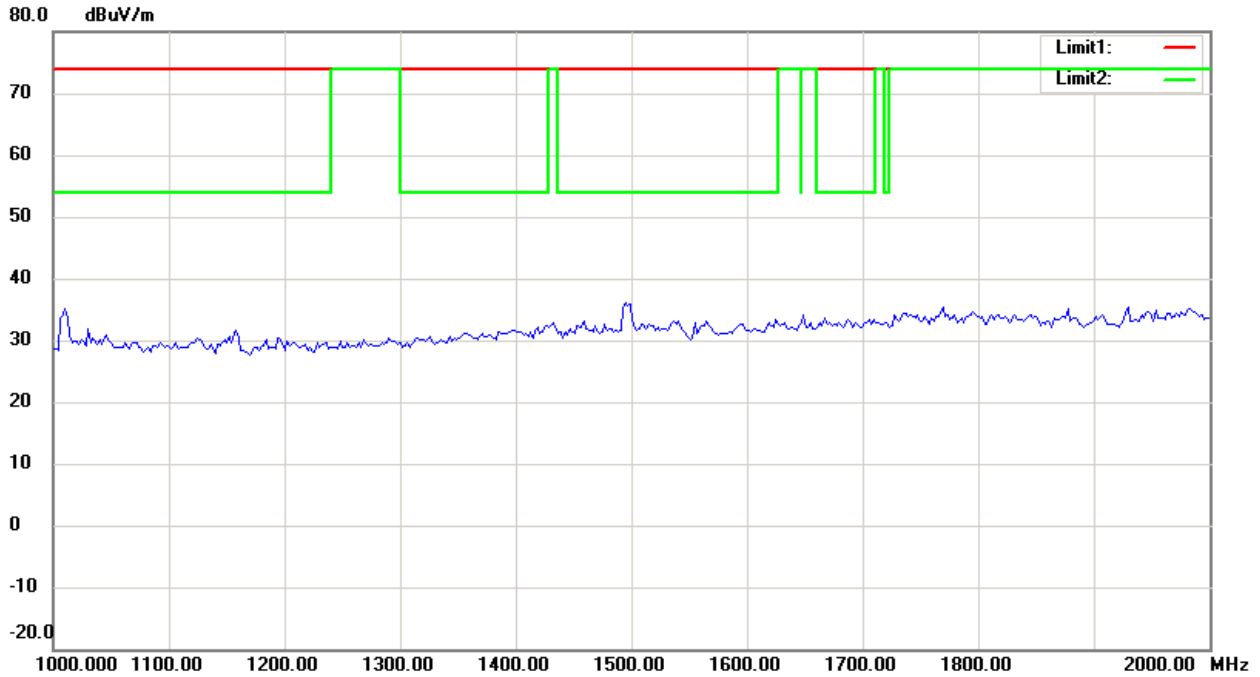
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**Note:**

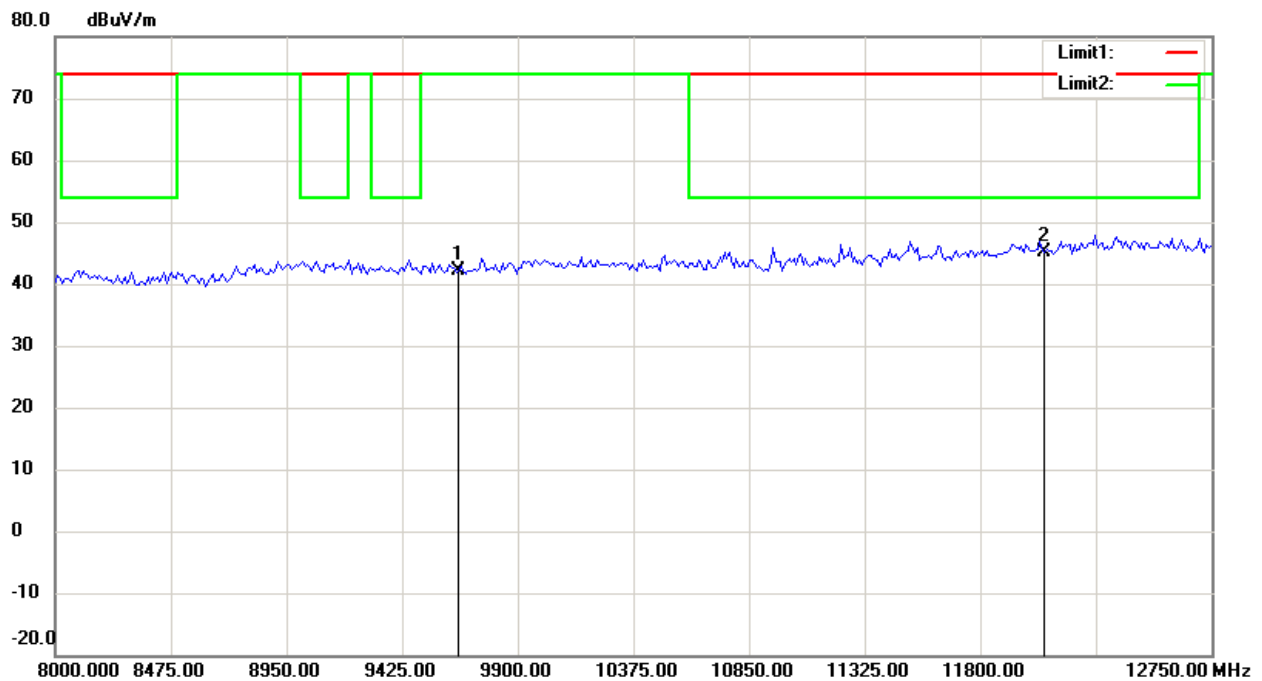
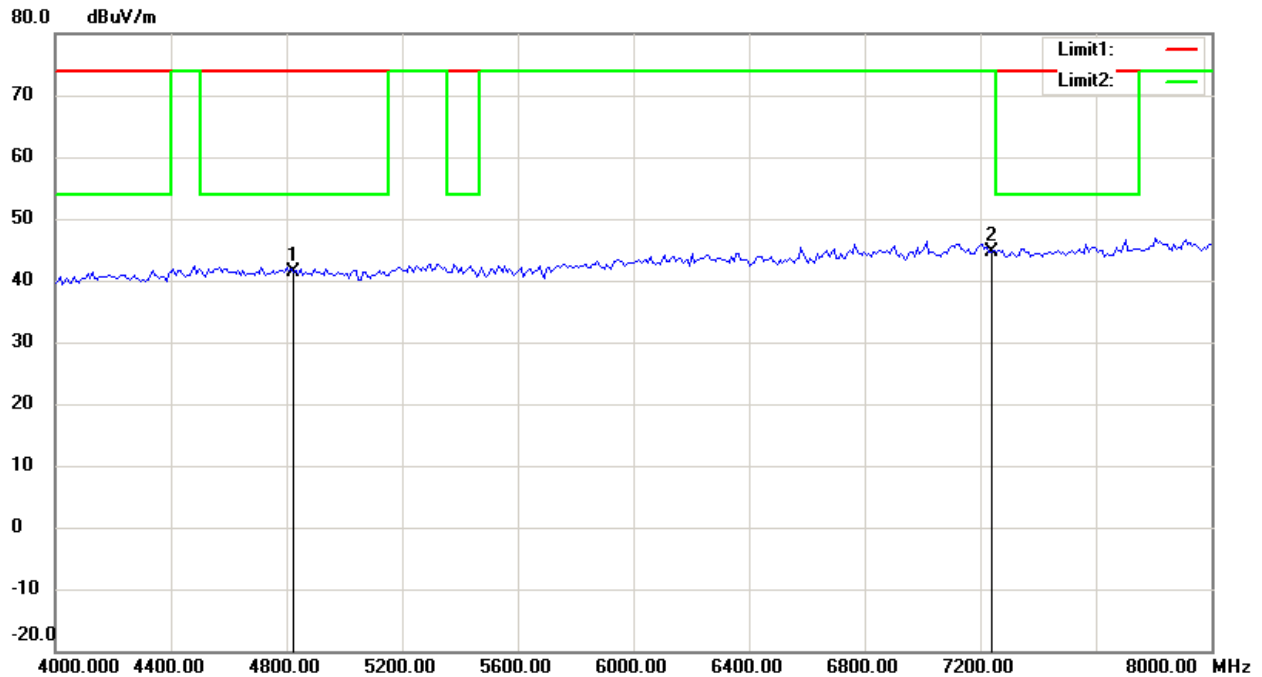
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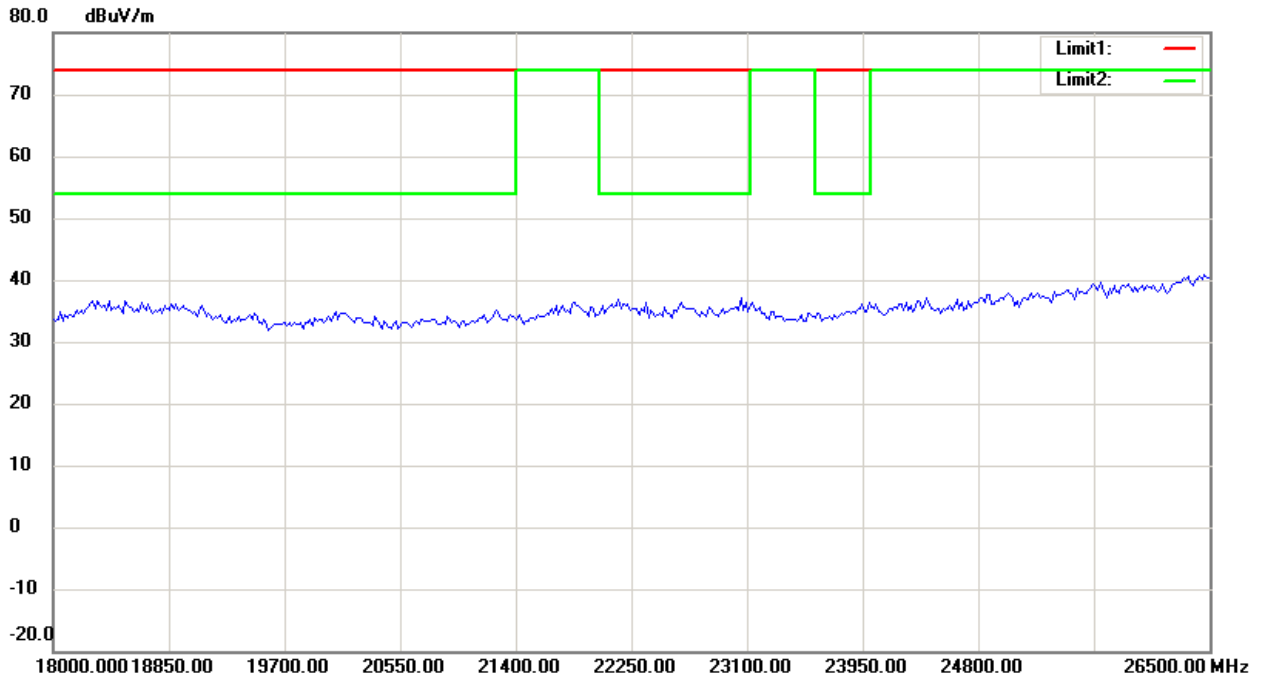
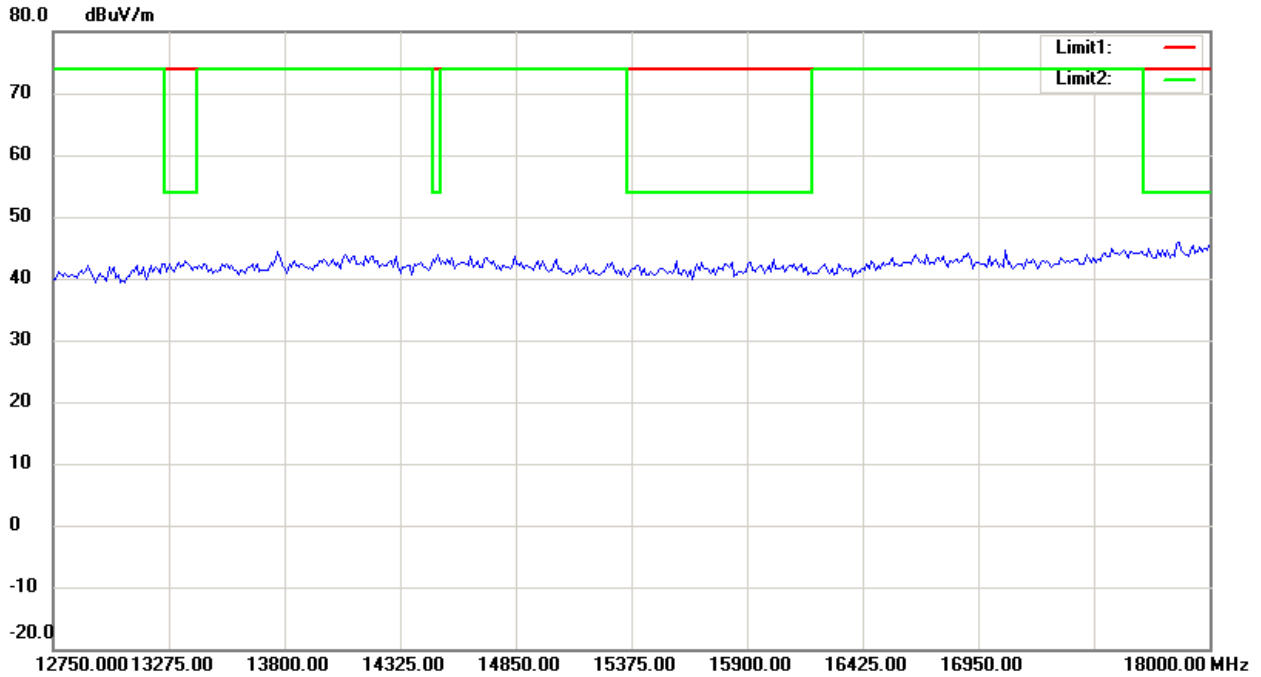
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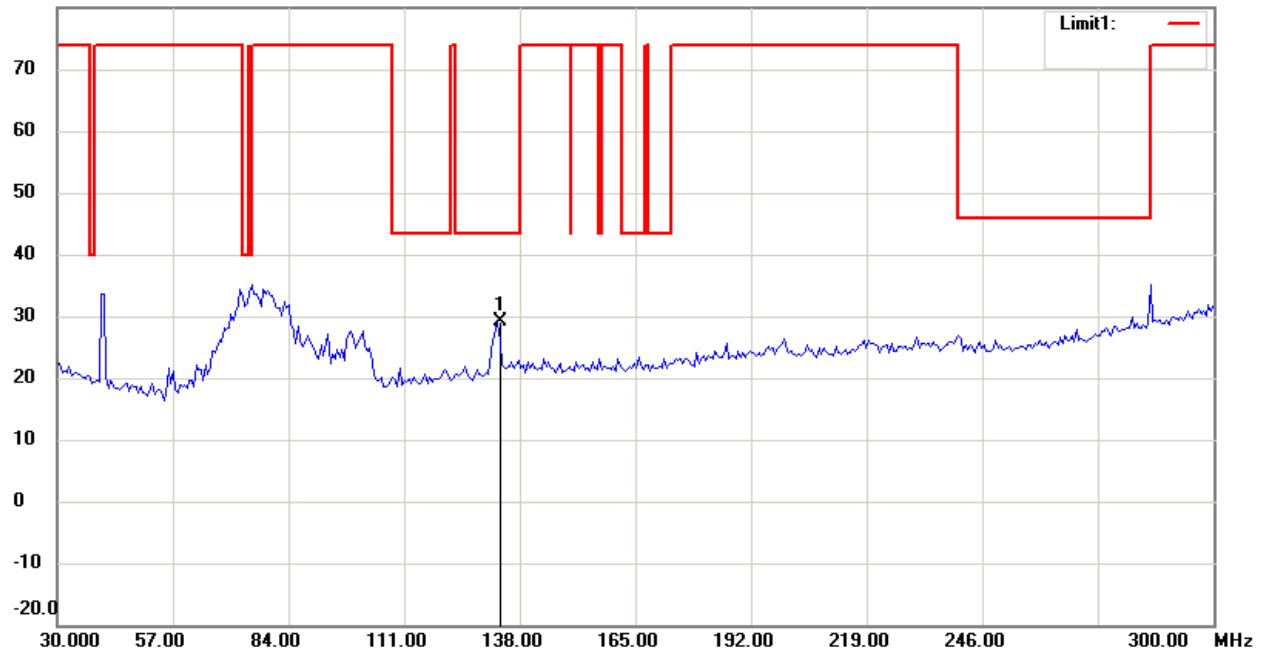
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

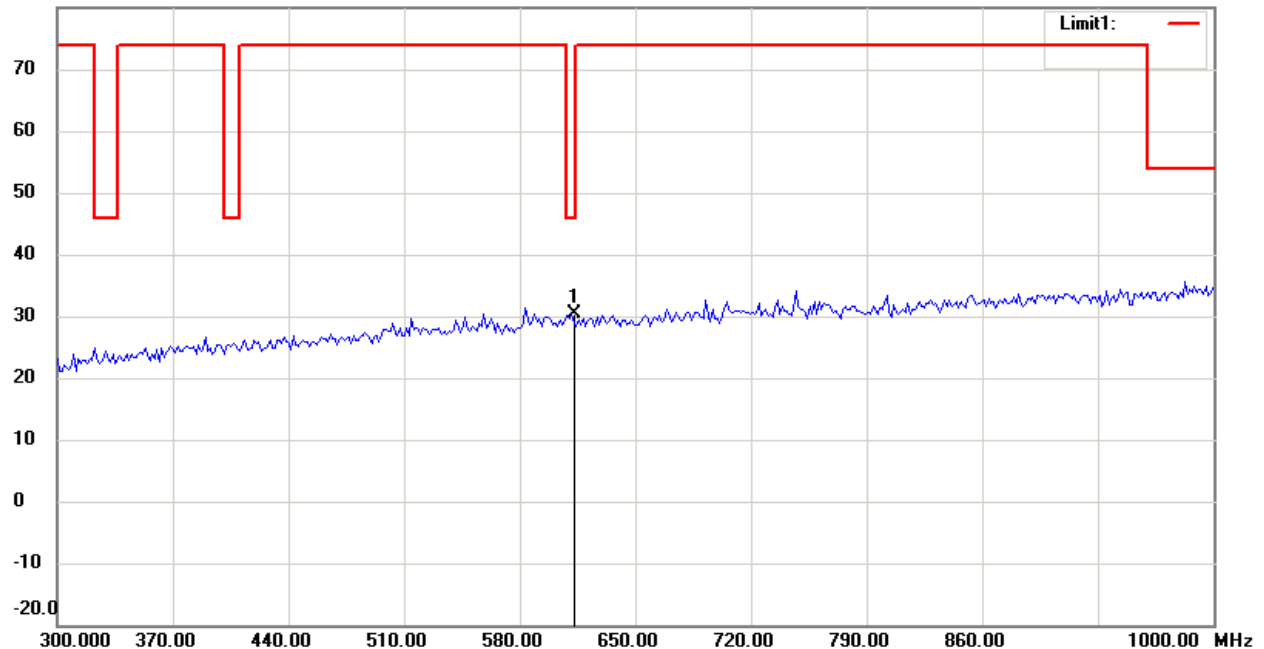
802.11n 20MHz ch6

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

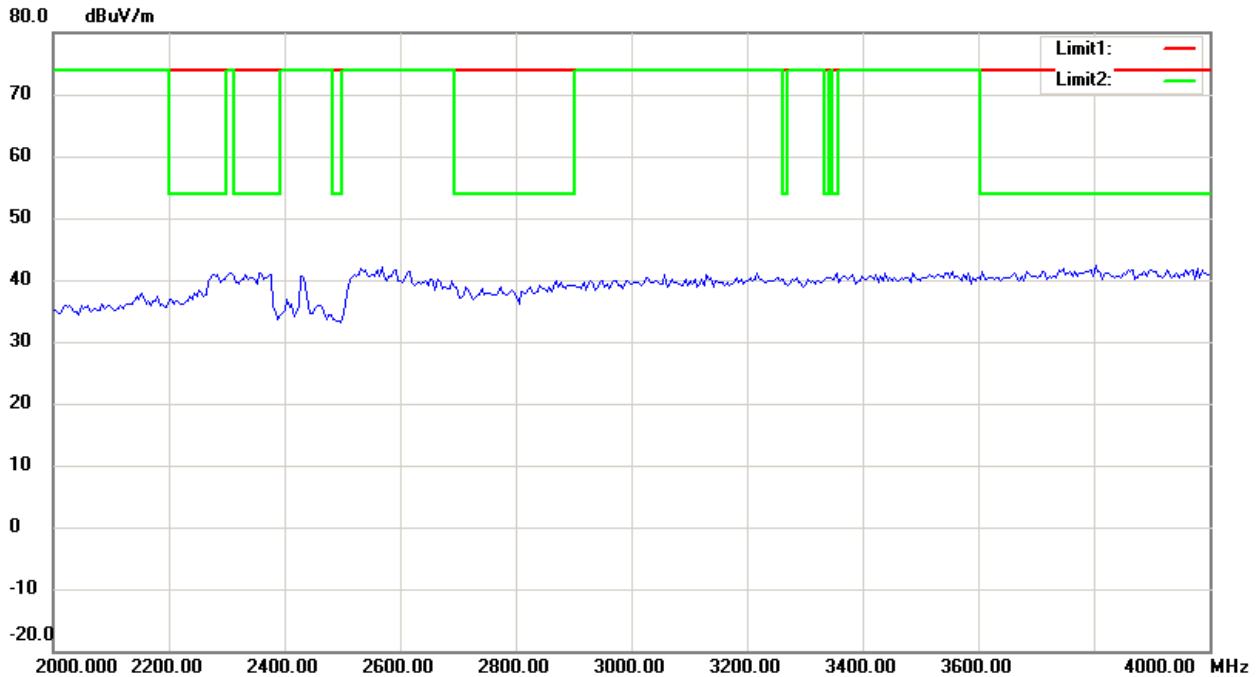
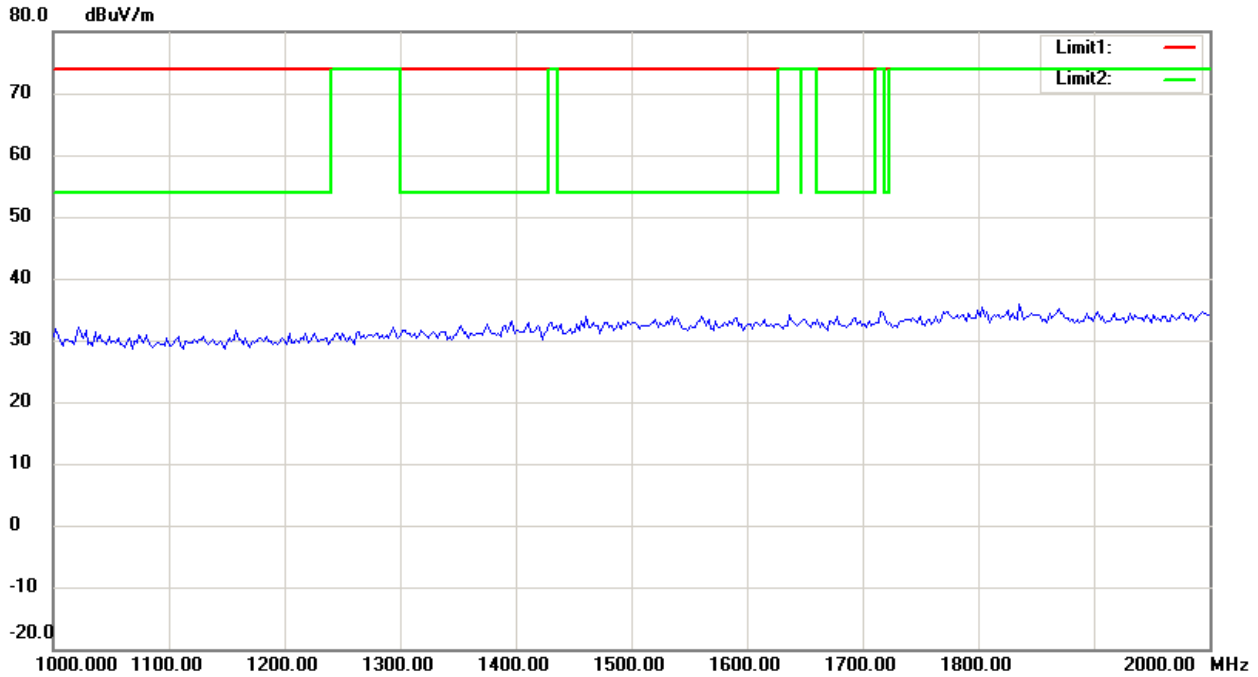
Up Line: Peak Limit Line Down Line: Ave Limit Line

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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



**Note:**

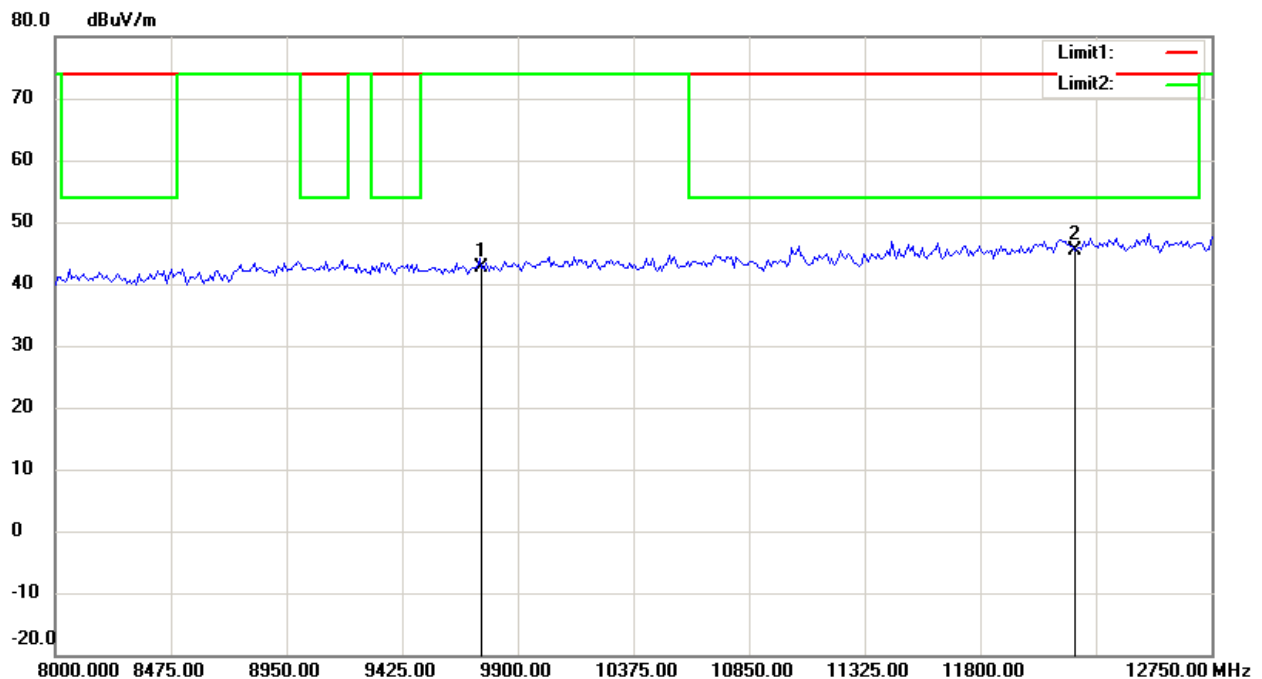
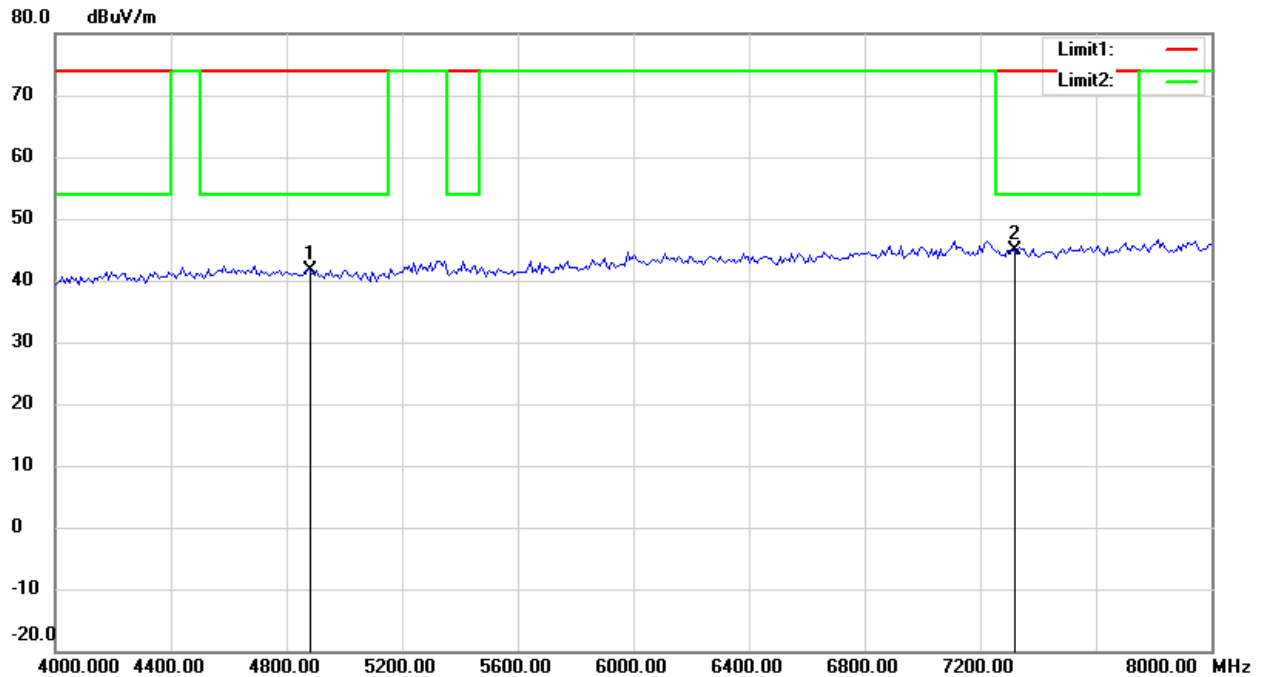
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

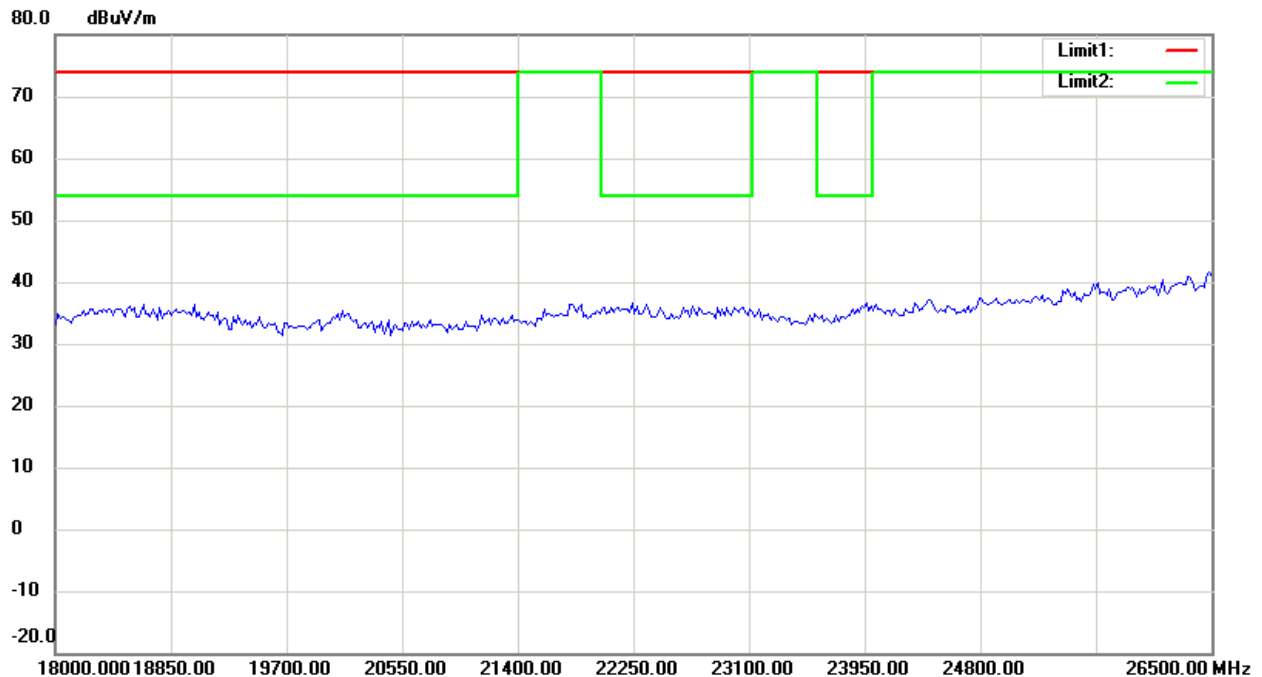
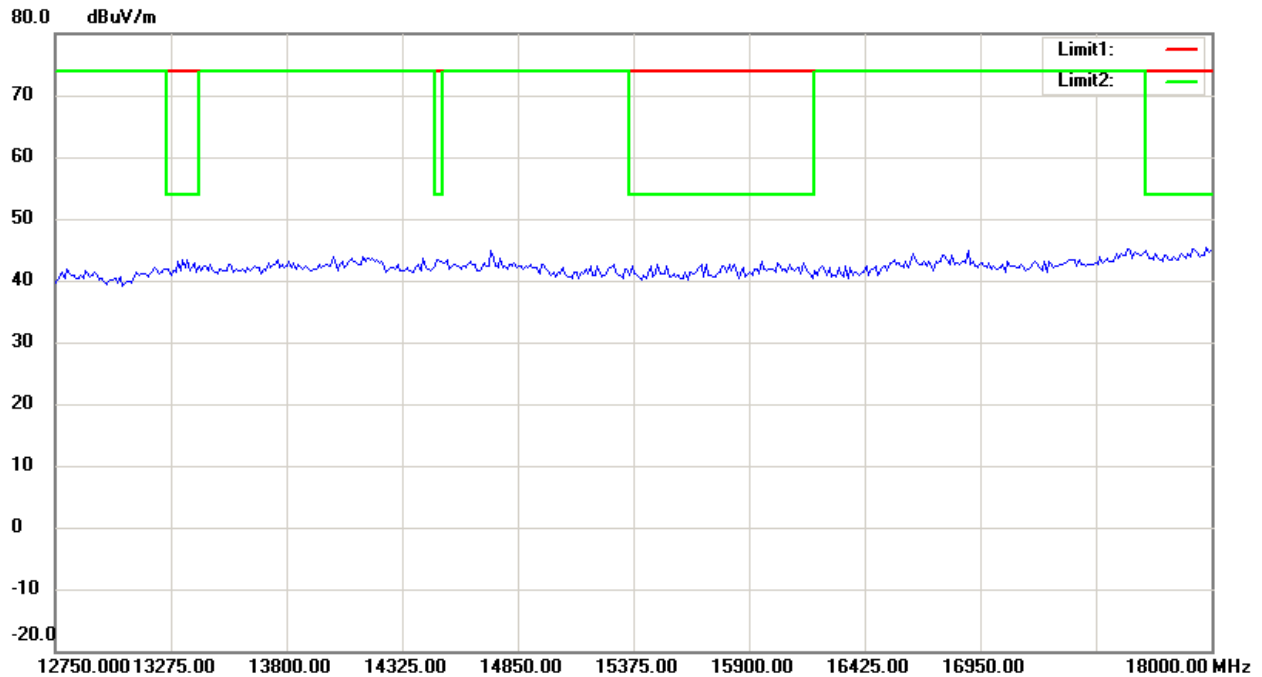
**Up Line: Peak Limit Line Down Line: Ave Limit Line**

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

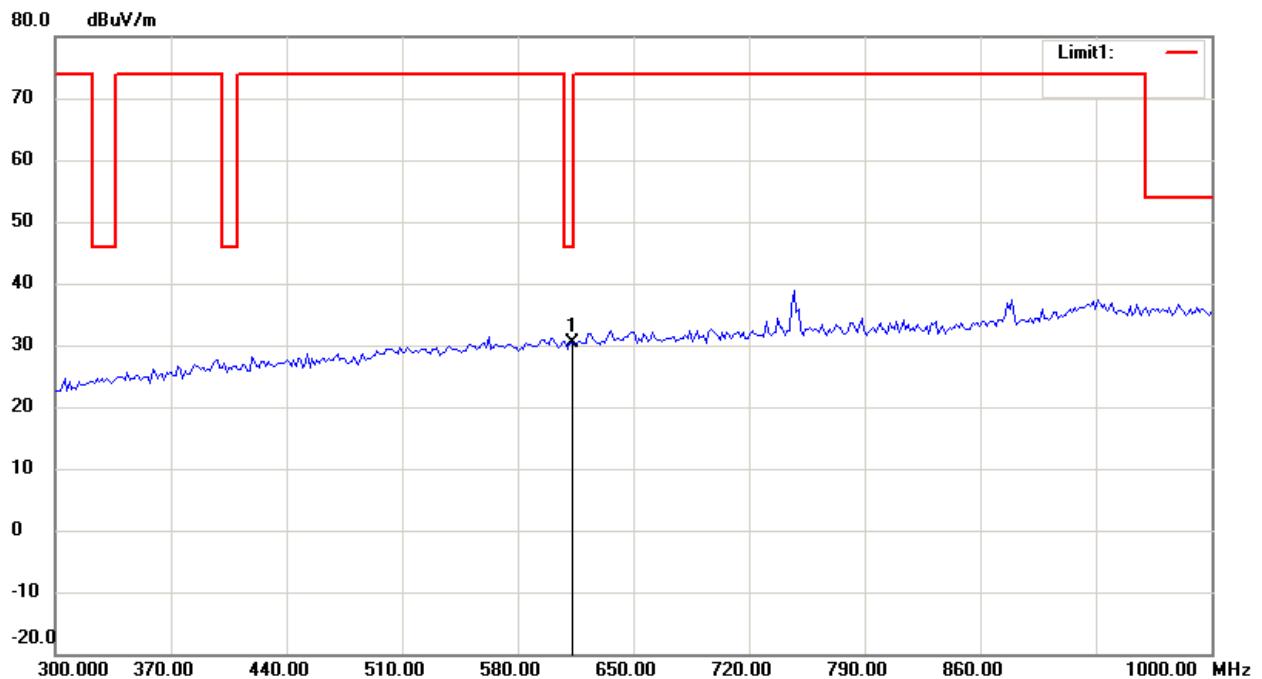
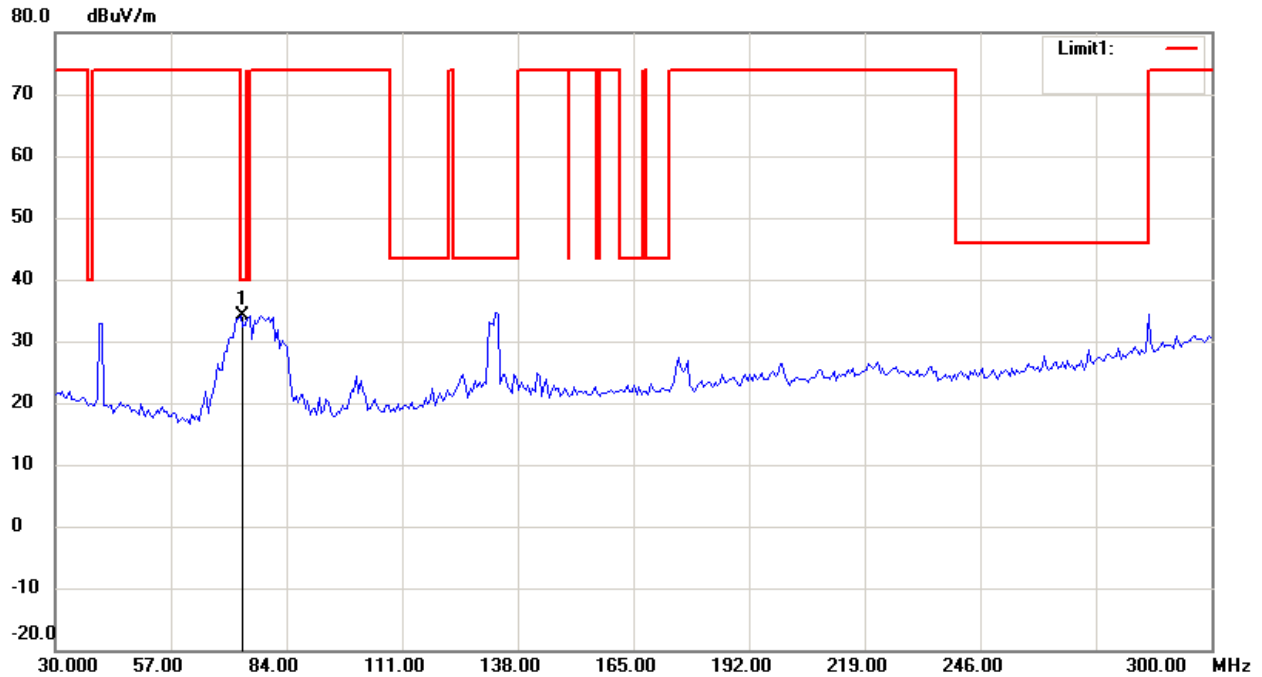
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

