

FCC PART 15 SUBPART C TEST REPORT

for

Airpod

Model No.: OP-430

FCC ID: Y2A-OP430

of

Applicant: Poslab Technology Corporation

**Address: 1F, No.94, Dacheng Rd., YangMei City, Taoyuan County 326,
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.: W6M21103-11337-C-1

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

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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, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

May 9, 2011

Robert Ren

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

May 9, 2011

Chang Tse-Ming

Date

WTS

Name

Signature



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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: Poslab Technology Corporation
Street: 1F, No.94, Dacheng Rd., YangMei City,
Town: Taoyuan County 326,
Country: Taiwan (R.O.C.)
Telephone: 886-2-7729-1900
Fax: 886-2-7729-1901



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1.4 Application details

Date of receipt of test item: March 18, 2011
Date of test: from March 21, 2011 to May 06, 2011

1.5 General information of Test item

Type of test item: Airpod
Model Number: OP-430
Brand Name: Poslab
Multi-listing model number: without
Photos: see Appendix

Technical data

Frequency band: 2.4 GHz – 2.4835 GHz

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

Frequency (ch 1 or A): 2.412 GHz
Frequency (ch 6 or B): 2.437 GHZ
Frequency (ch 11 or C): 2.462 GHz

Bluetooth

Frequency (ch 0 or A): 2.402 GHz
Frequency (ch 39 or B): 2.441 GHZ
Frequency (ch 78 or C): 2.480 GHz

Number of Channels: WLAN: 11b, 11g, 11n 20MHz: 11

Operation modes: Bluetooth: 79

Modulation Type: DSSS / OFDM / FHSS

Fixed point-to-point operation: Yes / No

Type of Antenna: 2.4GHz Multilayer Antenna

Antenna gain: 1.9 dBi

Power supply: Adapter (I/P:100-240V, 50-60Hz, 0.4A
O/P: 5V, 2.5A)
Battery (3.7Vdc, 2100mAh)

Emission designator: 11b: DSSS: 16M8G1D

11g: OFDM: 17M1W7D

11n 20MHz: OFDM: 18M1W7D

Bluetooth normal: 929KF7D

Bluetooth EDR: 1M22F1D



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Host device: none

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

Mode A (802.11b)

Power (ch 1 or A): Conducted: 15.37 dBm
Power (ch 6 or B): Conducted: 14.95 dBm
Power (ch 11 or C): Conducted: 14.95 dBm

Mode B (802.11g)

Power (ch 1 or A): Conducted: 19.55 dBm
Power (ch 6 or B): Conducted: 19.11 dBm
Power (ch 11 or C): Conducted: 18.68 dBm

Mode C (802.11n20MHz)

Power (ch 1 or A): Conducted: 19.23 dBm
Power (ch 6 or B): Conducted: 18.90 dBm
Power (ch 11 or C): Conducted: 19.01 dBm

Mode D (Bluetooth normal mode)

Power (ch 0 or A): Conducted: 4.19 dBm
Power (ch 39 or B): Conducted: 3.80 dBm
Power (ch 78 or C): Conducted: 3.38 dBm

Mode E (Bluetooth EDR mode)

Power (ch 0 or A): Conducted: 2.85 dBm
Power (ch 39 or B): Conducted: 2.76 dBm
Power (ch 78 or C): Conducted: 2.23 dBm

Manufacturer: (if applicable)

Name: ./
Street: ./
Town: ./
Country: ./

1.6 Test standards

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



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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: Adapter (I/P:100-240V, 50-60Hz, 0.4A
O/P: 5V, 2.5A)
Battery (3.7Vdc, 2100mAh)

Extreme conditions parameters: ./.



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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	2010/9/2	2011/9/1
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2011/3/10	2012/3/9
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2010/9/8	2011/9/7
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2011/5/3	2012/5/2
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use NCR	
ETSTW-CE 008	HF-EICHLEITUNG 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	2010/7/21	2011/7/20
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2010/10/21	2011/10/20
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2010/9/6	2011/9/5
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2011/2/21	2012/2/20
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2010/8/20	2011/8/19
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function Test	
ETSTW-CS 009	6 dB Attenuator	75-A-FFN-06	70998	BIRD	2011/4/18	2012/4/17
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2010/8/10	2011/8/9
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2010/9/14	2011/9/13
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2010/9/2	2011/9/1
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2010/9/6	2011/9/5
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 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2011/4/25	2012/4/24
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2010/8/20	2011/8/19
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	2010/7/22	2011/7/21
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2011/2/25	2012/2/24
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2010/10/4	2011/10/3
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P1450 8	LeCroy	Function Test	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2010/10/4	2011/10/3
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2011/1/14	2012/1/13
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2011/4/26	2012/4/25
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2011/4/25	2012/4/24
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use NCR	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2010/8/30	2011/8/29



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ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2011/4/8	2012/4/7
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2010/6/3	2011/6/2
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2011/3/4	2012/3/3
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2010/9/27	2011/9/26
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2010/11/30	2011/11/29
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2011/4/8	2012/4/7
ETSTW-RE 066	Highpass Filter	H1G013G1	206015	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2010/10/7	2011/10/6
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2011/1/10	2012/1/9
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2011/1/10	2012/1/9
ETSTW-RE 081	Highpass Filter	H03G13G1	4260-02 DC0428	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 096	SIGNAL GENERATOR	SMIQ 03B	102274	R&S	2011/5/3	2012/5/2
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2011/3/10	2012/3/9
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2011/3/11	2012/3/10
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2011/3/24	2012/3/23
ETSTW-RE 111	Log-Periodic Dipole Array Antenna	VULB 9160	9160-3309	Schwarzbeck	2010/12/17	2011/12/16
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Function test	
ETSTW-RE 114	2.4GHz Notch Filter	N0124411	473873	MICROWAVE CIRCUITS	2011/1/13	2012/1/12
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2010/8/27	2011/8/26
ETSTW-EMS 001	BASELSTRASSE 160 CH-4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	Function Test	
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014	None	Function Test	
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2010/11/3	2011/11/2
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	Function Test	
ETSTW-EMS 012	EM Injection Clamp	F-203I-23MM	476	FCC	2010/6/3	2011/6/2
ETSTW-EMS 015	HVAC Trms Power Clamp Meter	3079K	070800649	TES	2010/10/5	2011/10/4
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2010/10/5	2011/10/4
ETSTW-EMS 017	Multimeter	DM-1220	518614	HOLA	2010/8/18	2011/8/17
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2010/11/25	2011/11/24
ETSTW-EMS 020	Humidity Temperature Meter	TES-1366	091011116	TES	2011/3/24	2012/3/23
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	Function Test	
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	Function Test	
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2011/3/7	2012/3/6
ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function Test	



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ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	HP	2011/2/23	2012/2/22
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2010/10/12	2011/10/11
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2010/10/7	2011/10/6
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2010/9/20	2011/9/19
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104 (S_Cable 7)	238093	HUBER+SUHNER	2010/9/27	2011/9/26
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104 (S_Cable 11)	209953	HUBER+SUHNER	2010/9/27	2011/9/26
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test Use NCR	
ETSTW-Cable 012	BNC Cable	BNC Cable 2	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104 (S_Cable 5)	232345	HUBER+SUHNER	Function Test	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 022	N TYPE Cable	OATS Cable 3	0002	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 023	BNC Cable	BNC Cable 3	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 024	BNC Cable	BNC Cable 4	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 025	BNC Cable	BNC Cable 5	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	SPECTRUM	2011/3/10	2012/3/9
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104 (S_Cable 19)	316739	HUBER+SUHNER	2011/3/4	2012/3/3
ETSTW-Cable 040	Microwave Cable	SUCOFLEX 104 (S_Cable 20)	316738	HUBER+SUHNER	Function Test	
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO CO.,LTD.	2011/3/31	2012/3/30
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2011/3/31	2012/3/30
ETSTW-Cable 053	N TYPE To SMA Cable	OATS Cable 4	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 054	BNC To SMA Cable	OATS Cable 5	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3

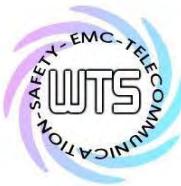


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WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMU	None	Farad	Version ETS-03A1
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b
WTSTW-SW 005	GSM Fading Level Correction	GSMFadLevCor	None	R&S	Version 1.66



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2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2003 using a 50 μ 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 μ 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 μ V + 10.36 dB + 6 dB = 36.36 dB μ 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.



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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.

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



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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: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

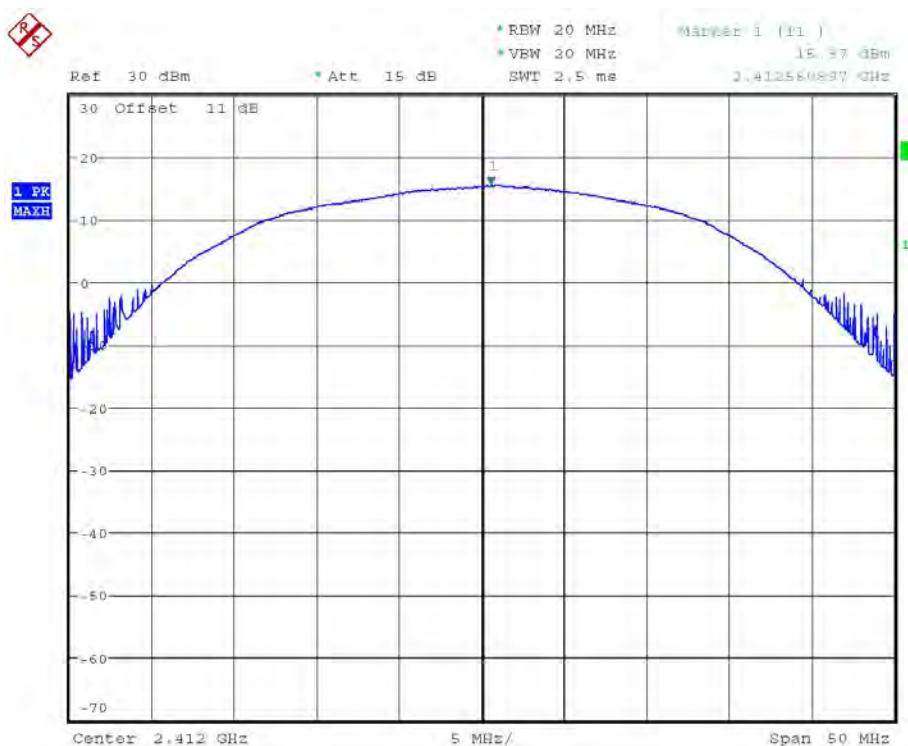
3.1 Peak Output Power (transmitter)

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.

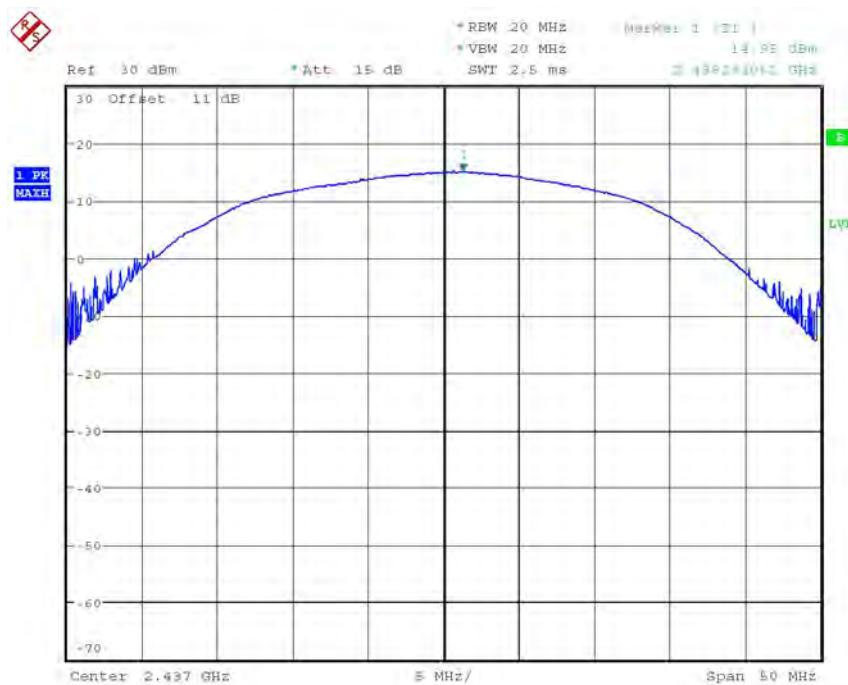
The power was measured with modulation (declared by the applicant).

Mode A



MAX OUTPUT POWER 802.11b CH1
 Date: 21.APR.2011 18:01:24

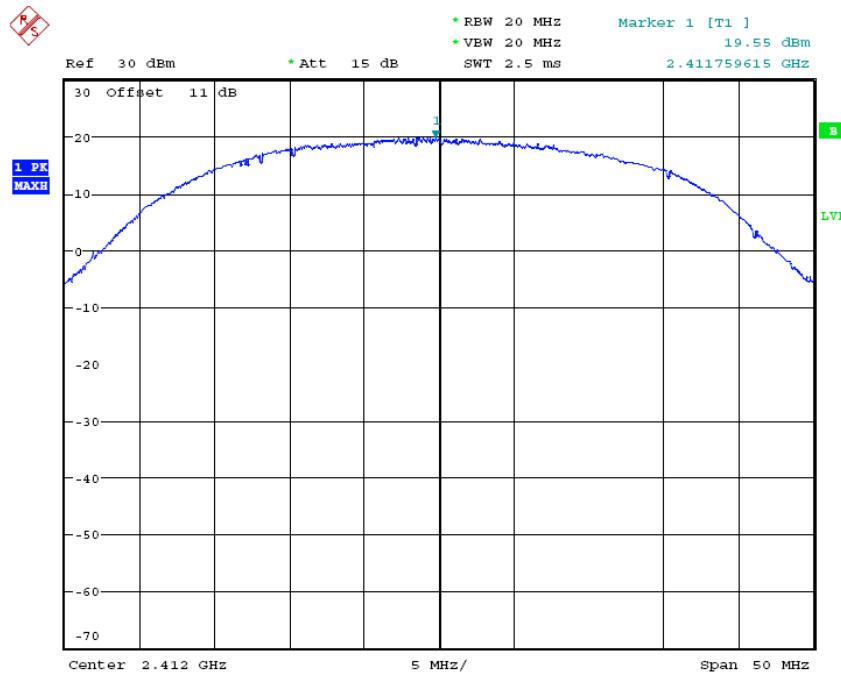
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



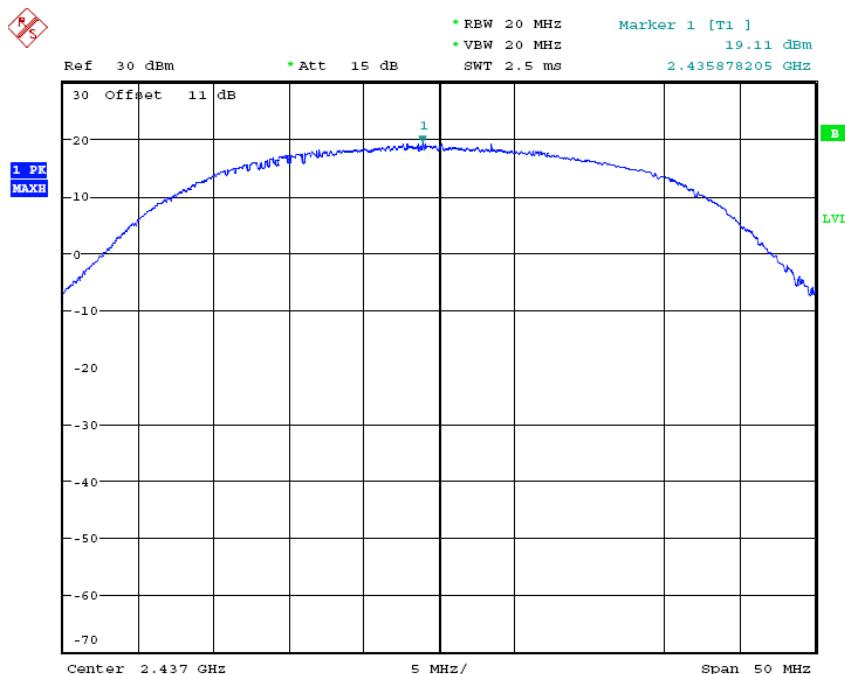
MAX OUTPUT POWER 802.11b CH11
 Date: 21.APR.2011 18:00:12

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Mode B

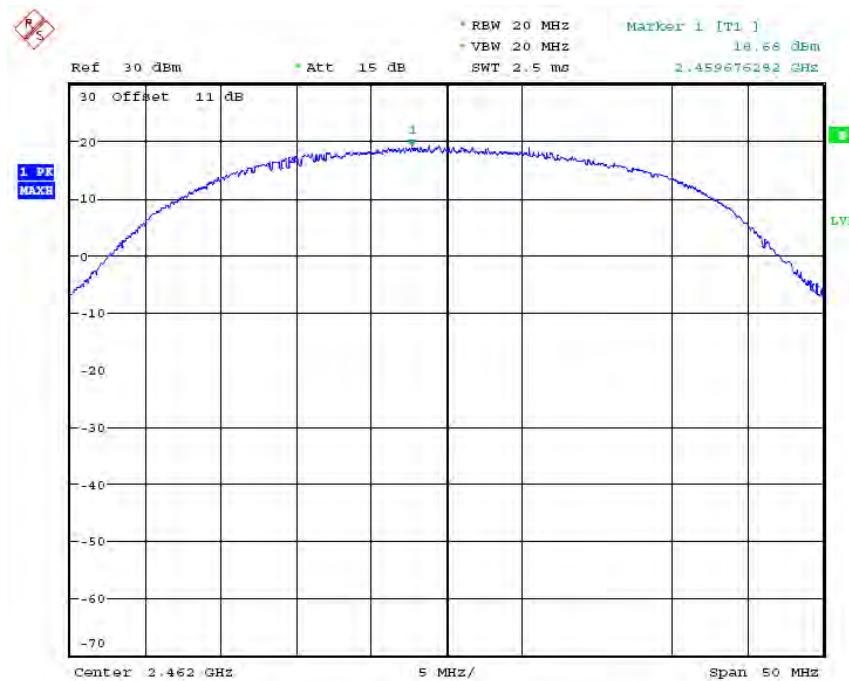


MAX OUTPUT POWER 802.11g CH1
 Date: 21.APR.2011 18:06:53

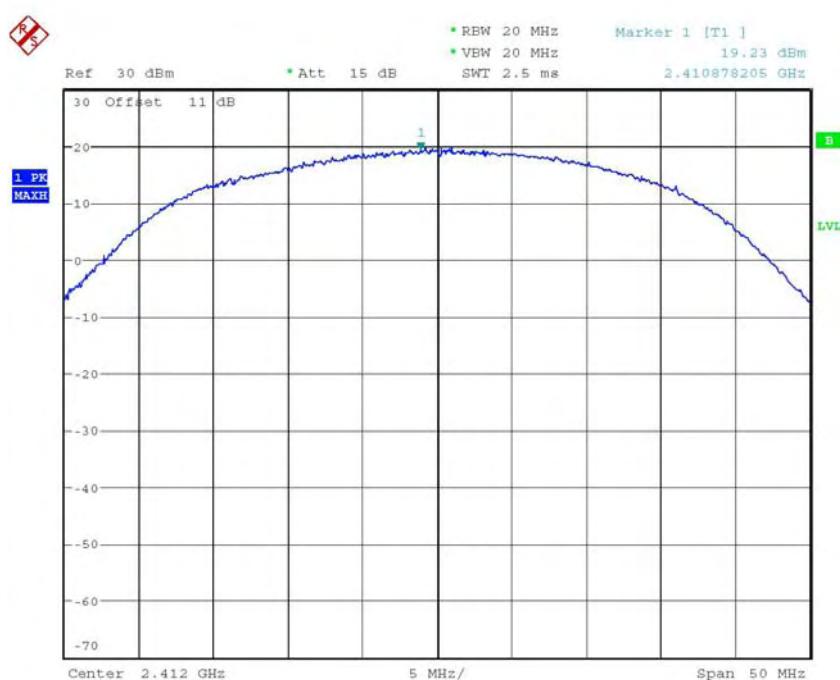


MAX OUTPUT POWER 802.11g CH6
 Date: 21.APR.2011 18:07:24

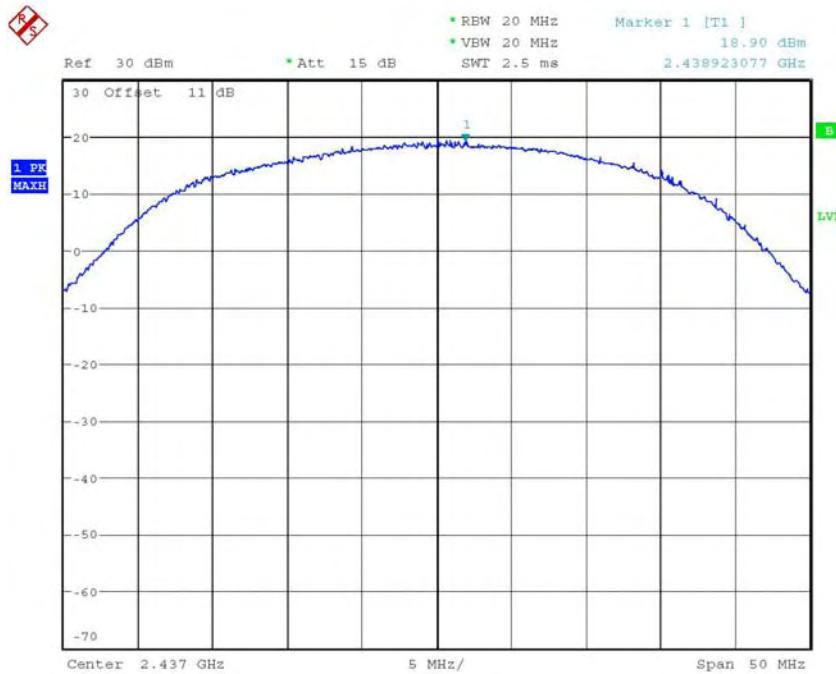
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Mode C



Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

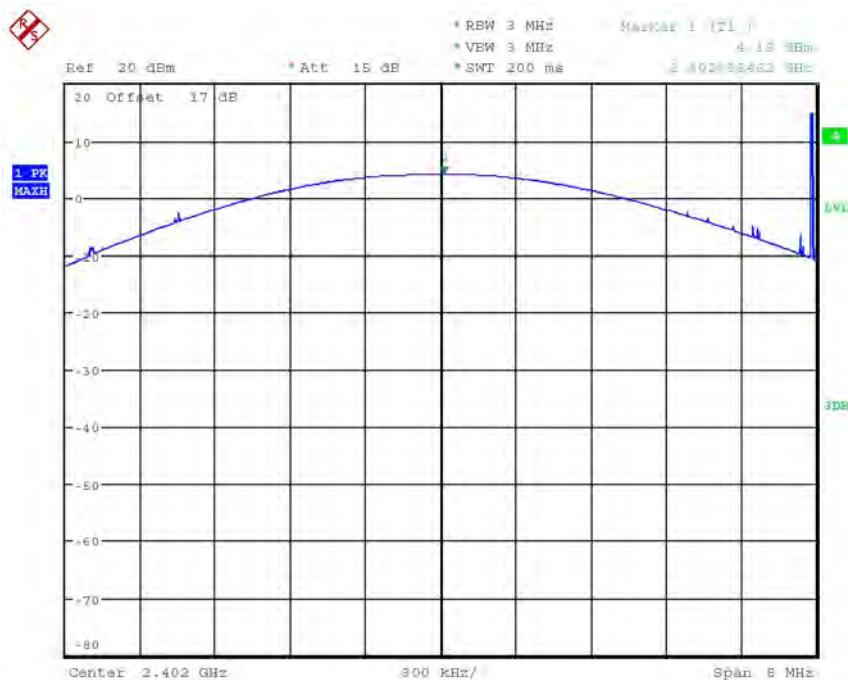


MAX OUTPUT POWER 802.11n CH11

Date: 21.APR.2011 18:10:12

Registration number: W6M21103-11337-C1
 FCC ID:Y2A-OP430

Mode D



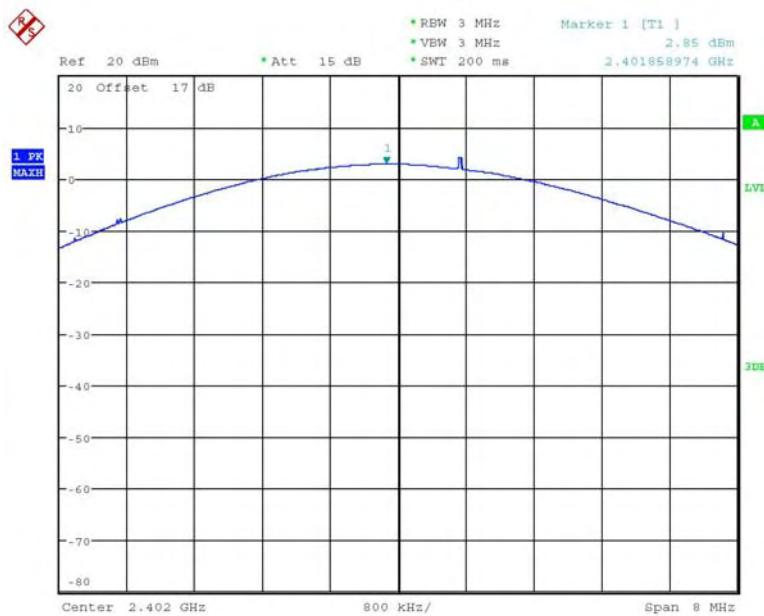
MAX OUTPUT POWER CH39
 Date: 1.MAY.2011 11:57:25

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



MAX OUTPUT POWER CH78
Date: 1.MAY.2011 11:57:57

Mode E

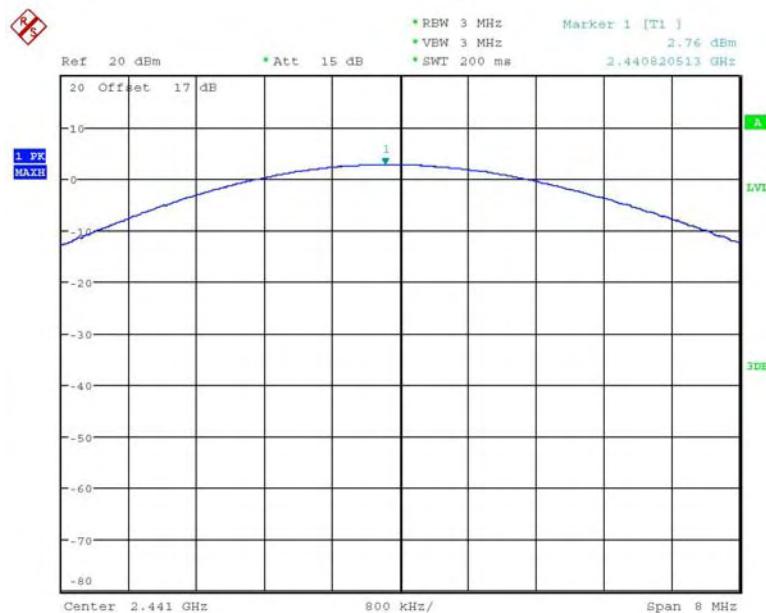


MAX OUTPUT POWER CHO EDR MODE
Date: 1.MAY.2011 11:58:54



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



MAX OUTPUT POWER CH78 EDR MODE
Date: 1.MAY.2011 12:00:03



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Test condition $T_{nom} = --^{\circ}\text{C}$, $V_{nom} = -- \text{ V}$	Signal Field strength TX highest power mode dB μ V/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 $> 6 \text{ dBi}$ and using fixed point-to point operation consider §15.247 (b)(4)

Test equipment used: ETSTW-RE 055



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

$$\begin{aligned} \text{EIRP} &= 19.55 \text{ dBm} + 1.9 \text{ dBi} \\ &= 21.45 \text{ dBm} \end{aligned}$$

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

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.

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

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

Item	Unit	Value	Remarks
P	mW	90.16	Peak value
D	dB		
AG	dBi	1.9	
G		1.55	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.028	Calculated value

Limits:

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



Worldwide Testing Services(Taiwan) Co., Ltd.

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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.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

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 044

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



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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".

Model:	OP-430	Date:	2011/3/21
Mode:	802.11b CH1	Temperature:	21.3 °C
Polarization:	Horizontal	Humidity:	55 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
132.8057	16.21	peak	14.88	31.09	43.50	-12.41	130	150
962.1243	8.21	peak	27.76	35.97	54.00	-18.03	240	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	46.10	---	-4.15	41.95	---	74.00	54.00	-32.05	240	150
7236.0000	49.04	---	-1.41	47.63	---	74.00	54.00	-26.37	130	150
9646.7940	28.25	---	19.40	47.65	---	74.00	54.00	-26.35	210	150
12060.0000	24.57	---	21.97	46.54	---	74.00	54.00	-27.46	240	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
38.1163	22.52	peak	14.14	36.66	40.00	-3.34	250	150
977.5551	2.35	peak	27.81	30.16	54.00	-23.84	290	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4824.0000	46.87	---	-4.15	42.72	---	74.00	54.00	-31.28	140	150
7236.0000	48.55	---	-1.41	47.14	---	74.00	54.00	-26.86	260	150
9648.0000	25.33	---	19.39	44.72	---	74.00	54.00	-29.28	240	150
12060.0000	24.39	---	21.97	46.36	---	74.00	54.00	-27.64	130	150

Mode: 802.11b CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak			Peak	Ave.	Peak	Ave.			
135.5111	15.53	peak	15.10	30.63		43.50		-12.87	290	150
962.1243	8.21	peak	27.76	35.97		54.00		-18.03	260	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4874.0000	46.61	---	-4.00	42.61	---	74.00	54.00	-31.39	160	150
7311.0000	48.80	---	-1.88	46.92	---	74.00	54.00	-27.08	130	150
9748.0000	26.46	---	19.37	45.83	---	74.00	54.00	-28.17	140	150
12185.0000	23.84	---	22.28	46.12	---	74.00	54.00	-27.88	200	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak			Peak	Ave.	Peak	Ave.			
135.5111	14.63	peak	15.10	29.73		43.50		-13.77	240	150
984.5691	3.04	peak	27.83	30.87		54.00		-23.13	120	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4874.0000	46.10	---	-4.00	42.10	---	74.00	54.00	-31.90	140	150
7311.0000	48.05	---	-1.88	46.17	---	74.00	54.00	-27.83	160	150
9748.0000	26.18	---	19.37	45.55	---	74.00	54.00	-28.45	140	150
12185.0000	24.10	---	22.28	46.38	---	74.00	54.00	-27.62	60	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Mode: 802.11b CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
132.2646	17.46	peak	14.84	32.30	43.50	-11.20	290	150
962.1243	8.56	peak	27.76	36.32	54.00	-17.68	290	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.			
4921.8440	50.12	---	-3.91	46.21	---	74.00	54.00	-27.79	100	150
7386.0000	47.71	---	-2.09	45.62	---	74.00	54.00	-28.38	260	150
9848.0000	25.04	---	19.63	44.67	---	74.00	54.00	-29.33	180	150
12310.0000	24.61	---	22.25	46.86	---	74.00	54.00	-27.14	200	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
38.1163	23.29	peak	14.14	37.43	40.00	-2.57	290	150
962.1243	3.46	peak	27.76	31.22	54.00	-22.78	200	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	45.68	---	-3.91	41.77	---	74.00	54.00	-32.23	140	150
7386.0000	47.75	---	-2.09	45.66	---	74.00	54.00	-28.34	230	150
9848.0000	25.08	---	19.63	44.71	---	74.00	54.00	-29.29	140	150
12310.0000	24.74	---	22.25	46.99	---	74.00	54.00	-27.01	260	150

Mode: 802.11g CH1

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
250.2205	18.92	peak	14.49	33.41	46.00	-12.59	290	150
962.1243	8.74	peak	27.76	36.50	54.00	-17.50	290	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
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Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4824.0000	47.05	---	-4.15	42.90	---	74.00	54.00	-31.10	170	150
7236.0000	48.32	---	-1.41	46.91	---	74.00	54.00	-27.09	160	150
9646.7940	27.65	---	19.40	47.05	---	74.00	54.00	-26.95	240	150
12060.0000	24.30	---	21.97	46.27	---	74.00	54.00	-27.73	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)
132.8057	16.35	peak	14.88	31.23	43.50	-12.27	290	150
610.0201	3.34	peak	22.84	26.18	46.00	-19.82	210	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4824.0000	47.32	---	-4.15	43.17	---	74.00	54.00	-30.83	140	150
7236.0000	47.92	---	-1.41	46.51	---	74.00	54.00	-27.49	160	150
9646.7940	27.18	---	19.40	46.58	---	74.00	54.00	-27.42	140	150
12060.0000	24.33	---	21.97	46.30	---	74.00	54.00	-27.70	210	150

Mode: 802.11g CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
137.6754	18.55	peak	15.26	33.81	43.50	-9.69	240	150
962.1243	8.74	peak	27.76	36.50	54.00	-17.50	240	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4874.0000	46.41	---	-4.00	42.41	---	74.00	54.00	-31.59	250	150
7311.0000	48.49	---	-1.88	46.61	---	74.00	54.00	-27.39	40	150
9751.5030	26.78	---	19.39	46.17	---	74.00	54.00	-27.83	140	150
12185.0000	23.65	---	22.28	45.93	---	74.00	54.00	-28.07	260	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
266.4530	13.63	peak	14.97	28.60	46.00	-17.40	80	150
962.1243	4.55	peak	27.76	32.31	54.00	-21.69	320	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	46.27	---	-4.00	42.27	---	74.00	54.00	-31.73	240	150
7311.0000	48.12	---	-1.88	46.24	---	74.00	54.00	-27.76	100	150
9751.5030	27.17	---	19.39	46.56	---	74.00	54.00	-27.44	240	150
12185.0000	24.01	---	22.28	46.29	---	74.00	54.00	-27.71	140	150

Mode: 802.11g CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
132.2646	18.16	peak	14.84	33.00	43.50	-10.50	200	150
962.1243	9.06	peak	27.76	36.82	54.00	-17.18	100	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	45.69	---	-3.91	41.78	---	74.00	54.00	-32.22	200	150
7386.0000	48.63	---	-2.09	46.54	---	74.00	54.00	-27.46	250	150
9848.0000	25.06	---	19.63	44.69	---	74.00	54.00	-29.31	130	150
12310.0000	24.98	---	22.25	47.23	---	74.00	54.00	-26.77	60	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
134.9700	14.91	peak	15.05	29.96	43.50	-13.54	160	150
962.1243	4.55	peak	27.76	32.31	54.00	-21.69	100	150



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Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4924.0000	46.33	---	-3.91	42.42	---	74.00	54.00	-31.58	140	150
7386.0000	49.71	---	-2.09	47.62	---	74.00	54.00	-26.38	100	150
9848.0000	25.36	---	19.63	44.99	---	74.00	54.00	-29.01	240	150
12310.0000	25.15	---	22.25	47.40	---	74.00	54.00	-26.60	140	150

Mode: 802.11n 20M CH1

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
134.9700	16.30	peak	15.05	31.35	43.50	-12.15	290	150
962.1243	9.18	peak	27.76	36.94	54.00	-17.06	290	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4824.0000	46.15	---	-4.15	42.00	---	74.00	54.00	-32.00	140	150
7236.0000	48.82	---	-1.41	47.41	---	74.00	54.00	-26.59	60	150
9646.7940	27.87	---	19.40	47.27	---	74.00	54.00	-26.73	240	150
12060.0000	24.53	---	21.97	46.50	---	74.00	54.00	-27.50	160	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
38.1163	20.06	peak	14.14	34.20	40.00	-5.80	90	150
962.1243	3.56	peak	27.76	31.32	54.00	-22.68	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4824.0000	47.66	---	-4.15	43.51	---	74.00	54.00	-30.49	110	150
7236.0000	48.08	---	-1.41	46.67	---	74.00	54.00	-27.33	260	150
9648.0000	25.36	---	19.39	44.75	---	74.00	54.00	-29.25	140	150
12060.0000	24.40	---	21.97	46.37	---	74.00	54.00	-27.63	30	150



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Mode: 802.11n 20M CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
132.2646	18.00	peak	14.84	32.84	43.50	-10.66	90	150
962.1243	9.17	peak	27.76	36.93	54.00	-17.07	210	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.66	---	-4.00	42.66	---	74.00	54.00	-31.34	240	150
7311.0000	48.85	---	-1.88	46.97	---	74.00	54.00	-27.03	160	150
9748.0000	26.60	---	19.37	45.97	---	74.00	54.00	-28.03	170	150
12185.0000	24.30	---	22.28	46.58	---	74.00	54.00	-27.42	250	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
134.9700	15.61	peak	15.05	30.66	43.50	-12.84	90	150
976.1523	3.36	peak	27.80	31.16	54.00	-22.84	240	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	46.79	---	-4.00	42.79	---	74.00	54.00	-31.21	100	150
7311.0000	48.81	---	-1.88	46.93	---	74.00	54.00	-27.07	50	150
9748.0000	26.05	---	19.37	45.42	---	74.00	54.00	-28.58	270	150
12185.0000	23.93	---	22.28	46.21	---	74.00	54.00	-27.79	140	150

Mode: 802.11n 20M CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
250.2205	18.13	peak	14.49	32.62	46.00	-13.38	190	150
962.1243	7.79	peak	27.76	35.55	54.00	-18.45	240	150



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Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4924.0000	45.83	---	-3.91	41.92	---	74.00	54.00	-32.08	240	150
7386.0000	48.23	---	-2.09	46.14	---	74.00	54.00	-27.86	160	150
9848.0000	25.20	---	19.63	44.83	---	74.00	54.00	-29.17	100	150
12310.0000	25.10	---	22.25	47.35	---	74.00	54.00	-26.65	160	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
118.1965	15.93	peak	13.84	29.77	43.50	-13.73	210	150
987.3748	4.01	peak	27.84	31.85	54.00	-22.15	290	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4924.0000	45.91	---	-3.91	42.00	---	74.00	54.00	-32.00	100	150
7386.0000	48.17	---	-2.09	46.08	---	74.00	54.00	-27.92	260	150
9848.0000	25.29	---	19.63	44.92	---	74.00	54.00	-29.08	140	150
12310.0000	25.08	---	22.25	47.33	---	74.00	54.00	-26.67	130	150

Mode: Bluetooth 2402MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
275.1102	14.06	peak	15.30	29.36	46.00	-16.64	170	150
611.4230	4.95	peak	22.86	27.81	46.00	-18.19	140	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4804.0000	45.89	---	-4.21	41.68	---	74.00	54.00	-32.32	140	150
7206.0000	48.14	---	-1.20	46.94	---	74.00	54.00	-27.06	260	150
9608.0000	24.97	---	19.59	44.56	---	74.00	54.00	-29.44	100	150
12010.0000	25.29	---	21.90	47.19	---	74.00	54.00	-26.81	60	150



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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	14.38	peak	11.78	26.16	40.00	-13.84	200	150
610.0201	6.75	peak	22.84	29.59	46.00	-16.41	210	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin	Table Degree (Deg.)	Ant. High (cm)			
	Peak Ave.	Corr.	Peak Ave.	Peak Ave.	(dB)					
4804.0000	45.80	---	-4.21	41.59	---	74.00	54.00	-32.41	320	150
7206.0000	48.61	---	-1.20	47.41	---	74.00	54.00	-26.59	280	150
9608.0000	25.10	---	19.59	44.69	---	74.00	54.00	-29.31	100	150
12010.0000	26.00	---	21.90	47.90	---	74.00	54.00	-26.10	260	150

Mode: Bluetooth 2441MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
278.3567	14.28	peak	15.42	29.70	46.00	-16.30	140	150
610.0201	5.55	peak	22.84	28.39	46.00	-17.61	160	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin	Table Degree (Deg.)	Ant. High (cm)			
	Peak Ave.	Corr.	Peak Ave.	Peak Ave.	(dB)					
4882.0000	46.30	---	-3.97	42.33	---	74.00	54.00	-31.67	200	150
7323.0000	48.43	---	-1.91	46.52	---	74.00	54.00	-27.48	260	150
9764.0000	25.45	---	19.45	44.90	---	74.00	54.00	-29.10	100	150
12205.0000	24.84	---	22.32	47.16	---	74.00	54.00	-26.84	260	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	22.01	peak	11.90	33.91	40.00	-6.09	260	150
962.1243	5.99	peak	27.76	33.75	54.00	-20.25	160	150



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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.			
4882.0000	45.67	---	-3.97	41.70	---	74.00	54.00	-32.30	140	150
7323.0000	48.34	---	-1.91	46.43	---	74.00	54.00	-27.57	60	150
9764.0000	25.54	---	19.45	44.99	---	74.00	54.00	-29.01	100	150
12205.0000	24.95	---	22.32	47.27	---	74.00	54.00	-26.73	60	150

Mode: Bluetooth 2480MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
266.9940	13.46	peak	14.99	28.45	46.00	-17.55	170	150
612.8257	6.30	peak	22.87	29.17	46.00	-16.83	240	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.			
4960.0000	45.26	---	-3.90	41.36	---	74.00	54.00	-32.64	140	150
7440.0000	49.44	---	-2.15	47.29	---	74.00	54.00	-26.71	100	150
9920.0000	25.56	---	19.81	45.37	---	74.00	54.00	-28.63	140	150
12400.0000	24.64	---	22.37	47.01	---	74.00	54.00	-26.99	250	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	22.76	peak	12.01	34.77	40.00	-5.23	190	150
611.4230	6.71	peak	22.86	29.57	46.00	-16.43	260	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.			
4960.0000	45.19	---	-3.90	41.29	---	74.00	54.00	-32.71	140	150
7440.0000	48.97	---	-2.15	46.82	---	74.00	54.00	-27.18	260	150
9920.0000	24.98	---	19.81	44.79	---	74.00	54.00	-29.21	100	150
12400.0000	24.63	---	22.37	47.00	---	74.00	54.00	-27.00	160	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.



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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 044

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3.6 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

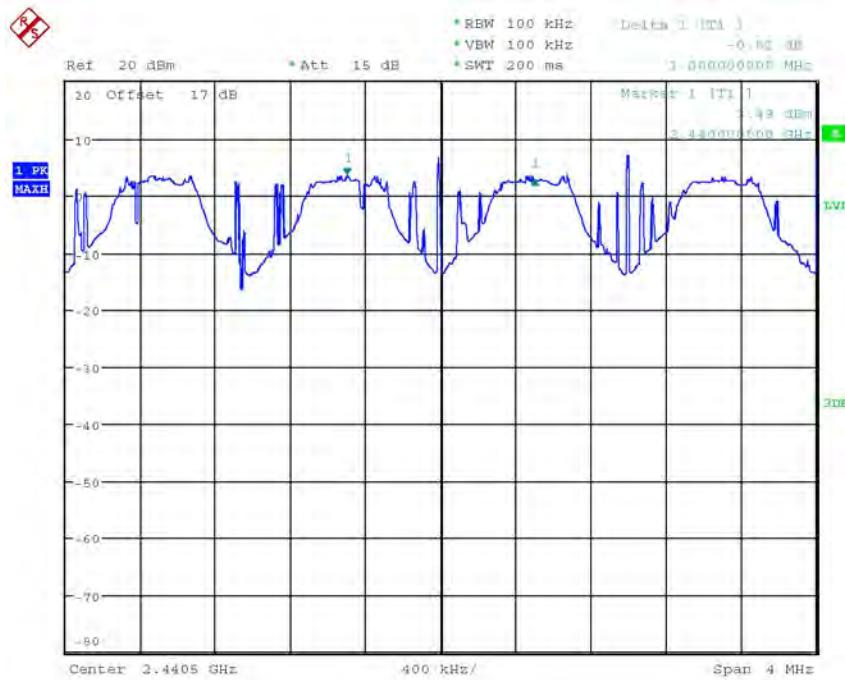
According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Mode D and Mode E:



FREQUENCY SEPARATION CH0
 Date: 1.MAY.2011 12:14:06

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



FREQUENCY SEPARATION CH39
 Date: 1.MAY.2011 12:16:45



FREQUENCY SEPARATION CH78
 Date: 1.MAY.2011 12:20:07



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Limits:

Frequency Range MHz	Limits	
	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz
902-928	25 kHz	20 dB bandwidth
2400-2483.5	25 kHz	20 dB bandwidth
5725-5850.0		

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A, Mode B, and Mode C because these three modes are not FHSS modulation.

Registration number: W6M21103-11337-C-1

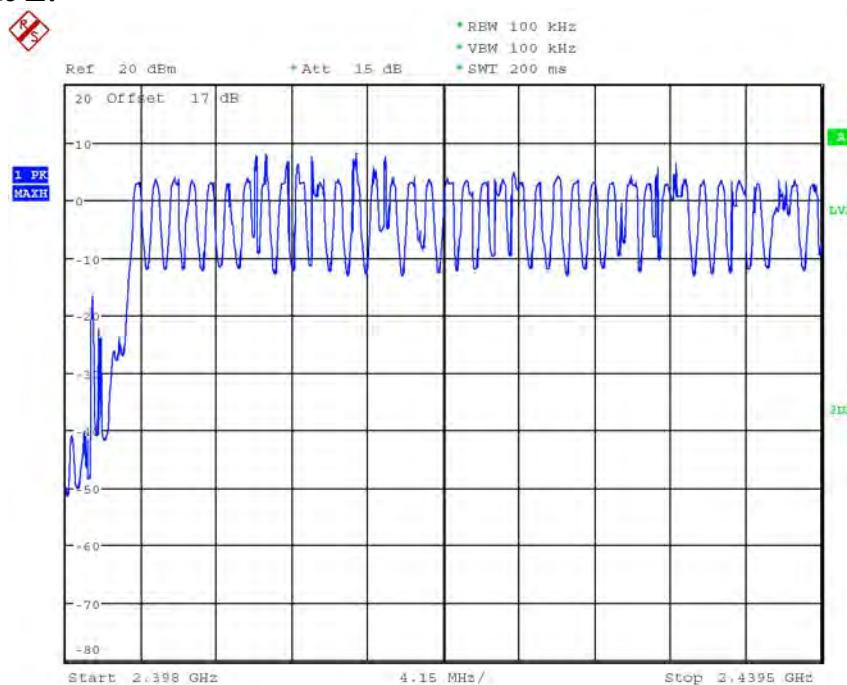
FCC ID:Y2A-OP430

3.7 Number of Hopping Frequencies

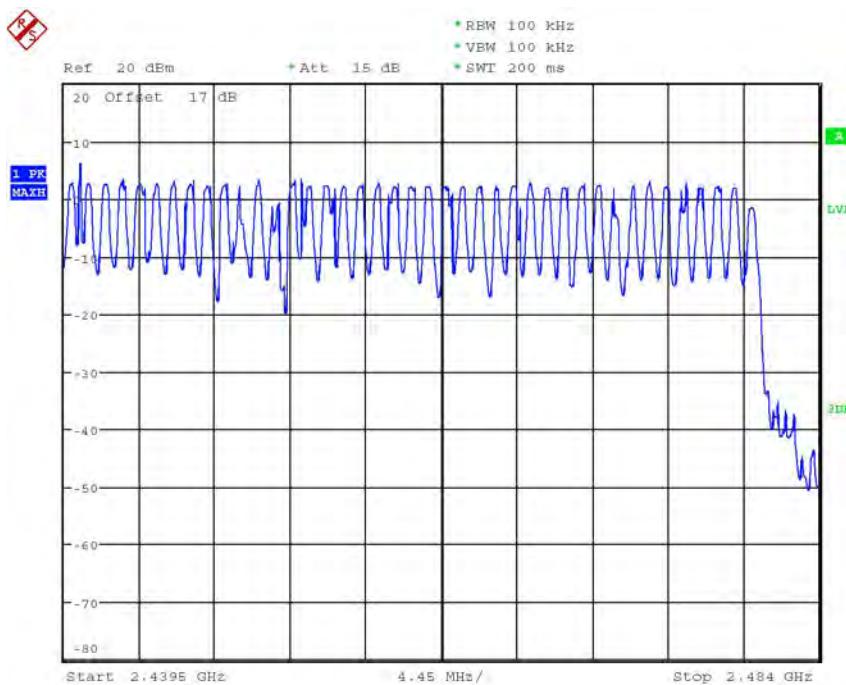
According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Mode D and Mode E:



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 FCC ID:Y2A-OP430



NUMBER OF HOPPING CH37-78
 Date: 1.MAY.2011 12:10:44

Limits:

Frequency Range MHz	Limit	
	20dB Bandwidth	Number of Channels
902-928 MHz	Bandwidth < 250 kHz	≥ 50
	Bandwidth ≥ 250 kHz	≥ 25
2400-2483.5	not defined	15
5725-5850.0 MHz	1 MHz	75

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A, Mode B, and Mode C because these three modes are not FHSS modulation.

3.7.1 Pseudorandom Frequency Hopping Sequence

The generation of the hopping sequence is determined by the Bluetooth cord specification and complies with the FCC requirements.



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3.7.2 Coordination of hopping sequences to other transmitters

According to the Bluetooth core specification V1.1 such a coordination is not possible. During scatternet function only one of the two hopping sequences will be used at a definite moment.

3.7.3 System Receiver Hopping Capability

According to the Bluetooth core specification. The system receivers shift frequencies in synchronization with the transmitted signals.

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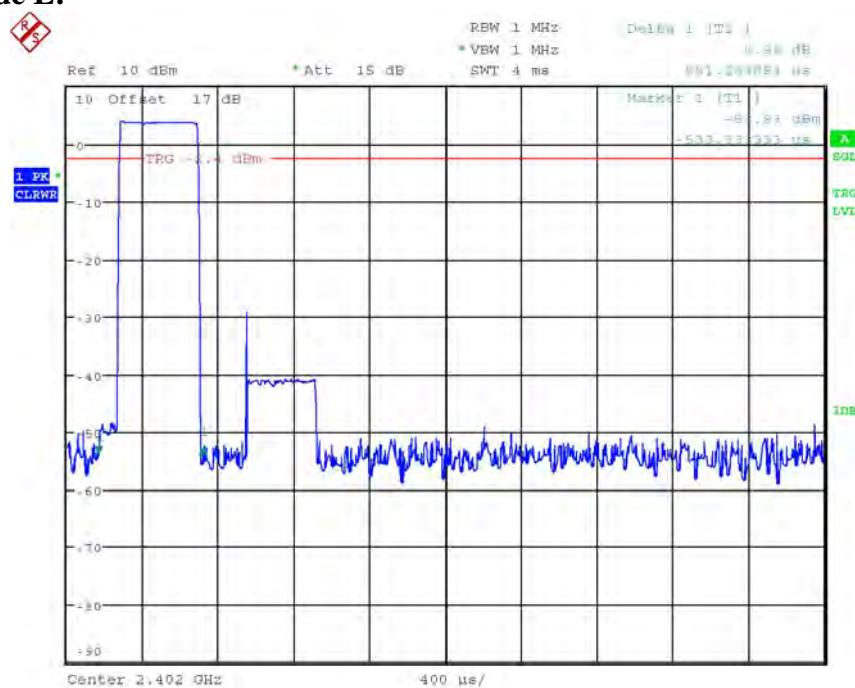
3.8 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

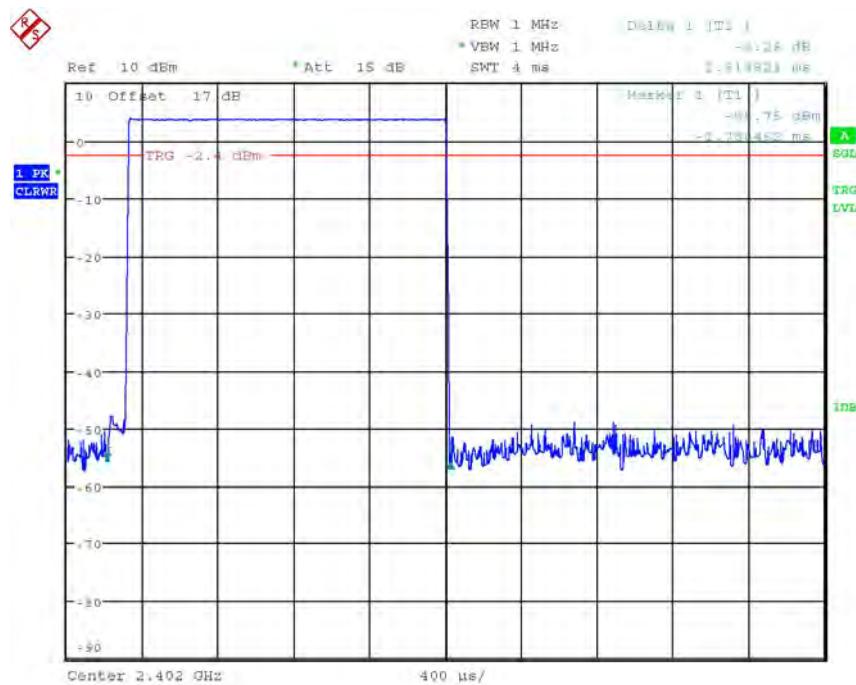
In 2400-2483,5 MHz band the average time of occupancy on any channel shall not be greater than 0,4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

Mode D and Mode E:



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DWELL TIME CH0 DH3 (1.812ms * 160events = 289.92ms)

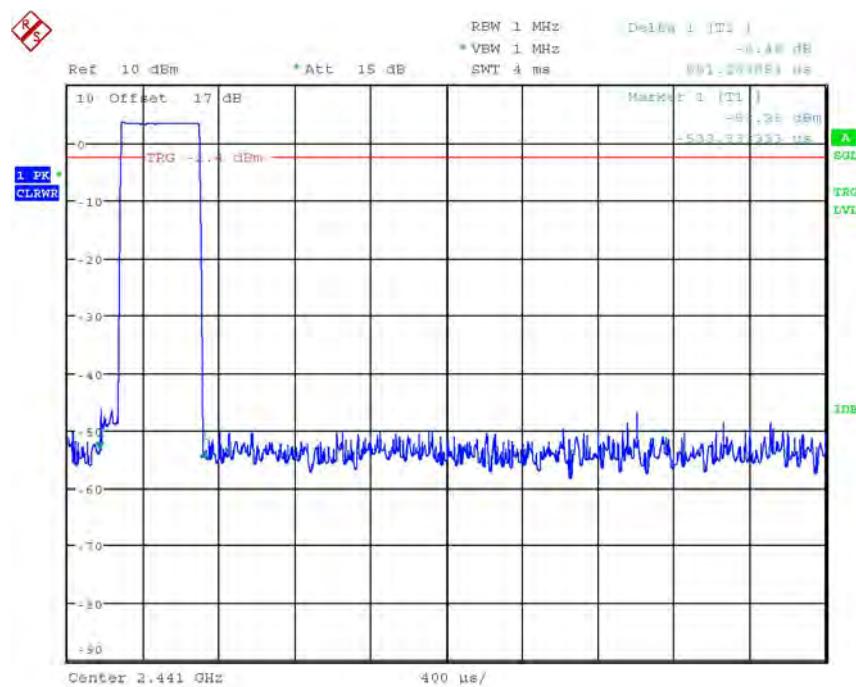
Date: 1.MAY.2011 12:53:46



DWELL TIME CH0 DH5 (2.974ms * 110events = 327.14ms)

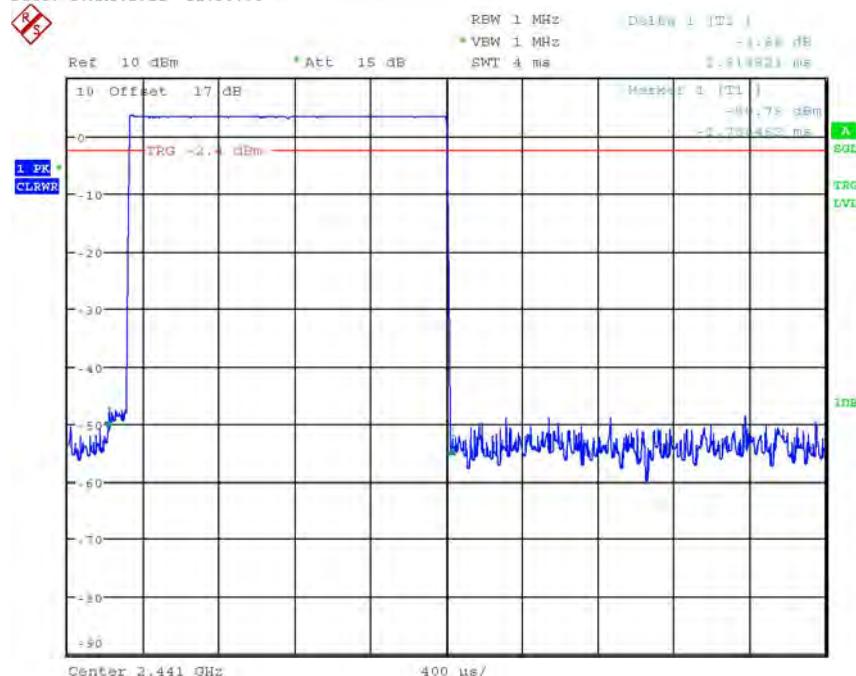
Date: 1.MAY.2011 12:49:46

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



DWELL TIME CH39 DH1 (0.551ms * 320events = 176.32ms)

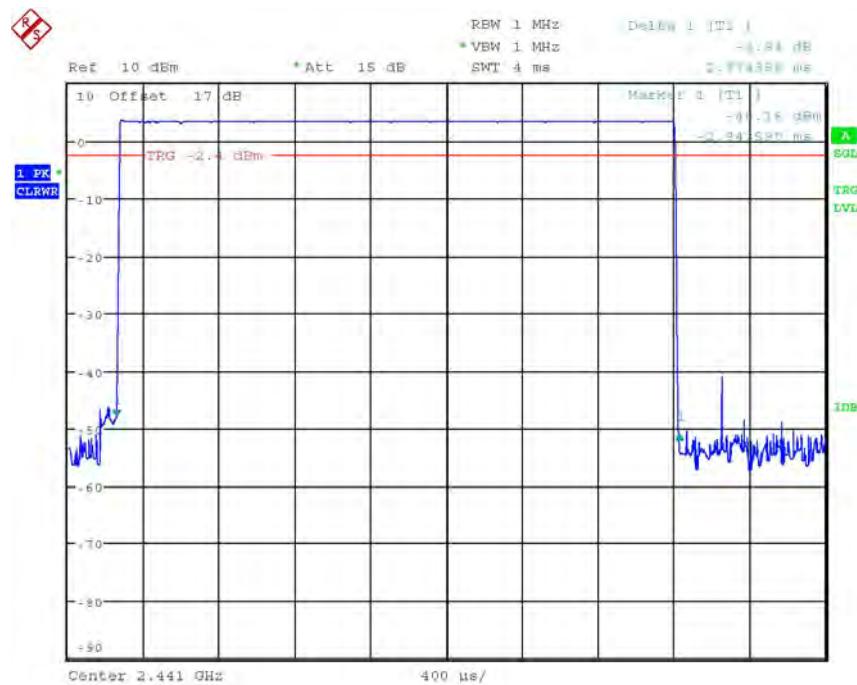
Date: 1.MAY.2011 12:56:04



DWELL TIME CH39 DH3 (1.812ms * 160events = 289.92ms)

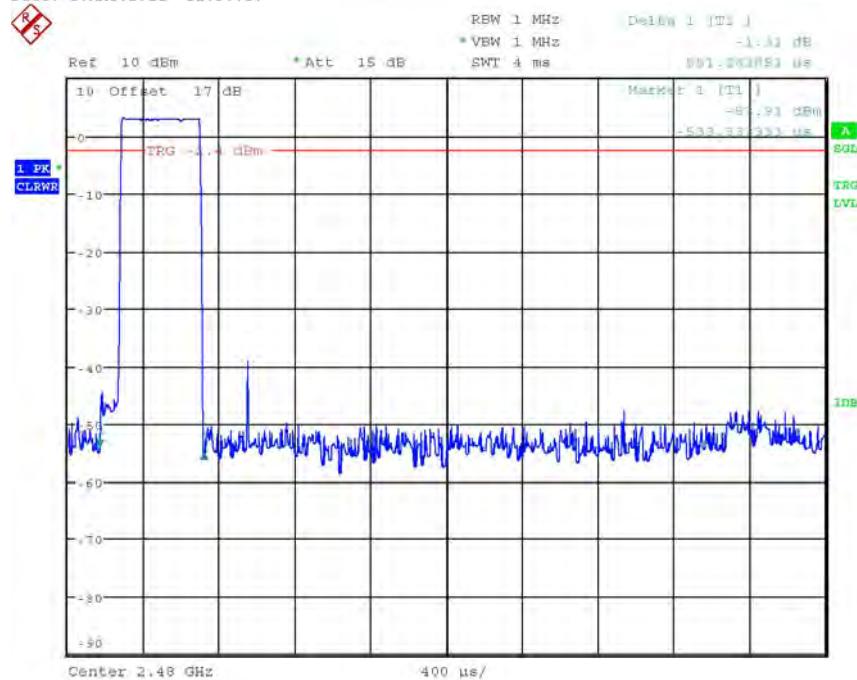
Date: 1.MAY.2011 12:53:22

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



DWELL TIME CH39 DHL (2.974ms * 110events = 327.14ms)

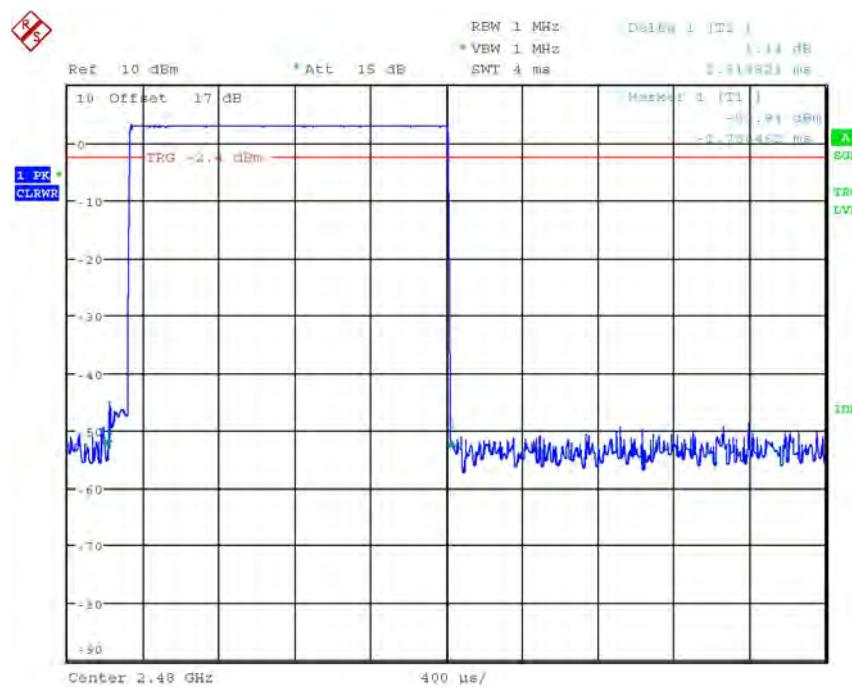
Date: 1.MAY.2011 12:50:17



DWELL TIME CH78 DH1 (0.551ms * 320events = 176.32ms)

Date: 1.MAY.2011 12:56:33

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



DWELL TIME CH78 DH3 (1.812ms * 160events = 289.92ms)

Date: 1.MAY.2011 12:52:54



DWELL TIME CH78 DH5 (2.974ms * 110events = 327.14ms)

Date: 1.MAY.2011 12:50:46



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Period	Limit
902 – 928	≥50	20 s	0,4 s
	49 ≥ 25	10 s	0,4 s
2400 – 2483,5	≥ 15	0,4 s * number of used channels	0,4 s
5725- 5850	≥ 75	30 s	0,4s

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

Explanation: This test is not applicable for Mode A, Mode B and Mode C because these three modes are not FHSS modulation, which show the On-time and the number of counted events during the measurement period

Registration number: W6M21103-11337-C1
 FCC ID:Y2A-OP430

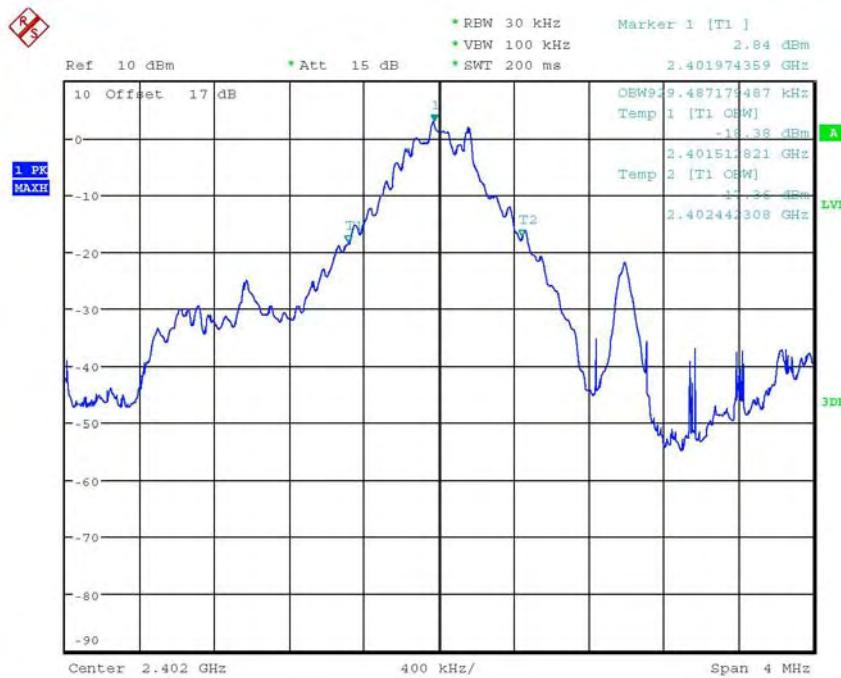
3.9 20dB Bandwidth

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

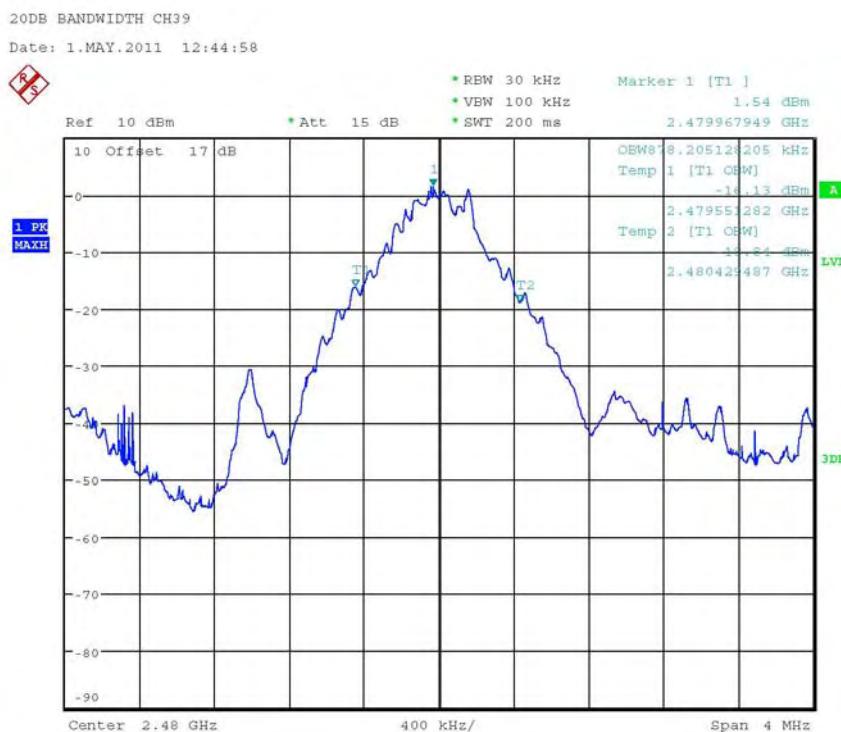
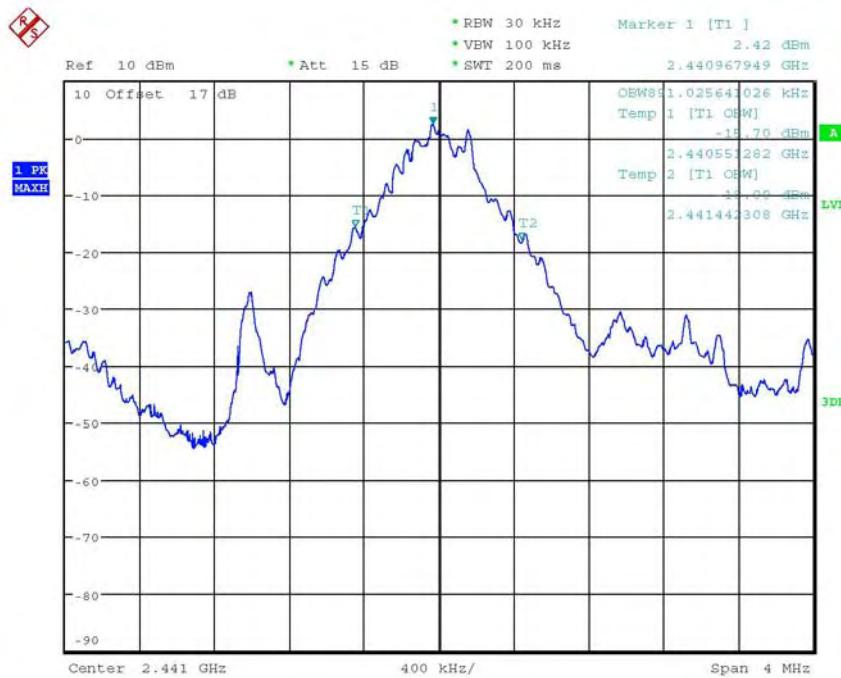
For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Mode D:



20DB BANDWIDTH CH0
 Date: 1.MAY.2011 12:45:23

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

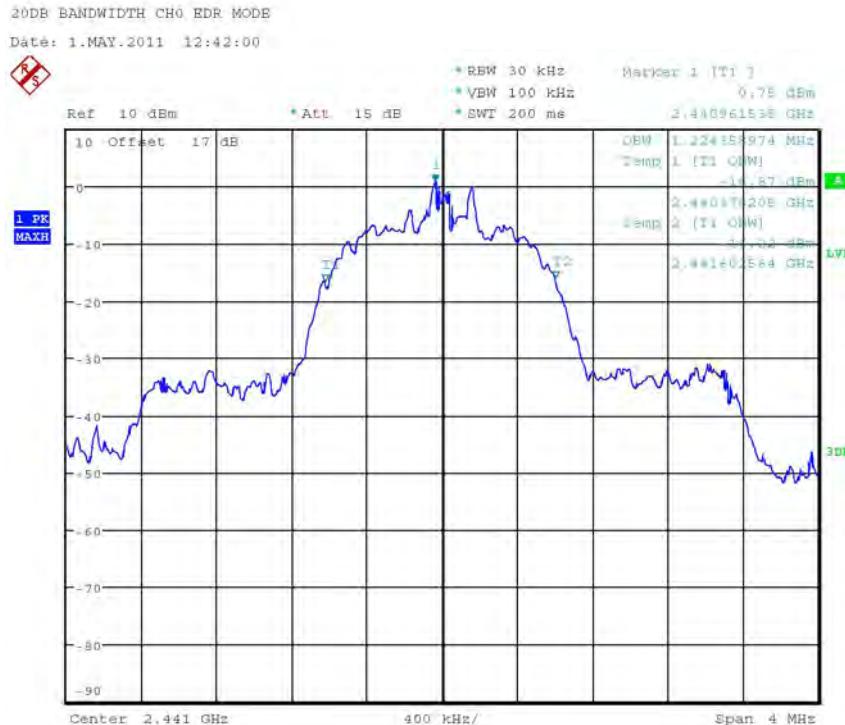
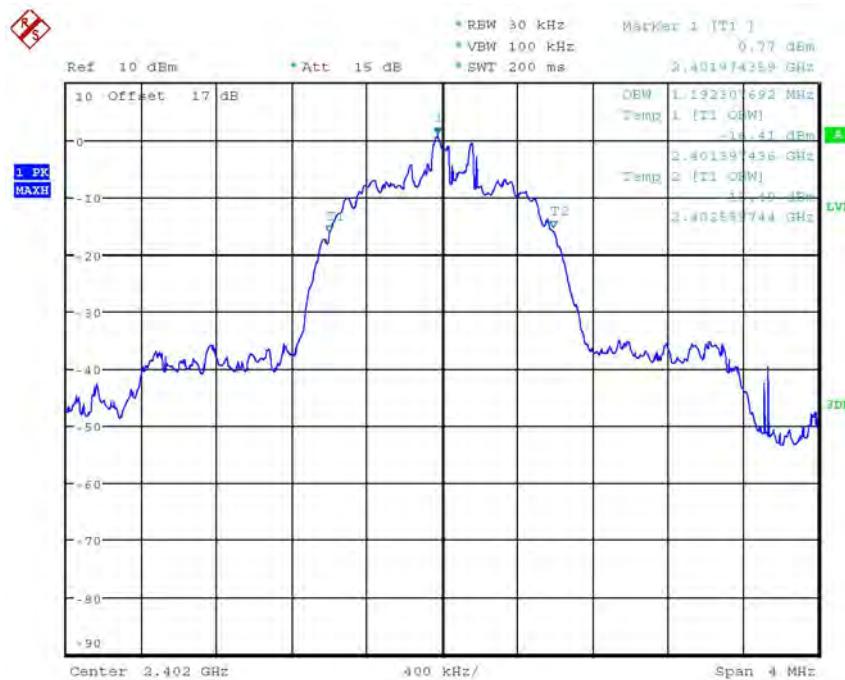


20DB BANDWIDTH CH78

Date: 1.MAY.2011 12:44:07

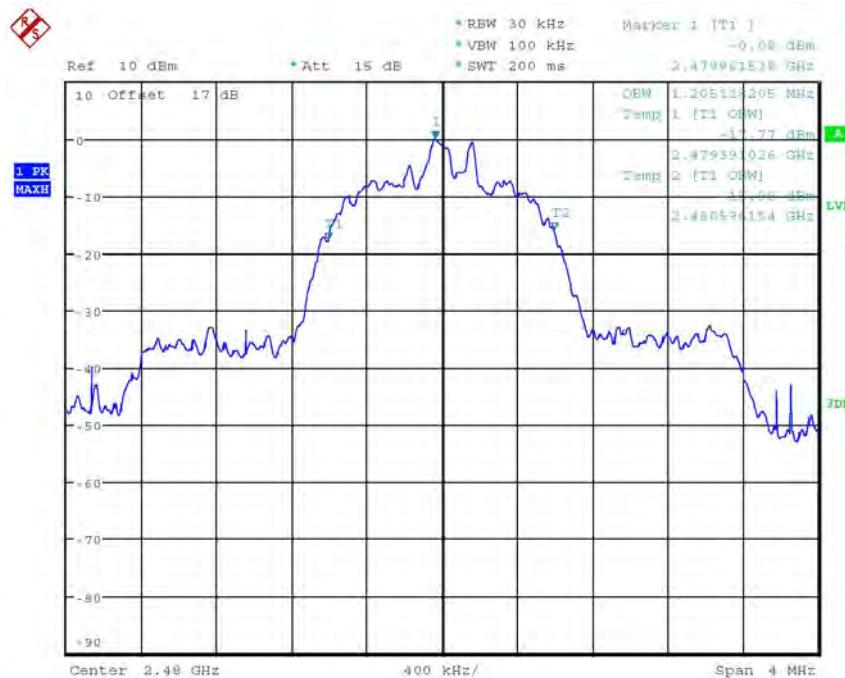
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Mode E:



20dB BANDWIDTH CH39 EDR MODE
 Date: 1.MAY.2011 12:42:59

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



20DB BANDWIDTH CH78 EDR MODE
 Date: 1.MAY.2011 12:43:31

Limits:

Frequency Range / MHz	Limit
902-928	≤ 500 kHz
2400-2483.5	not defined
5725-5850	≤ 1 MHz

Test equipment used: ETSTW-RE 055 ETSTW-RE 064

Explanation: This test is not applicable for Mode A, Mode B and Mode C because these three modes are not FHSS modulation. See attached diagrams in appendix.

