FCC PART 15 SUBPART C TEST REPORT

for

Cordless 2.4GHz Keyboard

Model No.: RF-6521

FCC ID: UJ96521

of

Applicant: **I-ROCKS TECHNOLOGY CO., LTD.**
Address: **12F, No. 190, Chung-hsin Rd., Sec. 2, Hsin-tien City, Taipei, 23146 Taiwan, R.O.C.**

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.: W6M20809-9320-P-15

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.
The test report may only be reproduced or published in full.
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Tester:

Date	WTS-Lab.	Name	Signature
October 02, 2008		Jeff	Jeff

Technical responsibility for area of testing:

Date	WTS	Name	Signature
October 02, 2008		Chang Tse-Ming	Chang Tse-ming

1.2 Testing laboratory

1.2.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)

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

1.3 Details of approval holder

Name:	I-ROCKS TECHNOLOGY CO., LTD.
Street:	12F, No. 190, Chung-hsin Rd., Sec. 2, Hsin-tien City,
Town:	Taipei
Country:	23146 Taiwan,R.O.C.
Telephone:	+886-2-2911-3080
Fax:	+886-2-2914-1712
Teletex:	./.

1.4 Application details

Date of receipt of test item:	September 16, 2008
Date of test:	From September 17, 2008 to September 30, 2008

1.5 General information of Test item

Type of test item:	Cordless 2.4GHz Keyboard
Model Number:	RF-6521
Multi-listing model number:	without
Photos:	see Annex

Technical data

Frequency band:	2400~2483.5 MHz
Operation Frequency:	2410~2473 MHz
Frequency 1:	2410 MHz
Frequency 2:	2445 MHz
Frequency 3:	2473 MHz
Operation modes:	GFSK
Modulation Type:	FHSS
Antenna type:	Printed antenna
Power supply:	Battery (AAA*1)

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Manufacturer: (if different from applicant)

Name:	JyeWang Enterprise Co., Ltd.
Street:	Zhen Hua Road, Tie Lu Keng Village ,Qi Shi Town,
Town:	Dong Gang City, Guang Dong Province.
Country:	China

Additional information: ./.

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.249 (2007-10)

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations as specified in 2.5 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Temperature:	23 ^{o}C
Relative humidity content:	20 ... 75 %
Air pressure:	86 ... 103 kPa
Details Power supply:	Battery (AAA*1)
Extreme conditions parameters:	Not required

Registration number: W6M20809-9320-P-15
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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2008/9/18	2009/9/17
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None		Function Test	
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2008/9/15	2009/9/14
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2008/9/15	2009/9/14
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2008/5/10	2009/5/09
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2008/9/18	2009/9/17
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2008/7/25	2009/7/24
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2008/9/22	2009/9/21
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2008/9/24	2009/9/23
ETSTW-CS 001	SIGNAL GENERATOR	SMX	849254/003	R&S	Function Test	
ETSTW-CS 003	COUPLING AND DECOUPLING NETWORK	CDN T400	19820	SCHAFFNER	2008/9/16	2009/9/15
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2008/8/23	2009/8/22
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function Test	
ETSTW-CS 008	6 dB Attenuator	HFP-5100-3/06 N M/F	2010876106		2008/5/10	2009/5/09
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2007/12/3	2008/12/2
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2008/9/22	2009/9/21
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2008/9/18	2009/9/17
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	Log-Periodic Antenna	HL025	352886/001	R&S	2008/5/5	2009/5/4
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2007/11/7	2008/11/6
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2008/8/27	2009/8/26
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2008/4/23	2009/4/22
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2008/4/23	2009/4/22
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2008/3/26	2009/3/25
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2008/9/1	2009/8/31
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	2008/6/27	2009/6/26
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2008/9/1	2009/8/31
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2007/1/11	2009/1/10
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2008/5/2	2009/5/1
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2008/5/22	2009/5/21
ETSTW-RE 047	ESA-E SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	2008/6/26	2009/6/25
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2009/3/21

ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2007/5/2	2009/5/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2008/7/1	2009/6/30
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	2008/9/1	2009/8/31
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2007/7/2	2009/7/1

2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2003 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 C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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

Example:

Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBµV + 10.36 dB + 6 dB = 36.36 dBµV/m @3m

ANSI STANDARD C63.4-2003 10.1.7 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 10th 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, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 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.

3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.249 (b)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.249 (e)	☒	☒	☐
Spurious Emissions conducted – Transmitter operating	15.249 (e)	☐	☐	☐
Radiated Emission from Receiver L.O.	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.

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: RF-6521 Date: 2008/9/22
Mode: 2410MHz Temperature: 26 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2409.925	56.11	--	35.72	91.83	--	114.00	--	-22.17	223	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2409.800	43.83	--	35.70	79.53	--	114.00	--	-34.47	62	150

Mode: 2445MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2444.750	55.23	--	35.80	91.03	--	114.00	--	-22.97	112	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2444.750	42.84	--	35.78	78.62	--	114.00	--	-35.38	117	150

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Mode: 2473MHz
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2472.925	54.47	--	35.87	90.34	--	114.00	--	-23.66	99	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
2472.800	41.08	--	35.84	76.92	--	114.00	--	-37.08	197	150

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028
ETSTW-RE 030 ETSTW-RE 043 ETSTW-RE 044

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

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 Cordless 2.4GHz Keyboard 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 (MHz)	Field strength (microvolts/meter)	Field Strength (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 dBμV/m + 20 dB= 74dBμV/m
Or
Must be attenuated at least 50dB below the level of fundament

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028
ETSTW-RE 029 ETSTW-RE 030 ETSTW-RE 042 ETSTW-RE 043
ETSTW-RE 044

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: RF-6521 Date: 2008/9/25
Mode: 2410MHz Temperature: 26 °C Engineer: Danny
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)
132.806	9.95	peak	14.29	24.24	43.50	-19.26	338	150
506.212	12.25	peak	19.90	32.15	46.00	-13.85	30	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1990.000	50.61	--	-8.57	42.04	--	74.00	--	-31.96	317	150
4820.000	44.48	--	-2.43	42.05	--	74.00	--	-31.95	111	150
7230.000	39.86	--	2.05	41.91	--	74.00	--	-32.09	321	150
9940.000	33.45	--	6.07	33.52	--	74.00	--	-40.48	221	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
208.557	14.98	peak	12.31	27.29	43.50	-16.21	310	150
828.858	7.52	peak	25.54	33.06	46.00	-12.94	347	150

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Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1772.500	51.27	--	-10.05	41.22	--	74.00	--	-32.78	337	150
4820.000	50.18	--	-2.43	47.75	--	74.00	--	-26.25	334	150
7230.000	39.92	--	2.05	41.97	--	74.00	--	-32.03	197	150
9940.000	33.34	--	6.07	33.41	--	74.00	--	-40.59	337	150

Mode: 2445MHz Temperature: 26 °C Engineer: Danny
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)
156.072	11.14	peak	15.43	26.57	43.50	-16.93	331	150
506.212	12.25	peak	19.90	32.15	46.00	-13.85	178	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1750.000	51.13	--	-10.20	40.93	--	74.00	--	-33.07	339	150
4890.000	46.17	--	-2.11	44.06	--	74.00	--	-29.94	197	150
7335.000	39.78	--	2.30	42.08	--	74.00	--	-31.92	319	150
9780.000	35.29	--	5.46	34.75	--	74.00	--	-39.25	347	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
186.373	11.56	peak	13.21	24.77	43.50	-18.73	223	150
828.858	7.52	peak	25.54	33.06	46.00	-12.94	334	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1240.000	49.72	--	-11.85	37.87	--	74.00	--	-36.13	316	150
4890.000	50.08	--	-2.11	47.97	--	74.00	--	-26.03	197	150
7335.000	42.03	--	2.30	44.33	--	74.00	--	-29.67	178	150
9780.000	34.41	--	5.46	33.87	--	74.00	--	-40.13	329	150

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Mode: 2473MHz Temperature: 26 °C Engineer: Danny
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)
156.072	9.89	peak	15.43	25.32	43.50	-18.18	347	150
506.212	12.25	peak	19.90	32.15	46.00	-13.85	99	150

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1780.000	51.22	--	-10.00	41.22	--	74.00	--	-32.78	37	150
4950.000	48.96	--	-1.83	47.13	--	74.00	--	-26.87	197	150
7420.000	42.37	--	2.51	44.88	--	74.00	--	-29.12	331	150
9892.000	32.91	--	5.89	32.80	--	74.00	--	-41.2	117	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
165.812	9.22	peak	15.18	24.40	43.50	-19.10	197	150
518.838	9.86	peak	20.08	29.94	46.00	-16.06	334	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
1990.000	50.66	--	-8.57	42.09	--	74.00	--	-31.91	124	150
4950.000	49.16	--	-1.83	47.33	--	74.00	--	-26.67	317	150
7420.000	46.10	--	2.51	48.61	--	74.00	--	-25.39	109	150
9892.000	34.41	--	5.89	34.30	--	74.00	--	-39.7	234	150

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. **See the attached diagram as appendix.**

TEST RESULT (Transmitter): The unit DOES meet the FCC requirements.
Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 055

Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

3.6 Radiated Emissions from Receiver L.O.

Summary table with radiated data of the test plots

Model:	RF-6521	Date:	--		
Mode:	--	Temperature:	-- °C	Engineer:	--
Polarization:	Horizontal	Humidity:	-- %		

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	---	--	--	---	--	--	--

Polarization: Vertical

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave.	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	---	--	--	---	--	--	--	--	--

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028 ETSTW-RE 029 ETSTW-RE 030 ETSTW-RE 042 ETSTW-RE 043 ETSTW-RE 044

Explanation: The test results are listed in the separated test report no. W6M20809-9320-P-15B .

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).

Test conditions		Attenuation at or outside band-edges	
		Lower Band-edge	Upper Band-edge
T_{nom}= 26°C	V_{nom} = 1.5 V	51.41 dB	51.42 dB

Limit:

Frequency Range (MHz)	Limit (dB)
902 – 928 2400 – 2483.5 5725 – 5875 24000 - 24250	>50

Test equipment used: ETSTW-RE 003 ETSTW-RE 004 ETSTW-RE 017 ETSTW-RE 028
ETSTW-RE 030 ETSTW-RE 043 ETSTW-RE 044

Explanation: Please see attached diagram as appendix.

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.

Frequency	Level (dBμV)	
	quasi-peak	average
-- kHz	lower limit line	Lower 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 003 ETSTW-CE 004 ETSTW-CE 006

Explanation: This is not required the sample is battery used.

