

FCC PART 15 SUBPART C TEST REPORT

for

Wallaby

Model No.: AMW004

FCC ID: 2ABPY-61F8D

of

Applicant: ACKme Networks Inc

Address: 2 North Santa Cruz Ave Suite 207 Los Gatos California
United States 95030

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.: W6M21401-13800-C-1



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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 to IEEE 802.11 b/g/n.

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

Tester:

February 18, 2014

Robert Ren

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

February 18, 2014

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: ACKme Networks Inc

Street: 2 North Santa Cruz Ave Suite 207

Town: Los Gatos California

Country: United States 95030

Telephone: +61409275566

Fax: ./.



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1.4 Application details

Date of receipt of test item: January 23, 2014
Date of test: from January 24, 2014 to February 18, 2014

1.5 General information of Test item

Type of test item: Wallaby
Model Number: AMW004
Brand Name: ACKme Networks
Multi-listing model number: ./.
Photos: see Appendix

Technical data

Frequency band: 2.4 GHz – 2.4835 GHz
11b, 11g, 11n 20MHz
Frequency (ch 1 or A): 2.412 GHz
Frequency (ch 6 or B): 2.437 GHz
Frequency (ch 11 or C): 2.462 GHz
Number of Channels: 11
Operation modes: duplex
Modulation Type: DSSS / OFDM
Fixed point-to-point operation: ☐ Yes / ☒ No
Type of Antenna: PCB Antenna
Antenna gain: 3.18 dBi
Power supply: 3.3Vdc / USB 5Vdc (Power from PC)
Emission designator: 11b: DSSS: 14M0G1D
11g: OFDM: 17M0D1D
11n 20MHz: OFDM: 18M0D1D

Host device: none

Classification :

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



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Transmitter

Unom

Mode A (DSSS)

Power (ch 1 or A):	Conducted: 21.48 dBm
Power (ch 6 or B):	Conducted: 22.04 dBm
Power (ch 11 or C):	Conducted: 22.22 dBm

Mode B (OFDM)

Power (ch 1 or A):	Conducted: 23.54 dBm
Power (ch 6 or B):	Conducted: 23.58 dBm
Power (ch 11 or C):	Conducted: 23.49 dBm

Mode C (OFDM)

Power (ch 1 or A):	Conducted: 21.50 dBm
Power (ch 6 or B):	Conducted: 21.71 dBm
Power (ch 11 or C):	Conducted: 21.45 dBm

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

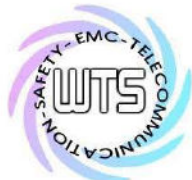
Temperature: 23 °C

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Power supply: 3.3Vdc / USB 5Vdc (Power from PC)

Extreme conditions parameters: ./.



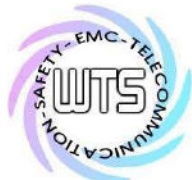
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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2013/9/2	2014/9/1
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 008	HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2013/7/10	2014/7/9
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2013/10/28	2014/10/27
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	2013/10/15	2014/10/14
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	2013/11/27	2014/11/26
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	2013/10/7	2014/10/6
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2013/10/11	2014/10/10
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	2013/12/04	2014/12/03
ETSTW-RE 111	TRILOG Super Broadband test Antenna	VULB 9160	9160-3309	Schwarz beck	2013/12/27	2014/12/26
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2014/1/10	2015/1/09
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
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



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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 Circits	2013/8/13	2014/8/12
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circits	2013/8/13	2014/8/12
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2013/10/7	2014/10/6
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2014/1/10	2015/1/09
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2014/1/10	2015/1/09
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2014/1/10	2015/1/09
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2014/1/10	2015/1/09
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	2013/10/11	2014/10/10
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2013/10/11	2014/10/10
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	2013/11/27	2014/11/26
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2013/11/27	2014/11/26
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2013/11/27	2014/11/26
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	



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

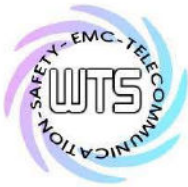
The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2009 6.3.1. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (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.



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

$T = 100\text{ms}$ 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.



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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 Receiver Part	15.109	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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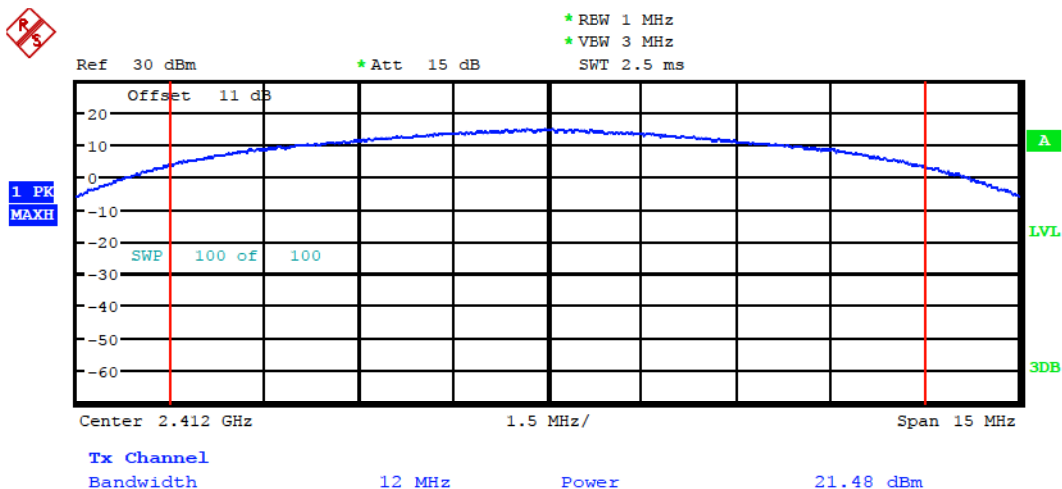
3.1 Peak Output Power (transmitter)

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).

802.11b

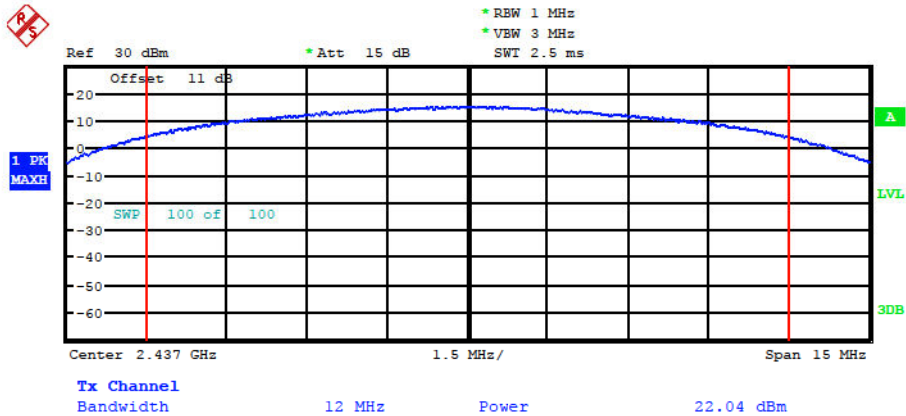


MAX OUTPUT POWER 802.11B CH01

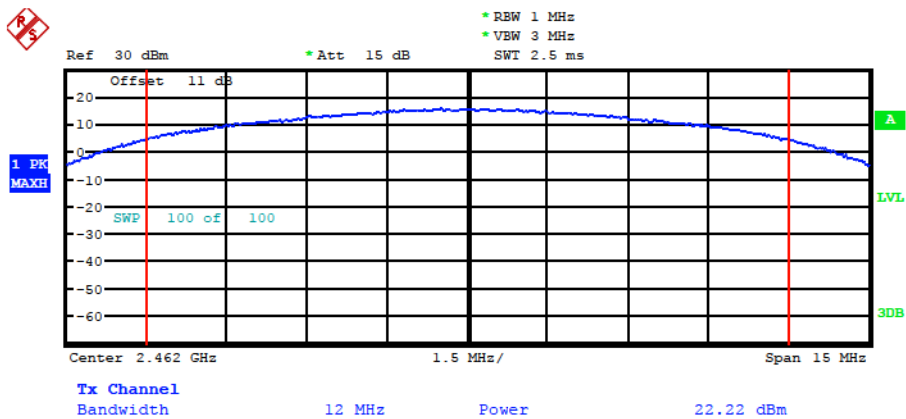
Date: 12.FEB.2014 16:26:56



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MAX OUTPUT POWER 802.11B CH06
Date: 12.FEB.2014 16:27:47



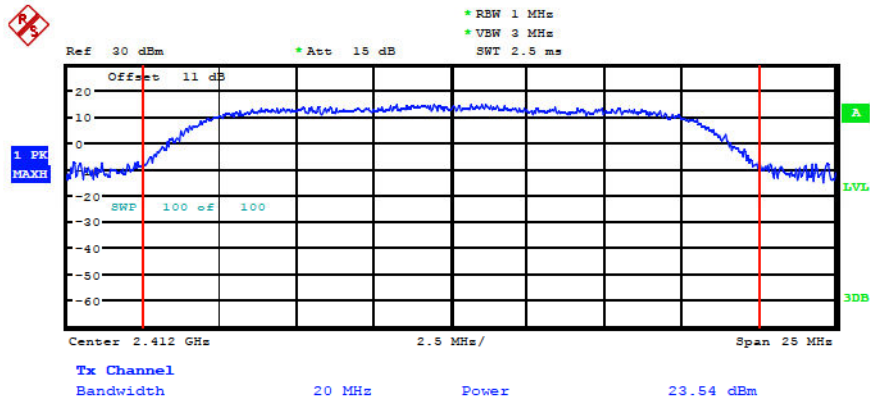
MAX OUTPUT POWER 802.11B CH11
Date: 12.FEB.2014 16:28:29



Registration number: W6M21401-13800-C-1

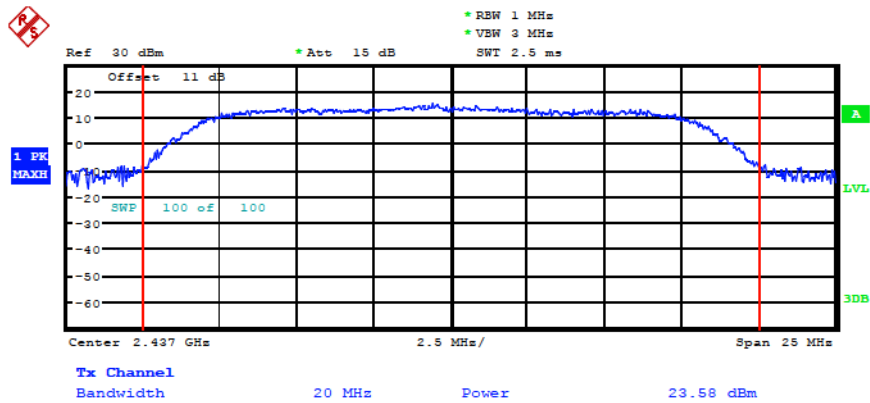
FCC ID: 2ABPY-61F8

802.11g



MAX OUTPUT POWER 802.11G CH01

Date: 12.FEB.2014 16:29:19



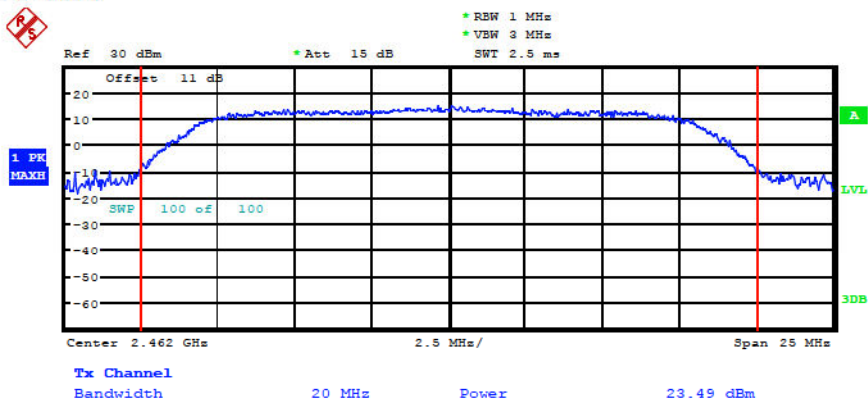
MAX OUTPUT POWER 802.11G CH06

Date: 12.FEB.2014 16:30:13



Registration number: W6M21401-13800-C-1

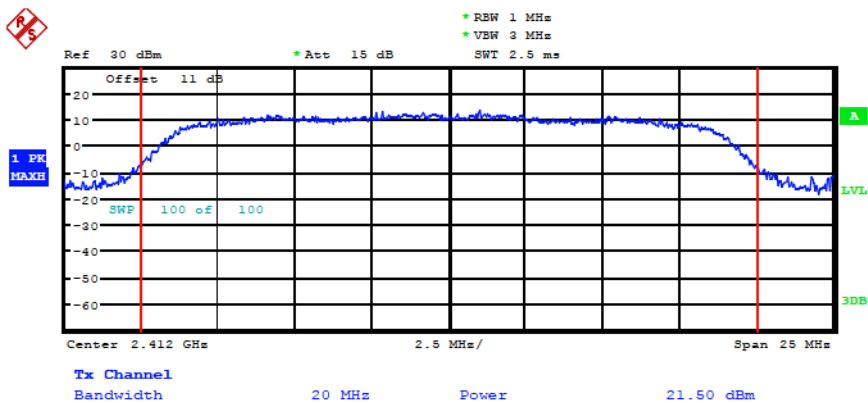
FCC ID: 2ABPY-61F8



MAX OUTPUT POWER 802.11G CH11

Date: 12.FEB.2014 16:30:51

802.11n 20MHz

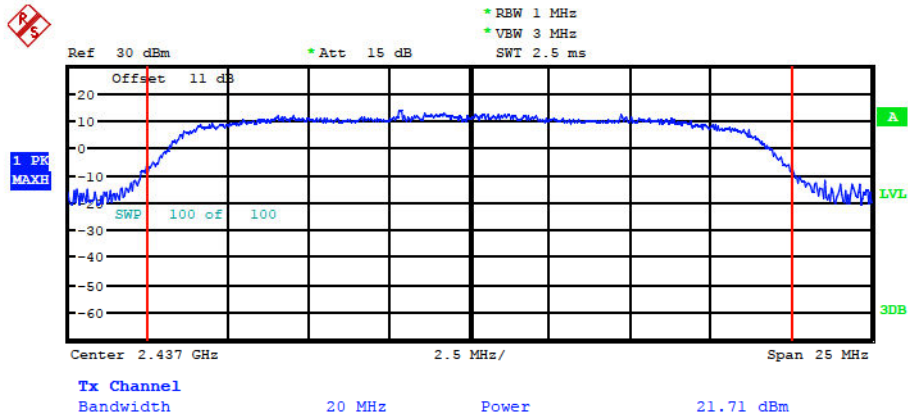


MAX OUTPUT POWER 802.11N 20MHZ CH01

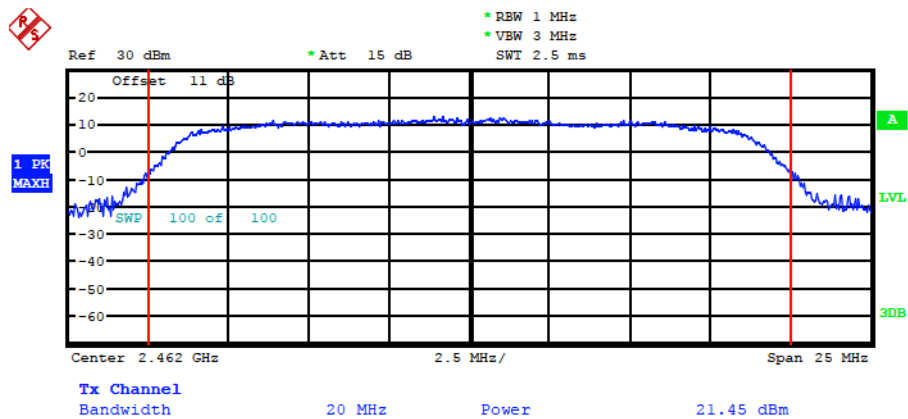
Date: 12.FEB.2014 16:31:57



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MAX OUTPUT POWER 802.11N 20MHZ CH06
Date: 12.FEB.2014 16:33:04



MAX OUTPUT POWER 802.11N 20MHZ CH11
Date: 12.FEB.2014 16:33:41



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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



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3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain (Directional gain)

EIRP = 23.58 dBm + 3.18 dBi

= 26.76 dBm

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

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

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

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

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

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

Item	Unit	Value	Remarks
P	mW	228.034	Peak value
D	dB		
AG	dBi	3.18	
G		2.08	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.09436	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:

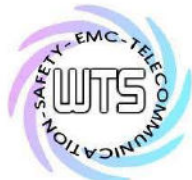
“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

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

Model: AMW004

Date: 2014/1/27

Mode: TX 802.11b CH1

Temperature: 24 °C

Engineer: Roy

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)
317.6954	20.62	peak	16.43	37.05	46.00	-8.95	240	100
799.7795	14.68	peak	25.64	40.32	46.00	-5.68	100	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4825.6510	47.05	---	0.50	47.55	---	74.00	54.00	-26.45	310	100
7236.0000	40.82	---	4.06	44.88	---	74.00	54.00	-29.12	40	100
9648.0000	34.80	---	9.16	43.96	---	74.00	54.00	-30.04	205	100
12060.0000	34.33	---	13.89	48.22	---	74.00	54.00	-25.78	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)
630.6612	13.27	peak	23.44	36.71	46.00	-9.29	190	100
896.9738	11.54	peak	27.10	38.64	46.00	-7.36	65	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4823.9460	51.43	44.66	0.50	51.93	45.16	74.00	54.00	-8.84	175	100
7236.0000	40.28	---	4.06	44.34	---	74.00	54.00	-29.66	60	100
9648.0000	35.25	---	9.16	44.41	---	74.00	54.00	-29.59	30	100
12060.0000	34.01	---	13.89	47.90	---	74.00	54.00	-26.10	125	100



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Mode: TX 802.11b CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
327.4148	19.26	peak	16.69	35.95	46.00	-10.05	110	100
797.8356	13.60	peak	25.63	39.23	46.00	-6.77	280	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4873.7480	48.59	---	0.61	49.20	---	74.00	54.00	-24.80	200	100
7311.0000	40.12	---	4.20	44.32	---	74.00	54.00	-29.68	75	100
9748.0000	35.18	---	9.51	44.69	---	74.00	54.00	-29.31	235	100
12185.0000	32.09	---	14.83	46.92	---	74.00	54.00	-27.08	110	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
630.6613	12.89	peak	23.44	36.33	46.00	-9.67	200	100
898.9178	8.56	peak	27.12	35.68	46.00	-10.32	75	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4873.7780	52.27	45.43	0.61	52.88	46.04	74.00	54.00	-7.96	170	100
7311.0000	40.64	---	4.20	44.84	---	74.00	54.00	-29.16	55	100
9748.0000	35.01	---	9.51	44.52	---	74.00	54.00	-29.48	80	100
12185.0000	32.20	---	14.83	47.03	---	74.00	54.00	-26.97	165	100

Mode: TX 802.11b CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.3125	19.45	peak	15.92	35.37	46.00	-10.63	90	100
799.7795	14.56	peak	25.64	40.20	46.00	-5.80	255	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4921.8440	48.48	---	0.83	49.31	---	74.00	54.00	-24.69	220	100
7386.0000	39.15	---	4.43	43.58	---	74.00	54.00	-30.42	90	100
9848.0000	35.04	---	9.76	44.80	---	74.00	54.00	-29.20	30	100
12310.0000	33.82	---	14.12	47.94	---	74.00	54.00	-26.06	165	100



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Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
630.6613	12.38	peak	23.44	35.82	46.00	-10.18	145	100
896.9740	10.20	peak	27.10	37.30	46.00	-8.70	60	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4921.8440	51.90	45.40	0.83	52.73	46.23	74.00	54.00	-7.77	175	100
7386.0000	39.91	---	4.43	44.34	---	74.00	54.00	-29.66	80	100
9848.0000	34.88	---	9.76	44.64	---	74.00	54.00	-29.36	40	100
12310.0000	34.71	---	14.12	48.83	---	74.00	54.00	-25.17	130	100

Mode: TX 802.11g CH1

Polarization: Horizontal

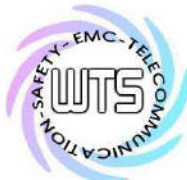
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
319.6392	19.85	peak	16.48	36.33	46.00	-9.67	30	100
799.7093	12.72	QP	25.64	38.36	46.00	-7.64	160	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	43.76	---	0.50	44.26	---	74.00	54.00	-29.74	195	100
7236.0000	40.75	---	4.06	44.81	---	74.00	54.00	-29.19	120	100
9648.0000	35.74	---	9.16	44.90	---	74.00	54.00	-29.10	95	100
12060.0000	34.22	---	13.89	48.11	---	74.00	54.00	-25.89	260	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
480.9820	12.97	peak	20.46	33.43	46.00	-12.57	25	100
630.6613	13.60	peak	23.44	37.04	46.00	-8.96	130	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4824.0000	46.25	---	0.50	46.75	---	74.00	54.00	-27.25	85	100
7236.0000	40.80	---	4.06	44.86	---	74.00	54.00	-29.14	255	100
9648.0000	35.07	---	9.16	44.23	---	74.00	54.00	-29.77	240	100
12060.0000	33.29	---	13.89	47.18	---	74.00	54.00	-26.82	115	100



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Mode: TX 802.11g CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
288.5371	20.83	peak	15.75	36.58	46.00	-9.42	75	100
797.8356	15.22	peak	25.63	40.85	46.00	-5.15	235	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4865.7310	45.68	---	0.59	46.27	---	74.00	54.00	-27.73	240	100
7311.0000	40.43	---	4.20	44.63	---	74.00	54.00	-29.37	135	100
9748.0000	34.60	---	9.51	44.11	---	74.00	54.00	-29.89	85	100
12185.0000	32.20	---	14.83	47.03	---	74.00	54.00	-26.97	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)
630.6613	13.37	peak	23.44	36.81	46.00	-9.19	260	100
797.8357	9.21	peak	25.63	34.84	46.00	-11.16	150	100

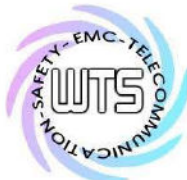
Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4873.7480	49.30	44.49	0.61	49.91	45.10	74.00	54.00	-8.90	155	100
7311.0000	40.30	---	4.20	44.50	---	74.00	54.00	-29.50	65	100
9748.0000	35.91	---	9.51	45.42	---	74.00	54.00	-28.58	140	100
12185.0000	32.43	---	14.83	47.26	---	74.00	54.00	-26.74	25	100

Mode: TX 802.11g CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3686	19.91	peak	15.88	35.79	46.00	-10.21	40	100
799.7795	14.87	peak	25.64	40.51	46.00	-5.49	110	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4921.8440	44.26	---	0.83	45.09	---	74.00	54.00	-28.91	190	100
7386.0000	39.65	---	4.43	44.08	---	74.00	54.00	-29.92	70	100
9848.0000	35.01	---	9.76	44.77	---	74.00	54.00	-29.23	225	100
12310.0000	34.16	---	14.12	48.28	---	74.00	54.00	-25.72	100	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

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Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
630.6613	13.09	peak	23.44	36.53	46.00	-9.47	260	100
797.8357	9.91	peak	25.63	35.54	46.00	-10.46	125	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4913.8280	46.62	---	0.77	47.39	---	74.00	54.00	-26.61	185	100
7386.0000	40.27	---	4.43	44.70	---	74.00	54.00	-29.30	290	100
9848.0000	35.39	---	9.76	45.15	---	74.00	54.00	-28.85	145	100
12310.0000	34.21	---	14.12	48.33	---	74.00	54.00	-25.67	270	100

Mode: TX 802.11n 20MHz CH1

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
329.3586	19.50	peak	16.75	36.25	46.00	-9.75	95	100
797.8356	14.84	peak	25.63	40.47	46.00	-5.53	165	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	41.41	---	0.84	42.25	---	74.00	54.00	-31.75	90	100
7386.0000	39.68	---	4.43	44.11	---	74.00	54.00	-29.89	125	100
9848.0000	34.44	---	9.76	44.20	---	74.00	54.00	-29.80	285	100
12310.0000	34.10	---	14.12	48.22	---	74.00	54.00	-25.78	140	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.2565	15.56	peak	15.96	31.52	46.00	-14.48	45	100
630.6613	12.55	peak	23.44	35.99	46.00	-10.01	235	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	41.09	---	0.84	41.93	---	74.00	54.00	-32.07	300	100
7386.0000	40.27	---	4.43	44.70	---	74.00	54.00	-29.30	185	100
9848.0000	34.93	---	9.76	44.69	---	74.00	54.00	-29.31	275	100
12310.0000	34.61	---	14.12	48.73	---	74.00	54.00	-25.27	105	100



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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Mode: TX 802.11n 20MHz CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
323.5271	19.56	peak	16.59	36.15	46.00	-9.85	115	100
799.7795	15.70	peak	25.64	41.34	46.00	-4.66	215	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4874.0000	43.15	---	0.61	43.76	---	74.00	54.00	-30.24	85	100
7311.0000	40.75	---	4.20	44.95	---	74.00	54.00	-29.05	150	100
9748.0000	35.11	---	9.51	44.62	---	74.00	54.00	-29.38	240	100
12185.0000	32.54	---	14.83	47.37	---	74.00	54.00	-26.63	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)
294.3687	15.45	peak	15.88	31.33	46.00	-14.67	300	100
630.6613	12.98	peak	23.44	36.42	46.00	-9.58	225	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4873.7480	45.10	---	0.61	45.71	---	74.00	54.00	-28.29	60	100
7311.0000	40.43	---	4.20	44.63	---	74.00	54.00	-29.37	215	100
9748.0000	34.34	---	9.51	43.85	---	74.00	54.00	-30.15	95	100
12185.0000	32.40	---	14.83	47.23	---	74.00	54.00	-26.77	170	100

Mode: TX 802.11n 20MHz CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
319.6392	20.12	peak	16.48	36.60	46.00	-9.40	175	100
797.8356	15.38	peak	25.63	41.01	46.00	-4.99	65	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4924.0000	41.27	---	0.84	42.11	---	74.00	54.00	-31.89	45	100
7386.0000	40.36	---	4.43	44.79	---	74.00	54.00	-29.21	180	100
9848.0000	34.10	---	9.76	43.86	---	74.00	54.00	-30.14	305	100
12310.0000	34.65	---	14.12	48.77	---	74.00	54.00	-25.23	210	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.2565	15.49	peak	15.96	31.45	46.00	-14.55	210	100
630.6613	13.07	peak	23.44	36.51	46.00	-9.49	80	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4921.8440	44.91	---	0.83	45.74	---	74.00	54.00	-28.26	170	100
7386.0000	39.96	---	4.43	44.39	---	74.00	54.00	-29.61	80	100
9848.0000	35.23	---	9.76	44.99	---	74.00	54.00	-29.01	160	100
12310.0000	34.64	---	14.12	48.76	---	74.00	54.00	-25.24	235	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 = ± 3.68 dB, 1-18 GHz = ± 5.37 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: W6M21401-13800-C-1

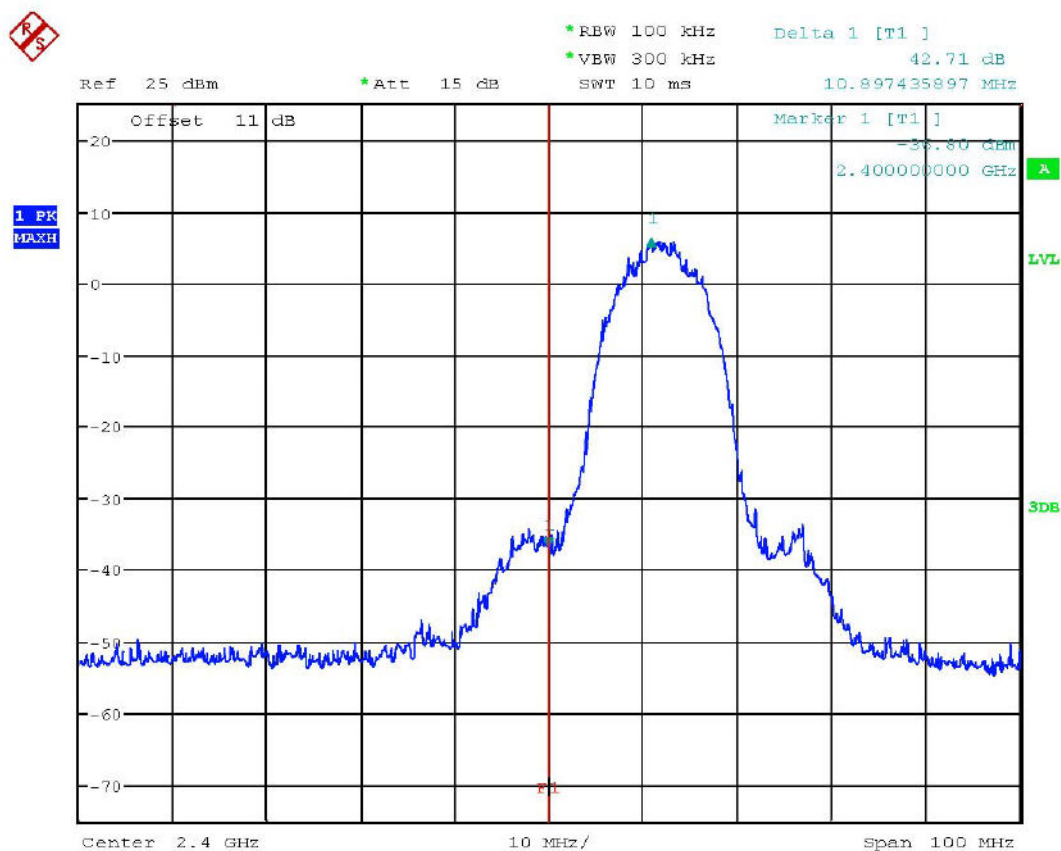
FCC ID: 2ABPY-61F8

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.

802.11b

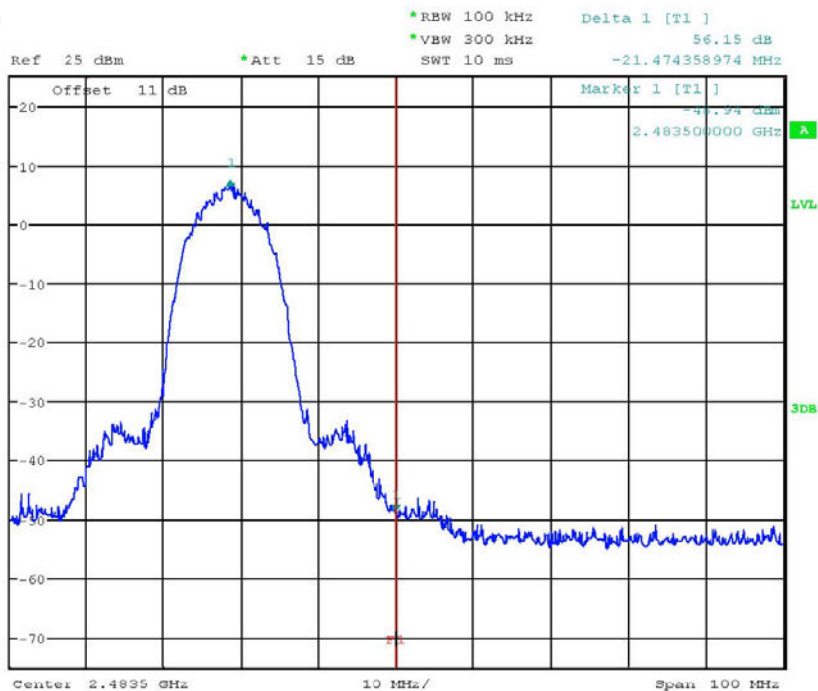


BANDEGE 802.11B CH01

Date: 12.FEB.2014 16:27:15

Registration number: W6M21401-13800-C-1

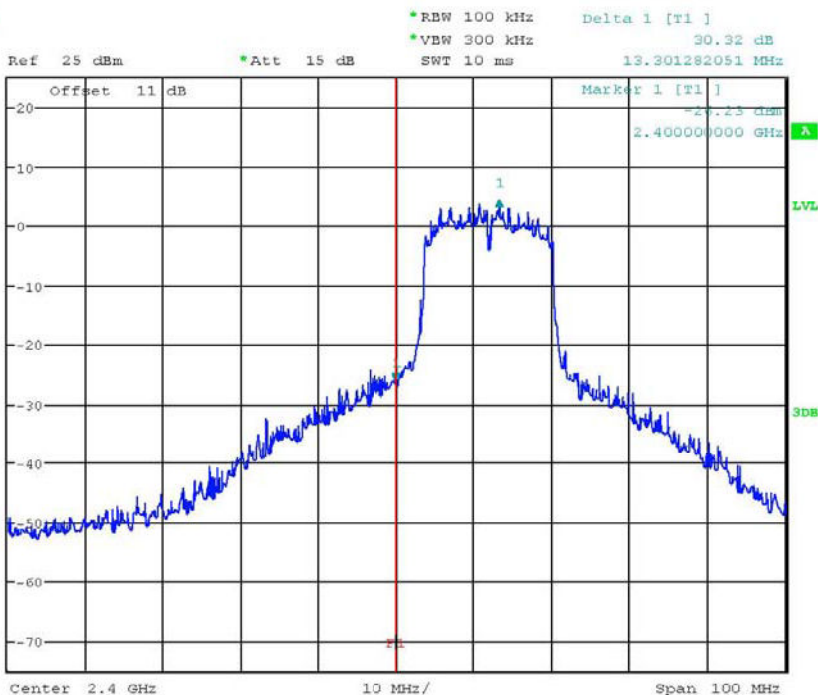
FCC ID: 2ABPY-61F8



BANDEDGE 802.11B CH11

Date: 12.FEB.2014 16:28:47

802.11g



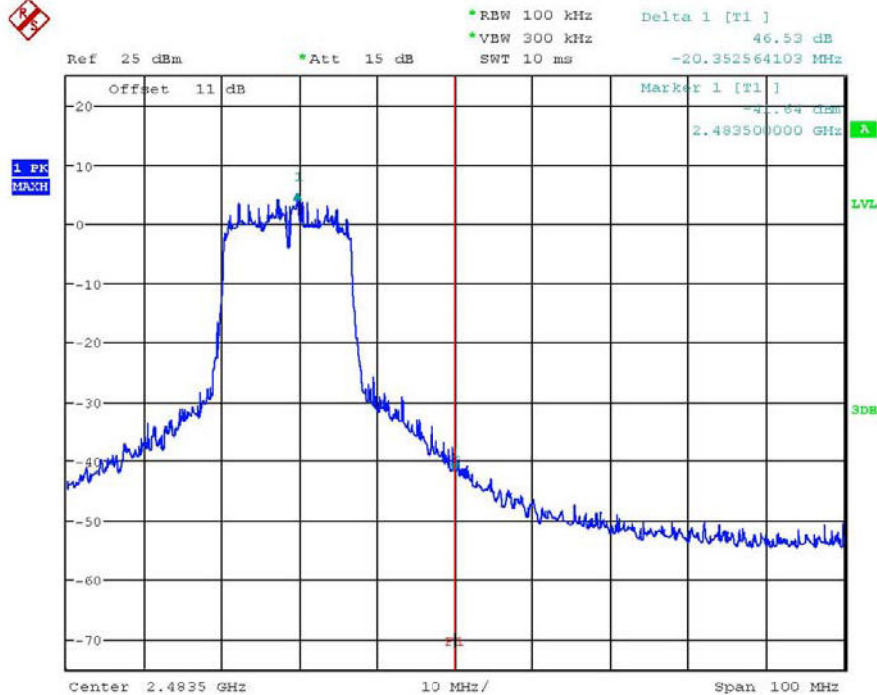
BANDEDGE 802.11G CH01

Date: 12.FEB.2014 16:29:37



Registration number: W6M21401-13800-C-1

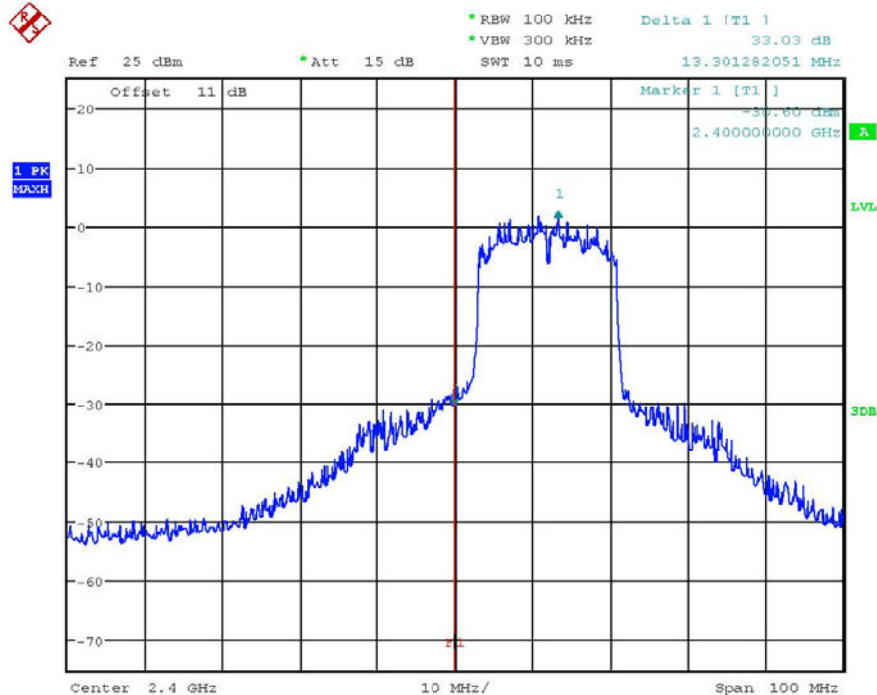
FCC ID: 2ABPY-61F8



BANDEDGE 802.11G CH11

Date: 12.FEB.2014 16:31:09

802.11n 20MHz



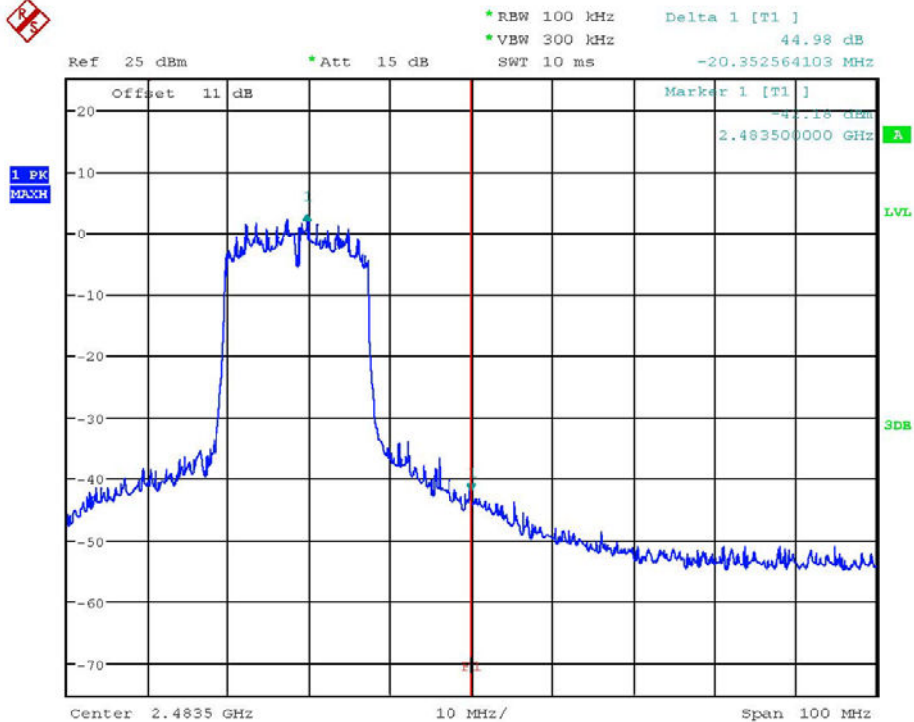
BANDEDGE 802.11N 20MHZ CH01

Date: 12.FEB.2014 16:32:15



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1
FCC ID: 2ABPY-61F8



BANDEDGE 802.11N 20MHZ CH11
Date: 12.FEB.2014 16:33:59

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: W6M21401-13800-C-1

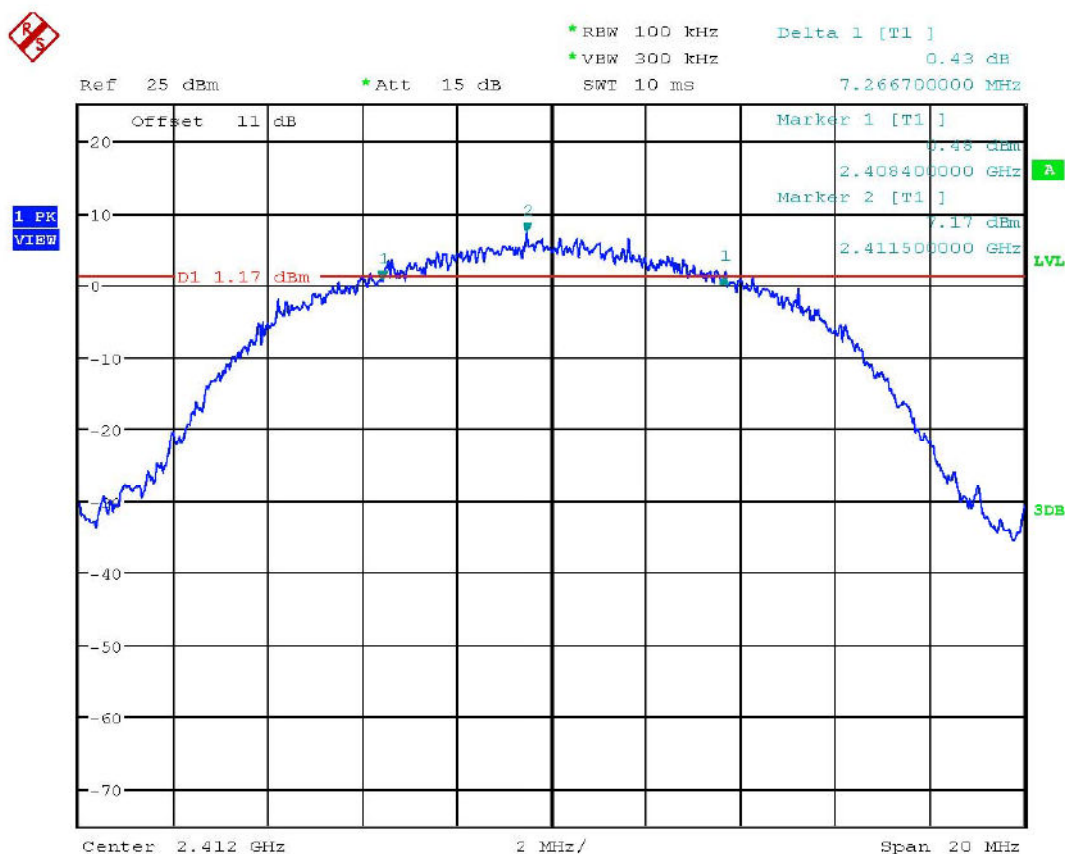
FCC ID: 2ABPY-61F8

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.

802.11b

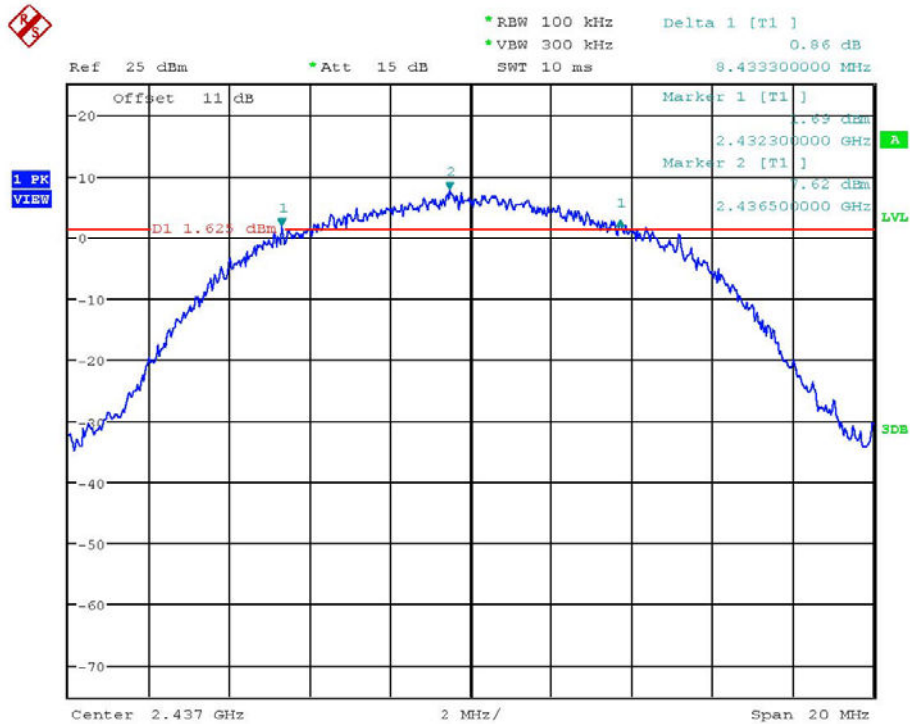


6DB BANDWIDTH 802.11B CH01

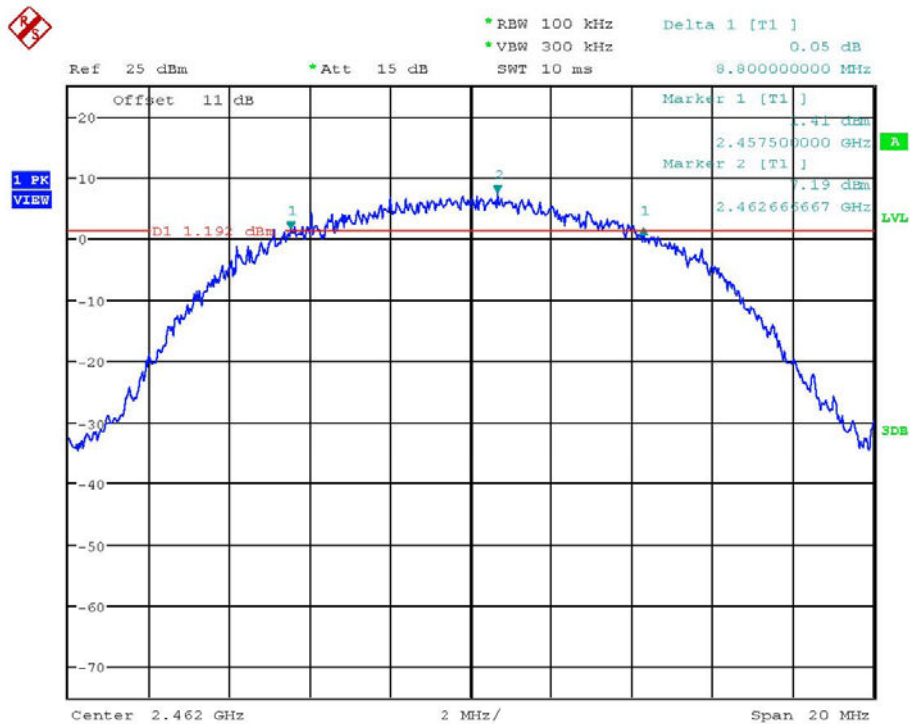
Date: 12.FEB.2014 16:27:05



Registration number: W6M21401-13800-C-1
FCC ID: 2ABPY-61F8



6DB BANDWIDTH 802.11B CH06
Date: 12.FEB.2014 16:27:55



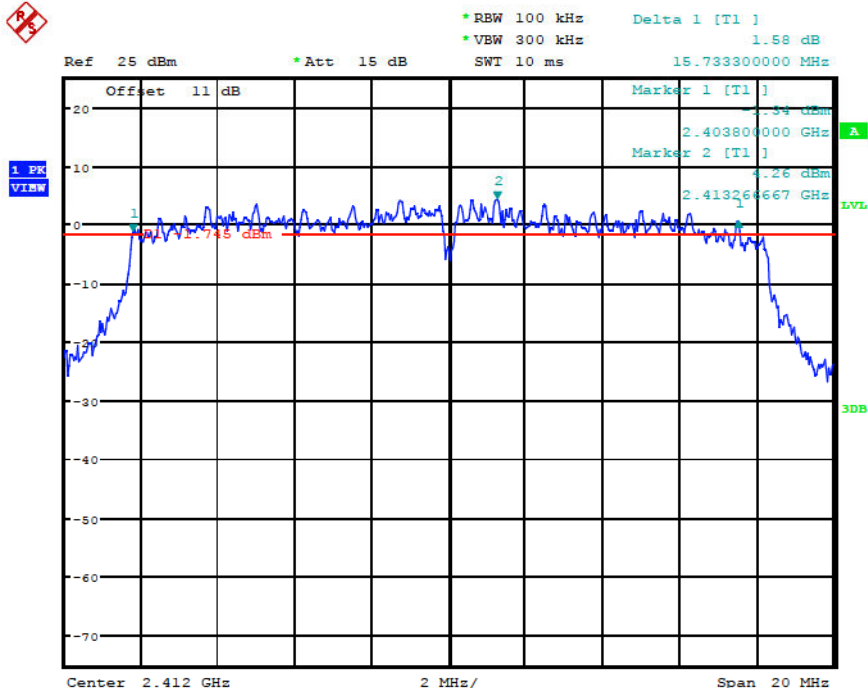
6DB BANDWIDTH 802.11B CH11
Date: 12.FEB.2014 16:28:37



Registration number: W6M21401-13800-C-1

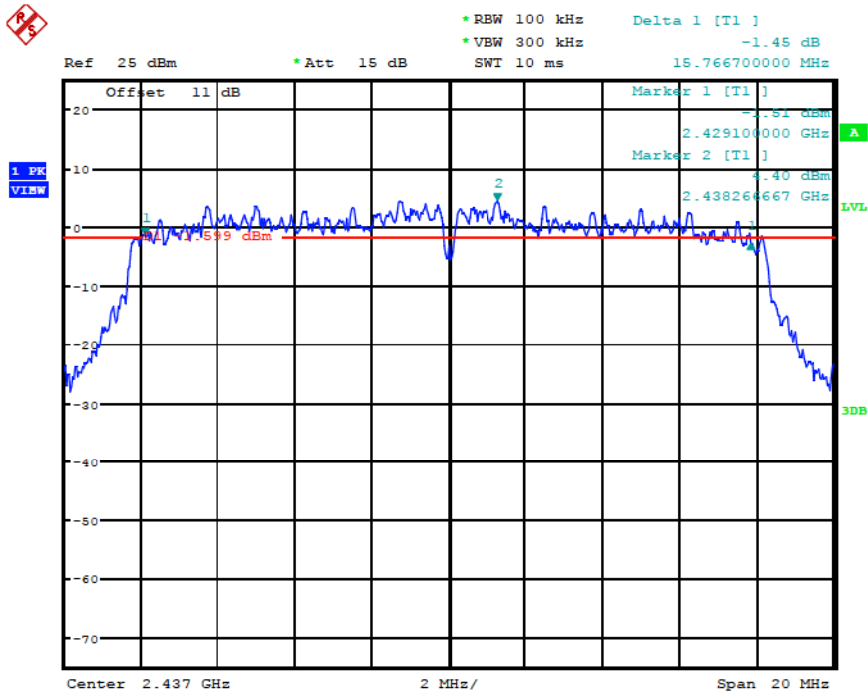
FCC ID: 2ABPY-61F8

802.11g



6DB BANDWIDTH 802.11G CH01

Date: 12.FEB.2014 16:29:27



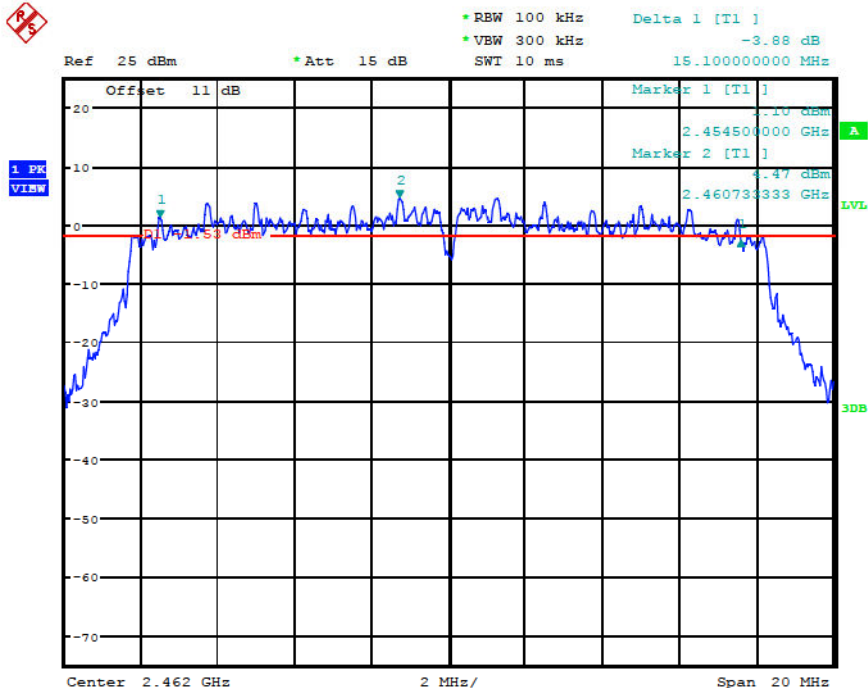
6DB BANDWIDTH 802.11G CH06

Date: 12.FEB.2014 16:30:21



Registration number: W6M21401-13800-C-1

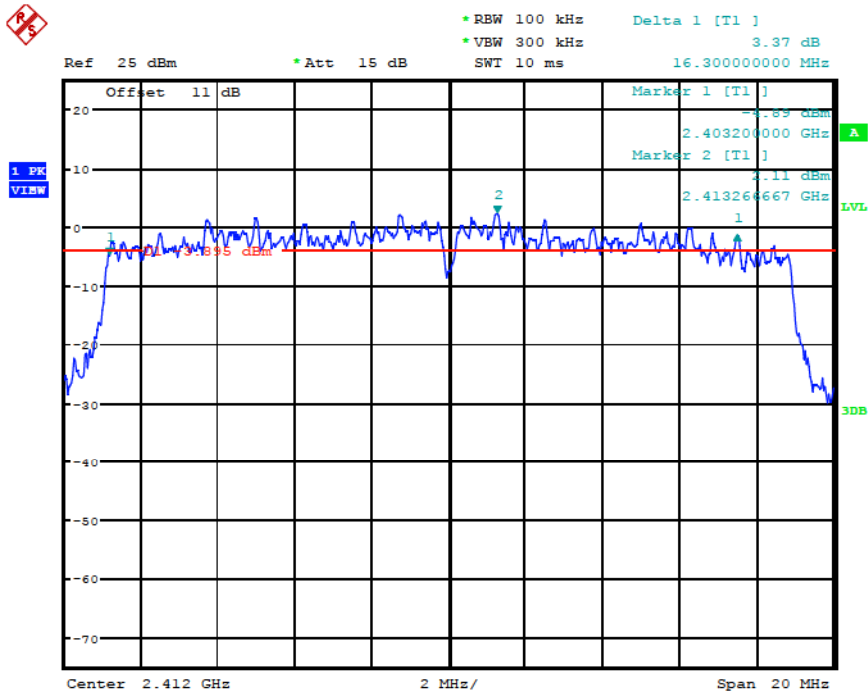
FCC ID: 2ABPY-61F8



6DB BANDWIDTH 802.11G CH11

Date: 12.FEB.2014 16:30:59

802.11n 20MHz

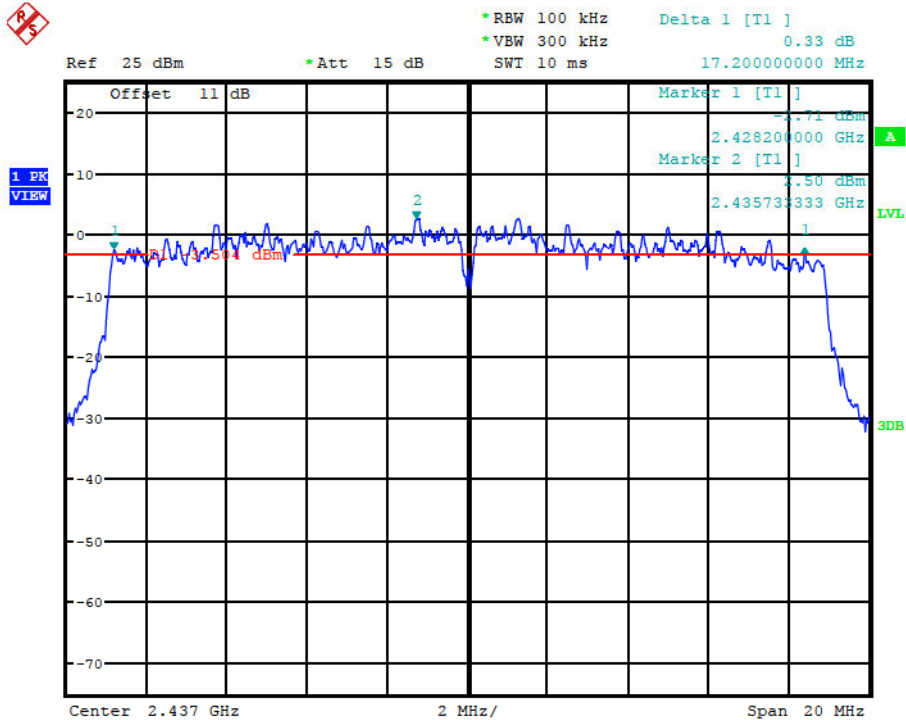


6DB BANDWIDTH 802.11N 20MHZ CH01

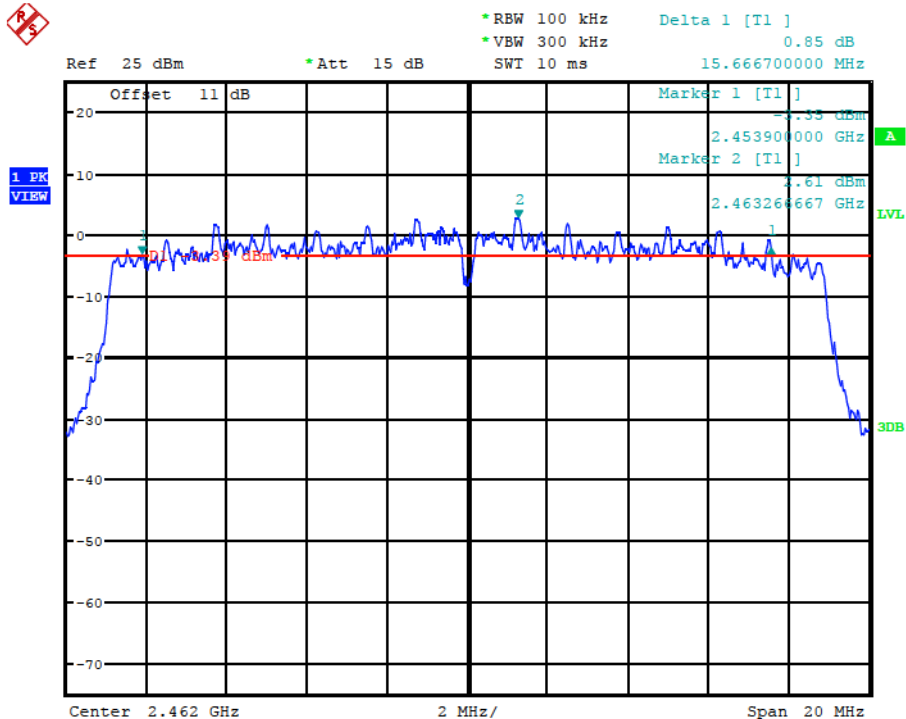
Date: 12.FEB.2014 16:32:05



Registration number: W6M21401-13800-C-1
FCC ID: 2ABPY-61F8



6DB BANDWIDTH 802.11N 20MHZ CH06
Date: 12.FEB.2014 16:33:12



6DB BANDWIDTH 802.11N 20MHZ CH11
Date: 12.FEB.2014 16:33:49



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

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: W6M21401-13800-C-1

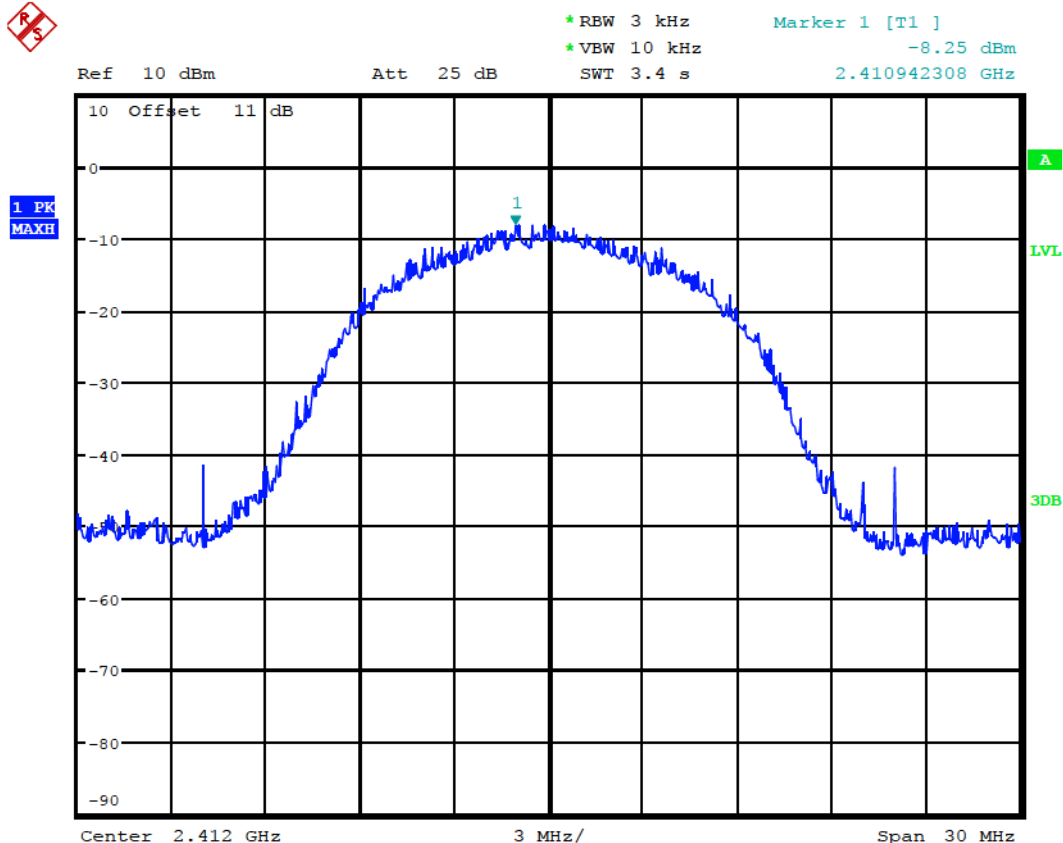
FCC ID: 2ABPY-61F8

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.

802.11b



POWER DENSITY 802.11b CH1

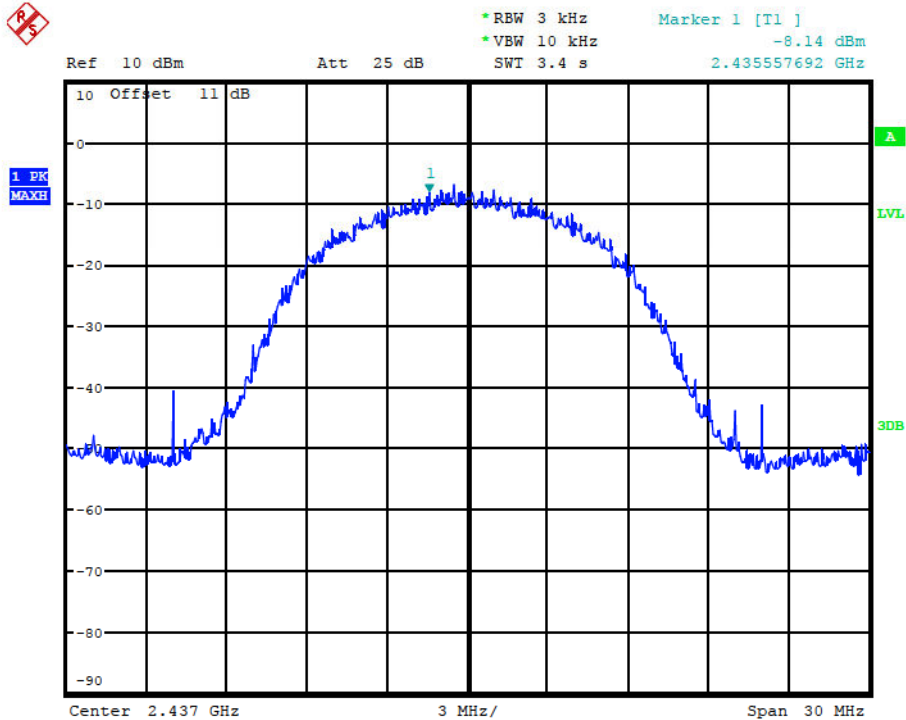
Date: 12.FEB.2014 17:24:36



Worldwide Testing Services(Taiwan) Co., Ltd.

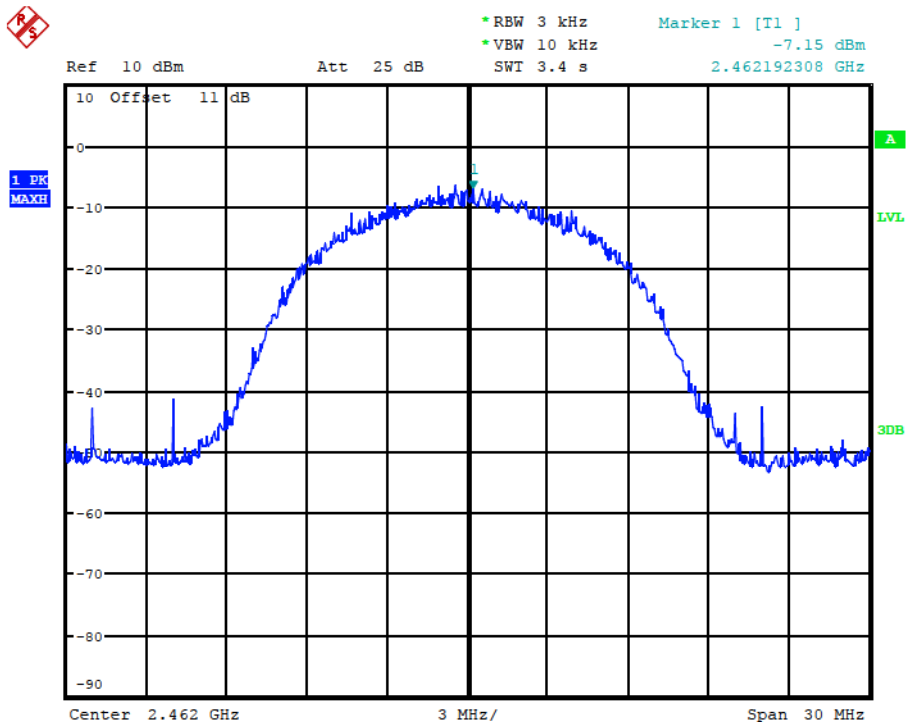
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8



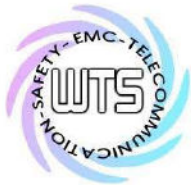
POWER DENSITY 802.11b CH6

Date: 12.FEB.2014 17:23:40



POWER DENSITY 802.11b CH11

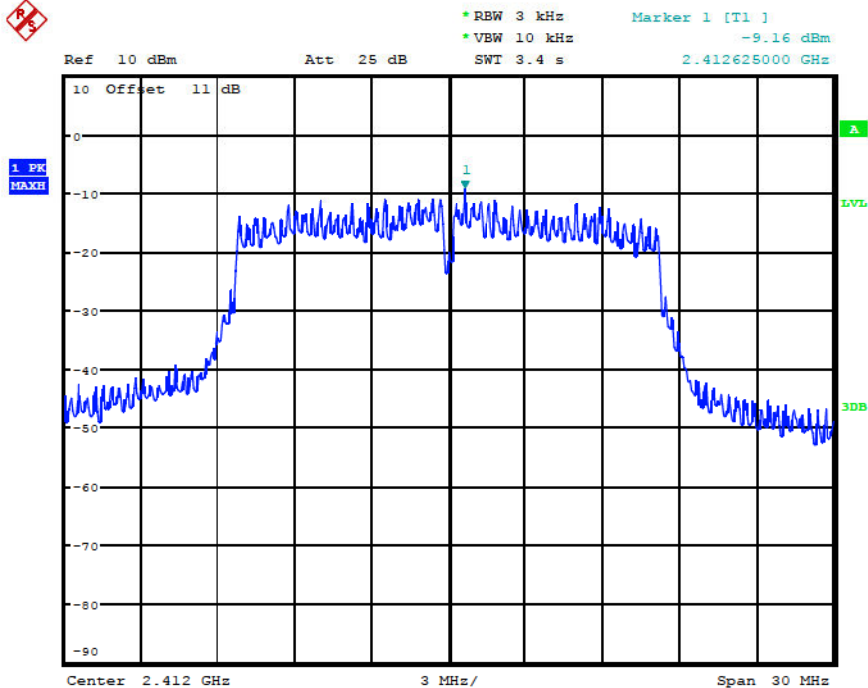
Date: 12.FEB.2014 17:23:03



Registration number: W6M21401-13800-C-1

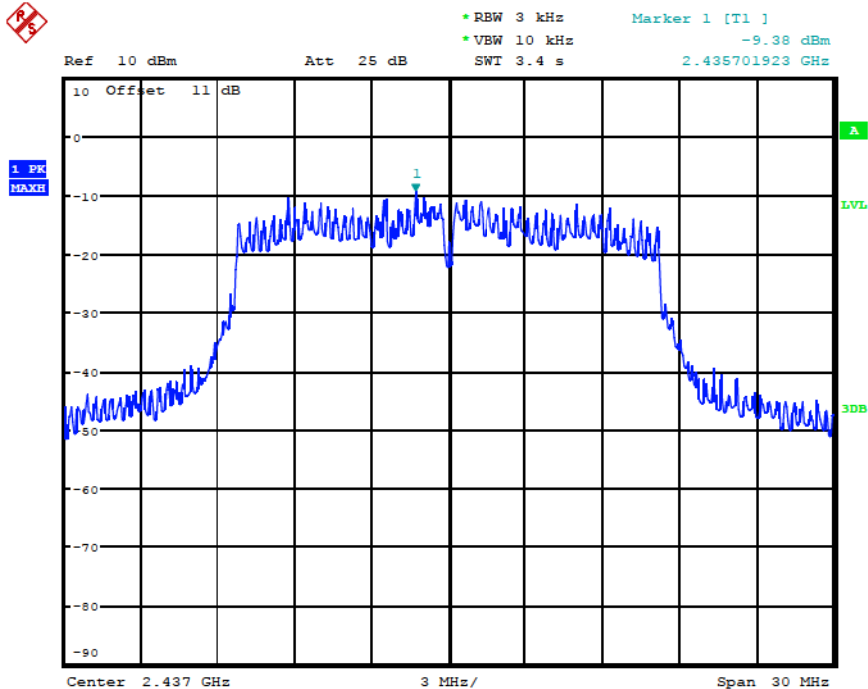
FCC ID: 2ABPY-61F8

802.11g



POWER DENSITY 802.11g CH1

Date: 12.FEB.2014 17:25:26



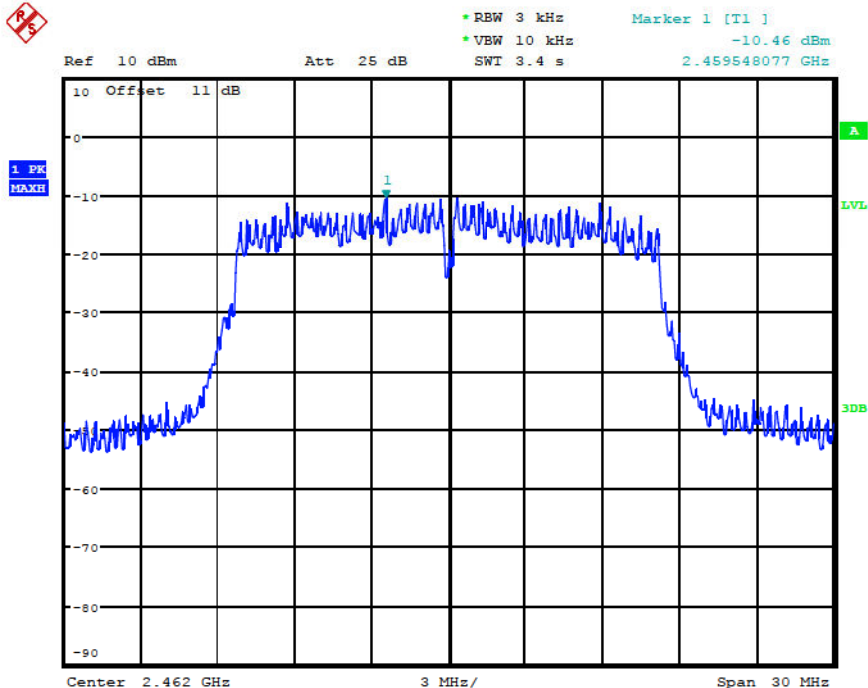
POWER DENSITY 802.11g CH6

Date: 12.FEB.2014 17:26:10



Registration number: W6M21401-13800-C-1

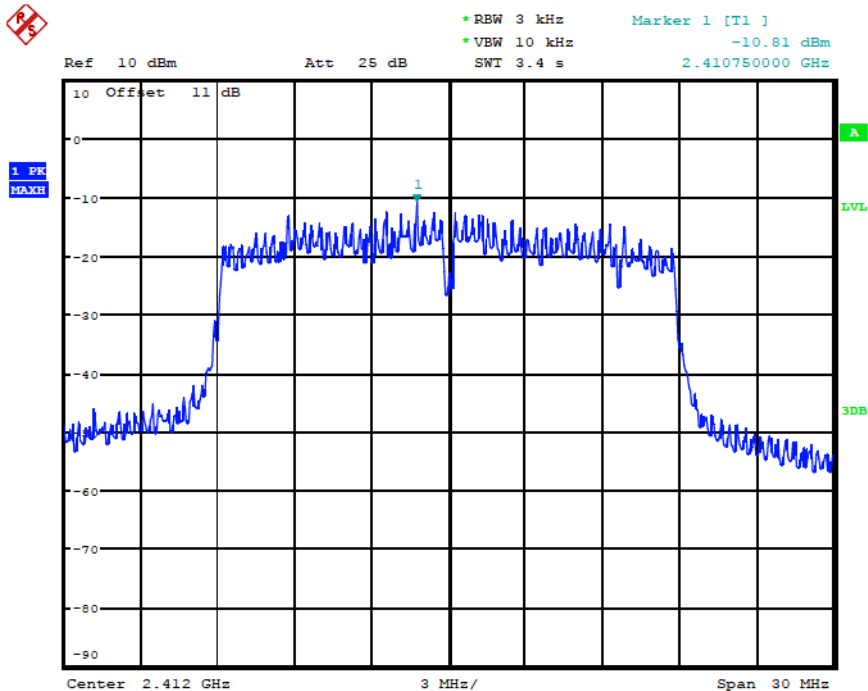
FCC ID: 2ABPY-61F8



POWER DENSITY 802.11g CH11

Date: 12.FEB.2014 17:26:54

802.11n 20MHz

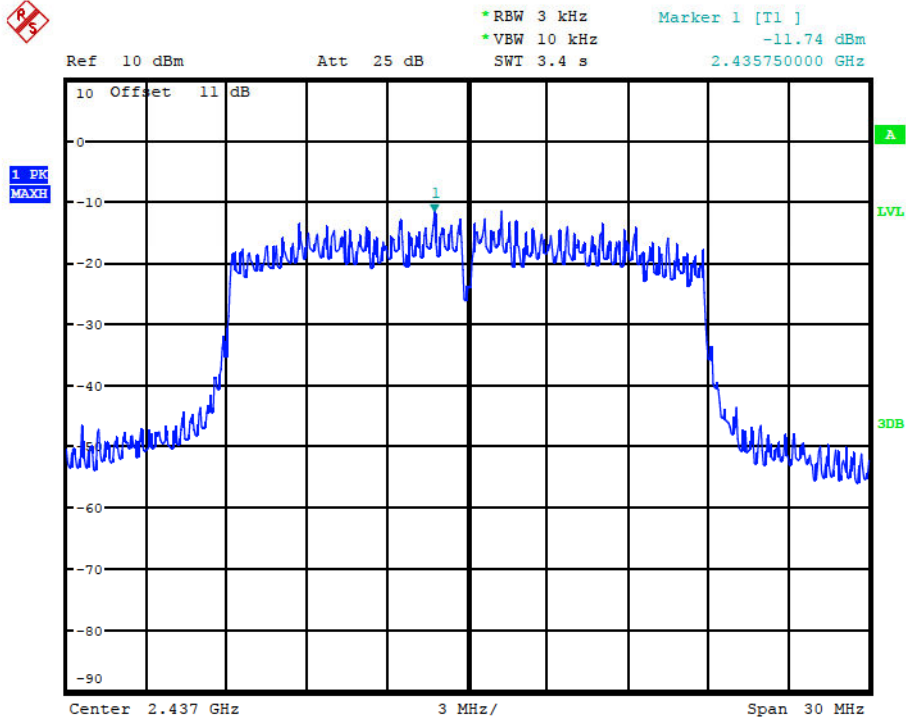


POWER DENSITY 802.11n 20MHz CH1

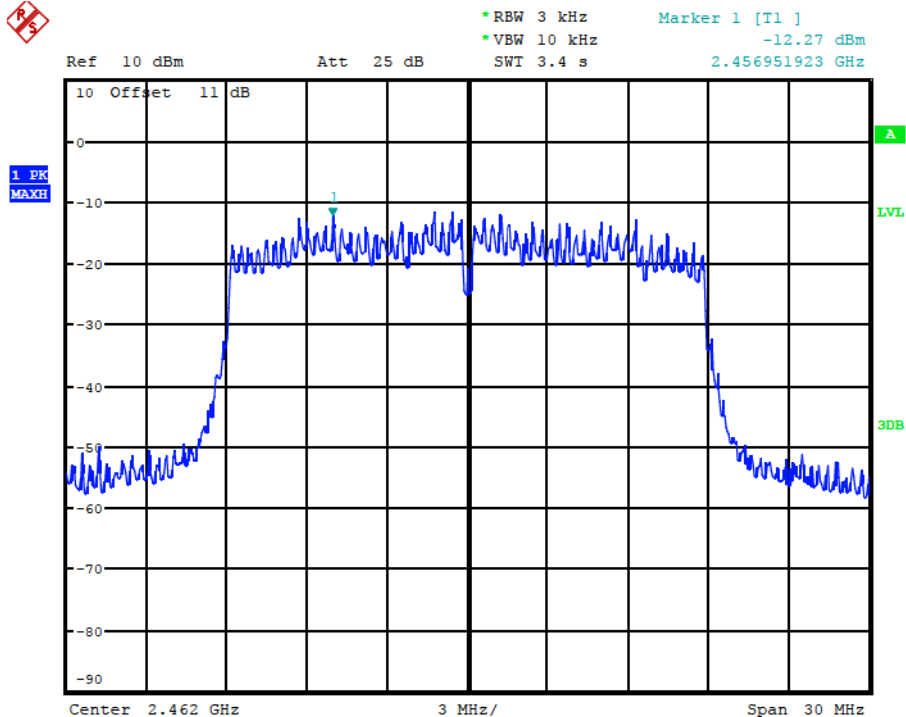
Date: 12.FEB.2014 17:29:45



Registration number: W6M21401-13800-C-1
FCC ID: 2ABPY-61F8



POWER DENSITY 802.11n 20MHz CH6
Date: 12.FEB.2014 17:28:59



POWER DENSITY 802.11n 20MHz CH11
Date: 12.FEB.2014 17:28:12



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Limits:

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

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



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

3.9 Radiated Emission from Receiver Part

FCC Rule: 15.109

Model: AMW004

Date: 2014/1/27~2014/1/28

Mode: RX 802.11b CH1

Temperature: 24 °C

Engineer: Roy

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)
296.3125	21.27	peak	15.92	37.19	46.00	-8.81	200	100
510.1403	12.19	peak	21.12	33.31	46.00	-12.69	175	100
630.6612	10.94	peak	23.44	34.38	46.00	-11.62	60	100
799.7795	12.49	peak	25.64	38.13	46.00	-7.87	115	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4478.9580	42.76	---	0.10	42.86	---	74.00	54.00	-31.14	170	100
6555.1100	40.76	---	4.52	45.28	---	74.00	54.00	-28.72	55	100

Polarization: Vertical

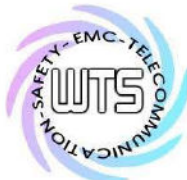
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.3126	17.26	peak	15.92	33.18	46.00	-12.82	265	100
480.9820	12.37	peak	20.46	32.83	46.00	-13.17	215	100
510.1403	12.12	peak	21.12	33.24	46.00	-12.76	80	100
630.6613	13.42	peak	23.44	36.86	46.00	-9.14	140	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4675.3510	42.09	---	0.19	42.28	---	74.00	54.00	-31.72	330	100
7032.0640	40.90	---	4.37	45.27	---	74.00	54.00	-28.73	150	100

Mode: RX 802.11b CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3686	20.98	peak	15.88	36.86	46.00	-9.14	95	100
510.1403	11.41	peak	21.12	32.53	46.00	-13.47	260	100
630.6612	11.57	peak	23.44	35.01	46.00	-10.99	225	100
797.8356	15.25	peak	25.63	40.88	46.00	-5.12	180	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4675.3510	42.37	---	0.19	42.56	---	74.00	54.00	-31.44	290	100
7032.0640	40.78	---	4.37	45.15	---	74.00	54.00	-28.85	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)
290.4810	16.63	peak	15.80	32.43	46.00	-13.57	85	100
480.9820	13.14	peak	20.46	33.60	46.00	-12.40	140	100
630.6613	14.04	peak	23.44	37.48	46.00	-8.52	190	100
799.7796	8.48	peak	25.64	34.12	46.00	-11.88	230	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4829.6590	41.73	---	0.51	42.24	---	74.00	54.00	-31.76	260	100
6555.1100	40.72	---	4.52	45.24	---	74.00	54.00	-28.76	120	100

Mode: RX 802.11b CH11

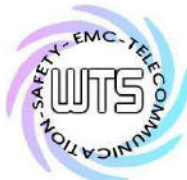
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3686	21.59	peak	15.88	37.47	46.00	-8.53	285	100
325.4708	18.75	peak	16.64	35.39	46.00	-10.61	65	100
630.6612	11.00	peak	23.44	34.44	46.00	-11.56	130	100
799.7795	11.95	peak	25.64	37.59	46.00	-8.41	210	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
5026.0520	41.28	---	1.41	42.69	---	74.00	54.00	-31.31	295	100
6555.1100	40.40	---	4.52	44.92	---	74.00	54.00	-29.08	225	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.3126	15.88	peak	15.92	31.80	46.00	-14.20	165	100
480.9820	13.18	peak	20.46	33.64	46.00	-12.36	270	100
630.6613	13.06	peak	23.44	36.50	46.00	-9.50	240	100
797.8357	9.88	peak	25.63	35.51	46.00	-10.49	115	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4675.3510	42.48	---	0.19	42.67	---	74.00	54.00	-31.33	30	100
6653.3060	40.84	---	4.72	45.56	---	74.00	54.00	-28.44	165	100

Mode: RX 802.11g CH1

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
325.4708	19.35	peak	16.64	35.99	46.00	-10.01	255	100
480.9820	13.02	peak	20.46	33.48	46.00	-12.52	120	100
630.6612	11.85	peak	23.44	35.29	46.00	-10.71	205	100
799.7795	15.67	peak	25.64	41.31	46.00	-4.69	185	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4689.3790	42.36	---	0.21	42.57	---	74.00	54.00	-31.43	320	100
7004.0080	41.14	---	4.41	45.55	---	74.00	54.00	-28.45	195	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
306.0321	14.51	peak	16.14	30.65	46.00	-15.35	190	100
480.9820	12.48	peak	20.46	32.94	46.00	-13.06	135	100
630.6613	12.85	peak	23.44	36.29	46.00	-9.71	80	100
797.8357	9.73	peak	25.63	35.36	46.00	-10.64	225	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4352.7050	42.62	---	-0.25	42.37	---	74.00	54.00	-31.63	250	100
6106.2120	40.60	---	3.59	44.19	---	74.00	54.00	-29.81	105	100

Mode: RX 802.11g CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3686	20.79	peak	15.88	36.67	46.00	-9.33	260	100
323.5271	19.28	peak	16.59	35.87	46.00	-10.13	110	100
630.6612	10.82	peak	23.44	34.26	46.00	-11.74	305	100
797.8356	15.28	peak	25.63	40.91	46.00	-5.09	195	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4577.1540	42.49	---	0.11	42.60	---	74.00	54.00	-31.40	130	100
6428.8580	40.78	---	4.25	45.03	---	74.00	54.00	-28.97	255	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3687	16.91	peak	15.88	32.79	46.00	-13.21	235	100
480.9820	12.45	peak	20.46	32.91	46.00	-13.09	140	100
510.1403	11.80	peak	21.12	32.92	46.00	-13.08	75	100
630.6613	13.70	peak	23.44	37.14	46.00	-8.86	185	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
5460.9220	41.27	---	2.06	43.33	---	74.00	54.00	-30.67	205	100
7116.2330	40.97	---	4.21	45.18	---	74.00	54.00	-28.82	315	100

Mode: RX 802.11g CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.3125	19.66	peak	15.92	35.58	46.00	-10.42	150	100
510.1403	11.85	peak	21.12	32.97	46.00	-13.03	90	100
630.6612	10.71	peak	23.44	34.15	46.00	-11.85	275	100
799.7795	15.68	peak	25.64	41.32	46.00	-4.68	200	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4380.7610	42.57	---	-0.27	42.30	---	74.00	54.00	-31.70	90	100
6218.4370	40.58	---	3.73	44.31	---	74.00	54.00	-29.69	275	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3687	15.38	peak	15.88	31.26	46.00	-14.74	155	100
480.9820	13.08	peak	20.46	33.54	46.00	-12.46	180	100
510.1403	11.79	peak	21.12	32.91	46.00	-13.09	265	100
630.6613	13.48	peak	23.44	36.92	46.00	-9.08	220	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4450.9020	42.09	---	-0.04	42.05	---	74.00	54.00	-31.95	140	100
6442.8860	40.39	---	4.24	44.63	---	74.00	54.00	-29.37	185	100

Mode: RX 802.11n 20MHz CH1

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.3686	20.56	peak	15.88	36.44	46.00	-9.56	185	100
323.5271	20.19	peak	16.59	36.78	46.00	-9.22	320	100
630.6612	10.81	peak	23.44	34.25	46.00	-11.75	225	100
799.7795	15.96	peak	25.64	41.60	46.00	-4.40	70	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4464.9300	42.47	---	0.03	42.50	---	74.00	54.00	-31.50	240	100
6218.4370	41.28	---	3.73	45.01	---	74.00	54.00	-28.99	175	100

Polarization: Vertical

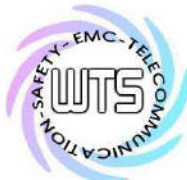
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
292.4248	15.21	peak	15.84	31.05	46.00	-14.95	240	100
480.9820	13.15	peak	20.46	33.61	46.00	-12.39	145	100
630.6613	13.06	peak	23.44	36.50	46.00	-9.50	55	100
799.7796	9.33	peak	25.64	34.97	46.00	-11.03	260	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4675.3510	42.27	---	0.19	42.46	---	74.00	54.00	-31.54	190	100
6204.4090	40.76	---	3.68	44.44	---	74.00	54.00	-29.56	310	100

Mode: RX 802.11n 20MHz CH6

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.3125	20.54	peak	15.92	36.46	46.00	-9.54	105	100
325.4708	19.50	peak	16.64	36.14	46.00	-9.86	40	100
630.6612	11.17	peak	23.44	34.61	46.00	-11.39	235	100
799.7795	14.89	peak	25.64	40.53	46.00	-5.47	200	100



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4689.3790	42.44	---	0.21	42.65	---	74.00	54.00	-31.35	220	100
6905.8110	39.88	---	5.46	45.34	---	74.00	54.00	-28.66	150	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
171.9038	14.04	peak	14.58	28.62	43.50	-14.88	185	100
298.2565	15.16	peak	15.96	31.12	46.00	-14.88	140	100
480.9820	12.95	peak	20.46	33.41	46.00	-12.59	60	100
630.6613	12.60	peak	23.44	36.04	46.00	-9.96	230	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4492.9860	42.63	---	0.17	42.80	---	74.00	54.00	-31.20	200	100
5895.7920	40.70	---	3.02	43.72	---	74.00	54.00	-30.28	135	100

Mode: RX 802.11n 20MHz CH11

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.2565	18.86	peak	15.96	34.82	46.00	-11.18	80	100
480.9820	13.58	peak	20.46	34.04	46.00	-11.96	170	100
630.6612	10.68	peak	23.44	34.12	46.00	-11.88	130	100
797.8356	13.87	peak	25.63	39.50	46.00	-6.50	265	100

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
4478.9580	42.37	---	0.10	42.47	---	74.00	54.00	-31.53	85	100
6470.9420	40.48	---	4.21	44.69	---	74.00	54.00	-29.31	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)
294.3687	14.03	peak	15.88	29.91	46.00	-16.09	110	100
480.9820	12.47	peak	20.46	32.93	46.00	-13.07	165	100
630.6613	12.70	peak	23.44	36.14	46.00	-9.86	240	100
797.8357	9.54	peak	25.63	35.17	46.00	-10.83	125	100



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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
5012.0240	41.59	---	1.40	42.99	---	74.00	54.00	-31.01	255	100
6569.1380	40.33	---	4.60	44.93	---	74.00	54.00	-29.07	130	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 = ± 3.68 dB, 1-18 GHz = ± 5.37 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.**

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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

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.

