

FCC PART 15 SUBPART C TEST REPORT
for
High Power 700mW Dual Band AC Wi-Fi Access
Point
Model No.: APA20
FCC ID: ZTT-APA20

of

Applicant: **Amped Wireless**
Address: **13089 Peyton Dr. #C307 Chino Hills California 91709**
United States

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.: W6D21310-13579-C-1

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wtls@wtls-lab.com



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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.

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

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

Tester:

November 01, 2013

Rick Chen

Rick Chen.

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

November 01, 2013

Kevin Wang

Kevin Wang

Date

WTS

Name

Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

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1.2 Testing laboratory

1.2.1 Location

OATS

No.5-1, Lishui, Shuang Sing Village,
Wanli Dist., New Taipei City 207,
Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

TEL:886-2-6613-0228

FAX:886-2-2791-5046

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: Amped Wireless

Street: 13089 Peyton Dr. #C307

Town: Chino Hills California 91709

Country: United States

Telephone: (909) 217-3229

Fax: (909) 580-8883



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1.4 Application details

Date of receipt of test item: October 09, 2013

Date of test: from July 15, 2013 to October 31, 2013

1.5 General information of Test item

Type of test item: High Power 700mW Dual Band AC Wi-Fi Access Point

Model Number: APA20

Brand Name: amped wireless

Multi-listing model number: ./.

Photos: see Appendix

Technical data

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

802.11a

Frequency (ch 149): 5.745 GHz

Frequency (ch 157): 5.785 GHz

Frequency (ch 165): 5.825 GHz

802.11n 20MHz

Frequency (ch 149): 5.745 GHz

Frequency (ch 157): 5.785 GHz

Frequency (ch 165): 5.825 GHz

802.11n 40MHz

Frequency (ch 151): 5.755 GHz

Frequency (ch 159): 5.795 GHz

802.11ac

Frequency (ch 155): 5.775 GHz

11b, 11g, 11n 20MHz

Frequency (ch 1): 2.412 GHz

Frequency (ch 6): 2.437 GHz

Frequency (ch 11): 2.462 GHz

11n 40MHz

Frequency (ch 1): 2.422 GHz

Frequency (ch 4): 2.437 GHz

Frequency (ch 7): 2.452 GHz



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Number of Channels: 11a, 11n 20MHz : 5 channels
11n 40MHz: 2 channels
11ac : 1 channels
11b, 11g, 11n 20MHz: 11 channels
11n 40MHz: 7 channels

Operation modes: duplex

Modulation Type: DSSS / OFDM

Fixed point-to-point operation: ☐ Yes / ☒ No

Type of Antenna: Antenna A: Omni Antenna (for 2.4GHz)
Antenna B: Omni Antenna (for 5GHz)
Antenna C: Dual Band Omni-Antenna (for 2.4GHz & 5GHz)

Antenna gain: Antenna A & Antenna C: 5 dBi & 2 dBi
Antenna B & Antenna C: 5 dBi & 4 dBi

Directional gain: 6.64 dBi (for 2.4GHz)

Directional gain: 7.52 dBi (for 5GHz)

According to KDB 662911, Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1, G_2, \dots, G_N dBi. If transmit signals are correlated, then Directional gain

$= 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

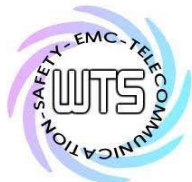
Power supply: Adaptor1: (I/P: 100-240Vac~50/60Hz 0.3A
O/P: 12Vdc, 1A)
Adaptor2: (I/P: 100-240Vac~50/60Hz 0.6A
O/P: 12Vdc, 1.5A)

Emission designator: **5.8GHz**
802.11a: OFDM: 19M3D1D
802.11n 20MHz: OFDM: 18M8D1D
802.11n 40MHz: OFDM: 34M4D1D
802.11ac: OFDM: 78M0D1D
2.4GHz
802.11b: DSSS: 16M2G1D
802.11g: OFDM: 17M0D1D
802.11n 20MHz: OFDM: 18M3D1D
802.11n 40MHz: OFDM: 38M4D1D

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"/>



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Transmitter

Unom

Antenna A

Mode A (802.11a)

Power (ch 149 or A):	Conducted: 20.12 dBm
Power (ch 157 or B):	Conducted: 19.60 dBm
Power (ch 165 or C):	Conducted: 19.26 dBm

Mode B (802.11n 20MHz)

Power (ch 149 or A):	Conducted: 20.86 dBm
Power (ch 157 or B):	Conducted: 19.95 dBm
Power (ch 165 or C):	Conducted: 20.03 dBm

Mode C (802.11n 40MHz)

Power (ch 151 or A):	Conducted: 17.47 dBm
Power (ch 159 or B):	Conducted: 17.06 dBm

Mode D (802.11ac)

Power (ch 155 or A):	Conducted: 18.13 dBm
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Mode E (802.11b)

Power (ch 1 or A):	Conducted: 28.92 dBm
Power (ch 6 or B):	Conducted: 28.54 dBm
Power (ch 11 or C):	Conducted: 27.43 dBm

Mode F (802.11g)

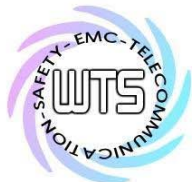
Power (ch 1 or A):	Conducted: 27.47 dBm
Power (ch 6 or B):	Conducted: 25.59 dBm
Power (ch 11 or C):	Conducted: 27.85 dBm

Mode G (802.11n 20MHz)

Power (ch 1 or A):	Conducted: 26.50 dBm
Power (ch 6 or B):	Conducted: 26.37 dBm
Power (ch 11 or C):	Conducted: 26.46 dBm

Mode H (802.11n 40MHz)

Power (ch 1 or A):	Conducted: 23.86 dBm
Power (ch 4 or B):	Conducted: 25.68 dBm
Power (ch 7 or C):	Conducted: 26.11 dBm



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Antenna B

Mode A (802.11a)

Power (ch 149 or A): Conducted: 21.32 dBm

Power (ch 157 or B): Conducted: 21.38 dBm

Power (ch 165 or C): Conducted: 20.99 dBm

Mode B (802.11n 20MHz)

Power (ch 149 or A): Conducted: 20.58 dBm

Power (ch 157 or B): Conducted: 20.53 dBm

Power (ch 165 or C): Conducted: 20.21 dBm

Mode C (802.11n 40MHz)

Power (ch 151 or A): Conducted: 19.36 dBm

Power (ch 159 or B): Conducted: 19.22 dBm

Mode D (802.11ac)

Power (ch 155 or A): Conducted: 19.51 dBm

Mode E (802.11b)

Power (ch 1 or A): Conducted: 26.48 dBm

Power (ch 6 or B): Conducted: 26.46 dBm

Power (ch 11 or C): Conducted: 26.01 dBm

Mode F (802.11g)

Power (ch 1 or A): Conducted: 25.88 dBm

Power (ch 6 or B): Conducted: 24.29 dBm

Power (ch 11 or C): Conducted: 25.33 dBm

Mode G (802.11n 20MHz)

Power (ch 1 or A): Conducted: 24.59 dBm

Power (ch 6 or B): Conducted: 24.09 dBm

Power (ch 11 or C): Conducted: 23.43 dBm

Mode H (802.11n 40MHz)

Power (ch 1 or A): Conducted: 21.33 dBm

Power (ch 4 or B): Conducted: 23.18 dBm

Power (ch 7 or C): Conducted: 23.12 dBm

Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	236.19	211.84	205.64	23.73	23.26	23.13
802.11n 40MHz	142.15	--	134.38	21.53	--	21.28
802.11ac	154.34	--	--	21.88	--	--
802.11n 20MHz(2.4GHz)	734.42	689.96	662.88	28.66	28.39	28.21
802.11n 40MHz	379.05	577.80	613.44	25.79	27.62	27.88



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Manufacturer: (if applicable)

Name: ./.

Street: ./.

Town: ./.

Country: ./.

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2011-10)



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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 %

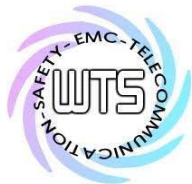
Air pressure: 86 ... 103 kPa

Power supply: Adaptor1: (I/P: 100-240Vac~50/60Hz, 0.3A
O/P: 12Vdc, 1A)
Adaptor2: (I/P: 100-240Vac~50/60Hz, 0.6A
O/P: 12Vdc, 1.5A)

Extreme conditions parameters: ./.

Special statement:

1. This test report is based on the original model no.: RTA15.(FCC ID:ZTT-RTA15)
2. The relevant Circuitry, PCB Layout, Inner element and Function are exactly the same as the original model no. RTA15. The differences are the appearance, the model number and the product name. Therefore the test result is also based on the original test report no.W6M21307-13350-C-1 without re-testing.

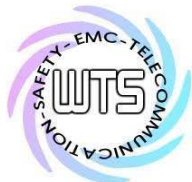


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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2013/9/2	2014/9/1
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	2012/12/21	2013/12/20
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2013/3/4	2014/3/3
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use	
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	2013/7/10	2014/7/9
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2013/9/2	2014/9/1
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2013/9/2	2014/9/1
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2013/10/4	2014/10/3
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2013/7/3	2014/7/2
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2013/3/4	2014/3/3
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2013/3/21	2014/3/20
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2013/3/4	2014/3/3
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2013/3/4	2014/3/3
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2013/3/4	2014/3/3
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2013/5/31	2014/5/30
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2013/3/4	2014/3/3
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2012/11/28	2013/11/27
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	EMCO	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2013/10/4	2014/10/3
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2013/10/4	2014/10/3
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2013/3/4	2014/3/3
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2012/12/4	2013/12/3
ETSTW-RE 111	TRILOG Super Broadband test Antenna	VULB 9160	9160-3309	Schwarz beck	2012/12/13	2013/12/12
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2013/1/11	2014/1/10
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	



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ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2013/6/28	2014/6/27
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2013/8/16	2014/8/15
ETSTW-RE 126	5GHz Notch filter	5NSL11-5800/E221.3-O/O	1	K&L Microwave	2013/8/16	2014/8/15
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2013/3/4	2014/3/3
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2013/8/13	2014/8/12
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2013/8/13	2014/8/12
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2013/10/4	2014/10/3
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2013/1/11	2014/1/10
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2013/1/11	2014/1/10
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2013/1/11	2014/1/10
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2013/1/11	2014/1/10
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2013/9/18	2014/9/17
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2013/3/4	2014/3/3
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test Use NCR	
ETSTW-Cable 012	N TYPE To SMA Cable	Cable 012	None	JYE BAO CO.,LTD.	2013/3/4	2014/3/3
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2013/3/4	2014/3/3
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2013/3/4	2014/3/3
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2013/3/4	2014/3/3
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2013/3/4	2014/3/3
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2013/3/26	2014/3/25
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2013/3/4	2014/3/3
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2013/3/4	2014/3/3
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2013/10/4	2014/10/3
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2013/10/4	2014/10/3
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2013/3/4	2014/3/3
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2012/11/28	2013/11/27
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2012/11/28	2013/11/27
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2012/11/28	2013/11/27
ETSTW-Cable 053	N TYPE To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2013/3/26	2014/3/25
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2013/6/20	2014/6/19
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1	



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2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2009 5.2 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 C63.4-2009 6.4 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

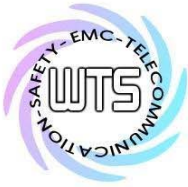
The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2009 6.3.1. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (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, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: 930600.

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



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

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

ANSI STANDARD C63.4-2009 10.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent isotropically radiated Power	15.247(b)	<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(d)	<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(e)	<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"/>

Note:

1. This EUT incorporates a MIMO function with IEEE 802.11a, 802.11ac, 802.11b, 802.11g, and 802.11n. Physically, this EUT includes two transmitters and two receivers with two incoherent streams. This device uses multiplexing and also employ cyclic delay diversity to improve range and throughput, and this device simultaneously operates on two adjacent channels.
2. This EUT is 2*2 spatial MIMO (2Tx&2Rx) without beam forming function. That operates dual chain configuration. The Pre-test was performed to determine the worst case mode from all possible combinations between all available modulations, data rates, bandwidths, and spatial stream modes.



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

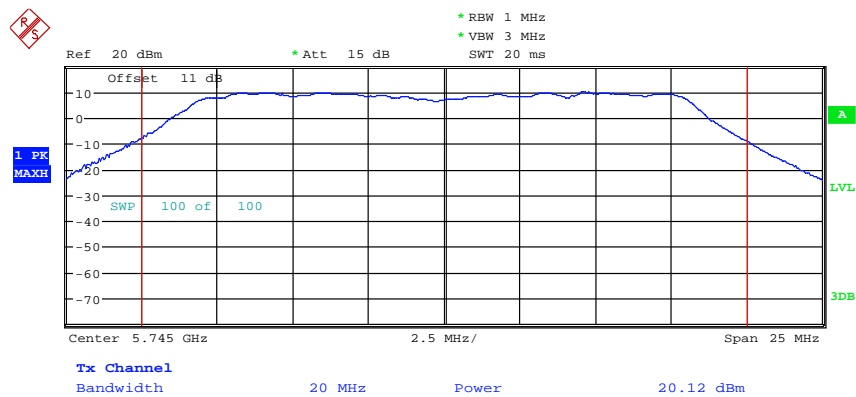
3.1 Peak Output Power (transmitter)

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).

Antenna A
Mode A



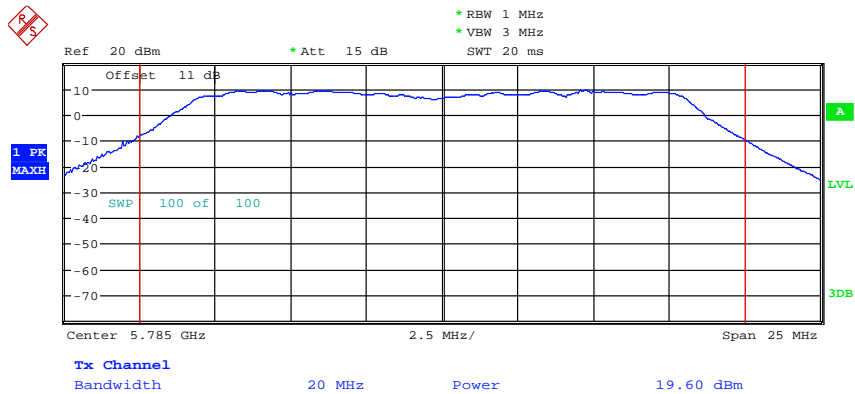
MAX OUTPUT POWER 802.11A CH149
Date: 2.OCT.2013 18:11:56



Worldwide Testing Services(Taiwan) Co., Ltd.

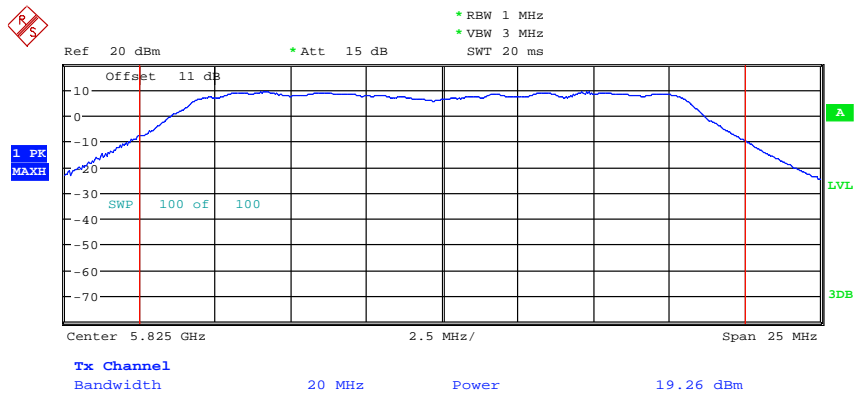
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11A CH157

Date: 2.OCT.2013 18:13:22



MAX OUTPUT POWER 802.11A CH165

Date: 2.OCT.2013 18:15:18

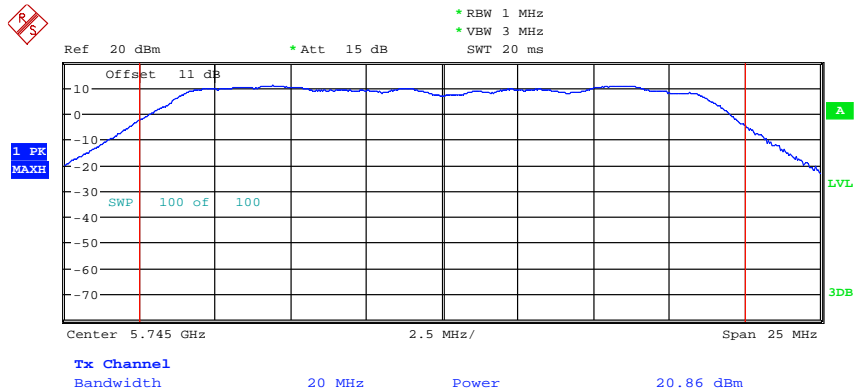


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

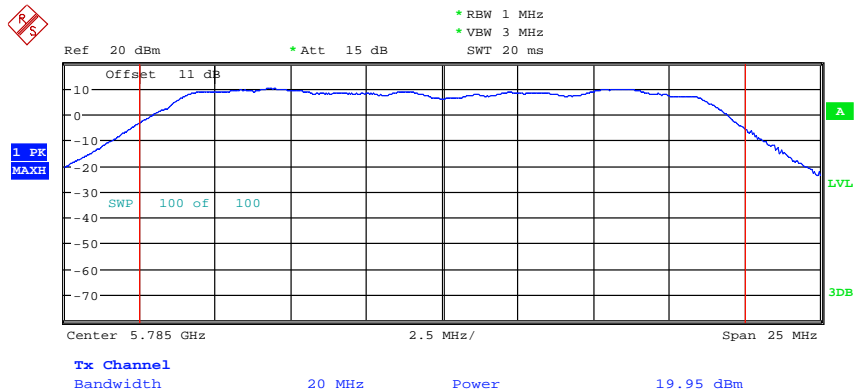
FCC ID: ZTT-APA20

Mode B



MAX OUTPUT POWER 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:36:45



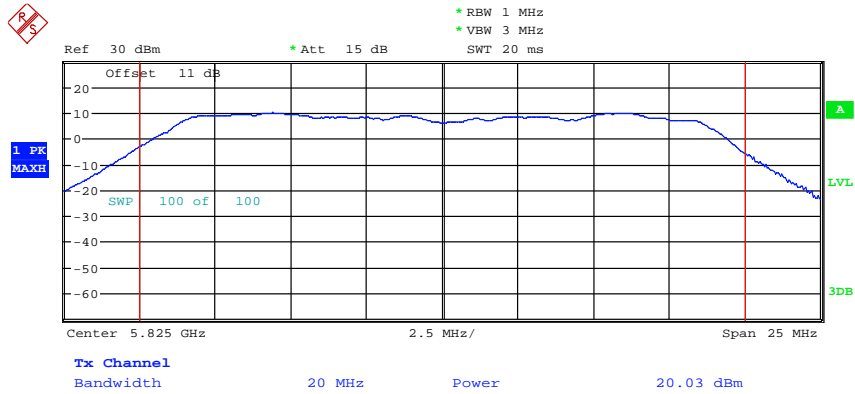
MAX OUTPUT POWER 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:37:28



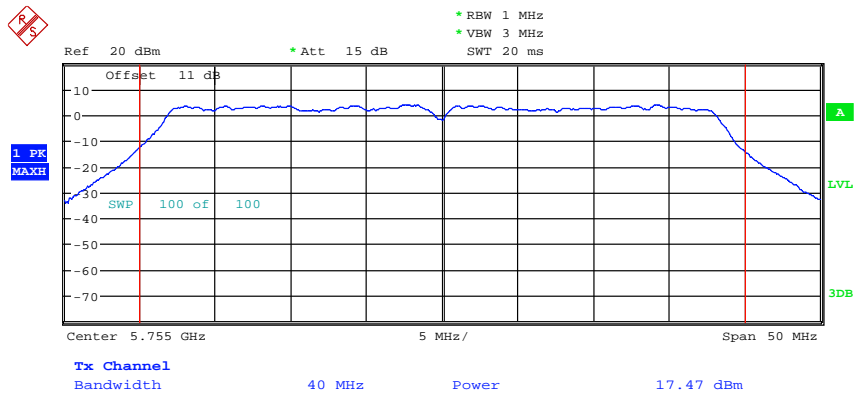
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11N 20MHZ CH165
Date: 2.OCT.2013 18:38:24

Mode C

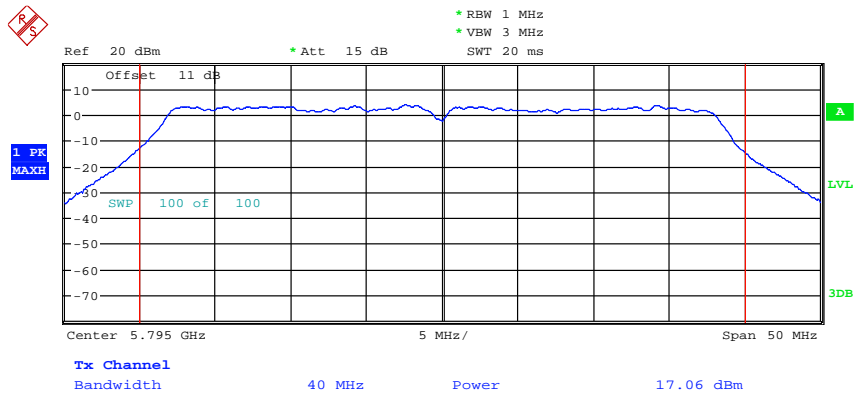


MAX OUTPUT POWER 802.11N 40MHZ CH151
Date: 2.OCT.2013 18:41:48



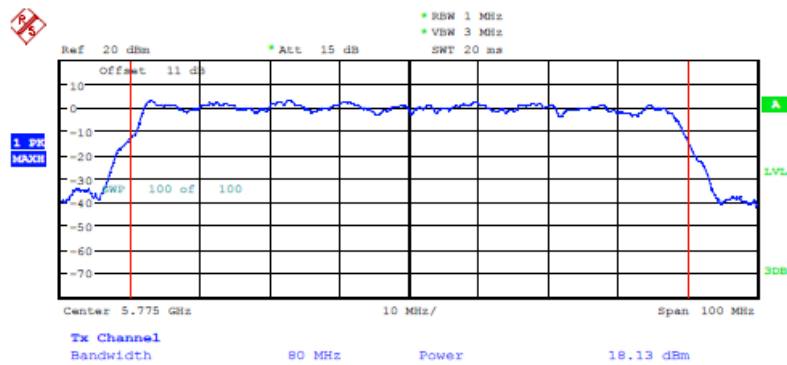
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11N 40MHZ CH159
Date: 2.OCT.2013 18:42:40

Mode D



MAX OUTPUT POWER 802.11AC 80MHZ CH155
Date: 2.OCT.2013 19:02:04

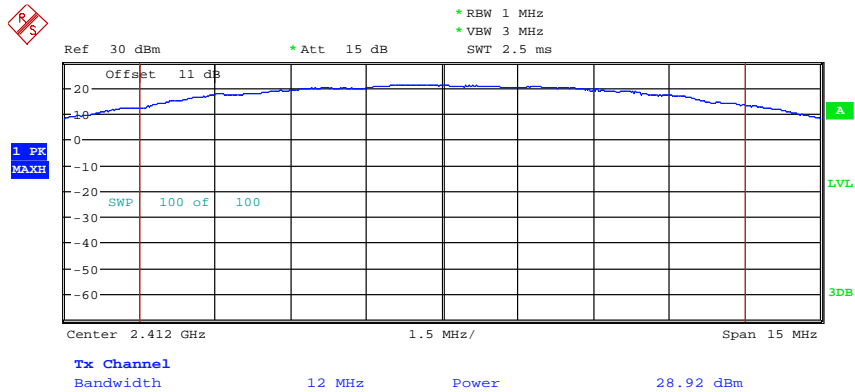


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

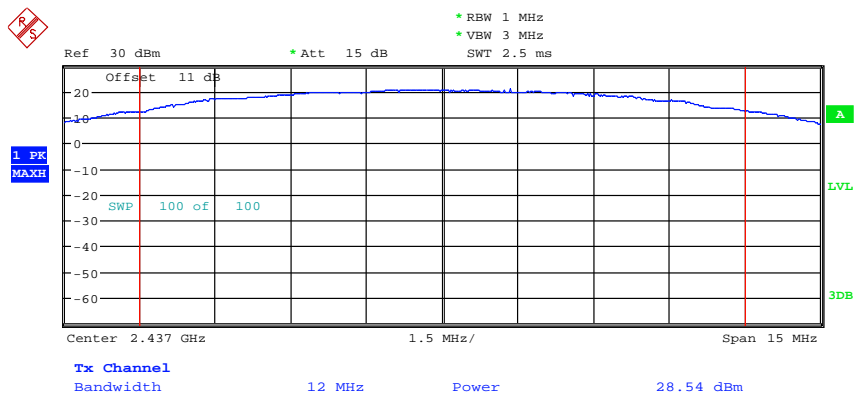
FCC ID: ZTT-APA20

Mode E



MAX OUTPUT POWER 802.11B CH01

Date: 2.OCT.2013 17:16:38

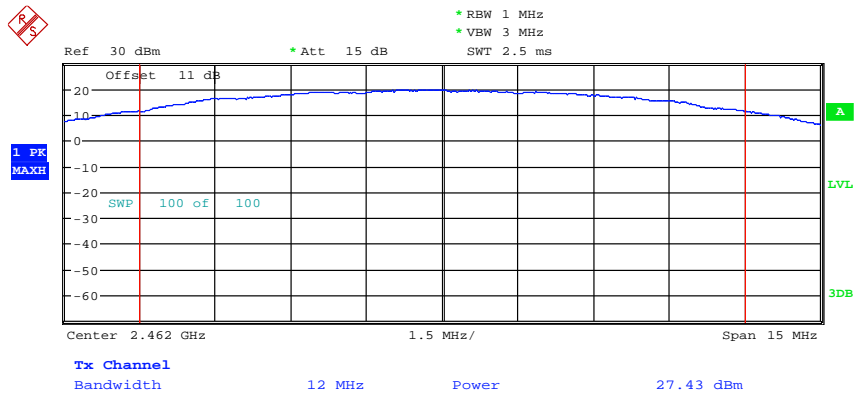


MAX OUTPUT POWER 802.11B CH06

Date: 2.OCT.2013 17:18:32

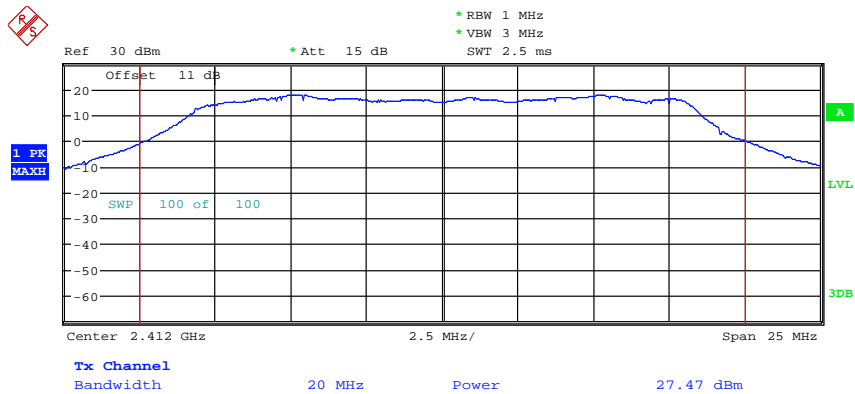


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11B CH11
Date: 2.OCT.2013 17:20:04

Mode F

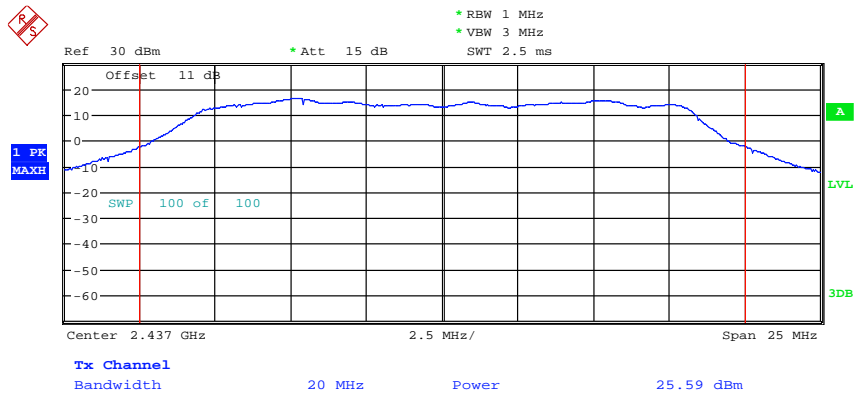


MAX OUTPUT POWER 802.11G CH01
Date: 2.OCT.2013 17:21:01



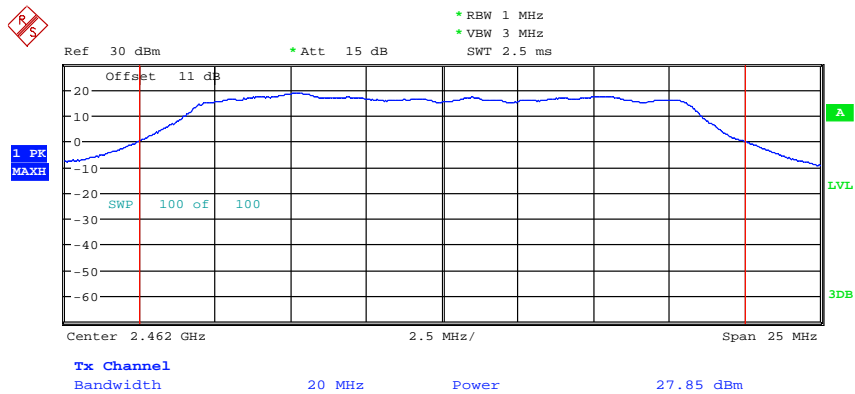
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11G CH06

Date: 2.OCT.2013 17:21:48



MAX OUTPUT POWER 802.11G CH11

Date: 2.OCT.2013 17:22:30

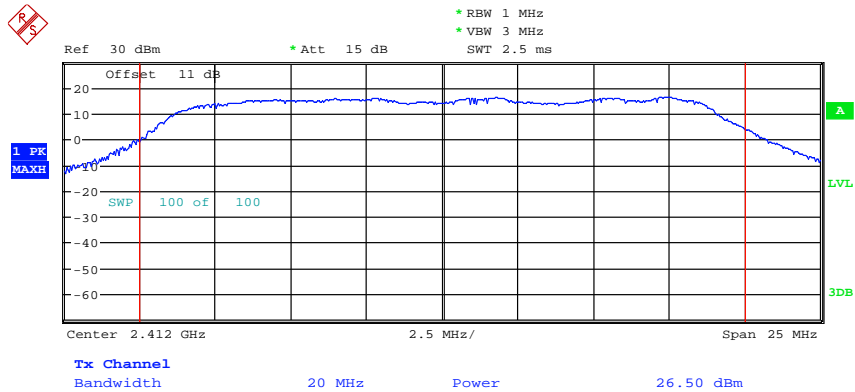


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

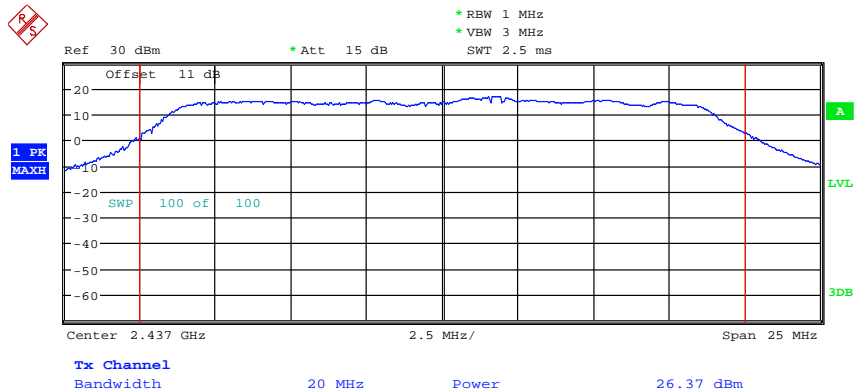
FCC ID: ZTT-APA20

Mode G



MAX OUTPUT POWER 802.11N 20MHZ CH01

Date: 2.OCT.2013 17:31:54



MAX OUTPUT POWER 802.11N 20MHZ CH06

Date: 2.OCT.2013 17:33:15



Ref 30 dBm *Att 15 dB SWT 2.5 ms

Offset 11 dB

1 PK MAXH

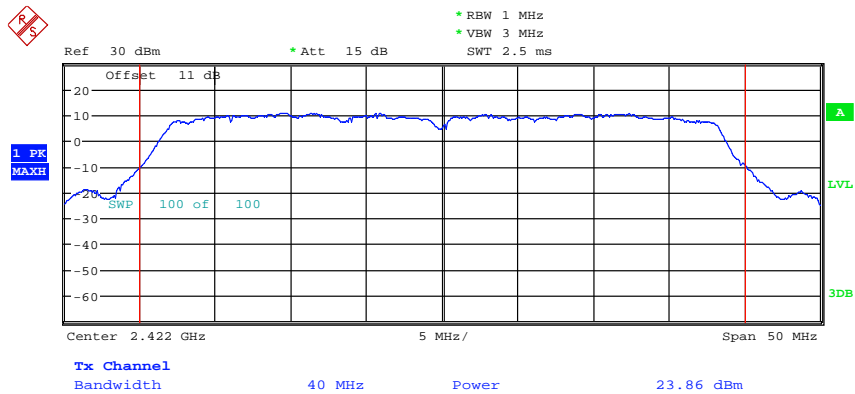
SWP 100 of 100

Center 2.462 GHz 2.5 MHz/ Span 25 MHz

Tx Channel

Bandwidth 20 MHz Power 26.46 dBm

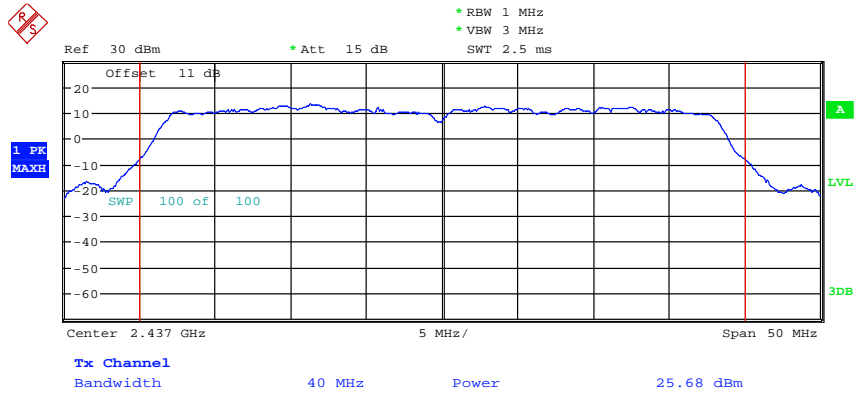
Mode H





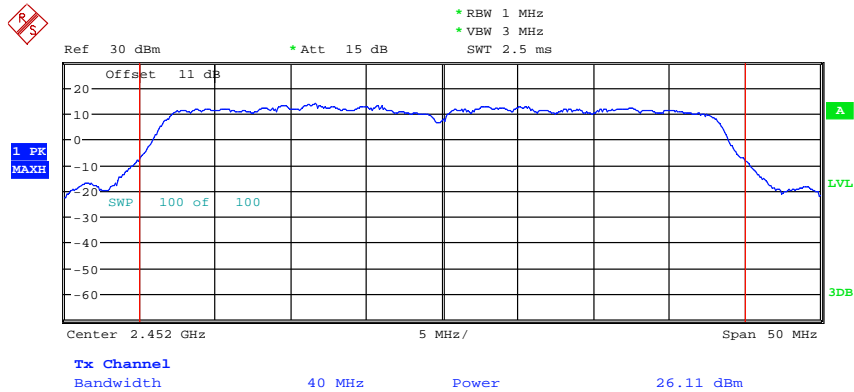
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:37:55



MAX OUTPUT POWER 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:39:01



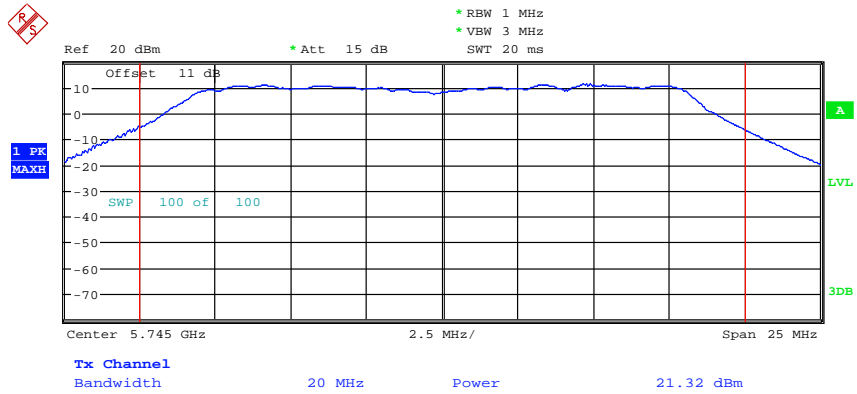
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

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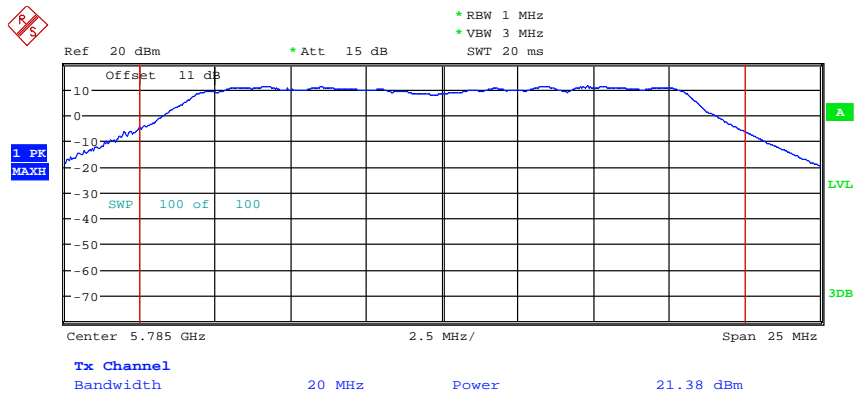
Antenna B

Mode A



MAX OUTPUT POWER 802.11A CH149

Date: 2.OCT.2013 18:48:24



MAX OUTPUT POWER 802.11A CH157

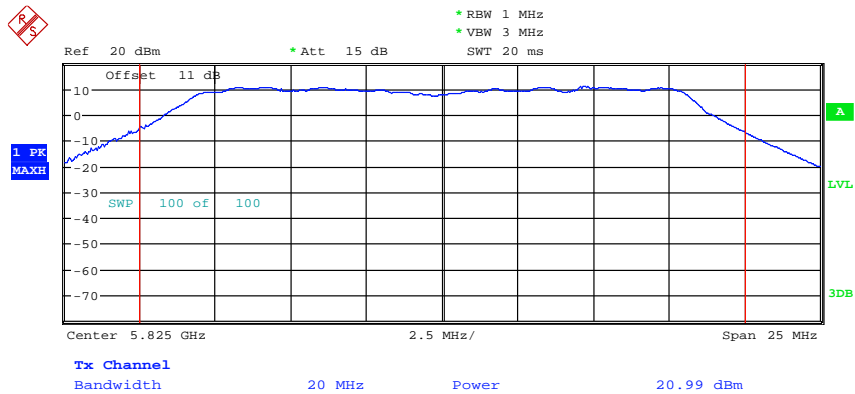
Date: 2.OCT.2013 18:49:15



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

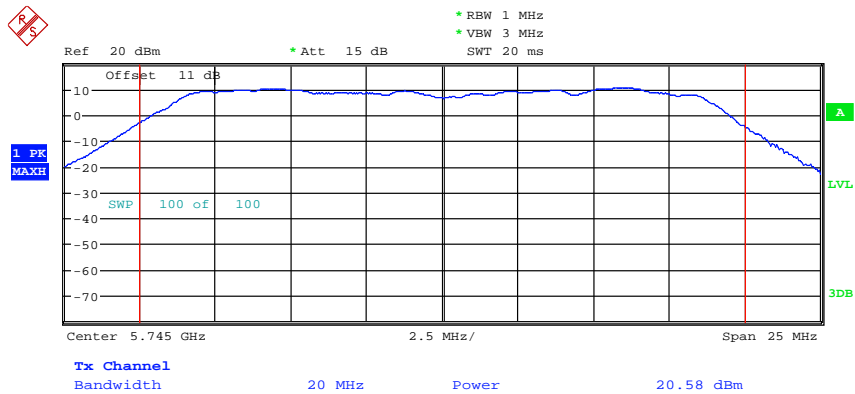
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11A CH165

Date: 2.OCT.2013 18:49:53

Mode B



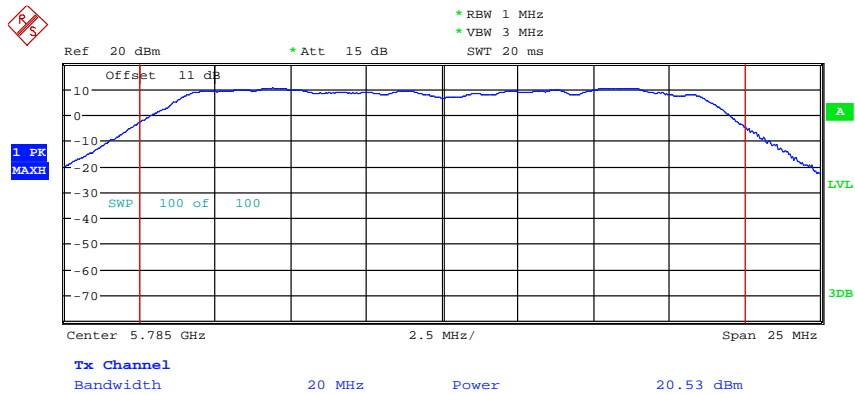
MAX OUTPUT POWER 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:50:58



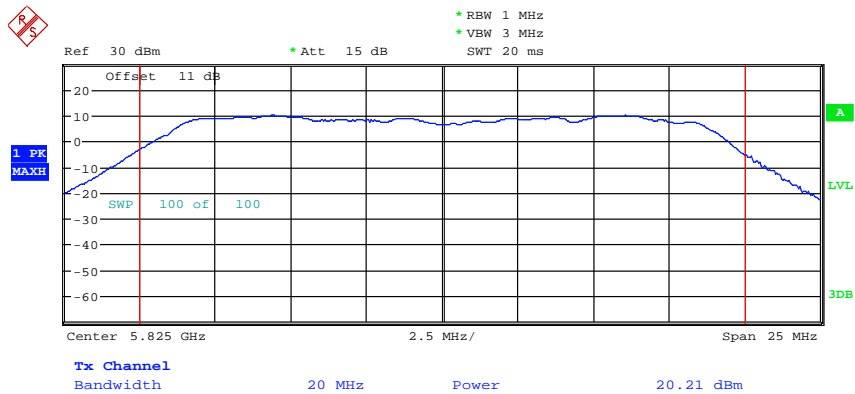
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:51:42



MAX OUTPUT POWER 802.11N 20MHZ CH165

Date: 2.OCT.2013 18:52:20

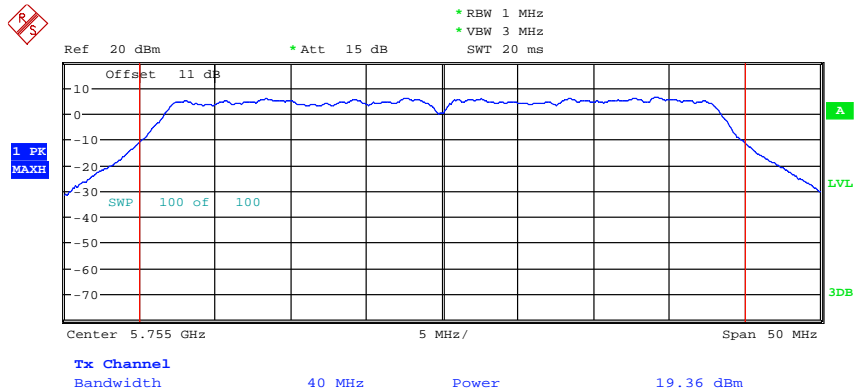


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

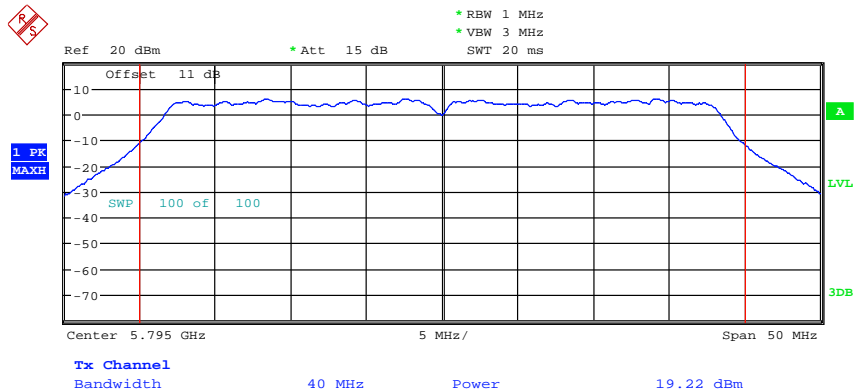
FCC ID: ZTT-APA20

Mode C



MAX OUTPUT POWER 802.11N 40MHZ CH151

Date: 2.OCT.2013 18:53:50



MAX OUTPUT POWER 802.11N 40MHZ CH159

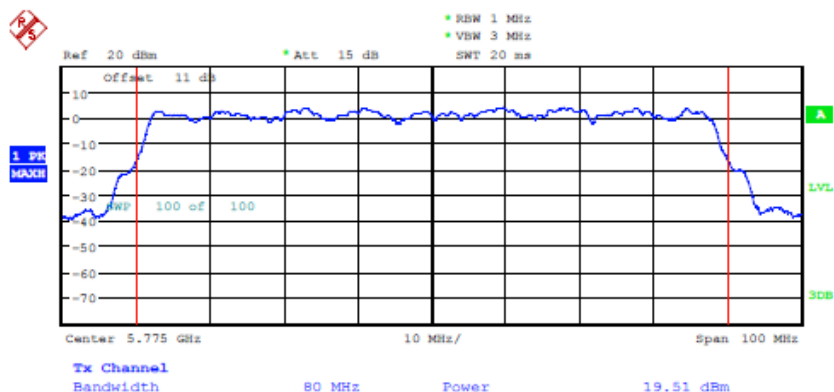
Date: 2.OCT.2013 18:54:37



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

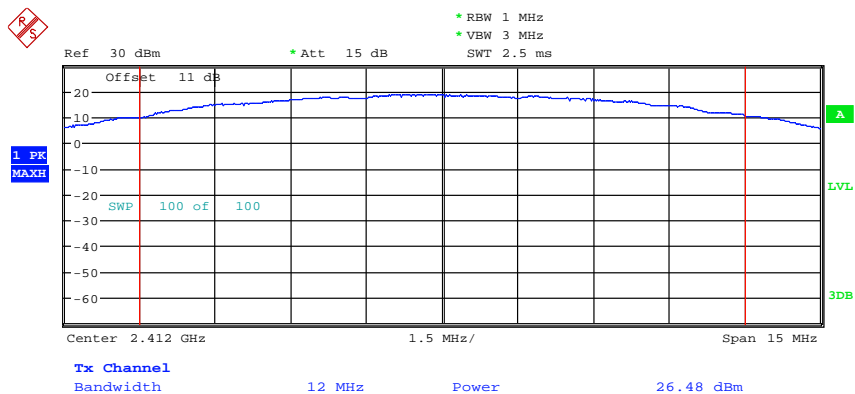
Mode D



MAX OUTPUT POWER 802.11AC 80MHZ CH155

Date: 2.OCT.2013 19:00:46

Mode E



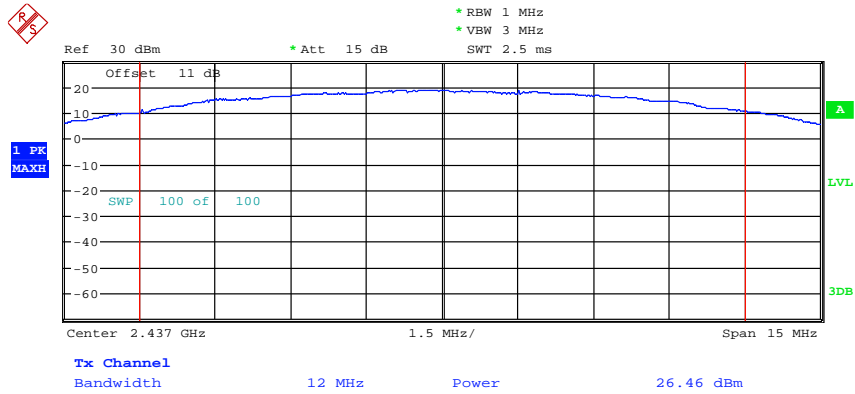
MAX OUTPUT POWER 802.11B CH01

Date: 2.OCT.2013 17:43:19



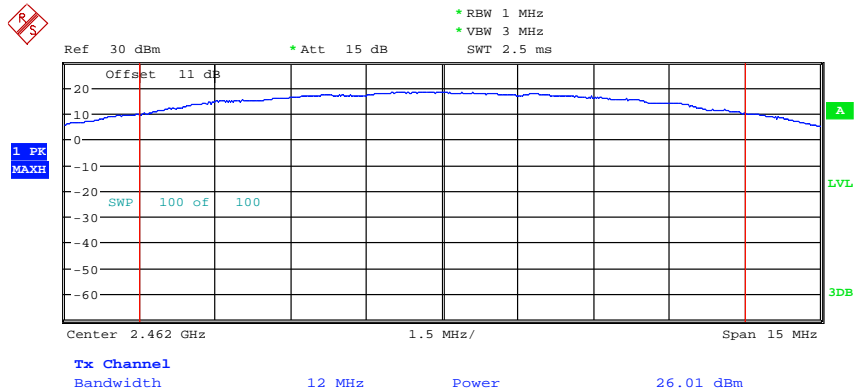
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11B CH06

Date: 2.OCT.2013 17:44:03



MAX OUTPUT POWER 802.11B CH11

Date: 2.OCT.2013 17:45:15

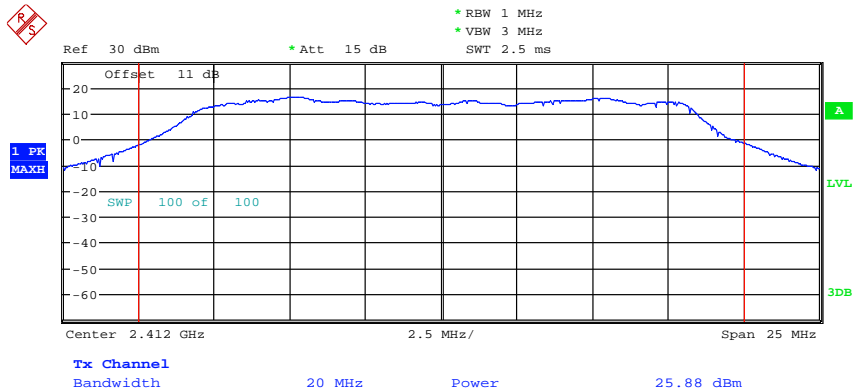


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

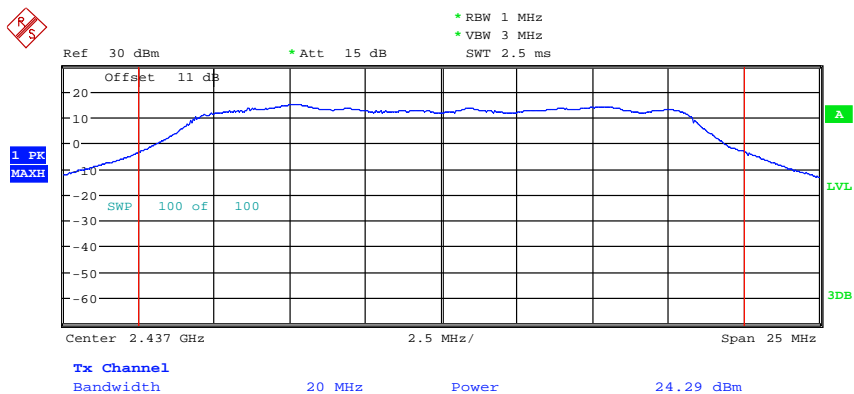
FCC ID: ZTT-APA20

Mode F



MAX OUTPUT POWER 802.11G CH01

Date: 2.OCT.2013 17:46:06



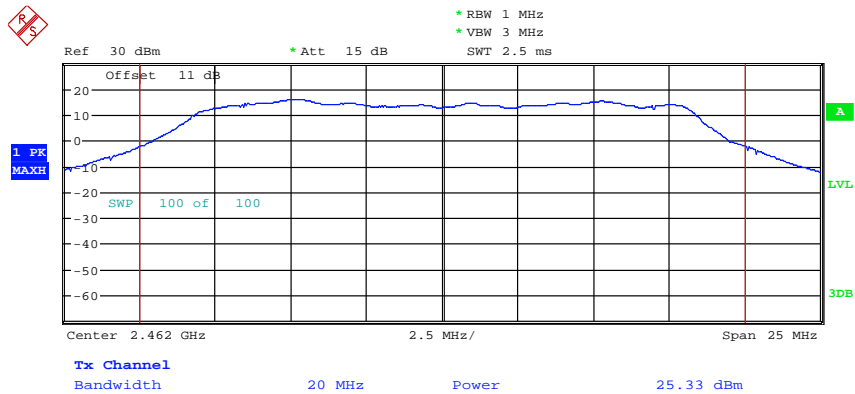
MAX OUTPUT POWER 802.11G CH06

Date: 2.OCT.2013 17:46:57



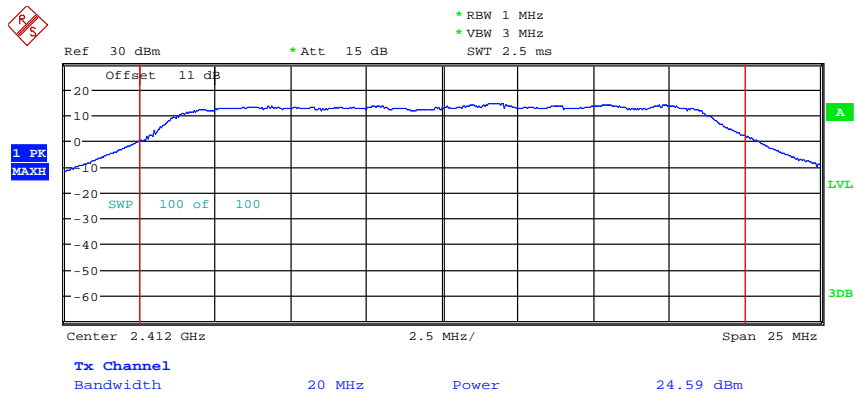
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

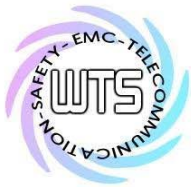


MAX OUTPUT POWER 802.11G CH11
Date: 2.OCT.2013 17:47:39

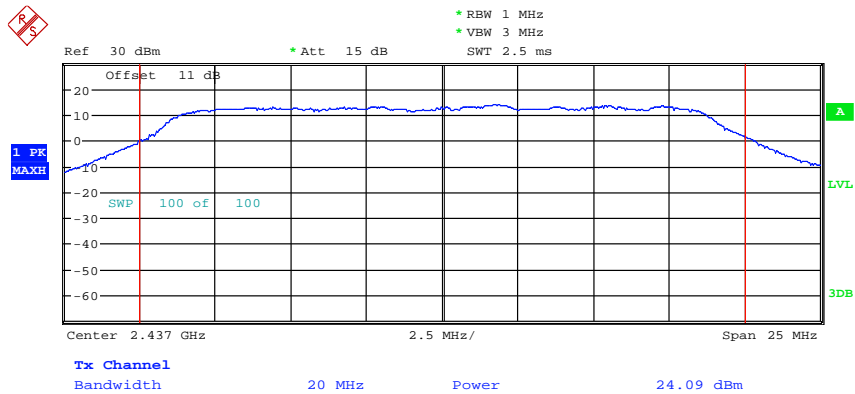
Mode G



MAX OUTPUT POWER 802.11N 20MHZ CH01
Date: 2.OCT.2013 17:48:37

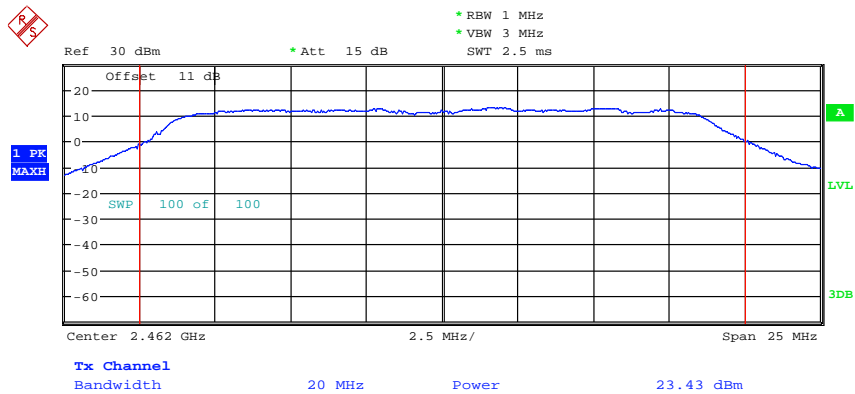


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FCC ID: ZTT-APA20



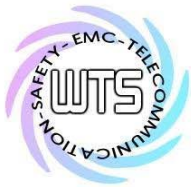
MAX OUTPUT POWER 802.11N 20MHZ CH06

Date: 2.OCT.2013 17:49:22



MAX OUTPUT POWER 802.11N 20MHZ CH11

Date: 2.OCT.2013 17:50:18

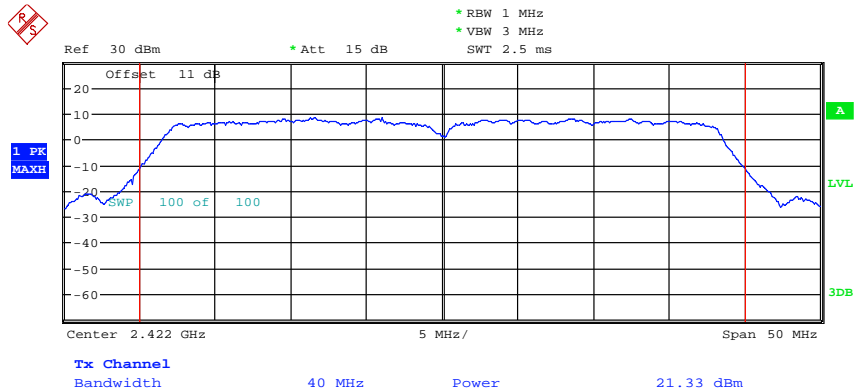


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

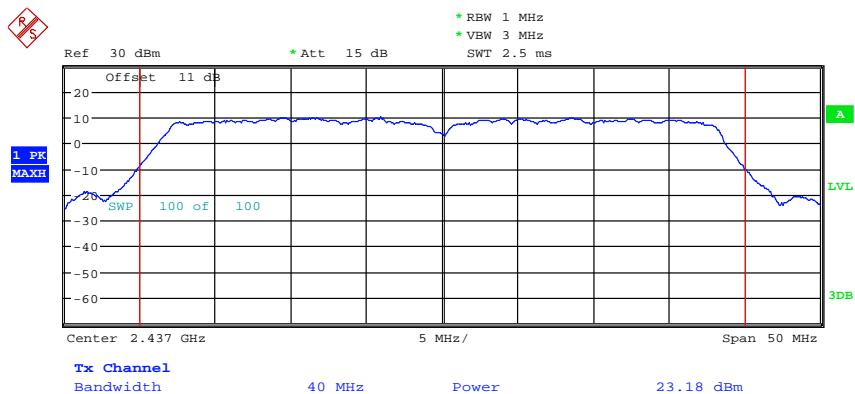
FCC ID: ZTT-APA20

Mode H



MAX OUTPUT POWER 802.11N 40MHZ CH01

Date: 2.OCT.2013 17:51:14



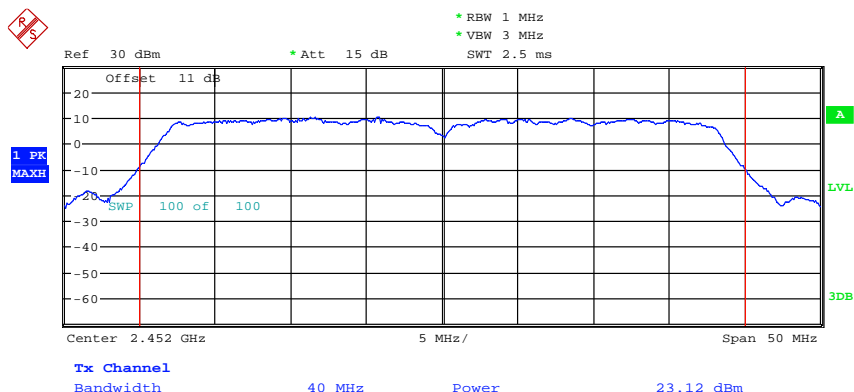
MAX OUTPUT POWER 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:52:27



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



MAX OUTPUT POWER 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:53:06

Antenna A	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	121.9	98.86	100.69	20.86	19.95	20.03
802.11n 40MHz	55.85	--	50.82	17.47	--	17.06
802.11ac	65.01	--	--	18.13	--	--
802.11n 20MHz(2.4GHz)	446.68	433.51	442.59	26.5	26.37	26.46
802.11n 40MHz	243.22	369.83	408.32	23.86	25.68	26.11
Antenna B	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	114.29	112.98	104.95	20.58	20.53	20.21
802.11n 40MHz	86.30	--	83.56	19.36	--	19.22
802.11ac	89.33	--	--	19.51	--	--
802.11n 20MHz(2.4GHz)	287.74	256.45	220.29	24.59	24.09	23.43
802.11n 40MHz	135.83	207.97	205.12	21.33	23.18	23.12
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	236.19	211.84	205.64	23.73	23.26	23.13
802.11n 40MHz	142.15	--	134.38	21.53	--	21.28
802.11ac	154.34	--	--	21.88	--	--
802.11n 20MHz(2.4GHz)	734.42	689.96	662.88	28.66	28.39	28.21
802.11n 40MHz	379.05	577.80	613.44	25.79	27.62	27.88



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

Limits:

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

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

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

5.8GHz:802.11a

EIRP = 21.38 dBm + 7.52 dBi

= 28.90 dBm

5.8GHz:802.11n(20MHz), 802.11n(40MHz)

EIRP = 23.73 dBm + 7.52 dBi

= 31.25 dBm

5.8GHz:802.11ac

EIRP = 21.88 dBm + 7.52 dBi

= 29.40 dBm

2.4GHz:802.11b/g

EIRP = 28.92 dBm + 6.64 dBi

= 35.56 dBm

2.4GHz: 802.11n(20MHz), 802.11n(40MHz)

EIRP = 28.66 dBm + 6.64 dBi

= 35.30 dBm

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

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

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

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

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

S – Power Density

P – Output power ERP

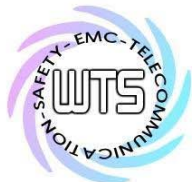
R – Distance

D – Cable Loss

AG – Antenna Gain

5.8GHz:802.11a

Item	Unit	Value	Remarks
P	mW	137.4042	Peak value
D	dB		
AG	dBi	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.1544	Calculated value



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

5.8GHz:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	236.0478	Peak value
D	dB		
AG	dB _i	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.2653	Calculated value

5.8GHz:802.11ac

Item	Unit	Value	Remarks
P	mW	154.1700	Peak value
D	dB		
AG	dB _i	7.52	
G		5.6494	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.1733	Calculated value

802.11b/g

Item	Unit	Value	Remarks
P	mW	779.8301	Peak value
D	dB		
AG	dB _i	6.64	
G		4.6132	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.7157	Calculated value

2.4G:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	734.5139	Peak value
D	dB		
AG	dB _i	6.64	
G		4.6132	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.6741	Calculated value

Limits:

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



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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.



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

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".

Summary table with radiated data of the test plots

Antenna A

Model: APA20 Date: 2013/10/01~2013/10/03
Mode: 802.11a 5745MHz Temperature: 24 °C Engineer: Leon
Polarization: Horizontal Humidity: 60 %

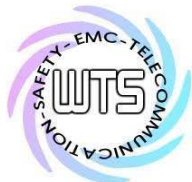
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.76	peak	13.13	29.89	40.00	-10.11	240	100
376.0120	26.14	peak	17.87	44.01	46.00	-1.99	120	100
624.8297	15.48	peak	23.38	38.86	46.00	-7.14	130	100
875.5911	17.87	peak	26.81	44.68	46.00	-1.32	90	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11490.0000	34.96	---	12.90	47.86	---	74.00	54.00	-26.14	205	100
17235.0000	26.11	---	21.95	48.06	---	74.00	54.00	-25.94	175	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.80	peak	13.13	37.93	40.00	-2.07	40	100
134.9700	21.74	peak	14.67	36.41	43.50	-7.09	130	100
376.0120	24.87	peak	17.87	42.74	46.00	-3.26	170	100
875.5912	17.10	peak	26.81	43.91	46.00	-2.09	155	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11490.0000	34.34	---	12.90	47.24	---	74.00	54.00	-26.76	180	100
17235.0000	26.44	---	21.95	48.39	---	74.00	54.00	-25.61	90	100



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FCC ID: ZTT-APA20

Mode: 802.11a 5785MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.12	peak	13.13	29.25	40.00	-10.75	135	100
249.6593	19.82	peak	14.14	33.96	46.00	-12.04	90	100
376.0120	26.43	peak	17.87	44.30	46.00	-1.70	120	100
875.5911	18.00	peak	26.81	44.81	46.00	-1.19	175	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11570.0000	36.67	---	13.43	50.10	---	74.00	54.00	-23.90	235	100
17355.0000	26.20	---	21.76	47.96	---	74.00	54.00	-26.04	105	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
61.1022	25.29	peak	12.87	38.16	40.00	-1.84	100	100
134.9700	21.99	peak	14.67	36.66	43.50	-6.84	135	100
376.0120	23.35	peak	17.87	41.22	46.00	-4.78	240	100
875.5912	16.23	peak	26.81	43.04	46.00	-2.96	150	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11570.0000	34.35	---	13.43	47.78	---	74.00	54.00	-26.22	155	100
17355.0000	26.37	---	21.76	48.13	---	74.00	54.00	-25.87	140	100

Mode: 802.11a 5825MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.11	peak	13.13	29.24	40.00	-10.76	195	100
376.0120	26.61	peak	17.87	44.48	46.00	-1.52	240	100
624.8297	16.86	peak	23.38	40.24	46.00	-5.76	120	100
875.5911	18.09	peak	26.81	44.90	46.00	-1.10	185	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11650.0000	35.16	---	13.34	48.50	---	74.00	54.00	-25.50	235	100
17475.0000	27.82	---	21.63	49.45	---	74.00	54.00	-24.55	160	100



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FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.71	peak	13.13	37.84	40.00	-2.16	140	100
134.9700	21.62	peak	14.67	36.29	43.50	-7.21	170	100
376.0120	24.47	peak	17.87	42.34	46.00	-3.66	110	100
875.5912	16.71	peak	26.81	43.52	46.00	-2.48	135	100

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.			
11650.0000	34.79	---	13.34	48.13	---	74.00	54.00	-25.87	190	100
17475.0000	27.64	---	21.63	49.27	---	74.00	54.00	-24.73	220	100

Mode: 802.11b 2412MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.64	peak	17.87	44.51	46.00	-1.49	90	100
875.5911	18.10	peak	26.81	44.91	46.00	-1.09	145	100

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.			
4825.6510	50.96	---	0.50	51.46	---	74.00	54.00	-22.54	125	100
7238.4770	45.03	---	4.07	49.10	---	74.00	54.00	-24.90	170	100
9656.3130	39.75	---	9.17	48.92	---	74.00	54.00	-25.08	130	100
12060.0000	33.08	---	13.89	46.97	---	74.00	54.00	-27.03	190	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.84	peak	13.13	38.97	40.00	-1.03	55	100
875.5912	16.43	peak	26.81	43.24	46.00	-2.76	130	100

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.			
4817.6350	56.05	52.76	0.48	56.53	53.24	74.00	54.00	-0.76	125	100
7238.4770	50.27	48.36	4.07	54.34	52.43	74.00	54.00	-1.57	222	100
9646.7940	43.76	42.39	9.16	52.92	51.55	74.00	54.00	-2.45	180	100
12060.0000	34.61	---	13.89	48.50	---	74.00	54.00	-25.50	210	100



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FCC ID: ZTT-APA20

Mode: 802.11b 2437MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	25.87	peak	17.87	43.74	46.00	-2.26	120	100
875.5911	17.36	peak	26.81	44.17	46.00	-1.83	75	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4873.7480	49.32	---	0.61	49.93	---	74.00	54.00	-24.07	140	100
7318.6370	44.78	---	4.23	49.01	---	74.00	54.00	-24.99	155	100
9748.0000	35.66	---	9.51	45.17	---	74.00	54.00	-28.83	235	100
12185.0000	31.86	---	14.83	46.69	---	74.00	54.00	-27.31	180	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.08	peak	13.13	38.21	40.00	-1.79	130	100
875.5912	17.75	peak	26.81	44.56	46.00	-1.44	85	100

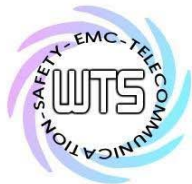
Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4873.7480	55.88	52.31	0.61	56.49	52.92	74.00	54.00	-1.08	180	100
7310.6210	48.89	46.76	4.20	53.09	50.96	74.00	54.00	-3.04	125	100
9741.9840	42.60	40.75	9.47	52.07	50.22	74.00	54.00	-3.78	170	100
12185.0000	32.14	---	14.83	46.97	---	74.00	54.00	-27.03	135	100

Mode: 802.11b 2462MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.39	peak	17.87	44.26	46.00	-1.74	235	100
875.5911	17.87	peak	26.81	44.68	46.00	-1.32	210	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4921.8440	50.66	---	0.83	51.49	---	74.00	54.00	-22.51	140	100
7382.7660	45.92	---	4.42	50.34	---	74.00	54.00	-23.66	115	100
9848.0000	35.38	---	9.76	45.14	---	74.00	54.00	-28.86	235	100
12310.0000	33.53	---	14.12	47.65	---	74.00	54.00	-26.35	170	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.99	peak	13.13	38.12	40.00	-1.88	145	100
134.9700	21.74	peak	14.67	36.41	43.50	-7.09	160	100

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.			
4921.8440	54.84	51.96	0.83	55.67	52.79	74.00	54.00	-1.21	115	100
7390.7820	48.10	46.20	4.44	52.54	50.64	74.00	54.00	-3.36	175	100
9846.6930	42.16	40.61	9.76	51.92	50.37	74.00	54.00	-3.63	160	100
12310.0000	33.80	---	14.12	47.92	---	74.00	54.00	-26.08	105	100

Mode: 802.11g 2412MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.12	peak	17.87	43.99	46.00	-2.01	235	100
875.5911	17.29	peak	26.81	44.10	46.00	-1.90	170	100

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.			
4825.6510	49.78	---	0.50	50.28	---	74.00	54.00	-23.72	65	100
7238.4770	44.11	---	4.07	48.18	---	74.00	54.00	-25.82	120	100
9648.0000	35.18	---	9.16	44.34	---	74.00	54.00	-29.66	175	100
12060.0000	33.78	---	13.89	47.67	---	74.00	54.00	-26.33	230	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.65	peak	13.13	37.78	40.00	-2.22	115	100
376.0120	24.80	peak	17.87	42.67	46.00	-3.33	170	100

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.			
4825.6510	56.86	52.55	0.50	57.36	53.05	74.00	54.00	-0.95	165	100
7238.4770	48.03	47.53	4.07	52.10	51.60	74.00	54.00	-2.40	225	100
9656.3130	44.21	42.17	9.17	53.38	51.34	74.00	54.00	-2.66	130	100
12060.0000	34.00	---	13.89	47.89	---	74.00	54.00	-26.11	90	100



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Mode: 802.11b 2437MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.31	peak	17.87	44.18	46.00	-1.82	110	100
875.5911	16.89	peak	26.81	43.70	46.00	-2.30	55	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4873.7480	50.10	---	0.61	50.71	---	74.00	54.00	-23.29	155	100
7318.6370	44.80	---	4.23	49.03	---	74.00	54.00	-24.97	195	100
9748.0000	35.23	---	9.51	44.74	---	74.00	54.00	-29.26	205	100
12185.0000	32.29	---	14.83	47.12	---	74.00	54.00	-26.88	170	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.58	peak	13.13	37.71	40.00	-2.29	125	100
875.5912	16.50	peak	26.81	43.31	46.00	-2.69	160	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4873.7480	55.91	52.69	0.61	56.52	53.30	74.00	54.00	-0.70	165	100
7318.6370	49.07	47.13	4.23	53.30	51.36	74.00	54.00	-2.64	150	100
9741.9840	43.85	42.39	9.47	53.32	51.86	74.00	54.00	-2.14	245	100
12185.0000	32.44	---	14.83	47.27	---	74.00	54.00	-26.73	135	100

Mode: 802.11g 2462MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.22	peak	17.87	44.09	46.00	-1.91	140	100
875.5911	17.77	peak	26.81	44.58	46.00	-1.42	95	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4921.8440	48.39	---	0.83	49.22	---	74.00	54.00	-24.78	155	100
7390.7820	44.72	---	4.44	49.16	---	74.00	54.00	-24.84	110	100
9848.0000	35.77	---	9.76	45.53	---	74.00	54.00	-28.47	210	100
12310.0000	34.03	---	14.12	48.15	---	74.00	54.00	-25.85	145	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.86	peak	13.13	37.99	40.00	-2.01	110	100
875.5912	16.88	peak	26.81	43.69	46.00	-2.31	75	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4921.8440	55.98	52.15	0.83	56.81	52.98	74.00	54.00	-1.02	190	100
7390.7820	48.14	46.31	4.44	52.58	50.75	74.00	54.00	-3.25	130	100
9856.2120	43.97	41.67	9.74	53.71	51.41	74.00	54.00	-2.59	145	100
12310.0000	34.95	---	14.12	49.07	---	74.00	54.00	-24.93	195	100

Antenna B

Mode: 802.11a 5745MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.64	peak	13.13	29.77	40.00	-10.23	145	100
134.9698	13.58	peak	14.67	28.25	43.50	-15.25	170	100
376.0120	26.26	peak	17.87	44.13	46.00	-1.87	200	100
875.5911	17.47	peak	26.81	44.28	46.00	-1.72	235	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11490.0000	34.86	---	12.90	47.76	---	74.00	54.00	-26.24	220	100
17235.0000	26.65	---	21.95	48.60	---	74.00	54.00	-25.40	175	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.01	peak	13.13	38.14	40.00	-1.86	120	100
133.0261	22.32	peak	14.52	36.84	43.50	-6.66	110	100
376.0120	25.04	peak	17.87	42.91	46.00	-3.09	135	100
875.5912	16.76	peak	26.81	43.57	46.00	-2.43	75	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11490.0000	35.21	---	12.90	48.11	---	74.00	54.00	-25.89	195	100
17235.0000	26.33	---	21.95	48.28	---	74.00	54.00	-25.72	140	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11a 5785MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.22	peak	13.13	29.35	40.00	-10.65	130	100
133.0261	14.15	peak	14.52	28.67	43.50	-14.83	145	100
376.0120	26.62	peak	17.87	44.49	46.00	-1.51	200	100
875.5911	16.24	peak	26.81	43.05	46.00	-2.95	185	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11570.0000	35.76	---	13.43	49.19	---	74.00	54.00	-24.81	165	100
17355.0000	27.07	---	21.76	48.83	---	74.00	54.00	-25.17	265	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.80	peak	13.13	37.93	40.00	-2.07	160	100
134.9700	21.77	peak	14.67	36.44	43.50	-7.06	240	100
376.0120	24.38	peak	17.87	42.25	46.00	-3.75	60	100
875.5912	16.94	peak	26.81	43.75	46.00	-2.25	135	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11570.0000	35.04	---	13.43	48.47	---	74.00	54.00	-25.53	190	100
17355.0000	25.15	---	21.76	46.91	---	74.00	54.00	-27.09	235	140

Mode: 802.11a 5825MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.10	peak	13.13	29.23	40.00	-10.77	170	100
376.0120	26.17	peak	17.87	44.04	46.00	-1.96	105	100
624.8297	16.69	peak	23.38	40.07	46.00	-5.93	140	100
875.5911	17.02	peak	26.81	43.83	46.00	-2.17	80	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11650.0000	34.77	---	13.34	48.11	---	74.00	54.00	-25.89	120	100
17475.0000	26.74	---	21.63	48.37	---	74.00	54.00	-25.63	195	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.07	peak	13.13	38.20	40.00	-1.80	155	100
134.9700	21.73	peak	14.67	36.40	43.50	-7.10	90	100
376.0120	24.70	peak	17.87	42.57	46.00	-3.43	130	100
875.5912	15.79	peak	26.81	42.60	46.00	-3.40	250	100

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.			
11650.0000	34.38	---	13.34	47.72	---	74.00	54.00	-26.28	215	100
17475.0000	26.57	---	21.63	48.20	---	74.00	54.00	-25.80	180	100

Mode: 802.11b 2412MHz

Polarization: Horizontal

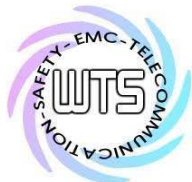
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	15.53	peak	13.13	28.66	40.00	-11.34	140	100
376.0120	25.76	peak	17.87	43.63	46.00	-2.37	75	100

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	51.49	---	0.50	51.99	---	74.00	54.00	-22.01	185	100
7238.4770	44.89	---	4.07	48.96	---	74.00	54.00	-25.04	140	100
9646.7940	40.79	---	9.16	49.95	---	74.00	54.00	-24.05	120	100
12060.0000	33.66	---	13.89	47.55	---	74.00	54.00	-26.45	75	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.42	peak	13.13	37.55	40.00	-2.45	155	100
875.5912	17.17	peak	26.81	43.98	46.00	-2.02	120	100

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.			
4817.6350	57.82	52.11	0.48	58.30	52.59	74.00	54.00	-1.41	255	100
7238.4770	48.27	46.96	4.07	52.34	51.03	74.00	54.00	-2.97	135	100
9646.7940	44.00	42.26	9.16	53.16	51.42	74.00	54.00	-2.58	120	100
12060.0000	33.45	---	13.89	47.34	---	74.00	54.00	-26.66	185	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11b 2437MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.13	peak	17.87	44.00	46.00	-2.00	170	100
875.5911	17.64	peak	26.81	44.45	46.00	-1.55	255	100

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.			
4873.7480	52.71	47.97	0.61	53.32	48.58	74.00	54.00	-5.42	255	100
7310.6210	46.61	---	4.20	50.81	---	74.00	54.00	-23.19	110	100
9741.9840	40.63	---	9.47	50.10	---	74.00	54.00	-23.90	170	100
12185.0000	31.90	---	14.83	46.73	---	74.00	54.00	-27.27	125	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.60	peak	13.13	37.73	40.00	-2.27	115	100
134.9700	21.50	peak	14.67	36.17	43.50	-7.33	130	100

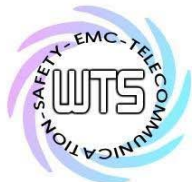
Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4873.7480	57.51	51.79	0.61	58.12	52.40	74.00	54.00	-1.60	245	100
7318.6370	48.06	47.12	4.23	52.29	51.35	74.00	54.00	-2.65	160	100
9751.5030	44.38	42.15	9.53	53.91	51.68	74.00	54.00	-2.32	170	100
12185.0000	32.28	---	14.83	47.11	---	74.00	54.00	-26.89	135	100

Mode: 802.11b 2462MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.44	peak	17.87	44.31	46.00	-1.69	140	100
875.5911	16.94	peak	26.81	43.75	46.00	-2.25	215	100

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.			
4921.8440	52.80	49.95	0.83	53.63	50.78	74.00	54.00	-3.22	145	100
7390.7820	45.78	---	4.44	50.22	---	74.00	54.00	-23.78	130	100
9846.6930	38.02	---	9.76	47.78	---	74.00	54.00	-26.22	130	100
12310.0000	33.47	---	14.12	47.59	---	74.00	54.00	-26.41	185	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.95	peak	13.13	38.08	40.00	-1.92	155	100
875.5912	16.79	peak	26.81	43.60	46.00	-2.40	130	100

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	57.45	51.59	0.83	58.28	52.42	74.00	54.00	-1.58	230	100
7390.7820	48.72	46.39	4.44	53.16	50.83	74.00	54.00	-3.17	115	100
9846.6930	43.58	42.22	9.76	53.34	51.98	74.00	54.00	-2.02	245	100
12310.0000	33.80	---	14.12	47.92	---	74.00	54.00	-26.08	115	100

Mode: 802.11g 2412MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	25.83	peak	17.87	43.70	46.00	-2.30	235	100
875.5911	16.75	peak	26.81	43.56	46.00	-2.44	210	100

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.			
4817.6350	51.32	---	0.48	51.80	---	74.00	54.00	-22.20	185	100
7238.4770	45.24	---	4.07	49.31	---	74.00	54.00	-24.69	140	100
9648.0000	35.17	---	9.16	44.33	---	74.00	54.00	-29.67	225	100
12060.0000	34.43	---	13.89	48.32	---	74.00	54.00	-25.68	160	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.00	peak	13.13	38.13	40.00	-1.87	145	100
376.0120	25.08	peak	17.87	42.95	46.00	-3.05	130	100

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.			
4817.6350	55.65	51.90	0.48	56.13	52.38	74.00	54.00	-1.62	115	100
7238.4770	48.57	47.53	4.07	52.64	51.60	74.00	54.00	-2.40	175	100
9656.3130	43.33	42.67	9.17	52.50	51.84	74.00	54.00	-2.16	200	100
12060.0000	33.63	---	13.89	47.52	---	74.00	54.00	-26.48	120	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11g 2437MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.47	peak	17.87	44.34	46.00	-1.66	110	100
875.5911	17.66	peak	26.81	44.47	46.00	-1.53	85	100

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.			
4873.7480	49.80	---	0.61	50.41	---	74.00	54.00	-23.59	135	100
7318.6370	45.53	---	4.23	49.76	---	74.00	54.00	-24.24	110	100
9748.0000	34.84	---	9.51	44.35	---	74.00	54.00	-29.65	225	100
12185.0000	31.82	---	14.83	46.65	---	74.00	54.00	-27.35	170	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.81	peak	13.13	37.94	40.00	-2.06	145	100
875.5912	16.82	peak	26.81	43.63	46.00	-2.37	120	100

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.			
4873.7480	56.50	52.29	0.61	57.11	52.90	74.00	54.00	-1.10	115	100
7318.6370	48.48	46.95	4.23	52.71	51.18	74.00	54.00	-2.82	170	100
9741.9840	43.20	42.06	9.47	52.67	51.53	74.00	54.00	-2.47	115	100
12185.0000	33.07	---	14.83	47.90	---	74.00	54.00	-26.10	160	100

Mode: 802.11g 2462MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.13	peak	17.87	44.00	46.00	-2.00	230	100
875.5911	17.51	peak	26.81	44.32	46.00	-1.68	105	100

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.			
4921.8440	49.49	---	0.83	50.32	---	74.00	54.00	-23.68	120	100
7390.7820	45.37	---	4.44	49.81	---	74.00	54.00	-24.19	185	100
9848.0000	34.53	---	9.76	44.29	---	74.00	54.00	-29.71	235	100
12310.0000	34.37	---	14.12	48.49	---	74.00	54.00	-25.51	170	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.77	peak	13.13	37.90	40.00	-2.10	135	100
134.9700	21.65	peak	14.67	36.32	43.50	-7.18	120	100

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	55.56	52.29	0.83	56.39	53.12	74.00	54.00	-0.88	165	100
7390.7820	48.45	47.24	4.44	52.89	51.68	74.00	54.00	-2.32	120	100
9856.2120	43.14	41.36	9.74	52.88	51.10	74.00	54.00	-2.90	235	100
12310.0000	33.91	---	14.12	48.03	---	74.00	54.00	-25.97	140	100

Antenna A + Antenna B

Mode: 802.11n 20MHz 5745MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	16.37	peak	13.13	29.50	40.00	-10.50	200	100
134.9698	13.66	peak	14.67	28.33	43.50	-15.17	130	100
376.0120	26.30	peak	17.87	44.17	46.00	-1.83	55	100
875.5911	17.68	peak	26.81	44.49	46.00	-1.51	195	100

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.			
11490.0000	34.86	---	12.90	47.76	---	74.00	54.00	-26.24	235	100
17235.0000	25.68	---	21.95	47.63	---	74.00	54.00	-26.37	170	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.03	peak	13.13	38.16	40.00	-1.84	120	100
134.9700	21.85	peak	14.67	36.52	43.50	-6.98	135	100
376.0120	25.11	peak	17.87	42.98	46.00	-3.02	70	100
875.5912	16.45	peak	26.81	43.26	46.00	-2.74	105	100

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.			
11490.0000	34.59	---	12.90	47.49	---	74.00	54.00	-26.51	110	100
17235.0000	25.95	---	21.95	47.90	---	74.00	54.00	-26.10	200	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11n 20MHz 5785MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
61.1022	15.63	peak	12.87	28.50	40.00	-11.50	195	100
376.0120	26.64	peak	17.87	44.51	46.00	-1.49	200	100
624.8297	16.67	peak	23.38	40.05	46.00	-5.95	135	100
875.5911	17.15	peak	26.81	43.96	46.00	-2.04	175	100

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.			
11570.0000	34.13	---	13.43	47.56	---	74.00	54.00	-26.44	95	100
17355.0000	26.35	---	21.76	48.11	---	74.00	54.00	-25.89	190	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	24.93	peak	13.13	38.06	40.00	-1.94	145	100
134.9698	21.49	peak	14.67	36.16	43.50	-7.34	110	100
376.0120	24.86	peak	17.87	42.73	46.00	-3.27	170	100
875.5911	16.95	peak	26.81	43.76	46.00	-2.24	135	100

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.			
11570.0000	34.23	---	13.43	47.66	---	74.00	54.00	-26.34	230	100
17355.0000	25.70	---	21.76	47.46	---	74.00	54.00	-26.54	105	100

Mode: 802.11n 20MHz 5825MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	15.58	peak	13.13	28.71	40.00	-11.29	130	100
376.0120	26.02	peak	17.87	43.89	46.00	-2.11	170	100
624.8297	17.96	peak	23.38	41.34	46.00	-4.66	155	100
875.5911	17.39	peak	26.81	44.20	46.00	-1.80	240	100

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.			
11650.0000	35.67	---	13.34	49.01	---	74.00	54.00	-24.99	235	100
17475.0000	28.21	---	21.63	49.84	---	74.00	54.00	-24.16	120	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.30	peak	13.13	38.43	40.00	-1.57	165	100
133.0261	22.13	peak	14.52	36.65	43.50	-6.85	130	100
376.0120	24.54	peak	17.87	42.41	46.00	-3.59	200	100
875.5912	16.54	peak	26.81	43.35	46.00	-2.65	85	100

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.			
11650.0000	35.43	---	13.34	48.77	---	74.00	54.00	-25.23	205	100
17475.0000	26.86	---	21.63	48.49	---	74.00	54.00	-25.51	120	100

Mode: 802.11n 40MHz 5755MHz

Polarization: Horizontal

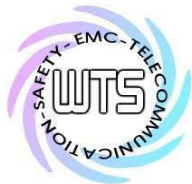
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	15.85	peak	13.13	28.98	40.00	-11.02	140	100
376.0120	26.39	peak	17.87	44.26	46.00	-1.74	200	100
624.8297	16.79	peak	23.38	40.17	46.00	-5.83	135	100
875.5911	16.25	peak	26.81	43.06	46.00	-2.94	95	100

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.			
11510.0000	34.75	---	13.06	47.81	---	74.00	54.00	-26.19	170	100
17265.0000	26.73	---	22.39	49.12	---	74.00	54.00	-24.88	200	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.21	peak	13.13	38.34	40.00	-1.66	210	100
133.0261	22.31	peak	14.52	36.83	43.50	-6.67	175	100
376.0120	24.65	peak	17.87	42.52	46.00	-3.48	130	100
875.5912	16.41	peak	26.81	43.22	46.00	-2.78	120	100

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.			
11510.0000	34.61	---	13.06	47.67	---	74.00	54.00	-26.33	75	100
17265.0000	26.80	---	22.39	49.19	---	74.00	54.00	-24.81	165	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11n 40MHz 5795MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	15.18	peak	13.13	28.31	40.00	-11.69	195	100
134.9698	14.16	peak	14.67	28.83	43.50	-14.67	200	100
376.0120	25.89	peak	17.87	43.76	46.00	-2.24	120	100
875.5911	17.57	peak	26.81	44.38	46.00	-1.62	175	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11590.0000	33.98	---	13.55	47.53	---	74.00	54.00	-26.47	135	100
17385.0000	27.99	---	21.14	49.13	---	74.00	54.00	-24.87	145	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.80	peak	13.13	37.93	40.00	-2.07	120	100
134.9700	22.11	peak	14.67	36.78	43.50	-6.72	155	100
376.0120	24.97	peak	17.87	42.84	46.00	-3.16	140	100
875.5912	17.18	peak	26.81	43.99	46.00	-2.01	85	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11590.0000	33.92	---	13.55	47.47	---	74.00	54.00	-26.53	205	100
17385.0000	28.33	---	21.14	49.47	---	74.00	54.00	-24.53	215	100

Mode: 802.11ac 5775MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
136.9138	14.79	peak	14.81	29.60	43.50	-13.90	210	100
376.0120	26.53	peak	17.87	44.40	46.00	-1.60	175	100
624.8297	15.66	peak	23.38	39.04	46.00	-6.96	255	100
875.5911	17.94	peak	26.81	44.75	46.00	-1.25	140	100

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
11510.0000	34.76	---	13.06	47.82	---	74.00	54.00	-26.18	230	100
17265.0000	25.93	---	22.39	48.32	---	74.00	54.00	-25.68	120	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1582	25.12	peak	13.13	38.25	40.00	-1.75	120	100
134.9697	22.86	peak	14.67	37.53	43.50	-5.97	55	100
376.0120	24.97	peak	17.87	42.84	46.00	-3.16	70	100
875.5911	16.64	peak	26.81	43.45	46.00	-2.55	155	100

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.			
11510.0000	34.22	---	13.06	47.28	---	74.00	54.00	-26.72	75	100
17265.0000	26.47	---	22.39	48.86	---	74.00	54.00	-25.14	235	100

Mode: 802.11n 20 MHz 2412MHz

Polarization: Horizontal

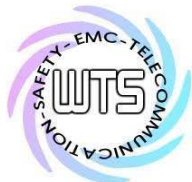
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.16	peak	17.87	44.03	46.00	-1.97	75	100
875.5911	16.77	peak	26.81	43.58	46.00	-2.42	120	100

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.			
4817.6350	50.44	---	0.48	50.92	---	74.00	54.00	-23.08	165	100
7238.4770	45.28	---	4.07	49.35	---	74.00	54.00	-24.65	180	100
9648.0000	35.38	---	9.16	44.54	---	74.00	54.00	-29.46	225	100
12060.0000	33.85	---	13.89	47.74	---	74.00	54.00	-26.26	210	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.73	peak	13.13	37.86	40.00	-2.14	120	100
875.5912	16.81	peak	26.81	43.62	46.00	-2.38	170	100

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.			
4825.6510	55.99	52.76	0.50	56.49	53.26	74.00	54.00	-0.74	175	100
7238.4770	48.67	47.35	4.07	52.74	51.42	74.00	54.00	-2.58	240	100
9656.3130	42.97	41.49	9.17	52.14	50.66	74.00	54.00	-3.34	220	100
12060.0000	33.89	---	13.89	47.78	---	74.00	54.00	-26.22	140	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11n 20MHz 2437MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.33	peak	17.87	44.20	46.00	-1.80	170	100
875.5911	18.09	peak	26.81	44.90	46.00	-1.10	55	100

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.			
4873.7480	48.95	---	0.61	49.56	---	74.00	54.00	-24.44	150	100
7318.6370	45.06	---	4.23	49.29	---	74.00	54.00	-24.71	225	100
9748.0000	34.80	---	9.51	44.31	---	74.00	54.00	-29.69	220	100
12185.0000	32.53	---	14.83	47.36	---	74.00	54.00	-26.64	165	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.32	peak	13.13	38.45	40.00	-1.55	110	100
133.0261	21.60	peak	14.52	36.12	43.50	-7.38	165	100

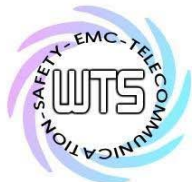
Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
4873.7480	55.74	51.97	0.61	56.35	52.58	74.00	54.00	-1.42	135	100
7318.6370	49.00	47.77	4.23	53.23	52.00	74.00	54.00	-2.00	90	100
9751.5030	43.56	41.64	9.53	53.09	51.17	74.00	54.00	-2.83	215	100
12185.0000	33.21	---	14.83	48.04	---	74.00	54.00	-25.96	130	100

Mode: 802.11n 20MHz 2462MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.56	peak	17.87	44.43	46.00	-1.57	135	100
875.5911	16.98	peak	26.81	43.79	46.00	-2.21	95	100

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.			
4921.8440	49.65	---	0.83	50.48	---	74.00	54.00	-23.52	135	100
7390.7820	44.83	---	4.44	49.27	---	74.00	54.00	-24.73	170	100
9848.0000	35.34	---	9.76	45.10	---	74.00	54.00	-28.90	145	100
12310.0000	34.33	---	14.12	48.45	---	74.00	54.00	-25.55	170	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.99	peak	13.13	38.12	40.00	-1.88	205	100
376.0120	24.44	peak	17.87	42.31	46.00	-3.69	110	100

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	55.49	52.17	0.83	56.32	53.00	74.00	54.00	-1.00	180	100
7390.7820	48.35	46.73	4.44	52.79	51.17	74.00	54.00	-2.83	230	100
9856.2120	42.95	41.51	9.74	52.69	51.25	74.00	54.00	-2.75	140	100
12310.0000	34.12	---	14.12	48.24	---	74.00	54.00	-25.76	220	100

Mode: 802.11n 40MHz 2422MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.36	peak	17.87	44.23	46.00	-1.77	200	100
875.5911	17.94	peak	26.81	44.75	46.00	-1.25	235	100

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.			
4841.6830	48.67	---	0.54	49.21	---	74.00	54.00	-24.79	130	100
7270.5410	43.97	---	4.12	48.09	---	74.00	54.00	-25.91	185	100
9688.0000	35.19	---	9.19	44.38	---	74.00	54.00	-29.62	165	100
12110.0000	33.09	---	14.34	47.43	---	74.00	54.00	-26.57	210	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.12	peak	13.13	38.25	40.00	-1.75	185	100
875.5912	16.38	peak	26.81	43.19	46.00	-2.81	150	100

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.			
4841.6830	55.71	52.43	0.54	56.25	52.97	74.00	54.00	-1.03	185	100
7270.5410	48.99	47.62	4.12	53.11	51.74	74.00	54.00	-2.26	135	100
9694.3890	43.50	42.76	9.20	52.70	51.96	74.00	54.00	-2.04	115	100
12110.0000	34.12	---	14.34	48.46	---	74.00	54.00	-25.54	190	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode: 802.11n 40MHz 2437MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.51	peak	17.87	44.38	46.00	-1.62	170	100
875.5911	17.64	peak	26.81	44.45	46.00	-1.55	225	100

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.			
4873.7480	50.04	---	0.61	50.65	---	74.00	54.00	-23.35	130	100
7318.6370	46.43	---	4.23	50.66	---	74.00	54.00	-23.34	115	100
9748.0000	35.08	---	9.51	44.59	---	74.00	54.00	-29.41	75	100
12185.0000	33.02	---	14.83	47.85	---	74.00	54.00	-26.15	130	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	25.01	peak	13.13	38.14	40.00	-1.86	130	100
875.5912	16.34	peak	26.81	43.15	46.00	-2.85	95	100

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.			
4873.7480	54.75	52.16	0.61	55.36	52.77	74.00	54.00	-1.23	235	100
7318.6370	48.20	46.91	4.23	52.43	51.14	74.00	54.00	-2.86	155	100
9751.5030	42.63	41.55	9.53	52.16	51.08	74.00	54.00	-2.92	175	100
12185.0000	31.65	---	14.83	46.48	---	74.00	54.00	-27.52	140	100

Mode: 802.11n 40MHz 2452MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
376.0120	26.36	peak	17.87	44.23	46.00	-1.77	145	100
875.5911	17.47	peak	26.81	44.28	46.00	-1.72	210	100

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.			
4904.0000	50.32	---	0.70	51.02	---	74.00	54.00	-22.98	175	100
7358.7170	46.23	---	4.35	50.58	---	74.00	54.00	-23.42	160	100
9808.0000	35.42	---	9.83	45.25	---	74.00	54.00	-28.75	230	100
12260.0000	33.21	---	14.37	47.58	---	74.00	54.00	-26.42	170	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
59.1583	24.81	peak	13.13	37.94	40.00	-2.06	205	100
376.0120	24.77	peak	17.87	42.64	46.00	-3.36	130	100

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.			
4905.8110	54.57	52.64	0.71	55.28	53.35	74.00	54.00	-0.65	105	100
7358.7170	48.56	47.53	4.35	52.91	51.88	74.00	54.00	-2.12	140	100
9808.6170	43.32	41.57	9.83	53.15	51.40	74.00	54.00	-2.60	235	100
12260.0000	33.56	---	14.37	47.93	---	74.00	54.00	-26.07	210	100

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. **Measurement uncertainty for 3m measurement: 30-1000 MHz = ± 3.72 dB, 1-18 GHz = ± 5.33 dB, 18-40 GHz = ± 3.43 dB ; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.**
6. **See attached diagrams in appendix.**

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

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111,
ETSTW-RE 088, ETSTW-RE 018



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

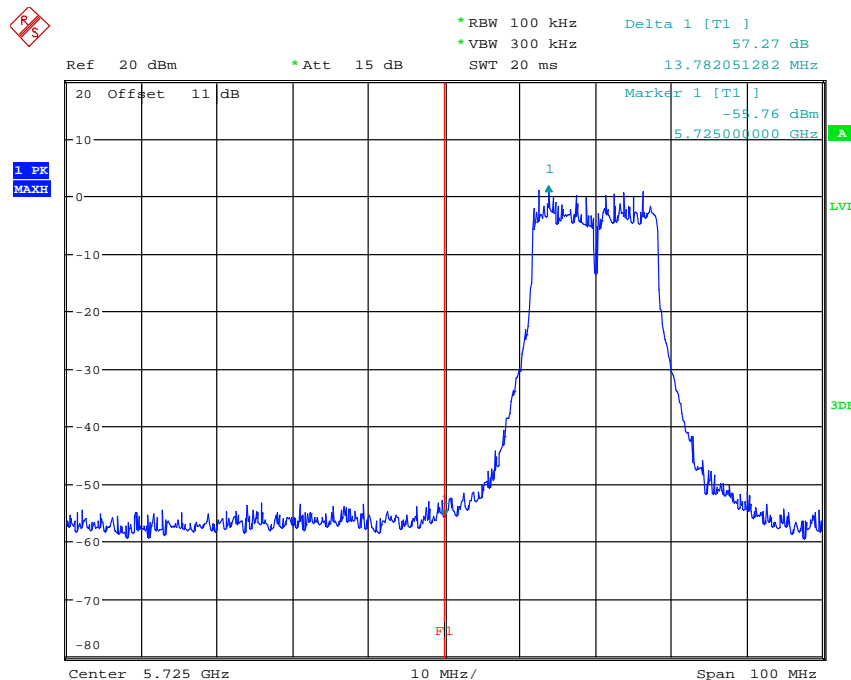
3.6 Radiated Emission on the band edge

According to FCC rules part 15 subpart C §15.247(d) 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.

Antenna A

Mode A

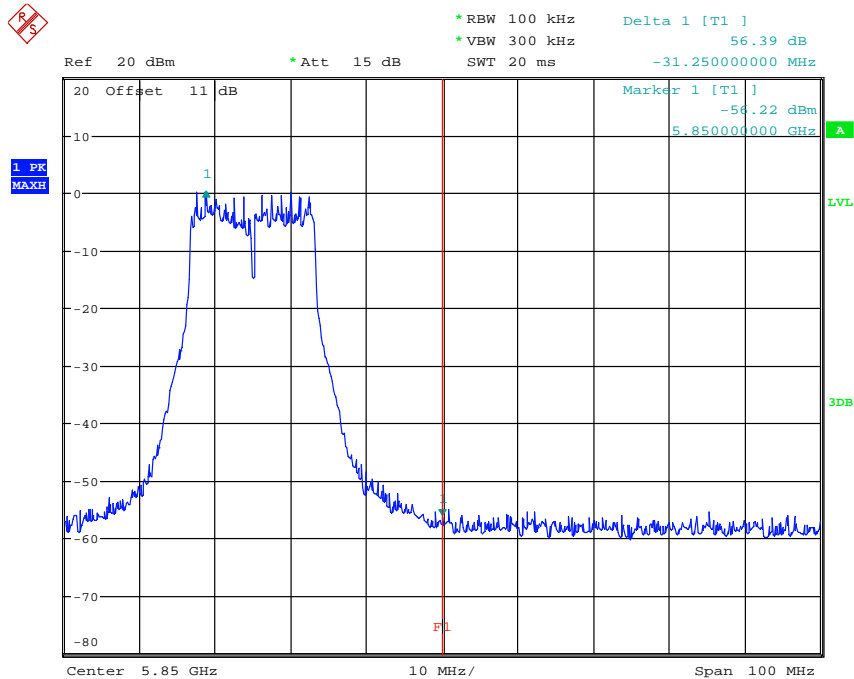


BANDEDGE 802.11A CH149

Date: 2.OCT.2013 18:12:18

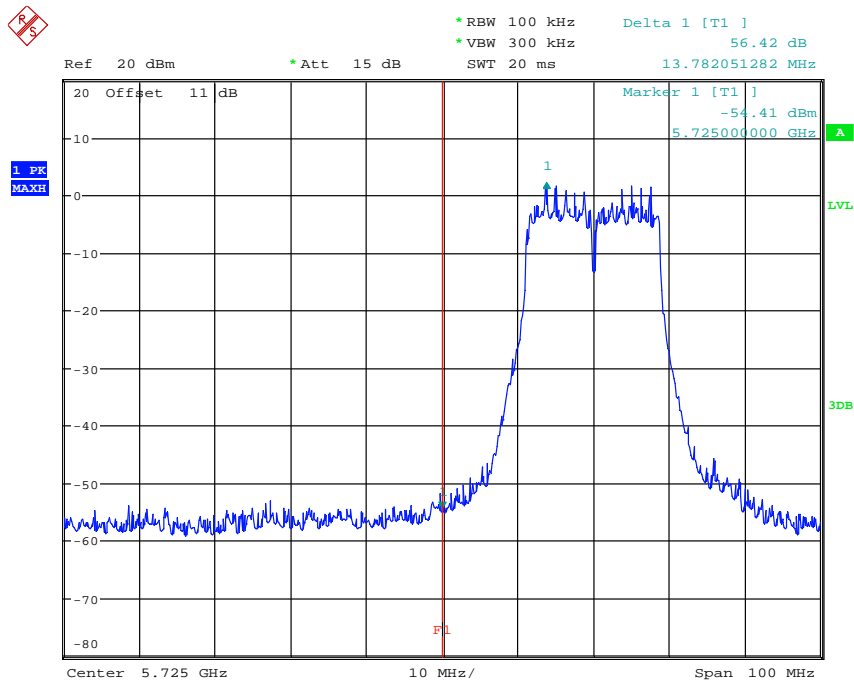


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11A CH165
Date: 2.OCT.2013 18:15:39

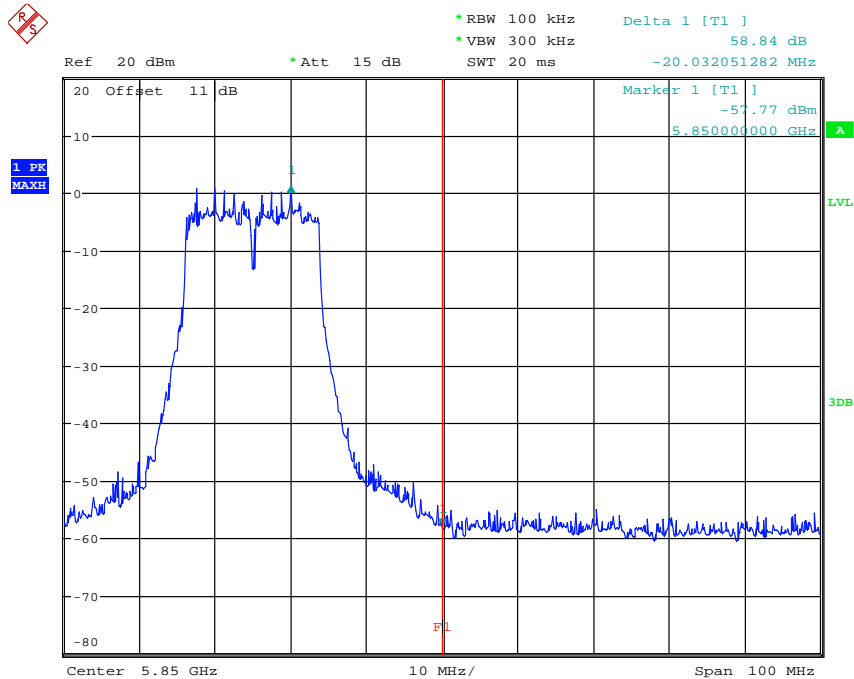
Mode B



BANDEDGE 802.11N 20MHZ CH149
Date: 2.OCT.2013 18:37:05

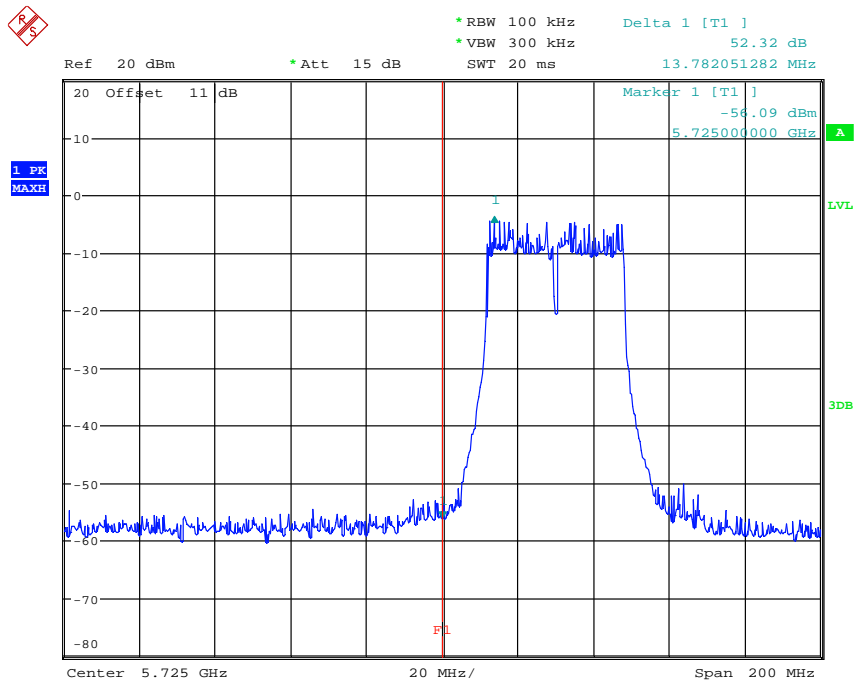


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

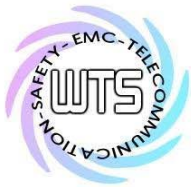


BANDEDGE 802.11N 20MHZ CH165
Date: 2.OCT.2013 18:38:45

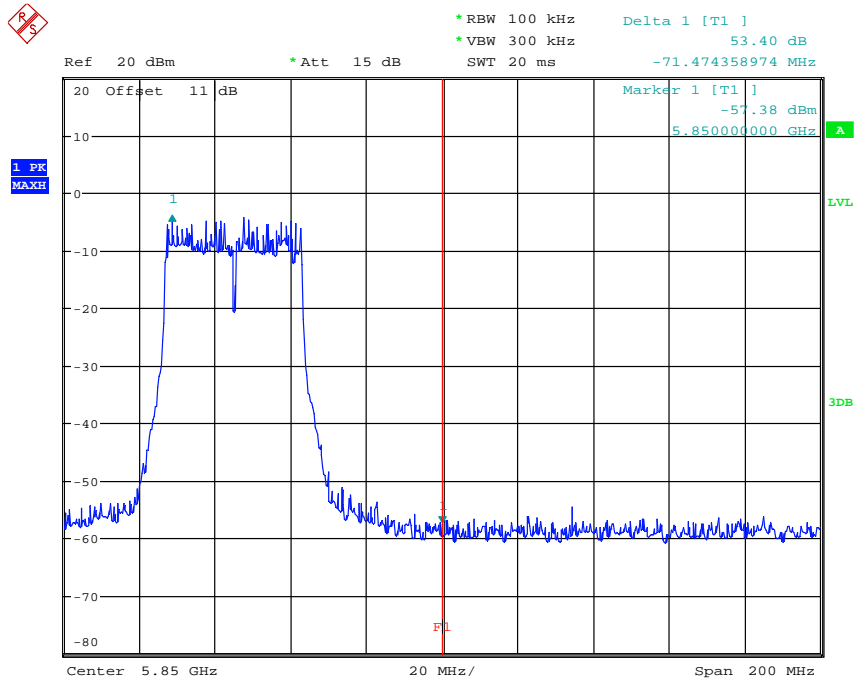
Mode C



BANDEDGE 802.11N 40MHZ CH151
Date: 2.OCT.2013 18:42:09

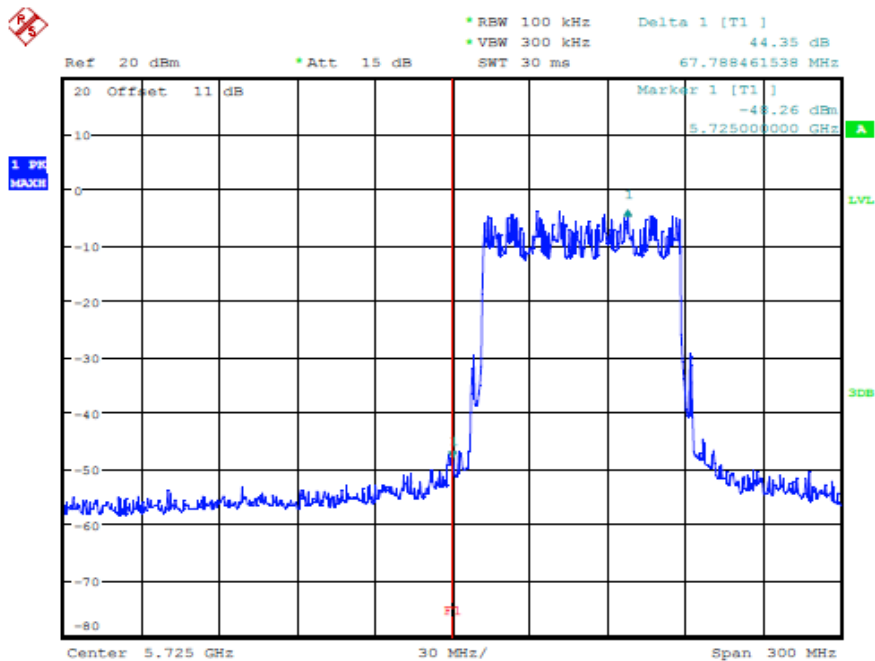


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11N 40MHZ CH159
Date: 2.OCT.2013 18:43:02

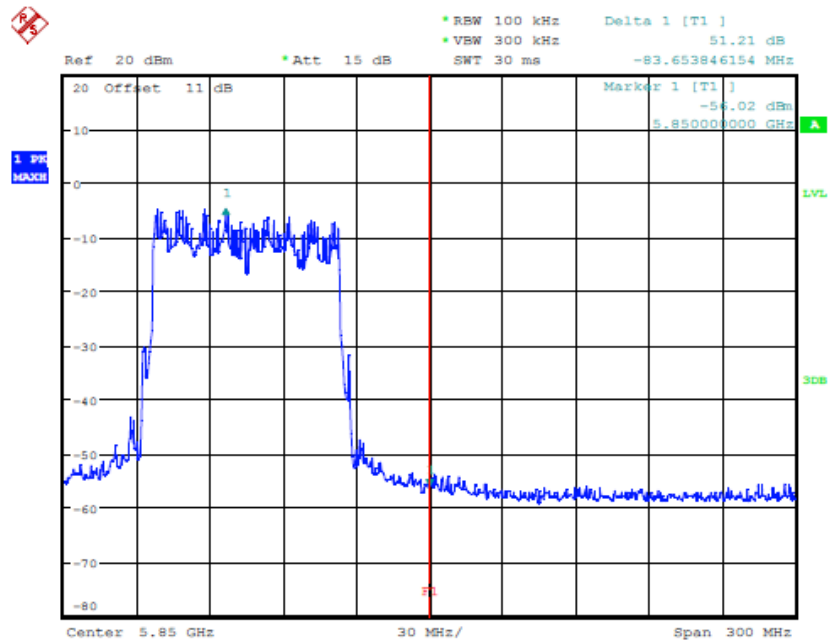
Mode D



BANDEDGE 802.11AC 80MHZ CH155
Date: 2.OCT.2013 19:15:42

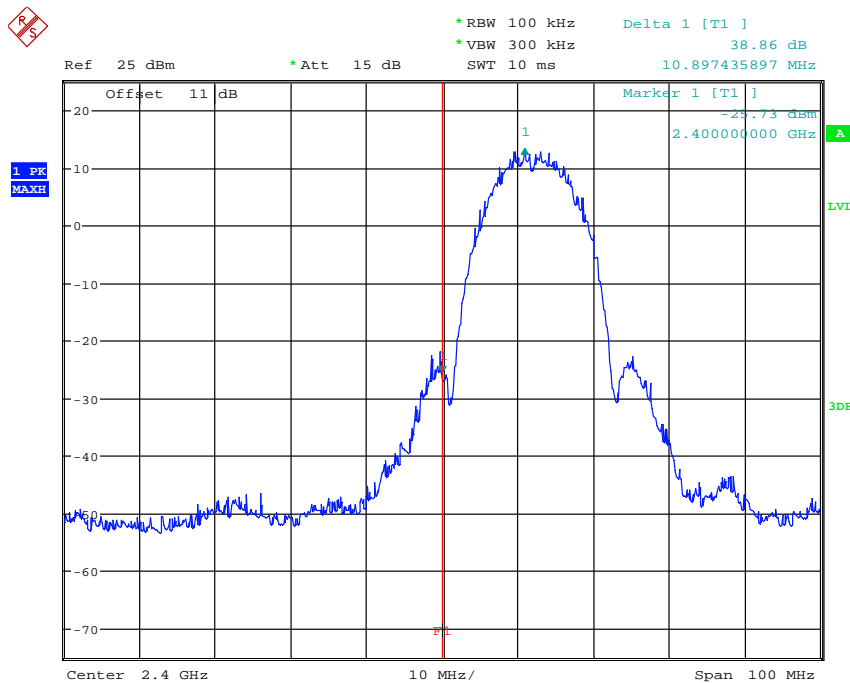


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11AC 80MHz CH155
Date: 2.OCT.2013 19:13:49

Mode E

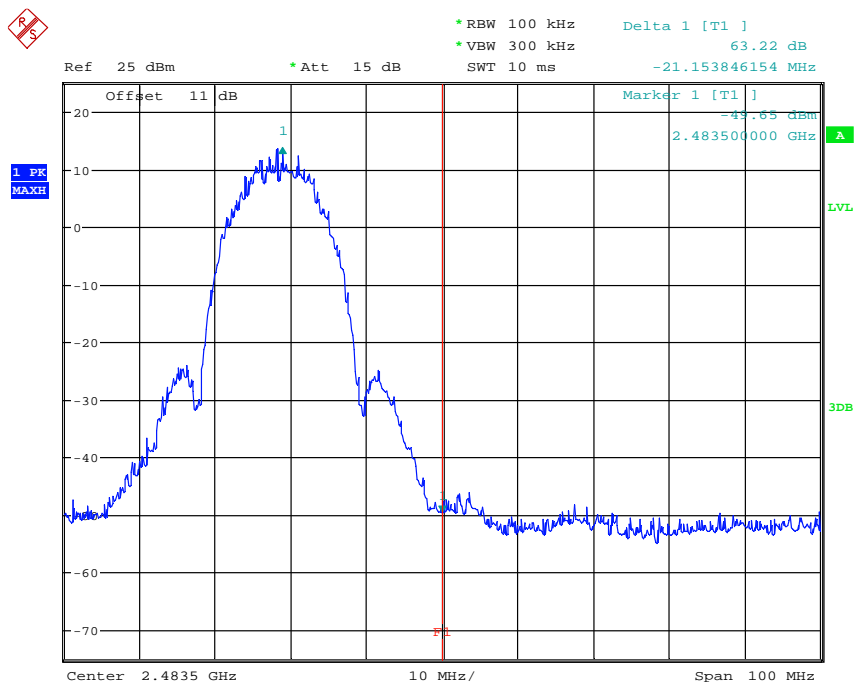


BANDEDGE 802.11B CH01
Date: 2.OCT.2013 17:16:58



Registration number: W6D21310-13579-C-1

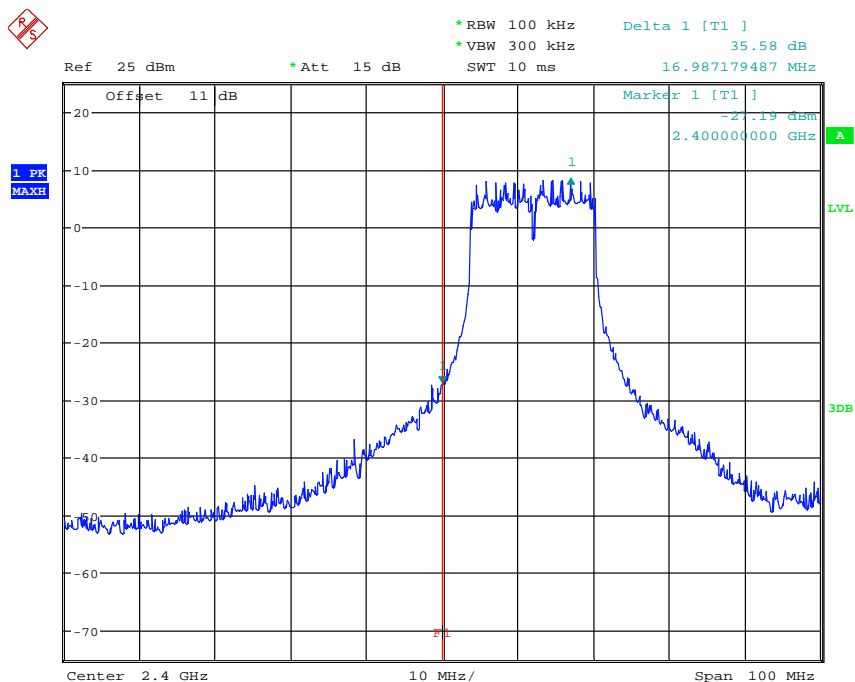
FCC ID: ZTT-APA20



BANDEDGE 802.11B CH11

Date: 2.OCT.2013 17:20:24

Mode F

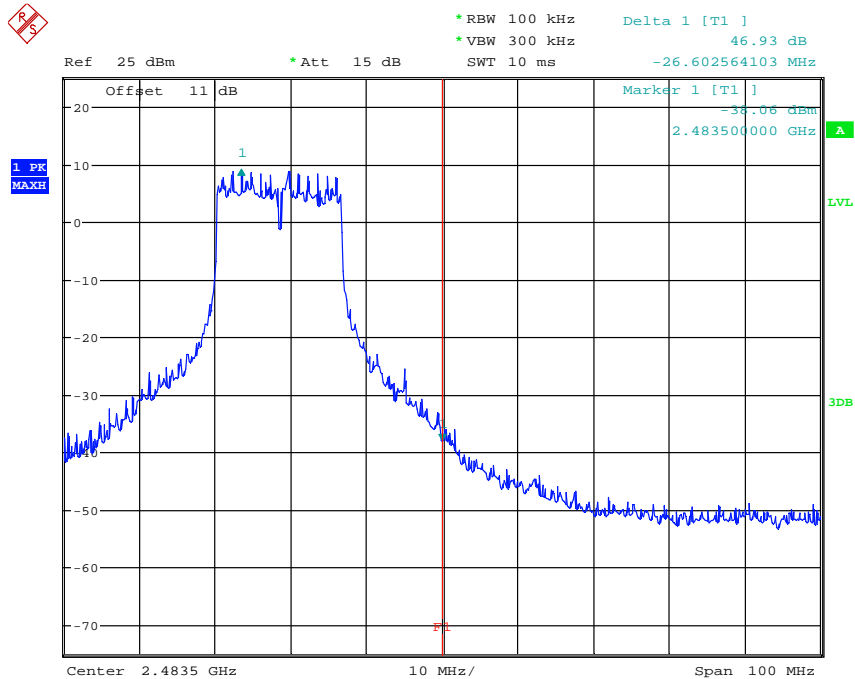


BANDEDGE 802.11G CH01

Date: 2.OCT.2013 17:21:22

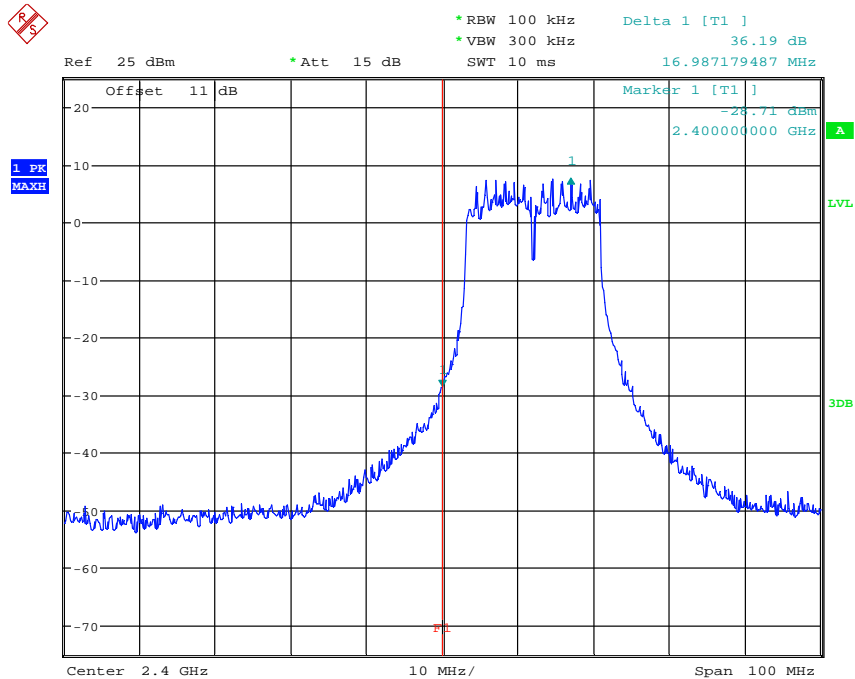


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11G CH11
Date: 2.OCT.2013 17:22:51

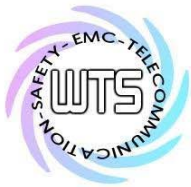
Mode G



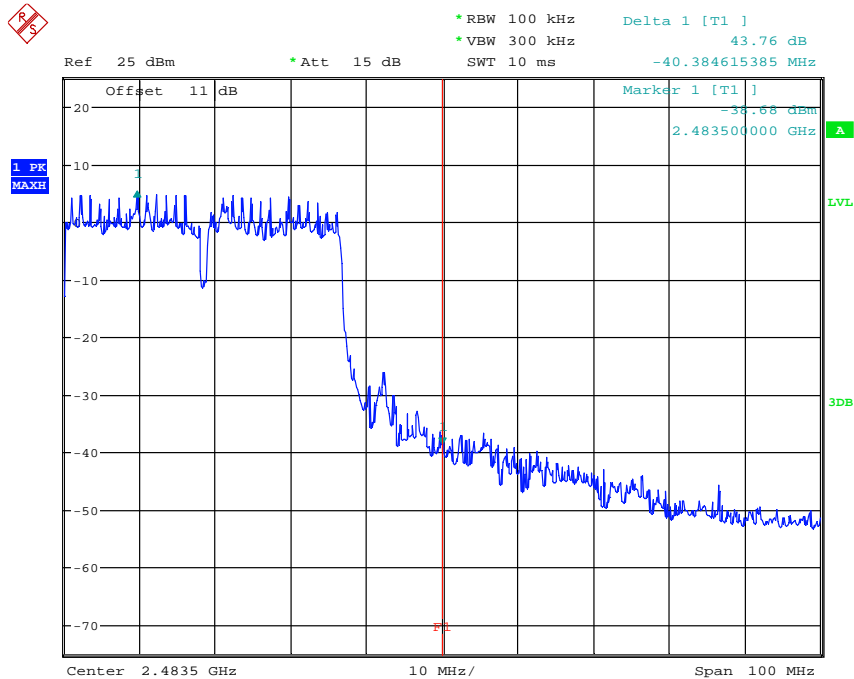
BANDEDGE 802.11N 20MHZ CH01
Date: 2.OCT.2013 17:32:14



FCC ID: ZTT-APA20

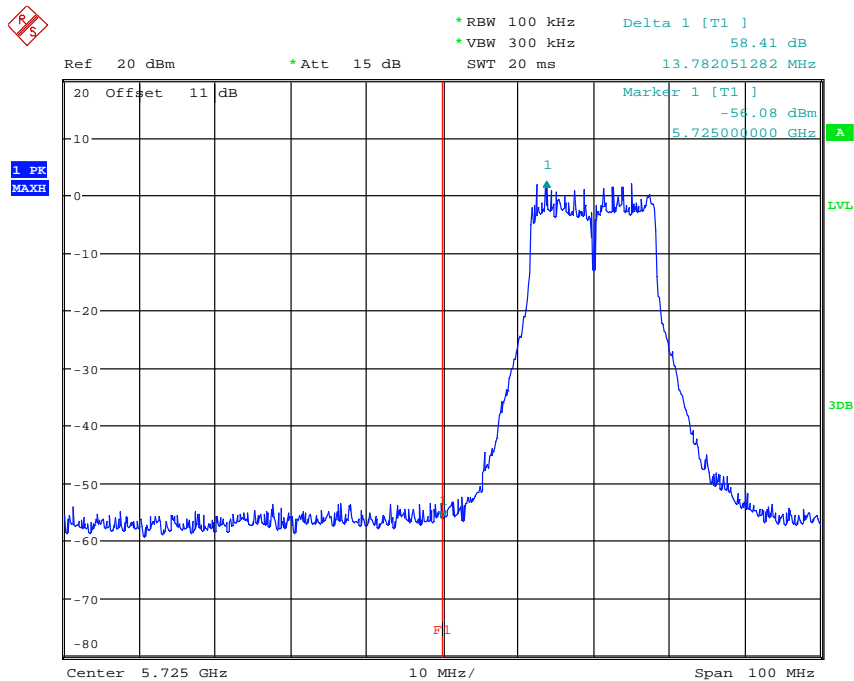


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11N 40MHZ CH07
Date: 2.OCT.2013 17:39:21

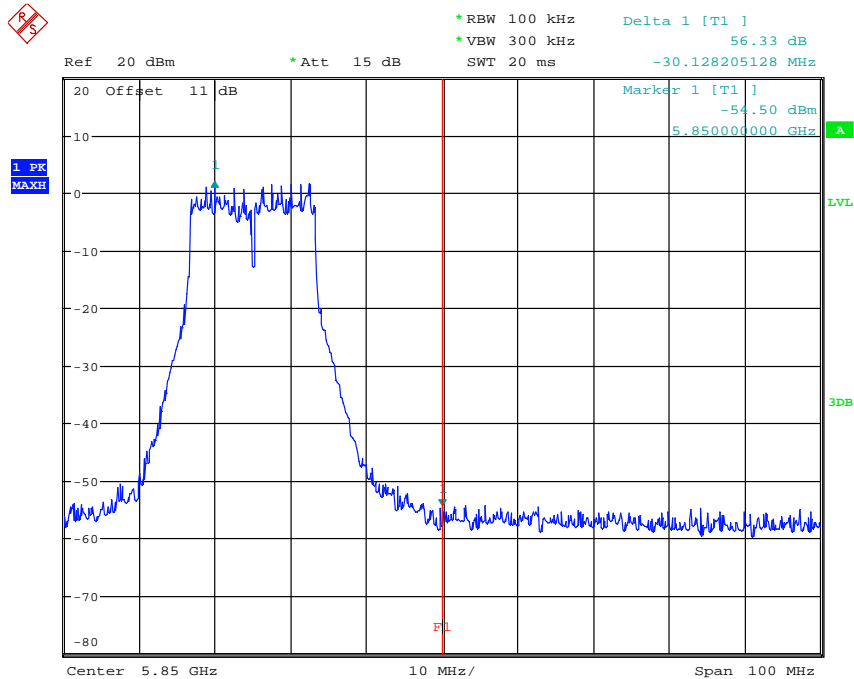
Antenna B
Mode A



BANDEDGE 802.11A CH149
Date: 2.OCT.2013 18:48:46

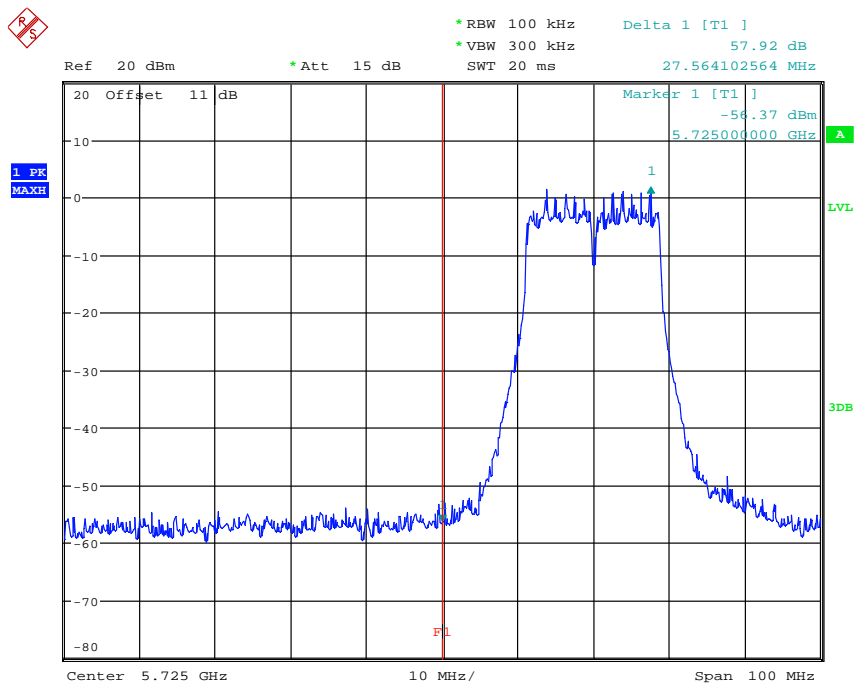


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11A CH165
Date: 2.OCT.2013 18:50:14

Mode B

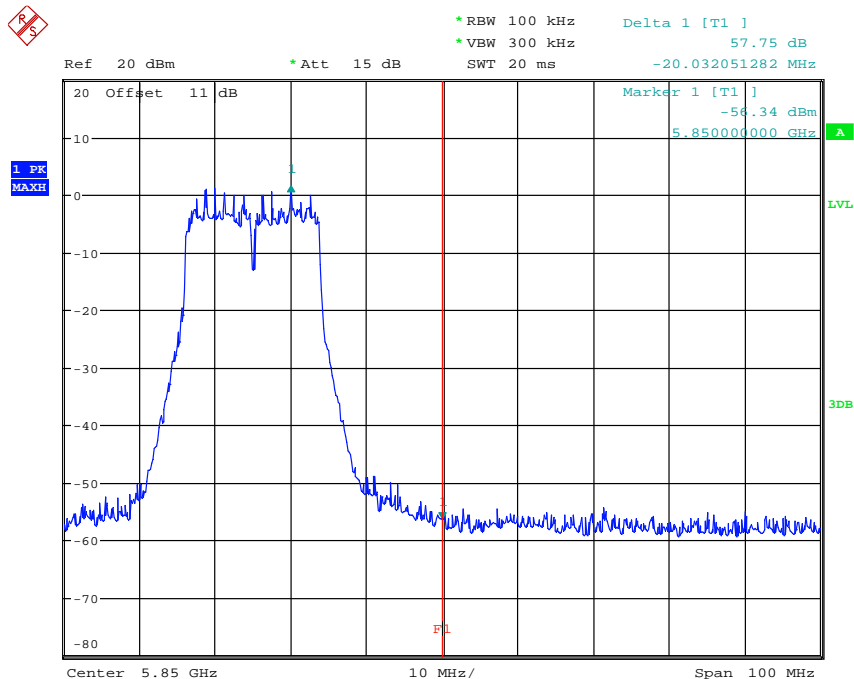


BANDEDGE 802.11N 20MHZ CH149
Date: 2.OCT.2013 18:51:19



Registration number: W6D21310-13579-C-1

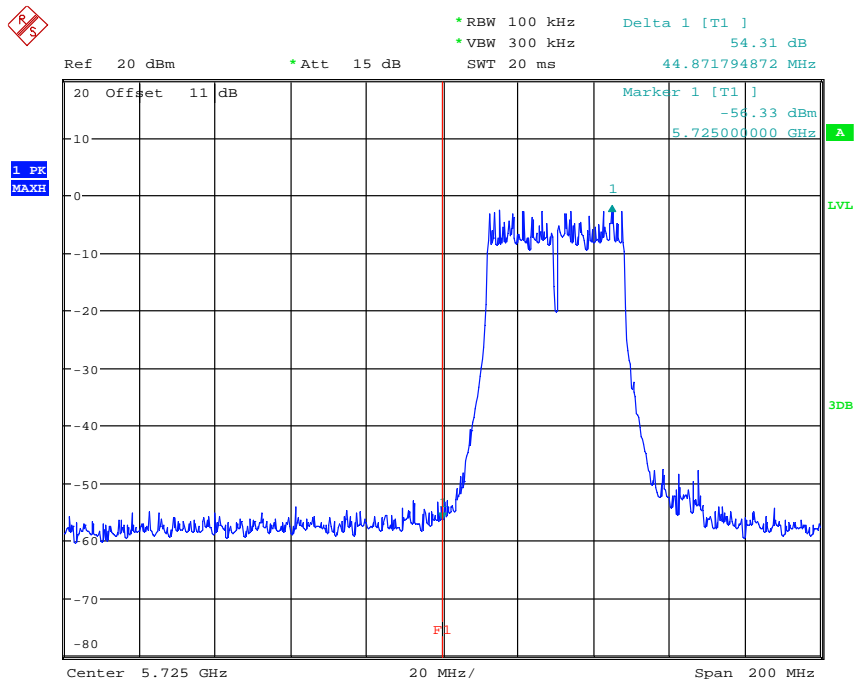
FCC ID: ZTT-APA20



BANDEDGE 802.11N 20MHZ CH165

Date: 2.OCT.2013 18:52:40

Mode C



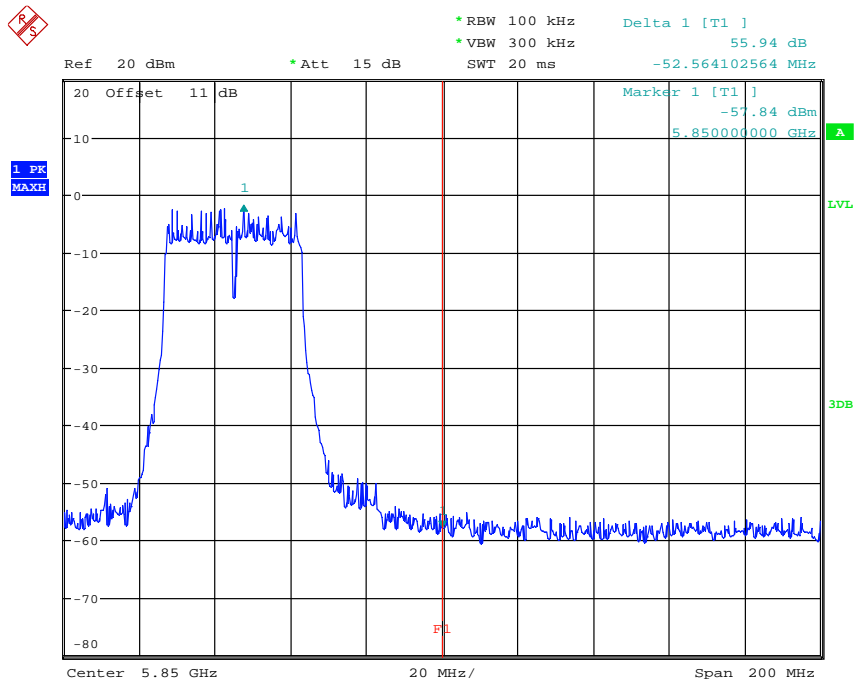
BANDEDGE 802.11N 40MHZ CH151

Date: 2.OCT.2013 18:54:11



Registration number: W6D21310-13579-C-1

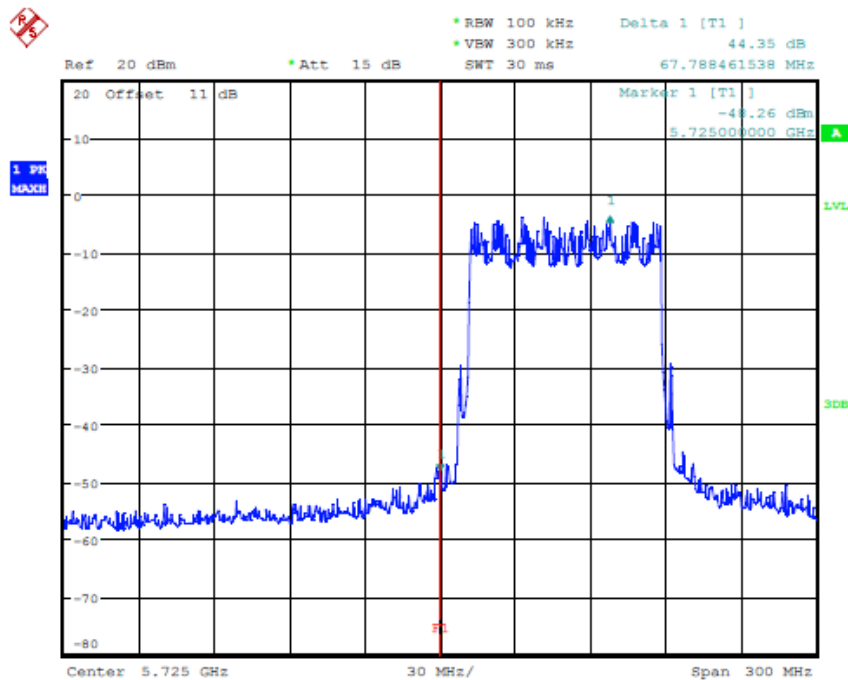
FCC ID: ZTT-APA20



BANDEDGE 802.11N 40MHZ CH159

Date: 2.OCT.2013 18:54:58

Mode D



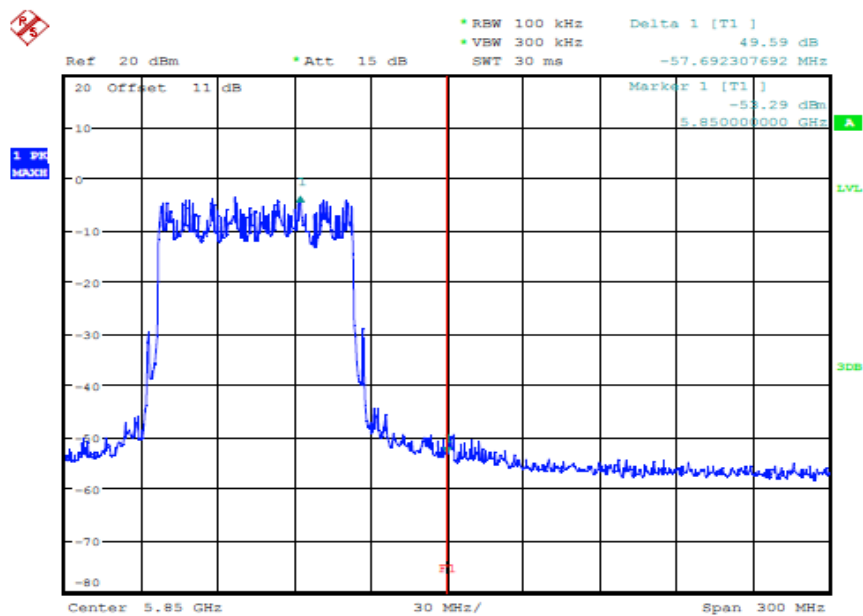
BANDEDGE 802.11AC 80MHZ CH155

Date: 2.OCT.2013 19:15:42



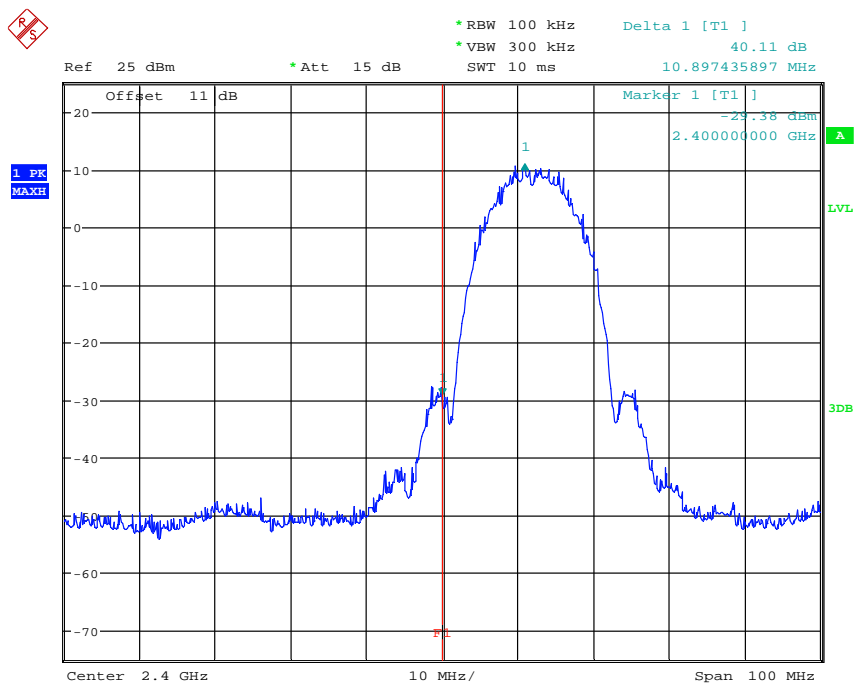
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



BANDEDGE 802.11AC 80MHZ CH155
Date: 2.OCT.2013 19:13:11

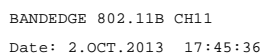
Mode E



BANDEDGE 802.11B CH01
Date: 2.OCT.2013 17:43:41



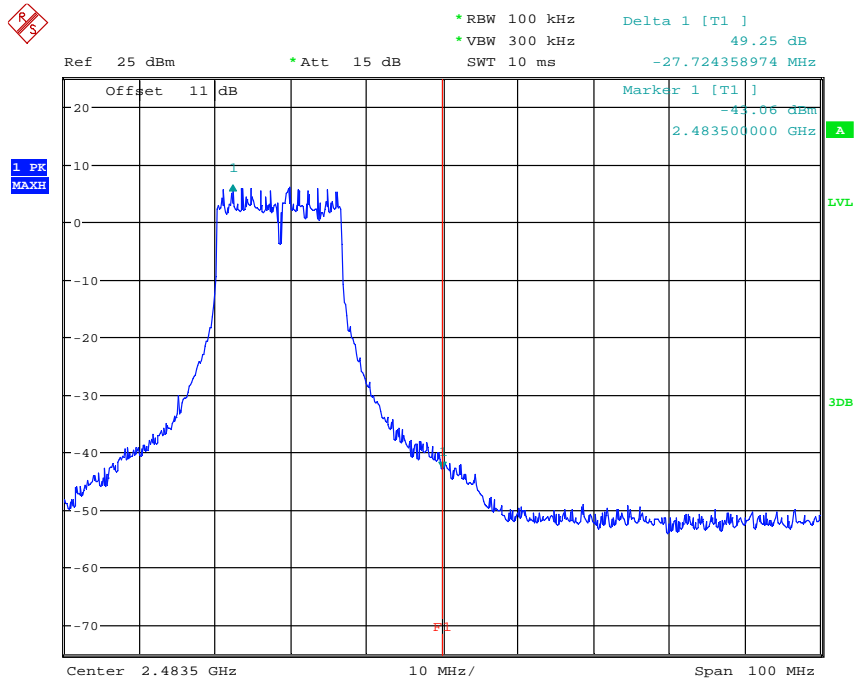
FCC ID: ZTT-APA20



BANDEDGE 802.11G CH01
Date: 2.OCT.2013 17:46:27

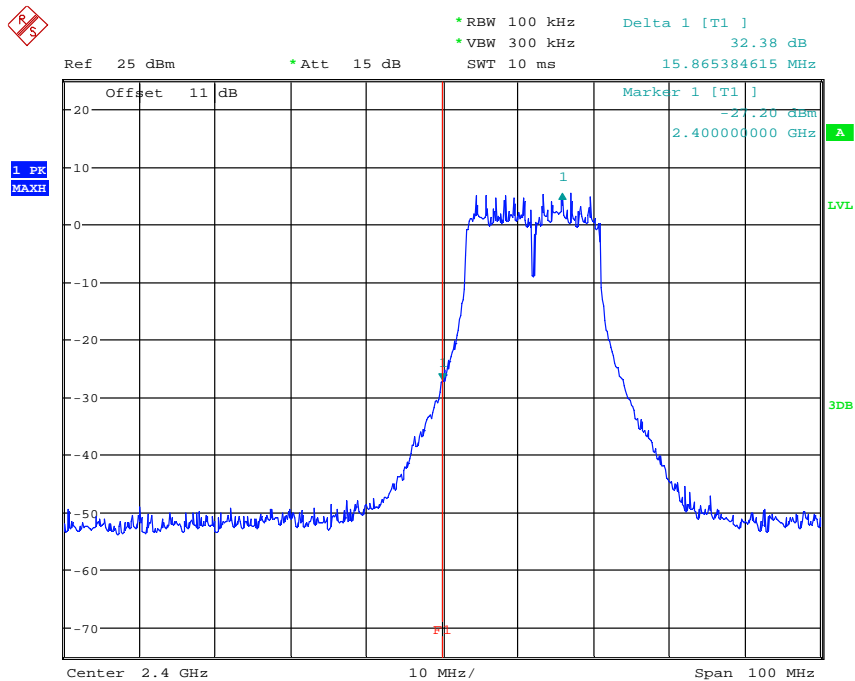


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11G CH11
Date: 2.OCT.2013 17:48:00

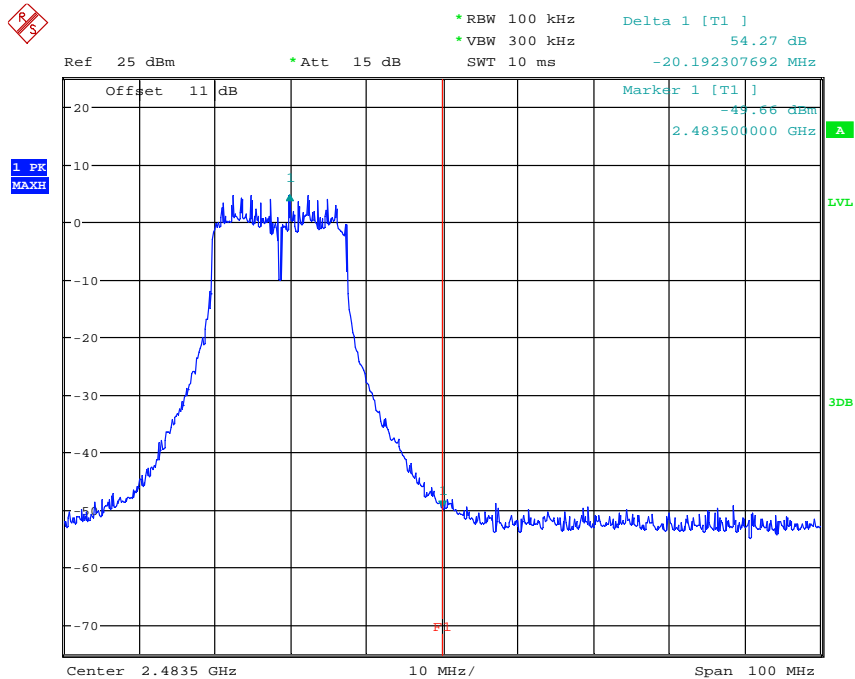
Mode G



BANDEDGE 802.11N 20MHZ CH01
Date: 2.OCT.2013 17:48:58

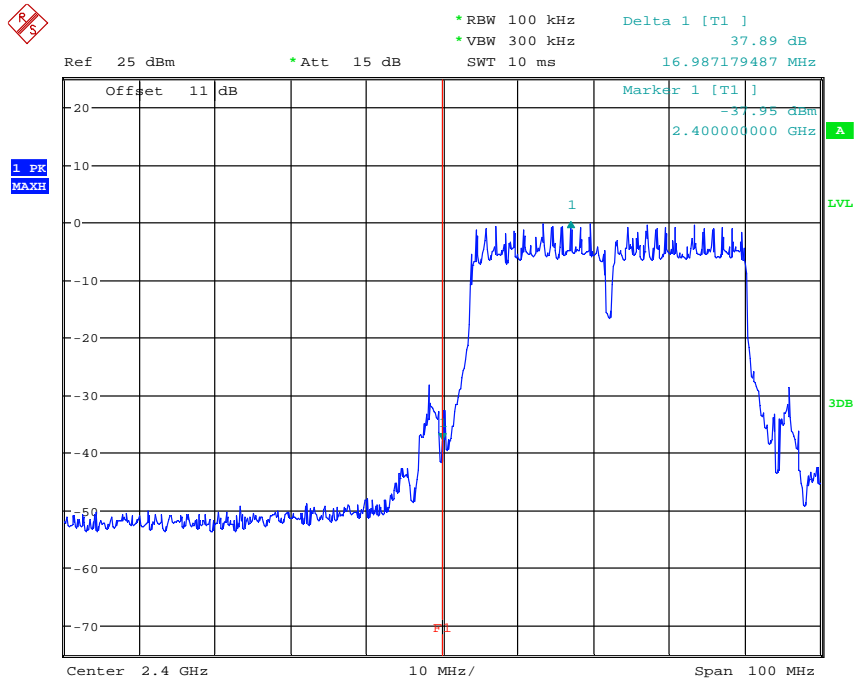


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11N 20MHZ CH11
Date: 2.OCT.2013 17:50:39

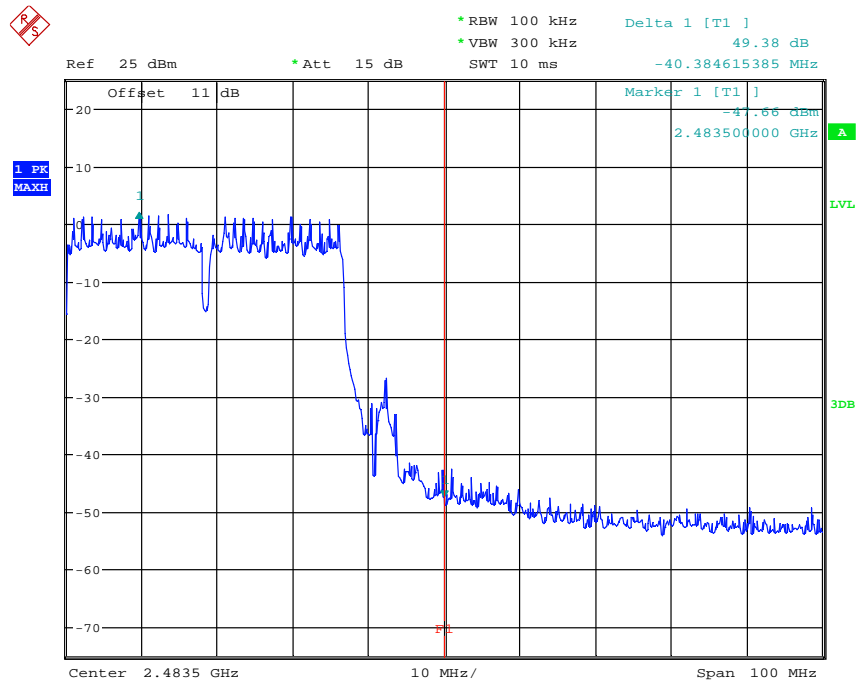
Mode H



BANDEDGE 802.11N 40MHZ CH01
Date: 2.OCT.2013 17:51:35



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



BANDEDGE 802.11N 40MHZ CH07
Date: 2.OCT.2013 17:53:28

Limit:

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

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

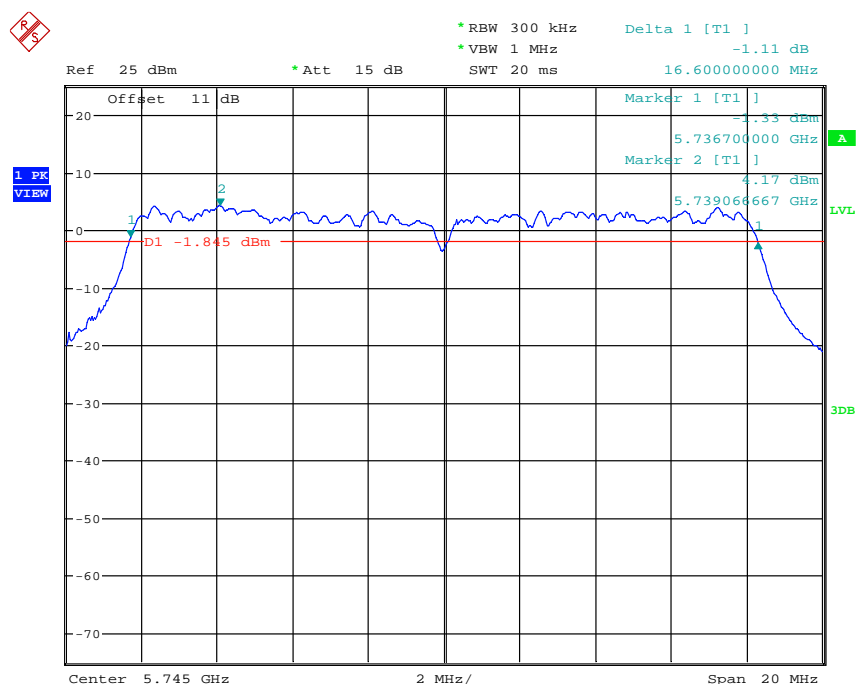
3.7 Minimum 6 dB Bandwidth

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

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

Antenna A

Mode A

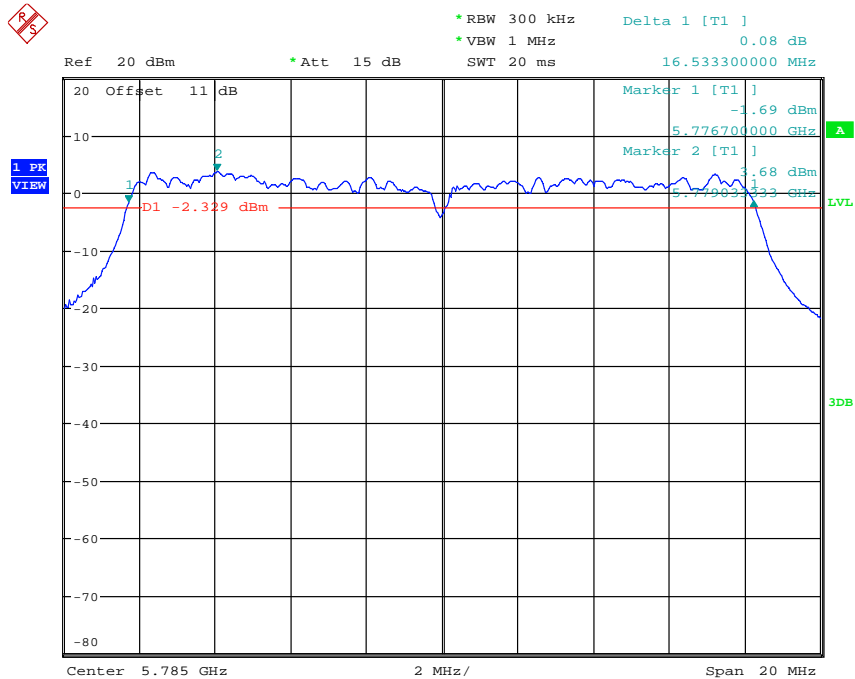


6DB BANDWIDTH 802.11A CH149

Date: 2.OCT.2013 18:12:05

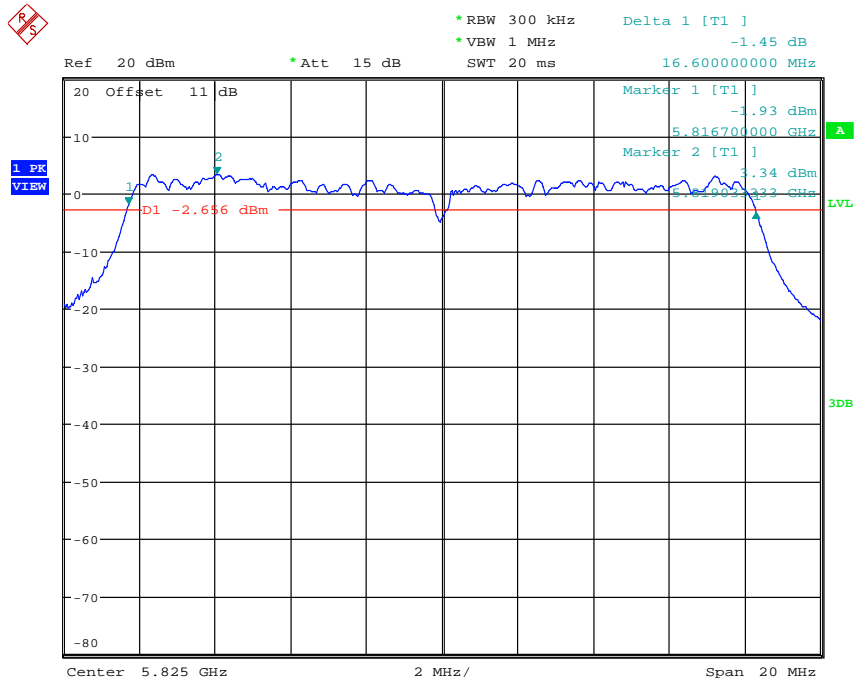


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11A CH157

Date: 2.OCT.2013 18:13:30



6DB BANDWIDTH 802.11A CH165

Date: 2.OCT.2013 18:15:27

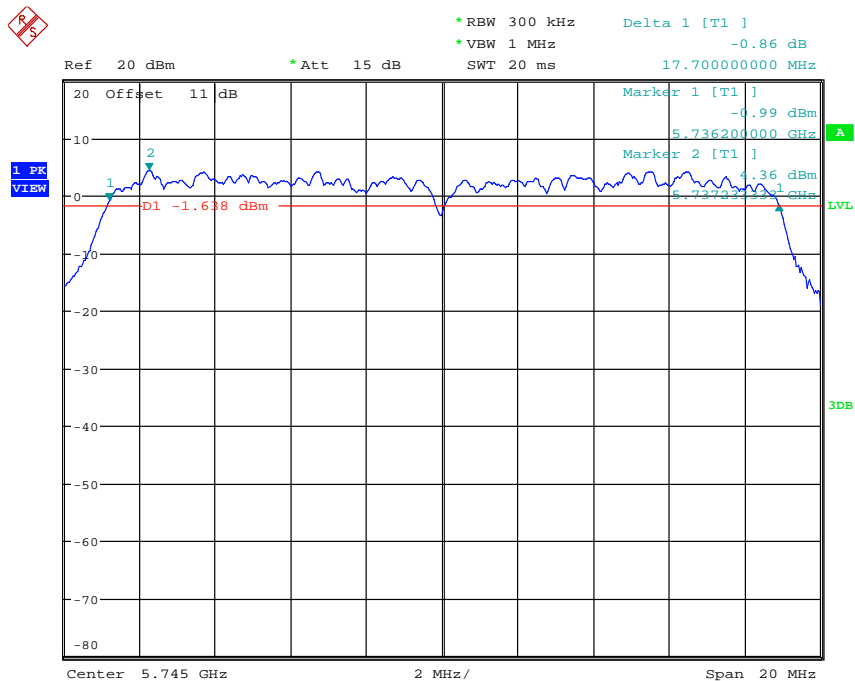


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Registration number: W6D21310-13579-C-1

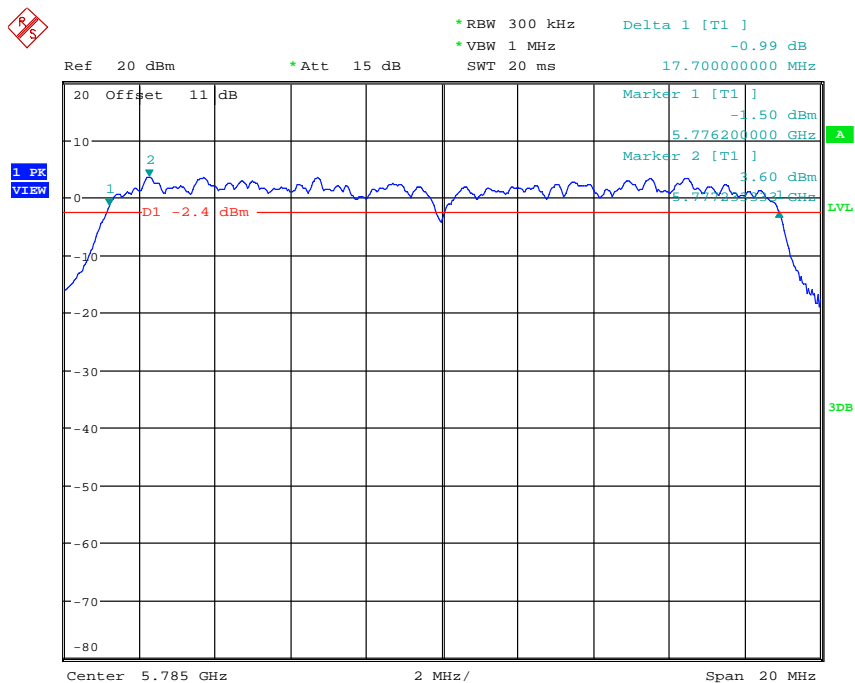
FCC ID: ZTT-APA20

Mode B



6DB BANDWIDTH 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:36:53

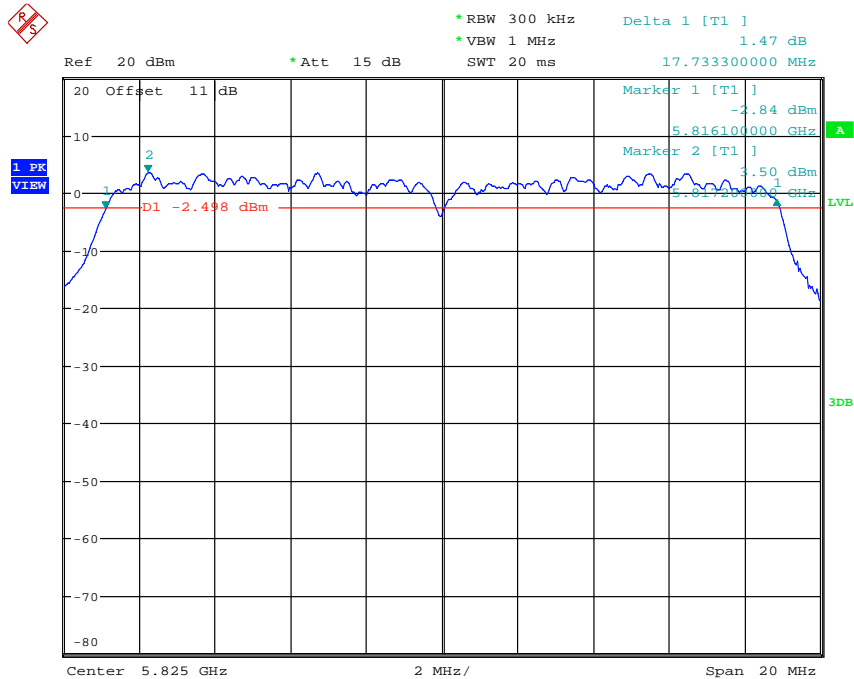


6DB BANDWIDTH 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:37:36

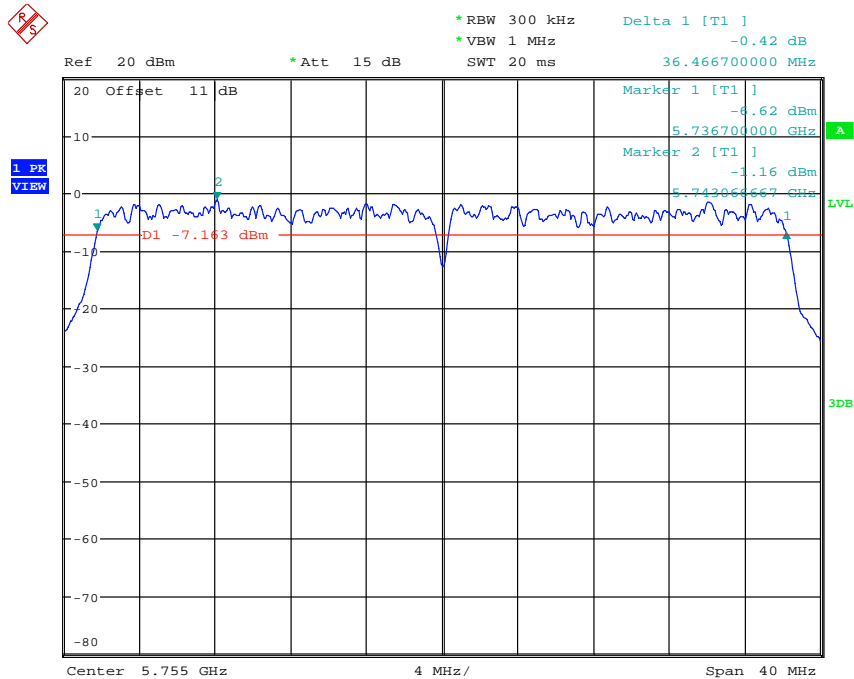


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 20MHZ CH165
Date: 2.OCT.2013 18:38:32

Mode C

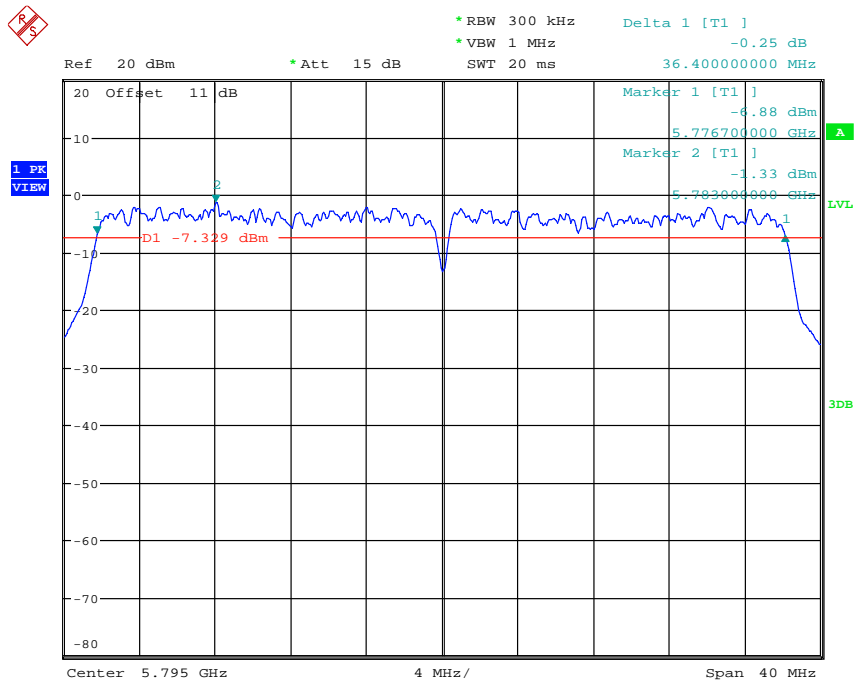


6DB BANDWIDTH 802.11N 40MHZ CH151
Date: 2.OCT.2013 18:41:57



Registration number: W6D21310-13579-C-1

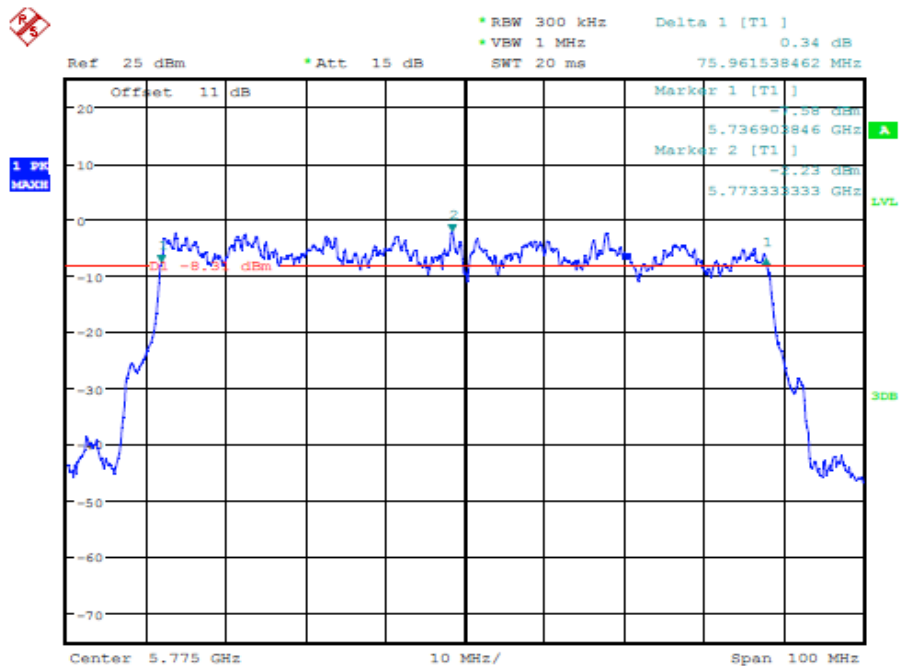
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 40MHZ CH159