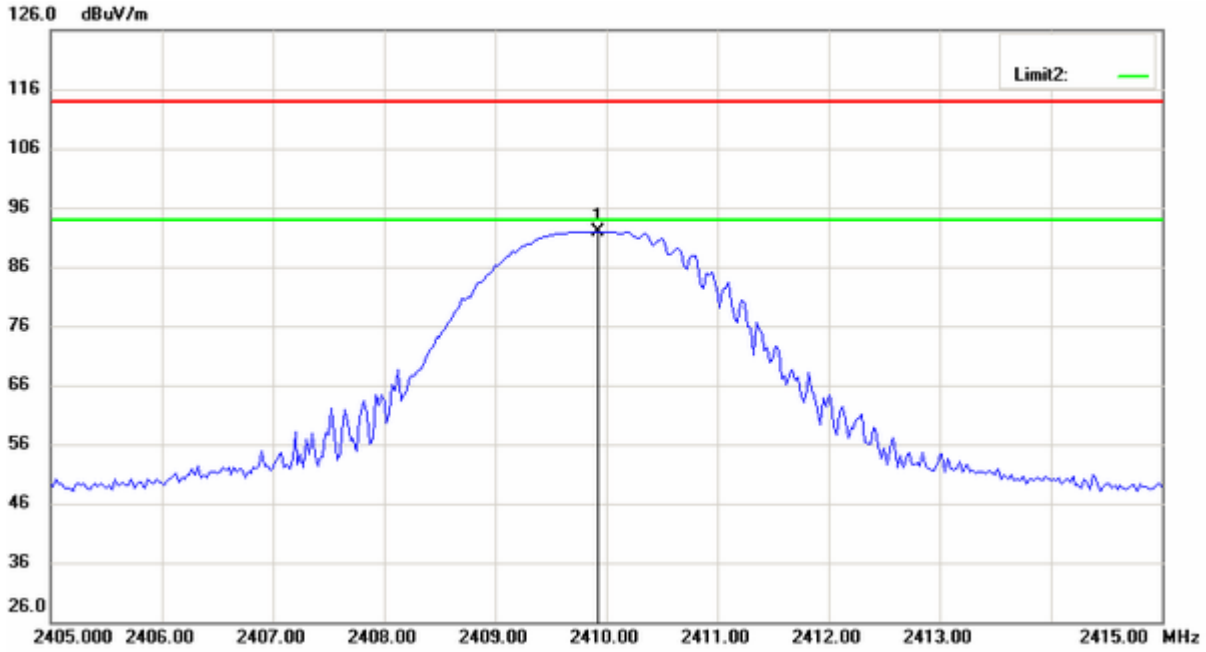
Appendix

Measurement diagrams

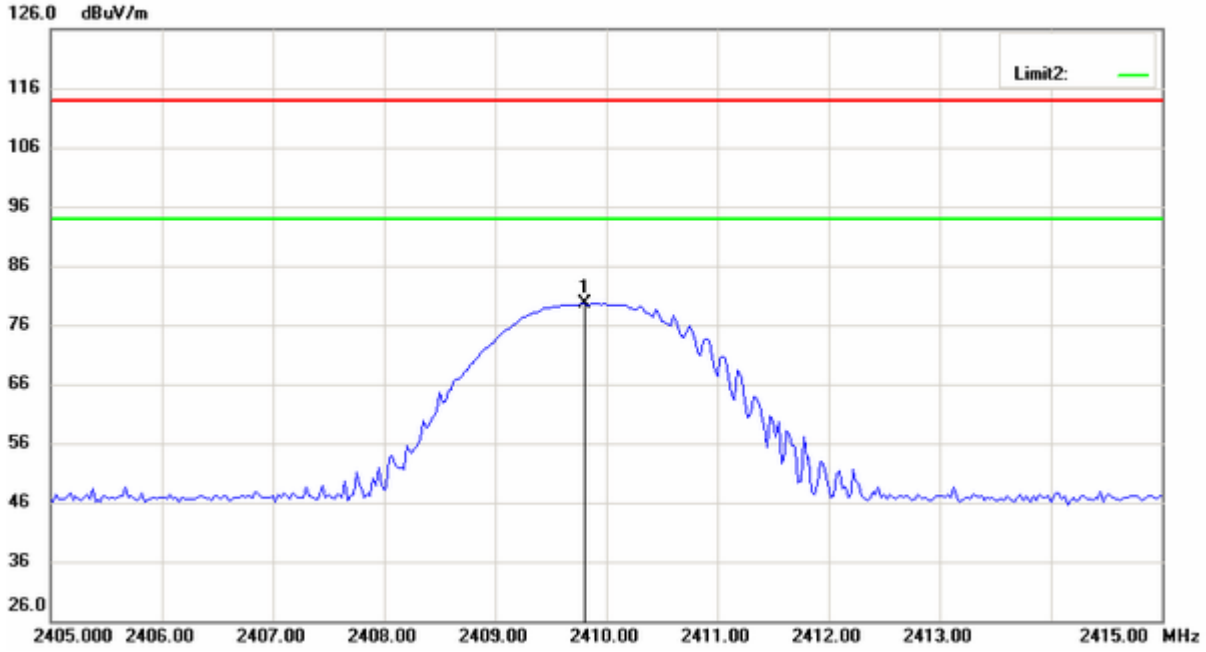
1. Fundamental Field Strength
2. Spurious Emissions radiated
3. Radiated Emission on the band edge
4. Occupied Bandwidth

Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

Fundamental Field Strength
2410 MHz
Antenna Polarization H



Antenna Polarization V



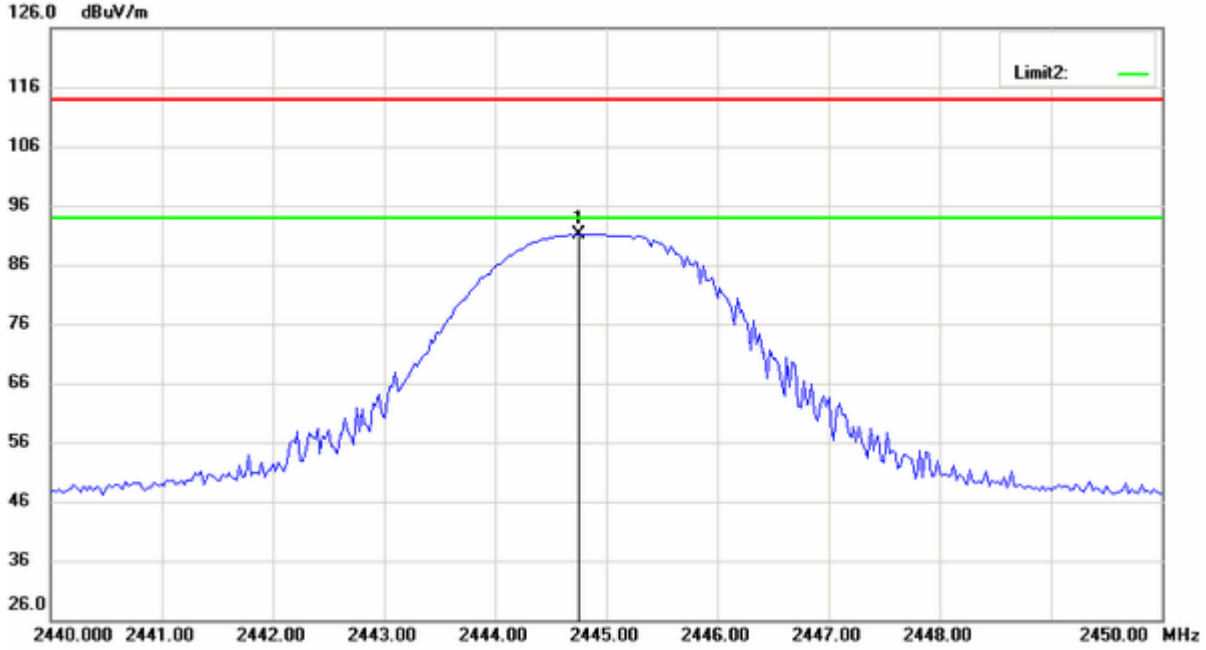
Up Line: Peak Limit Line
Down Line: Ave Limit Line
Note:

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 radiated test data of this test report.**

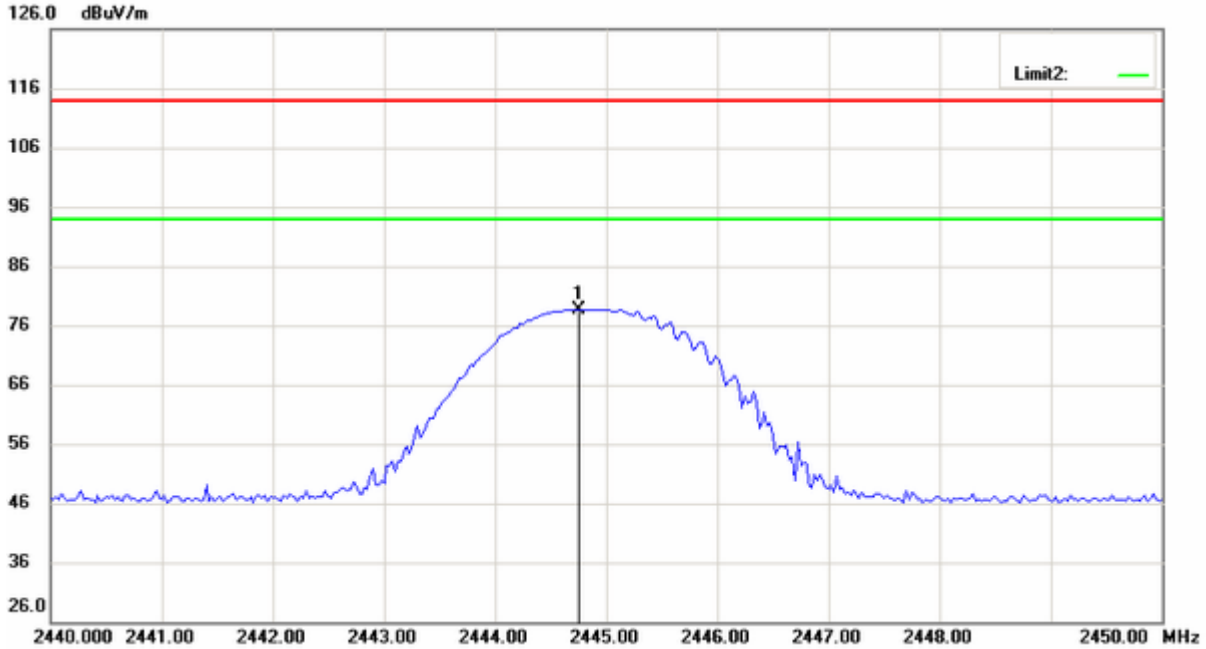
Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

2445 MHz

Antenna Polarization H



Antenna Polarization V



Up Line: Peak Limit Line
Down Line: Ave Limit Line
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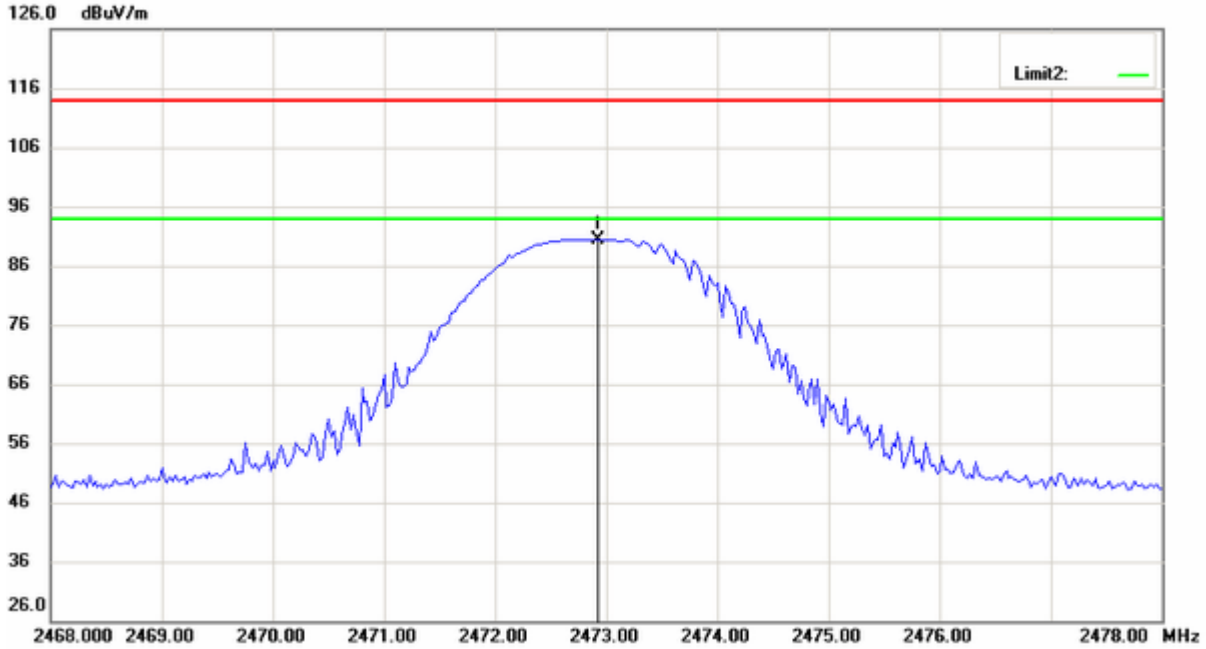
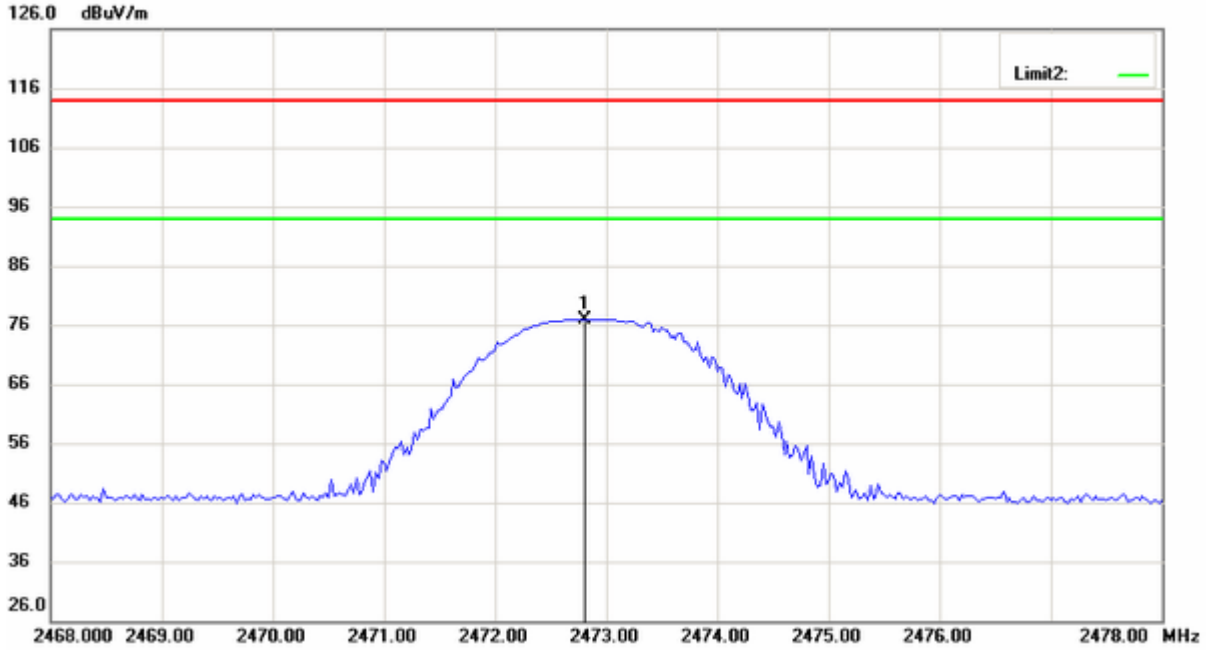
2473 MHz

