FCC PART 15 SUBPART C TEST REPORT

for

Bluetooth V4.0 Dual-mode dongle

Model No.: BT-400B0

FCC ID: PANBT400B0

of

Applicant: CC&C Technologies, Inc.
Address: 8F, No. 150, Jian Yi Road, Zhonghe District,
New Taipei City 235 Taiwan

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A

A2LA Accredited No.: 2732.01

Report No.: W6M21408-14385-C-1

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

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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 is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.
The test report may only be reproduced or published in full.
Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

Specific Conditions:
Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

August 20, 2014		Spencer Yang	Spencer
Date	WTS-Lab.	Name	Signature

Technical responsibility for area of testing:

August 20, 2014		Kevin Wang	Kevin Wang
Date	WTS	Name	Signature

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

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, IC 5107A

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:	CC&C Technologies, Inc.
Street:	8F, No. 150, Jian Yi Road, Zhonghe District,
Town:	New Taipei City 235
Country:	Taiwan
Telephone:	+886-2-8226-5088
Fax:	+886-2-8226-5077

1.4 Application details

Date of receipt of test item: August 14, 2014
Date of test: from August 15, 2014 to August 20, 2014

1.5 General information of Test item

Type of test item: Bluetooth V4.0 Dual-mode dongle
Model Number: BT-400B0
Brand Name: CC&C
Multi-listing model number: ./.
Photos: see Appendix

Technical data

Frequency band: 2.4 GHz – 2.4835 GHz
Number of Channels: Bluetooth 2.0 79 channels
Bluetooth 4.0 40 channels
Operation modes: Duplex
Modulation Type: GFSK、π/ 4DQPSK、8DPSK
Fixed point-to-point operation: ☐ Yes / ☒ No
Type of Antenna: PCB Antenna
Antenna gain: -4.10 dBi
Power supply: USB 5 VDC (power on PC), 500 mA
Emission designator: Bluetooth 2.0: 1M31F1D
Bluetooth 4.0: 1M25G1D
Host device: none

Classification :

Fixed Device	☐
Mobile Device (Human Body distance ＞ 20cm)	☐
Portable Device (Human Body distance ＜ 20cm)	☒
Modular Radio Device	☐

Transmitter	**Unom**

Mode A (Bluetooth 2.0 Normal mode)

Power (ch 0 or A):	Conducted: 4.28 dBm
Power (ch 39 or B):	Conducted: 5.07 dBm
Power (ch 78 or C):	Conducted: 5.15 dBm

Mode B (Bluetooth 2.0 EDR mode)

Power (ch 0 or A):	Conducted: 7.29 dBm
Power (ch 39 or B):	Conducted: 8.06 dBm
Power (ch 78 or C):	Conducted: 8.20 dBm

Mode C (Bluetooth 4.0)

Power (ch 0):	Conducted: 4.43 dBm
Power (ch 19):	Conducted: 5.23 dBm
Power (ch 39):	Conducted: 5.26 dBm

Manufacturer: (if applicable)

Name:	Kunshan CC&C Technologies, Co.,LTD.
Street:	No.9 Building, 3rd Main Street, Kunshan Free Trade Zone,
Town:	Jiangsu Province,
Country:	P.R.China

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2013-10)

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:	USB 5 VDC (power on PC), 500 mA
Extreme conditions parameters:	./.

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-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2014/7/8	2015/7/7
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	2014/7/01	2015/6/30
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2014/2/25	2015/2/24
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	2014/2/18	2015/2/17
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2014/3/3	2015/3/2
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2014/3/3	2015/3/2
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2014/3/3	2015/3/2
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2014/6/05	2015/6/04
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2014/3/3	2015/3/2
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	2014/3/3	2015/3/2
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	2014/6/11	2015/6/10
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2014/8/12	2015/8/11

ETSTW-RE 126	5GHz Notch filter	5NSL11-5800/E221.3-O/O	1	K&L Microwave	2014/8/12	2015/8/11
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2014/3/3	2015/3/2
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circits	2014/8/12	2015/8/11
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circits	2014/8/12	2015/8/11
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.	2014/2/27	2015/2/26
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.	2014/2/27	2015/2/26
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2014/2/27	2015/2/26
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2014/2/27	2015/2/26
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2014/2/27	2015/2/26
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2014/2/27	2015/2/26
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2014/2/19	2015/2/18
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2014/3/3	2015/3/2
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2014/3/3	2015/3/2
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	2014/3/3	2015/3/2
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.	2014/2/19	2015/2/18
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2014/2/19	2015/2/18
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 50μH 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 dBμV) 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 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/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.

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 (dwell time/T)
T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

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

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

3 Test results (enclosure)

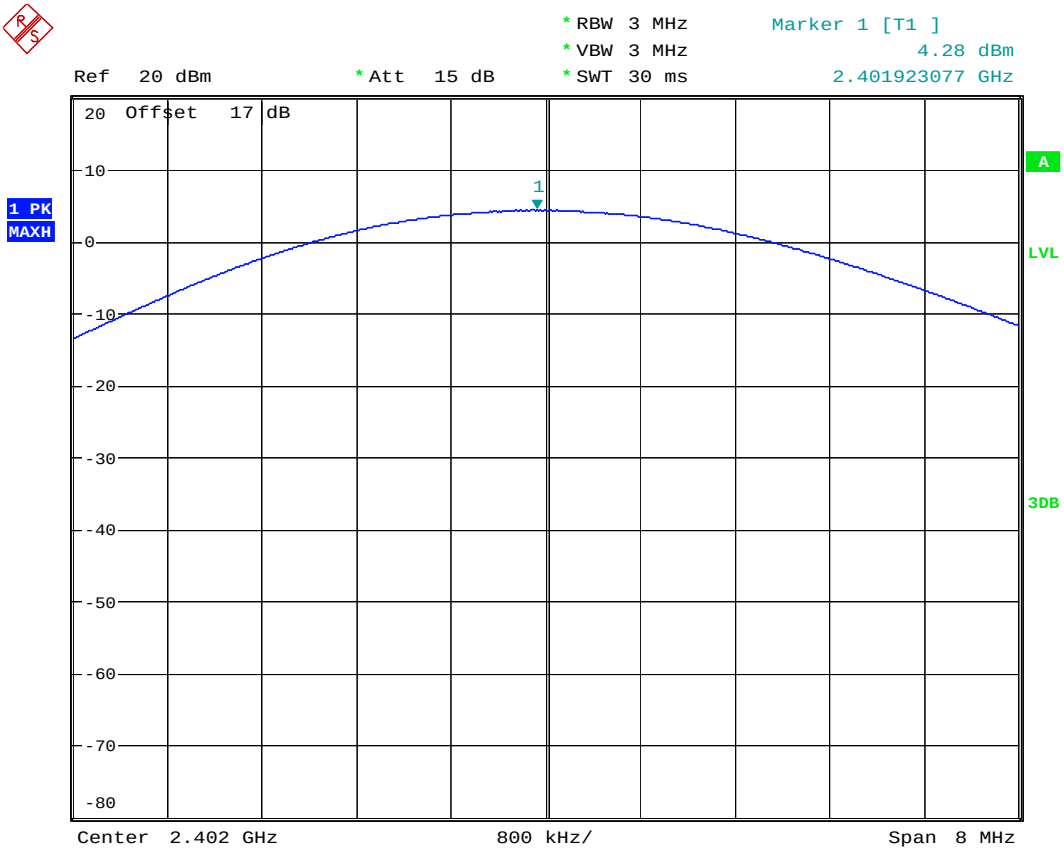
TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	☒	☒	☐
Equivalent isotropically radiated Power	15.247(b)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.247(c)	☒	☒	☐
Spurious Emissions conducted – Transmitter operating	15.247	☐	☐	☐
Carrier Frequency Separation	15.247(a) (1)	☒	☒	☐
Number of Hopping Frequencies	15.247(a) (1)(i)	☒	☒	☐
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	☒	☒	☐
20 dB Bandwidth	15.247(a) (1)(i)	☒	☒	☐
Minimum 6 dB Bandwidth	15.247(a)(2)	☒	☒	☐
Band-edge Compliance of RF Emission	15.247(d)	☒	☒	☐
Peak Power Spectral Density	15.247(e)	☒	☒	☐
Radiated Emission from Digital Part	15.109	☐	☐	☐
Power Line Conducted Emission	15.207(a)	☒	☒	☐

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

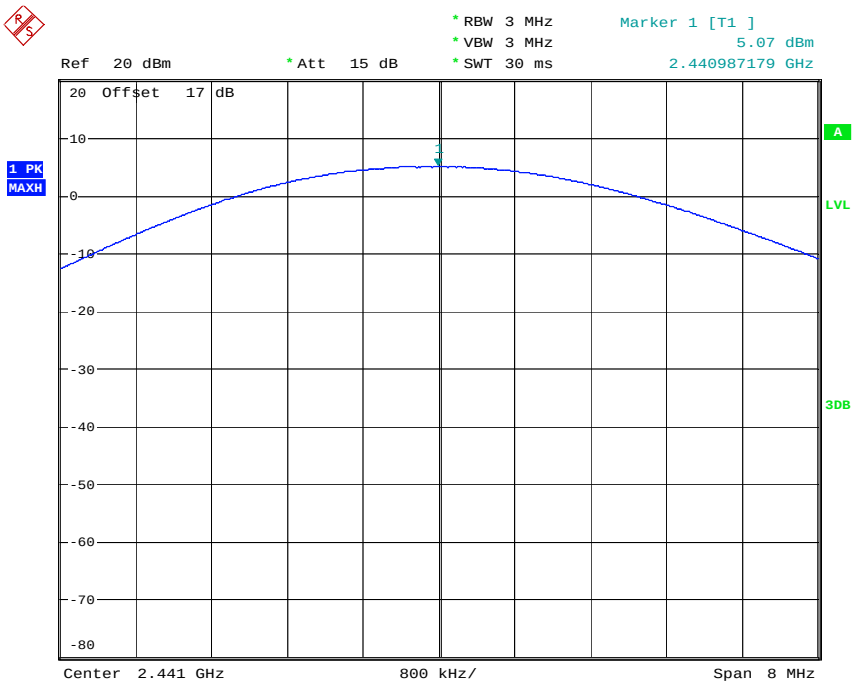
This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.
The power was measured with modulation (declared by the applicant).

Bluetooth 2.0
Normal mode

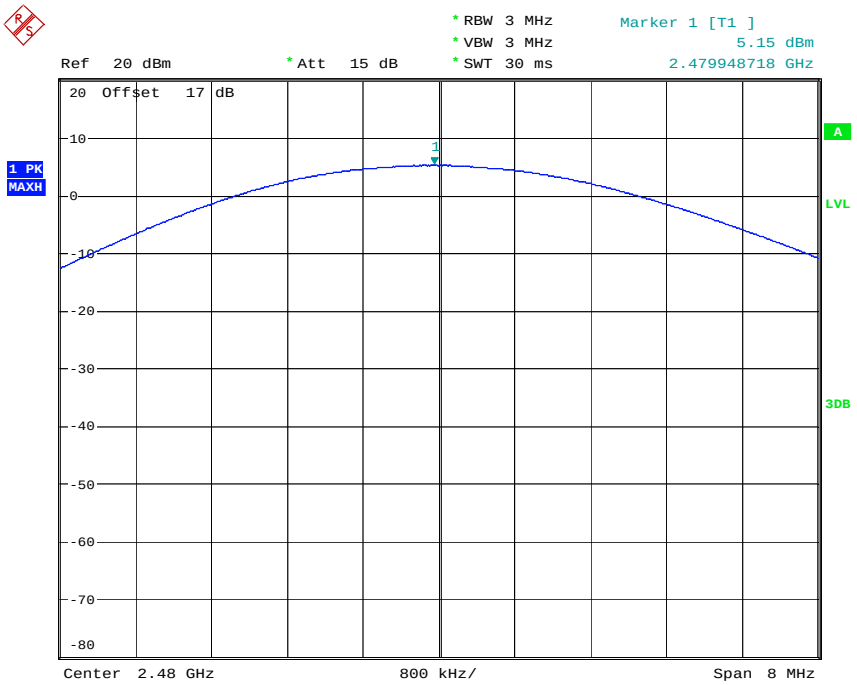


MAX OUTPUT POWER CH0
Date: 14.AUG.2014 19:49:12

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



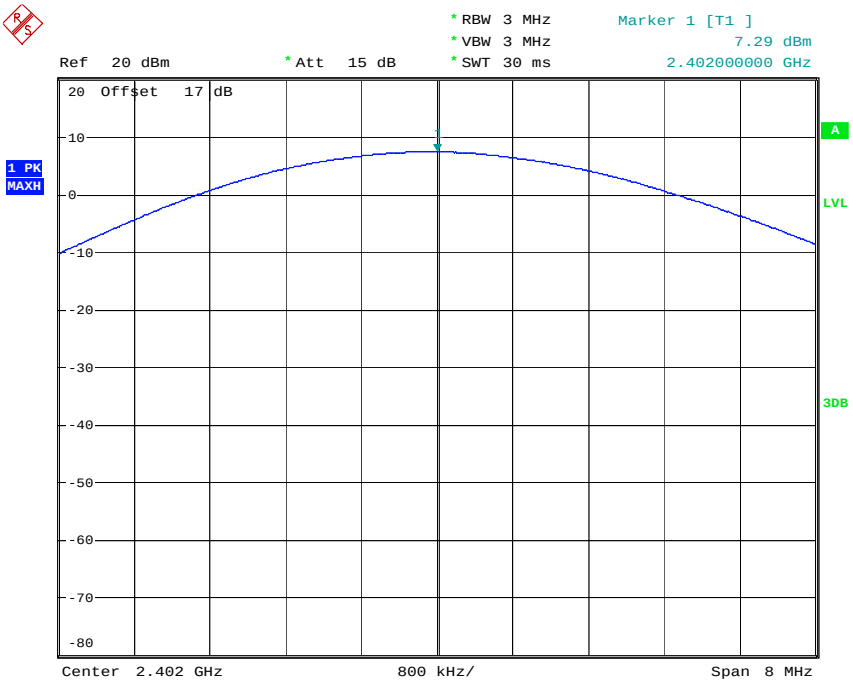
MAX OUTPUT POWER CH39
Date: 14.AUG.2014 19:49:43



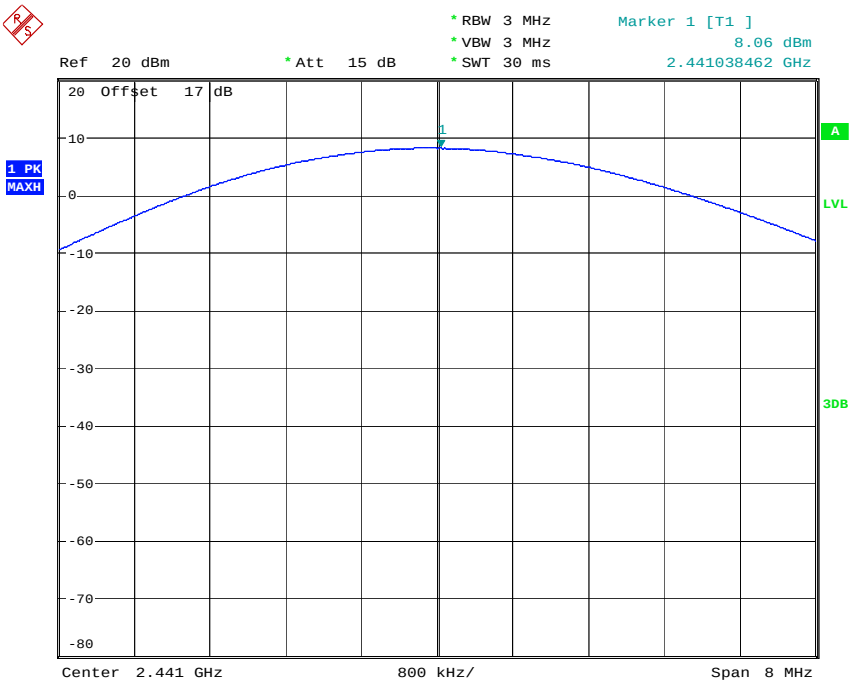
MAX OUTPUT POWER CH78
Date: 14.AUG.2014 19:50:03

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

EDR mode

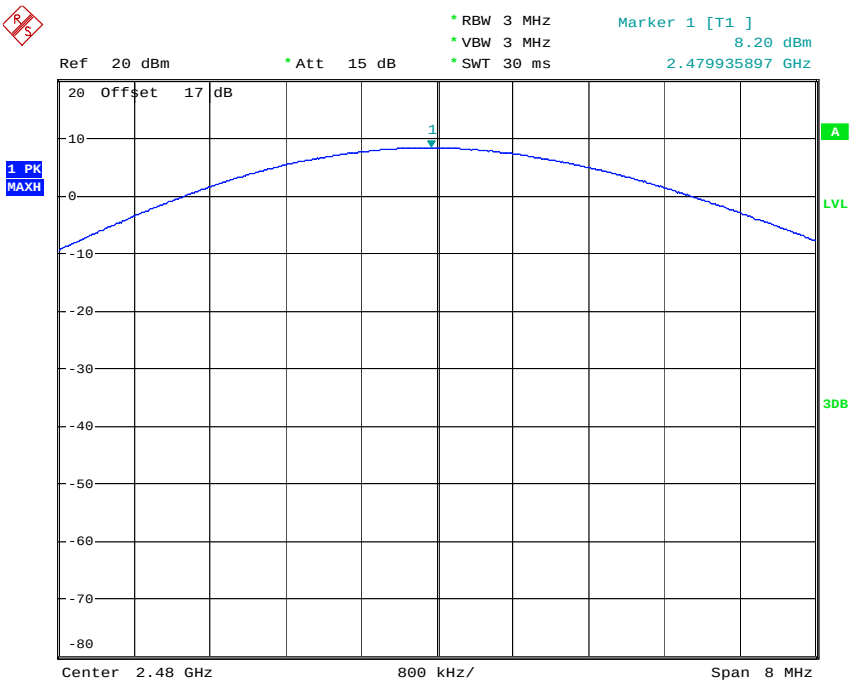


MAX OUTPUT POWER CH0 EDR MODE
Date: 14.AUG.2014 20:00:52



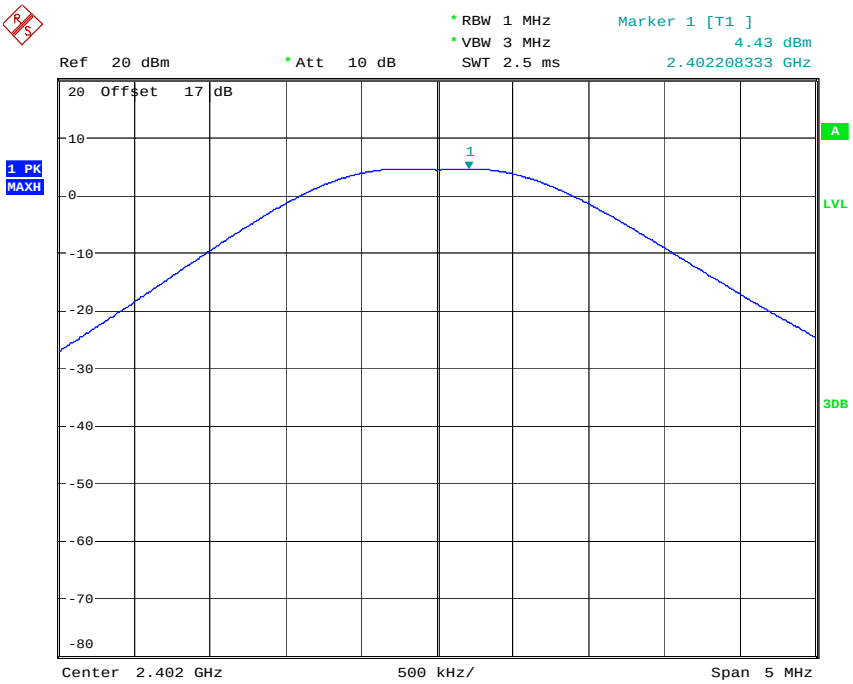
MAX OUTPUT POWER CH39 EDR MODE
Date: 14.AUG.2014 20:01:24

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



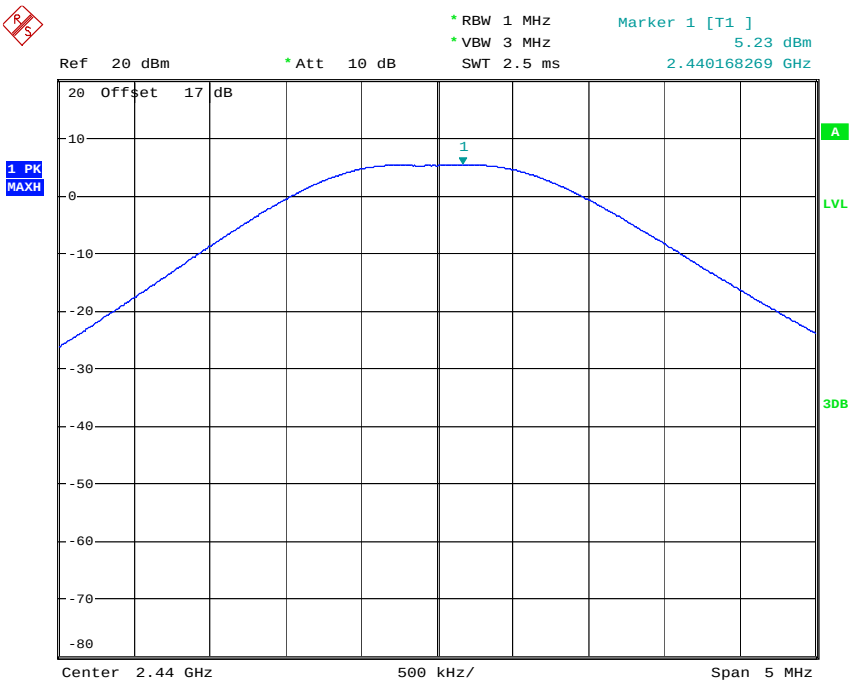
MAX OUTPUT POWER CH78 EDR MODE
Date: 14.AUG.2014 20:01:44

Bluetooth 4.0

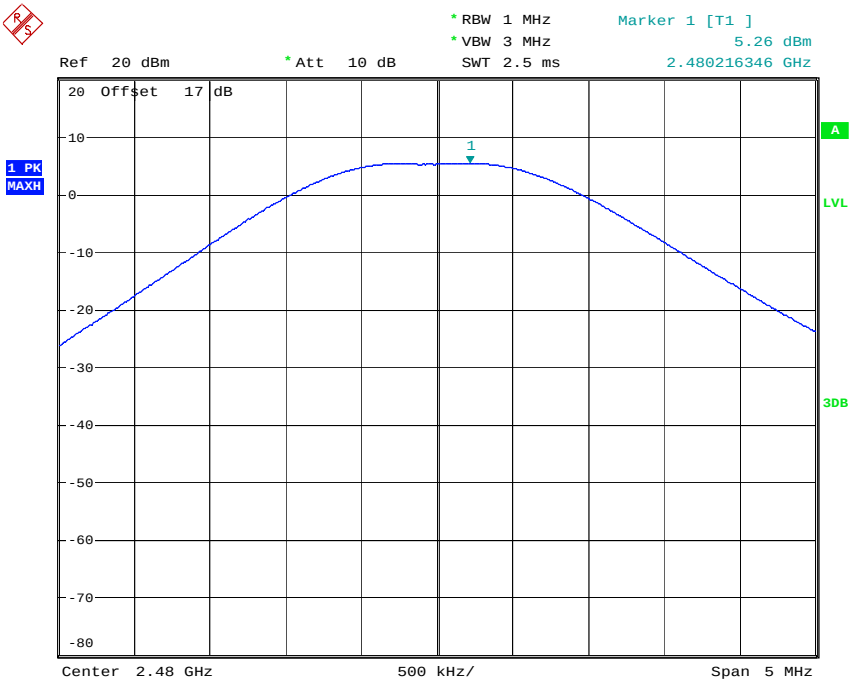


MAX OUTPUT POWER BT4.0 CH00
Date: 14.AUG.2014 20:19:04

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



MAX OUTPUT POWER BT4.0 CH19
Date: 14.AUG.2014 20:20:58



MAX OUTPUT POWER BT4.0 CH39
Date: 14.AUG.2014 20:21:48

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Mode A

Test condition T_{nom}= 23°C, V_{nom} = 120 V	Signal Field strength TX highest power mode dB μ V/m
Frequency [MHz]	--
--	

Mode B

Test condition T_{nom}= 23°C, V_{nom} = 120 V	Signal Field strength TX highest power mode dB μ V/m
Frequency [MHz]	--
--	

Mode C

Test condition T_{nom}= 23°C, V_{nom} = 120 V	Signal Field strength TX highest power mode dB μ V/m
Frequency [MHz]	--
--	

Limits:

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

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

Test equipment used: ETSTW-RE 055

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)
Bluetooth 2.0+EDR
EIRP = max. conducted output power + antenna gain
EIRP = 8.20 dBm + (-4.10) dBi = 4.10 dBm
Limit: EIRP = +36 dBm for Antenna gain <6dBi
Bluetooth 4.0
EIRP = max. conducted output power + antenna gain
EIRP = 5.26 dBm + (-4.10) dBi = 1.16 dBm
Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

RESULT:

Test standard : FCC KDB Publication 447498 10 D01v05

According to KDB447498 10 D01v05:
SAR evaluation, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The enclosure of the device provides ≥ 0.5 cm separation from the antenna elements to significant metal parts of the enclosure to minimize potential perturbations.

Frequency Band:2400-2483.5 MHz
Maximum Power fed to Antenna (BT2.0): 2.5704 mW
Maximum Power fed to Antenna (BT4.0): 1.3062 mW

Separation distances:
Antenna feed center to metal parts of enclosure: > 5 mm
Distance prescribed in user manual: > 5 mm

MHz	5	10	15	20	25	mm
2450	10	19	29	38	48	SAR Test Exclusion Threshold (mW)

MHz	30	35	40	45	50	mm
2450	57	67	77	86	96	SAR Test Exclusion Threshold (mW)

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	mW

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 ≦ 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 (dwell time/ 100ms)

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

Explanation: See attached diagrams in Appendix.

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 (dwell time/100ms)

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044

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

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: BT-400B0 Date: 2014/8/15
Mode: BT2.0 TX_2402 MHz Temperature: 24 °C Engineer: Leon
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
113.5871	18.73	peak	12.71	31.44	43.50	-12.06	60	100
306.0321	24.02	peak	16.14	40.16	46.00	-5.84	135	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3202.6390	59.34	43.15	-3.09	56.25	40.06	74.00	54.00	-13.94	147	100
4804.0000	42.18	---	0.28	42.46	---	74.00	54.00	-31.54	155	100
7206.0000	40.65	---	3.85	44.50	---	74.00	54.00	-29.50	130	100
9608.0000	33.54	---	7.93	41.47	---	74.00	54.00	-32.53	210	100
12010.0000	32.76	---	12.65	45.41	---	74.00	54.00	-28.59	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)
31.9440	25.10	QP	13.26	38.36	40.00	-1.64	225	100
74.7094	27.75	QP	10.67	38.42	40.00	-1.58	80	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4804.0000	41.76	---	0.28	42.04	---	74.00	54.00	-31.96	235	100
7206.0000	41.13	---	3.85	44.98	---	74.00	54.00	-29.02	140	100
9608.0000	33.91	---	7.93	41.84	---	74.00	54.00	-32.16	90	100
12010.0000	33.35	---	12.65	46.00	---	74.00	54.00	-28.00	240	100

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Mode: BT2.0 TX_2441 MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
111.6432	20.27	peak	12.56	32.83	43.50	-10.67	85	100
306.0321	24.01	peak	16.14	40.15	46.00	-5.85	130	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3254.5090	56.71	42.63	-3.00	53.71	39.63	74.00	54.00	-14.37	135	100
4882.0000	40.97	---	0.48	41.45	---	74.00	54.00	-32.55	230	100
7323.0000	40.05	---	3.66	43.71	---	74.00	54.00	-30.29	195	100
9764.0000	33.97	---	8.33	42.30	---	74.00	54.00	-31.70	50	100
12205.0000	31.78	---	13.75	45.53	---	74.00	54.00	-28.47	210	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
76.6533	27.92	QP	10.37	38.29	40.00	-1.71	85	100
113.5872	28.81	QP	12.71	41.52	43.50	-1.98	30	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4882.0000	41.46	---	0.48	41.94	---	74.00	54.00	-32.06	175	100
7323.0000	39.67	---	3.66	43.33	---	74.00	54.00	-30.67	120	100
9764.0000	35.52	---	8.33	43.85	---	74.00	54.00	-30.15	85	100
12205.0000	32.14	---	13.75	45.89	---	74.00	54.00	-28.11	170	100

Mode: BT2.0 TX_2480 MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
113.5871	18.57	peak	12.71	31.28	43.50	-12.22	105	100
306.0321	23.76	peak	16.14	39.90	46.00	-6.10	170	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3308.6170	59.13	43.55	-2.94	56.19	40.61	74.00	54.00	-13.39	155	100
4960.0000	40.52	---	0.88	41.40	---	74.00	54.00	-32.60	135	100
7440.0000	40.69	---	3.93	44.62	---	74.00	54.00	-29.38	220	100
9920.0000	33.70	---	8.50	42.20	---	74.00	54.00	-31.80	265	100
12400.0000	32.57	---	14.46	47.03	---	74.00	54.00	-26.97	210	100

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
76.6533	28.23	QP	10.37	38.60	40.00	-1.40	95	100
113.5872	28.59	QP	12.71	41.30	43.50	-2.20	60	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
4960.0000	40.09	---	0.88	40.97	---	74.00	54.00	-33.03	175	100
7440.0000	40.60	---	3.93	44.53	---	74.00	54.00	-29.47	65	100
9920.0000	34.22	---	8.50	42.72	---	74.00	54.00	-31.28	45	100
12400.0000	31.80	---	14.46	46.26	---	74.00	54.00	-27.74	110	100

Model: BT-400B0 Date: 2014/8/15
Mode: BT4.0 TX_2402 MHz Temperature: 24 °C Engineer: Leon
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
239.9398	21.12	peak	14.16	35.28	46.00	-10.72	50	100
306.0321	22.58	peak	16.14	38.72	46.00	-7.28	130	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3202.7000	61.19	55.18	-3.09	58.10	52.09	74.00	54.00	-1.91	140	100
4804.0000	41.36	---	0.28	41.64	---	74.00	54.00	-32.36	205	100
7206.0000	41.04	---	3.85	44.89	---	74.00	54.00	-29.11	130	100
9608.0000	33.67	---	7.93	41.60	---	74.00	54.00	-32.40	210	100
12010.0000	33.34	---	12.65	45.99	---	74.00	54.00	-28.01	145	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
31.9440	24.72	QP	13.26	37.98	40.00	-2.02	75	100
76.6533	27.86	QP	10.37	38.23	40.00	-1.77	120	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3202.6590	58.99	52.11	-3.09	55.90	49.02	74.00	54.00	-4.98	134	100
4804.0000	41.40	---	0.28	41.68	---	74.00	54.00	-32.32	250	100
7206.0000	40.52	---	3.85	44.37	---	74.00	54.00	-29.63	190	100
9608.0000	34.42	---	7.93	42.35	---	74.00	54.00	-31.65	245	100
12010.0000	32.40	---	12.65	45.05	---	74.00	54.00	-28.95	170	100

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Mode: BT4.0 TX_2440MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
261.3226	23.07	peak	14.71	37.78	46.00	-8.22	90	100
306.0321	22.72	peak	16.14	38.86	46.00	-7.14	135	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3254.5090	60.83	55.75	-3.00	57.83	52.75	74.00	54.00	-1.25	137	100
4880.0000	41.54	---	0.47	42.01	---	74.00	54.00	-31.99	85	100
7320.0000	39.94	---	3.65	43.59	---	74.00	54.00	-30.41	110	100
9760.0000	33.54	---	8.29	41.83	---	74.00	54.00	-32.17	95	100
12200.0000	31.69	---	13.72	45.41	---	74.00	54.00	-28.59	170	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
31.9440	24.36	QP	13.26	37.62	40.00	-2.38	105	100
113.5872	28.44	QP	12.71	41.15	43.50	-2.35	210	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3254.5090	54.77	---	-3.00	51.77	---	74.00	54.00	-22.23	135	100
4880.0000	41.08	---	0.47	41.55	---	74.00	54.00	-32.45	225	100
7320.0000	39.71	---	3.65	43.36	---	74.00	54.00	-30.64	140	100
9760.0000	33.26	---	8.29	41.55	---	74.00	54.00	-32.45	95	100
12200.0000	32.23	---	13.72	45.95	---	74.00	54.00	-28.05	160	100

Mode: BT4.0 TX_2480MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
113.5871	18.99	peak	12.71	31.70	43.50	-11.80	90	100
306.0321	22.24	peak	16.14	38.38	46.00	-7.62	135	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3308.6170	61.31	55.93	-2.94	58.37	52.99	74.00	54.00	-1.01	145	100
4960.0000	40.48	---	0.88	41.36	---	74.00	54.00	-32.64	195	100
7440.0000	40.79	---	3.93	44.72	---	74.00	54.00	-29.28	60	100
9920.0000	33.37	---	8.50	41.87	---	74.00	54.00	-32.13	215	100
12400.0000	31.75	---	14.46	46.21	---	74.00	54.00	-27.79	170	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
76.6533	28.29	QP	10.37	38.66	40.00	-1.34	155	100
111.6433	28.94	QP	12.56	41.50	43.50	-2.00	20	100

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3308.6170	56.24	53.75	-2.94	53.30	50.81	74.00	54.00	-3.19	85	100
4960.0000	40.22	---	0.88	41.10	---	74.00	54.00	-32.90	220	100
7440.0000	40.19	---	3.93	44.12	---	74.00	54.00	-29.88	130	100
9920.0000	32.43	---	8.50	40.93	---	74.00	54.00	-33.07	105	100
12400.0000	31.97	---	14.46	46.43	---	74.00	54.00	-27.57	170	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. **Up Line: PK Limit Line, Down Line: Ave Limit Line.**
7. **See attached diagrams in appendix.**

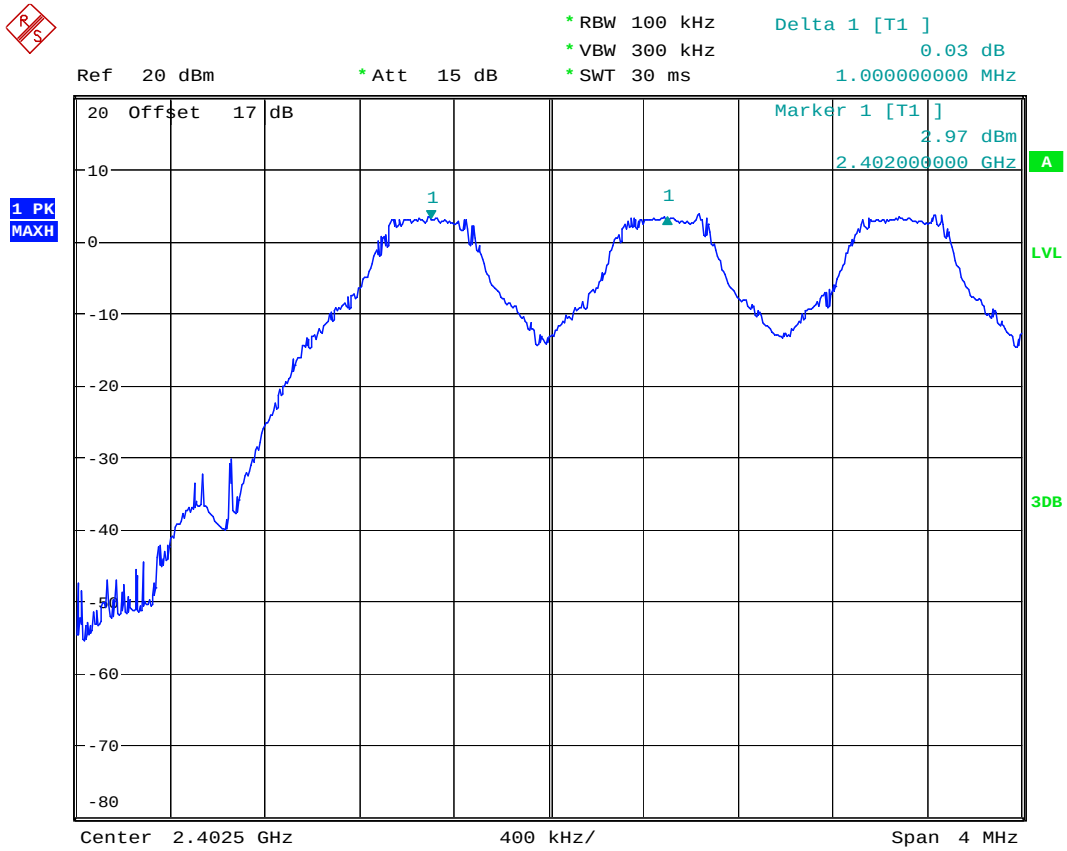
TEST RESULT (Transmitter): The unit DOES meet the FCC requirements.

