



NVLAP LAB CODE 200707-0



**FCC PART 90 TYPE APPROVAL
MEASUREMENT AND TEST REPORT
For
Shenzhen Friendcom Telecom Co. Ltd.**

2/F, Multifunction Building, Dongpeng Industrial Park, Wuhao Road,
North Section of Hi-tech Park, Nanshan, Shenzhen City 518057 P.R. of China

FCC ID: UU3FC401-2-06

This Report Concerns: <input checked="" type="checkbox"/> Original Report		Equipment Type: Control Unit	
Test Engineer:	Deny Xiong <i>Deny Xiong</i>		
Report No.:	RSZ06121204		
Test Date:	2006-12-27 to 2006-12-28		
Report Date:	2007-07-24		
Reviewed By:	EMC Manager: Boni Baniqued <i>Boni Baniqued</i>		
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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.

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Shenzhen Friendcom Telecom Co. Ltd.*'s product, model number: *FC401-2* or the "EUT" as referred to in this report is a *Control Unit*. The EUT is measured approximately 25.0 cm L x 20.0 cm W x 9.0 cmH, DC Voltage Range: 10.8 V-13.8V.

** The test data gathered are from production sample, serial number: 0612013, Provided by the manufacturer, we received the EUT on 2006-12-12.*

Objective

This Type approval report is prepared on behalf of *Shenzhen Friendcom Telecom Co. Ltd.* 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).



NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at
<http://ts.nist.gov/ts/hdocs/210/214/scopes/2007070.htm>.

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.

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR	DoC
DELL	Power Supply	NPS-250KB D	CN-0H2678-17972-56E8NBM	DoC
Seagate	Hard Disk	ST340014A	5JXK3NAD	DoC
DELL	3.5" Floppy	N/A	CN-0N8893-69802-54Q-02OZ	DoC
Lite-ON	CD-Rom	LTN-489S	N/A	DoC
Intel	Ethernet	PRO 10/100 VE	N/A	DoC
Intel	CPU	Celeron D-2533	N/A	DoC
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700	DoC
DELL	PC	DELL 170L	CN-0TC670-70821-560-F4WQ	DoC

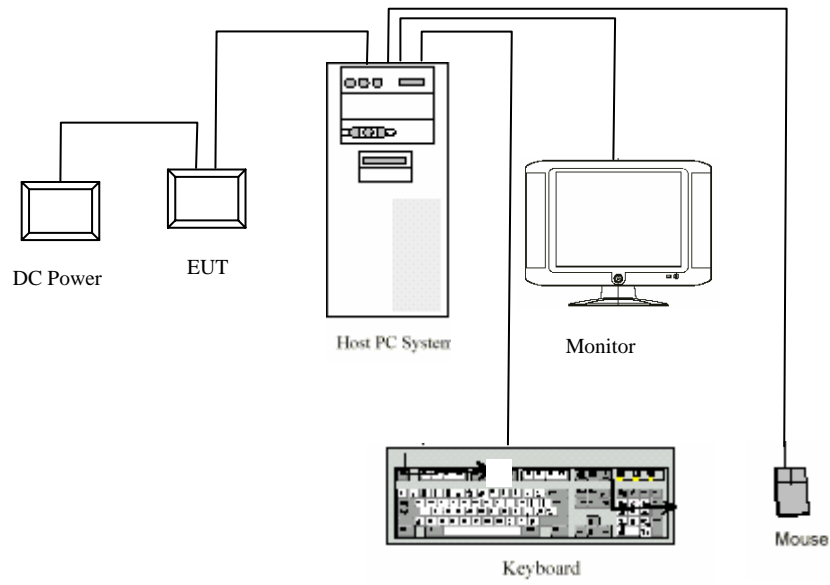
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	Keyboard	SK-8110	CN07N244-71616-56I-1I00	DoC
DELL	Mouse	M071KC	519046820	DoC
DELL	LCD Monitor	1505FP	Y4287-7168-574-GBSH	DoC
ZAOXIN	DC Power	T-S076	20030842184	DoC