Antenna Polarization H



Antenna Polarization V



Up Line: Peak Limit Line
Down Line: Ave Limit Line
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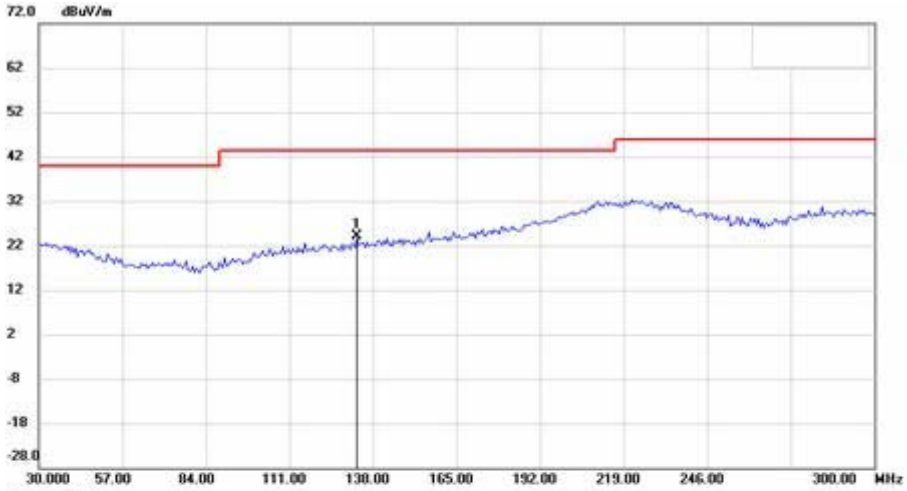
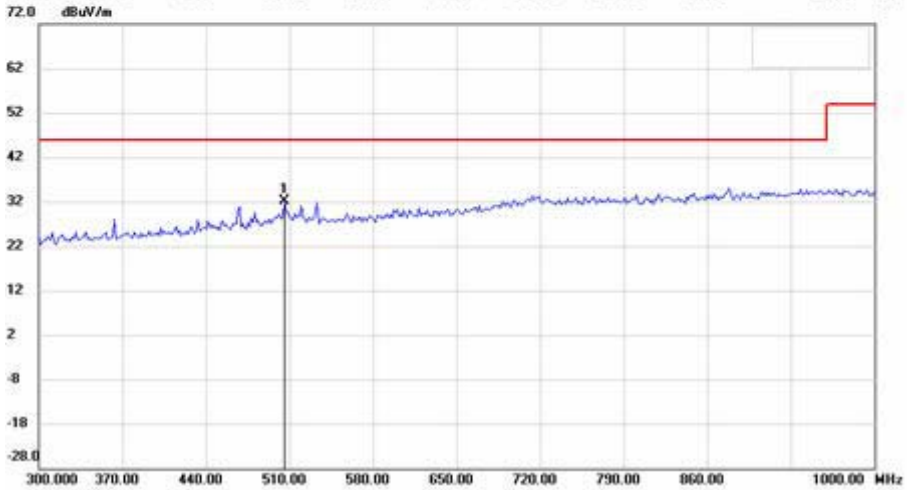
Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

Radiated Emission
Transmitter
2410 MHz
Antenna Polarization H





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Down Line: Ave Limit Line
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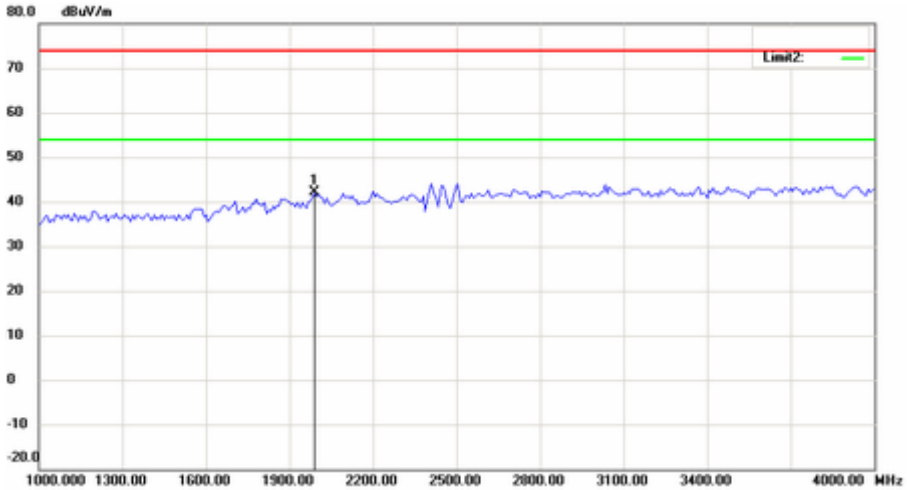
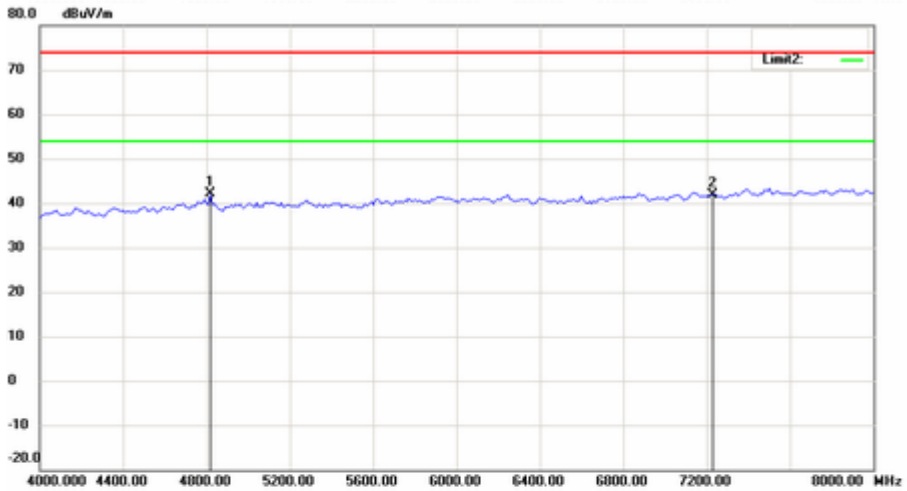
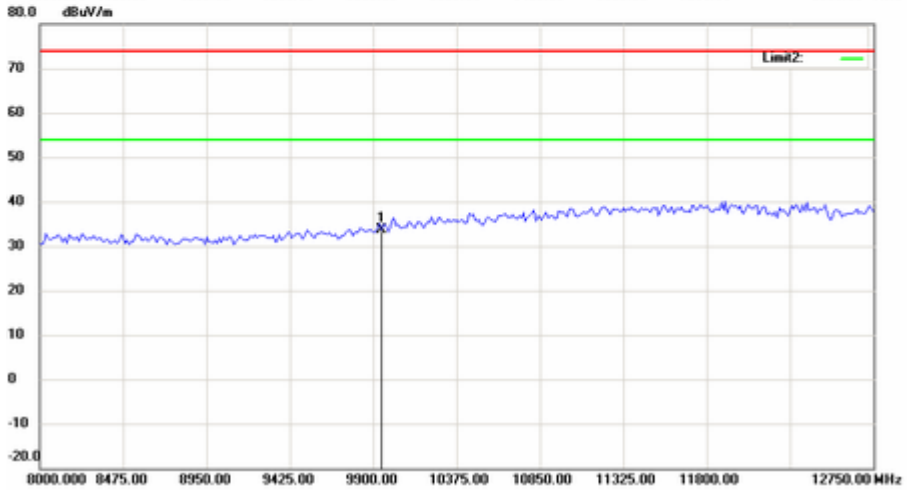
FCC ID: UJ96521







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Down Line: Ave Limit Line
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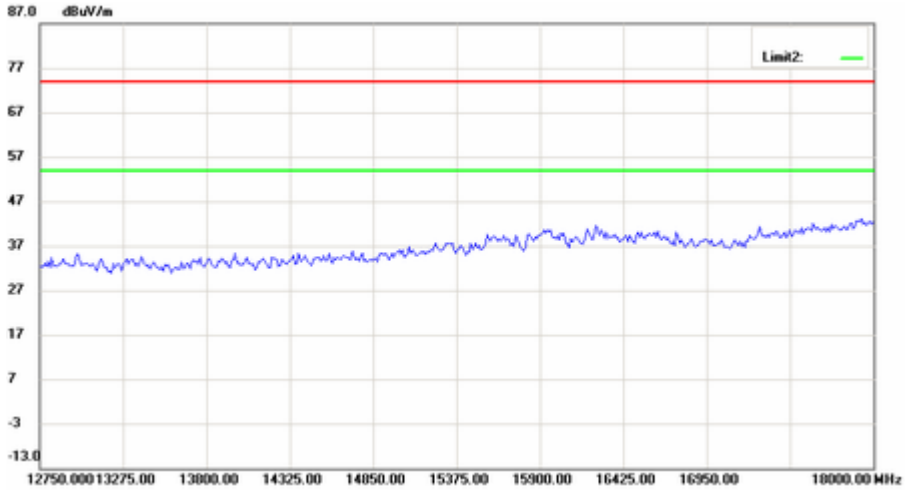
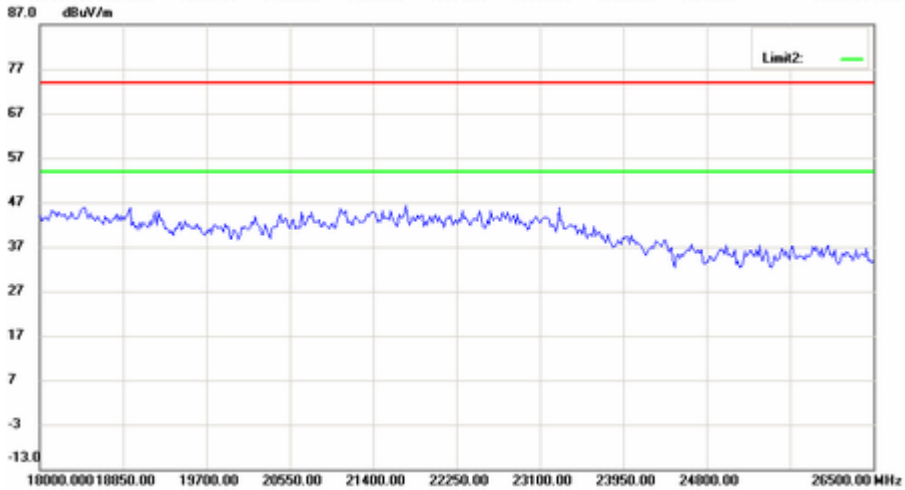
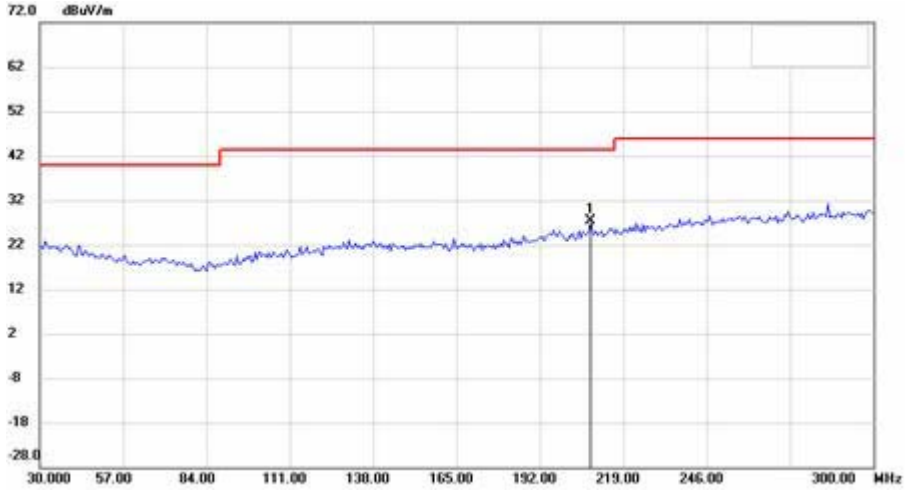
FCC ID: UJ96521





