



# FCC PART 90 TYPE APPROVAL EMI MEASUREMENT AND TEST REPORT

For

# Kirmuss & Associates/ Infinity Advanced Technologies

13401 West 43rd Drive, Unit 11, Golden, Co., USA 80403

FCC ID: ULXKAP1010U

This Report Concerns: Equipment Type:

☑ Original Report UHF Two-way Radio

Test Engineer: Merry Zhao

**Report No.:** RSZ06052901

**Test Date:** 2007-05-23 to 2007-05-24

**Reviewed By:** EMC Manager: Boni Baniqued

**Report Date:** 2007-05-29

**Prepared By:** Bay Area Compliance Laboratory Corp. (Shenzhen)

6/F, the 3rd Phase of WanLi Industrial Building,

Joed-

ShiHua Road, FuTian Free Trade Zone

Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008

**Note:** This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratory Corp. (Shenzhen). This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

# TABLE OF CONTENTS

§2.1055 (d) and §90.213- FREQUENCY STABILITY	25
TEST RESULTS SUMMARY TEST DATA	22
TEST PROCEDURE	23
APPLICABLE STANDARD TEST EQUIPMENT LIST AND DETAILS	
§2.1053 and §90.210 - RADIATED SPURIOUS EMISSIONS	
TEST PROCEDURE TEST DATA	20
APPLICABLE STANDARD	20
§2.1051 and §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	
TEST DATA	
TEST PROCEDURE	18
APPLICABLE STANDARD TEST EQUIPMENT LIST AND DETAILS	
\$2.1049 and \$ 90.209 – OCCUPIED BANDWIDTH	
TEST DATA	
TEST PROCEDURE	15
APPLICABLE STANDARD	
§2.1047 and §90.207 - MODULATION CHARACTERISTIC	
TEST DATA	
TEST EQUIPMENT LIST AND DETAILS	
APPLICABLE STANDARD	
§2.1046 and §90.205 – RADIATED OUTPUT POWER	
TEST DATA	
TEST EQUIPMENT LIST AND DETAILS	
APPLICABLE STANDARD	
§2.1046 - CONDUCTED OUTPUT POWER	
§1.1310 §2.1093 - RF EXPOSURE	
SUMMARY OF TEST RESULTS	
BLOCK DIAGRAM OF TEST SETUP	
CONFIGURATION OF TEST SETUP	
EQUIPMENT MODIFICATIONS	
DESCRIPTION OF TEST CONFIGURATION	
SYSTEM TEST CONFIGURATION	
TEST METHODOLOGY TEST FACILITY	
RELATED SUBMITTAL(S)/GRANT(S)	
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	
GENERAL INFORMATION	

APPLICABLE STANDARD	25
TEST EQUIPMENT LIST AND DETAILS	25
TEST PROCEDURE	
TEST DATA	
§90.214 - TRANSIENT FREQUENCY BEHAVIOR	27
APPLICABLE STANDARD	27
TEST EQUIPMENT LIST AND DETAILS.	27
TEST PROCEDURE	
Test Data	27

#### **GENERAL INFORMATION**

#### **Product Description for Equipment under Test (EUT)**

The *Kirmuss & Associates/ Infinity Advanced Technologies's* product, model number: P-1010 or the "EUT" as referred to in this report is a UHF Portable Two-way Radio. The EUT is measured approximately 5.8 cm (W)× 2.7 cm(D)×23 cm(H), rated input voltage: DC 7.4 V battery.

\* The test data gathered are from production sample, serial number: 0605032, Provided by the manufacturer, we received the EUT on 2006-05-29.

#### **Objective**

This Type approval report is prepared on behalf of *Kirmuss & Associates/ Infinity Advanced Technologies* in accordance with Part 2, and Part 90 of the Federal Communication Commissions rules.

#### **Related Submittal(s)/Grant(s)**

No related submittal(s).

#### **Test Methodology**

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2, Sub-part J as well as the following individual parts:

Part 90 – Private Land Mobile Radio Service

Applicable Standards: TIA 603-C and ANSI 63.4-2003.

All emissions measurement was performed and Bay Area Compliance Laboratory Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

#### **Test Facility**

The Test site used by Bay Area Compliance Laboratory Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratory Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratory Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at <a href="http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm">http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm</a>.

# **SYSTEM TEST CONFIGURATION**

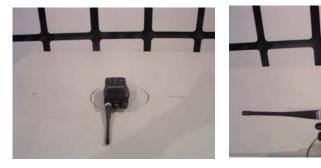
#### **Description of Test Configuration**

The system was configured for testing in a typical fashion (as normally used by a typical user).

