### FCC PART 15 SUBPART C TEST REPORT

for

2.4G Dongle

**Model No.:** 

R1~Rxx (x=A~Z, a~z, 0~9, or blank, any character)

FCC ID: YI8R3

of

Applicant: OMEGA TECHNOLOGY INC.

Address: 6F., No. 87, Sec 3, Chung-Yang Rd., Tu-Cheng, Taipei, 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.: W6M21109-11844-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: W6M21109-11844-C-1

FCC ID: YI8R3

### TABLE OF CONTENTS

1	GEN	NERAL INFORMATION	2
	1 1	Nome	~
	1.1	Notes	
	1.2	TESTING LABORATORY	
	1.2.1		
	1.2.2	Details of accreditation status	3
	1.3	DETAILS OF APPROVAL HOLDER	3
	1.4	APPLICATION DETAILS	4
	1.5	GENERAL INFORMATION OF TEST ITEM	4
	1.6	TEST STANDARDS	4
2	TEC	CHNICAL TEST	5
	2.1	SUMMARY OF TEST RESULTS	
	2.2	TEST ENVIRONMENT	
	2.3	TEST EQUIPMENT LIST	6
	2.4	GENERAL TEST PROCEDURE	10
3	TES	T RESULTS (ENCLOSURE)	11
	3.1	PEAK OUTPUT POWER (TRANSMITTER)	12
	3.2	EQUIVALENT ISOTROPIC RADIATED POWER	14
	3.3	RF Exposure Compliance Requirements	14
	3.4	OUT OF BAND RADIATED EMISSIONS	14
	3.5	Spurious emission (TX)	15
	3.6	RADIATED EMISSIONS FROM DIGITAL PART	18
	3.7	RADIATED EMISSION ON THE BAND EDGE	19
	3.8	POWER LINE CONDUCTED EMISSION	21
Aı	PPENDE	X	23



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 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:**

November 16, 2011 Rick Chen Rick Chen

Date WTS-Lab. Name Signature

#### **Technical responsibility for area of testing:**

November 16, 2011 Chang Tse-Ming

Date WTS Name Signature

November 16, 2011 Chang Tse-Ming

Signature



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 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: 2730.01

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: W6M21109-11844-C-1

FCC ID: YI8R3

### 1.3 Details of approval holder

Name: OMEGA TECHNOLOGY INC.

Street: 6F.,No.87,Sec 3,Chung-Yang Rd., Tu-Cheng,

Town: Taipei, Country: Taiwan

Telephone: 02-2267-1710 Fax: 02-2267-1010

Teletex: ./.

1.4 Application details

Date of receipt of test item: September 19, 2011

Date of test: From September 20, 2011 to November 15, 2011

#### 1.5 General information of Test item

Type of test item: 2.4G Dongle

Model Number:  $R1\sim Rxx$  (x=A~Z, a~z, 0~9, or blank, any character)

Multi-listing model number: ./.

Brand Name: OMEGA
Photos: see Annex

#### **Technical data**

Frequency band: 2.400-2.4835GHz Operation Frequency: 2.408-2.474 GHz

Frequency 1: 2.408 GHz
Frequency 2: 2.440 GHz
Frequency 3: 2.474 GHz

Operation modes: Duplex Modulation Type: FSK

Antenna type: PCB antenna

Power supply: USB 5VDC (power on PC)

### **Manufacturer: (if different from applicant)**

Name: Dongguan Jiangyang Electronic Technology Co.,Ltd

Street: NO.58, Shajiao Village Industry Area,

Town: Shipai Town, Dongguan city, Guangdong Province,

Country: China Additional information: ./.

### 1.6 Test standards

Technical standard: FCC RULES PART 15 SUBPART C § 15.249 (2010-10)

Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

#### 2 Technical test

### 2.1 Summary of test results

To deviations from the technical specification(s) were ascertained in the course f the tests performed.			
or			
The deviations as specified in 2.5 were ascertained in the course of the tests performed.			

#### 2.2 Test environment

Temperature: 23 °C

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Details Power supply: USB 5VDC (power on PC)

Extreme conditions parameters: Not required

#### Note:

- 1. This test report is valid in connection to the model has been tested, any modification to the product which is different from the test model will avoid the certification of the test report.
- 2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.
- 3. The x in model number is representing different appearances, colors and customers.



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

2.3 Test Equipment List

2.3 Test 1	Equipment List  Test equipment	Туре	Serial No.	Manufacturer	Cal. Date	Next Cal.
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2011/9/2	<b>Date</b> 2012/9/1
		APS-9102		GW		
ETSTW-CE 003	AC POWER SOURCE ZWEILEITER-V-	APS-9102	D161137	Gw	Function	on Test
ETSTW-CE 004	NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2011/3/10	2012/3/9
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2011/9/5	2012/9/4
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2011/3/8	2012/3/7
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	2011/7/13	2012/7/12
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2011/9/6	2012/9/5
ETSTW-CE 024	IMPEDANCE STABILIZATION NETWORK	ISN T800	29454	TESEQ	2011/1/10	2012/1/9
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2011/8/12	2012/8/11
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function	on Test
ETSTW-CS 010	6 dB Attenuator	SA3N1007-06	None	AISI	2011/7/29	2012/7/28
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2011/8/16	2012/8/15
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2011/9/5	2012/9/4
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2011/9/2	2012/9/1
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2011/9/7	2012/9/6
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 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2011/4/25	2012/4/24
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function	on Test
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2011/7/19	2012/7/18
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	Function	on Test
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	Function	on Test
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2011/2/25	2012/2/24
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2011/10/4	2012/10/3
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	2011/10/4	2012/10/3
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2011/1/14	2012/1/13
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2011/4/26	2012/4/25
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2011/4/25	2012/4/24
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-te	st Use