Antenna Polarization V



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Down Line: Ave Limit Line
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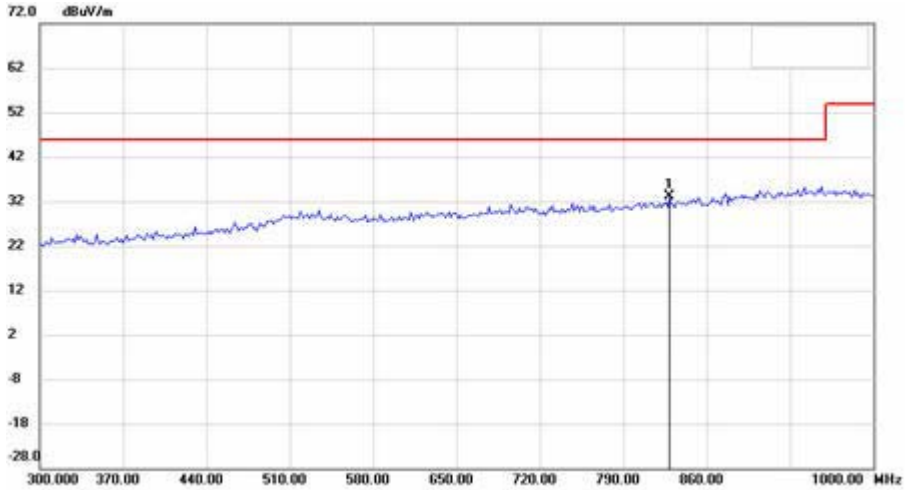

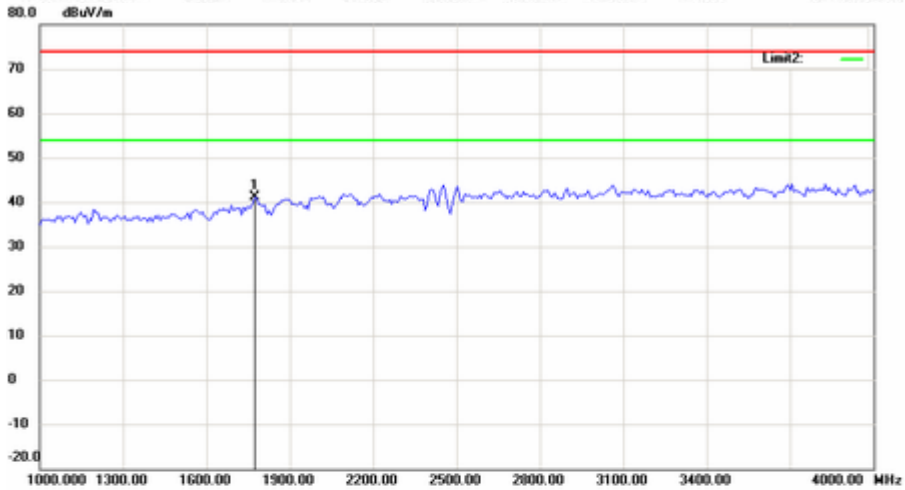

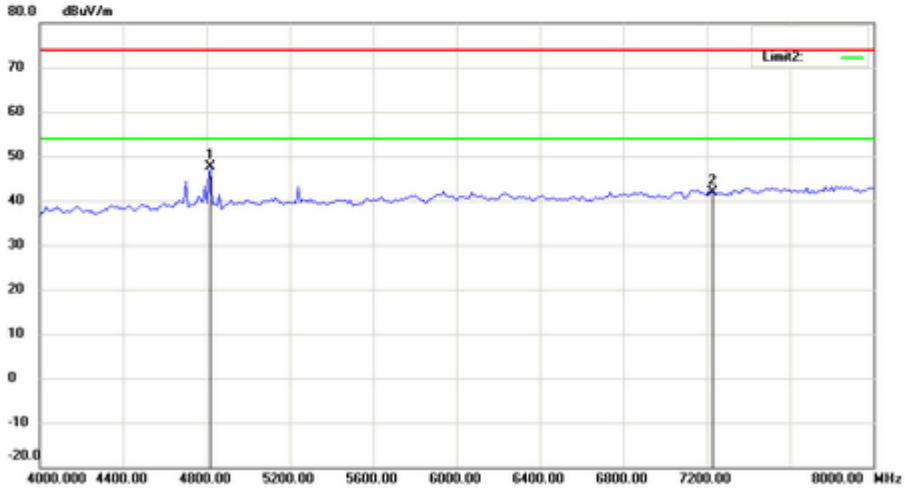

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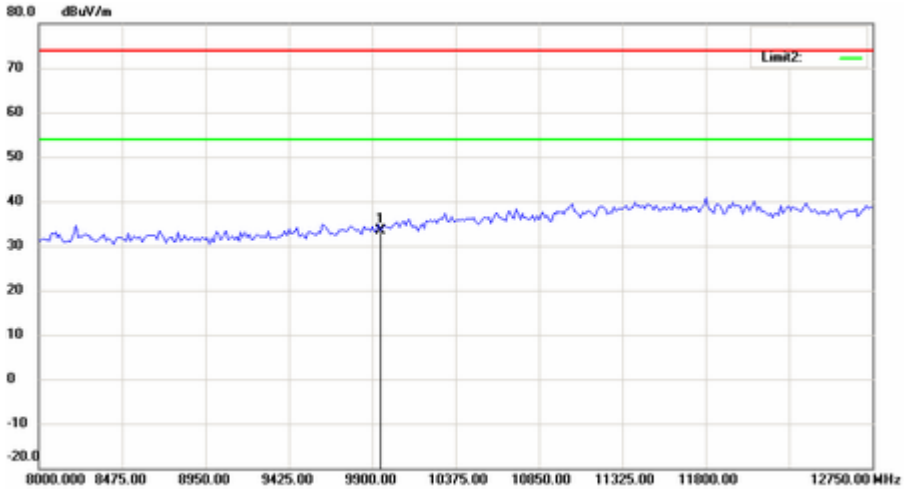

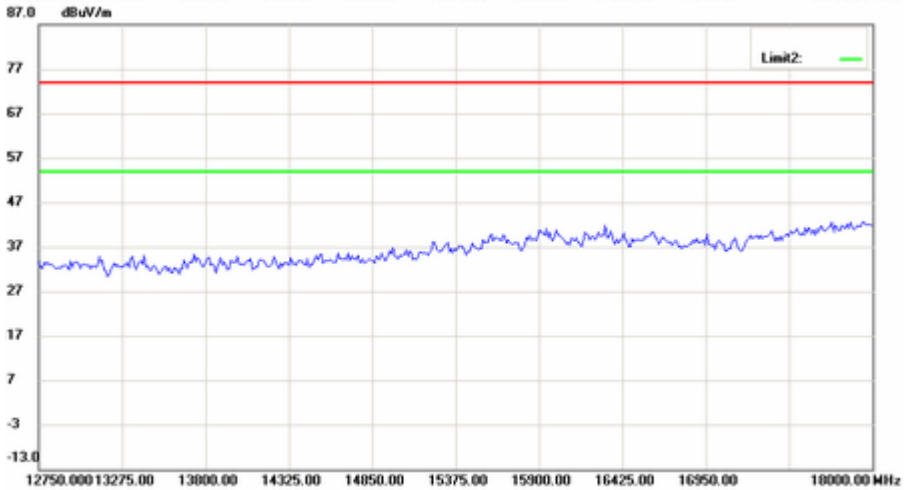

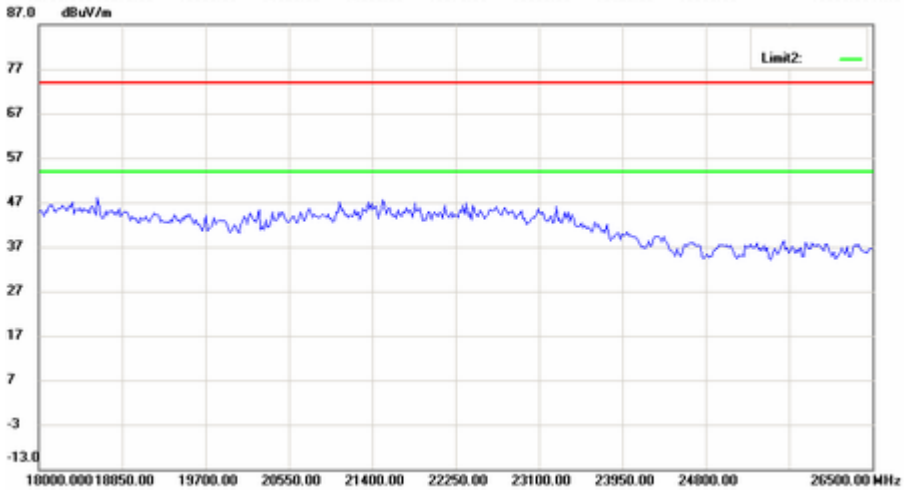

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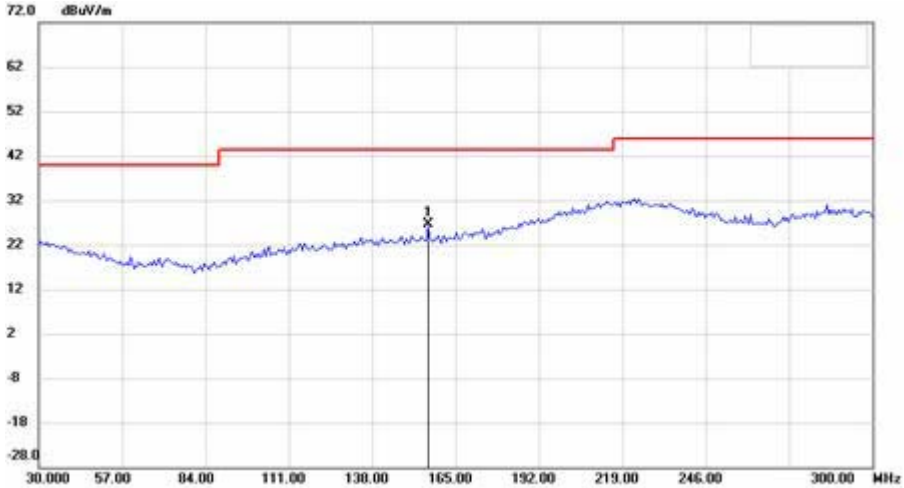
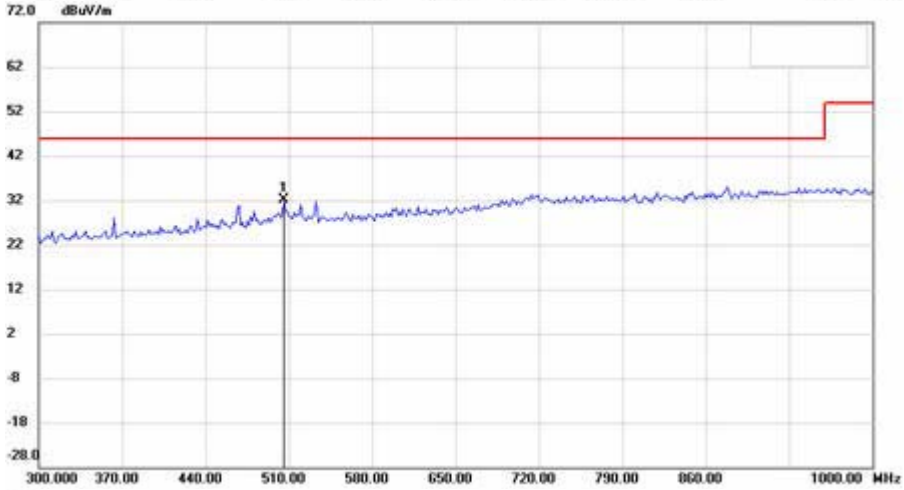
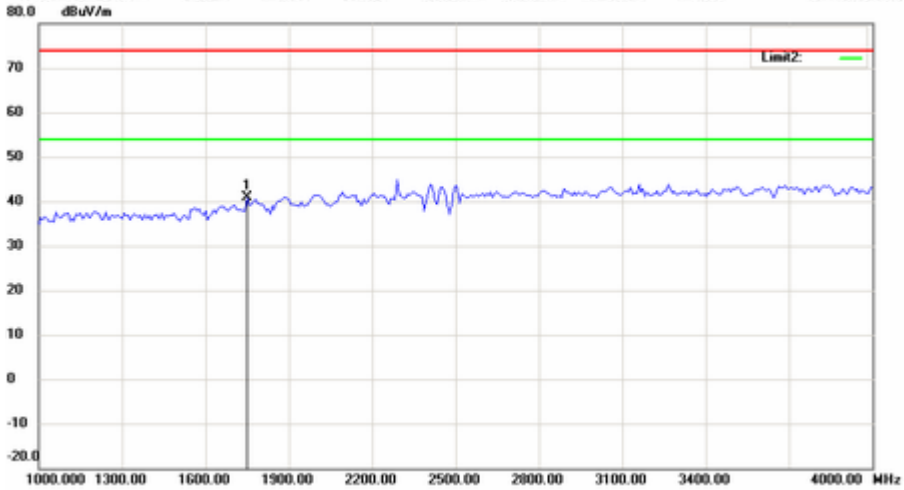
Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