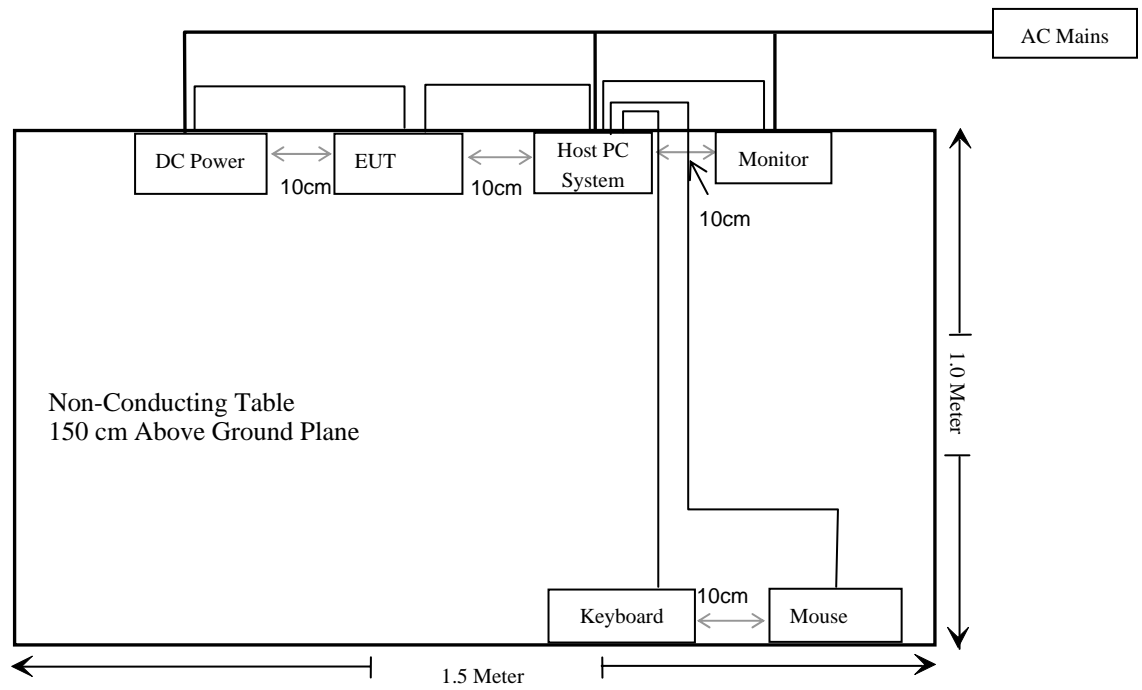
External I/O Cable

Cable Description	Length (M)	From/Port	To
Shielded Detachable K/B Cable	1.5	K/B Port /Host	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port /Host	Mouse
Shielded Detachable VGA Cable	1.5	VGA Port /Host	Monitor
Antenna	1.1	EUT	Antenna
Control Line	1.2	EUT	PC
Power Line	1.5	EUT	DC Source

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 §2.1091	RF Exposure	Compliant
§2.1046	Conducted Output Power	Compliant
§2.1046, §90.205	Radiated Output Power	Compliant
§2.1047, and §90.207	Modulation Characteristic	Compliant
§2.1049, §90.209, §90.210	Occupied Bandwidth (Emissions Mask)	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

§1.1310 §2.1091- RF EXPOSURE

Limit

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Limits for Occupational/Controlled Exposures				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300.	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

f = frequency in MHz

* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally **numeric** gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Maximum peak output power at antenna input terminal (dBm): 34.07

Maximum peak output power at antenna input terminal (mW): 2553

Prediction distance (cm): 30 (>20)

Prediction frequency (MHz): 460

Antenna Gain, typical (dBi): 5.5

Maximum Antenna Gain (numeric): 3.548

Power density at predication frequency at 30 cm (mW/cm²): 0.8

MPE limit for uncontrolled exposure at predication frequency (mW/cm²): 460/300=1.53

$$0.8 \text{ (mW/cm}^2\text{)} < 1.53 \text{ (mW/cm}^2\text{)}$$

Result: The Power Density Level at 30 cm is 0.8 mW/cm² which is below the controlled exposure

limit of 1.53 mW/cm² at 460 MHz.

Please refer to the user's manual in details.

§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

* **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:	100.5kPa

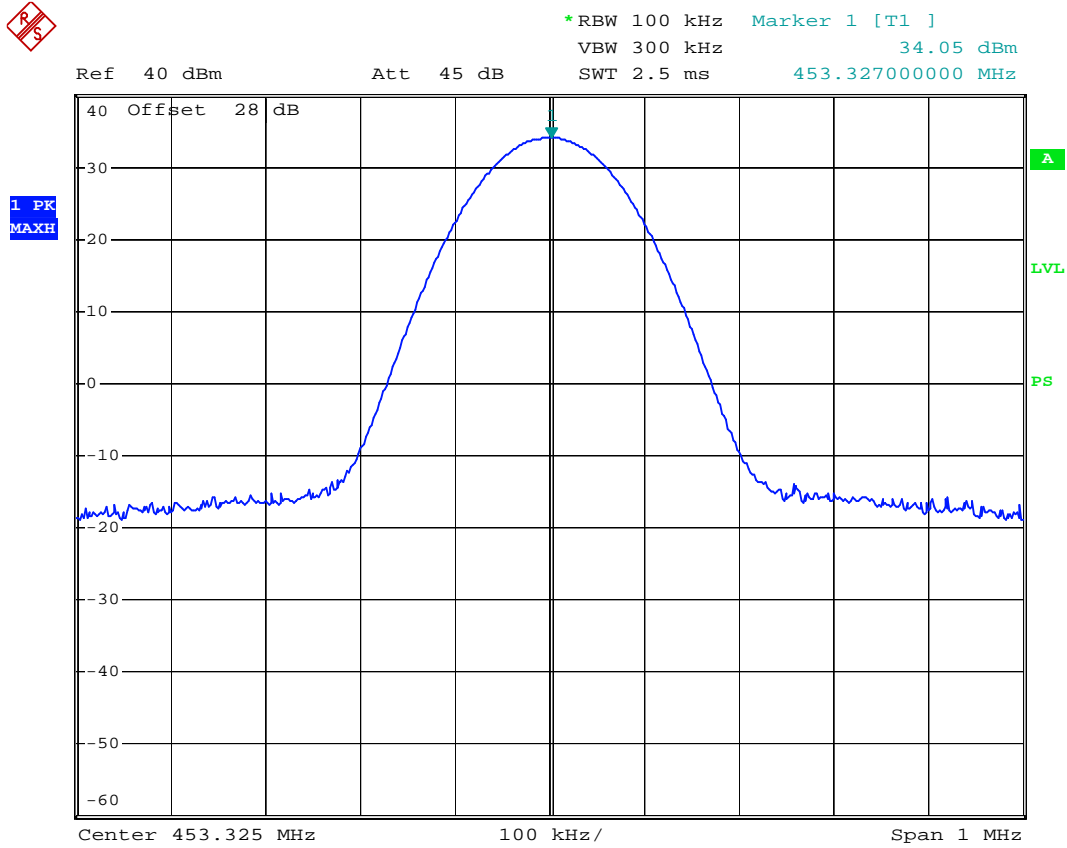
The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

