FCC PART 15 SUBPART C TEST REPORT

for

UHF RFID READER

Model No.: UHF860

FCC ID: WXAUHF860

of

Applicant: GIGA-TMS INC.
Address: 8F, NO.31, LANE 169, KANG-NING ST.,HSI-CHIH,
NEW TAIPEI CITY, 22180 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

A2LA Accredited No.: 2732.01





Report No.: W6M21203-12309-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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

TABLE OF CONTENTS

1 (GENERAL INFORMATION	 2
1.1	Notes	2
1.2		
1	1.2.1 Location	
1	1.2.2 Details of accreditation status	
1.3	DETAILS OF APPROVAL HOLDER	4
1.4	APPLICATION DETAILS	4
1.5	GENERAL INFORMATION OF TEST ITEM	4
1.6	TEST STANDARDS	5
2 1	FECHNICAL TEST	6
2.1	SUMMARY OF TEST RESULTS	6
2.2	TEST ENVIRONMENT	6
2.3	TEST EQUIPMENT LIST	7
2.4	GENERAL TEST PROCEDURE	11
3 T	TEST RESULTS (ENCLOSURE)	13
3.1	PEAK OUTPUT POWER (TRANSMITTER)	14
3.2	RF Exposure Compliance Requirements	17
3.3	Out of Band Radiated Emissions	17
3.4		
3.5	Spurious emissions (TX)	19
3.6	CARRIER FREQUENCY SEPARATION	28
3.7	NUMBER OF HOPPING FREQUENCIES.	31
3	3.7.1 Pseudorandom Frequency Hopping Sequence	32
	3.7.2 Coordination of hopping sequences to other transmitters	
3	3.7.3 Equal Hopping Frequency Use	
3.8	,	
3.9		
3.10		
3.1		
3.12	2 POWER LINE CONDUCTED EMISSION	44
Apr	PENDIX	45

FCC ID: WXAUHF860

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.

Tester:

October 30, 2012 Robert Ren

Date WTS-Lab. Name Signature

Technical responsibility for area of testing:

October 30, 2012 Danny Sung

Date WTS Name Signature



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

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:	./.



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

1.3 Details of approval holder

Name : GIGA-TMS INC.

Street : 8F, NO.31, LANE 169, KANG-NING ST., HSI-CHIH,

Town : NEW TAIPEI CITY, 22180

Country : TAIWAN

Telephone : +886-2-2695-4214 Fax : +886-2-2695-4213

1.4 Application details

Date of receipt of test item : March 28, 2012

Date of test : from March 29, 2012 to October 30, 2012

1.5 General information of Test item

Type of test item : UHF RFID READER

Model Number : UHF860

Multi-listing model number : ./.

Brand Name: : PROMAGE,GIGATEK,ProxData

Photos : see Appendix

Technical data

Frequency band : 902 - 928 MHz
Frequency (ch A) : 902.75 MHz
Frequency (ch B) : 914.75 MHz
Frequency (ch C) : 927.75 MHz

Transmitter Unom

Power (ch A or ch 1) : Conducted: 26.80 dBm Power (ch B or ch 25) : Conducted: 26.80 dBm Power (ch C or ch 50) : Conducted: 26.73 dBm

Power supply : DC 9V

Operation modes : Half-duplex

Modulation Type : PRSK

Antenna Type1 : GSM Directional Panel Antenna

Antenna gain : 9 dBi

Antenna Type2 : Panel Antenna

Antenna gain : 9 dBi

Antenna Type3 : Panel Antenna

Antenna gain : 9 dBi Host device : none

FCC ID: WXAUHF860

Classification:

Fixed Device	\boxtimes
Mobile Device (Human Body distance > 20cm)	
Portable Device (Human Body distance < 20cm)	

Manufacturer: (if different from applicant in point 1.3)

Name: GIGATEK INC

Street: NO.47, XIANGHE RD., TANZI DIST.,

Town: TAICHUNG CITY 42741,

Country : TAIWAN

1.6 Test standards

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

FCC ID: WXAUHF860

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 3 were ascertained in the course of the tests performed. \Box

2.2 Test environment

Temperature : 23 $^{\circ}$ C

Relative humidity content : 20 ... 75 %

Air pressure : 86 ... 103 kPa

Details of power supply : DC 9V

Extreme conditions parameters : test voltage : -- extreme

min:--V

max :-- V

Description of Tested System : ./.



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

2.3 Test Equipment List

	Equipment List		l I		Ī	Next Cal.
No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2012/9/5	2013/9/4
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function	on Test
ETSTW-CE 004	ZWEILEITER-V- NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	ESH3-Z5 840731/011 R&S 201		2011/12/28	2012/12/27
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2012/9/26	2013/9/25
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2012/3/5	2013/3/4
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-te	st Use
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function	on Test
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2012/7/3	2013/7/2
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2012/9/6	2013/9/5
ETSTW-CE 024	IMPEDANCE STABILIZATION NETWORK	ISN T800	29454	TESEQ	2012/1/4	2013/1/3
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2012/8/10	2013/8/09
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function	on Test
ETSTW-CS 010	6 dB Attenuator	SA3N1007-06	None	AISI	Functi	on test
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2012/8/10	2013/8/09
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2012/9/5	2013/9/4
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2012/9/5	2013/9/4
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2012/9/5	2013/9/4
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function	on Test
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function	on Test
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2012/10/12	2013/10/11
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2012/4/03	2013/4/02
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function	on Test
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2012/8/01	2013/7/31
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	Functio	on Test
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	Function	on Test
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2012/2/21	2013/2/20
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2012/10/5	2013/10/4
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P1450 8	LeCroy	Function	on Test
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2012/10/5	2013/10/4
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2012/1/10	2013/1/9
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2012/4/13	2013/4/12



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

	AUHF860		-				
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2012/4/06	2013/4/05	
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-te	st Use	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2012/8/28	2013/8/27	
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2012/3/23	2013/3/22	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2012/3/3	2013/3/2	
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2012/3/3	2013/3/2	
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2012/3/3	2013/3/2	
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2012/5/29	2013/5/28	
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2012/3/3	2013/3/2	
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2012/5/17	2013/5/16	
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2011/11/29	2012/11/28	
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function	on Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650- 25-10P	941608	MITEQ	2012/4/6	2013/4/5	
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	EMCO	Function	on Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	НР	2012/10/5	2013/10/4	
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2012/1/4	2013/1/3	
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2012/1/4	2013/1/3	
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2012/10/12	2013/10/11	
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2012/3/5	2013/3/4	
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2012/3/5	2013/3/4	
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2011/12/1	2012/11/30	
ETSTW-RE 111	TRILOG Super Broadband test Antenna	VULB 9160	9160-3309	Schwarz beck	2011/12/27	2012/12/26	
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Functi	on test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2012/1/12	2013/1/11	
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Functi	on test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2012/7/3	2013/7/2	
ETSTW-RE 125	5GHz Notch filter	5NSL11- 5200/E221.3-O/O	1	K&L Microwave	2012/8/18	2013/8/17	
ETSTW-RE 126	5GHz Notch filter	5NSL11- 5800/E221.3-O/O	1	K&L Microwave	2012/8/18	2013/8/17	
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2012/3/3	2013/3/2	
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2012/8/10	2013/8/09	
ETSTW-EMS 001	BASELSTRASSE 160 CH- 4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	Function	on Test	
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014	None	Function	on Test	
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2011/11/2	2012/11/1	
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	Function	on Test	
ETSTW-EMS 010	Coupling De-coupling Network	CDN-UTP8	014	EMC-PARTNER	Function	on Test	
ETSTW-EMS 012	EM Injection Clamp	F-203I-23MM	476	FCC	2012/5/29	2013/5/28	



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

				T		
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2012/10/5	2013/10/4
ETSTW-EMS 017	Multimeter	DM-1220	518614	HOLA	2012/8/10	2013/8/09
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2012/10/5	2013/10/4
ETSTW-EMS 020	Humidity Temperature Meter	TES-1366	091011116	TES	2011/12/20	2012/12/19
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	Function	on Test
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	Function	on Test
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2012/2/29	2013/2/28
ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function	on Test
ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	HP	2012/2/20	2013/2/19
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2012/9/24	2013/9/23
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2012/10/5	2013/10/4
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849- 822/851-40 /12+9SS	3	WI	2012/1/13	2013/1/12
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748- 1743/1752-32/5SS	1	WI	2012/1/13	2013/1/12
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5 -1875.5/1884.5- 32/5SS	3	WI	2012/1/13	2013/1/12
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1- 904.25-50/8SS	1	WI	2012/1/13	2013/1/12
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2012/9/18	2013/9/17
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104 (S_Cable 7)	238093	HUBER+SUHNER	2012/5/17	2013/5/16
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104 (S_Cable 11)	209953	HUBER+SUHNER	2012/5/17	2013/5/16
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2012/3/5	2013/3/4
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test U	Jse NCR
ETSTW-Cable 012	N TYPE To SMA Cable	Cable 012	None	JYE BAO CO.,LTD.	2012/3/5	2013/3/4
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104 (S_Cable 5)	232345	HUBER+SUHNER	Function	on Test
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2012/10/12	2013/10/11
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2012/10/12	2013/10/11
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2011/11/29	2012/11/28
ETSTW-Cable 032	Microwave Cable	SUCOFLEX 104 (S Cable 12)	237301	HUBER+SUHNER	Function	on Test
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104 (S Cable 19)	316739	HUBER+SUHNER	2012/5/17	2013/5/16



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

ETSTW-Cable 040	Microwave Cable	SUCOFLEX 104 (S Cable 20)	316738	HUBER+SUHNER	Function	on Test
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2011/11/29	2012/11/28
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2011/11/29	2012/11/28
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO CO.,LTD.	2012/3/30	2013/3/29
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2012/3/30	2013/3/29
ETSTW-Cable 053	N TYPE To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 054	BNC To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 055	NTYPE Cable	N30N30-JBY240- 80CM	20110621-1.1	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 056	N TYPE Cable	N30N30-JBY240- 80CM	20110621-1.0	JYE BAO CO.,LTD.	Function	on Test
ETSTW-Cable 057	N TYPE Cable	N30N30-JBY240- 80CM	20110621-1.1	JYE BAO CO.,LTD.	Function	on Test
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18	
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1	
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2	2007-8-17b

FCC ID: WXAUHF860

2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2009 5.2 using a $50\mu H$ LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was $10 \, kHz$ with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.4-2009 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. The ambient, temperature of the UUT was 23°C with a humidity of 40 %.

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

Example:

Freq (MHz) METER READING + ACF + CABLE LOSS (to the receiver) = FS

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 No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: **930600**.



FCC ID: WXAUHF860

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.

FCC ID: WXAUHF860

3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	×	×	
Equivalent 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)	X	×	
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	X	×	
20 dB Bandwidth	15.247(a) (1)(i)	×	×	
Band-edge Compliance of RF Emission	15.247(d)	×	×	
Radiated Emission from Receiver part	15.109			
Power Line Conducted Emission	15.207(a)			

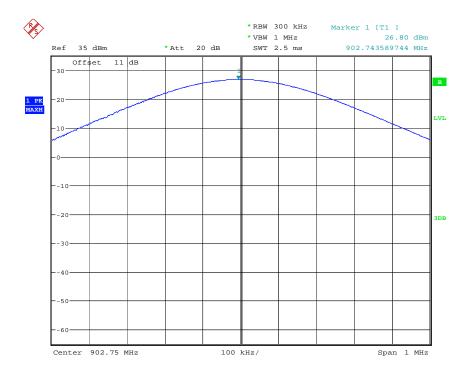
FCC ID: WXAUHF860

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

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).



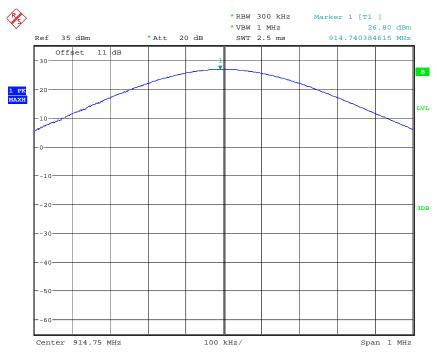
MAX OUTPUT POWER

Date: 23.JUL.2012 16:18:02



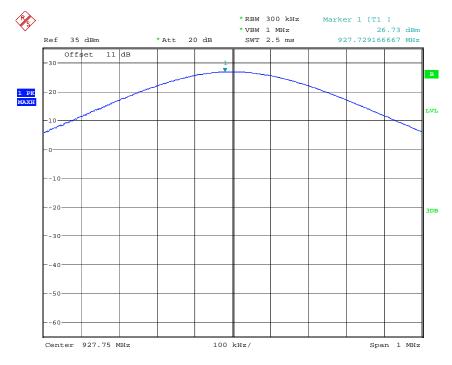
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



MAX OUTPUT POWER

Date: 23.JUL.2012 16:19:00



MAX OUTPUT POWER

Date: 23.JUL.2012 16:19:39

FCC ID: WXAUHF860

Maximum Peak Output Power

Limits:

Frequency	Number of hopping channels							Number of hopping channels					
MHz	≥ 75	≥ 75 ≥ 50 $49 \geq 25$		74 ≥ 15									
902-928		30 dBm	24 dBm										
2400-2483.5 MHz	30 dBm	-		21 dbm									
5725-5850 MHz	30 dBm	-											

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 064

FCC ID: WXAUHF860

3.2 RF Exposure Compliance Requirements

According to Supplement C, Edition 01-01 to OET Bulletin 65, Edition 97-01 this spread spectrum transmitter is categorically excluded from routine environmental evaluation because of the low power level, where there is a high likelihood of compliance with RF exposure standards.

3.3 Out of Band Radiated Emissions

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 below 1GHz:

Max. reading – 20 dB

Guidance on Measurement of FHSS 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." Here the correction was added to the limit instead subtracted from the reading.

Duty Cycle correction = 20 log (dwell time/100ms)
For frequencies above 1GHz (Peak measurements).
Limit = max. aver. reading-20dB +20dB(because Peak detector is used)

For frequencies above 1GHz (Average measurements).

Max. reading – 20 dB - duty cycle correction:

No duty cycle correction was added to the reading

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

FCC ID: WXAUHF860

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 26000 MHz.

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

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements) Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (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 960	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of FHSS Systems:

"If the emission is pulsed, modify the unit for continues operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation." Here the correction was added to the limit instead subtracted from the reading.

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

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

 $54.0dB\mu V/m$

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

 $54.0 dB \mu V/m + 20 dB = 74 dB \mu V/m$

Note: See attached diagrams.

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

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))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to 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 an 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 "Marker-Delta-Method" or the "Duty-Cycle Correction Factor".

Antenna 1

	Model:		UHF860		Date:	2012/0	4/06		
Mode: TX 902.75 MHz				Temperature:	perature: 24 °C			Kevin	
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)
	116.0320	19.02	peak	13.01	32.03	43.50	-11.47	230	100
	405.2102	11.10	peak	18.37	29.47	46.00	-16.53	250	100

Frequency	Reading (dBuV)		Factor (dB)		lt @3m uV/m)	Limit @3m (dBuV/m)		Limit @3m Margi (dBuV/m)		Margin	Table Degree	Ant. High
(MHz)	Peak	Áve.	Corr.	Peak	Äve.	Peak	Äve.	(dB)	(Deg.)	(cm)		
1805.5910	80.06	59.84	-7.93	72.13	51.91	74.00	54.00	-2.09	230	100		
2708.5310	77.62	57.42	-5.14	72.48	52.28	74.00	54.00	-1.72	215	100		
3611.0760	68.59	51.62	-2.99	65.60	48.63	74.00	54.00	-5.37	355	100		
4513.0260	60.73	48.48	-1.42	59.31	47.06	74.00	54.00	-6.94	210	100		
5418.8380	54.24	45.67	0.10	54.34	45.77	74.00	54.00	-8.23	190	100		
6316.6330	52.82	44.23	1.34	54.16	45.57	74.00	54.00	-8.43	20	100		

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
114.4088	23.56	peak	12.92	36.48	43.50	-7.02	205	100
405.2104	17.82	peak	18.37	36.19	46.00	-9.81	230	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Frequency		Reading (dBuV)		Result @3m (dBuV/m)			Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak	Ave.	(dB) (dBuV/m) Corr. Peak Ave.		Peak Ave.		(dB)	(Deg.)	(cm)	
1805.5810	80.08	61.05	-7.93	72.15	53.12	74.00	54.00	-0.88	250	100
2708.3470	77.02	57.24	-5.14	71.88	52.10	74.00	54.00	-1.90	280	100
3611.0160	69.90	52.99	-2.99	66.91	50.00	74.00	54.00	-4.00	220	100
4513.0260	59.75	48.23	-1.42	58.33	46.81	74.00	54.00	-7.19	110	100
5418.8380	63.72	52.18	0.10	63.82	52.28	74.00	54.00	-1.72	170	100
6316.6330	50.72	42.23	1.34	52.06	43.57	74.00	54.00	-10.43	200	100
9028.0560	46.26		5.55	51.81		74.00	54.00	-22.19	105	100
9932.3650	41.47		7.18	48.65		74.00	54.00	-25.35	300	100

Mode: TX 914.75 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
117.1141	18.66	peak	13.07	31.73	43.50	-11.77	310	100
405.2102	10.48	peak	18.37	28.85	46.00	-17.15	40	100