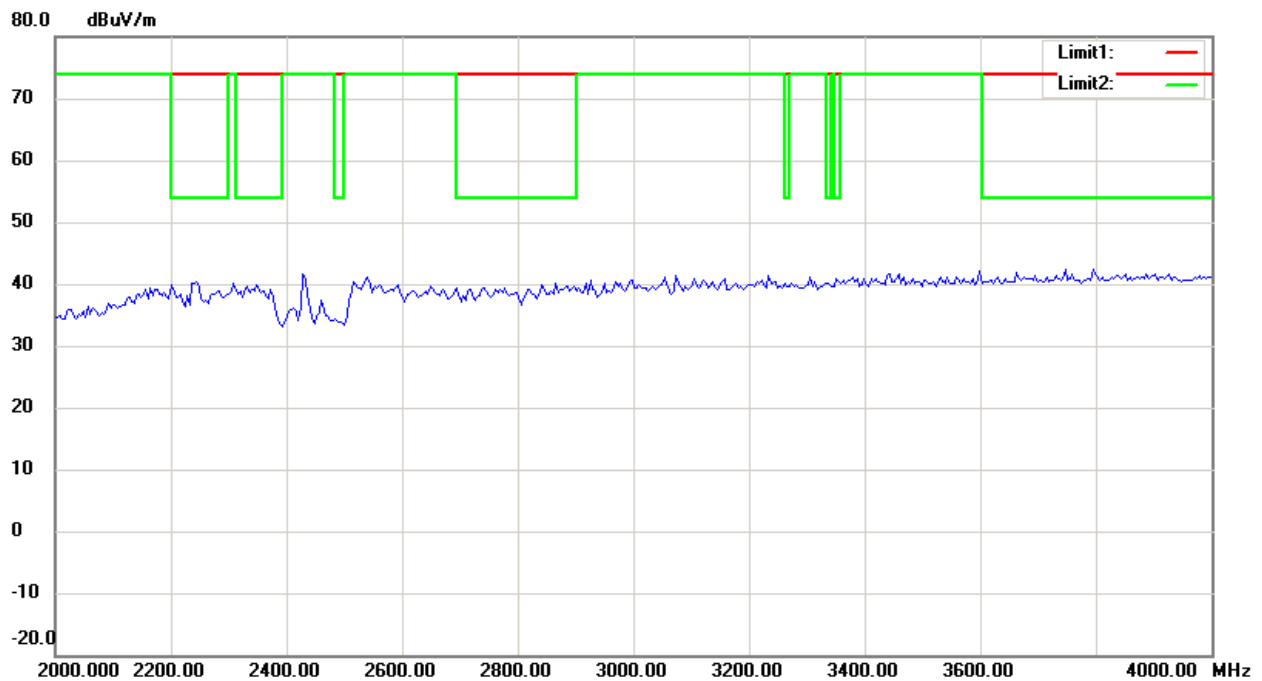
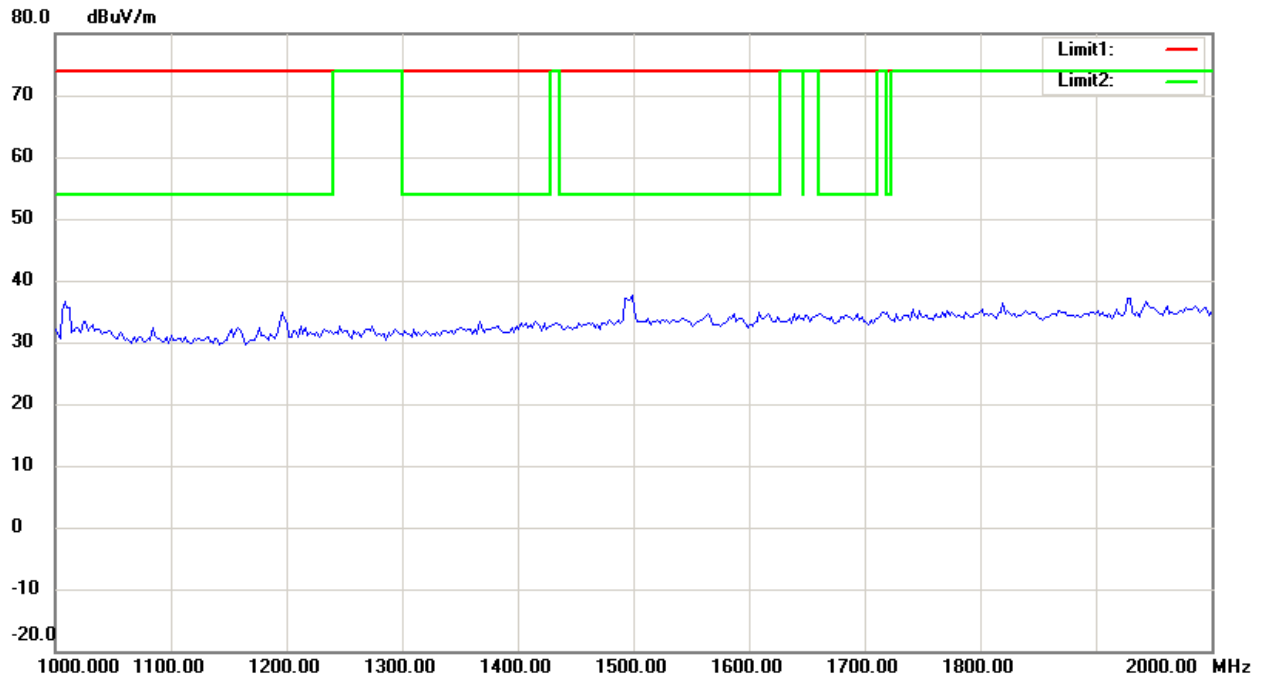
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Note:

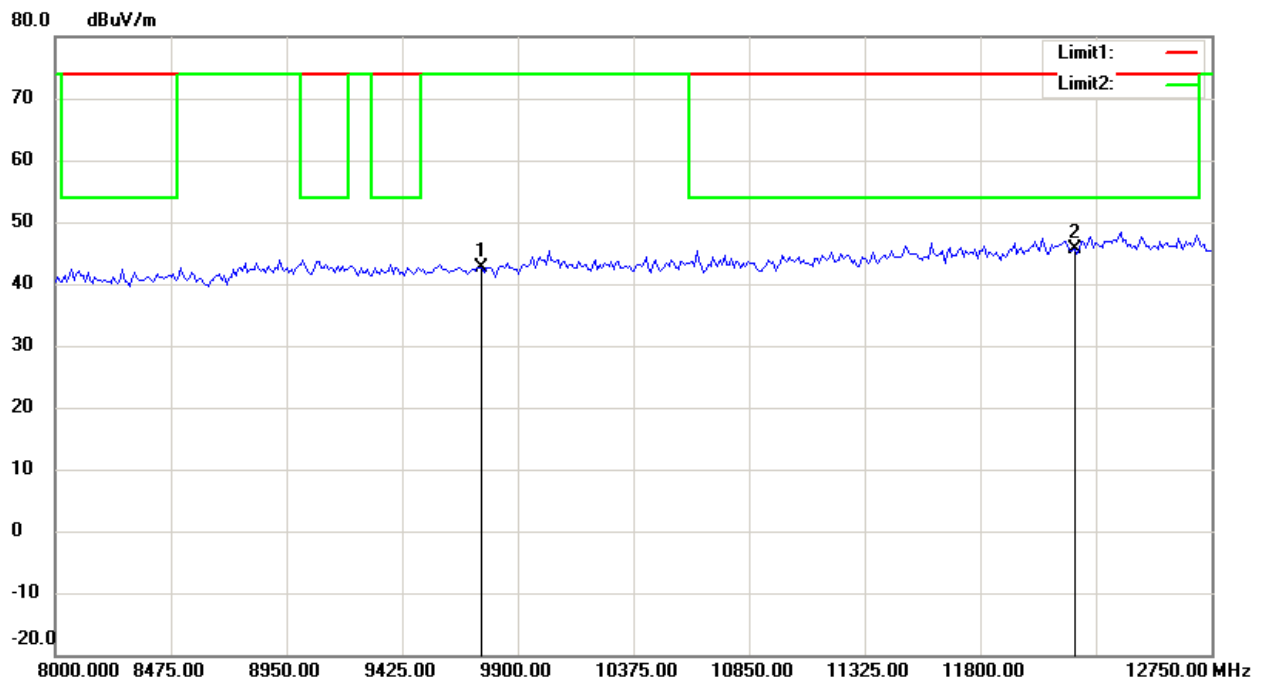
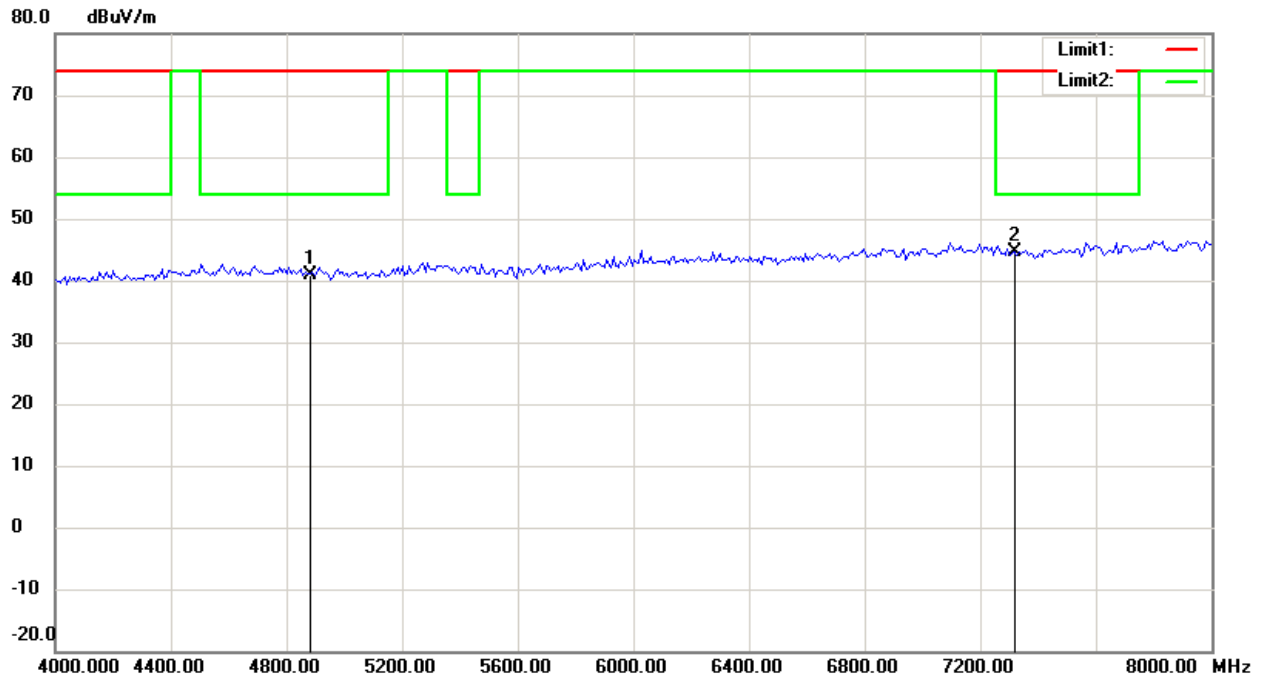
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

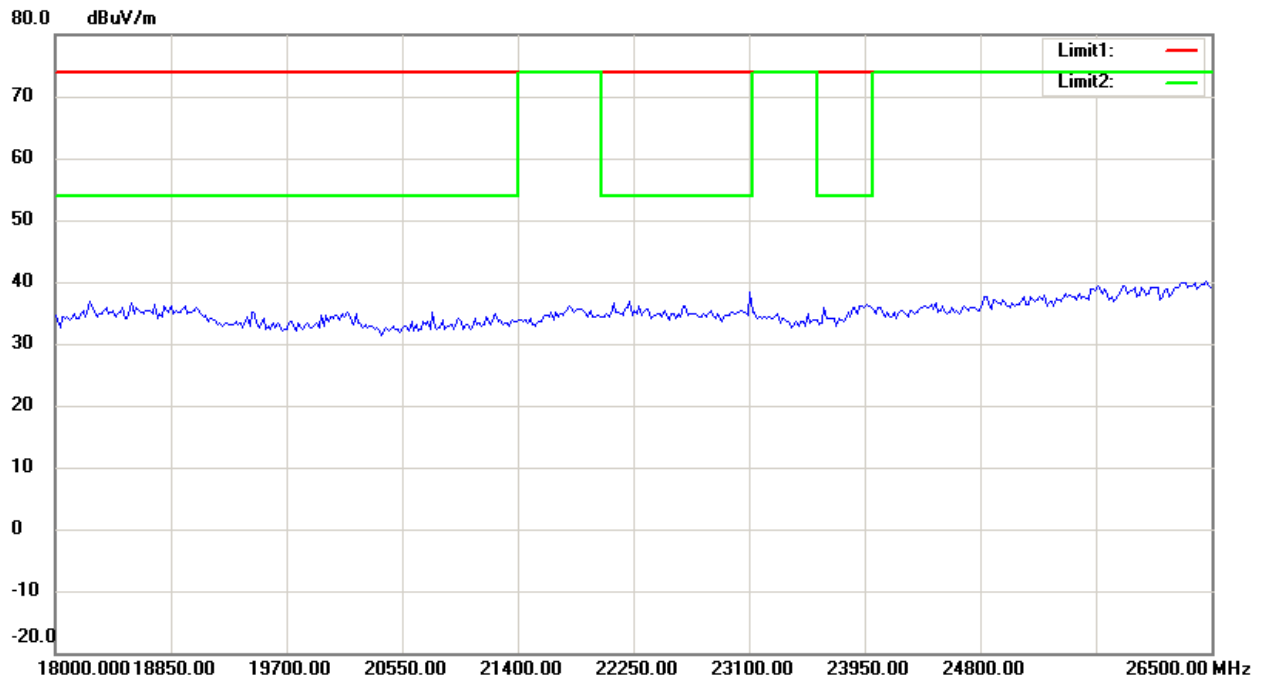
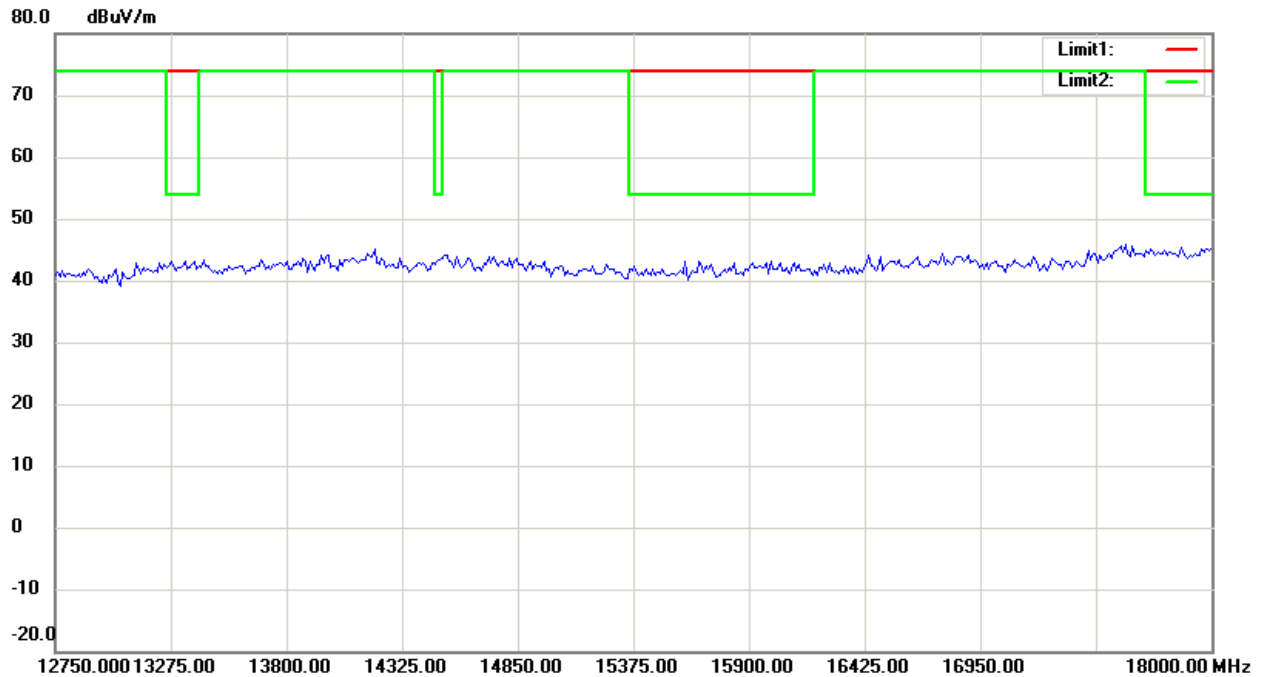
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**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

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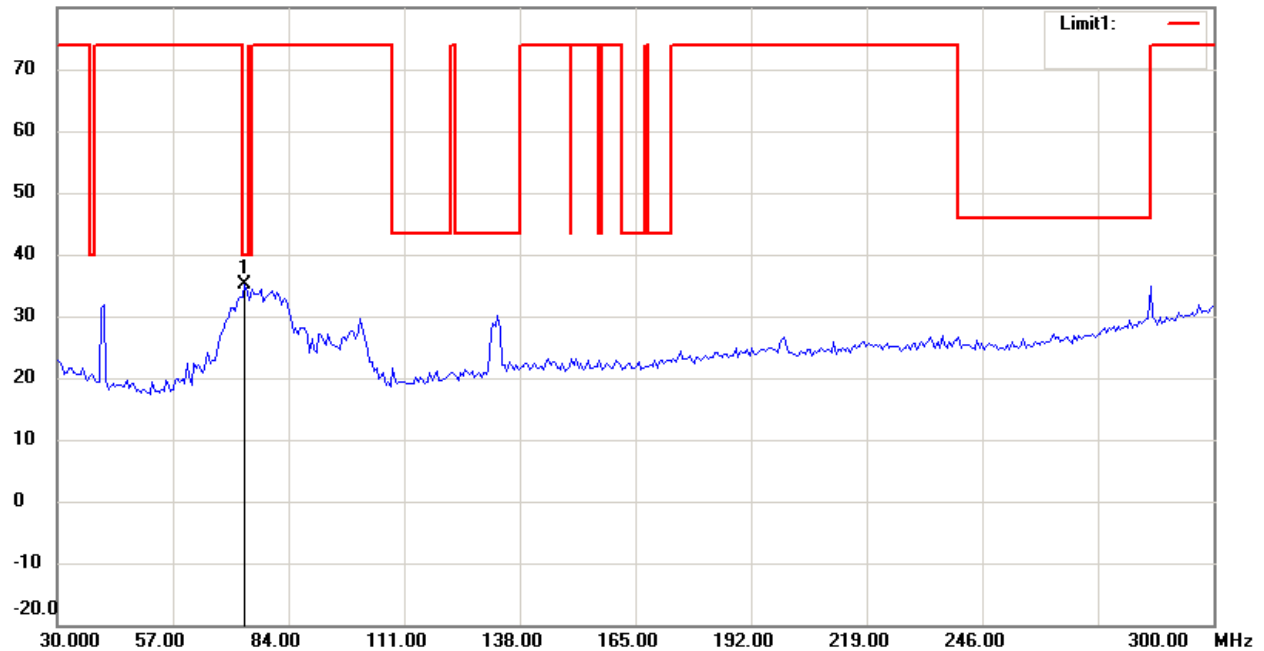
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

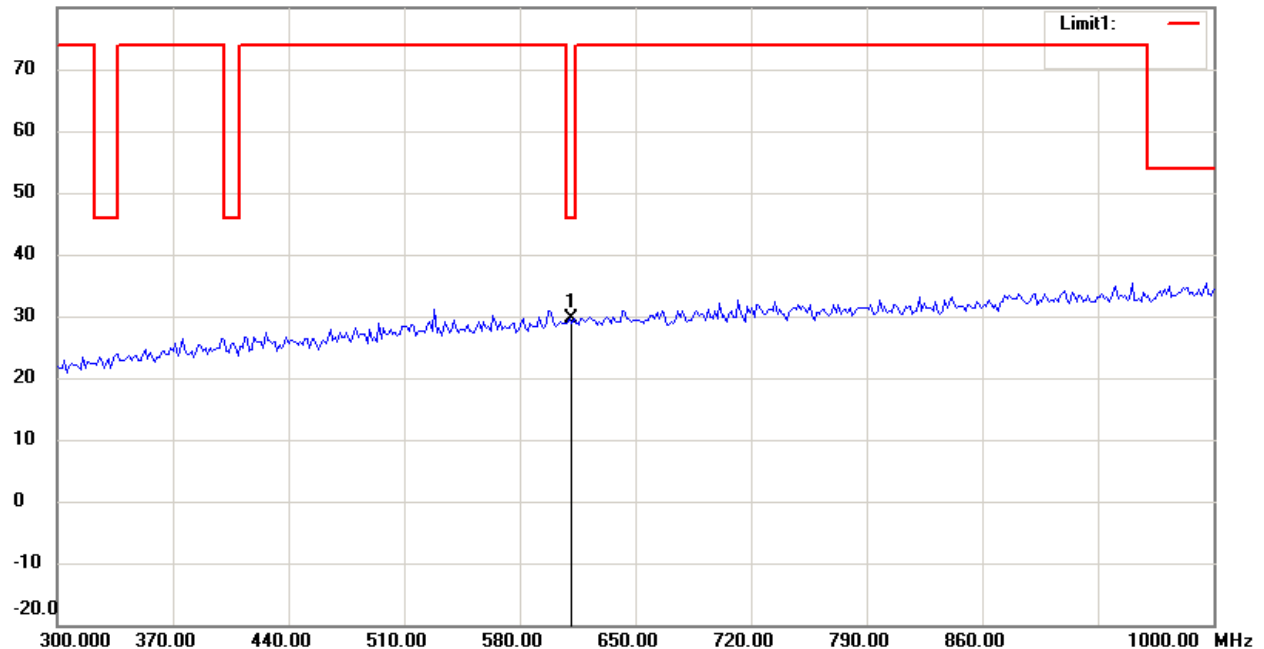
802.11n 20MHz ch11

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



### Note:

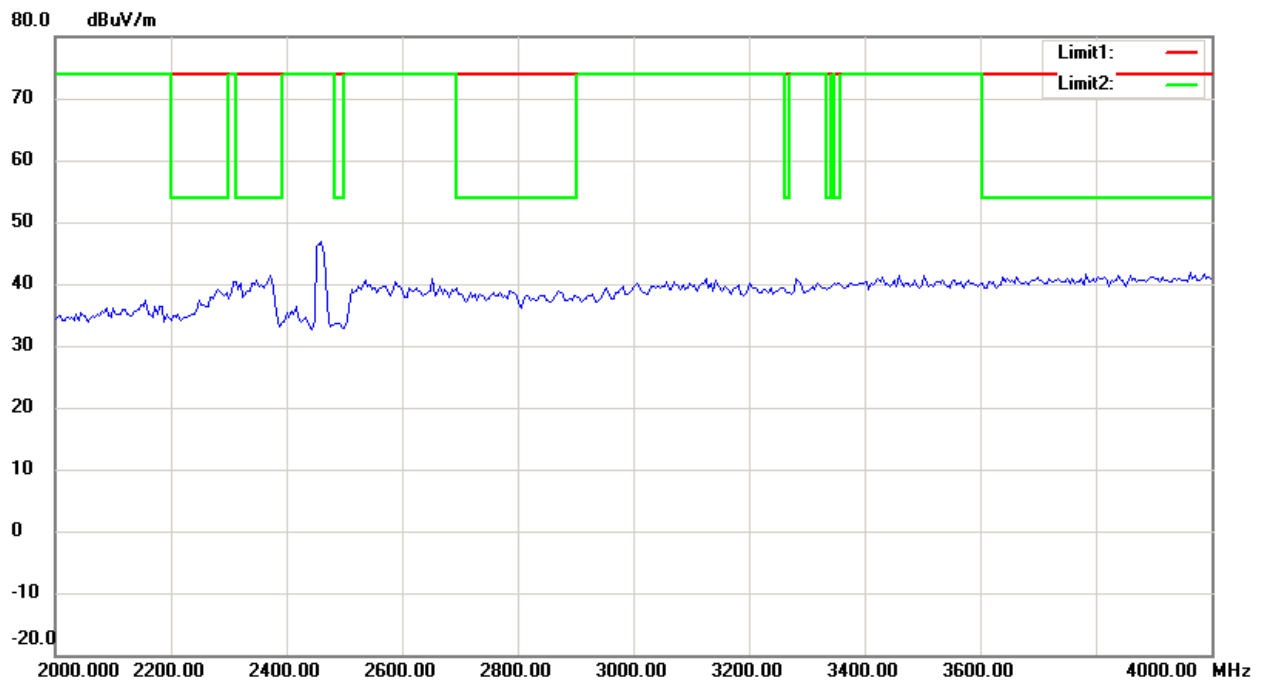
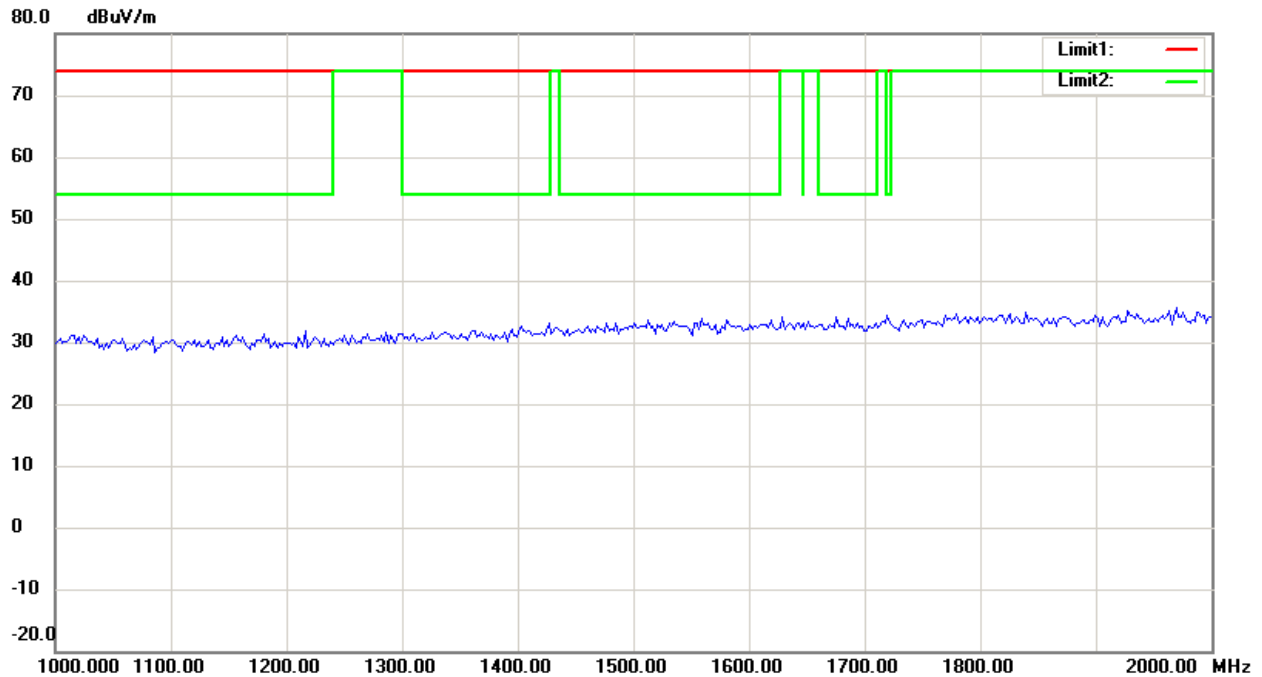
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

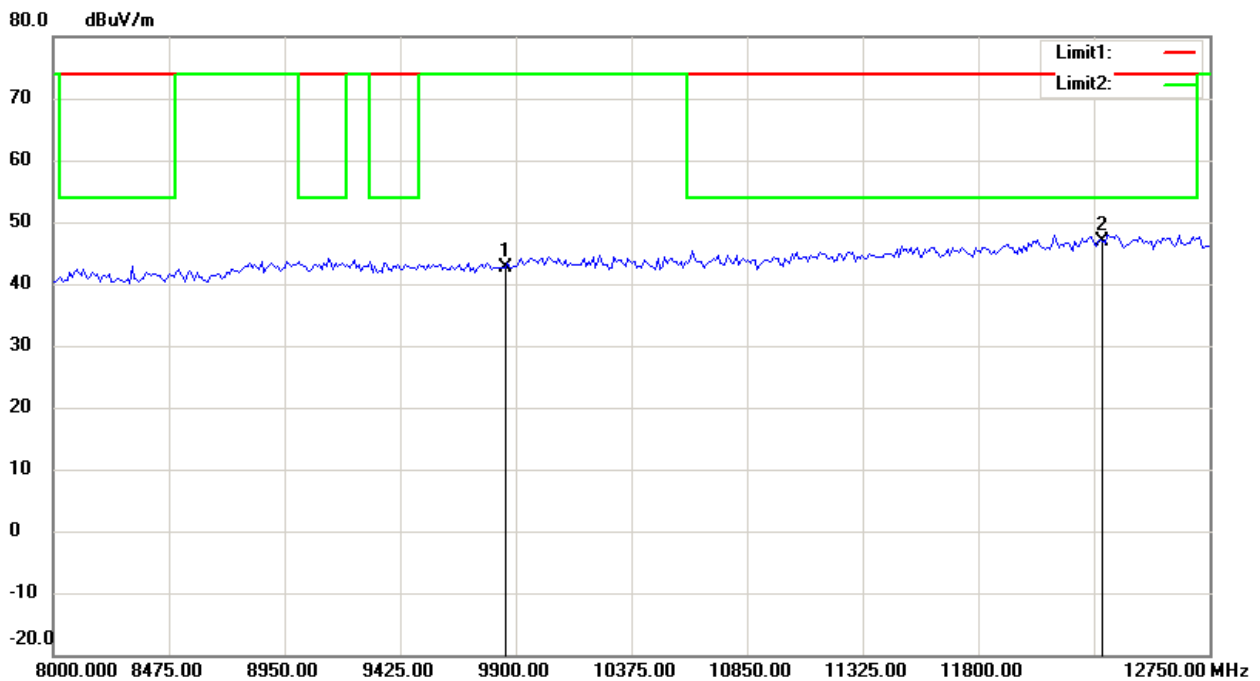
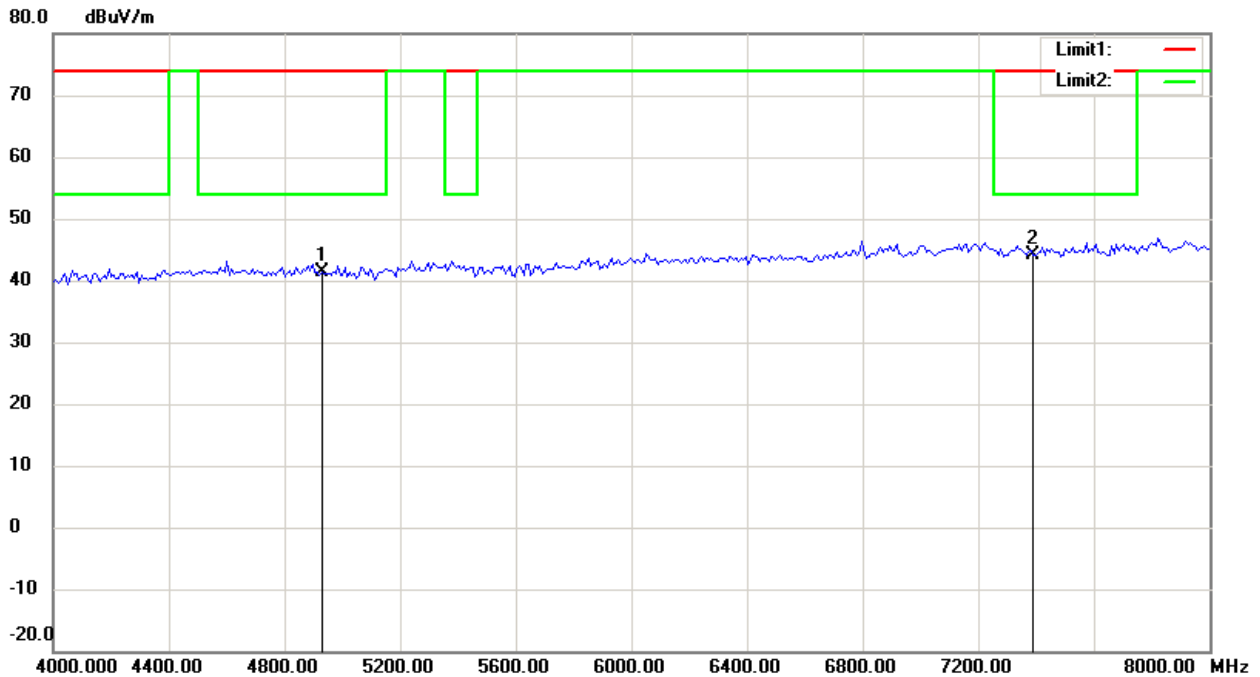
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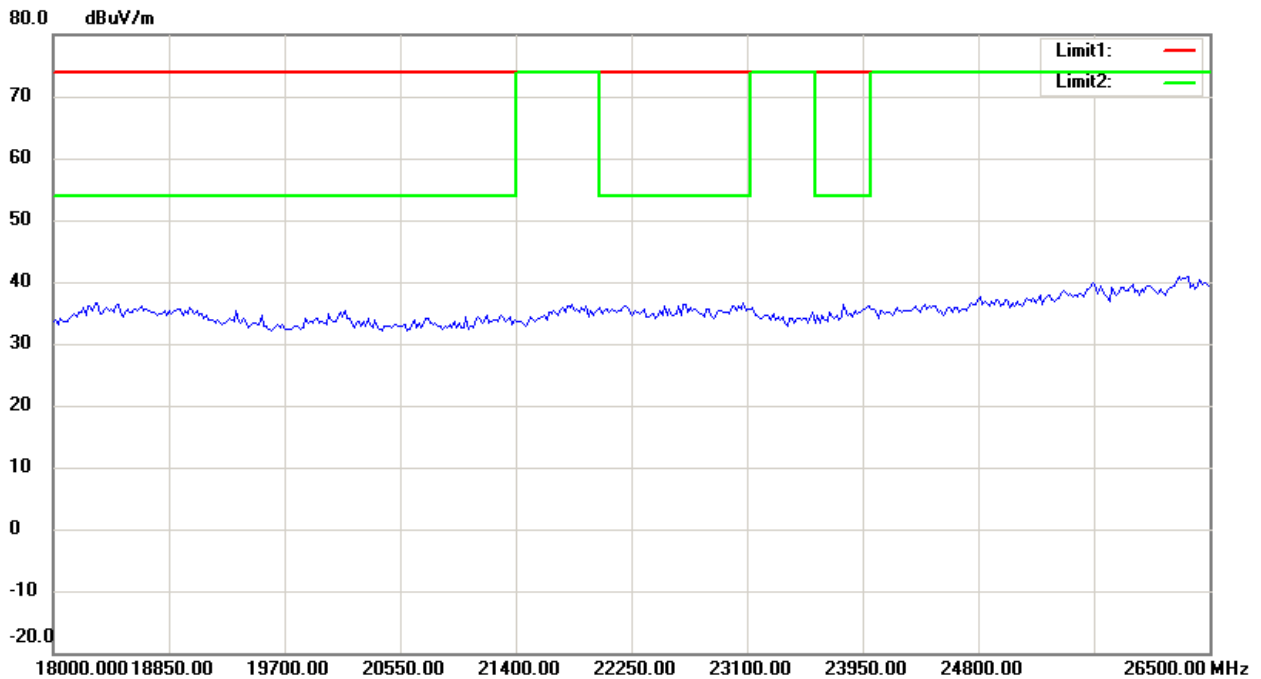
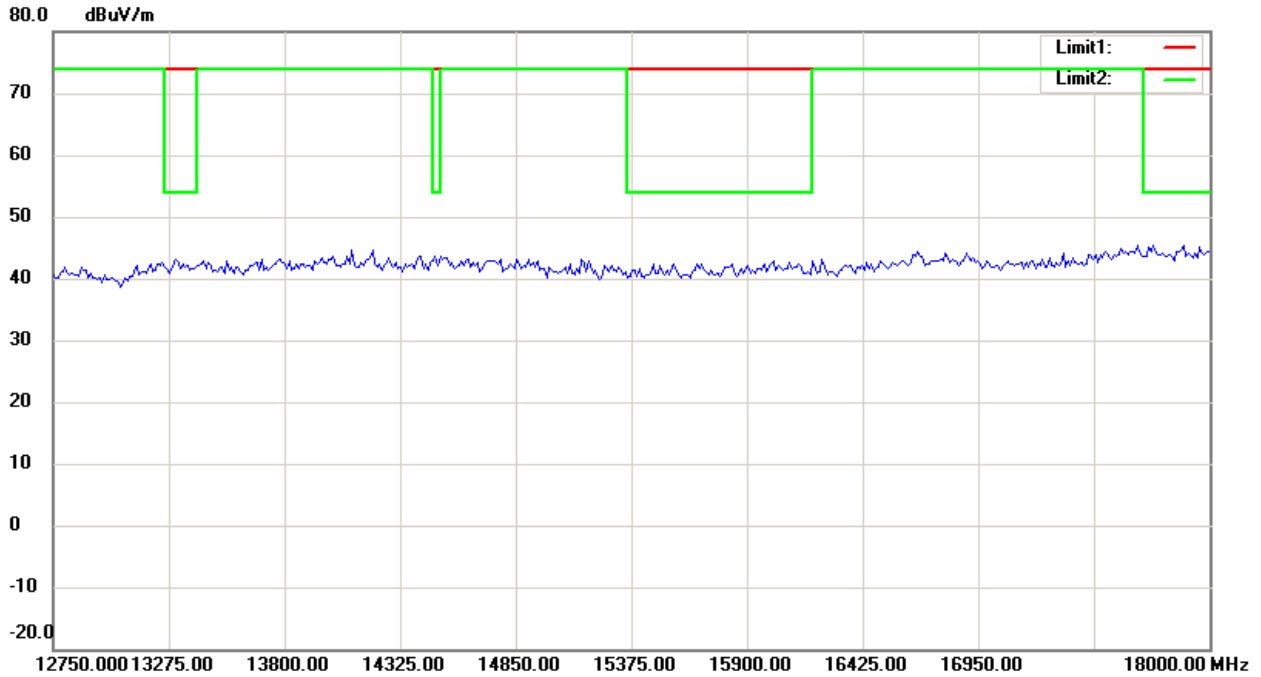
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# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



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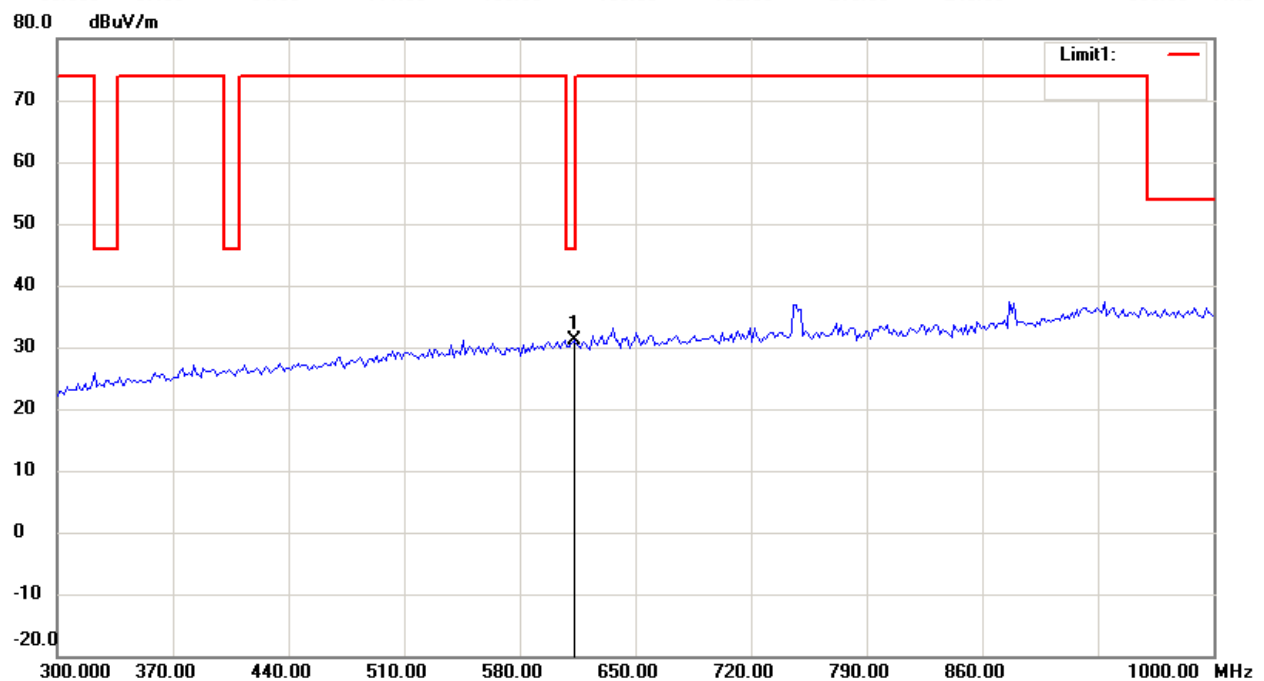
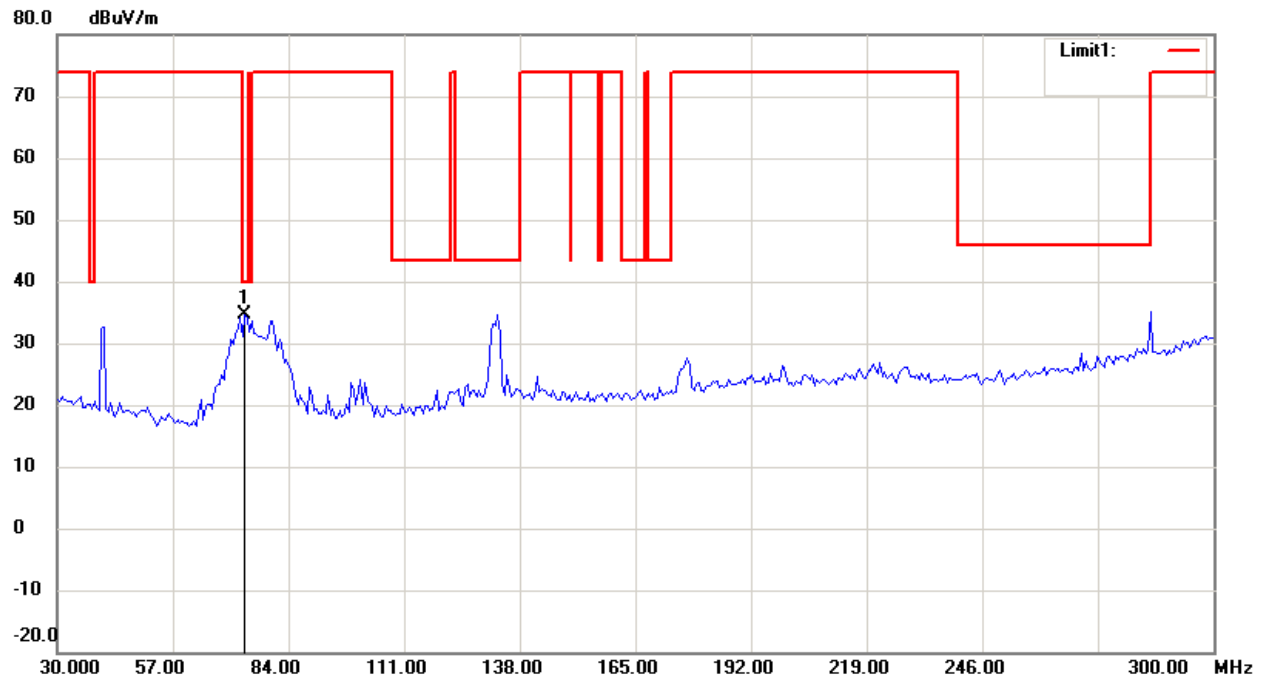