Date: 2.OCT.2013 18:42:49

Mode D



6DB BANDWIDTH 802.11AC 80MHZ CH155

Date: 2.OCT.2013 19:04:31

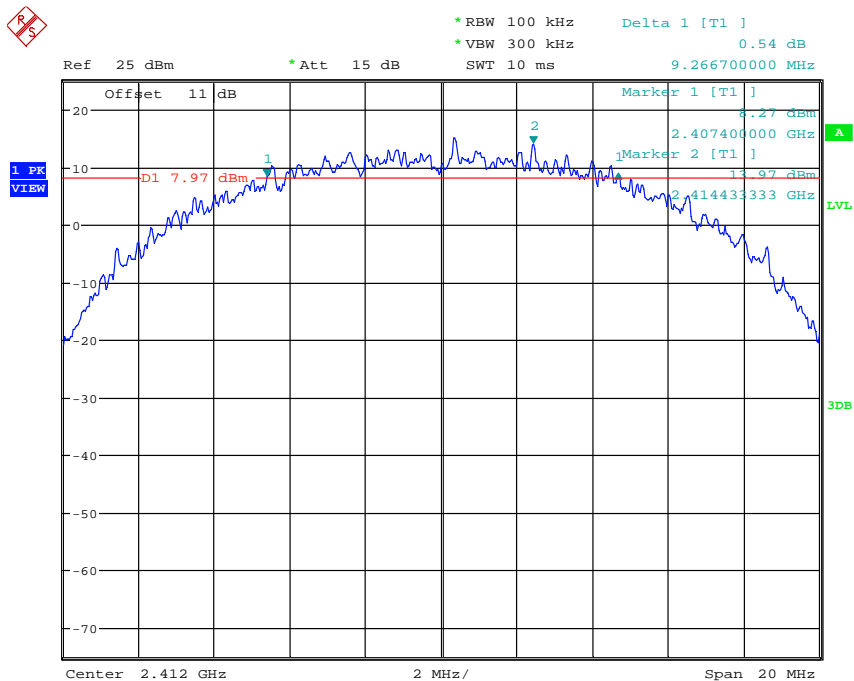


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

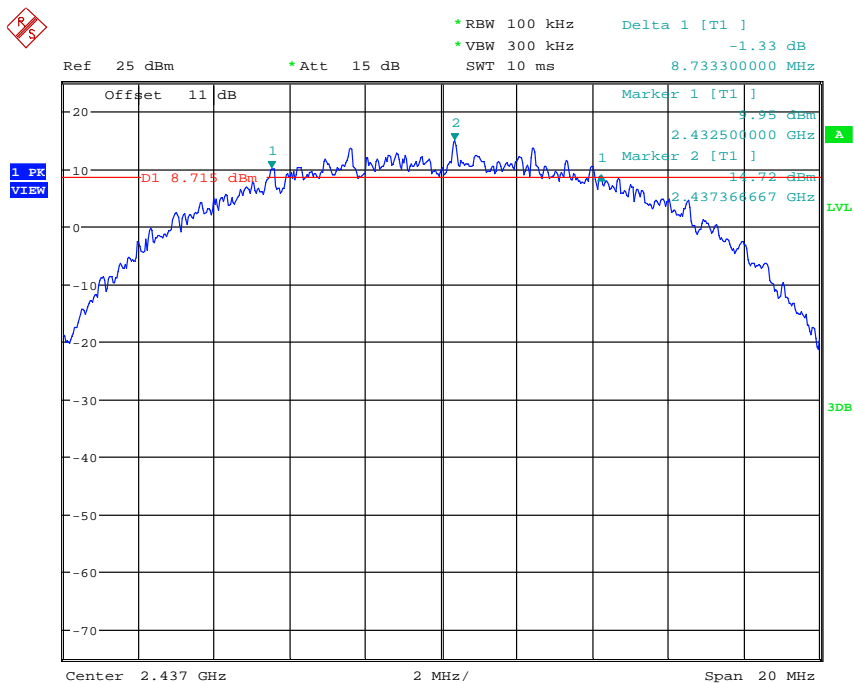
FCC ID: ZTT-APA20

Mode E



6DB BANDWIDTH 802.11B CH01

Date: 2.OCT.2013 17:16:46



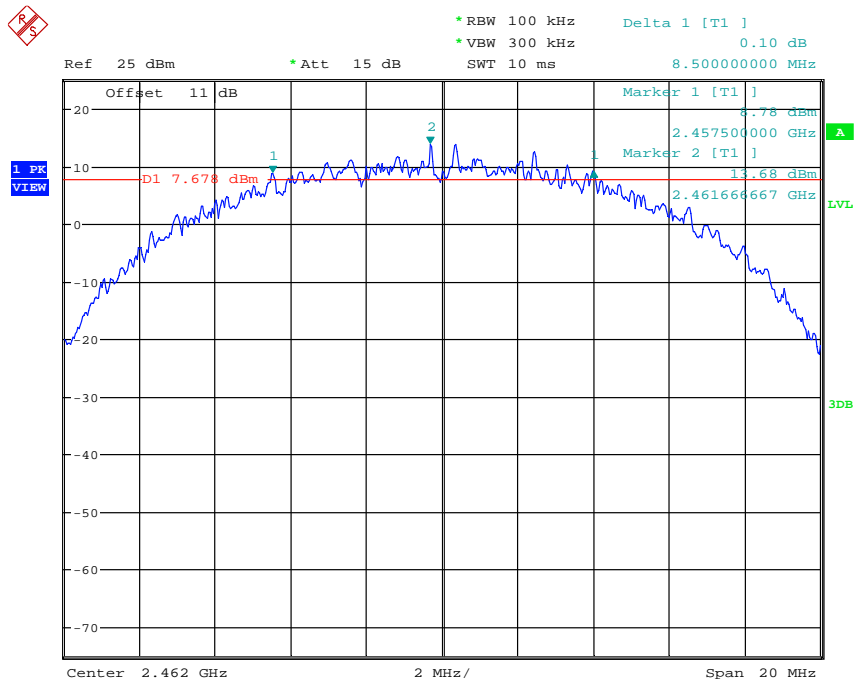
6DB BANDWIDTH 802.11B CH06

Date: 2.OCT.2013 17:18:40



Registration number: W6D21310-13579-C-1

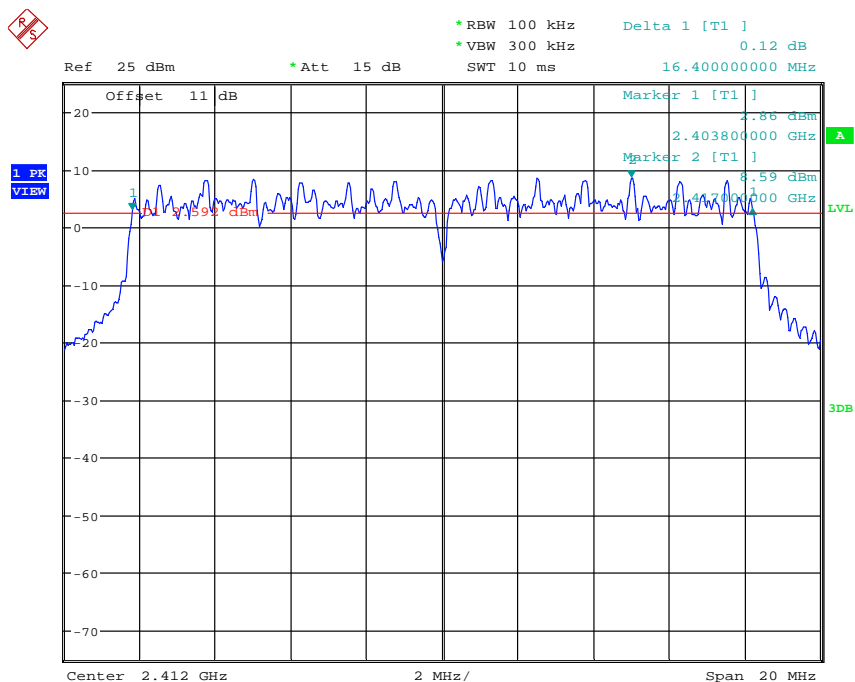
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11B CH11

Date: 2.OCT.2013 17:20:12

Mode F



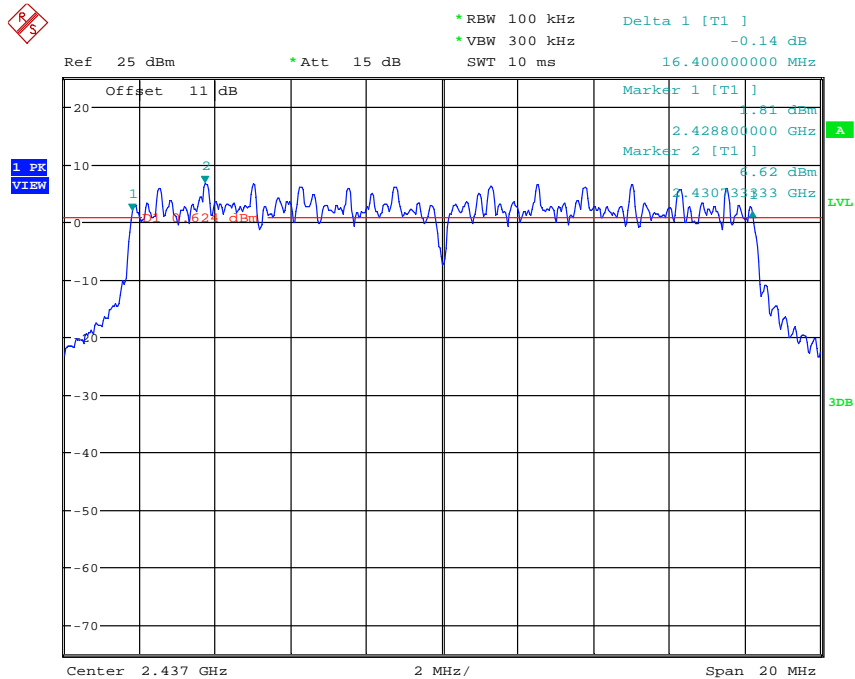
6DB BANDWIDTH 802.11G CH01

Date: 2.OCT.2013 17:21:09

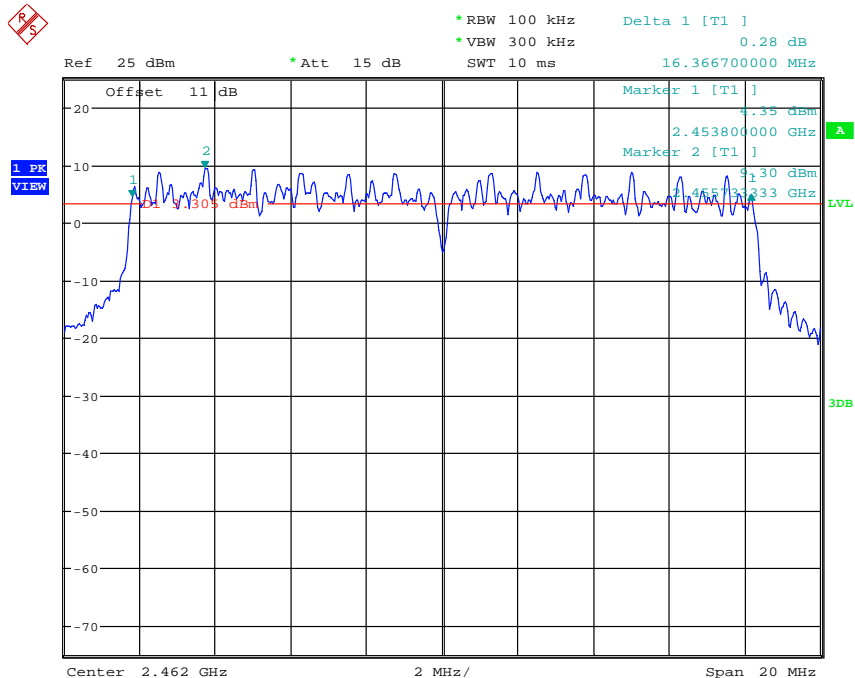


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11G CH06
Date: 2.OCT.2013 17:21:56



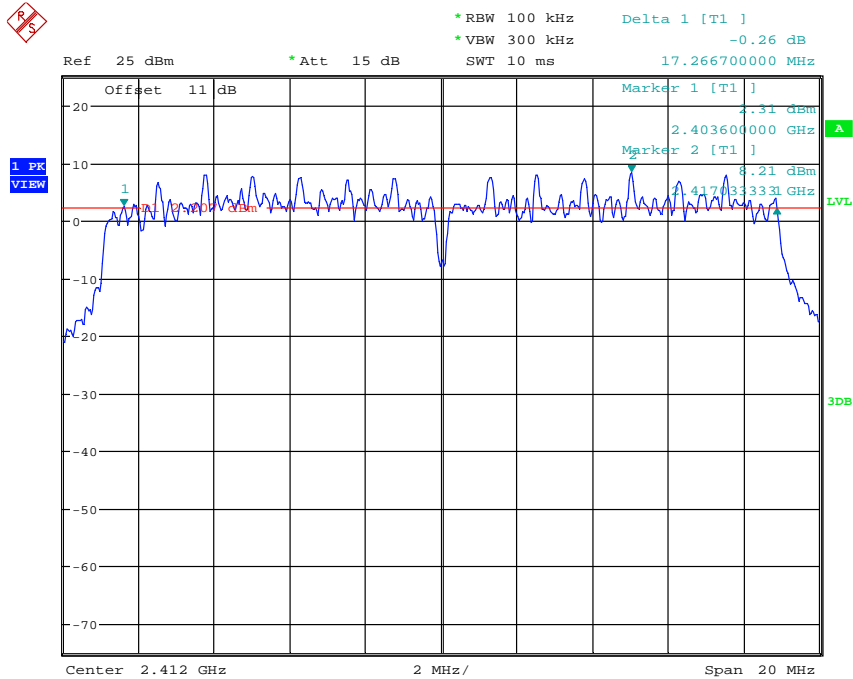
6DB BANDWIDTH 802.11G CH11
Date: 2.OCT.2013 17:22:38



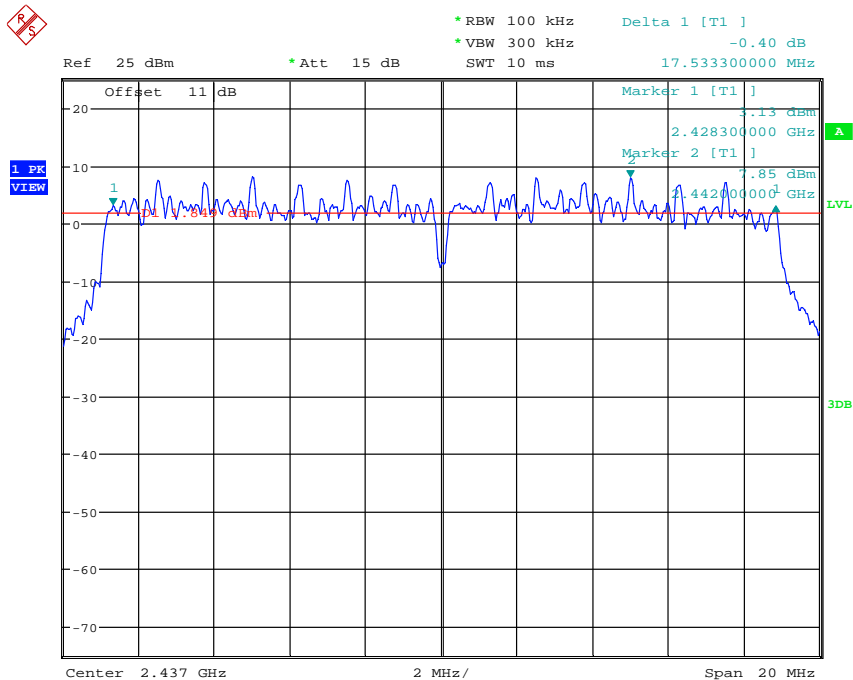
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode G



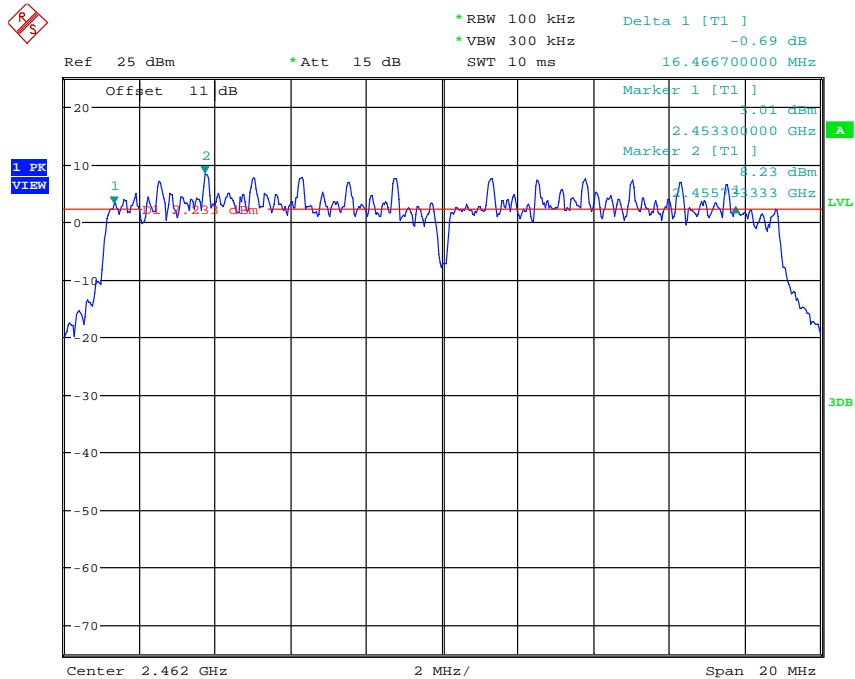
6DB BANDWIDTH 802.11N 20MHZ CH01
Date: 2.OCT.2013 17:32:02



6DB BANDWIDTH 802.11N 20MHZ CH06
Date: 2.OCT.2013 17:33:23

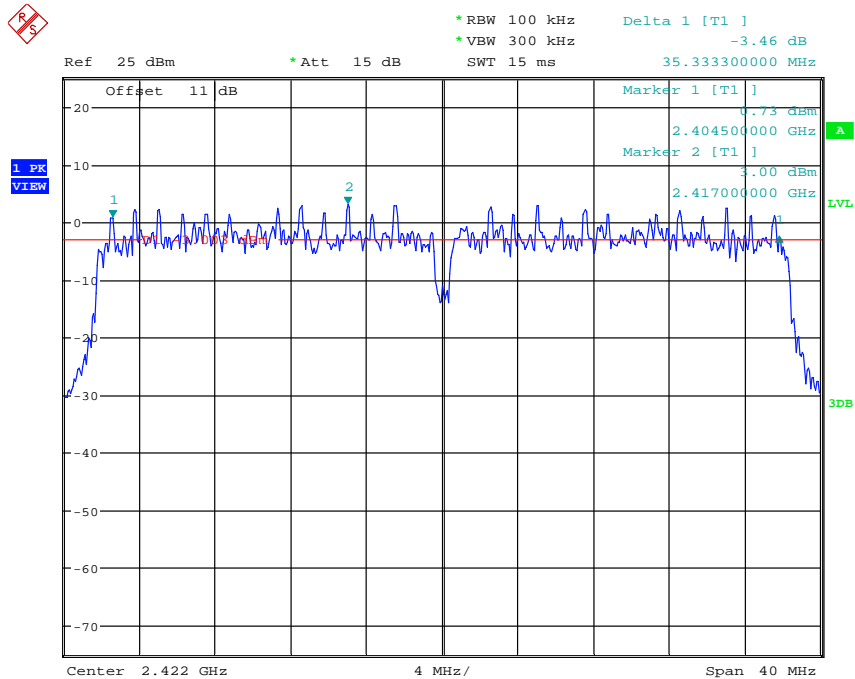


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 20MHZ CH11
Date: 2.OCT.2013 17:34:21

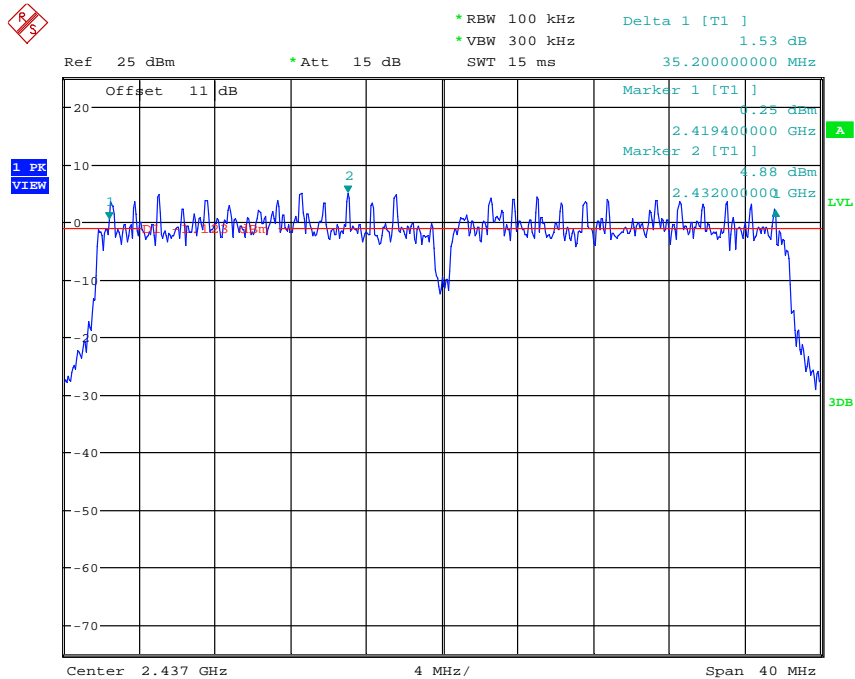
Mode H



6DB BANDWIDTH 802.11N 40MHZ CH01
Date: 2.OCT.2013 17:35:39

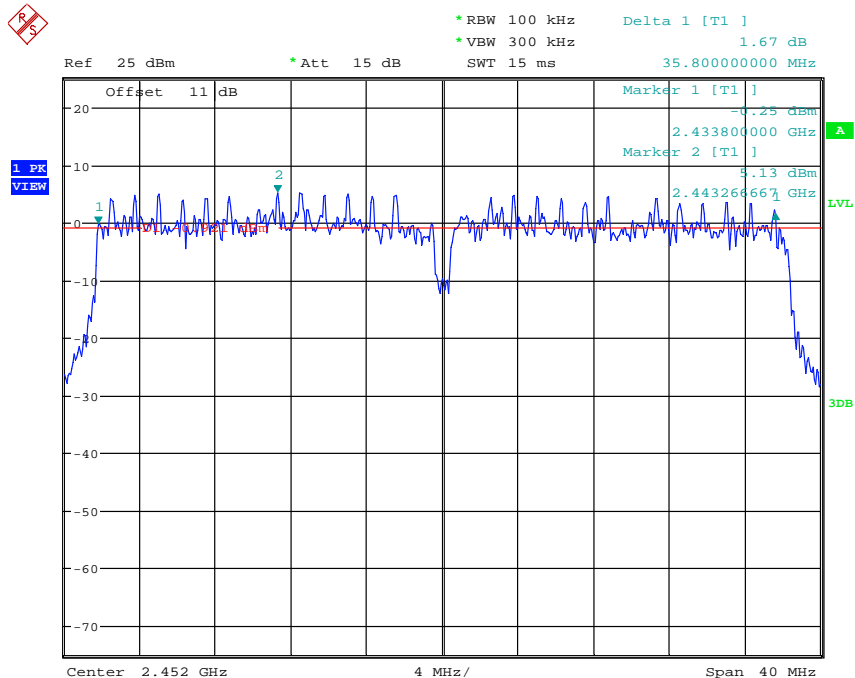


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:38:03



6DB BANDWIDTH 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:39:09



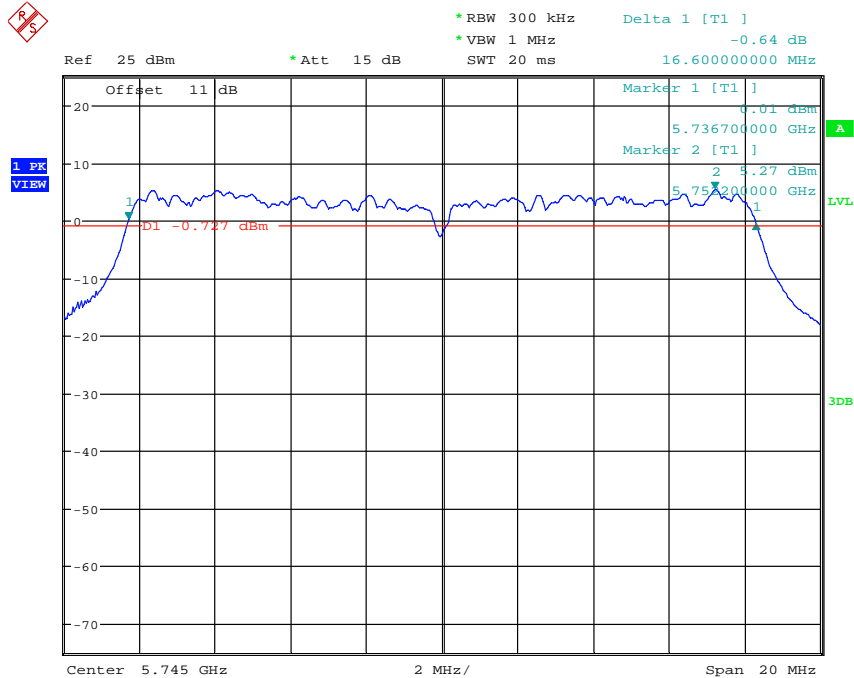
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

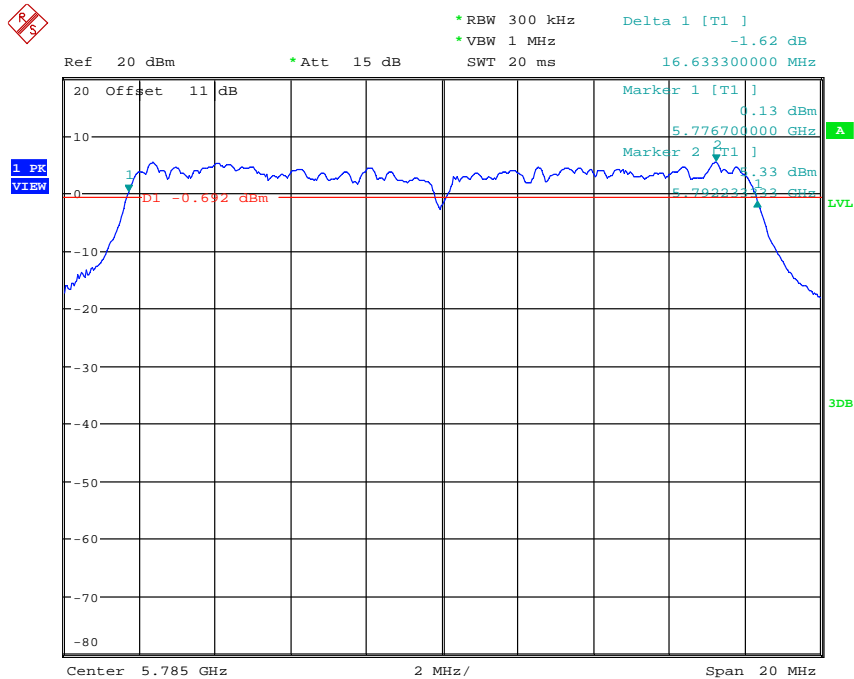
Antenna B

Mode A



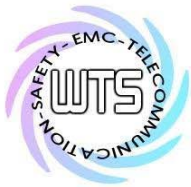
6DB BANDWIDTH 802.11A CH149

Date: 2.OCT.2013 18:48:33

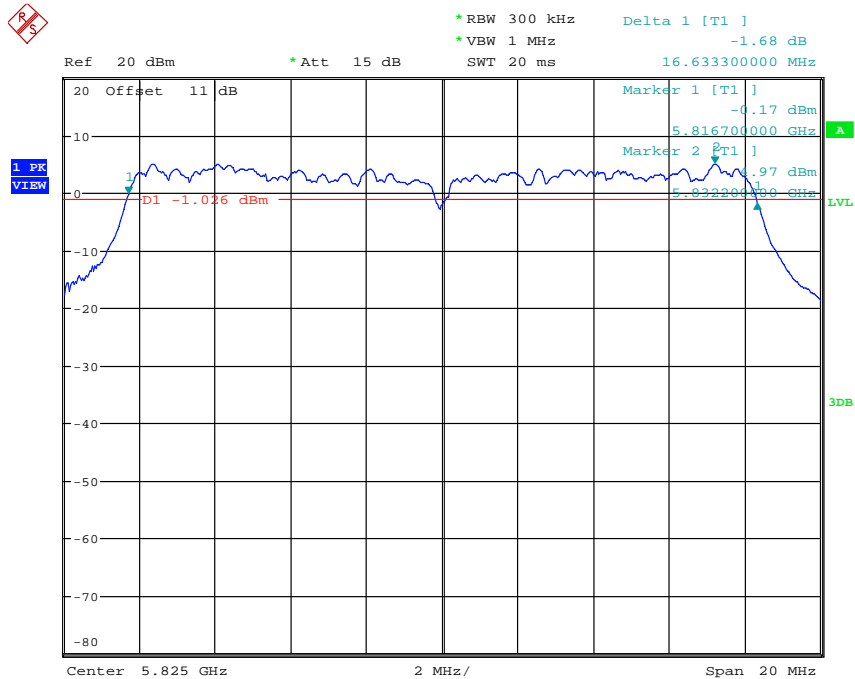


6DB BANDWIDTH 802.11A CH157

Date: 2.OCT.2013 18:49:23



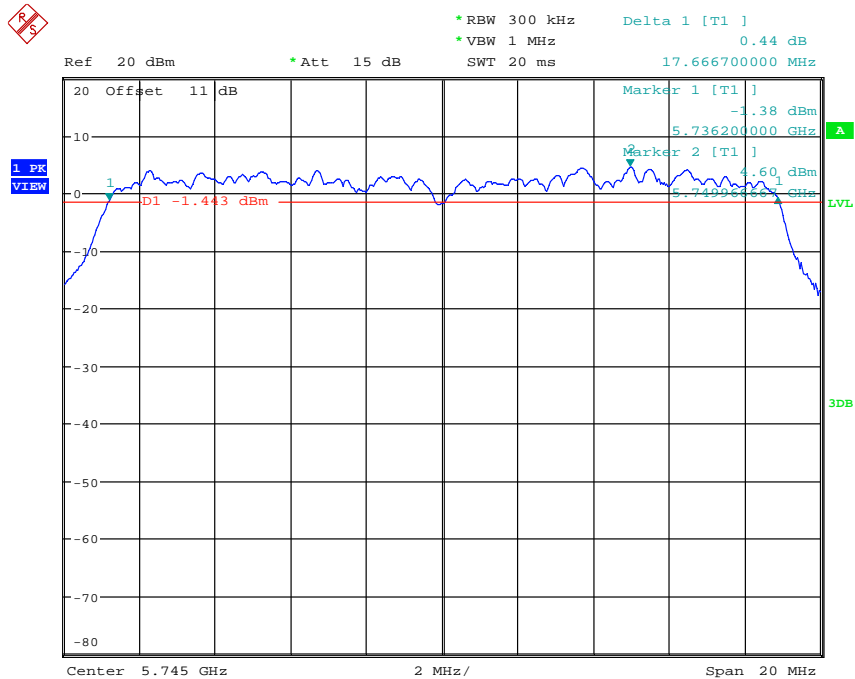
Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11A CH165

Date: 2.OCT.2013 18:50:01

Mode B

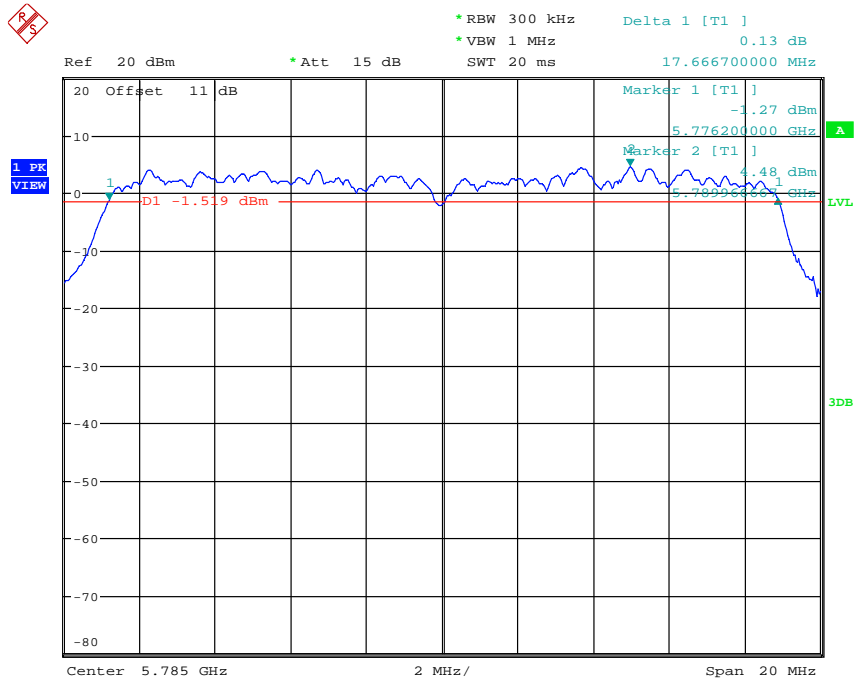


6DB BANDWIDTH 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:51:06

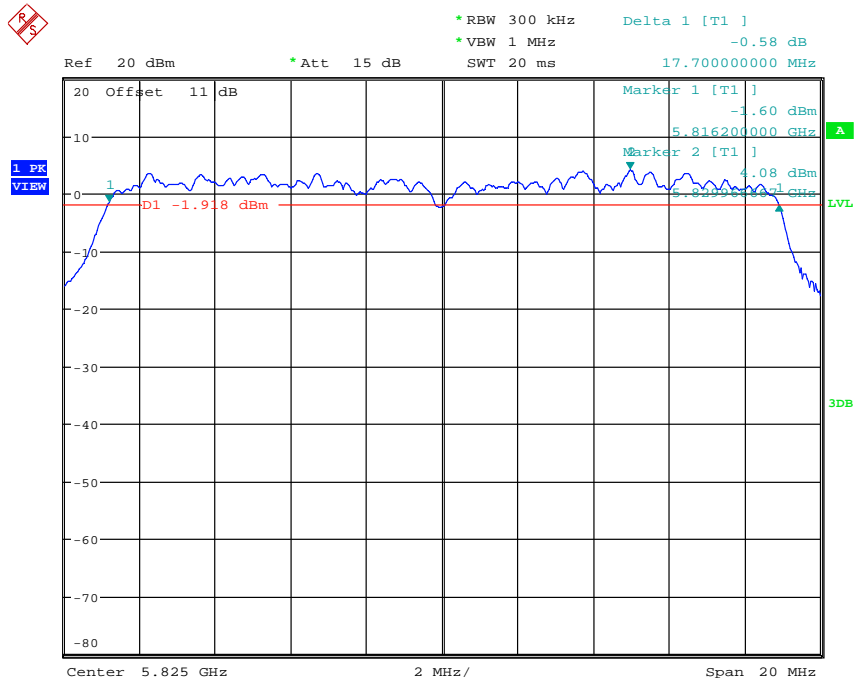


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:51:50



6DB BANDWIDTH 802.11N 20MHZ CH165

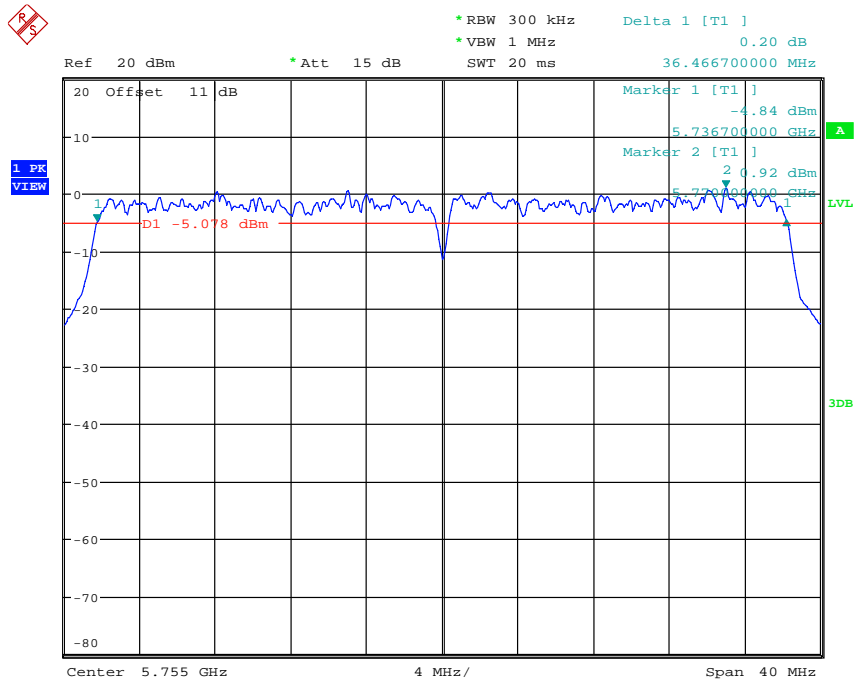
Date: 2.OCT.2013 18:52:28



Registration number: W6D21310-13579-C-1

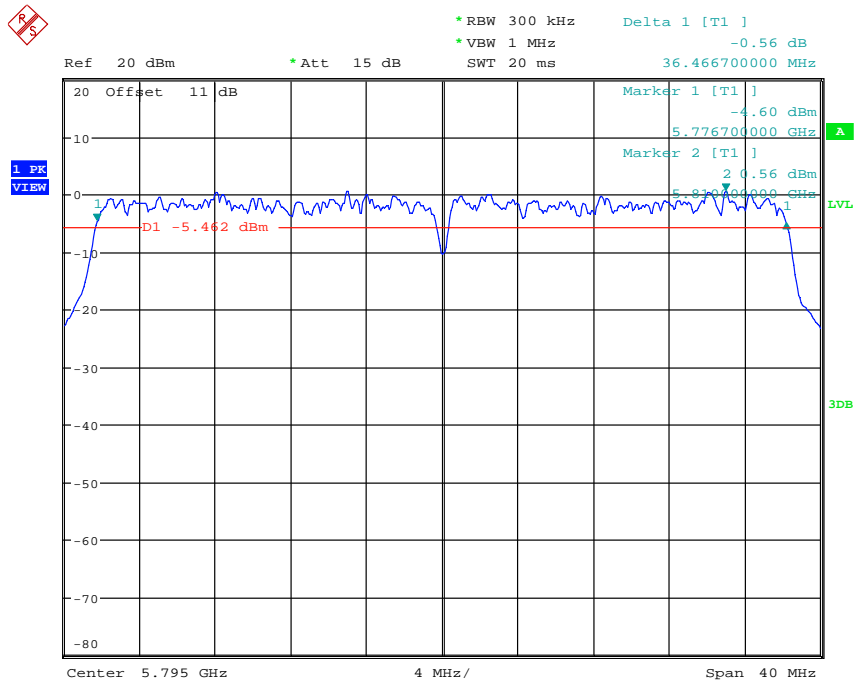
FCC ID: ZTT-APA20

Mode C



6DB BANDWIDTH 802.11N 40MHZ CH151

Date: 2.OCT.2013 18:53:58



6DB BANDWIDTH 802.11N 40MHZ CH159

Date: 2.OCT.2013 18:54:45

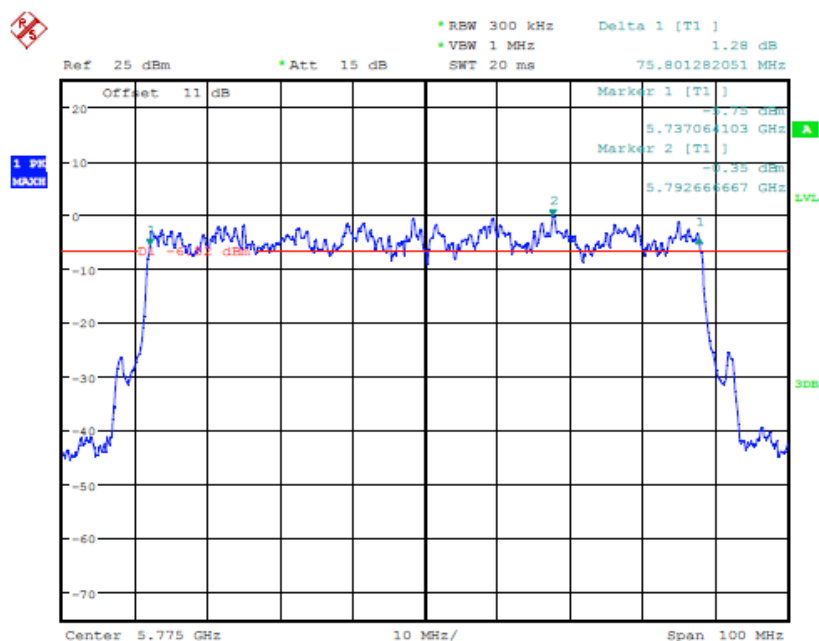


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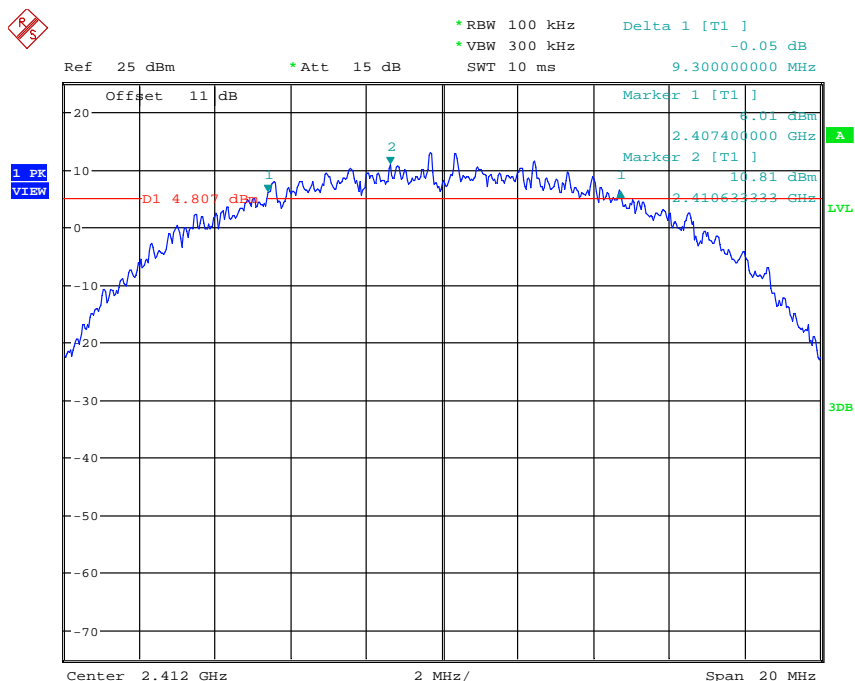
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Mode D

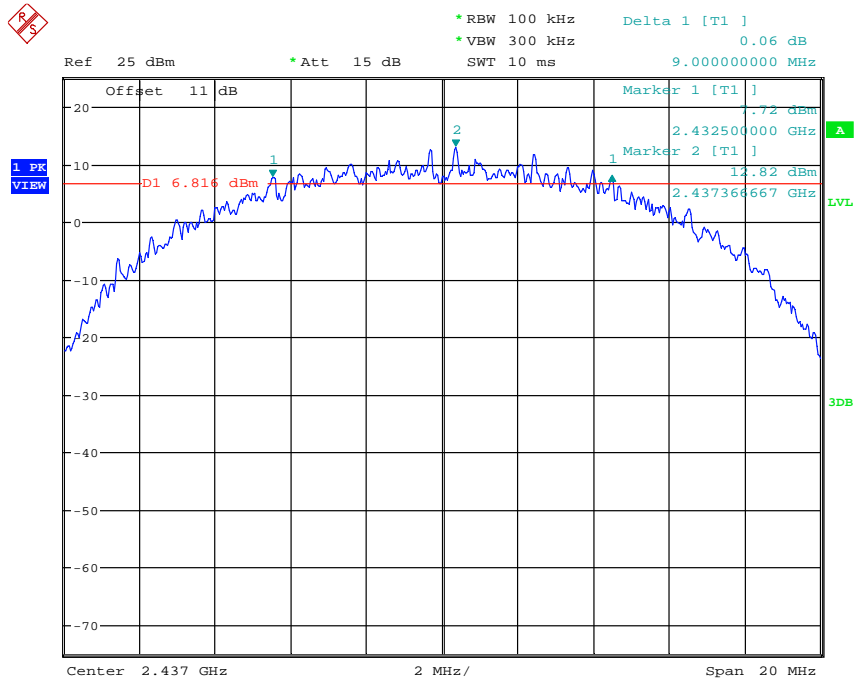


Mode E



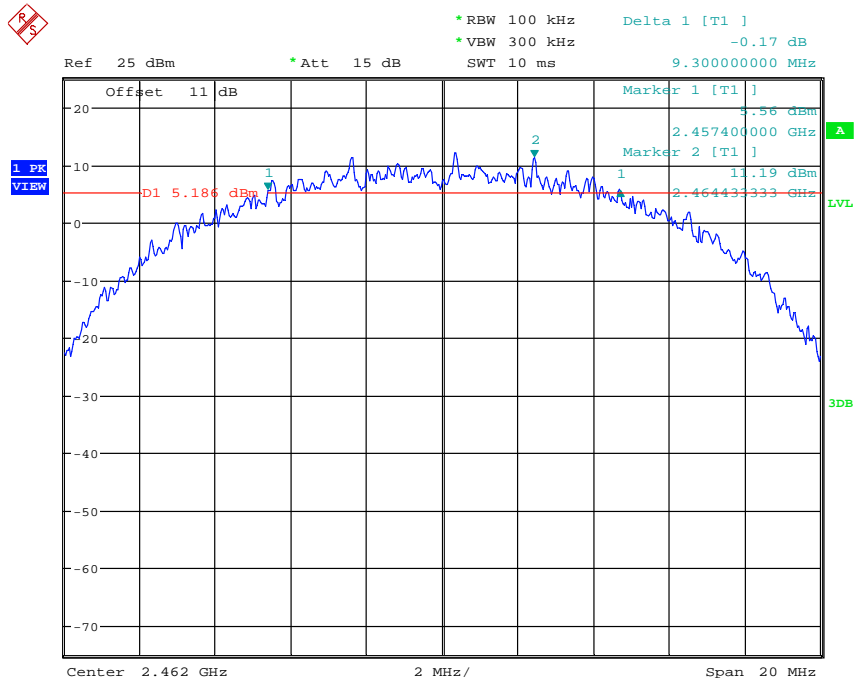


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11B CH06

Date: 2.OCT.2013 17:44:11



6DB BANDWIDTH 802.11B CH11

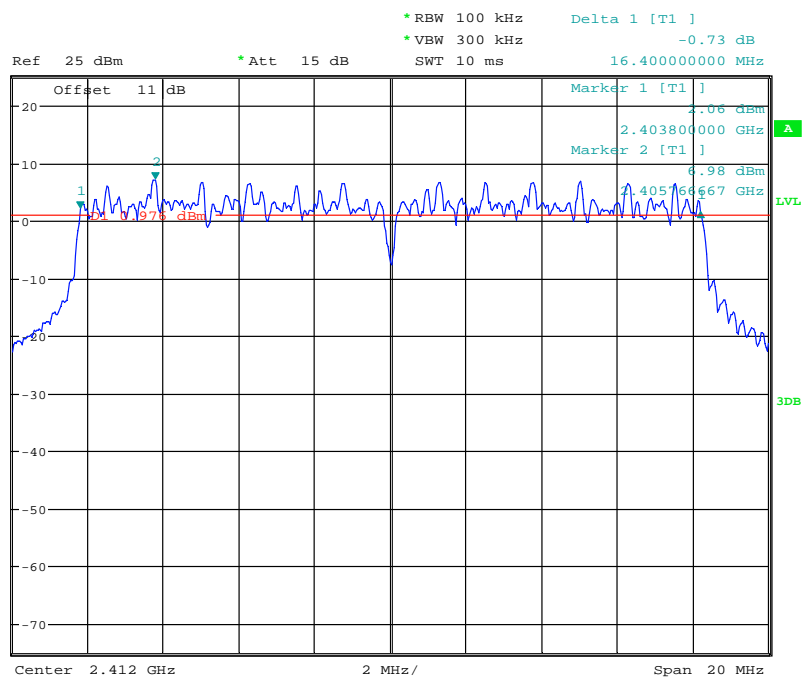
Date: 2.OCT.2013 17:45:23



Registration number: W6D21310-13579-C-1

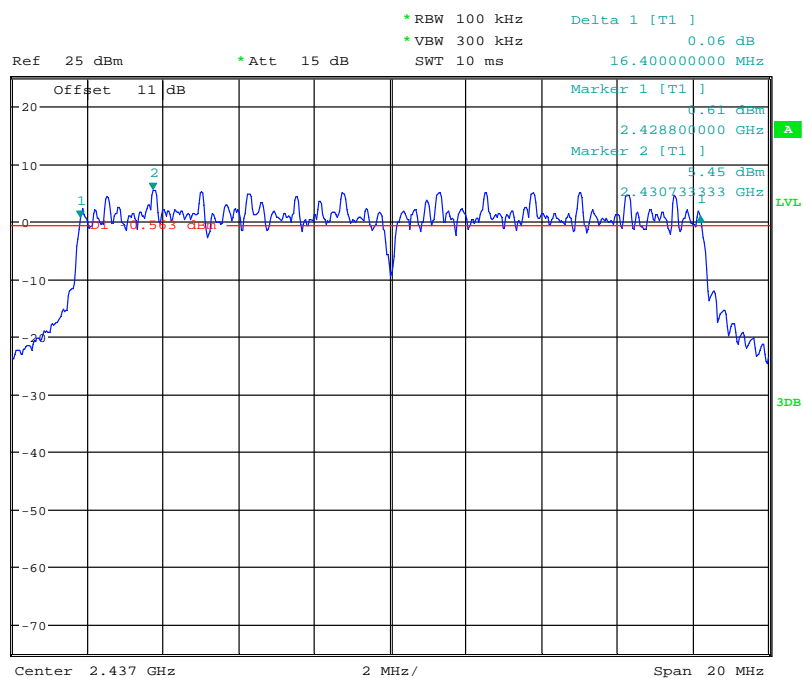
FCC ID: ZTT-APA20

Mode F



6DB BANDWIDTH 802.11G CH01

Date: 2.OCT.2013 17:46:14

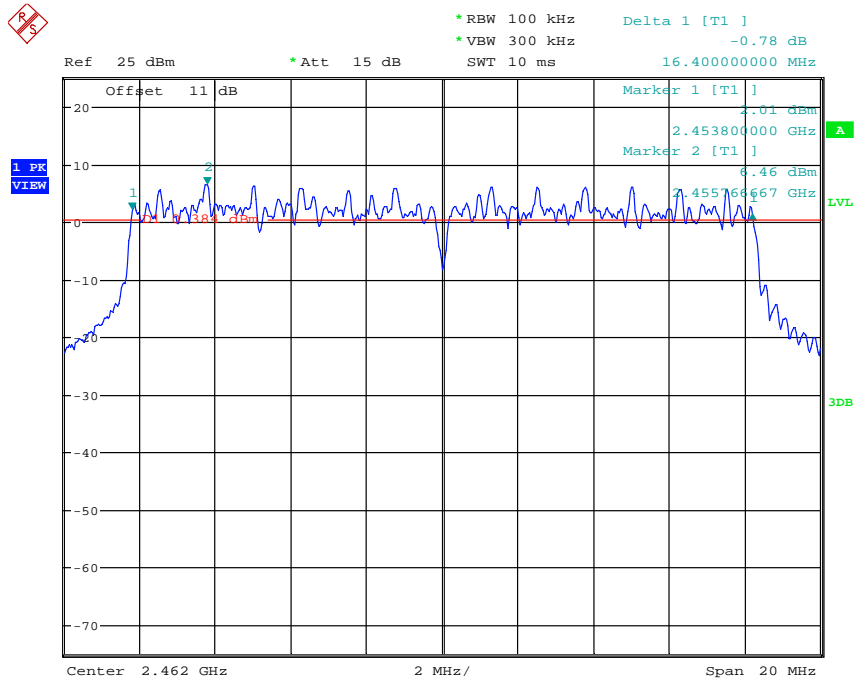


6DB BANDWIDTH 802.11G CH06

Date: 2.OCT.2013 17:47:05

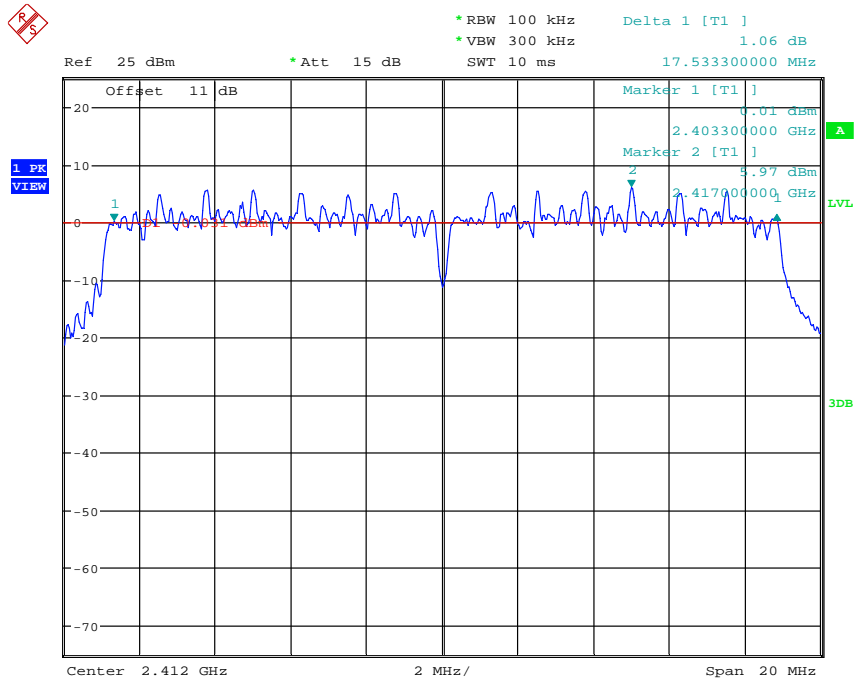


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

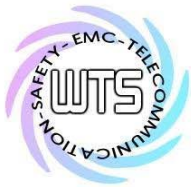


6DB BANDWIDTH 802.11G CH11
Date: 2.OCT.2013 17:47:47

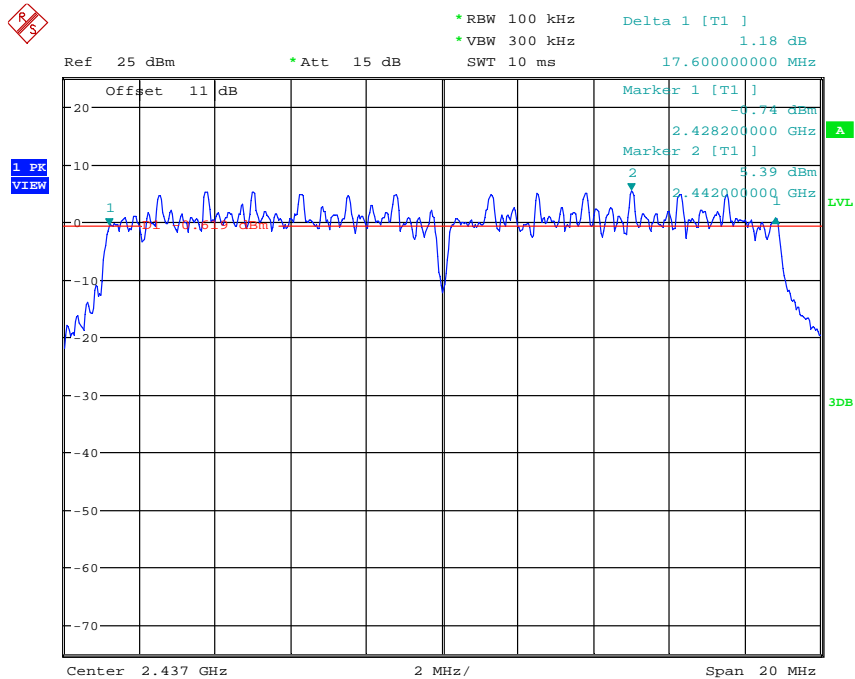
Mode G



6DB BANDWIDTH 802.11N 20MHZ CH01
Date: 2.OCT.2013 17:48:45

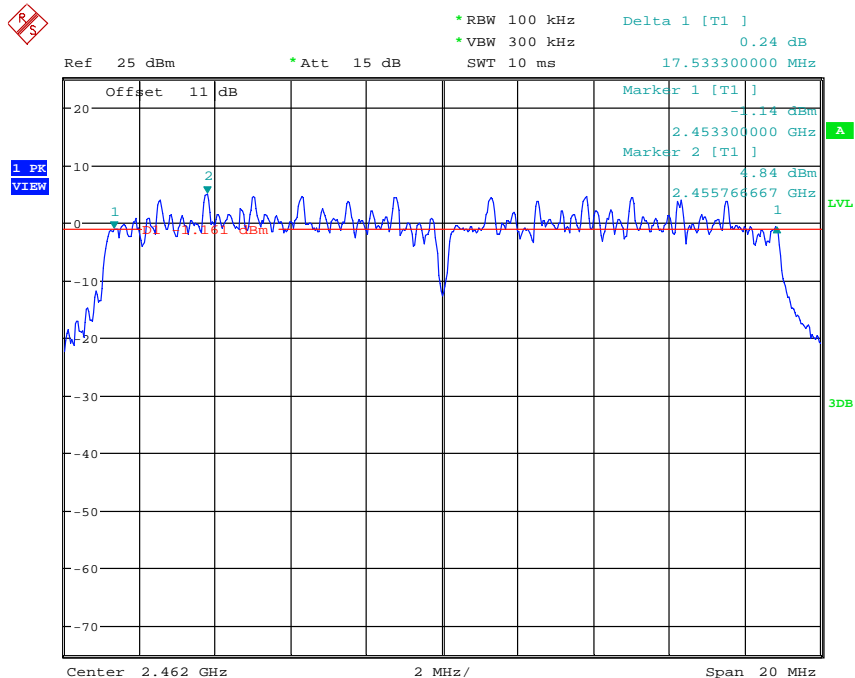


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 20MHZ CH06

Date: 2.OCT.2013 17:49:31



6DB BANDWIDTH 802.11N 20MHZ CH11

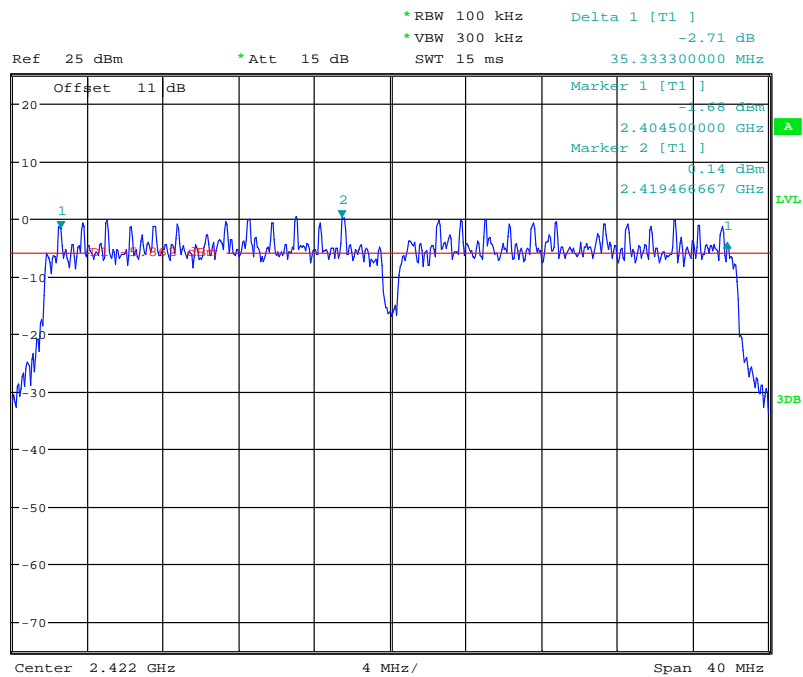
Date: 2.OCT.2013 17:50:27



Registration number: W6D21310-13579-C-1

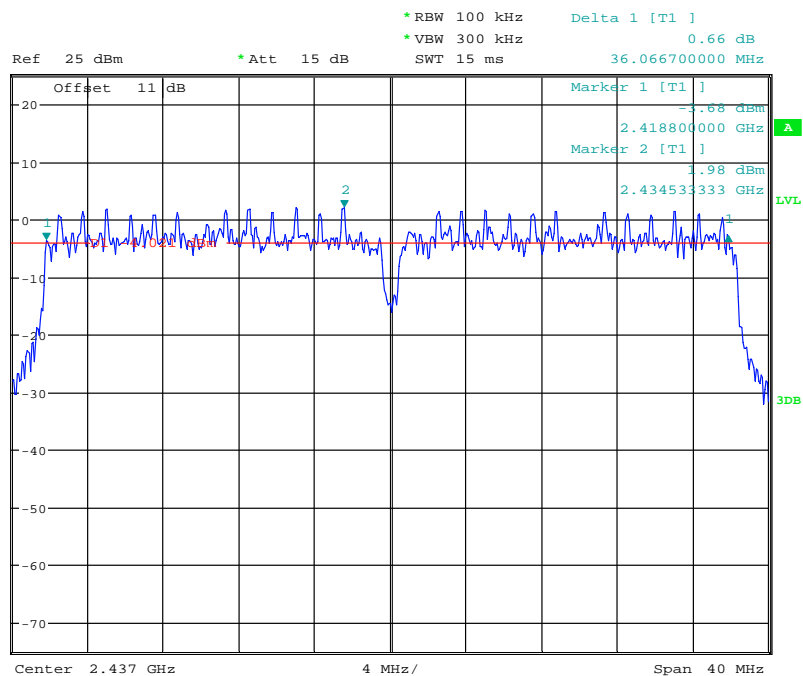
FCC ID: ZTT-APA20

Mode H



6DB BANDWIDTH 802.11N 40MHZ CH01

Date: 2.OCT.2013 17:51:23



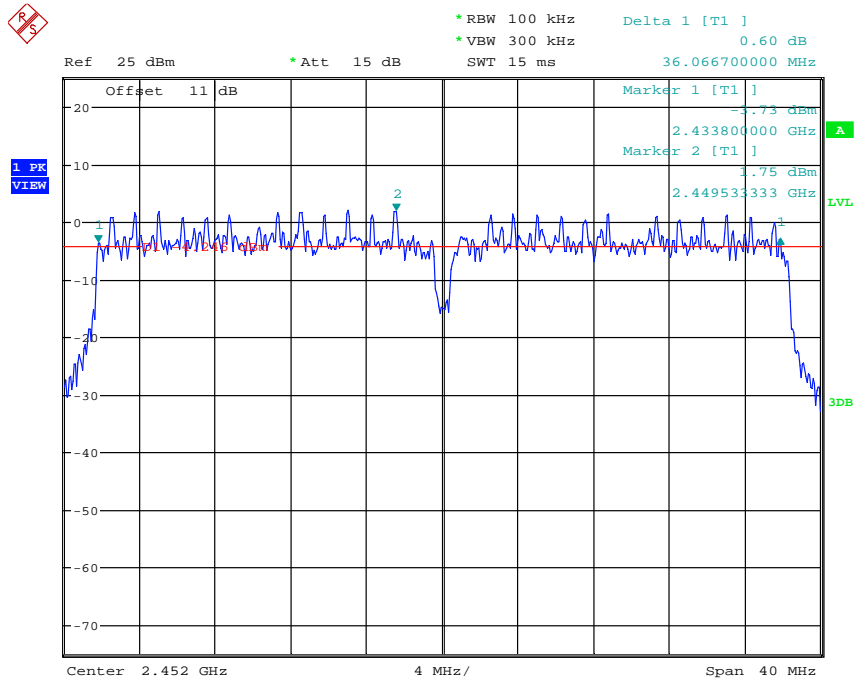
6DB BANDWIDTH 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:52:36



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



6DB BANDWIDTH 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:53:15

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, ETSTW-RE 050



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

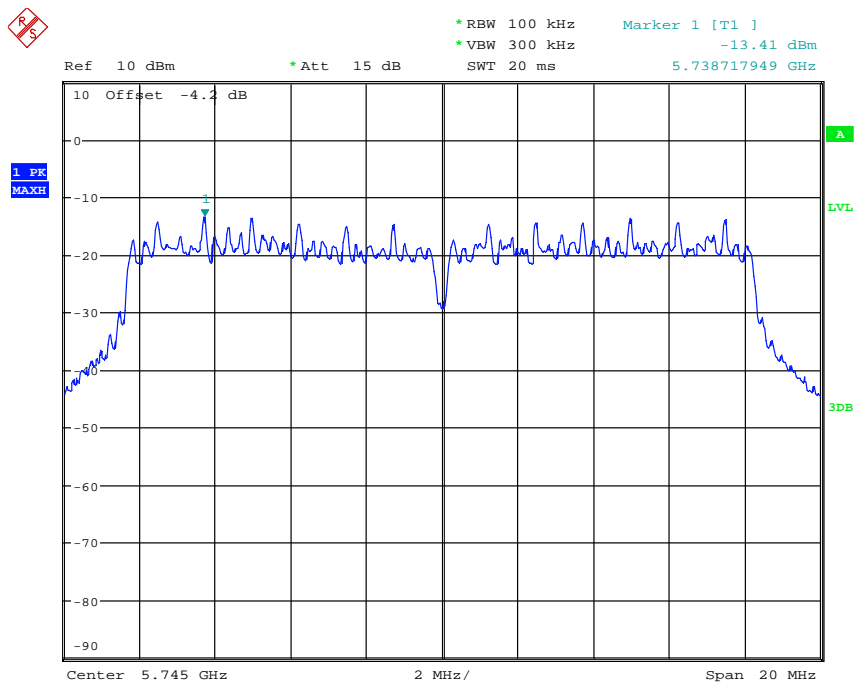
3.8 Peak Power Spectral Density

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

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

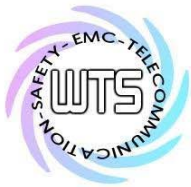
Antenna A

Mode A

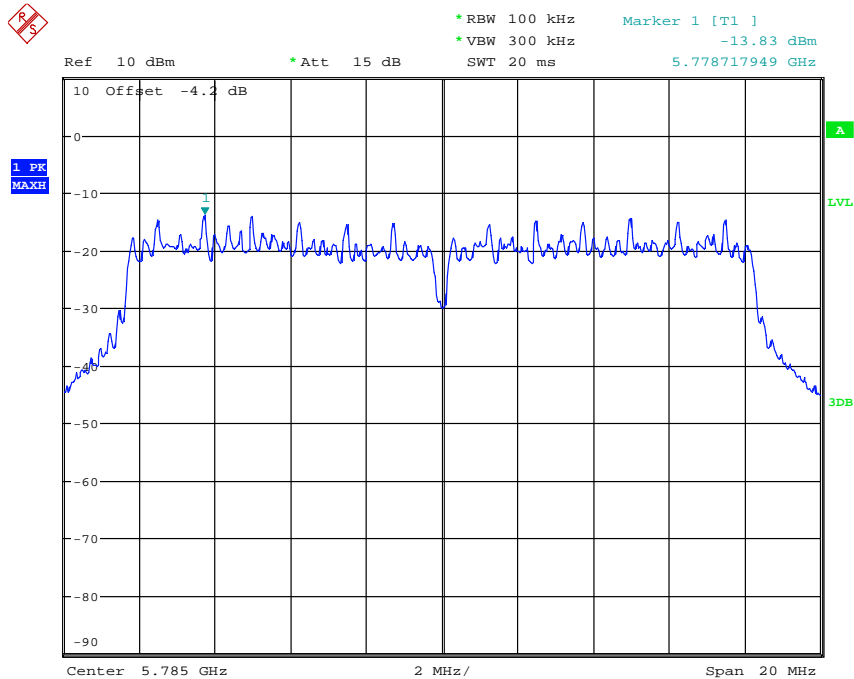


POWER DENSITY 802.11A CH149

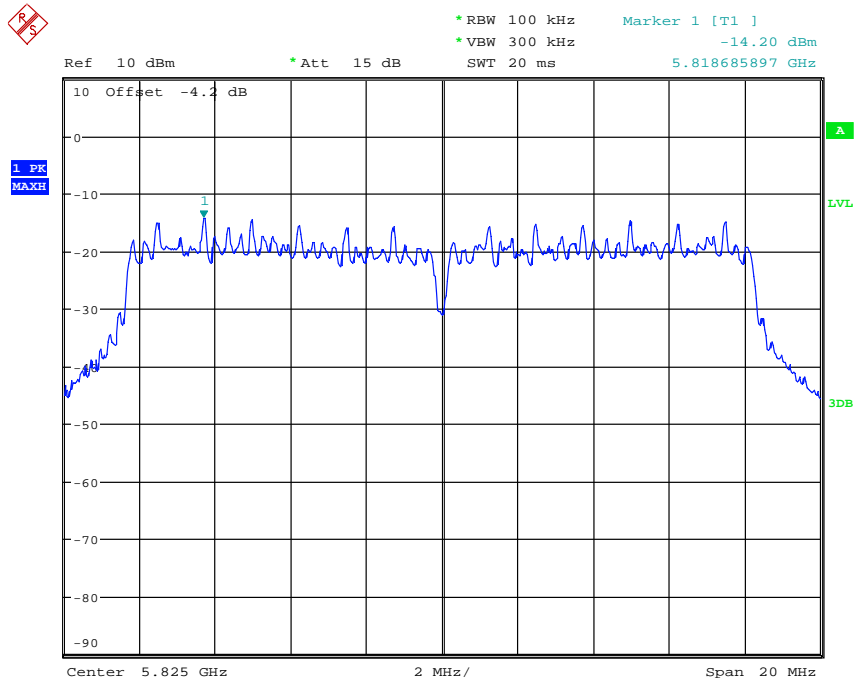
Date: 2.OCT.2013 18:12:12



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



POWER DENSITY 802.11A CH157
Date: 2.OCT.2013 18:13:37



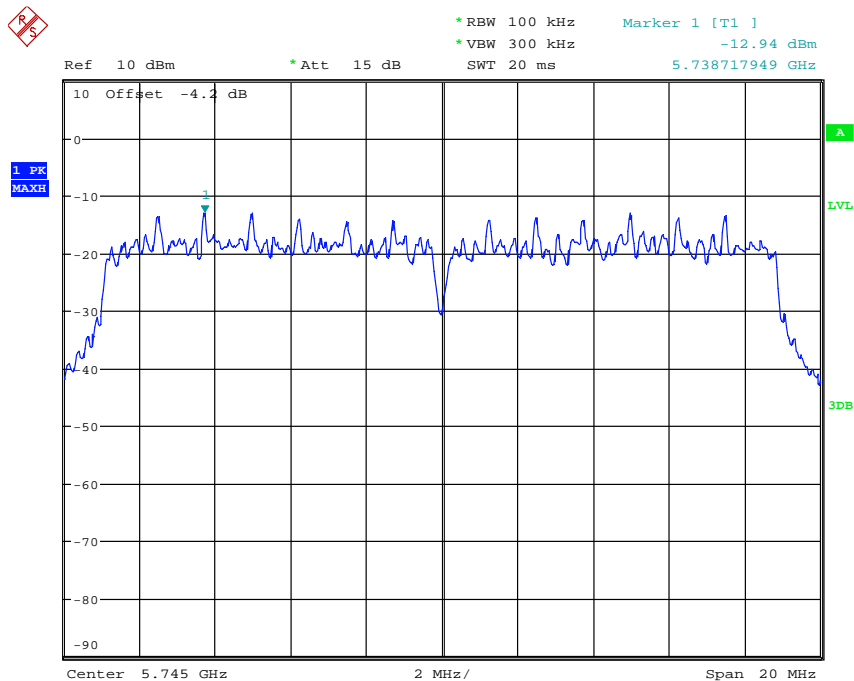
POWER DENSITY 802.11A CH165
Date: 2.OCT.2013 18:15:33



Registration number: W6D21310-13579-C-1

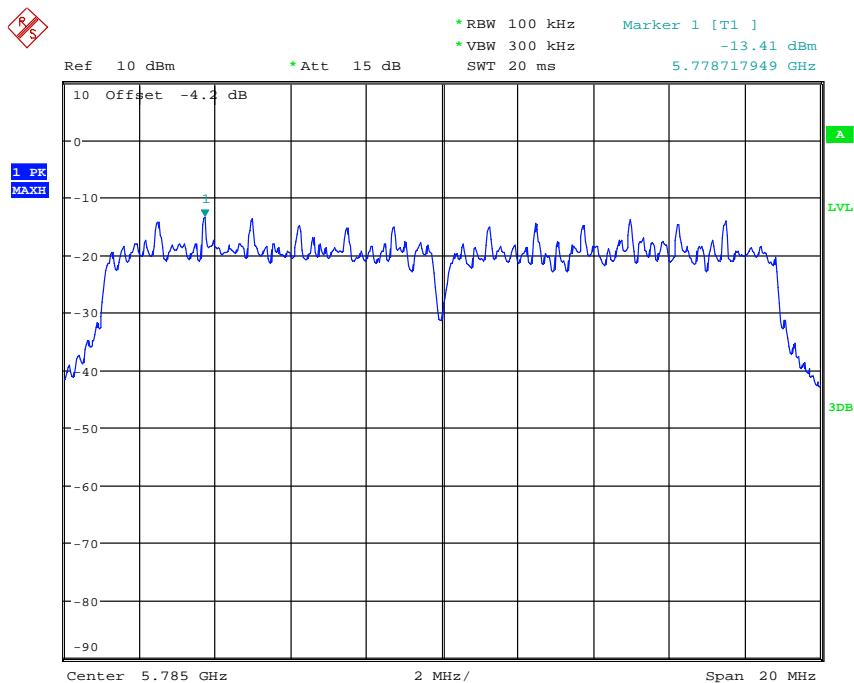
FCC ID: ZTT-APA20

Mode B



POWER DENSITY 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:36:59



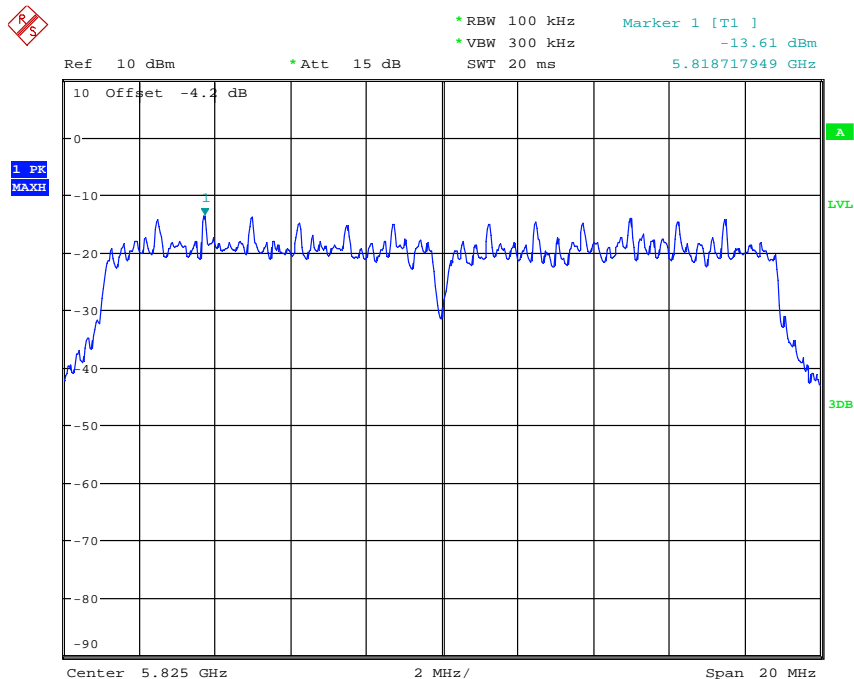
POWER DENSITY 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:37:43



Registration number: W6D21310-13579-C-1

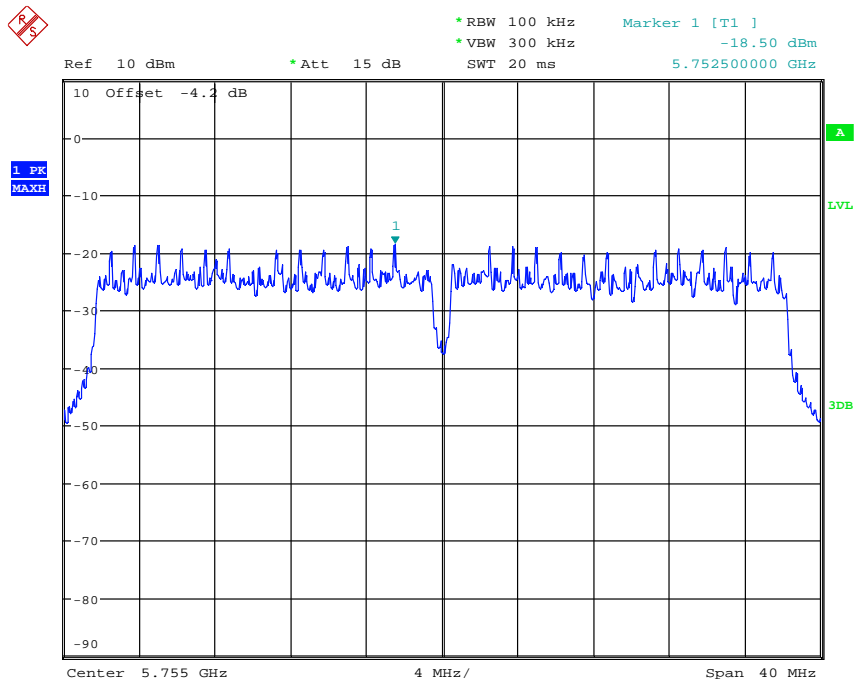
FCC ID: ZTT-APA20



POWER DENSITY 802.11N 20MHZ CH165

Date: 2.OCT.2013 18:38:39

Mode C



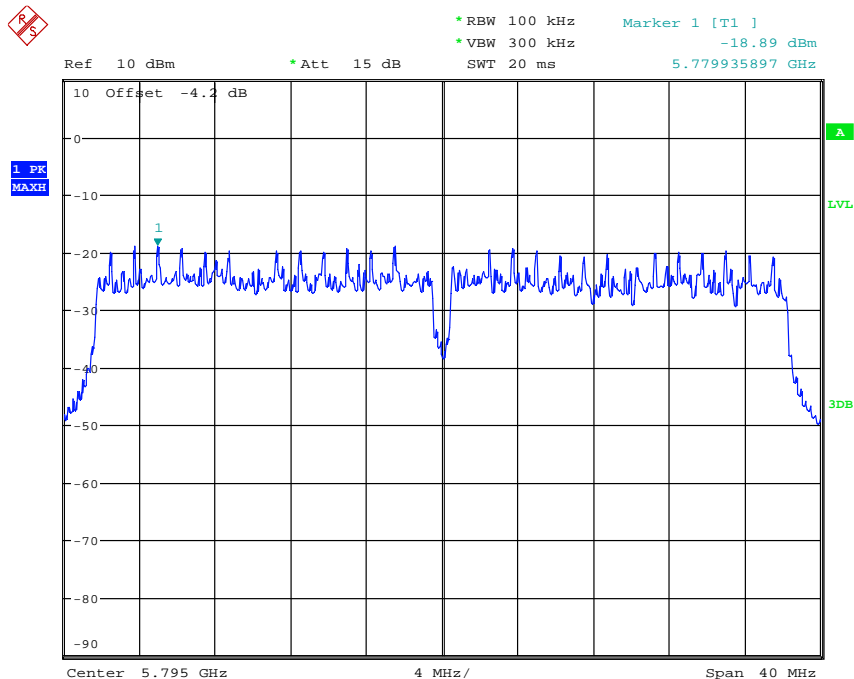
POWER DENSITY 802.11N 40MHZ CH151

Date: 2.OCT.2013 18:42:02



Registration number: W6D21310-13579-C-1

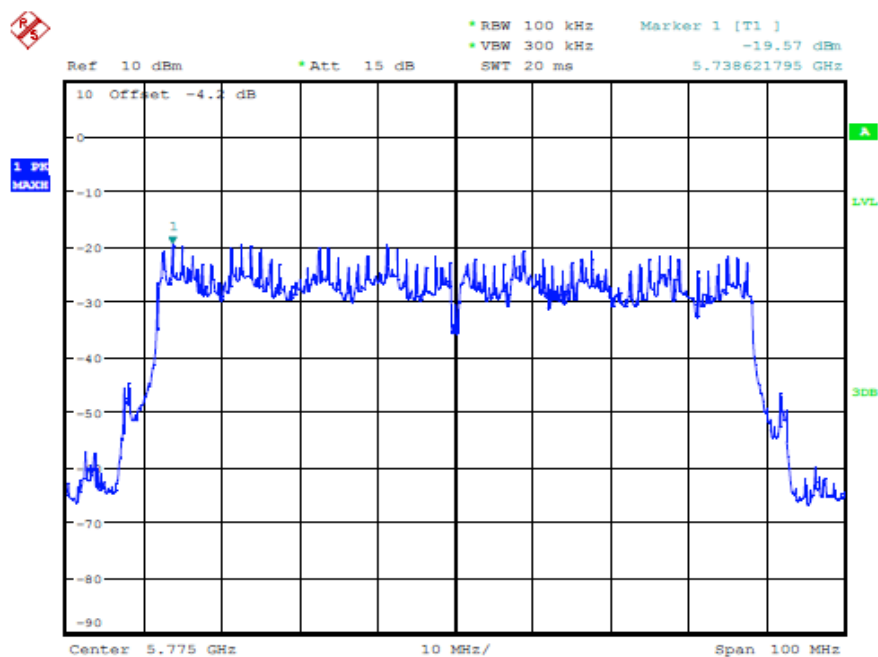
FCC ID: ZTT-APA20



POWER DENSITY 802.11N 40MHZ CH159

Date: 2.OCT.2013 18:42:55

Mode D



POWER DENSITY 802.11AC 80MHZ CH155

Date: 2.OCT.2013 19:09:07

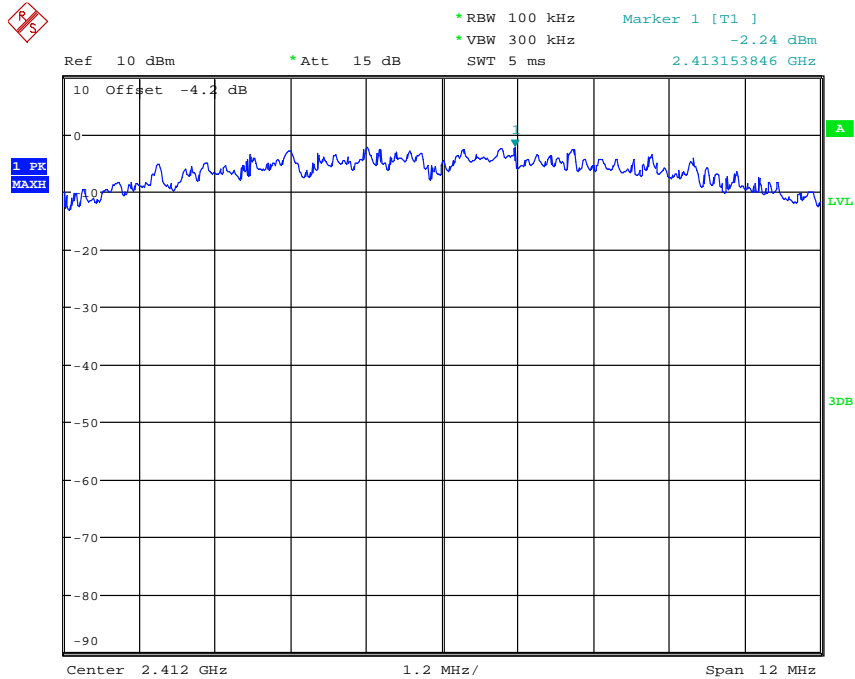


Worldwide Testing Services(Taiwan) Co., Ltd.

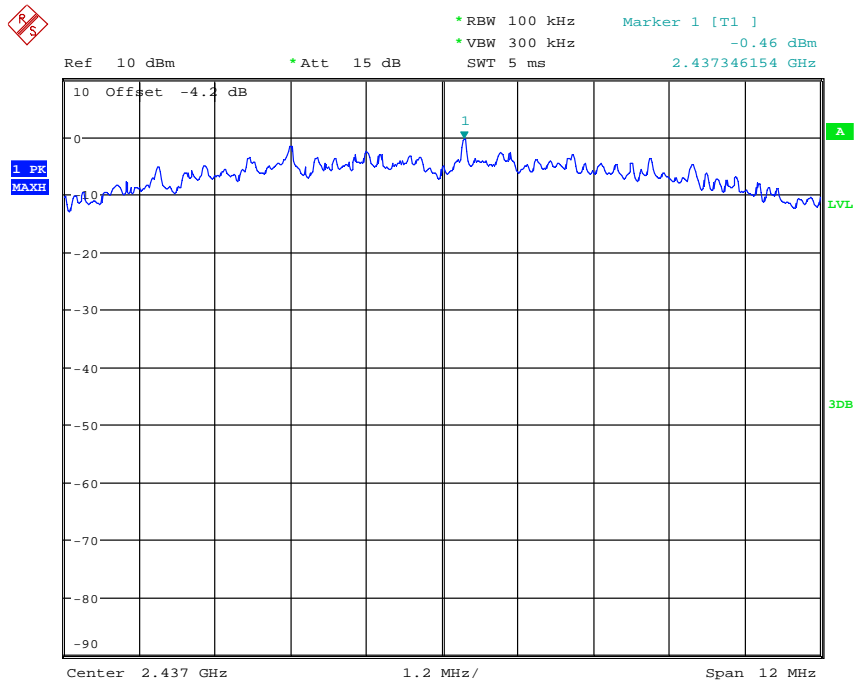
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

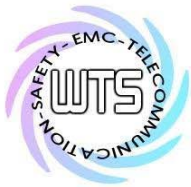
Mode E



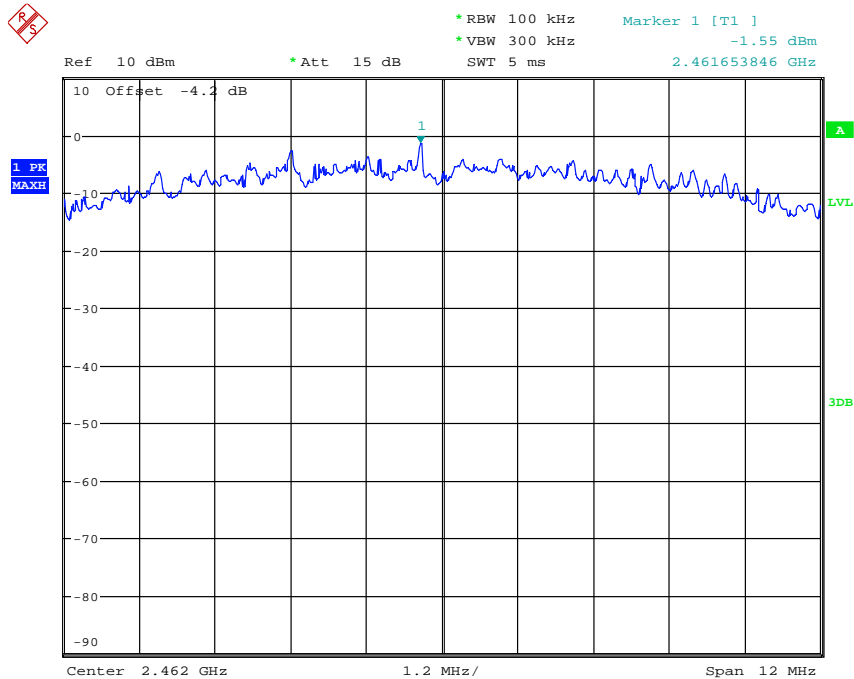
POWER DENSITY 802.11B CH01
Date: 2.OCT.2013 17:16:52



POWER DENSITY 802.11B CH06
Date: 2.OCT.2013 17:18:47

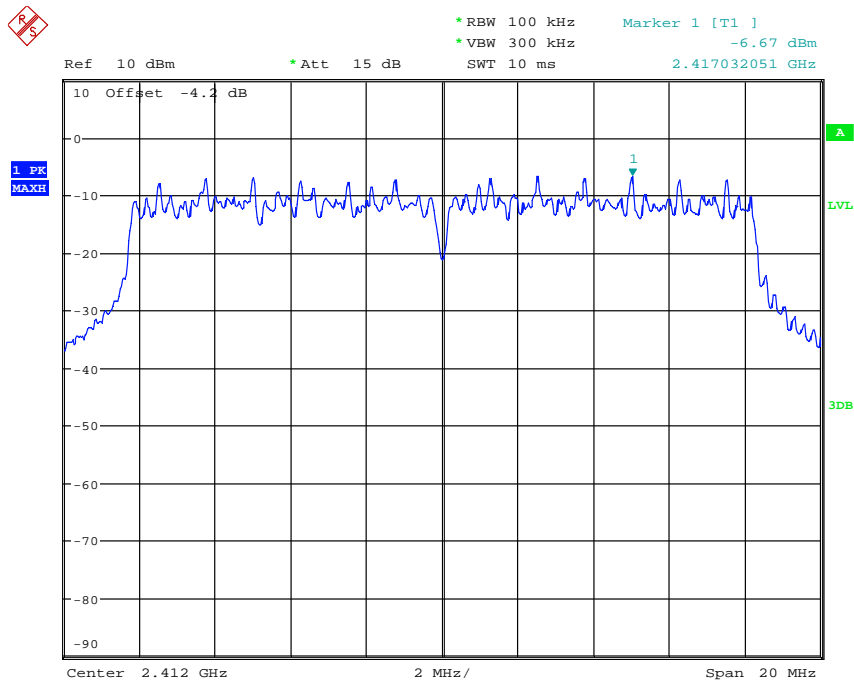


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



POWER DENSITY 802.11B CH11
Date: 2.OCT.2013 17:20:18

Mode F

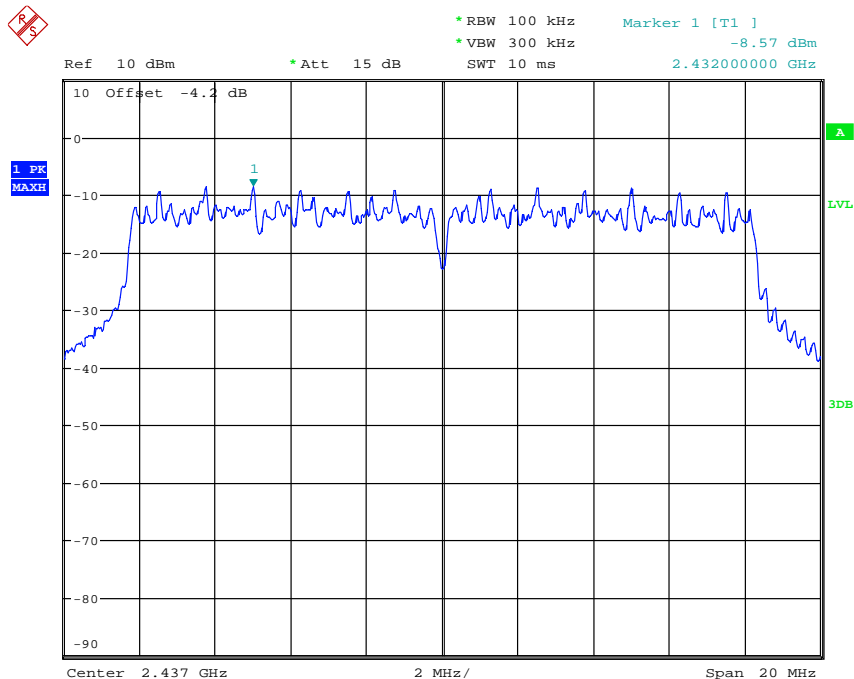


POWER DENSITY 802.11G CH01
Date: 2.OCT.2013 17:21:16



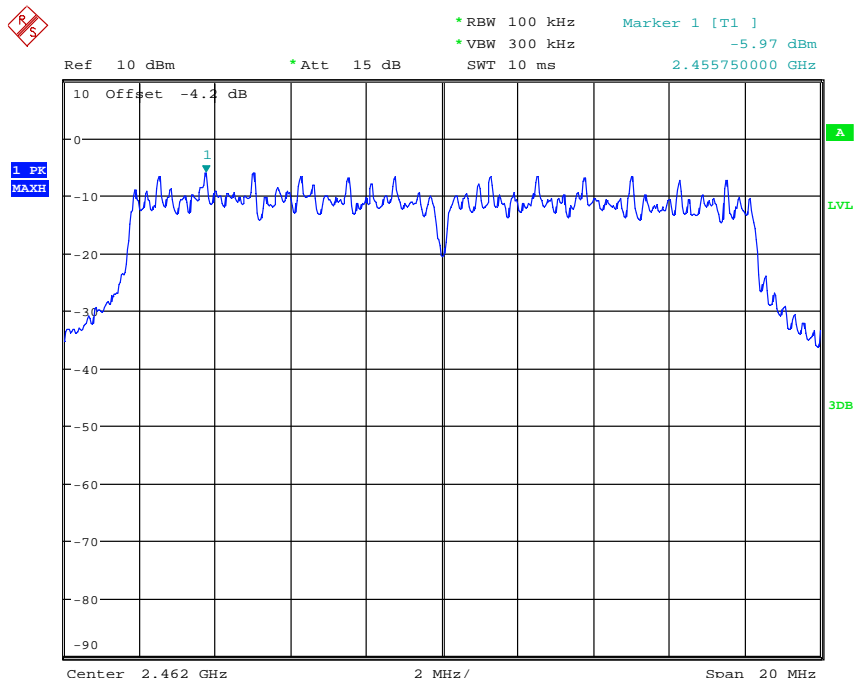
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



POWER DENSITY 802.11G CH06

Date: 2.OCT.2013 17:22:03



POWER DENSITY 802.11G CH11

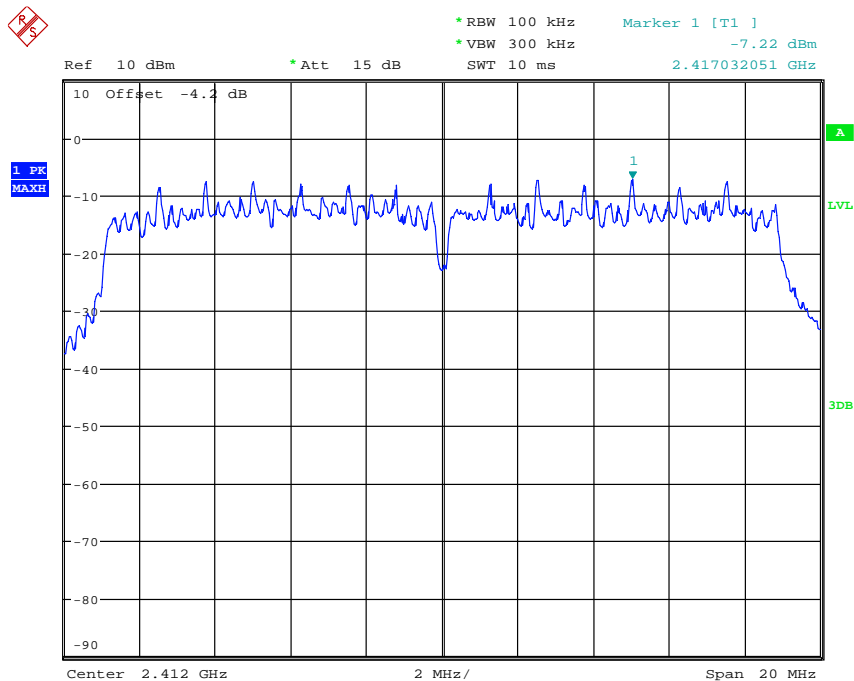
Date: 2.OCT.2013 17:22:45



Registration number: W6D21310-13579-C-1

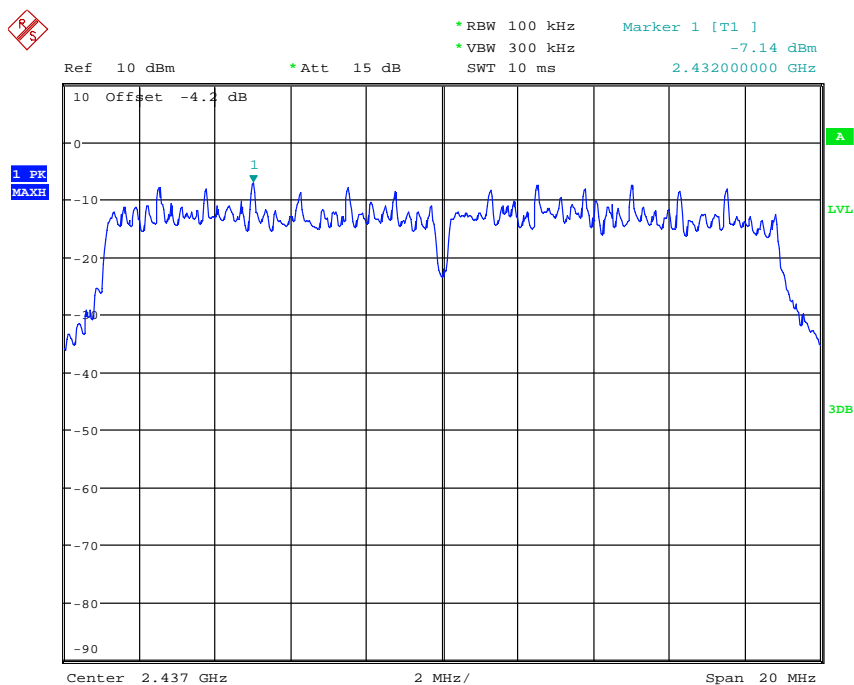
FCC ID: ZTT-APA20

Mode G



POWER DENSITY 802.11N 20MHZ CH01

Date: 2.OCT.2013 17:32:08

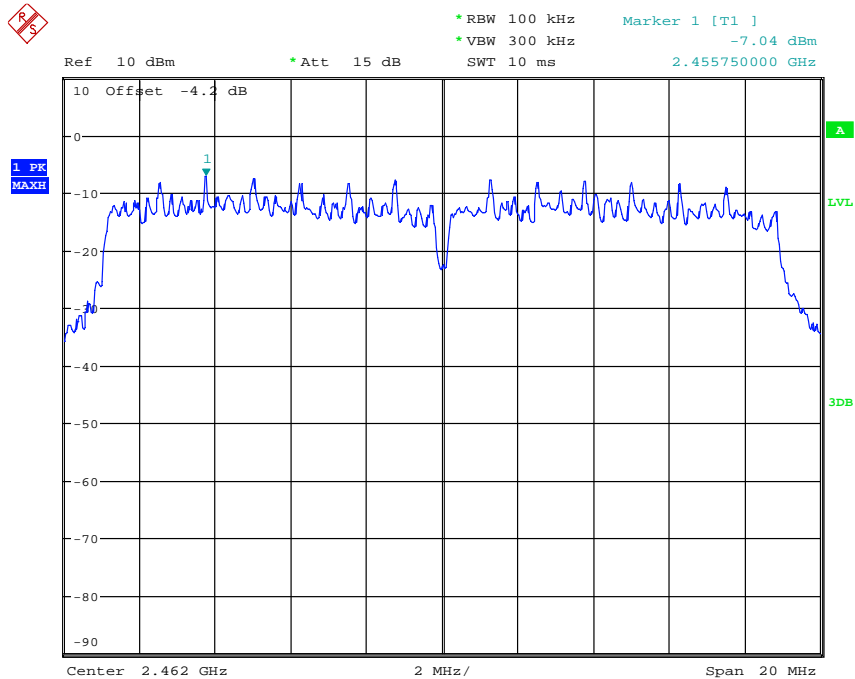


POWER DENSITY 802.11N 20MHZ CH06

Date: 2.OCT.2013 17:33:29

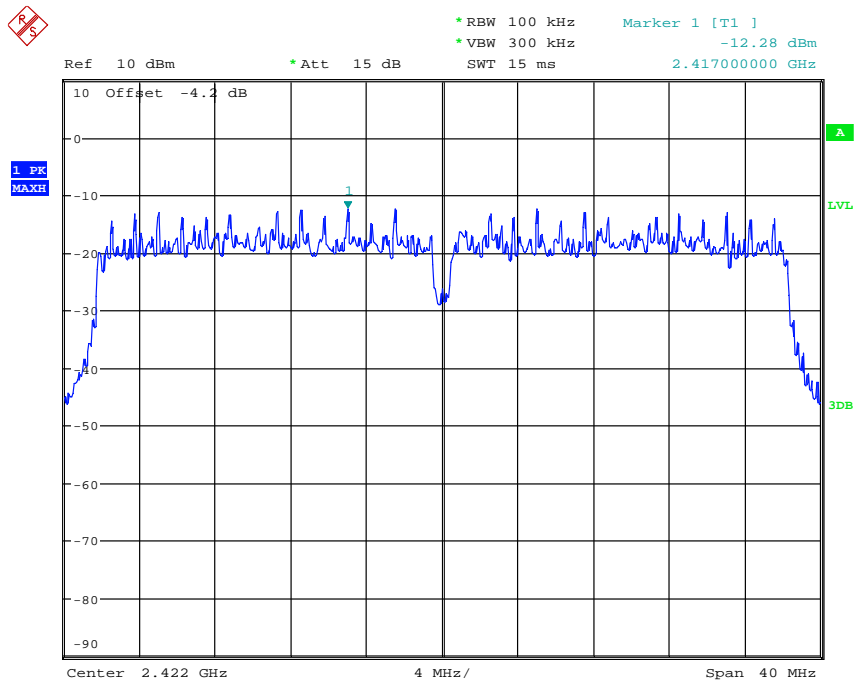


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



POWER DENSITY 802.11N 20MHZ CH11
Date: 2.OCT.2013 17:34:28

Mode H

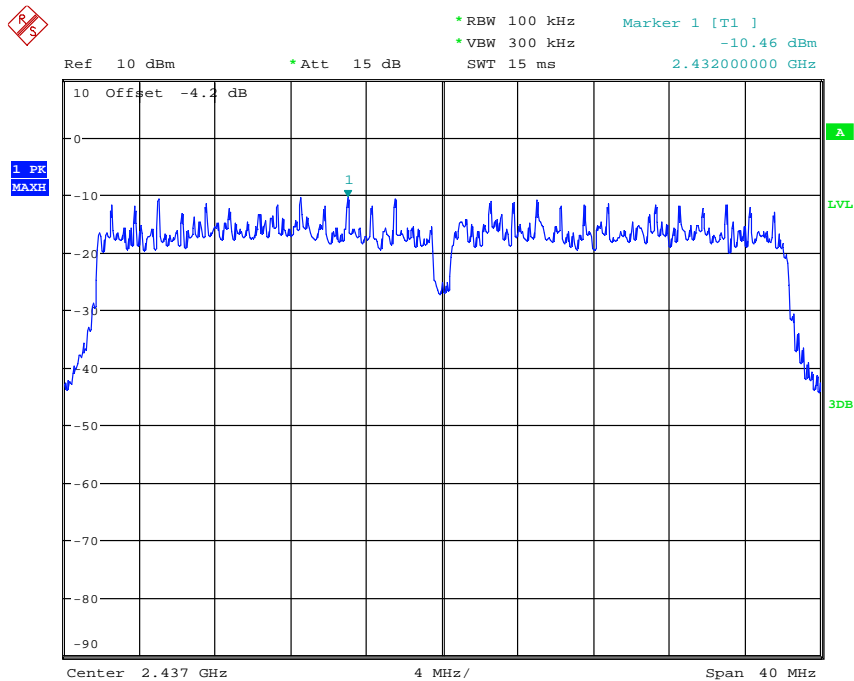


POWER DENSITY 802.11N 40MHZ CH01
Date: 2.OCT.2013 17:35:46



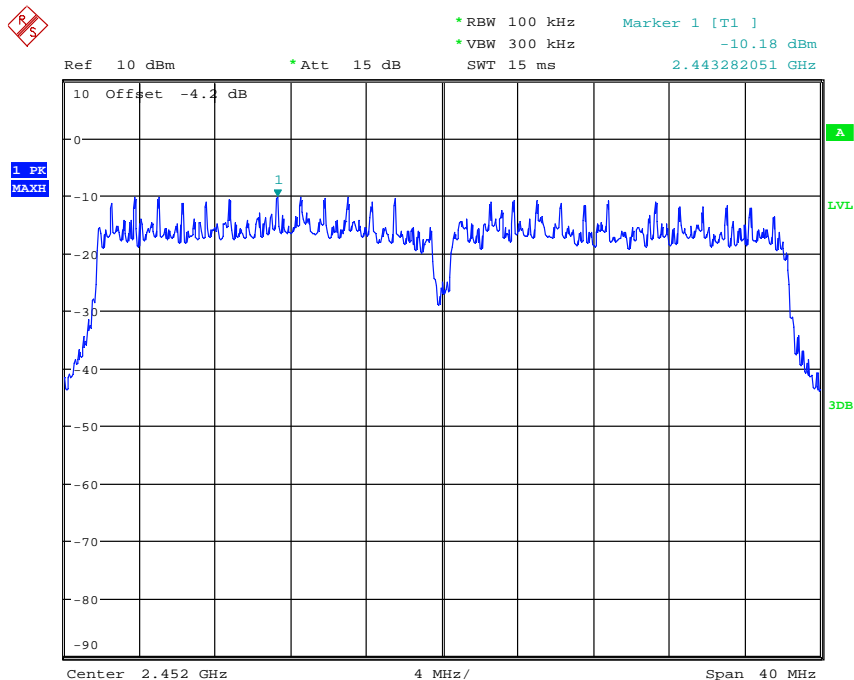
Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



POWER DENSITY 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:38:10



POWER DENSITY 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:39:15



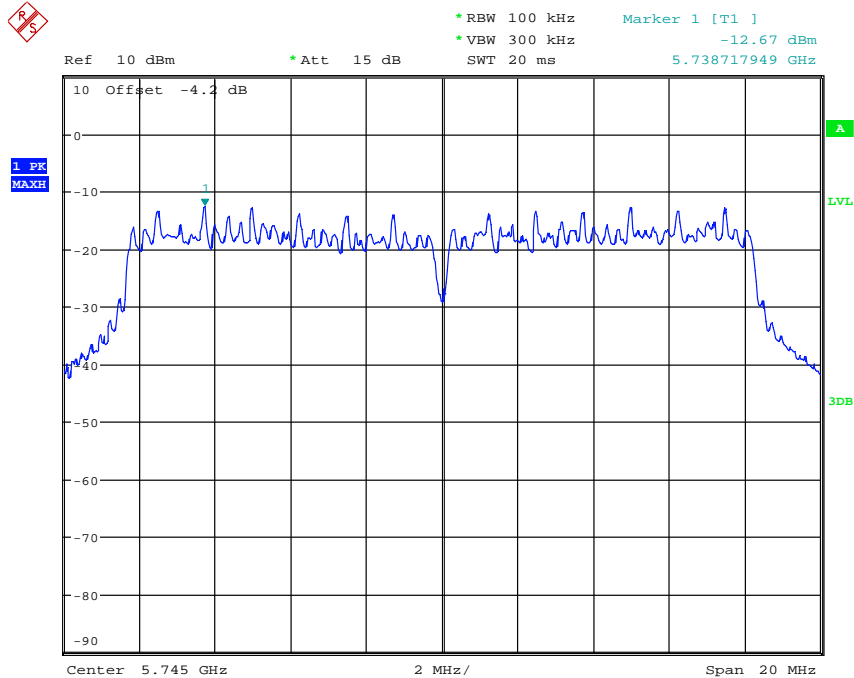
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

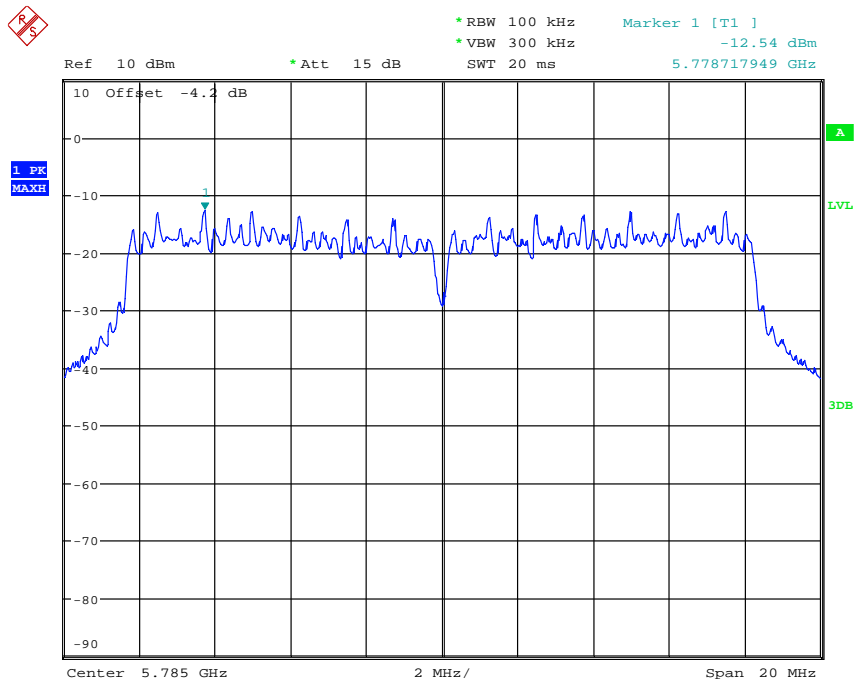
Antenna B

Mode A



POWER DENSITY 802.11A CH149

Date: 2.OCT.2013 18:48:40



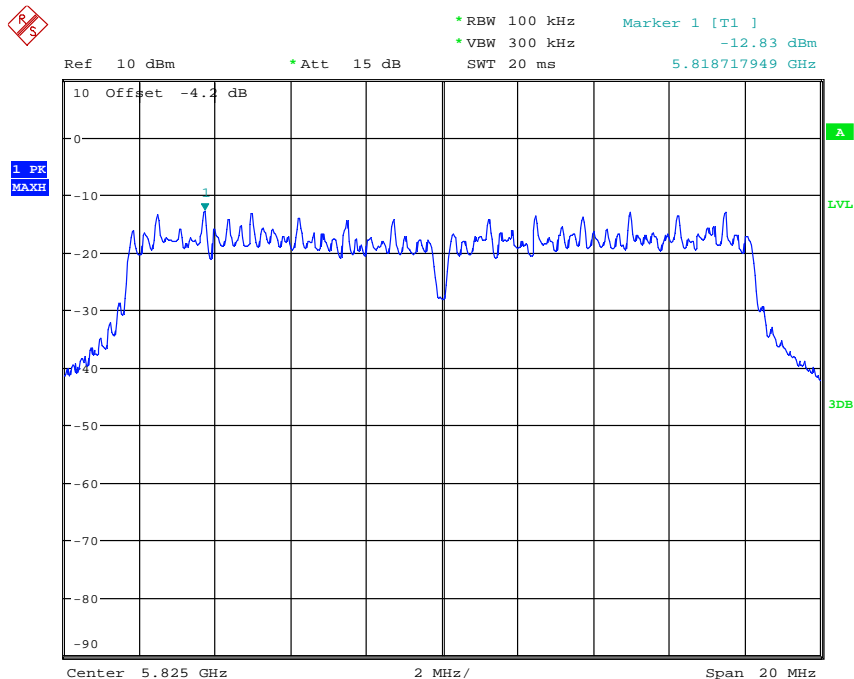
POWER DENSITY 802.11A CH157

Date: 2.OCT.2013 18:49:30



Registration number: W6D21310-13579-C-1

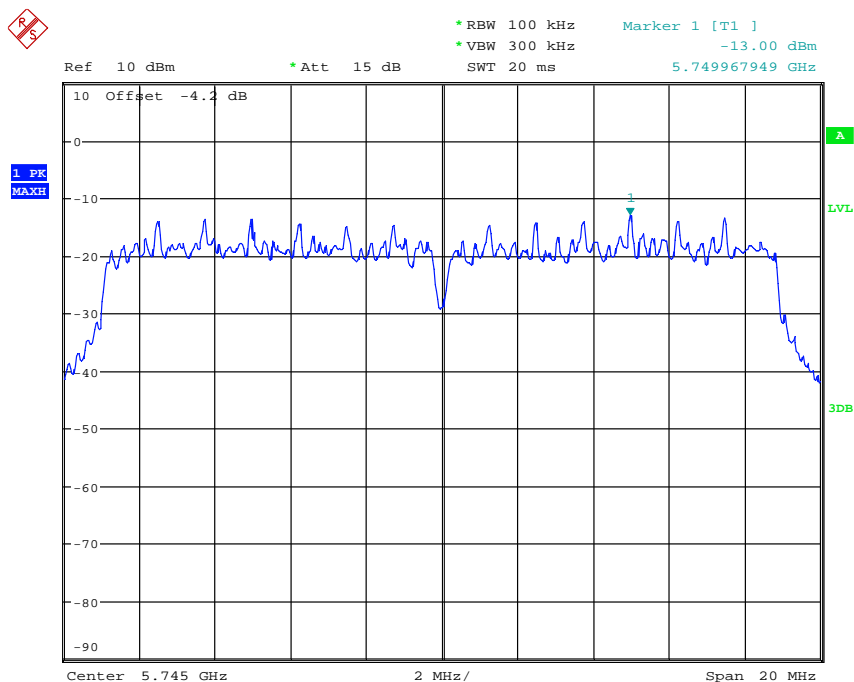
FCC ID: ZTT-APA20



POWER DENSITY 802.11A CH165

Date: 2.OCT.2013 18:50:08

Mode B



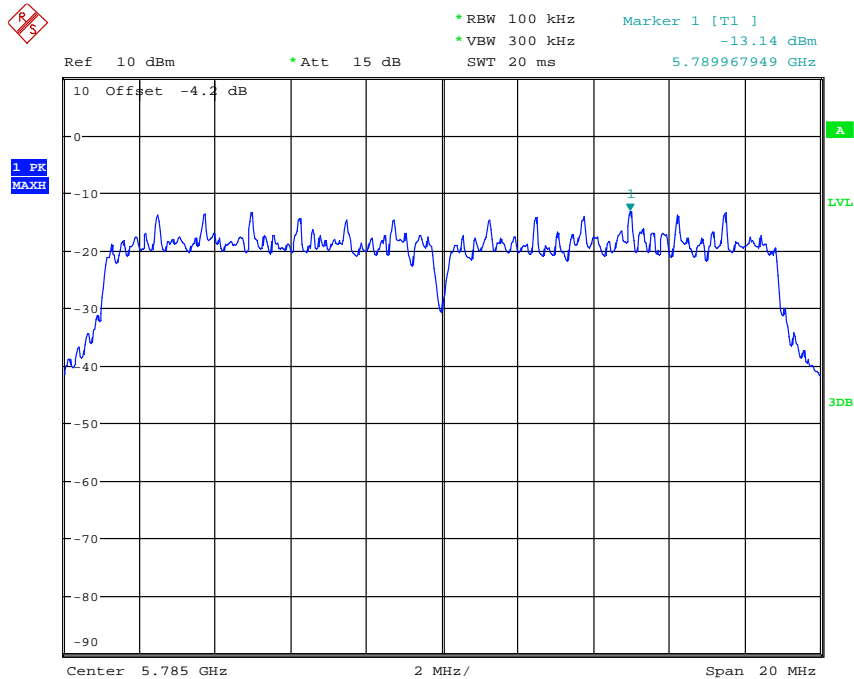
POWER DENSITY 802.11N 20MHZ CH149

Date: 2.OCT.2013 18:51:13



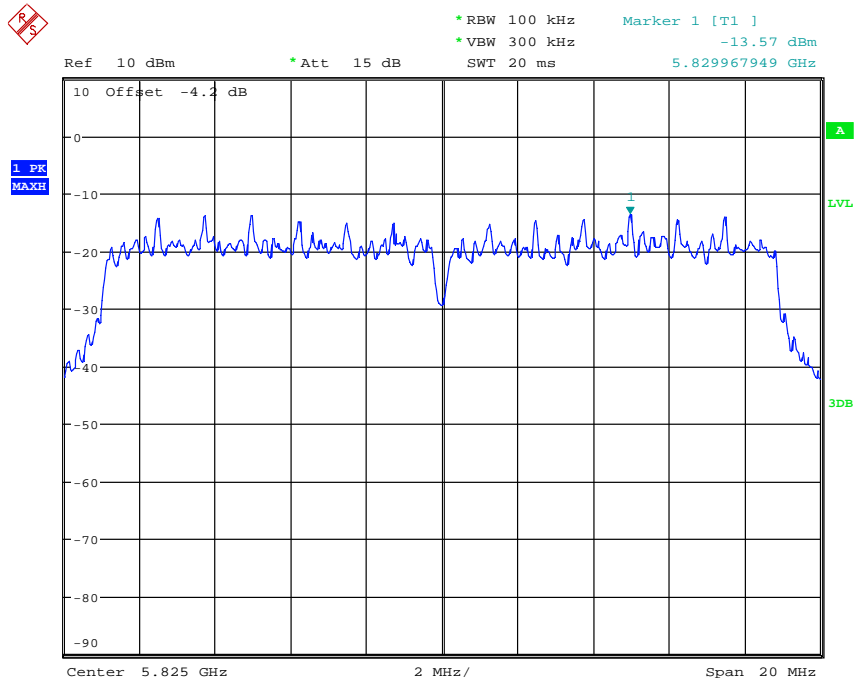
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



POWER DENSITY 802.11N 20MHZ CH157

Date: 2.OCT.2013 18:51:56



POWER DENSITY 802.11N 20MHZ CH165

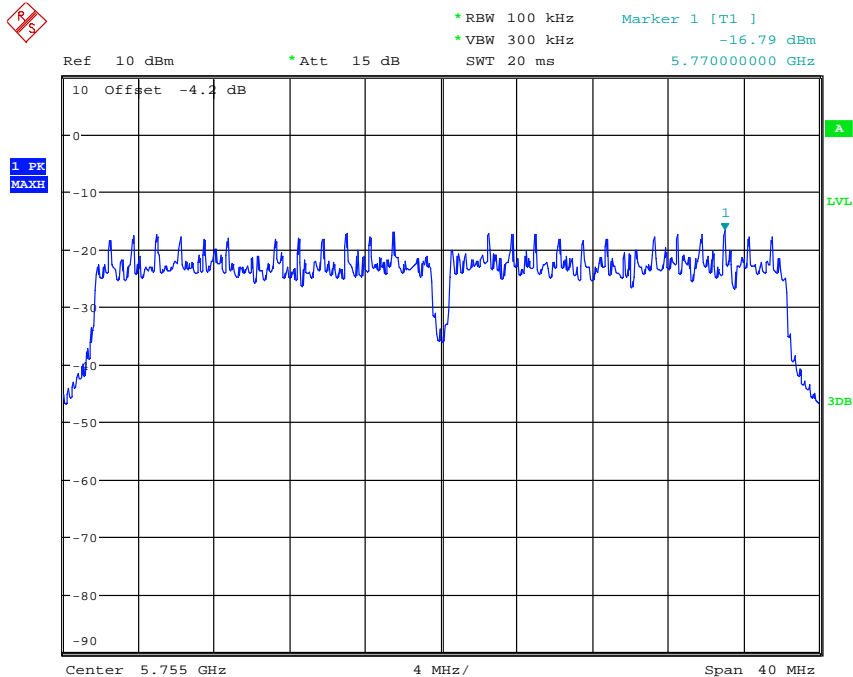
Date: 2.OCT.2013 18:52:34



Registration number: W6D21310-13579-C-1

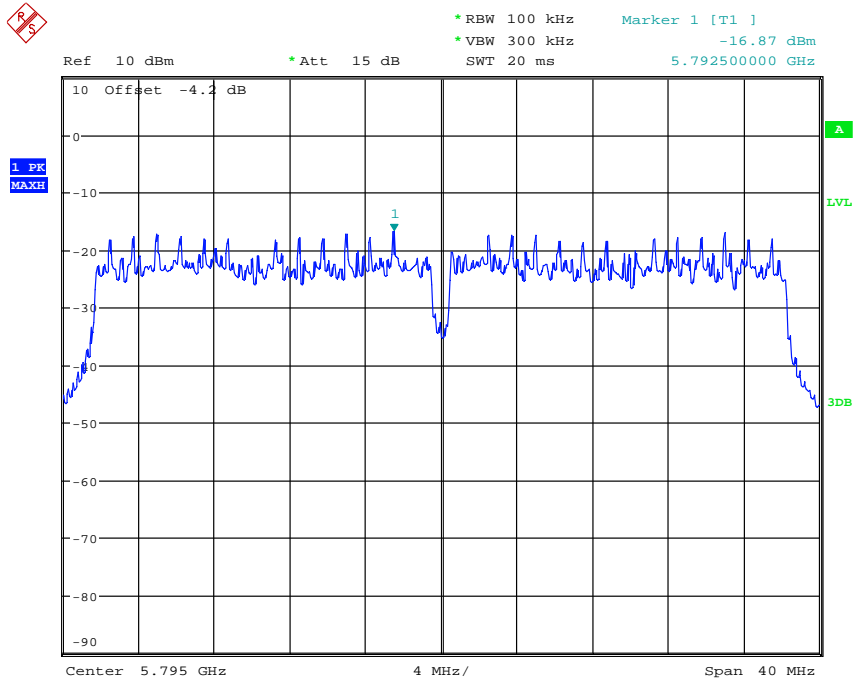
FCC ID: ZTT-APA20

Mode C



POWER DENSITY 802.11N 40MHZ CH151

Date: 2.OCT.2013 18:54:05



POWER DENSITY 802.11N 40MHZ CH159

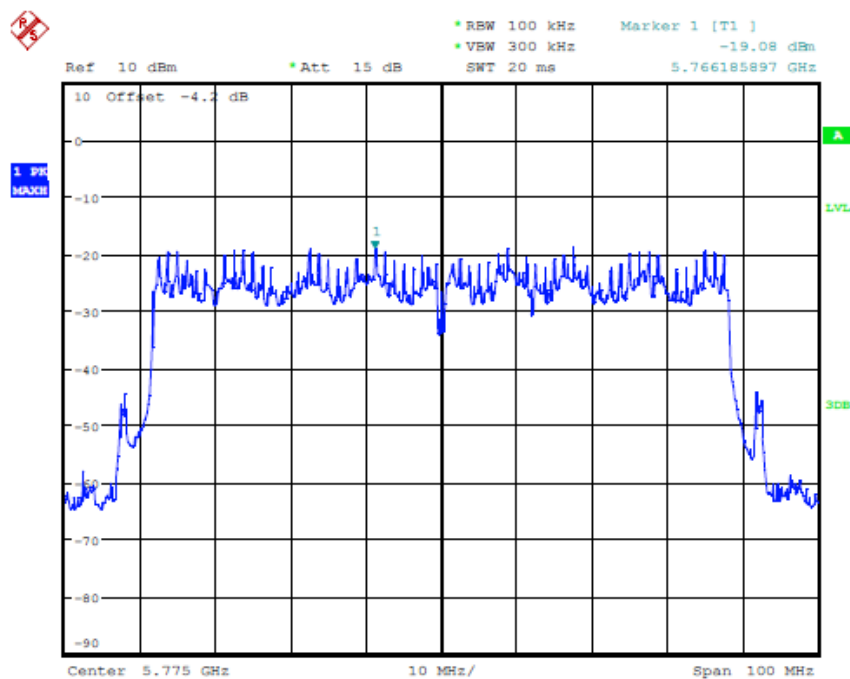
Date: 2.OCT.2013 18:54:52



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

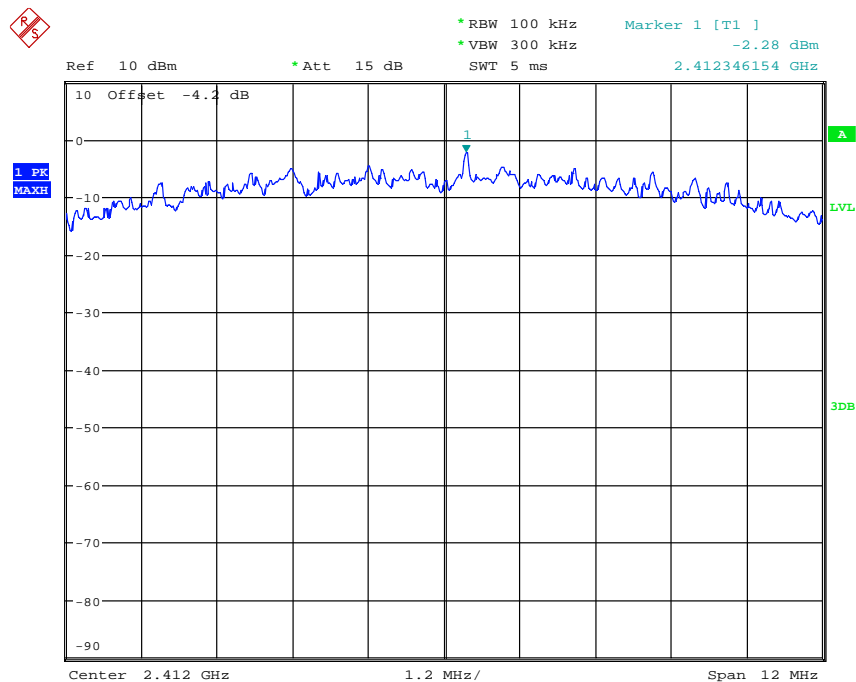
Mode D



POWER DENSITY 802.11AC 80MHZ CH155

Date: 2.OCT.2013 19:08:16

Mode E

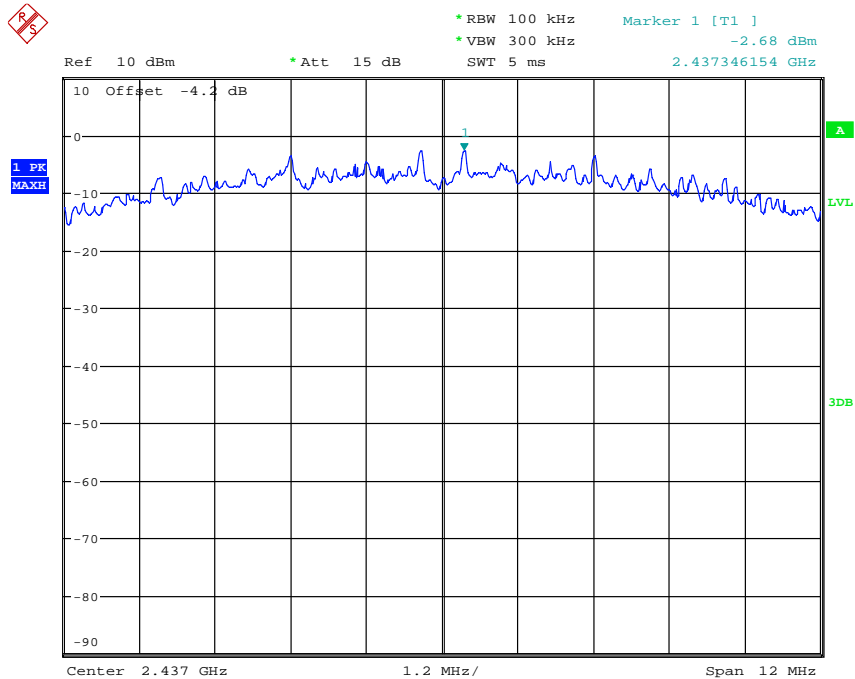


POWER DENSITY 802.11B CH01

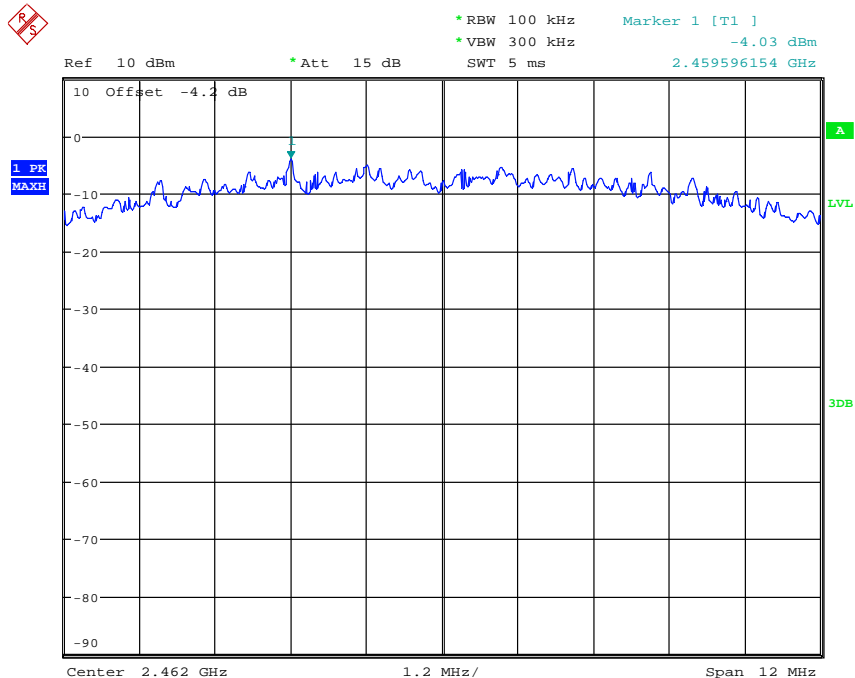
Date: 2.OCT.2013 17:43:35



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



POWER DENSITY 802.11B CH06
Date: 2.OCT.2013 17:44:18



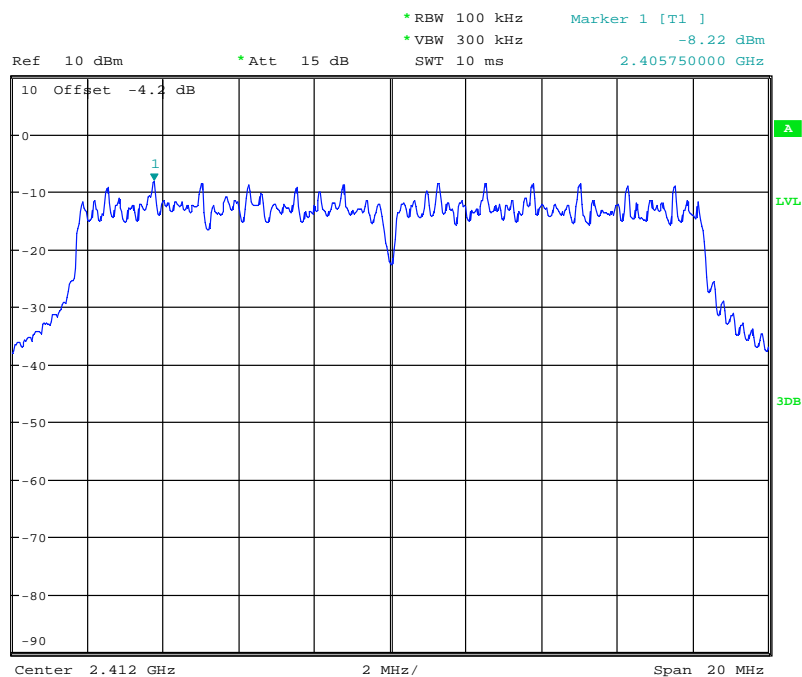
POWER DENSITY 802.11B CH11
Date: 2.OCT.2013 17:45:30



Registration number: W6D21310-13579-C-1

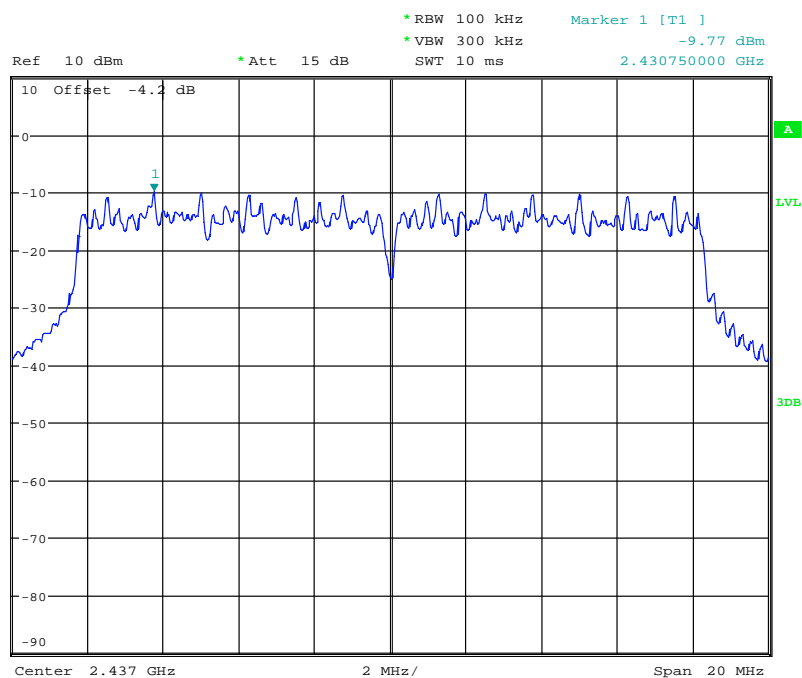
FCC ID: ZTT-APA20

Mode F



POWER DENSITY 802.11G CH01

Date: 2.OCT.2013 17:46:21



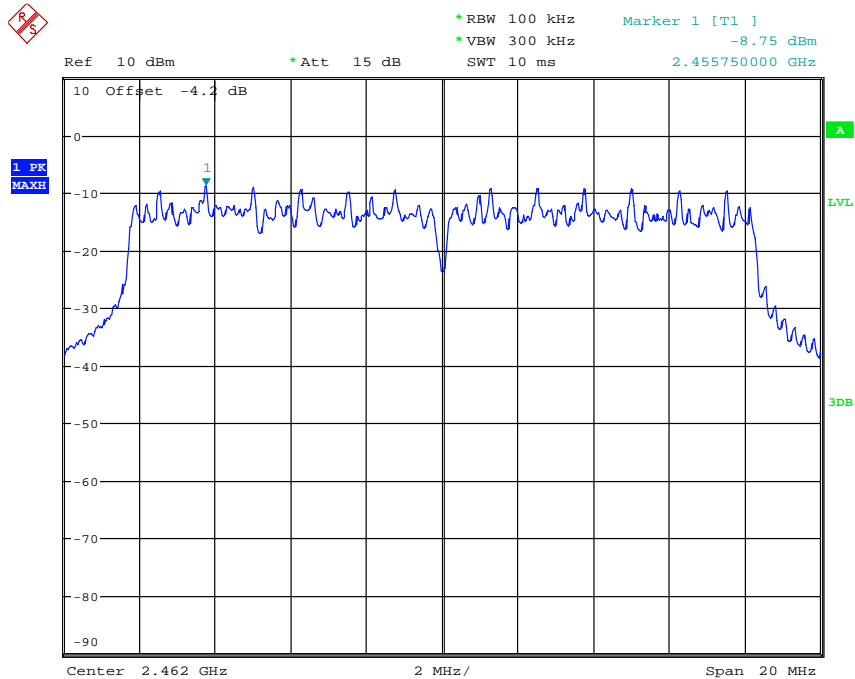
POWER DENSITY 802.11G CH06

Date: 2.OCT.2013 17:47:11



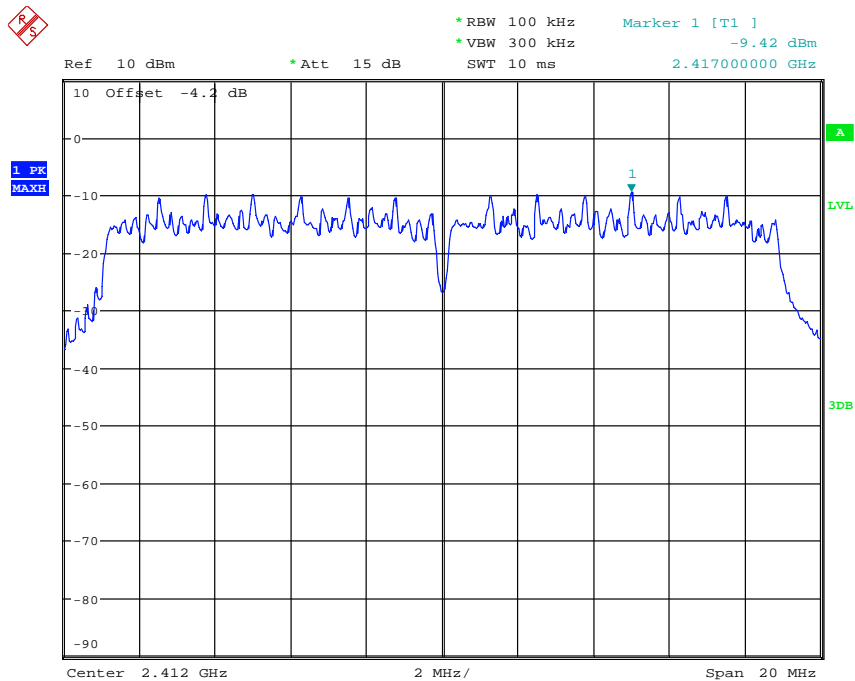
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

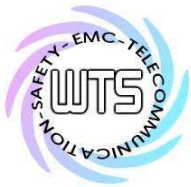


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Date: 2.OCT.2013 17:47:54

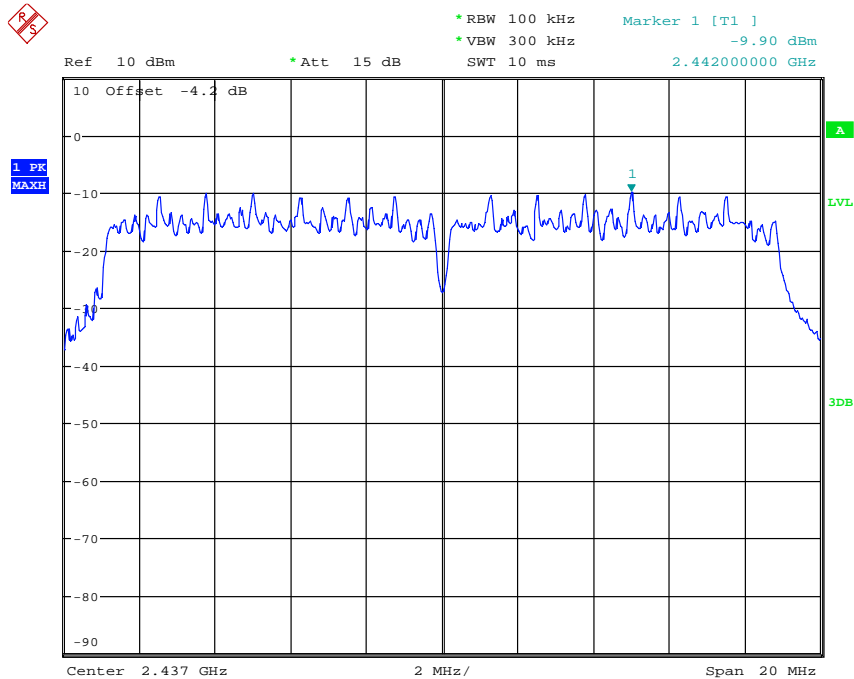
Mode G



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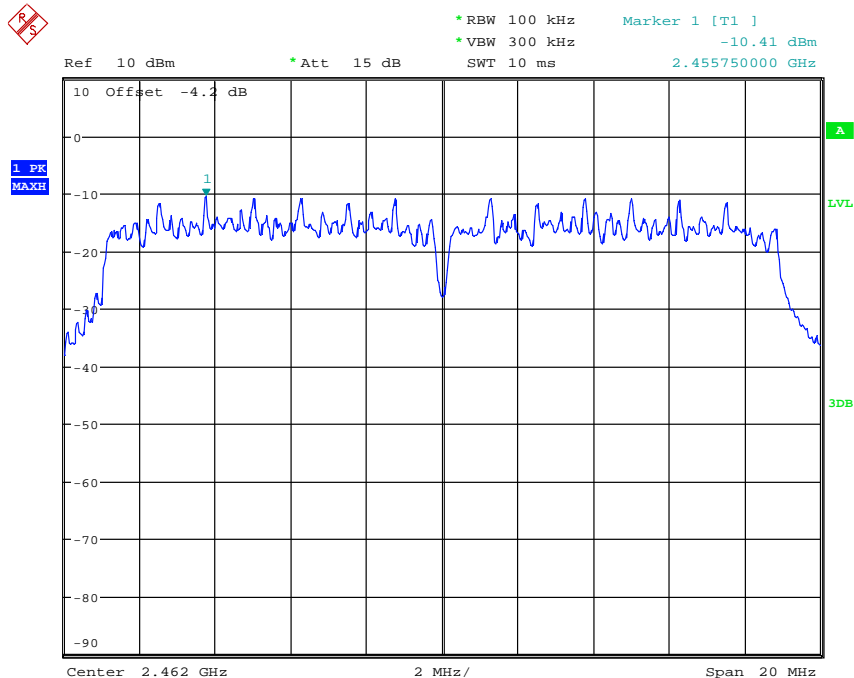


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



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Date: 2.OCT.2013 17:49:37



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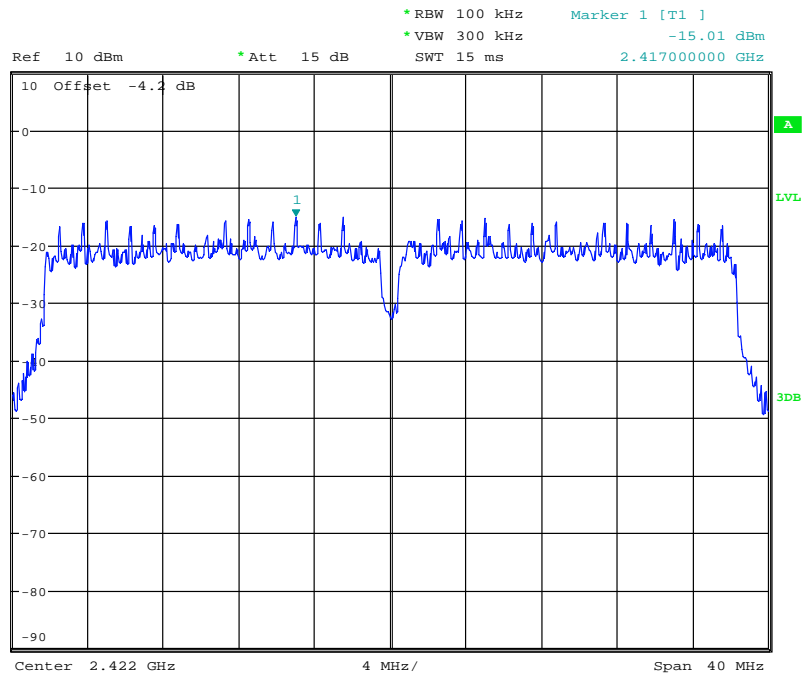
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Registration number: W6D21310-13579-C-1

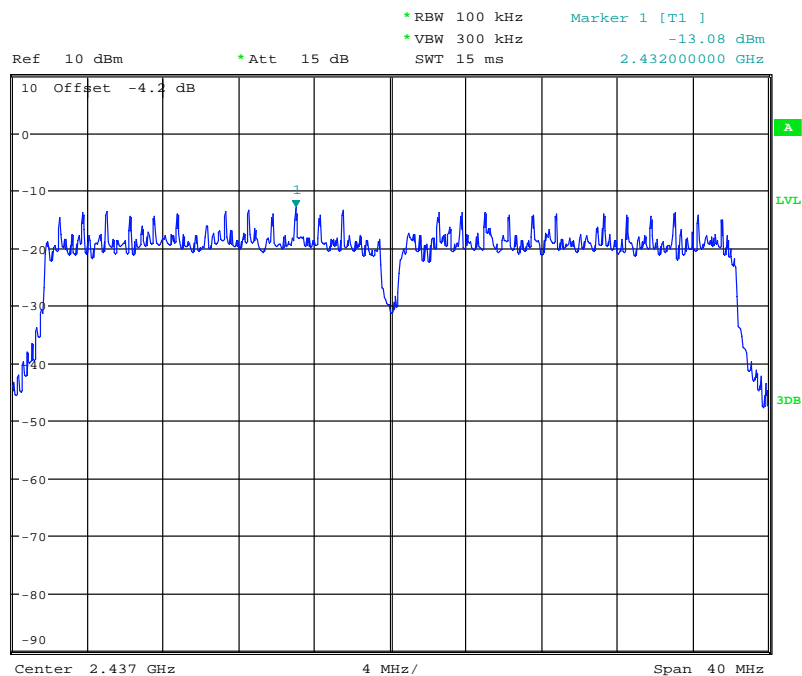
FCC ID: ZTT-APA20

Mode H



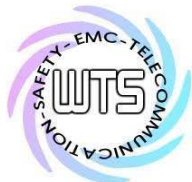
POWER DENSITY 802.11N 40MHZ CH01

Date: 2.OCT.2013 17:51:29



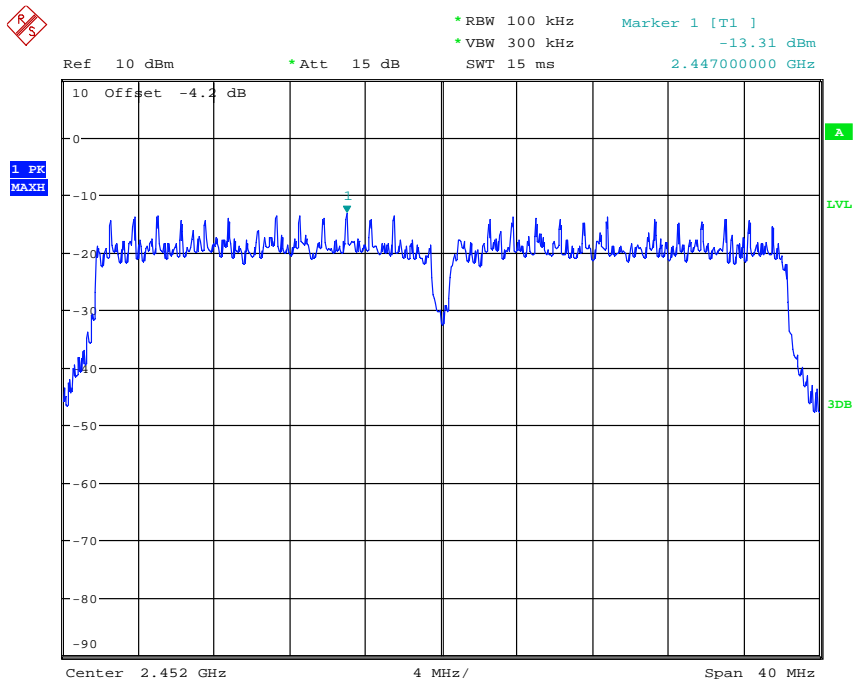
POWER DENSITY 802.11N 40MHZ CH04

Date: 2.OCT.2013 17:52:41



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



POWER DENSITY 802.11N 40MHZ CH07

Date: 2.OCT.2013 17:53:22

Antenna A	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	0.051	0.046	0.044	-12.94	-13.41	-13.61
802.11n 40MHz	0.014	--	0.013	-18.50	--	-18.89
802.11ac	0.011	--	--	-19.57	--	--
802.11n 20MHz(2.4GHz)	0.190	0.193	0.198	-7.22	-7.14	-7.04
802.11n 40MHz	0.059	0.090	0.096	-12.28	-10.46	-10.18
Antenna B	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	0.050	0.049	0.044	-13.00	-13.14	-13.57
802.11n 40MHz	0.021	--	0.021	-16.79	--	-16.87
802.11ac	0.012	--	--	-19.08	--	--
802.11n 20MHz(2.4GHz)	0.114	0.102	0.091	-9.42	-9.90	-10.41
802.11n 40MHz	0.032	0.049	0.047	-15.01	-13.08	-13.31
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz(5.8GHz)	0.101	0.095	0.088	-9.957	-10.223	-10.555
802.11n 40MHz	0.035	--	0.034	-14.559	--	-14.685
802.11ac	0.023	--	--	-16.383	--	-
802.11n 20MHz(2.4GHz)	0.304	0.295	0.289	-5.171	-5.302	-5.391
802.11n 40MHz	0.091	0.139	0.143	-10.41	-8.570	-8.447



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

Limits:

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

Test equipment used: ETSTW-RE 055, ETSTW-RE 050



Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

3.9 Radiated Emission from Digital Part

FCC Rule: 15.109

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

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

Test equipment used: ETSTW-RE 055, ETSTW-RE 064, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111

Explanation: The test results are listed in the separated test report no.: W6D21310-13579-P-15B.



Registration number: W6D21310-13579-C-1

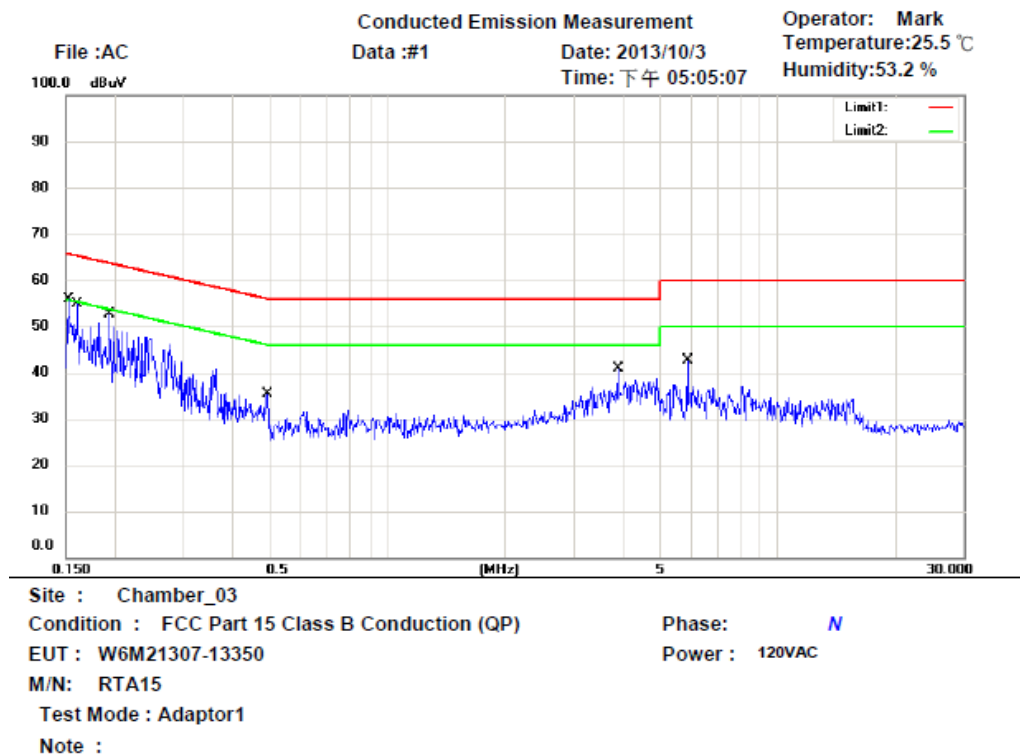
FCC ID: ZTT-APA20

3.9 Power Line Conducted Emission

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

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

Adaptor1

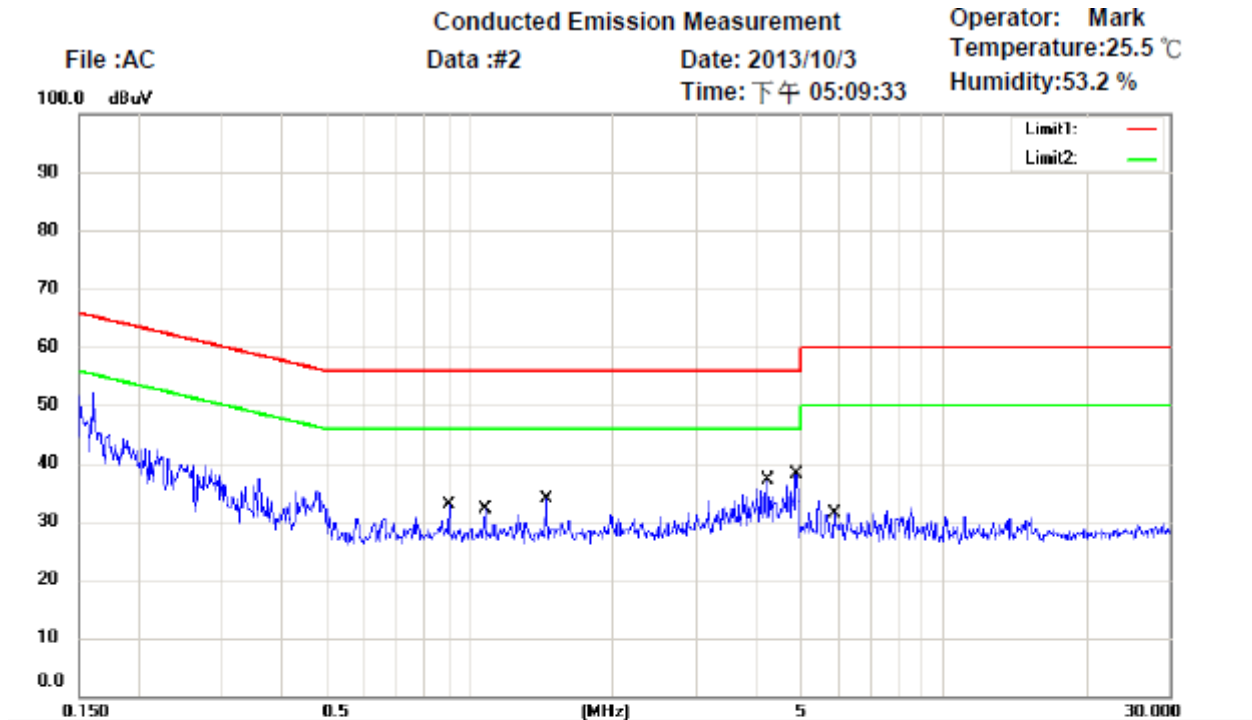


Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.1520	33.35	QP	10.12	43.47	65.89	-22.42	
	0.1520	17.21	AVG	10.12	27.33	55.89	-28.56	
	0.1600	31.75	QP	10.12	41.87	65.46	-23.59	
	0.1600	13.57	AVG	10.12	23.69	55.46	-31.77	
	0.1931	29.00	QP	10.10	39.10	63.90	-24.80	
	0.1931	10.35	AVG	10.10	20.45	53.90	-33.45	
	0.4922	16.26	QP	10.12	26.38	56.13	-29.75	
	0.4922	5.10	AVG	10.12	15.22	46.13	-30.91	
	3.8870	19.87	QP	10.31	30.18	56.00	-25.82	
	3.8870	10.35	AVG	10.31	20.66	46.00	-25.34	
	5.8627	20.22	QP	10.44	30.66	60.00	-29.34	
	5.8627	9.71	AVG	10.44	20.15	50.00	-29.85	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M21307-13350

Power : 120VAC

M/N: RTA15

Test Mode : Adaptor1

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.9092	16.52	QP	10.14	26.66	56.00	-29.34	
	0.9092	-0.99	AVG	10.14	9.15	46.00	-36.85	
	1.0605	15.90	QP	10.14	26.04	56.00	-29.96	
	1.0605	-0.49	AVG	10.14	9.65	46.00	-36.35	
	1.4466	15.82	QP	10.16	25.98	56.00	-30.02	
	1.4466	0.40	AVG	10.16	10.56	46.00	-35.44	
	4.2350	19.28	QP	10.36	29.64	56.00	-26.36	
	4.2350	7.68	AVG	10.36	18.04	46.00	-27.96	
*	4.8965	19.85	QP	10.42	30.27	56.00	-25.73	
	4.8965	8.29	AVG	10.42	18.71	46.00	-27.29	
	5.8641	19.35	QP	10.48	29.83	60.00	-30.17	
	5.8641	7.53	AVG	10.48	18.01	50.00	-31.99	

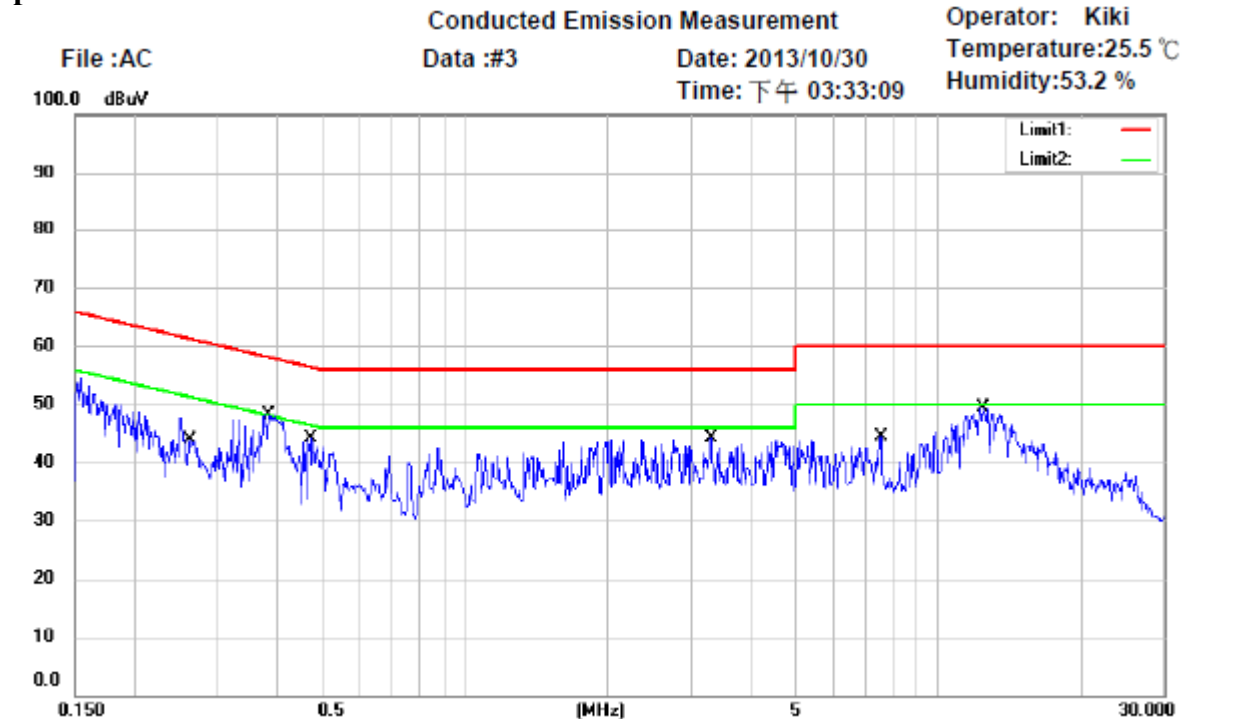


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Adaptor2



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: N

EUT : W6M21307-13350

Power : 120VAC

M/N: RTA15

Test Mode : Adaptor2

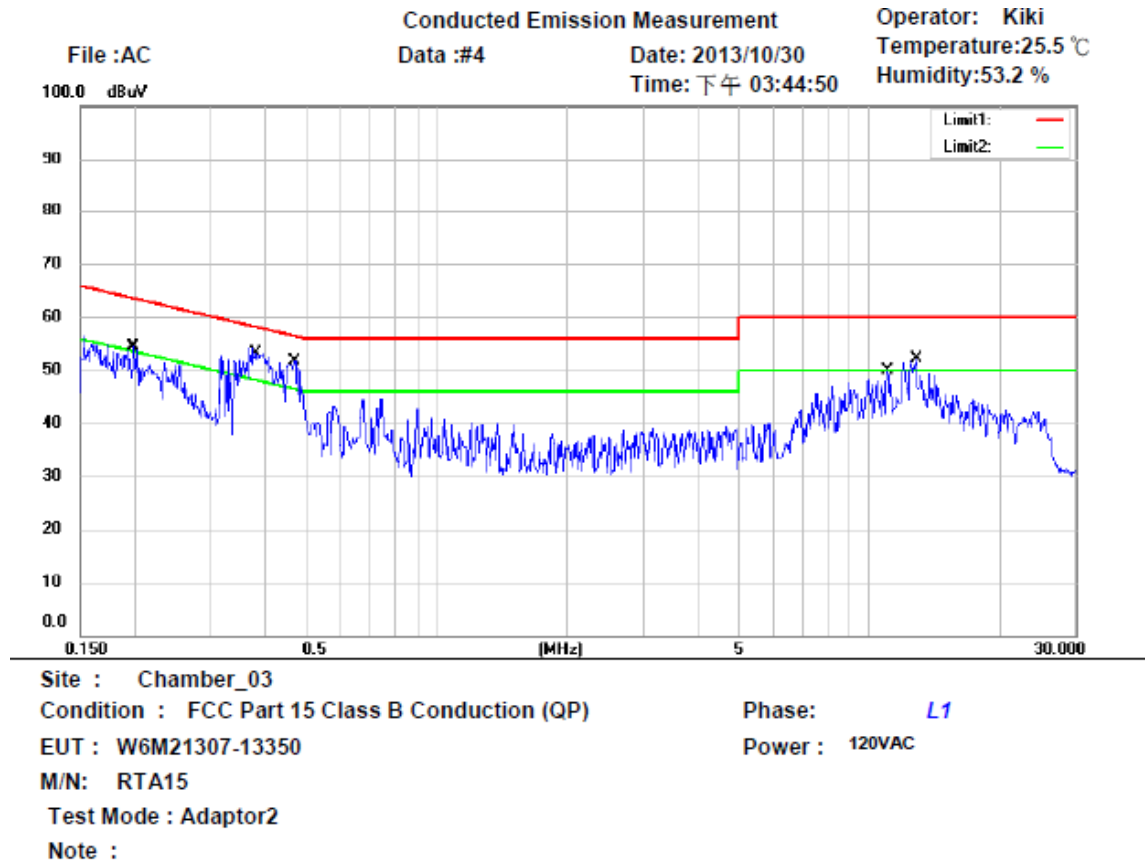
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.2592	28.63	QP	10.11	38.74	61.46	-22.72	
	0.2592	9.39	AVG	10.11	19.50	51.46	-31.96	
	0.3860	33.96	QP	10.11	44.07	58.15	-14.08	
*	0.3860	24.34	AVG	10.11	34.45	48.15	-13.70	
	0.4720	22.49	QP	10.11	32.60	56.48	-23.88	
	0.4720	6.03	AVG	10.11	16.14	46.48	-30.34	
	3.2972	22.20	QP	10.26	32.46	56.00	-23.54	
	3.2972	13.15	AVG	10.26	23.41	46.00	-22.59	
	7.5423	20.22	QP	10.53	30.75	60.00	-29.25	
	7.5423	12.37	AVG	10.53	22.90	50.00	-27.10	
	12.4312	29.10	QP	10.67	39.77	60.00	-20.23	
	12.4312	22.70	AVG	10.67	33.37	50.00	-16.63	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1
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Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1958	39.00	QP	10.09	49.09	63.79	-14.70	
	0.1958	23.72	AVG	10.09	33.81	53.79	-19.98	
	0.1992	28.70	QP	10.09	38.79	63.64	-24.85	
	0.1992	22.20	AVG	10.09	32.29	53.64	-21.35	
	0.3828	39.93	QP	10.11	50.04	58.22	-8.18	
*	0.3828	31.75	AVG	10.11	41.86	48.22	-6.36	
	0.4631	33.37	QP	10.11	43.48	56.64	-13.16	
	0.4631	21.00	AVG	10.11	31.11	46.64	-15.53	
	11.0003	27.20	QP	10.75	37.95	60.00	-22.05	
	11.0003	20.20	AVG	10.75	30.95	50.00	-19.05	
	12.8206	29.14	QP	10.82	39.96	60.00	-20.04	
	12.8206	22.36	AVG	10.82	33.18	50.00	-16.82	

- Note: 1. The formula of measured value as: Test Result = Reading + Correction Factor
2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
4. All not in the table noted test results are more than 20 dB below the relevant limits.
5. Measurement uncertainty = ± 1.60 dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.
6. Up Line: QP Limit Line, Down Line: Ave Limit Line.