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

FCC ID: Y181	33		1			1
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2011/8/29	2012/8/28
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2011/4/8	2012/4/7
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2011/5/30	2012/5/29
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2011/3/4	2012/3/3
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2011/5/18	2012/5/17
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2010/11/30	2011/11/29
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function	on Test
ETSTW-RE 065	Amplifier	AMF-6F-18002650- 25-10P	941608	MITEQ	2011/4/8	2012/4/7
ETSTW-RE 066	Highpass Filter	H1G013G1	206015	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ЕМСО	Function	on Test
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	НР	2011/10/5	2012/10/4
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2011/1/10	2012/1/9
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2011/1/10	2012/1/9
ETSTW-RE 081	Highpass Filter	H03G13G1	4260-02 DC0428	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2011/3/10	2012/3/9
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2011/3/11	2012/3/10
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2011/3/24	2012/3/23
ETSTW-RE 111	Log-Periodic Dipole Array Antenna	VULB 9160	9160-3309	Schwarz beck 2010/12/17		2011/12/16
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Functi	on test
ETSTW-RE 114	2.4GHz Notch Filter	N0124411	473873	MICROWAVE CIRCUITS	2011/1/13	2012/1/12
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Functi	on test
ETSTW-RE 121	SPECTRUM ANALYZER	FSU43	100013	R&S	2011/6/23	2012/6/22
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2011/7/4	2012/7/3
ETSTW-RE 125	5GHz Notch filter	5NSL11- 5200/E221.3-O/O	1	K&L Microwave	2011/8/19	2012/8/18
ETSTW-RE 126	5GHz Notch filter	5NSL11- 5800/E221.3-O/O	1	K&L Microwave	2011/8/19	2012/8/18
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2011/9/1	2012/8/31
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	2011/6/1	2012/5/31
ETSTW-EMS 015	HVAC Trms Power Clamp Meter	3079K	070800649	TES	2011/10/6	2012/10/5



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

FCC ID: YI8R	<u>l3</u>					
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2011/10/6	2012/10/5
ETSTW-EMS 017	Multimeter	DM-1220	518614	HOLA	2011/8/11	2012/8/10
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2011/10/31	2012/10/30
ETSTW-EMS 020	Humidity Temperature Meter	TES-1366	091011116	TES	2011/3/24	2012/3/23
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	Function	on Test
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	Function	on Test
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2011/3/7	2012/3/6
ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function	on Test
ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	НР	2011/2/23	2012/2/22
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2011/9/8	2012/9/7
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2011/10/4	2012/10/3
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849- 822/851-40 /12+9SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748- 1743/1752-32/5SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5 -1875.5/1884.5- 32/5SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1- 904.25-50/8SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2011/9/19	2012/9/18
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104 (S Cable 7)	238093	HUBER+SUHNER	2011/5/18	2012/5/17
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104 (S_Cable 11)	209953	HUBER+SUHNER	2011/5/18	2012/5/17
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test U	Jse NCR
ETSTW-Cable 012	BNC Cable	BNC Cable 2	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104 (S_Cable 5)	232345	HUBER+SUHNER	Function	on Test
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 022	N TYPE Cable	OATS Cable 3	0002	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	SPECTRUM	2011/3/10	2012/3/9
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 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	2011/5/18	2012/5/17
		SUCOFLEX 104				-



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO CO.,LTD.	2011/3/31	2012/3/30
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2011/3/31	2012/3/30
ETSTW-Cable 053	N TYPE To SMA Cable	OATS Cable 4	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 054	BNC To SMA Cable	OATS Cable 5	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
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



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

2.4 General Test Procedure

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

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.4-2009 6.4 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of  $dB\mu V$ ) 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

 $20 \text{ dB}\mu\text{V} + 10.36 \text{ dB} + 6 \text{ dB} = 36.36 \text{ dB}\mu\text{V/m} \text{ @3m}$ 

ANSI STANDARD C63.4-2009 6.3.1 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm height and with dimensions of 1m by 1.5m (non metallic table). The EUT was placed in the centre of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10<sup>th</sup> harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings. Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located at No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: 930600.

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

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



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.249 (a)	×	×	
Spurious Emissions radiated – Transmitter operating	15.249 (e)	×	×	
Spurious Emissions conducted – Transmitter operating	15.249 (e)			
Radiated Emission from Digital Part	15.109			
Out of Band Spurious Emission, Band edge-Transmitter operating	15.249 (e)	×	×	
Power Line Conducted Emission	15.207	×	×	

The follows is intended to leave blank.



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3.1 Peak Output Power (transmitter)

FCC Rule: 15.249 (b)

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).

Model: R1~Rxx (x=A~Z, a~z, 0~9, or blank, any character)

Mode: 2408MHz Temperature: 24°C Engineer: Kevin

Polarization: Horizontal Humidity: 60%

ſ	Frequency	Reading		Factor	Re	sult	Limit		Margin	Table	Ant.
		(dBuV)		(dB)	(dBuV/m)		(dBuV/m)			Degree	High
	(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
ſ	2407.9860	54.49	53.79	38.47	92.96	92.26	114.00	94.00	-1.74	220	100

Polarization: Vertical

Freque	ncy	Reading		Factor	Result		Limit		Margin	Table	Ant.
		(dB	uV)	(dB)	(dBuV/m)		(dBuV/m)			Degree	High
(MHz	<u>z</u> )	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2408.0	100	52.51	51.95	38.47	90.98	90.42	114.00	94.00	-3.58	160	100

Mode: 2440MHz Polarization: Horizontal

Frequency	Reading		Factor	Result		Limit		Margin	Table	Ant.
	(dB	uV)	(dB)	(dBu	(dBuV/m)		(dBuV/m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2439.9660	53.05	52.17	38.61	91.66	90.78	114.00	94.00	-3.22	260	100

Polarization: Vertical

1 Oldrizationi	· or trour									
Frequency	Reading		Factor	Result		Limit		Margin	Table	Ant.
	(dB	uV)	(dB)	(dBuV/m)		(dBuV/m)			Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2439.9900	51.07	50.22	38.61	89.68	88.83	114.00	94.00	-5.17	140	100

Mode: 2474MHz Polarization: Horizontal

Frequency	Rea	ding	Factor	Re	sult	Lim	nit	Margin	Table	Ant.
•	(dB	uV)	(dB)	(dBu	ıV/m)	(dBu\	//m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2474.0020	51.71	51.13	38.76	90.47	89.89	114.00	94.00	-4.11	320	100

Date:2011/11/14



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3
Polarization: Vertical

Frequ	ency	Rea	ding	Factor	Re	sult	Lin	nit	Margin	Table	Ant.
		(dB	uV)	(dB)	(dBu	ıV/m)	(dBu\	//m)		Degree	High
(MH	łz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2473.9	9860	51.64	50.87	38.76	90.40	89.63	114.00	94.00	-4.37	210	100

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 019, ETSTW-RE 030, ETSTW-RE 044, ETSTW-RE 062, ETSTW-RE 111

Explanation: The diagrams for the field strength measurements are included in appendix.

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Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3.2 Equivalent isotropic radiated power

Because using an permanent antenna there are no deviations from the radiated test results according 3.1.

#### 3.3 RF Exposure Compliance Requirements

Not applicable for this EUT for the low power level.