# **Equipment Modifications**

Bay Area Compliance Laboratory Corp. (Shenzhen) has not done any modification on the EUT.

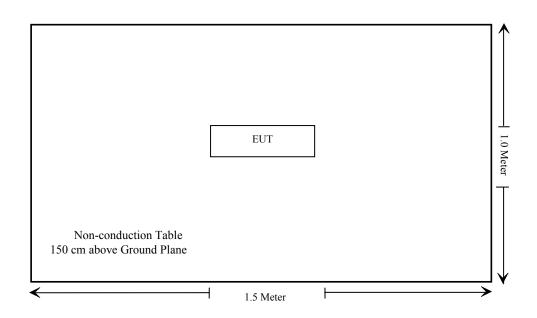
# **Configuration of Test Setup**





Lie Side Stand

# **Block Diagram of Test Setup**



# **SUMMARY OF TEST RESULTS**

Fcc Rules	Description of Test	Result
§1.1310 §2.1093	RF Exposure	Compliant, Pease refer to SAR report
§2.1046	Conducted Output Power	Compliant
§2.1046, §90.205	Radiated Output Power	Compliant
\$2.1047 \$90.207	Modulation Characteristic	Compliant
§2.1049, §90.209	Occupied Bandwidth	Compliant
§2.1051 §90.210	Spurious Emission at Antenna Terminal	Compliant
§ 2.1053 § 90.210	Spurious Radiated Emissions	Compliant
§ 2.1055 § 90.213	Frequency stability	Compliant
§ 90.214	Transient Frequency Behavior	Compliant

Kirmuss & Associates/ Infinity Advanced Technologies	FCC ID: ULXKAP10100
§1.1310 §2.1093 - RF EXPOSURE	
Please refer to SAR report.	

# §2.1046 - CONDUCTED OUTPUT POWER

# **Applicable Standard**

According to FCC §2.1046, and §90.205.

# **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2006-09-29	2007-09-29

<sup>\*</sup> Statement of Tractability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

#### **Test Procedure**

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

Spectrum Analyzer Setting:

R B/W Video B/W 100 kHz 300 kHz

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-23.

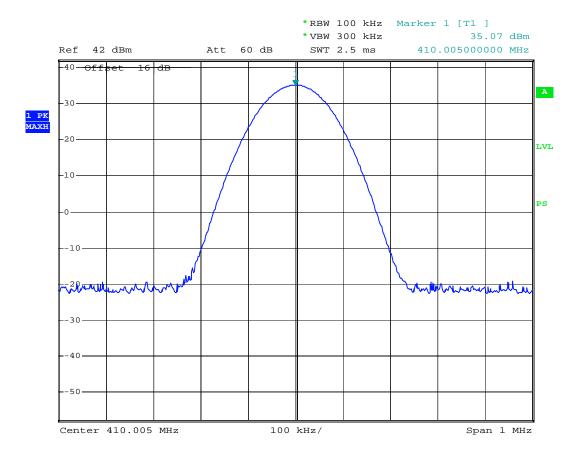
Test Result: Pass

Test Mode: Transmitting

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (w)	
Low	410.005	35.07	3.213	
Middle	445.250	36.16	4.130	
High	479.987	34.68	2.937	

Please refer to the following plots.