Model: AMW004 Date: --
Mode: -- Temperature: -- °C Engineer: --
Polarization: N Humidity: -- %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Polarization: L1

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

- 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 = ±1.41 dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.**
 6. **This test is not required.**



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

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 016, ETSTW-CE 006, ETSTW-RE 045



Appendix

A. Measurement diagrams

Spurious Emissions radiated

B. Photos

1. EUT Photos
2. Set Up Photo of Radiated Emission



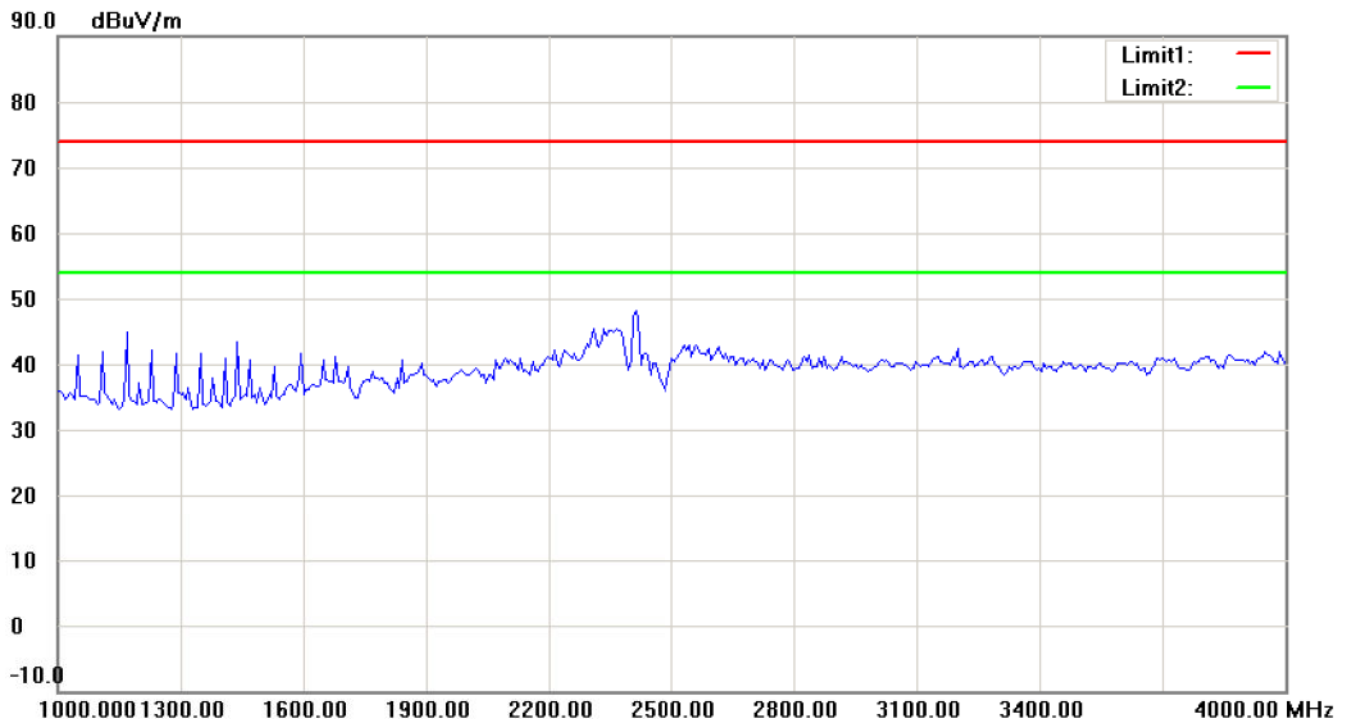
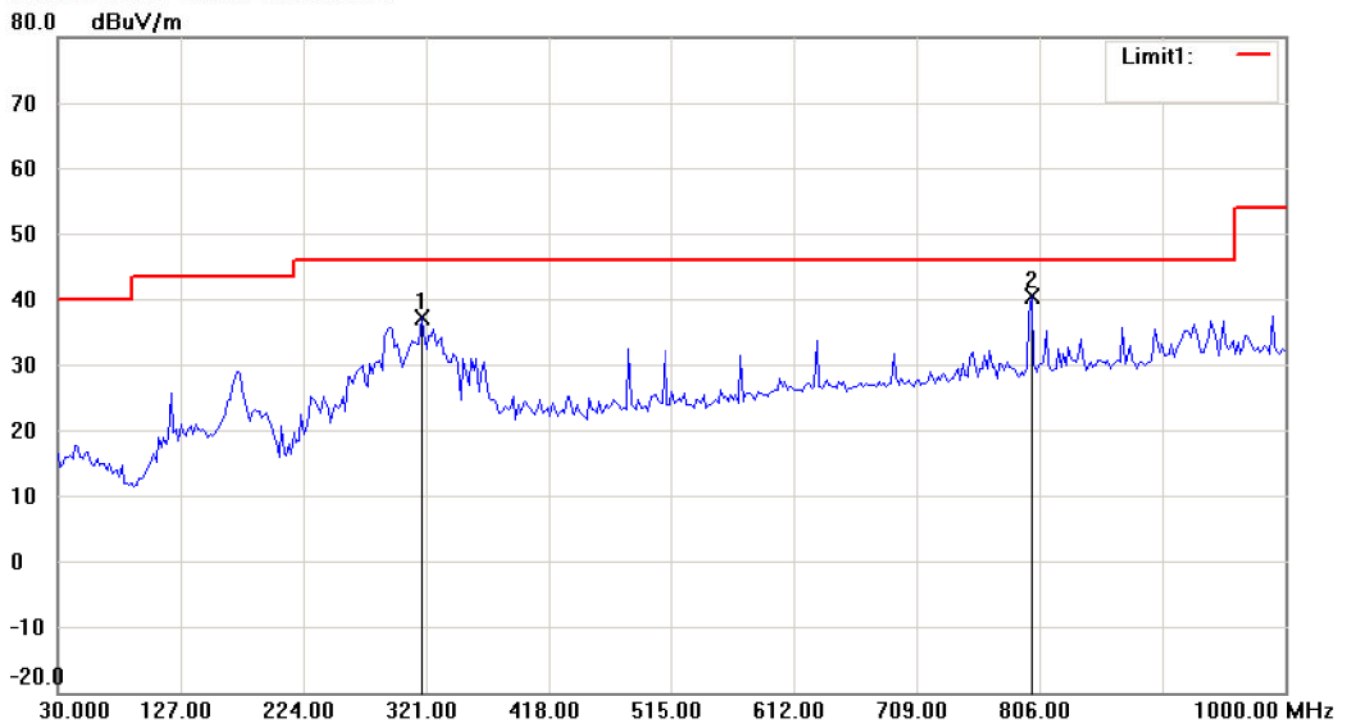
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Spurious Emissions radiated Transmitter

TX 802.11b CH1

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

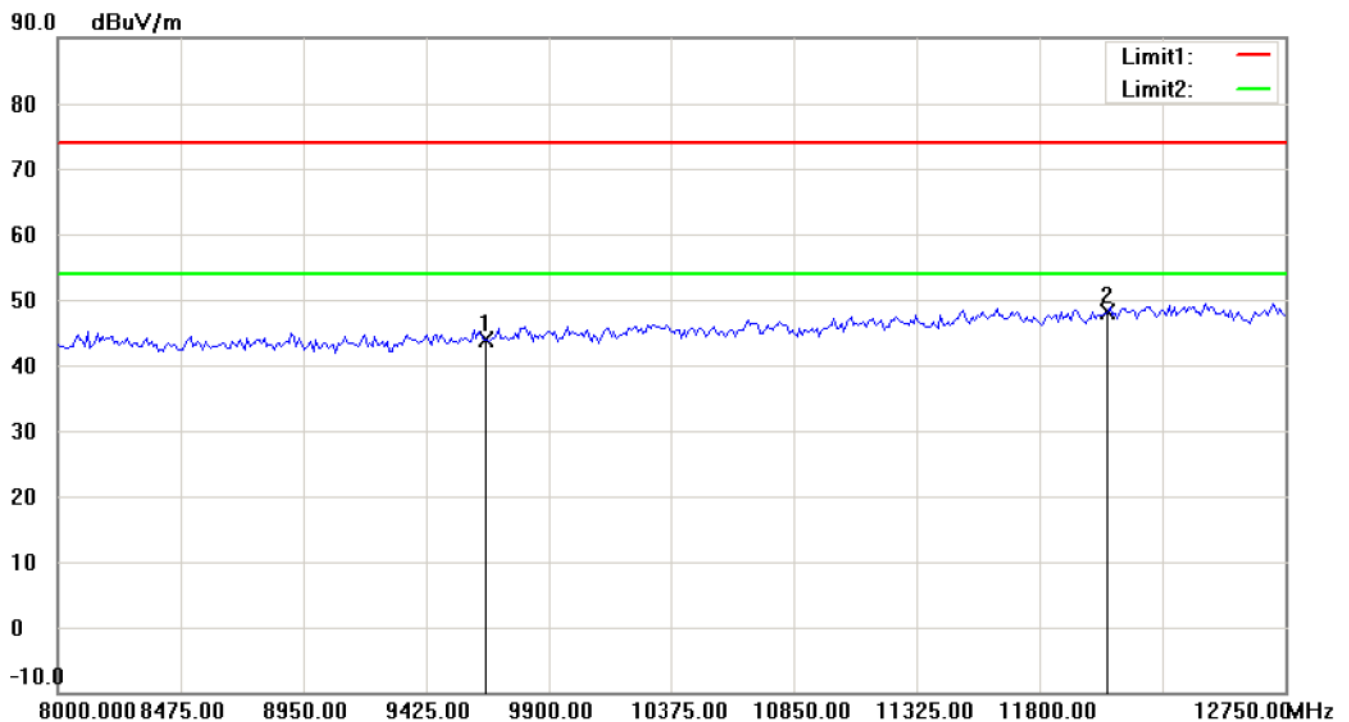
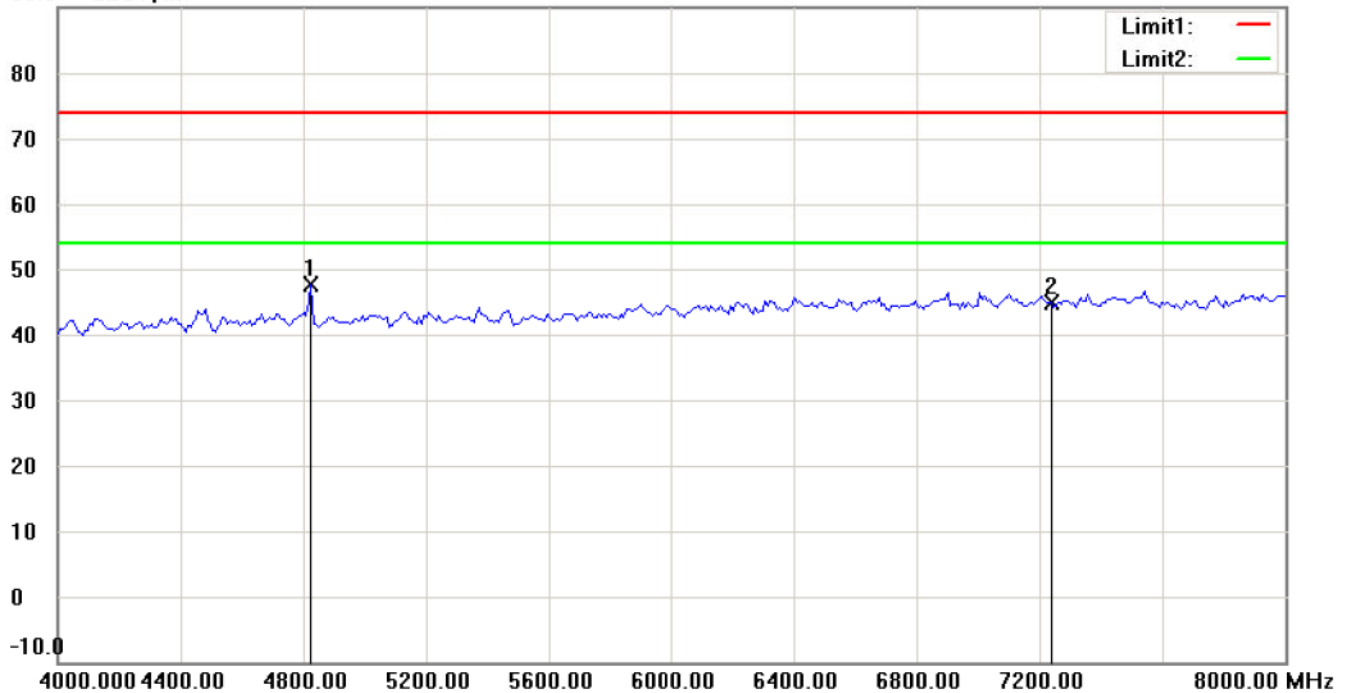
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

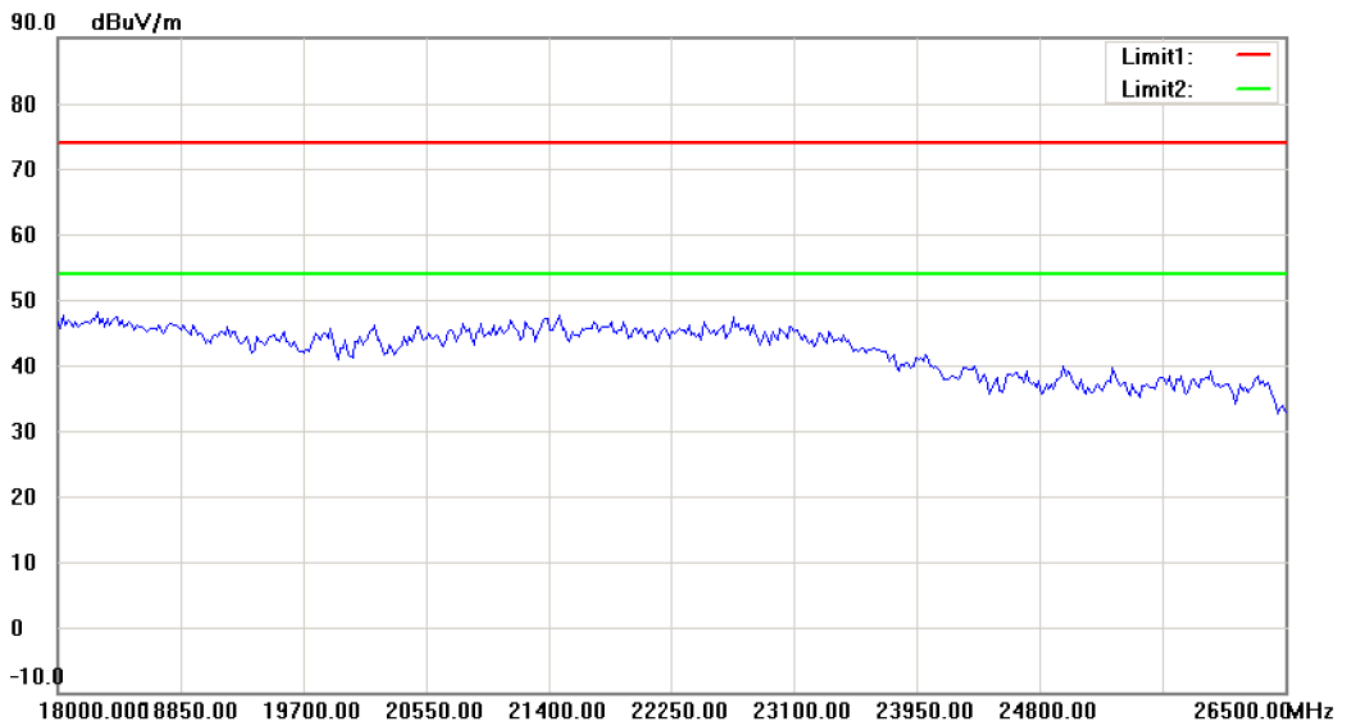
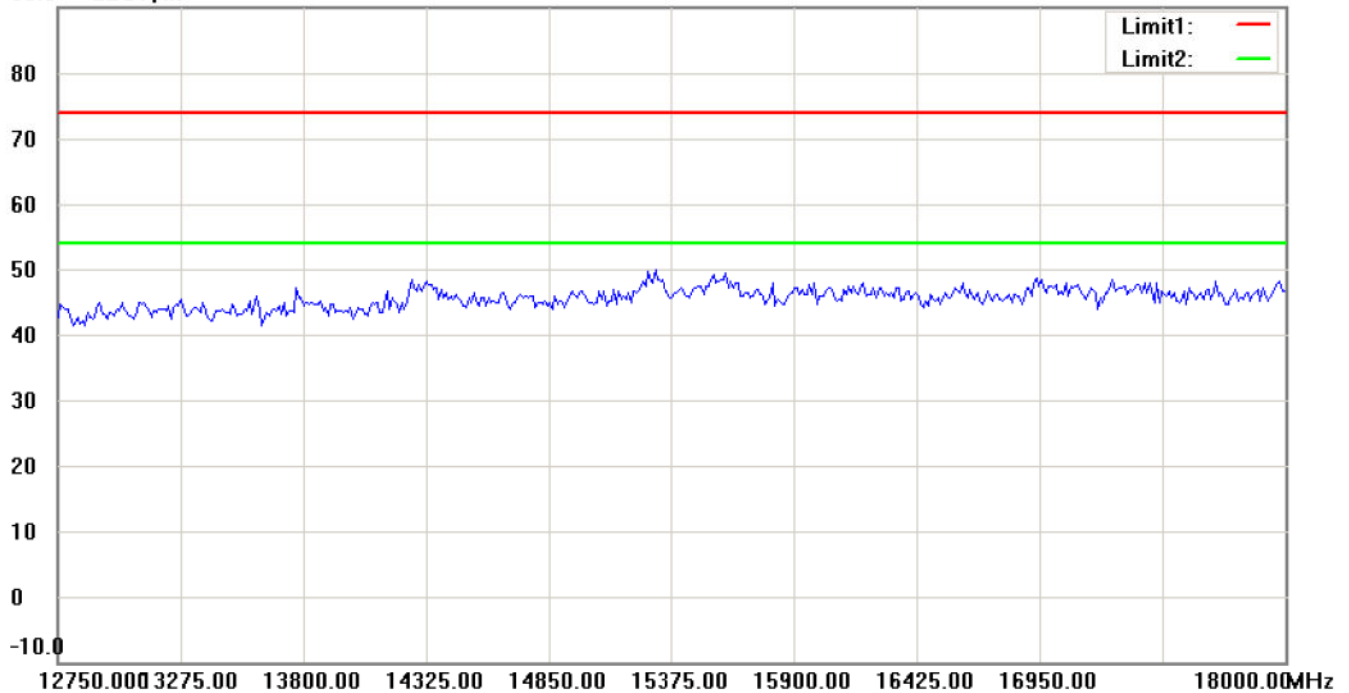


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

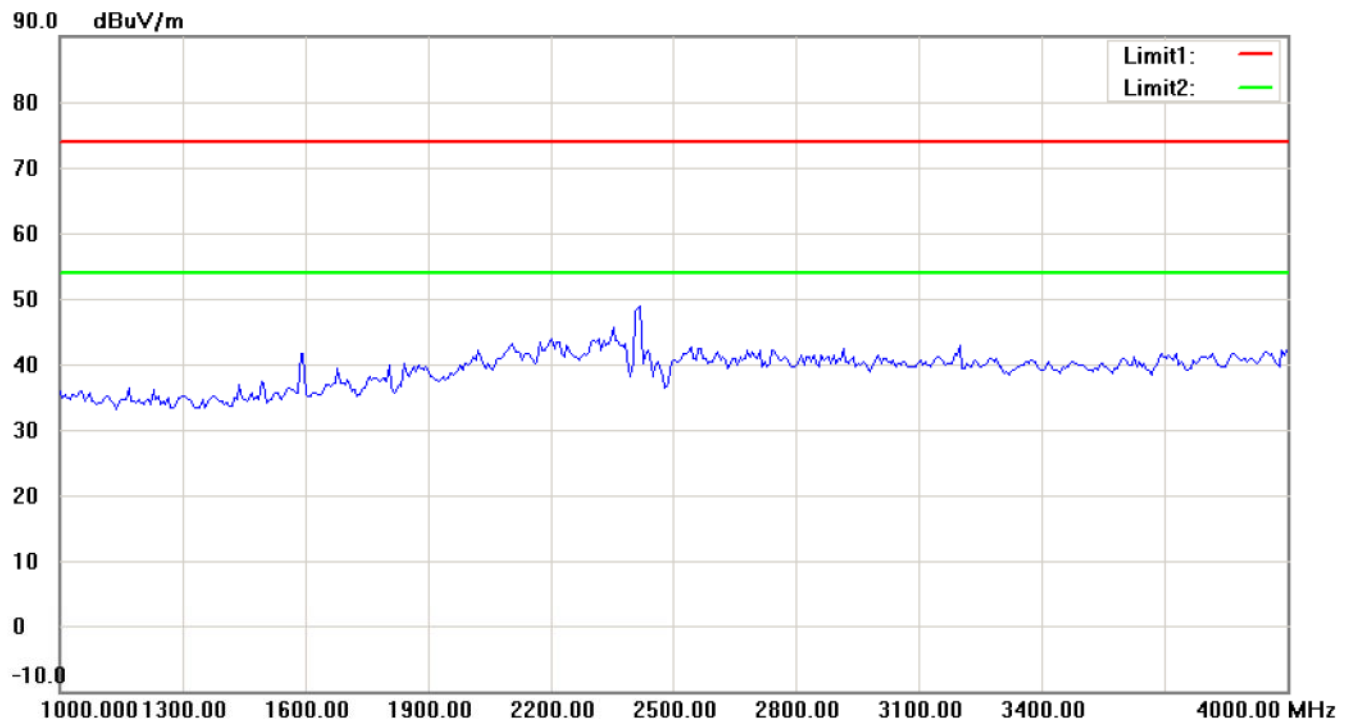
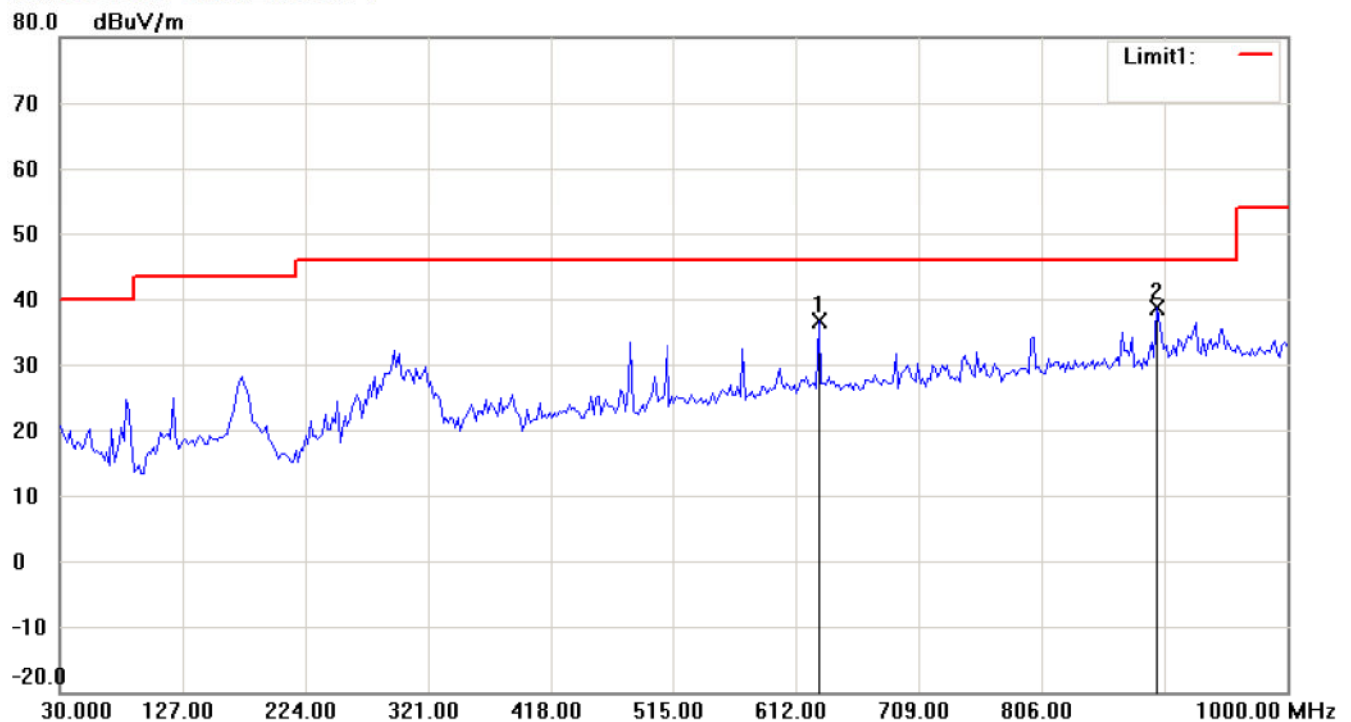
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

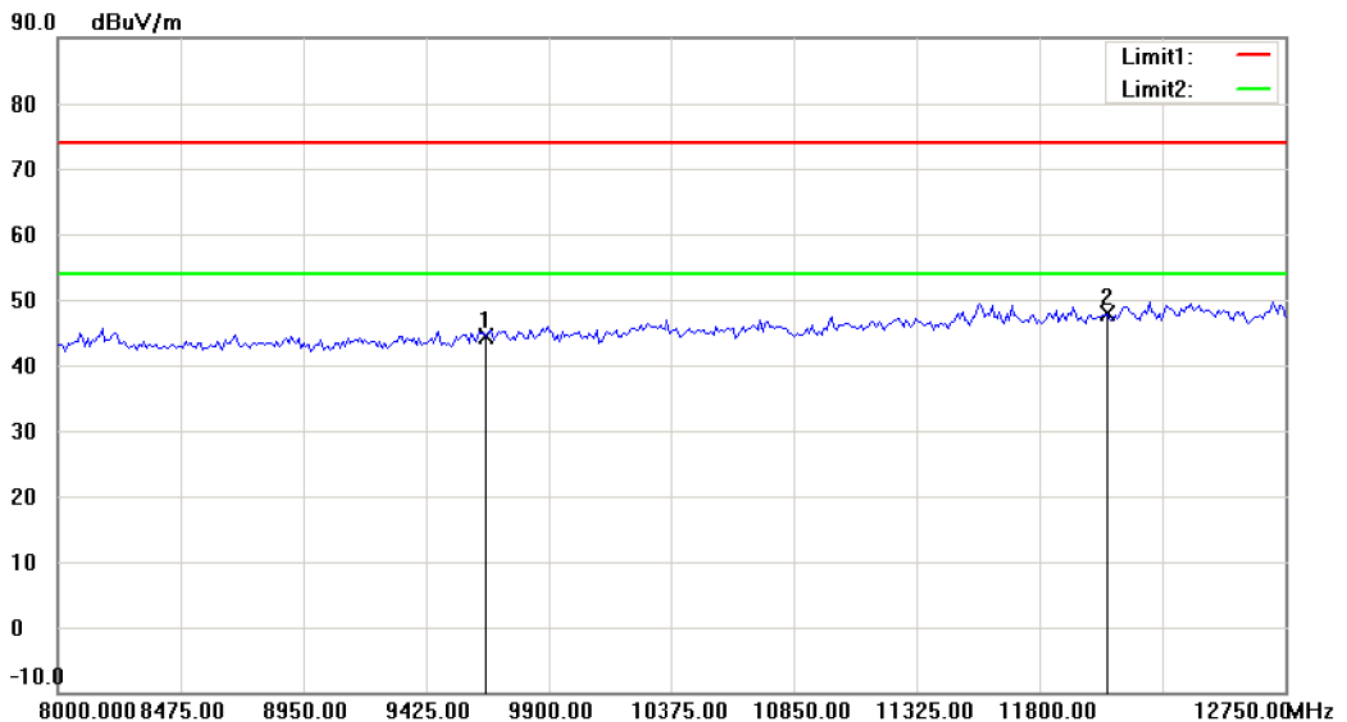
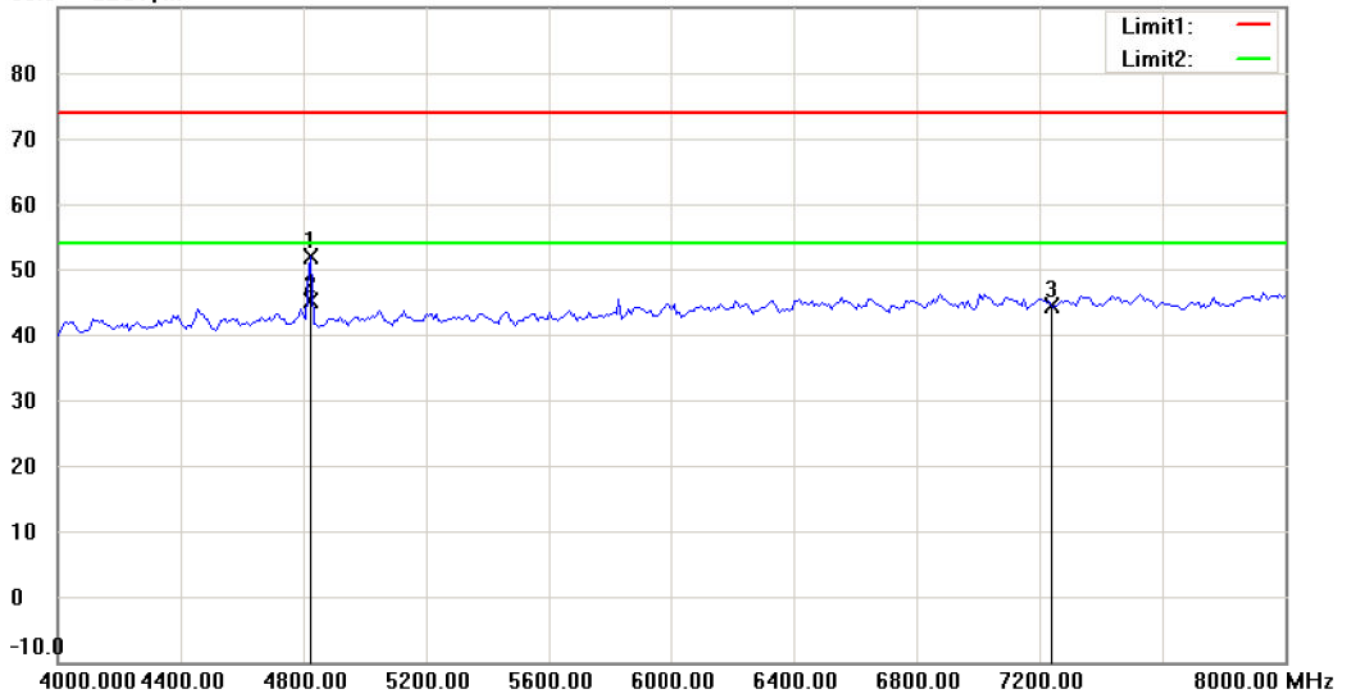
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

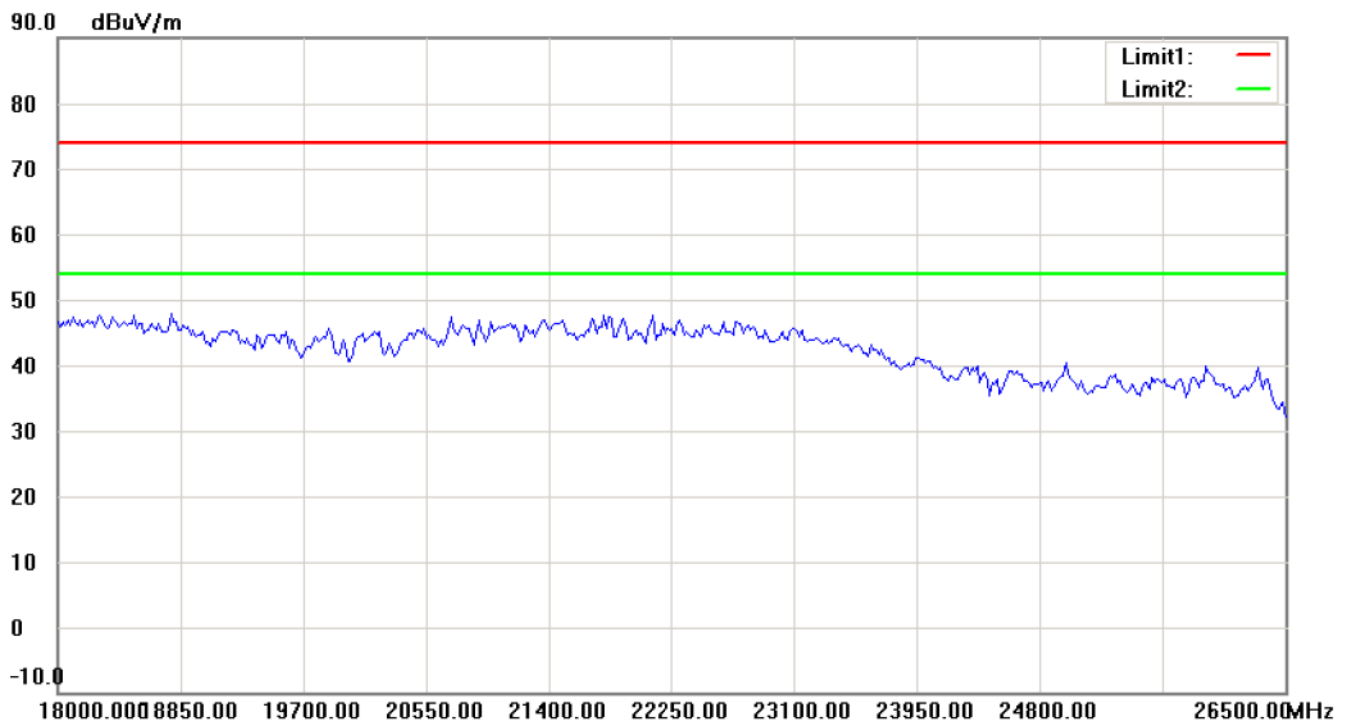
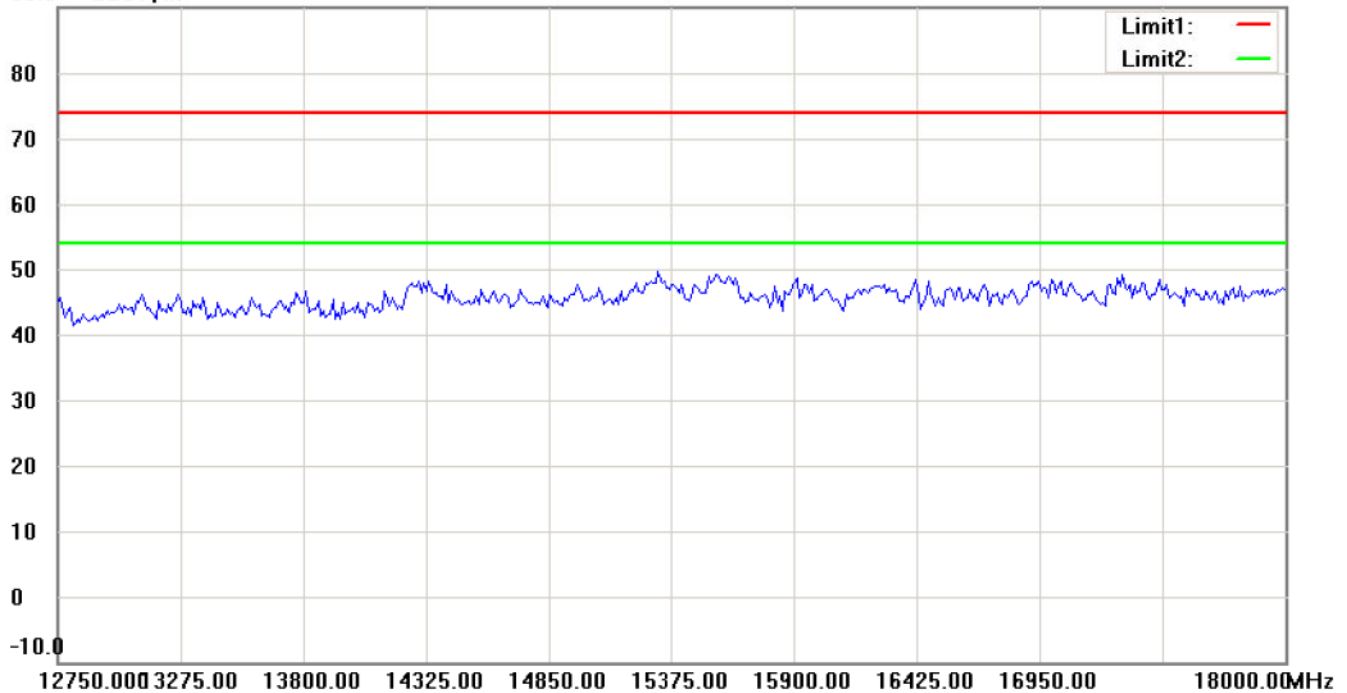


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

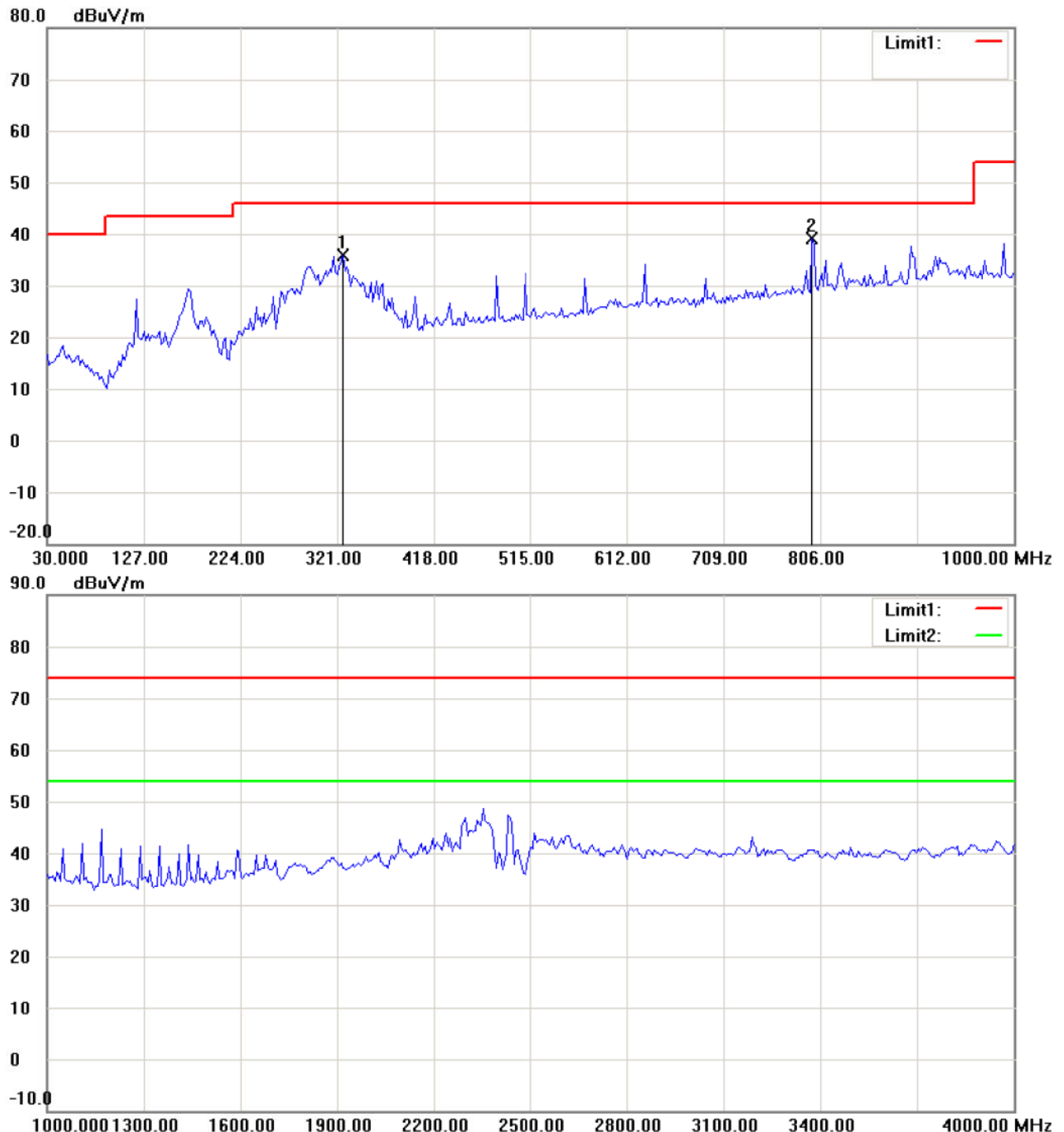


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11b CH6

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

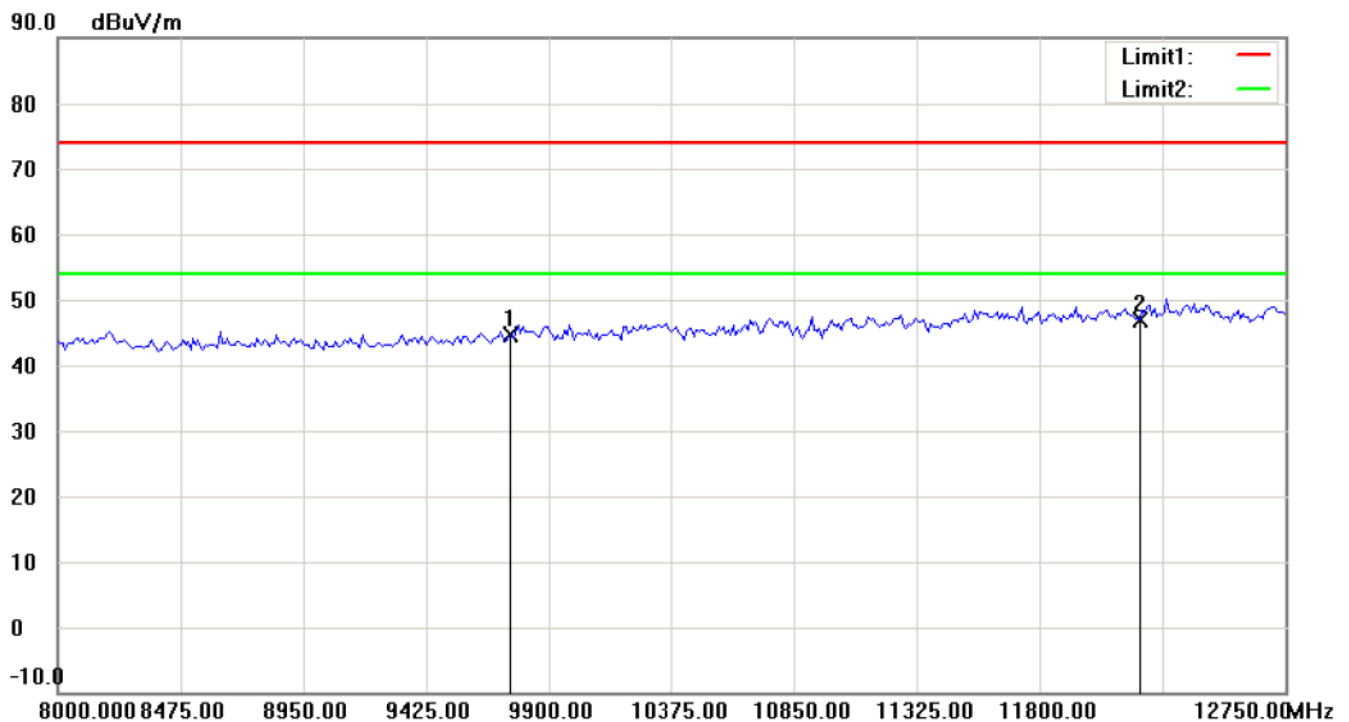
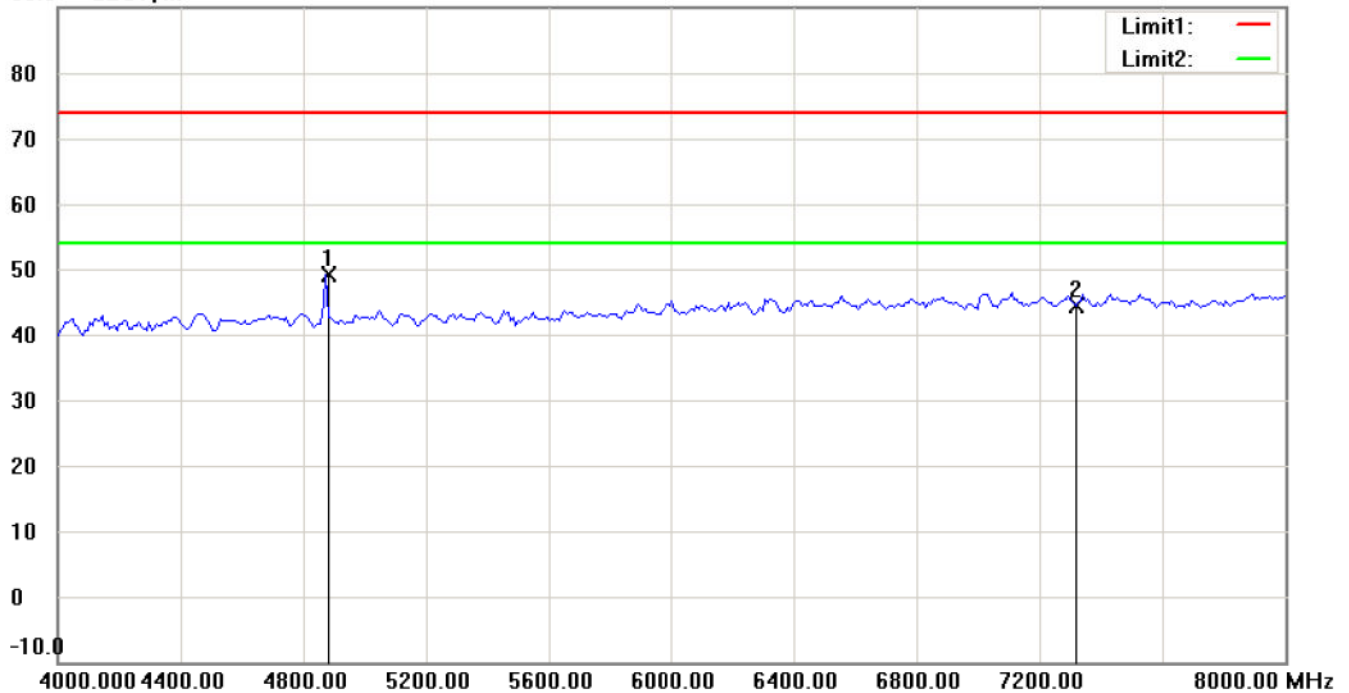
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

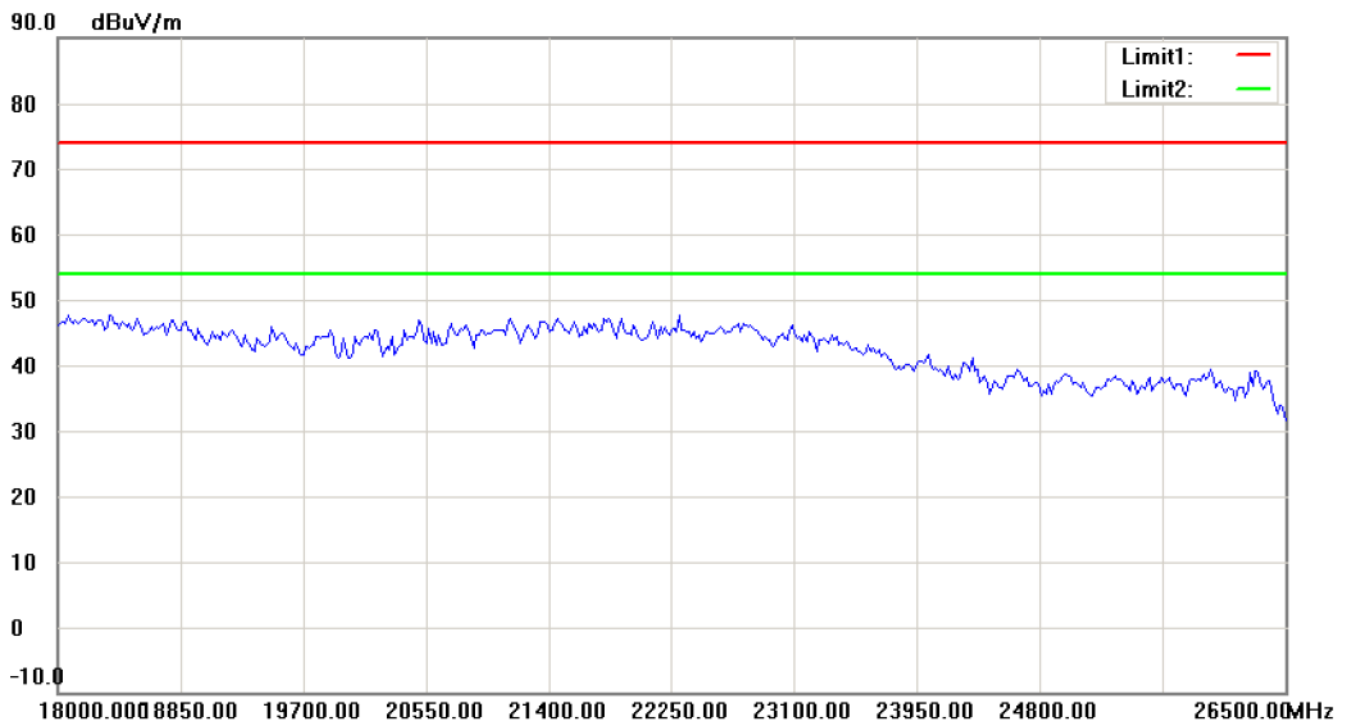
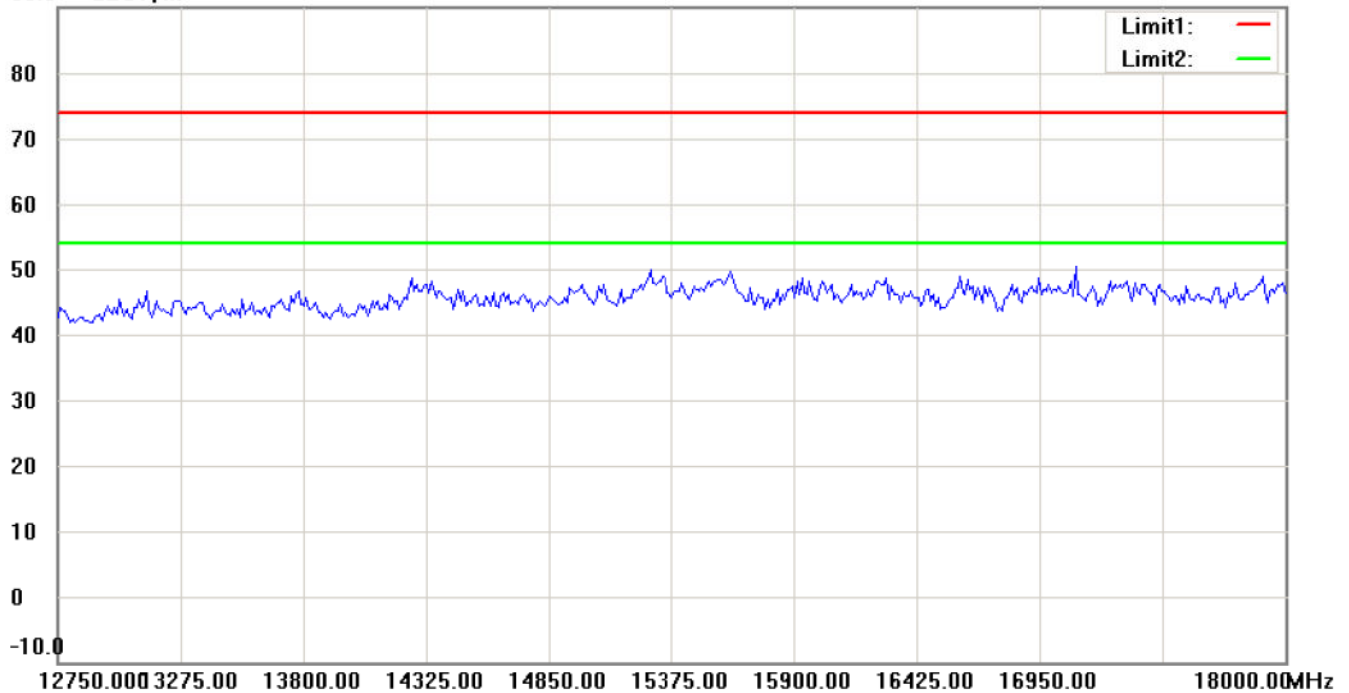


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

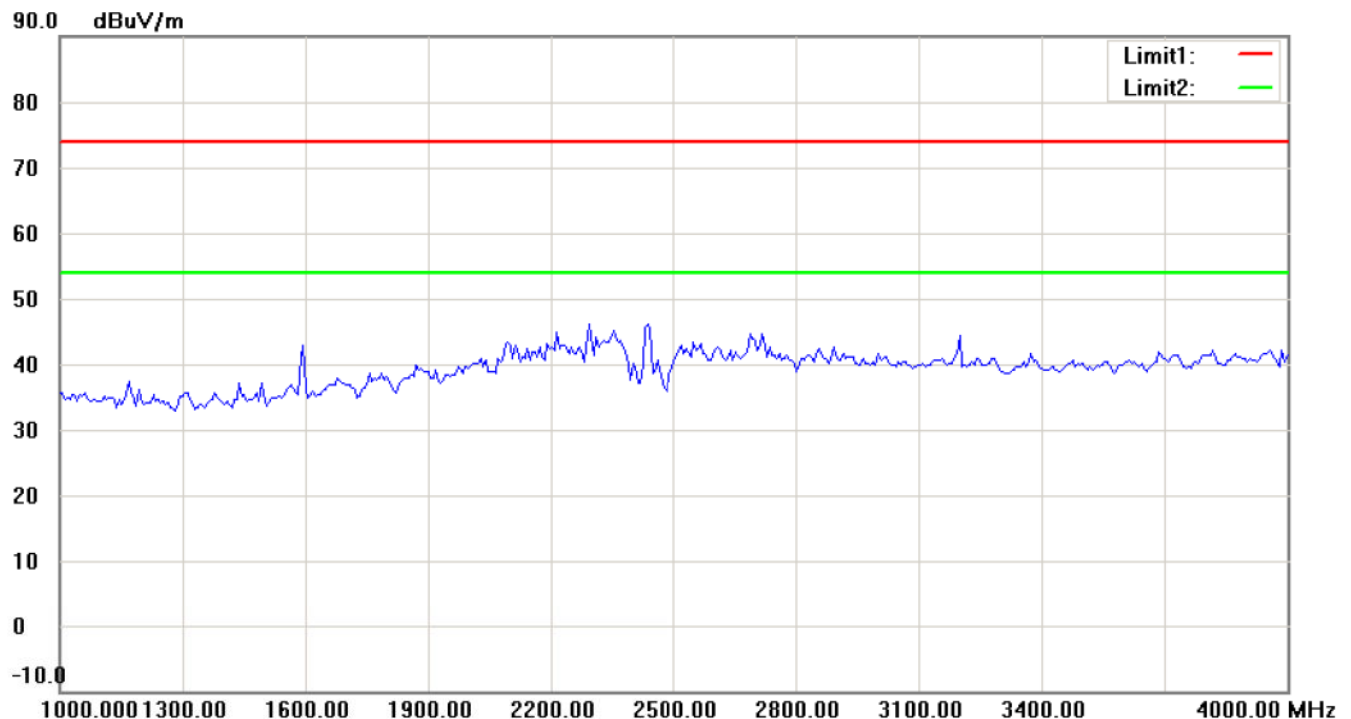
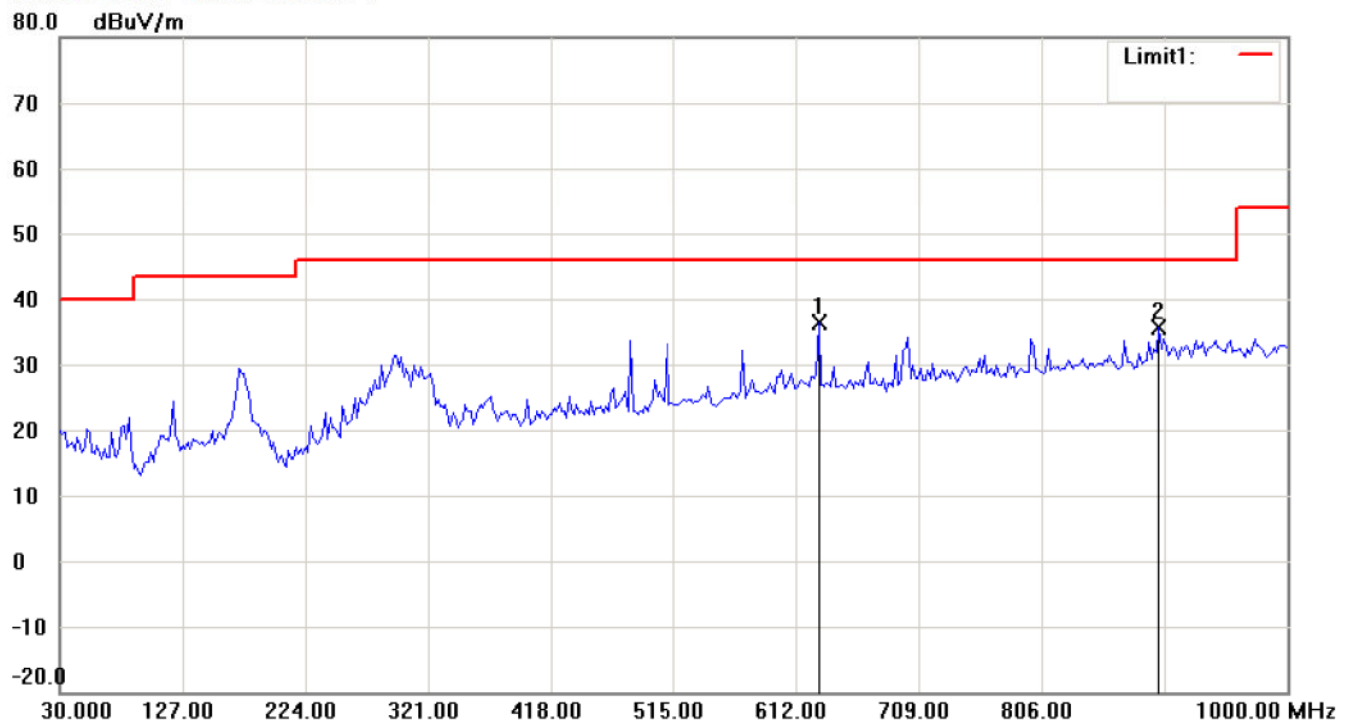
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

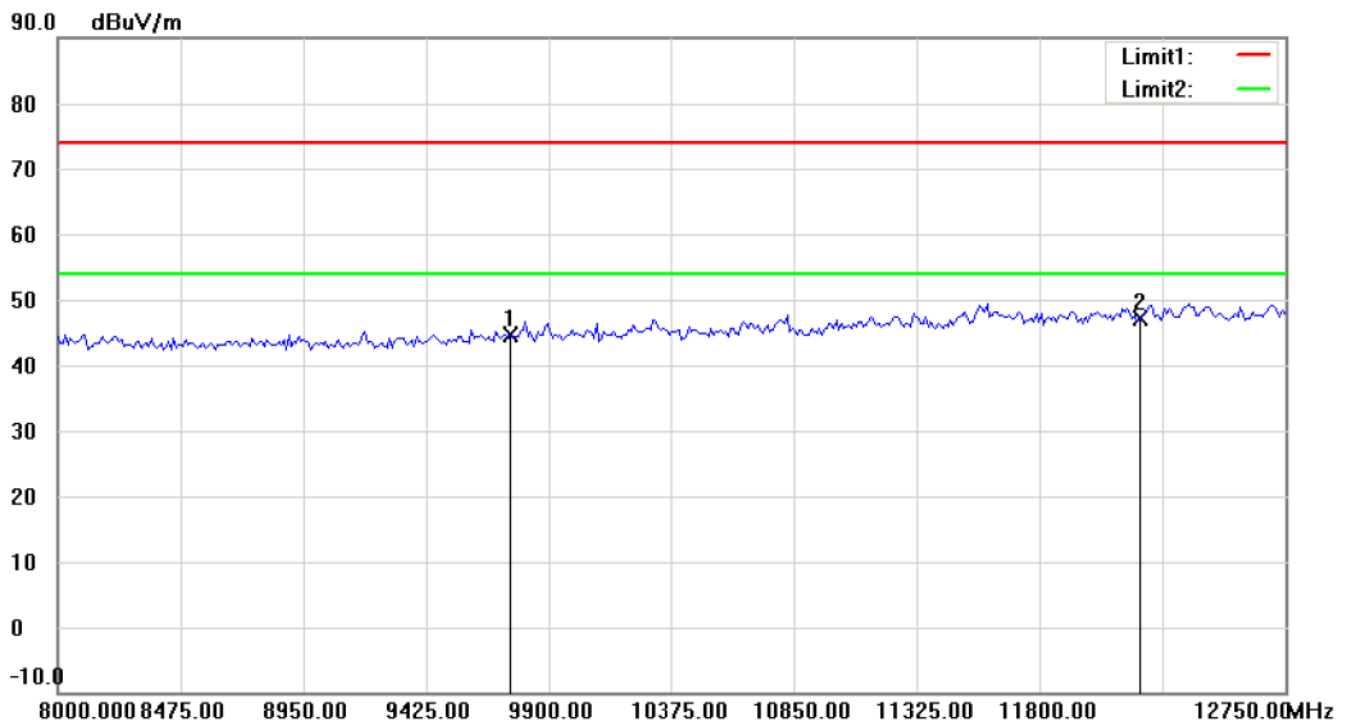
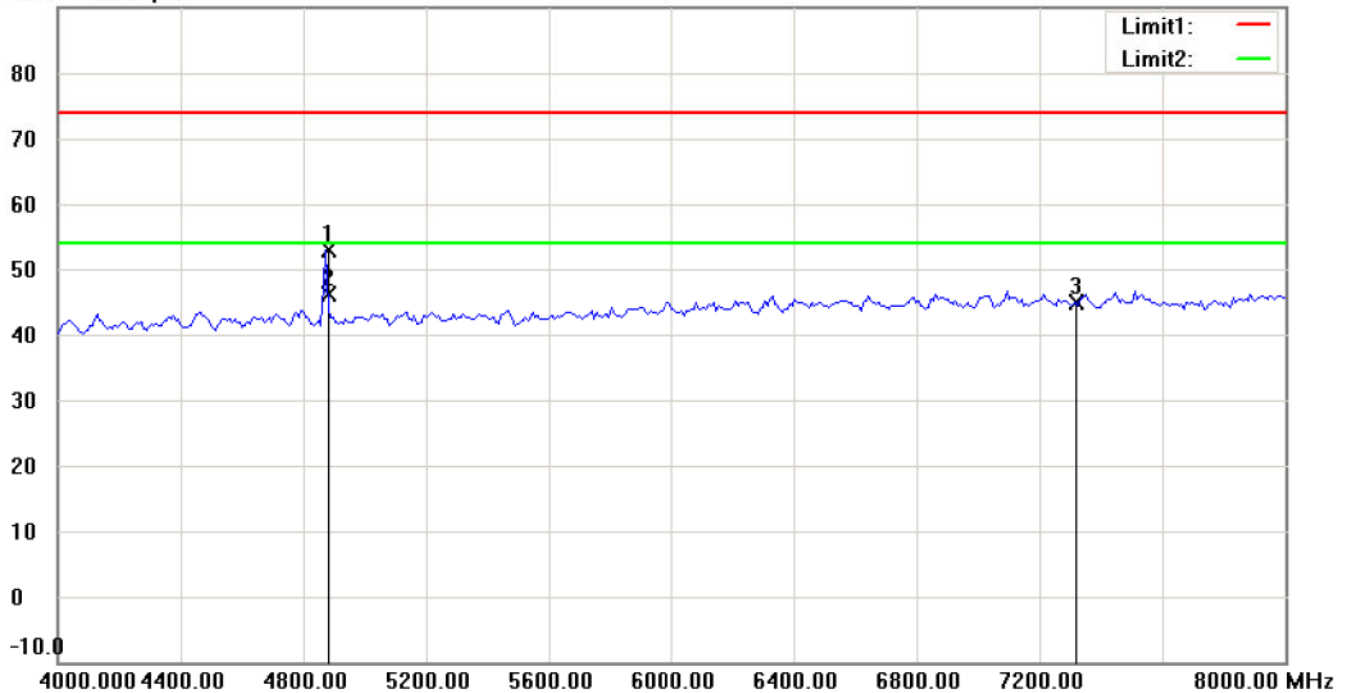
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

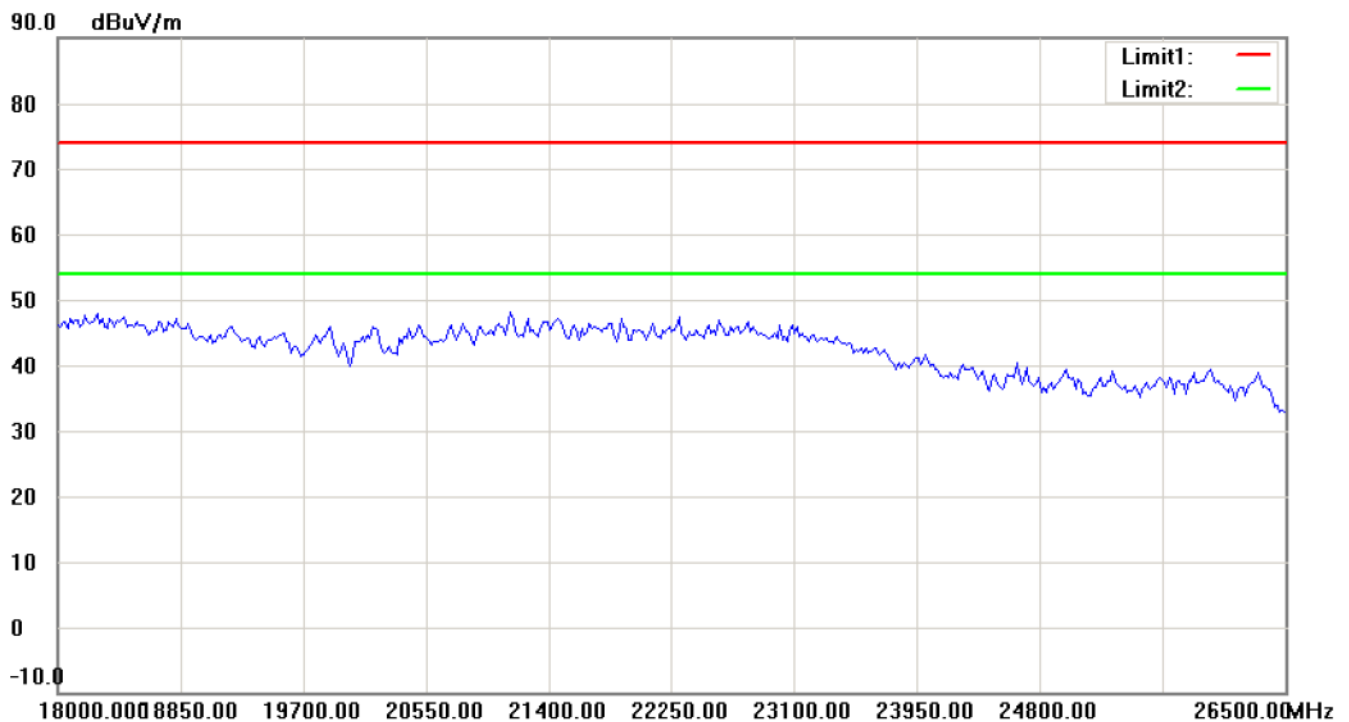
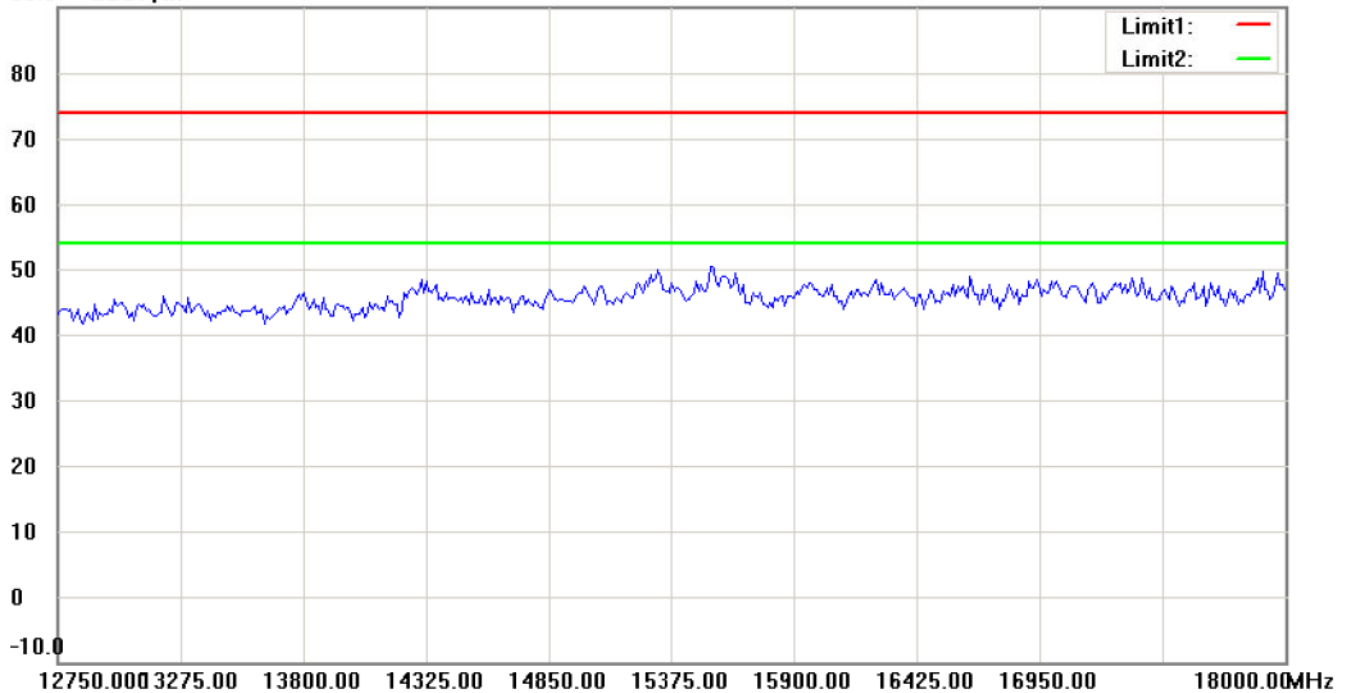