Frequency		Reading (dBuV)		Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin	Table Degree	Ant. High
(MHz)	_ `.	Áve.	Corr.	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		Peak	Áve.	(dB)	(Deg.)	(cm)
1829.5650	79.51	56.64	-7.67	71.84	48.97	74.00	54.00	-5.03	170	100
2744.3950	76.74	57.85	-5.06	71.68	52.79	74.00	54.00	-1.21	220	100
3659.1490	70.28	51.80	-2.88	67.40	48.92	74.00	54.00	-5.08	250	100
4573.8430	59.70	49.18	-1.45	58.25	47.73	74.00	54.00	-6.27	290	100
5488.5270	62.22	46.60	0.39	62.61	46.99	74.00	54.00	-7.01	20	100
6404.8100	49.63		1.58	51.21		74.00	54.00	-22.79	110	100
9147.8380	47.39	38.32	5.61	53.00	43.93	74.00	54.00	-10.07	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)
114.9498	26.58	peak	12.95	39.53	43.50	-3.97	70	100
405.2104	17.79	peak	18.37	36.16	46.00	-9.84	240	100

Frequency		Reading Fact (dBuV) (dB			lt @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	, , , ,		Peak	Peak Ave.		(Deg.)	(cm)
1829.5330	79.82	59.83	-7.67	72.15	52.16	74.00	54.00	-1.84	290	100
2744.3510	77.92	58.51	-5.06	72.86	53.45	74.00	54.00	-0.55	150	100
3658.9240	65.73	50.84	-2.88	62.85	47.96	74.00	54.00	-6.04	230	100
4573.9180	59.09	48.56	-1.45	57.64	47.11	74.00	54.00	-6.89	110	100
5488.6950	56.74	44.56	0.39	57.13	44.95	74.00	54.00	-9.05	190	100
6404.8100	48.73		1.58	50.31		74.00	54.00	-23.69	150	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Mode: TX 927.75 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
112.2445	18.84	peak	12.81	31.65	43.50	-11.85	300	100
405.2102	10.74	peak	18.37	29.11	46.00	-16.89	210	100

Frequency		Reading (dBuV)			lt @3m uV/m)	Limit @3m (dBuV/m)		Margin	Table Degree	Ant. High
(MHz)	Peak	Äve.	(dB) Corr.	Peak	Ave.	Peak	Äve.	(dB)	(Deg.)	(cm)
1855.4890	79.74	60.01	-7.40	72.34	52.61	74.00	54.00	-1.39	220	100
2783.3040	77.22	57.59	-4.97	72.25	52.62	74.00	54.00	-1.38	210	100
3710.9680	69.52	54.94	-2.80	66.72	52.14	74.00	54.00	-1.86	170	100
4633.2660	63.87	48.54	-1.53	62.34	47.01	74.00	54.00	-6.99	175	100
5563.1260	58.02	45.08	0.41	58.43	45.49	74.00	54.00	-8.51	220	100
6492.9860	51.12	40.07	1.70	52.82	41.77	74.00	54.00	-12.23	50	100
7422.8460	48.97	38.07	4.61	53.58	42.68	74.00	54.00	-11.32	310	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
113.8677	25.10	peak	12.89	37.99	43.50	-5.51	140	100
405.2104	17.91	peak	18.37	36.28	46.00	-9.72	325	100

Frequency	Read (dBi	•	Factor (dB)		lt @3m uV/m)		Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	Peak	Peak Ave.		Peak Ave.		(Deg.)	(cm)
1855.4910	79.87	60.40	-7.40	72.47	53.00	74.00	54.00	-1.00	270	100
2783.3250	77.52	58.28	-4.97	72.55	53.31	74.00	54.00	-0.69	210	100
3710.8940	70.66	53.31	-2.80	67.86	50.51	74.00	54.00	-3.49	300	100
4633.2660	63.68	48.25	-1.53	62.15	46.72	74.00	54.00	-7.28	200	100
5563.1260	52.78	45.33	0.41	53.19	45.74	74.00	54.00	-8.26	170	100
6492.9860	48.38	40.19	1.70	50.08	41.89	74.00	54.00	-12.11	320	100

Antenna 2

Model: UHF860 Date: 2012/7/20

Mode: TX 902.75 MHz Temperature: 24 °C Engineer: Vic

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)
162.5651	20.96	peak	14.93	35.89	43.50	-7.61	165	100
335.0701	22.67	peak	16.51	39.18	46.00	-6.82	285	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Frequency		Reading (dBuV)			Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak	Peak Áve.		Peak	Äve.	Peak	Äve.	(dB)	(Deg.)	(cm)
1805.6110	78.80	56.74	-7.93	70.87	48.81	74.00	54.00	-5.19	80	100
2708.3110	74.72	55.63	-5.14	69.58	50.49	74.00	54.00	-3.51	55	100
3611.0660	66.50	52.80	-2.99	63.51	49.81	74.00	54.00	-4.19	260	100
4513.8100	58.39	46.90	-1.42	56.97	45.48	74.00	54.00	-8.52	260	100
5418.8380	50.70		0.10	50.80		74.00	54.00	-23.20	210	100
6316.6330	51.21	41.06	1.34	52.55	42.40	74.00	54.00	-11.60	300	100
7222.4450	43.44		4.18	47.62		74.00	54.00	-26.38	165	100

Polarization: Vertical

	Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
Ī	162.5651	19.23	peak	14.93	34.16	43.50	-9.34	175	100
ſ	997.1944	11.15	peak	27.84	38.99	54.00	-15.01	145	100

Frequency	Read (dBi	•	Factor (dB)		lt @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak			Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1805.6110	74.74	55.64	-7.93	66.81	47.71	74.00	54.00	-6.29	175	100
2708.3470	74.30	55.06	-5.14	69.16	49.92	74.00	54.00	-4.08	136	100
3611.0960	70.35	52.83	-2.99	67.36	49.84	74.00	54.00	-4.16	273	100
4513.8100	58.97	47.80	-1.42	57.55	46.38	74.00	54.00	-7.62	180	100
5416.5670	55.02	45.49	0.09	55.11	45.58	74.00	54.00	-8.42	205	100
6316.6330	52.1	42.15	1.34	53.44	43.49	74.00	54.00	-10.51	300	100
7222.4450	45.64		4.18	49.82		74.00	54.00	-24.18	255	100
8123.7480	42.50		5.27	47.77		74.00	54.00	-26.23	285	100

Mode: TX 914.75 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
128.4770	21.83	peak	13.69	35.52	43.50	-7.98	235	100
330.8616	21.38	peak	16.40	37.78	46.00	-8.22	325	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Frequency		Reading (dBuV)			Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak Ave.		Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1829.6590	64.17	46.83	-7.67	56.50	39.16	74.00	54.00	-14.84	240	100
2744.3030	74.60	57.27	-5.06	69.54	52.21	74.00	54.00	-1.79	215	100
3659.0600	68.54	52.44	-2.88	65.66	49.56	74.00	54.00	-4.44	240	100
4573.8170	57.16	48.07	-1.45	55.71	46.62	74.00	54.00	-7.38	120	100
5490.9820	53.10	43.06	0.40	53.50	43.46	74.00	54.00	-10.54	300	100
6404.8100	48.51		1.58	50.09		74.00	54.00	-23.91	110	100
7318.6370	43.62		4.36	47.98		74.00	54.00	-26.02	254	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
164.7295	19.66	peak	14.84	34.50	43.50	-9.00	280	100
333.6673	16.37	peak	16.47	32.84	46.00	-13.16	310	100

Frequency	Read (dBi	•	Factor (dB)		t @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak			Peak	•	Peak	Áve.	(dB)	(Deg.)	(cm)
1829.6590	70.69	50.45	-7.67	63.02	42.78	74.00	54.00	-11.22	170	100
2744.2630	77.71	56.61	-5.06	72.65	51.55	74.00	54.00	-2.45	185	100
3659.0680	67.71	52.69	-2.88	64.83	49.81	74.00	54.00	-4.19	285	100
4573.8450	60.82	49.89	-1.45	59.37	48.44	74.00	54.00	-5.56	186	100
5490.9820	57.94	46.77	0.40	58.34	47.17	74.00	54.00	-6.83	230	100
6404.8100	53.09	43.05	1.58	54.67	44.63	74.00	54.00	-9.37	155	100
7318.0420	48.88	41.06	4.36	53.24	45.42	74.00	54.00	-8.58	355	100

Mode: TX 927.75 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
127.9360	23.10	peak	13.66	36.76	43.50	-6.74	325	100
328.0561	21.25	peak	16.32	37.57	46.00	-8.43	205	100

Frequency	Reading (dBuV)		Factor (dB)		t @3m uV/m)		Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak Ave.		Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1855.7110	77.39	56.12	-7.39	70.00	48.73	74.00	54.00	-5.27	170	100
2783.2920	77.94	56.74	-4.97	72.97	51.77	74.00	54.00	-2.23	182	100
3711.0600	73.86	54.03	-2.80	71.06	51.23	74.00	54.00	-2.77	195	100
4638.8430	59.15	47.20	-1.54	57.61	45.66	74.00	54.00	-8.34	90	100
5563.1260	53.96	43.85	0.41	54.37	44.26	74.00	54.00	-9.74	260	100
6492.9860	48.17		1.70	49.87		74.00	54.00	-24.13	145	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
162.5651	20.56	peak	14.93	35.49	43.50	-8.01	260	100
995.7916	11.34	peak	27.83	39.17	54.00	-14.83	320	100

Frequency		Reading (dBuV)			lt @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Peak Áve.		Peak	,	Peak	Äve.	(dB)	(Deg.)	(cm)
1855.6010	80.26	58.91	-7.40	72.86	51.51	74.00	54.00	-2.49	0	100
2783.3000	77.74	57.07	-4.97	72.77	52.10	74.00	54.00	-1.90	185	100
3711.1280	73.09	54.33	-2.80	70.29	51.53	74.00	54.00	-2.47	195	100
4638.8190	62.29	47.75	-1.54	60.75	46.21	74.00	54.00	-7.79	185	100
5563.1260	53.48	43.46	0.41	53.89	43.87	74.00	54.00	-10.13	260	100
6492.9860	53.57	43.55	1.70	55.27	45.25	74.00	54.00	-8.75	130	100
7422.0100	48.19	41.21	4.62	52.81	45.83	74.00	54.00	-8.17	210	100

Antenna 3

Model: UHF860 Date: 2012/10/25

Mode: TX 902.75 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)
163.6473	4.18	peak	14.89	19.07	43.50	-24.43	165	100
610.0200	7.07	peak	22.70	29.77	46.00	-16.23	145	100

Frequency		Reading (dBuV)			Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Table Degree	Ant. High
(MHz)	Peak Áve.		Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1805.6110	74.22	54.26	-7.93	66.29	46.33	74.00	54.00	-7.67	130	100
2708.2710	78.01	58.03	-5.14	72.87	52.89	74.00	54.00	-1.11	200	100
3611.0340	73.46	52.13	-2.99	70.47	49.14	74.00	54.00	-4.86	140	100
4513.8380	68.51	50.22	-1.42	67.09	48.80	74.00	54.00	-5.20	255	100
5418.8380	57.29	42.31	0.10	57.39	42.41	74.00	54.00	-11.59	40	100
6316.6330	55.56	36.65	1.34	56.90	37.99	74.00	54.00	-16.01	60	100
7222.4450	50.66	30.85	4.18	54.84	35.03	74.00	54.00	-18.97	95	110

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
38.1160	2.31	peak	13.55	15.86	40.00	-24.14	155	100
998.5972	15.97	peak	27.85	43.82	54.00	-10.18	120	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Frequency	Read (dB)	•	Factor (dB)		t @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1805.6110	74.62	54.65	-7.93	66.69	46.72	74.00	54.00	-7.28	180	110
2709.4190	77.02	56.90	-5.14	71.88	51.76	74.00	54.00	-2.24	130	100
3611.2220	73.07	53.14	-2.99	70.08	50.15	74.00	54.00	-3.85	140	100
5418.8380	63.06	42.05	0.10	63.16	42.15	74.00	54.00	-11.85	120	110
6316.6330	60.12	40.26	1.34	61.46	41.60	74.00	54.00	-12.40	140	100
7222.4450	50.89	30.67	4.18	55.07	34.85	74.00	54.00	-19.15	130	100
8123.7480	46.48		5.27	51.75		74.00	54.00	-22.25	130	100

Mode: TX 914.75 MHz

Polarization: Horizontal

· olanizationii								
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
38.1160	2.93	peak	13.55	16.48	40.00	-23.52	120	100
610.0200	7.57	peak	22.70	30.27	46.00	-15.73	170	100

Frequency	Readiı (dBu\	U	Factor (dB)		t @3m uV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Áve.	Corr.	Peak	Äve.	Peak	Äve.	(dB)	(Deg.)	(cm)
1829.6590	72.29	52.28	-7.67	64.62	44.61	74.00	54.00	-9.39	30	100
2745.4910	77.46	57.59	-5.06	72.40	52.53	74.00	54.00	-1.47	110	100
3659.3190	73.03	53.00	-2.88	70.15	50.12	74.00	54.00	-3.88	40	100
4569.1380	66.99	43.28	-1.45	65.54	41.83	74.00	54.00	-12.17	200	100
5490.9820	57.27	37.11	0.40	57.67	37.51	74.00	54.00	-16.49	40	100
6404.8100	52.81	32.82	1.58	54.39	34.40	74.00	54.00	-19.60	130	100
7318.6370	49.00	29.25	4.36	53.36	33.61	74.00	54.00	-20.39	280	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
37.5752	2.18	peak	13.51	15.69	40.00	-24.31	275	100
969.1382	16.13	peak	27.61	43.74	54.00	-10.26	230	100

Frequency	Read (dBt	0	Factor (dB)		t @3m ıV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
1829.6590	69.50	49.35	-7.67	61.83	41.68	74.00	54.00	-12.32	100	100
2745.4910	77.36	57.11	-5.06	72.30	52.05	74.00	54.00	-1.95	130	100
3659.3190	73.99	54.69	-2.88	71.11	51.81	74.00	54.00	-2.19	20	100
4569.1380	69.96	50.89	-1.45	68.51	49.44	74.00	54.00	-4.56	130	100
5490.9820	60.96	40.98	0.40	61.36	41.38	74.00	54.00	-12.62	120	100
6404.8100	58.49	38.45	1.58	60.07	40.03	74.00	54.00	-13.97	50	100
7318.6370	48.12	28.12	4.36	52.48	32.48	74.00	54.00	-21.52	300	100



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Mode: TX 927.75 MHz

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
37.5752	3.20	peak	13.51	16.71	40.00	-23.29	325	100
610.0200	5.26	peak	22.70	27.96	46.00	-18.04	165	100

Frequency	Readir (dBu\	•	Factor (dB)		t @3m ıV/m)		@3m V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Äve.	Corr.	Peak	Äve.	Peak	Äve.	(dB)	(Deg.)	(cm)
1855.7110	78.12	58.05	-7.39	70.73	50.66	74.00	54.00	-3.34	0	100
2781.5630	77.62	57.78	-4.97	72.65	52.81	74.00	54.00	-1.19	40	100
3711.4230	74.24	53.11	-2.80	71.44	50.31	74.00	54.00	-3.69	170	100
4633.2660	66.27	46.30	-1.53	64.74	44.77	74.00	54.00	-9.23	300	100
5563.1260	56.04	35.98	0.41	56.45	36.39	74.00	54.00	-17.61	120	100
6492.9860	50.29	30.66	1.70	51.99	32.36	74.00	54.00	-21.64	170	100
7422.8460	45.64	28.33	4.61	50.25	32.94	74.00	54.00	-21.06	90	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
37.5752	2.87	peak	13.51	16.38	40.00	-23.62	160	100
990.1803	15.88	peak	27.78	43.66	54.00	-10.34	90	100

Frequency (MHz)	Read (dBo Peak	•	Factor (dB) Corr.		t @3m uV/m) Ave.		@3m V/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1855.7110	78.28	58.65	-7.39	70.89	51.26	74.00	54.00	-2.74	130	100
2781.5630	77.61	57.88	-4.97	72.64	52.91	74.00	54.00	-1.09	300	100
3711.4230	73.79	54.46	-2.80	70.99	51.66	74.00	54.00	-2.34	110	100
4633.2660	67.74	49.02	-1.53	66.21	47.49	74.00	54.00	-6.51	310	100
5563.1260	57.93	37.85	0.41	58.34	38.26	74.00	54.00	-15.74	120	100
6492.9860	53.77	33.75	1.70	55.47	35.45	74.00	54.00	-18.55	180	100
7422.8460	47.62	27.66	4.61	52.23	32.27	74.00	54.00	-21.73	30	100
9275.5510	45.31		5.74	51.05		74.00	54.00	-22.95	210	100

Note:

- 1. Correction Factor = Antenna factor + Cable loss Preamplifier
- 2. The formula of measured value as: Test Result = Reading + Correction Factor
- 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. Measurement uncertainty for 3m measurement: $30-1000 \text{ MHz} = \pm 3.72 \text{ dB}$, $1-18 \text{ GHz} = \pm 5.56 \text{ dB}$, $18-40 \text{ GHz} = \pm 3.46 \text{ dB}$; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 6. See attached diagrams in appendix.

FCC ID: WXAUHF860

All other not noted test plots do not contain significant test results in relation to the limits.