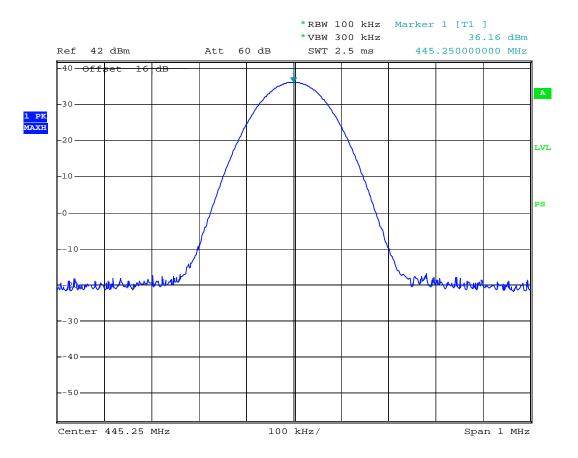
#### **Low Channel**



Kirmuss:P1010 low chanel RF output power

Date: 23.MAY.2007 10:16:38

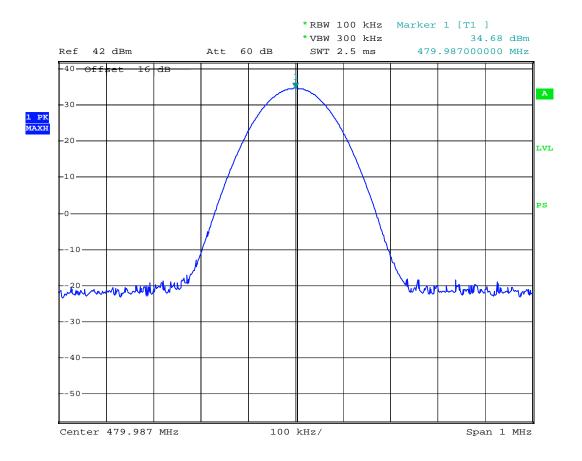
#### **Middle Channel**



Kirmuss:P1010 Middel chanel RF output power

Date: 23.MAY.2007 10:13:53

# **High Cchannel**



Kirmuss:P1010 high chanel RF output power

Date: 23.MAY.2007 10:19:13

# §2.1046 and §90.205 – RADIATED OUTPUT POWER

#### **Applicable Standard**

According to FCC §2.1046, and §90.205.

#### **Test Equipment List and Details**

Manufacturer	Description Model Serial Number		Calibration Date	Calibration Due Date	
Sunol Sciences	Horn Antenna	DRH-118	A052604	2006-09-25	2007-09-25
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2006-08-14	2007-08-14
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2006-08-14	2007-08-14
Agilent	Spectrum Analyzer	8564E	3943A01781	2006-11-22	2007-11-22
HP	Signal Generator	HP8657A	2849U00982	2006-09-29	2007-09-29
Giga-tronics	Signal Generator	1026	270801	2006-09-29	2007-09-29
A.H. System	Horn Antenna	SAS-200/571	135	2006-05-17	2007-05-17

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the ERP were measured by the substitution.

Absolute level = substituted level + Antenna gain – Cable Loss

# **Test Data**

# **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-23.

Test Result: Pass

Test Mode: Transmitting

Indica	ited	Table	Test Ar	ntenna	Substituted		Antenna Cable		Absolu	te Level	
Frequency (MHz)	Ampl (dBuV)	Angle Degree	Height (m)	Polar H/V	Frequency (MHz)	Level (dBm)	Polar H/V	Gain Correction	Loss	(dBm)	Watt
				Lov	w Channel (41	0.005 MHz	)				
410.005	113.44	154	1.5	V	410.005	40	V	0	3.55	36.45	4.415
410.005	99.41	147	1.6	Н	410.005	24.5	Н	0	3.55	20.95	0.124
				Mido	dle Channel (4	45.250 MH	z)				
445.25	114.52	154	1.5	V	445.25	40.50	V	0	3.73	36.77	4.753
445.25	102.17	147	1.6	Н	445.25	28.05	Н	0	3.73	24.32	0.27
High Channel (479.9875 MHz)											
479.9875	109.33	154	1.5	V	479.9875	39.85	V	0	4.0	35.85	3.845
479.9875	95.73	147	1.6	Н	479.9875	25.6	Н	0	4.0	21.6	0.144

# §2.1047 and §90.207 - MODULATION CHARACTERISTIC

#### **Applicable Standard**

§2.1047 & §90.207:

- (a) Equipment which utilizes voice modulated communication shall show the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz. for equipment which is required to have a low pass filter, the frequency response of the filter, or all of the circuitry installed between the modulation limited and the modulated stage shall be supplied.
- (b) Equipment which employs modulation limiting, a curve showing the percentage of modulation versus the modulation input voltage shall be supplied.

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
НР	Modulation Analyzer	8901B	3438A05208	2007-03-01	2008-03-01
NANYAN	Audio Generator	NY2201	019829	2006-12-23	2007-12-23

<sup>\*</sup> **Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

TIA/EIA-603 2.2.3

#### **Test Data**

#### **Environmental Conditions**

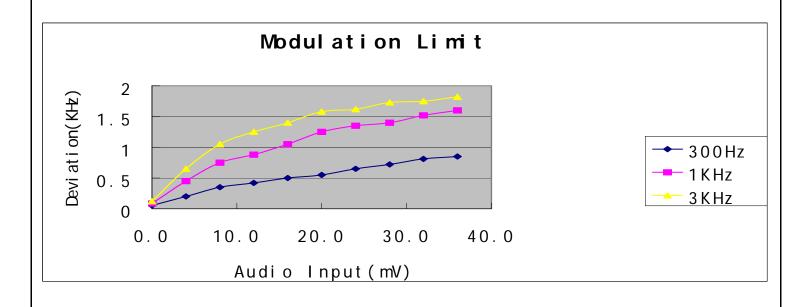
Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-24.