3.9.1 System Receiver Input Bandwidth

It is determined in the Bluetooth core specification. The value matches to the bandwidth of transmitter signal.

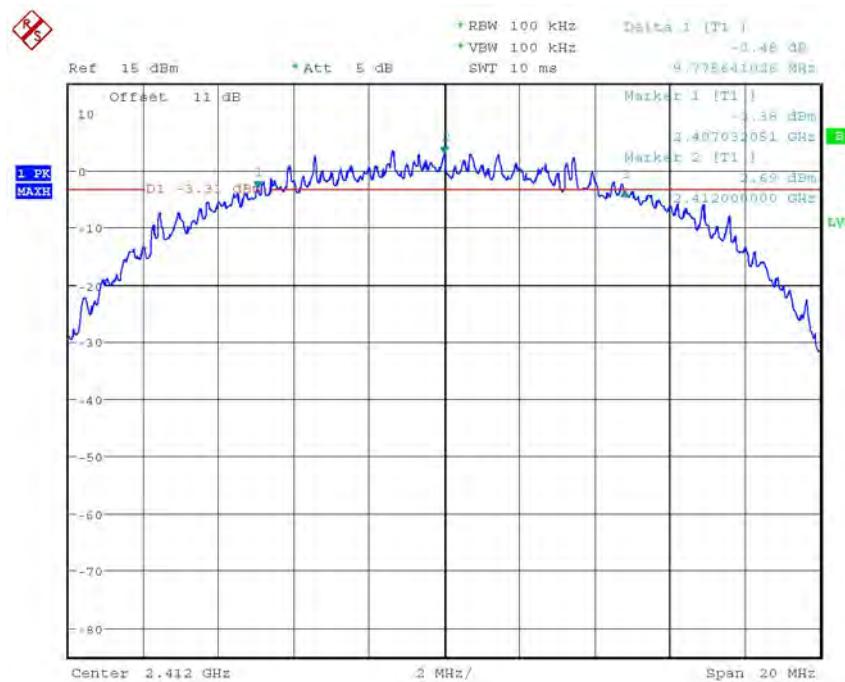
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

3.10 Minimum 6 dB Bandwidth

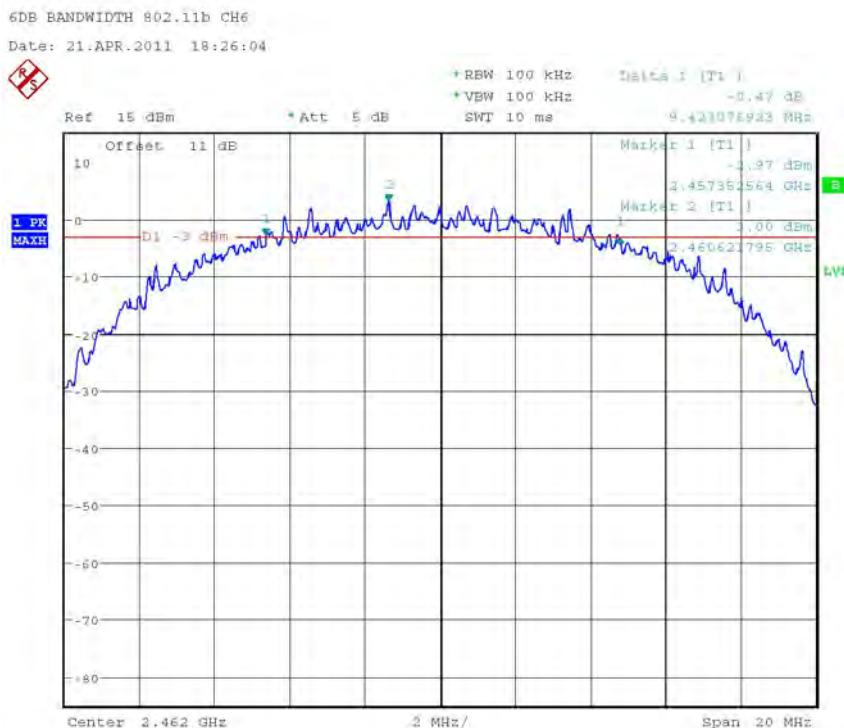
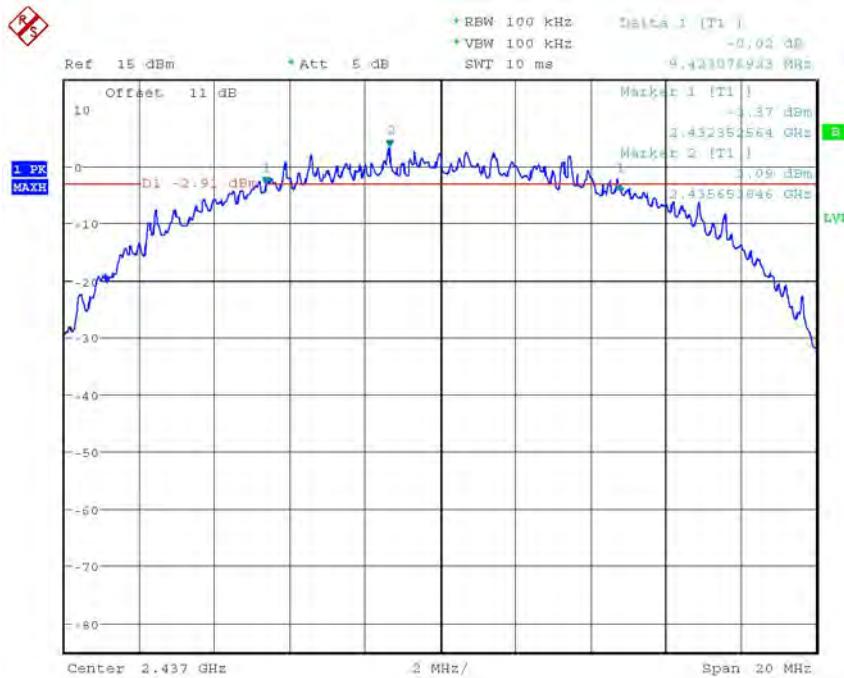
The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission.

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

Mode 802.11b



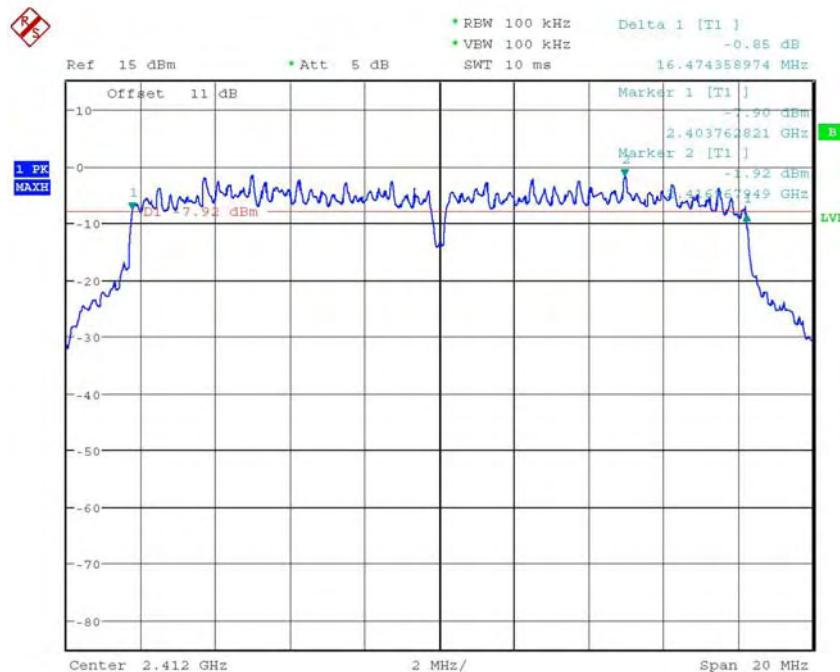
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



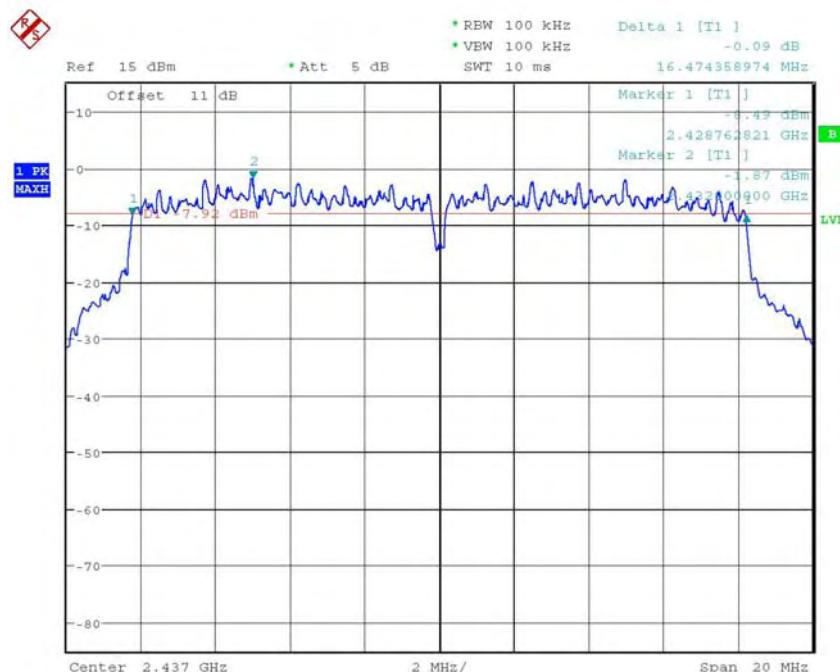
6DB BANDWIDTH 802.11b CH11
 Date: 21.APR.2011 18:27:18

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Mode 802.11g

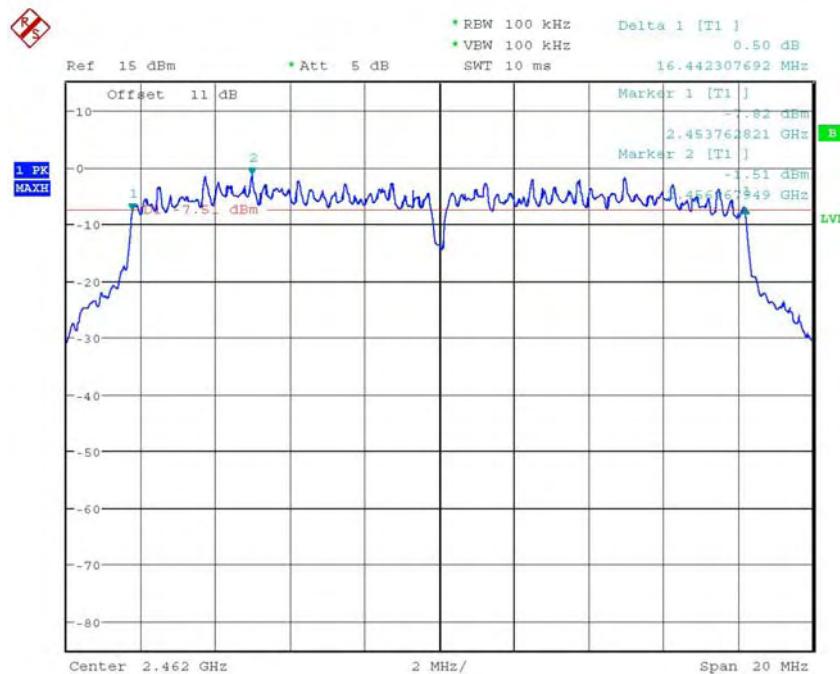


6DB BANDWIDTH 802.11g CH1
 Date: 21.APR.2011 18:22:57



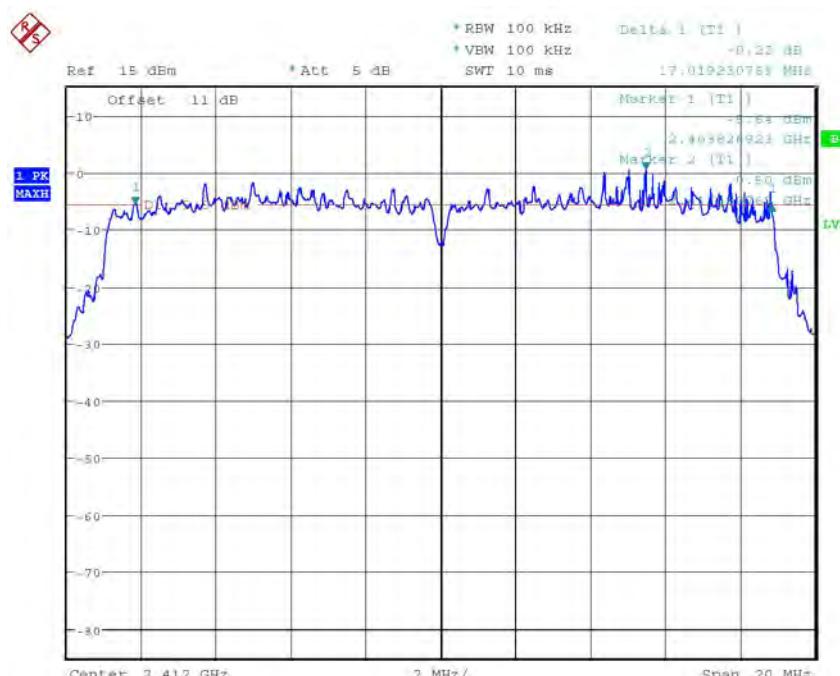
6DB BANDWIDTH 802.11g CH6
 Date: 21.APR.2011 18:22:11

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



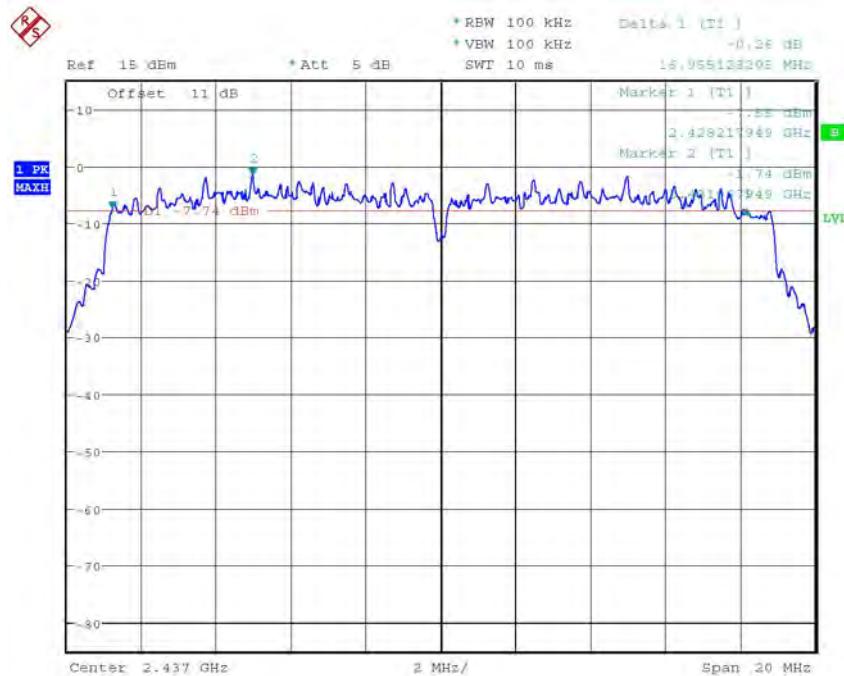
6DB BANDWIDTH 802.11g CH11
 Date: 21.APR.2011 18:21:27

Mode 802.11n 20MHz



6DB BANDWIDTH 802.11n CH1
 Date: 21.APR.2011 18:14:49

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



6DB BANDWIDTH 802.11n CH11
 Date: 21.APR.2011 18:20:11



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

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: This test is not applicable for Mode D and Mode E because these two modes are not DSSS / OFDM modulation.

Registration number: W6M21103-11337-C-1

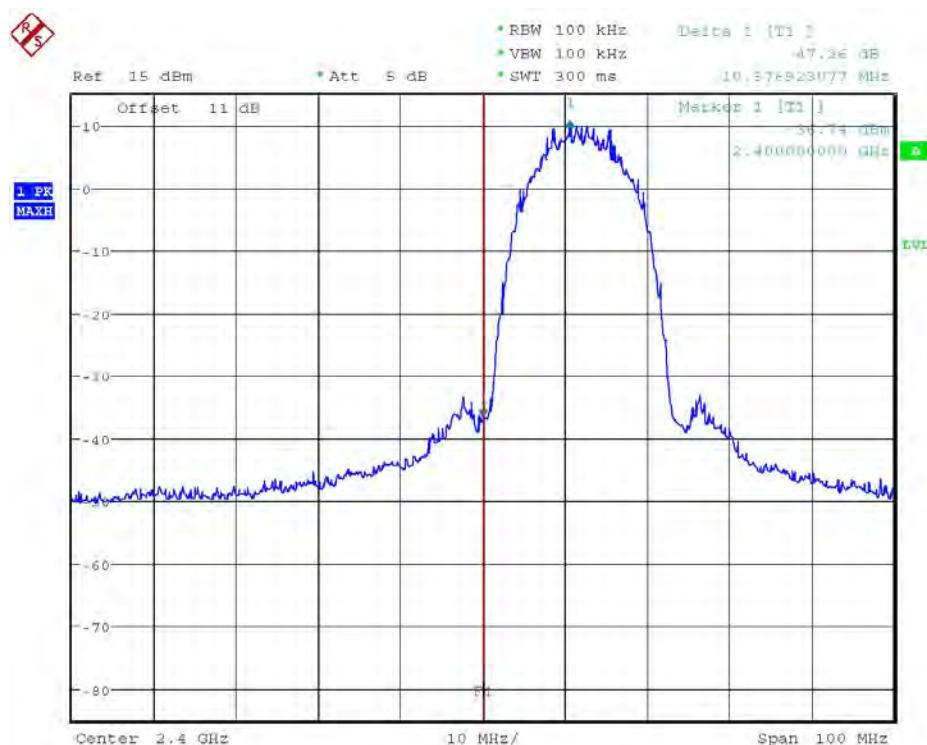
FCC ID:Y2A-OP430

3.11 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.

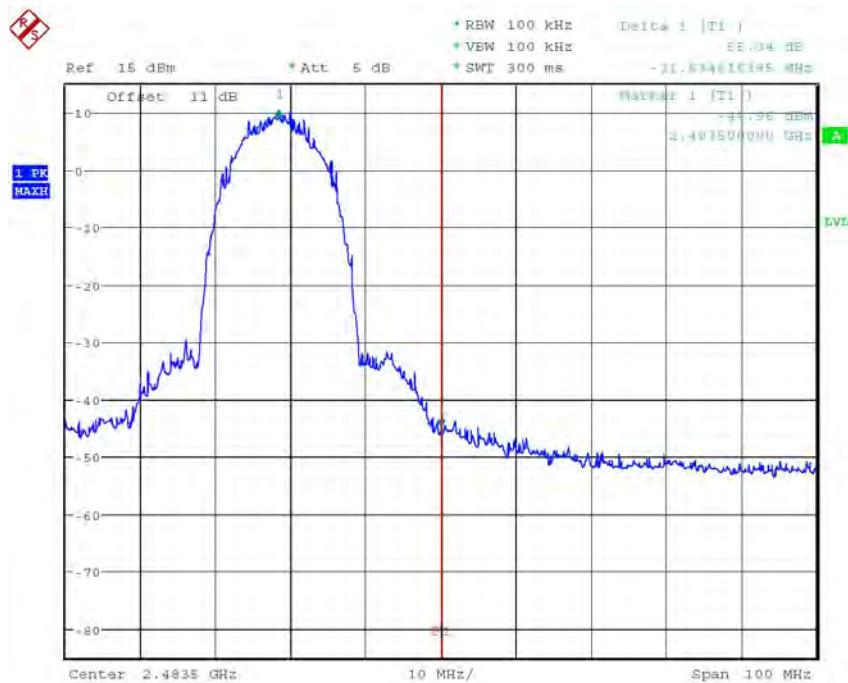
In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Mode 802.11b



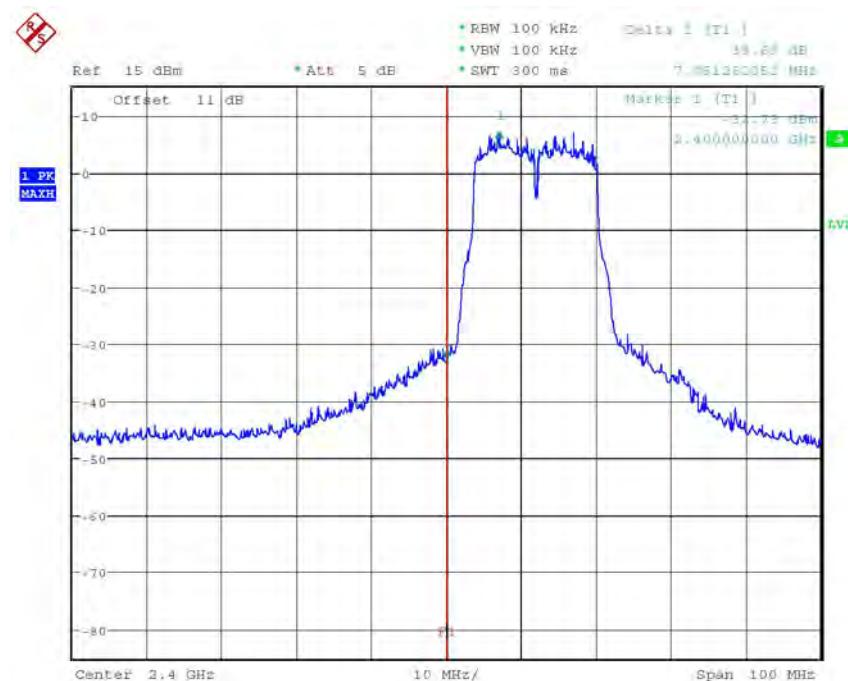
BANDEdge 802.11b CH1
Date: 23.APR.2011 11:23:48

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



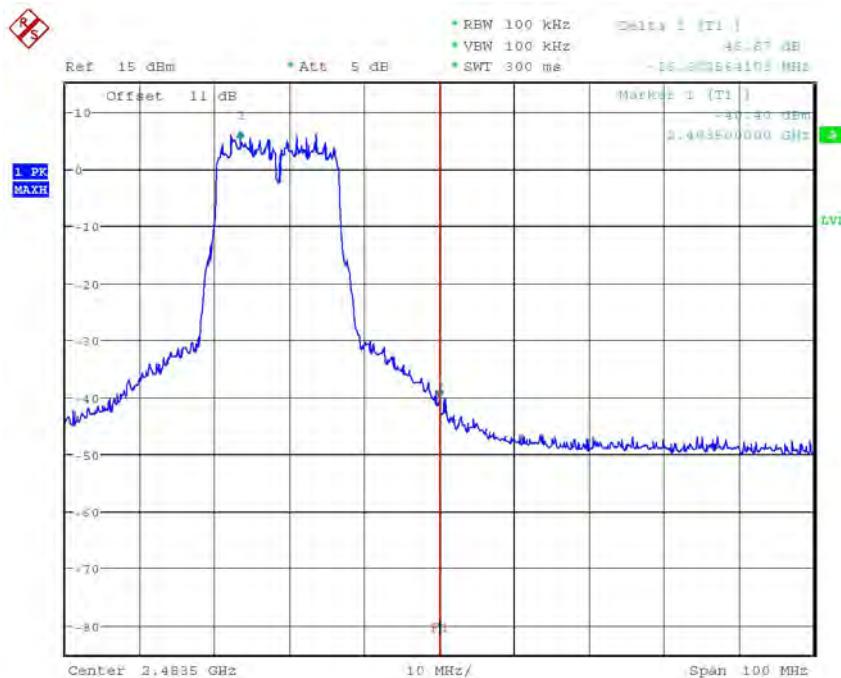
BANDEDGE 802.11b CH11
 Date: 23.APR.2011 11:27:45

Mode 802.11g

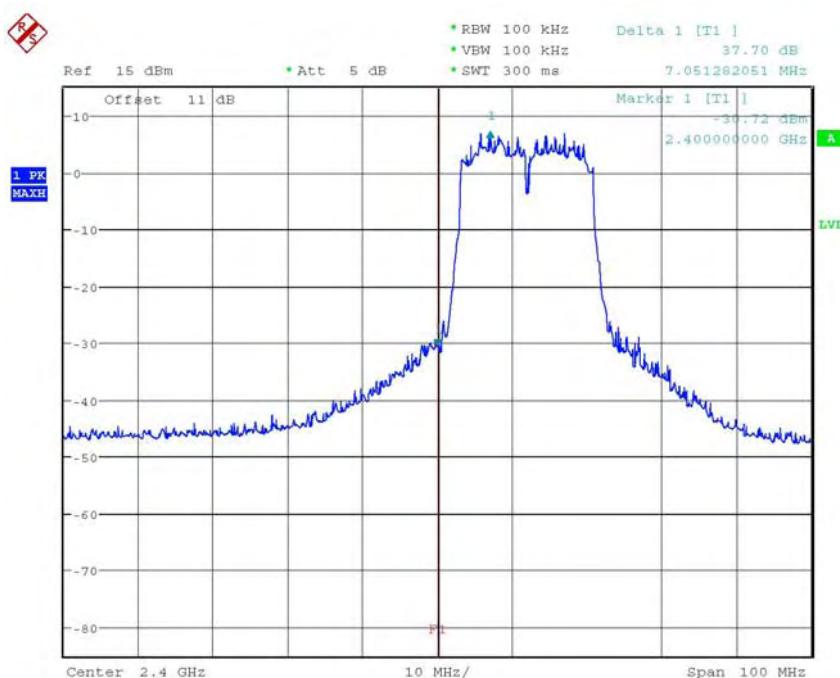


BANDEDGE 802.11g CH1
 Date: 23.APR.2011 11:25:00

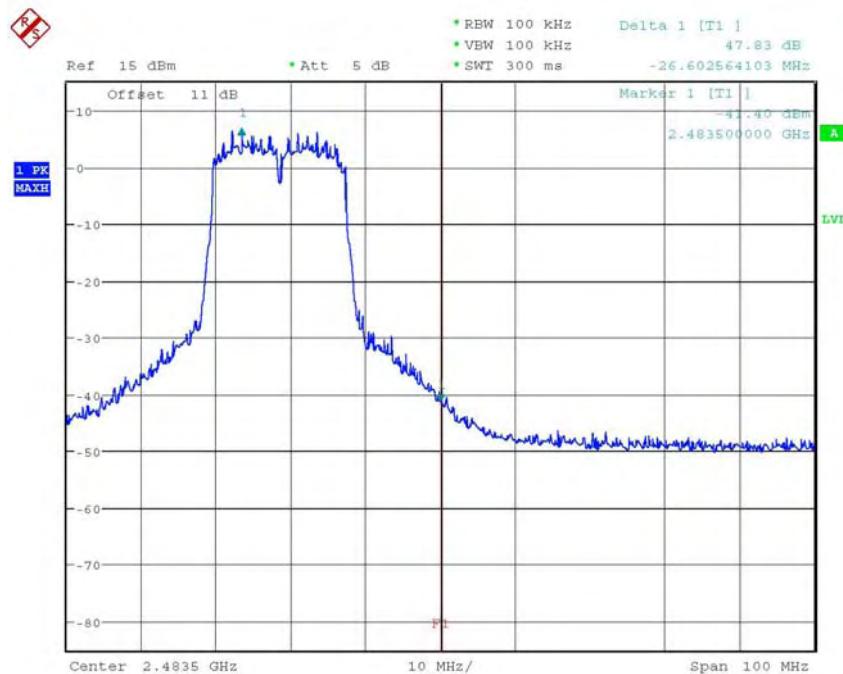
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Mode 802.11n 20MHz

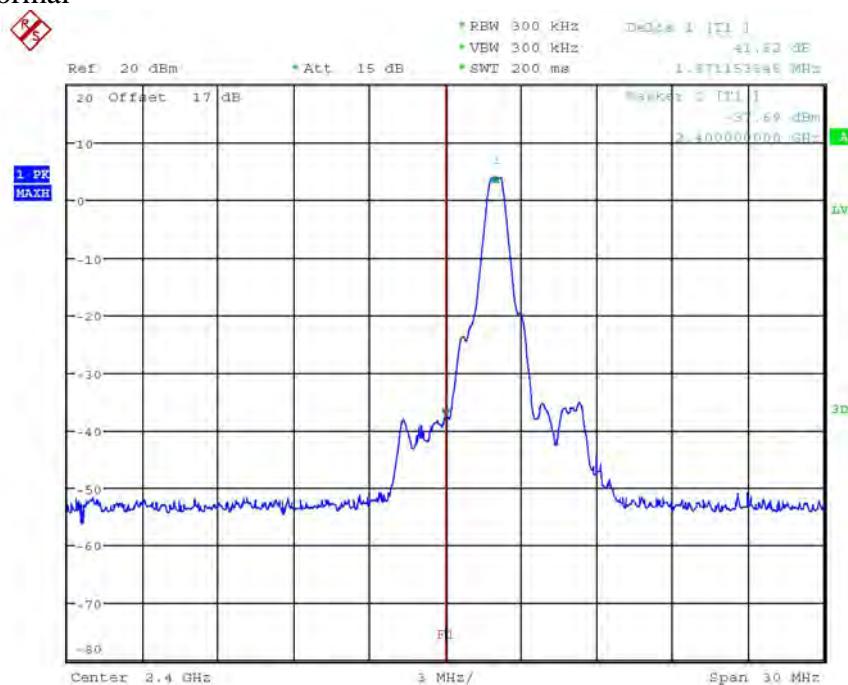


Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



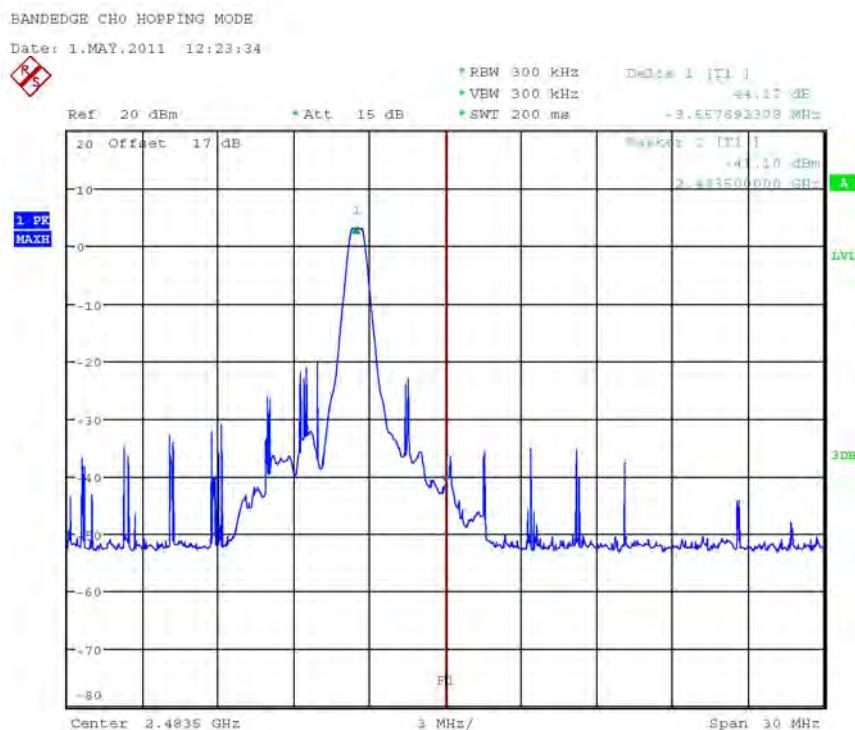
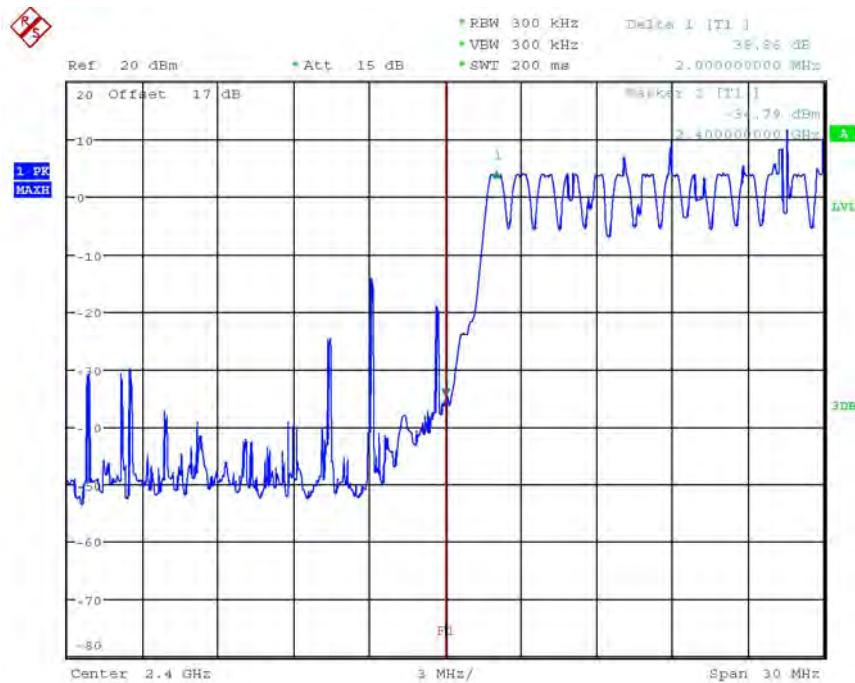
BANDEDGE 802.11n CH11
 Date: 23.APR.2011 11:26:20

Mode Bluetooth normal



BANDEDGE CH0
 Date: 1.MAY.2011 12:28:39

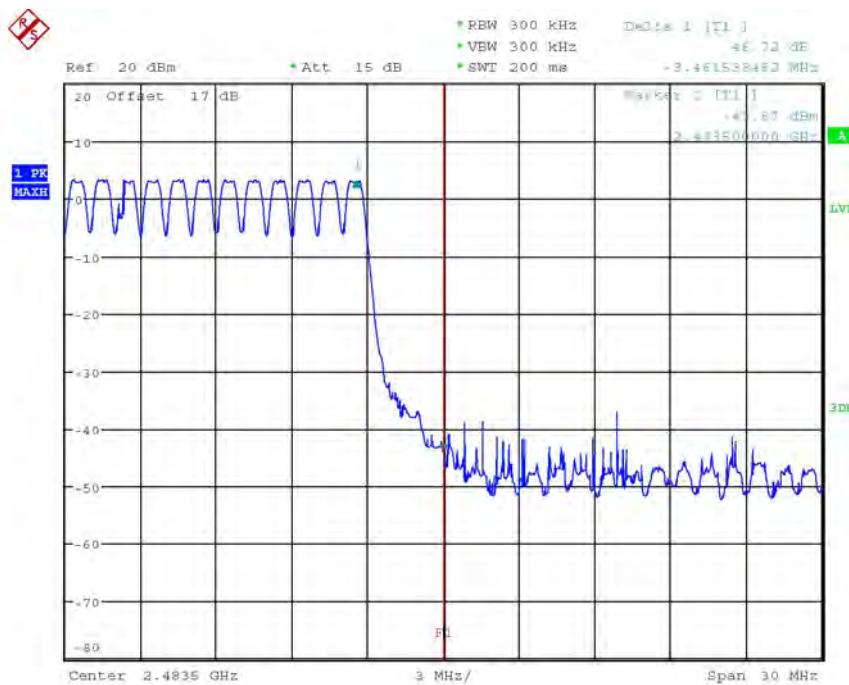
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



BANDEDGE CH78

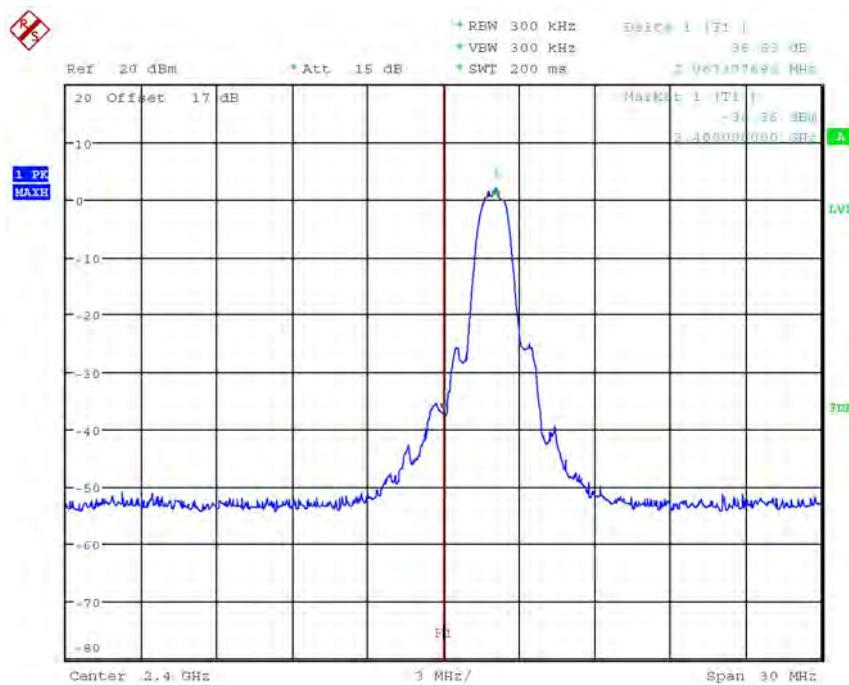
Date: 1.MAY.2011 12:27:37

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



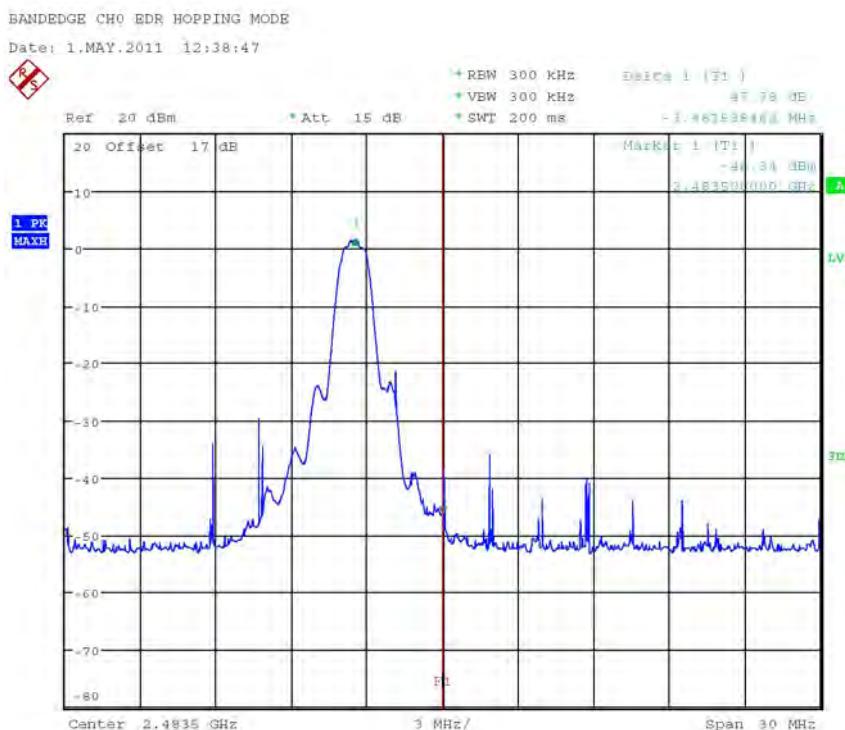
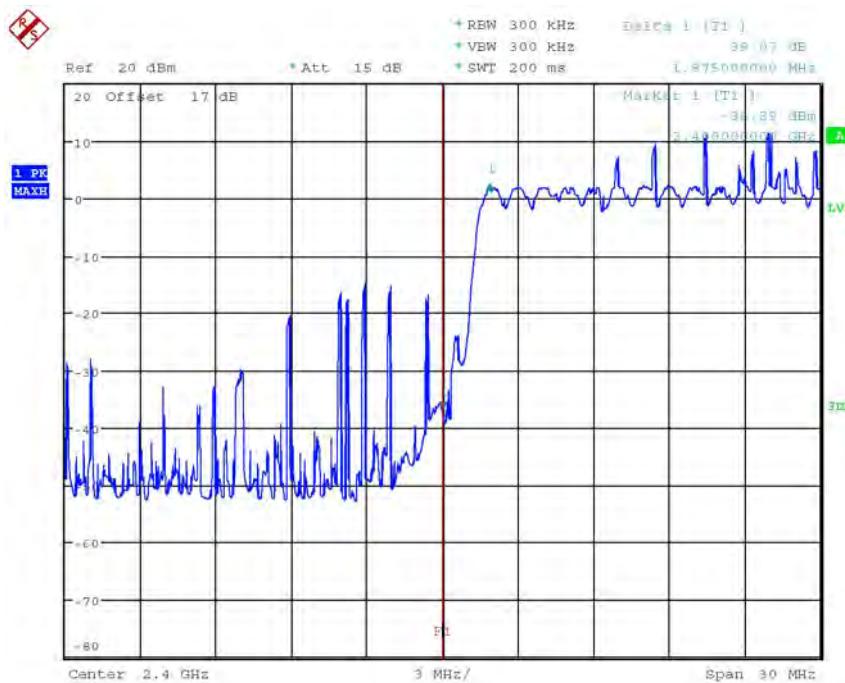
BANDEdge CH78 HOPPING MODE
 Date: 1 MAY, 2011 12:25:55

Mode Bluetooth EDR



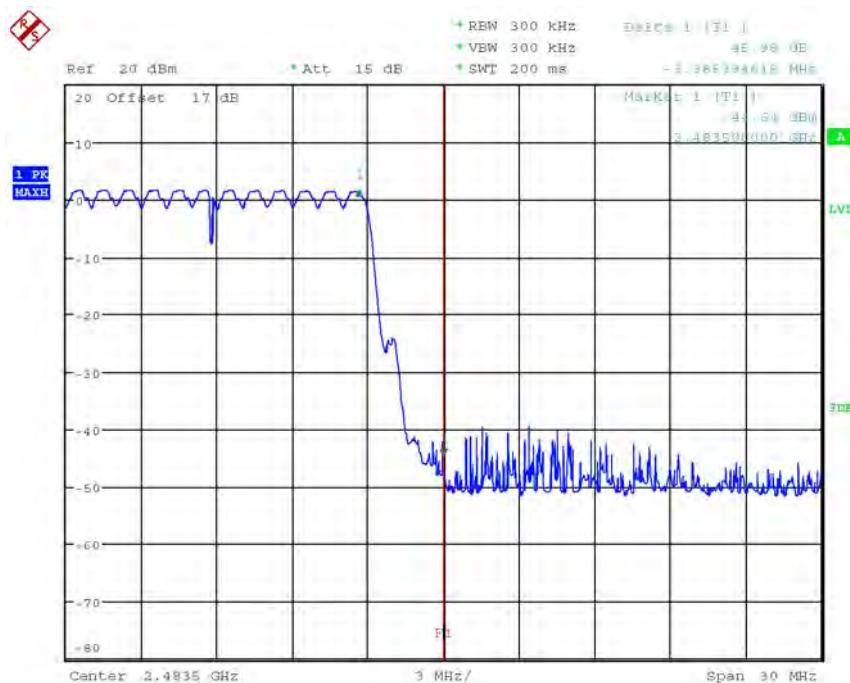
BANDEdge CH6 EDR MODE
 Date: 1 MAY, 2011 12:29:59

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



BANDEDGE CH78 EDR MODE
 Date: 1.MAY.2011 12:30:55

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



BANDEDGE CH78 EDR HOPPING MODE
 Date: 1.MAY.2011 12:35:41

Limit:

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

Test equipment used: ETSTW-RE 055

Registration number: W6M21103-11337-C-1

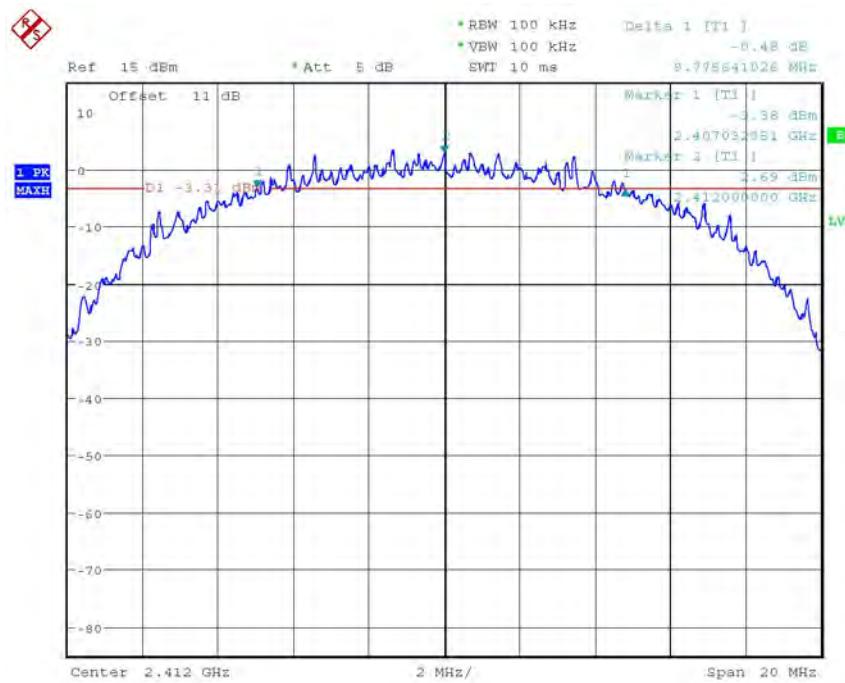
FCC ID:Y2A-OP430

3.12 Peak Power Spectral Density

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

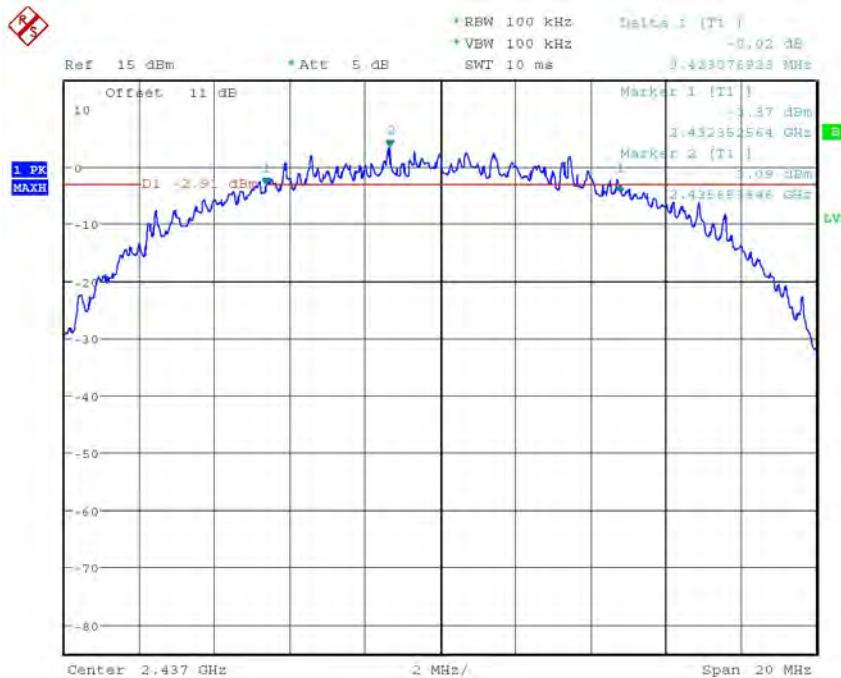
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Mode 802.11b



6DB BANDWIDTH 802.11b CH1
Date: 21.APR.2011 18:24:19

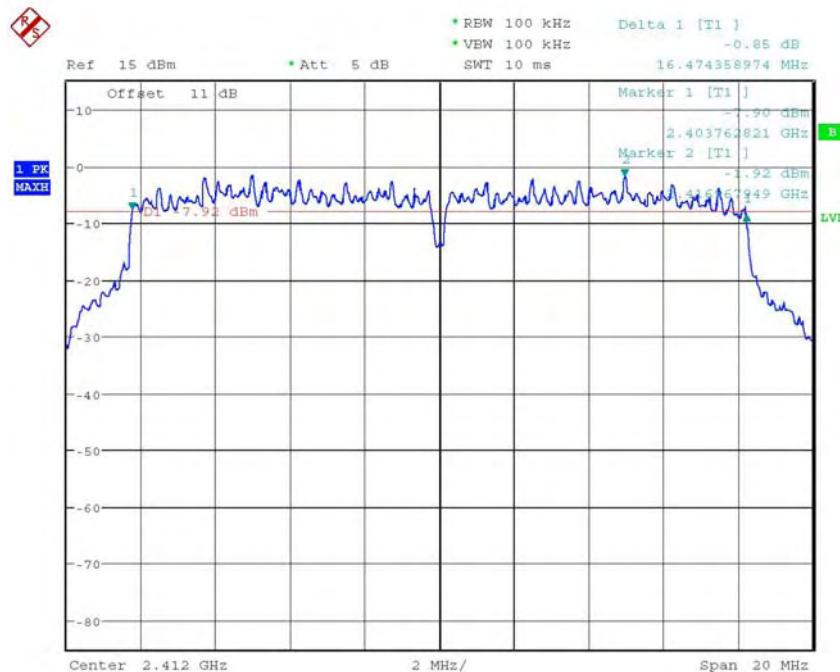
Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



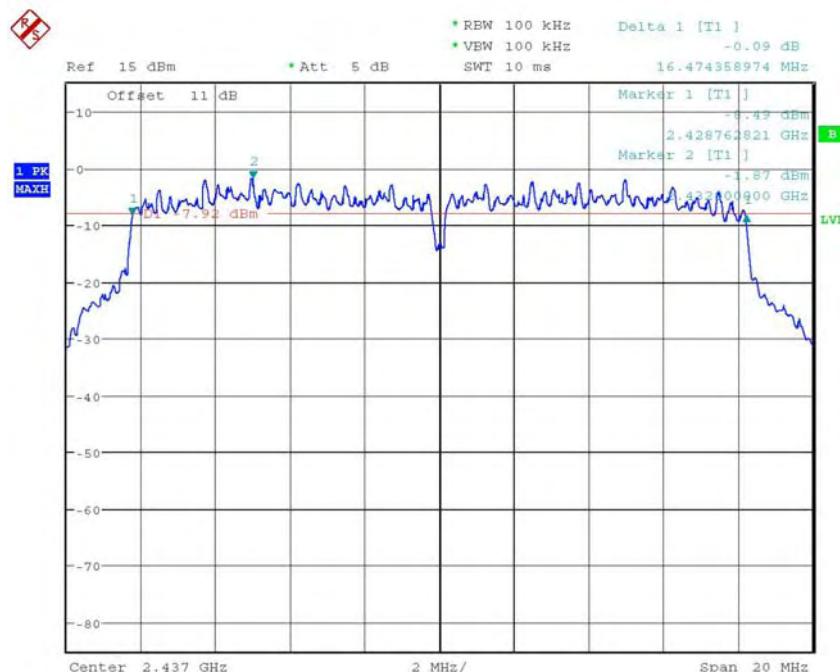
6DB BANDWIDTH 802.11b CH11
 Date: 21.APR.2011 18:27:18

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Mode 802.11g

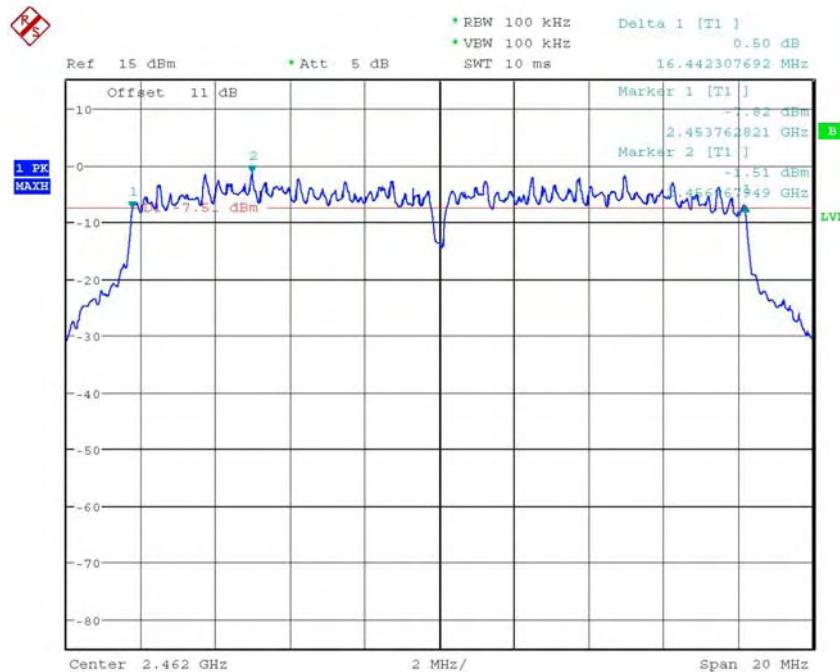


6DB BANDWIDTH 802.11g CH1
 Date: 21.APR.2011 18:22:57



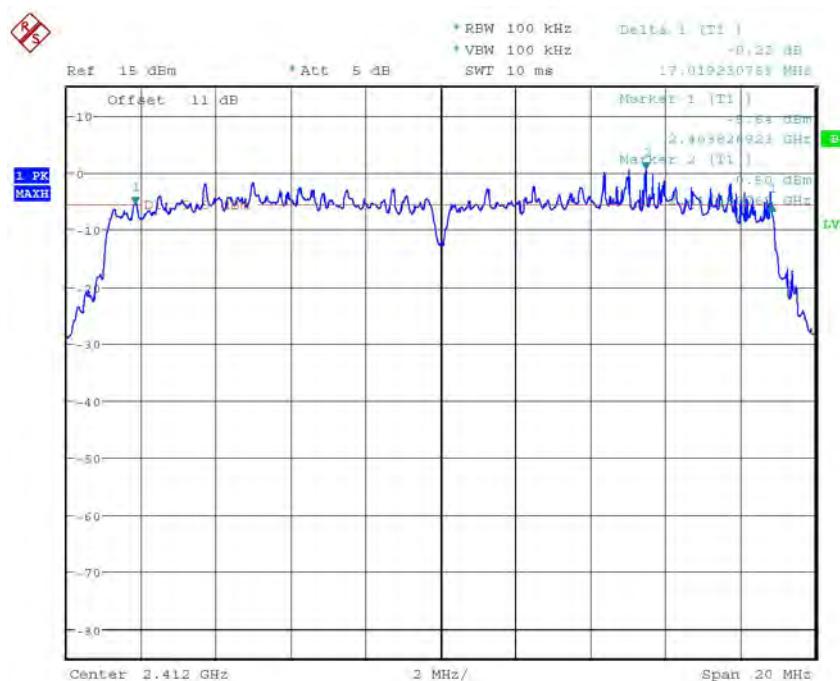
6DB BANDWIDTH 802.11g CH6
 Date: 21.APR.2011 18:22:11

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



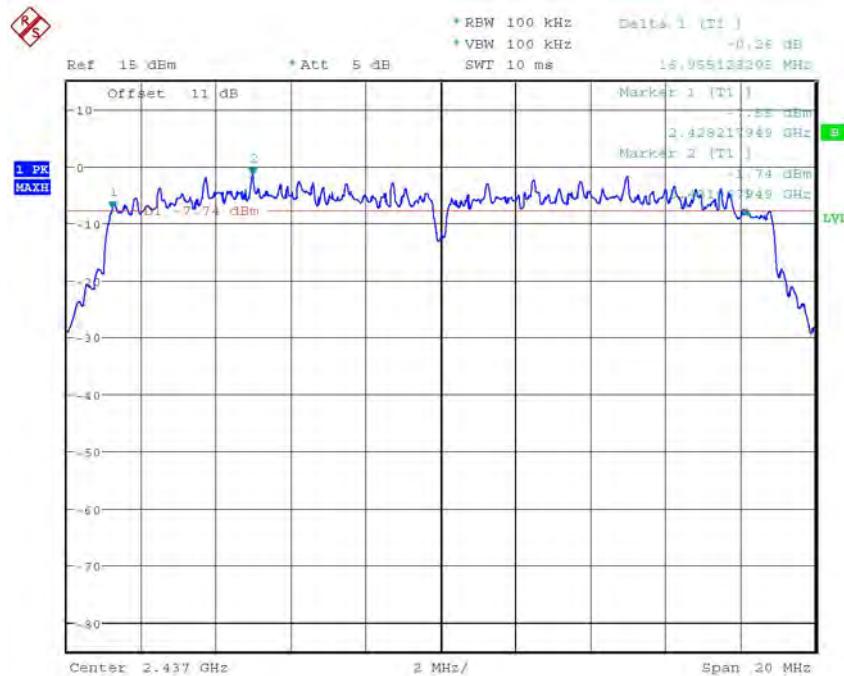
6DB BANDWIDTH 802.11g CH11
 Date: 21.APR.2011 18:21:27

Mode 802.11n 20MHz



6DB BANDWIDTH 802.11n CH1
 Date: 21.APR.2011 18:14:49

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



6DB BANDWIDTH 802.11n CH6
 Date: 21.APR.2011 18:16:43



6DB BANDWIDTH 802.11n CH11
 Date: 21.APR.2011 18:20:11



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Limits:

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

Test equipment used: ETSTW-RE 055

Explanation: This test is not applicable for Mode D, Mode E because these two modes are not DSSS / OFDM modulation.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

3.13 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 044

Explanation: The test results are listed in the separated test report no. W6M21103-11337-P-15B.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

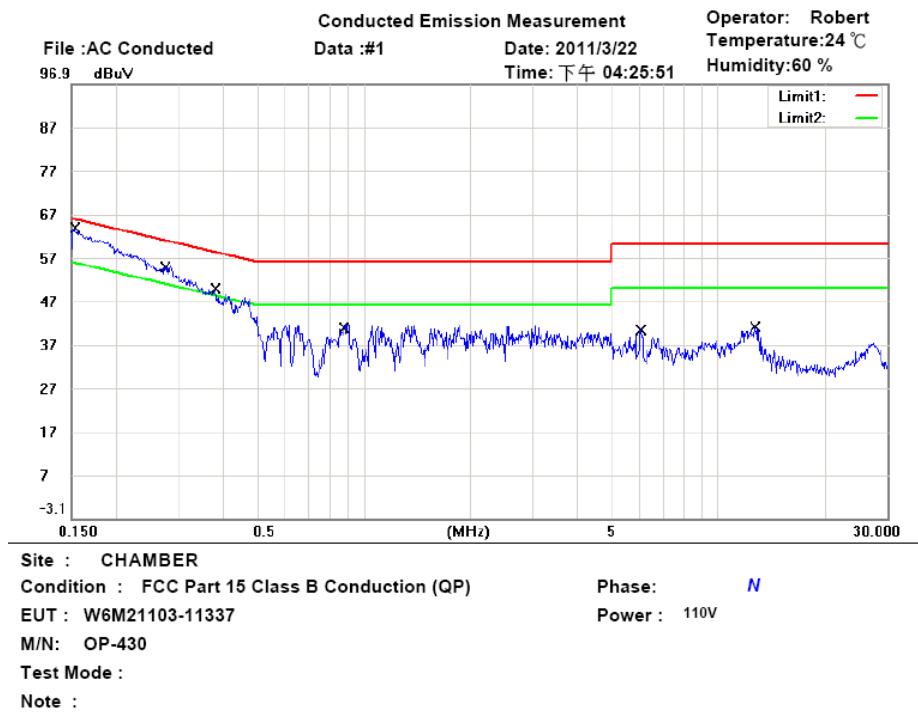
FCC ID:Y2A-OP430

3.14 Power Line Conducted Emission

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 (dB microvolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

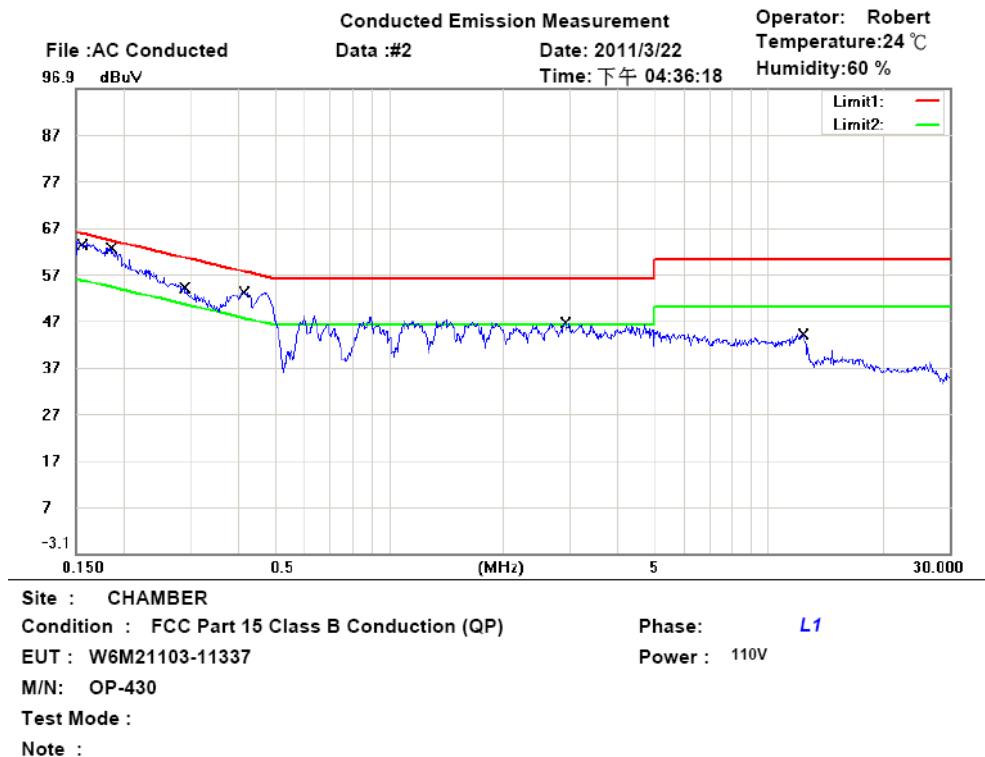


Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.1530	40.30	QP	9.94	50.24	65.84	-15.60	
	0.1530	11.58	AVG	9.94	21.52	55.84	-34.32	
	0.2768	30.34	QP	9.91	40.25	60.91	-20.66	
	0.2768	15.32	AVG	9.91	25.23	50.91	-25.68	
	0.3854	23.21	QP	9.93	33.14	58.16	-25.02	
	0.3854	0.84	AVG	9.93	10.77	48.16	-37.39	
	0.8668	23.07	QP	9.95	33.02	56.00	-22.98	
	0.8668	8.67	AVG	9.95	18.62	46.00	-27.38	
	6.0264	17.13	QP	10.22	27.35	60.00	-32.65	
	6.0264	4.23	AVG	10.22	14.45	50.00	-35.55	
	12.6924	19.71	QP	10.64	30.35	60.00	-29.65	
	12.6924	11.67	AVG	10.64	22.31	50.00	-27.69	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.1573	42.58	QP	9.99	52.57	65.61	-13.04	
	0.1573	28.36	AVG	9.99	38.35	55.61	-17.26	
	0.1842	34.46	QP	9.96	44.42	64.29	-19.87	
	0.1842	8.91	AVG	9.96	18.87	54.29	-35.42	
	0.2892	27.14	QP	9.98	37.12	60.55	-23.43	
	0.2892	13.90	AVG	9.98	23.88	50.55	-26.67	
	0.4170	33.84	QP	10.01	43.85	57.51	-13.66	
	0.4170	19.35	AVG	10.01	29.36	47.51	-18.15	
	2.9030	29.21	QP	10.14	39.35	56.00	-16.65	
	2.9030	19.83	AVG	10.14	29.97	46.00	-16.03	
	12.2898	26.88	QP	10.78	37.66	60.00	-22.34	
	12.2898	21.06	AVG	10.78	31.84	50.00	-18.16	

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.