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

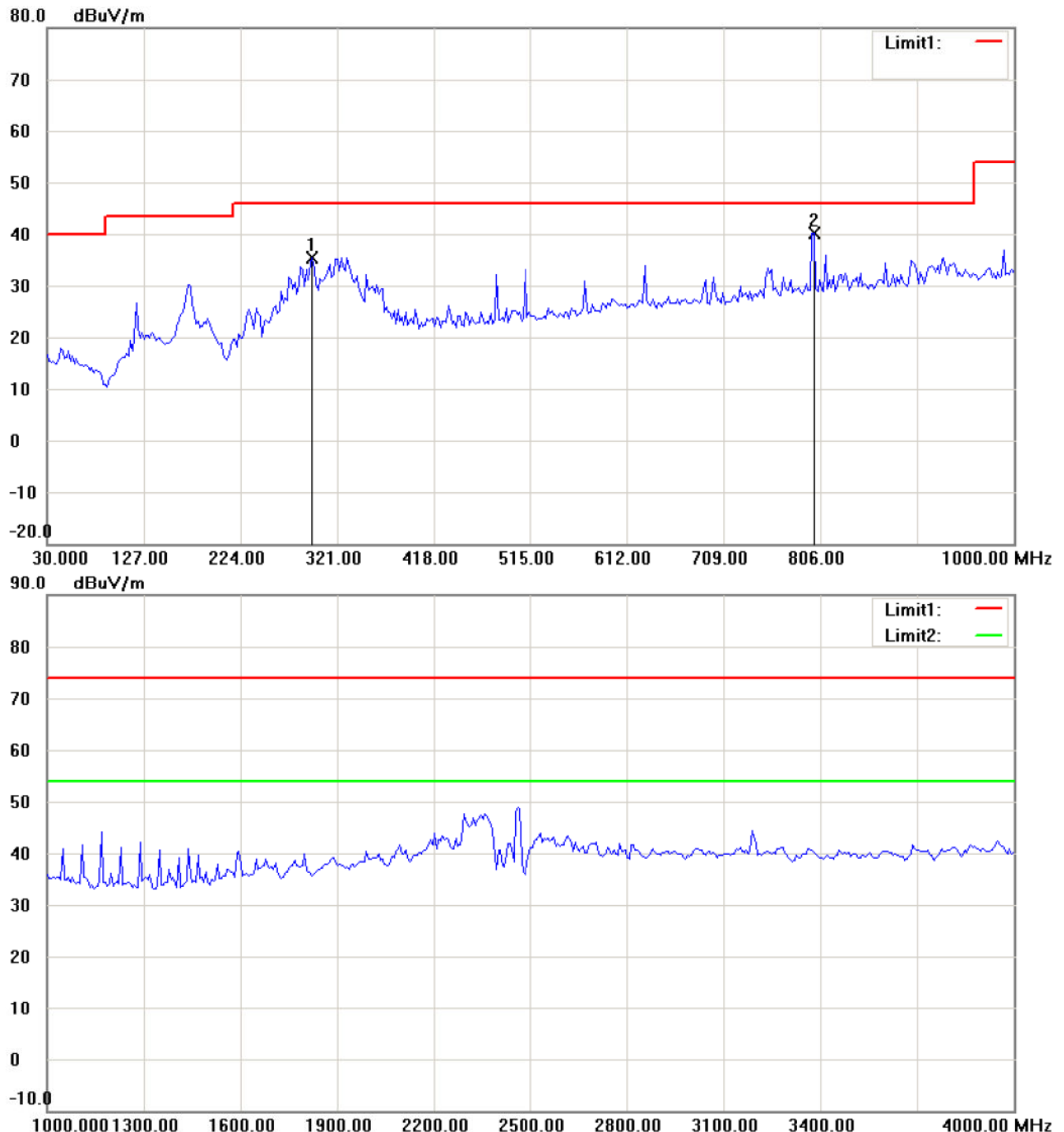


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11b CH11

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

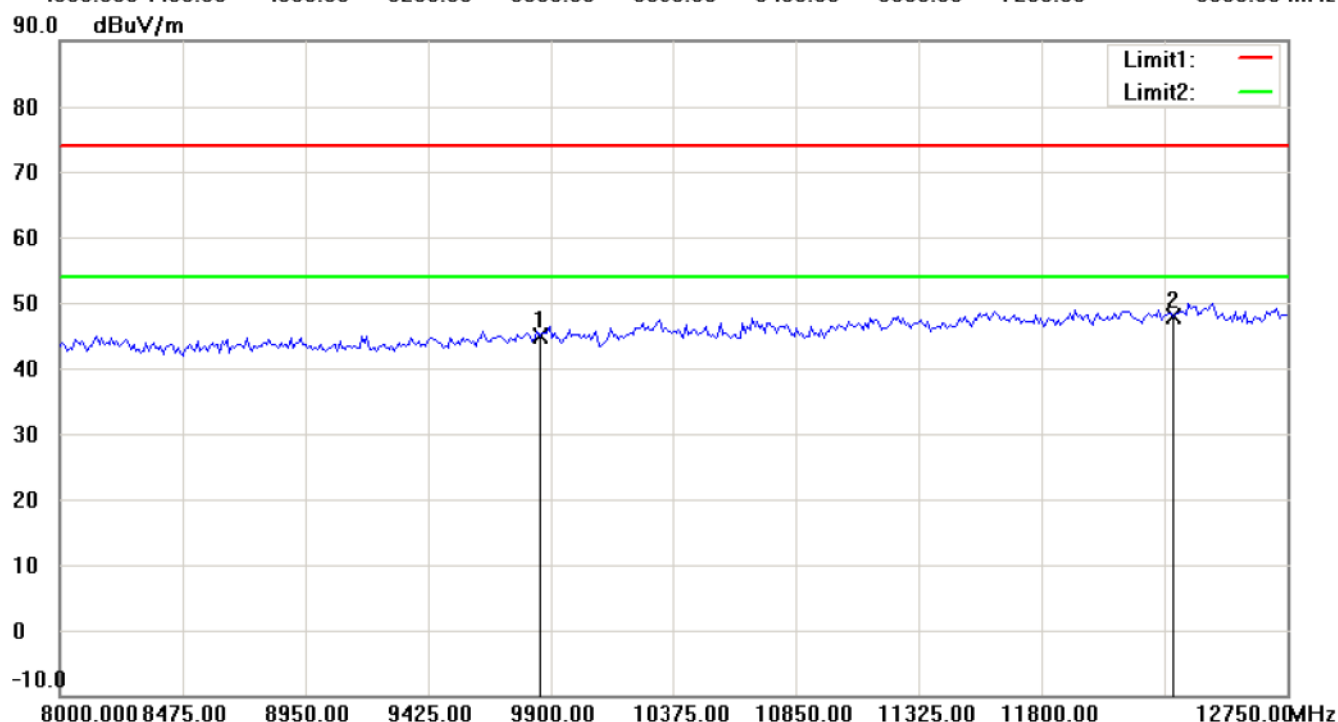
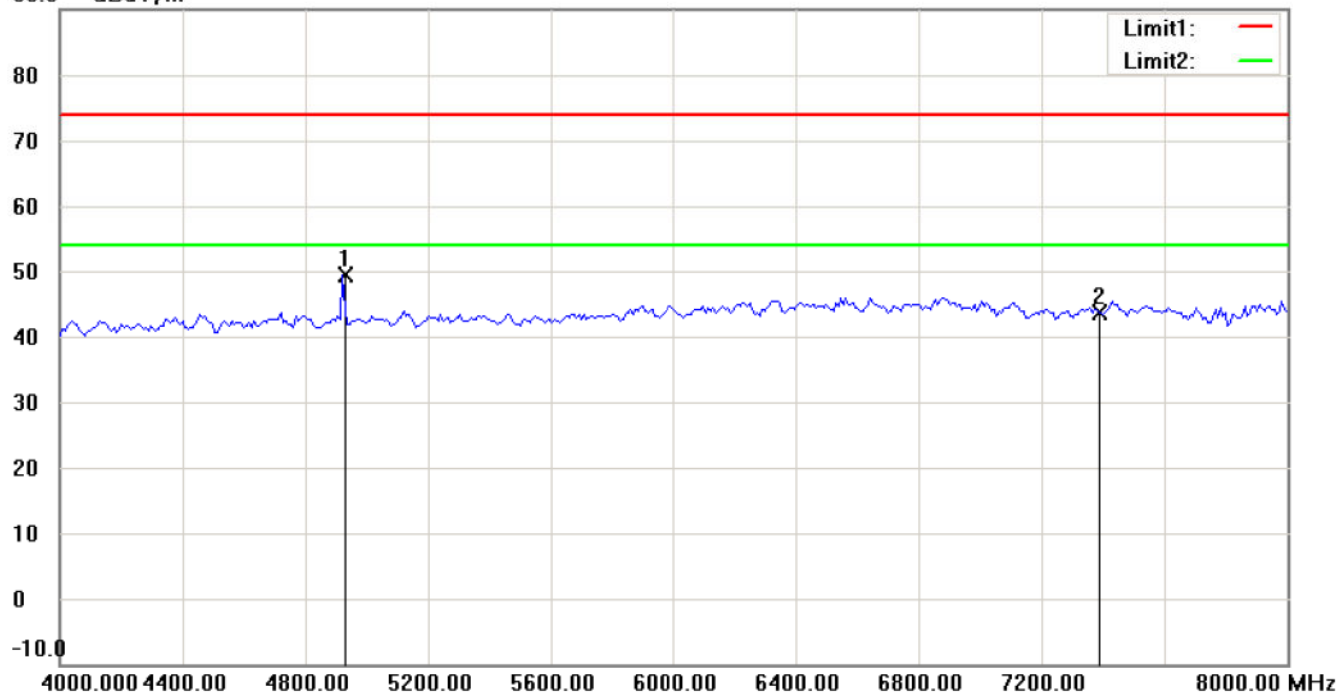
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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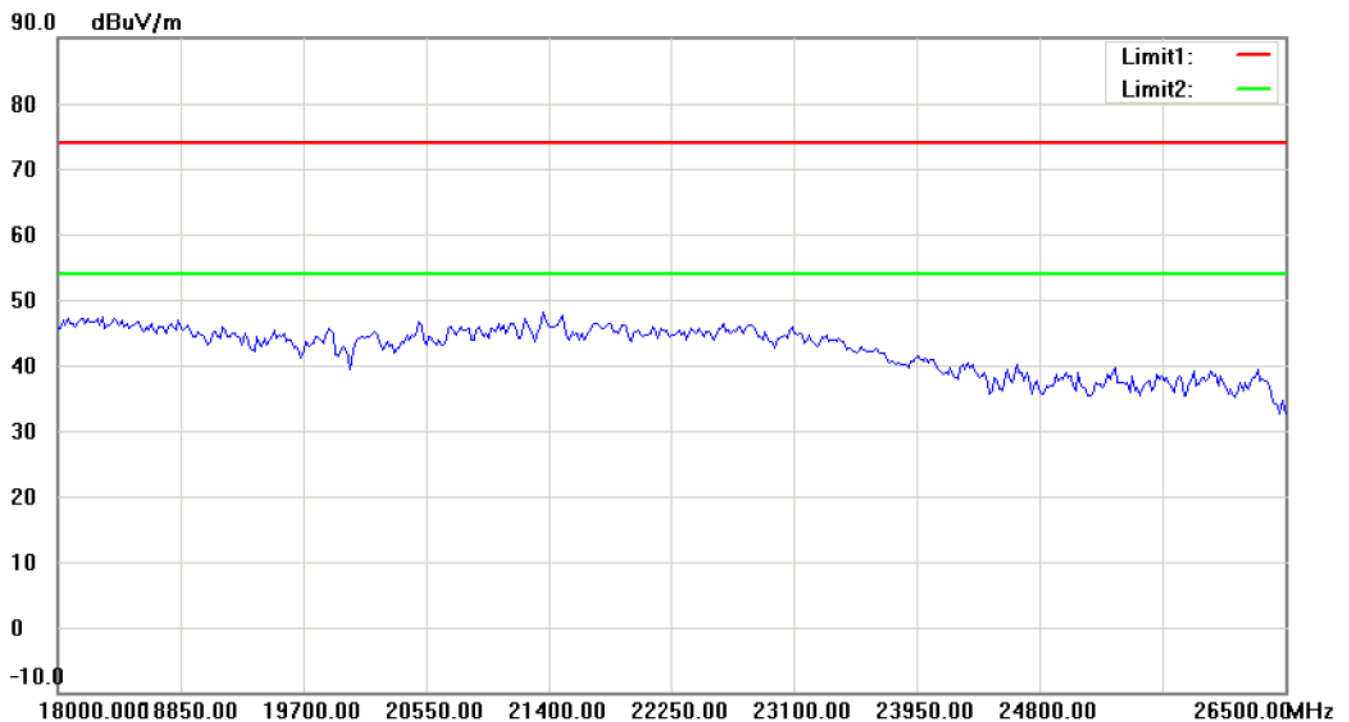
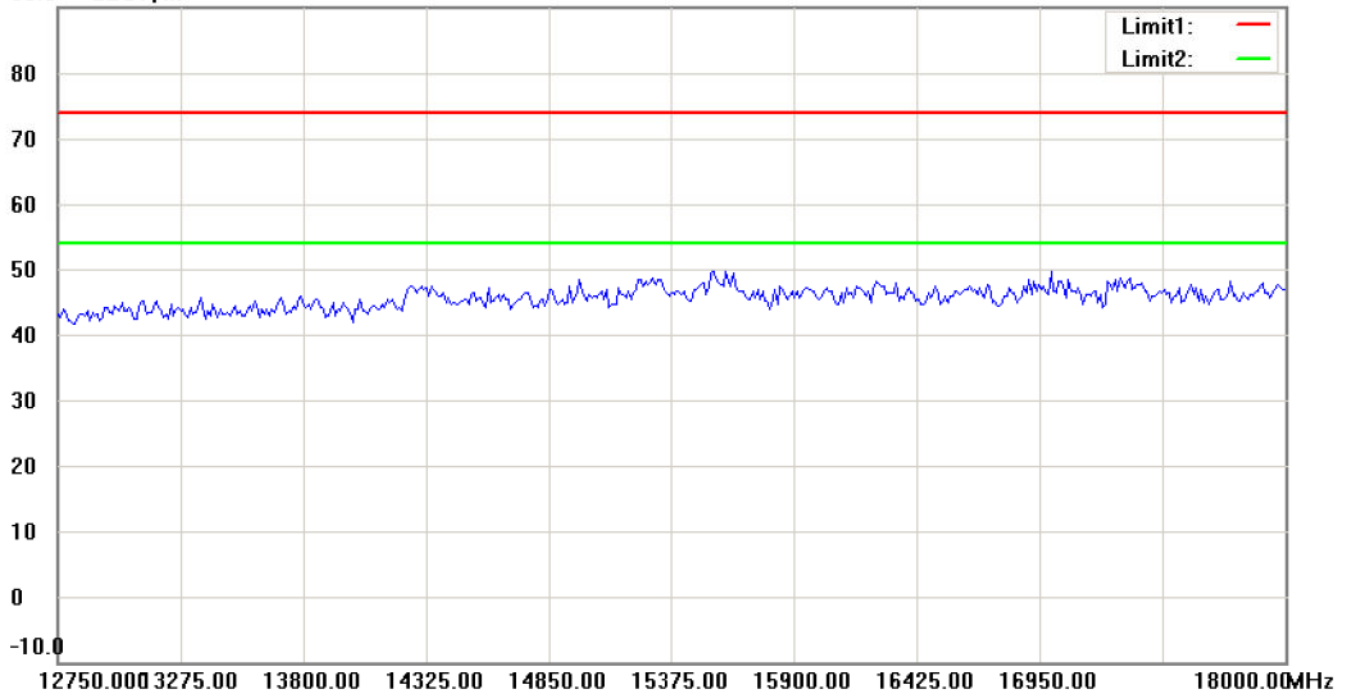


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

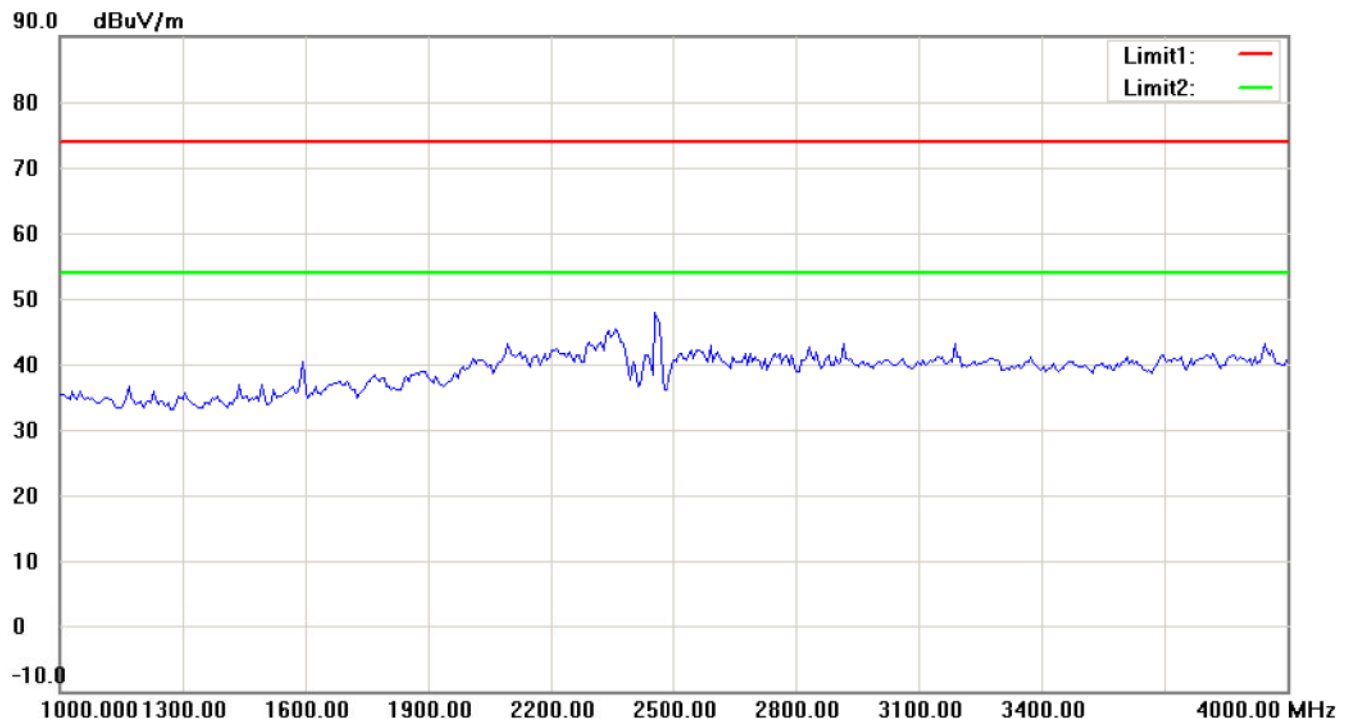
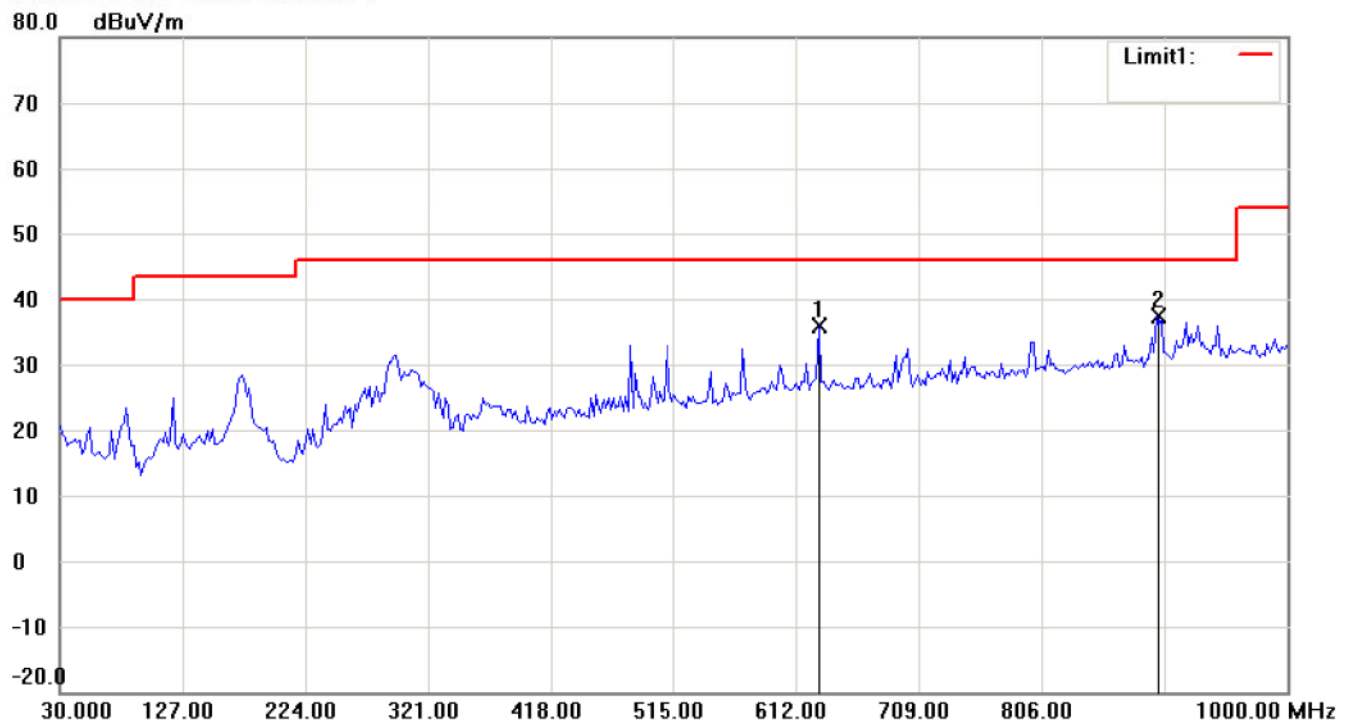
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

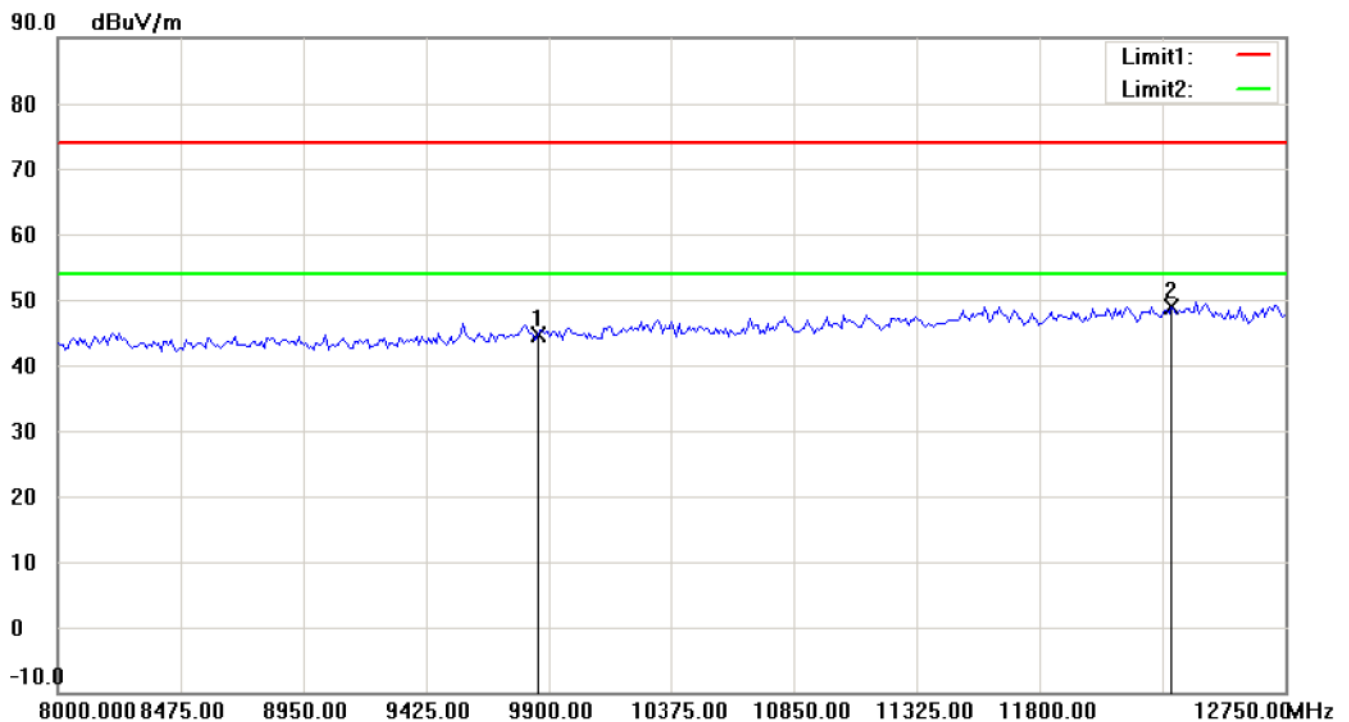
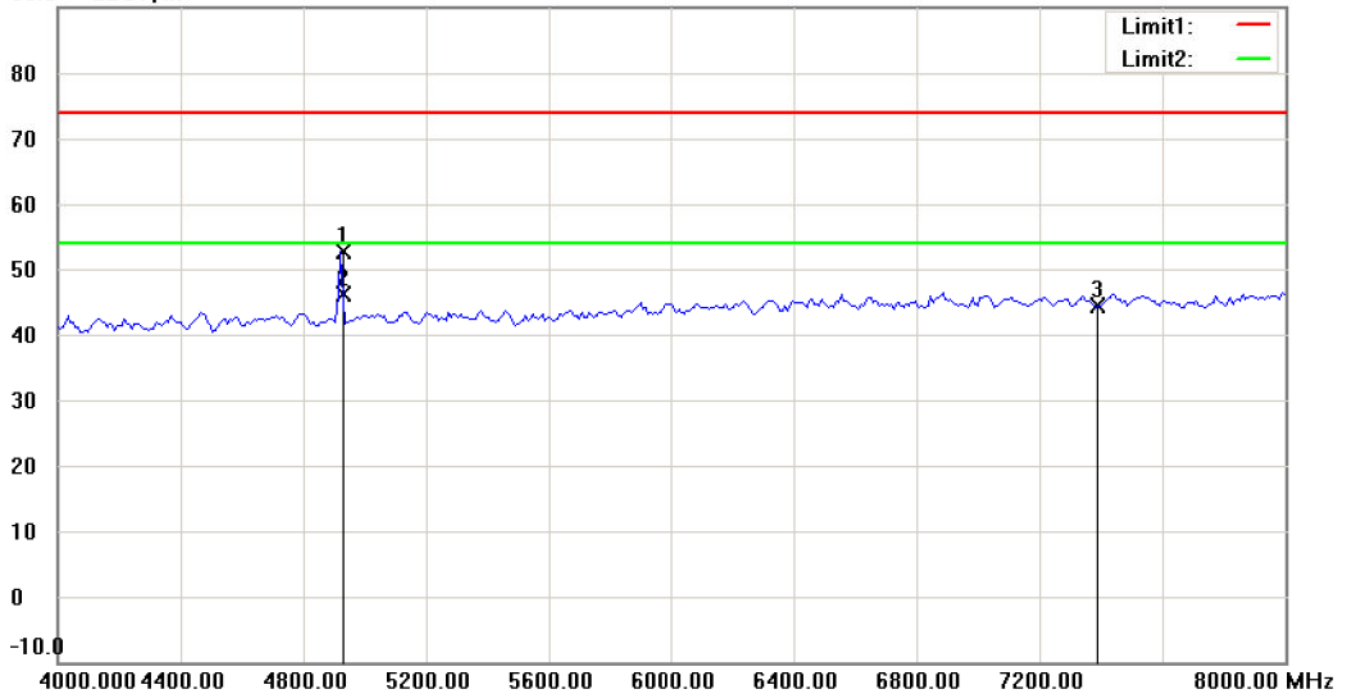
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3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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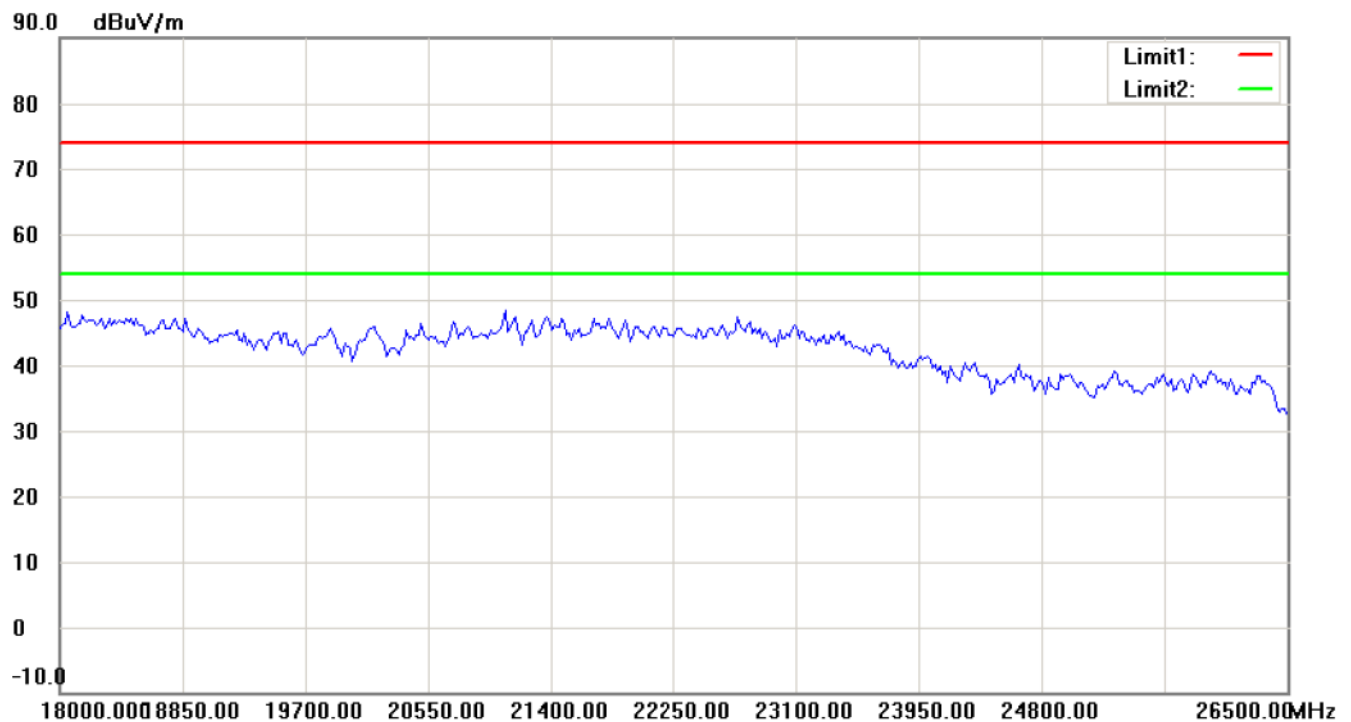
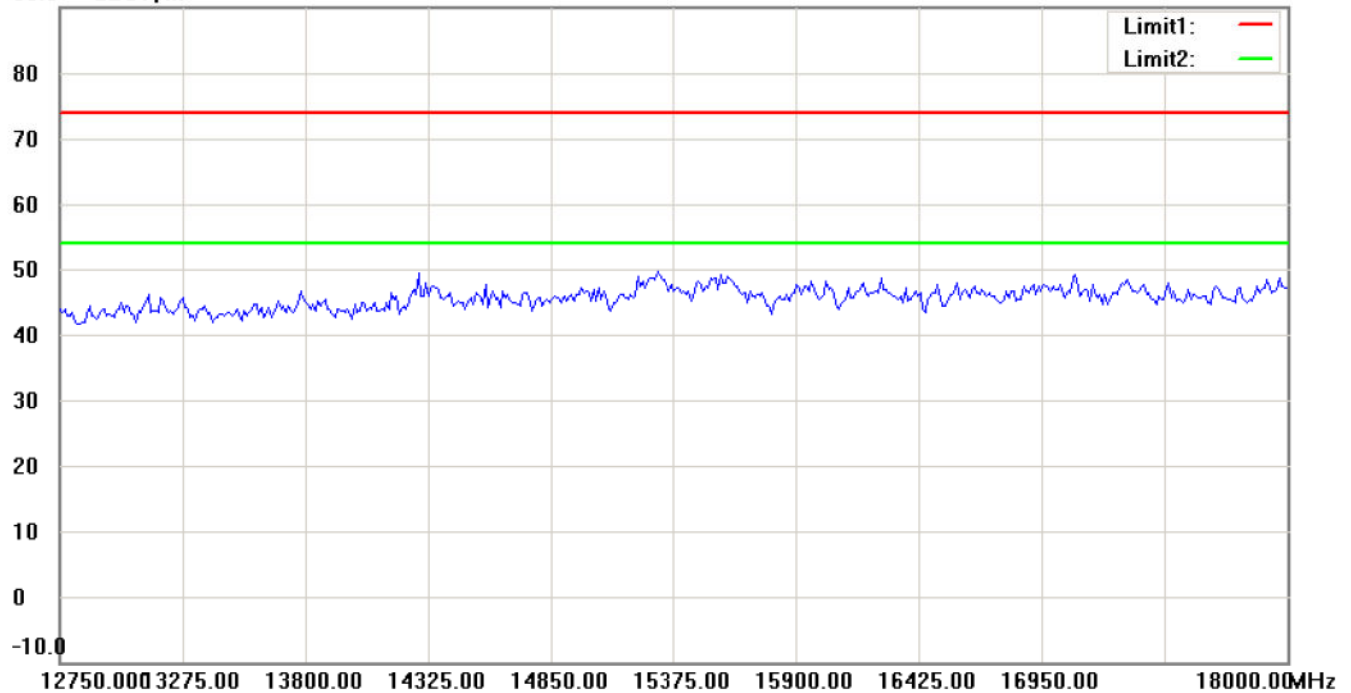


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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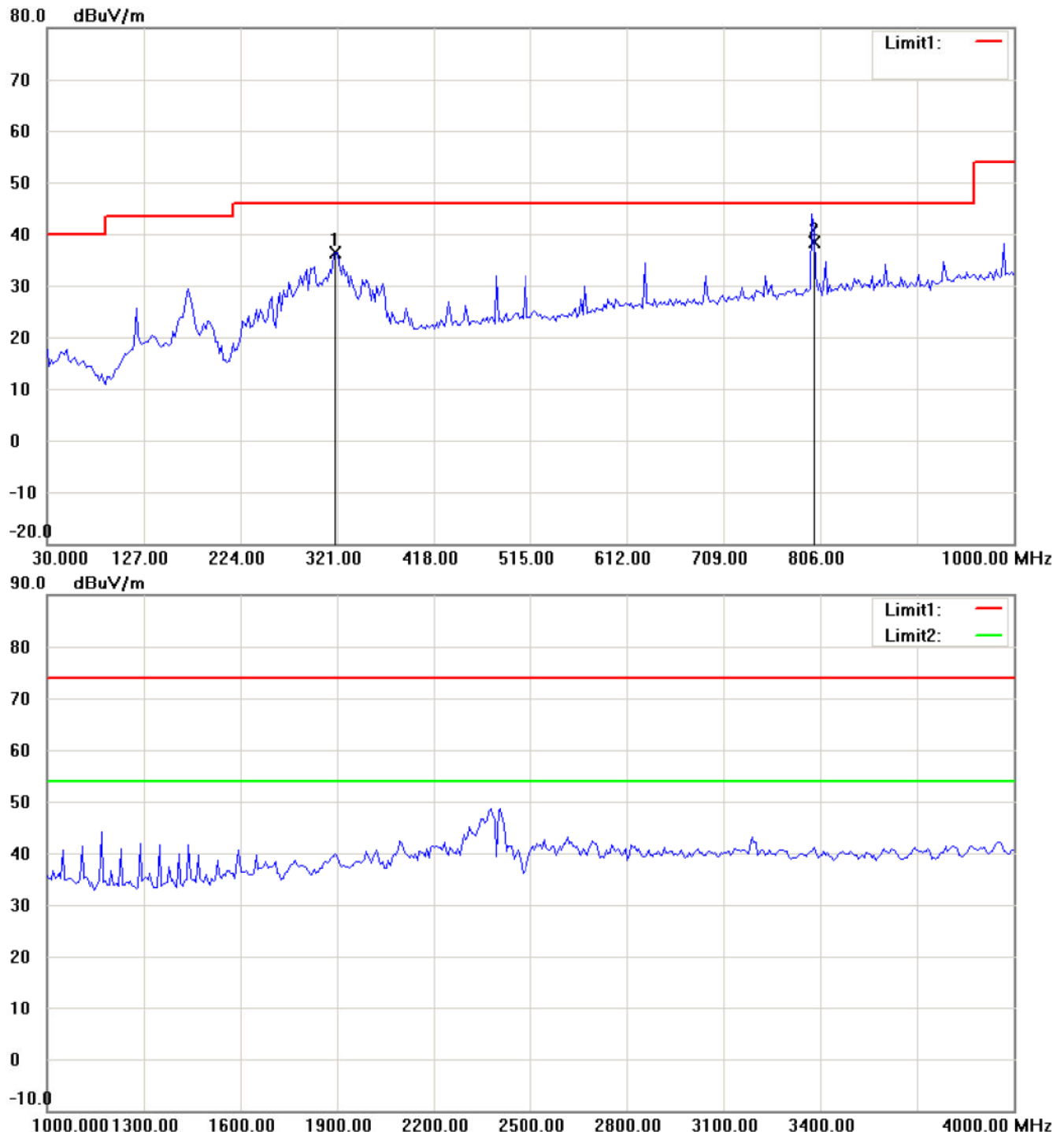


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11g CH1

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

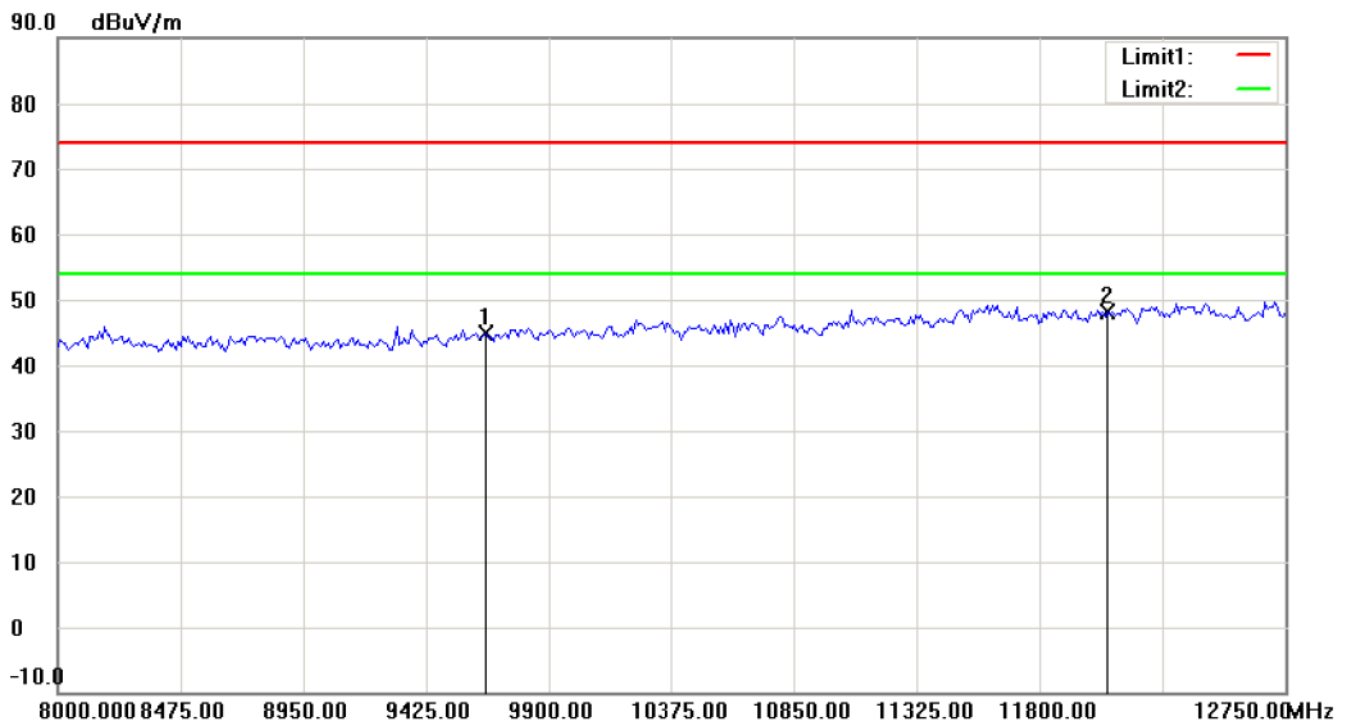
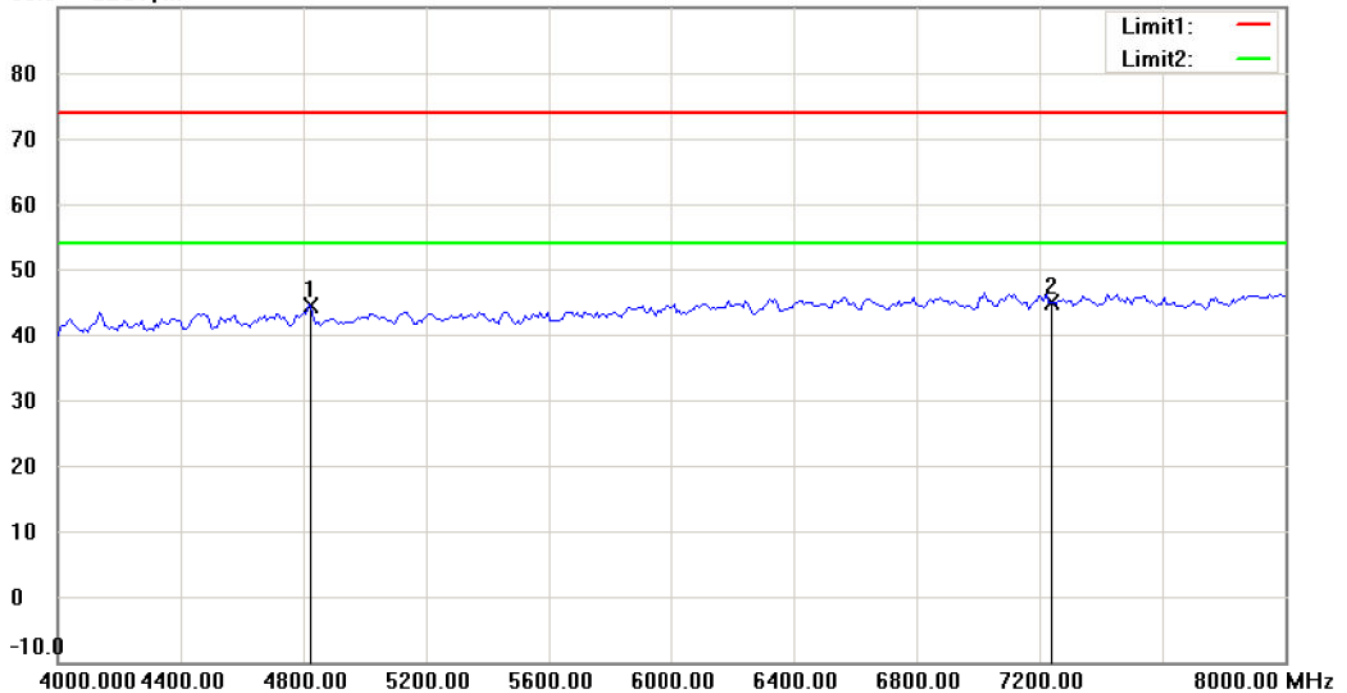
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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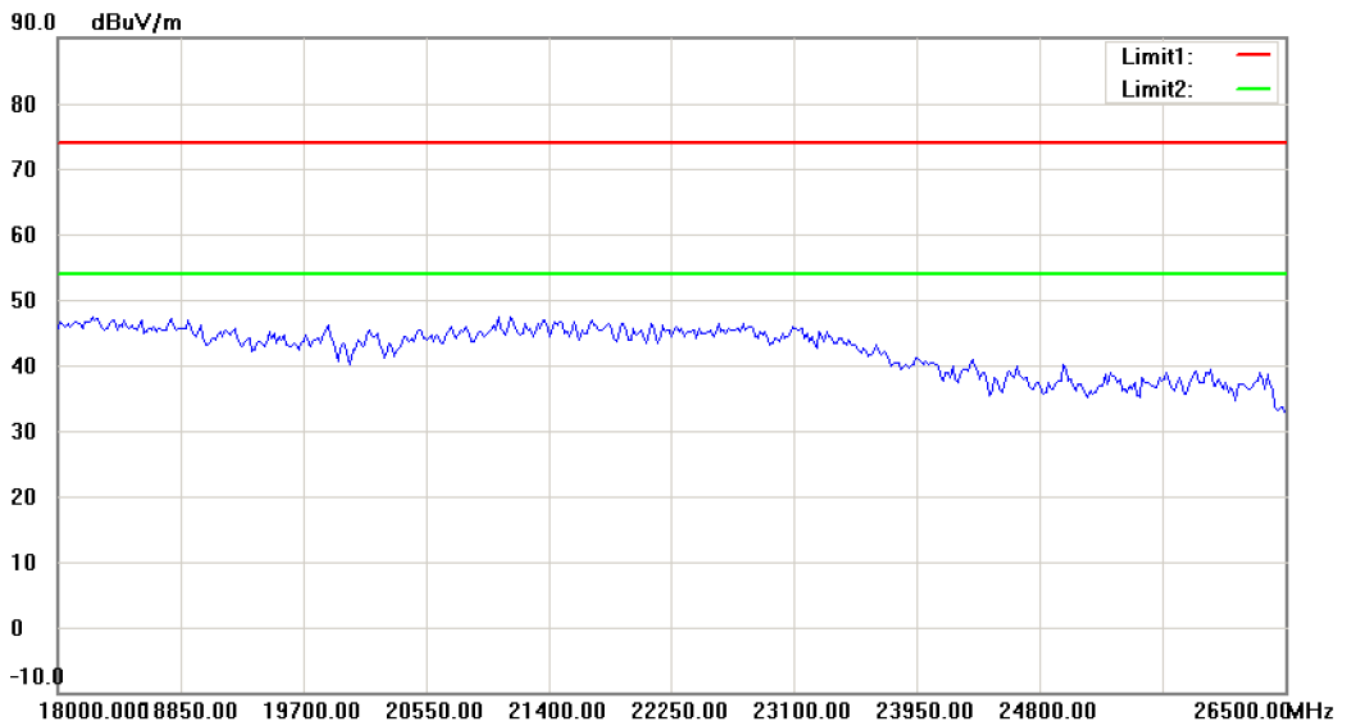
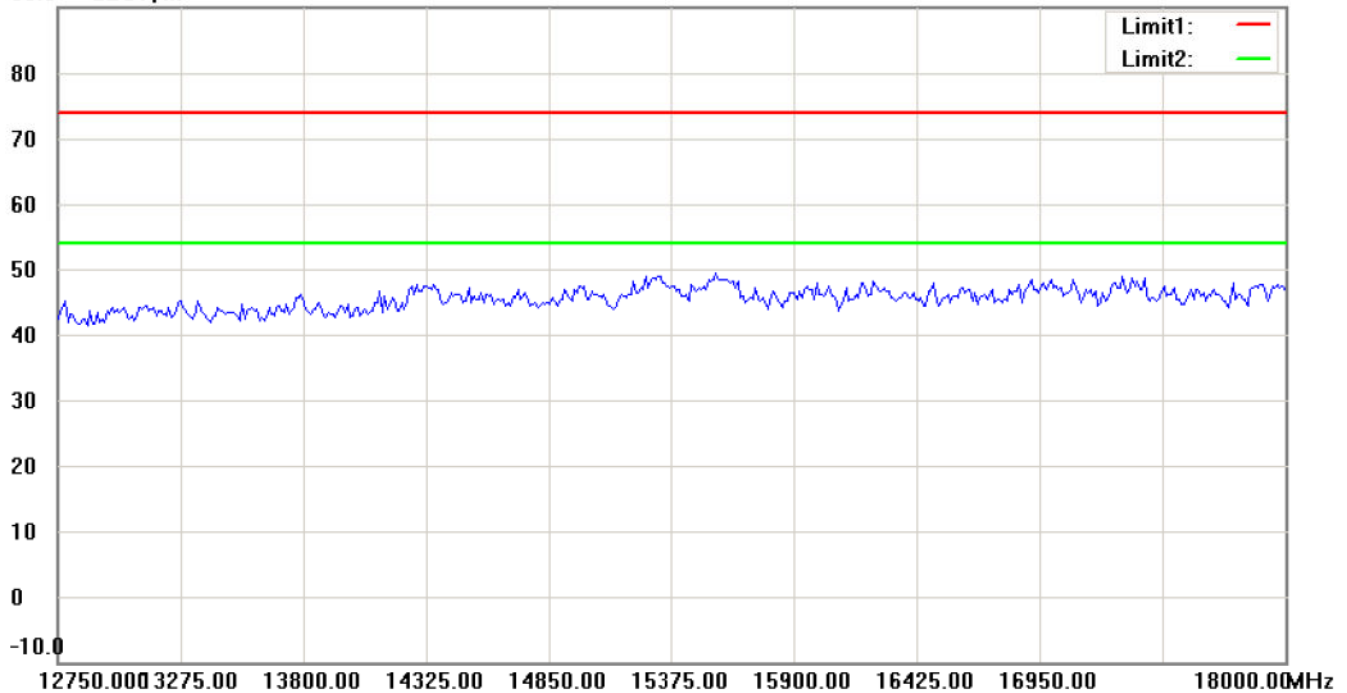


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

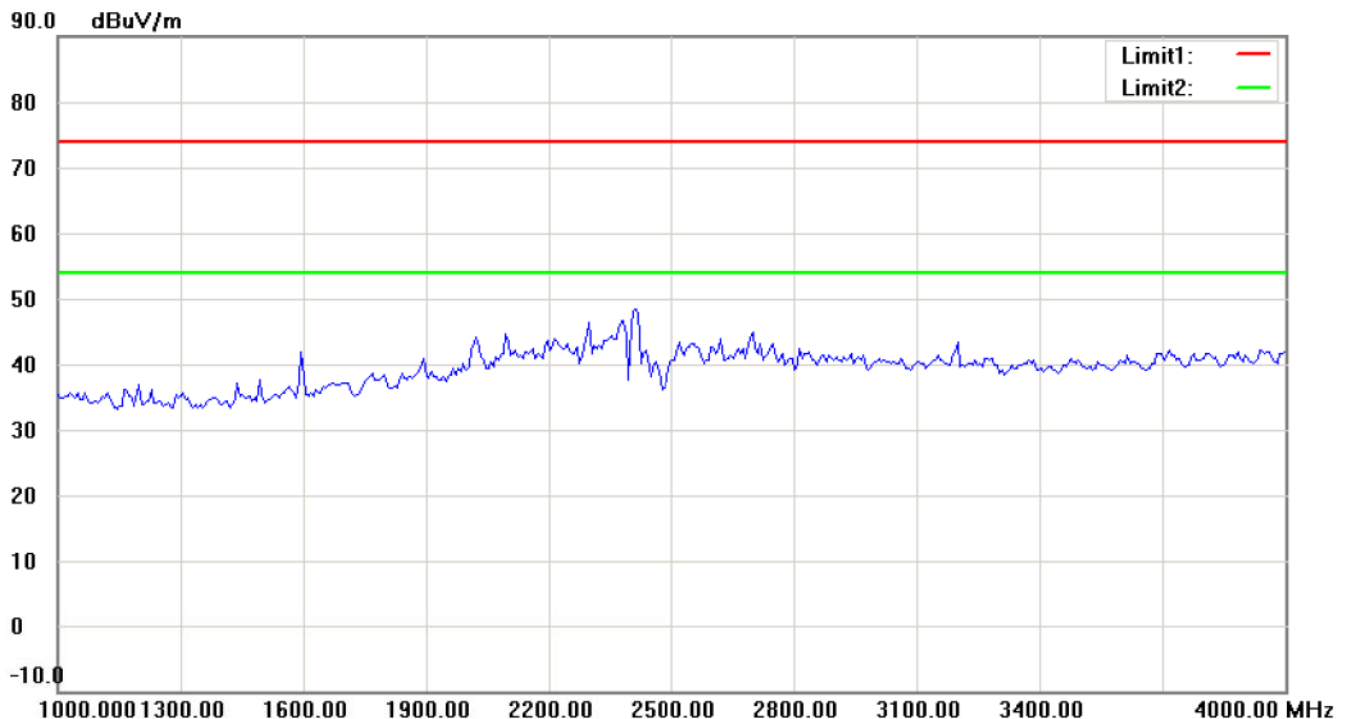
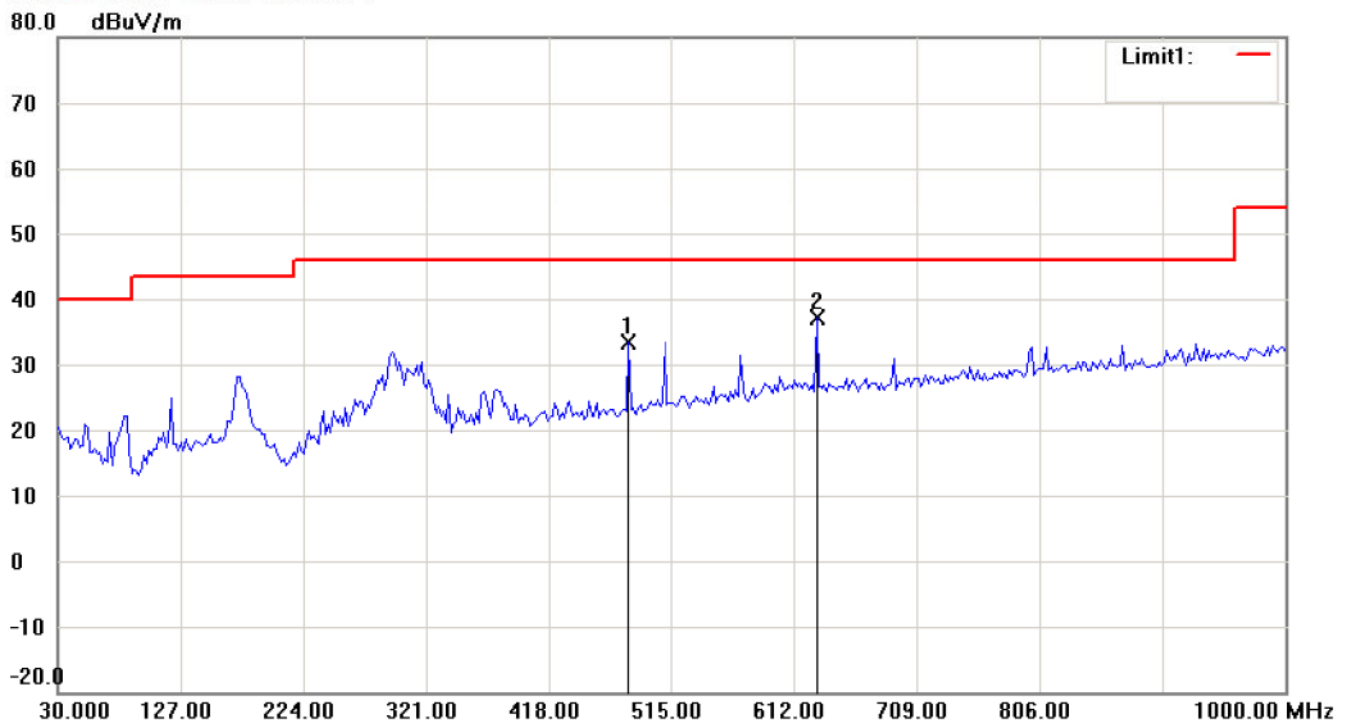
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

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.

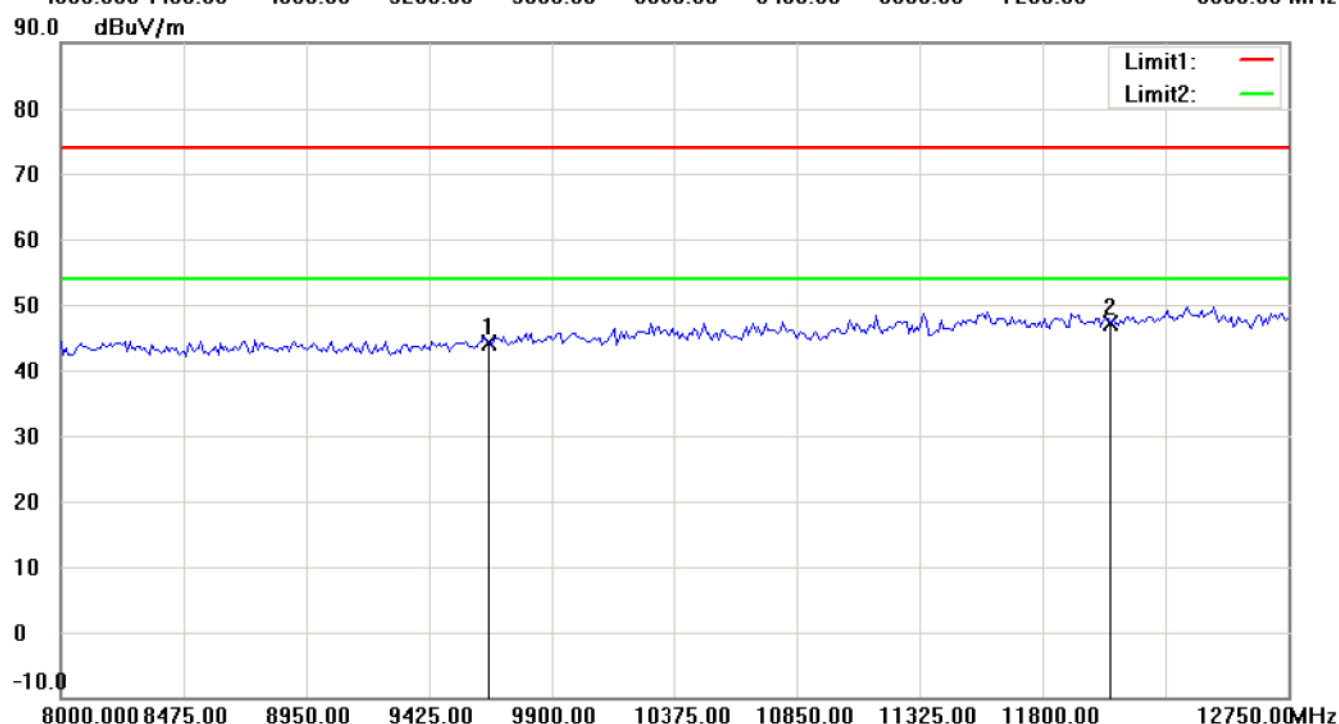
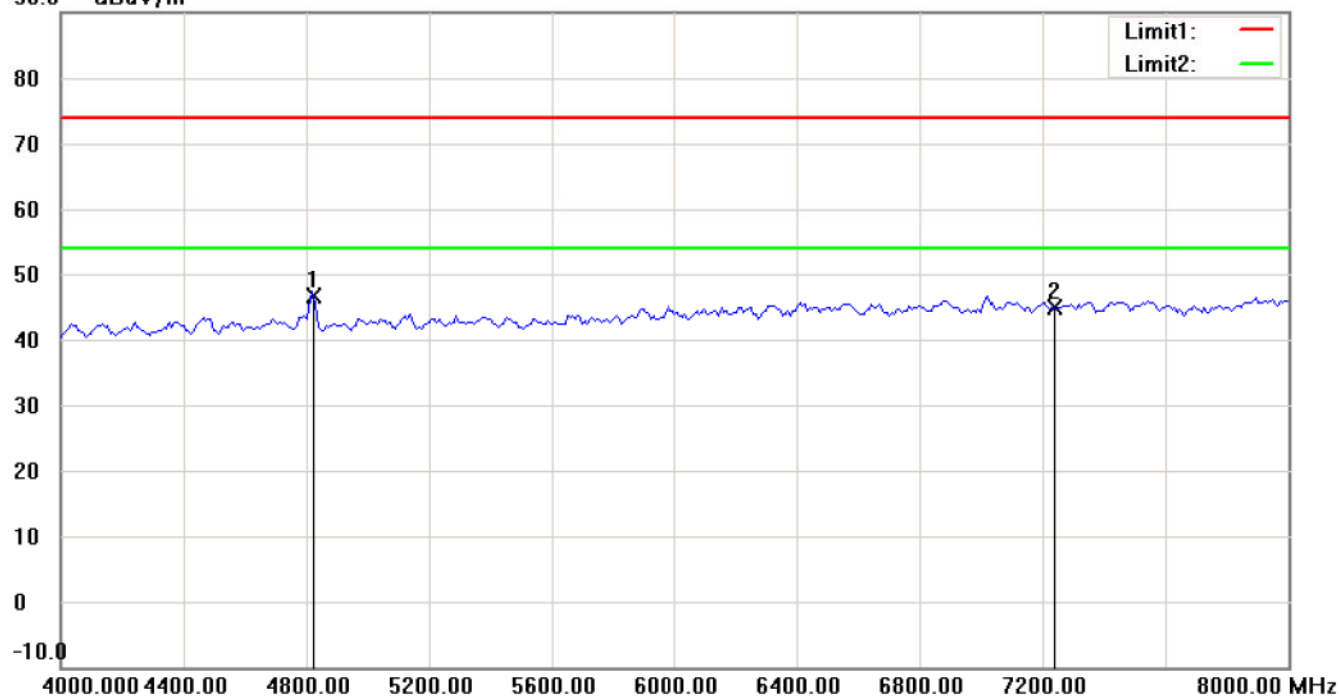


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

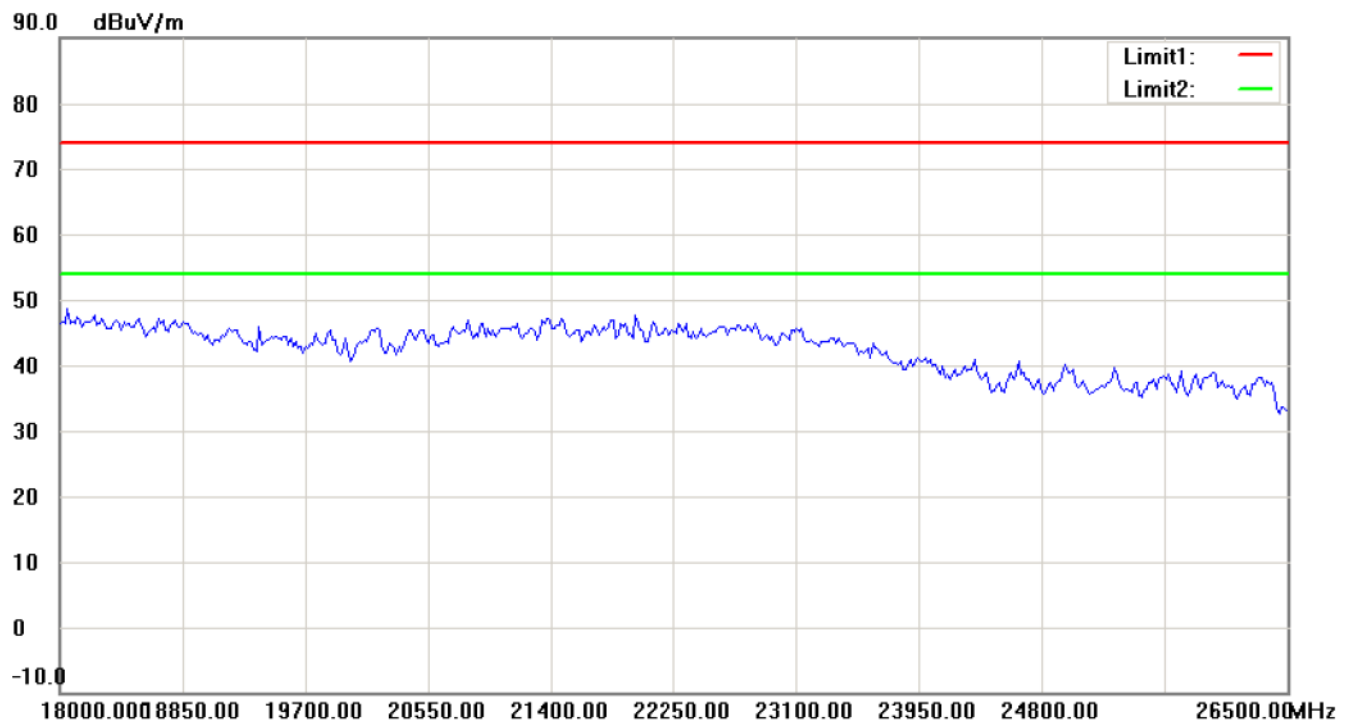
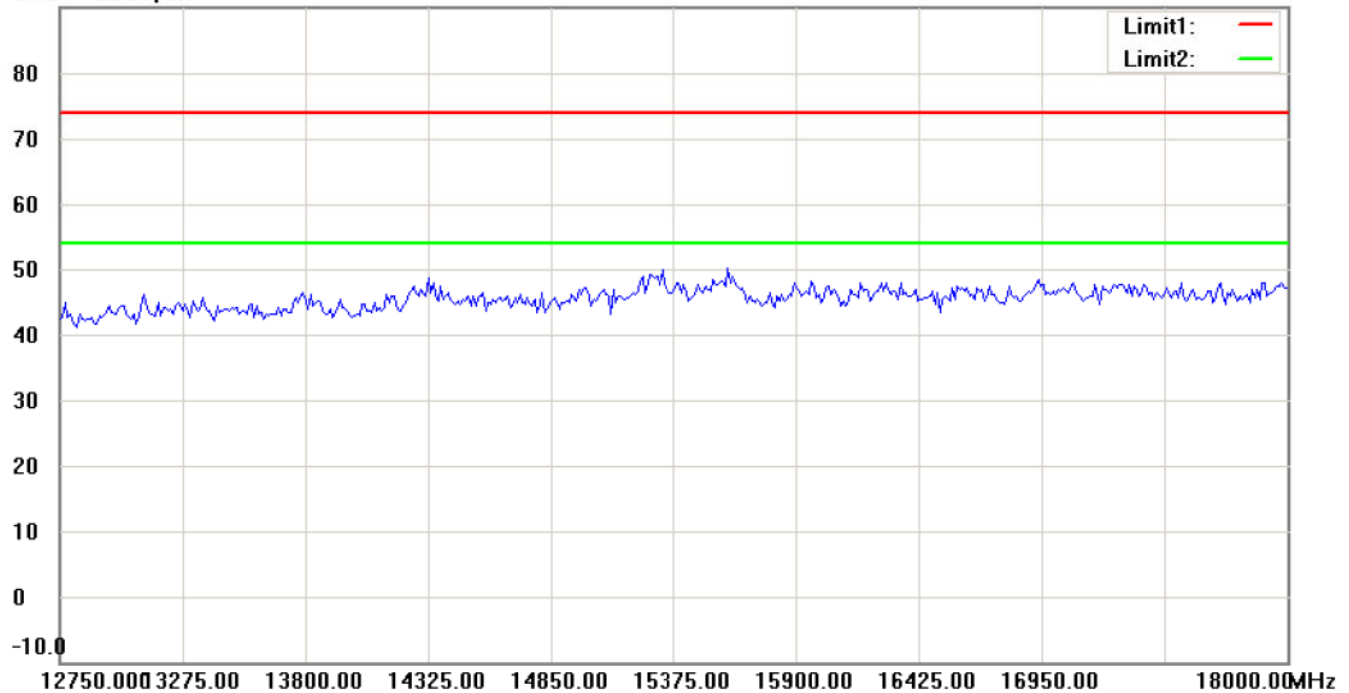
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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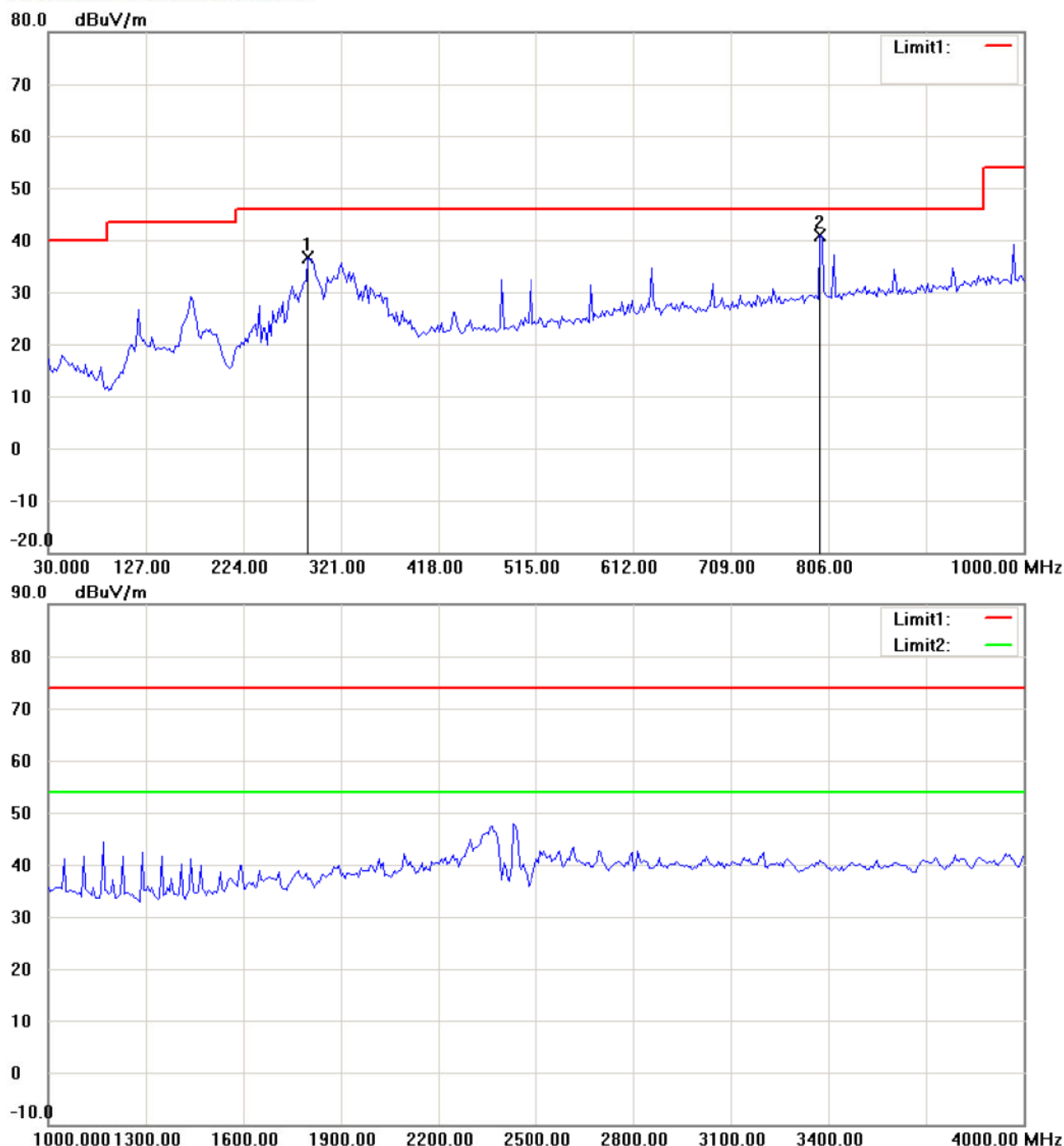


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11g CH6

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

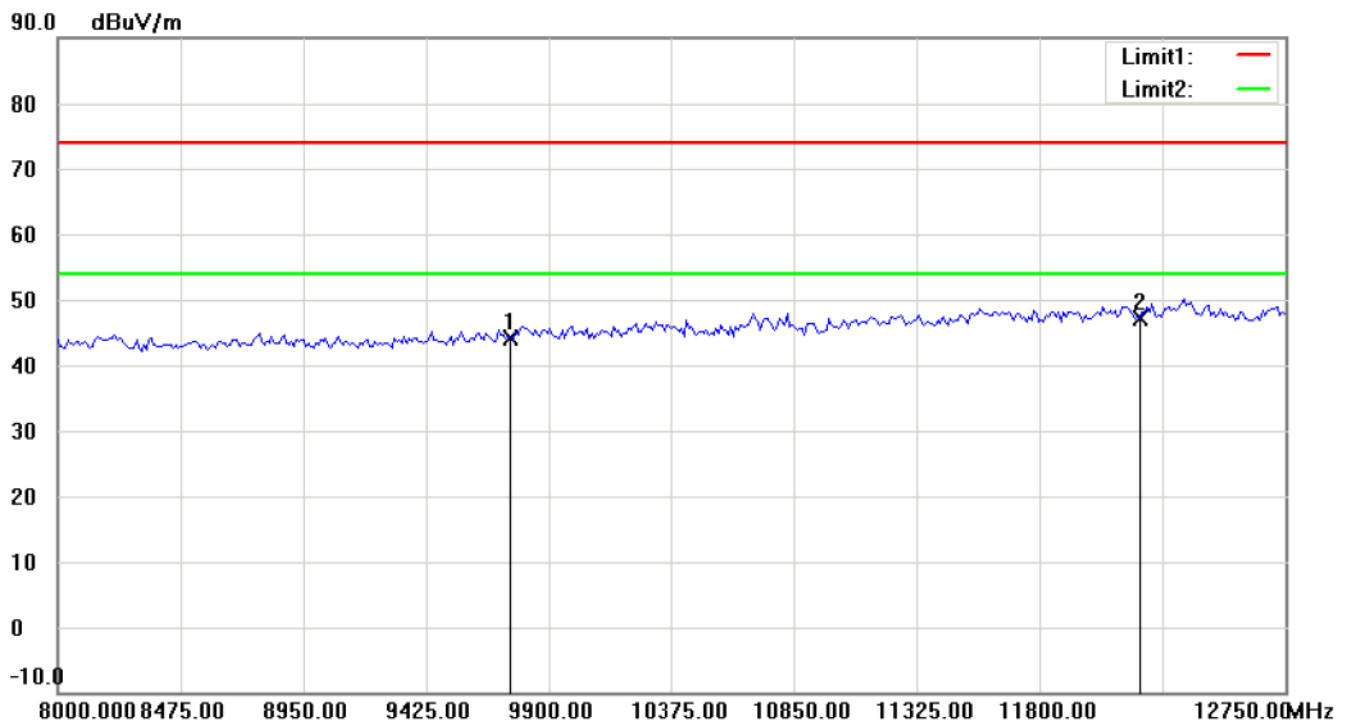
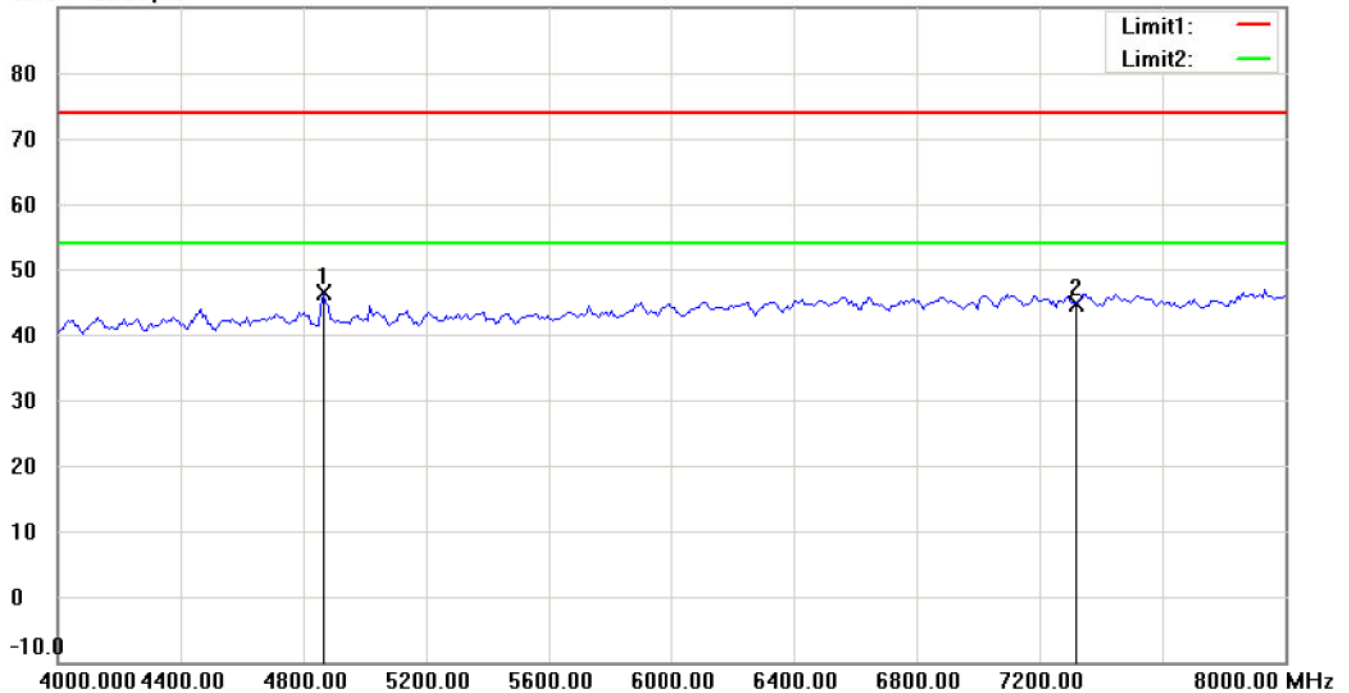
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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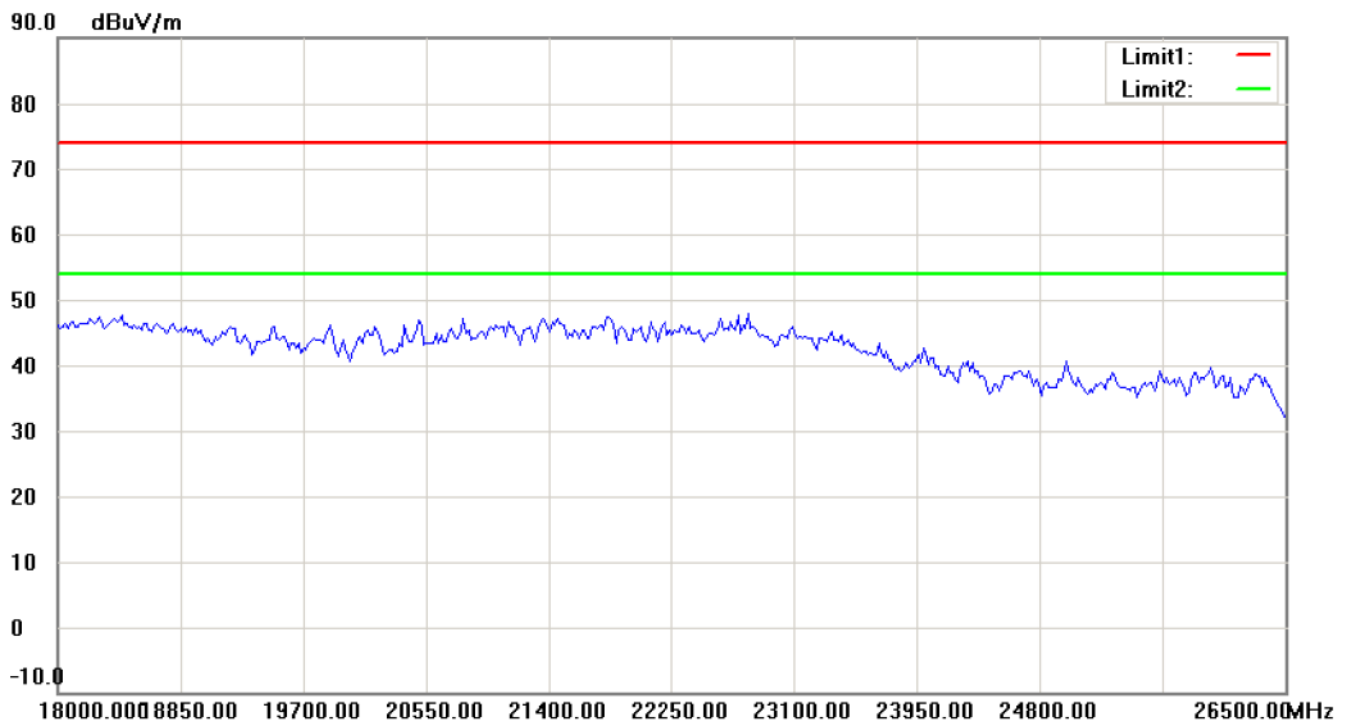
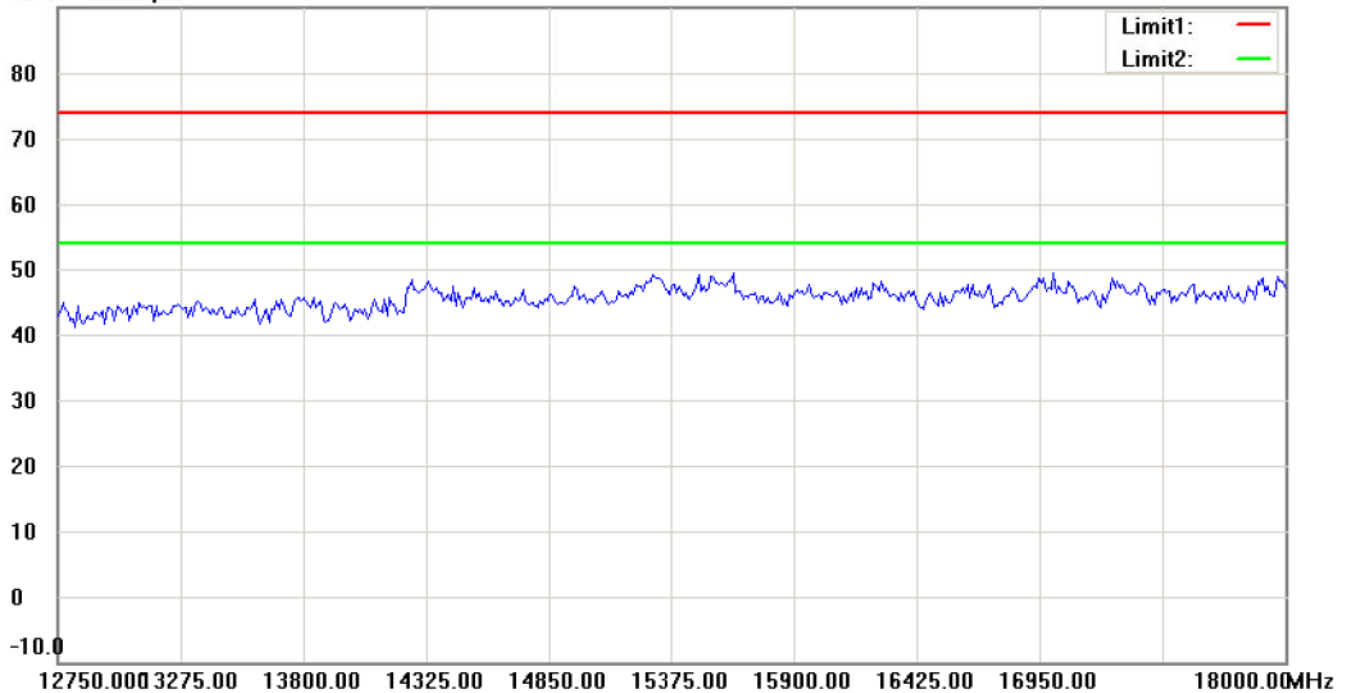