2445 MHz

Antenna Polarization H







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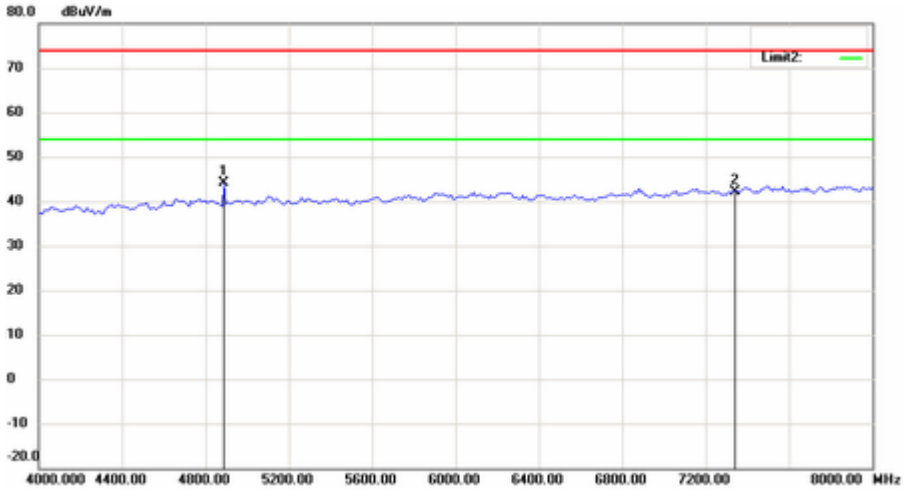

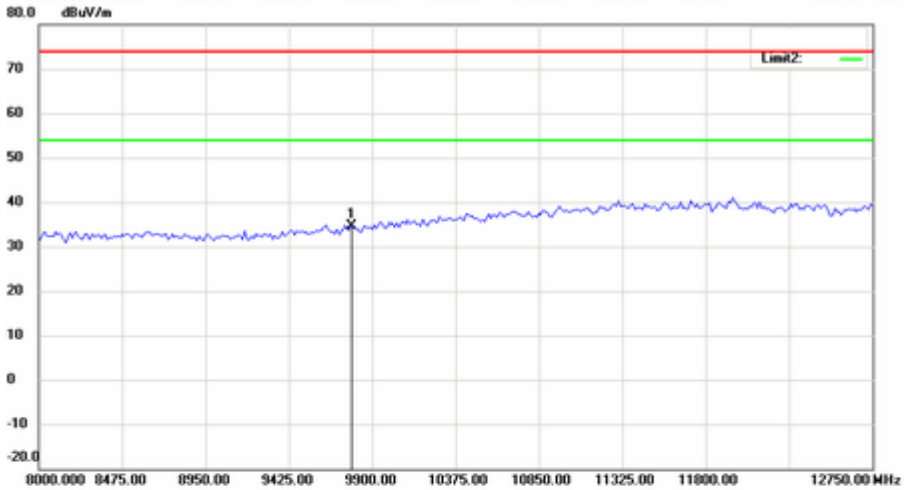

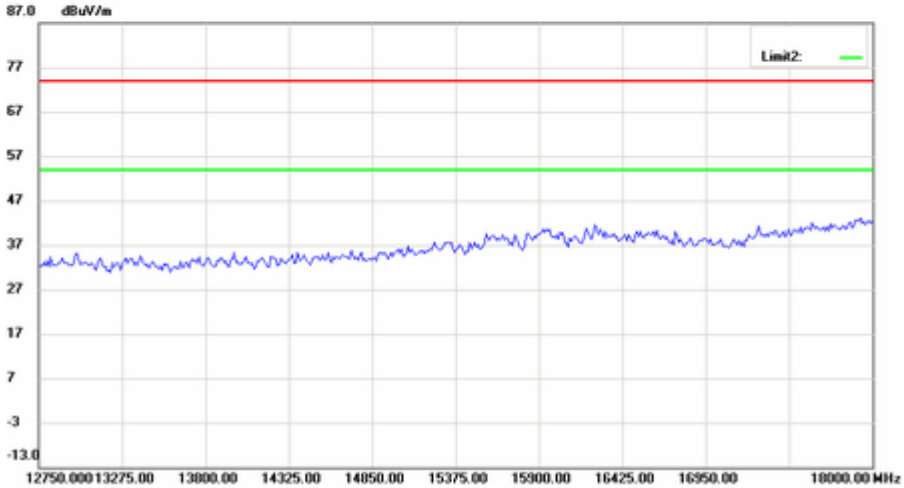

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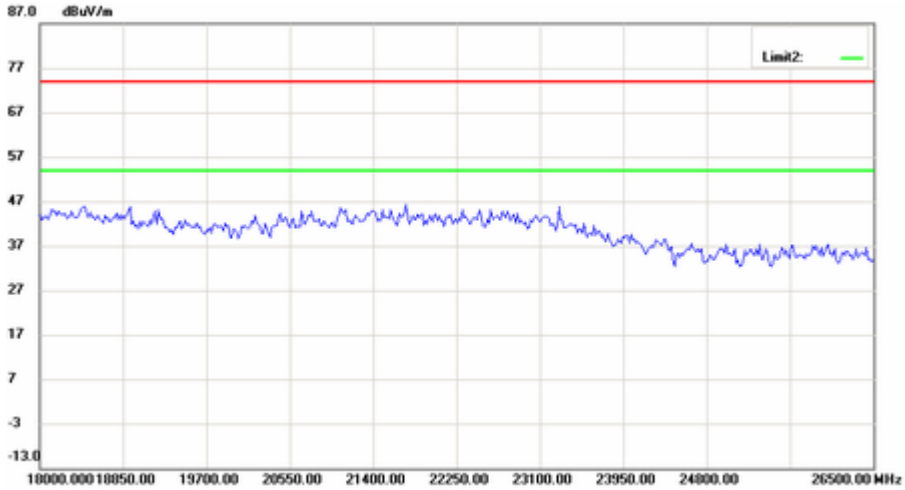
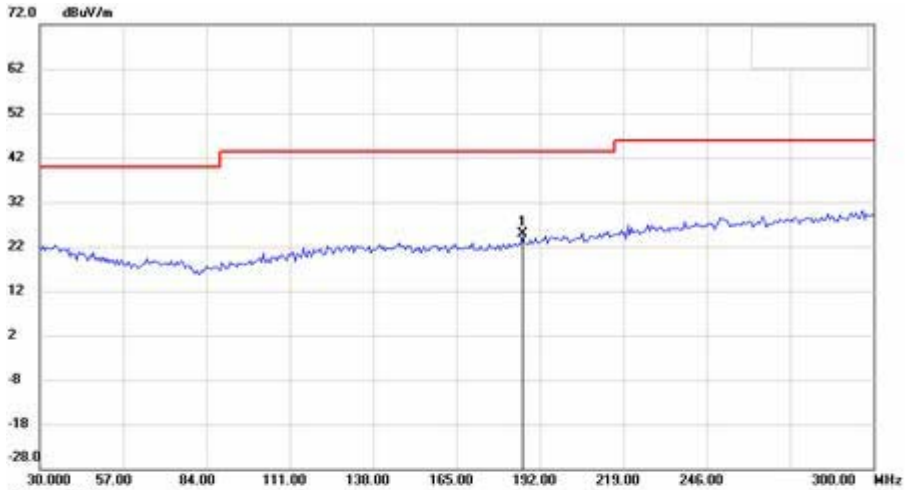
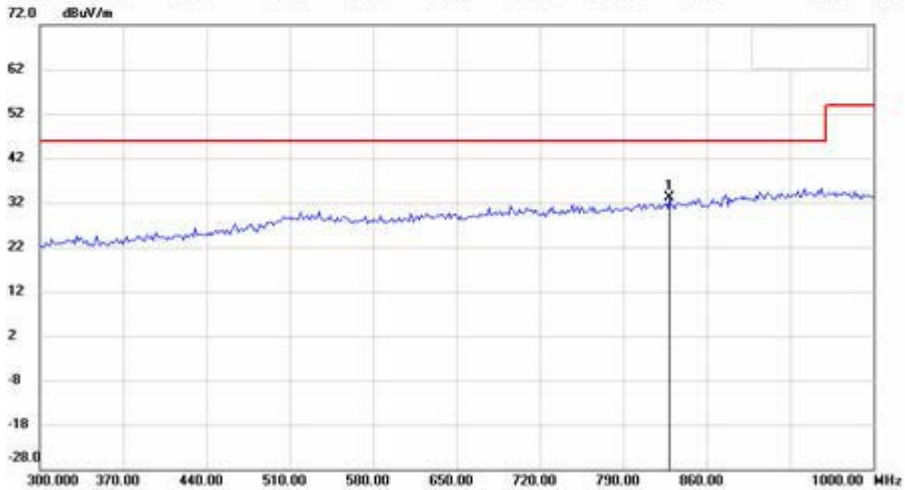


Antenna Polarization V





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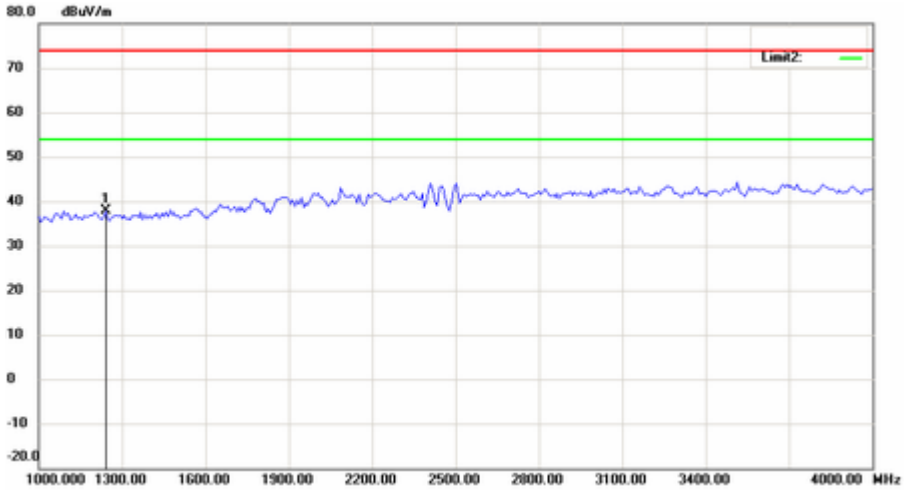