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

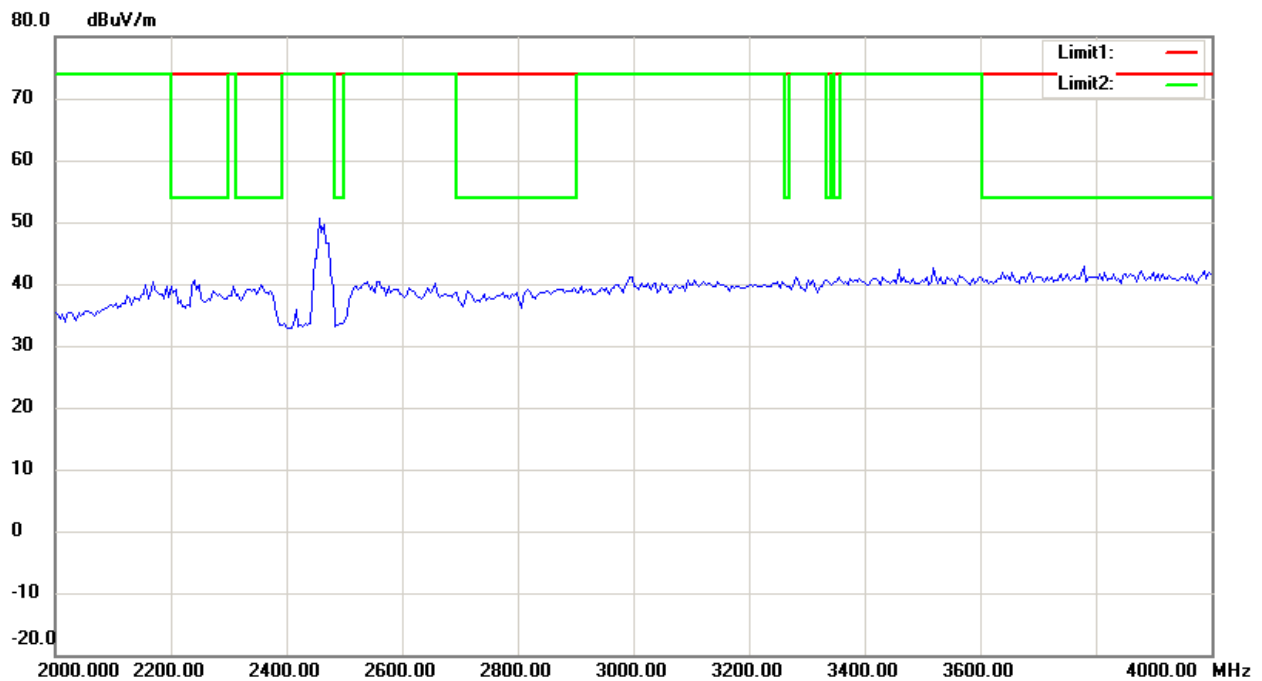
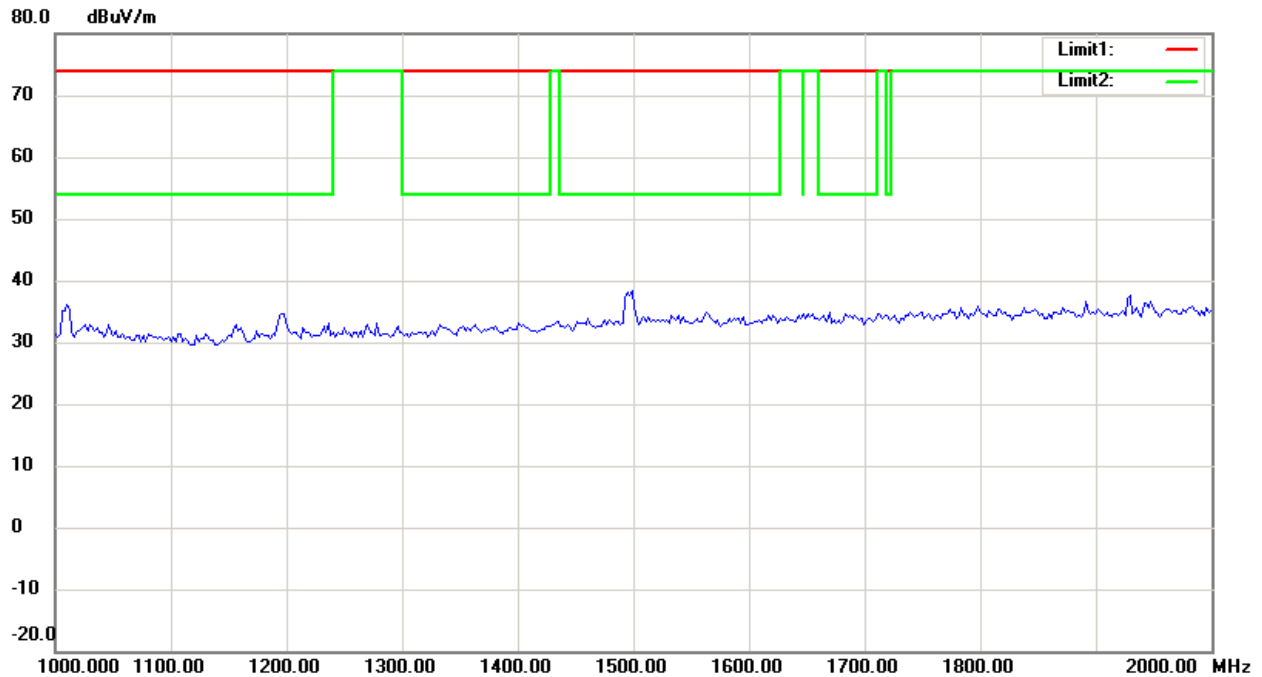
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



## Note:

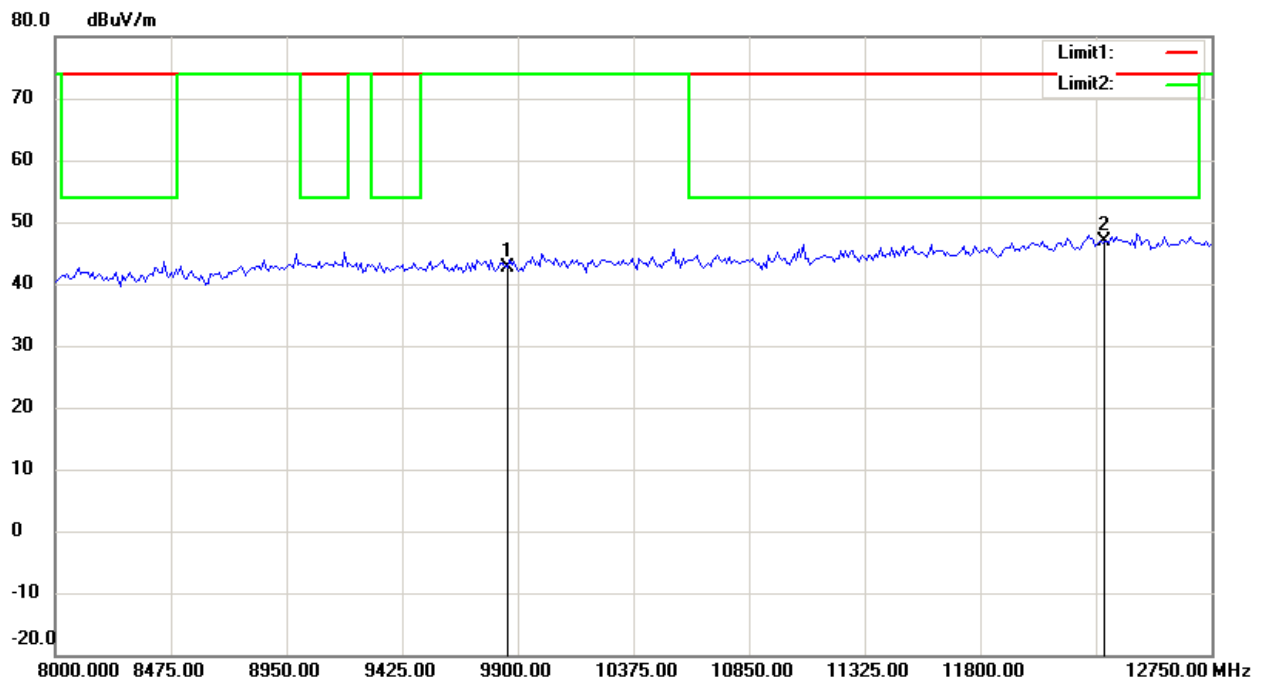
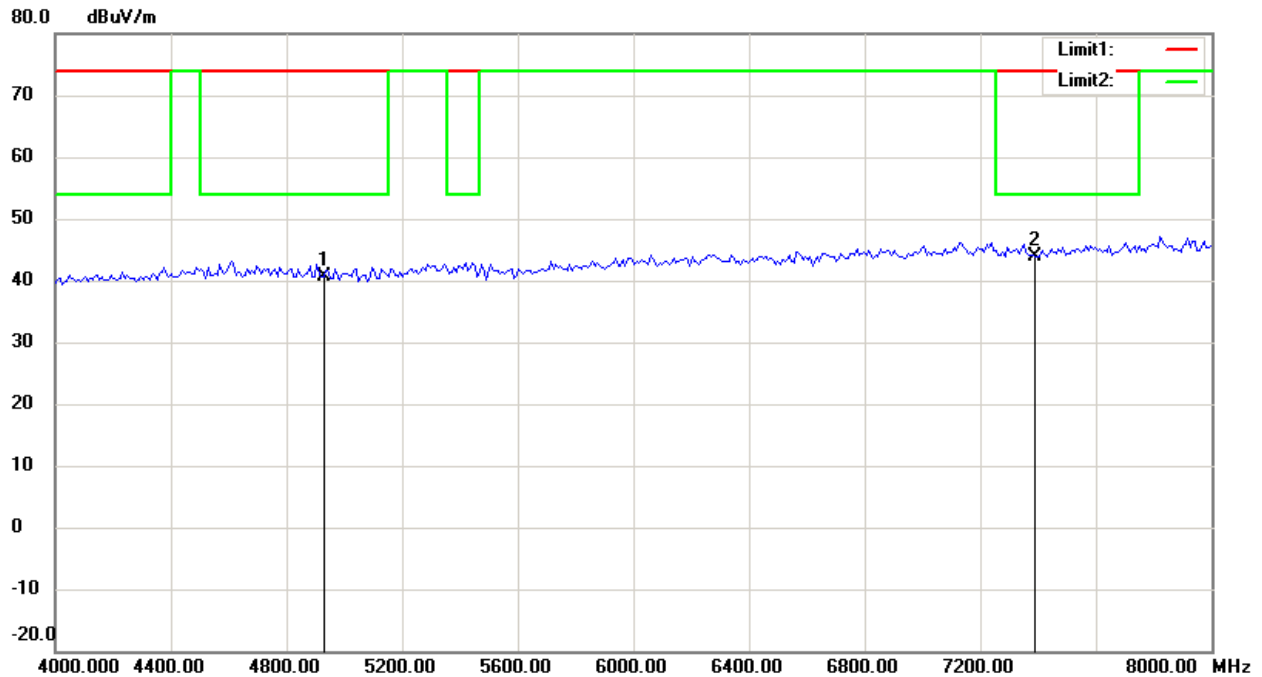
Up Line: Peak Limit Line Down Line: Ave Limit Line

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FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

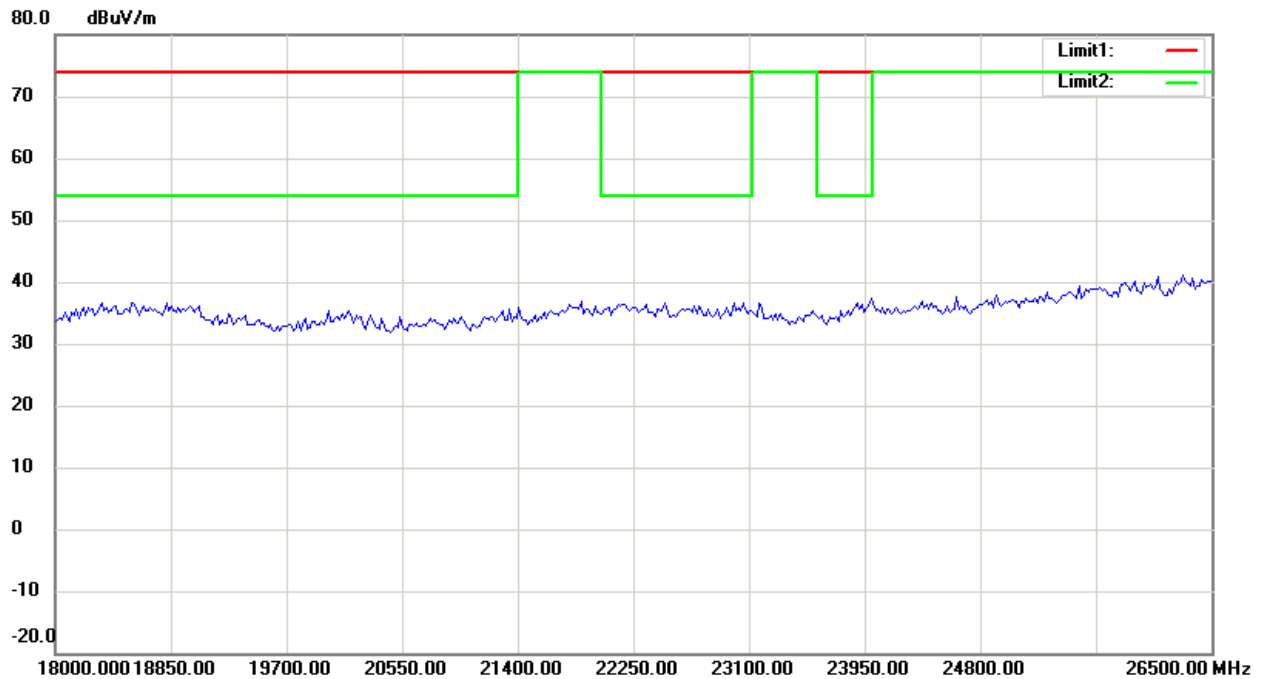
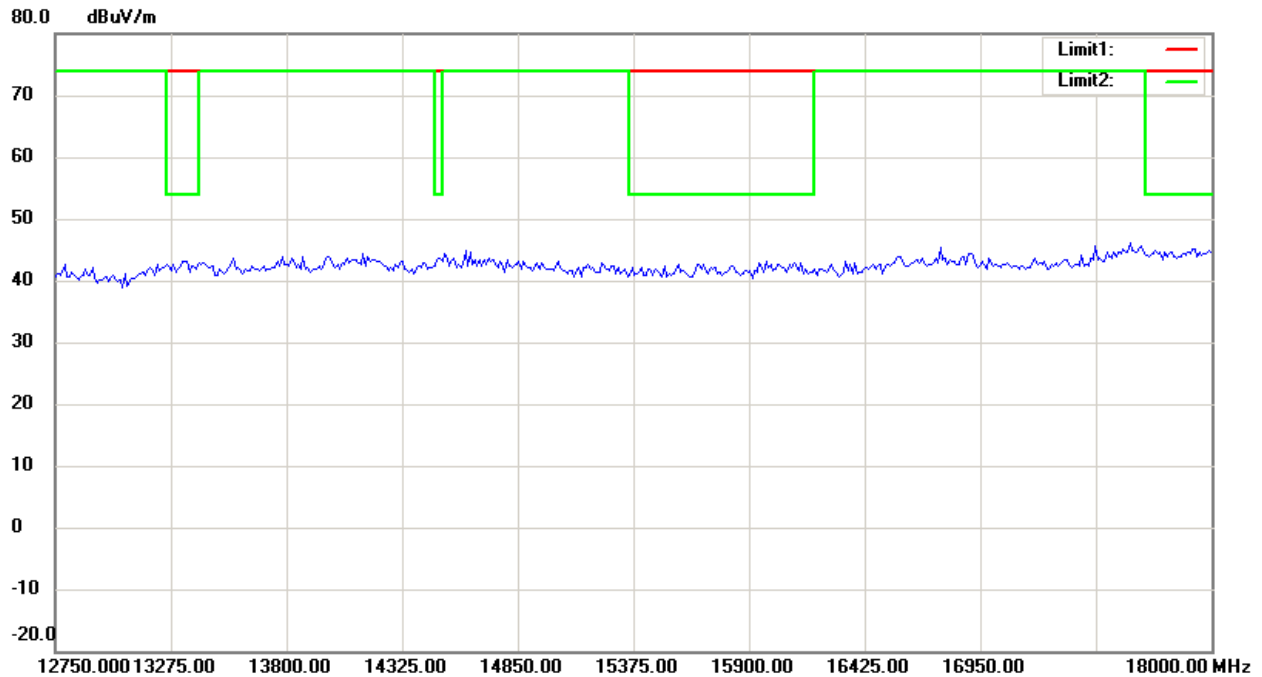
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**Note:**

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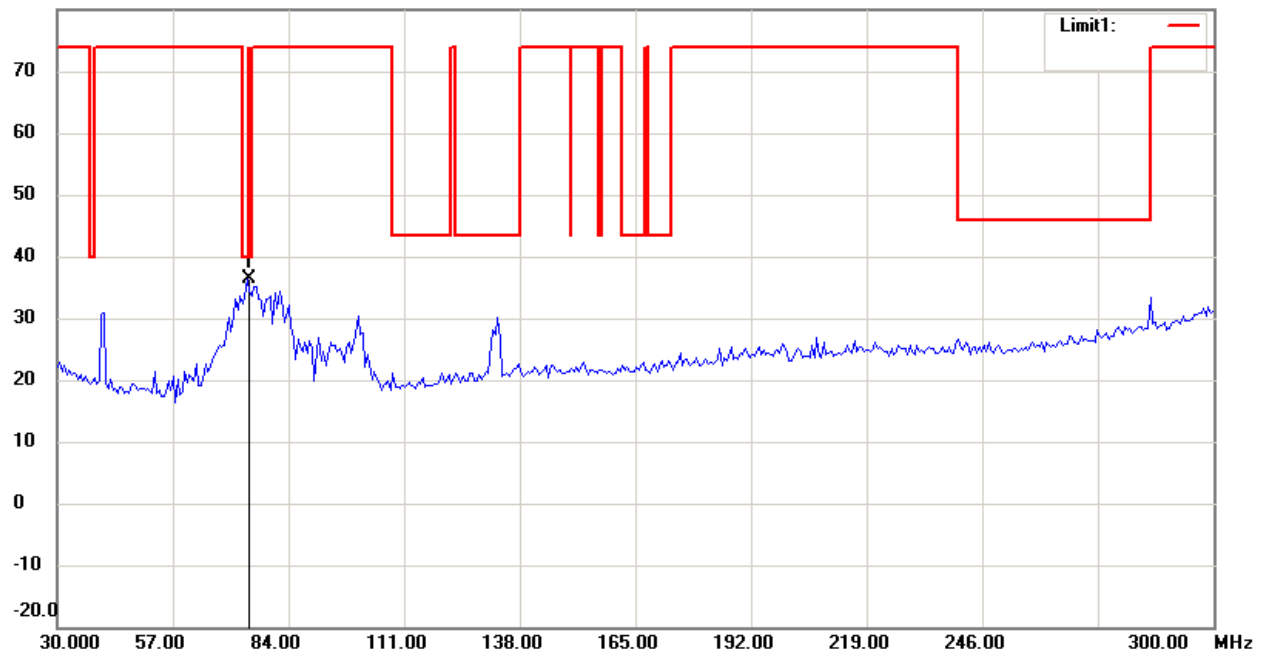
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

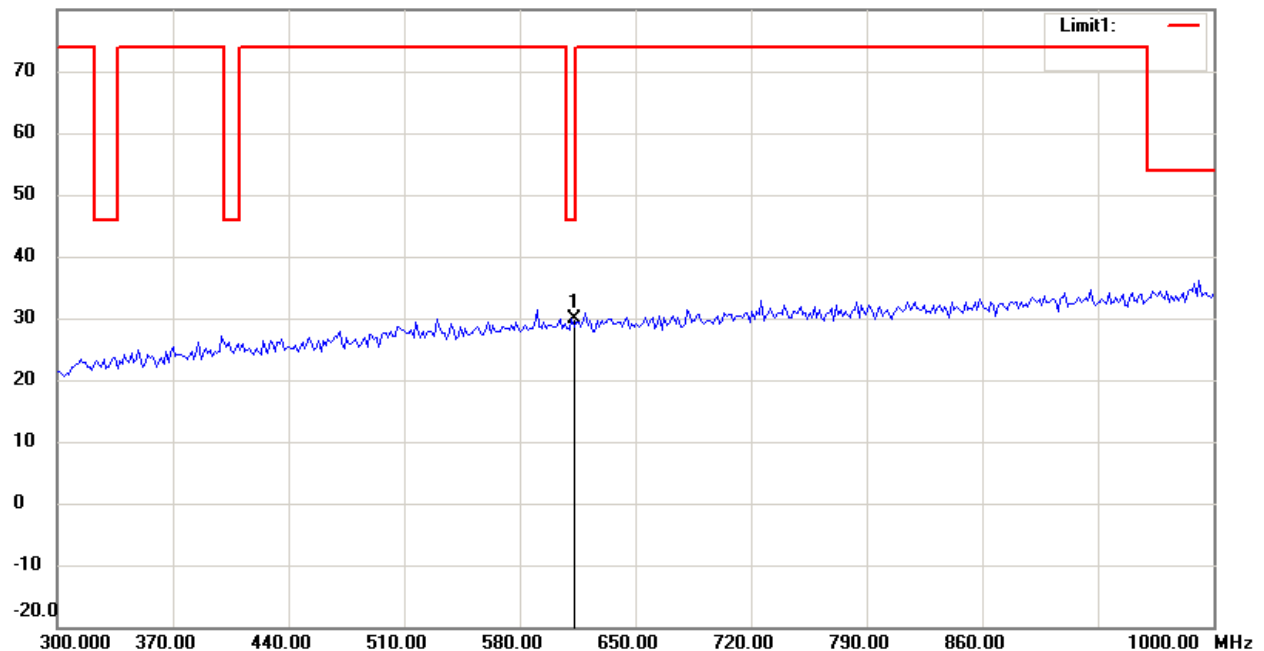
802.11n 40MHz ch1

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



### Note:

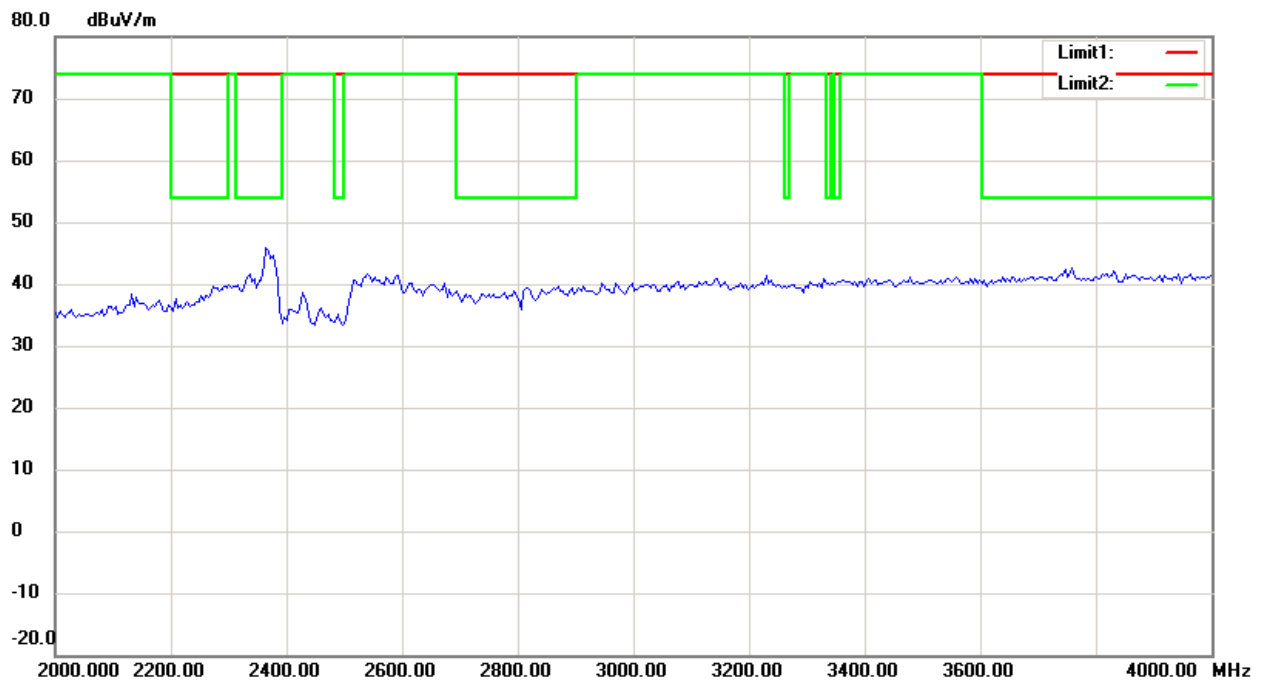
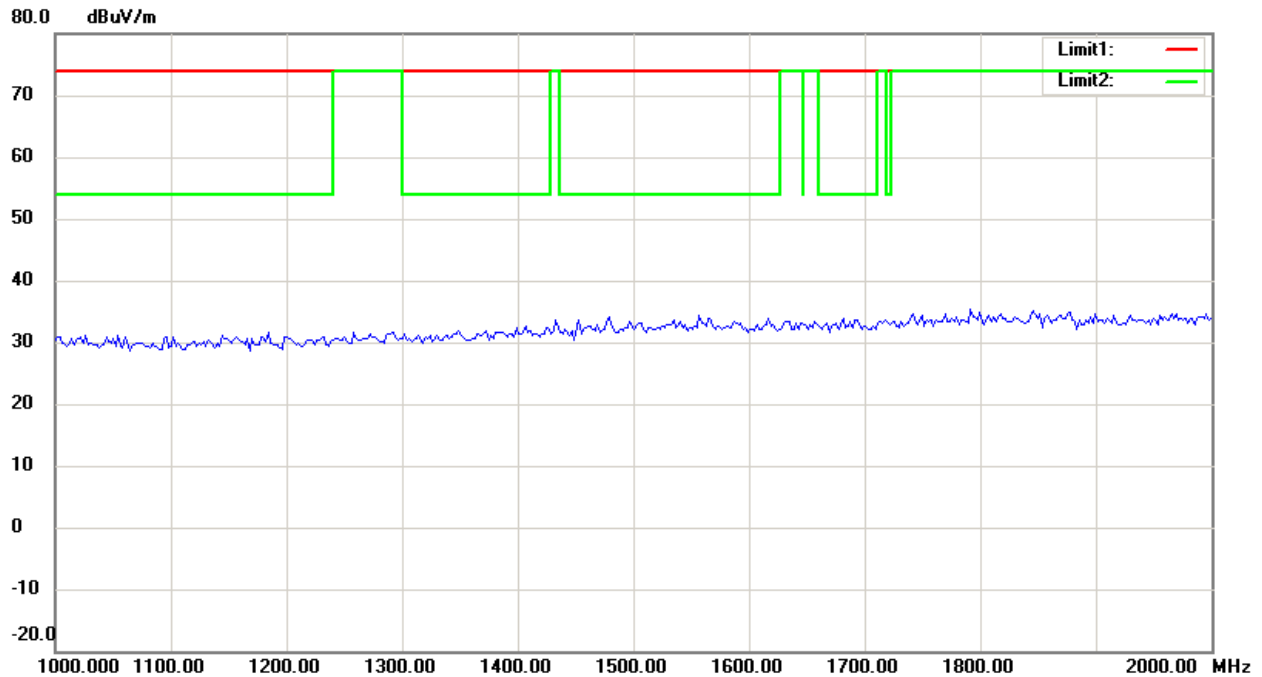
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**Note:**

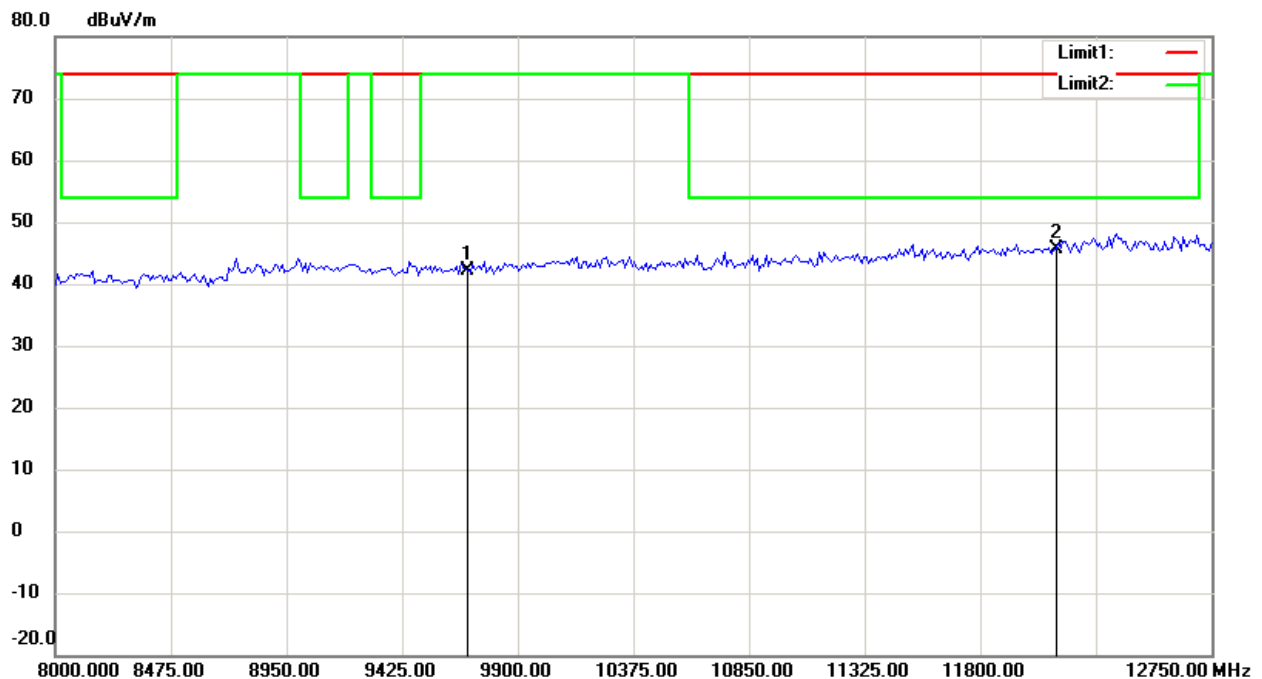
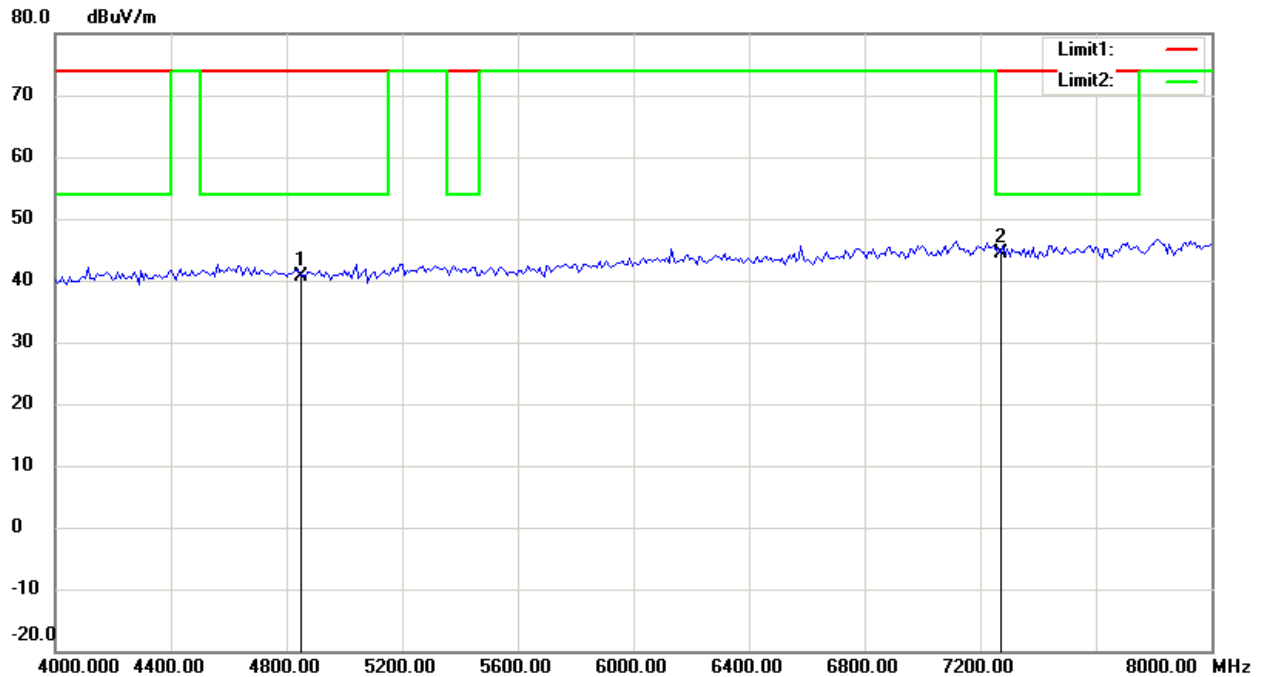
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FCC ID: IR5RF9



**Note:**

**Up Line: Peak Limit Line Down Line: Ave Limit Line**

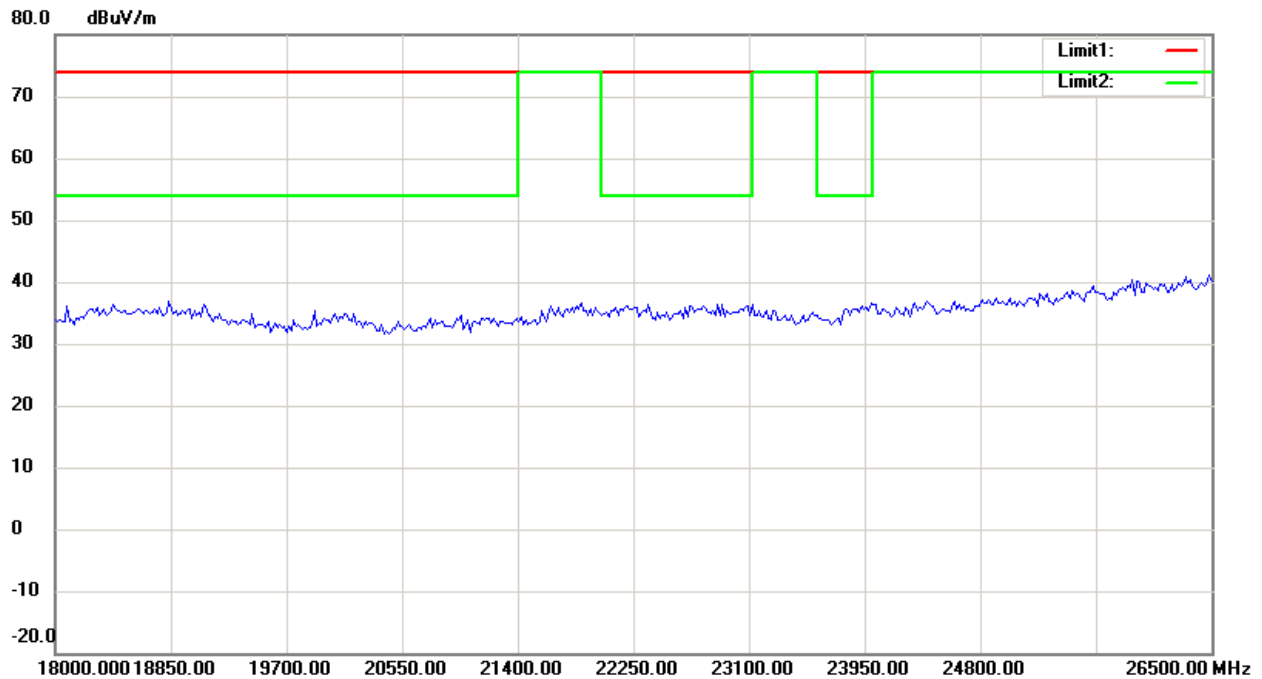
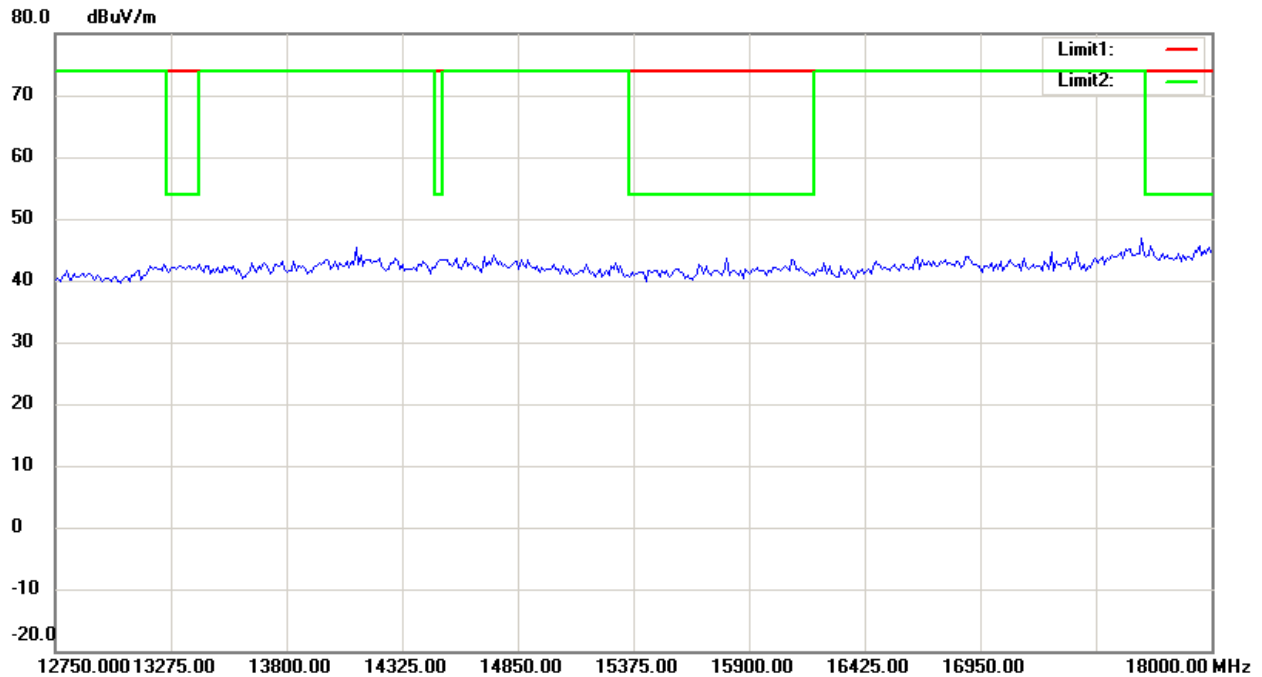
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

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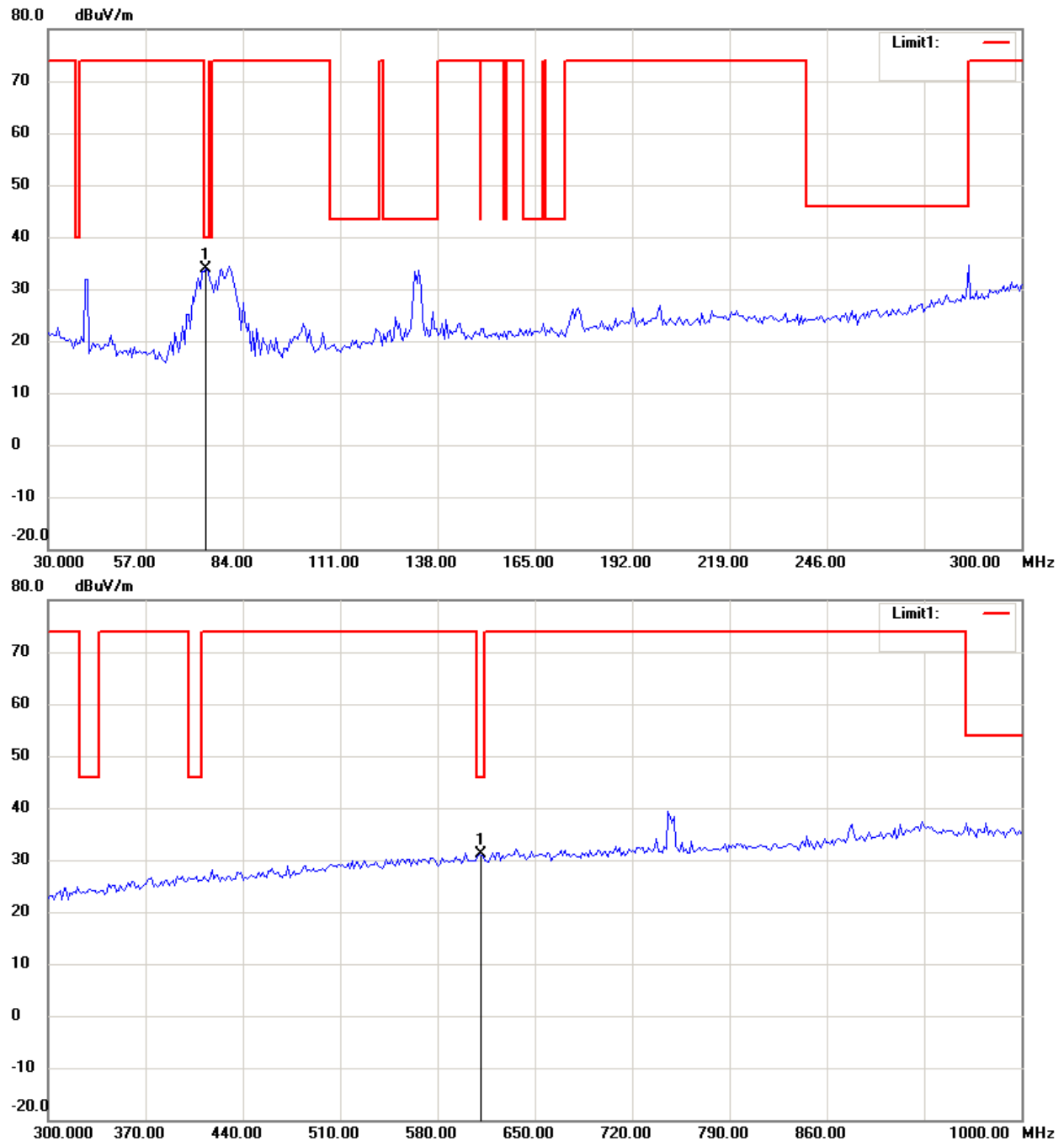