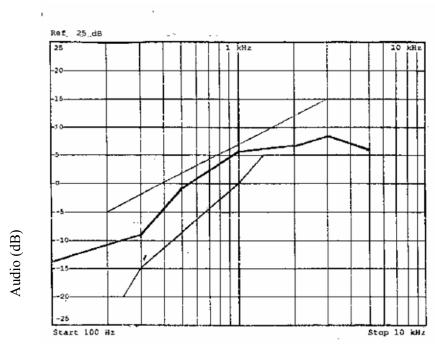
**Test Result:** Pass

For 12.5 kHz Channel Spacing:

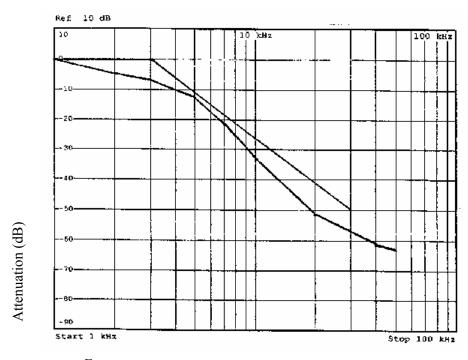
Audio Input (mV)	300Hz Deviation (kHz)	1kHz Deviation (kHz)	3kHz Deviation (kHz)
0.0	0.053	0.085	0.12
4.0	0.2	0.45	0.65
8.0	0.35	0.75	1.05
12.0	0.42	0.88	1.25
16.0	0.5	1.05	1.40
20.0	0.55	1.25	1.58
24.0	0.65	1.35	1.62
28.0	0.72	1.40	1.73
32.0	0.81	1.52	1.75
36.0	0.85	1.6	1.82



# Audio Low Filter Characteristic:



Frequency



Frequency

# §2.1049 and § 90.209 – OCCUPIED BANDWIDTH

# **Applicable Standard**

§2.1049, §90.209 and §90.210

Emission Mask D—12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- 1) On any frequency from the center of the authorized bandwidth f0 to 5.625 kHz removed from f0: Zero dB
- 2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 5.625 kHz but no more than 12.5 kHz: At least 7.27(fd-2.88 kHz) dB.
- 3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 12.5 kHz: At least  $50 + 10 \log (P) dB$  or 70 dB, whichever is the lesser attenuation.

 $43+10\log P=50+10\log (4.487)=56.52dB$ 

The resolution bandwidth was 300Hz or greater for measuring up to 250kHz from the edge of the authorized frequency segment, and 30kHz or greater for measuring more than 250kHz from the authorized frequency segment.

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2006-09-29	2007-09-29
HP	Modulation Analyzer	8901B	3438A05208	2007-03-01	2008-03-01
NANYAN	Audio Generator	NY2201	019829	2006-12-23	2007-12-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 300 Hz and the spectrum was recorded in the frequency band  $\pm 50$  KHz from the carrier frequency.

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

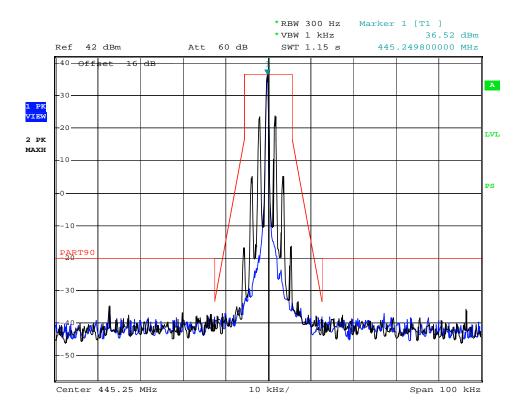
The testing was performed by Merry Zhao on 2007-05-23.