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

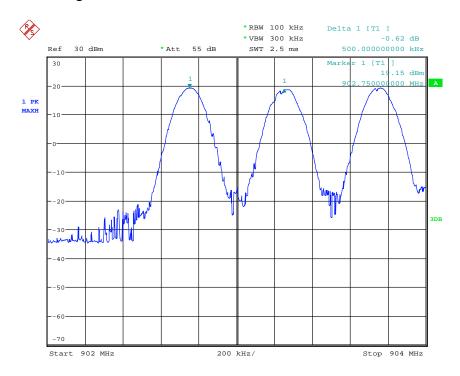
Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

FCC ID: WXAUHF860

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.

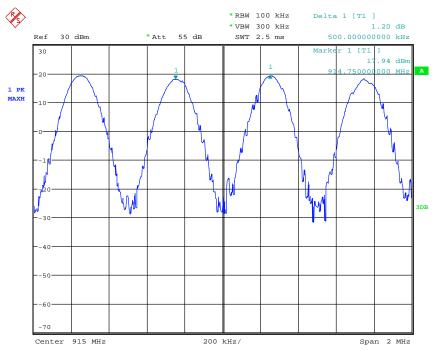


Frequency Separation
Date: 2.APR.2012 14:13:05

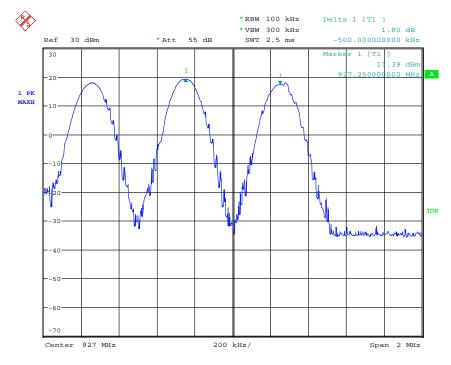


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



Frequency Separation
Date: 2.APR.2012 14:14:49



Frequency Separation
Date: 2.APR.2012 14:16:40



FCC ID: WXAUHF860

Limits:

Frequency Range	Limits					
MHz	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				

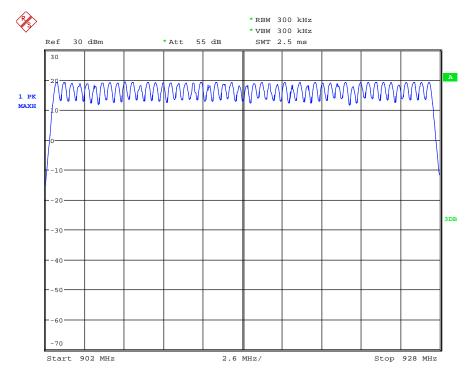
Test equipment used: ETSTW-RE 055, ETSTW-RE 064

FCC ID: WXAUHF860

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.



NUMBER OF HOPPING
Date: 2.APR.2012 13:56:28

Limits:

Frequency Range	Limit	
MHz	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

FCC ID: WXAUHF860

3.7.1 Pseudorandom Frequency Hopping Sequence

Channel	MHz	Channel	MHz
Ch1	902.75	Ch26	915.25
Ch2	903.25	Ch27	915.75
Ch3	903.75	Ch28	916.25
Ch4	904.25	Ch29	916.75
Ch5	904.75	Ch30	917.25
Ch6	905.25	Ch31	917.75
Ch7	905.75	Ch32	918.25
Ch8	906.25	Ch33	918.75
Ch9	906.75	Ch34	919.25
Ch10	907.25	Ch35	919.75
Ch11	907.75	Ch36	920.25
Ch12	908.25	Ch37	920.75
Ch13	908.75	Ch38	921.25
Ch14	909.25	Ch39	921.75
Ch15	909.75	Ch40	922.25
Ch16	910.25	Ch41	922.75
Ch17	910.75	Ch42	923.25
Ch18	911.25	Ch43	923.75
Ch19	911.75	Ch44	924.25
Ch20	912.25	Ch45	924.75
Ch21	912.75	Ch46	925.25
Ch22	913.25	Ch47	925.75
Ch23	913.75	Ch48	926.25
Ch24	914.25	Ch49	926.75
Ch25	914.75	Ch50	927.25

3.7.2 Coordination of hopping sequences to other transmitters

This transmitter does not have the ability of being coordinated with other FHSS system for as soon as the transmitter is in operation, the hopping frequency will follow the selected hopping sequence to transmit independently and no coordination is possible. Especially, this transmitter is used as a UHF RFID READER, so no coordination of hopping frequency is required.

3.7.3 Equal Hopping Frequency Use

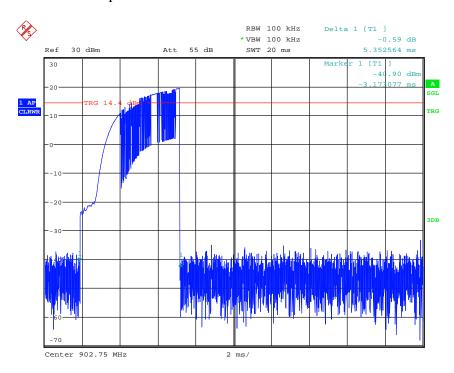
Due to each hopping frequency will be transmitted in accordance to the frequency tables described above, there is no any frequency will be able to hop more times than others. Therefore each frequency will be used equally.

FCC ID: WXAUHF860

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.

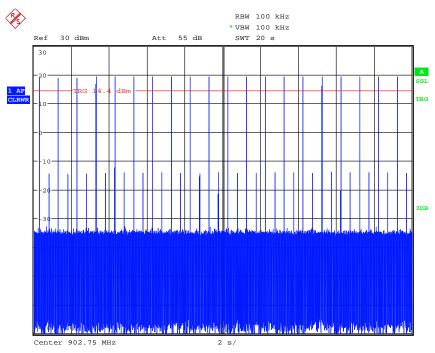


DWELL TIME (5.35ms * 20 = 107ms)
Date: 2.APR.2012 15:16:26

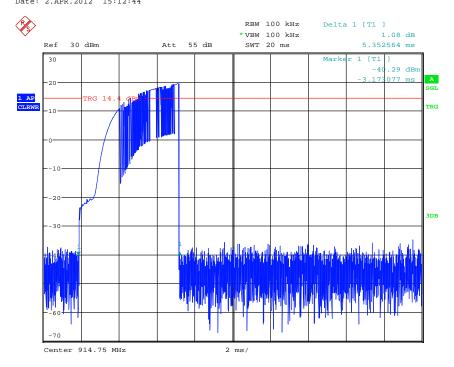


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



DWELL TIME
Date: 2.APR.2012 15:12:44

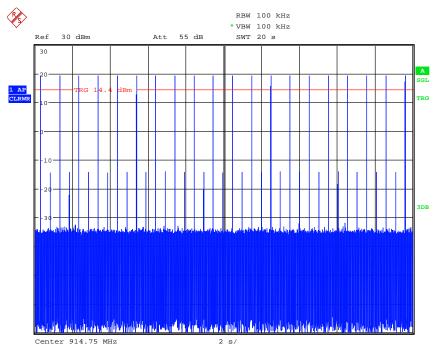


DWELL TIME (5.35ms * 20 = 107ms)
Date: 2.APR.2012 15:16:45

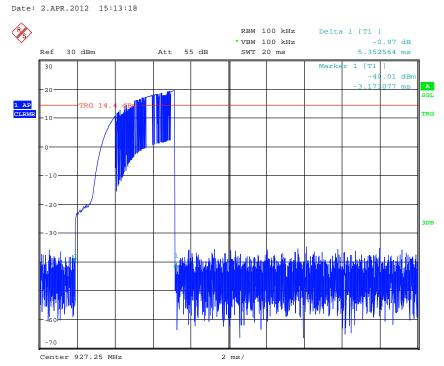


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



DWELL TIME

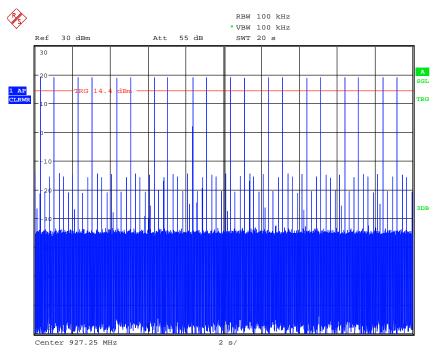


DWELL TIME (5.35ms * 20 = 107ms)
Date: 2.APR.2012 15:17:26



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



DWELL TIME

Date: 2.APR.2012 15:02:52

Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Period	Limit
902 – 928	≥50	20 s	0.4 s
902 – 928	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

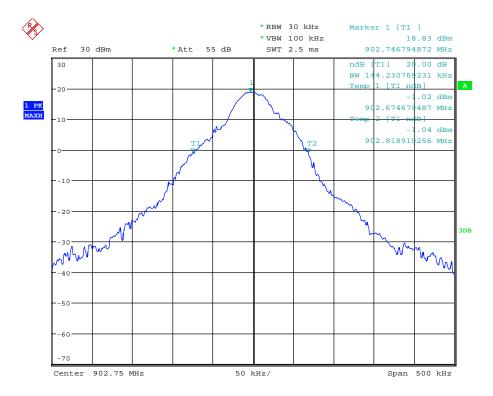
FCC ID: WXAUHF860

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.



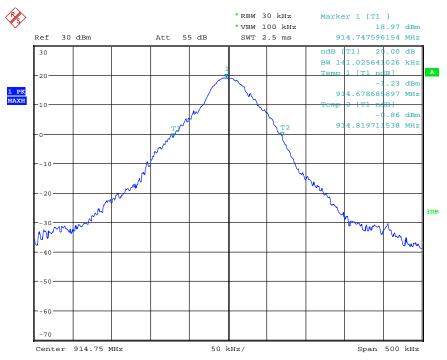
20DB BANDWIDTH

Date: 2.APR.2012 14:40:35



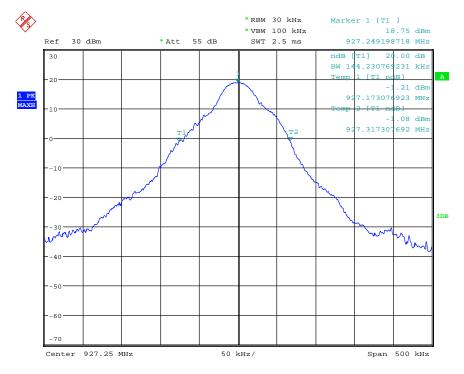
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



20DB BANDWIDTH

Date: 2.APR.2012 15:24:00



20DB BANDWIDTH

Date: 2.APR.2012 14:37:53

FCC ID: WXAUHF860

Limits:

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

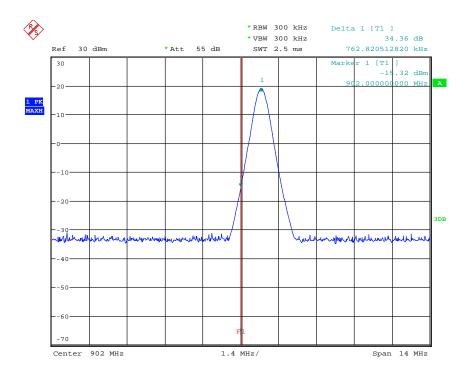
Test equipment used: ETSTW-RE 055, ETSTW-RE 064

FCC ID: WXAUHF860

3.10 Band-edge Compliance of RF Emissions

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.



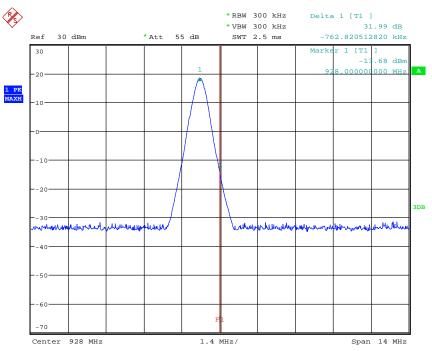
BANDEDGE

Date: 2.APR.2012 14:29:34



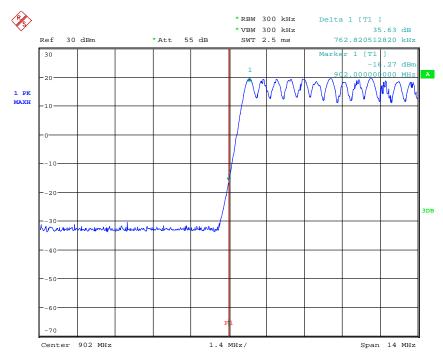
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



BANDEDGE

Date: 2.APR.2012 14:32:04

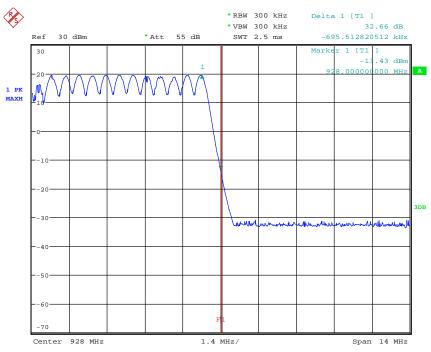


BANDEDGE HOPPING MODE
Date: 2.APR.2012 14:25:35



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



BANDEDGE HOPPING MODE

Date: 2.APR.2012 14:23:05

Limits:

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

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

FCC ID: WXAUHF860

3.11 Radiated Emissions from Receiver Section of Receiver 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	Field Strength	Field Strength
(MHz)	(microvolts/meter)	(dBmicrovolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

Explanation: Please refer to separated test report no.: W6M21203-12309-P-15B.

FCC ID: WXAUHF860

3.12 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.

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

iviodei:	UHF86U) Da	ne:		-			
Mode:		Te	mperature:		°C	En	gineer:	
Polarization:	N	ŀ	Humidity:		%			
Frequency	Read	ding	Factor	Re	sult	Lir	nit	Margin
	(dBı	uV)	(dB)	(dB	uV)	(dB	uV)	
(MHz)	QP	Ave.	Corr.	QP	Ave.	QP	Ave.	(dB)
1	1	1		1				· · · · · · · · · · · · · · · · · · ·

Polarization: L1

Frequency	Reading		Factor	Result		Limit		Margin
	(dBi	uV)	(dB)	(dB	uV)	(dB	uV)	
(MHz)	QP	Ave.	Corr.	QP	Ave.	QP	Ave.	(dB)
				1			1	

Limits:

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

Test equipment used: ETSTW-CE 001, ETSTW-CE 004, ETSTW-CE 006, ETSTW-RE 064

Note: This test is not required.

FCC ID: WXAUHF860

Appendix

Measurement diagrams

Spurious Emissions radiated



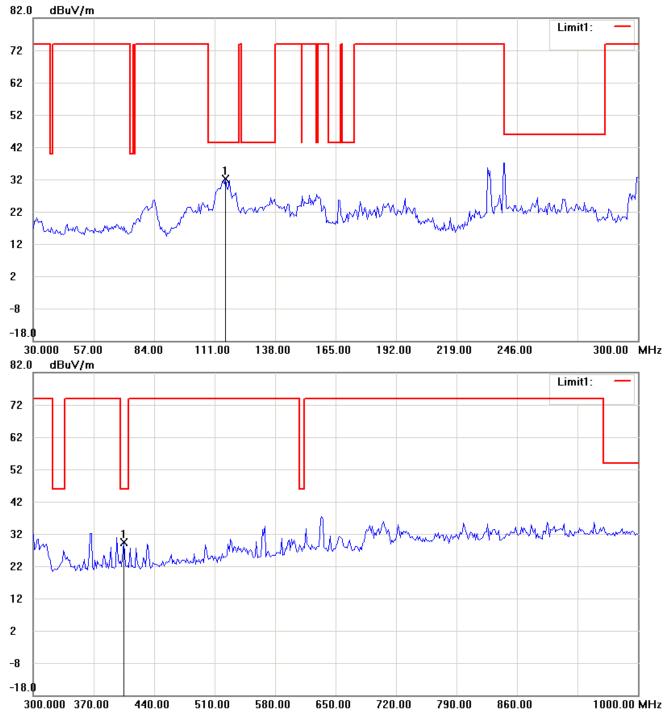
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Spurious Emissions radiated-TX Antenna 1

902.75 MHz

Antenna Polarization H



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

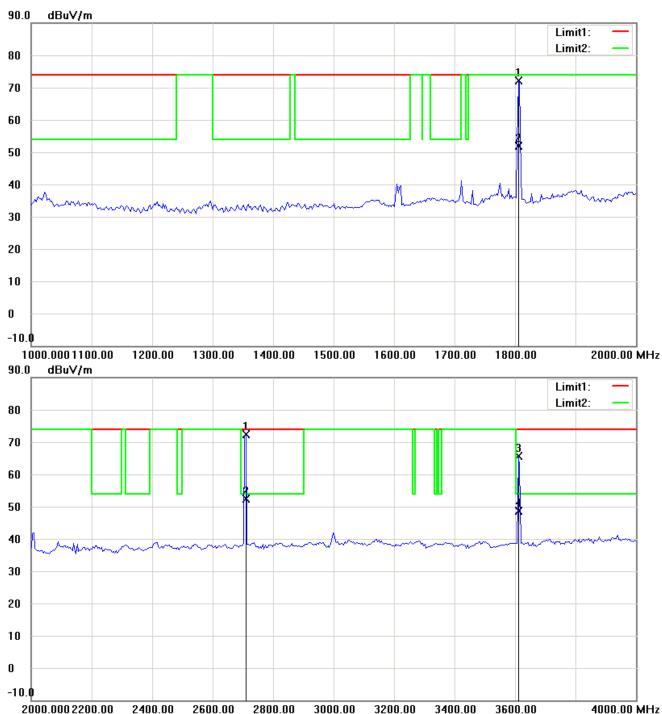
Note:

- 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: W6M21203-12309-C-1

FCC ID: WXAUHF860

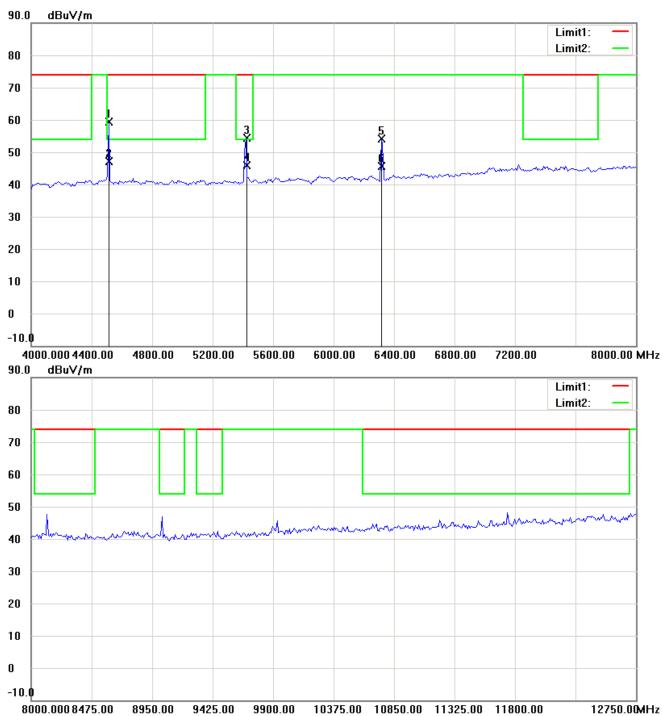


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



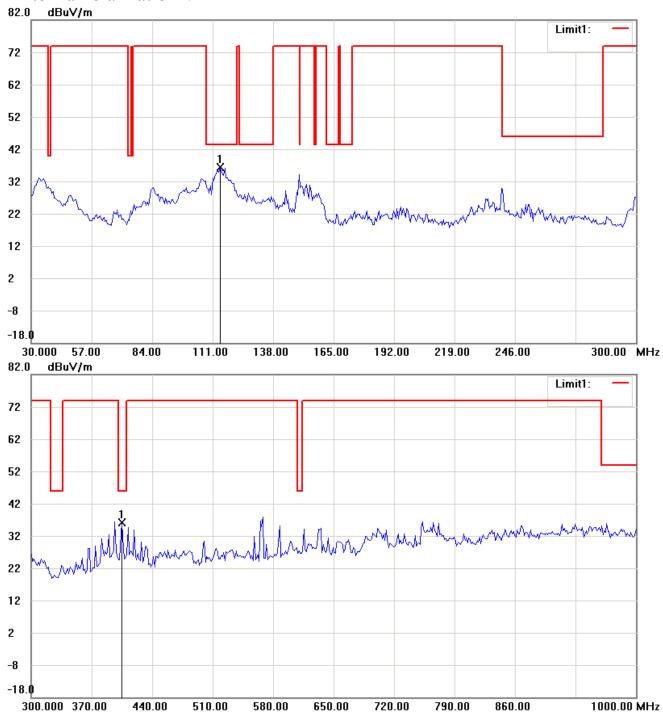
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

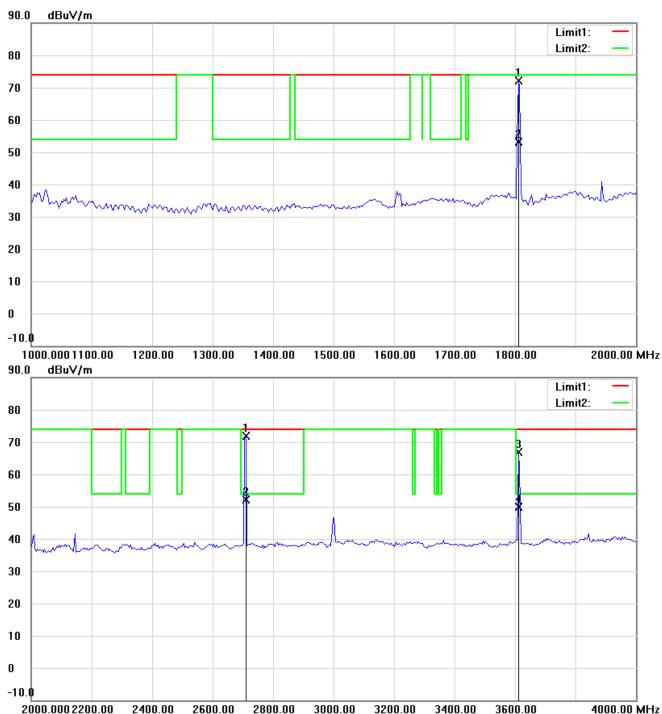


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

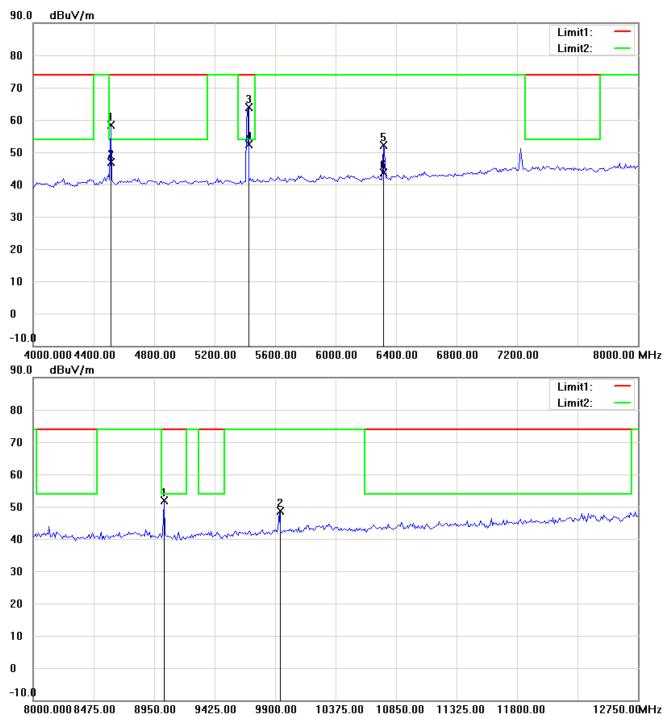


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

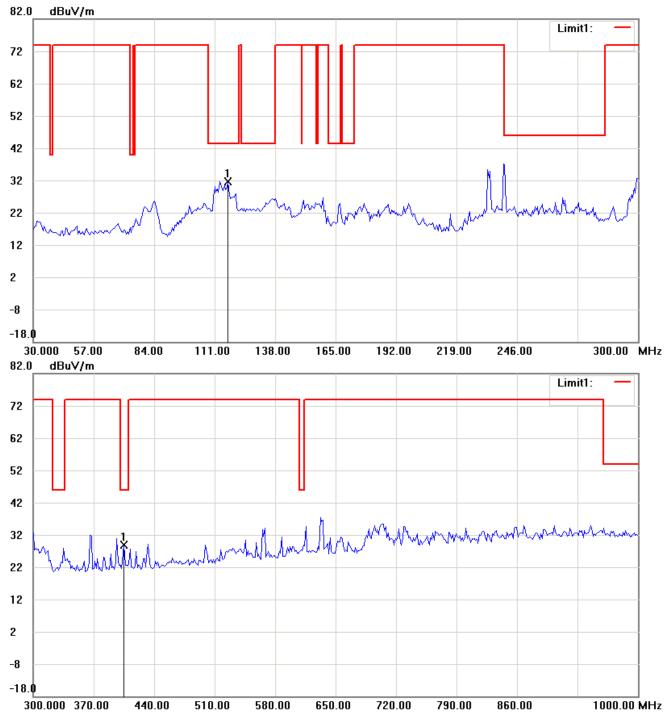


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

914.75 MHz

Antenna Polarization H

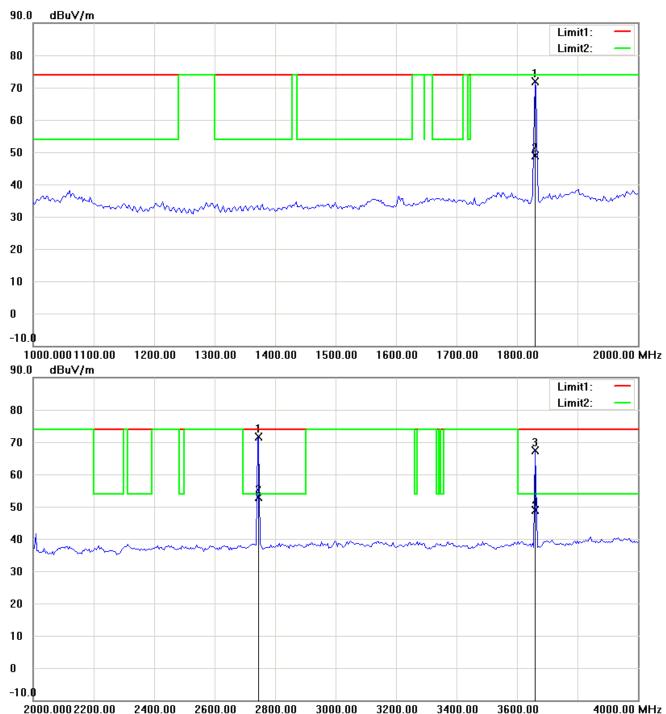


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

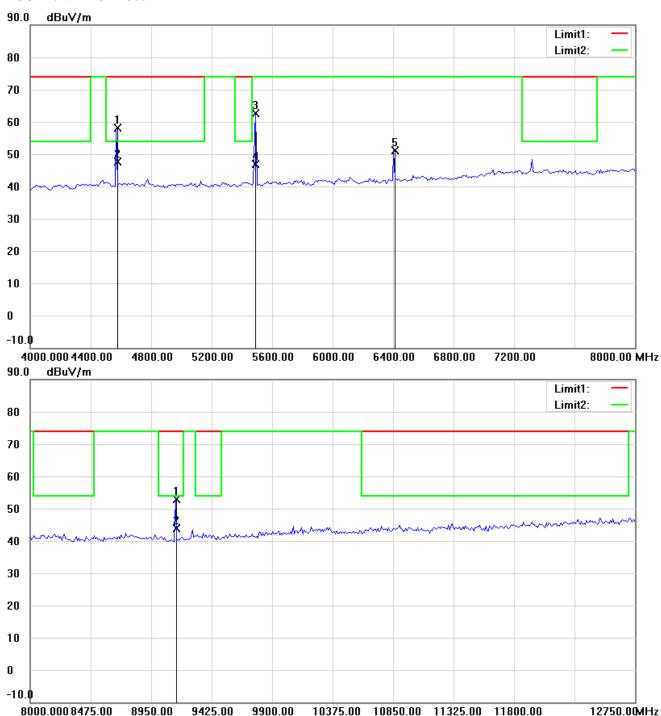


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



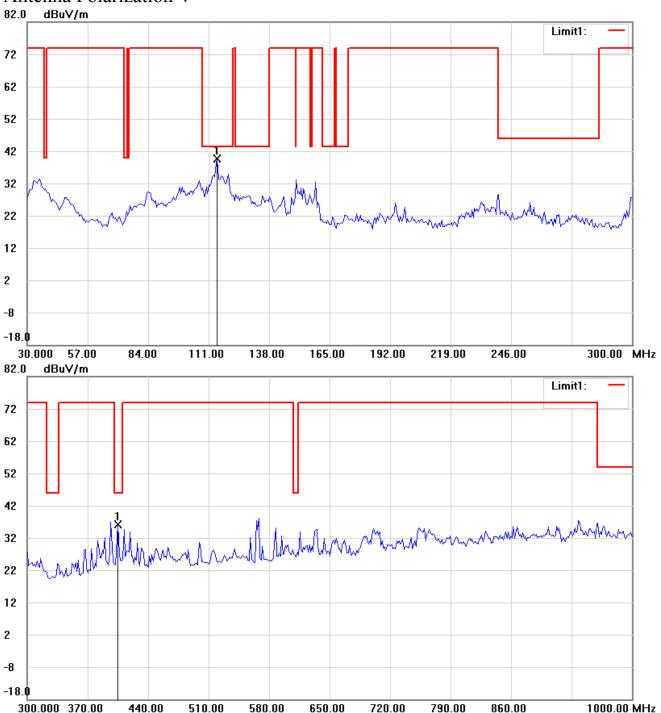
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