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

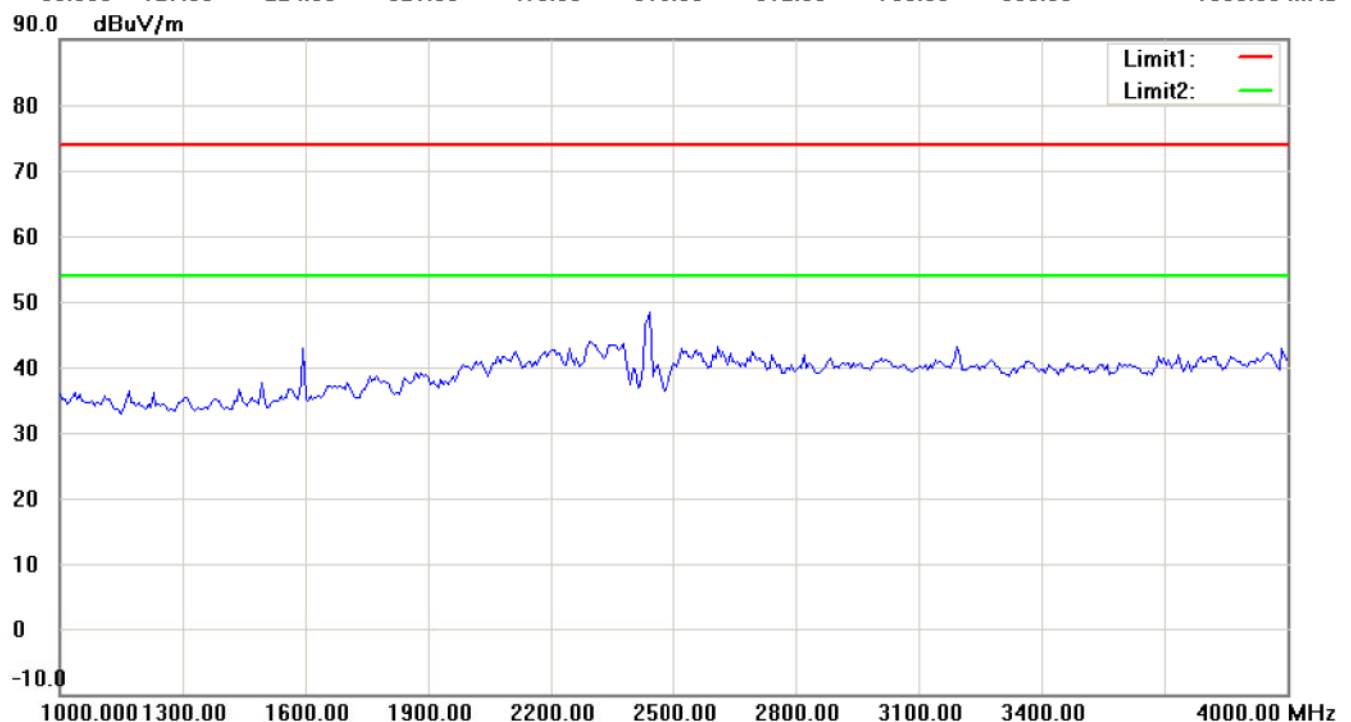
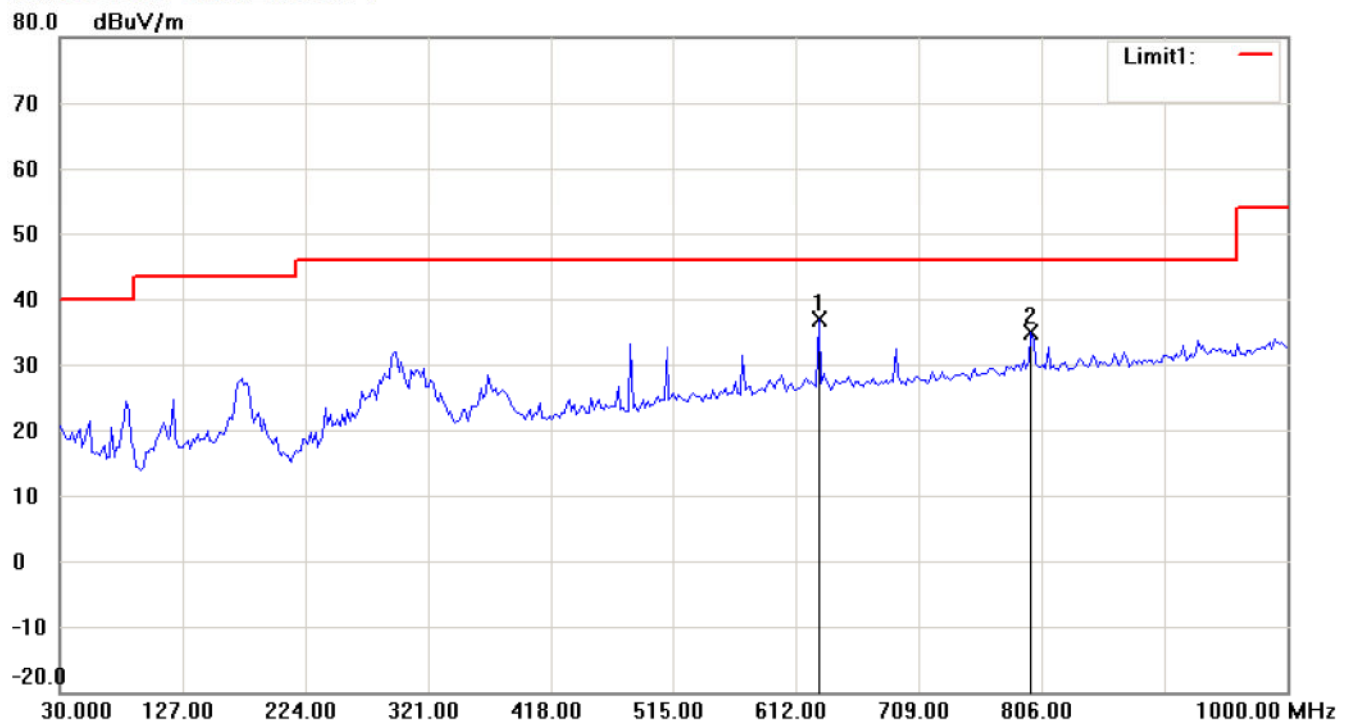
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

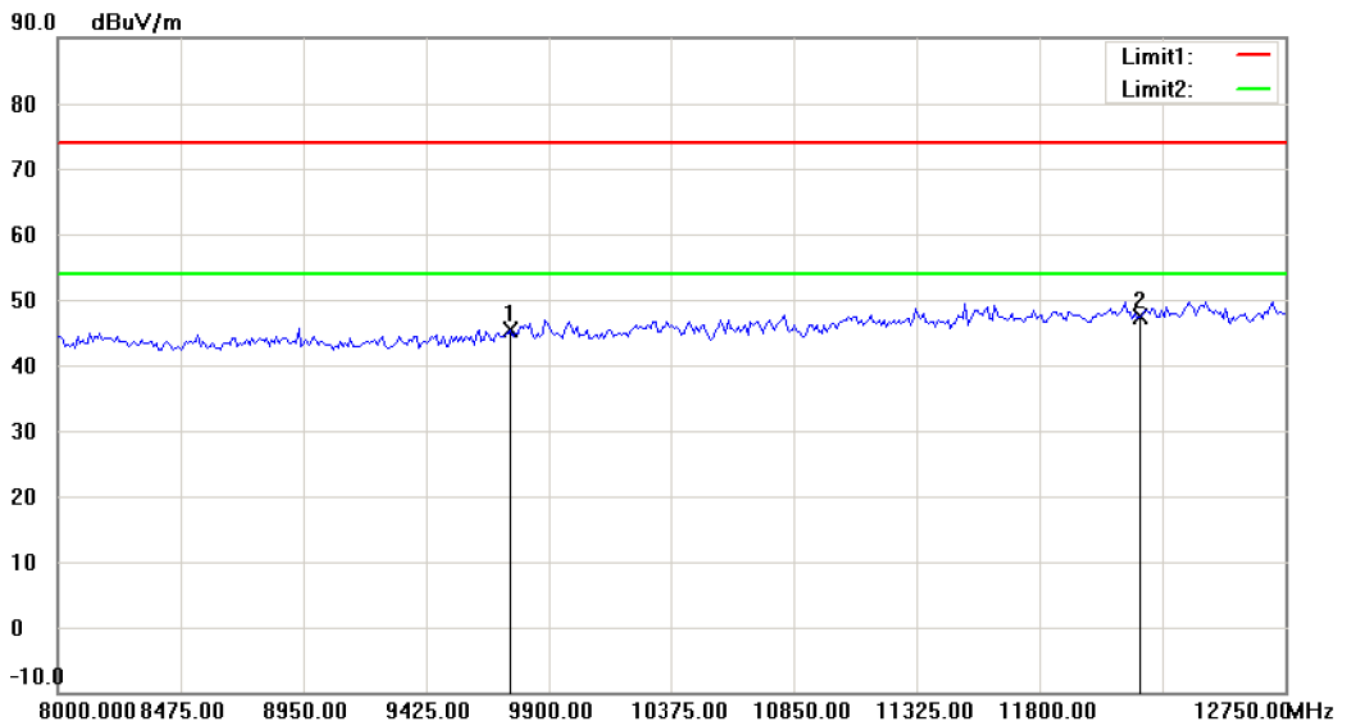
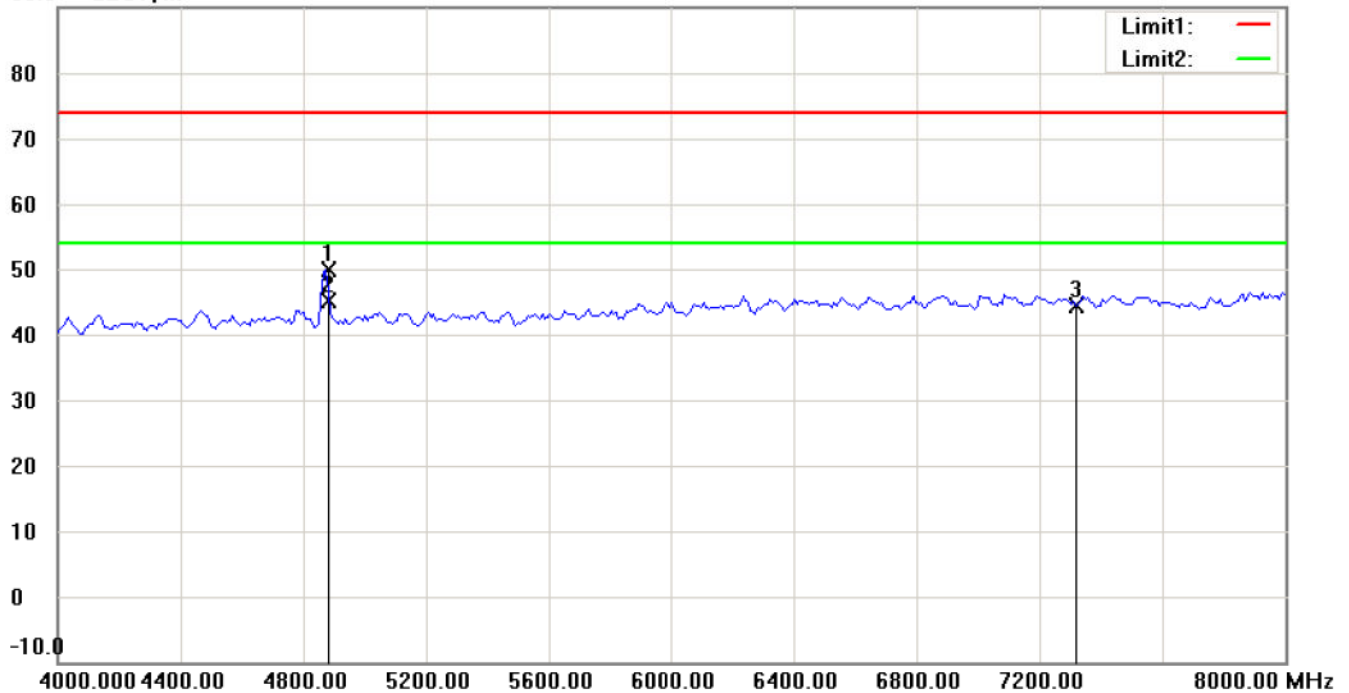
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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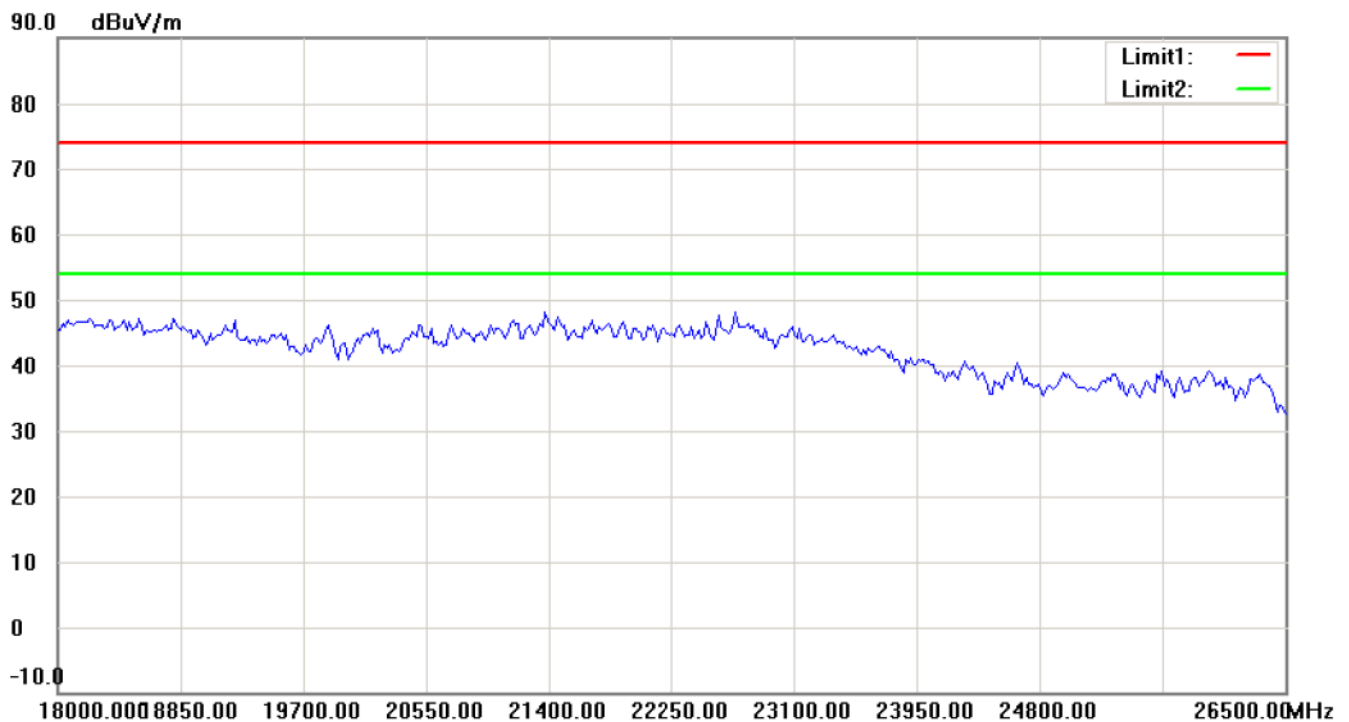
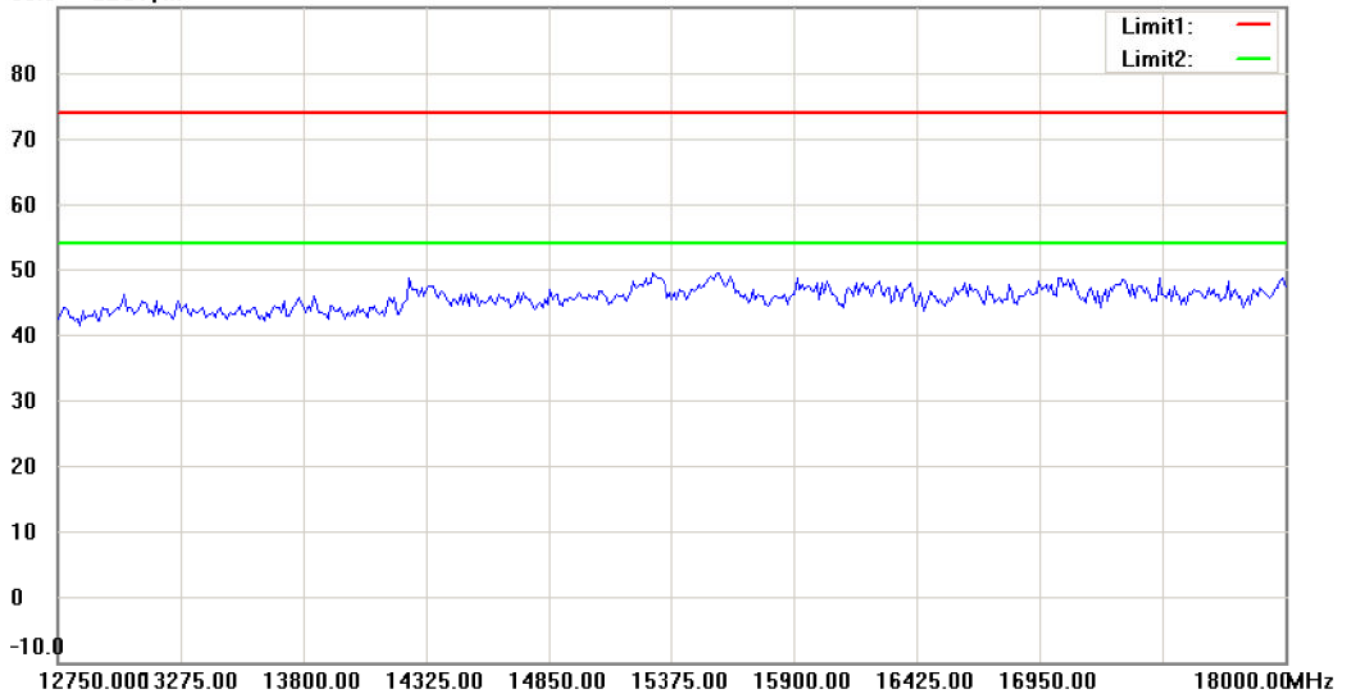


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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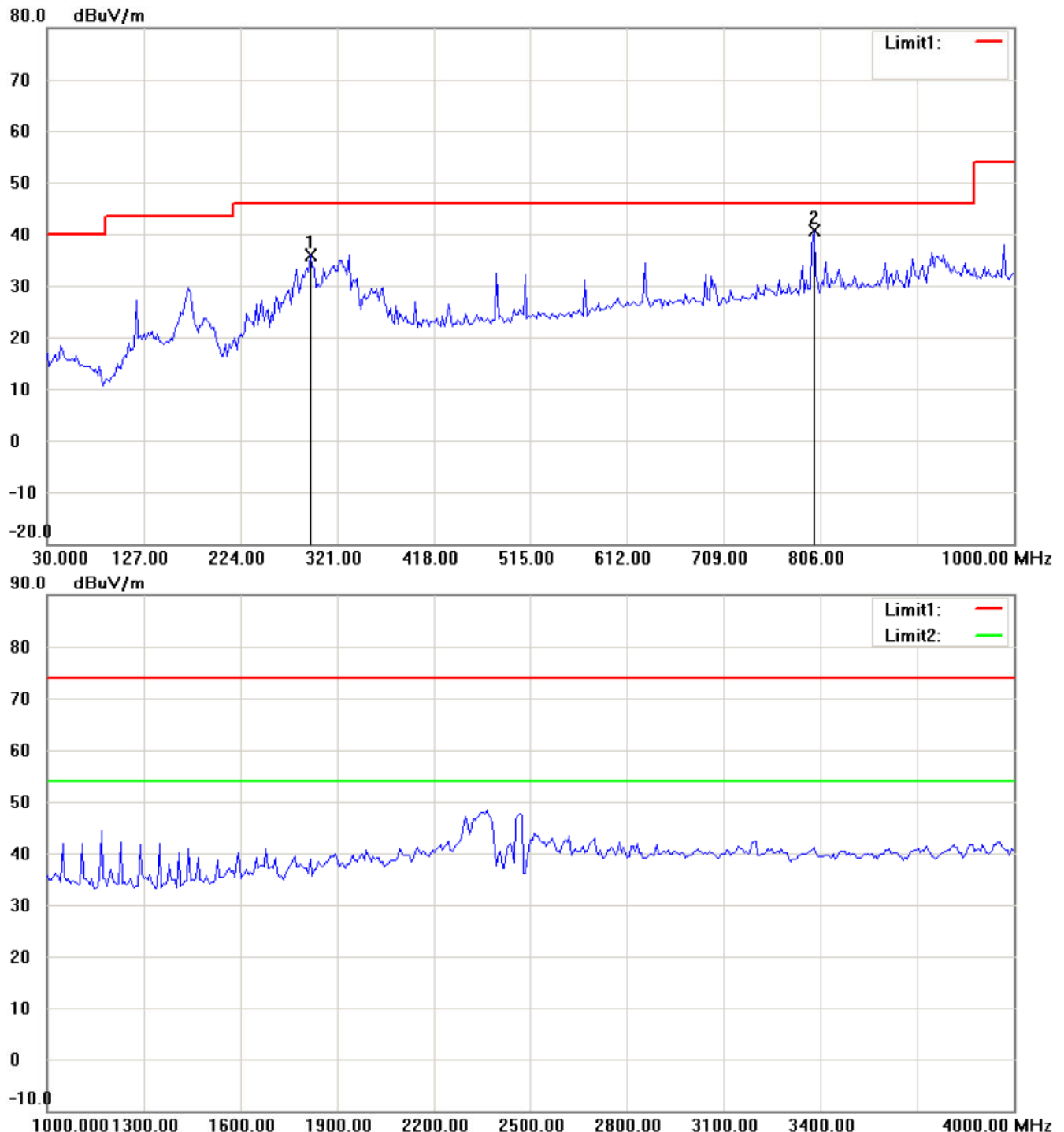


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11g CH11

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

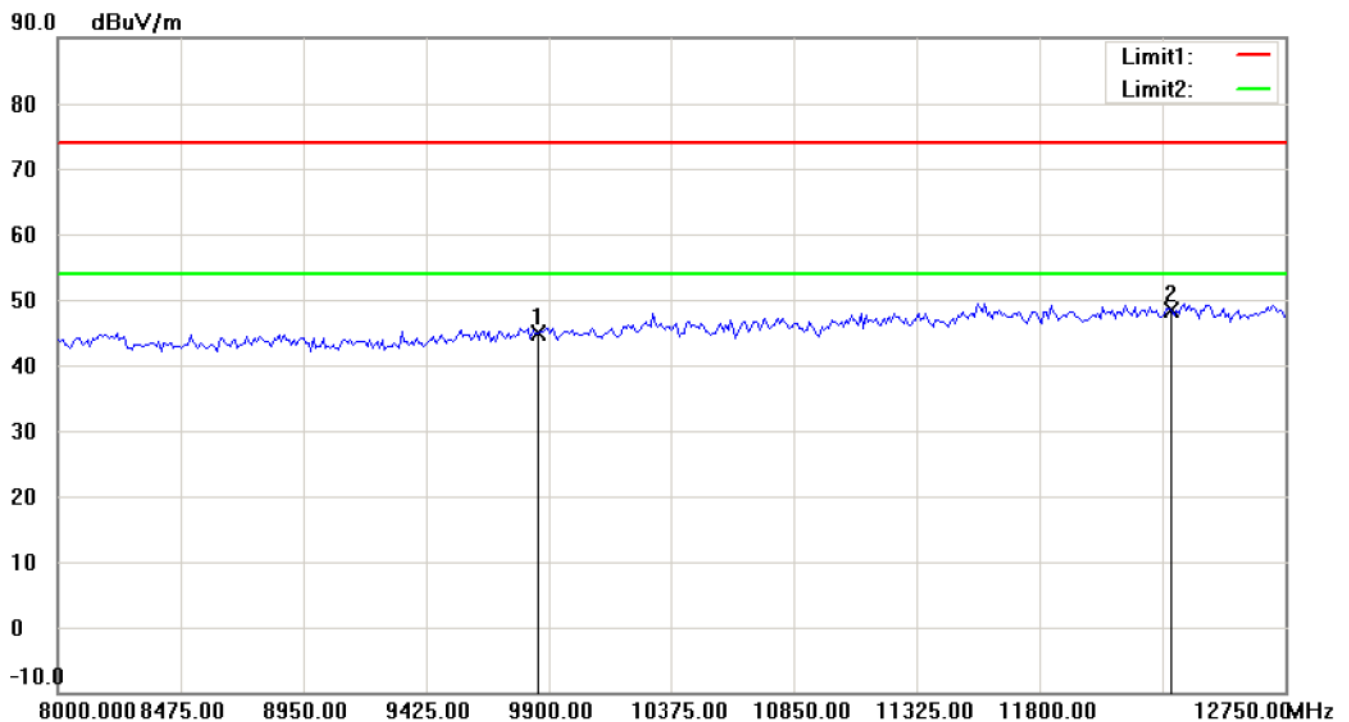
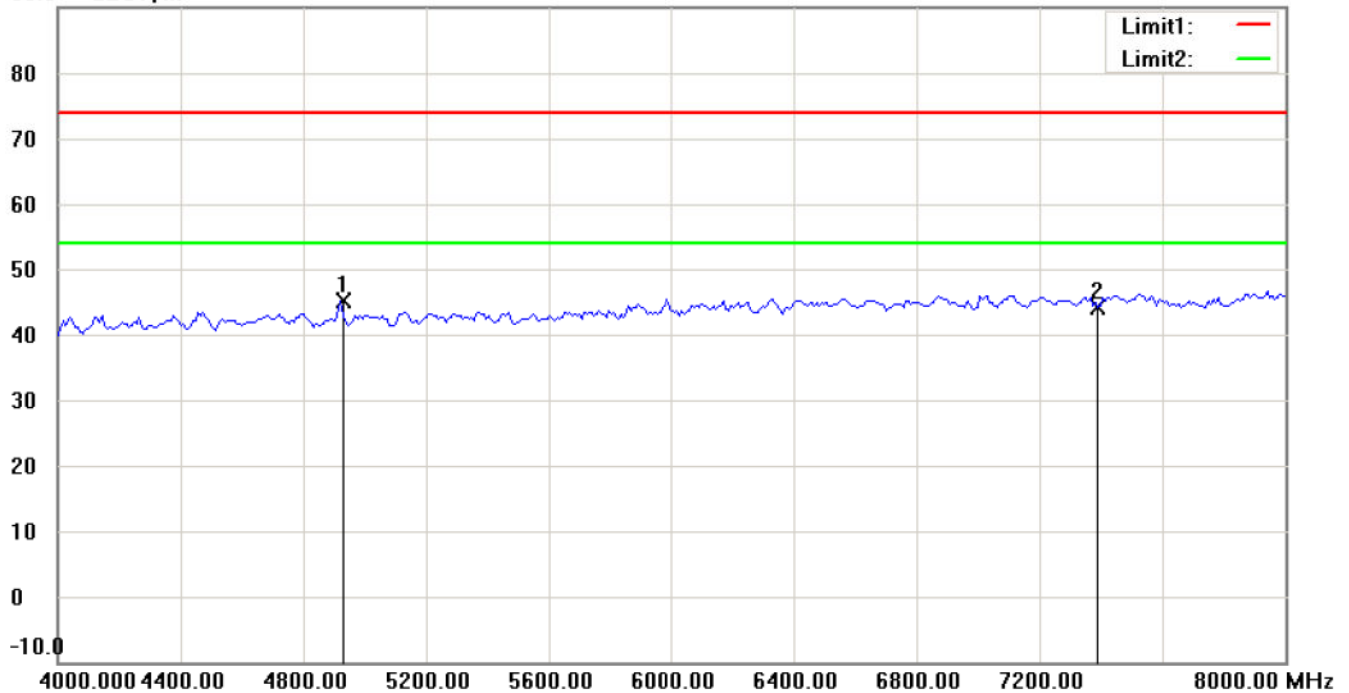
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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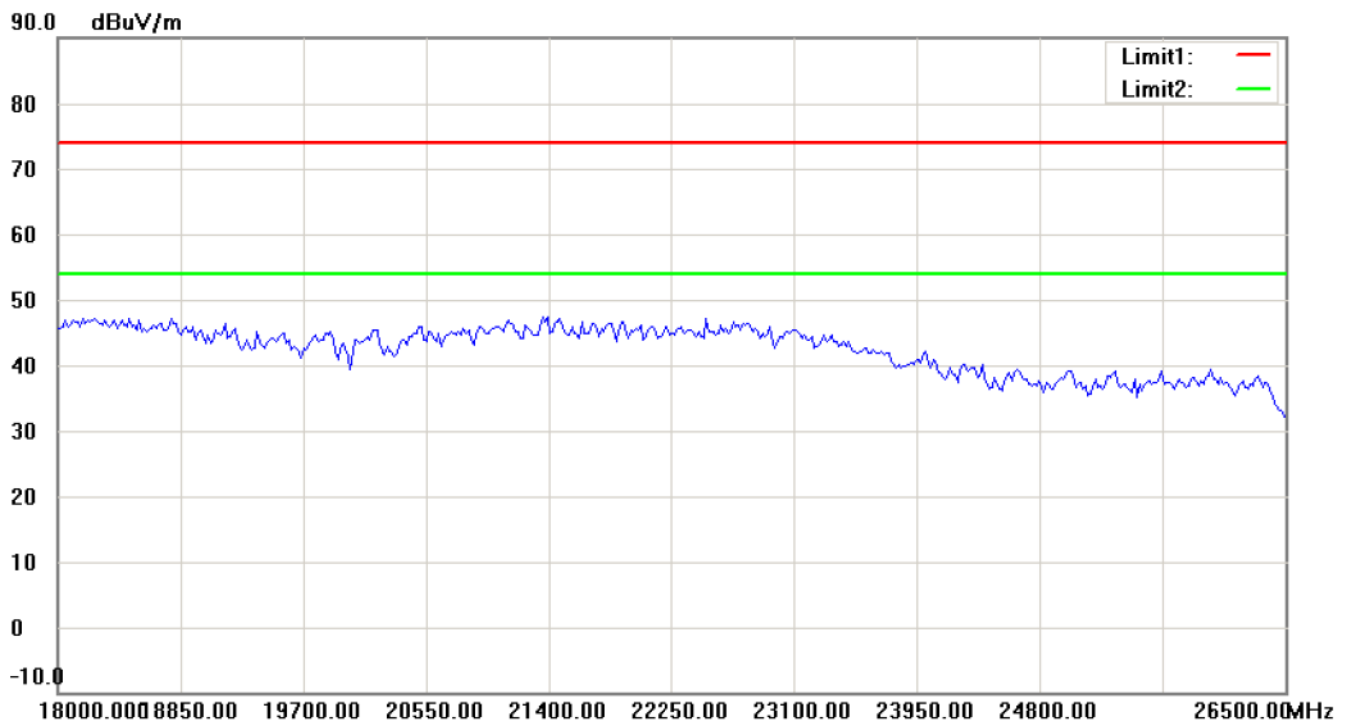
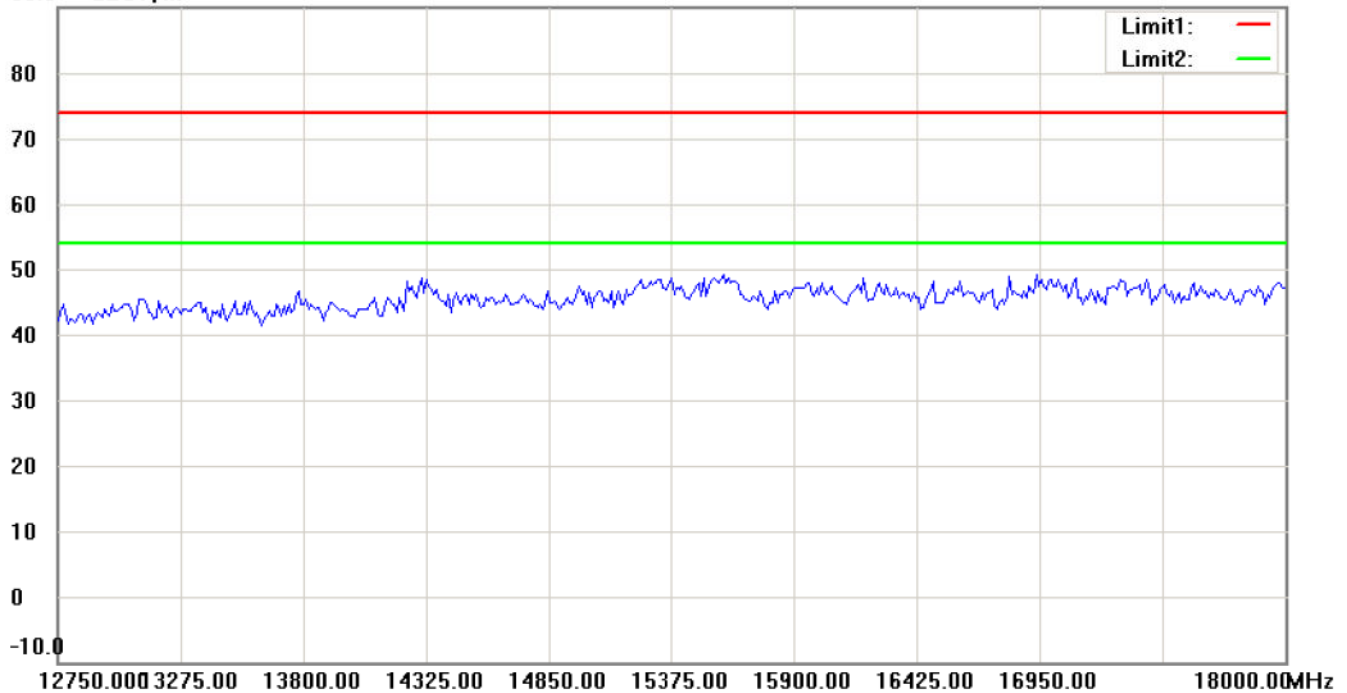


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

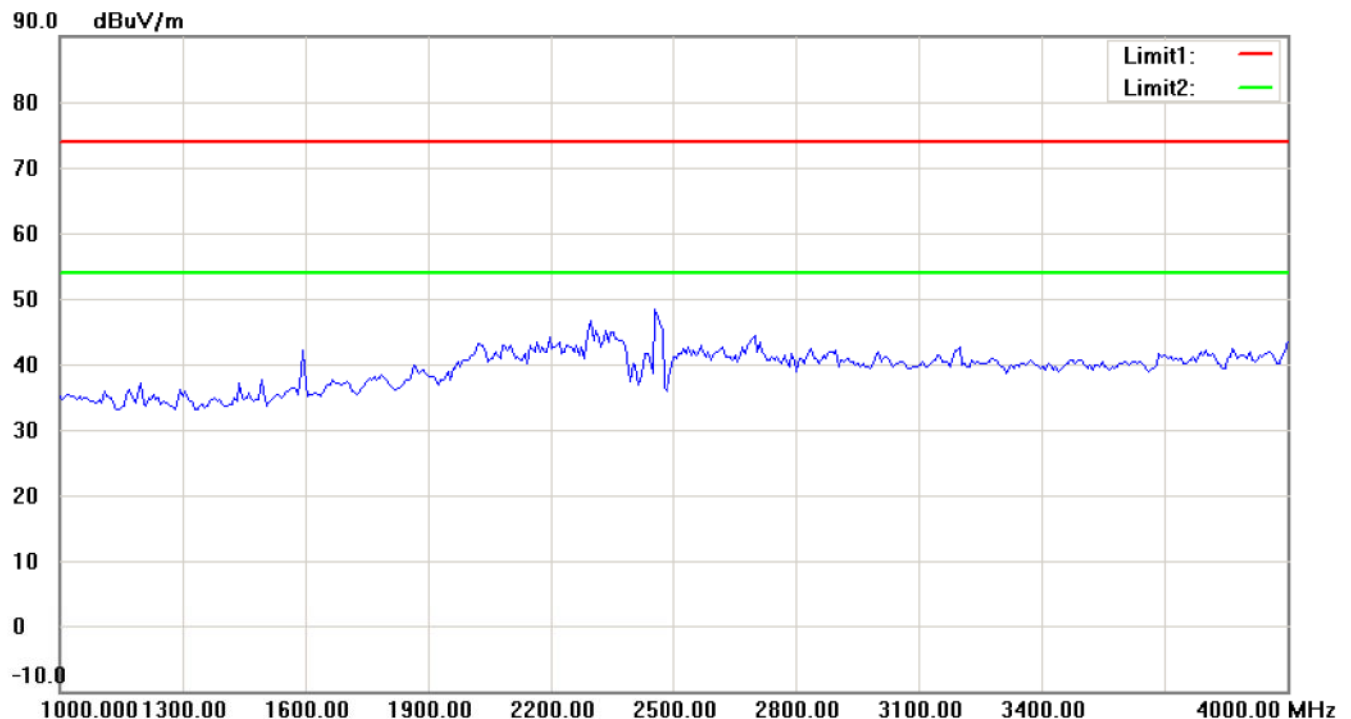
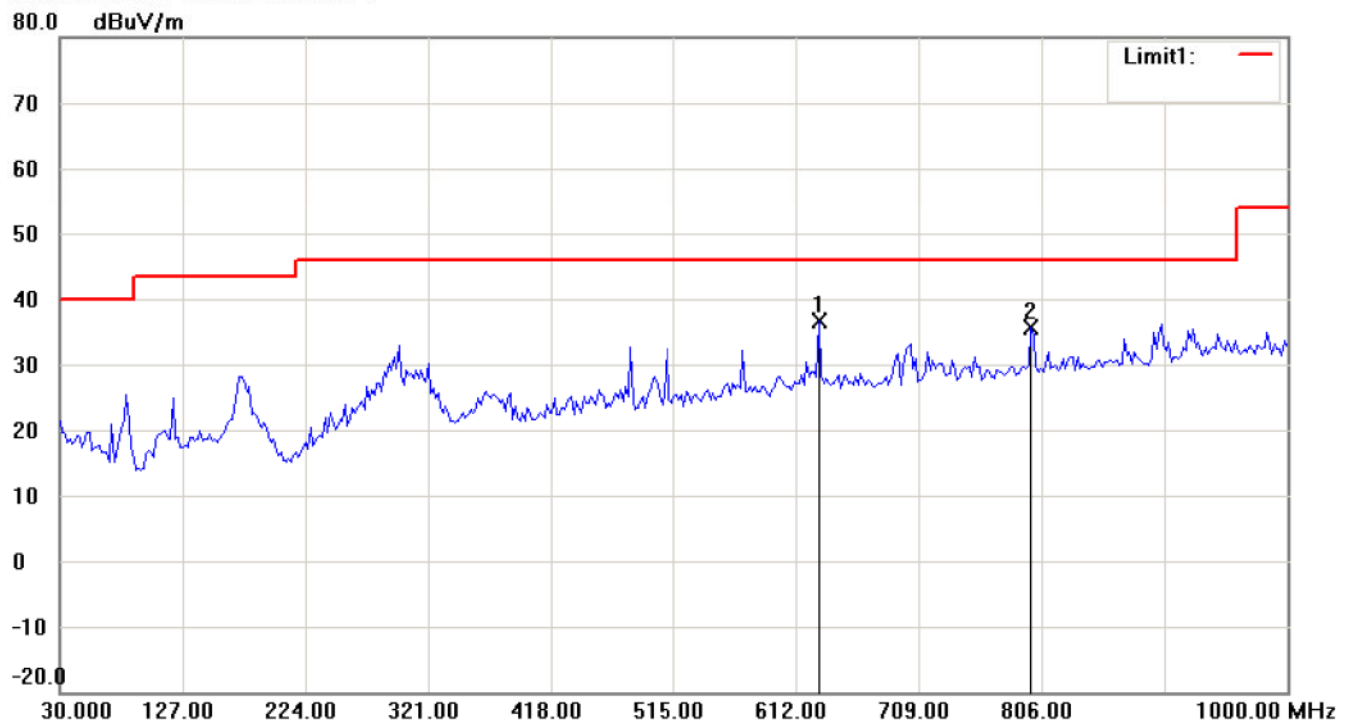
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

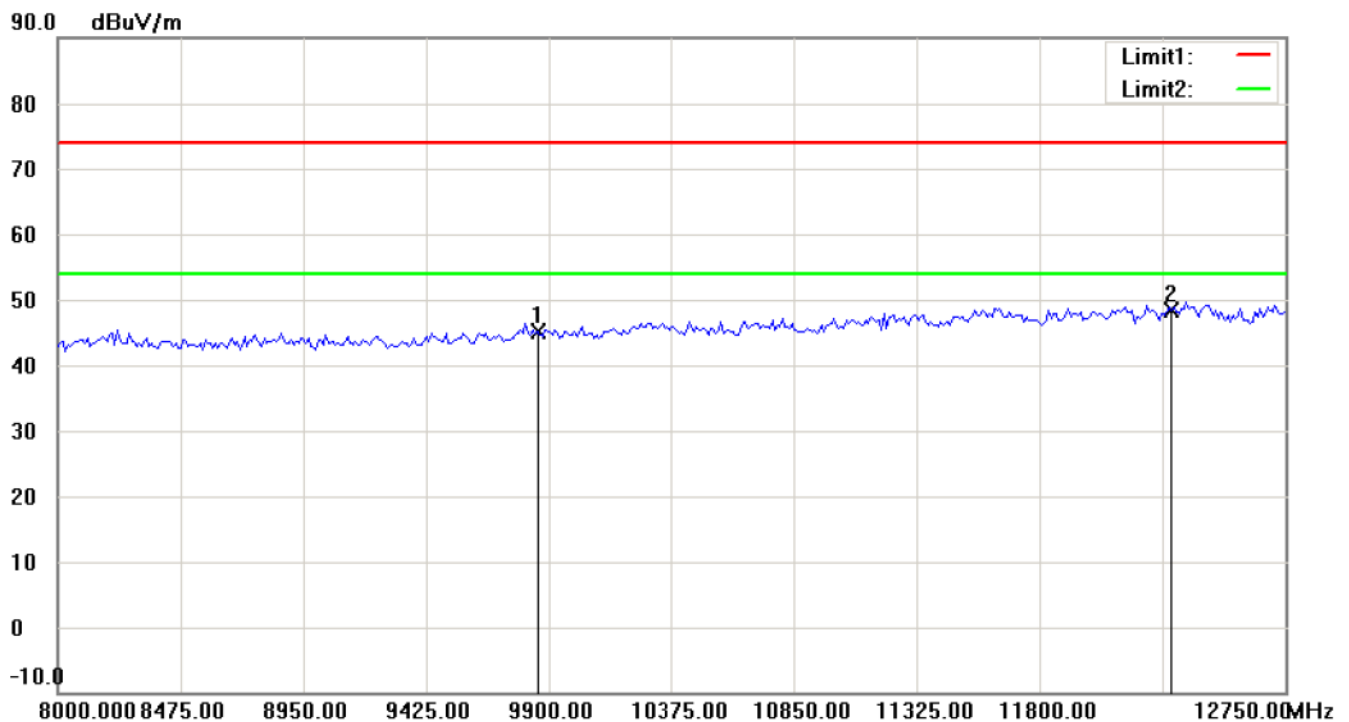
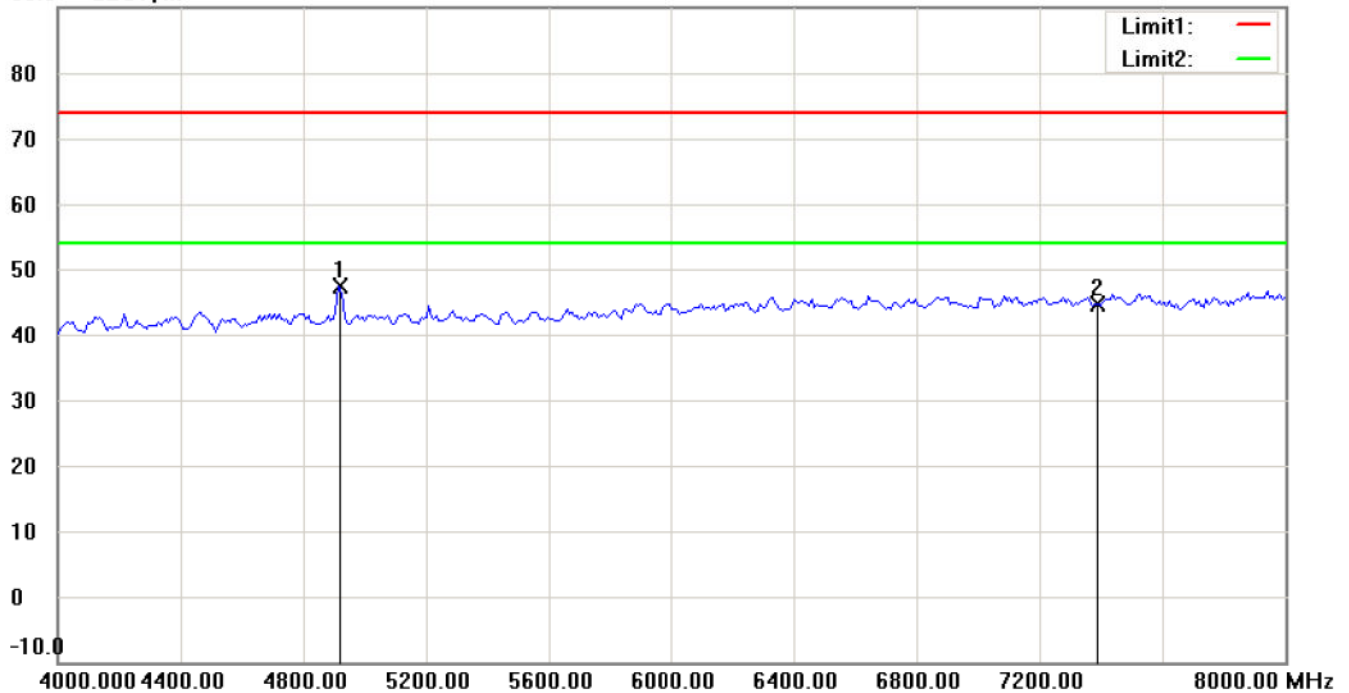
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

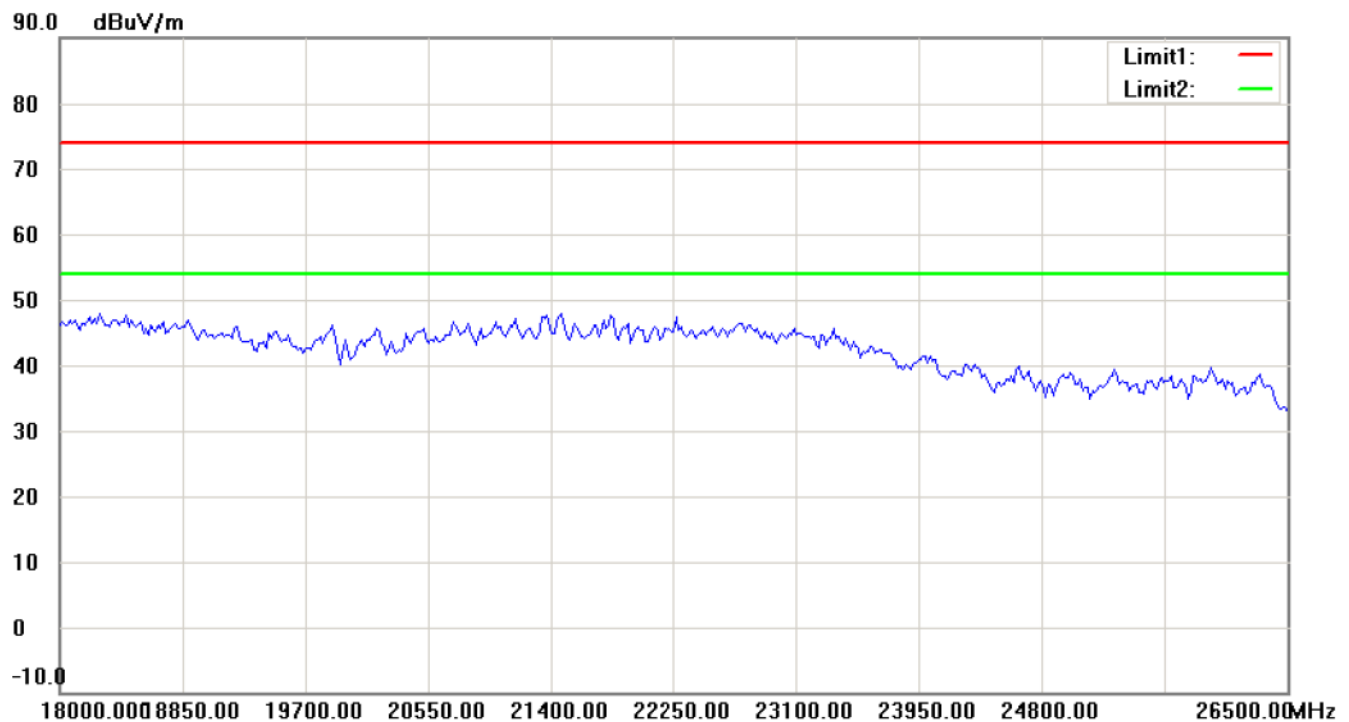
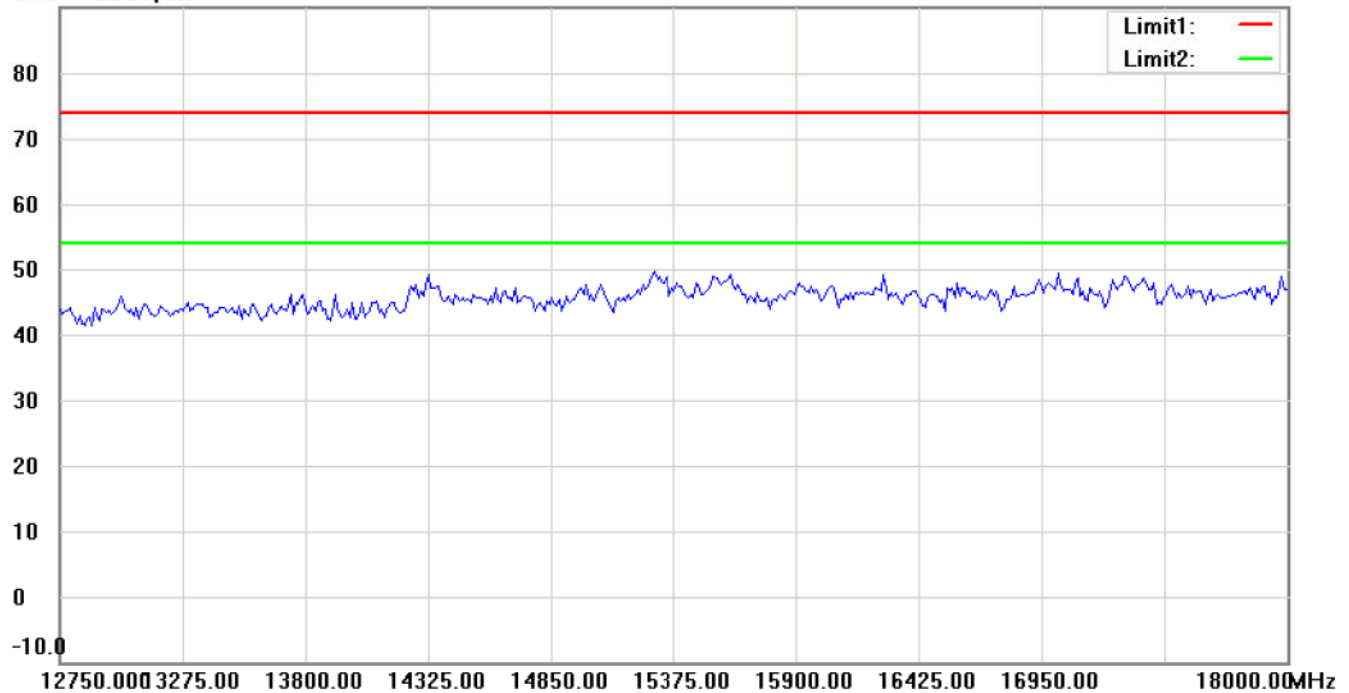
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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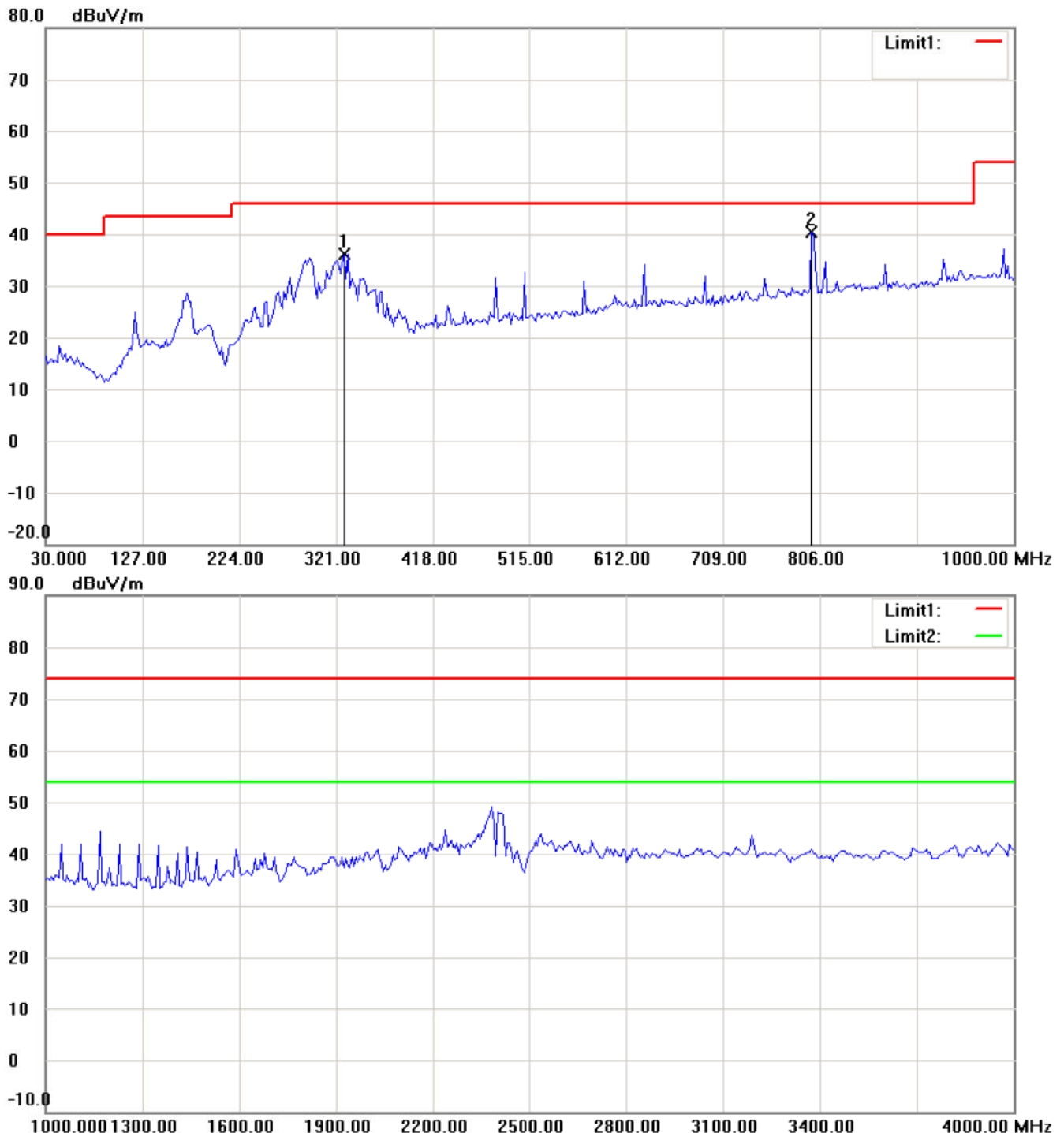
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11n 20MHz CH1

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

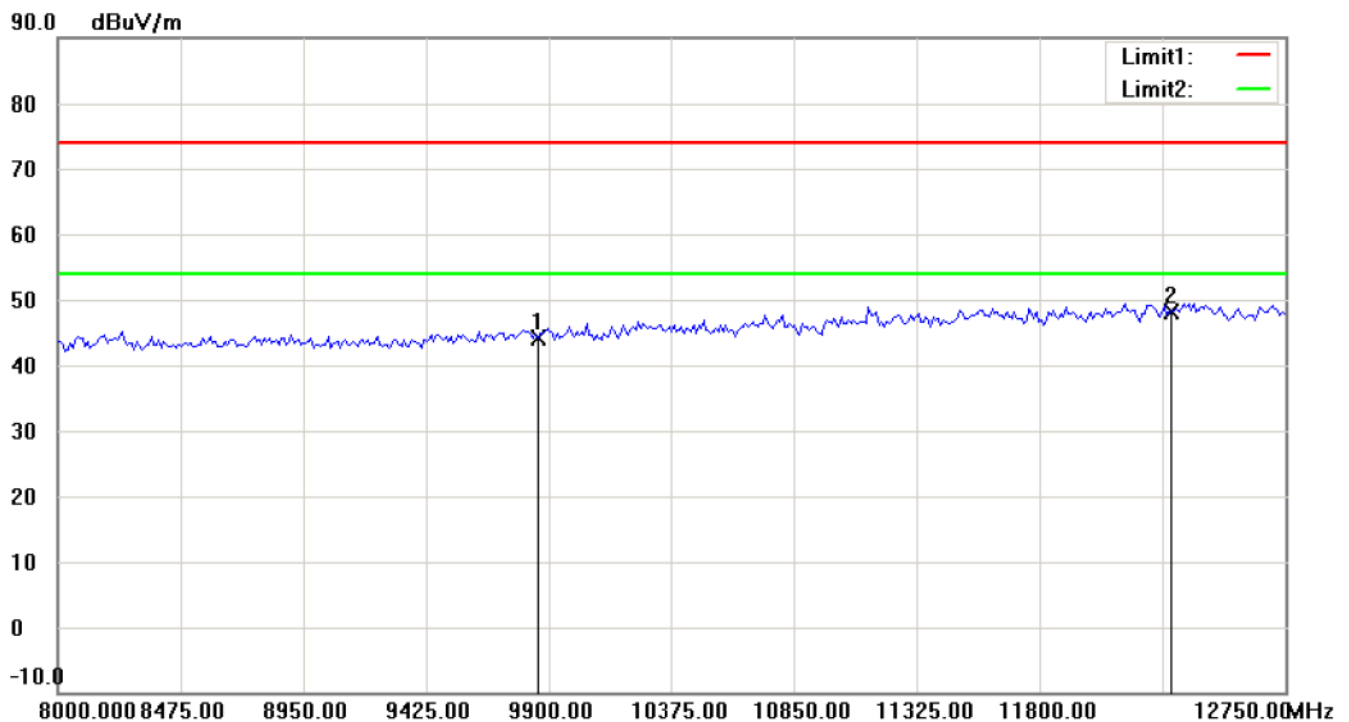
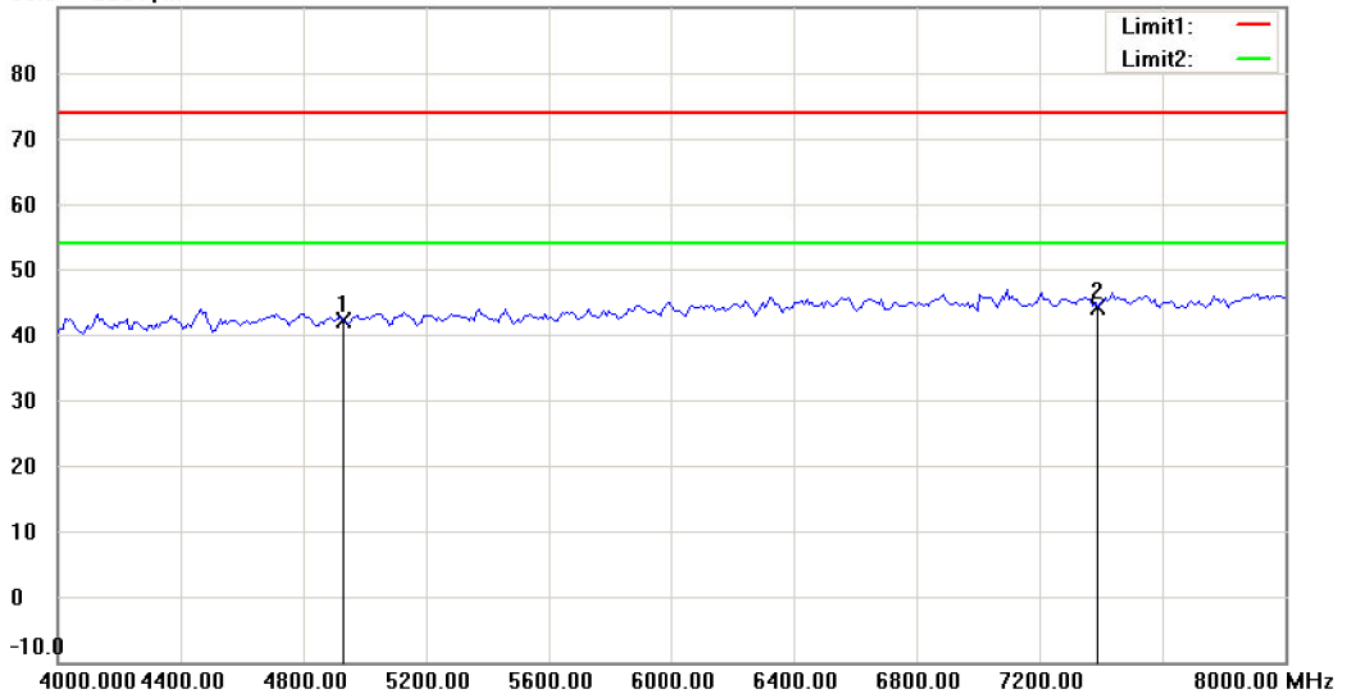
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

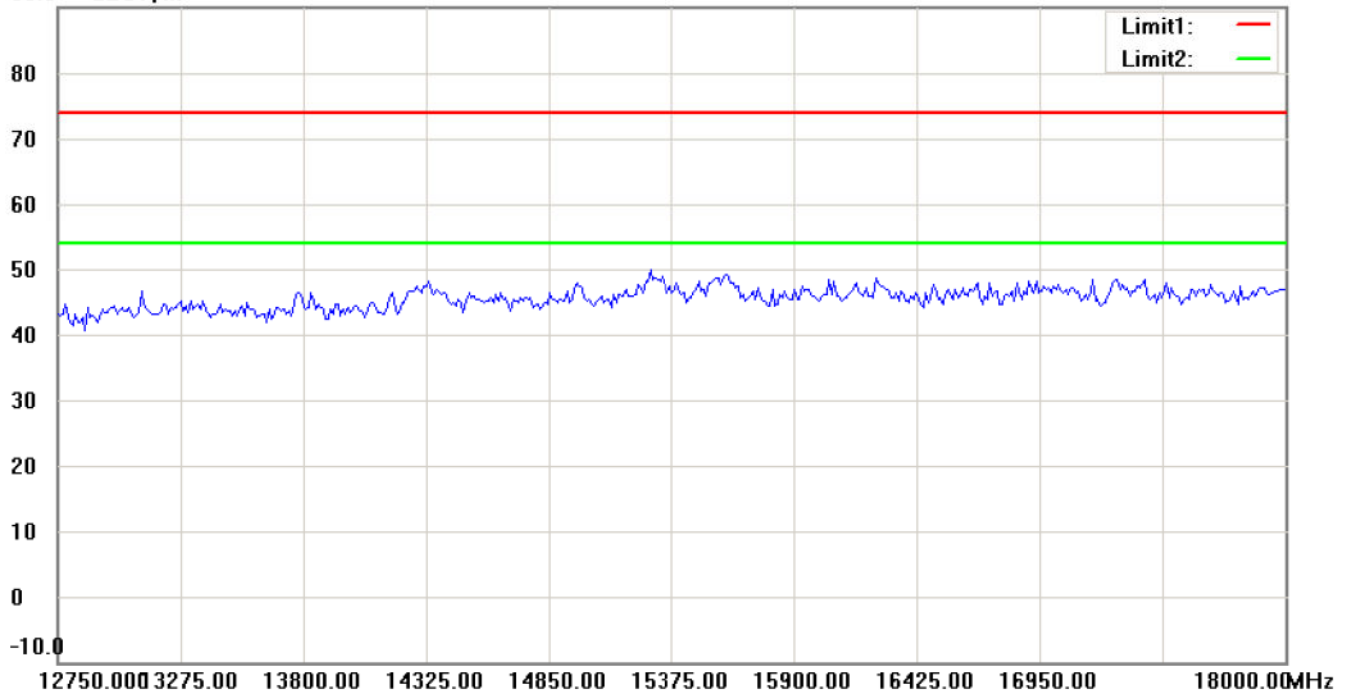


Worldwide Testing Services(Taiwan) Co., Ltd.