**Test Result:** Pass .Please refer to the following plot.

Emission Designator:

For 12.5 kHz Channel Spacing: 2M+2D = 2x3+2x2.5 = 11K0F3E

# Emission Mask D for 12.5 kHz Channel Spacing



Kirmuss UHF portable two-way radio P1010 Emission mask(12.5k  $_{\mbox{\scriptsize Hz}\,\mbox{\scriptsize )}}$ 

Date: 23.MAY.2007 11:36:07

# §2.1051 and §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

#### **Applicable Standard**

§2.1051and §90.210 (25 kHz bandwidth and 20 kHz bandwith)

On any frequency removed from the center of the assigned channel by more than 250 percent at least:

 $43+10\log P=43+10\log (3.837)=48.84dB$ 

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2006-09-29	2007-09-29
Agilent	Spectrum Analyzer	8564E	3943A01781	2006-11-22	2007-11-22

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

The RF output of the UHF Portable Two-way Radio was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.

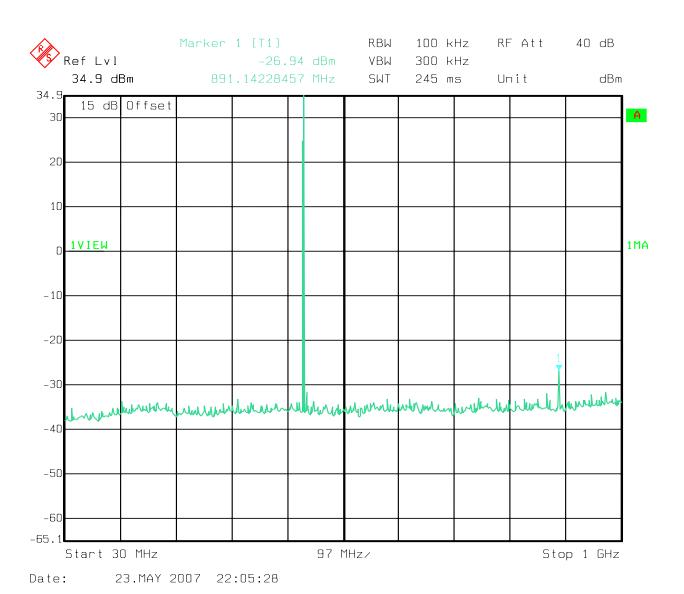
#### **Test Data**

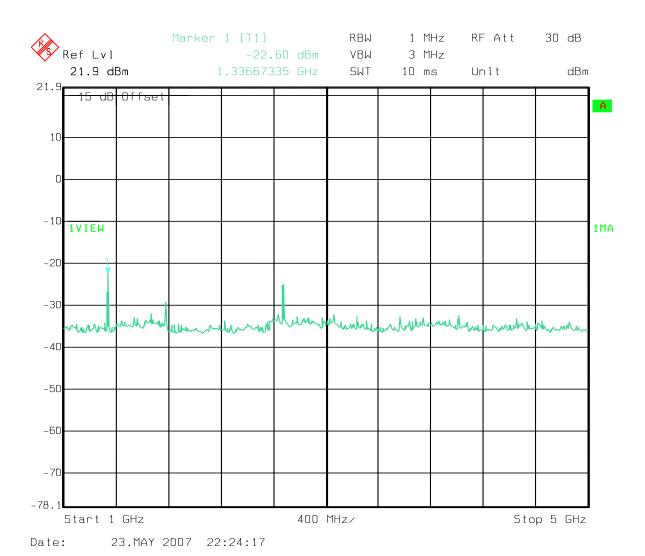
#### **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-23.

**Test Result:** Pass. Please refer to the following plot.





#### §2.1053 and §90.210 - RADIATED SPURIOUS EMISSIONS

# **Applicable Standard**

§2.1053 and §90.210

#### **Test Equipment List and Details**

Manufacturer	Description	Model Serial Number		Calibration Date	Calibration Due Date
Sunol Sciences	Horn Antenna	DRH-118	A052604	2006-09-25	2007-09-25
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2006-08-14	2007-08-14
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2006-08-14	2007-08-14
Agilent	Spectrum Analyzer	8564E	3943A01781	2006-11-22	2007-11-22
HP	Signal Generator	HP8657A	2849U00982	2006-09-29	2007-09-29
Giga-tronics	Signal Generator	1026	270801	2006-09-29	2007-09-29
A.H. System	Horn Antenna	SAS-200/571	135	2006-05-17	2007-05-17

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB =10 1g (TXpwr in Watts/0.001)-the absolute level

Spurious attenuation limit in dB =50+10 Log<sub>10</sub> (power out in Watts)