#### 3.4 Out of Band Radiated Emissions

FCC Rule: 15.249 (d)(e), 15.35(b)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequency above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

#### Limits:

Frequency of Emission	Field strength	Field Strength
(MHz)	(microvolts/meter)	(dB microvolts/meter)
30 - 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.5
Above 960	500	54.0

For frequencies above 1 GHz (Peak measurements).

Limit + 20 dB  $54.0 \text{ dB}\mu\text{V/m} + 20 \text{ dB} = 74 \text{dB}\mu\text{V/m}$ 

Or

Must be attenuated at least 50dB below the level of fundament

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 019, ETSTW-RE 030, ETSTW-RE 044, ETSTW-RE 062, ETSTW-RE 111



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3.5 Spurious emission (tx)

Spurious emission was measured with modulation (declared by manufacturer).

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

SAMPLE CALCULATION OF LIMIT. ALL results will be updated by an automatic measuring system in accordance with point 2.3.

The peak and average spurious emission plots was measured with the average limits.

The critical peak value listed in the table agree with the above calculated limits.

#### Summary table with radiated data of the test plots

Model: R1 $\sim$ Rxx (x=A $\sim$ Z, a $\sim$ z, 0 $\sim$ 9, or blank, any character) Date:2011/11/14 Mode: TX\_2408 MHz Temperature: 24 $^{\circ}$ C Engineer: 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)
35.8316	6.71	peak	13.05	19.76	40.00	-20.24	60	100
300.2004	10.84	peak	14.88	25.72	46.00	-20.28	220	100

Frequency	Rea	ding	Factor	Result	@3m	Limit	@3m	Margin	Table	Ant.
	(dB	uV)	(dB)	(dBu	V/m)	(dBu	V/m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2256.5130	49.29	48.12	1.47	50.76	49.59	74.00	54.00	-4.41	220	100
2707.4150	48.37	47.59	2.19	50.56	49.78	74.00	54.00	-4.22	60	100
4816.0100	48.72	48.01	4.57	53.29	52.58	74.00	54.00	-1.42	275	100
7223.9860	46.85	45.88	6.93	53.78	52.81	74.00	54.00	-1.19	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)
35.8316	6.14	peak	13.05	19.19	40.00	-20.81	120	100
70.8215	13.59	peak	11.59	25.18	40.00	-14.82	50	100



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

Frequency	Rea (dB	ding uV)	Factor (dB)	r Result @3m (dBuV/m)		Limit (dBu		Margin	Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
4809.6190	47.82	46.89	4.56	52.38	51.45	74.00	54.00	-2.55	220	100
7230.4610	47.40	45.91	6.93	54.33	52.84	74.00	54.00	-1.16	220	100
9632.0000	35.40		9.49	44.89		74.00	54.00	-29.11	140	110
12040.0000	32.84		13.47	46.31		74.00	54.00	-27.69	135	105

Mode: TX\_2440 MHz Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
173.8477	10.01	peak	14.25	24.26	43.50	-19.24	230	100
300.2004	9.94	peak	14.88	24.82	46.00	-21.18	65	100

Frequency	Rea	ding	Factor	Result	@3m	Limit	@3m	Margin	Table	Ant.
	(dB	uV)	(dB)	(dBu	V/m)	(dBu	V/m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
4880.0000	41.21		4.59	45.80		74.00	54.00	-28.20	190	100
7320.0000	40.94		6.92	47.86		74.00	54.00	-26.14	110	100
9760.0000	34.22		9.66	43.88		74.00	54.00	-30.12	130	100
12200.0000	32.47		14.79	47.26		74.00	54.00	-26.74	115	120

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
70.8215	14.04	peak	11.59	25.63	40.00	-14.37	120	100
300.2004	9.98	peak	14.88	24.86	46.00	-21.14	140	100

Frequency	Rea	ding	Factor	Result	@3m	Limit	@3m	Margin	Table	Ant.
	(dB	uV)	(dB)	(dBu	V/m)	(dBu	V/m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
4880.0000	41.63		4.59	46.22		74.00	54.00	-27.78	240	100
7320.0000	40.83		6.92	47.75		74.00	54.00	-26.25	200	100
9760.0000	34.33		9.66	43.99		74.00	54.00	-30.01	135	100
12200.0000	32.33		14.79	47.12		74.00	54.00	-26.88	120	120

Mode: TX\_2474 MHz Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
35.8316	5.68	peak	13.05	18.73	40.00	-21.27	130	100
300.2004	9.35	peak	14.88	24.23	46.00	-21.77	250	100



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

Frequency	Rea	ding	Factor	Result	:@3m	Limit	@3m	Margin	Table	Ant.
	(dB	uV)	(dB)	(dBu	(dBuV/m)		(dBuV/m)		Degree	High
(MHz)	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2322.6450	50.83	49.02	1.62	52.45	50.64	74.00	54.00	-3.36	250	100
4948.0000	40.58		4.75	45.33		74.00	54.00	-28.67	210	100
7422.8460	42.91		6.75	49.66		74.00	54.00	-24.34	110	100
9896.0000	34.45		9.80	44.25		74.00	54.00	-29.75	230	100
12370.0000	31.63		14.32	45.95		74.00	54.00	-28.05	50	100

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
57.2144	14.53	peak	13.33	27.86	40.00	-12.14	220	100
300.2004	9.98	peak	14.88	24.86	46.00	-21.14	80	100

Frequency	Rea (dB	ding	Factor (dB)		:@3m V/m)	Limit (dBu		Margin	Table Degree	Ant. High
(MHz)	Peak	av) Ave.	Corr.	Peak	Ave.	Peak	Ave.	(dB)	(Deg.)	(cm)
2322.6450	51.05	49.74	1.62	52.67	51.36	74.00	54.00	-2.64	310	100
4948.0000	40.33		4.75	45.08		74.00	54.00	-28.92	220	100
7422.0000	39.85		6.75	46.60		74.00	54.00	-27.40	50	100
9896.0000	33.12		9.80	42.92		74.00	54.00	-31.08	200	100
12370.0000	32.09		14.32	46.41		74.00	54.00	-27.59	45	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. Please see attached diagrams in appendix.

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

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 019, ETSTW-RE 030, ETSTW-RE 044, ETSTW-RE 062, ETSTW-RE 111

Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3.6 Radiated Emissions from Digital Part

#### Summary table with radiated data of the test plots

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

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.

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 019, ETSTW-RE 030, ETSTW-RE 044, ETSTW-RE 062, ETSTW-RE 111

Explanation: The test results are listed in the separated test report no.: W6M21109-11844-P-15B.