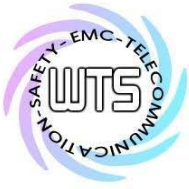


Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

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, ETSTW-RE 045



Registration number: W6D21310-13579-C-1
FCC ID: ZTT-APA20

Appendix

Measurement diagrams

Spurious Emissions radiated



Registration number: W6D21310-13579-C-1

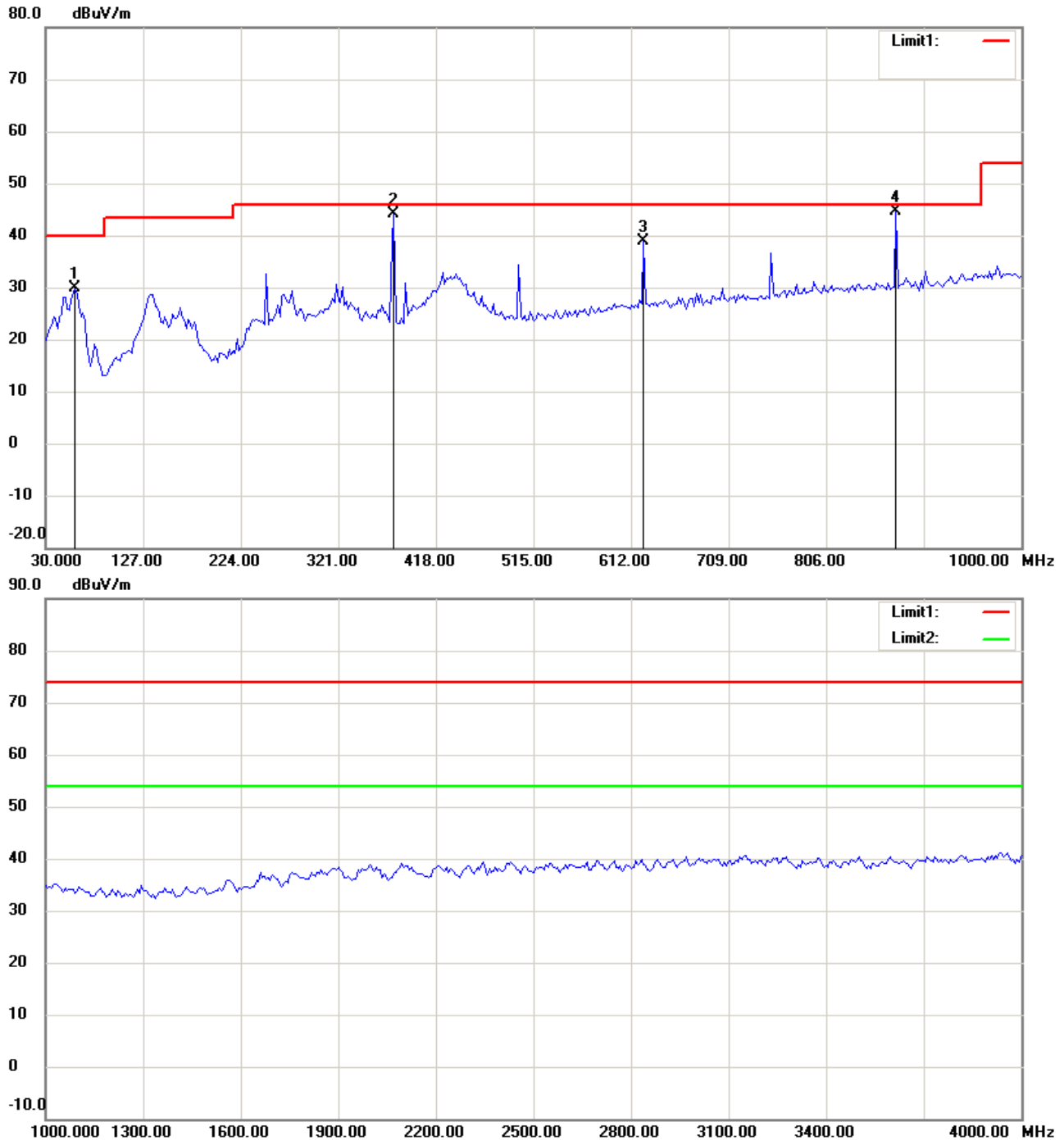
FCC ID: ZTT-APA20

Radiated Emission-Transmitter

Antenna A

802.11a 5745MHz

Antenna Polarization H



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

Note:

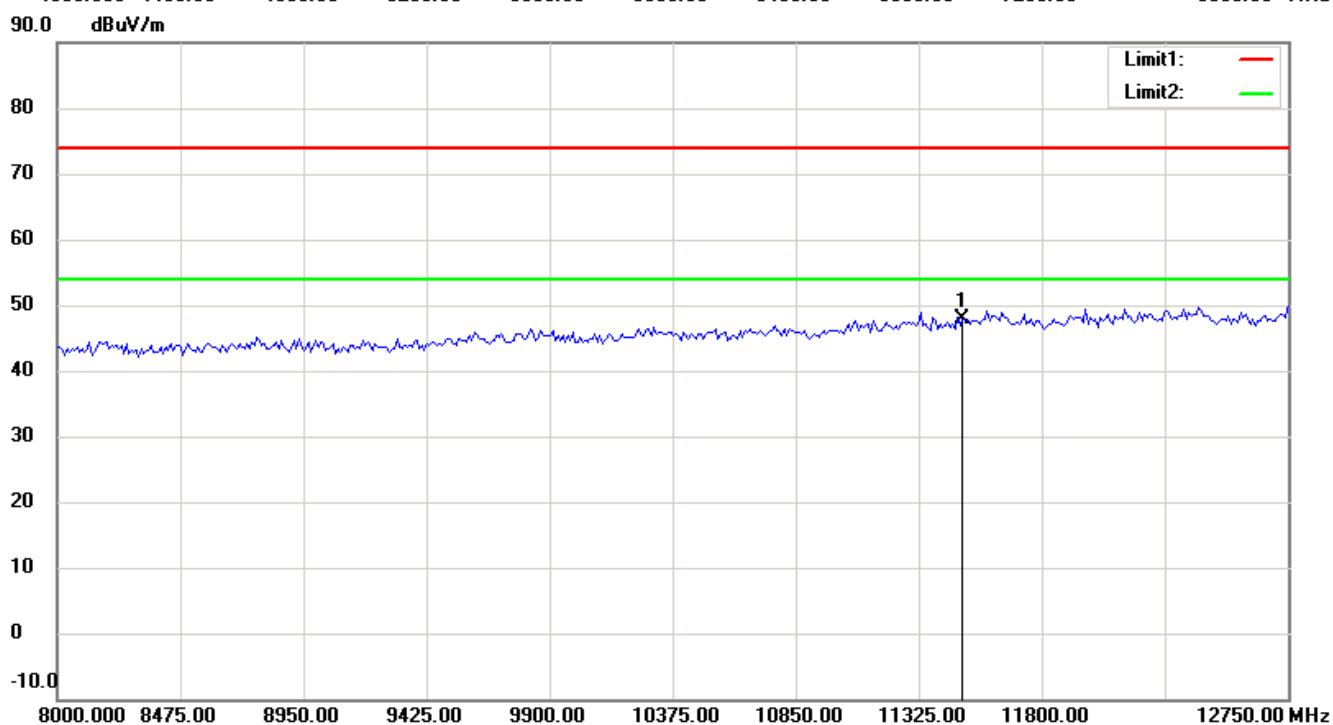
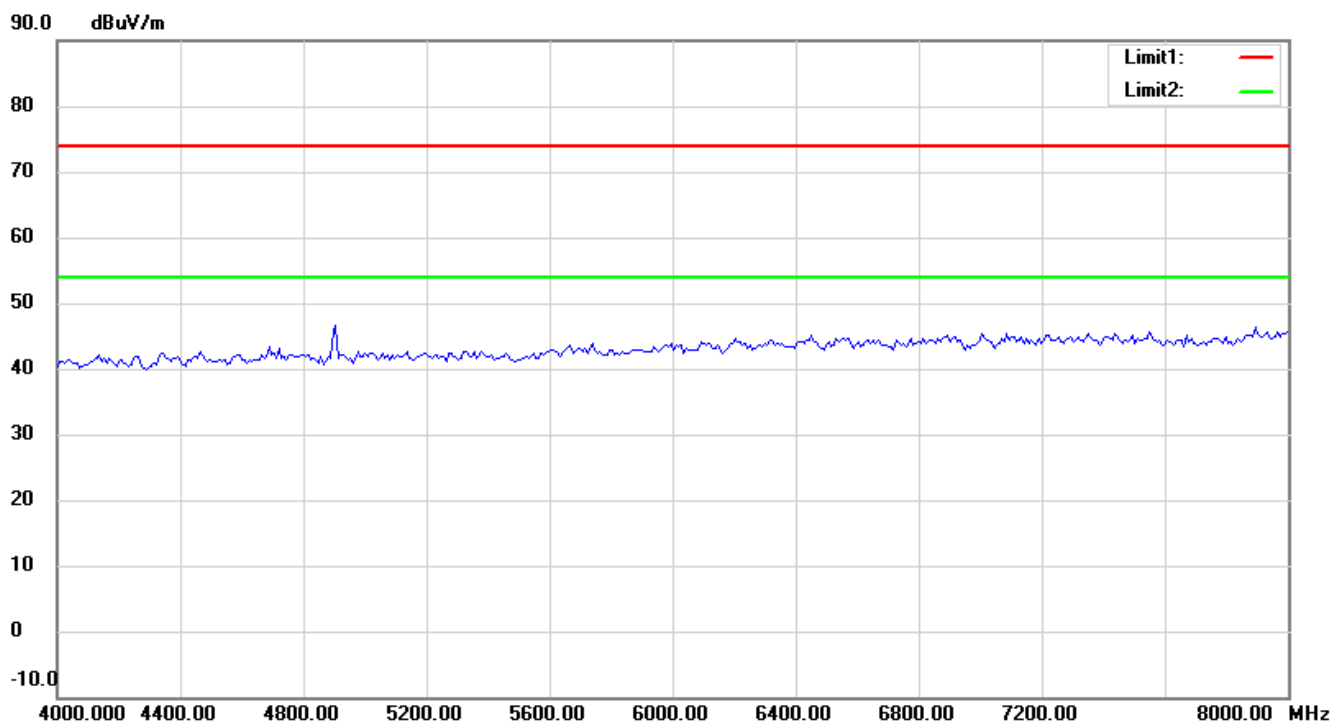
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

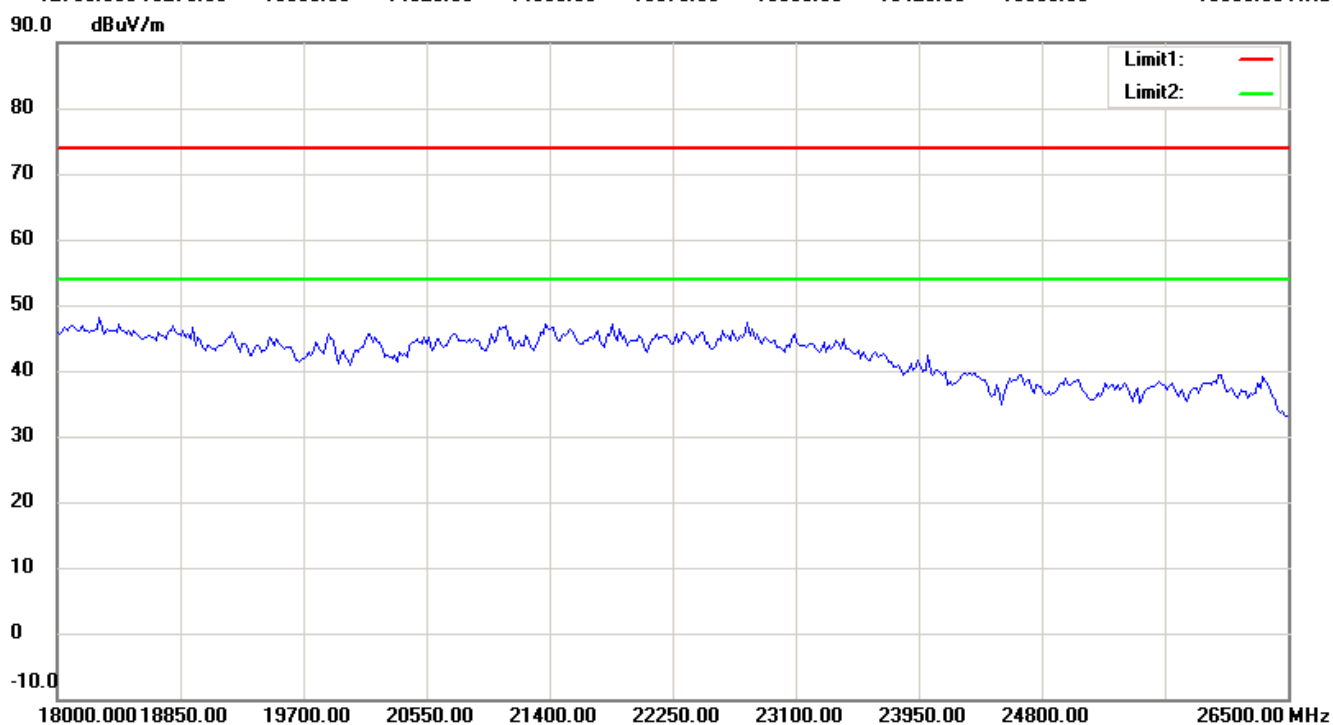
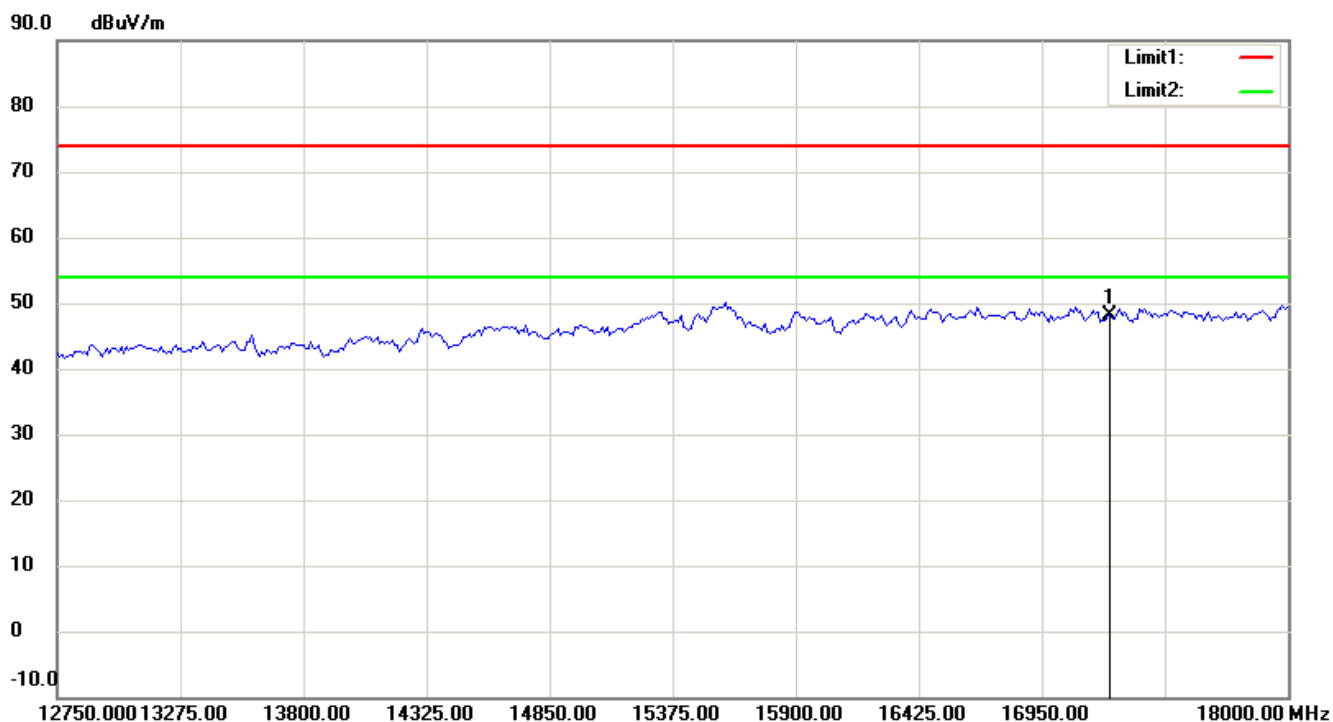
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

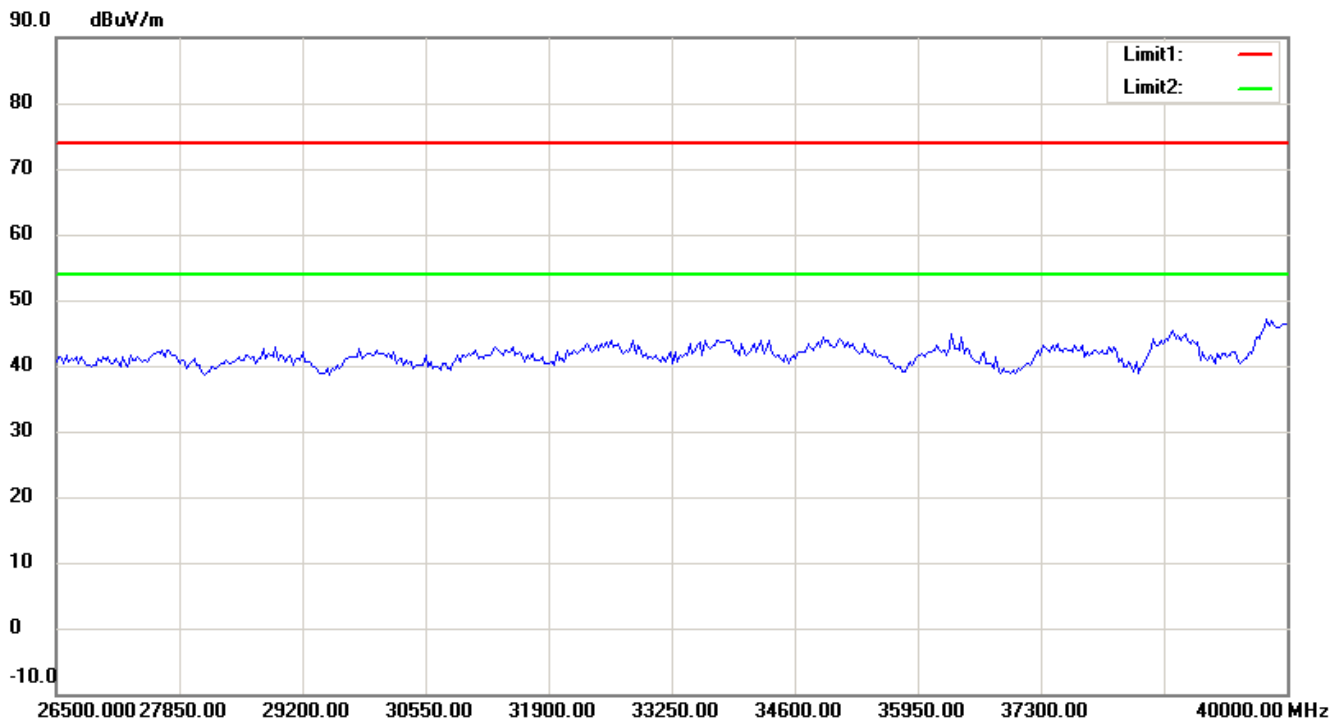
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



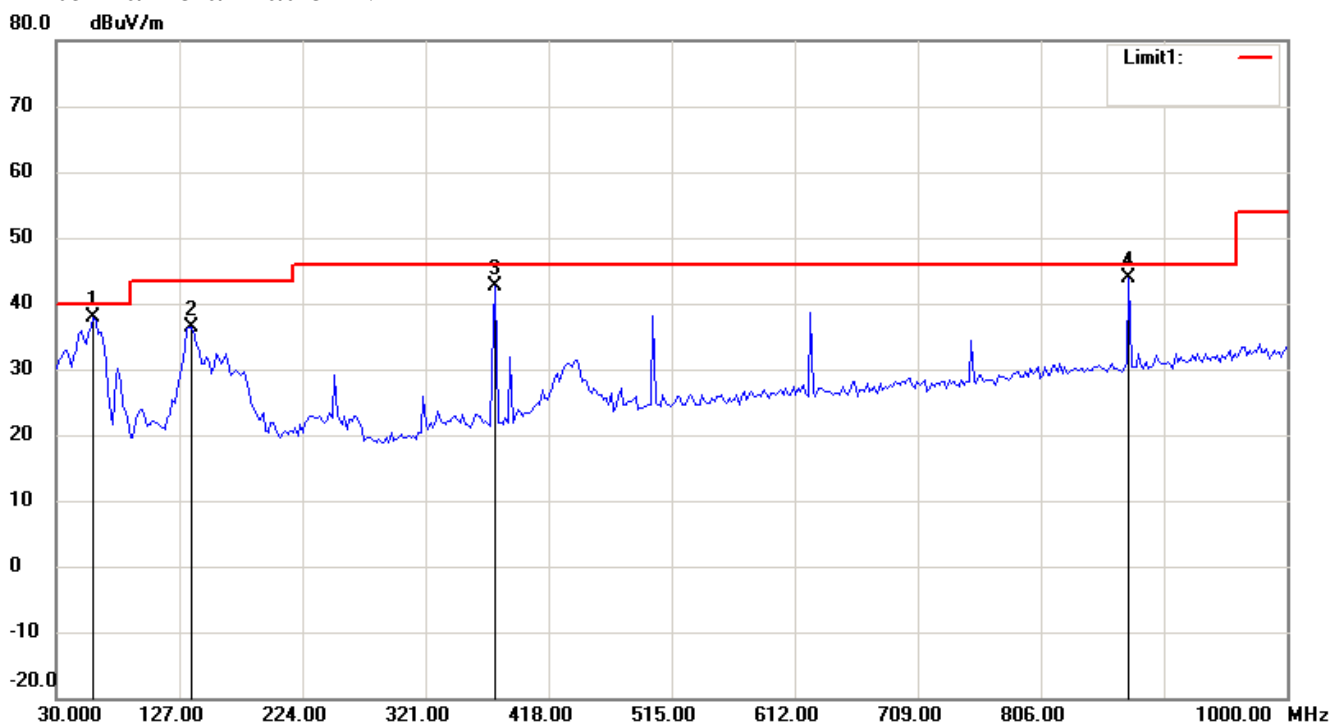
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

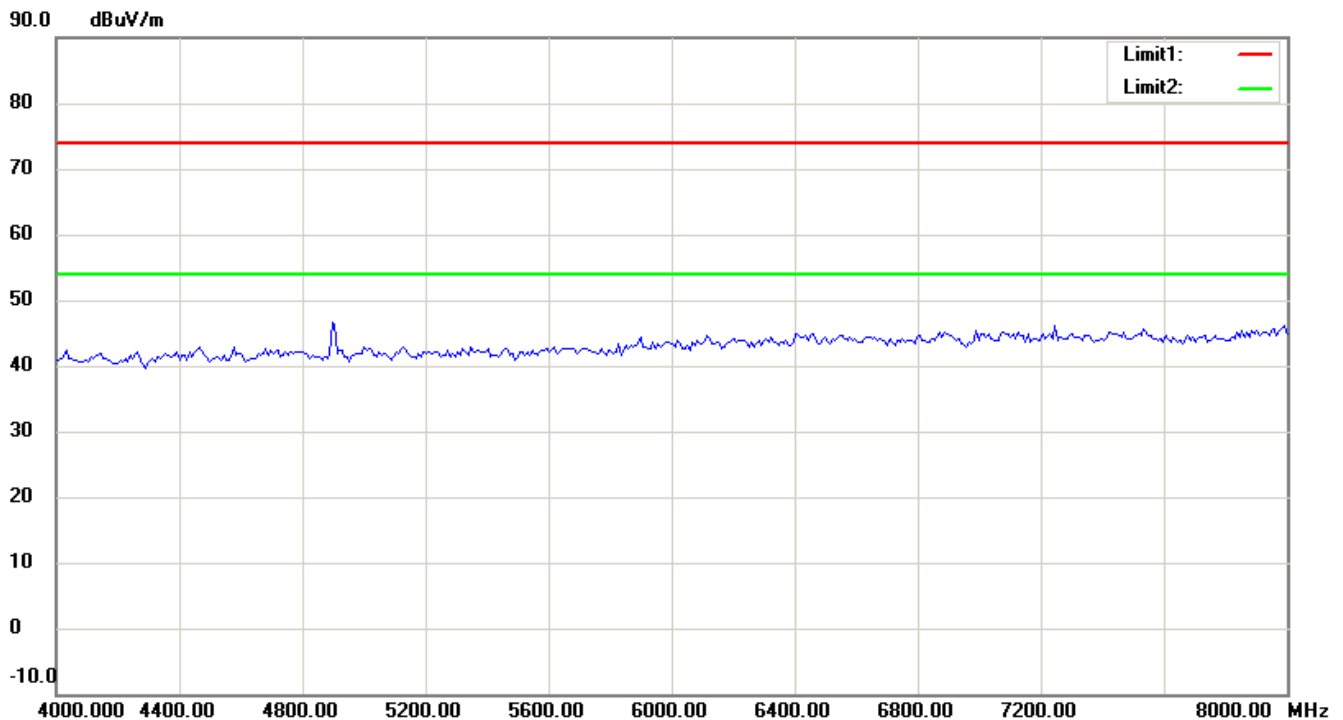
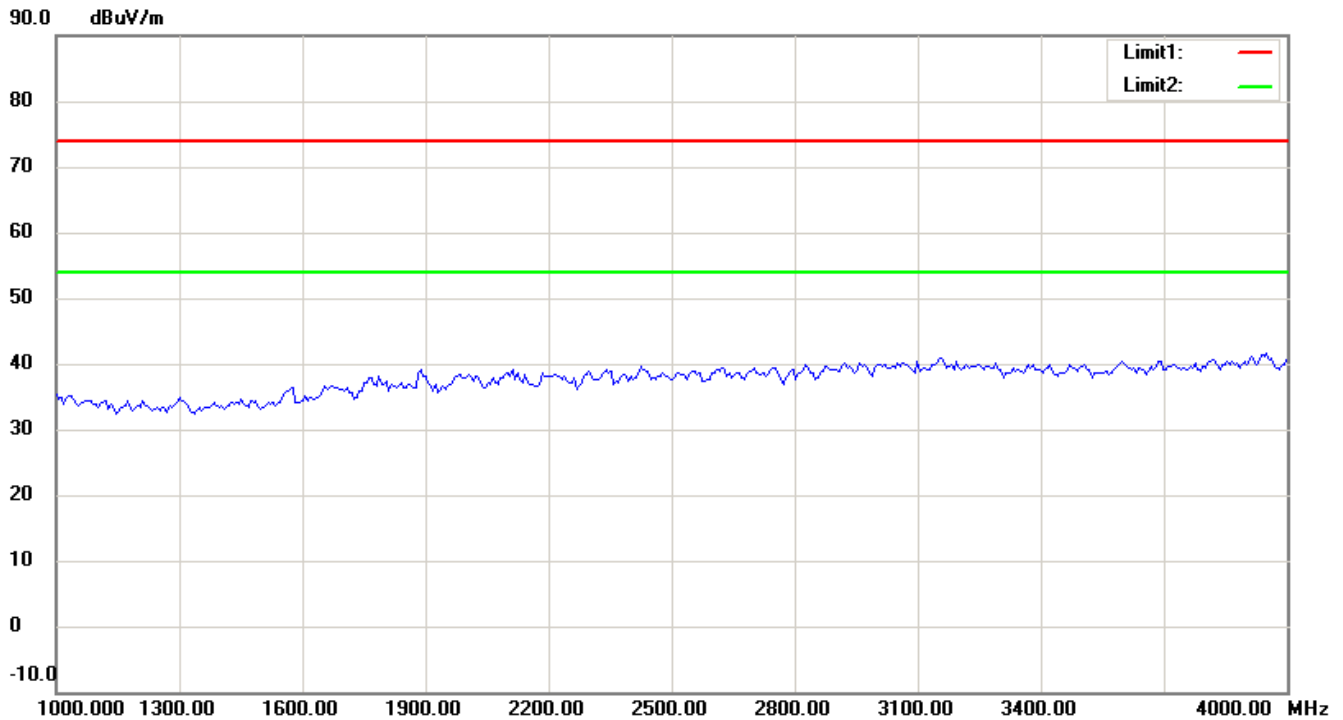
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

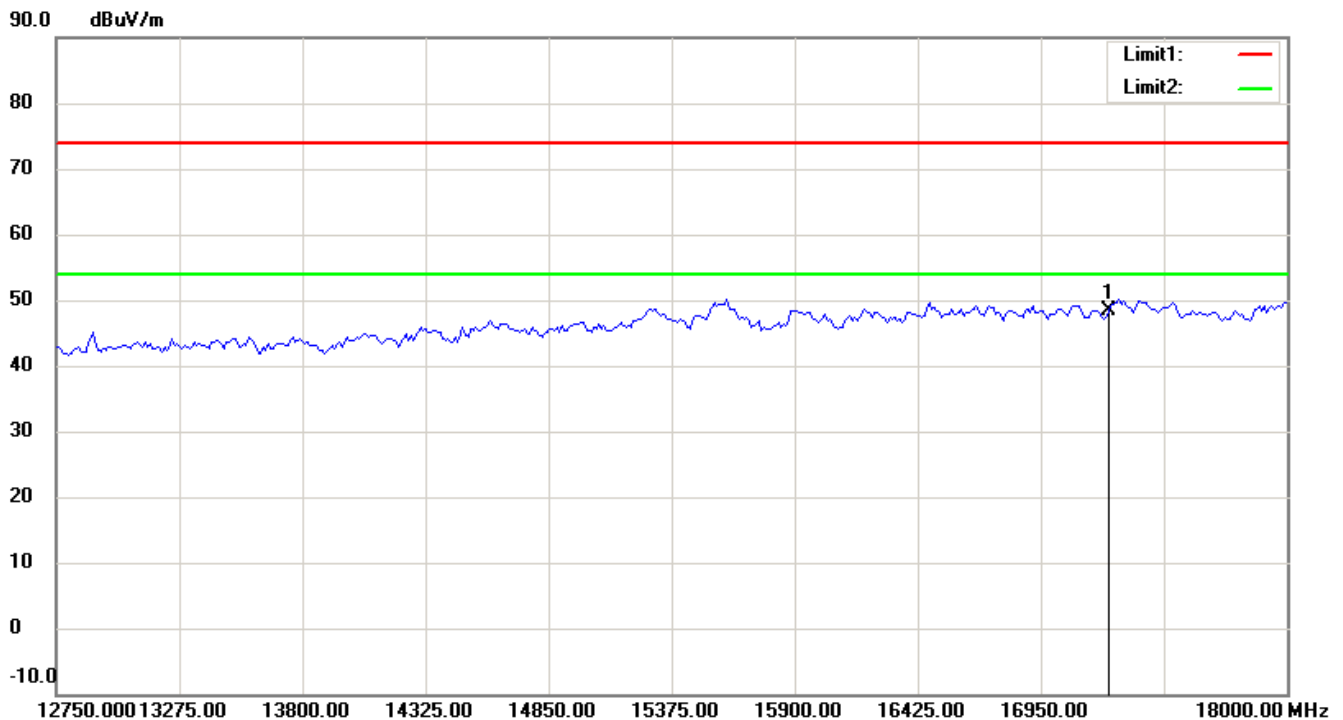
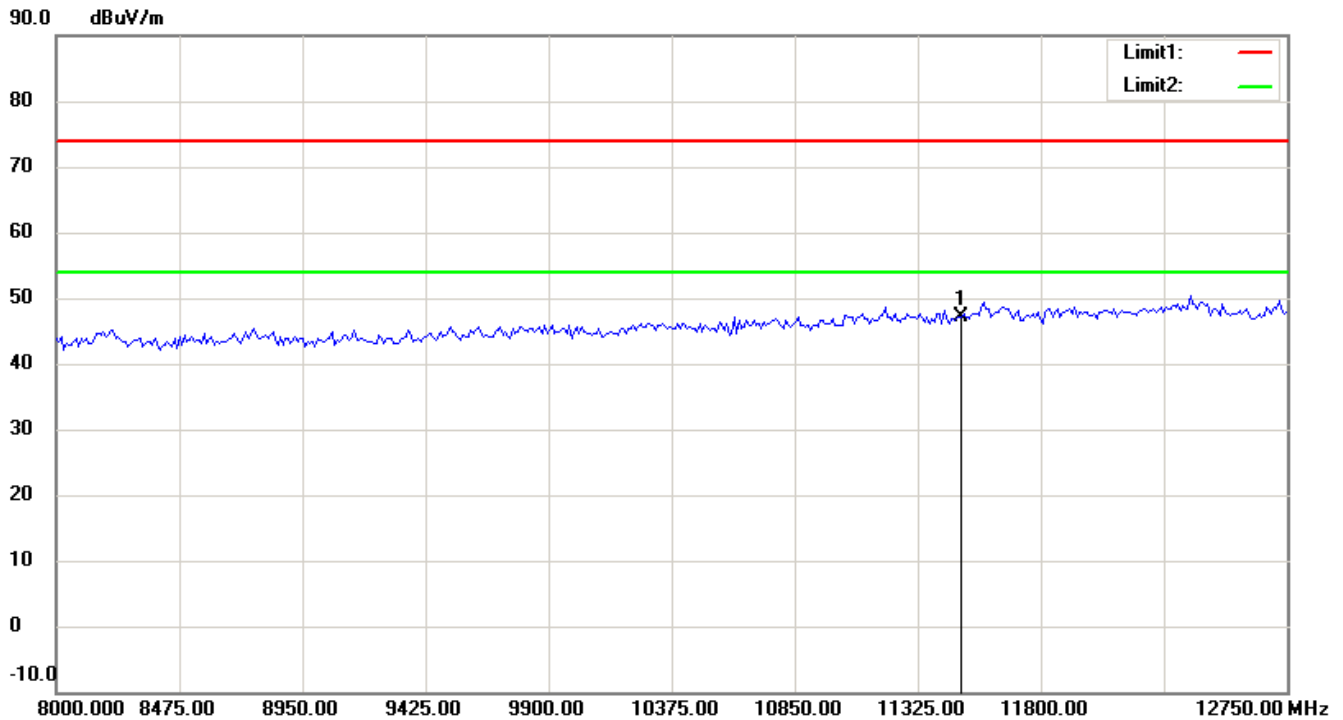
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

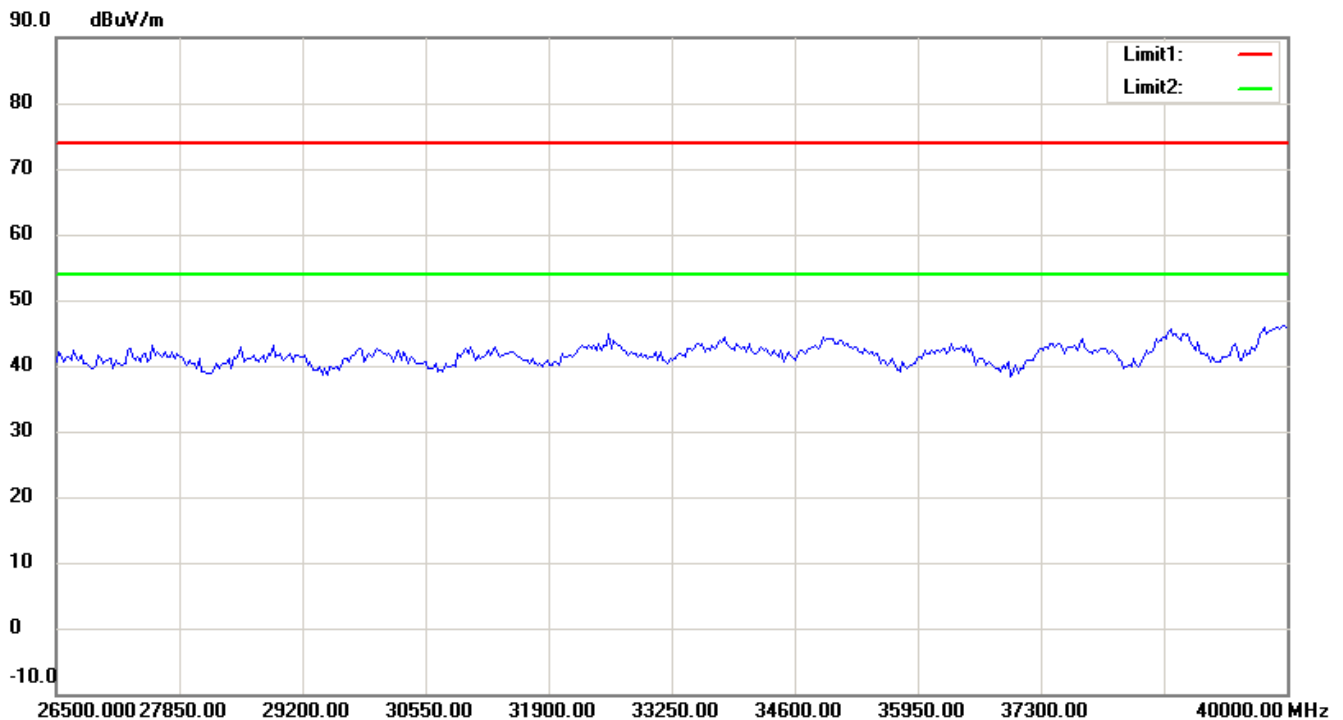
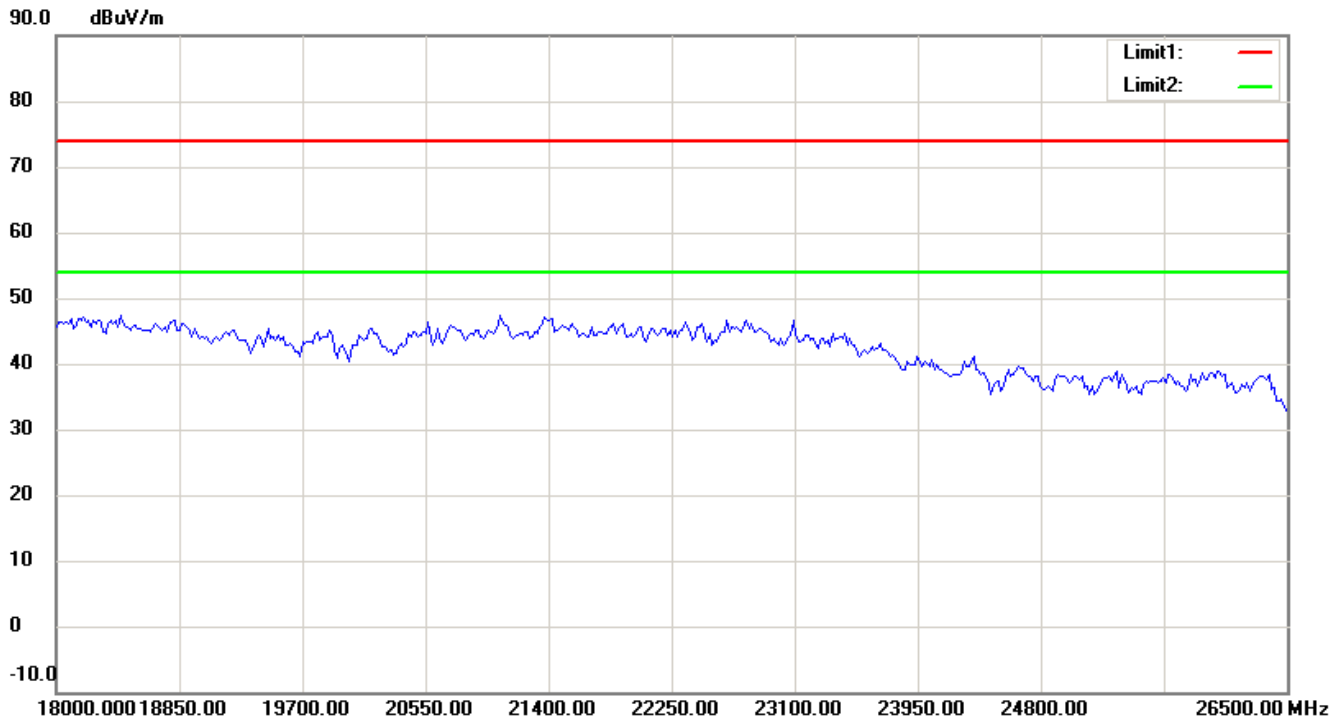
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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



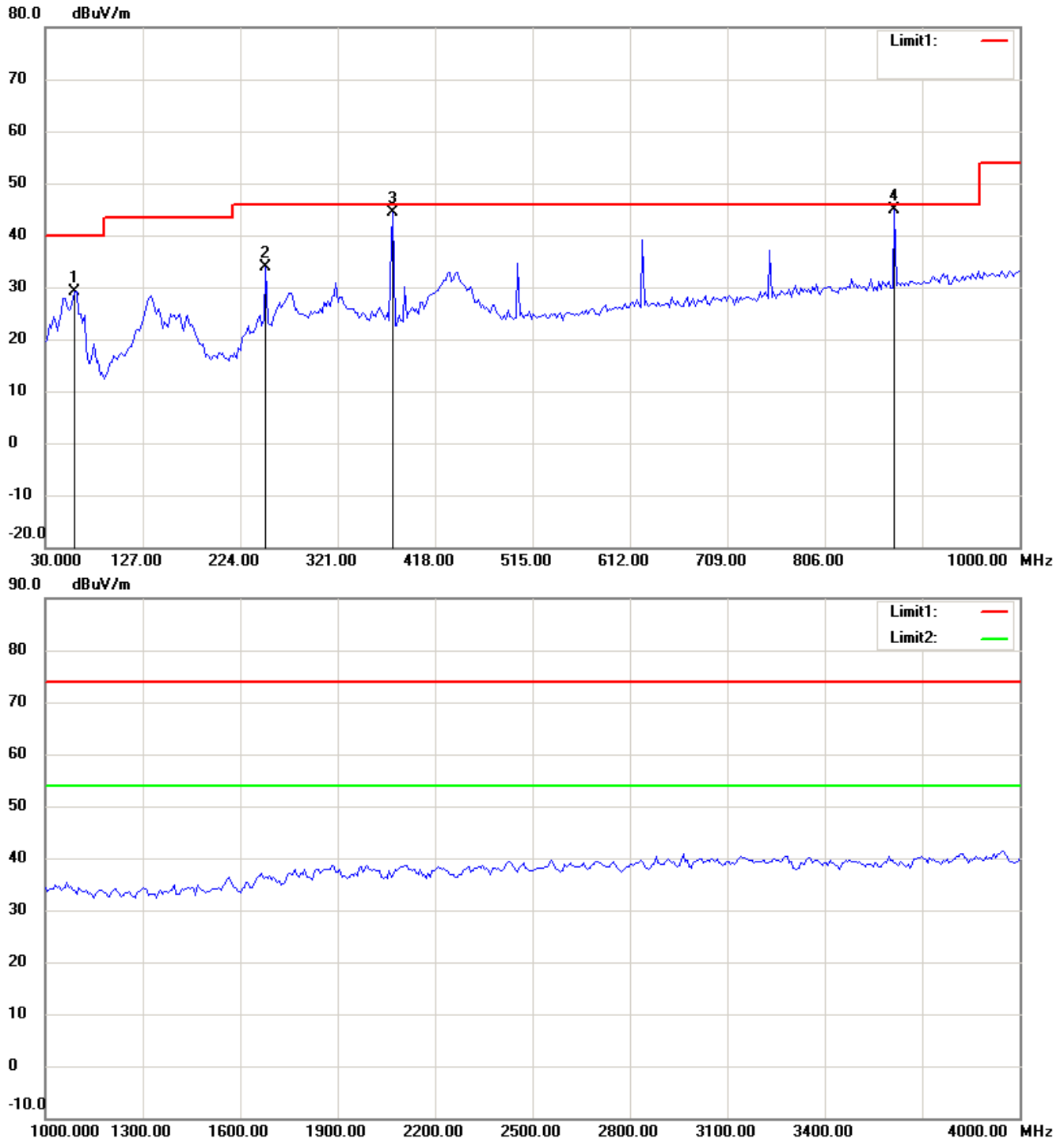
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11a 5785MHz

Antenna Polarization H



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

Note:

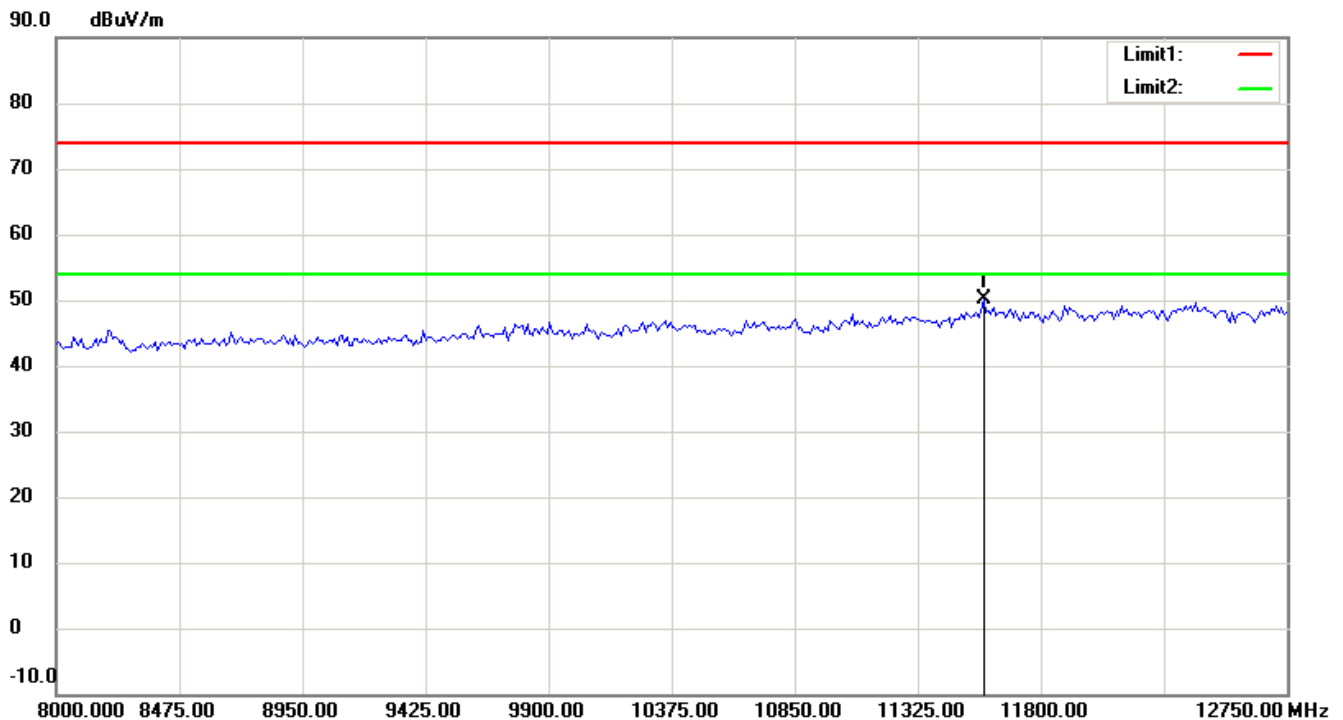
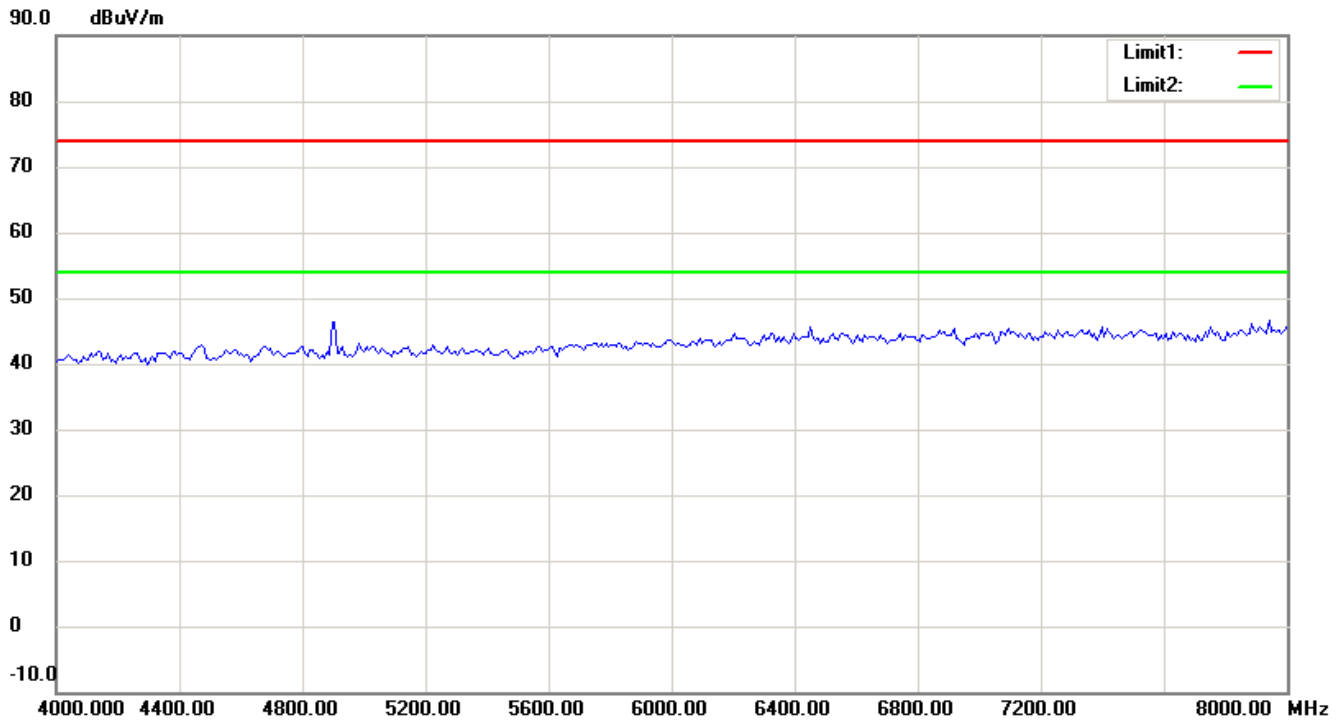
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

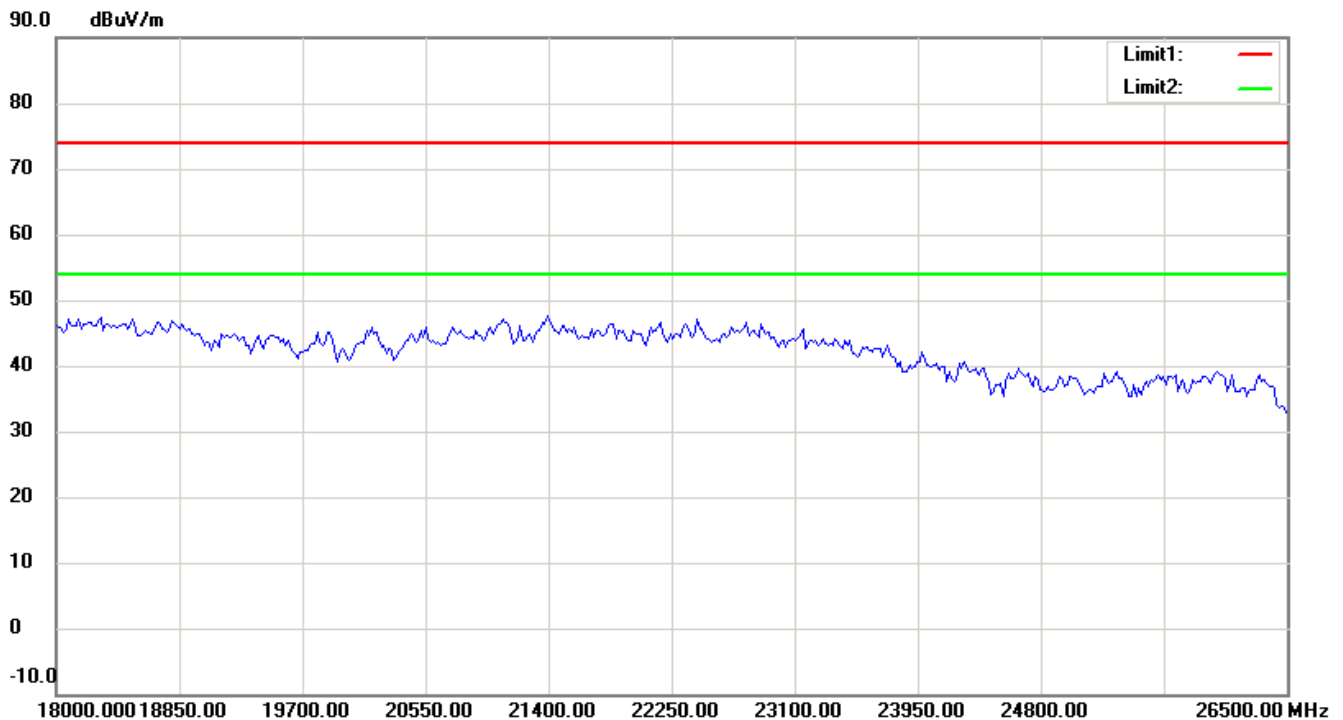
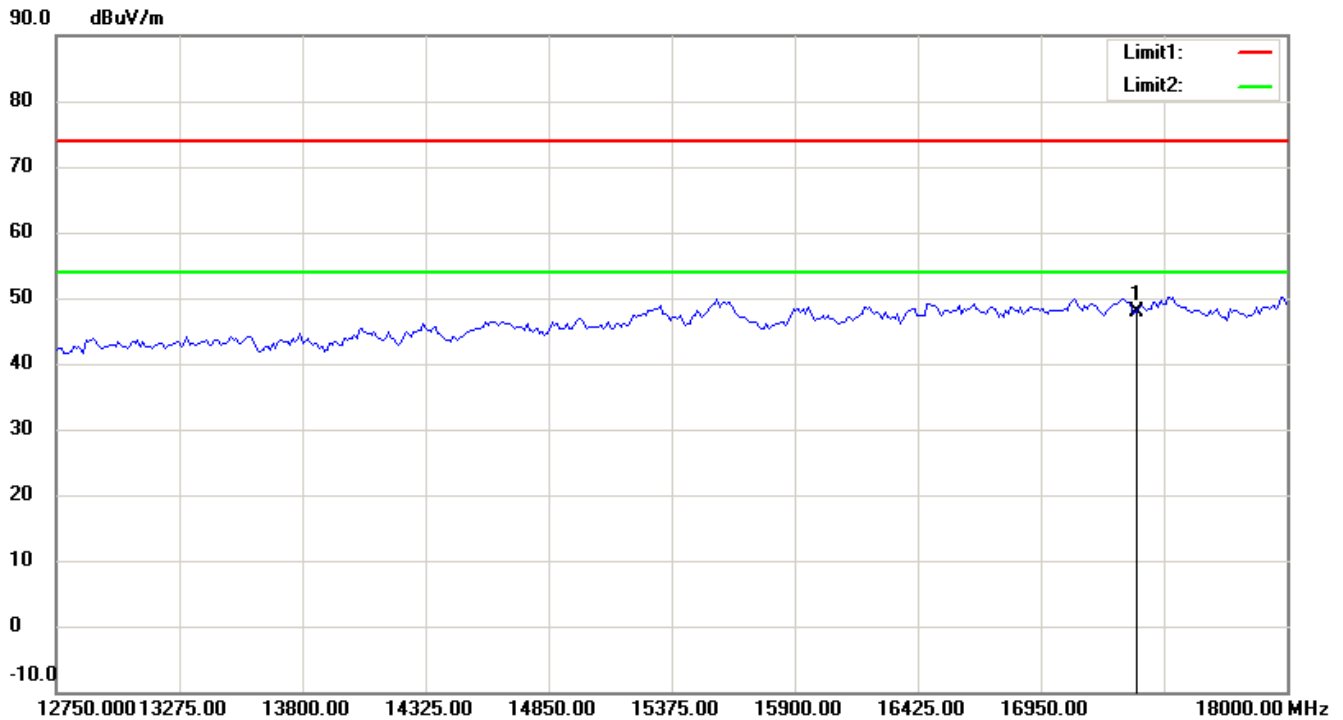
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

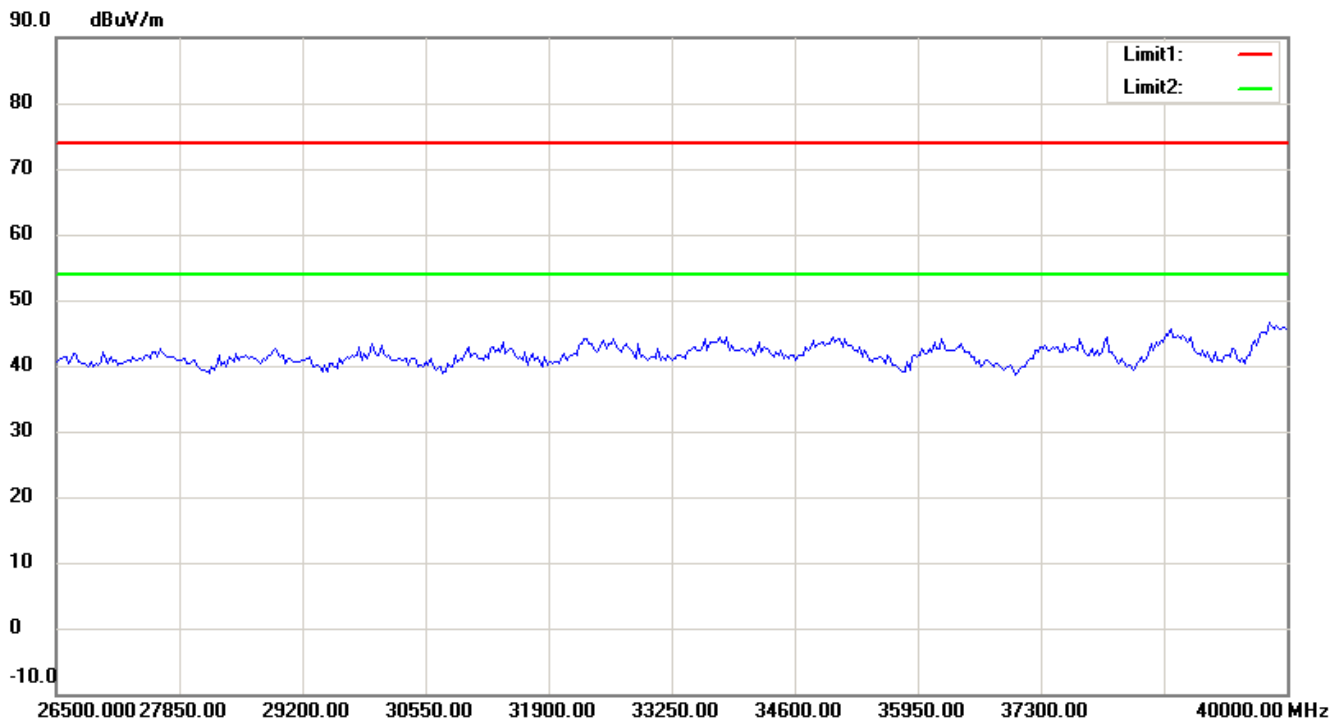
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



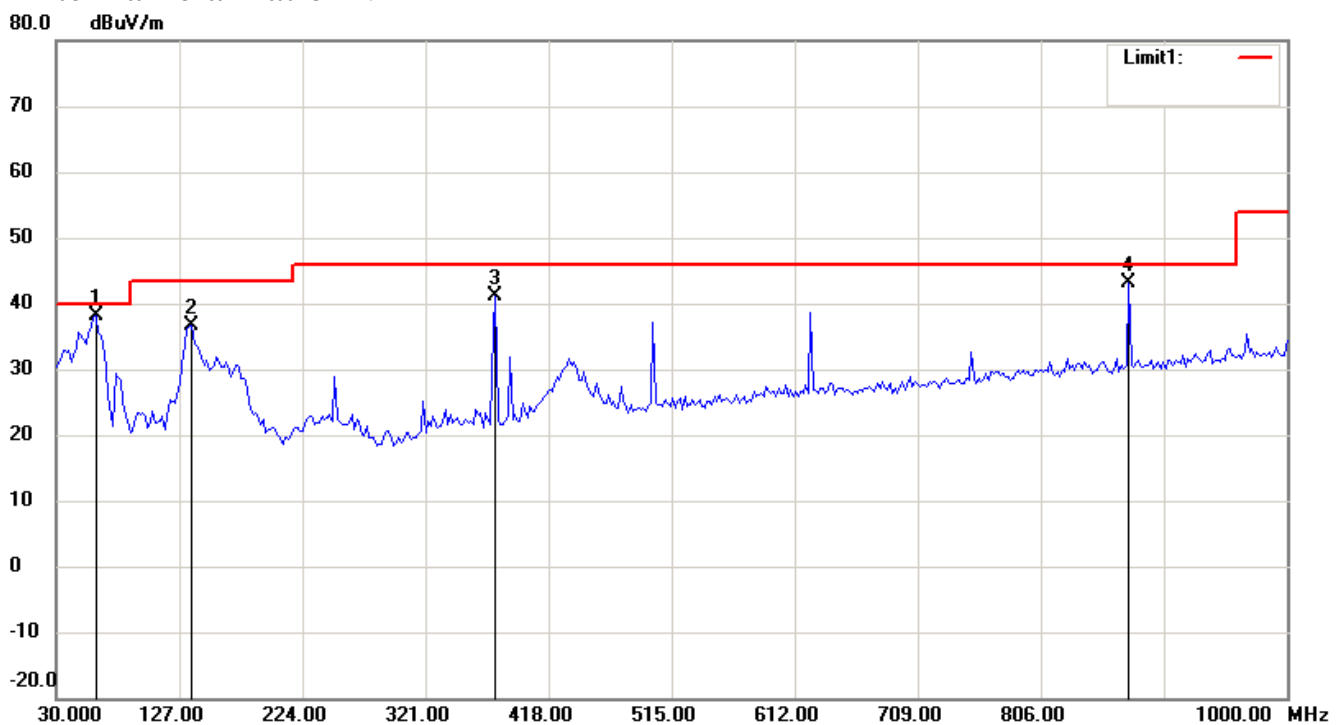
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

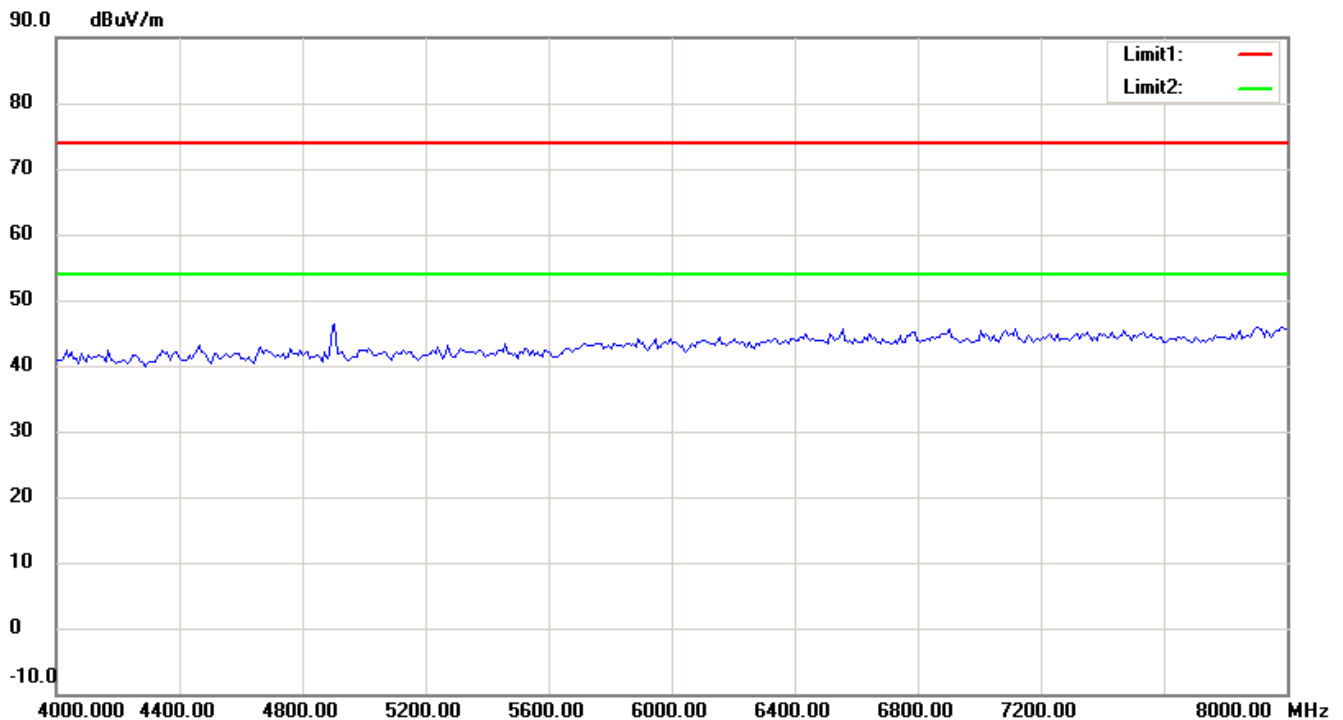
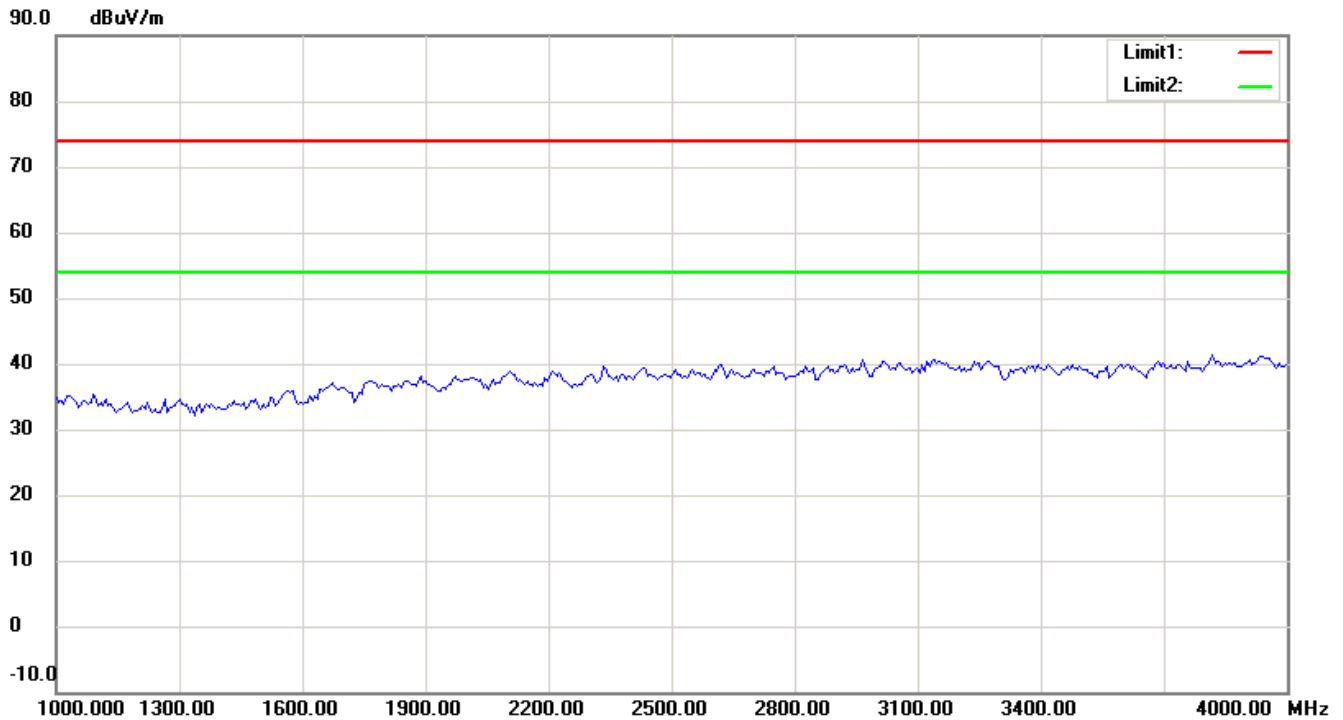
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

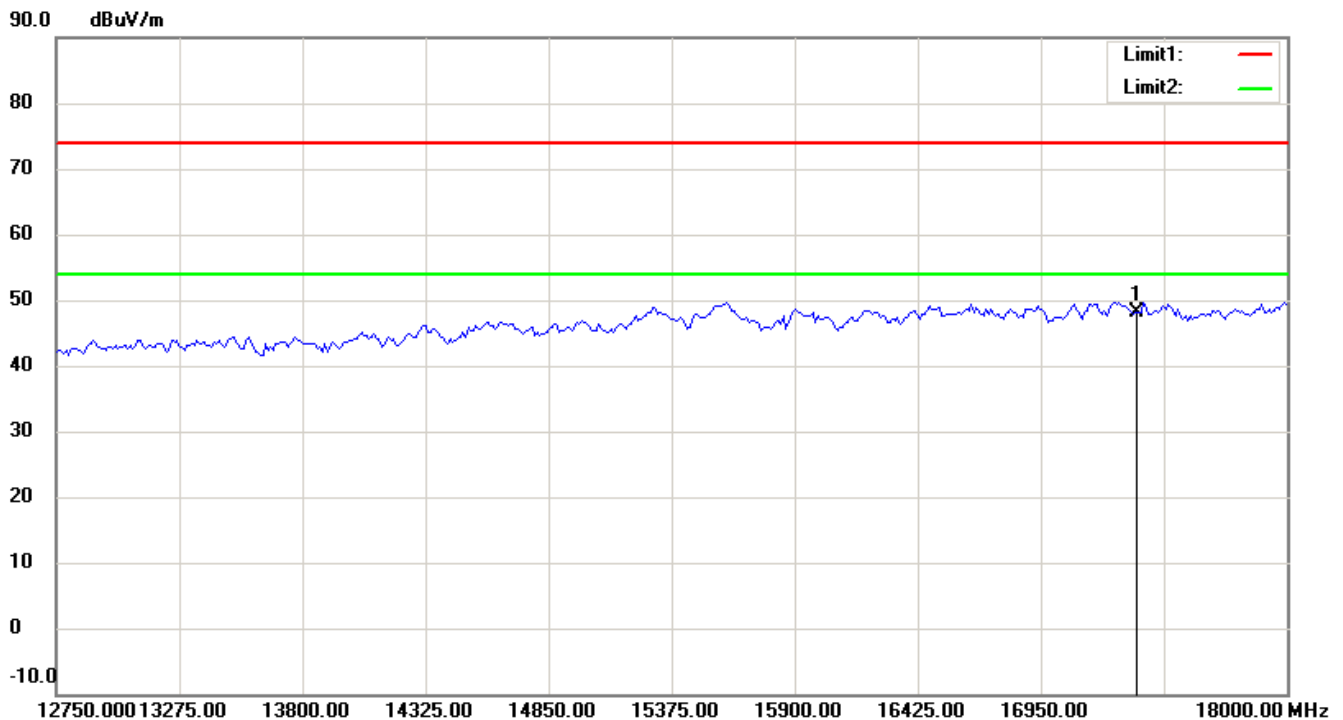
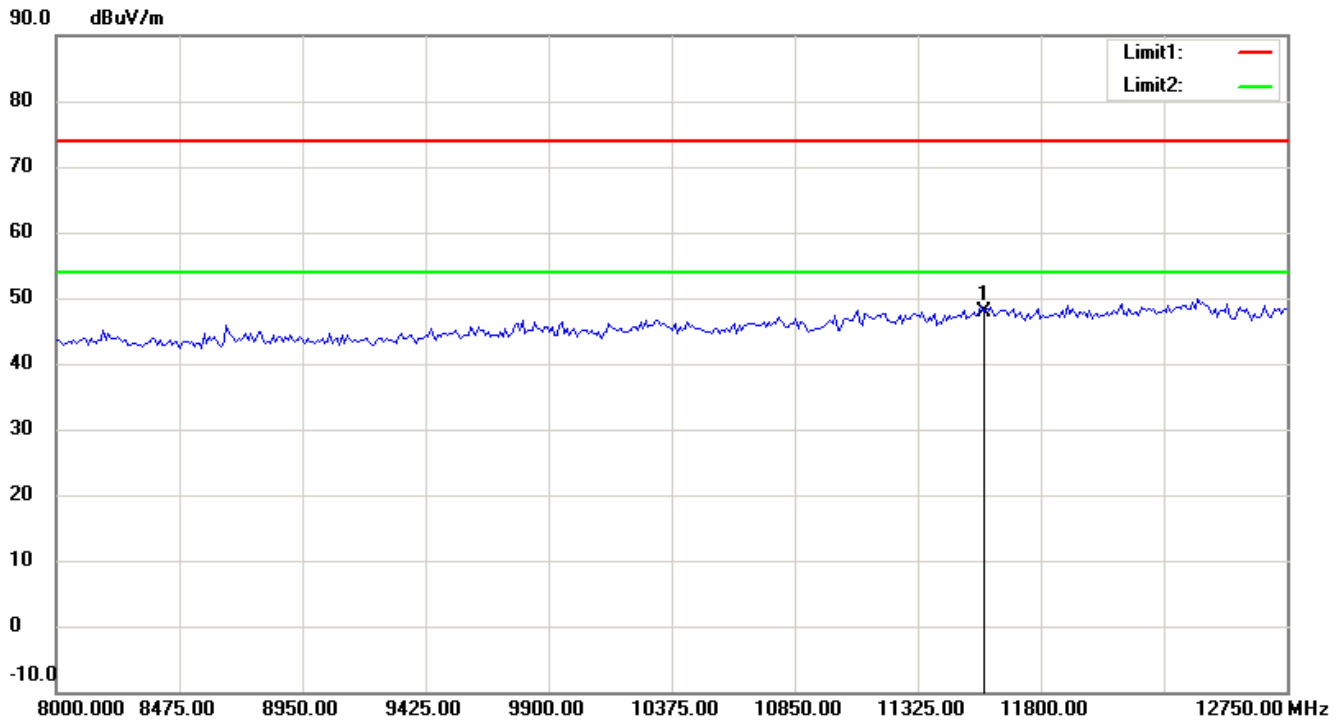
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

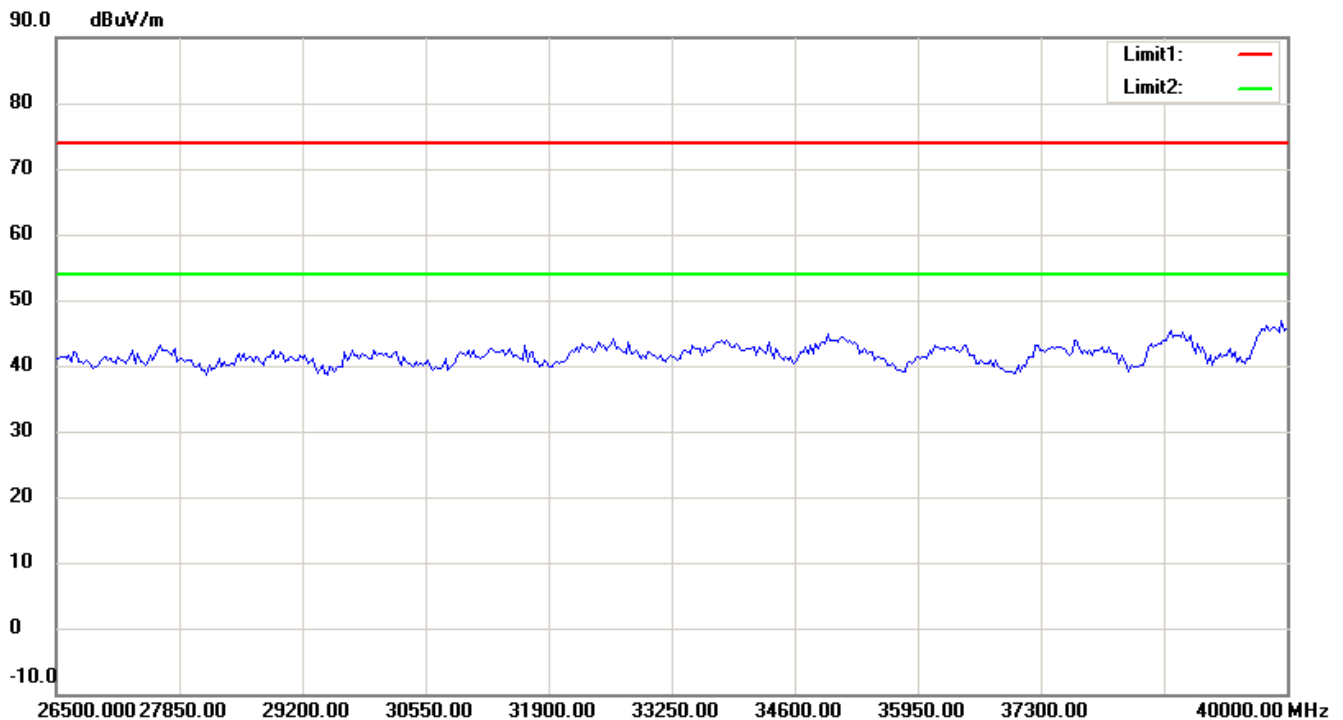
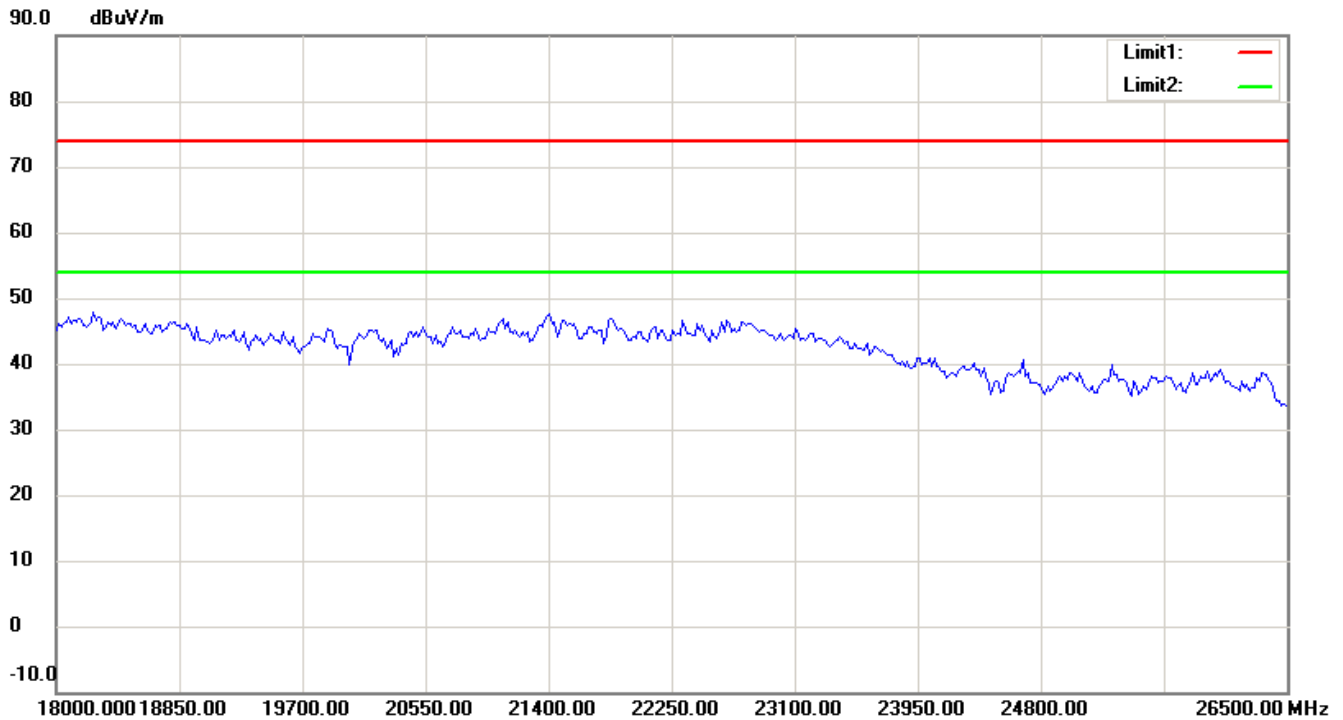
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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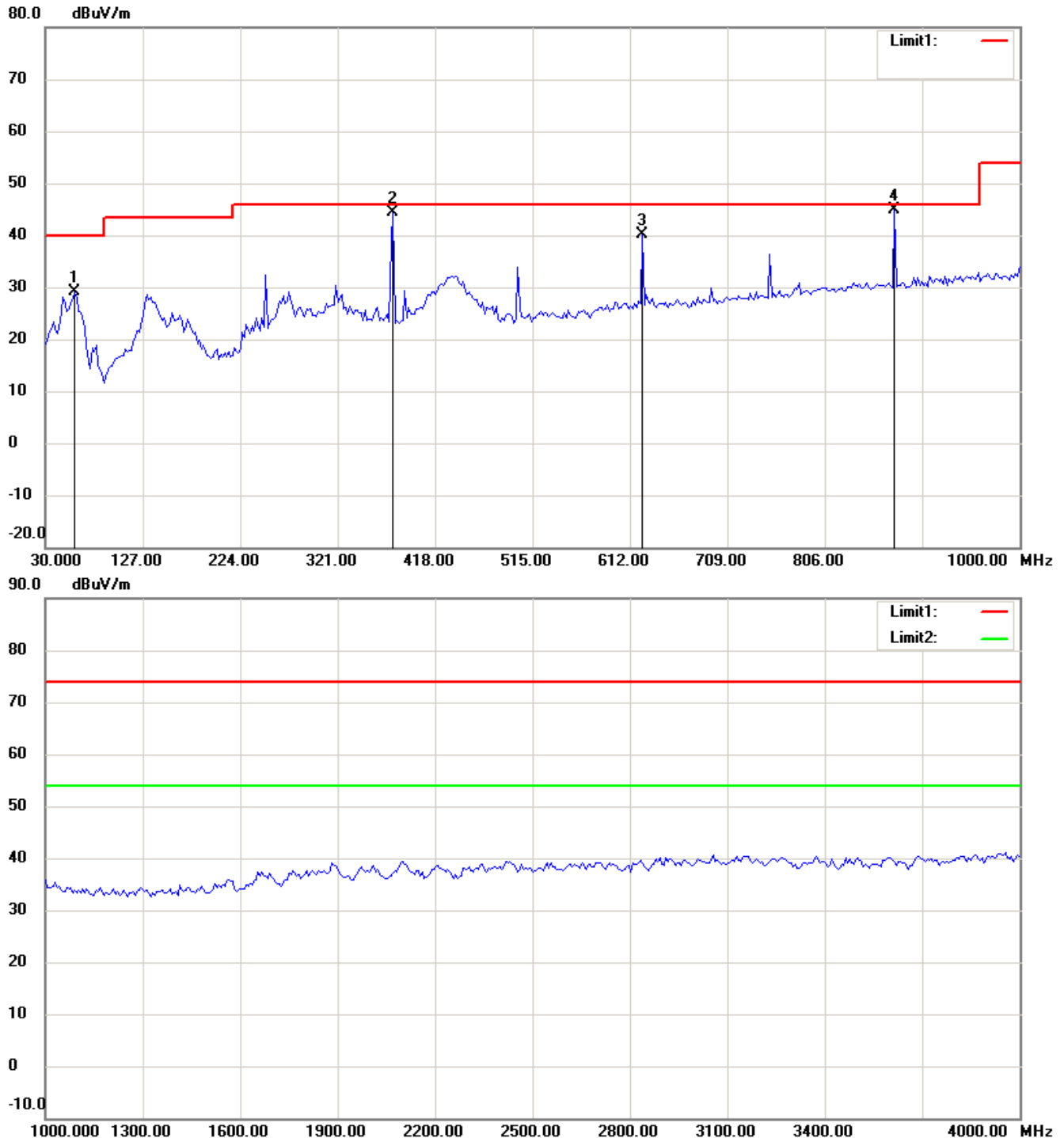
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11a 5825MHz

Antenna Polarization H



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

Note:

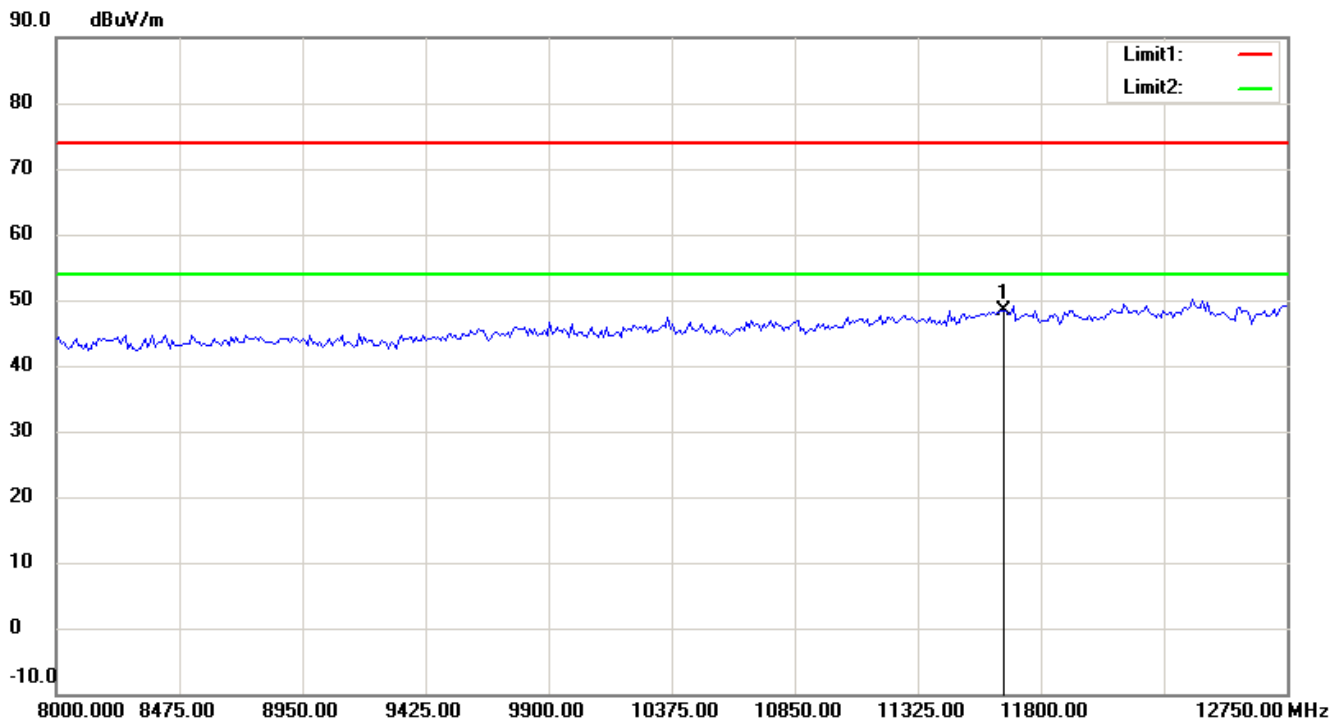
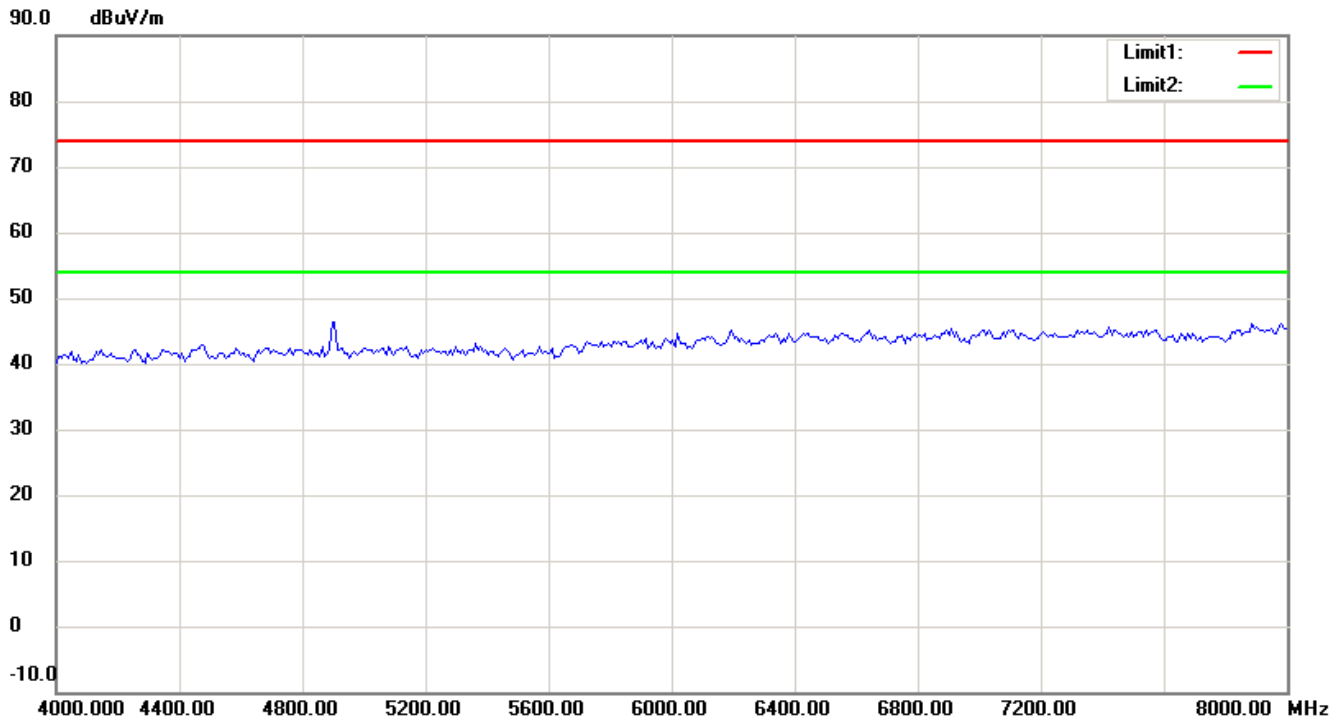
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

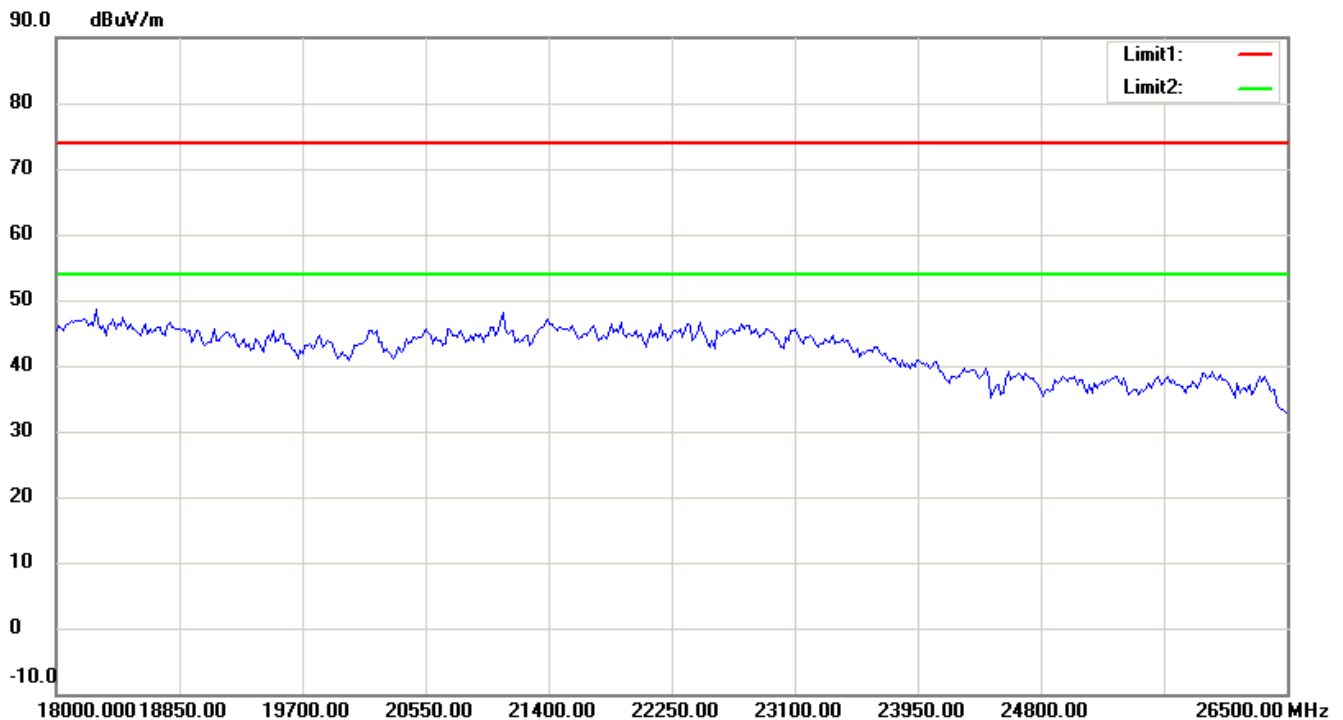
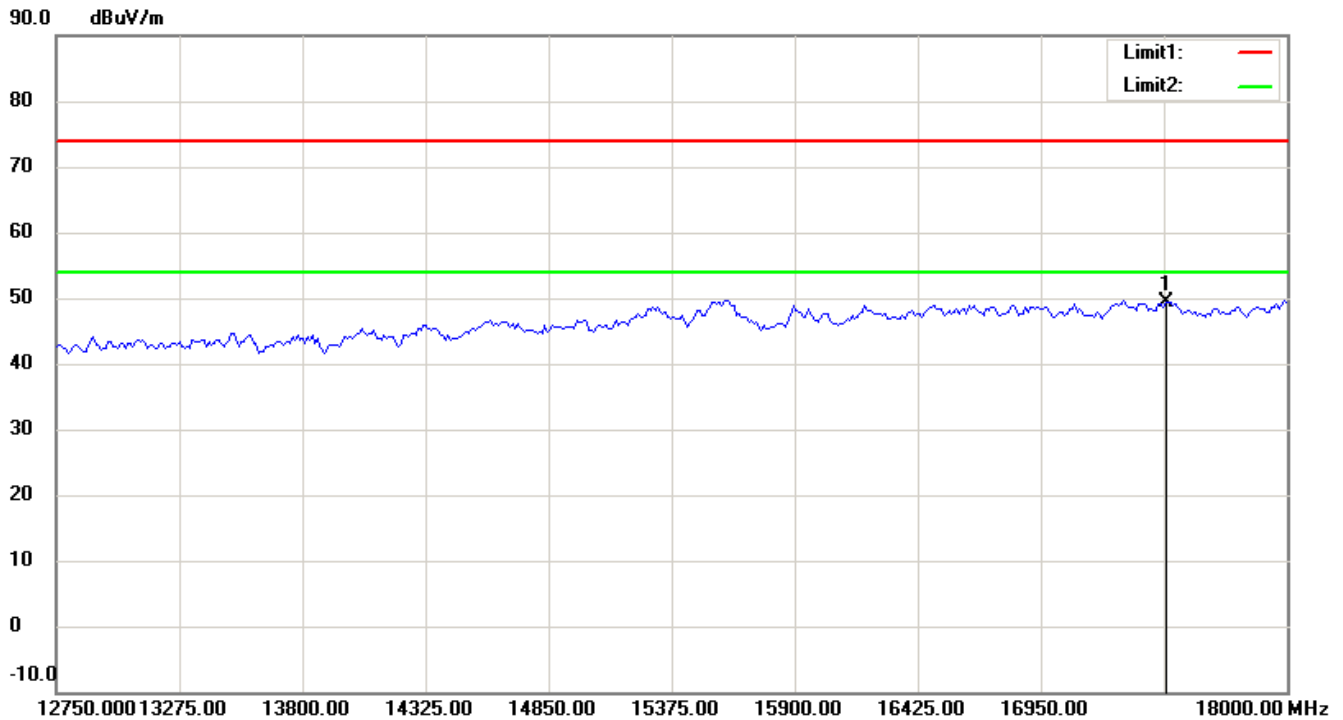
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

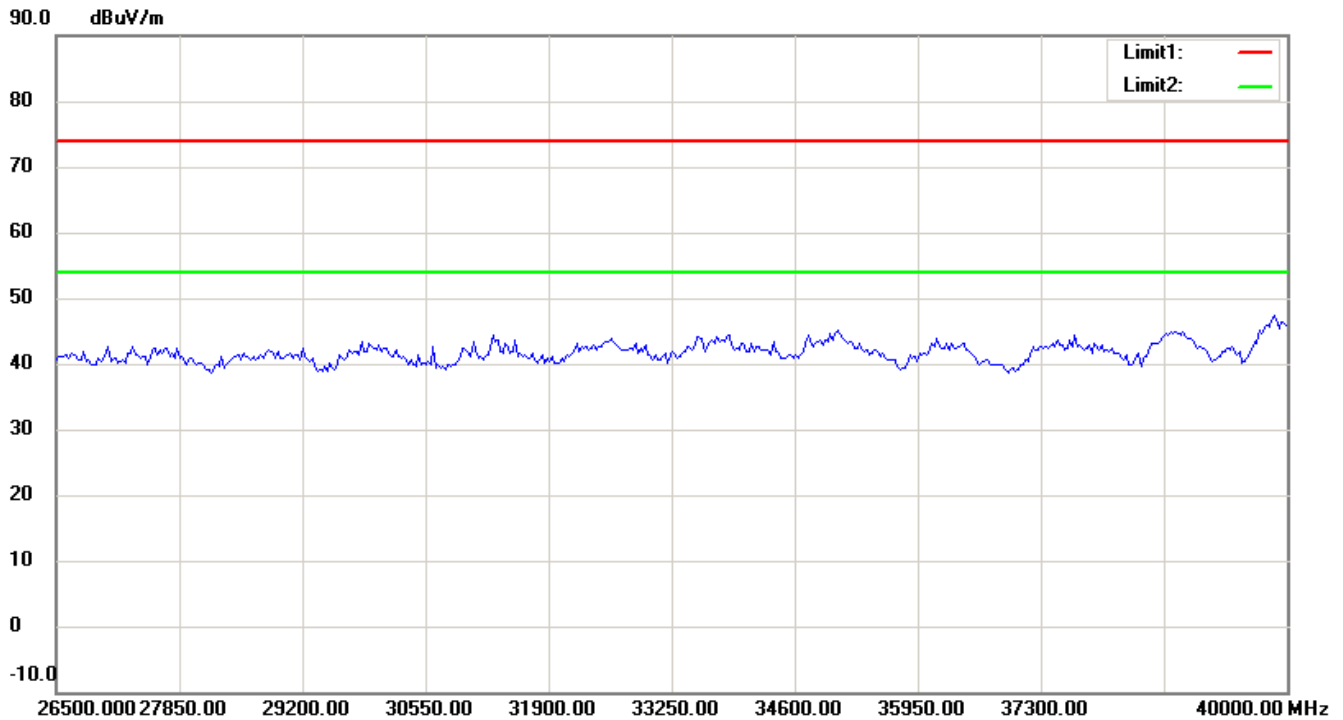
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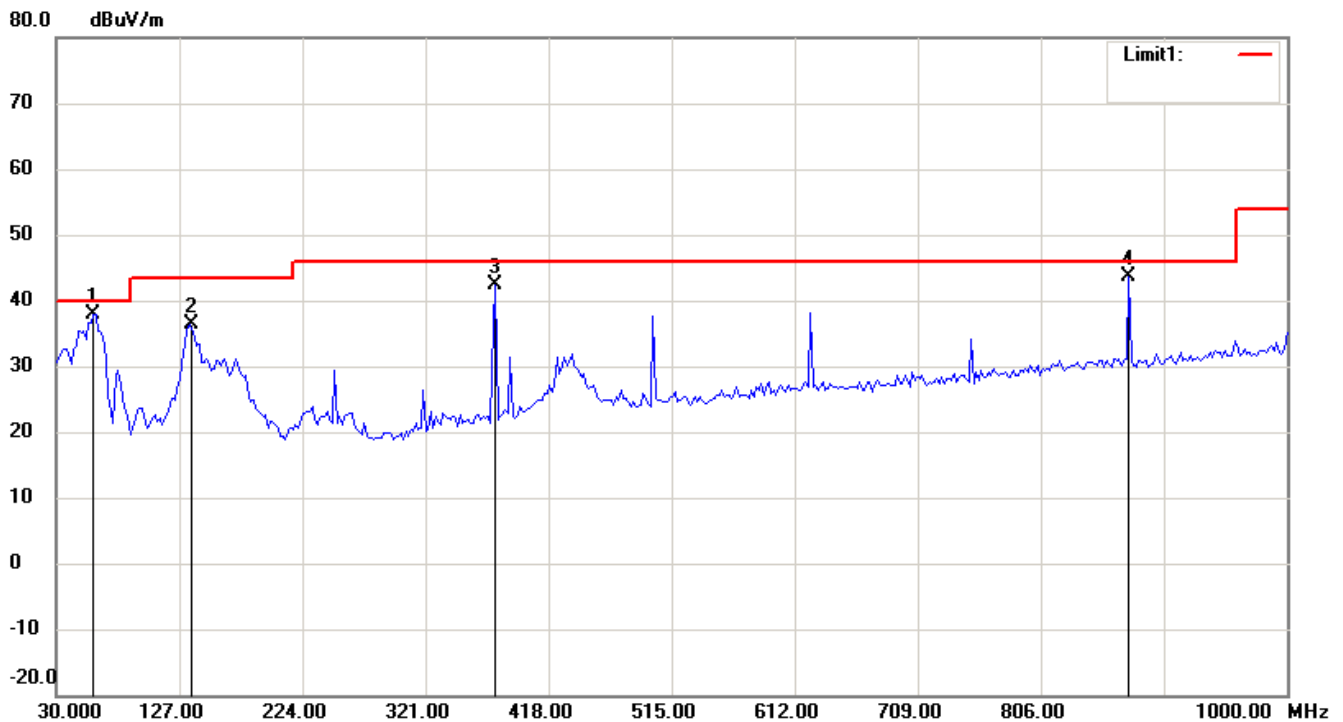
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

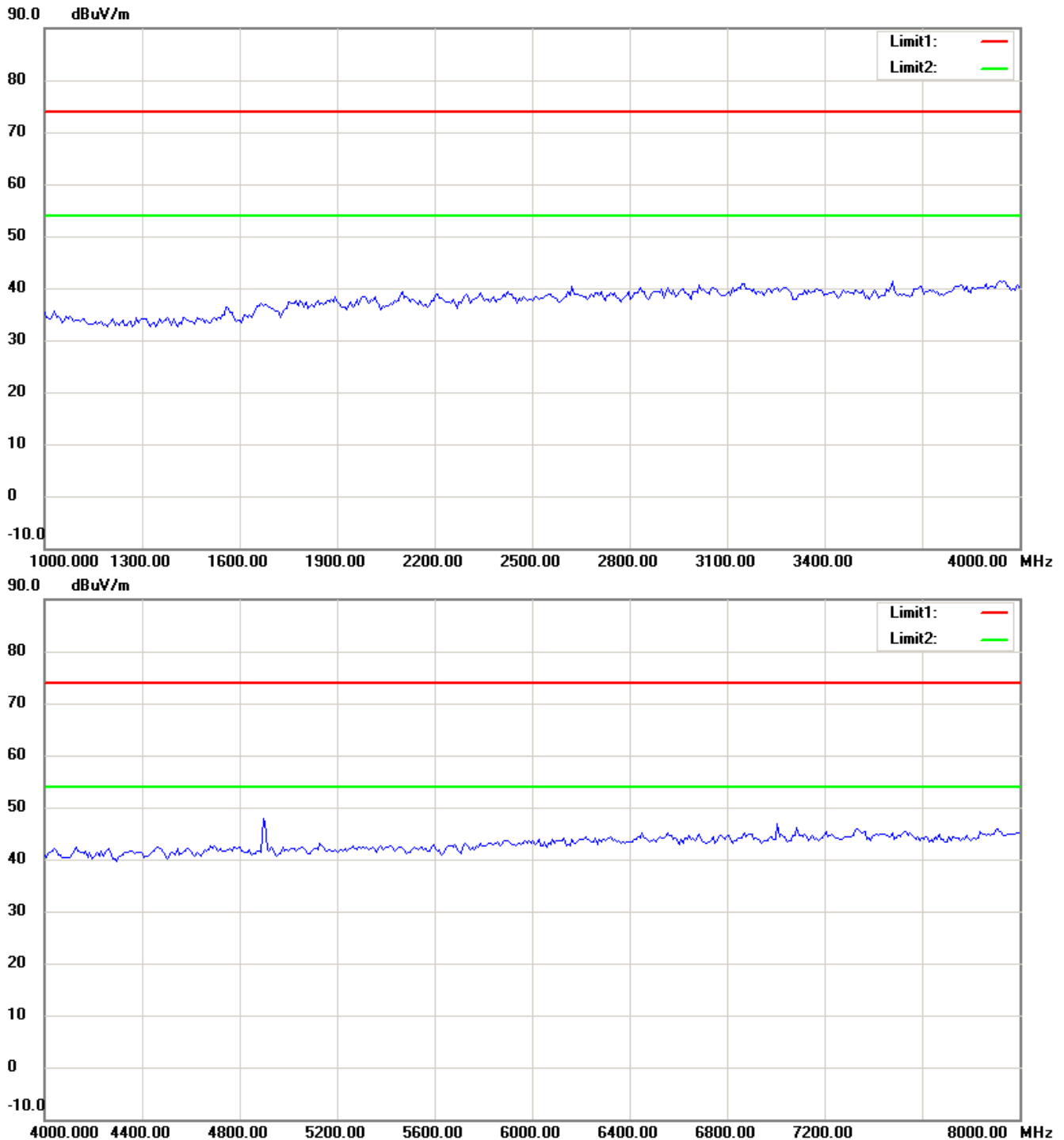
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

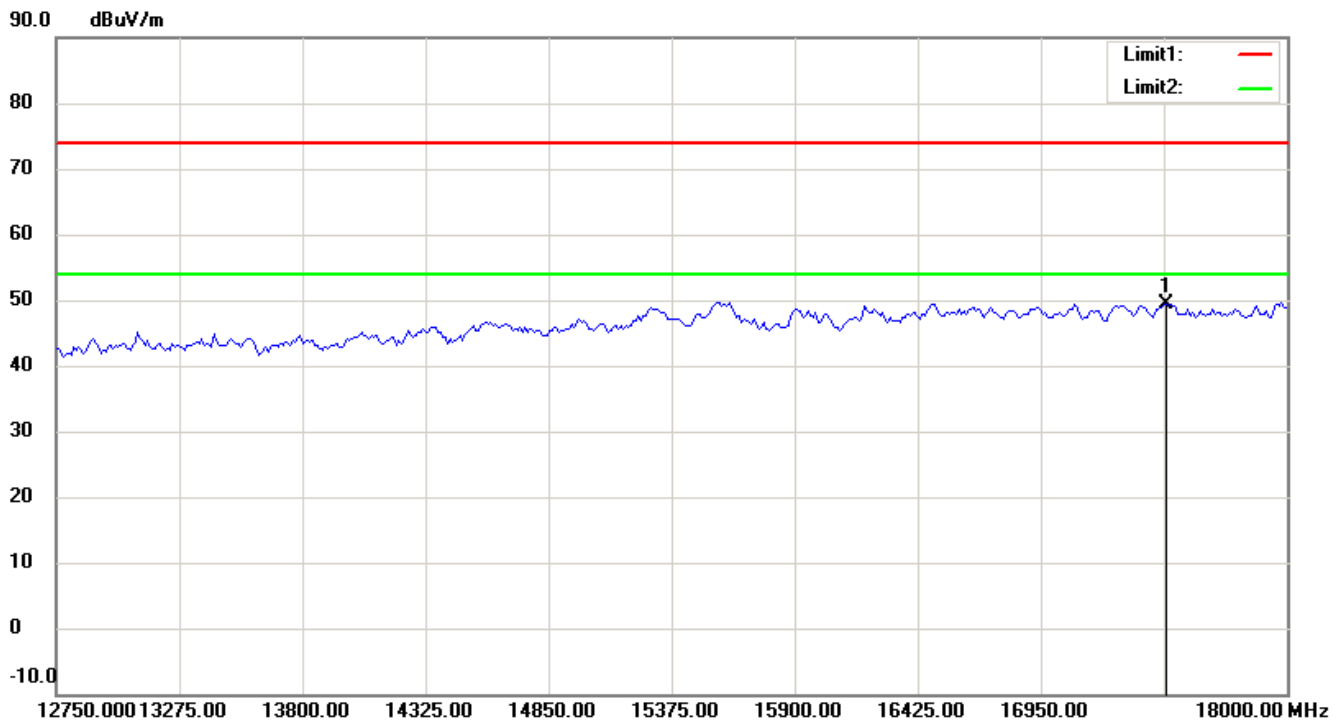
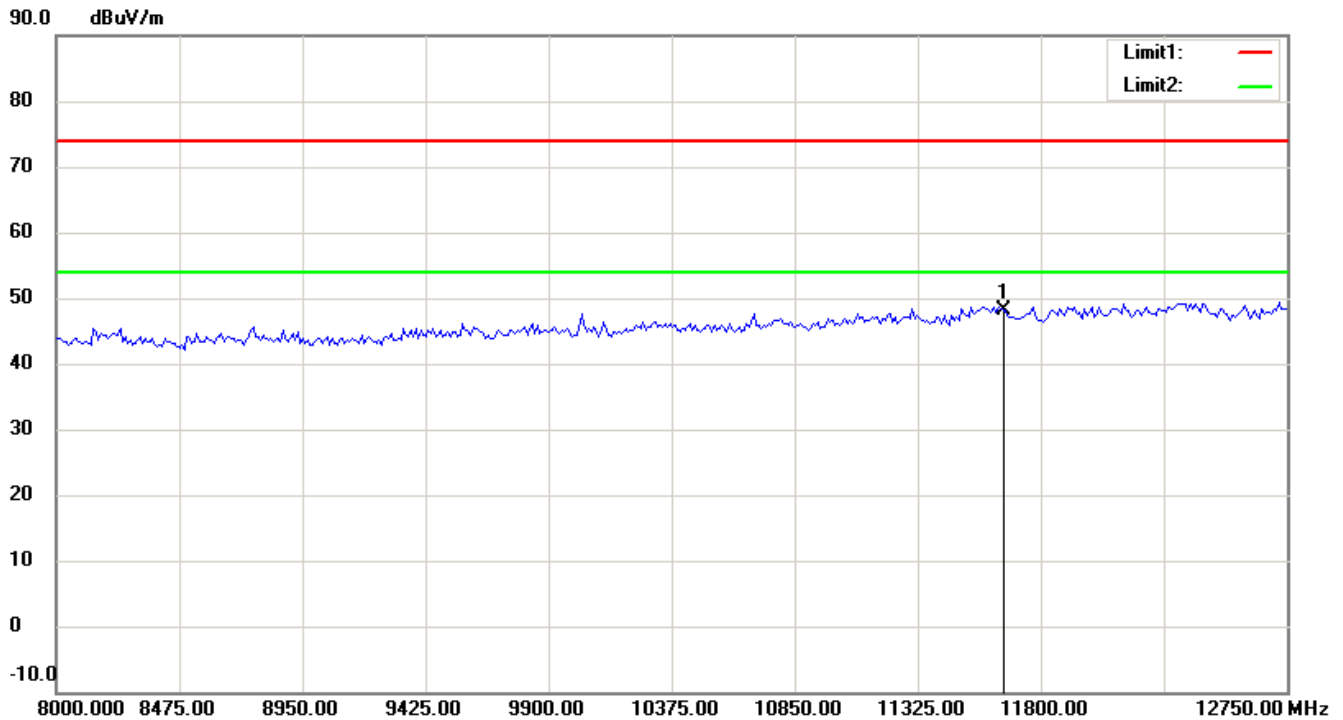
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

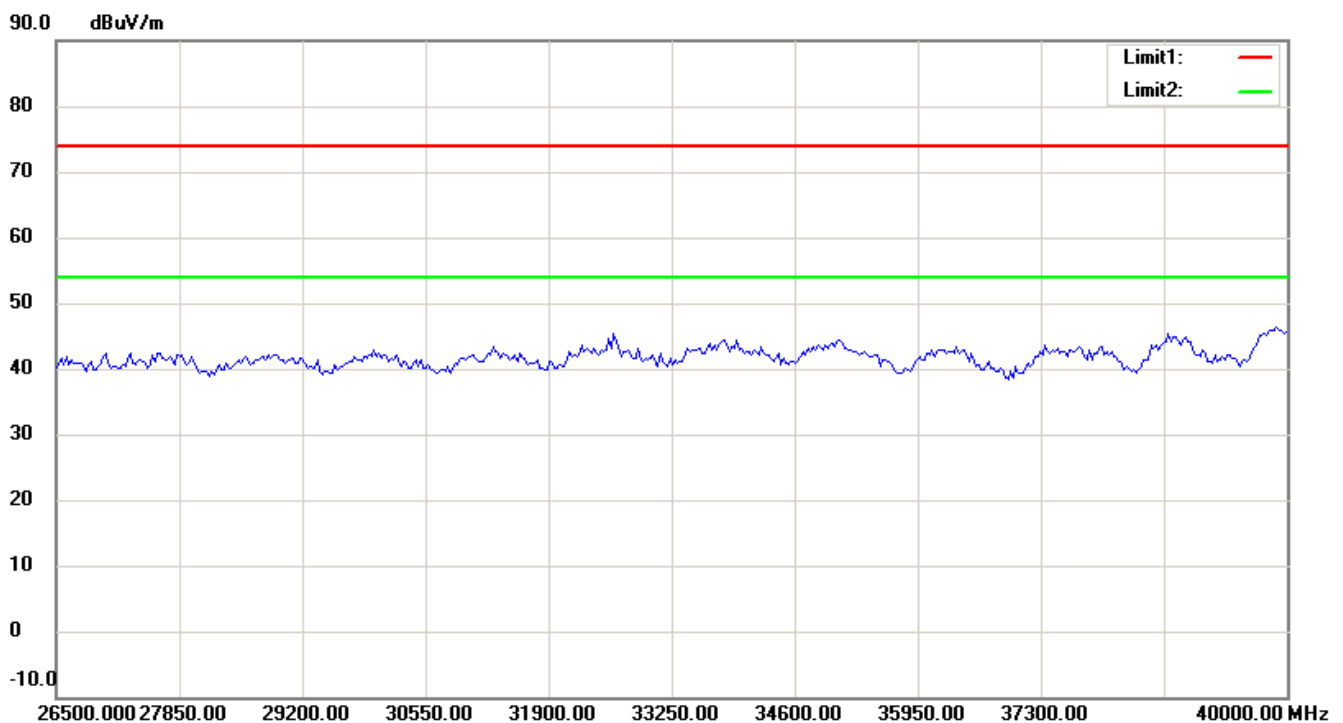
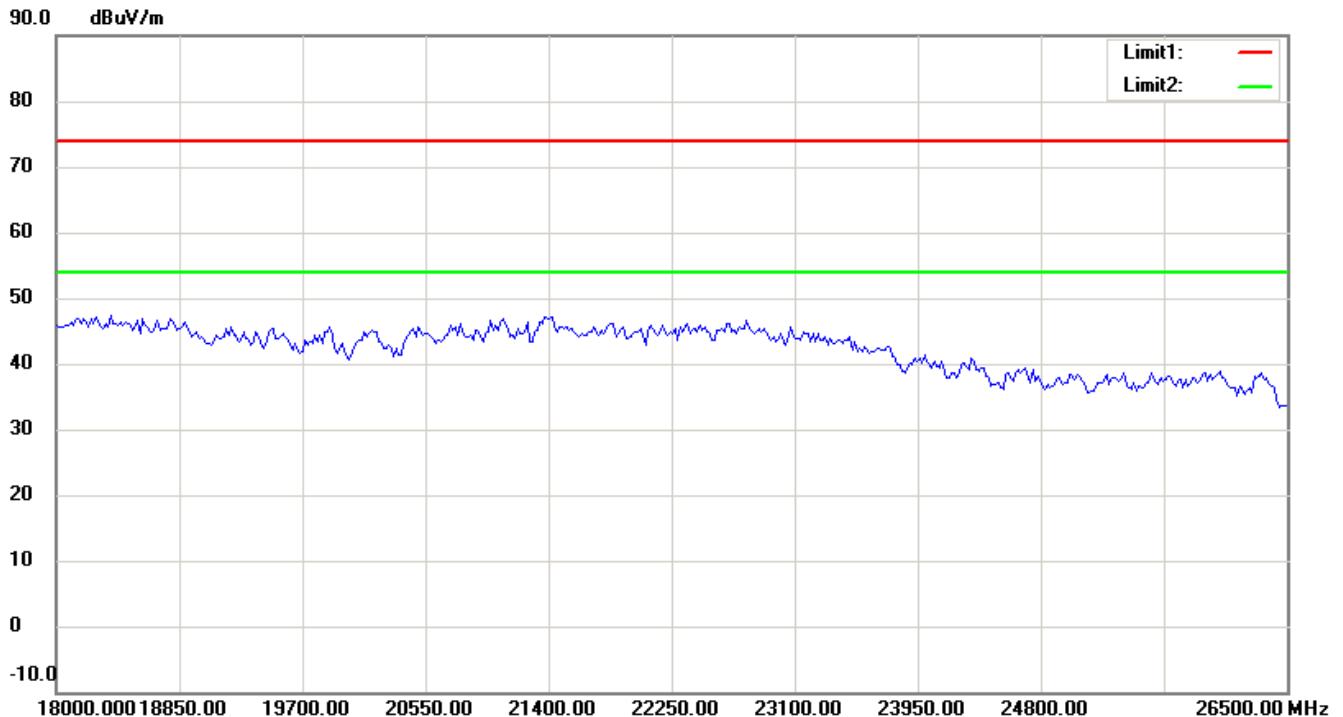
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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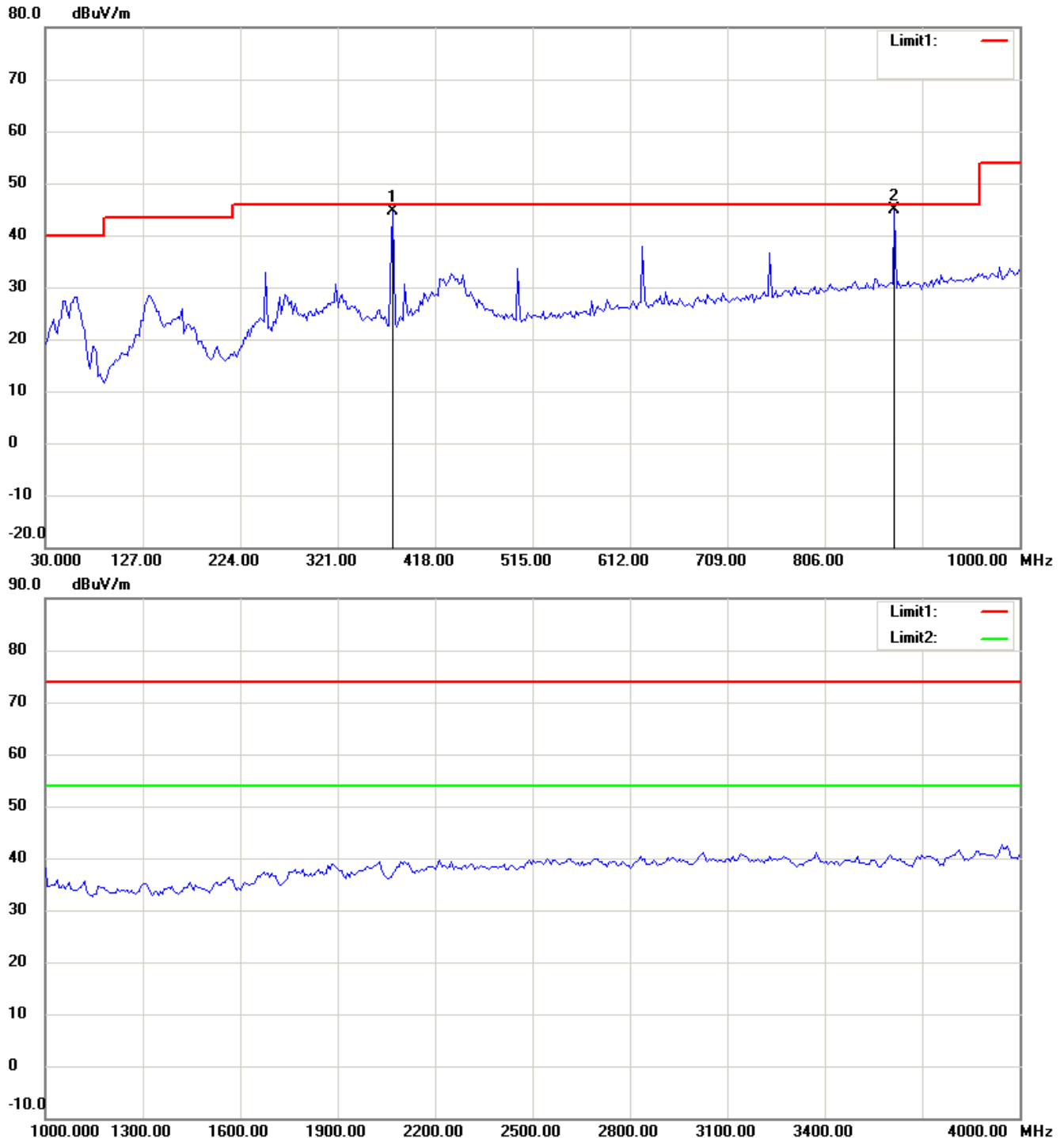
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2412MHz

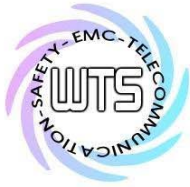
Antenna Polarization H



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

Note:

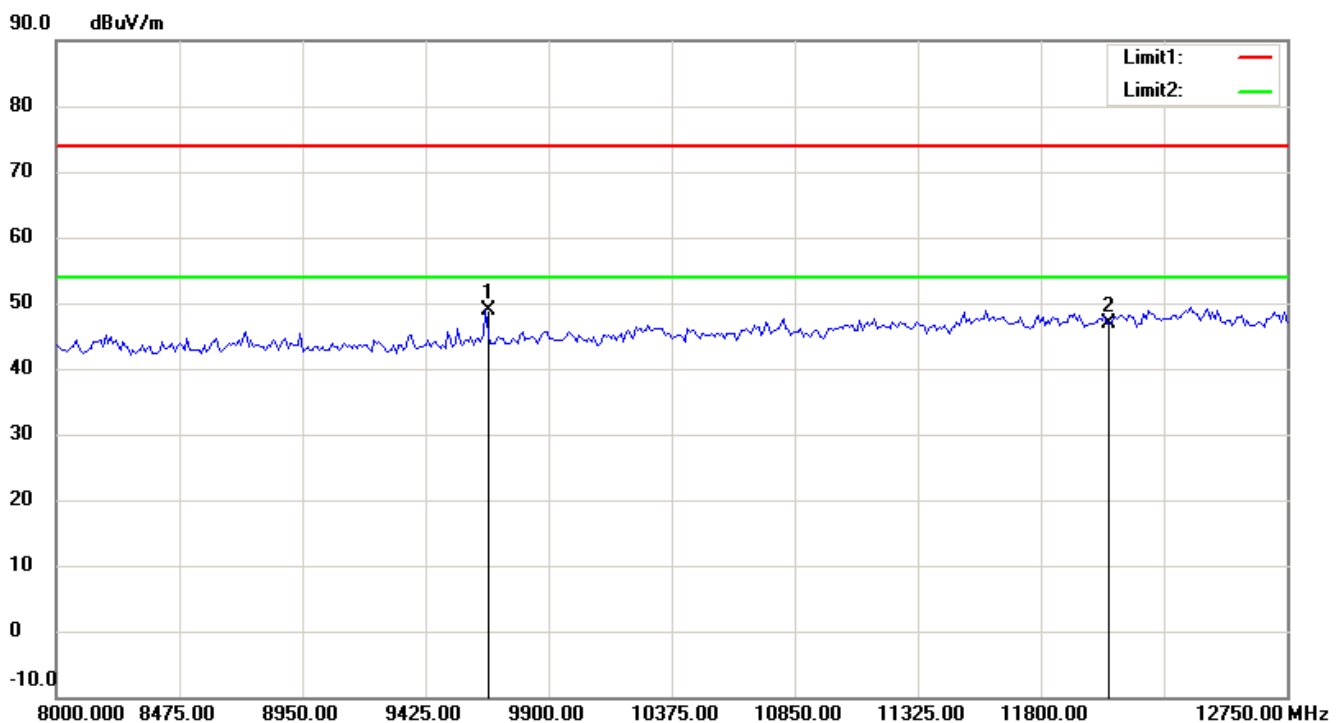
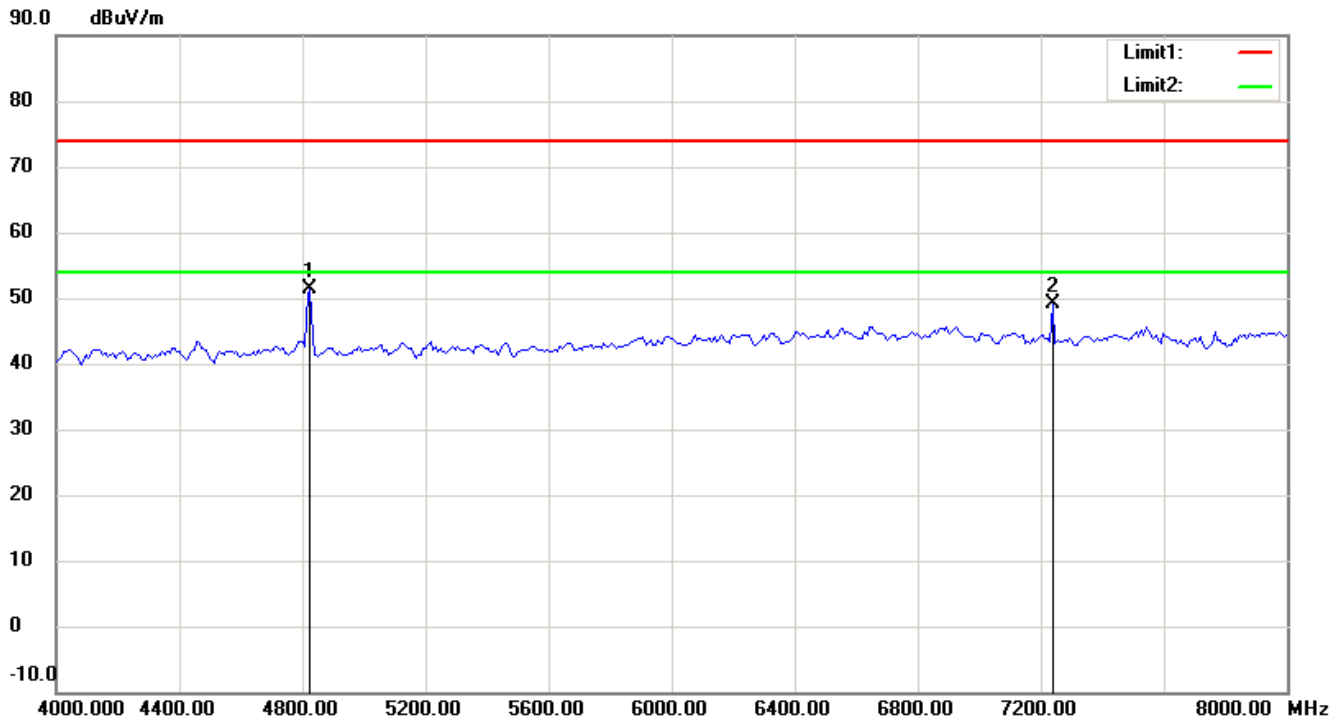
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

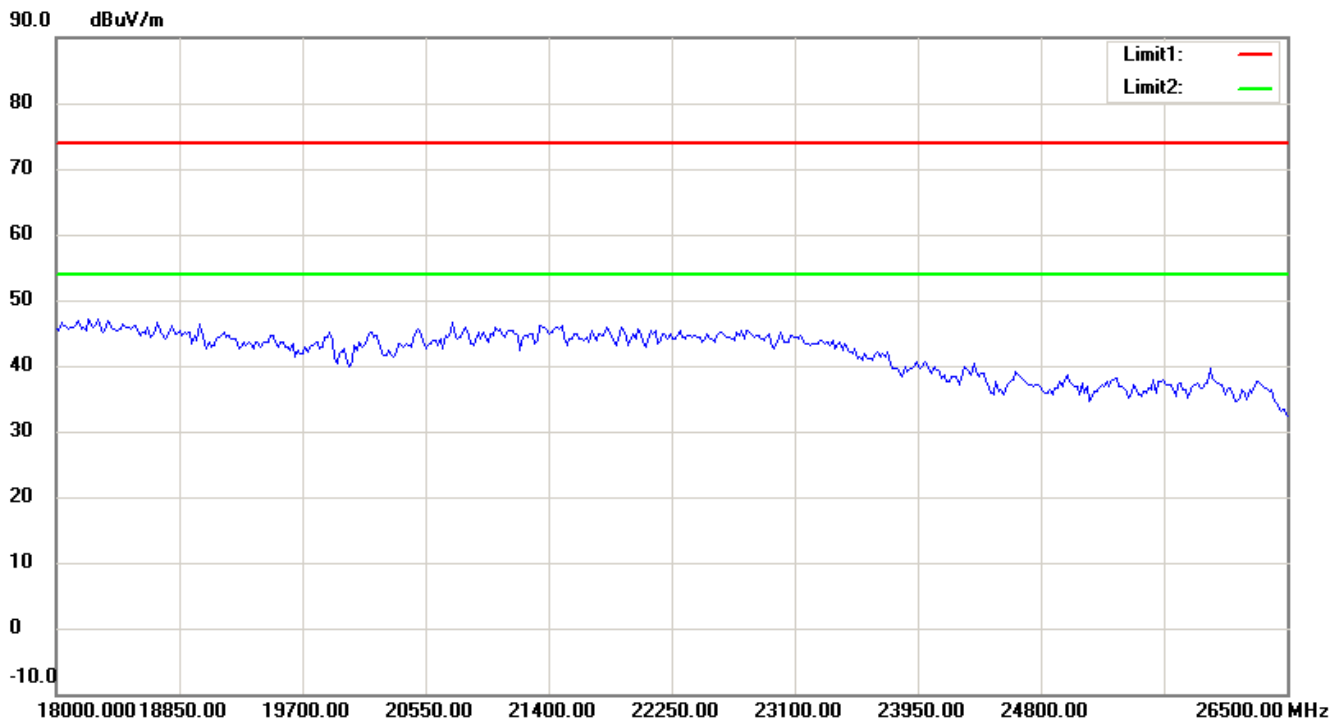
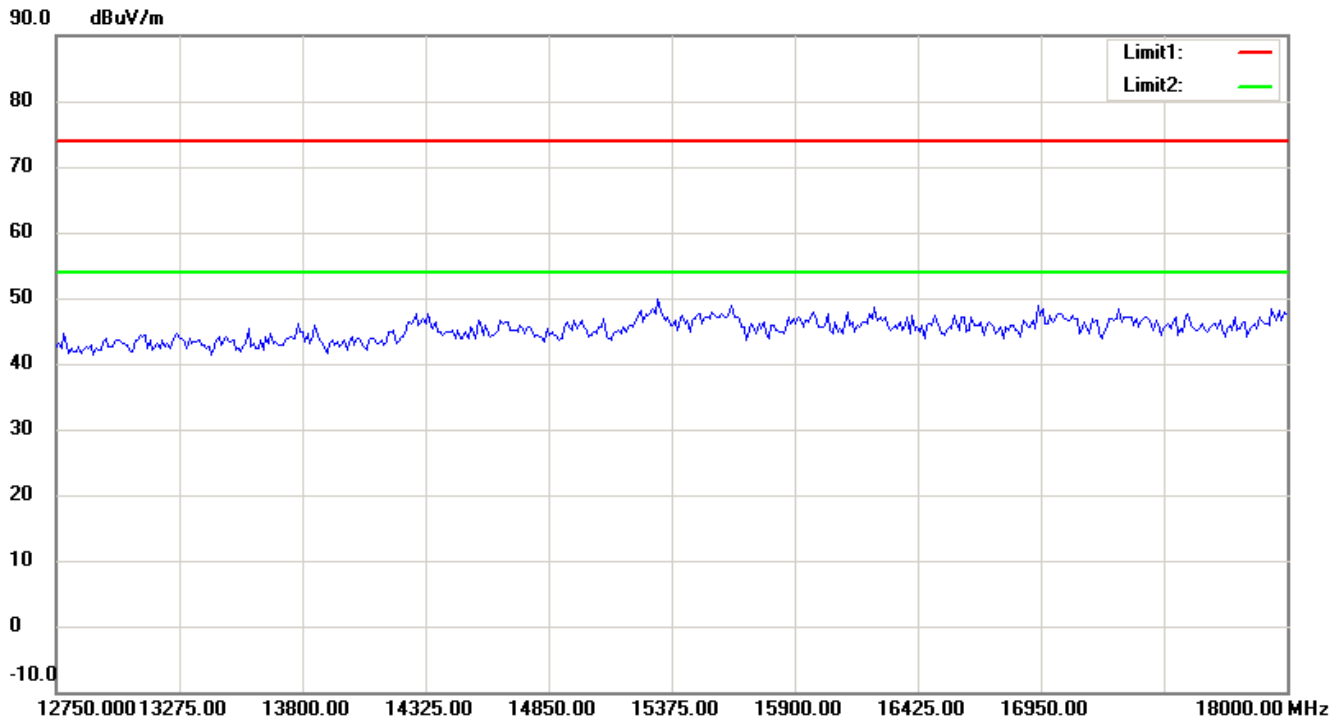
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

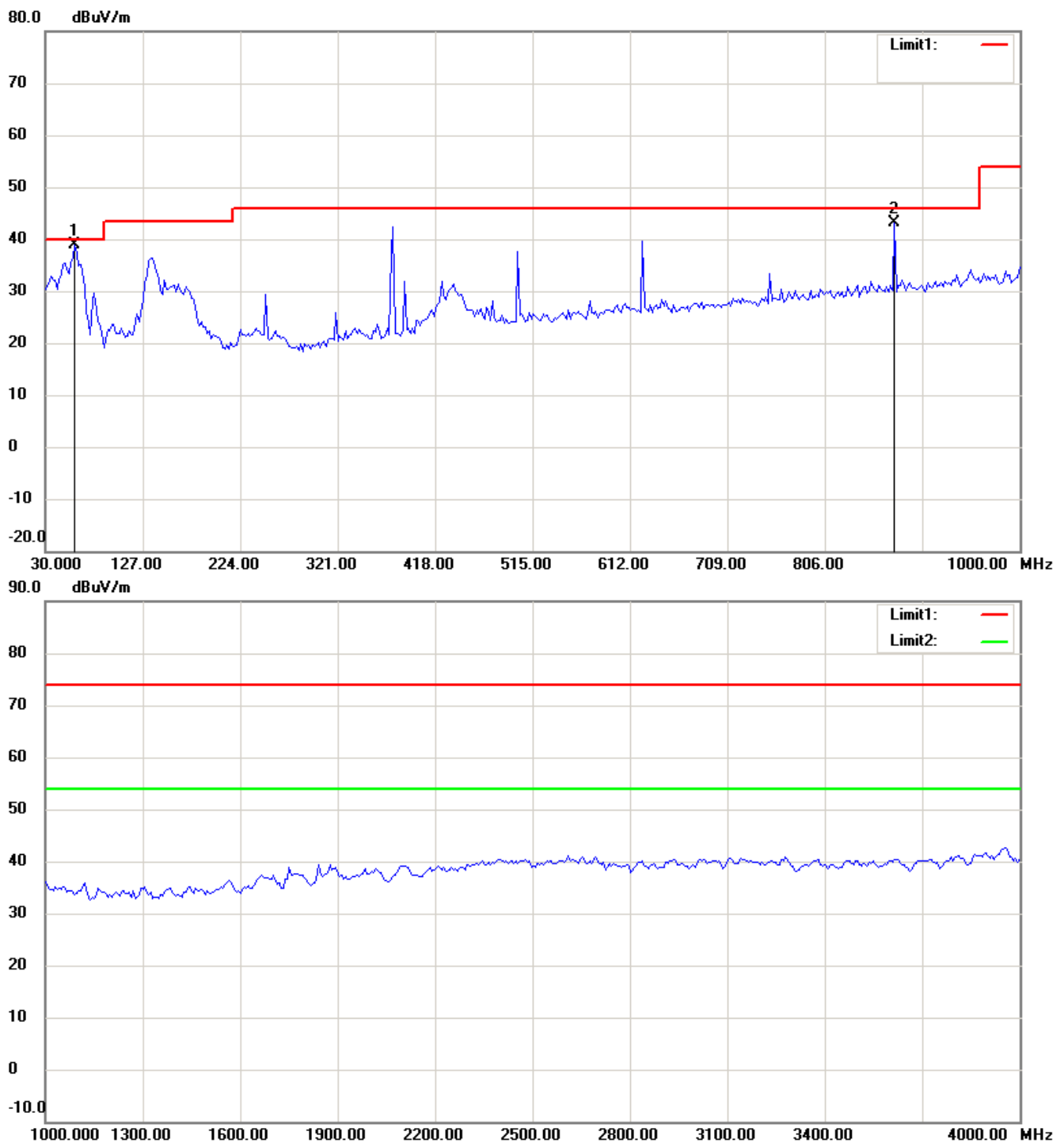
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

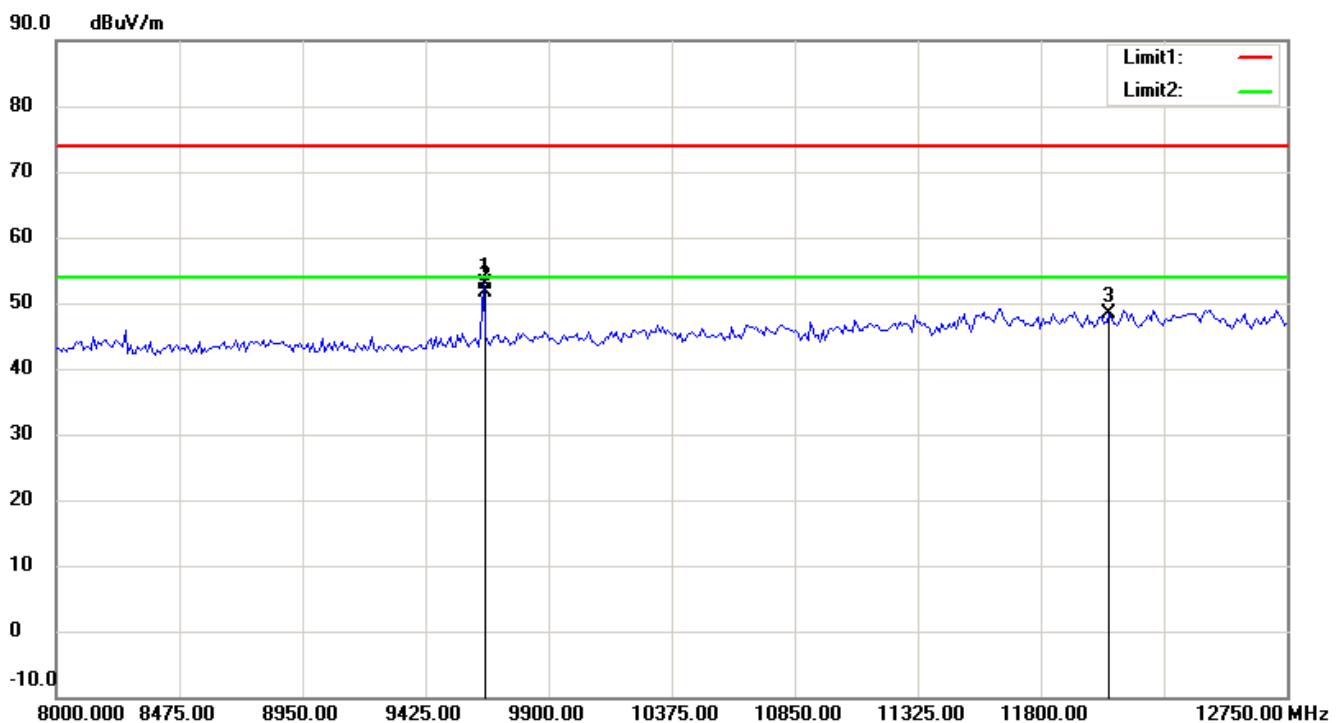
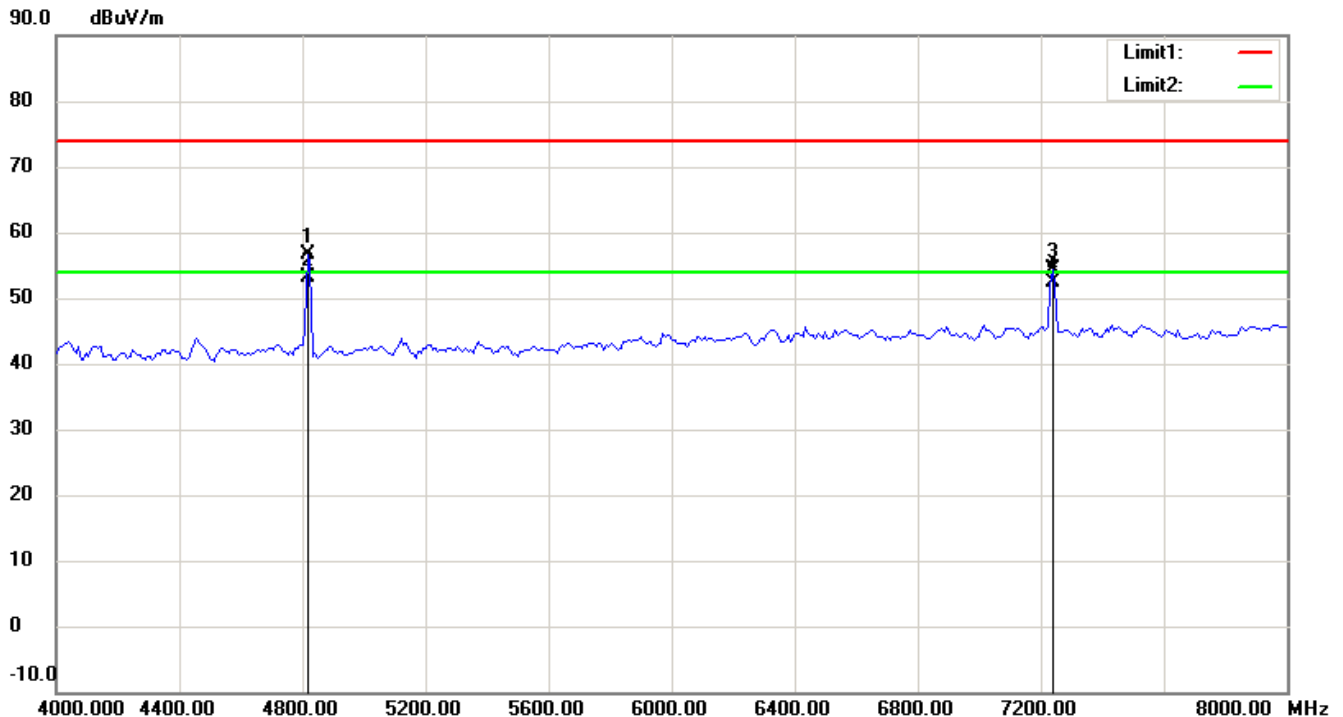
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

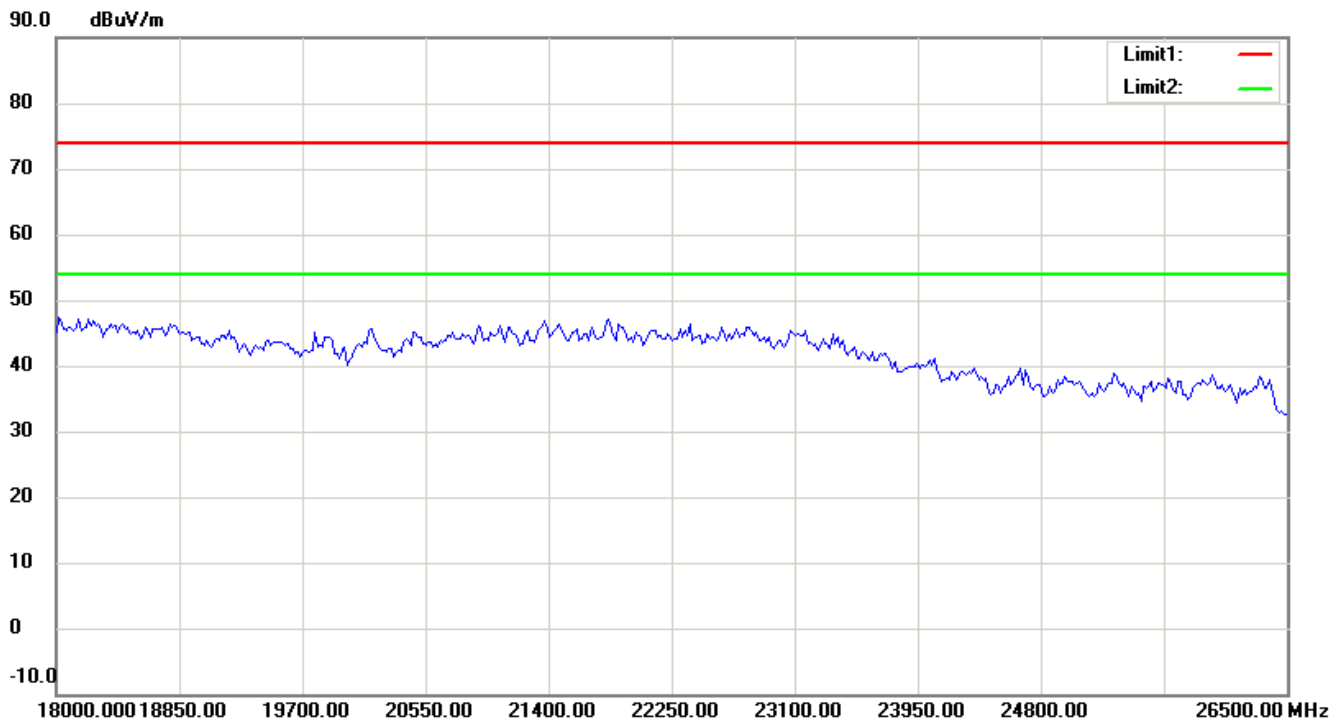
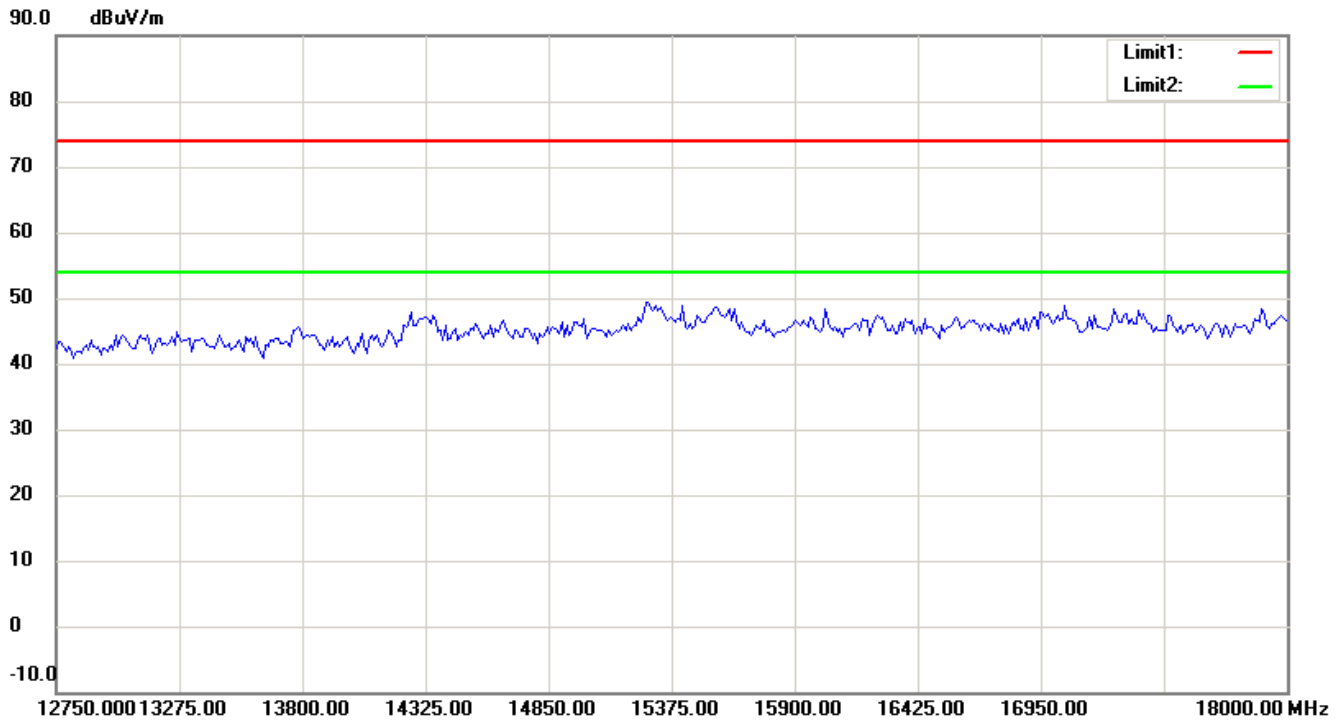
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

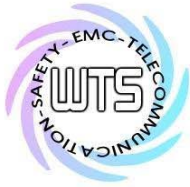
FCC ID: ZTT-APA20



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

Note:

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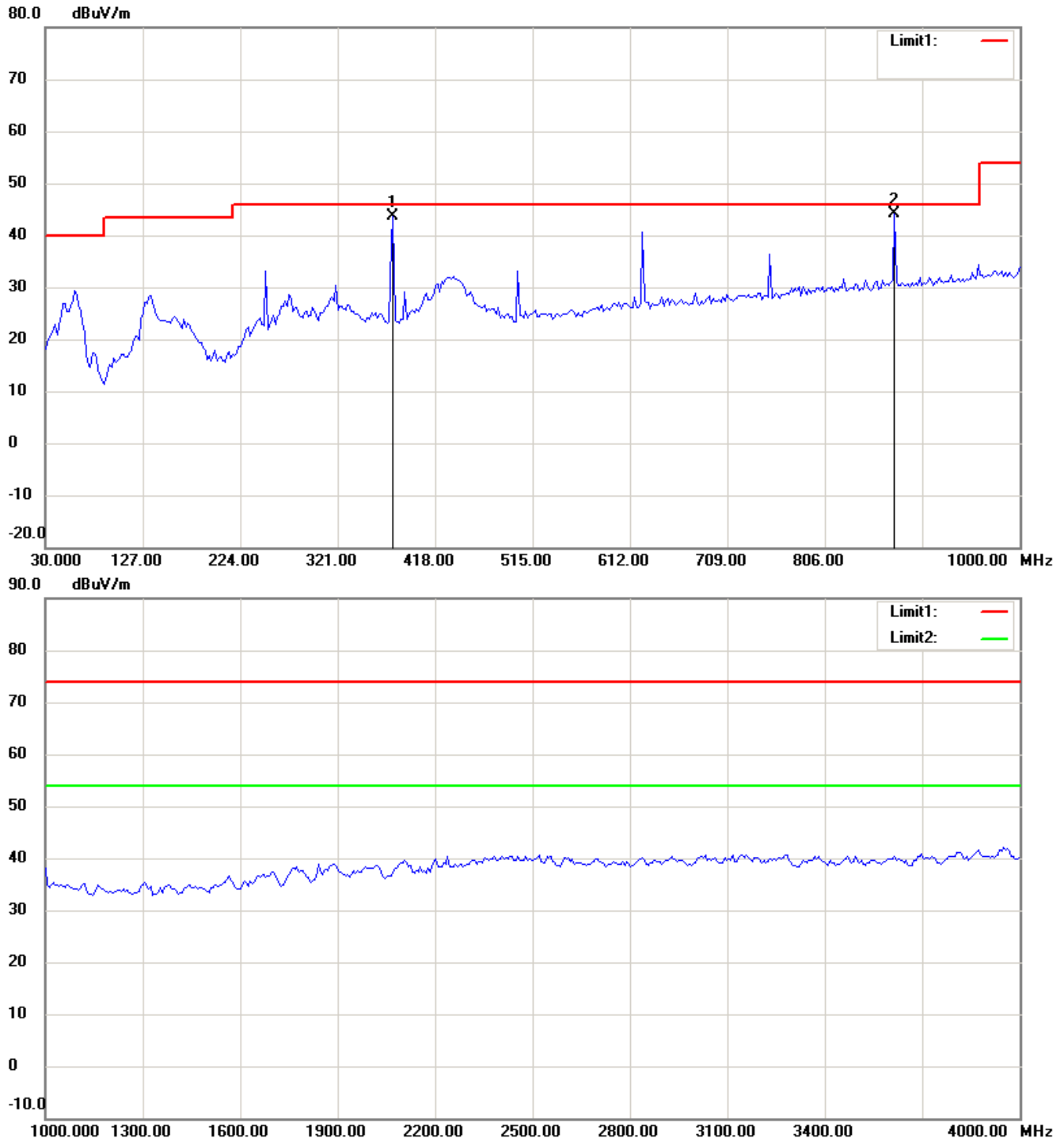
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2437MHz

Antenna Polarization H



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

Note:

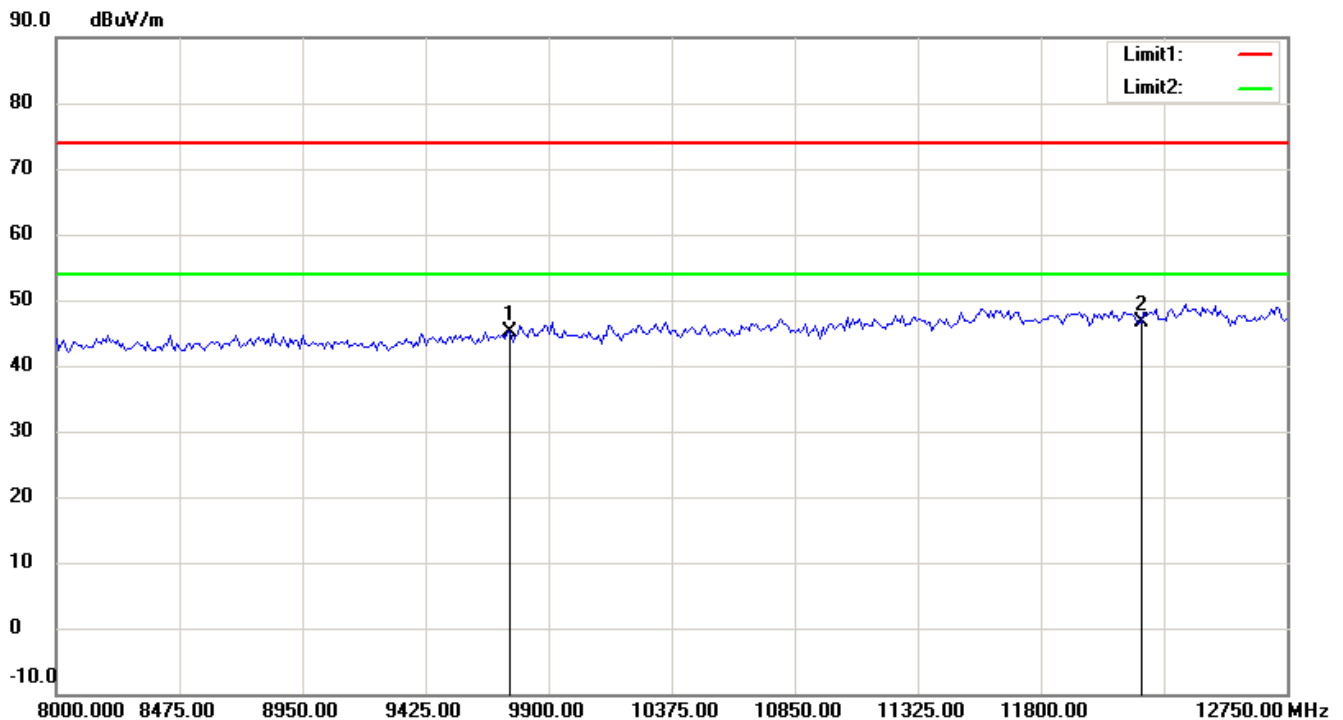
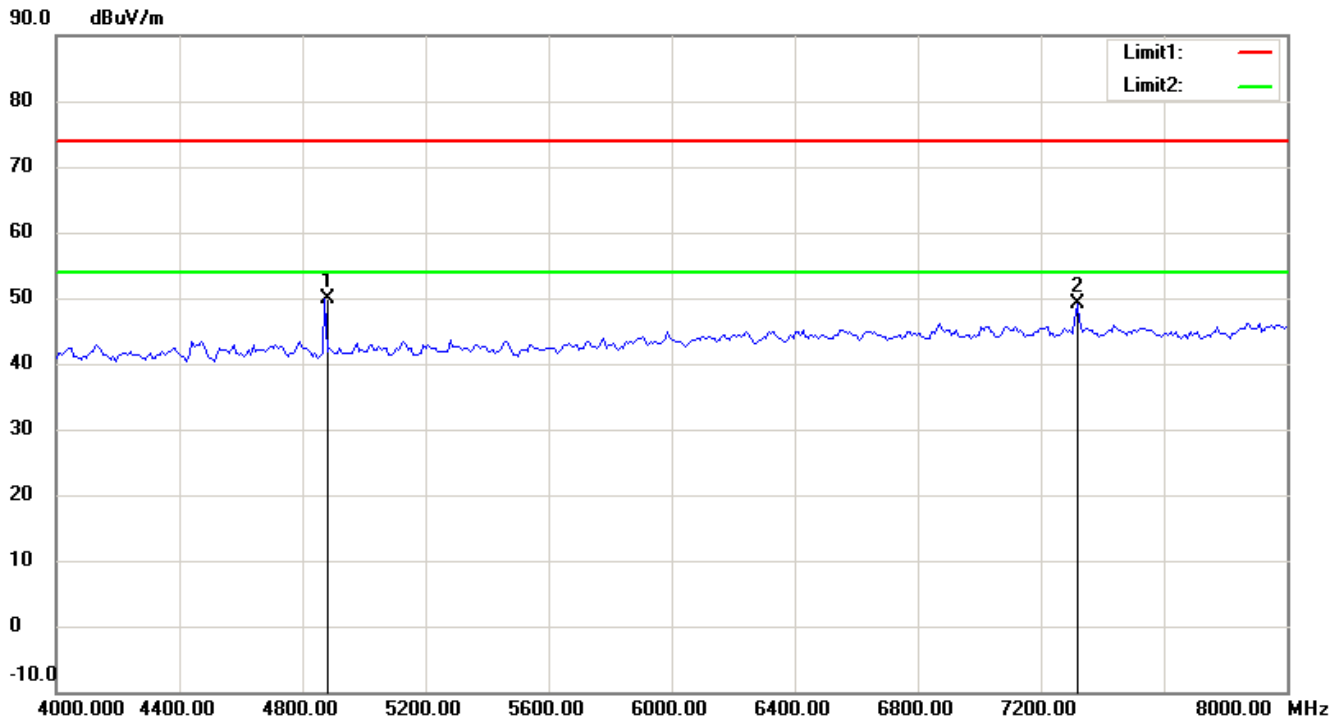
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

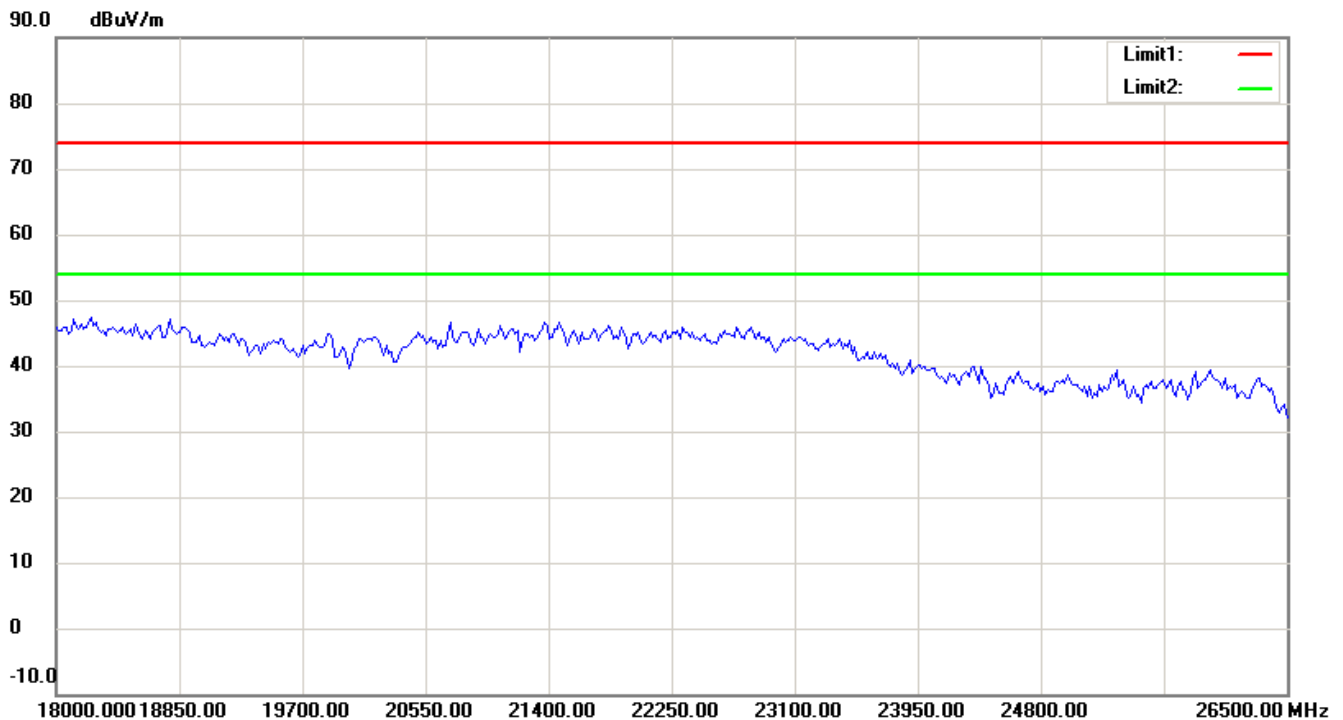
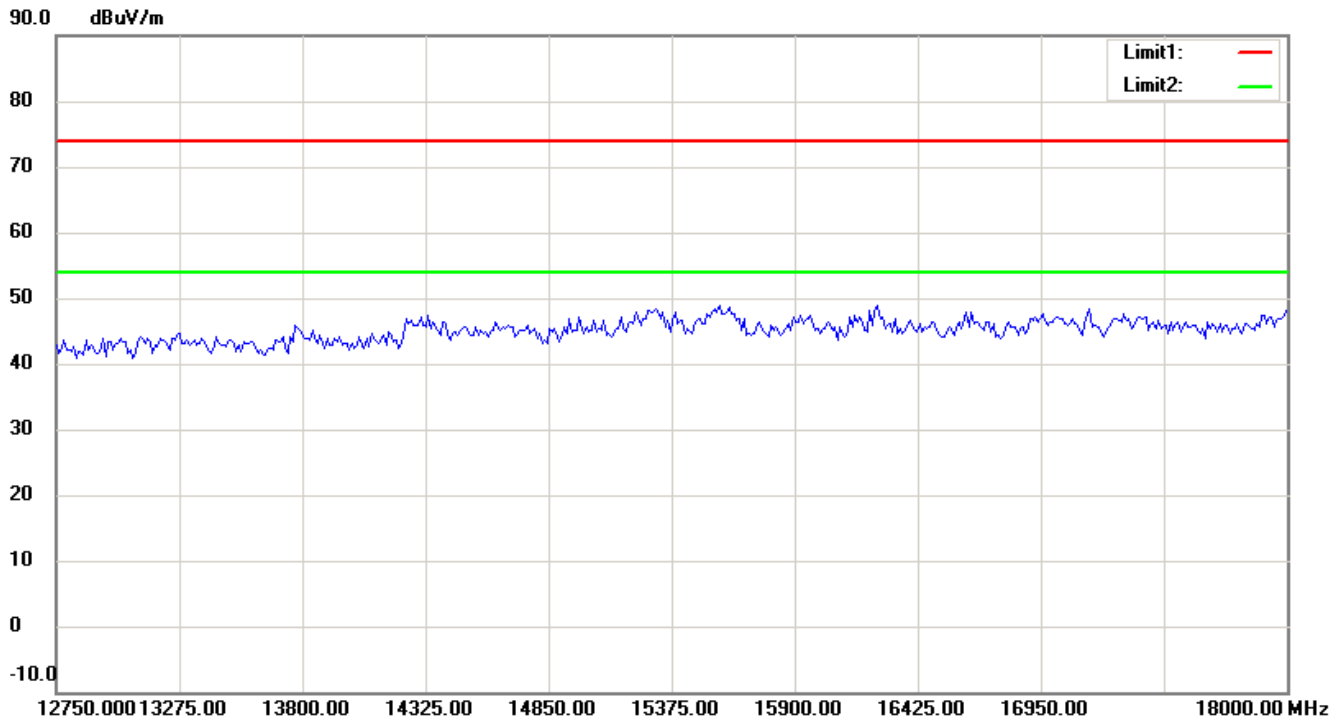
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

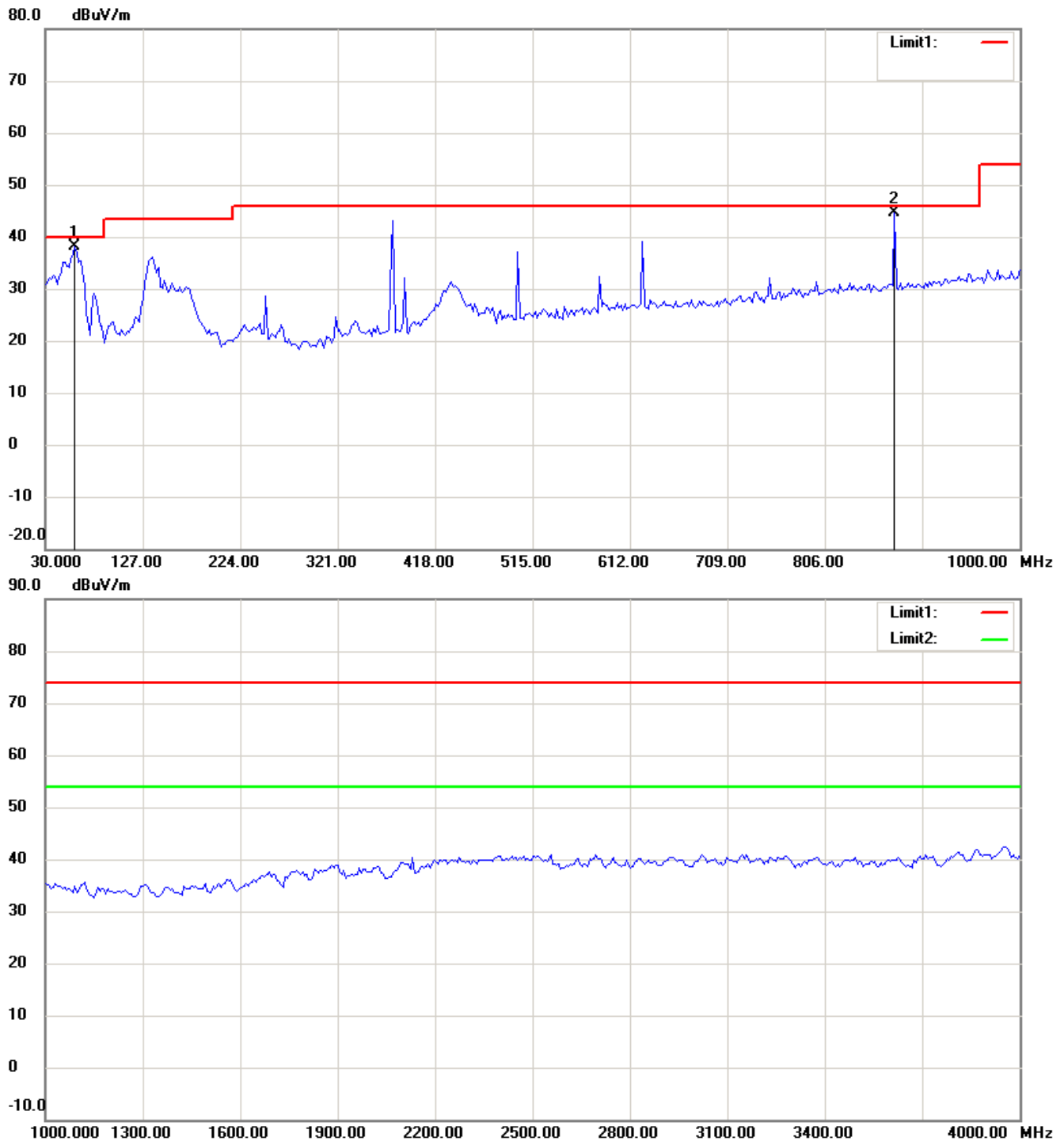
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

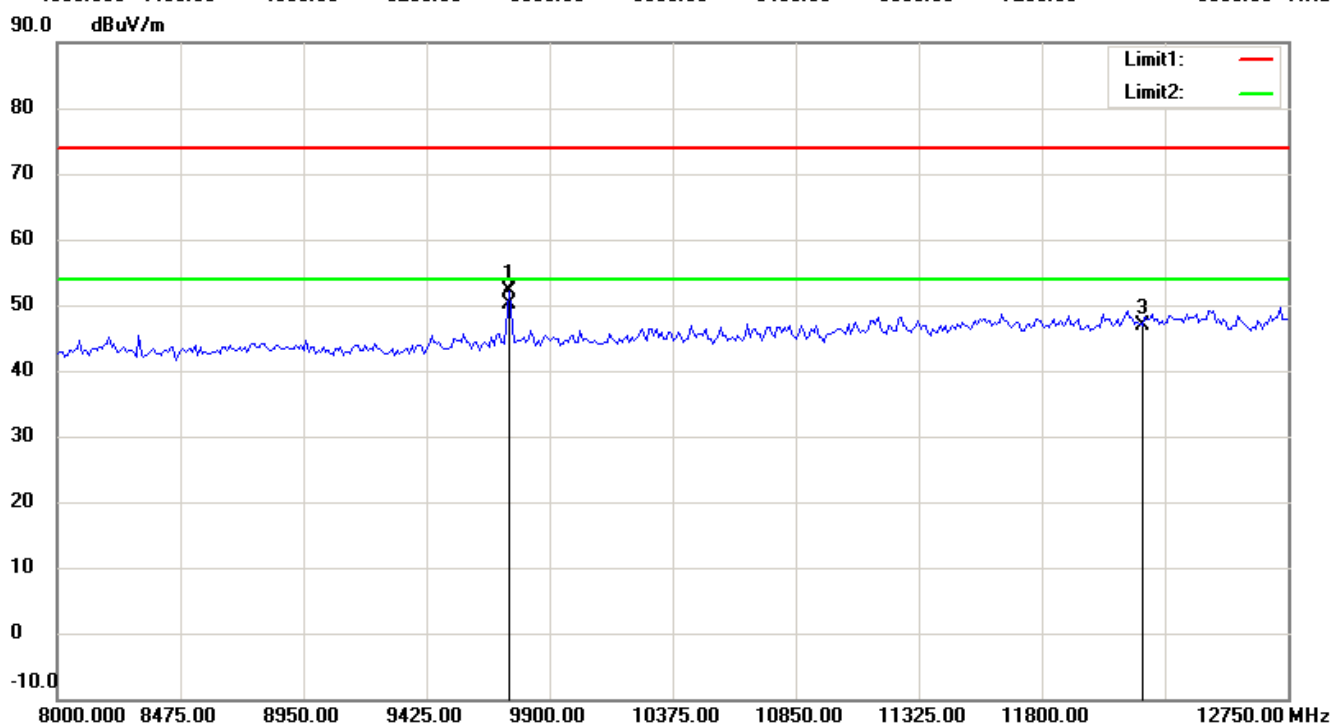
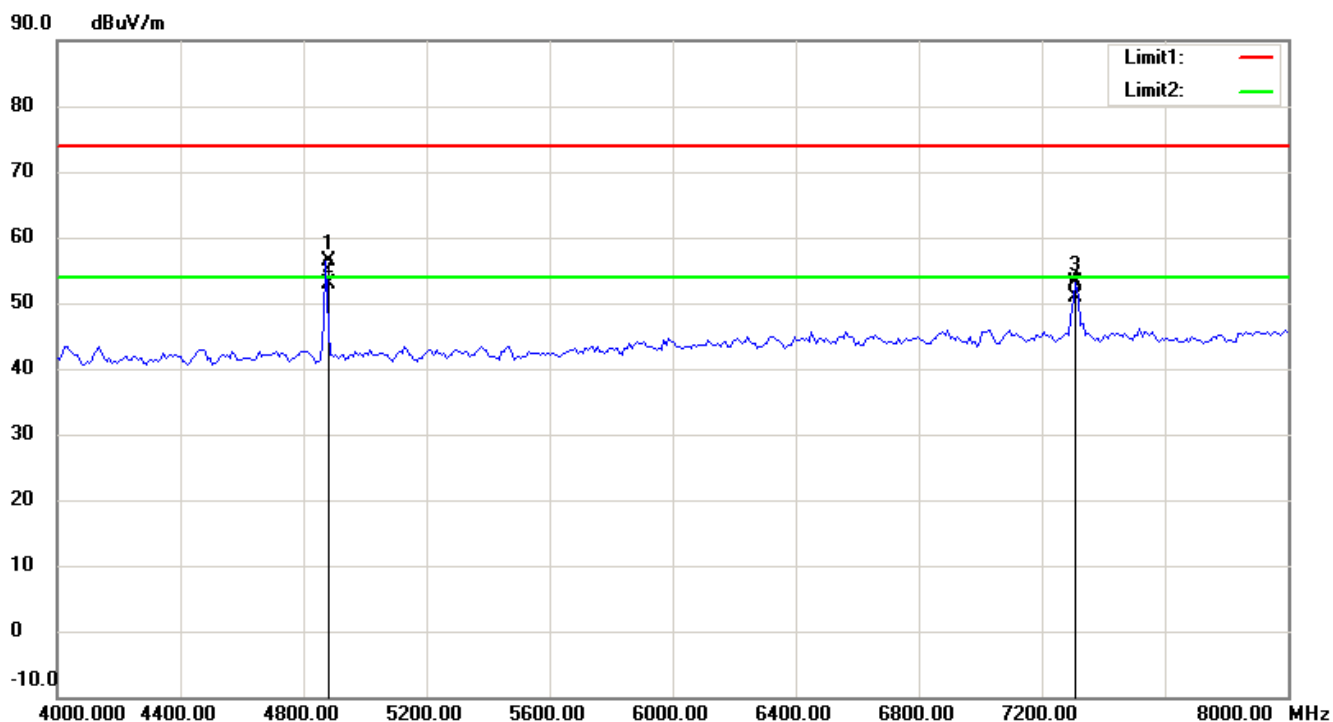
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

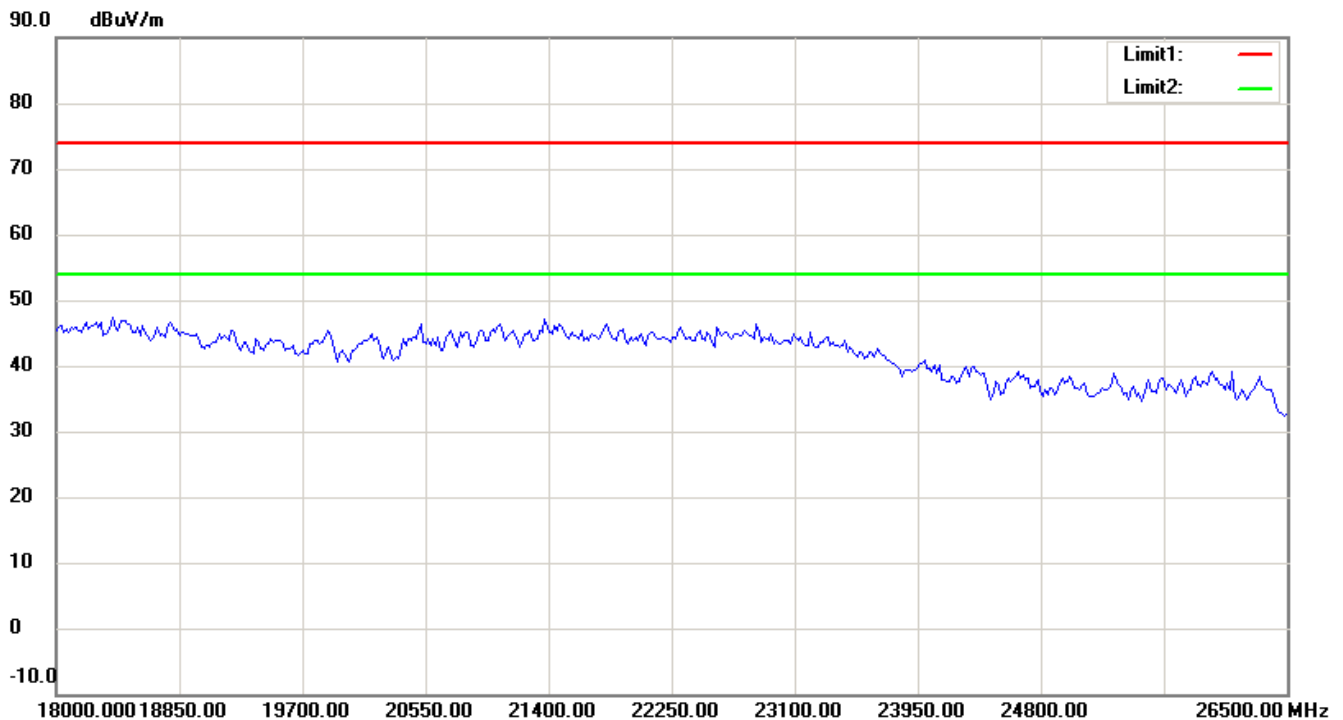
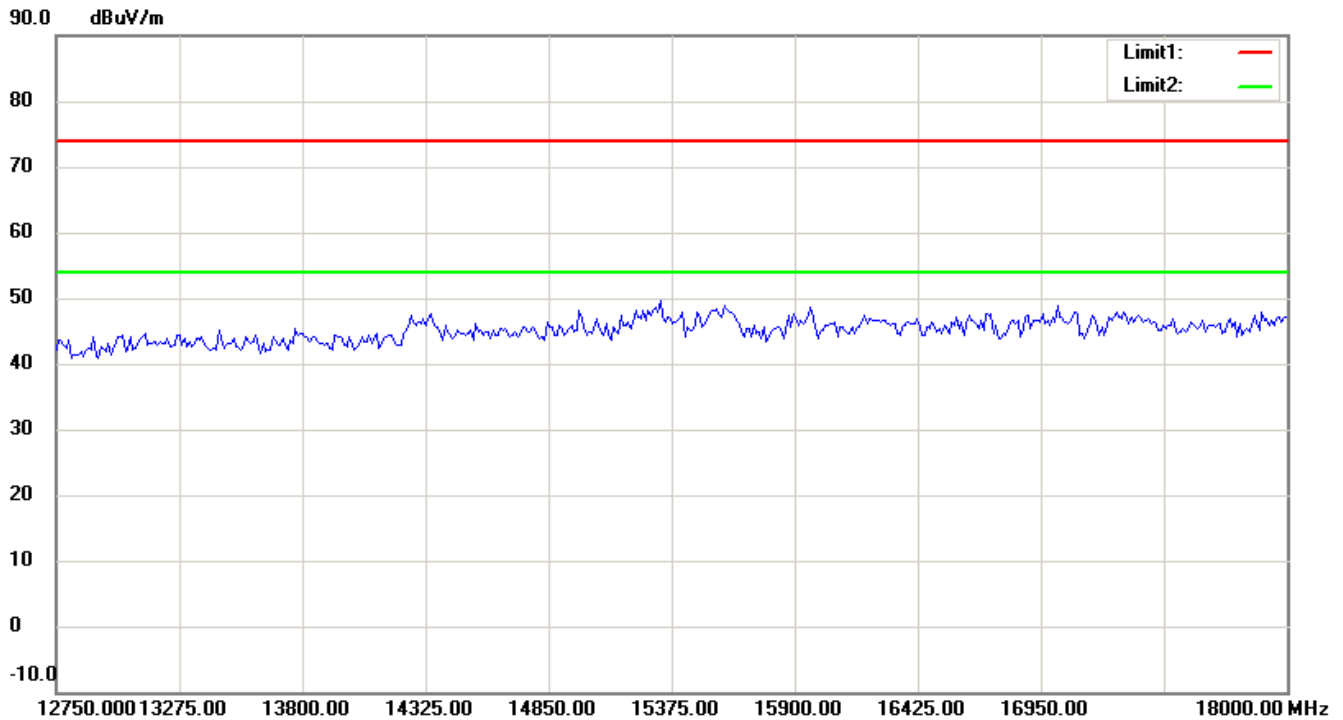
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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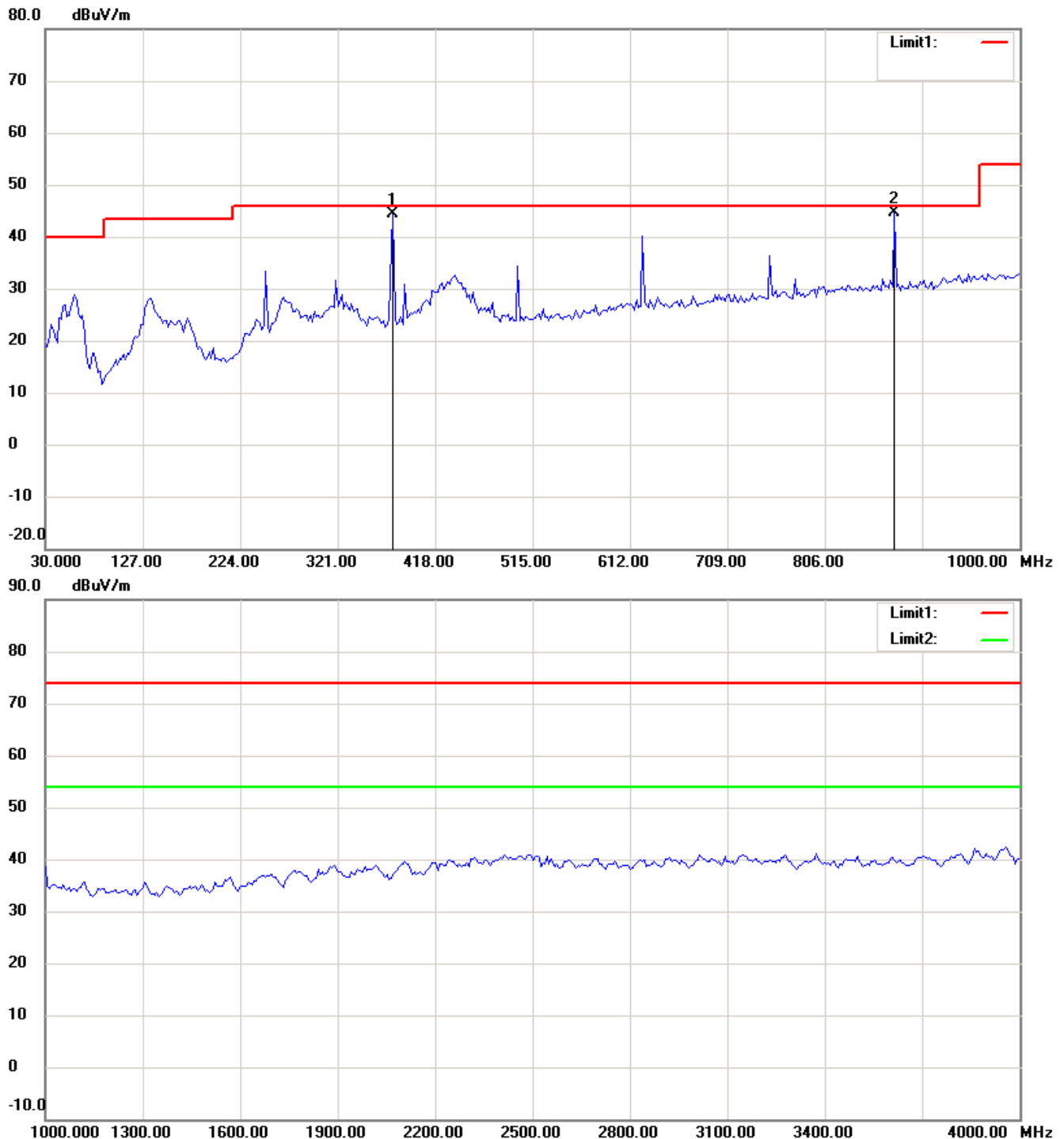
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2462MHz