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

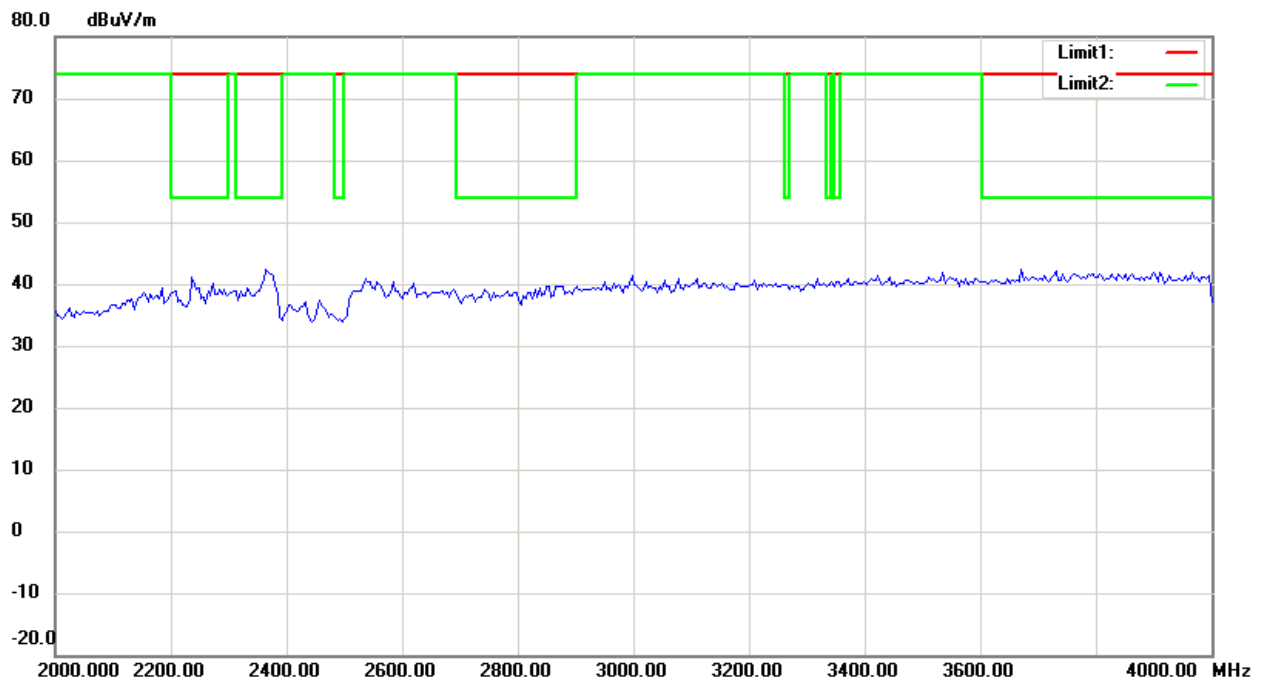
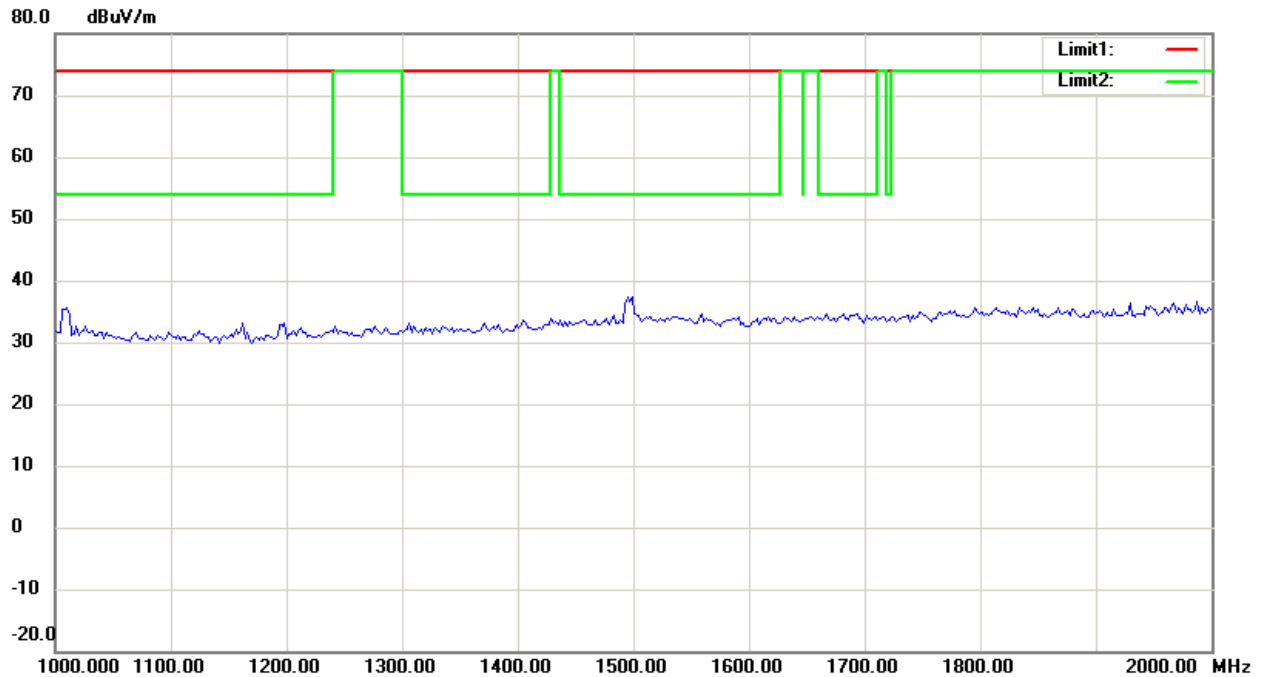
Up Line: Peak Limit Line Down Line: Ave Limit Line

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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

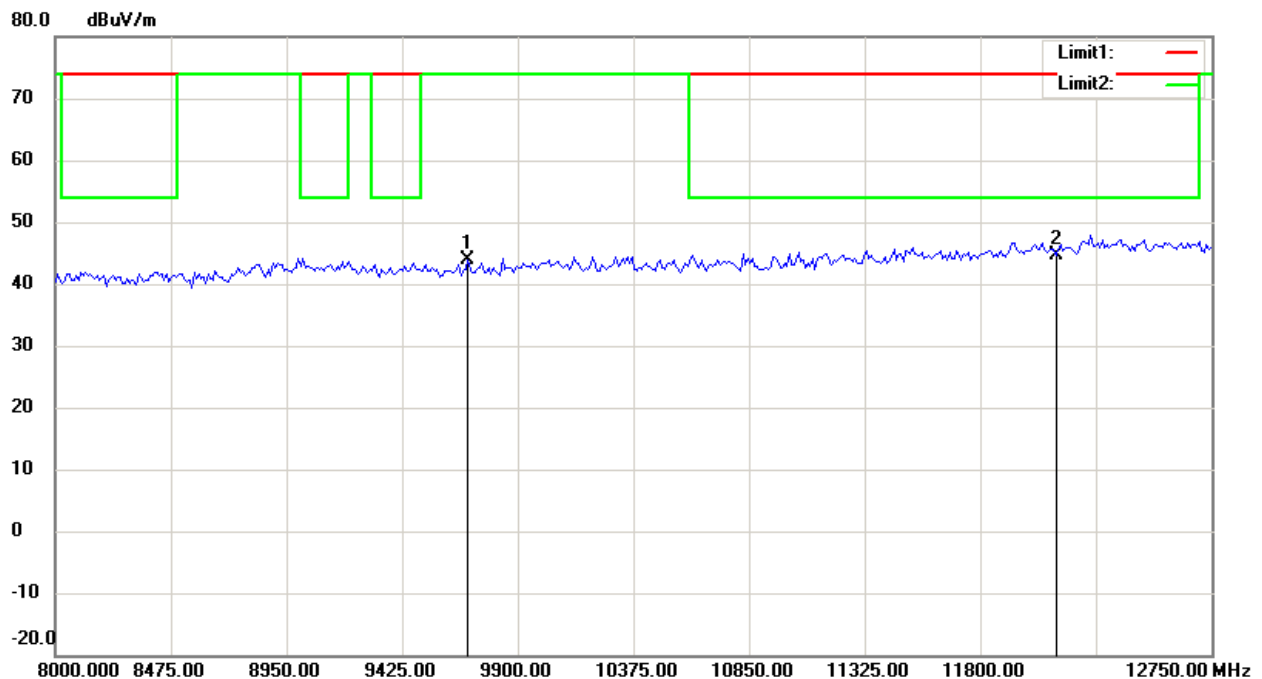
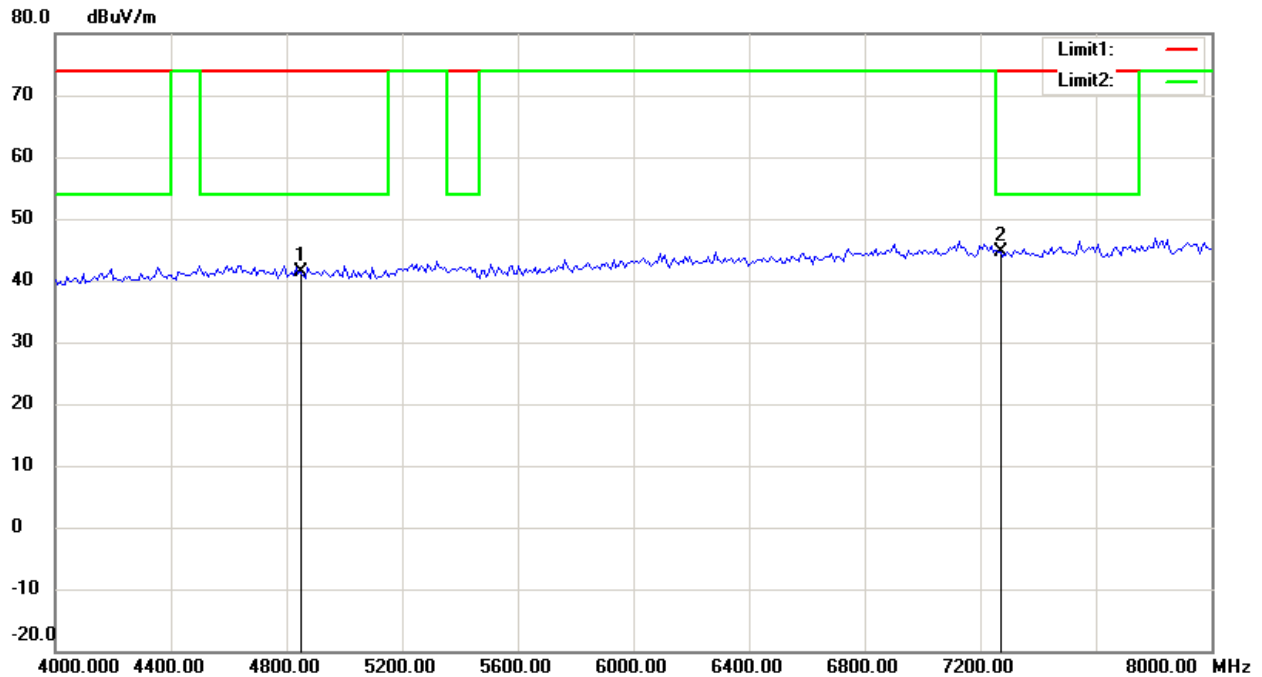
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**Note:**

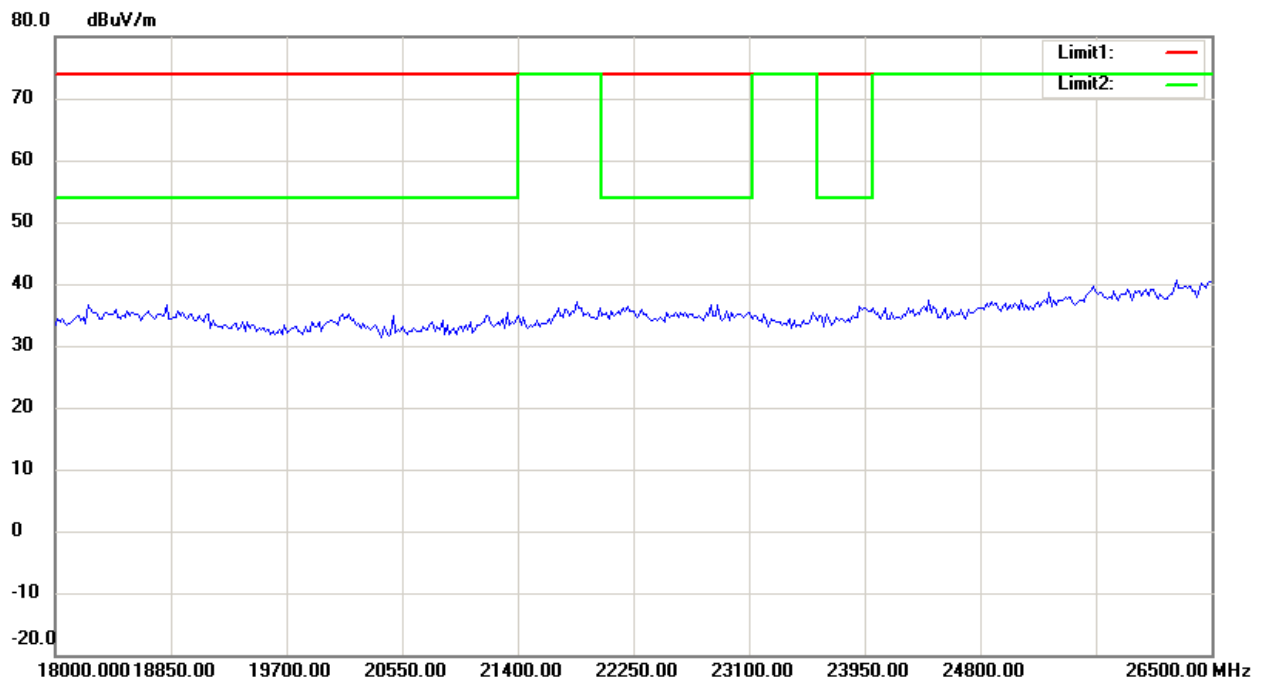
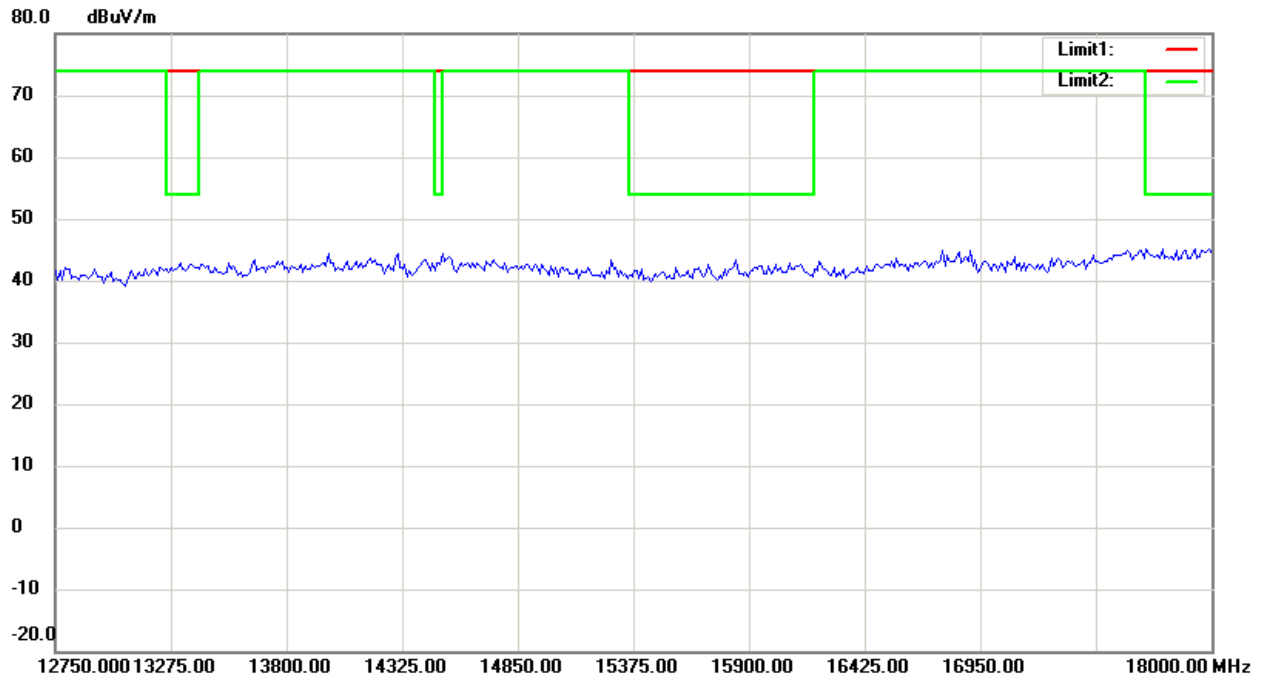
Up Line: Peak Limit Line Down Line: Ave Limit Line

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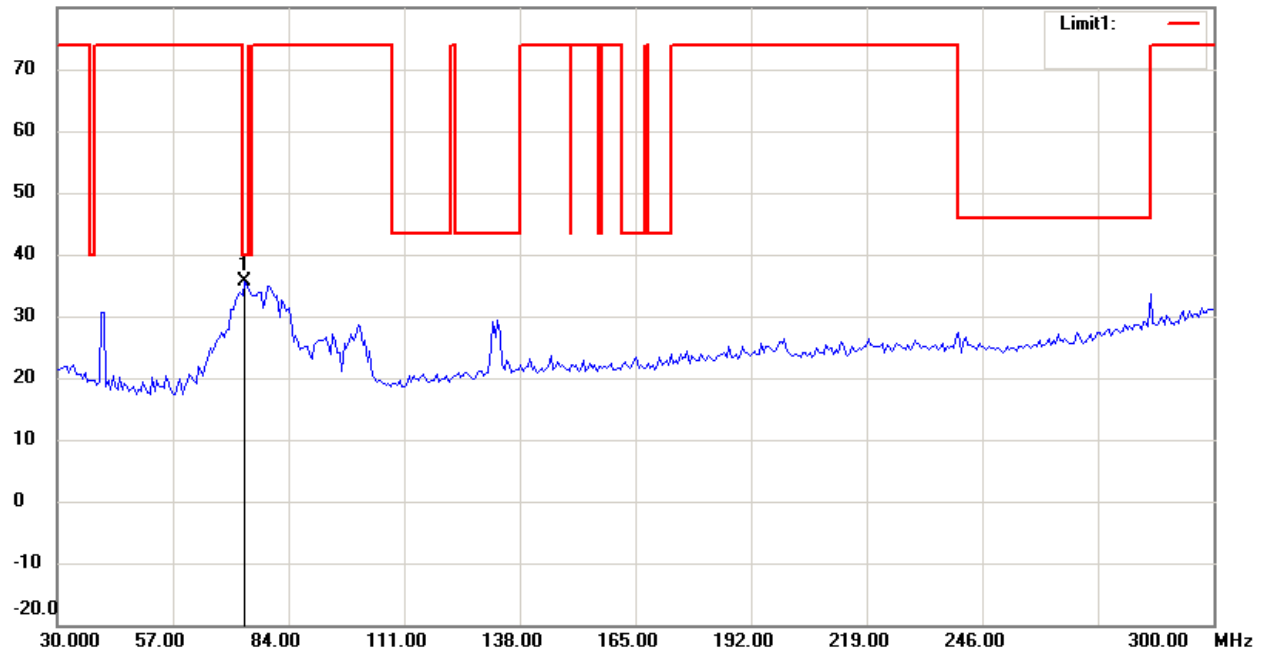
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

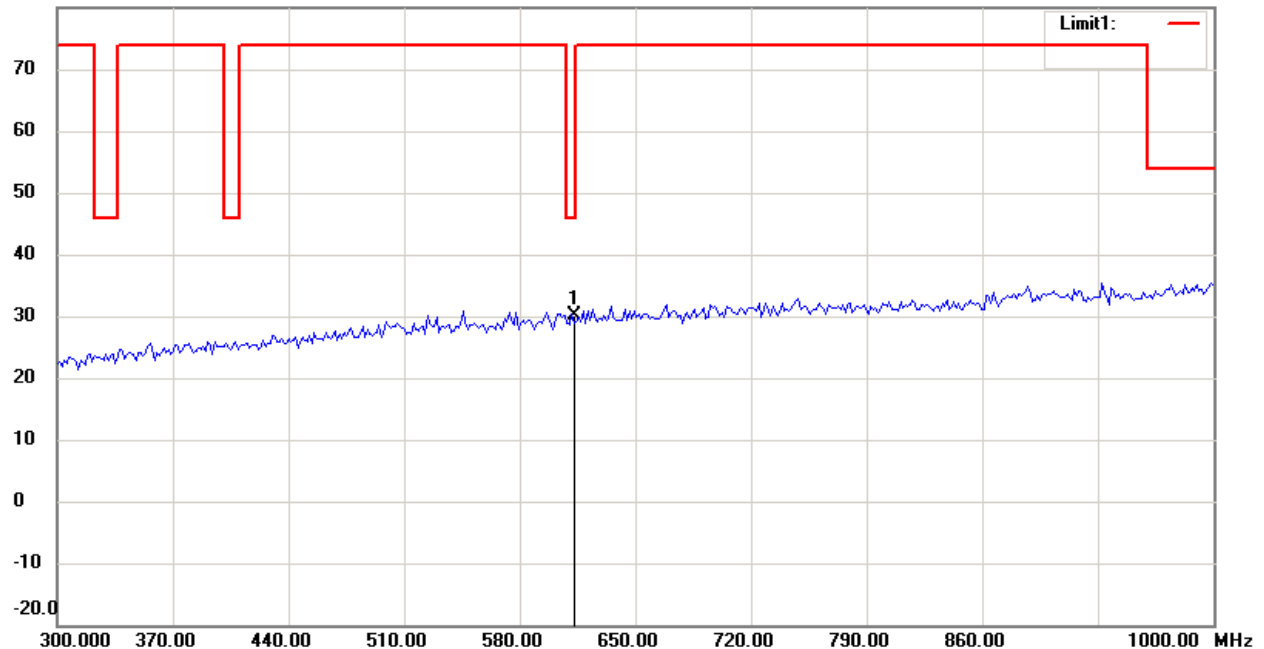
802.11n 40MHz ch4

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

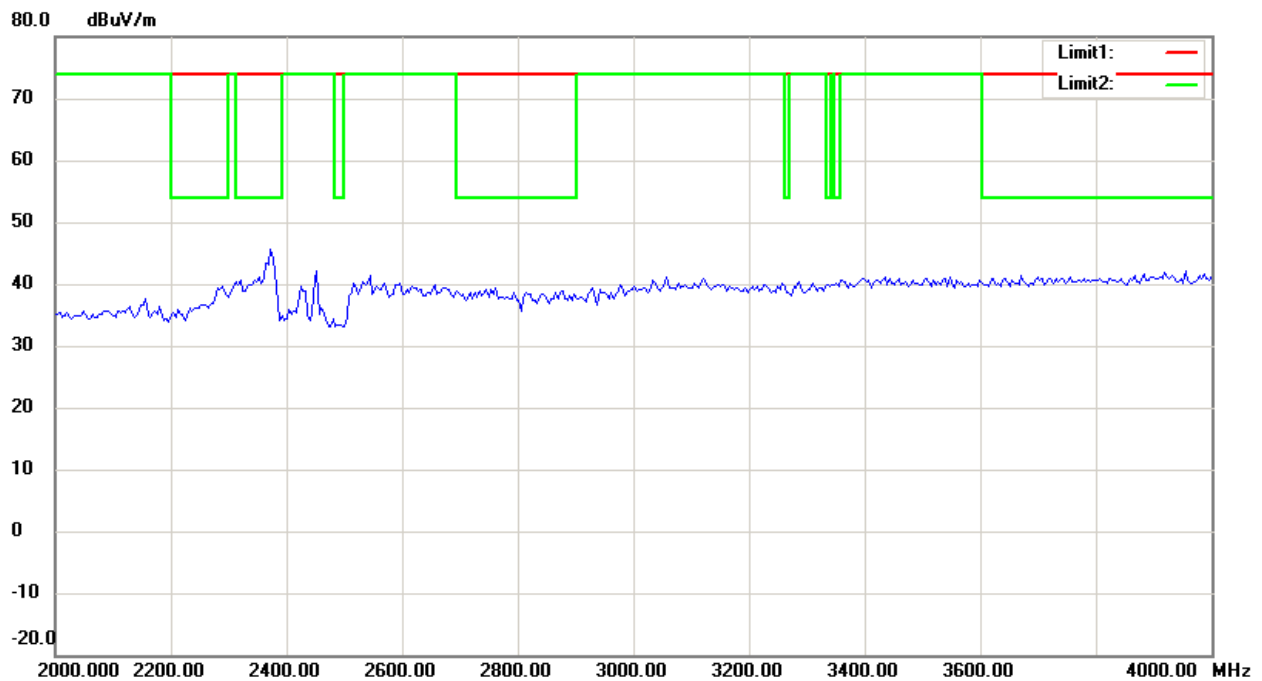
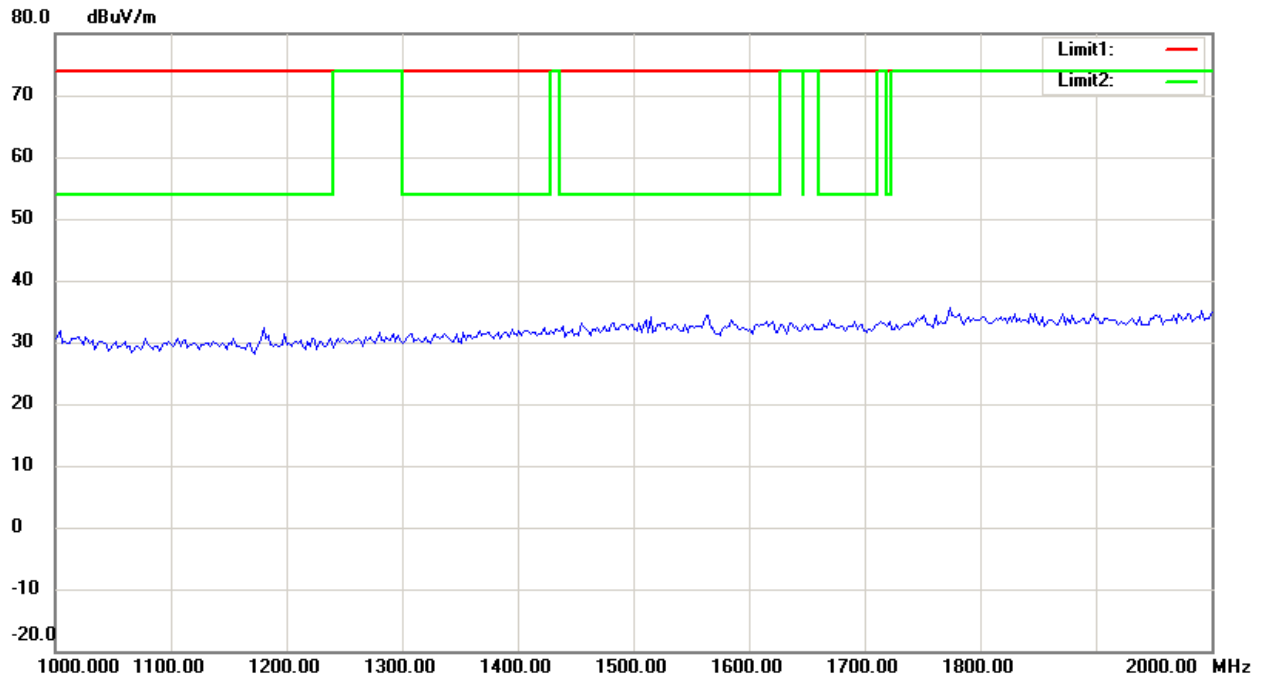
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FCC ID: IR5RF9



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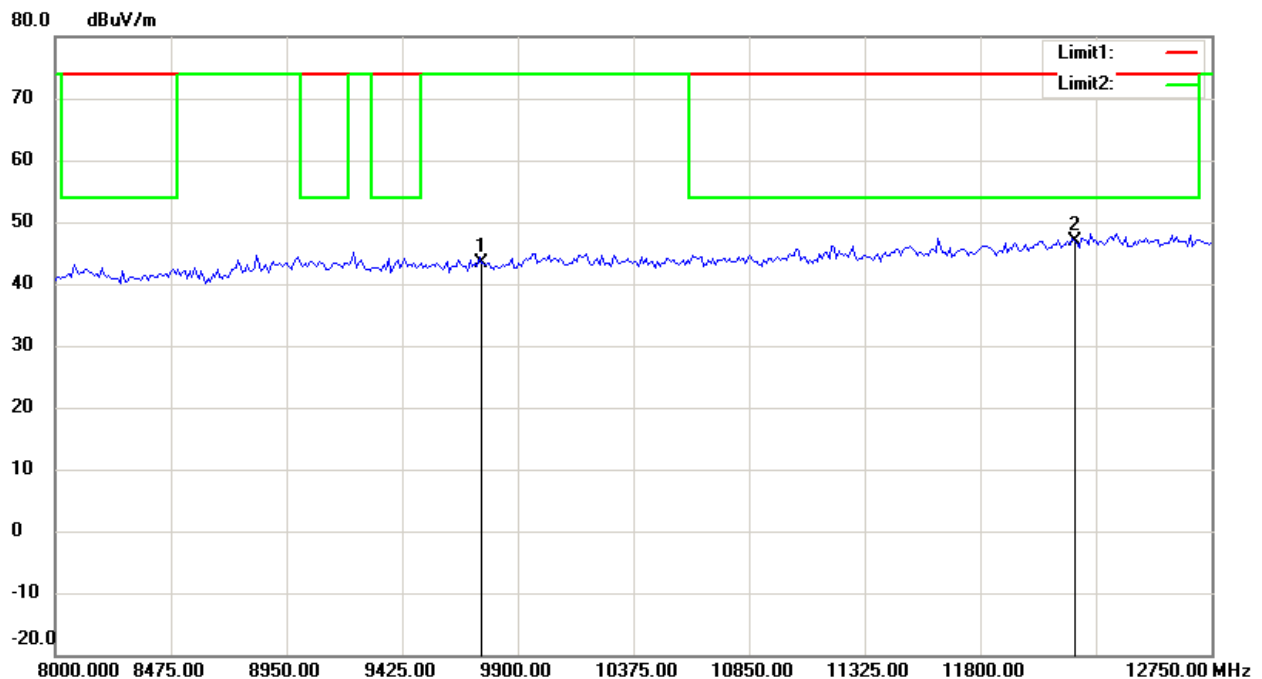
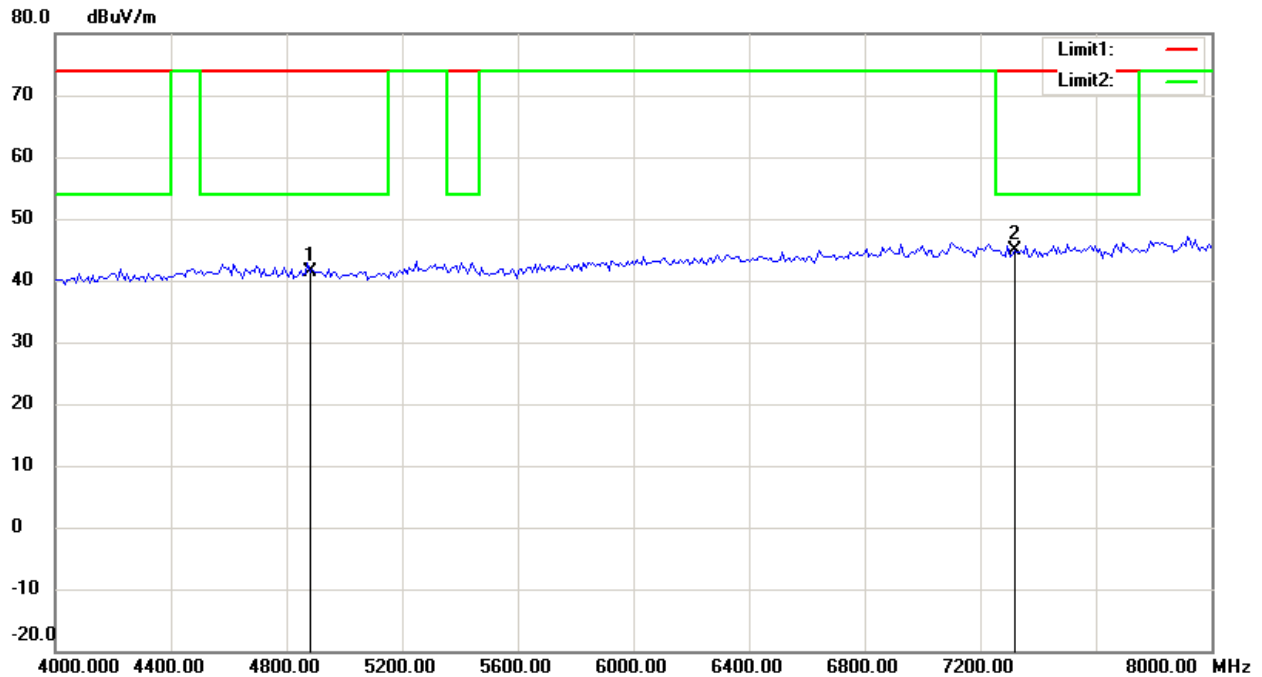
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Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

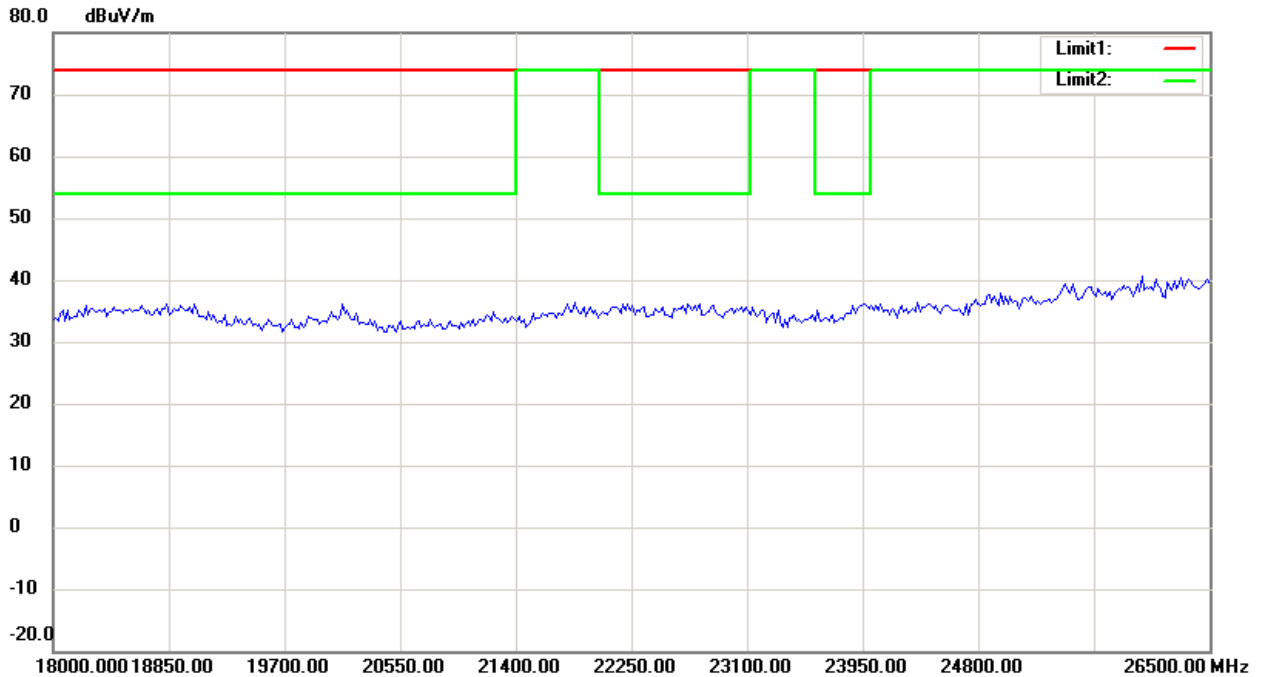
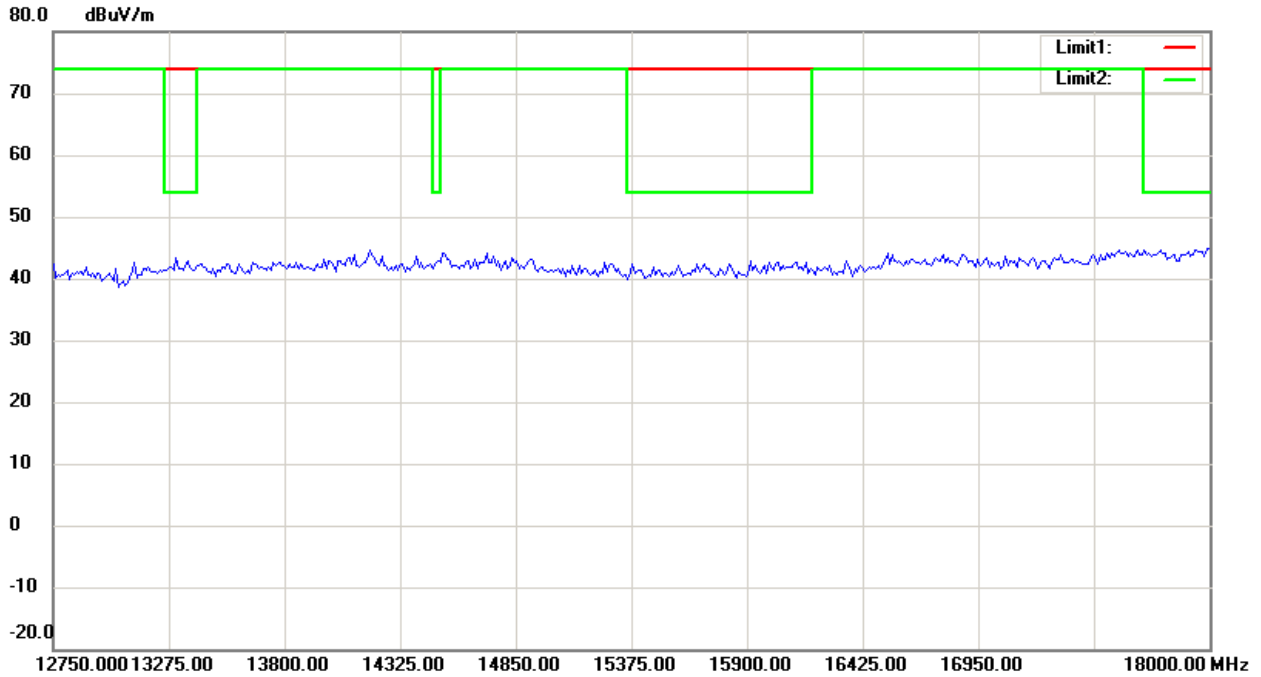
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

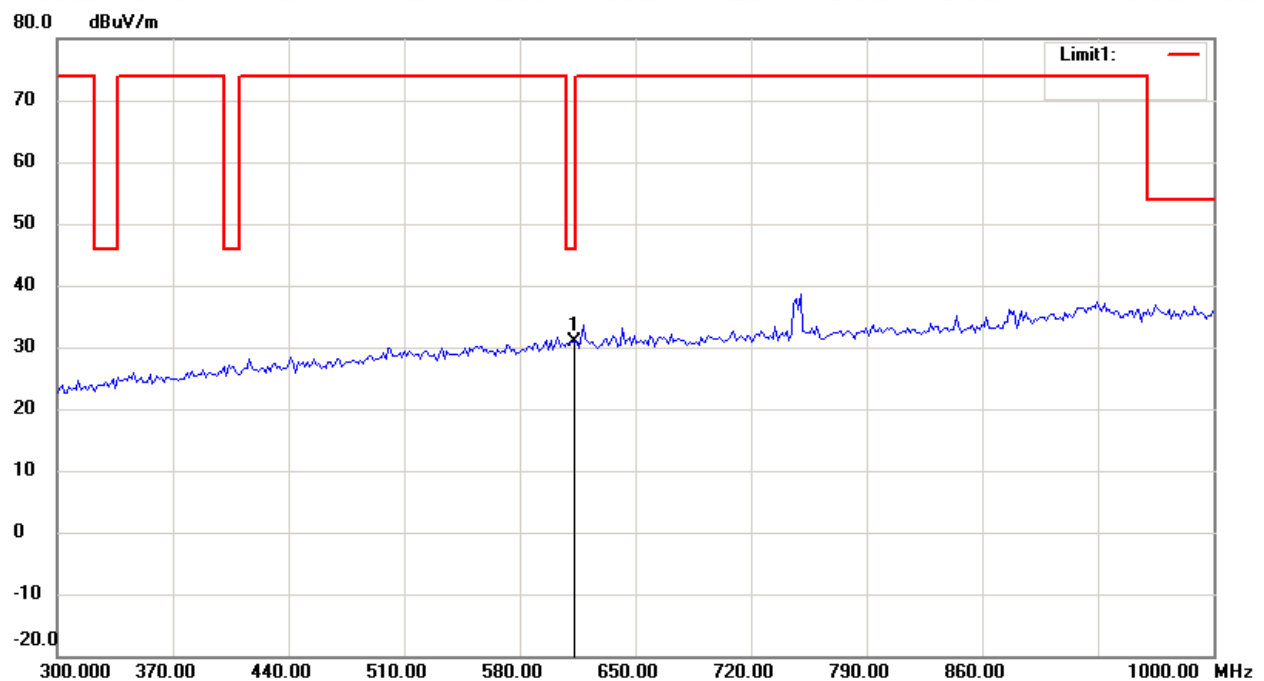
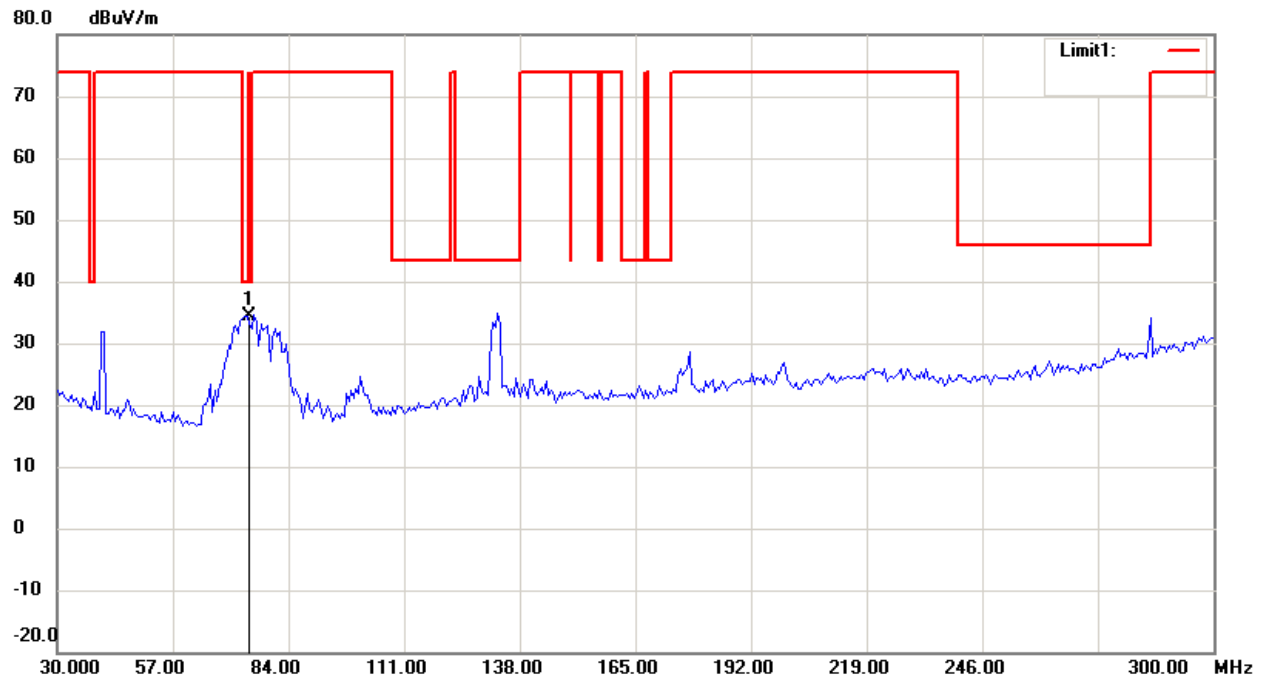