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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430

Appendix

Measurement diagrams

Spurious Emissions radiated

Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

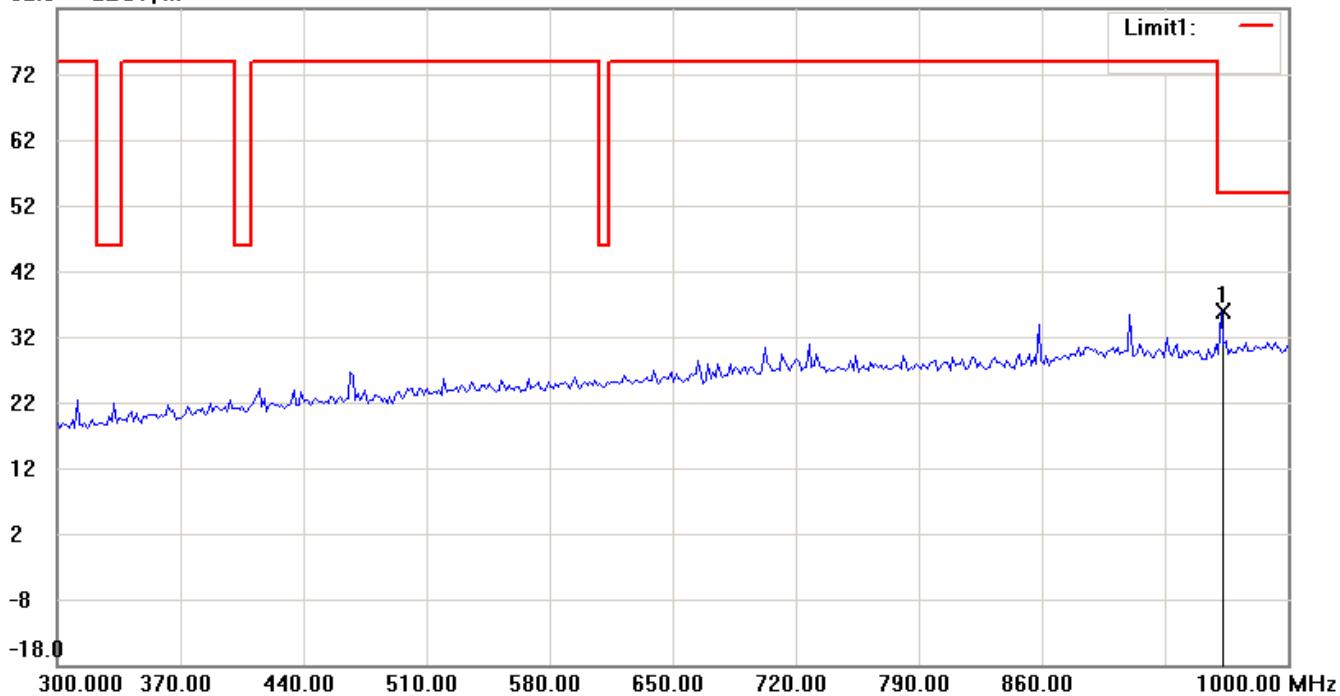
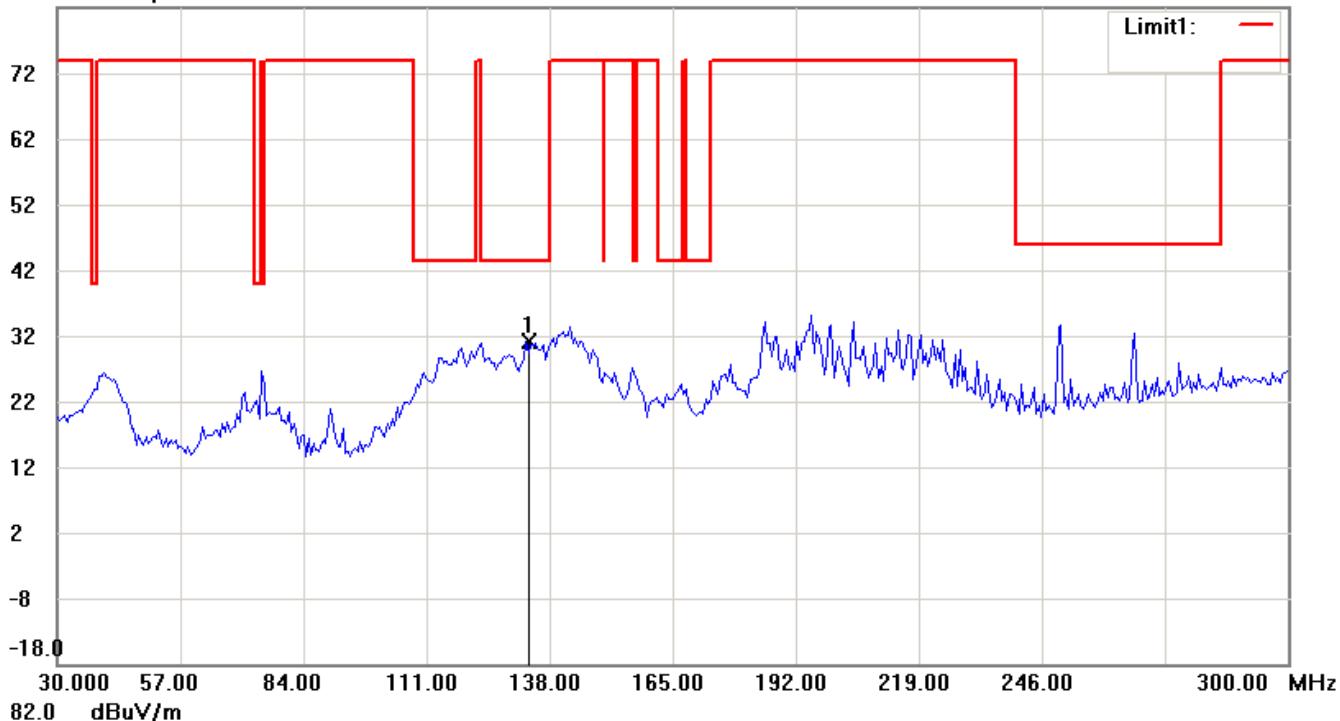
Spurious Emissions radiated

802.11b

Channel 1

Antenna Polarization H

82.0 dBuV/m



Note:

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

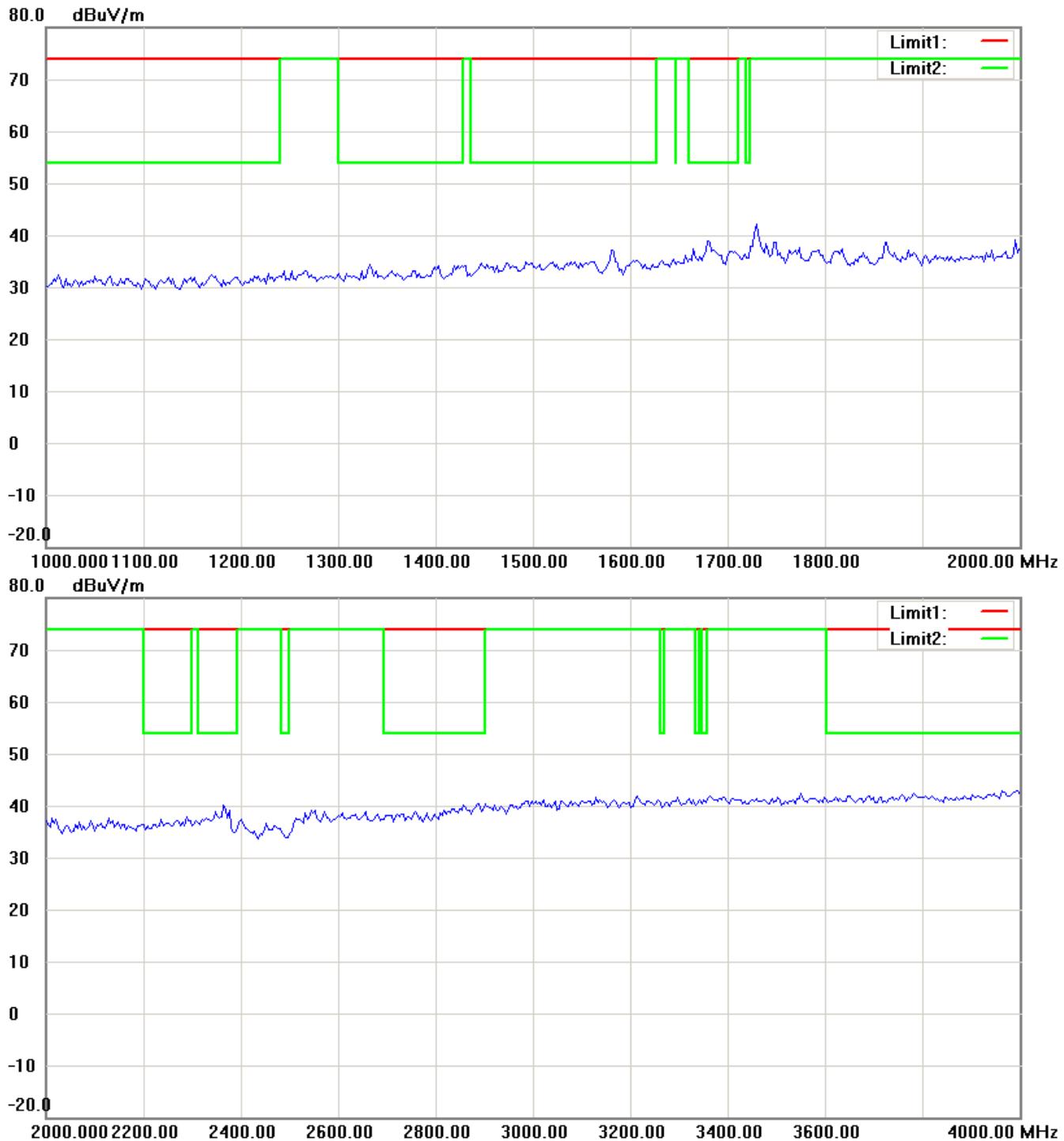
- 1 The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2 The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification 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: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

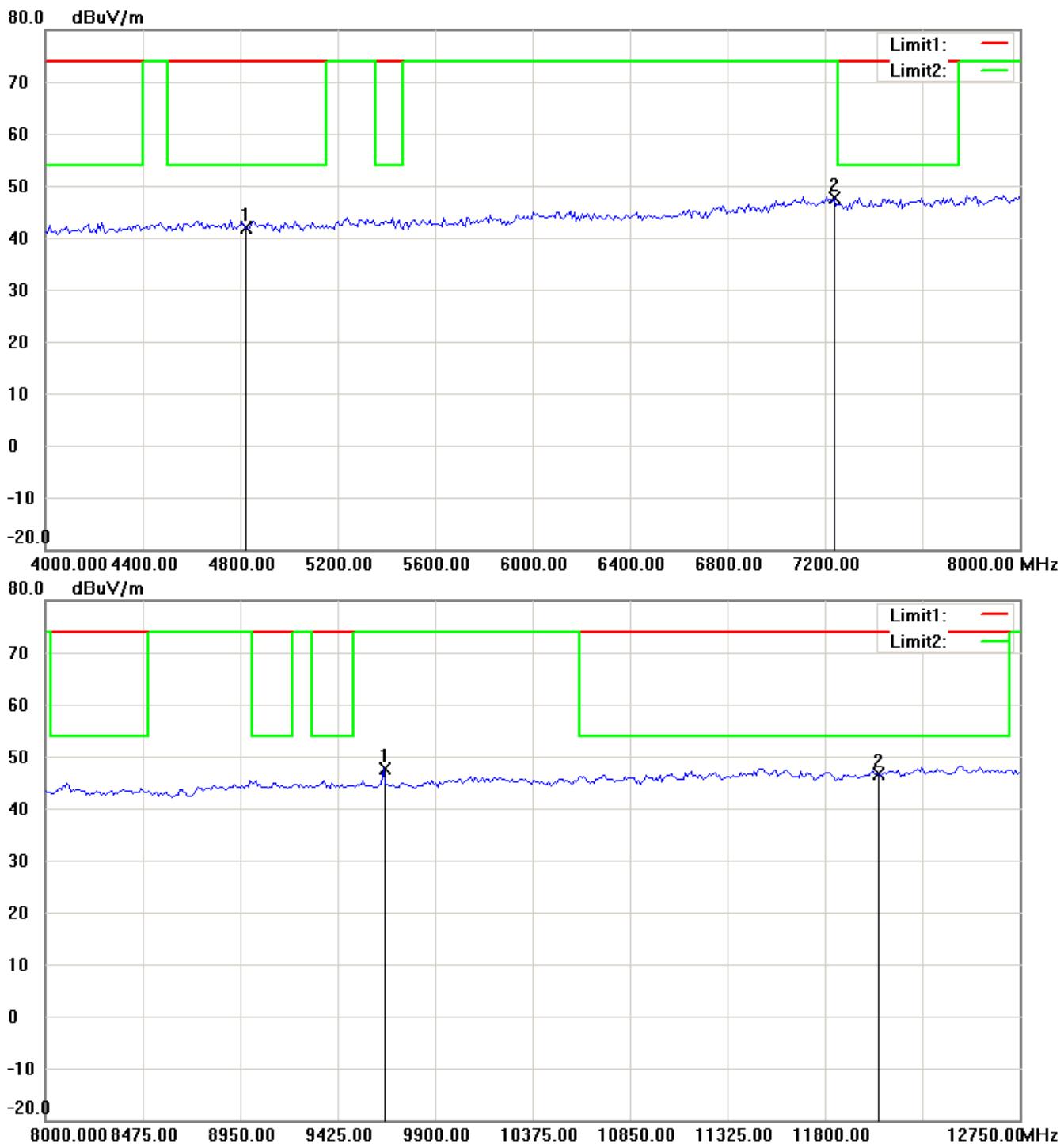
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

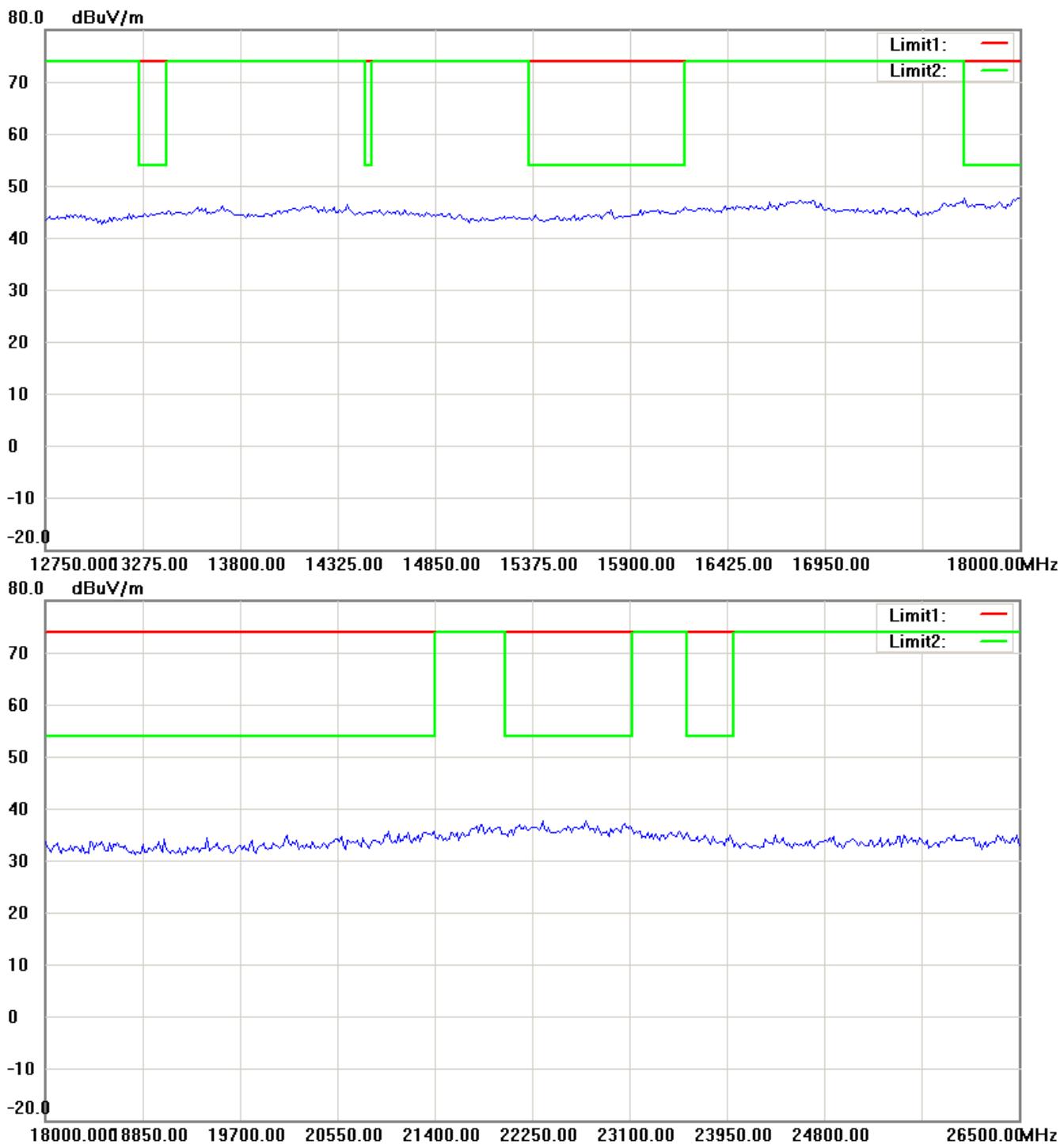
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



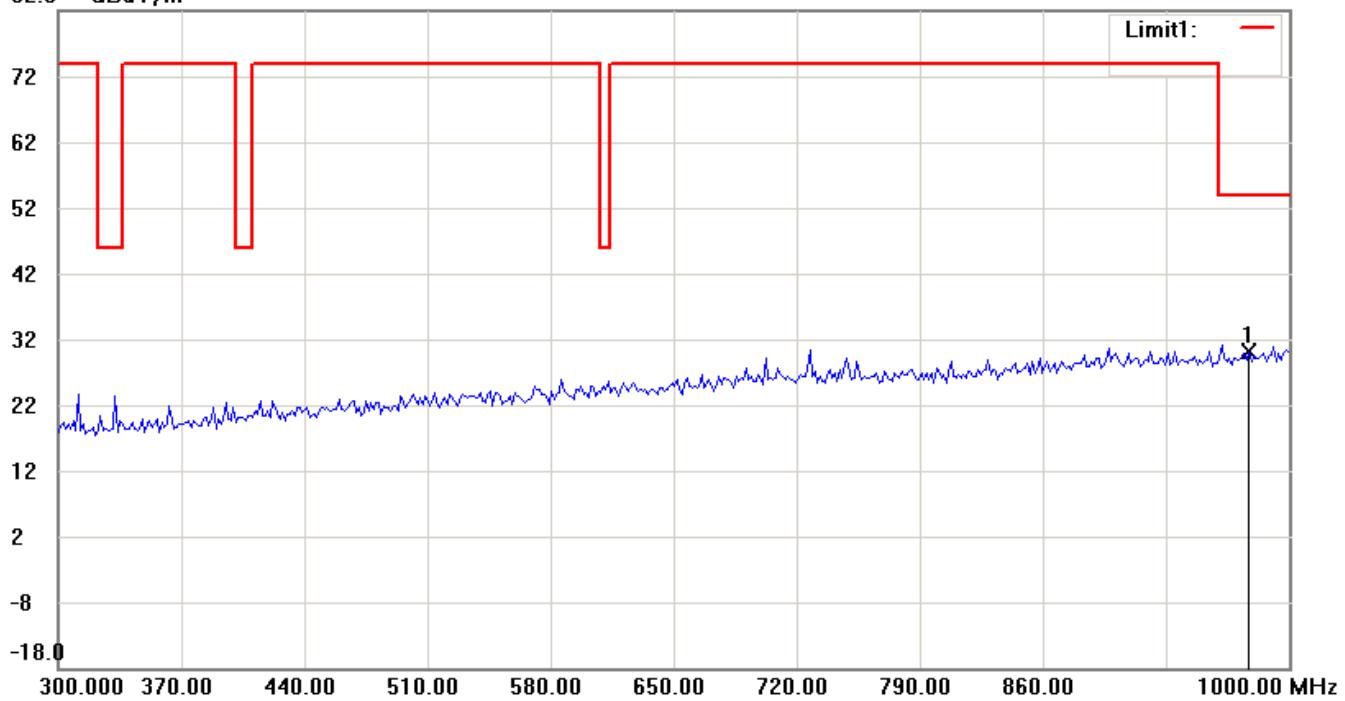
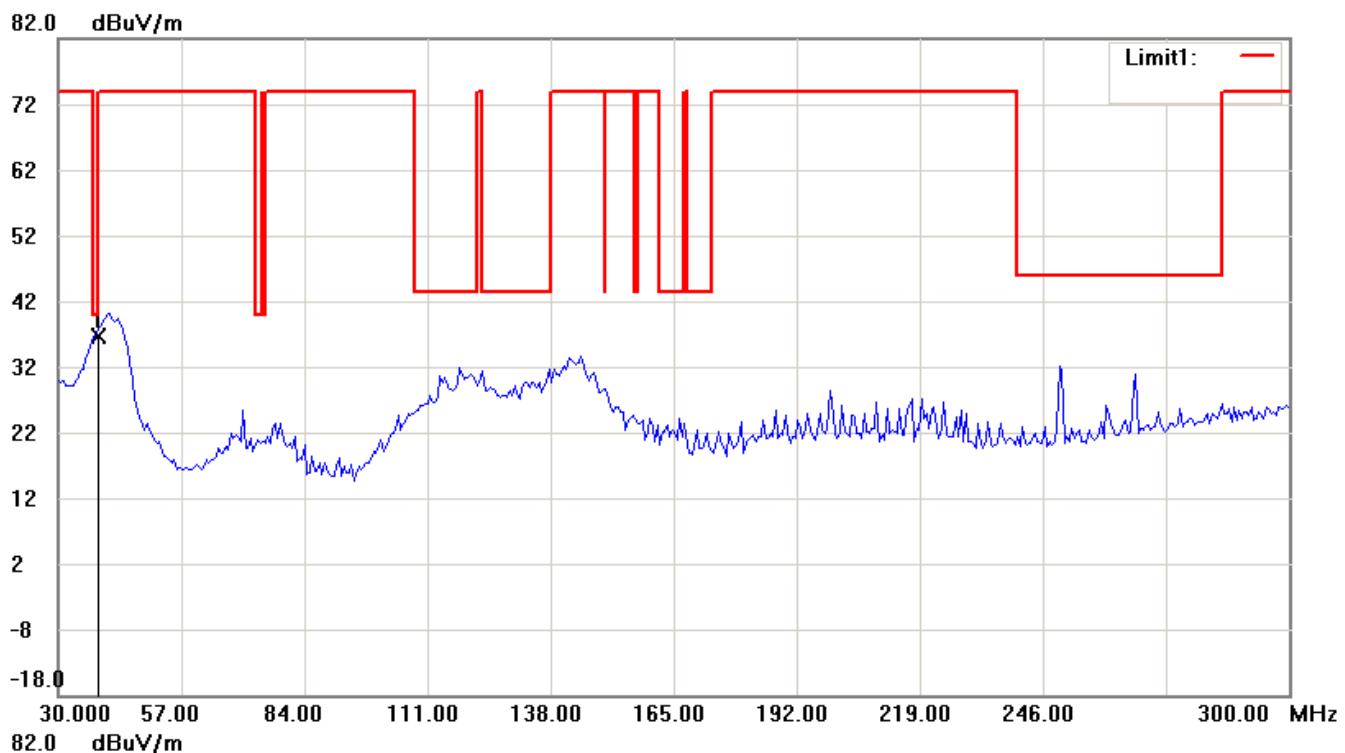
Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

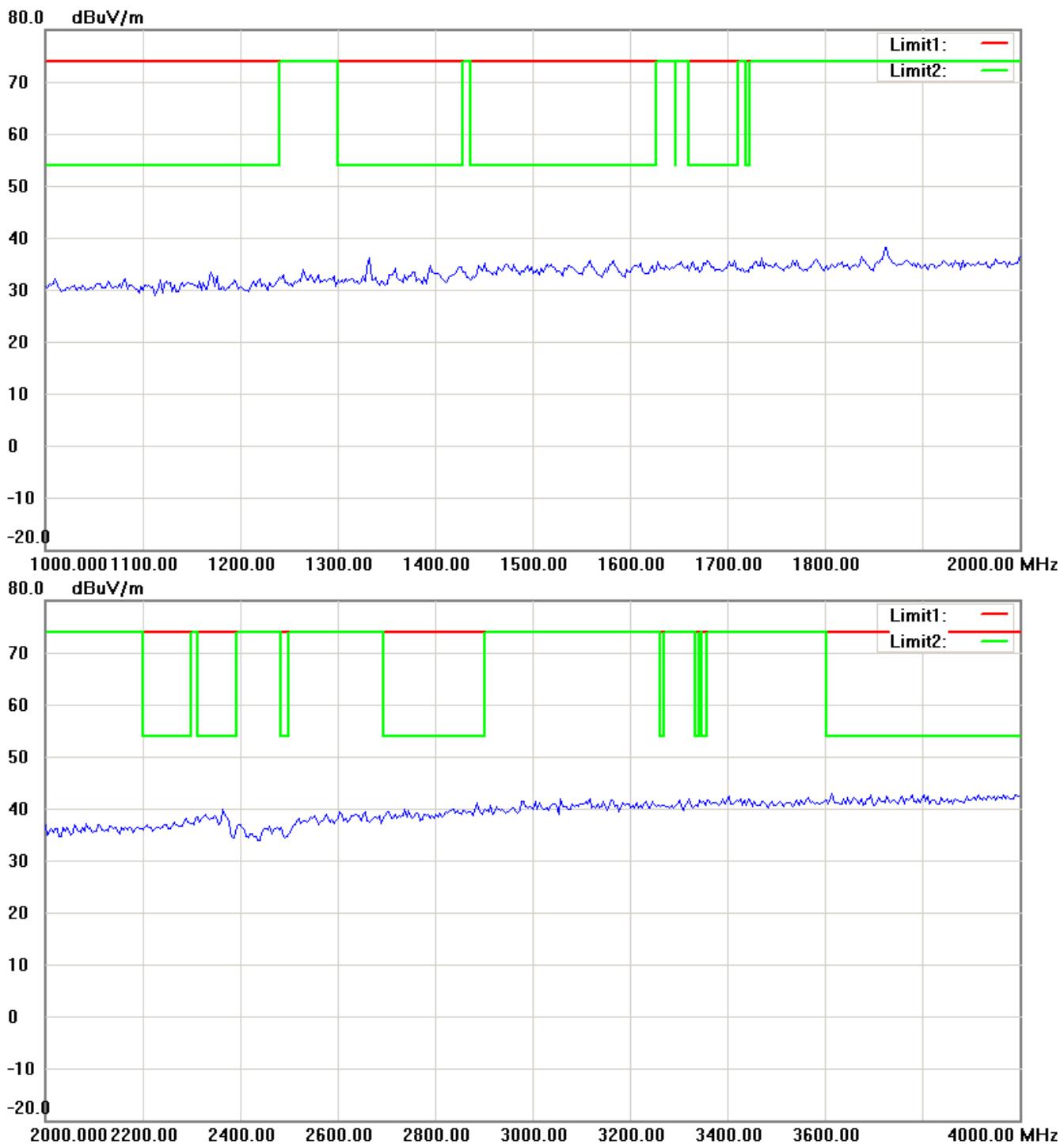
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

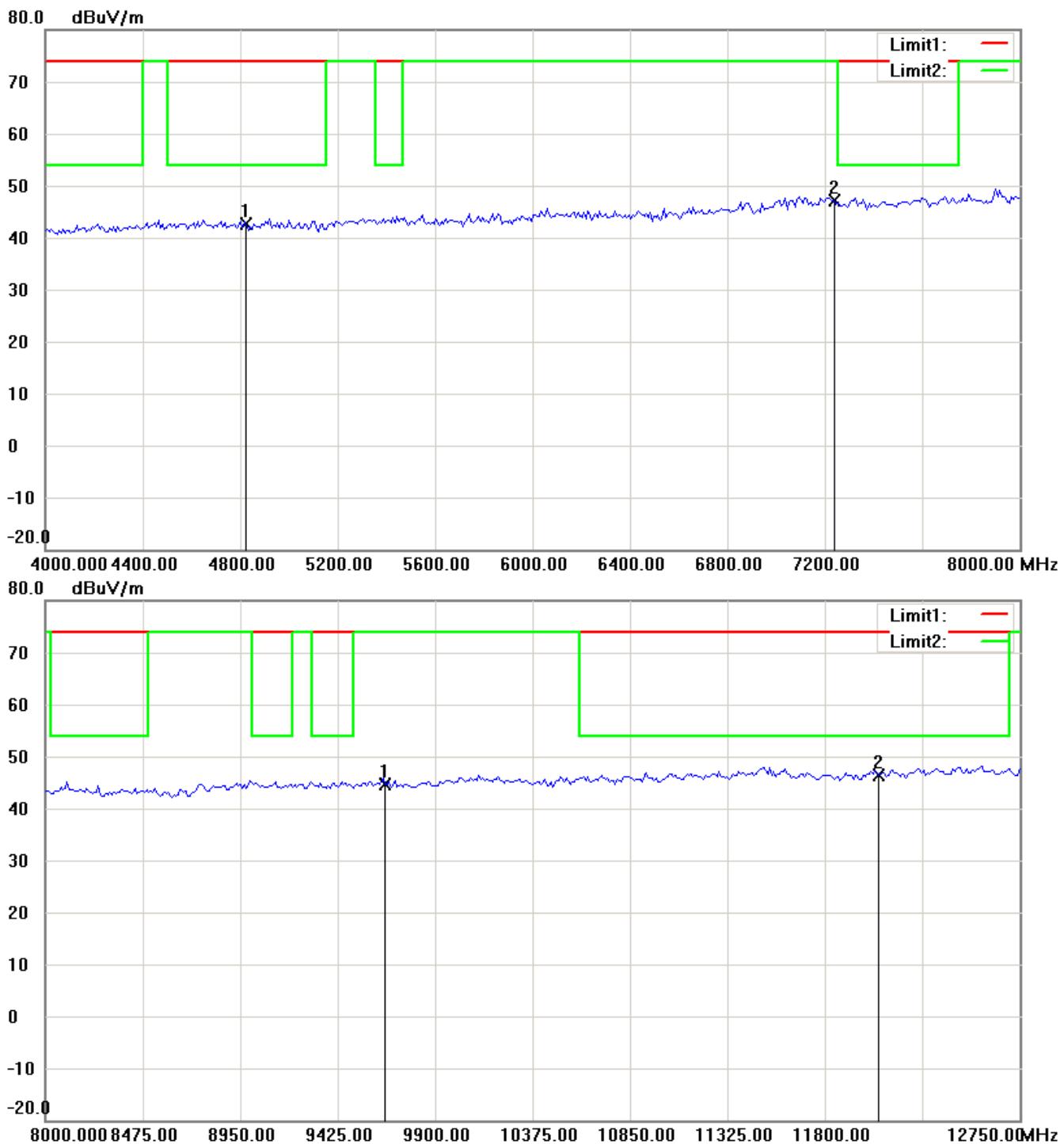
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

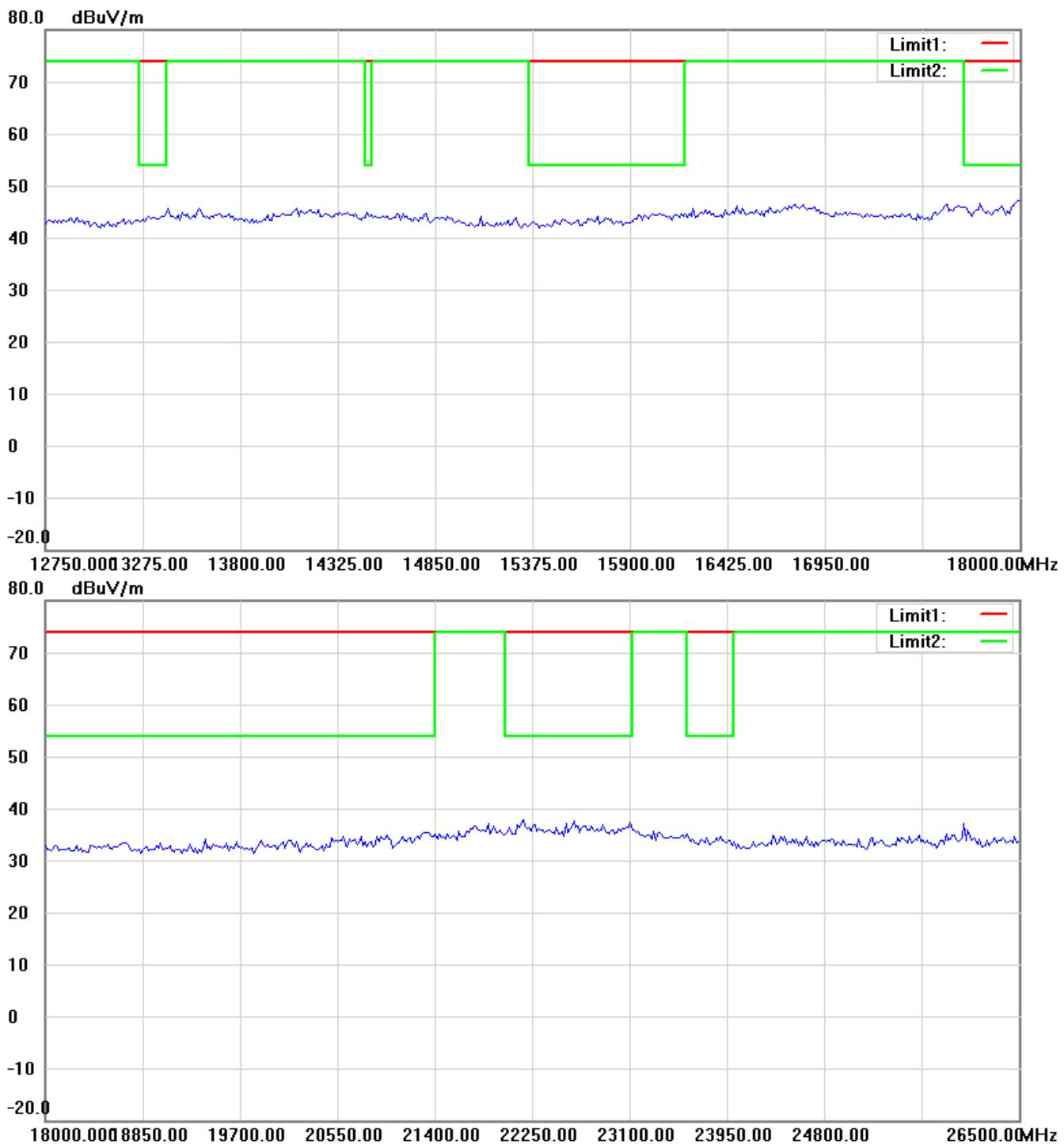
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



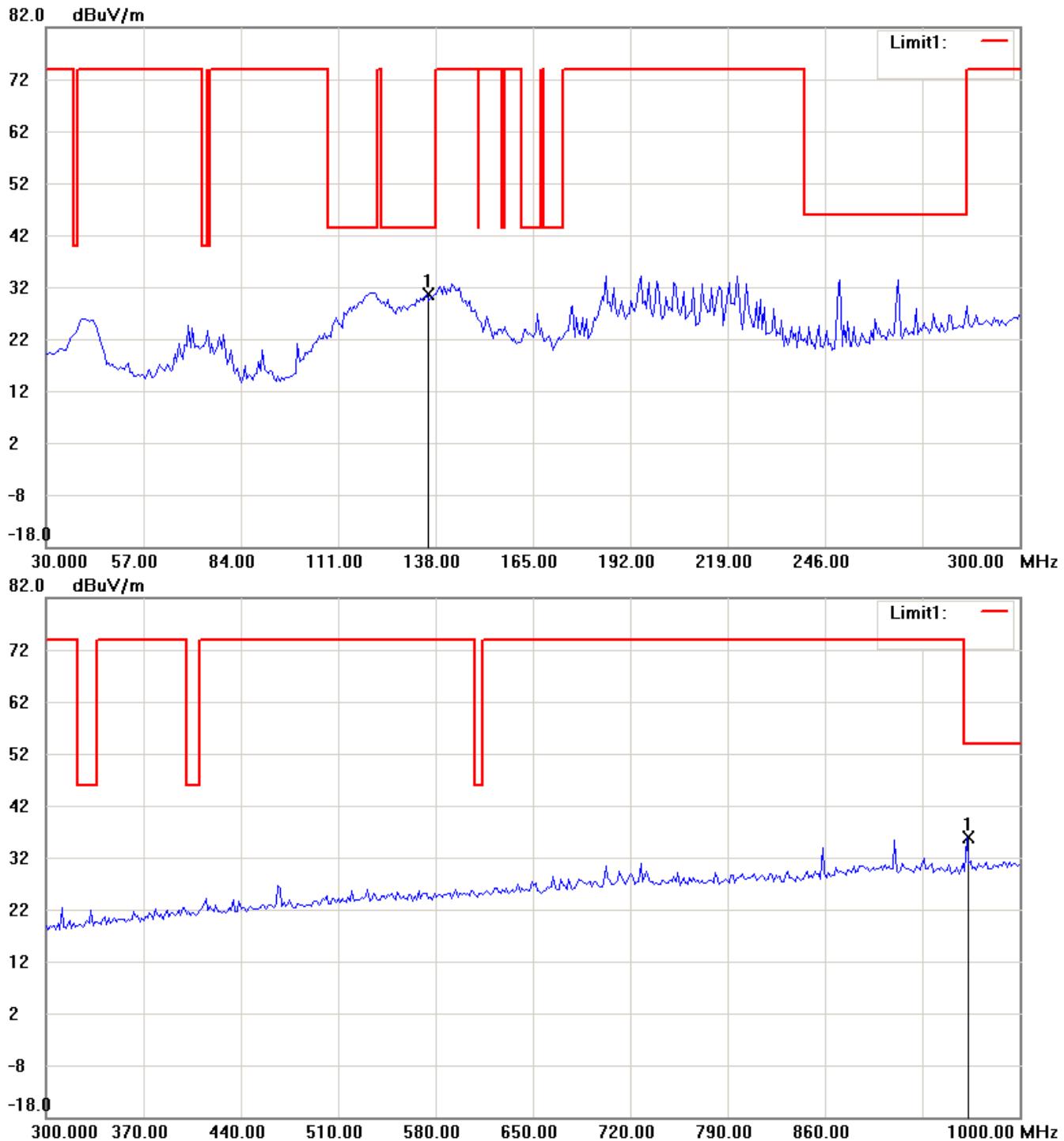
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 6 Antenna Polarization H



Note:

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

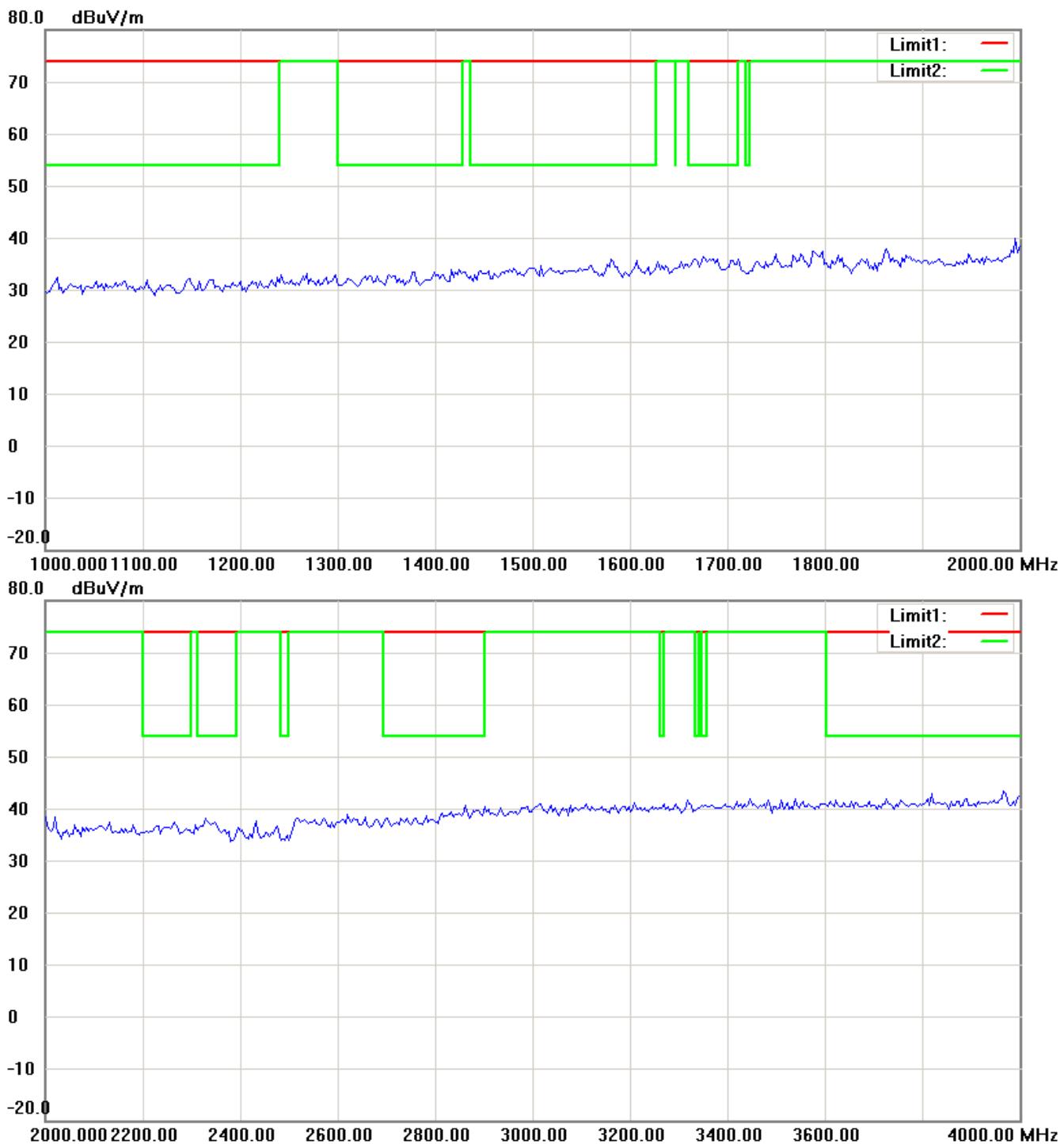
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

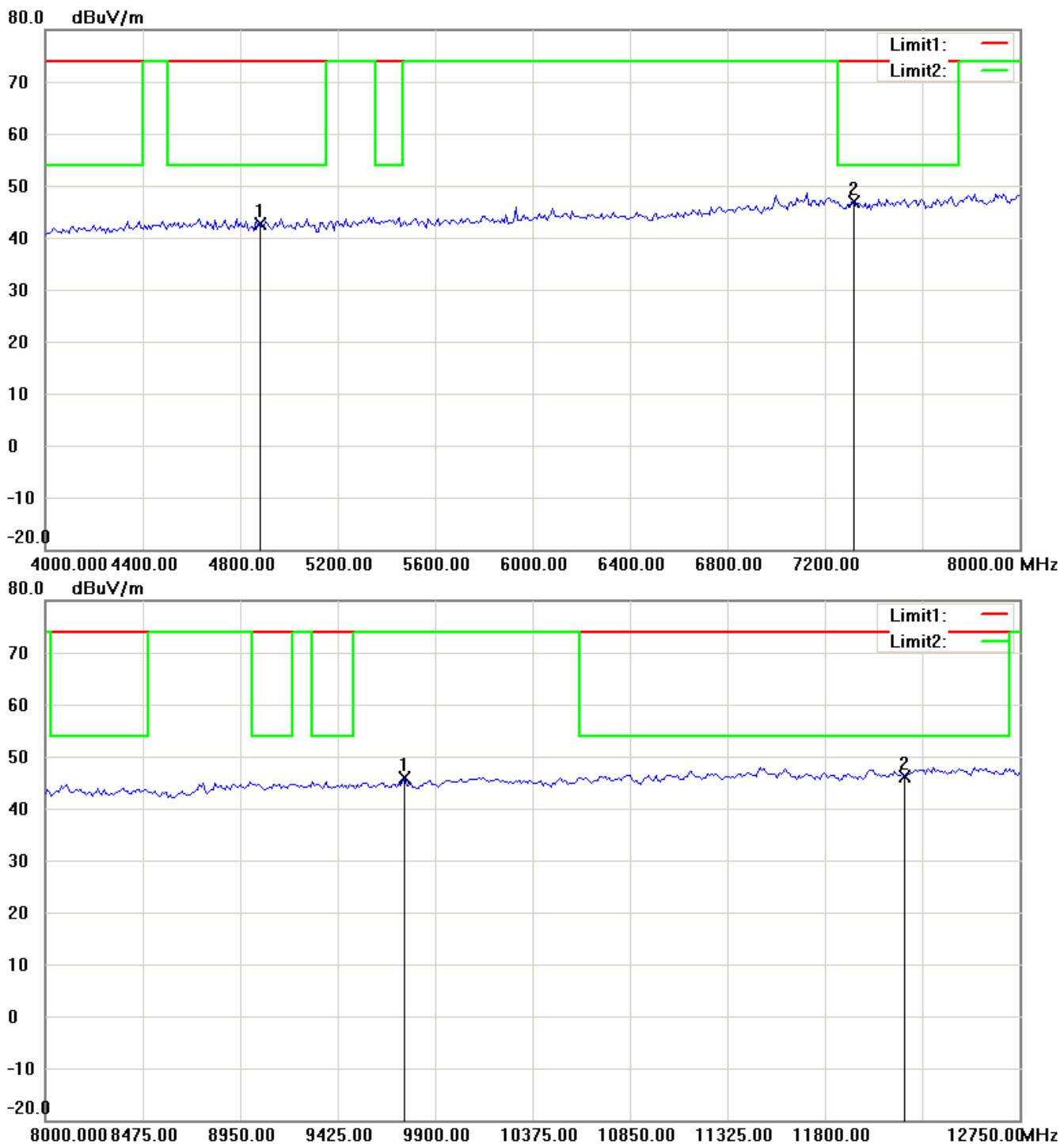
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

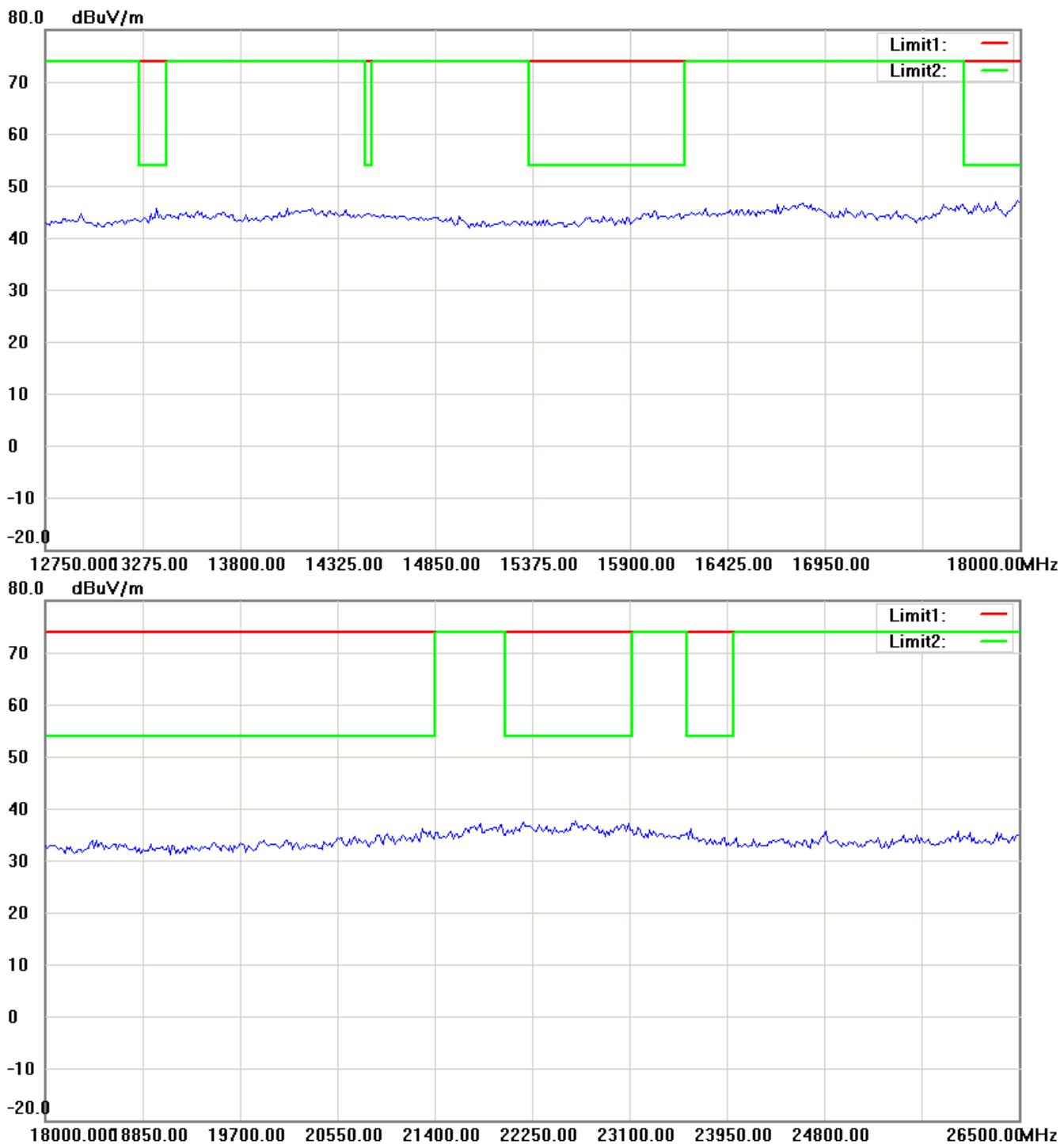
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

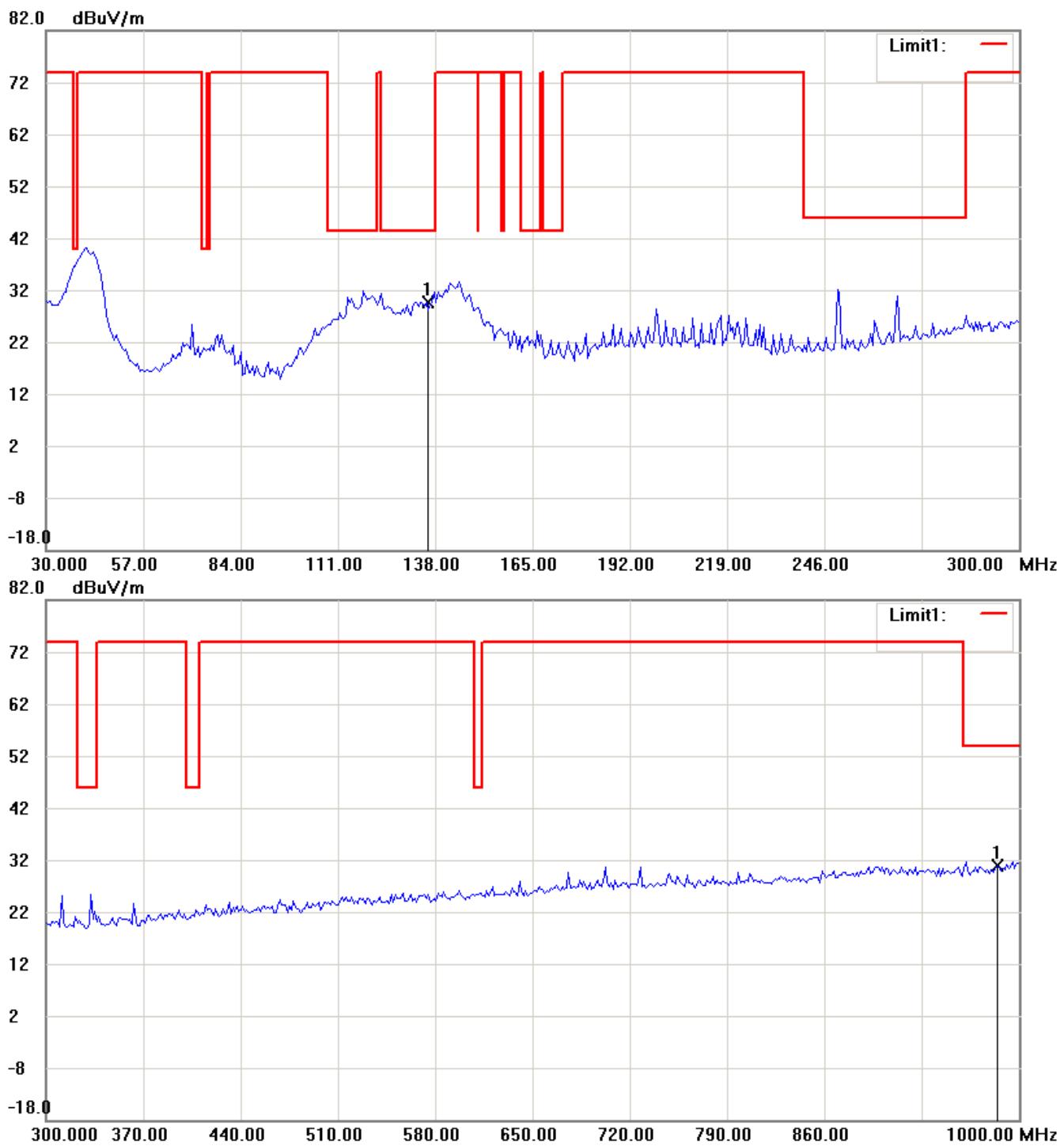
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

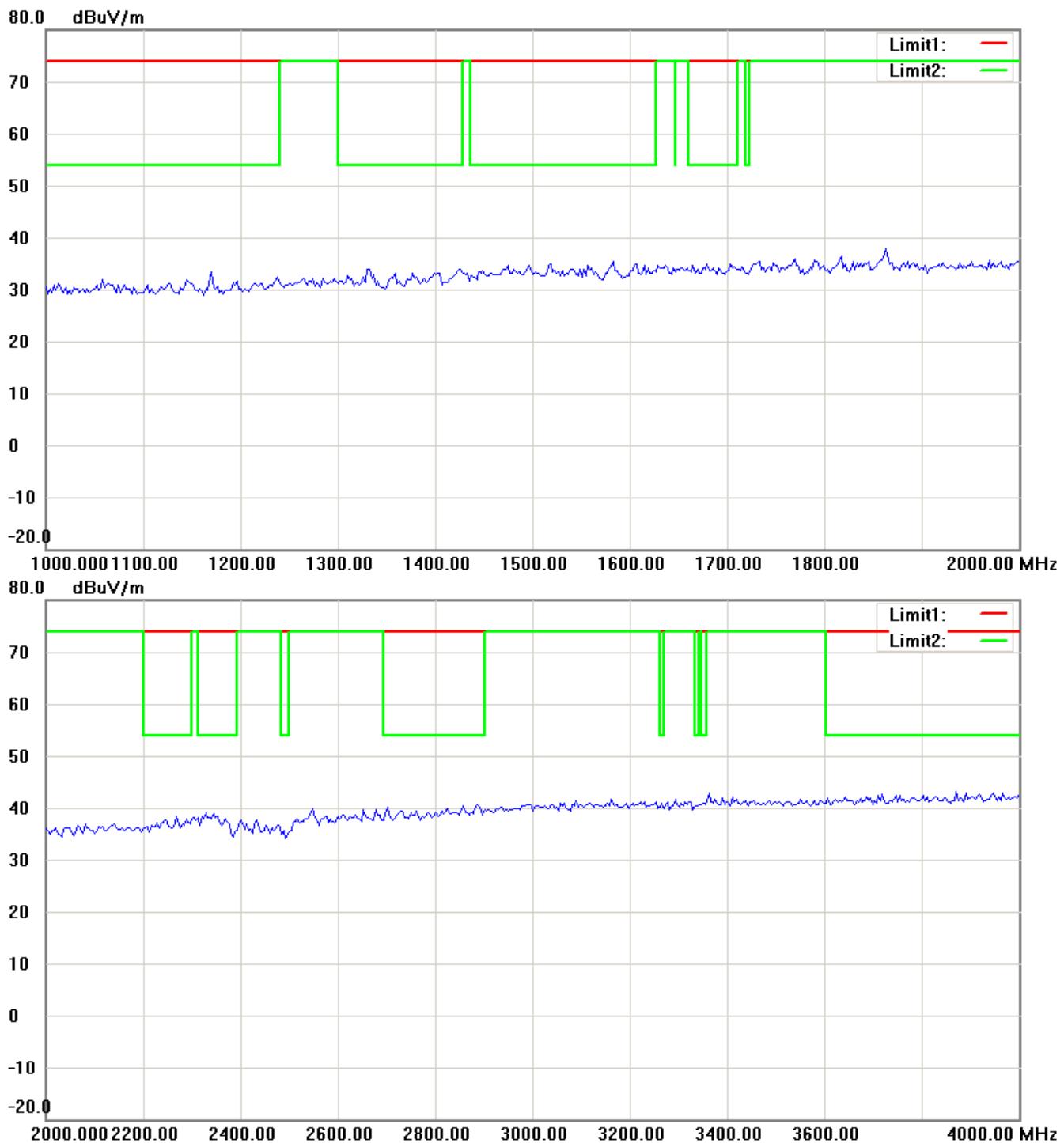
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

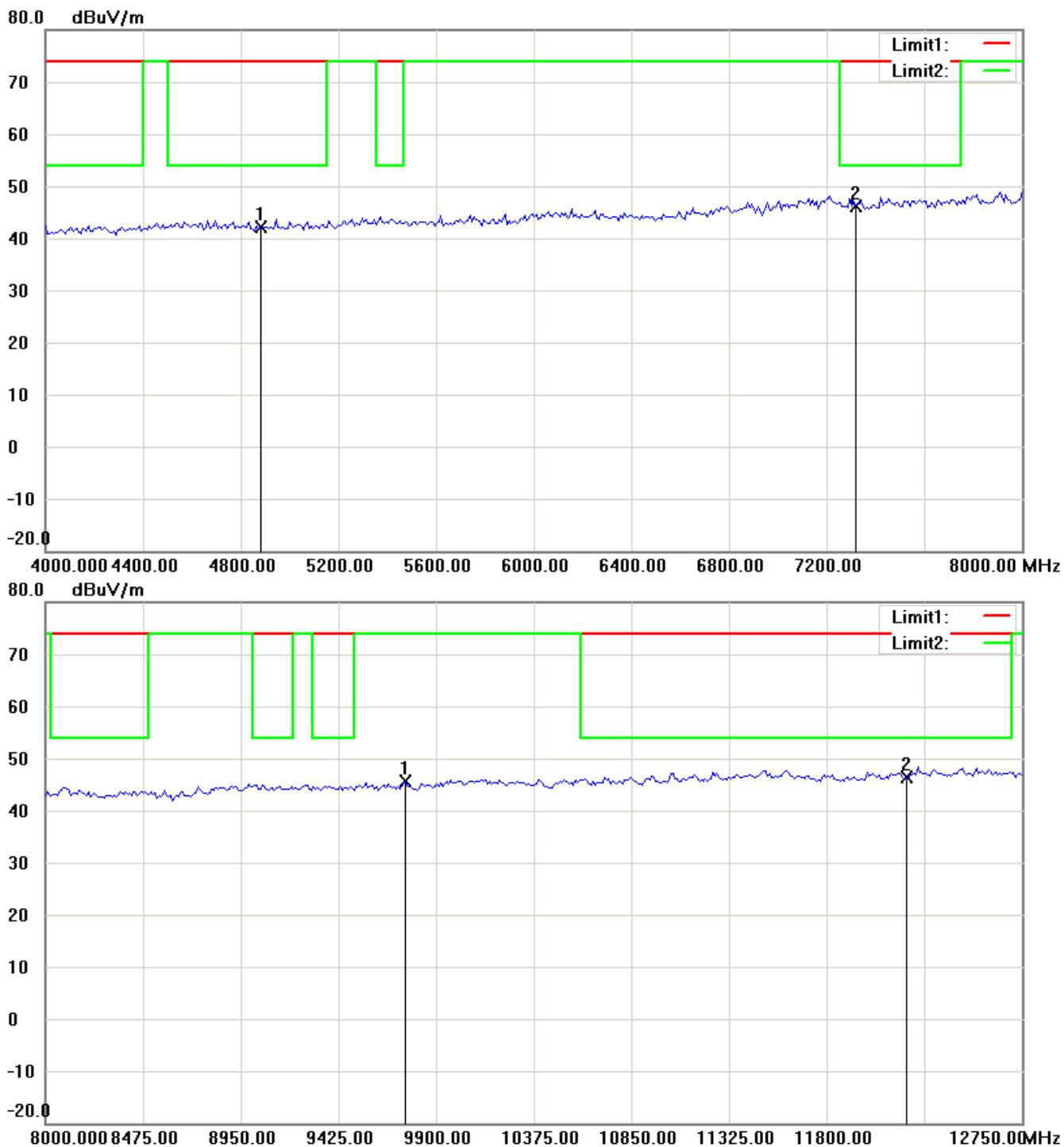
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

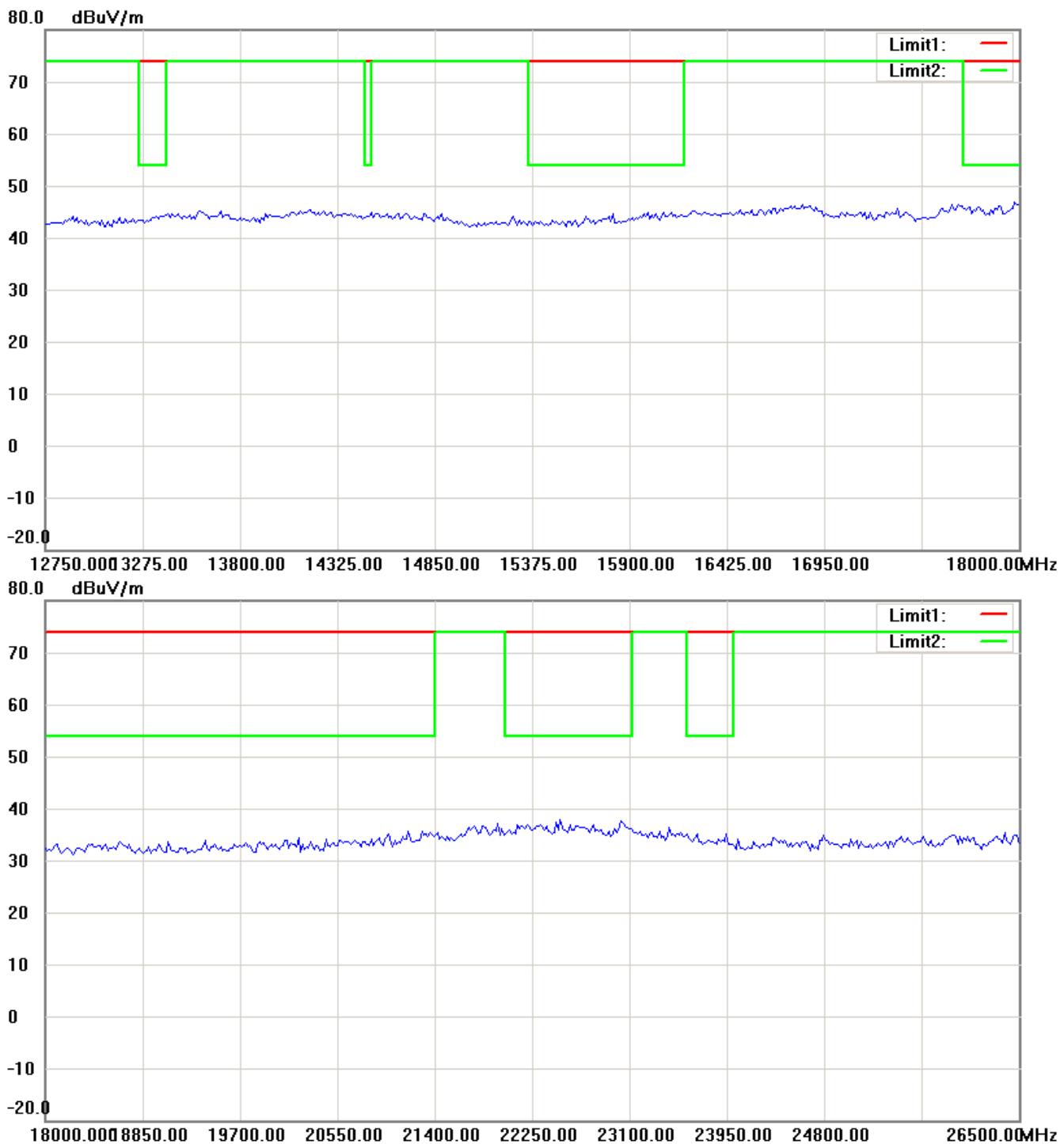
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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



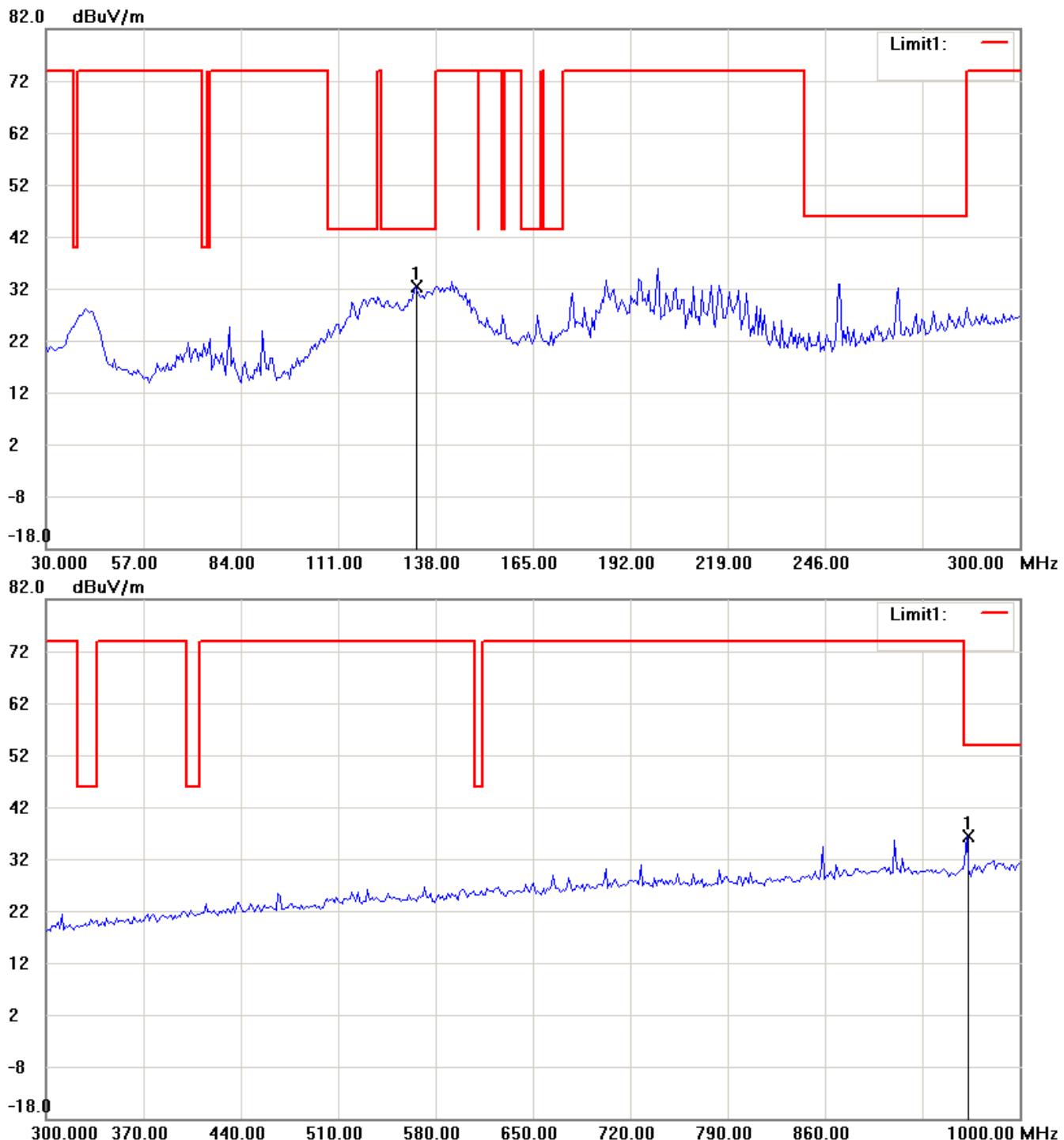
Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 11 Antenna Polarization H



Note:

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

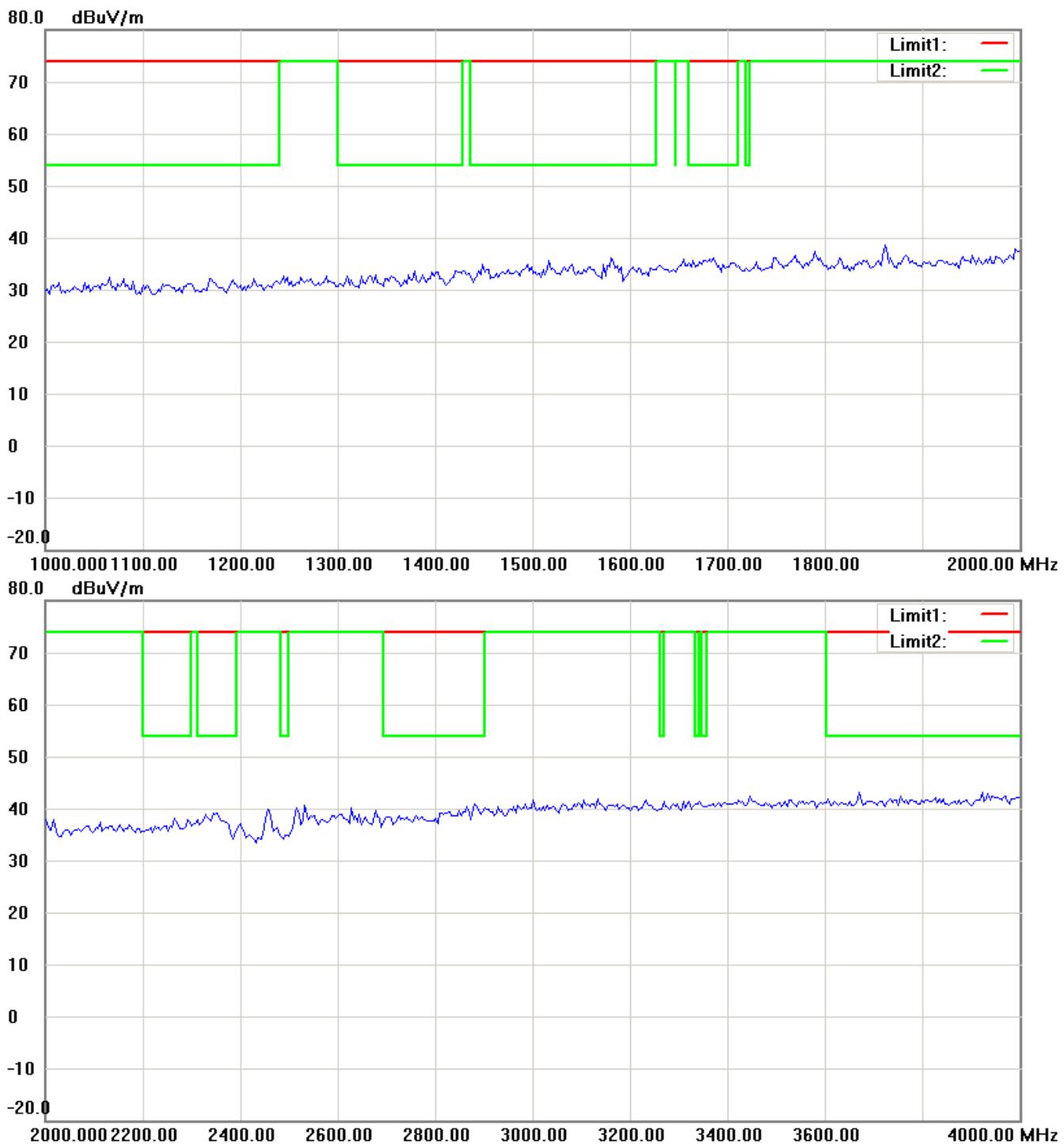
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