Antenna Polarization H



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

Note:

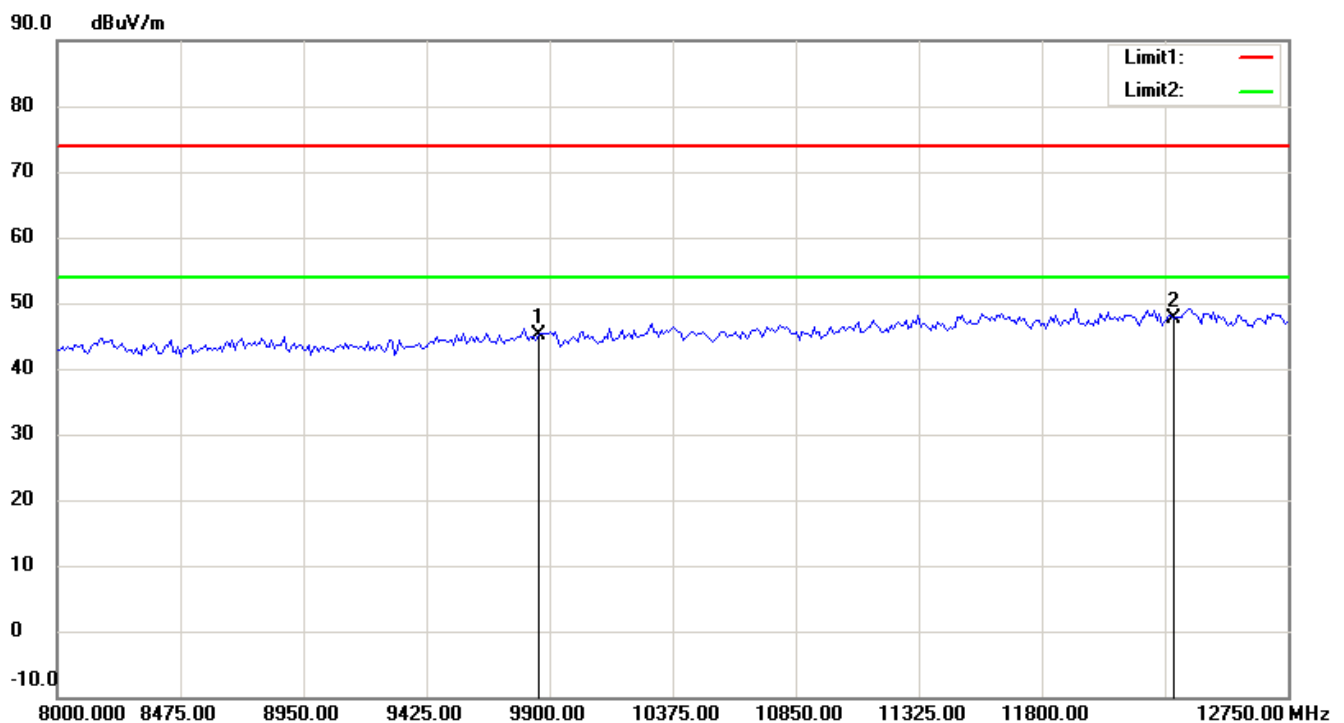
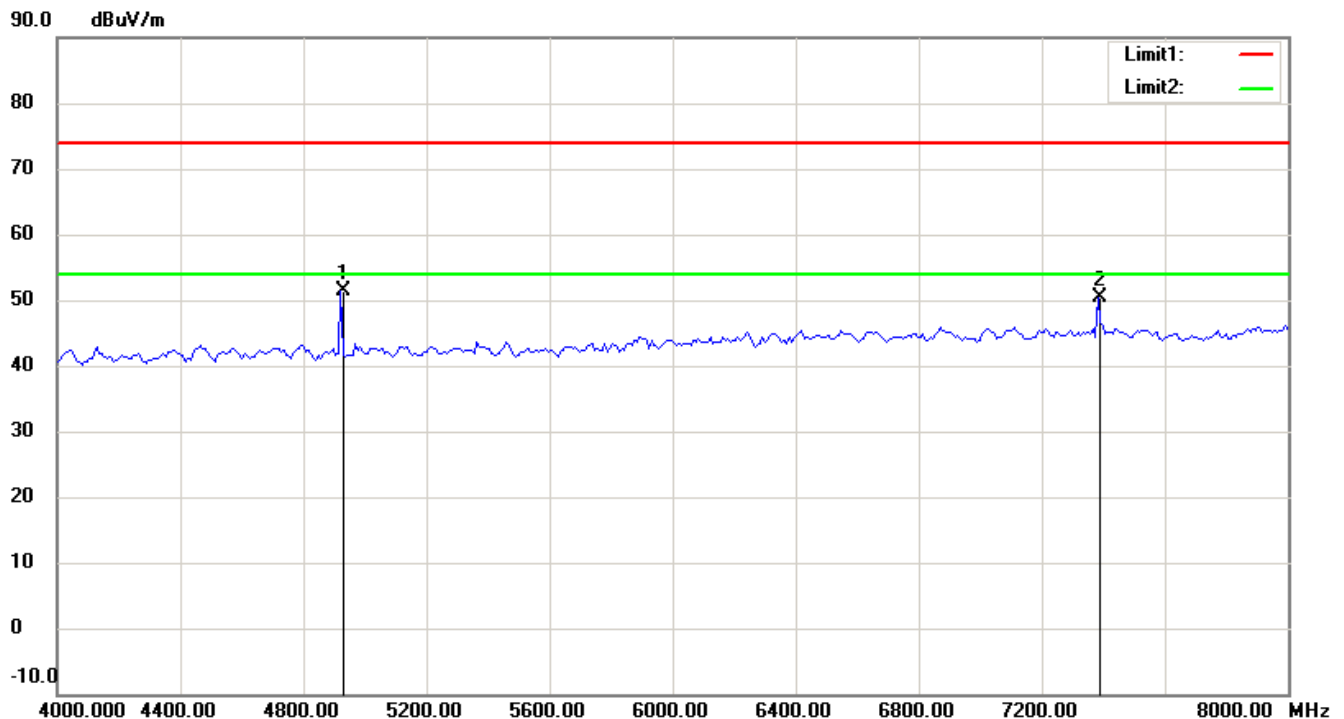
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

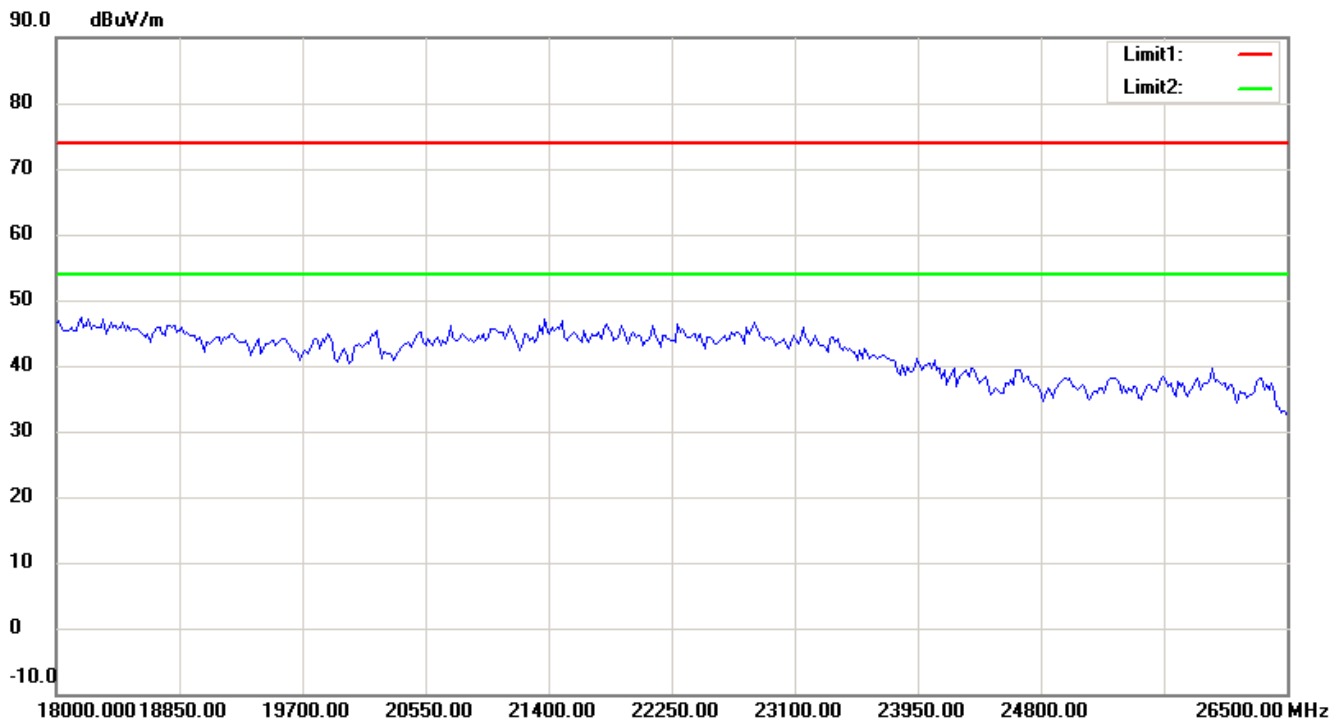
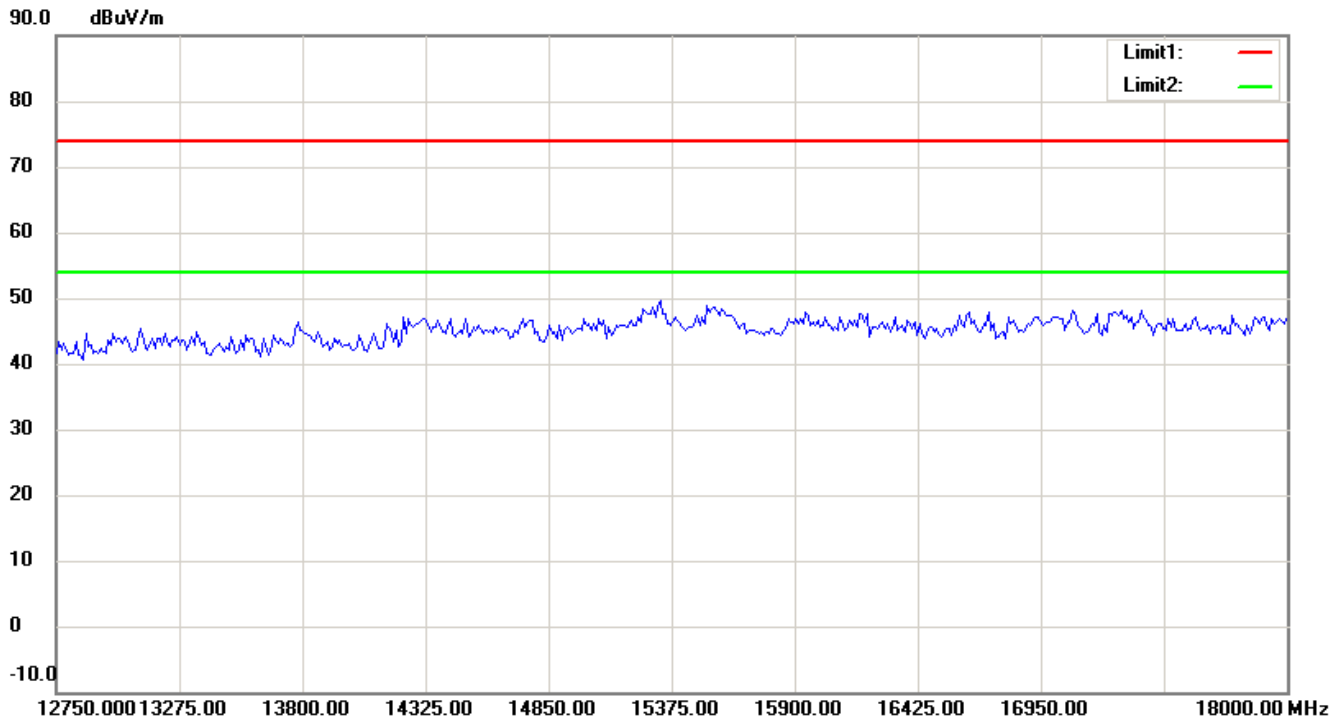
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

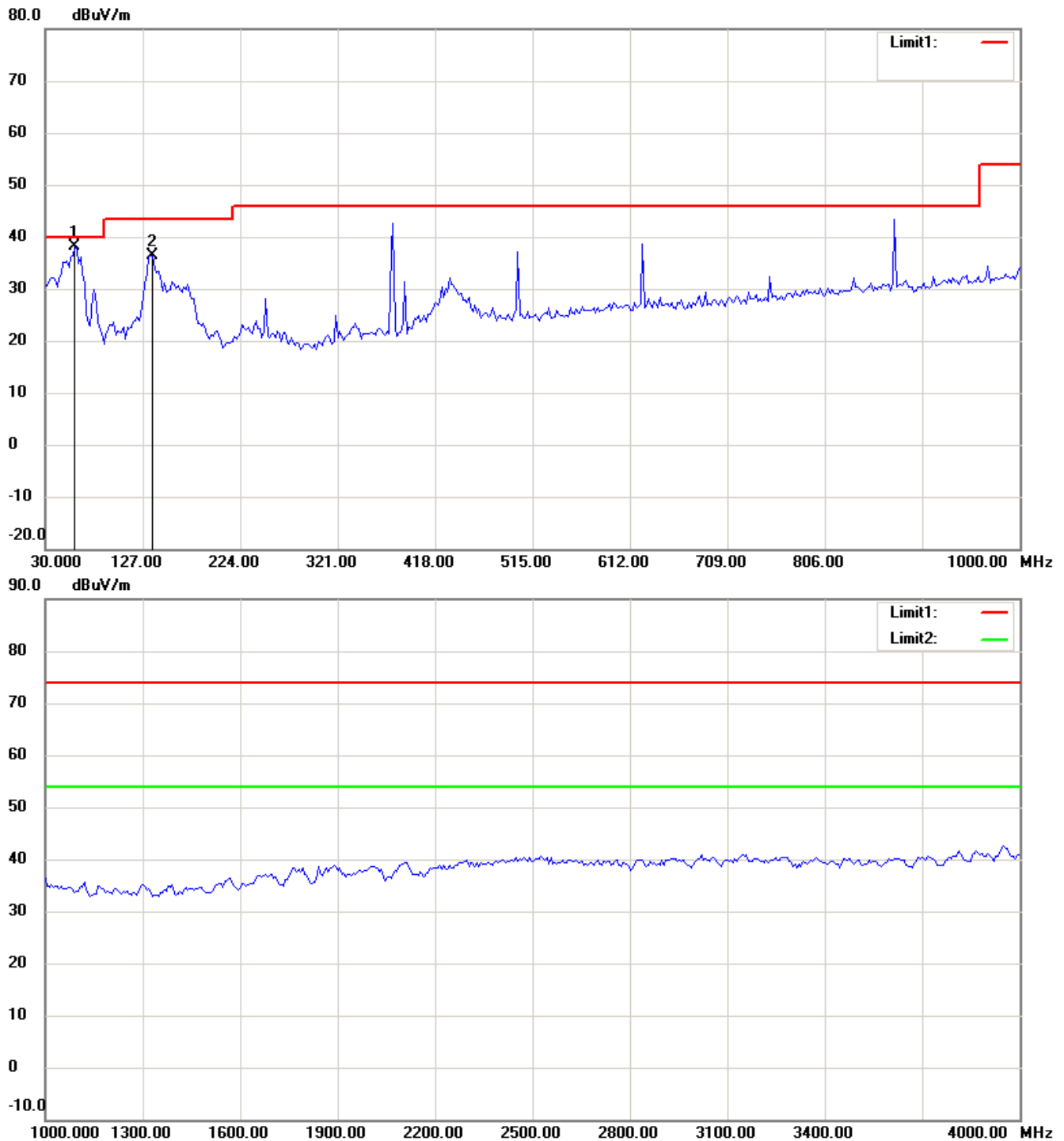
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

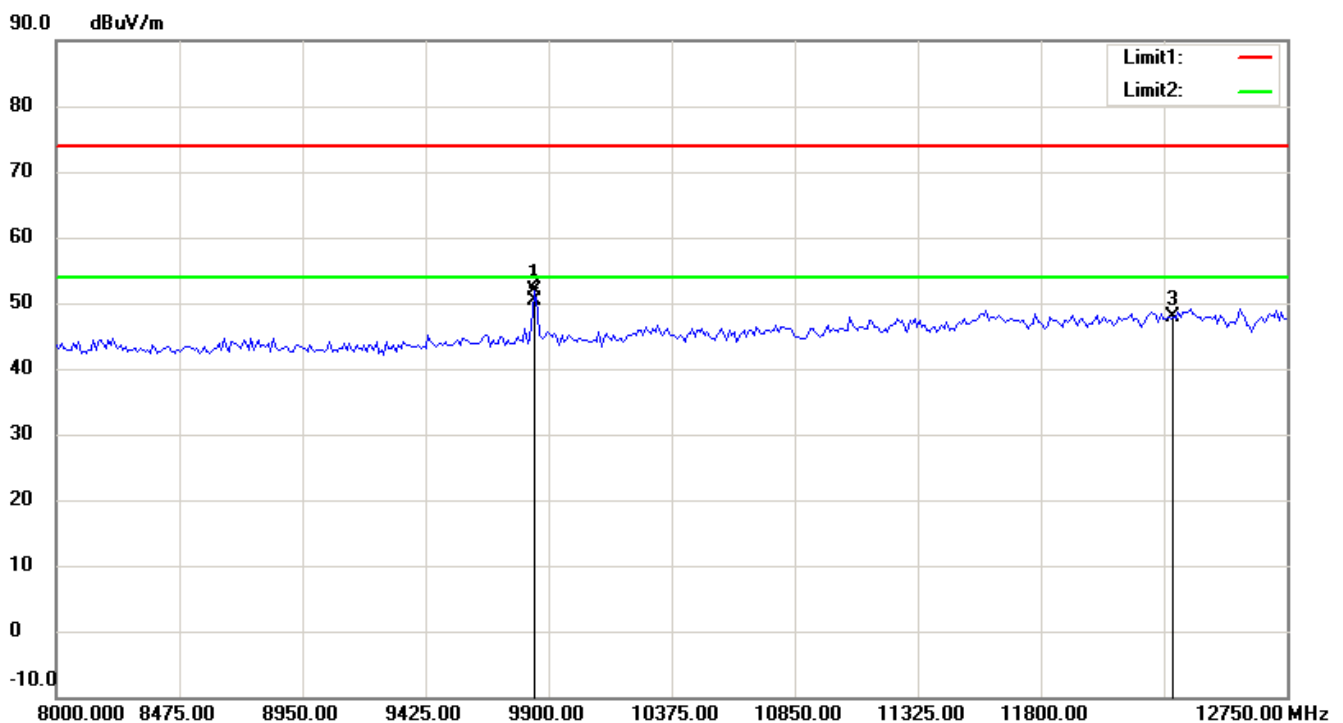
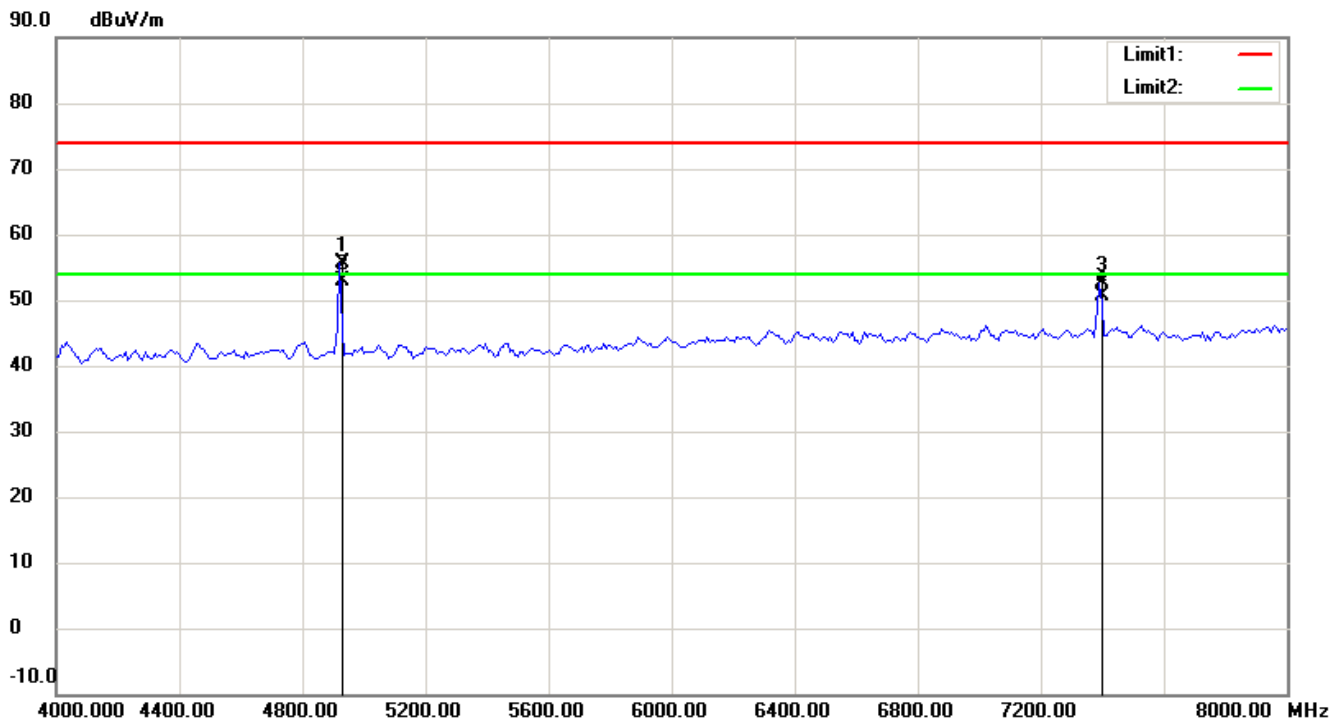
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

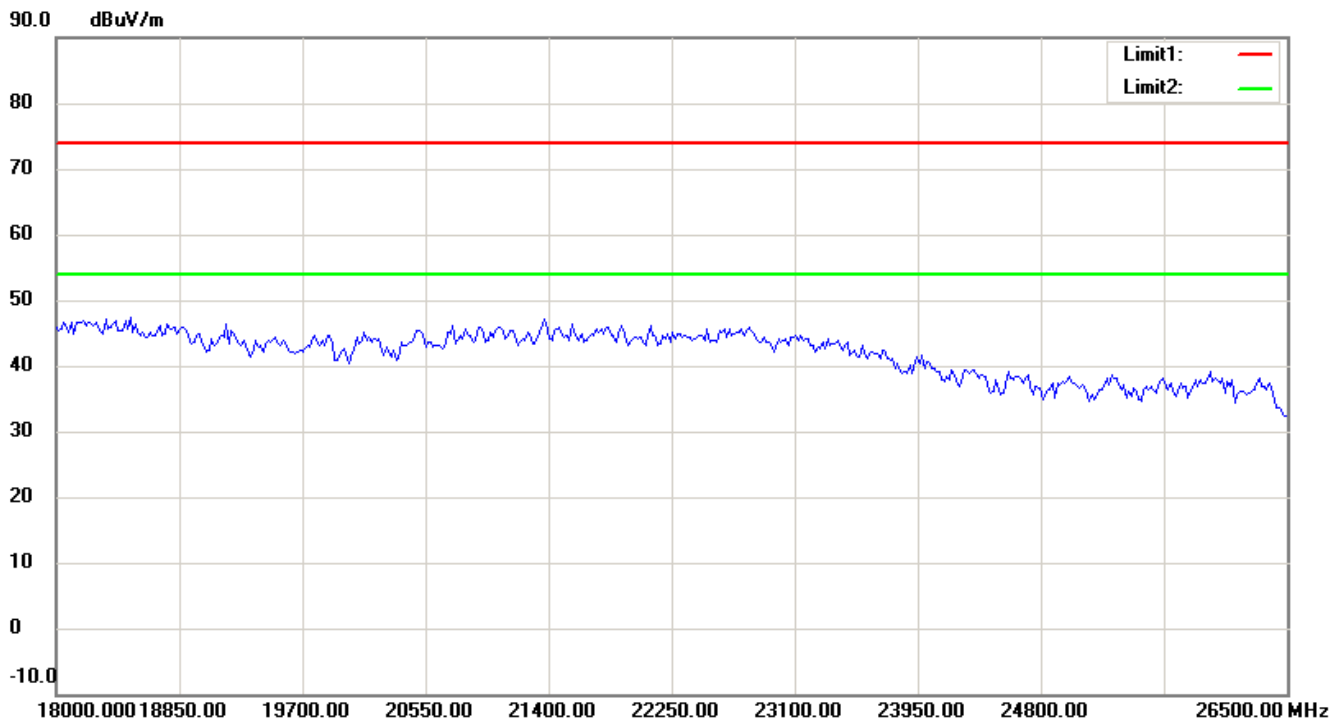
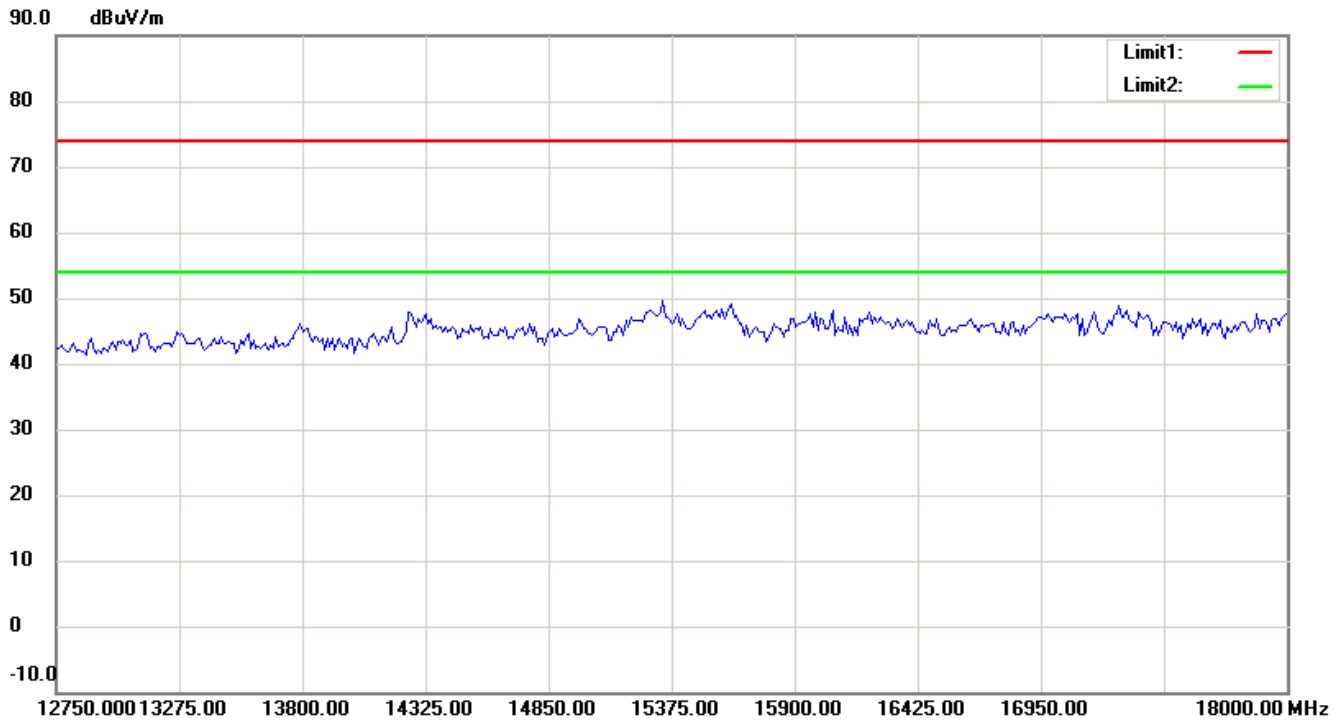
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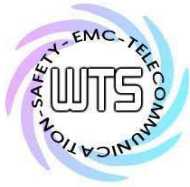
FCC ID: ZTT-APA20



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

Note:

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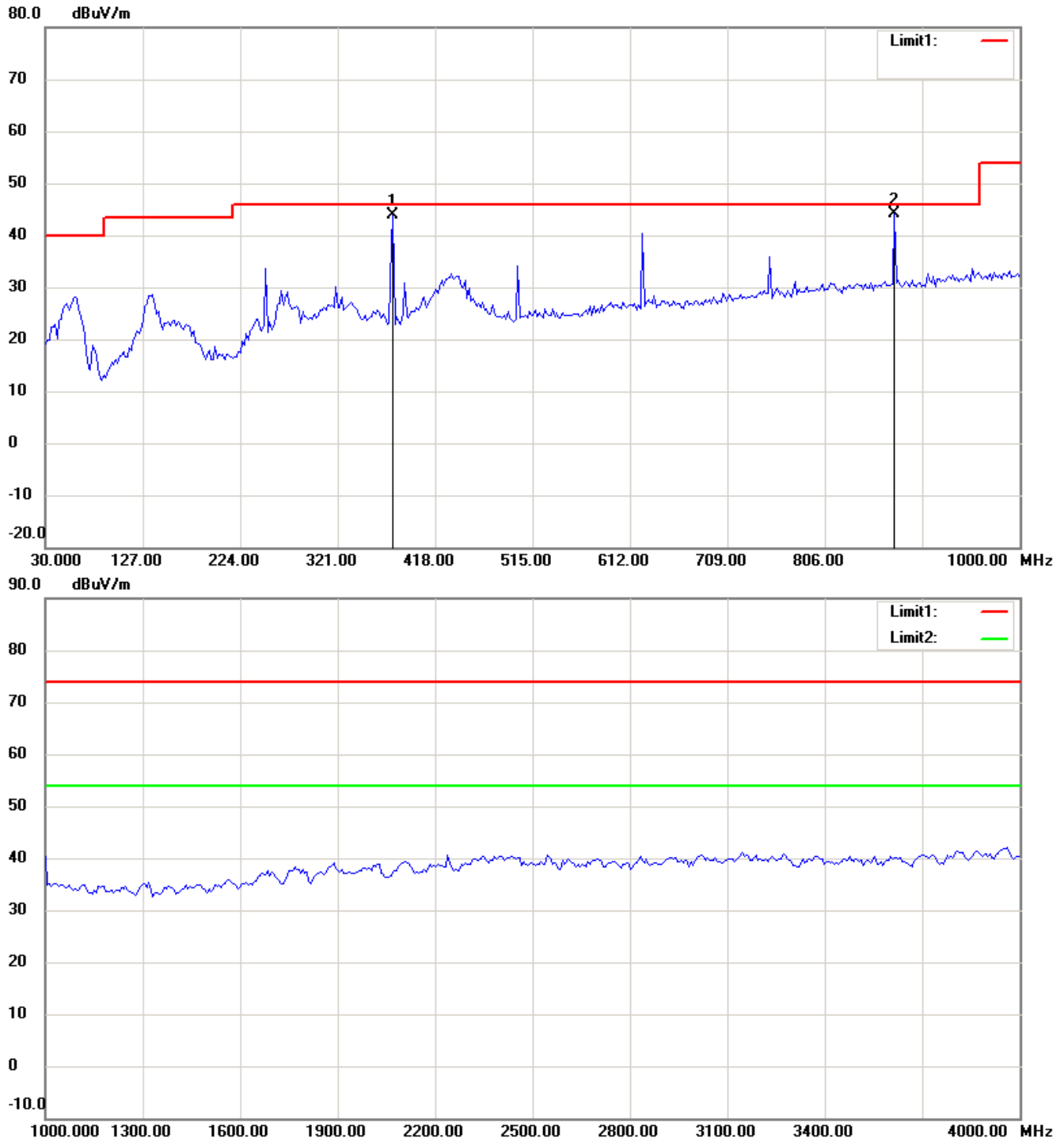
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2412MHz

Antenna Polarization H



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

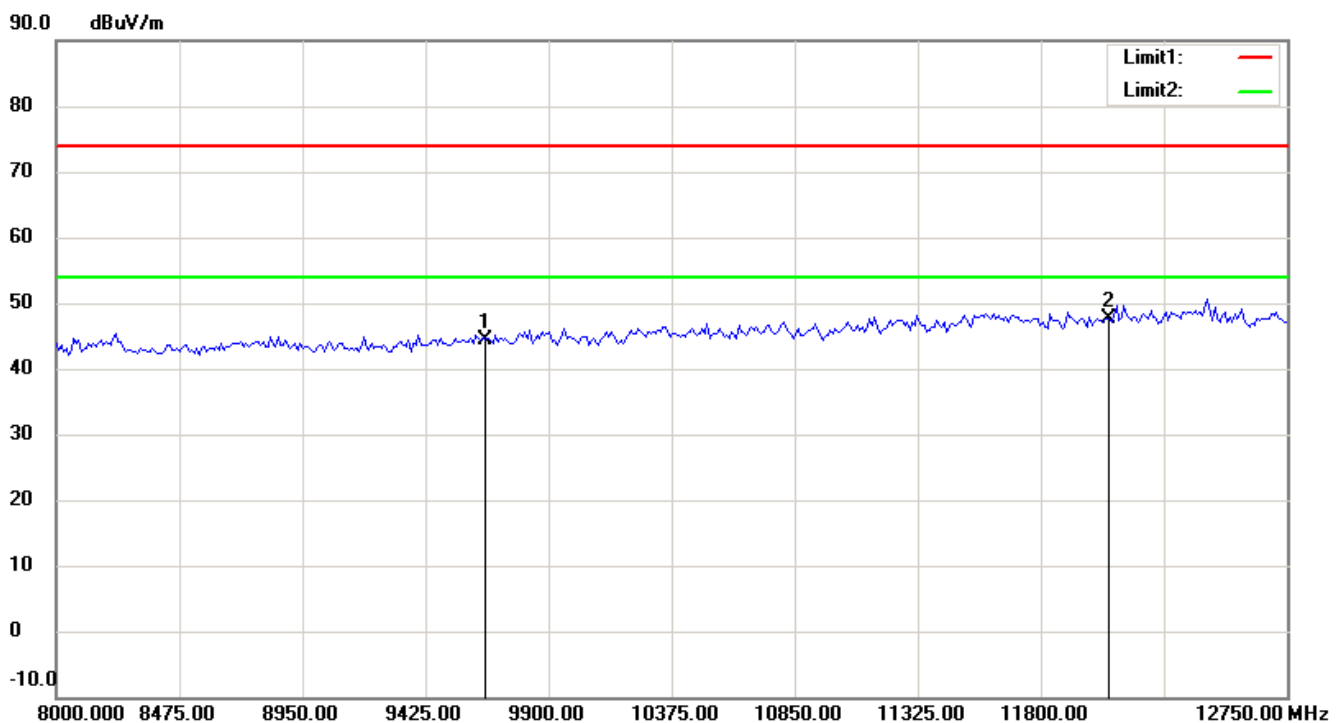
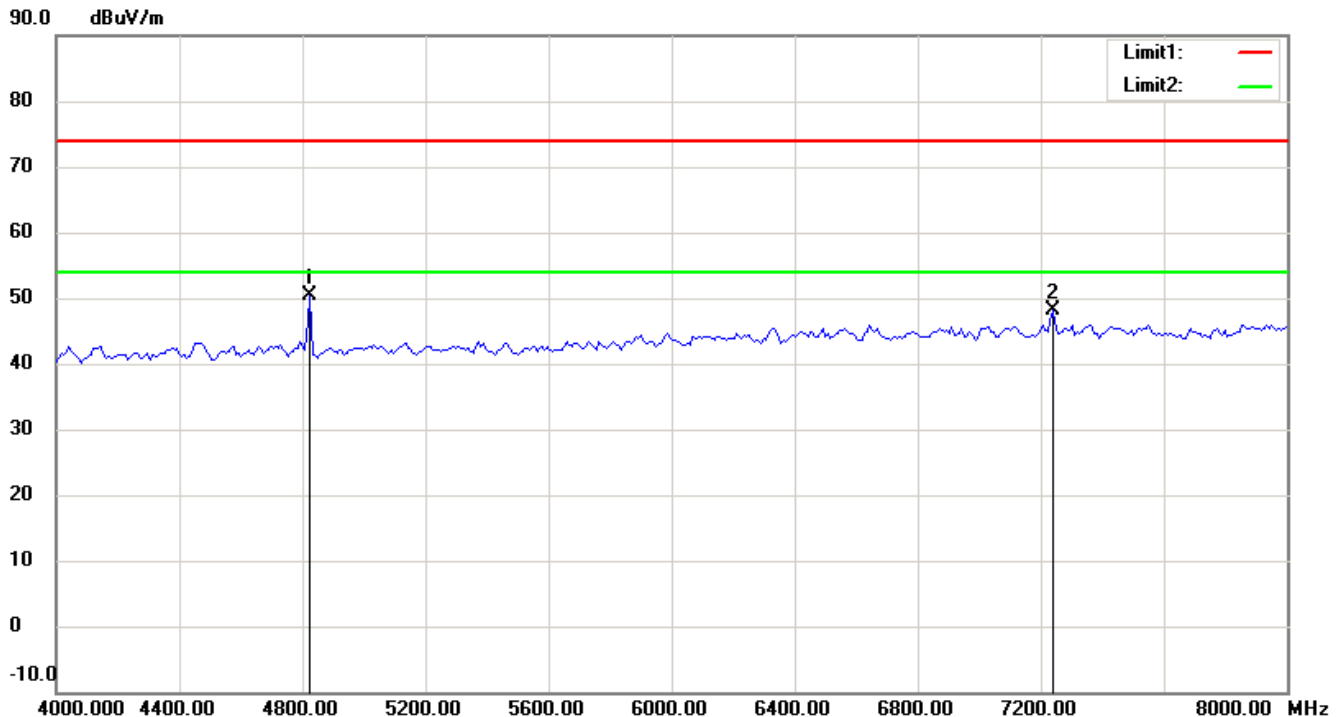
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

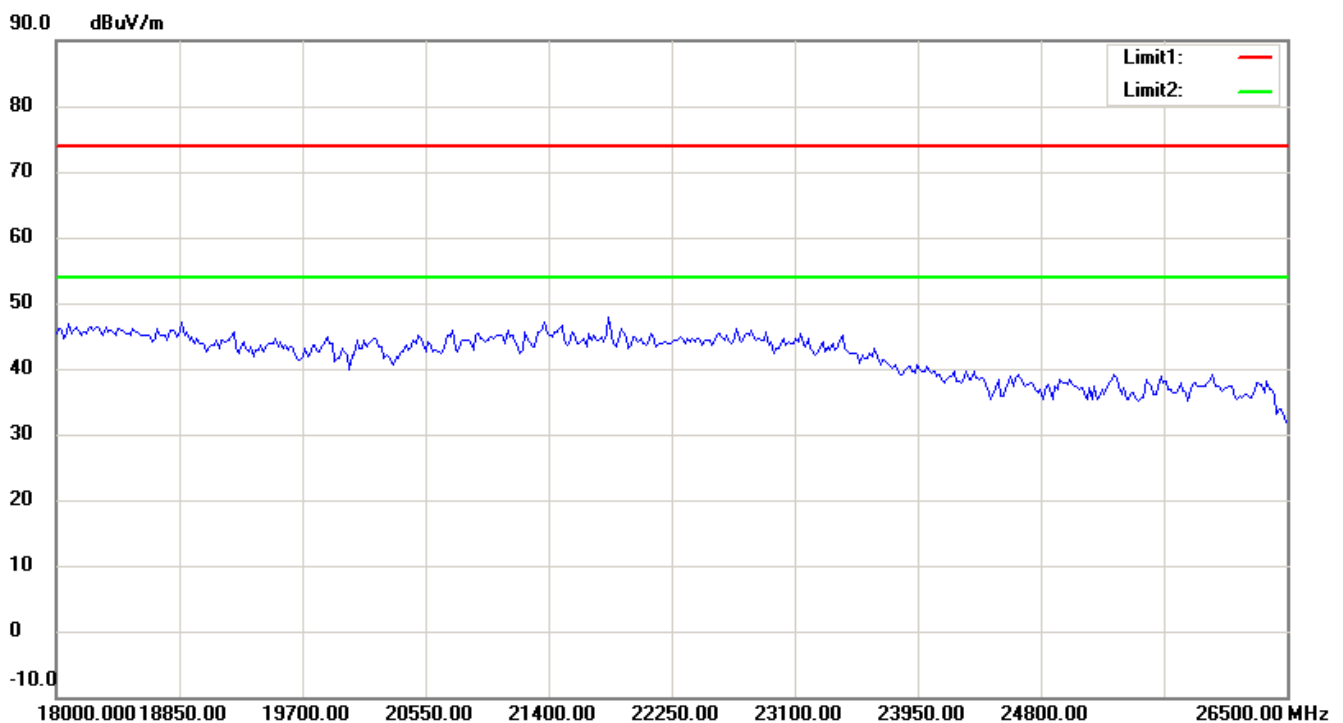
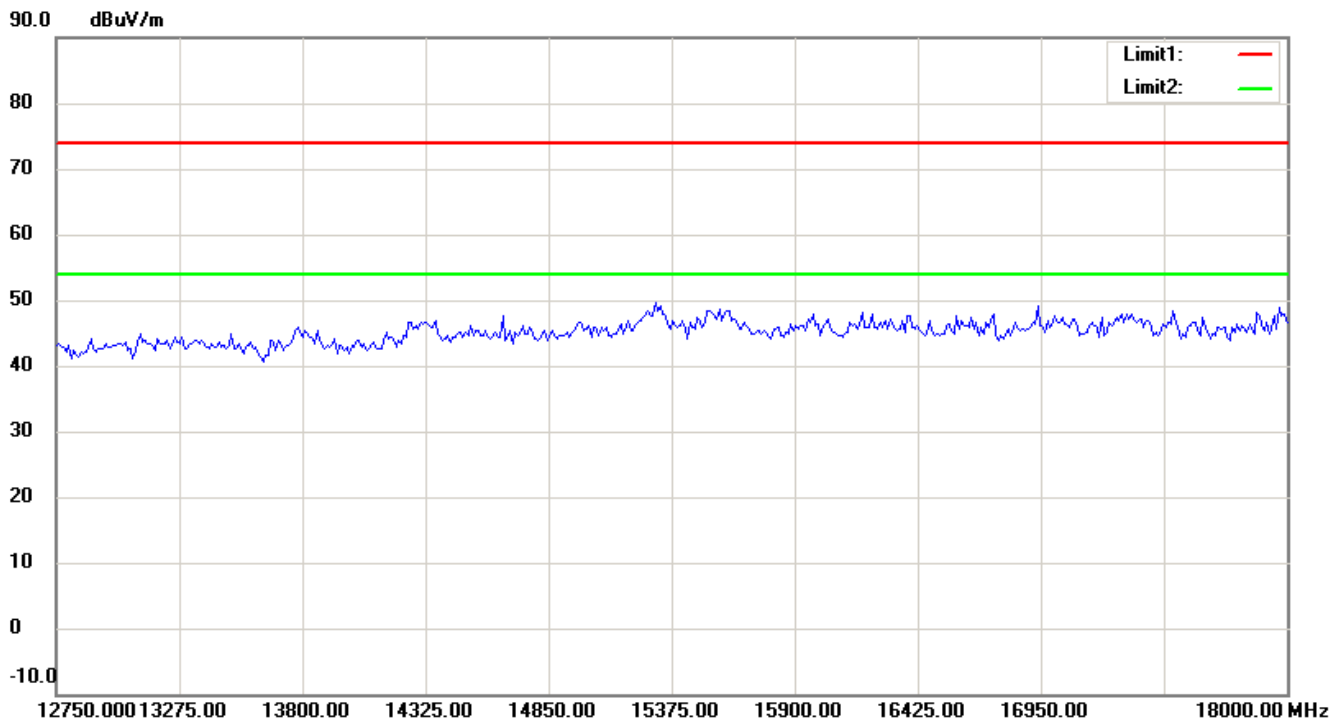
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

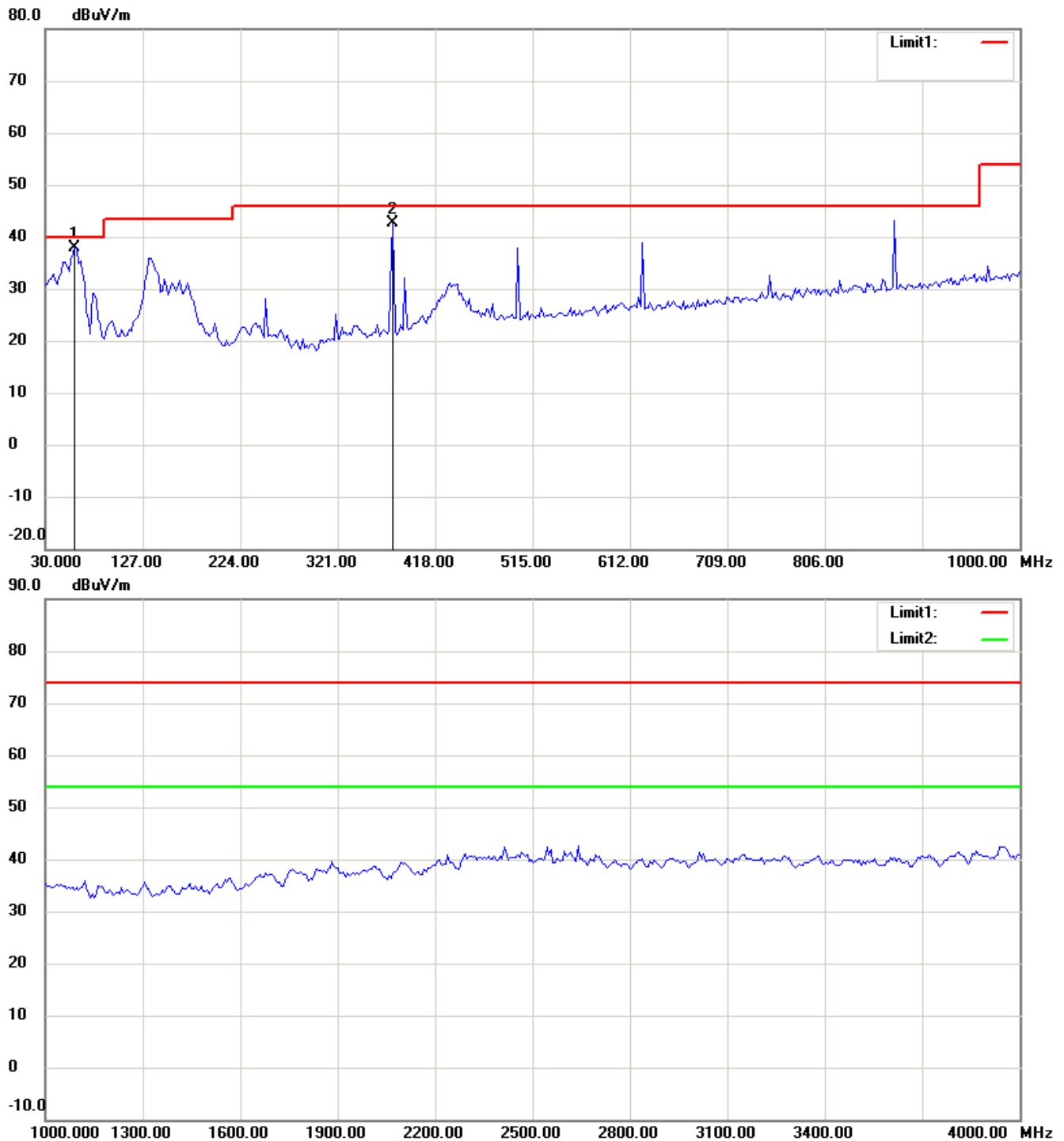
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

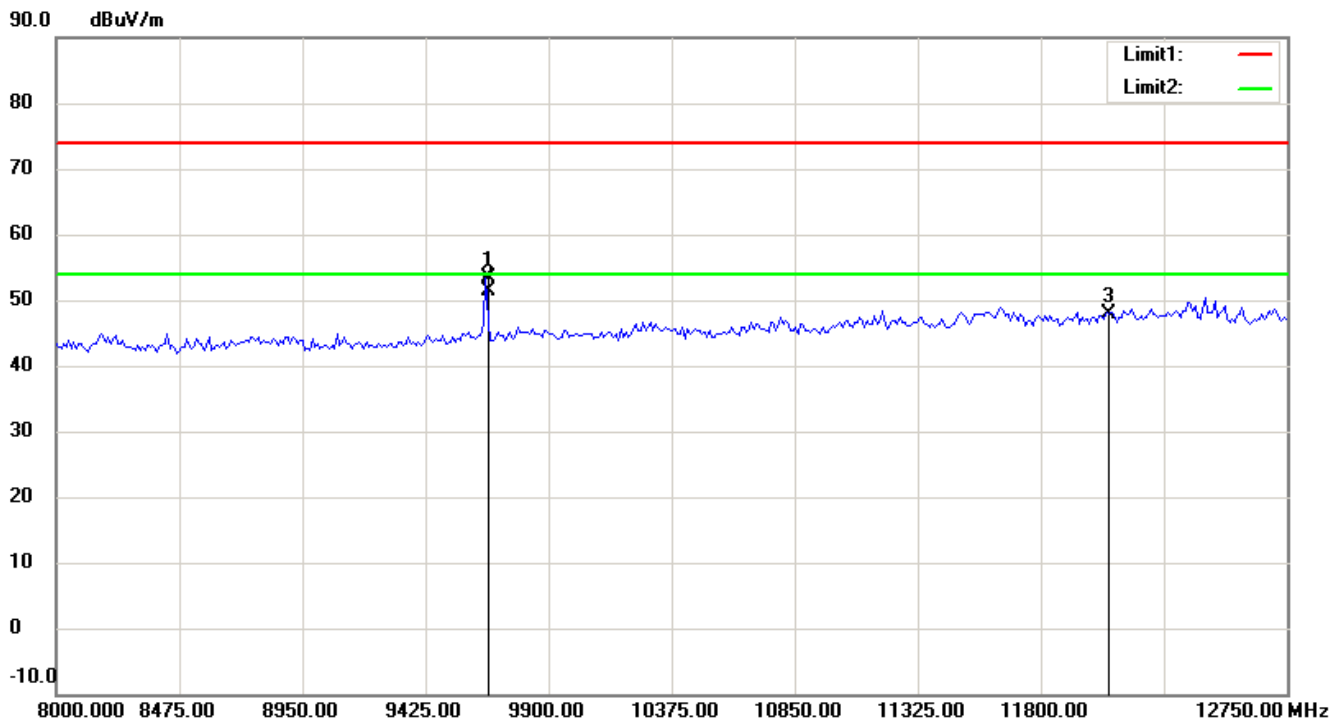
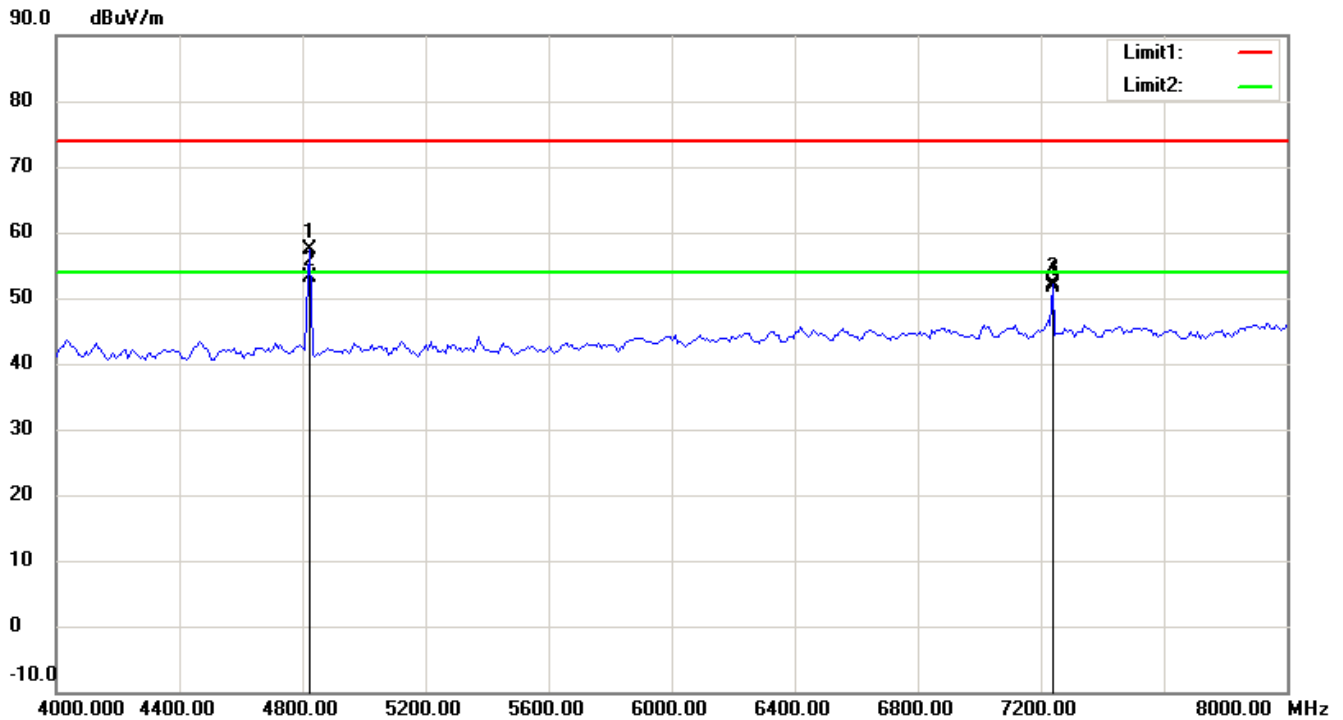
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

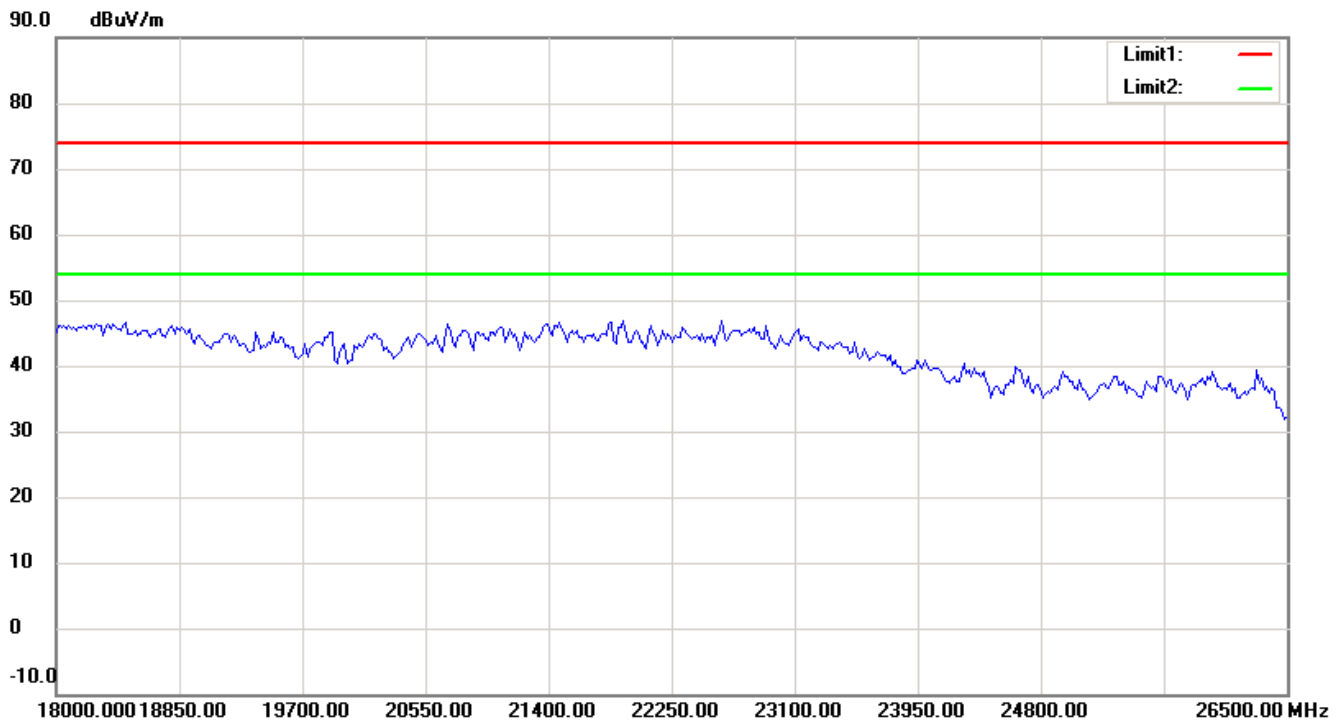
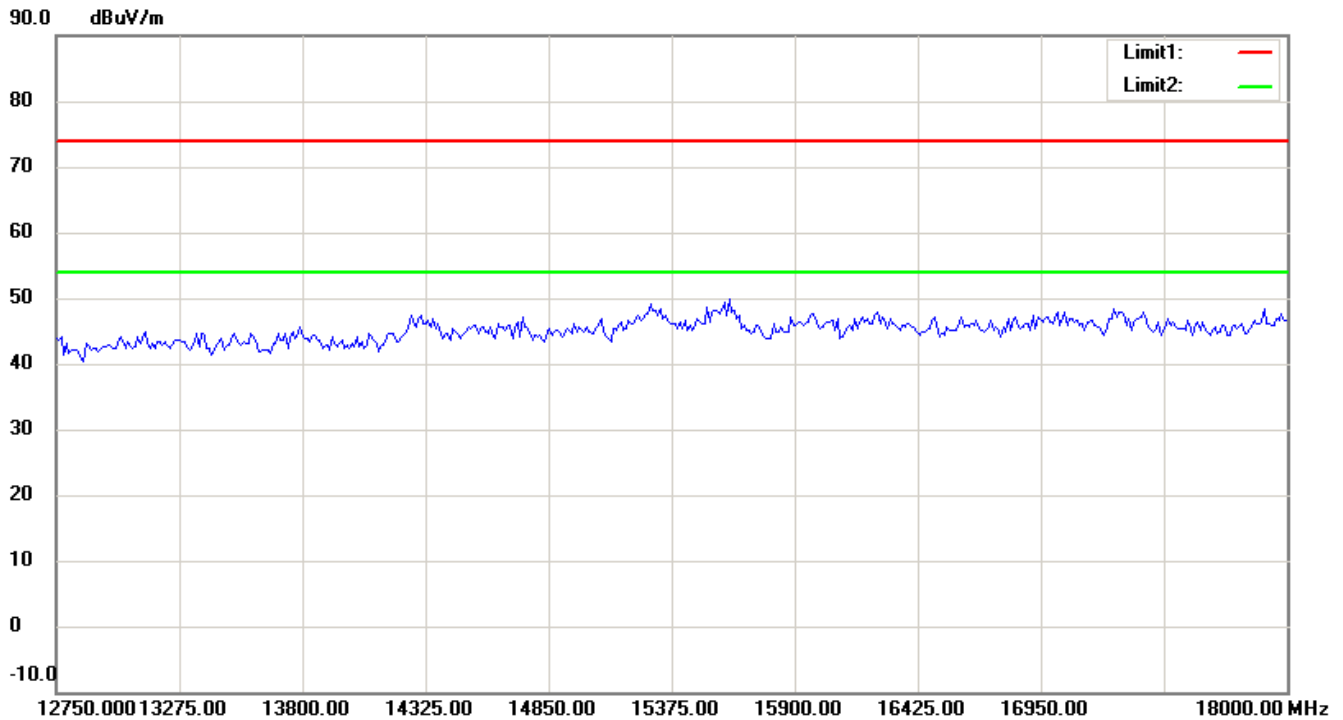
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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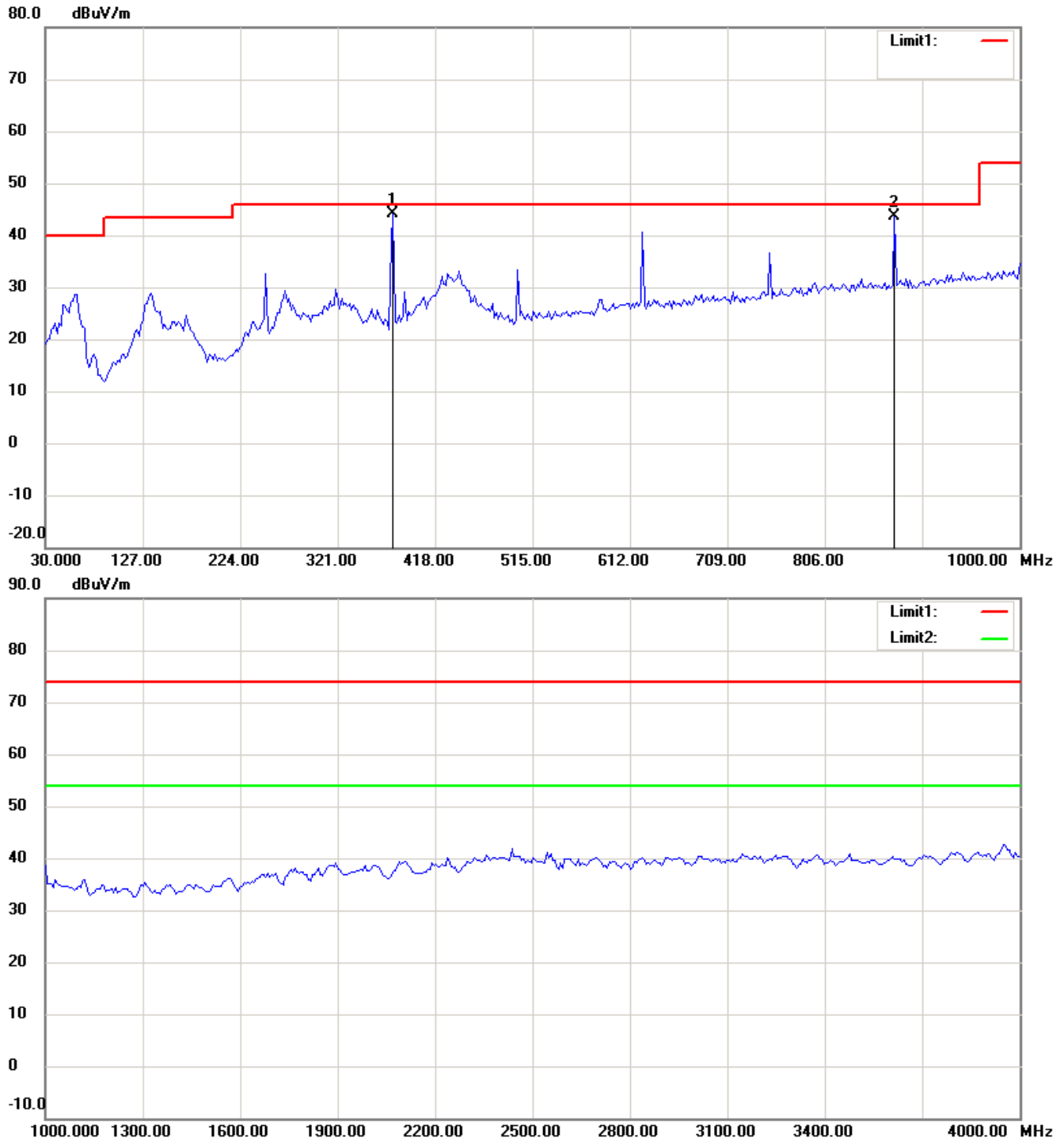
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2437MHz

Antenna Polarization H



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

Note:

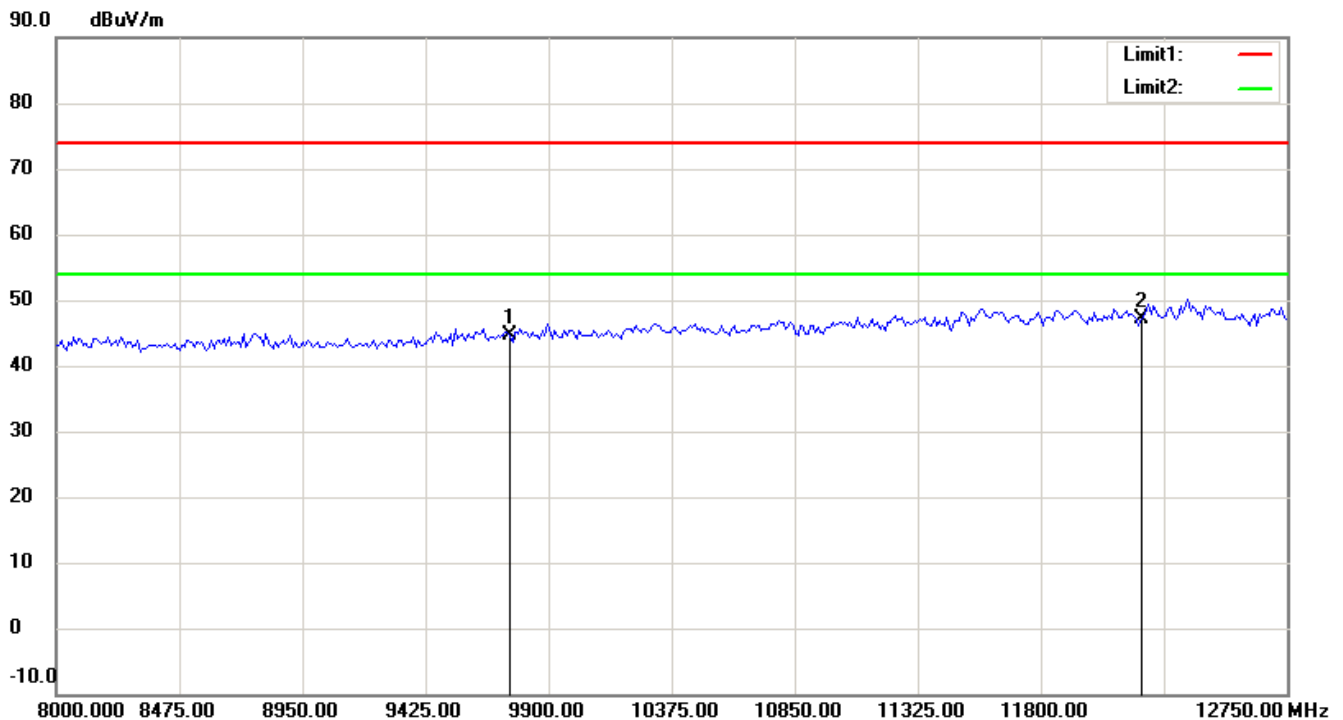
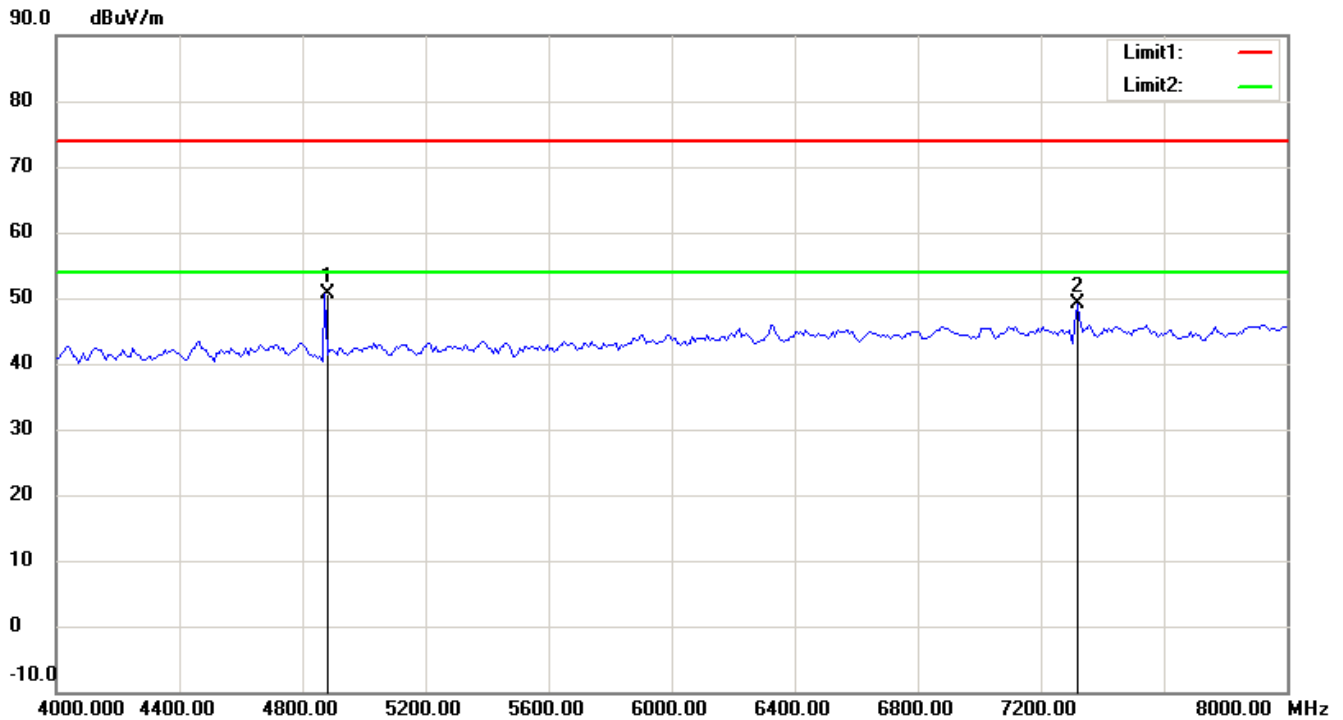
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

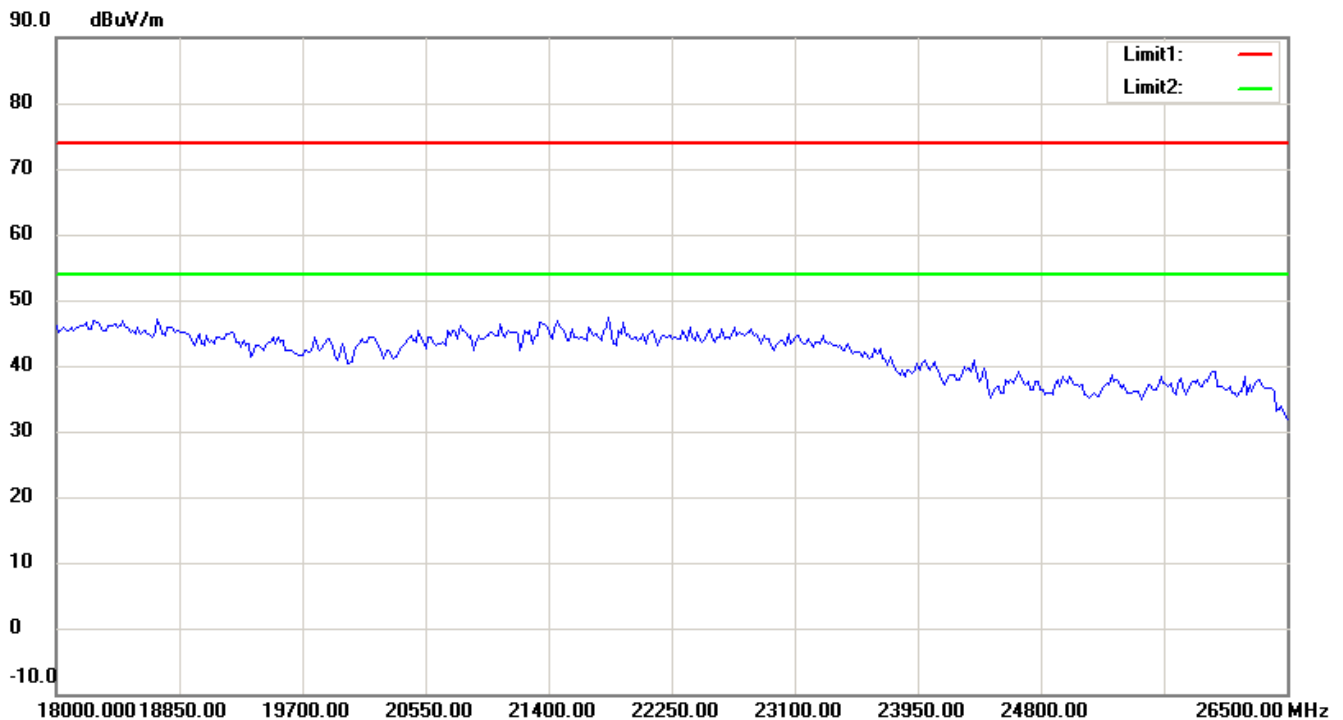
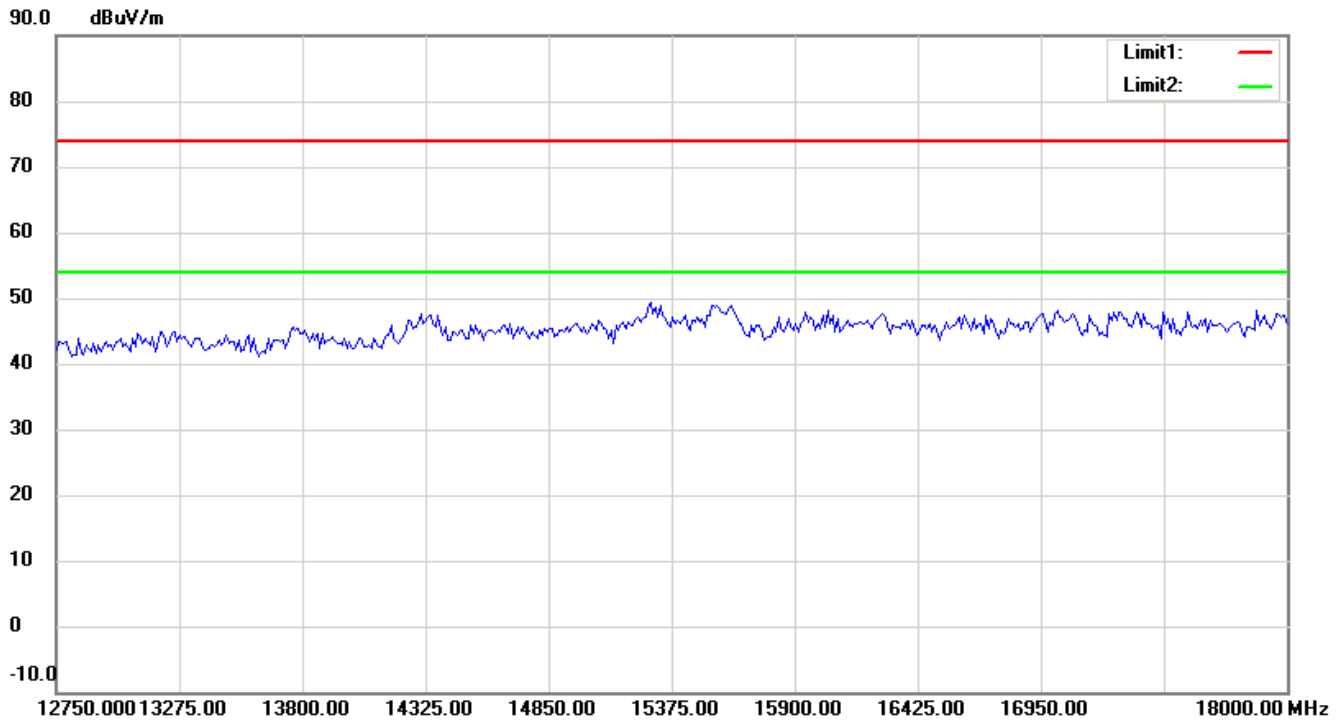
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

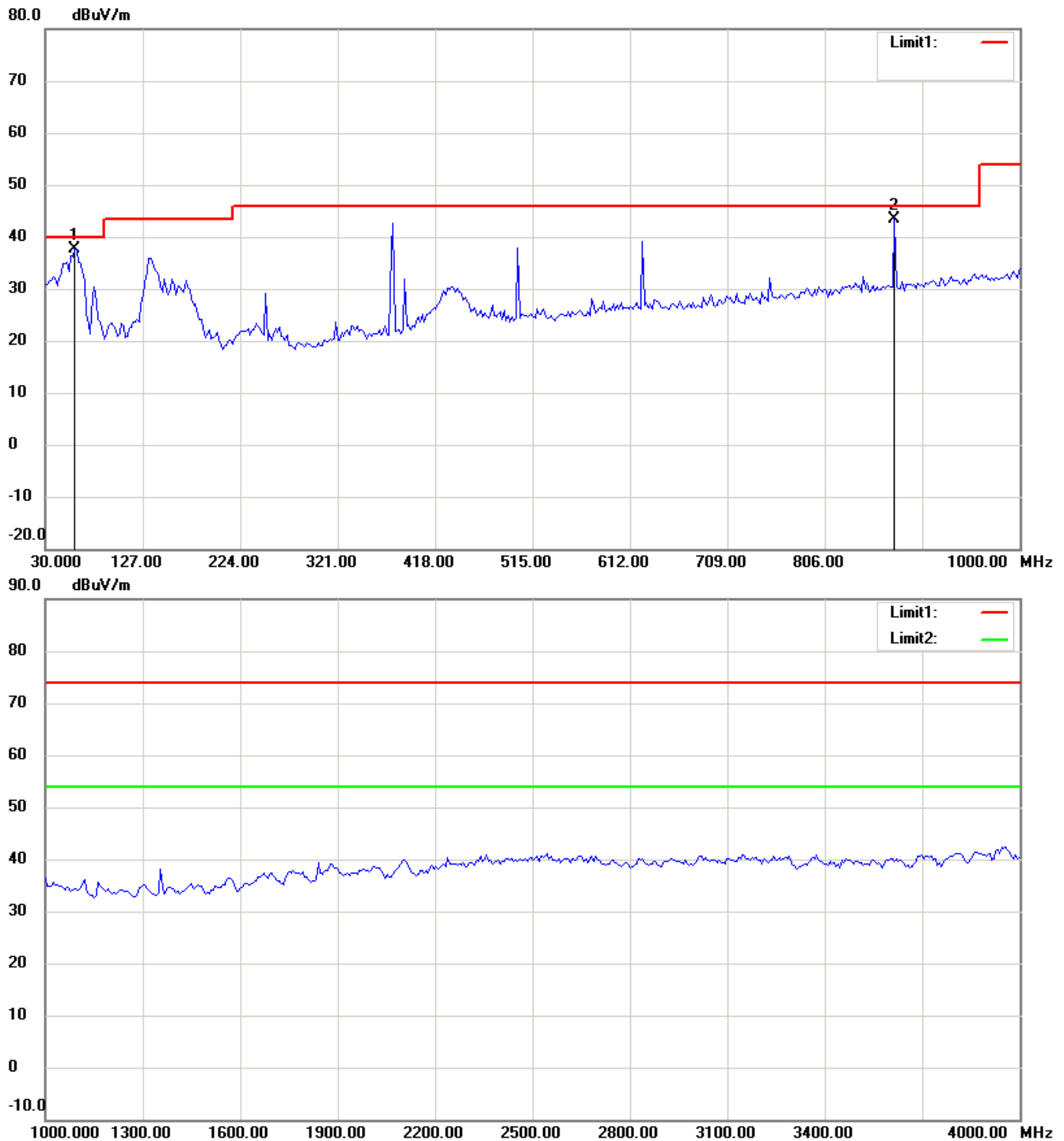
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

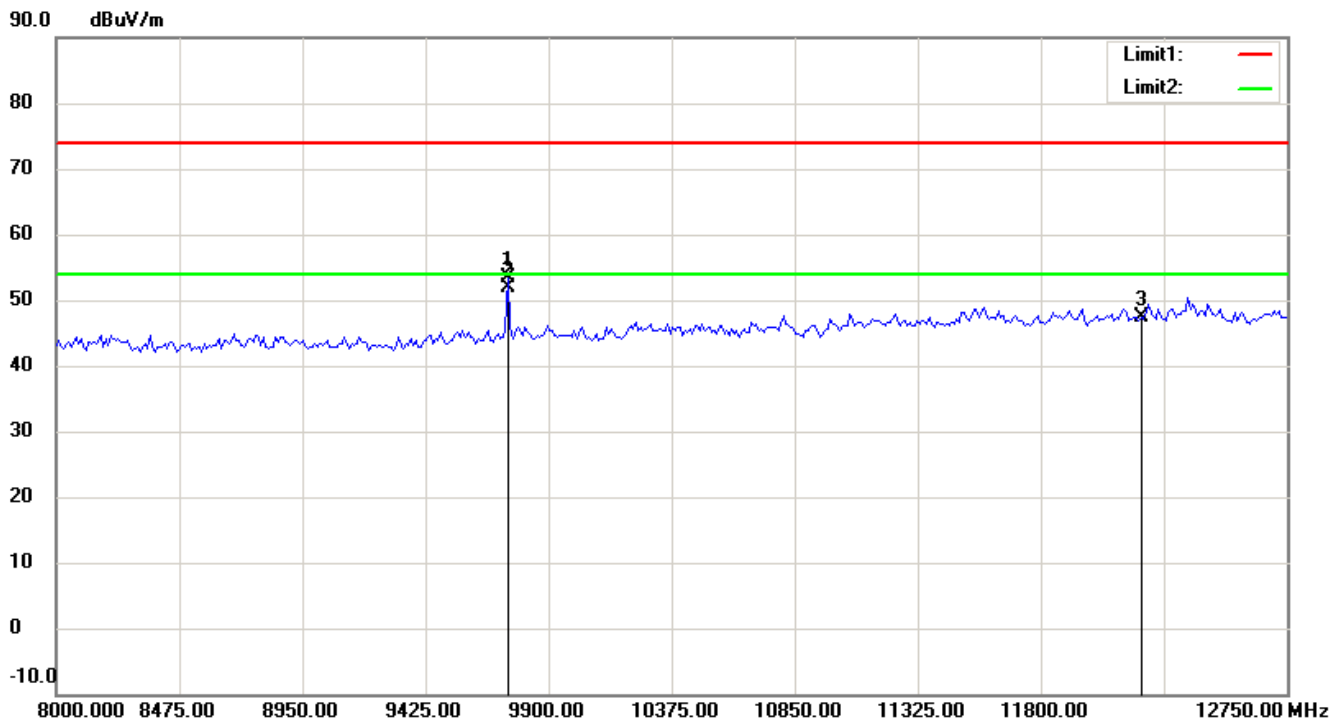
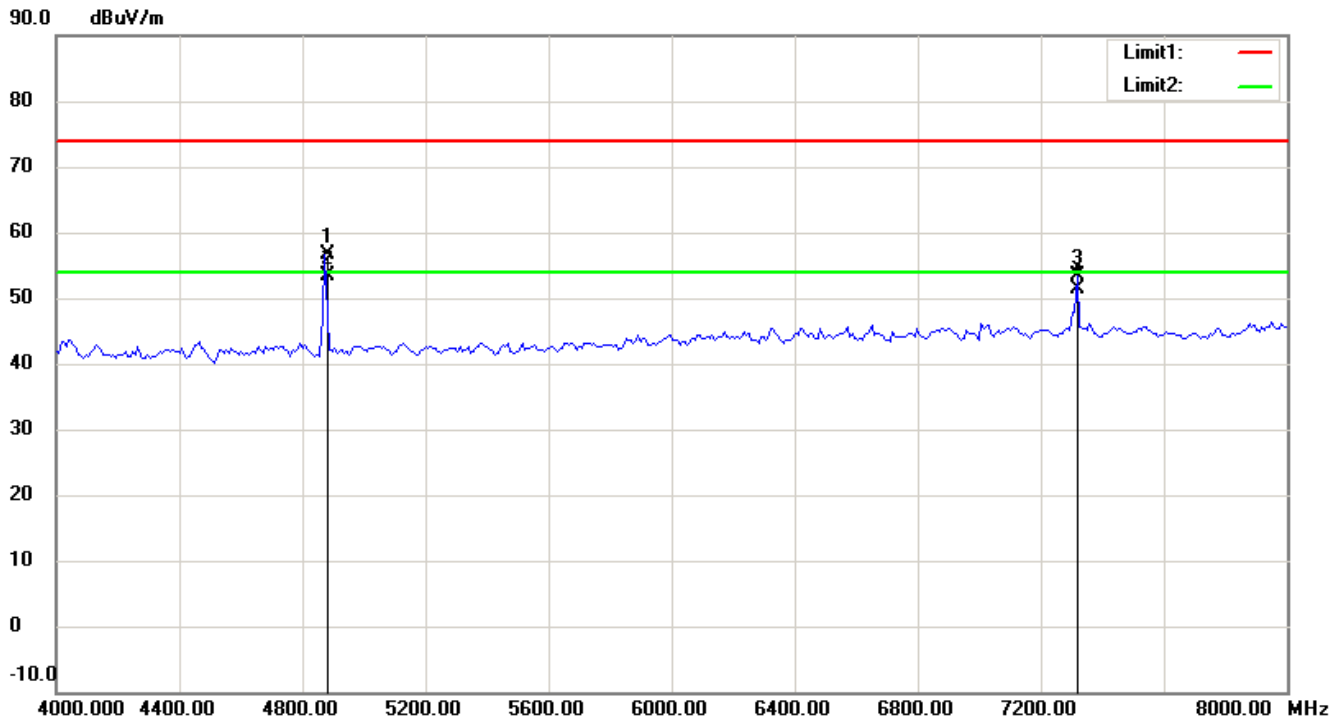
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

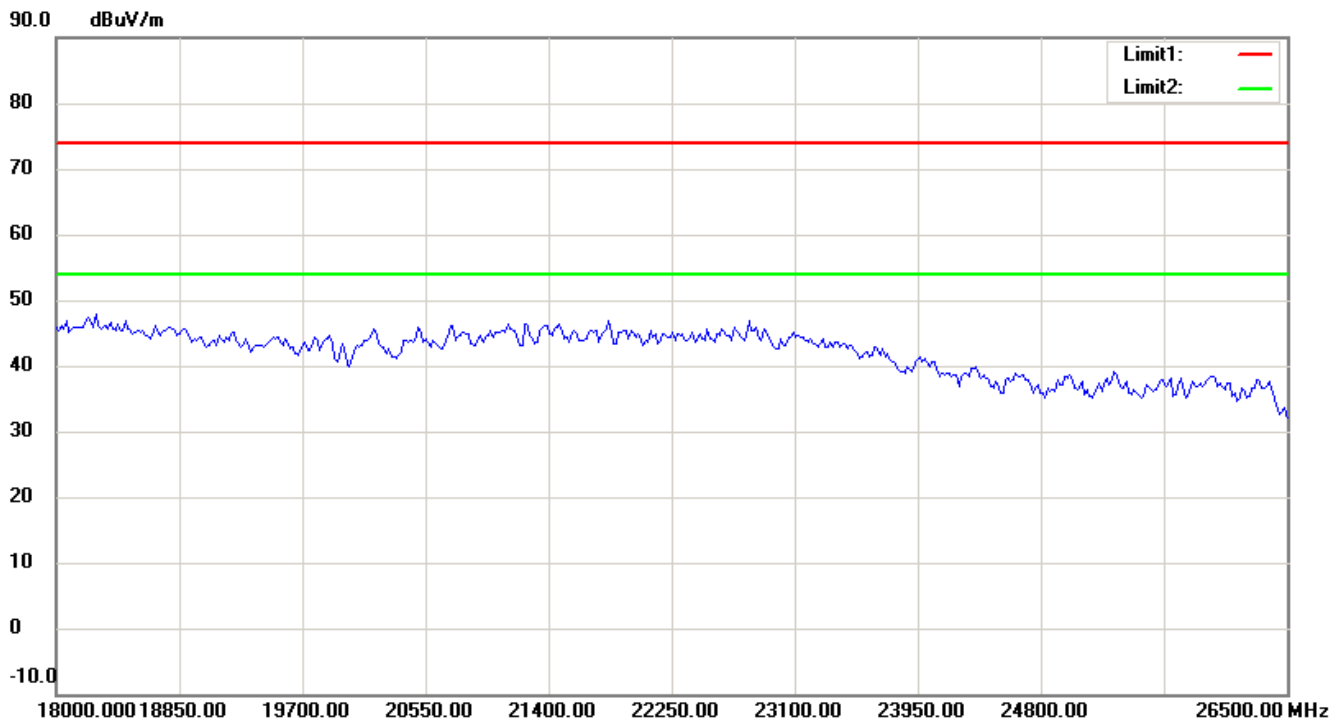
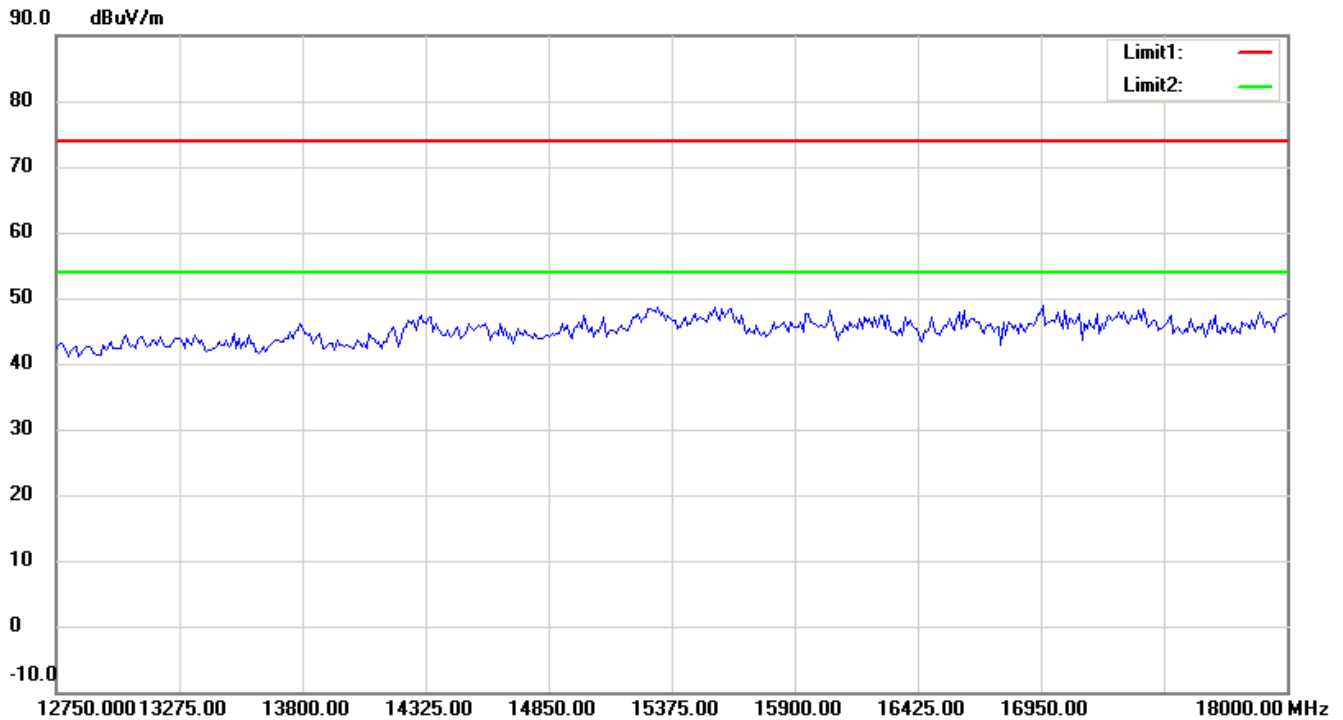
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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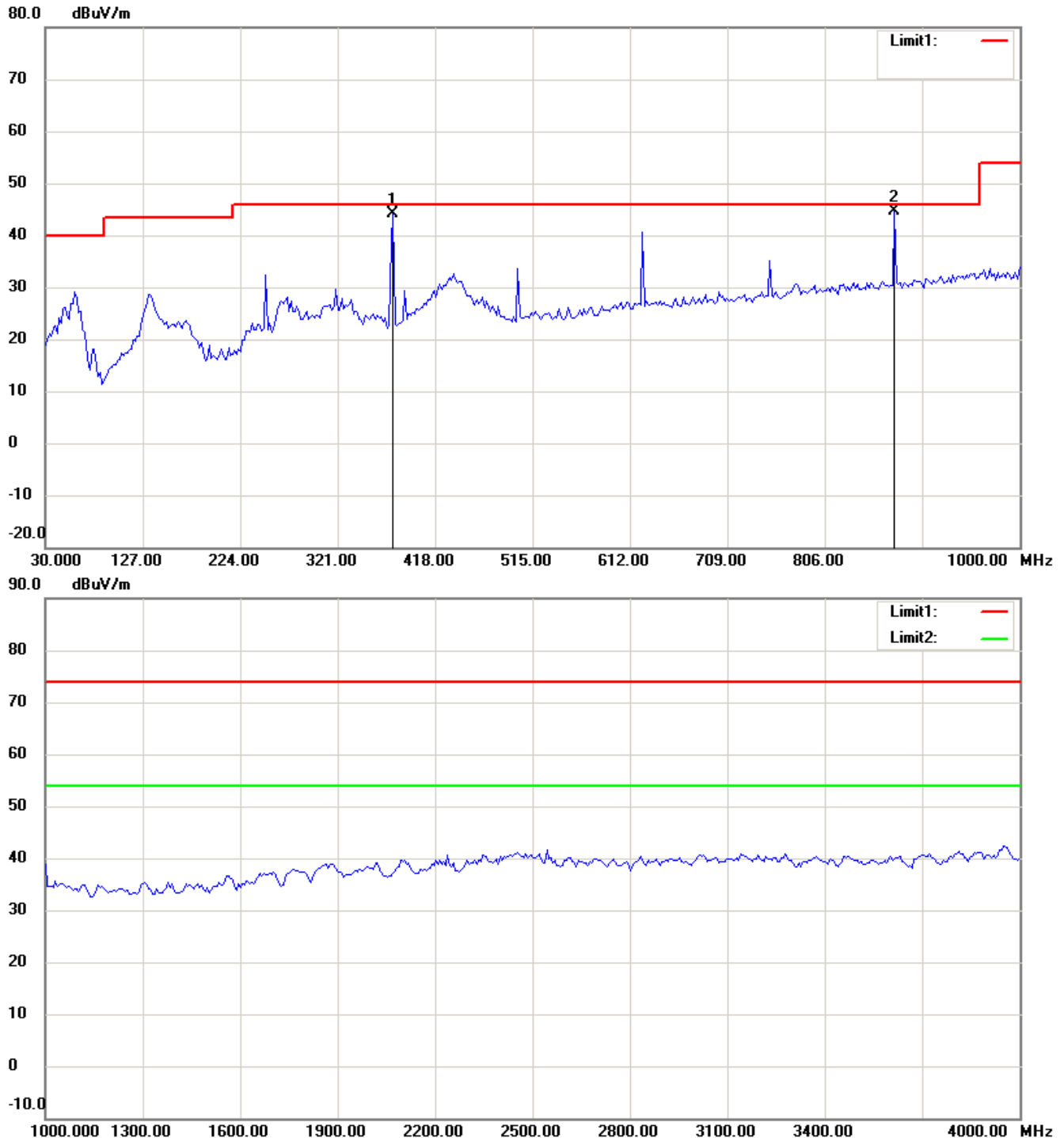
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2462MHz

Antenna Polarization H



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

Note:

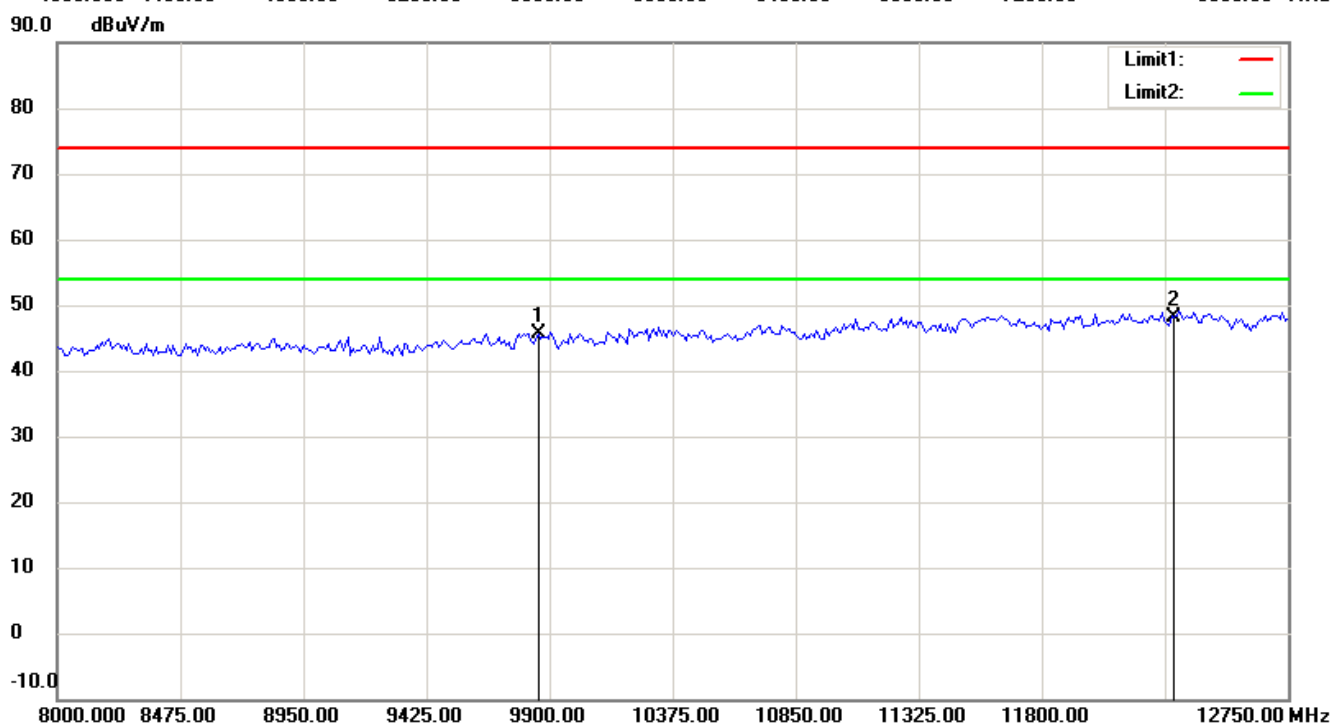
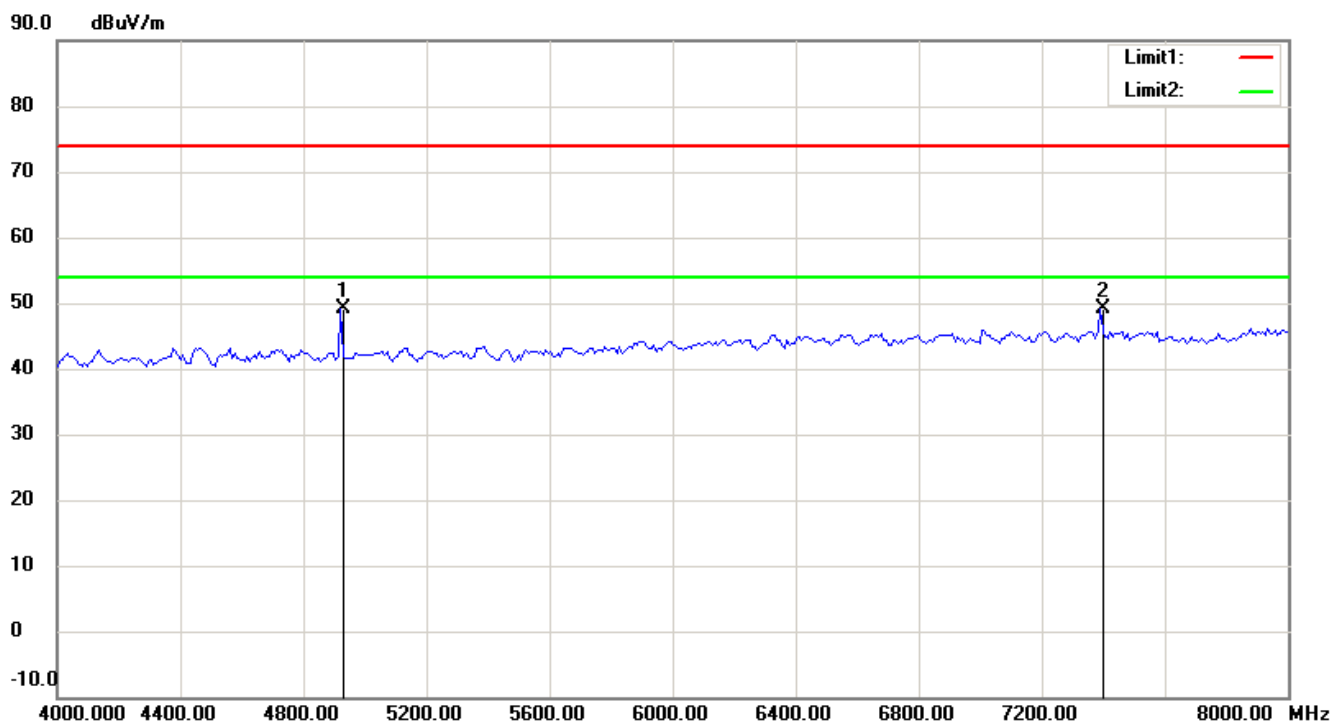
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

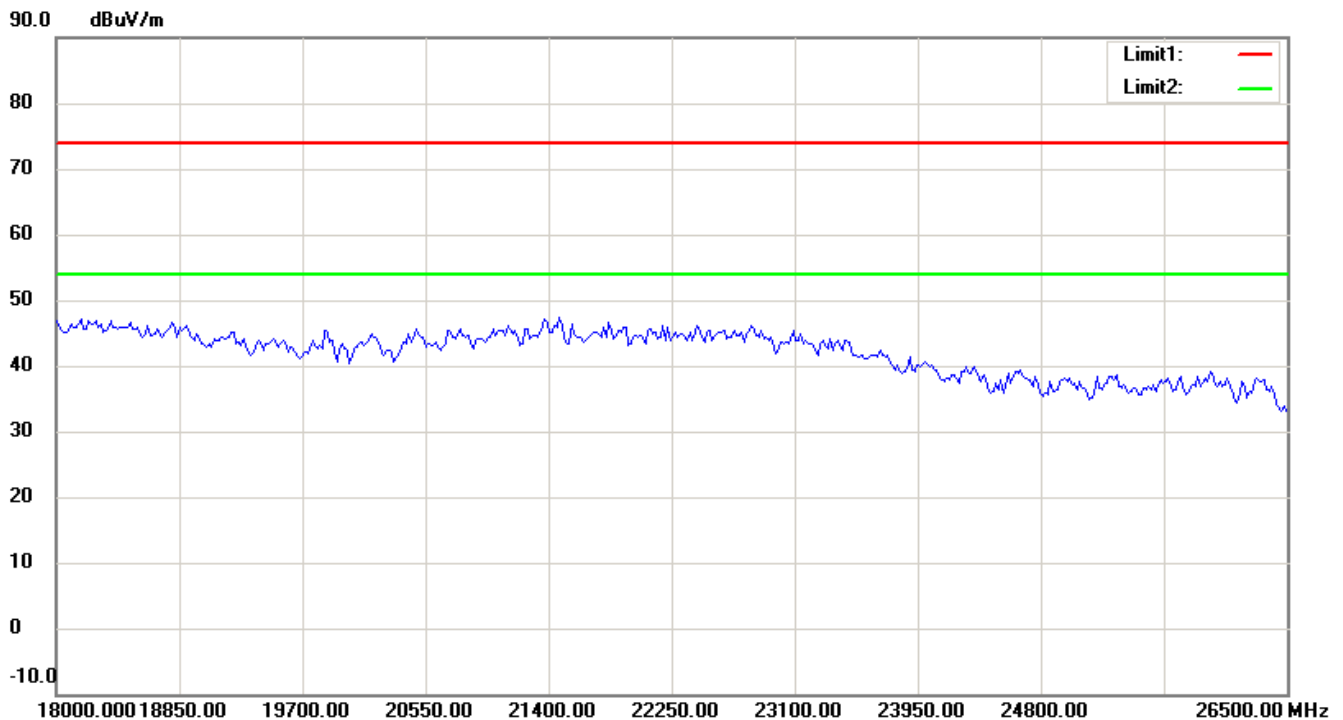
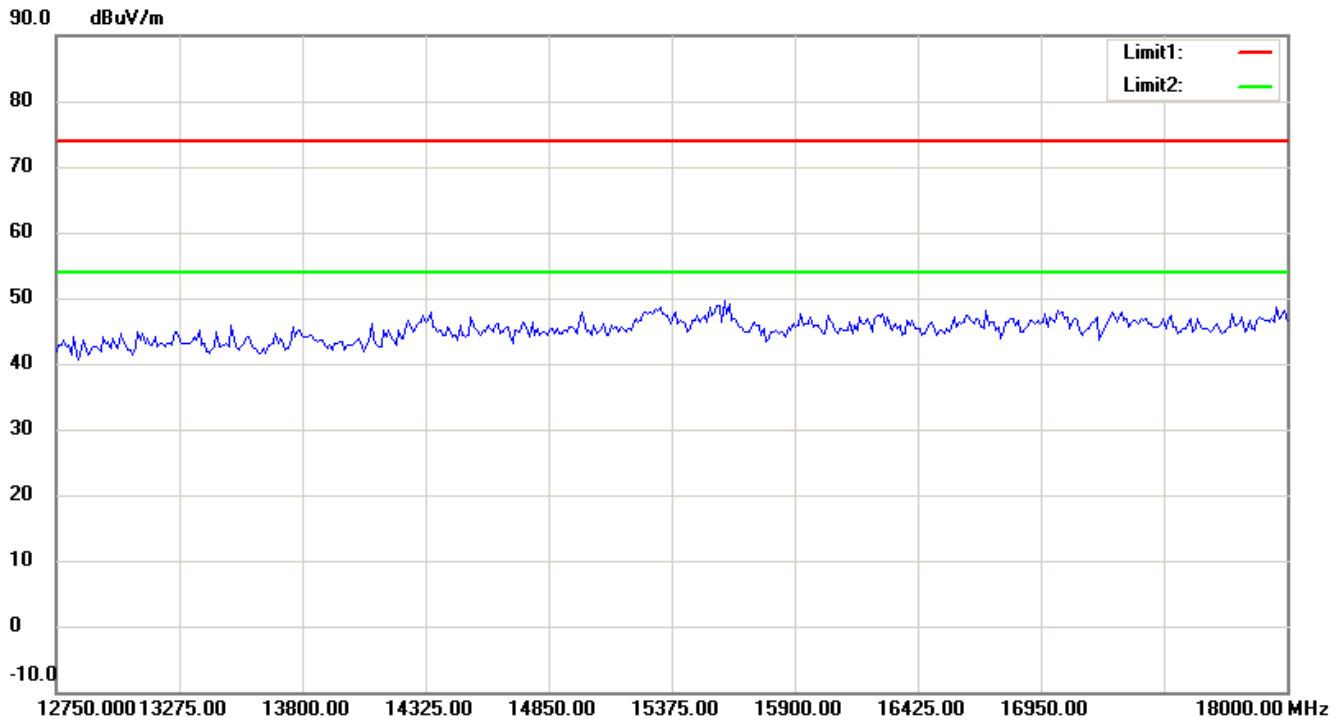
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

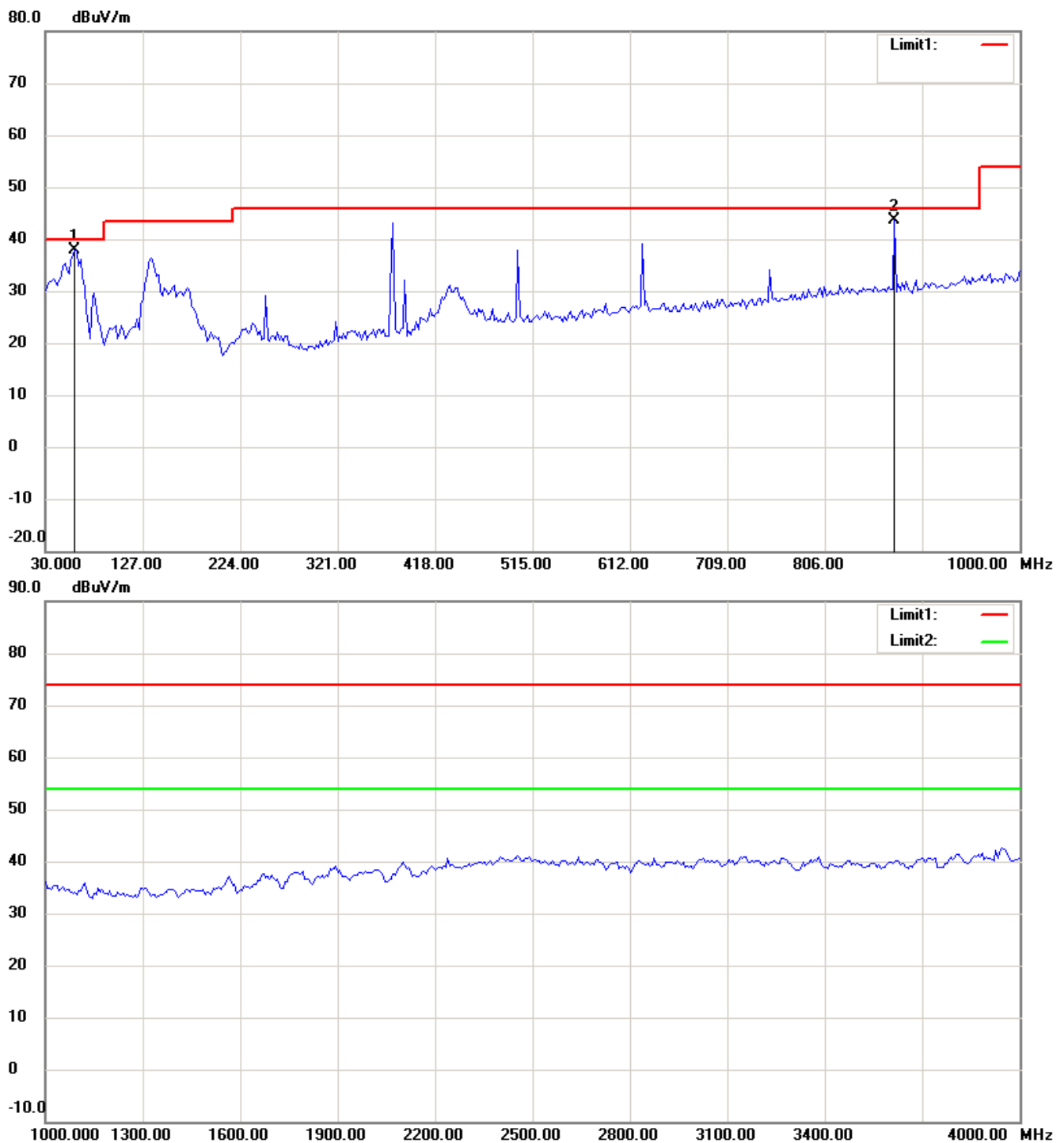
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

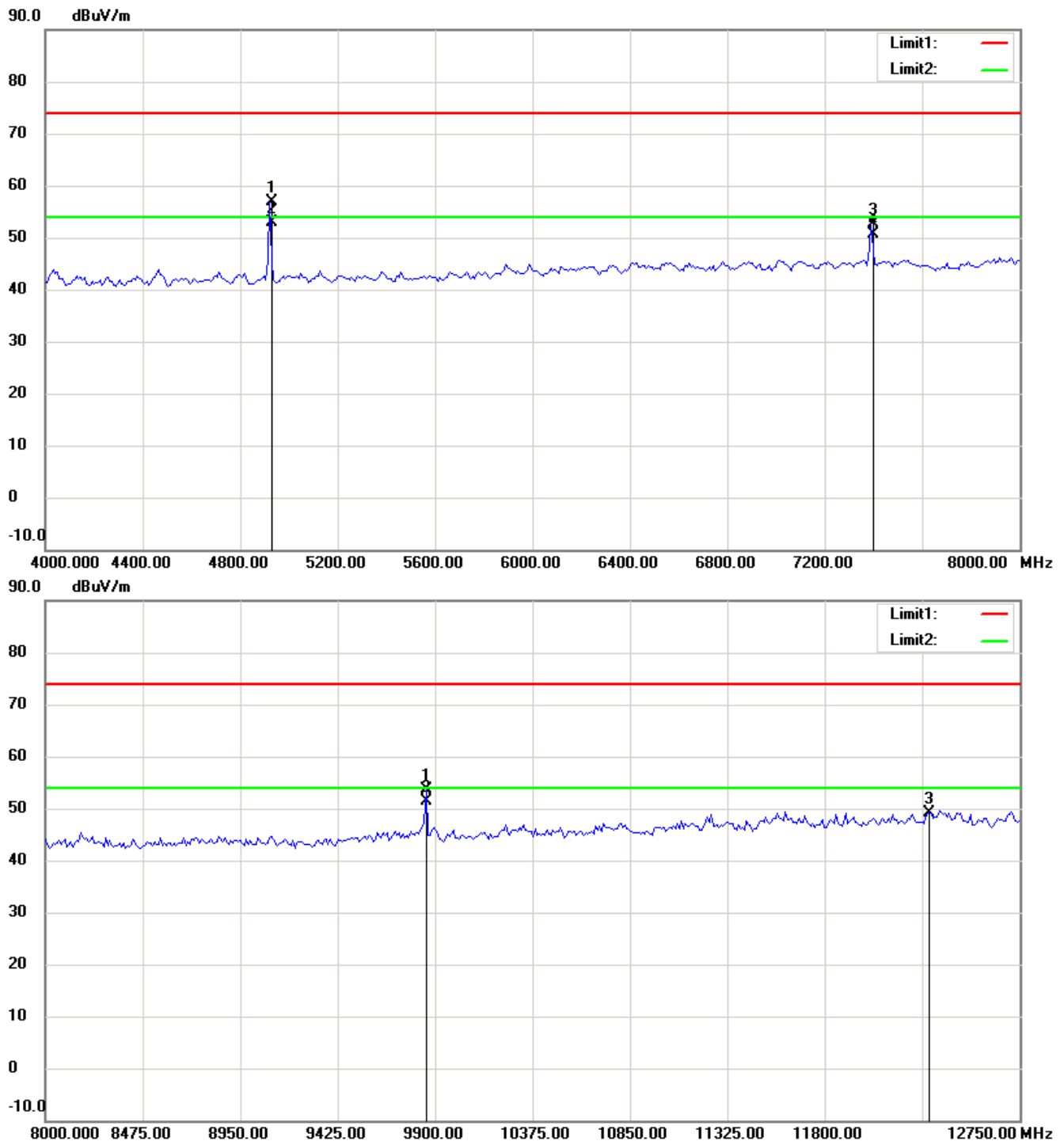
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

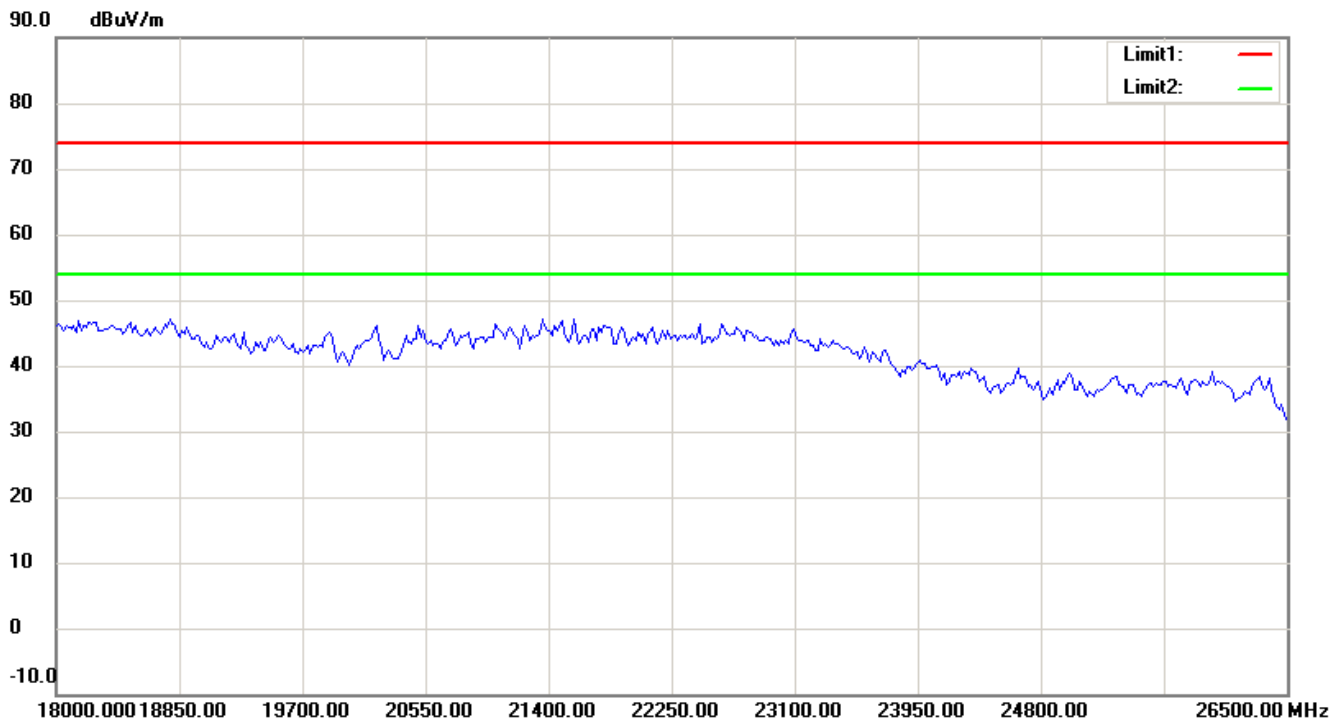
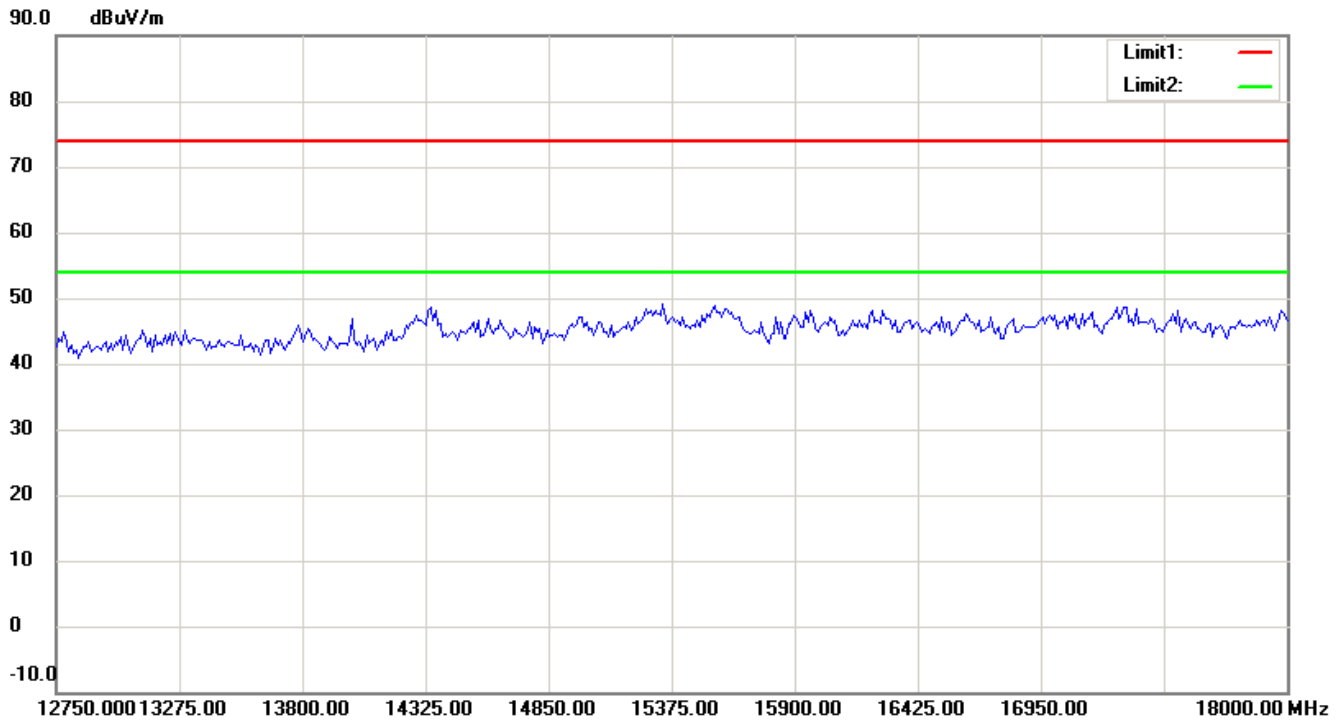
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

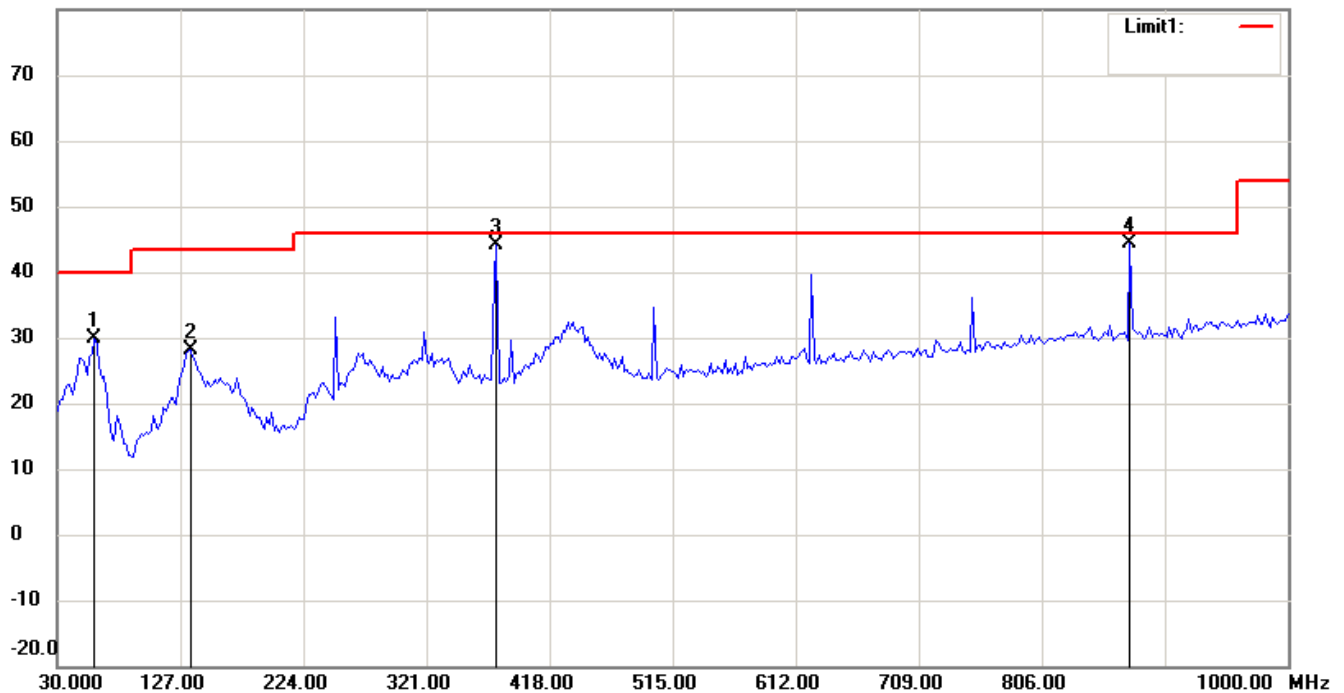
FCC ID: ZTT-APA20

Antenna B

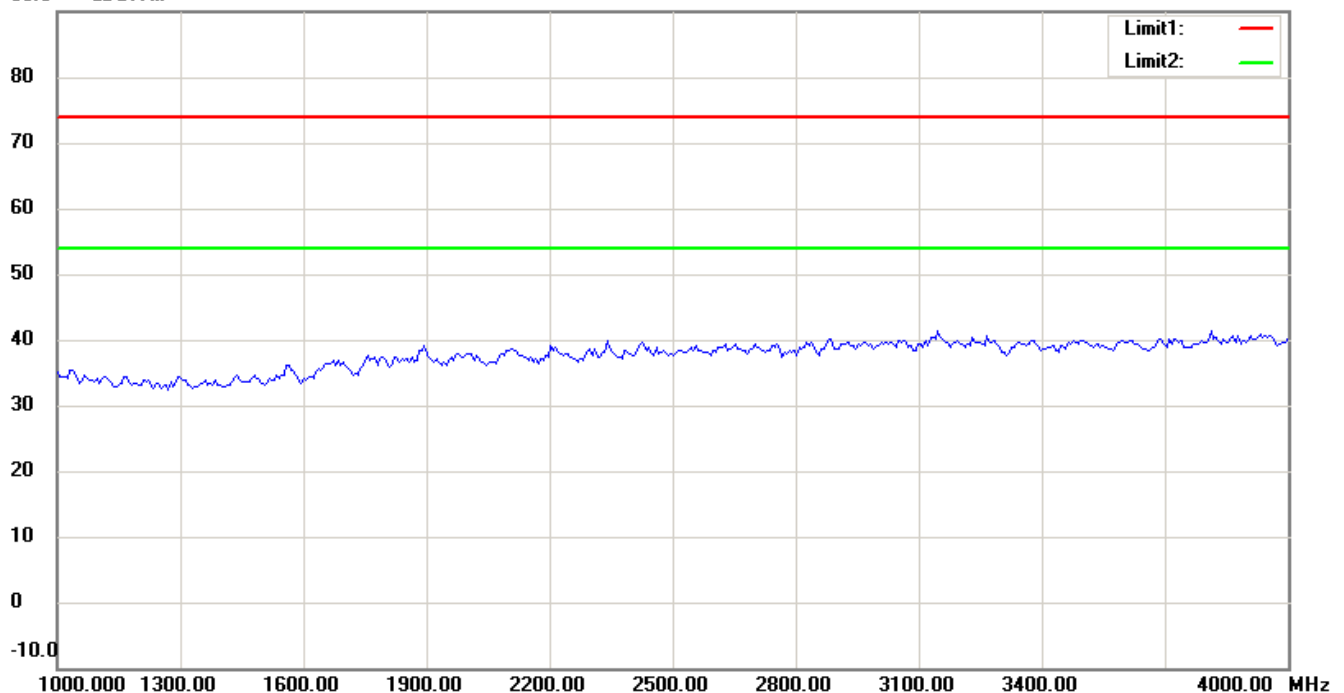
802.11a 5745MHz

Antenna Polarization H

80.0 dBuV/m



90.0 dBuV/m



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

Note:

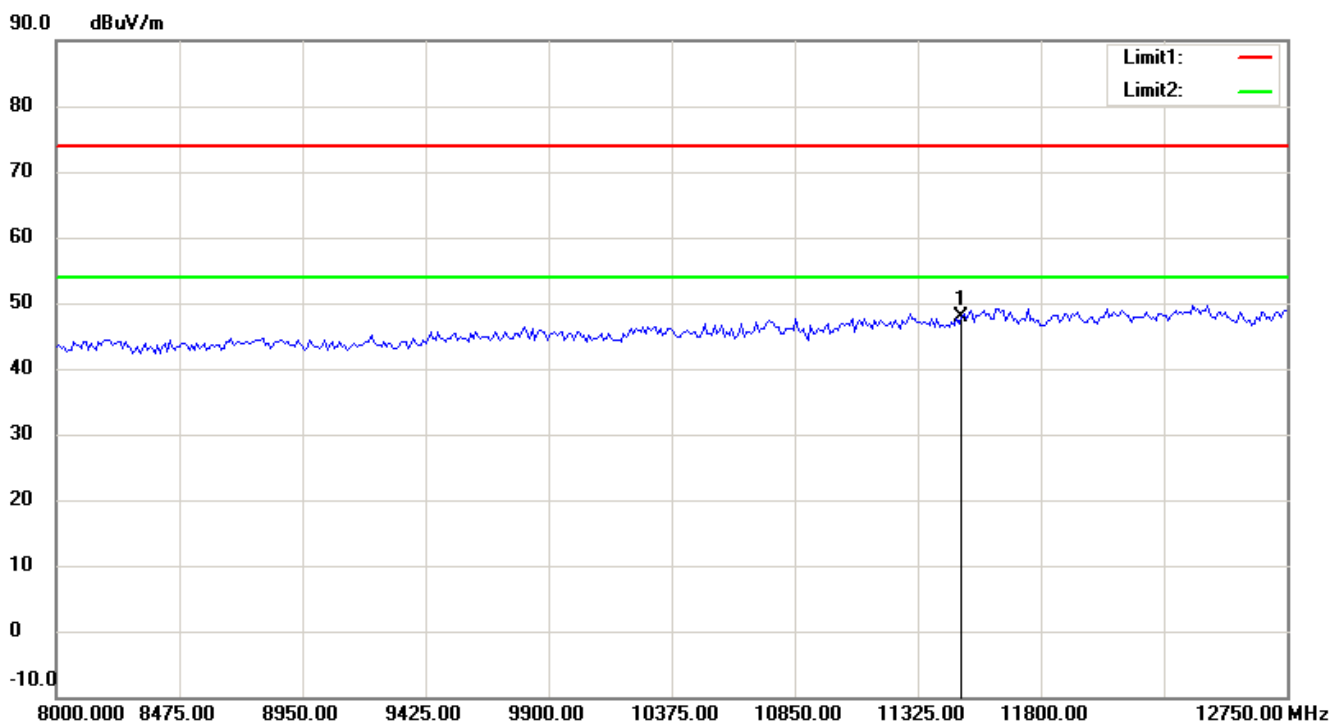
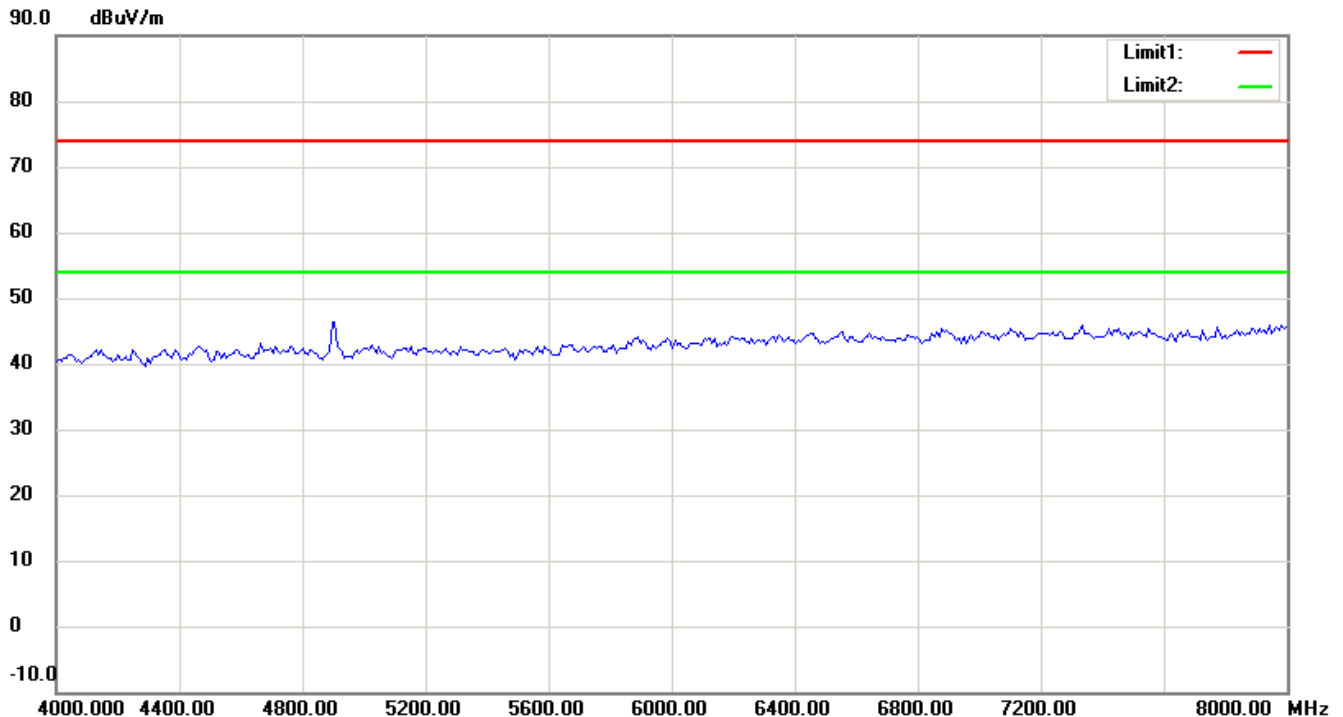
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

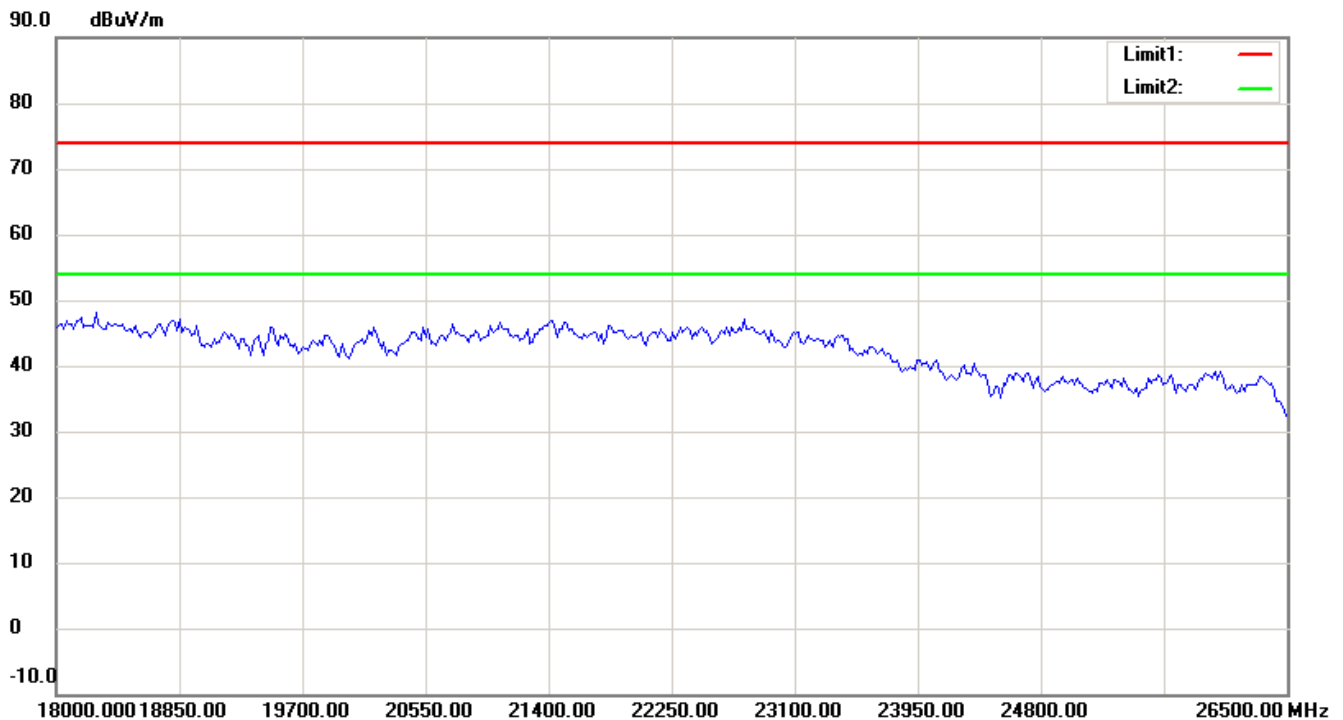
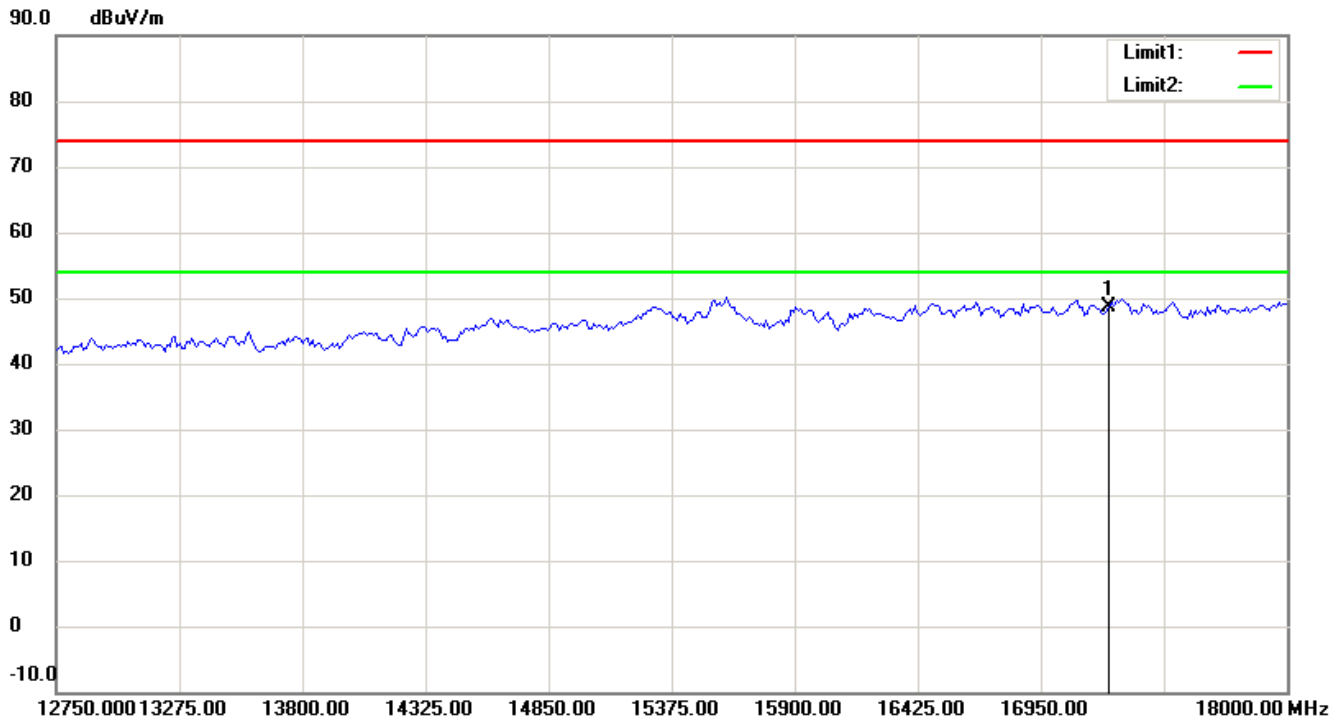
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

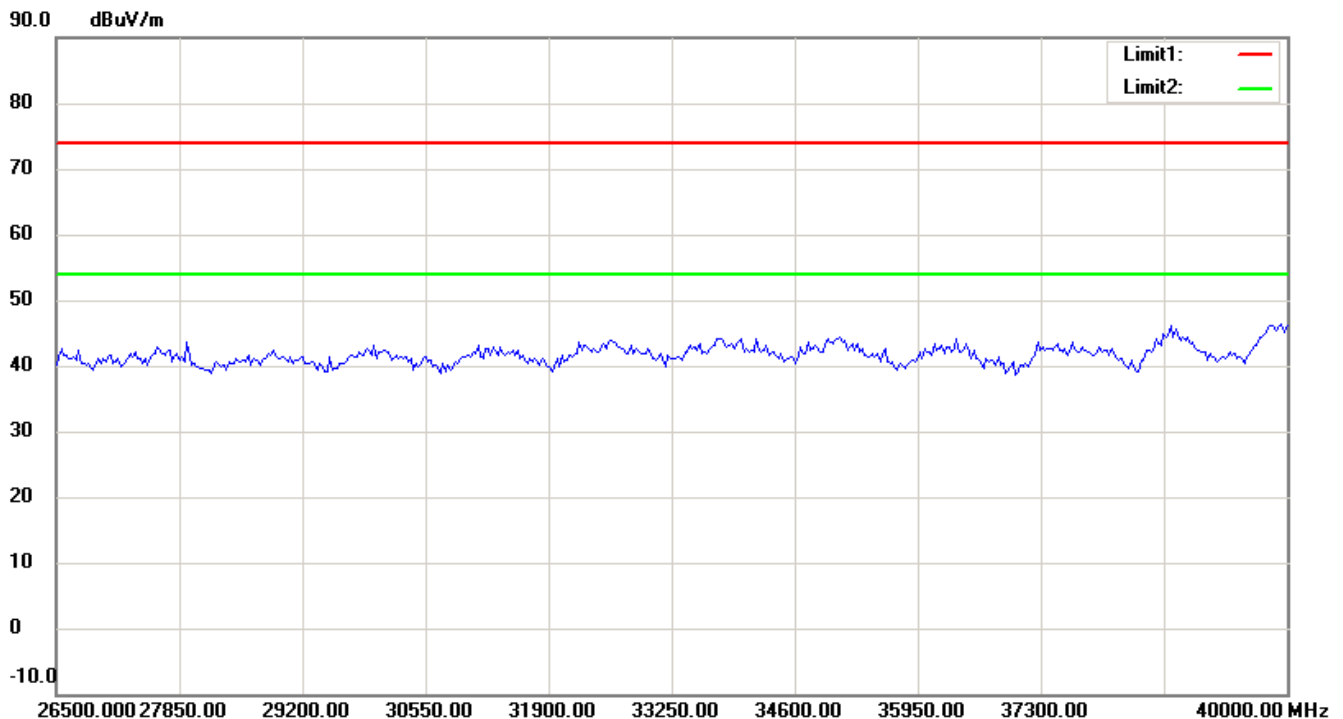
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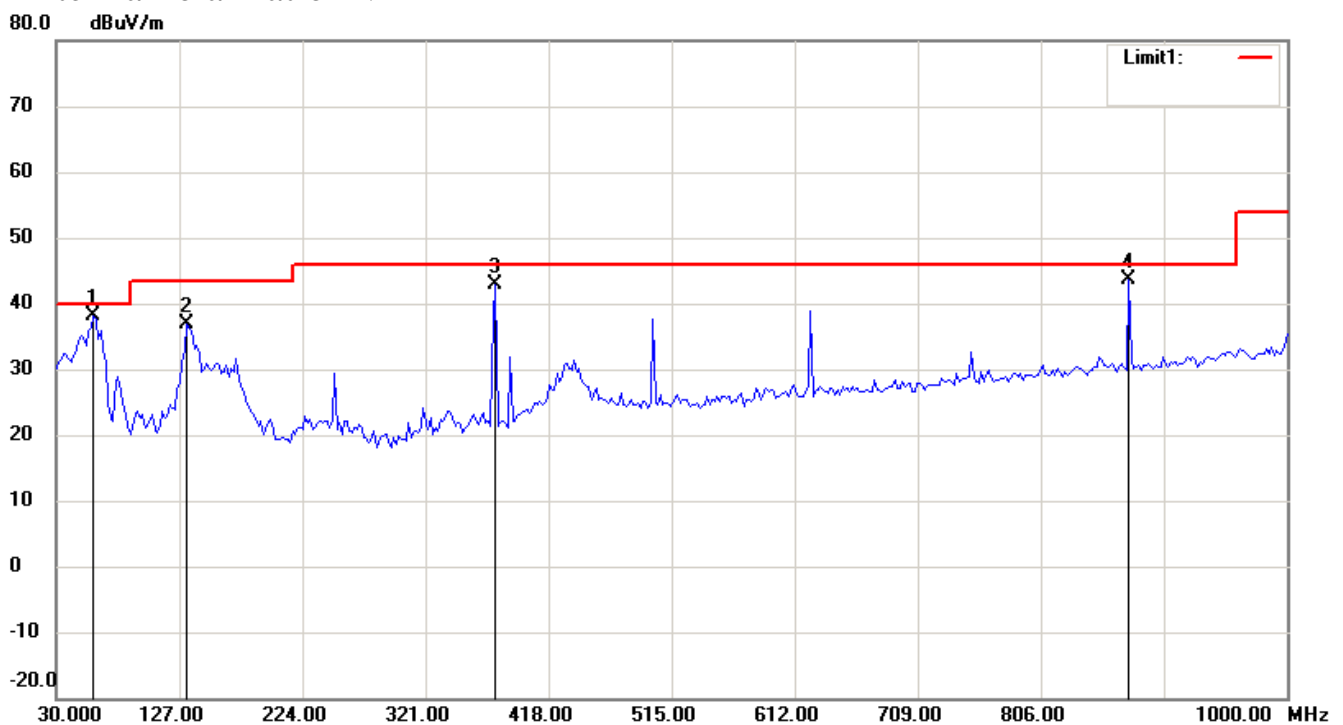
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

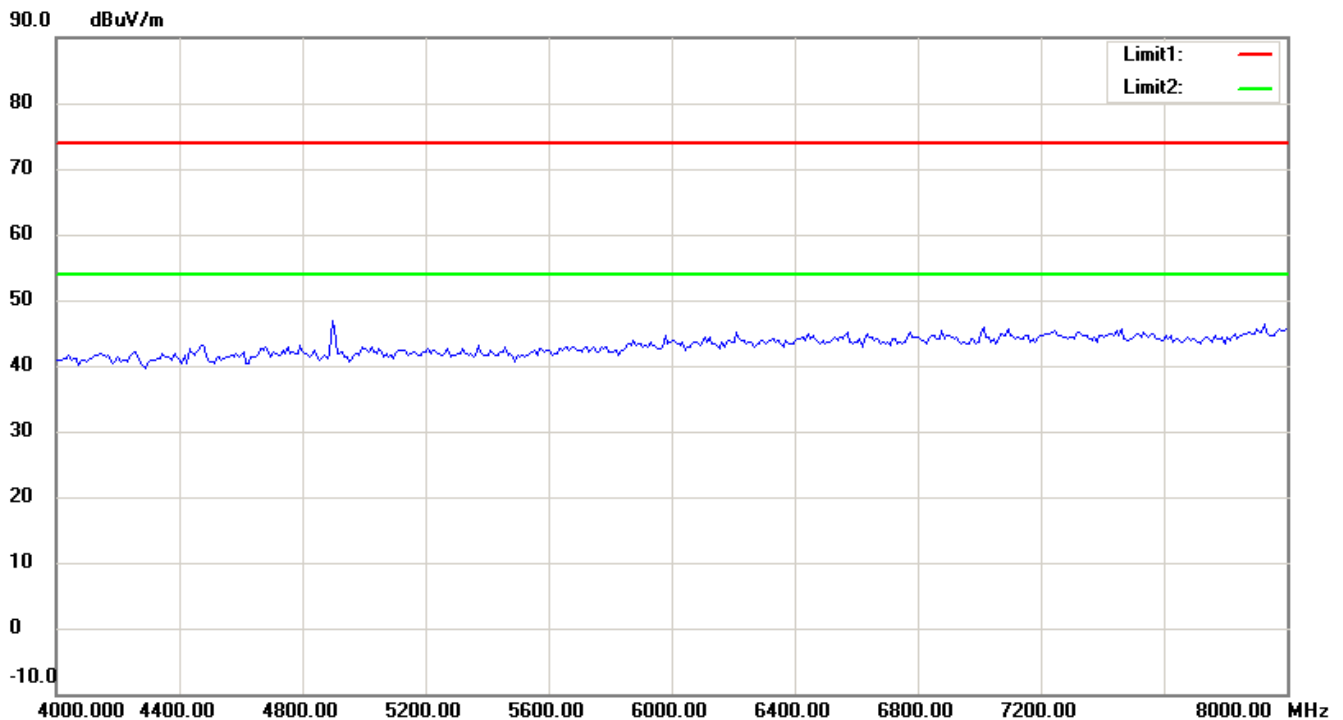
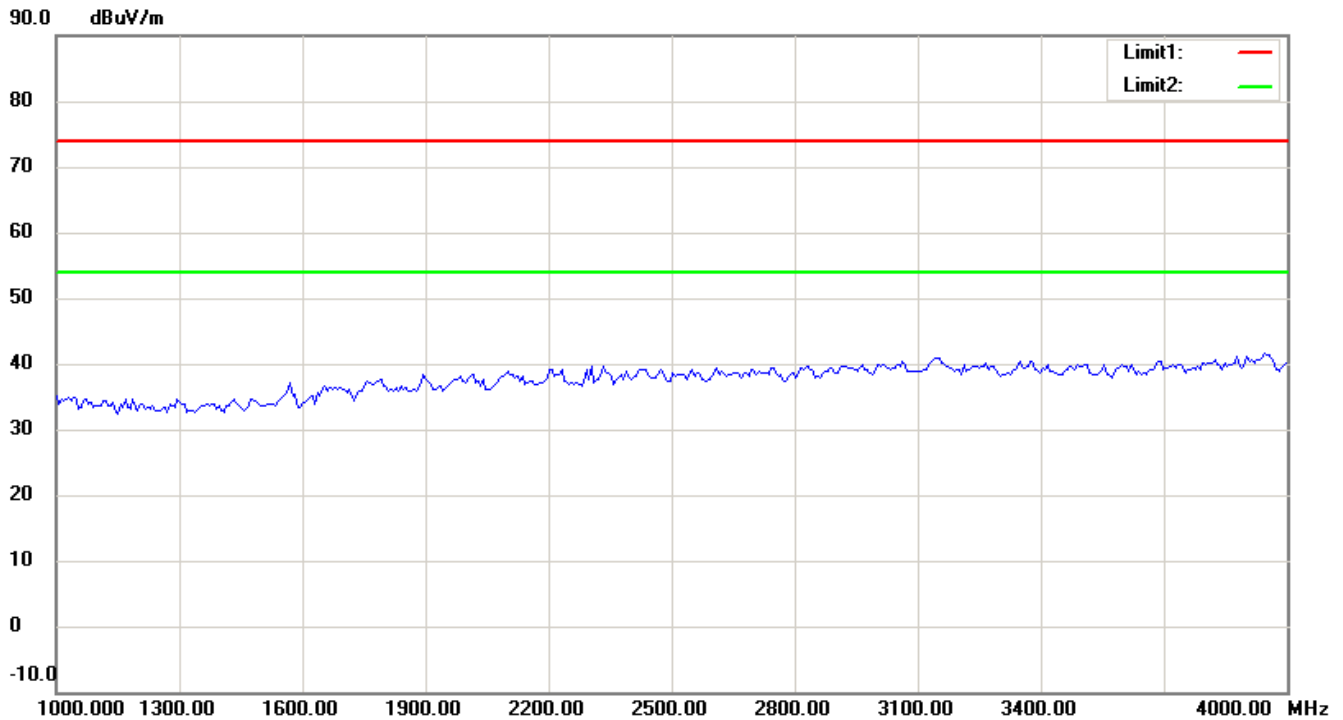
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

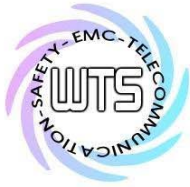
FCC ID: ZTT-APA20



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

Note:

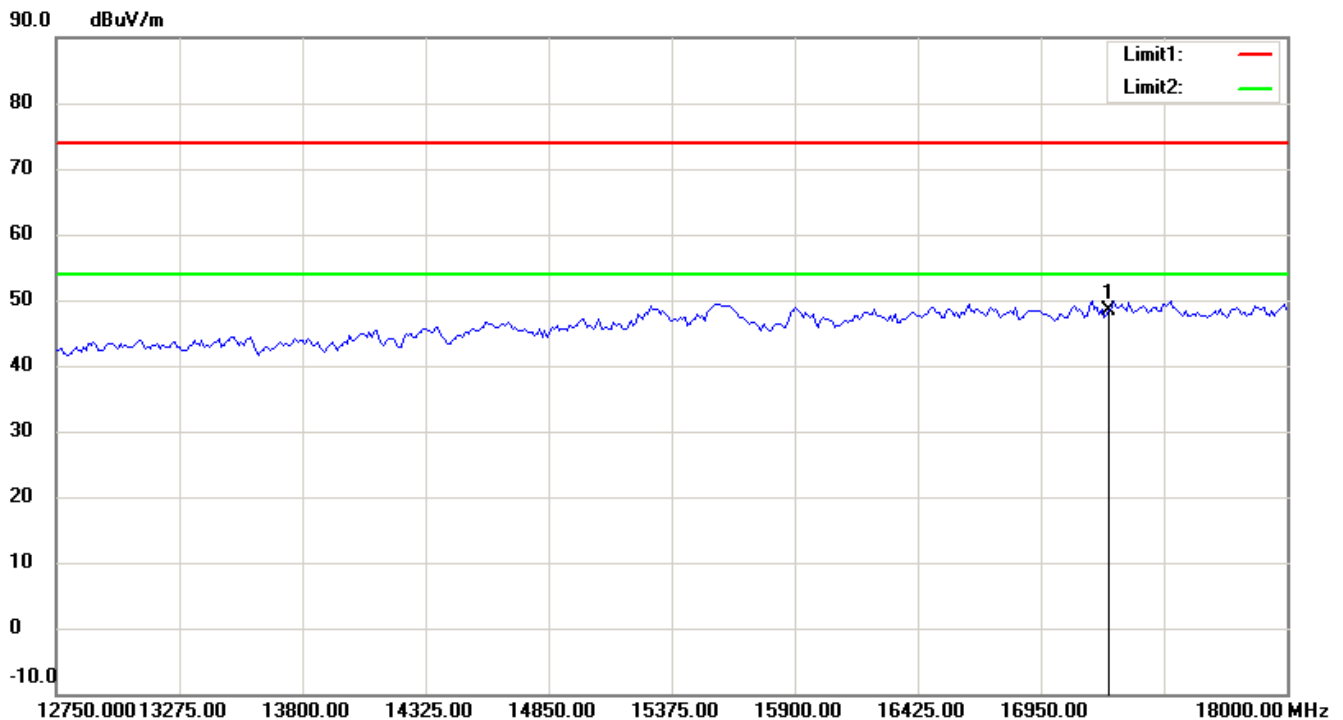
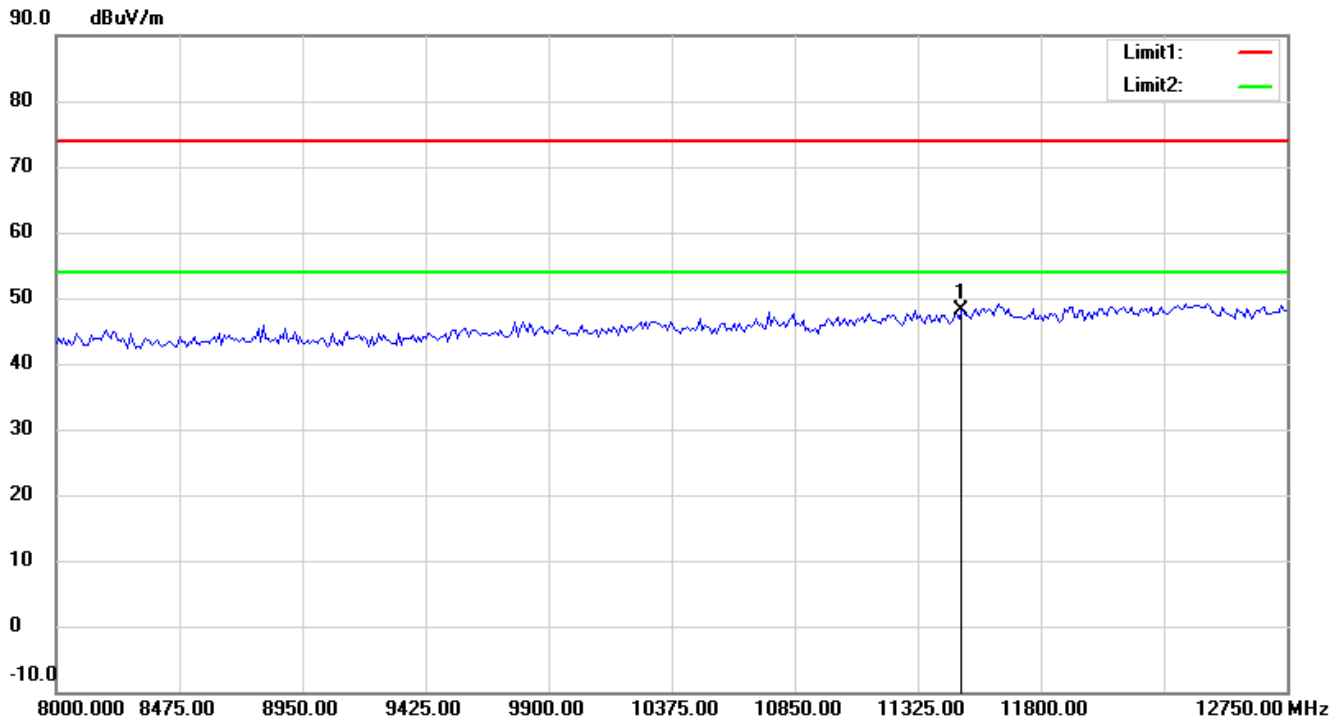
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FCC ID: ZTT-APA20



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

Note:

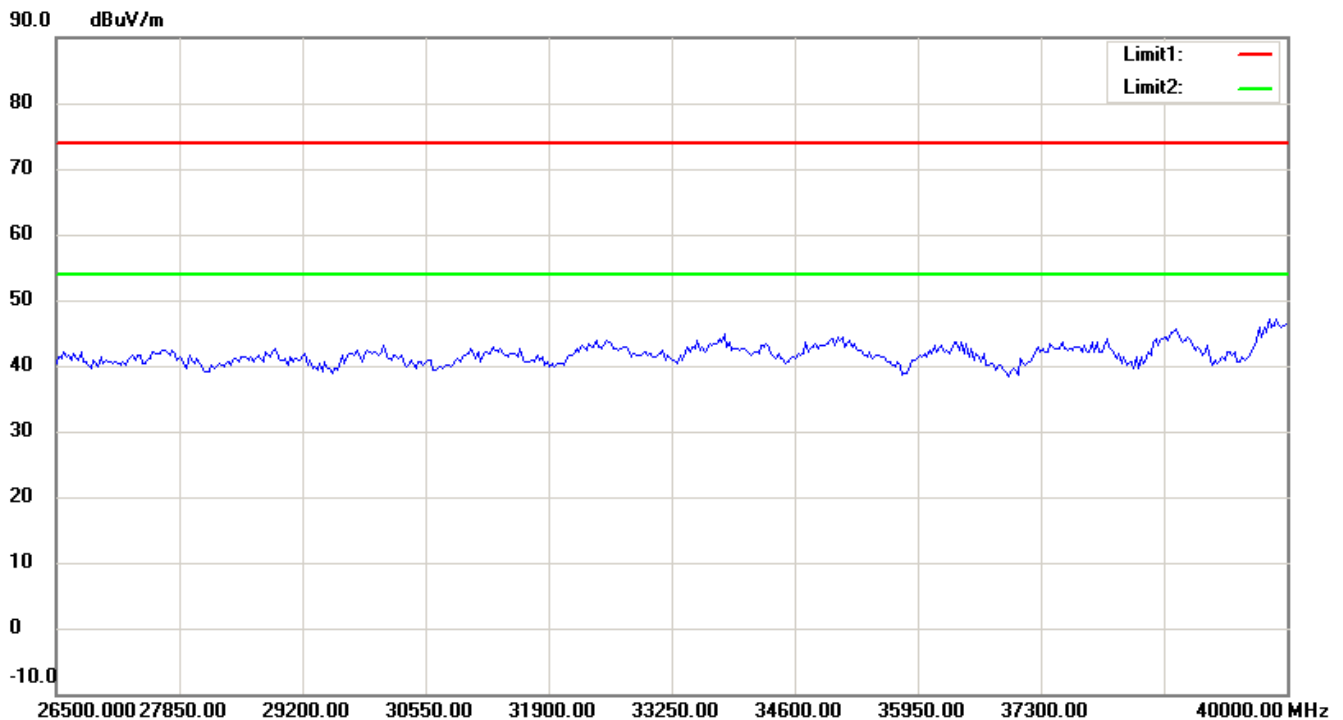
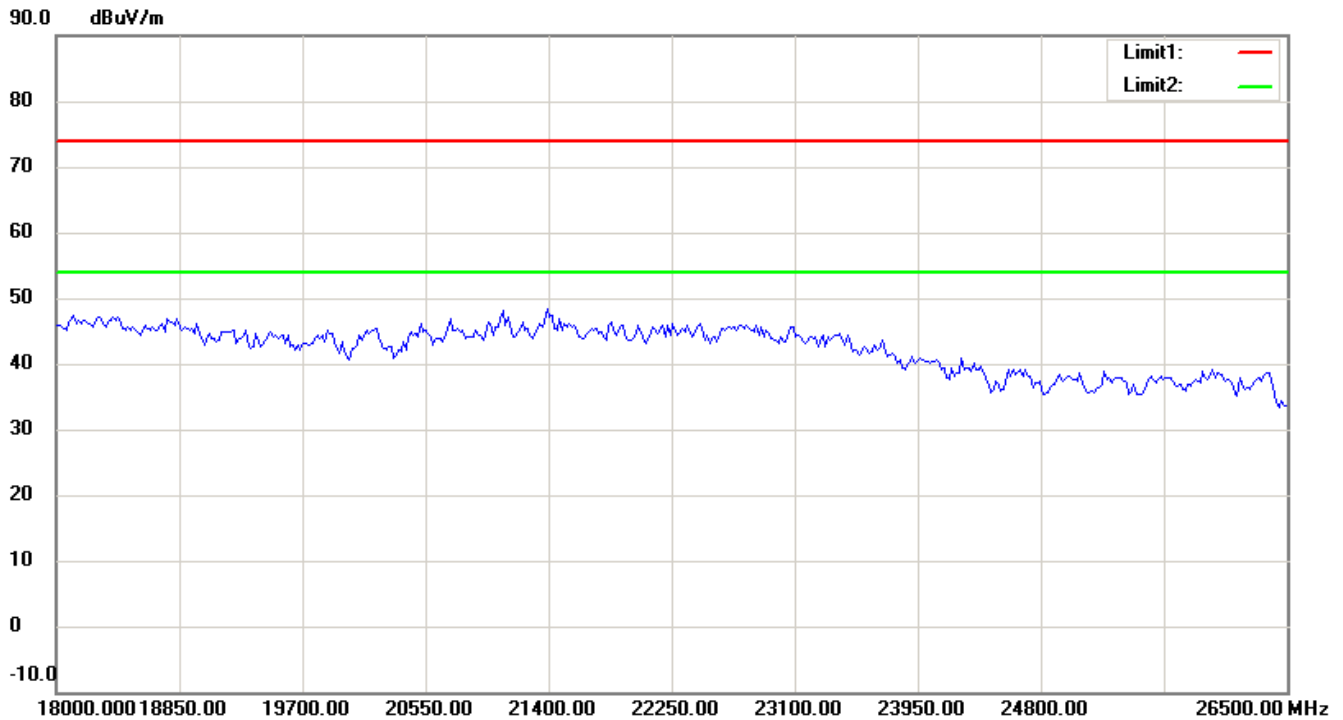
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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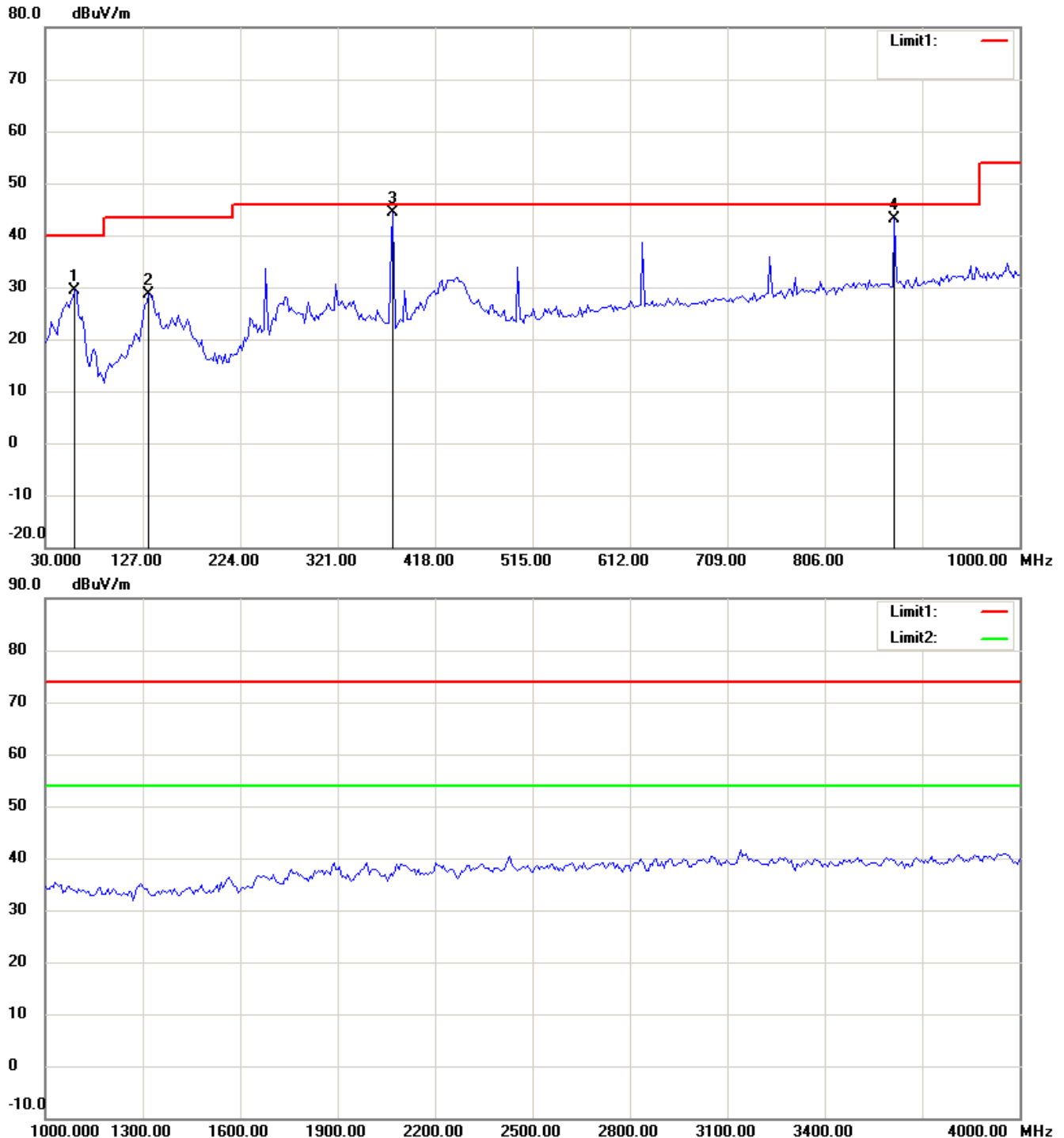
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11a 5785MHz

Antenna Polarization H



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

Note:

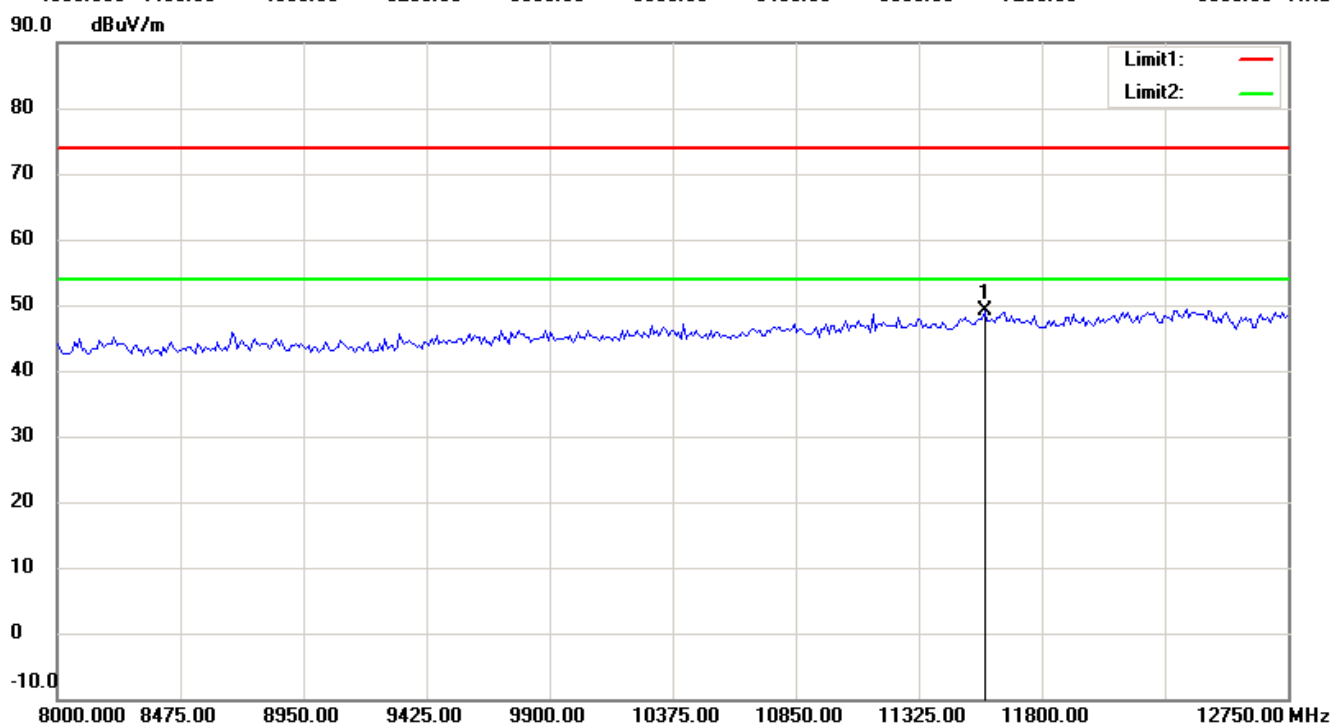
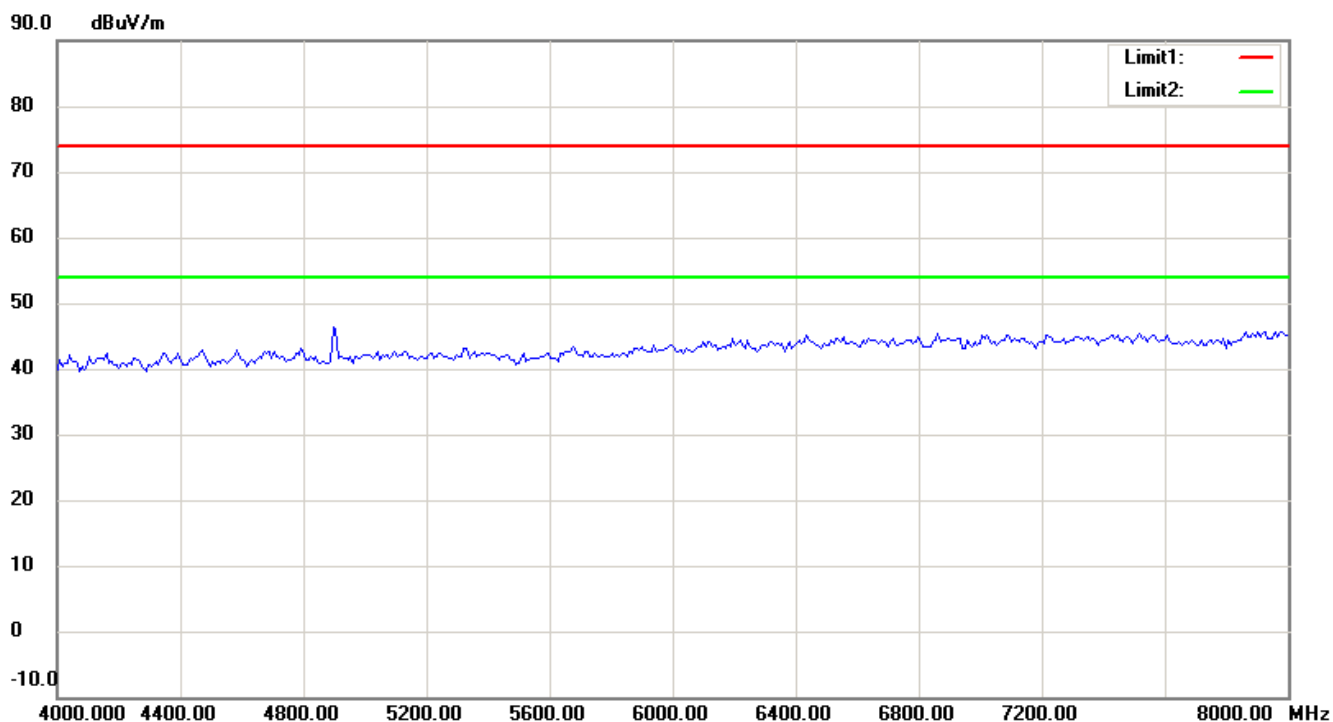
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Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