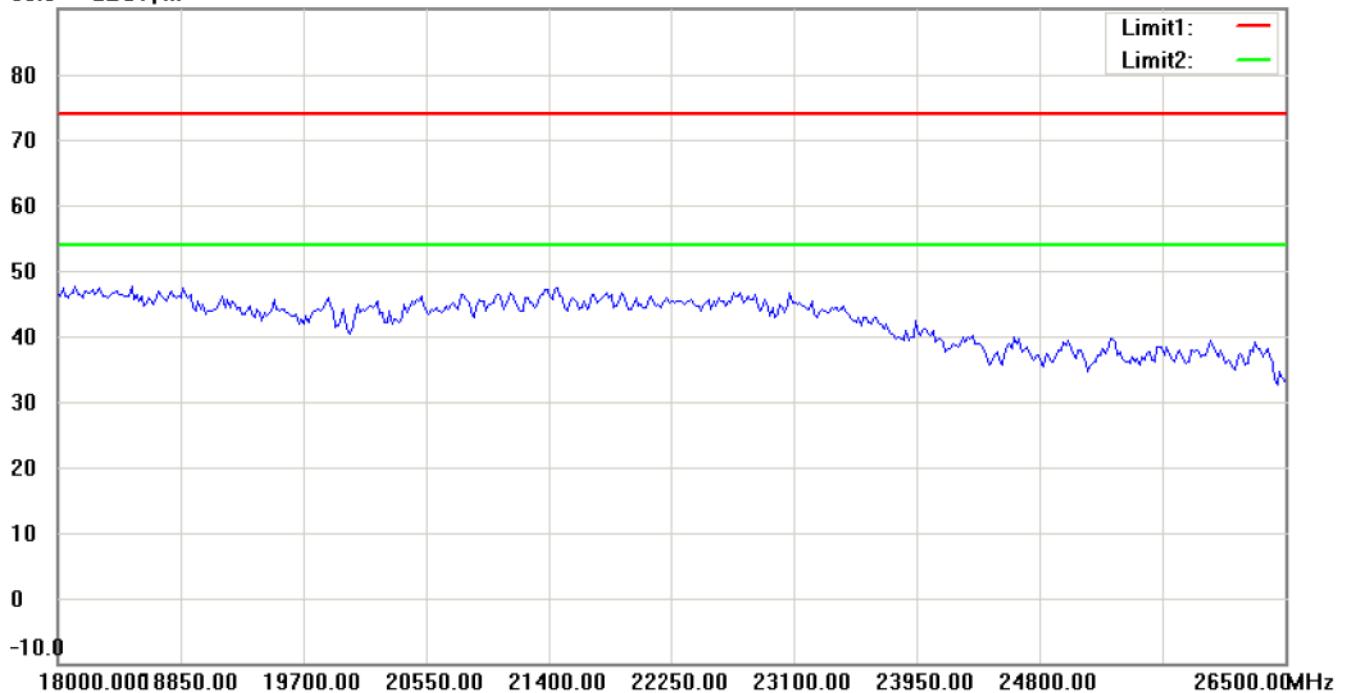
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

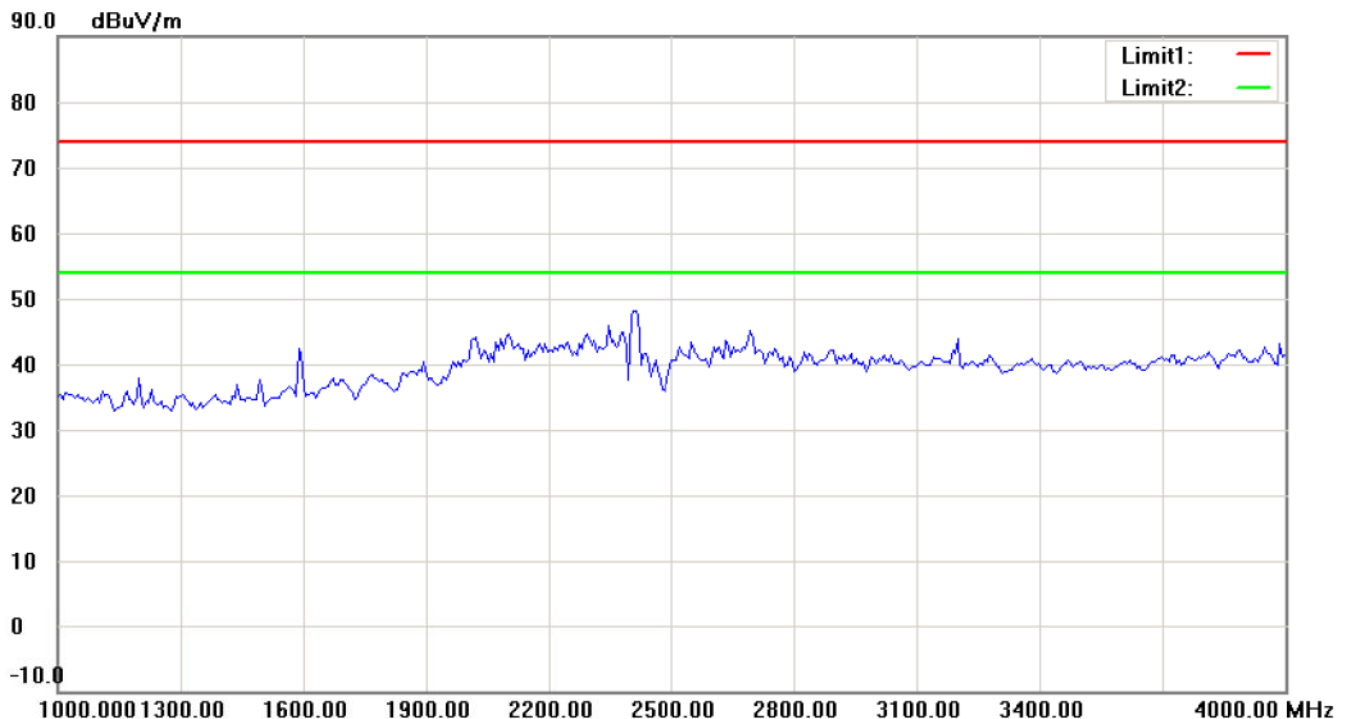
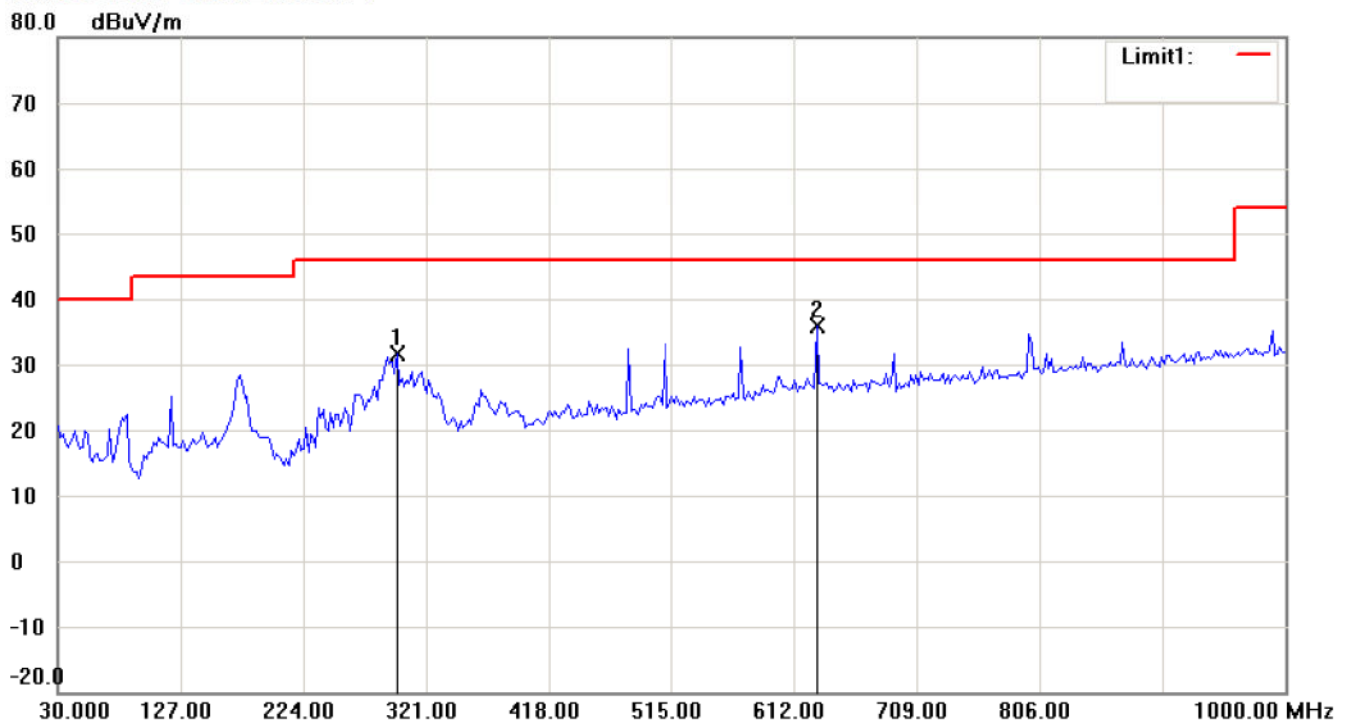
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

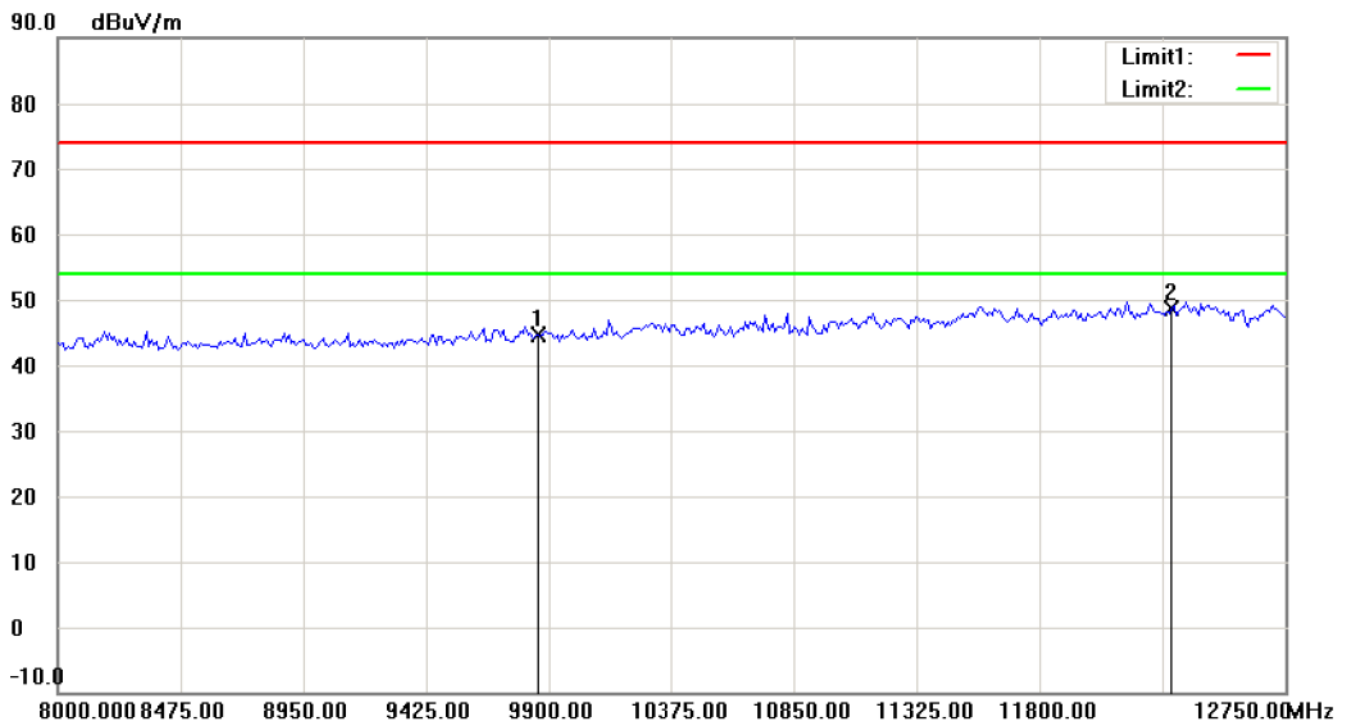
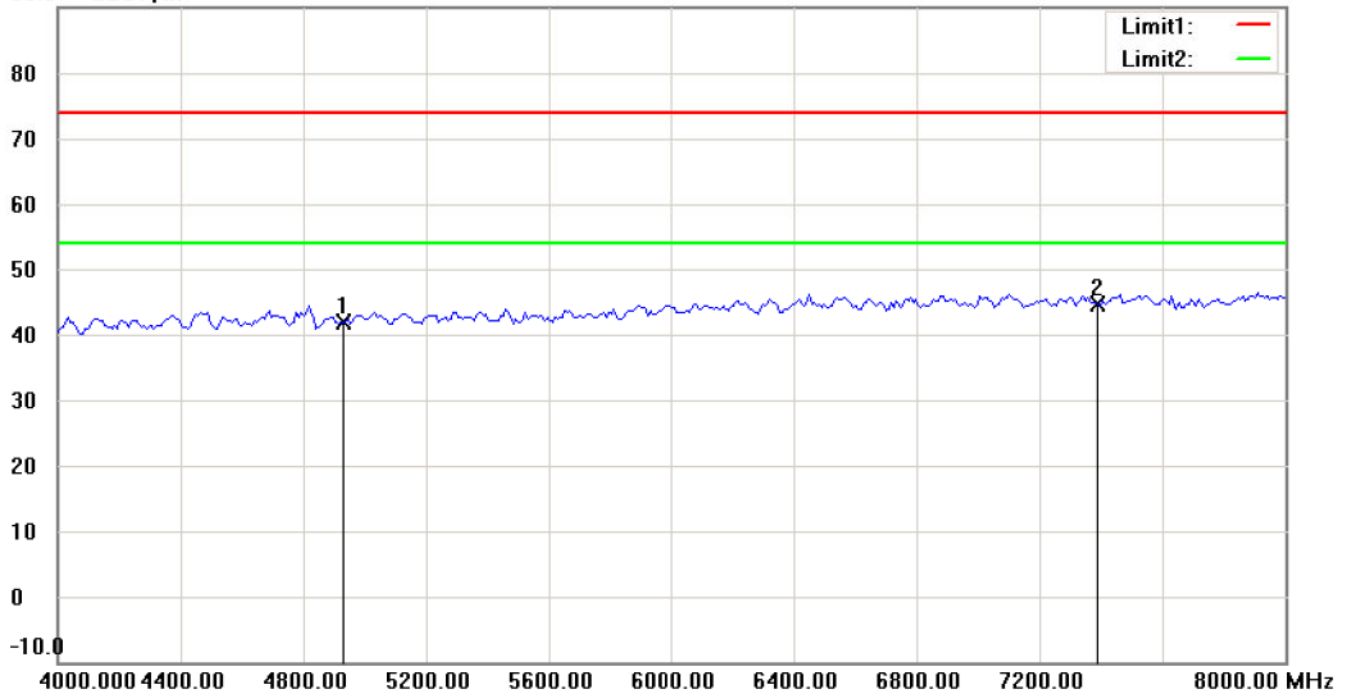
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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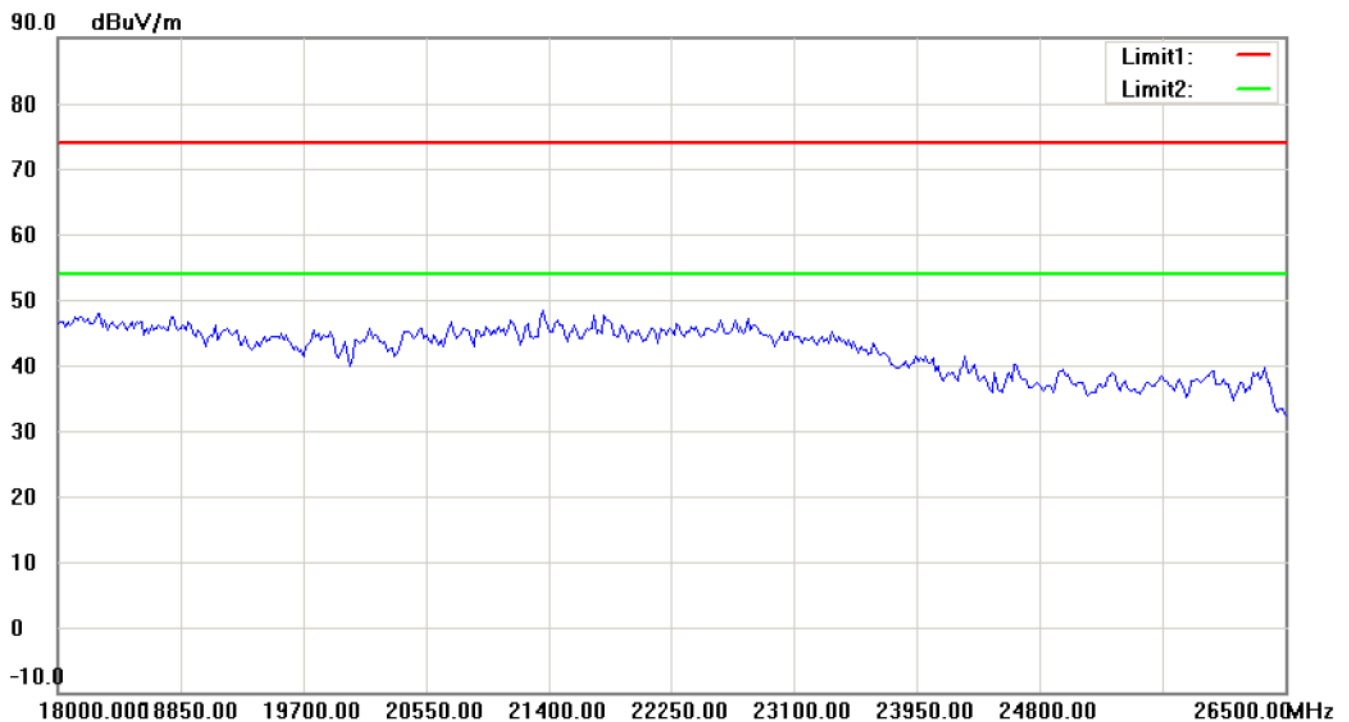
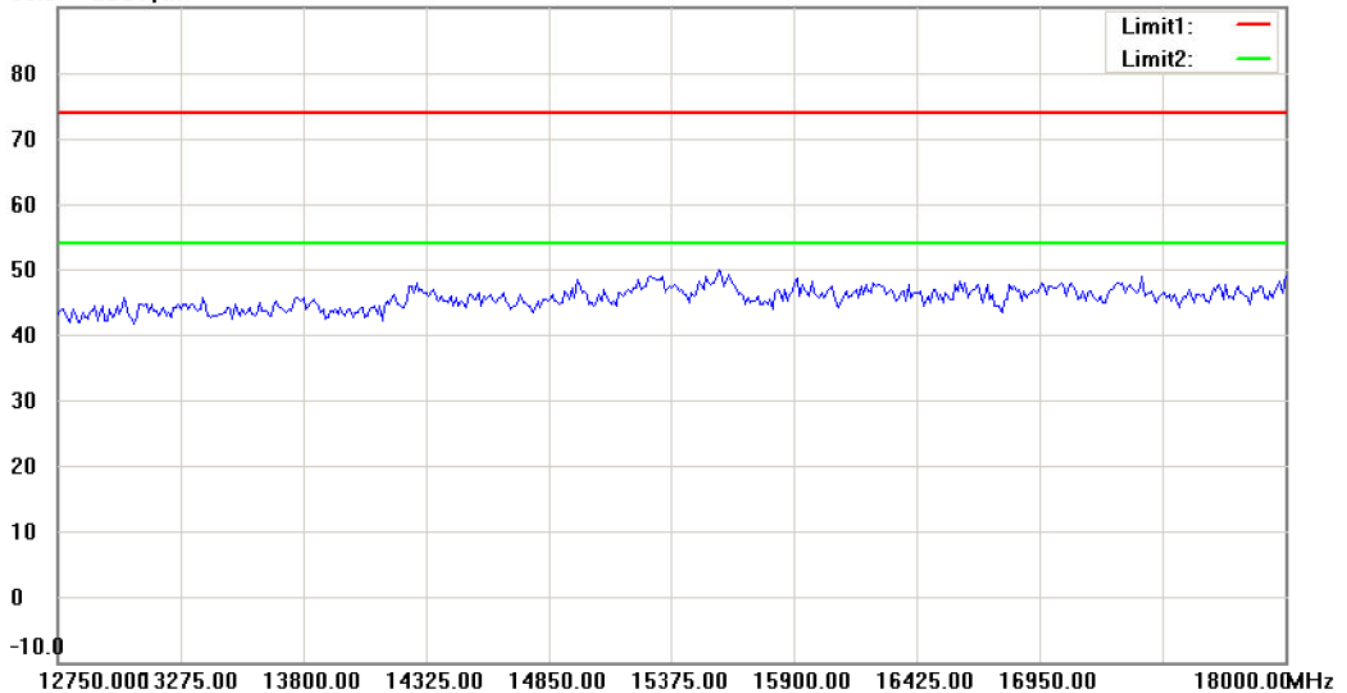


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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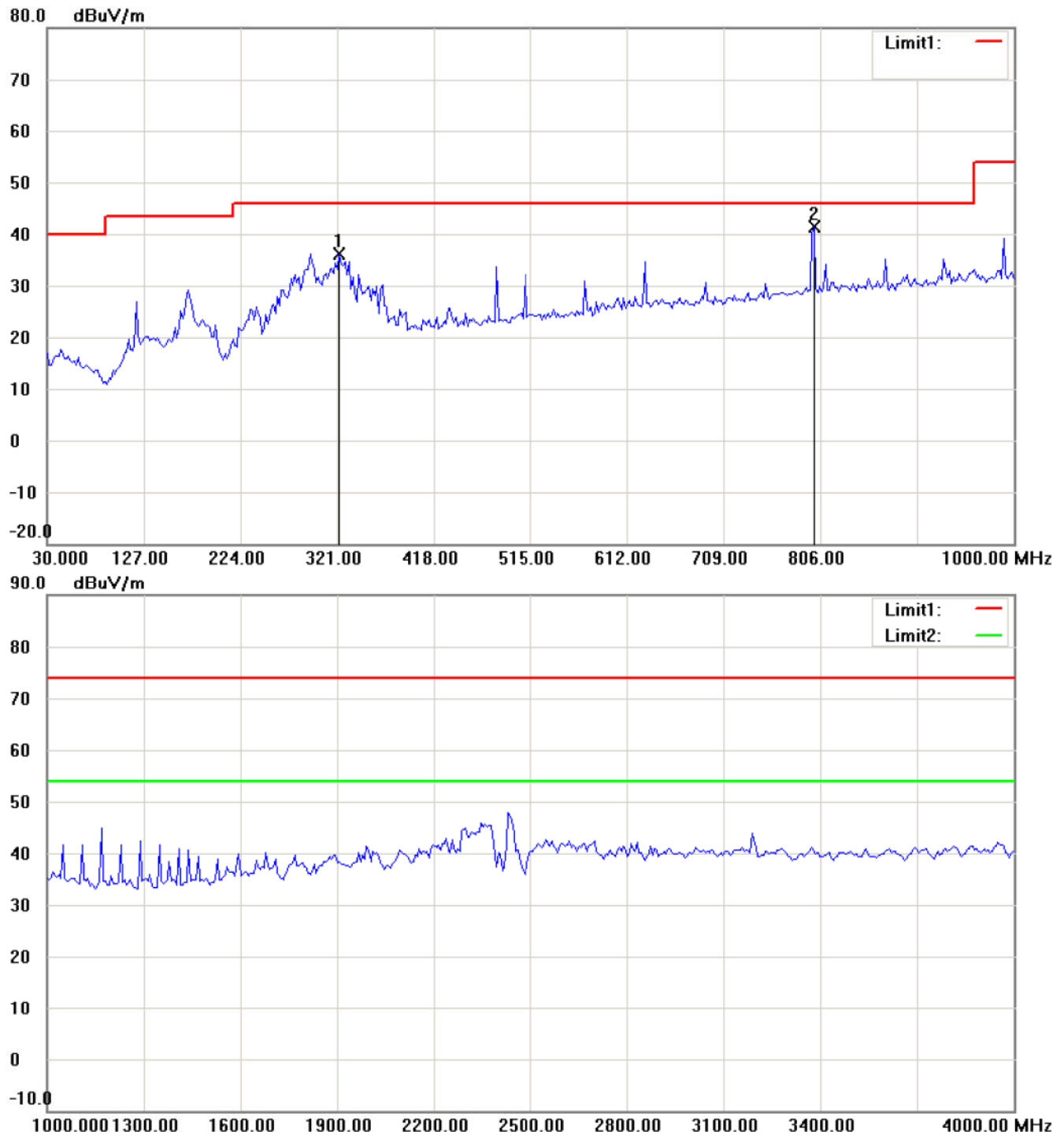


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11n 20MHz CH6

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

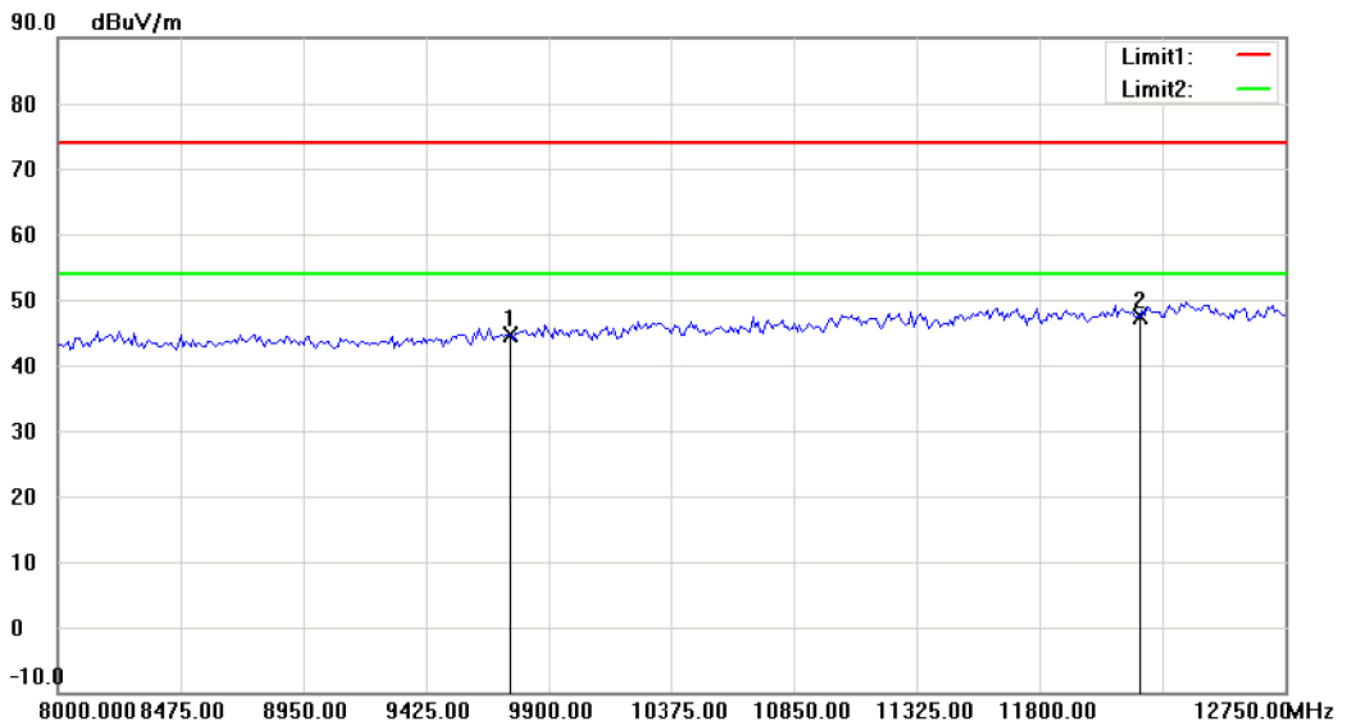
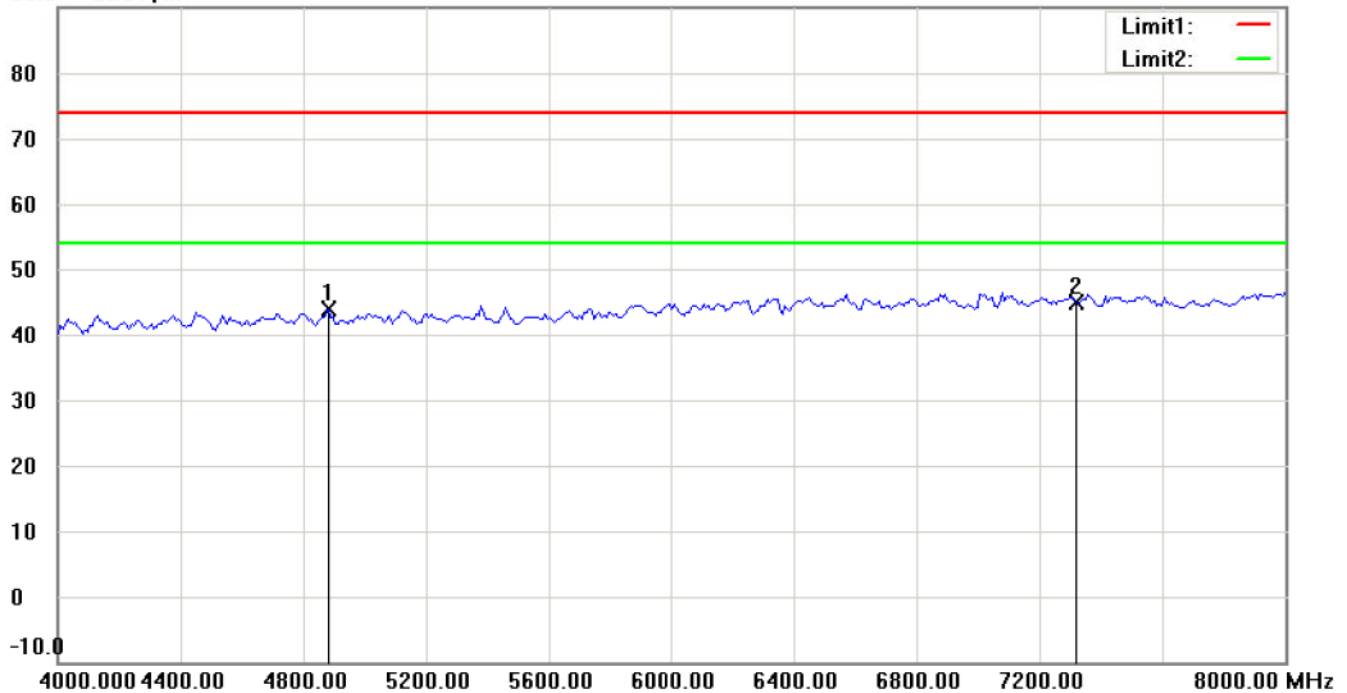
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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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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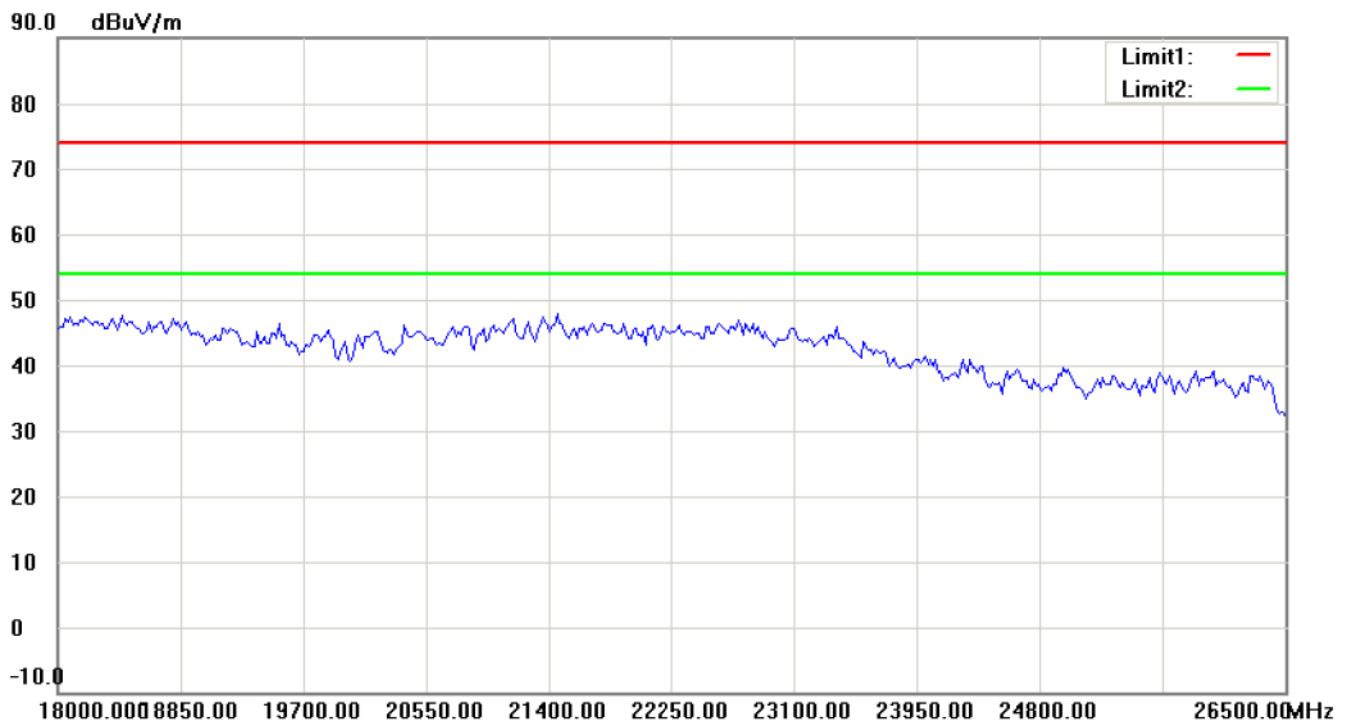
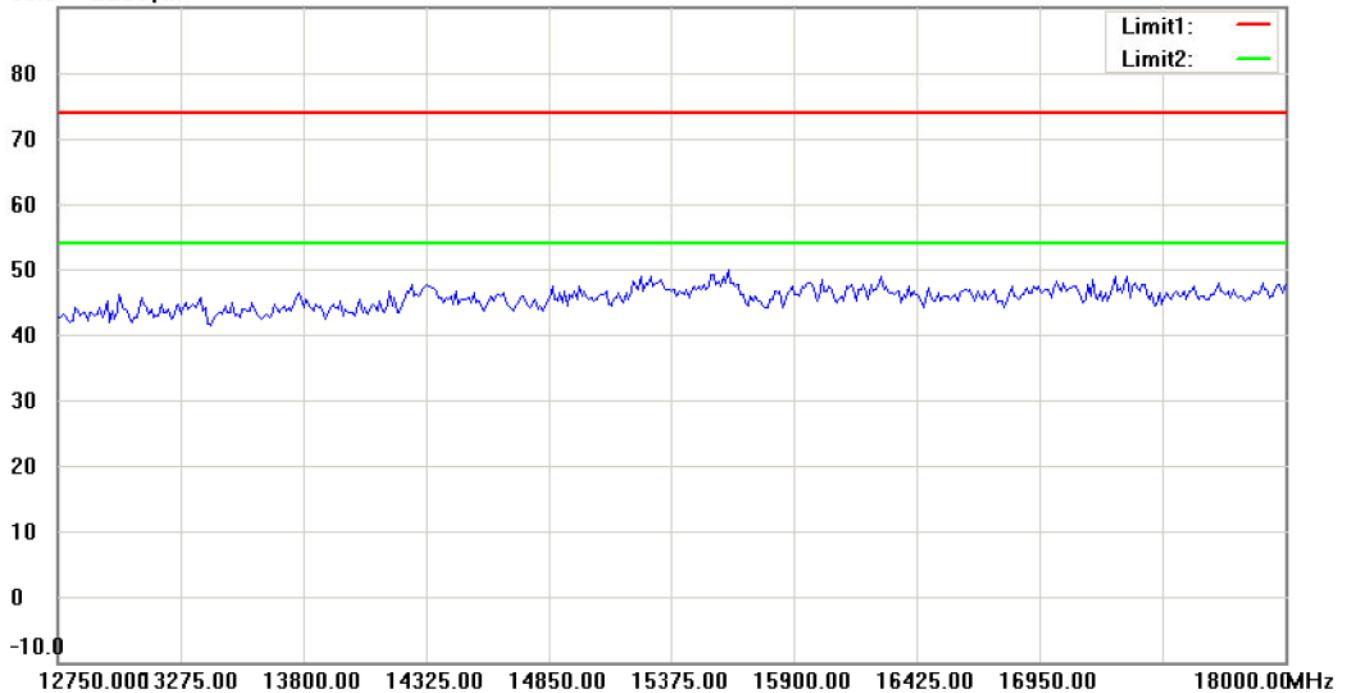


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

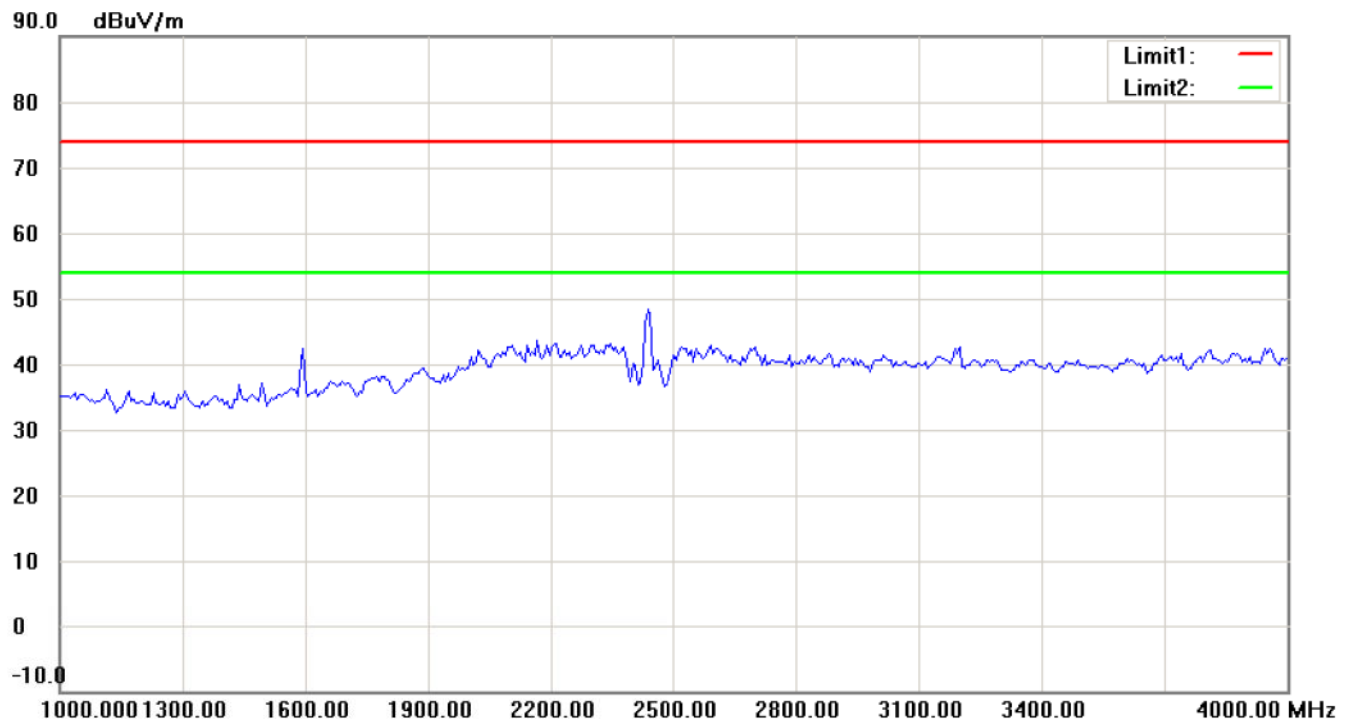
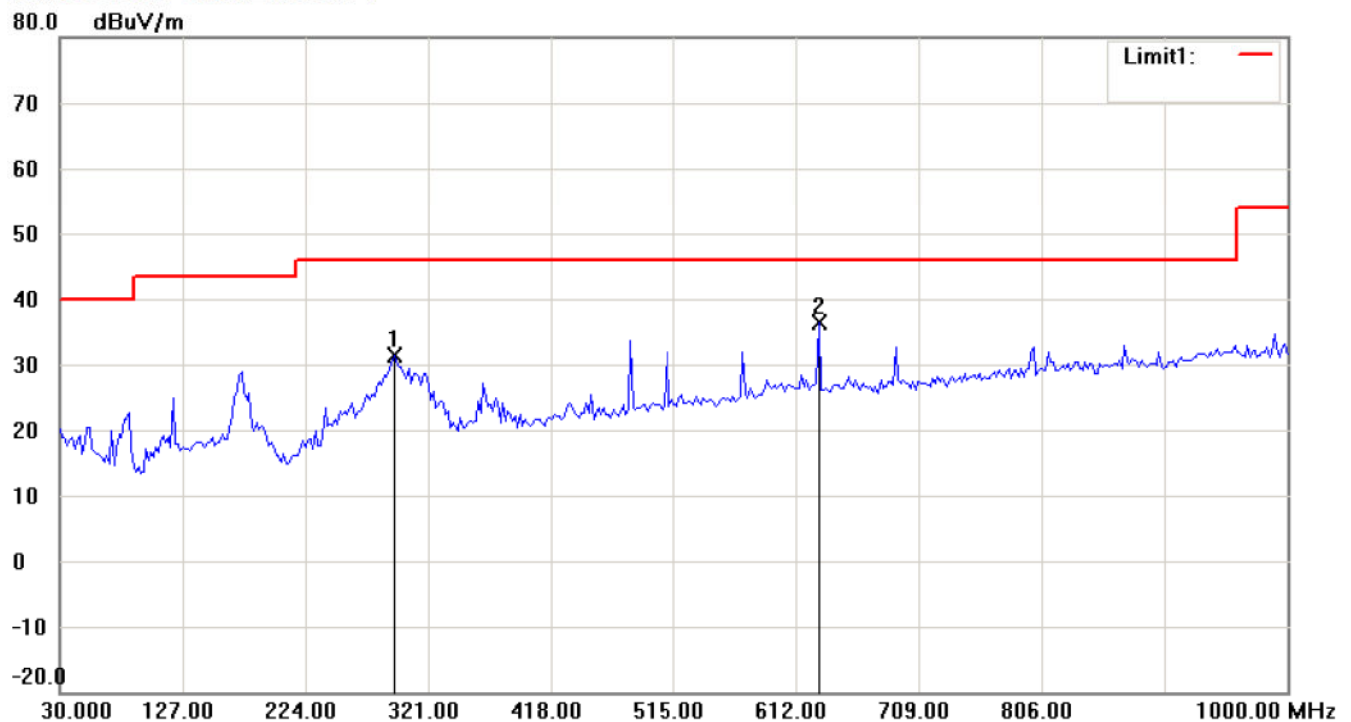
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

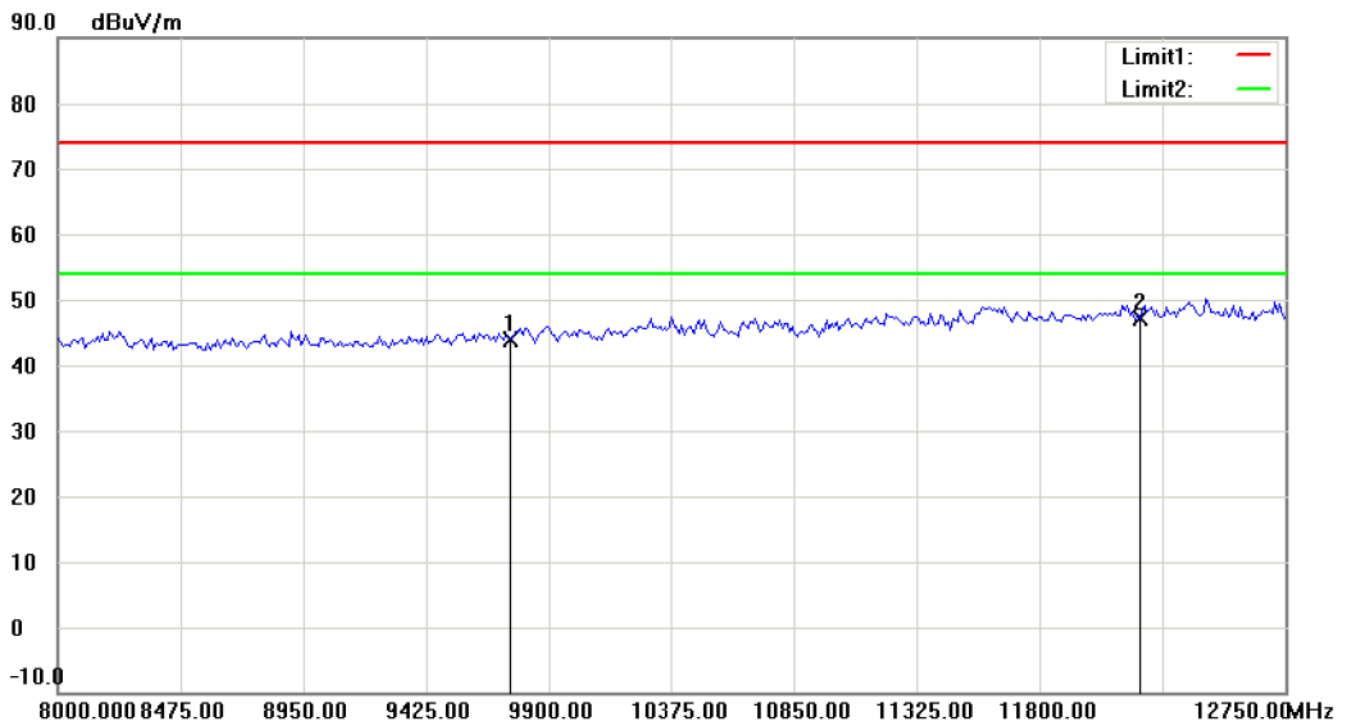
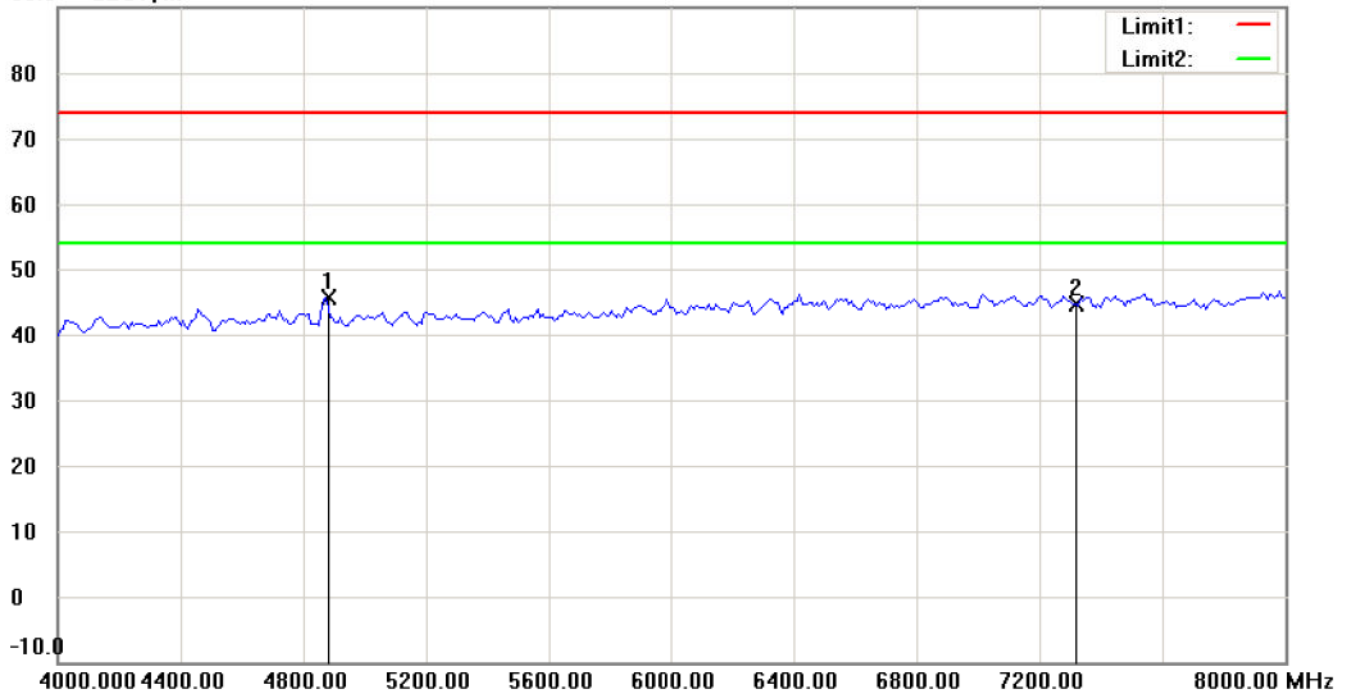
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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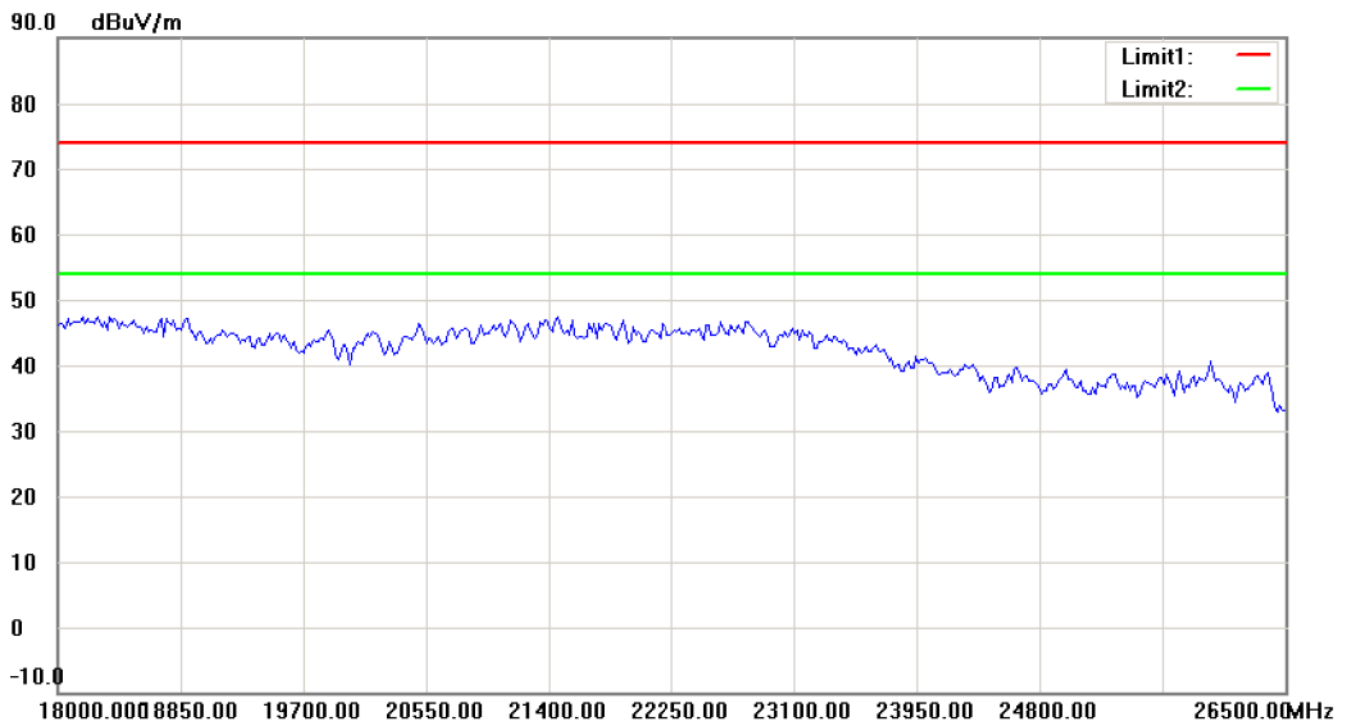
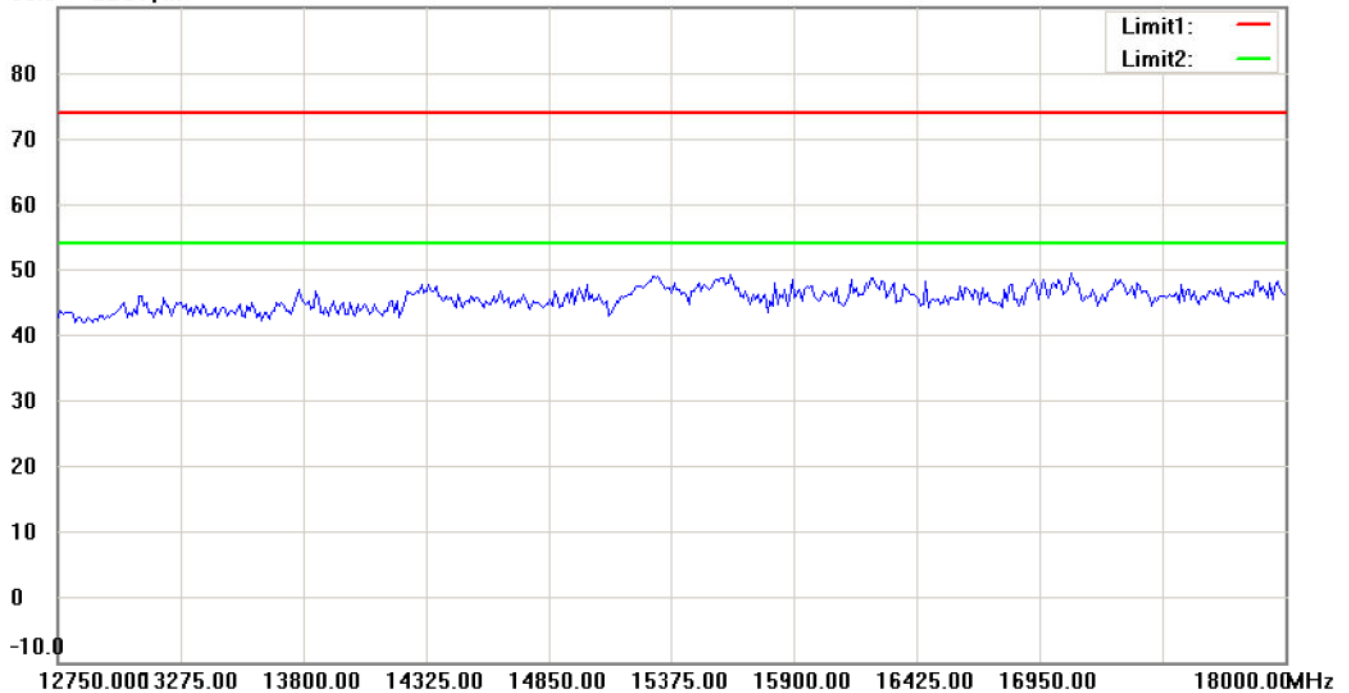


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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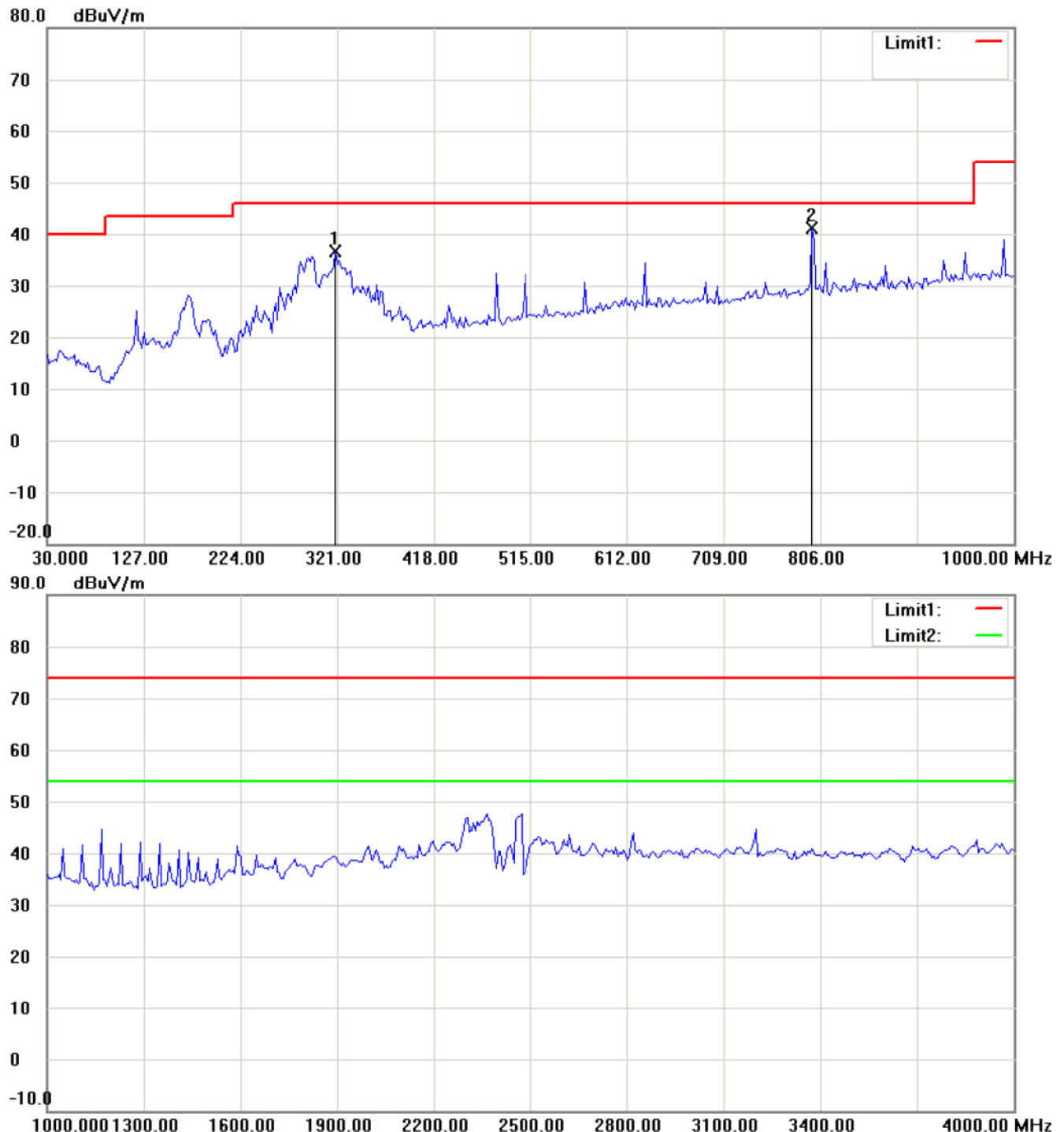


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

TX 802.11n 20MHz CH11

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

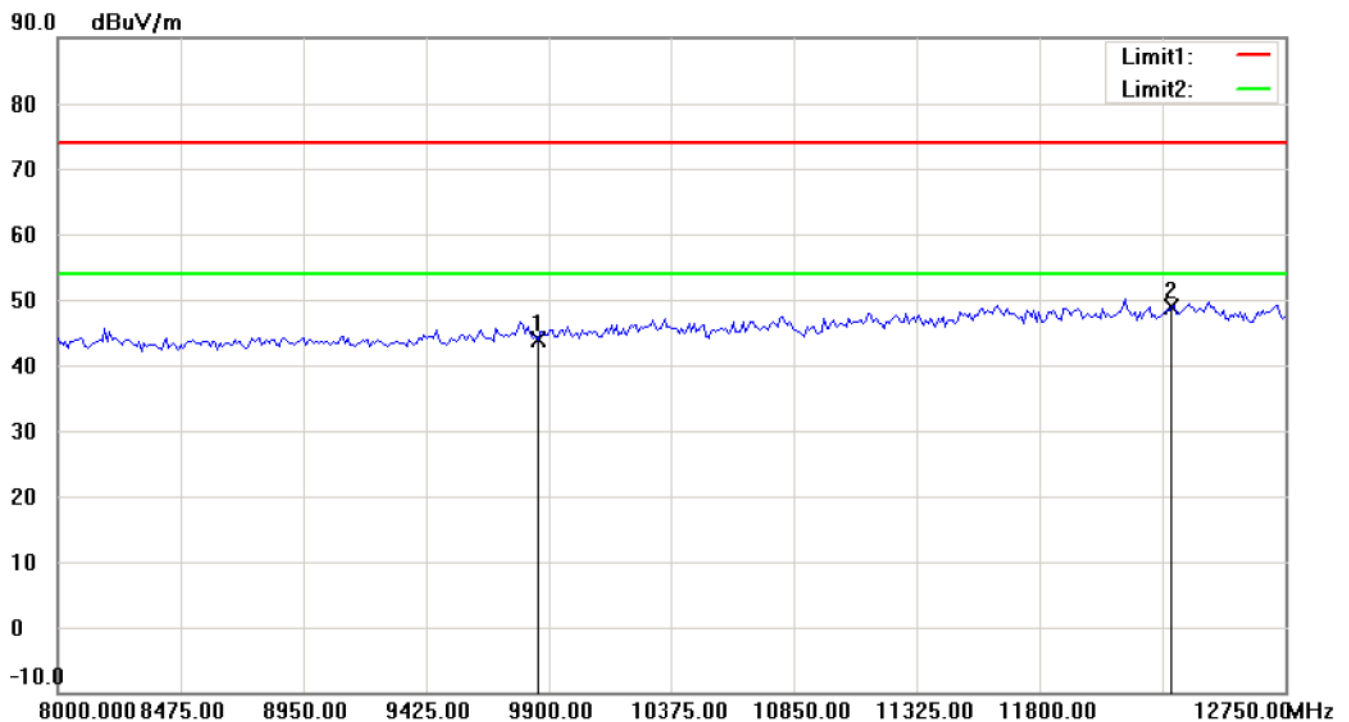
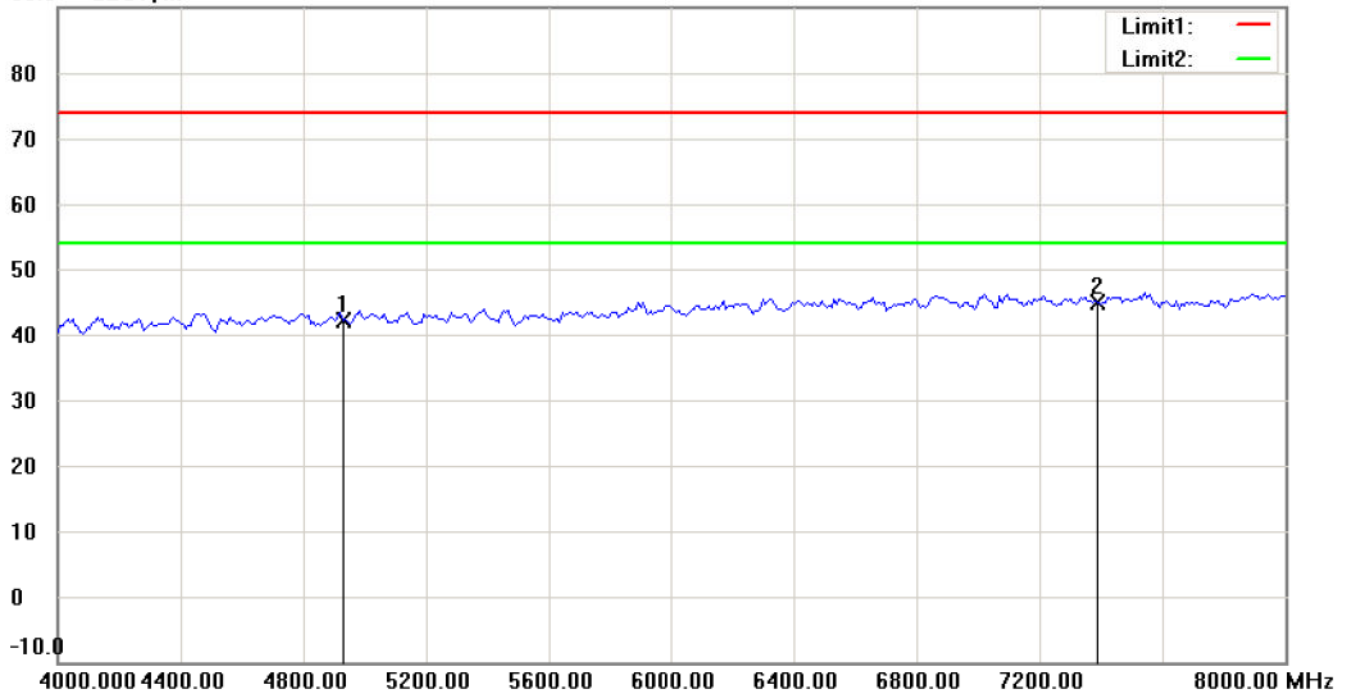
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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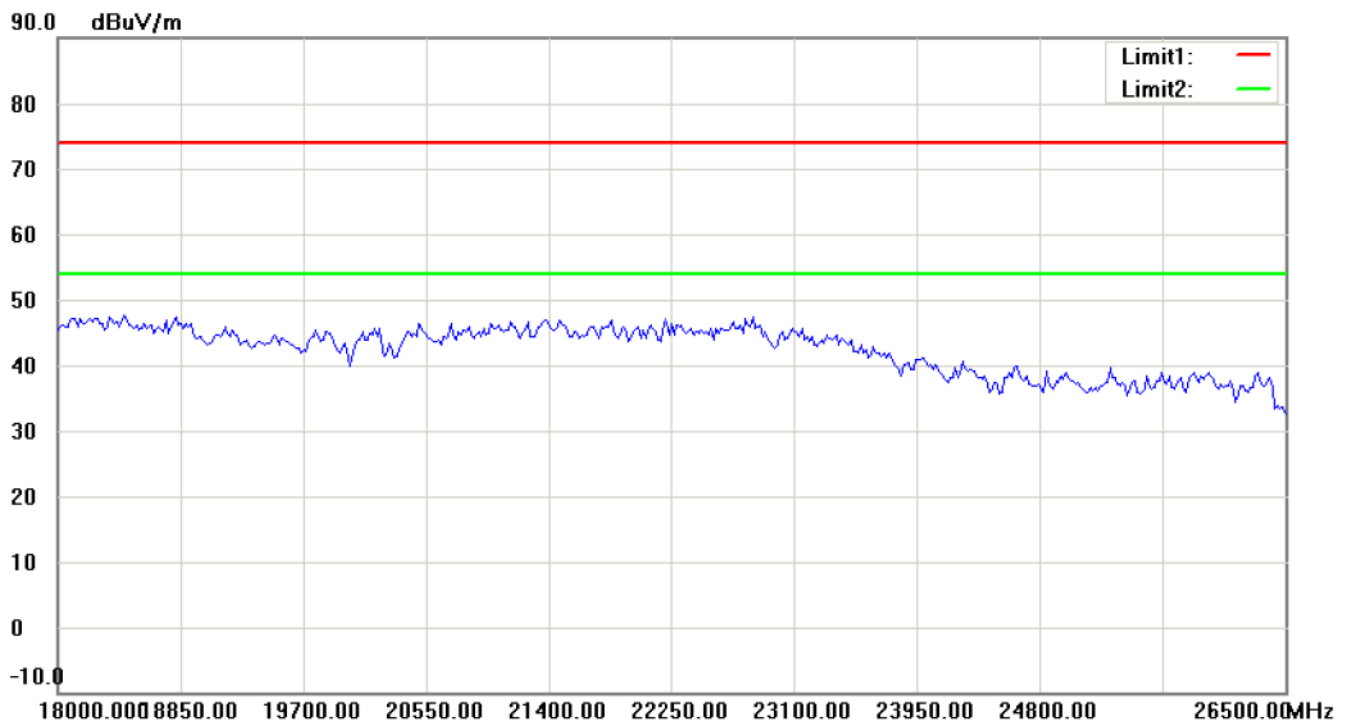
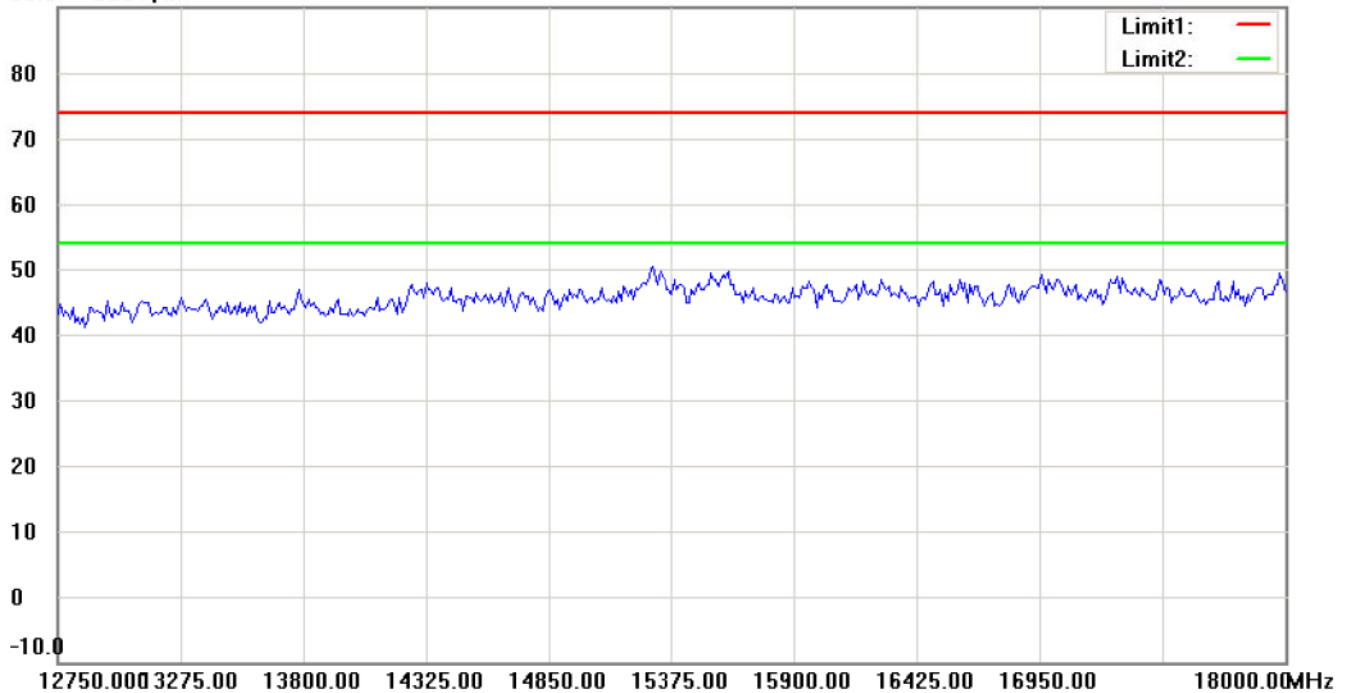


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

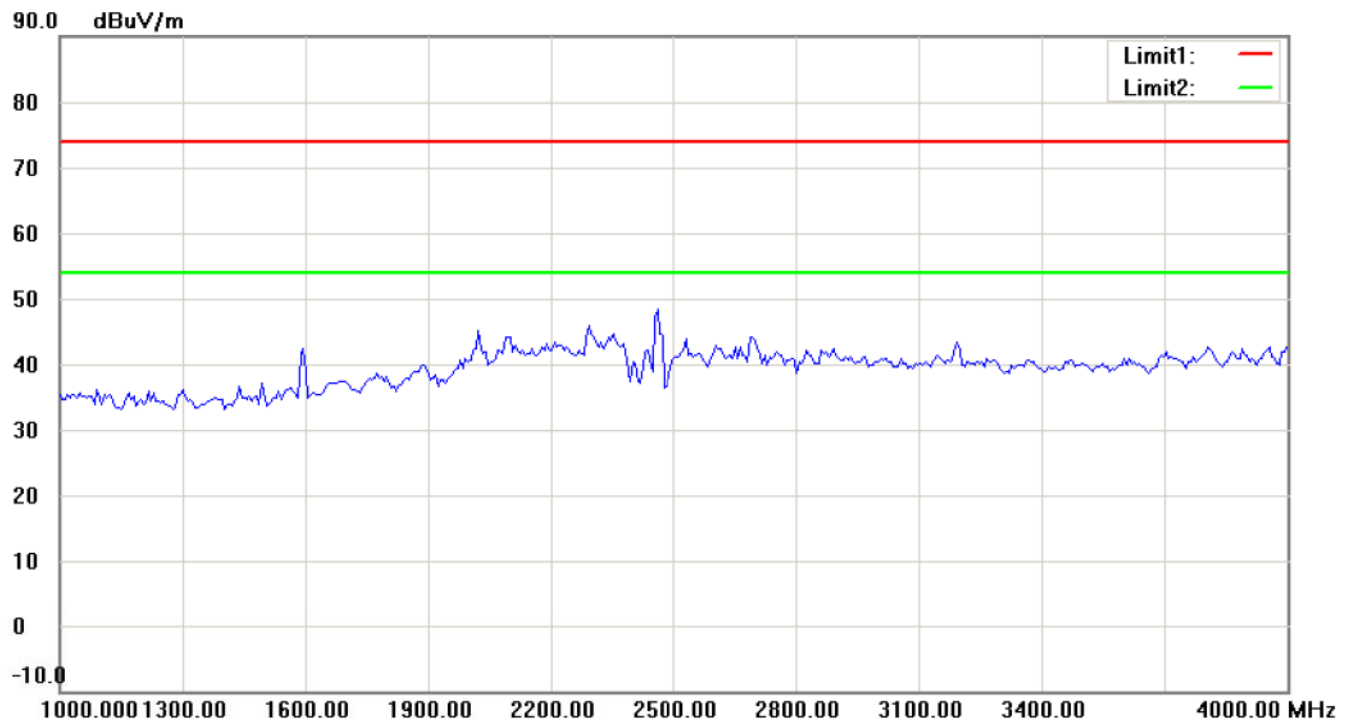
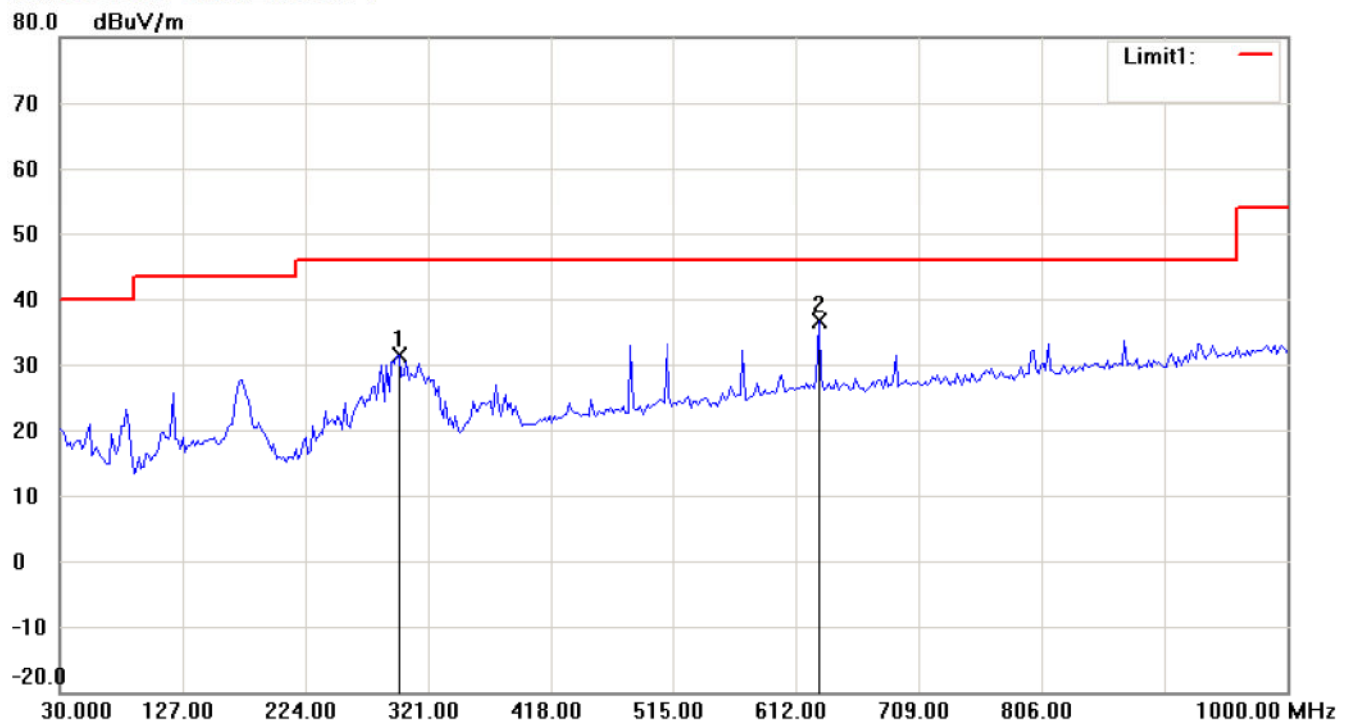
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Antenna Polarization V



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

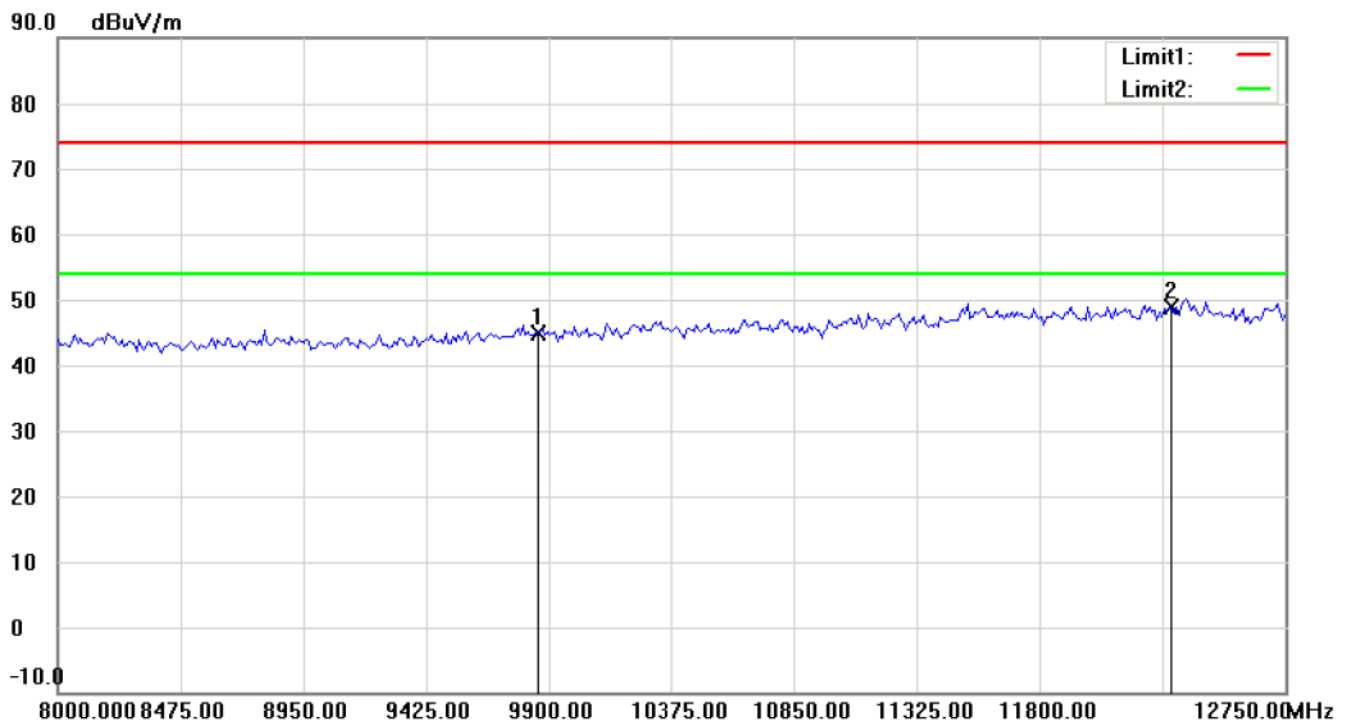
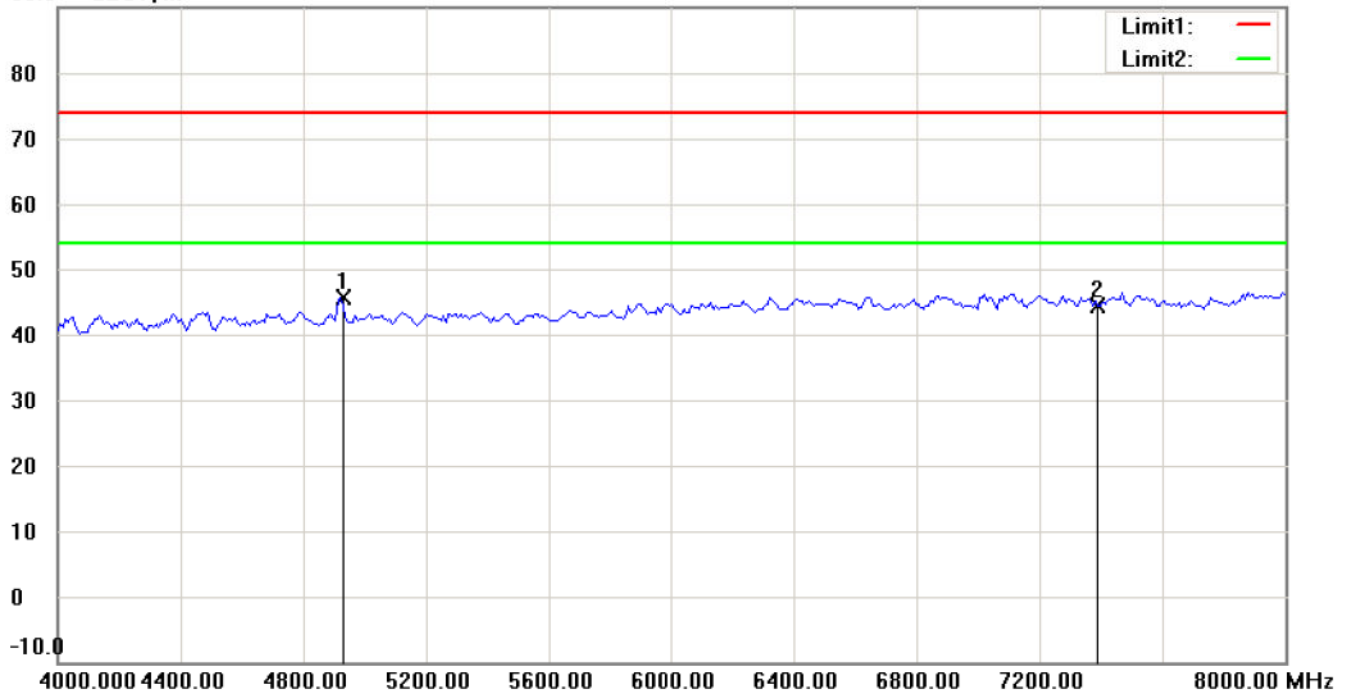
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