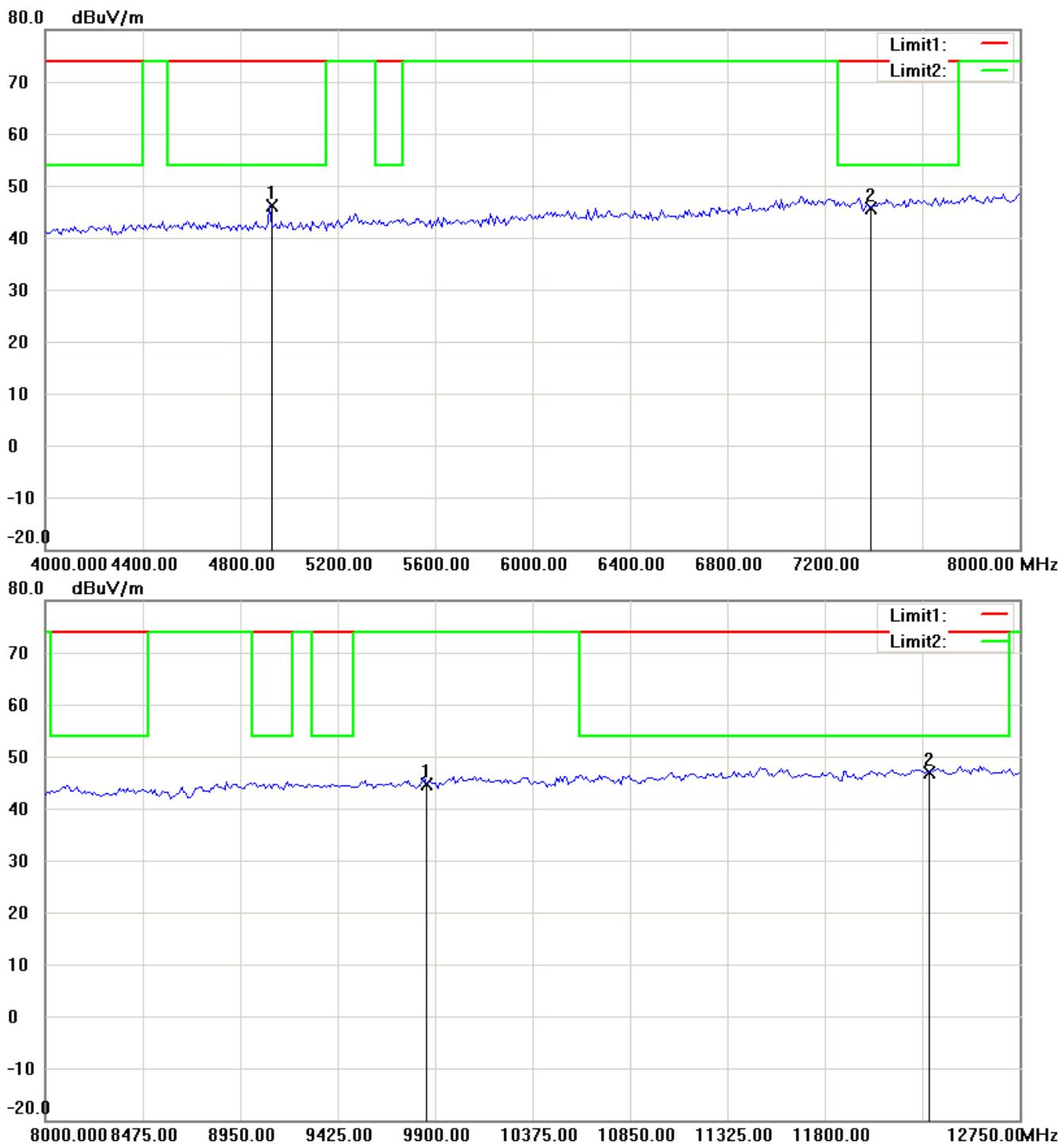


Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

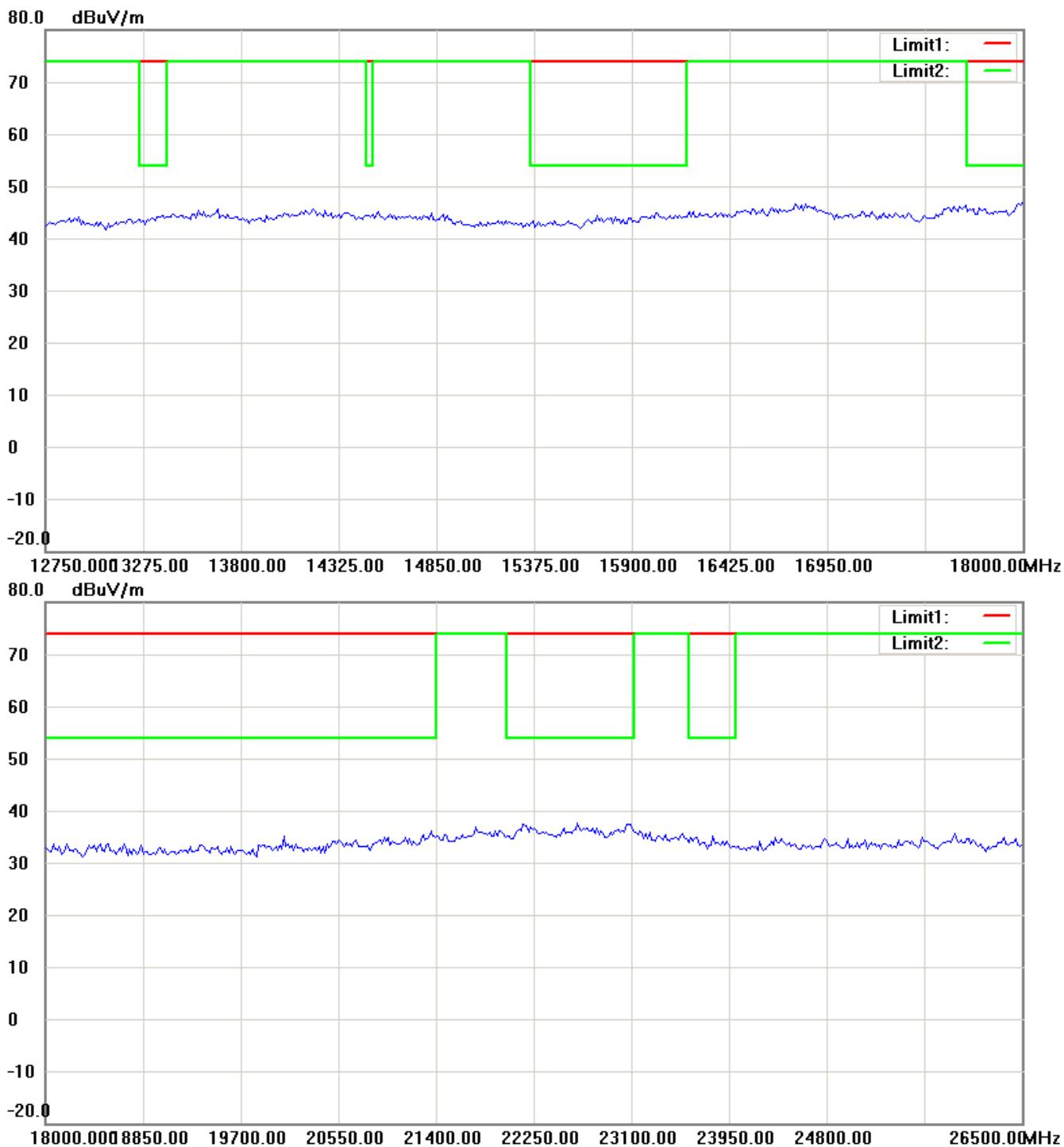
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



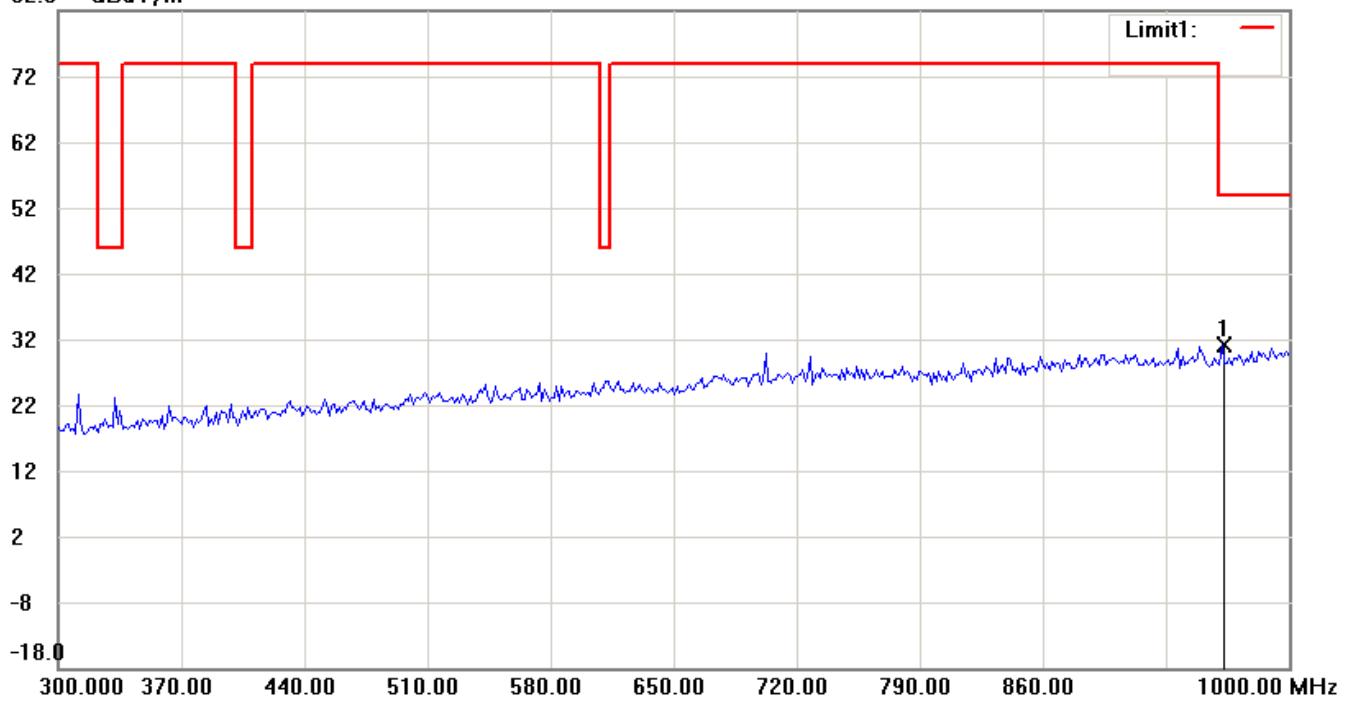
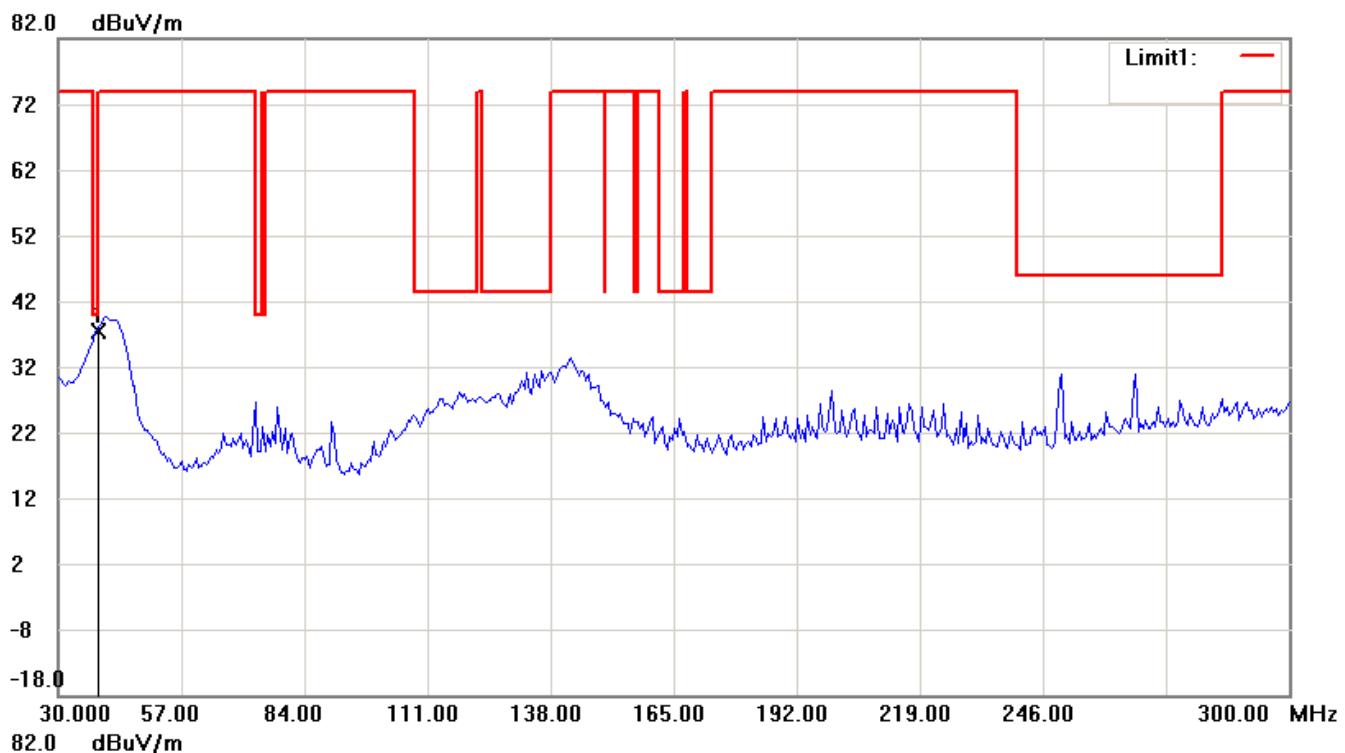
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

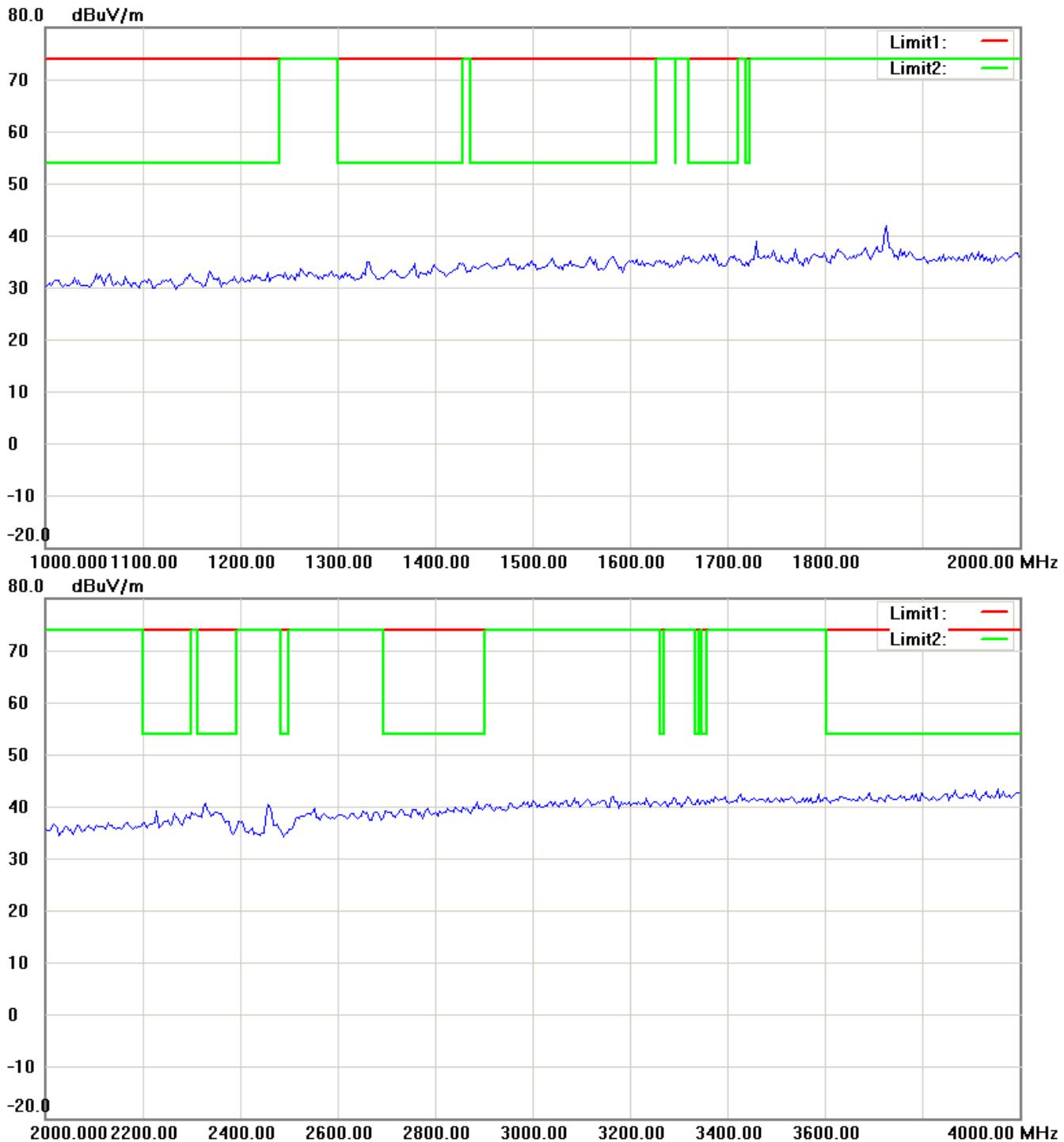
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

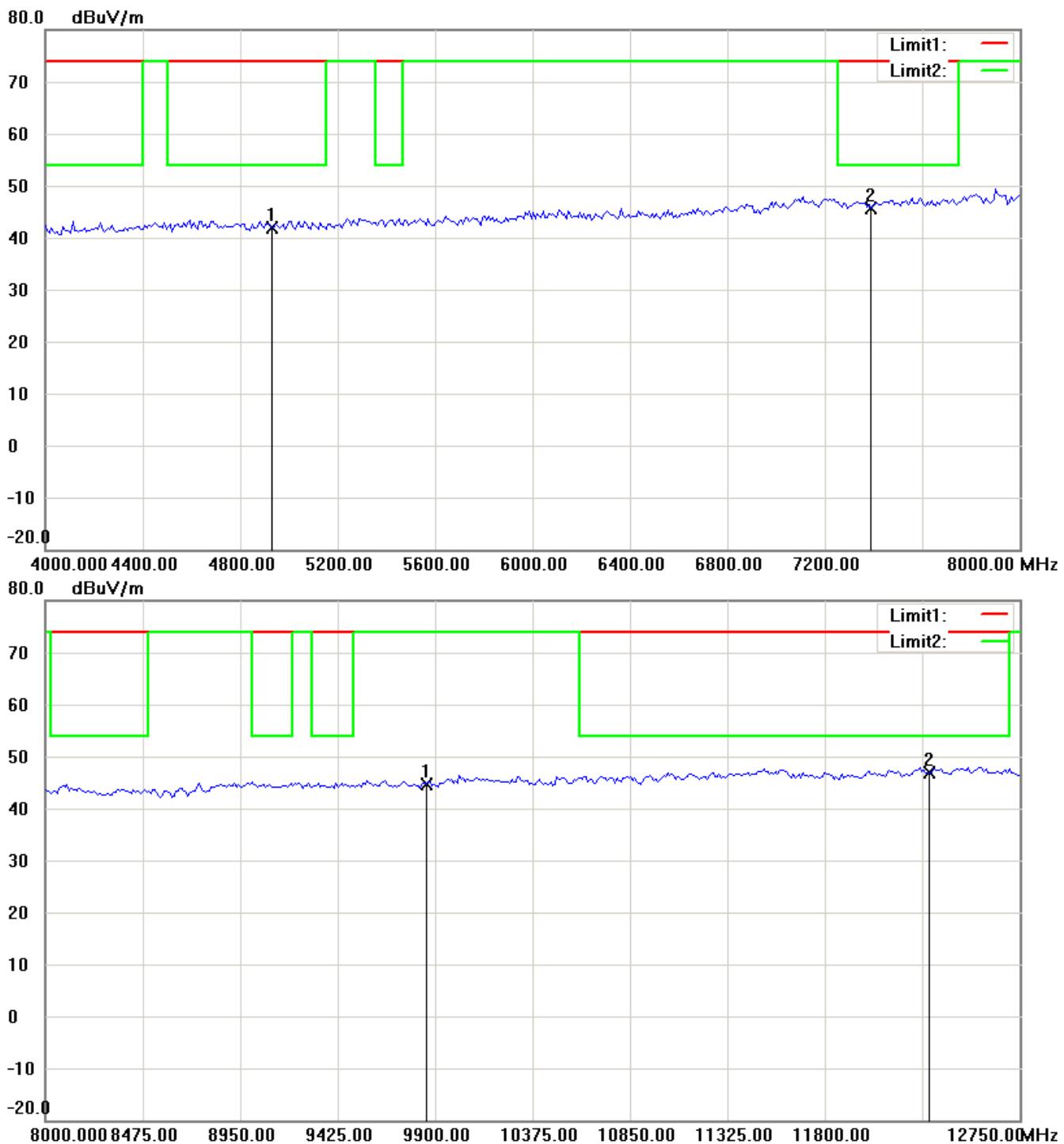


Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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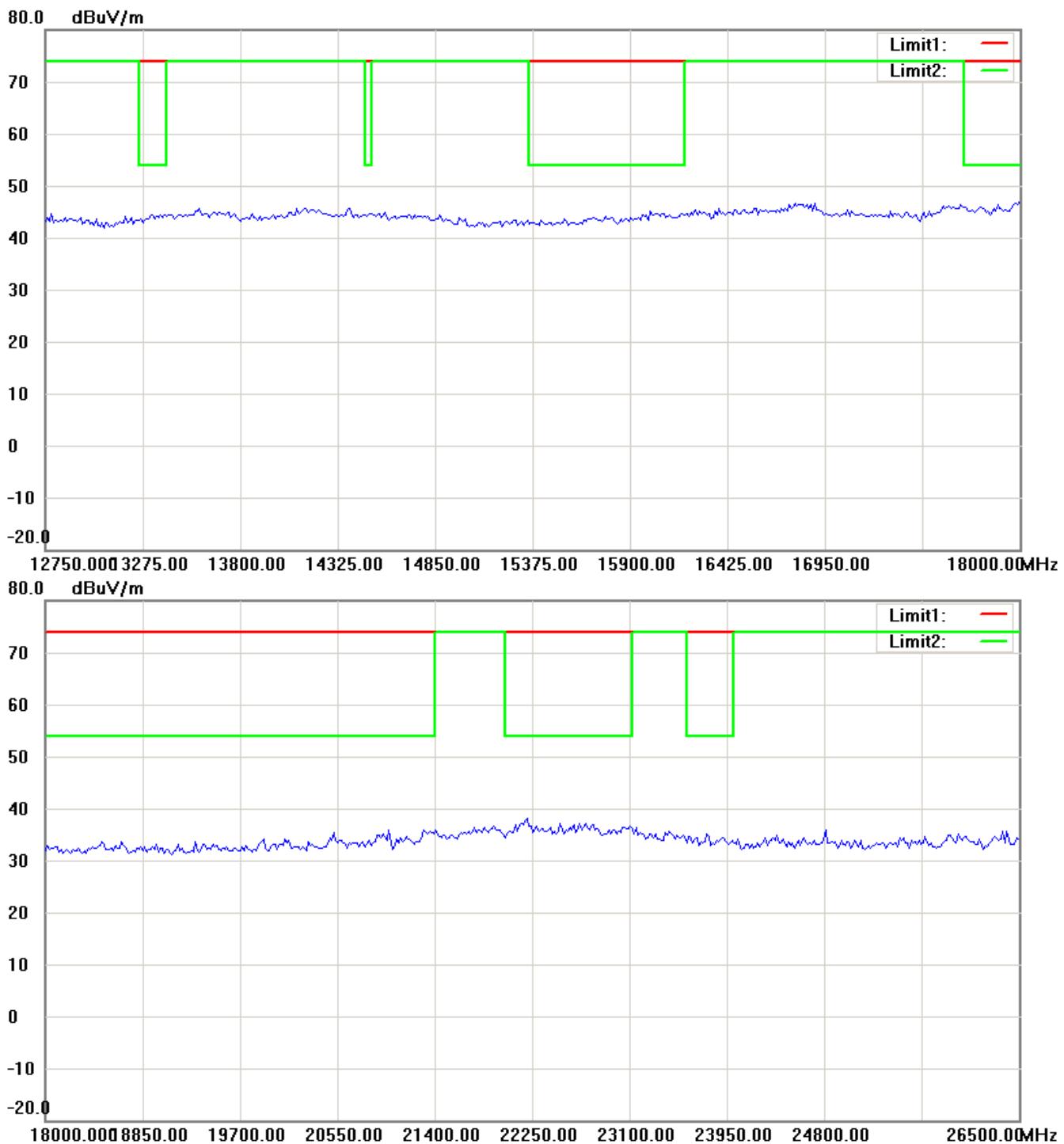
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

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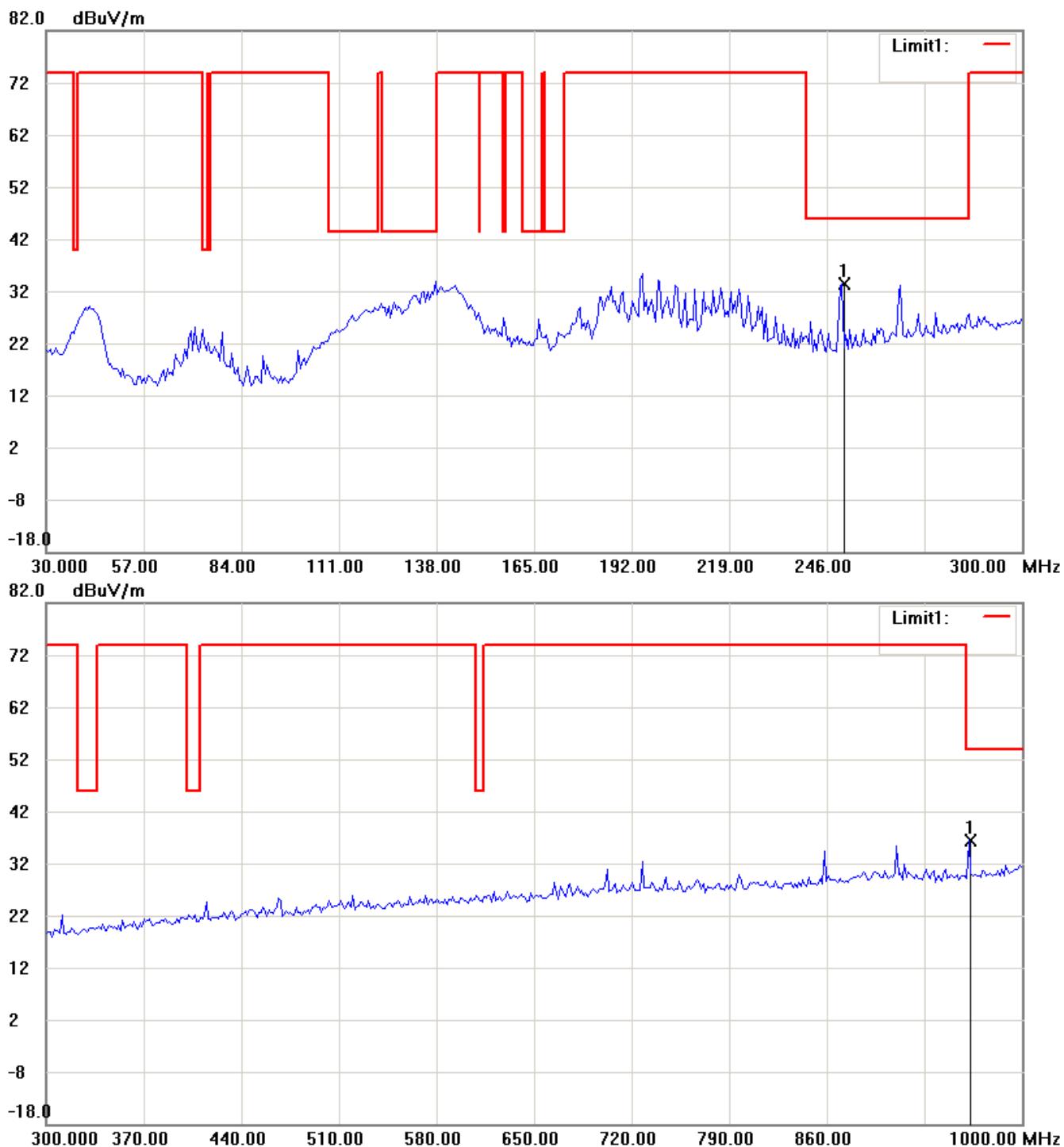
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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

802.11g

Channel 1

Antenna Polarization H



Note:

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

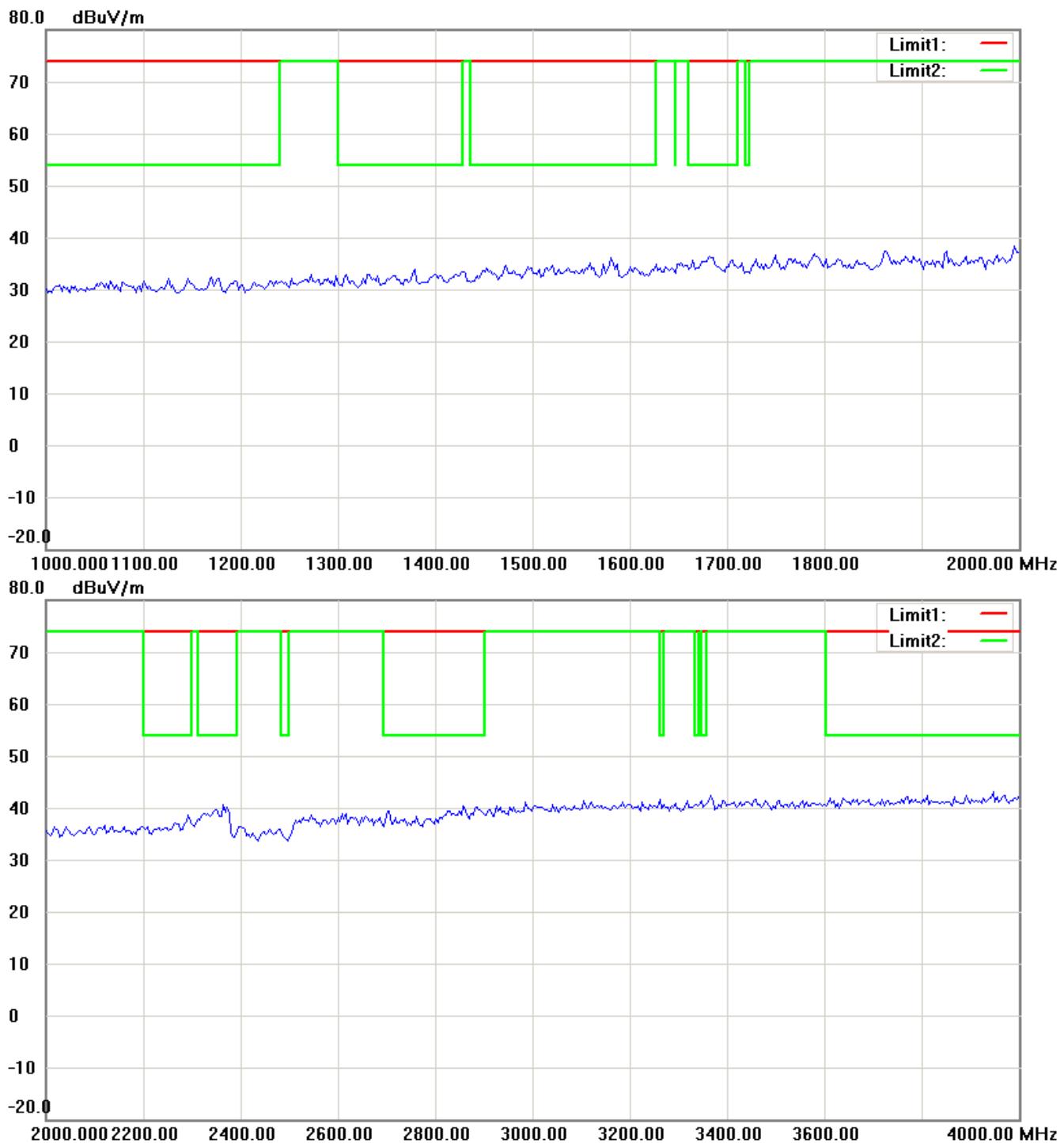
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

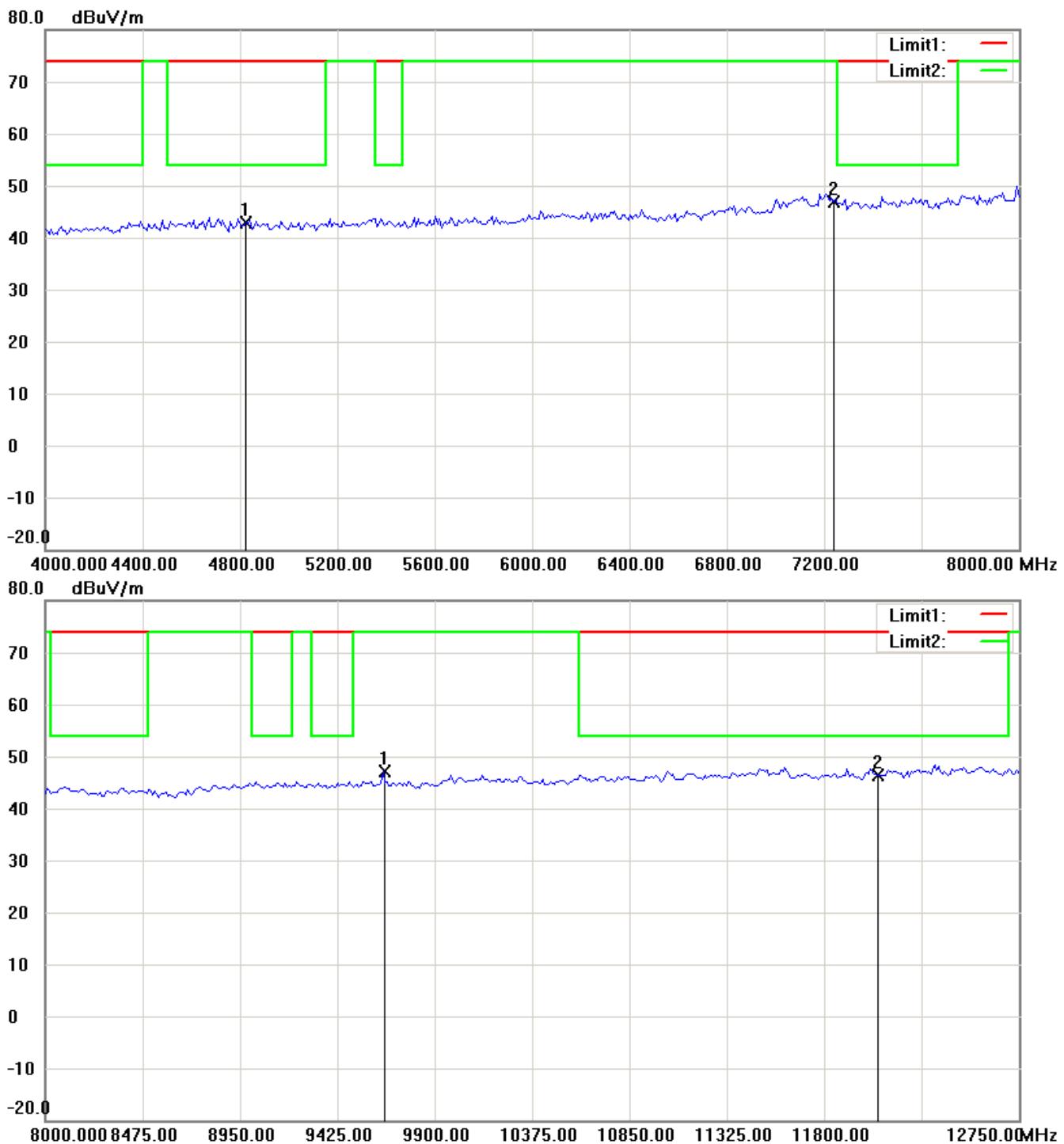
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

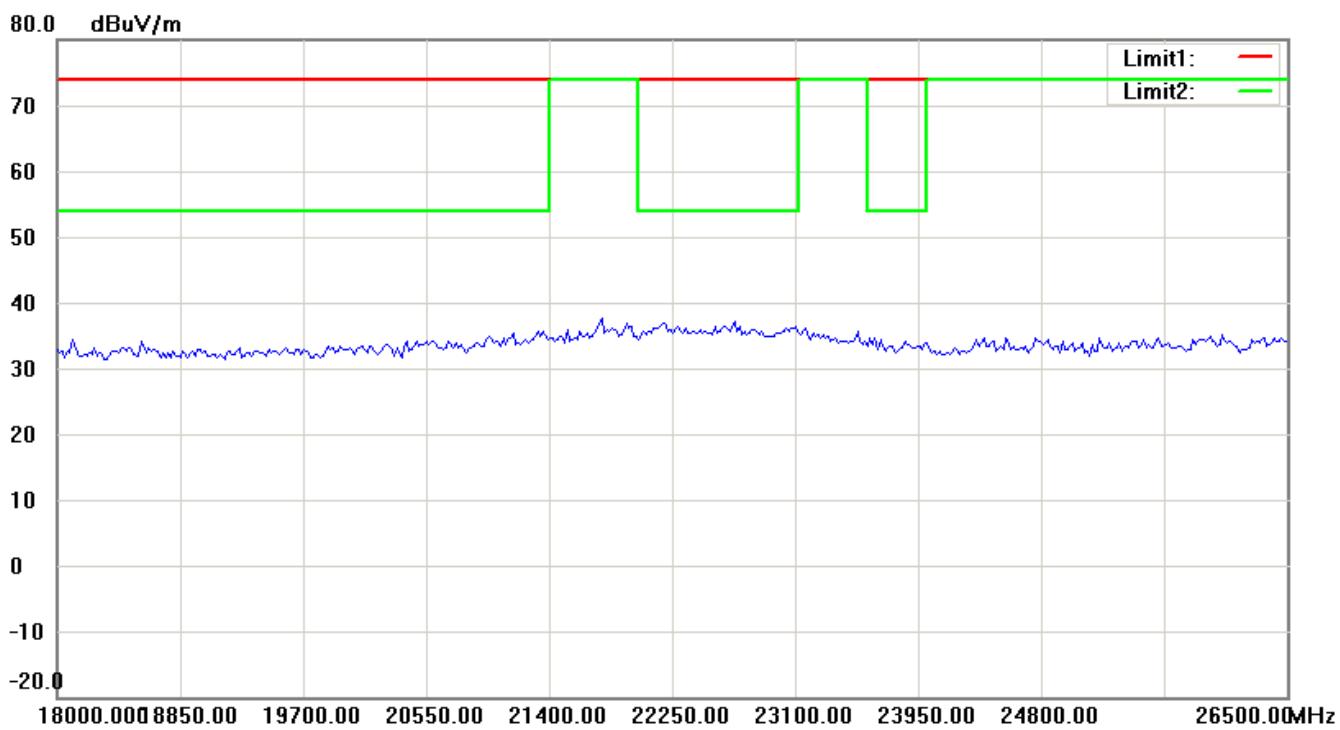
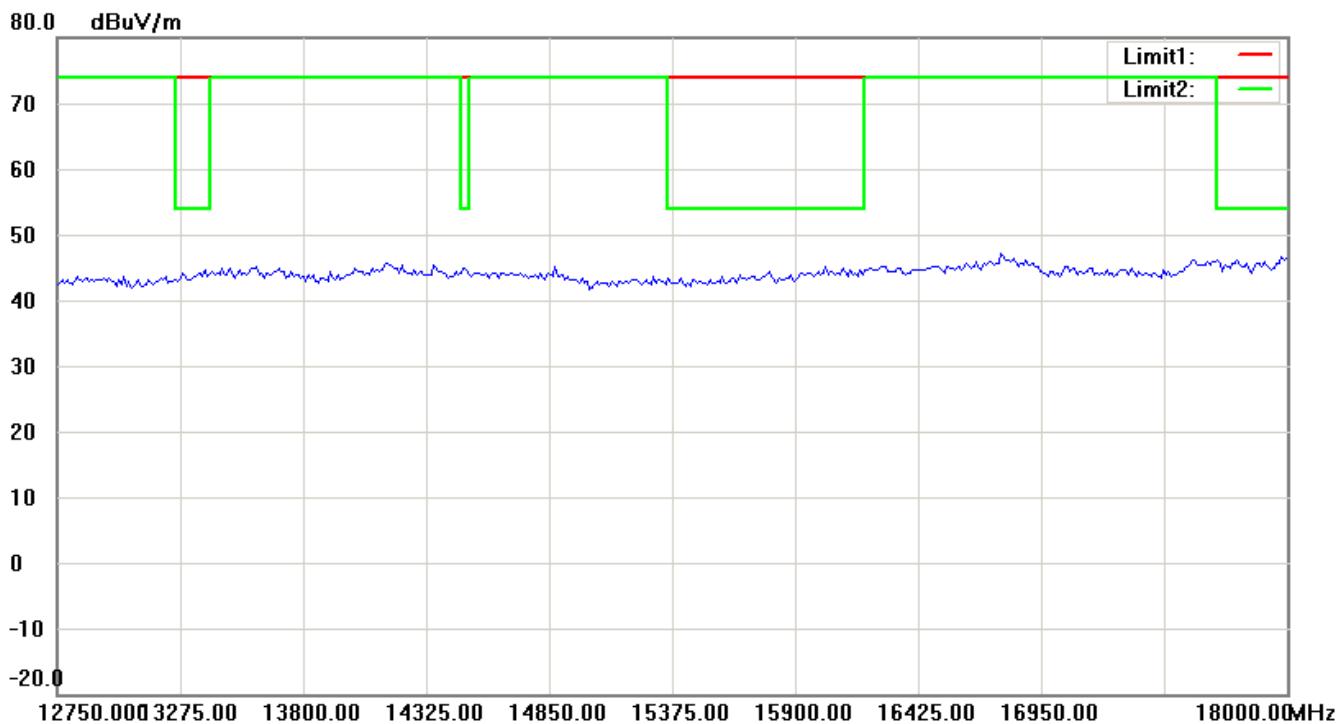
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Note:

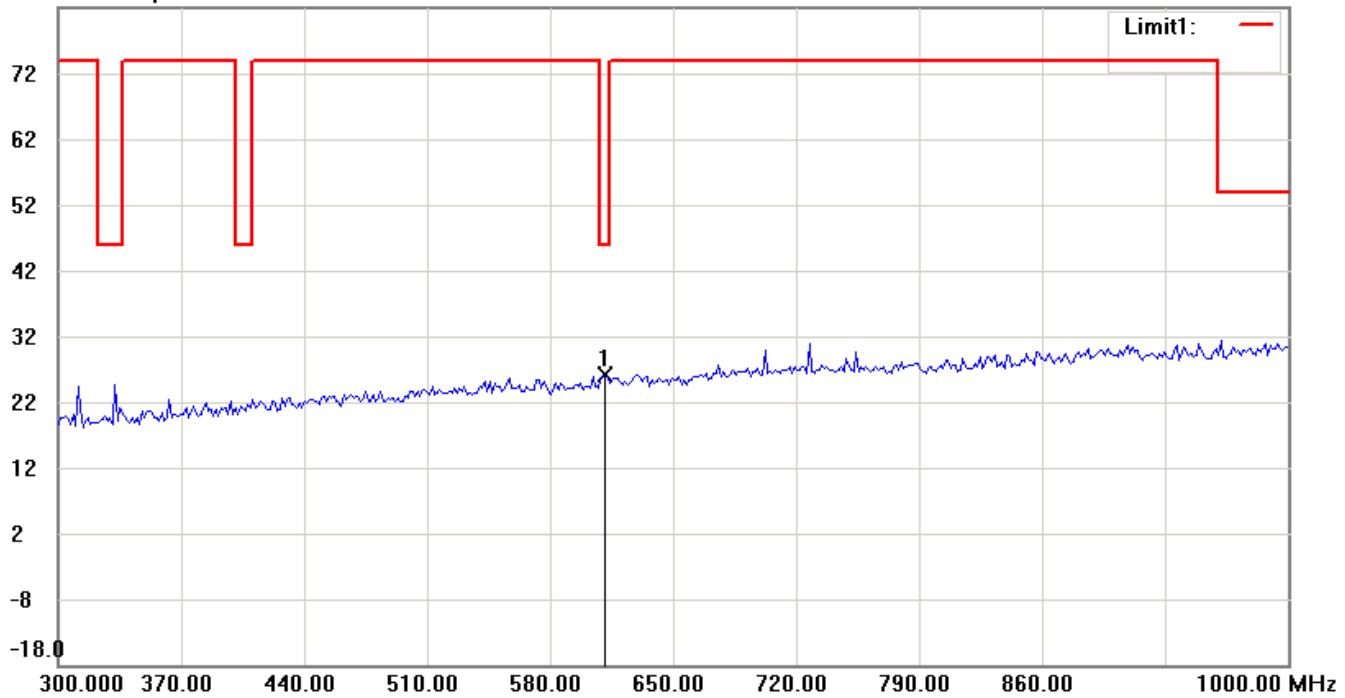
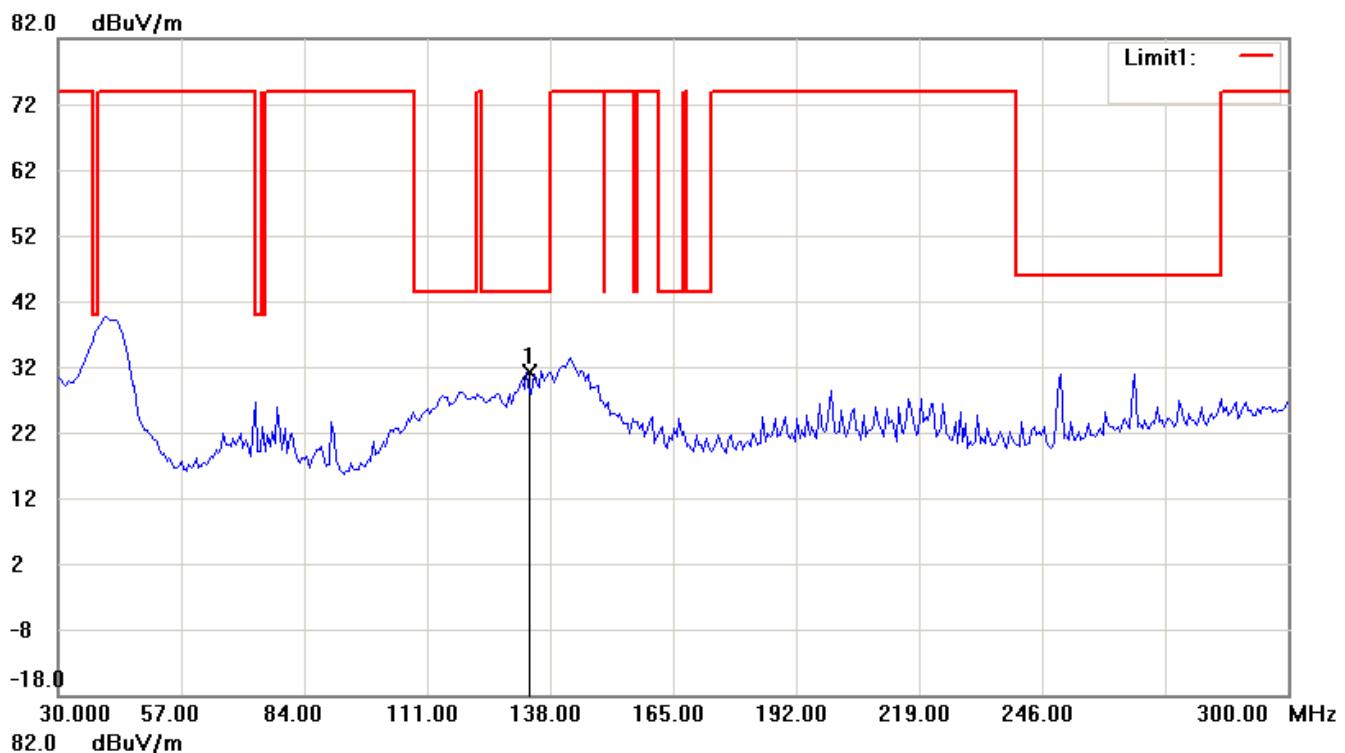
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

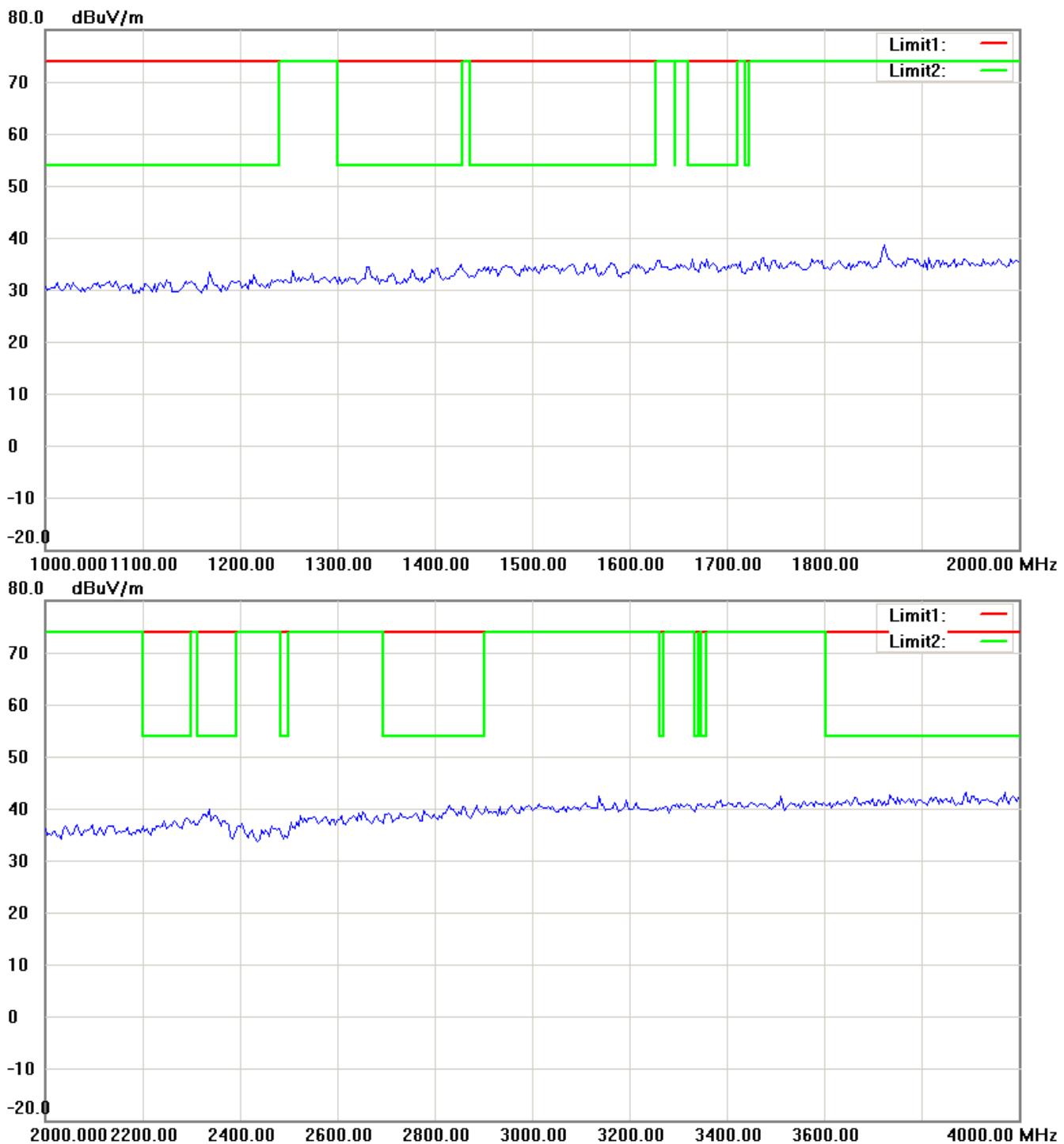
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

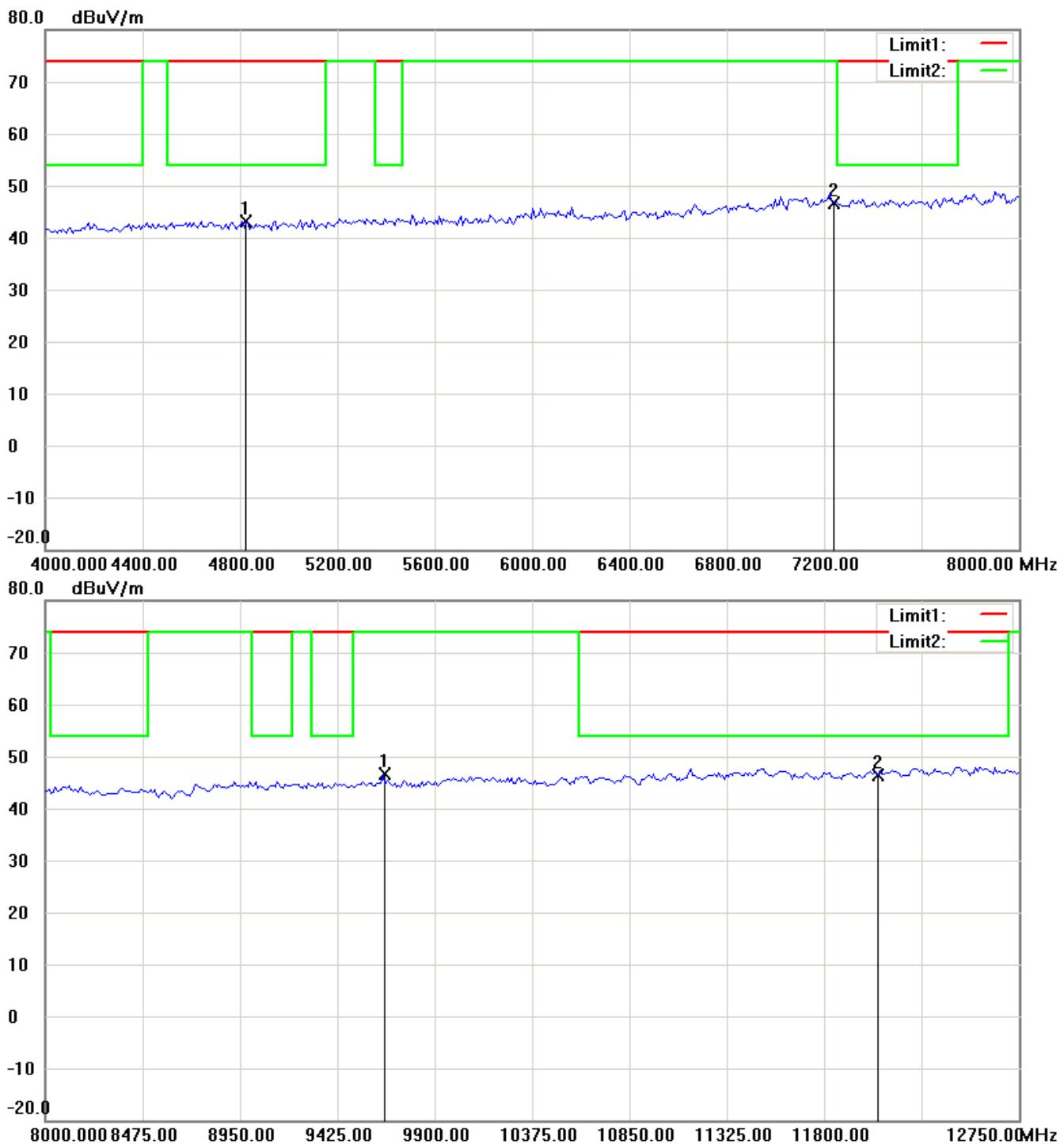
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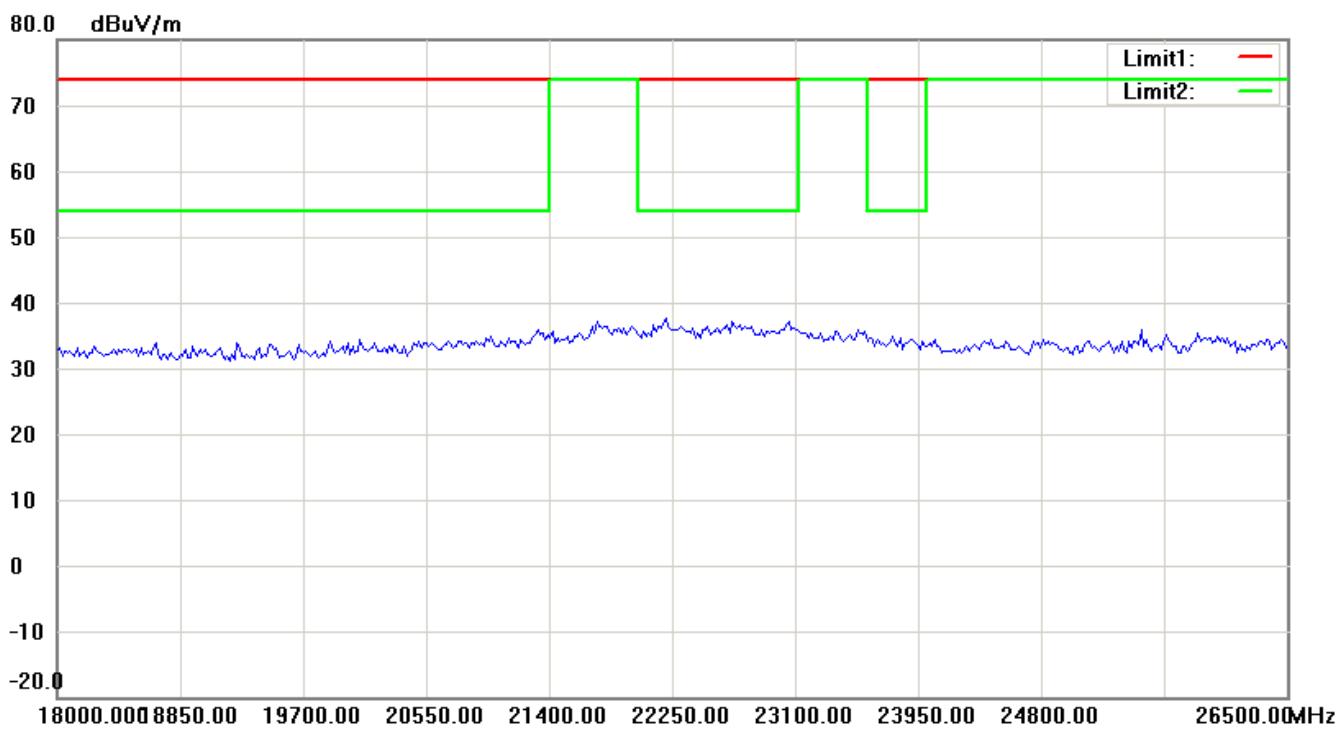
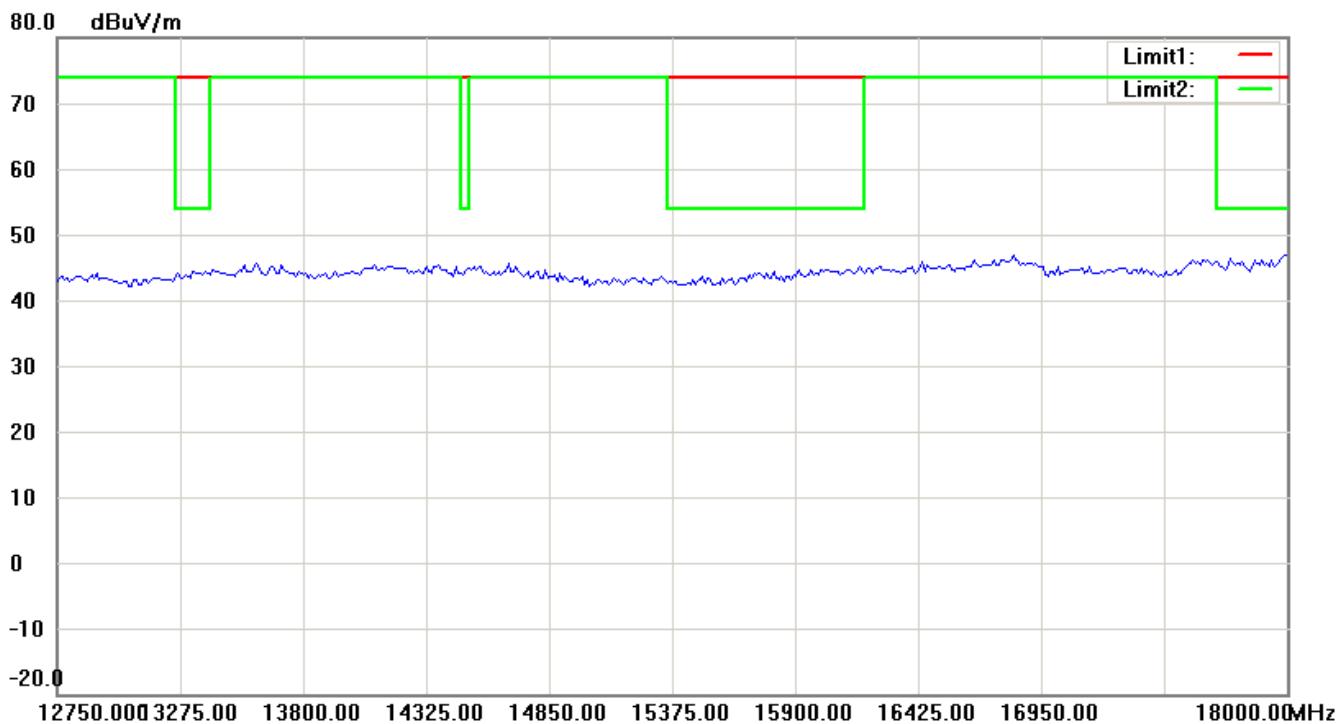
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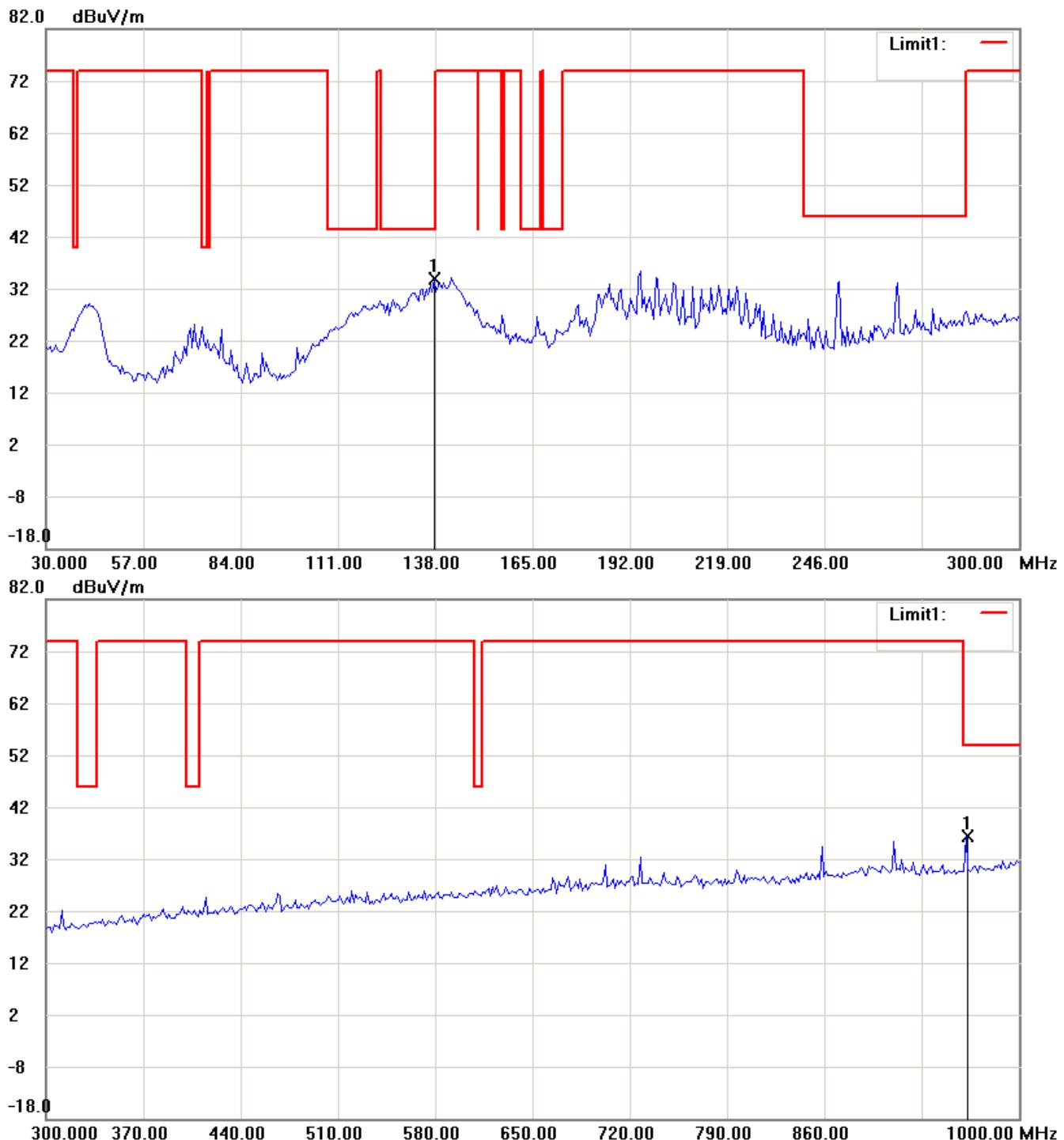
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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 6 Antenna Polarization H



Note:

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

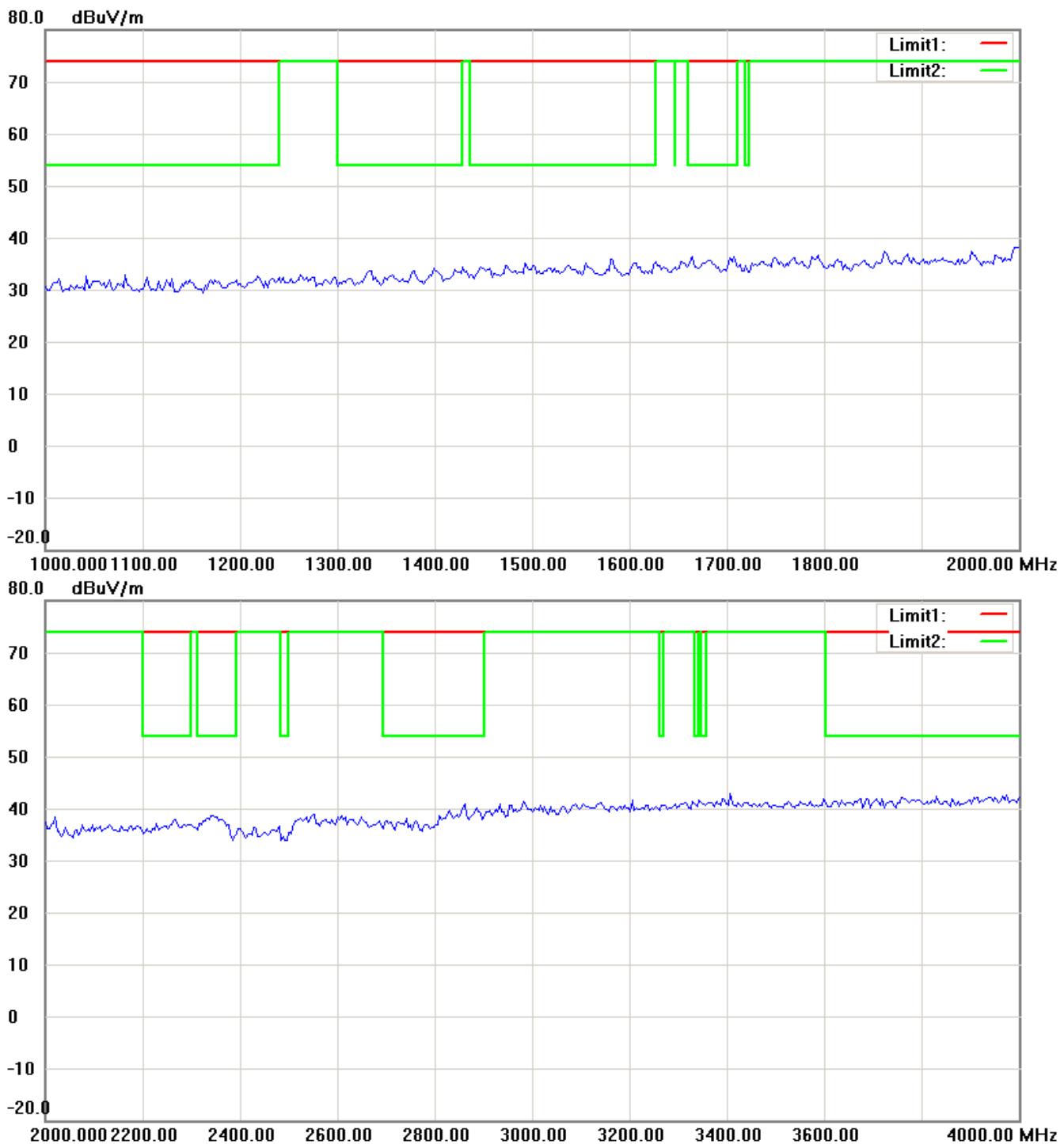
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Note:

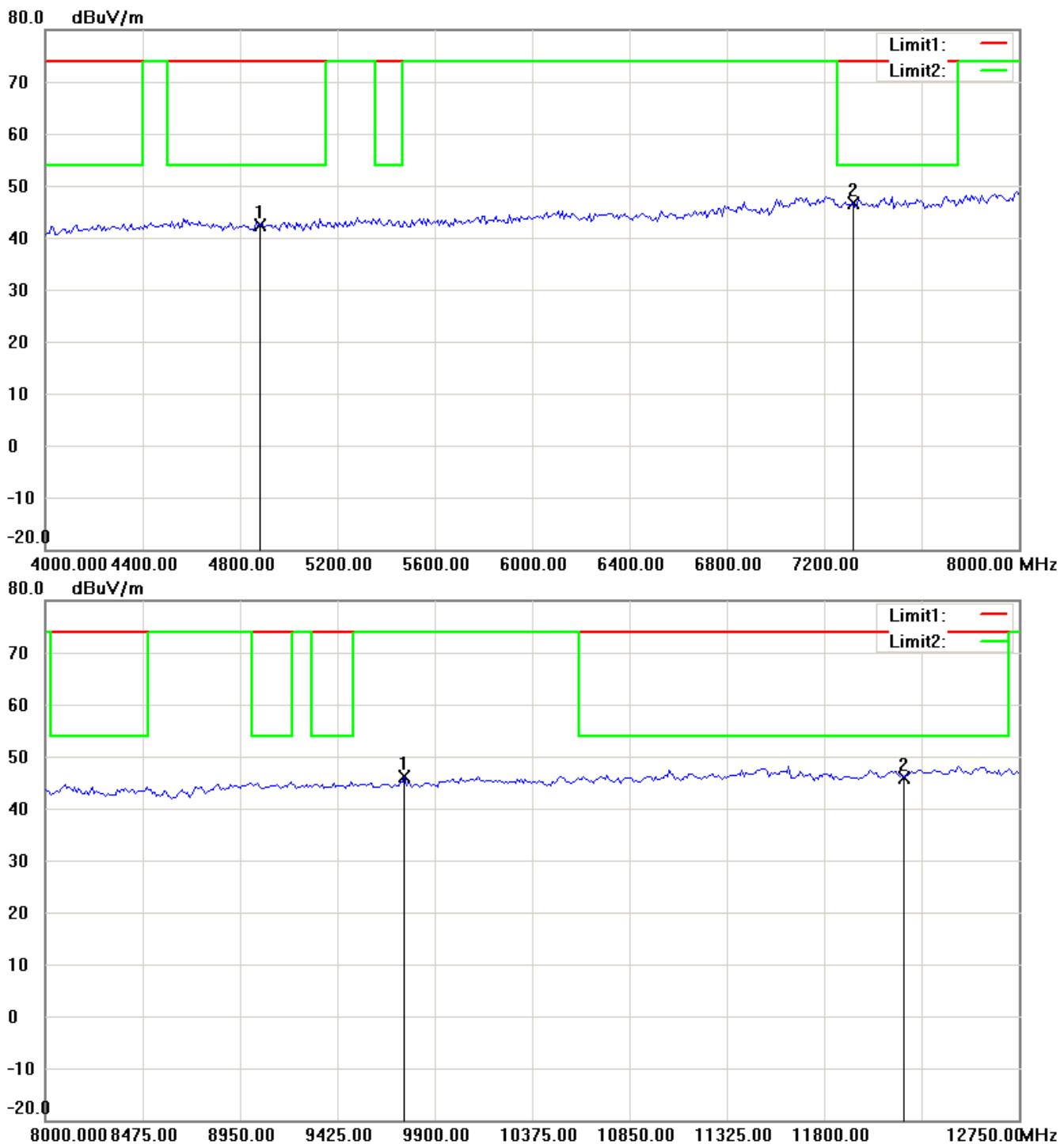
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Note:

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

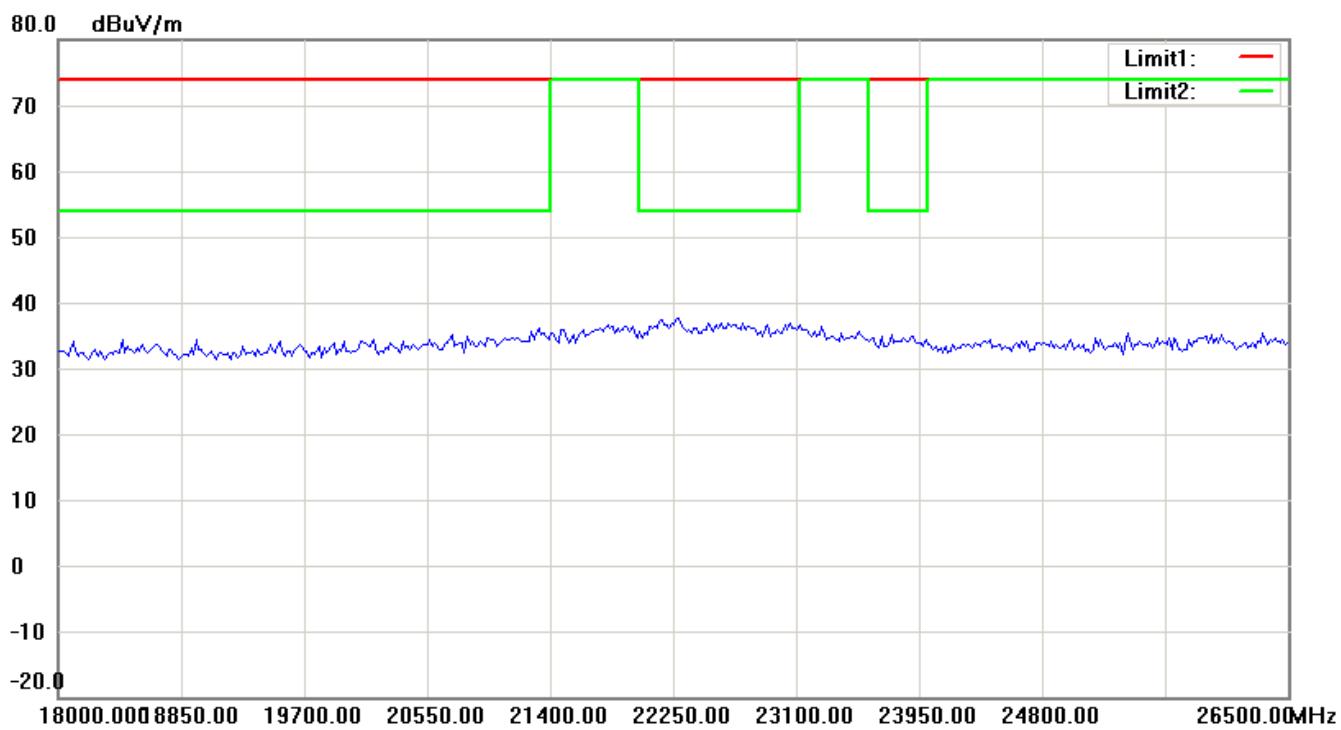
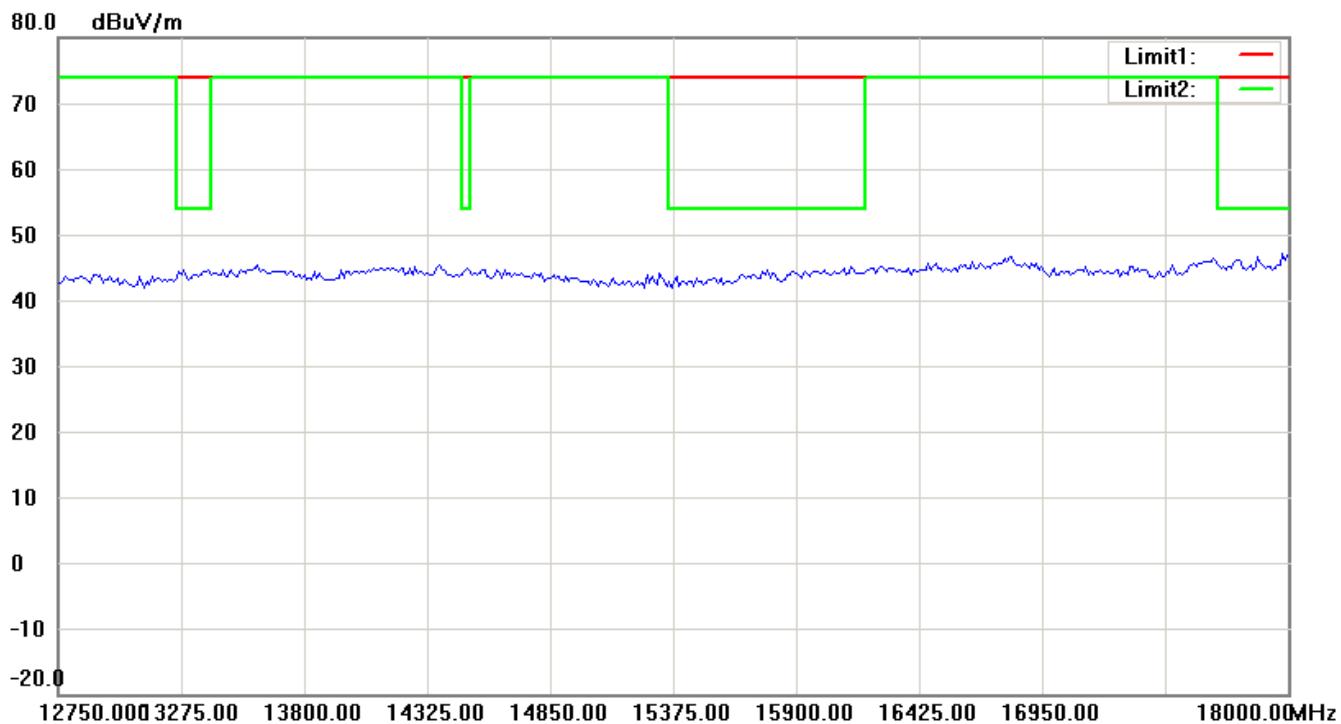
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

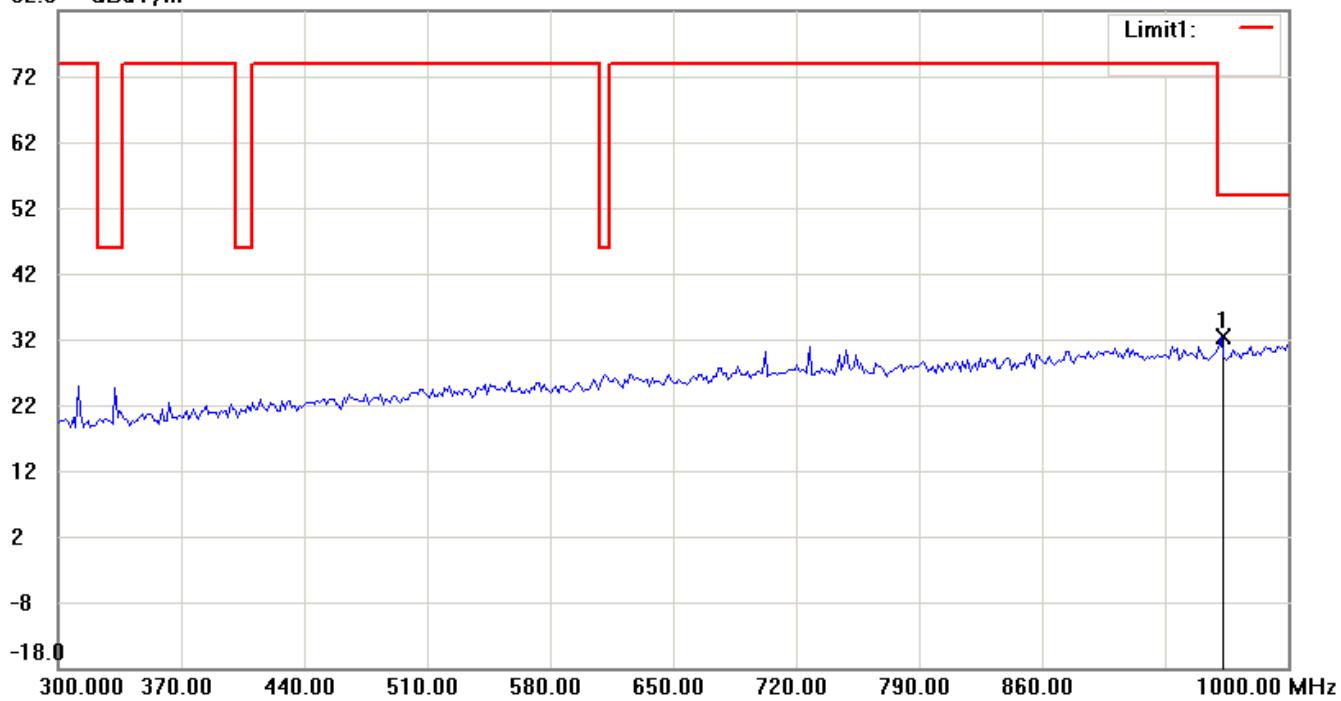
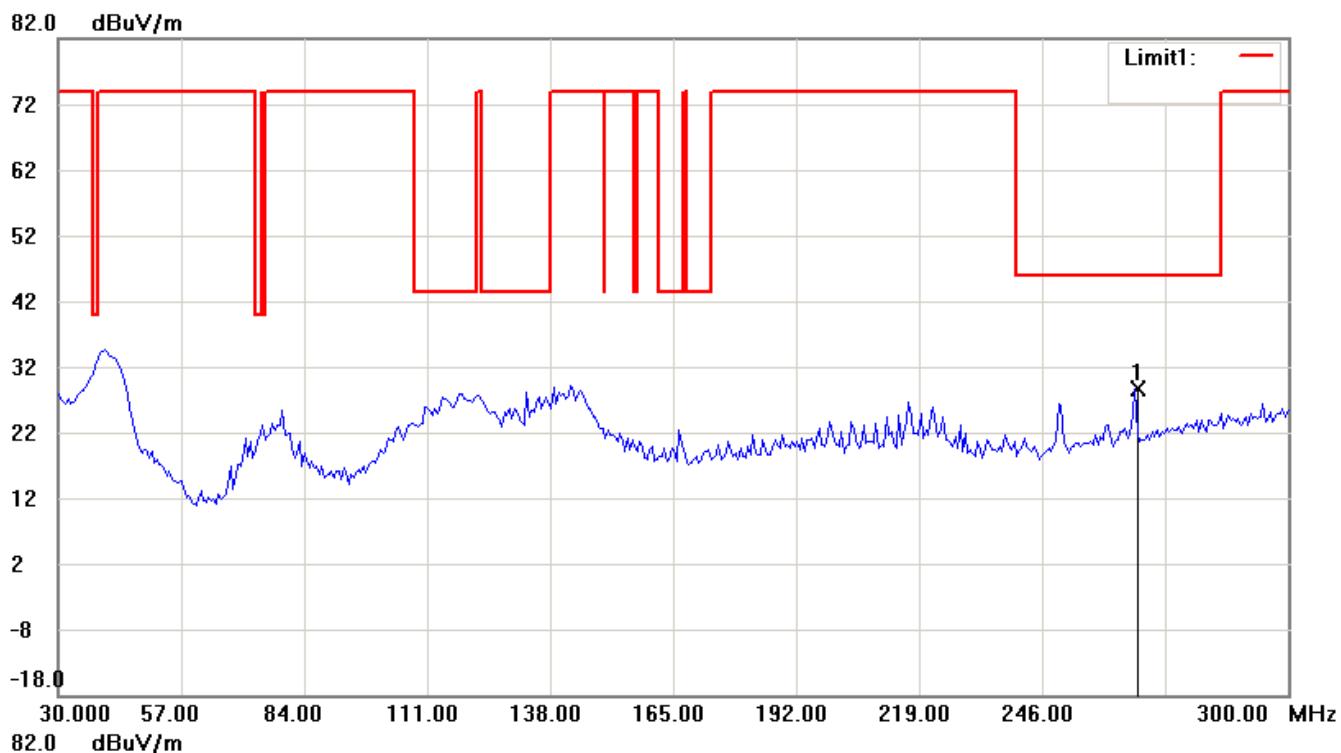
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

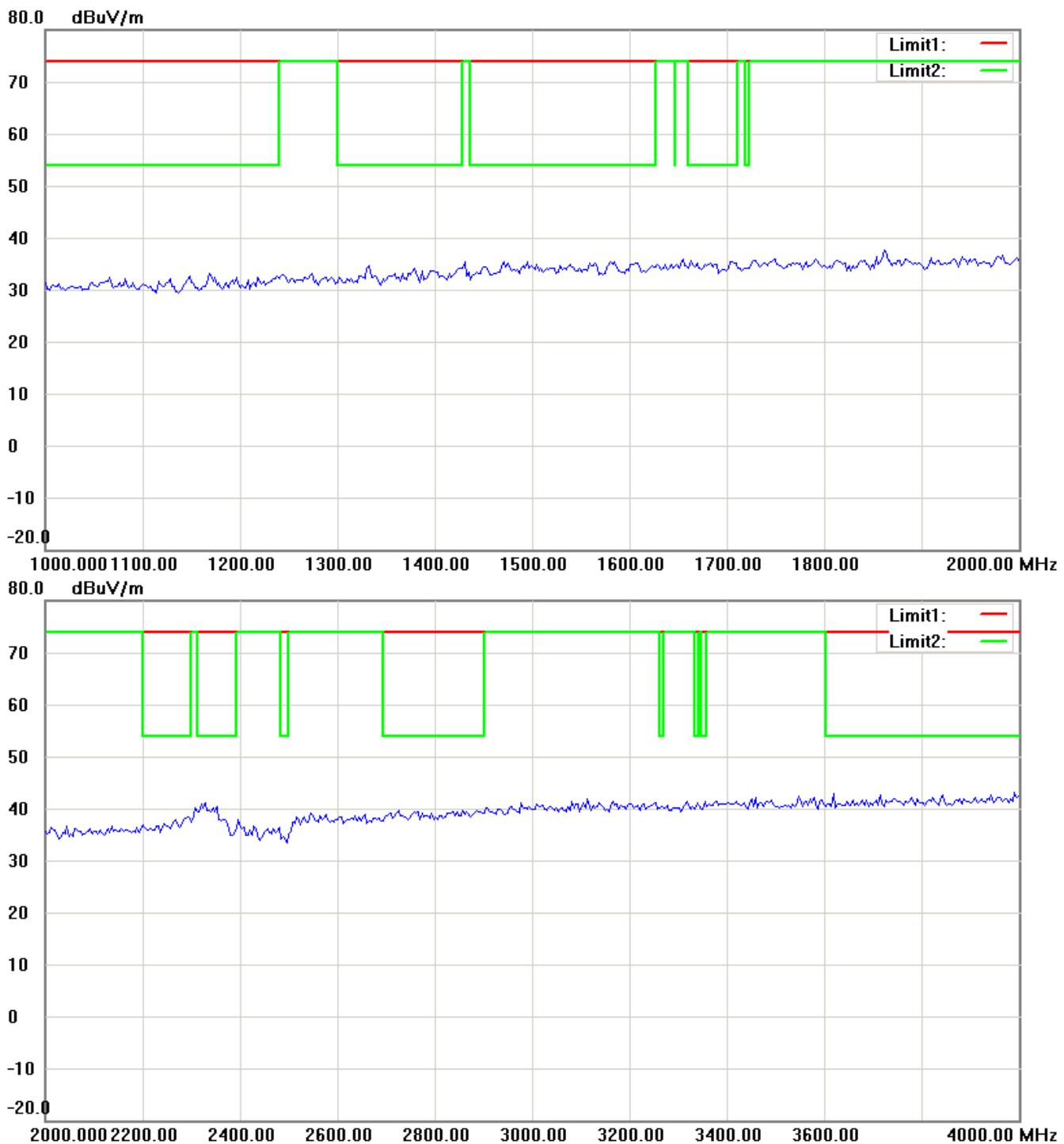
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

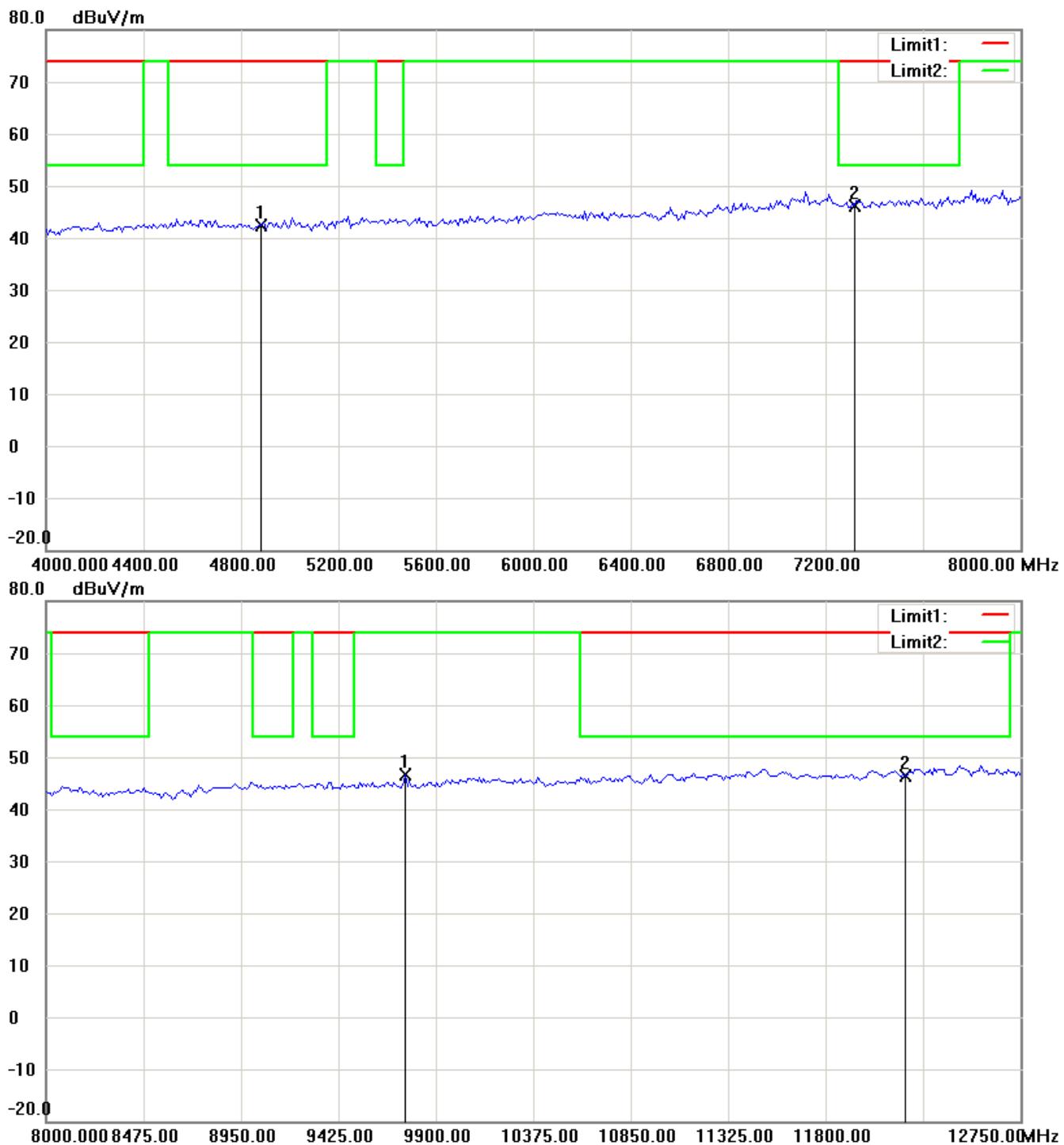
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

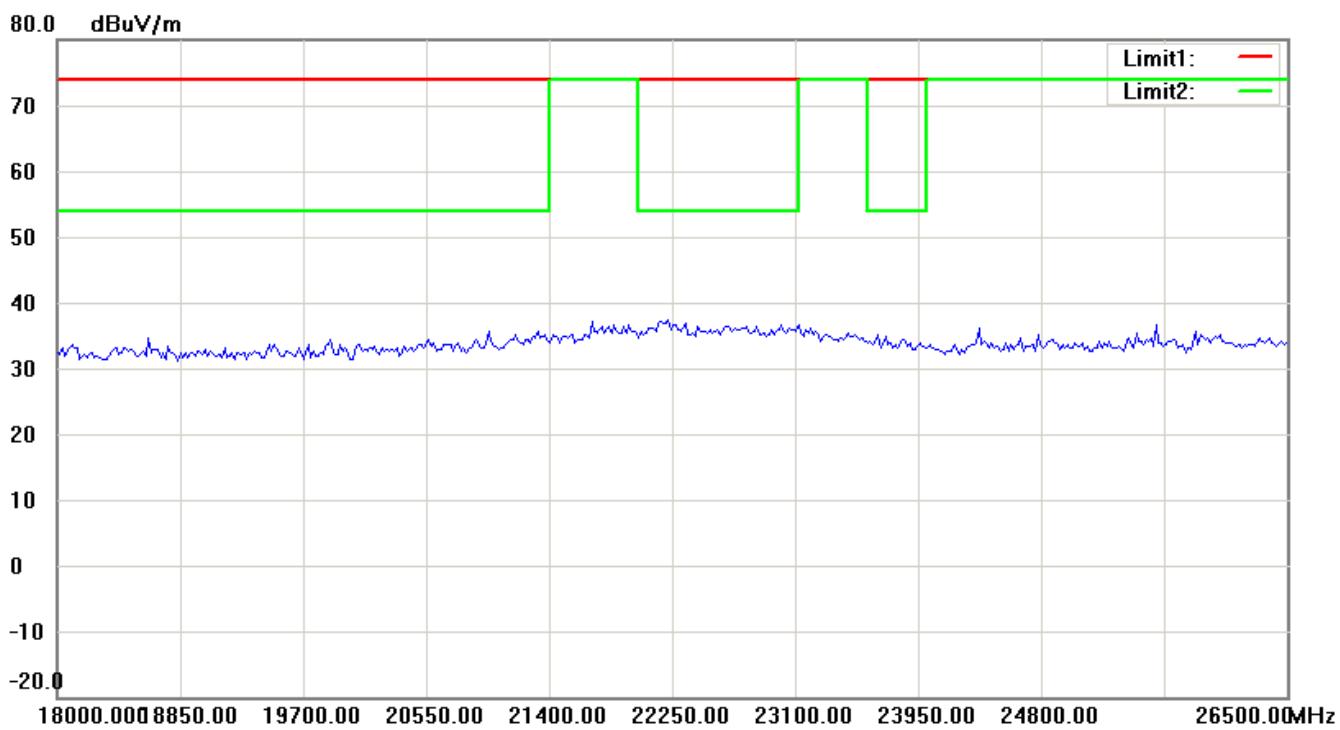
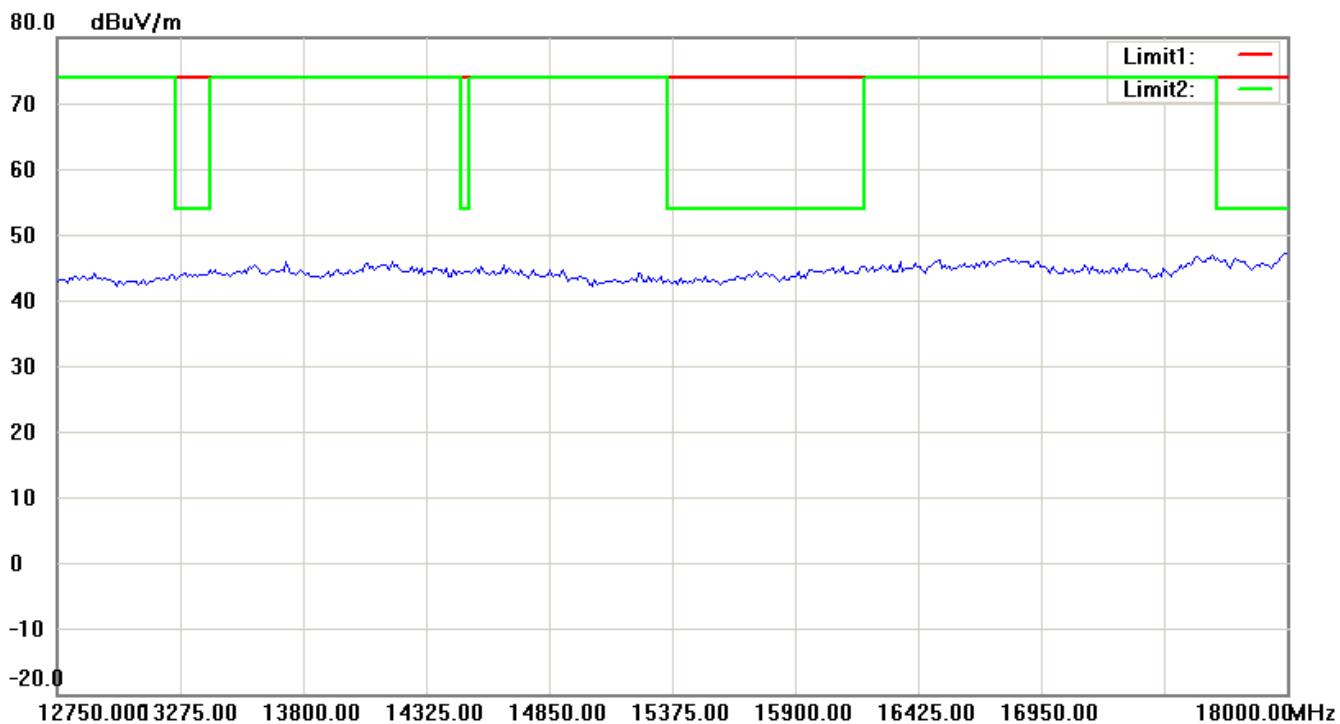
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



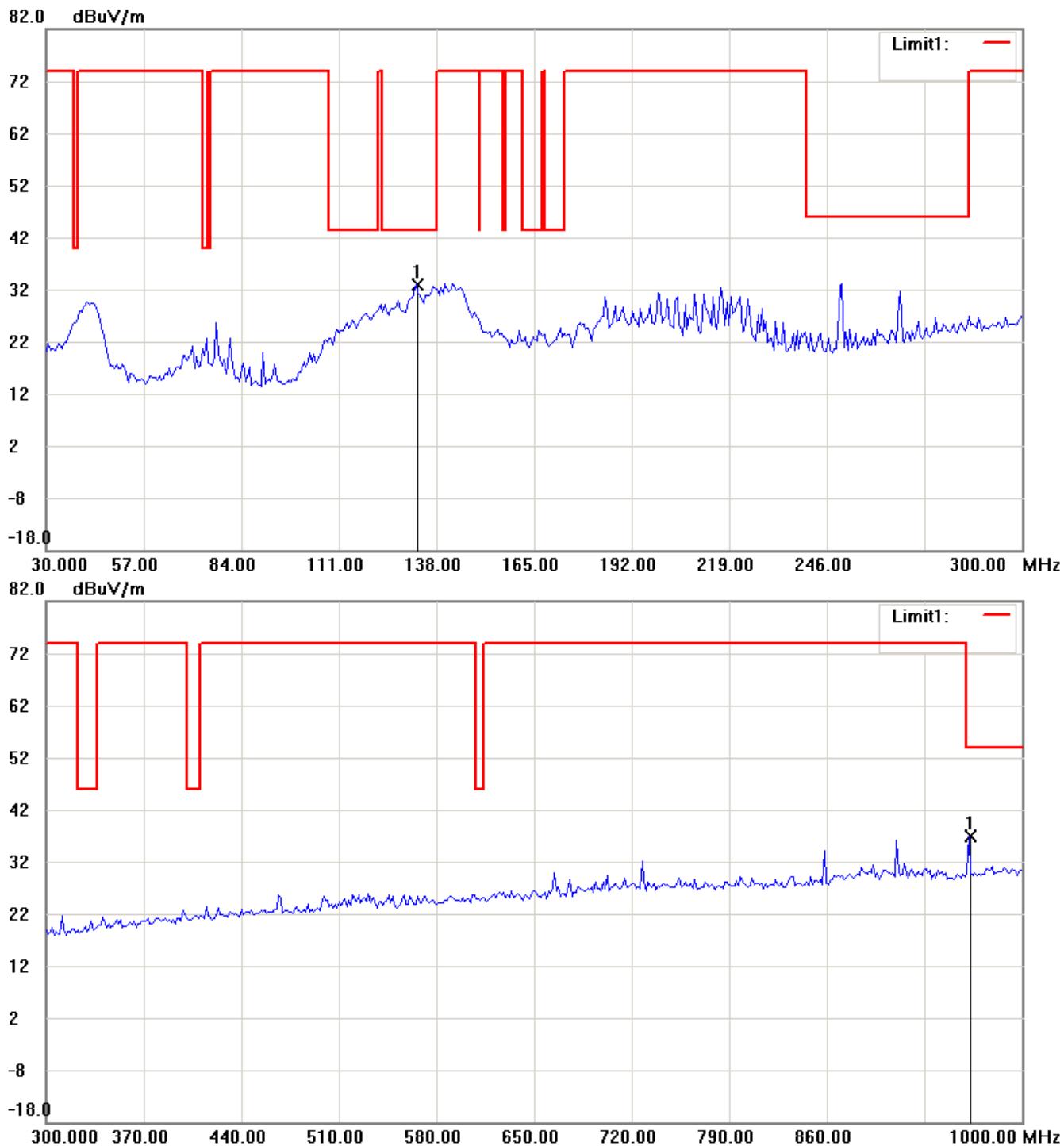
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 11 Antenna Polarization H



Note:

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

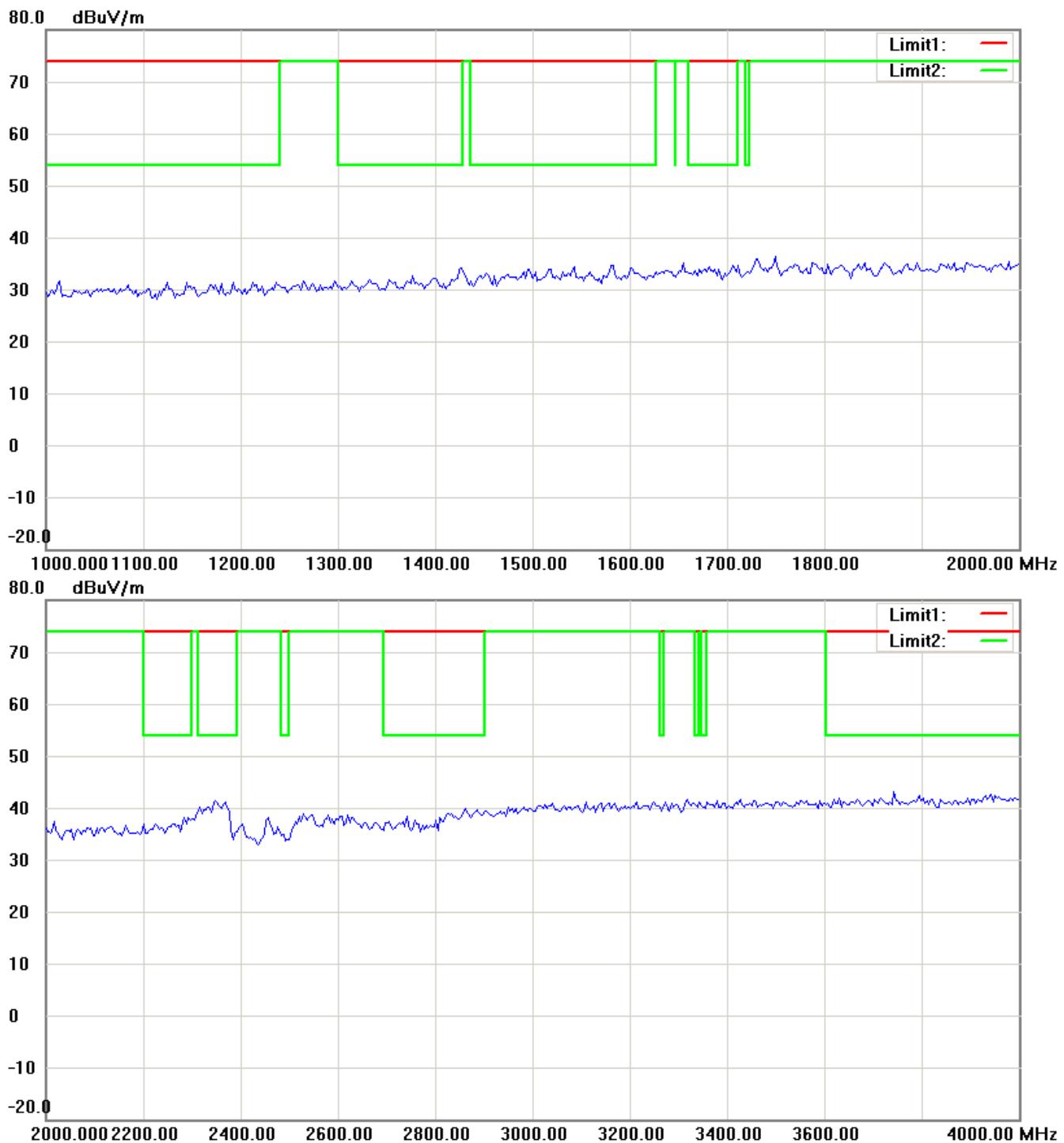
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

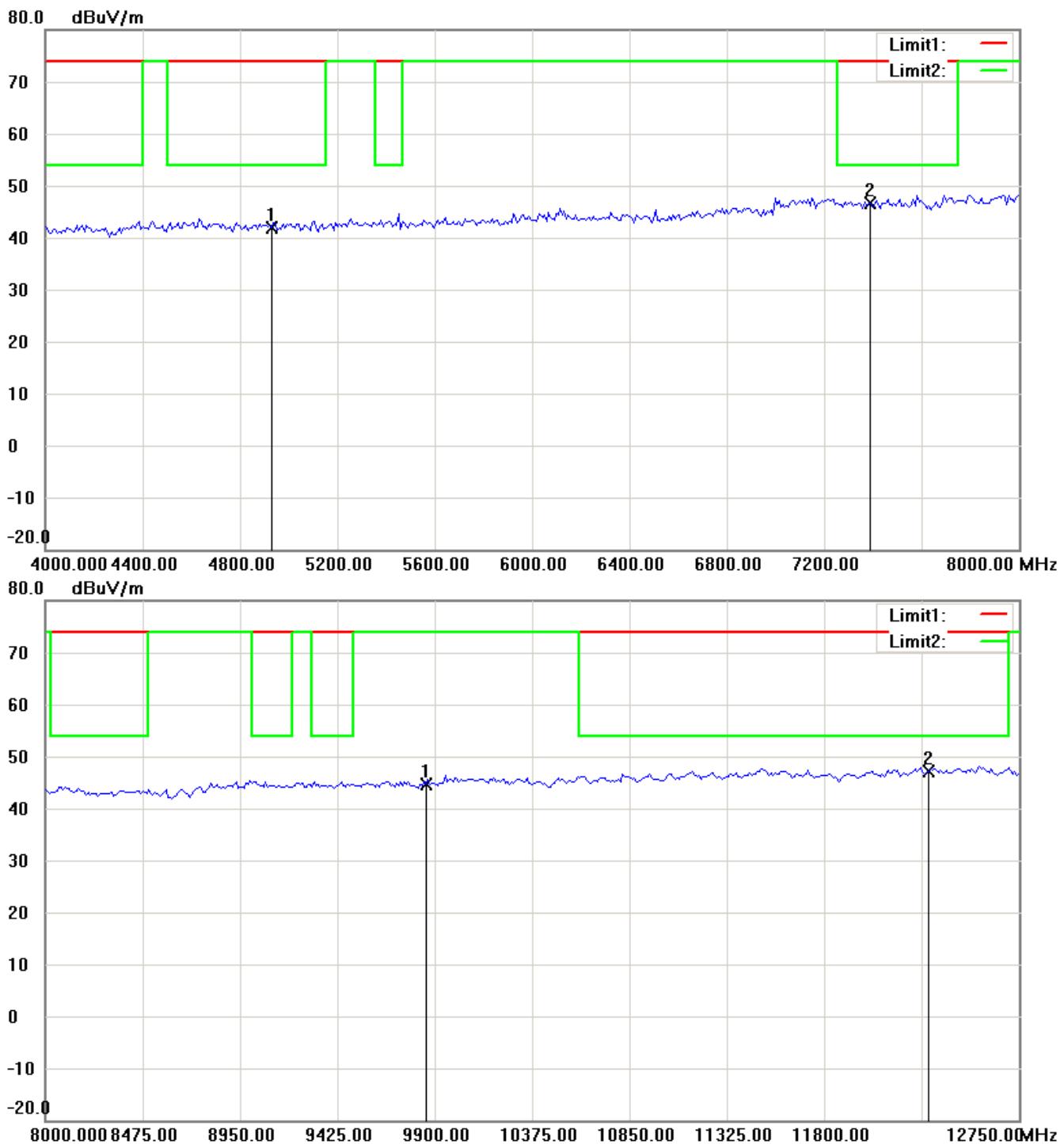


Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

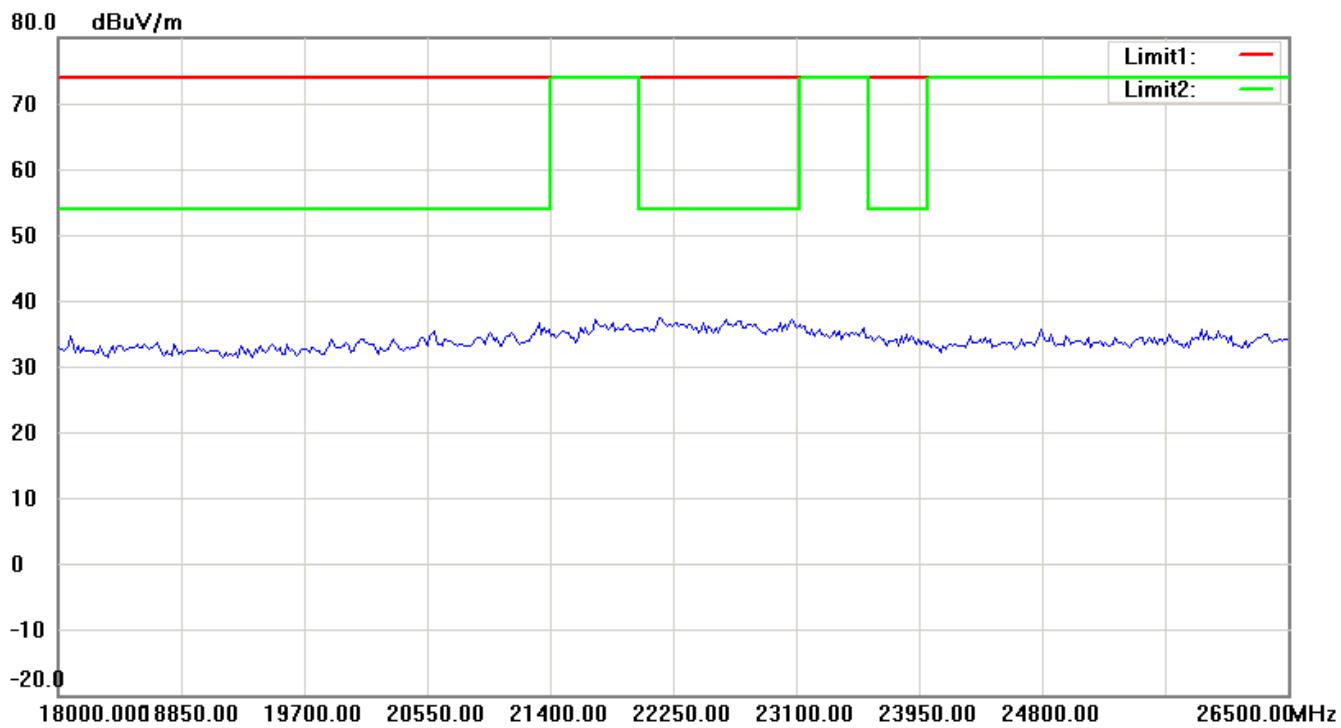
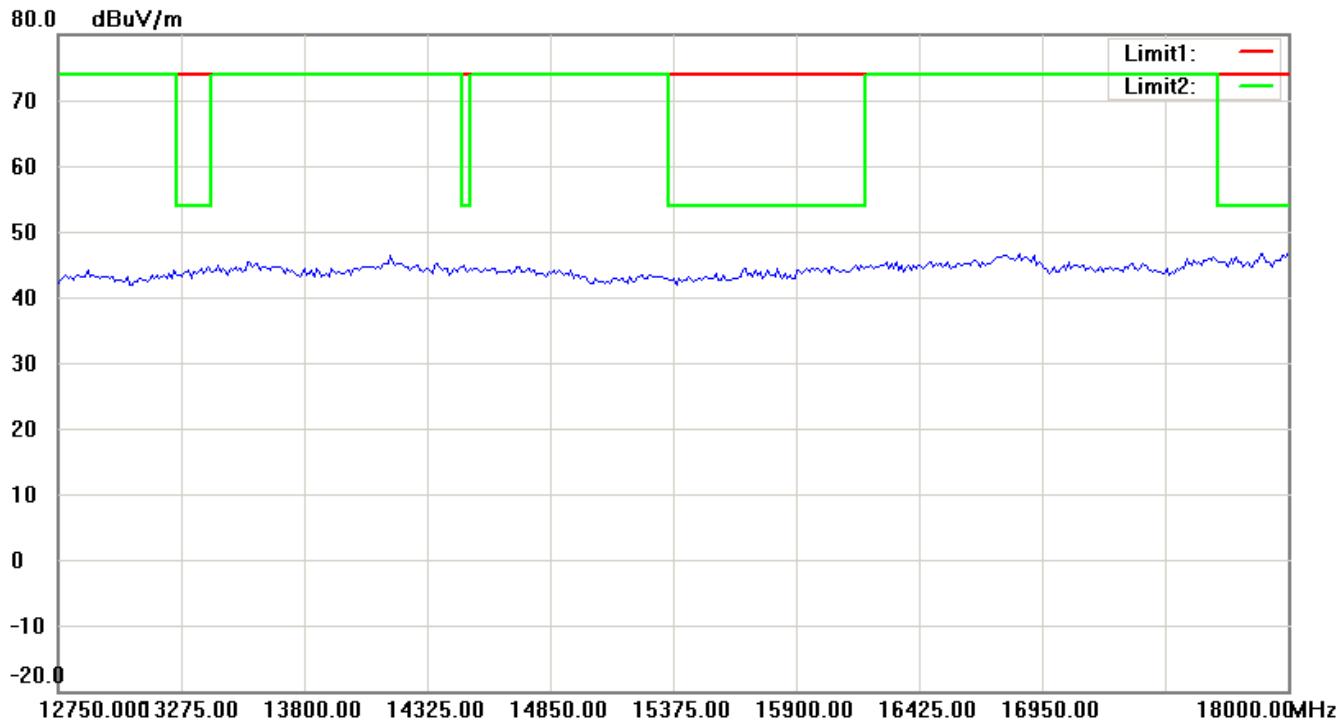
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



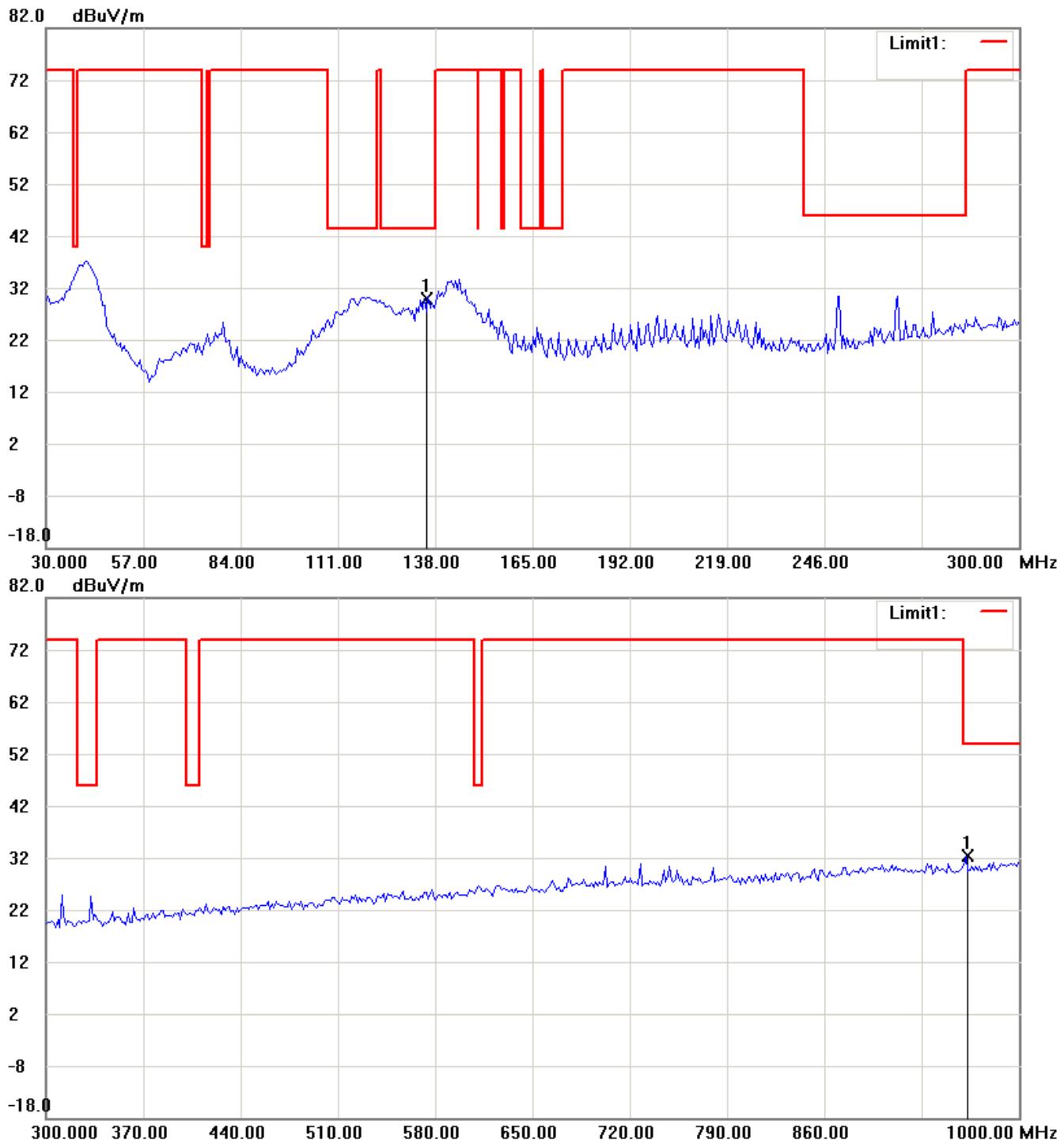
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

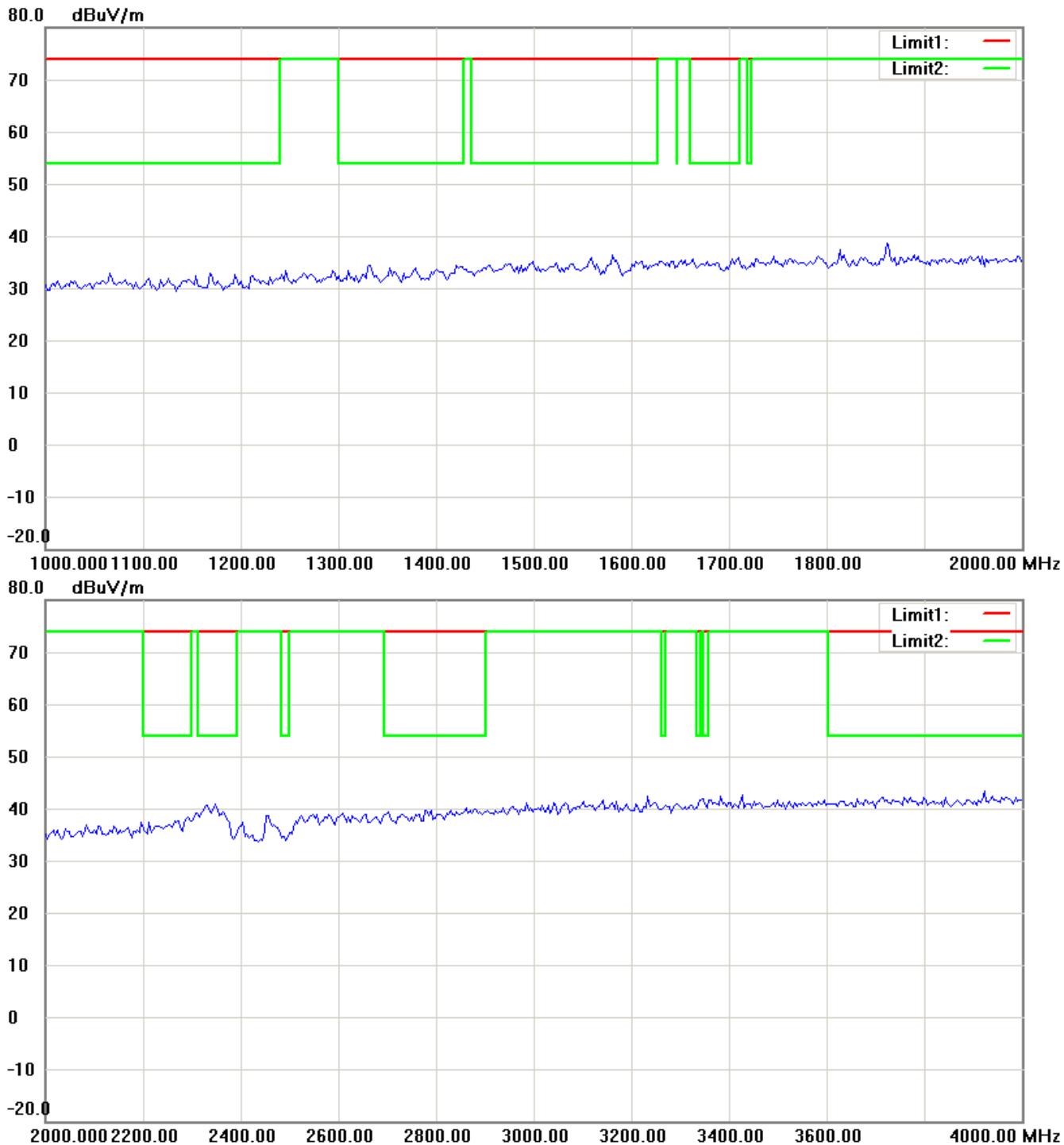
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

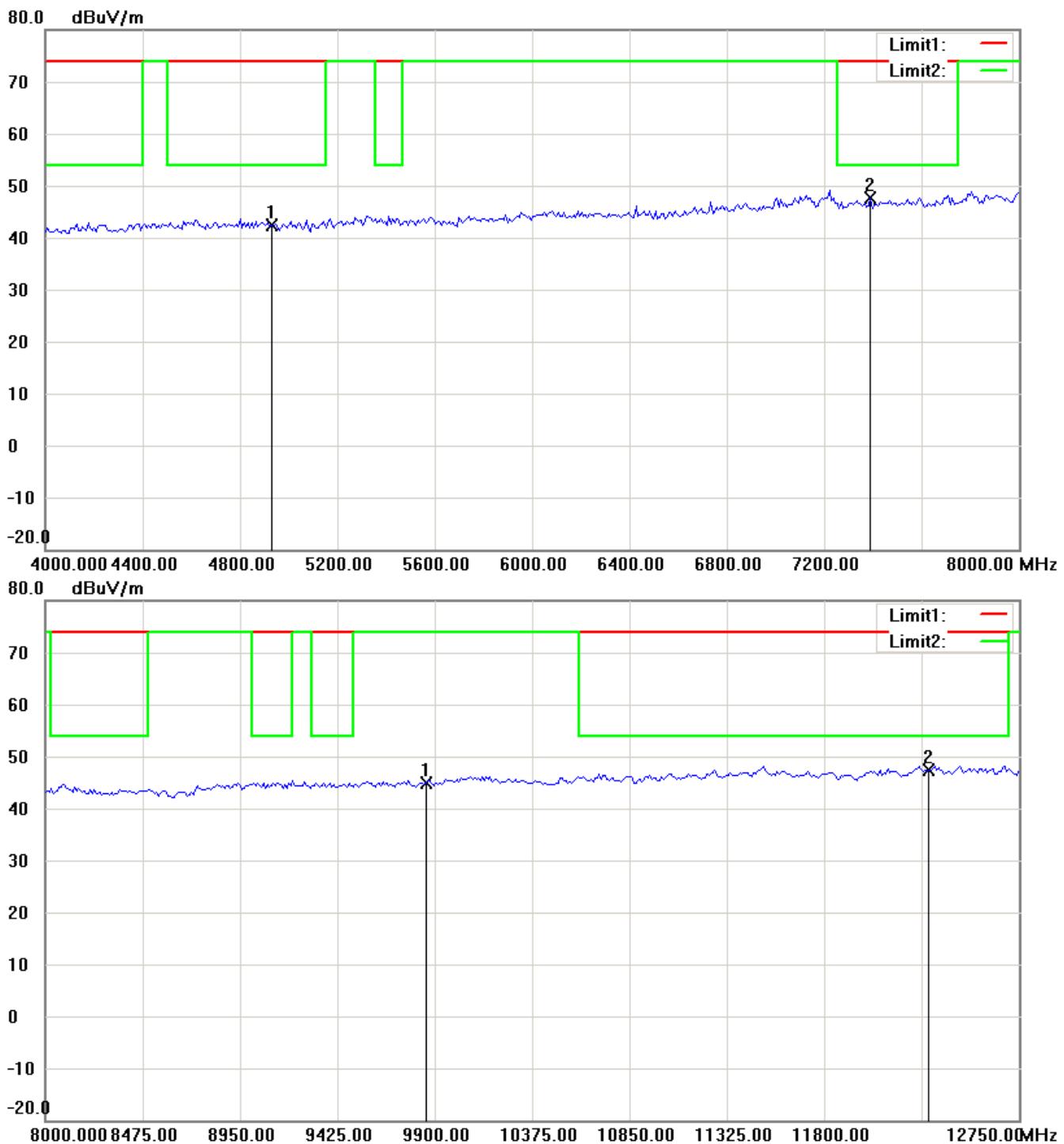
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

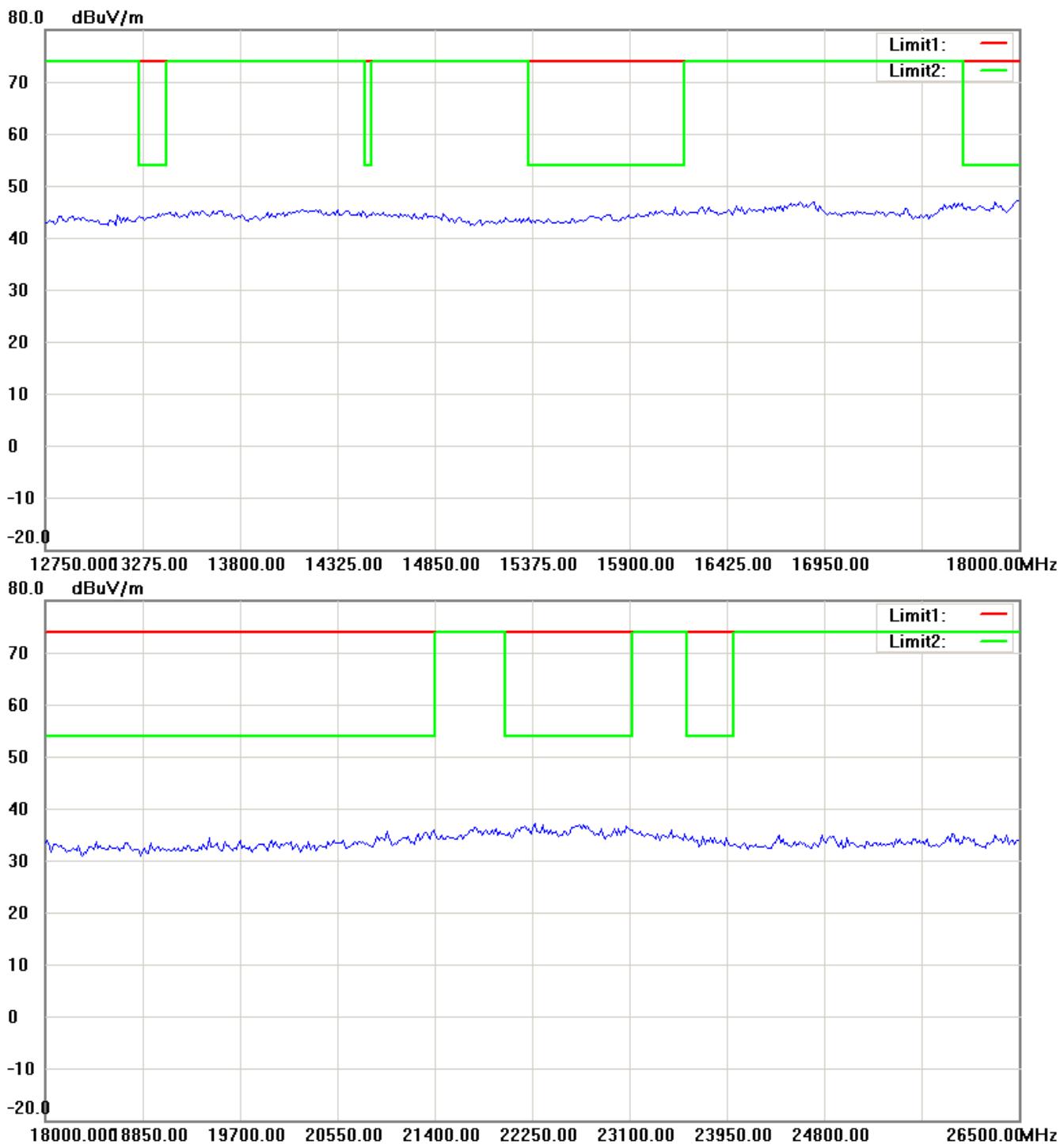
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FCC ID:Y2A-OP430



Note:

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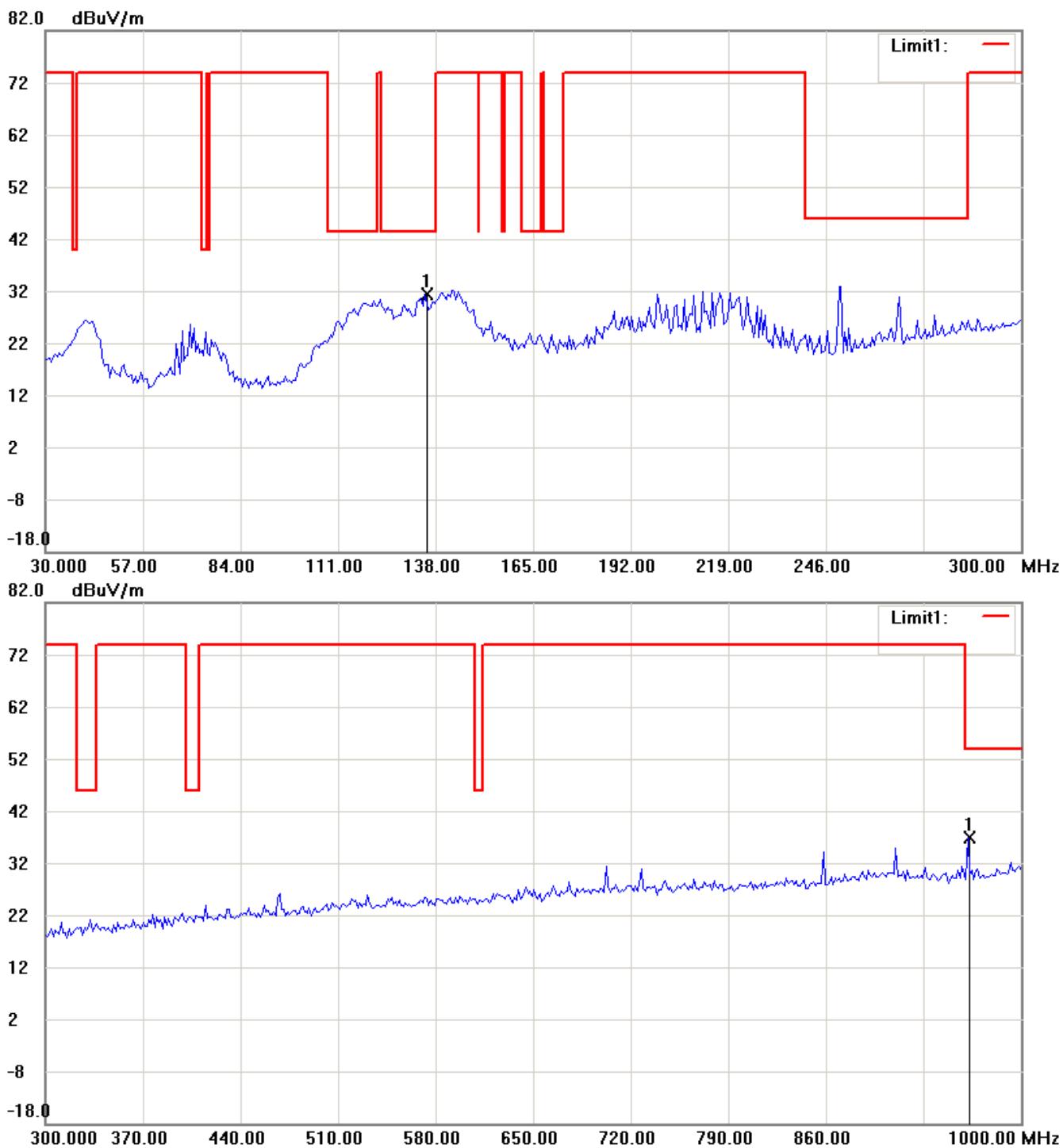
Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

802.11n 20MHz

Channel 1

Antenna Polarization H



Note:

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

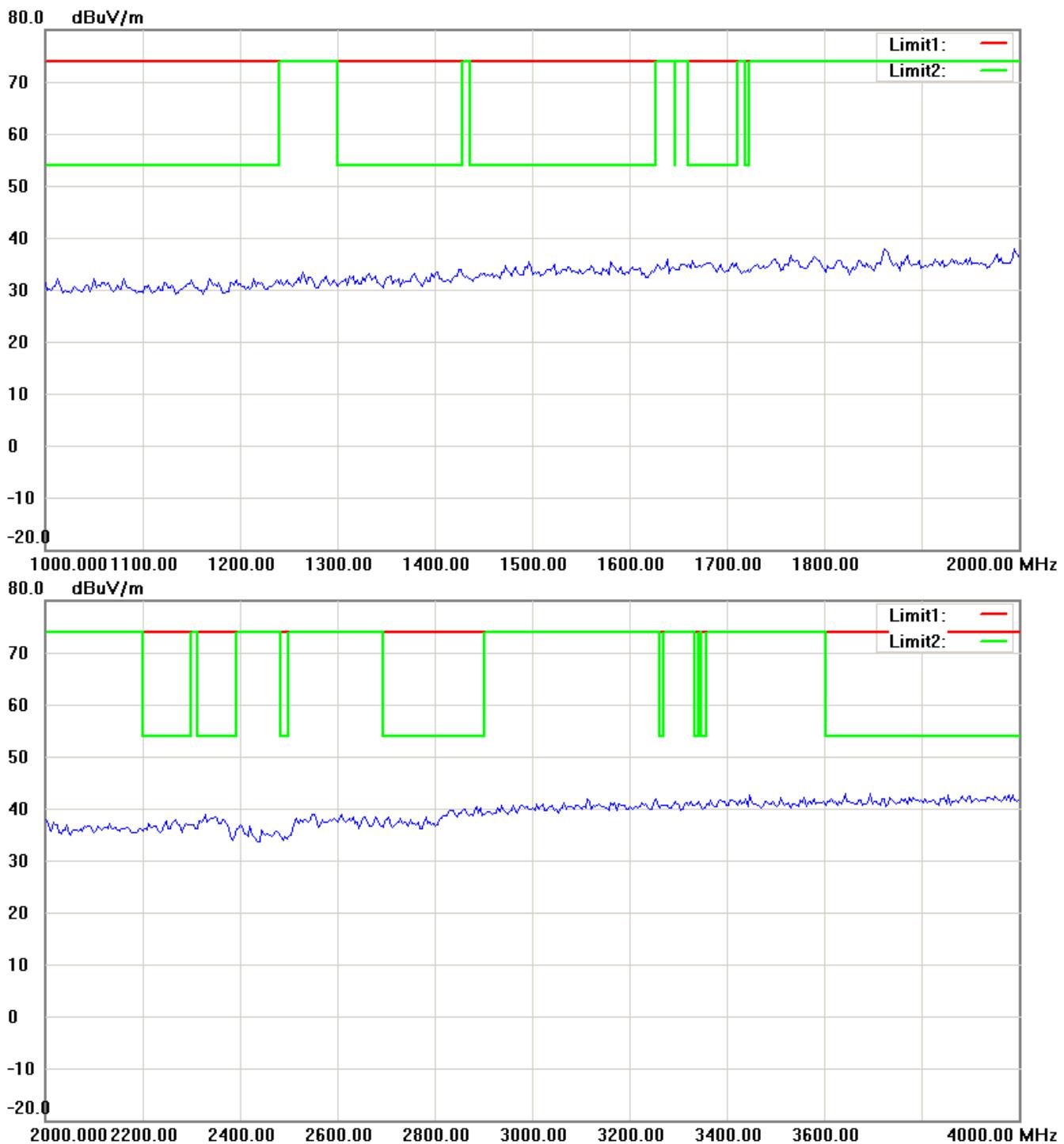
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