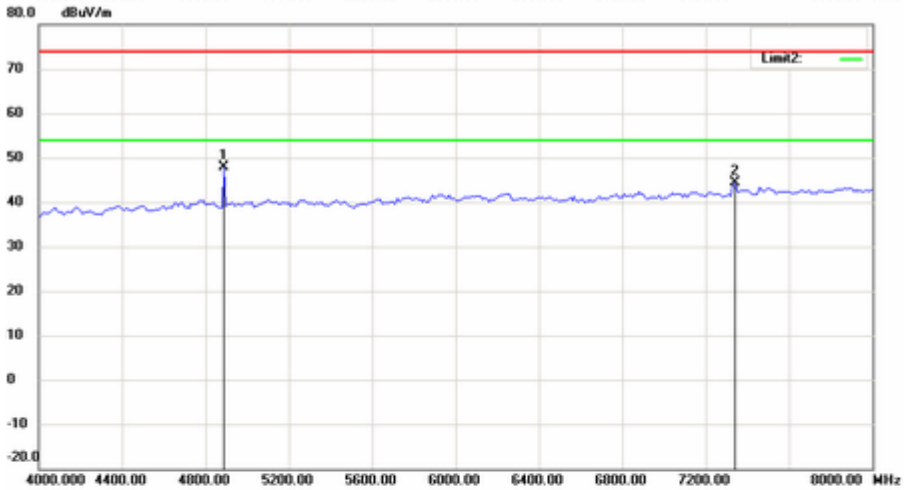

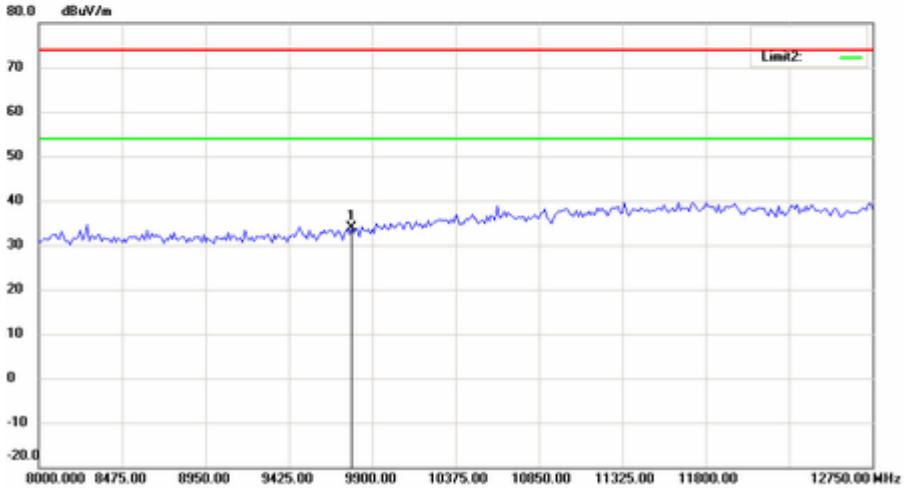

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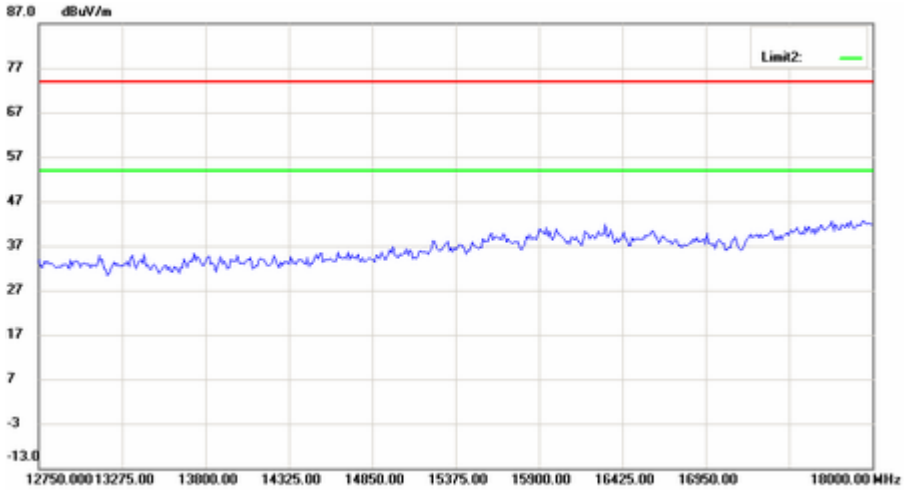
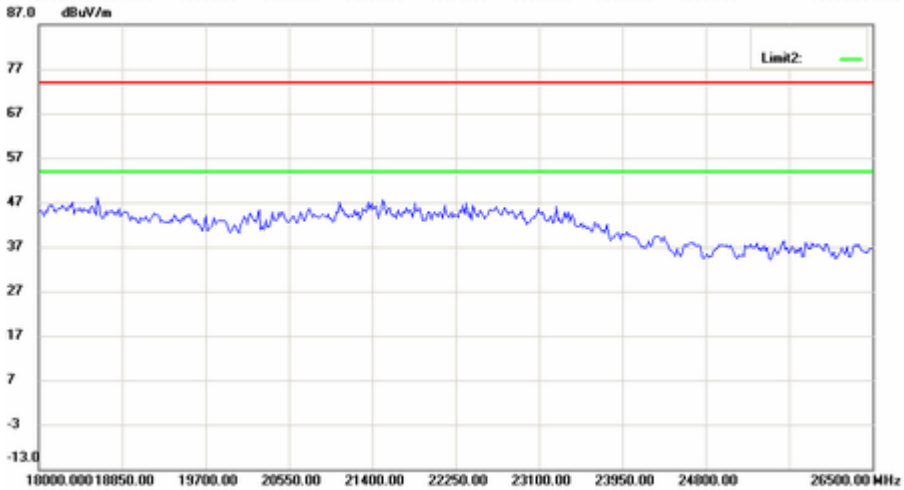
FCC ID: UJ96521





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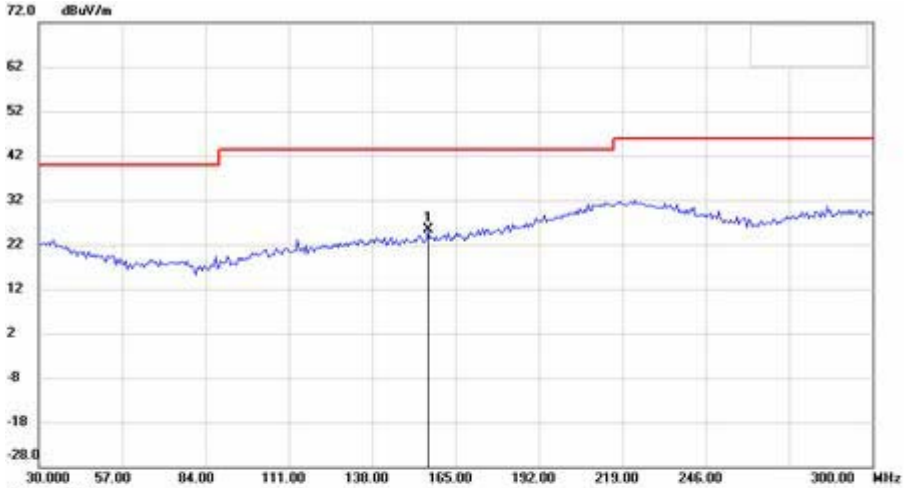
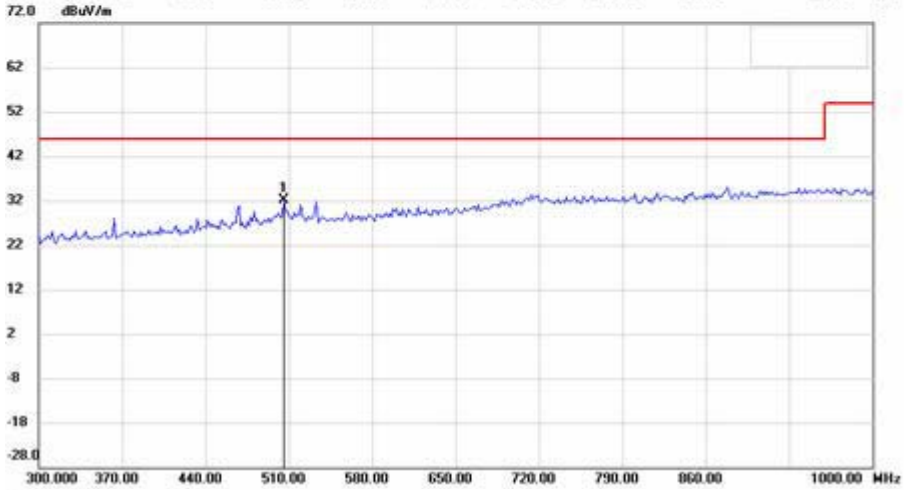
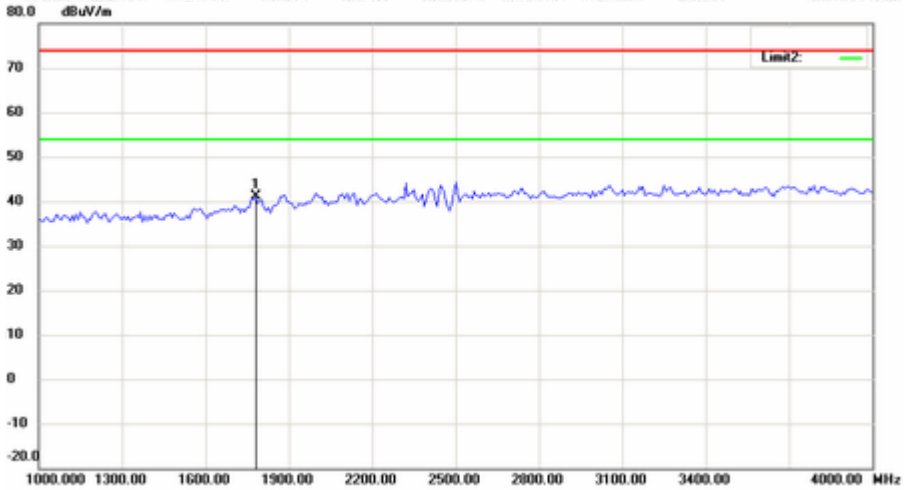
FCC ID: UJ96521

2473 MHz

Antenna Polarization H







Up Line: Peak Limit Line
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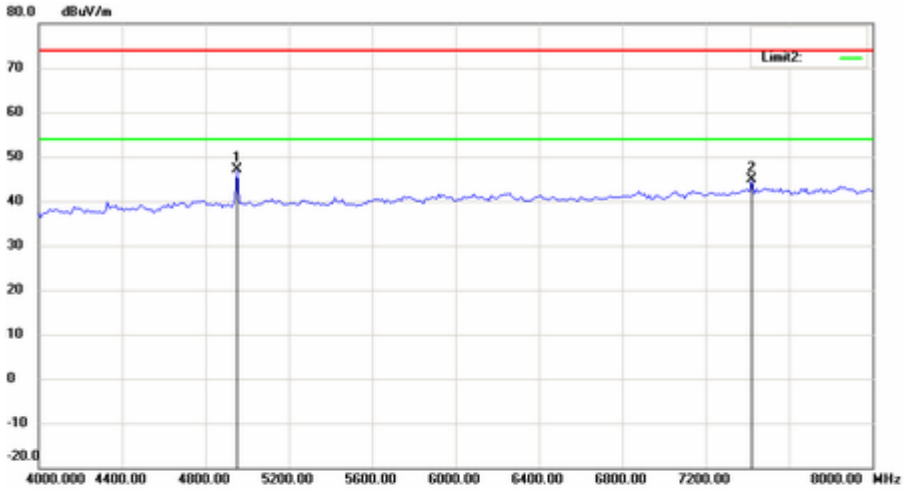
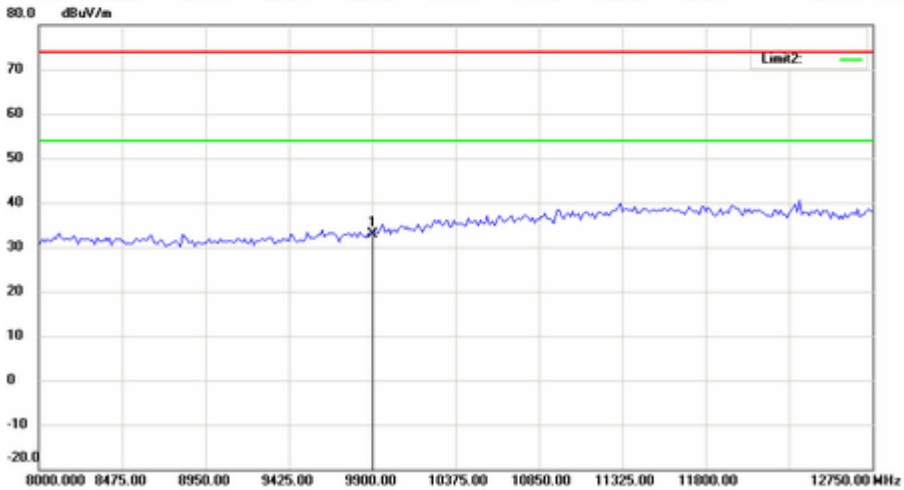
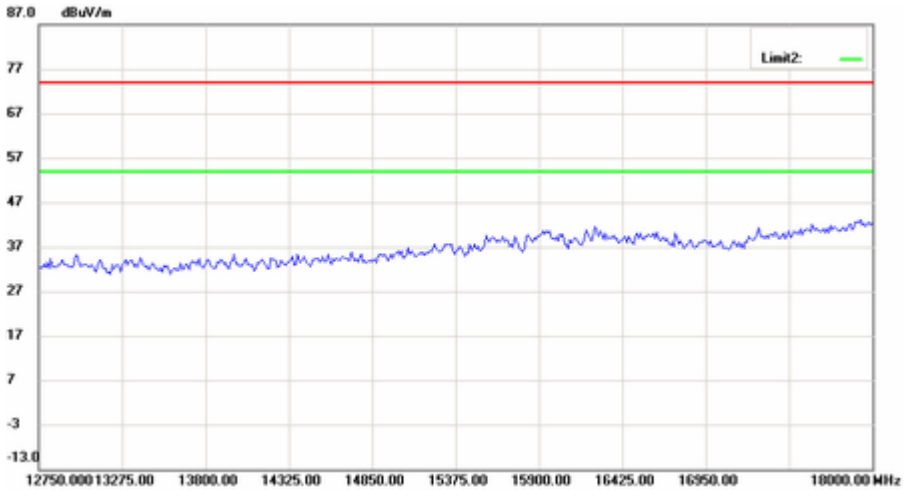
FCC ID: UJ96521