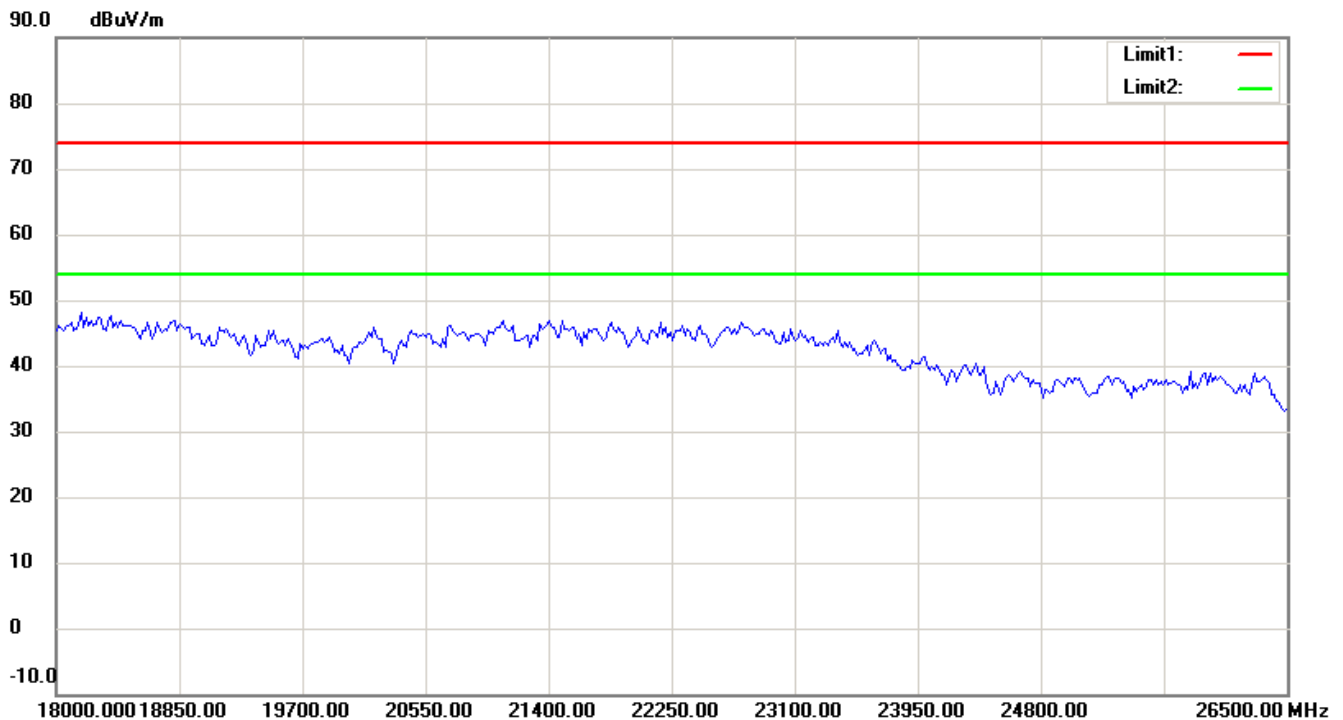
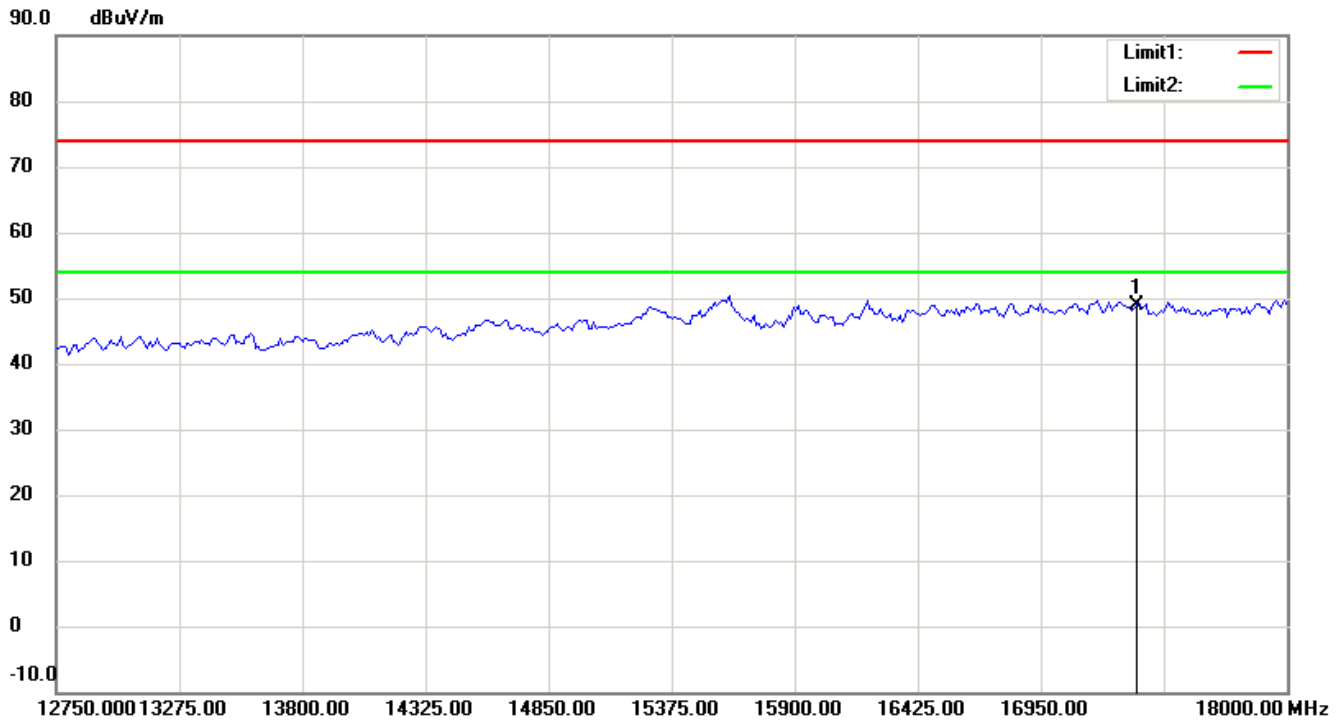
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

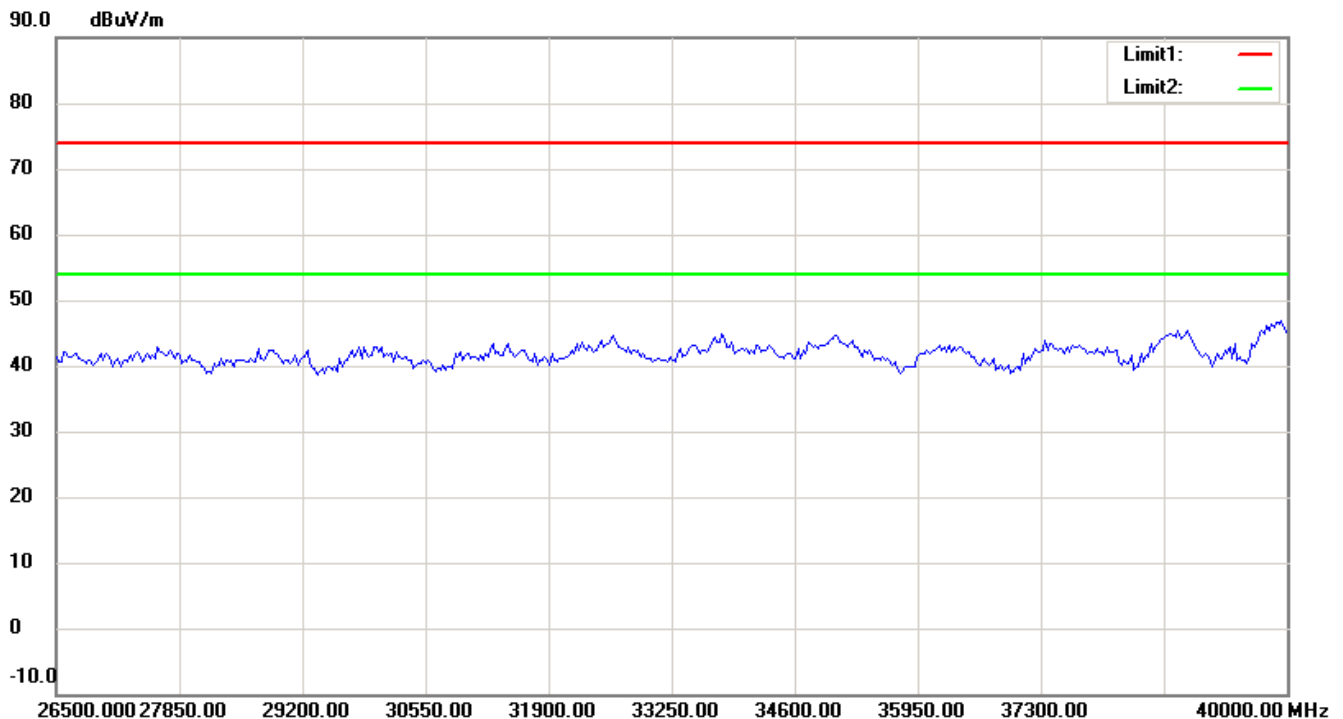
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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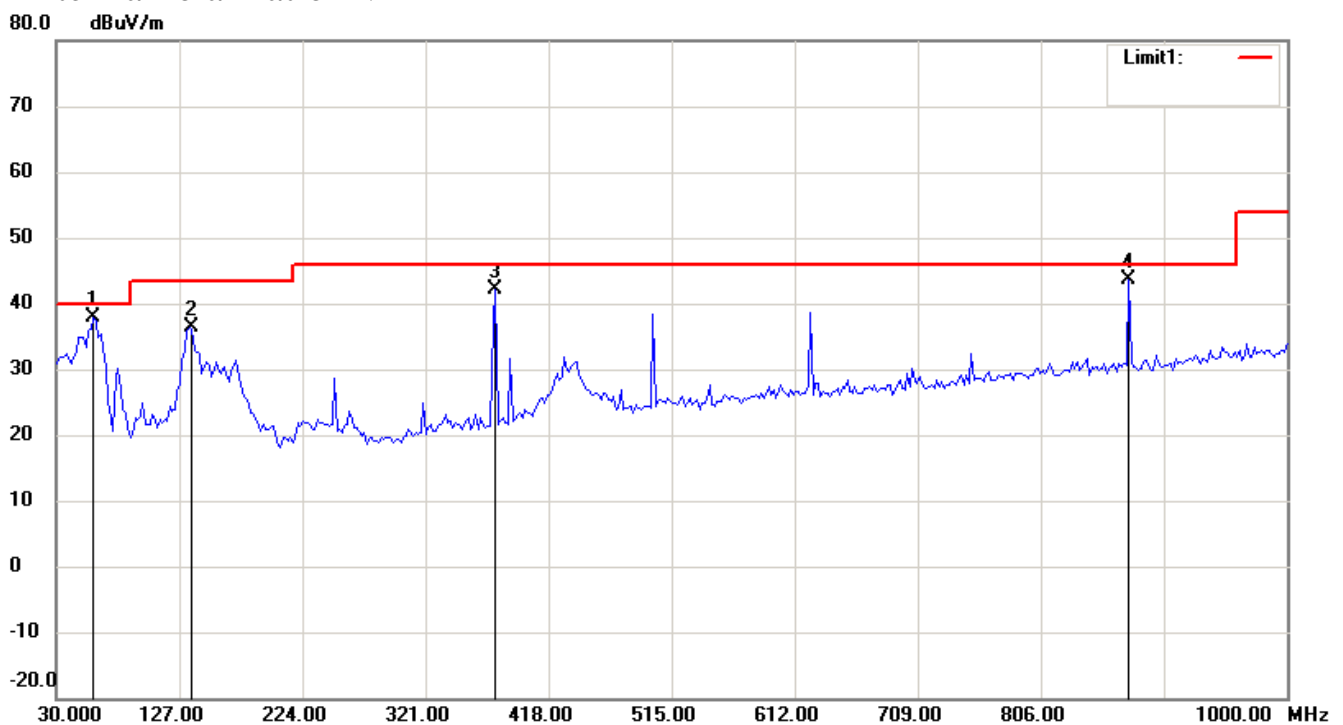
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

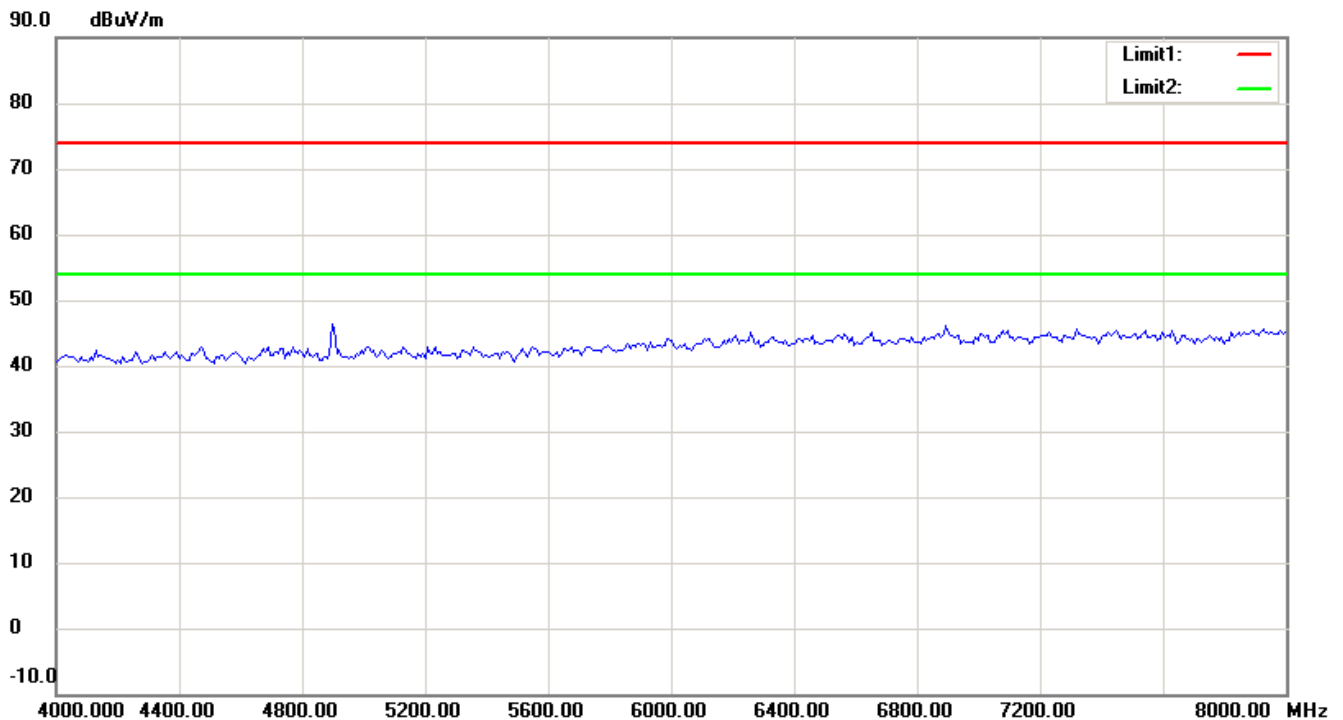
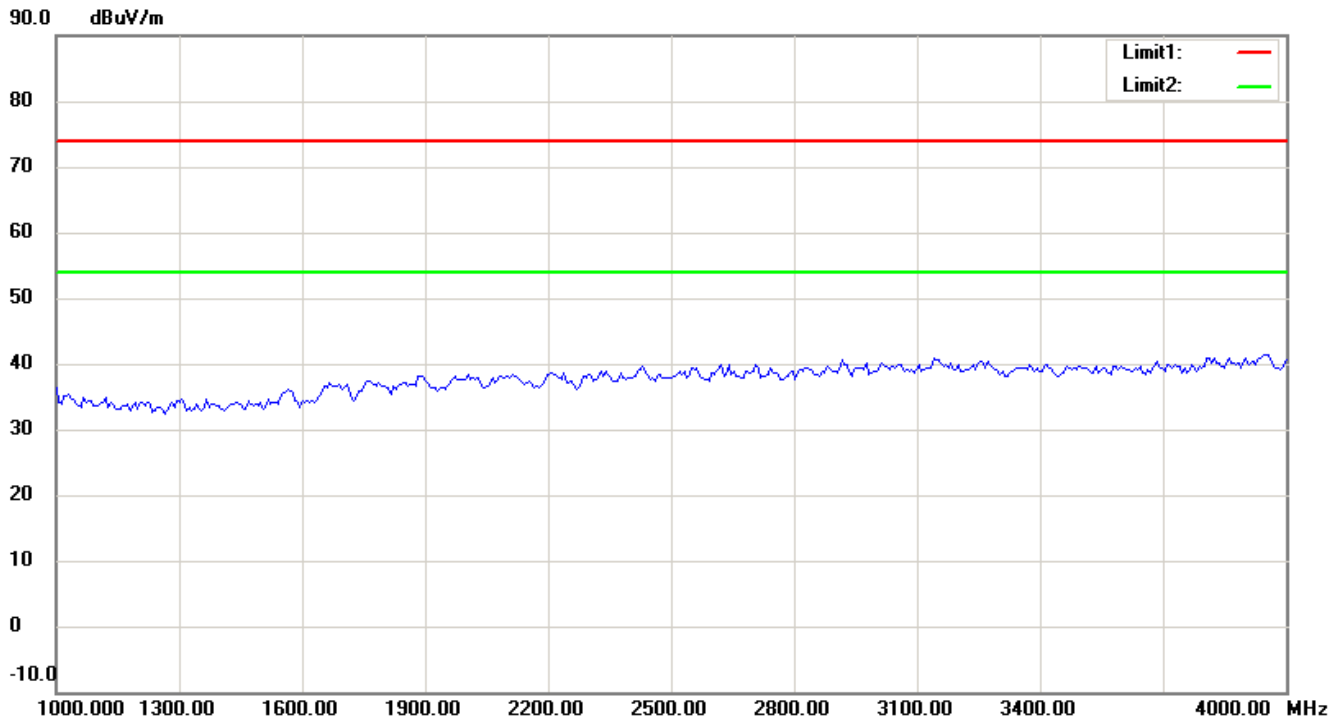
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

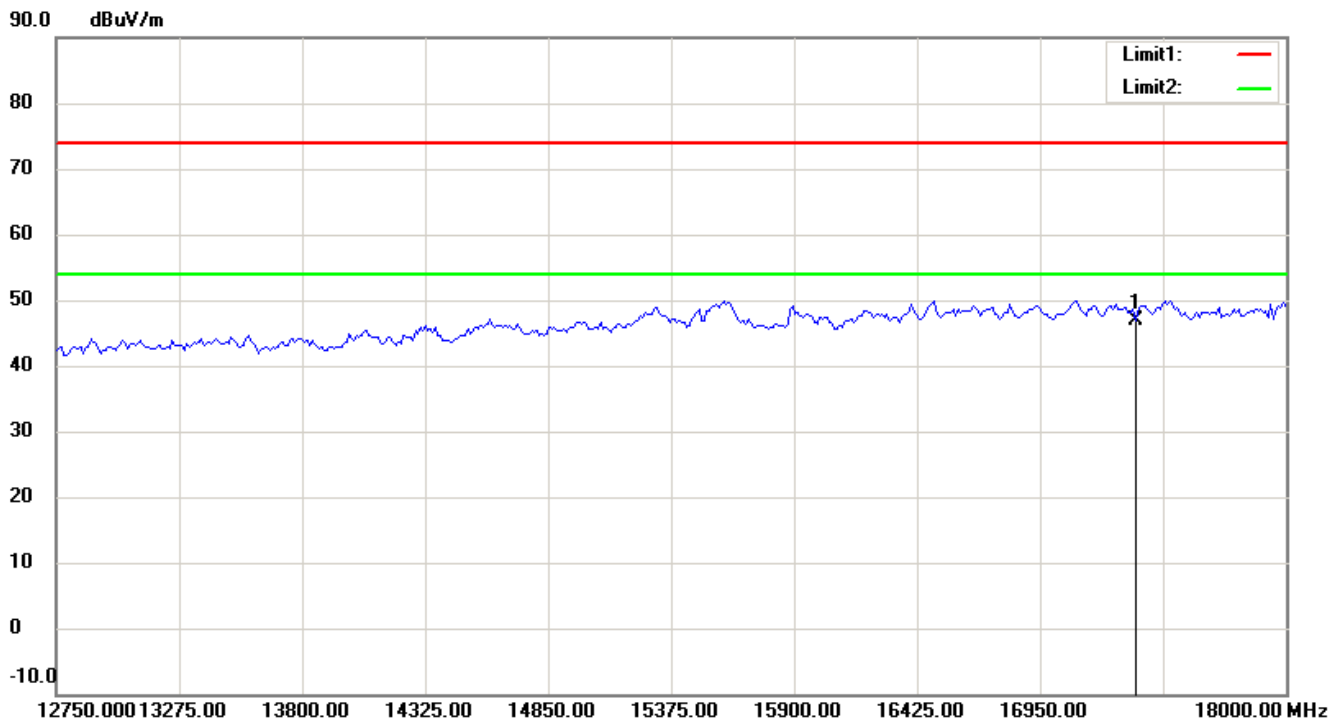
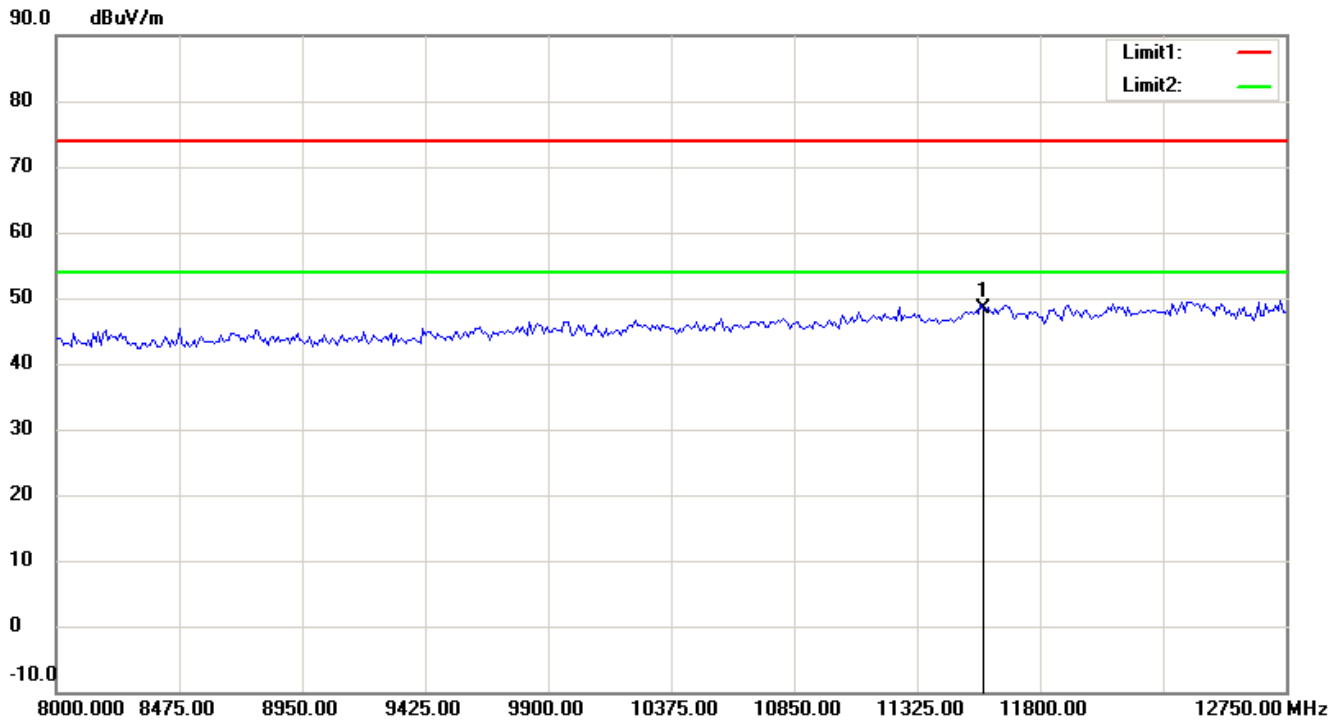
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

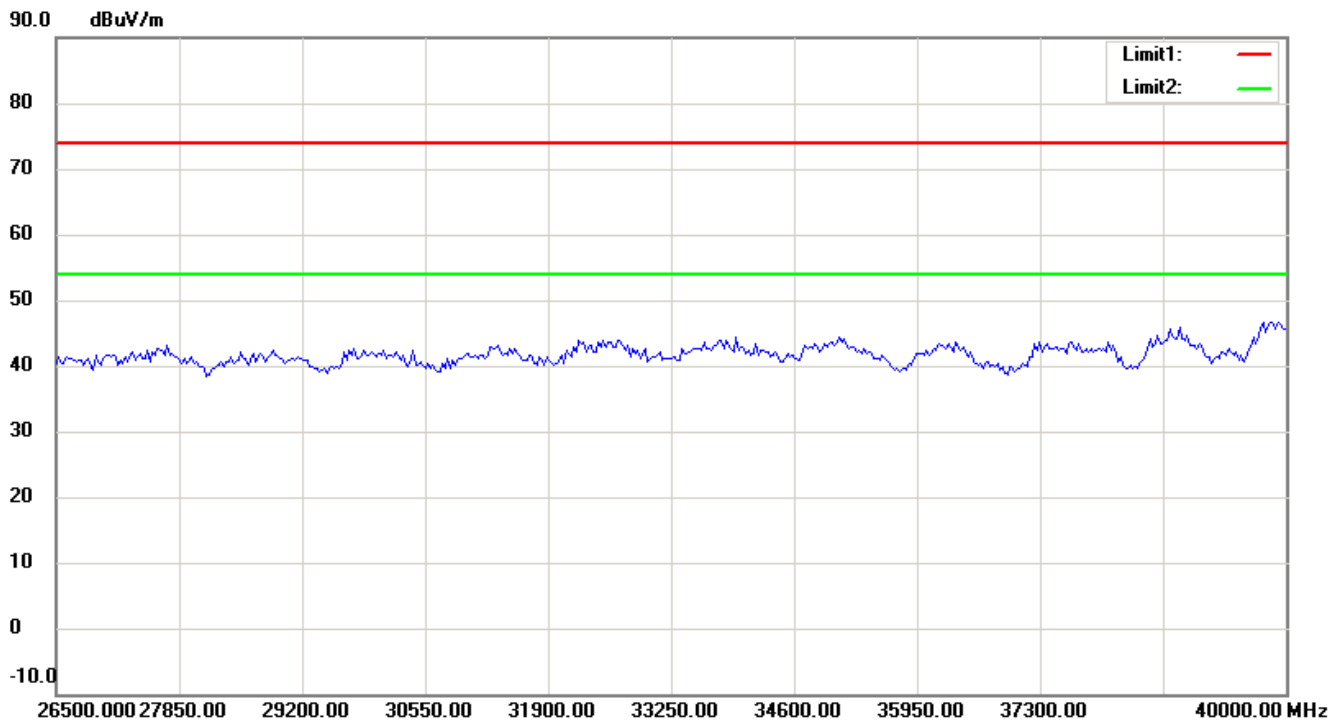
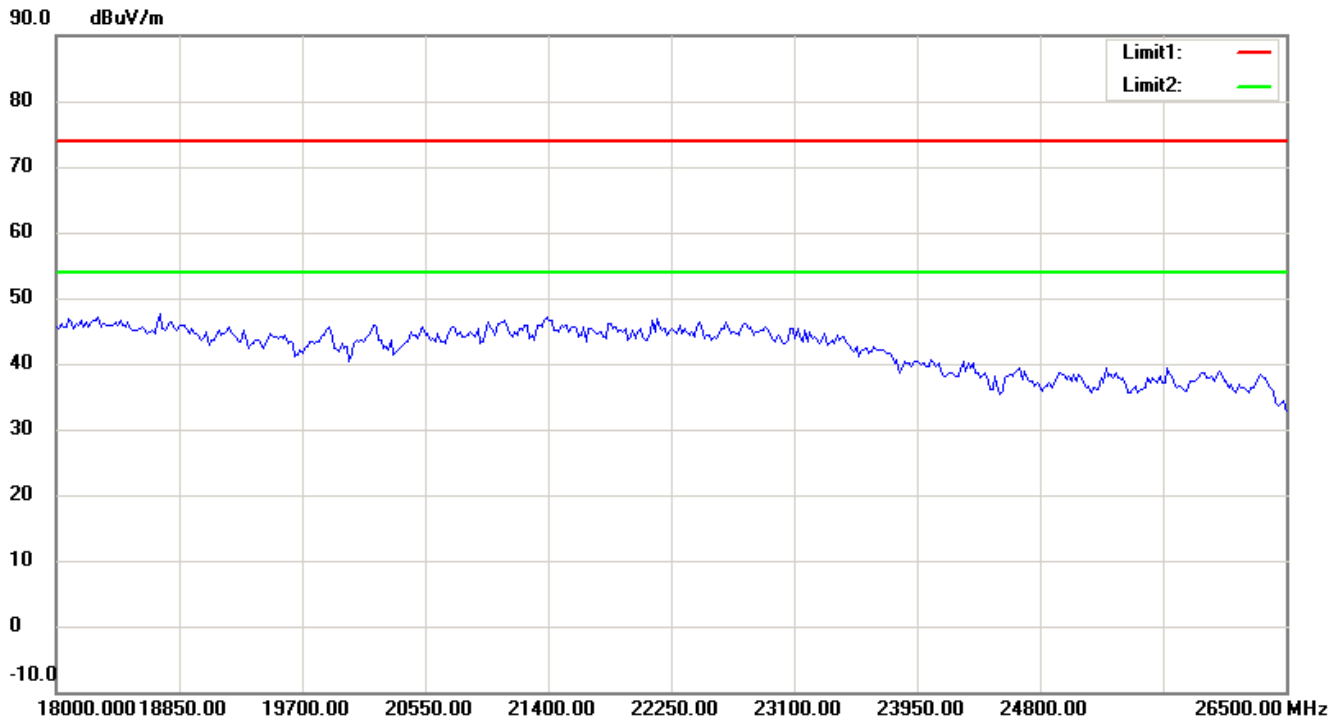
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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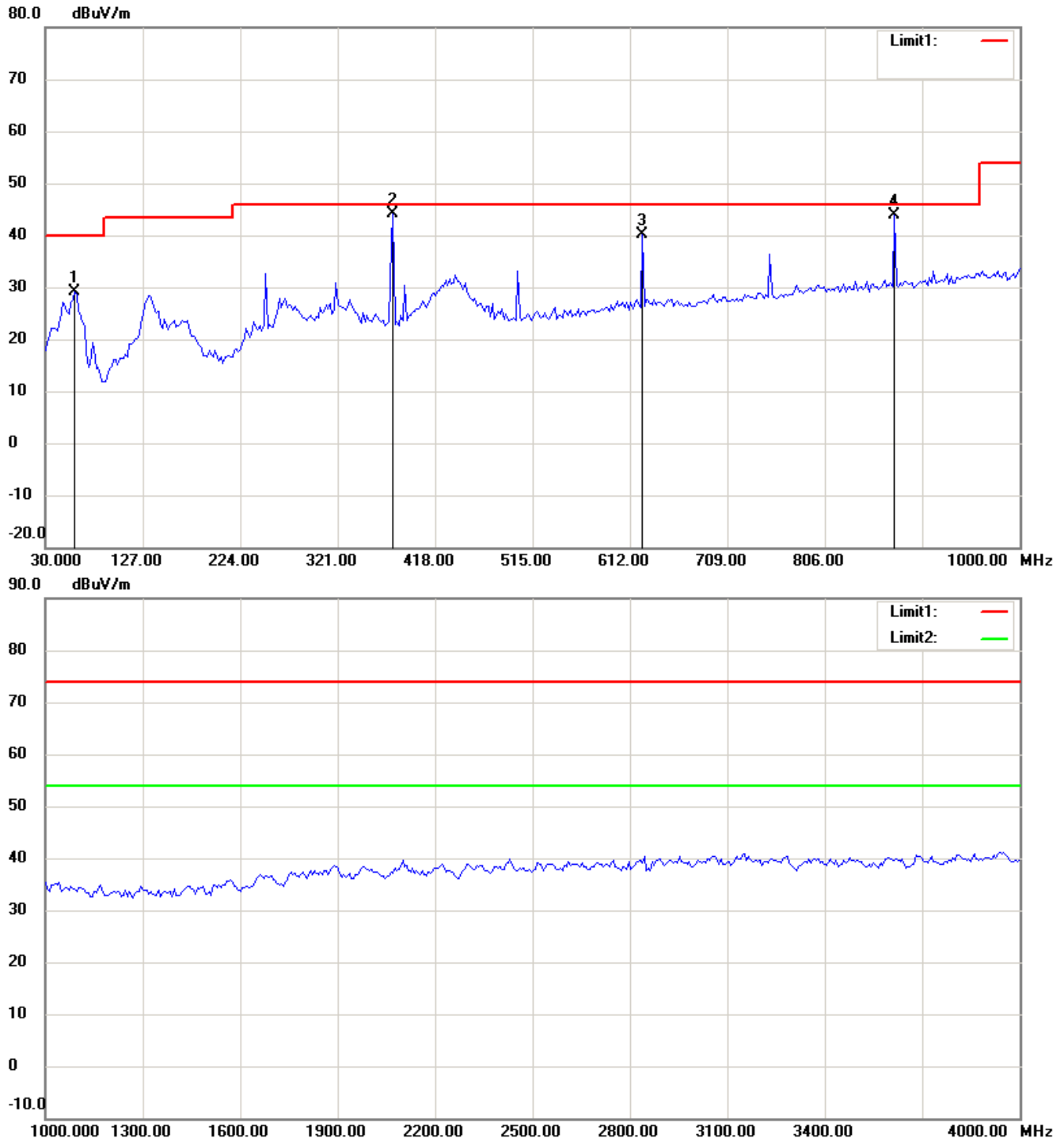
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11a 5825MHz

Antenna Polarization H



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

Note:

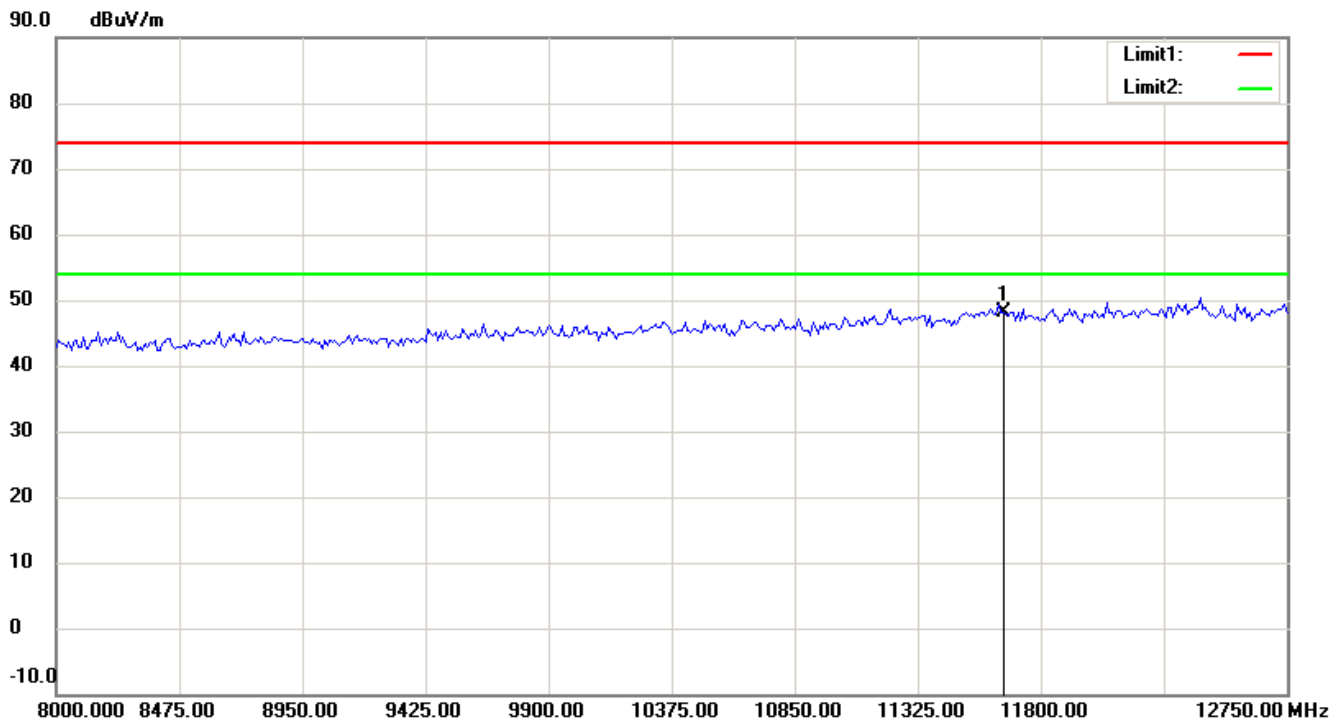
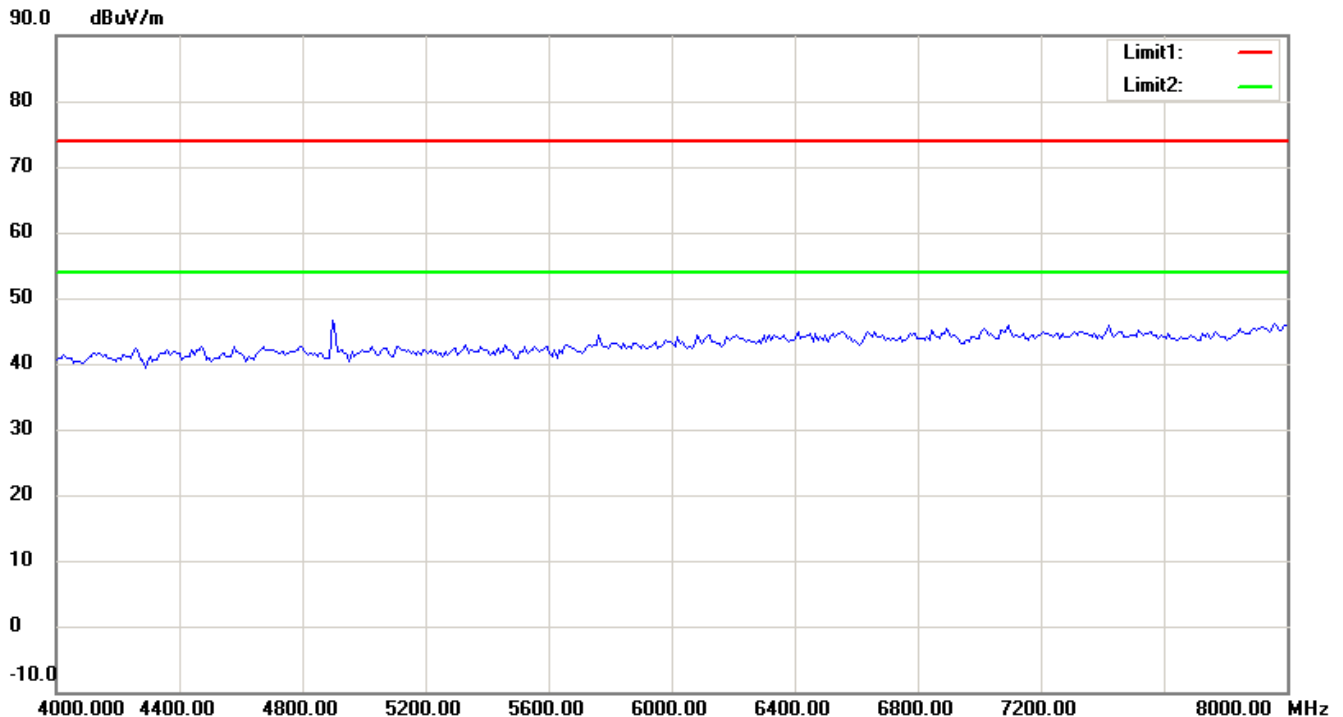
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

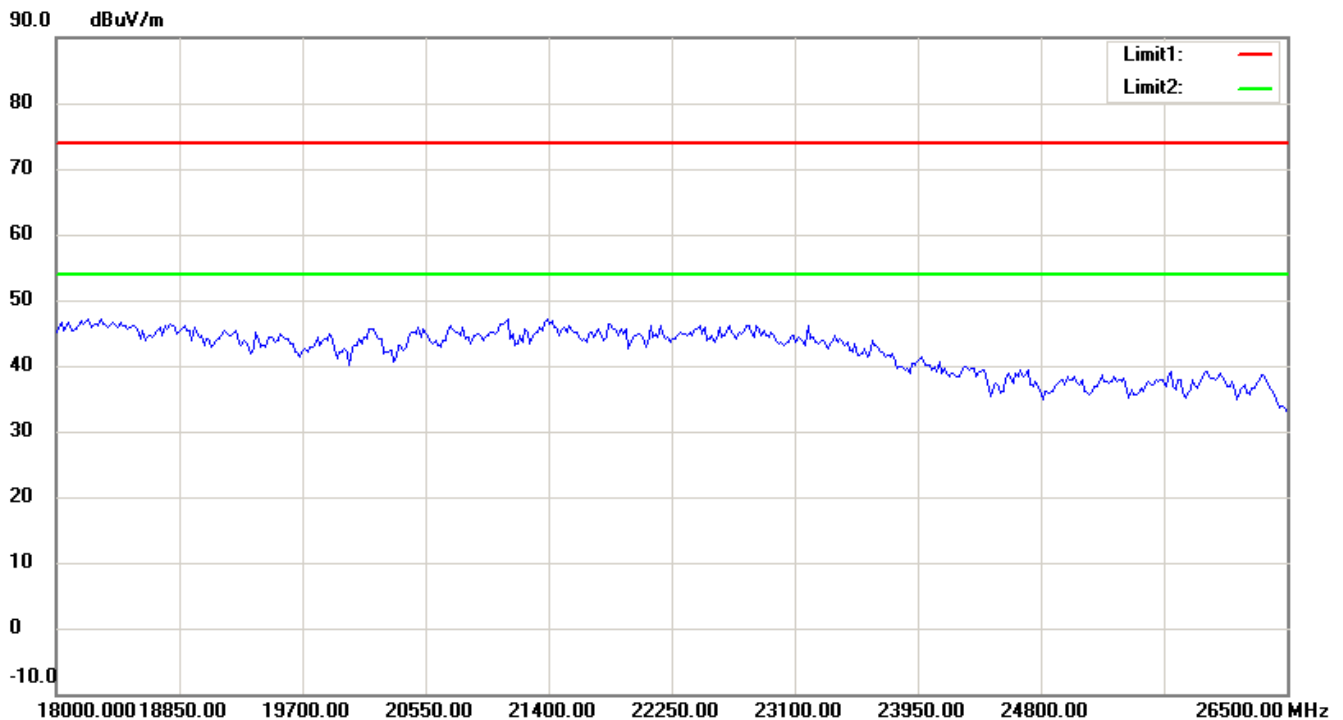
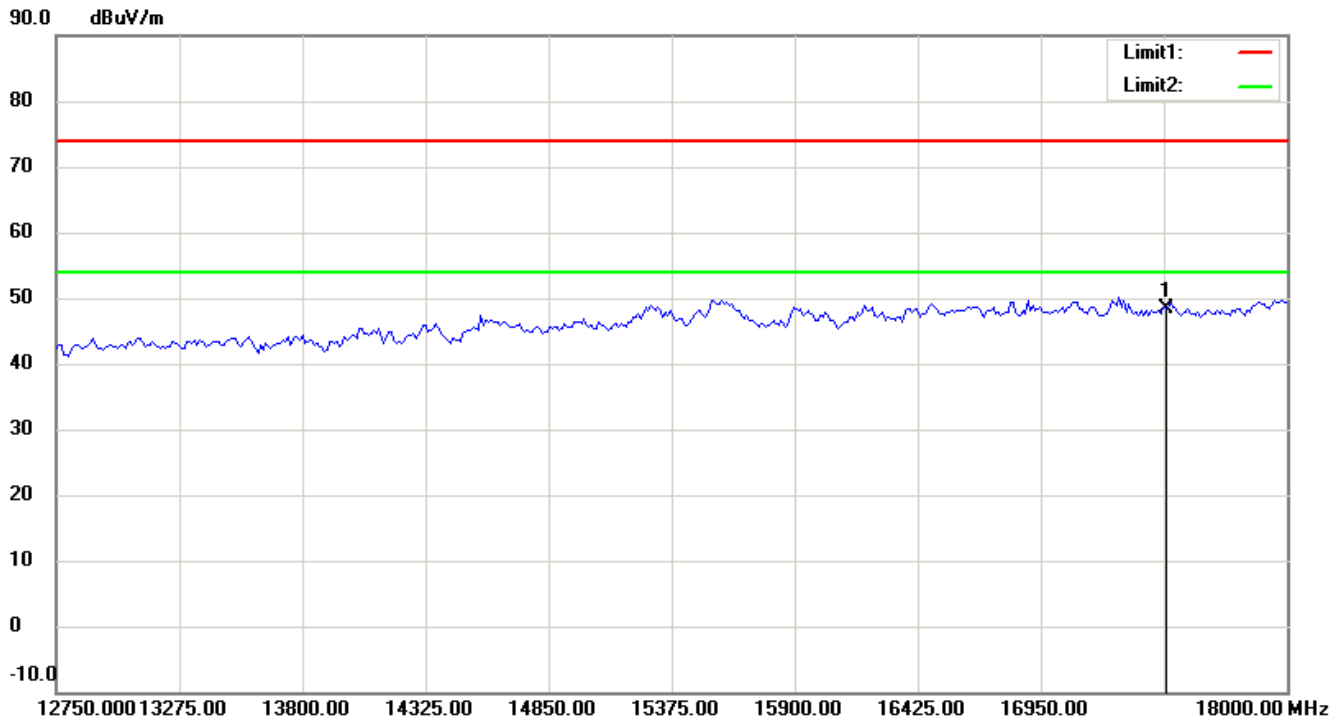
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

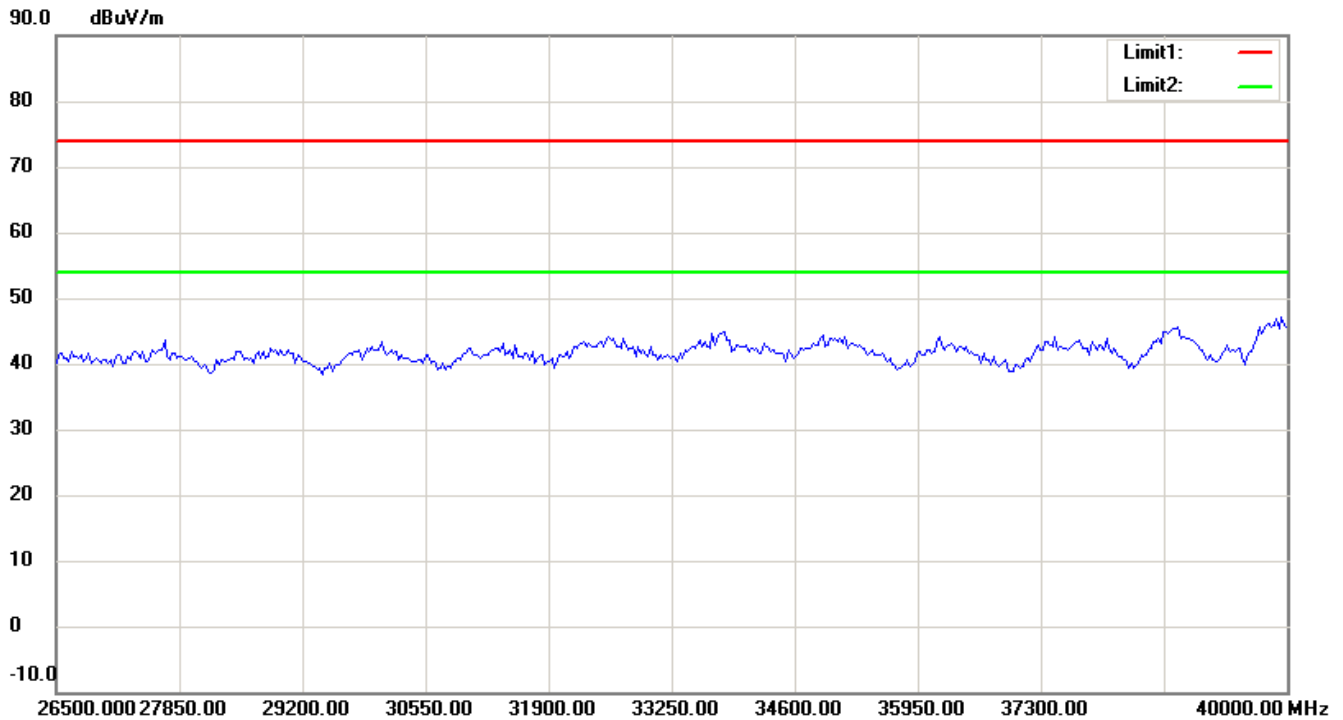
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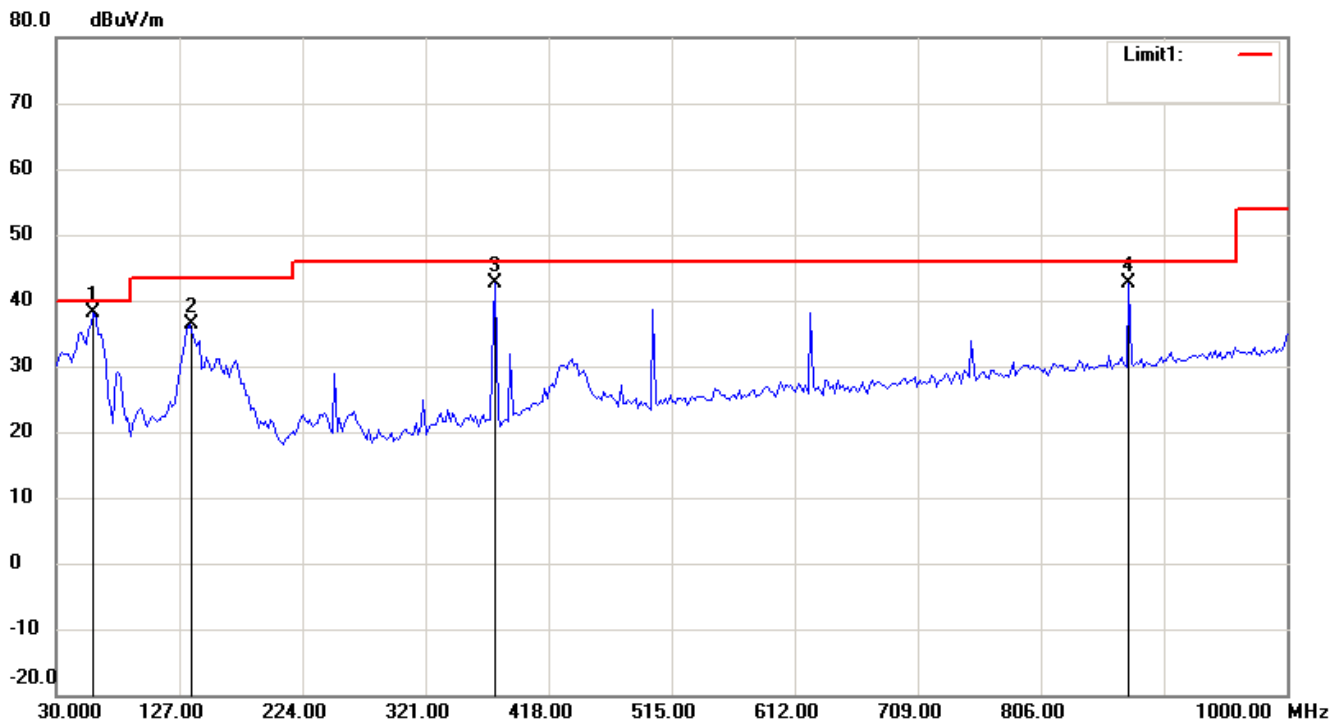
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

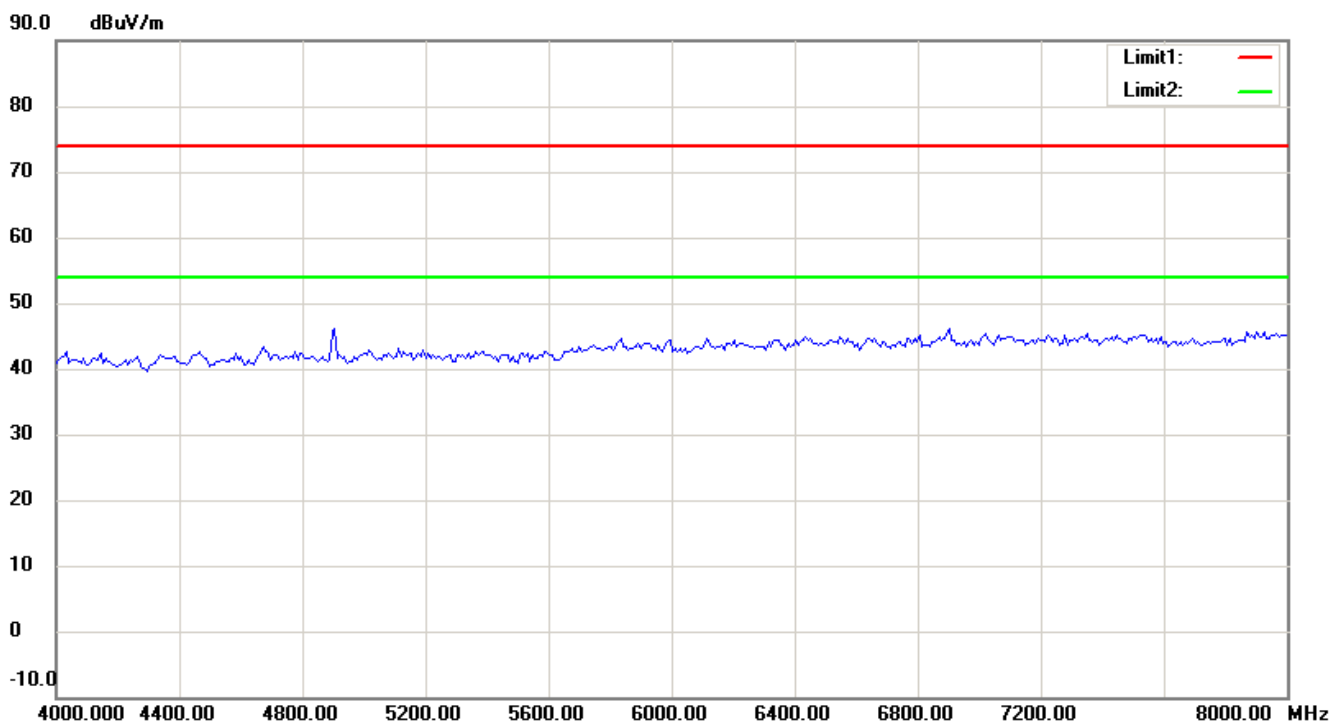
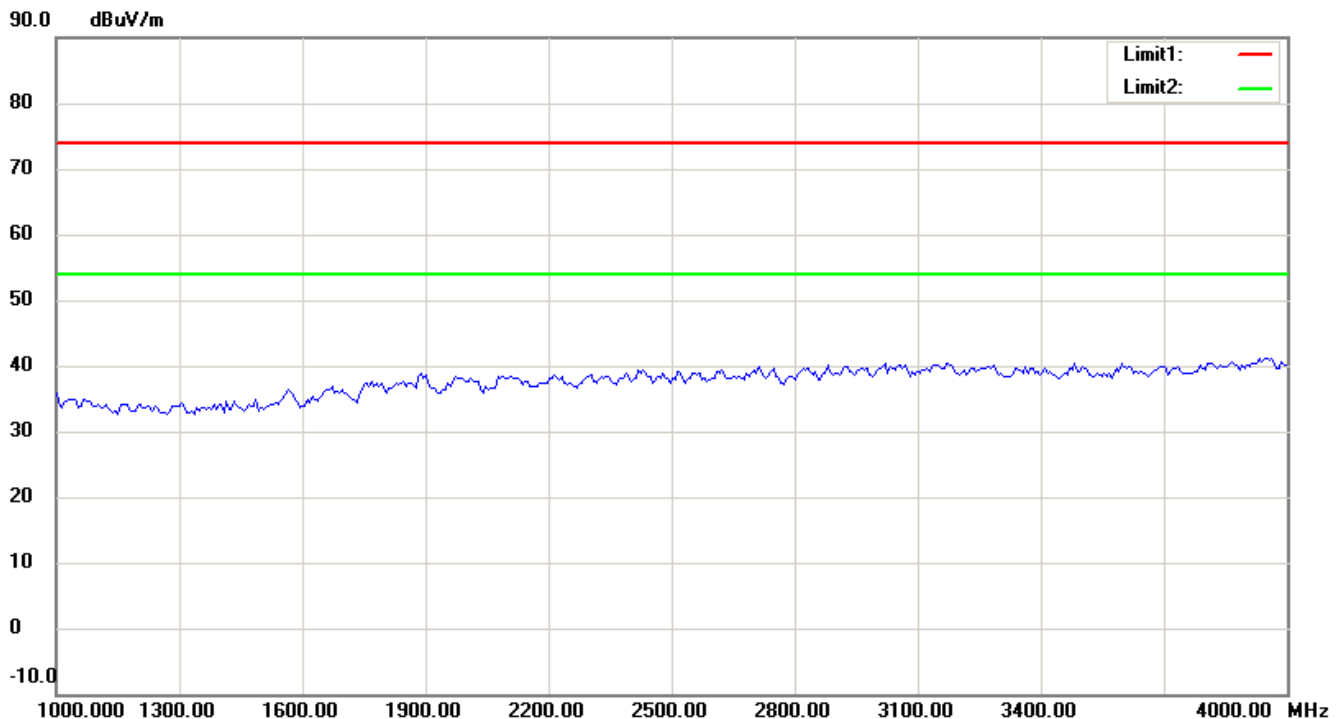
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

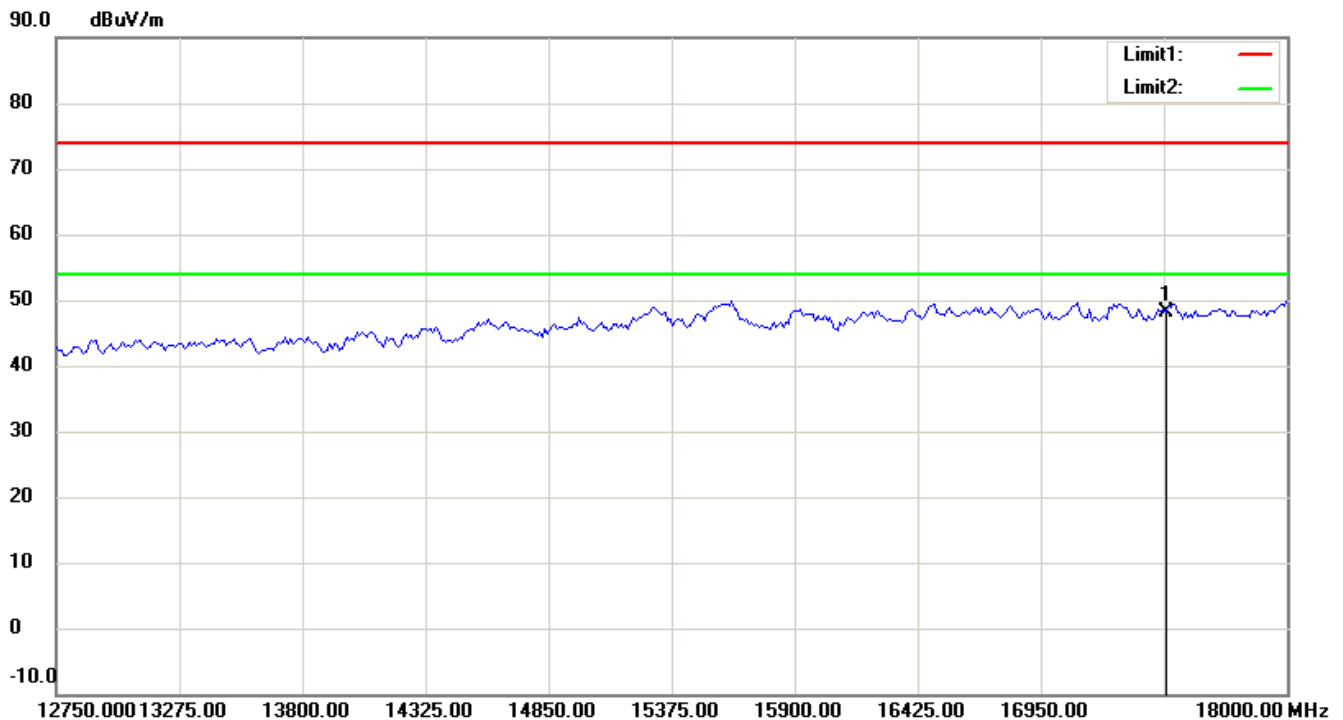
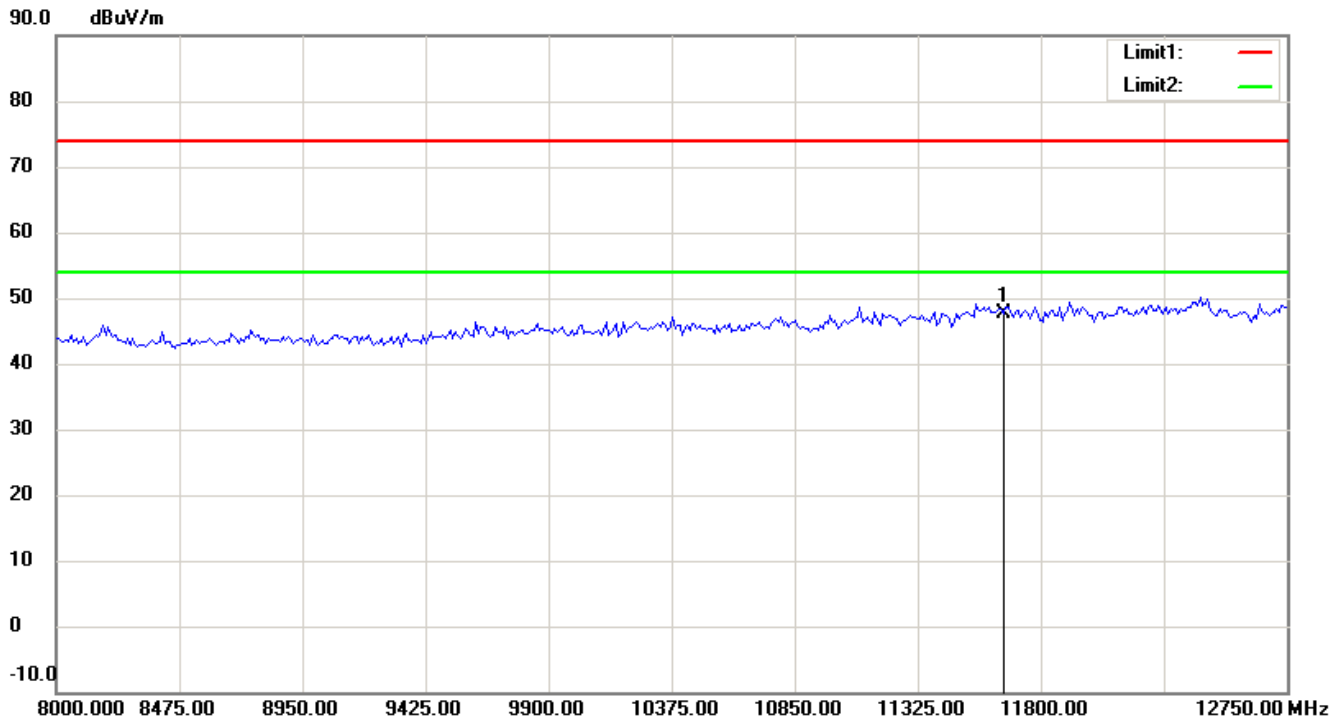
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

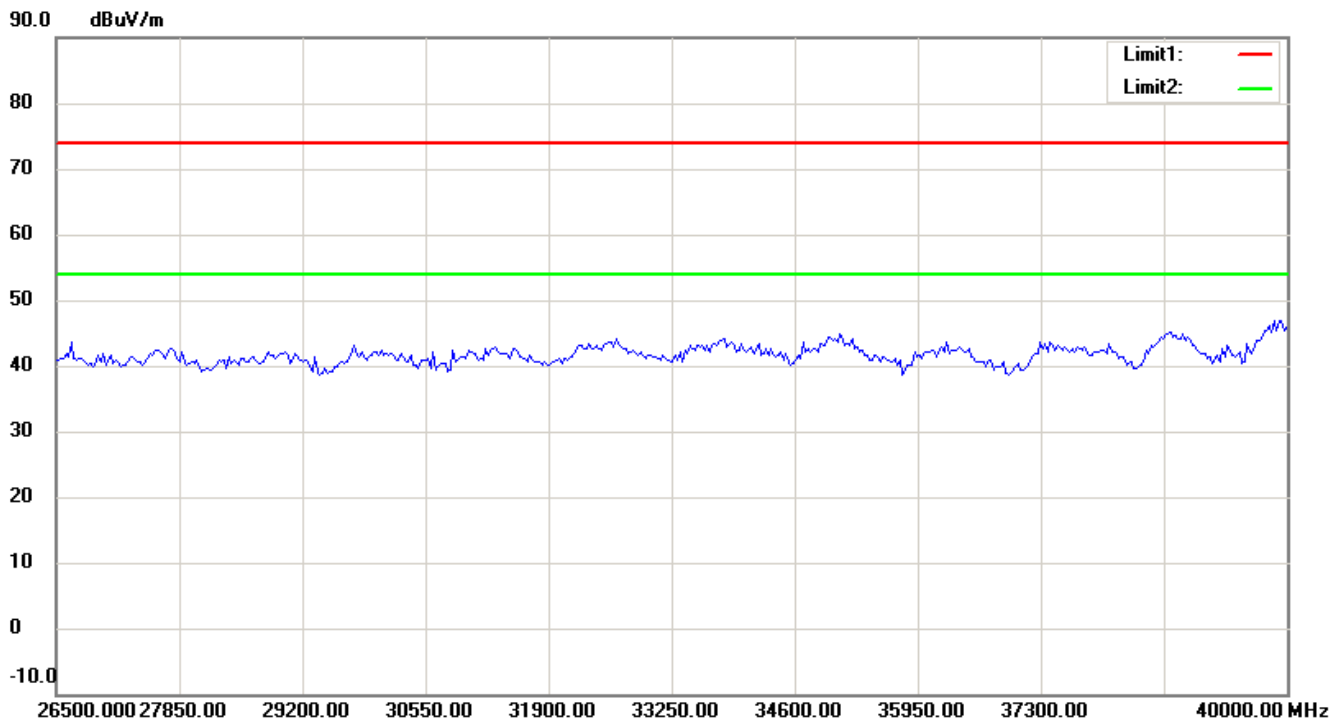
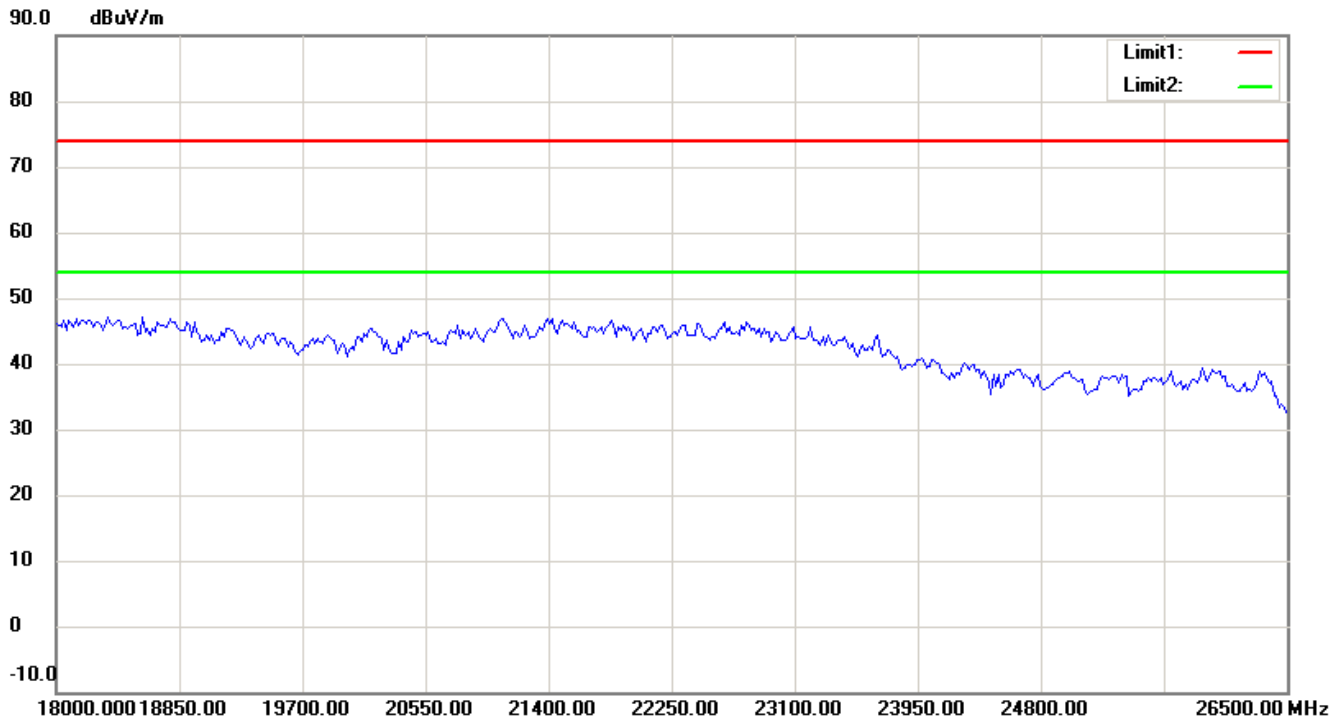
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

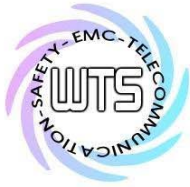
FCC ID: ZTT-APA20



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

Note:

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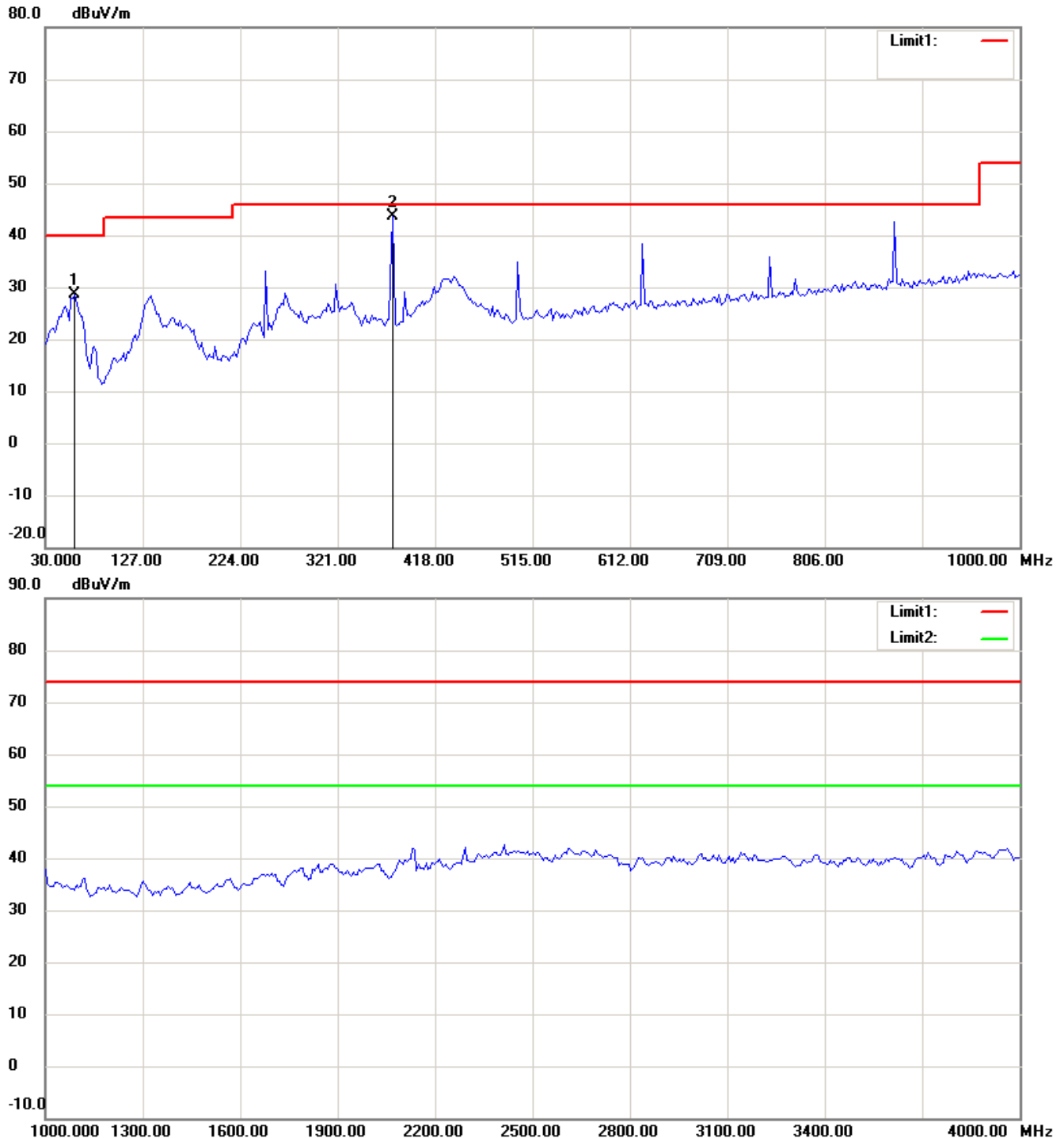
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2412MHz

Antenna Polarization H



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

Note:

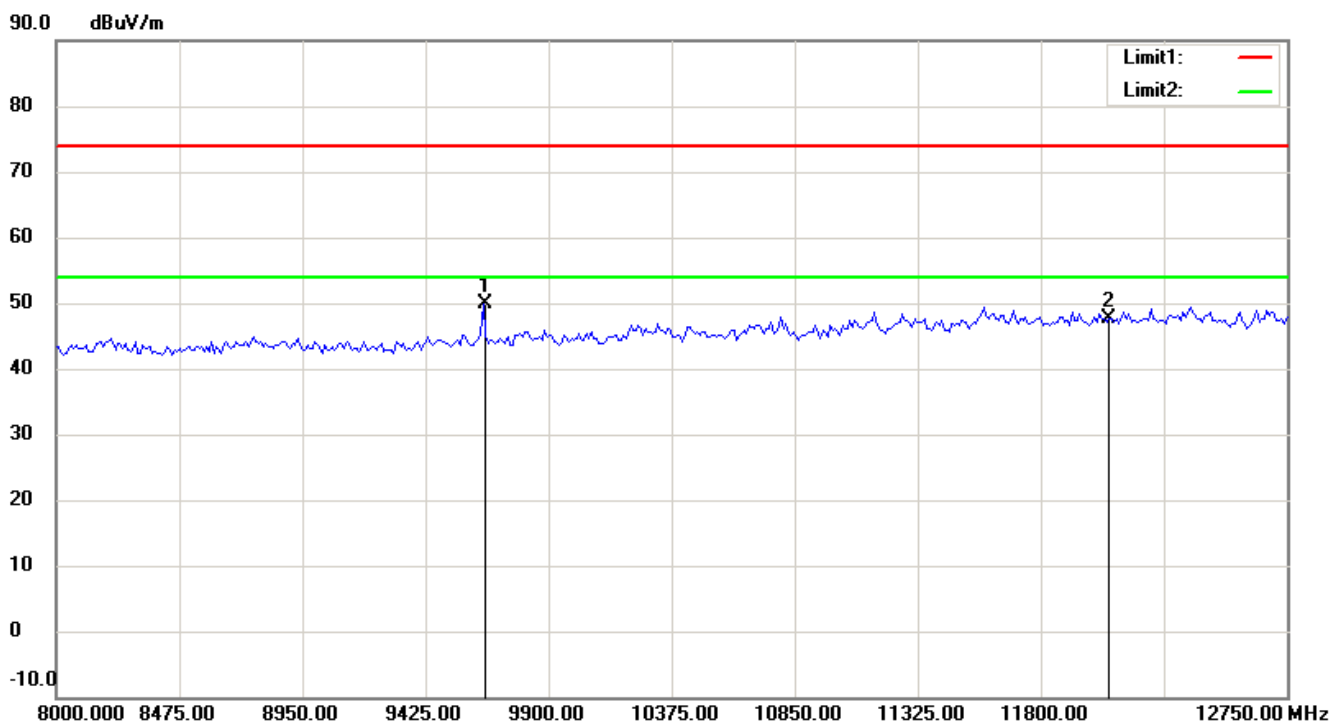
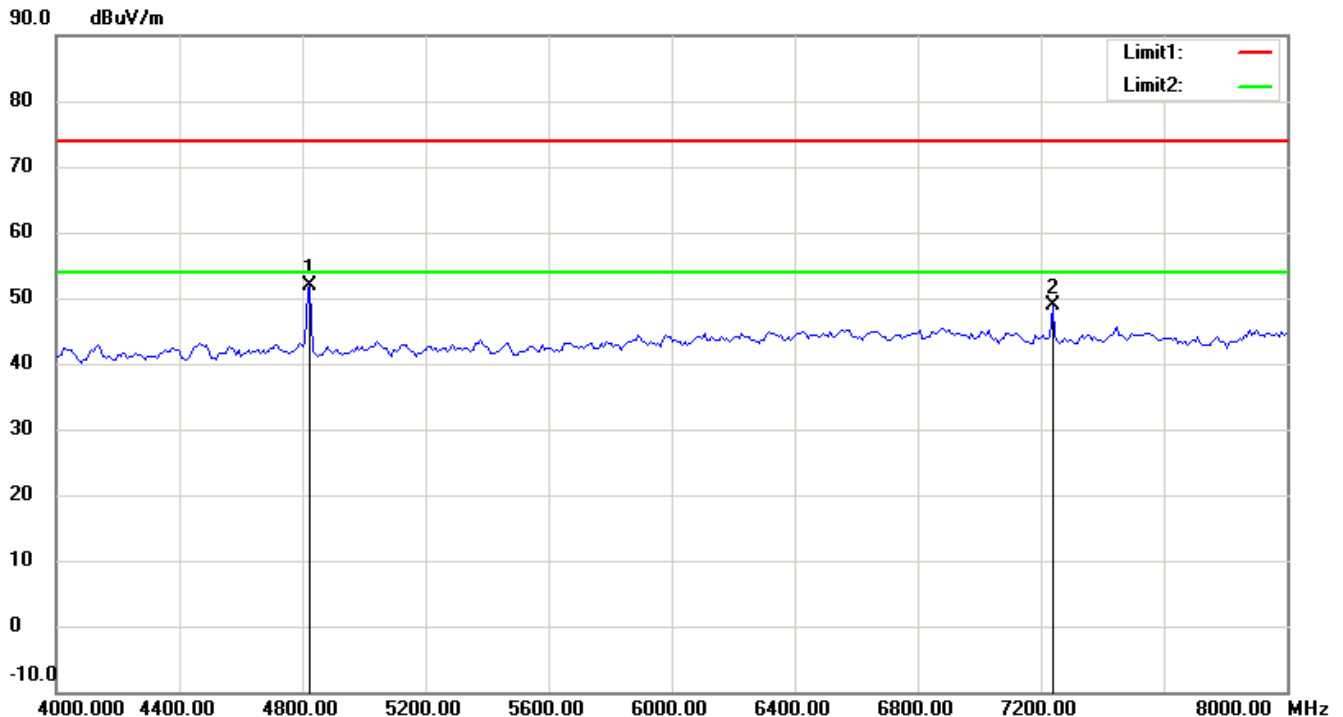
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

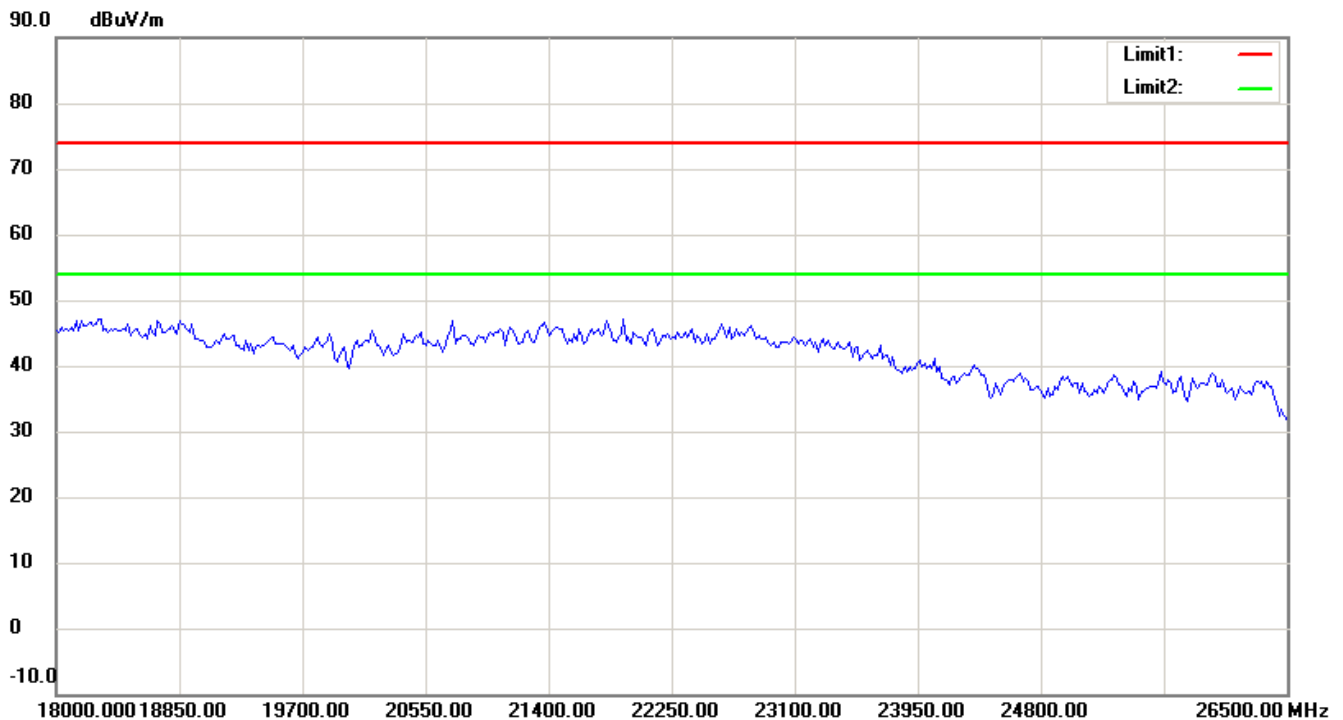
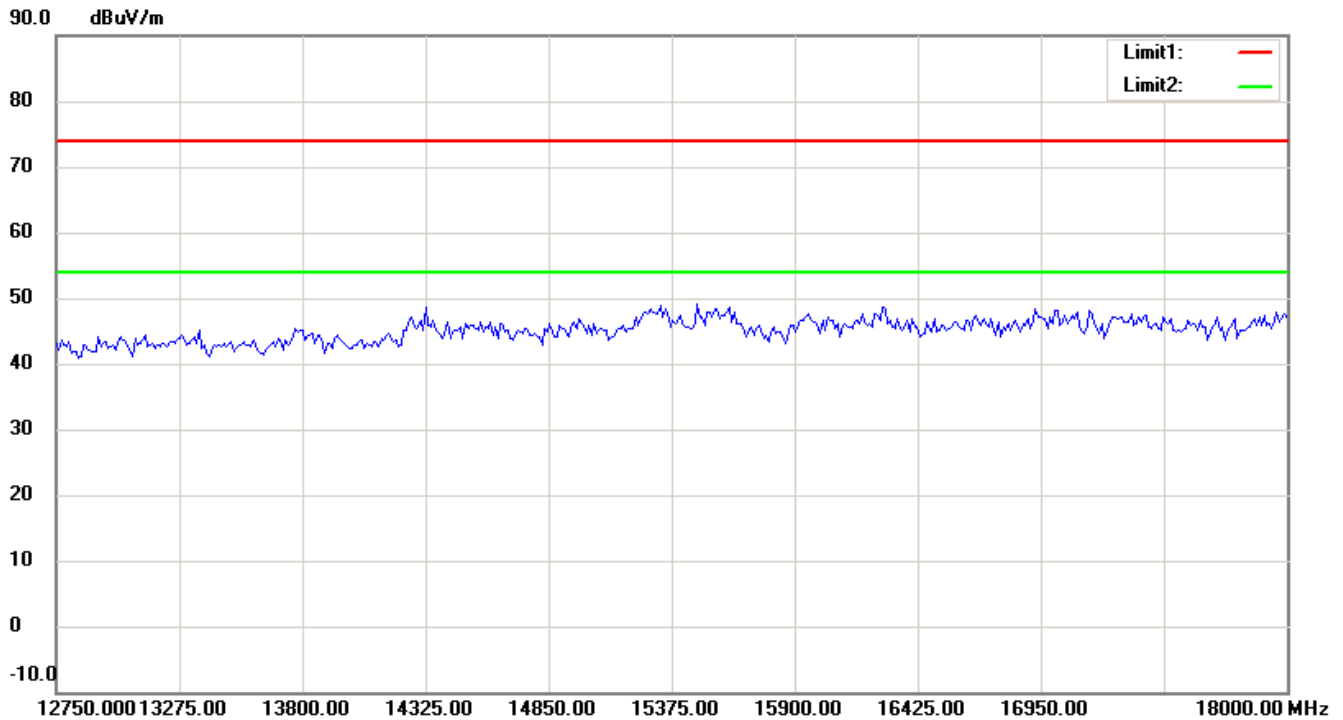
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

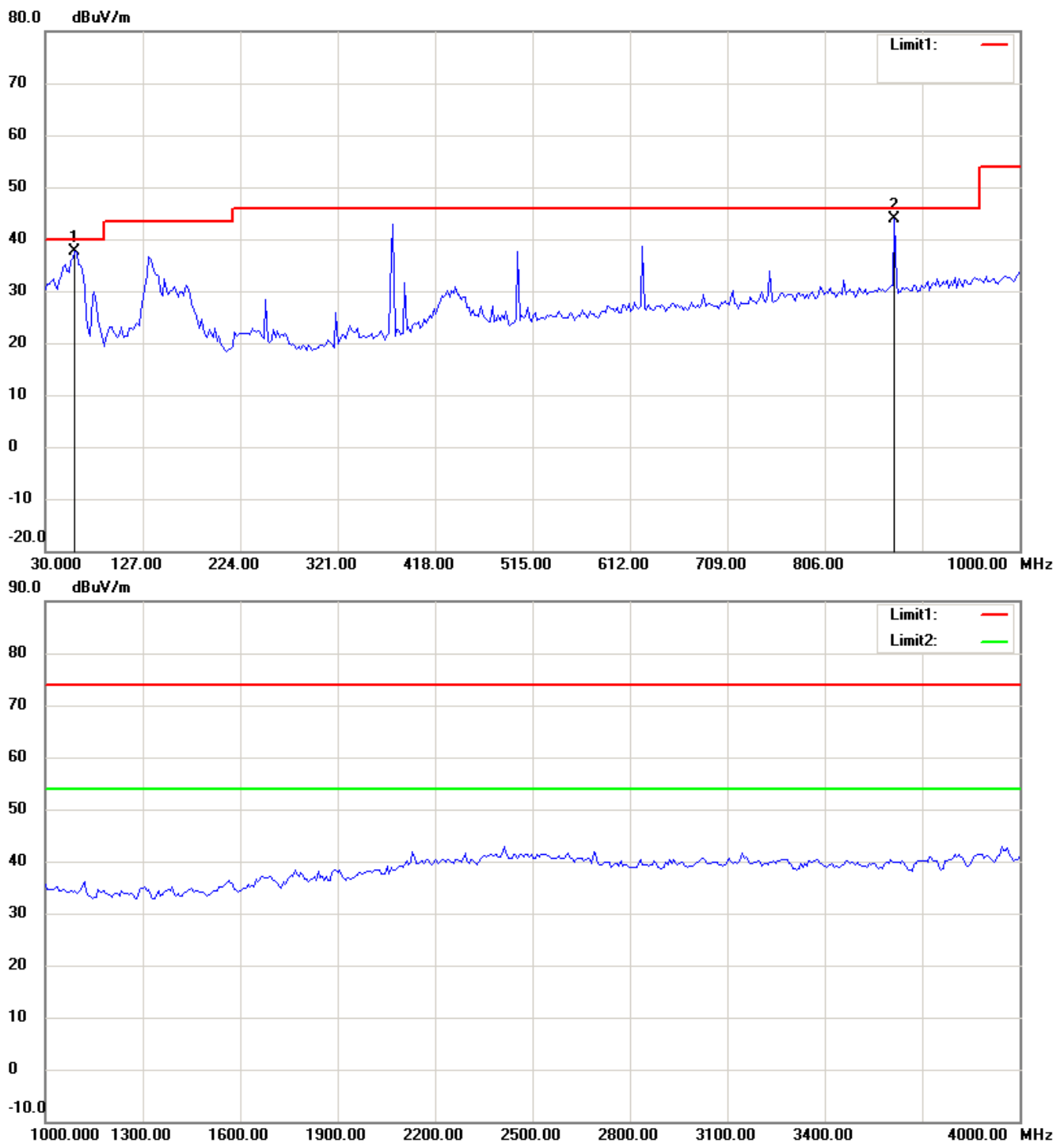
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

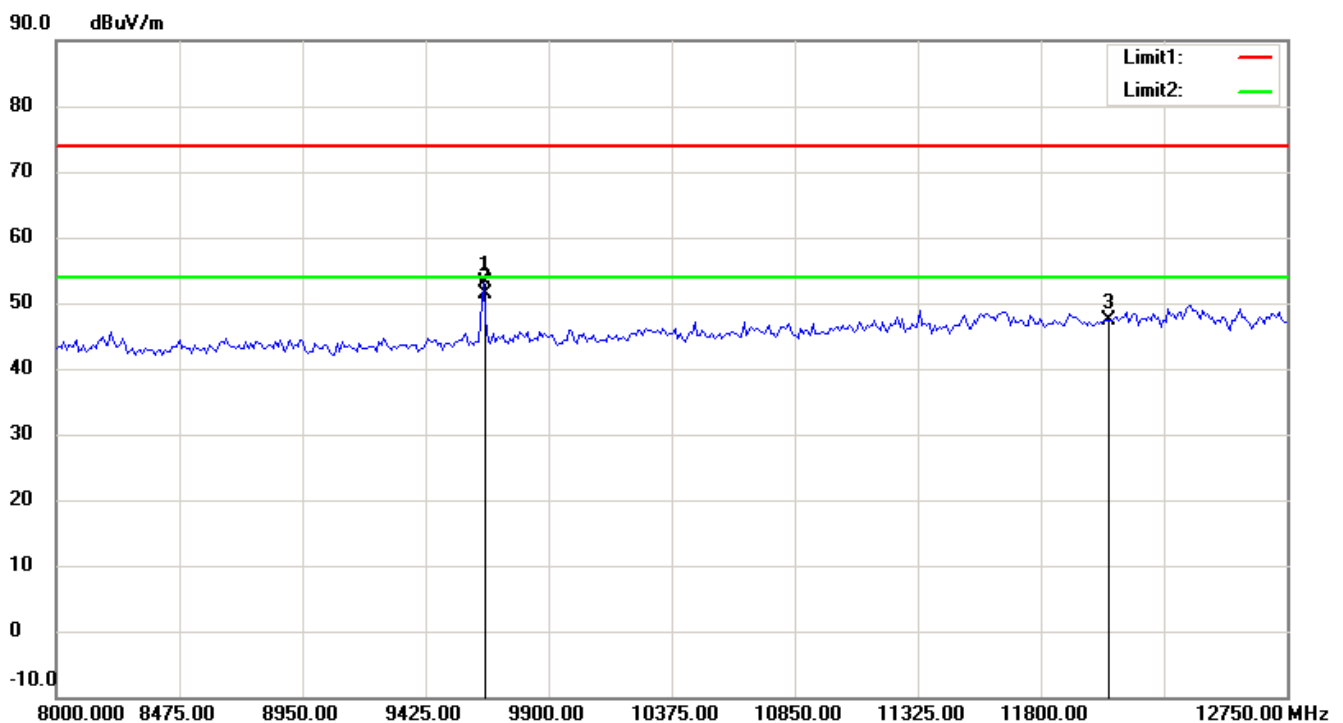
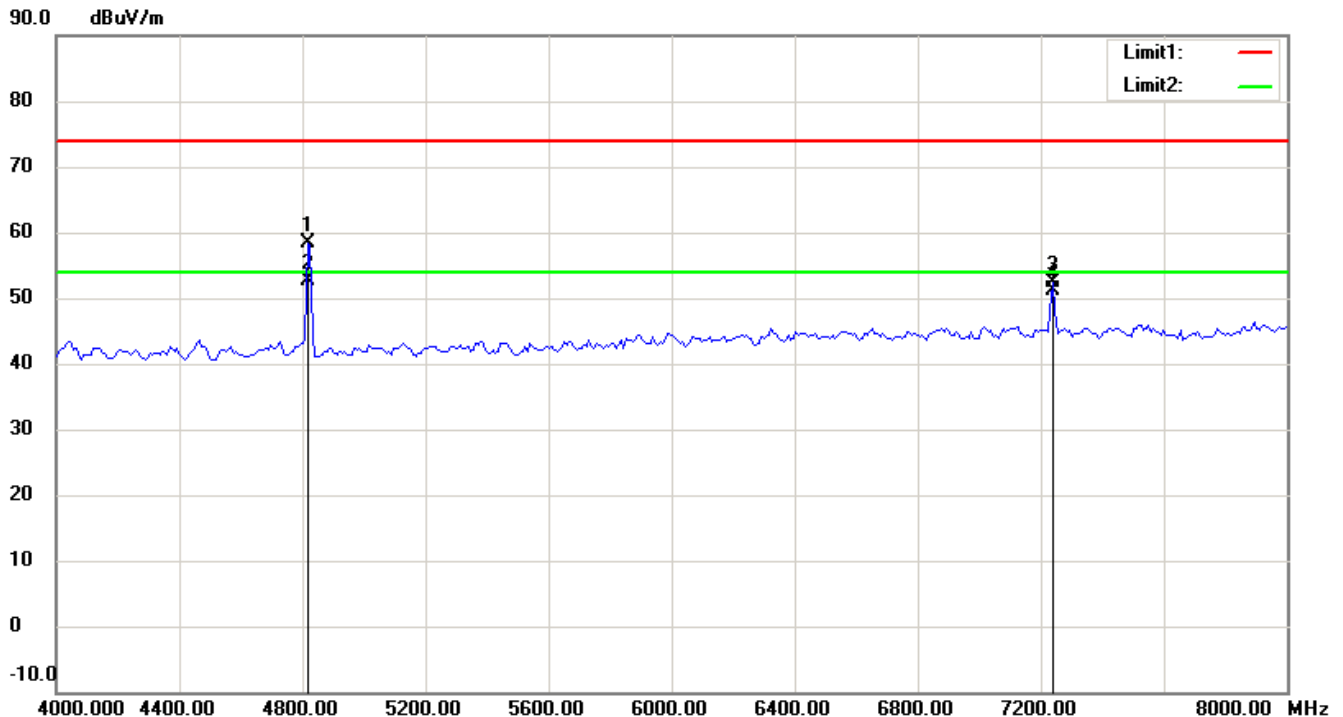
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

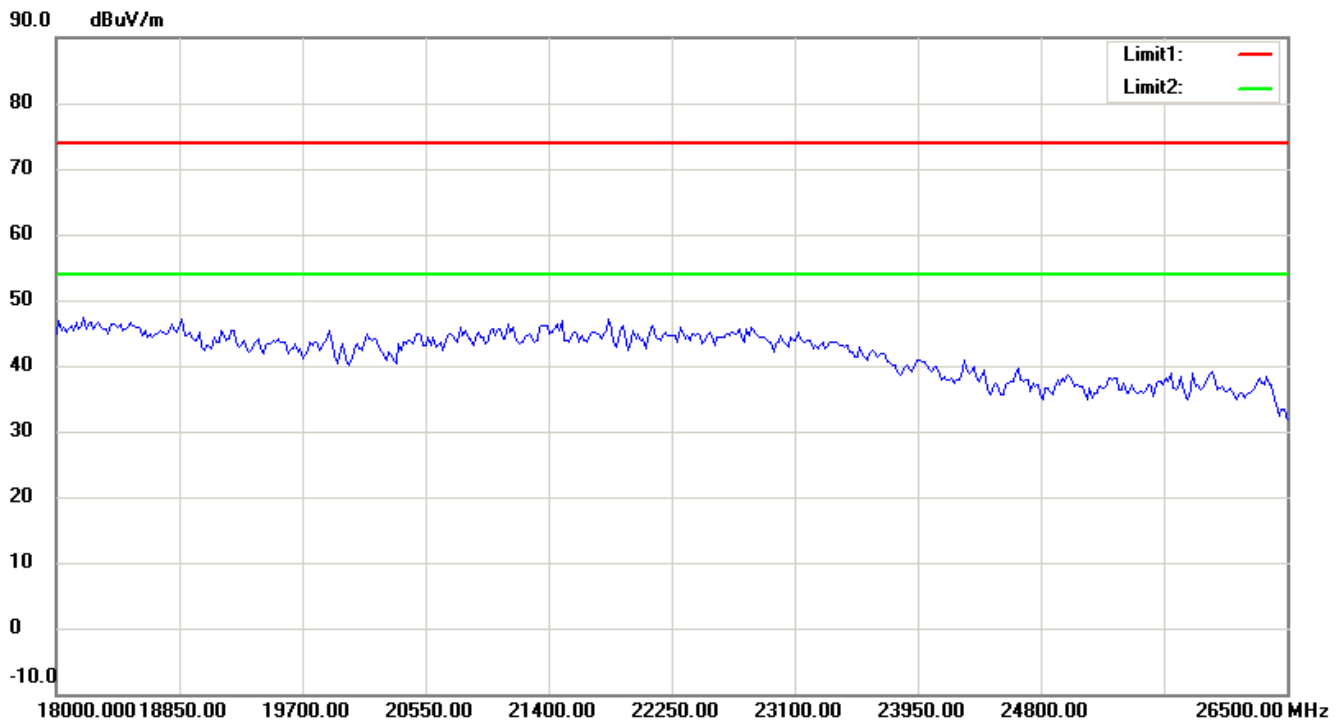
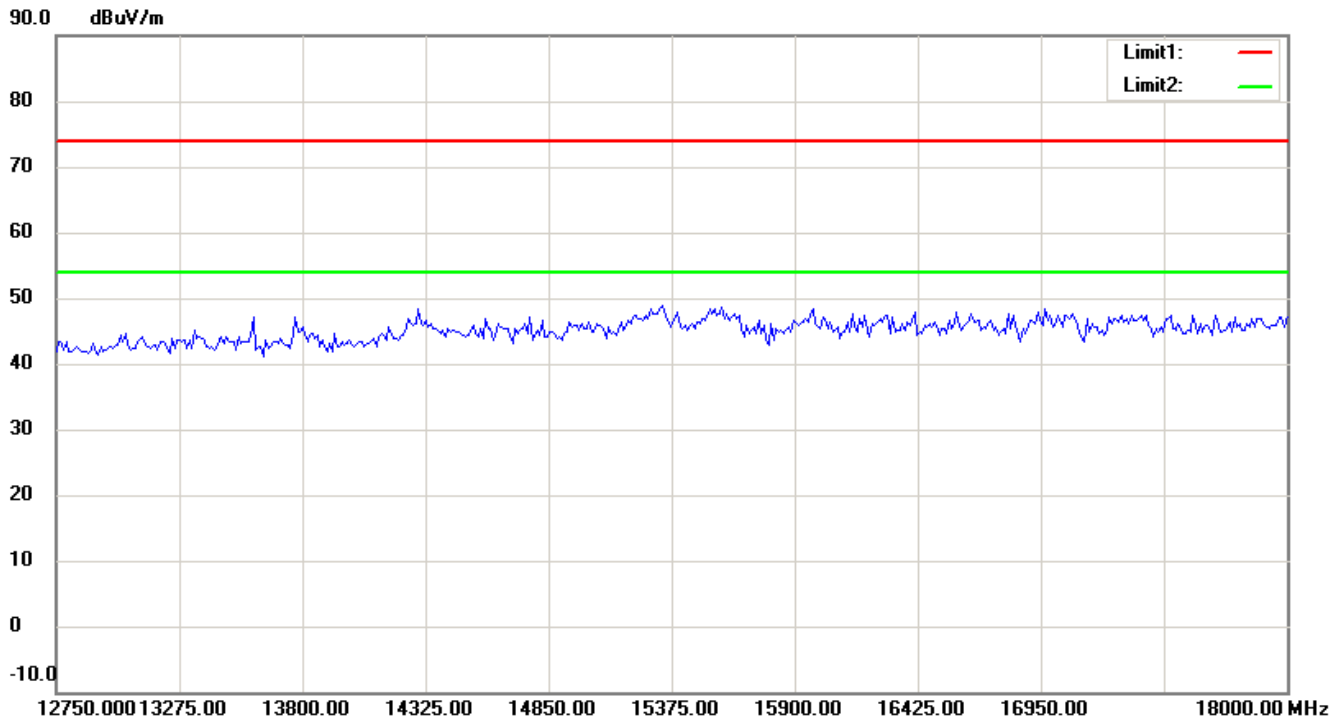
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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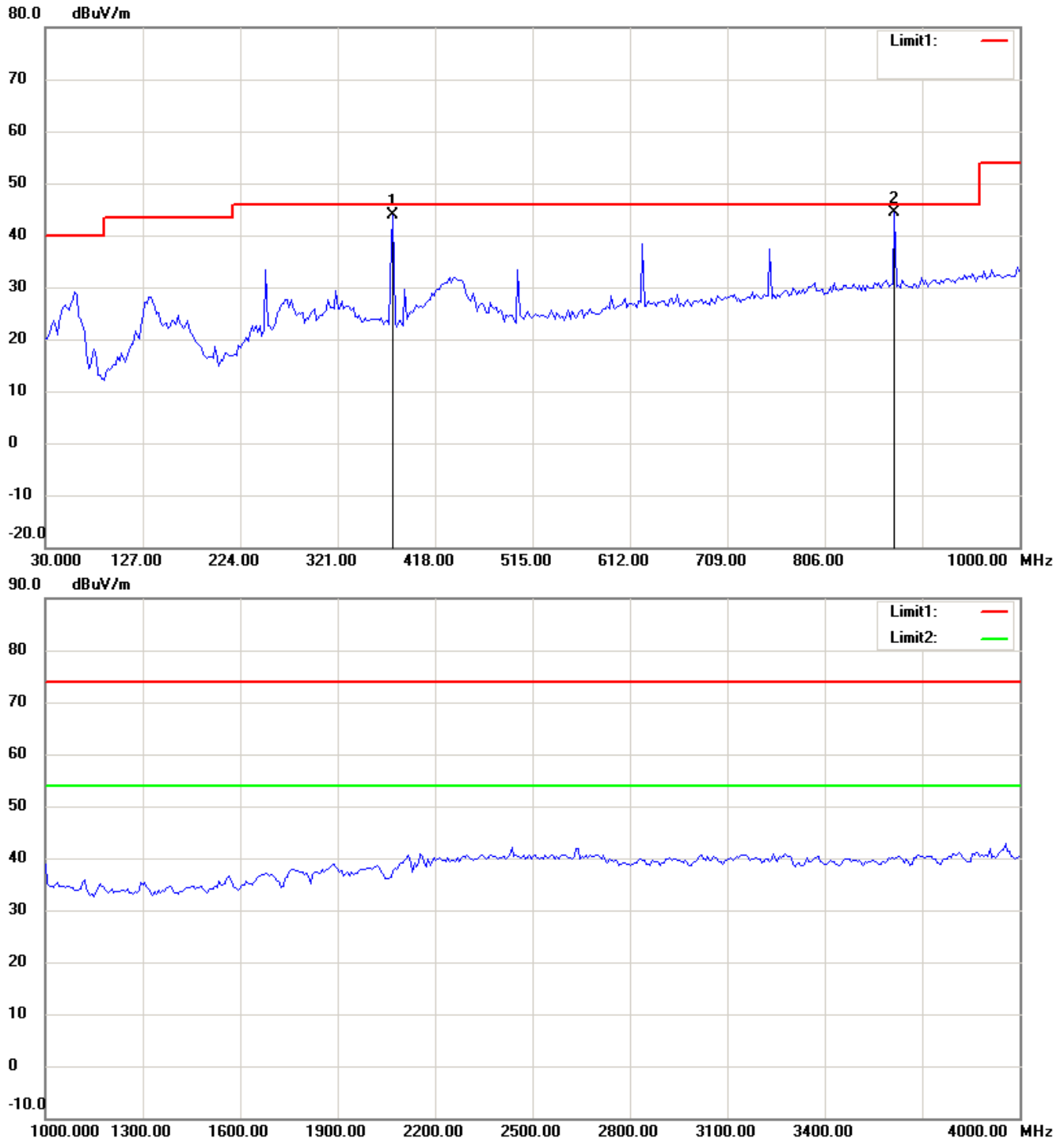
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2437MHz

Antenna Polarization H



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

Note:

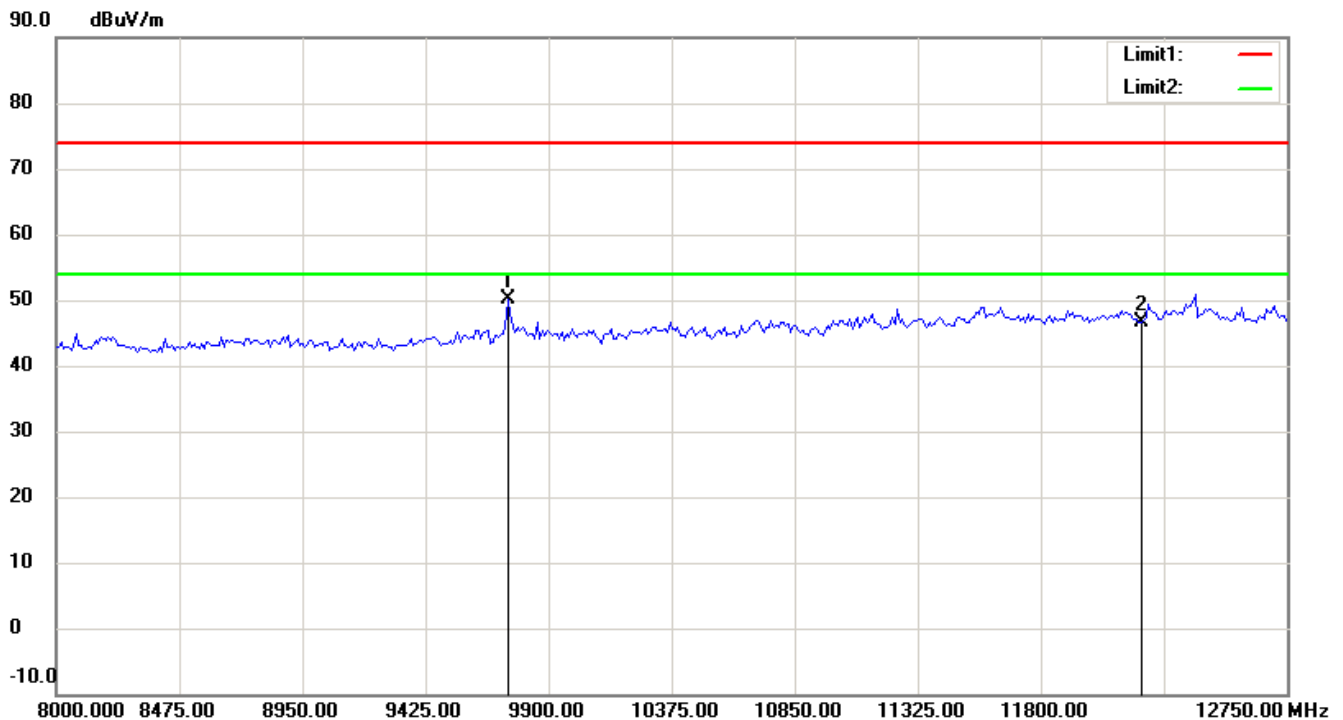
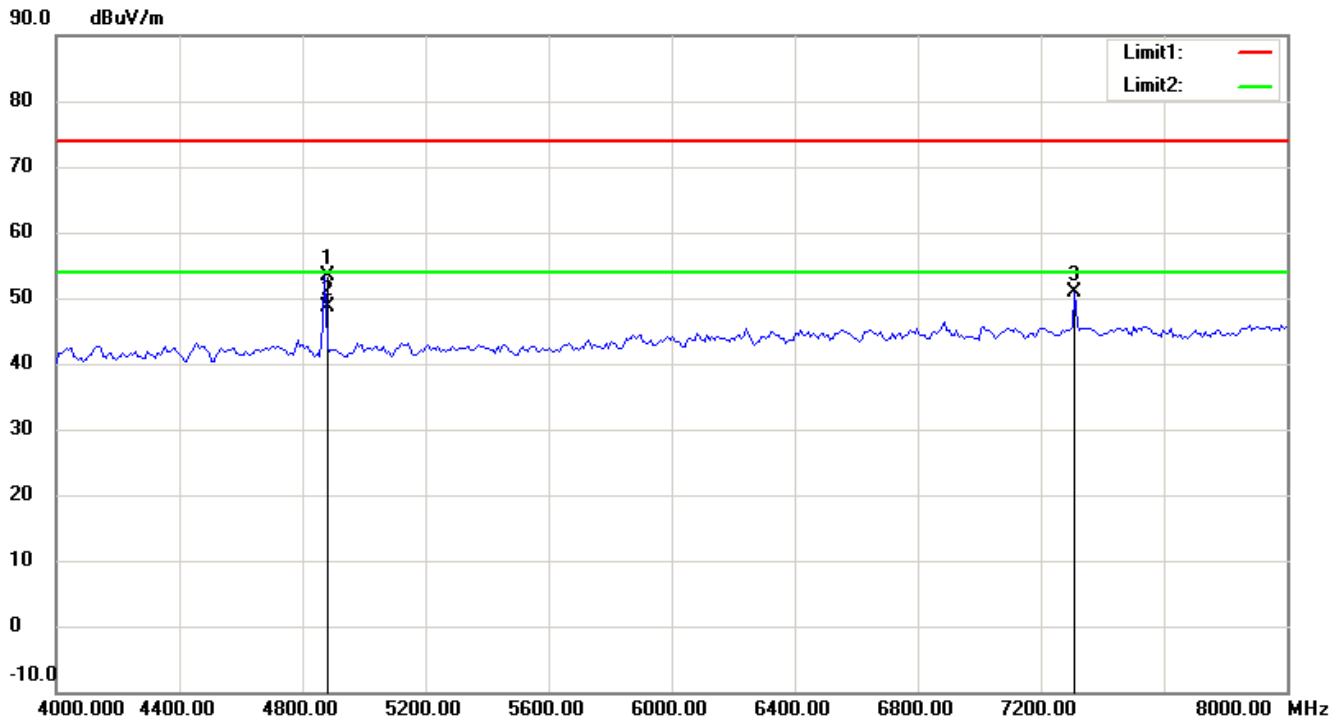
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

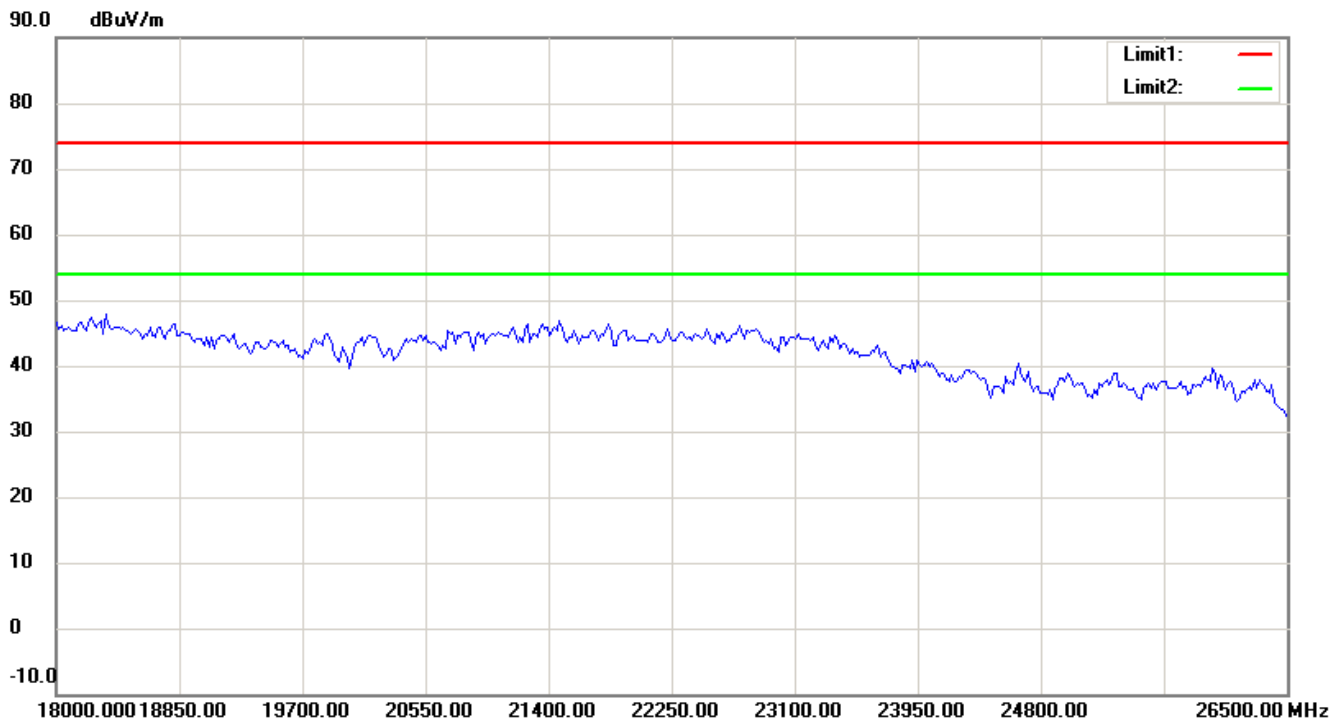
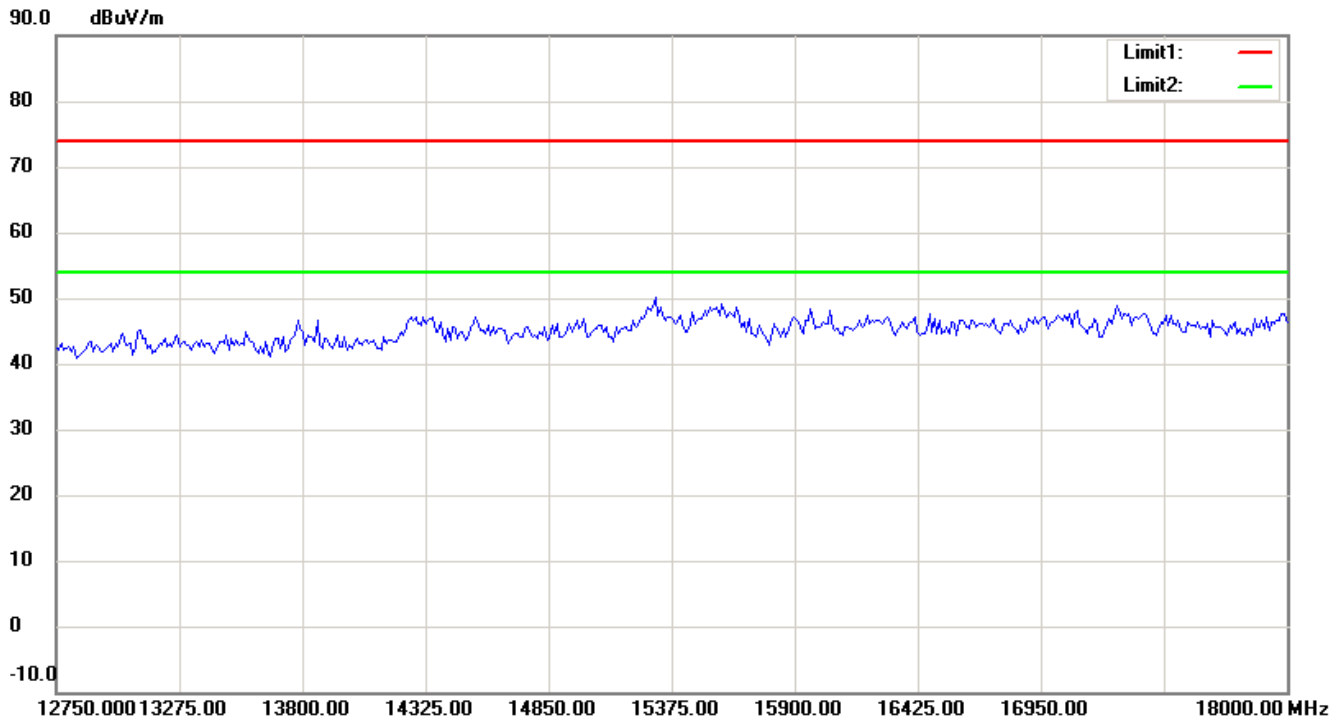
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

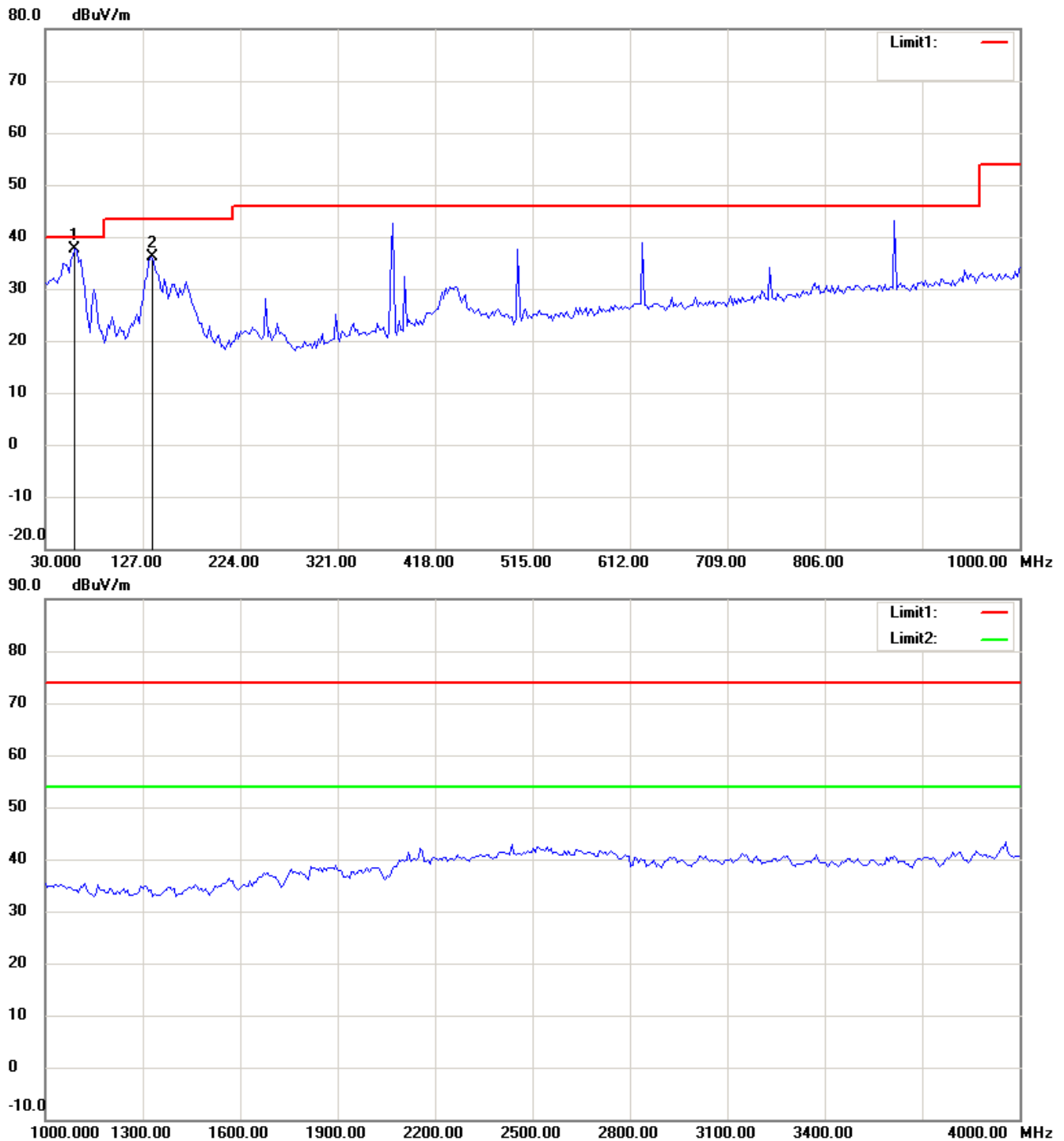
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

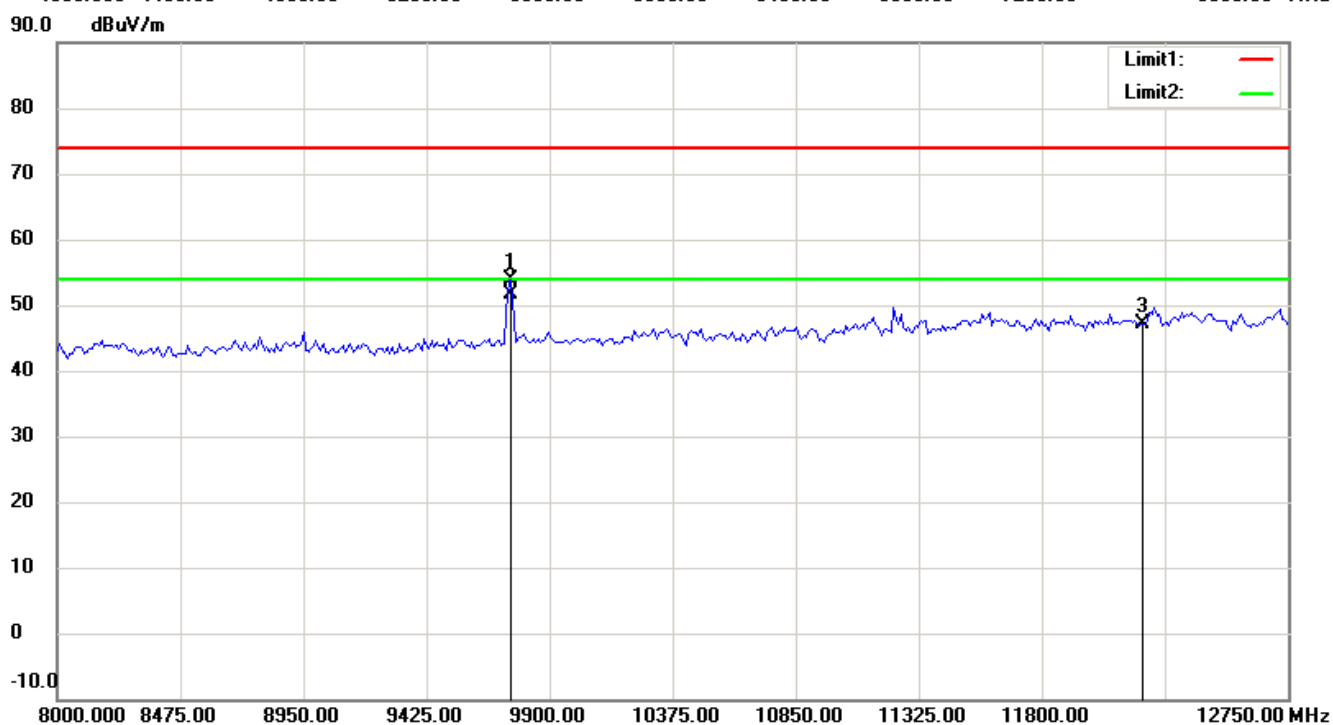
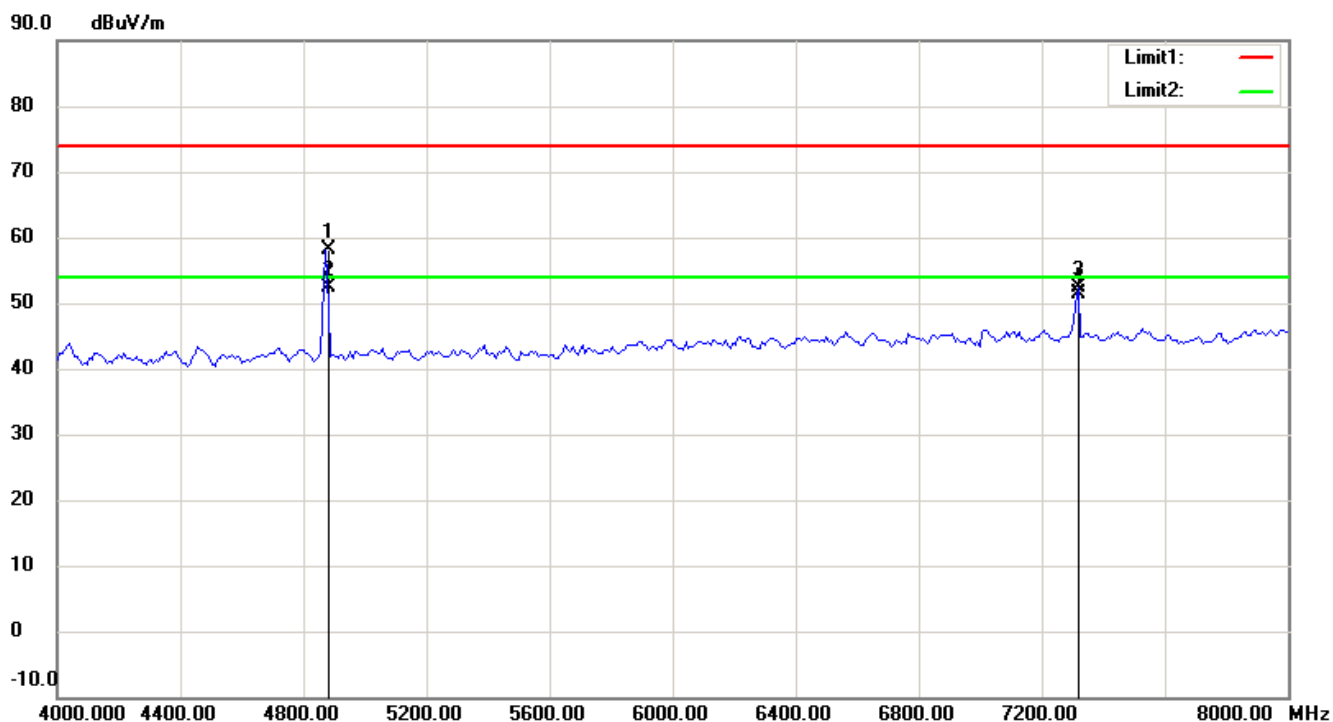
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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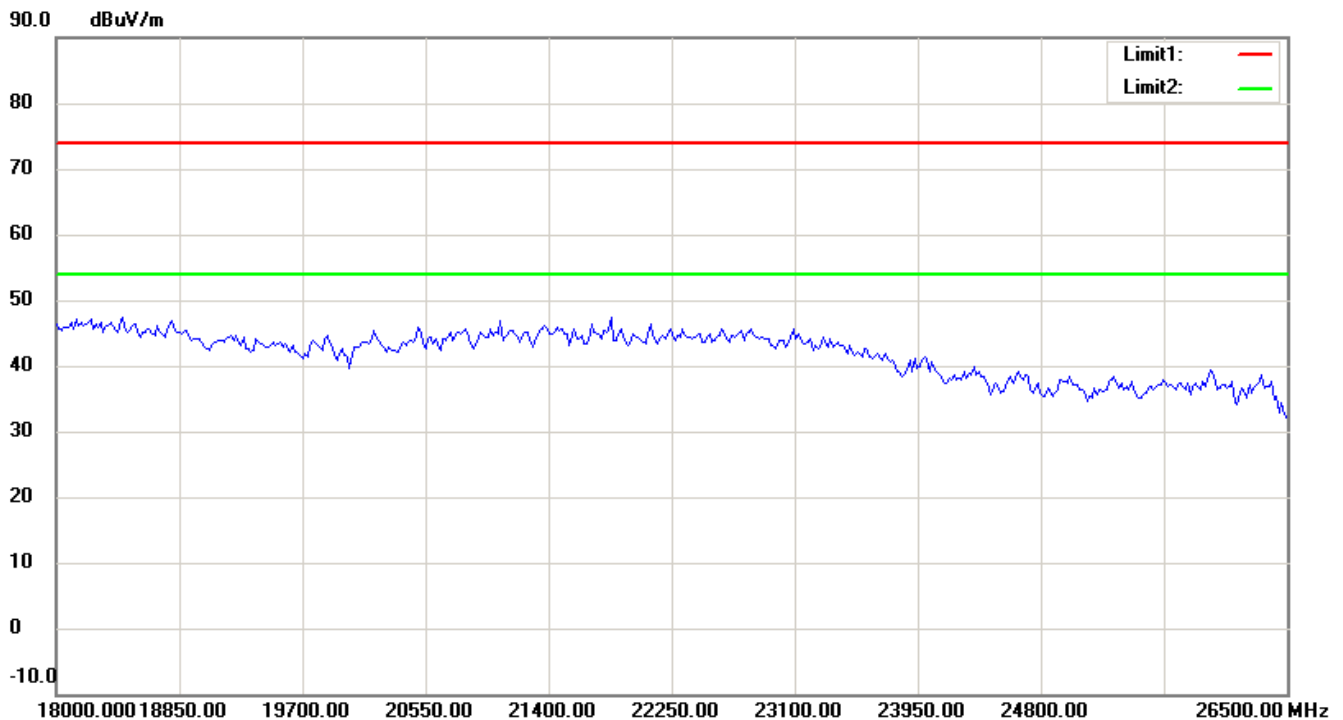
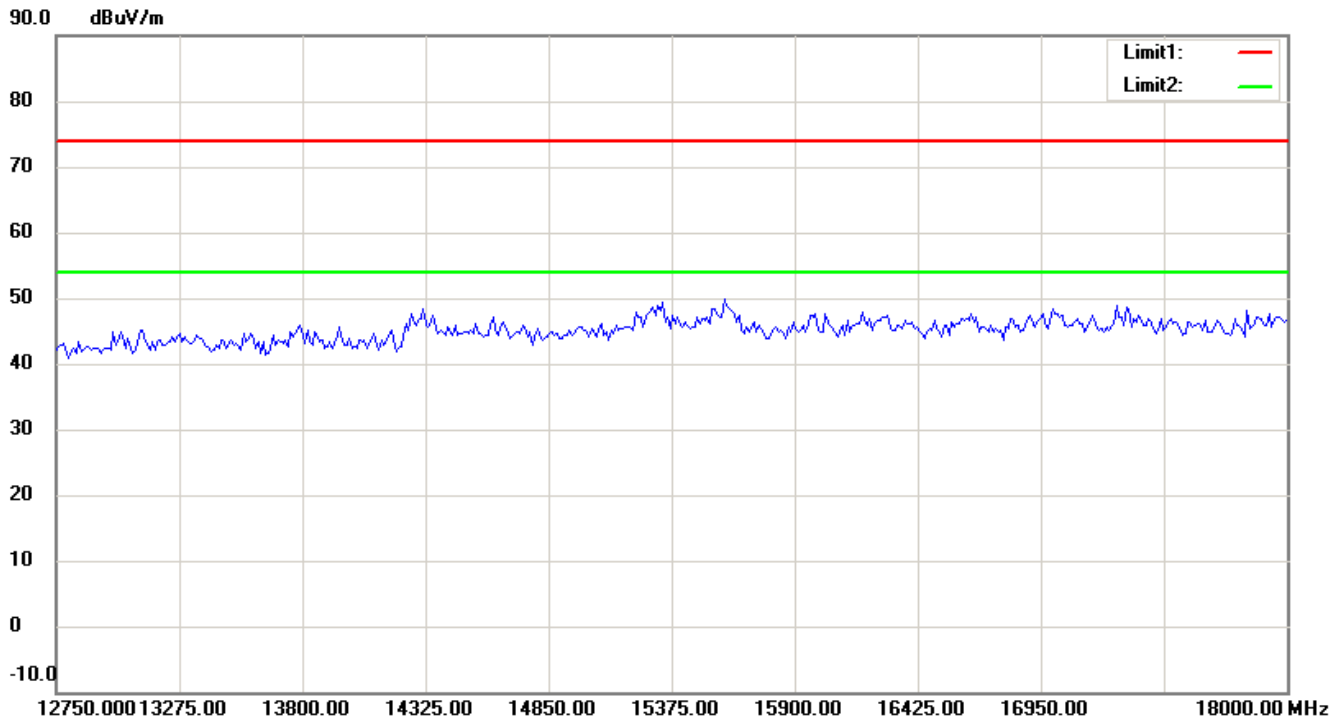
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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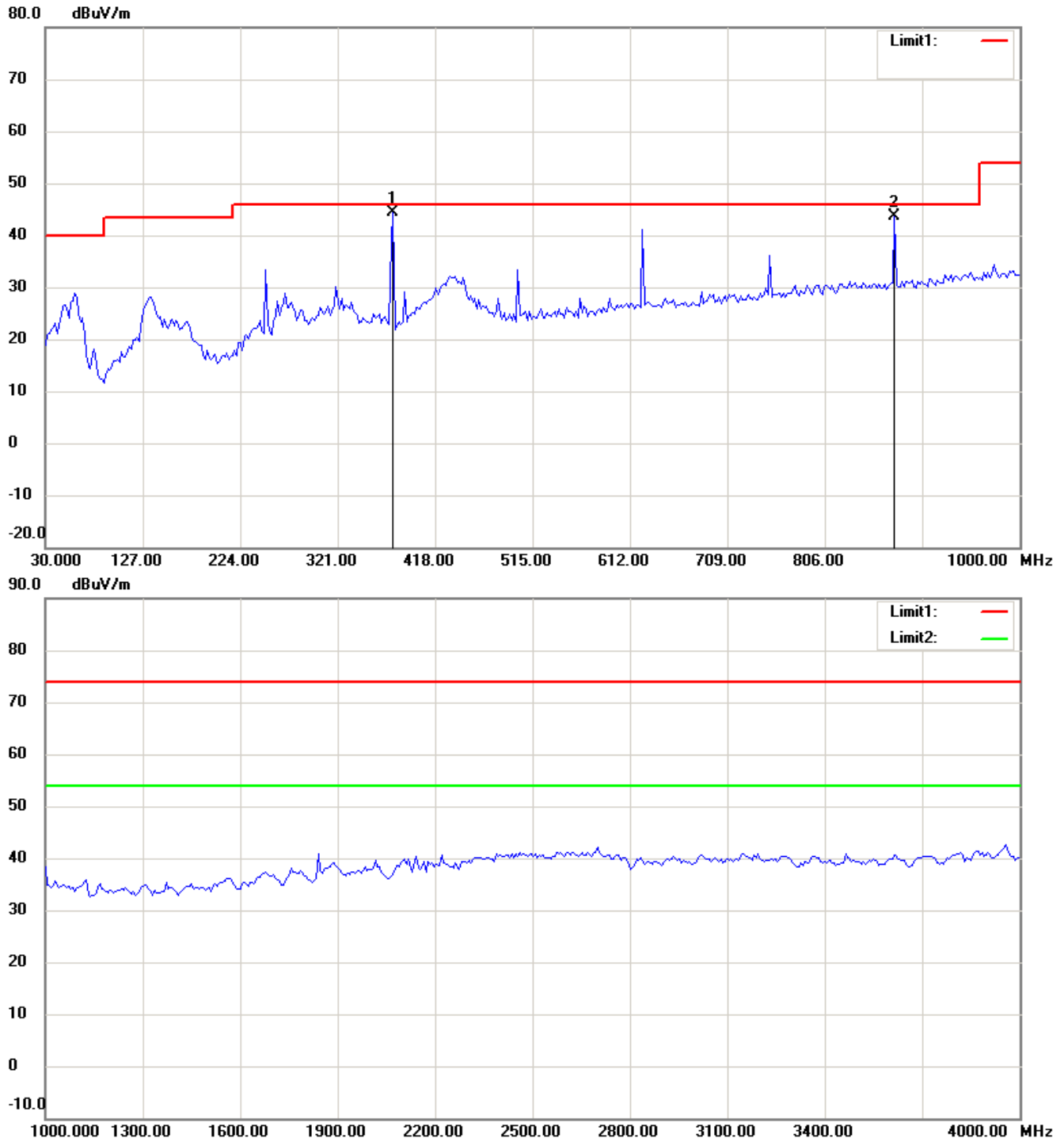
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11b 2462MHz

Antenna Polarization H



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

Note:

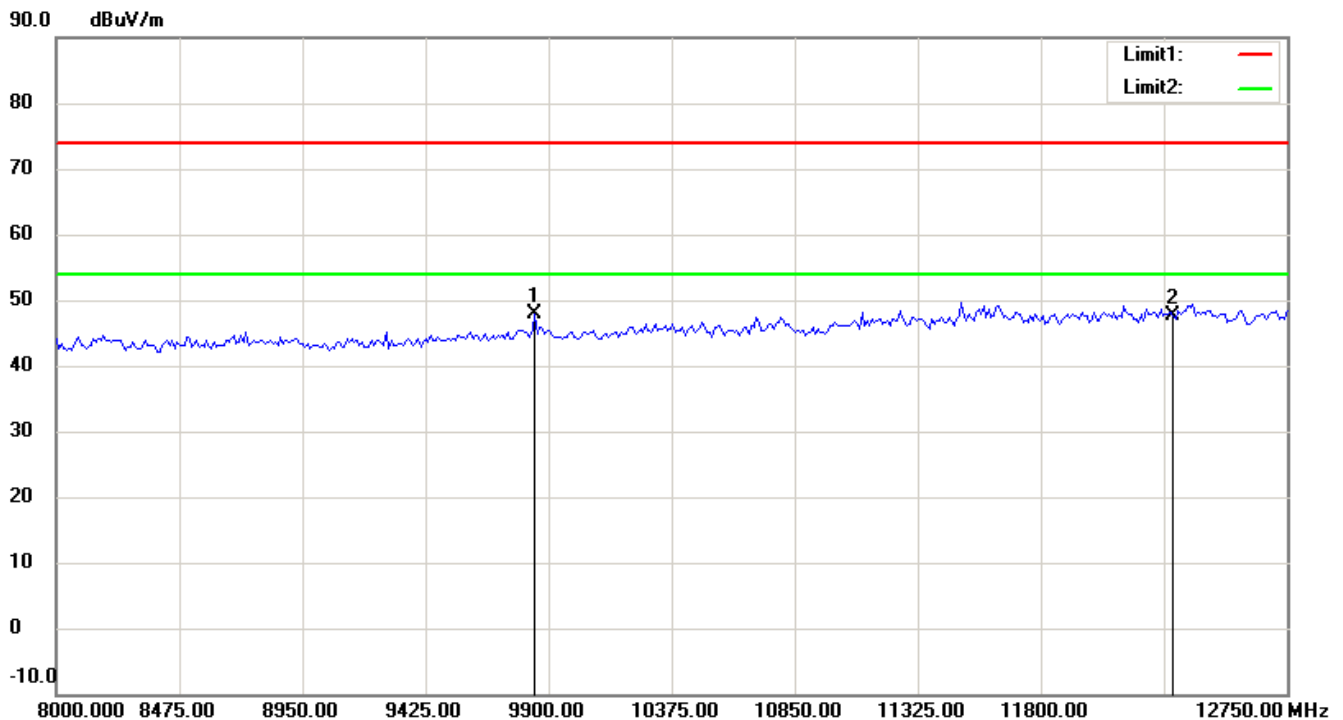
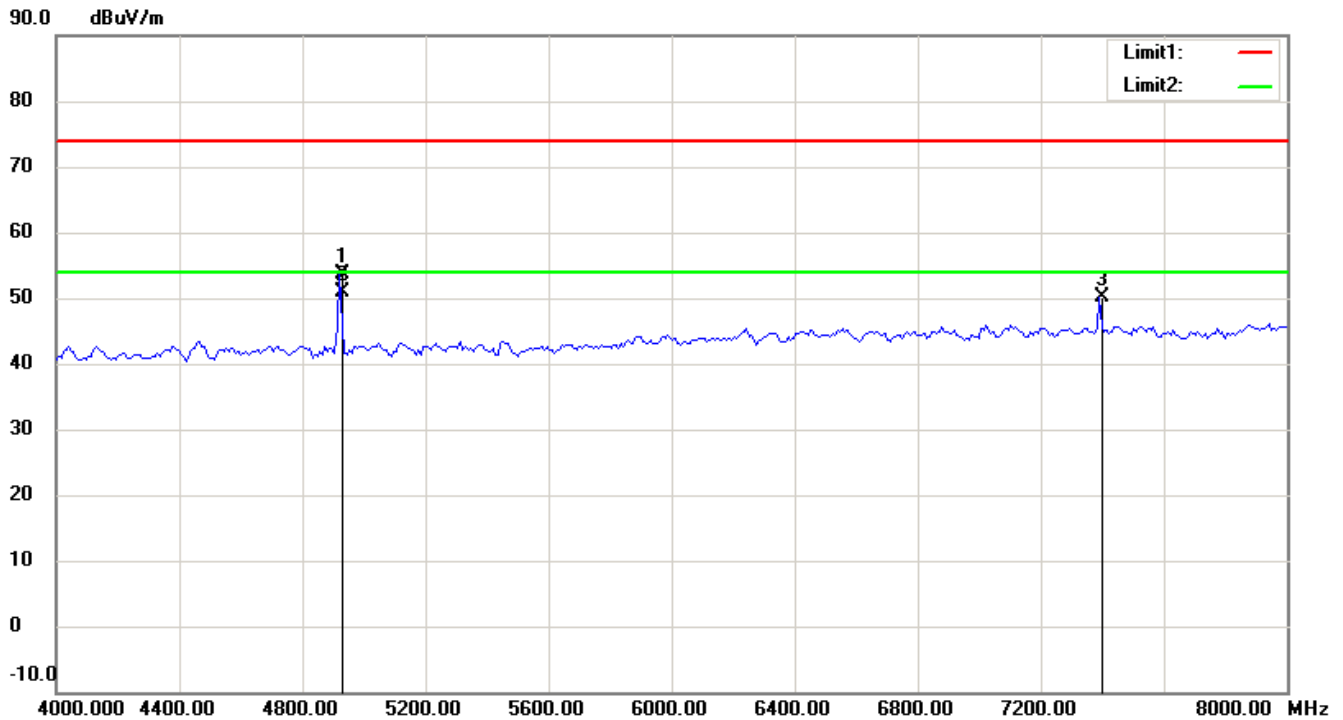
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

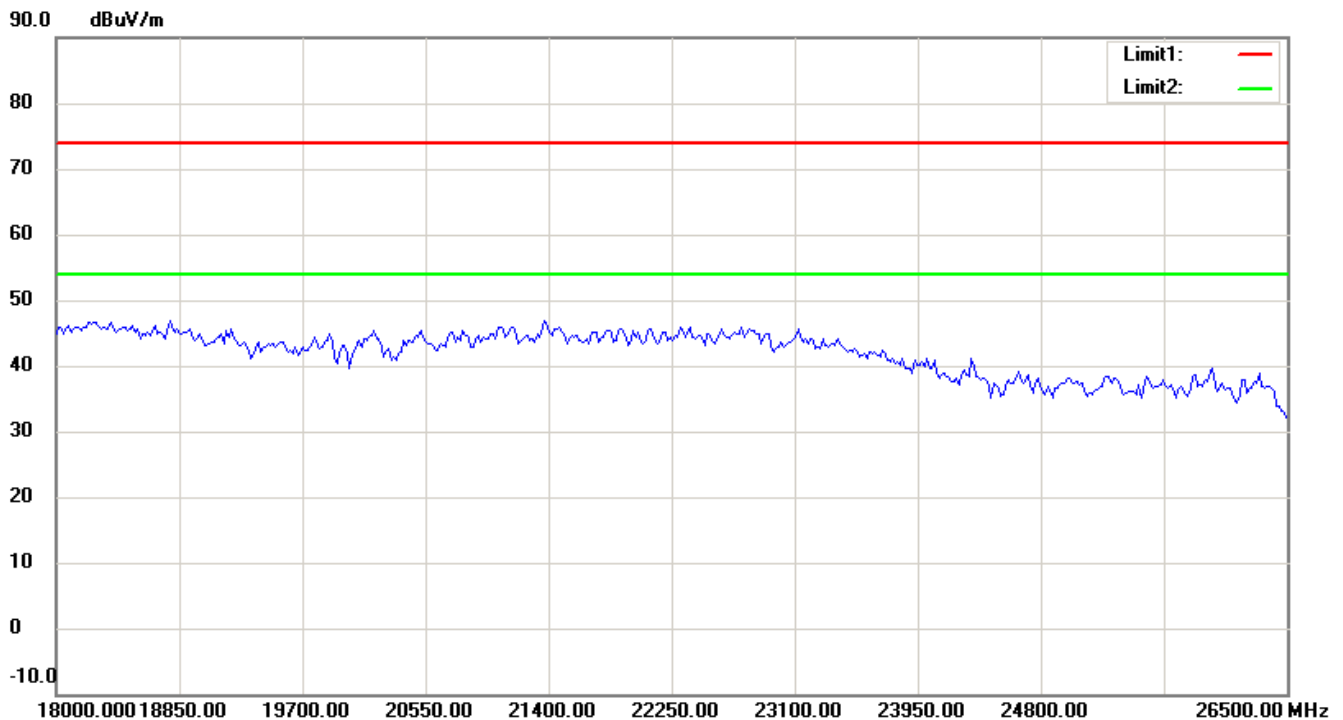
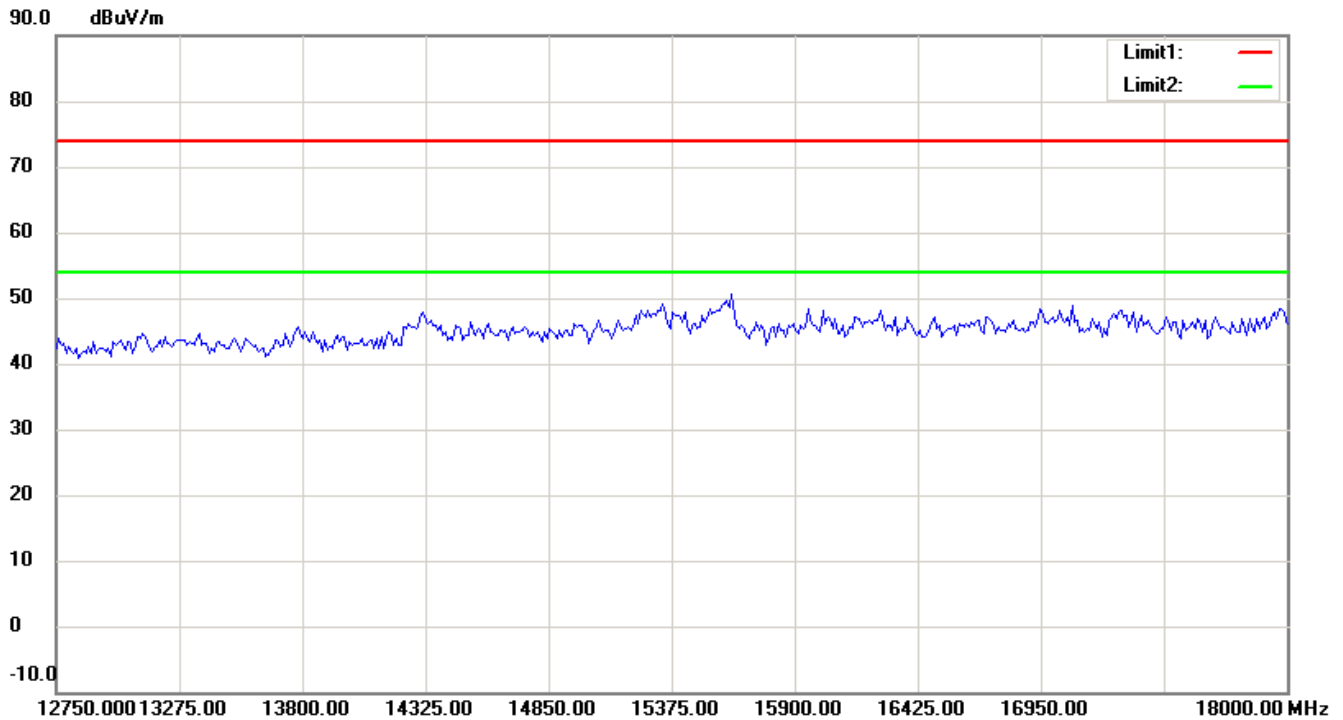
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

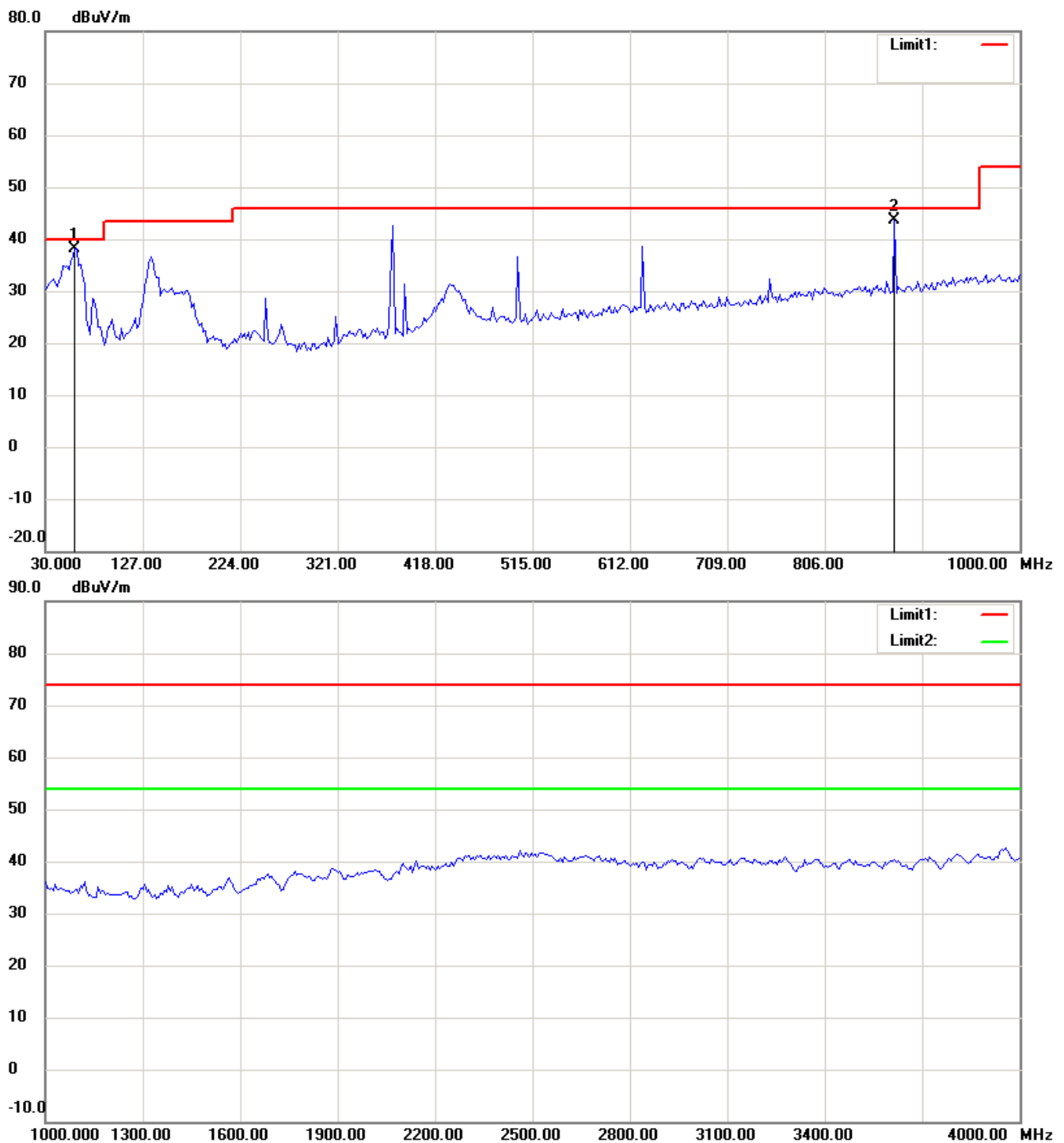
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

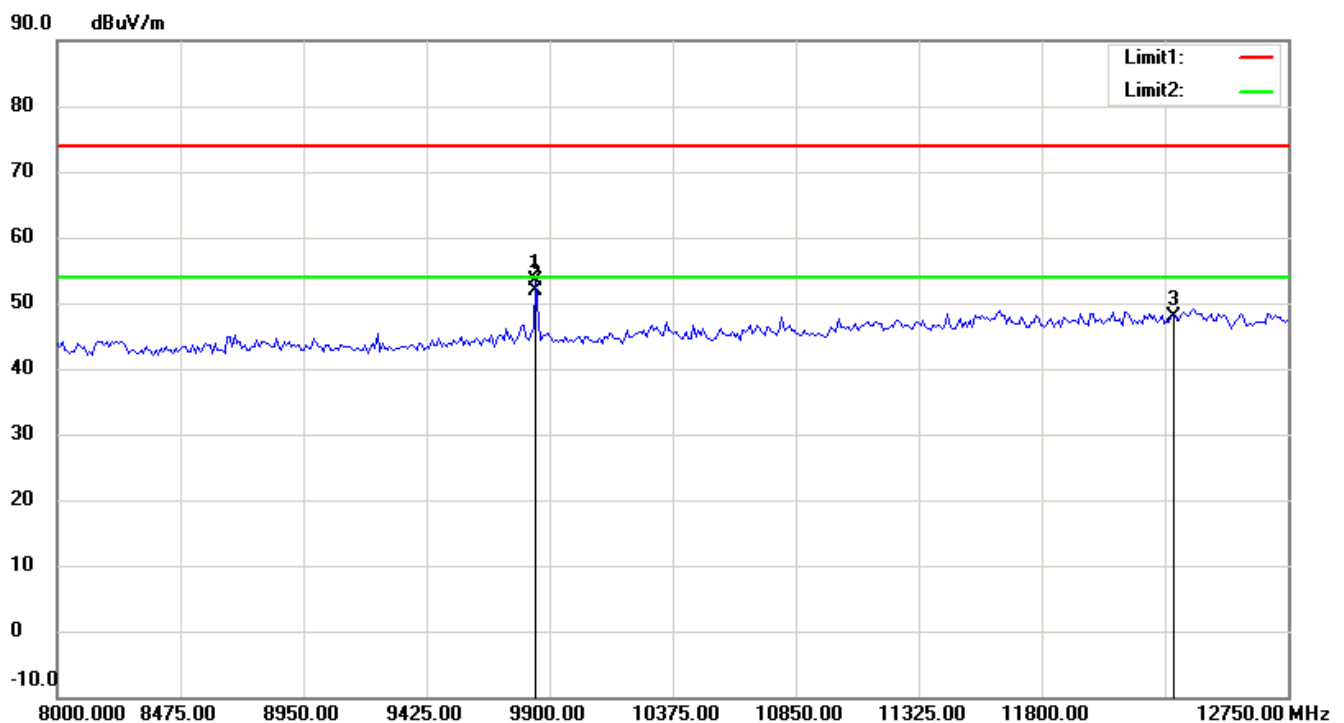
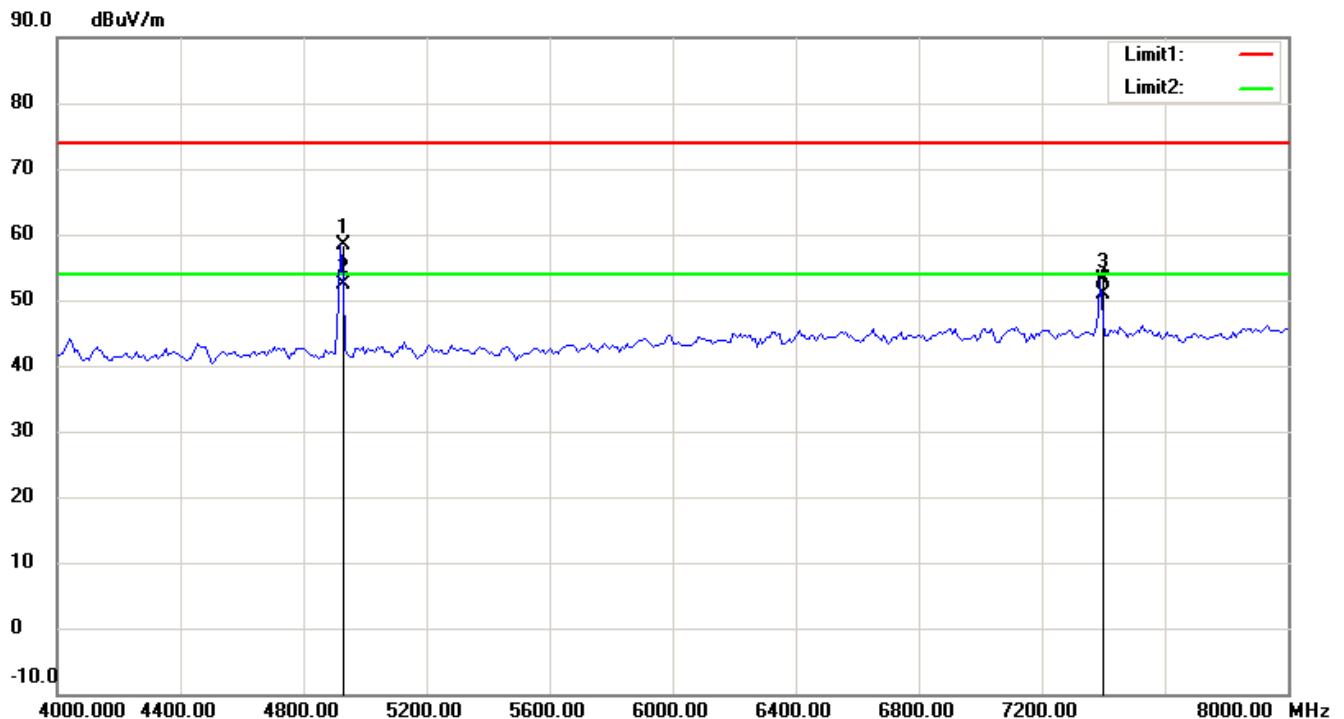
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

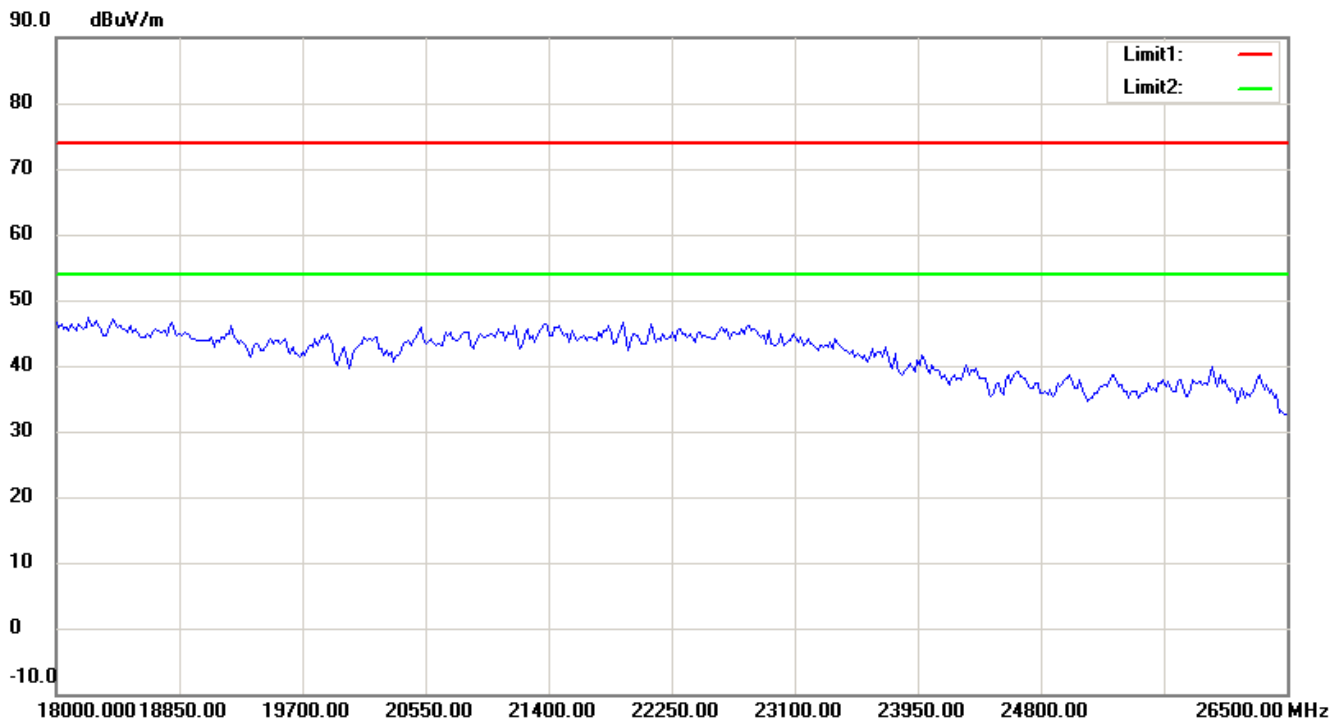
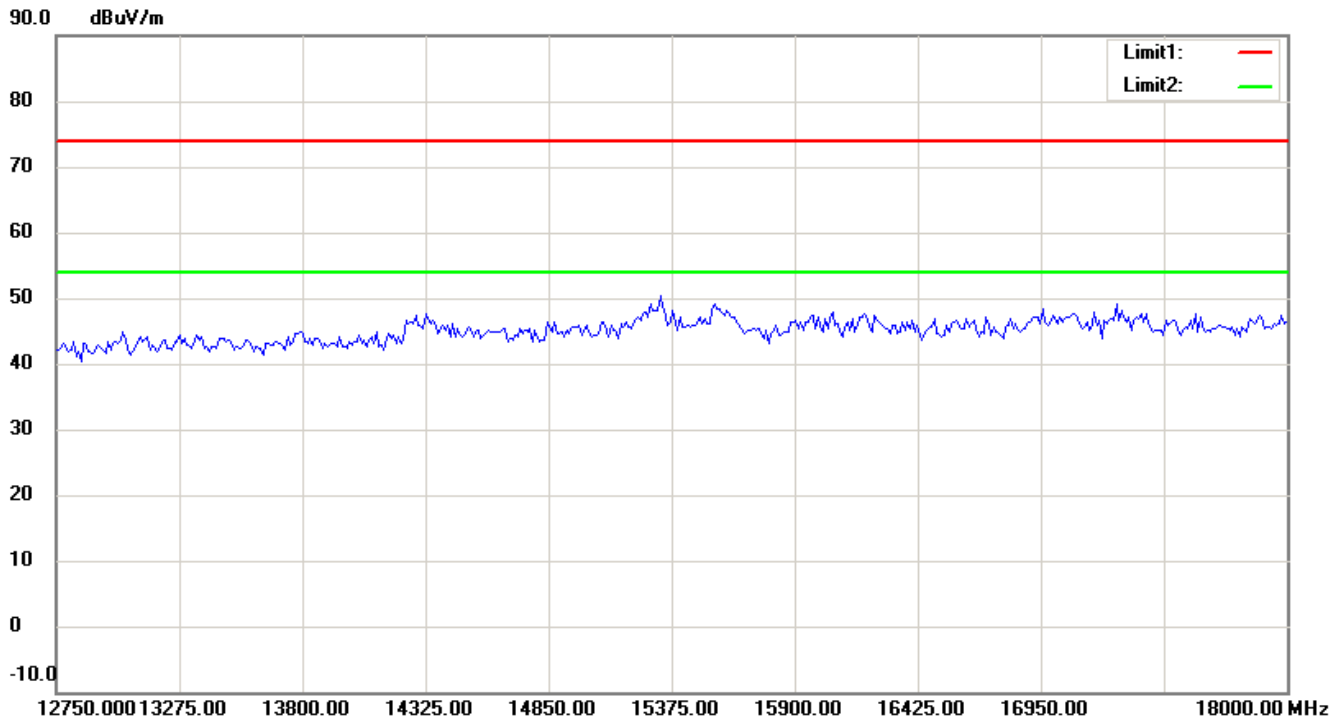
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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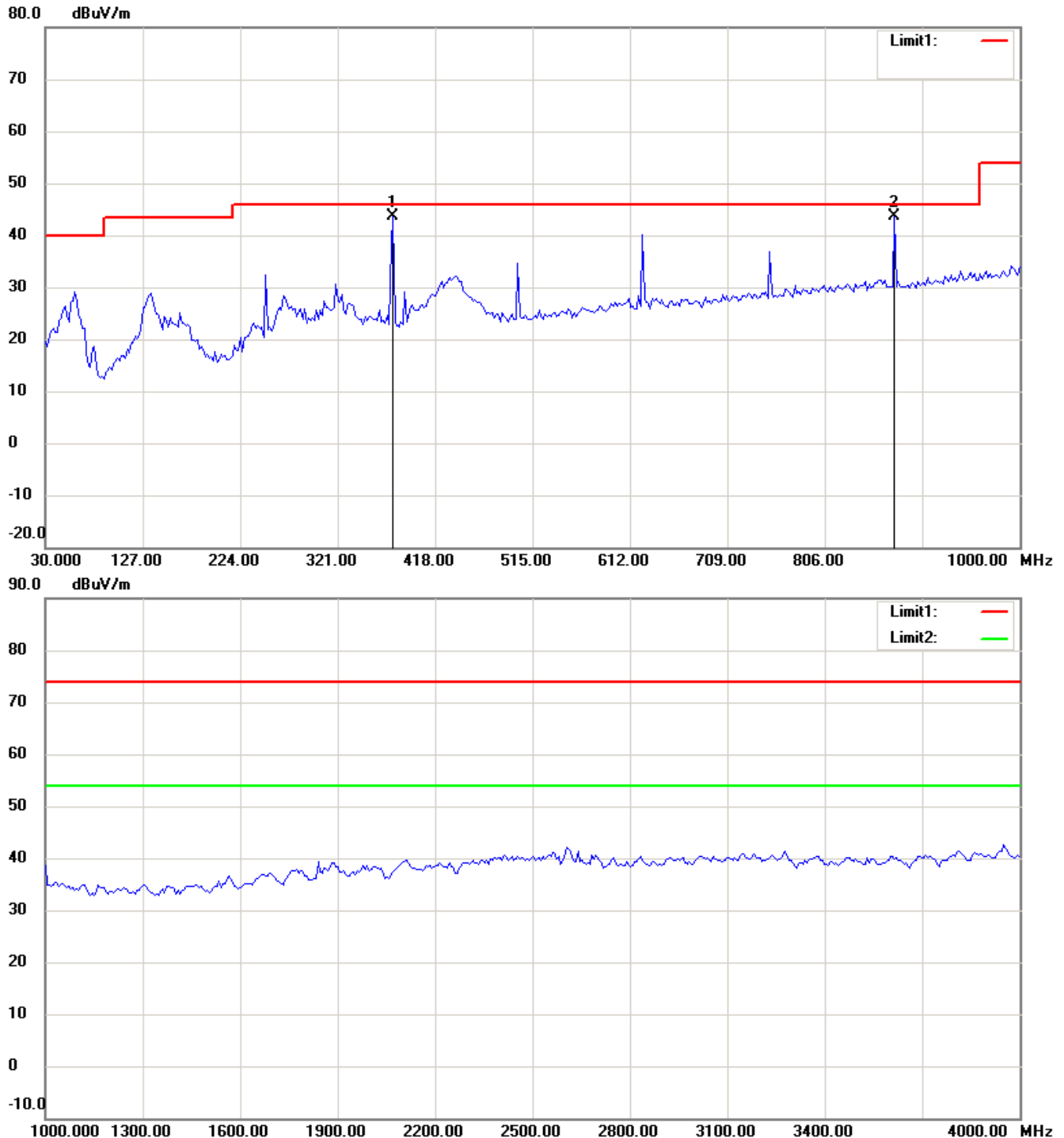
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2412MHz

Antenna Polarization H



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

Note:

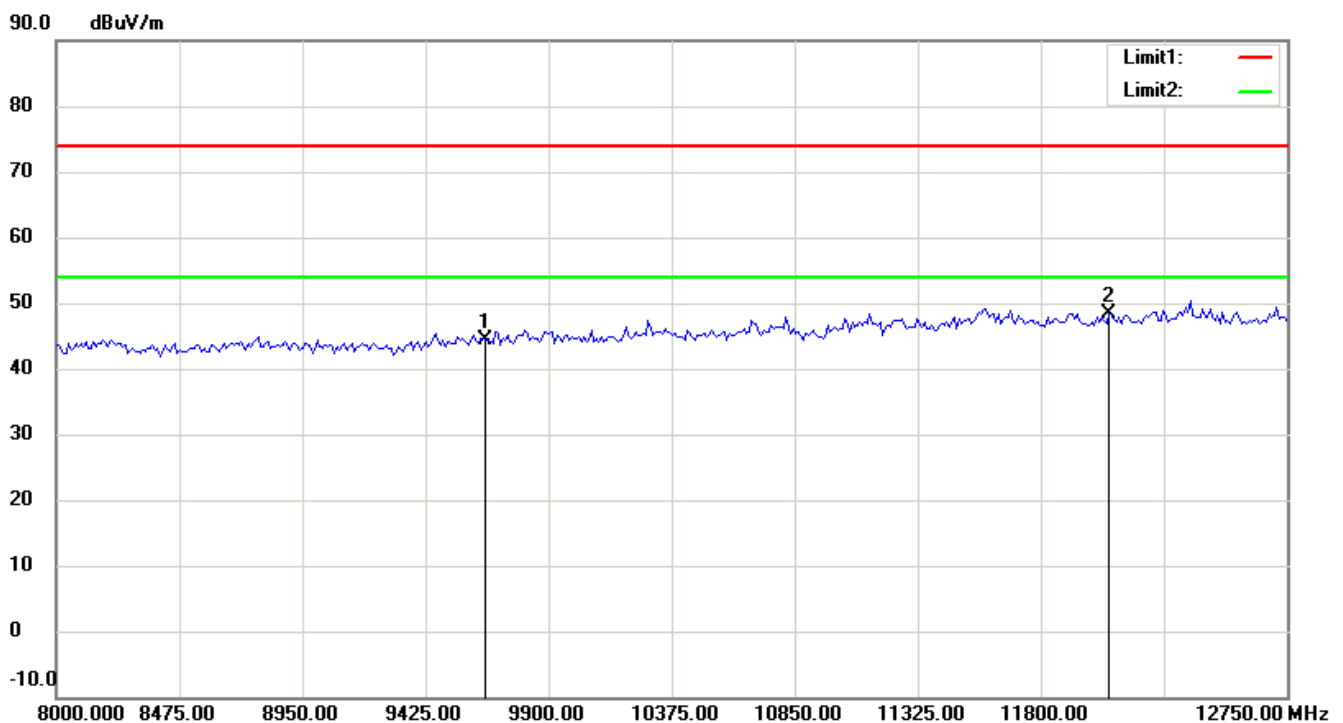
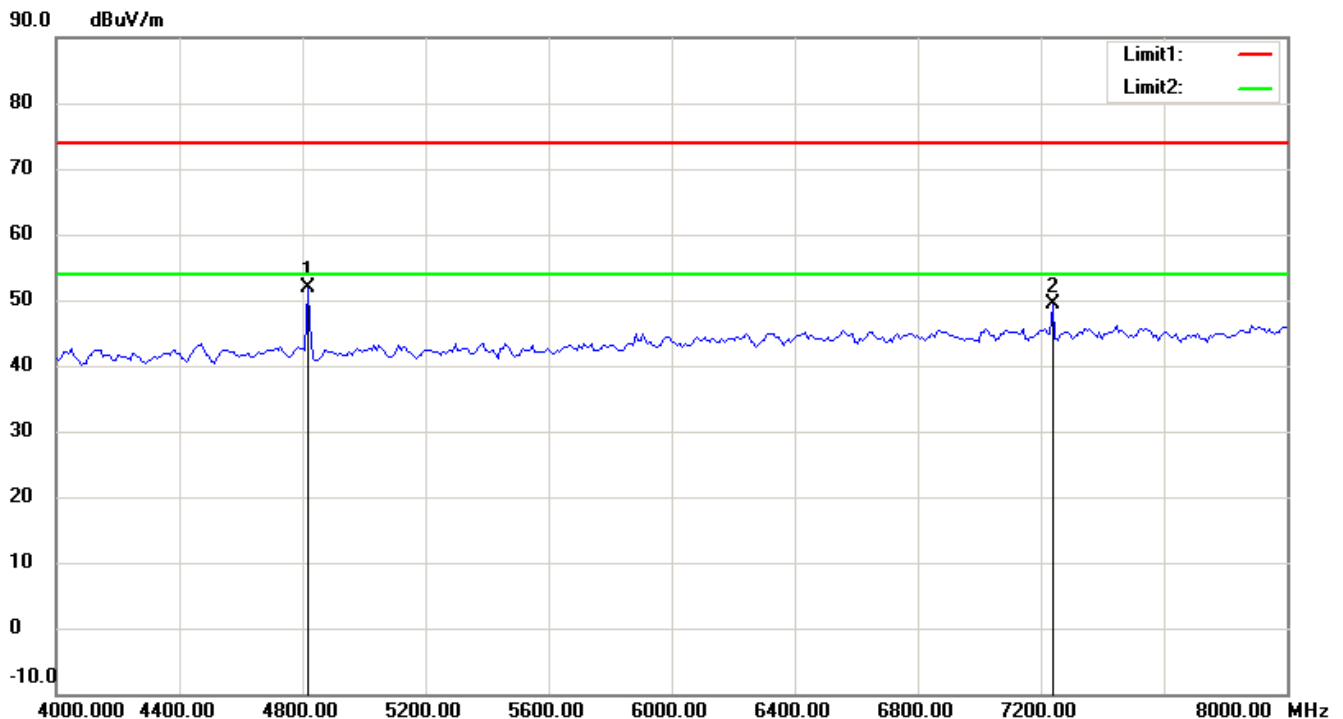
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