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044

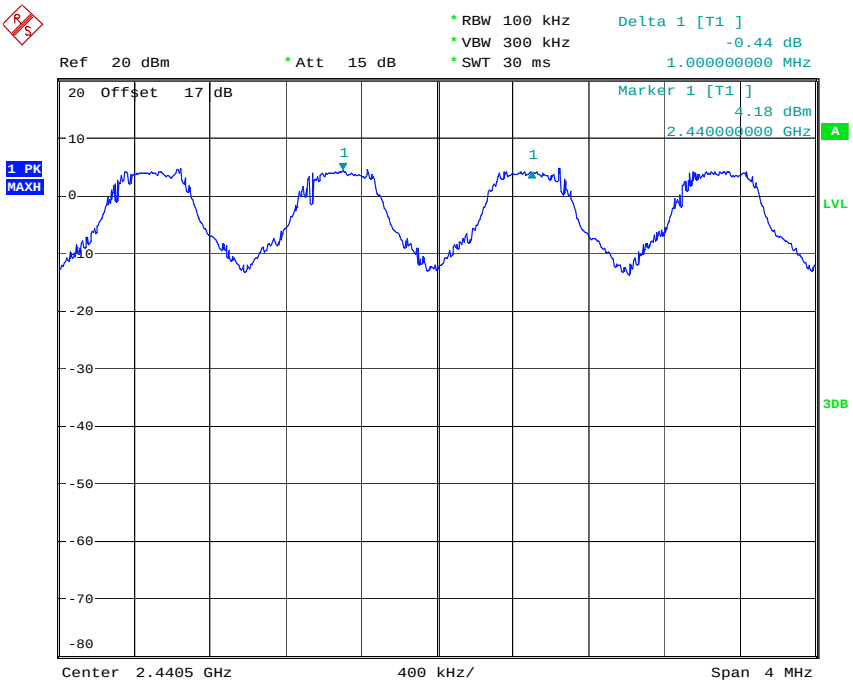
3.6 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).
According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Bluetooth 2.0
Normal mode

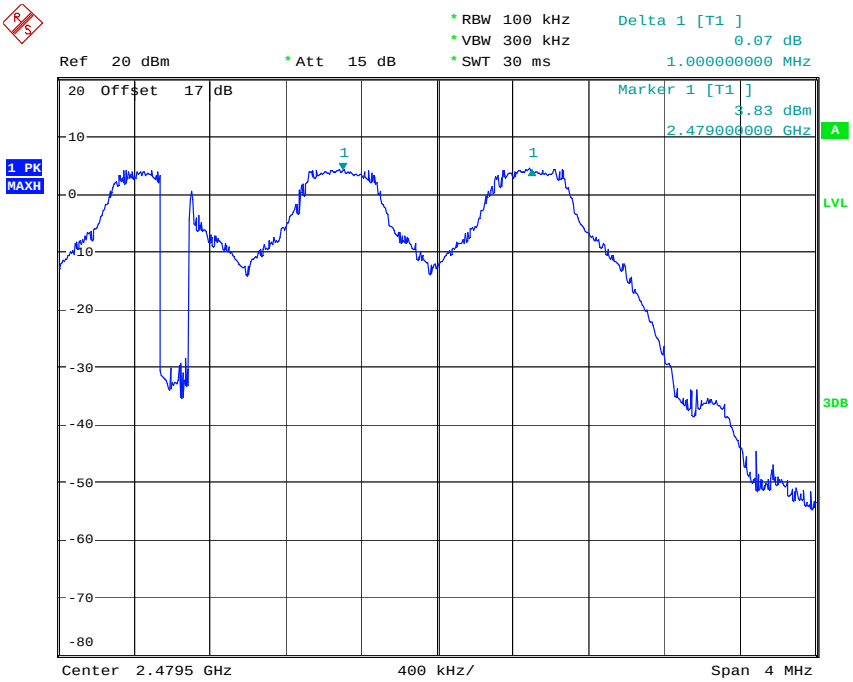


FREQUENCY SEPARATION CH0
Date: 14.AUG.2014 19:53:39



FREQUENCY SEPARATION CH39

Date: 14.AUG.2014 19:54:23



FREQUENCY SEPARATION CH78

Date: 14.AUG.2014 19:55:11

Limits:

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

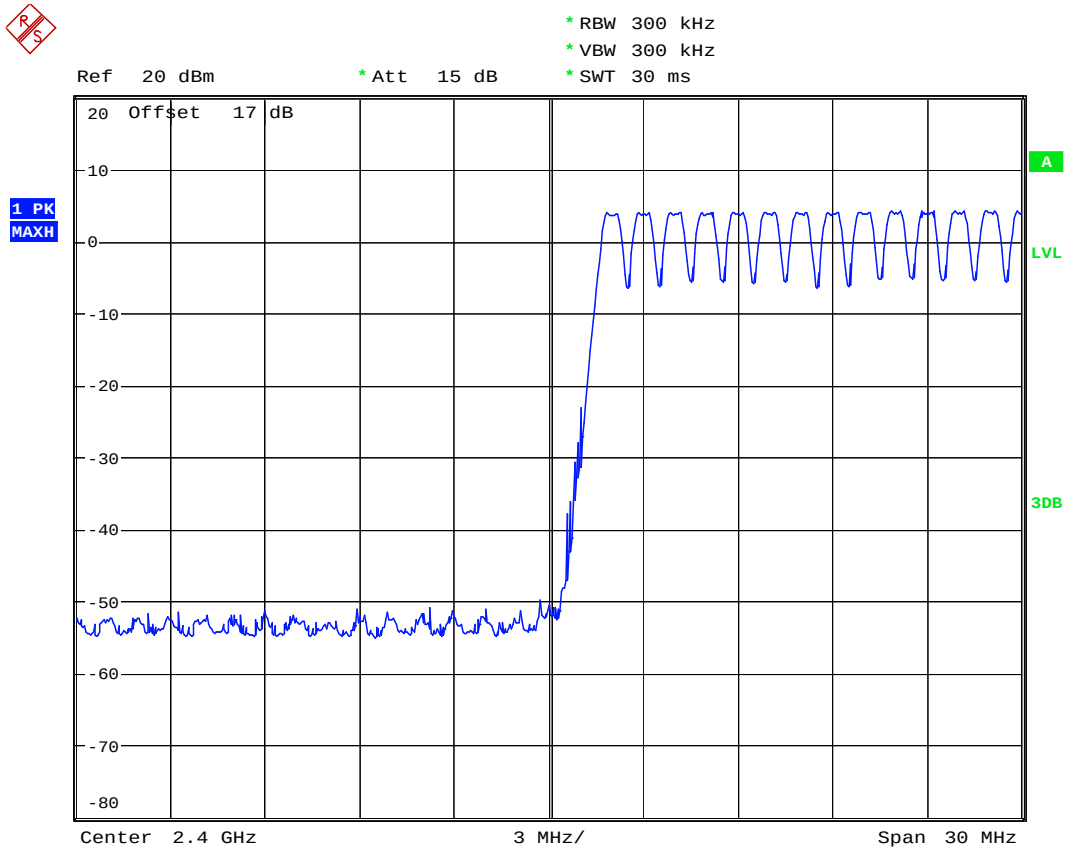
Test equipment used: ETSTW-RE 055, ETSTW-RE 064

3.7 Number of Hopping Frequencies

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

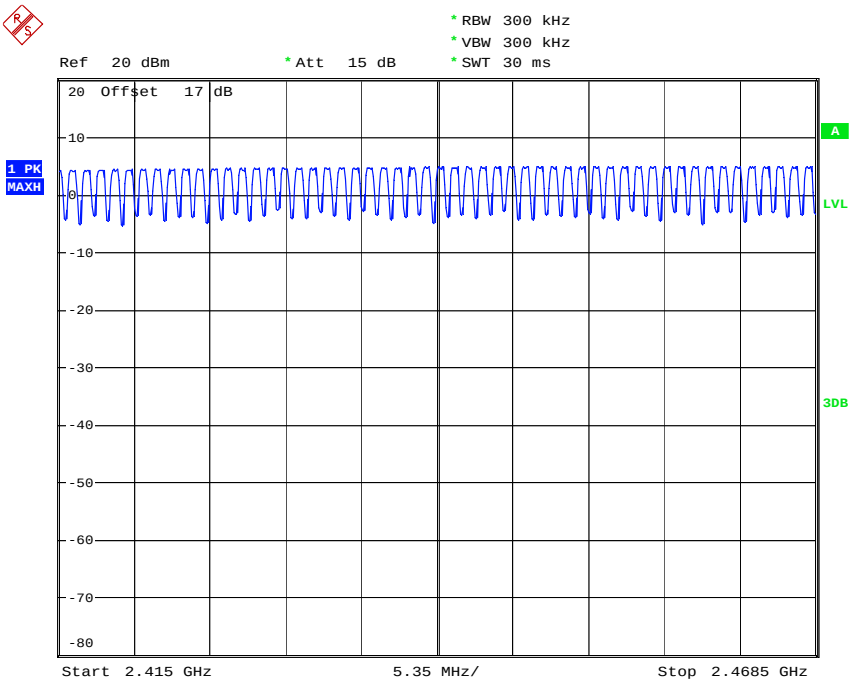
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Bluetooth 2.0



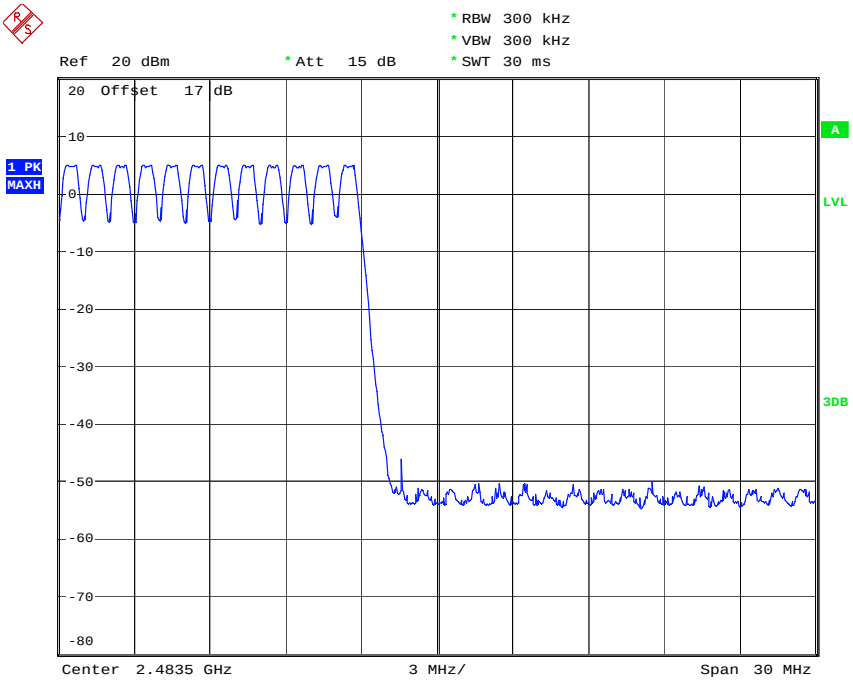
NUMBER OF HOPPING CH0-13

Date: 14.AUG.2014 19:50:59



NUMBER OF HOPPING CH14-66

Date: 14.AUG.2014 19:52:47



NUMBER OF HOPPING CH67-78

Date: 14.AUG.2014 19:51:40

Limits:

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

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

3.7.1 Pseudorandom Frequency Hopping Sequence

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

3.7.2 Coordination of hopping sequences to other transmitters

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

3.7.3 System Receiver Hopping Capability

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

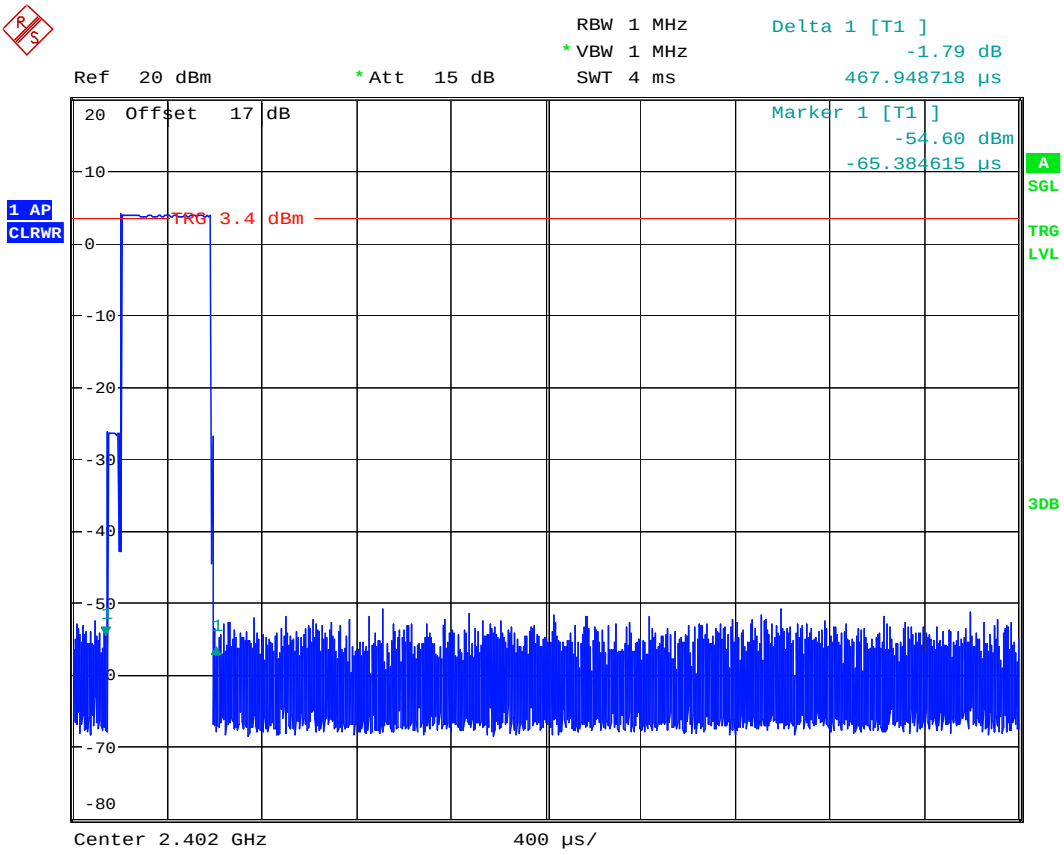
3.8 Time of Occupancy (Dwell Time)

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

In 2400-2483.5 MHz band the average time of occupancy on any channel shall not be greater than 0.4 seconds multiplied by the number of hopping channels employed.

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

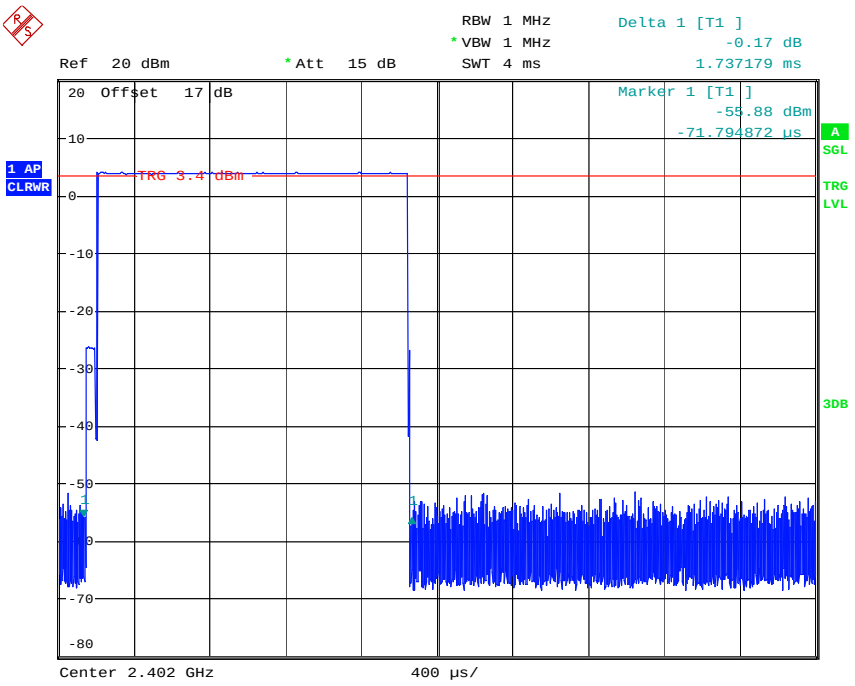
Bluetooth 2.0



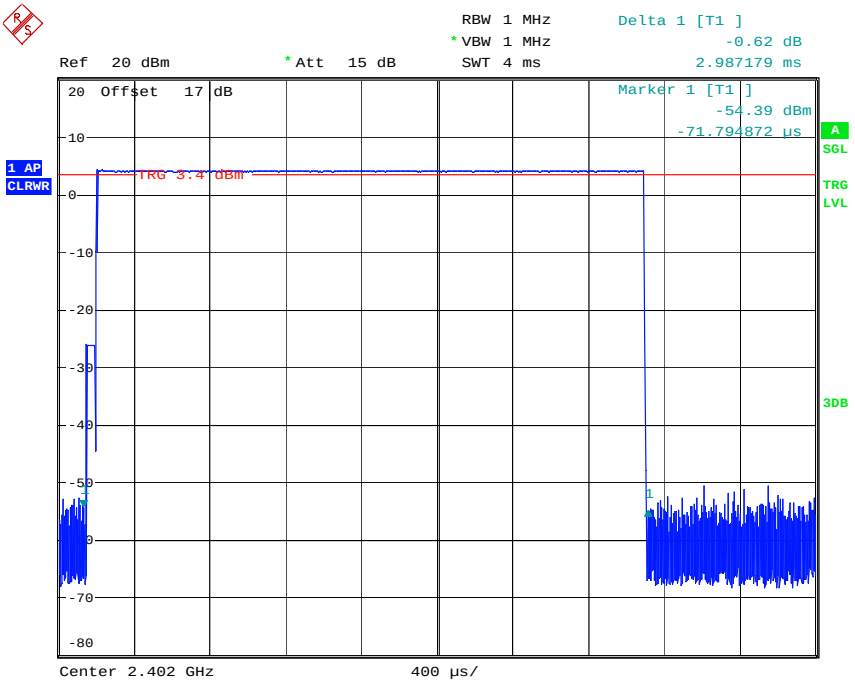
DWELL TIME CH0 DH1 (0.467ms * 320events = 149.44ms)

Date: 14.AUG.2014 20:11:15

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

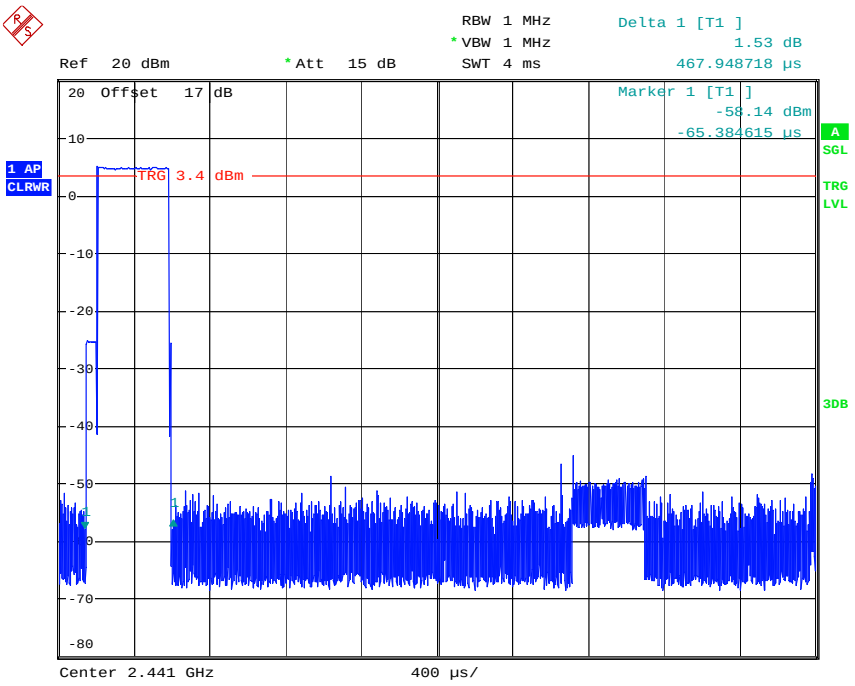


DWELL TIME CH0 DH3 (1.737ms * 160events = 277.92ms)
Date: 14.AUG.2014 20:14:20

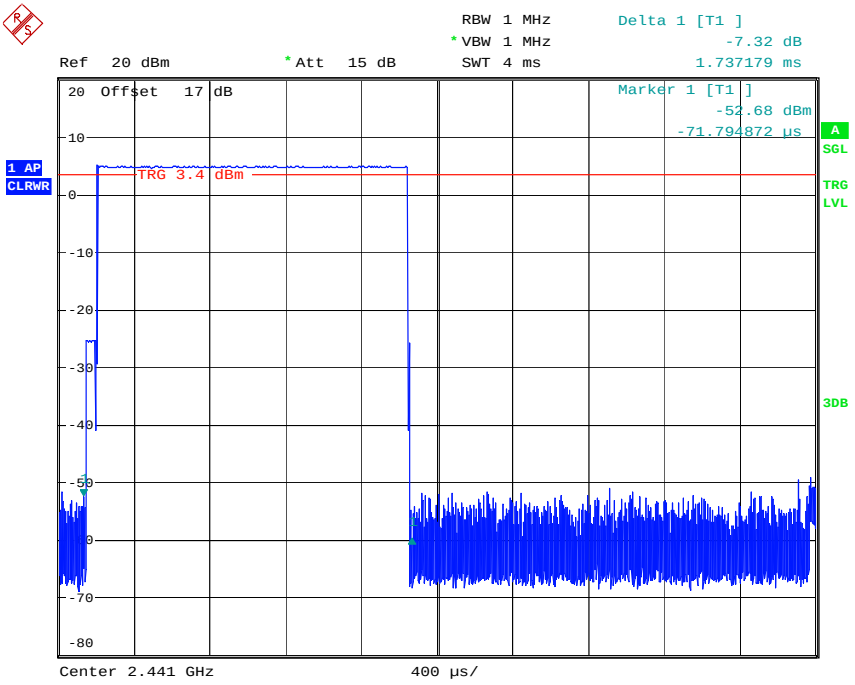


DWELL TIME CH0 DH5 (2.987ms * 106events = 316.62ms)
Date: 14.AUG.2014 20:17:08

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

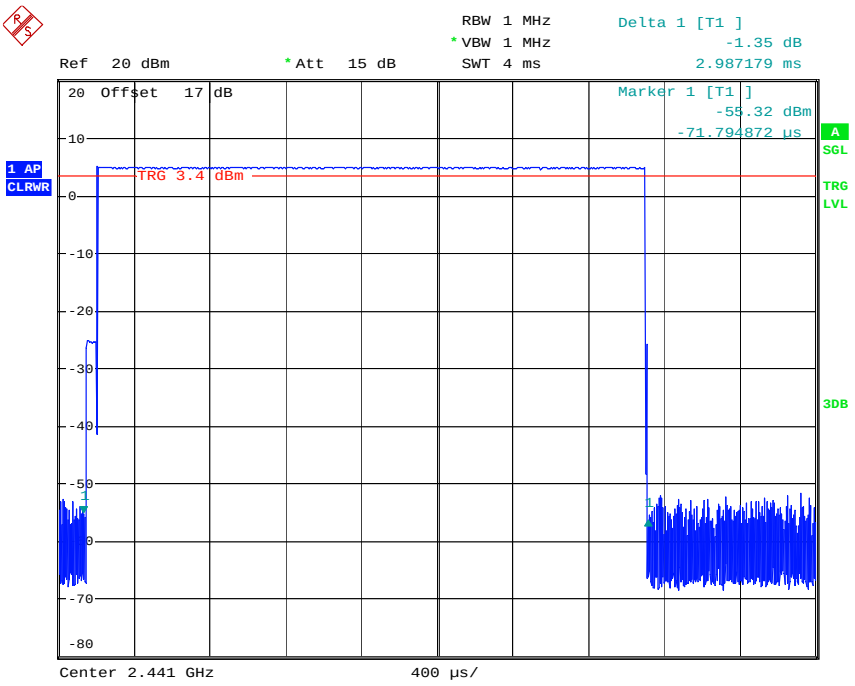


DWELL TIME CH39 DH1 (0.467ms * 320events = 149.44ms)
Date: 14.AUG.2014 20:11:45

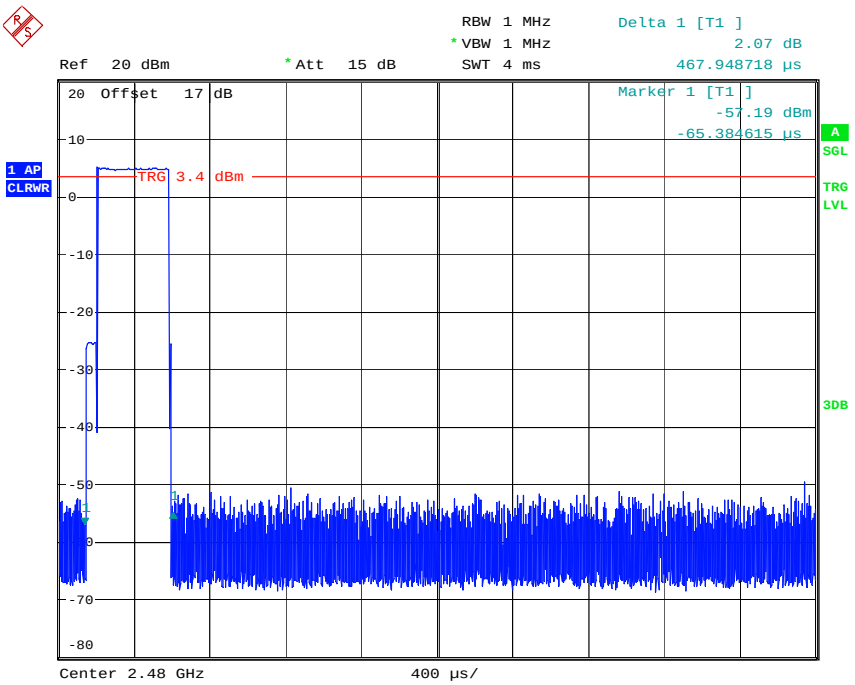


DWELL TIME CH39 DH3 (1.737ms * 160events = 277.92ms)
Date: 14.AUG.2014 20:14:39

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

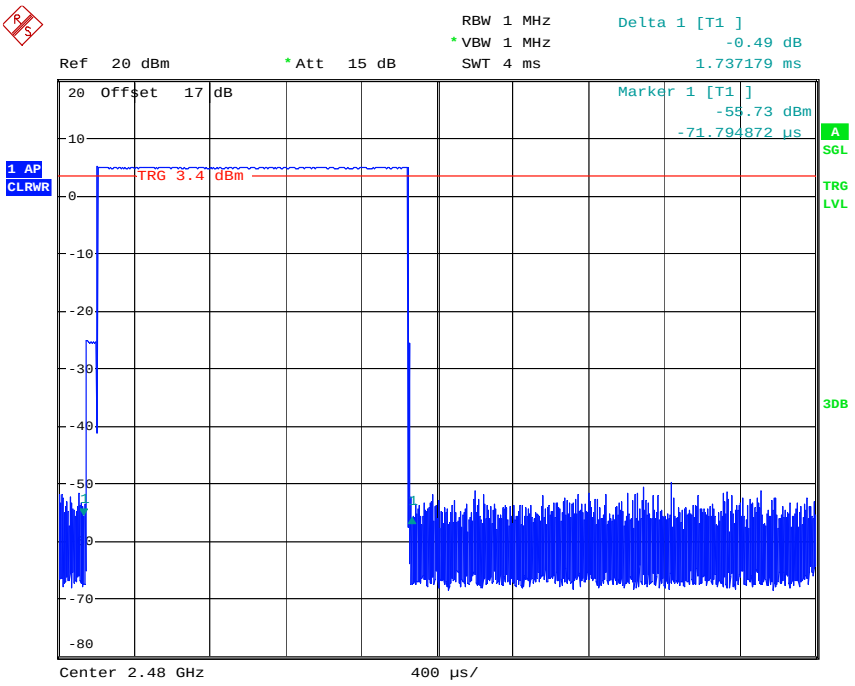


DWELL TIME CH39 DH5 (2.987ms * 106events = 316.62ms)
Date: 14.AUG.2014 20:16:52

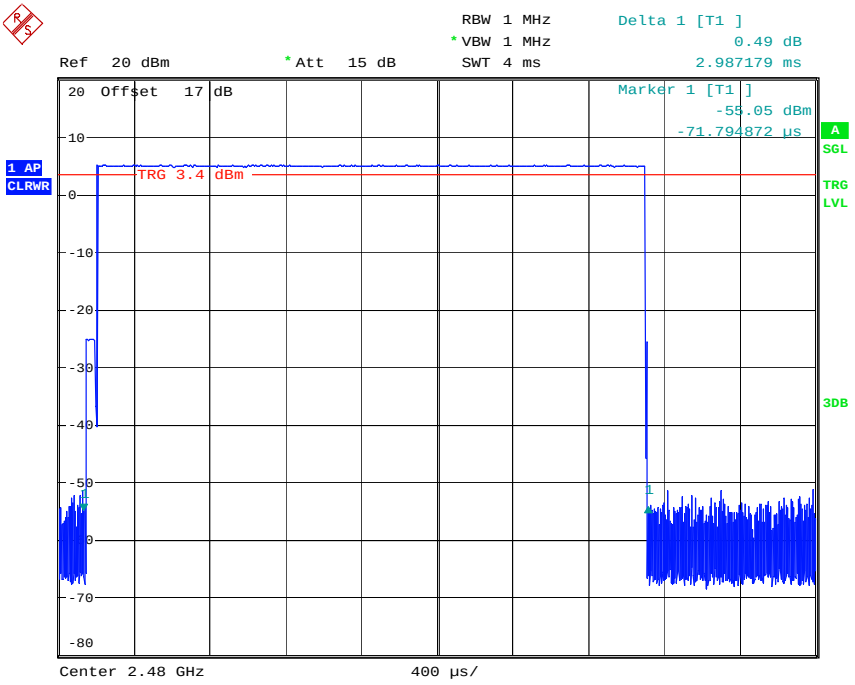


DWELL TIME CH78 DH1 (0.467ms * 320events = 149.44ms)
Date: 14.AUG.2014 20:12:01

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



DWELL TIME CH78 DH3 (1.737ms * 160events = 277.92ms)
Date: 14.AUG.2014 20:15:10



DWELL TIME CH78 DH5 (2.987ms * 106events = 316.62ms)
Date: 14.AUG.2014 20:16:27

Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Periode	Limit
902 – 928	≥50	20 s	0.4 s
	49 ≥ 25	10 s	0.4 s
2400 – 2483.5	≥ 15	0.4 s * number of used channels	0.4 s
5725- 5850	≥ 75	30 s	0.4s

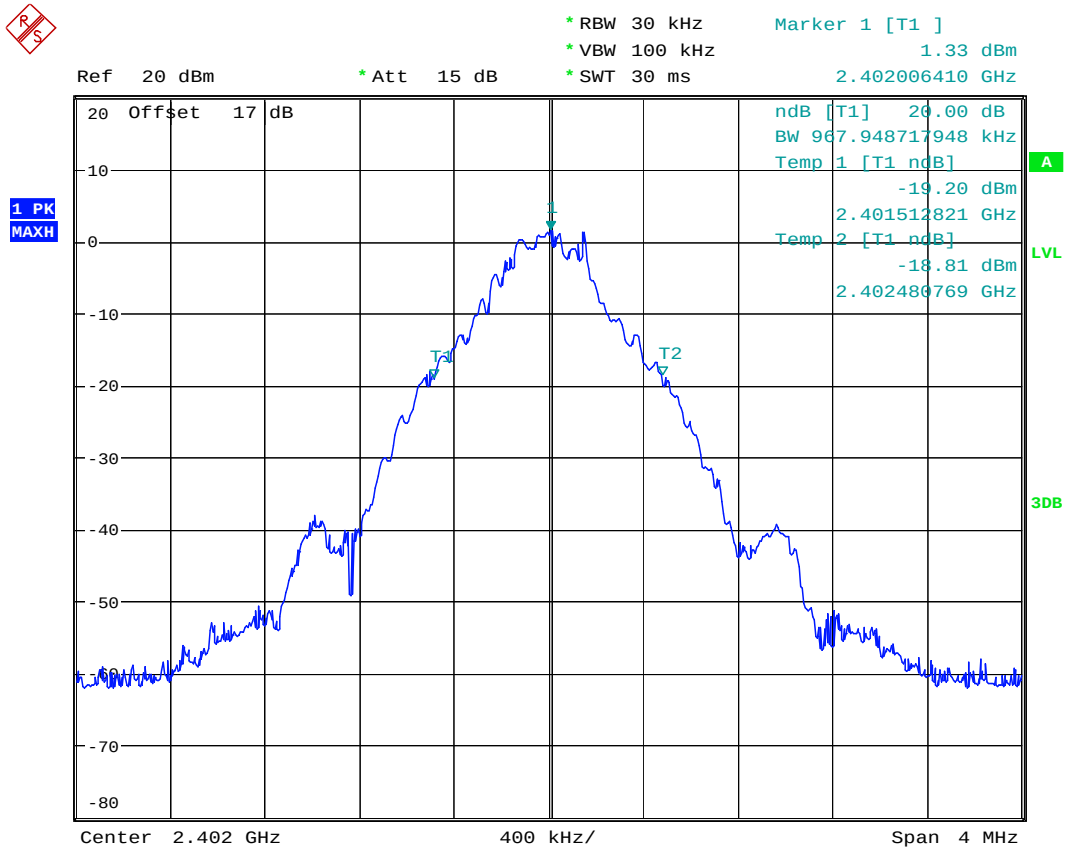
Test equipment used: ETSTW-RE 055, ETSTW-RE 064

3.9 20dB Bandwidth

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.
The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

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

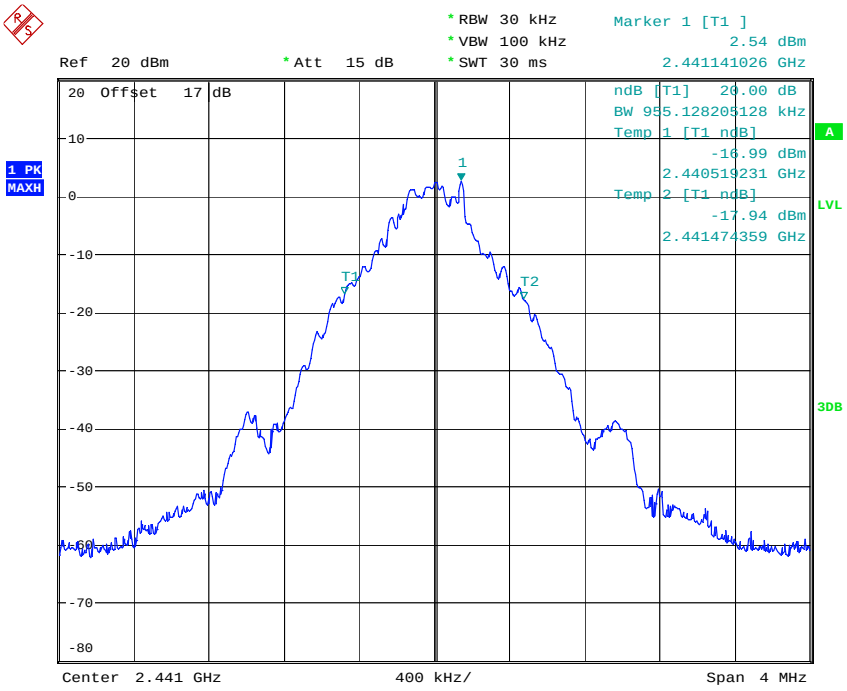
Bluetooth 2.0
Normal mode



20DB BANDWIDTH CH0

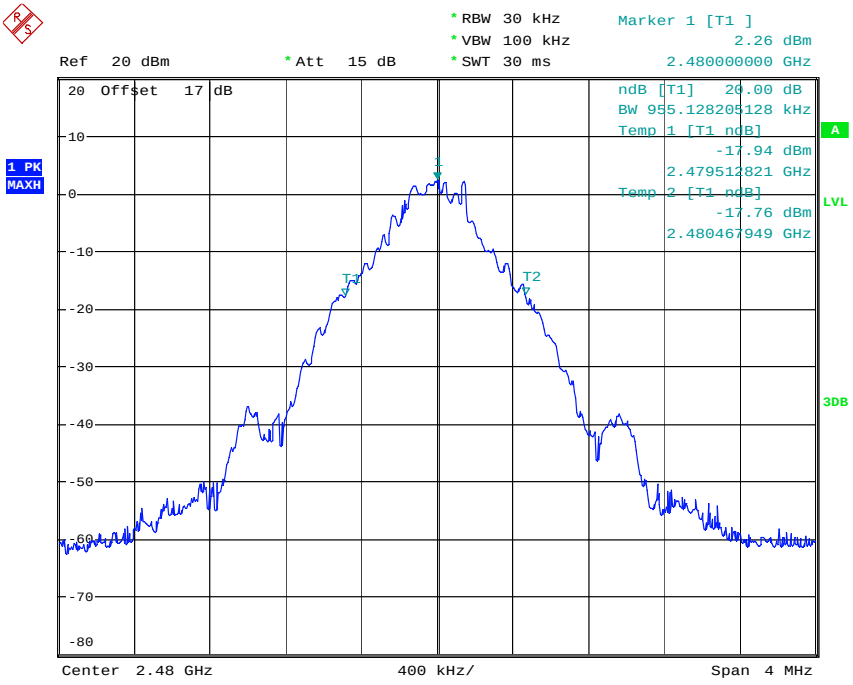
Date: 14.AUG.2014 19:49:19

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



20DB BANDWIDTH CH39

Date: 14.AUG.2014 19:49:51

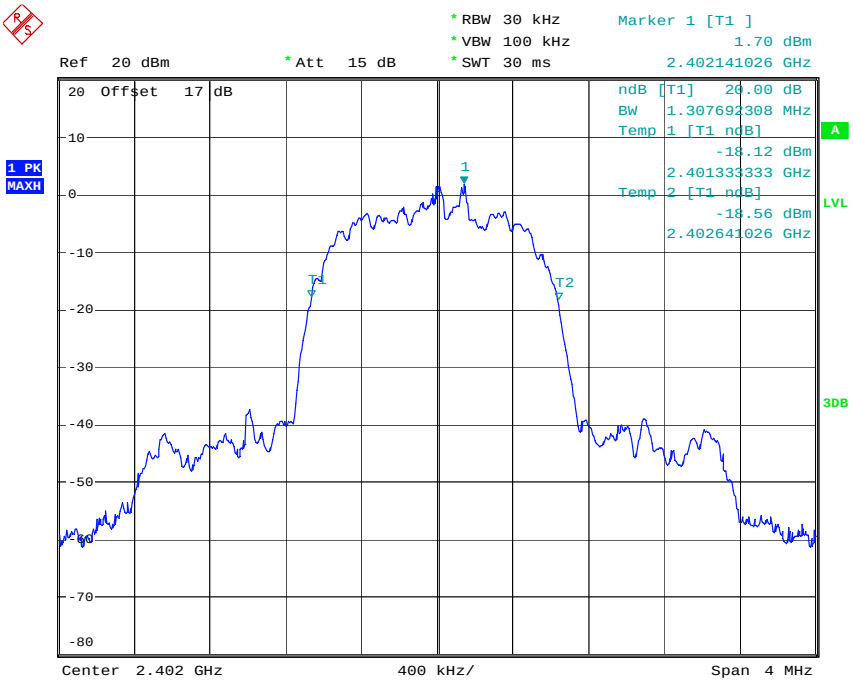


20DB BANDWIDTH CH78

Date: 14.AUG.2014 19:50:11

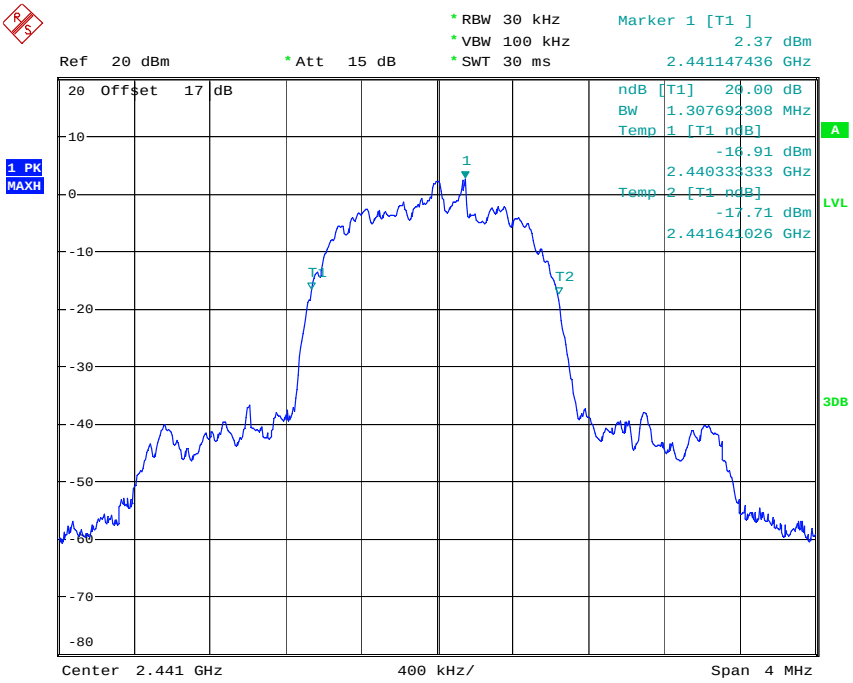
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

EDR mode



20DB BANDWIDTH CH0 EDR MODE

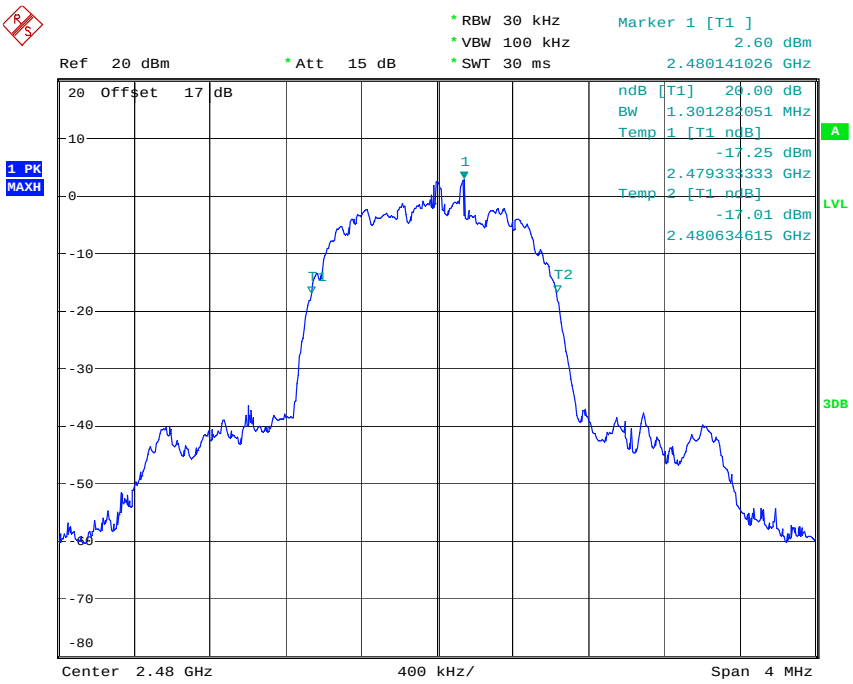
Date: 14.AUG.2014 20:01:00



20DB BANDWIDTH CH39 EDR MODE

Date: 14.AUG.2014 20:01:32

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



20DB BANDWIDTH CH78 EDR MODE
Date: 14.AUG.2014 20:01:52

Limits:

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

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

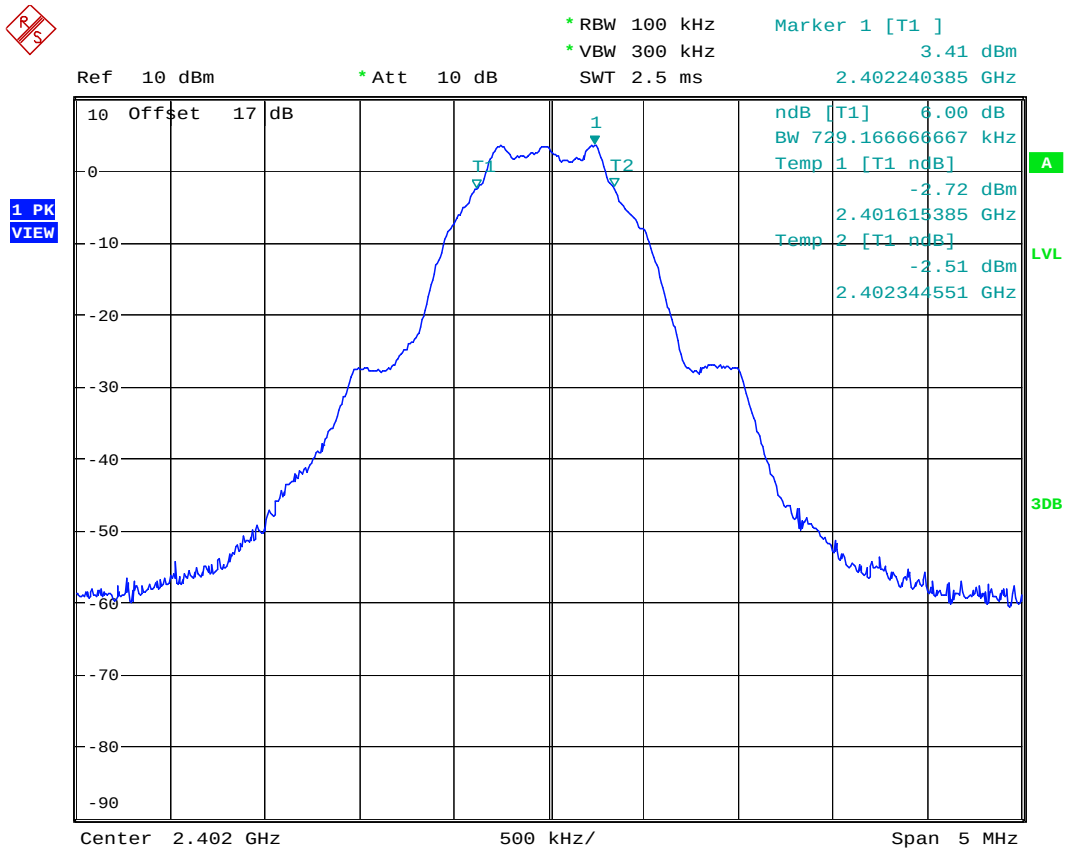
3.9.1 System Receiver Input Bandwidth

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

3.10 Minimum 6 dB Bandwidth

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

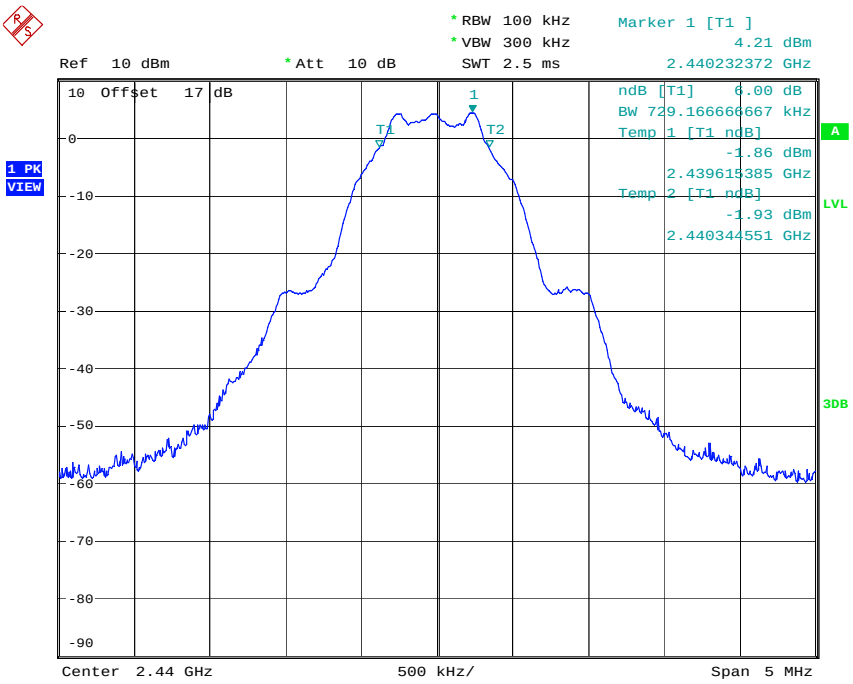
Bluetooth 4.0



6DB BANDWIDTH BT4.0 CH00

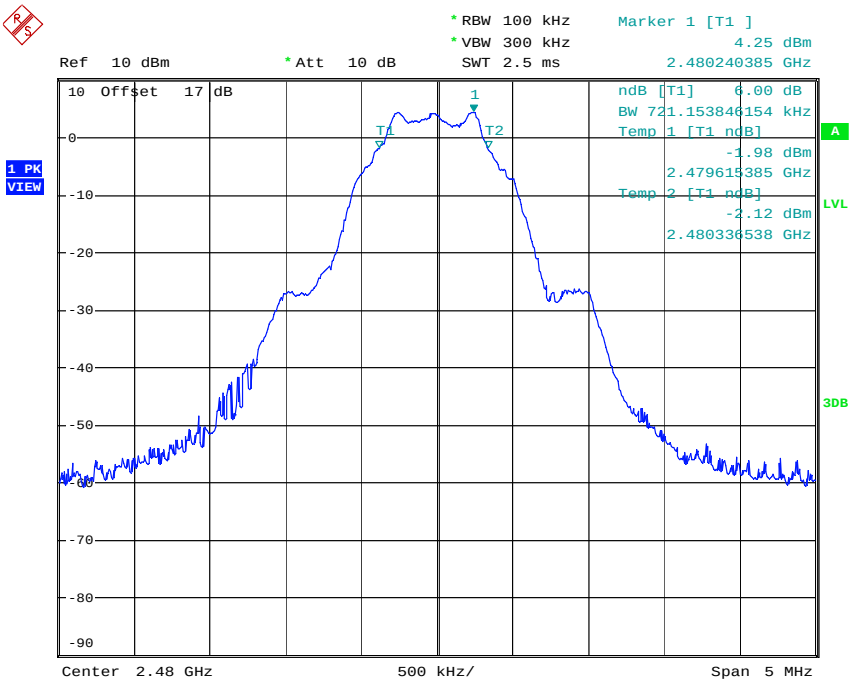
Date: 14.AUG.2014 20:19:14

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



6DB BANDWIDTH BT4.0 CH19

Date: 14.AUG.2014 20:21:08



6DB BANDWIDTH BT4.0 CH39

Date: 14.AUG.2014 20:21:58

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Limits:

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

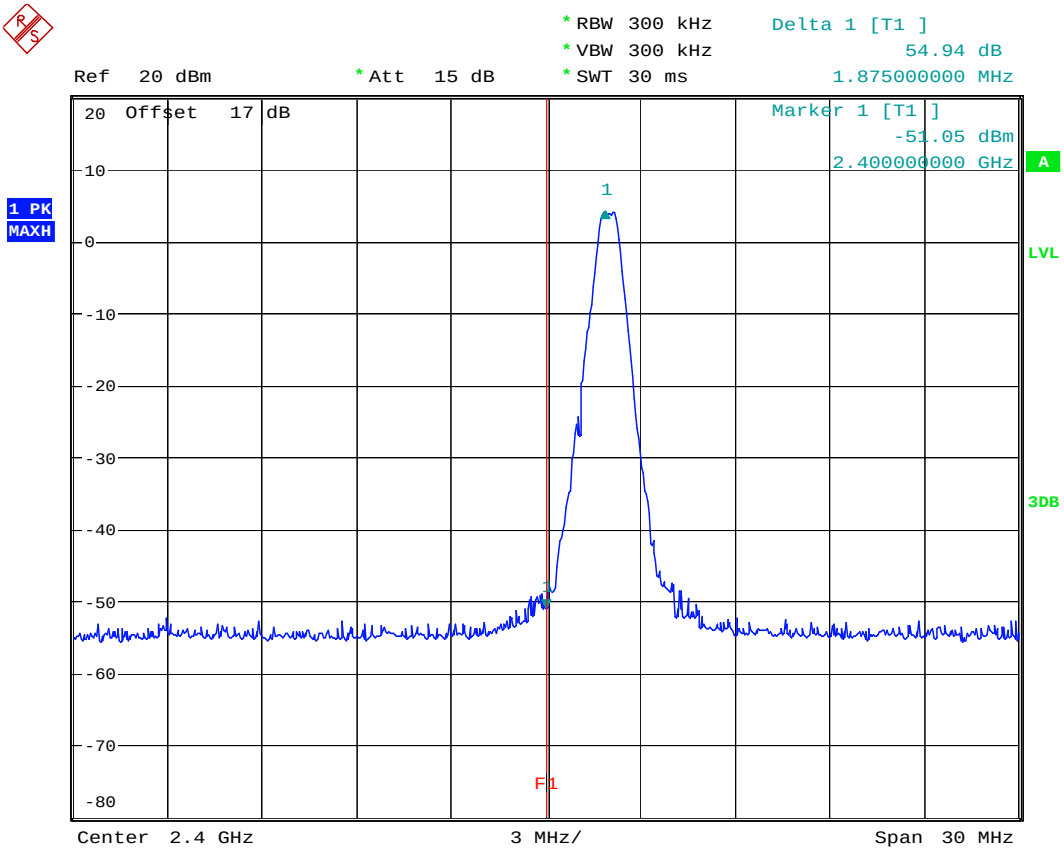
Test equipment used: ETSTW-RE 055

3.11 Radiated Emission on the band edge

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

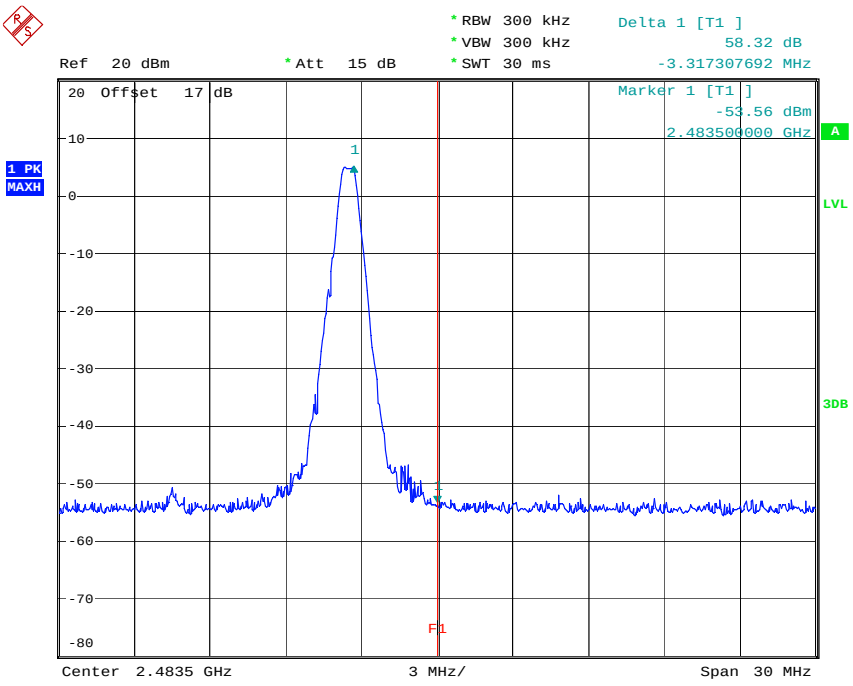
In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Bluetooth 2.0
Normal mode



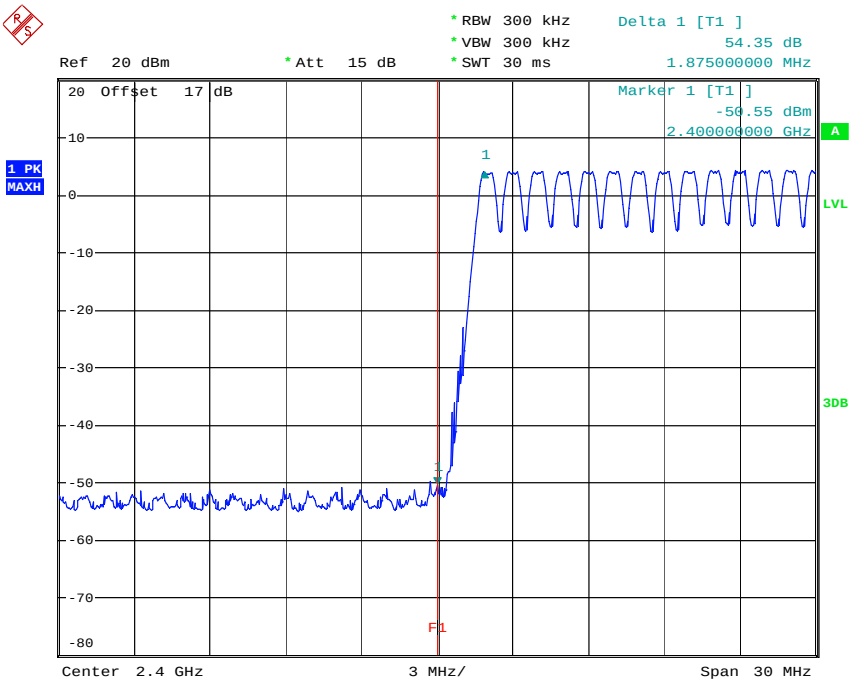
BANDEDGE CH0
Date: 14.AUG.2014 19:49:31

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



BANDEDGE CH78

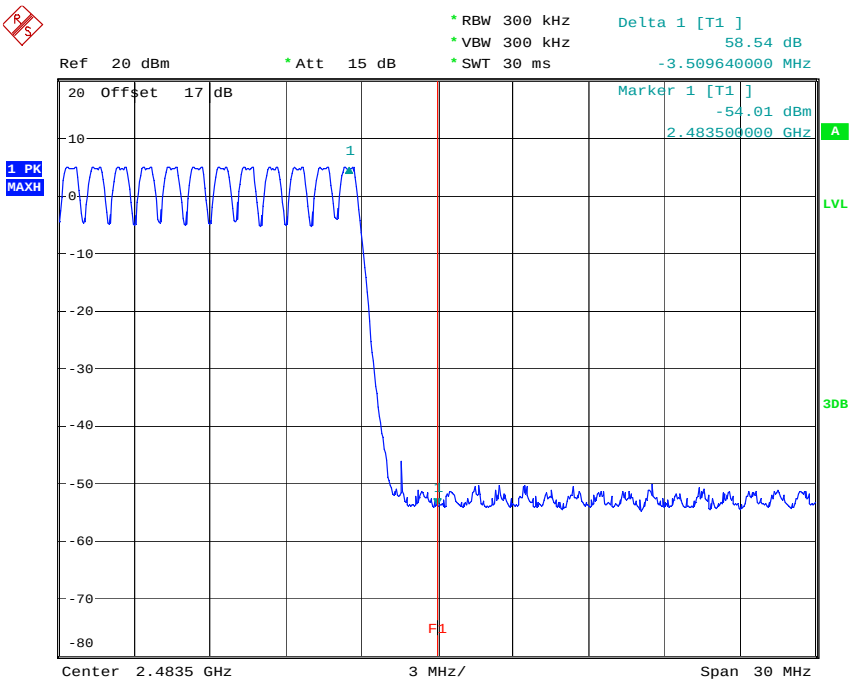
Date: 14.AUG.2014 19:50:19



BANDEDGE CH0 HOPPING MODE

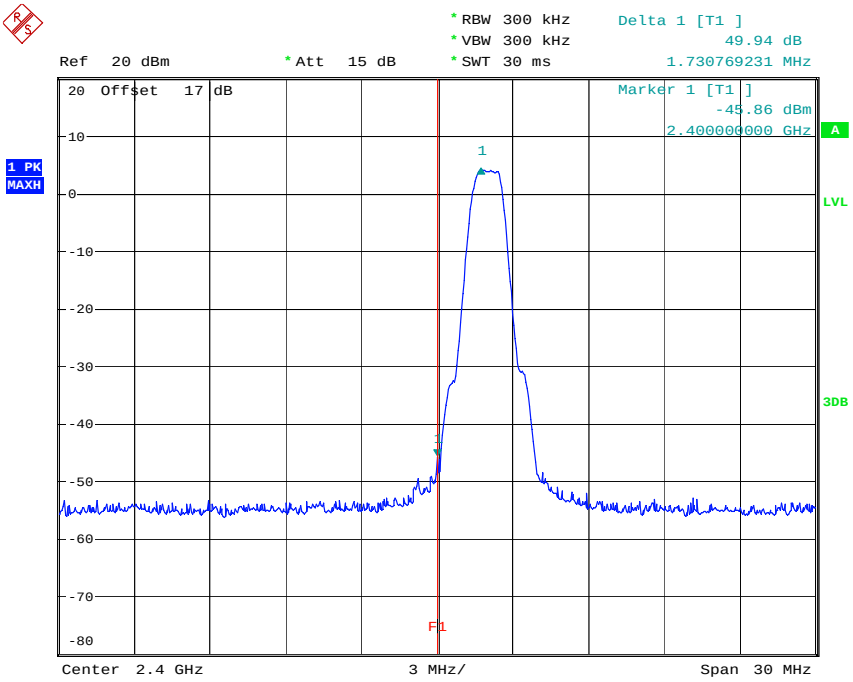
Date: 14.AUG.2014 19:51:00

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



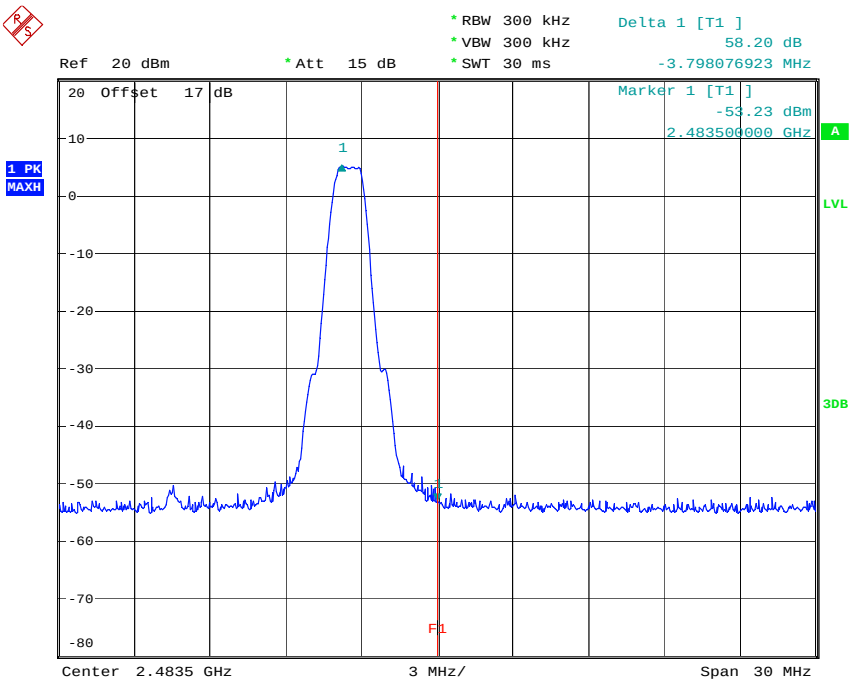
BANDEDGE CH78 HOPPING MODE
Date: 14.AUG.2014 19:51:40

EDR mode

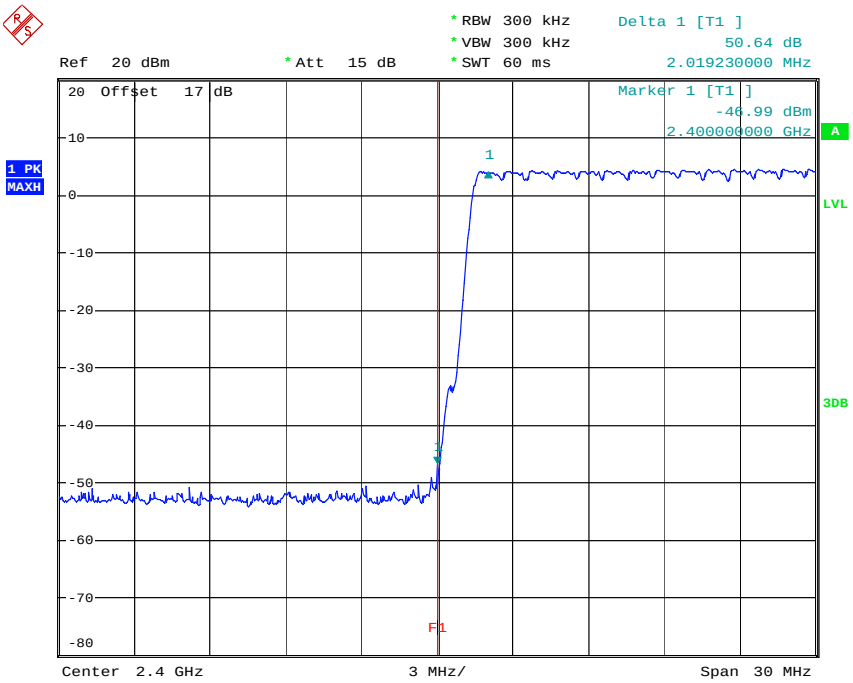


BANDEDGE CH0 EDR MODE
Date: 14.AUG.2014 20:01:08

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

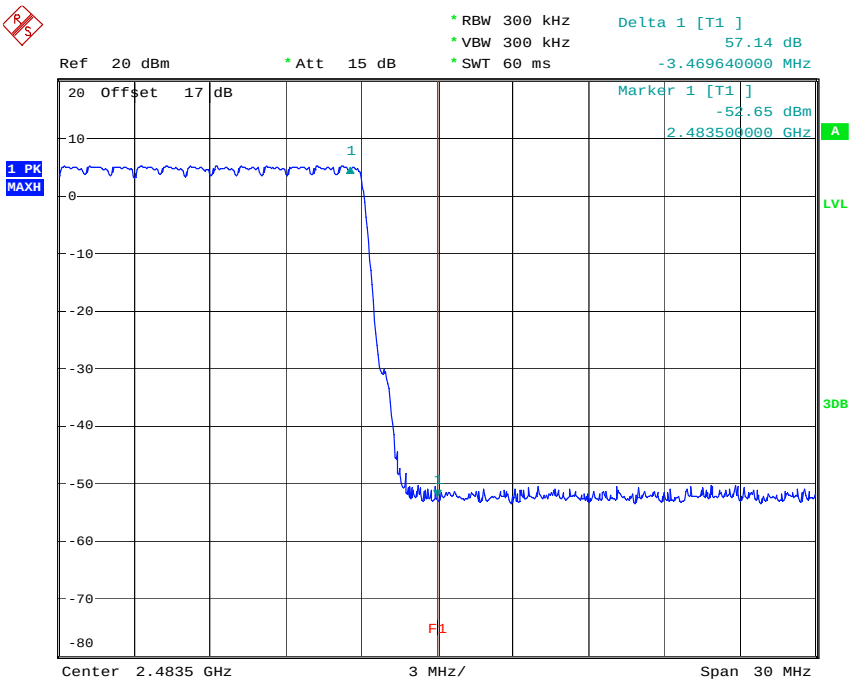


BANDEDGE CH78 EDR MODE
Date: 14.AUG.2014 20:02:03



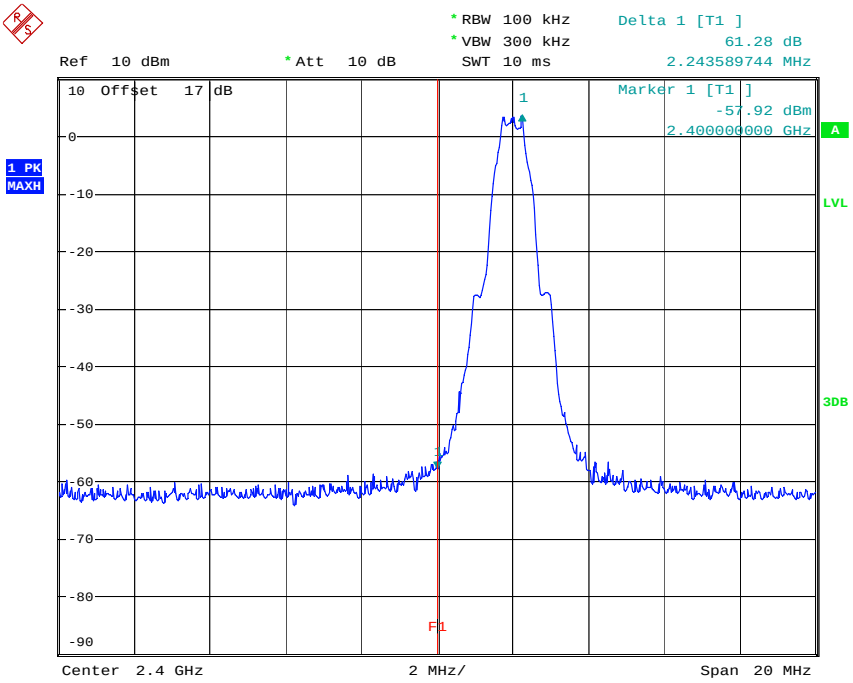
BANDEDGE CH0 EDR HOPPING MODE
Date: 14.AUG.2014 20:03:51

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



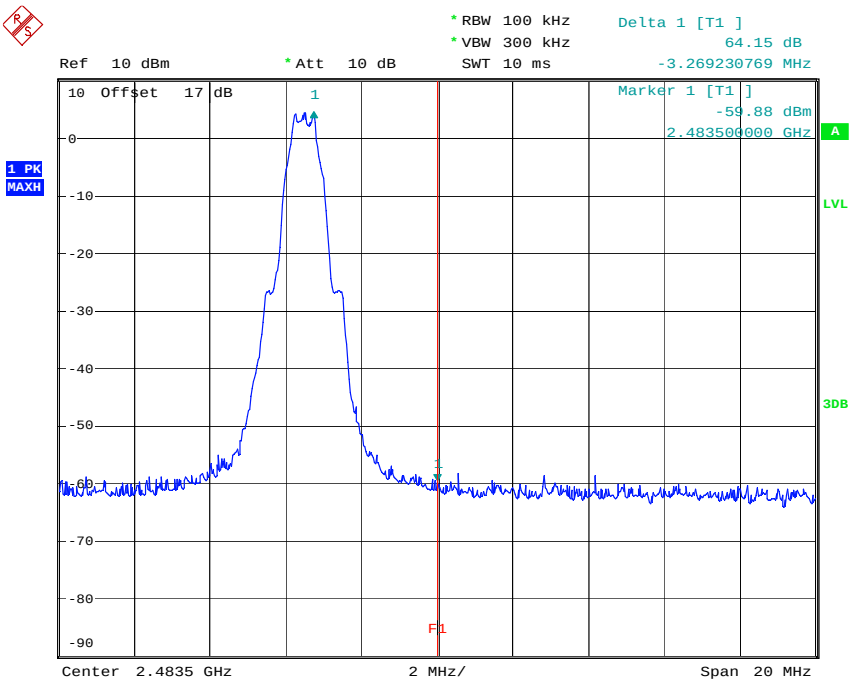
BANDEDGE CH78 EDR HOPPING MODE
Date: 14.AUG.2014 20:05:35

Bluetooth 4.0



BANDEDGE BT4.0 CH00
Date: 14.AUG.2014 20:19:32

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



BANDEDGE BT4.0 CH39
Date: 14.AUG.2014 20:22:16

Limit:

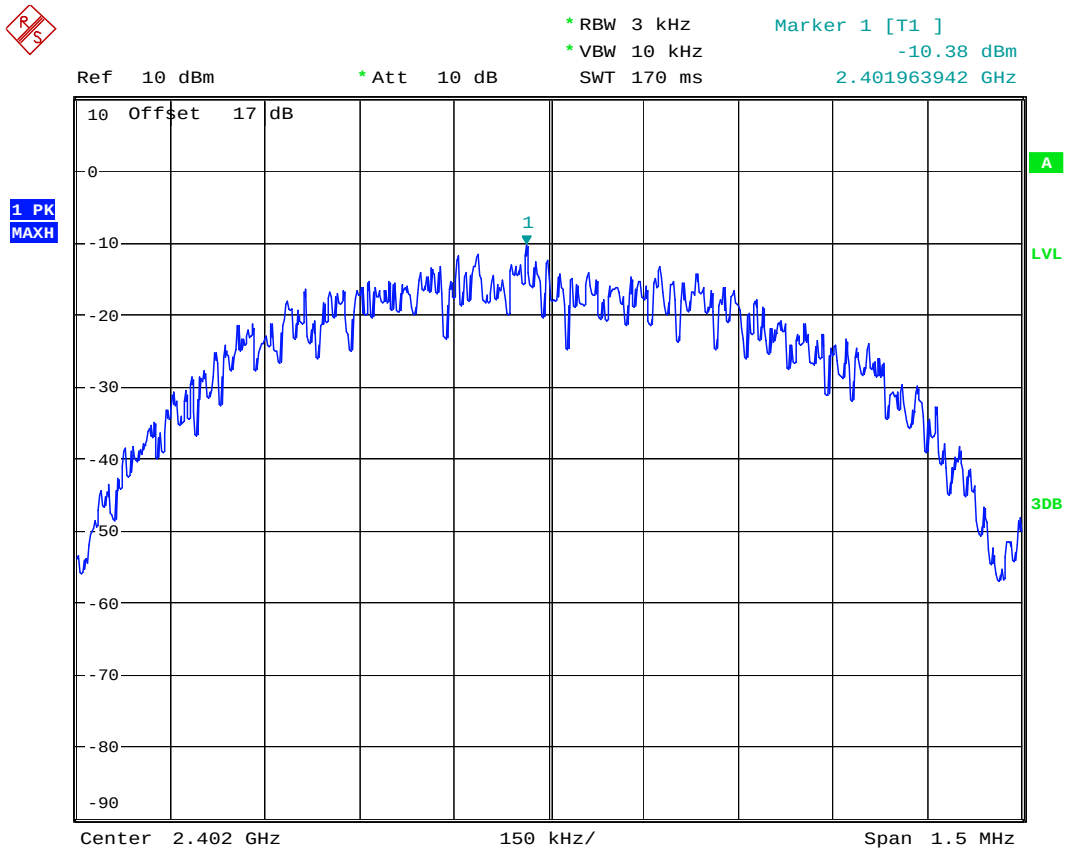
Frequency Range / MHz	Limit
902 –928 2400 – 2483.5 5725 - 5850	- 20 dB

Test equipment used: ETSTW-RE 055

3.12 Peak Power Spectral Density

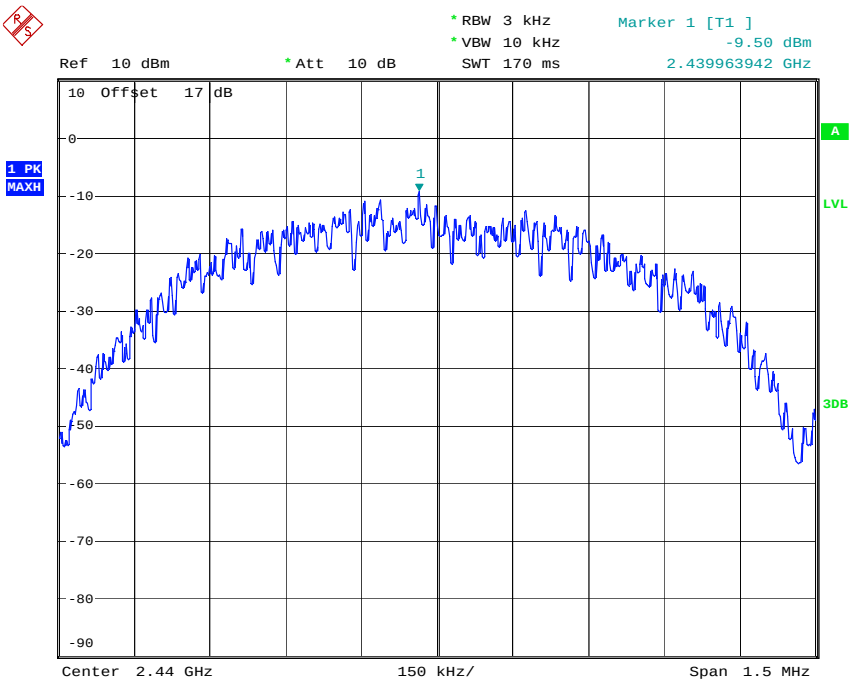
Peak Power Spectral density is a measured at low, middle and high channel.
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep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

Bluetooth 4.0

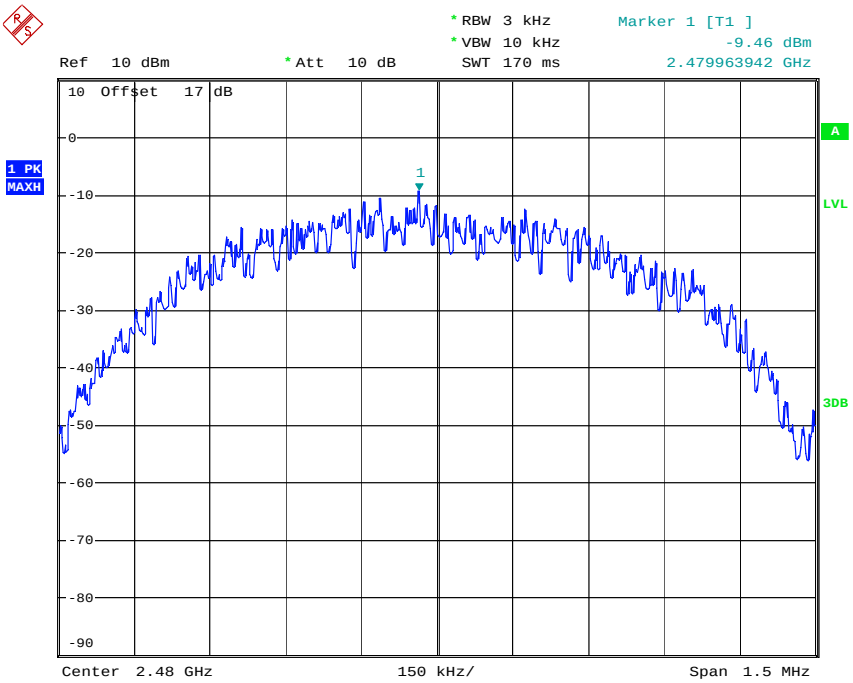


POWER DENSITY BT4.0 CH00
Date: 14.AUG.2014 20:19:24

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



POWER DENSITY BT4.0 CH19
Date: 14.AUG.2014 20:21:18



POWER DENSITY BT4.0 CH39
Date: 14.AUG.2014 20:22:08

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Limits:

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

Test equipment used: ETSTW-RE 055

3.13 Radiated Emission from Digital Part

FCC Rule: 15.109

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

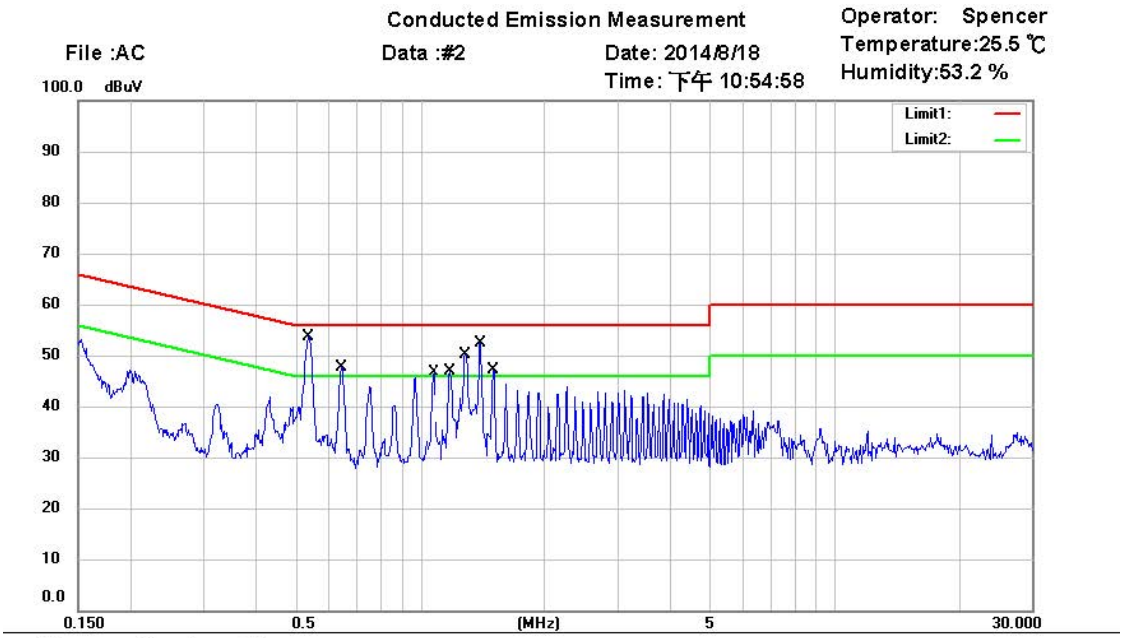
Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044

Explanation: Please refer to separated test report no.: W6M21408-14385-P-15B.

3.14 Power Line Conducted Emission

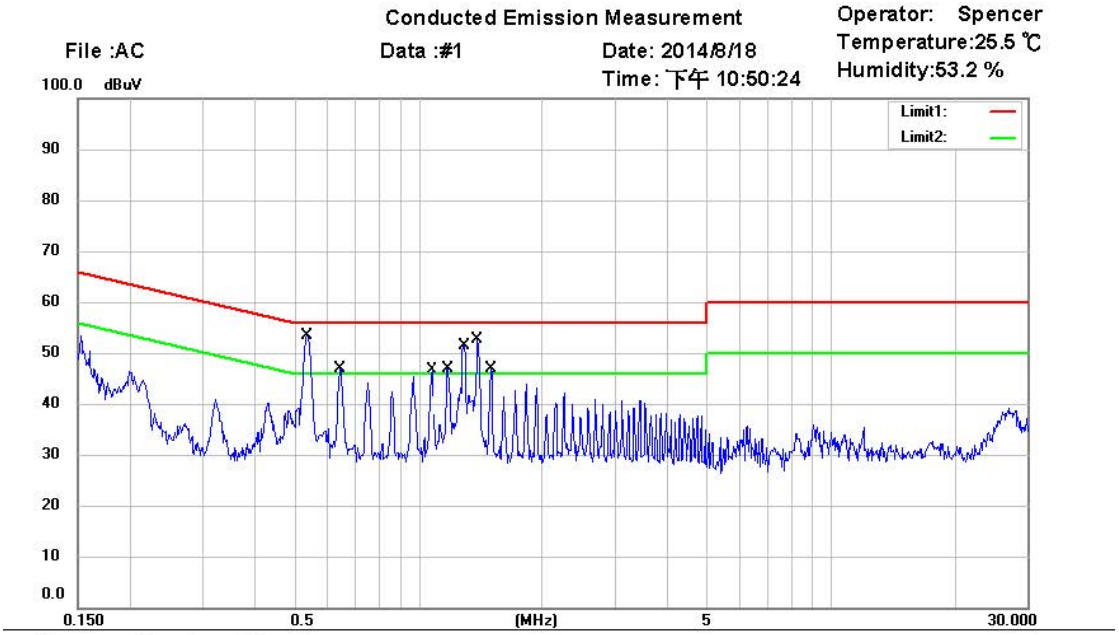
For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision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



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
EUT : W6M21408-14385
M/N: BT-400B0
Test Mode : BT
Note :
Phase: N
Power : 120VAC

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.5360	41.41	QP	9.68	51.09	56.00	-4.91	
	0.5360	23.52	AVG	9.68	33.20	46.00	-12.80	
	0.6440	35.13	QP	9.69	44.82	56.00	-11.18	
	0.6440	19.87	AVG	9.69	29.56	46.00	-16.44	
	1.0760	33.60	QP	9.70	43.30	56.00	-12.70	
	1.0760	20.44	AVG	9.70	30.14	46.00	-15.86	
	1.1818	32.64	QP	9.71	42.35	56.00	-13.65	
	1.1818	18.32	AVG	9.71	28.03	46.00	-17.97	
	1.2853	34.36	QP	9.71	44.07	56.00	-11.93	
	1.2853	16.28	AVG	9.71	25.99	46.00	-20.01	
	1.3977	38.40	QP	9.72	48.12	56.00	-7.88	
	1.3977	22.37	AVG	9.72	32.09	46.00	-13.91	
	1.5013	34.55	QP	9.73	44.28	56.00	-11.72	
	1.5013	20.56	AVG	9.73	30.29	46.00	-15.71	

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
EUT : W6M21408-14385
M/N: BT-400B0
Test Mode : BT
Note :

Phase: L1
Power : 120VAC

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.5360	41.41	QP	9.67	51.08	56.00	-4.92	
	0.5360	23.10	AVG	9.67	32.77	46.00	-13.23	
	0.6440	34.67	QP	9.68	44.35	56.00	-11.65	
	0.6440	17.40	AVG	9.68	27.08	46.00	-18.92	
	1.0737	34.04	QP	9.70	43.74	56.00	-12.26	
	1.0737	18.40	AVG	9.70	28.10	46.00	-17.90	
	1.1840	30.65	QP	9.71	40.36	56.00	-15.64	
	1.1840	14.61	AVG	9.71	24.32	46.00	-21.68	
	1.2897	36.09	QP	9.71	45.80	56.00	-10.20	
	1.2897	17.32	AVG	9.71	27.03	46.00	-18.97	
	1.3955	39.06	QP	9.72	48.78	56.00	-7.22	
	1.3955	21.80	AVG	9.72	31.52	46.00	-14.48	
	1.5012	33.66	QP	9.73	43.39	56.00	-12.61	
	1.5012	18.03	AVG	9.73	27.76	46.00	-18.24	

Frequency	Level (dBμV)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

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. Up Line: QP Limit Line, Down Line: Ave Limit Line.