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

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

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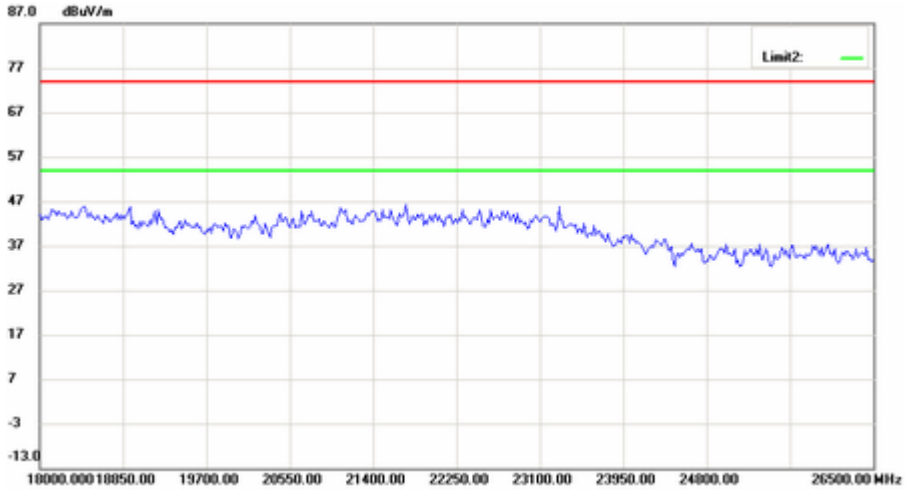
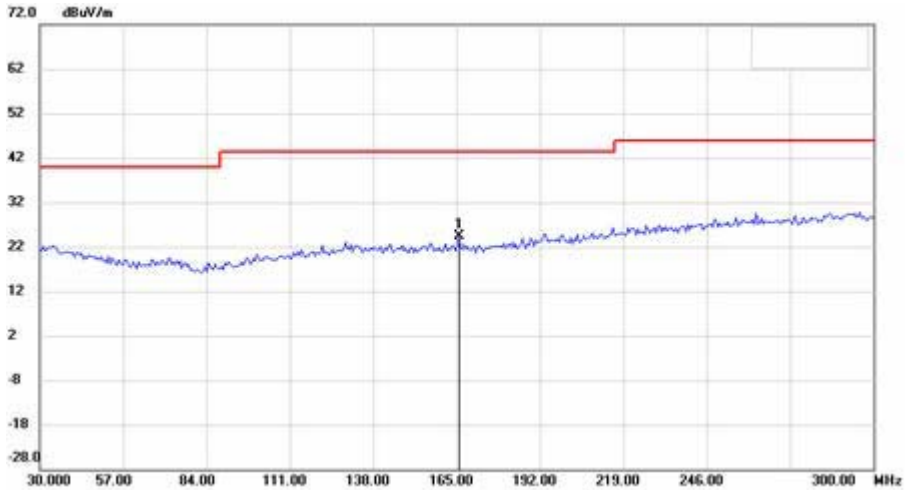
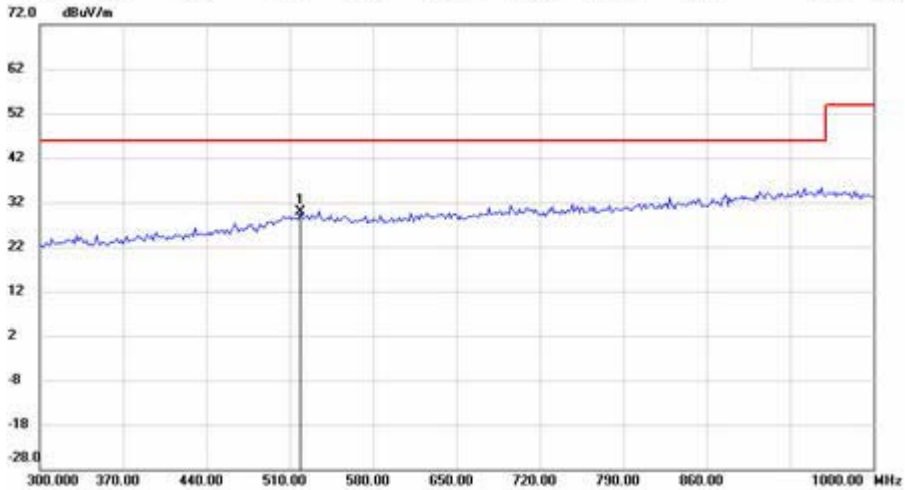


Antenna Polarization V





Up Line: Peak Limit Line
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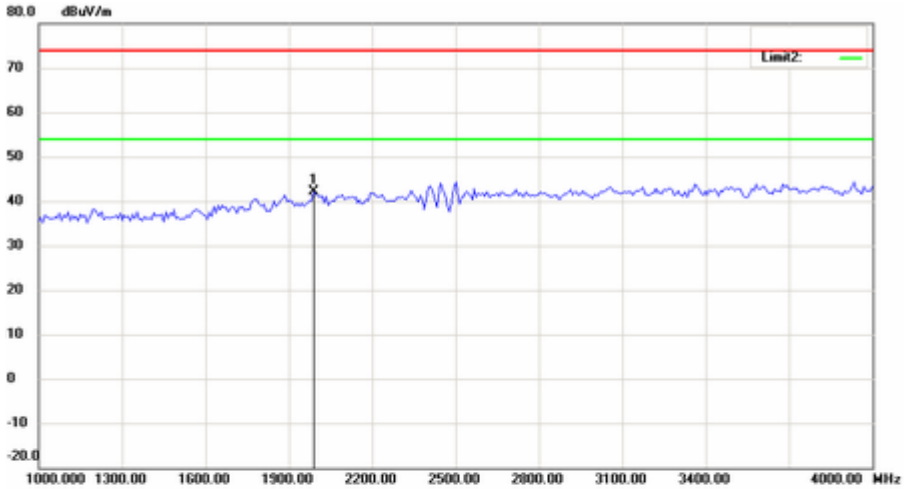

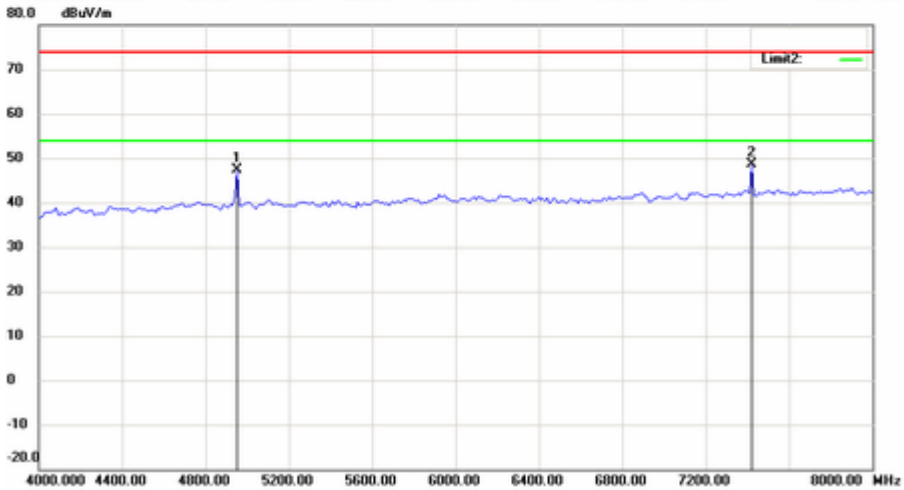

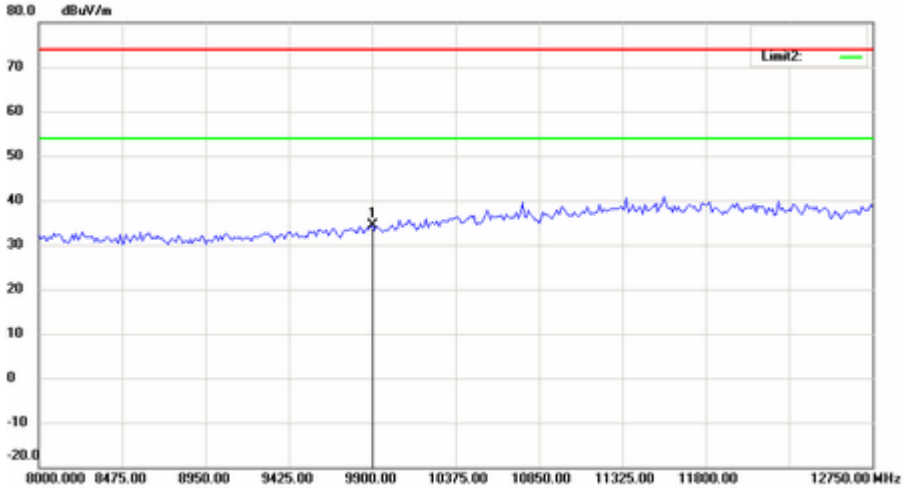

Up Line: Peak Limit Line
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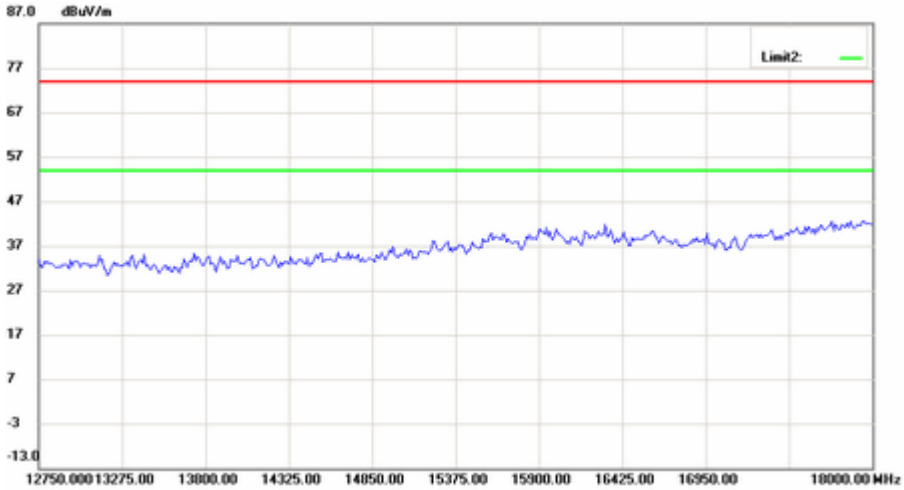

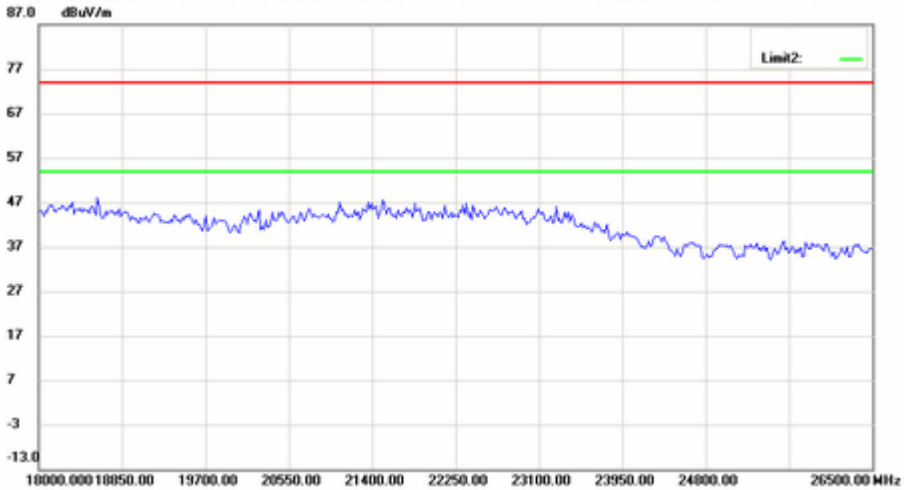

Up Line: Peak Limit Line
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Note:

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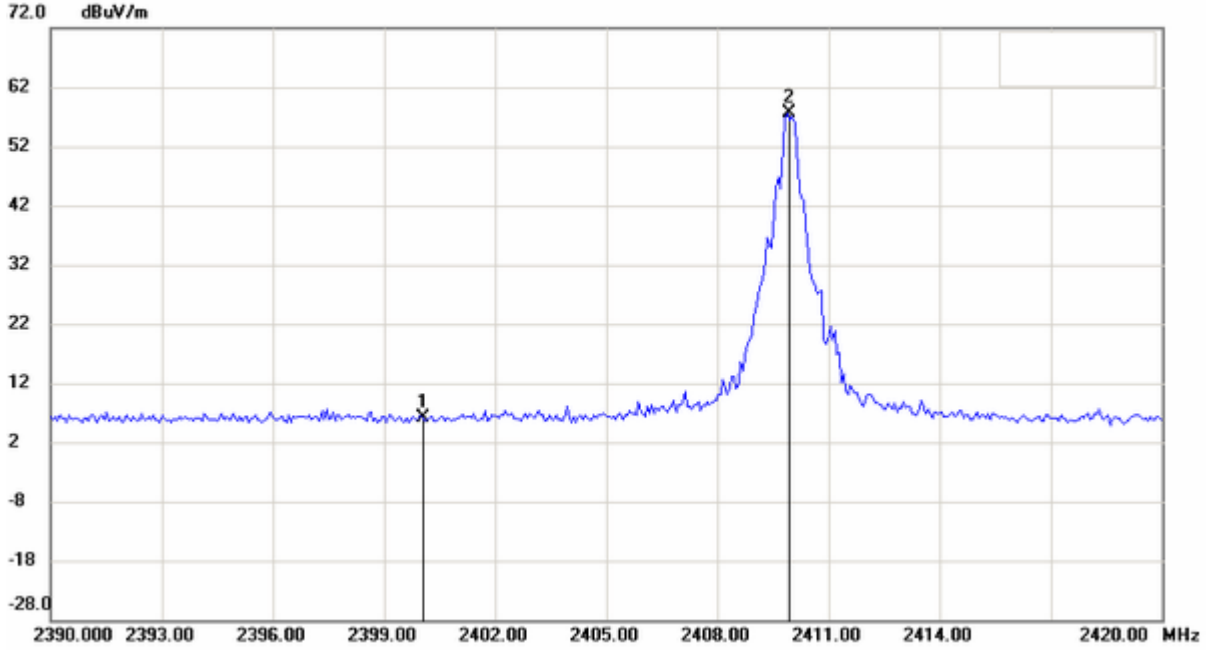
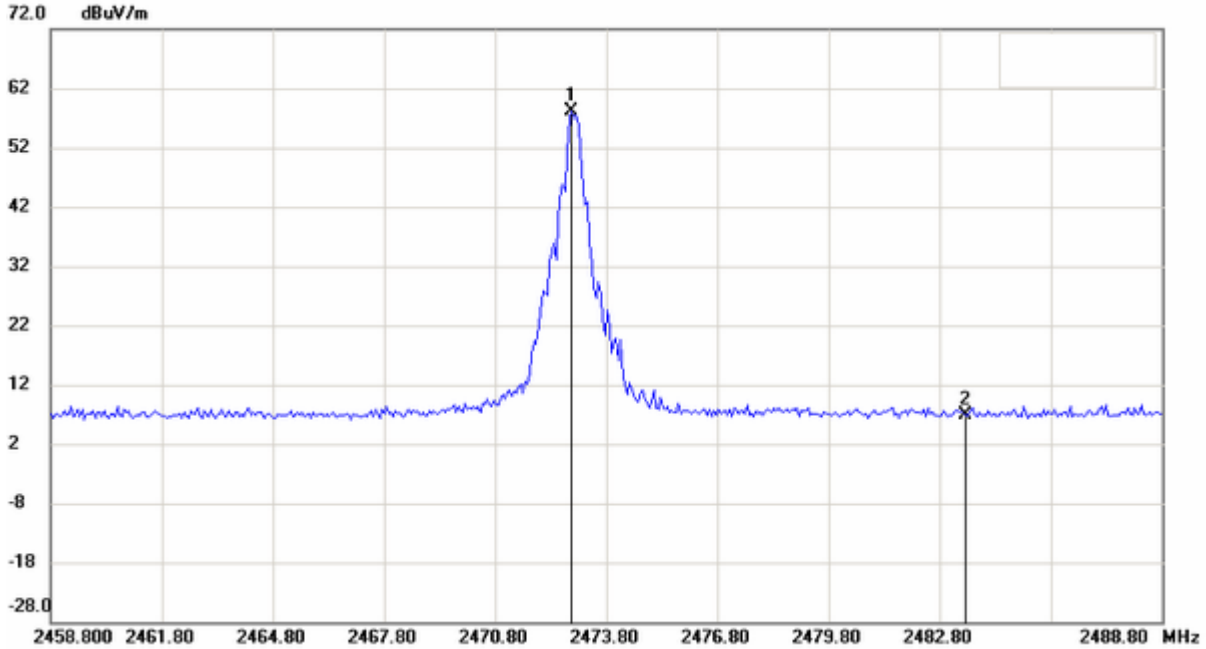
Radiated Emission on the band edge

2410 MHz



2473 MHz



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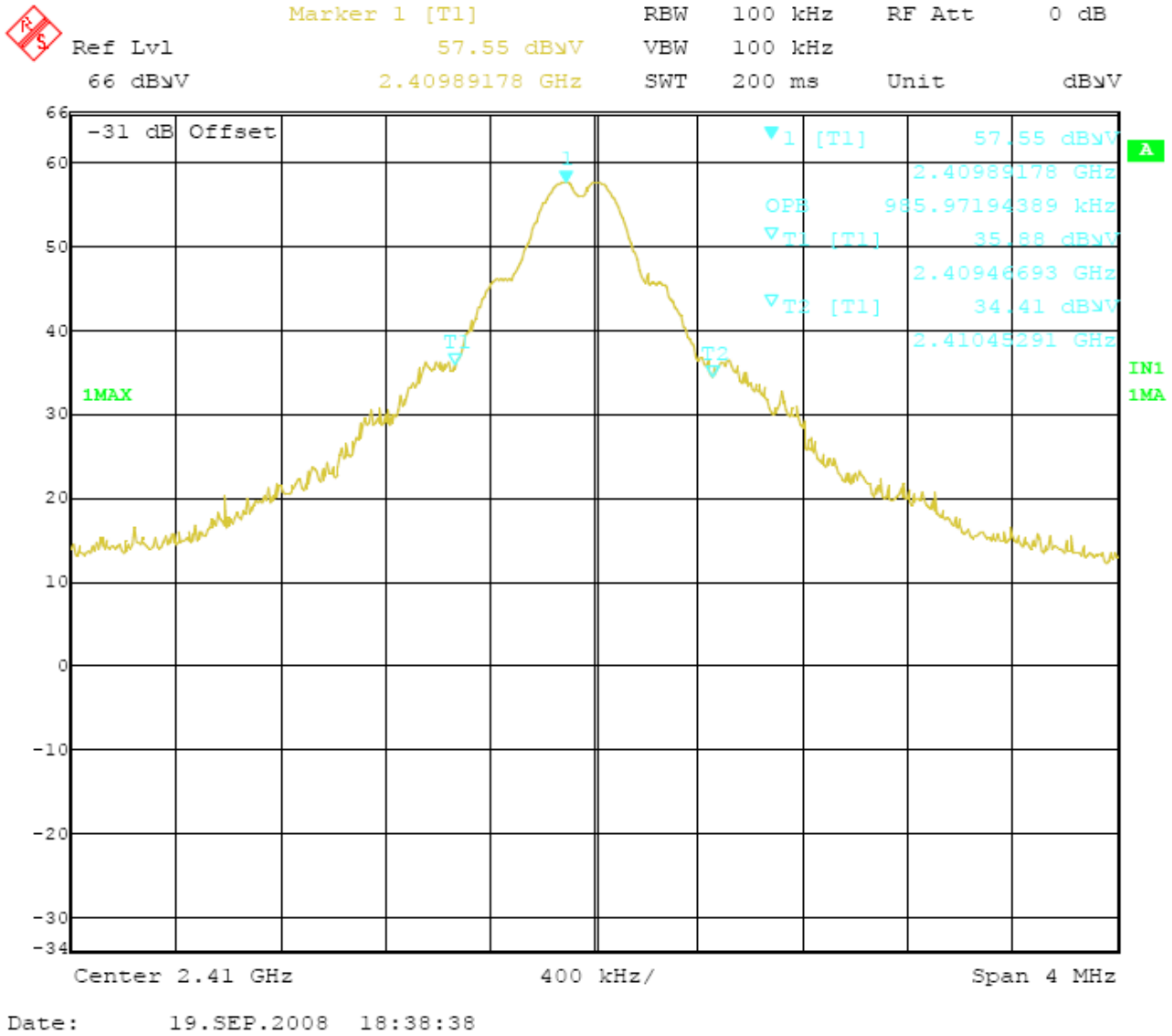
Occupied Bandwidth
2410 MHz



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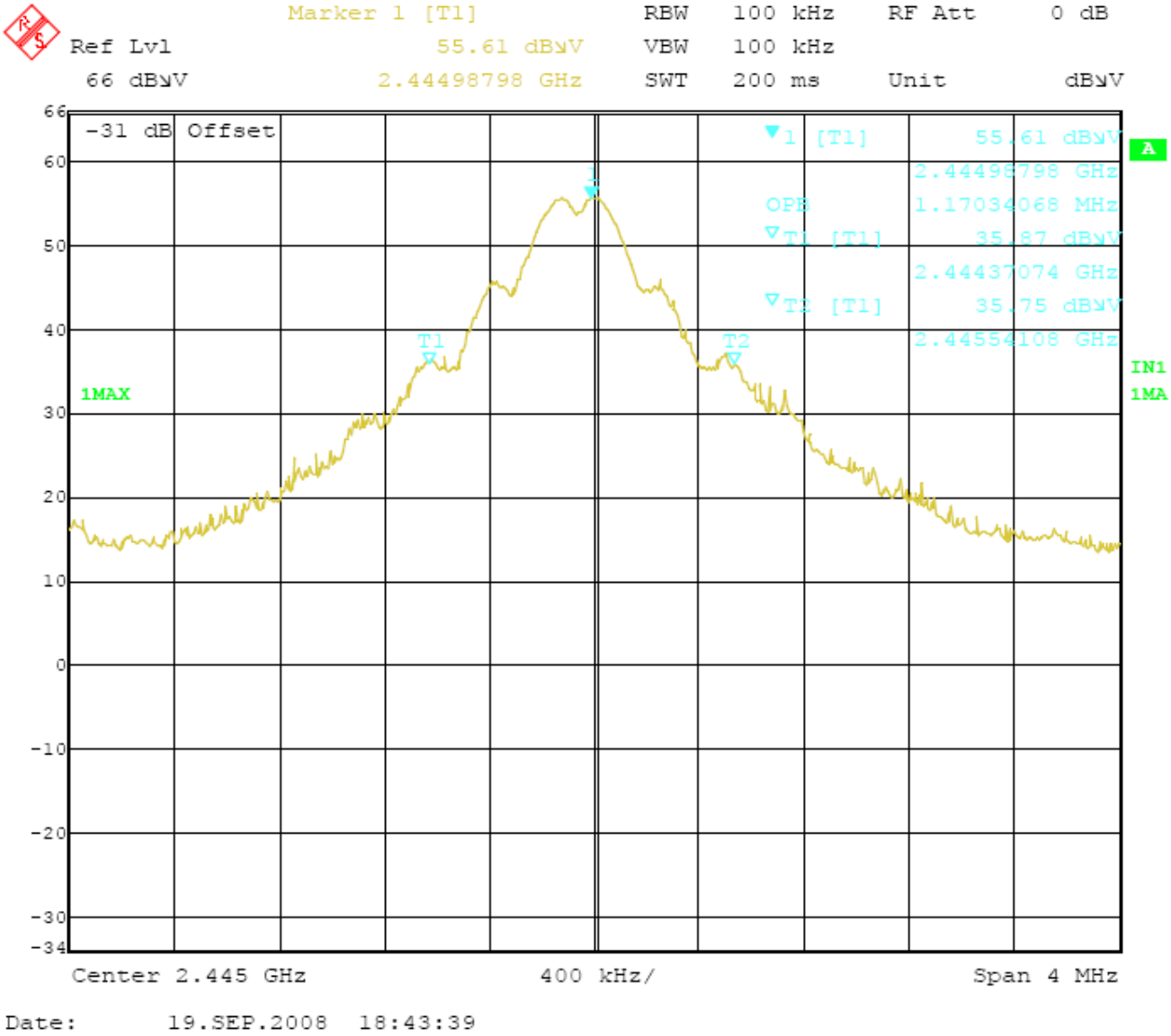
2445 MHz



Registration number: W6M20809-9320-P-15
FCC ID: UJ96521

2473 MHz