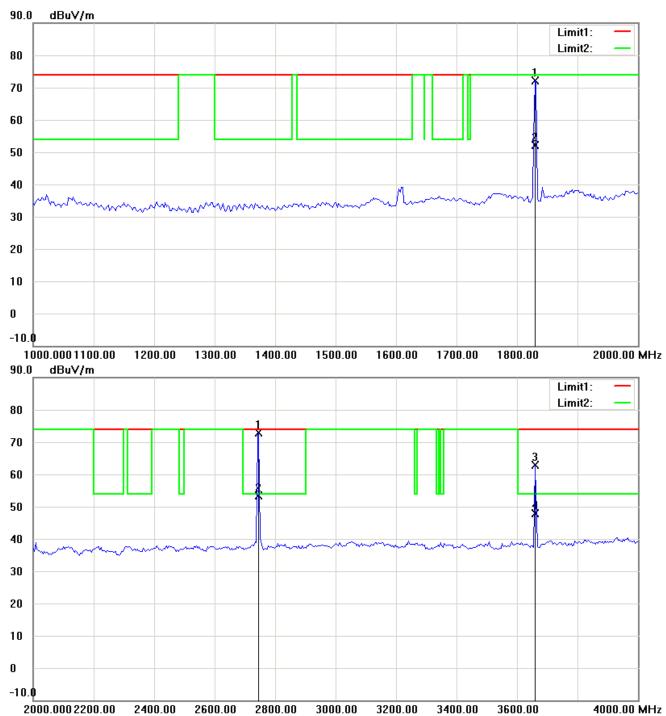


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

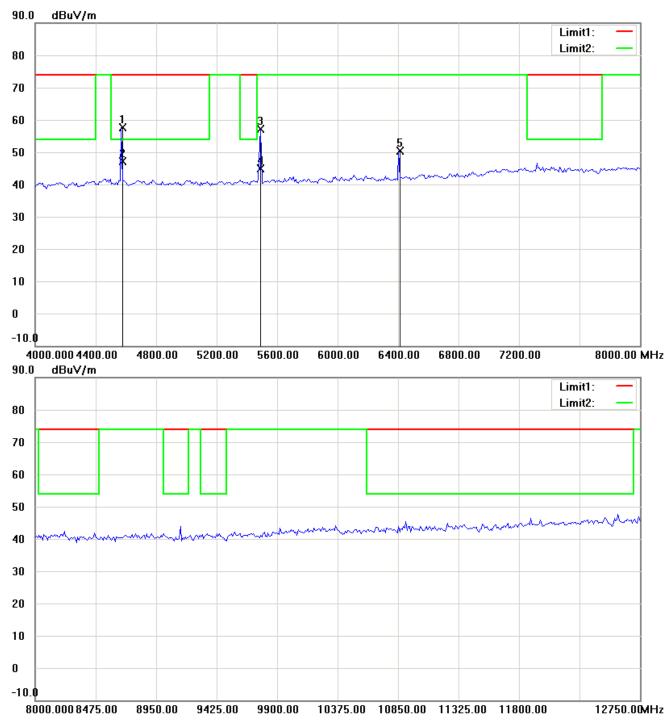


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

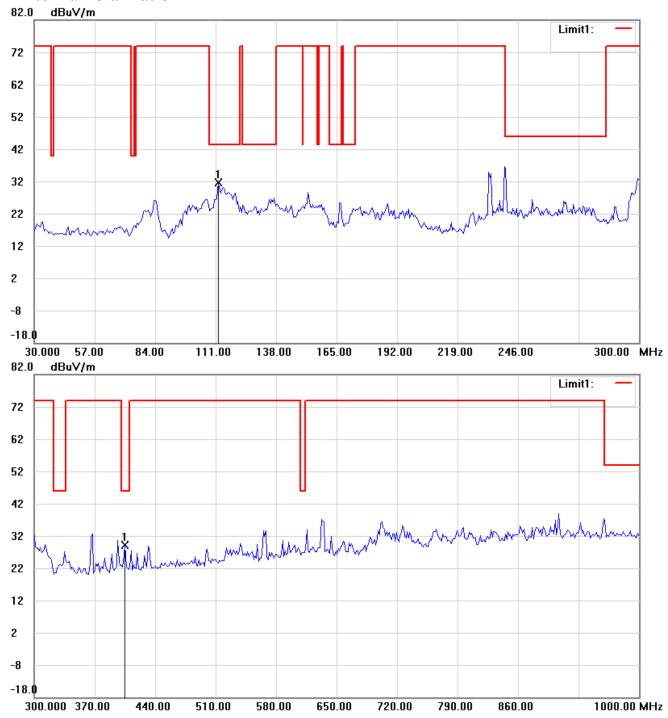


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

927.75 MHz

Antenna Polarization H

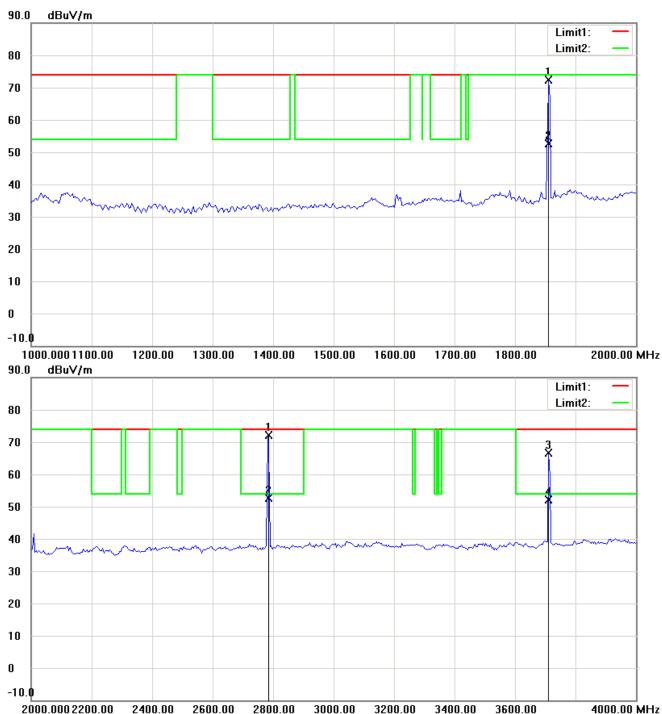


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

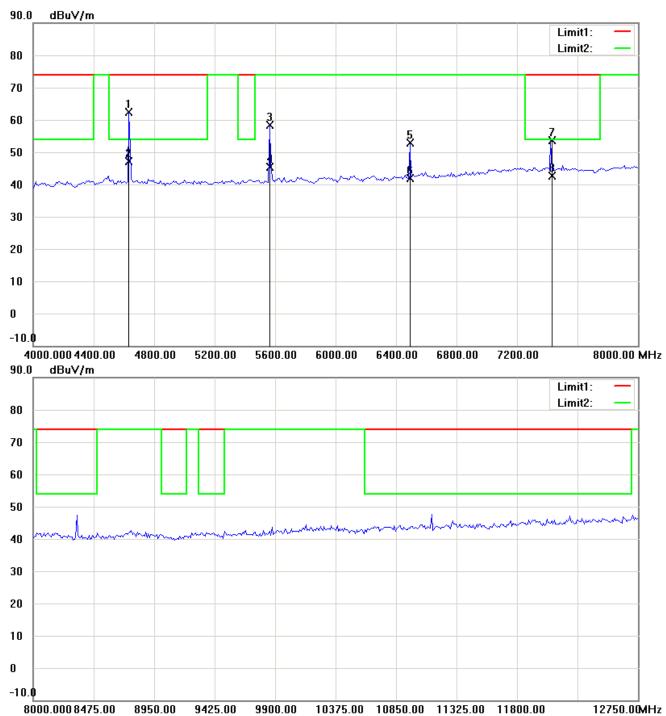


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



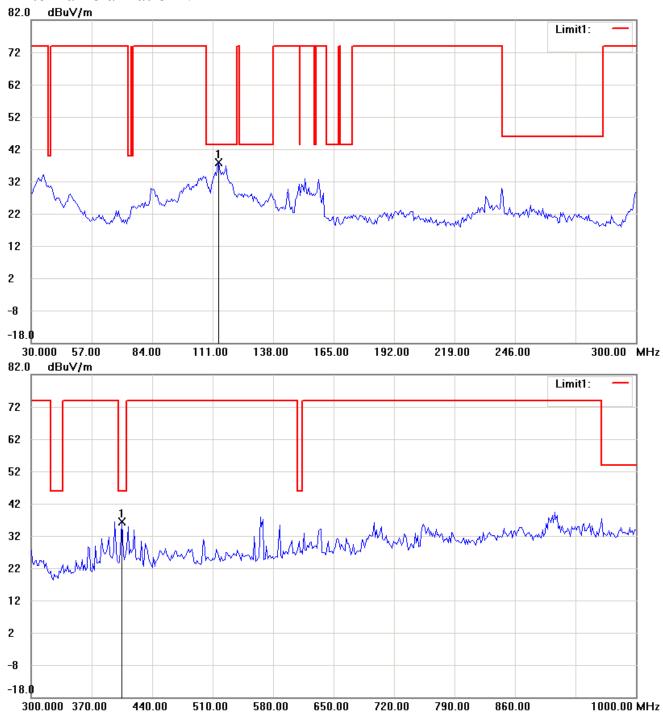
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

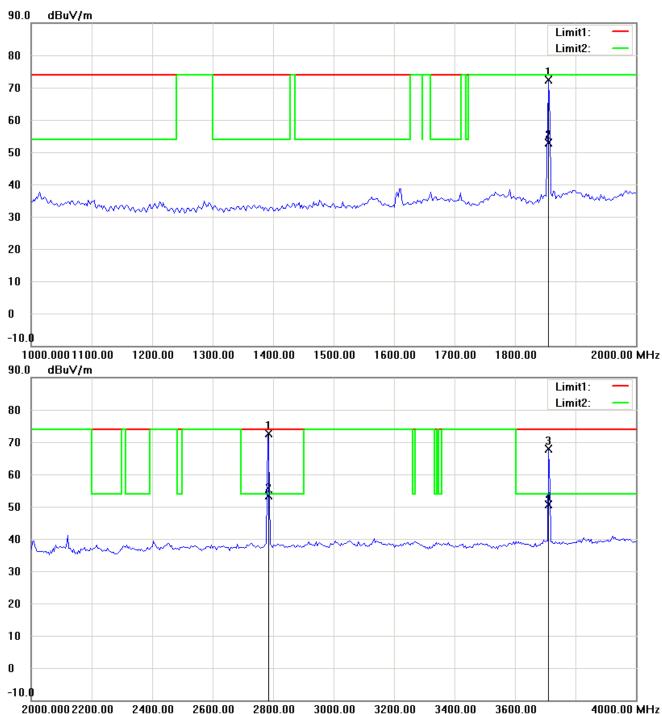


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

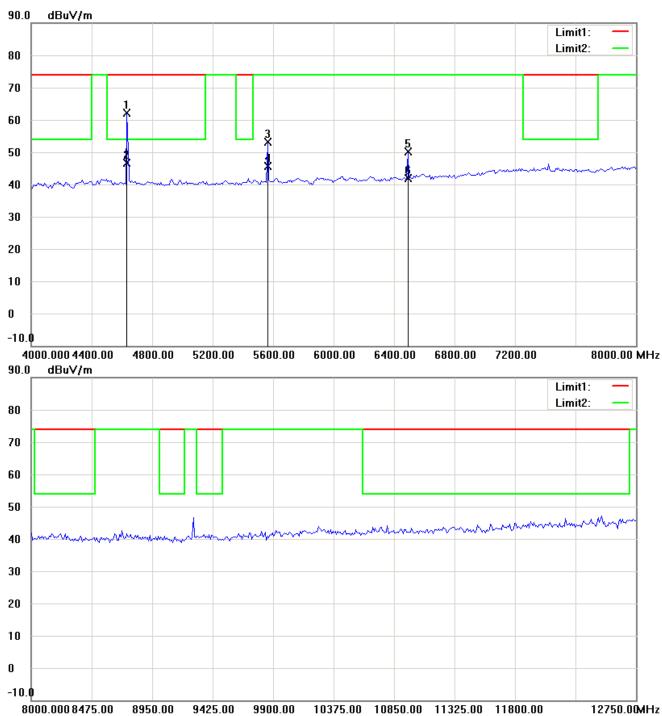


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.



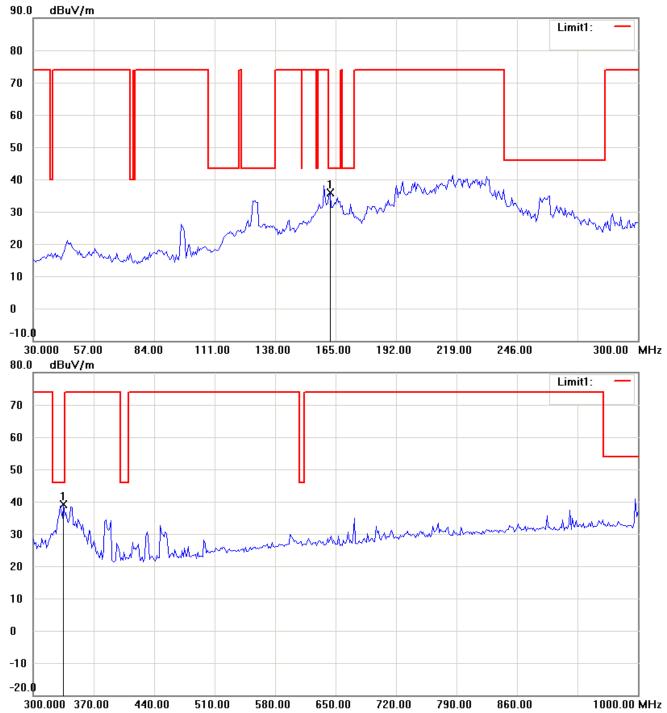
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Spurious Emissions radiated-TX Antenna 2

902.75 MHz

Antenna Polarization H



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

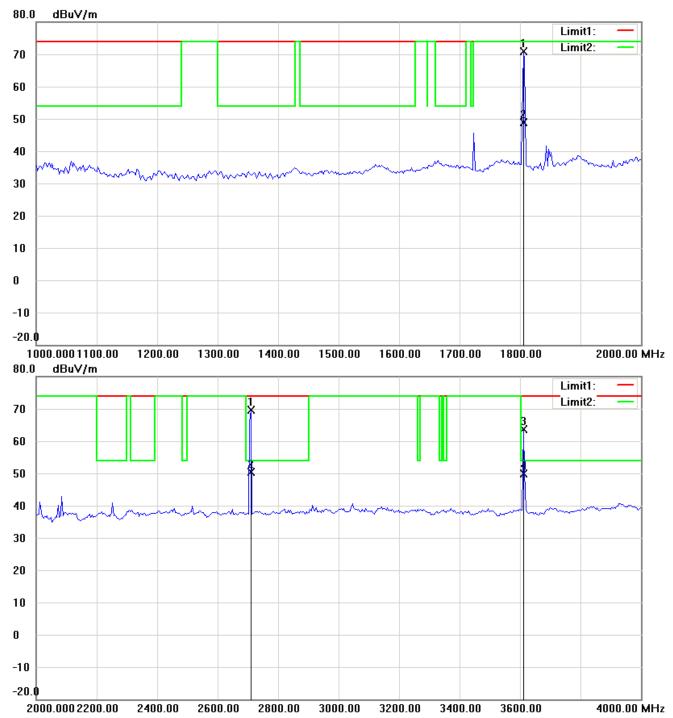
Note:

- 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: W6M21203-12309-C-1

FCC ID: WXAUHF860

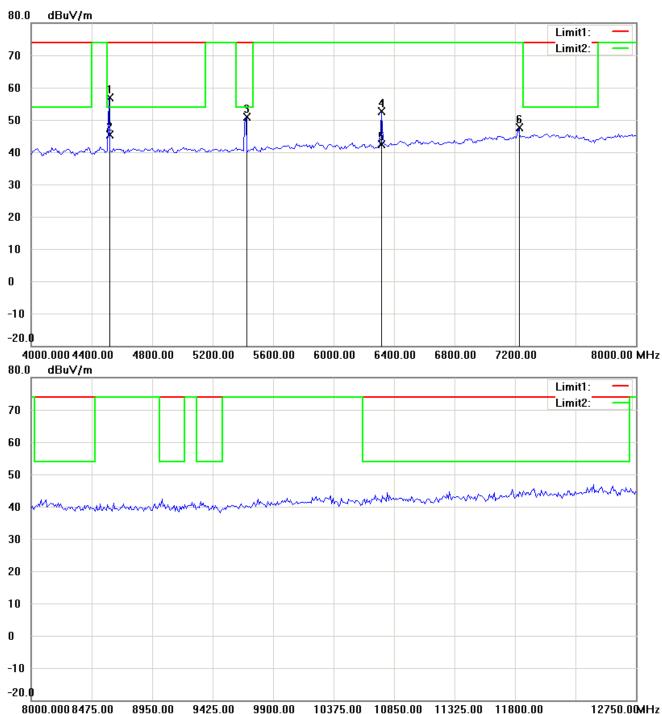


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



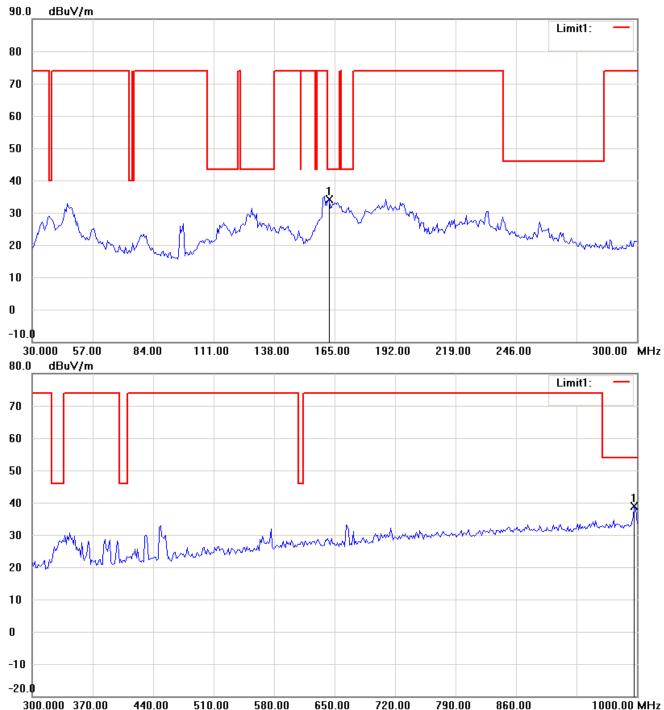
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