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

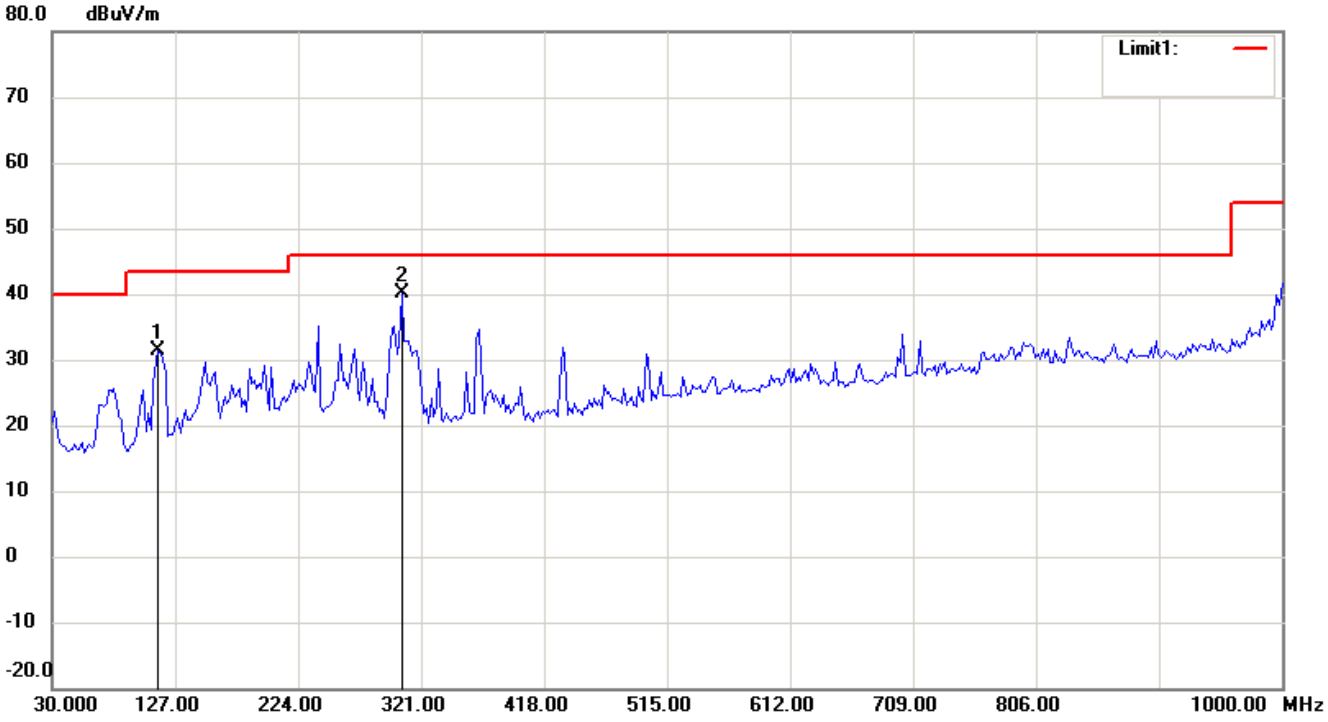
Appendix

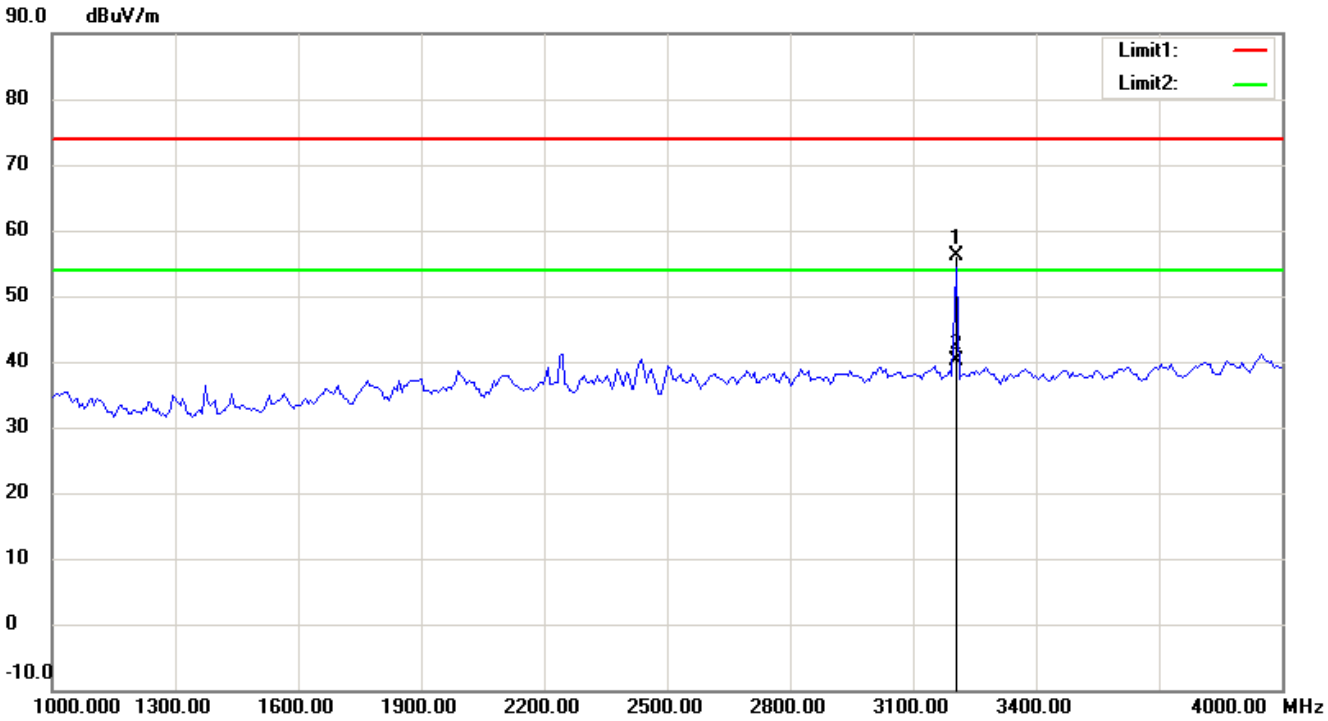
Measurement diagrams

Spurious Emissions radiated

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Spurious Emissions radiated-TX
Bluetooth 2.0 TX_2402 MHz
Antenna Polarization H

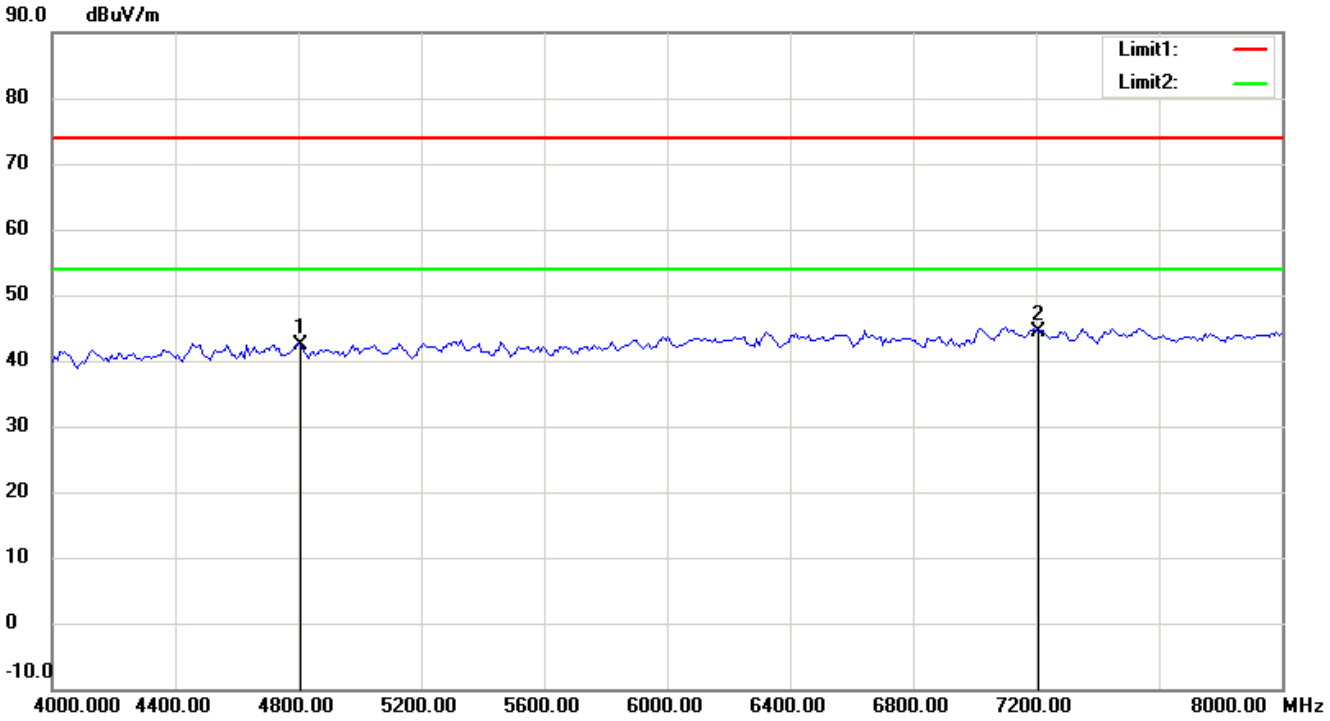


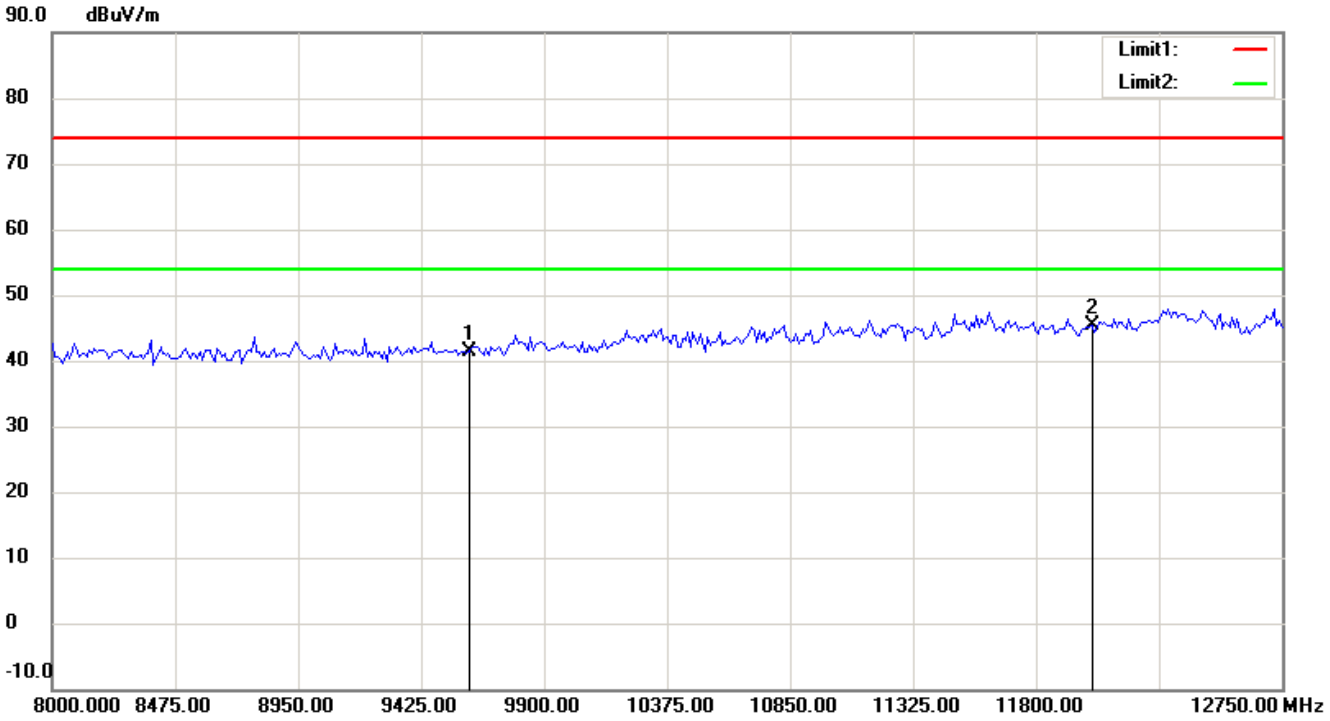


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

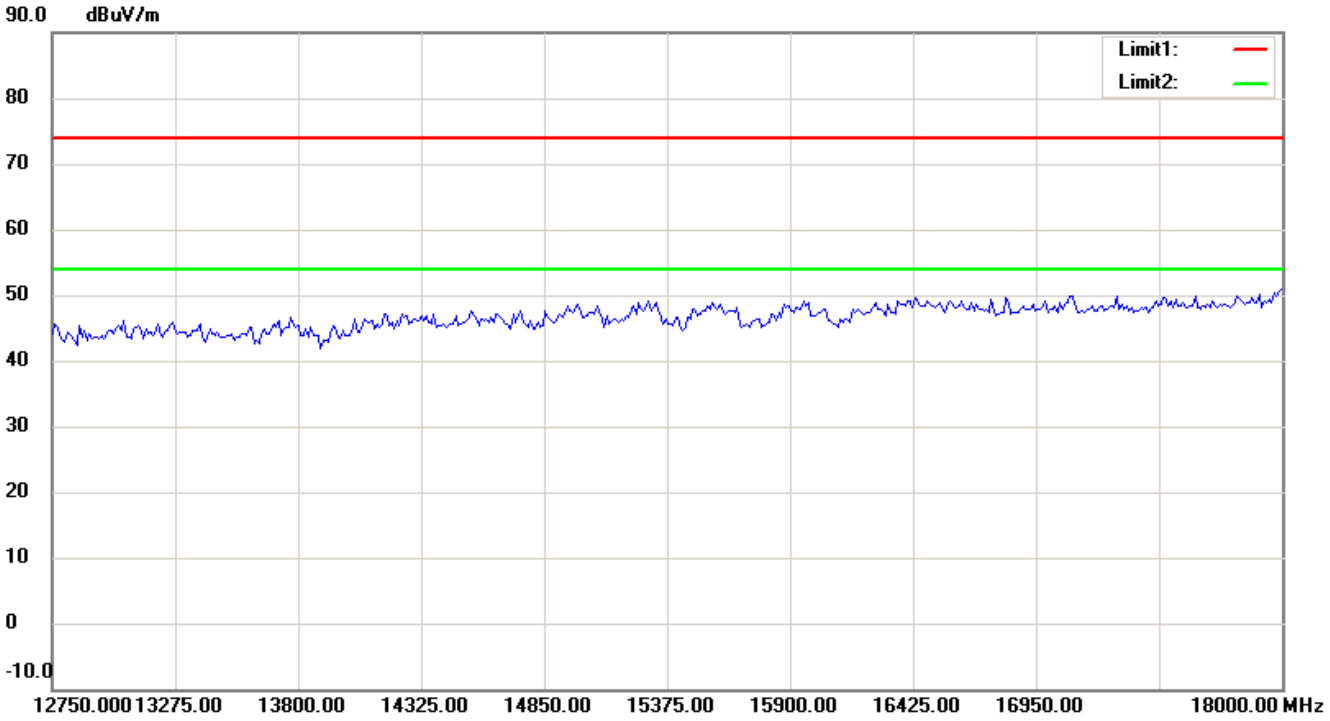


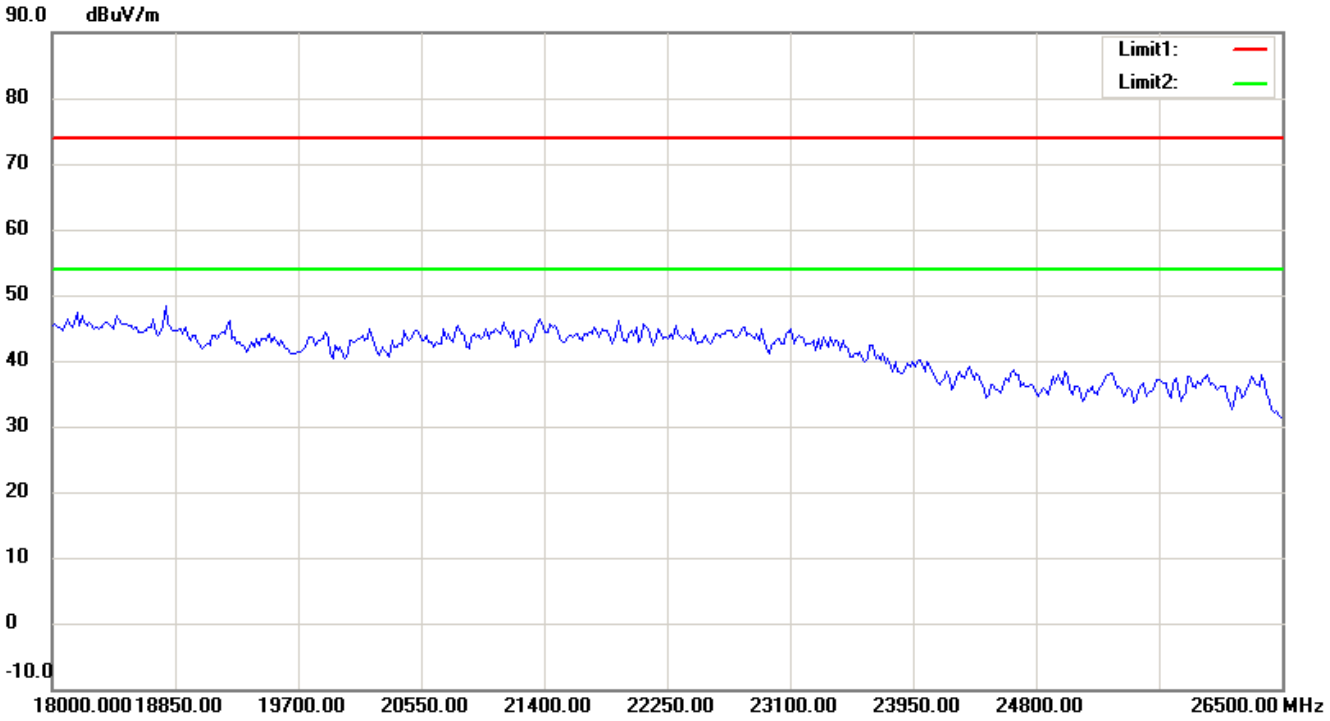


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0



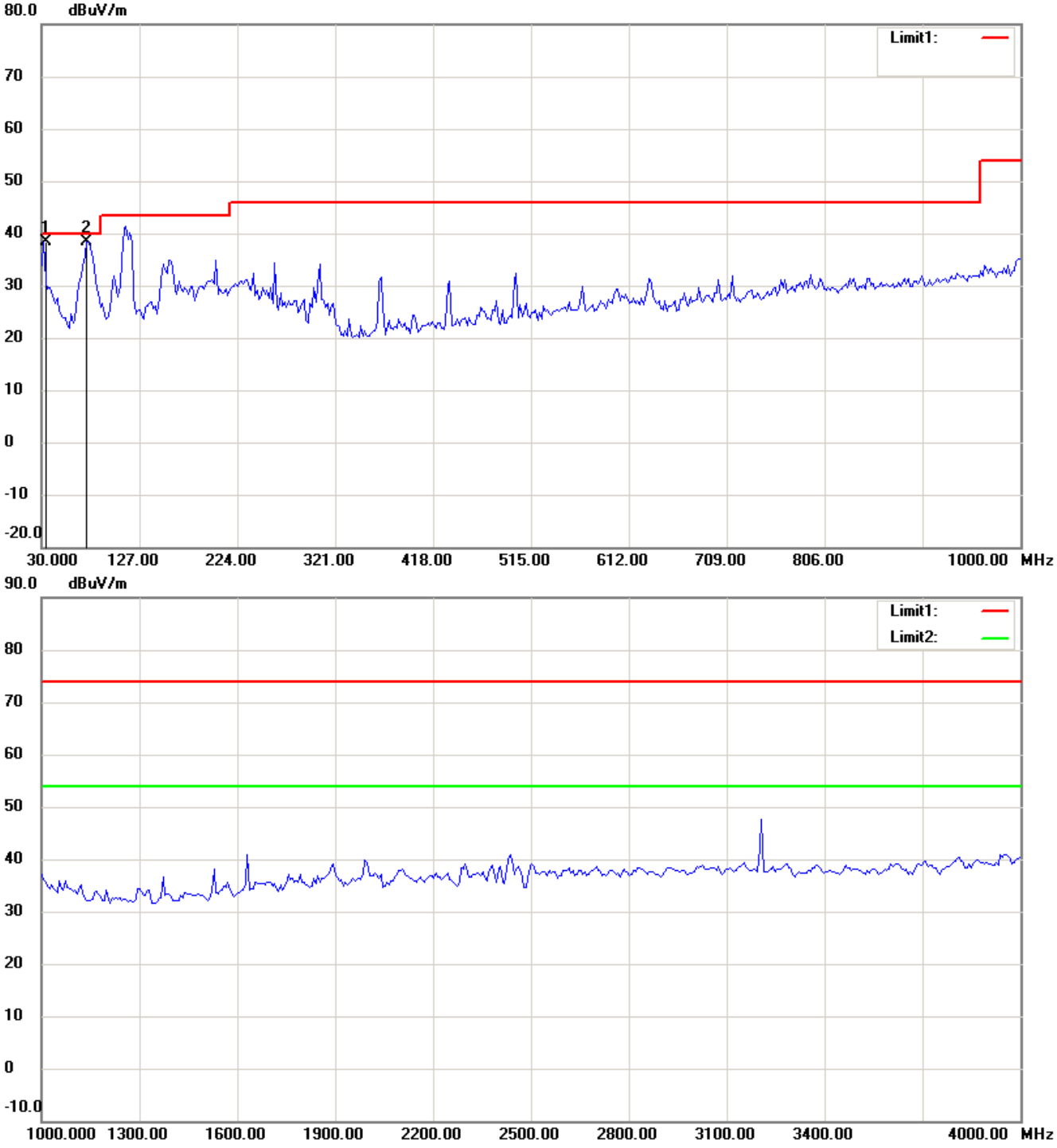


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

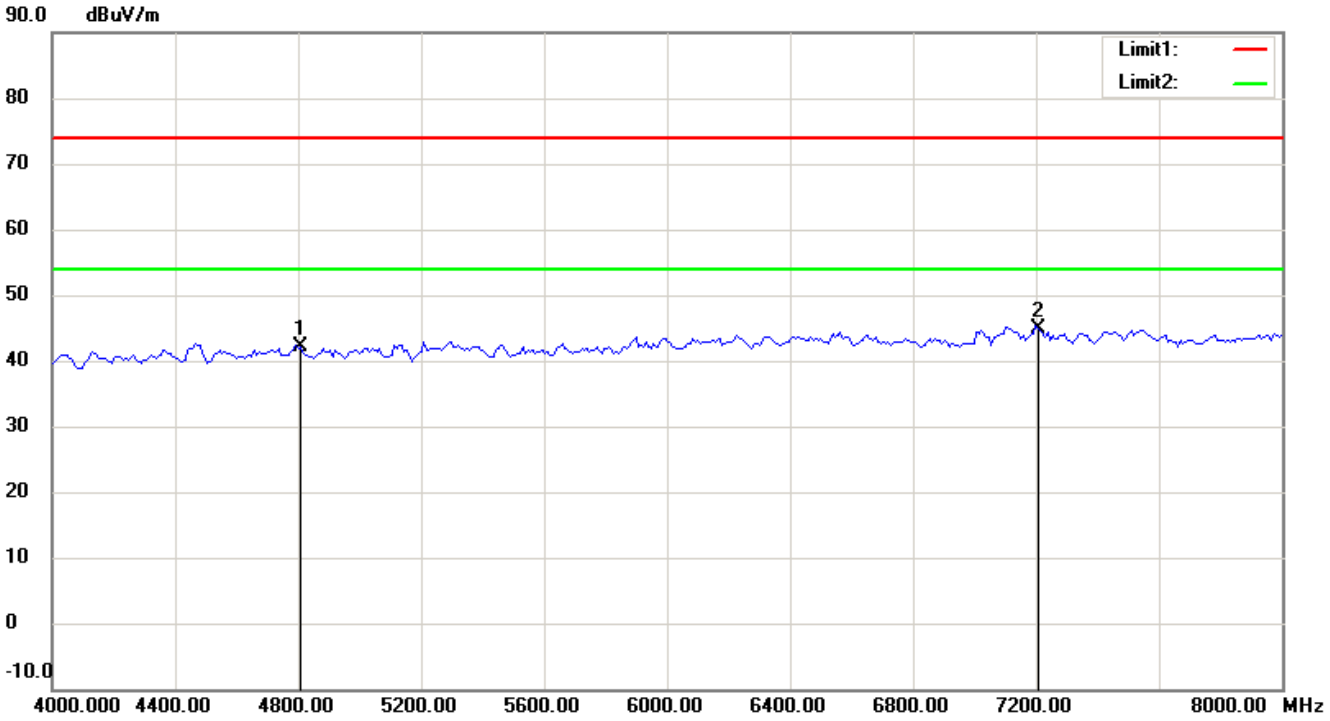
Antenna Polarization V

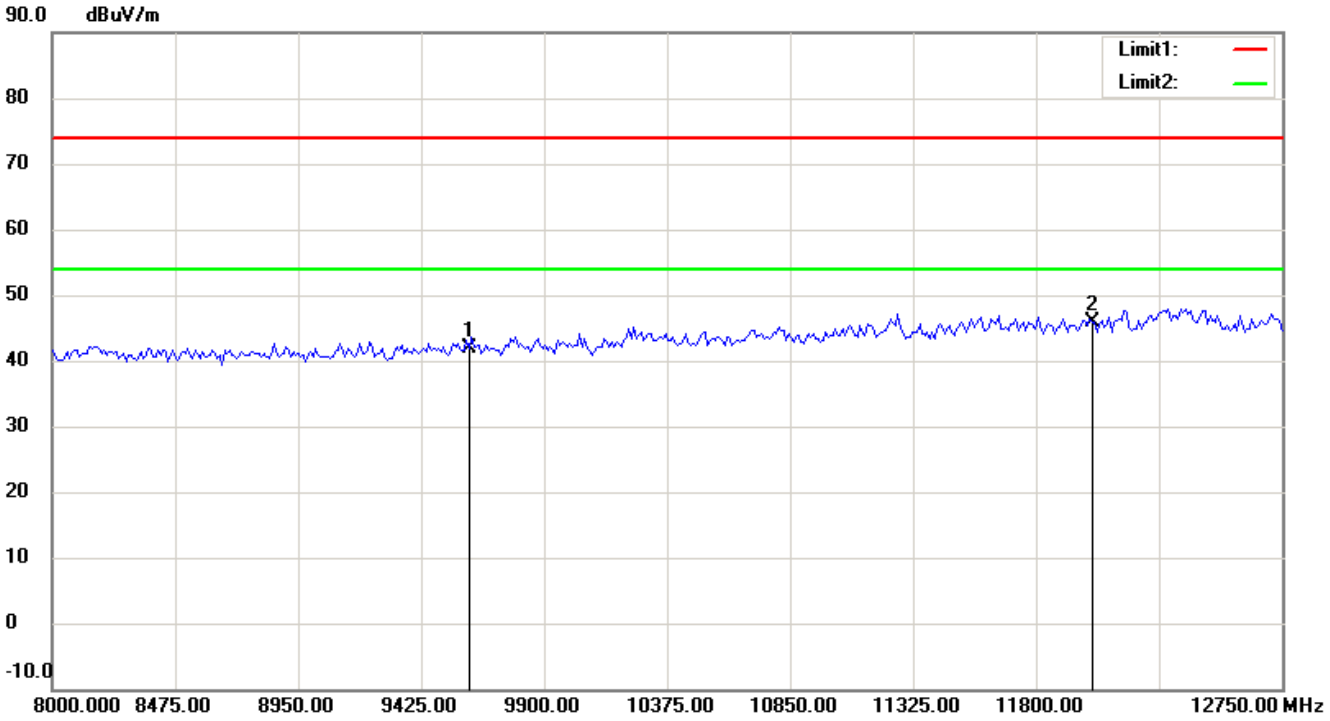


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

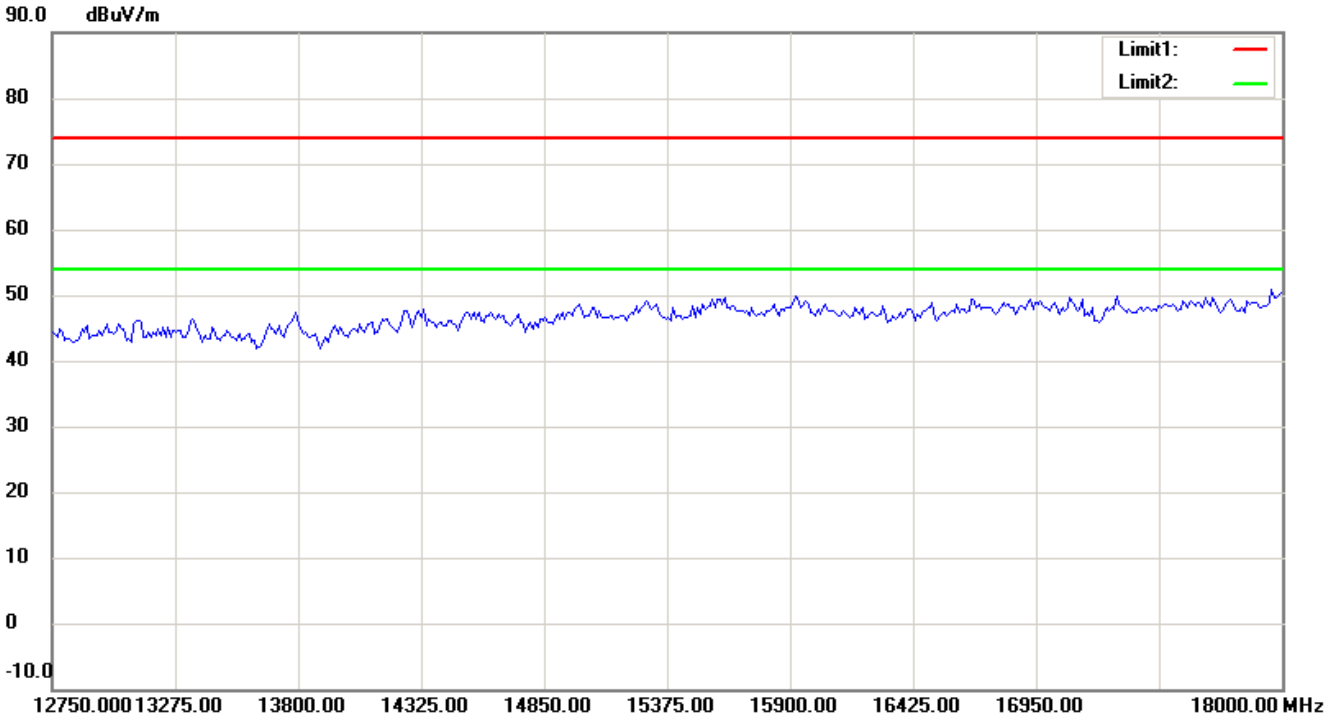


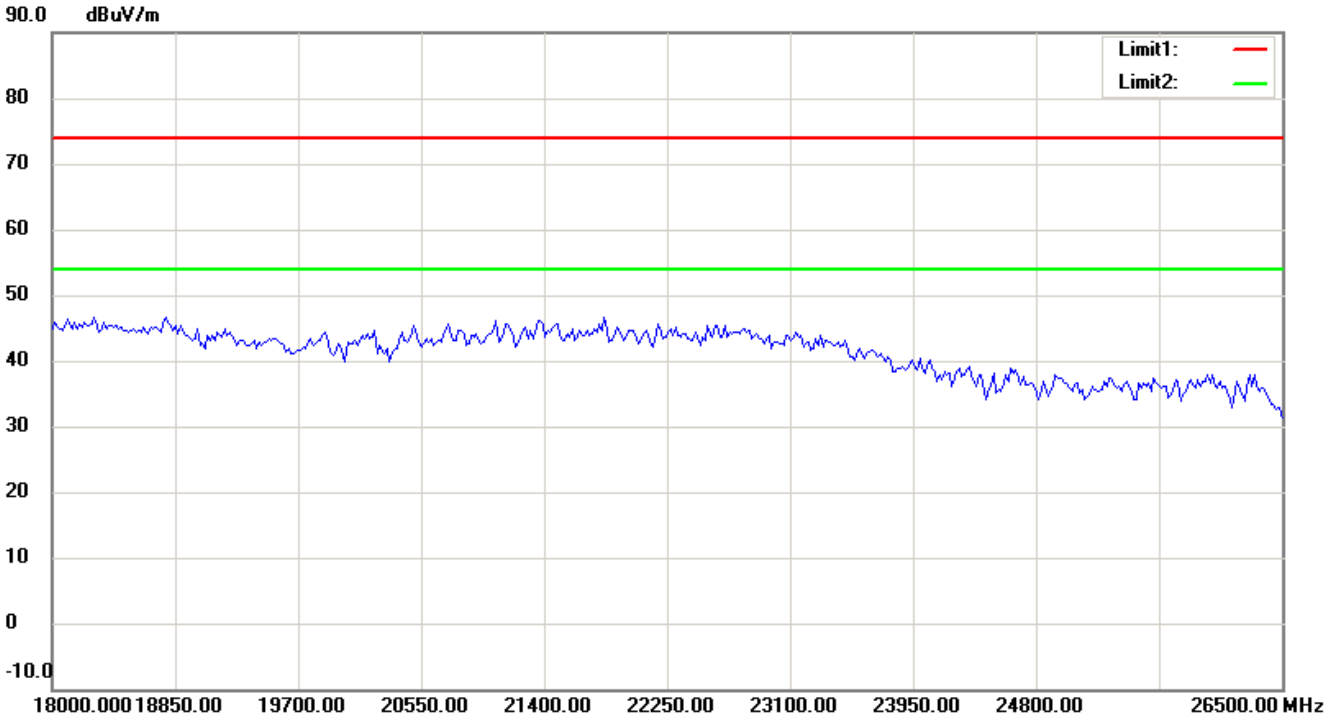


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0



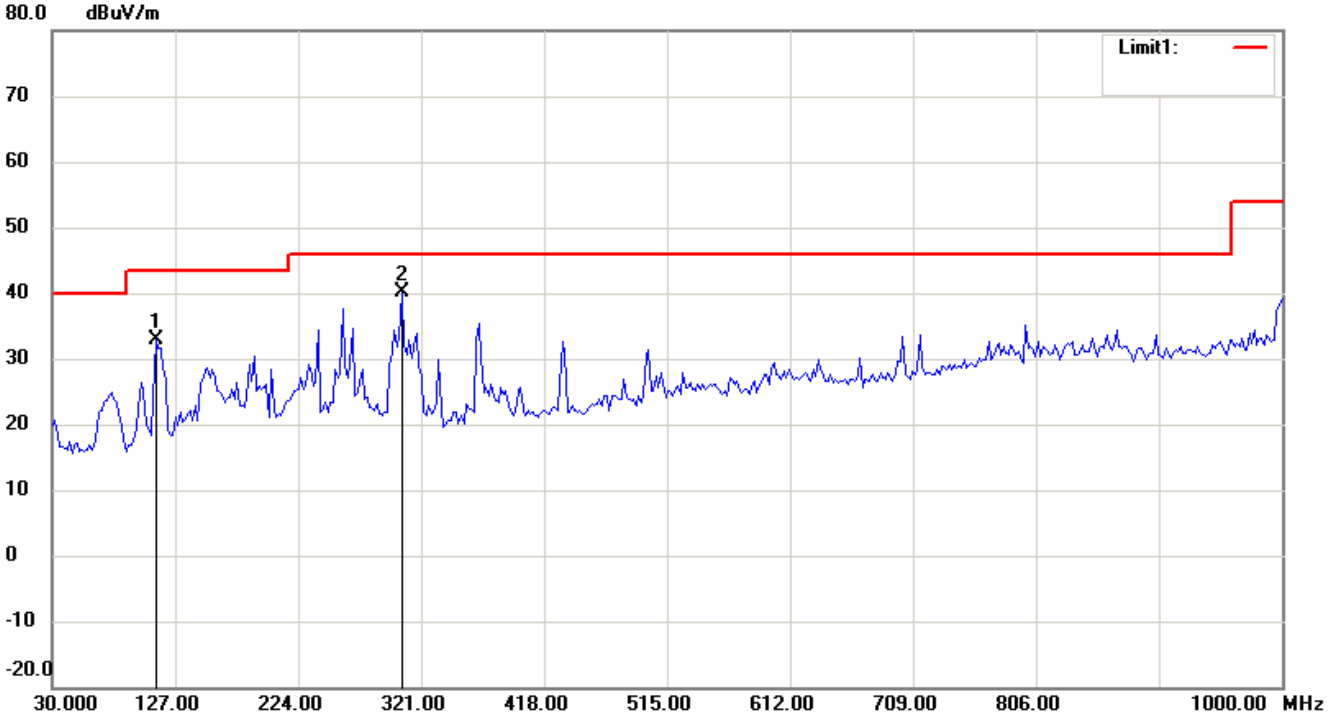


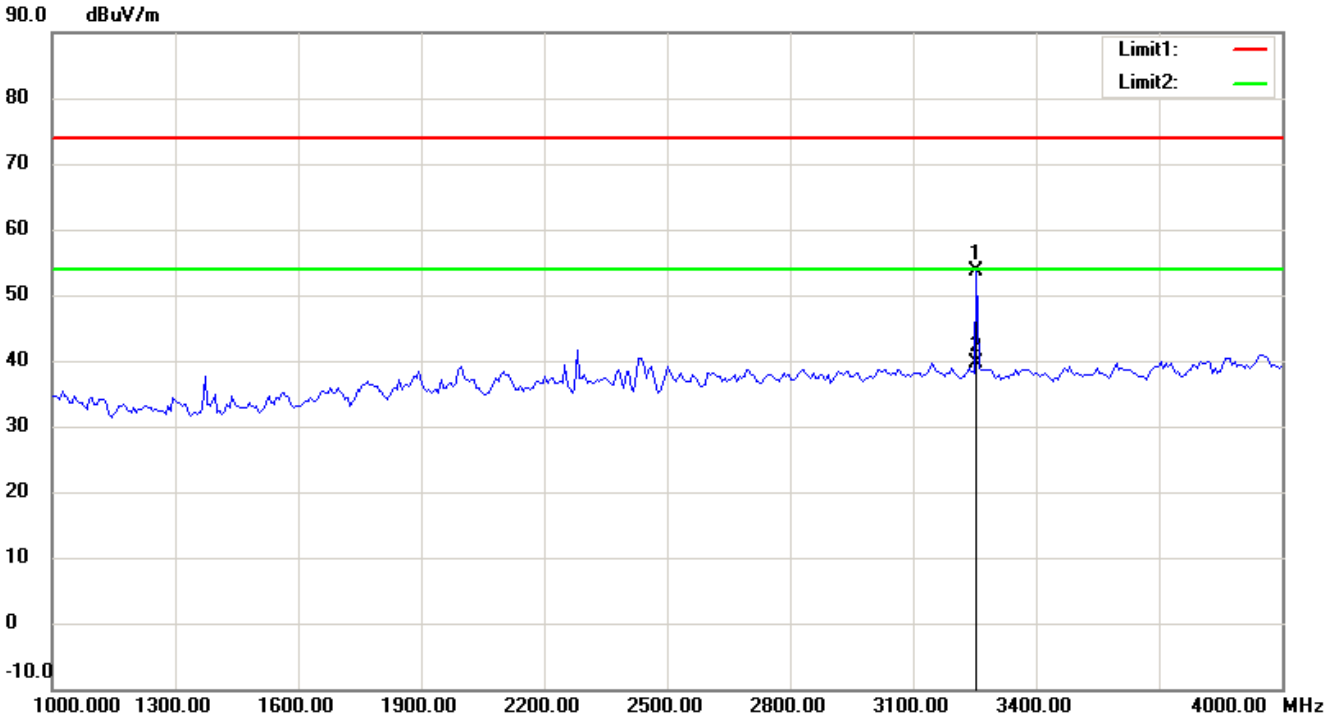
Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

Bluetooth 2.0 TX_2441 MHz
Antenna Polarization H

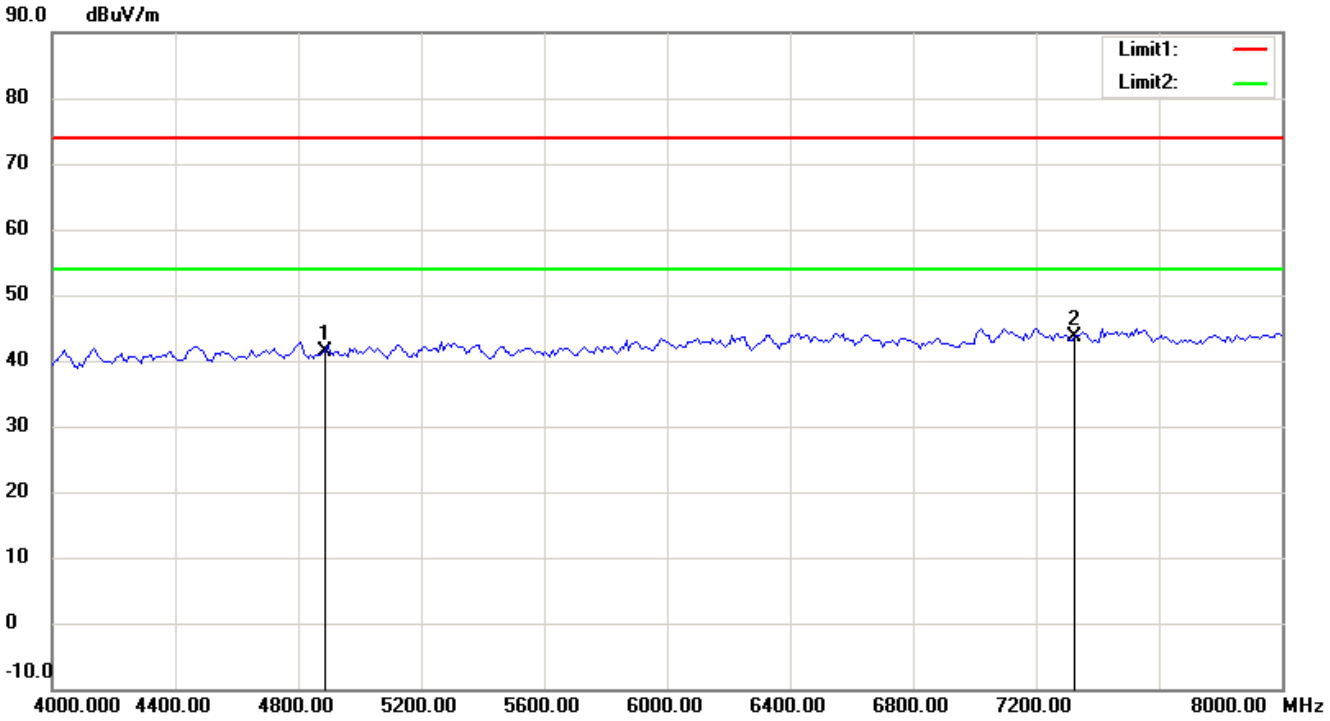


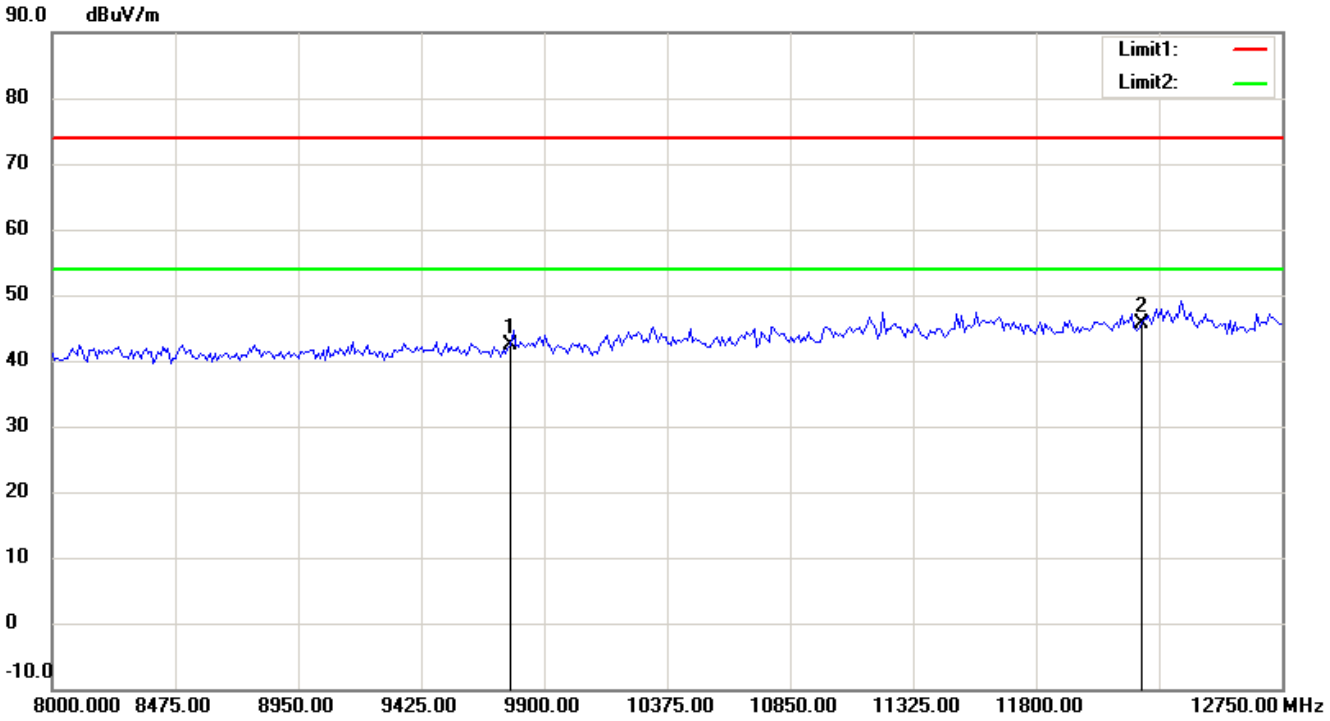


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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.**