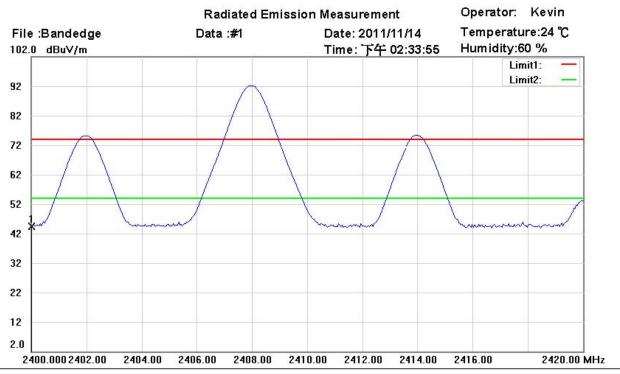


Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### 3.7 Radiated Emission on the band edge

From the following plots, they show that the fundamental emissions are confined in the specified band and hey at least 50 dB below the carrier level at band edge (2400 and 2483.5 MHz). It meets the requirement of section 15.249(d).



Site: Chamber

Condition: FCC 15.249 PK > 1G Polarization:

EUT: W6M21109-11844 Power: 110 Vac

M/N: R1~Rxx (x=A~Z, a~z, 0~9, or blank, any character) Distance: 3m

Test Mode: 2408MHz

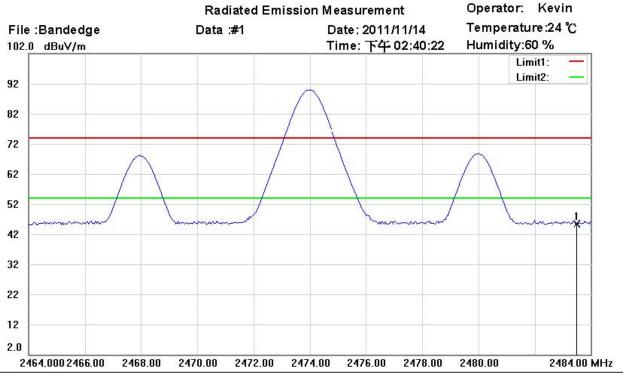
Note:

Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	2400.000	6.05	peak	38.43	44.48	74.00	100	260	-29.52	



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3



Site: Chamber

Condition: FCC 15.249 PK >1G

EUT: W6M21109-11844

IN: R1~Rxx (x=A~Z, a~z, 0~9, or blank, any character)

Test Mode: 2474MHz

Note:

Mk.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	2483.500	6.52	peak	38.80	45.32	74.00	100	225	-28.68	

Polarization:

Distance: 3m

110Vac

### Limit:

Frequency Range (MHz)	Limit (dBµV/m)			
902 – 928	Peak	Average		
2400 - 2483.5				
5725 – 5875	74	54		
24000 - 24250				

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 019, ETSTW-RE 030, ETSTW-RE 044, ETSTW-RE 062, ETSTW-RE 111



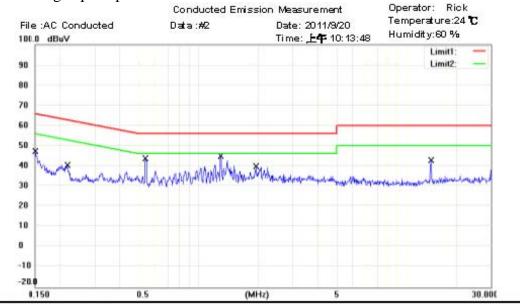
Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

#### 3.8 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.



Phase:

Power:

110 VAC

Site: Chamber\_03

Condition: FCC Part 15 Class B Conduction (QP)

EUT: W6M21109-11844

M/N: Rif~Rxx (x=A~Z, a~z, 0~9, or blank, any character)

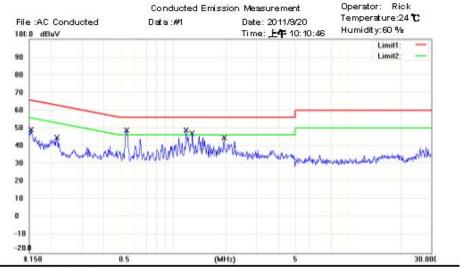
Test Mode : Note :

MH.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1504	31.94	QP	9.94	41.88	65.98	-24.10	
	0.1504	22.00	AVG	9.94	31.94	55.98	-24.04	
	0.2181	30.02	QP	9.89	39,91	62.89	-22.98	
	0.2181	21.59	AVG	9.89	3148	52.89	-21.41	
$\Box$	0.5404	37.20	QP	9.93	47.13	56.00	-8.87	
	0.5404	20.88	AVG	9.93	30.81	46.00	-15.19	
*	1.2943	37.62	QP	9.97	47.59	56.00	-8.41	
	1.2943	22.66	AVG	9.97	32.63	46.00	-13.37	
	1.9423	27.58	QP	10.00	37.58	56.00	-18.42	
	1.9423	21.76	AVG	10.00	31.76	46.00	-14.24	
	14.8625	27.98	QP	10.80	38.78	60.00	-21.22	
-	14.8625	17.68	AVG	10.80	28.48	50.00	-21.52	



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3



Phase: Power: 110 VAC

Site: Chamber\_03

Condition: FCC Part 15 Class B Conduction (QP)

EUT: W6M21109-11844

MVN: R1~Rxx(x=A~Z,a~z,0~9, or blank, any character)

Test Mode : Note :

MH.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1528	30.58	QP	10.00	40.58	65.85	-25.27	
$\neg$	0.1528	20.37	AVG	10.00	30.37	55.85	-25.48	
	0.2150	31.00	QP	9.95	40.95	63.01	-22.06	
	0.2150	21.08	AVG	9.95	31.03	53.01	-21.98	
×	0.5382	36.85	QP	10.00	46.85	56.00	-9.15	
	0.5382	22.04	AVG	10.00	32.04	46.00	-13.96	
$\neg$	1.1840	32.80	QP	10.03	42.83	56.00	-13.17	
	1.1840	17.07	AVG	10.03	27.10	46.00	-18.90	
	1.2808	25.82	QP	10.03	35.85	56.00	-20.15	
	1.2808	16.19	AVG	10.03	26.22	46.00	-19.78	
	1.9445	25.83	QP	10.07	35.90	56.00	-20.10	
1	1.9445	20.53	AVG	10.07	30.60	46.00	-15.40	

#### Note:

- 1. The formula of measured value as: Test Result = Reading + Correction Factor
- 2. The Correction Factor = Cable Loss + LISN Insertion Loss
- 3. Detector function in the form: PK = Peak, QP = Qusai Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. Up Line: QP Limit Line, Down Line: Ave Limit Line.