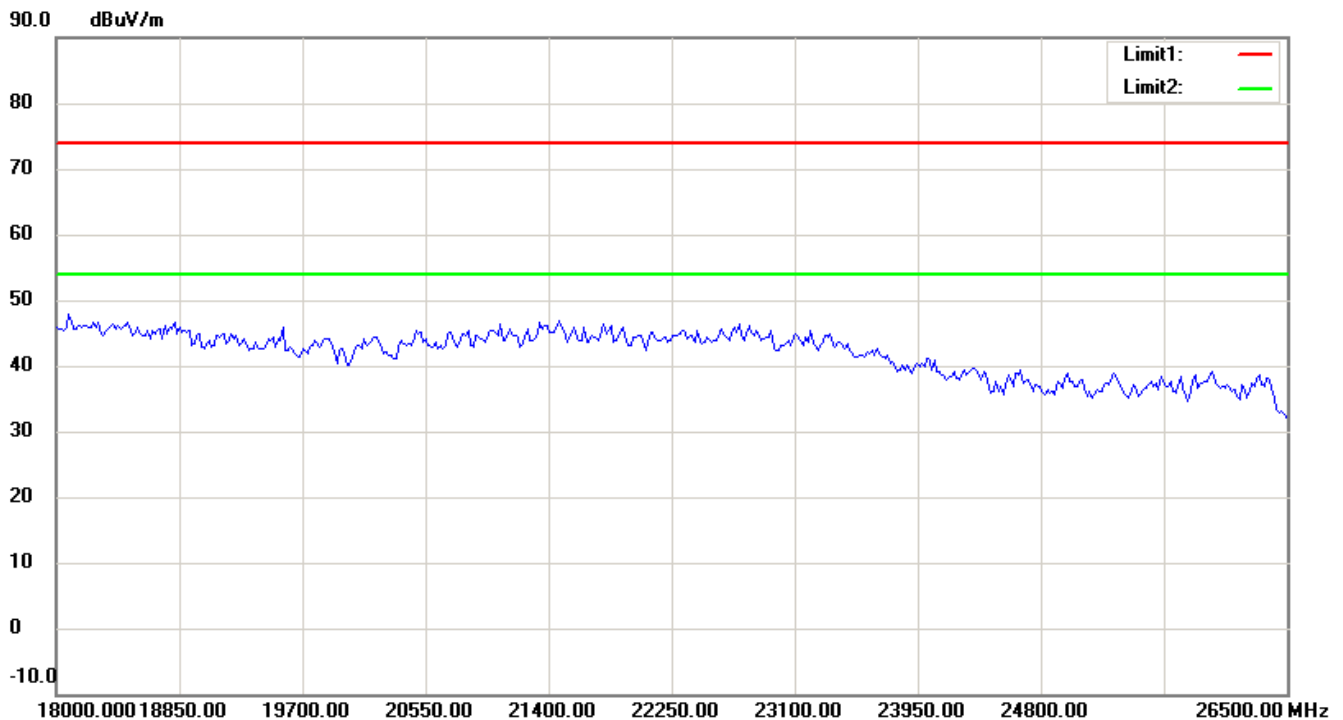
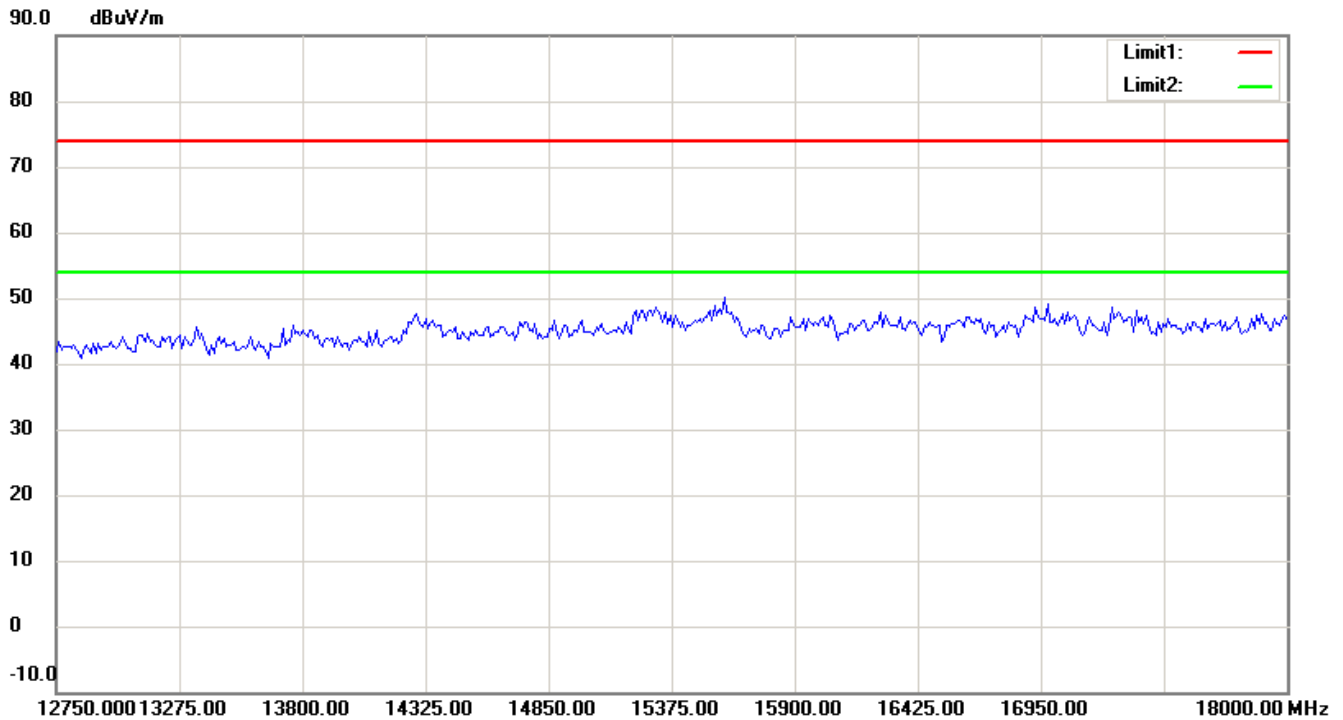
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

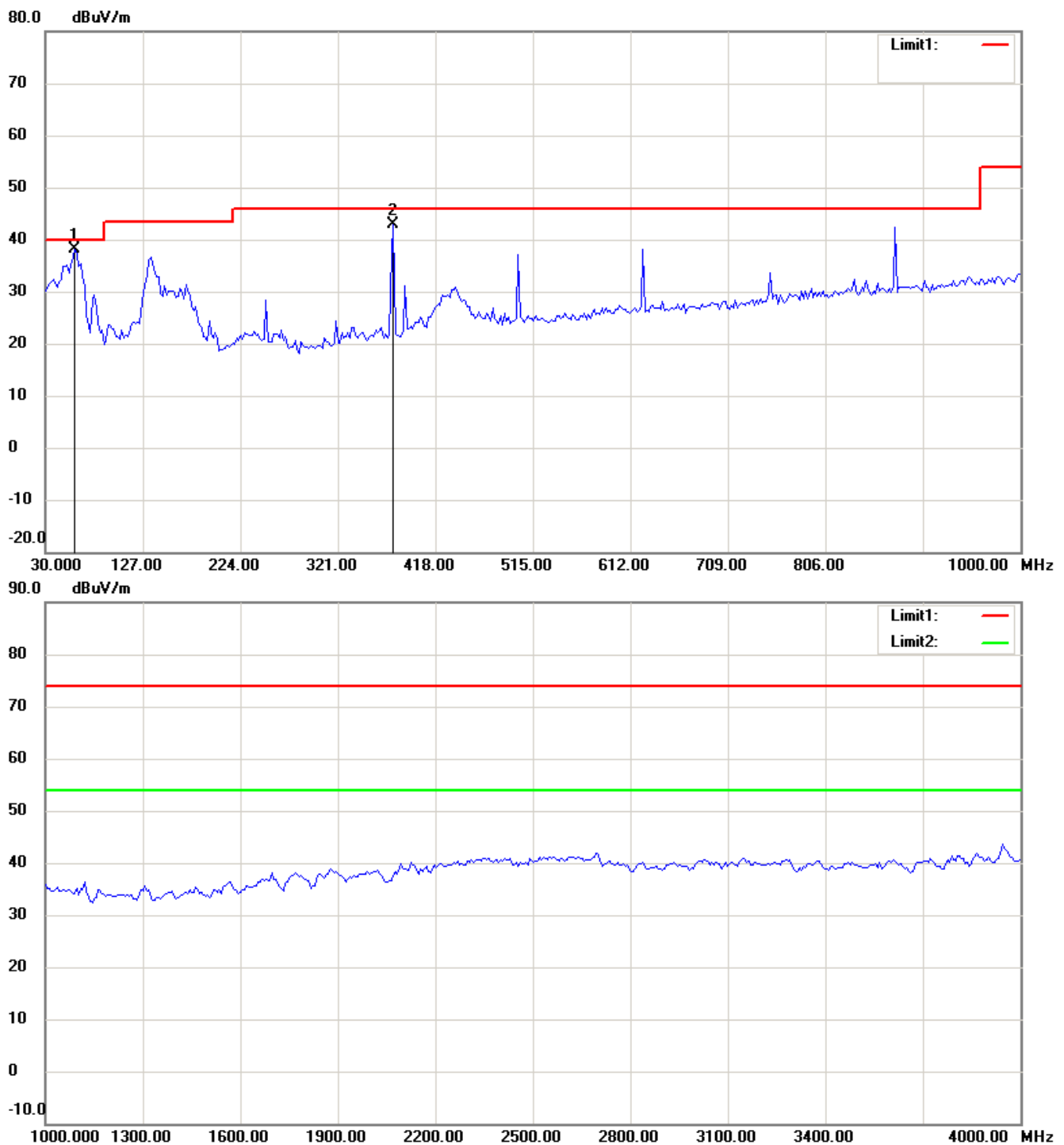
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

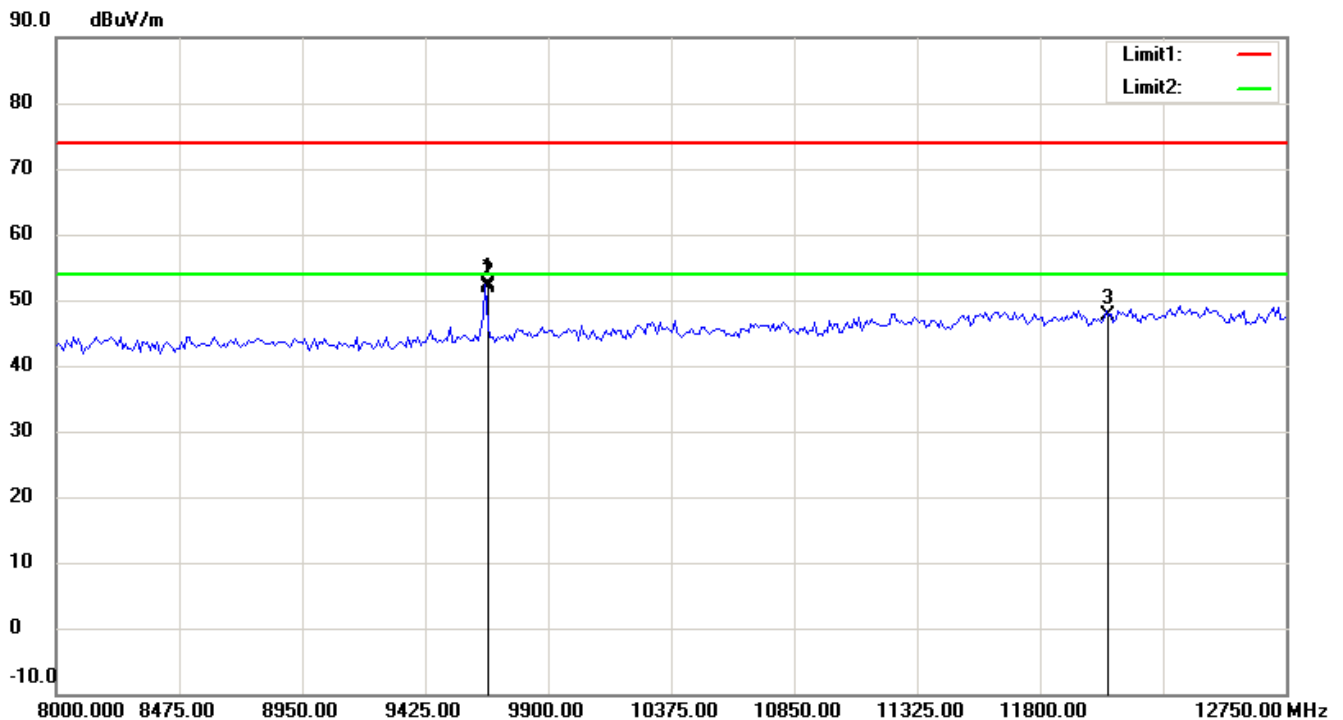
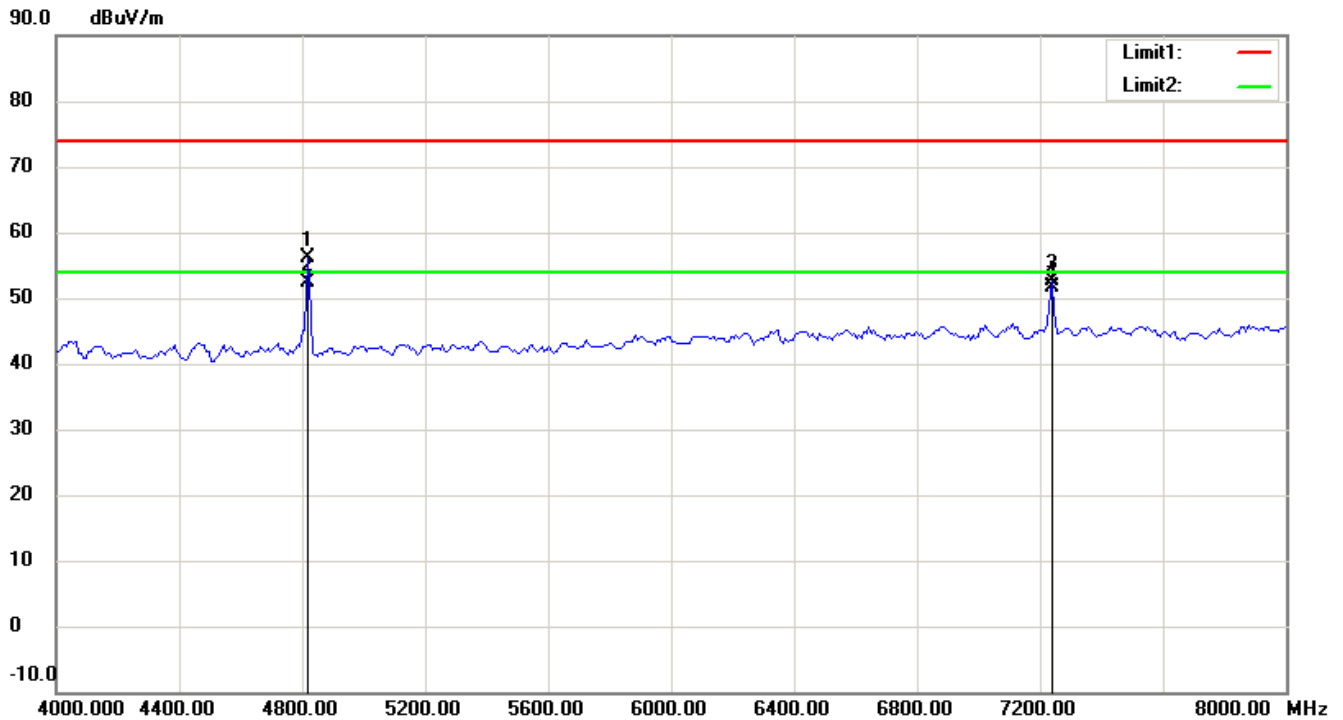
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

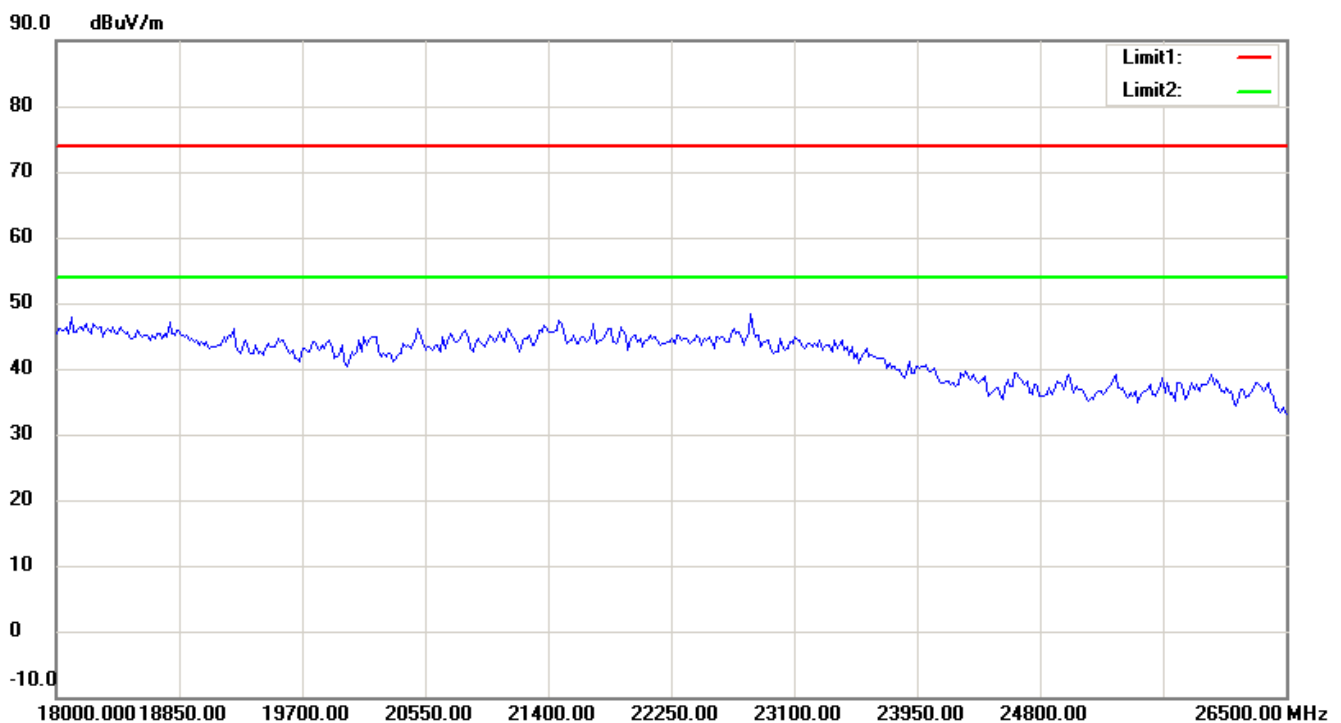
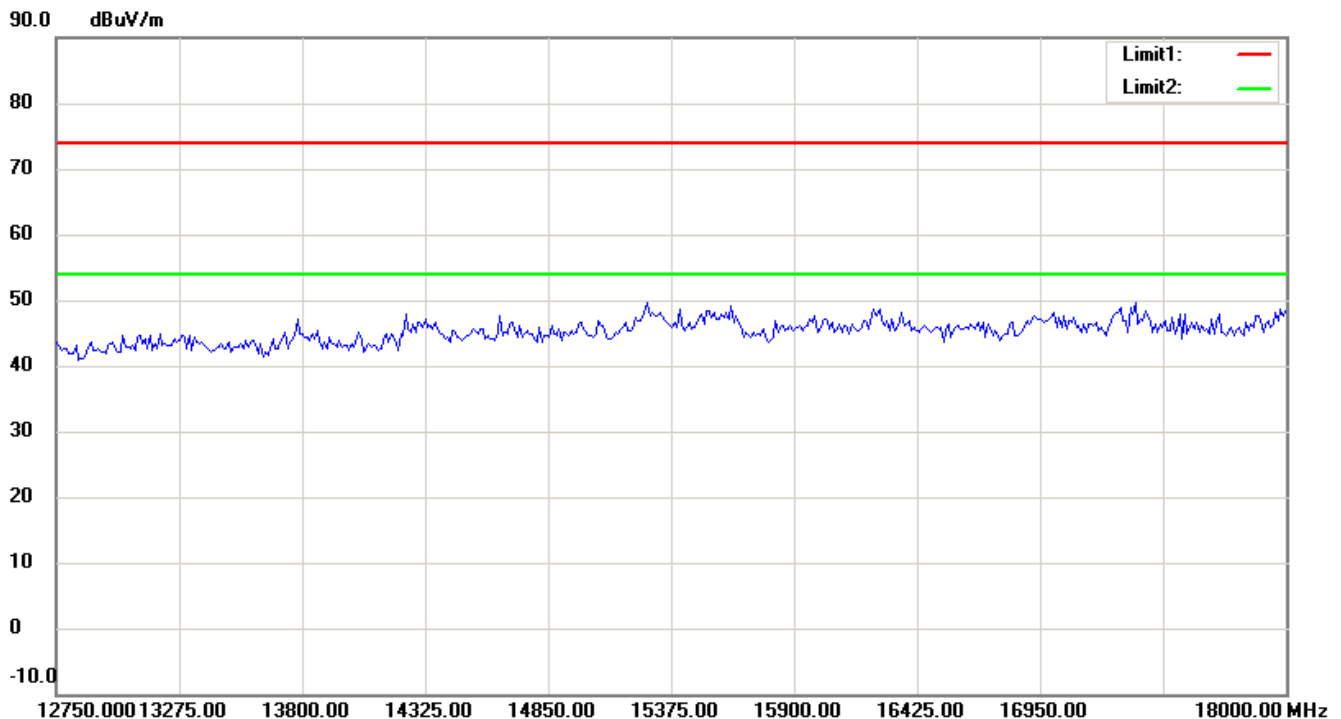
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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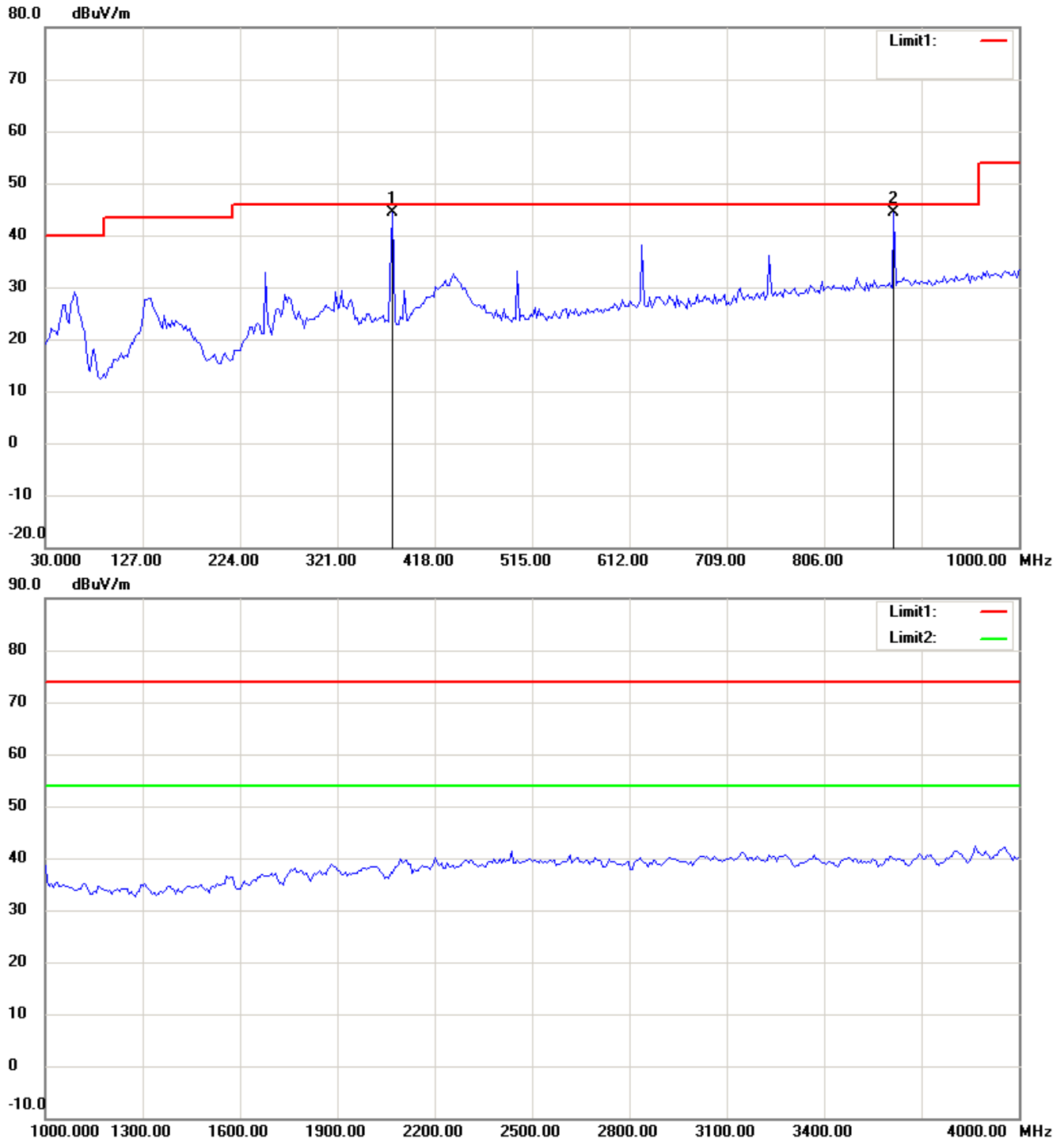
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2437MHz

Antenna Polarization H



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

Note:

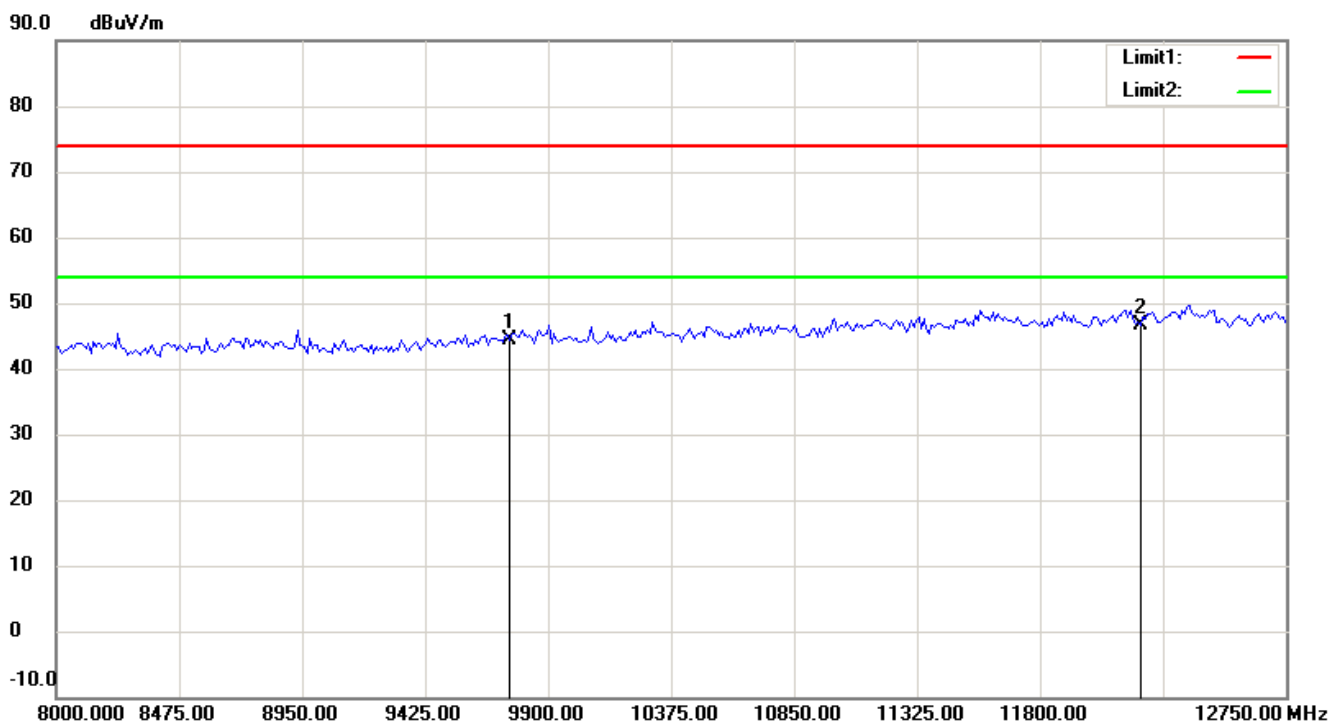
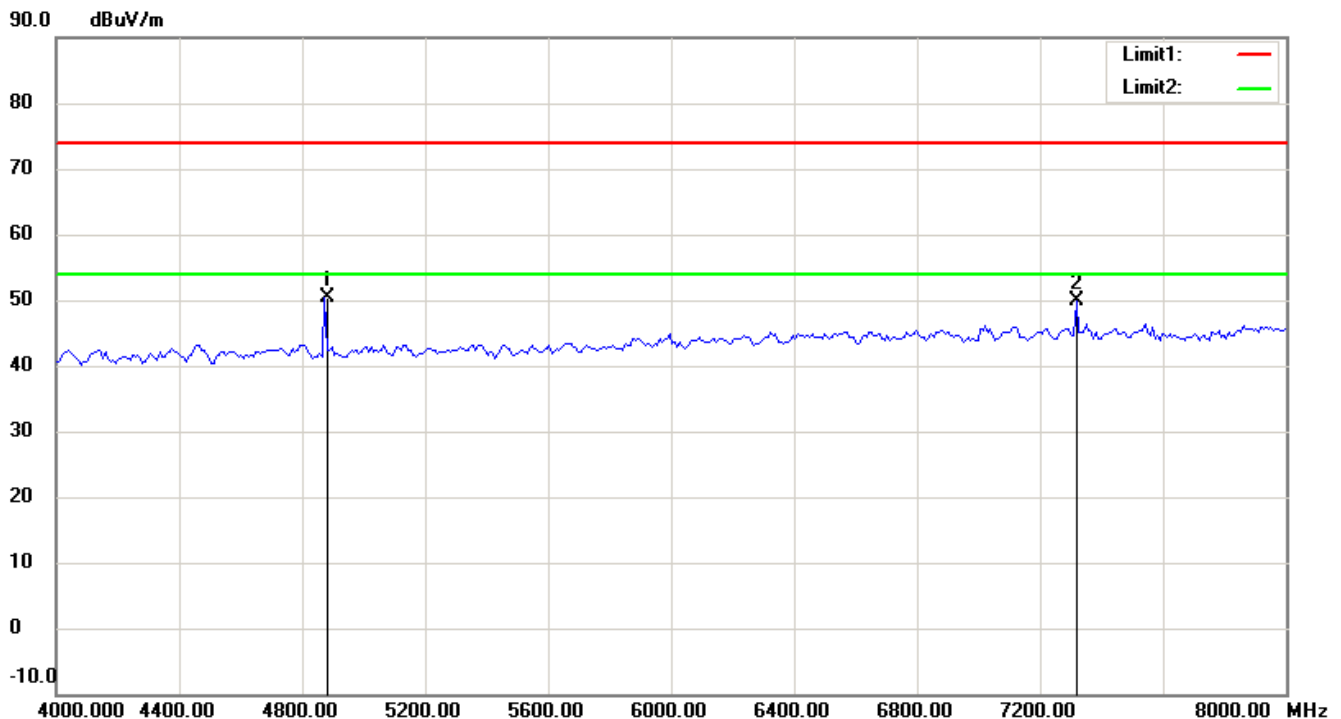
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

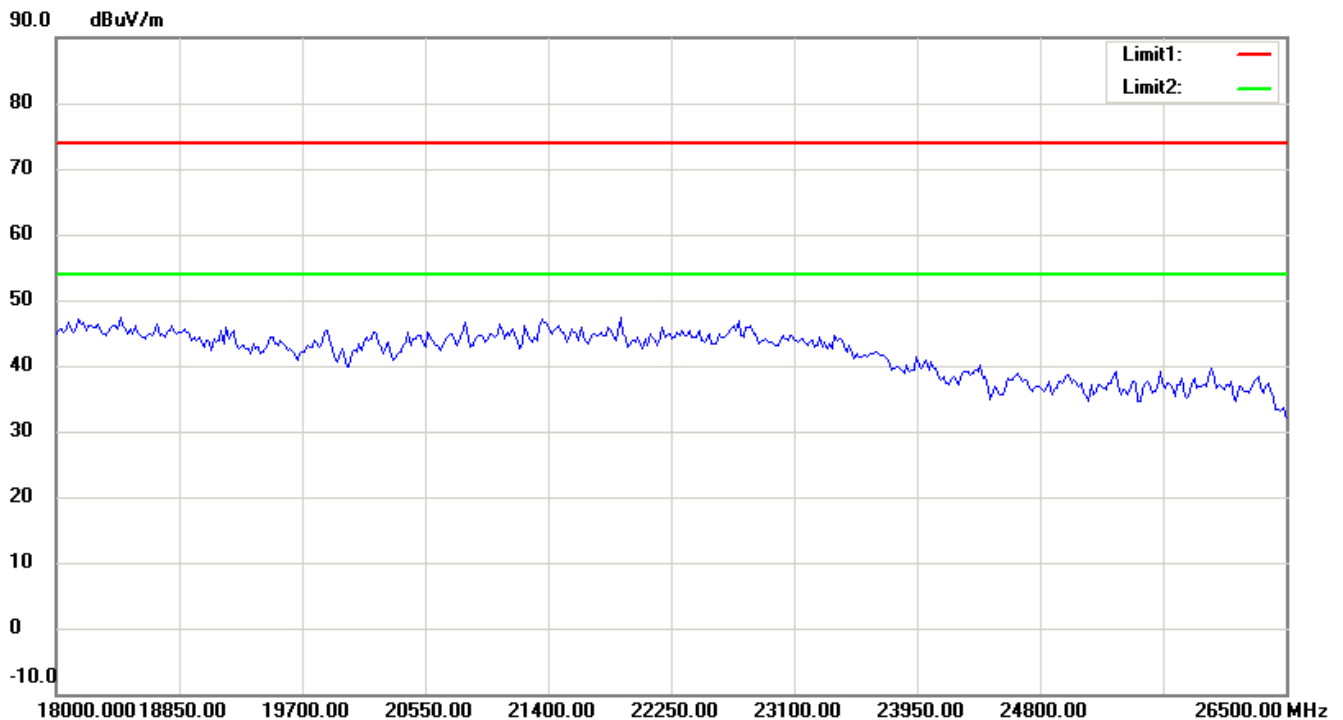
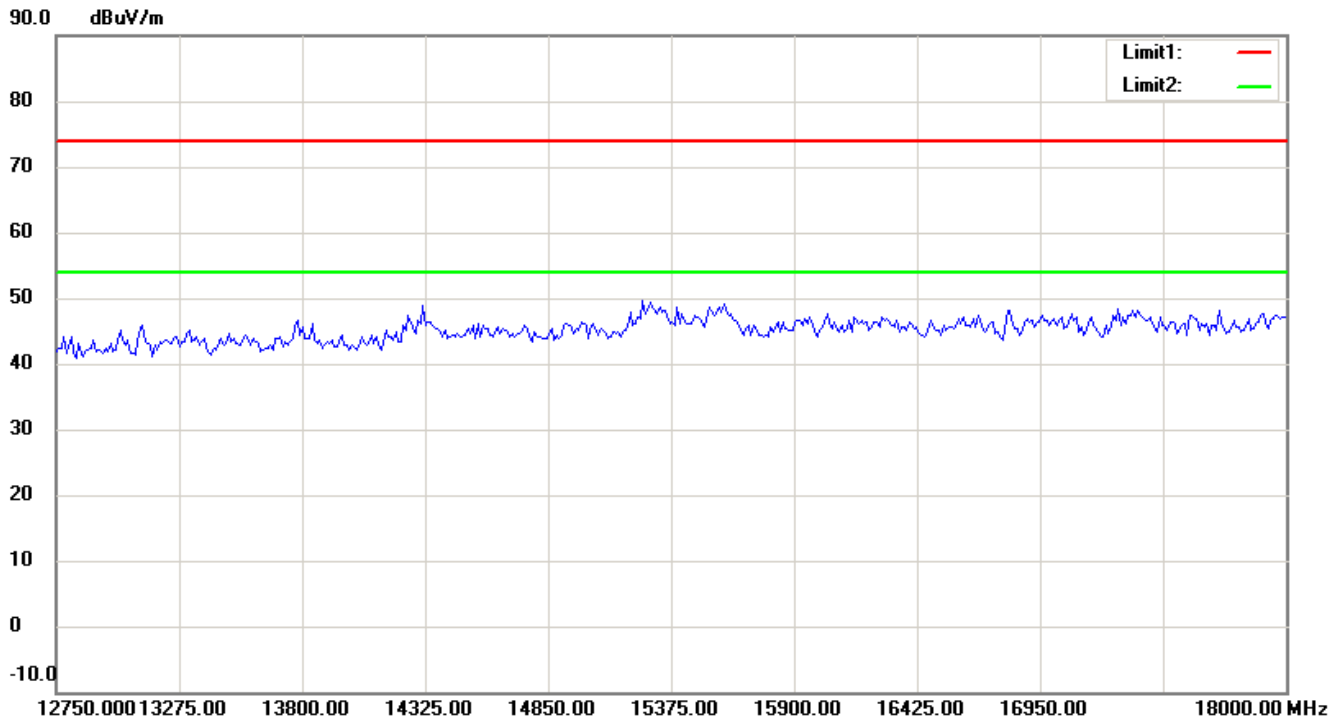
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

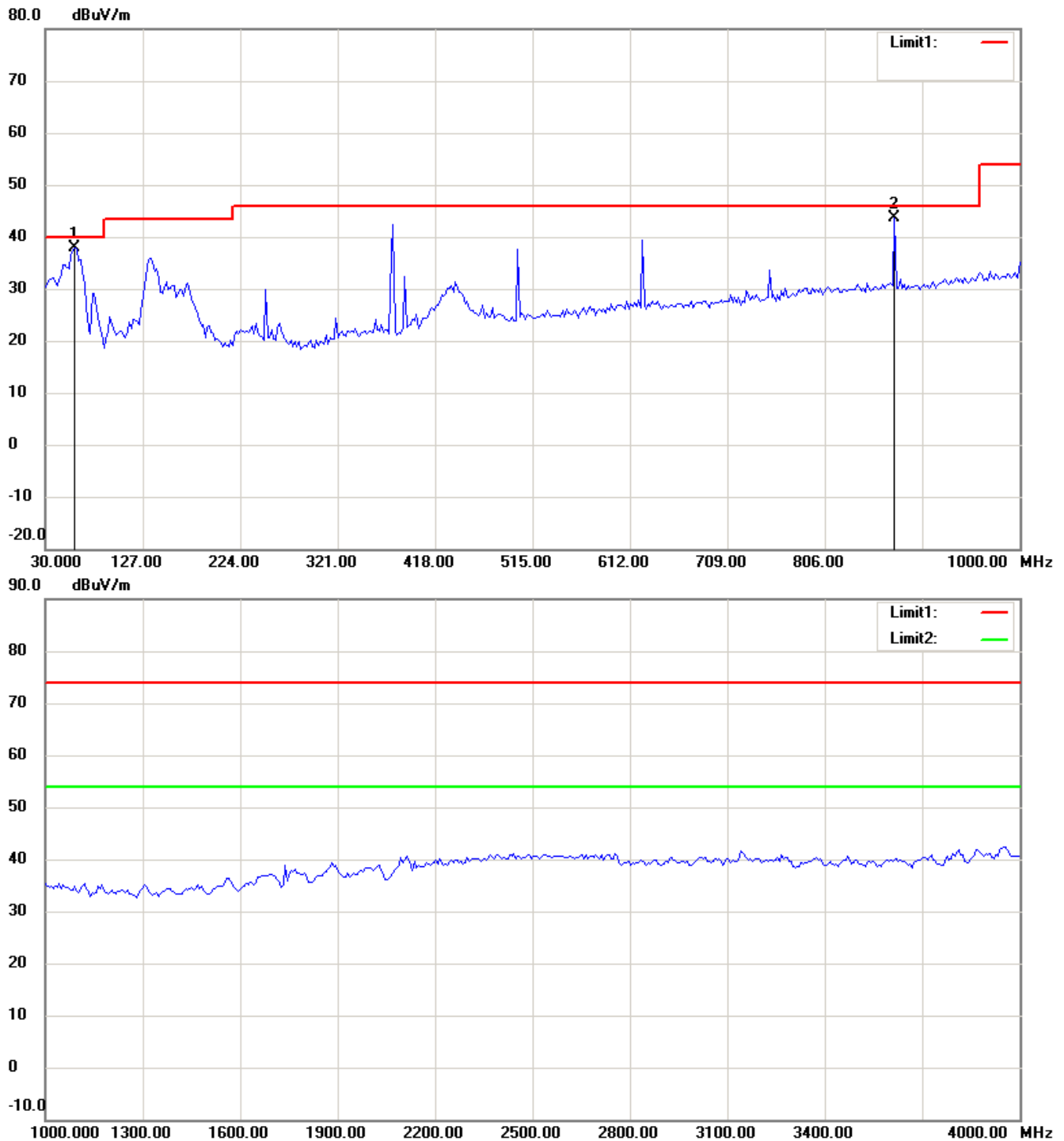
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

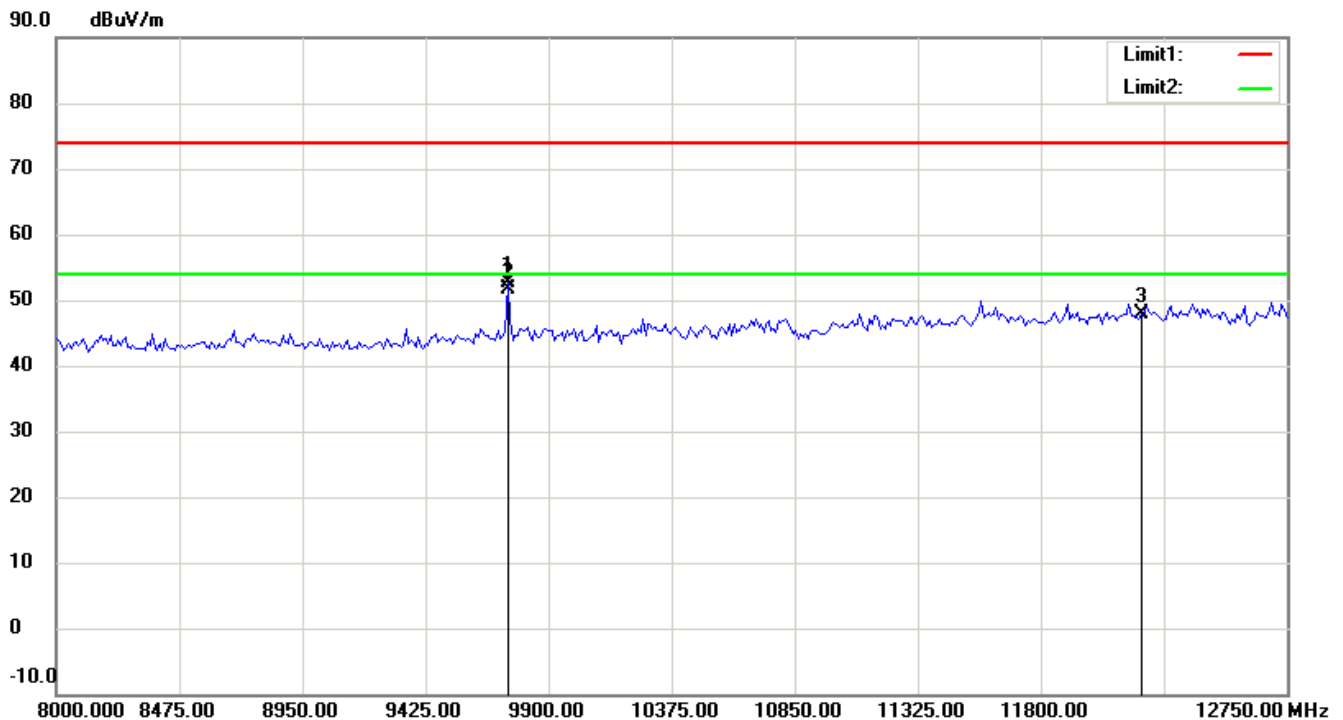
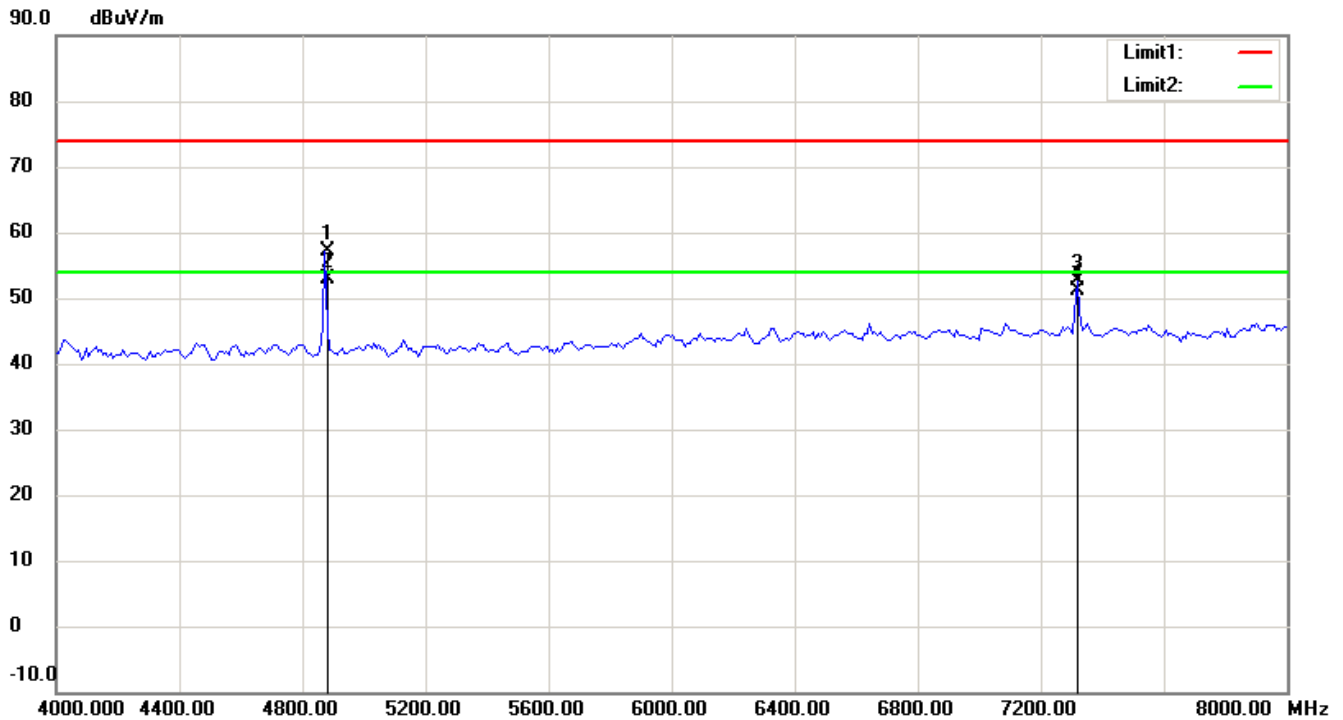
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

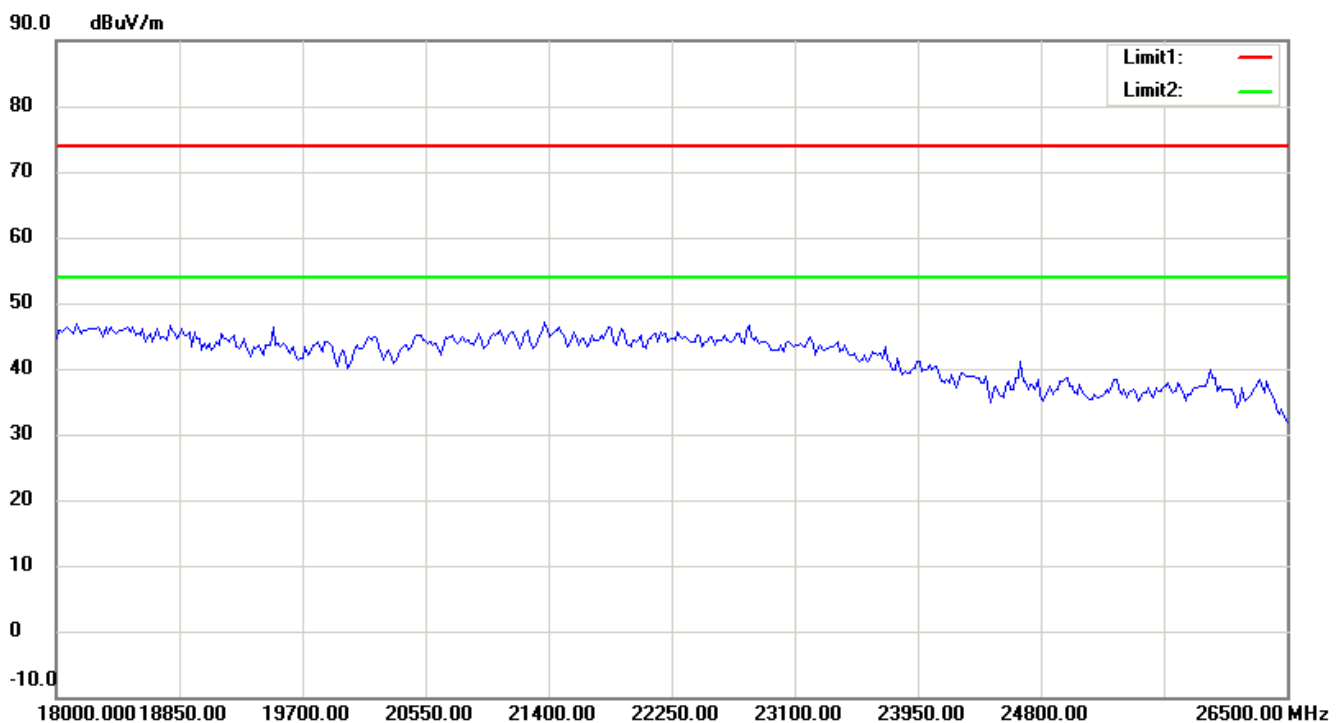
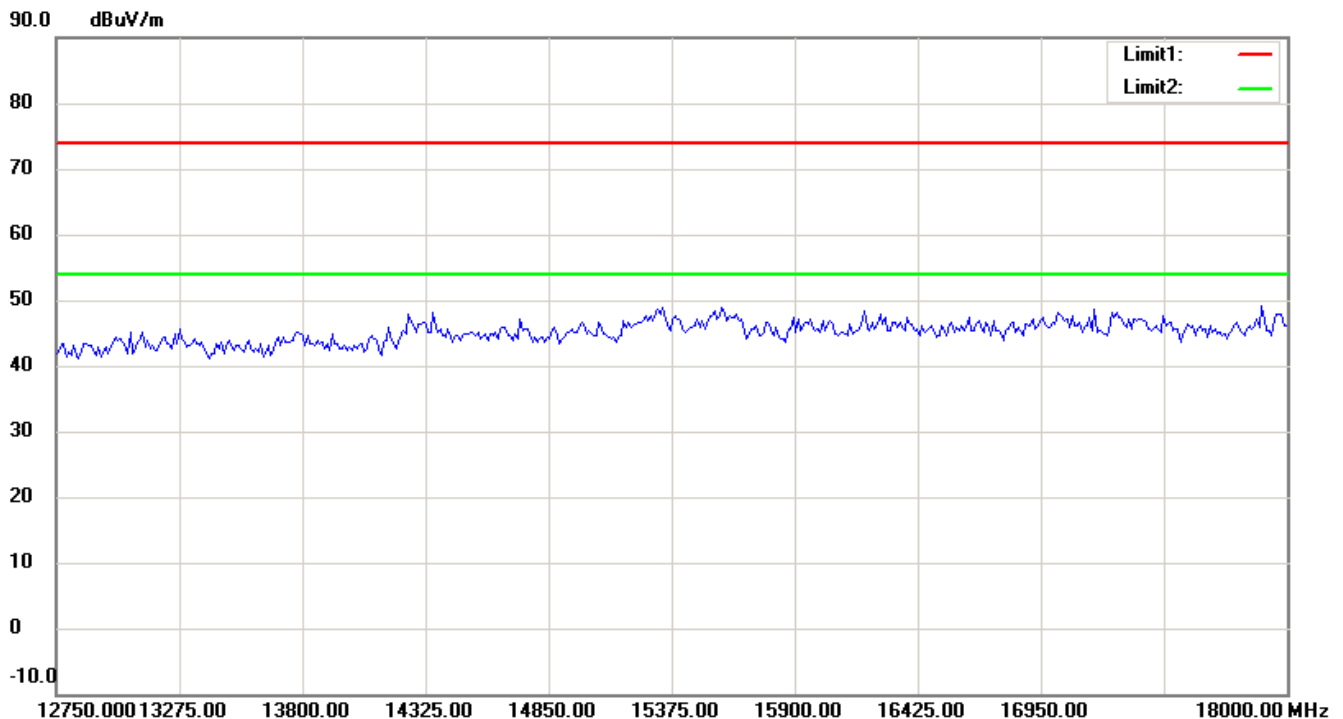
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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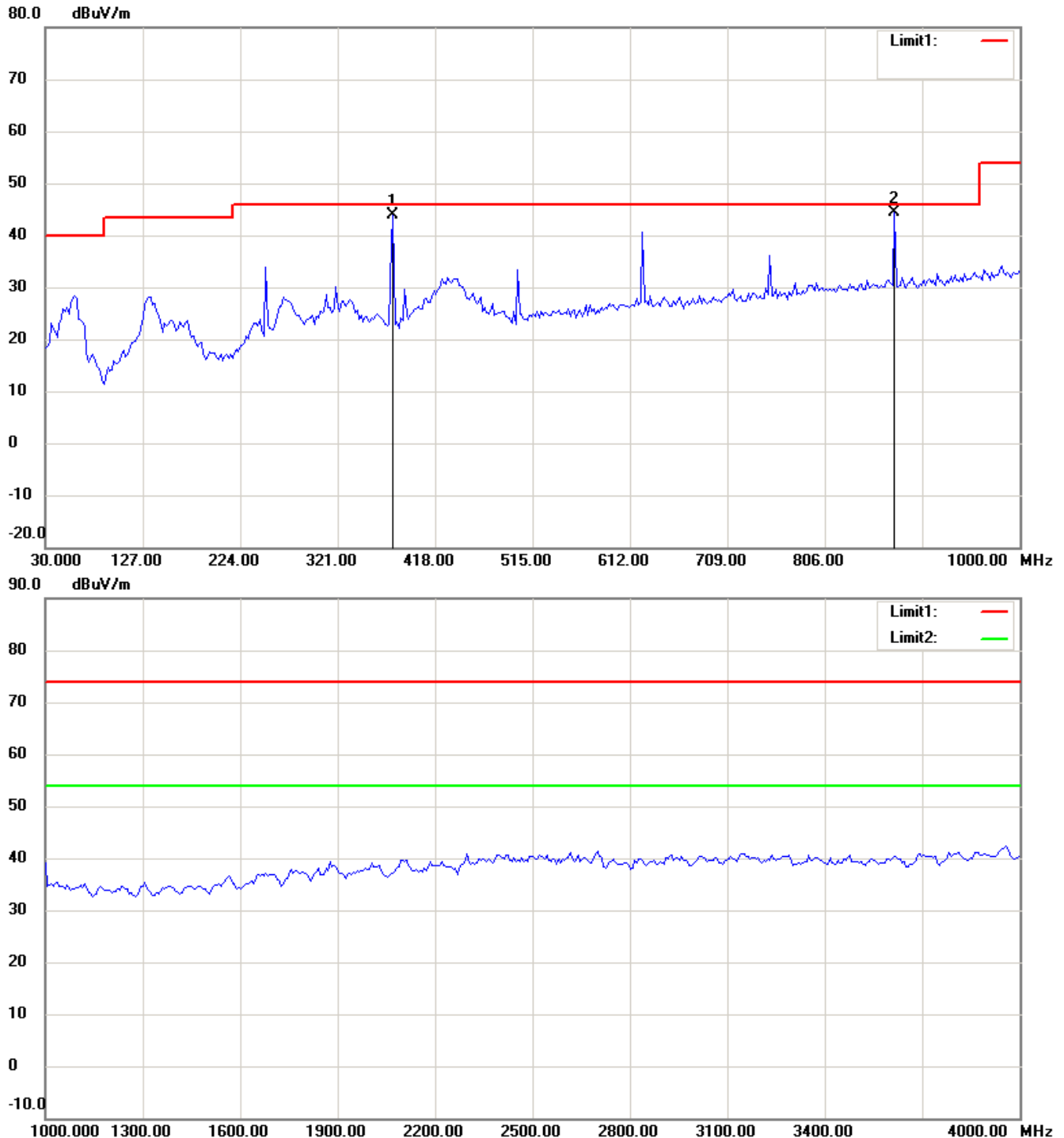
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11g 2462MHz

Antenna Polarization H



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

Note:

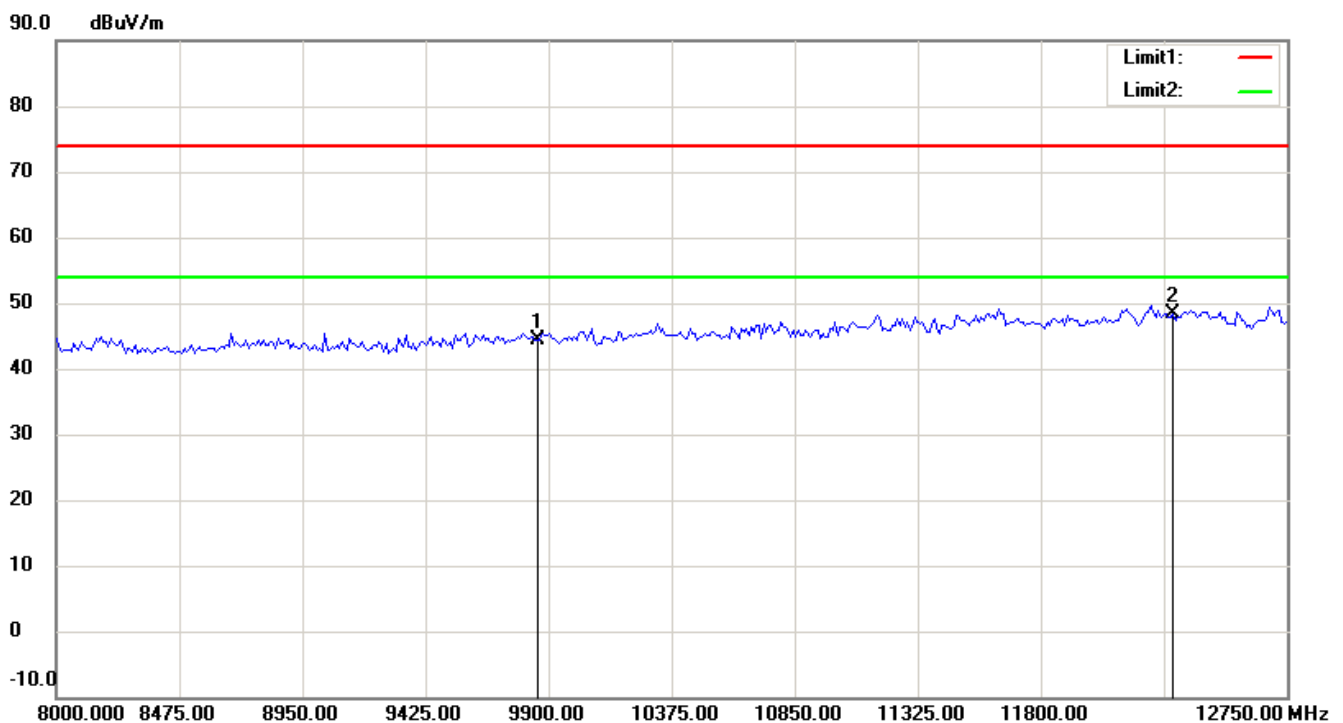
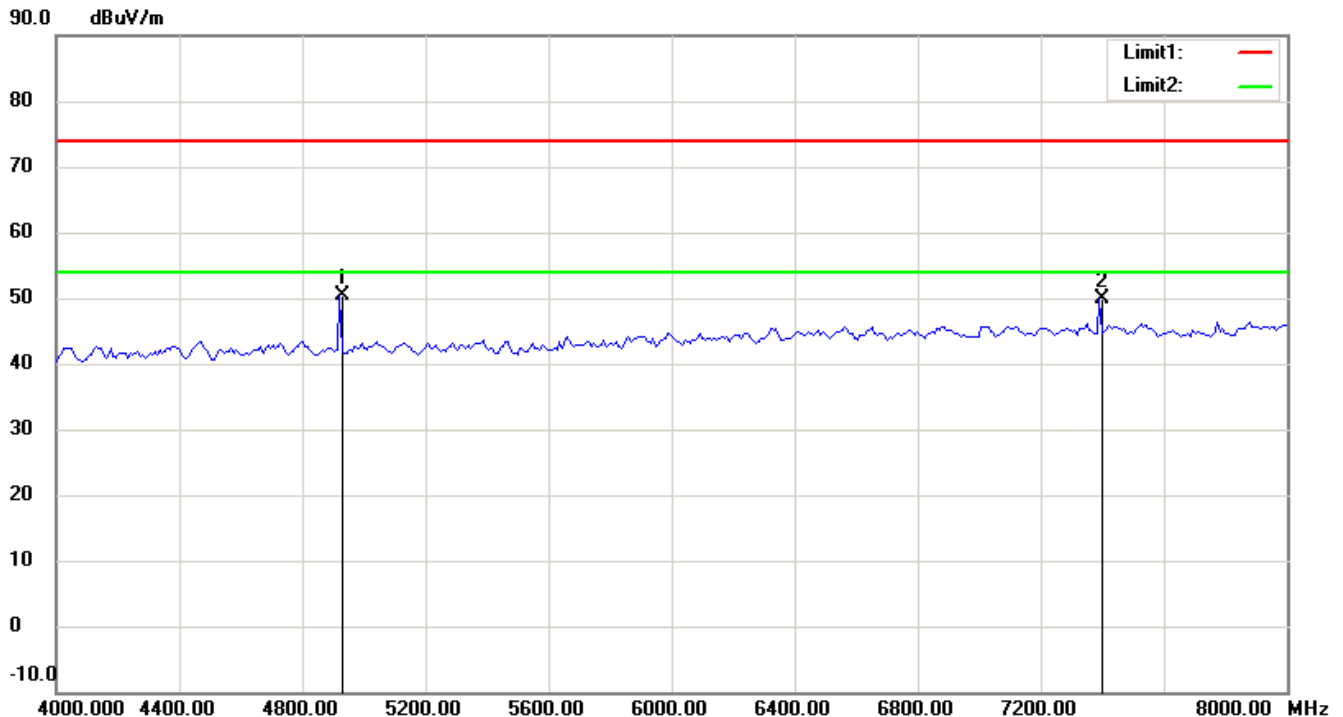
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

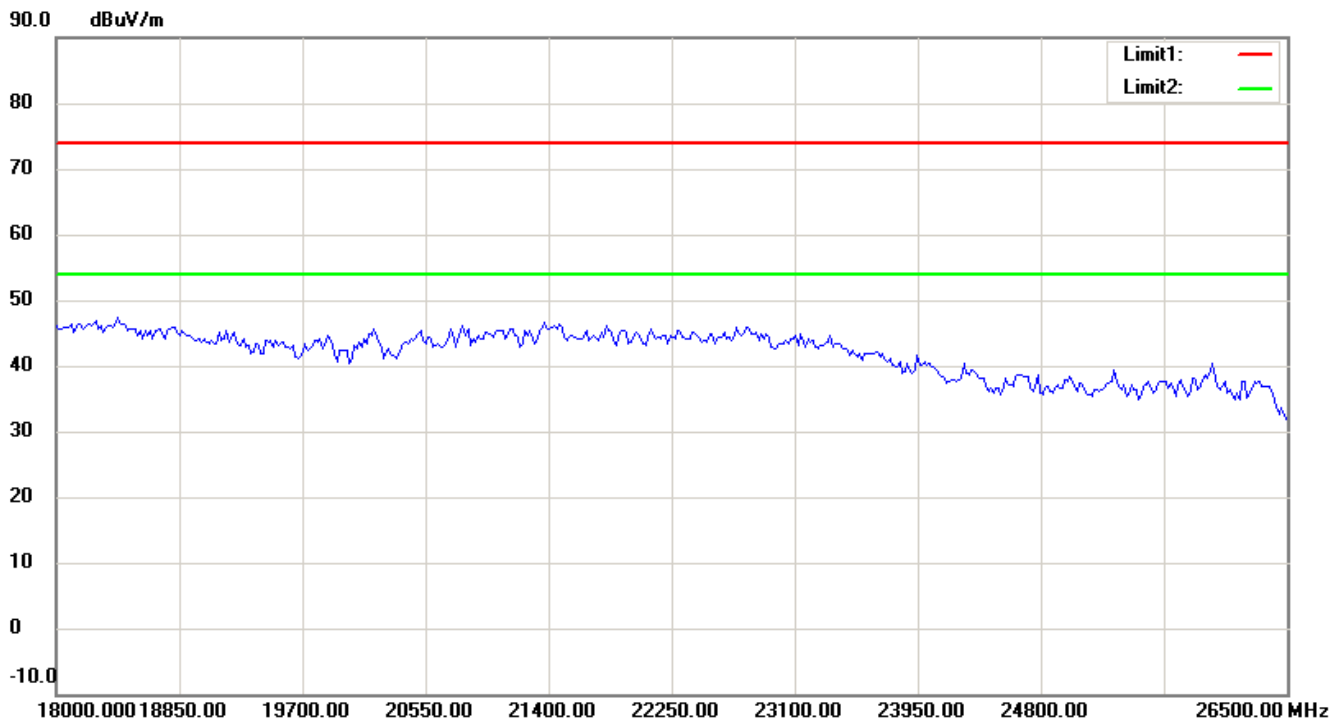
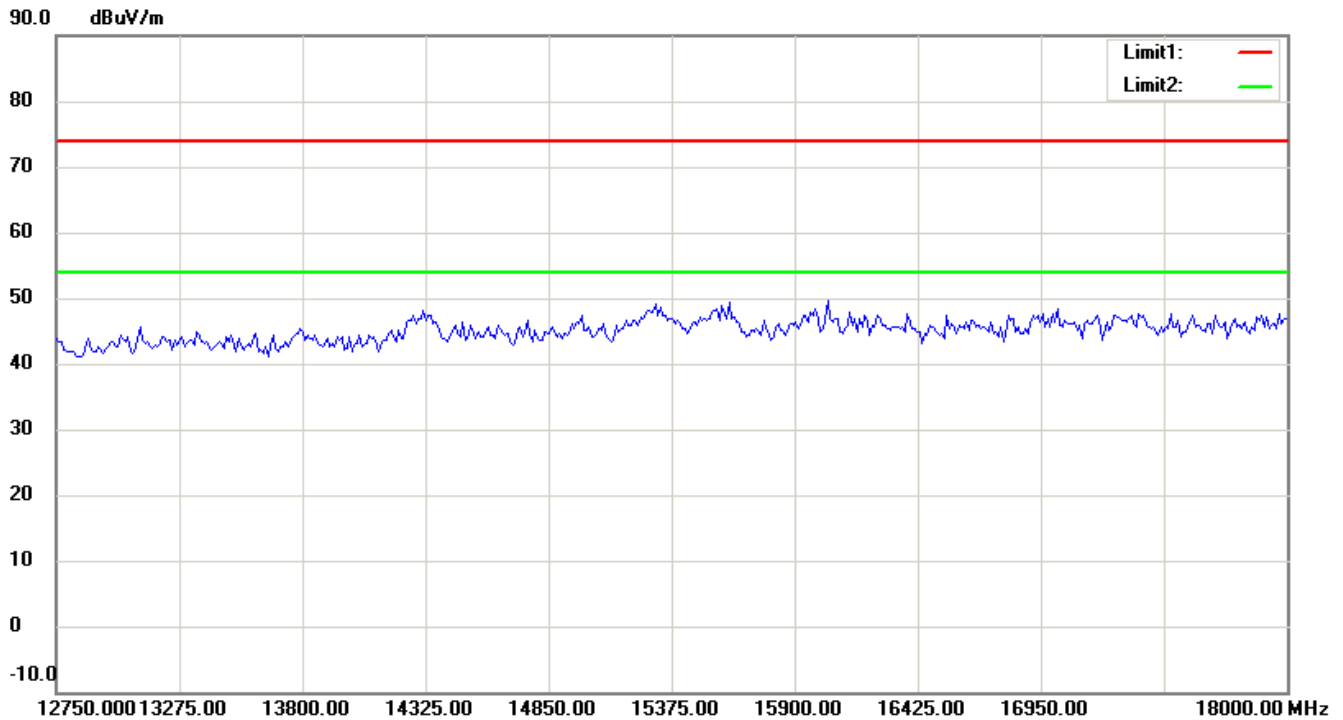
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

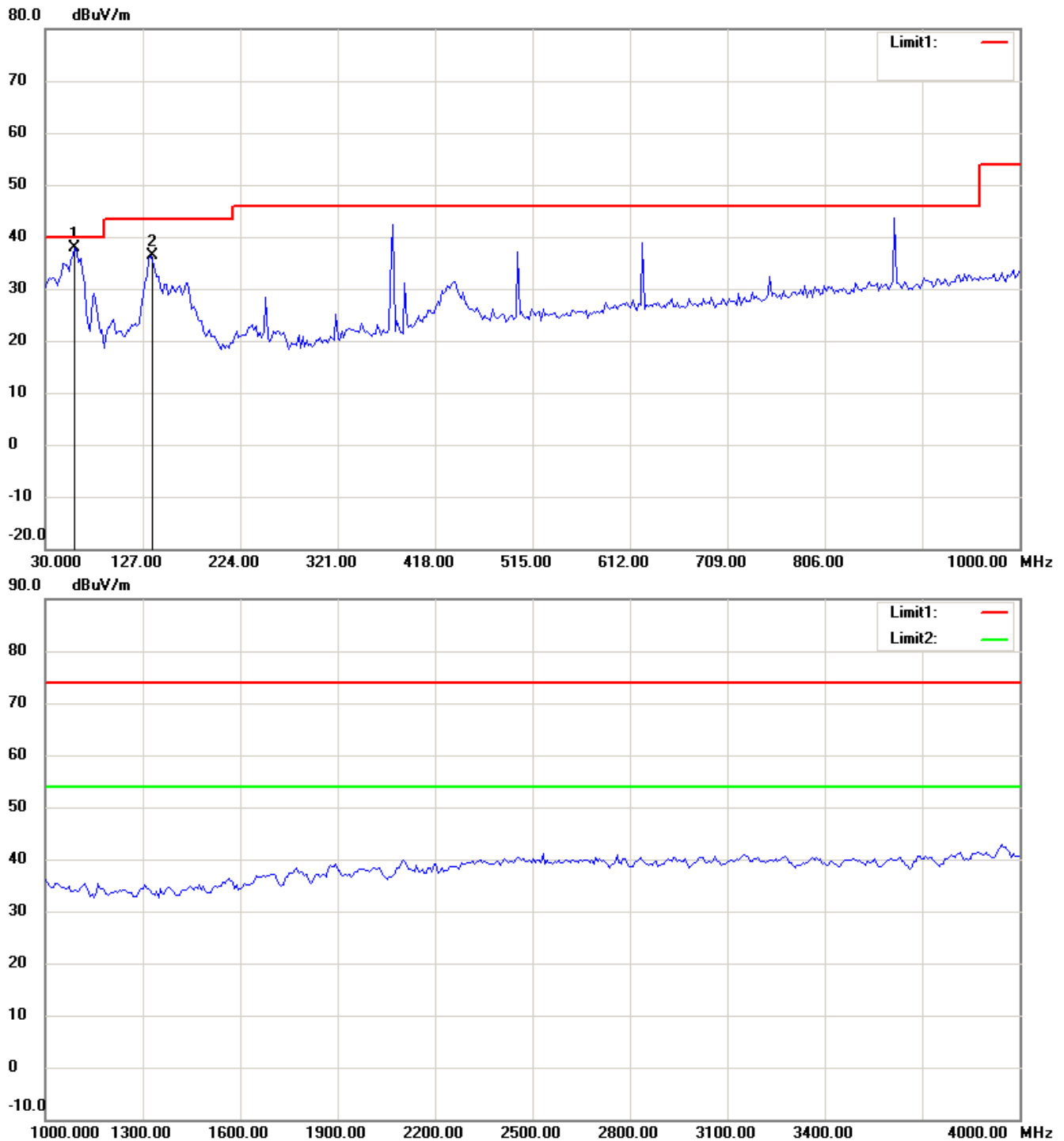
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

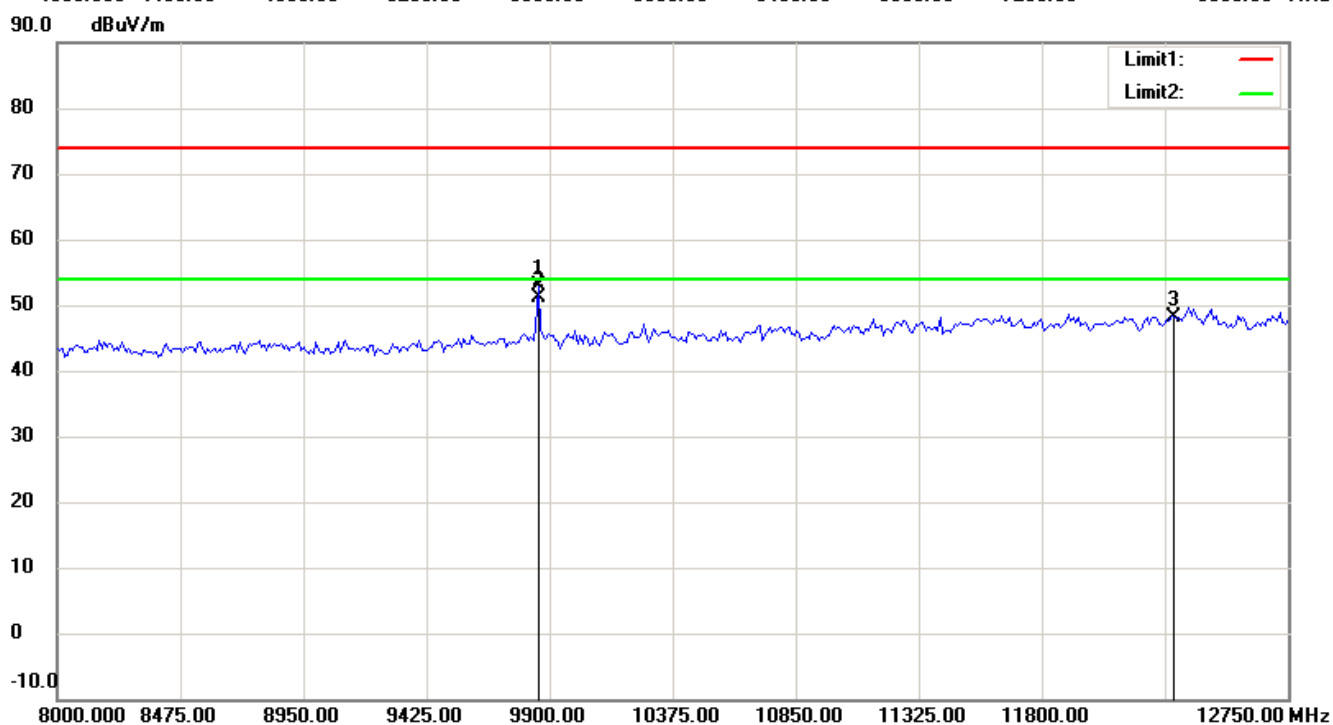
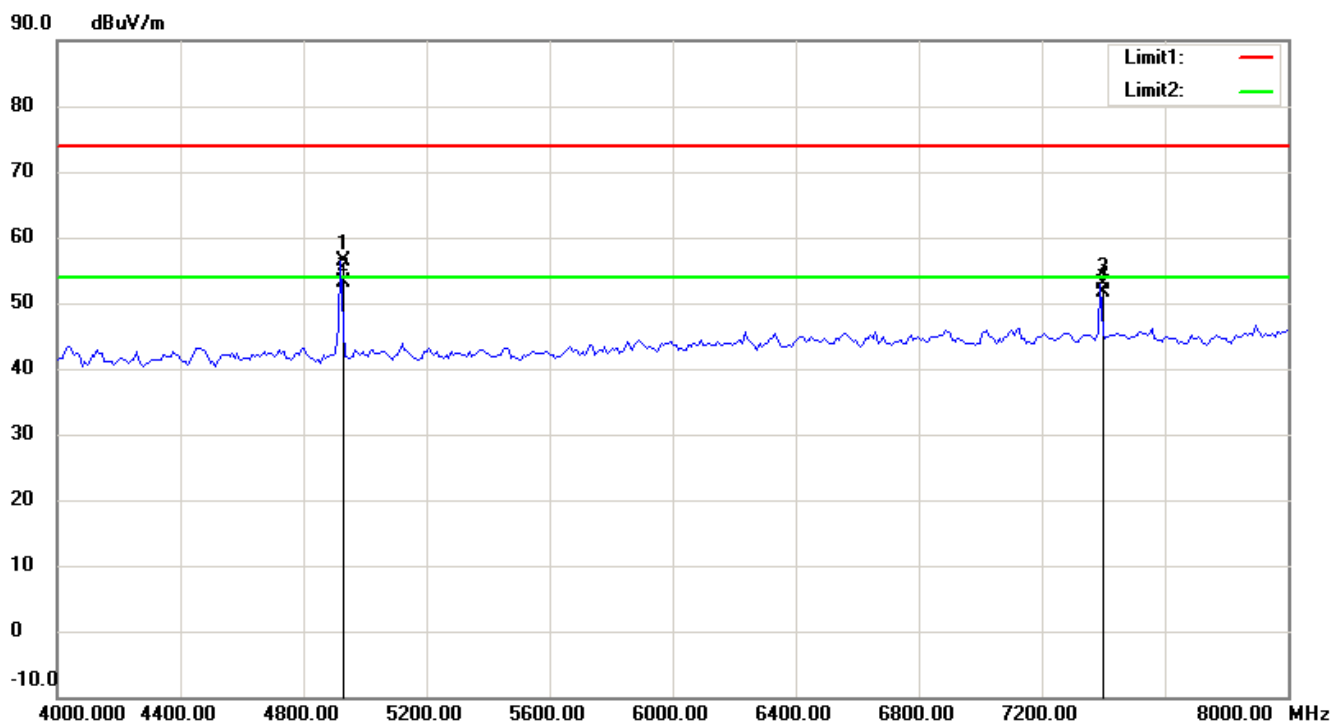
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

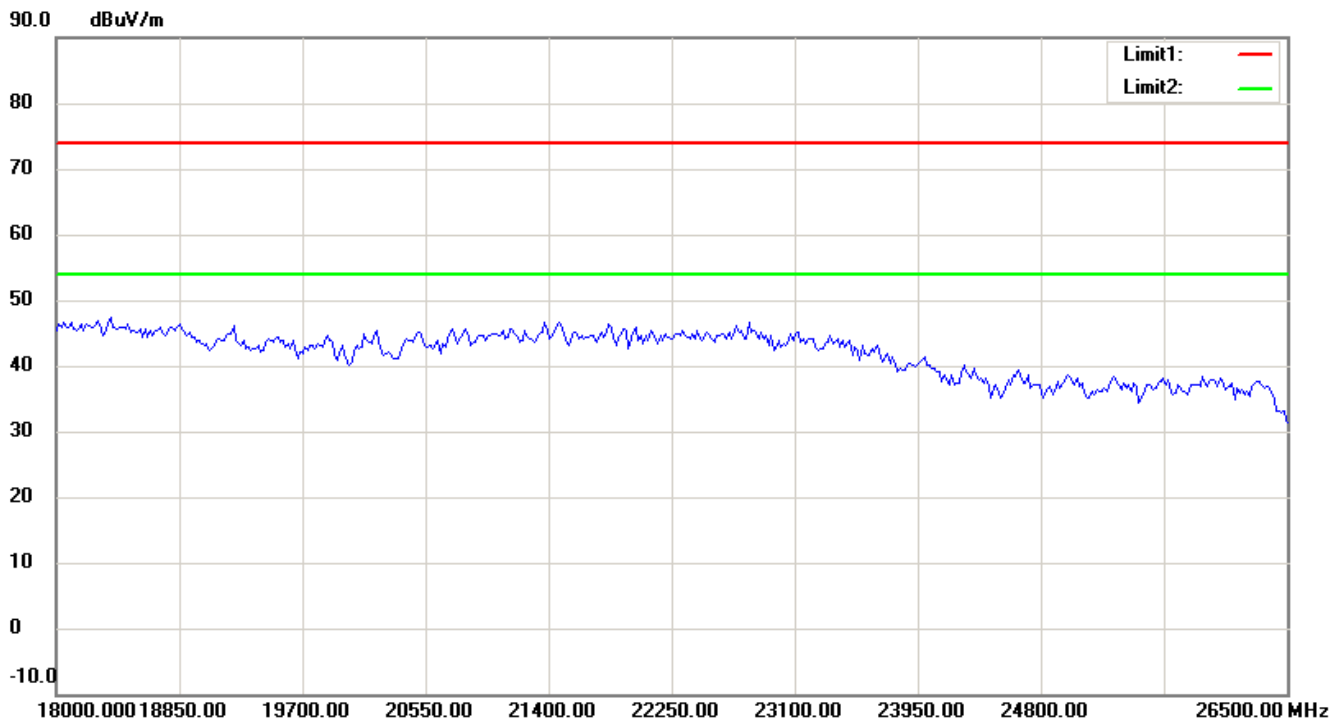
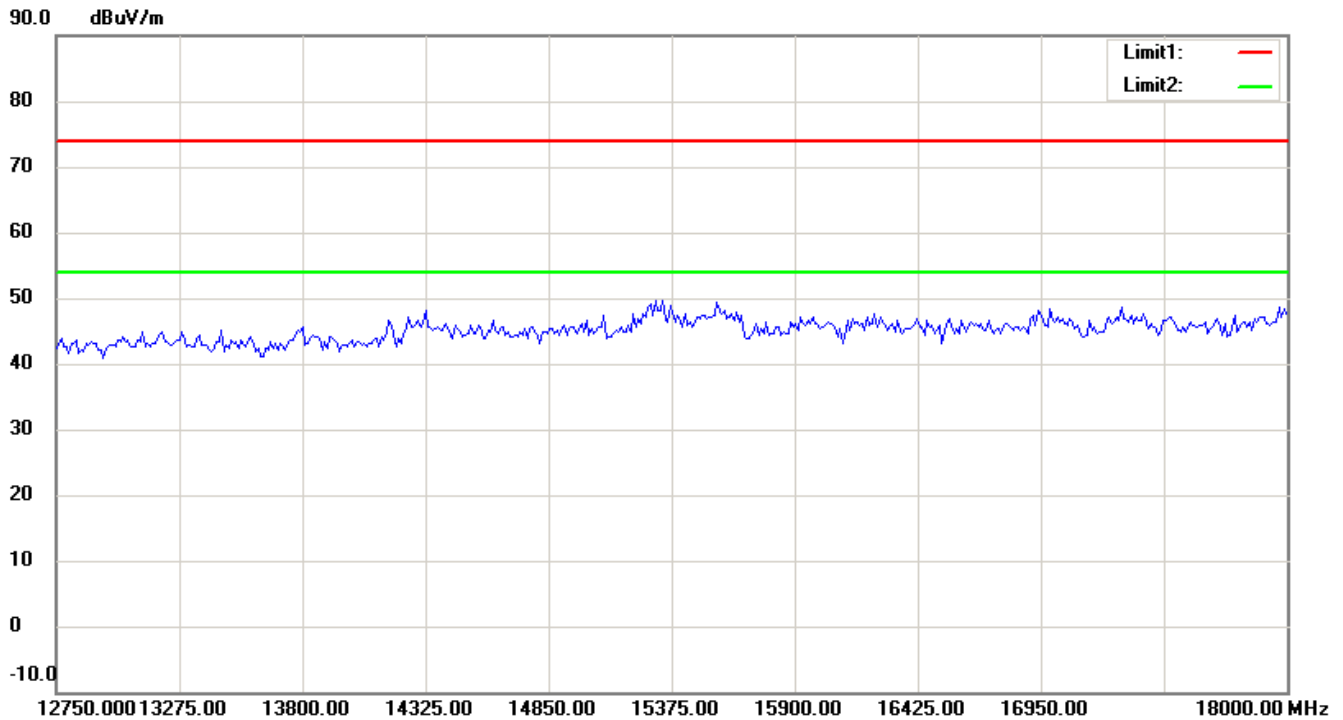
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FCC ID: ZTT-APA20



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

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Registration number: W6D21310-13579-C-1

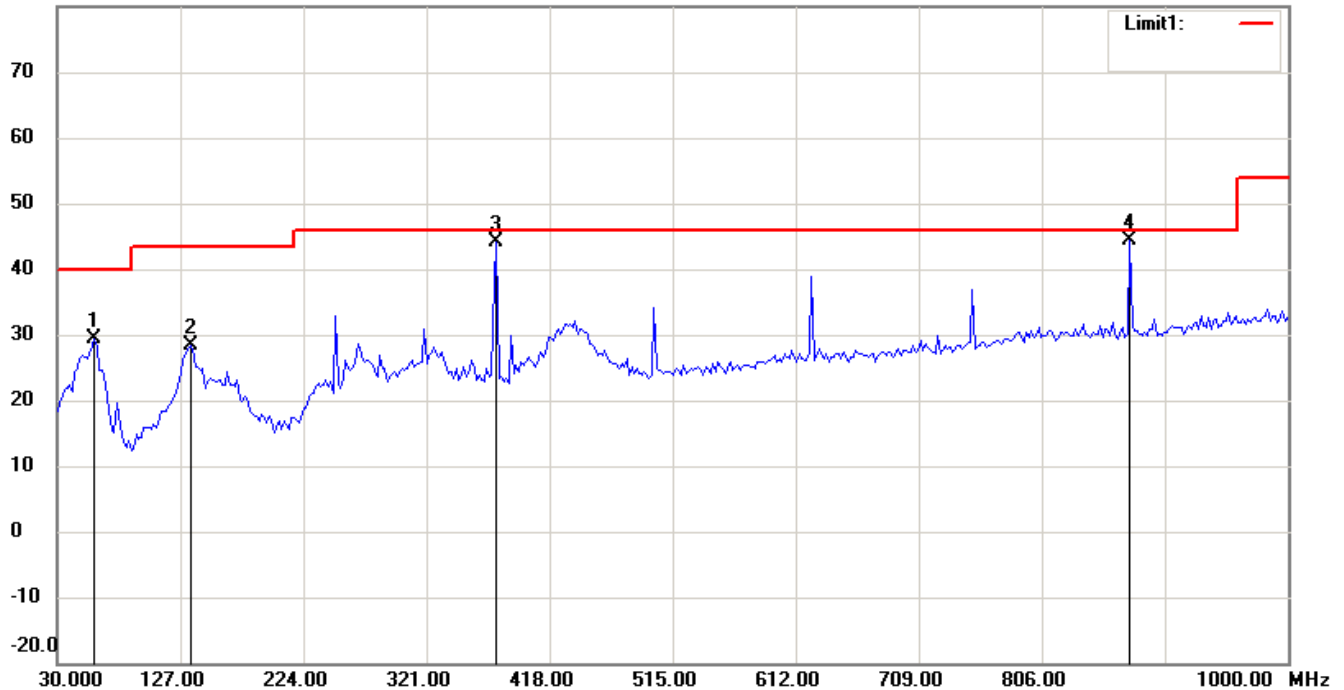
FCC ID: ZTT-APA20

Antenna A + Antenna B

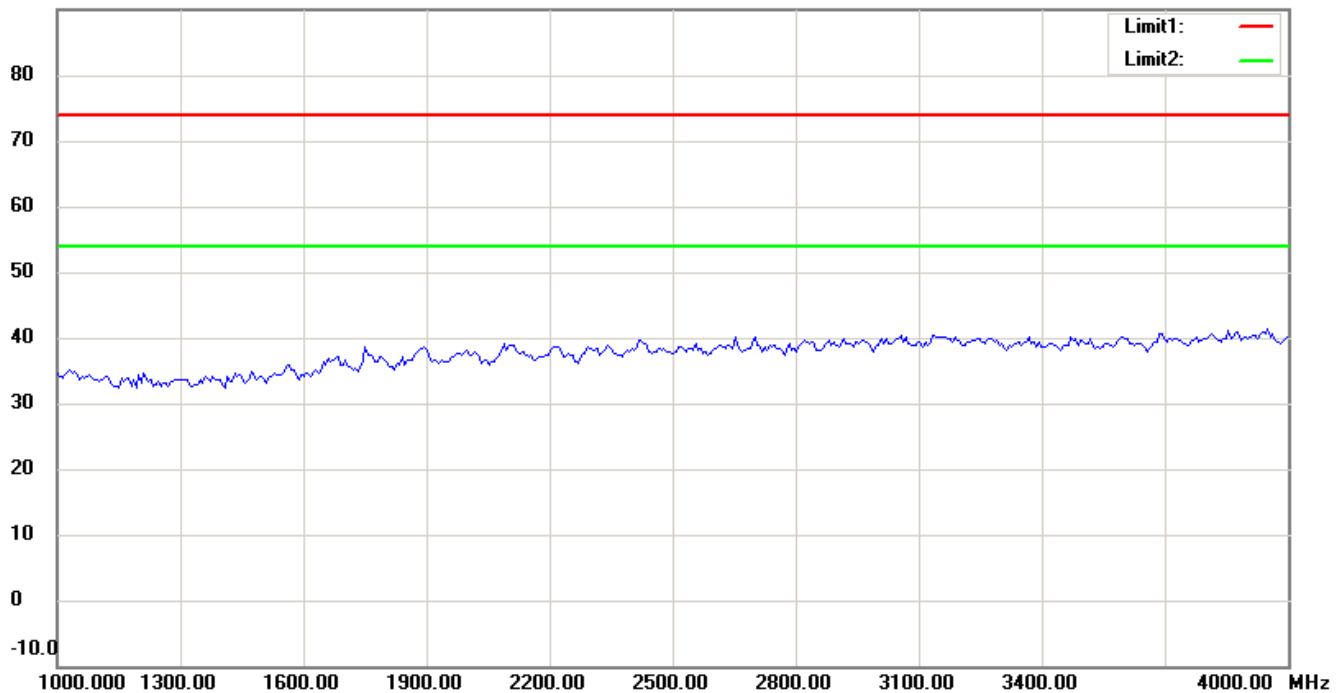
802.11n 20MHz 5745MHz

Antenna Polarization H

80.0 dBuV/m



90.0 dBuV/m



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

Note:

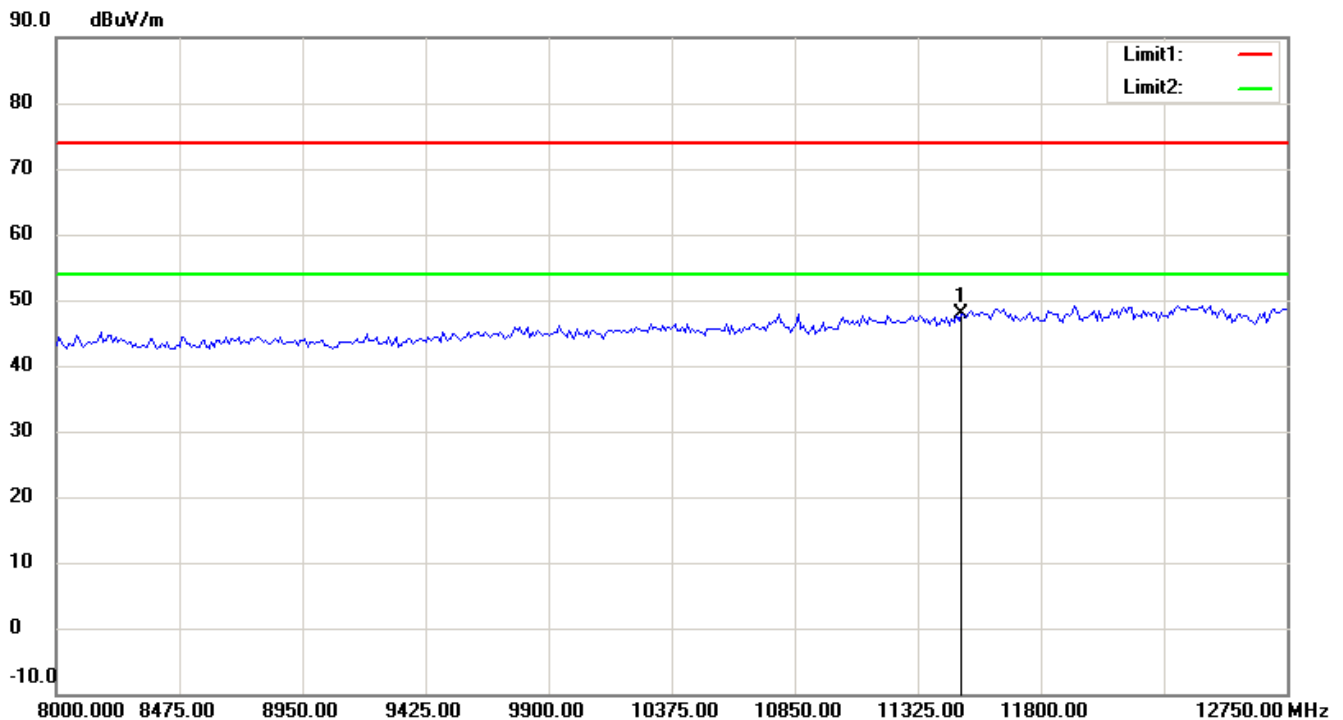
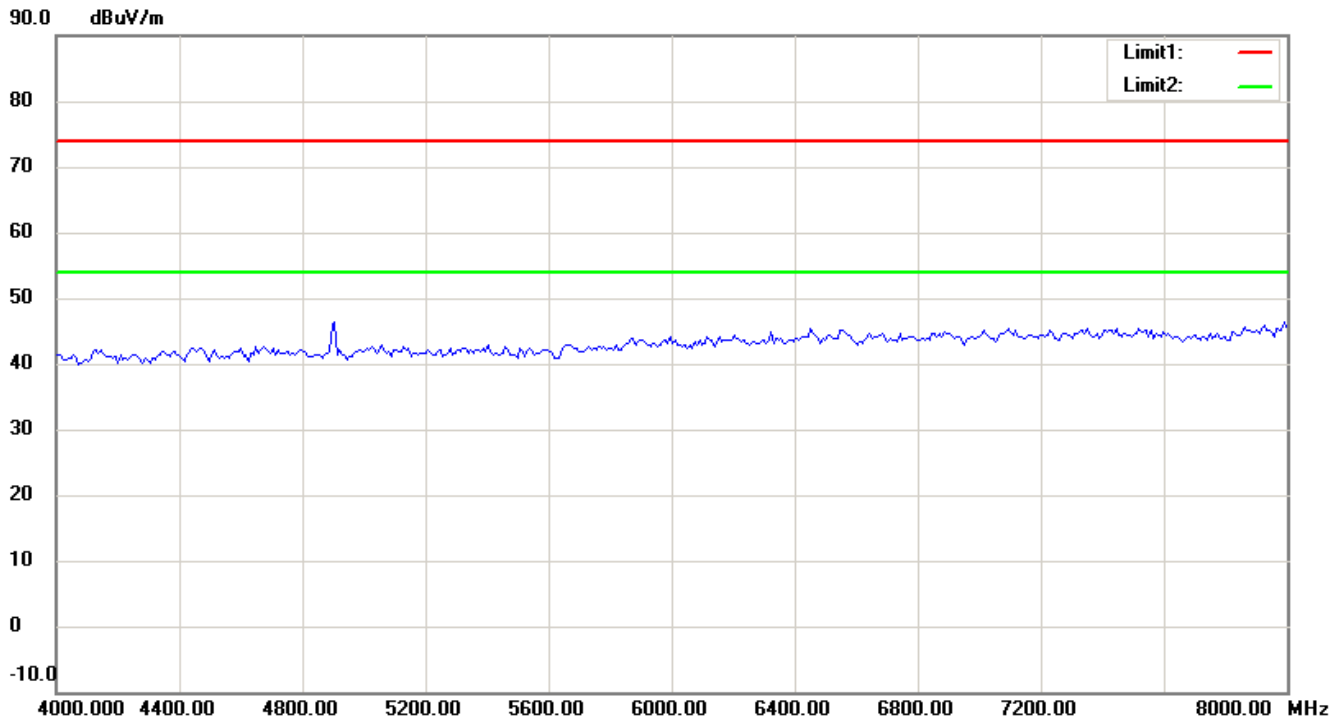
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

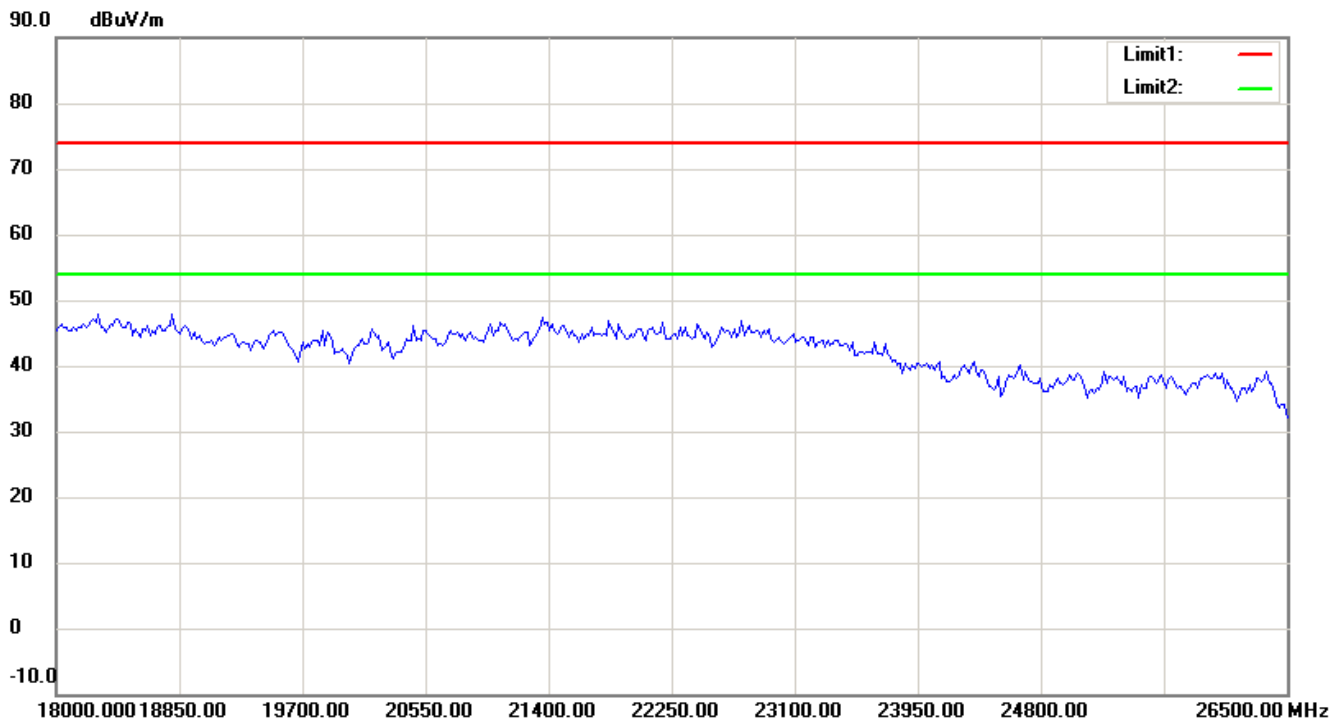
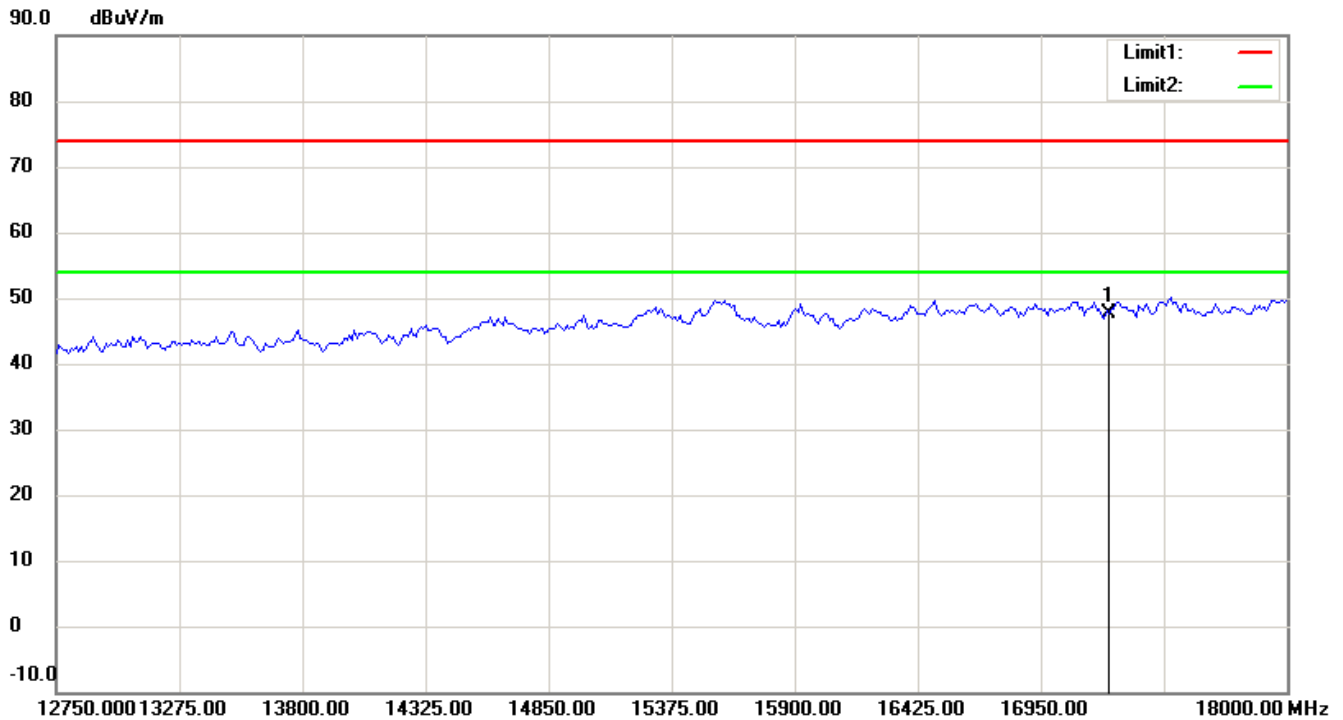
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

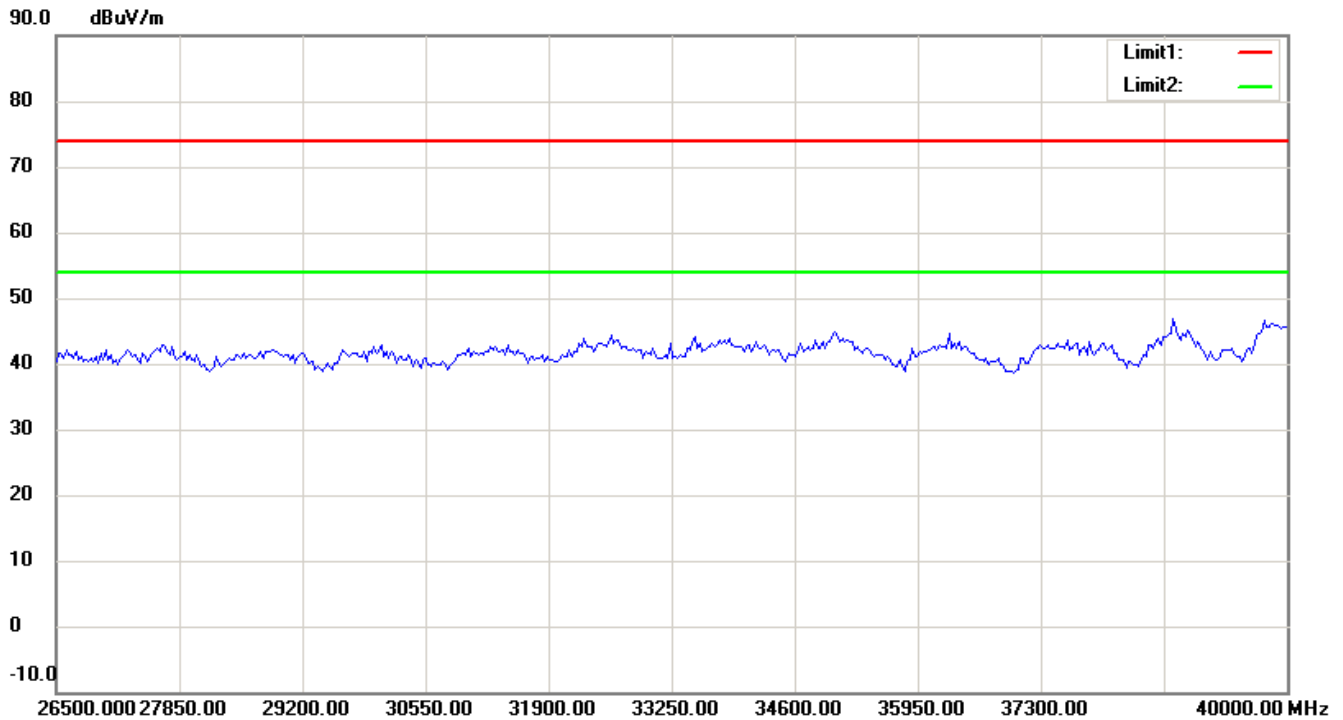
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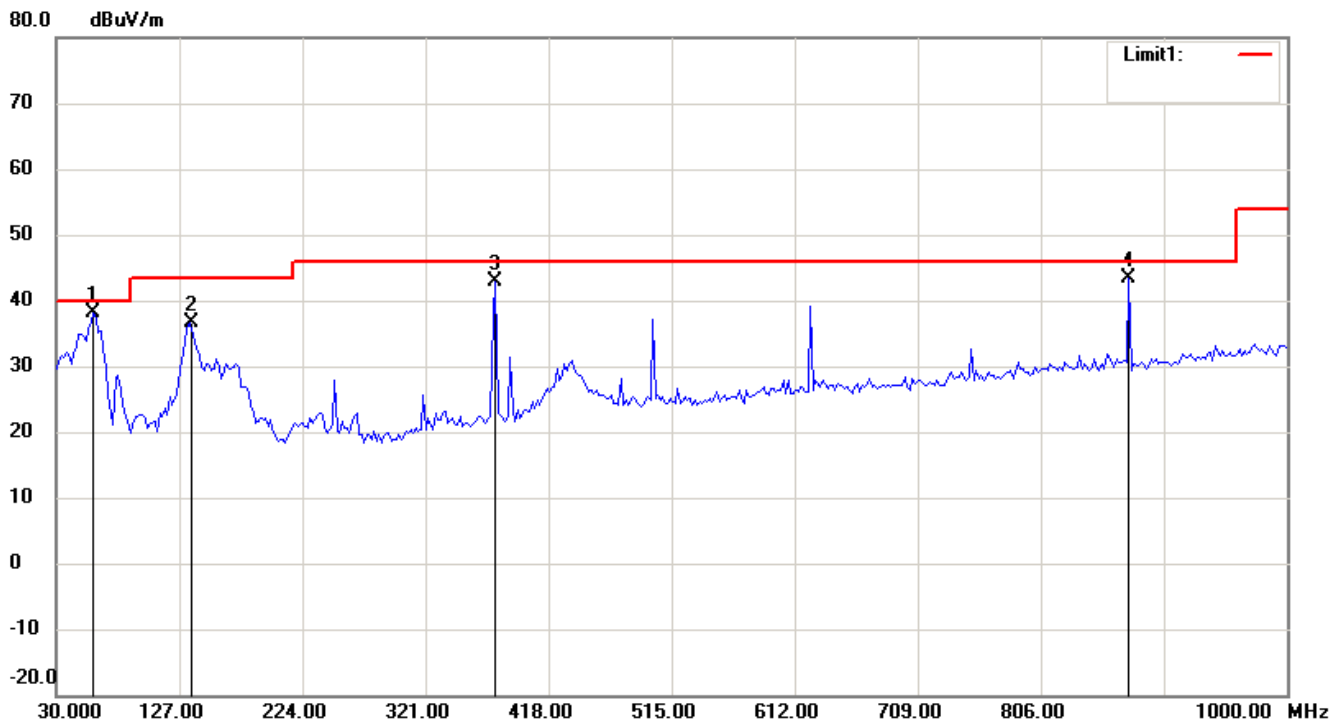
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

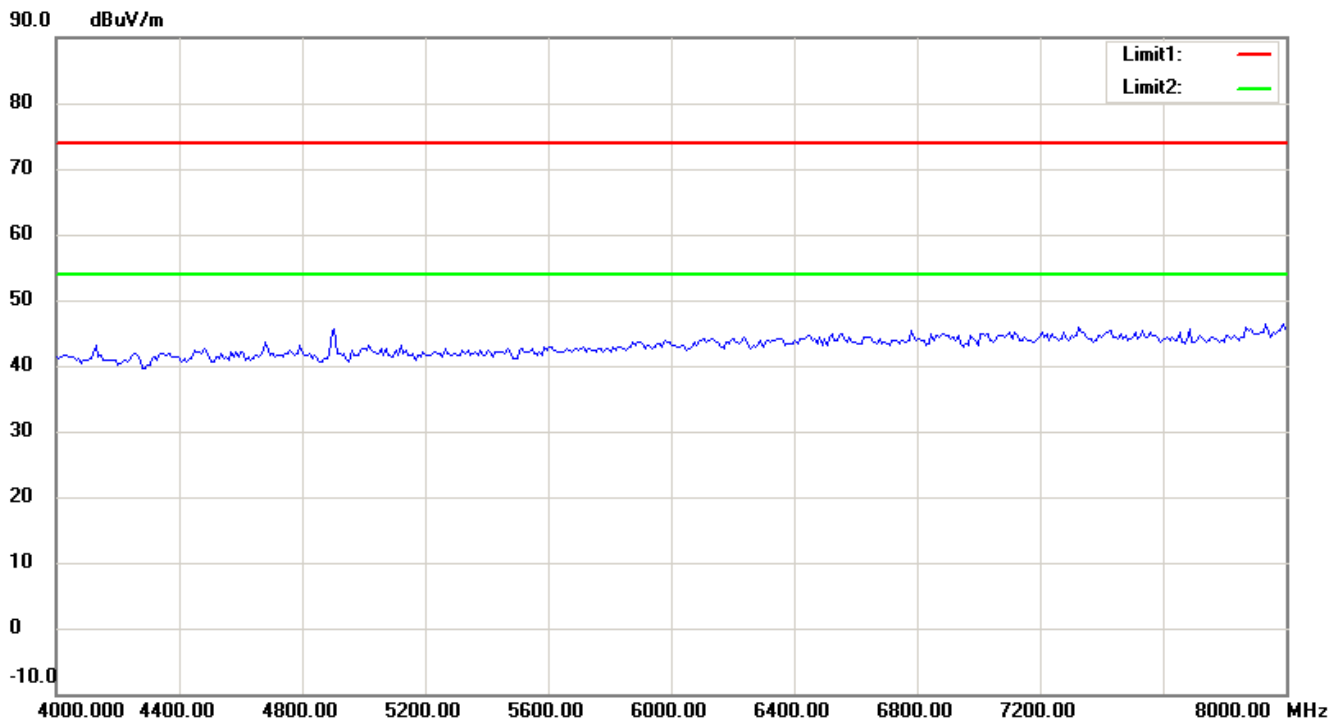
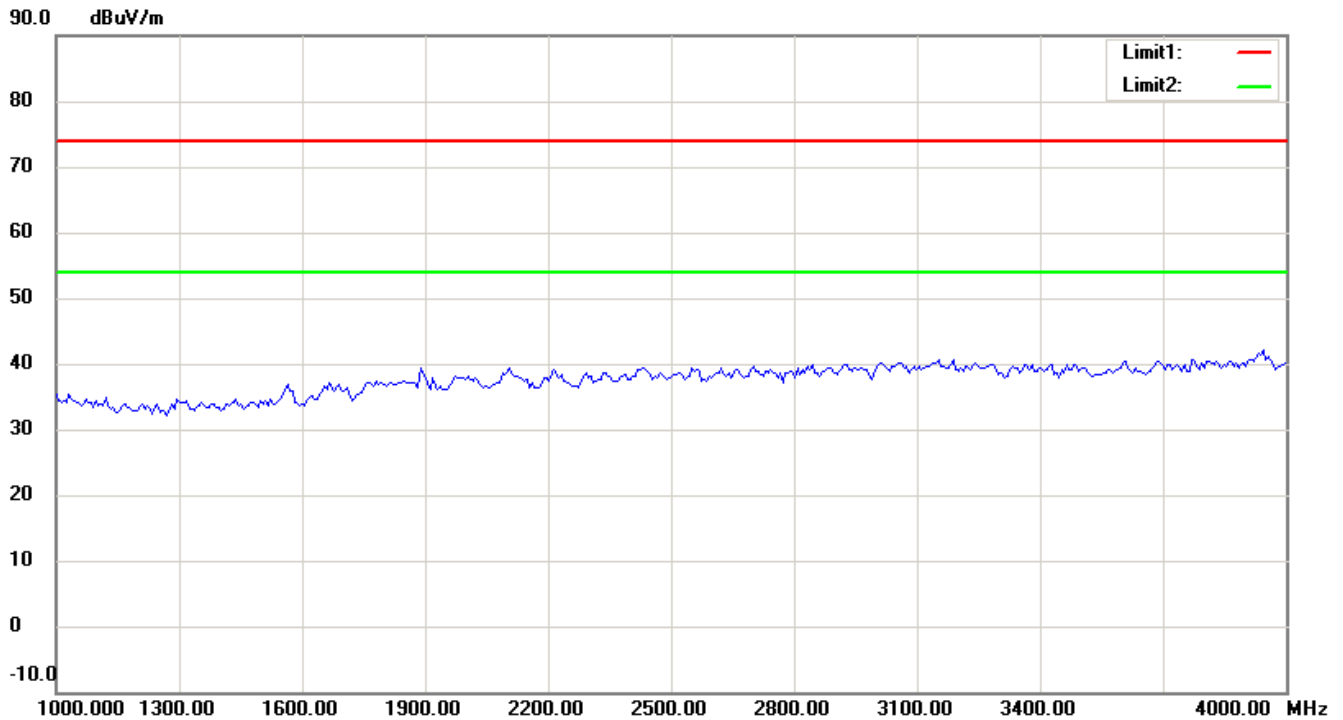
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Up Line: Peak Limit Line Down Line: Ave Limit Line

Note:

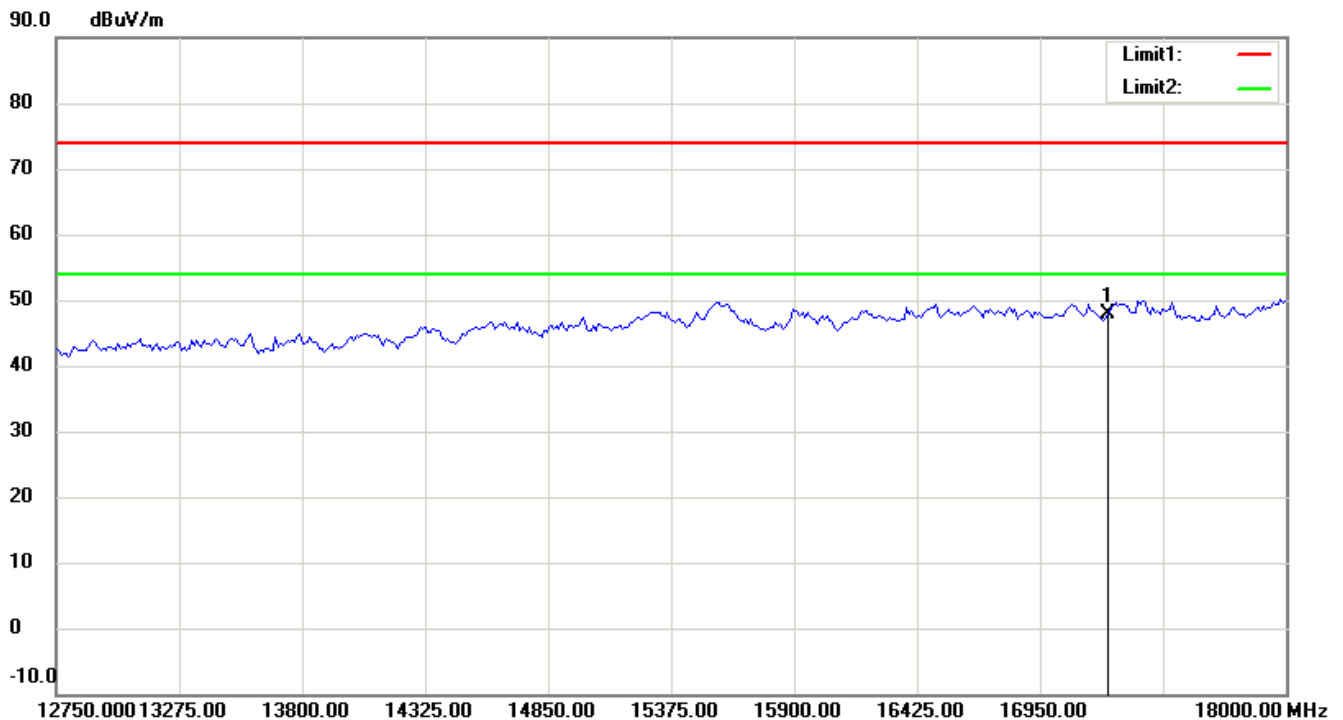
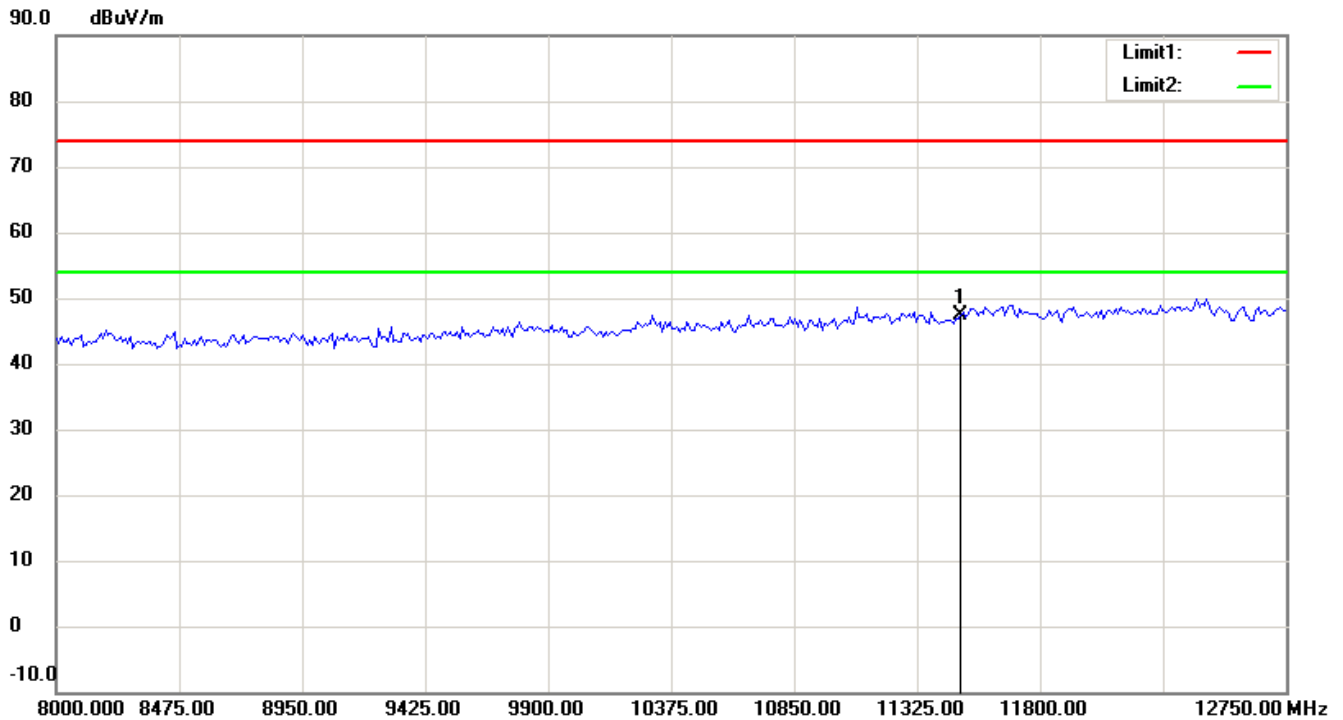
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FCC ID: ZTT-APA20



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

Note:

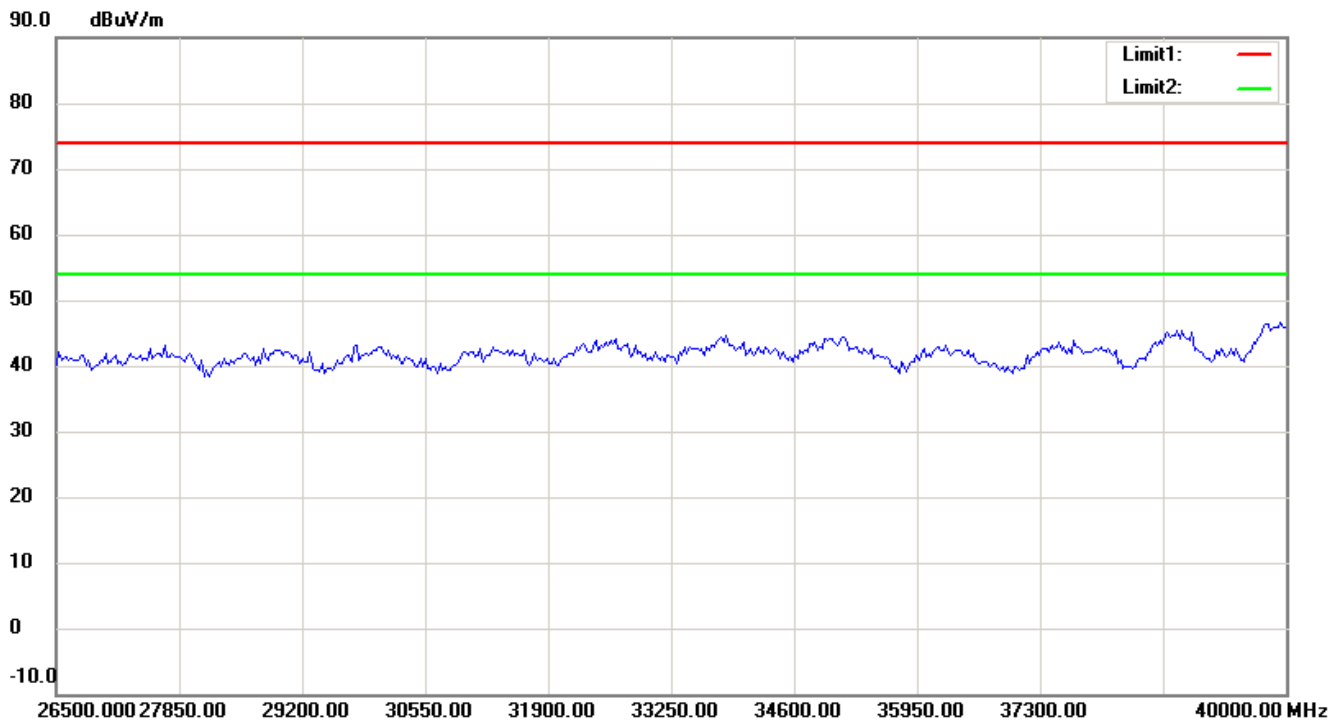
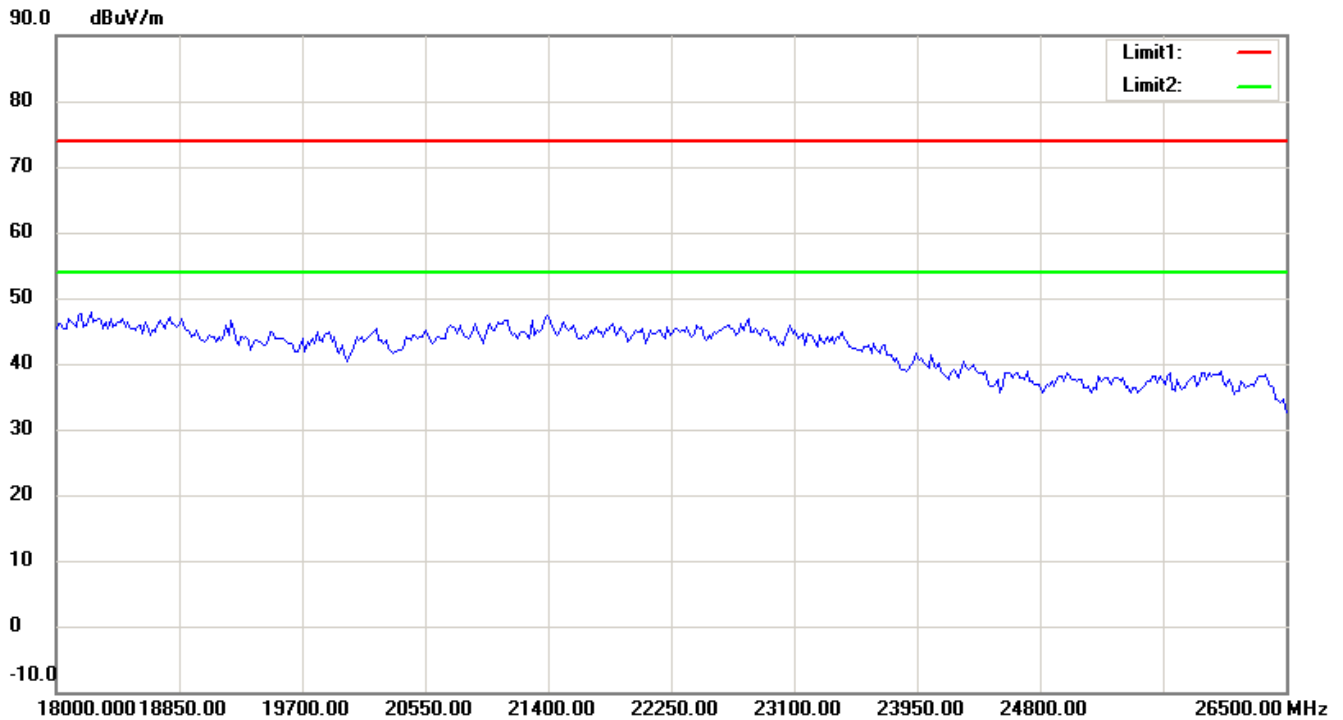
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Up Line: Peak Limit Line Down Line: Ave Limit Line

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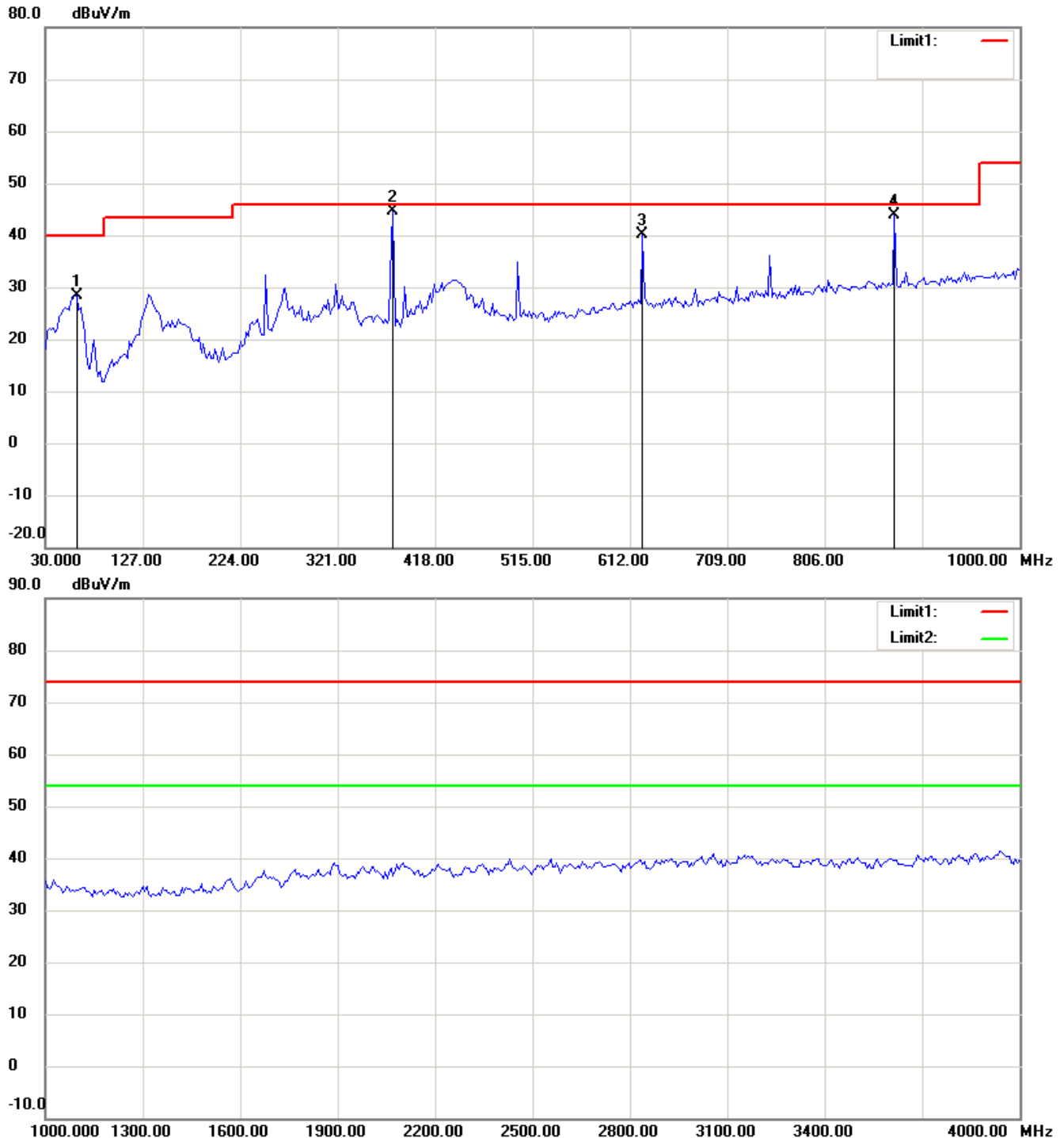
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 20MHz 5785MHz

Antenna Polarization H



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

Note:

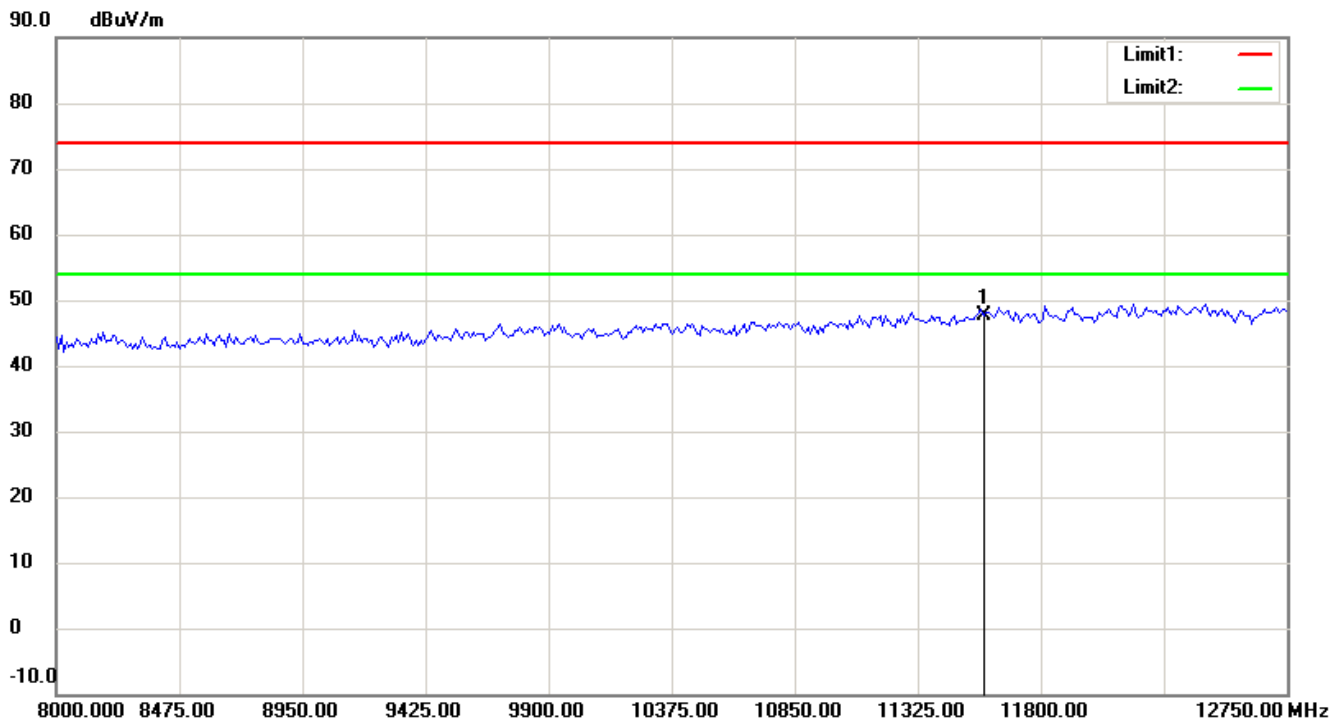
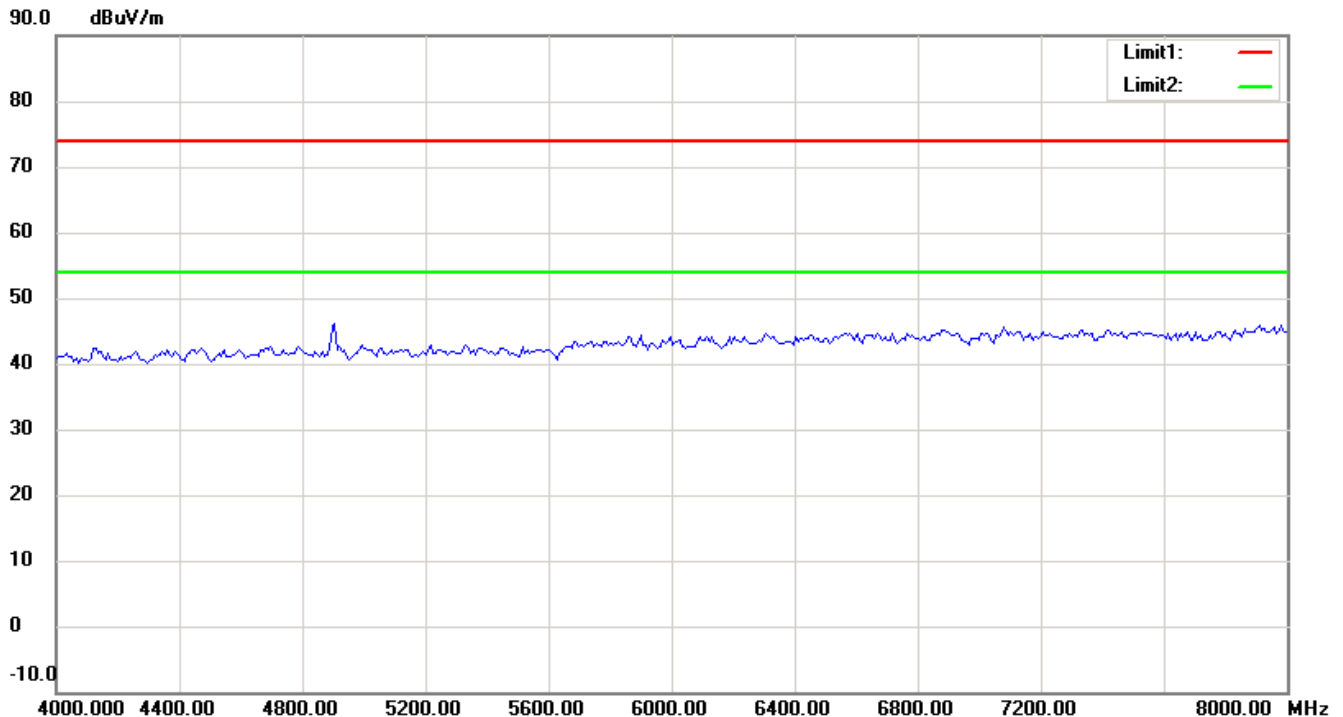
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

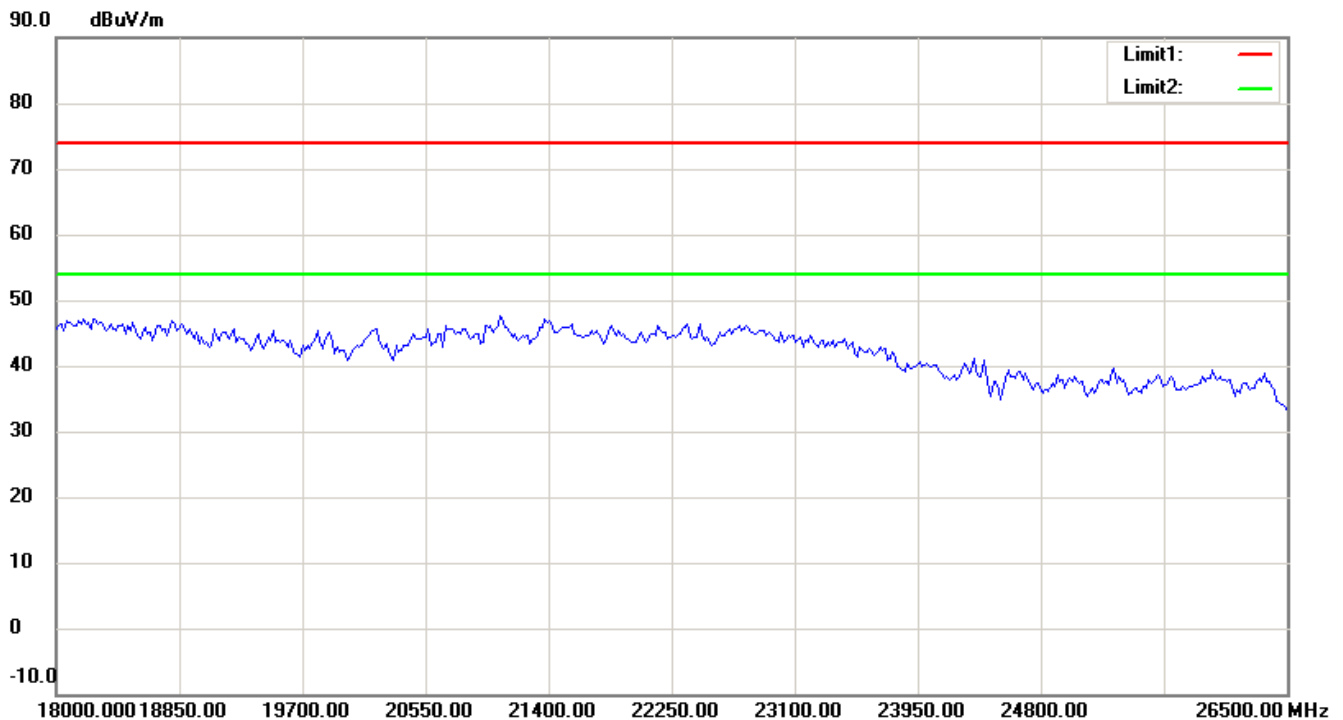
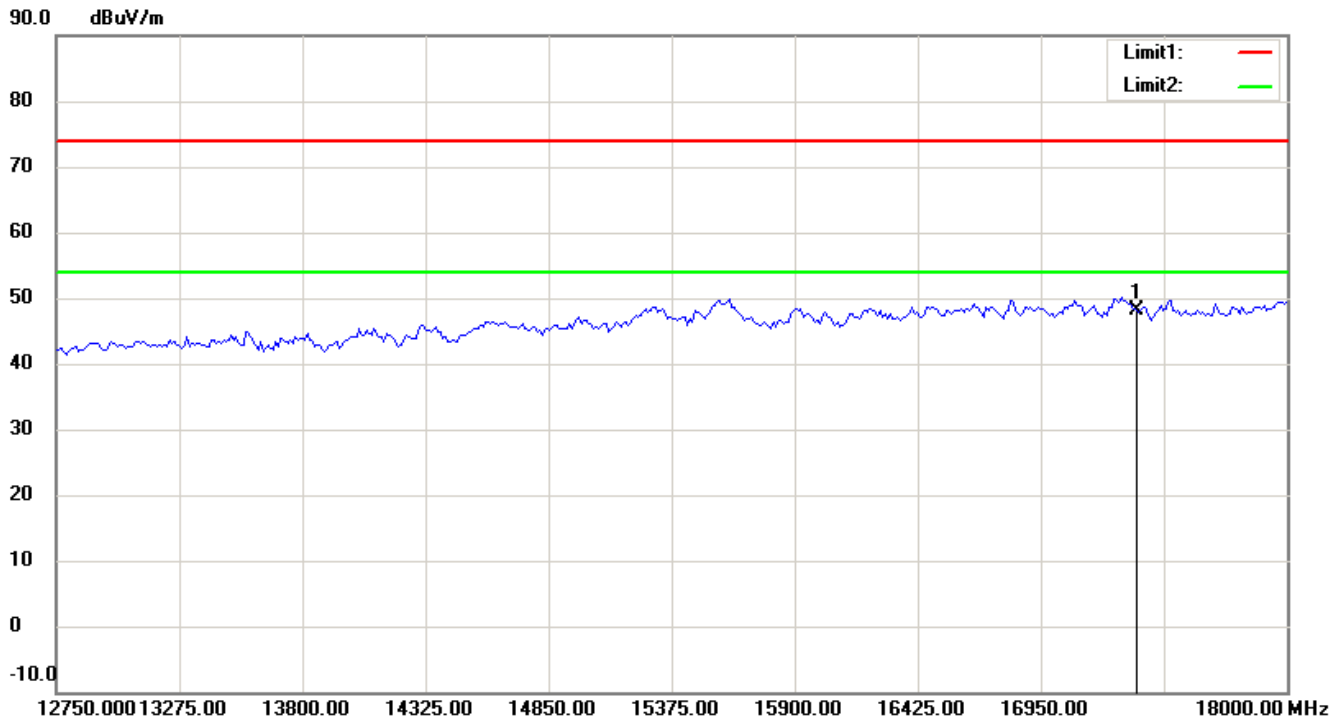
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

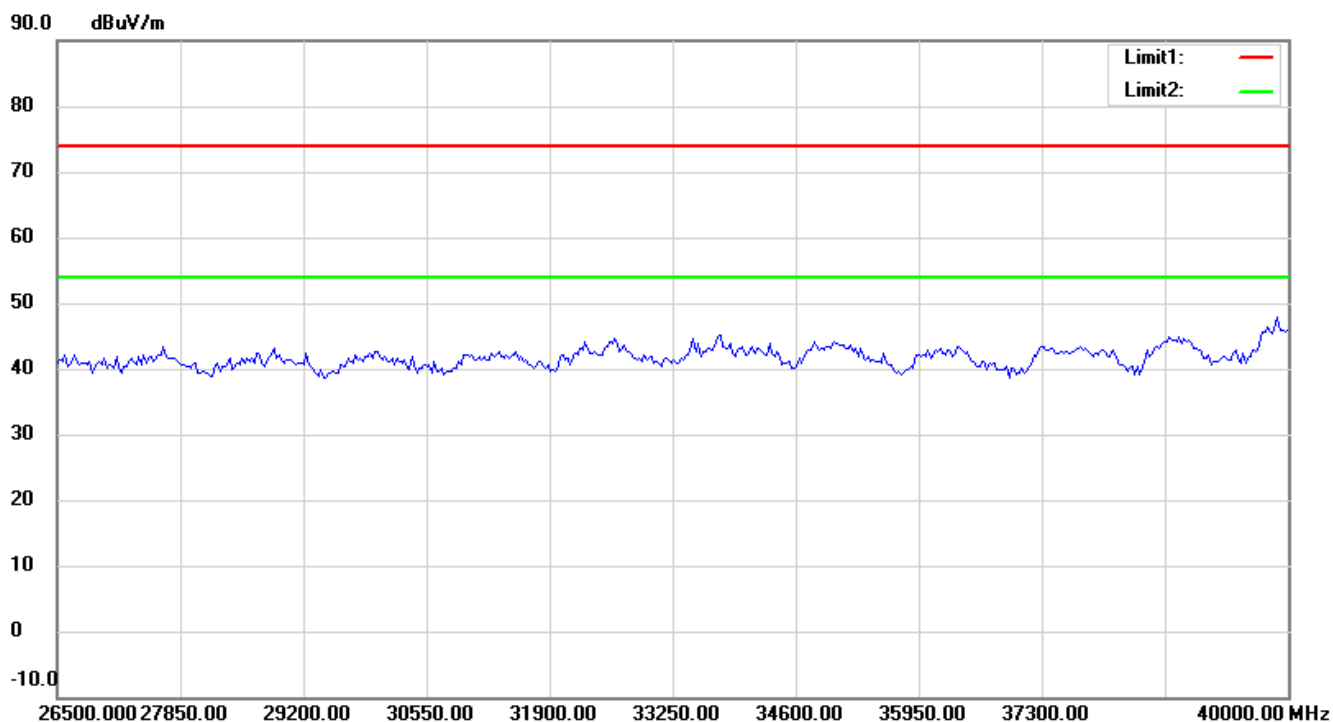
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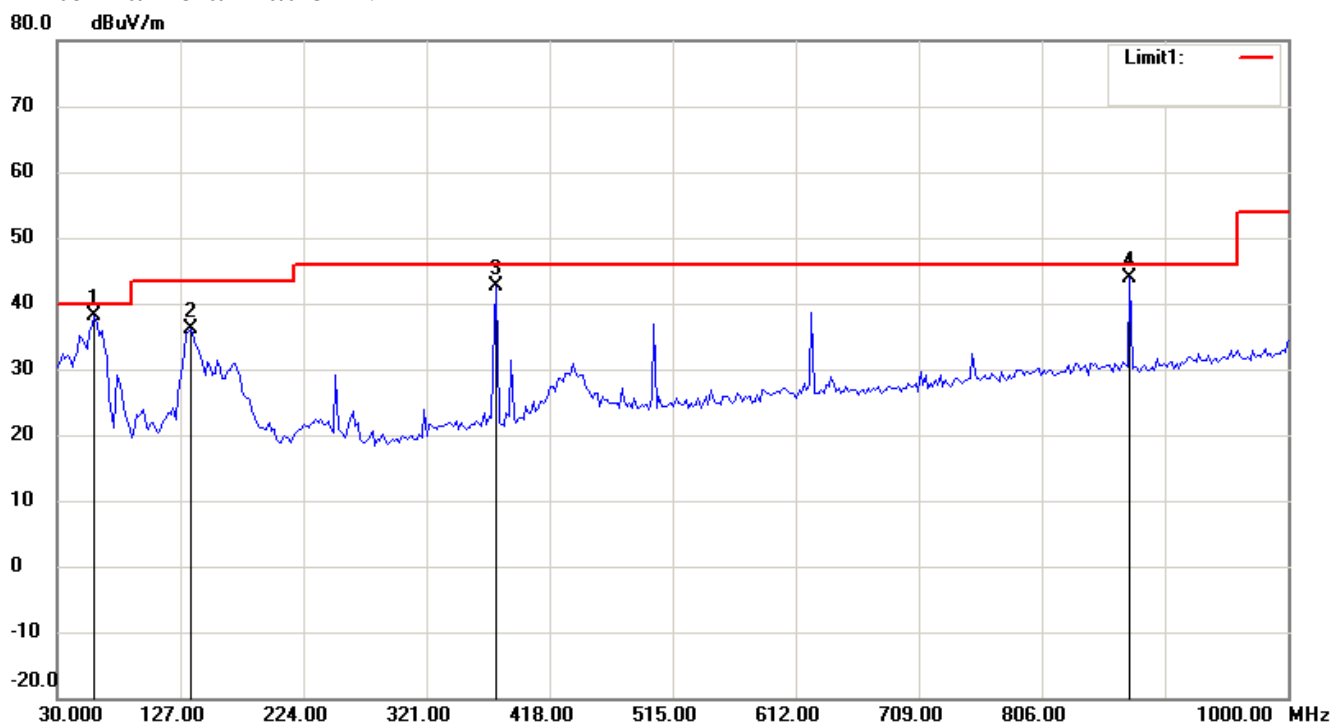
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

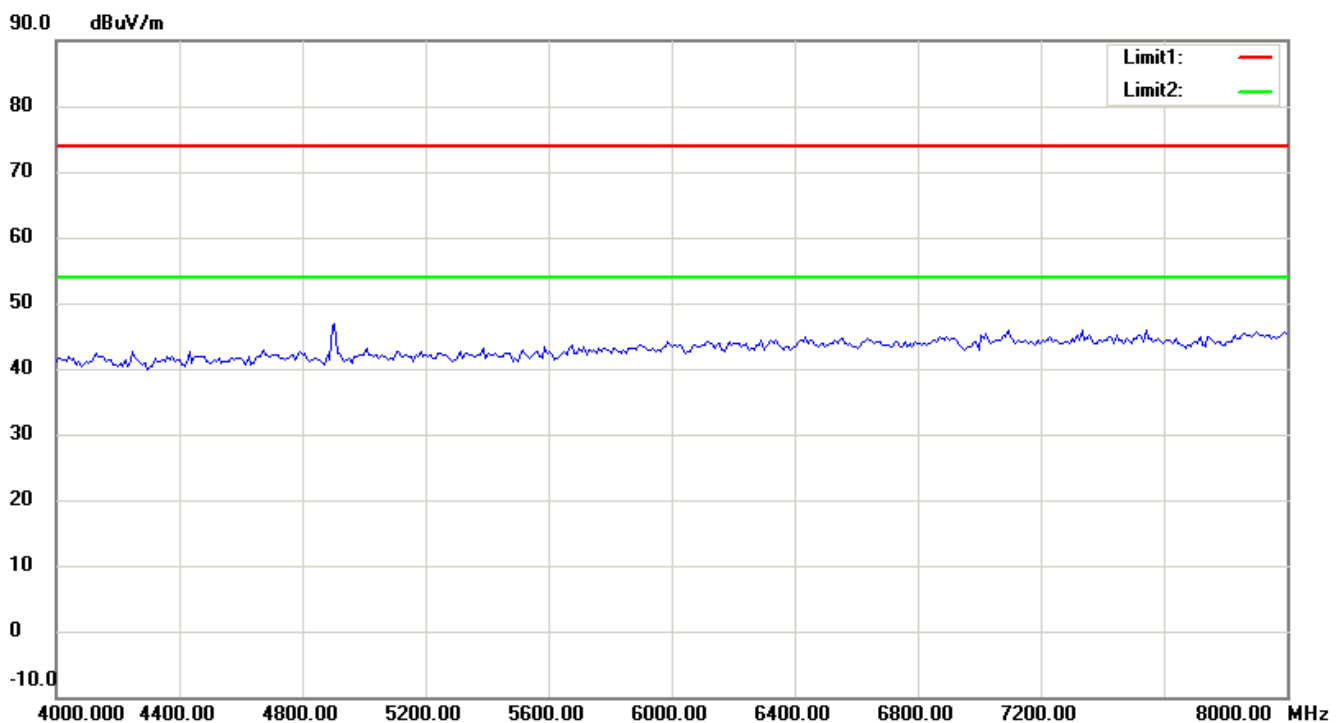
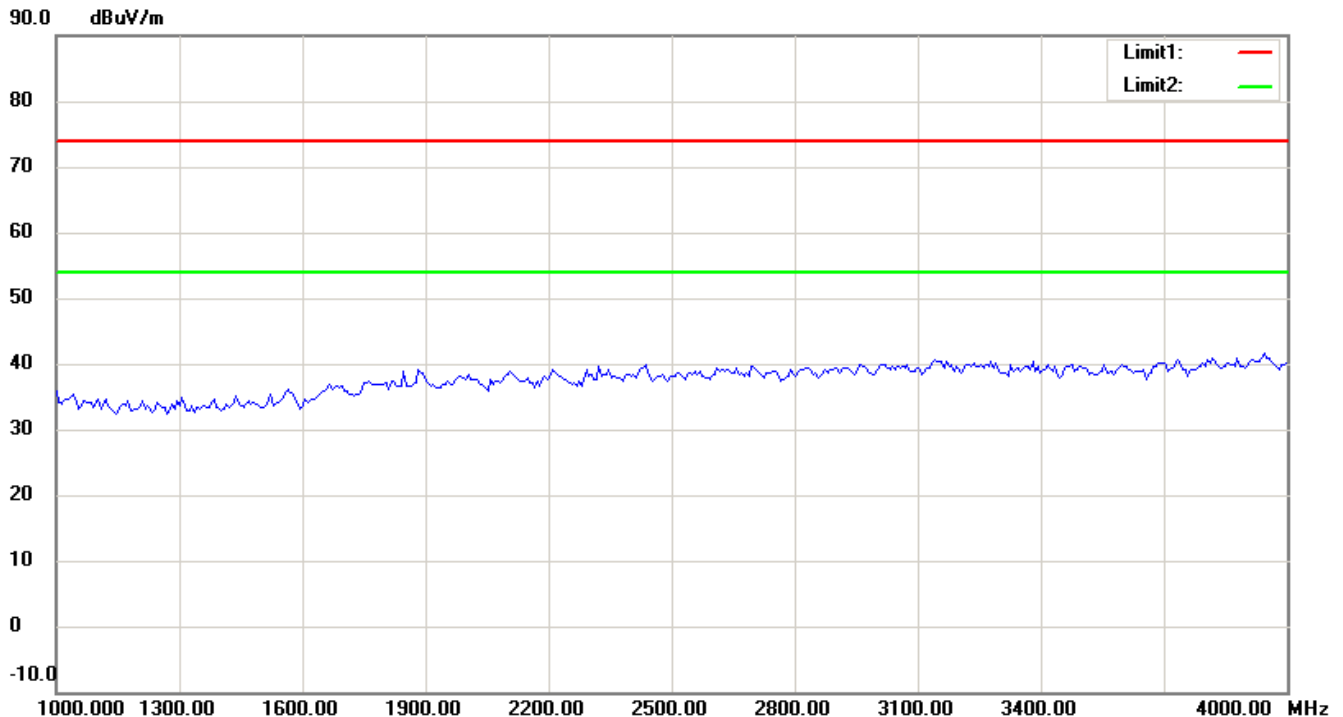
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

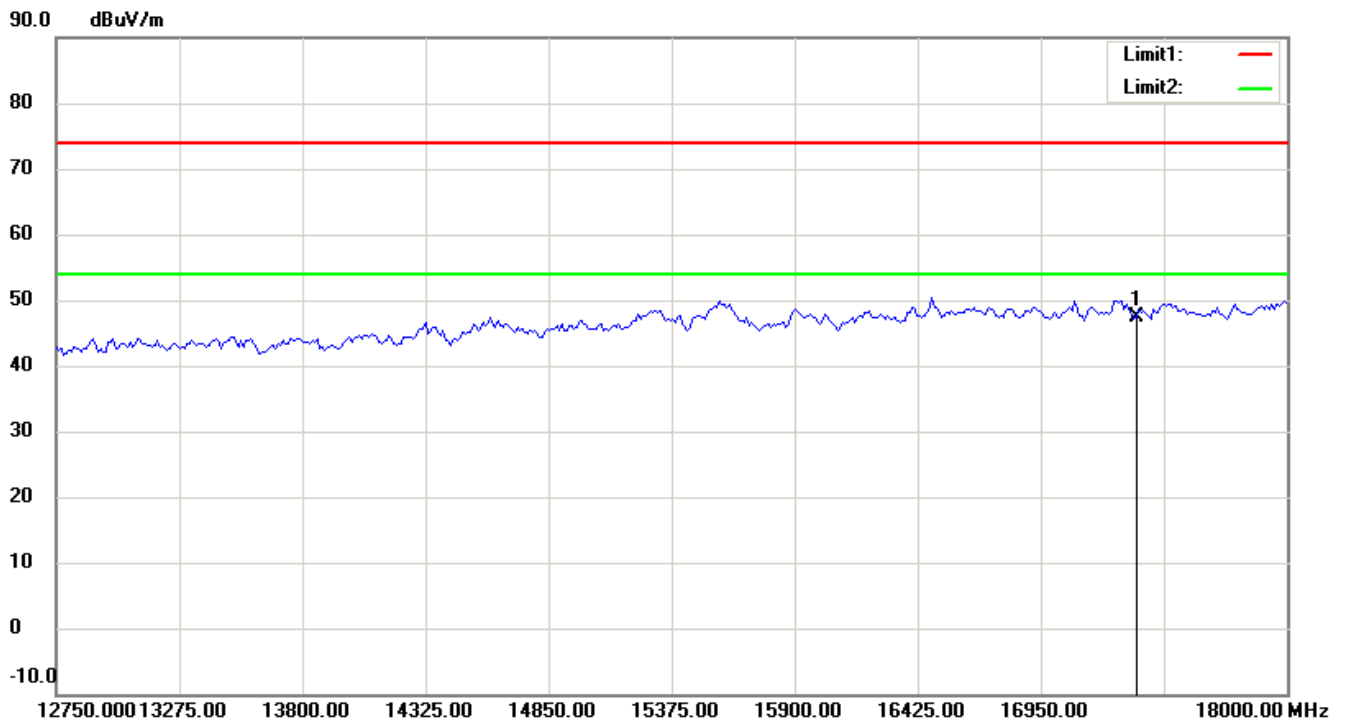
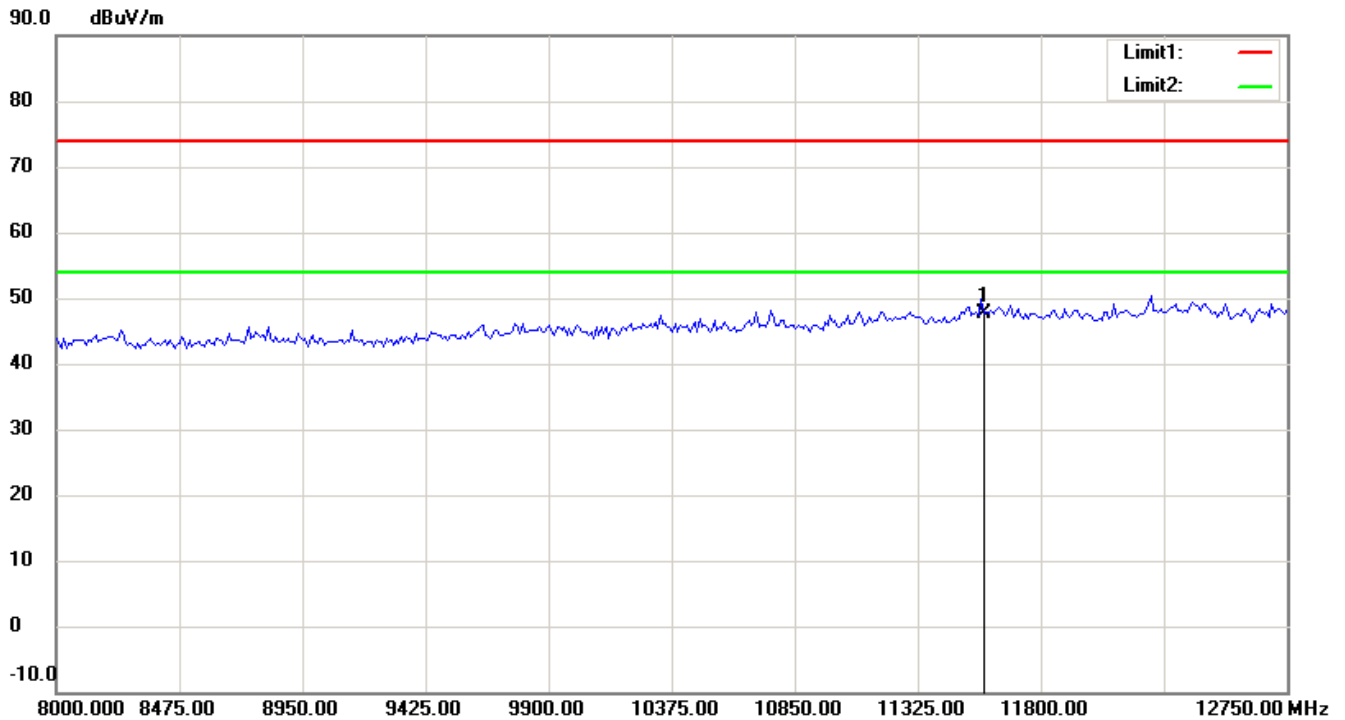
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

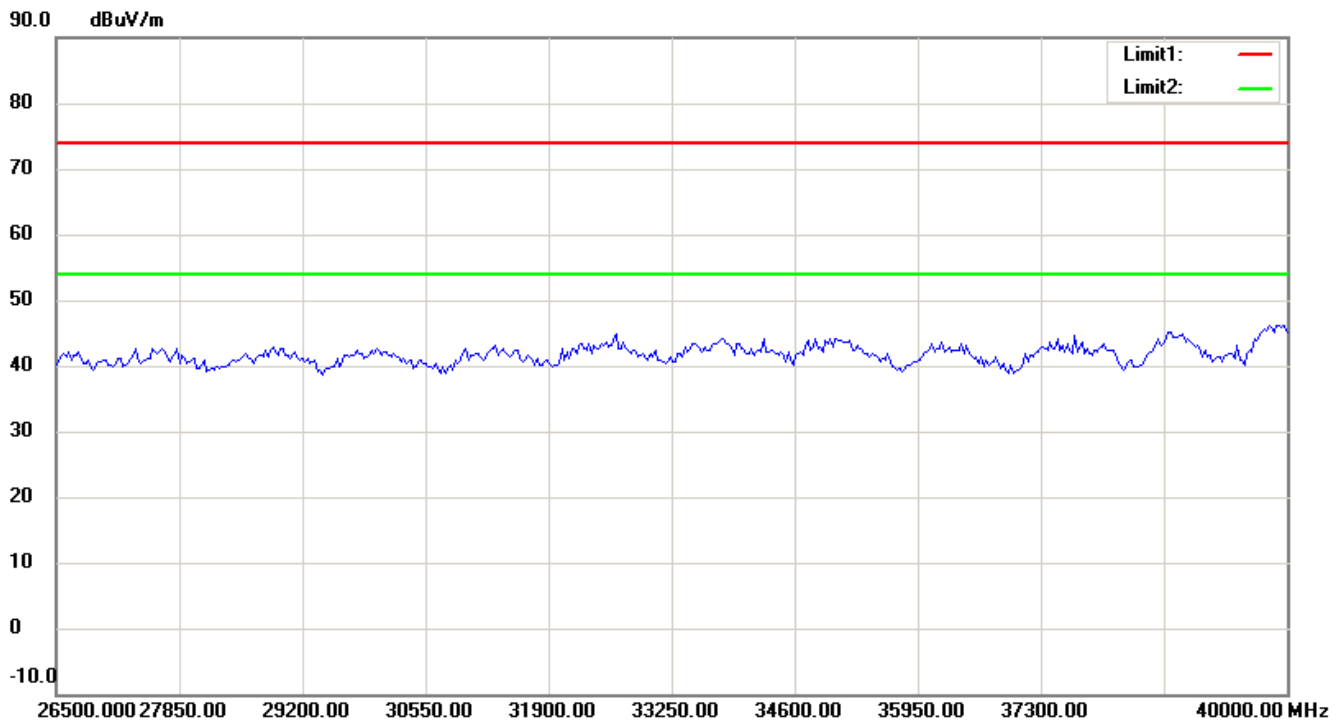
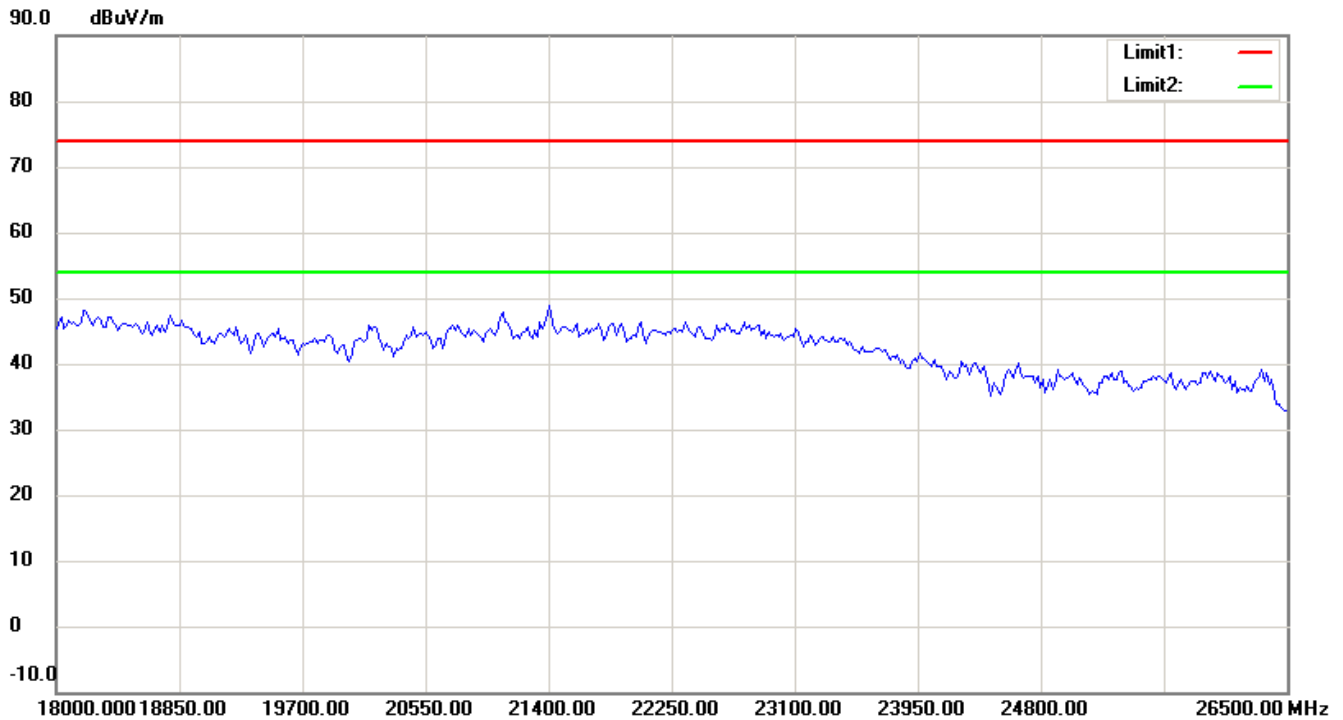
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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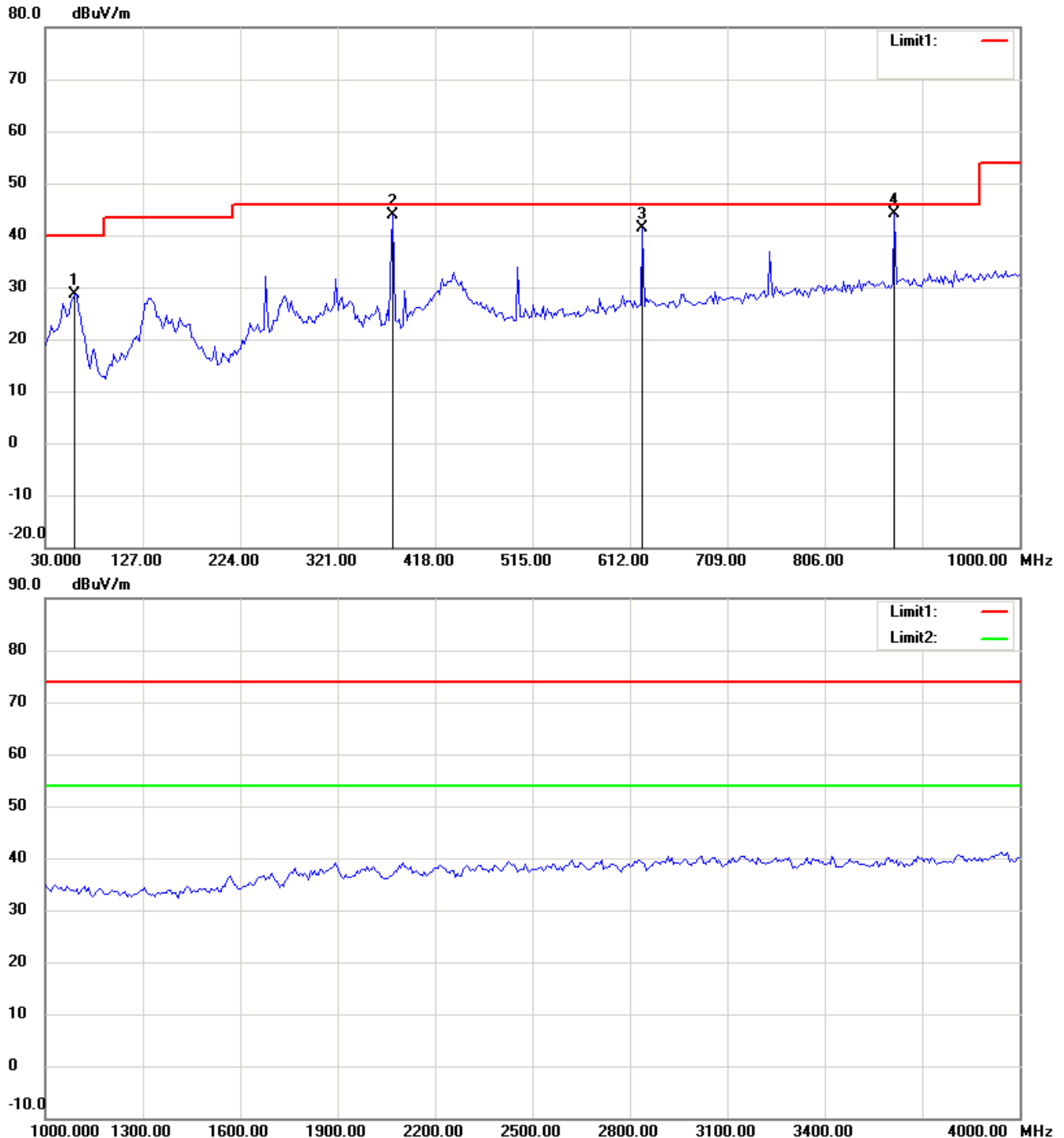
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 20MHz 5825MHz

Antenna Polarization H



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

Note:

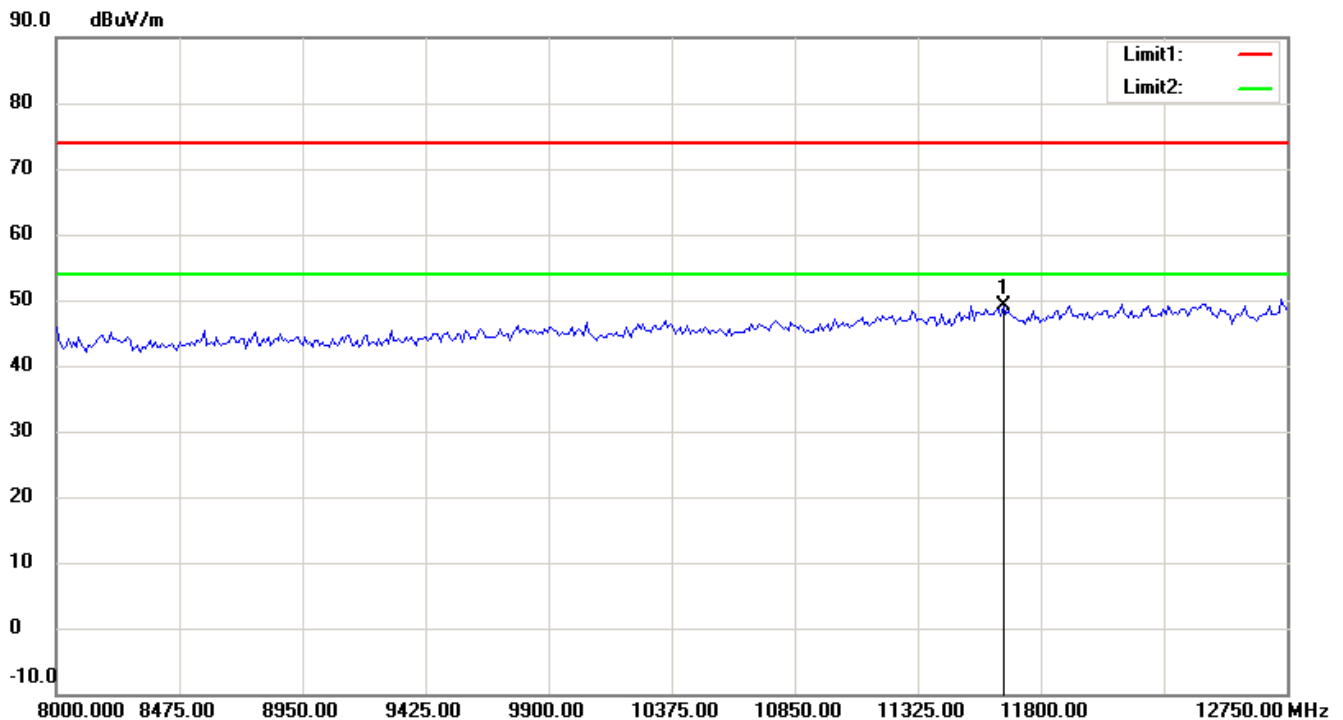
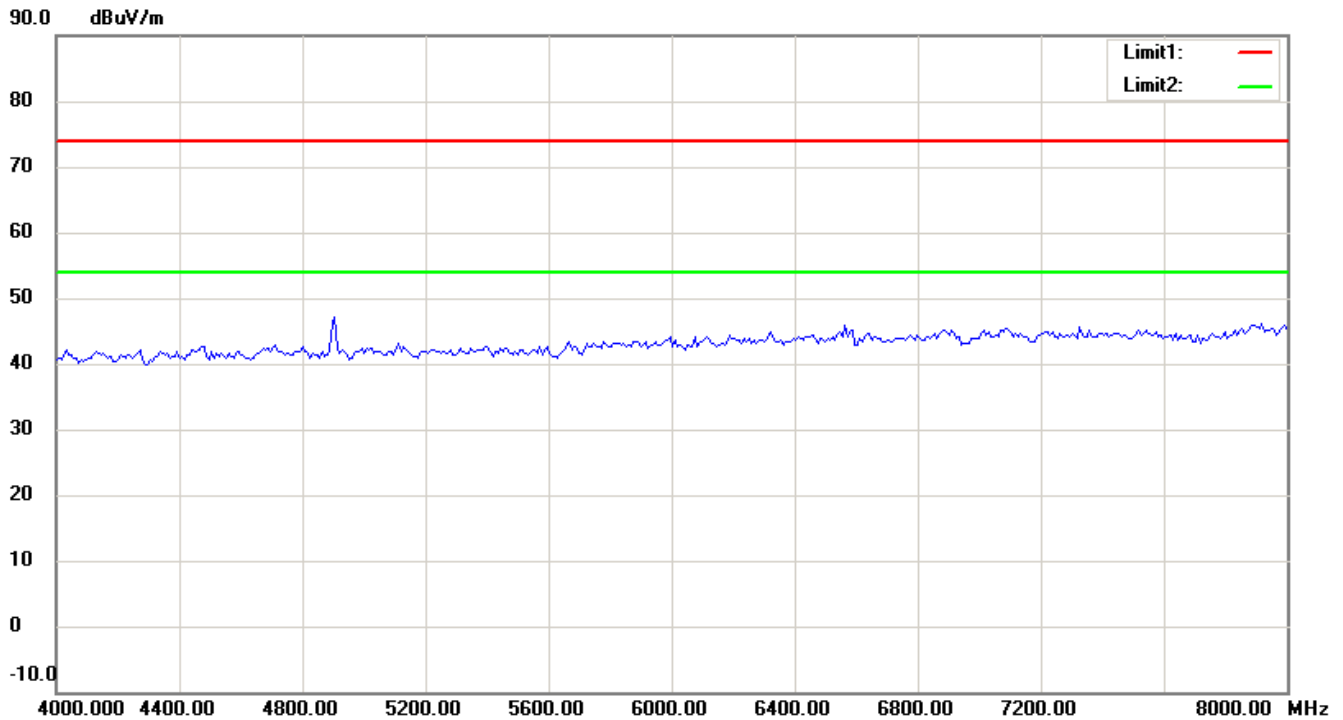
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

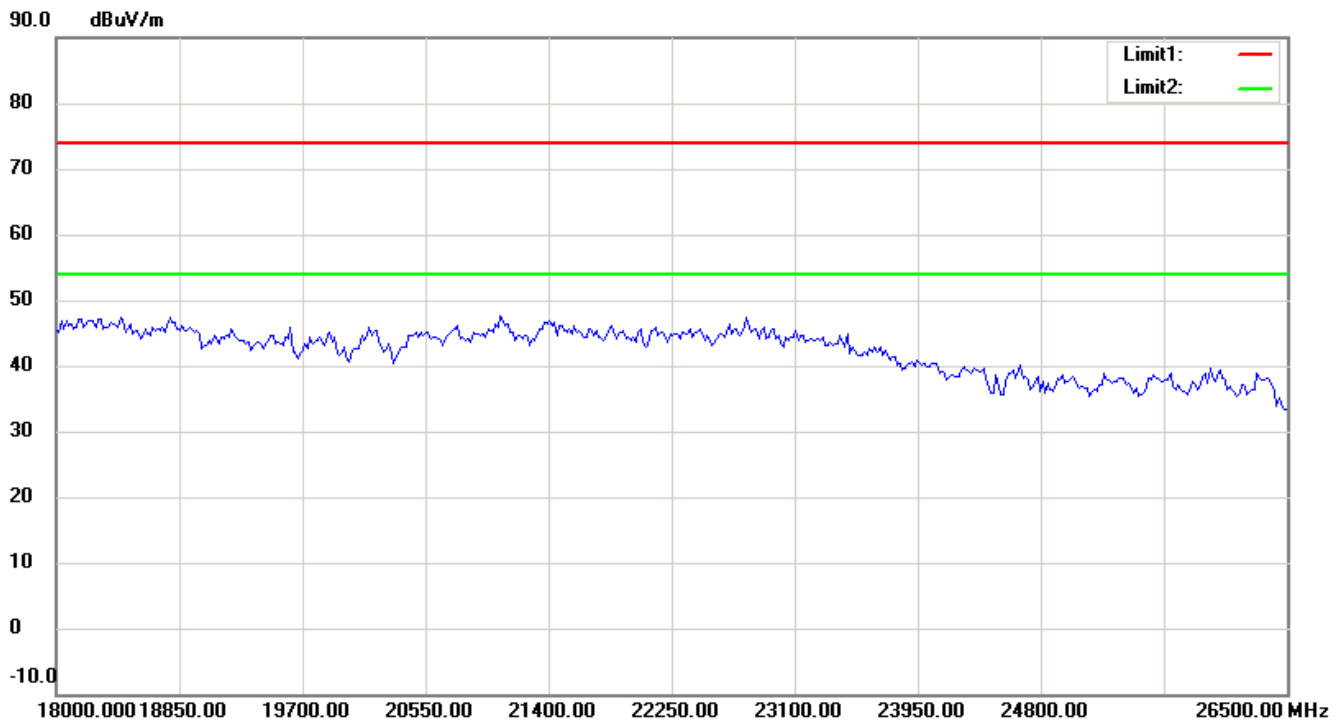
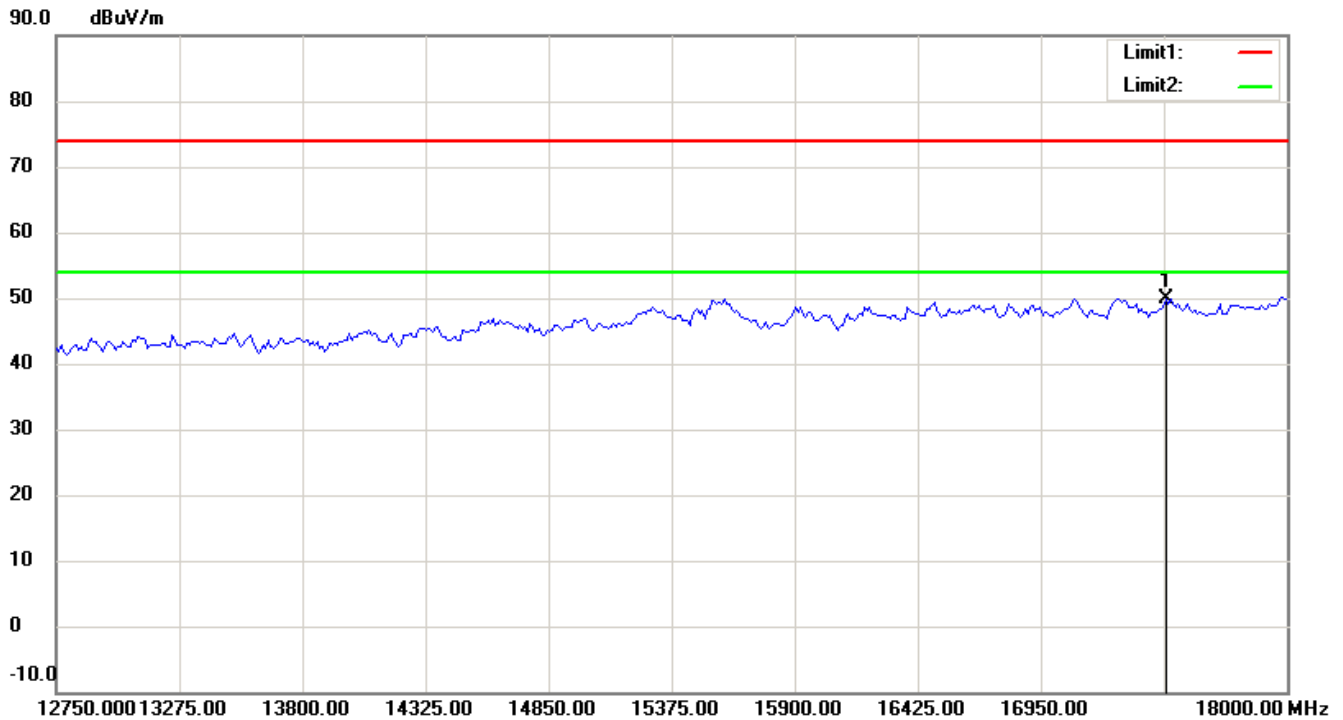
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

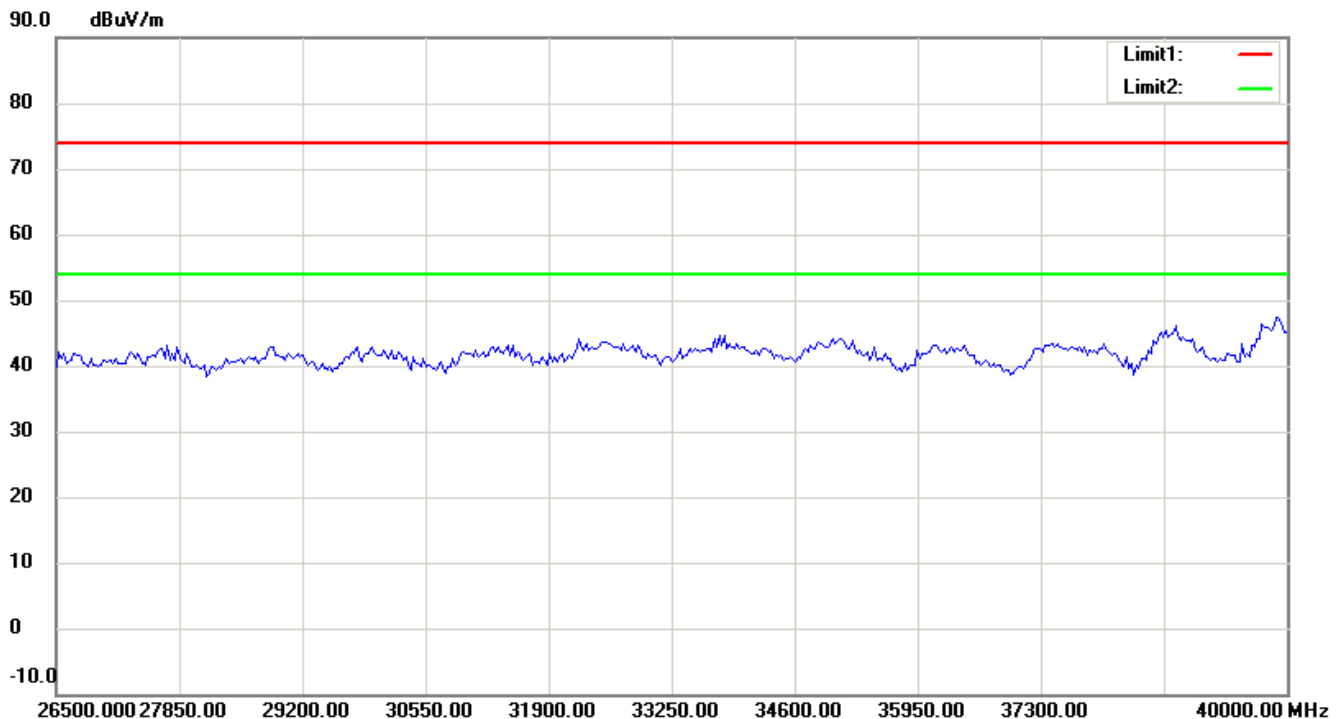
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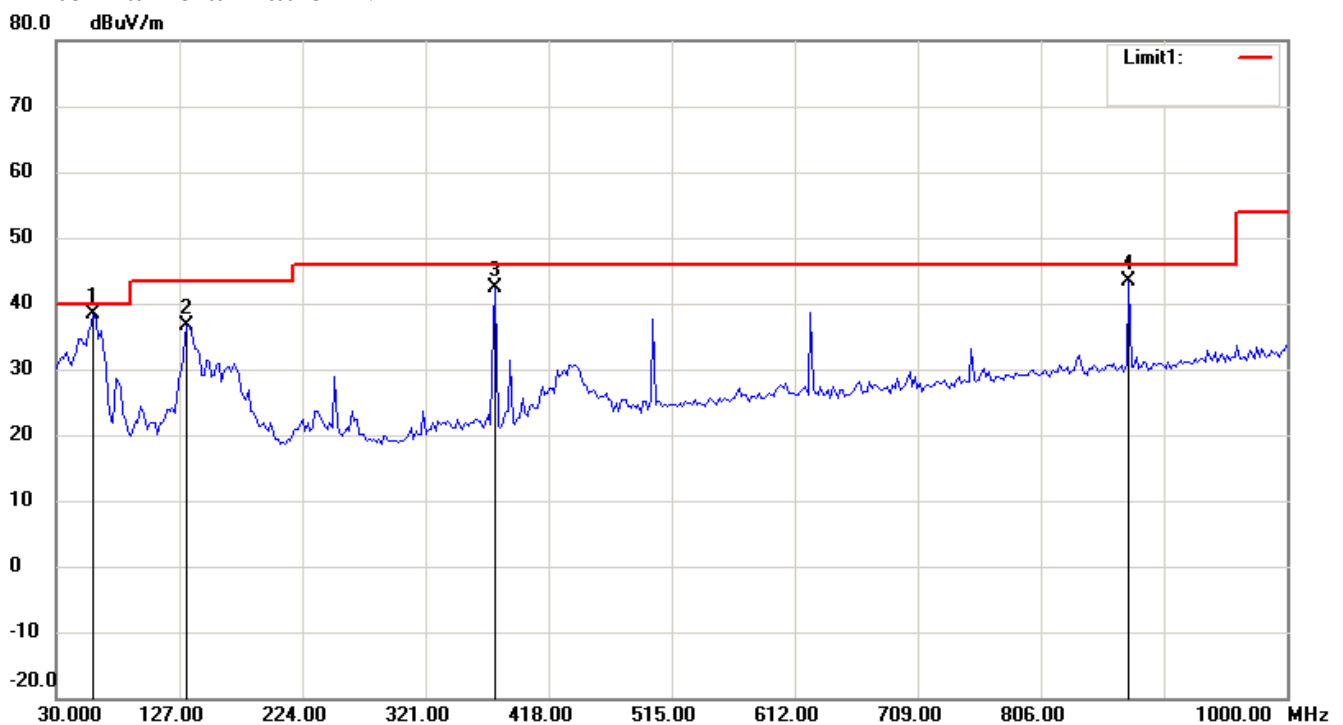
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

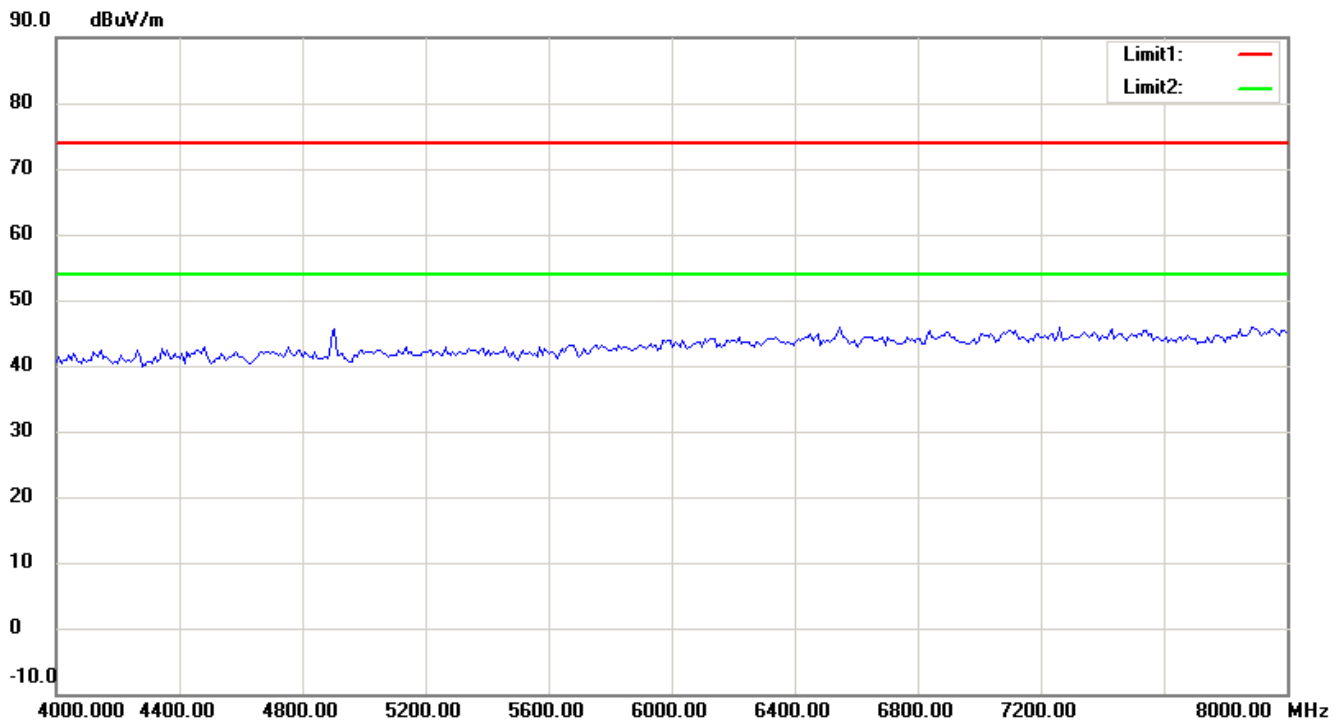
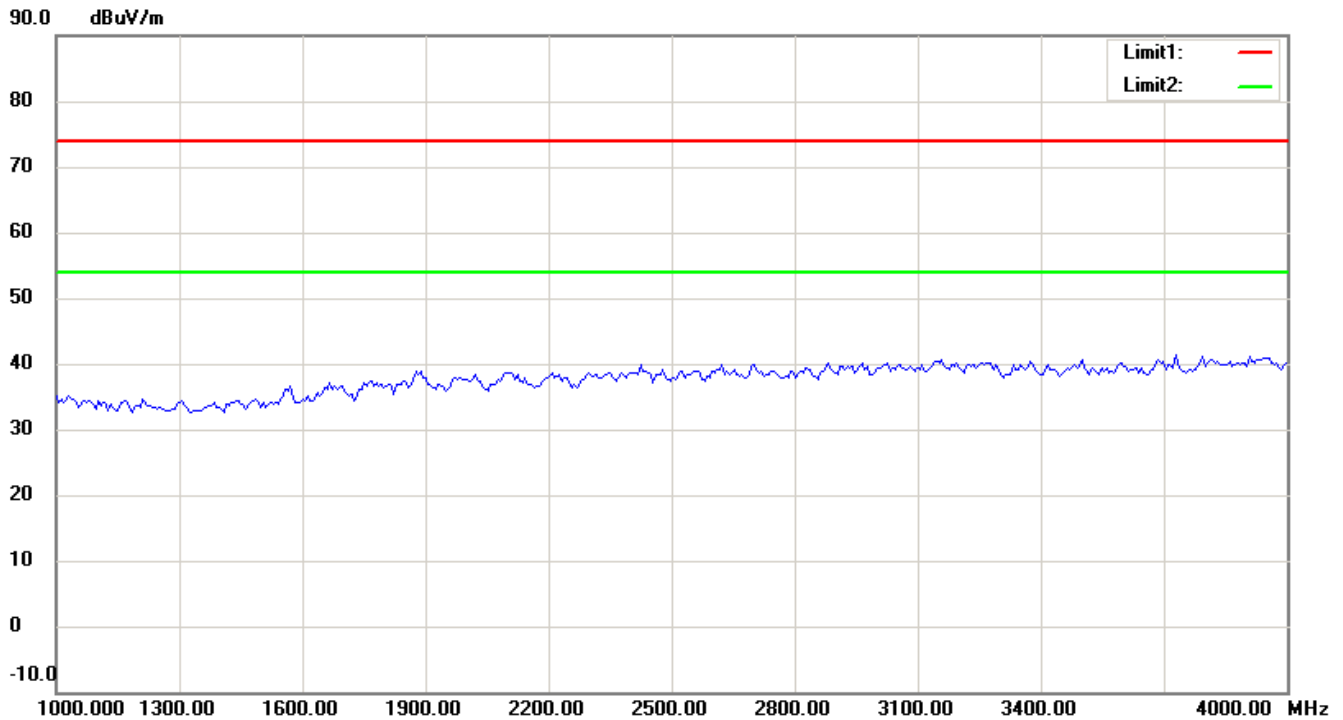
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

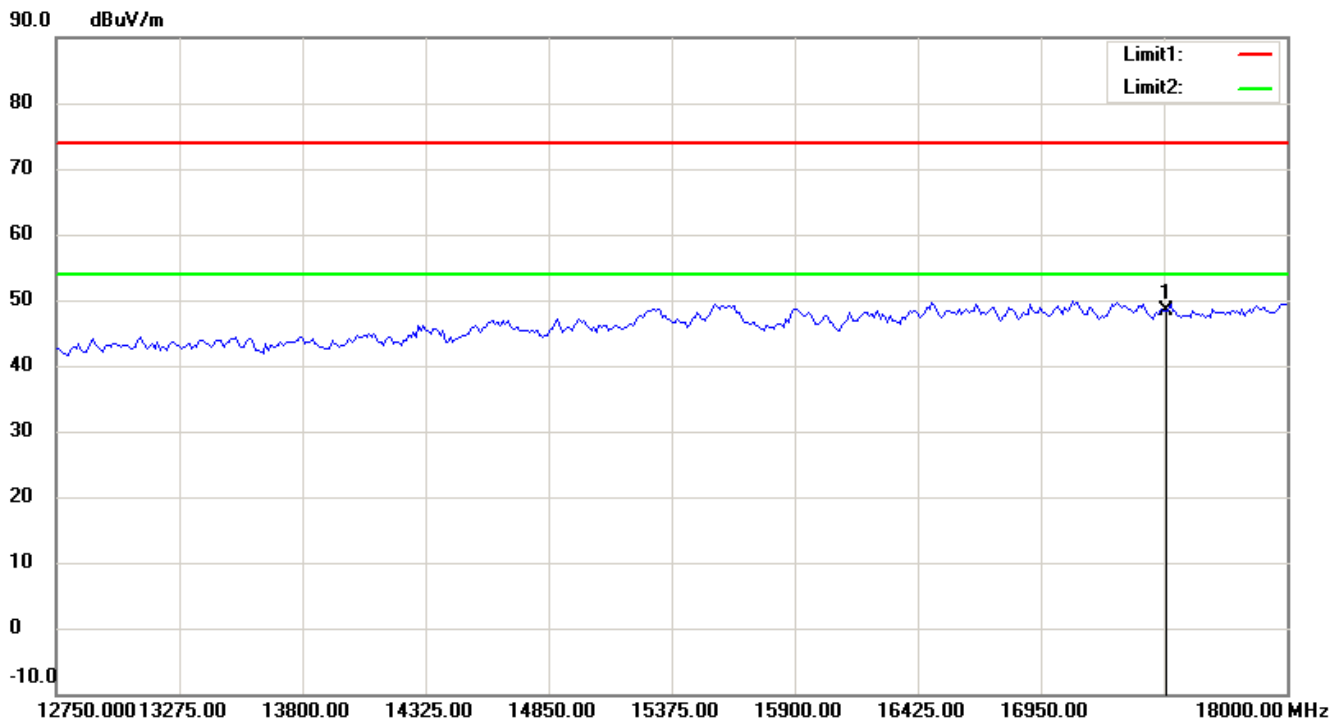
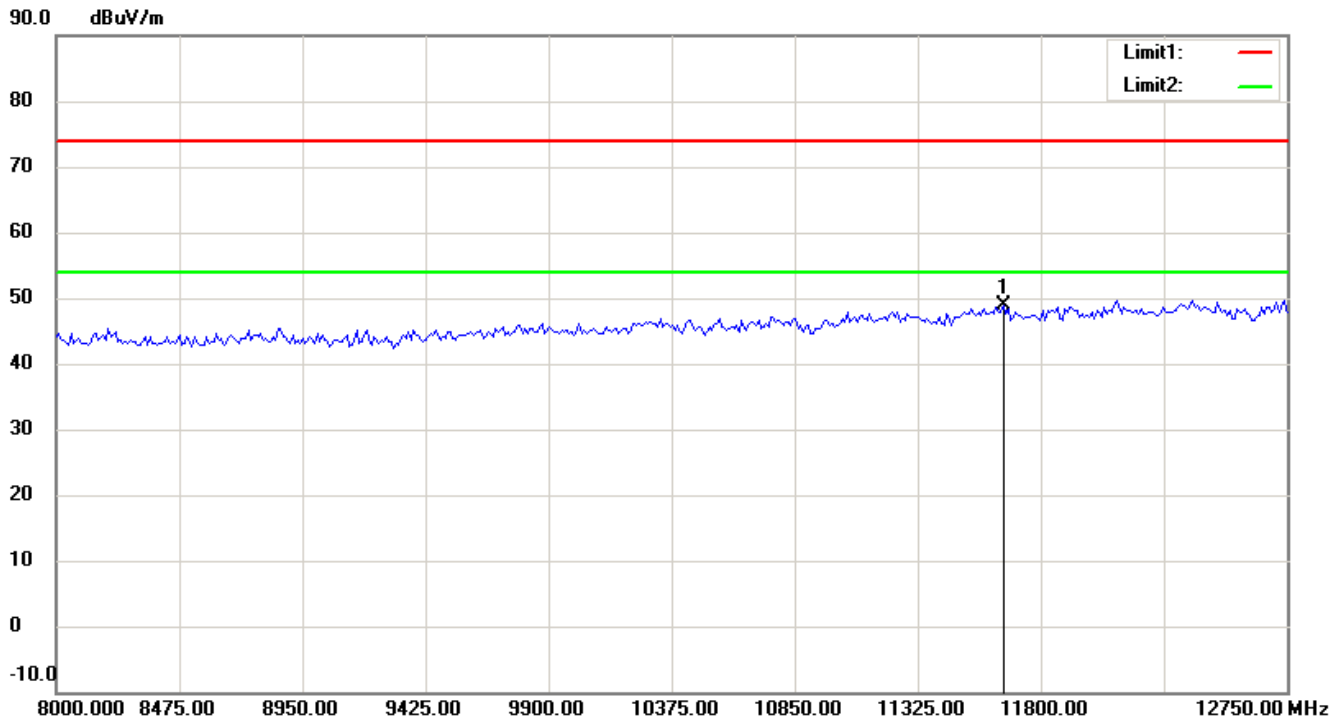
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

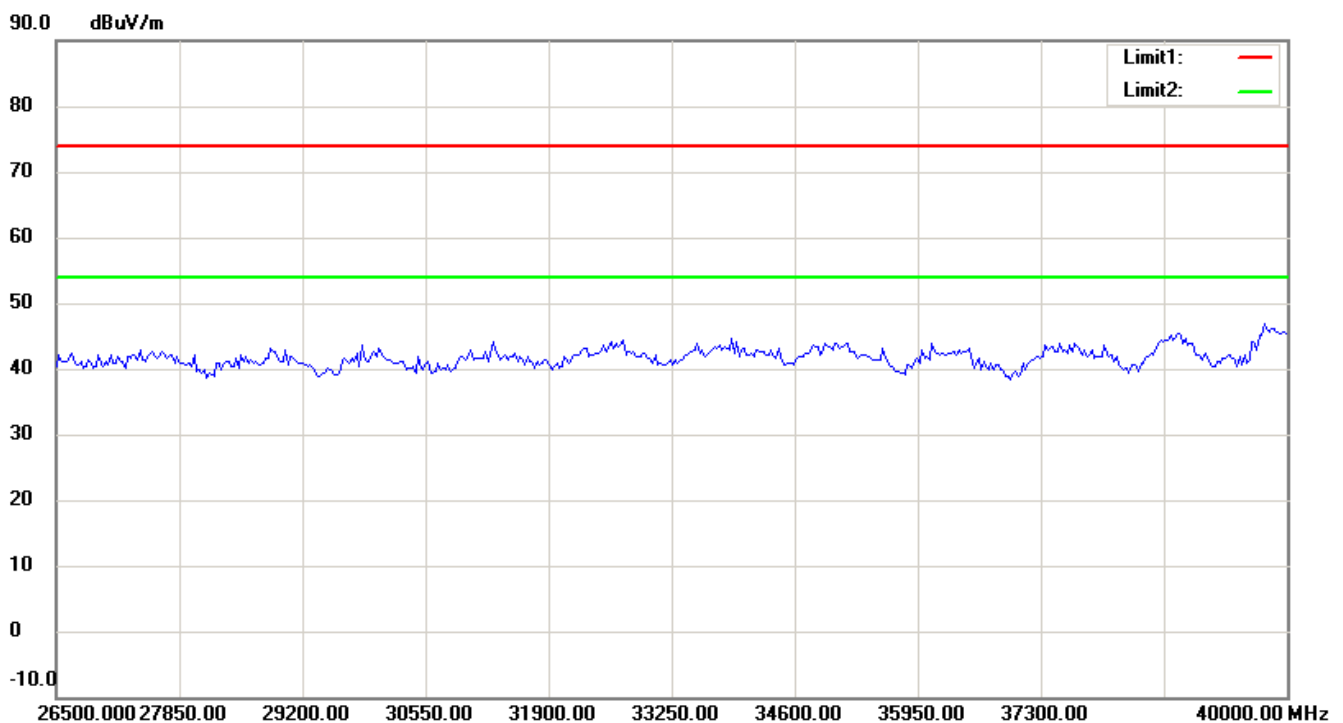
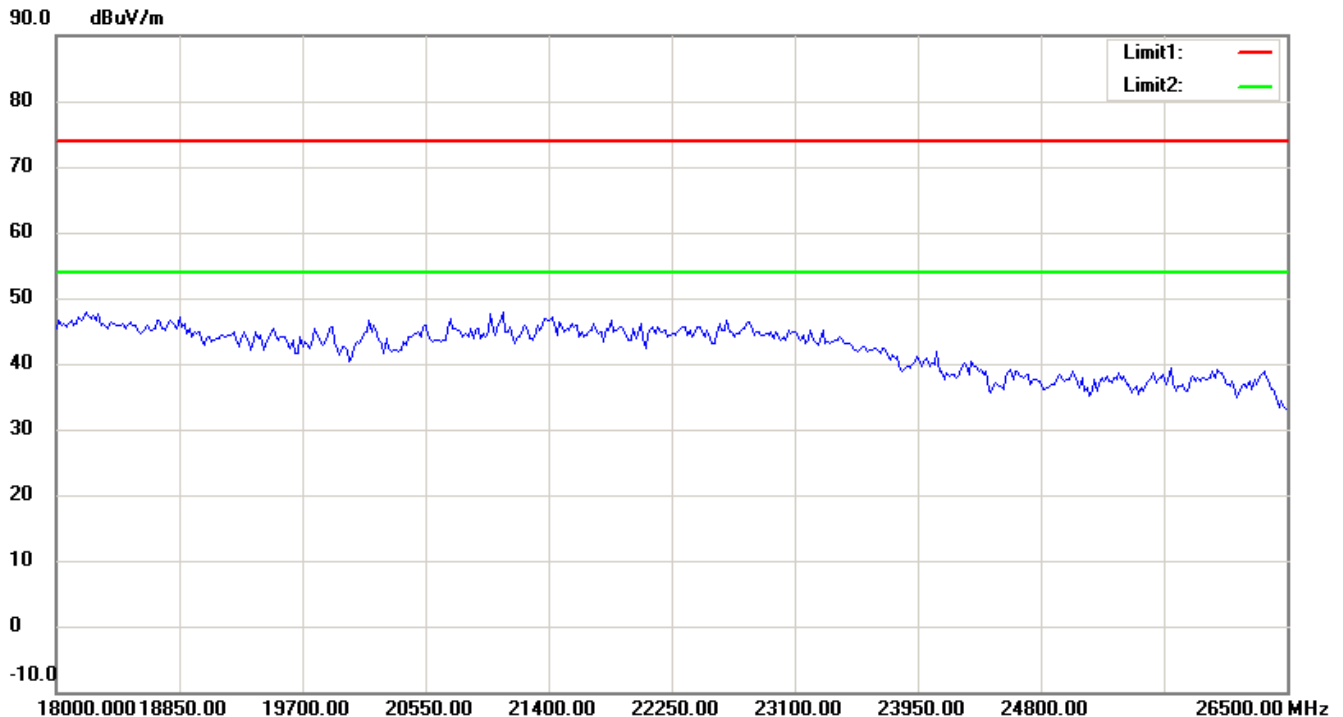
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

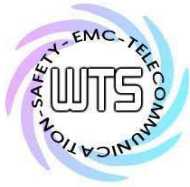
FCC ID: ZTT-APA20



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

Note:

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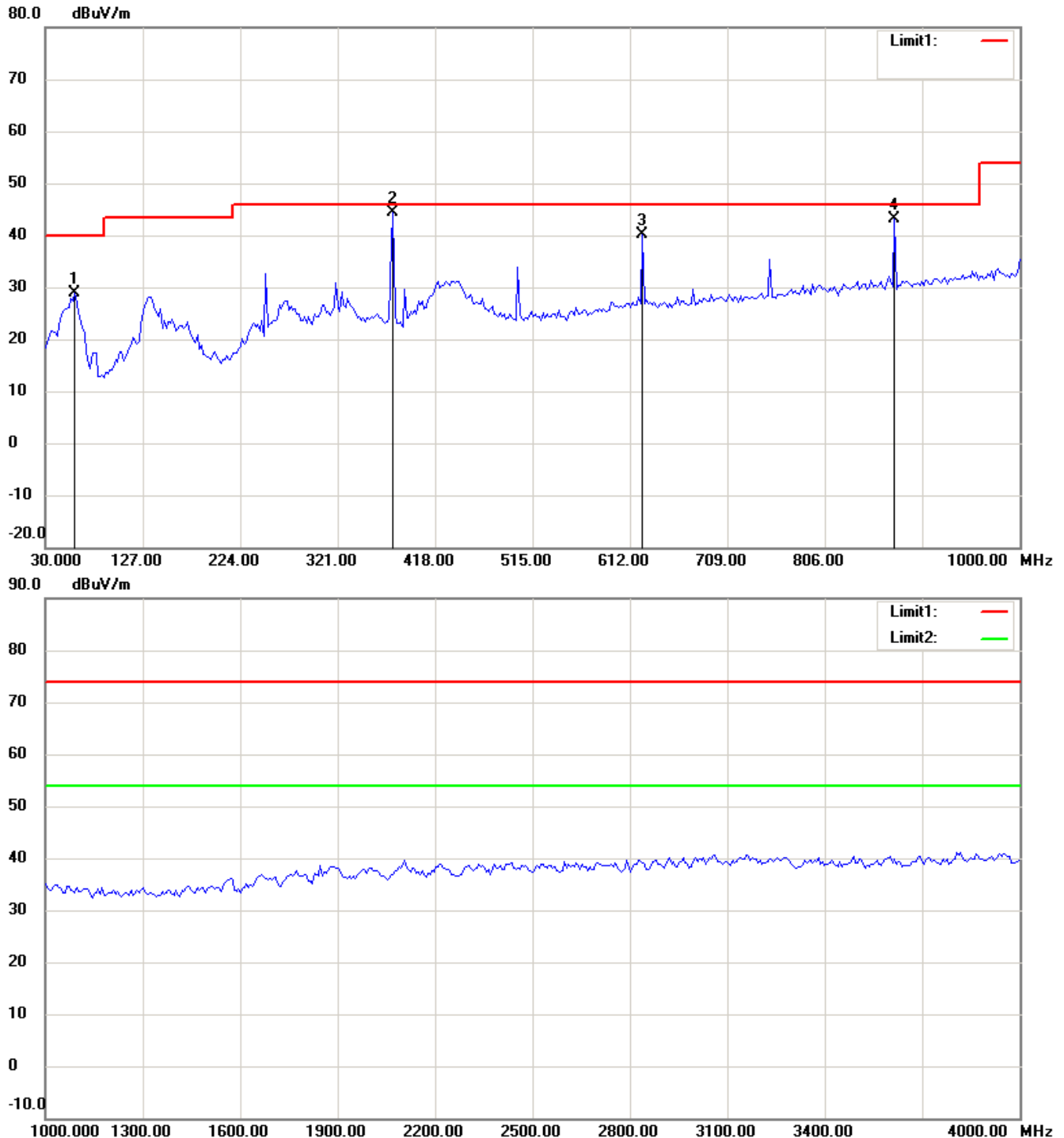
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 40MHz 5755MHz

Antenna Polarization H



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

Note:

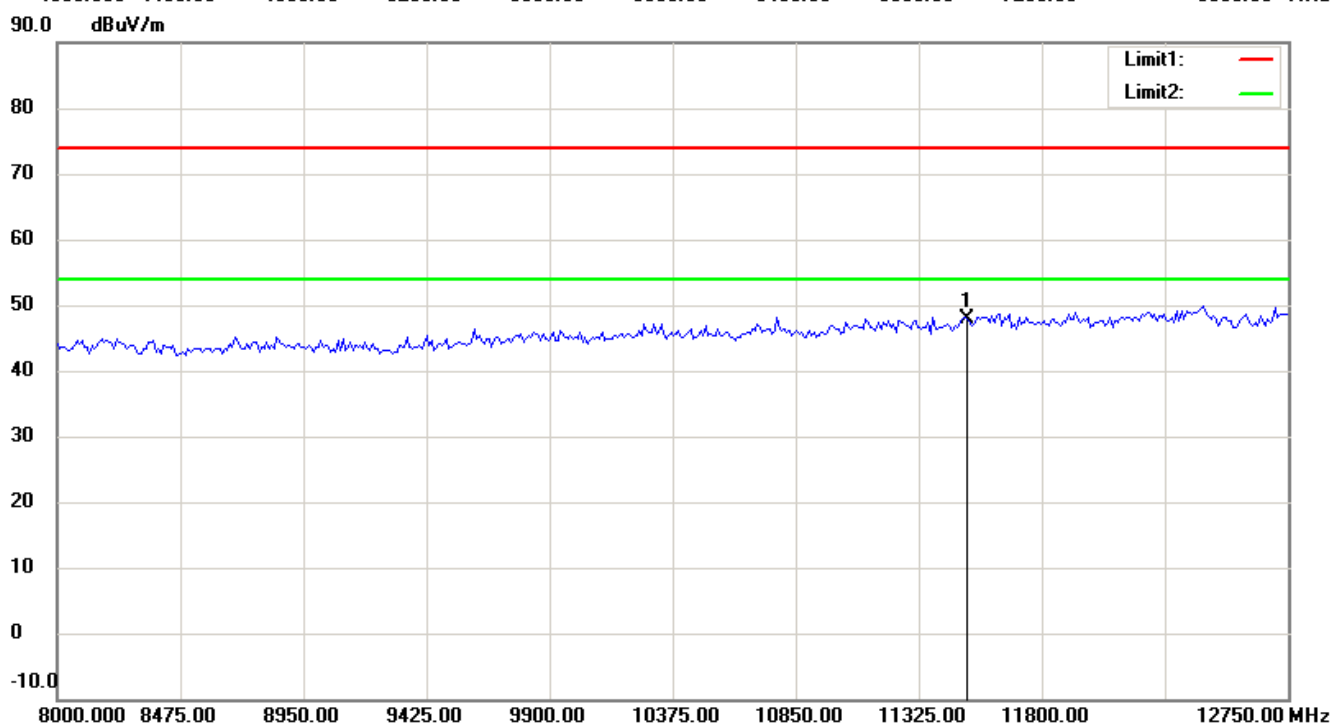
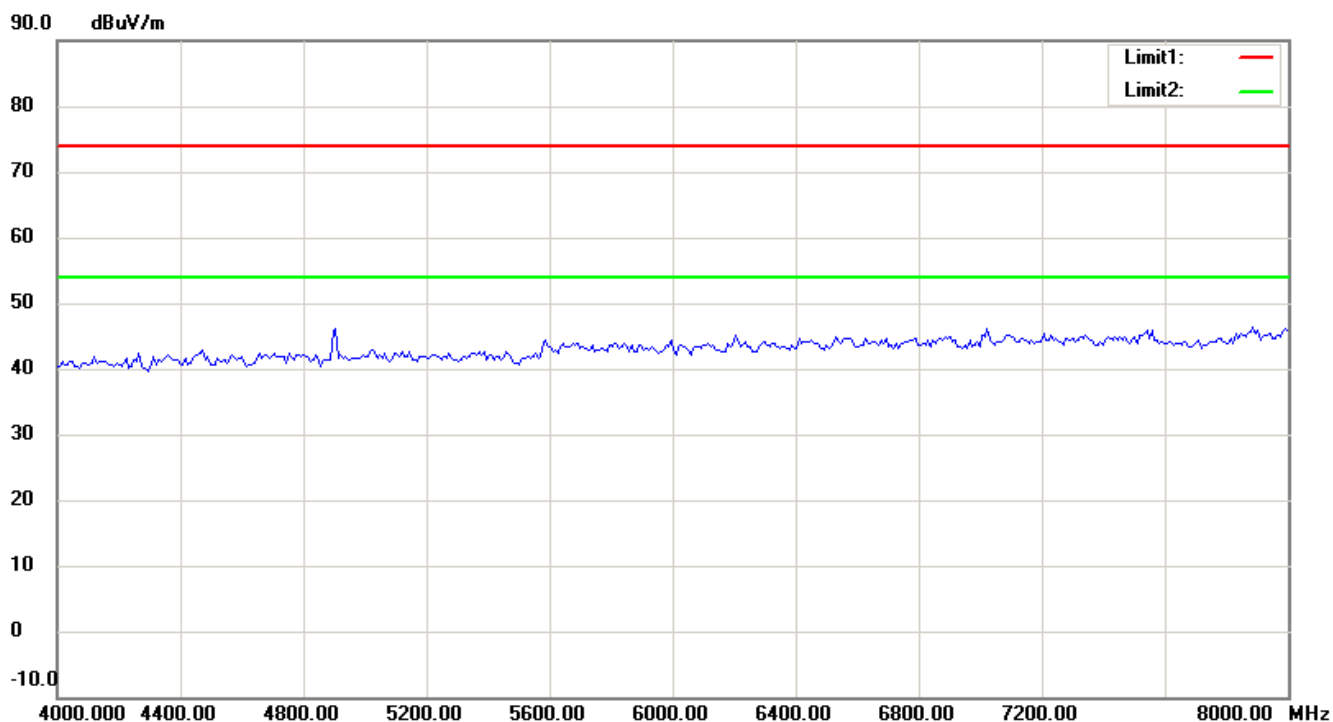
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

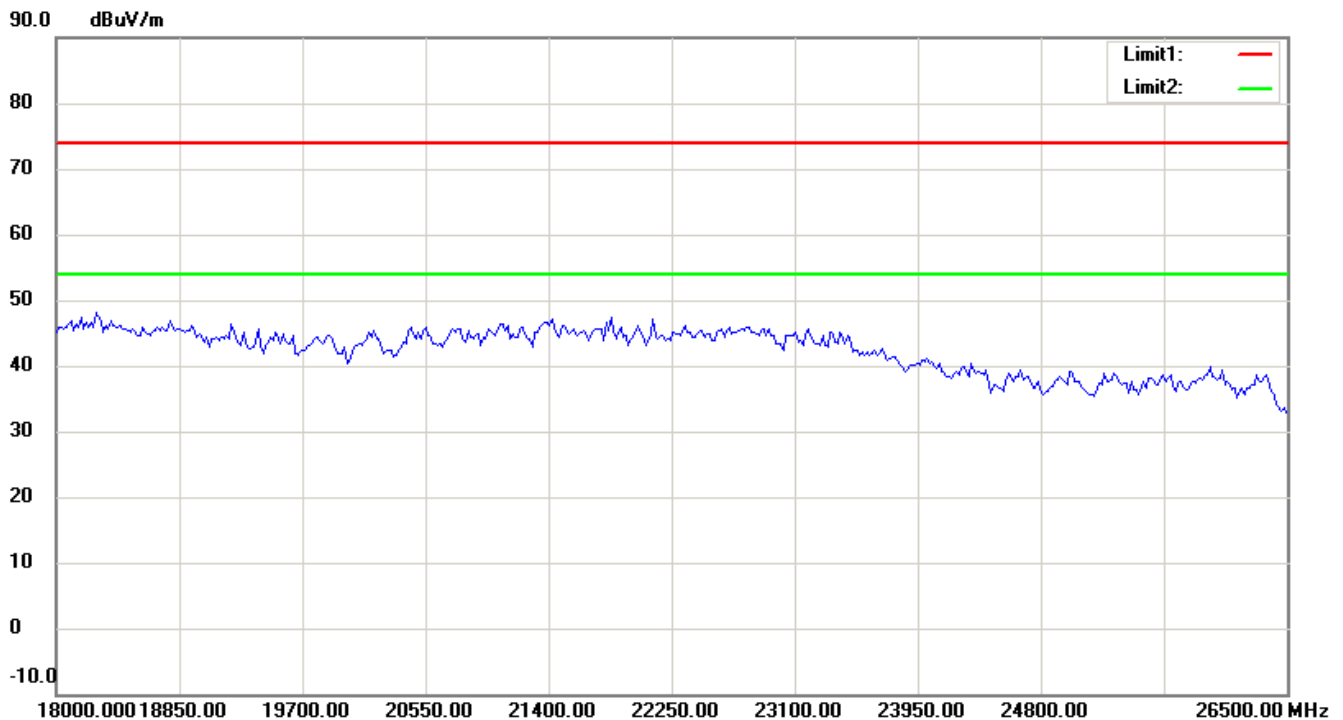
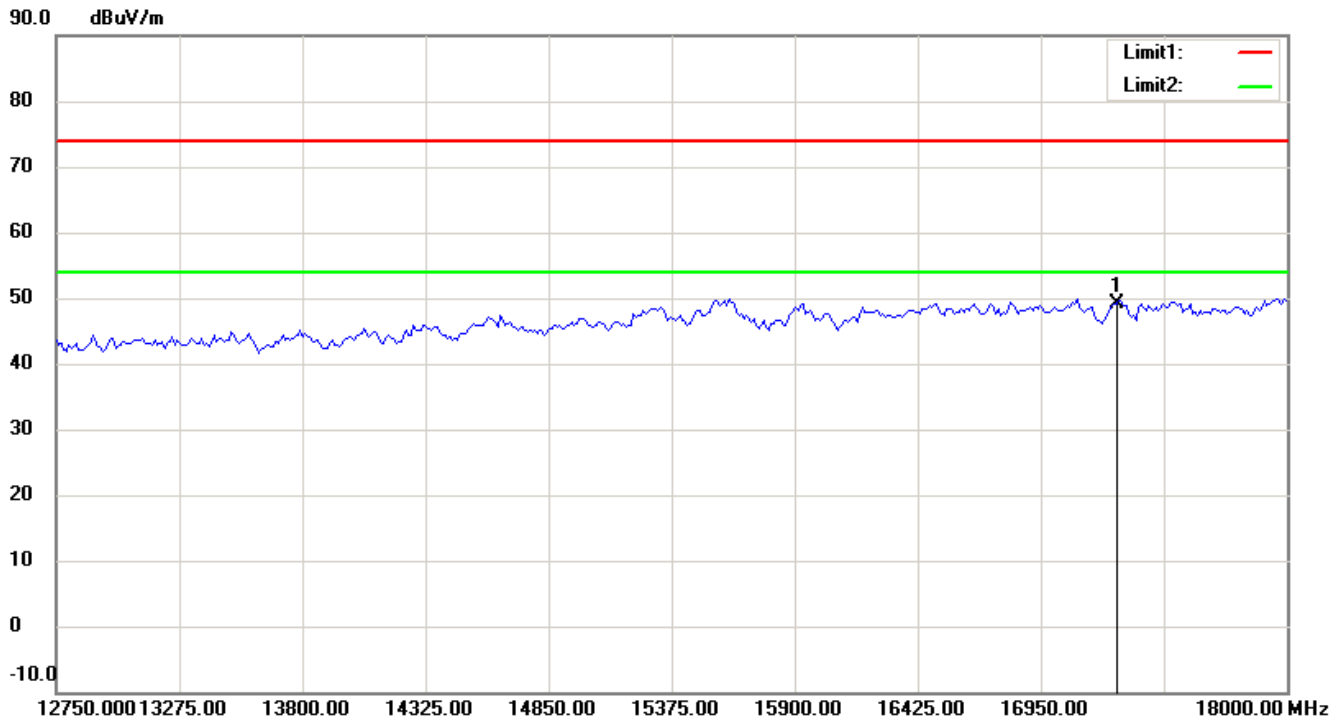
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

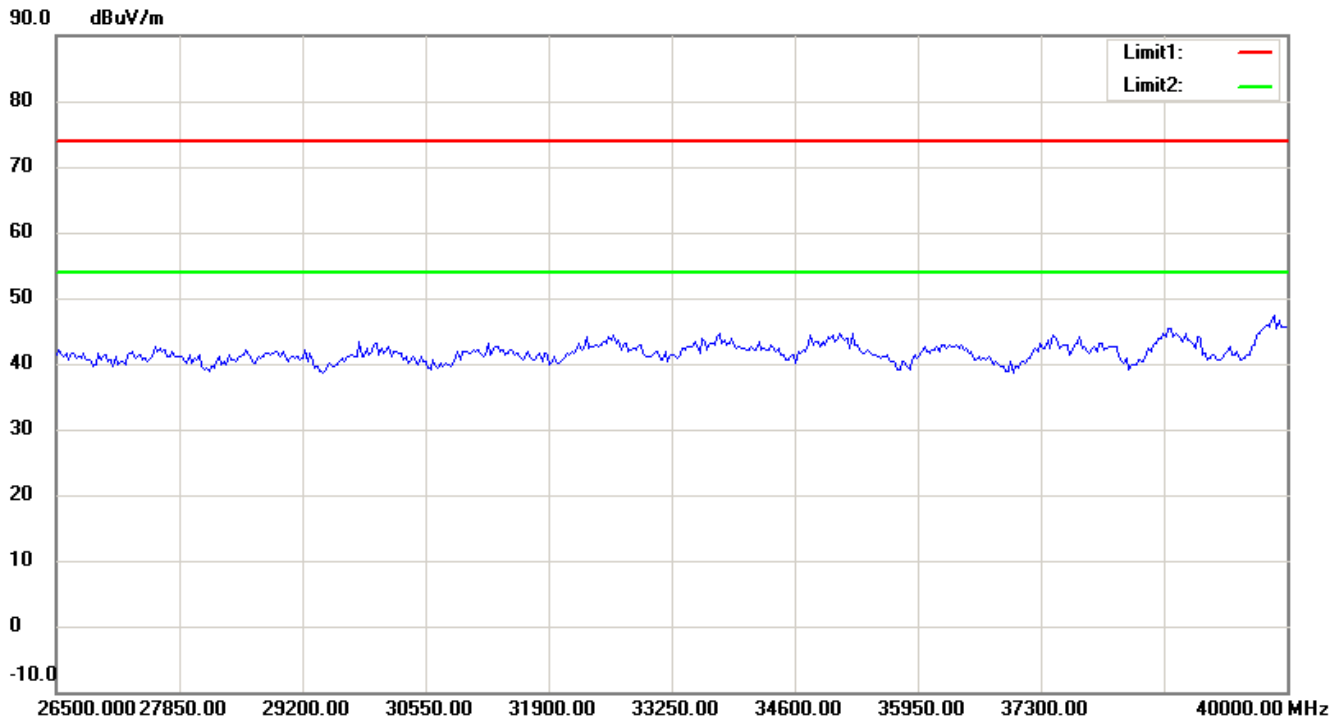
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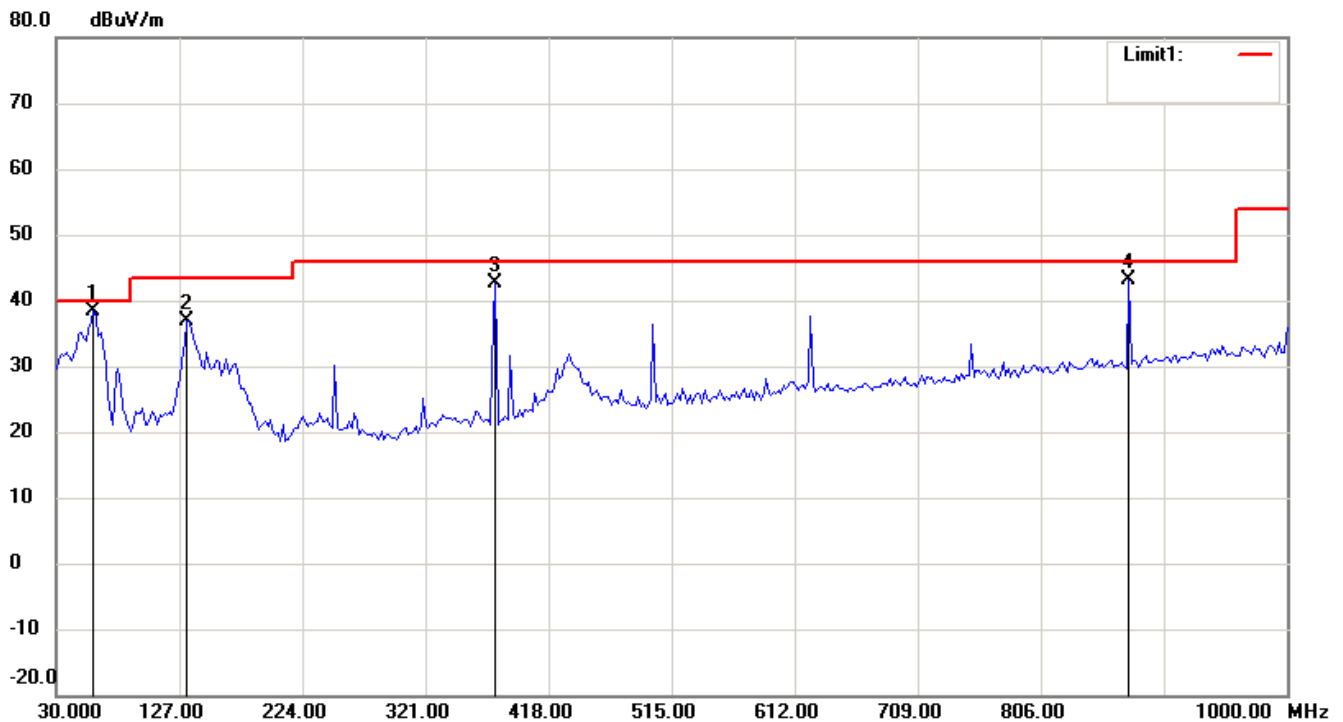
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

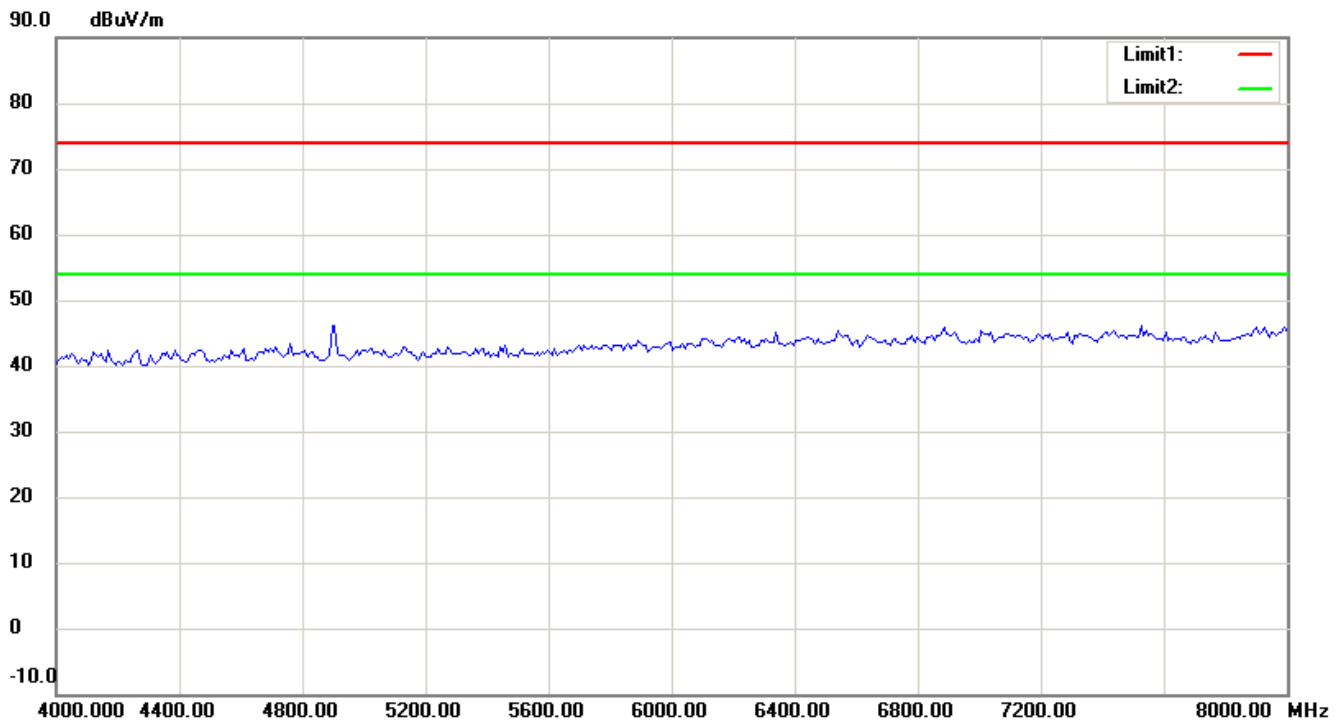
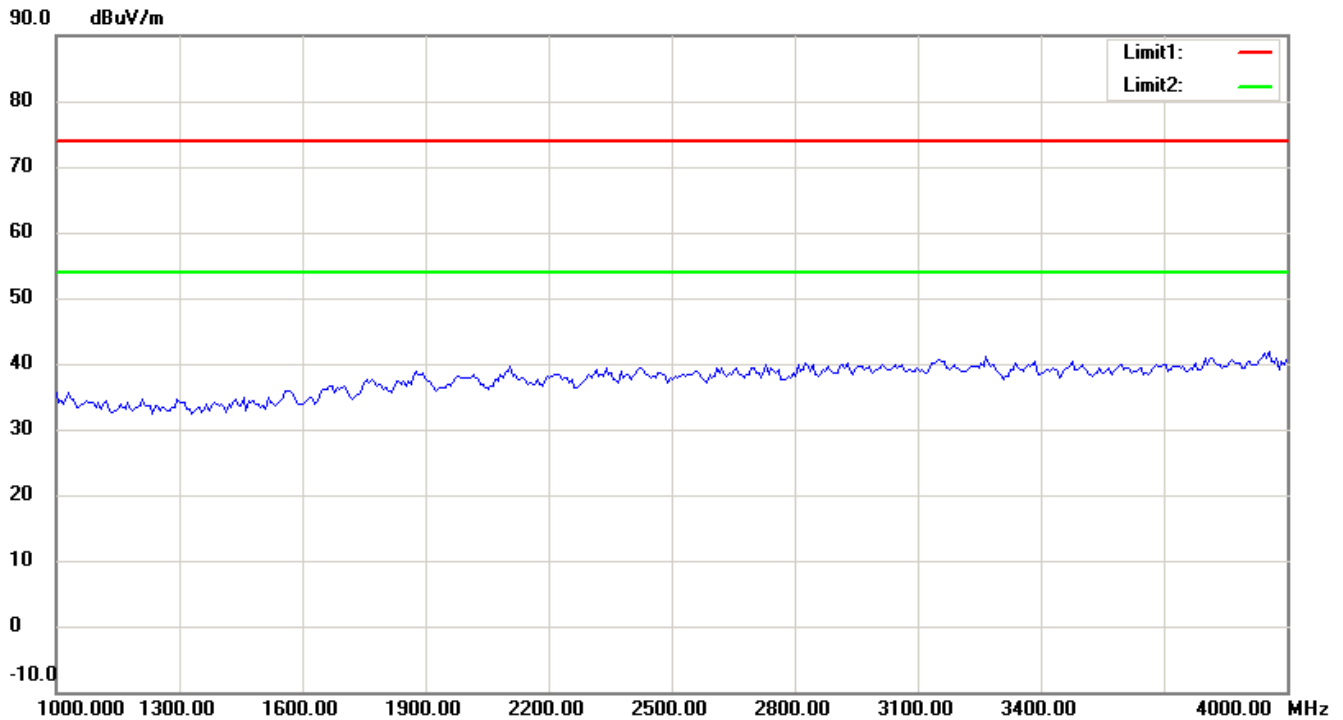
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

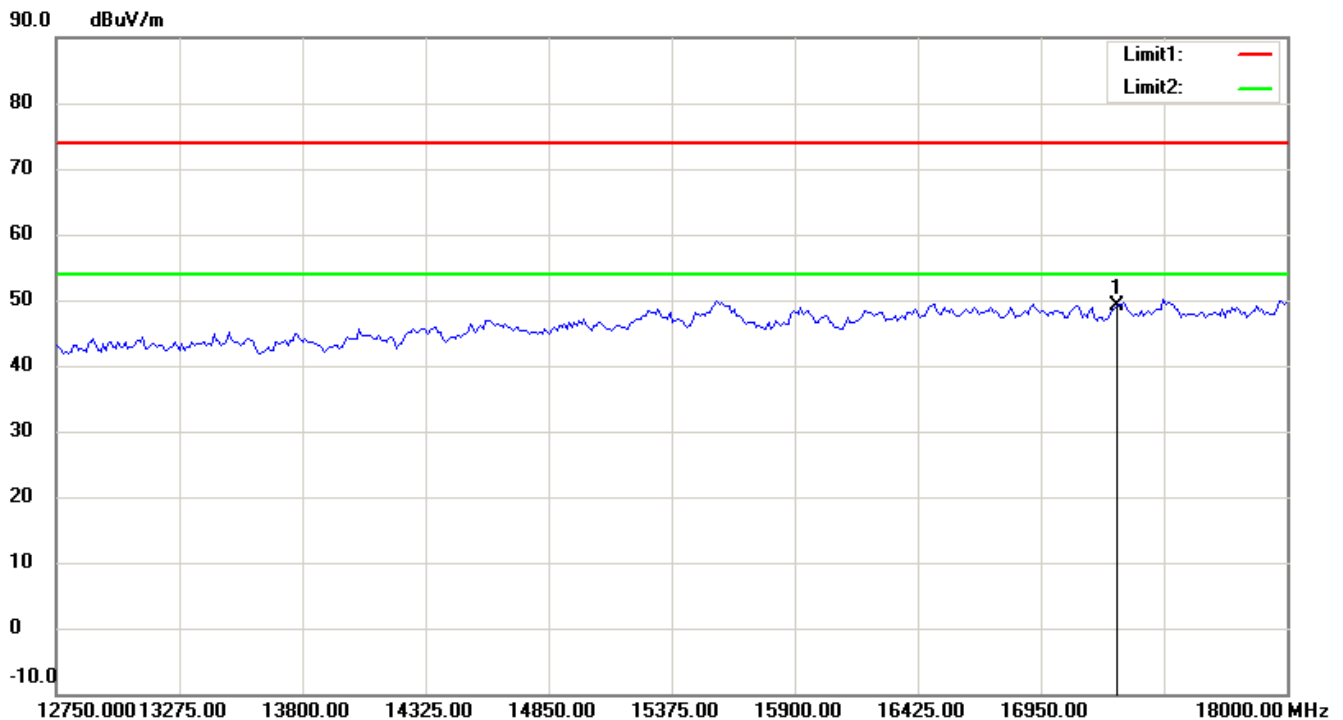
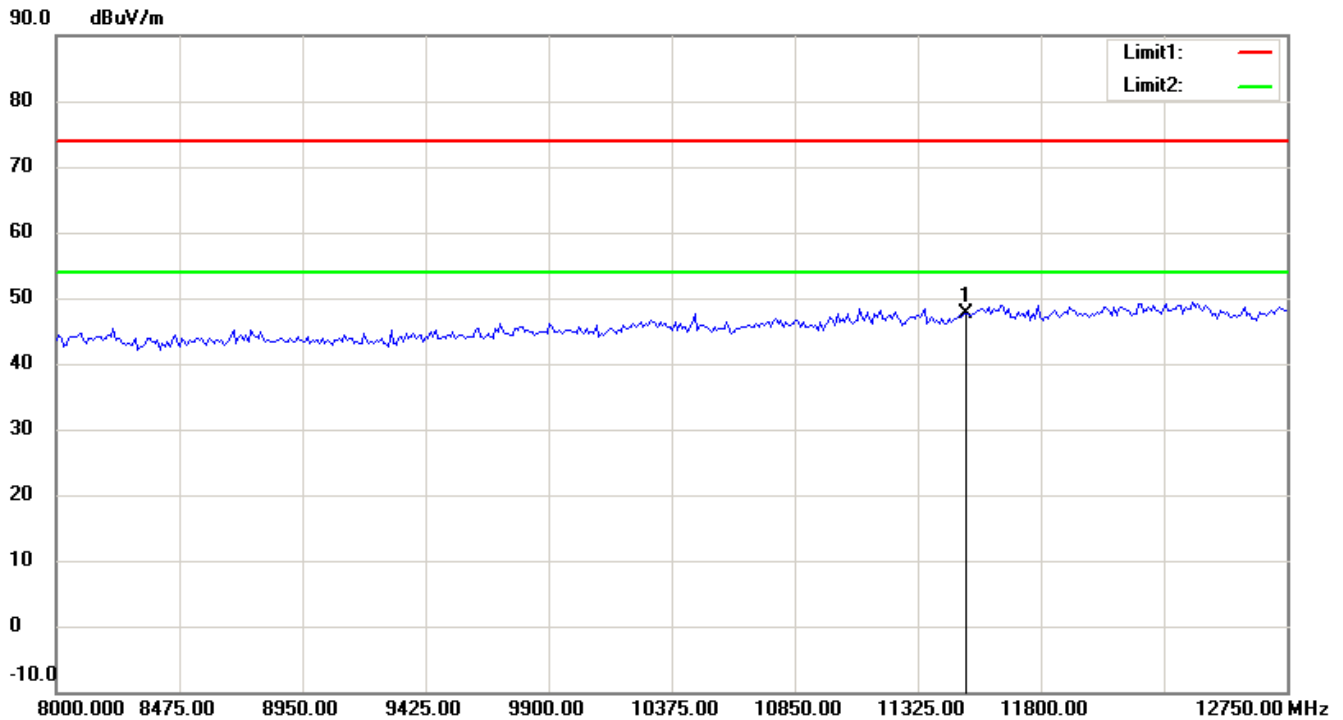
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

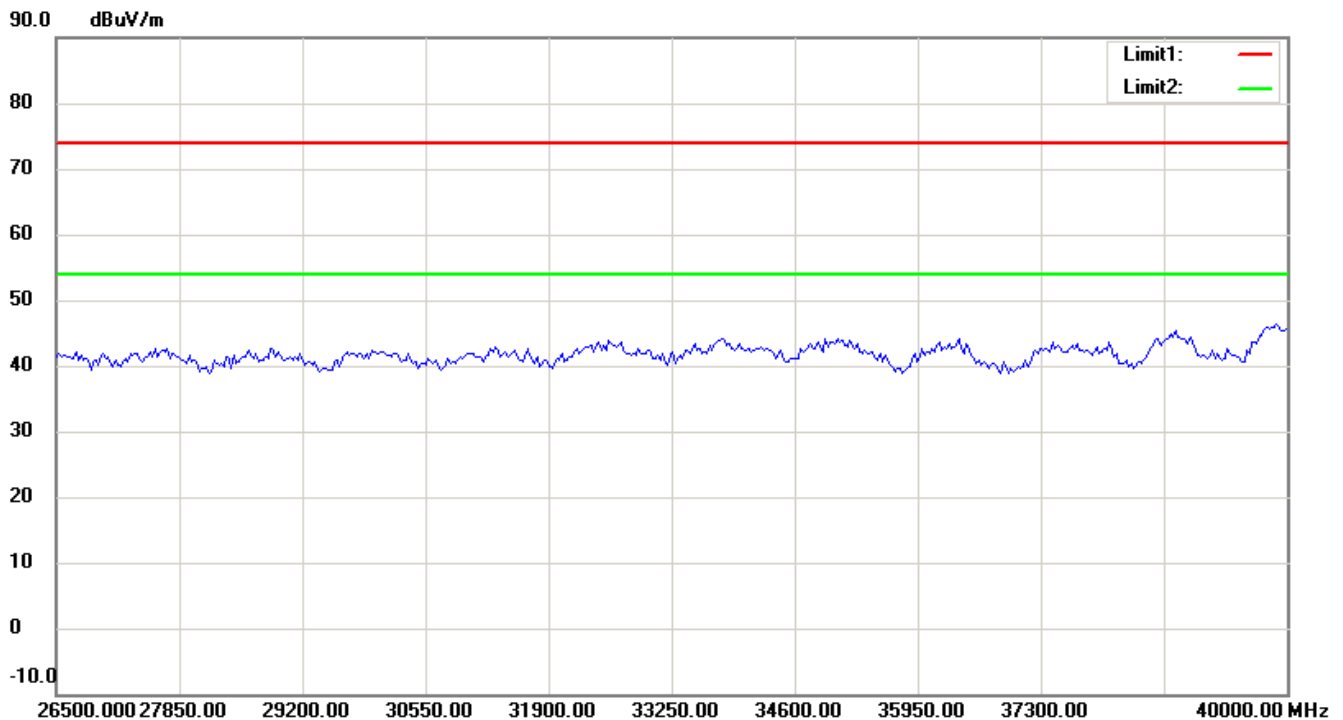
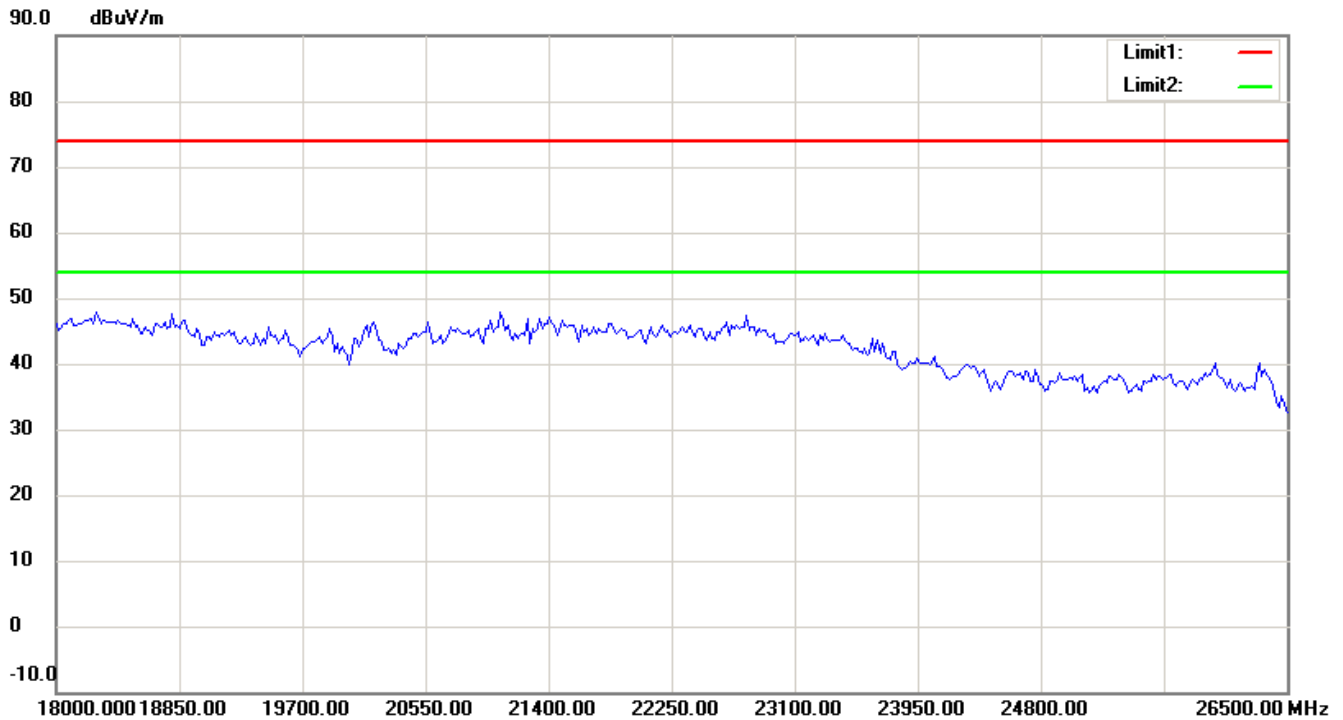
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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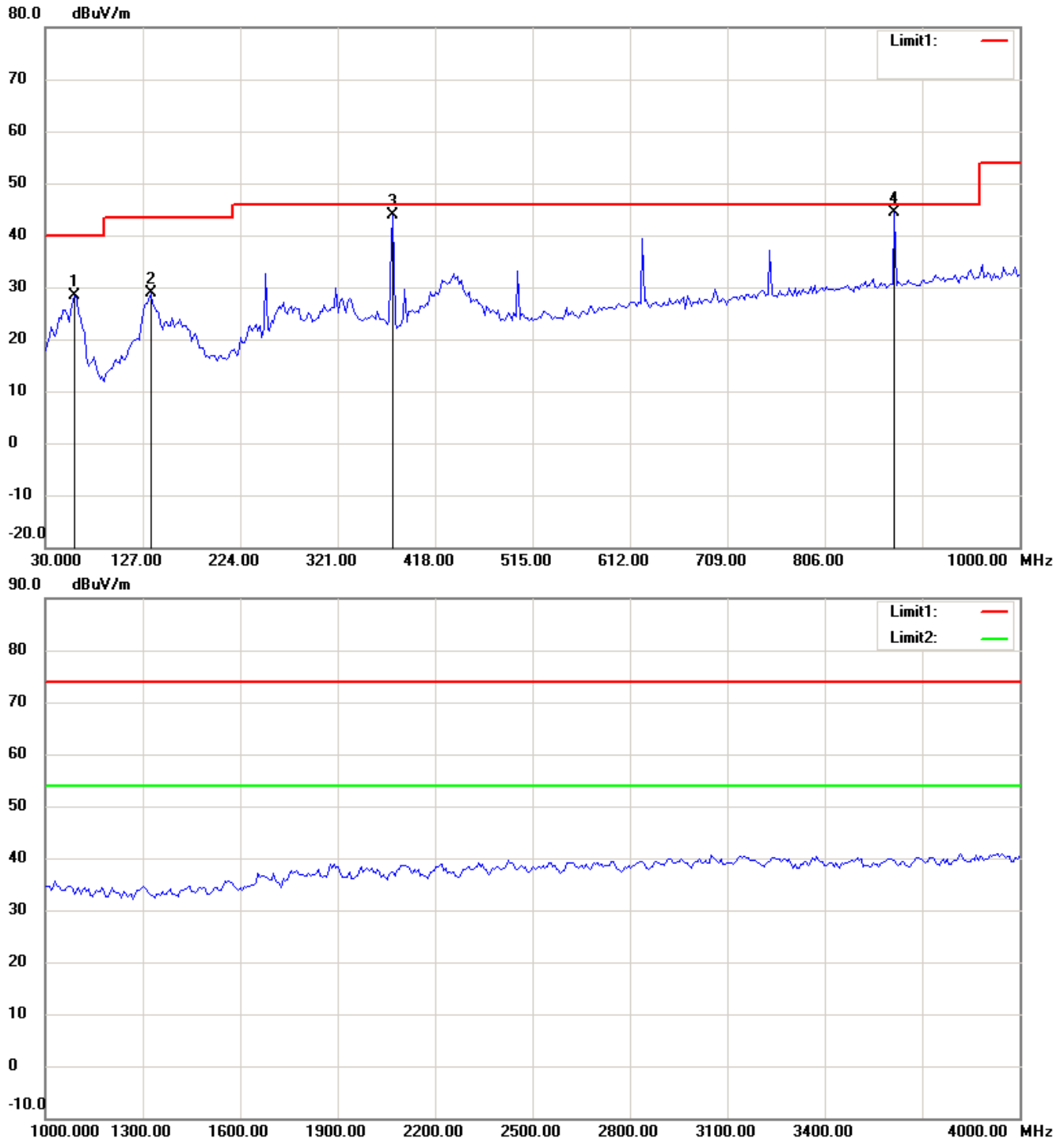
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 40MHz 5795MHz

Antenna Polarization H



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

Note:

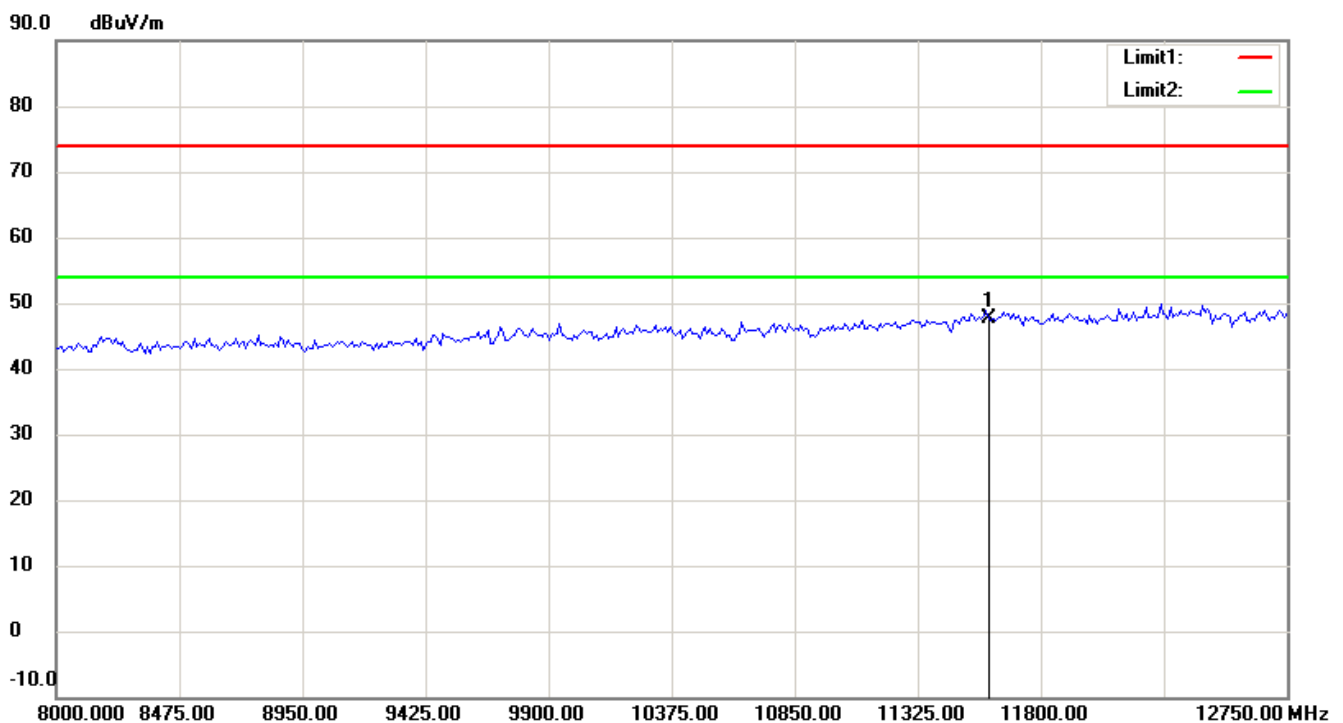
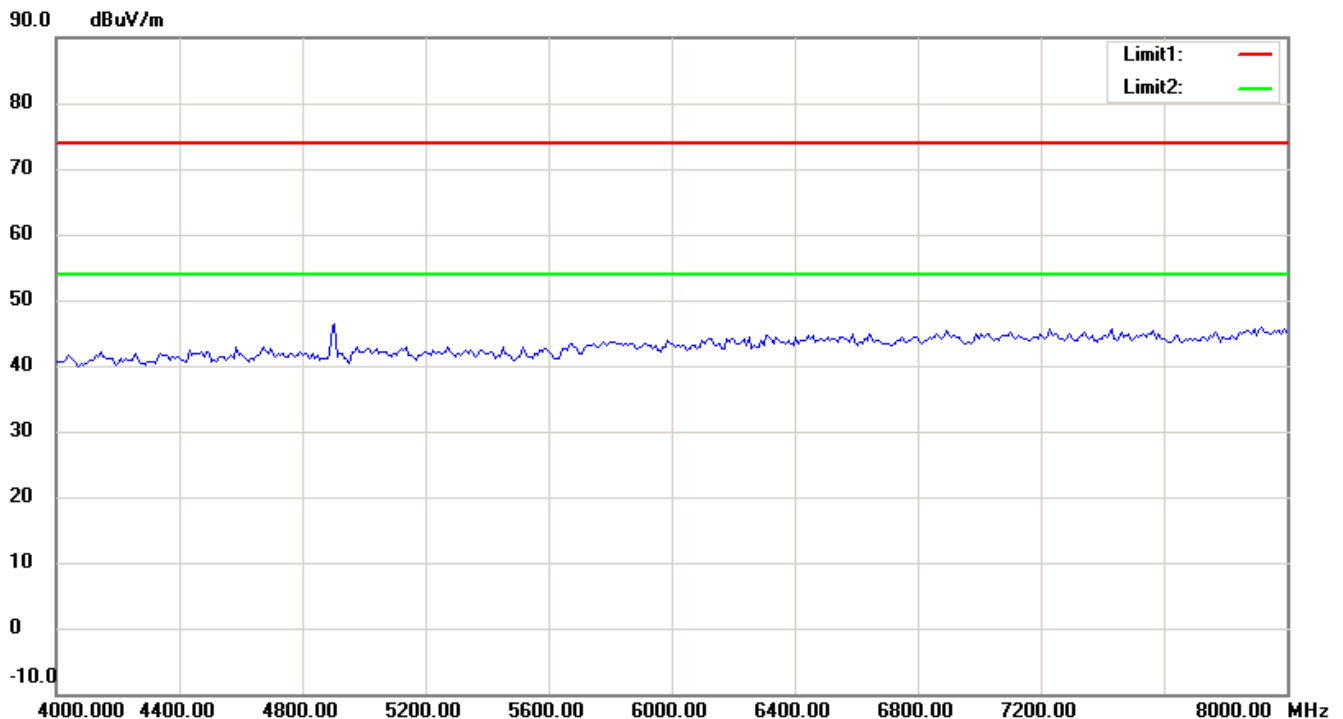
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

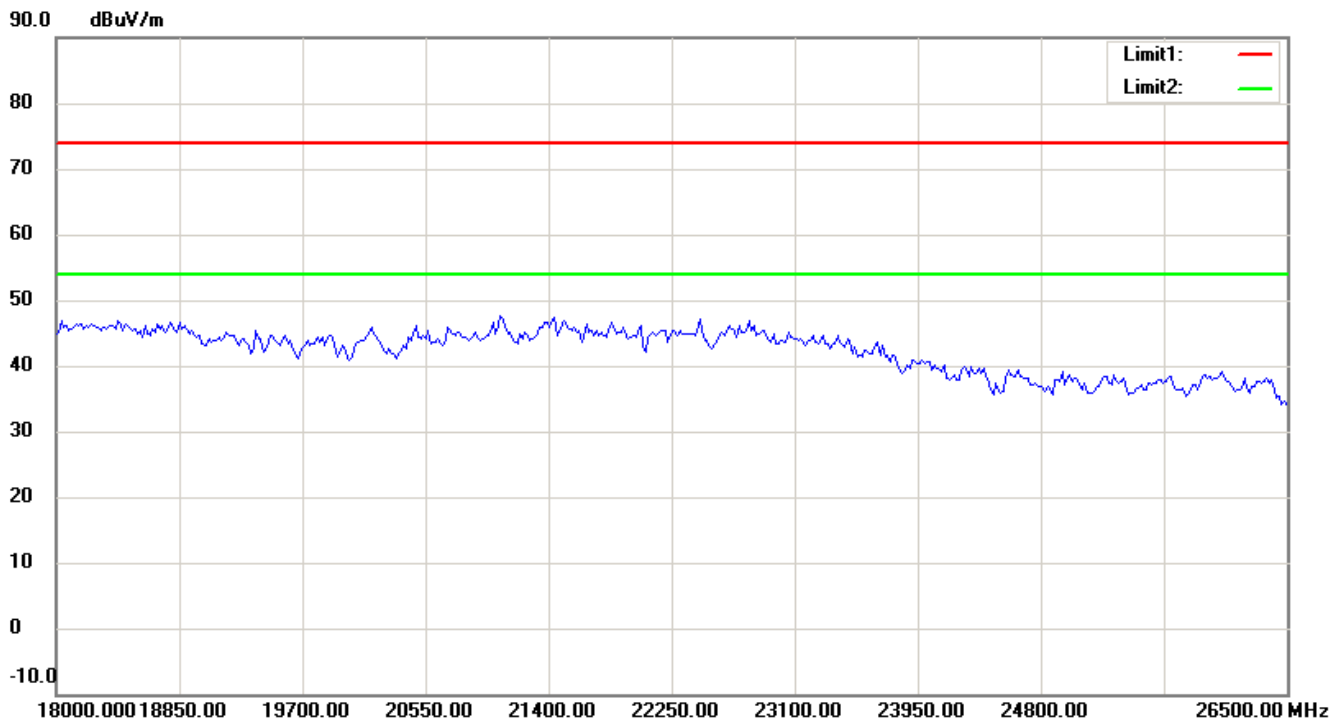
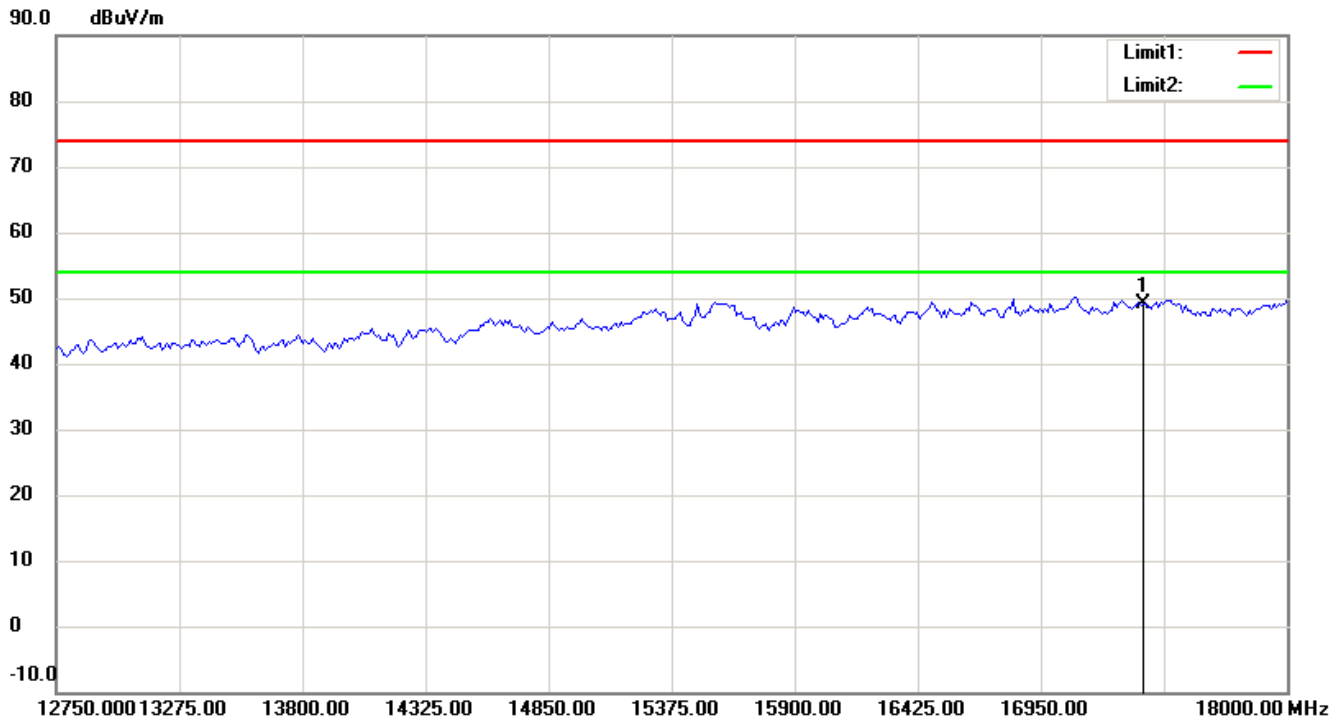
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

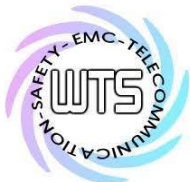
FCC ID: ZTT-APA20



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

Note:

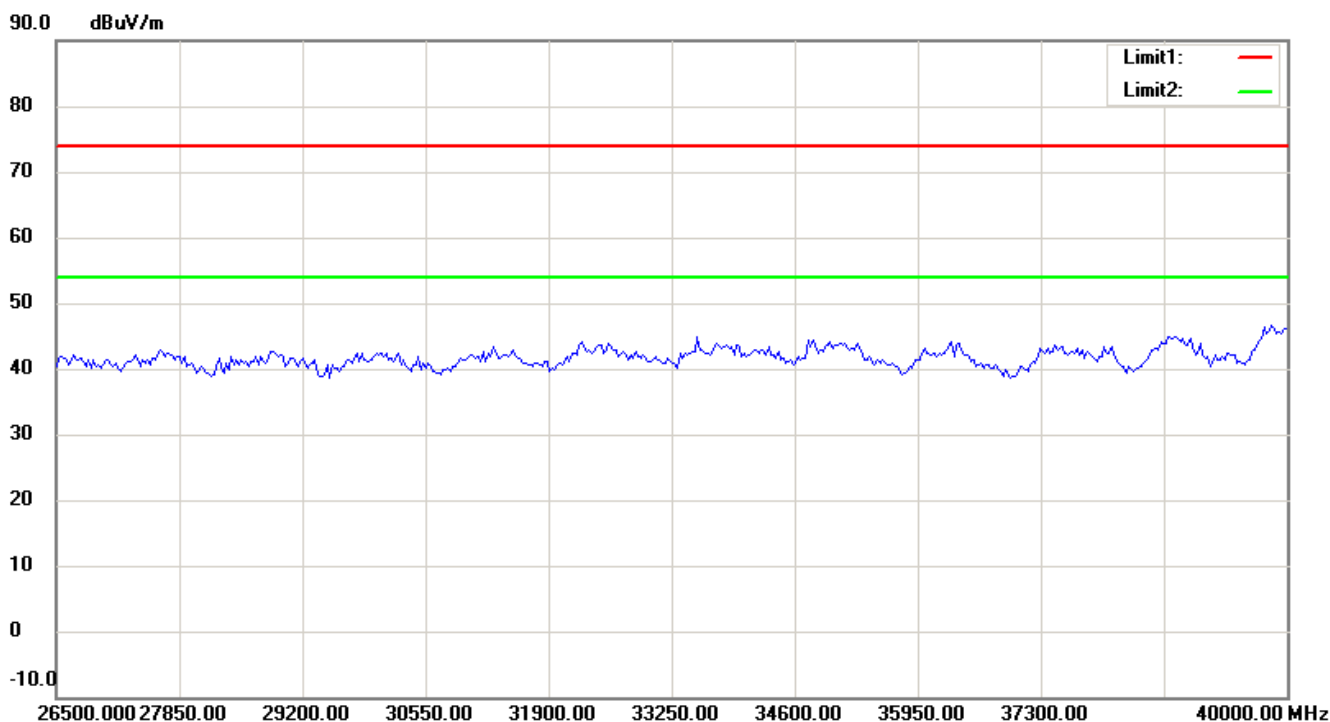
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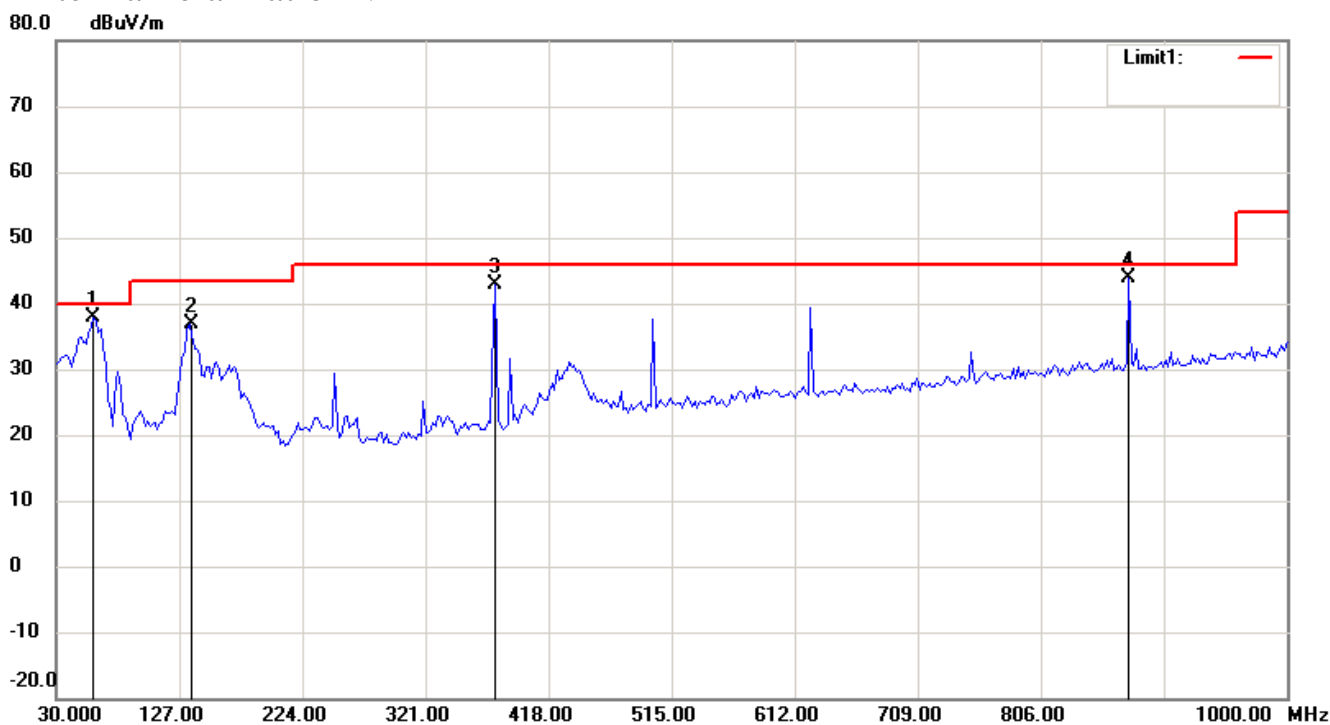
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

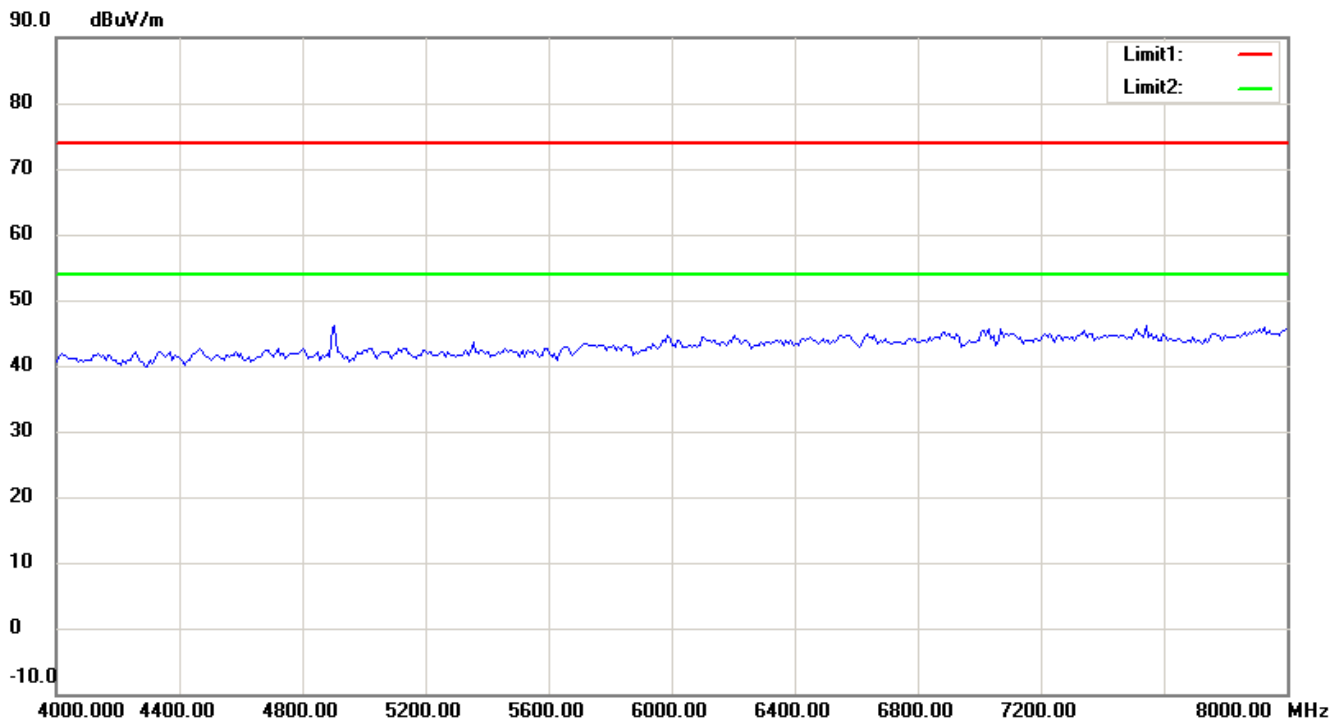
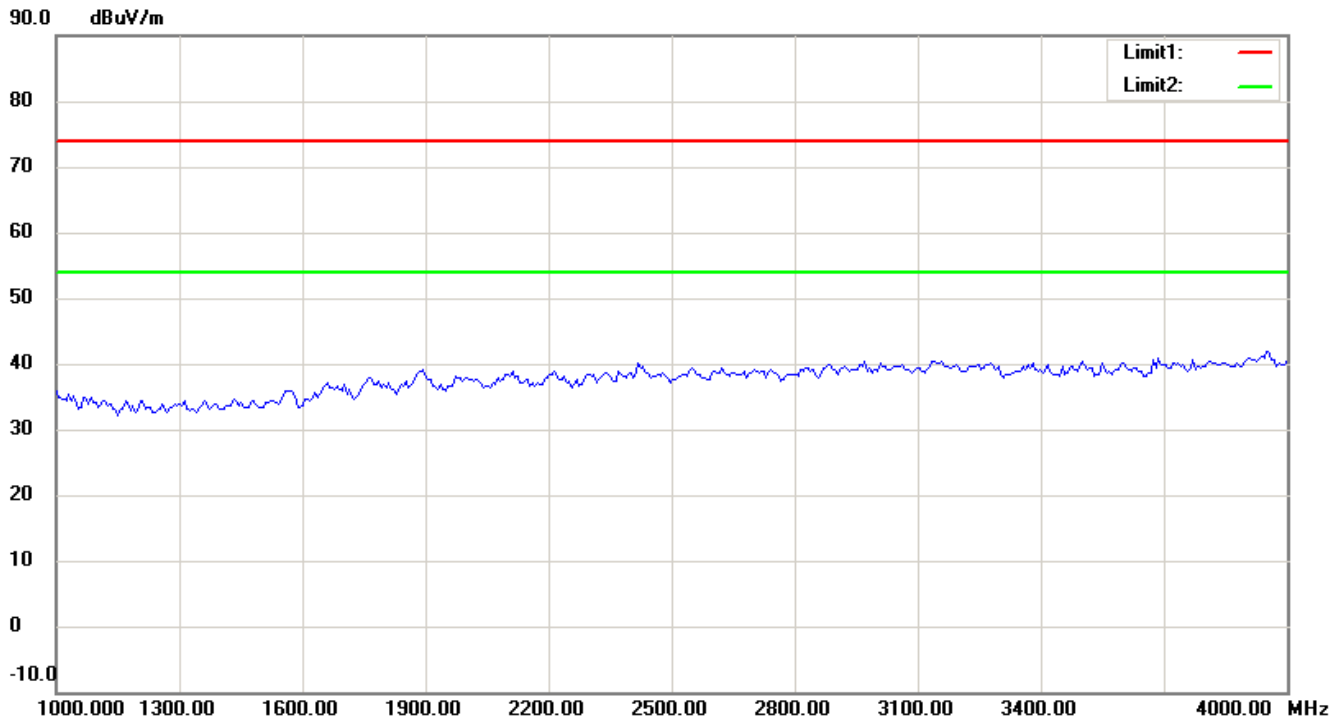
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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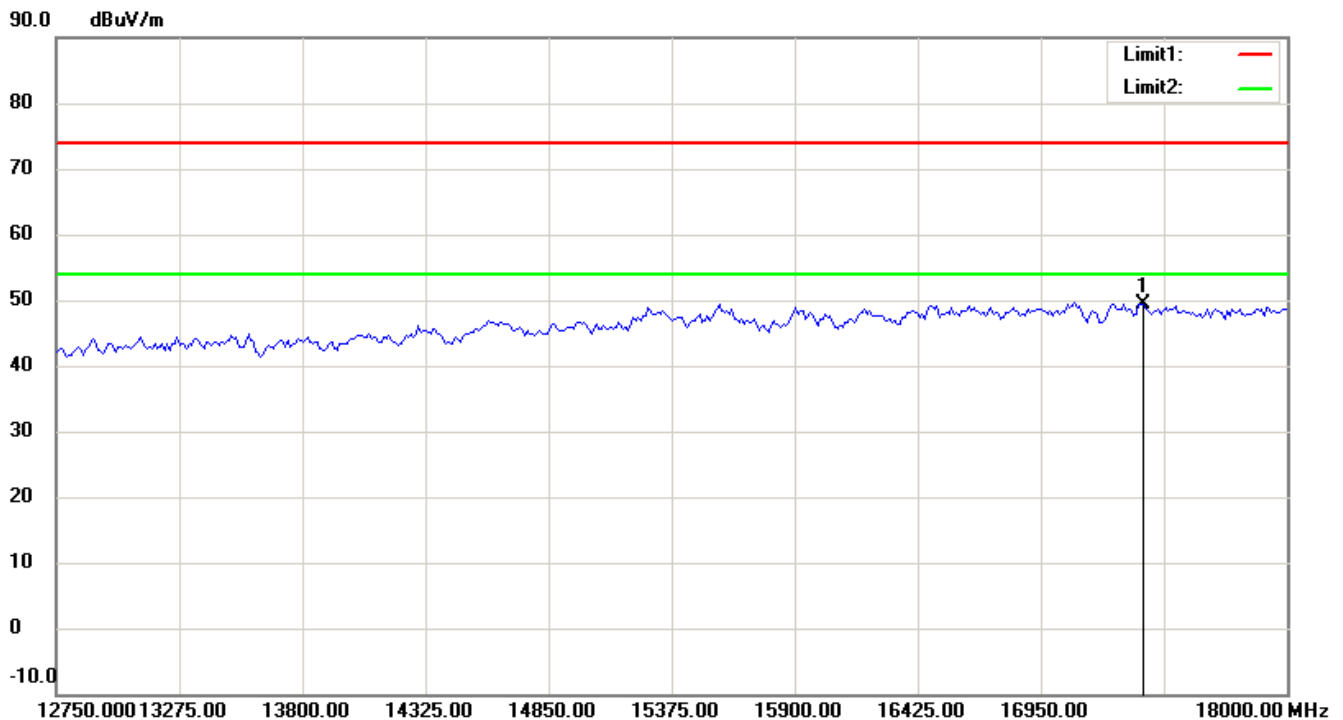
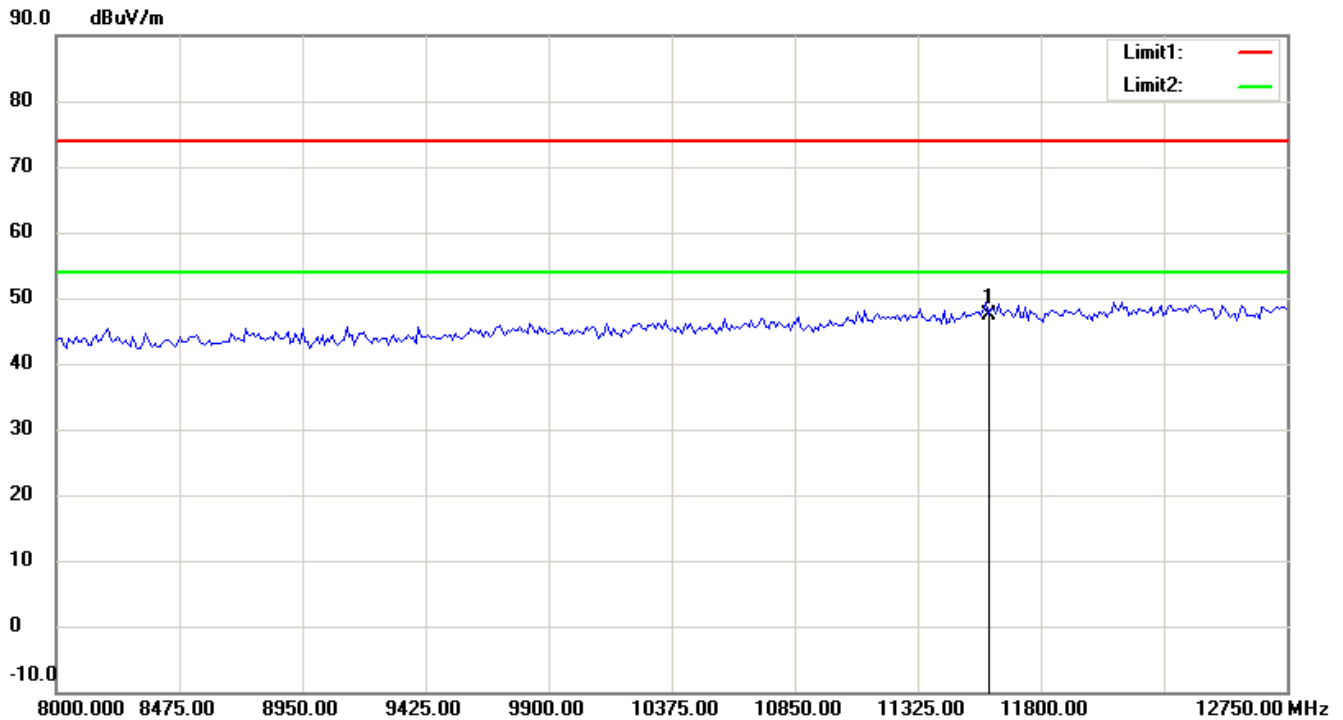
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

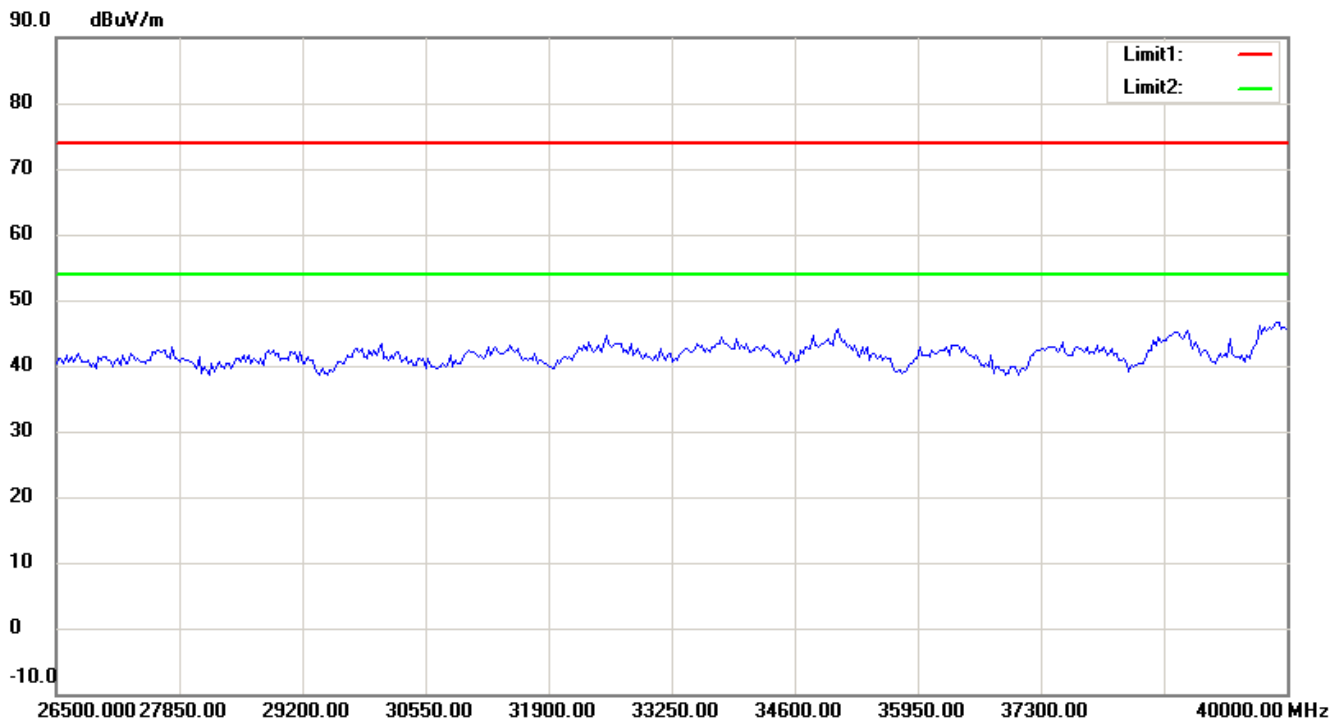
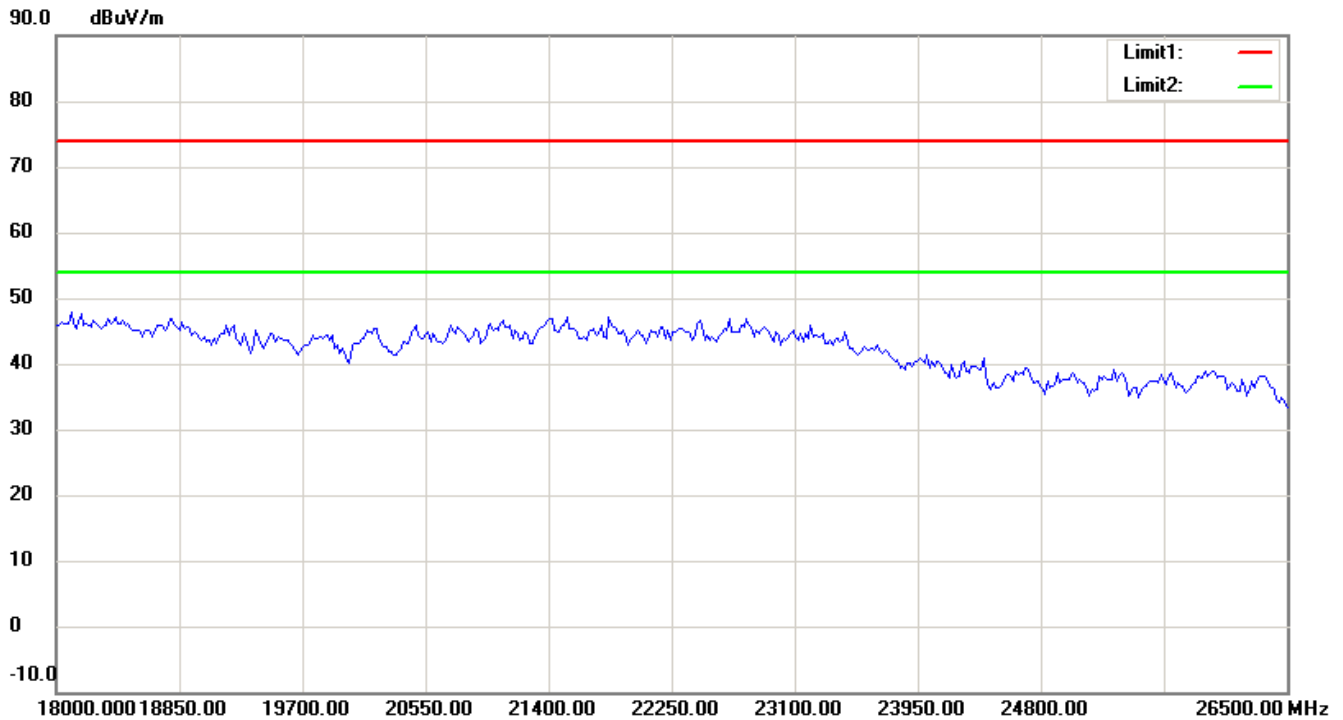
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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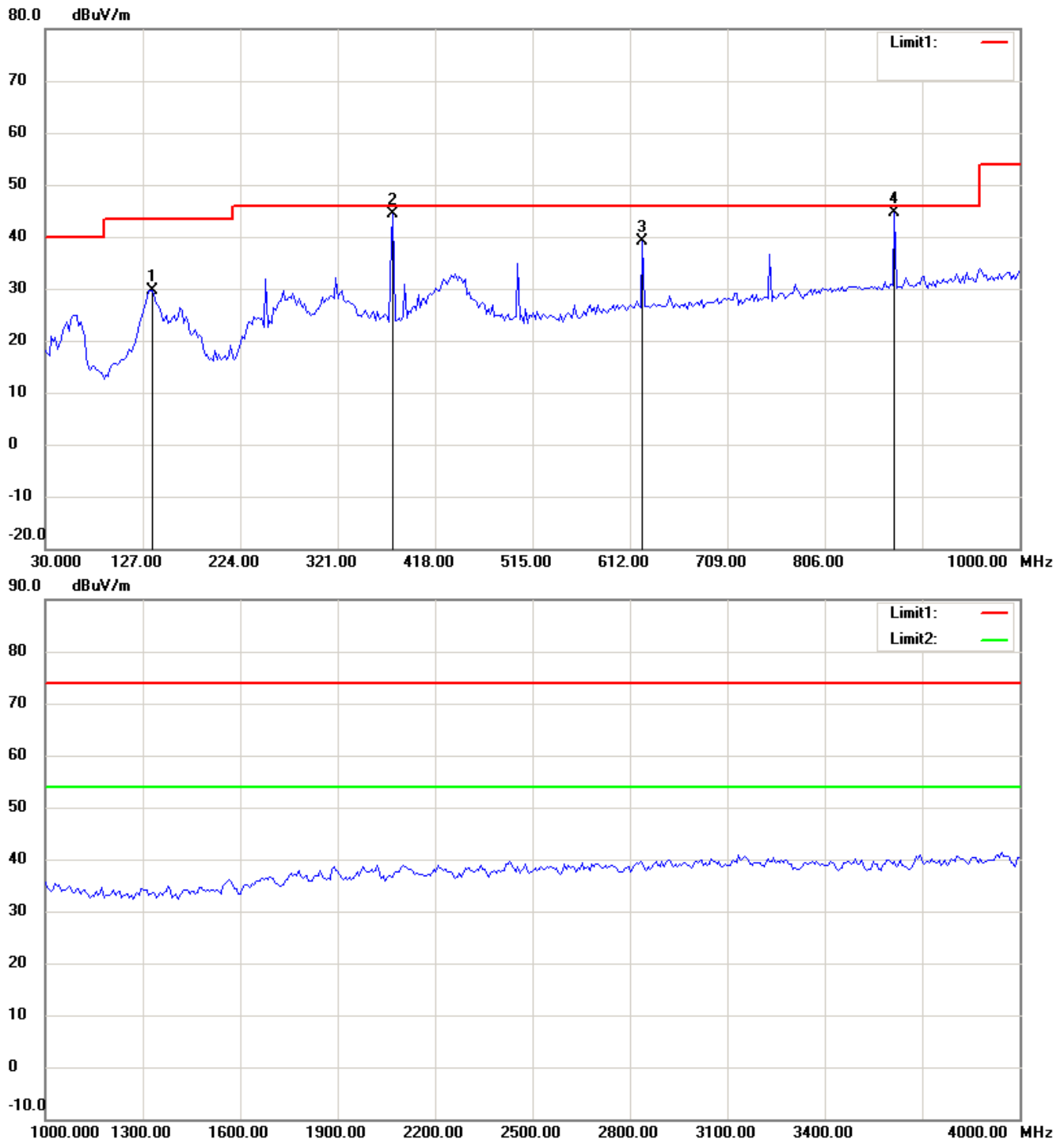
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11ac 5775MHz

Antenna Polarization H



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

Note:

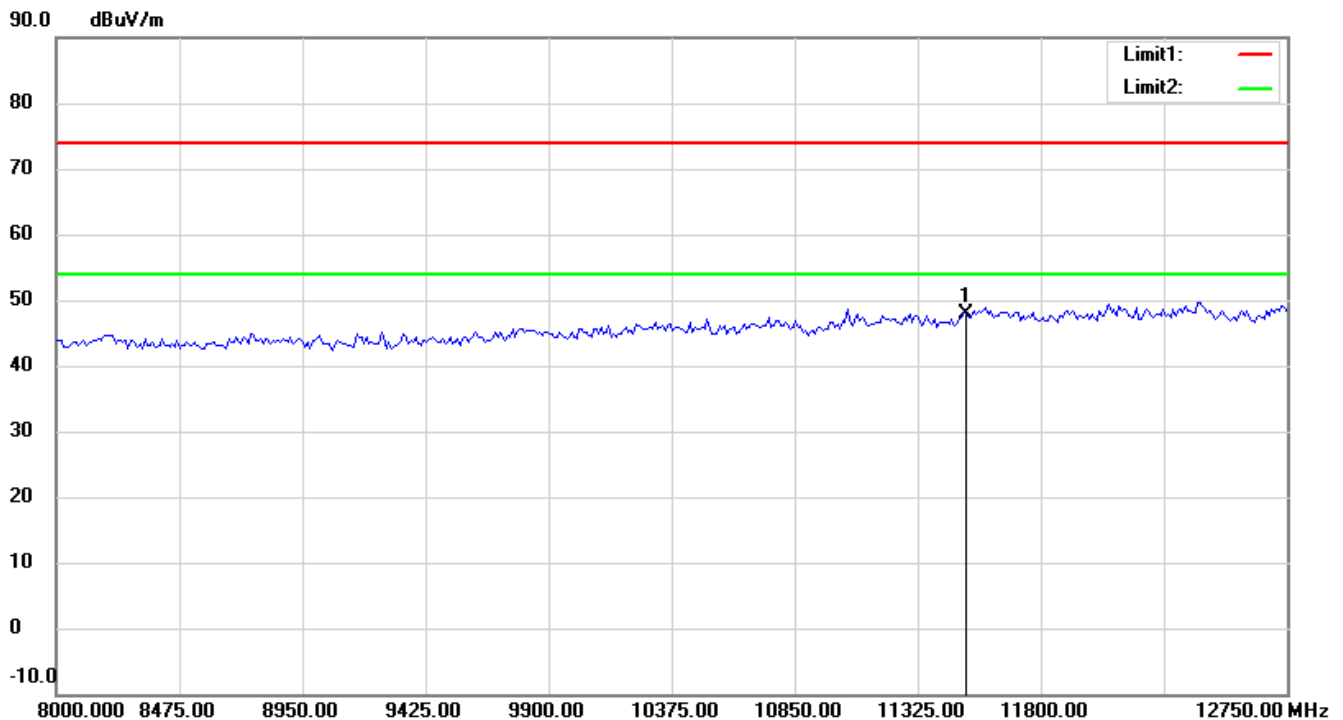
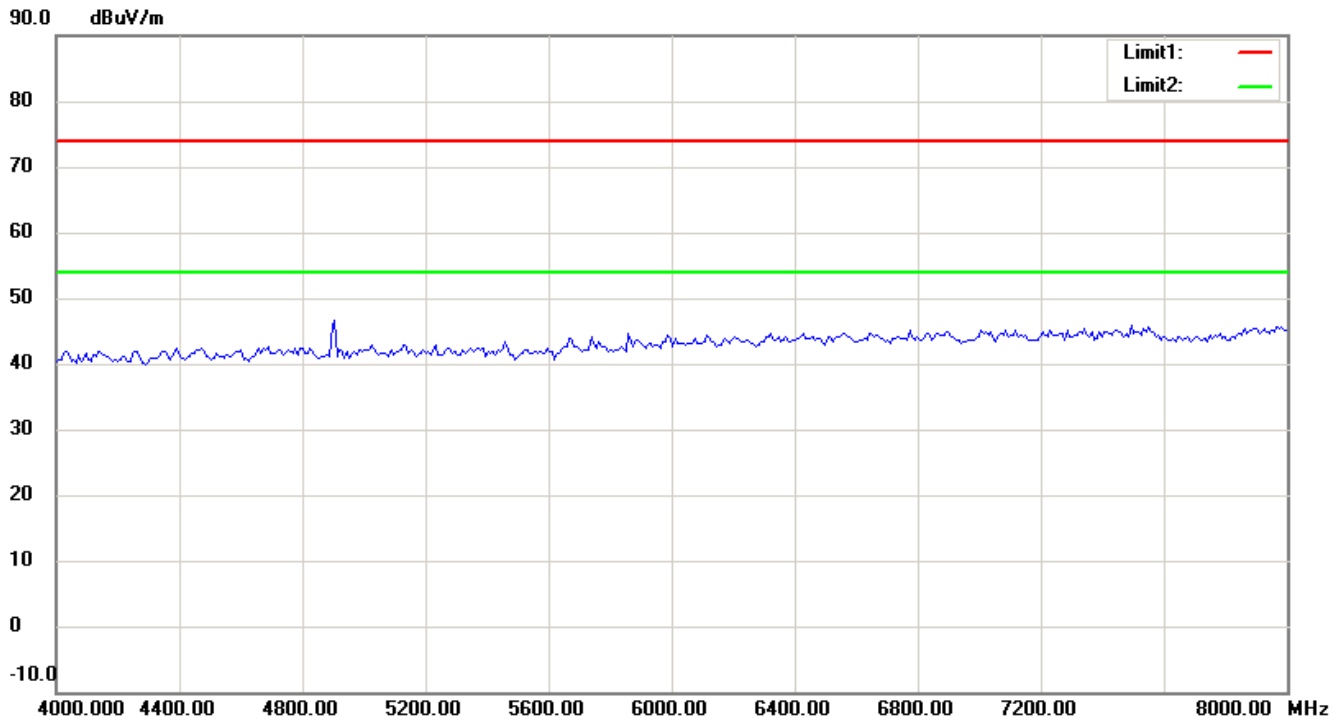
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

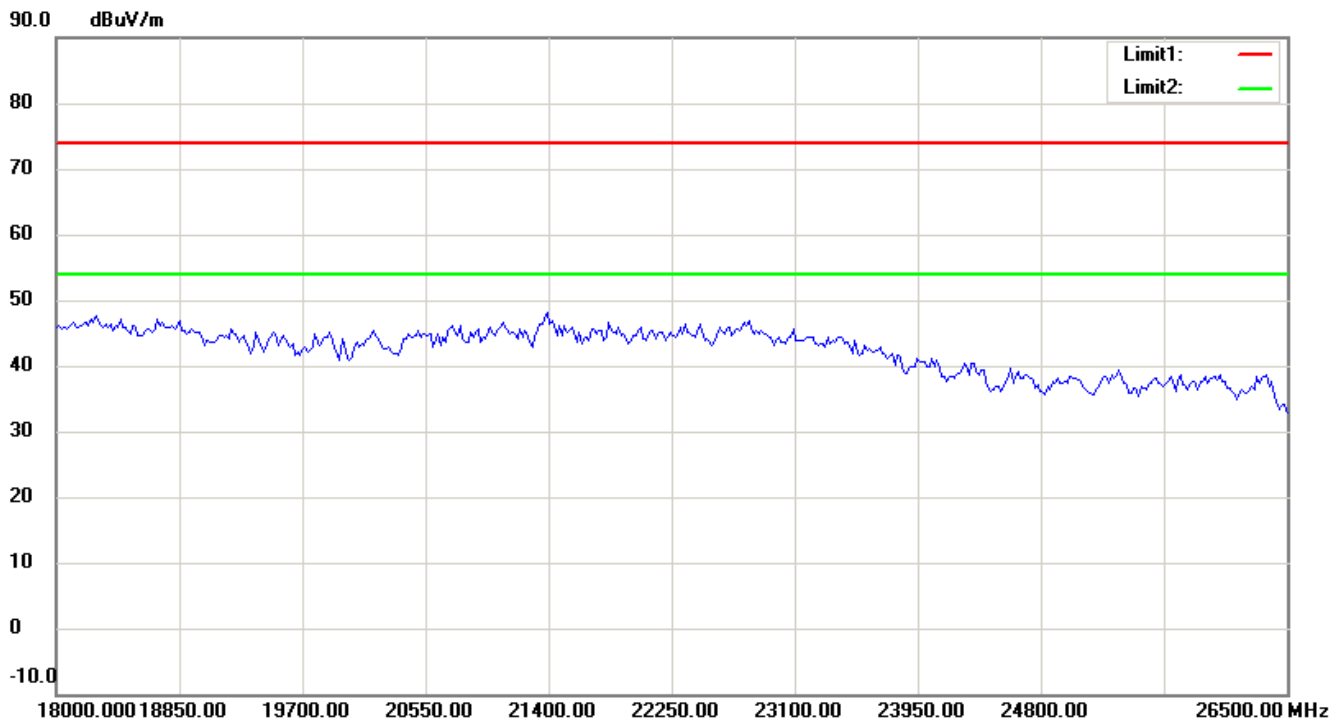
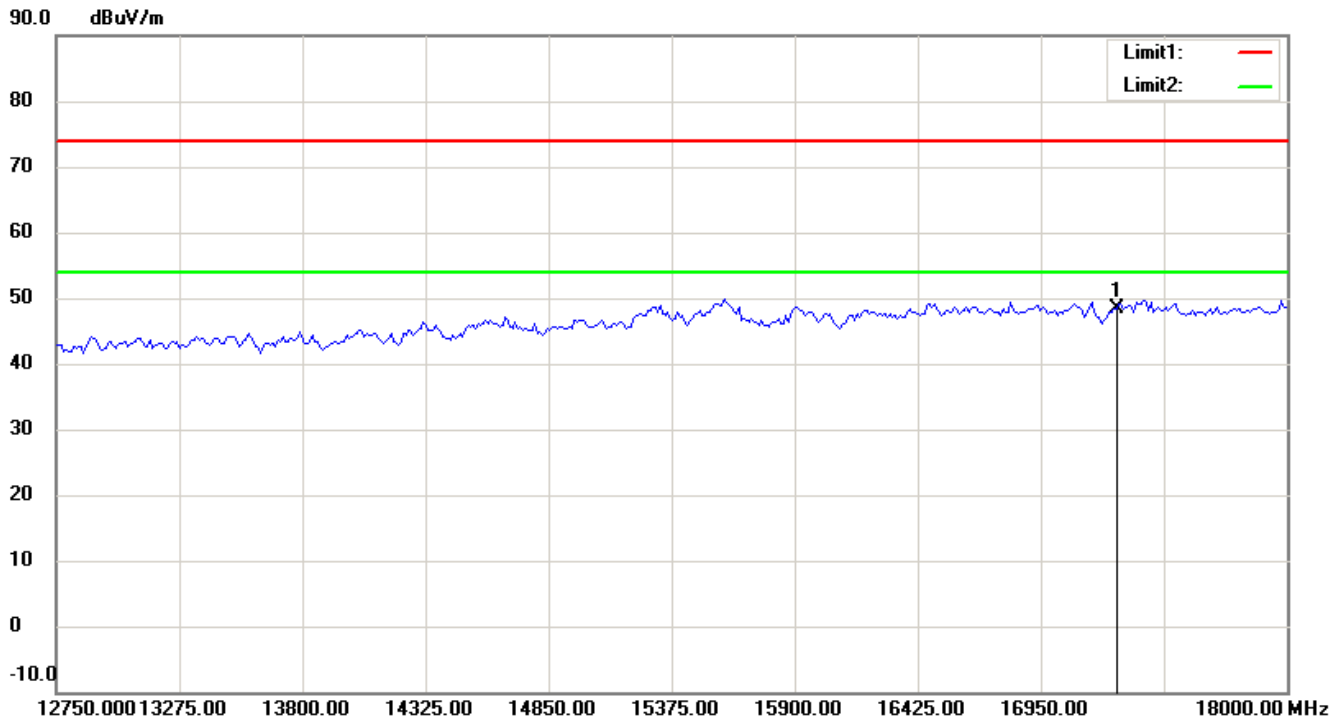
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

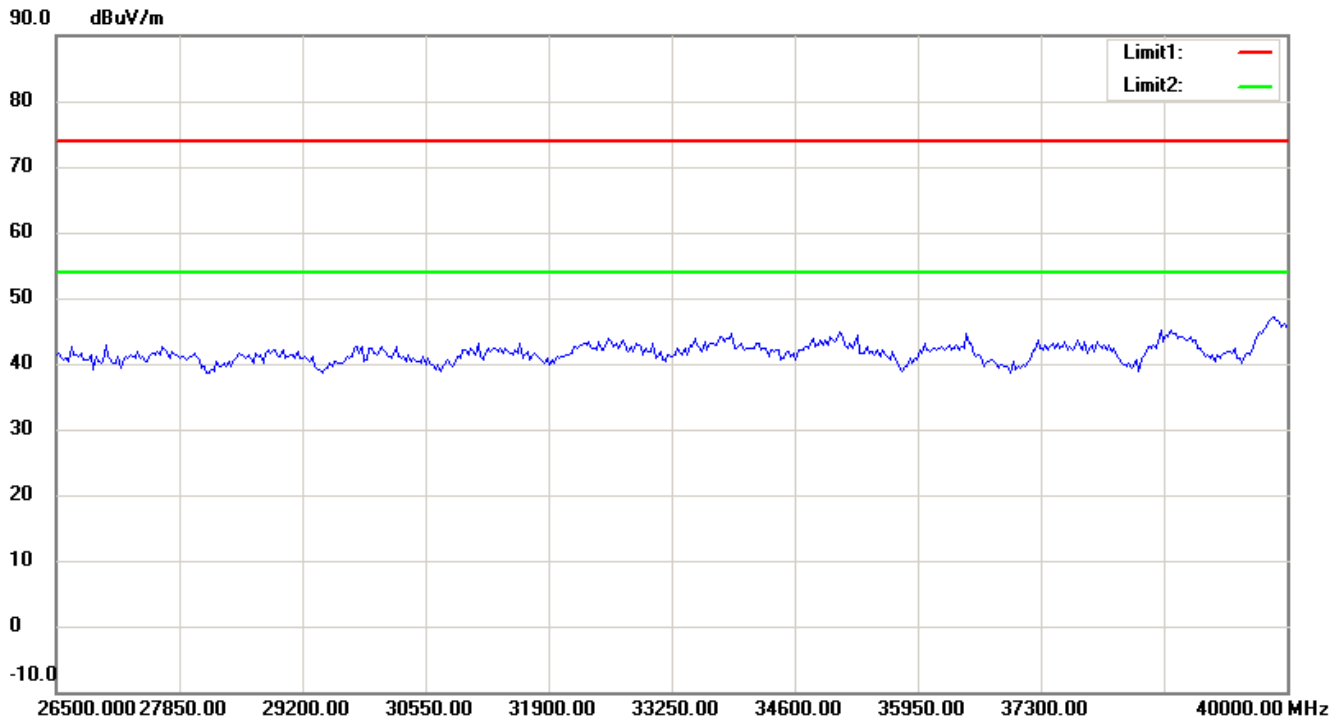
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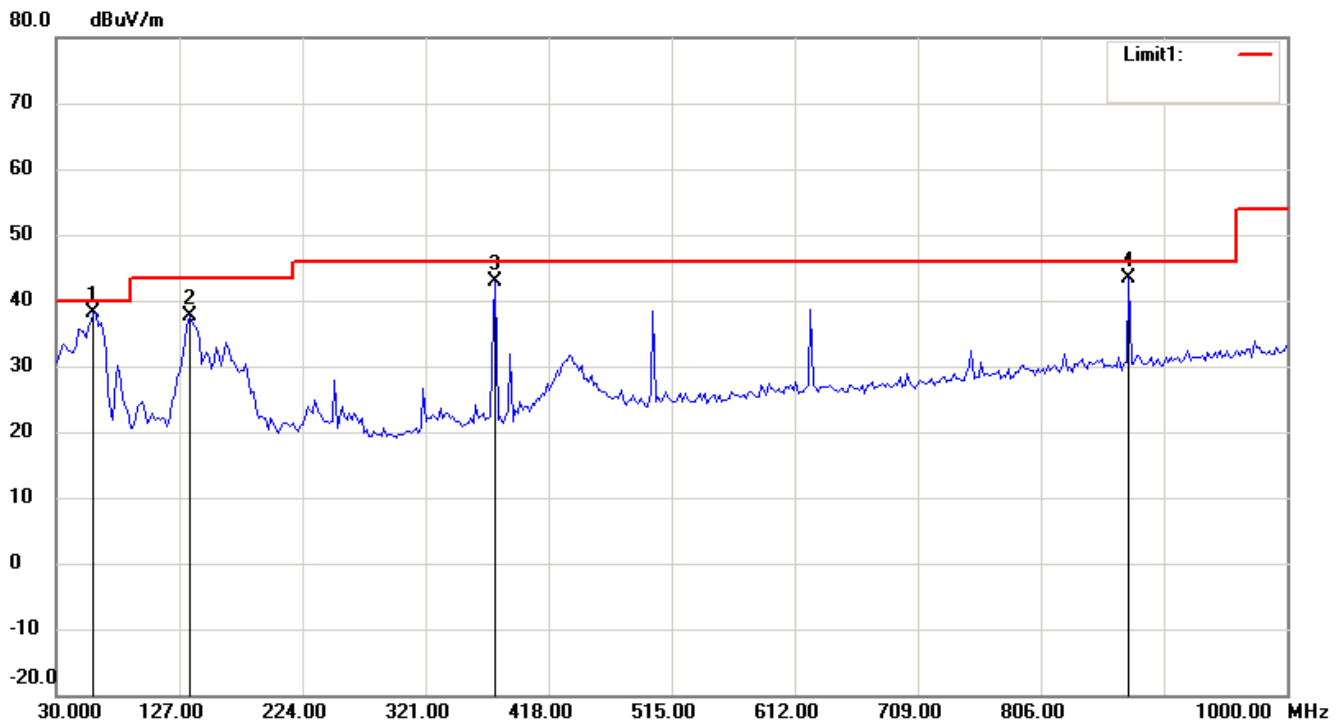
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



Antenna Polarization V



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

Note:

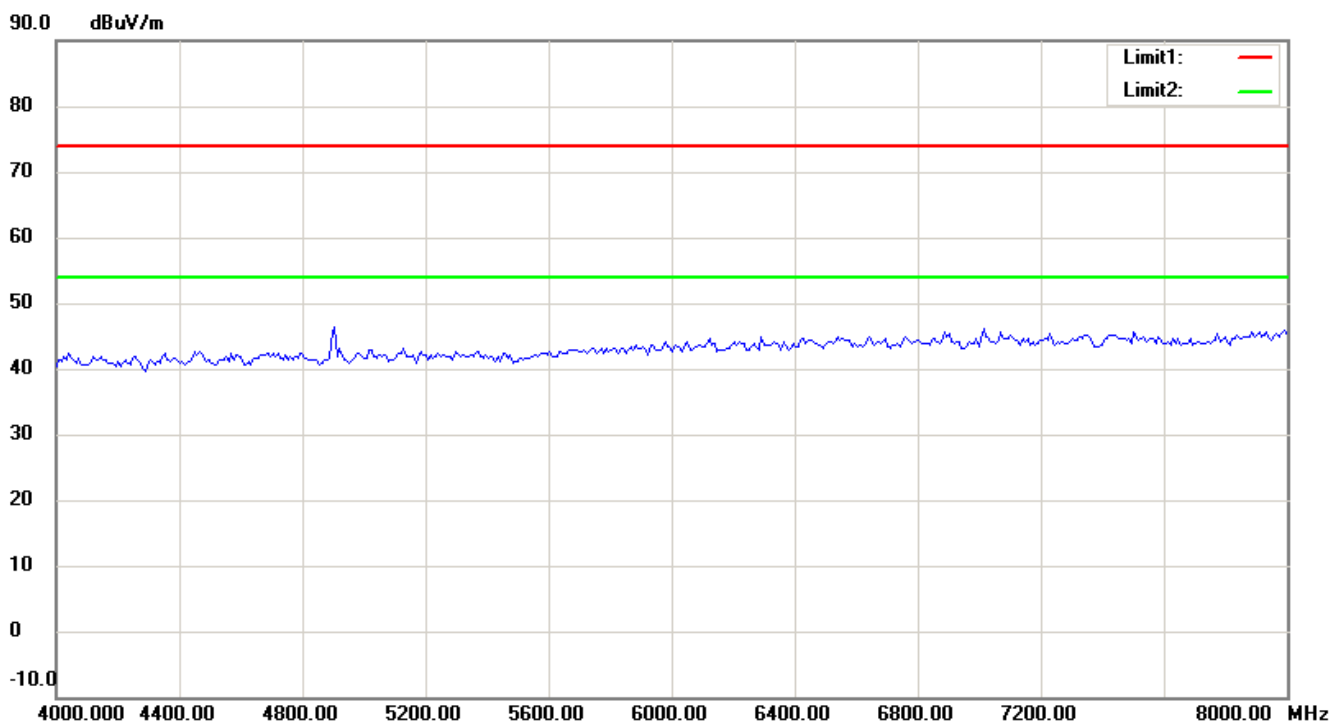
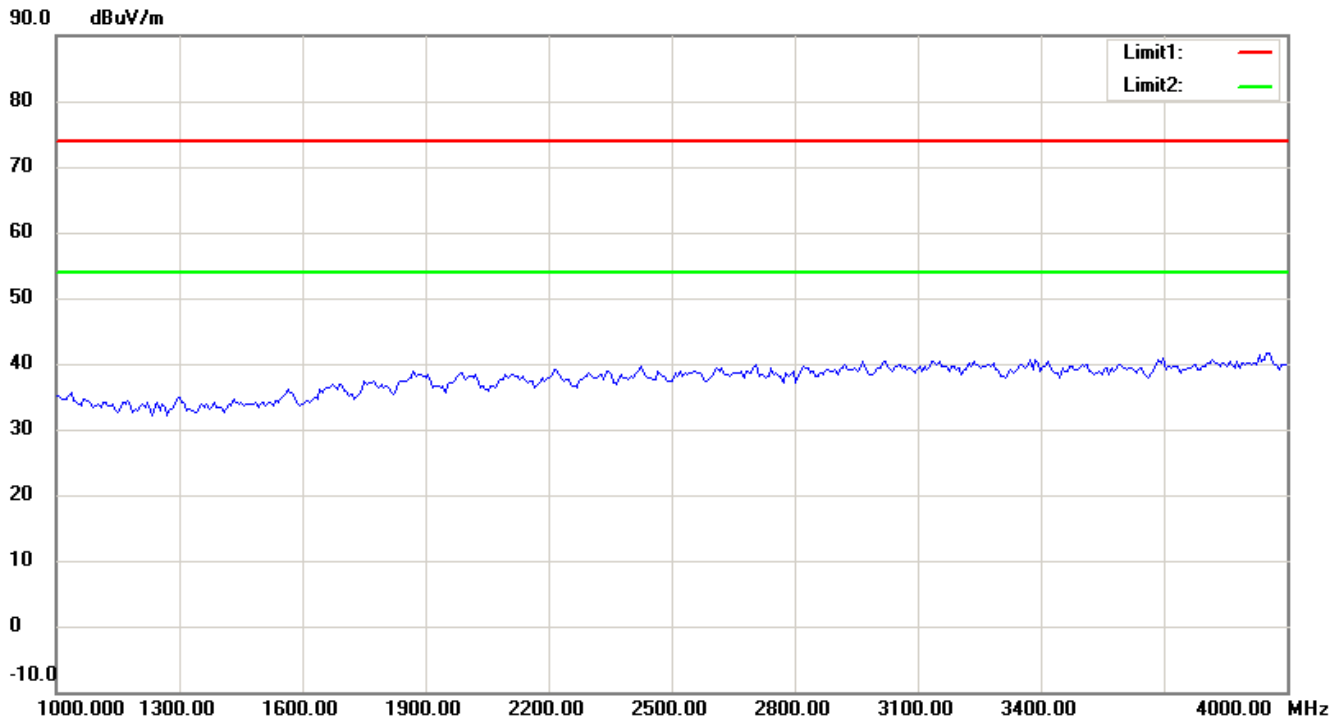
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

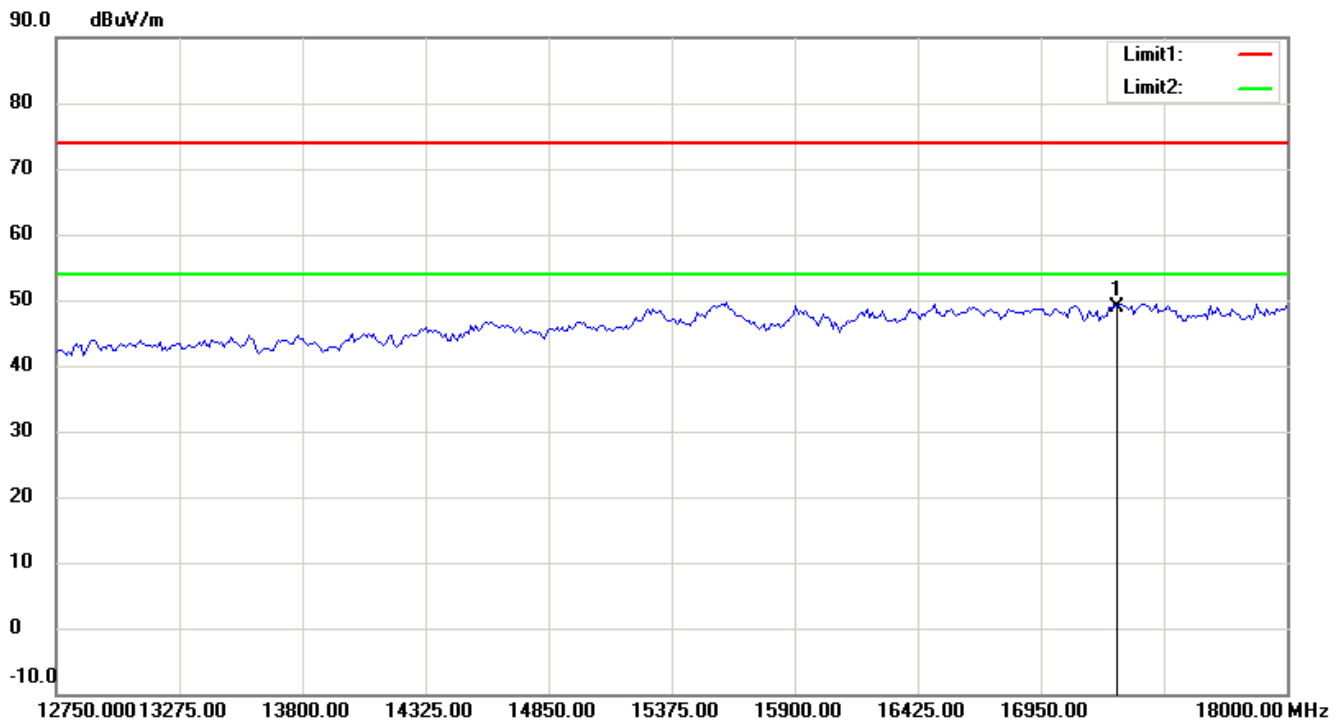
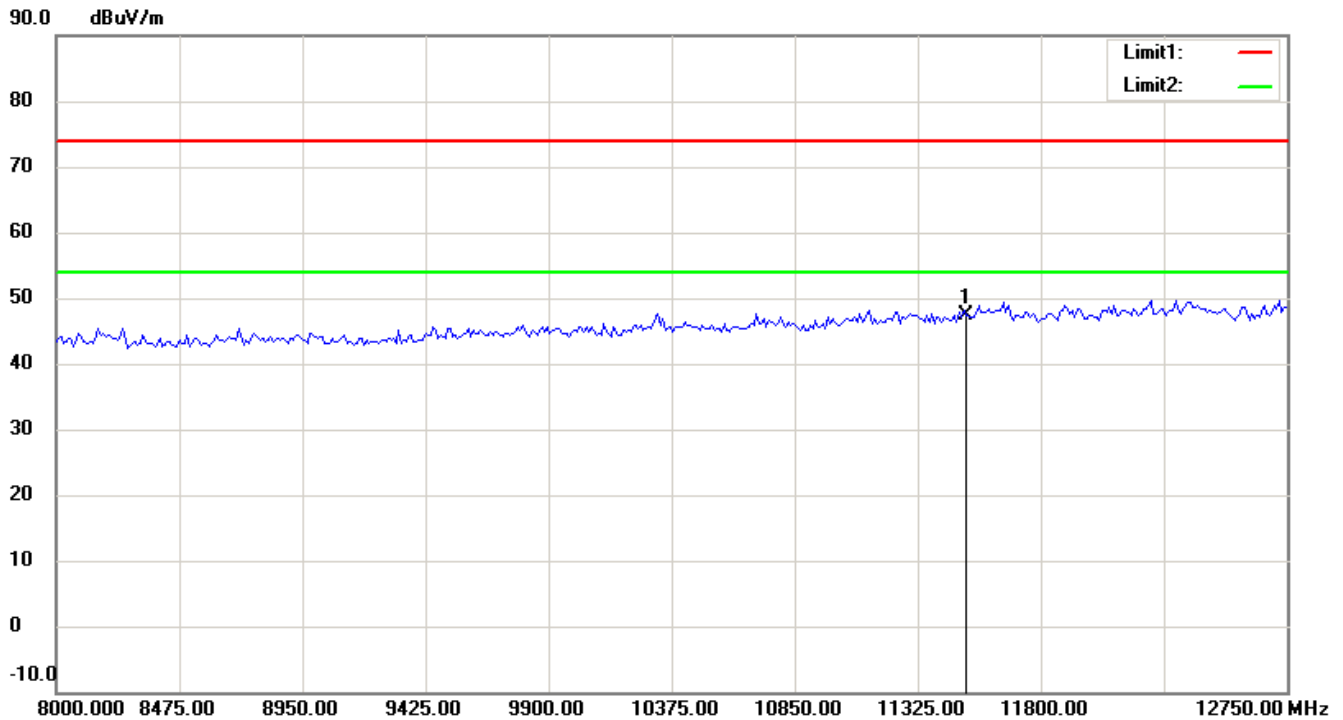
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

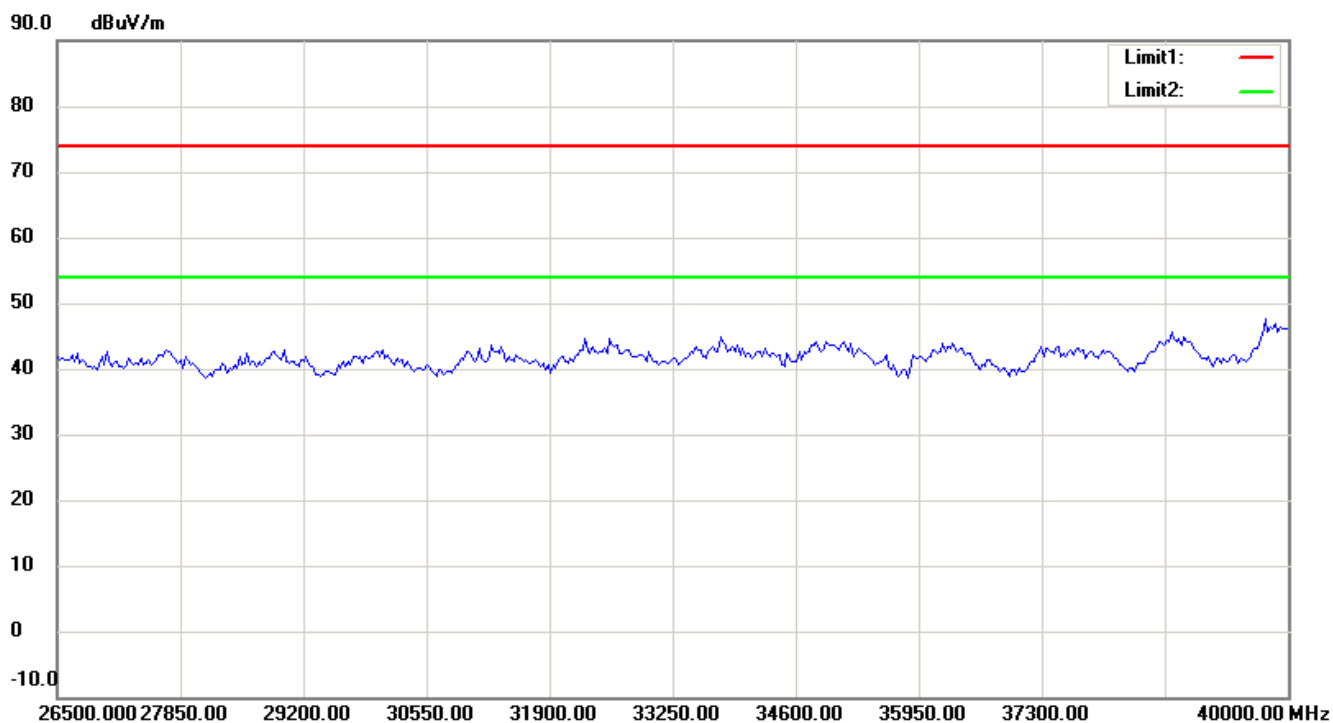
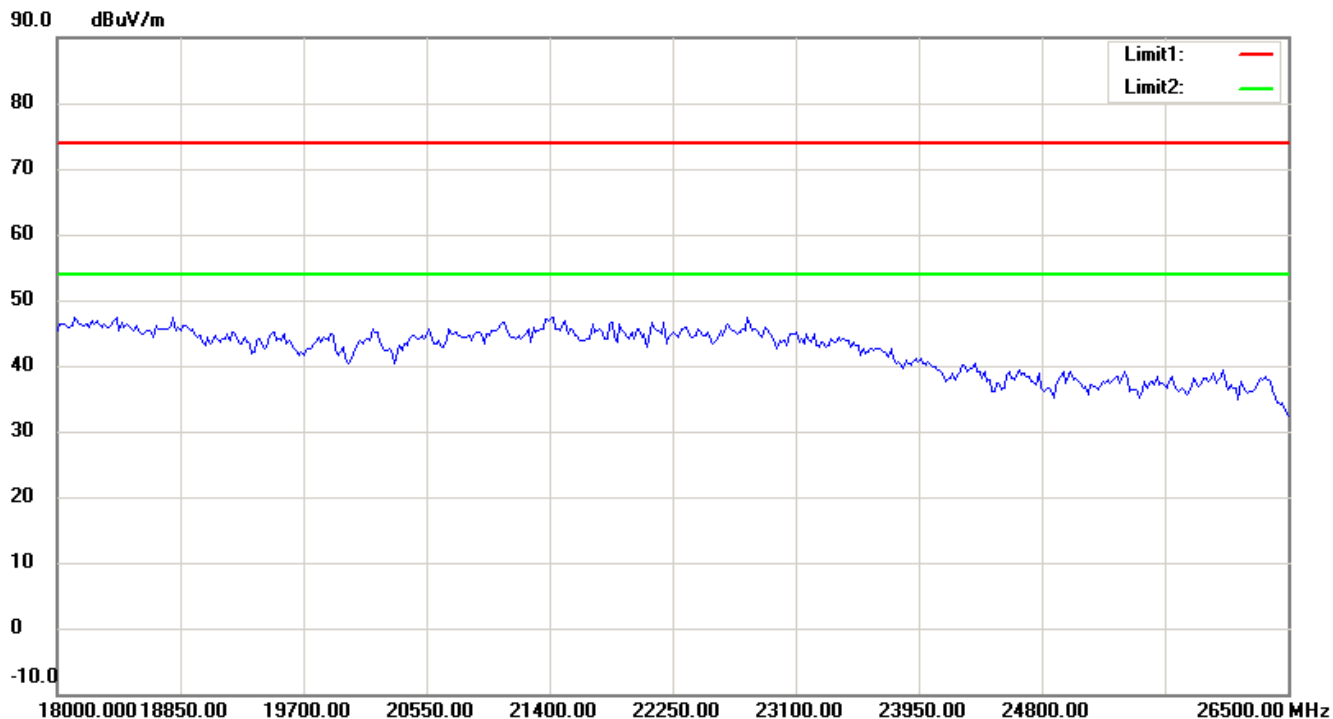
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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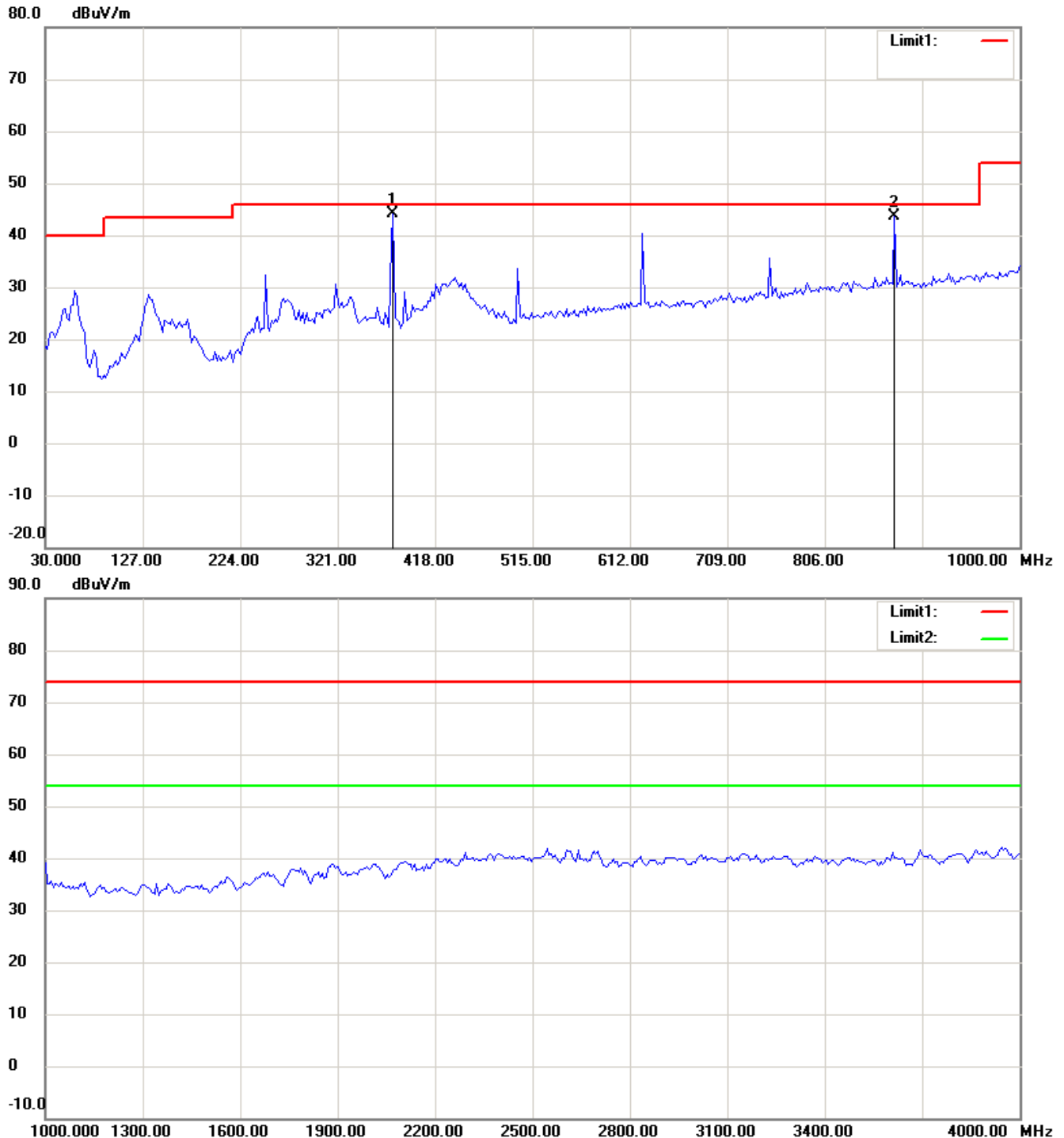
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 20MHz 2412MHz

Antenna Polarization H



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

Note:

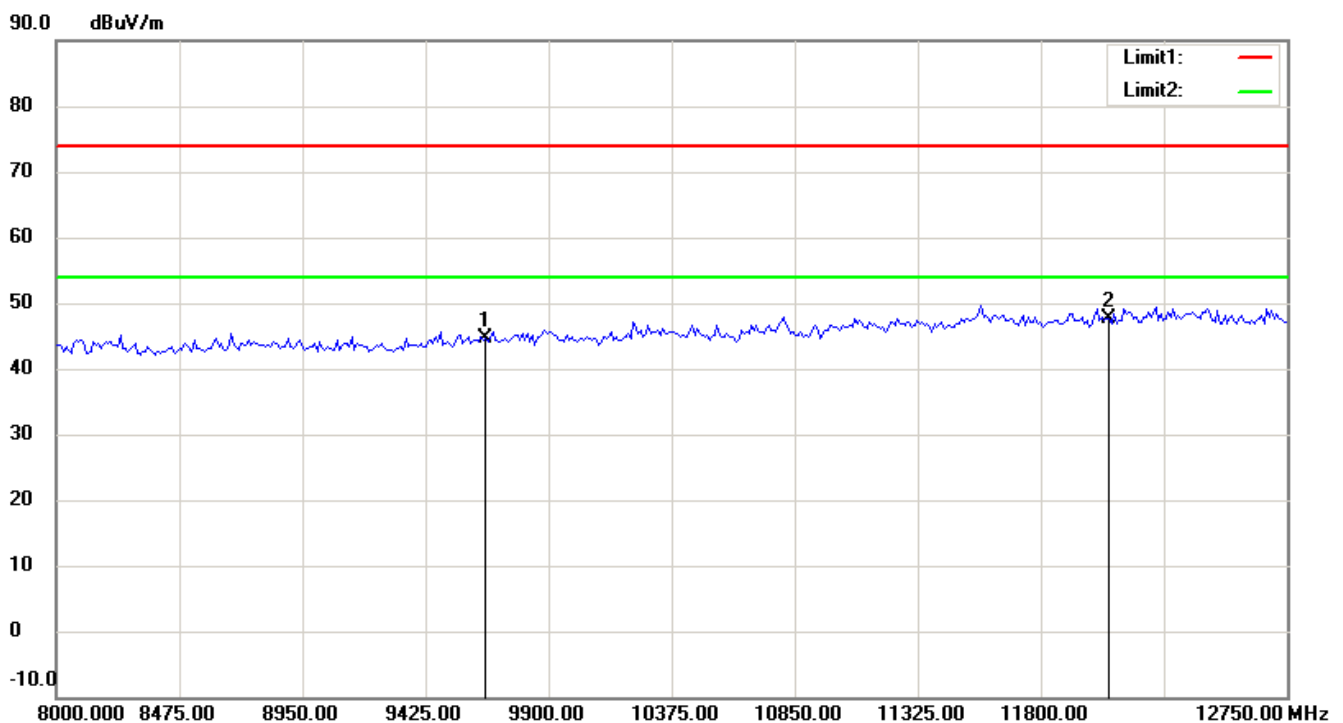
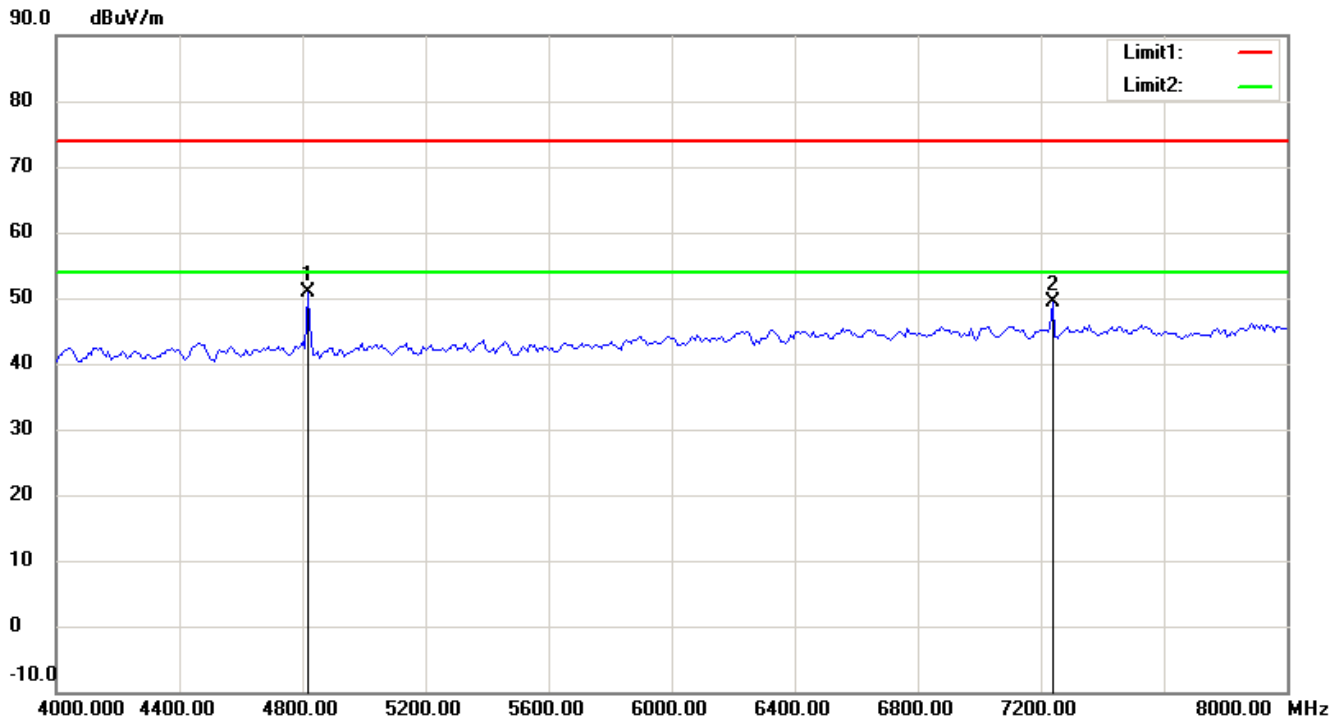
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

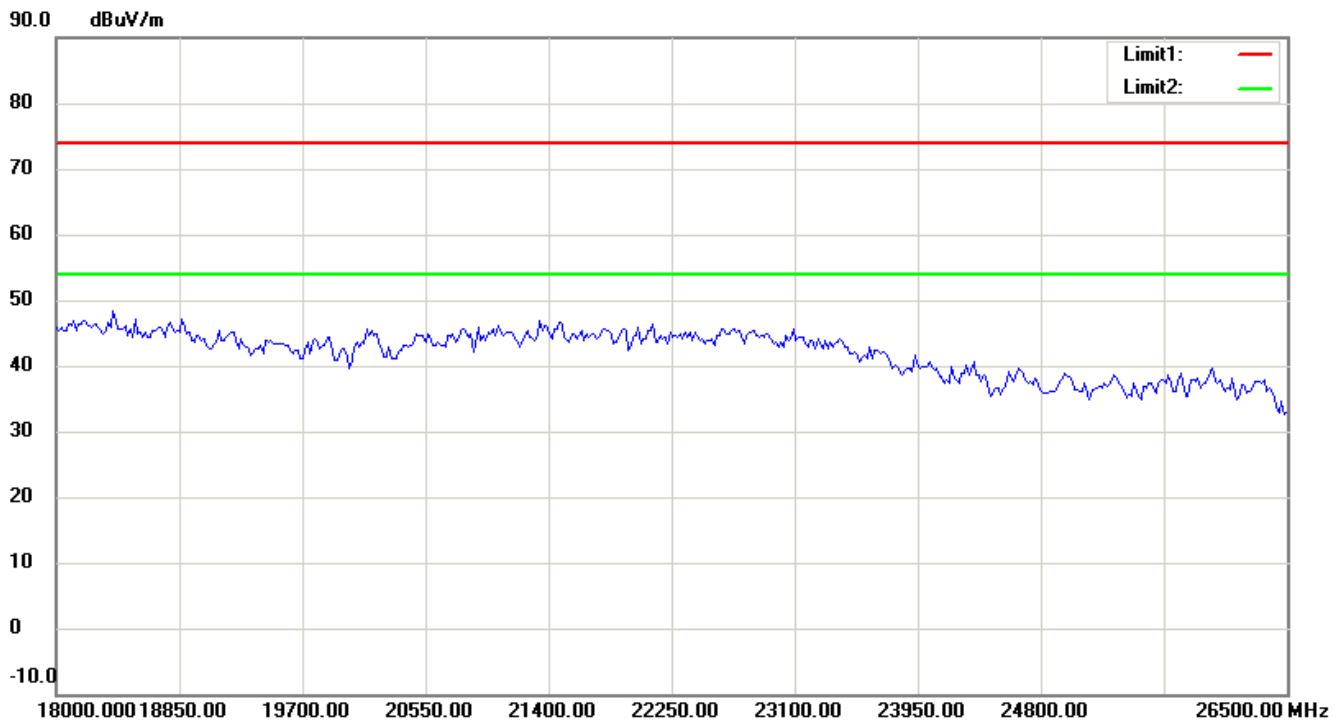
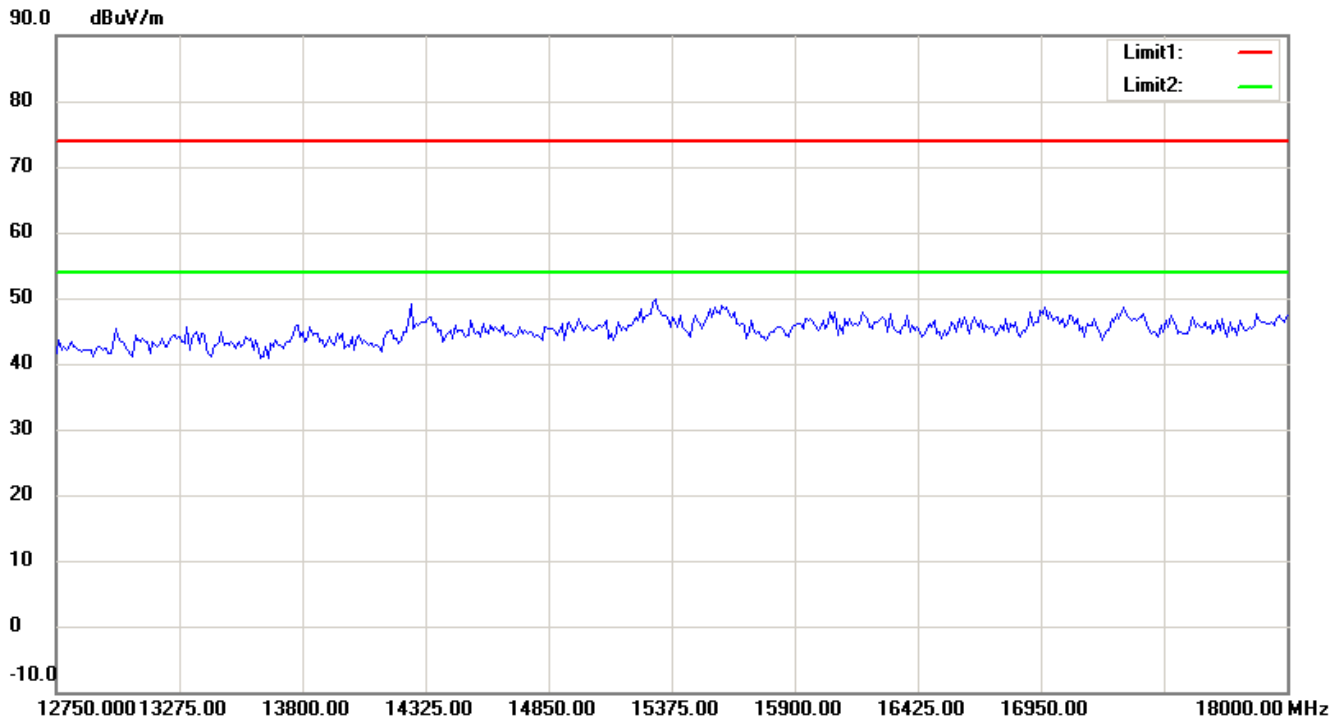
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

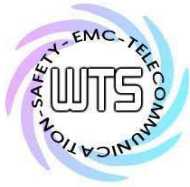
FCC ID: ZTT-APA20



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

Note:

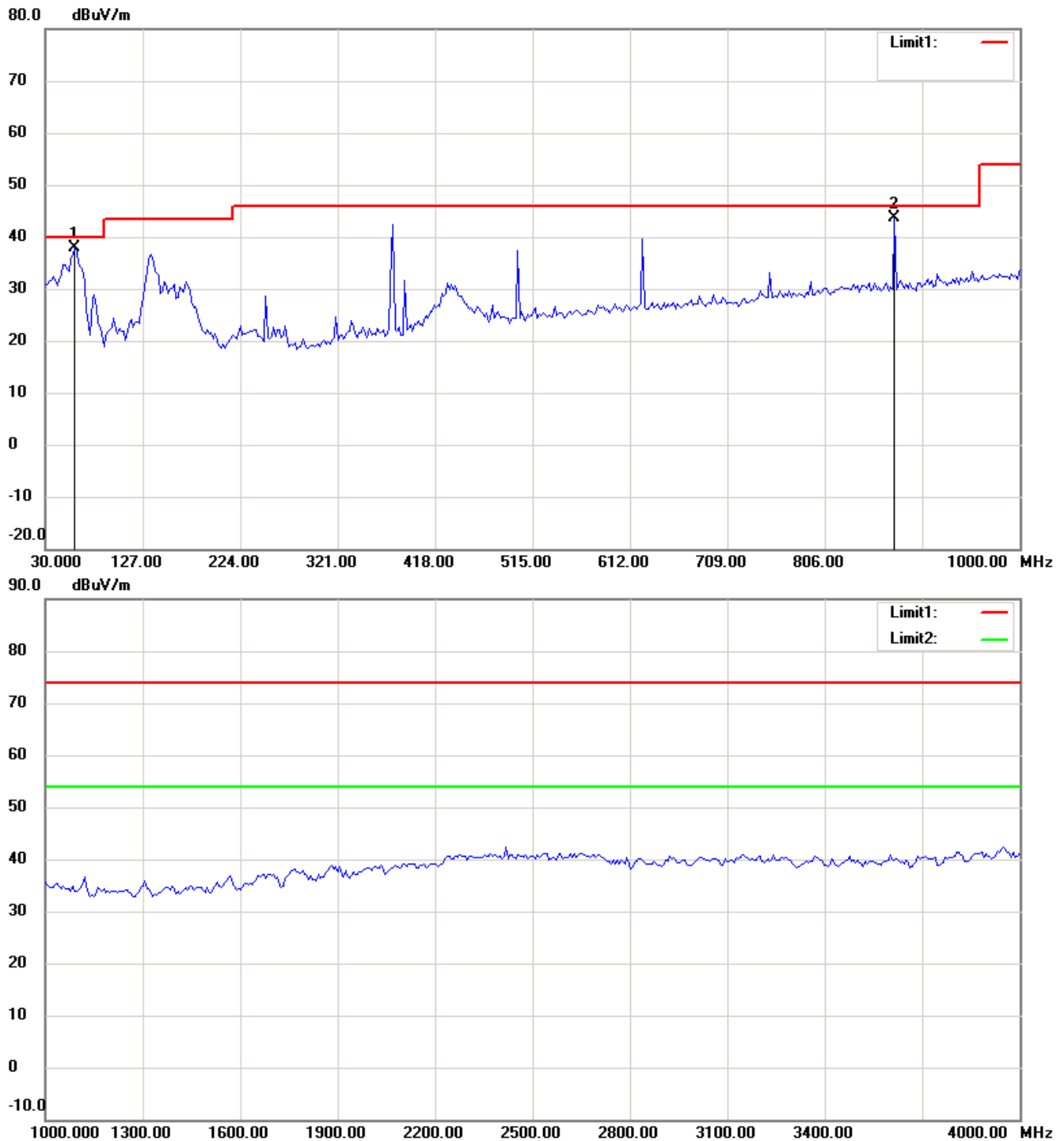
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

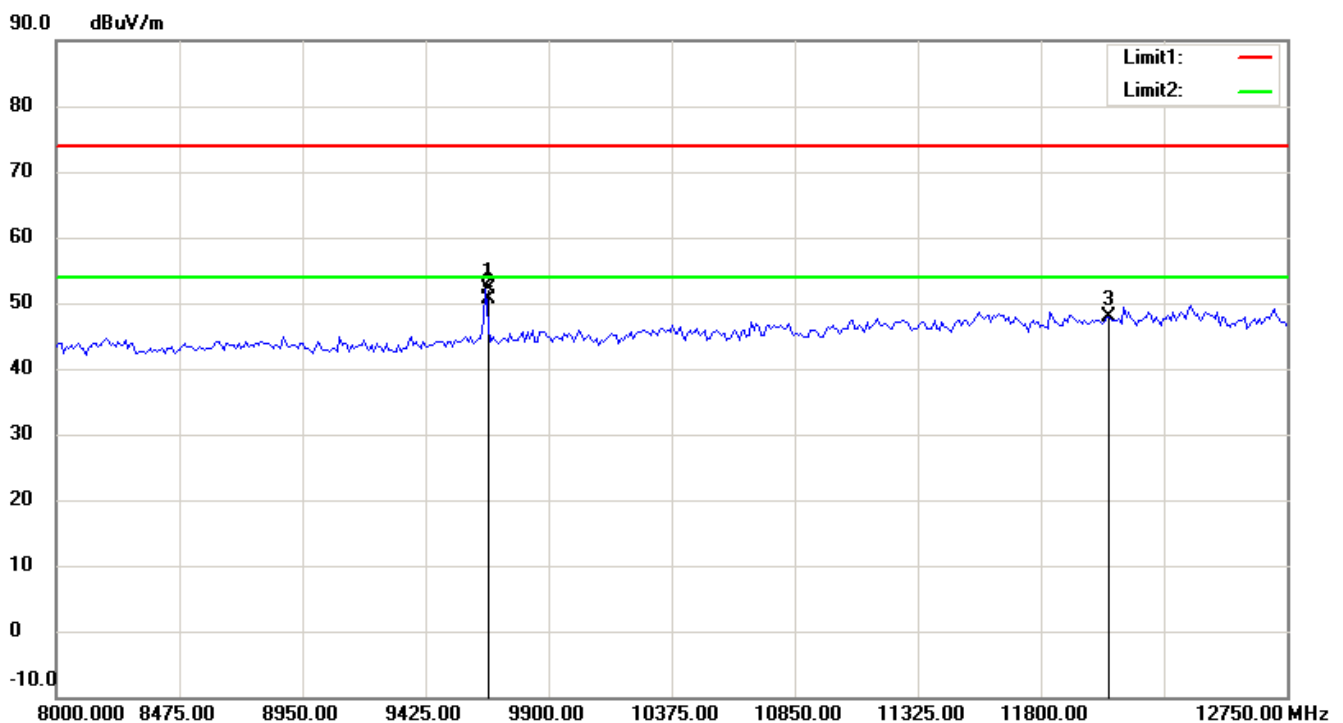
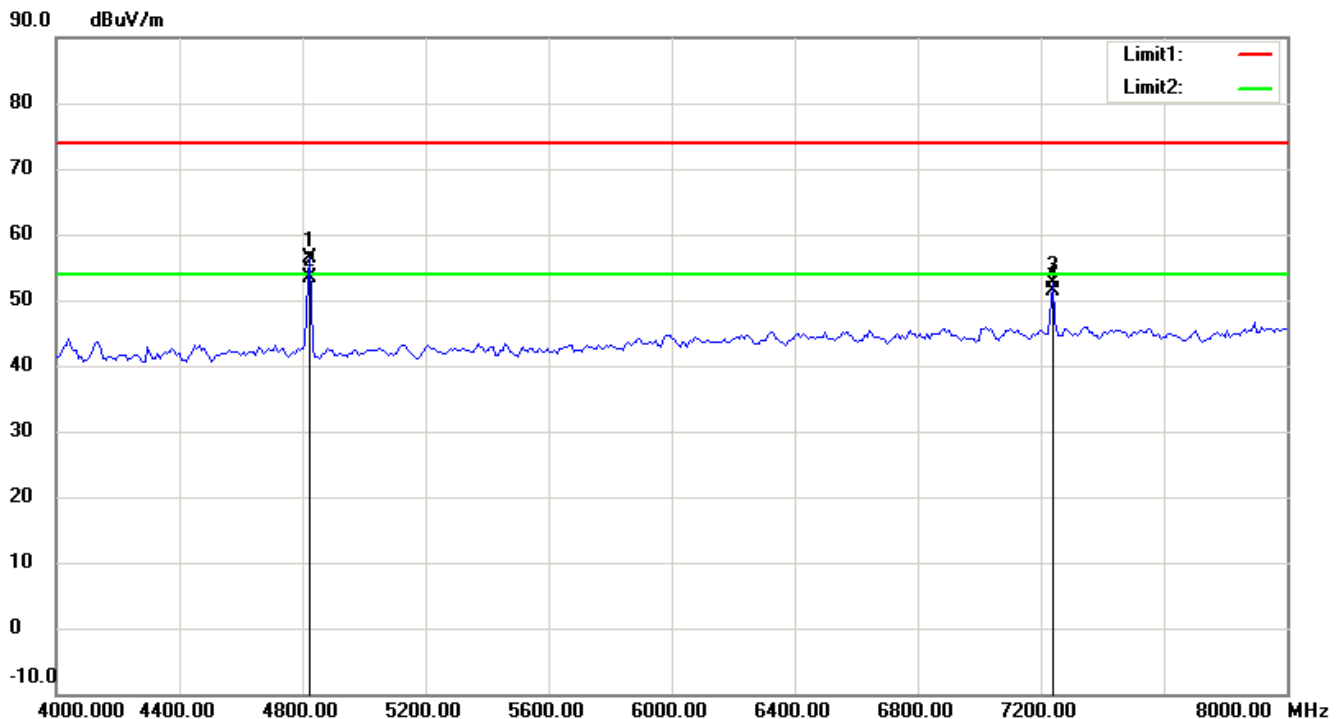
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

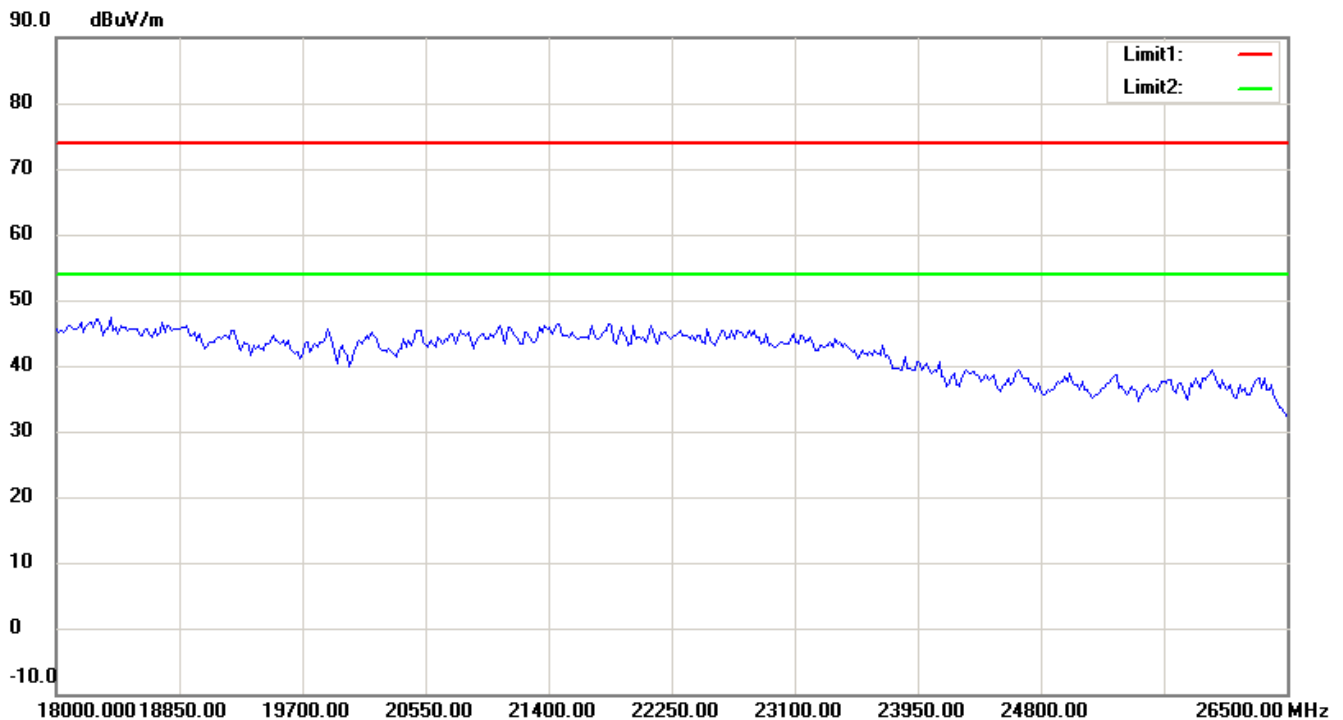
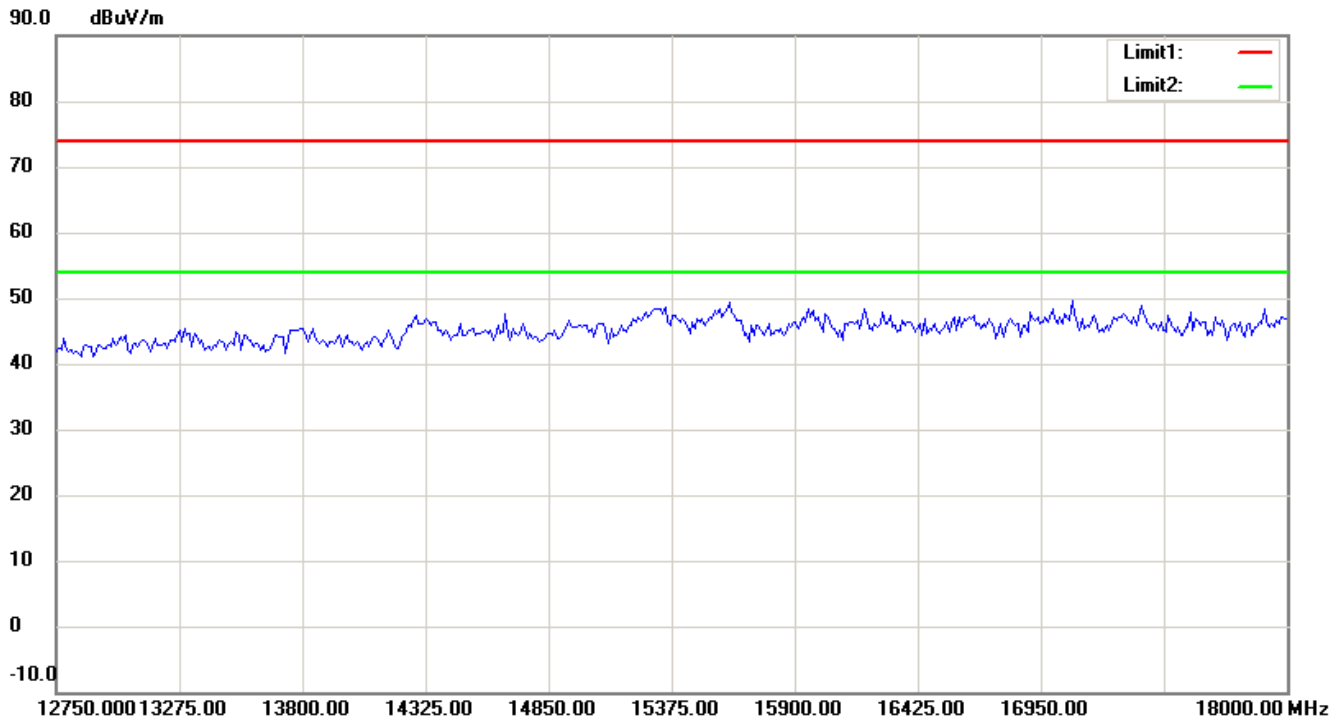
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

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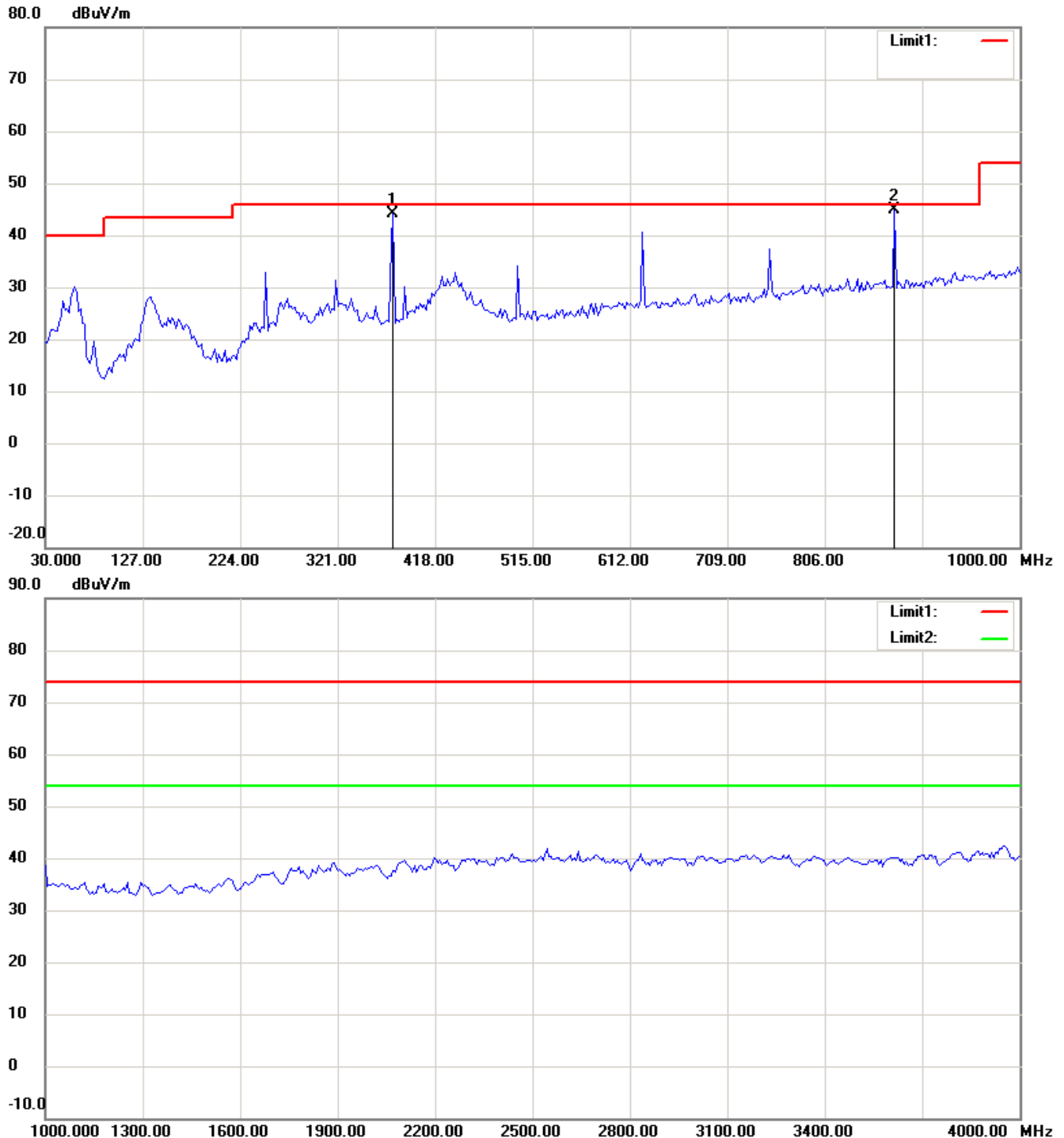
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 20MHz 2437MHz

Antenna Polarization H



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

Note:

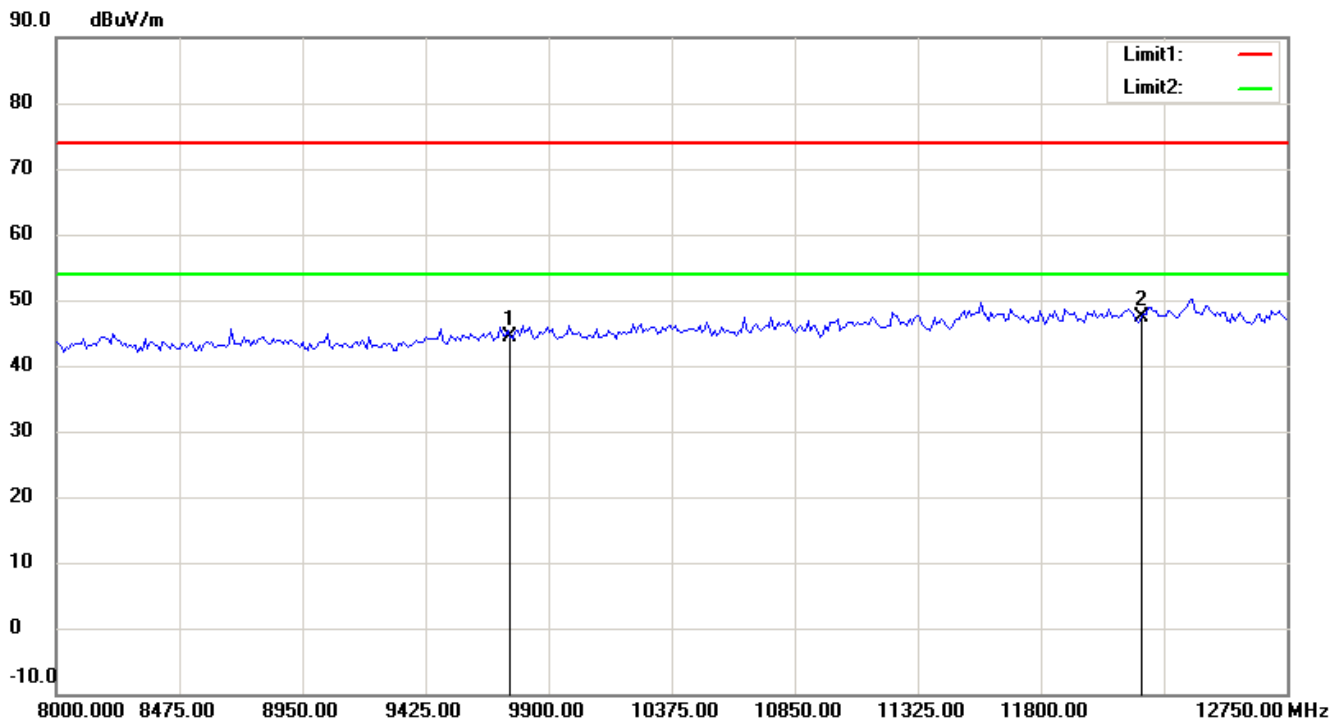
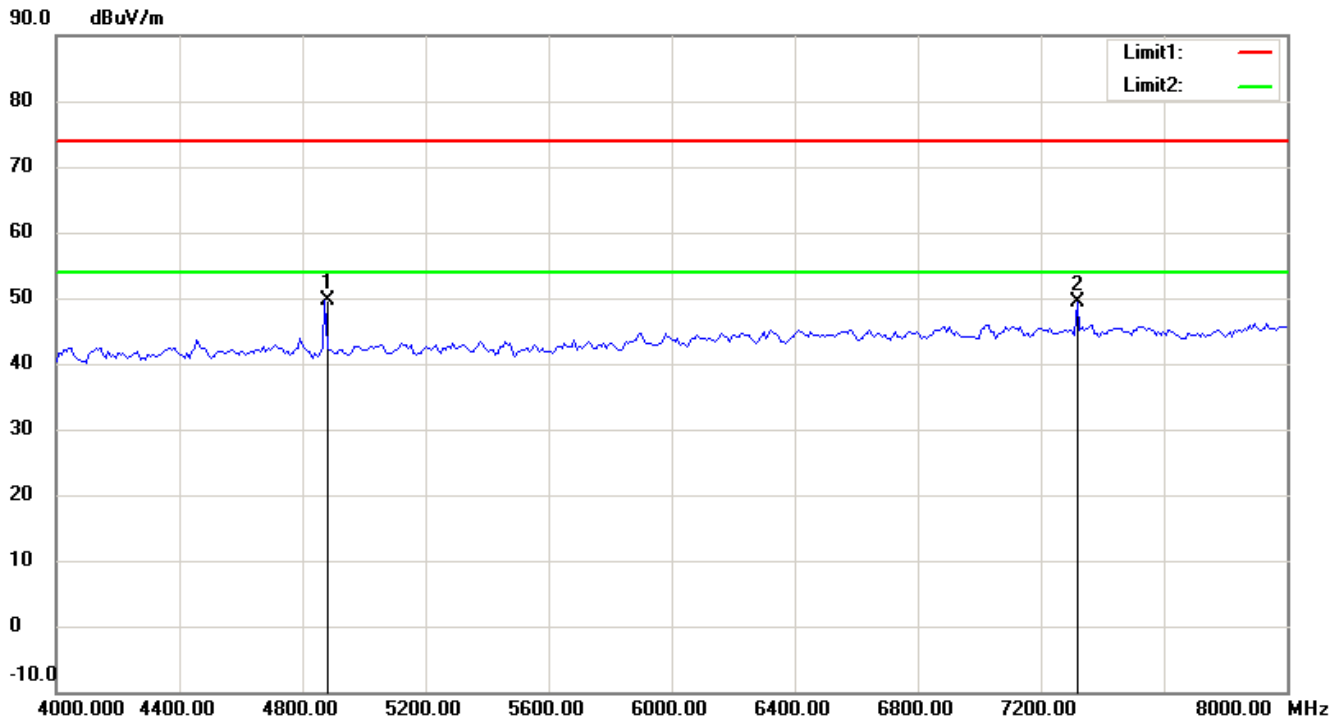
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

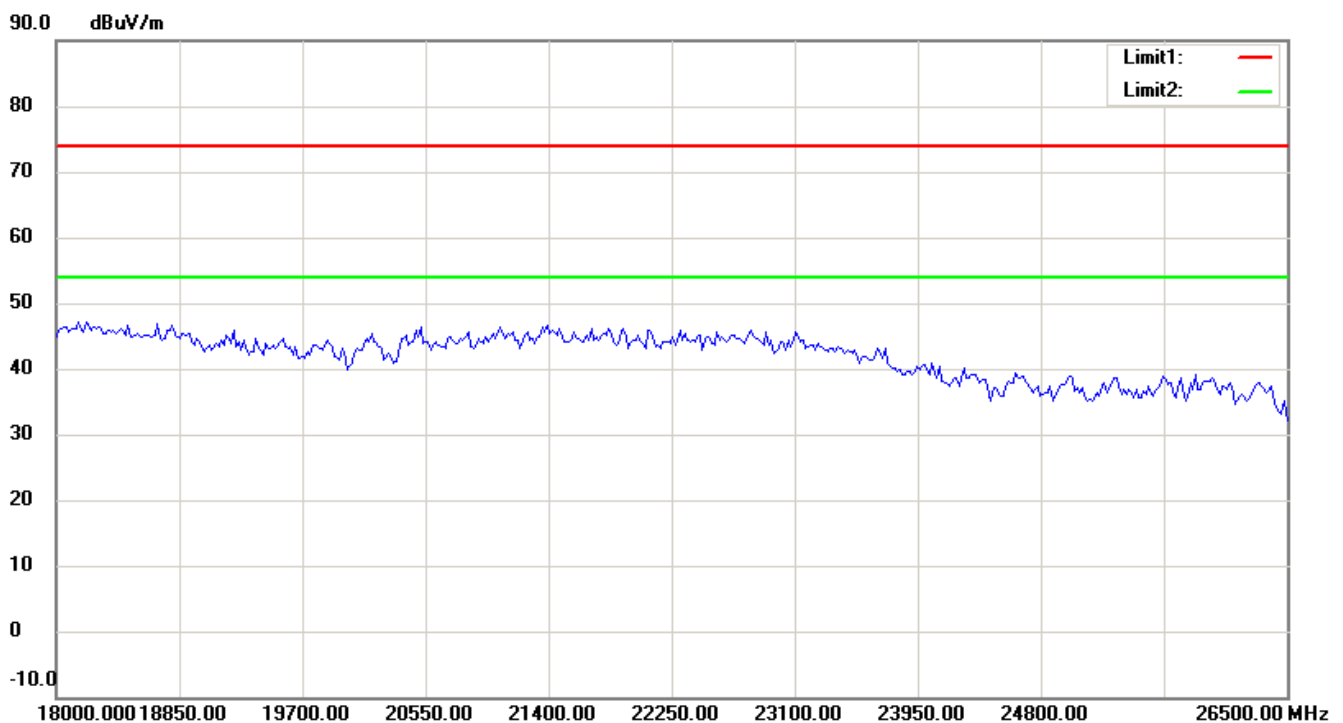
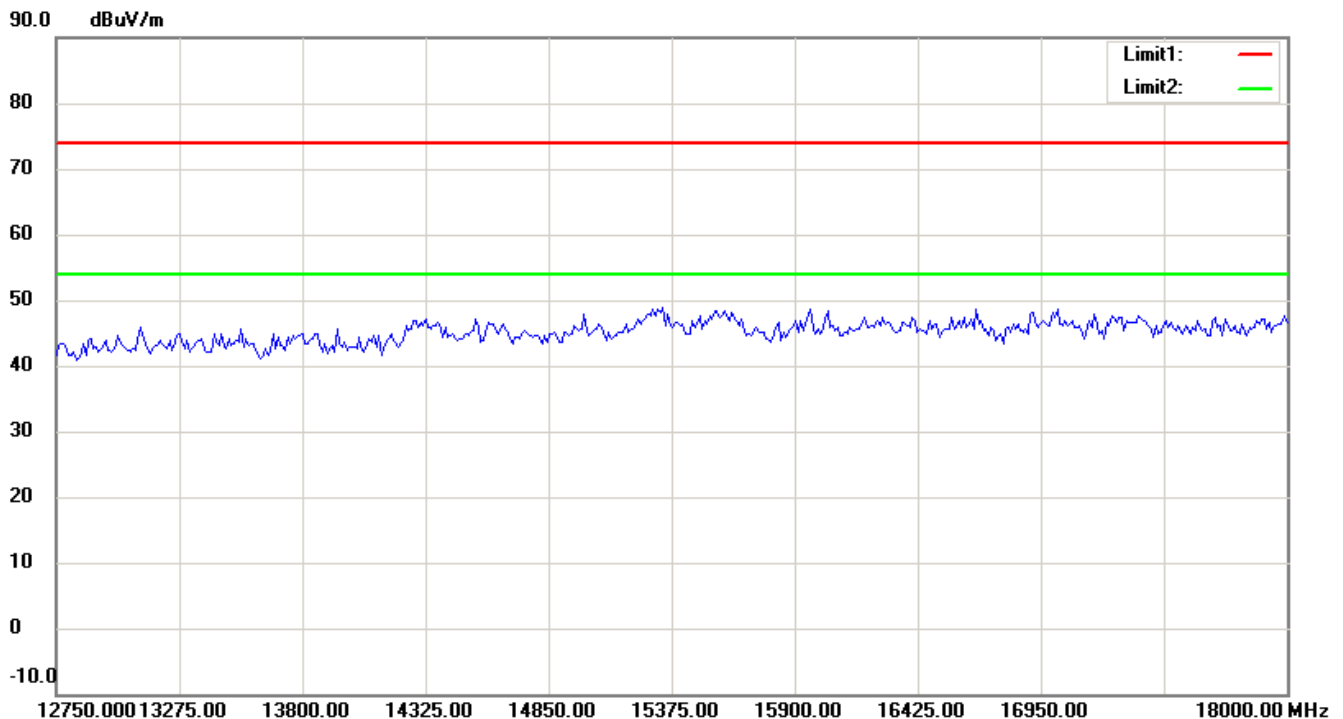
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

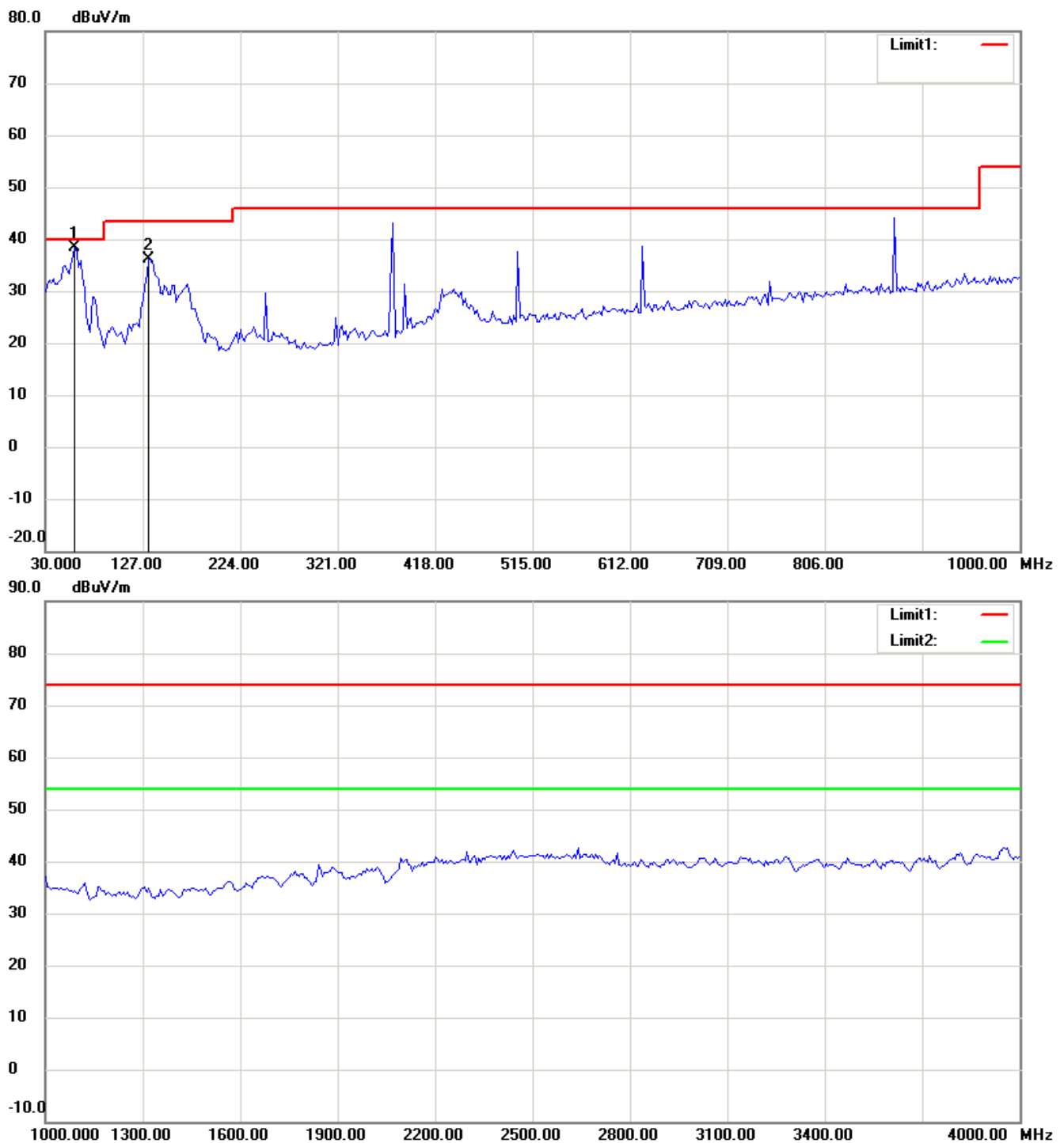
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

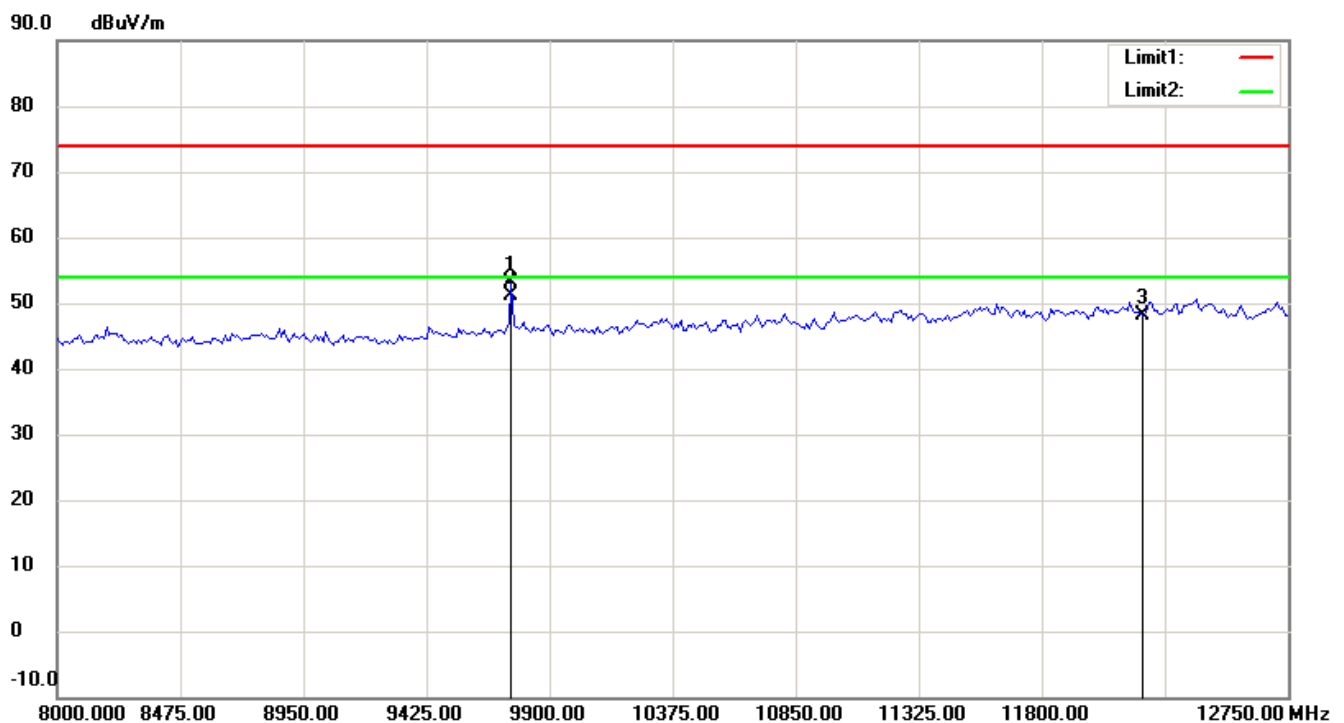
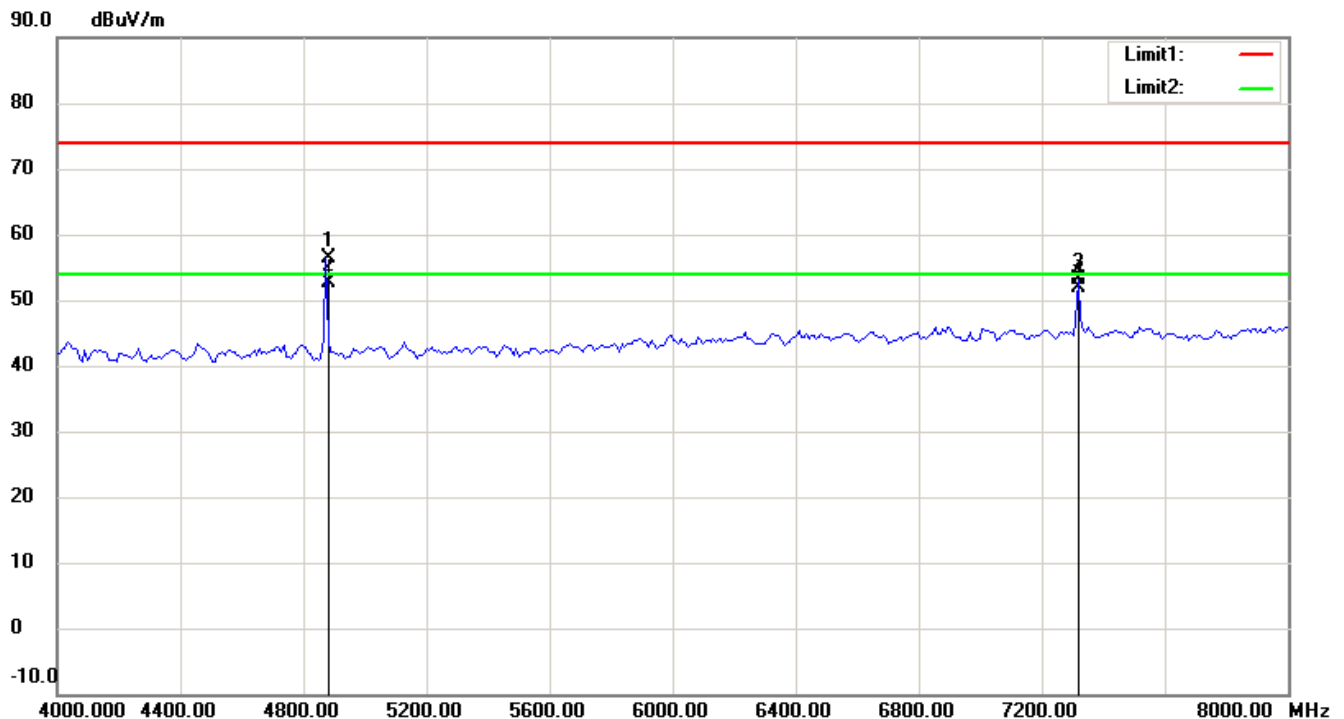
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

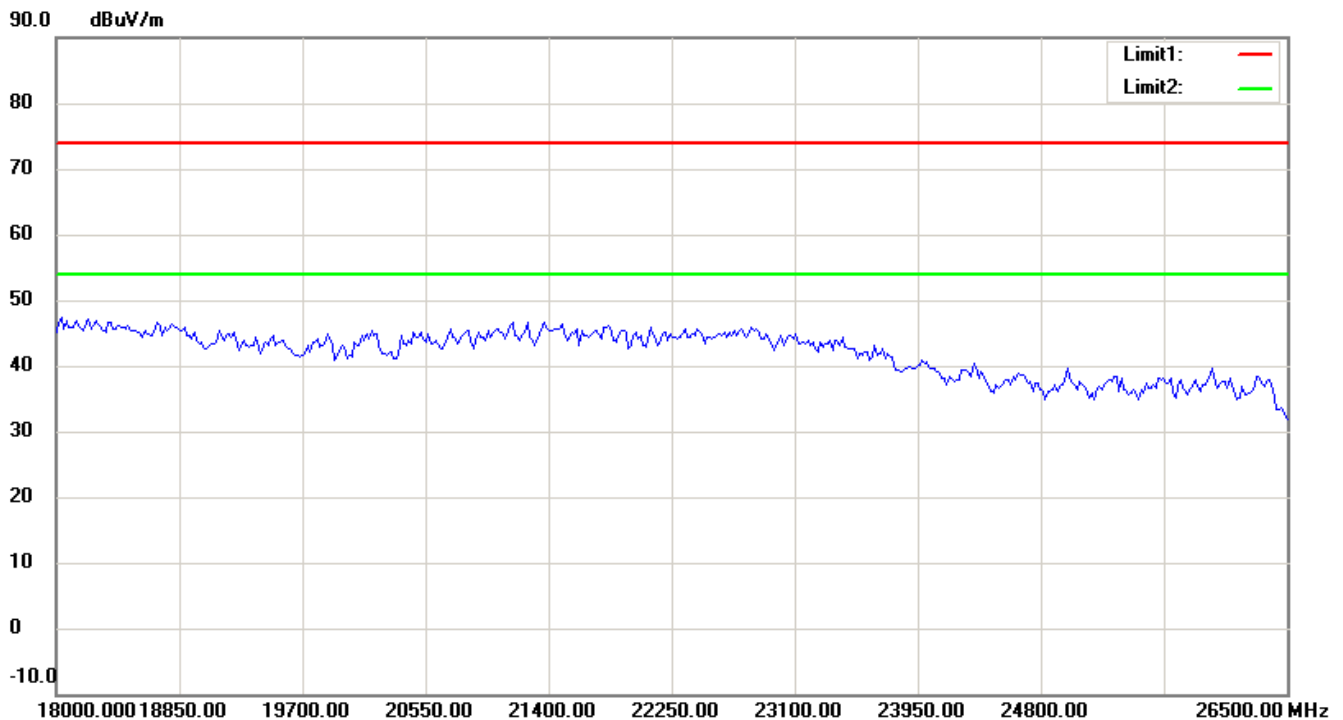
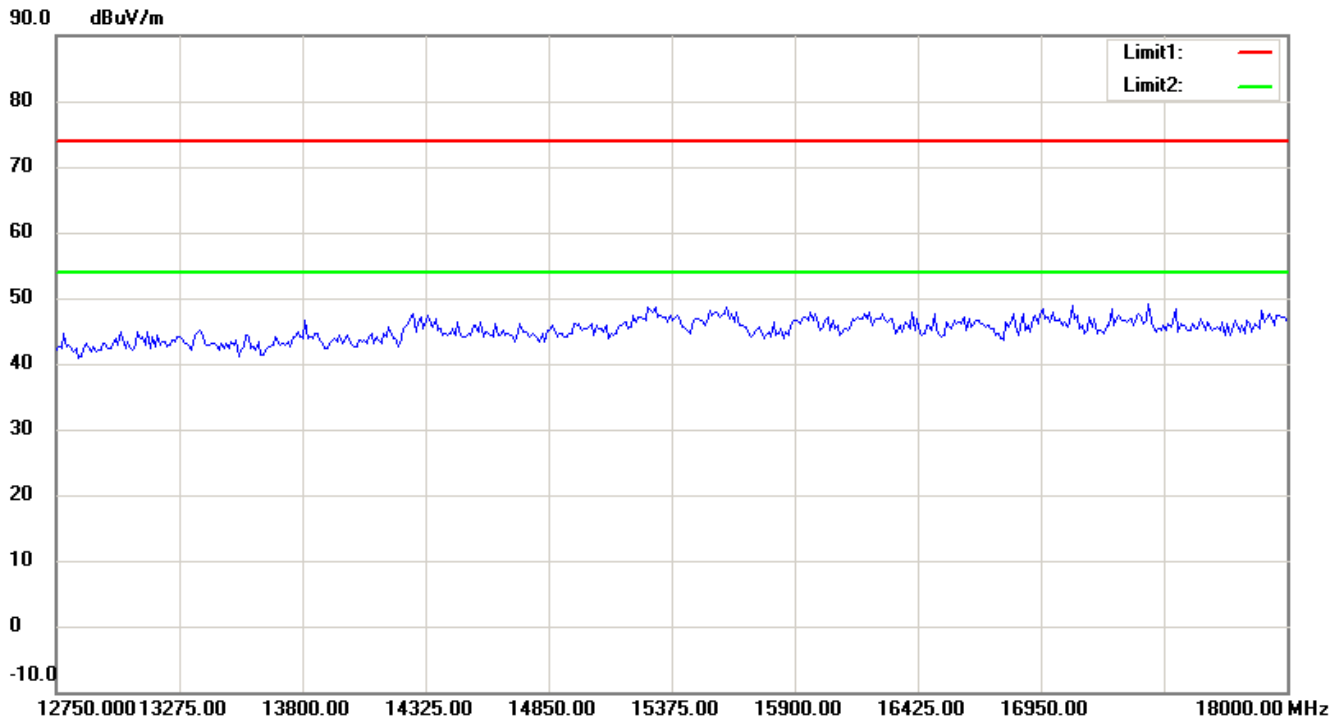
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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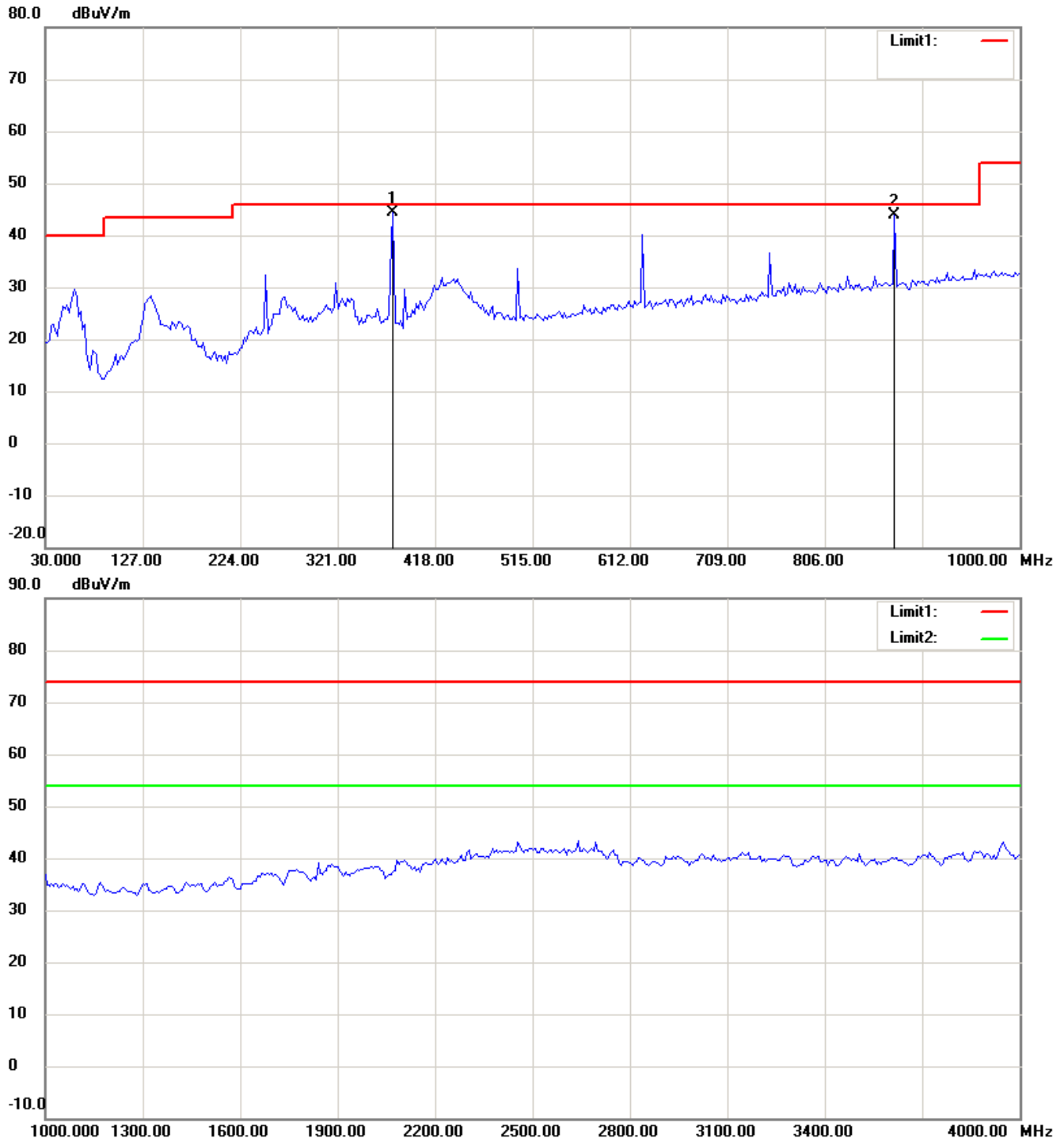
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 20MHz 2462MHz

Antenna Polarization H



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

Note:

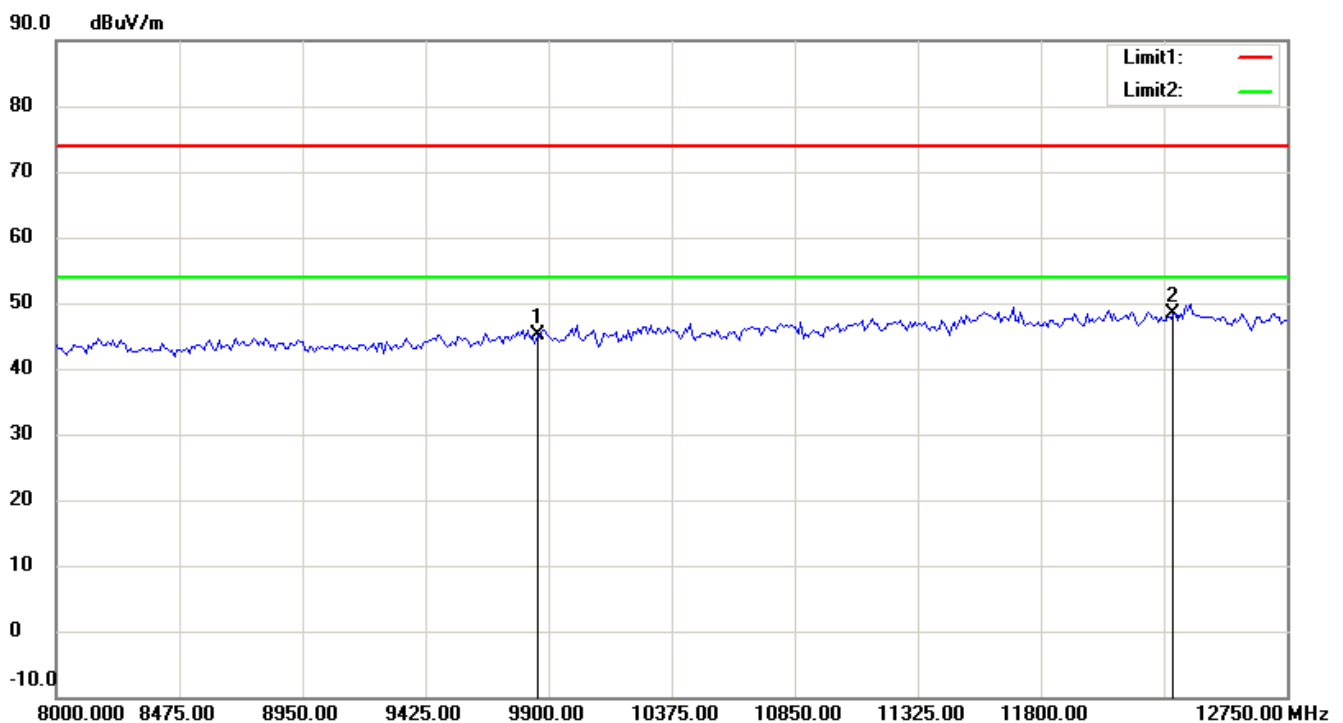
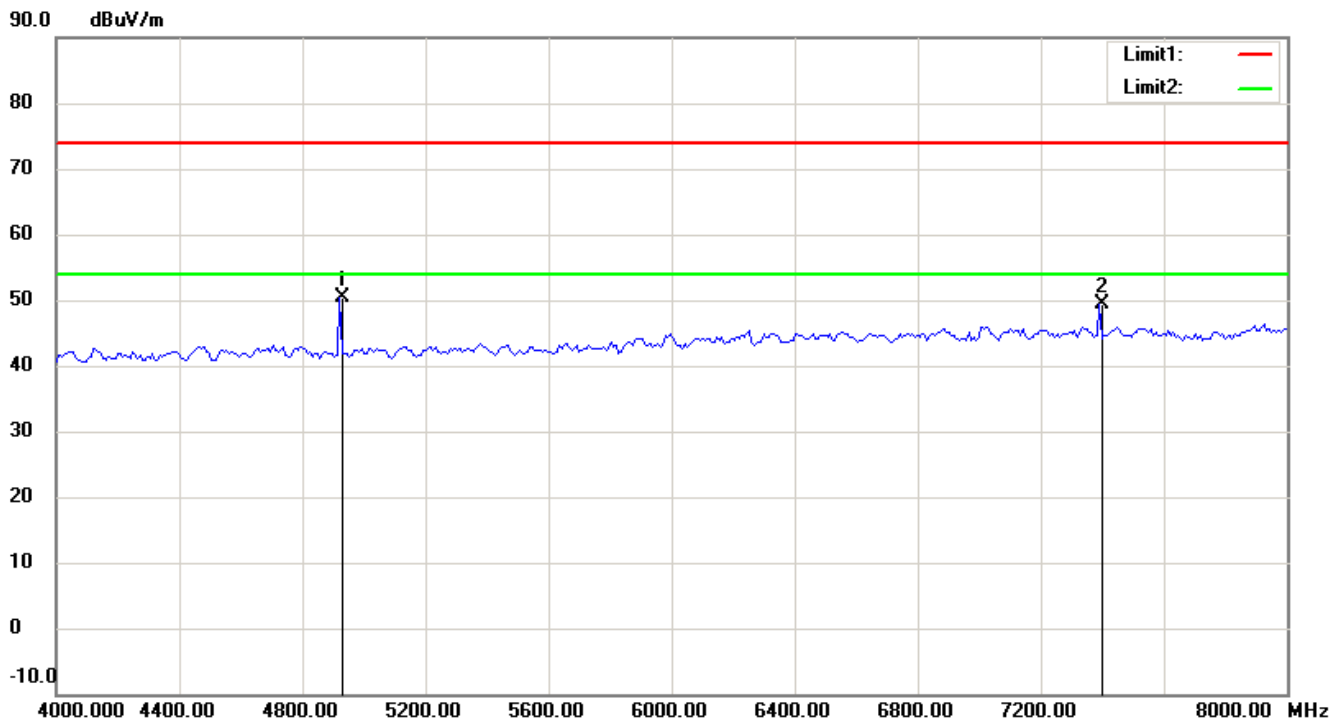
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

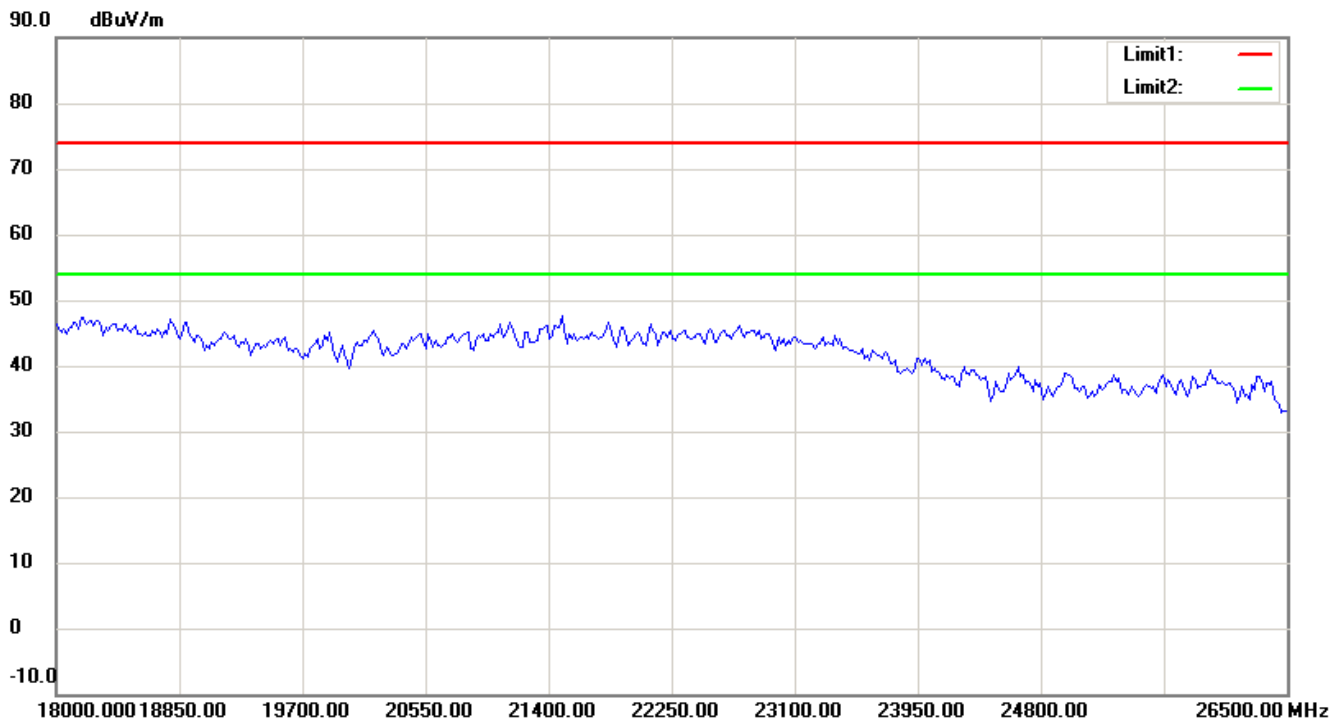
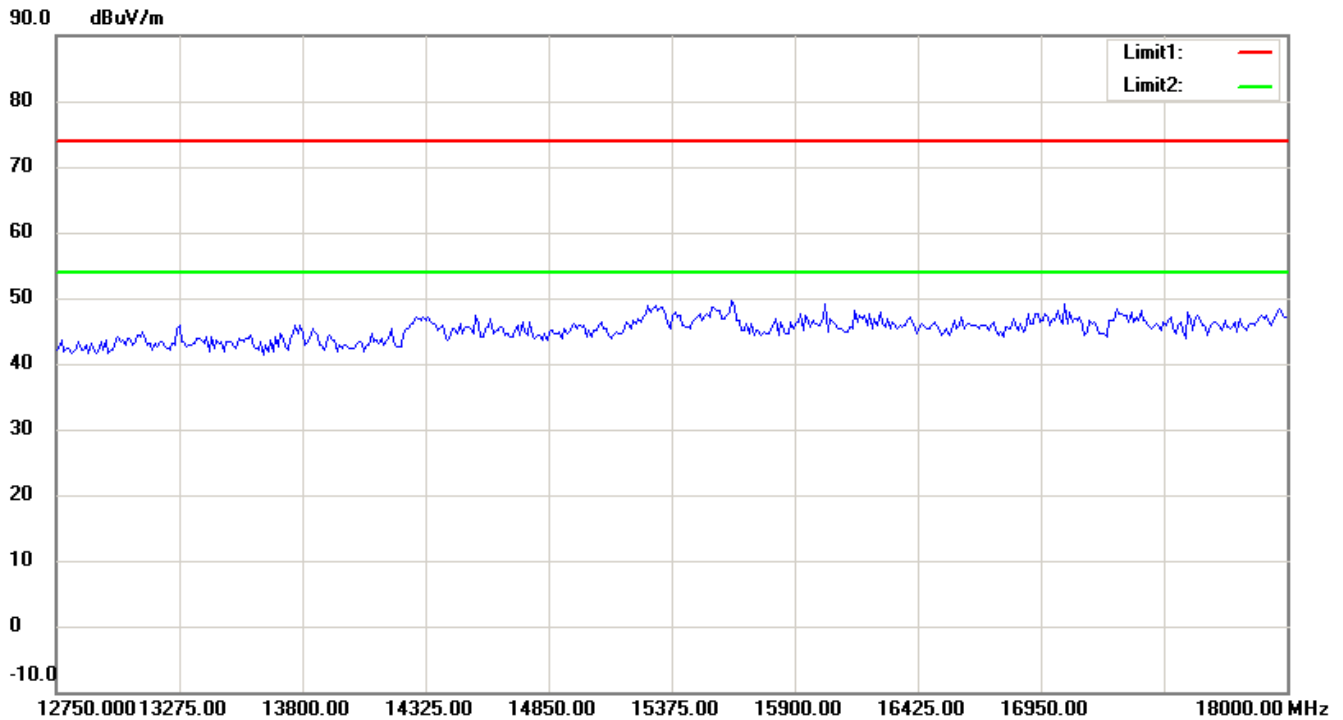
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

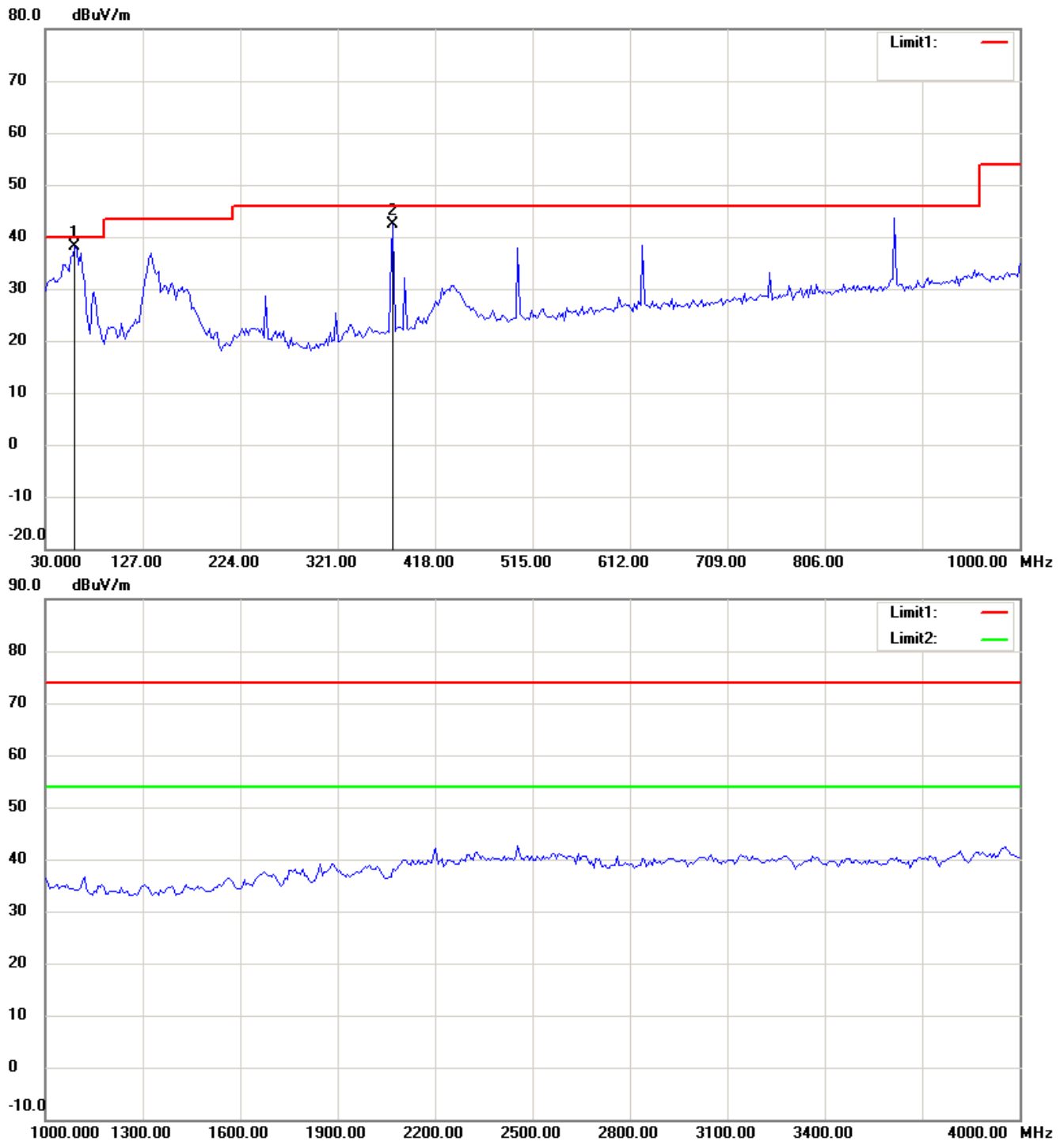
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

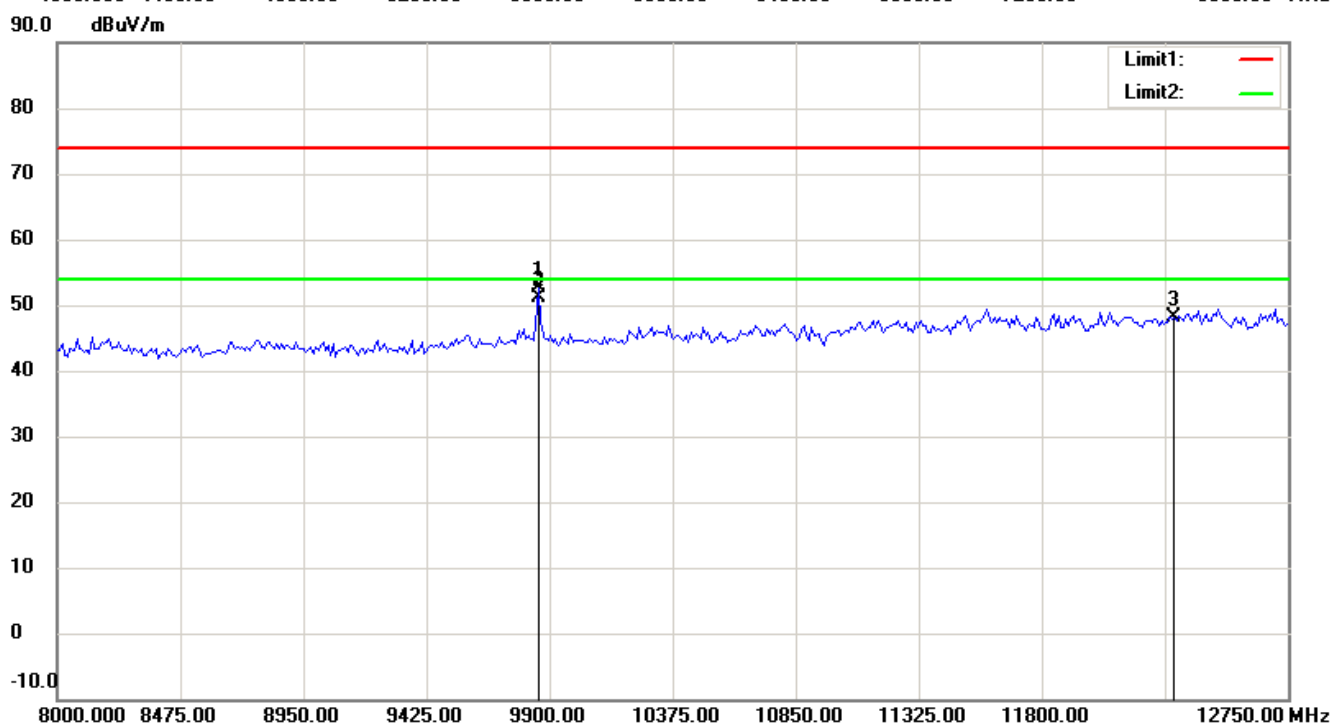
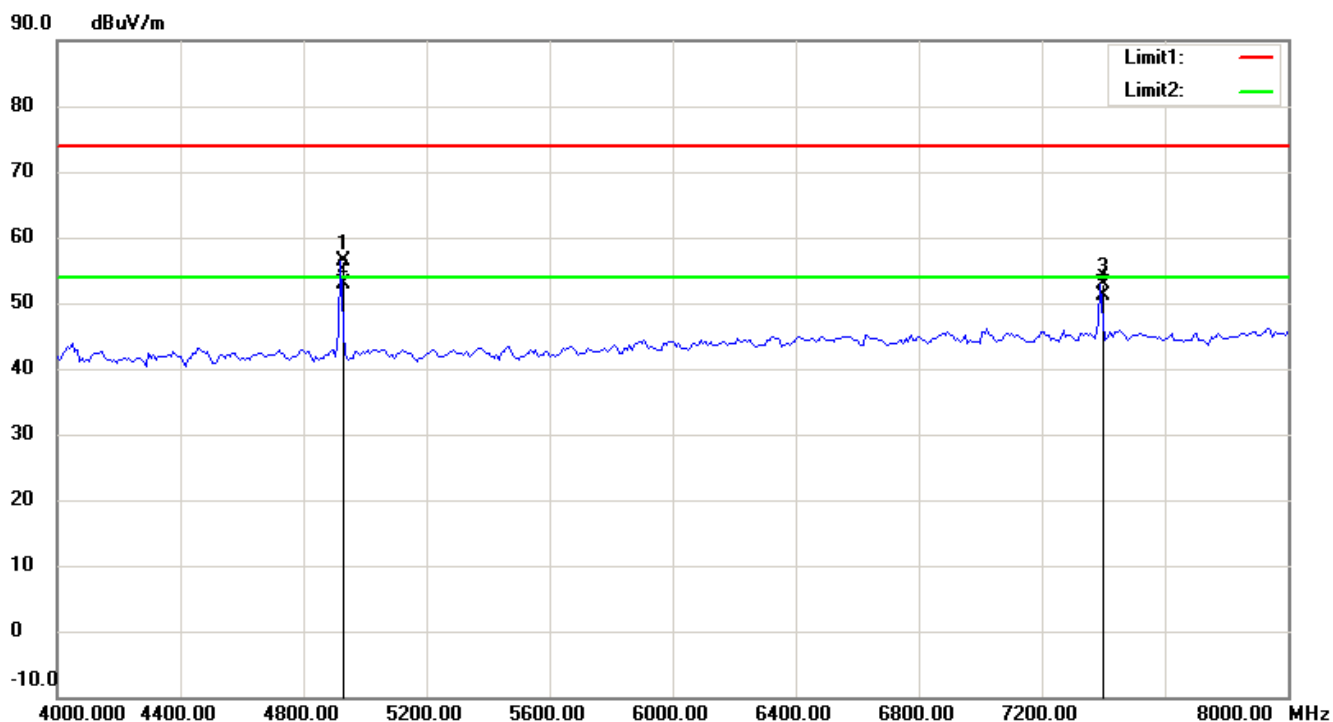
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

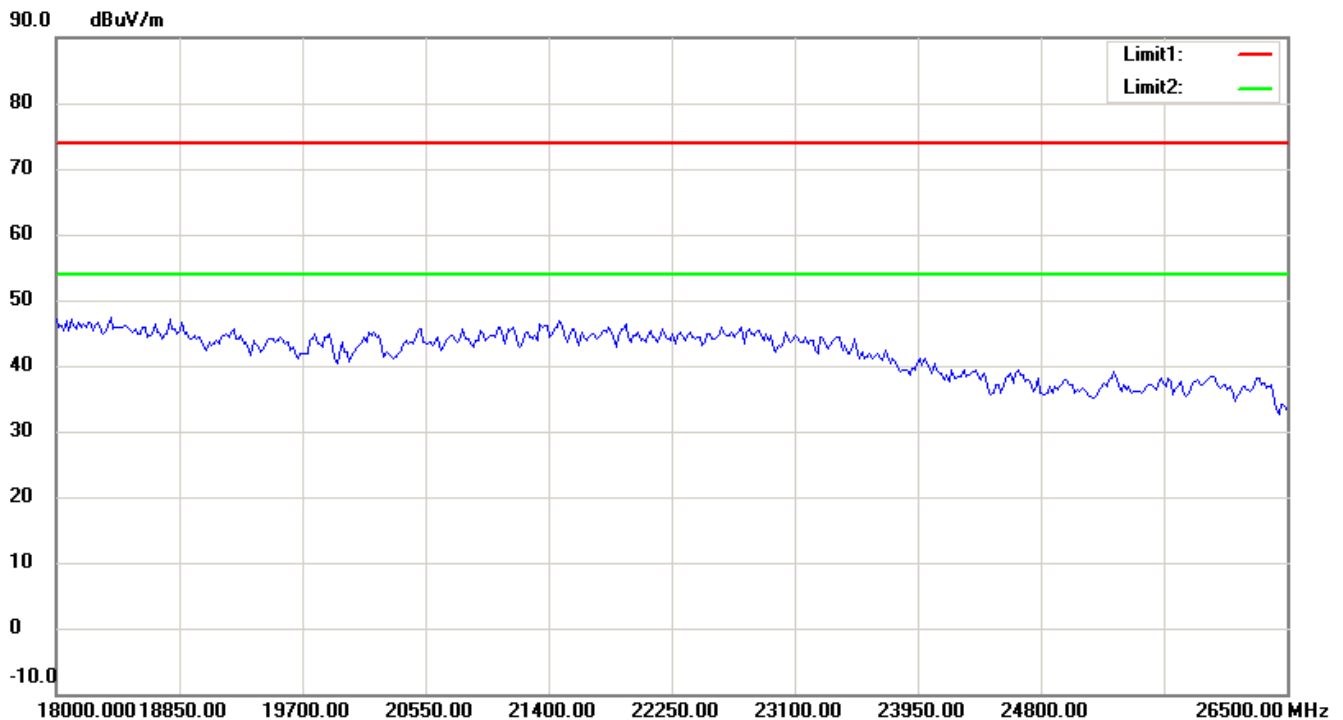
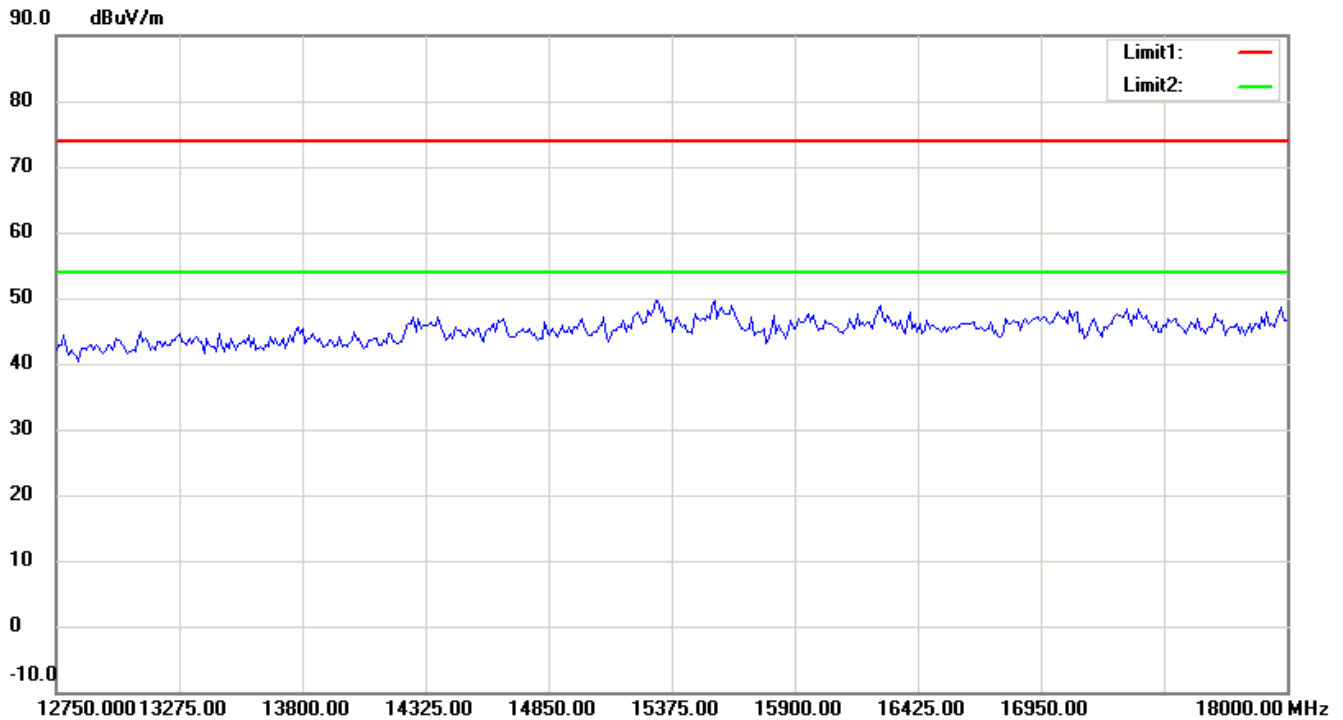
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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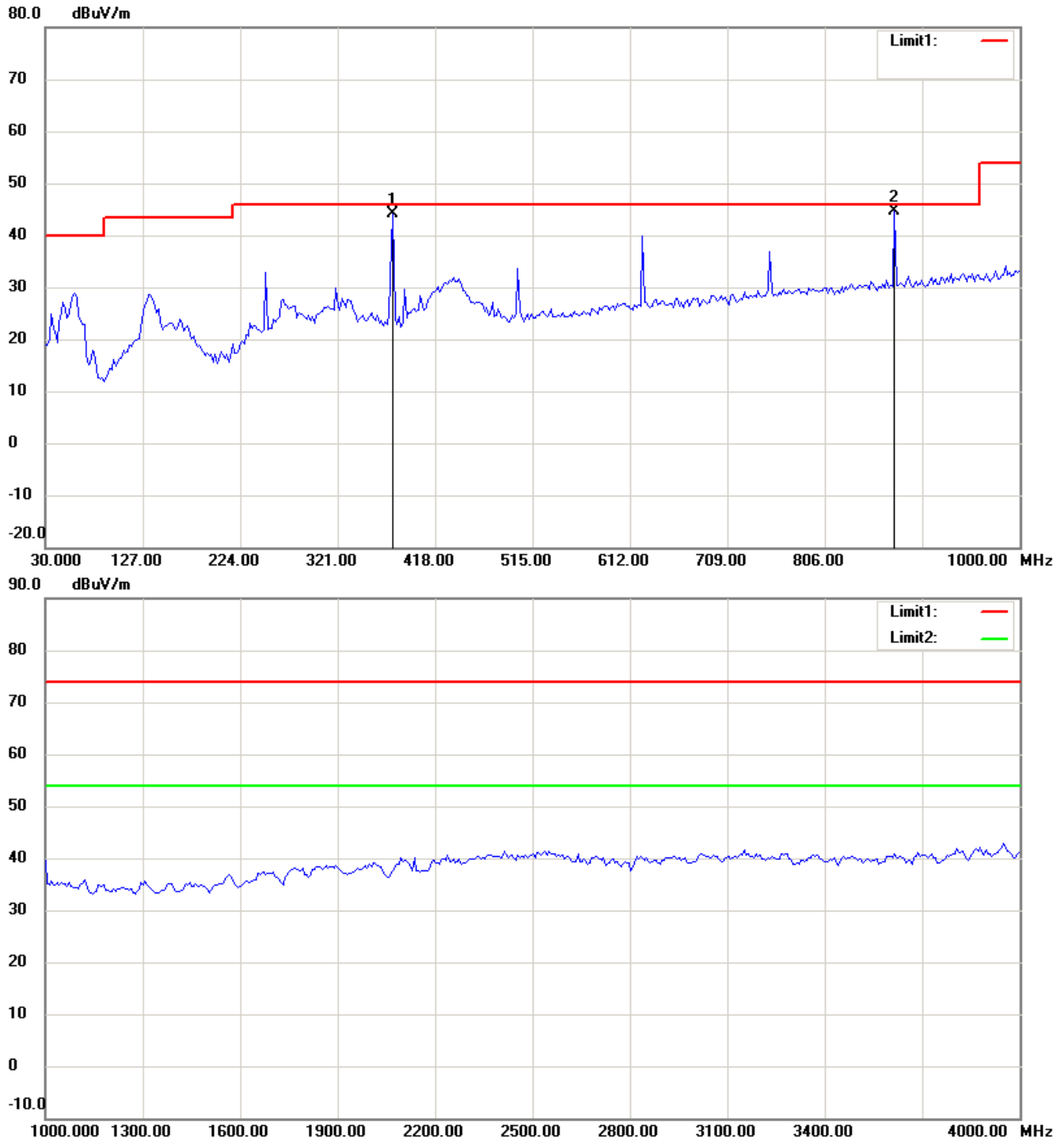
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 40MHz 2422MHz

Antenna Polarization H



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

Note:

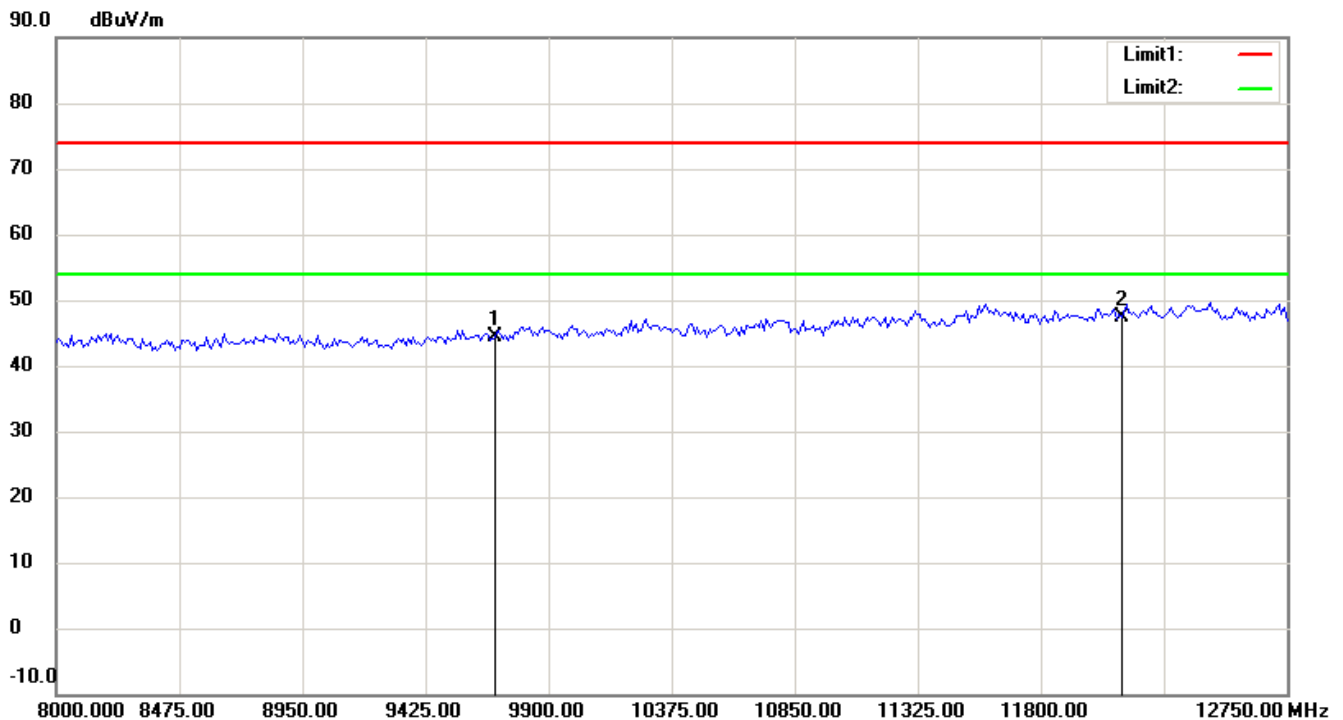
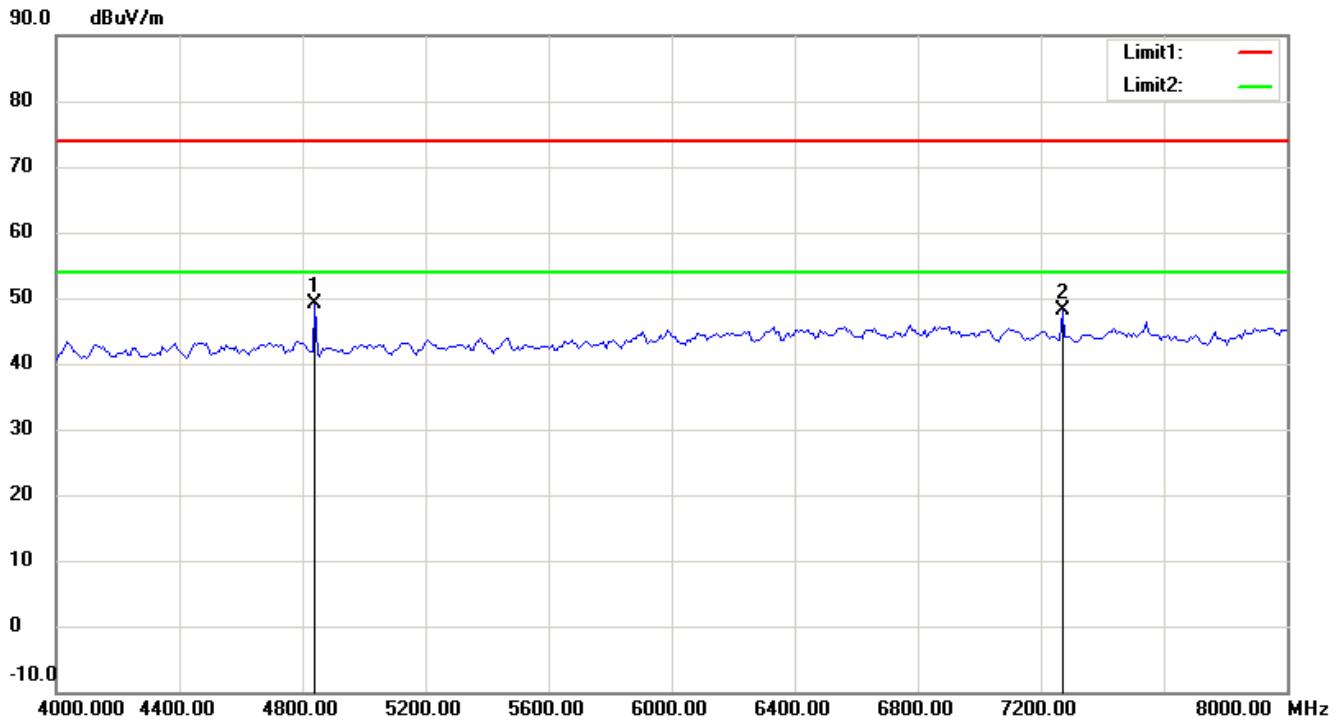
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

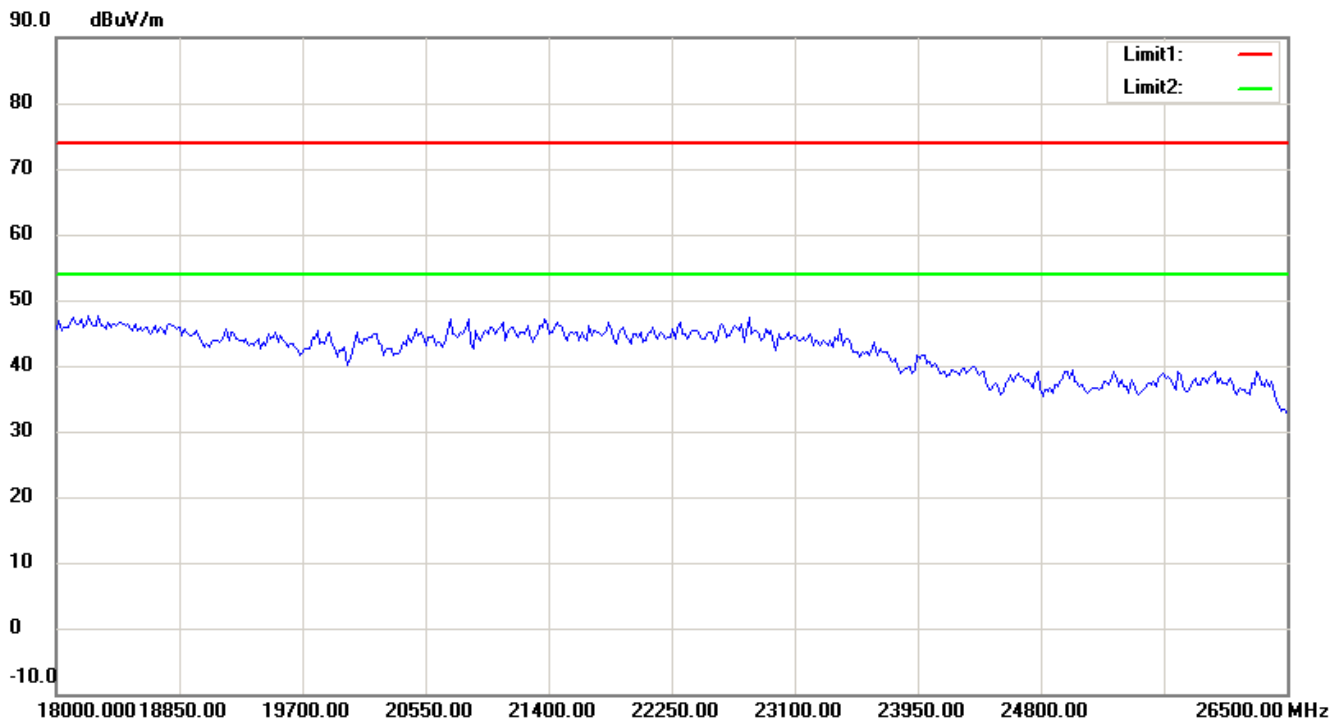
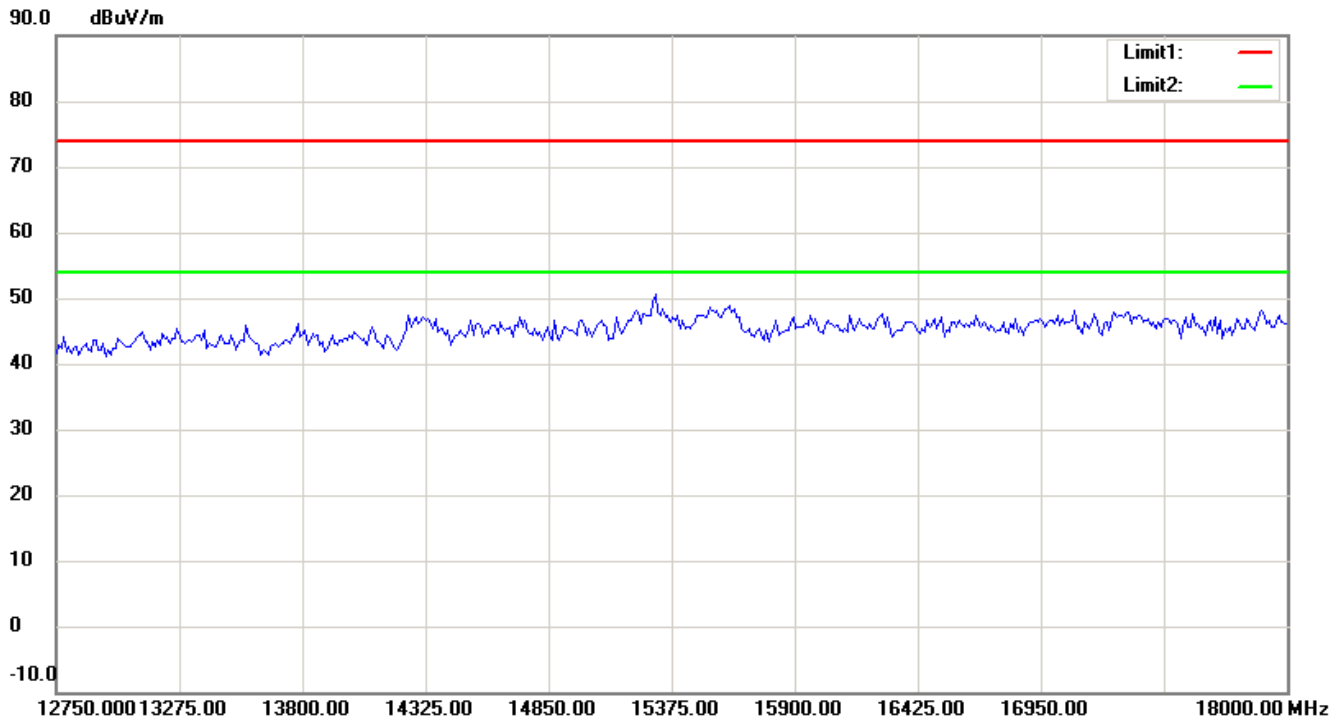
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

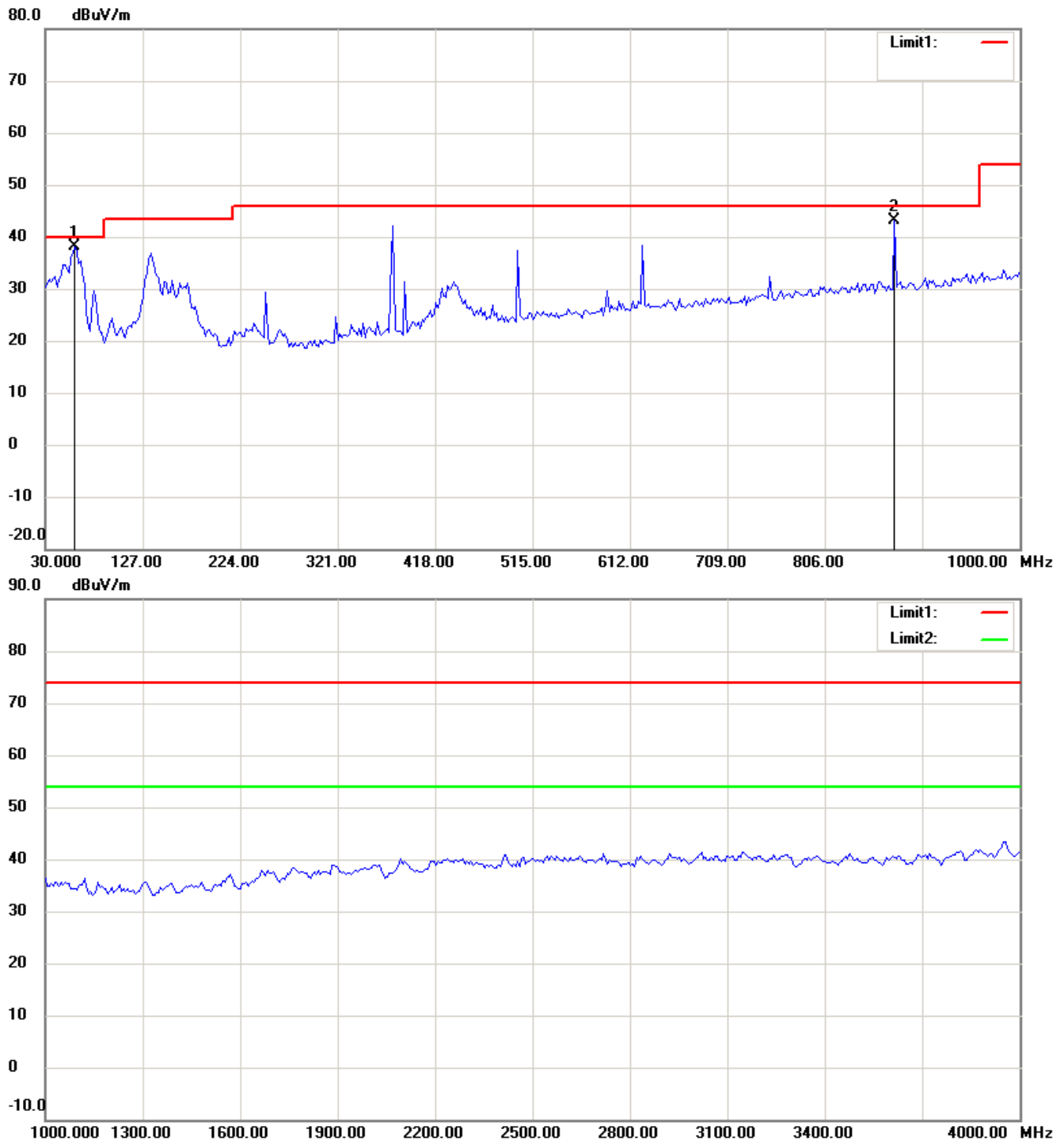
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

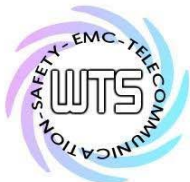
Antenna Polarization V



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

Note:

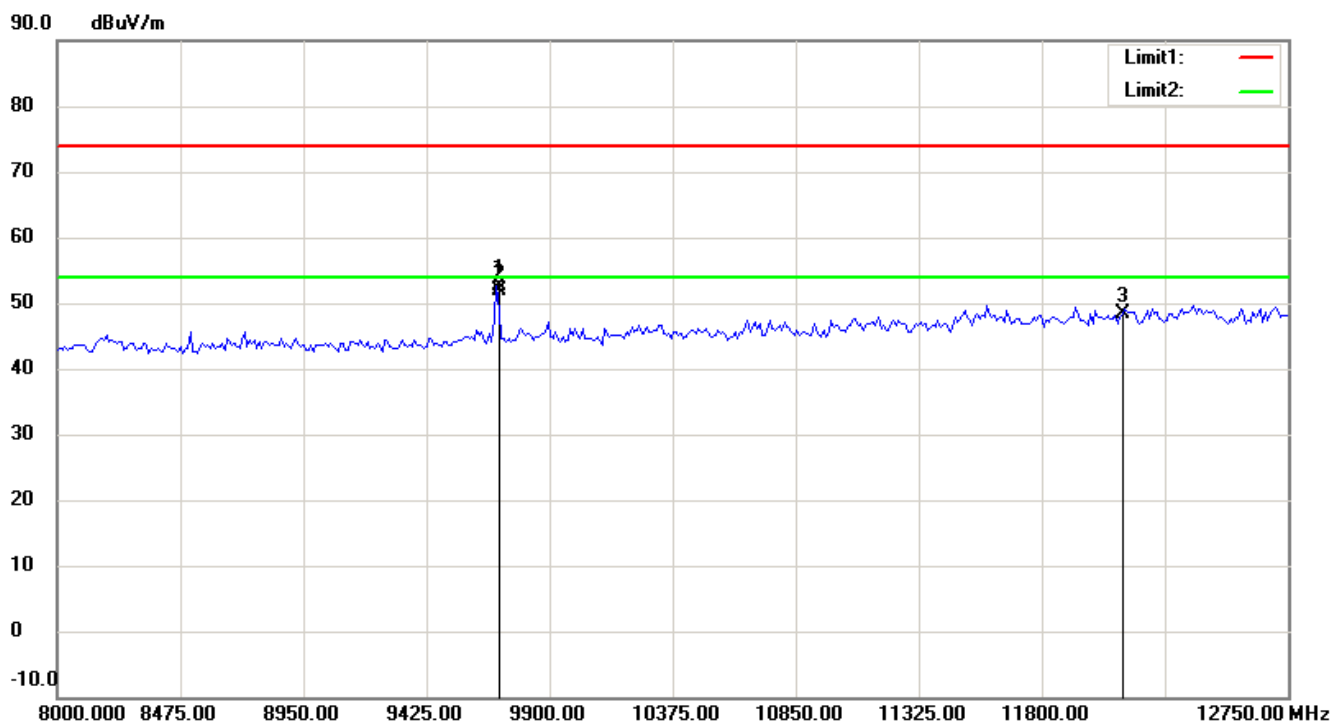
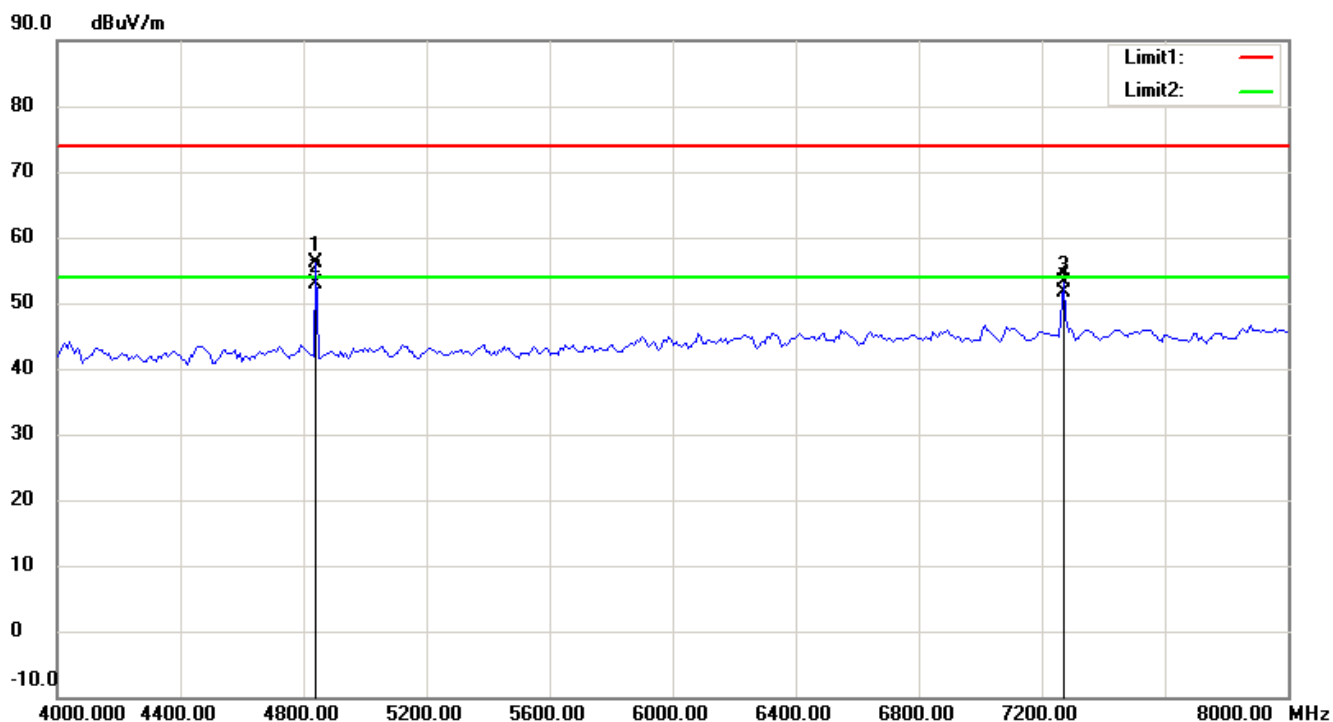
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

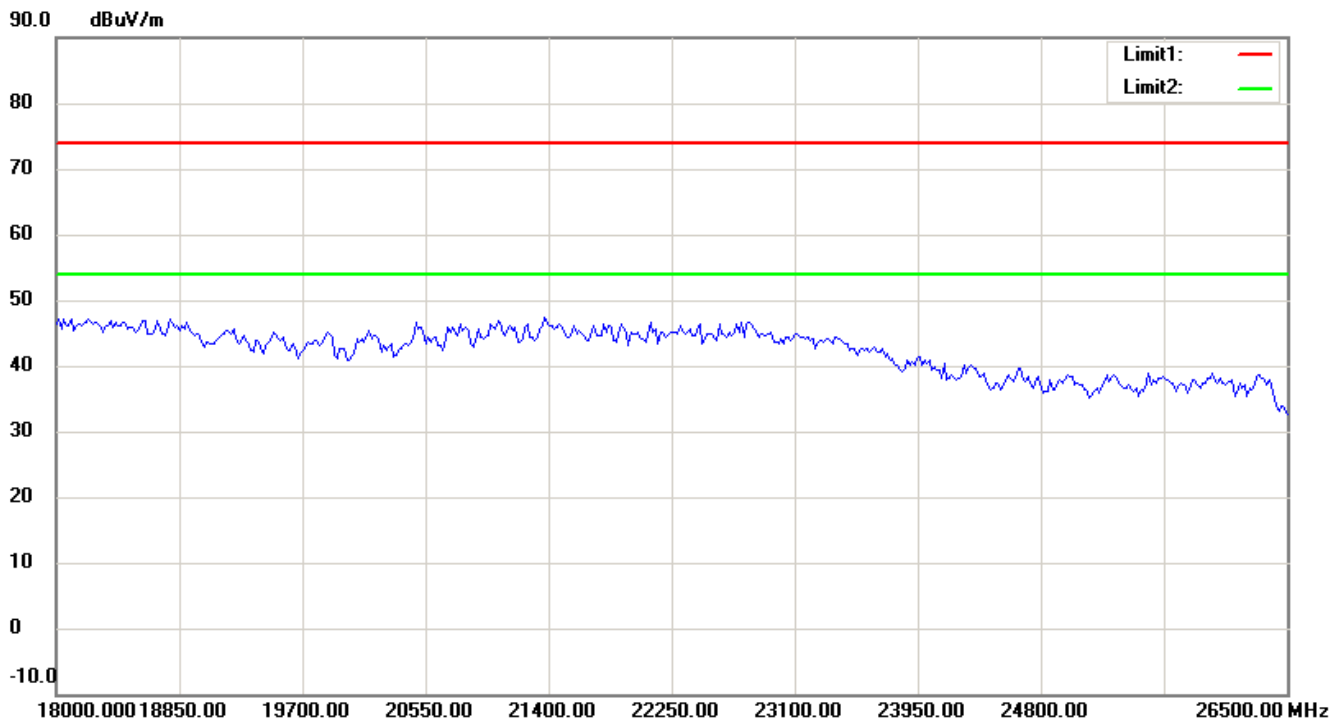
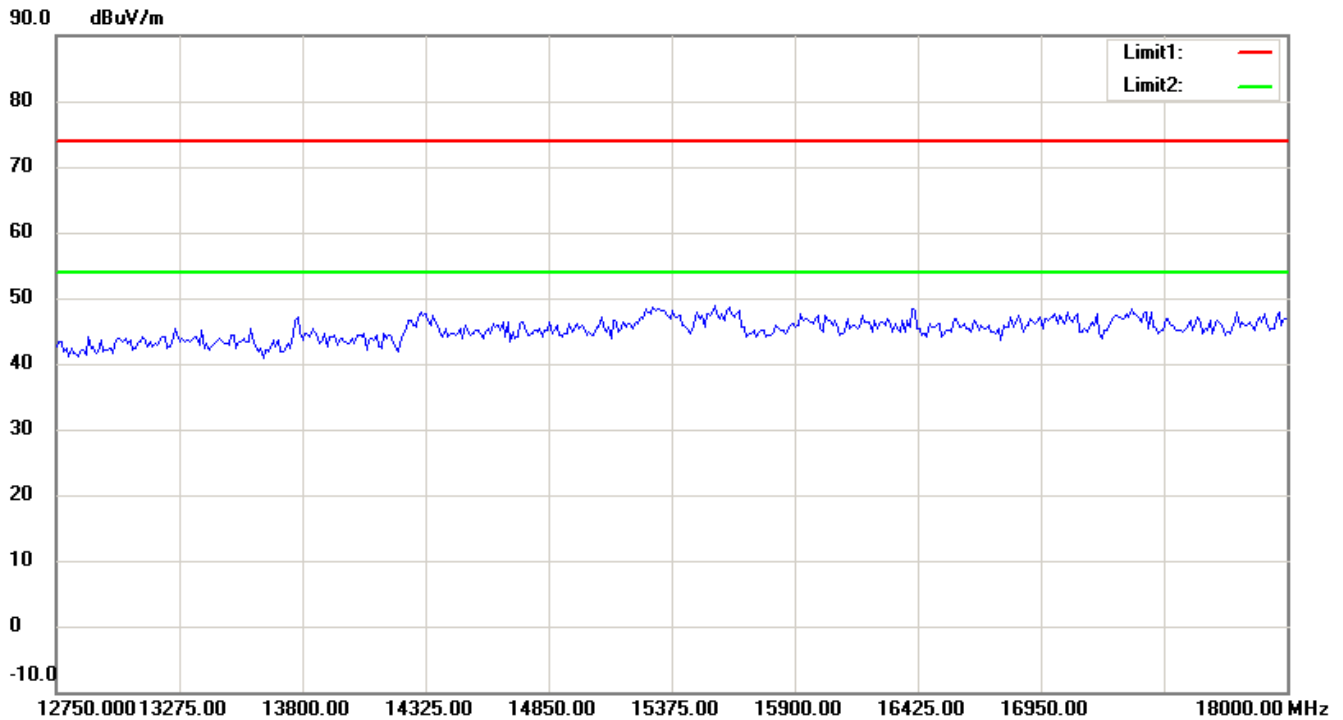
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

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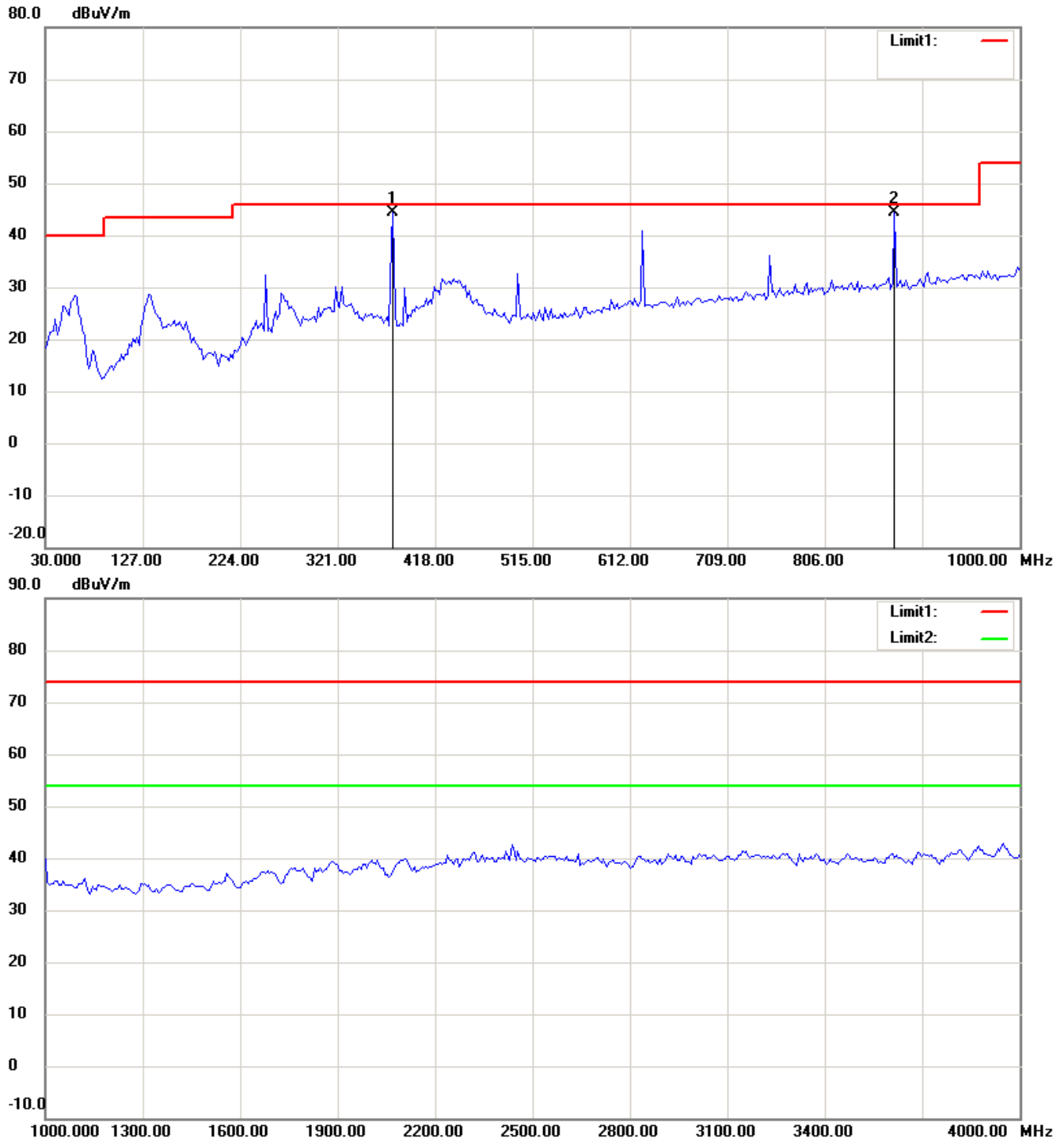
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 40MHz 2437MHz

Antenna Polarization H



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

Note:

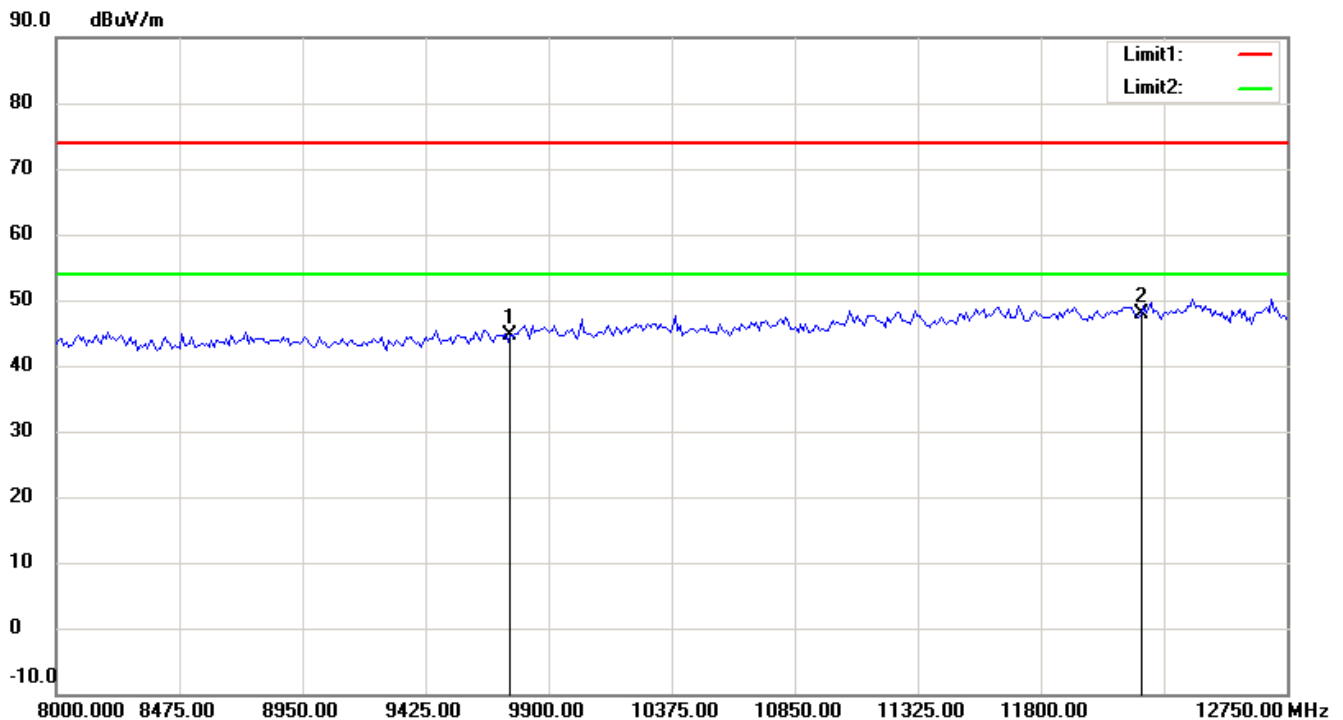
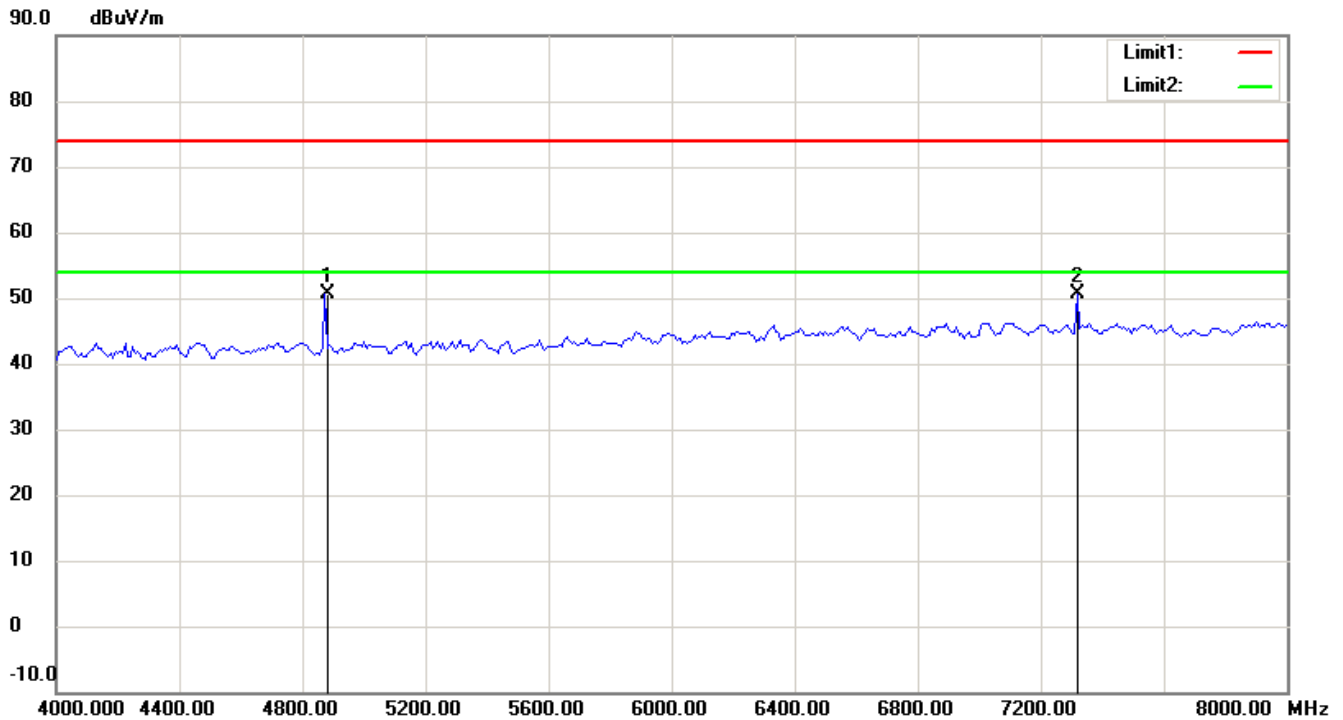
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

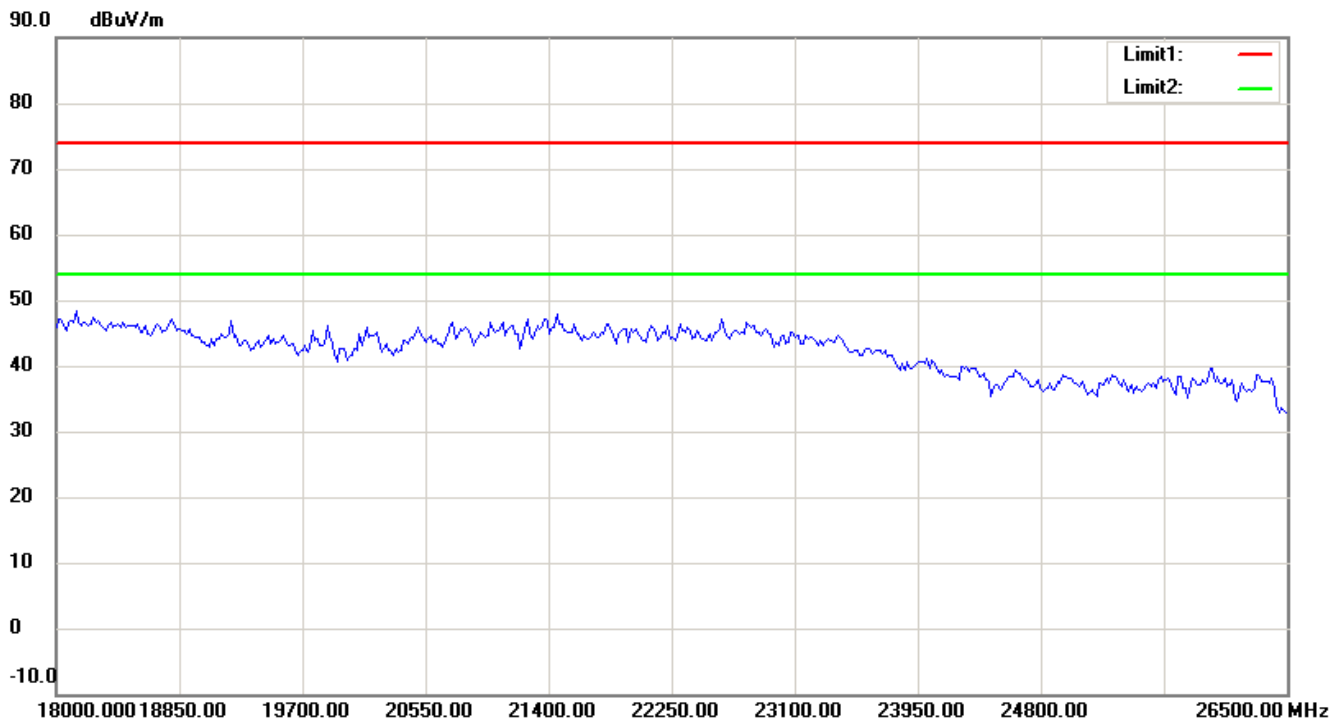
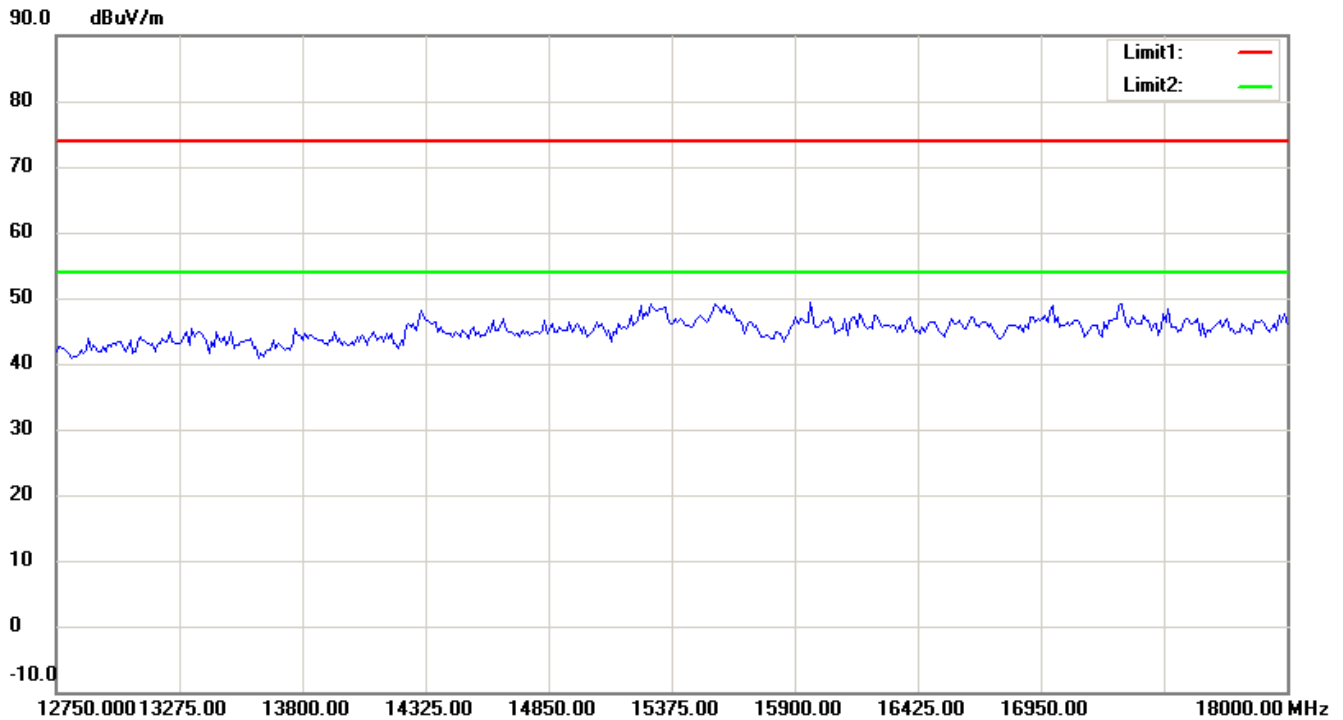
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

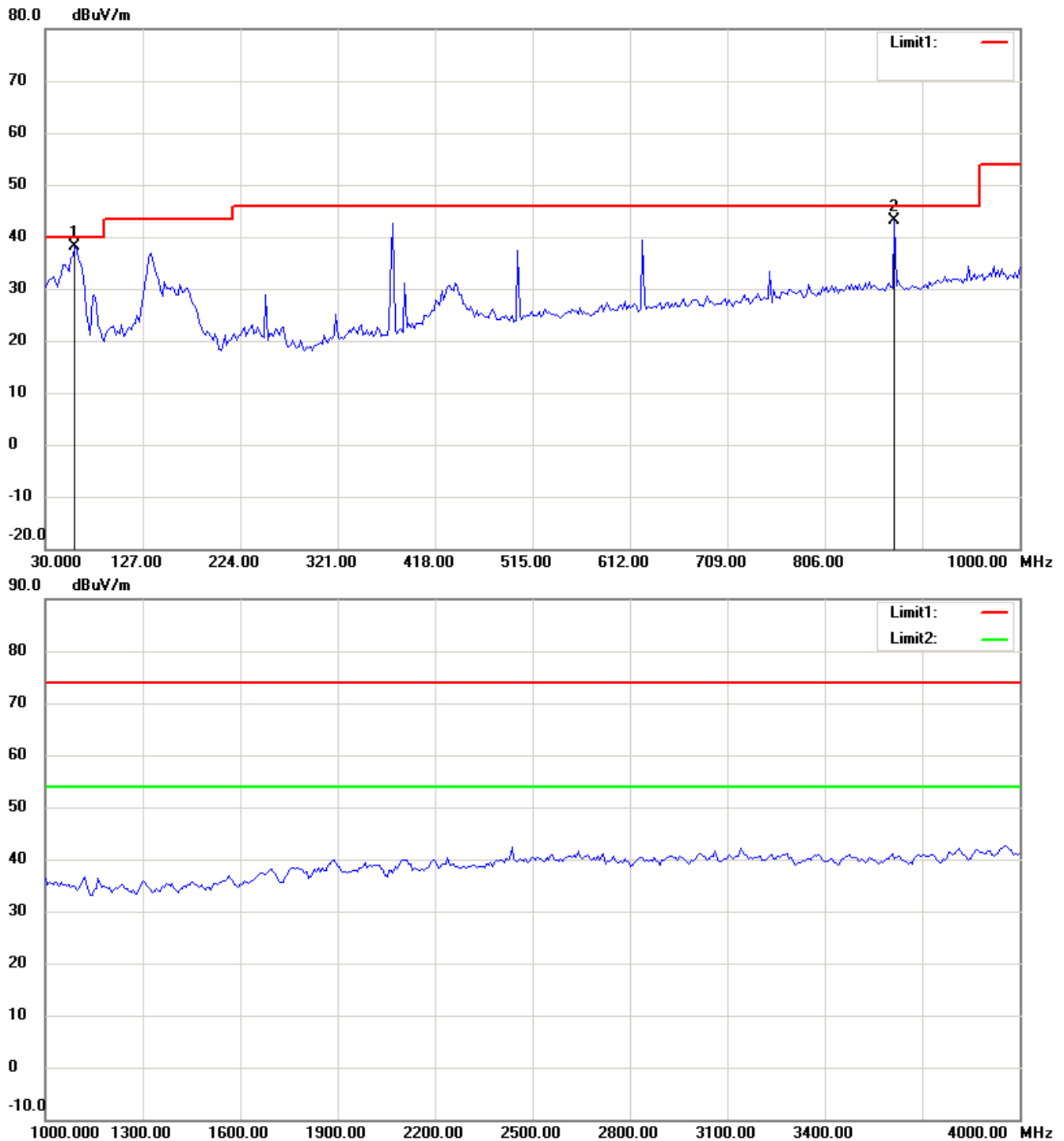
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

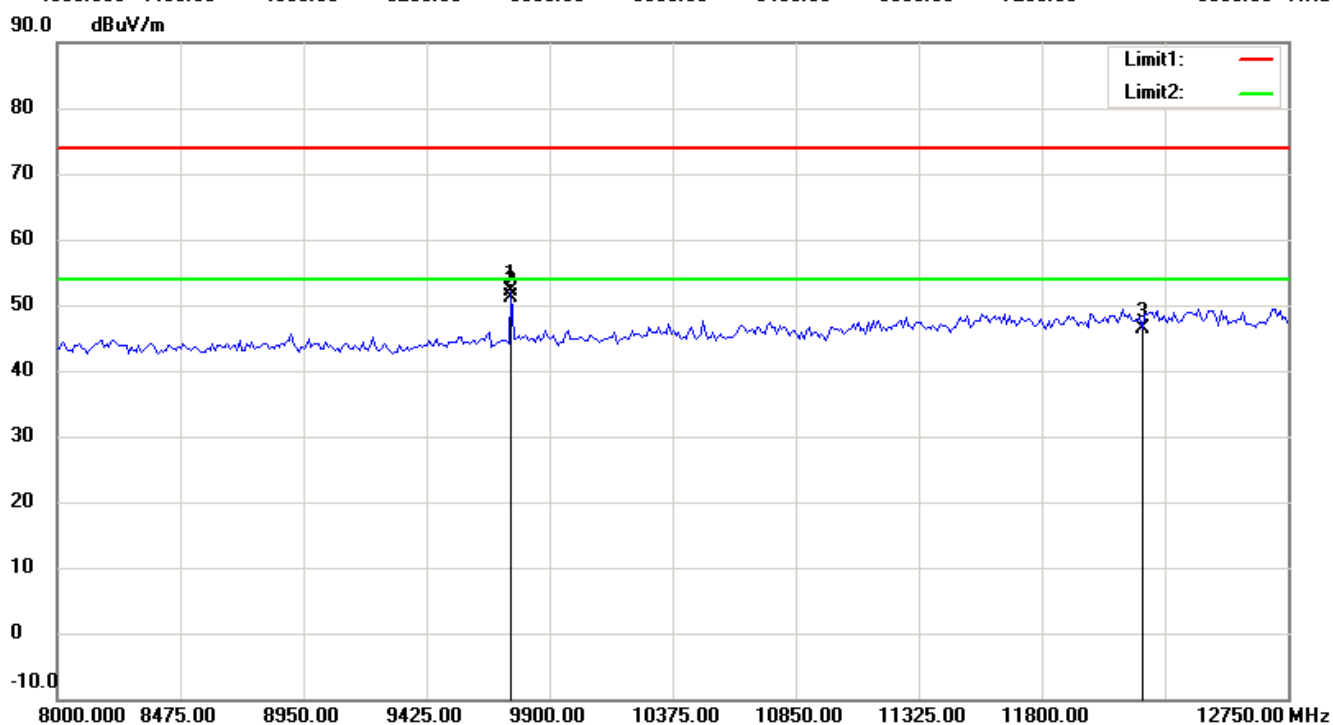
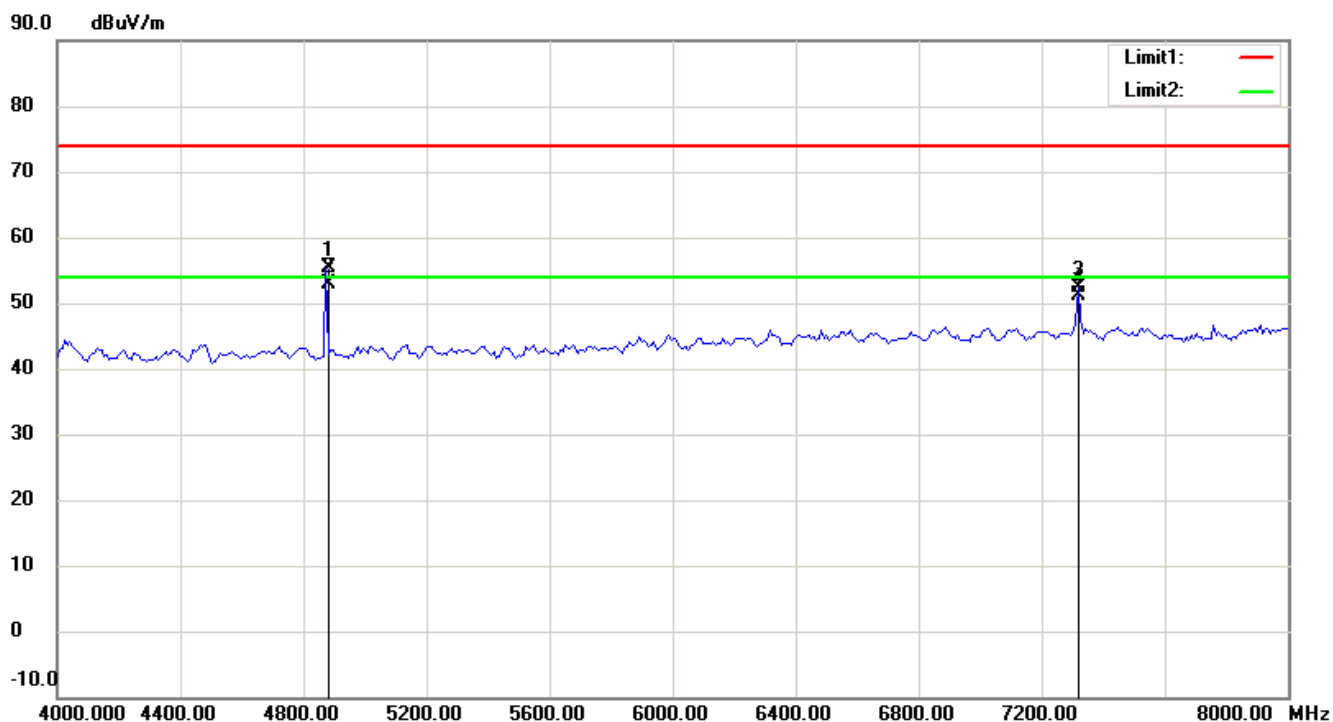
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FCC ID: ZTT-APA20



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

Note:

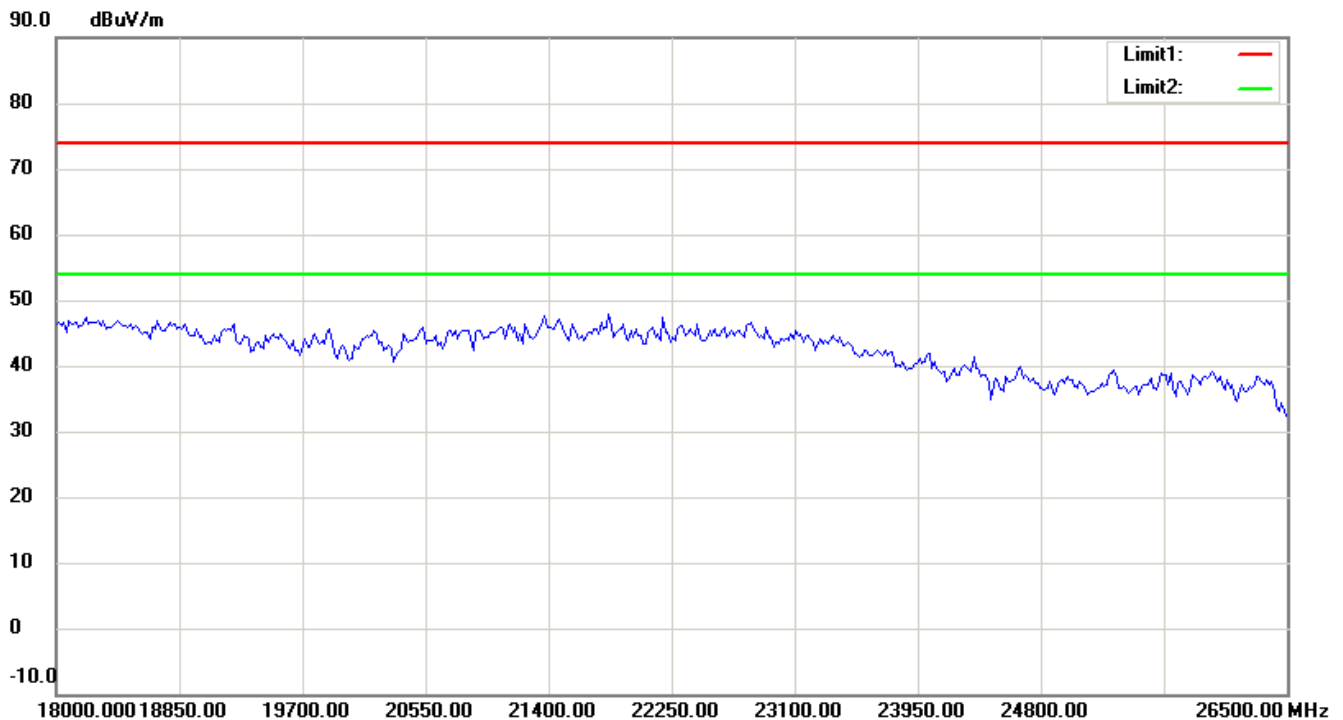
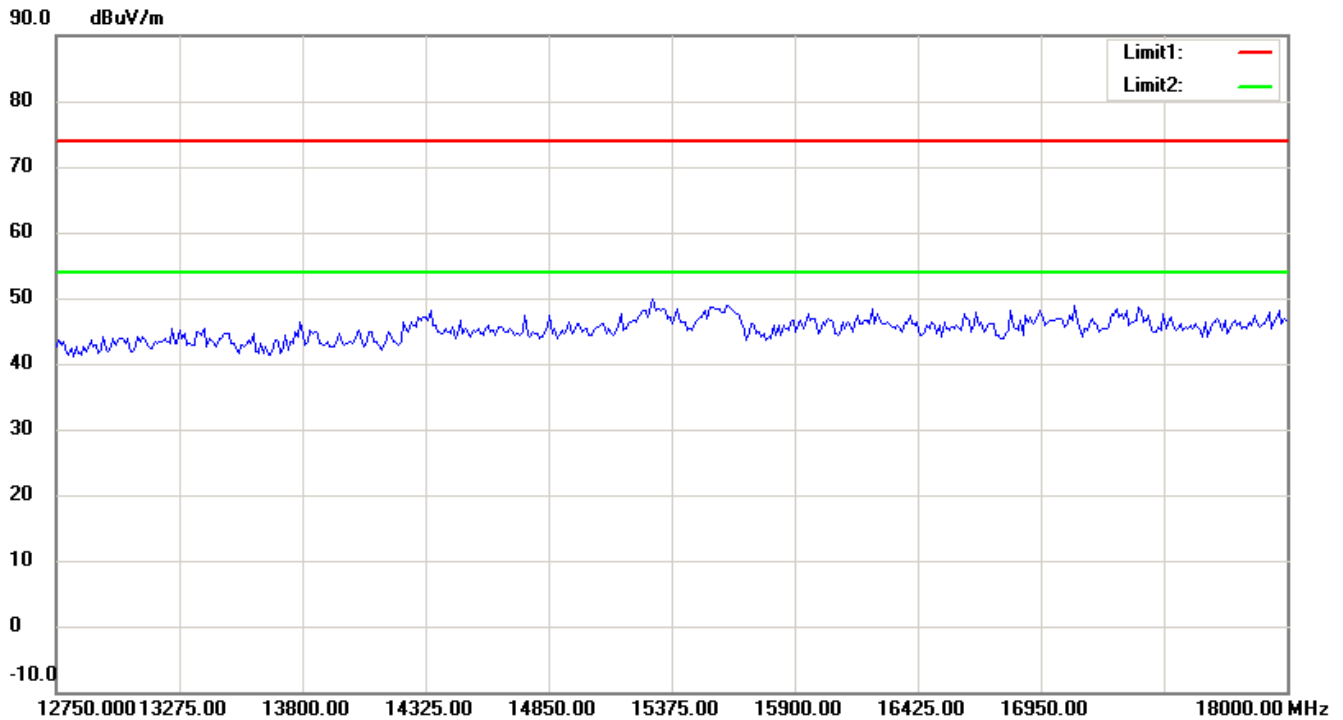
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FCC ID: ZTT-APA20



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

Note:

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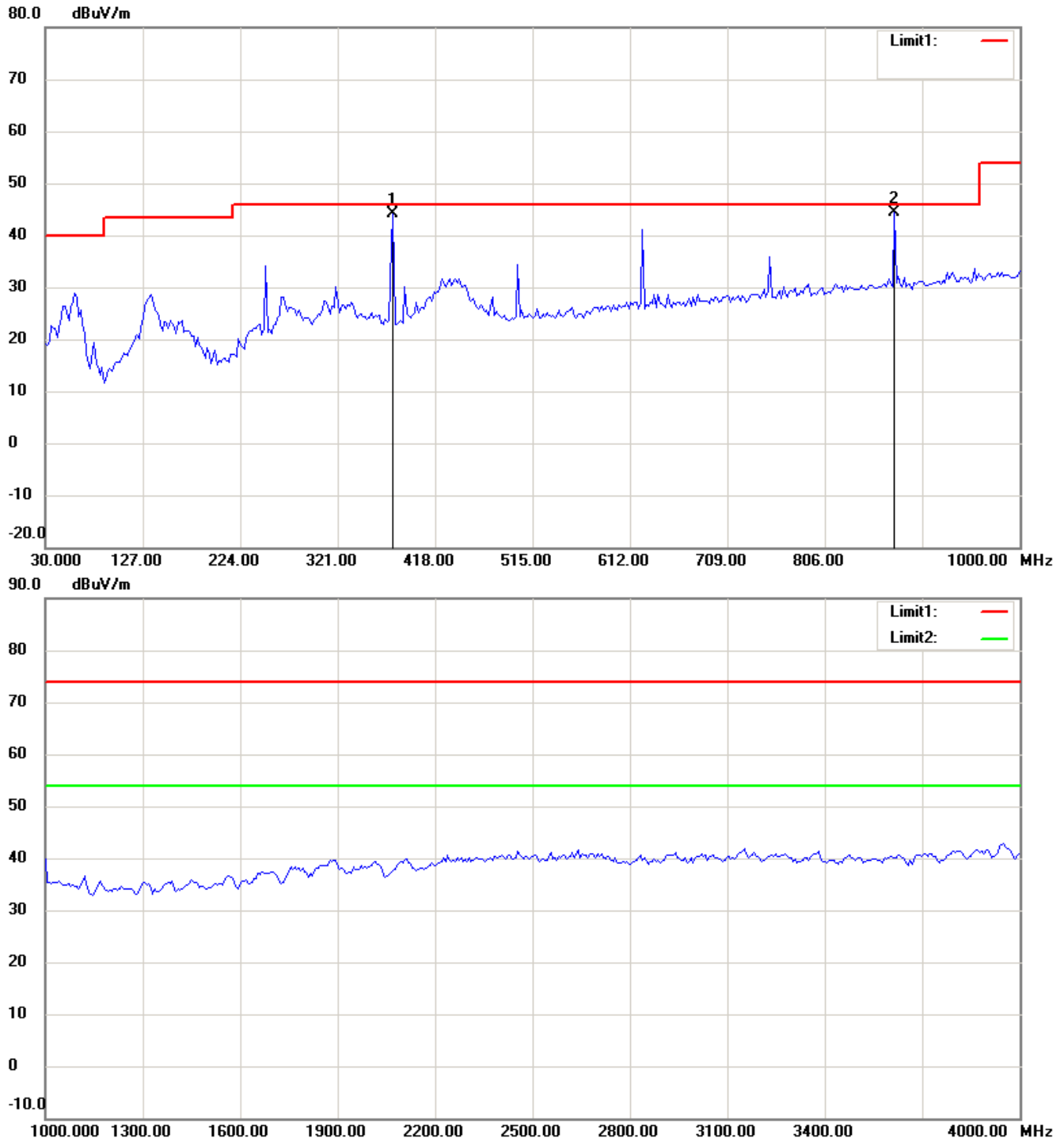
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

802.11n 40MHz 2452MHz

Antenna Polarization H



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

Note:

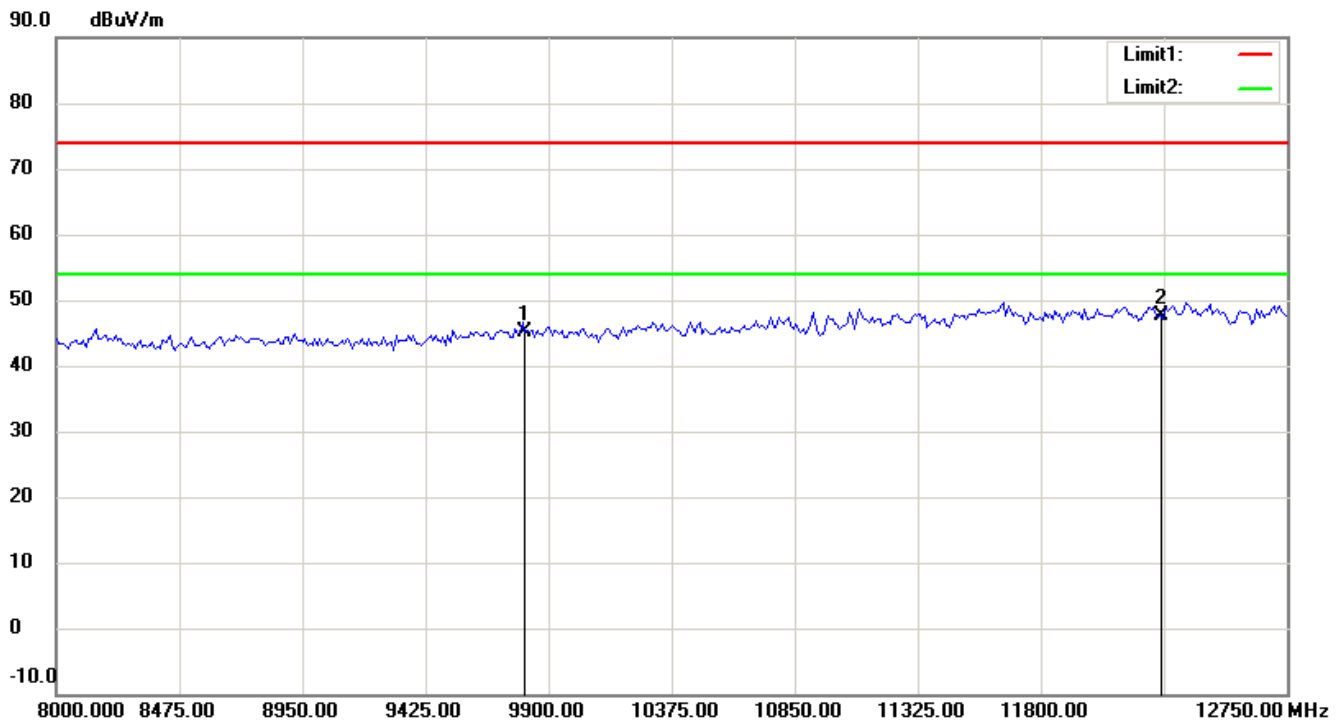
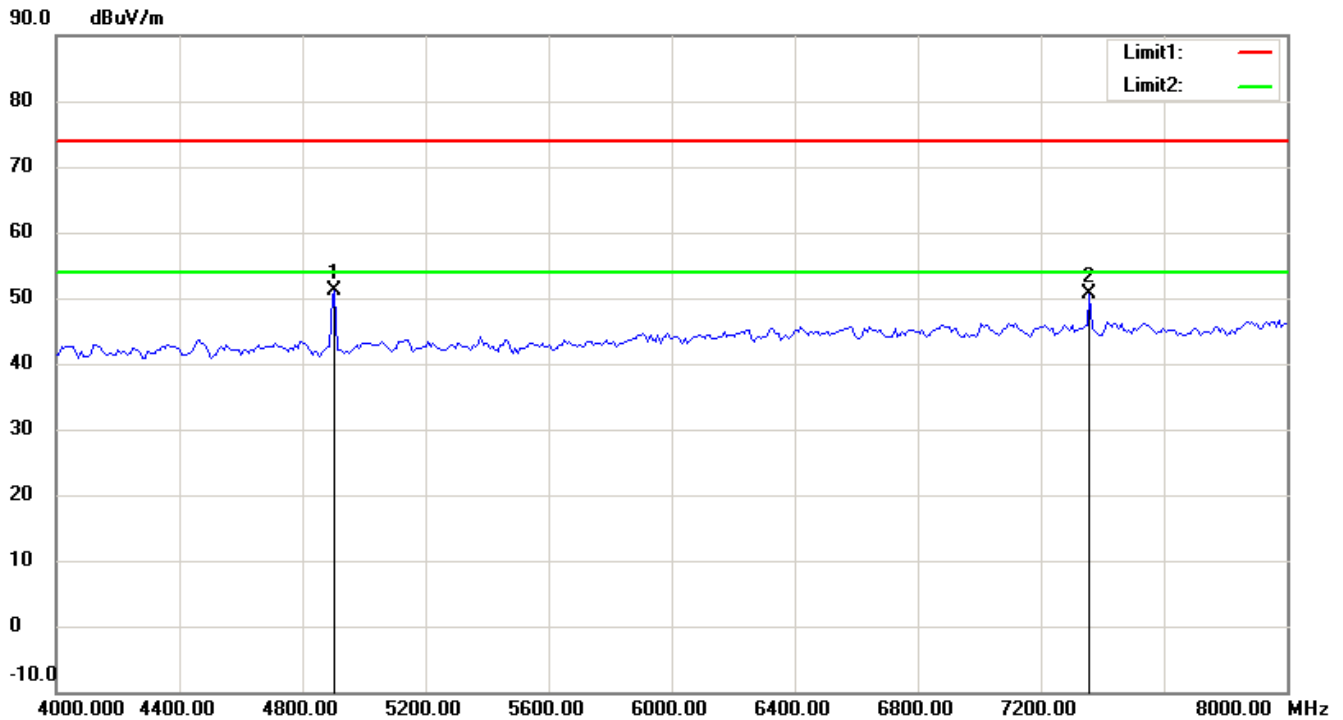
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Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

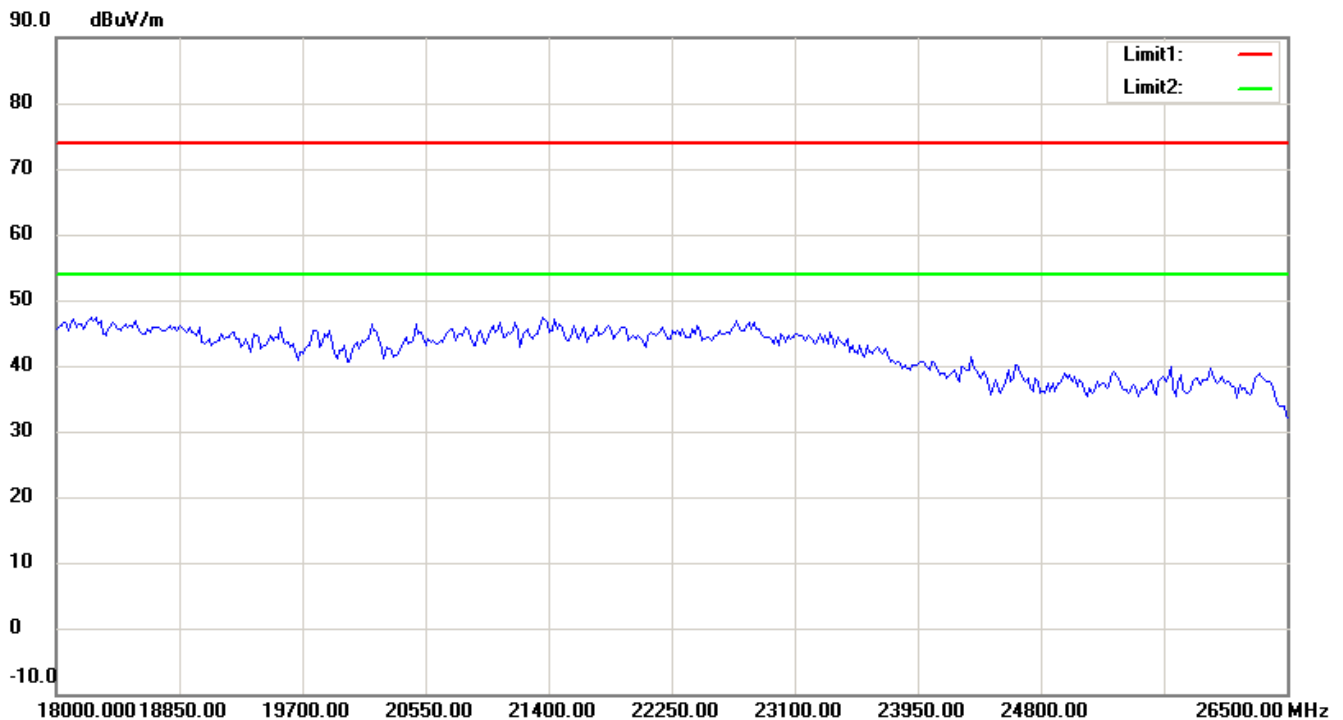
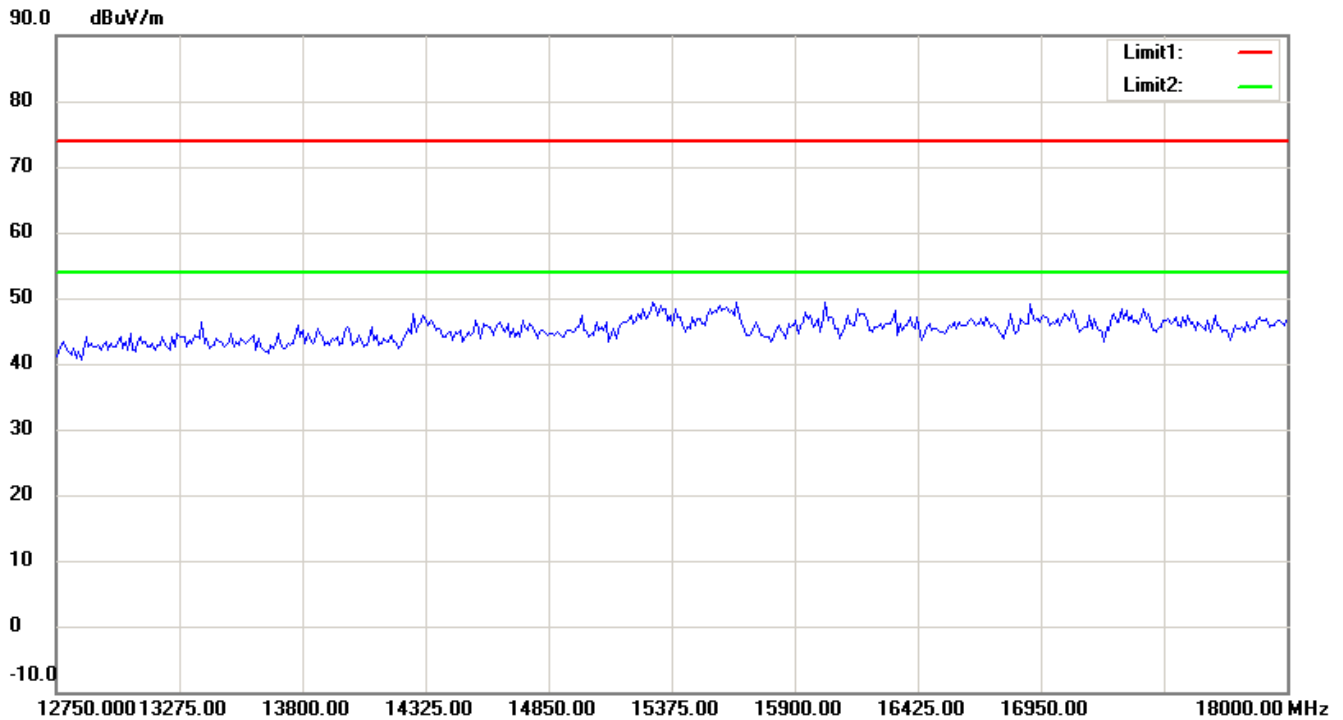
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20



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

Note:

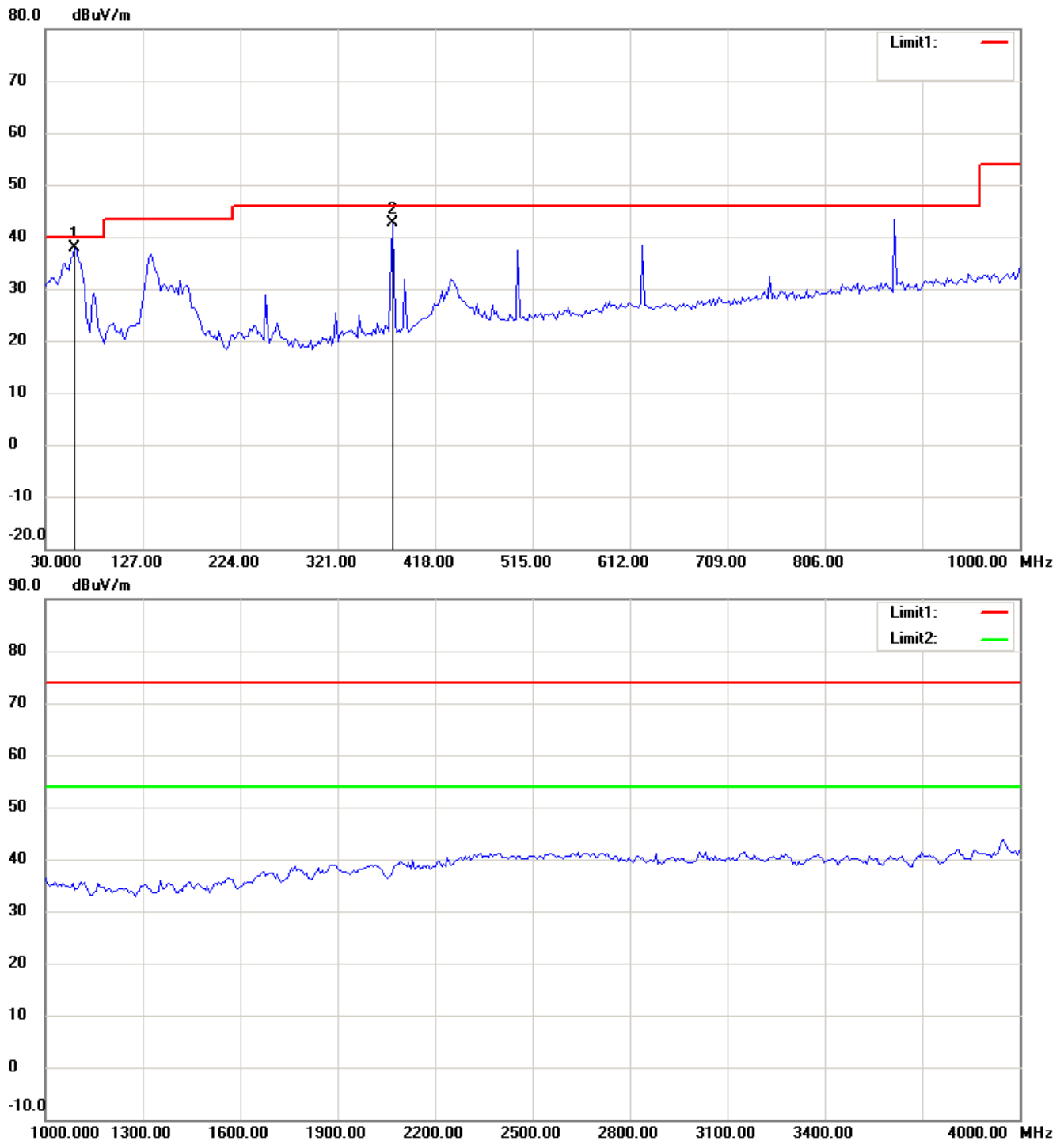
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Registration number: W6D21310-13579-C-1

FCC ID: ZTT-APA20

Antenna Polarization V



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

Note:

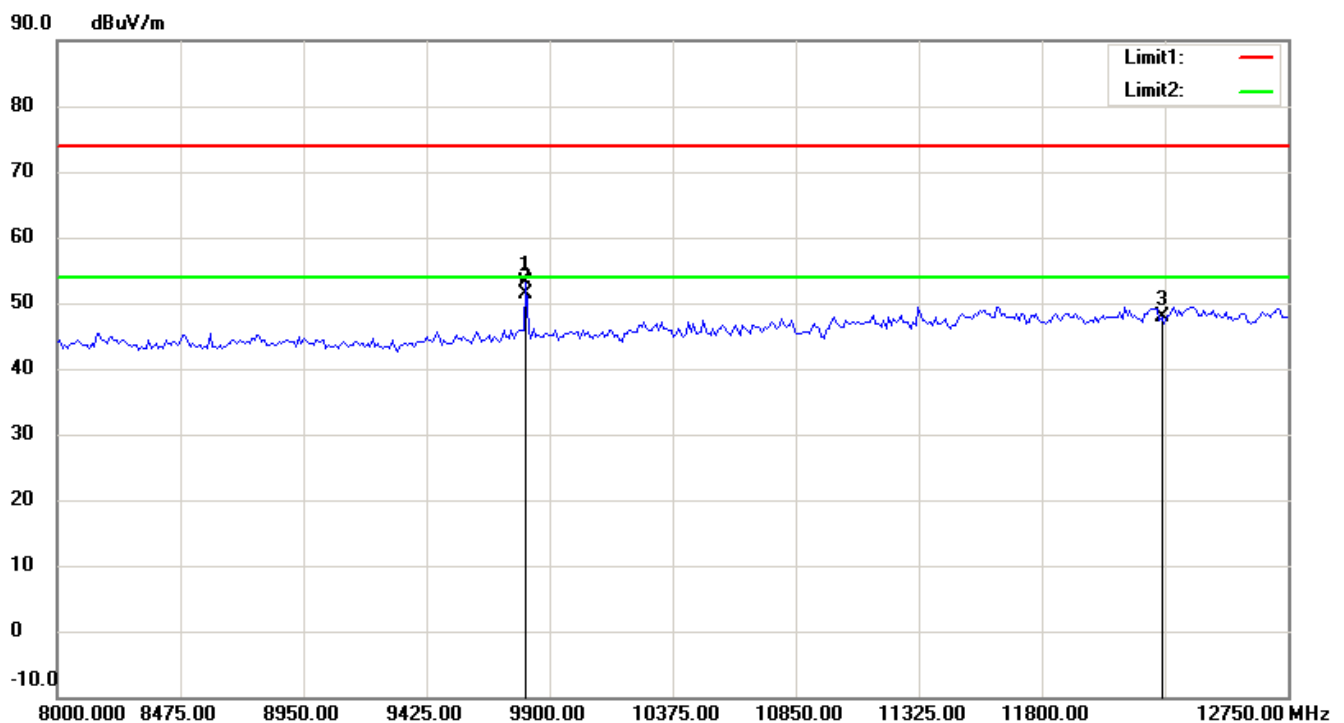
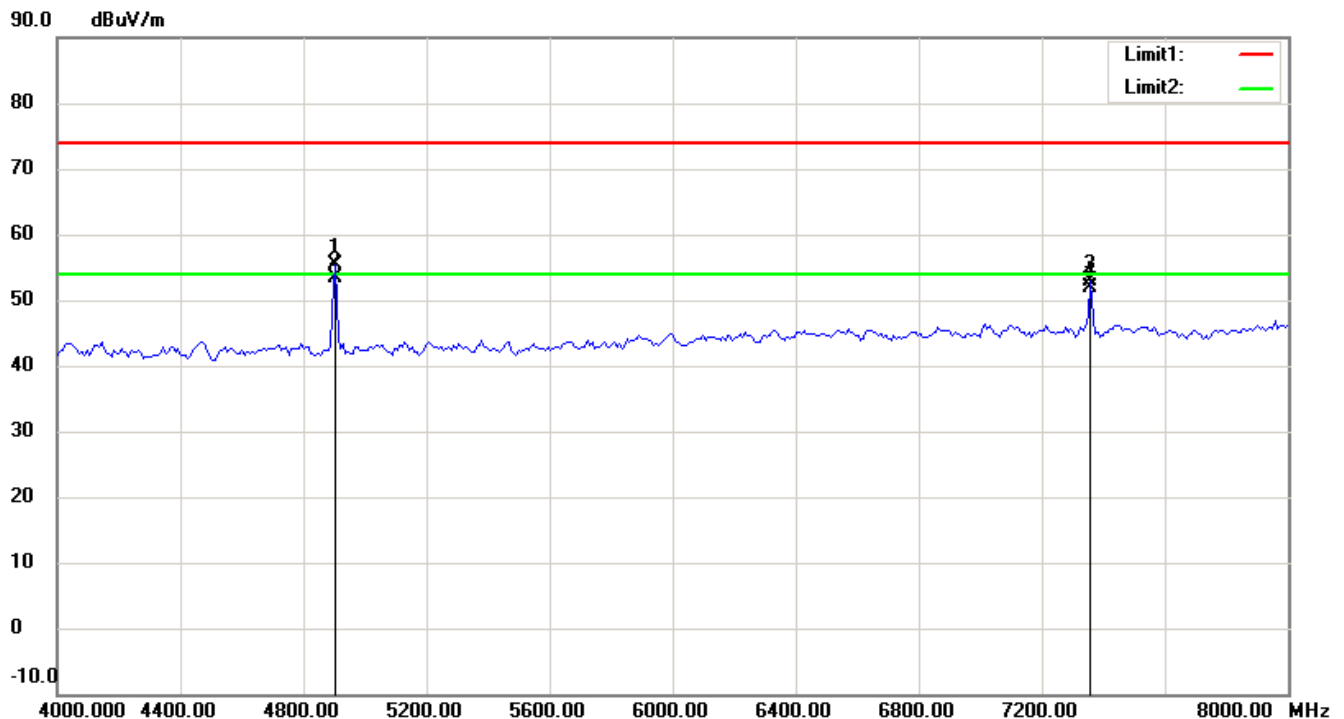
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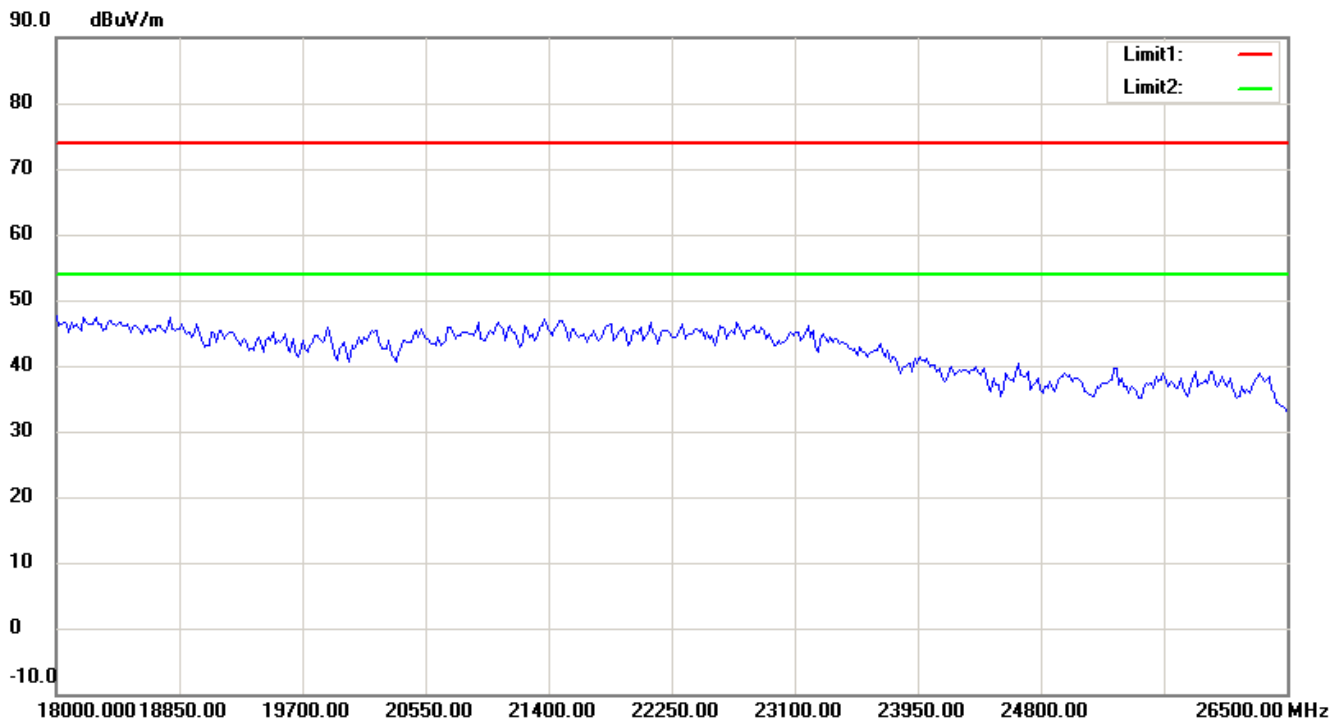
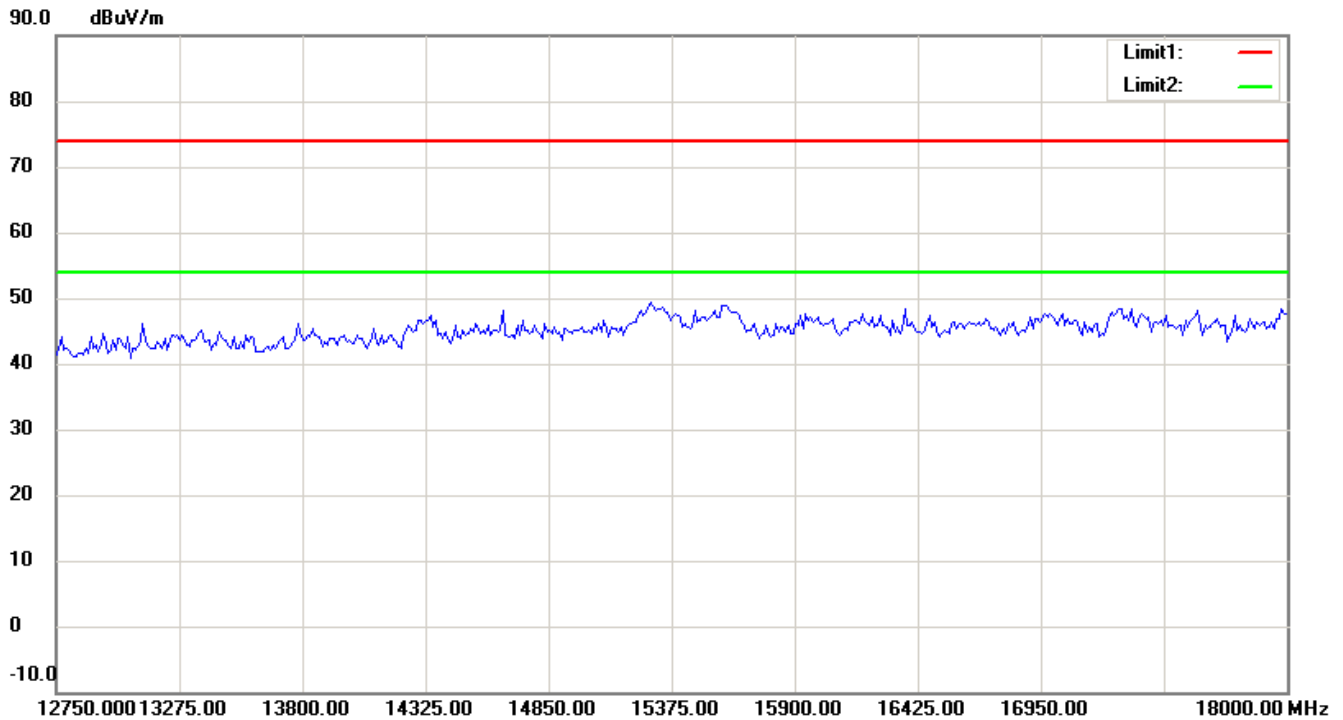
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