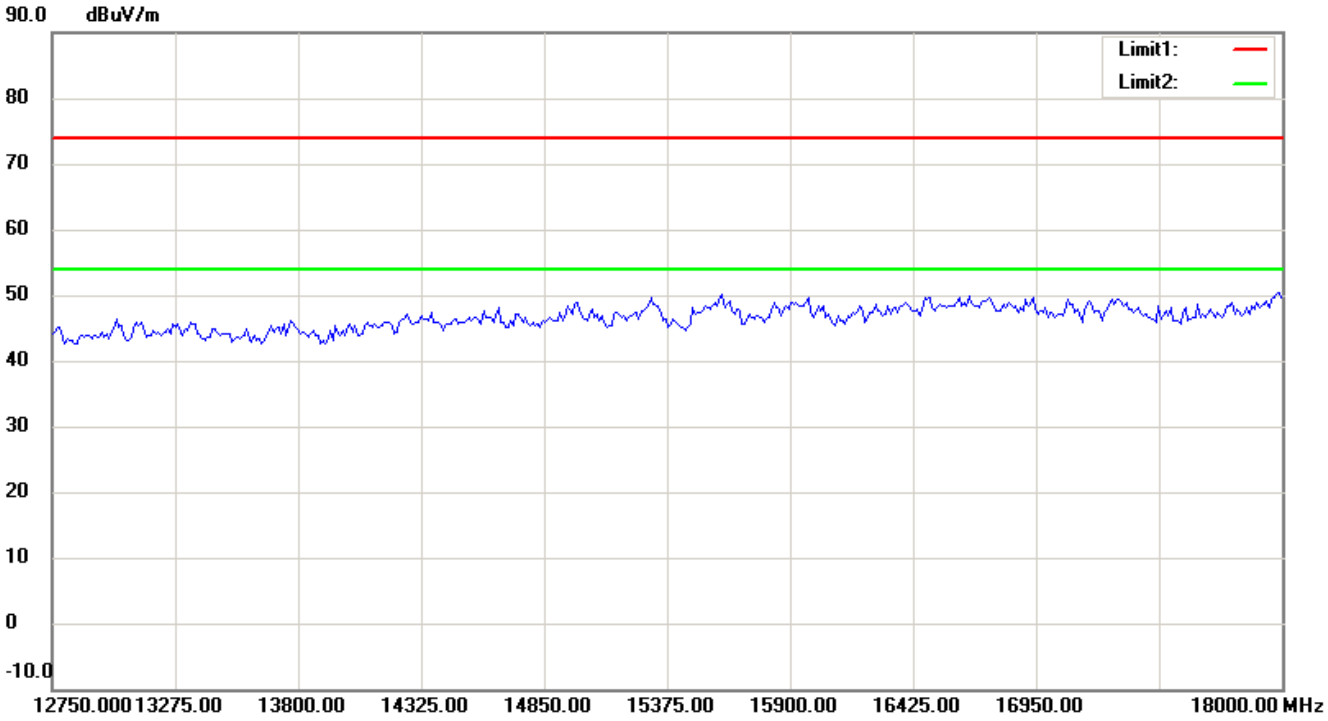
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

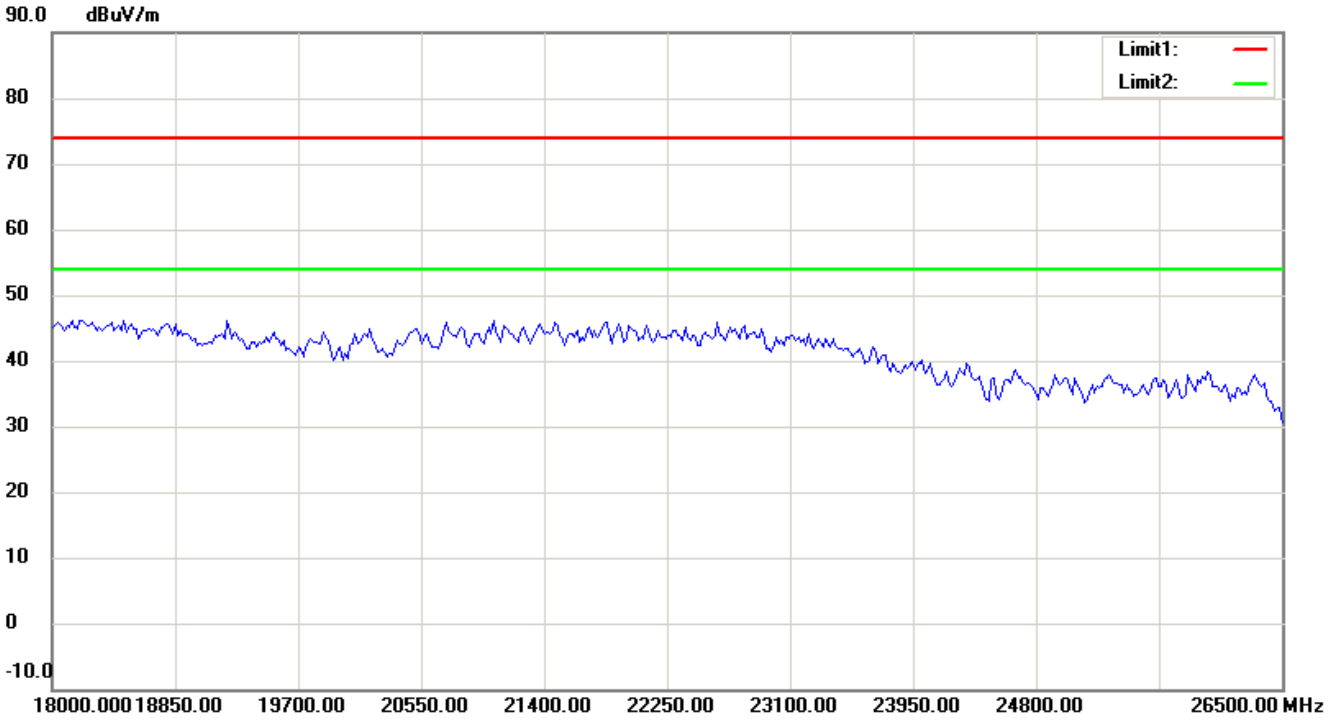




Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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.**



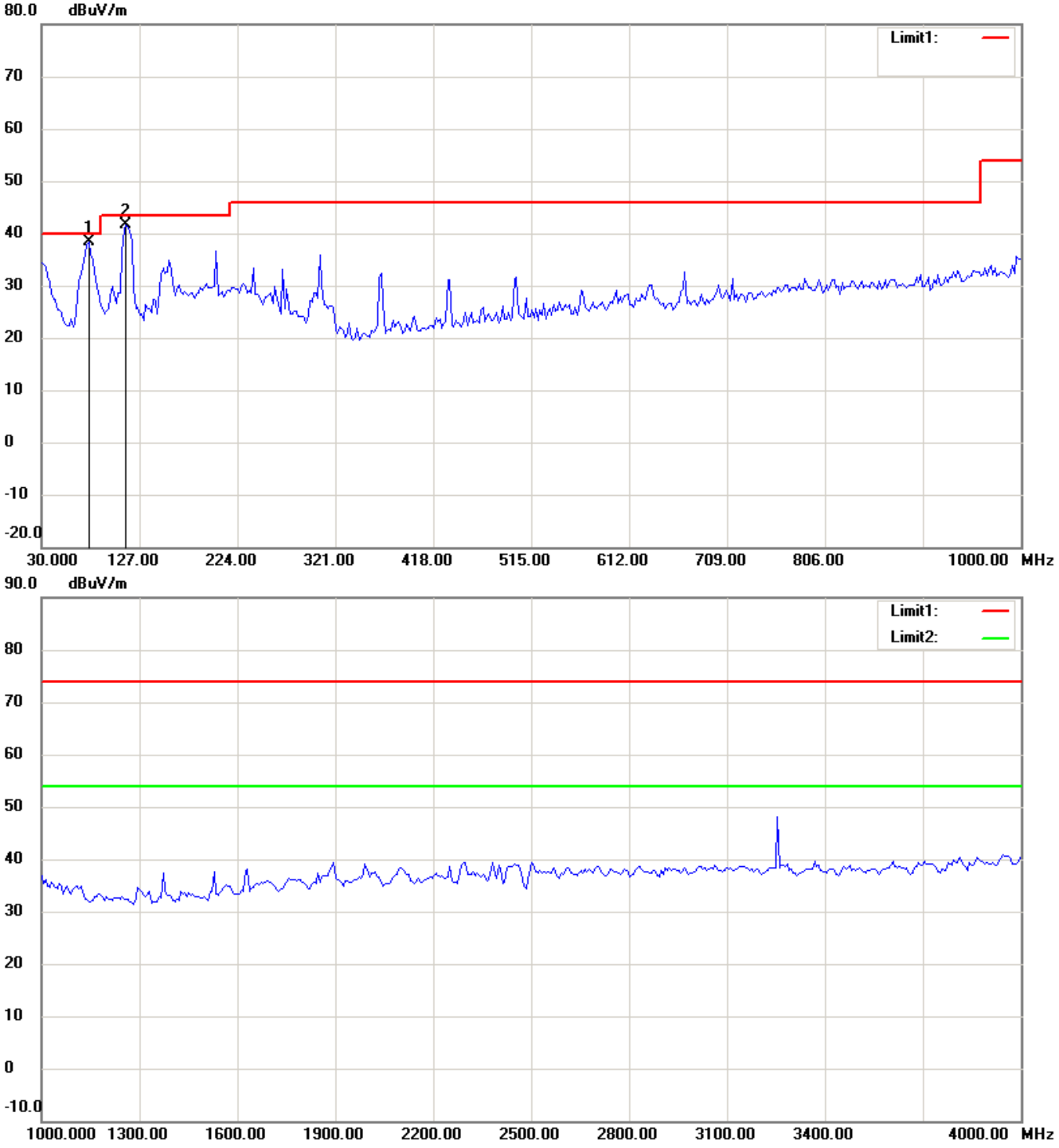


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

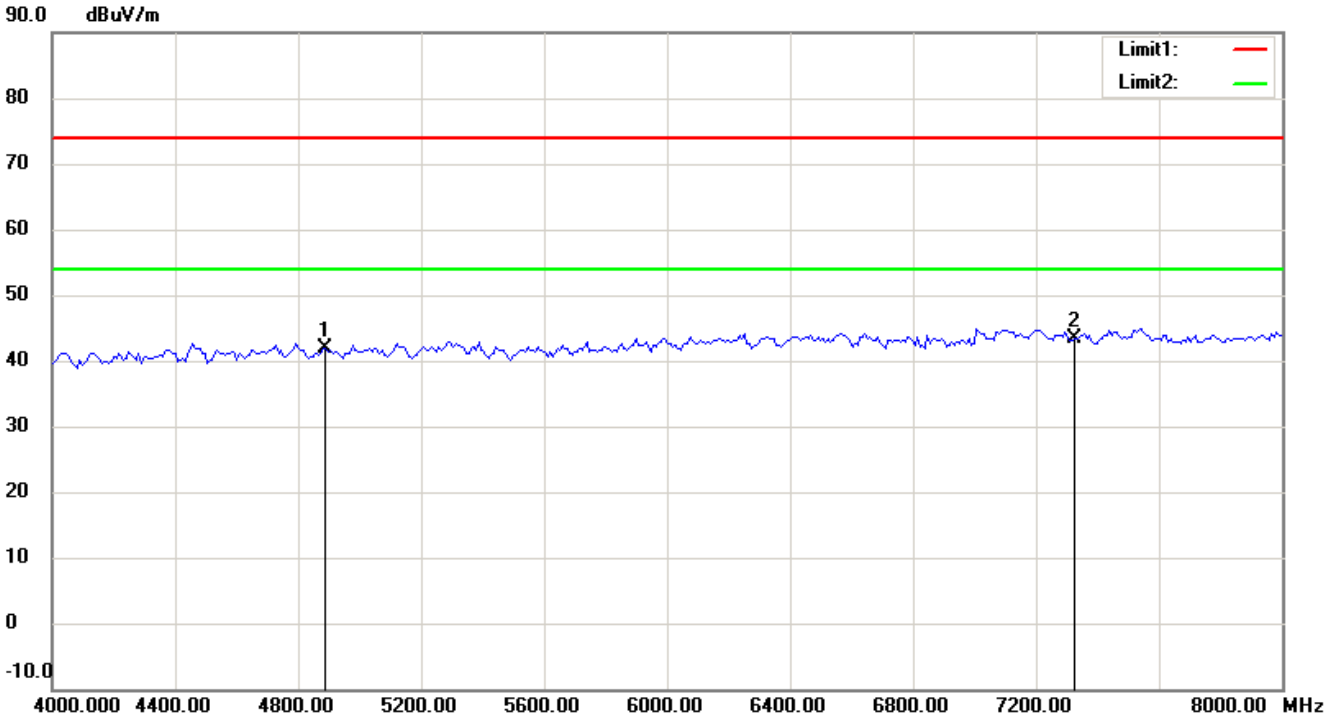
Antenna Polarization V

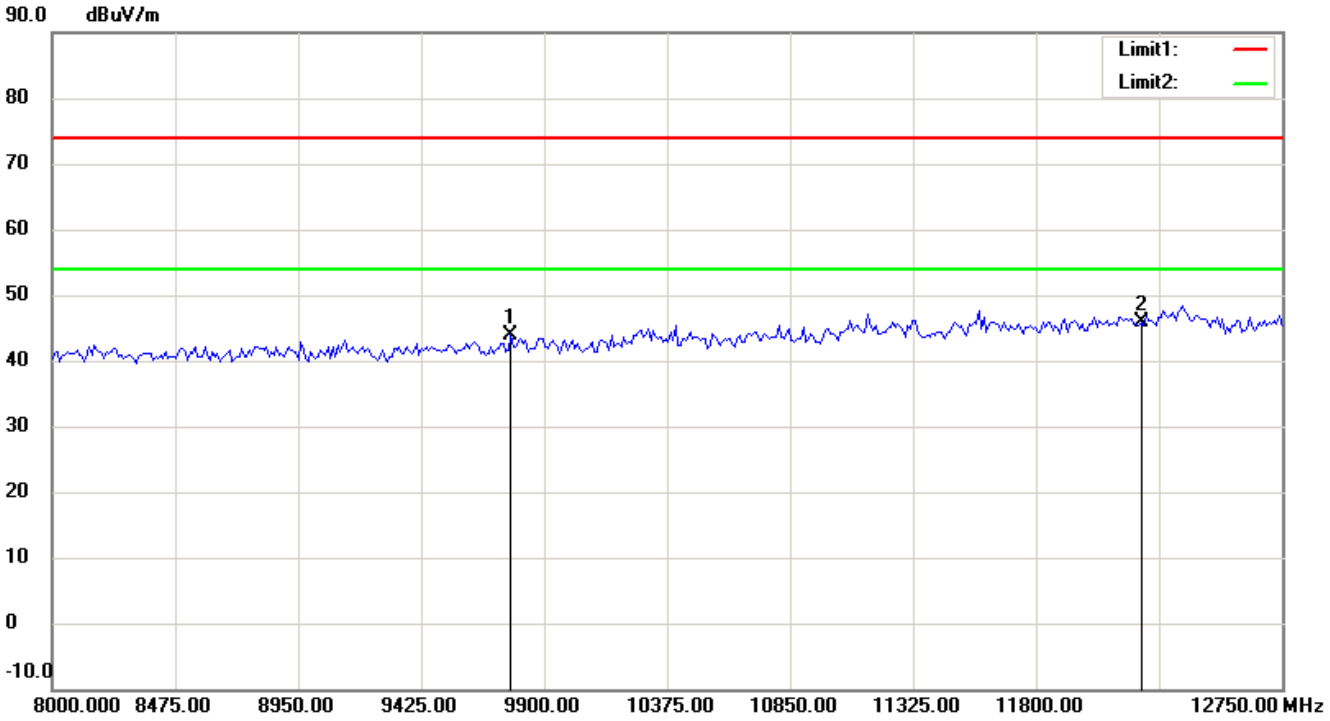


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0





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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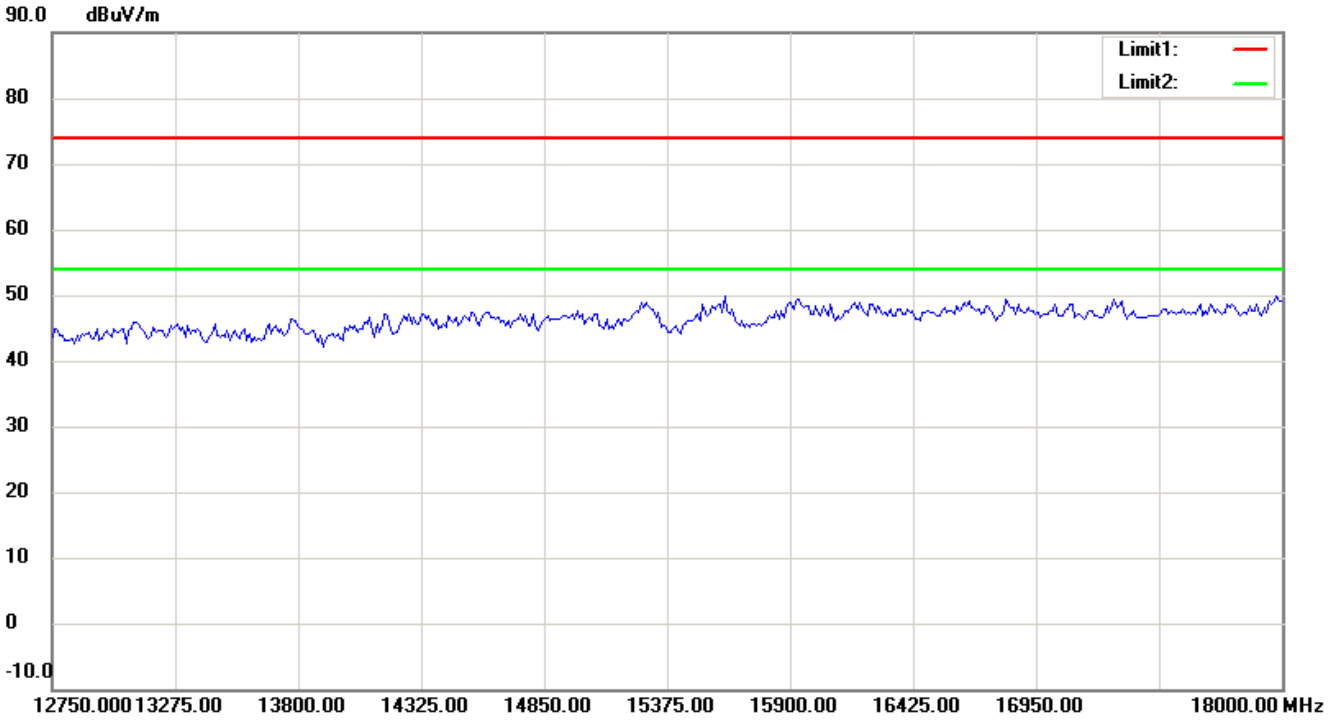
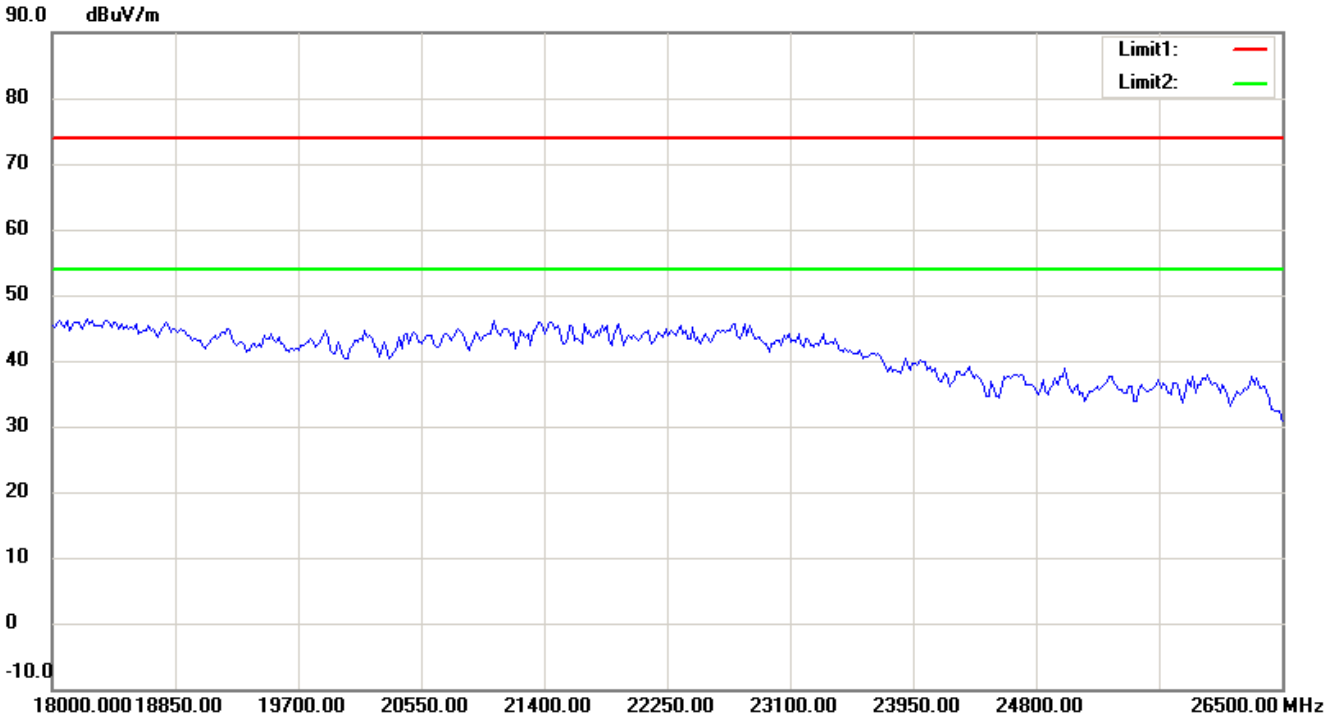
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



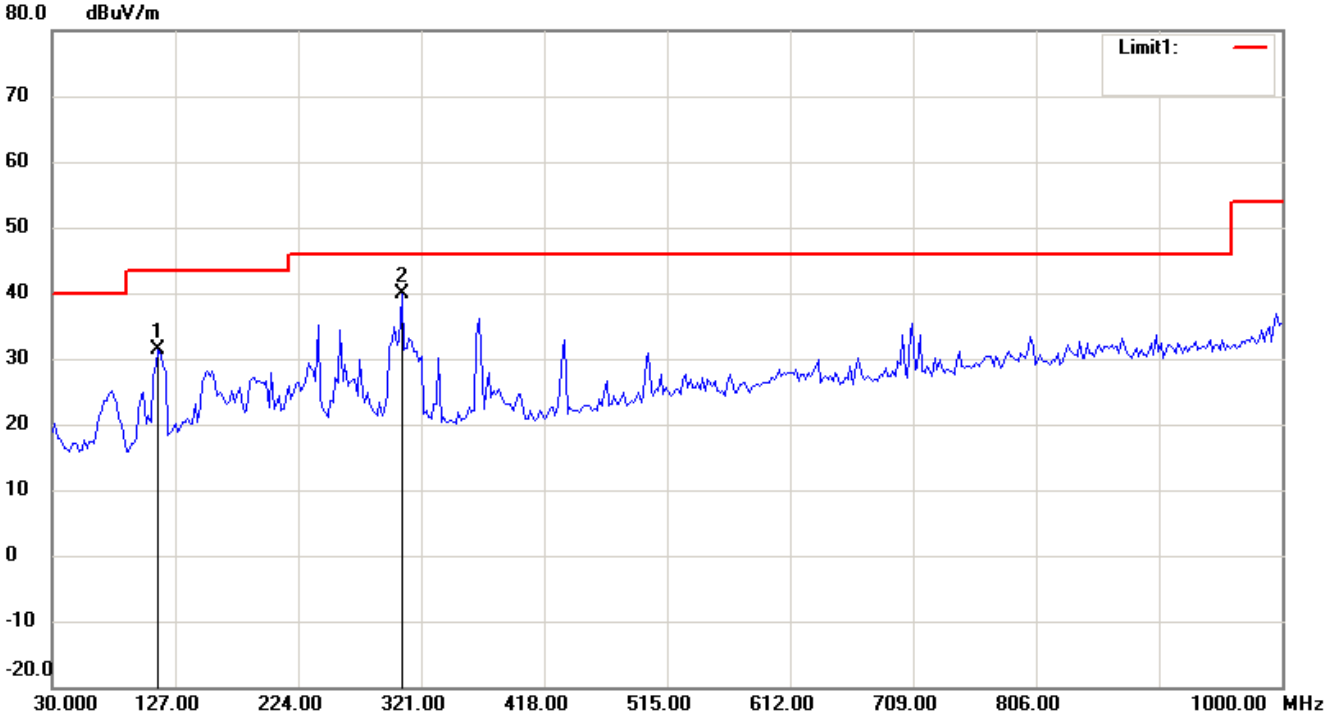


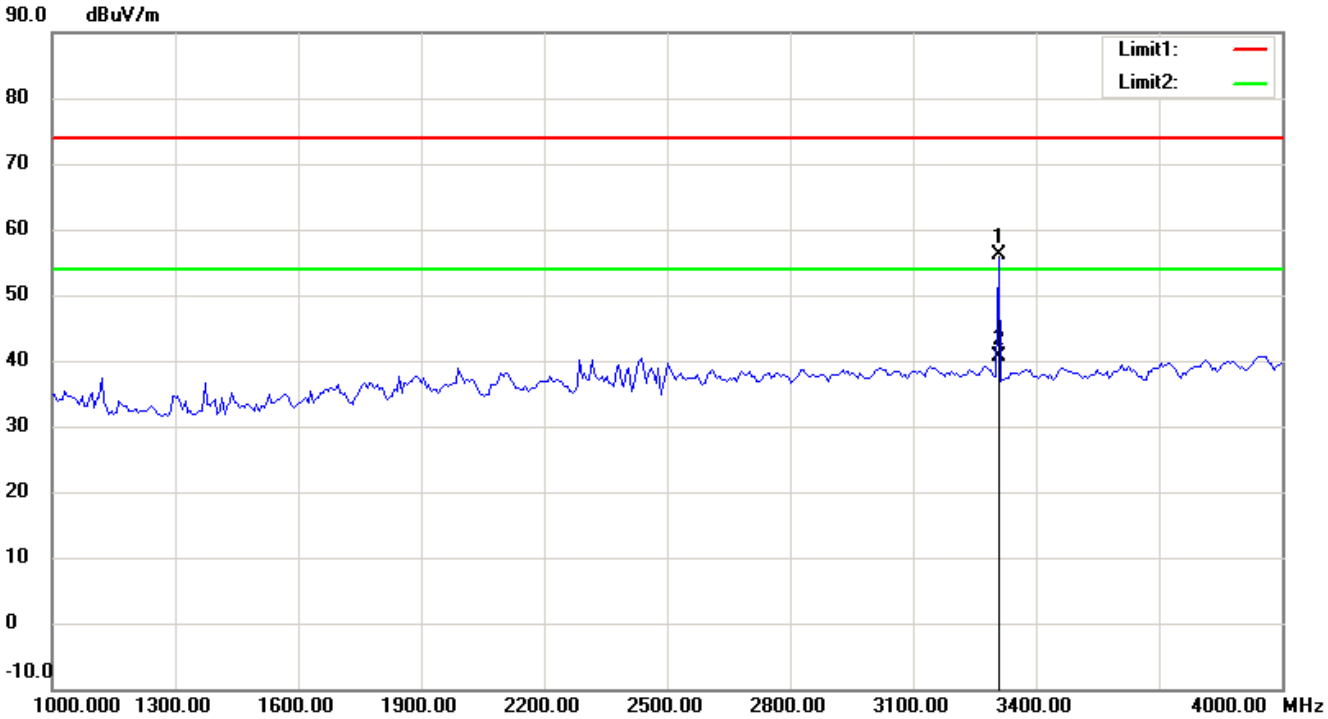
Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

Bluetooth 2.0 TX_2480 MHz
Antenna Polarization H

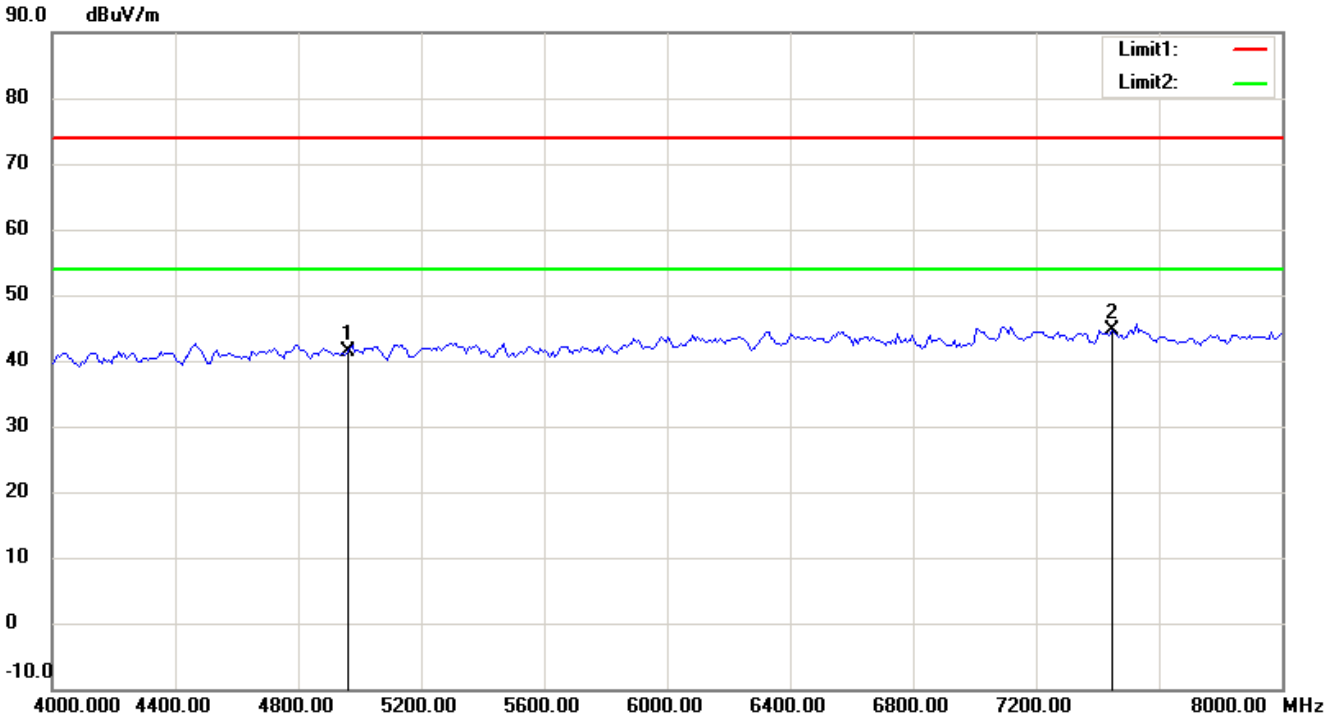


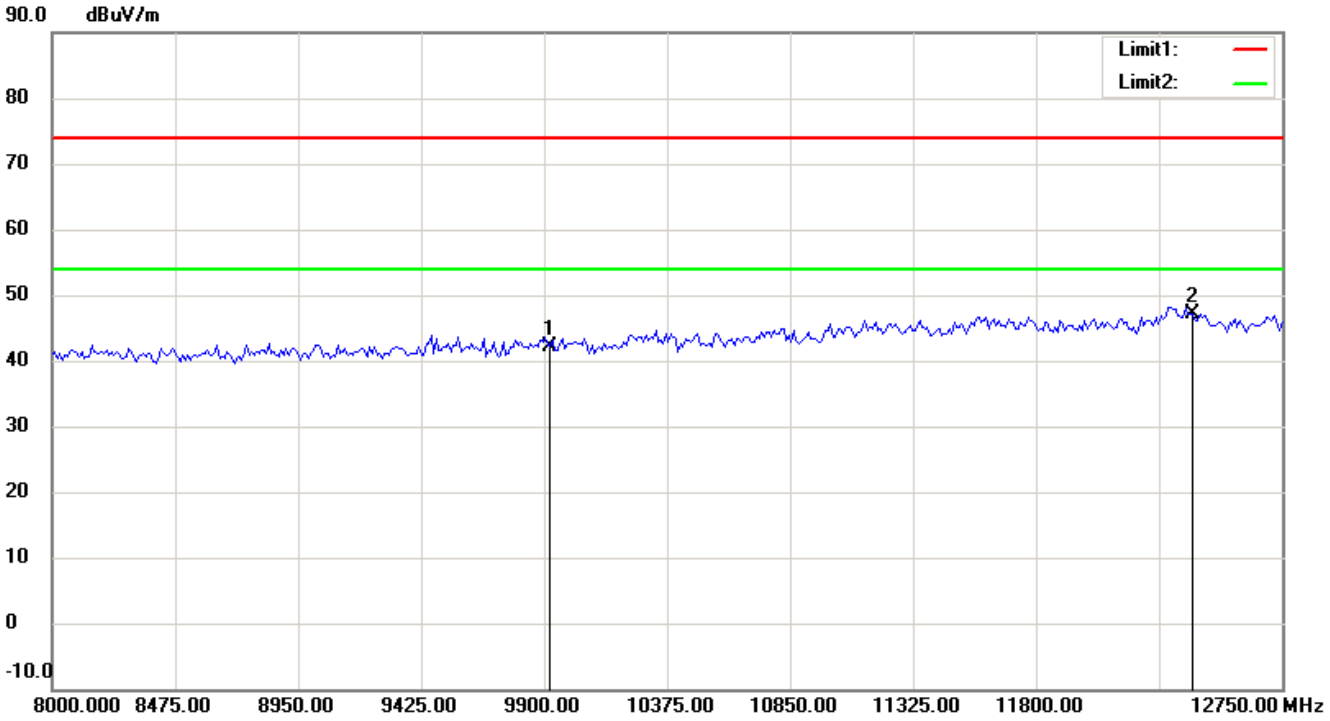


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0





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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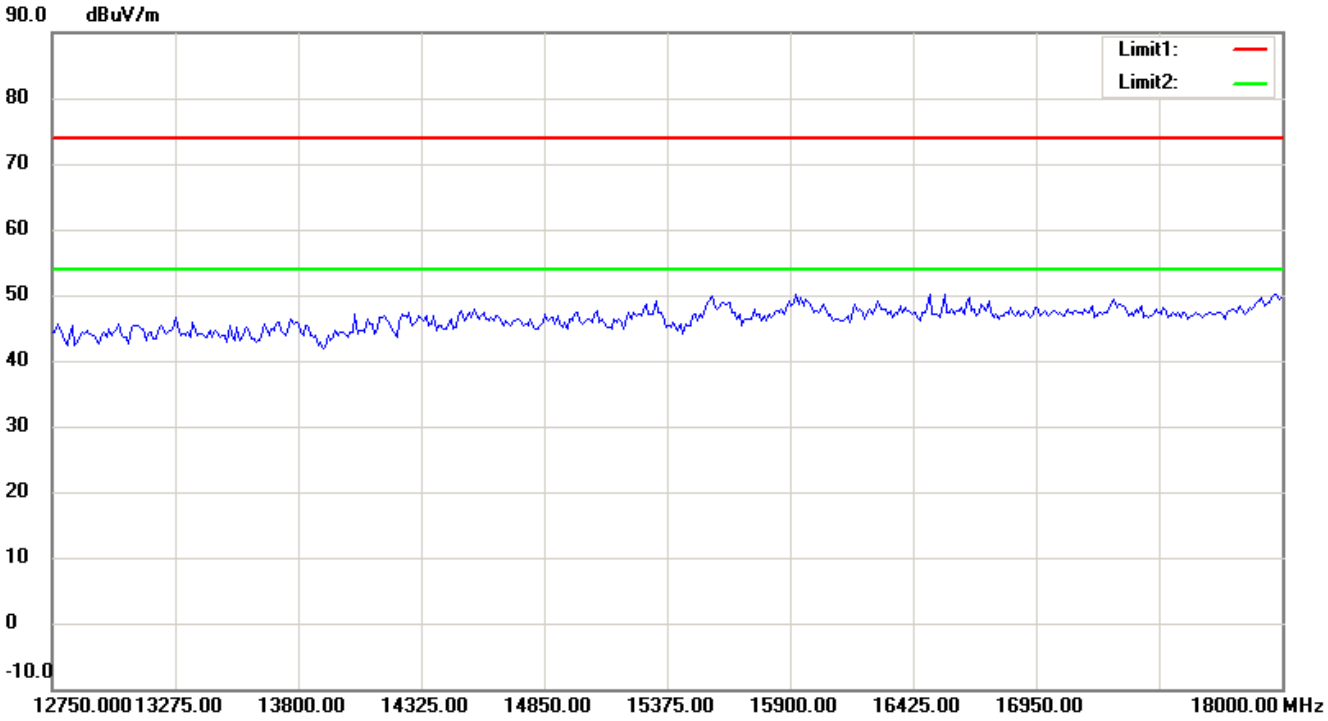
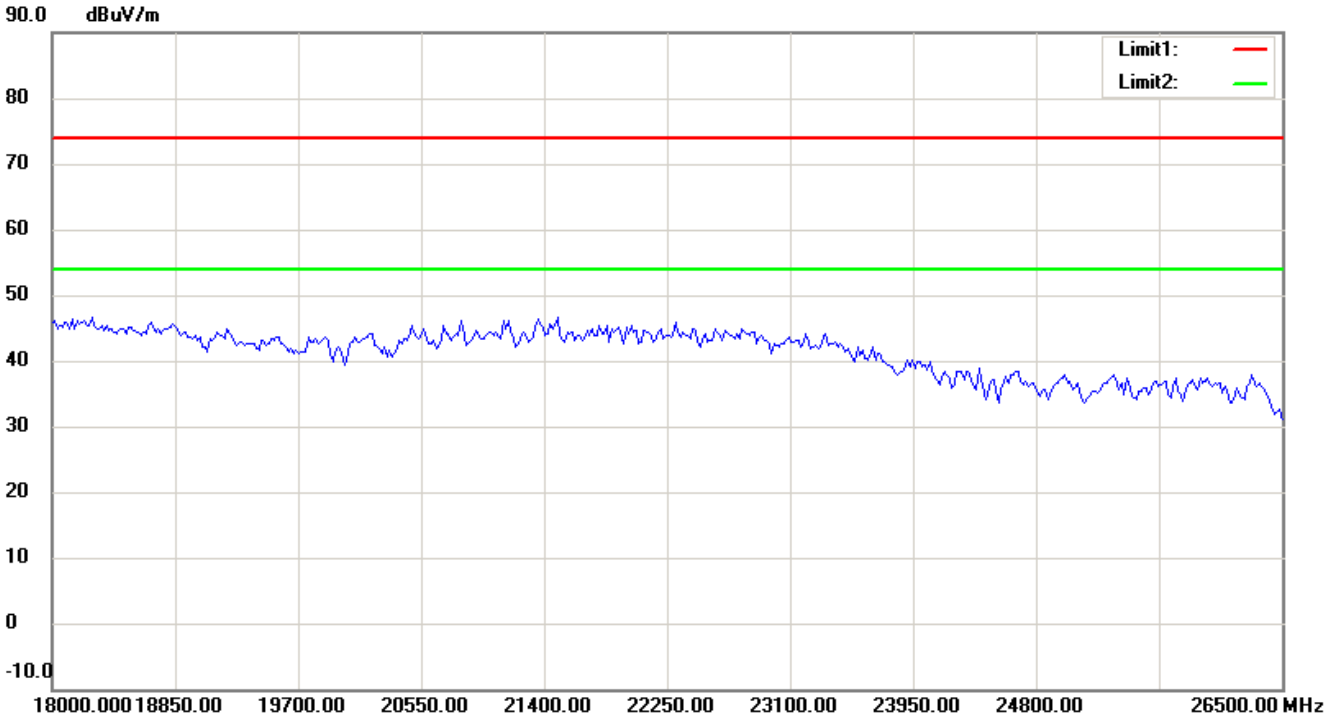
FCC ID: PANBT400B0