#### **Limits:**

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

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

Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

### **Appendix**

### **Measurement diagrams**

- 1. Peak Output Power
- 2. Spurious Emissions radiated



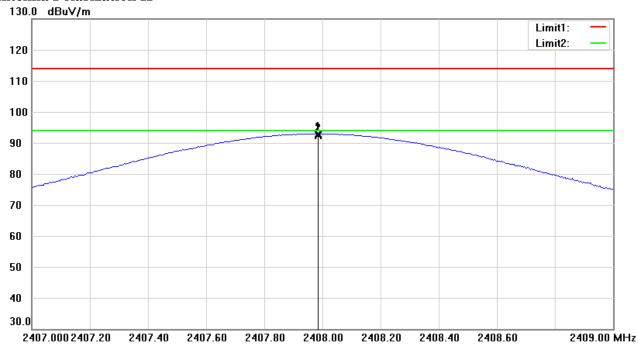
Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

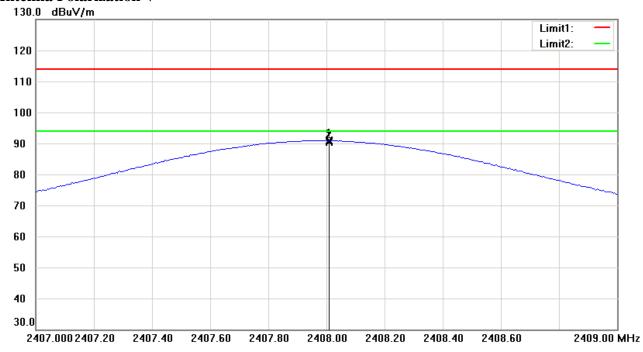
Peak Output Power

2408 MHz

#### **Antenna Polarization H**



#### **Antenna Polarization V**



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

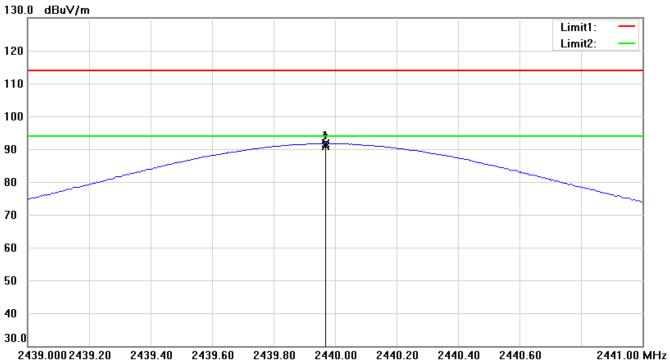
- 1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification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



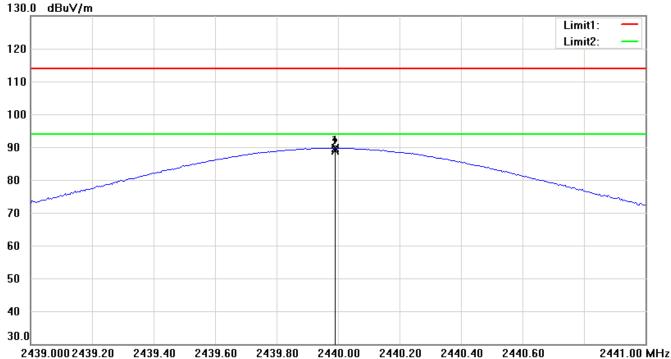
Registration number: W6M21109-11844-C-1

FCC ID: YI8R3 2440 MHz

#### **Antenna Polarization H**



#### Antenna Polarization V



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

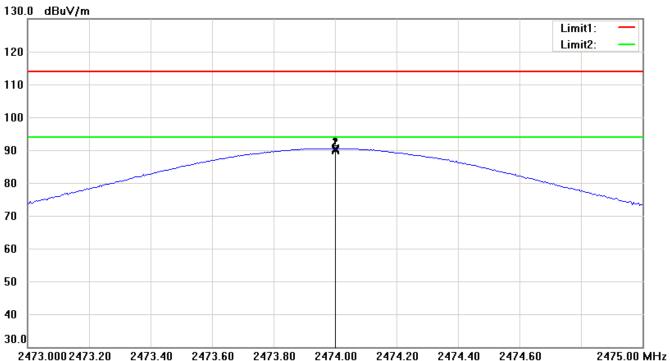
- Note:1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
- 2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the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



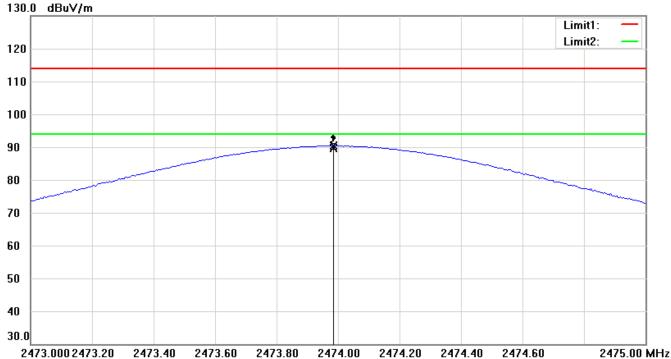
Registration number: W6M21109-11844-C-1

FCC ID: YI8R3 2474 MHz

#### **Antenna Polarization H**



Antenna Polarization V



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

- Note:

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



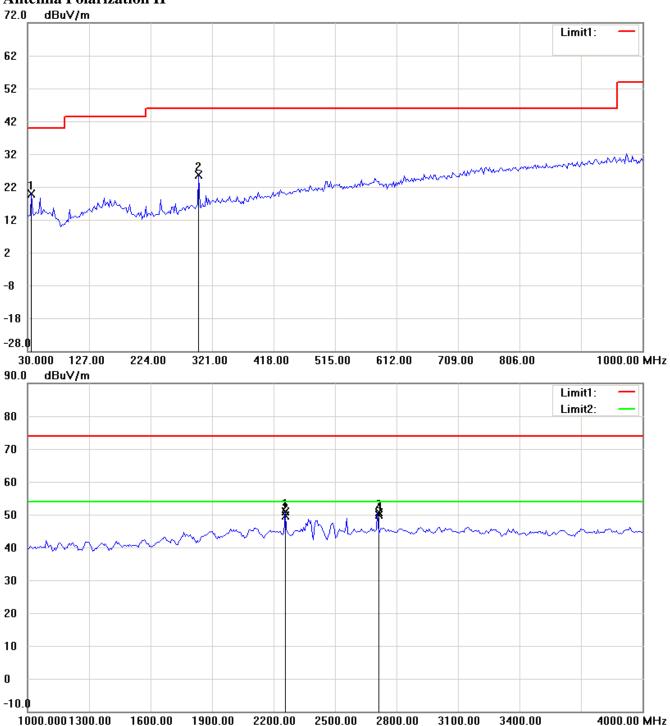
Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