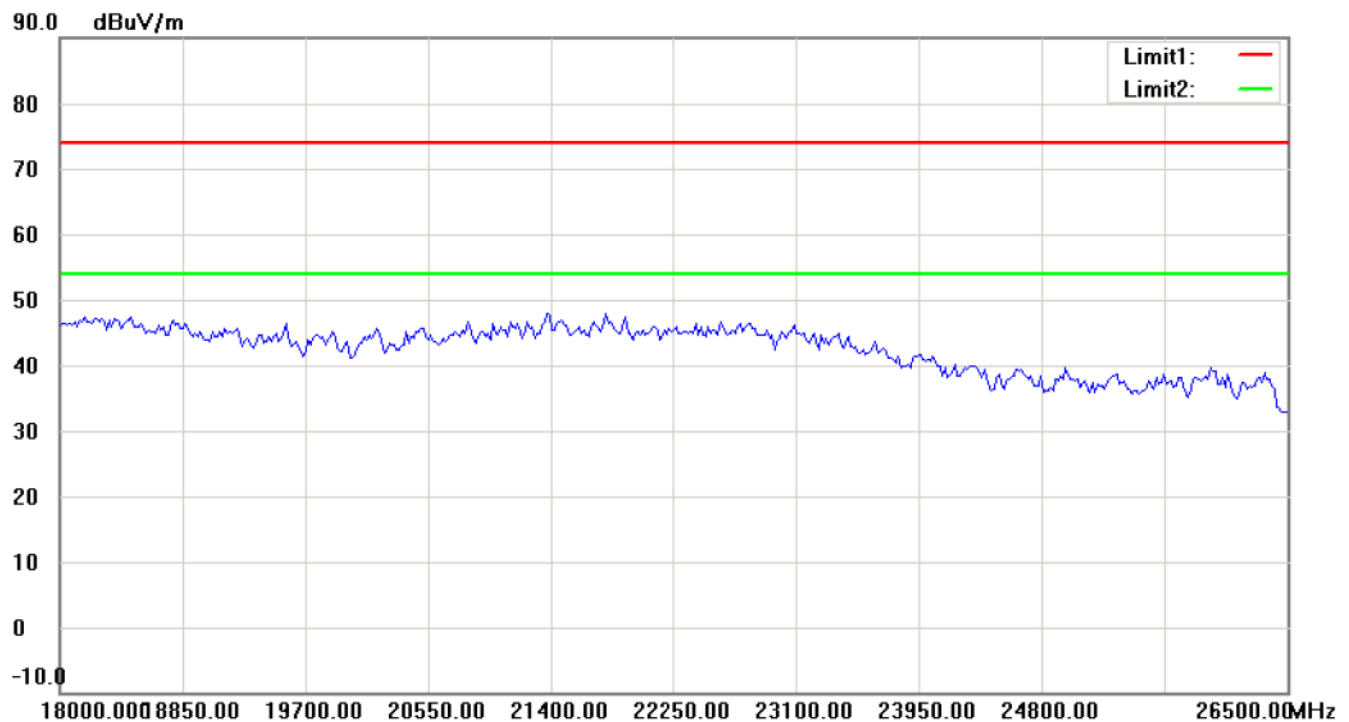
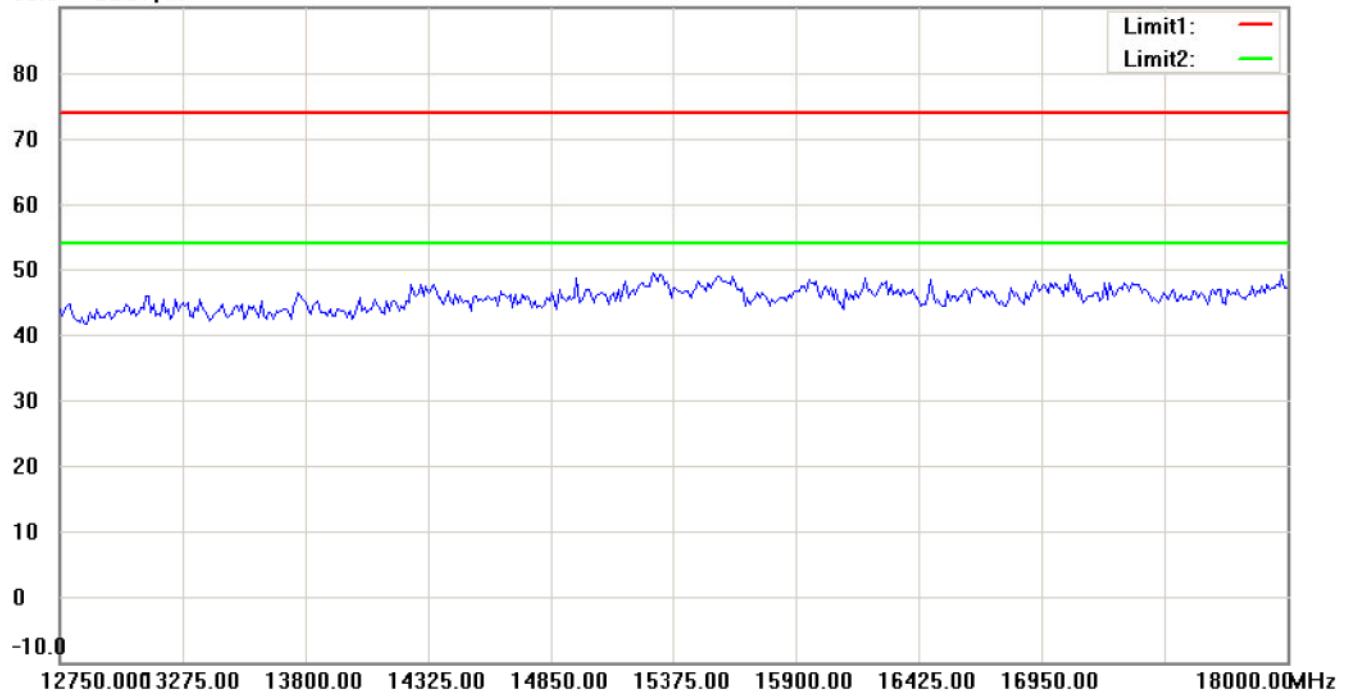
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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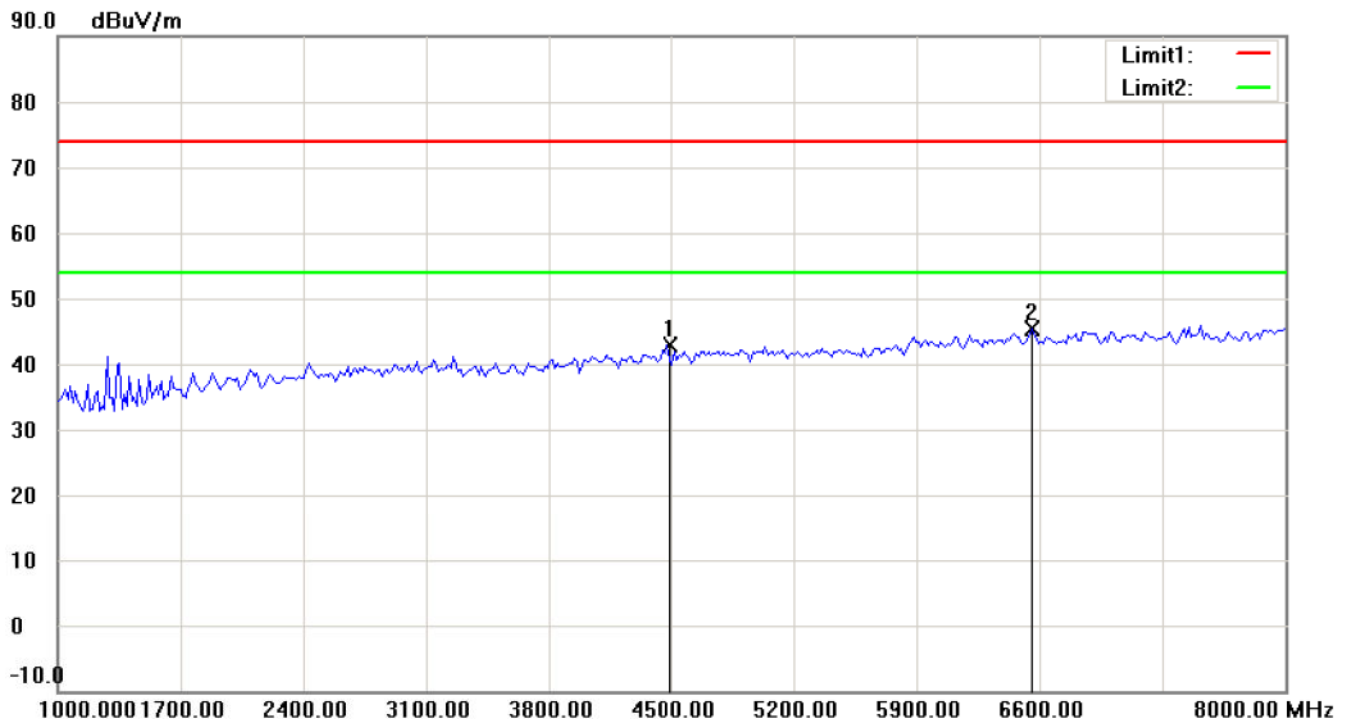
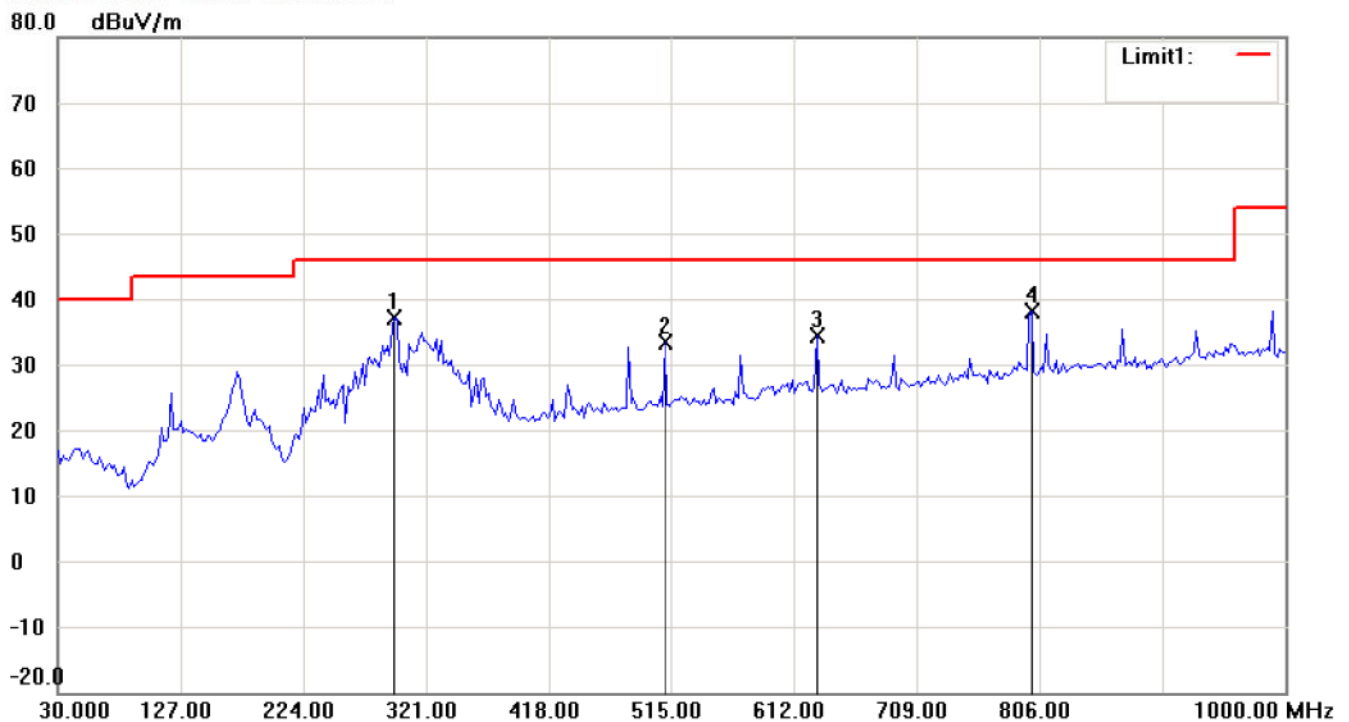
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

Spurious Emissions radiated Receiver

RX 802.11b CH1

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

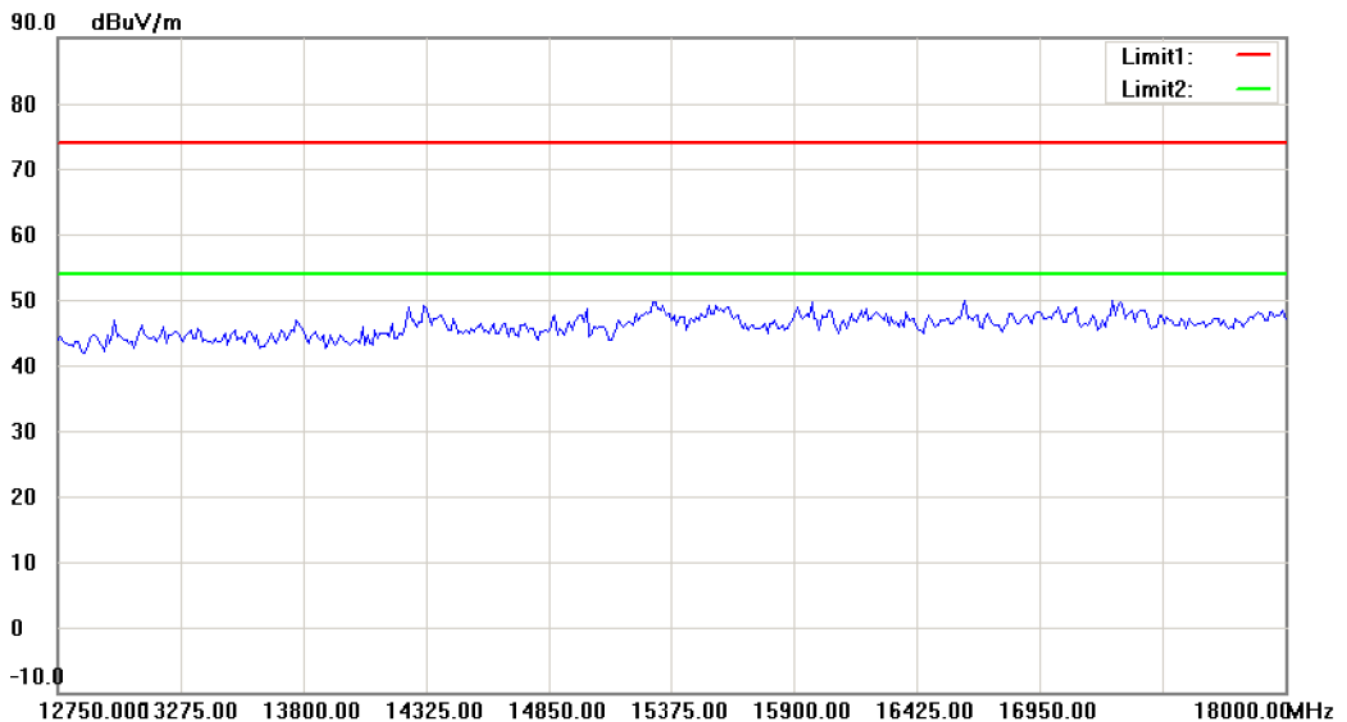
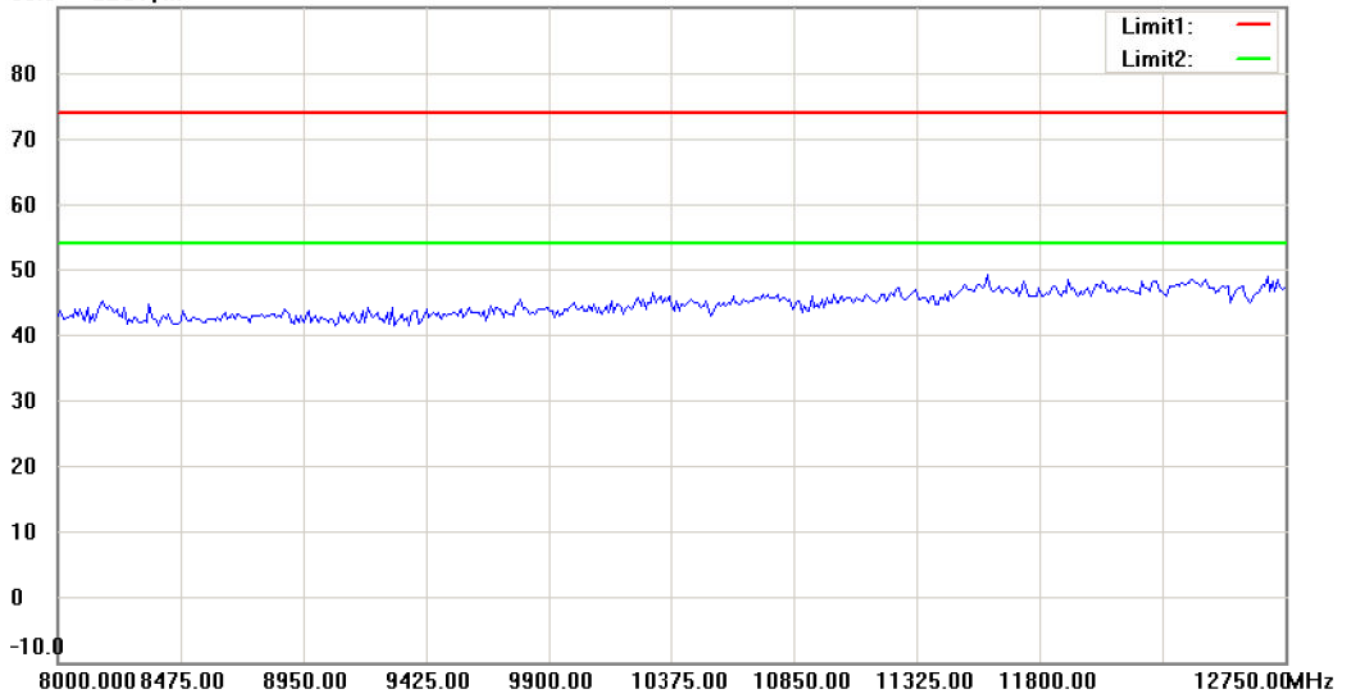
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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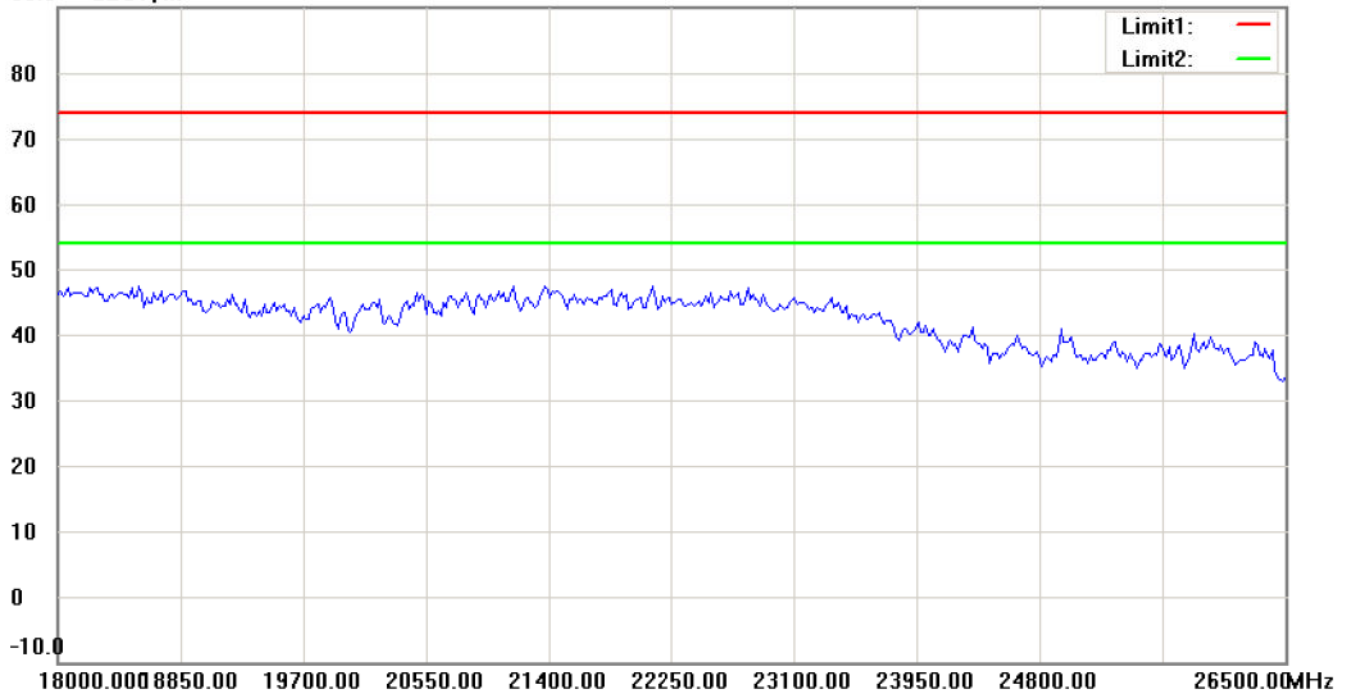


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

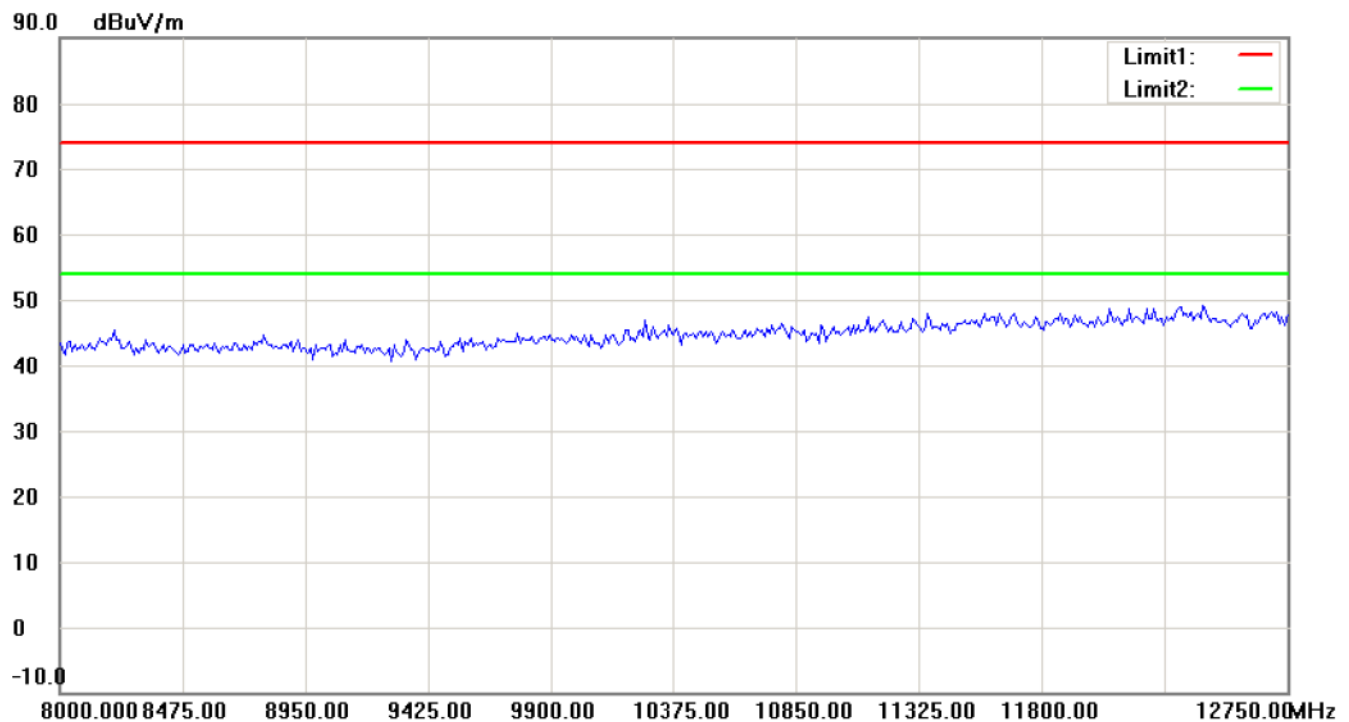
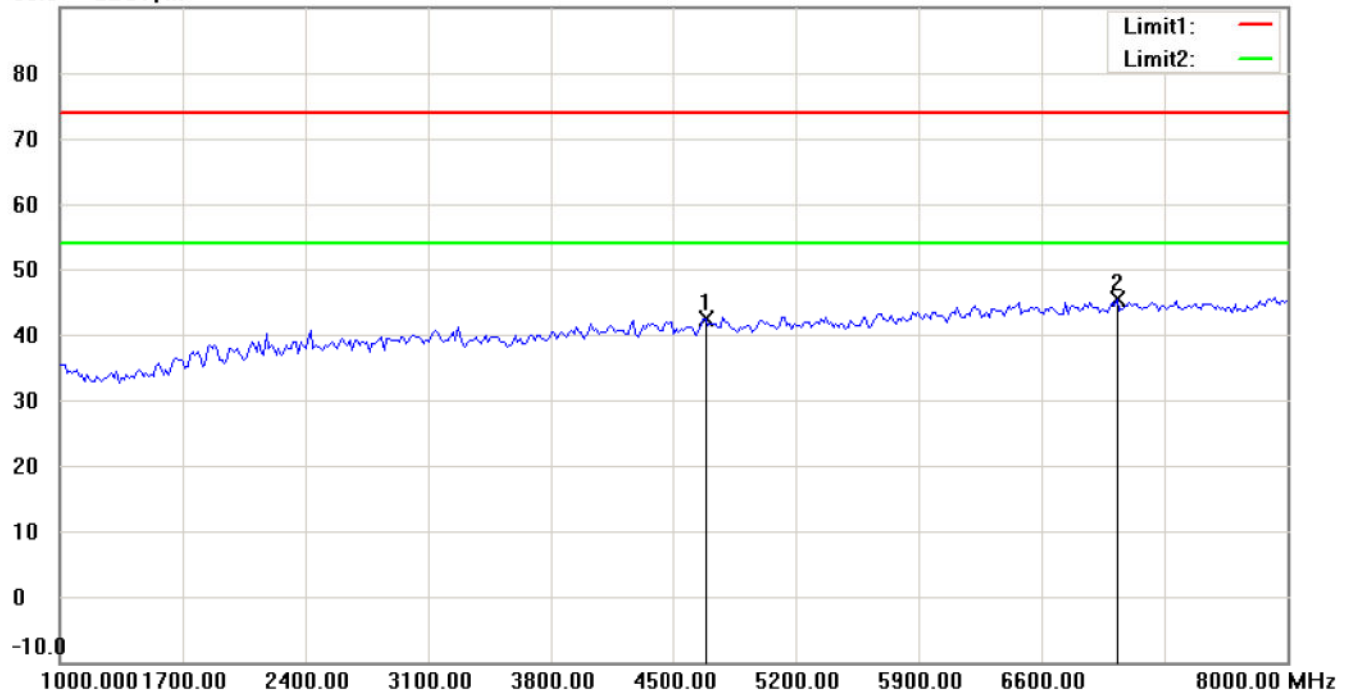
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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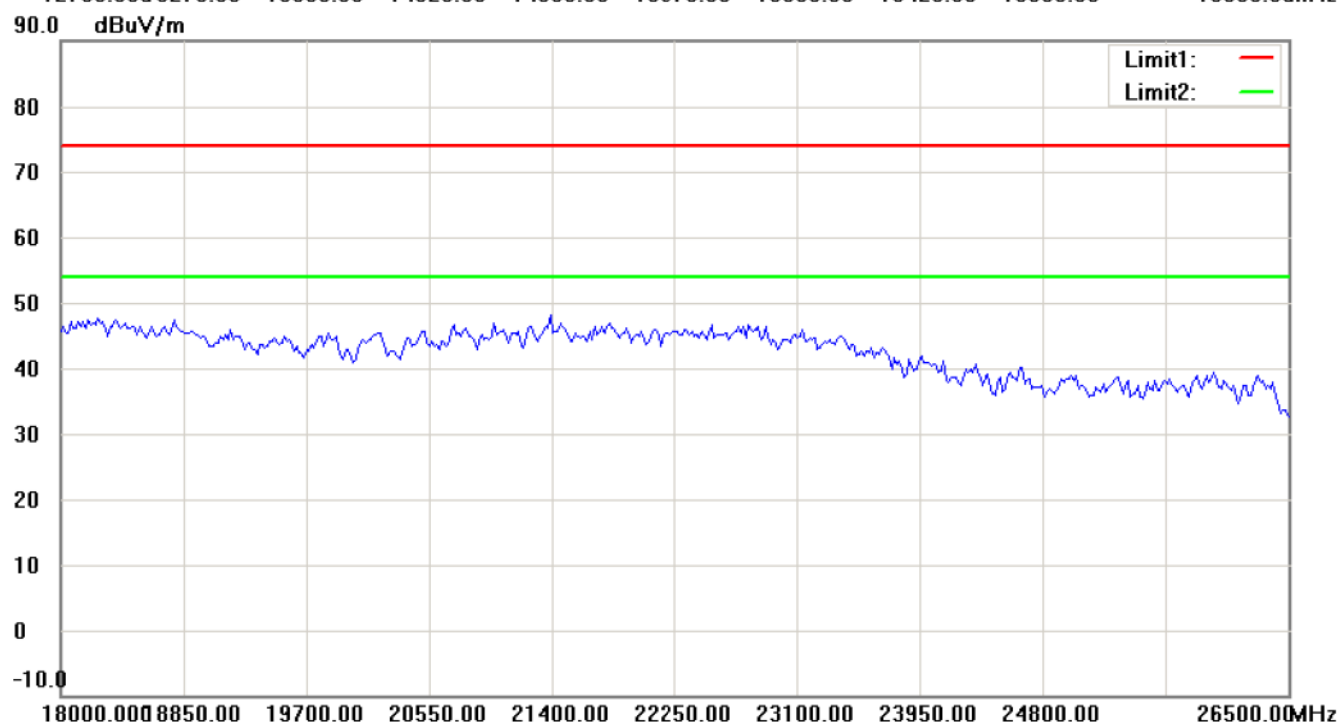
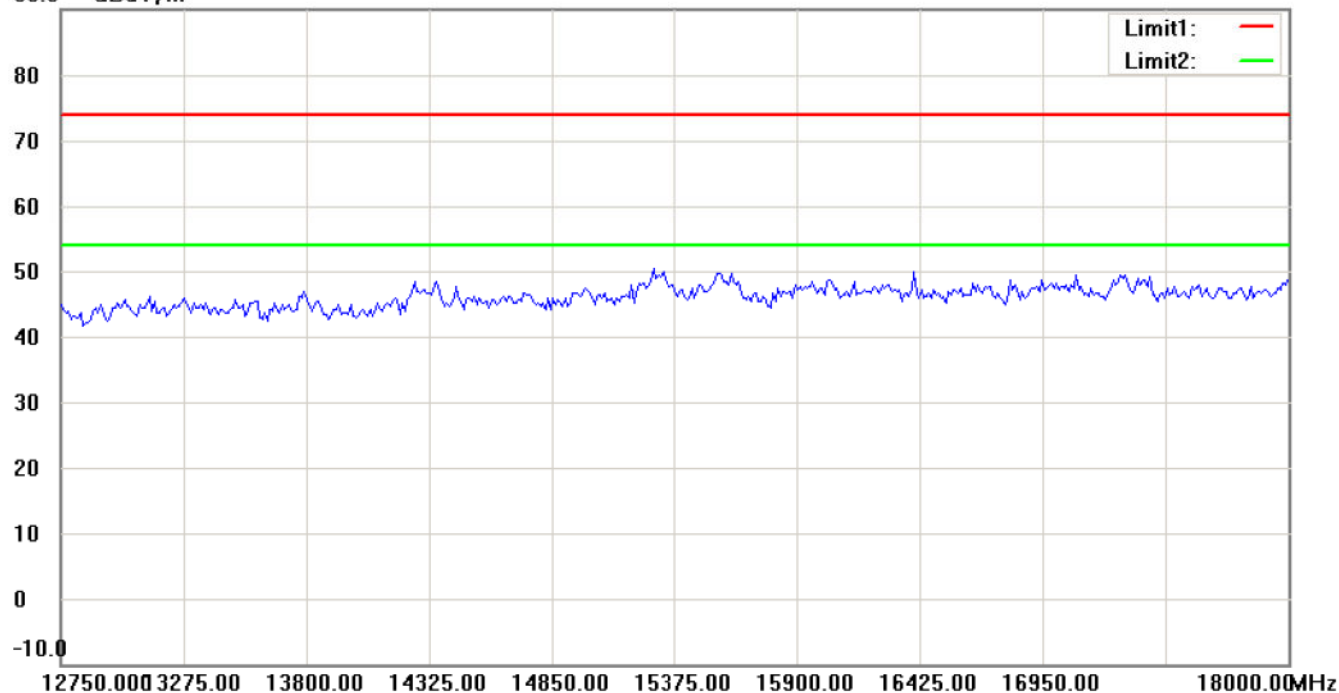


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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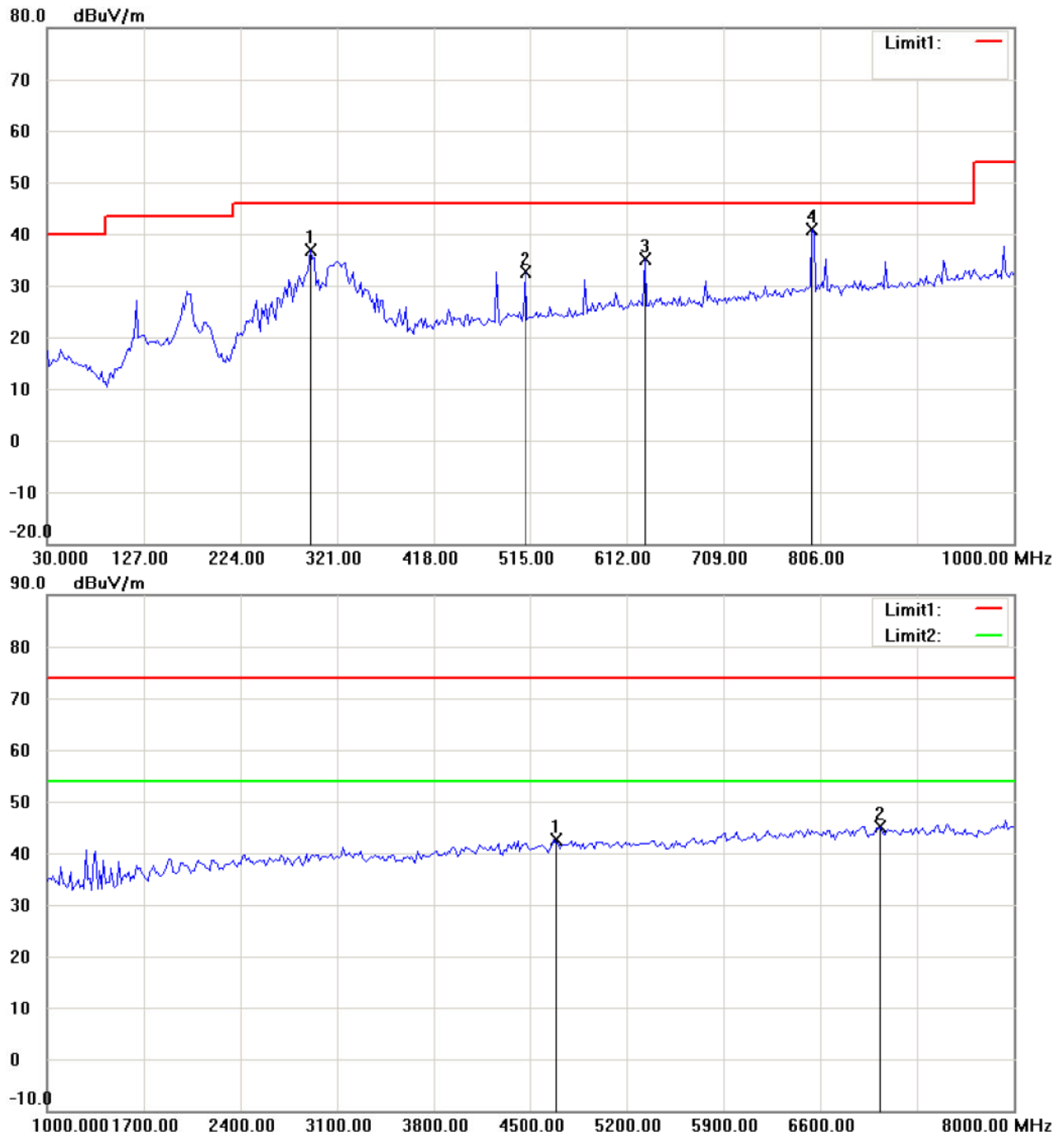


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11b CH6

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.
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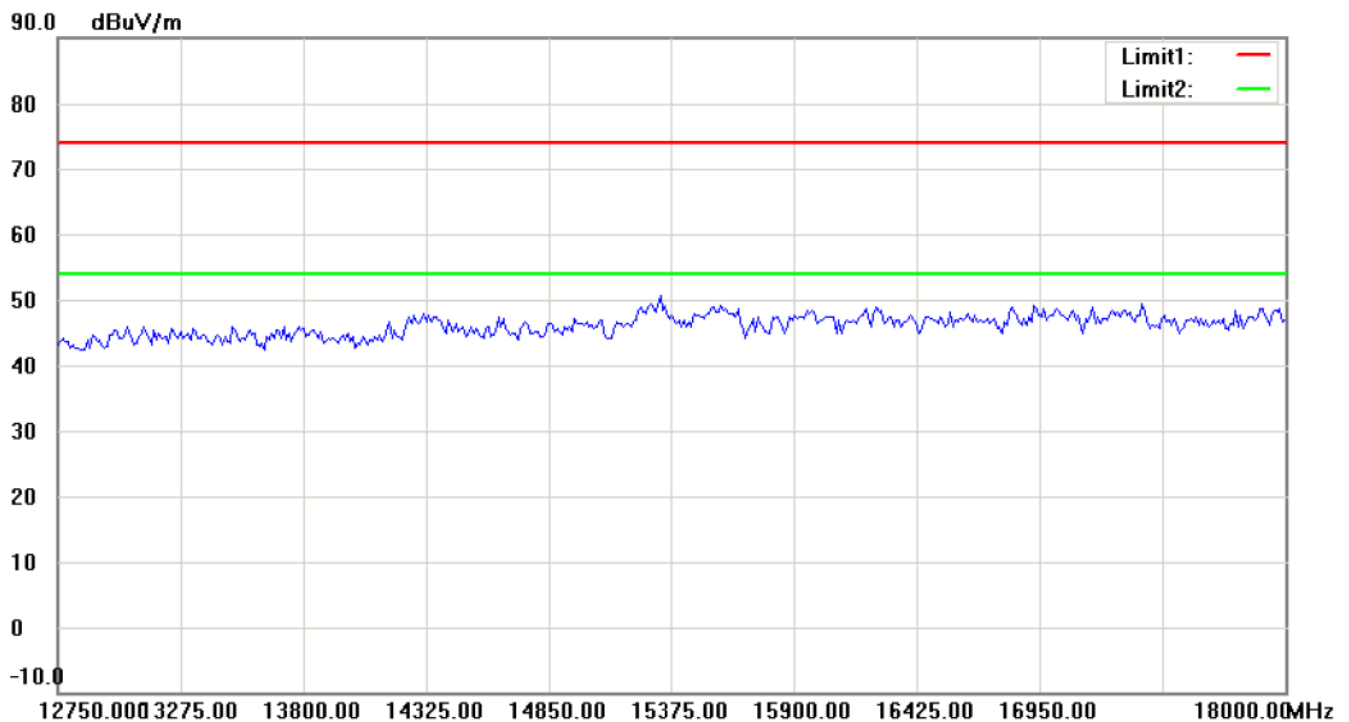
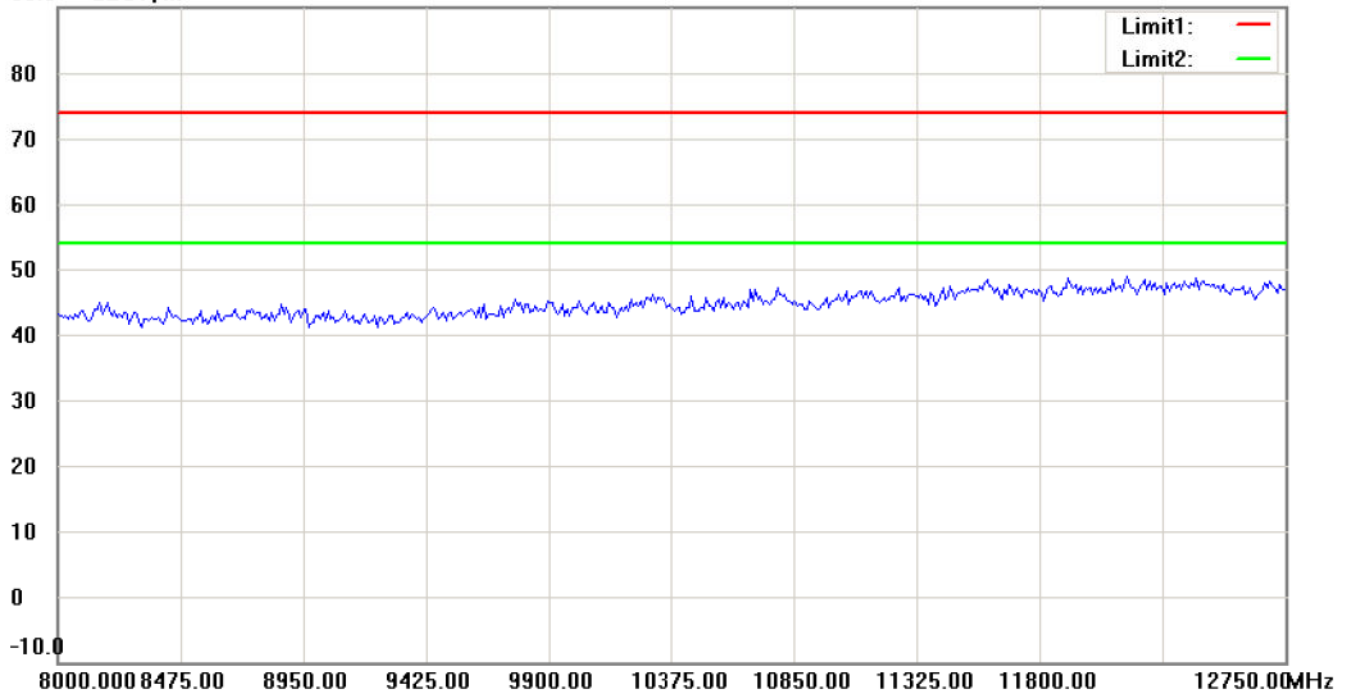


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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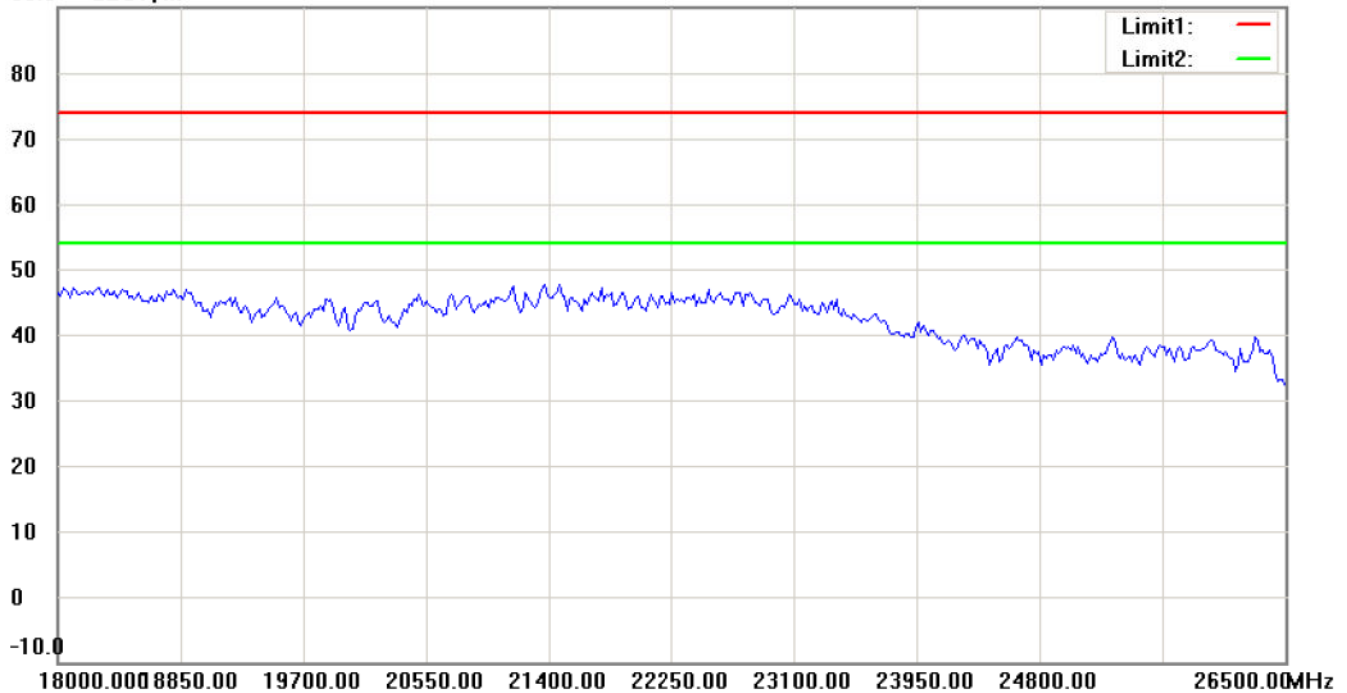


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

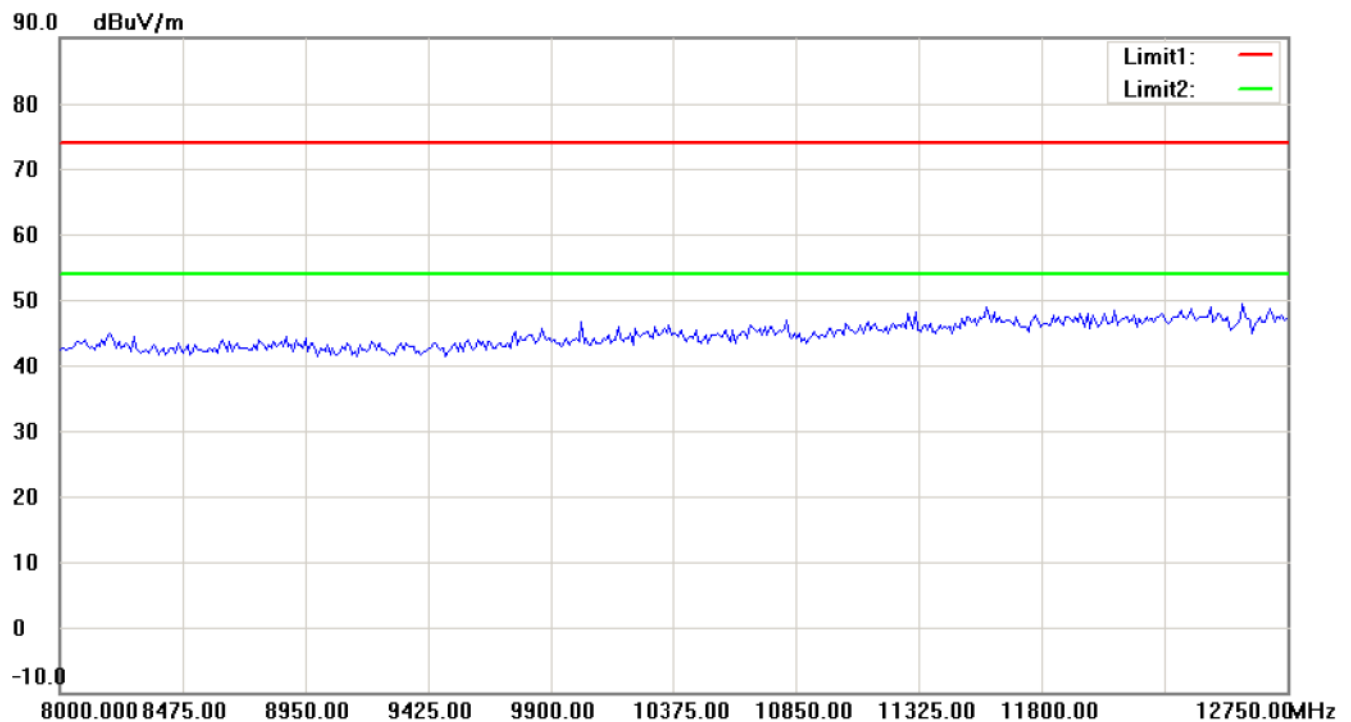
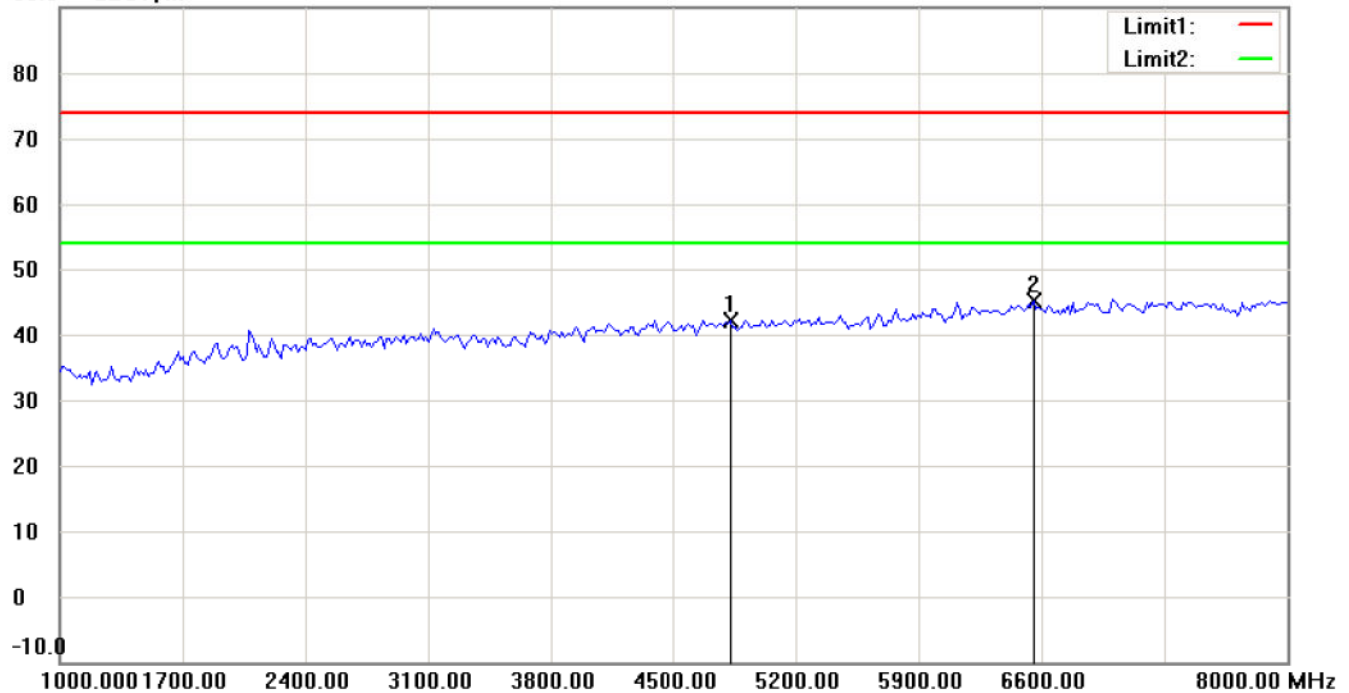
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

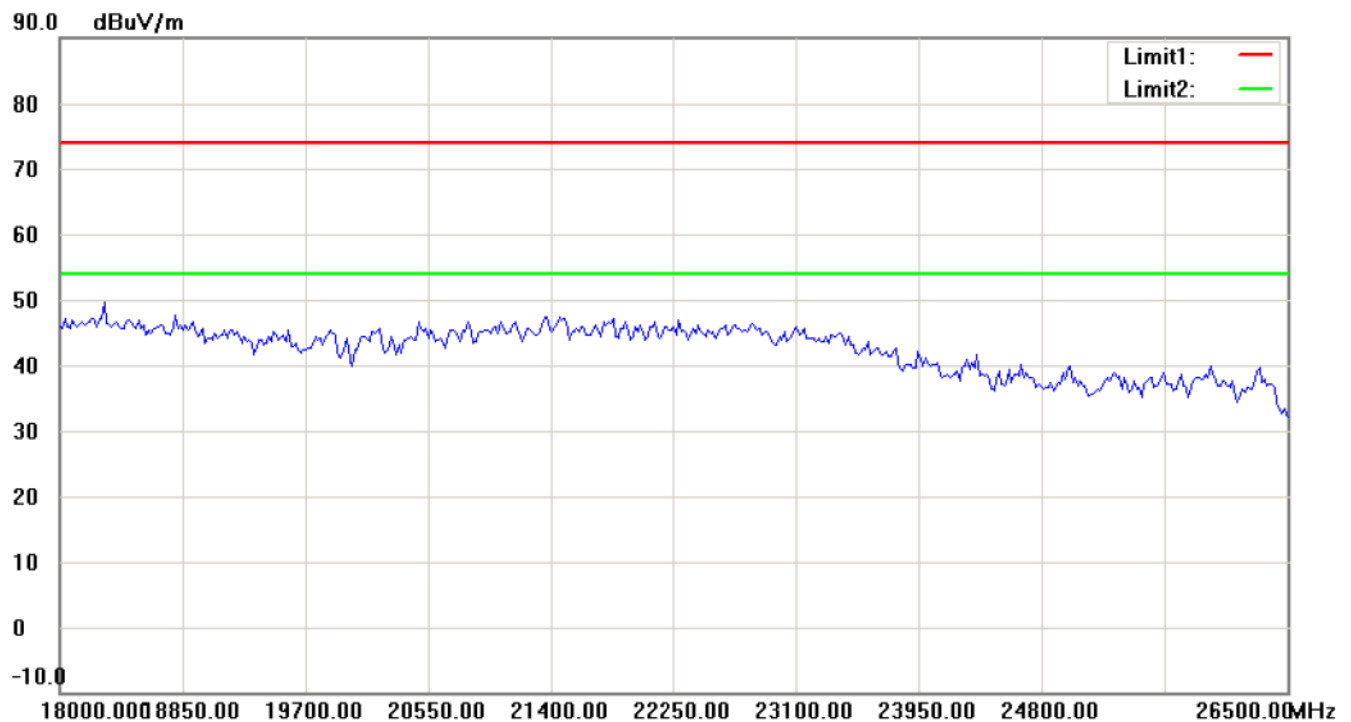
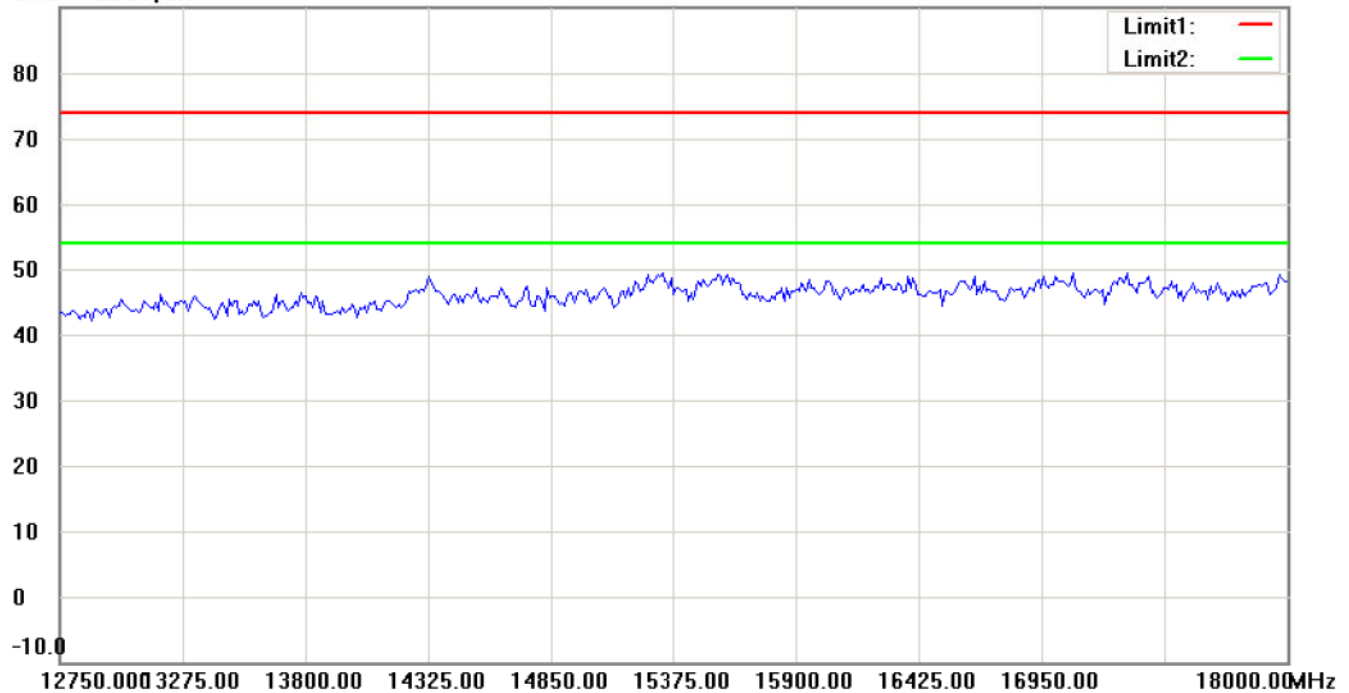
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

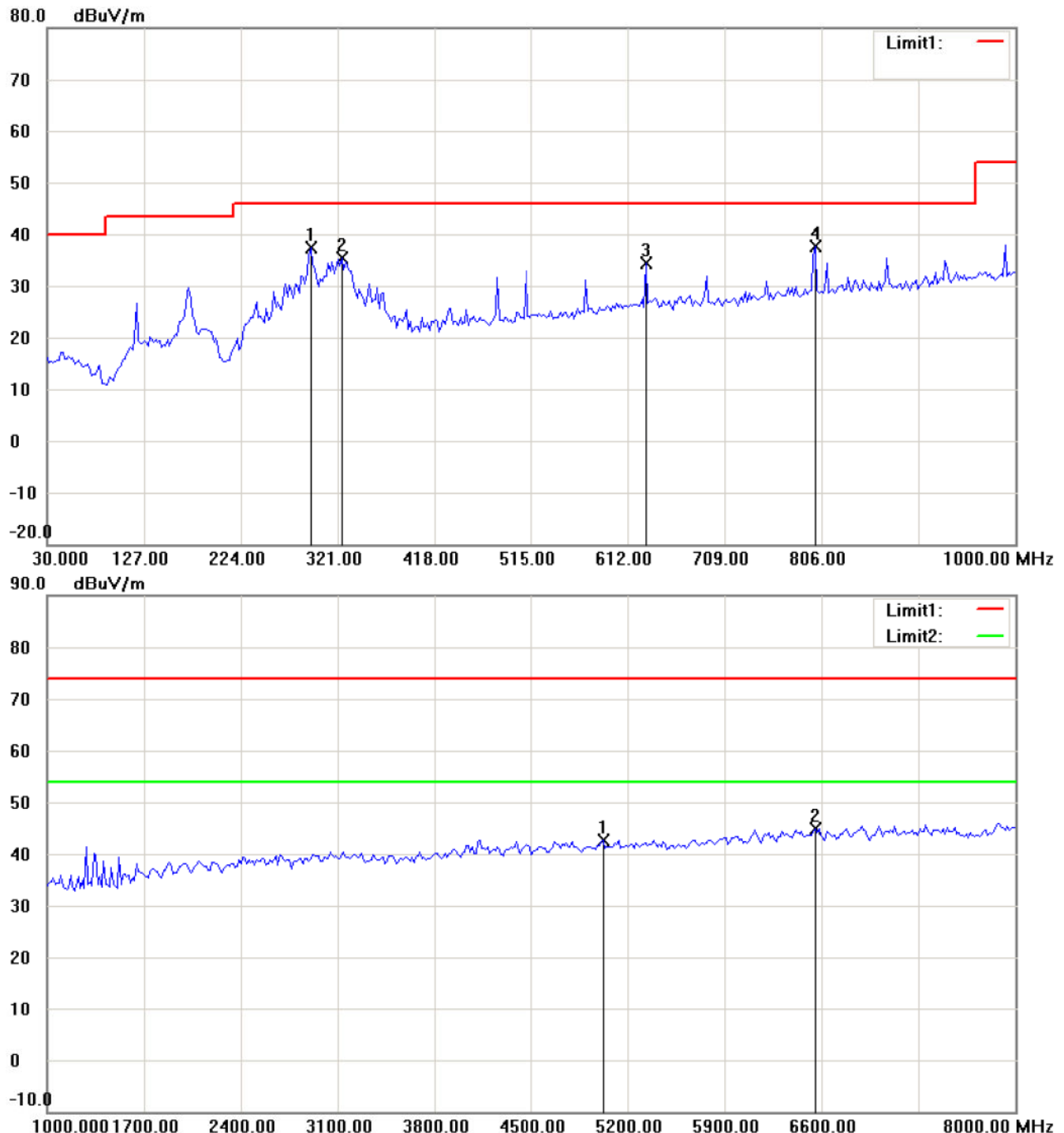


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11b CH11

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.

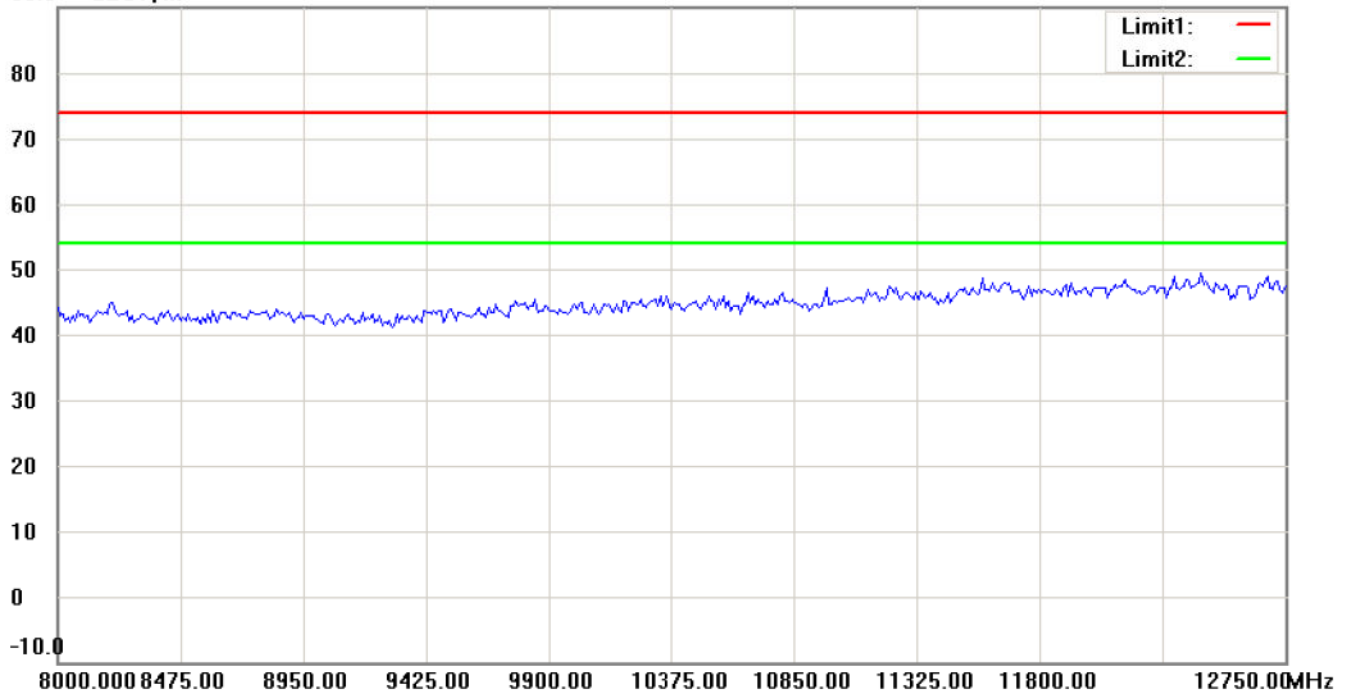


Worldwide Testing Services(Taiwan) Co., Ltd.

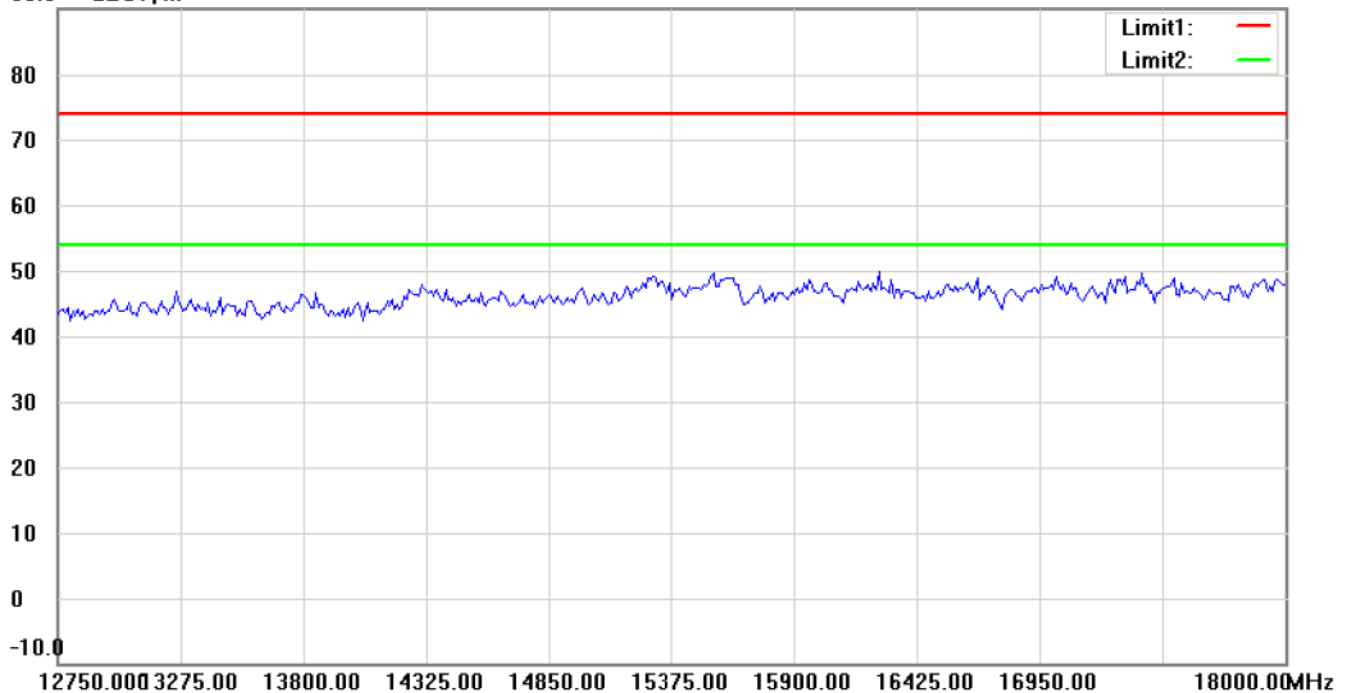
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



90.0 dBuV/m



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.

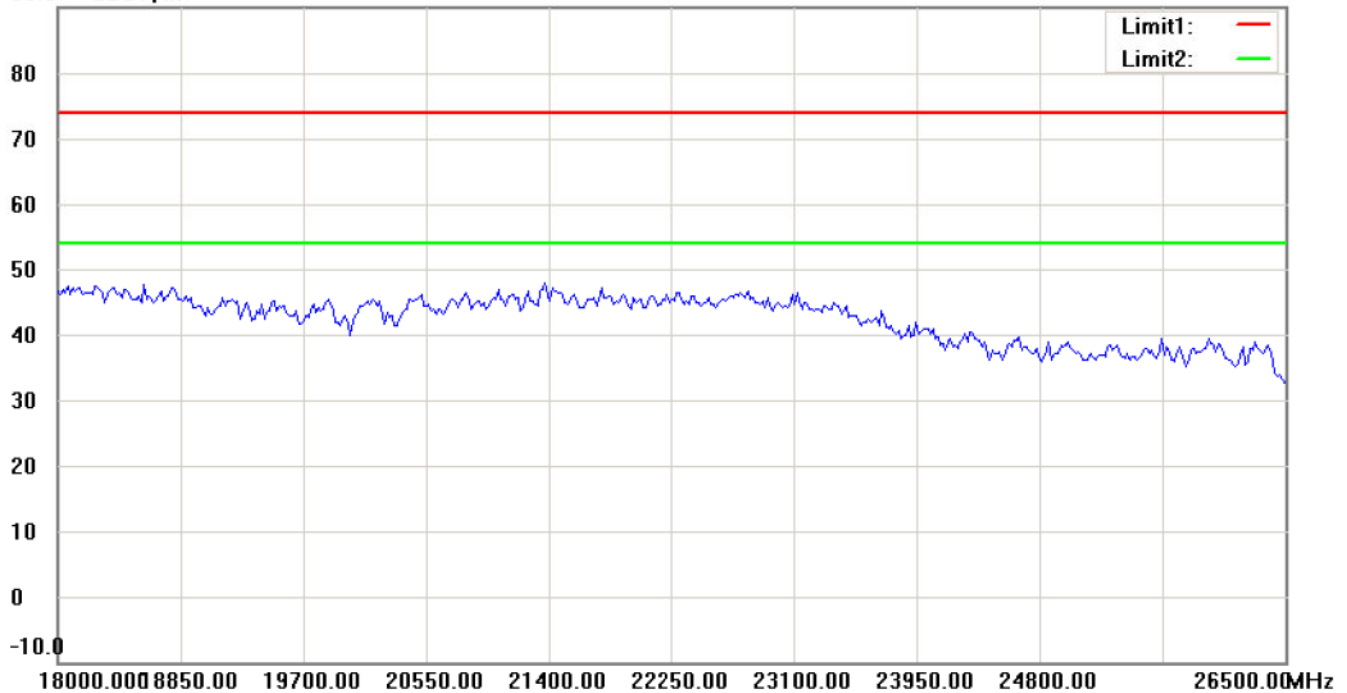


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

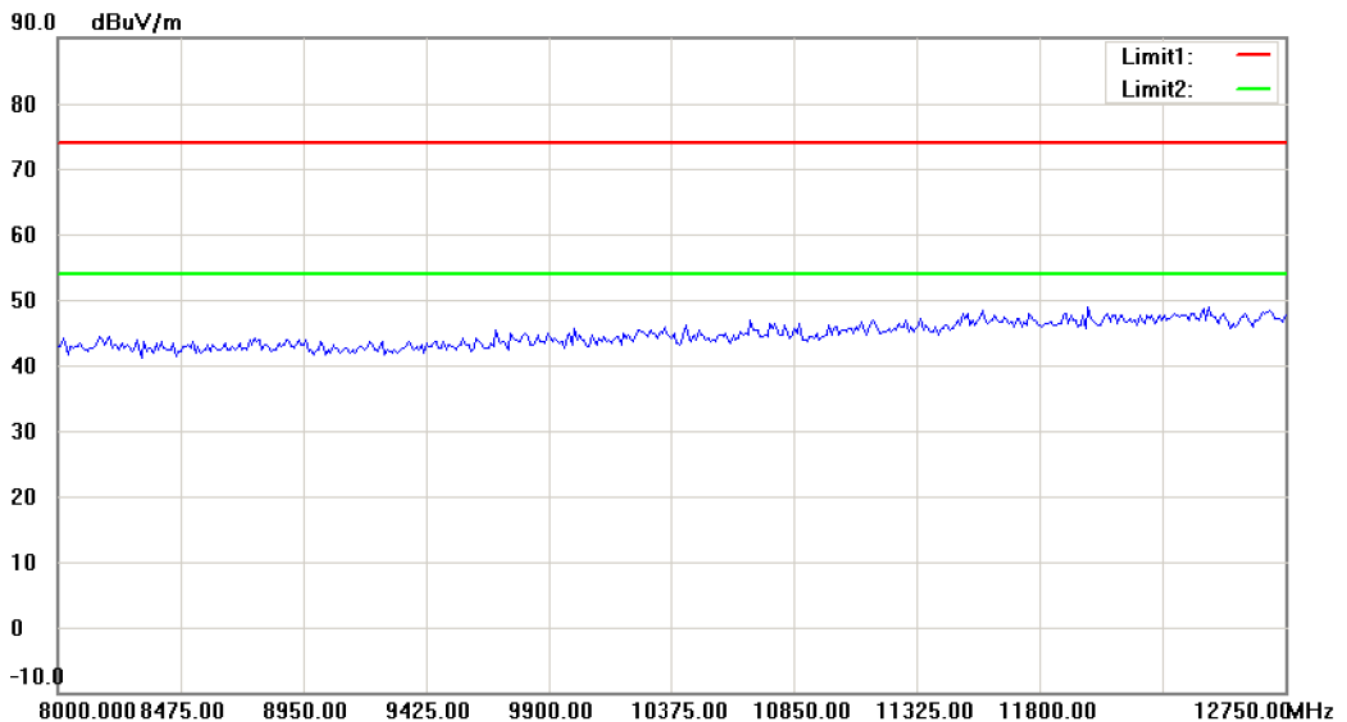
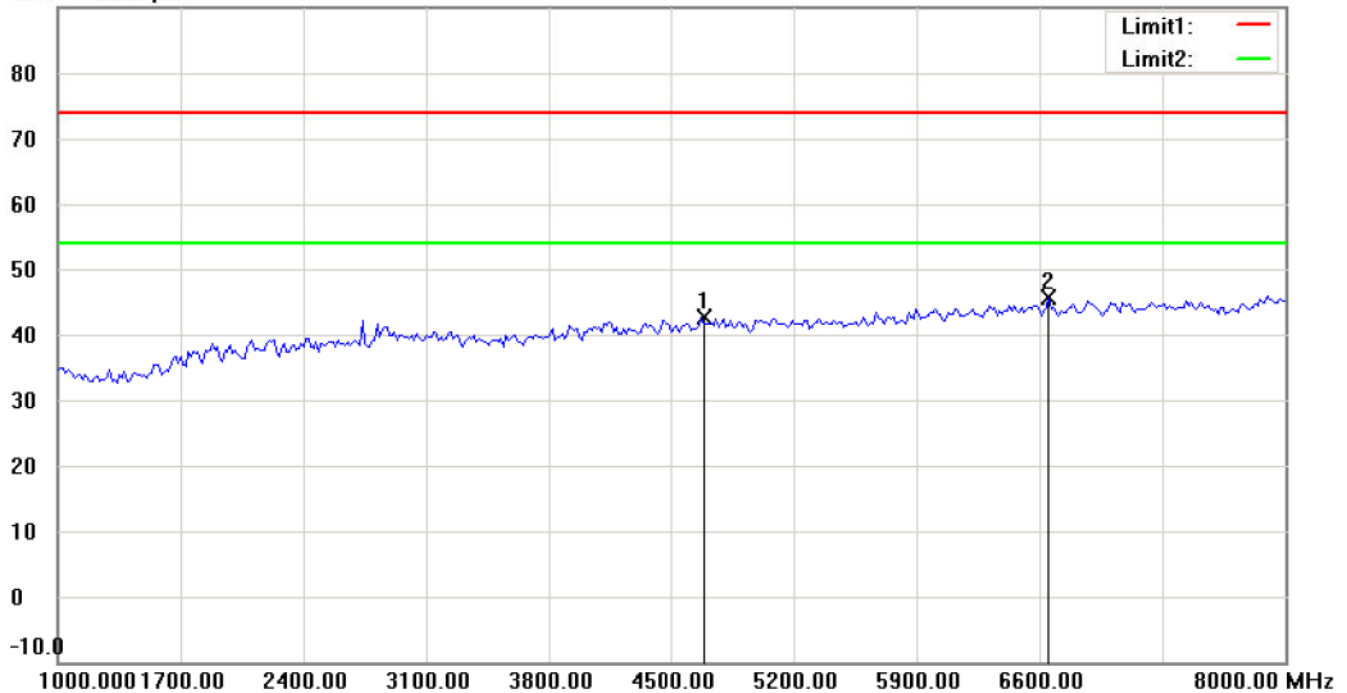
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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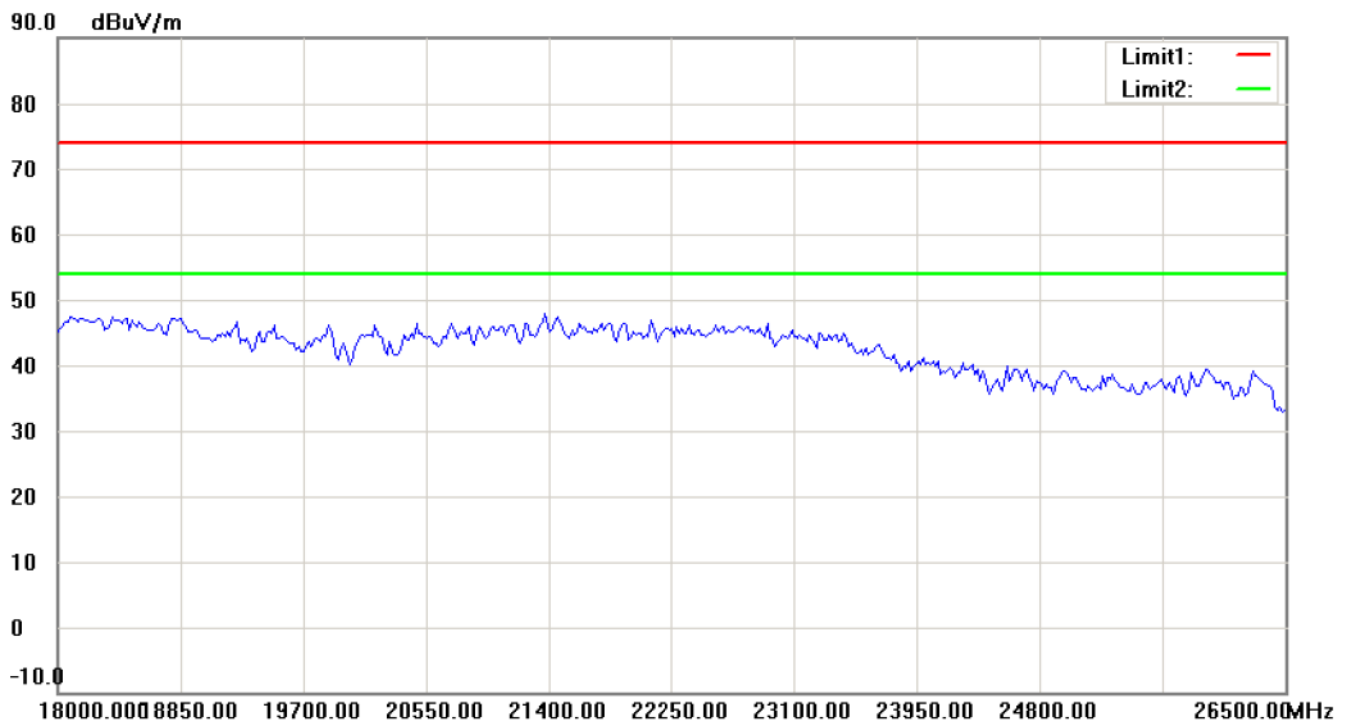
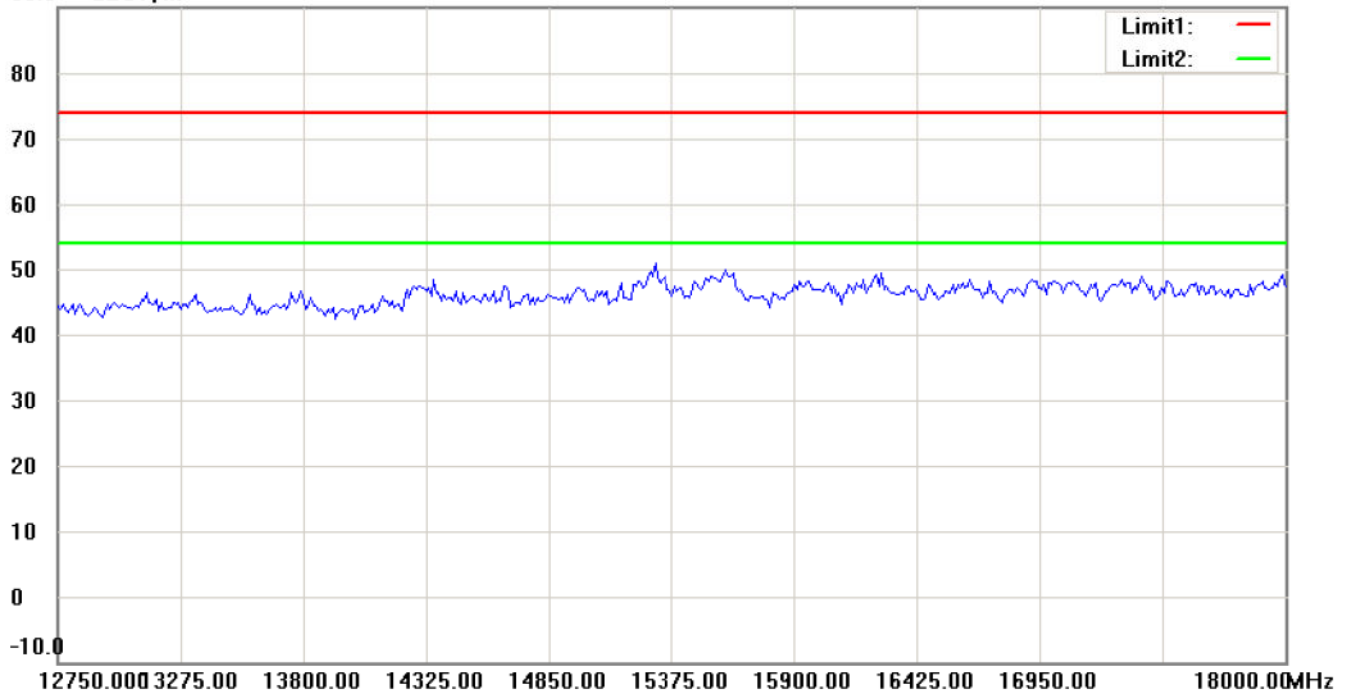


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11g CH1

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.