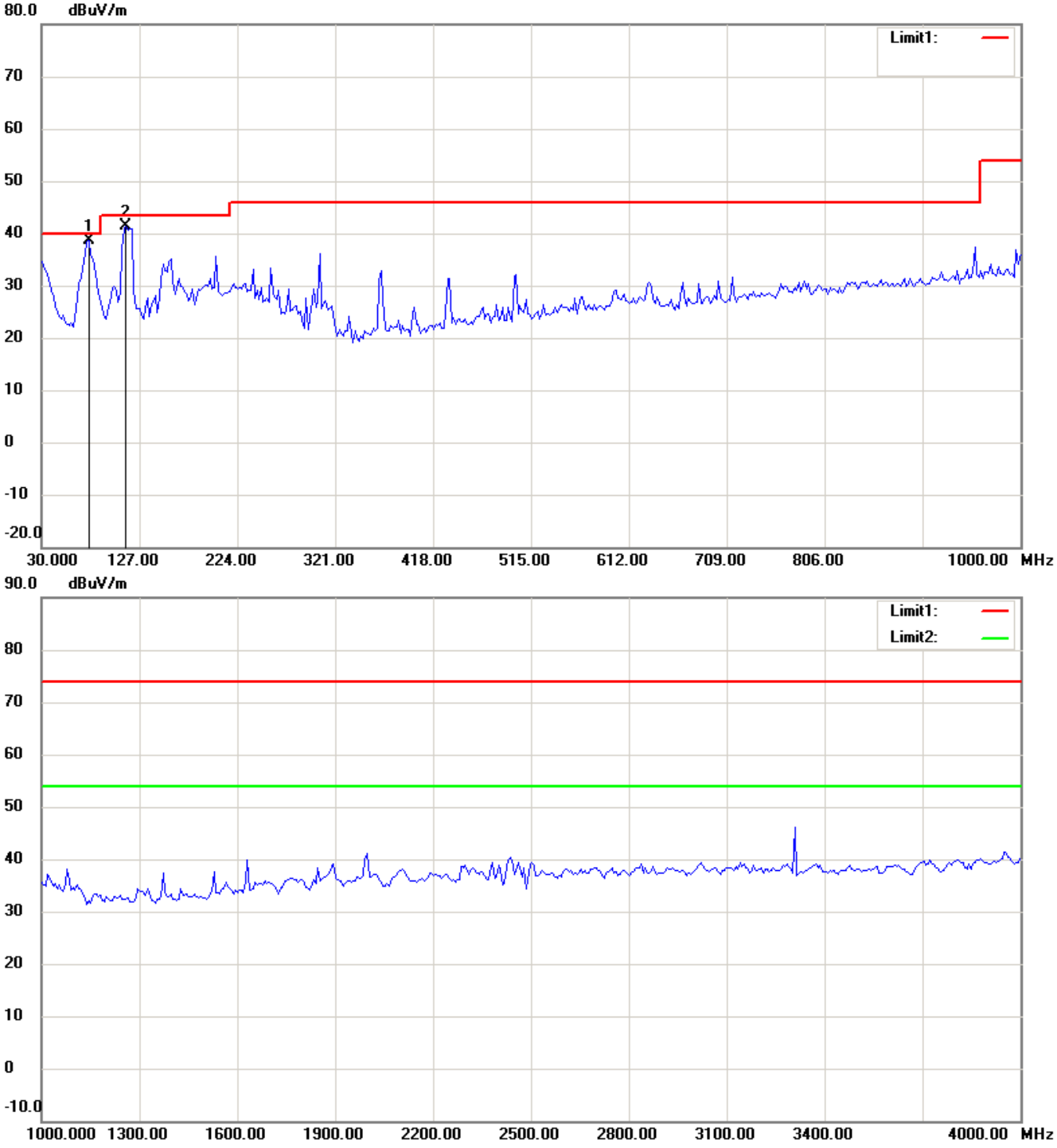


Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

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.**
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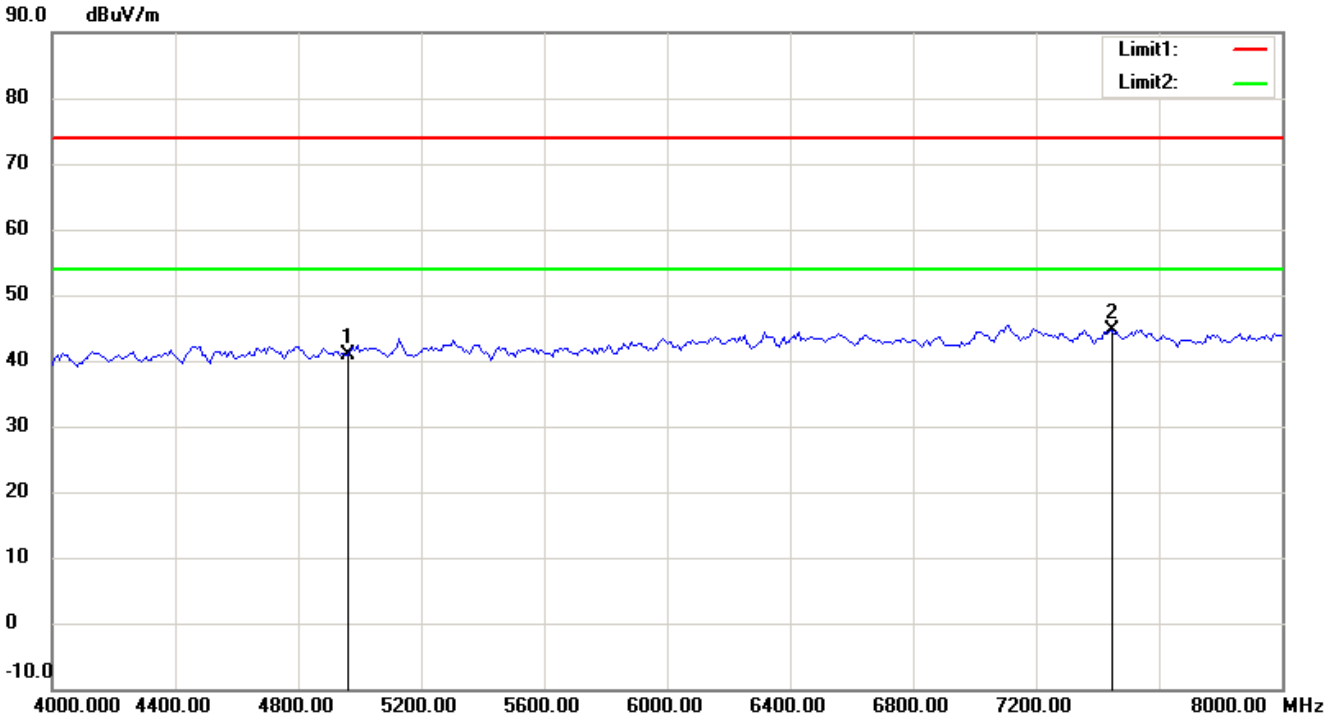
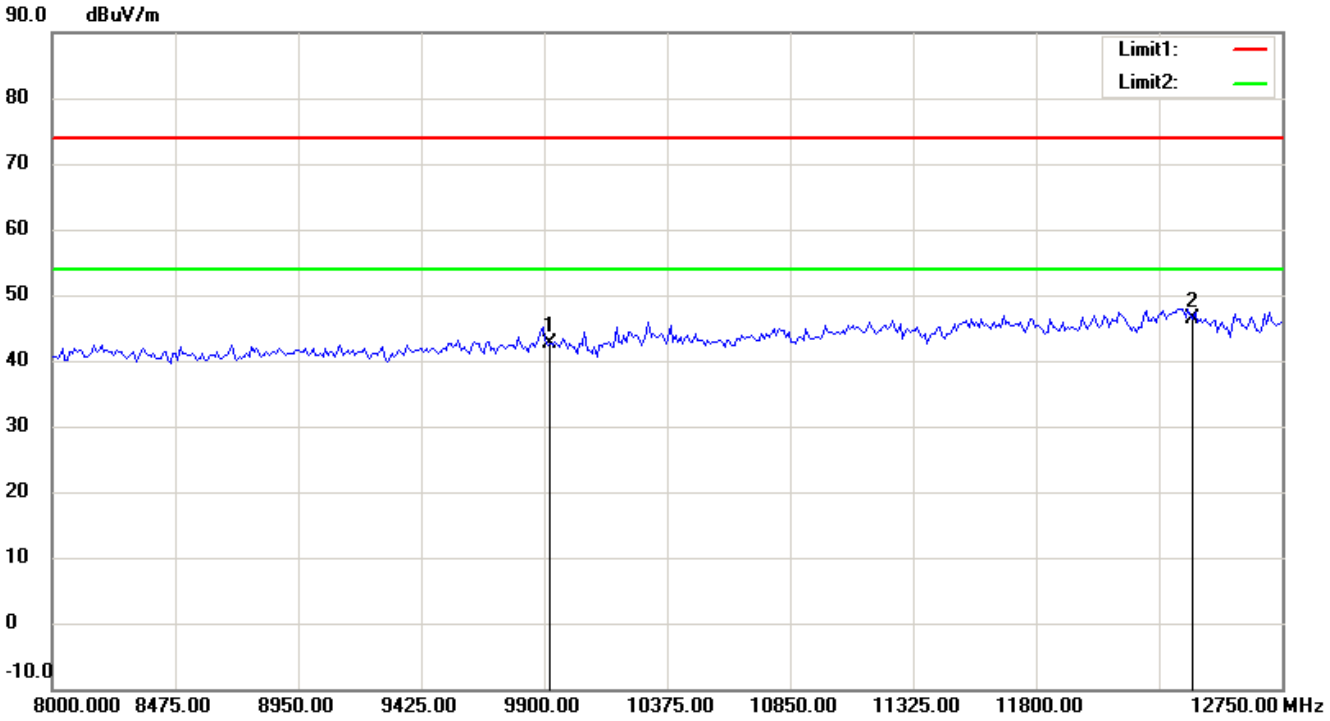
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





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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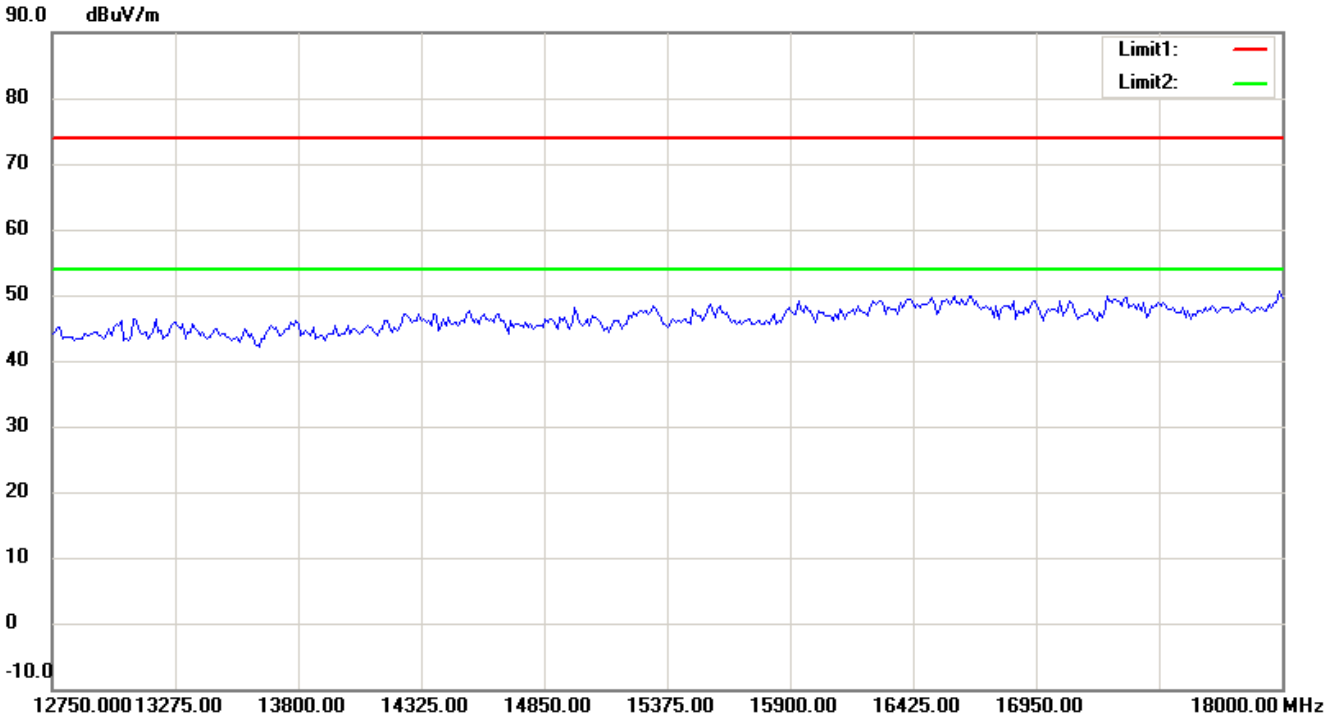
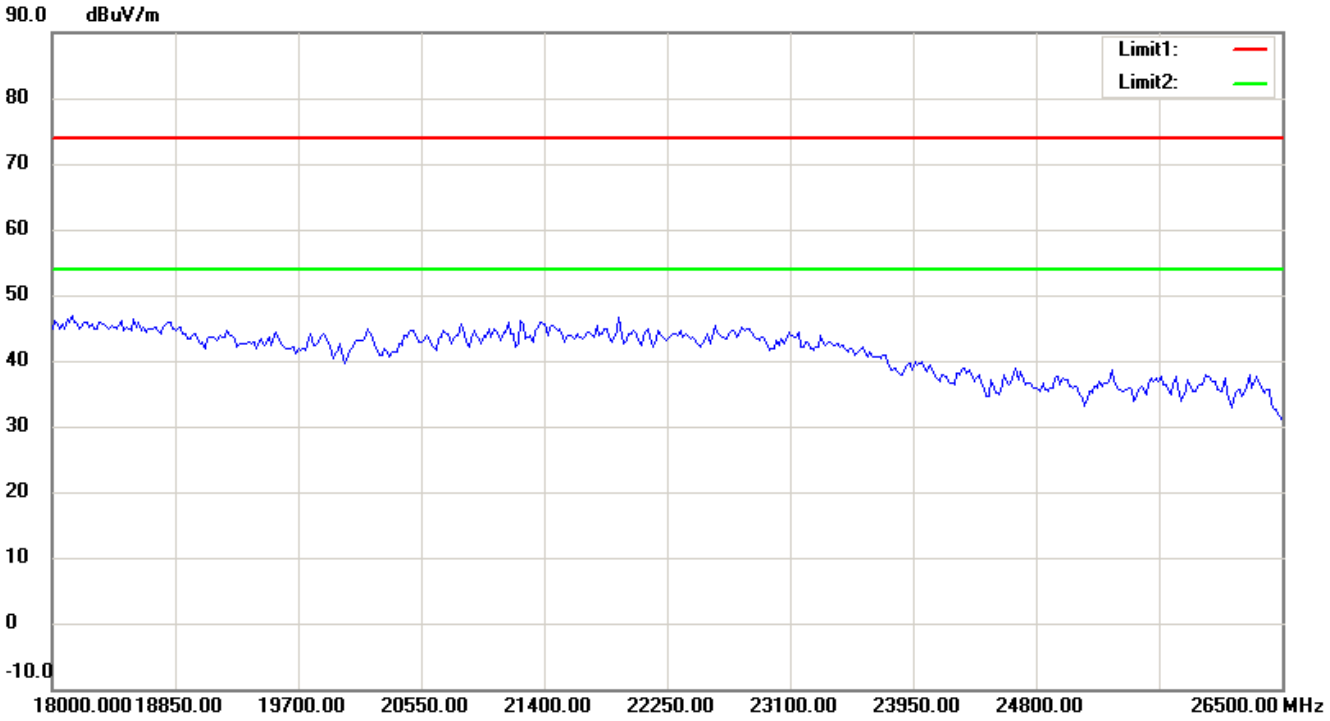
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



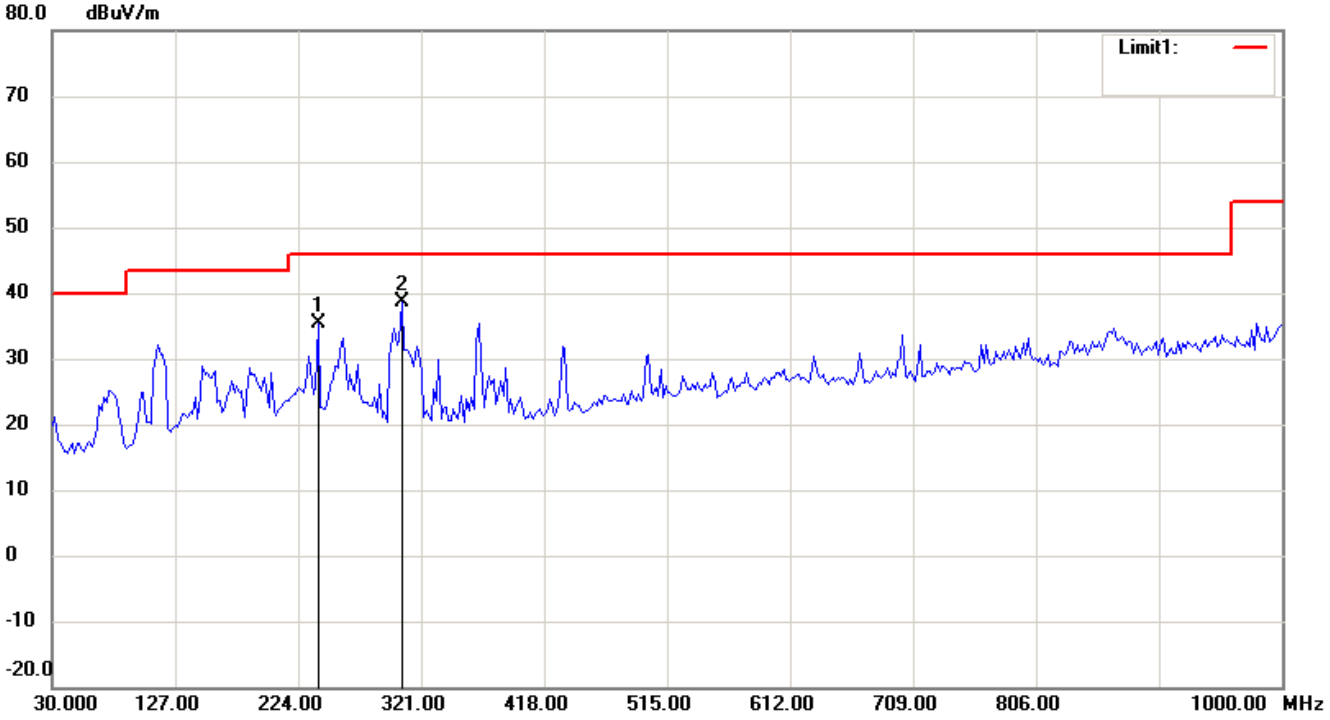


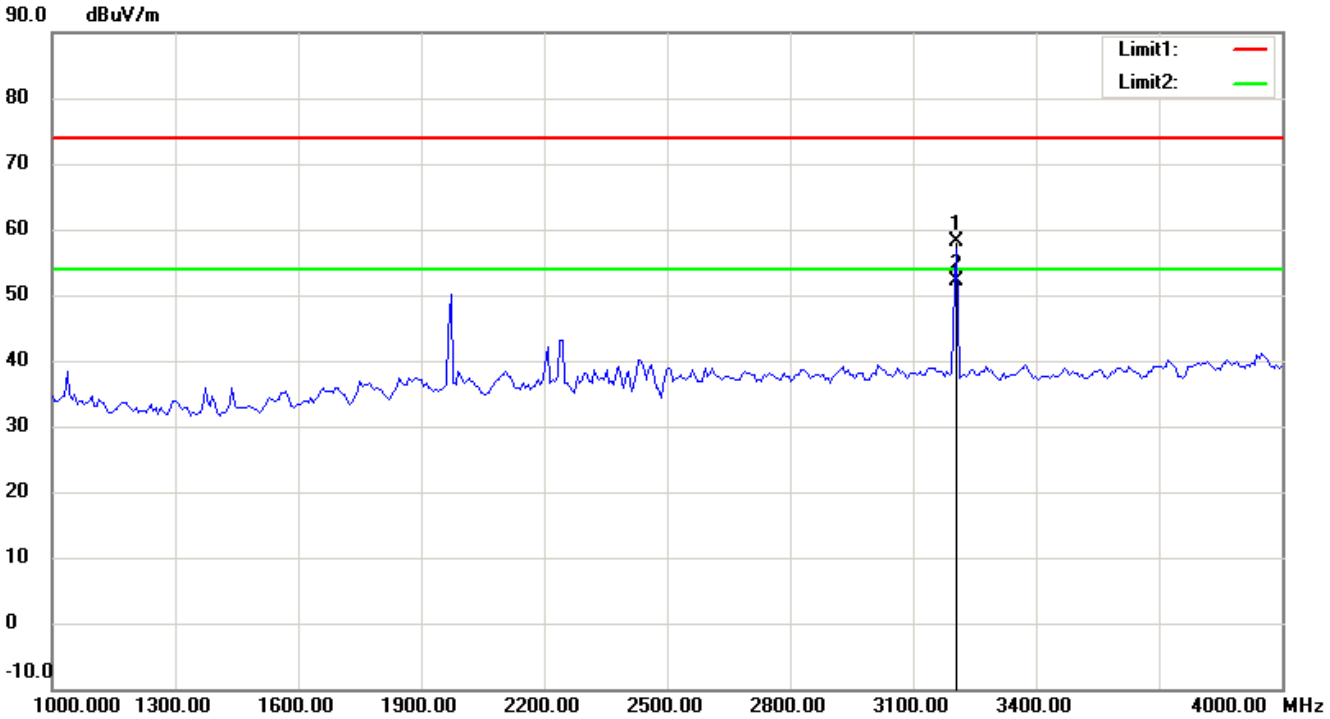
Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

Bluetooth 4.0 TX_2402 MHz
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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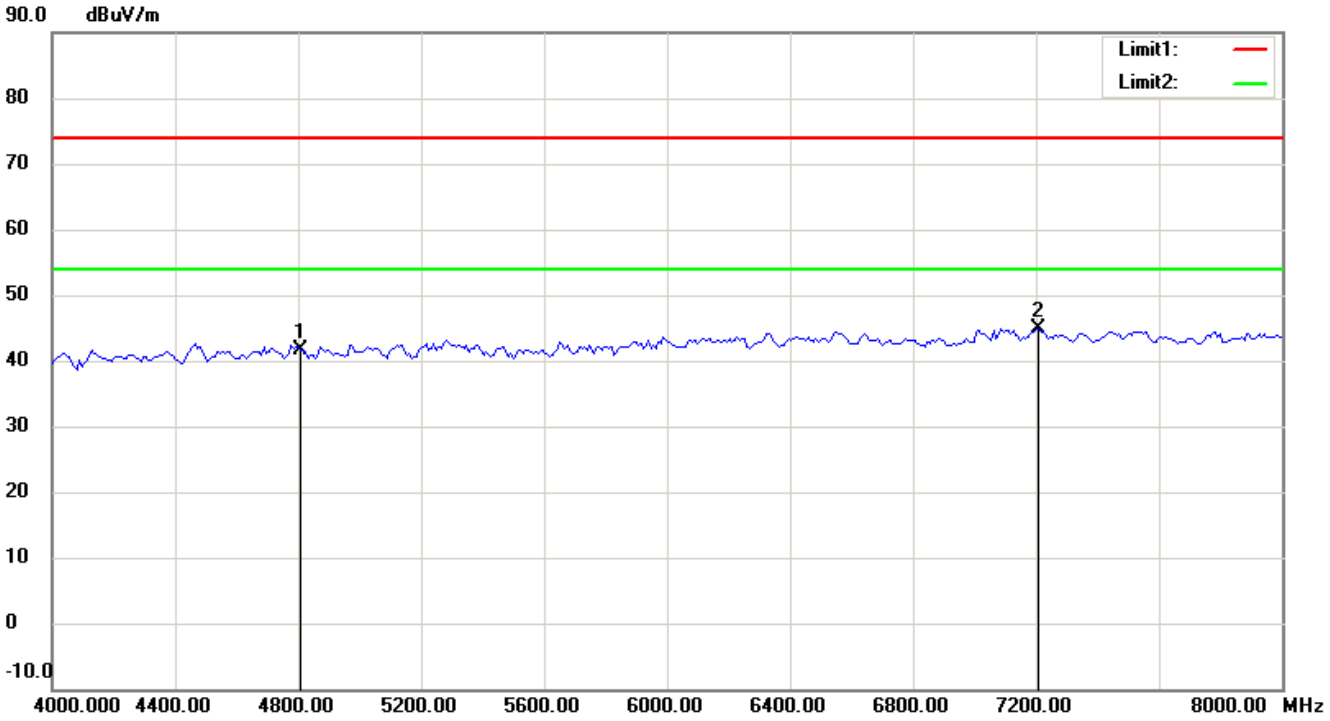
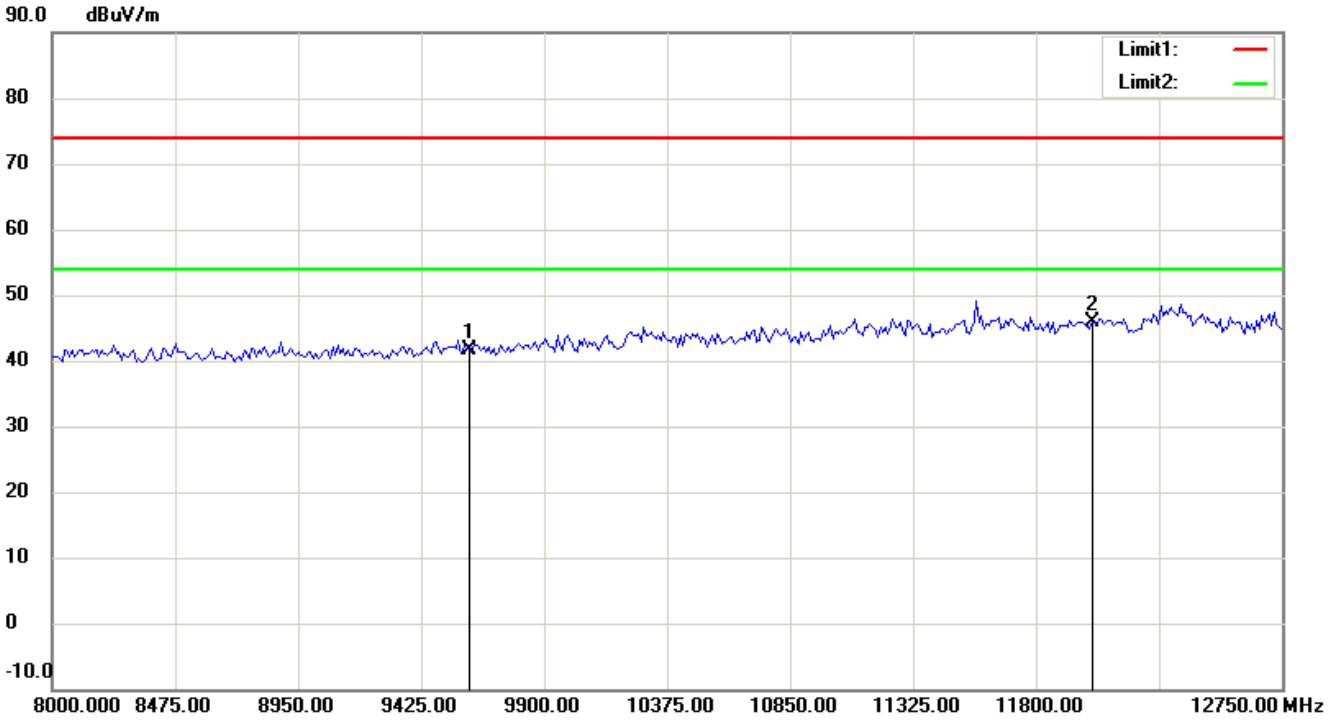
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





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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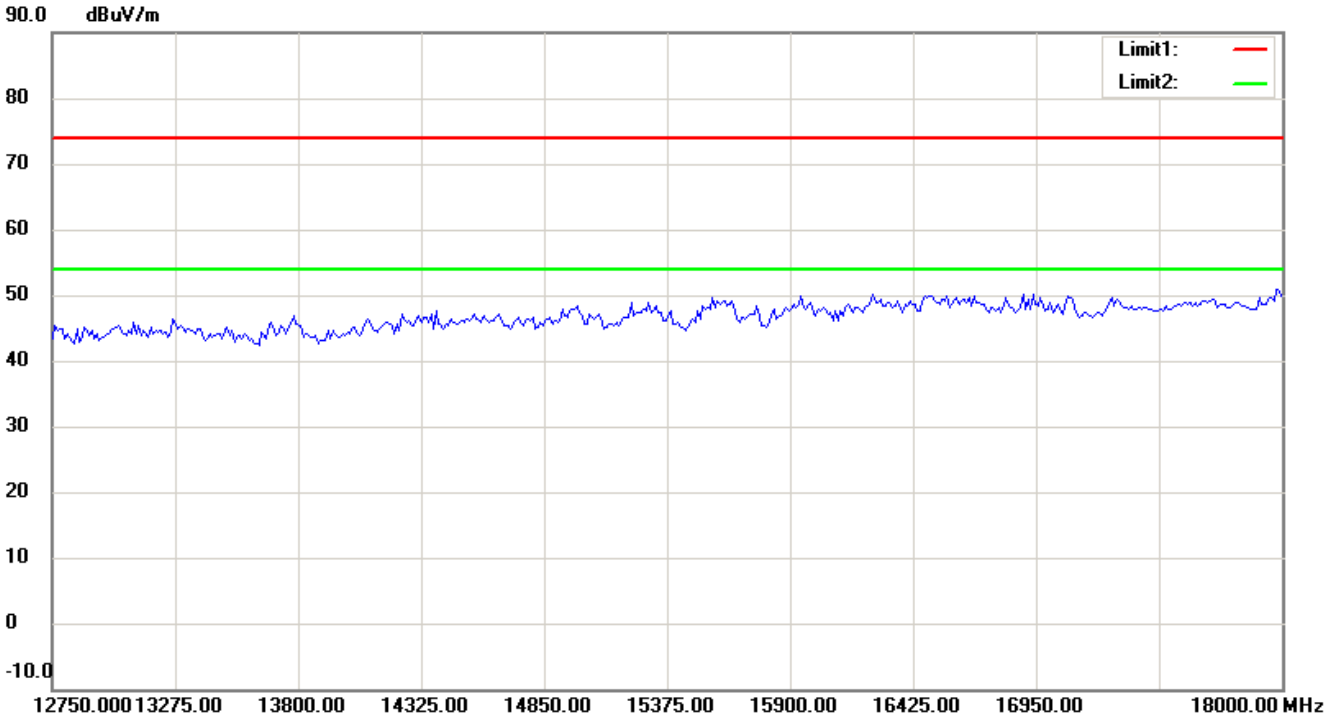
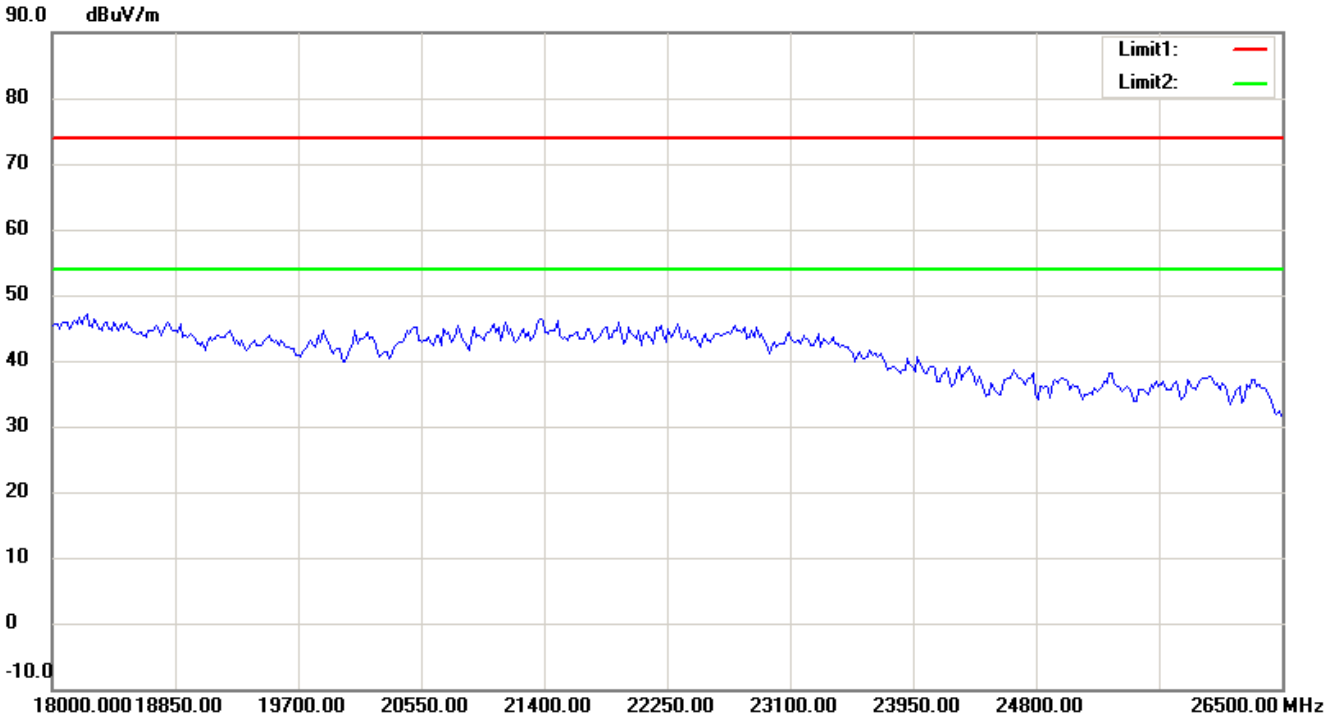
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0



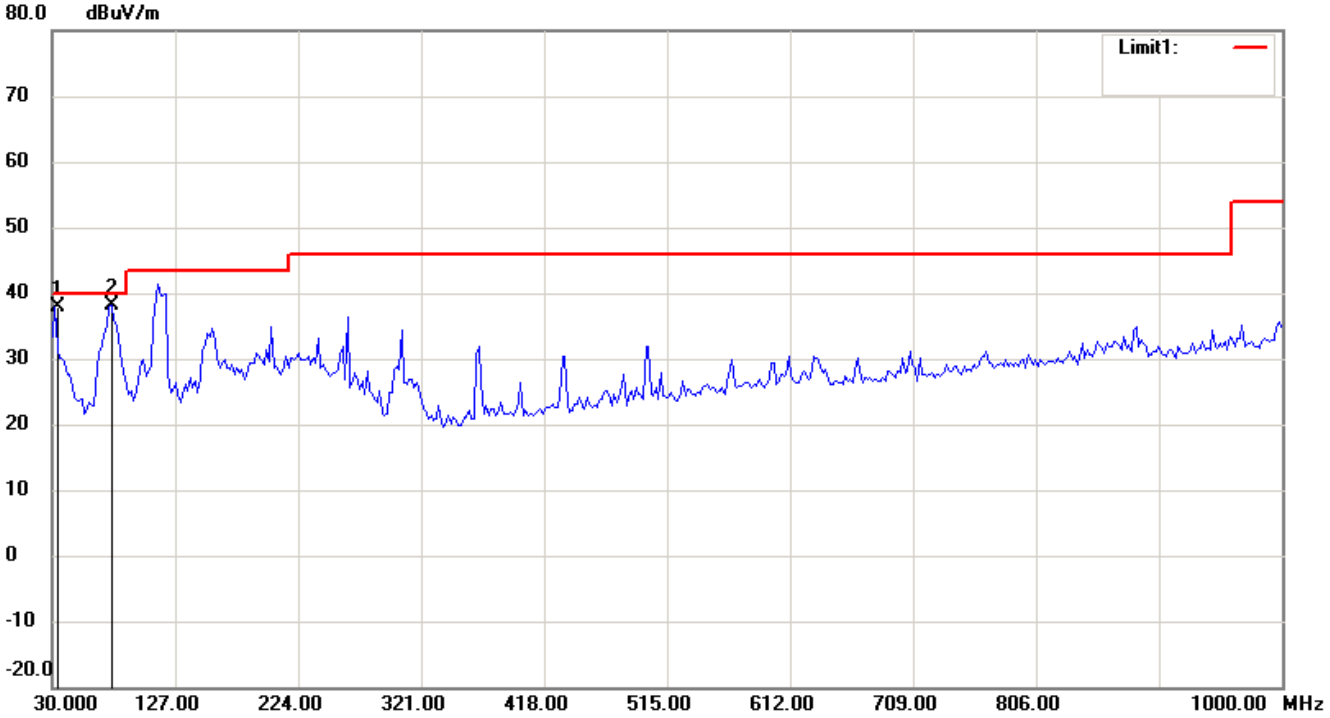


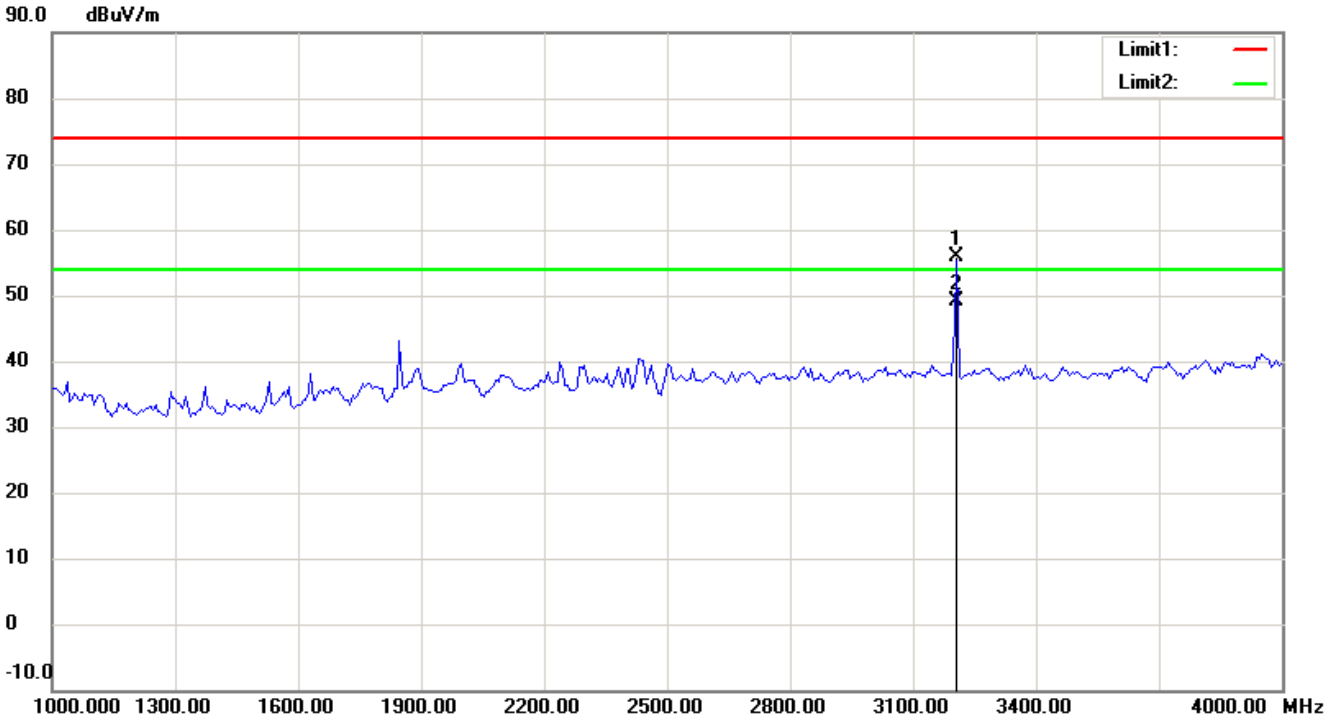
Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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: W6M21408-14385-C-1
FCC ID: PANBT400B0