#### **Test Results Summary**

3.47 dB at 3562.00 MHz

# **Test Data**

# **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-24.

Test Mode: Transmitting

Indica	ated	Table	Te Ante		Subs	stituted		Antenna	Cable	Absolute Level	FCC	Part 90
	Meter Reading	Angle Degree	Height		Frequency (MHz)			Gain	Loss (dB)	(dBm)	Limit (dBm)	Margin (dB)
3562.00	64.45	305	1.1	Н	3562.00	-30.0	Н	7.2	0.67	-23.47	-20	3.47
2671.50	62.15	258	1.2	V	2671.50	-31.5	V	7.0	0.38	-24.88	-20	4.88
4014.00	60.61	210	1.2	Н	4014.00	-31.0	Н	6.6	0.86	-25.26	-20	5.26
4014.00	62.64	45	1.1	V	4014.00	-31.0	V	6.6	0.86	-25.26	-20	5.26
890.50	43.30	145	1.8	Н	890.50	-19.5	Н	0.0	5.82	-25.32	-20	5.32
3562.00	60.24	135	1.3	V	3562.00	-32.4	V	7.2	0.67	-25.87	-20	5.87
2226.25	65.50	230	1.2	Н	2226.25	-34.5	Н	7.0	0.32	-27.82	-20	7.82
2226.25	63.33	320	1.4	V	2226.25	-36.0	V	7.0	0.32	-29.32	-20	9.32
2671.50	58.85	145	1.5	Н	2671.50	-38.0	Н	7.0	0.38	-31.38	-20	11.38
890.50	37.40	168	1.6	V	890.50	-28.0	V	0.0	5.82	-33.82	-20	13.82
1335.75	68.14	254	1.5	V	1335.75	-40.0	V	6.2	0.33	-34.13	-20	14.13
1335.75	67.13	256	1.5	Н	1335.75	-42.0	Н	6.2	0.33	-36.13	-20	16.13
1781.00	64.00	179	1.4	V	1781.00	-42.5	V	6.1	0.43	-36.83	-20	16.83
1781.00	58.45	158	1.5	Н	1781.00	-46.0	Н	6.1	0.43	-40.33	-20	20.33

# **§2.1055 (d) and §90.213- FREQUENCY STABILITY**

# **Applicable Standard**

§2.1055 (d)

§90.213

For output power > 2 watts, the limit is 2.5ppm.

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
WUHUAN	Temperature & Humidity Chamber	HTP205	20021115	2006-12-28	2007-12-28
Hewlett-Packard	Frequency Counter	5342A	2317A08289	2007-03-28	2008-03-28

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a f Spectrum Analyzer via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the counter.

The frequency stability shall be measured with variation of primary supply voltage as follows:

For hand carried, battery powered equipment, reduce primary supply to the battery operating end point which shall be specified by the measurement.

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-24.

**Test Result:** Pass

Frequency Stability versus Temperature:

Reference Frequency:445.25000 MHz, Limit: 2.5 ppm						
<b>Environment Temperature</b>	Power Supplied	Frequency Measure with Time Elapsed				
(°C)	(Vdc)	MCF (MHz)	Error (ppm)			
50	7.4	445.250040	0.090			
40	7.4	445.250020	0.045			
30	7.4	445.250000	0.000			
20	7.4	445.250000	0.000			
10	7.4	445.250000	0.000			
0	7.4	445.250110	0.247			
-10	7.4	445.250080	0.180			
-20	7.4	445.250080	0.180			
-30	7.4	445.250100	0.224			

Frequency Stability versus Input Voltage:

Reference Frequency:445.25 MHz, Limit: 2.5 ppm					
Power Supplied					
(Vdc)	Frequency (MHz) Error (ppm)				
6.5	445.250060	0.134			

# §90.214 - TRANSIENT FREQUENCY BEHAVIOR

#### **Applicable Standard**

§90.214

# **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
TEKTRONIX	Digital Phosphor Oscilloscope	TDS 7104	B020518	2007-03-01	2008-03-01
HP	Modulation Analyzer	8901B	3438A05208	2007-03-01	2008-03-01
HP	Signal Generator	HP8657A	2849U00982	2006-09-29	2007-09-29

<sup>\*</sup> **Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

#### **Test Procedure**

TIA/EIA-603 2.2.19

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	1005mbar

The testing was performed by Merry Zhao on 2007-05-24.

**Test Result:** Pass. Please refer to the following plos.

Operation Frequency (MHz)	Channel Separation (kHz)	Transient Period (ms)	Transient Frequency	Result
445.25	12.5	10	<+/-12.5 kHz	
		25	<+/-6.25 kHz	Pass
		10	<+/-12.5 kHz	

#### Turn on



#### Turn off