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

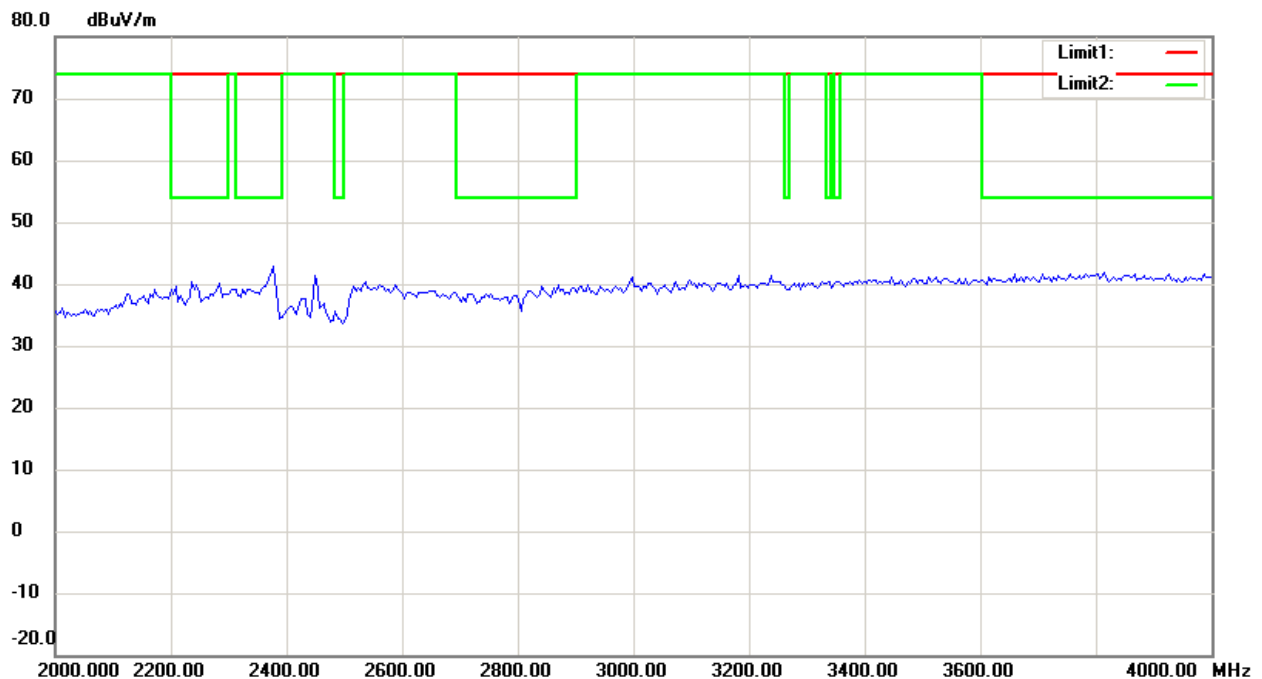
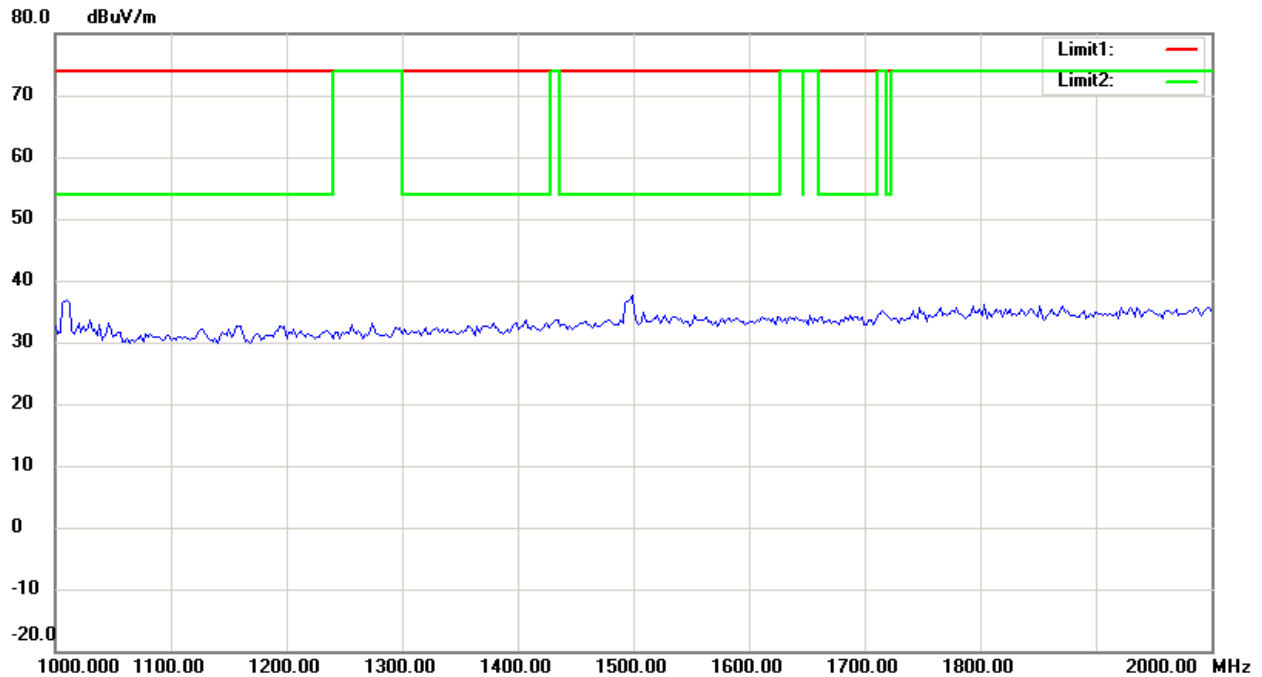
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

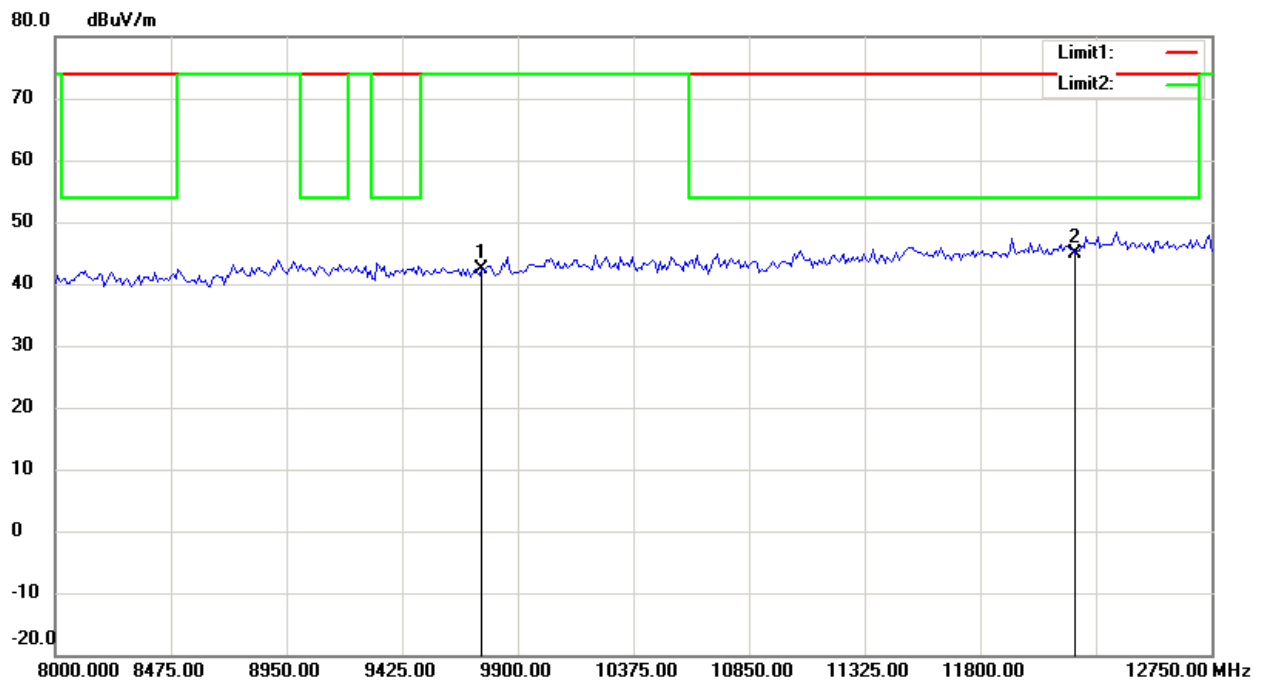
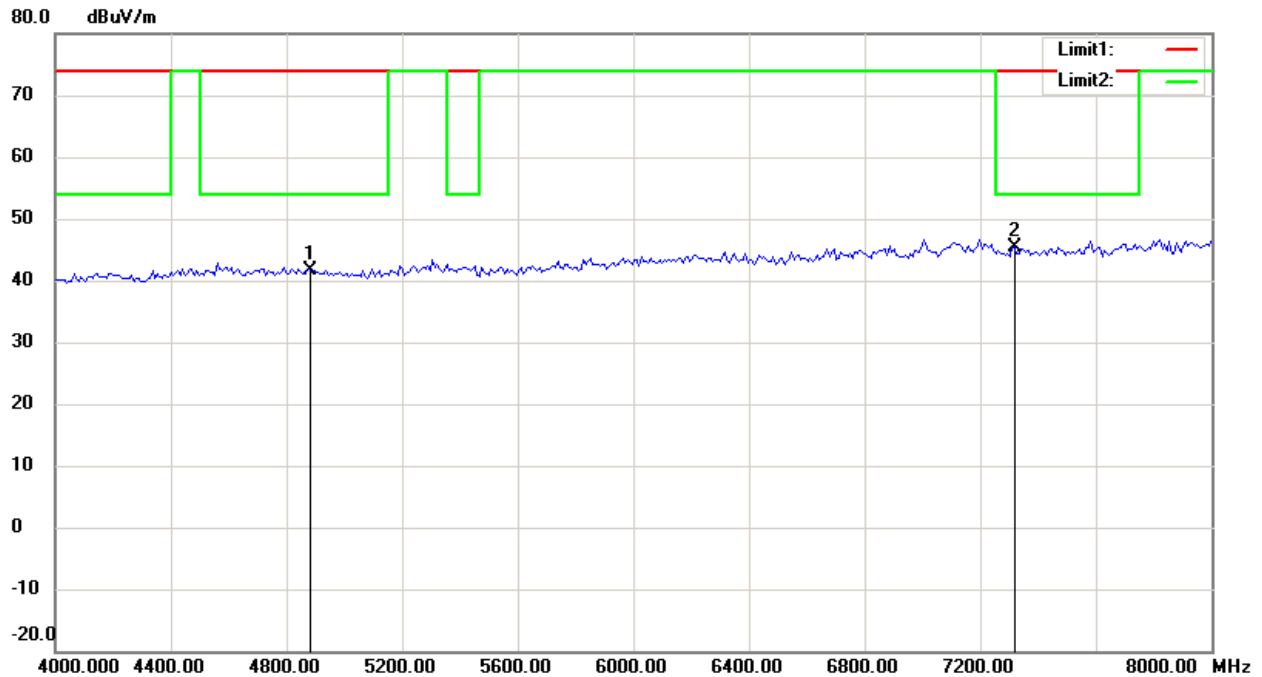
**Up Line: Peak Limit Line Down Line: Ave Limit Line**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

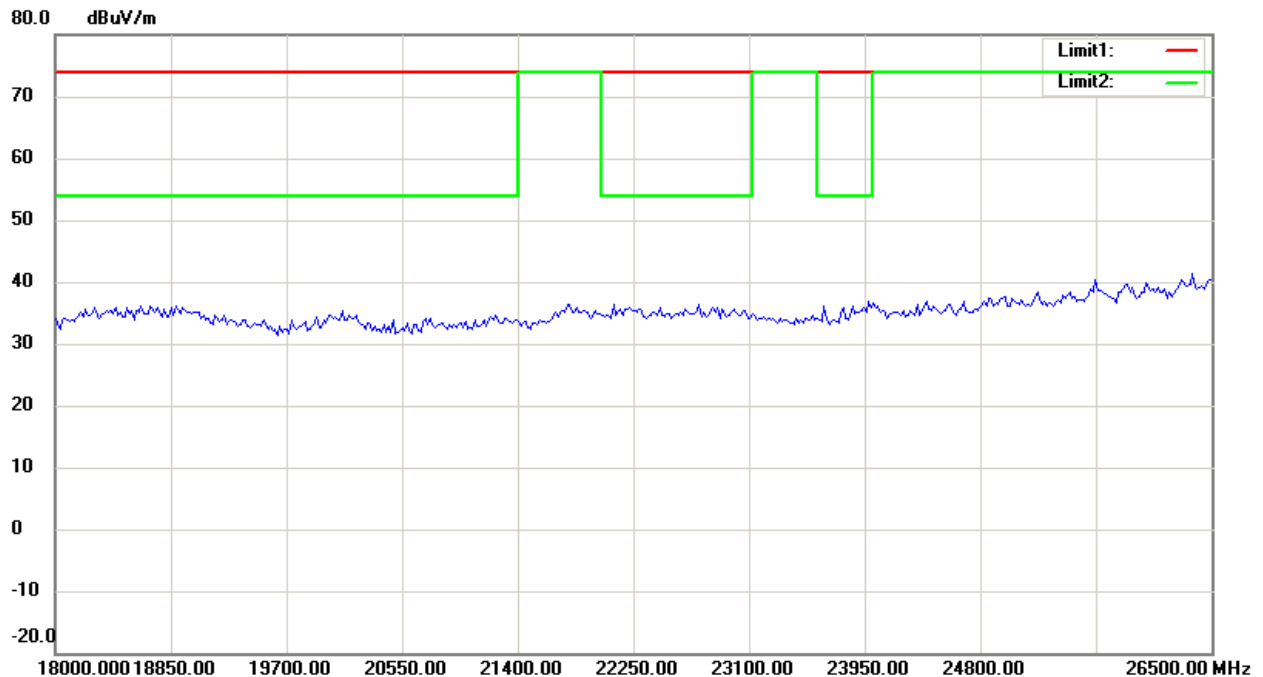
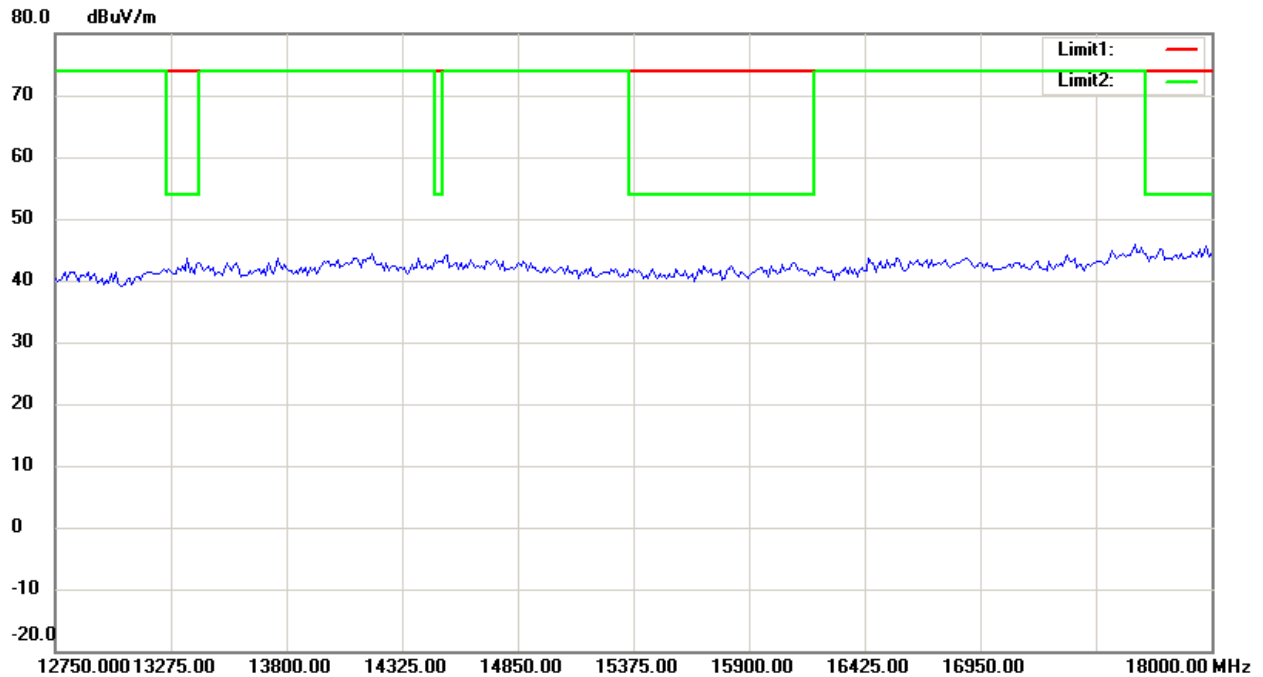
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



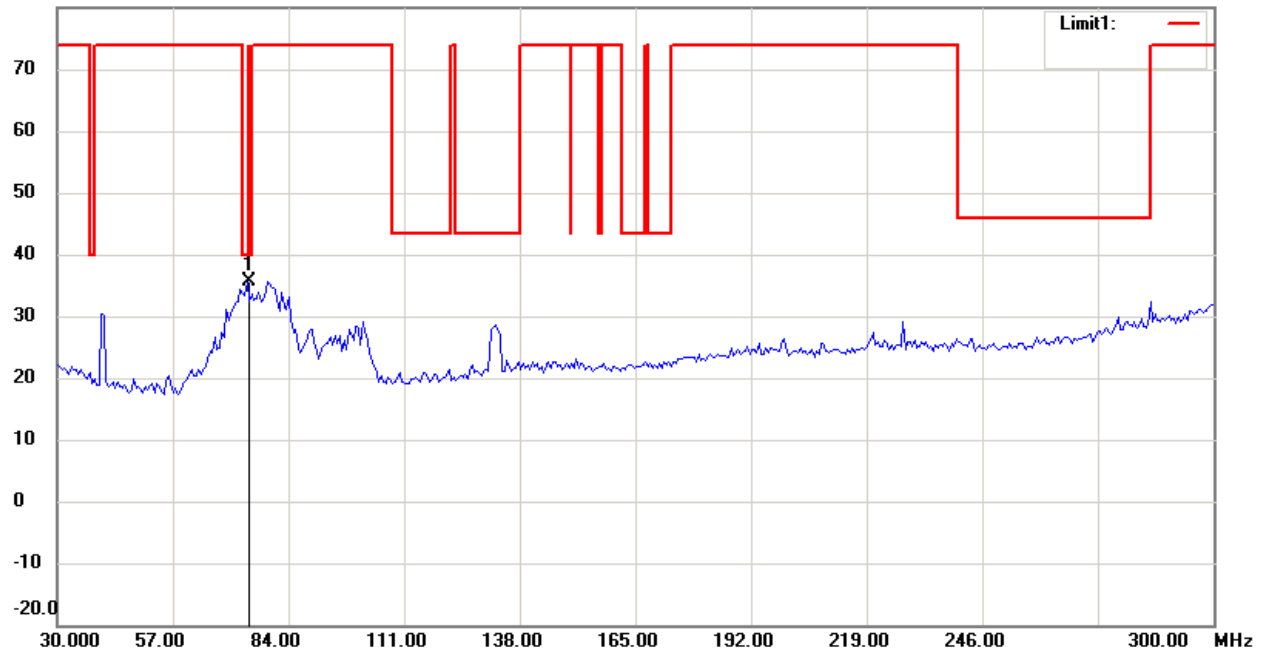
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

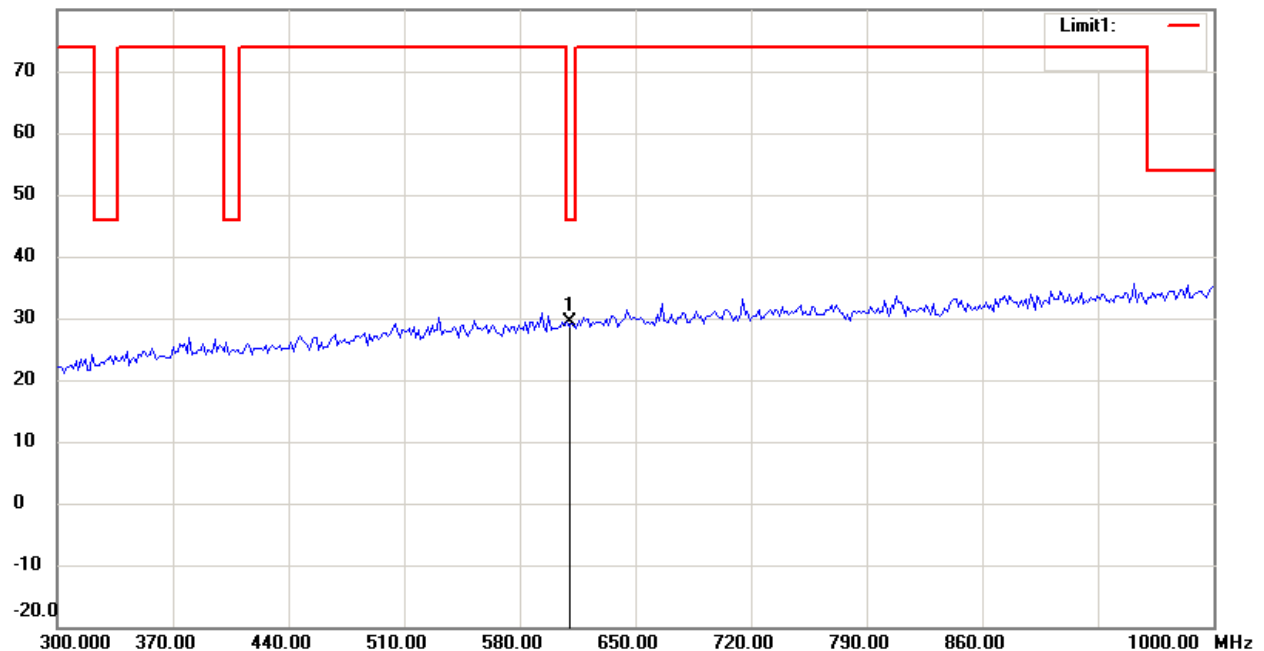
802.11n 40MHz ch7

Antenna Polarization H

80.0 dBuV/m



80.0 dBuV/m



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

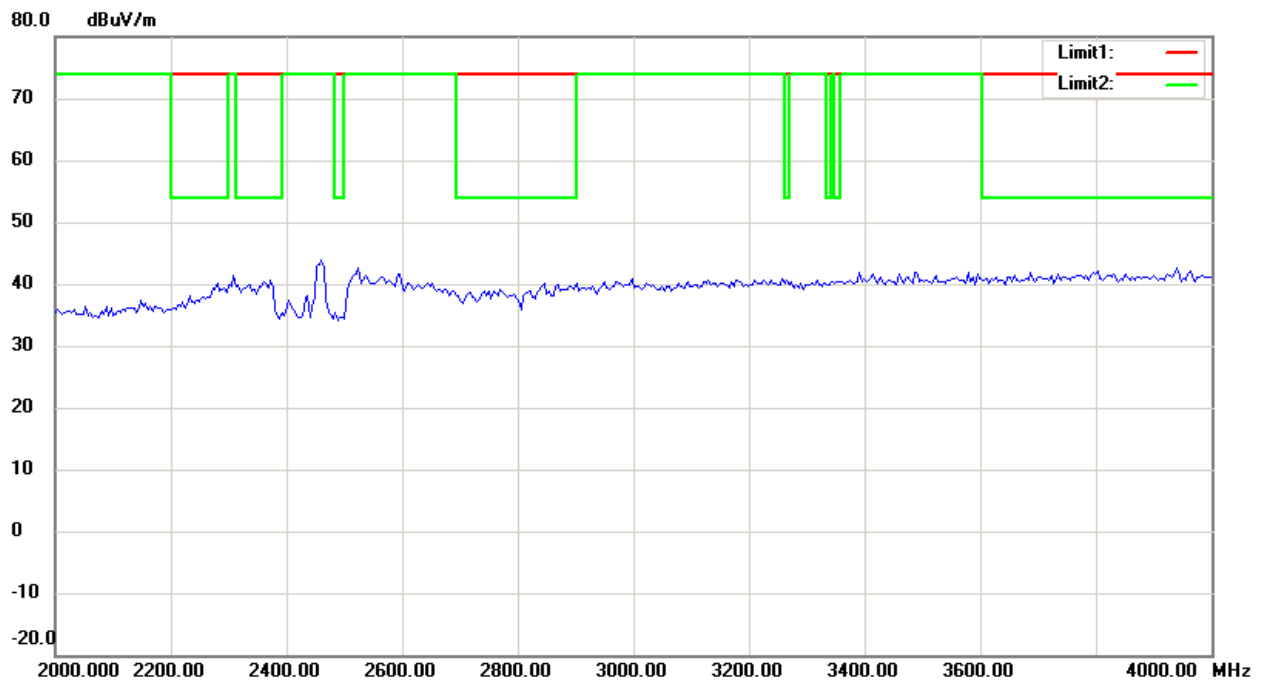
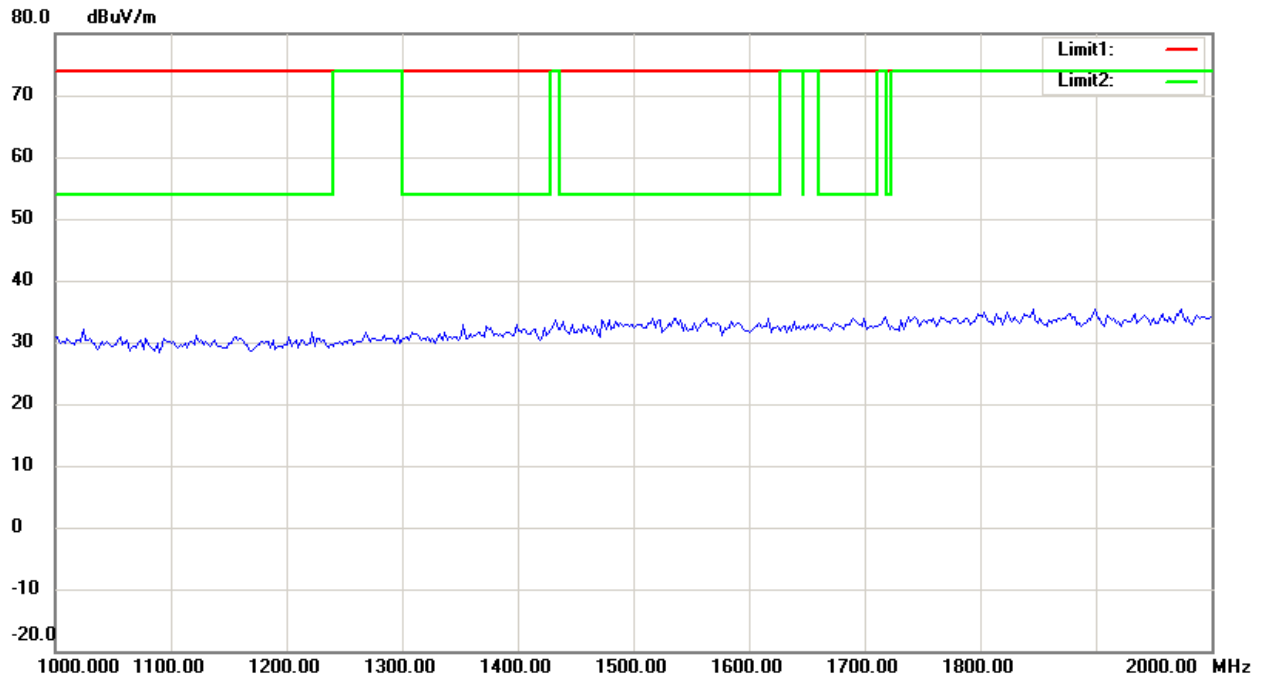
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

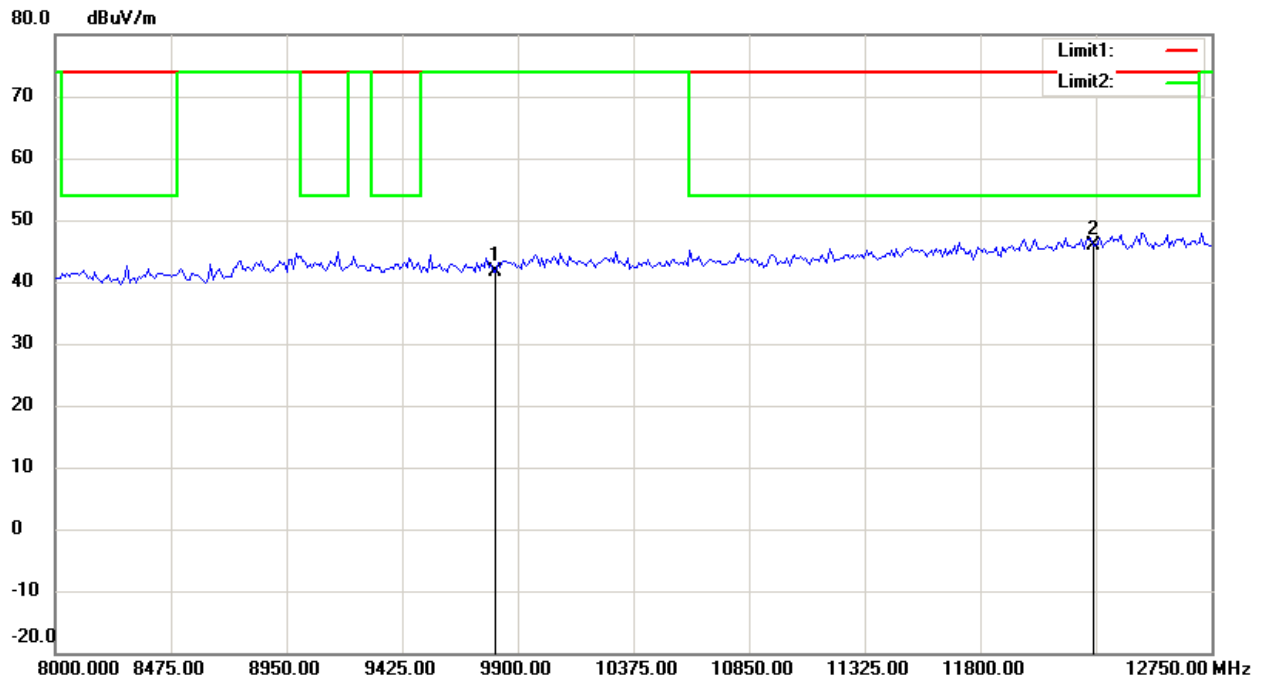
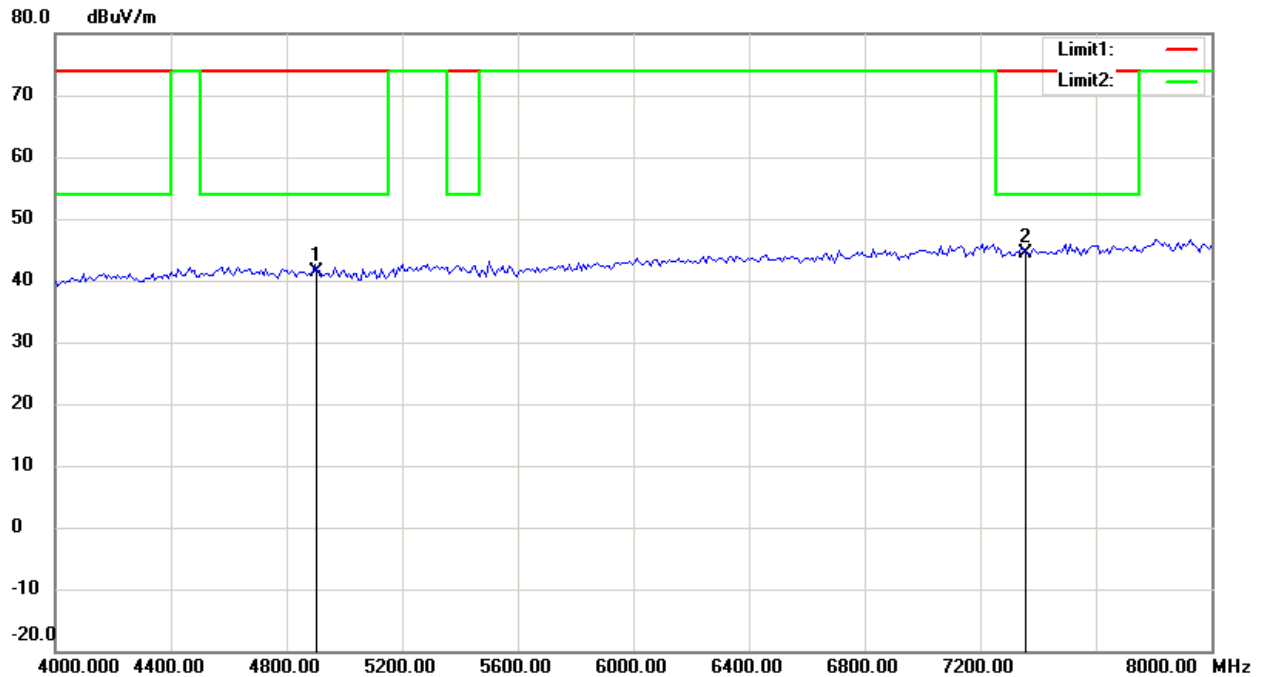
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

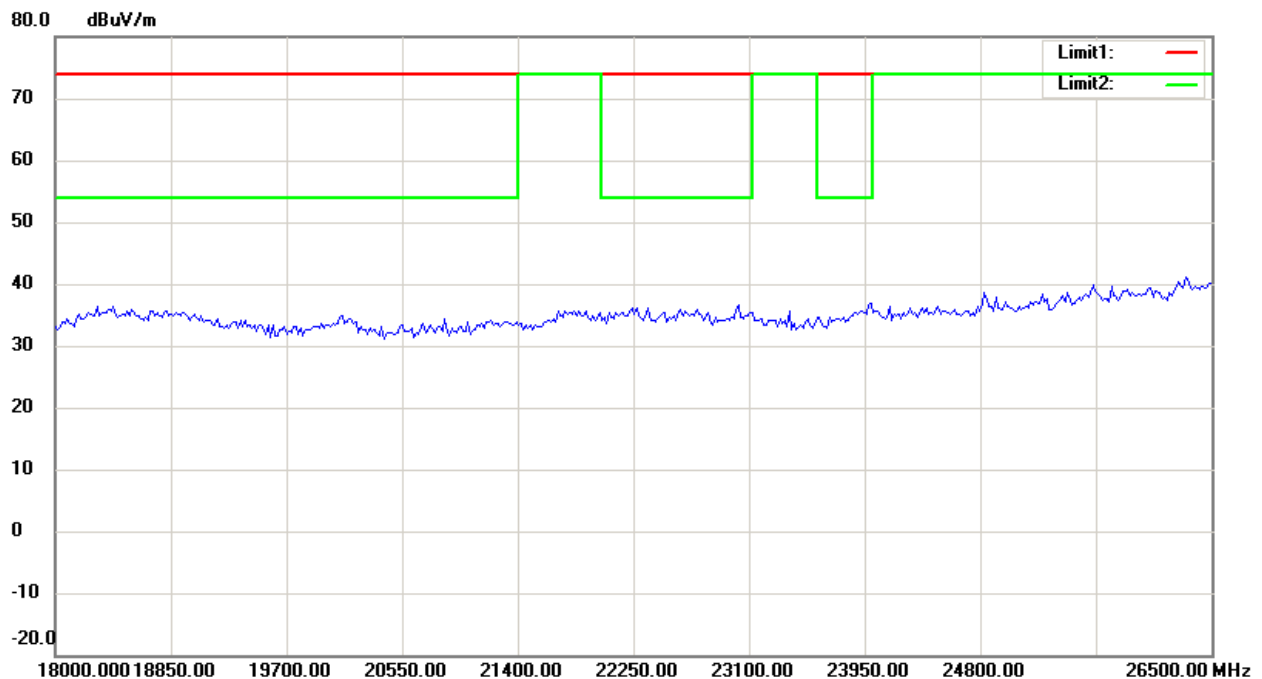
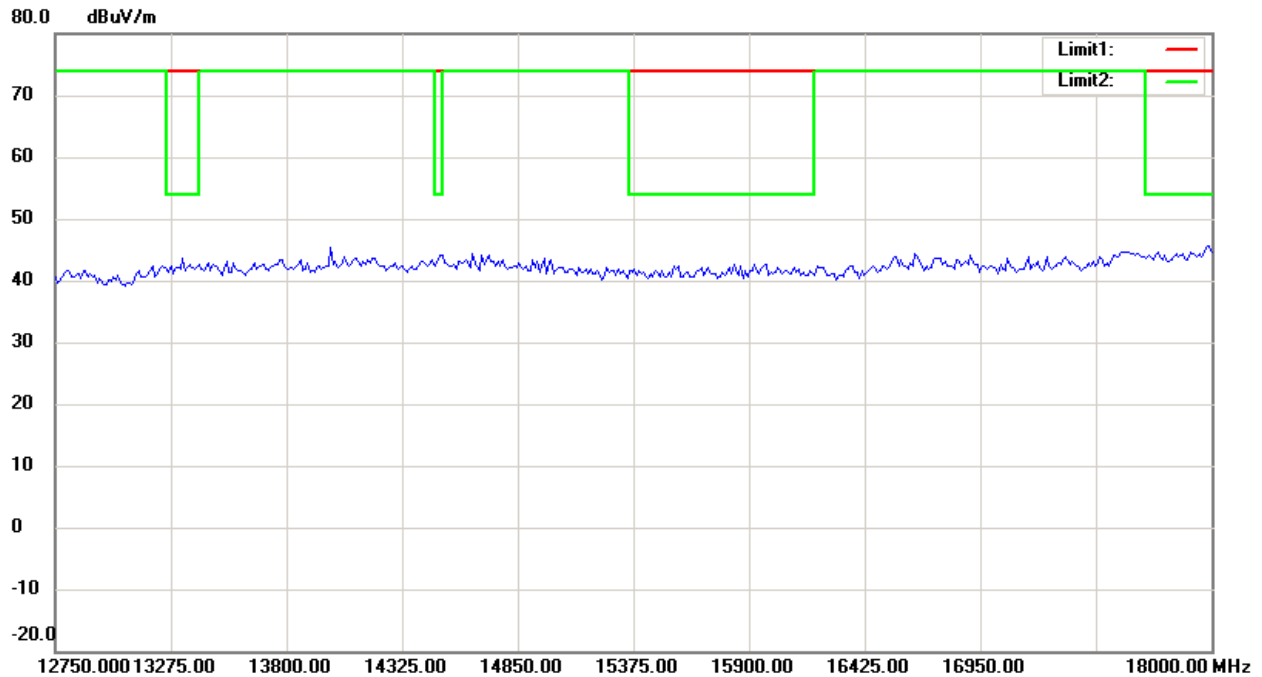
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

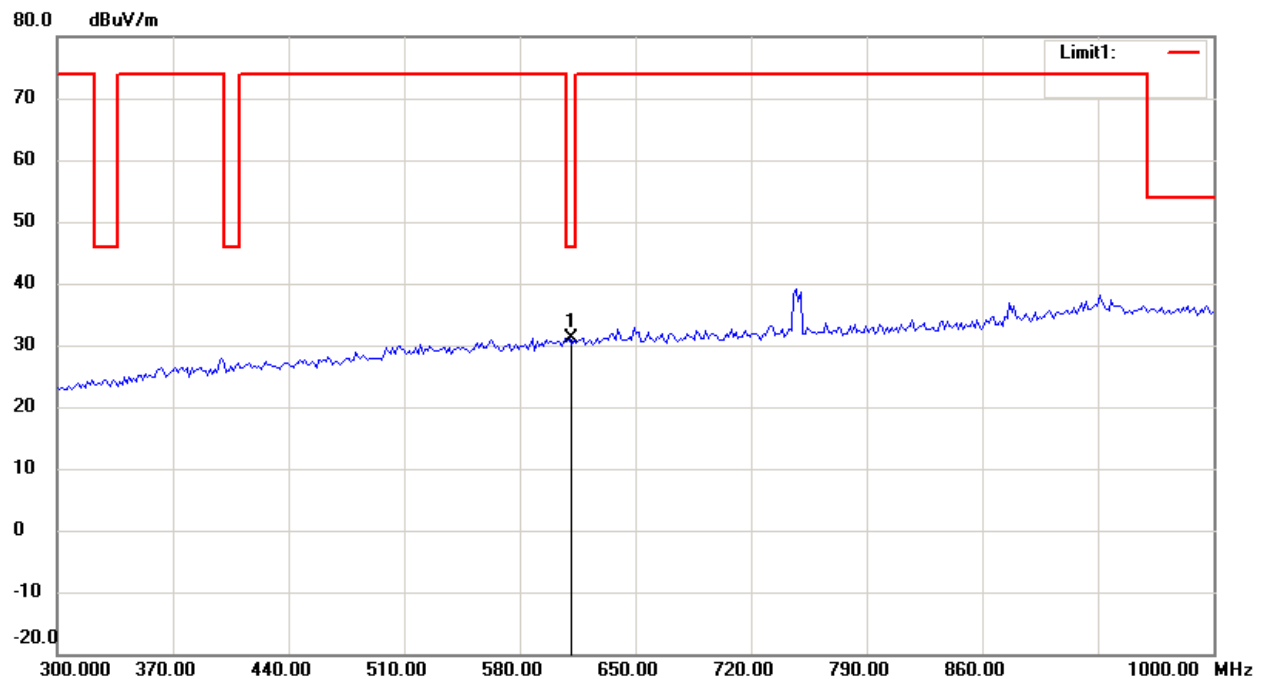
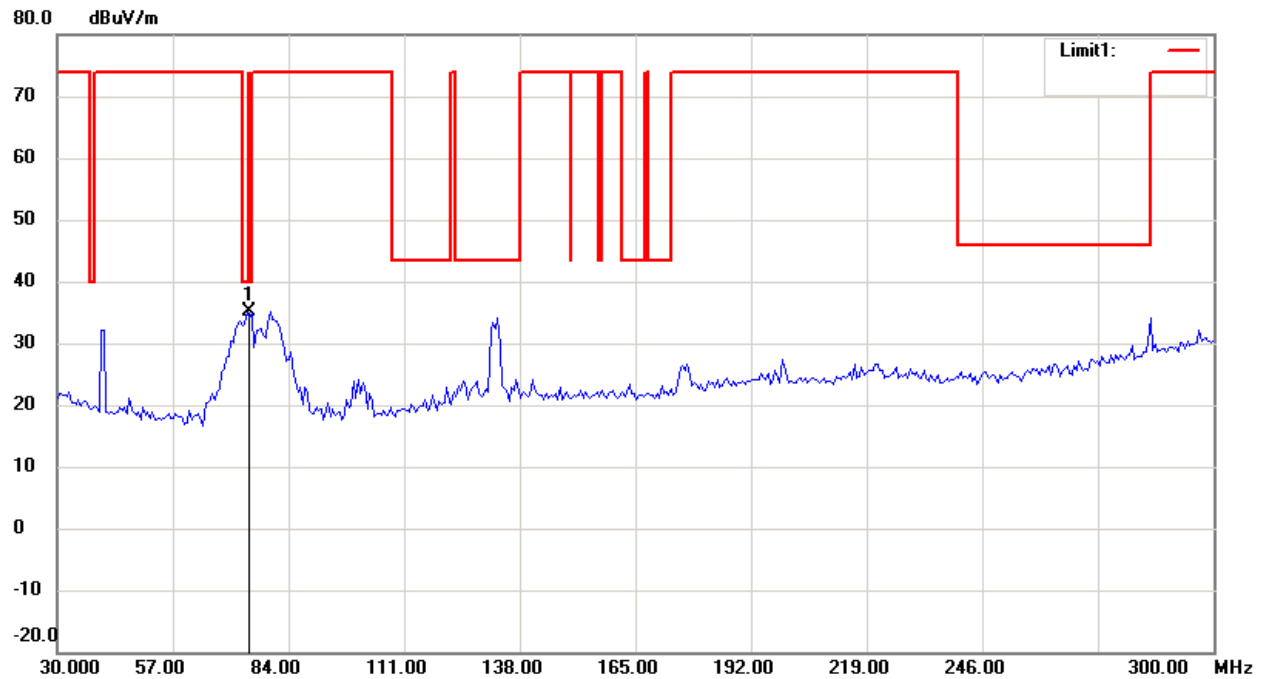




Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Antenna Polarization V



### Note:

Up Line: Peak Limit Line Down Line: Ave Limit Line

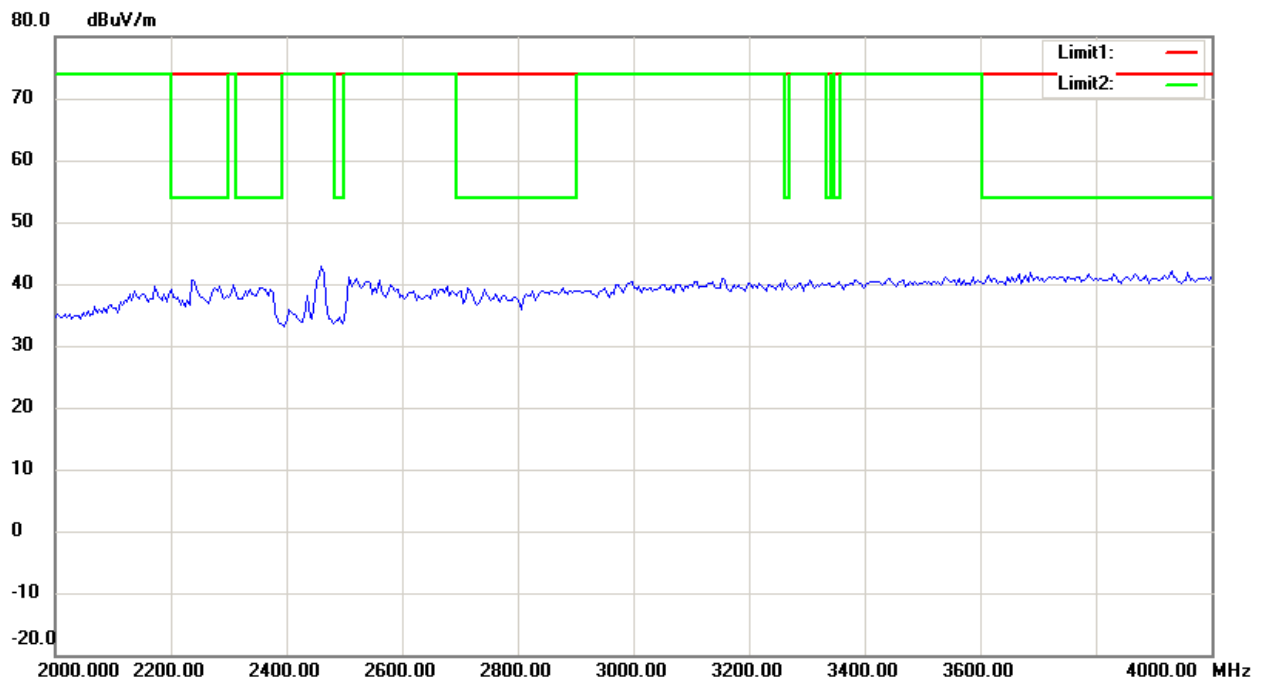
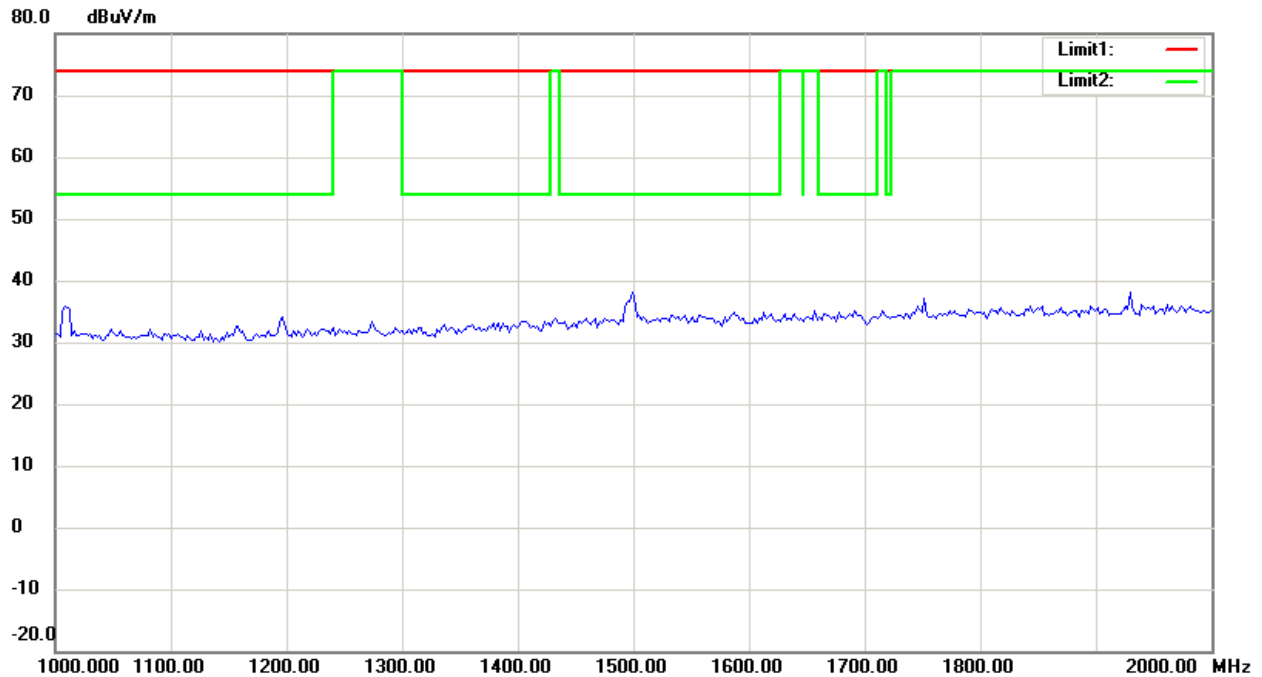
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

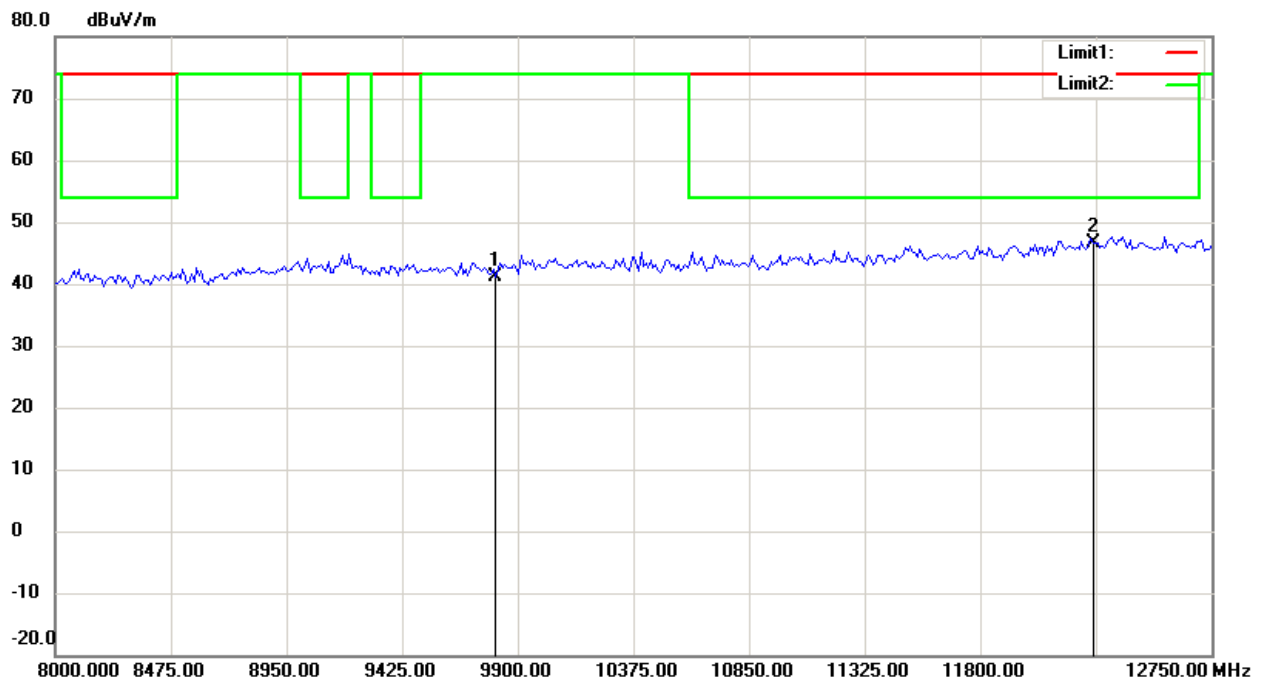
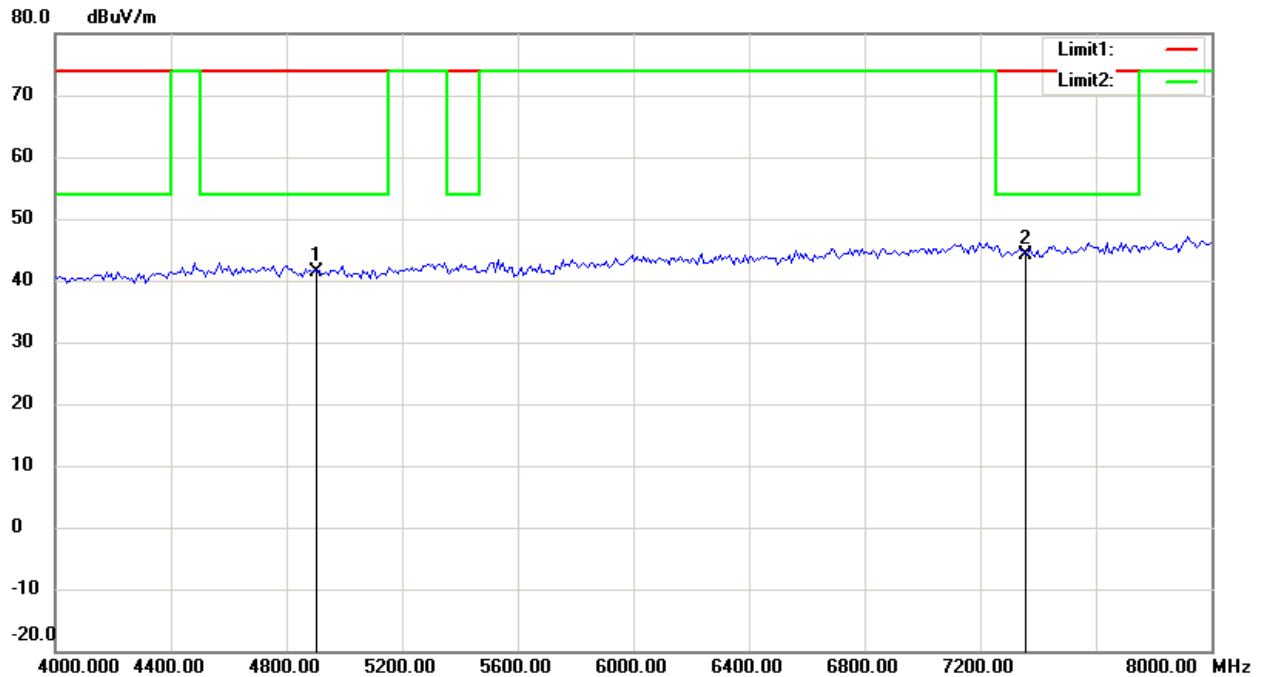
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

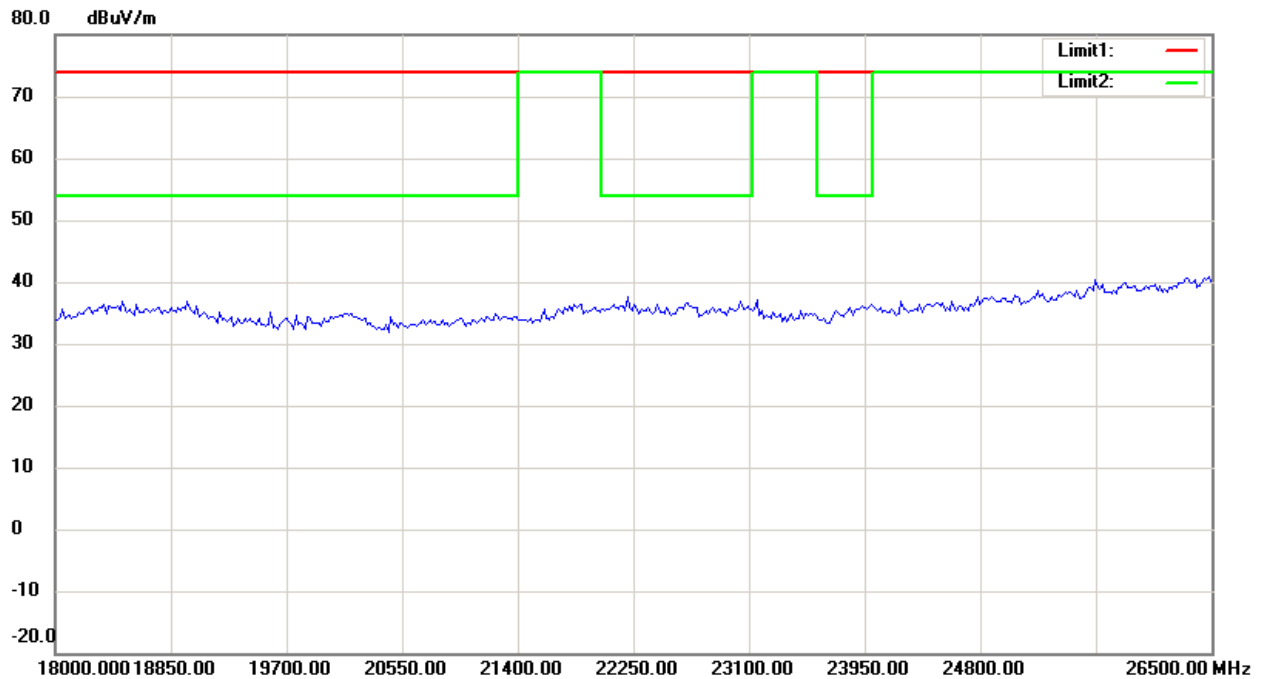
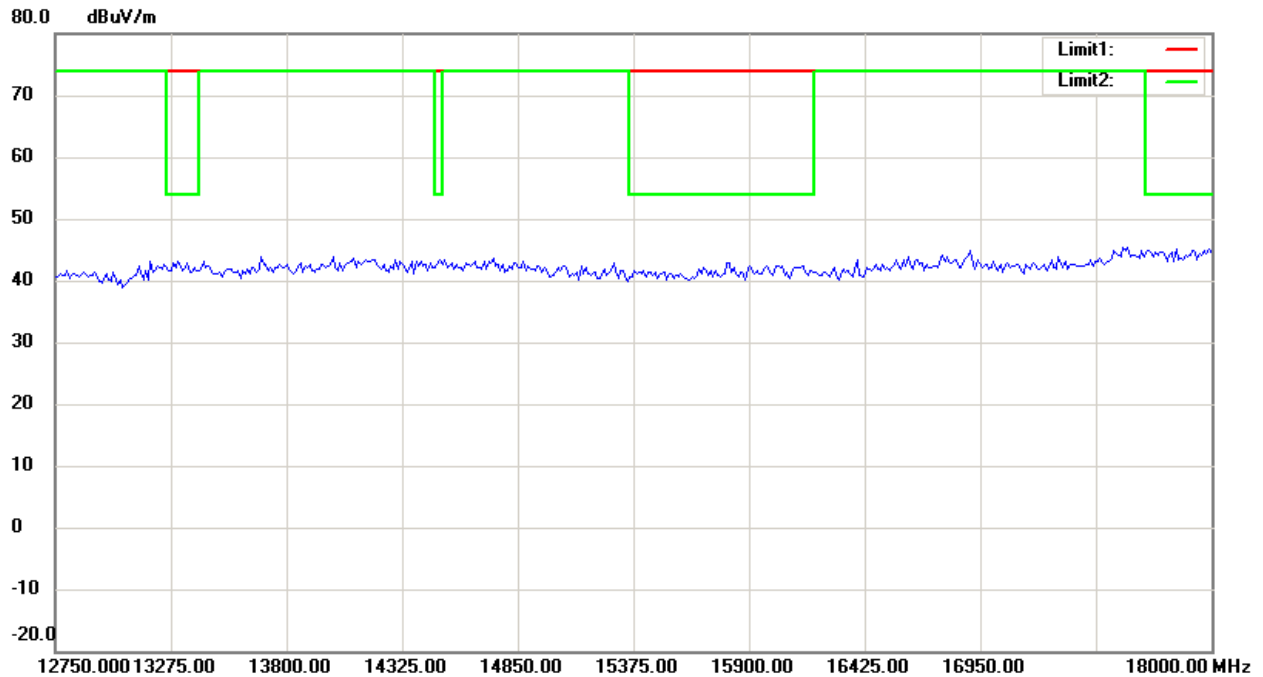
**Up Line: Peak Limit Line Down Line: Ave Limit Line**

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9



**Note:**

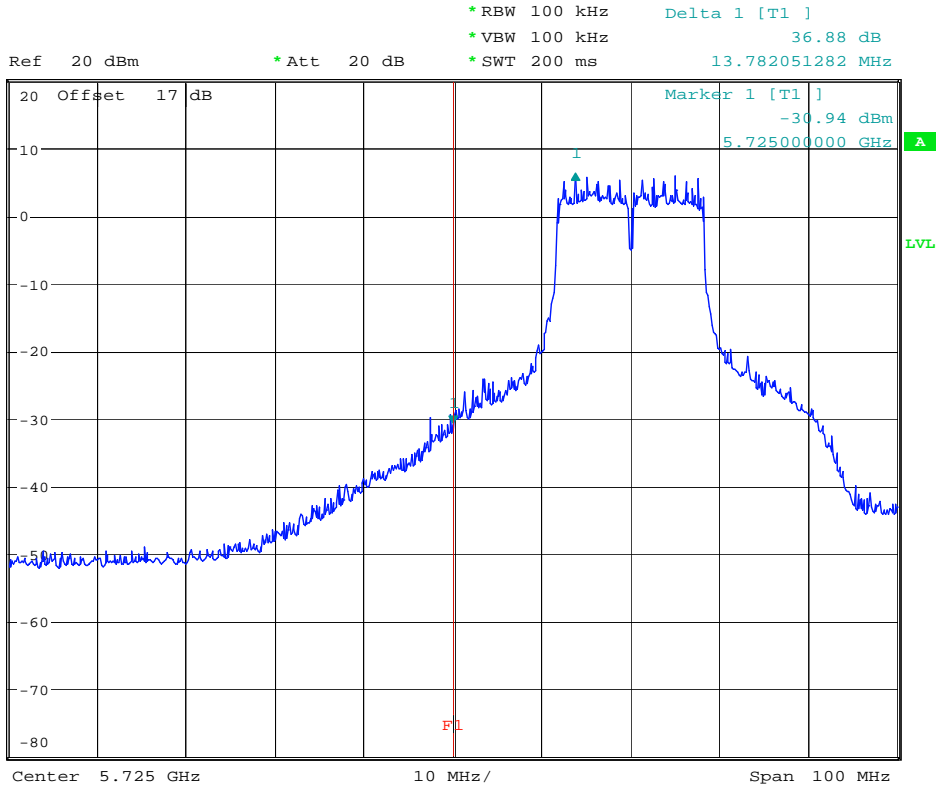
Up Line: Peak Limit Line Down Line: Ave Limit Line

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

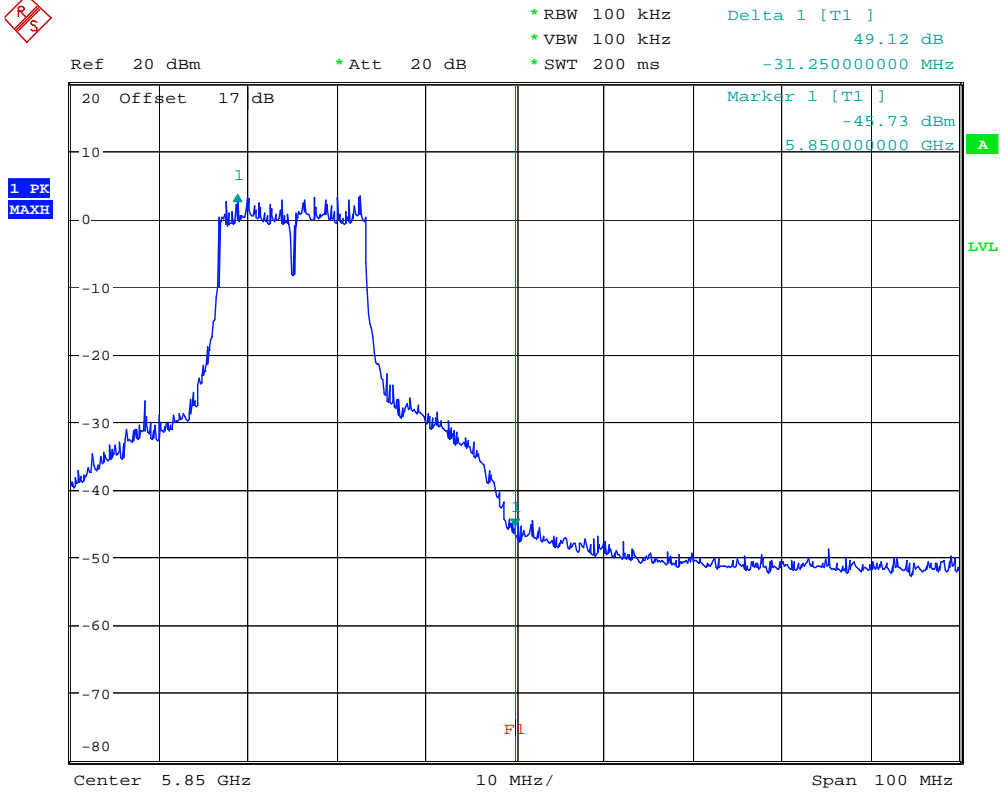
## Band Edge Measurement Mode A



BAND EDGE 802.11a CH149  
Date: 26.MAY.2010 10:13:42



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

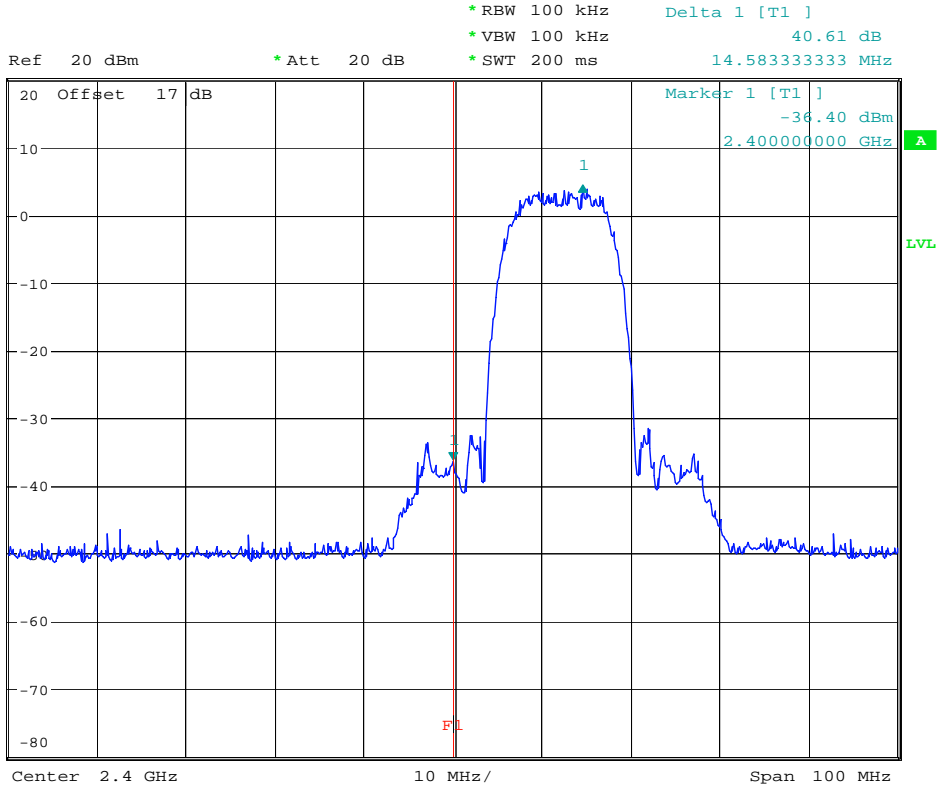


BAND EDGE 802.11a CH165  
Date: 26.MAY.2010 10:14:17



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode B

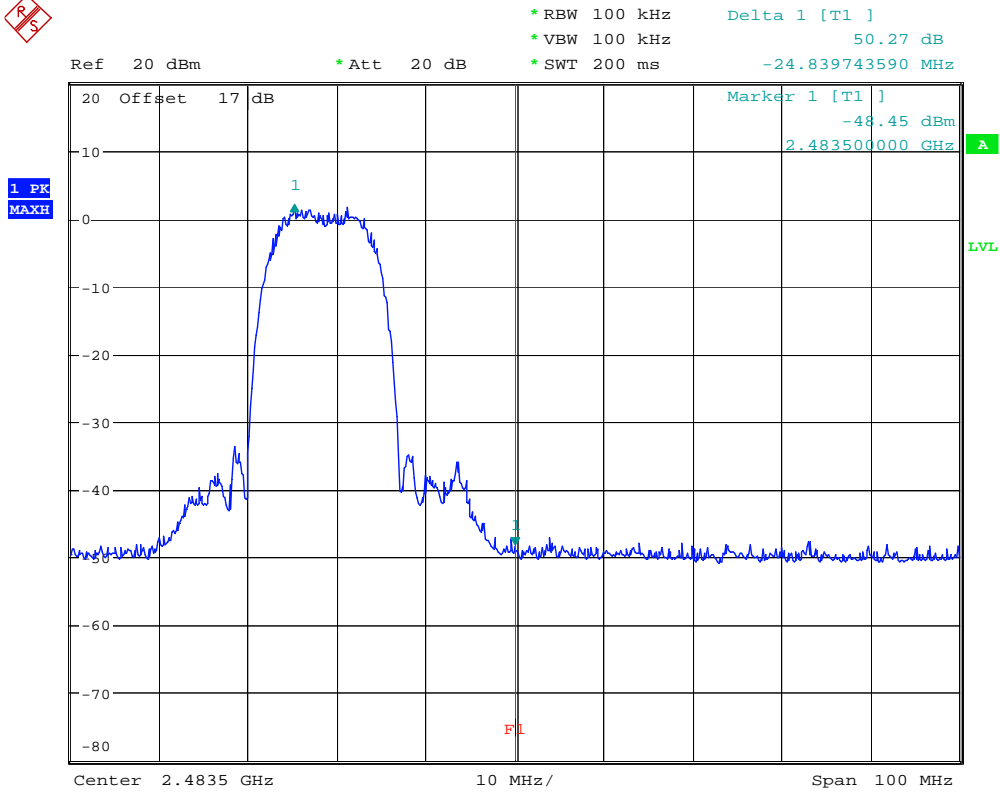


BAND EDGE 802.11b CH1  
Date: 26.MAY.2010 10:10:00



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



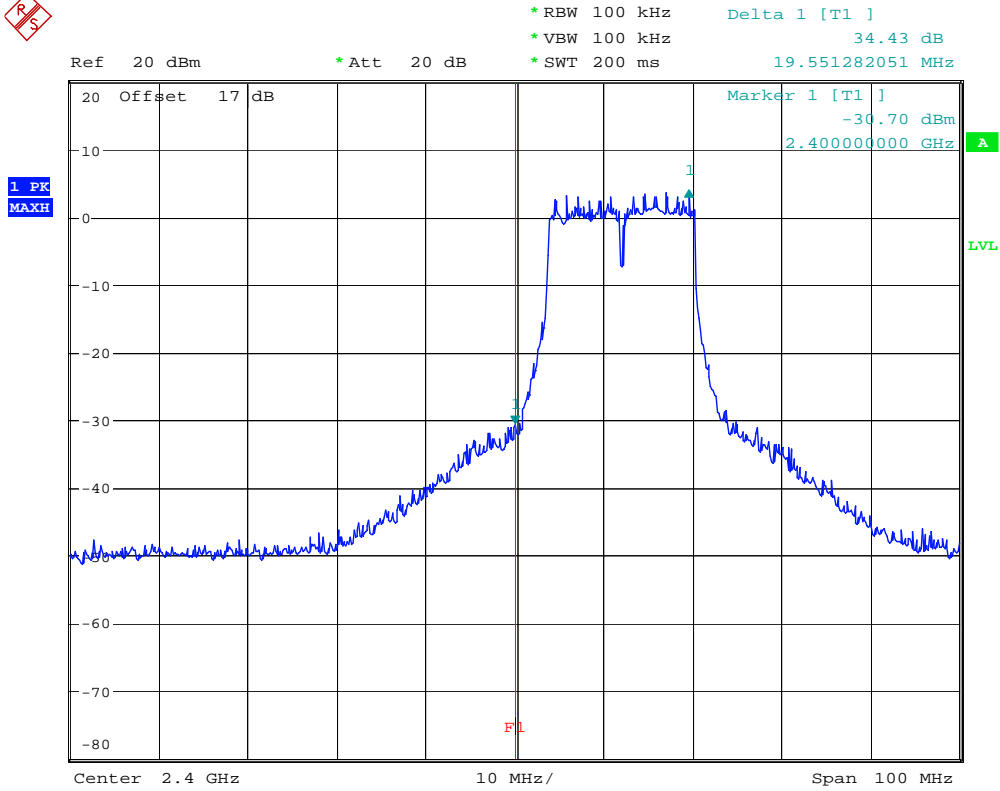
BAND EDGE 802.11b CH11  
Date: 26.MAY.2010 10:10:32





Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode C

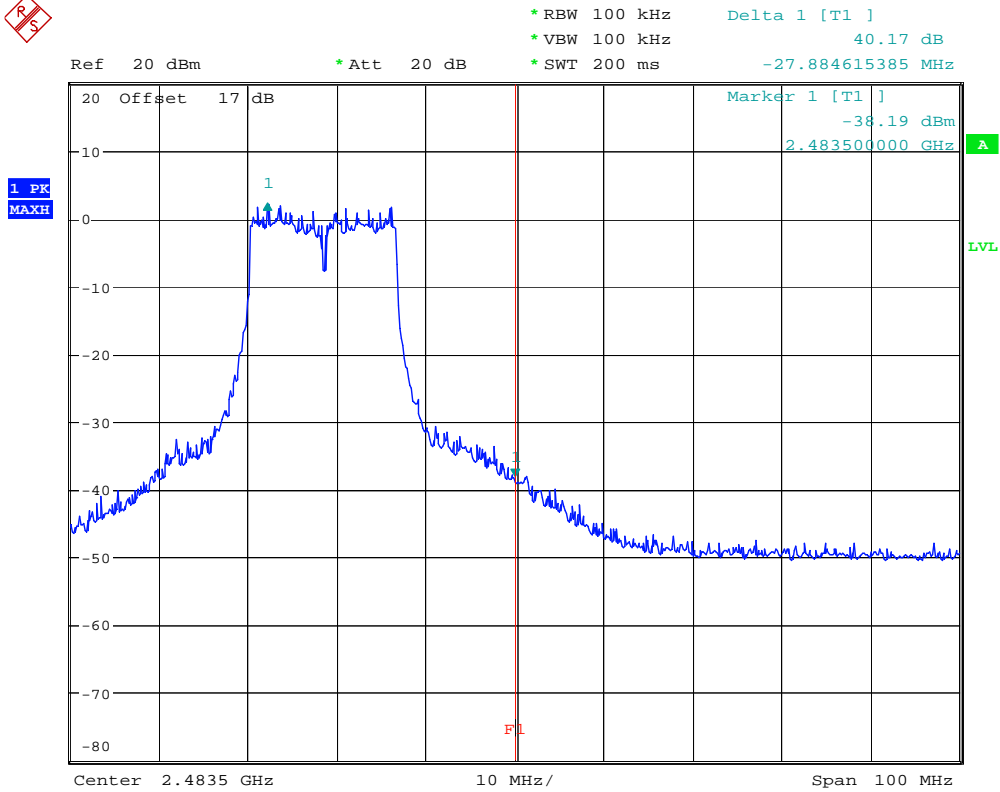


BAND EDGE 802.11g CH1

Date: 26.MAY.2010 10:09:41



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

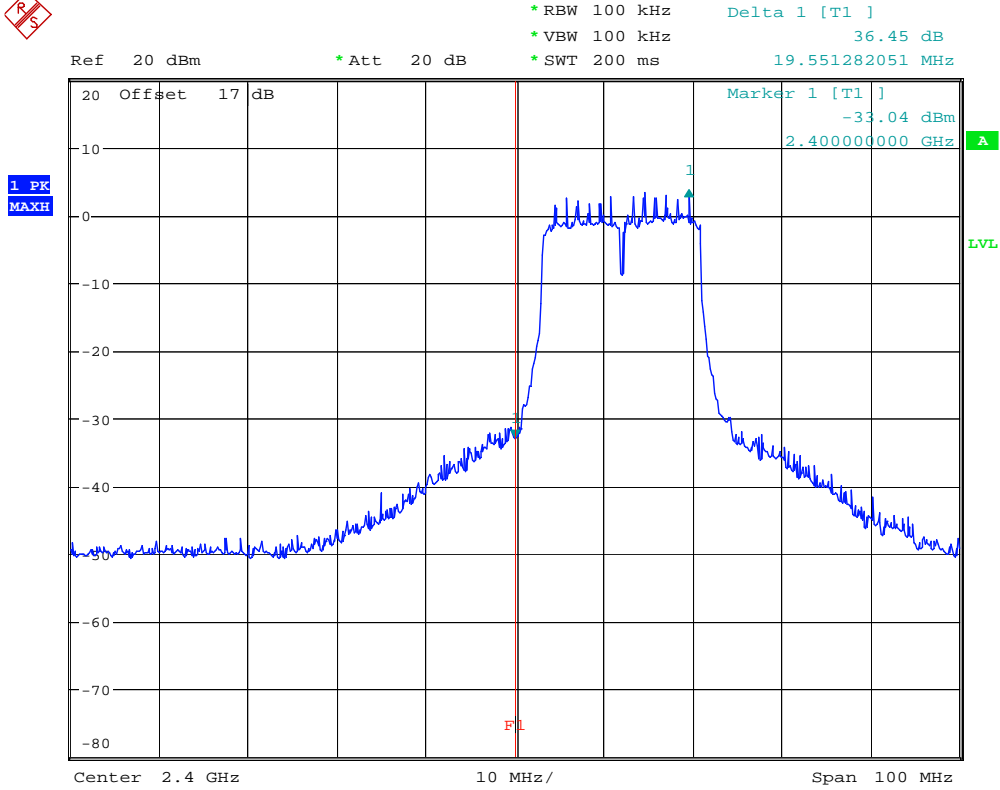


BAND EDGE 802.11g CH11  
Date: 26.MAY.2010 10:11:07



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

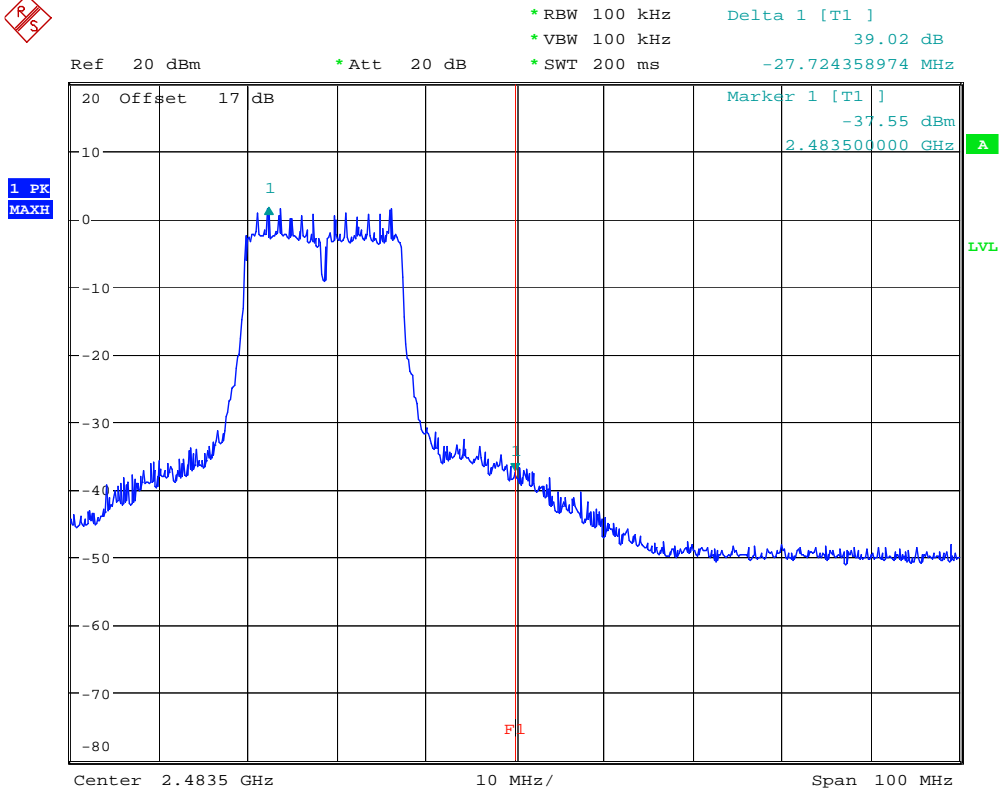
## Mode D



BAND EDGE 802.11n 20MHz CH1  
Date: 26.MAY.2010 10:09:20



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



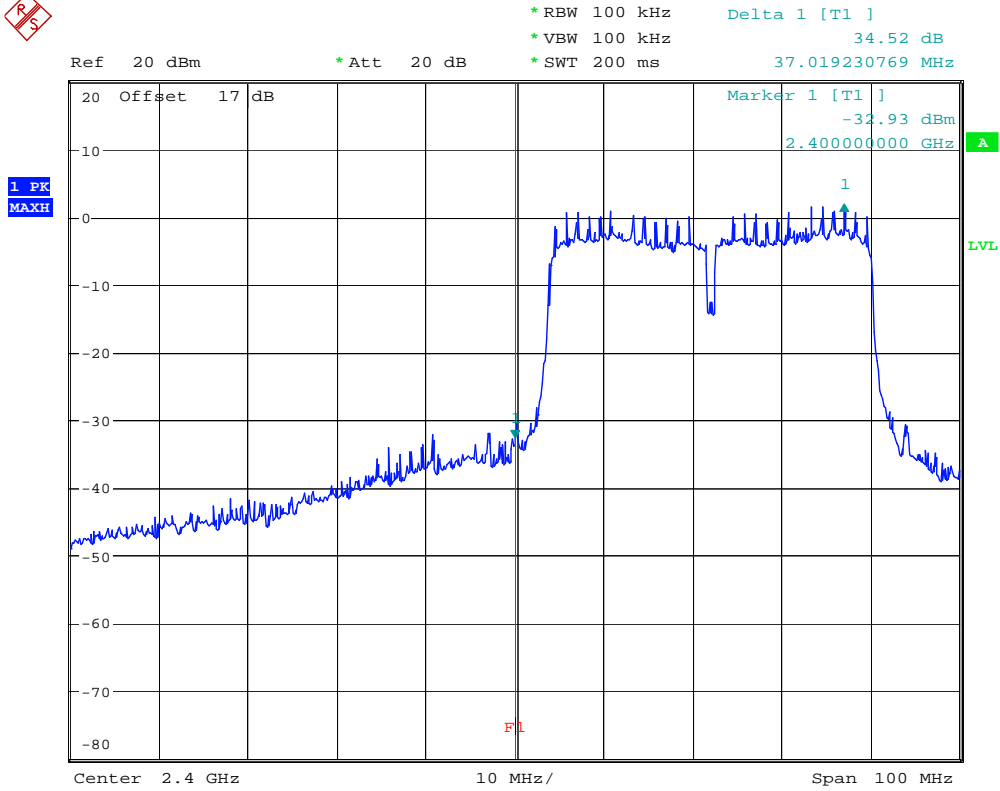
BAND EDGE 802.11n 20MHz CH11

Date: 26.MAY.2010 10:11:26



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode E

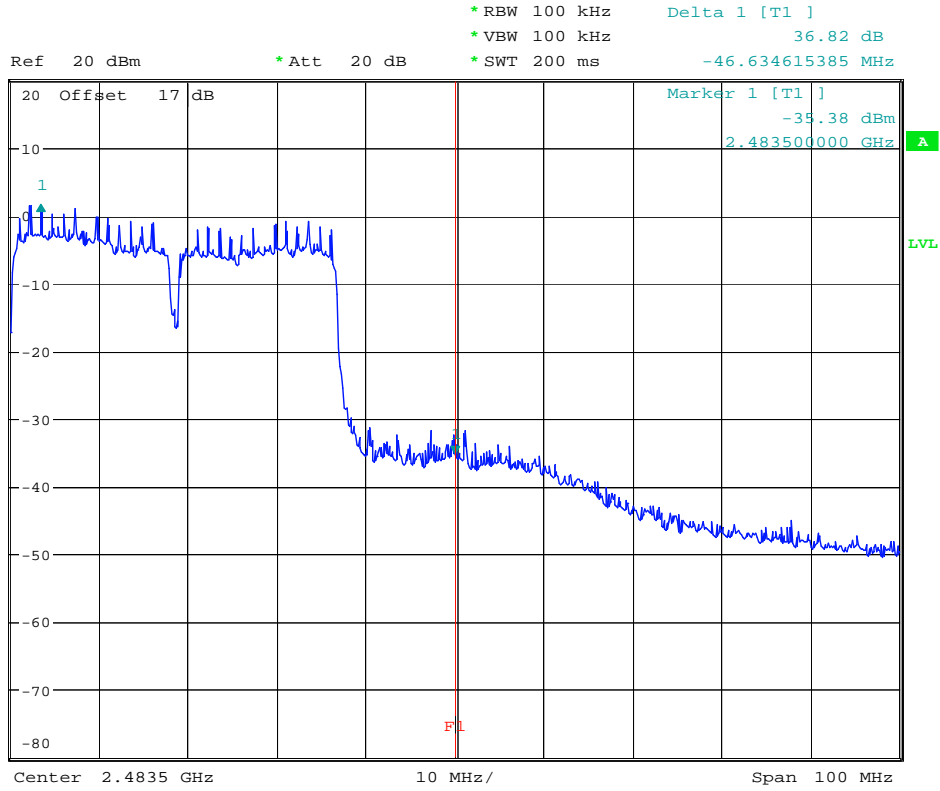


BAND EDGE 802.11n 40MHz CH1  
Date: 26.MAY.2010 10:08:57



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



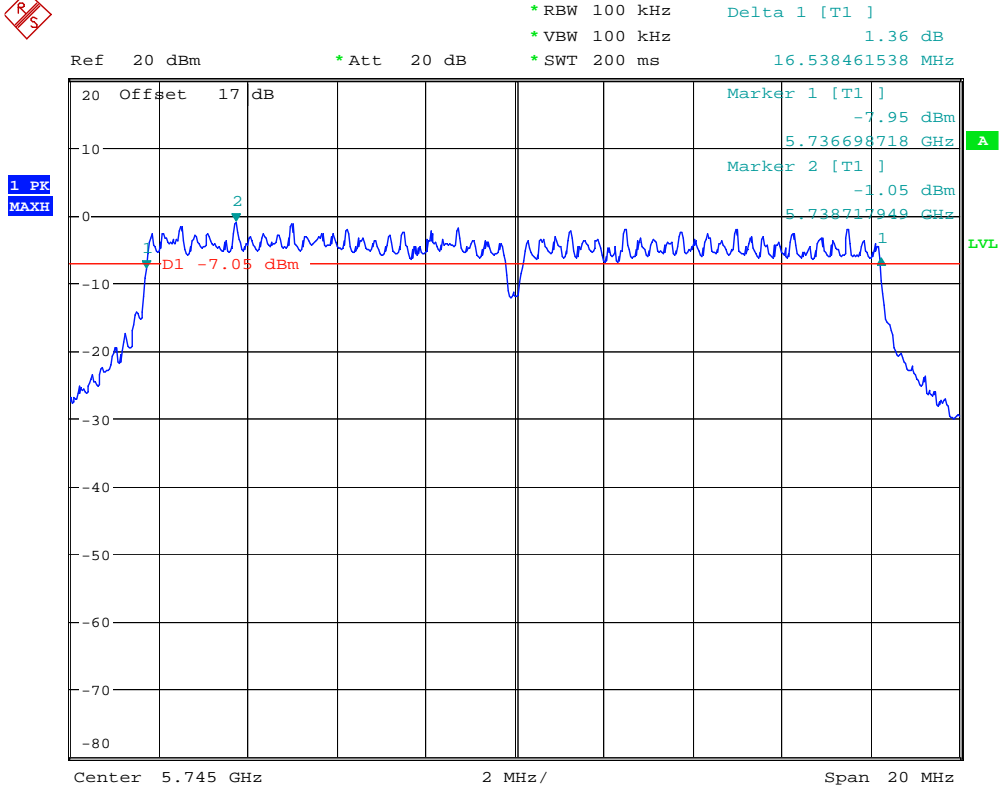
BAND EDGE 802.11n 40MHz CH7

Date: 26.MAY.2010 10:11:59



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Minimum 6dB Bandwidth Mode A