Antenna Polarization V





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

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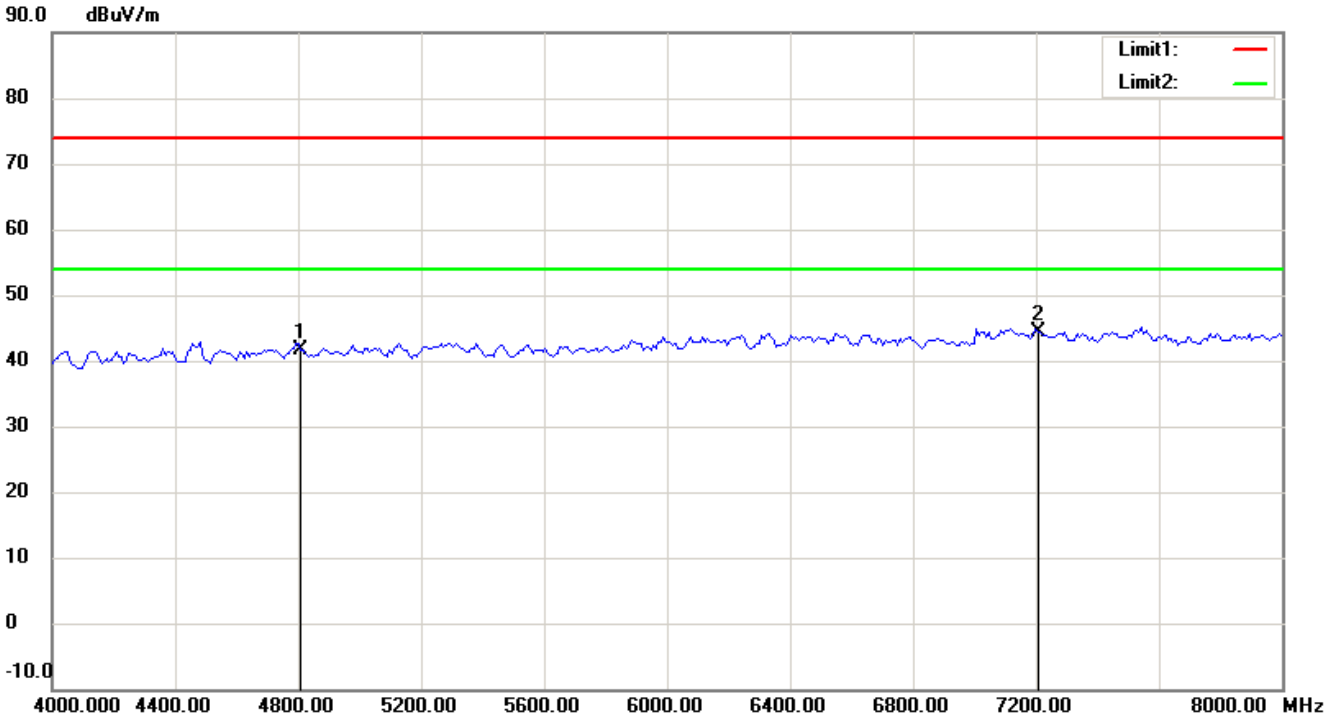
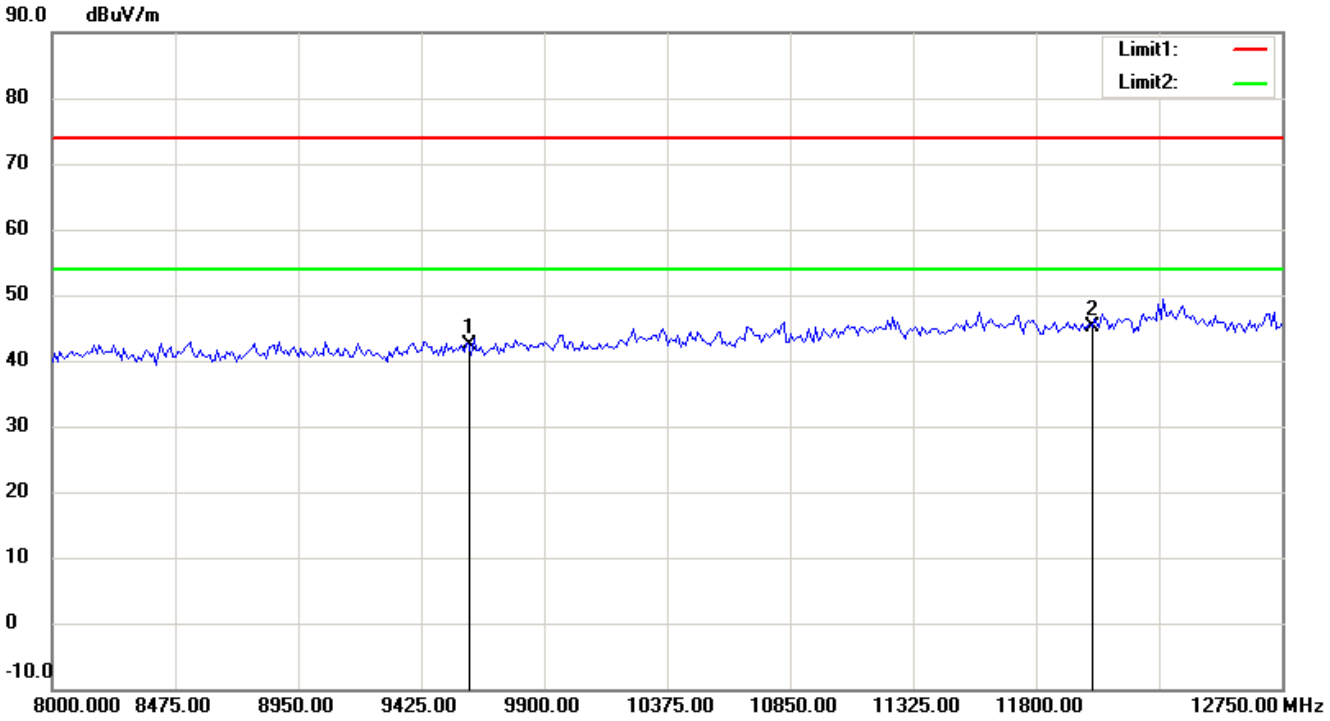
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





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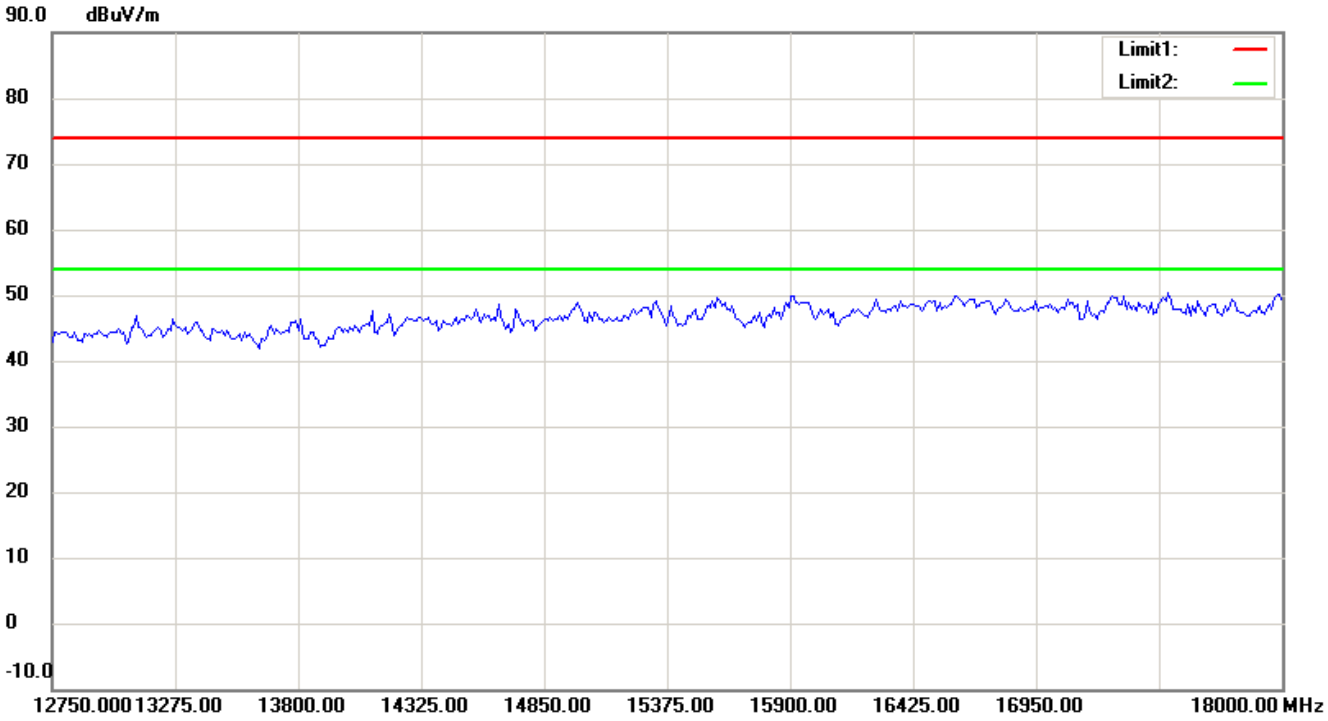
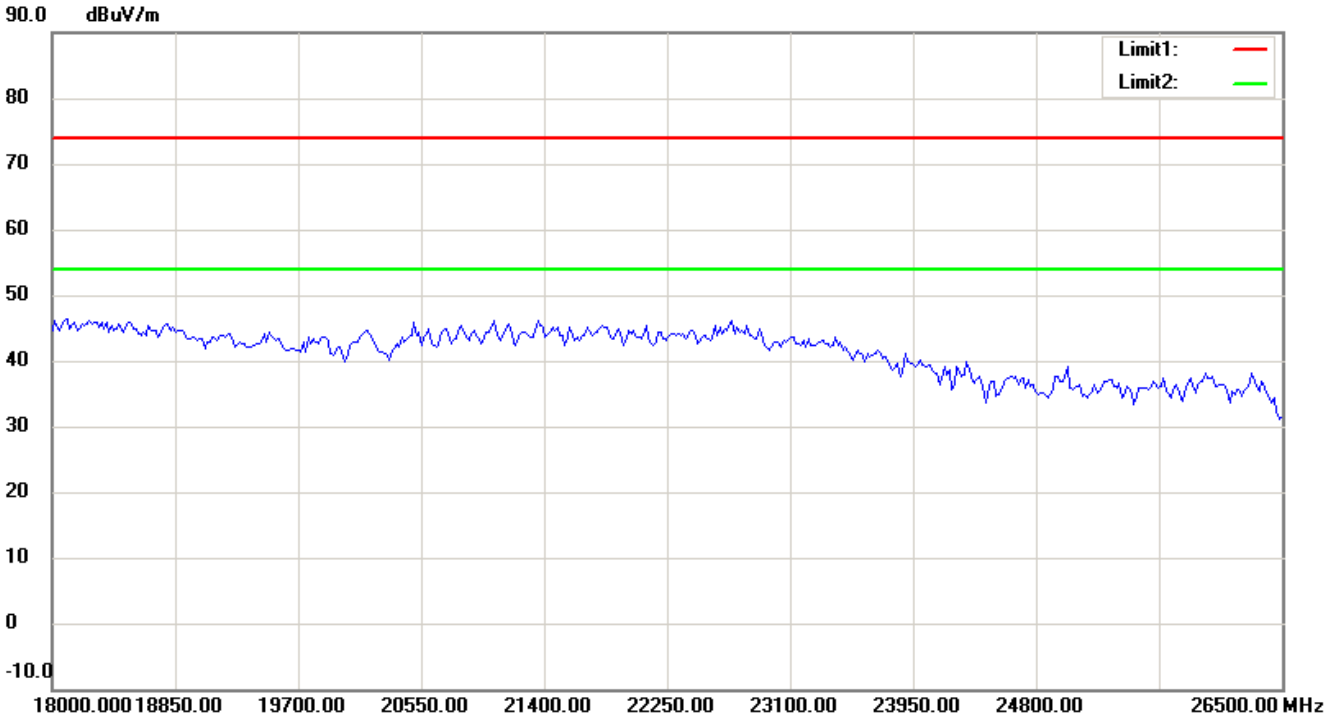
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





Up Line: Peak Limit Line Down Line: Ave Limit Line
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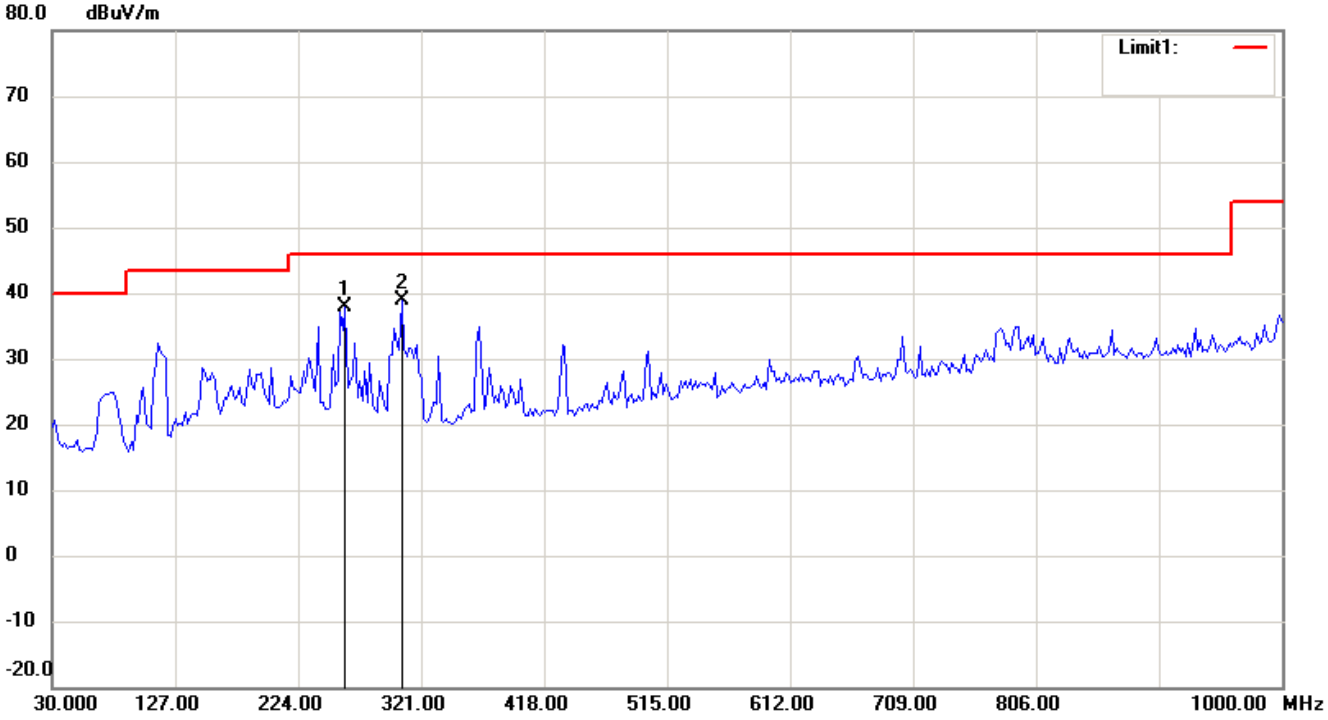
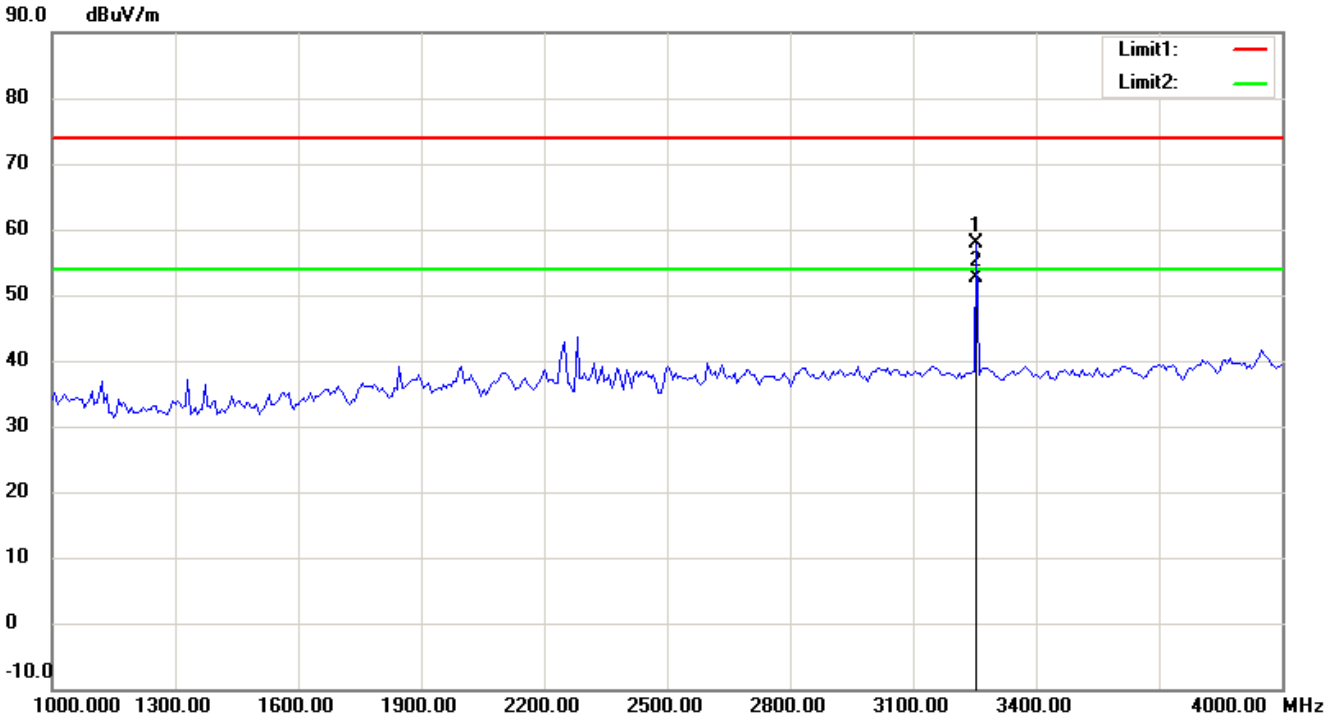
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Bluetooth 4.0 TX_2440 MHz
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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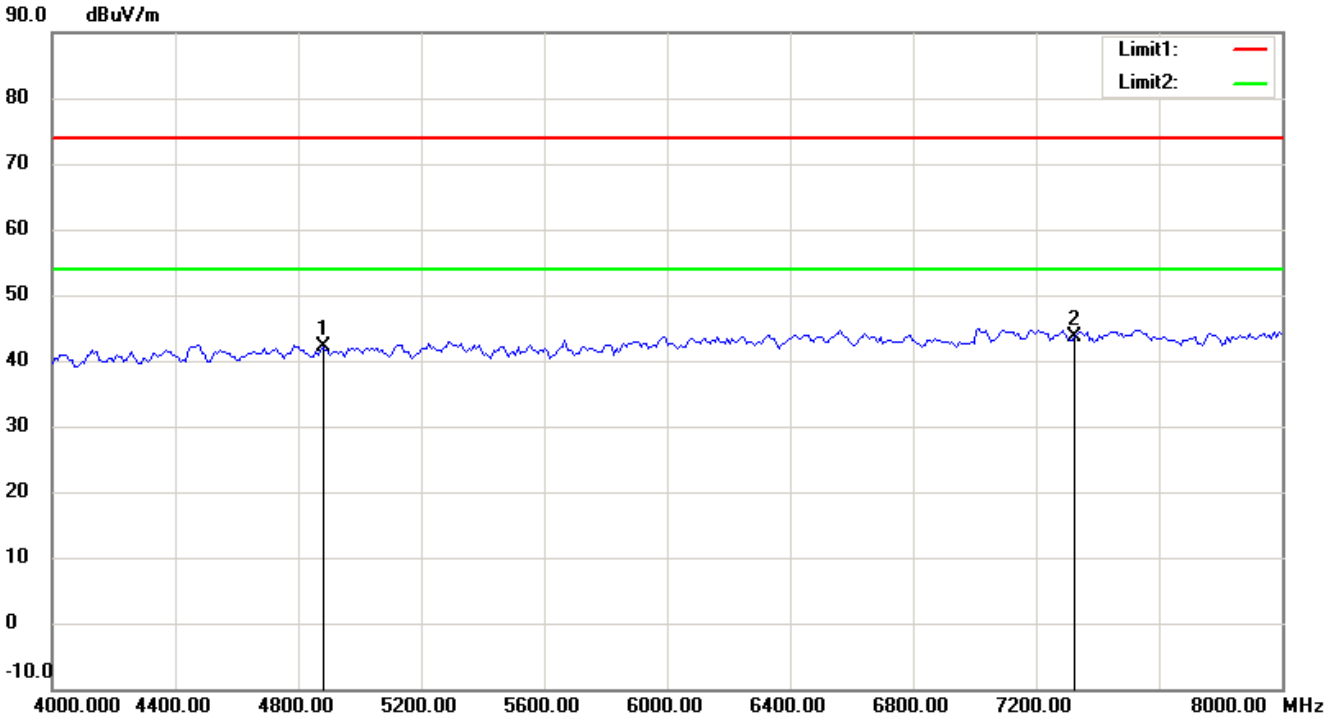
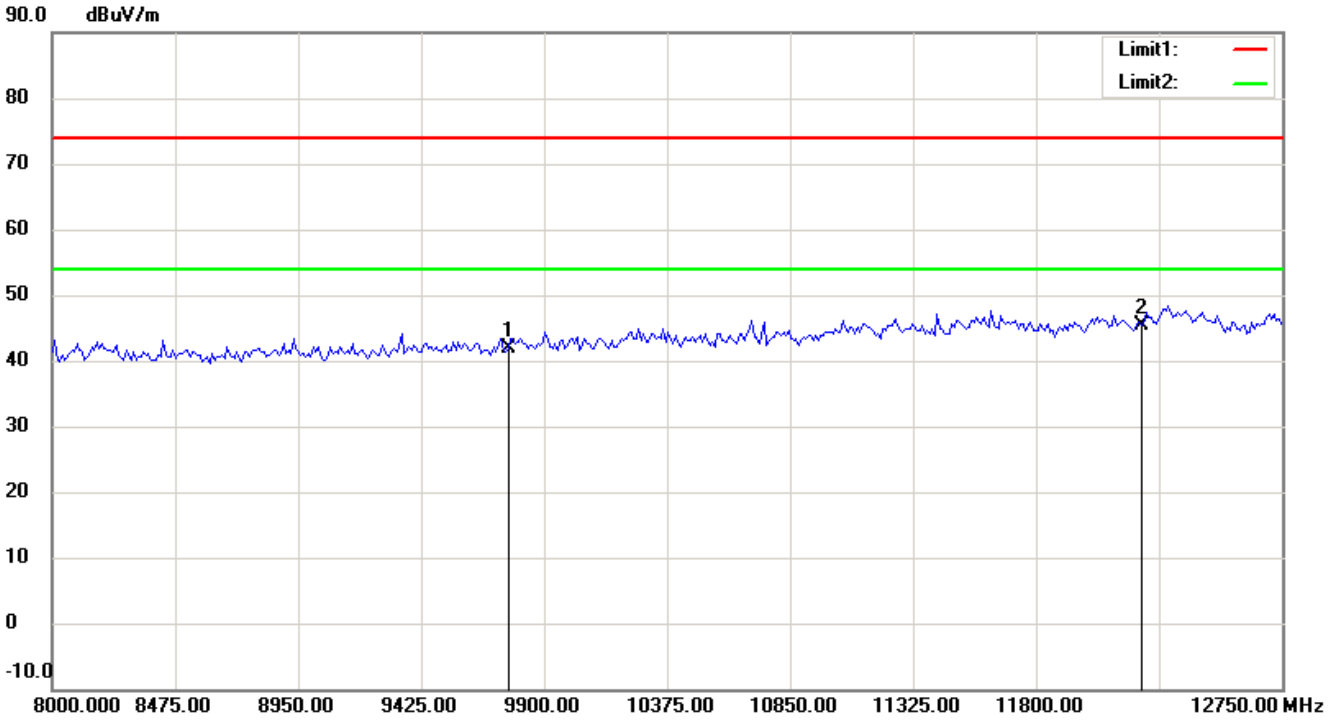
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





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

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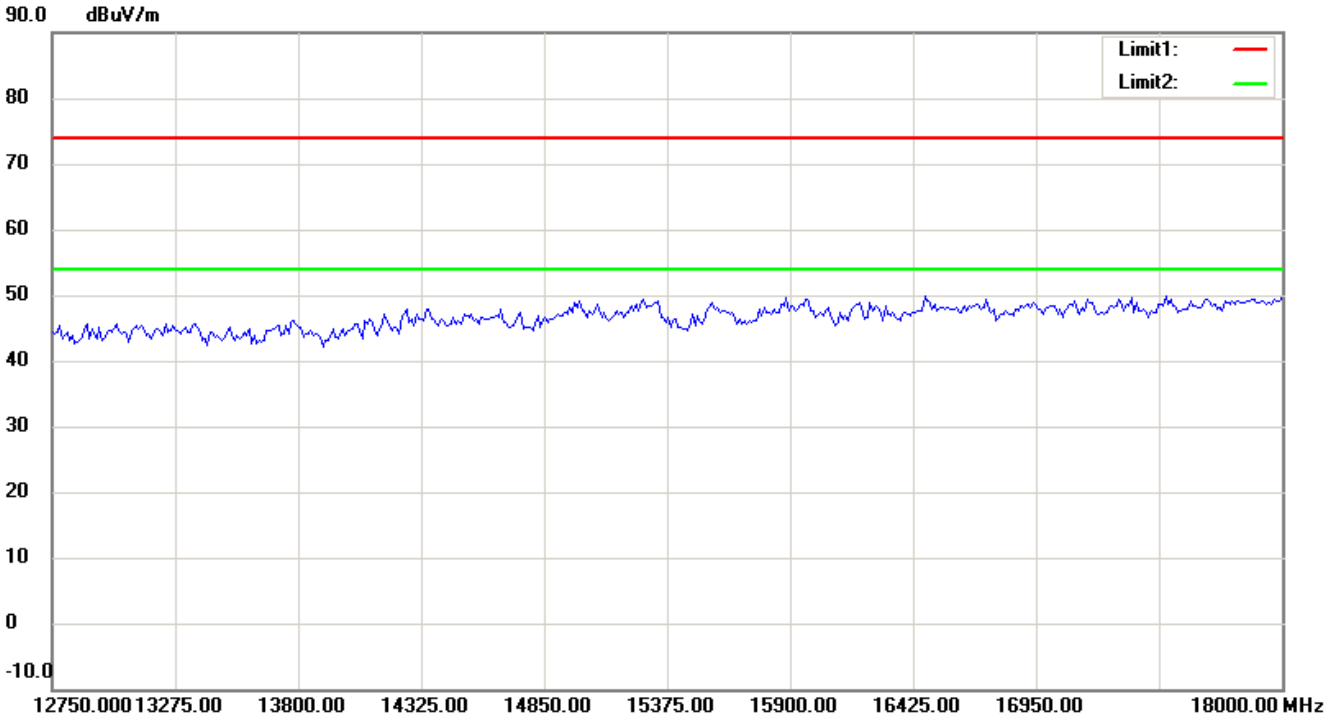

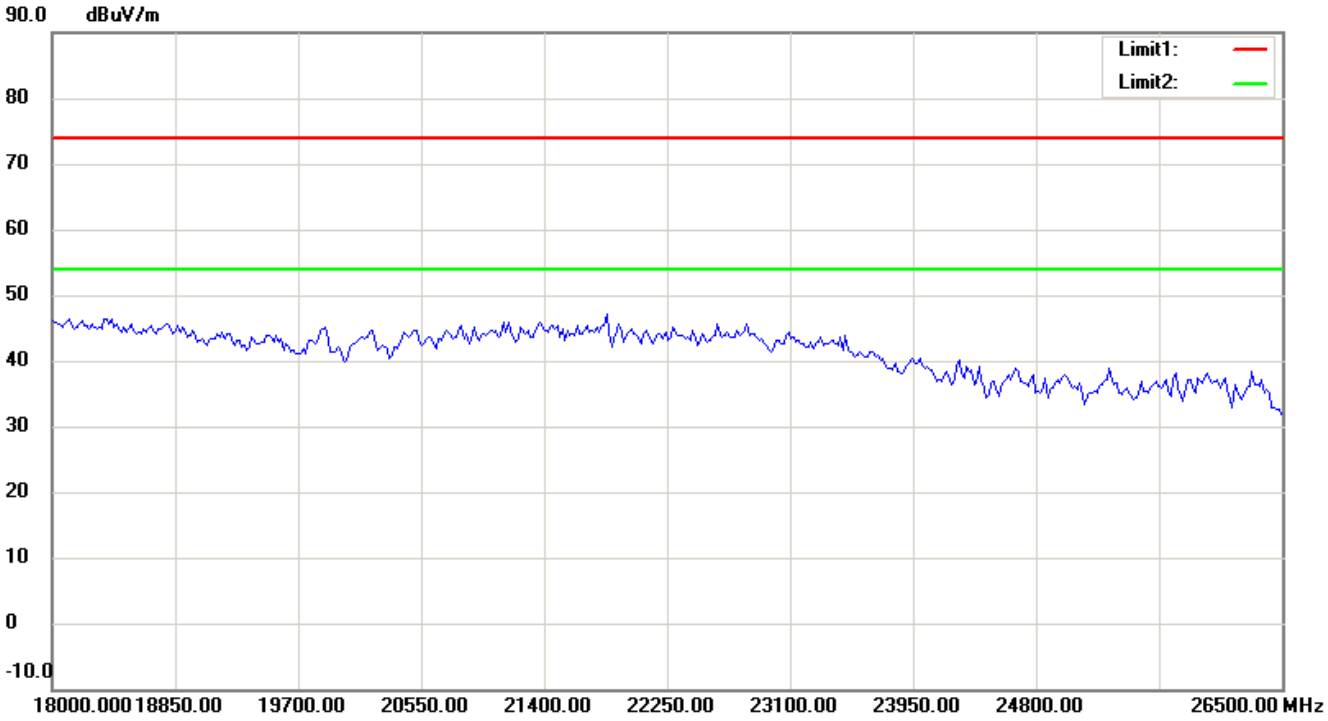

Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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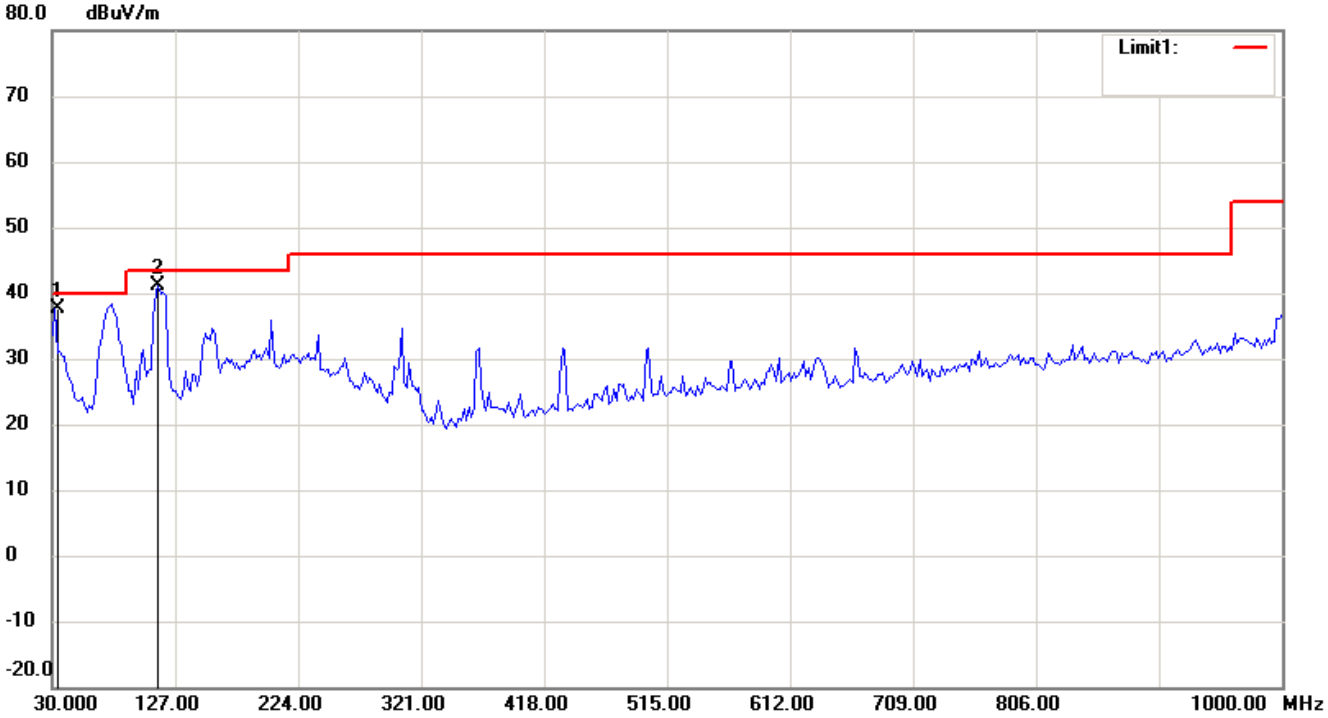
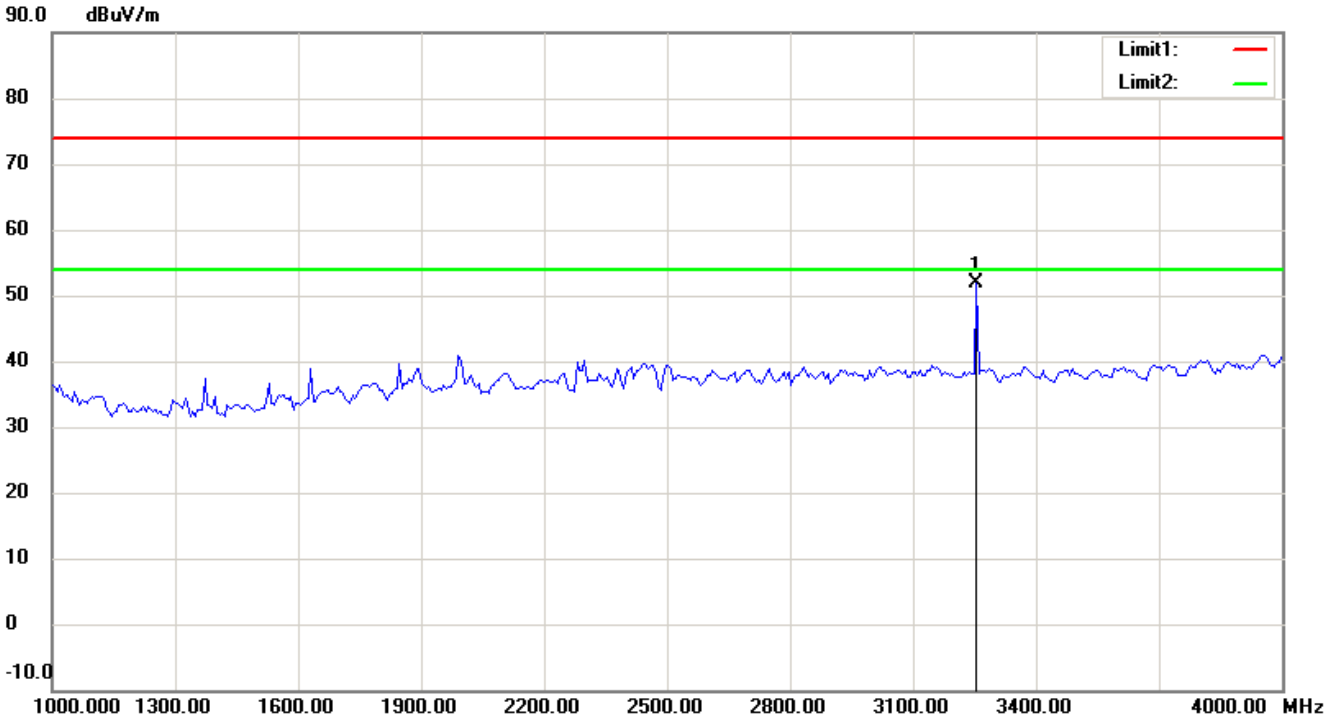
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Antenna Polarization V





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

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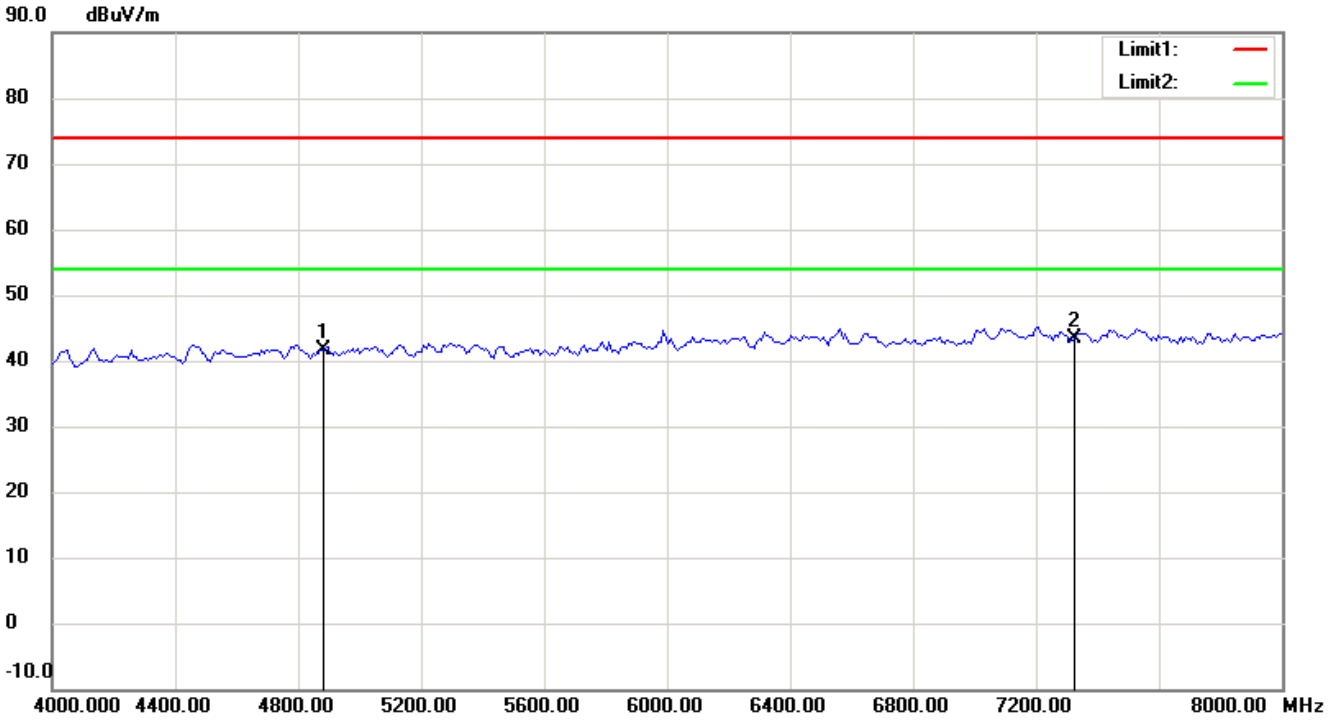
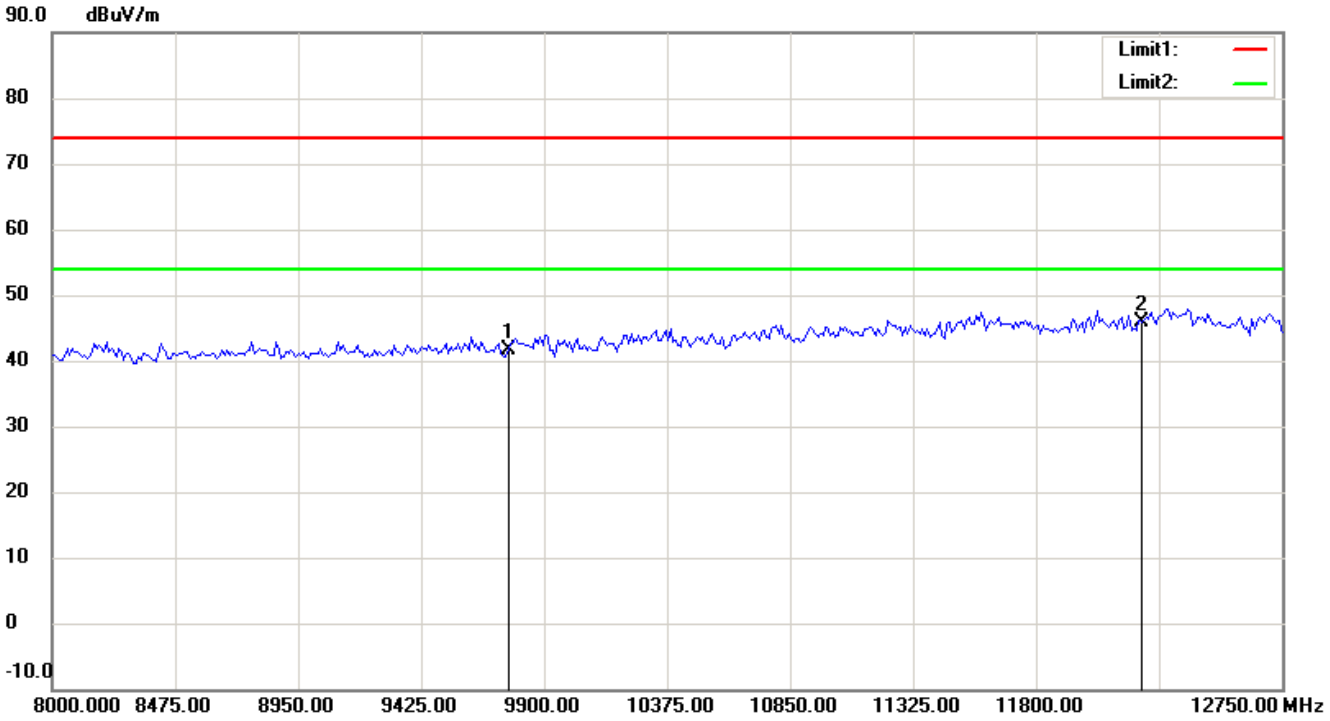
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