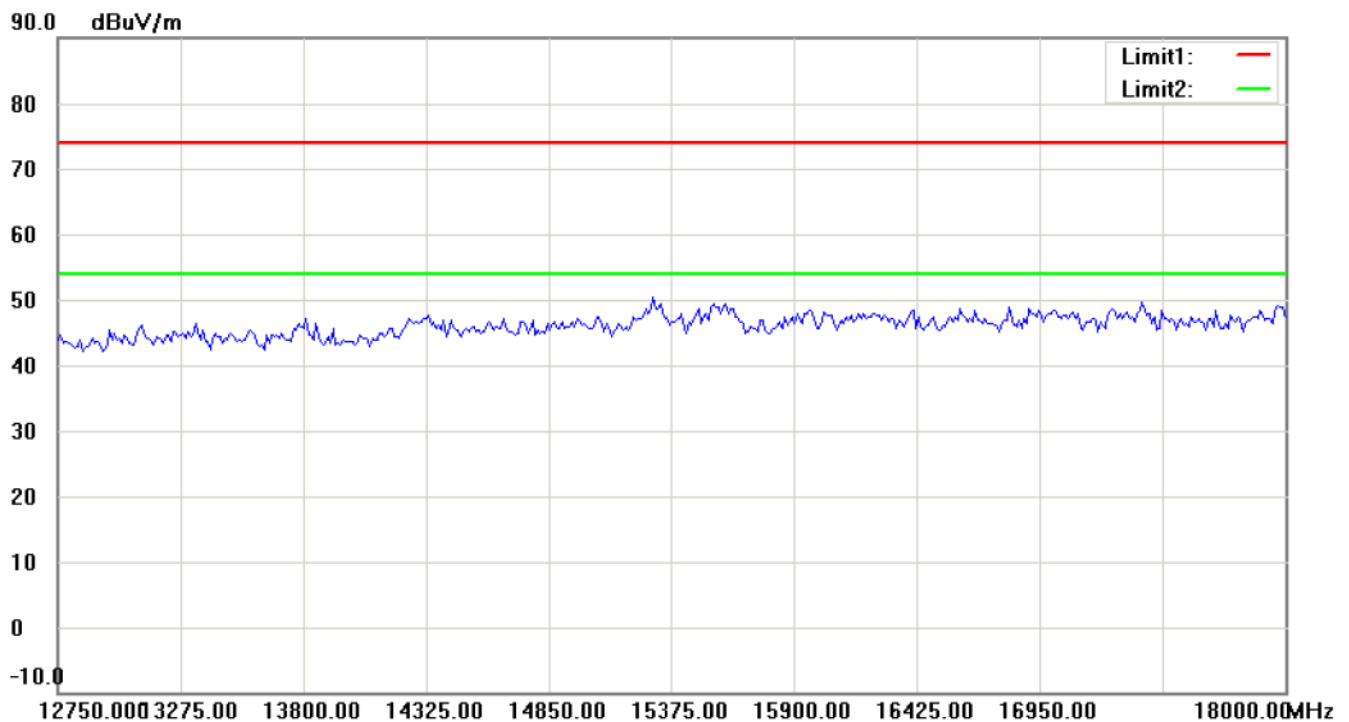
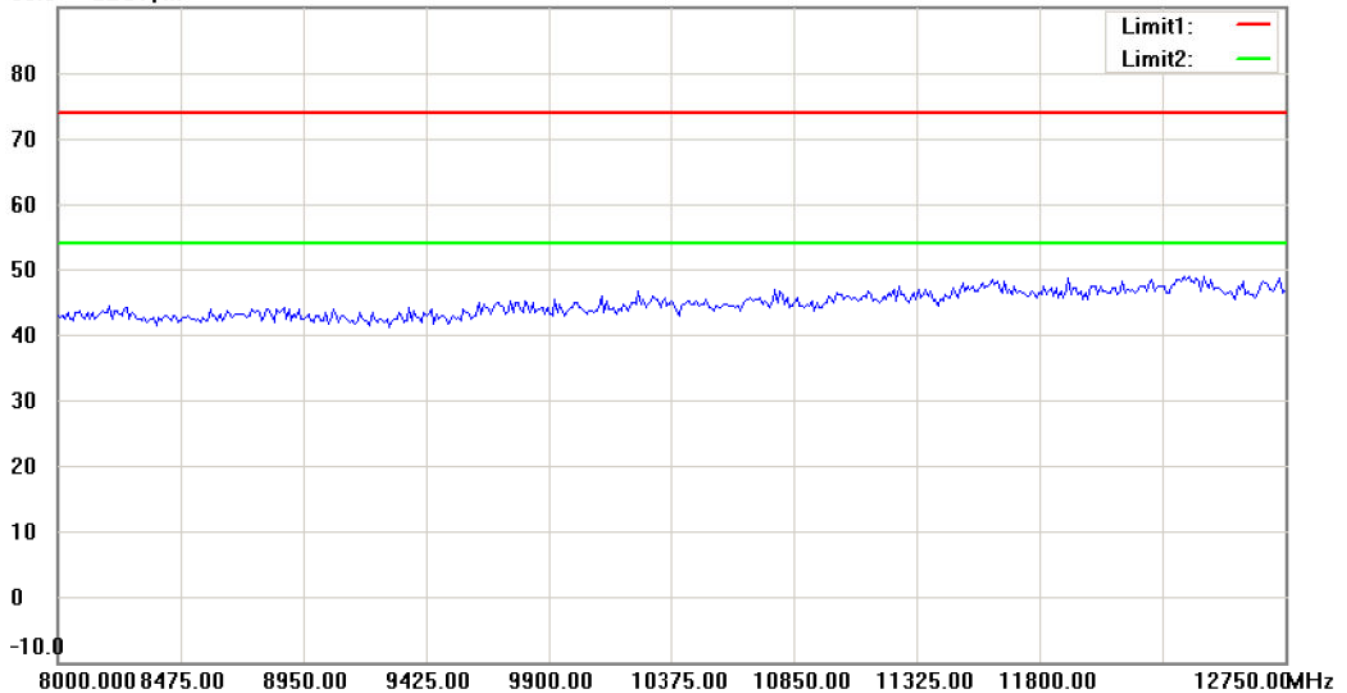


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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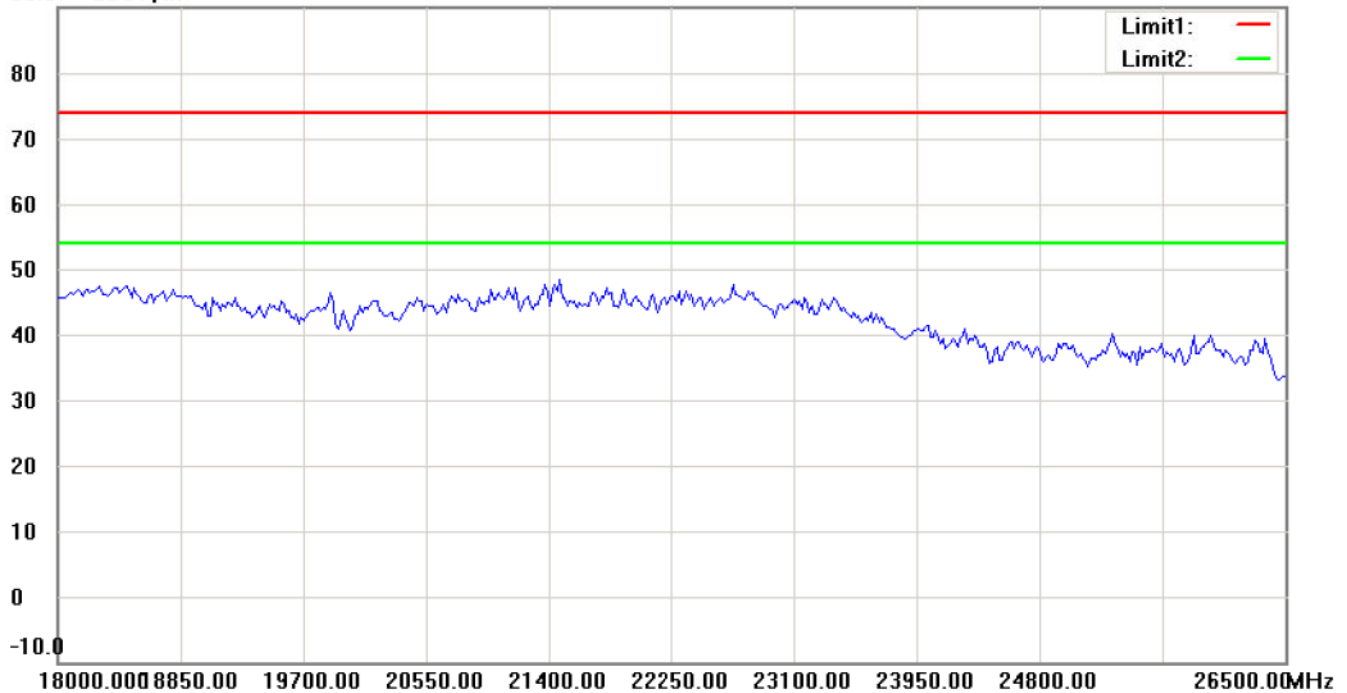


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



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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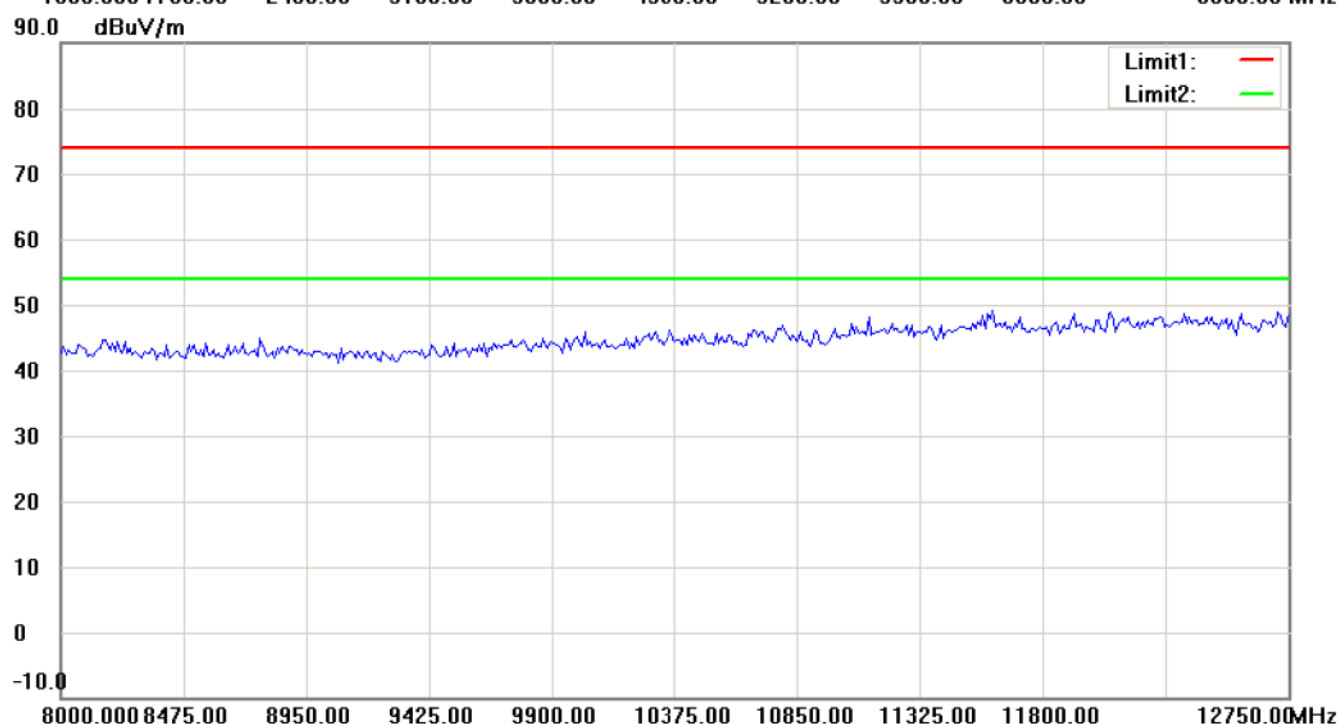
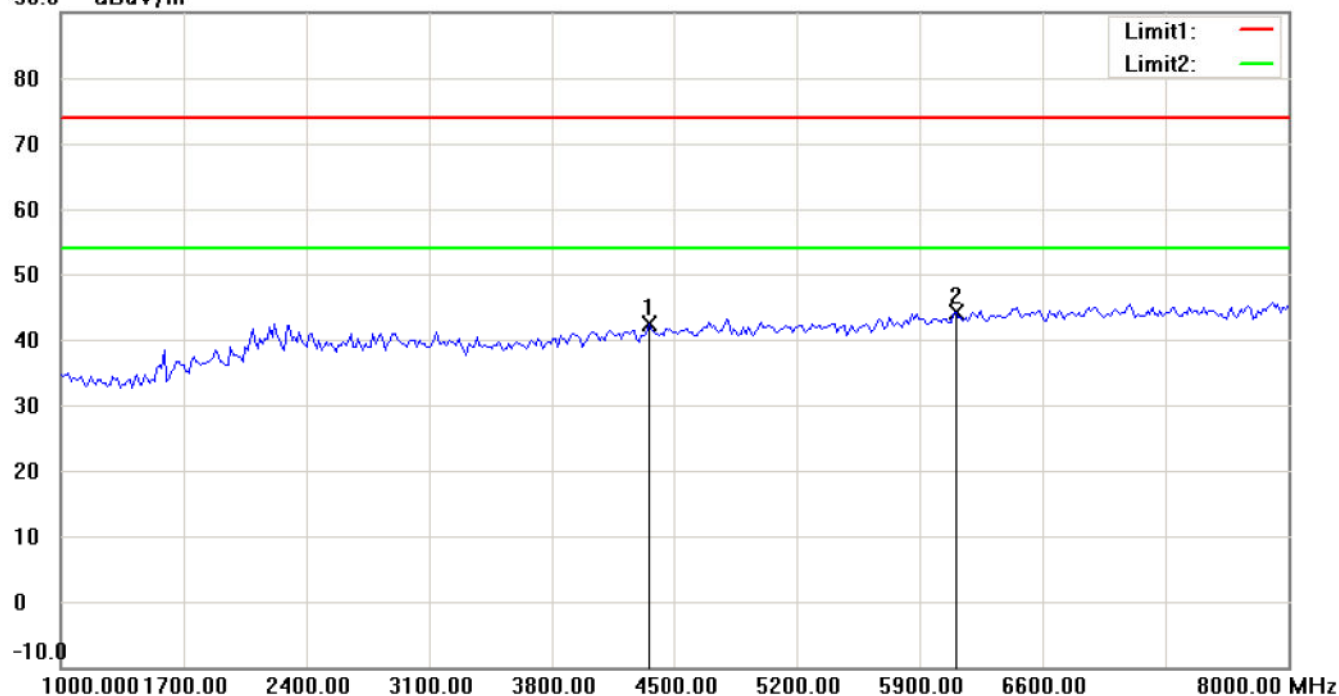


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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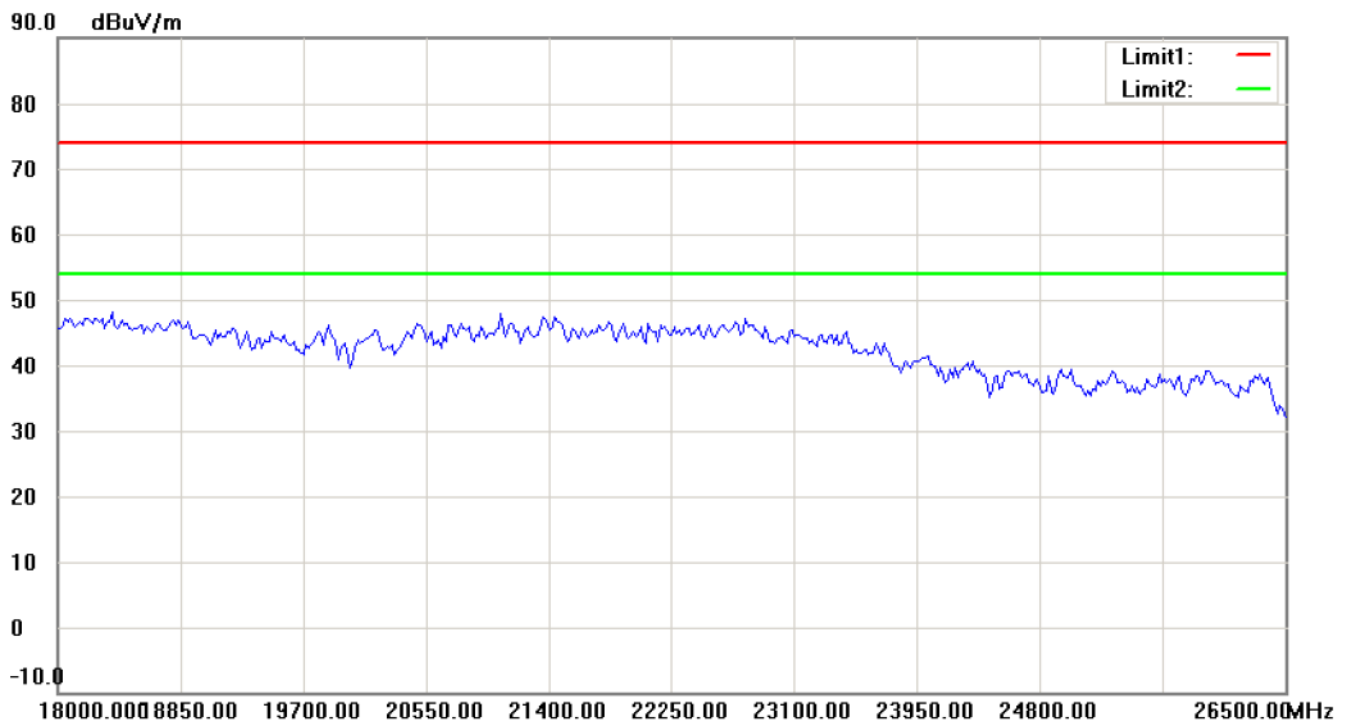
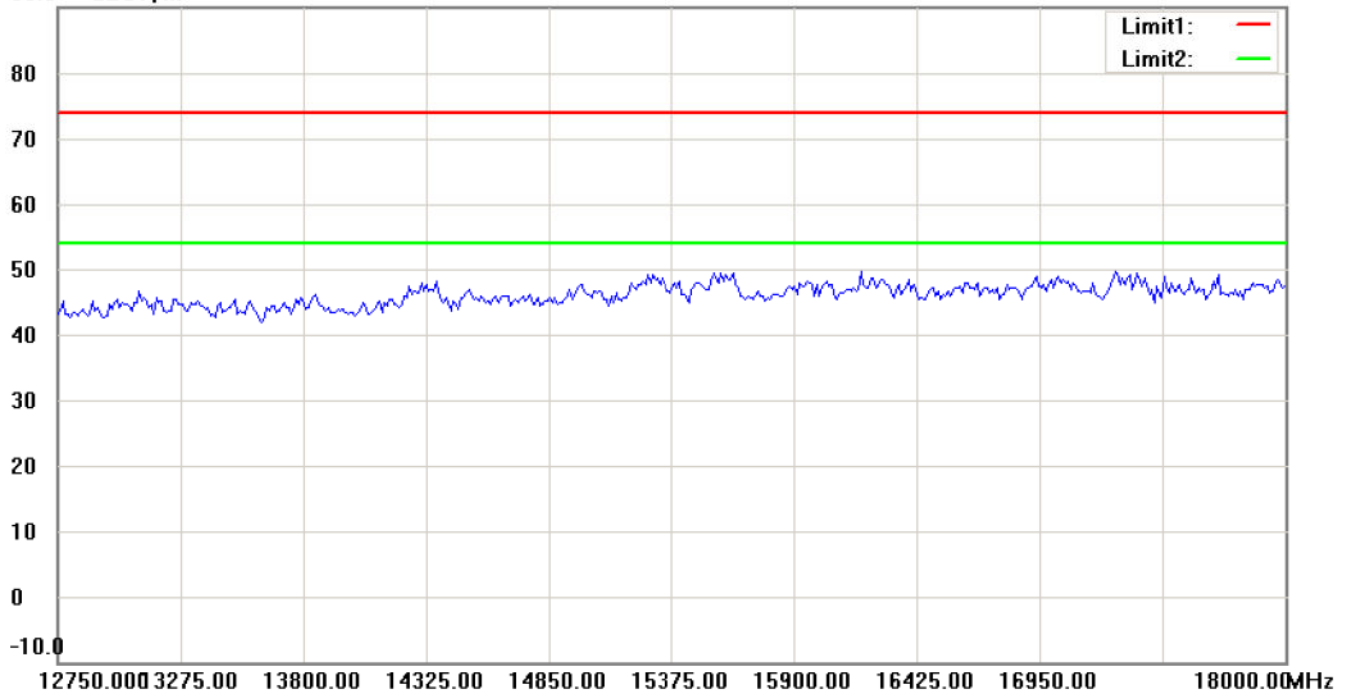


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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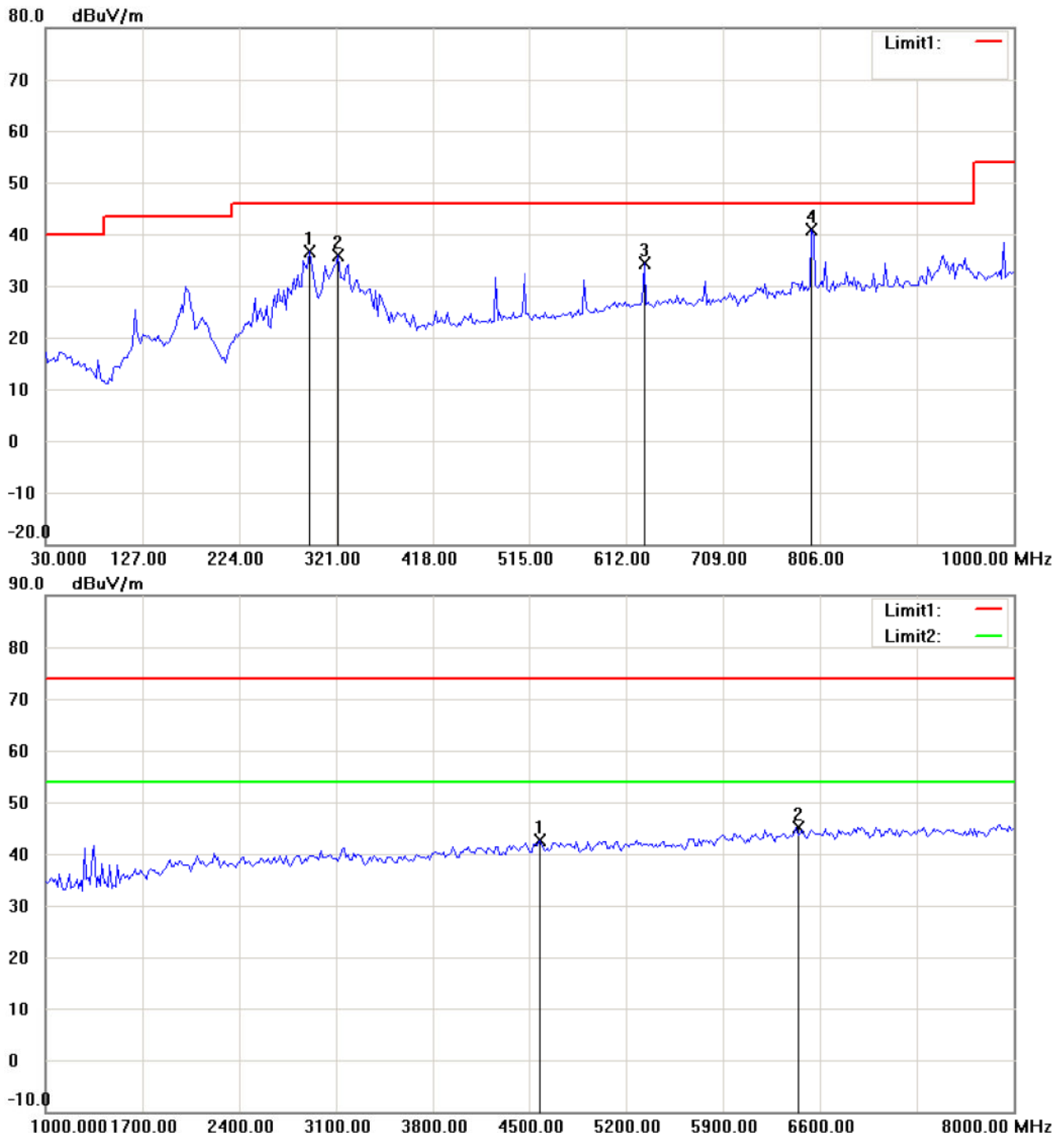
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11g CH6

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.

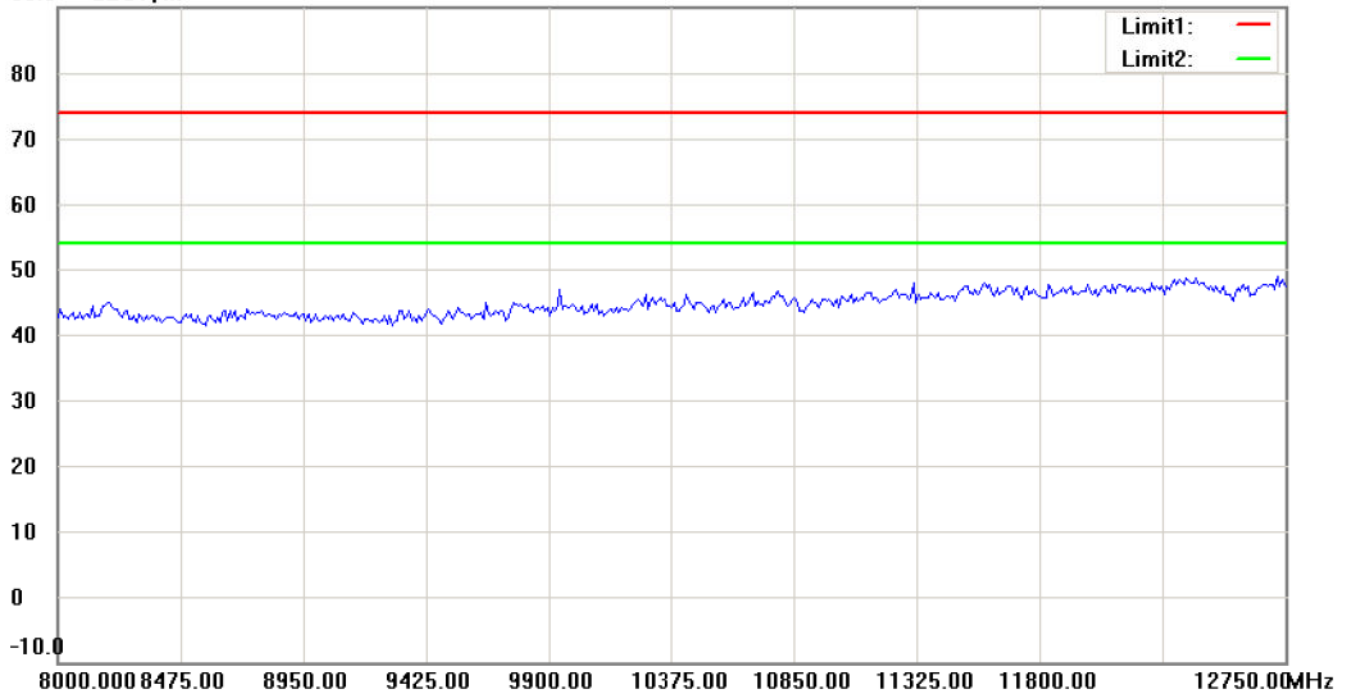


Worldwide Testing Services(Taiwan) Co., Ltd.

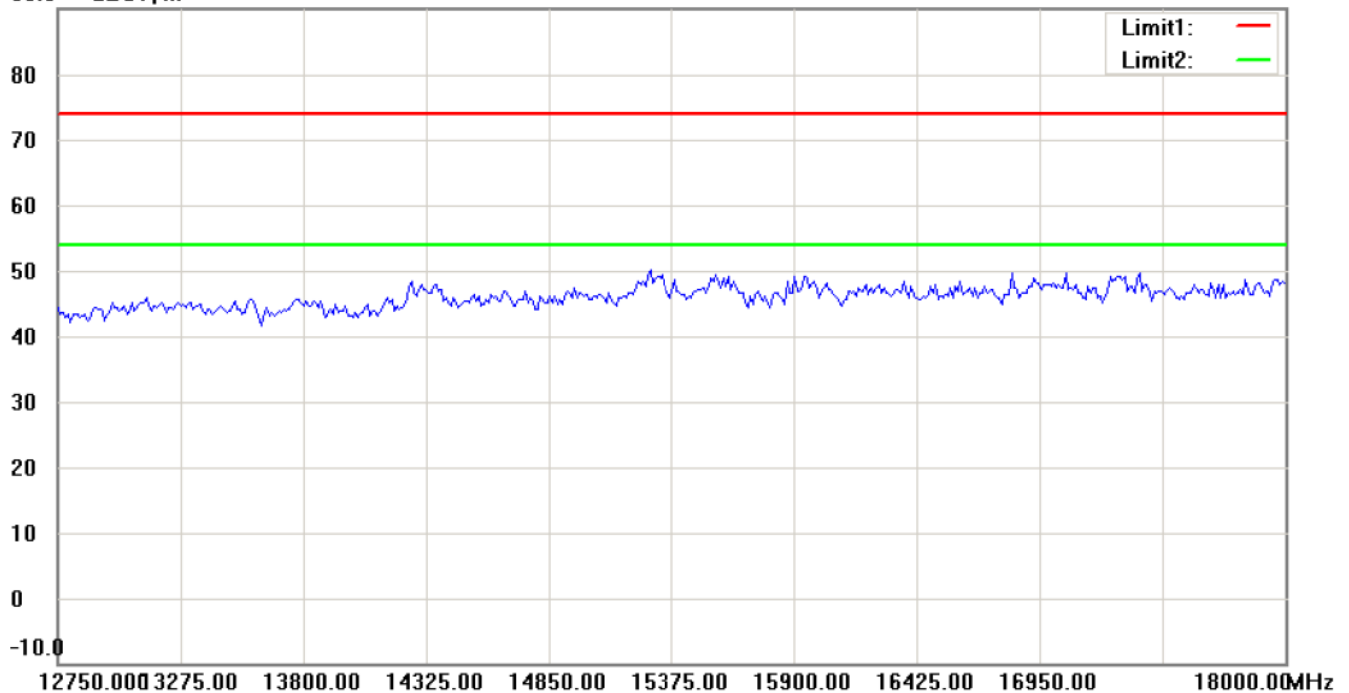
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



90.0 dBuV/m



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.

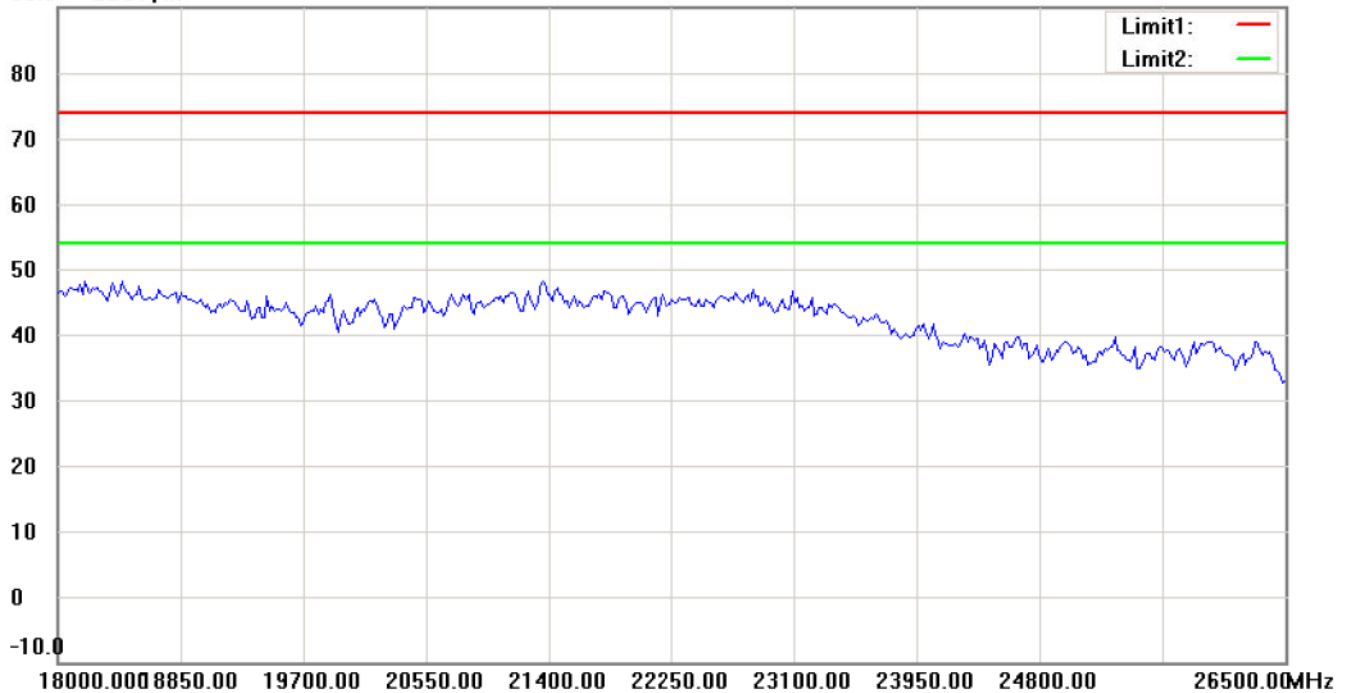


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



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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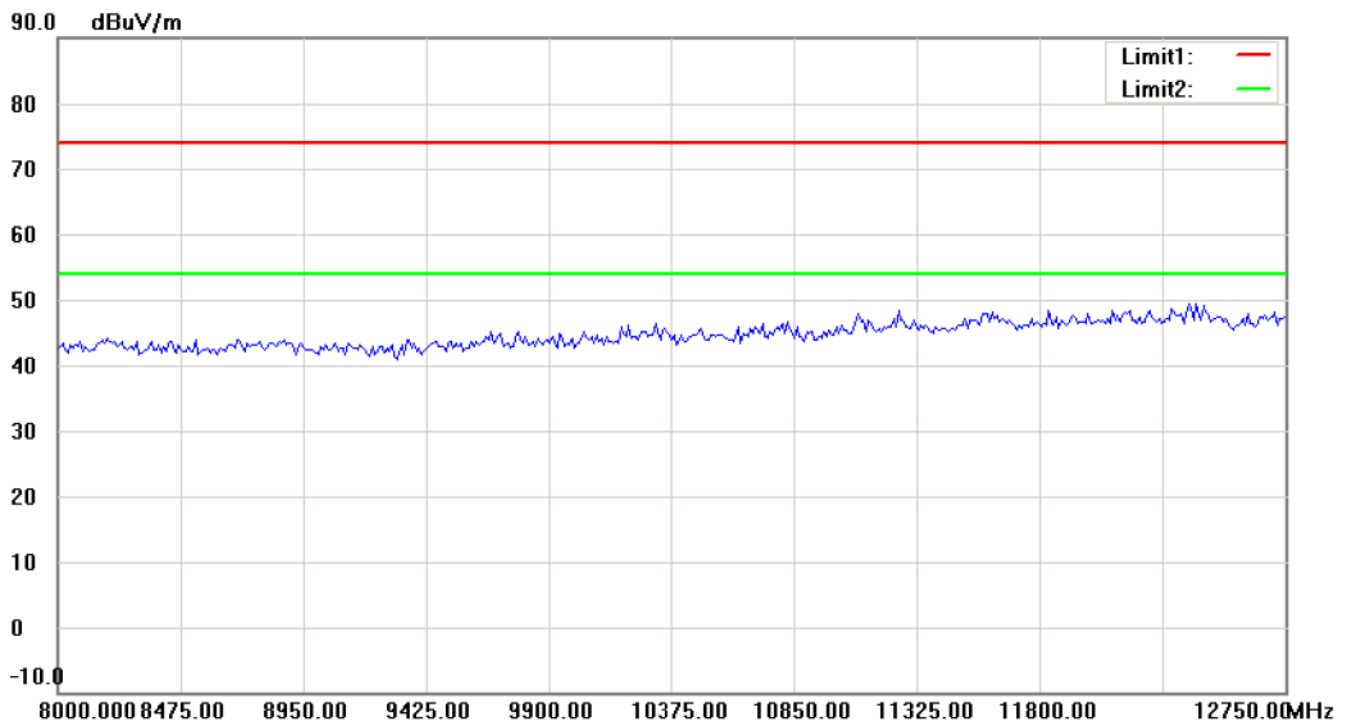
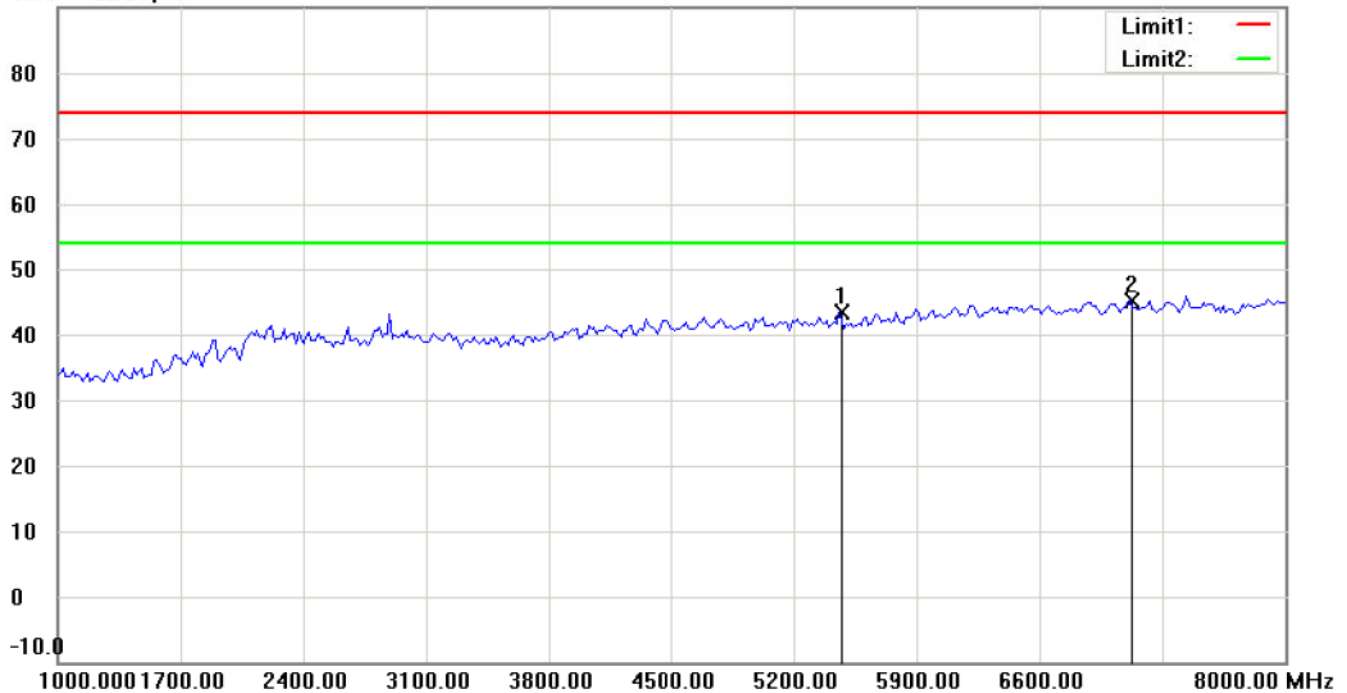


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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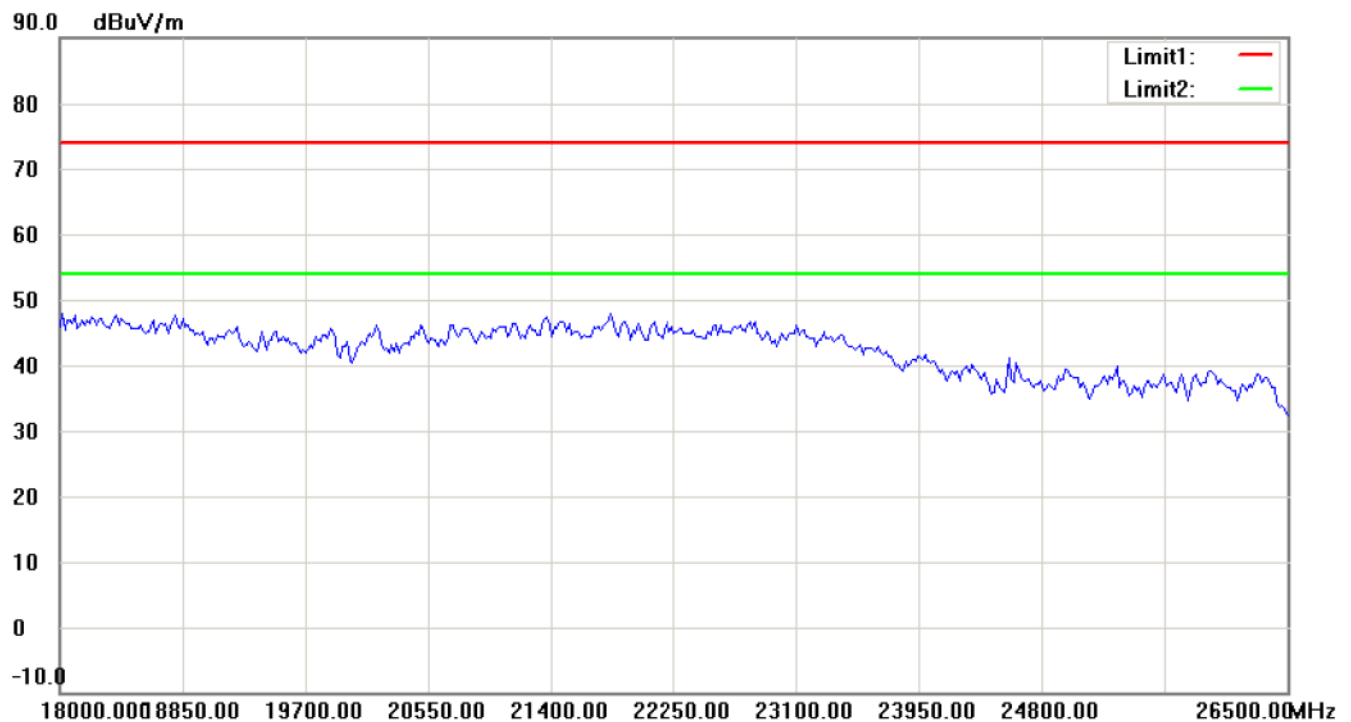
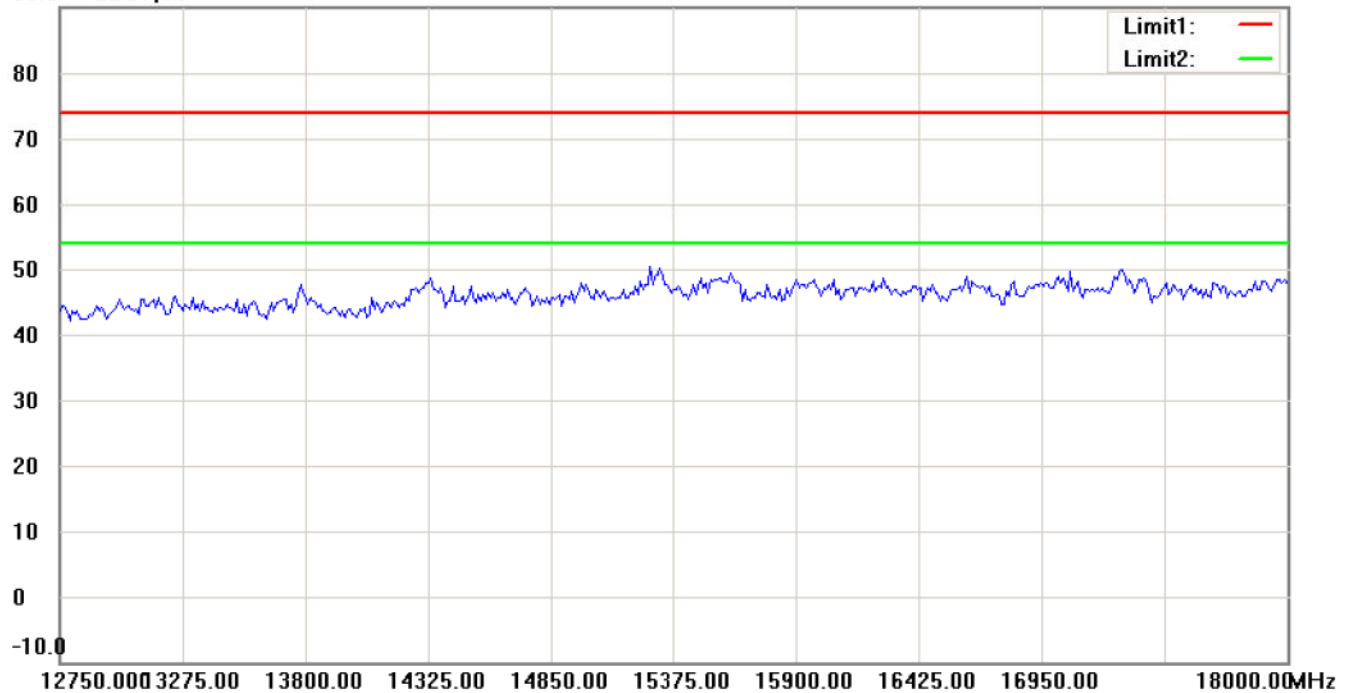


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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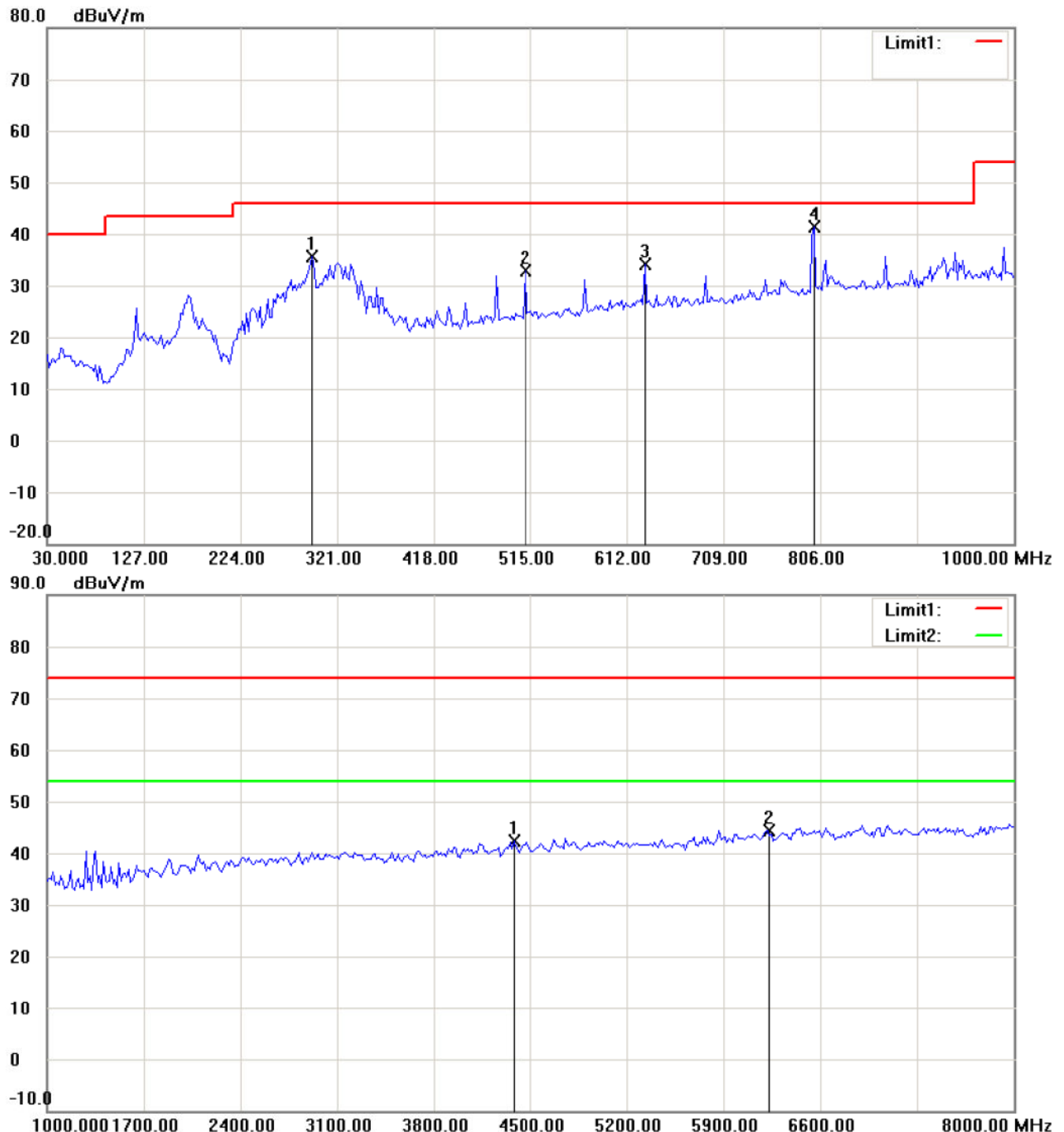


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11g CH11

Antenna Polarization H



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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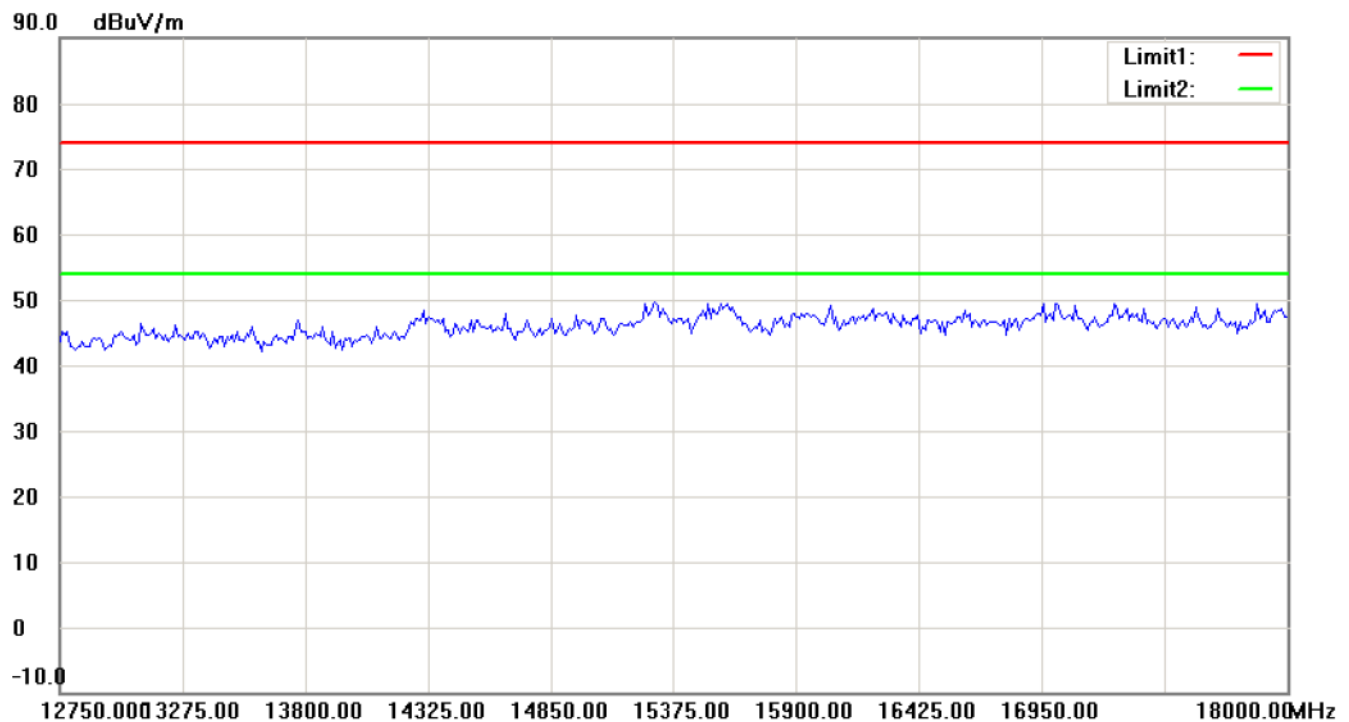
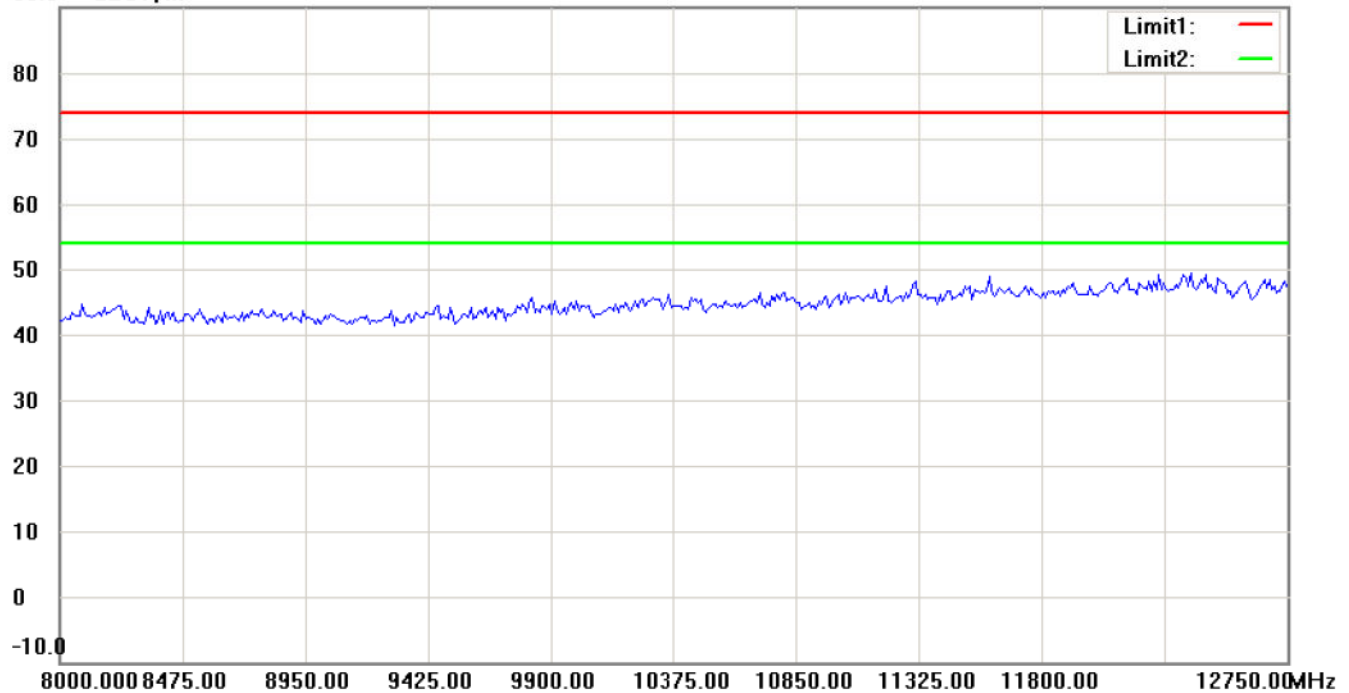


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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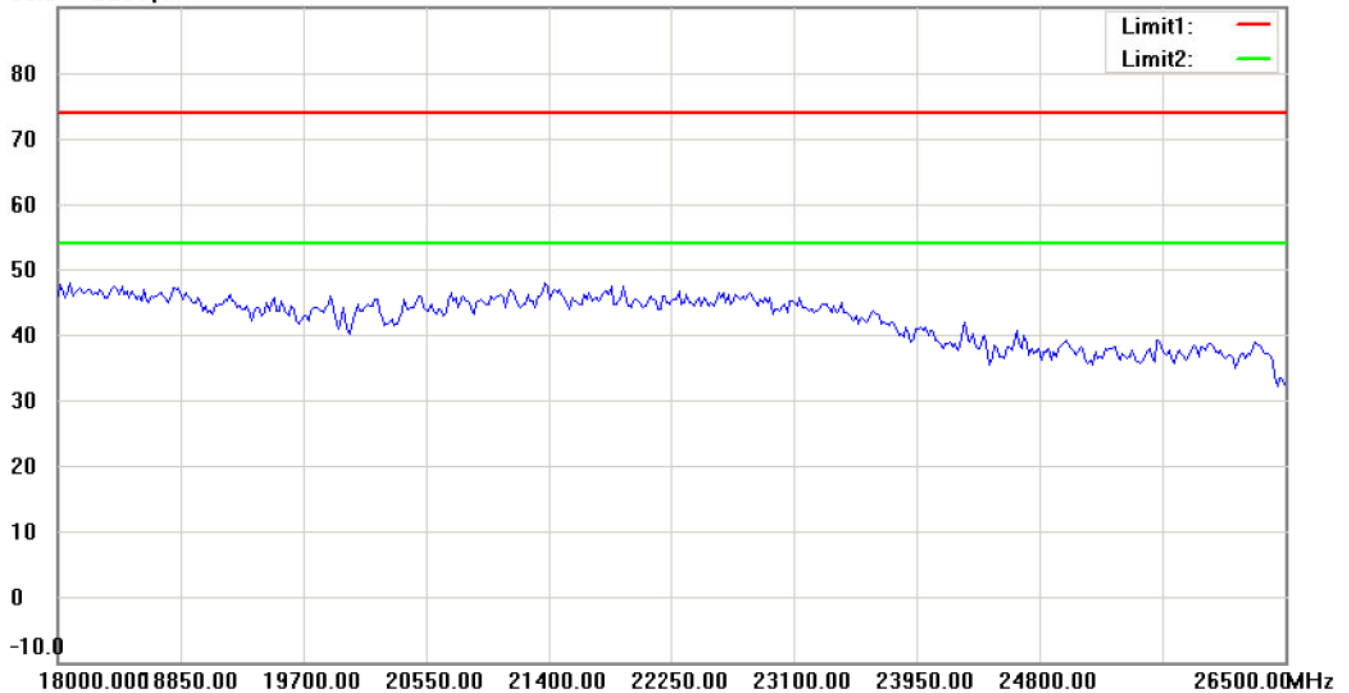


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

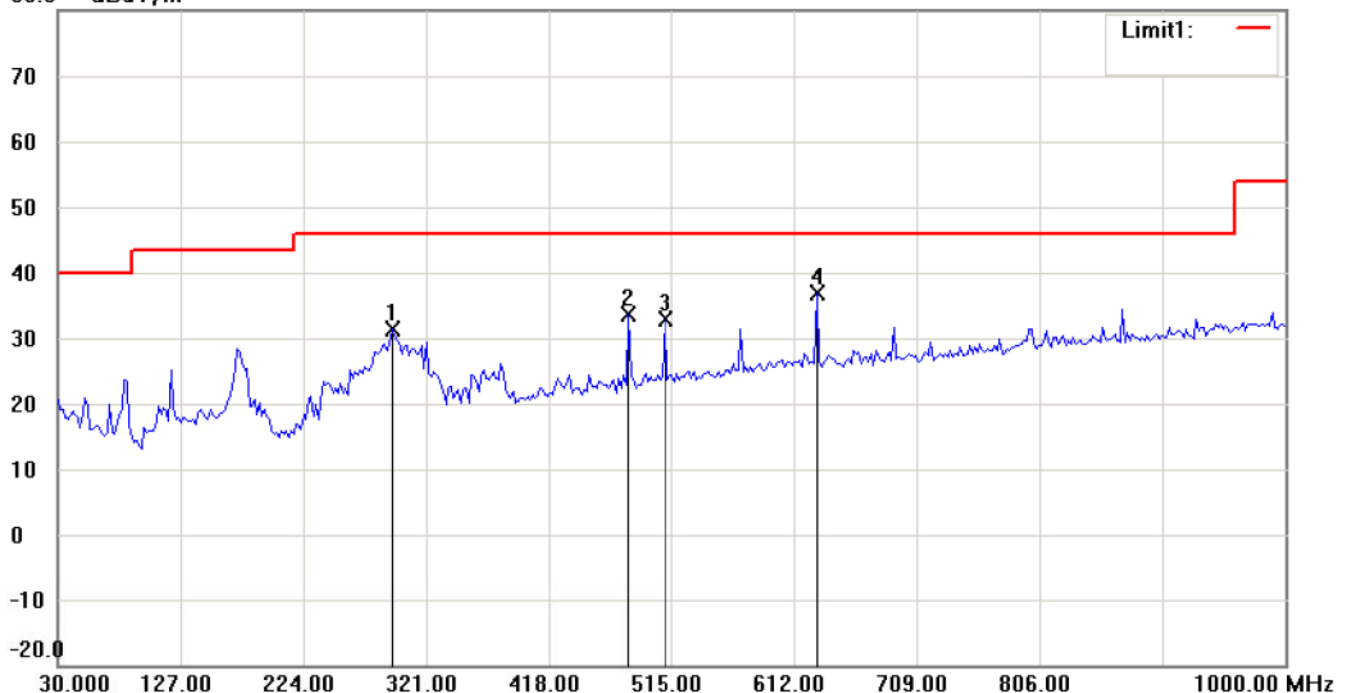
FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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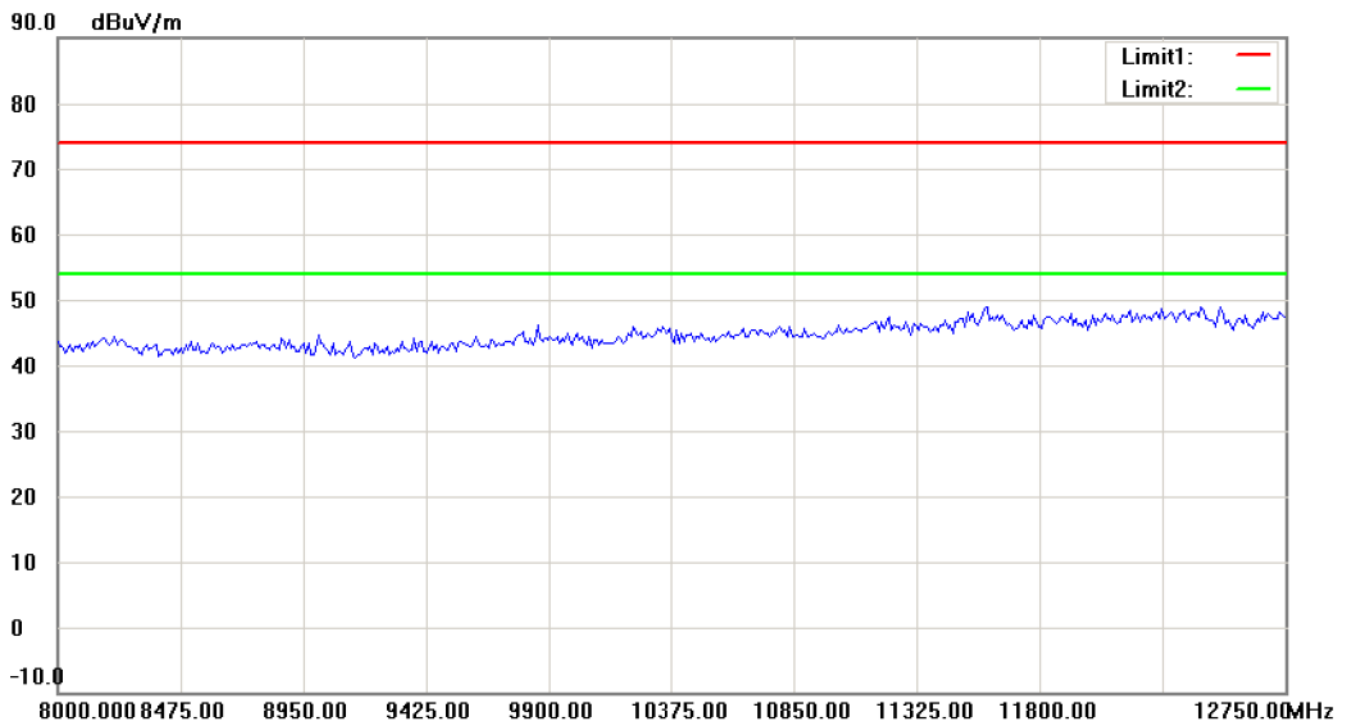
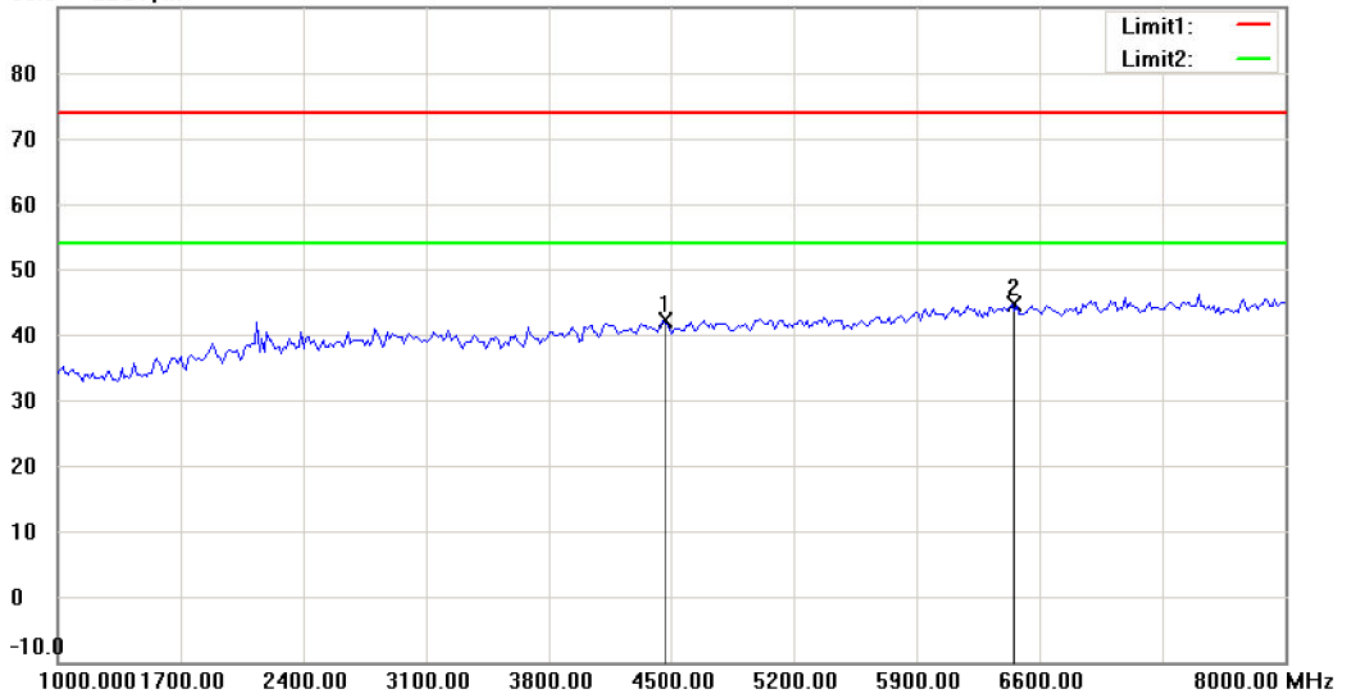


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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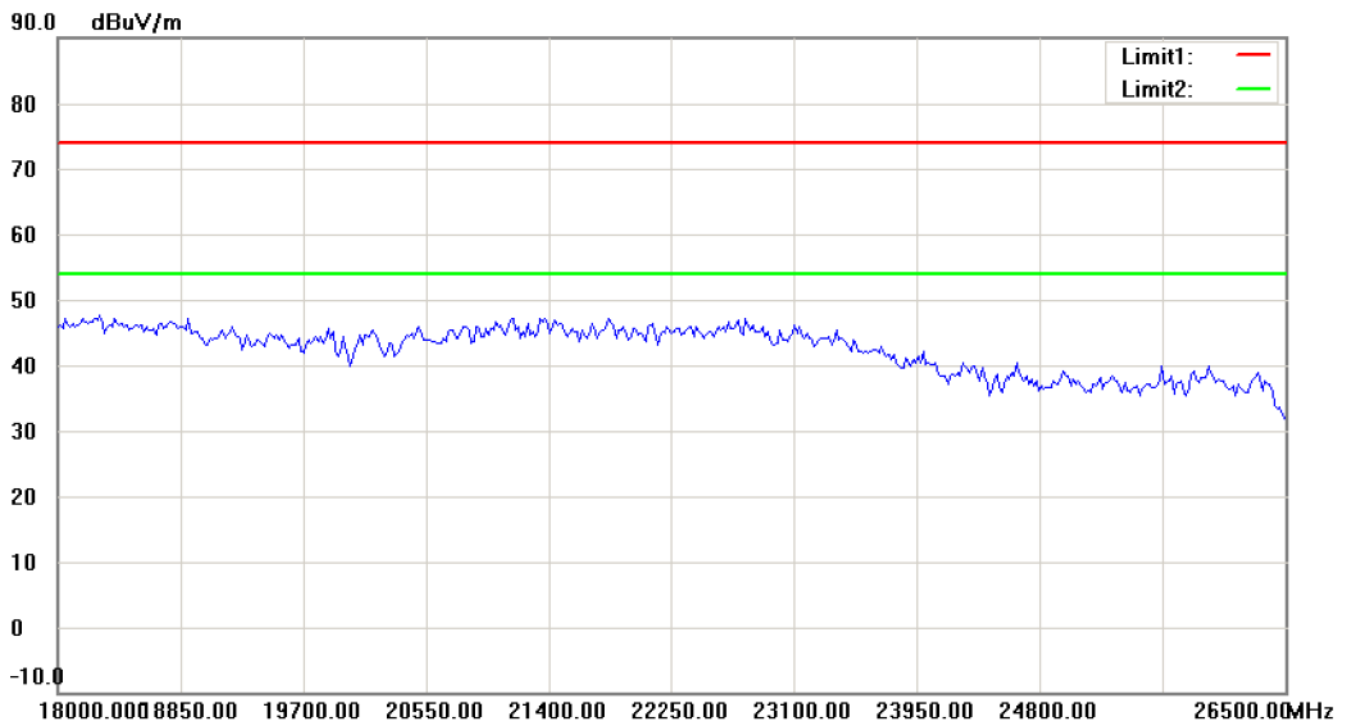
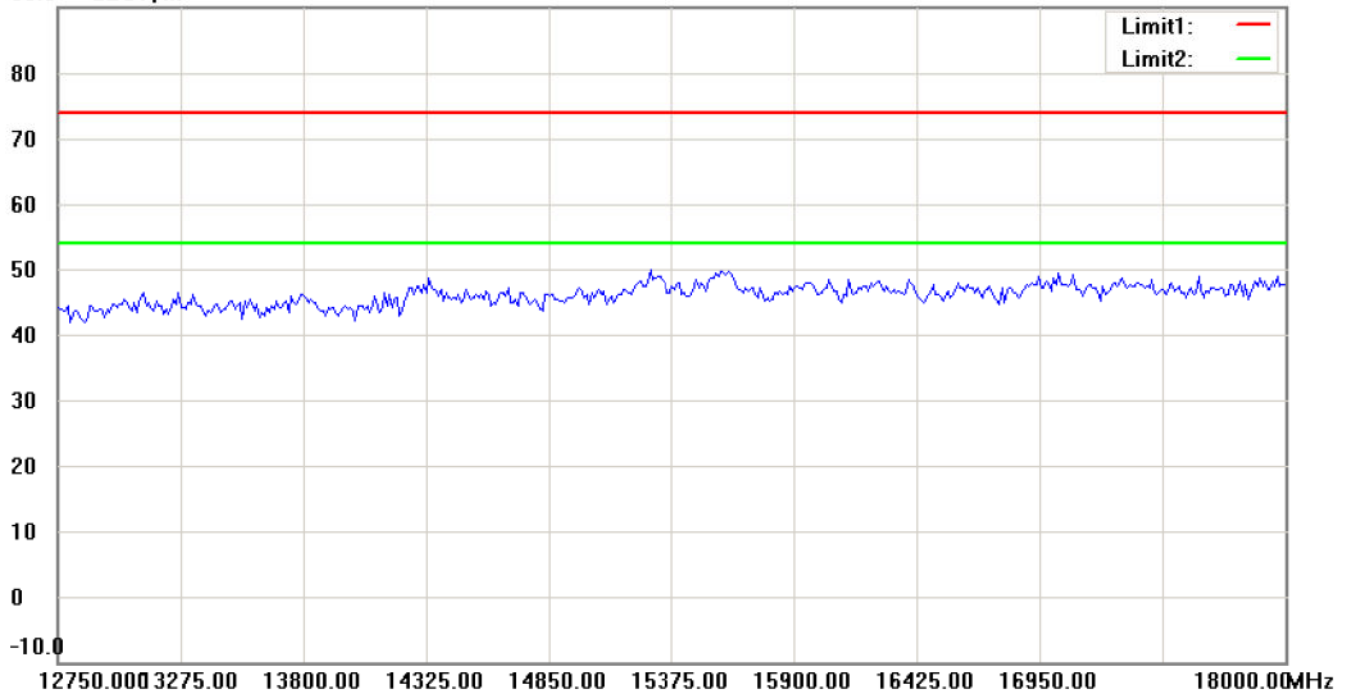


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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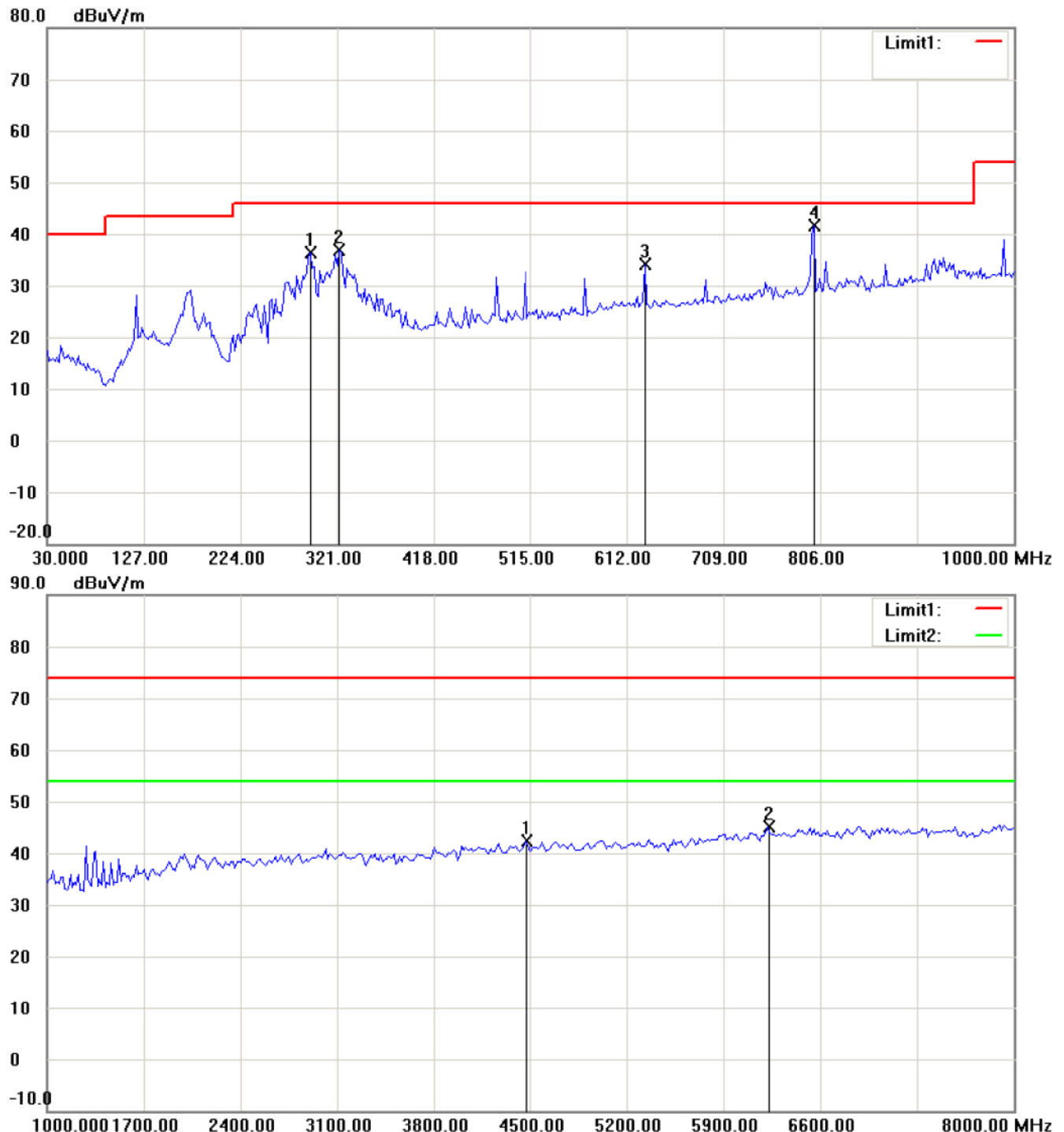


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11n 20MHz CH1

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.
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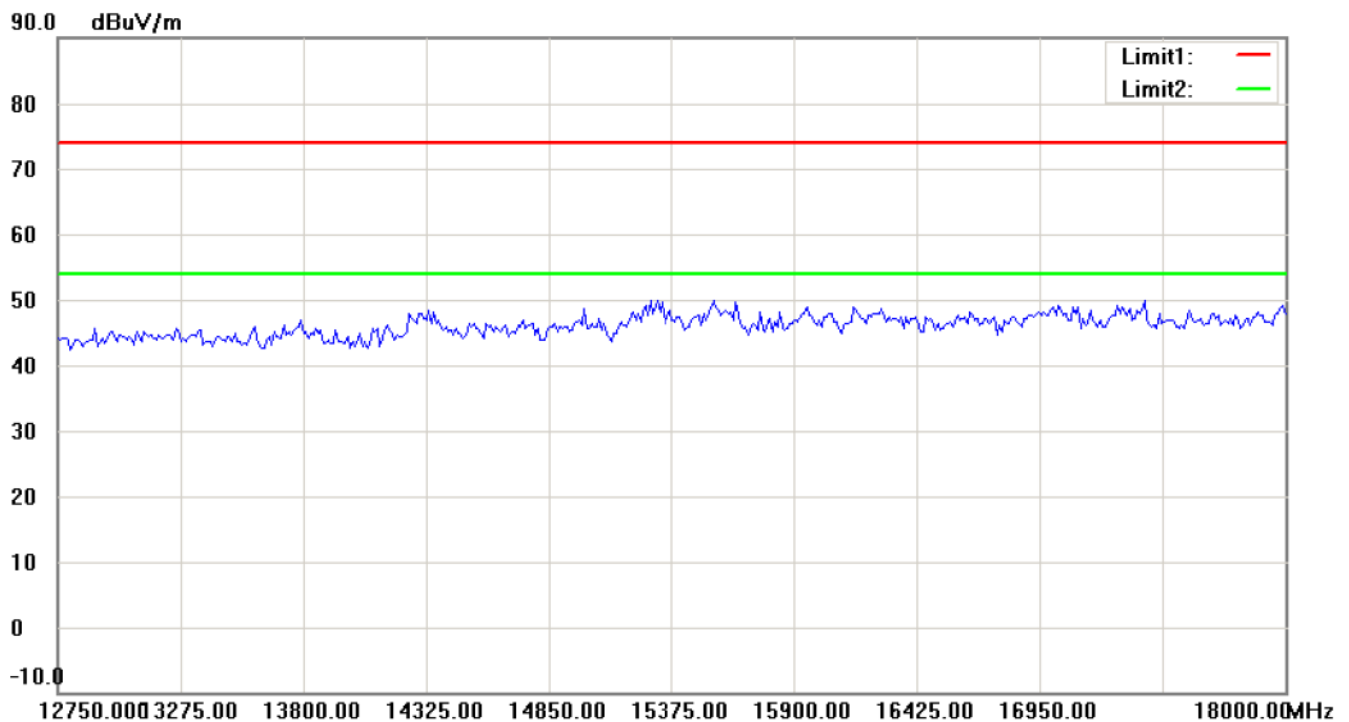
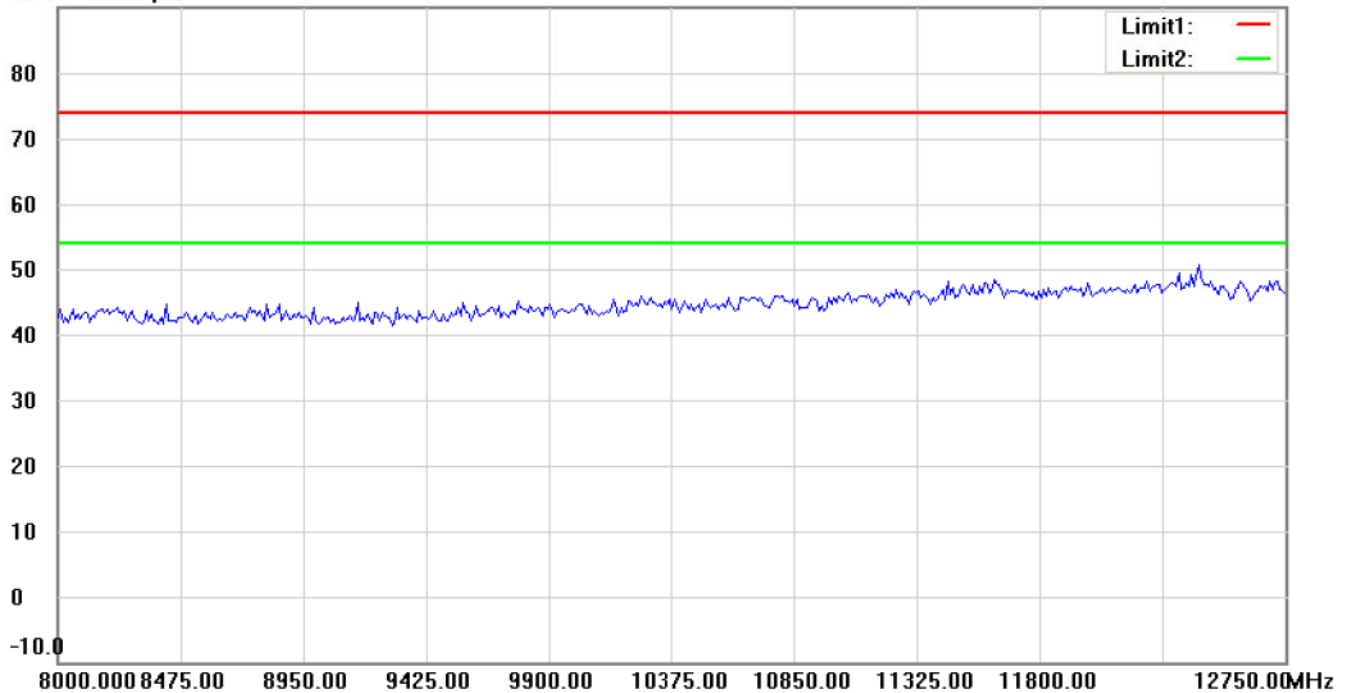


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

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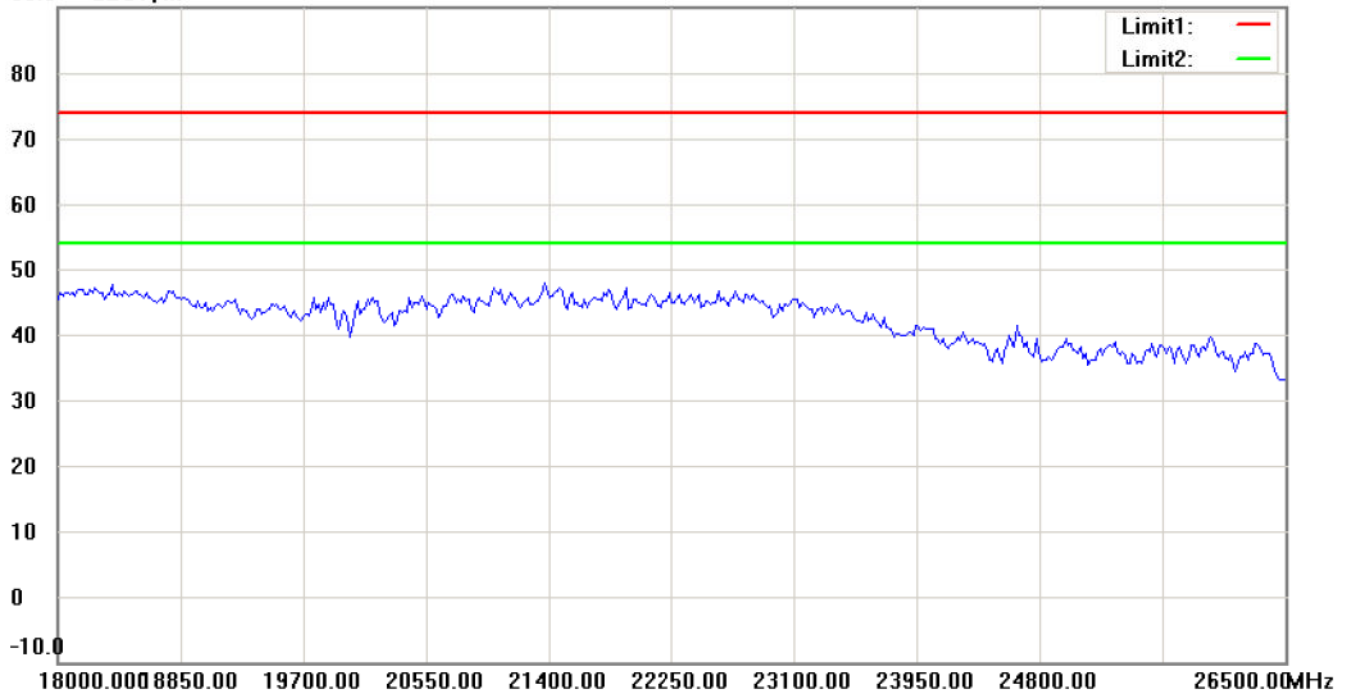


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



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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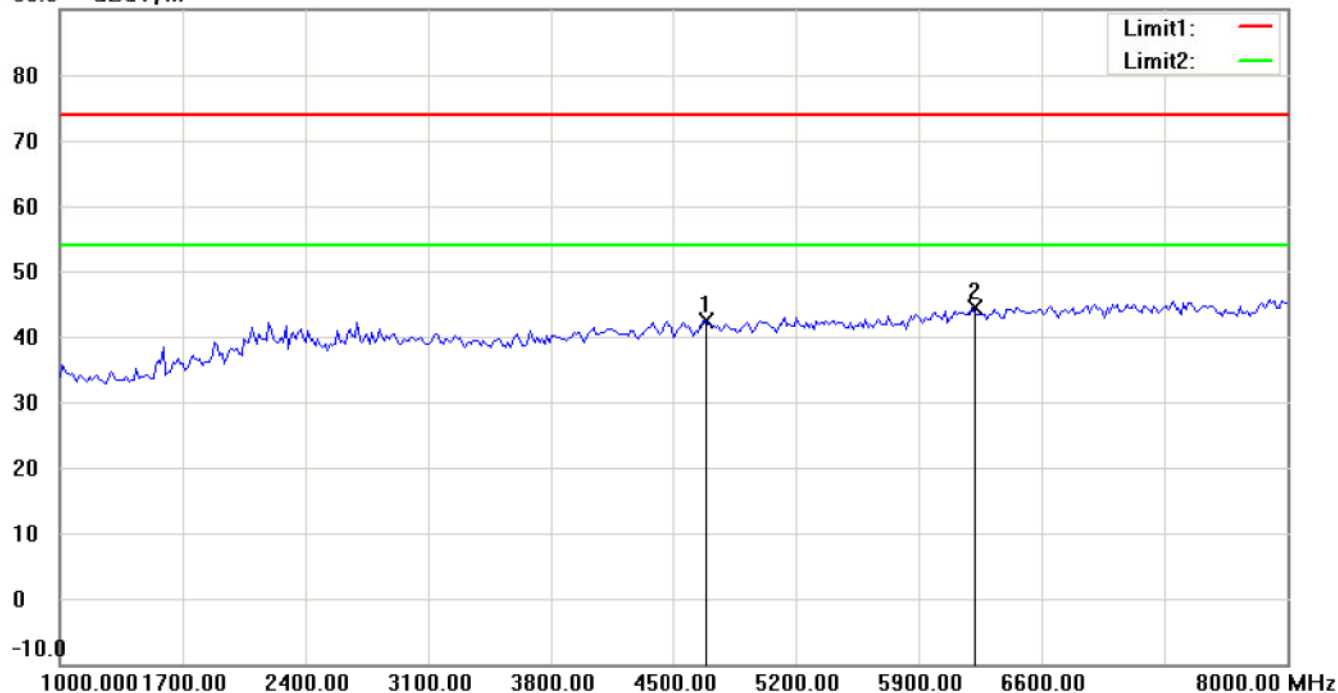


Worldwide Testing Services(Taiwan) Co., Ltd.