Spurious Emissions radiated

TX 2408 MHz

#### Antenna Polarization H



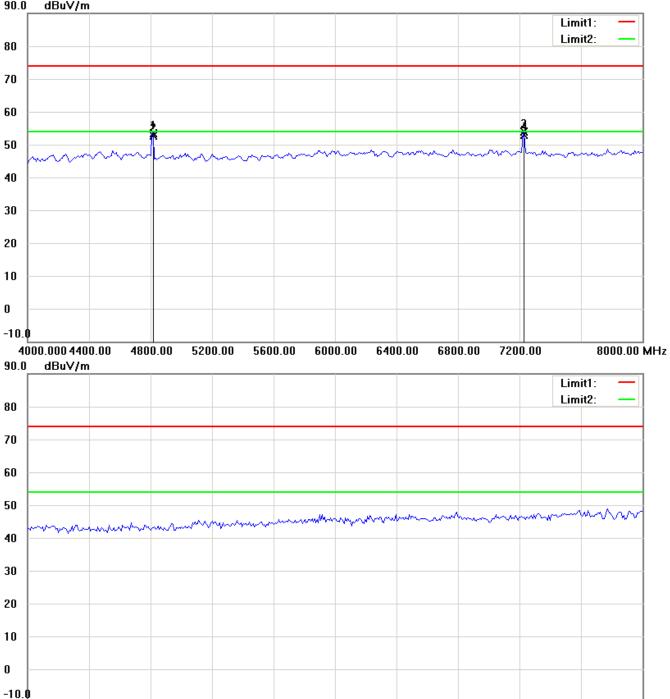
Up Line: Peak Limit Line, Down Line: Ave Limit Line. Note:

- 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: W6M21109-11844-C-1

FCC ID: YI8R3 90.0 dBuV/m



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

9425.00

9900.00

8950.00

The attached measurement plots are preliminarily pre-scanned with peak detector for determining 1. the final checking frequencies and are for reference only.

10375.00 10850.00 11325.00 11800.00

- The some frequencies may exceed the limit line without the specified detectors, but that cannot 2. 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.

8000.0008475.00



Registration number: W6M21109-11844-C-1 FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20 10 0

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.

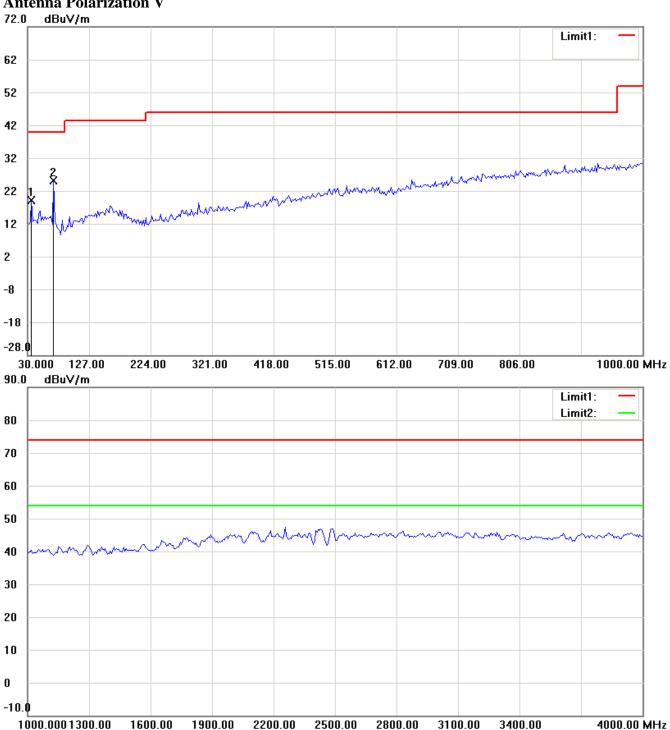
18000.0008850.00 19700.00 20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

-10.0



Registration number: W6M21109-11844-C-1

#### Antenna Polarization V



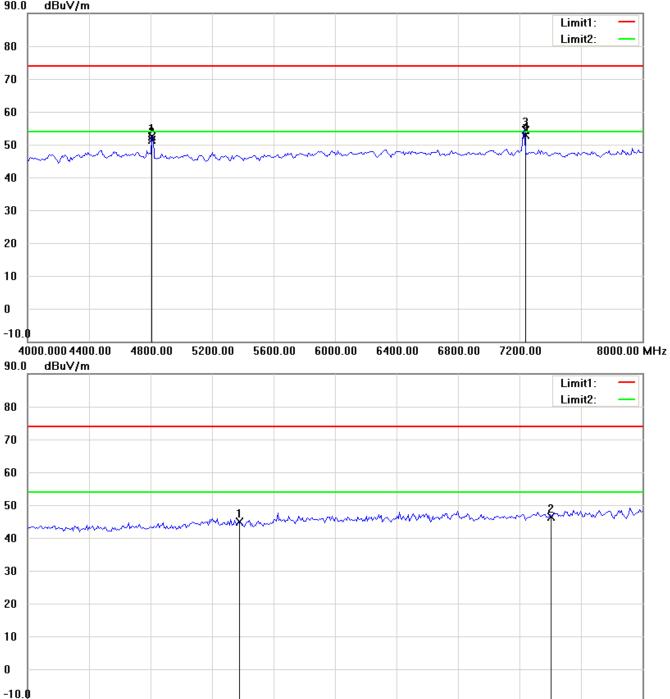
Up Line: Peak Limit Line, Down Line: Ave Limit Line. Note:

- The attached measurement plots are preliminarily pre-scanned with peak detector for determining 1. the final checking frequencies and are for reference only.
- The some frequencies may exceed the limit line without the specified detectors, but that cannot 2. 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: W6M21109-11844-C-1

FCC ID: YI8R3 90.0 dBuV/m



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

9425.00

9900.00

8950.00

The attached measurement plots are preliminarily pre-scanned with peak detector for determining 1. the final checking frequencies and are for reference only.