Up Line: Peak Limit Line Down Line: Ave Limit Line
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Registration number: W6M21408-14385-C-1
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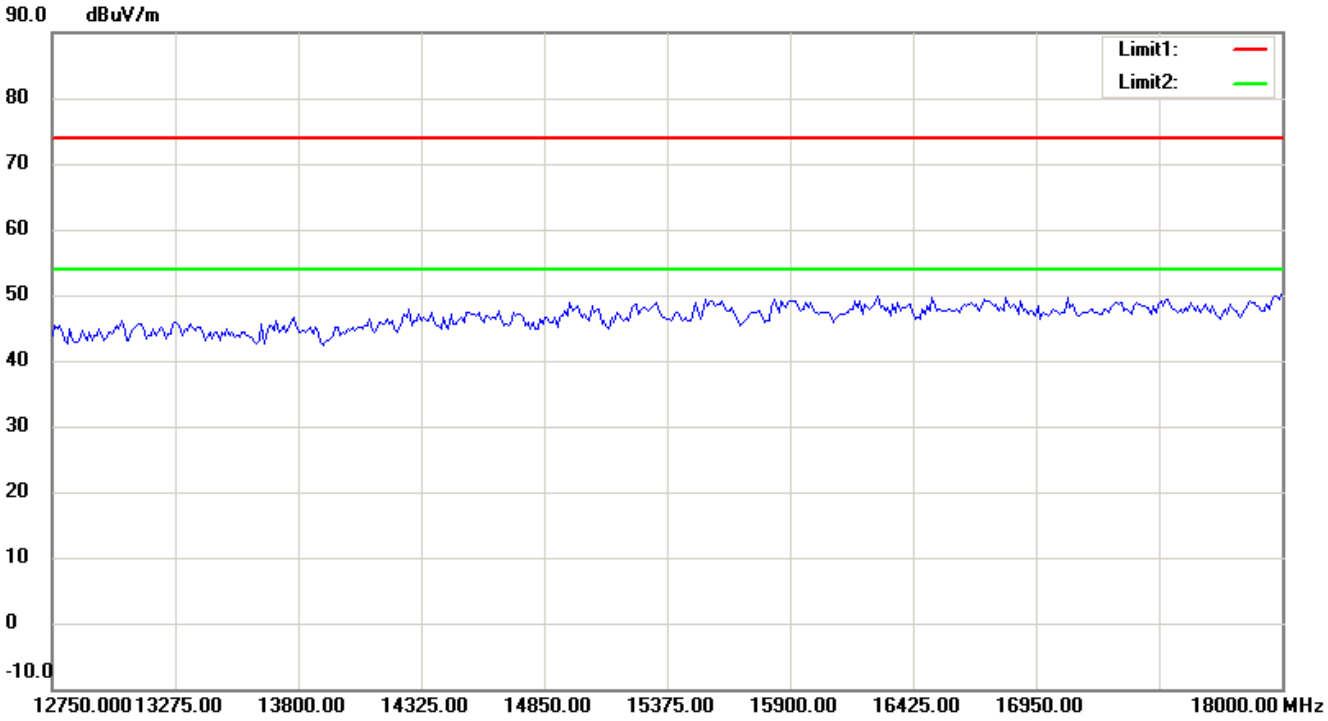

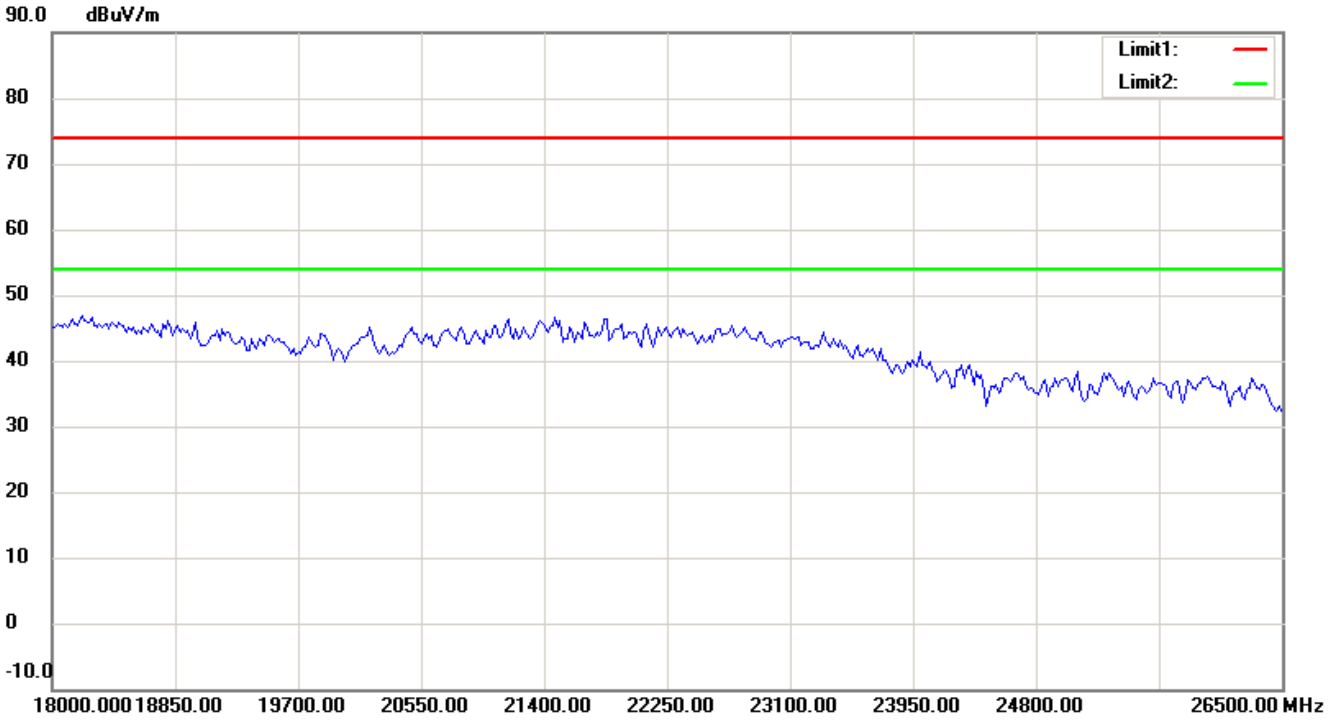

Up Line: Peak Limit Line Down Line: Ave Limit Line
Note:

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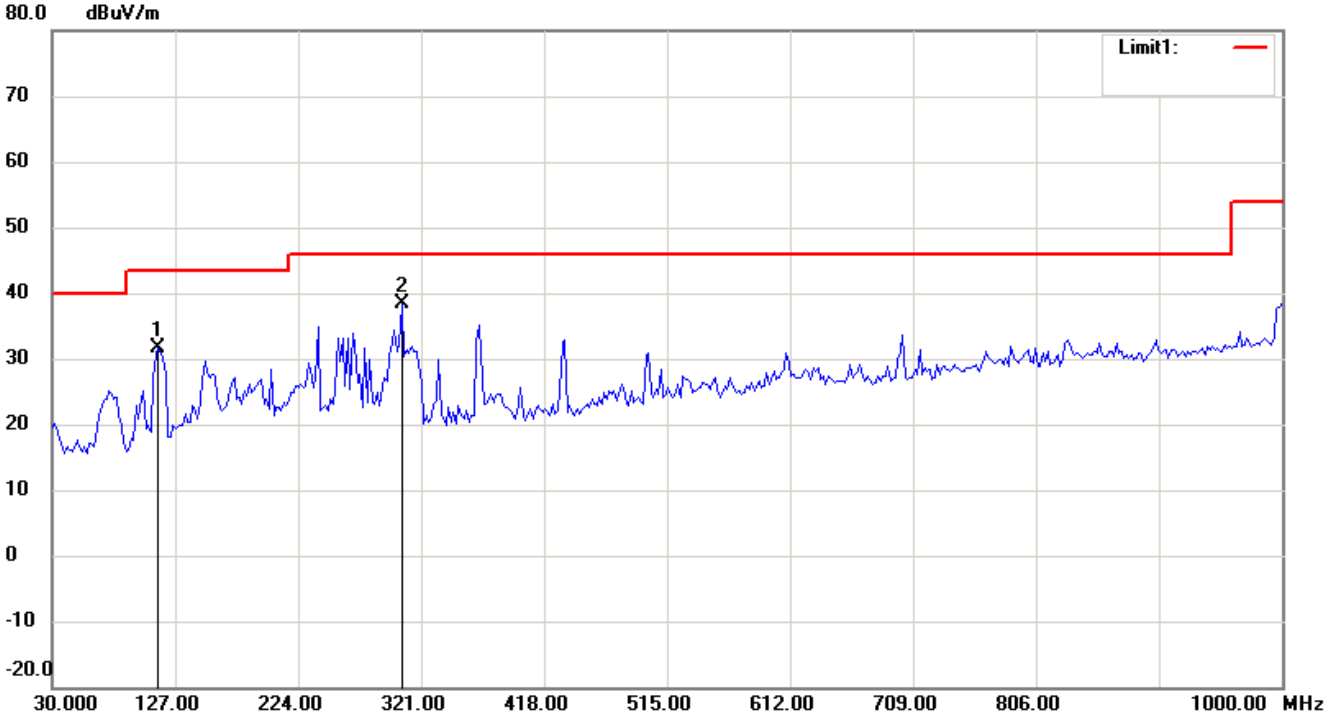
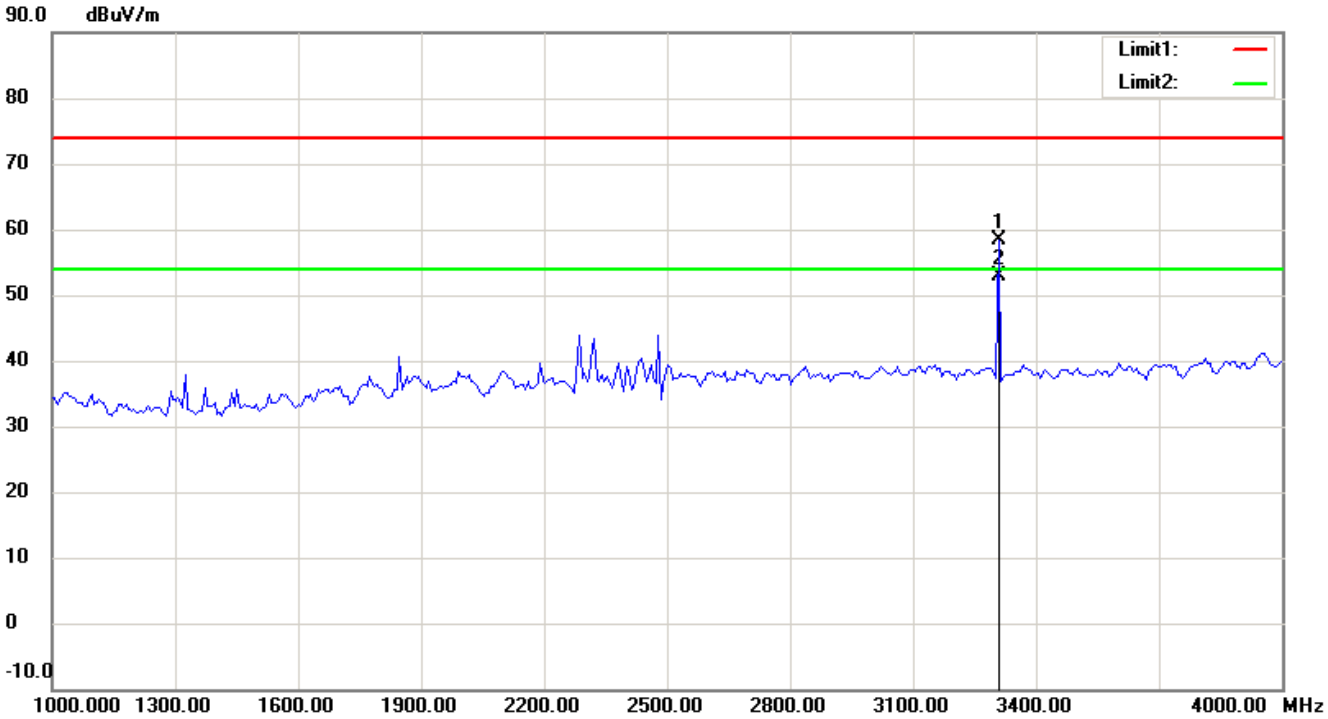
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Bluetooth 4.0 TX_2480 MHz
Antenna Polarization H





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

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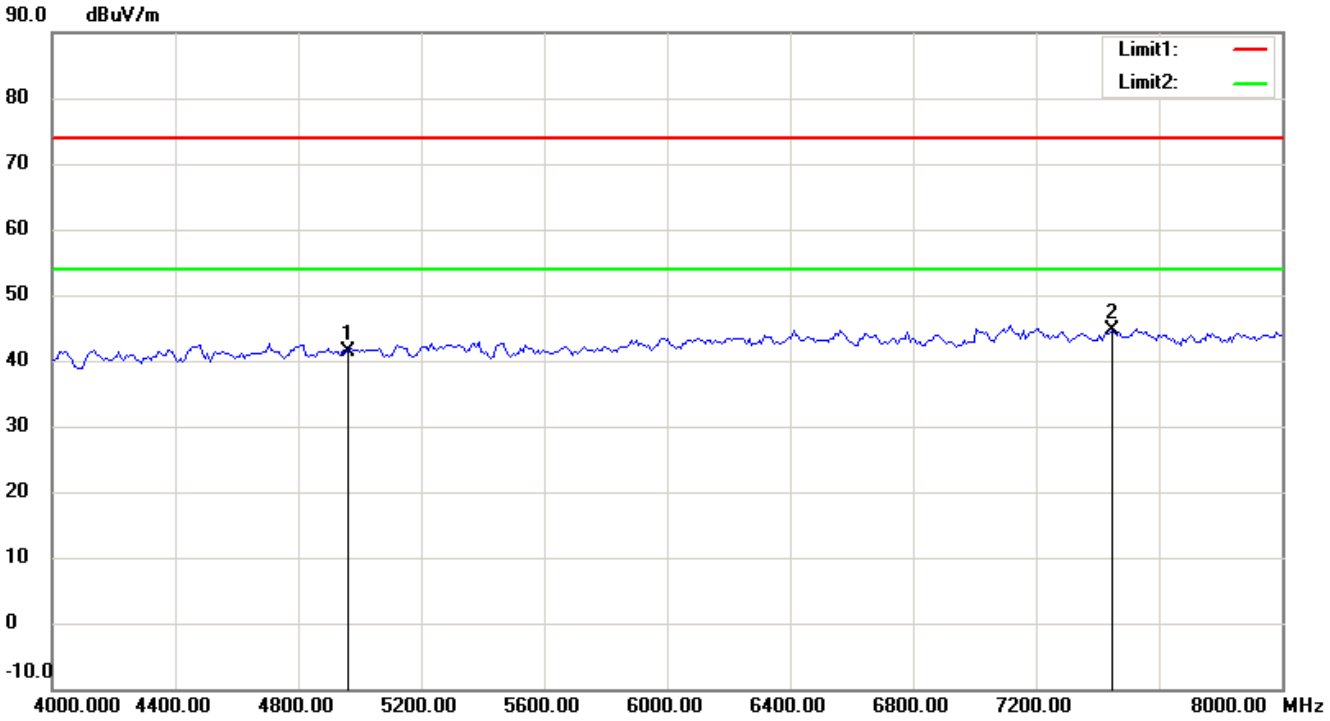
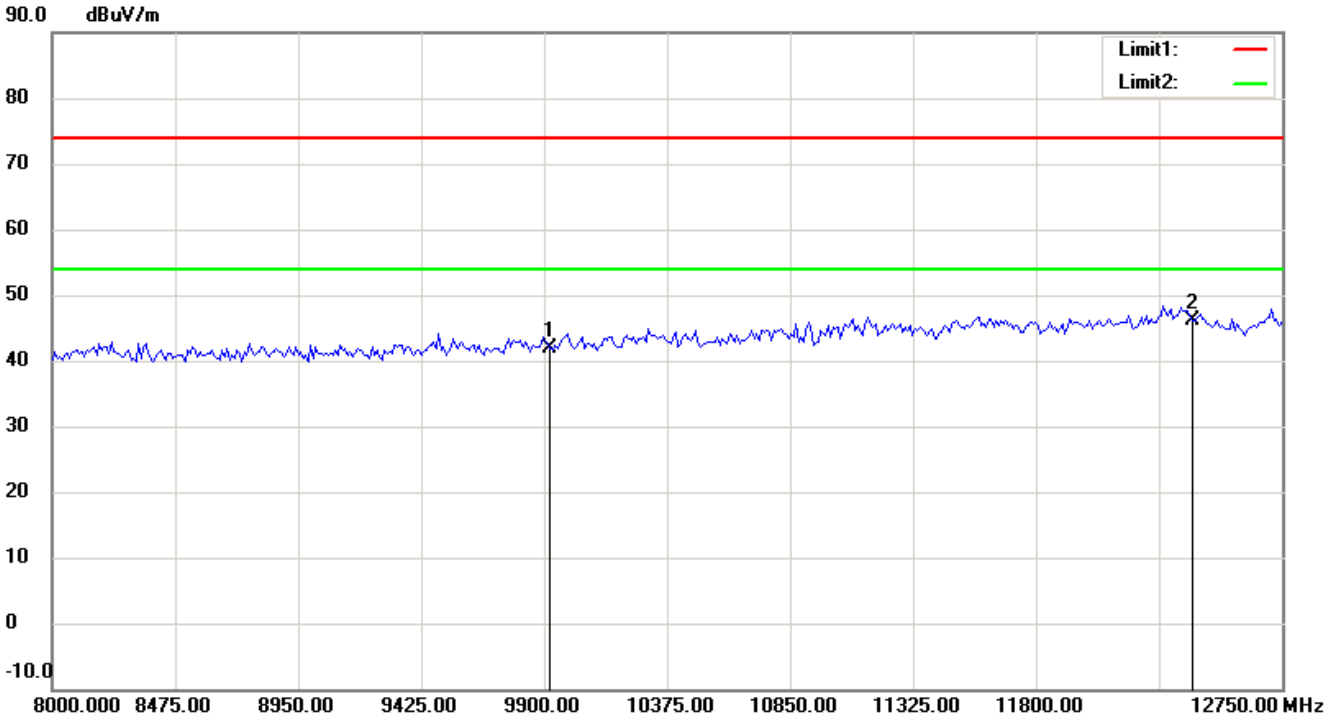
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0





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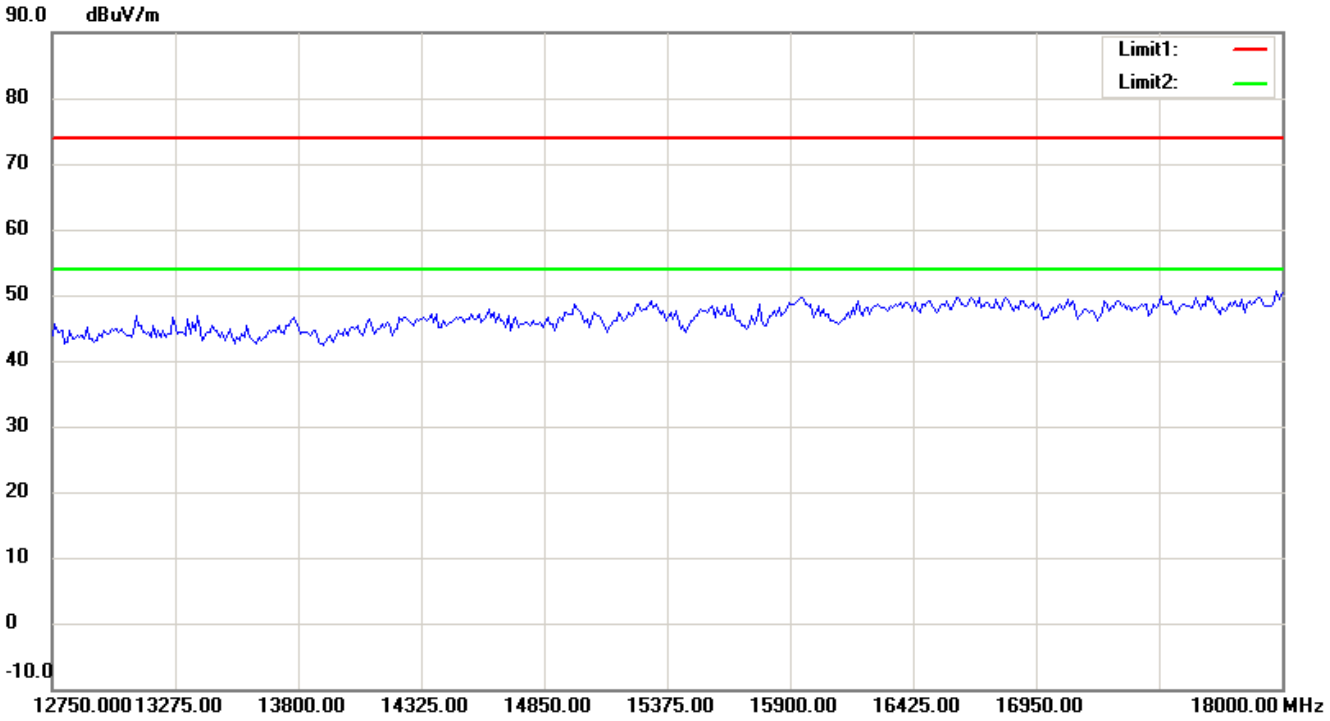
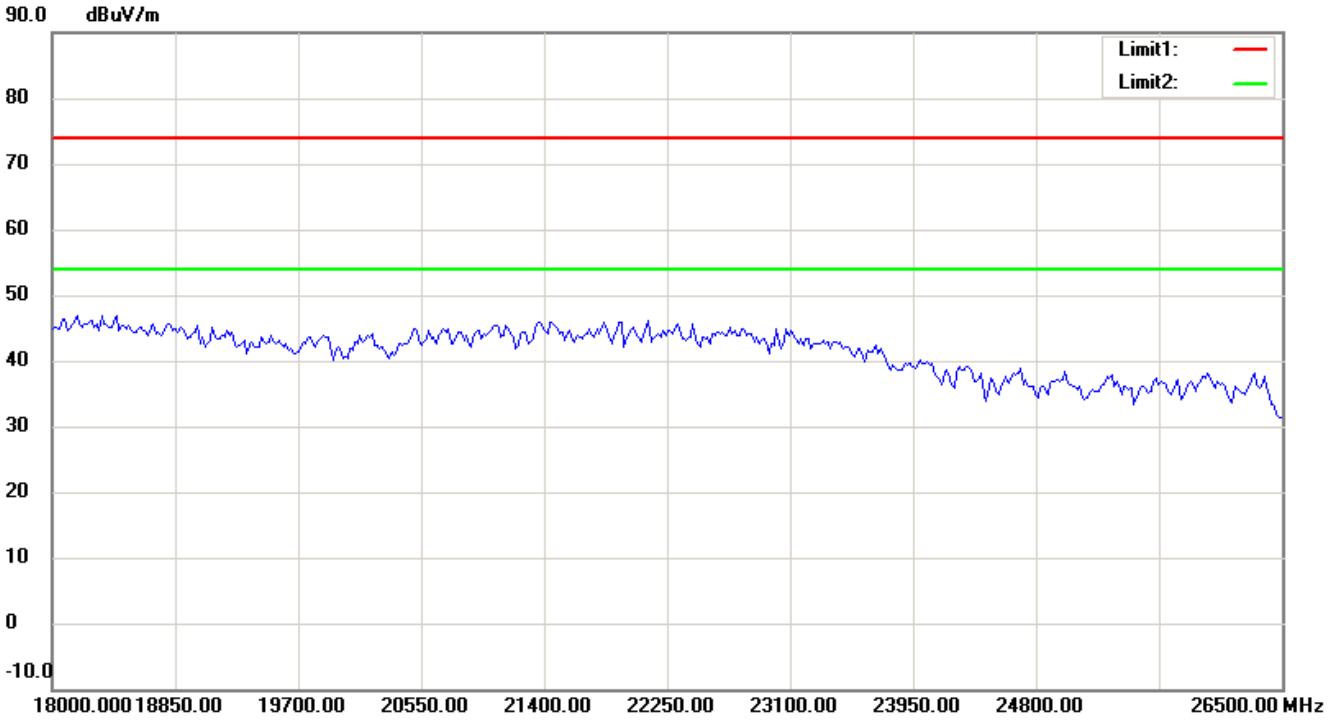
FCC ID: PANBT400B0





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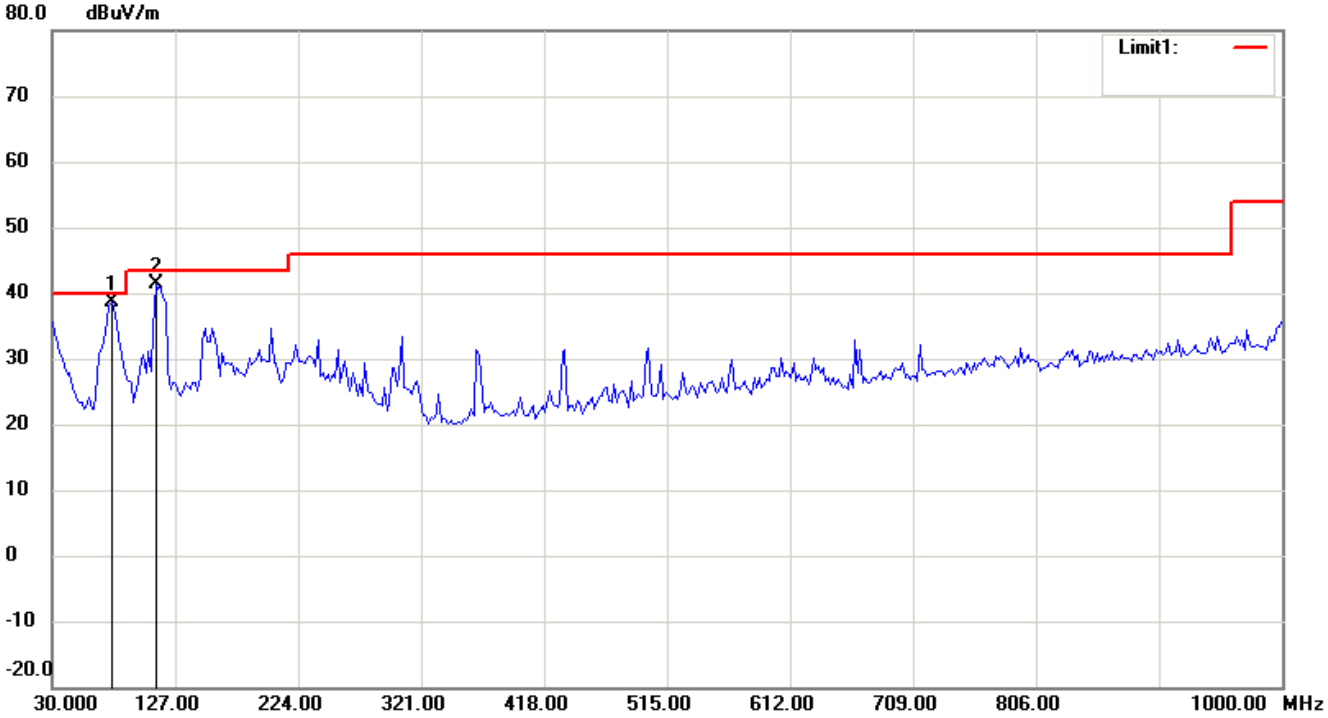
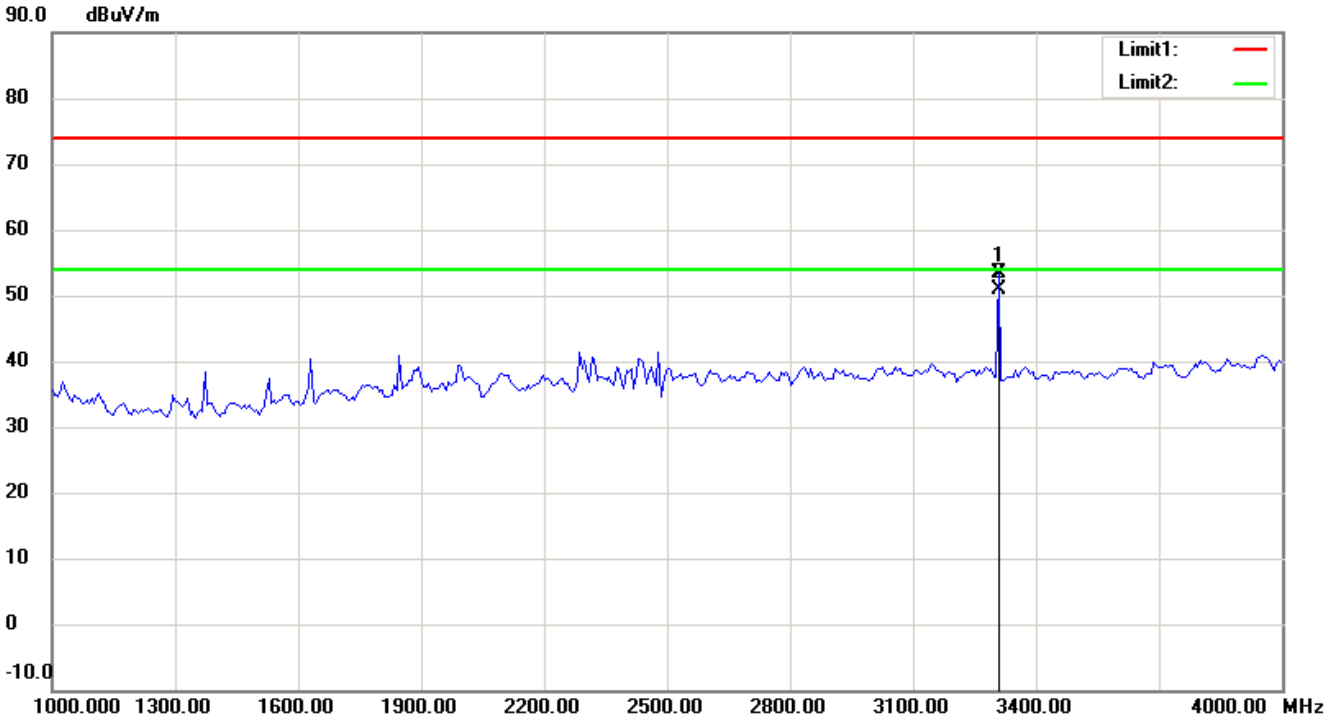
Registration number: W6M21408-14385-C-1
FCC ID: PANBT400B0

Antenna Polarization V





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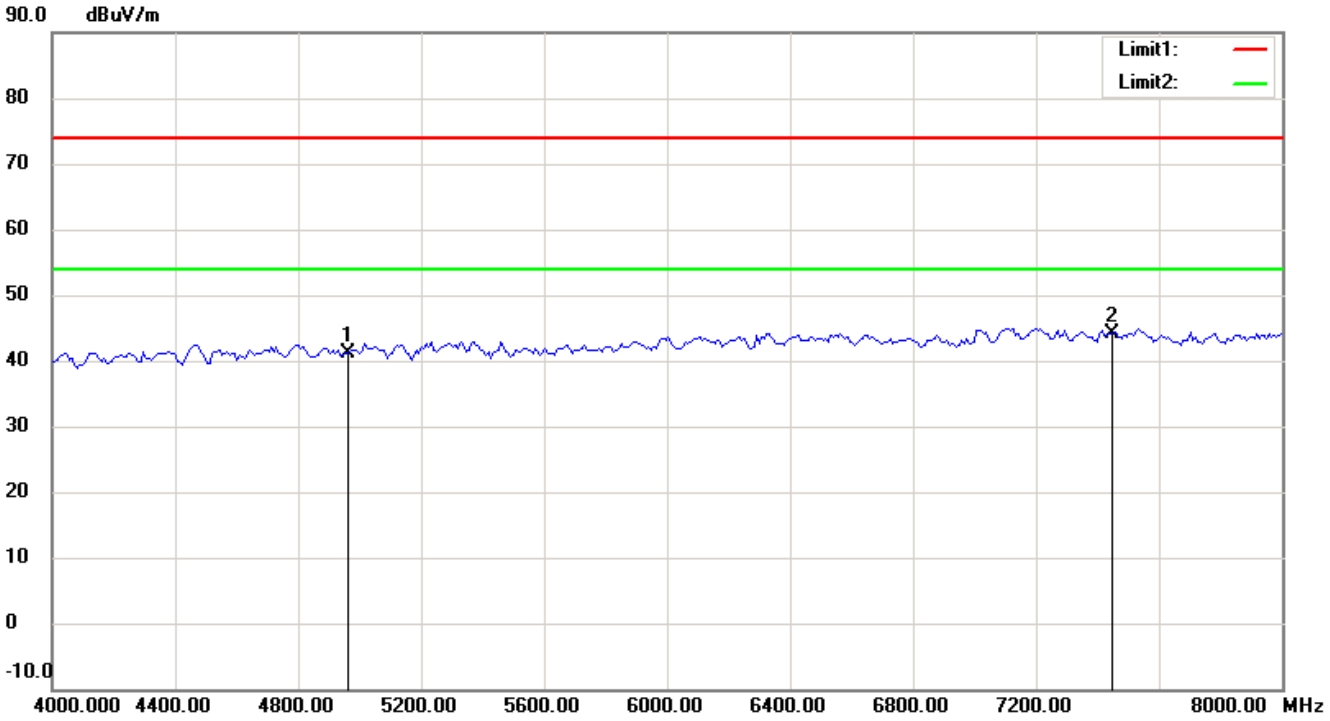

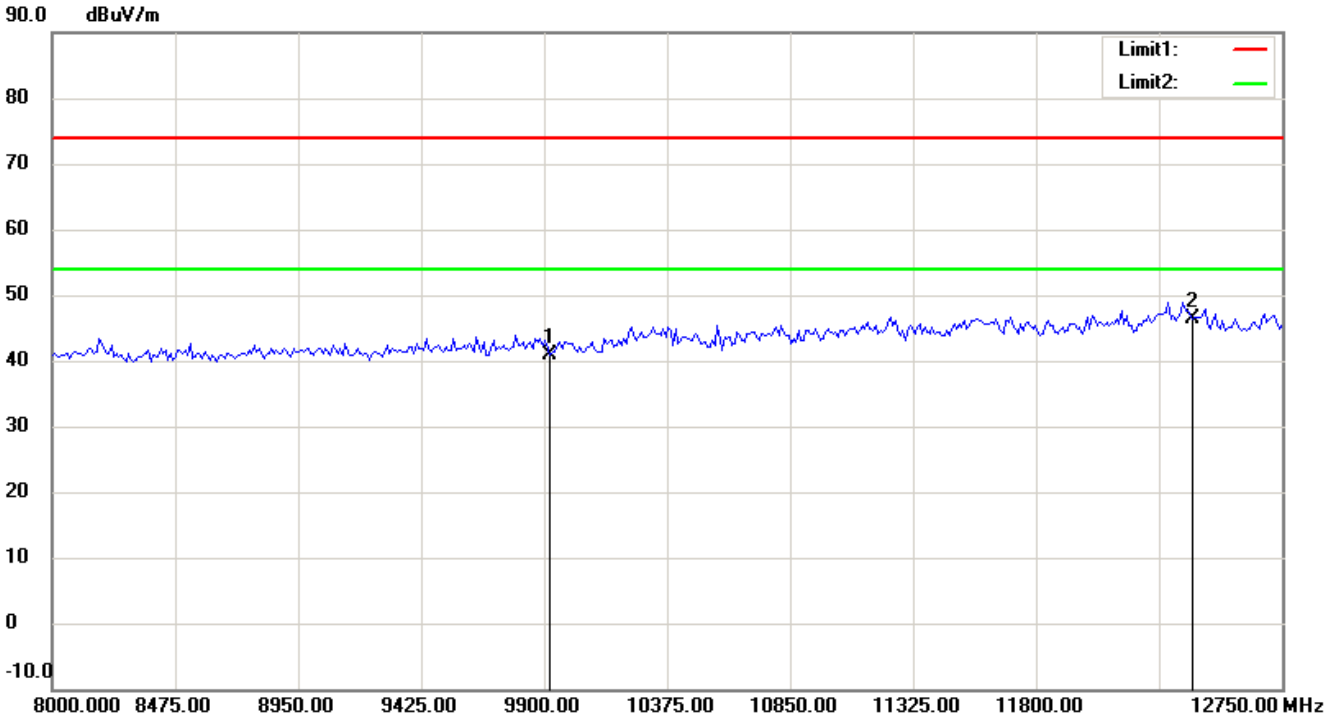

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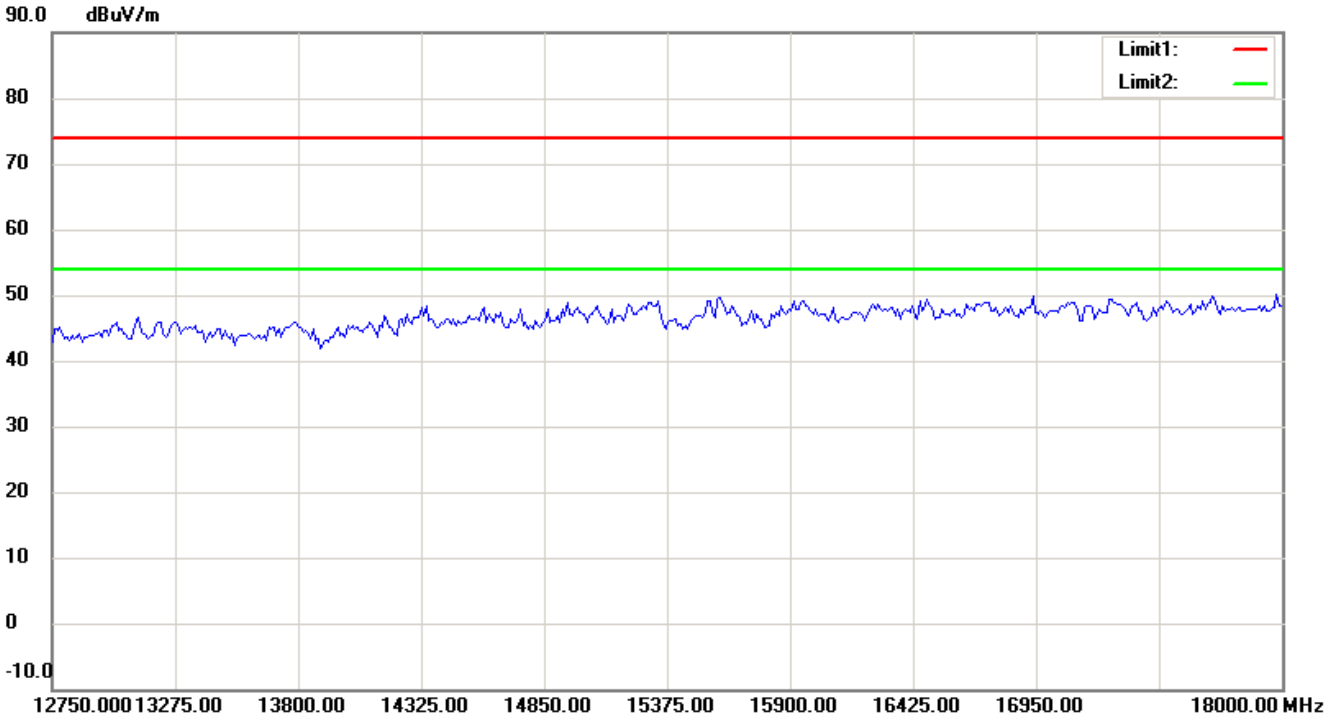

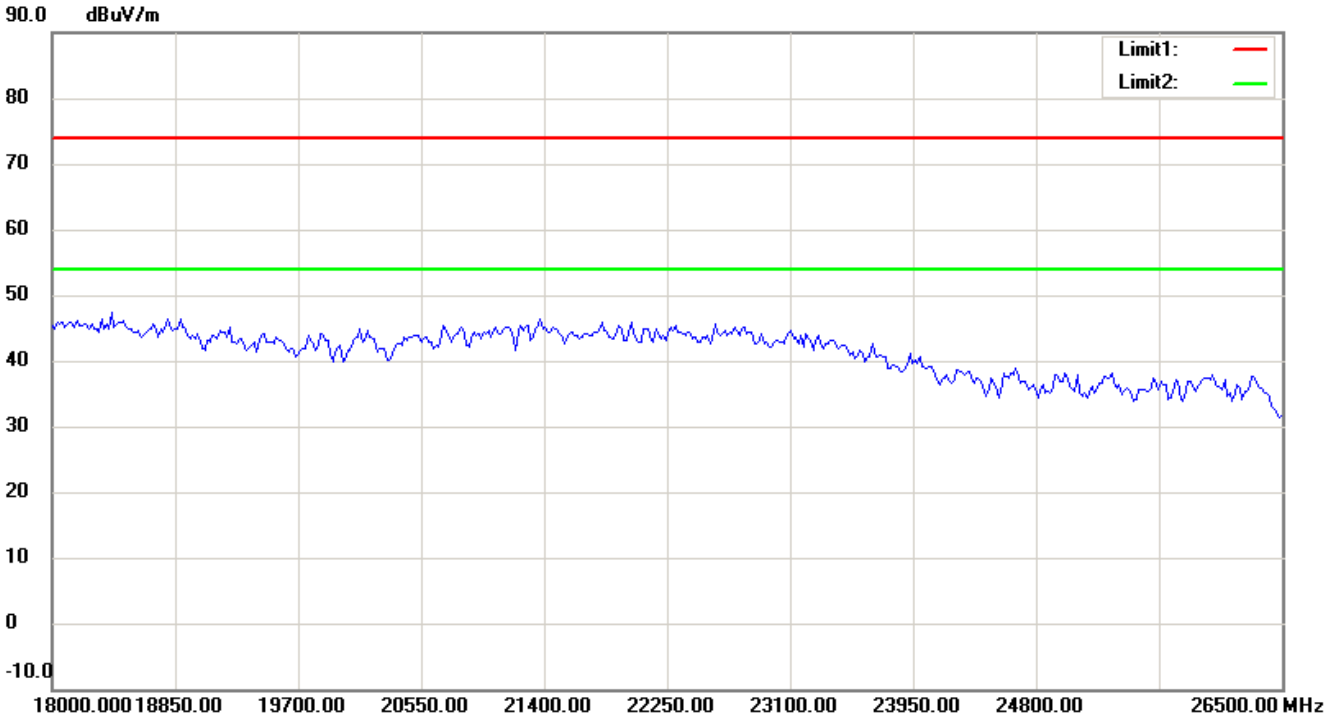

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