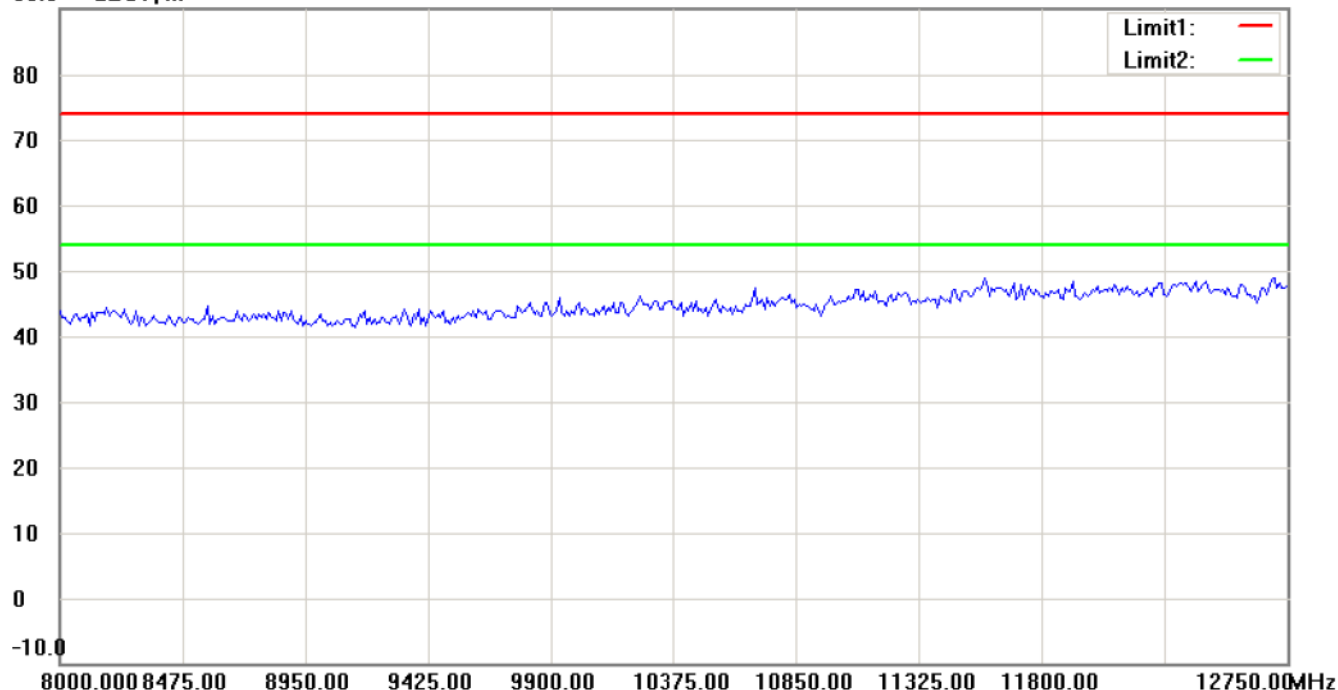
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



90.0 dBuV/m



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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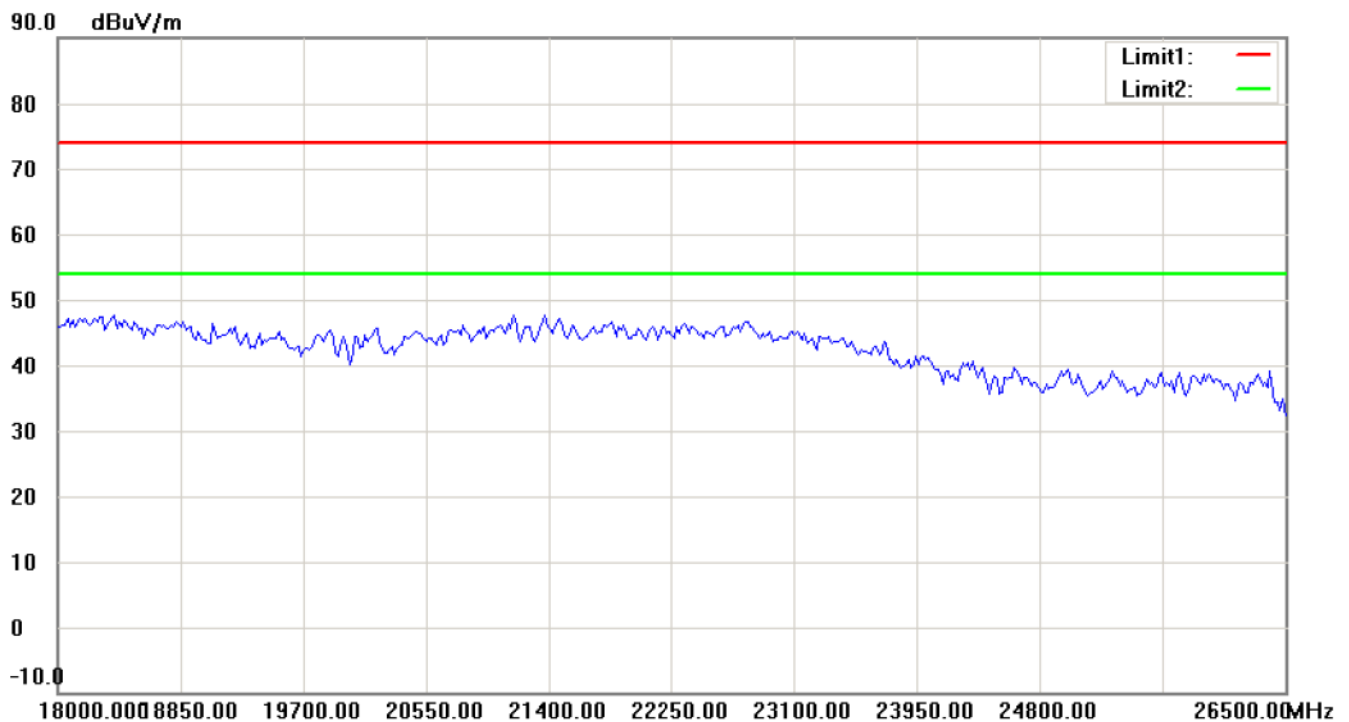
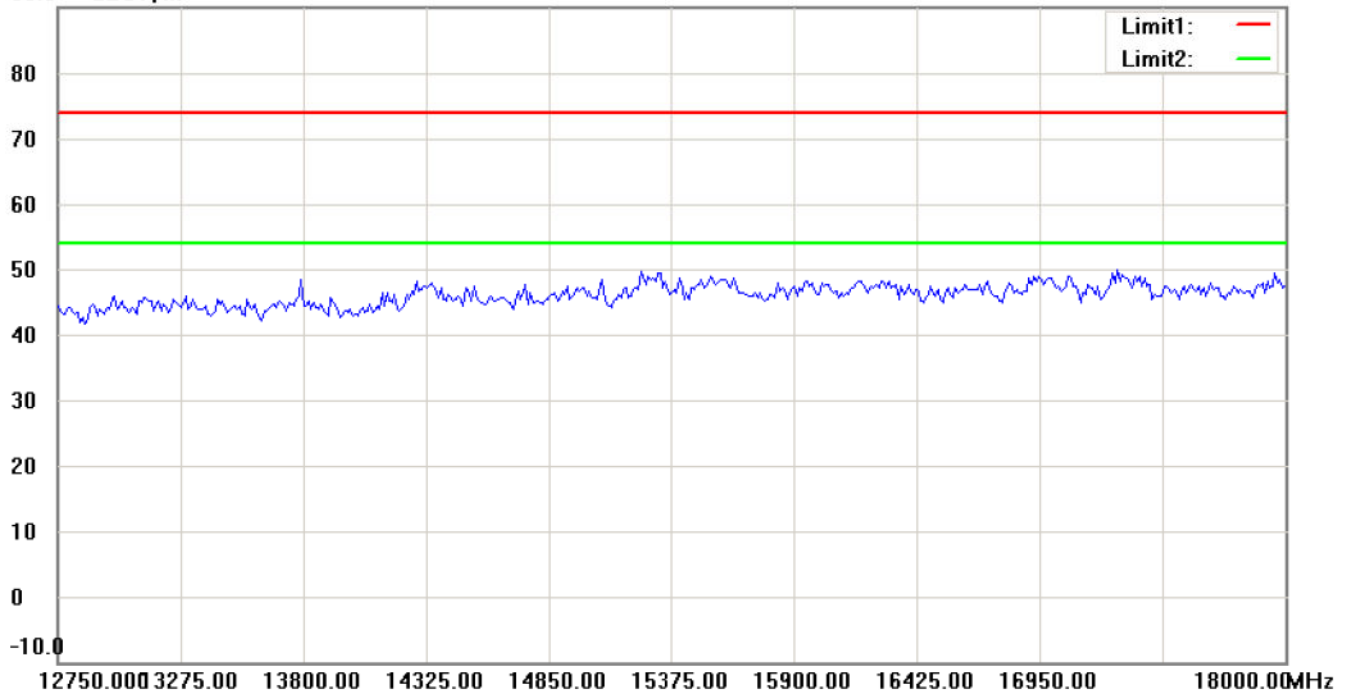


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.



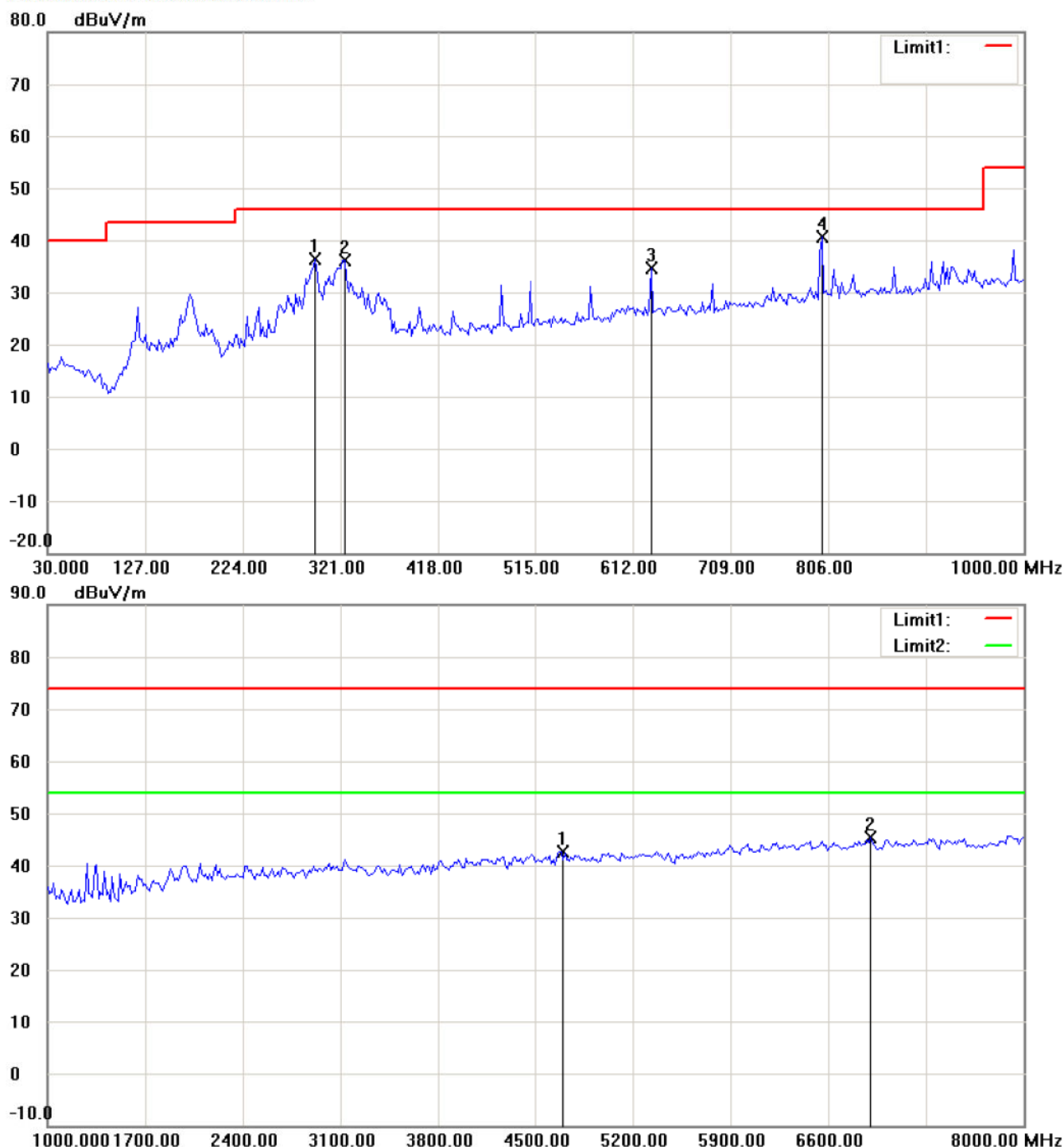
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11n 20MHz CH6

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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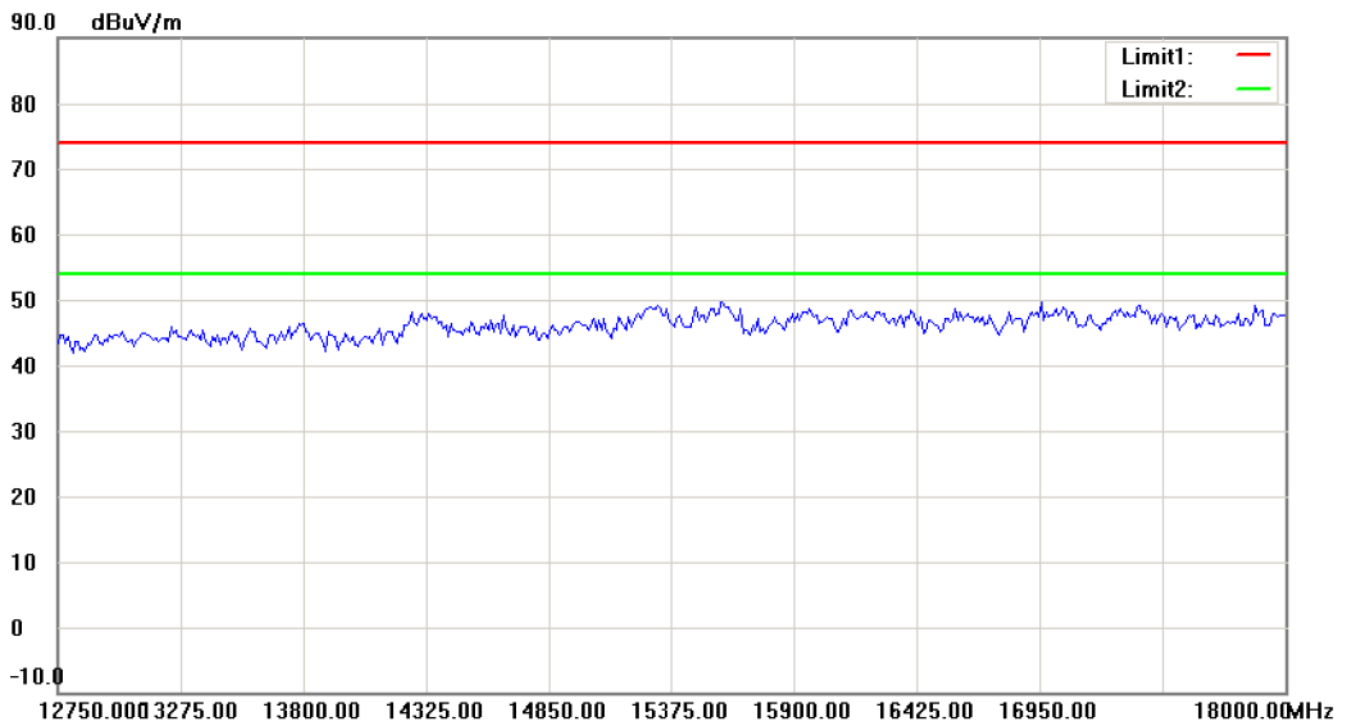
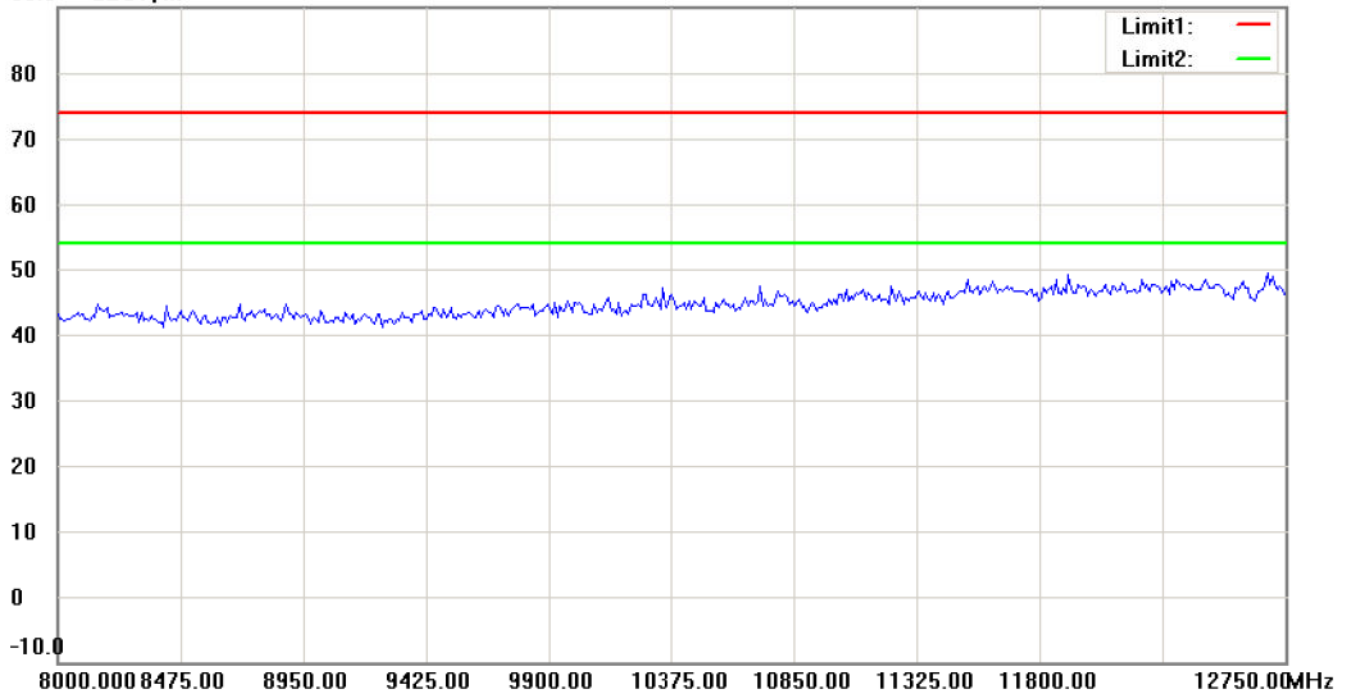


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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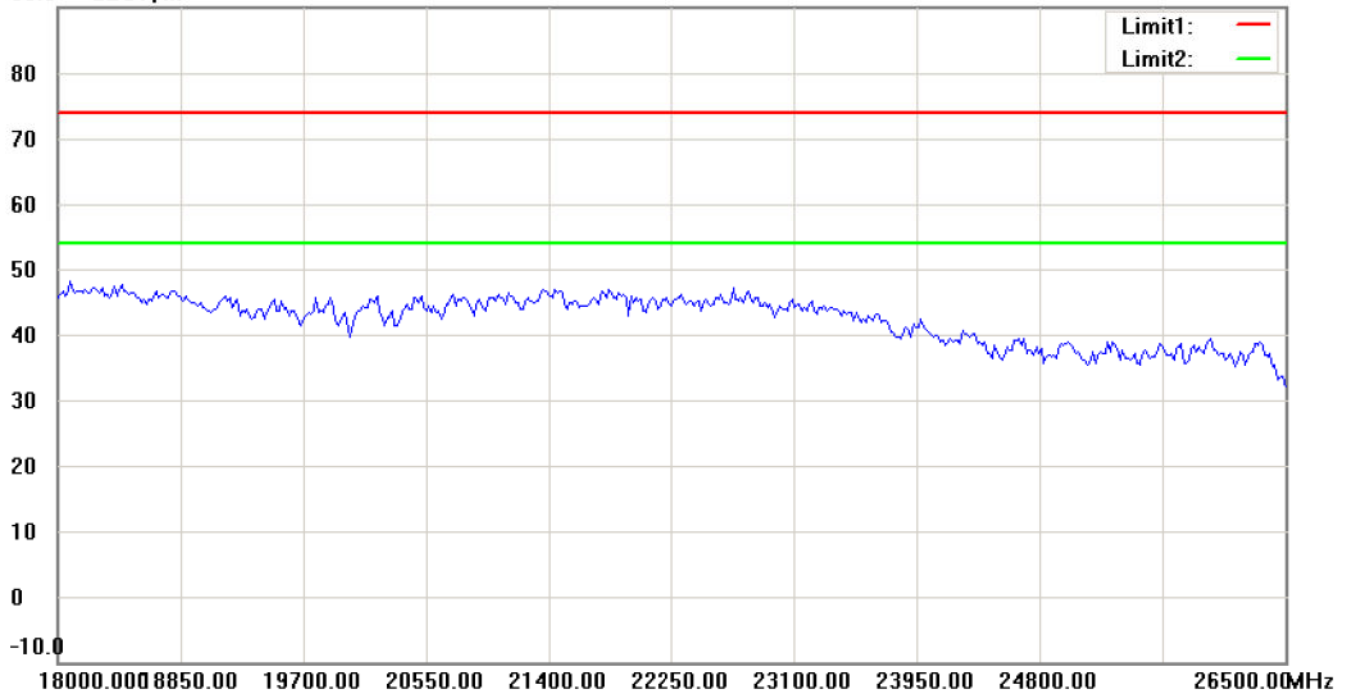


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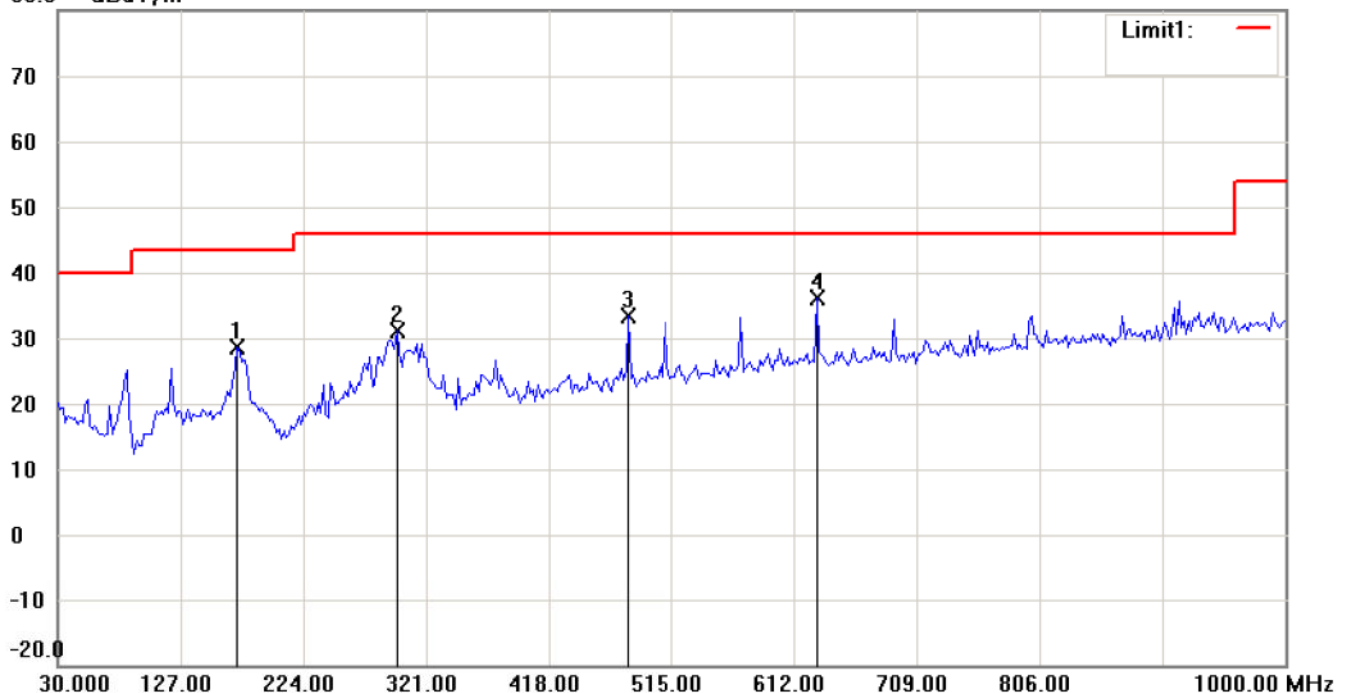
FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

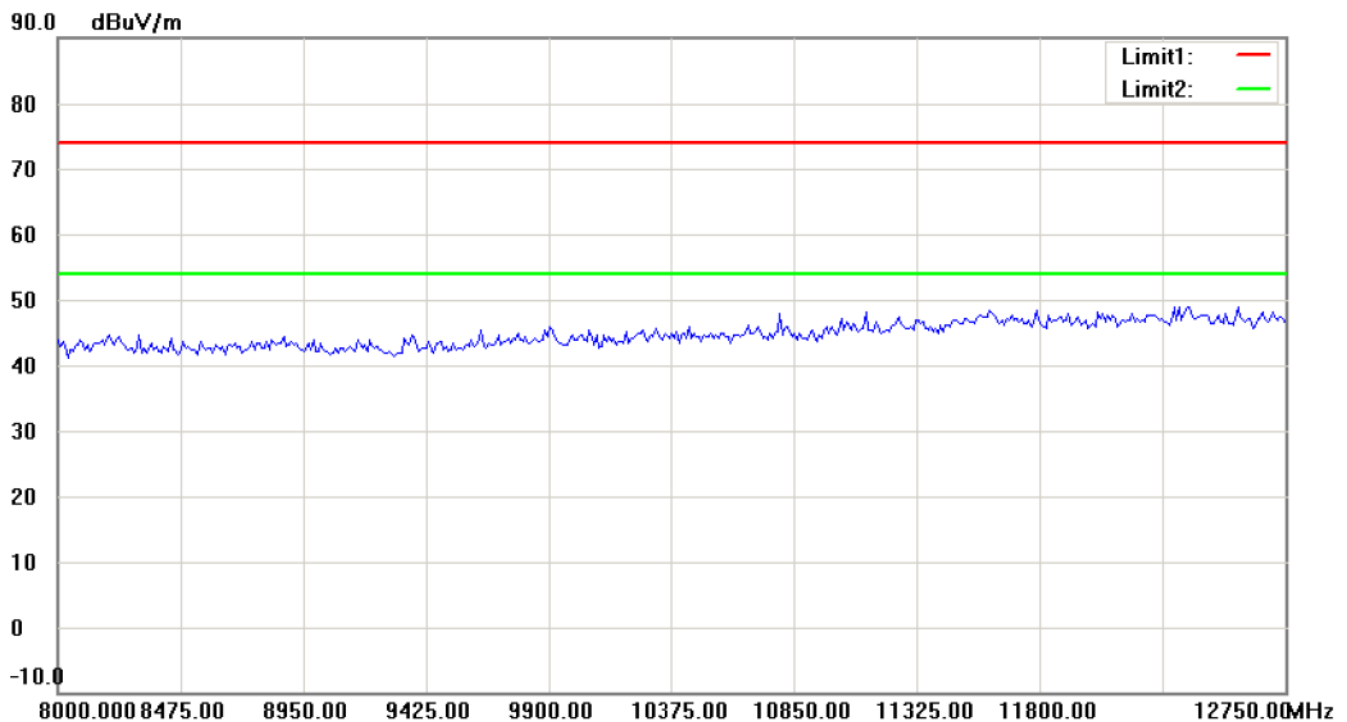
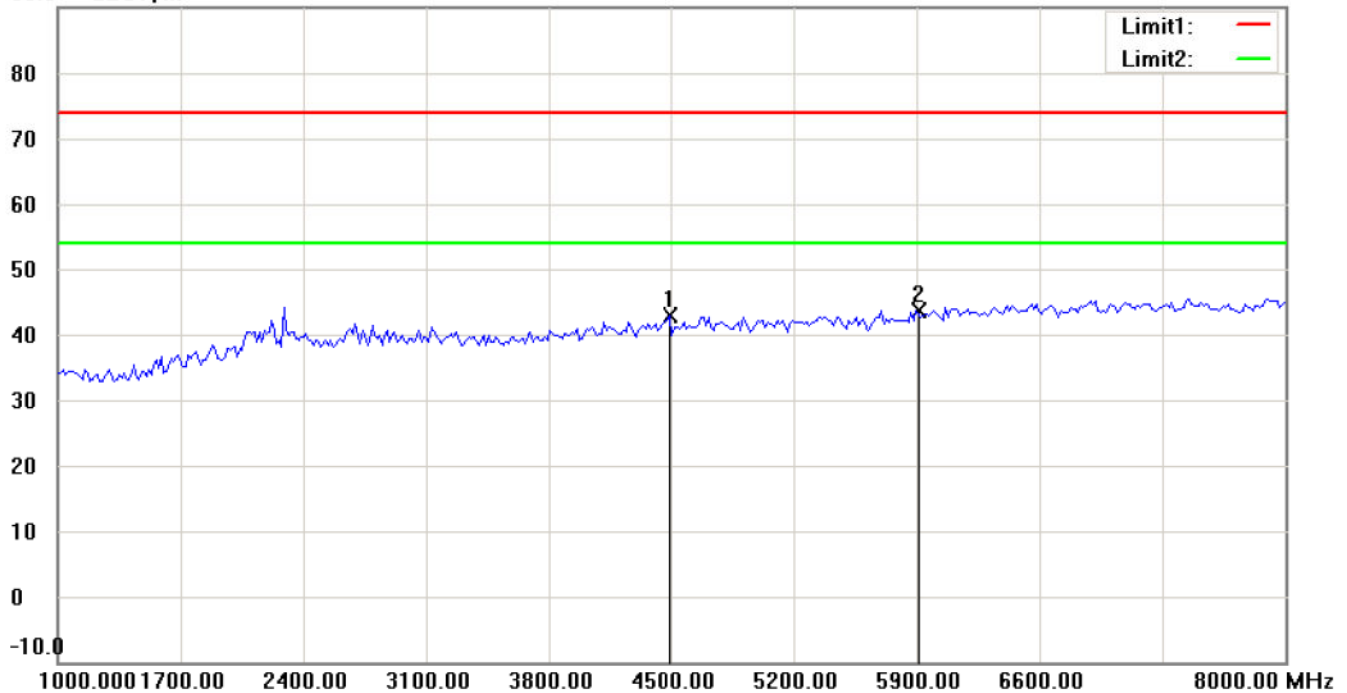
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

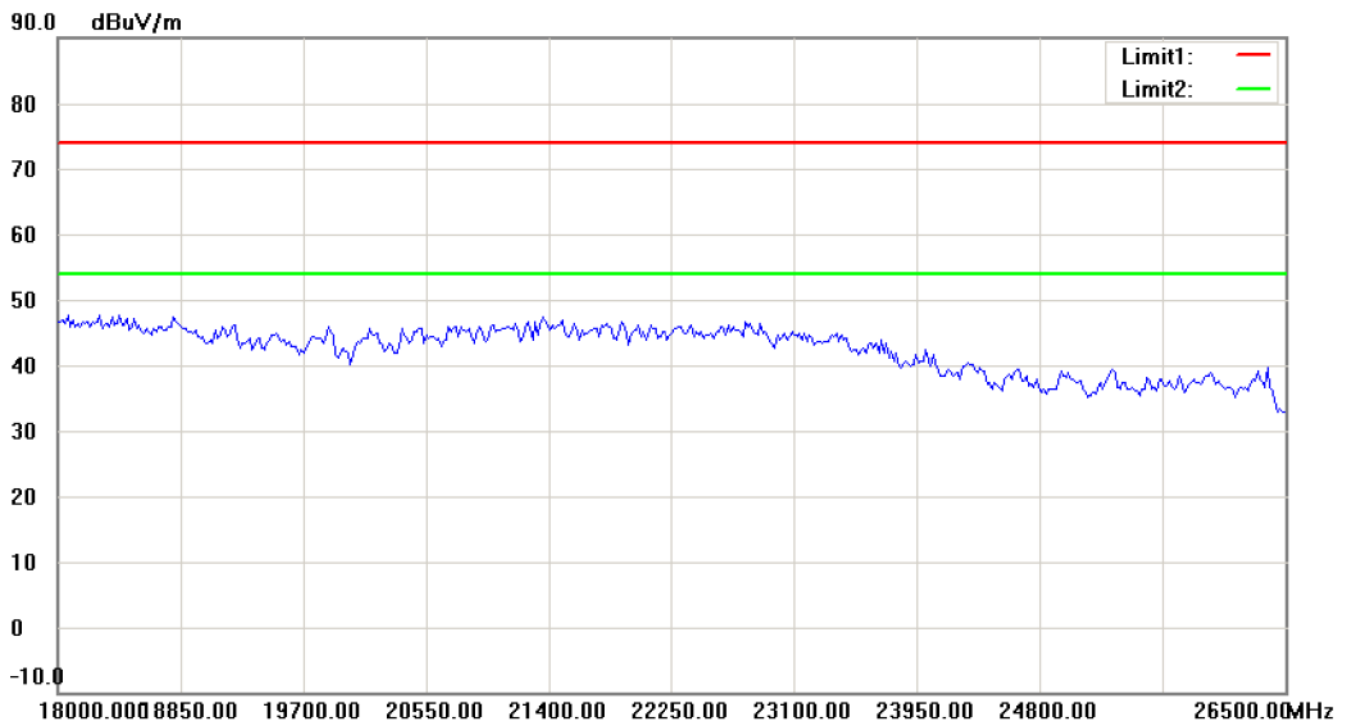
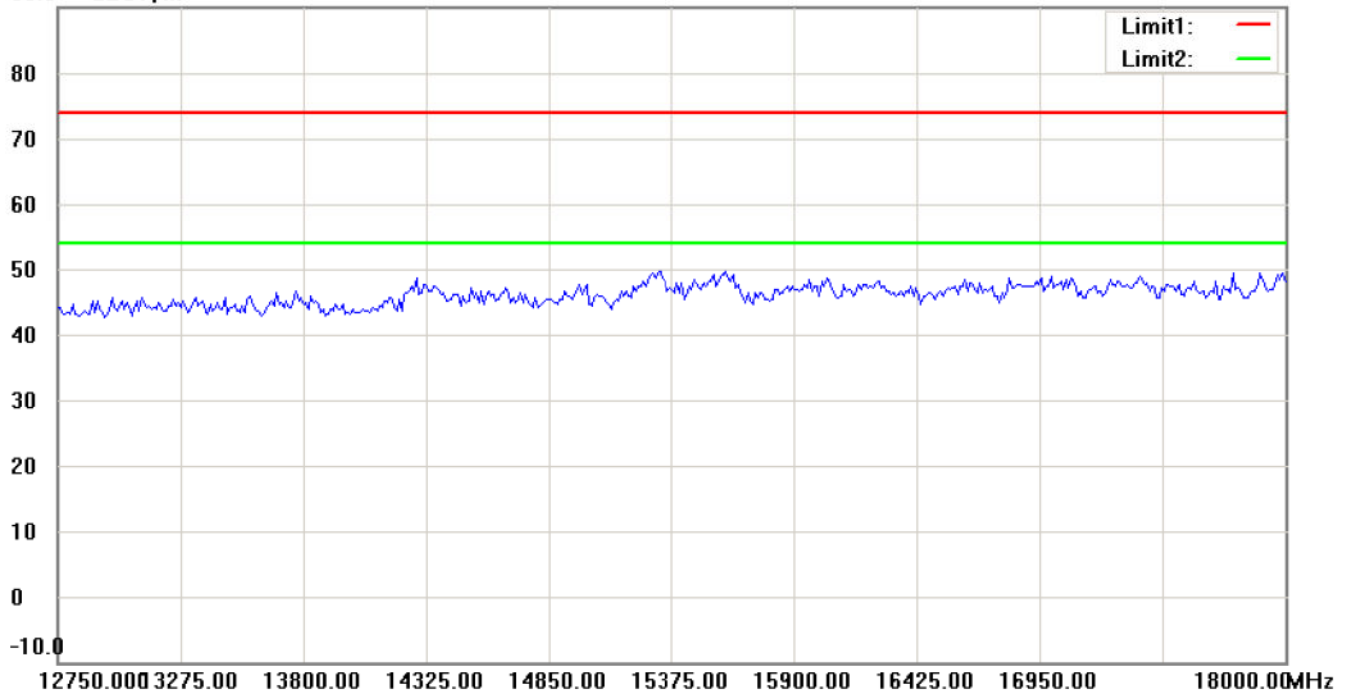


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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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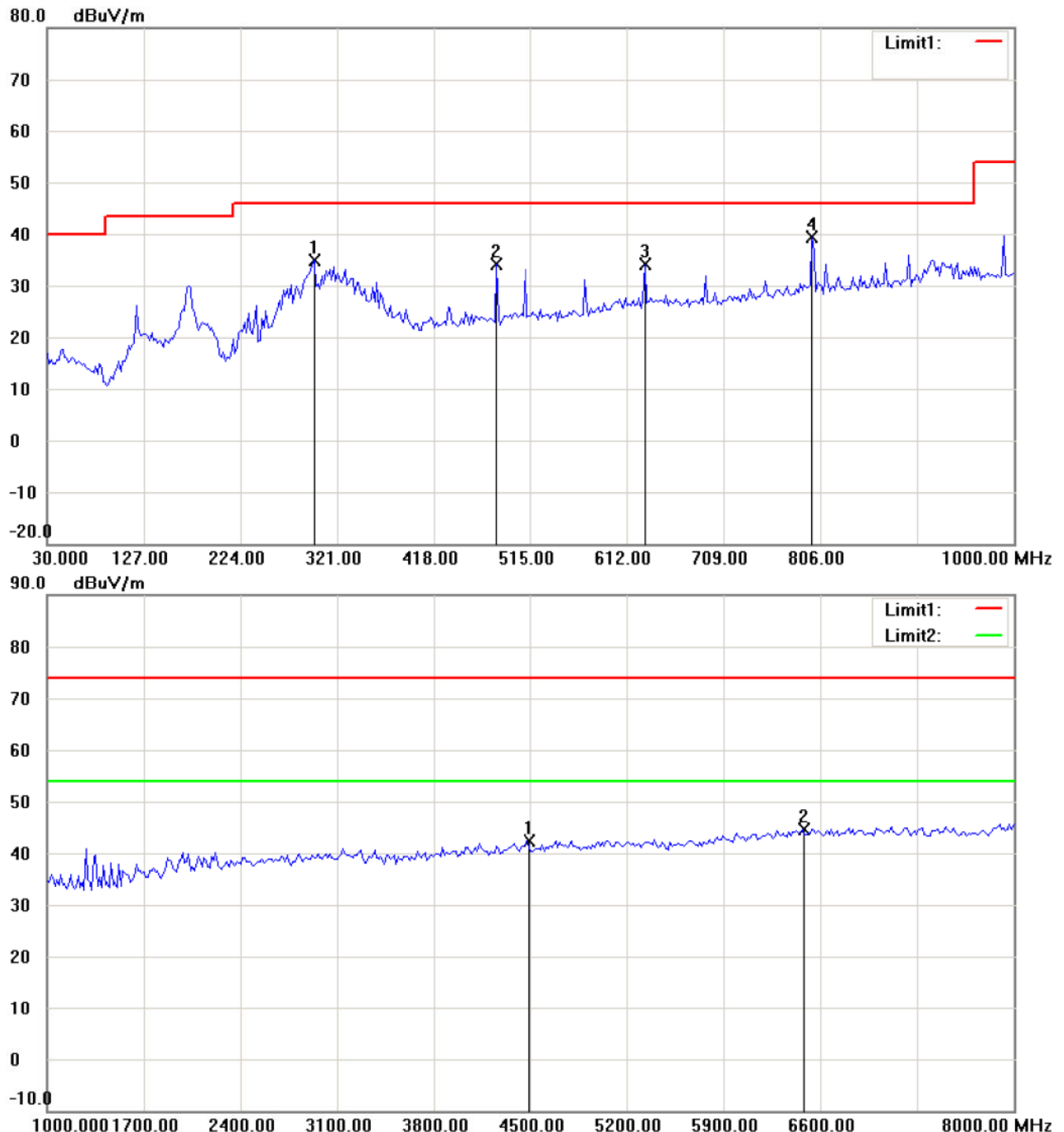


Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

RX 802.11n 20MHz CH11

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.

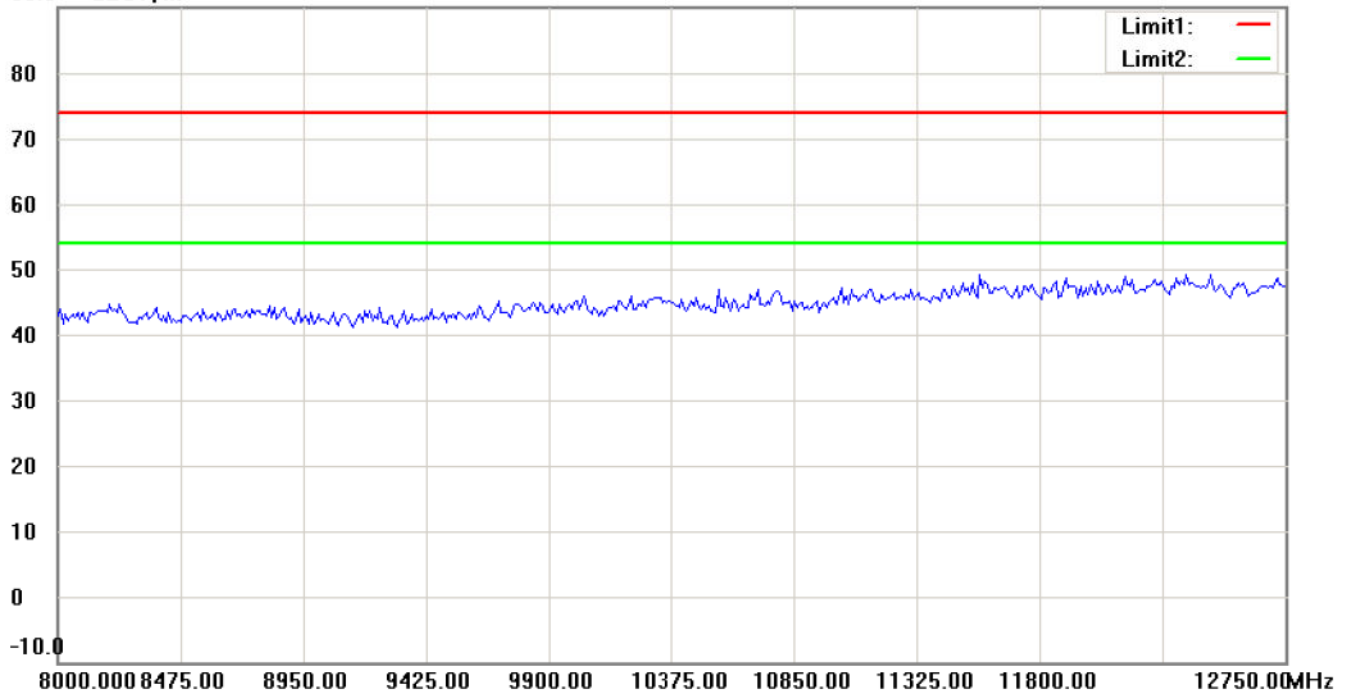


Worldwide Testing Services(Taiwan) Co., Ltd.

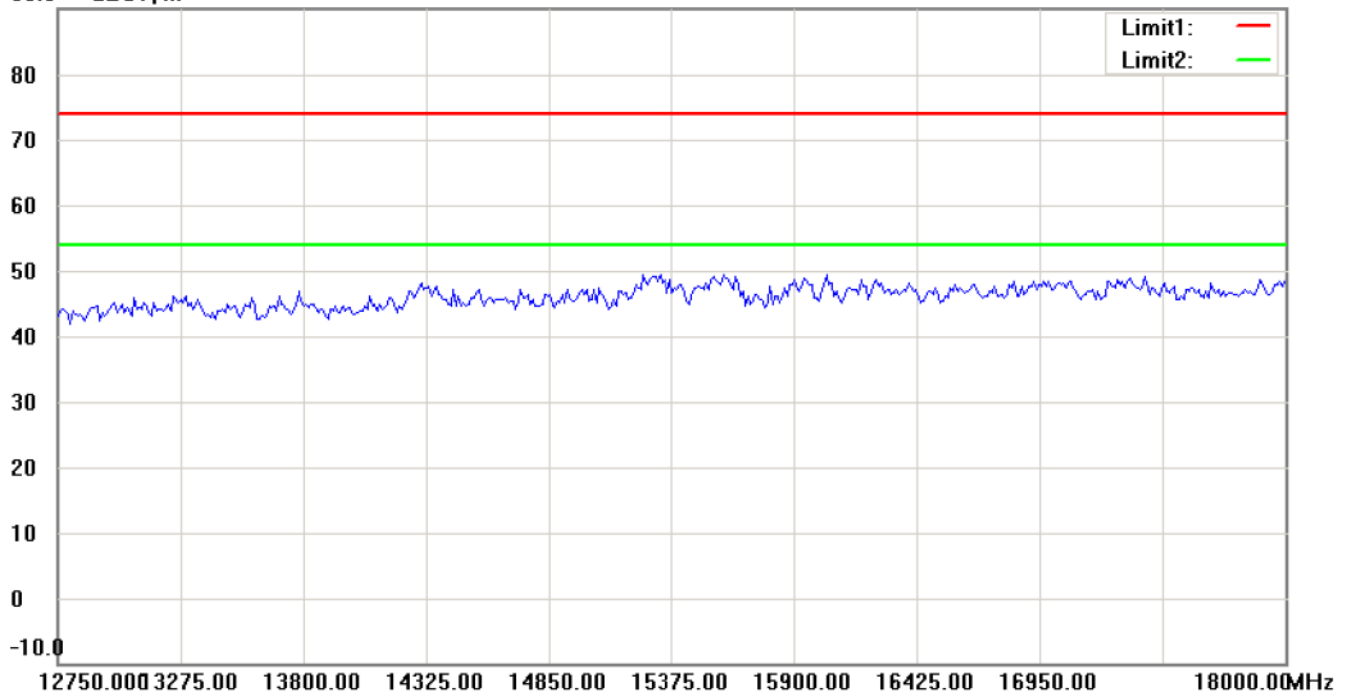
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



90.0 dBuV/m



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.

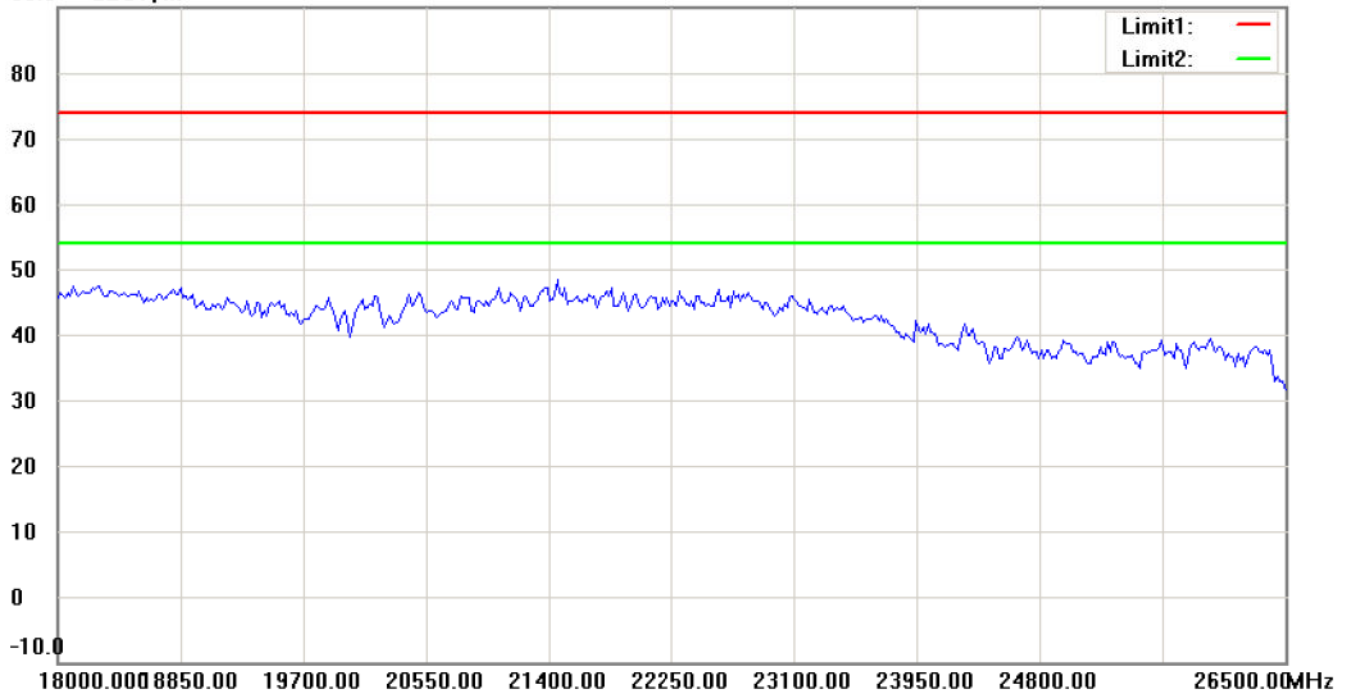


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Registration number: W6M21401-13800-C-1

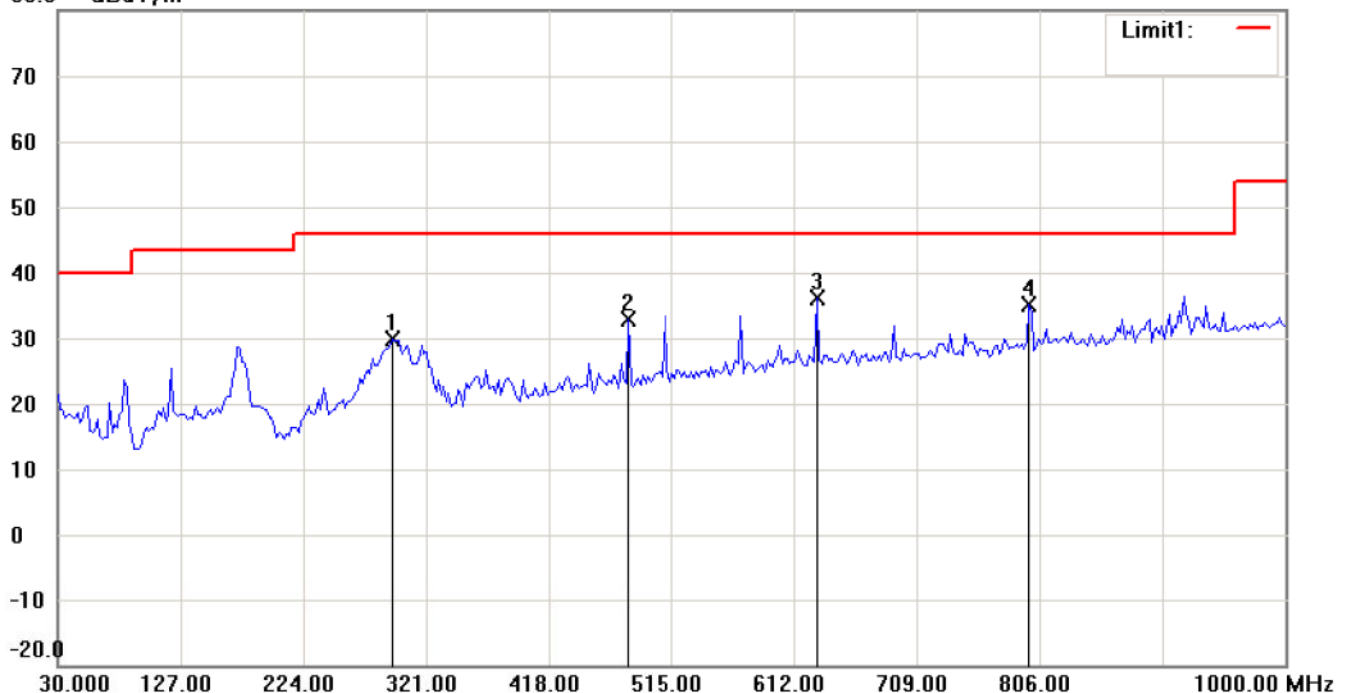
FCC ID: 2ABPY-61F8

90.0 dBuV/m



Antenna Polarization V

80.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

Note:

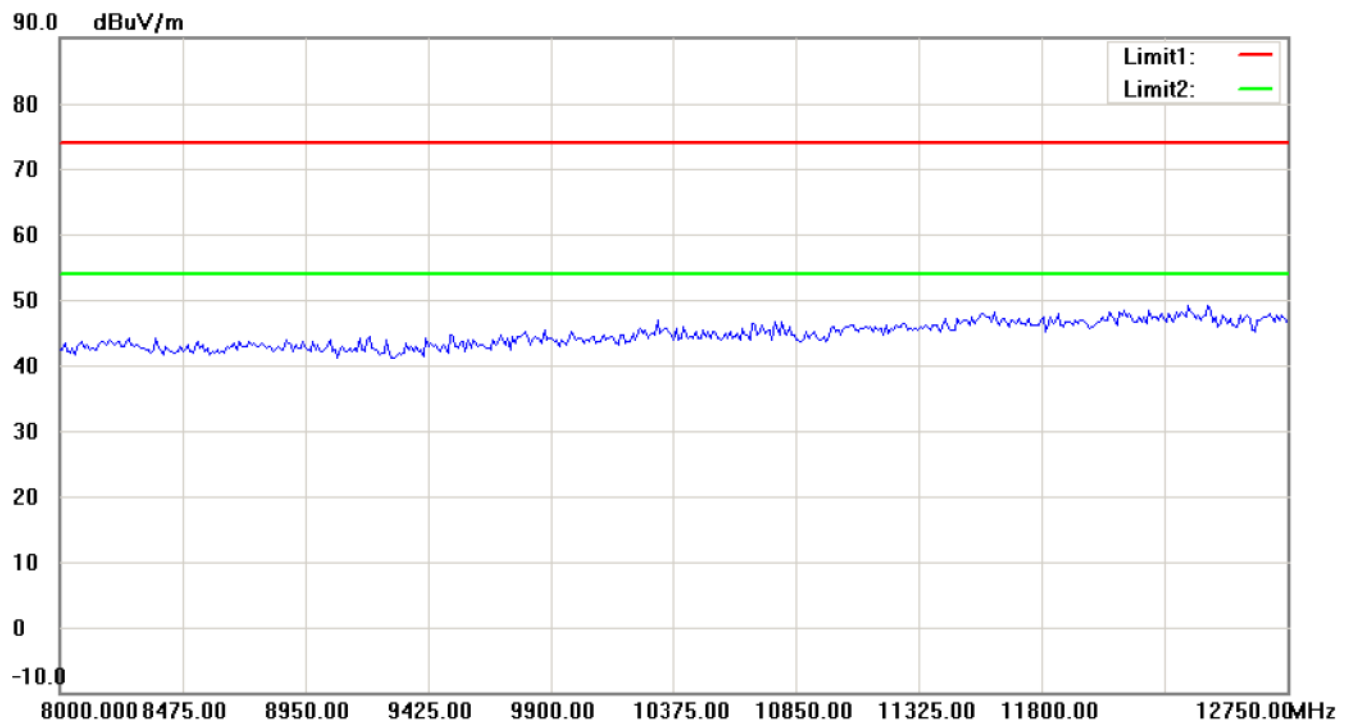
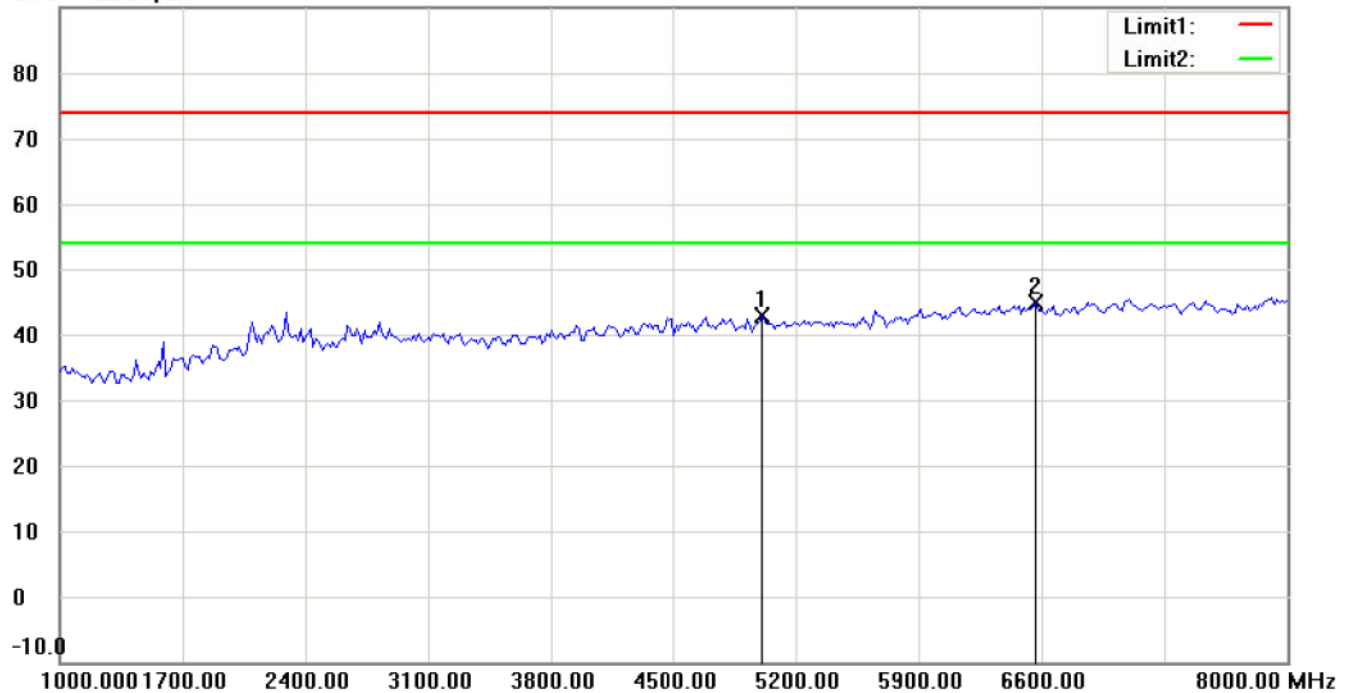
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



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.

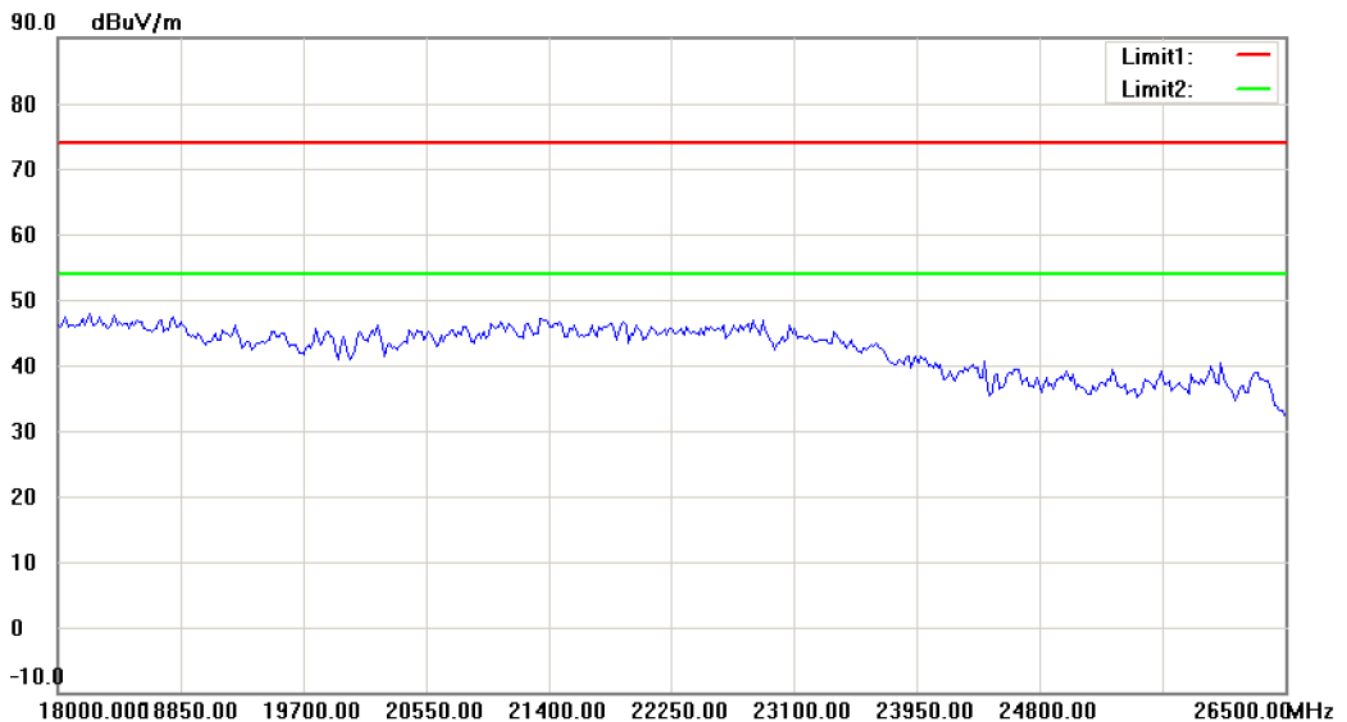
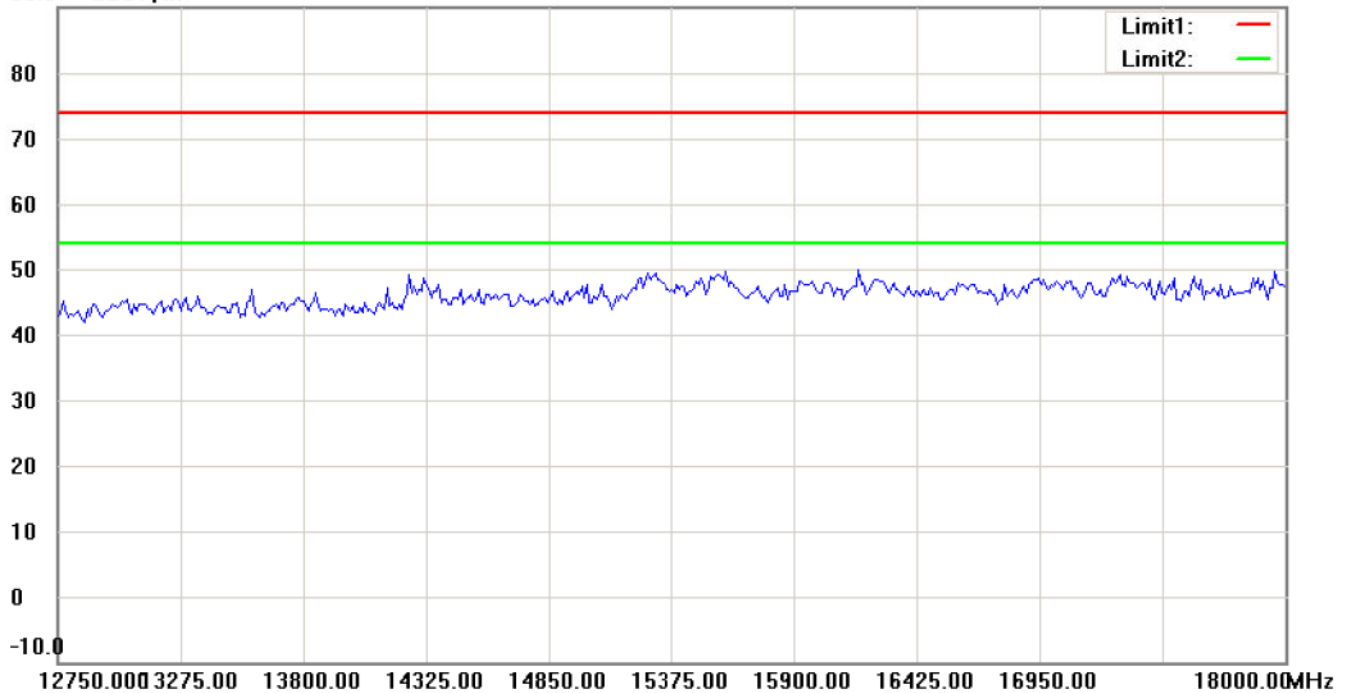


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Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

90.0 dBuV/m



Up Line: Peak Limit Line

Down Line: Ave Limit Line

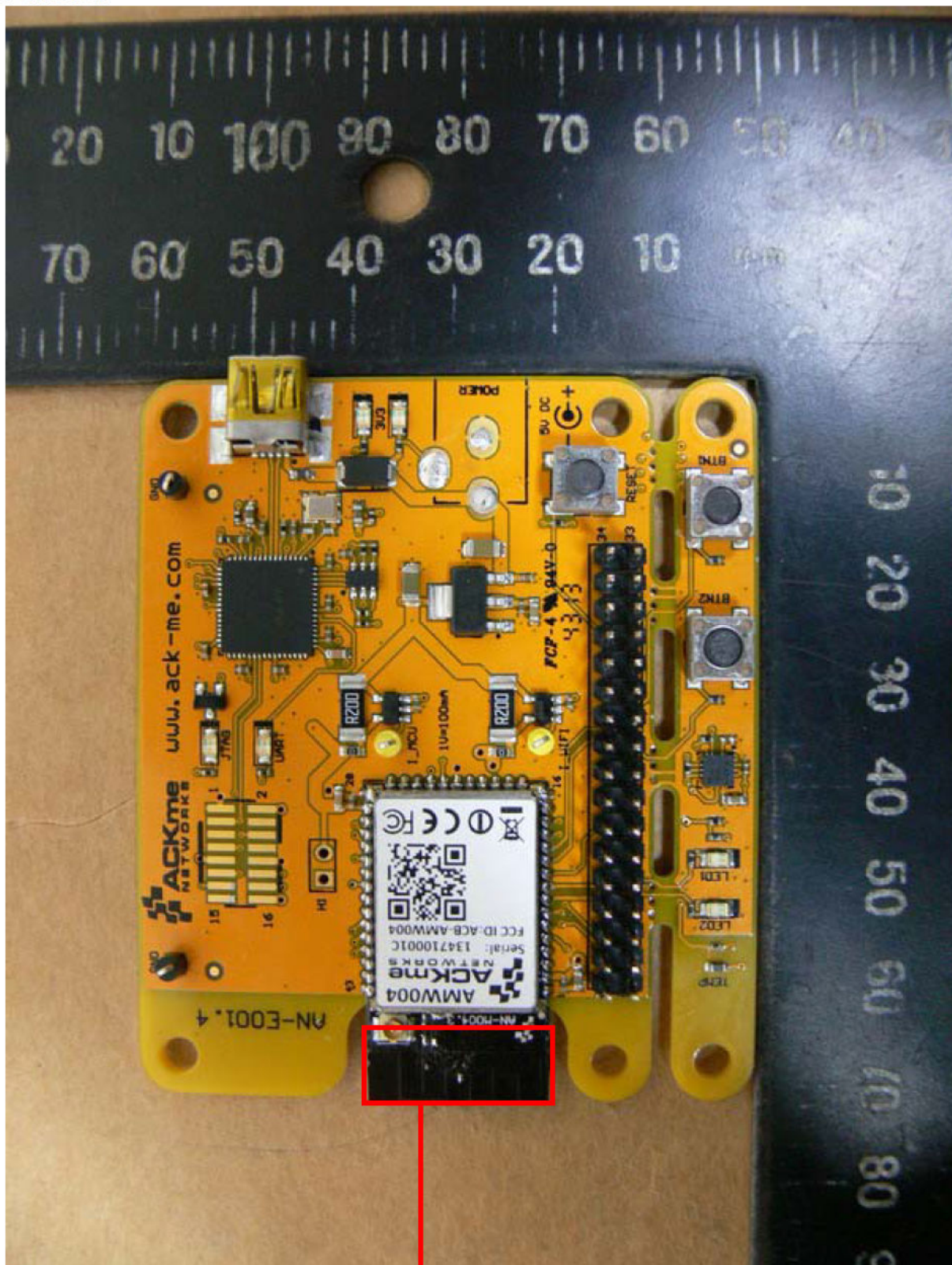
Note:

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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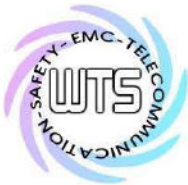
Registration number: W6M21401-13800-C-1

FCC ID: 2ABPY-61F8

EUT Photos

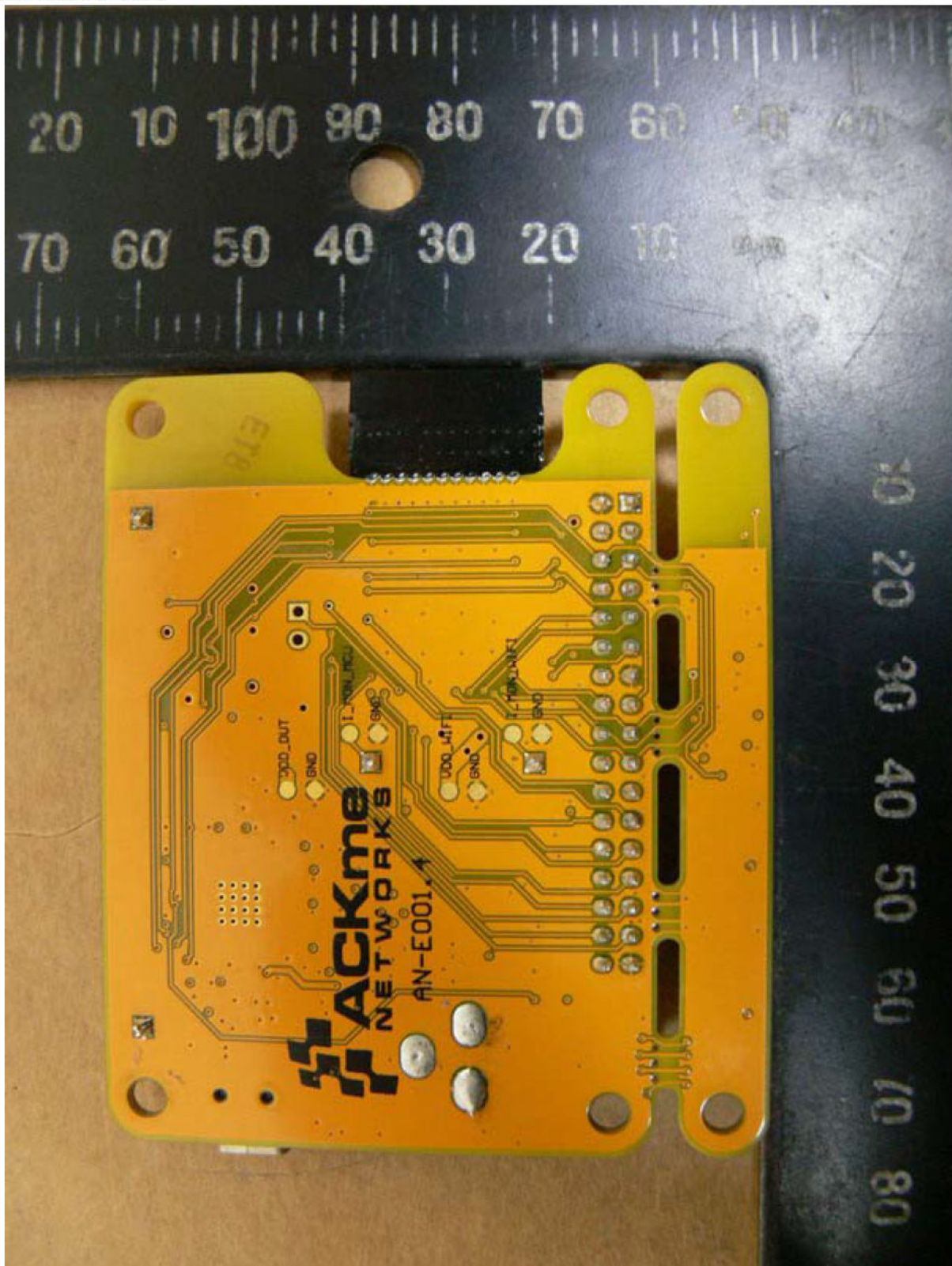


PCB antenna / 3.18 dBi



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Set Up Photo of Radiated Emission