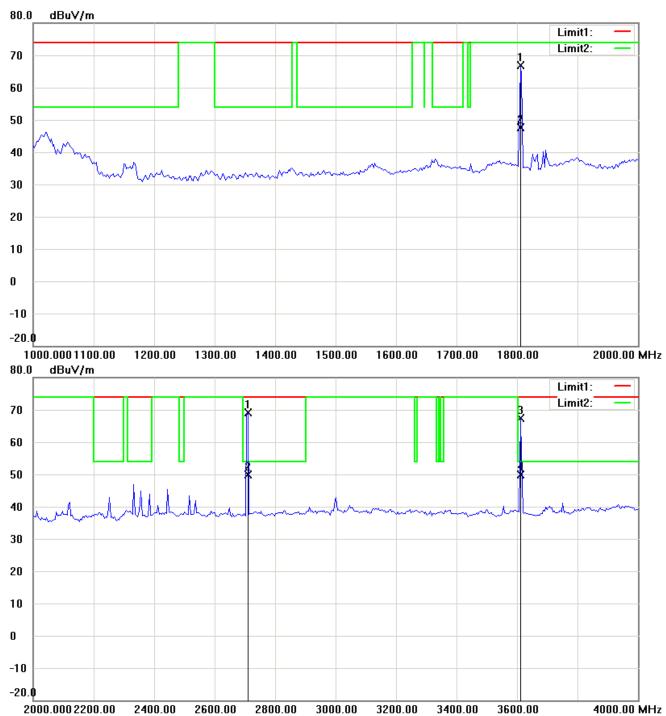


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

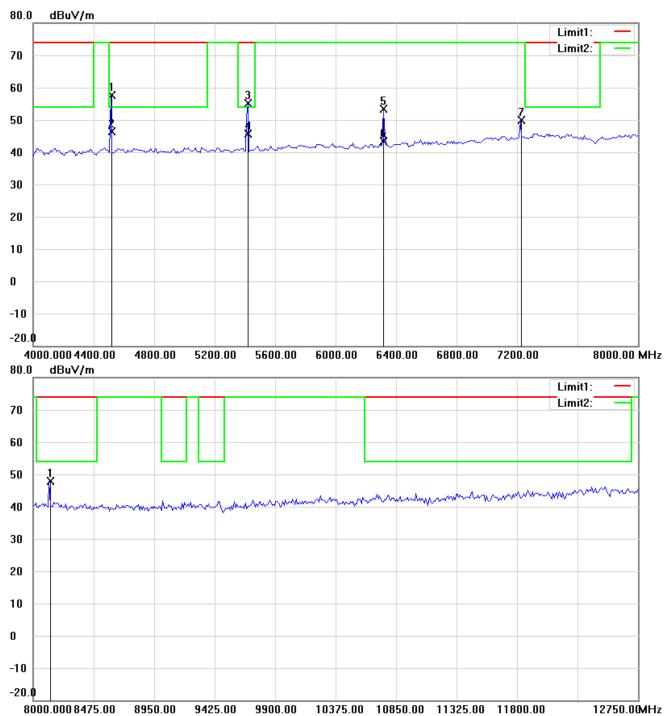


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

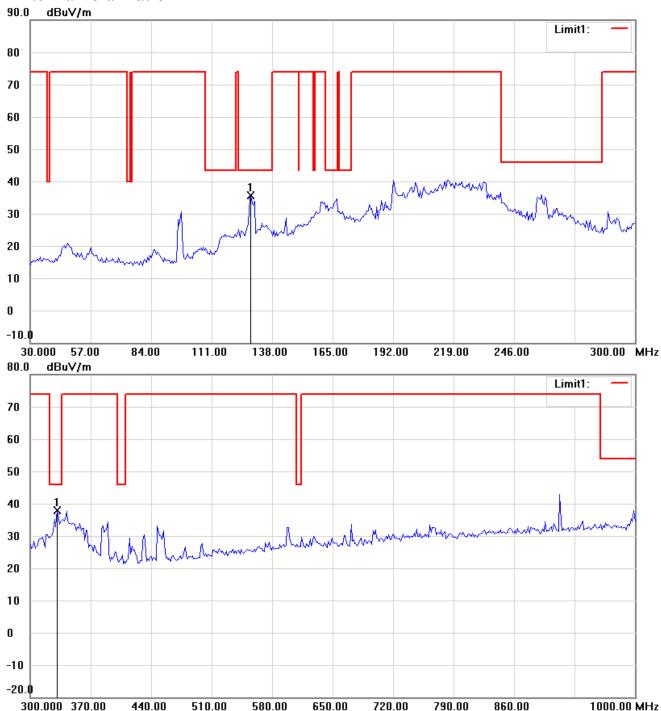


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

914.75 MHz

Antenna Polarization H

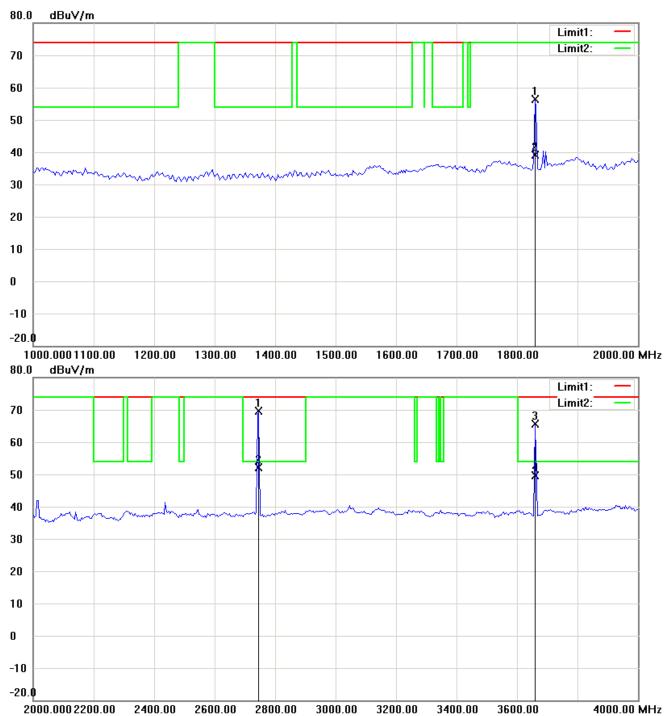


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

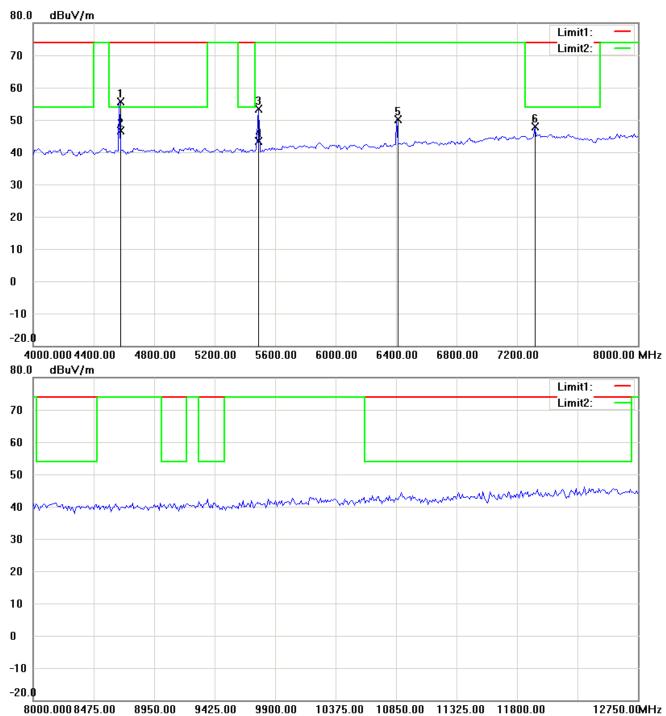


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



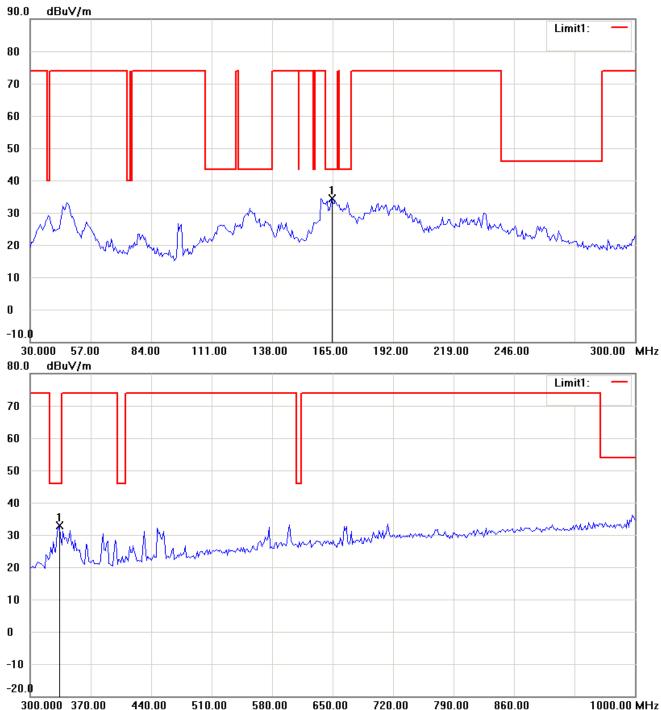
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

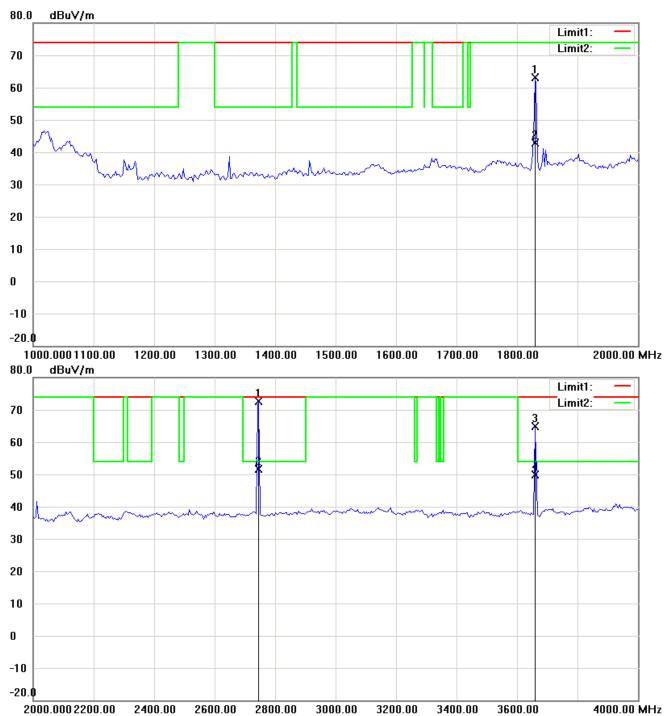


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

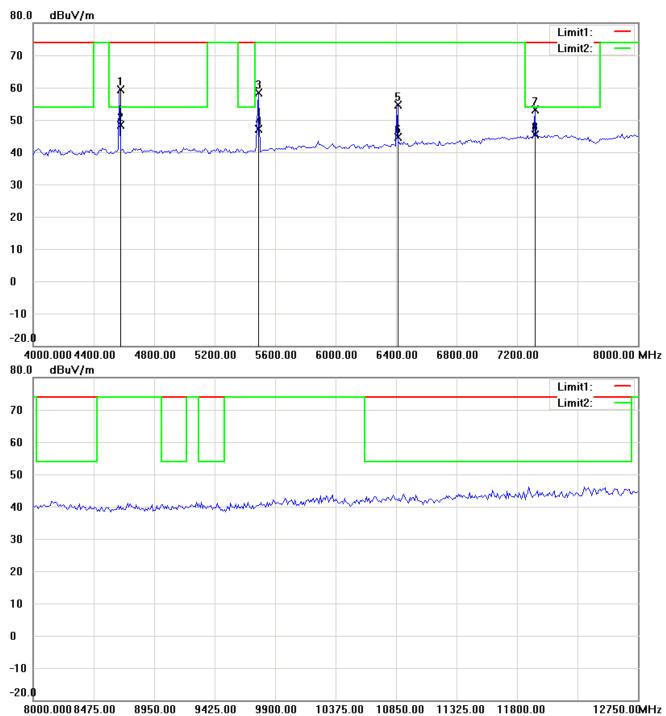


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

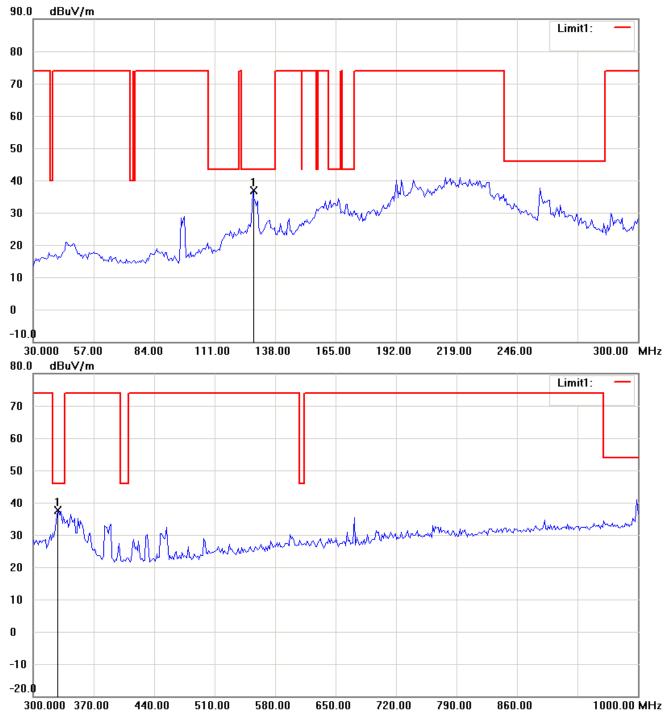


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

927.75 MHz

Antenna Polarization H

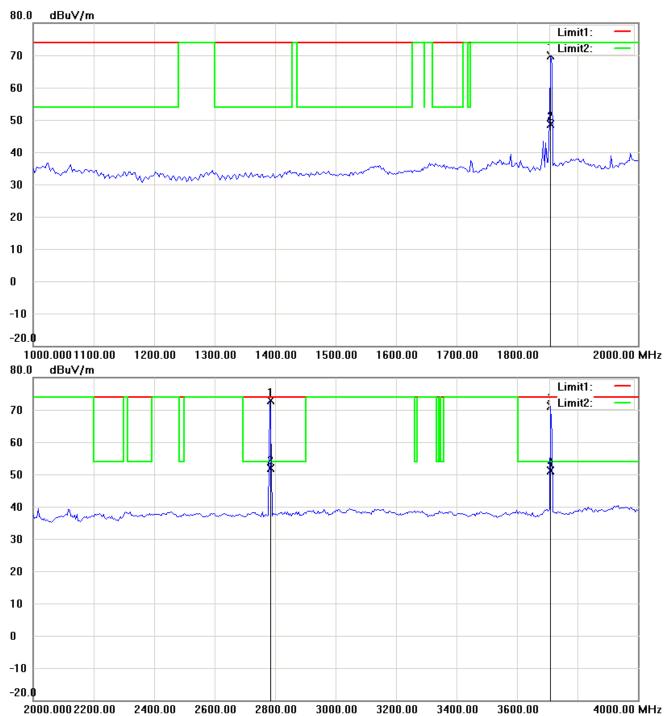


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

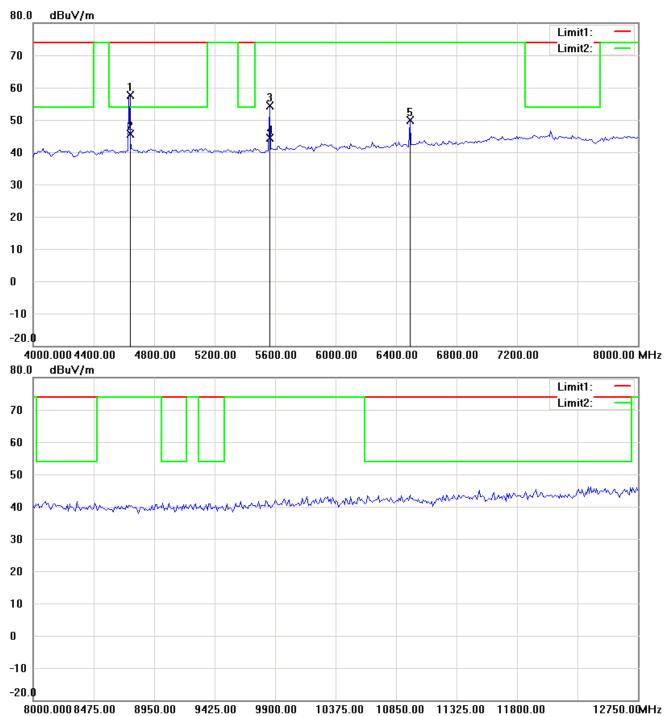


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



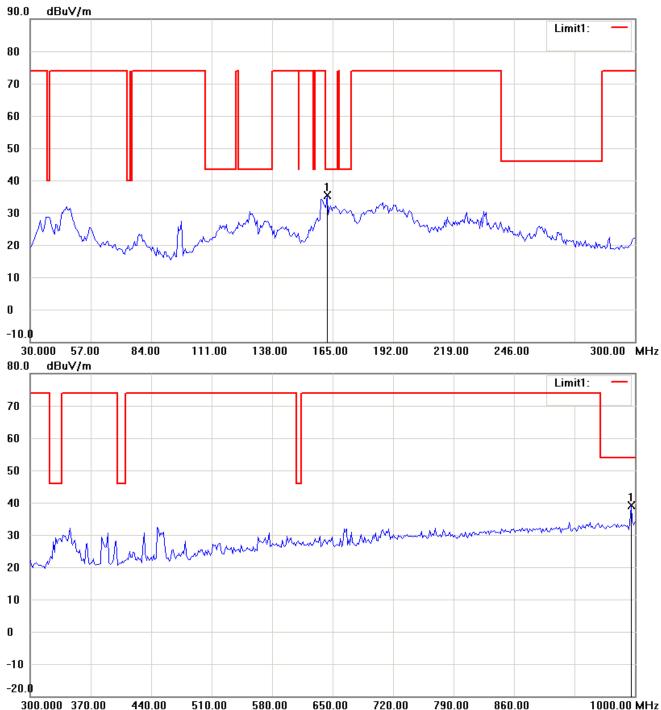
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

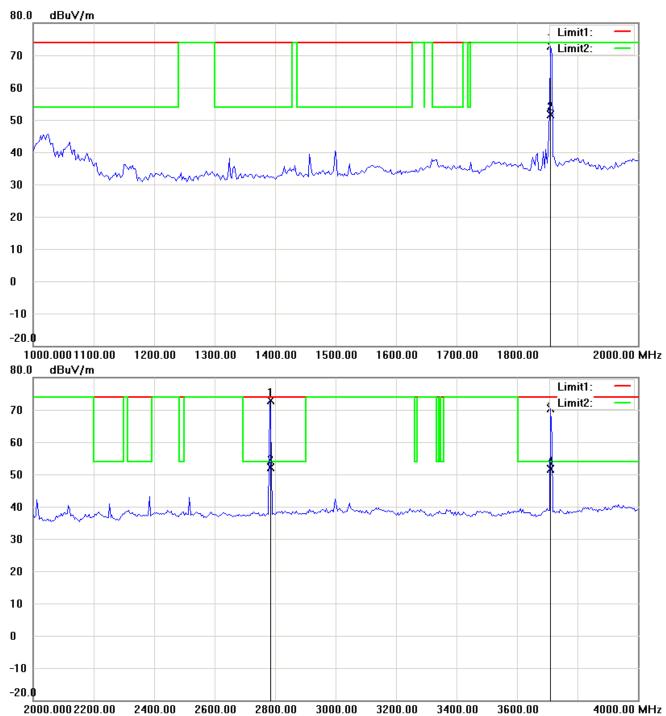


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

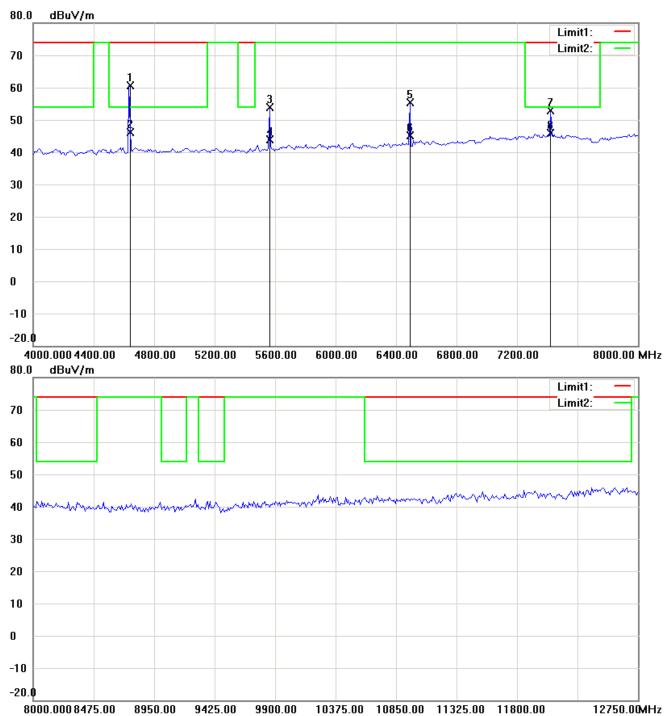


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.