10375.00 10850.00 11325.00 11800.00

- The some frequencies may exceed the limit line without the specified detectors, but that cannot 2. 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.

8000.0008475.00



Registration number: W6M21109-11844-C-1 FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20 10 0

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.

20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

- 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.

18000.0008850.00 19700.00

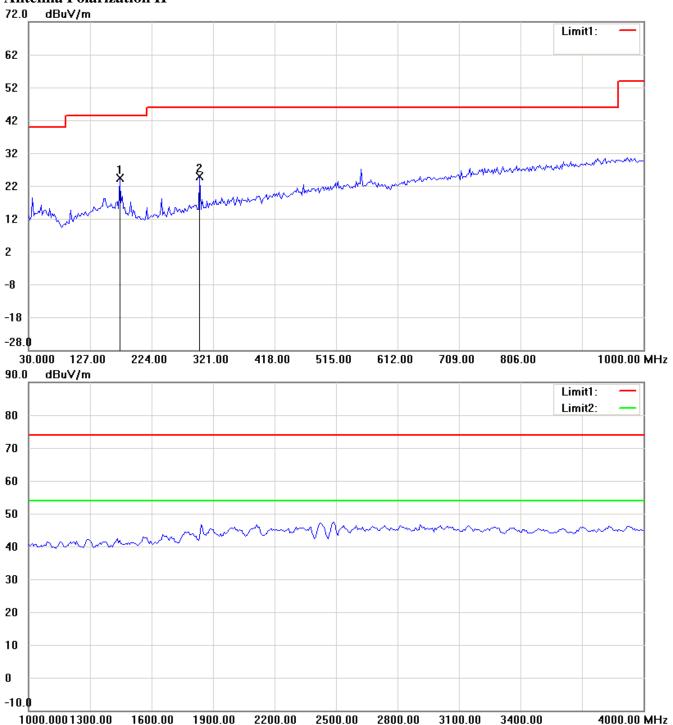
-10.**0** 



Registration number: W6M21109-11844-C-1

TX 2440 MHz

#### Antenna Polarization H



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

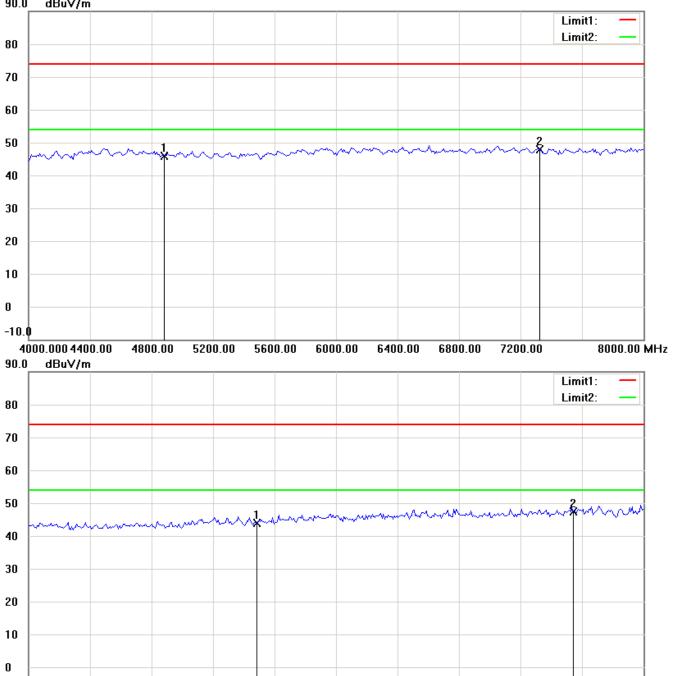
#### Note:

- The attached measurement plots are preliminarily pre-scanned with peak detector for determining 1. the final checking frequencies and are for reference only.
- The some frequencies may exceed the limit line without the specified detectors, but that cannot 2. 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: W6M21109-11844-C-1

FCC ID: YI8R3 90.0 dBuV/m



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

9425.00

9900.00

8950.00

The attached measurement plots are preliminarily pre-scanned with peak detector for determining 1. the final checking frequencies and are for reference only.

10375.00 10850.00 11325.00 11800.00

- The some frequencies may exceed the limit line without the specified detectors, but that cannot 2. 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.

-10.0

8000.0008475.00



10

0 -10.**0** 

### Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21109-11844-C-1

FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20

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.

20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

- 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.

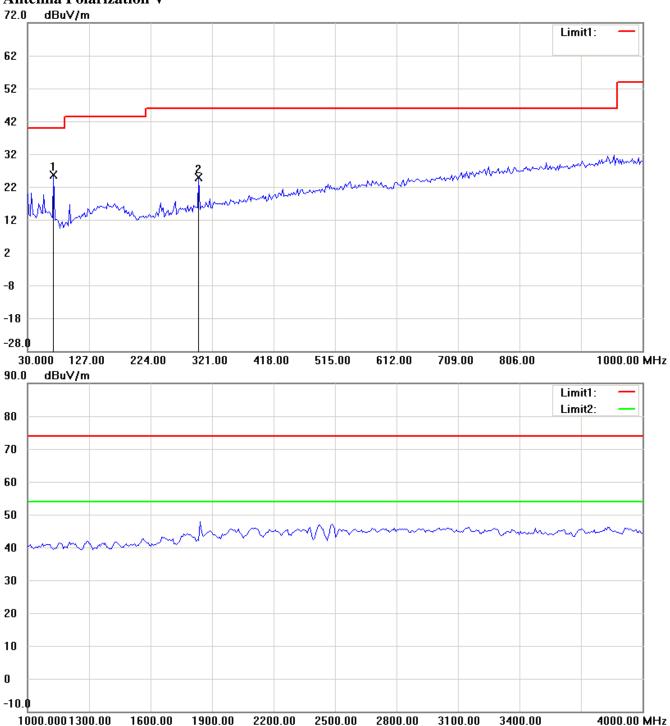
18000.0008850.00 19700.00



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

#### **Antenna Polarization V**

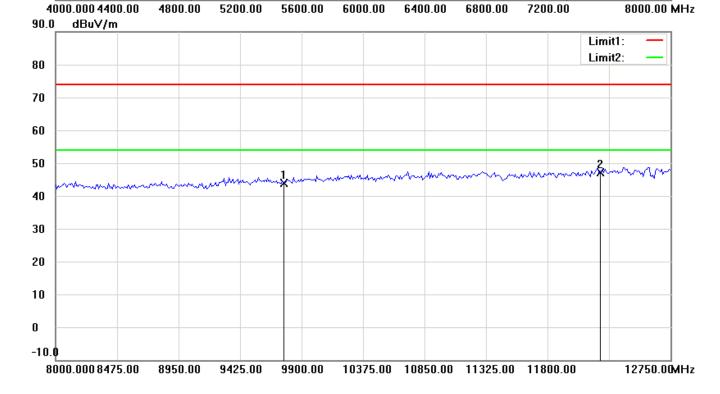


Up Line: Peak Limit Line, Down Line: Ave Limit Line. Note:

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



Registration number: W6M21109-11844-C-1



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: W6M21109-11844-C-1 FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20 10 0

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.