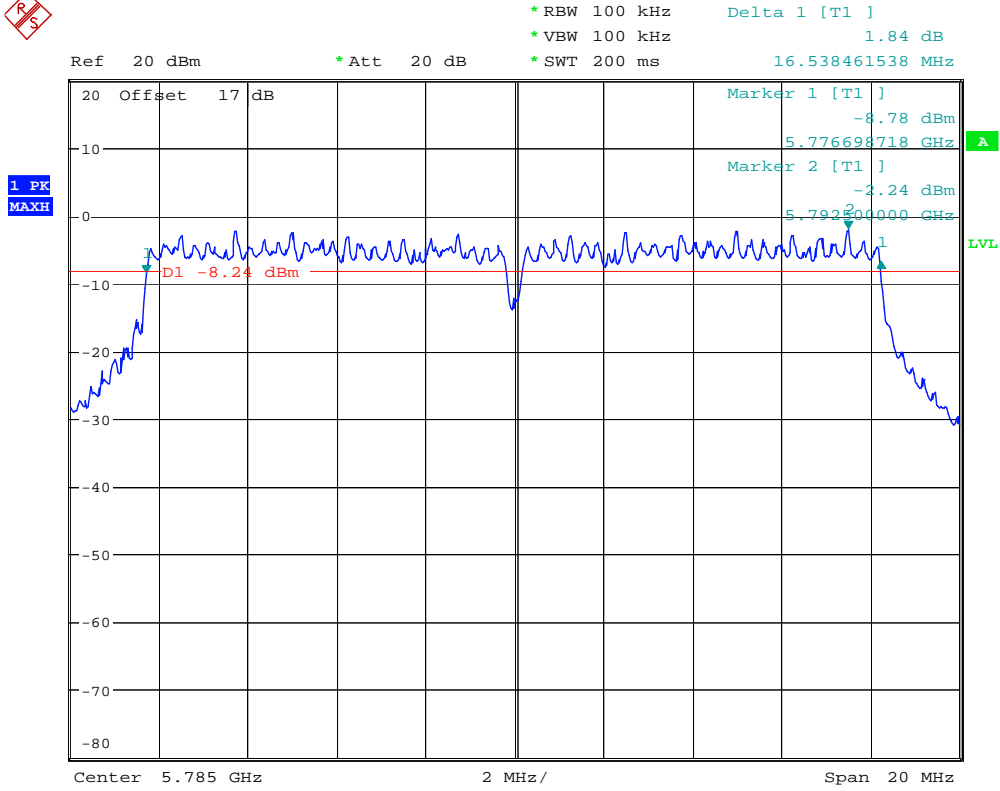


6DB BANDWIDTH 802.11a CH149  
Date: 19.MAY.2010 12:30:29



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



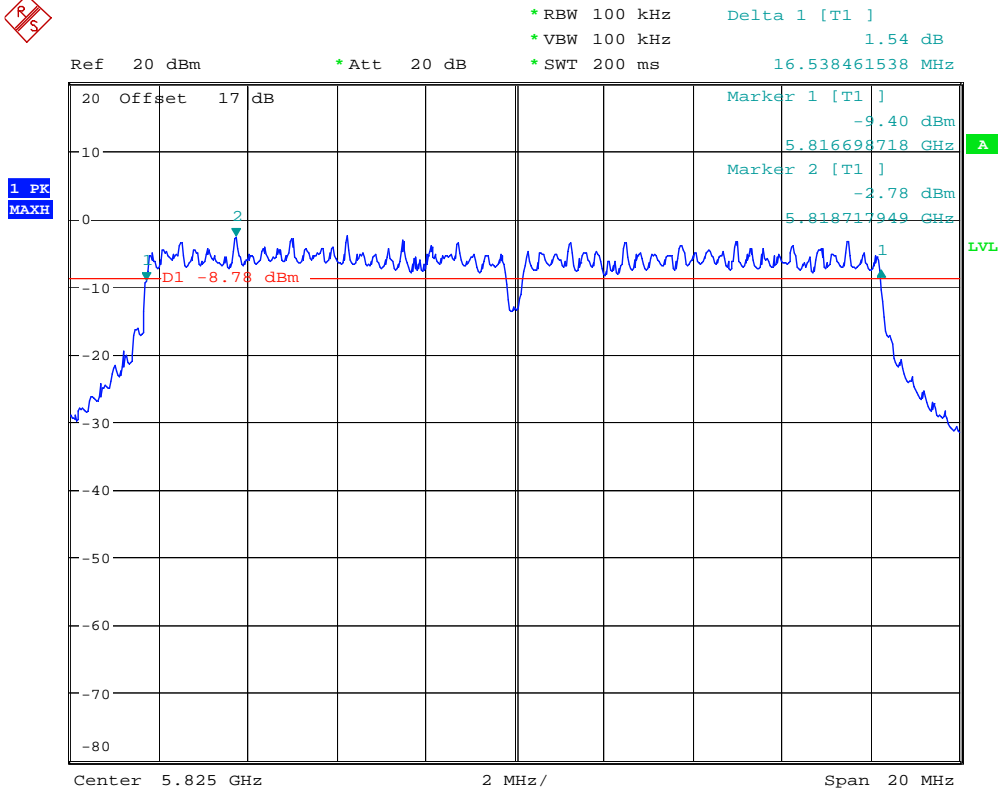
6DB BANDWIDTH 802.11a CH157

Date: 19.MAY.2010 12:29:40





Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



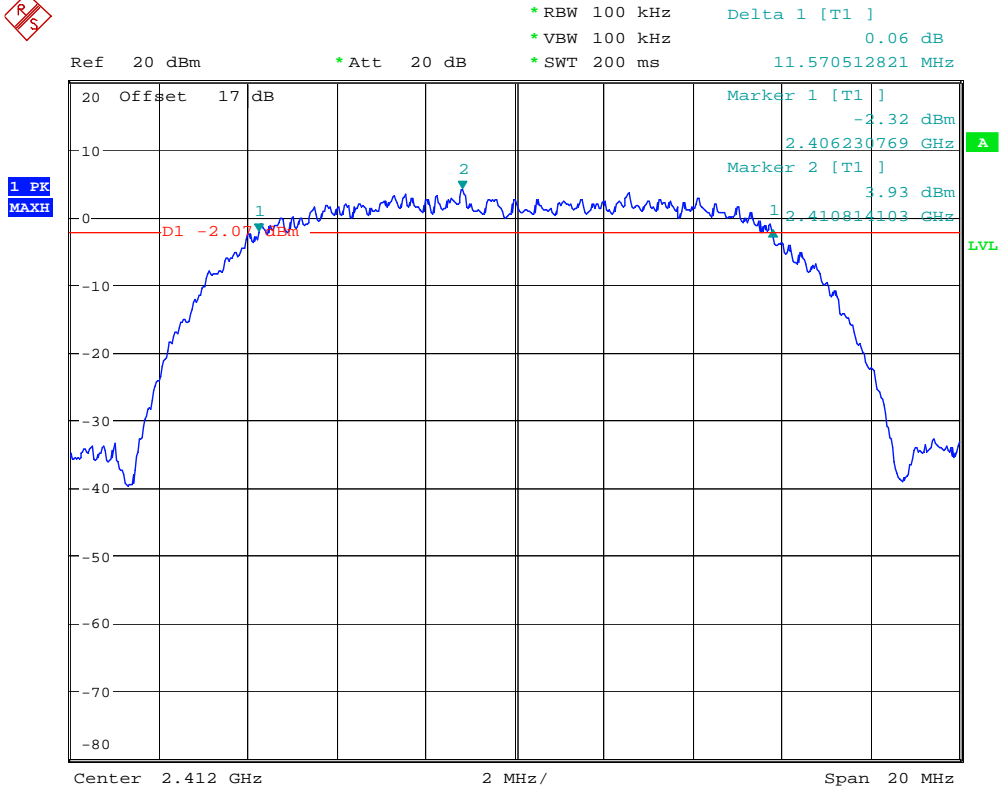
6DB BANDWIDTH 802.11a CH165

Date: 19.MAY.2010 12:28:40



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode B

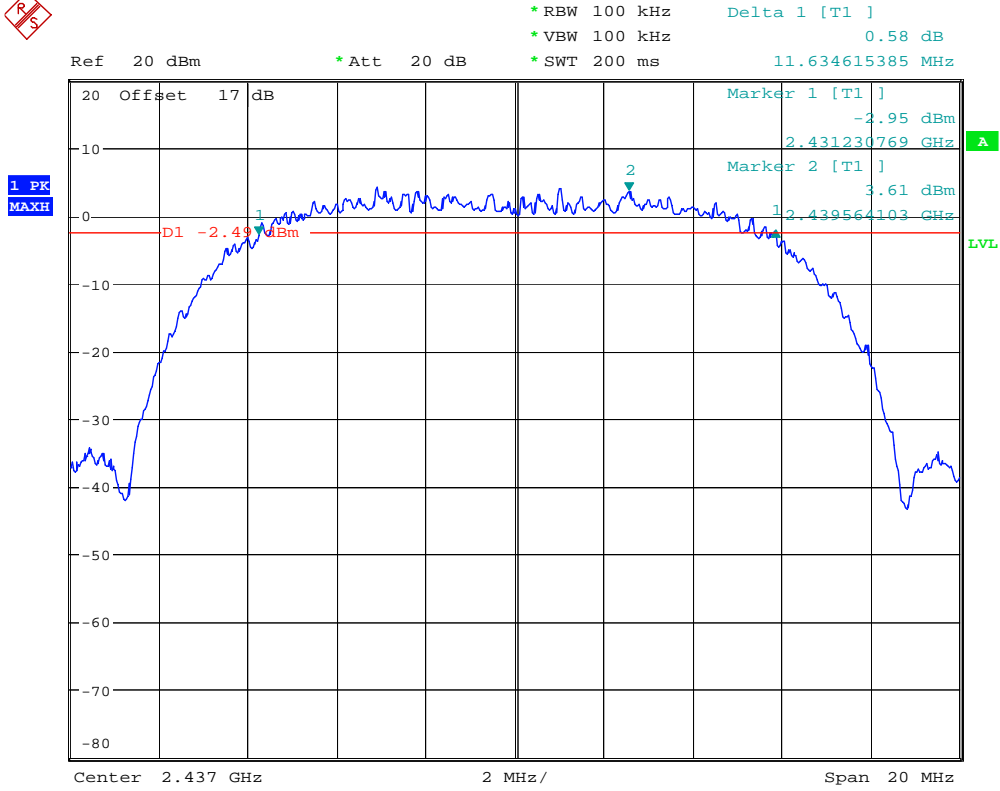


6DB BANDWIDTH 802.11b CH1  
Date: 19.MAY.2010 12:39:58



# Worldwide Testing Services(Taiwan) Co., Ltd.

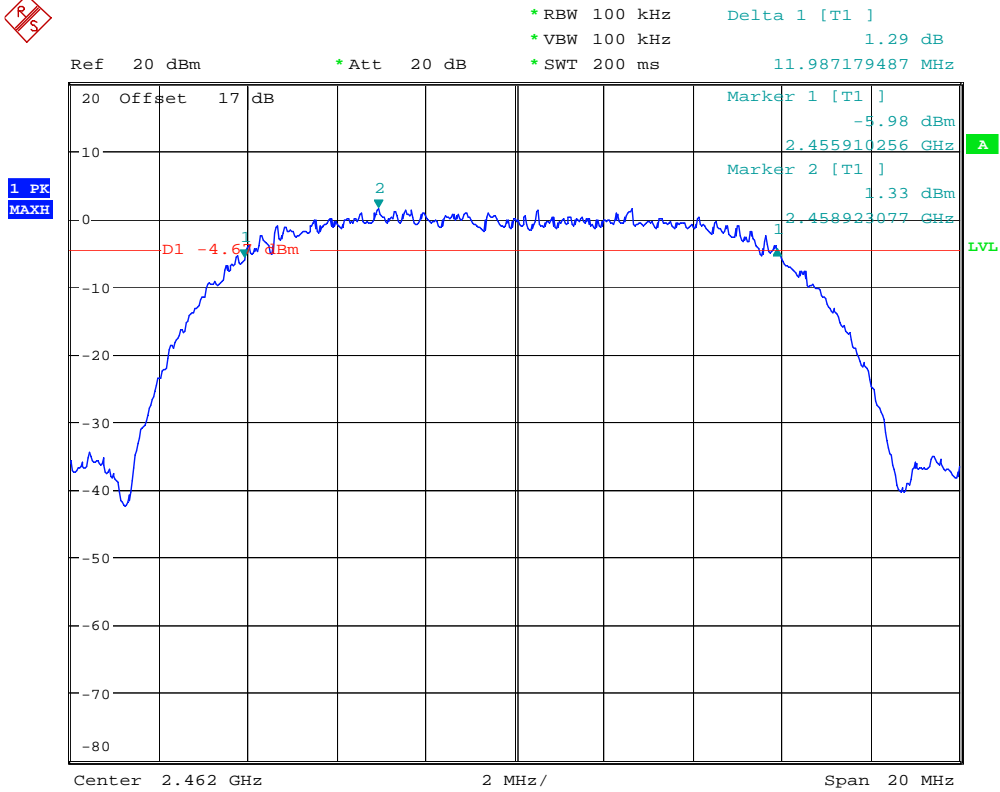
Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



6DB BANDWIDTH 802.11b CH6  
Date: 19.MAY.2010 12:44:22



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

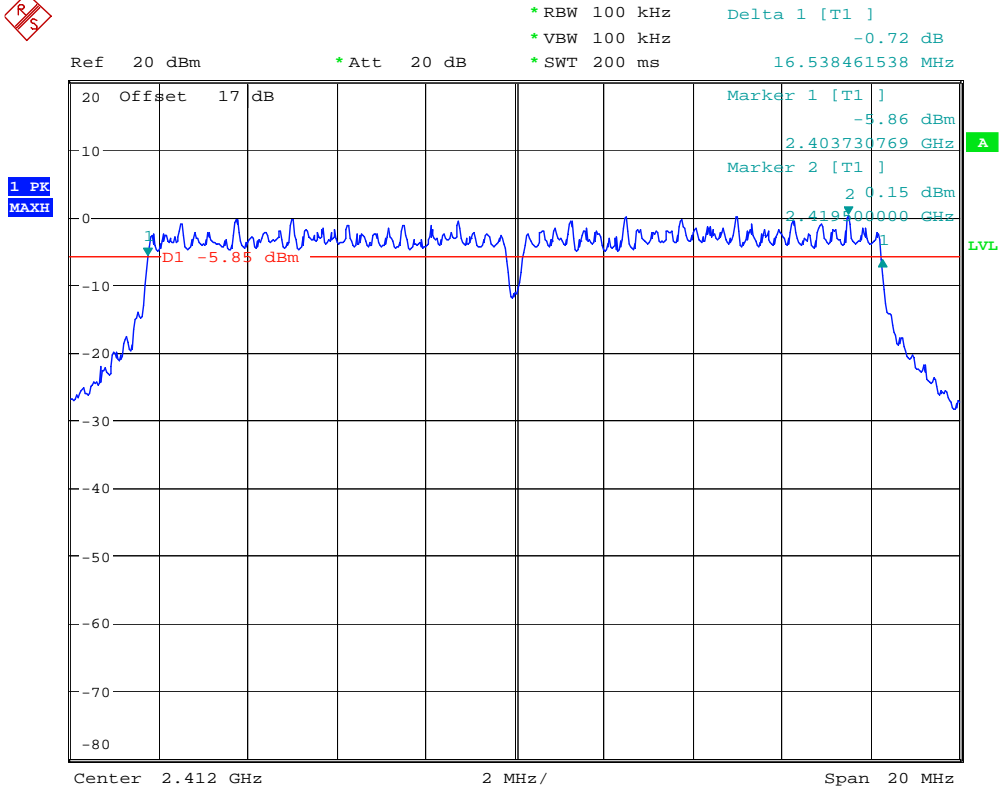


6DB BANDWIDTH 802.11b CH11  
Date: 19.MAY.2010 12:46:55



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

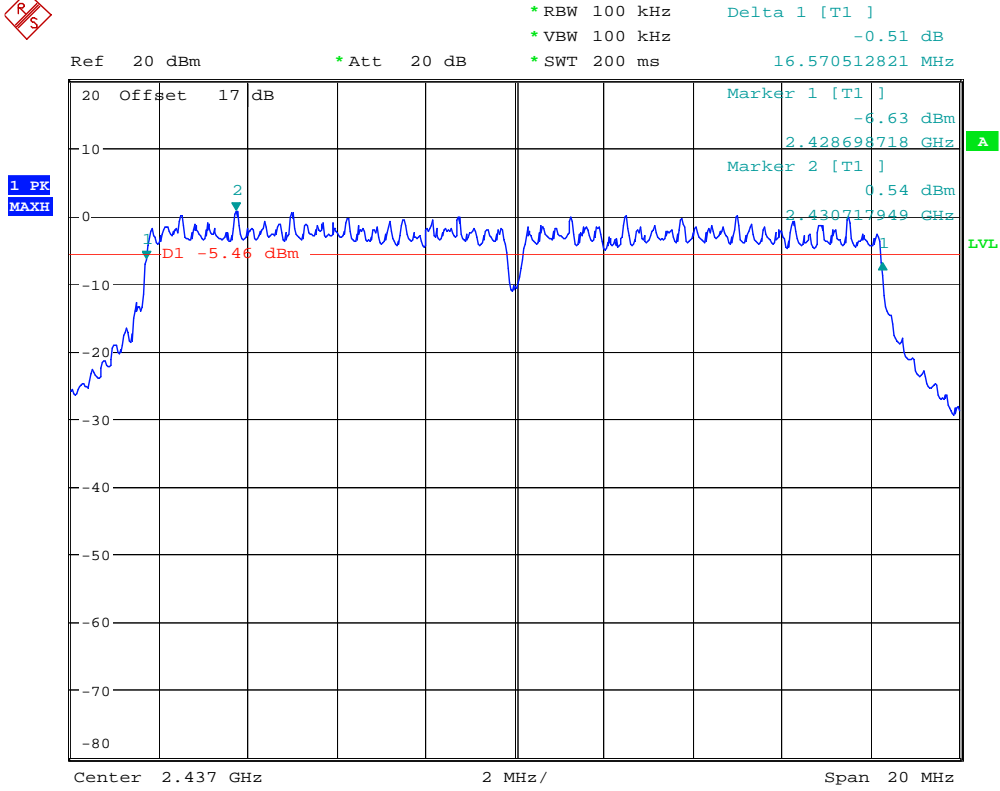
## Mode C



6DB BANDWIDTH 802.11g CH1  
Date: 19.MAY.2010 12:40:48



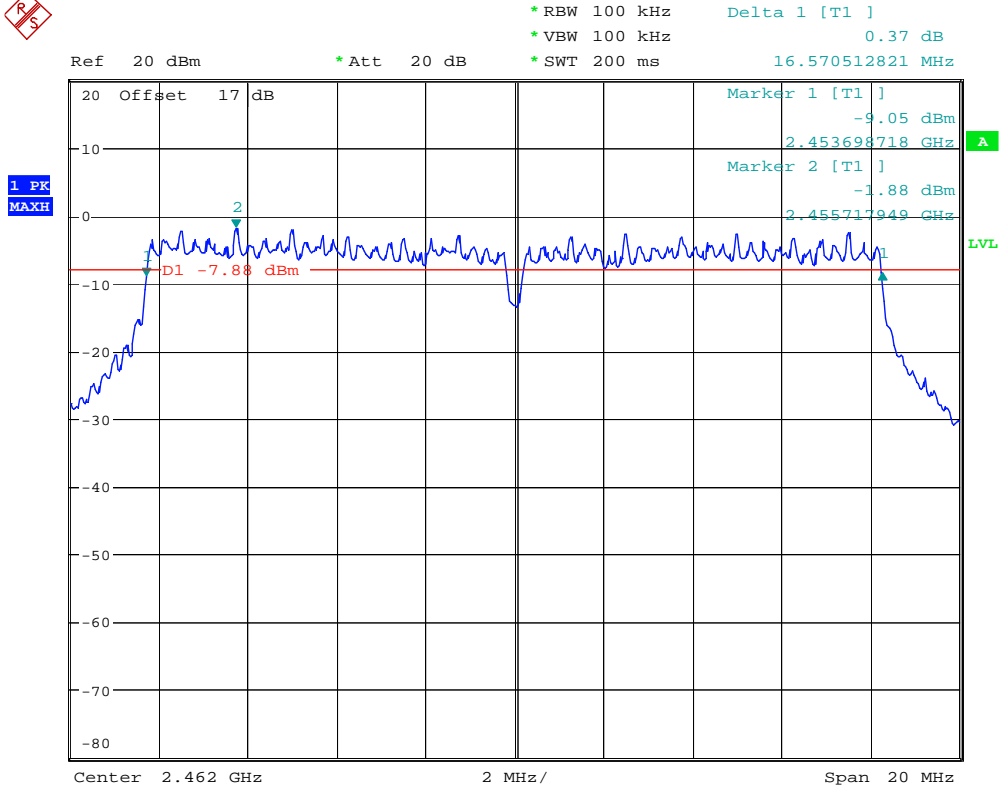
Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



6DB BANDWIDTH 802.11g CH6  
Date: 19.MAY.2010 12:43:32



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



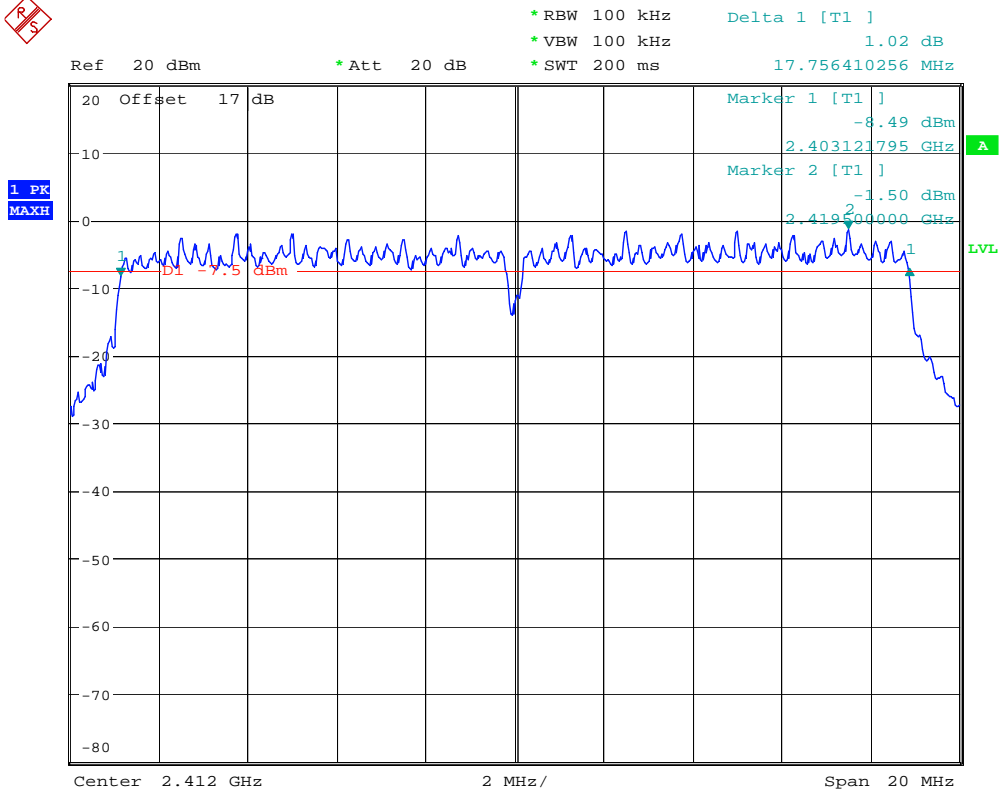
6DB BANDWIDTH 802.11g CH11  
Date: 19.MAY.2010 12:49:13



Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

## Mode D



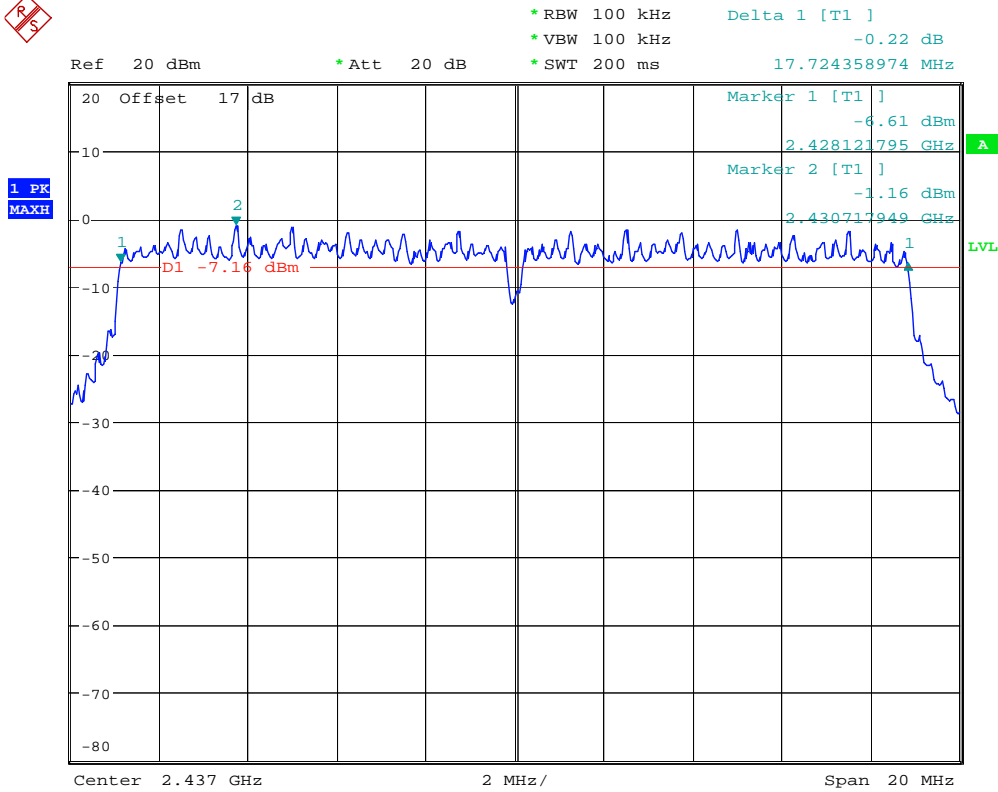
6DB BANDWIDTH 802.11n 20MHz CH1

Date: 19.MAY.2010 12:41:40





Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

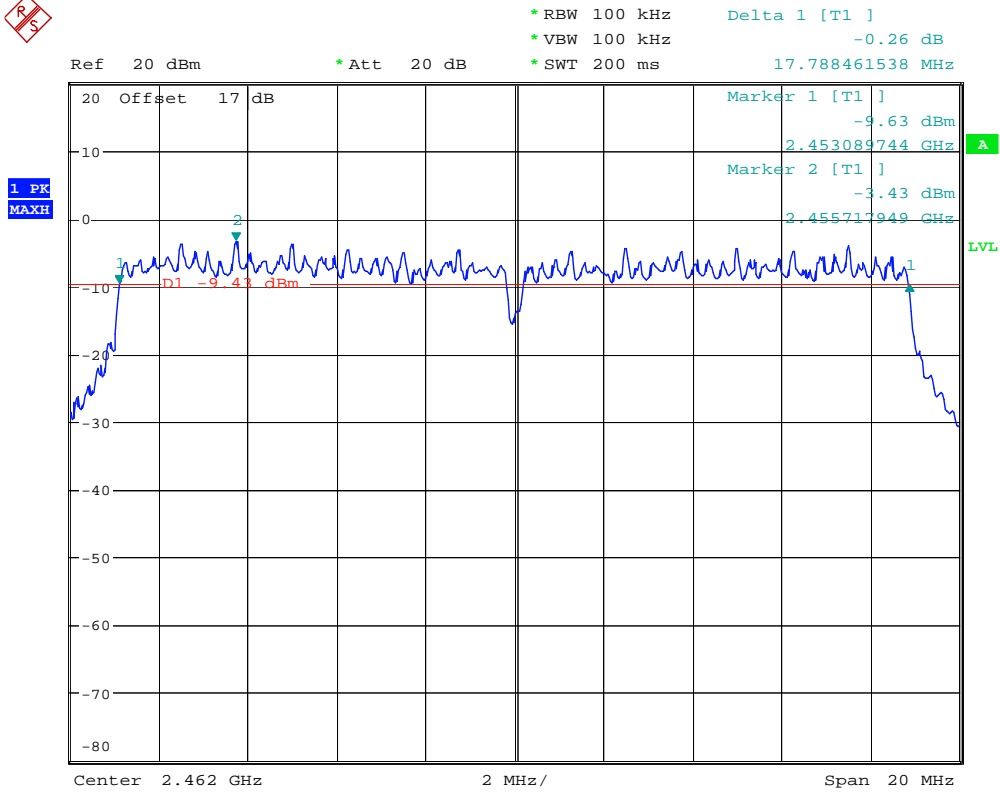


6DB BANDWIDTH 802.11n 20MHz CH6

Date: 19.MAY.2010 12:42:36



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



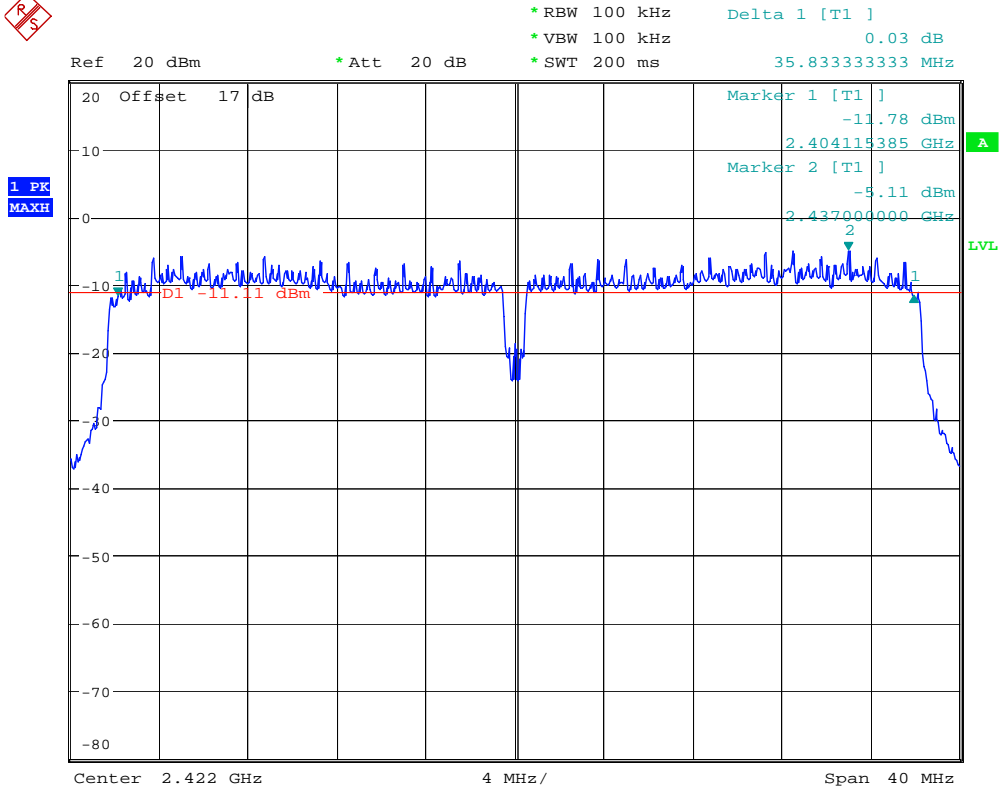
6DB BANDWIDTH 802.11n 20MHz CH11

Date: 19.MAY.2010 12:50:02



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Mode E



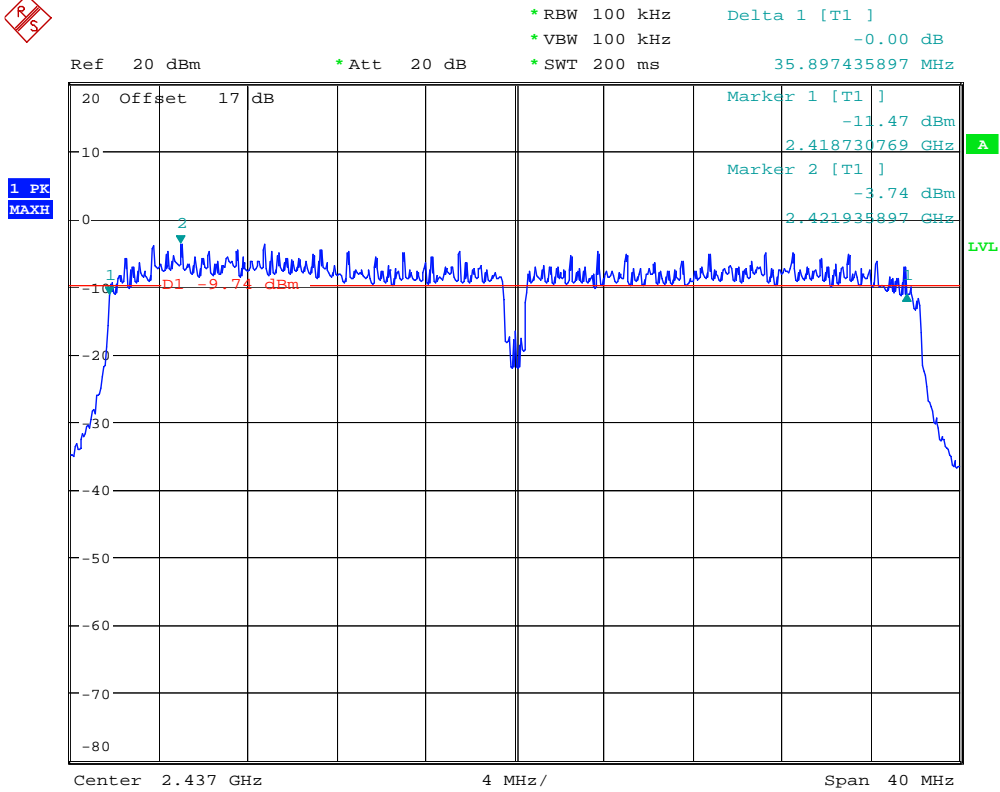
6DB BANDWIDTH 802.11n 40MHz CH1

Date: 19.MAY.2010 12:51:06



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

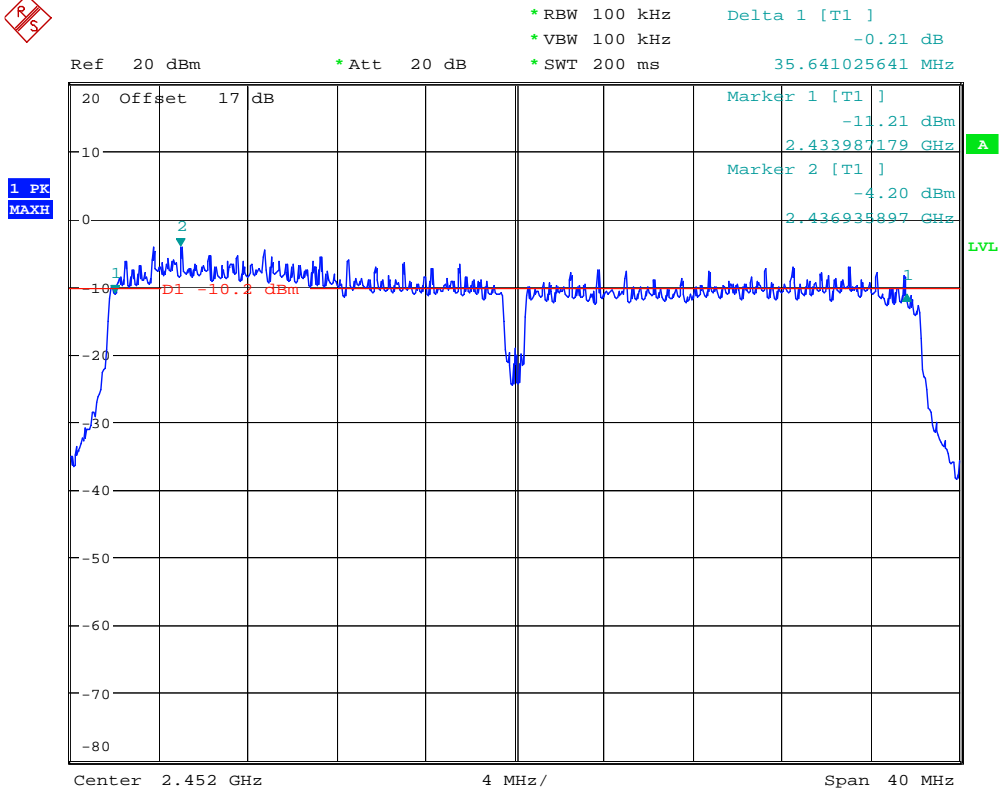


6DB BANDWIDTH 802.11n 40MHz CH4

Date: 19.MAY.2010 12:51:58



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



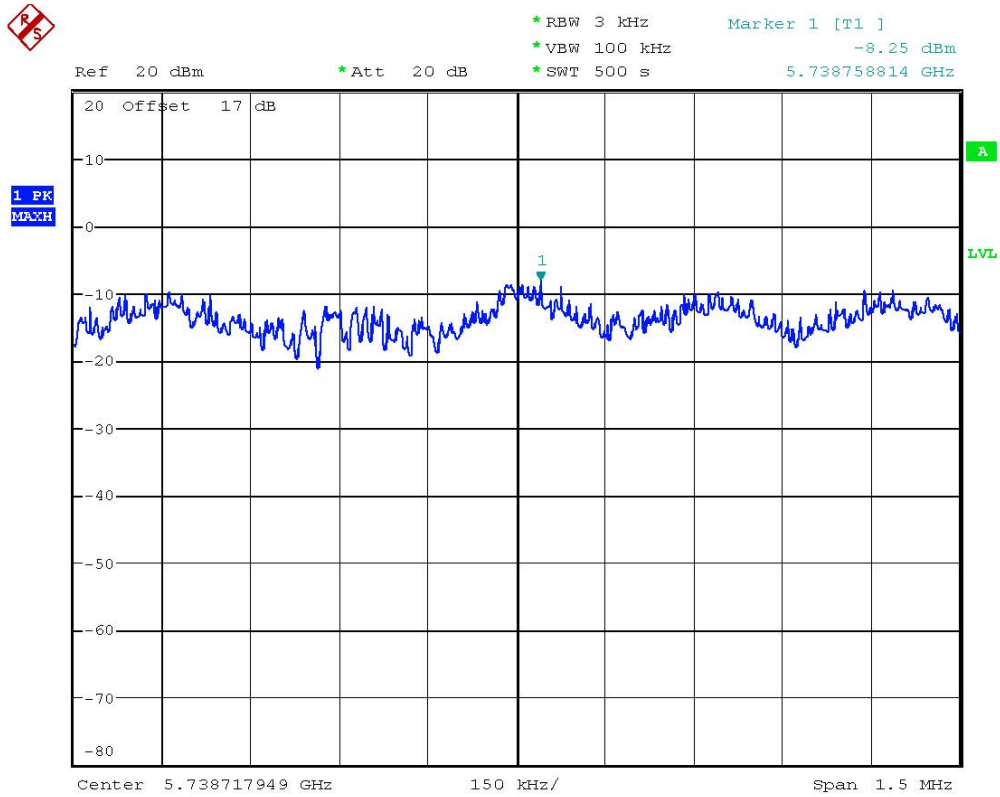
6DB BANDWIDTH 802.11n 40MHz CH7

Date: 19.MAY.2010 12:52:46



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

## Peak Power Spectral Density Mode A

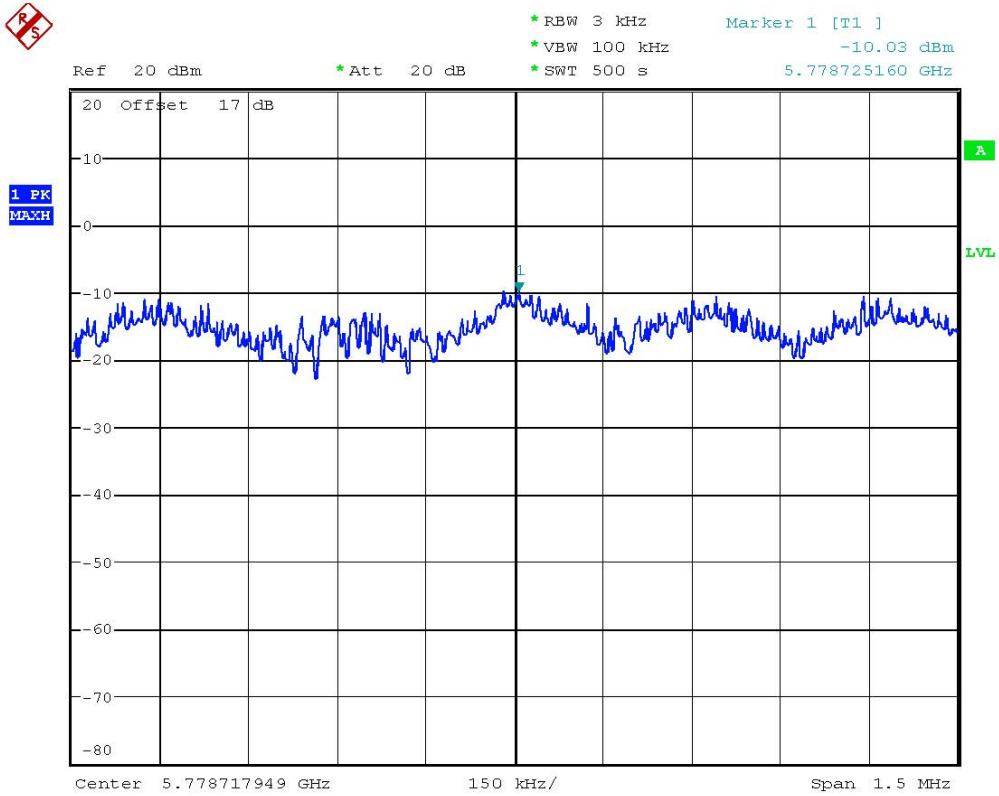


POWER DENSITY 802.11a CH149  
Date: 26.MAY.2010 10:15:31



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

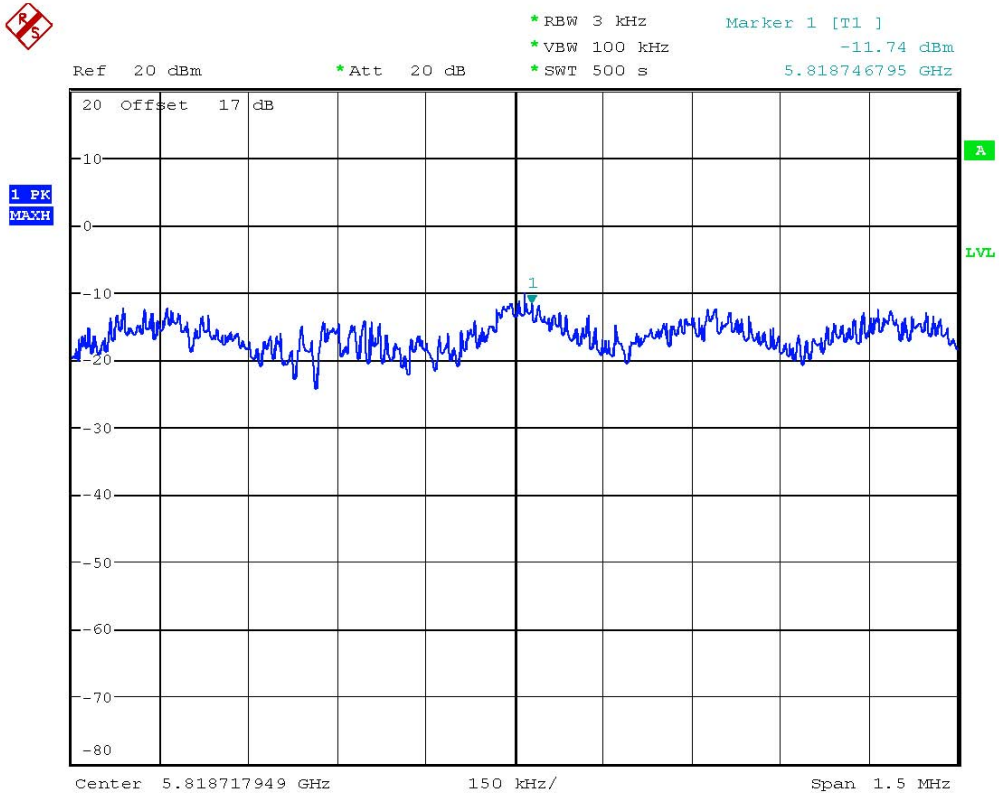


POWER DENSITY 802.11a CH157  
Date: 26.MAY.2010 10:16:05



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



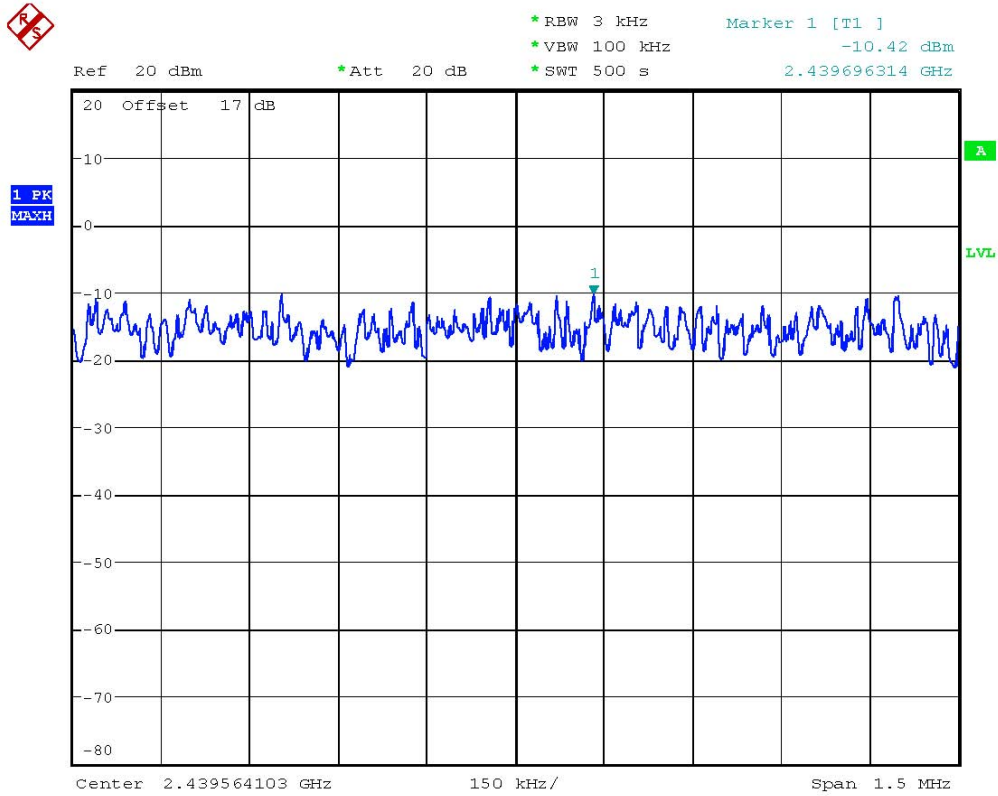
POWER DENSITY 802.11a CH165  
Date: 26.MAY.2010 10:16:42







Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

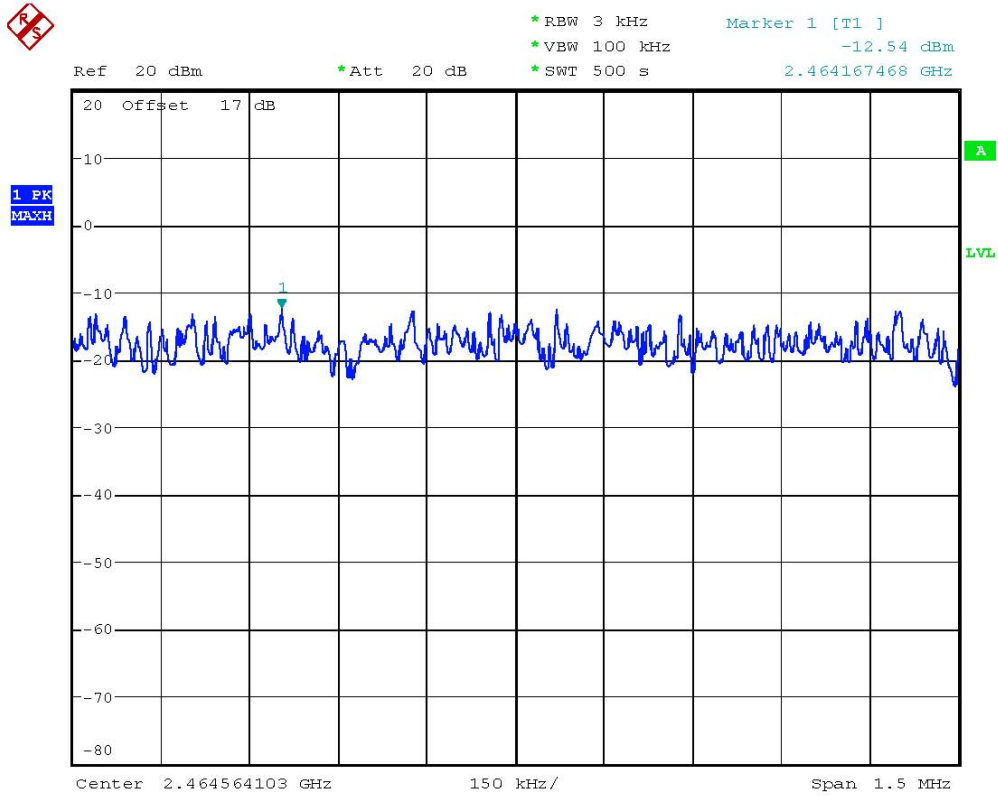


POWER DENSITY 802.11b CH6  
Date: 26.MAY.2010 10:17:56



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

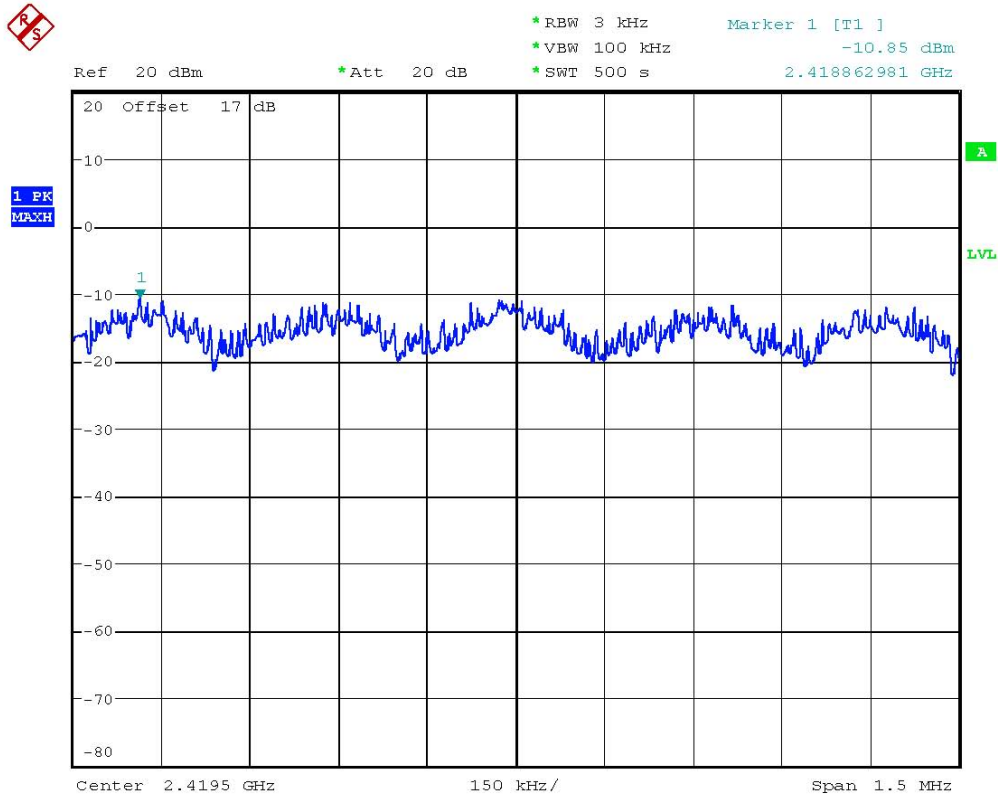


POWER DENSITY 802.11b CH11  
Date: 26.MAY.2010 10:18:25



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

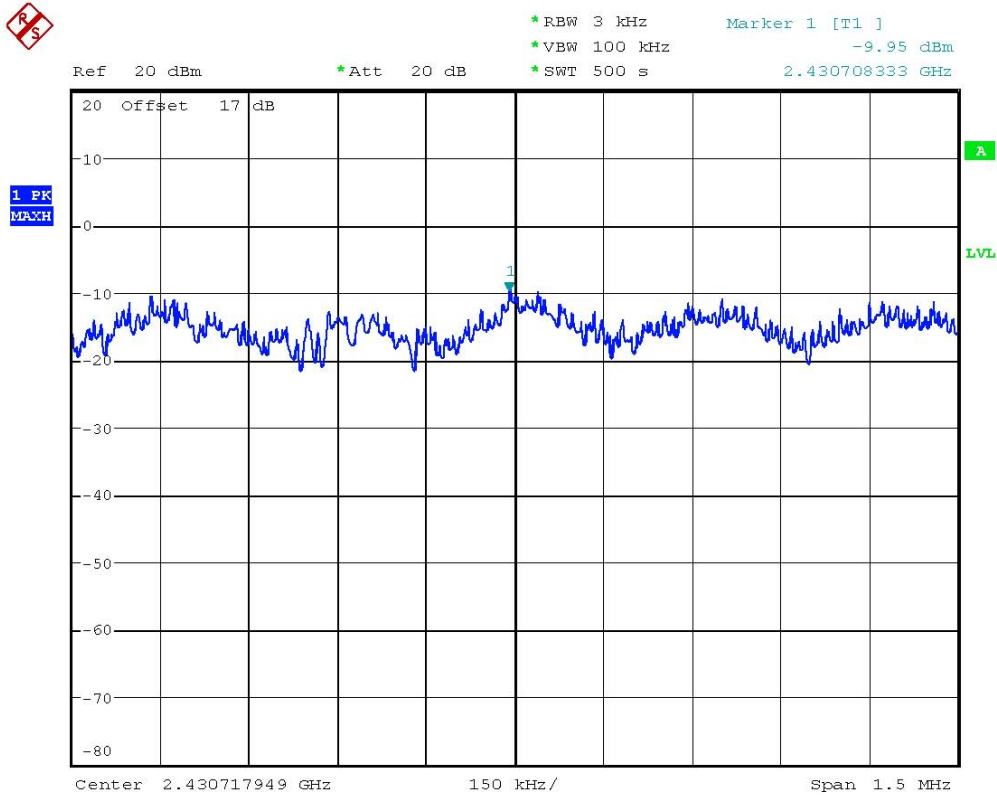
## Mode C



POWER DENSITY 802.11g CH1  
Date: 26.MAY.2010 10:20:04



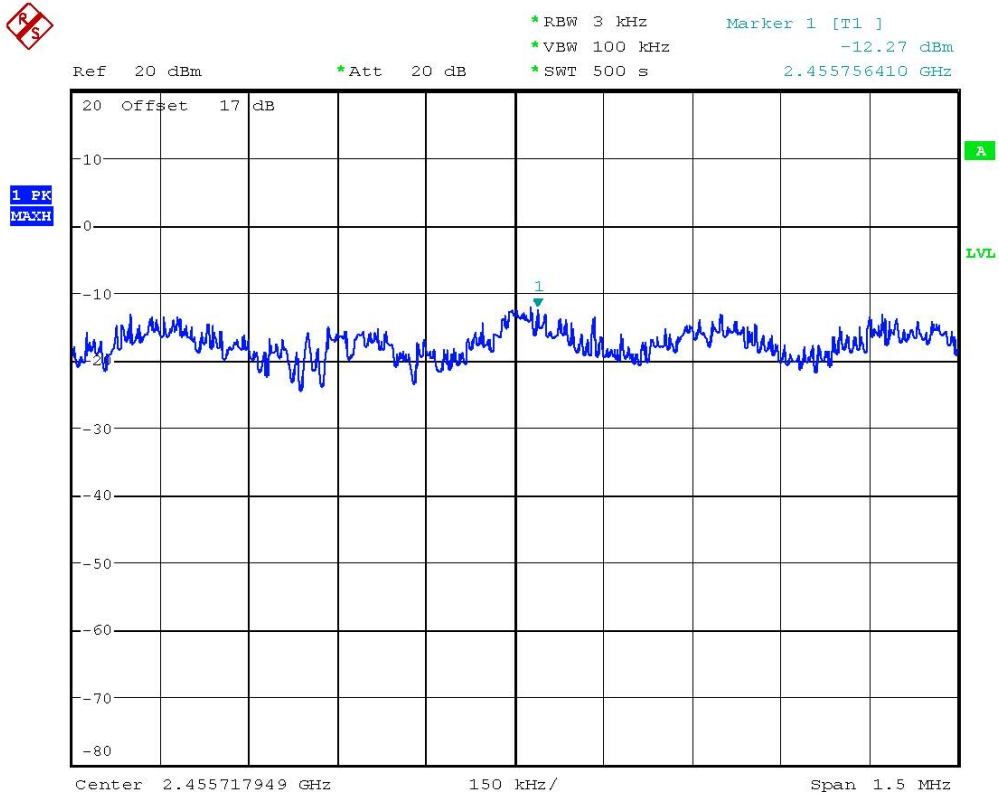
Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



POWER DENSITY 802.11g CH6  
Date: 26.MAY.2010 10:19:35



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



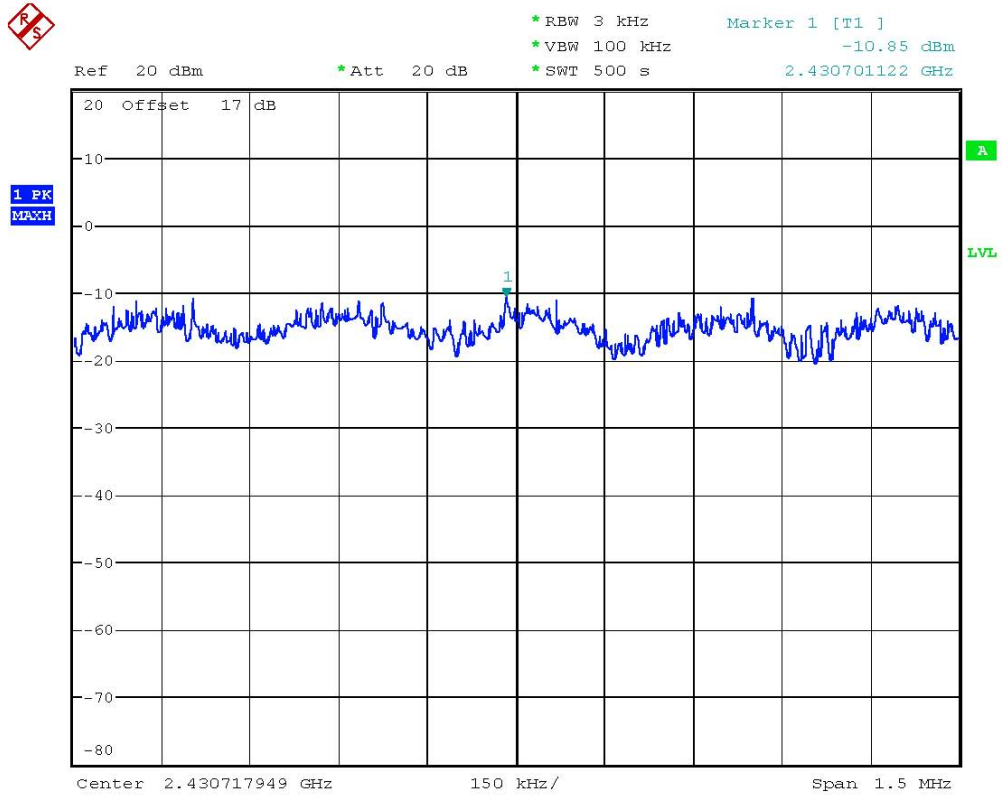
POWER DENSITY 802.11g CH11  
Date: 26.MAY.2010 10:19:02





# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



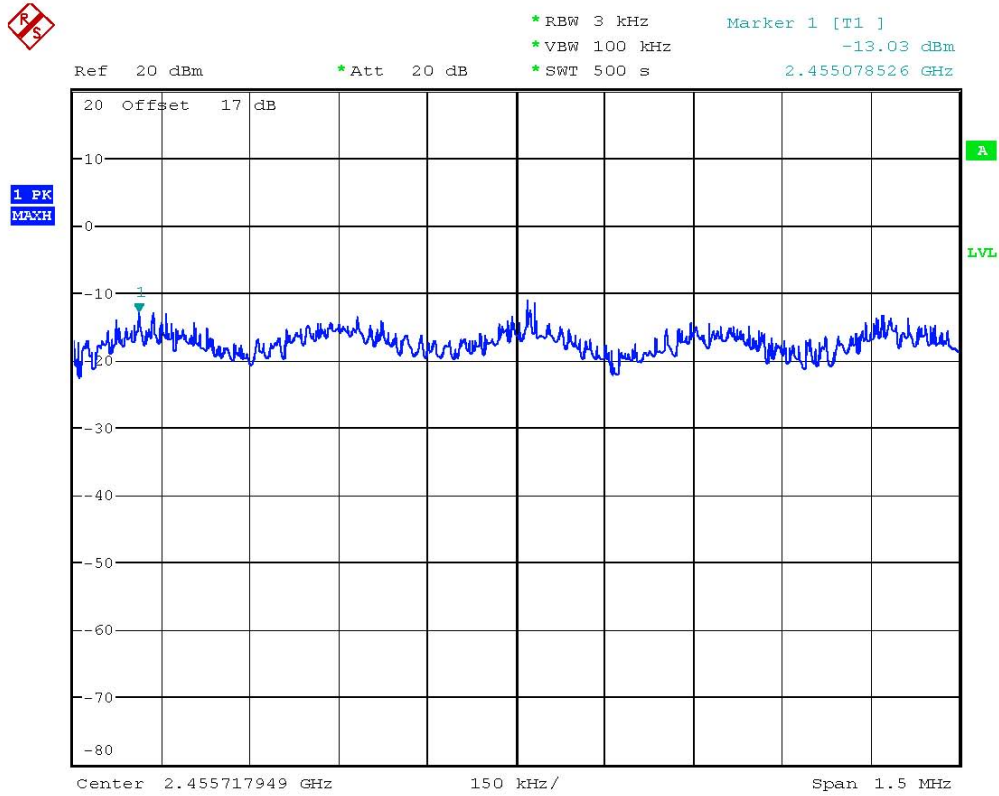
POWER DENSITY 802.11n 20MHz CH6

Date: 26.MAY.2010 10:21:09





Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



POWER DENSITY 802.11n 20MHz CH11

Date: 26.MAY.2010 10:21:44

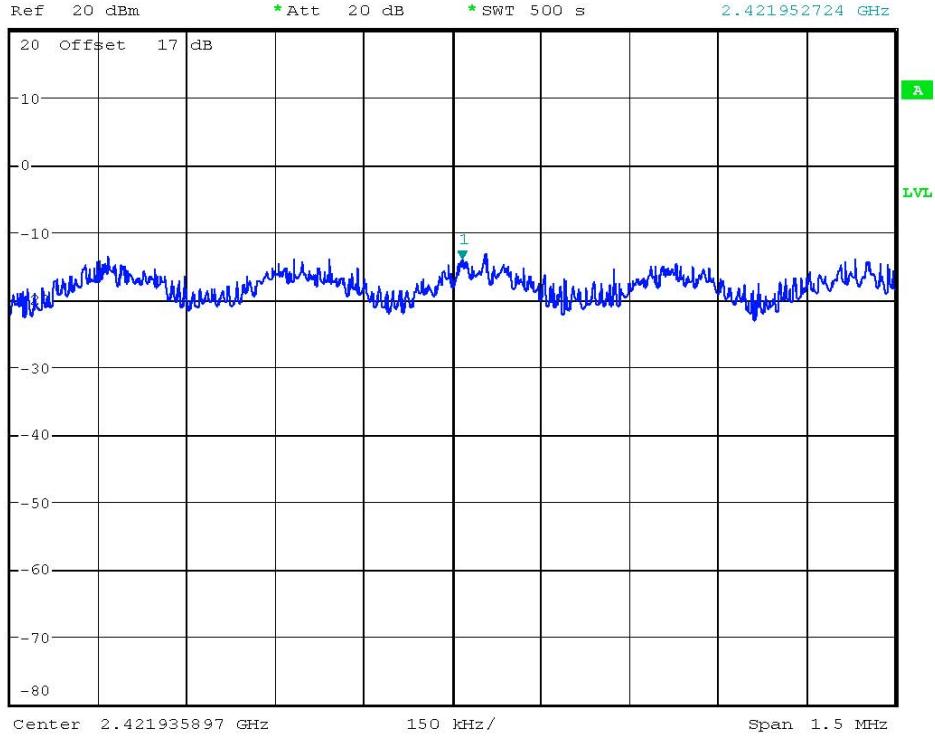




Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



\*RBW 3 kHz      Marker 1 [T1 ]  
\*VBW 100 kHz      -14.17 dBm  
\*SWT 500 s      2.421952724 GHz



POWER DENSITY 802.11n 40MHz CH4

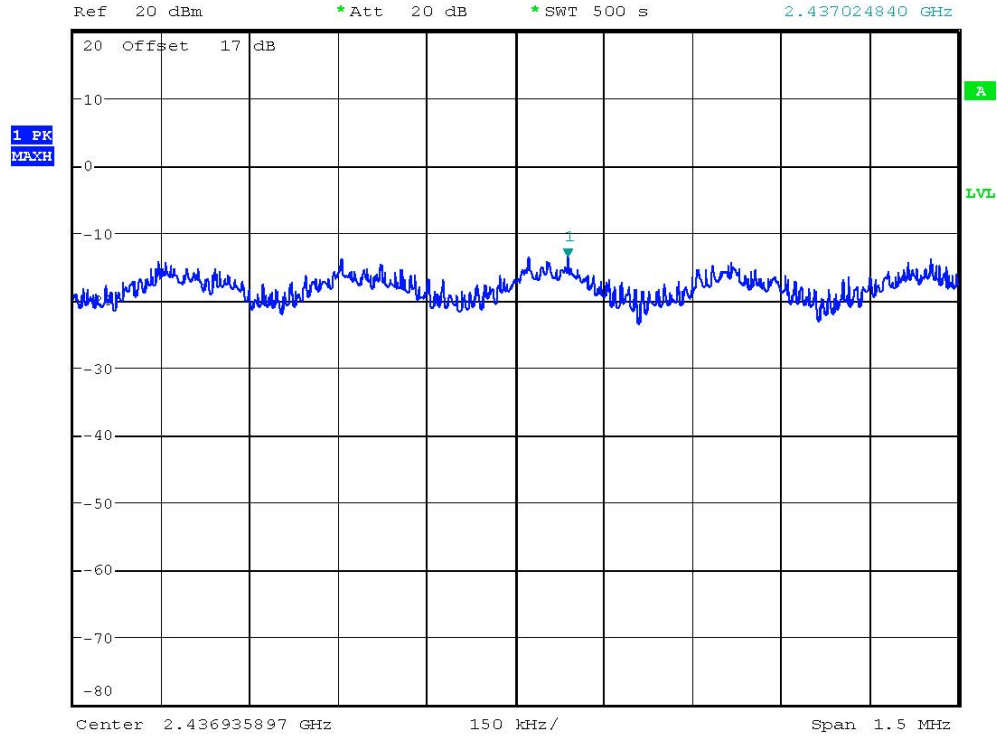
Date: 26.MAY.2010 10:22:50



Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9



\*RBW 3 kHz      Marker 1 [T1 ]  
\*VBW 100 kHz      -13.79 dBm  
\*SWT 500 s      2.437024840 GHz



POWER DENSITY 802.11n 40MHz CH7  
Date: 26.MAY.2010 10:22:22

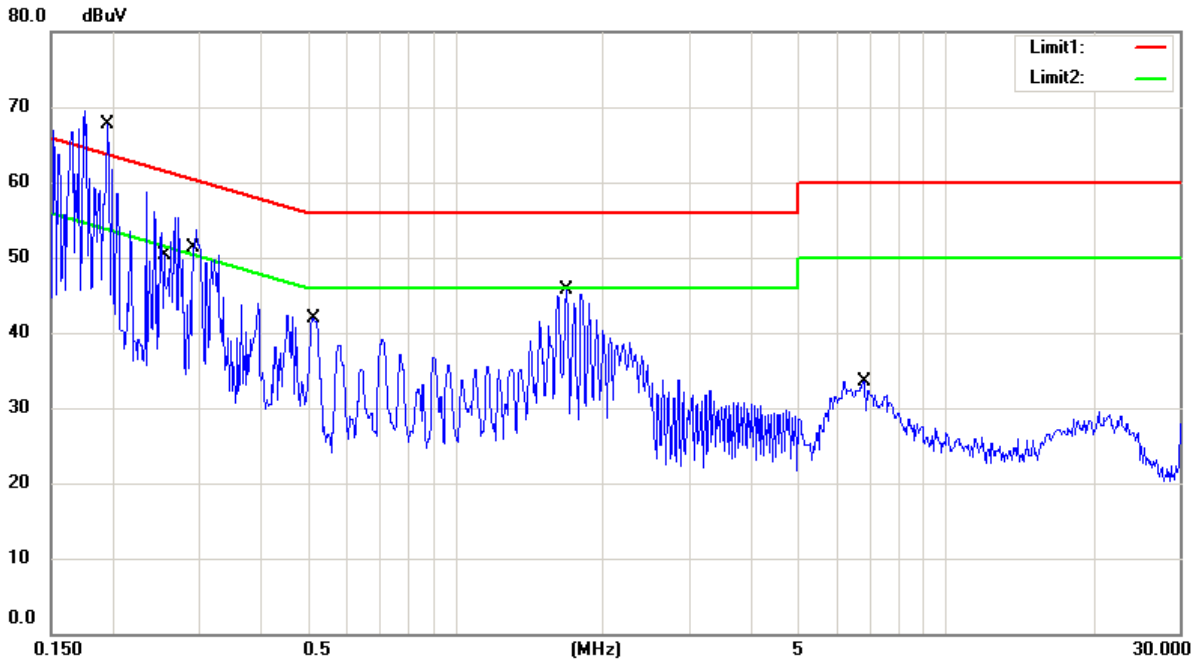


Registration number: W6M21003-10512-C-1  
FCC ID: IR5RF9

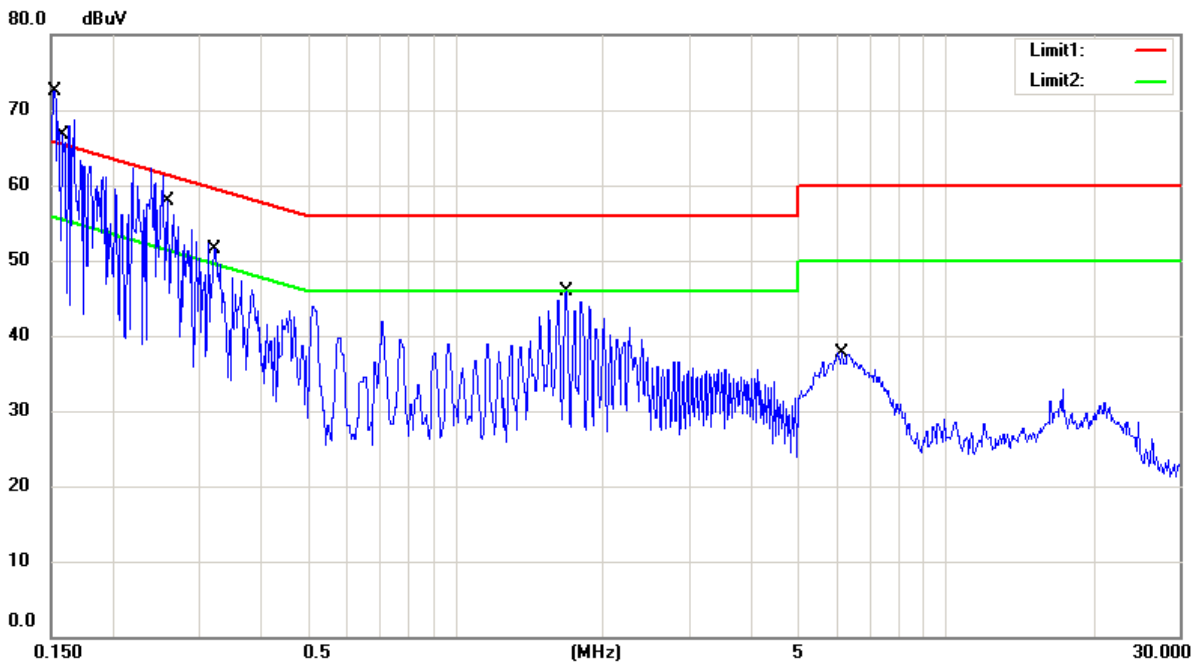
## Power Line Conducted Emission

800x600

LISN N



LISN L1



Up Line: QP Limit Line Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of AC conducted test data of this test report.



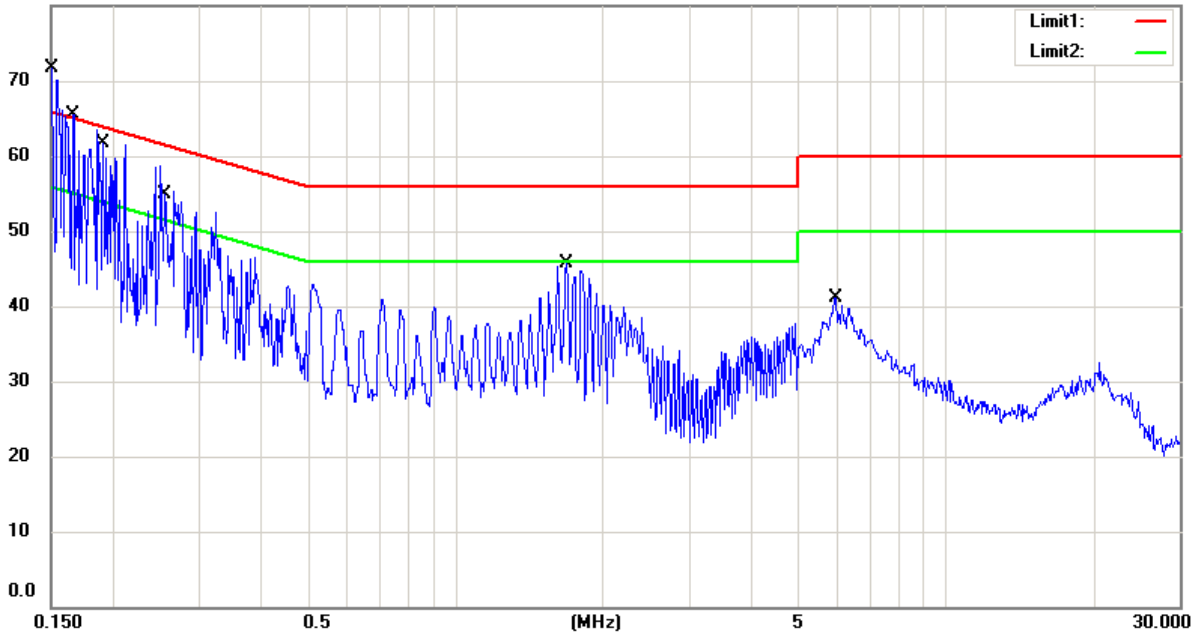
Registration number: W6M21003-10512-C-1

FCC ID: IR5RF9

1024x768

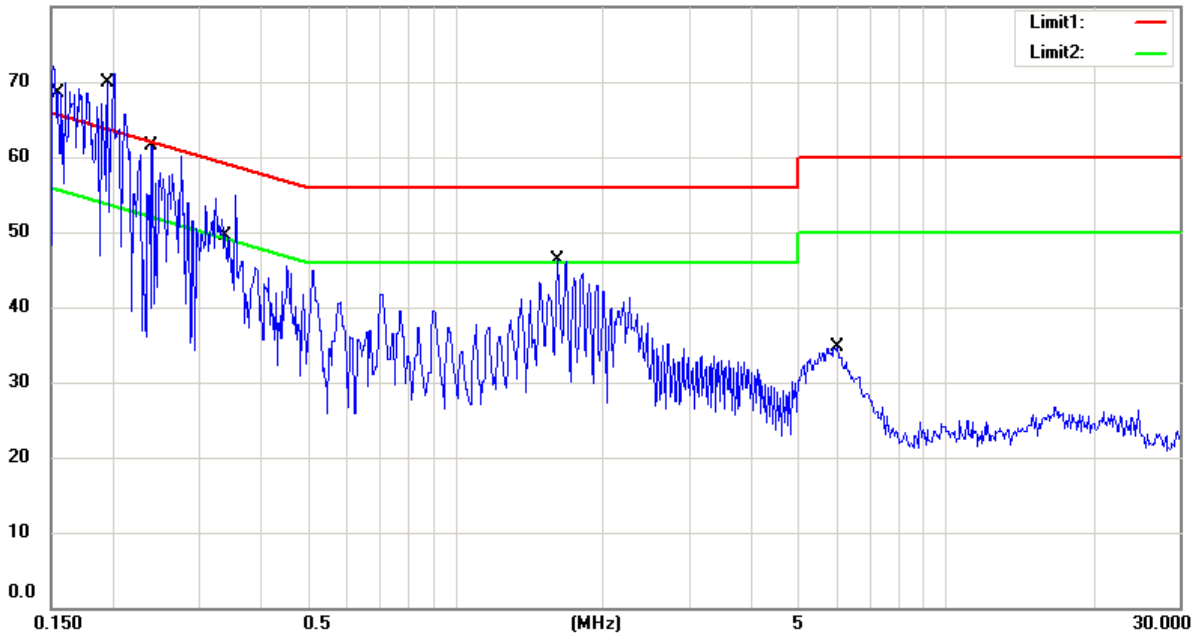
LISN N

80.0 dBuV



LISN L1

80.0 dBuV



Up Line: QP Limit Line Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of AC conducted test data of this test report.

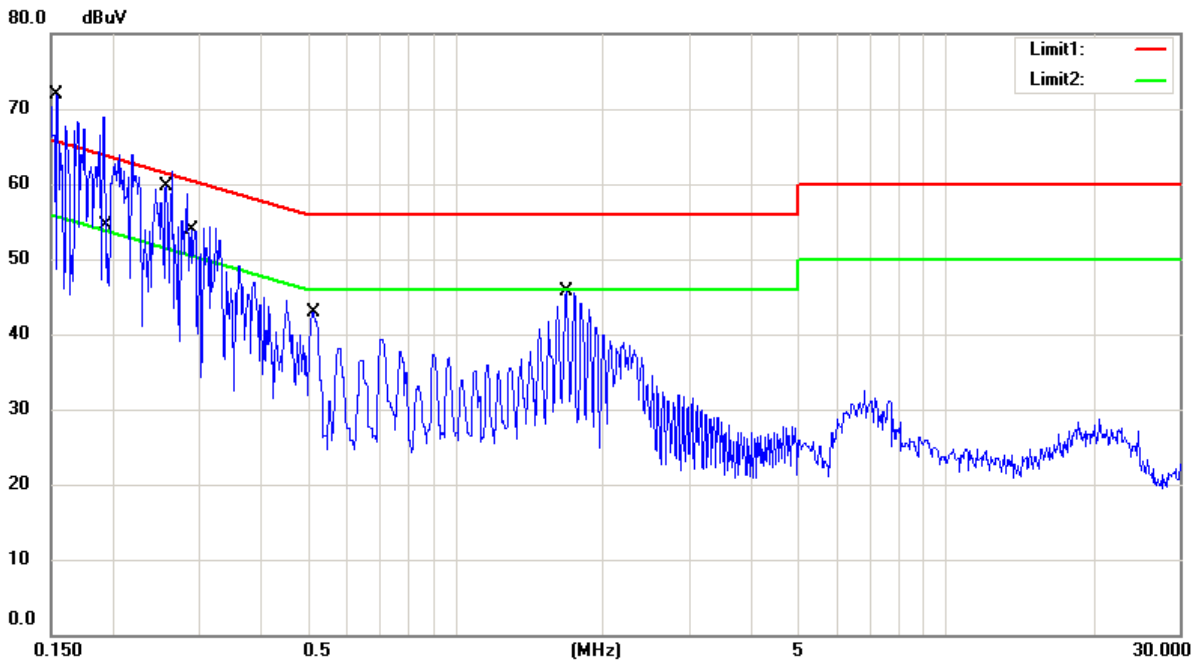


Registration number: W6M21003-10512-C-1

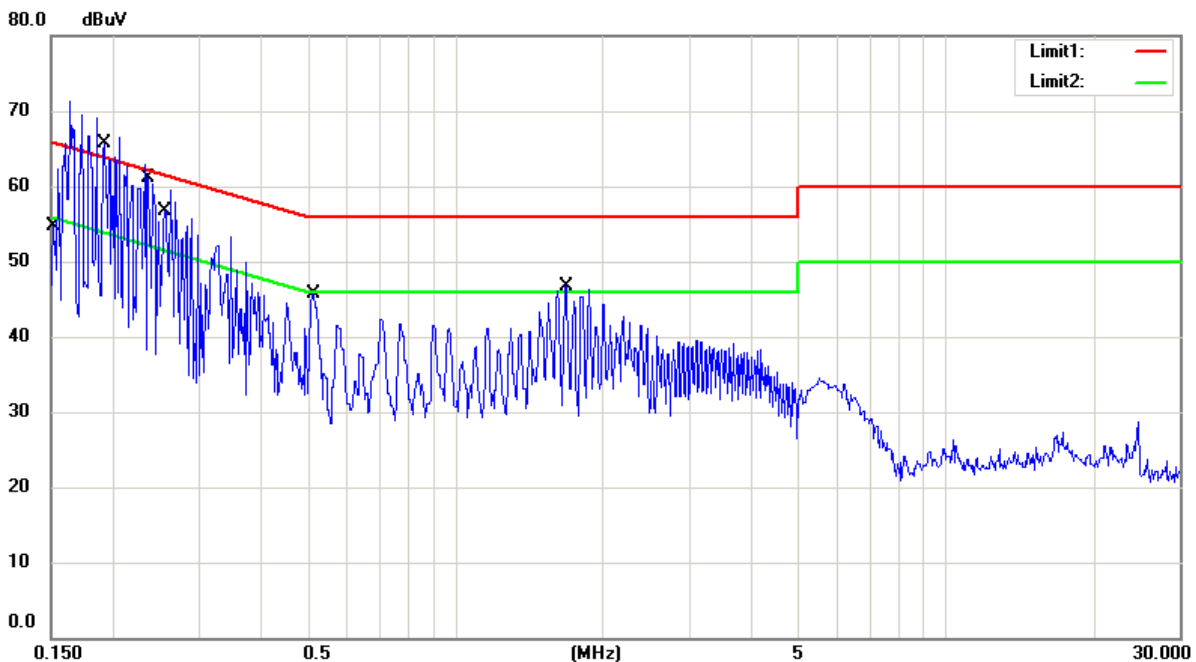
FCC ID: IR5RF9

1440x900

## LISN N



## LISN L1



Up Line: QP Limit Line Down Line: Ave Limit Line

Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of AC conducted test data of this test report.