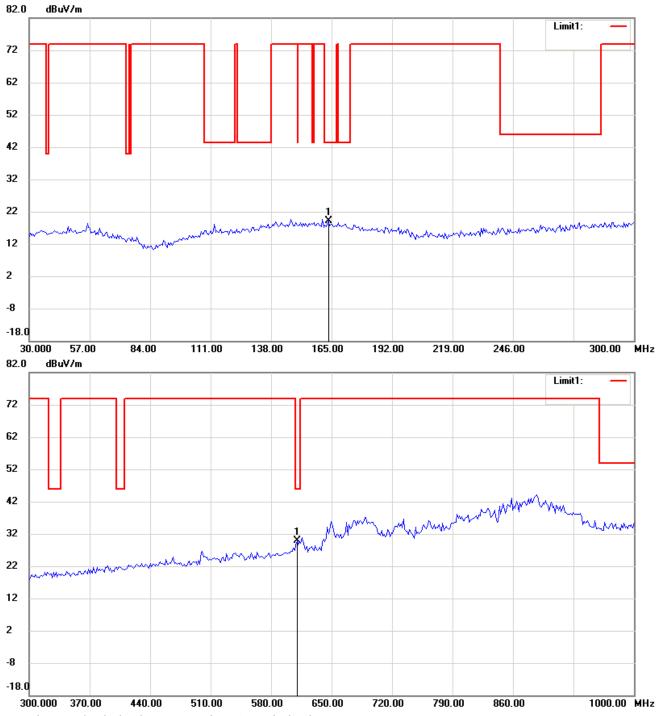
Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Spurious Emissions radiated-TX Antenna 3

902.75 MHz

Antenna Polarization H

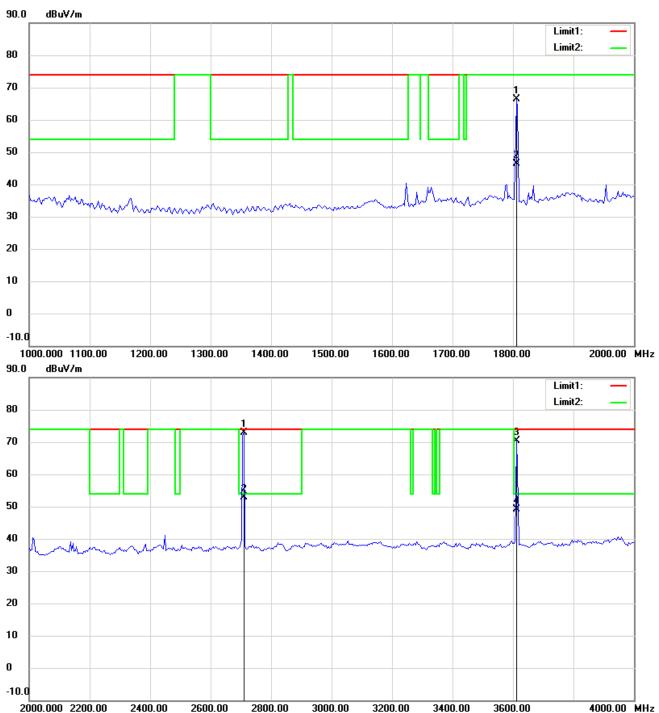


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

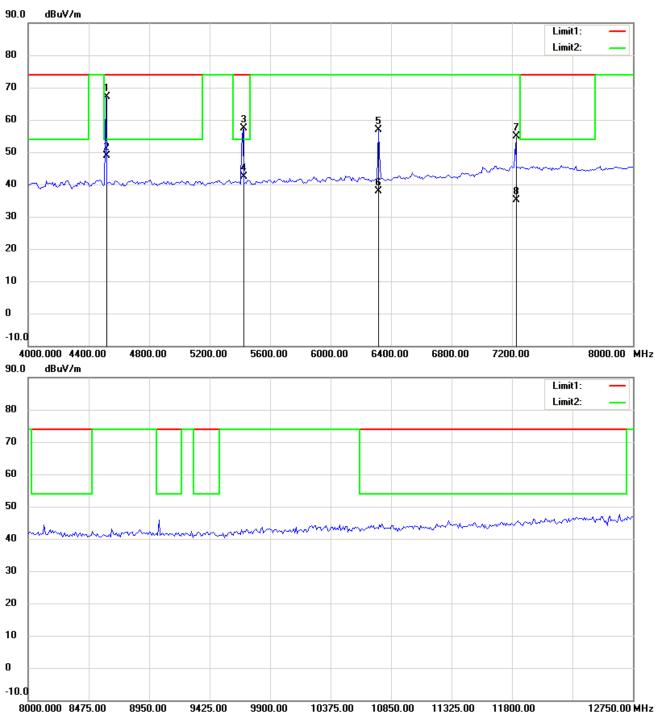


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



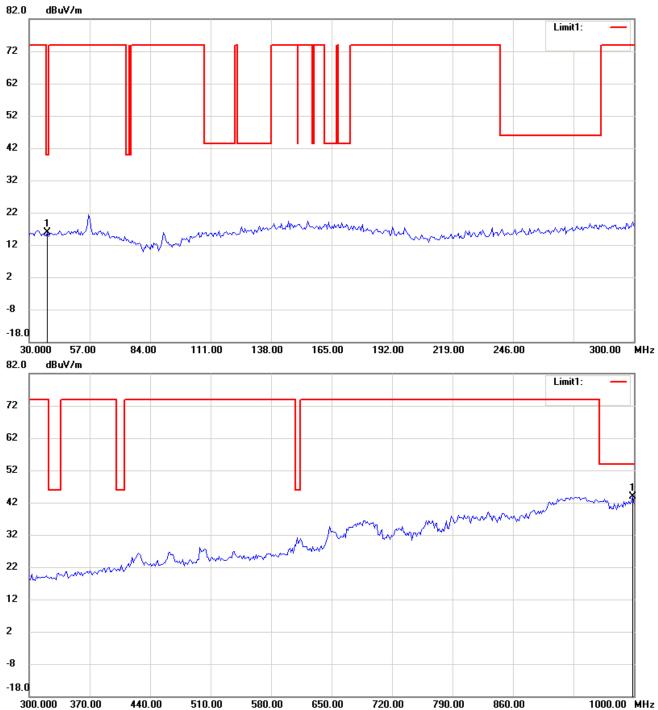
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

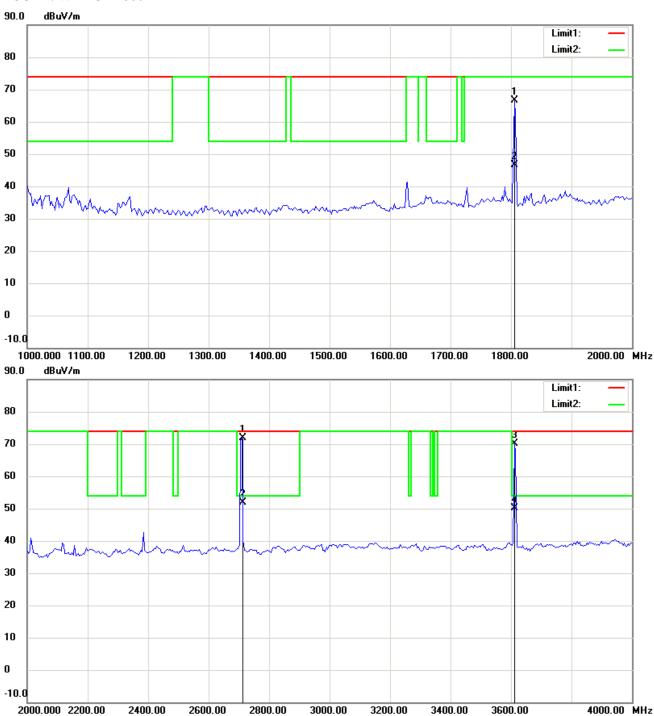


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

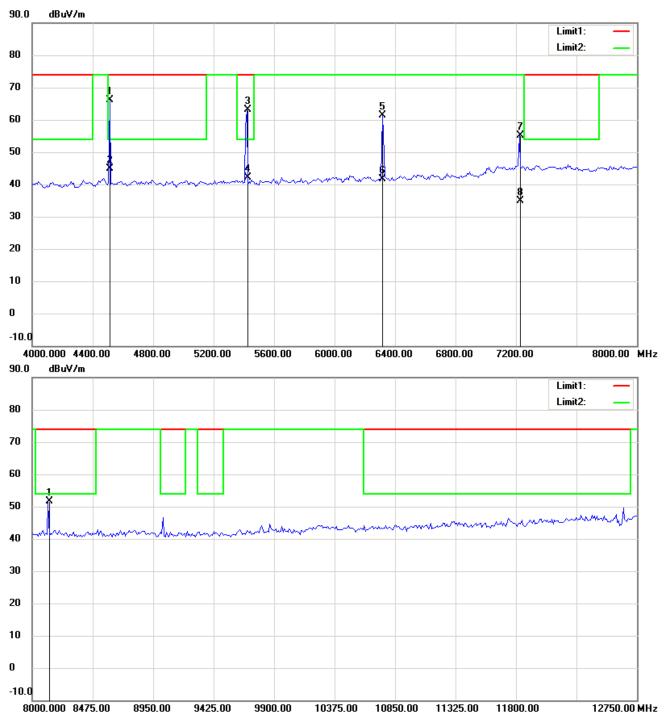


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

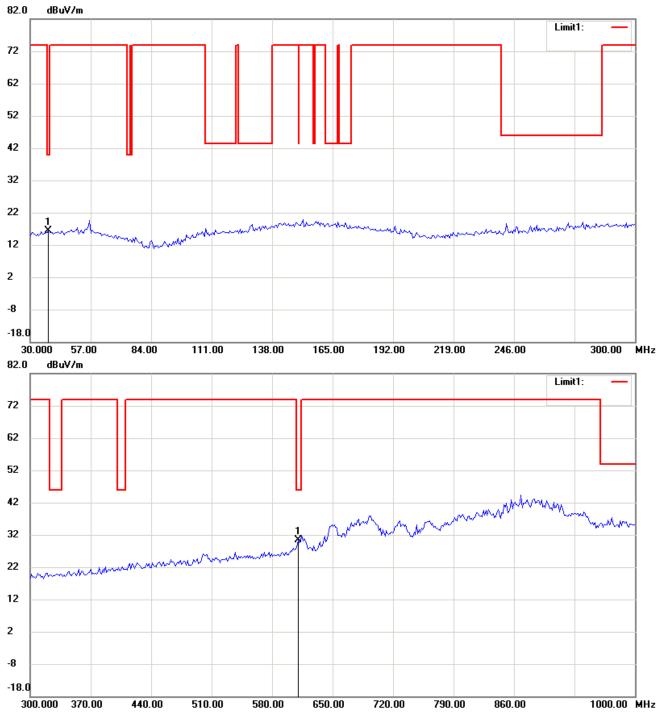


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

914.75 MHz

Antenna Polarization H

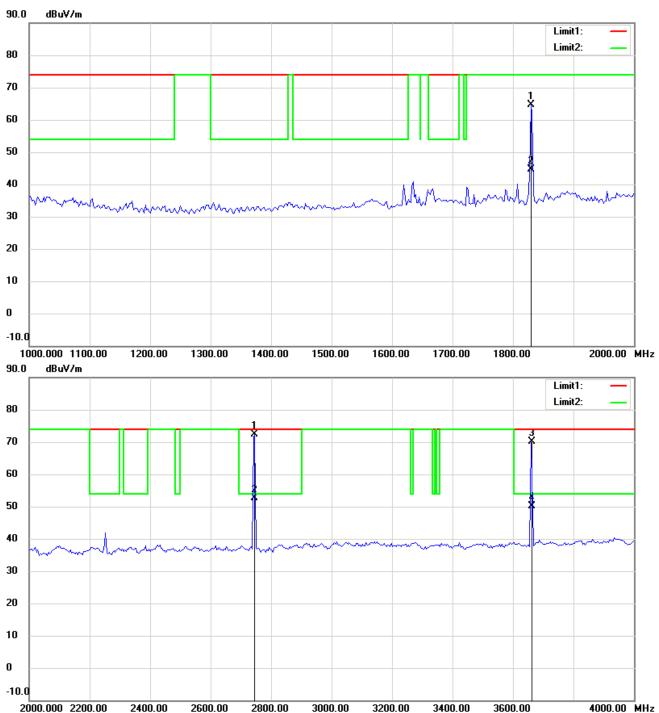


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

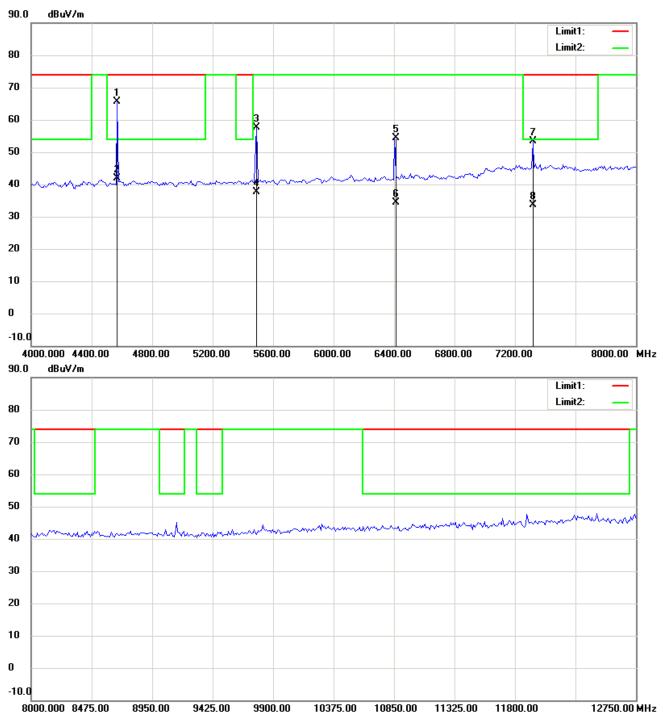


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

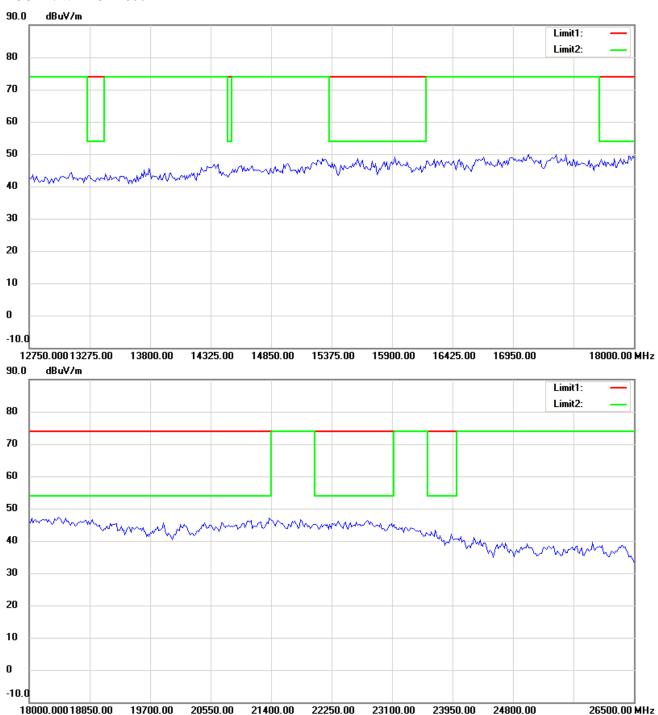


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



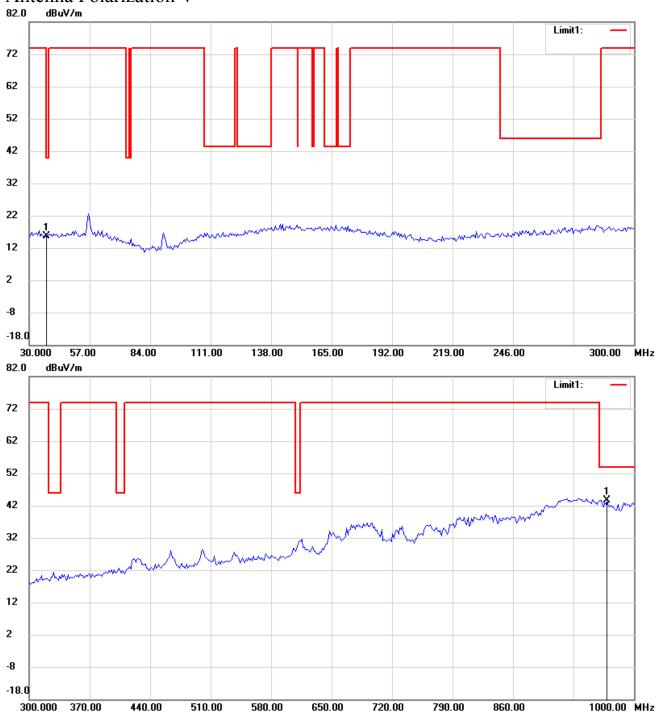
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