20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

- 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.

18000.0008850.00 19700.00

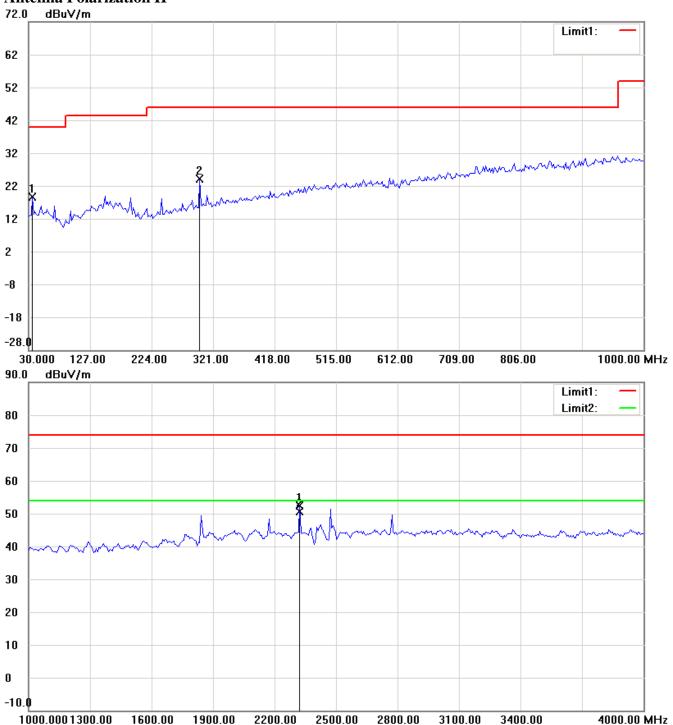
-10.**0** 



Registration number: W6M21109-11844-C-1

TX\_2474 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.



40

30

20

10

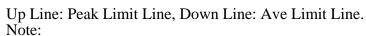
0 -10.**0** 

8000.0008475.00

### Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21109-11844-C-1

FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 -10.0 4000.000 4400.00 4800.00 5200.00 5600.00 6000.00 6400.00 6800.00 7200.00 8000.00 MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50



9425.00

9900.00

8950.00

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.

10375.00 10850.00 11325.00 11800.00

- 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: W6M21109-11844-C-1 FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20 10 0

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.

20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

- 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.

18000.0008850.00 19700.00

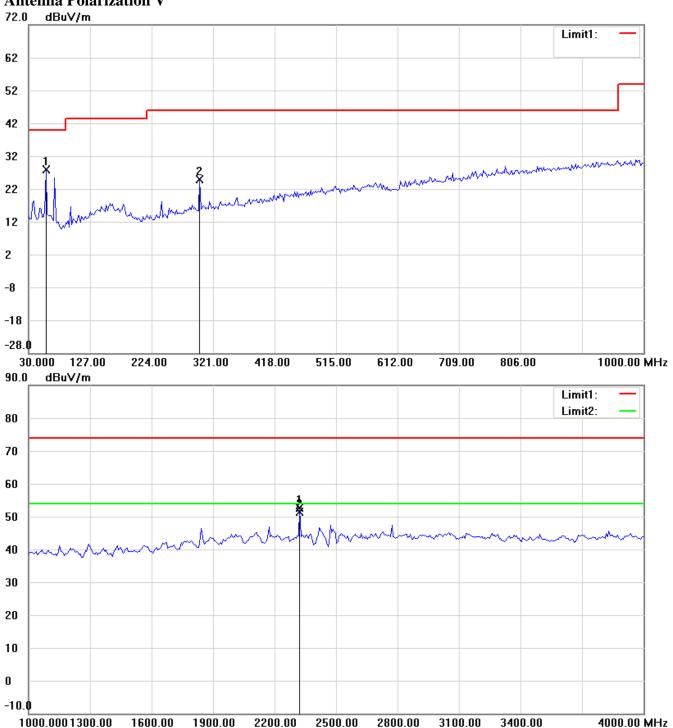
-10.0



Registration number: W6M21109-11844-C-1

FCC ID: YI8R3

#### **Antenna Polarization V**

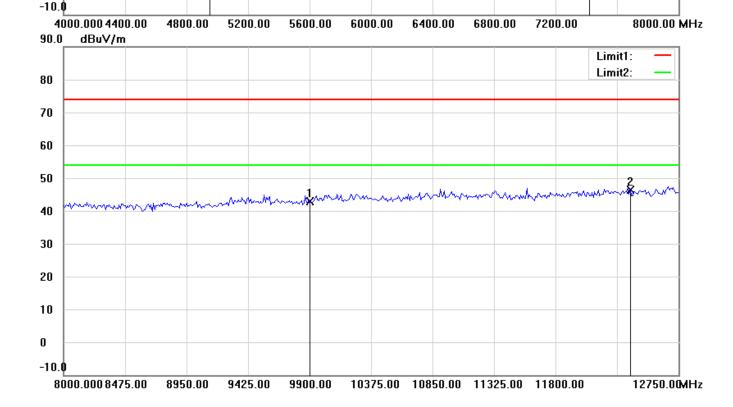


Up Line: Peak Limit Line, Down Line: Ave Limit Line. Note:

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



Registration number: W6M21109-11844-C-1



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: W6M21109-11844-C-1 FCC ID: YI8R3 90.0 dBuV/m Limit1: Limit2: 80 70 60 50 40 30 20 10 0 12750.0003275.00 13800.00 14325.00 14850.00 15375.00 15900.00 16425.00 16950.00 18000.00MHz dBuV/m 90.0 Limit1: Limit2: 80 70 60 50 40 30 20 10 0

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.

20550.00 21400.00 22250.00 23100.00 23950.00 24800.00

- 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.

18000.0008850.00 19700.00

-10.0