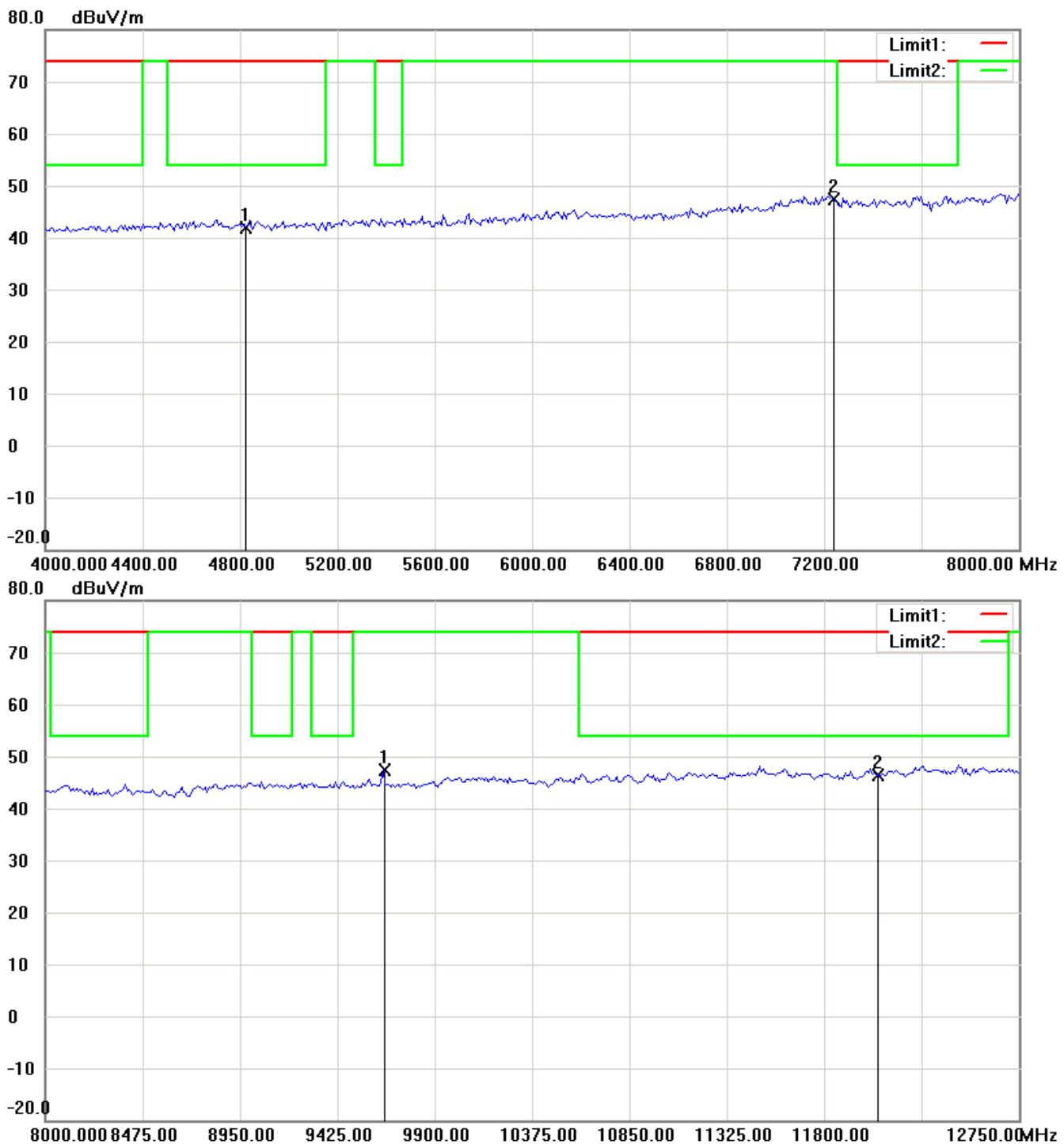
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

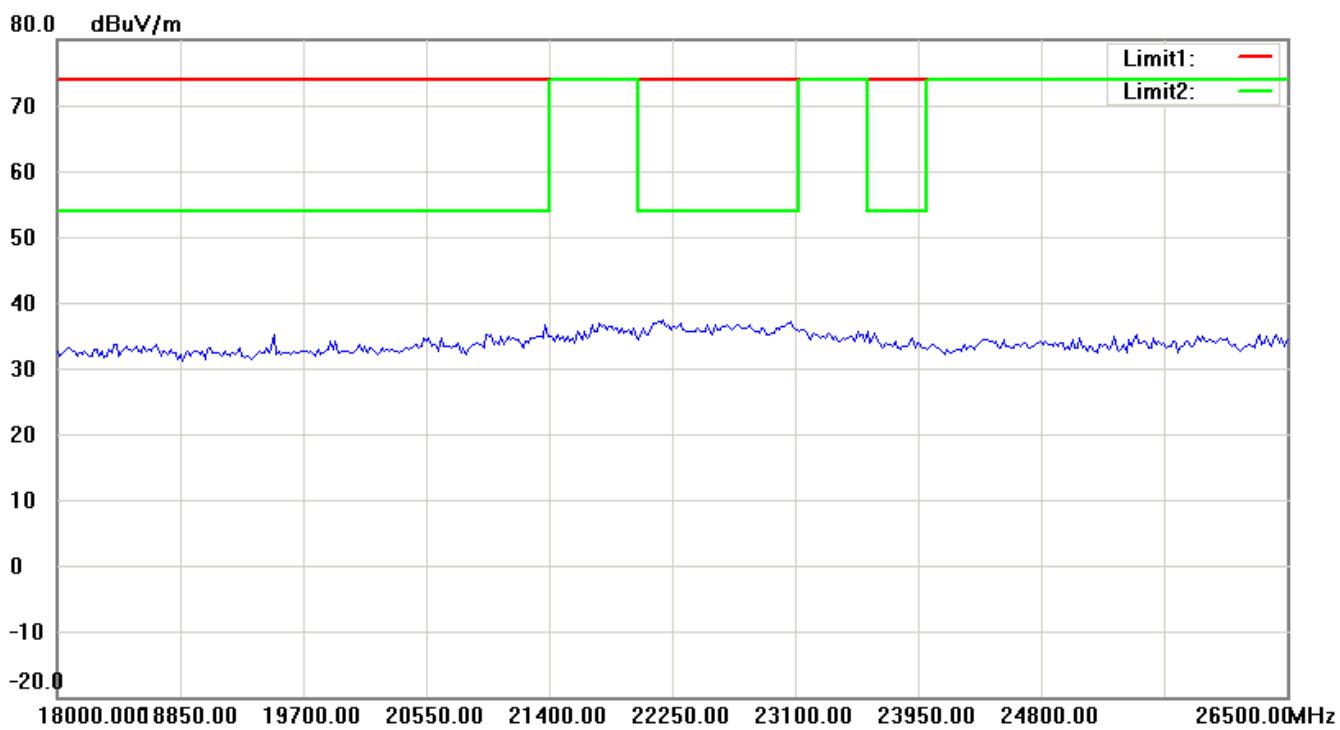
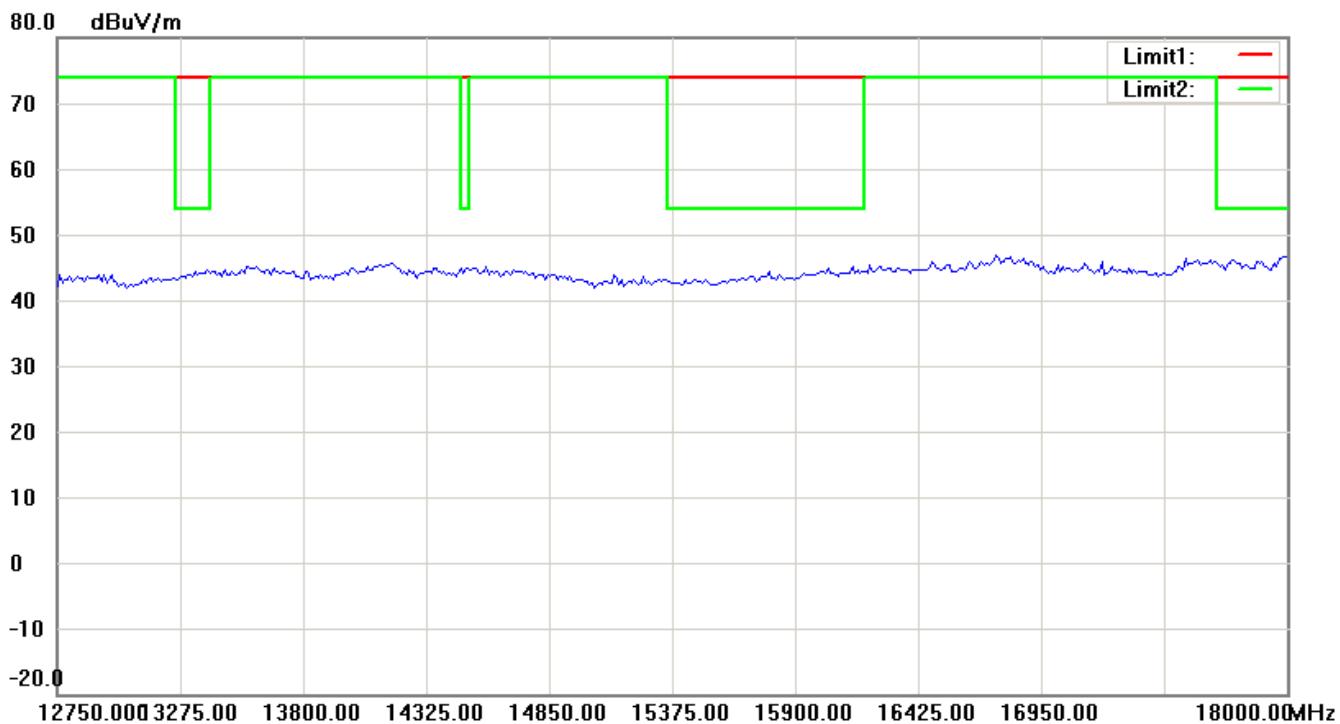
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

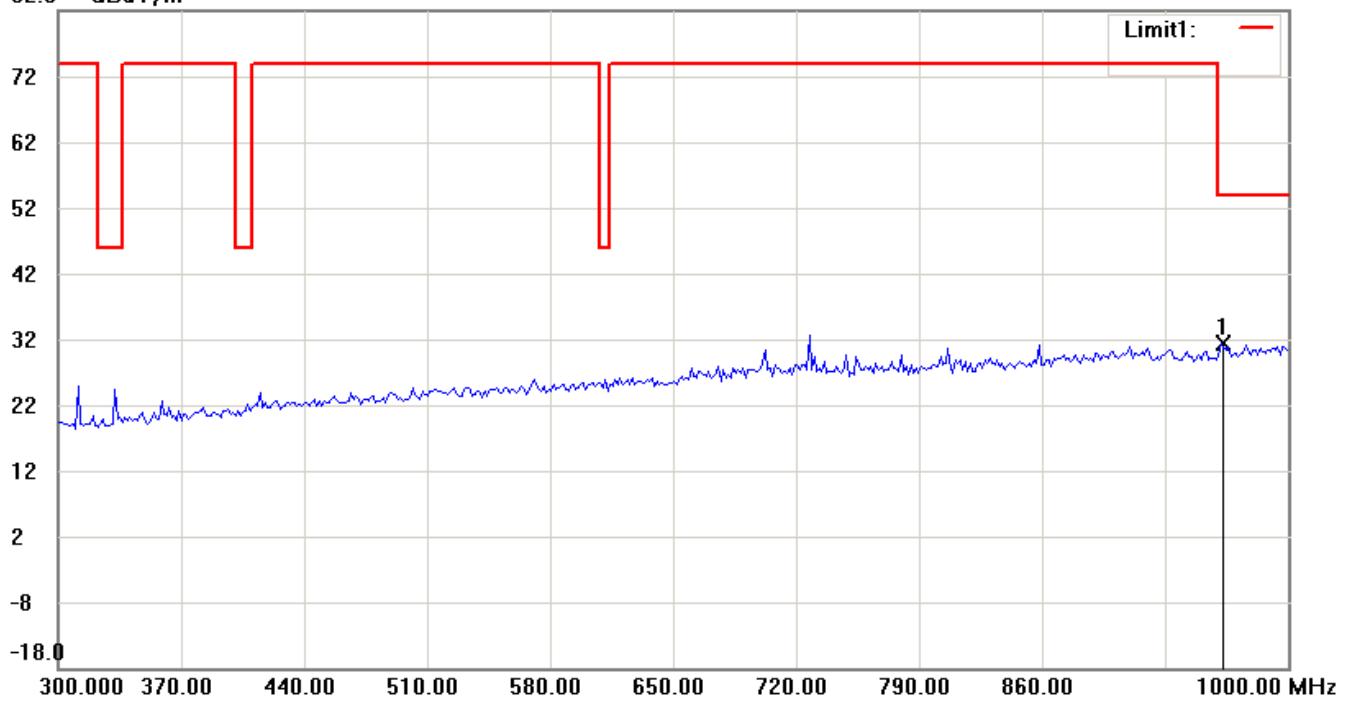
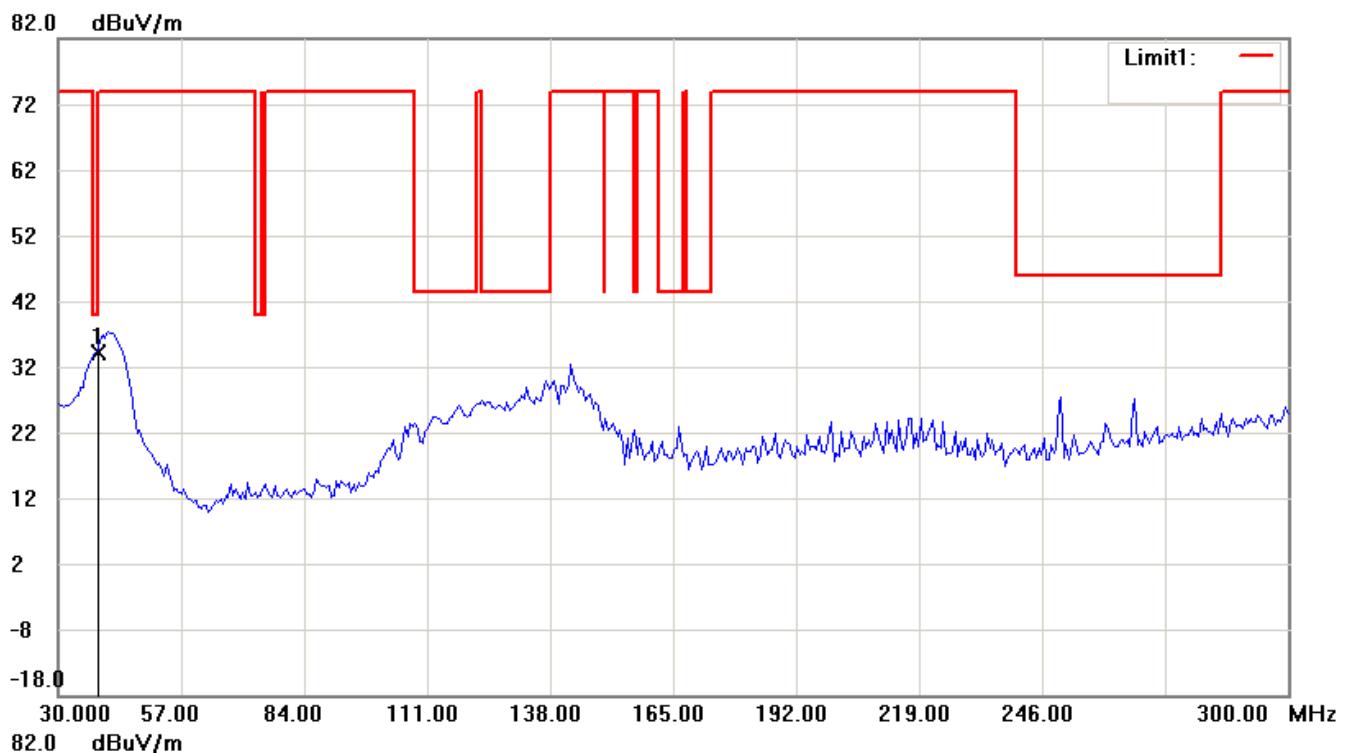
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

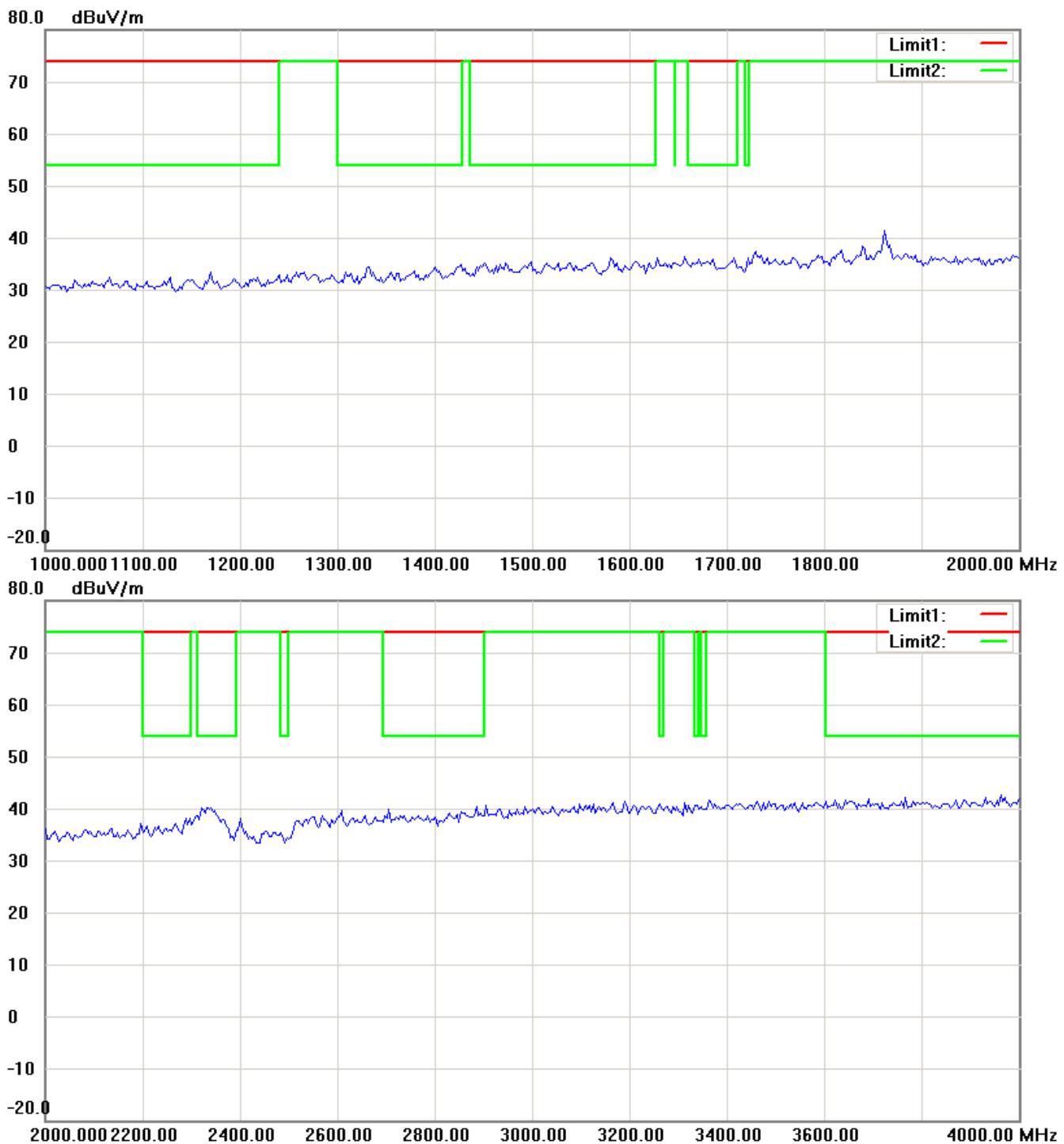
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

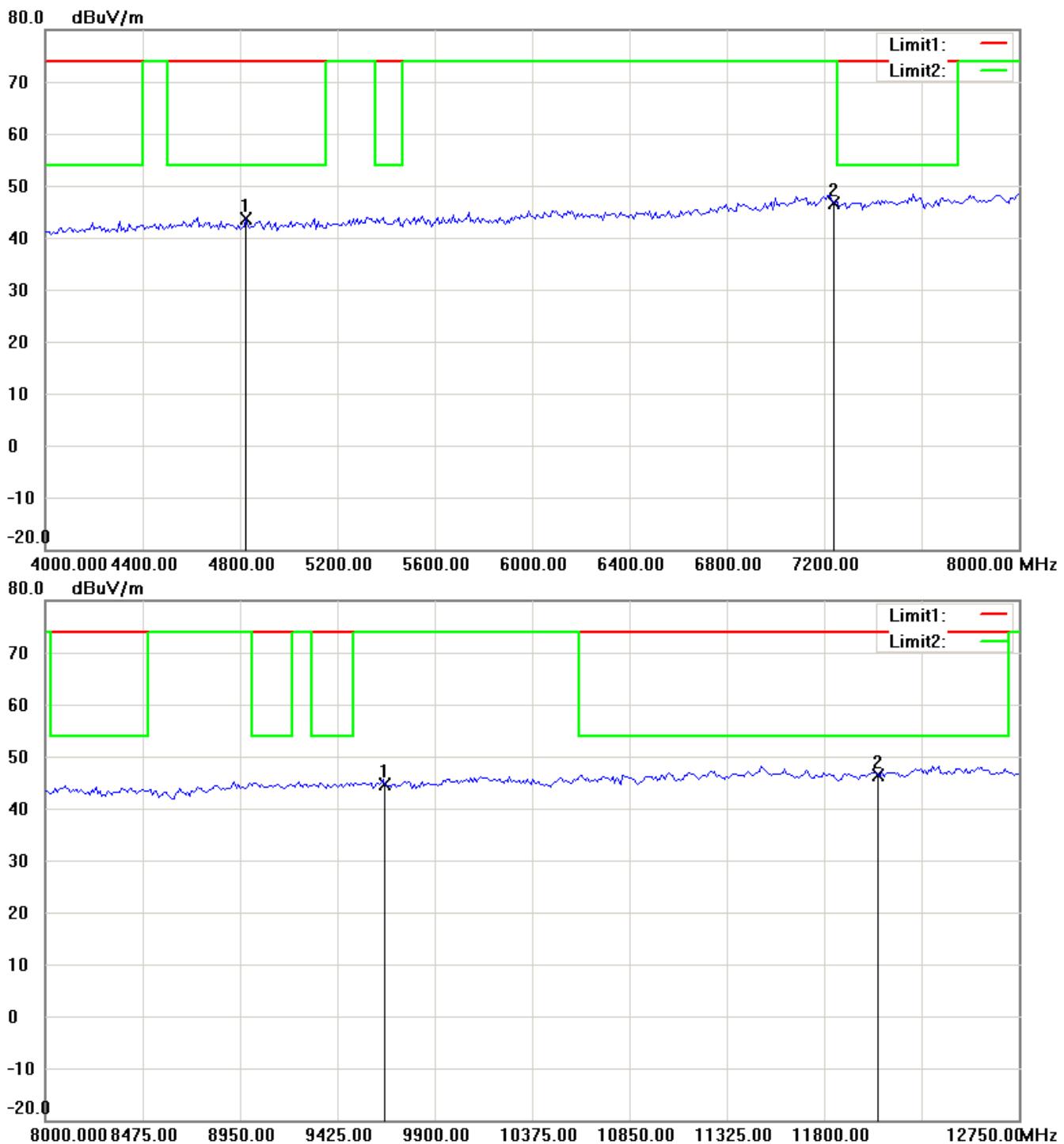
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

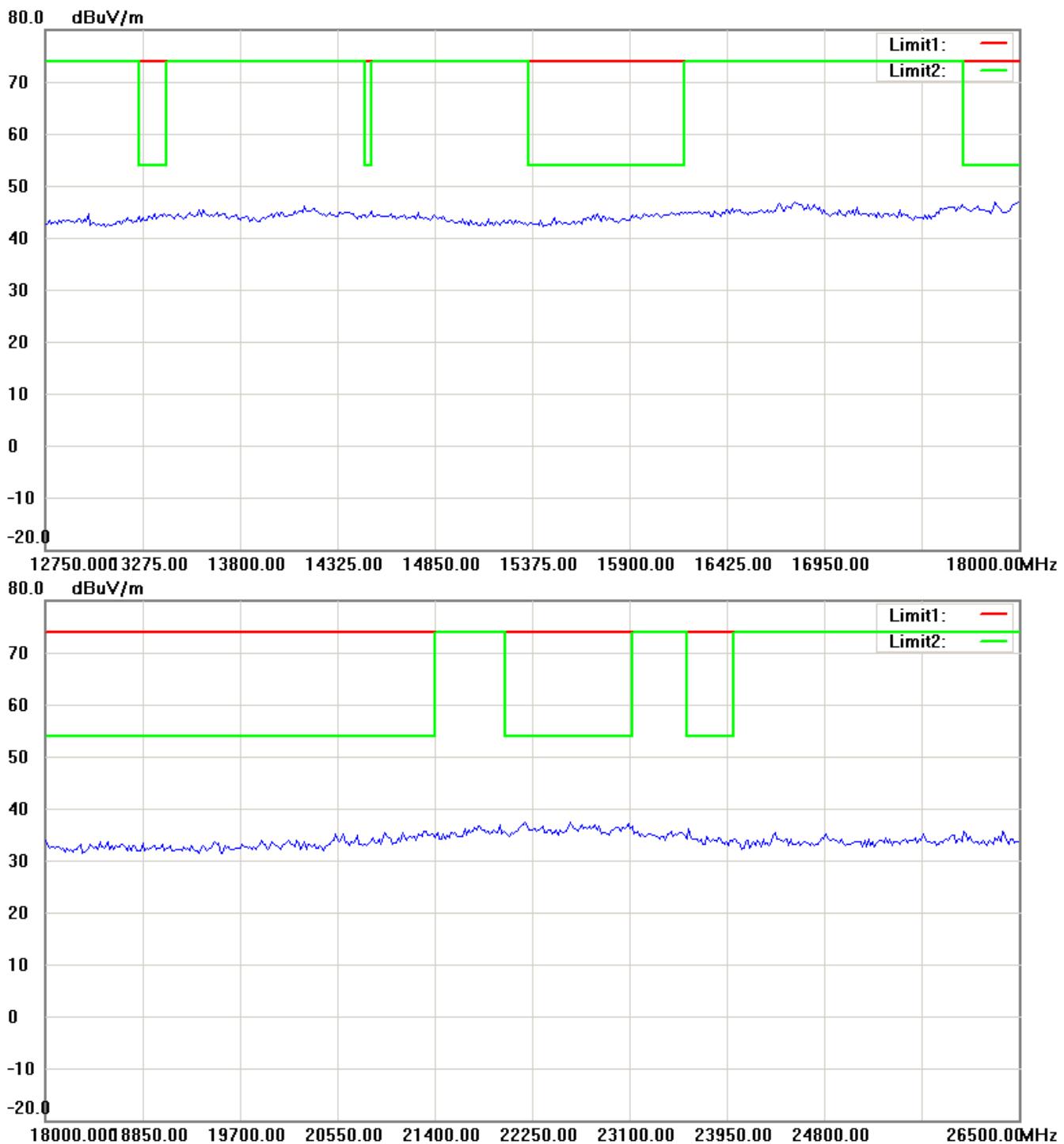
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FCC ID:Y2A-OP430



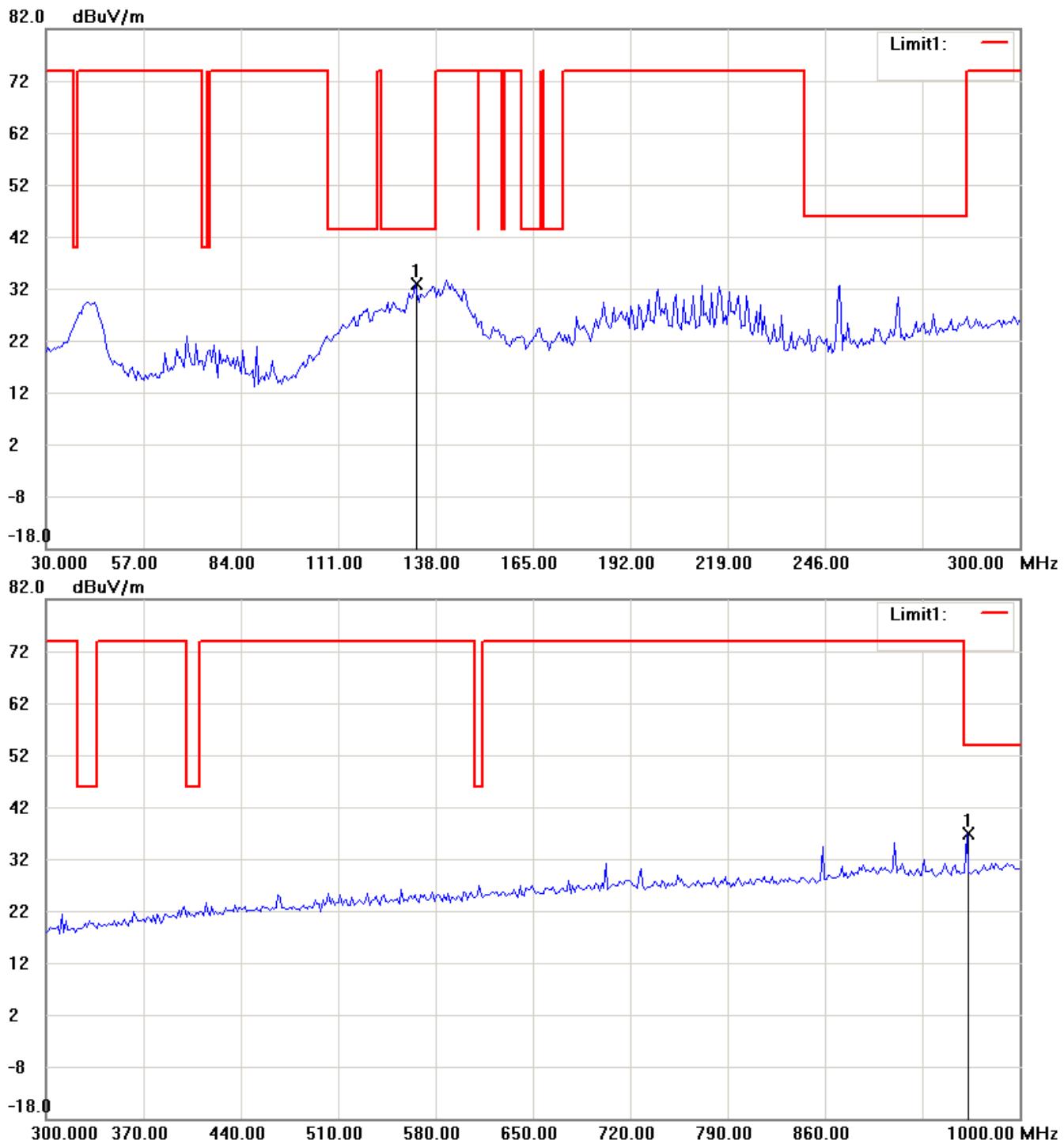
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 6 Antenna Polarization H



Note:

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

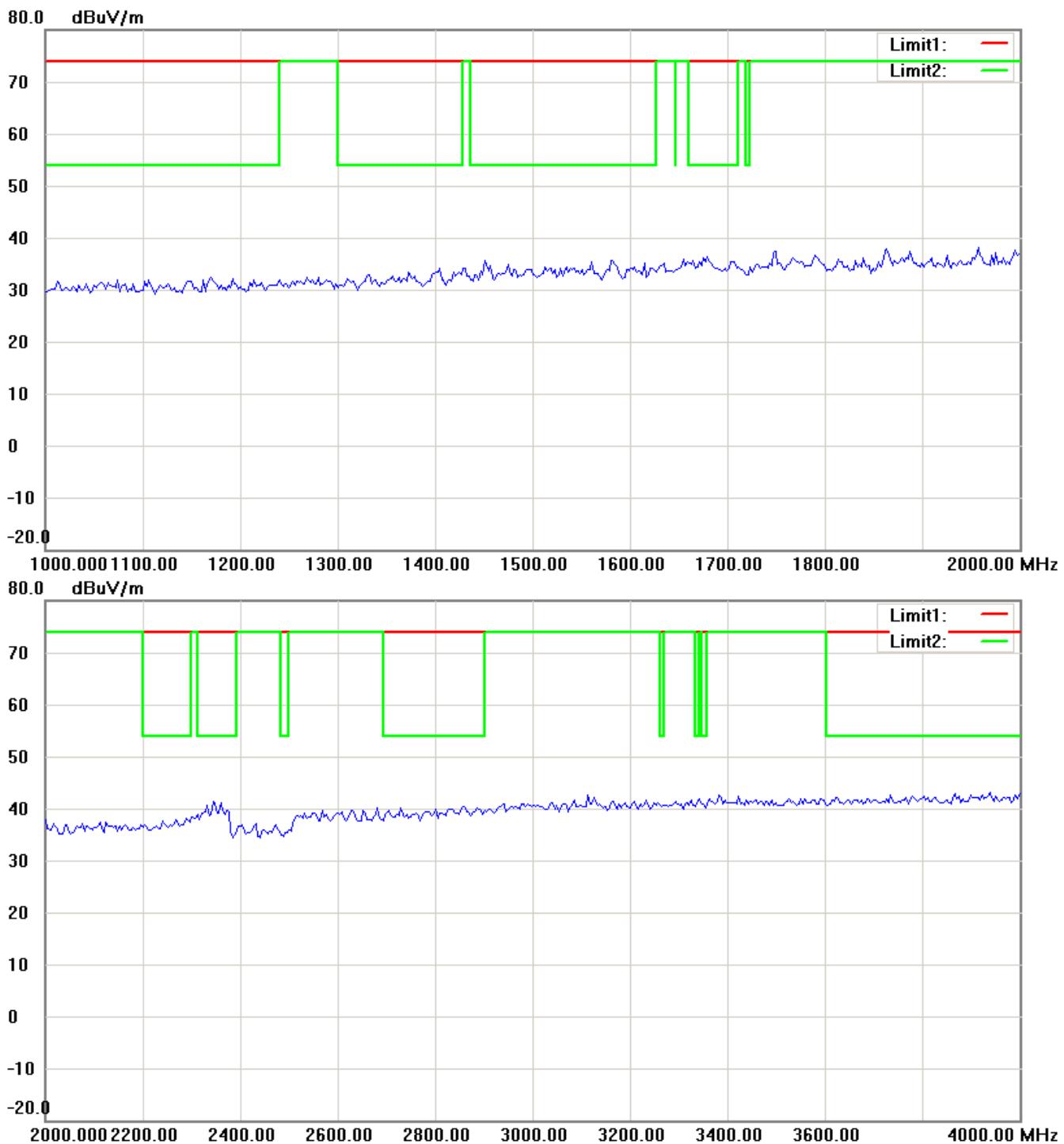
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

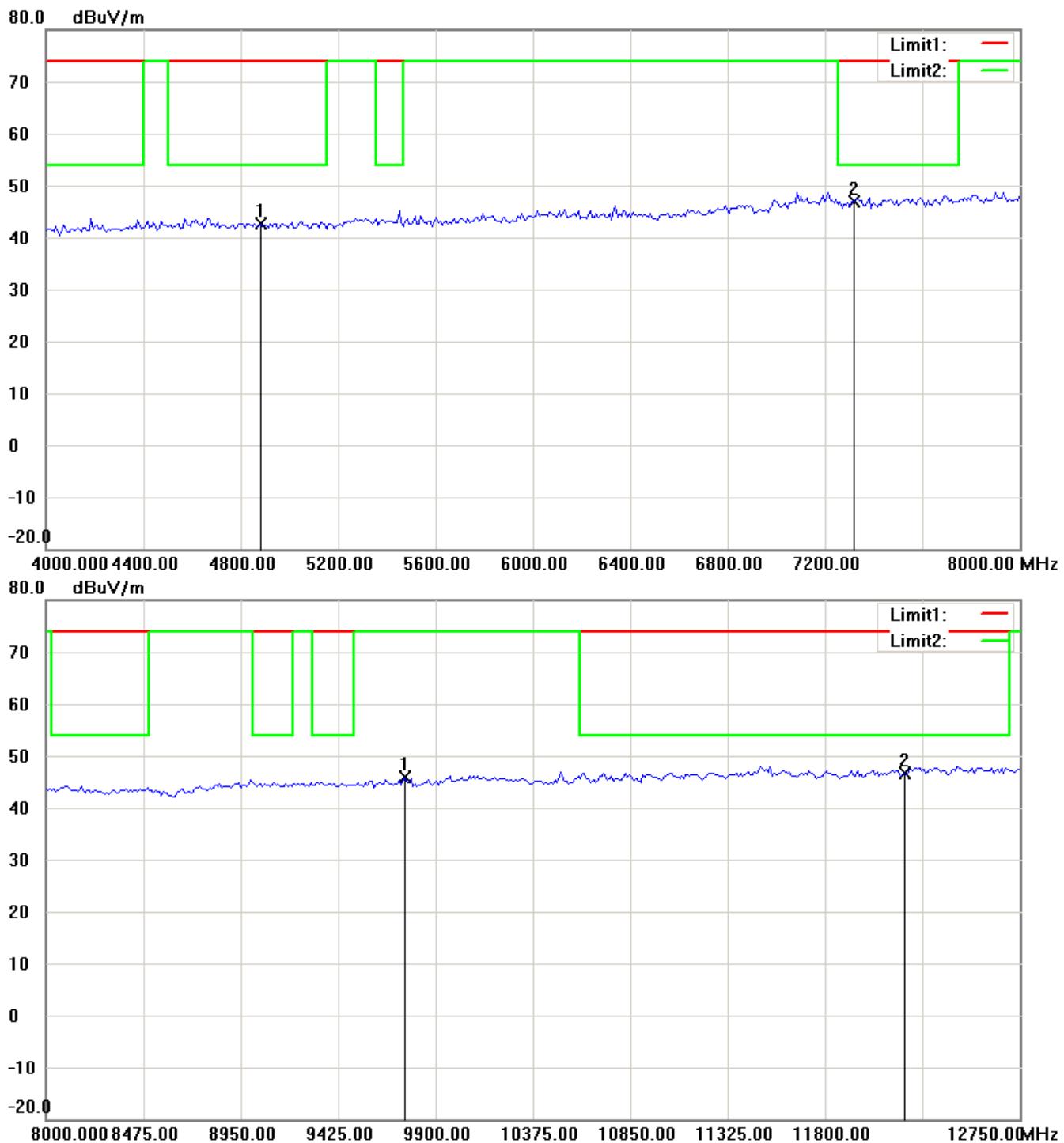
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

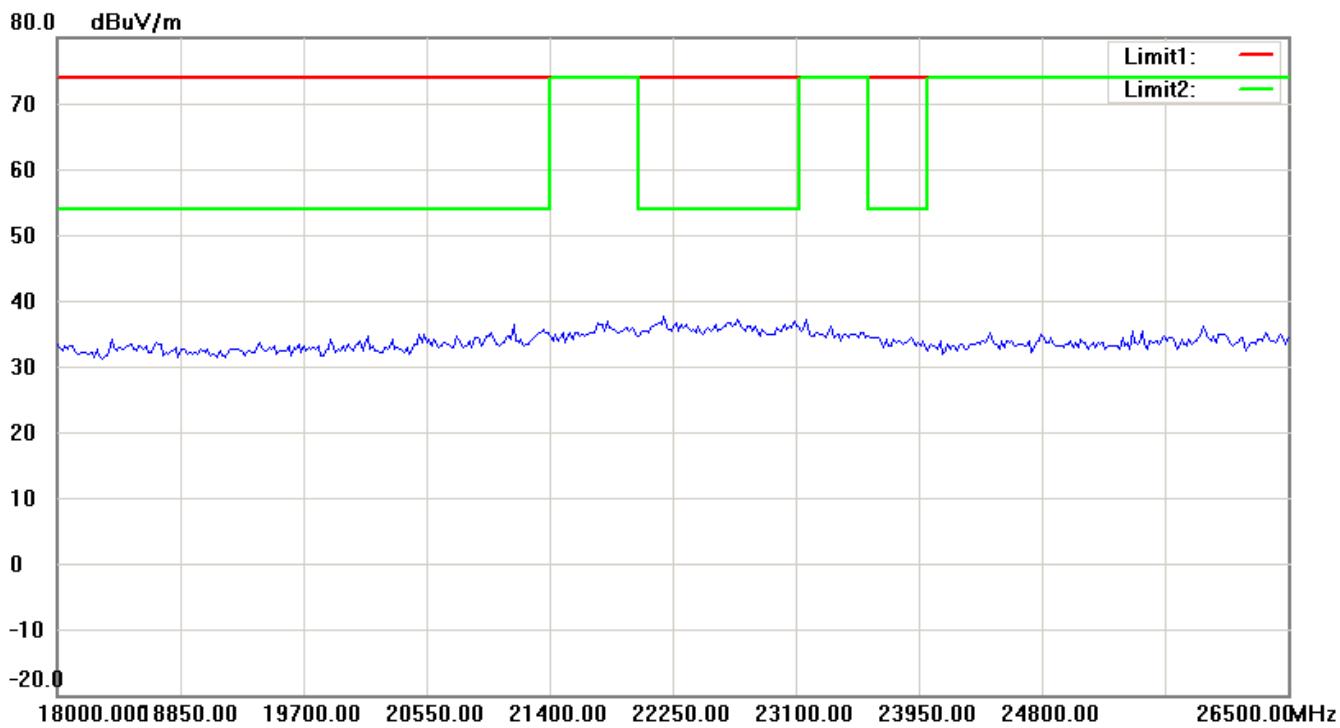
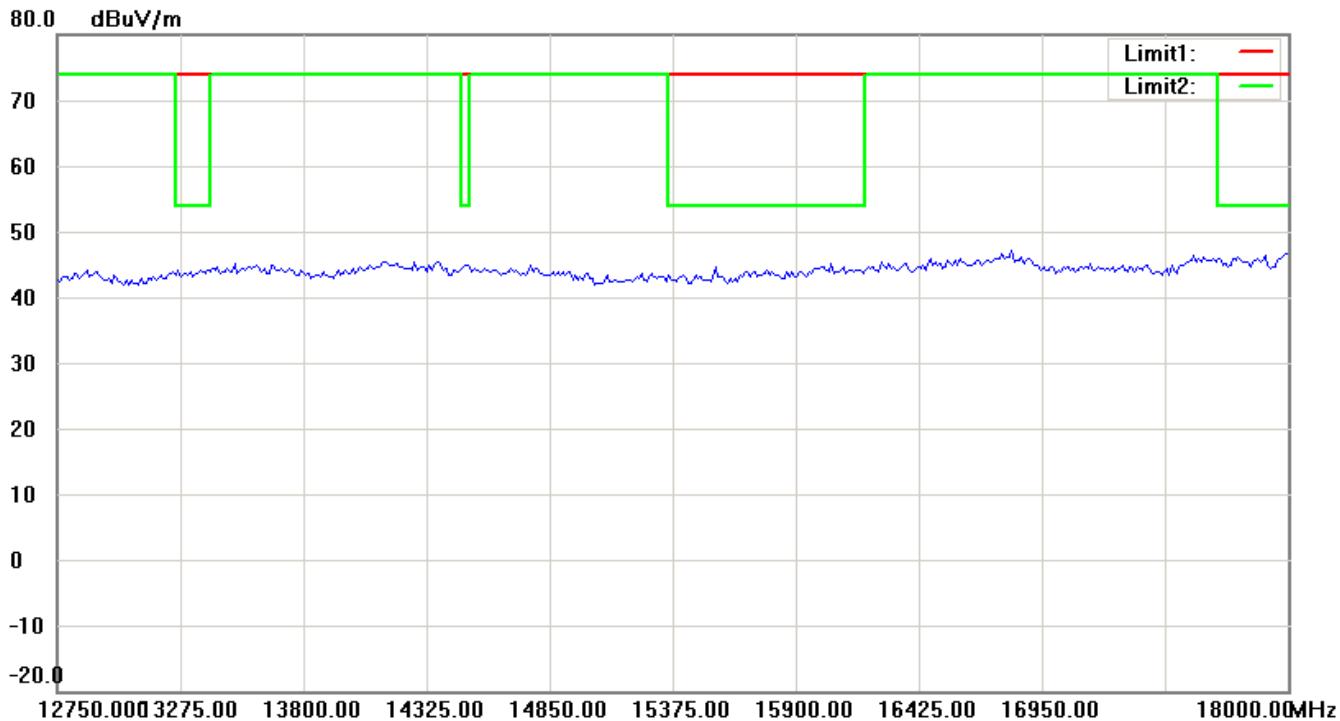
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



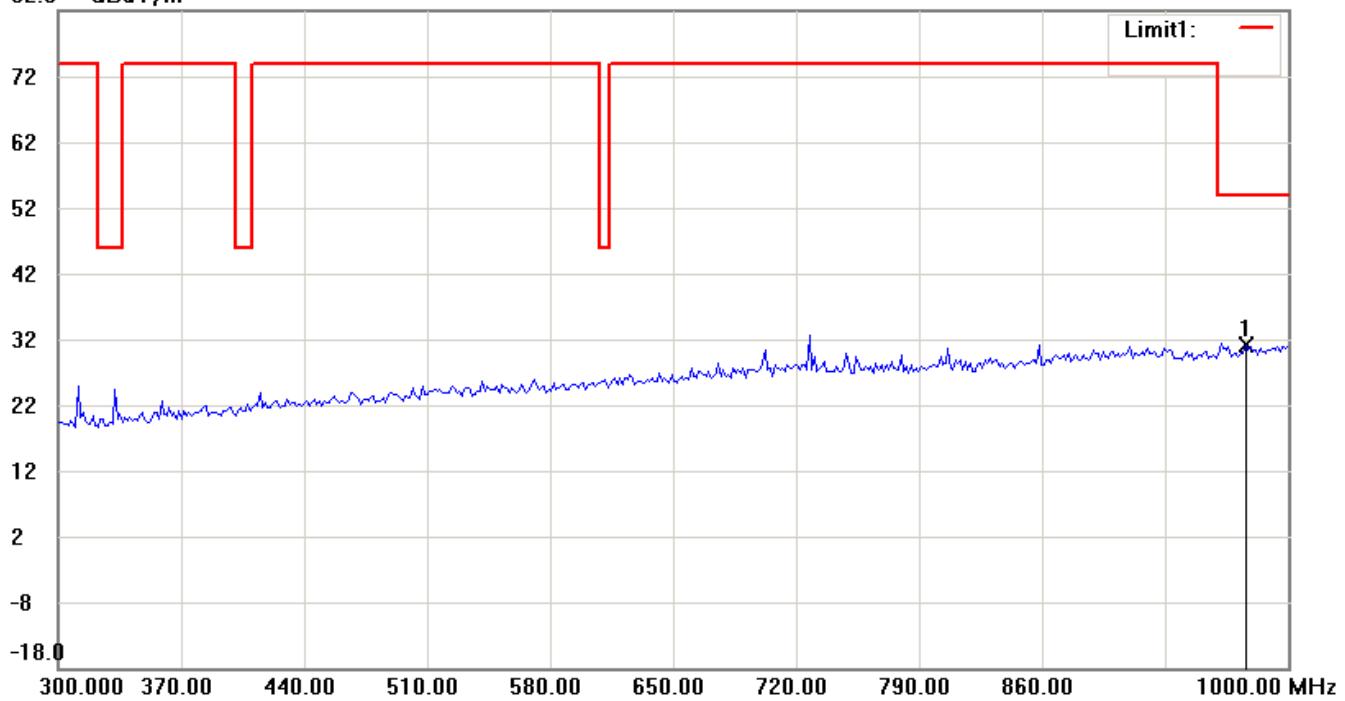
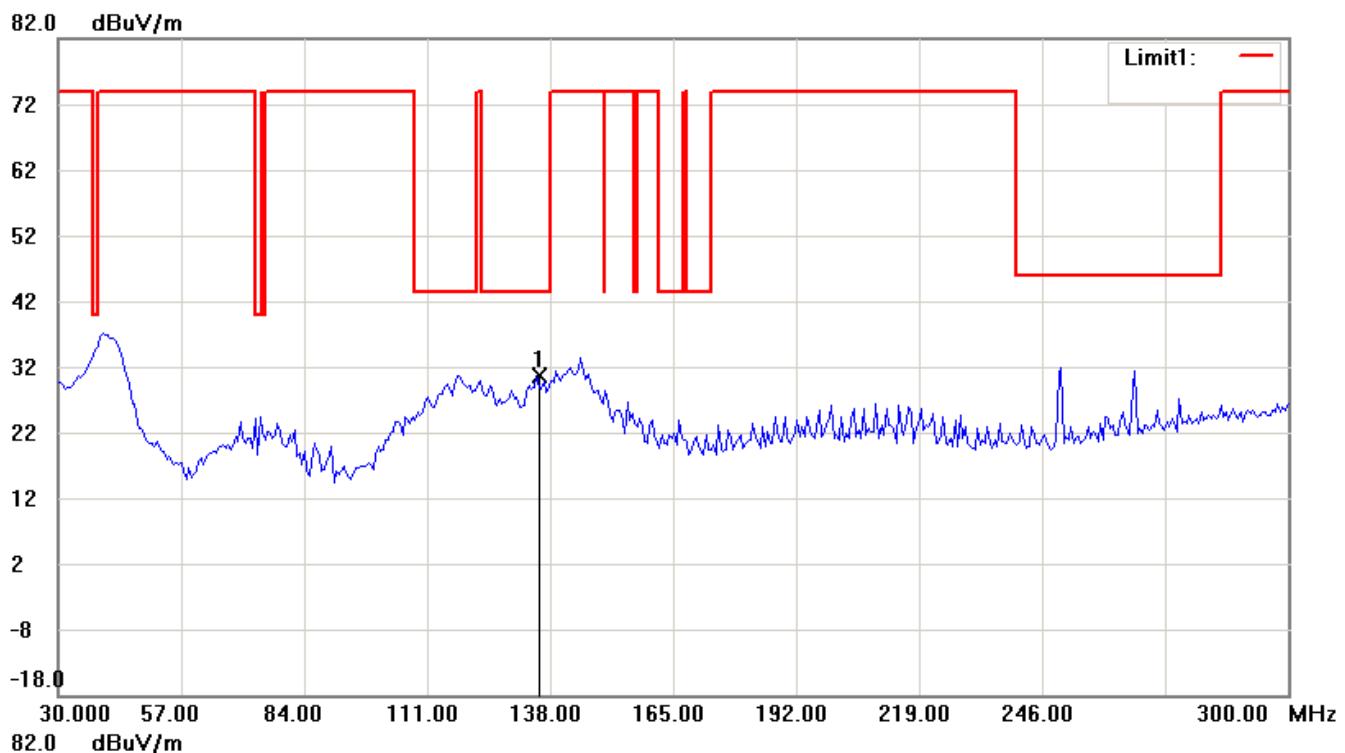
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

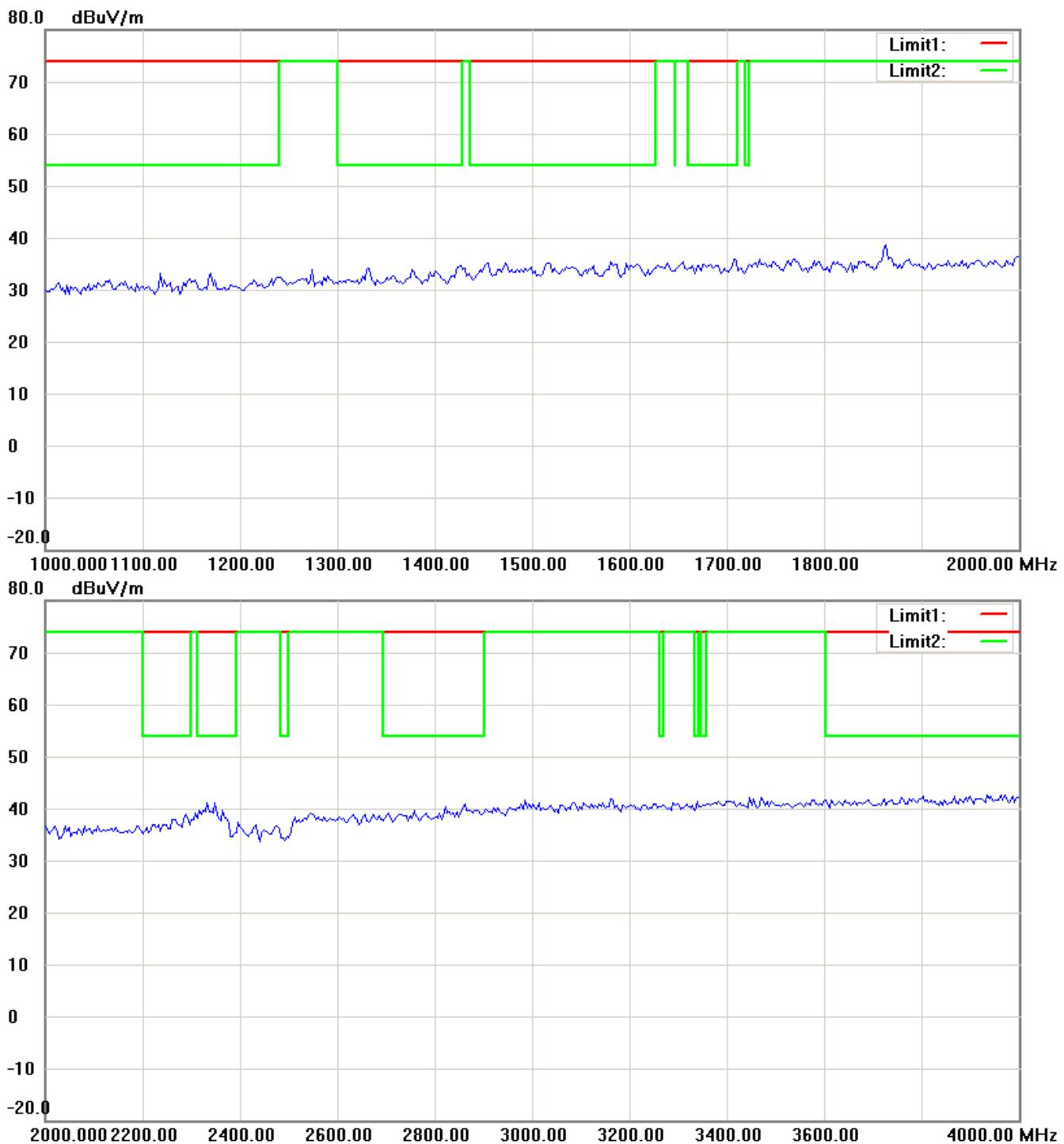
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

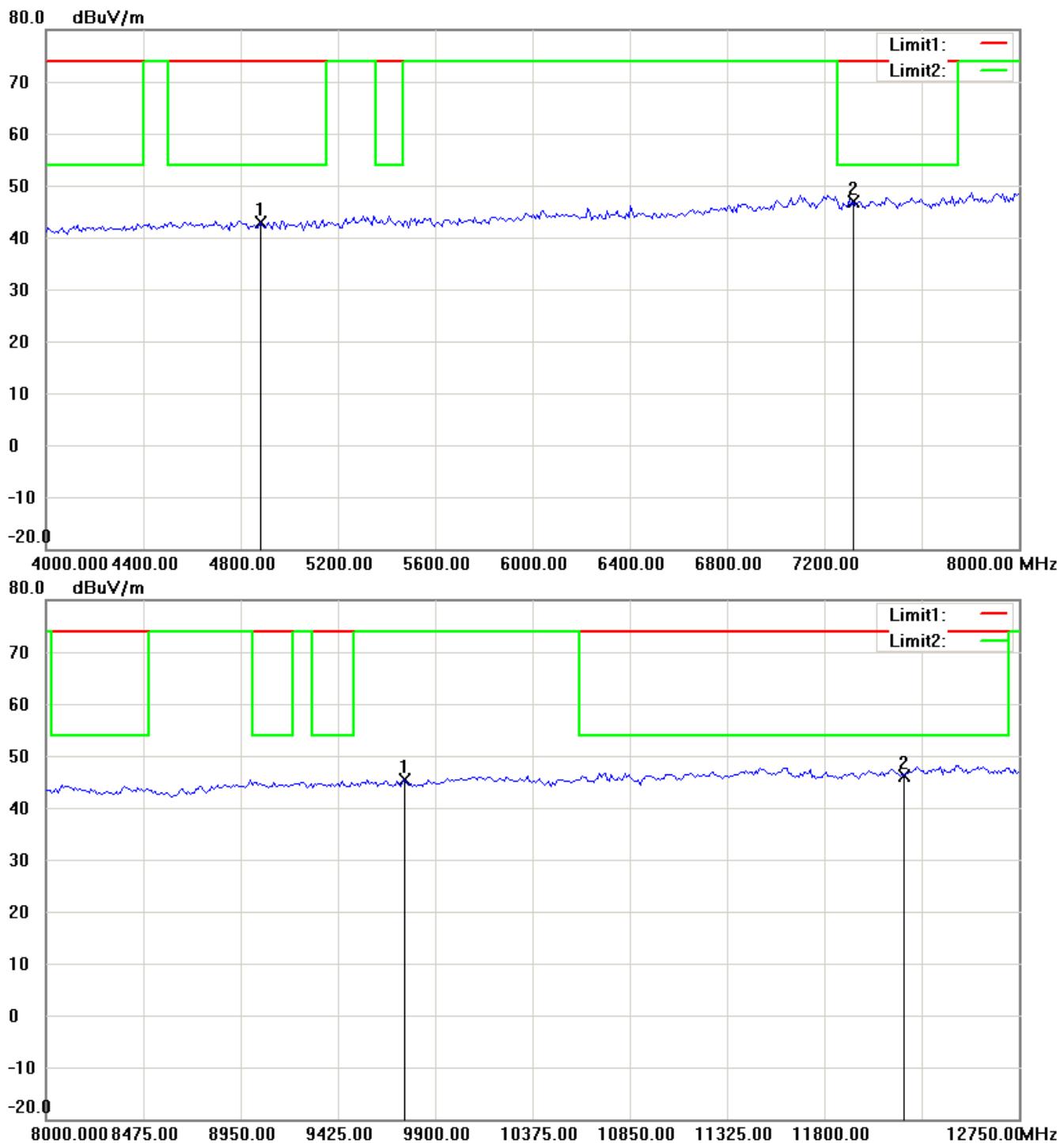
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Note:

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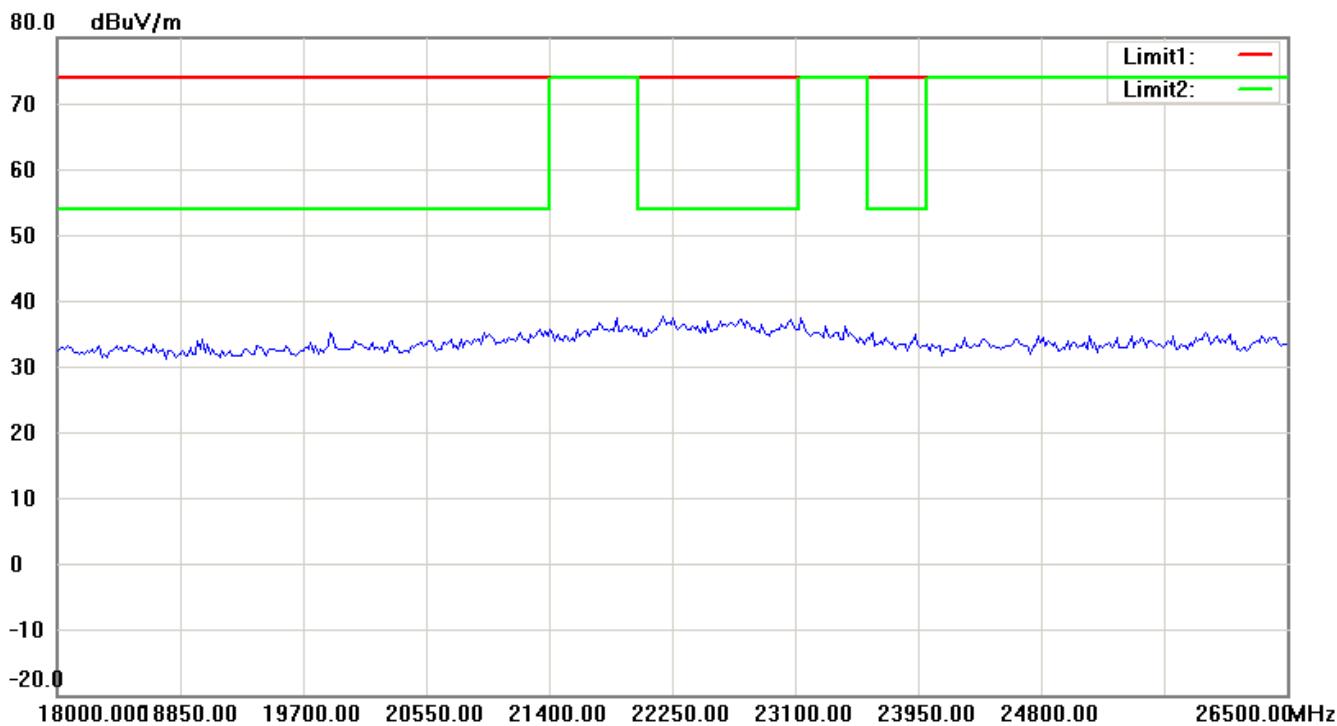
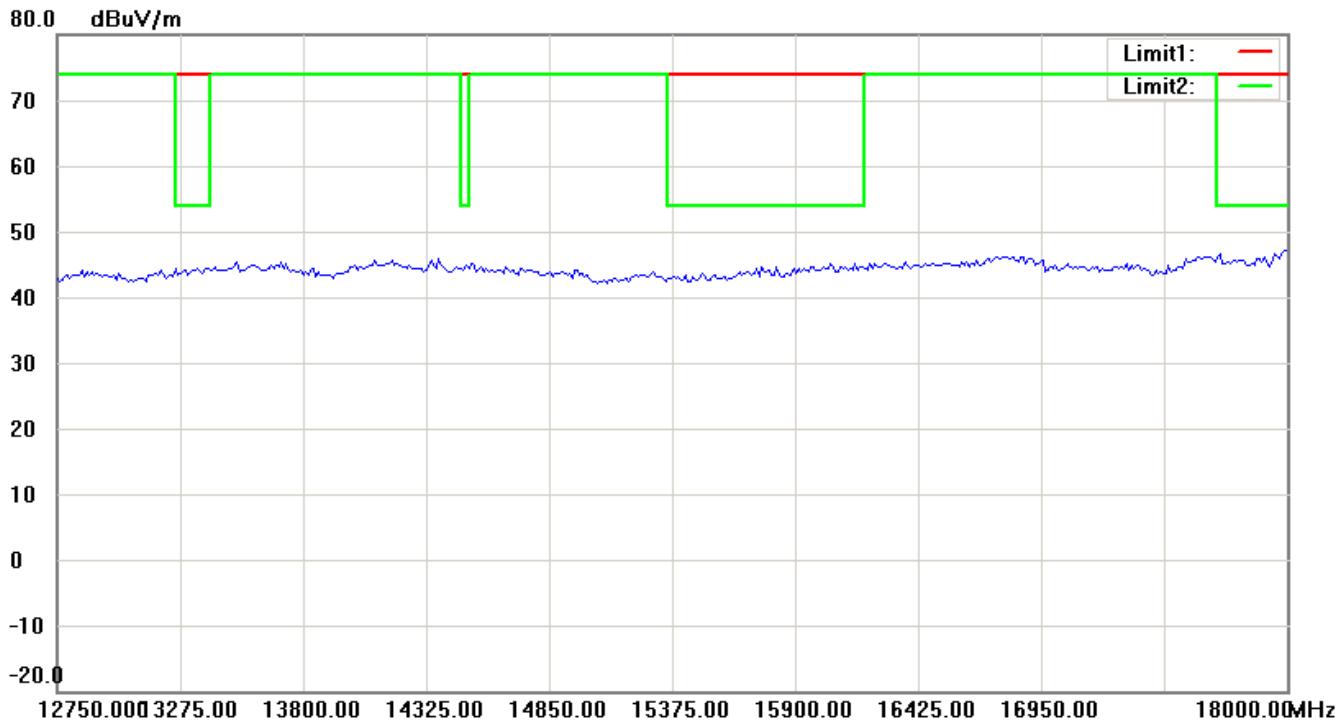
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Registration number: W6M21103-11337-C-1

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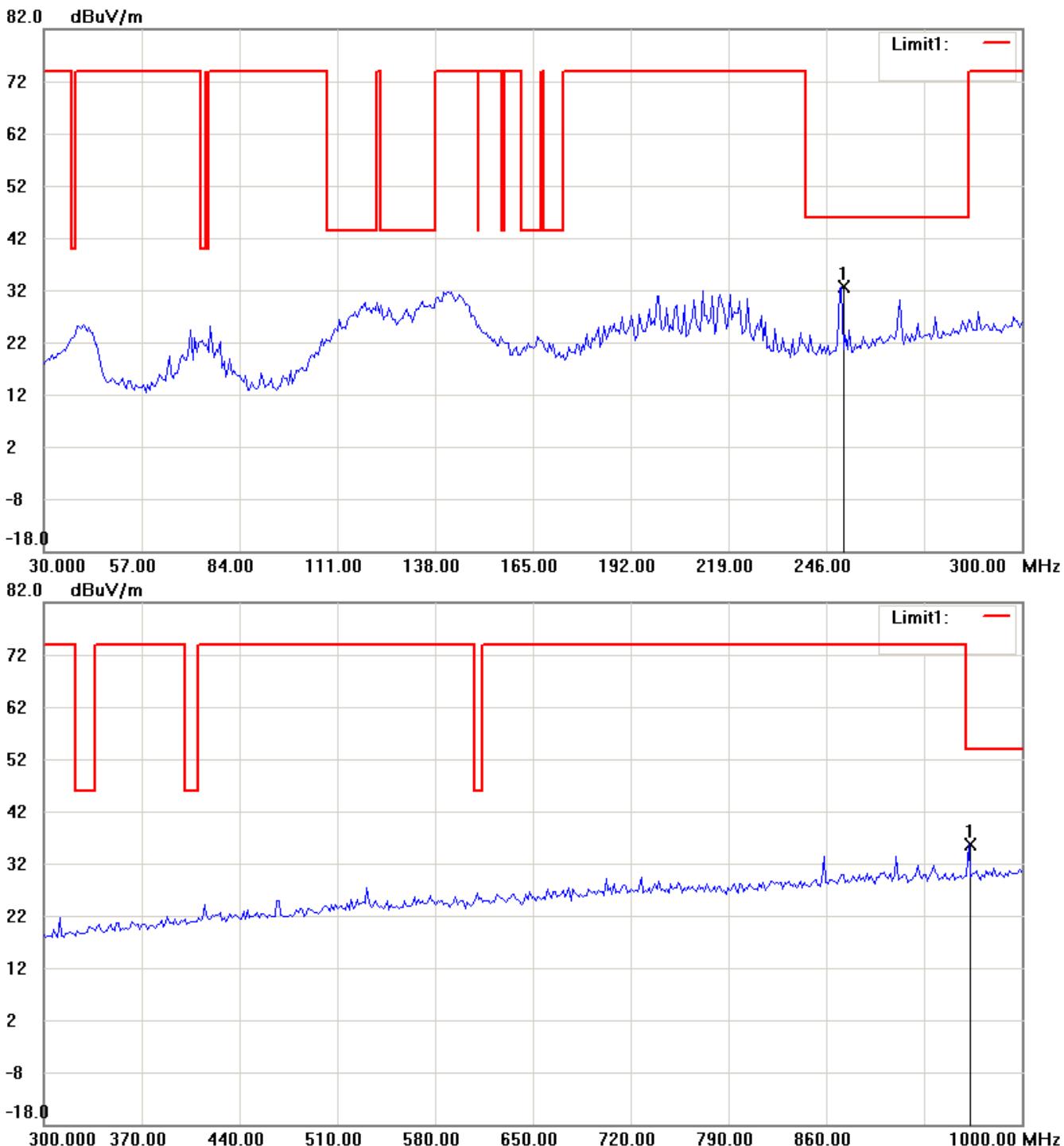
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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Channel 11 Antenna Polarization H



Note:

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

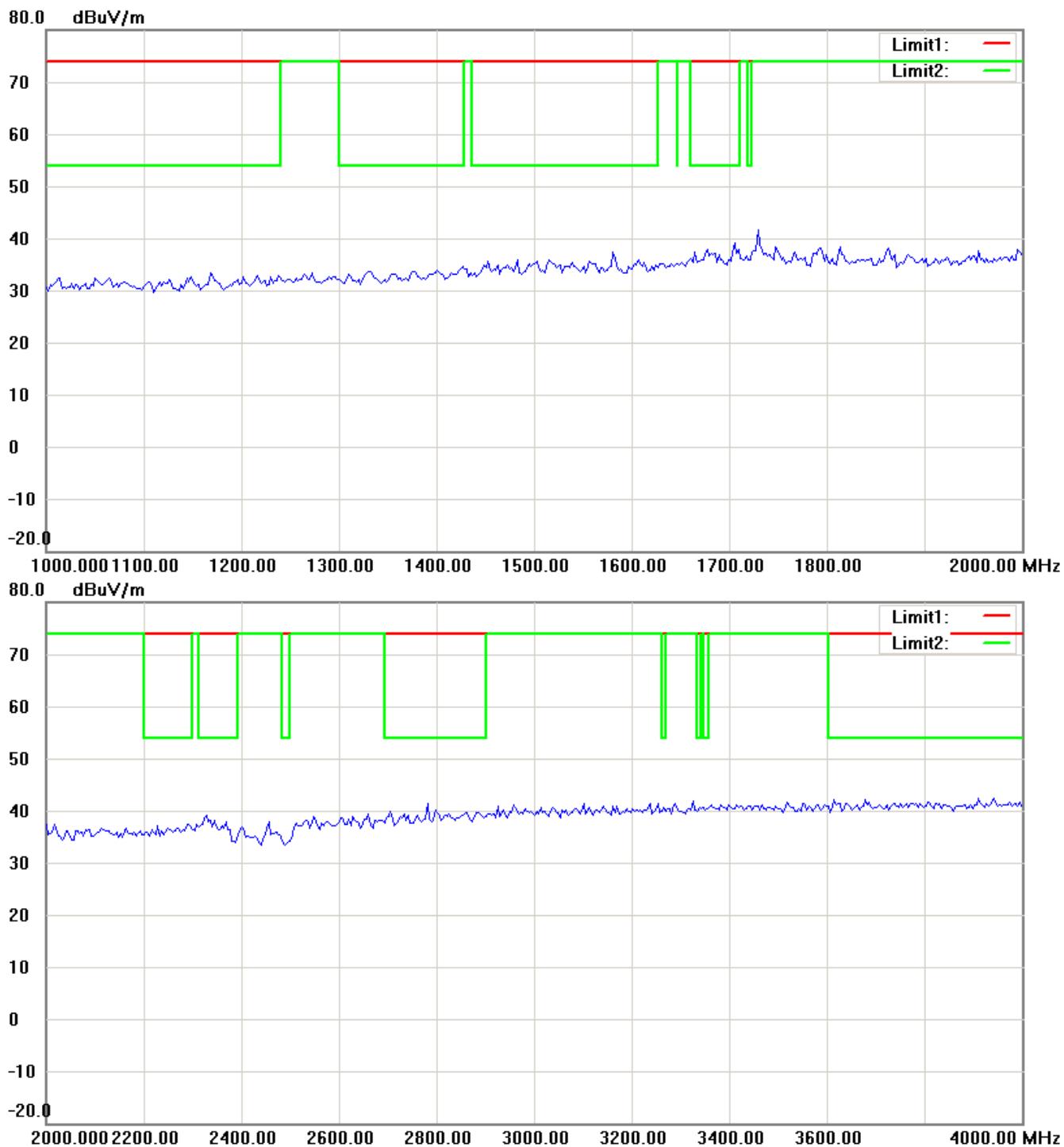
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