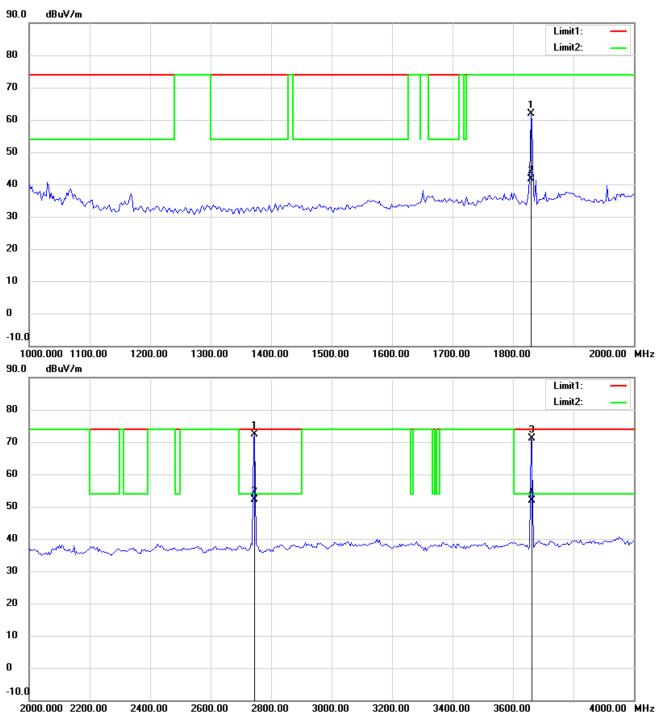


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

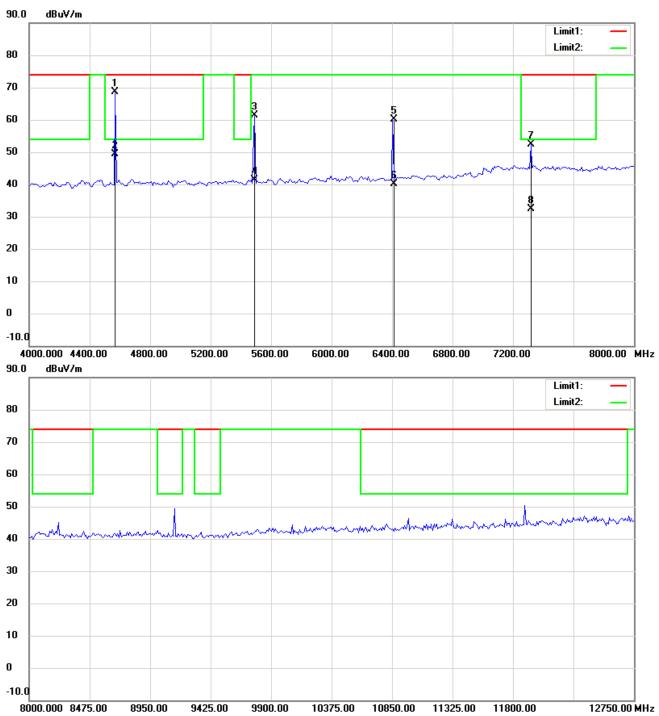


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

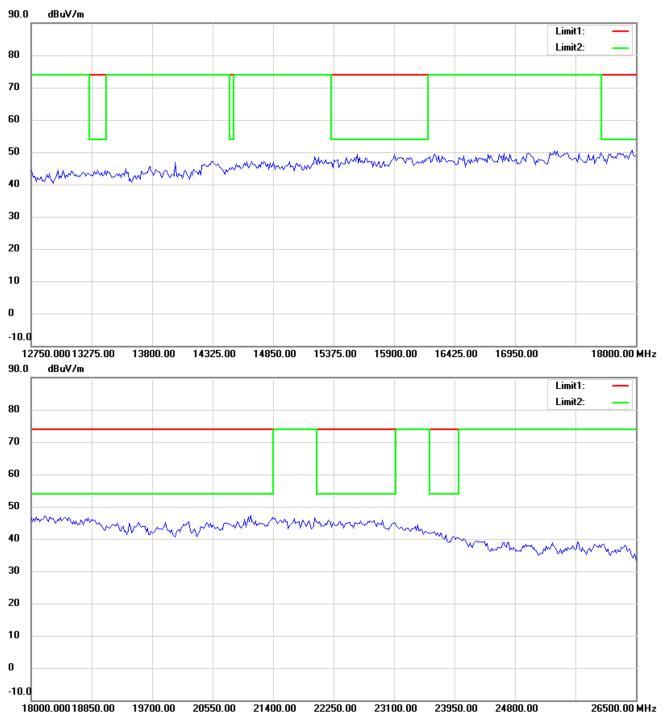


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.

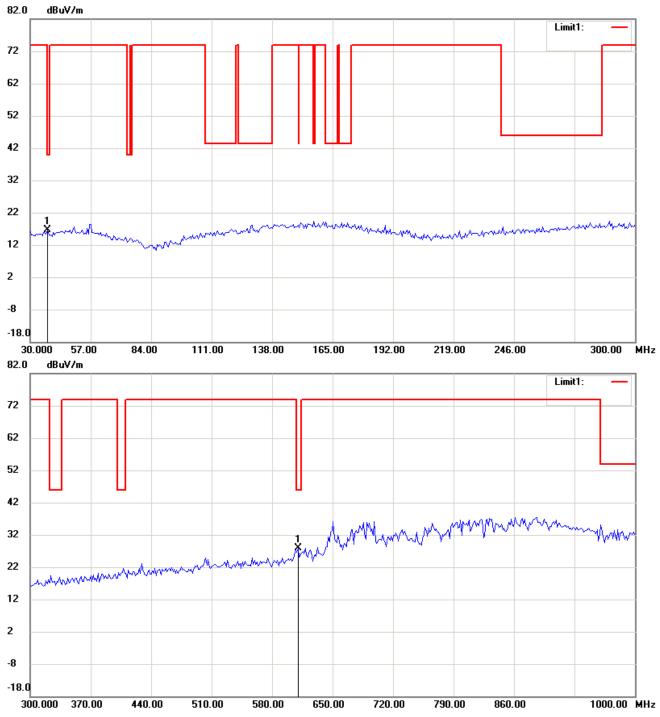


Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

927.75 MHz

Antenna Polarization H

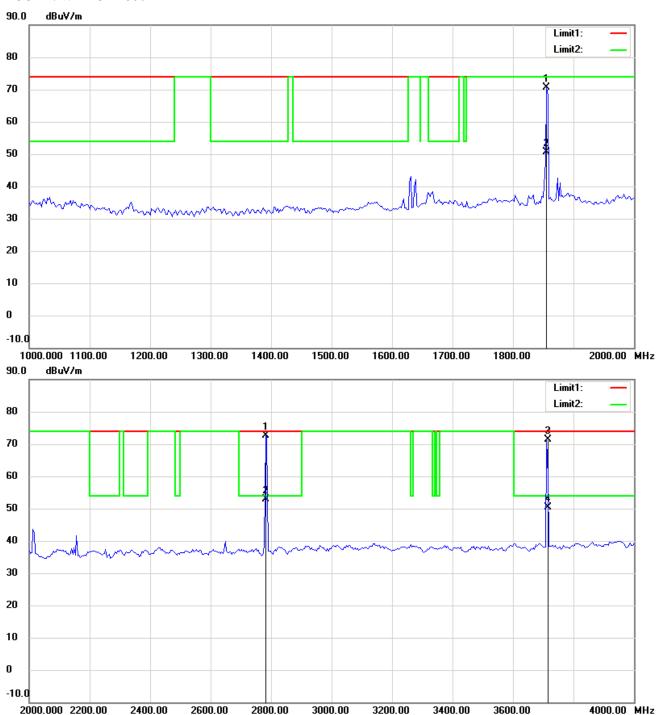


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

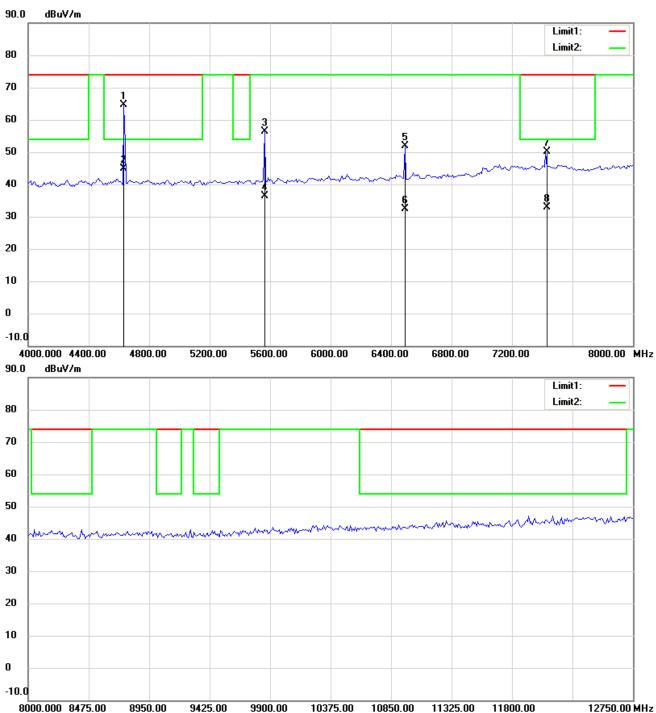


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

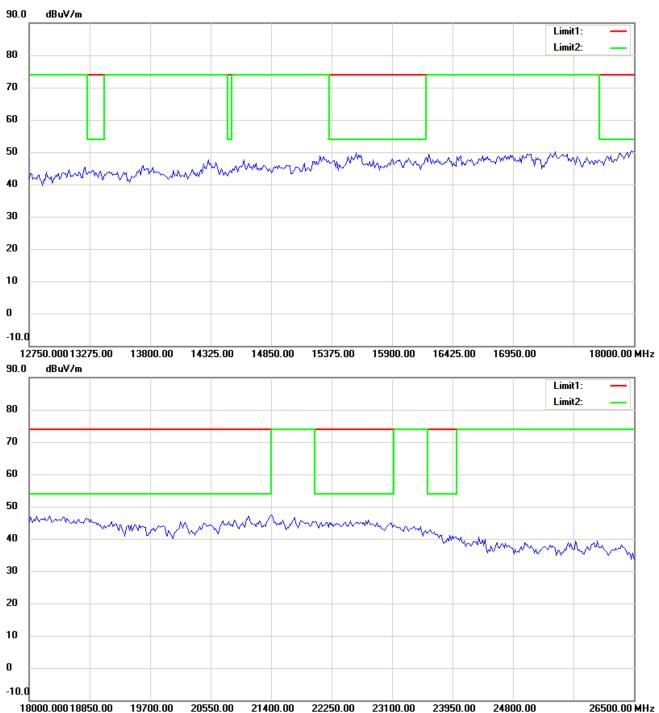


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



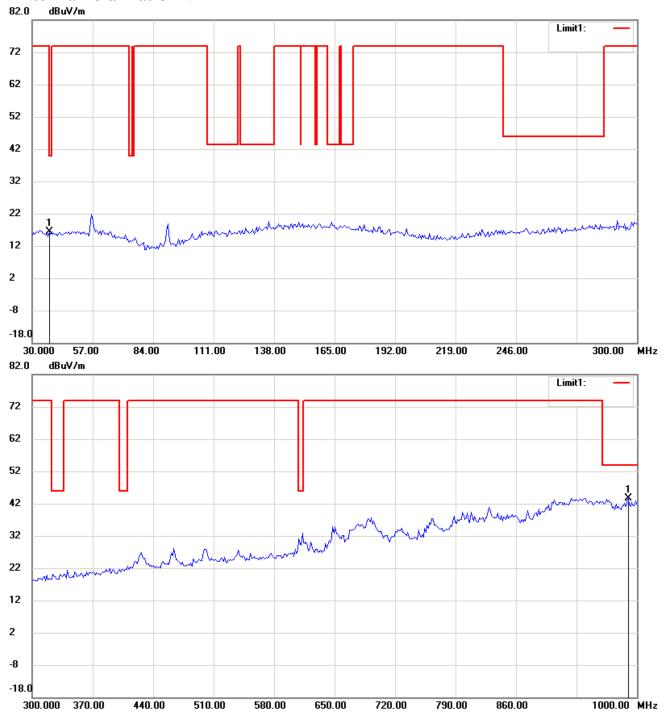
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

Antenna Polarization V

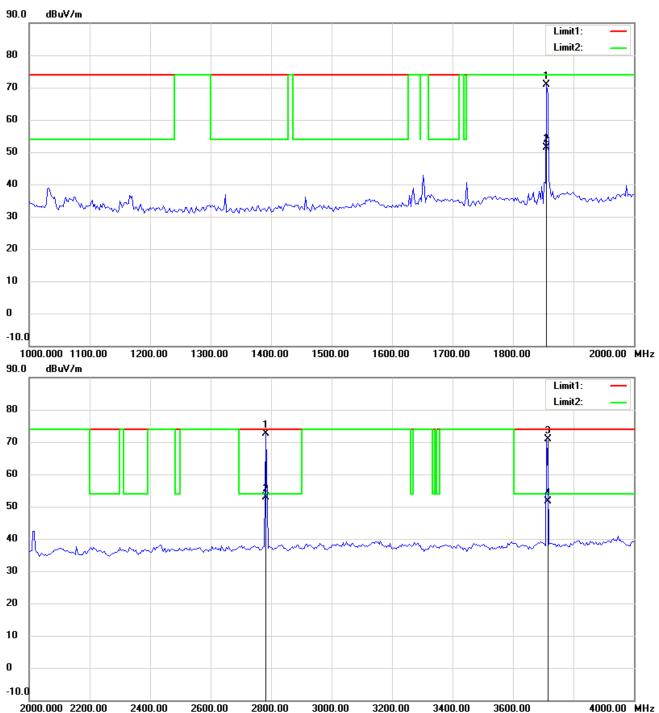


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

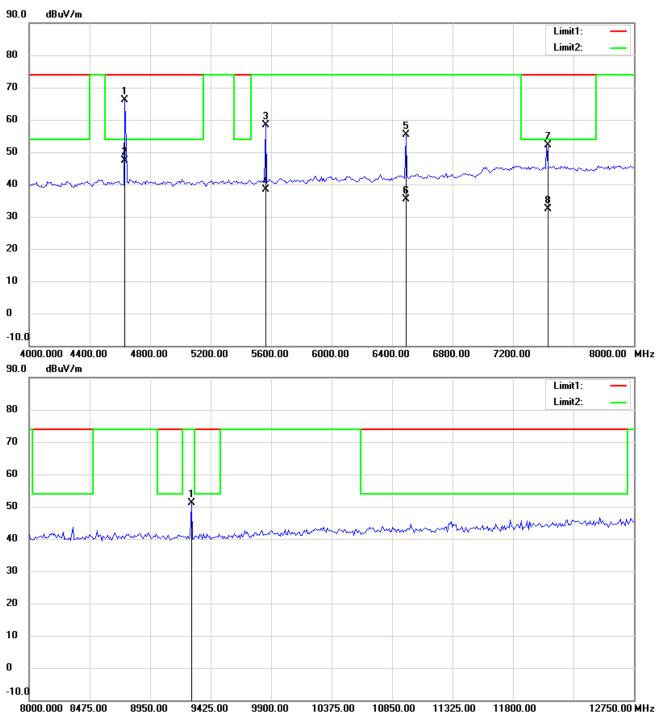


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860

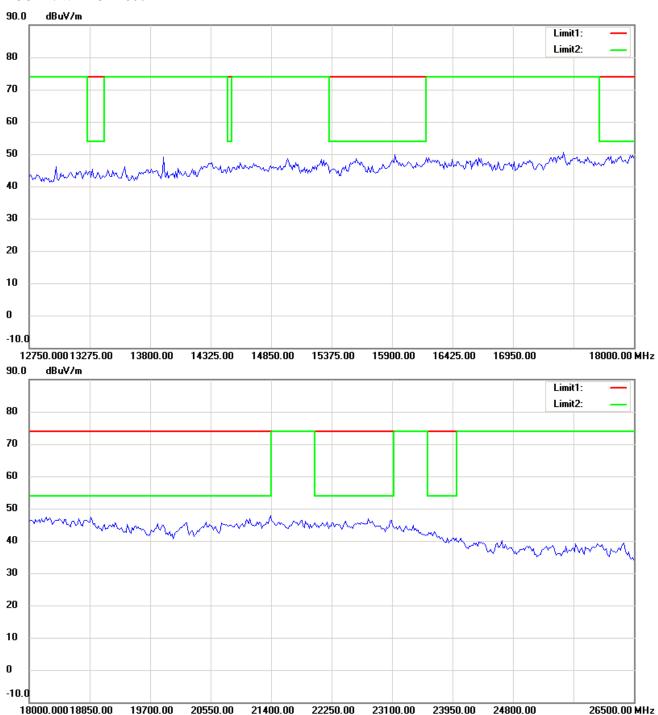


- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



Registration number: W6M21203-12309-C-1

FCC ID: WXAUHF860



- 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.