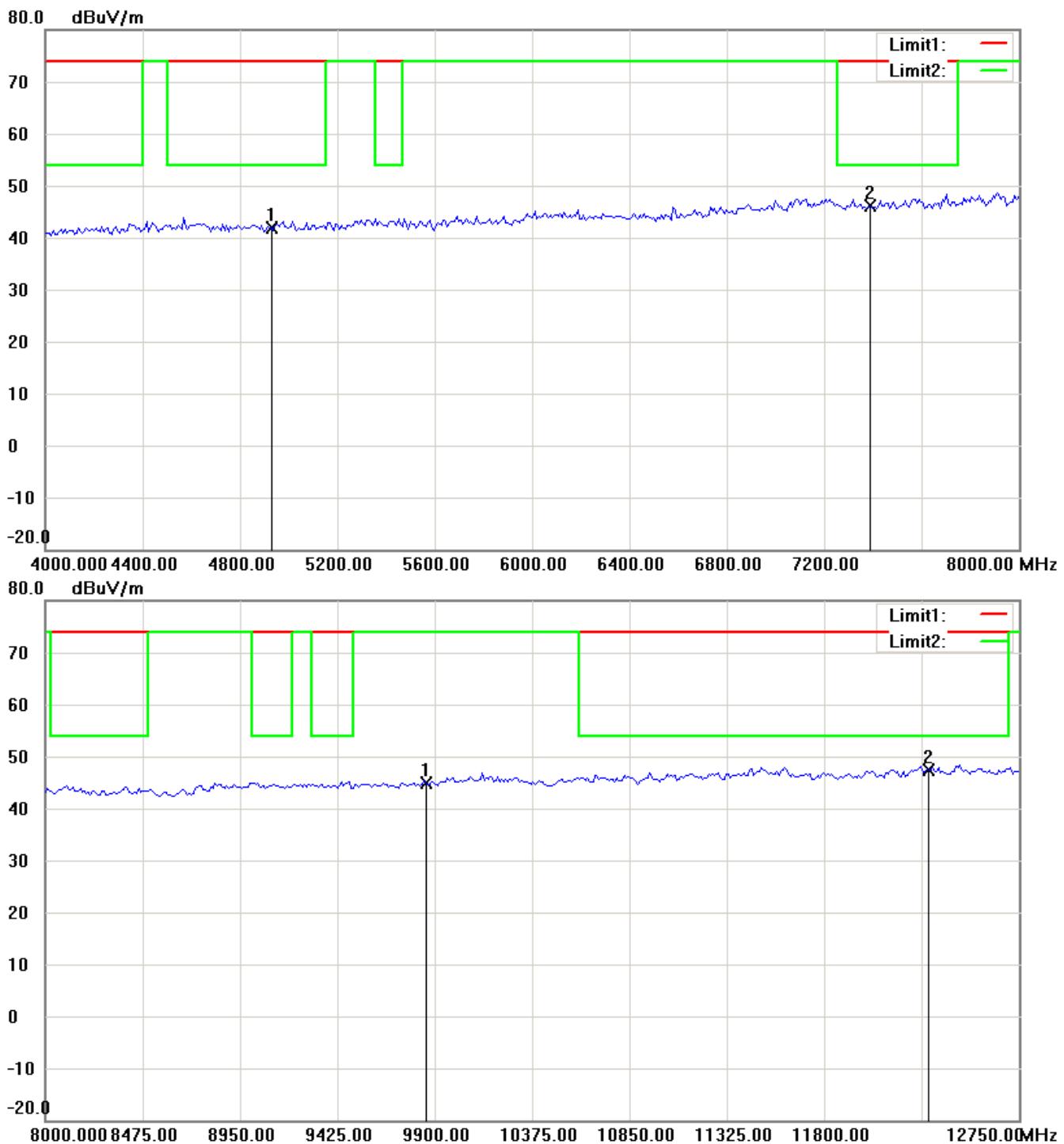


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 FCC ID:Y2A-OP430



Note:

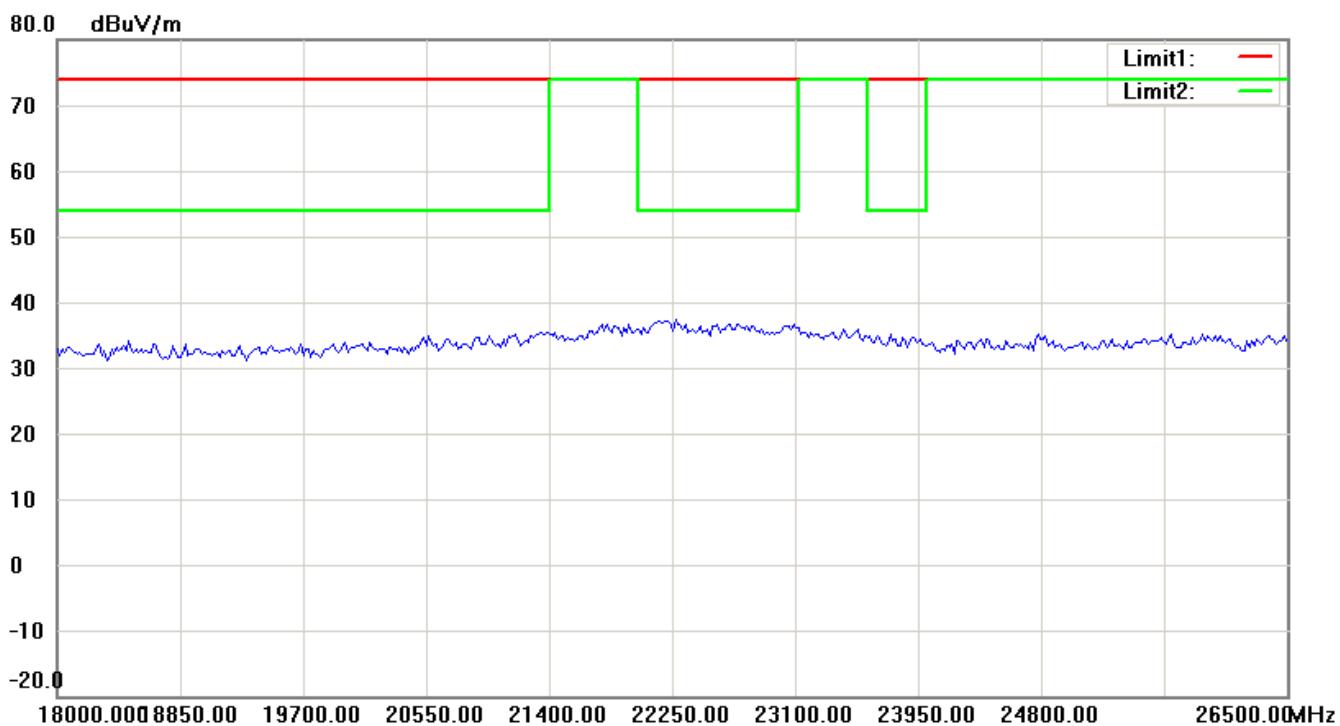
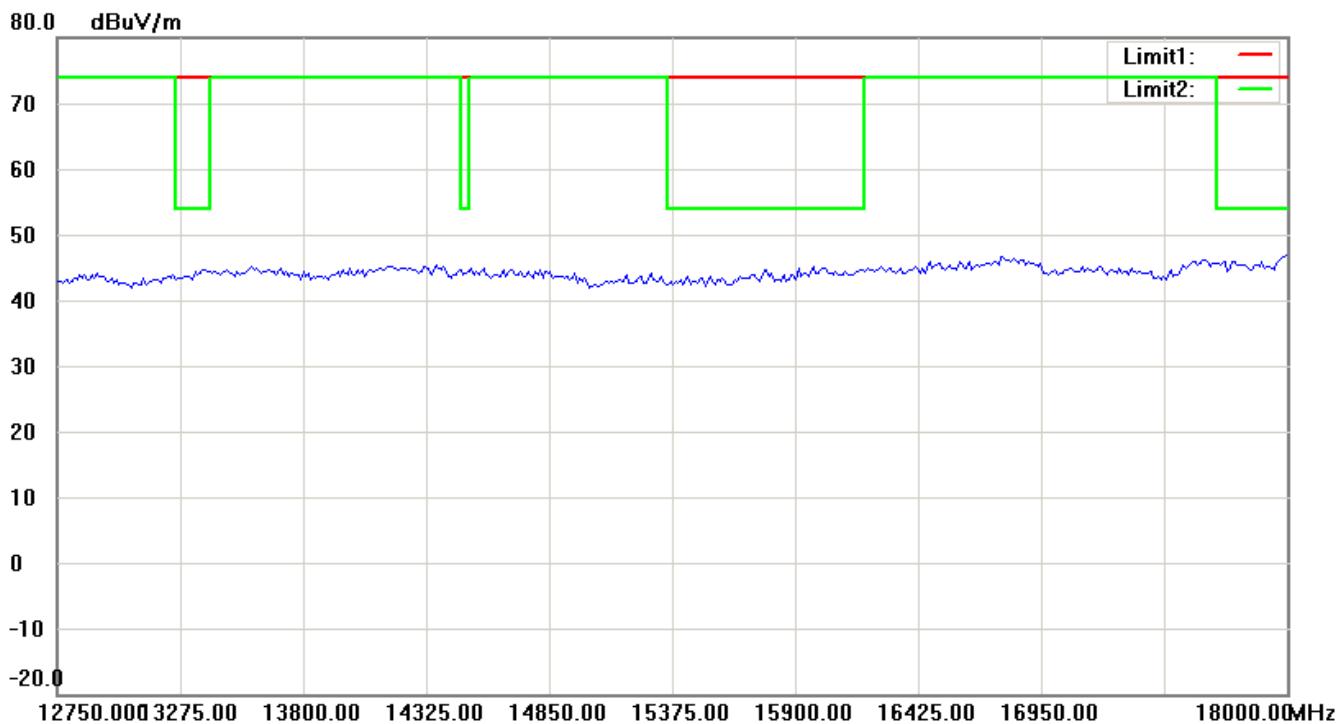
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



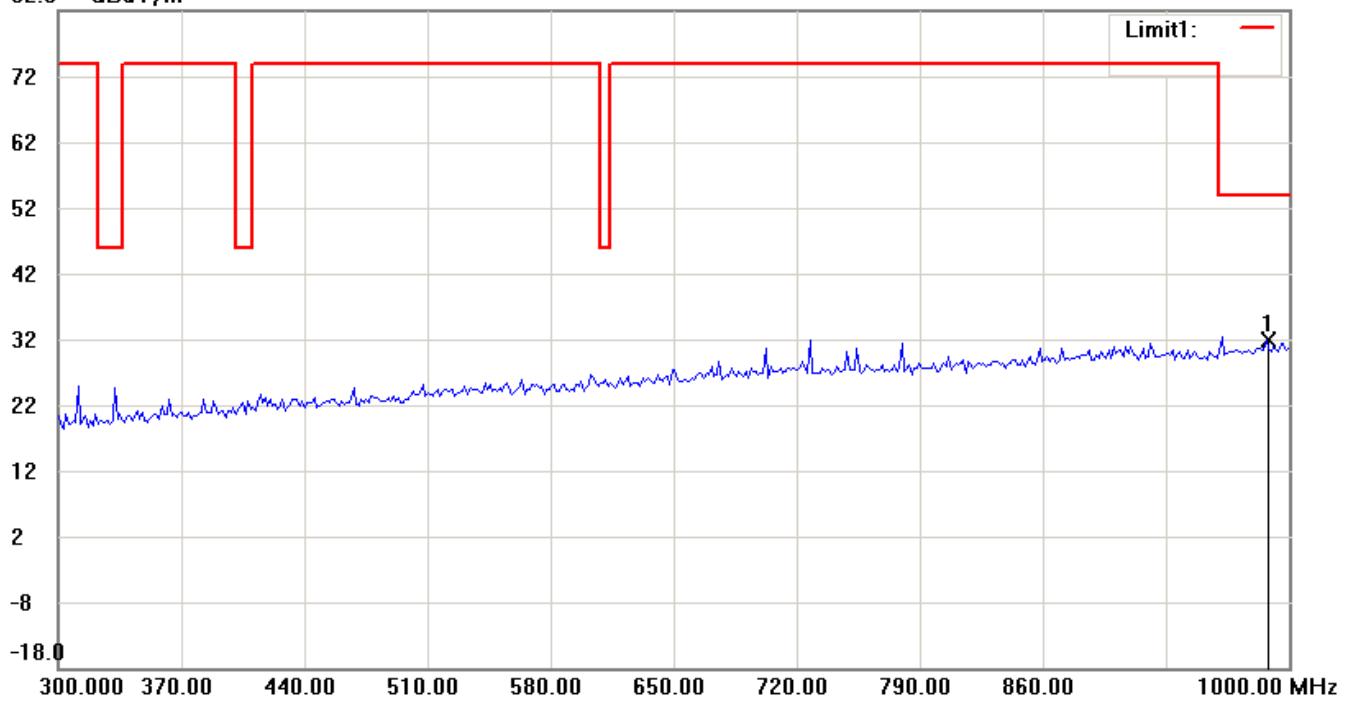
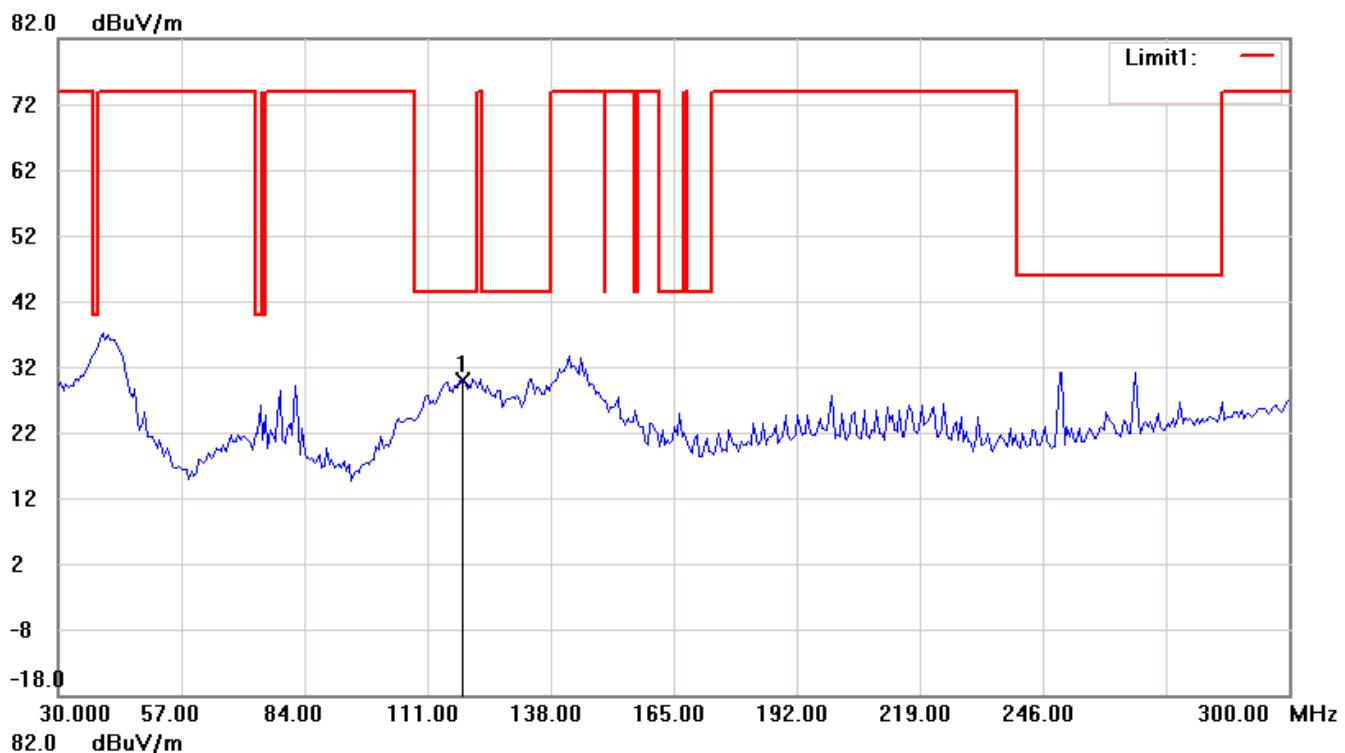
Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

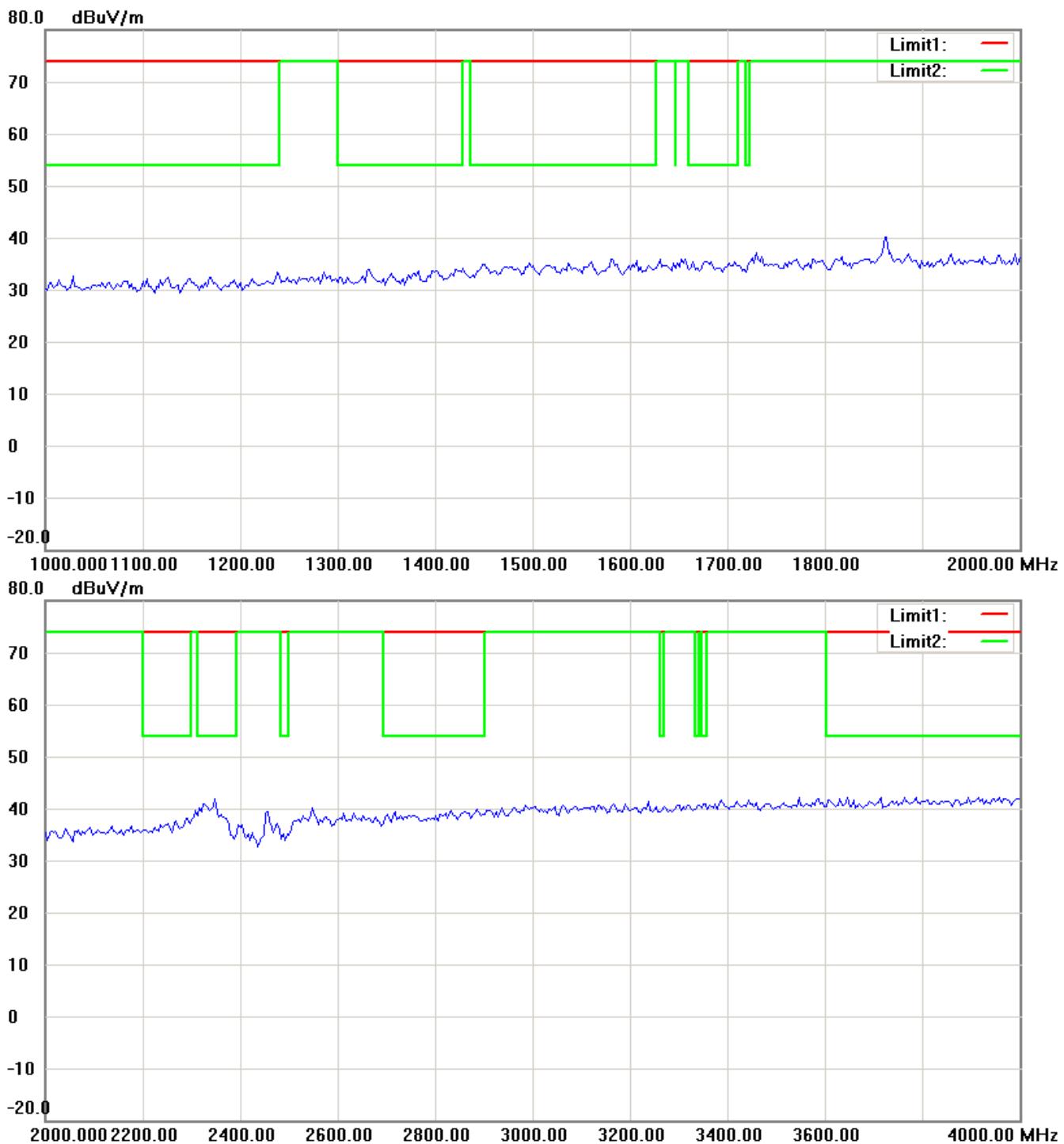
- 1 The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

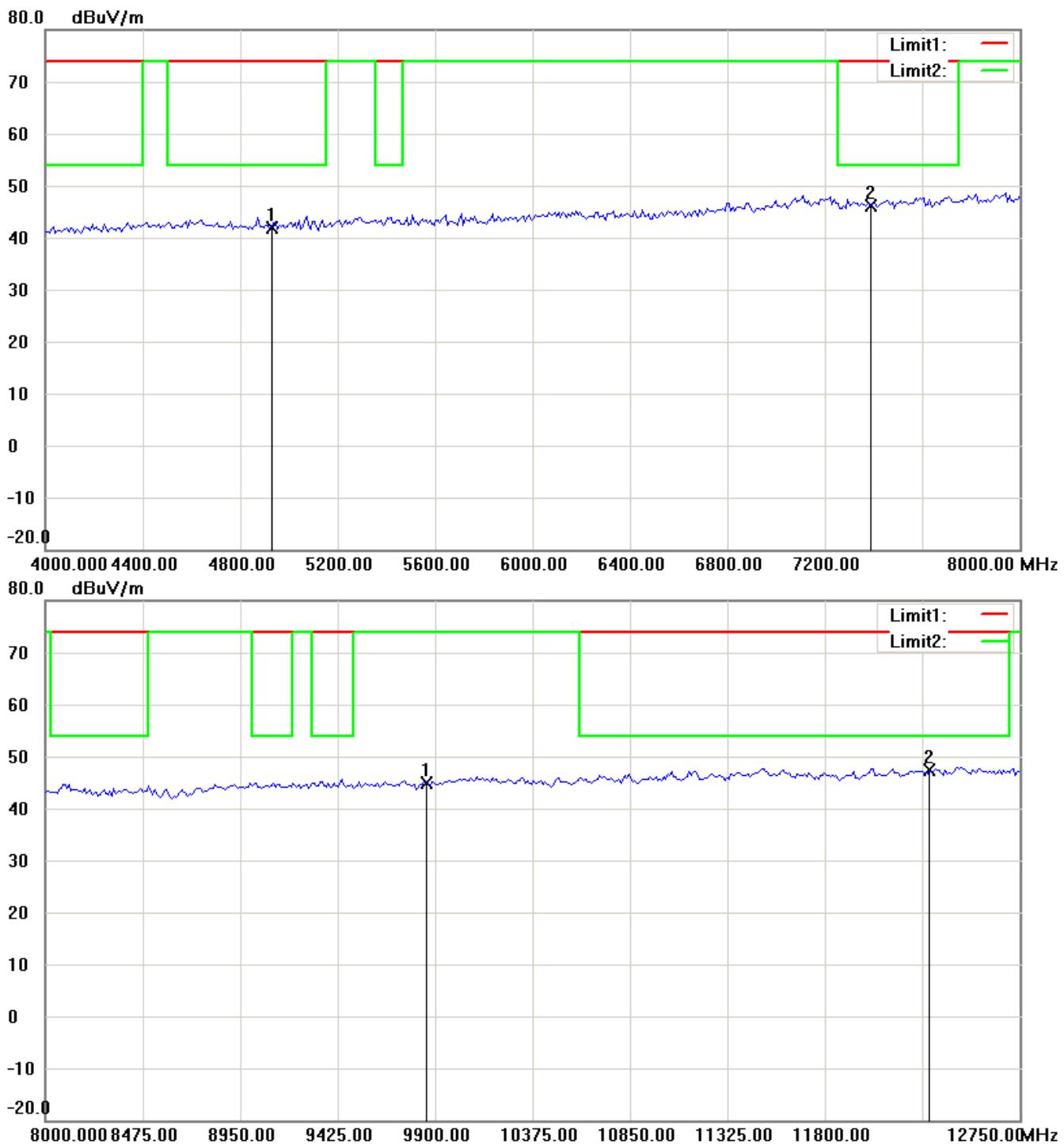


Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

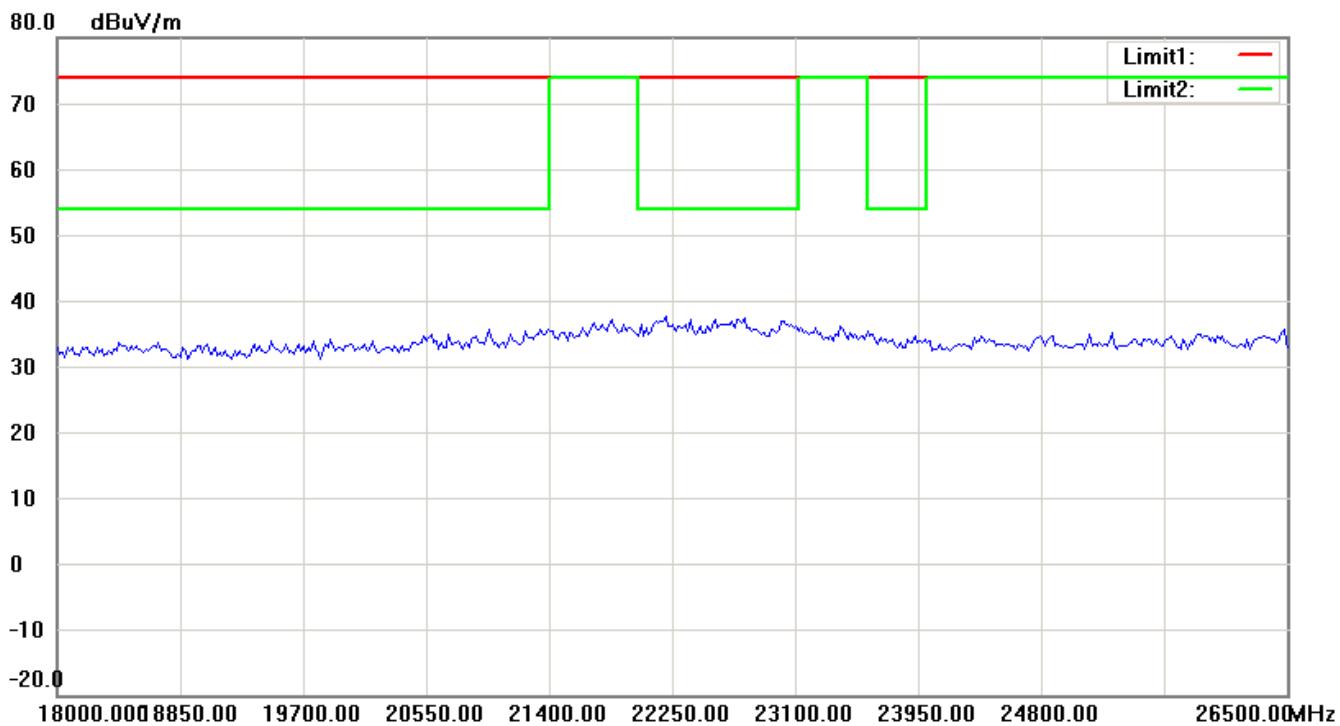
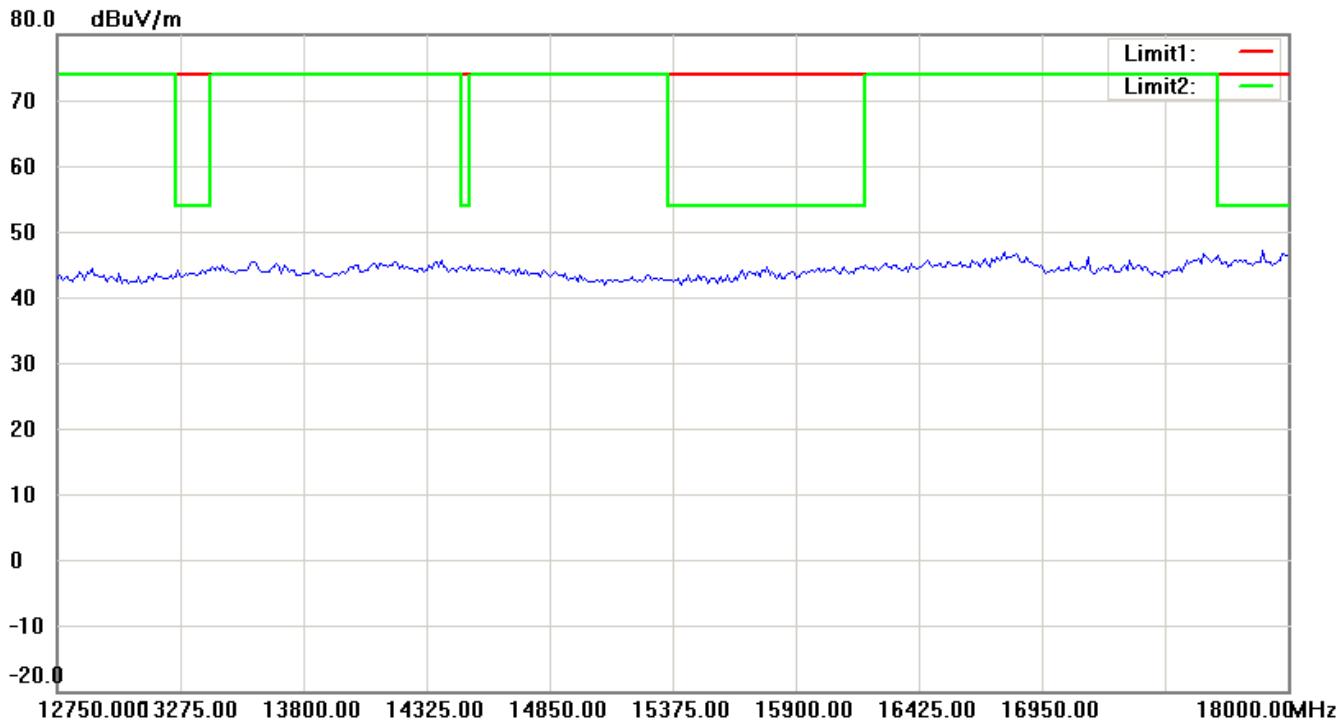
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



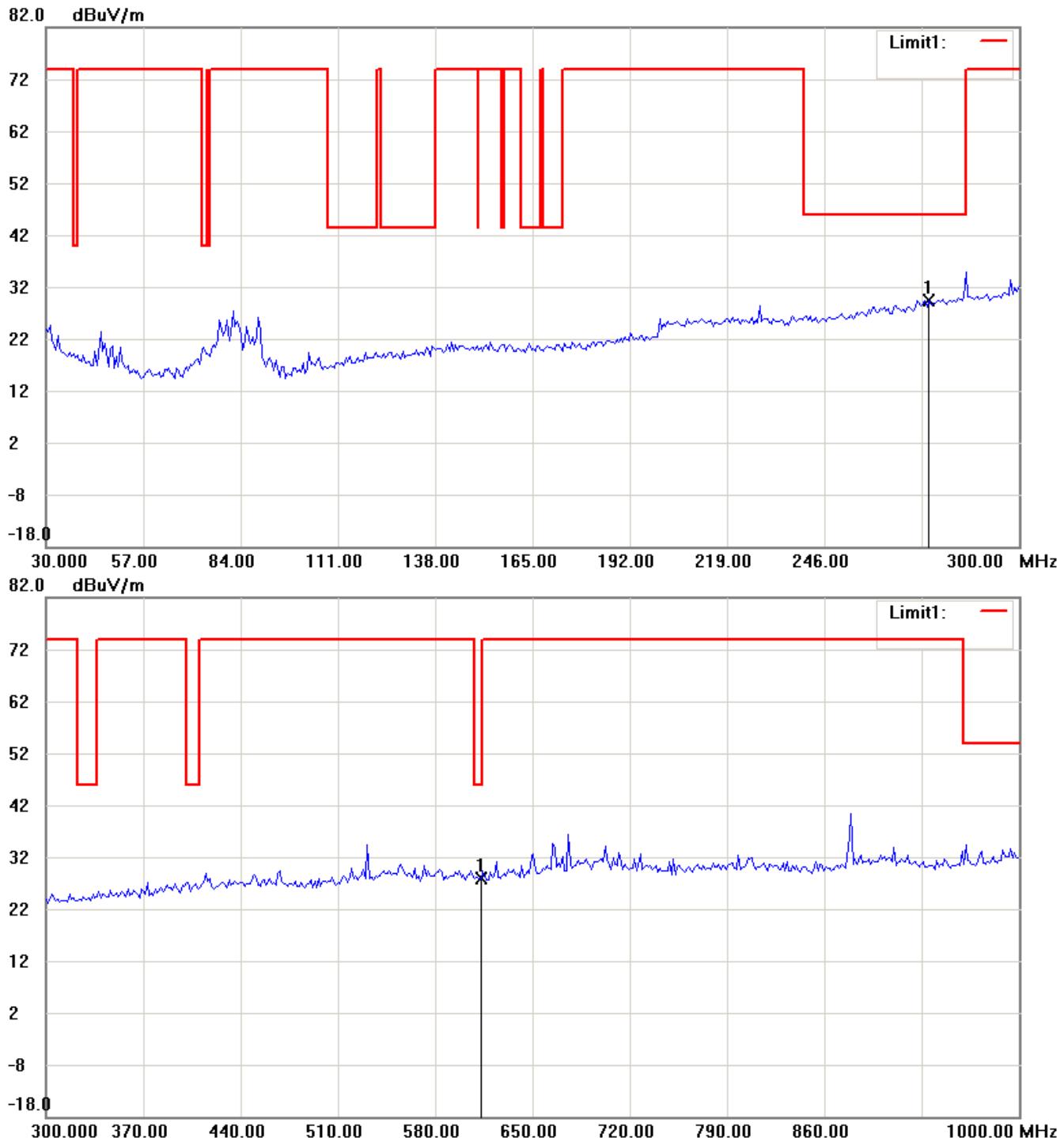
Note:

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: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Bluetooth 2402MHz Antenna Polarization H



Note:

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

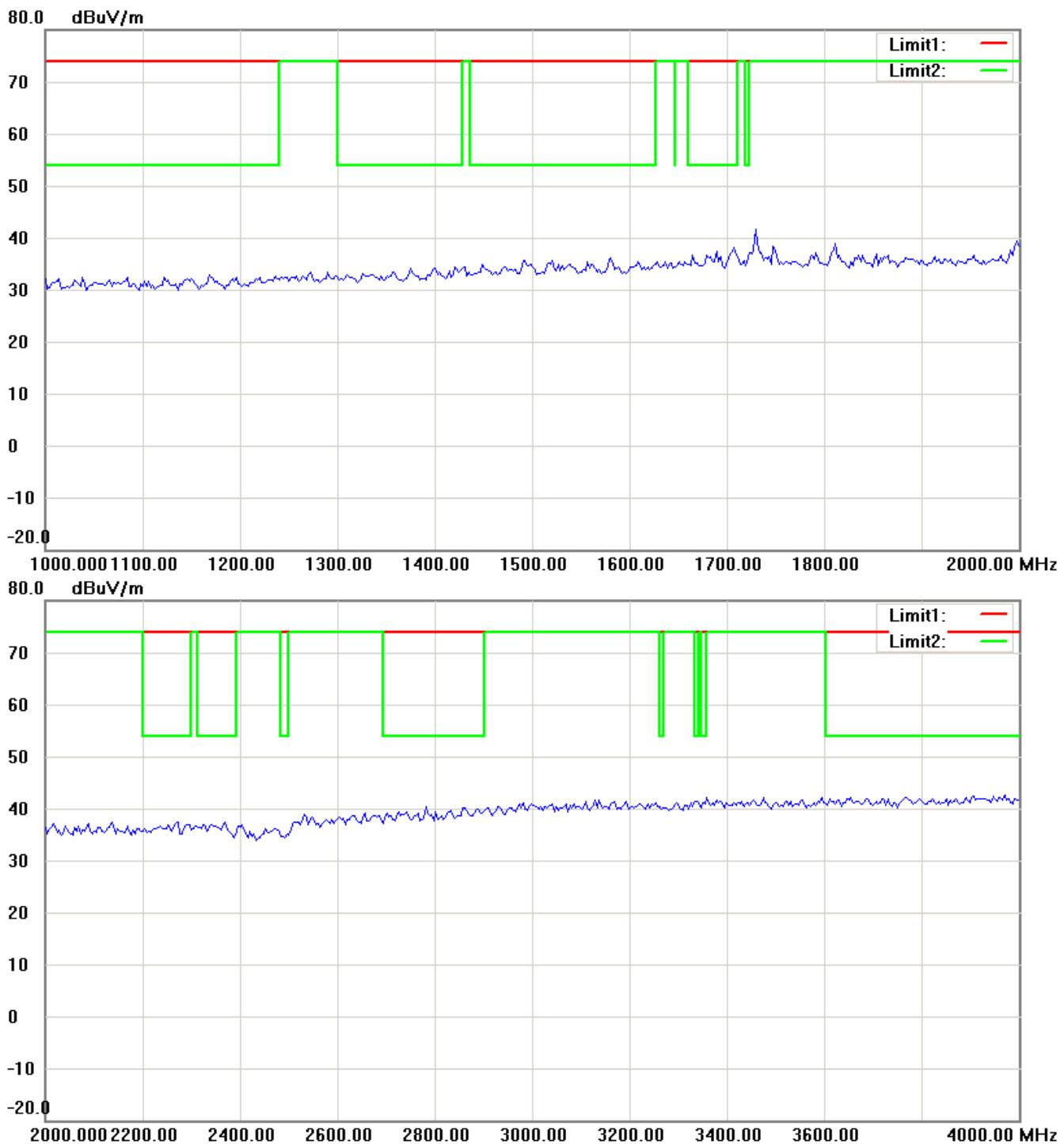
- 1 The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

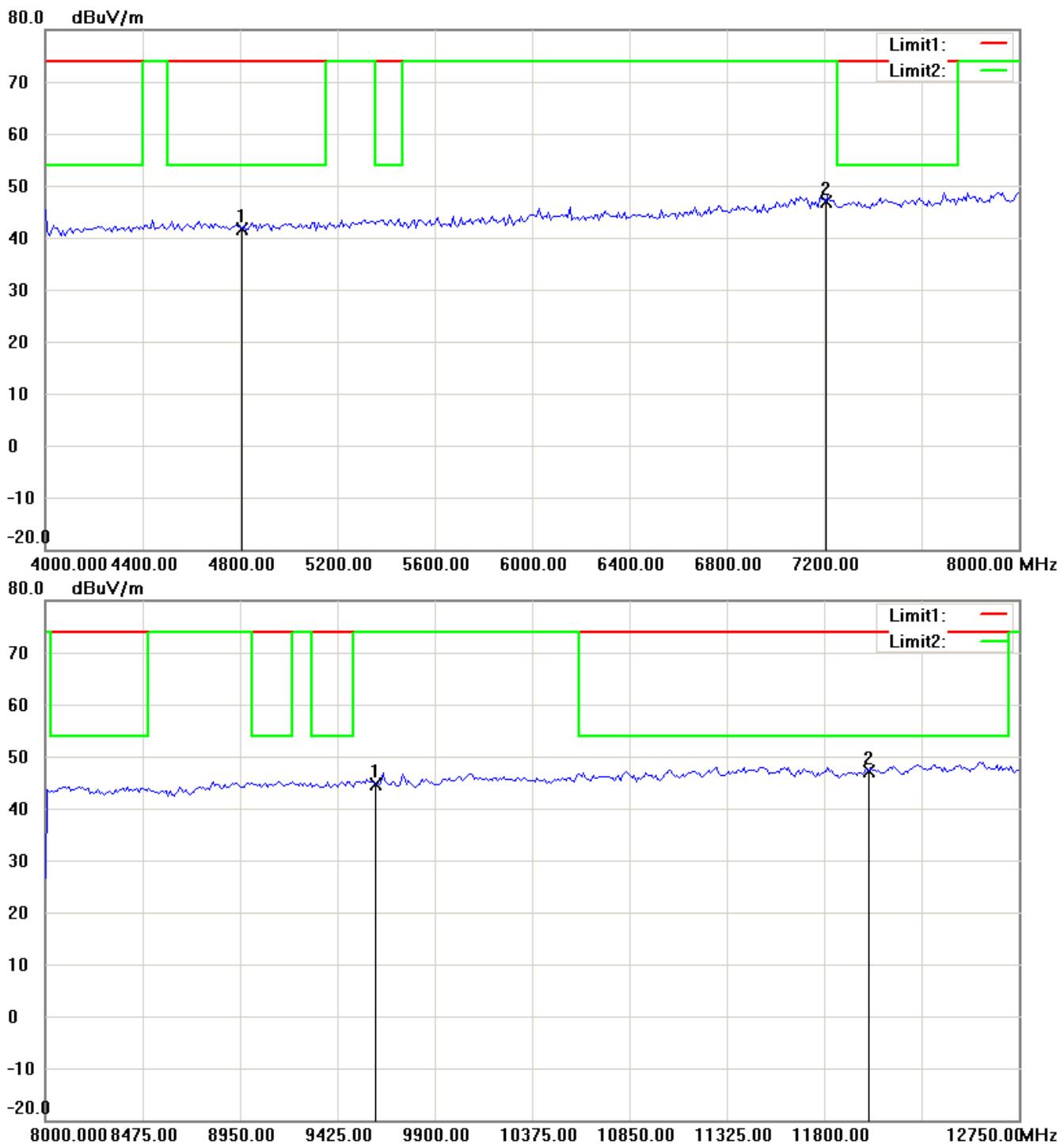
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

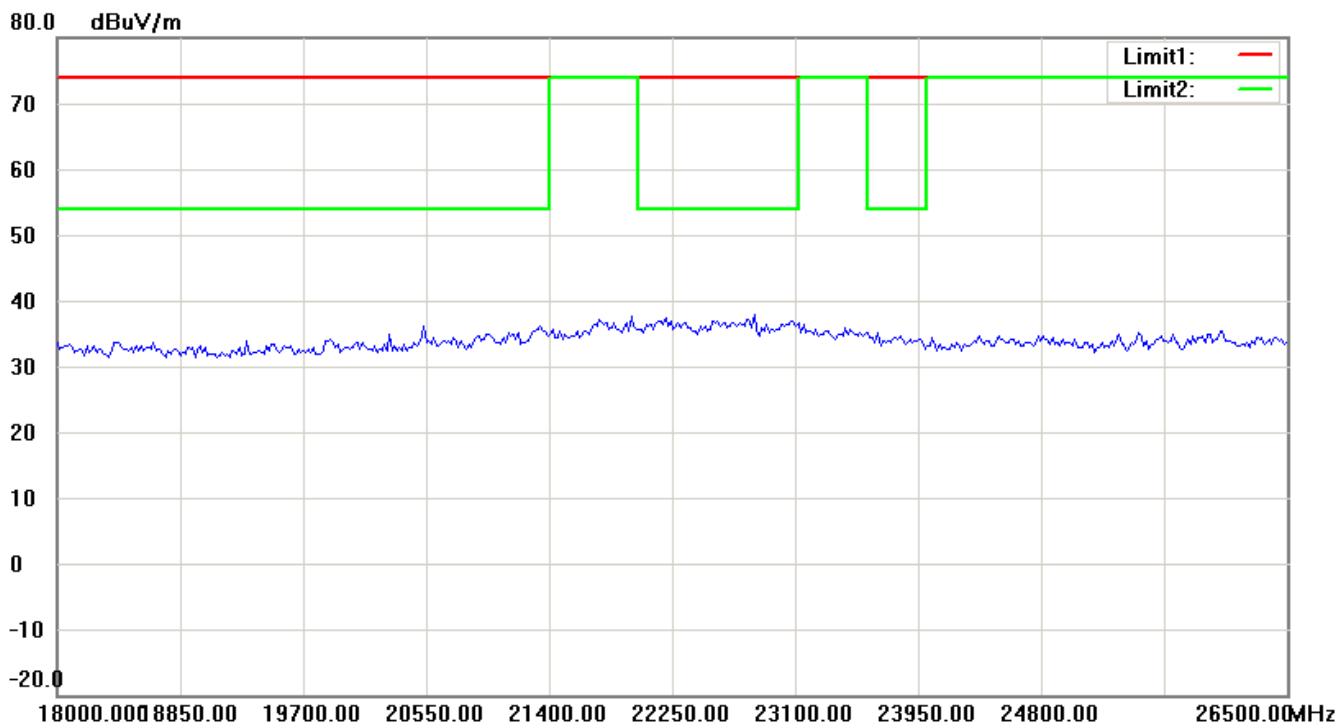
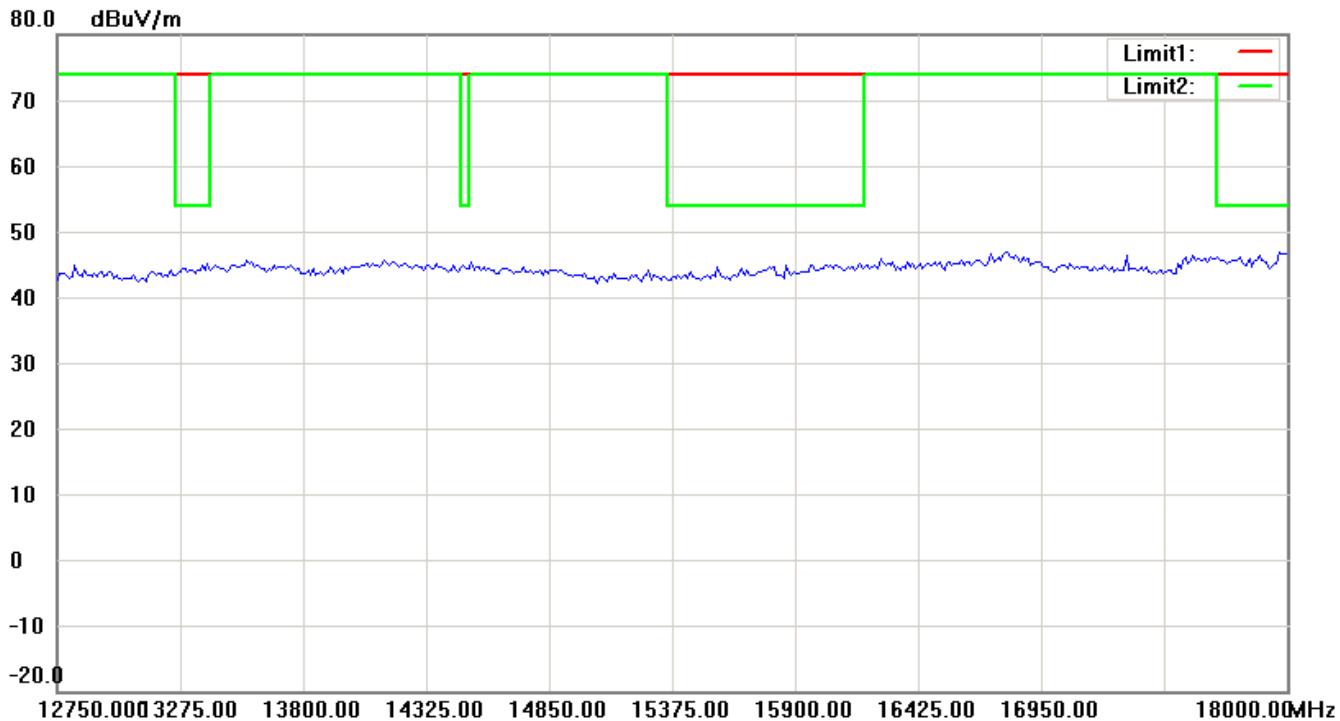
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

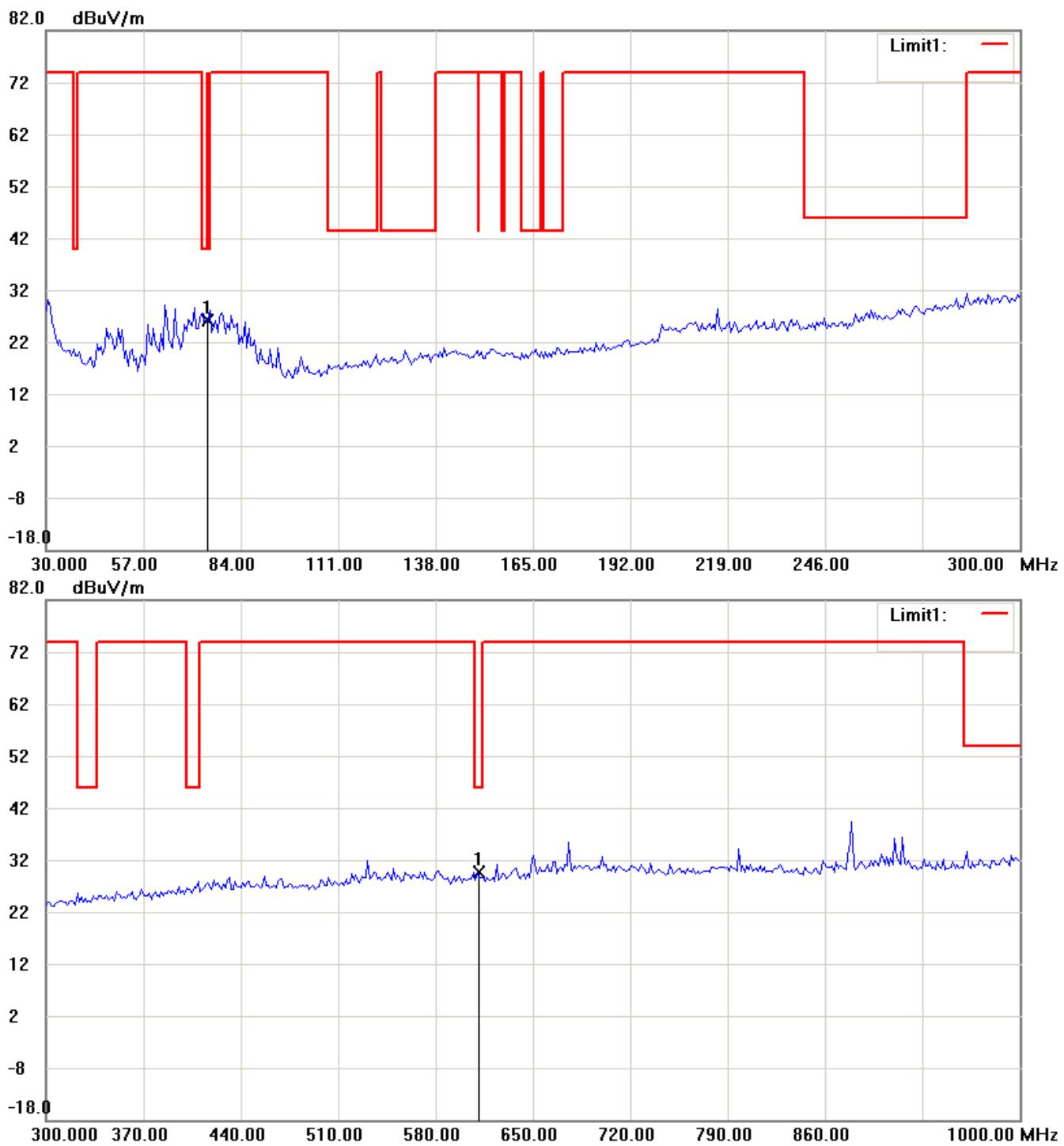
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

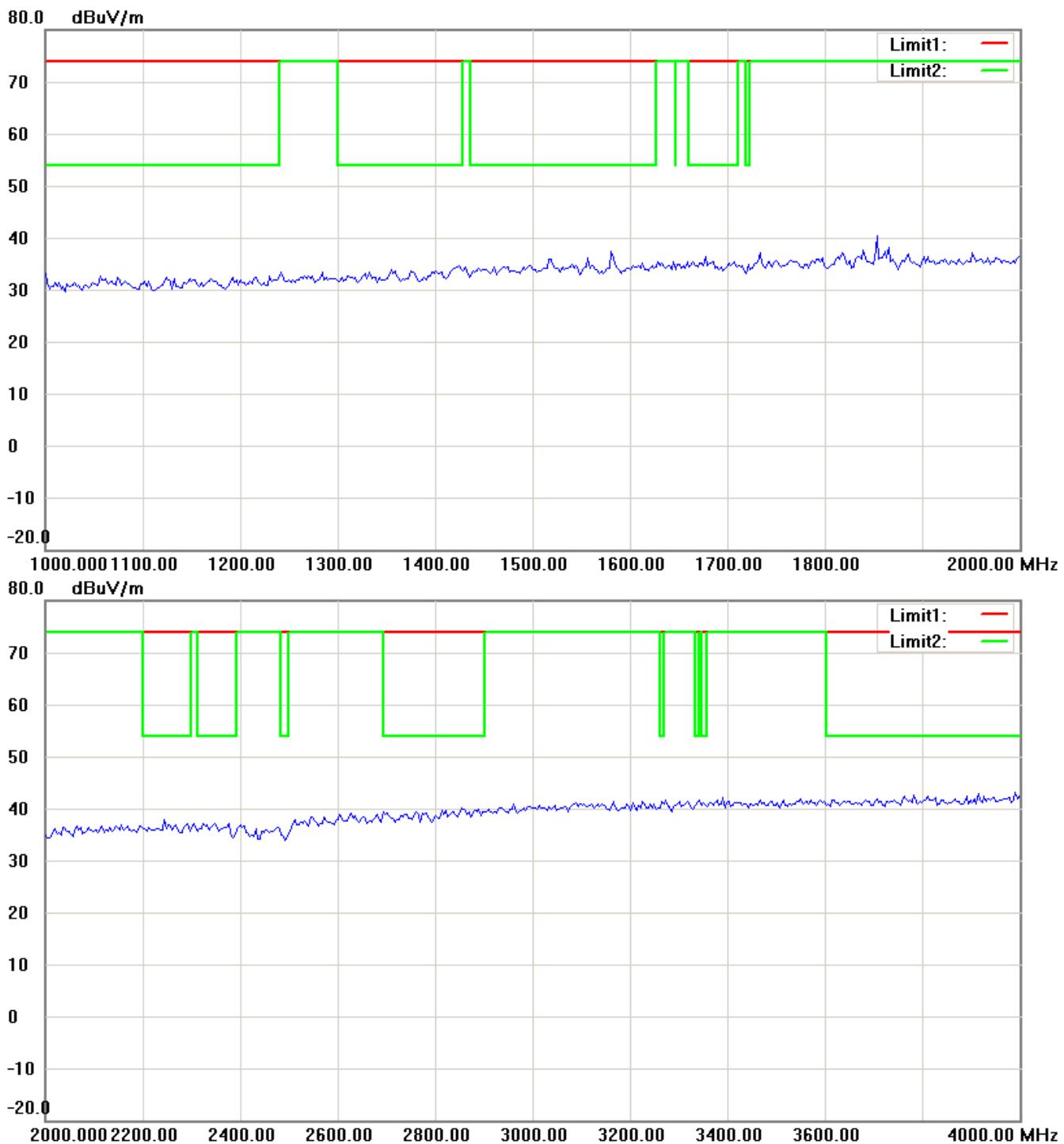
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

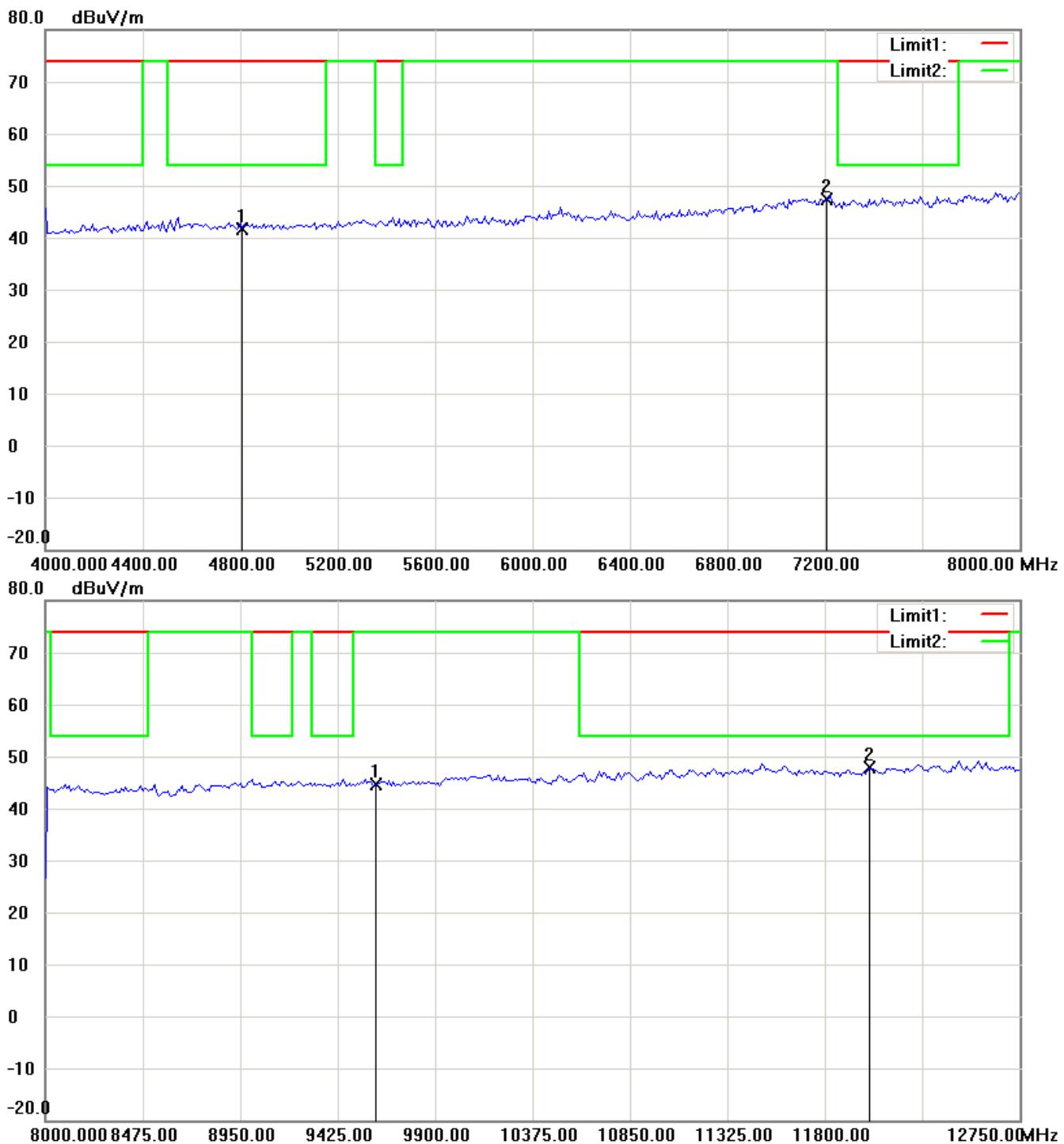
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

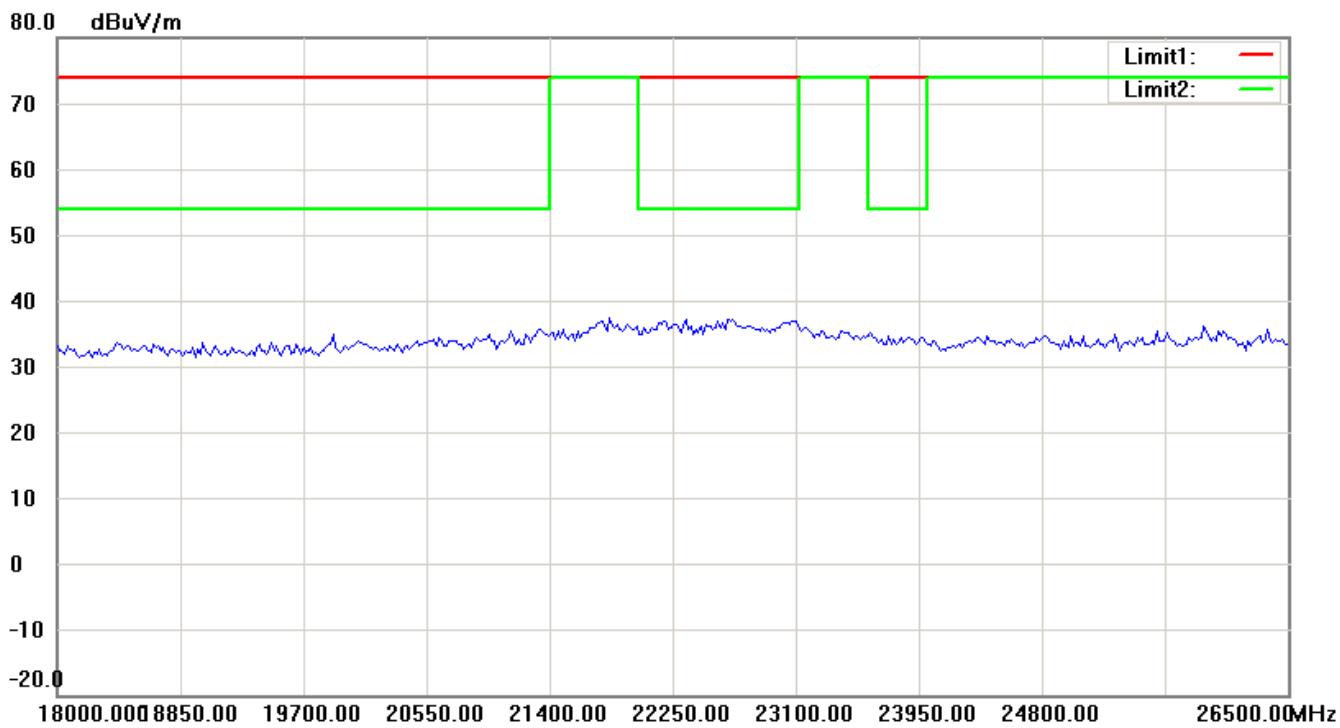
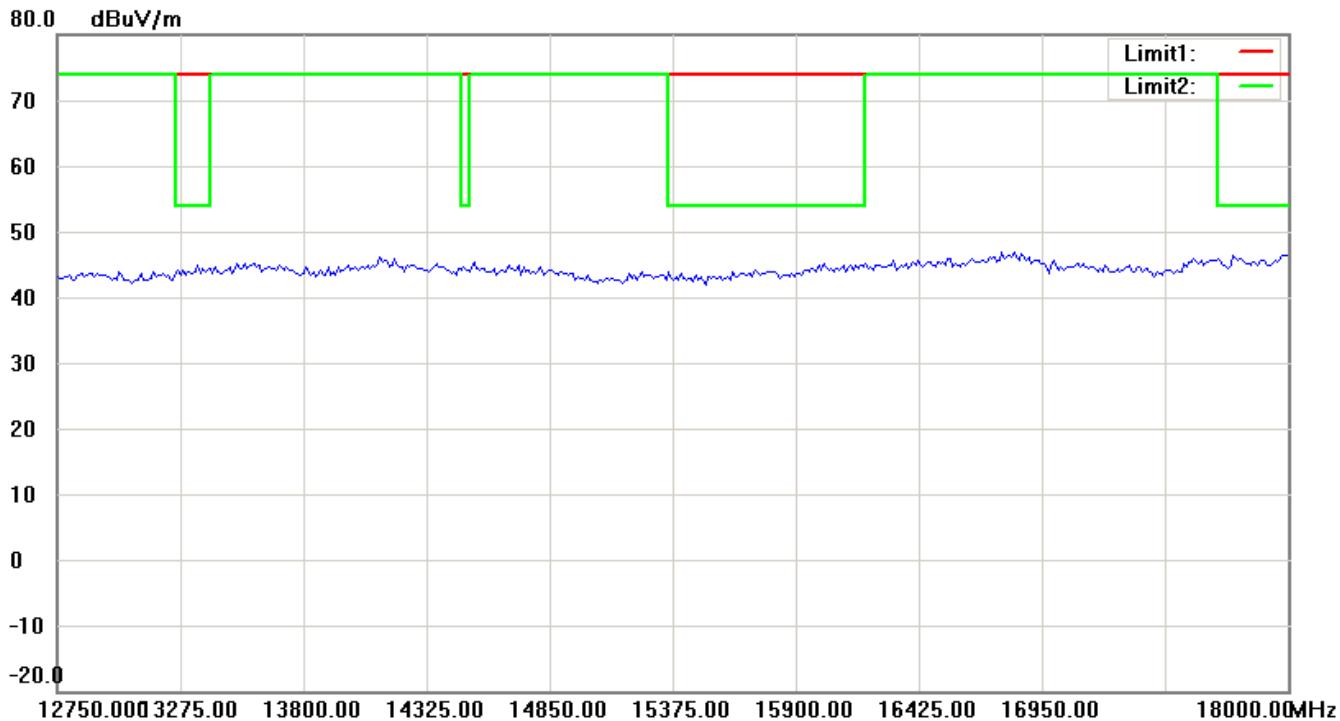
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



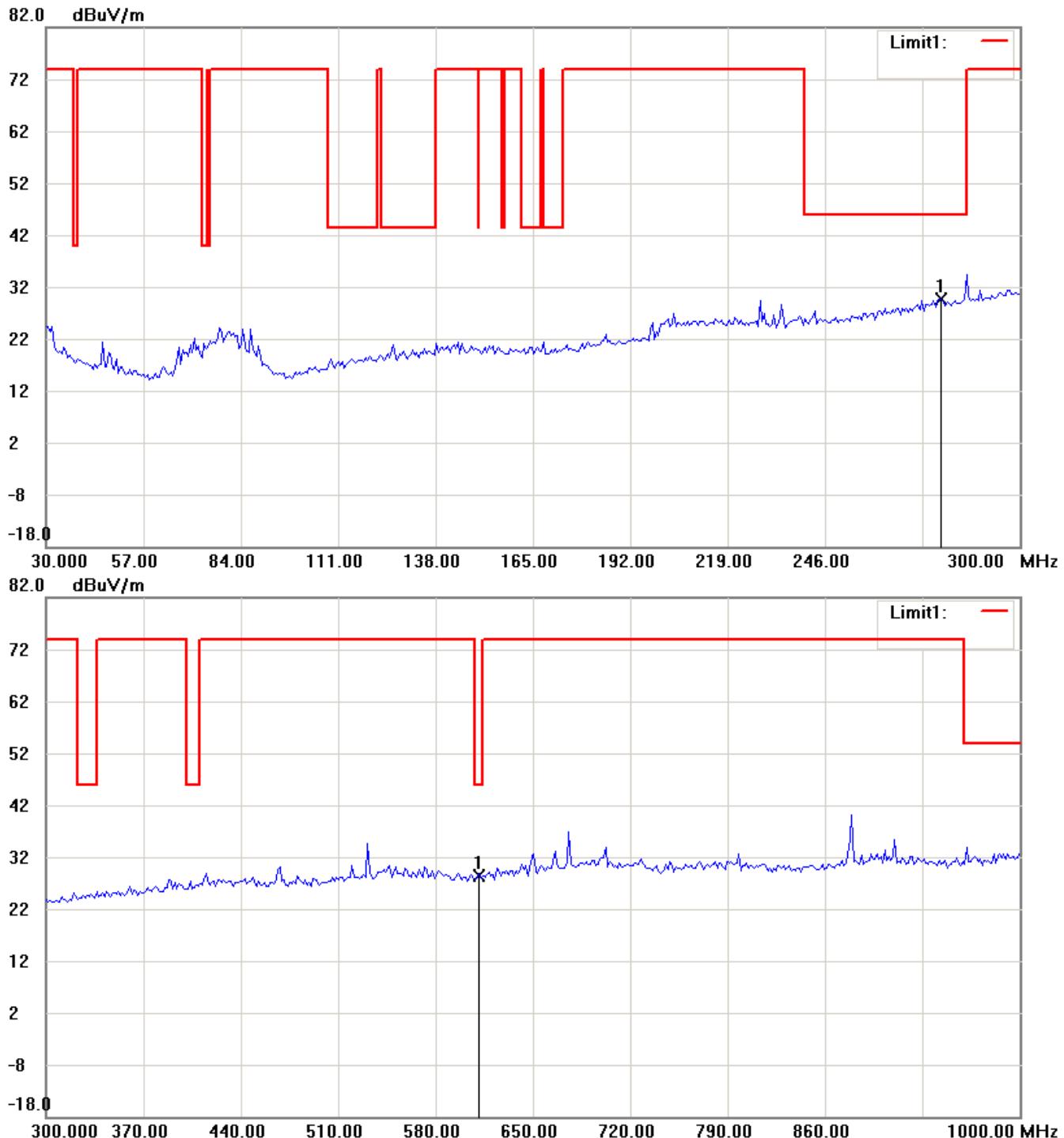
Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Bluetooth 2441MHz Antenna Polarization H



Note:

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

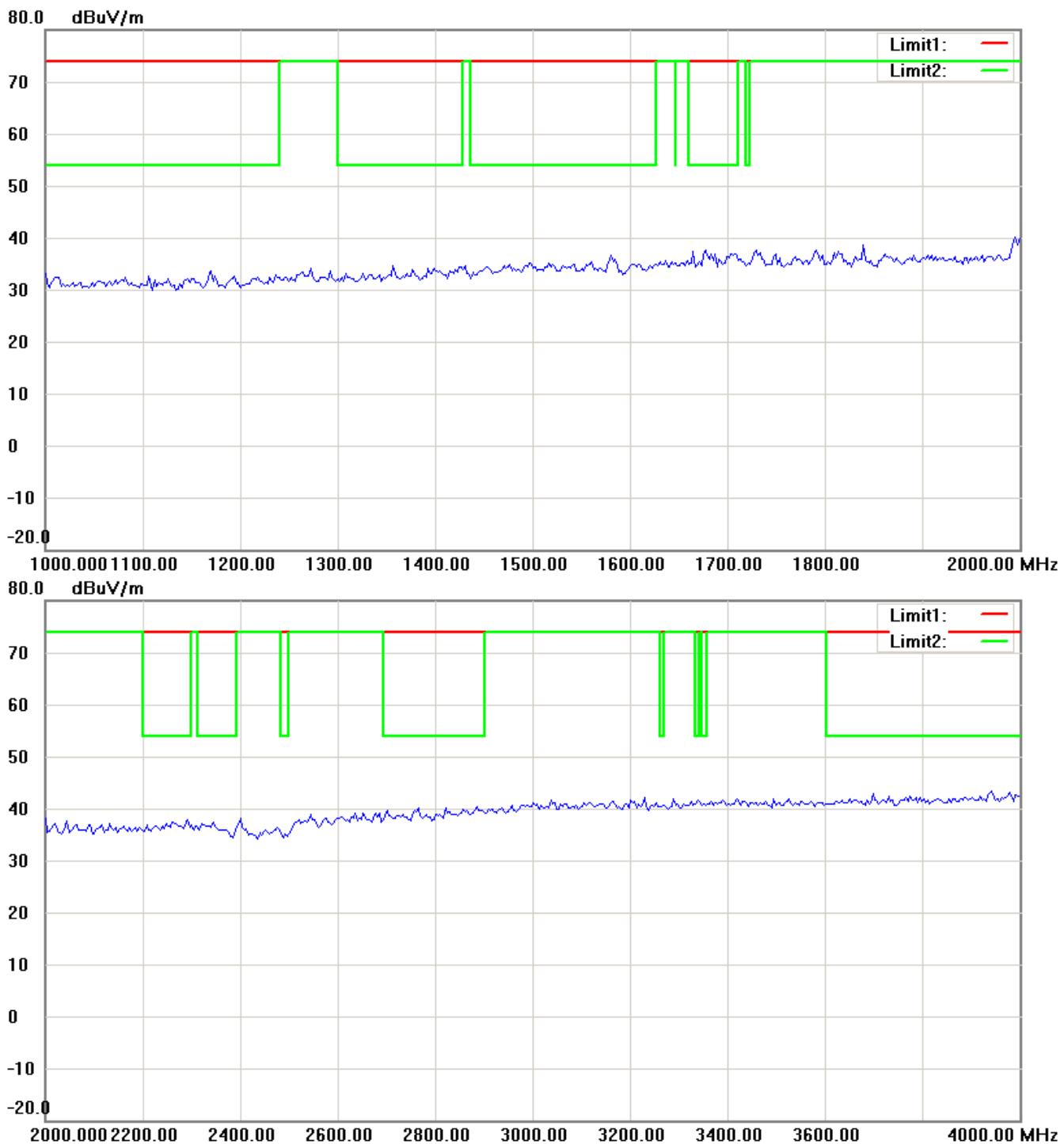
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

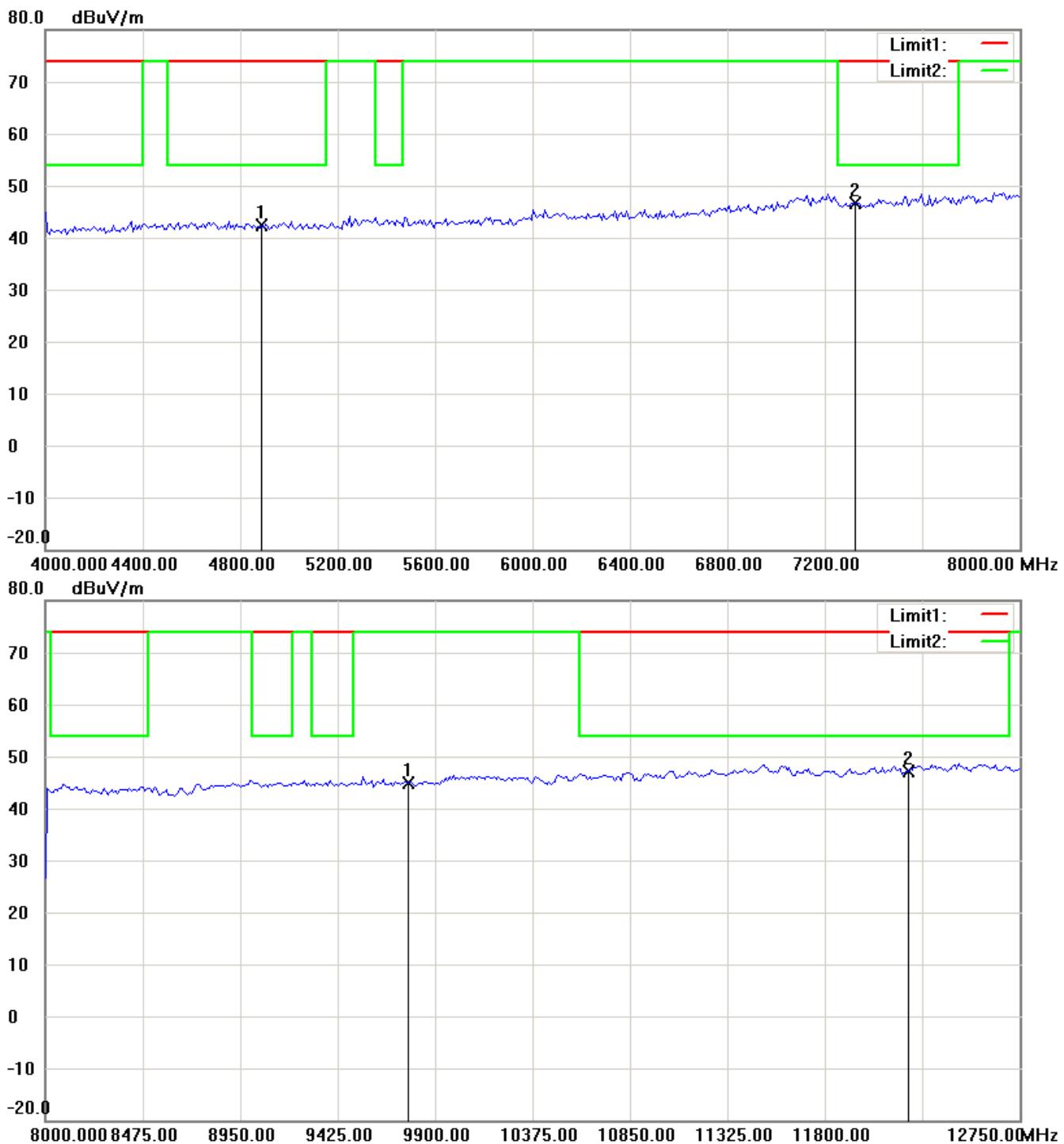


Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

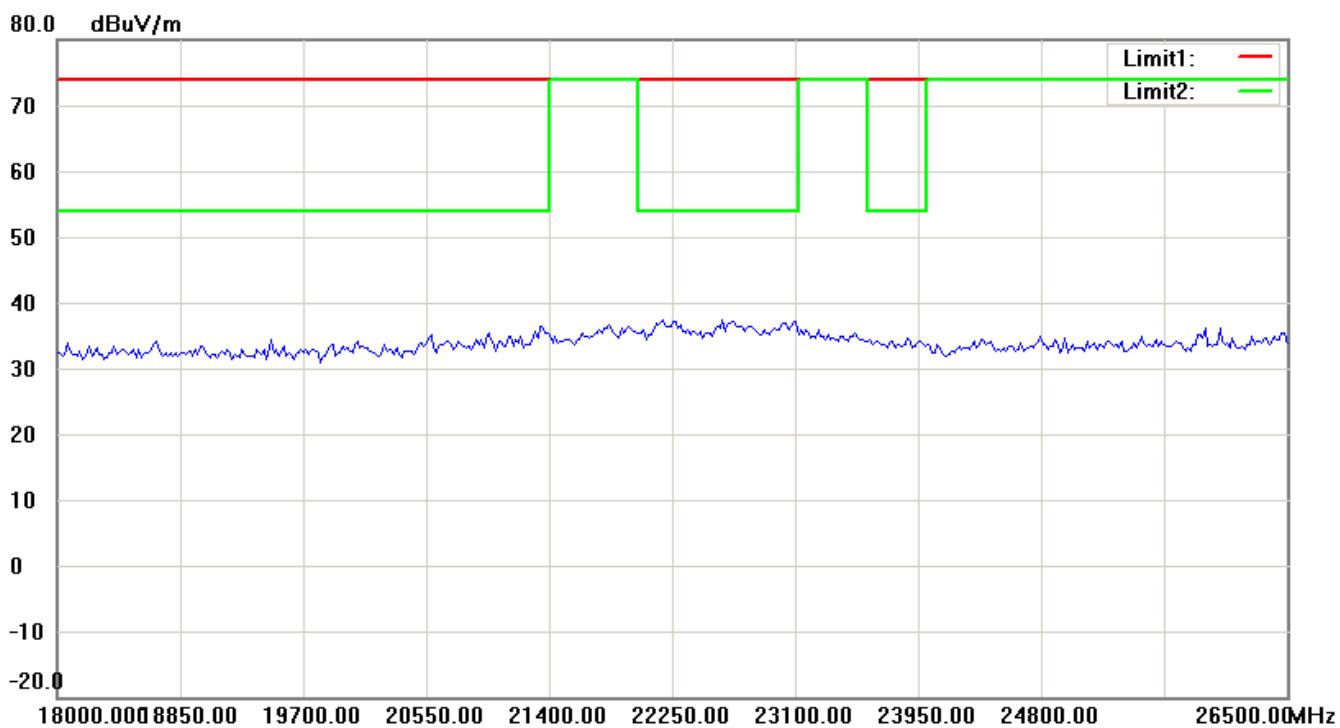
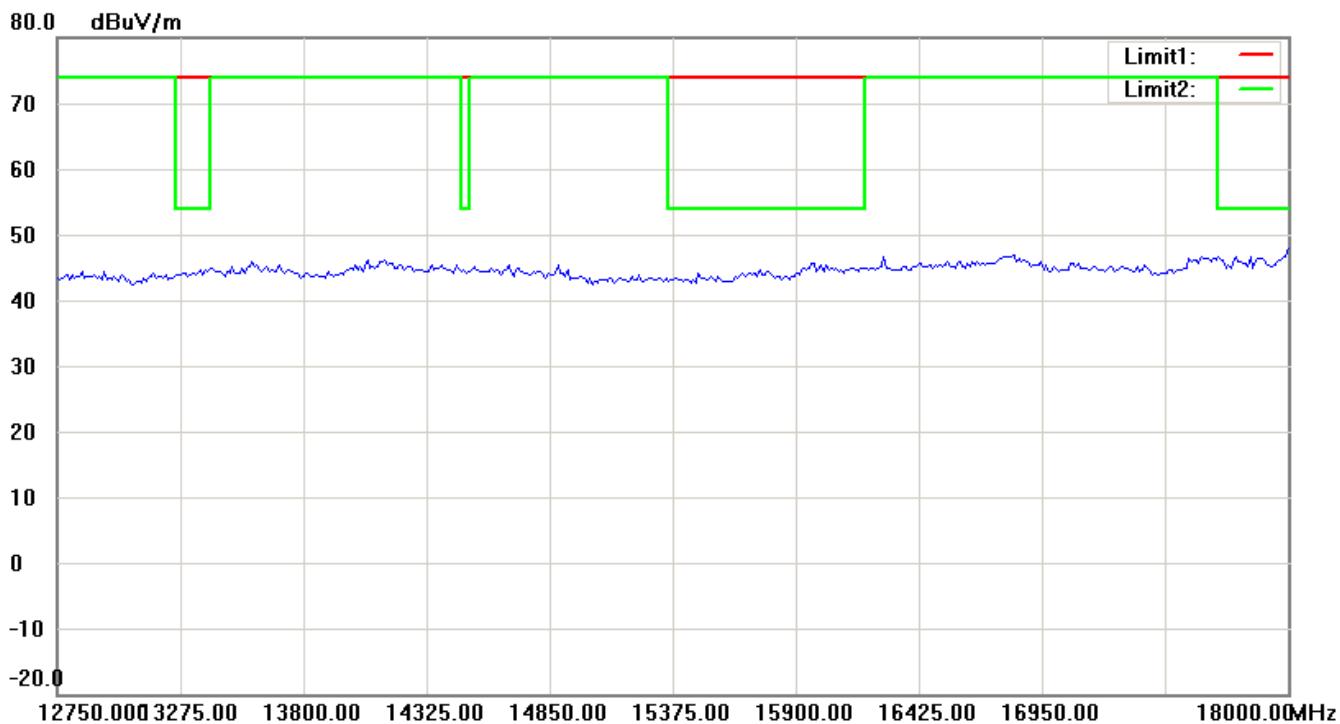
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

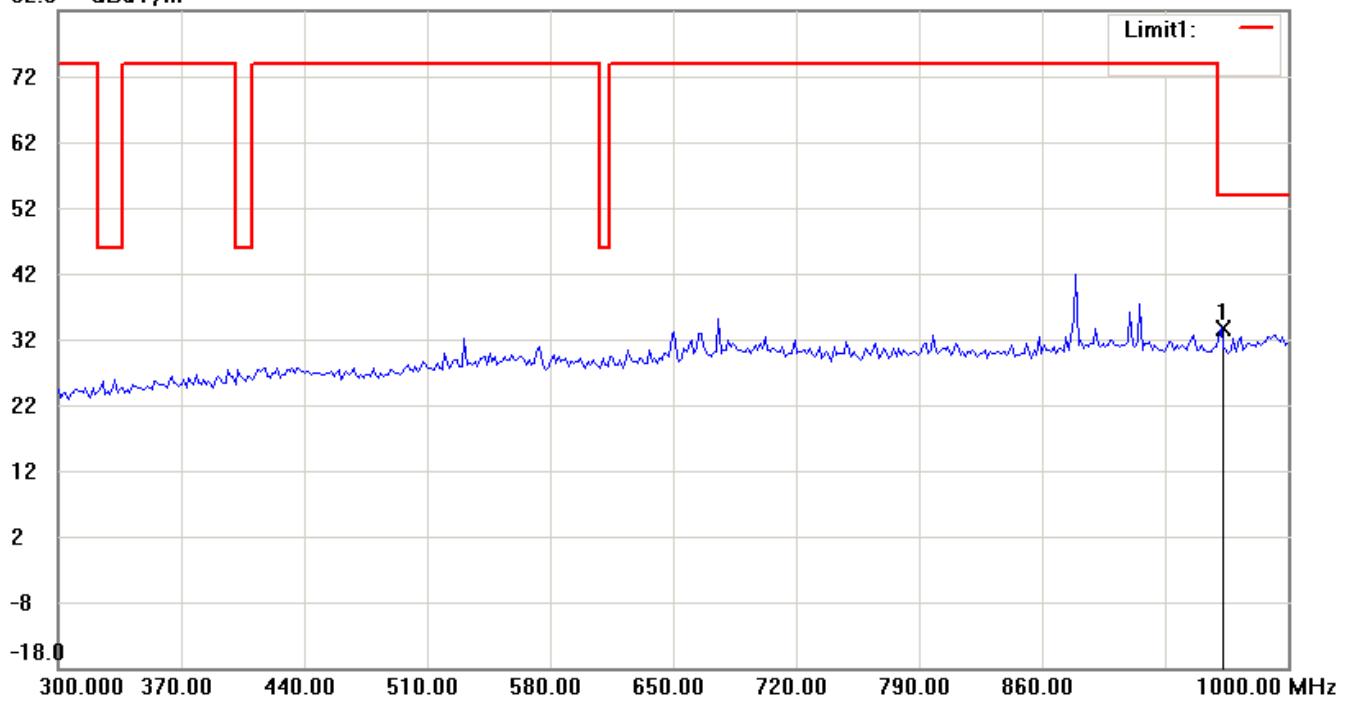
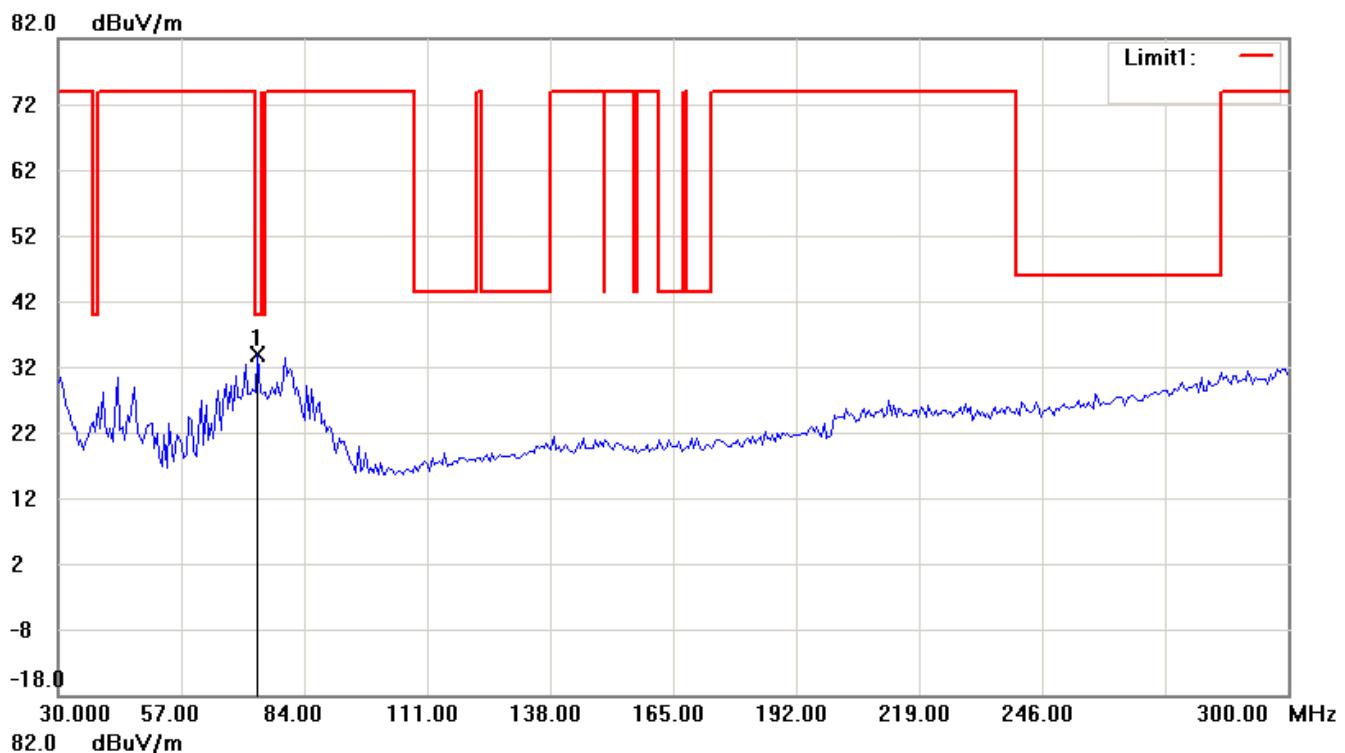
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

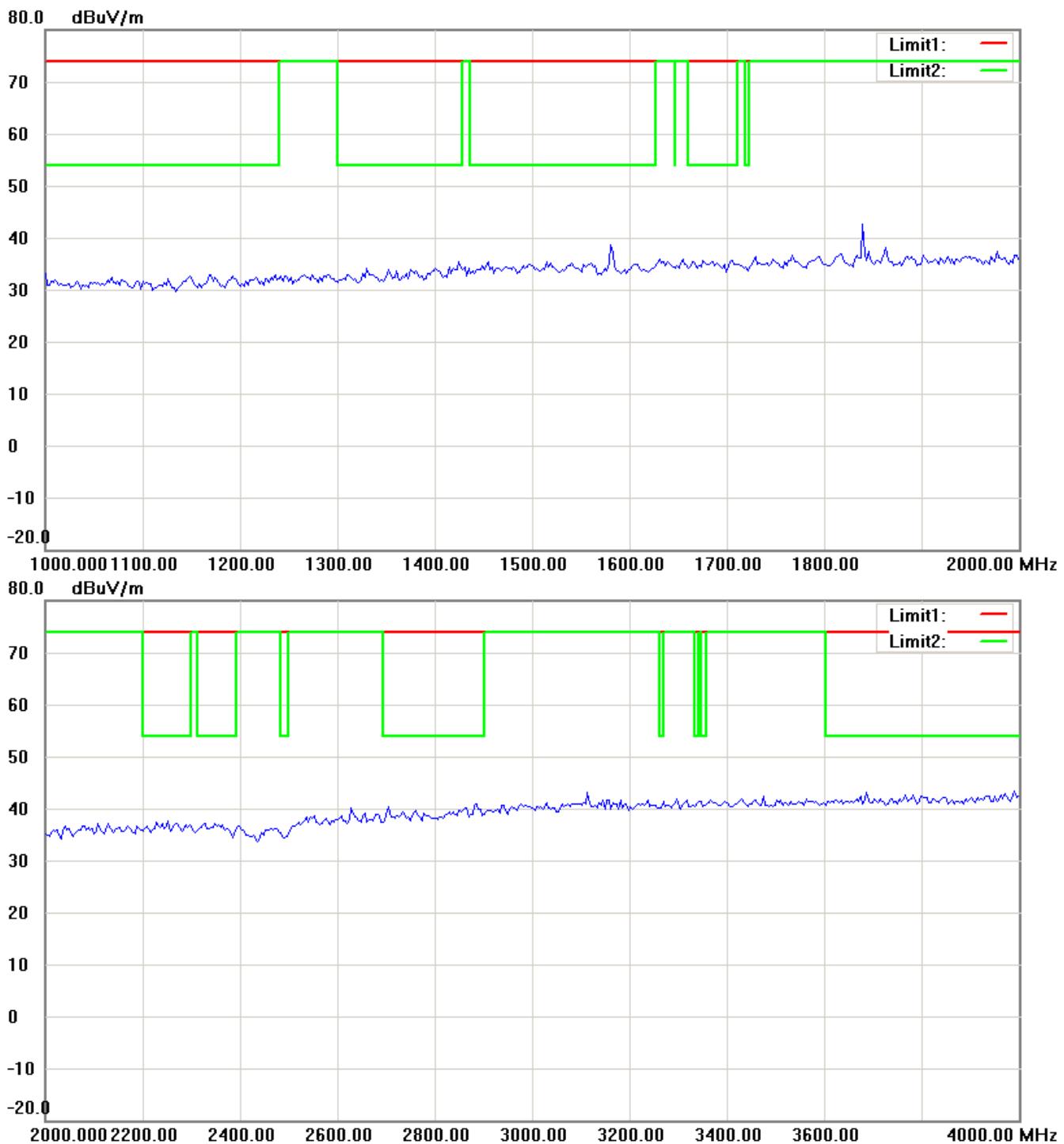
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

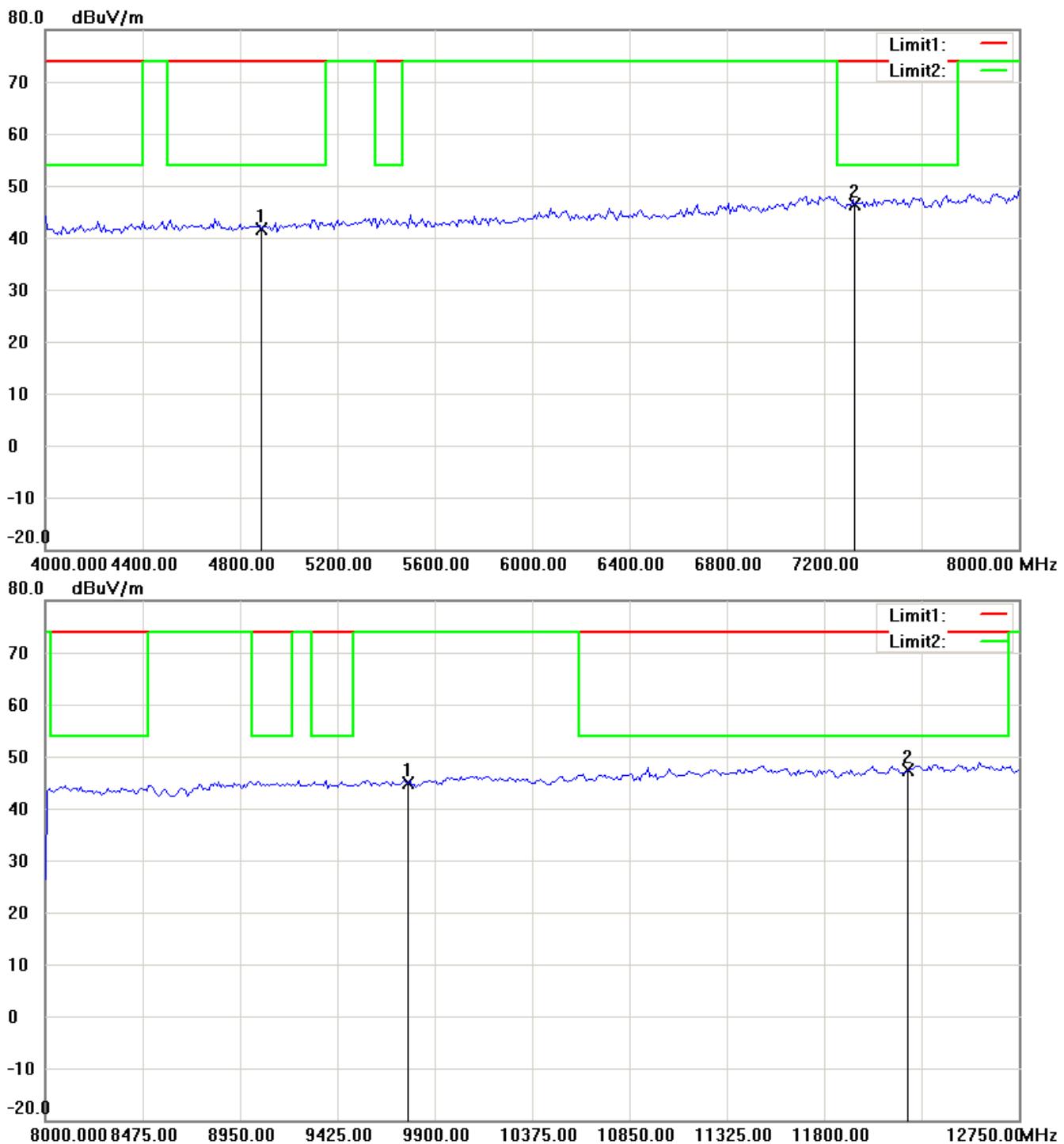


Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

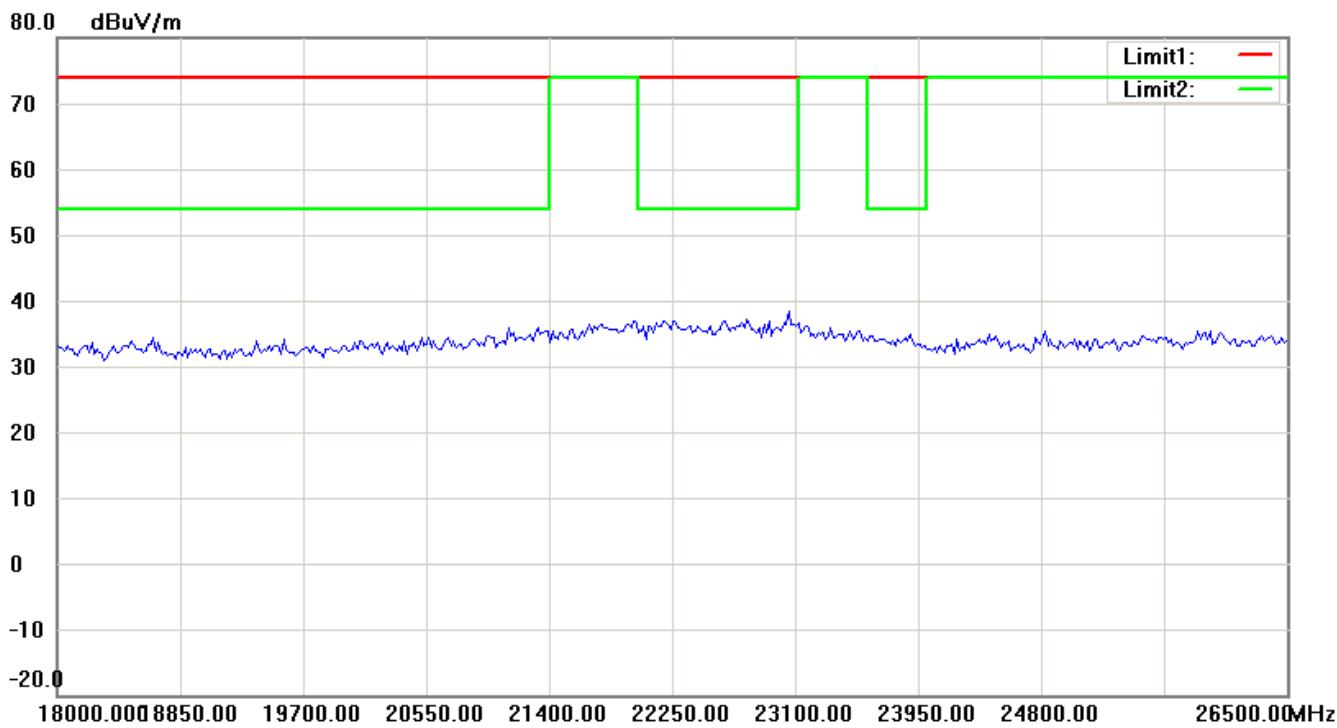
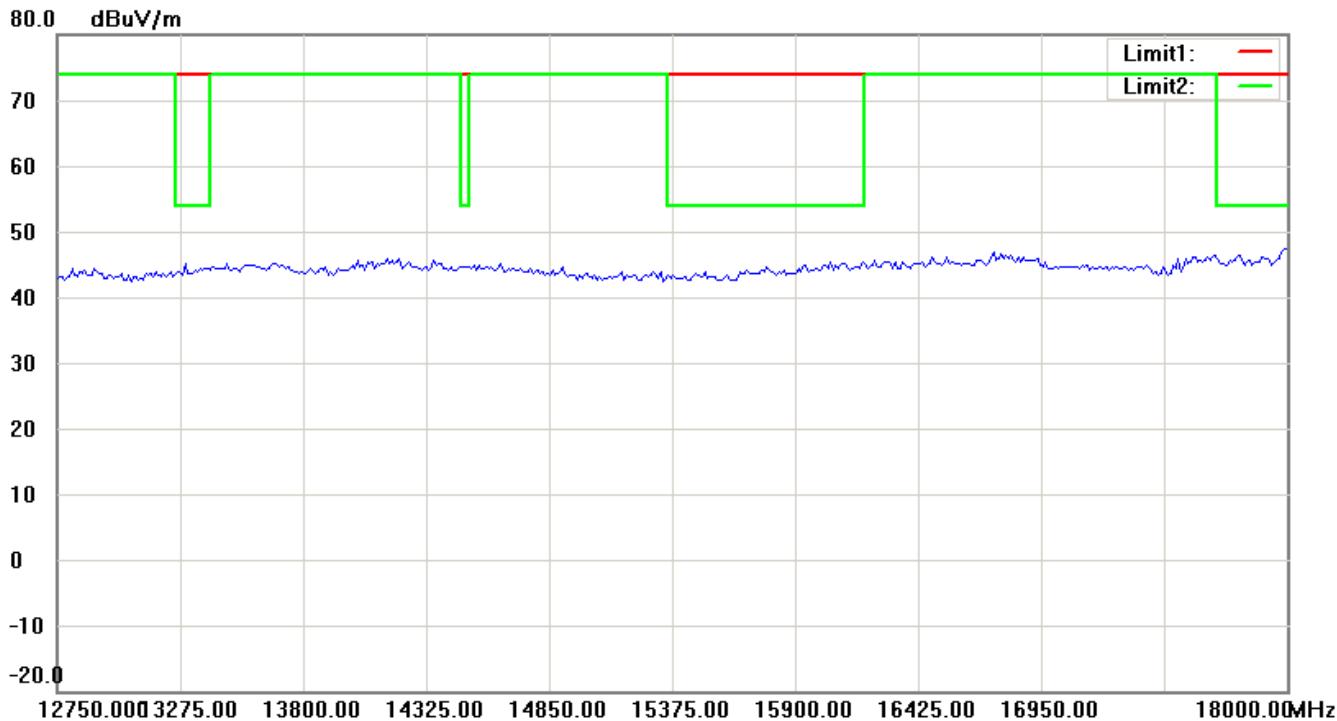
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



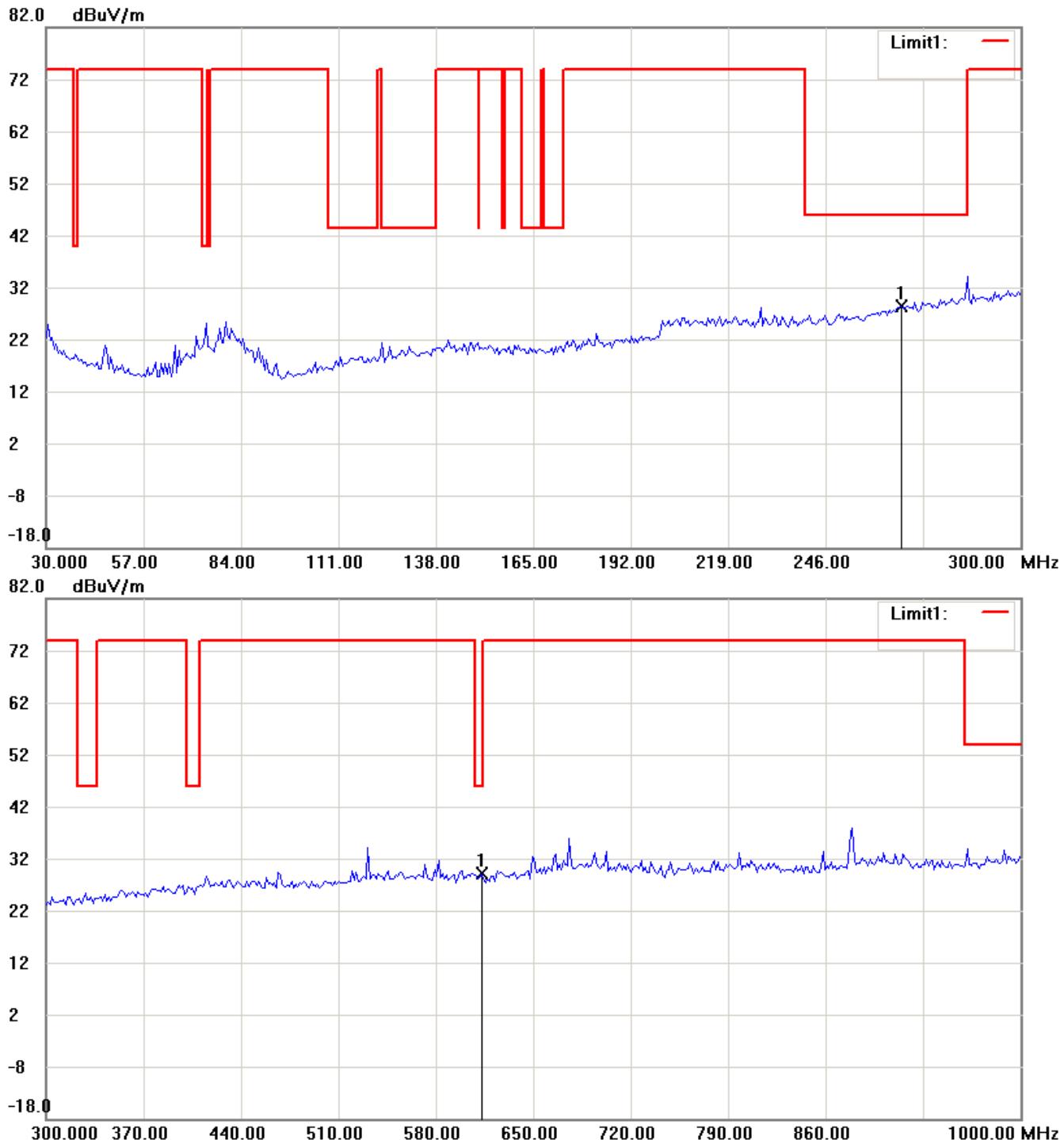
Note:

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430

Bluetooth 2480MHz Antenna Polarization H



Note:

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

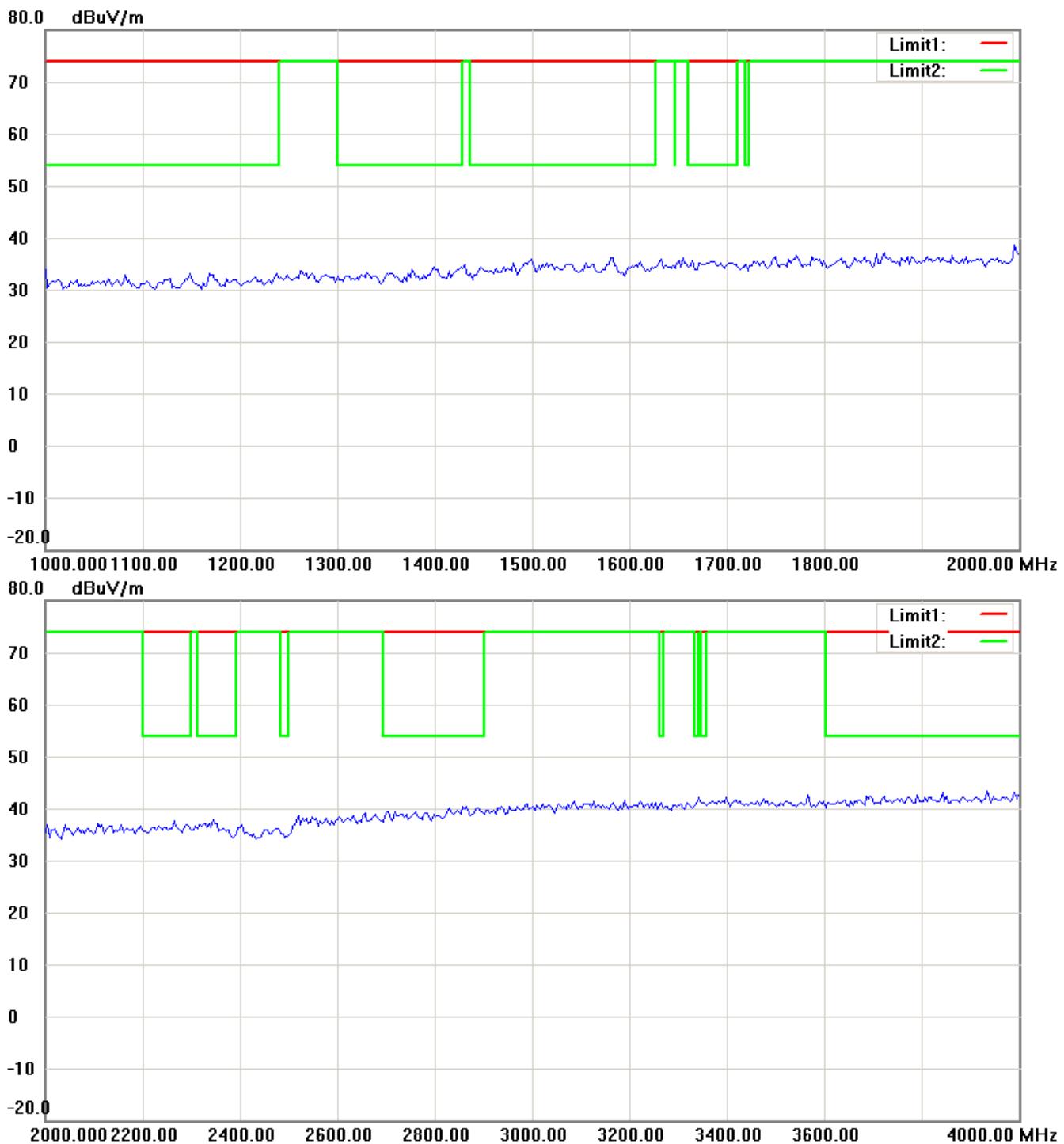
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

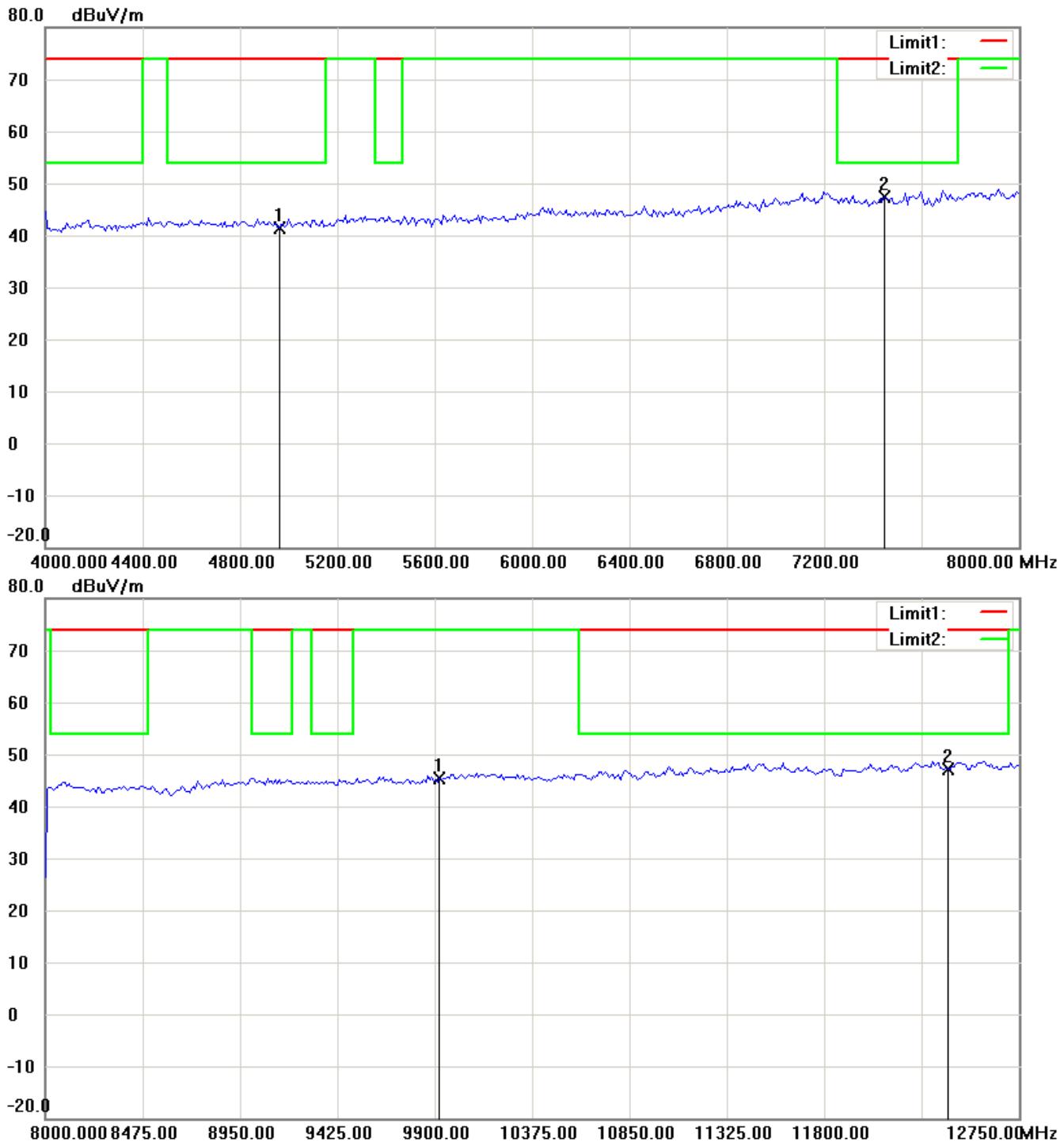


Note:

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

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Registration number: W6M21103-11337-C-1
 FCC ID:Y2A-OP430



Note:

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

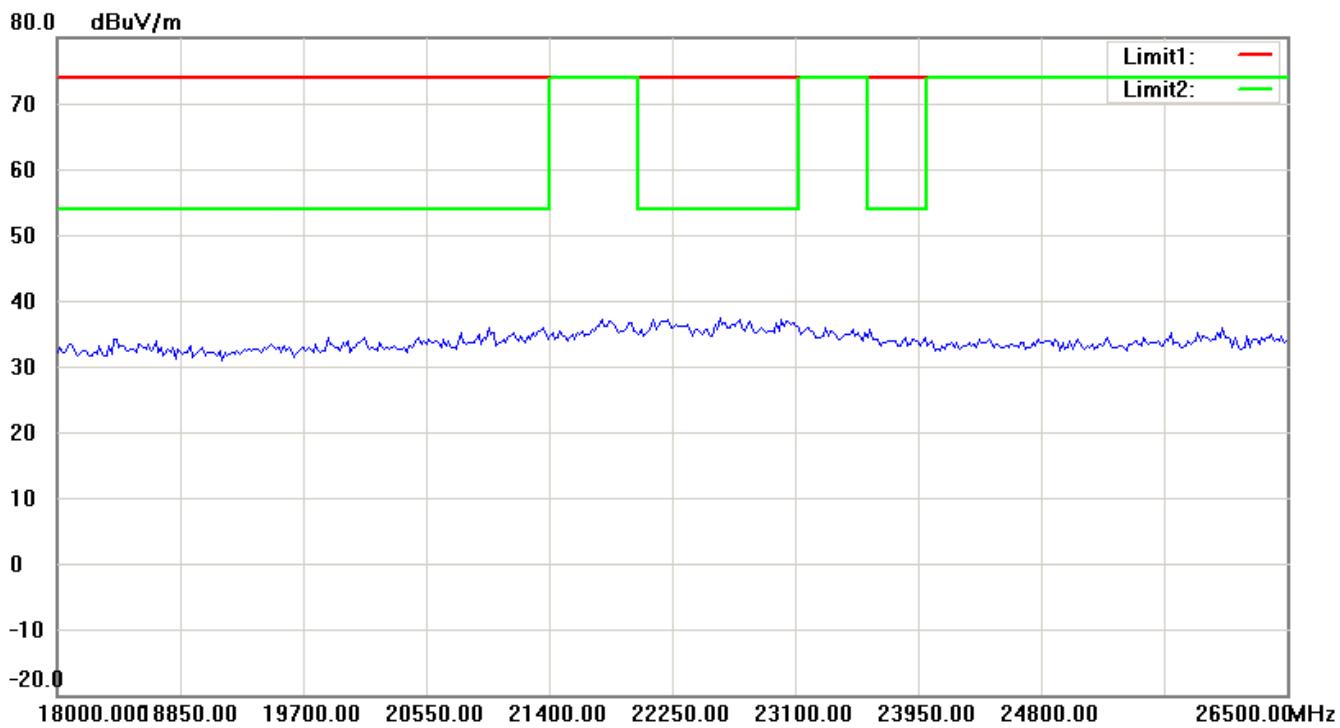
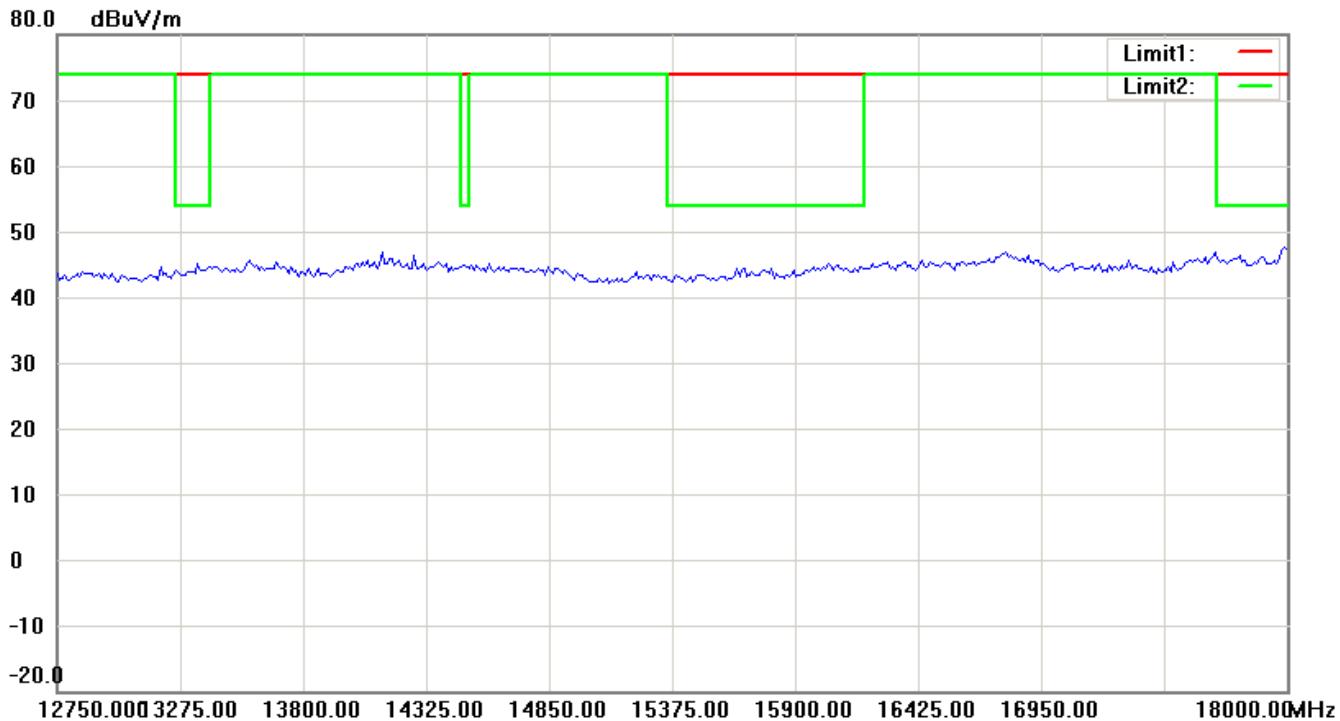
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

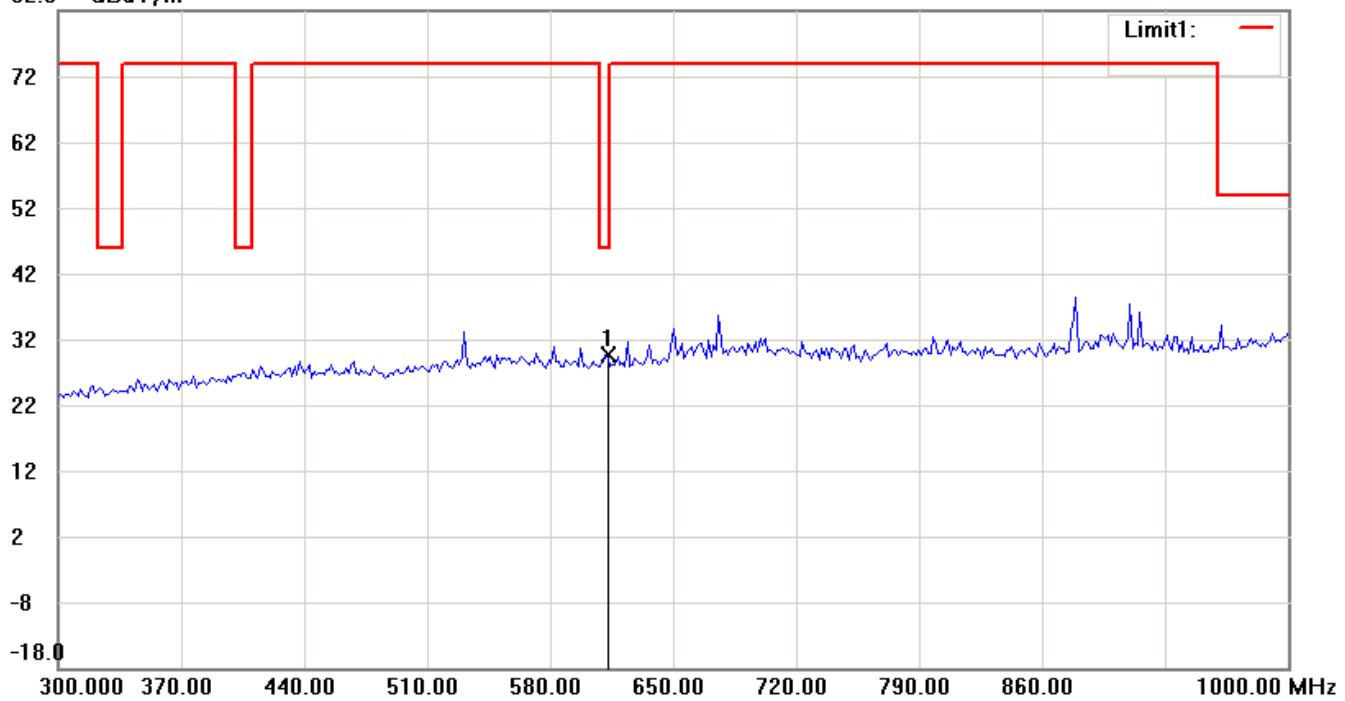
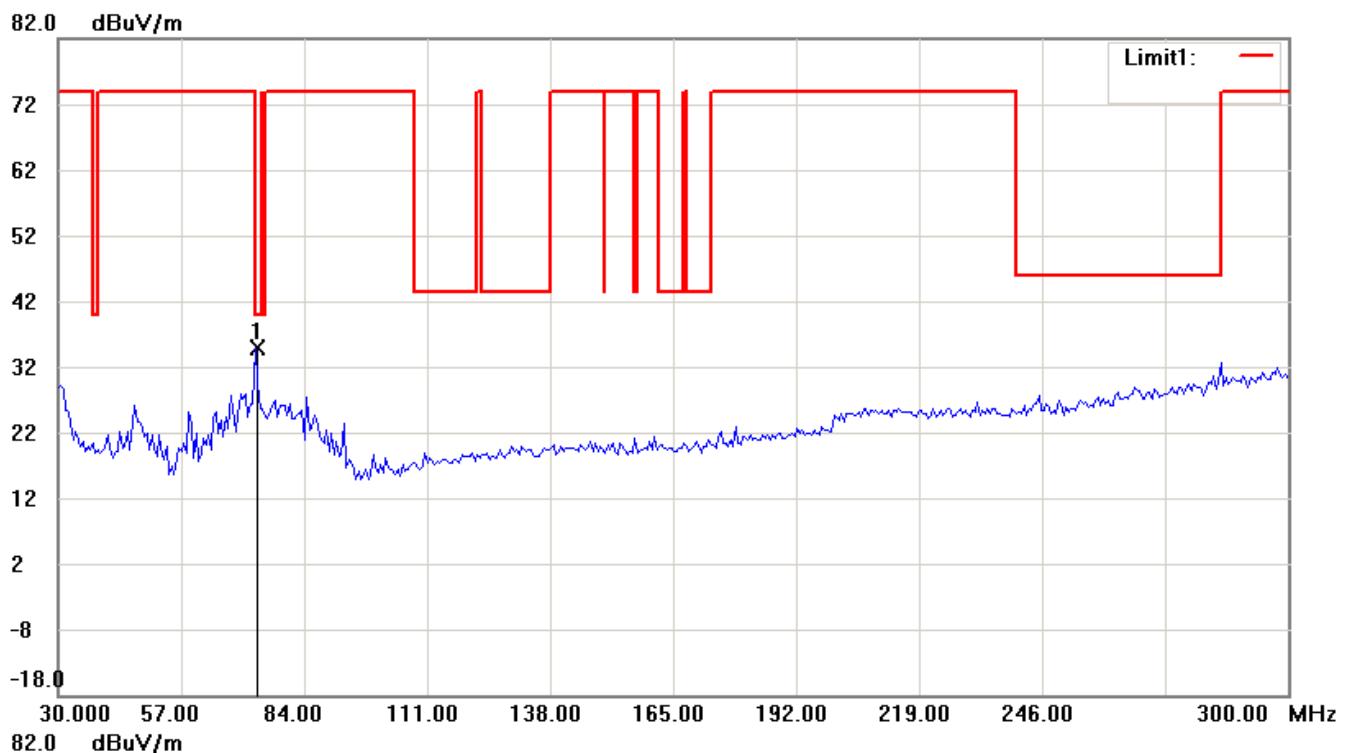
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430

Antenna Polarization V



Note:

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

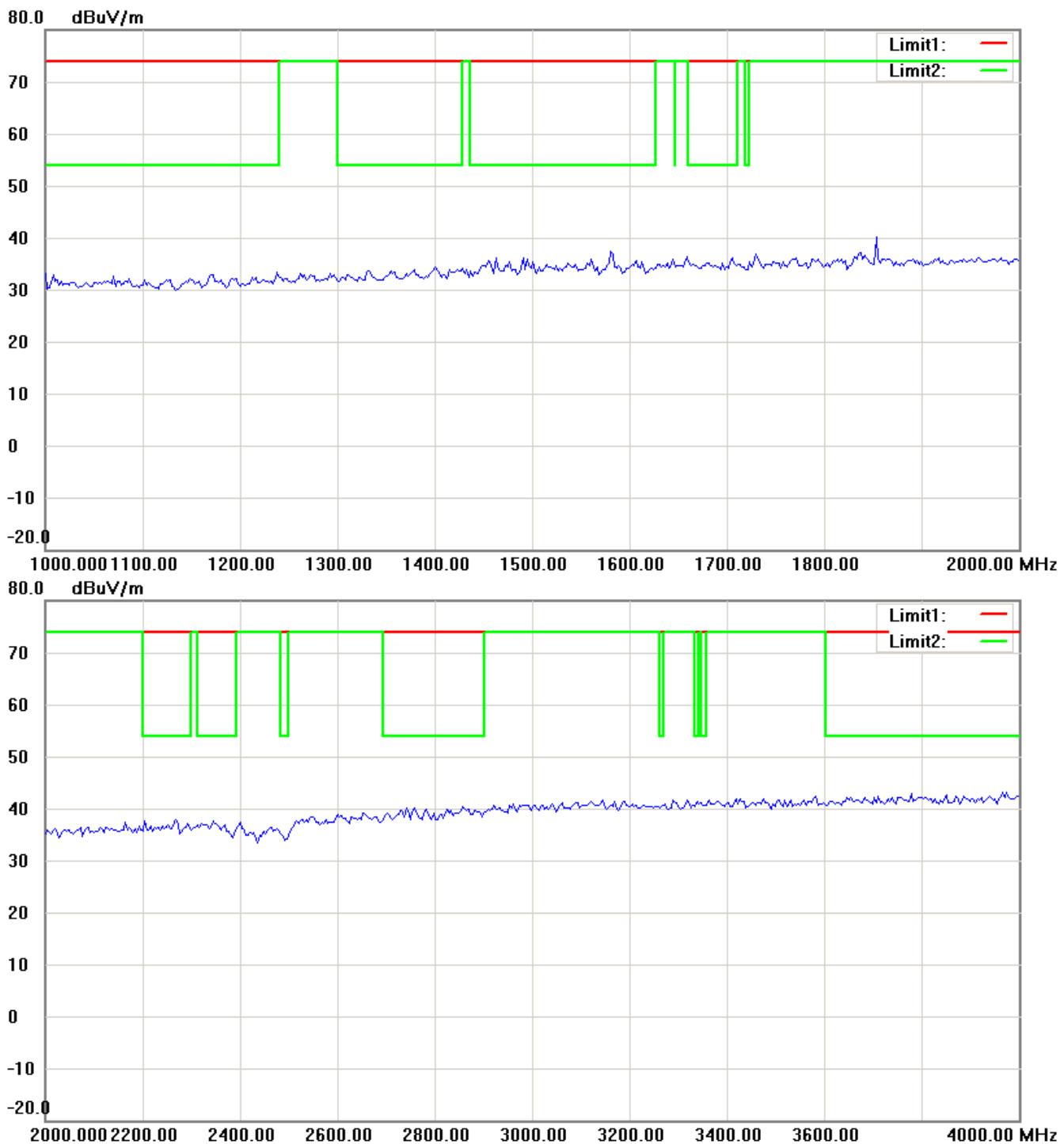
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



Note:

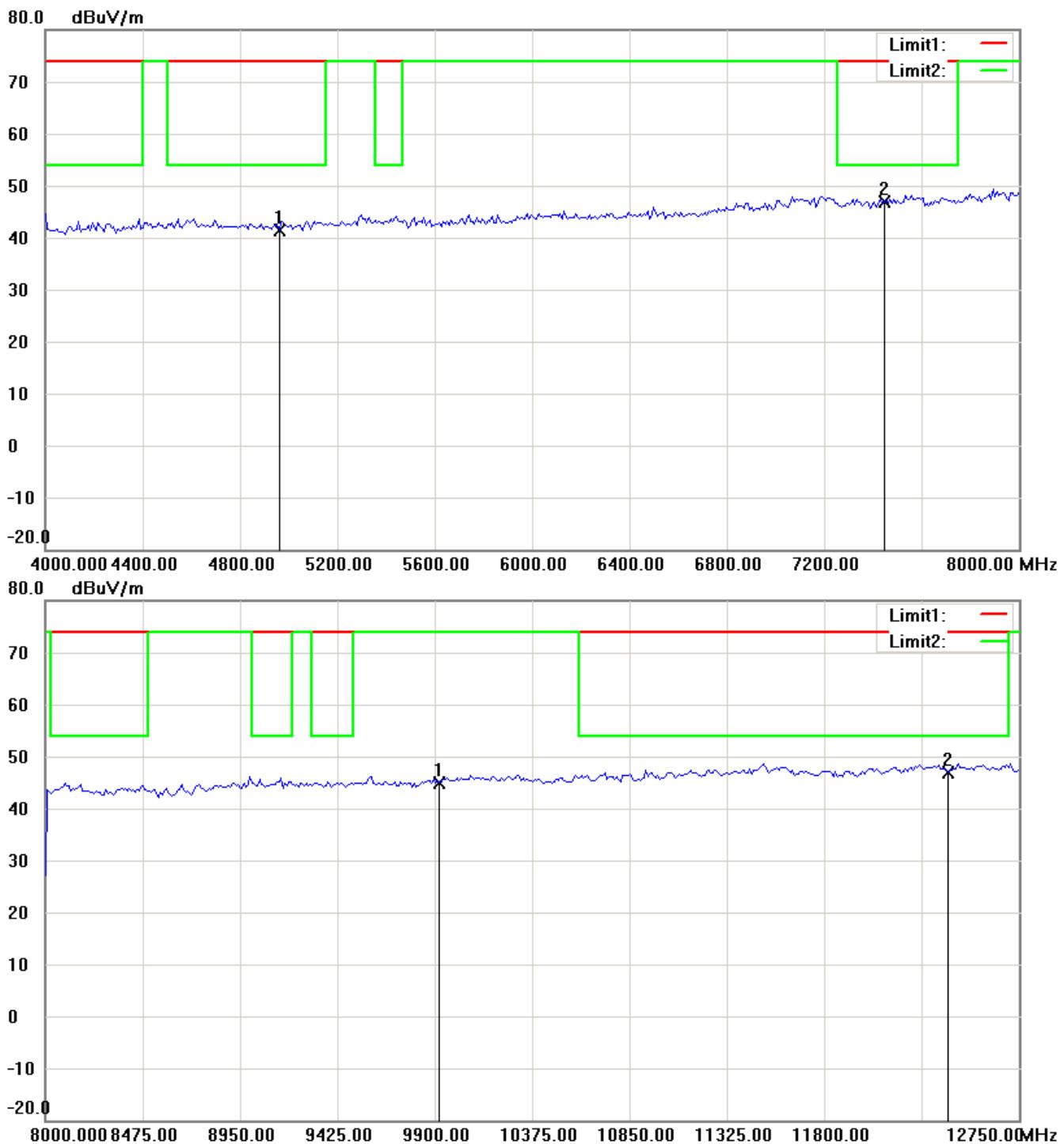
Up Line: Peak Limit Line, Down Line: Ave Limit Line

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21103-11337-C-1
FCC ID:Y2A-OP430



Note:

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

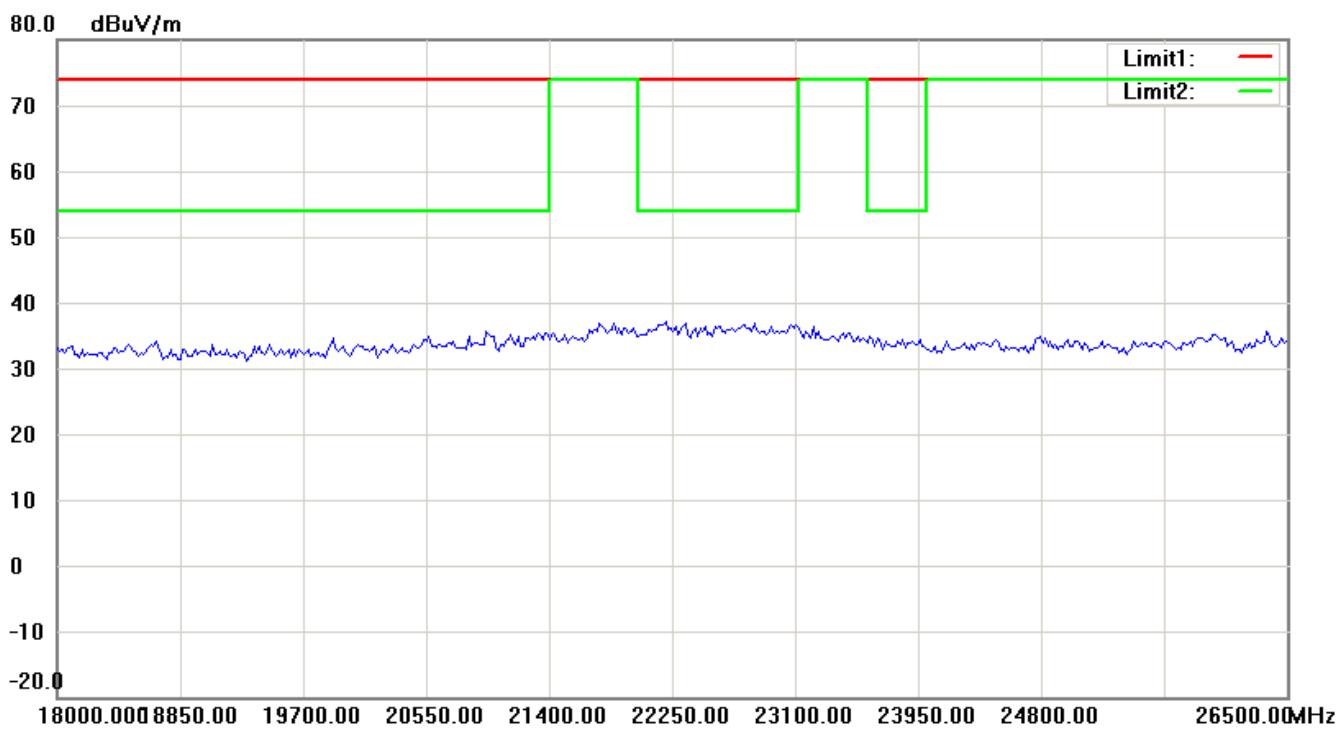
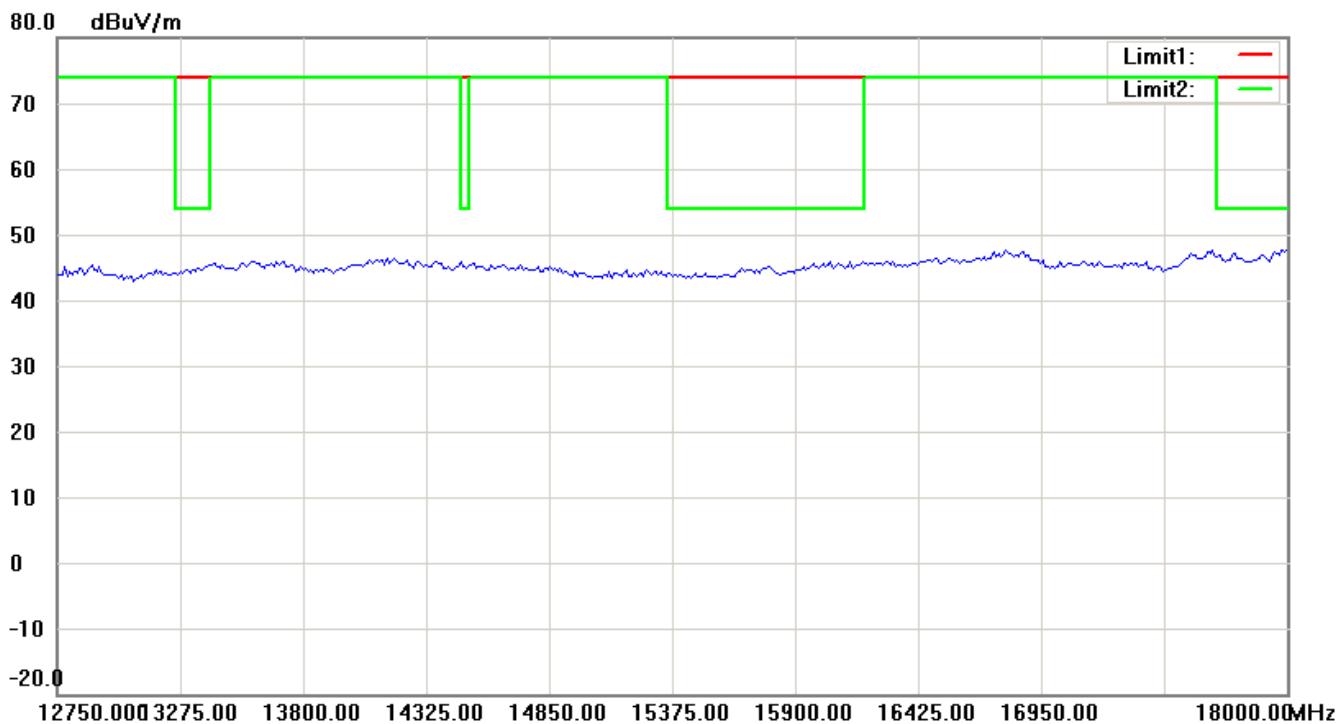
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Registration number: W6M21103-11337-C-1

FCC ID:Y2A-OP430



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