Frequency Spacing (kHz)	Frequency (MHz)	Output Power (dBm)	Output Power (Watt)
Low channel			
25	453.325	34.05	2.541
Middle channel			
25	460.0	34.07	2.553
High channel			
25	468.0	34.04	2.535

Please refer to the following plots:

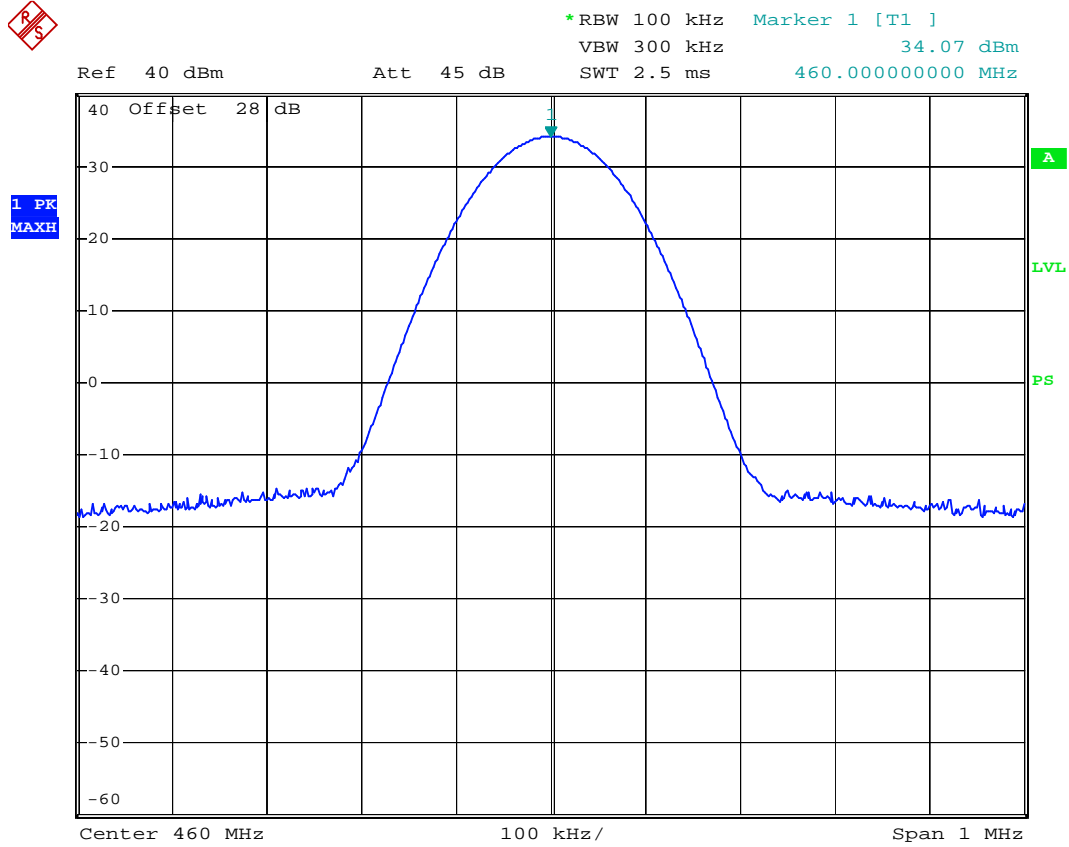
Low Channel



M/N:FC401-2 Conducted output power low channel

Date: 27.DEC.2006 16:45:23

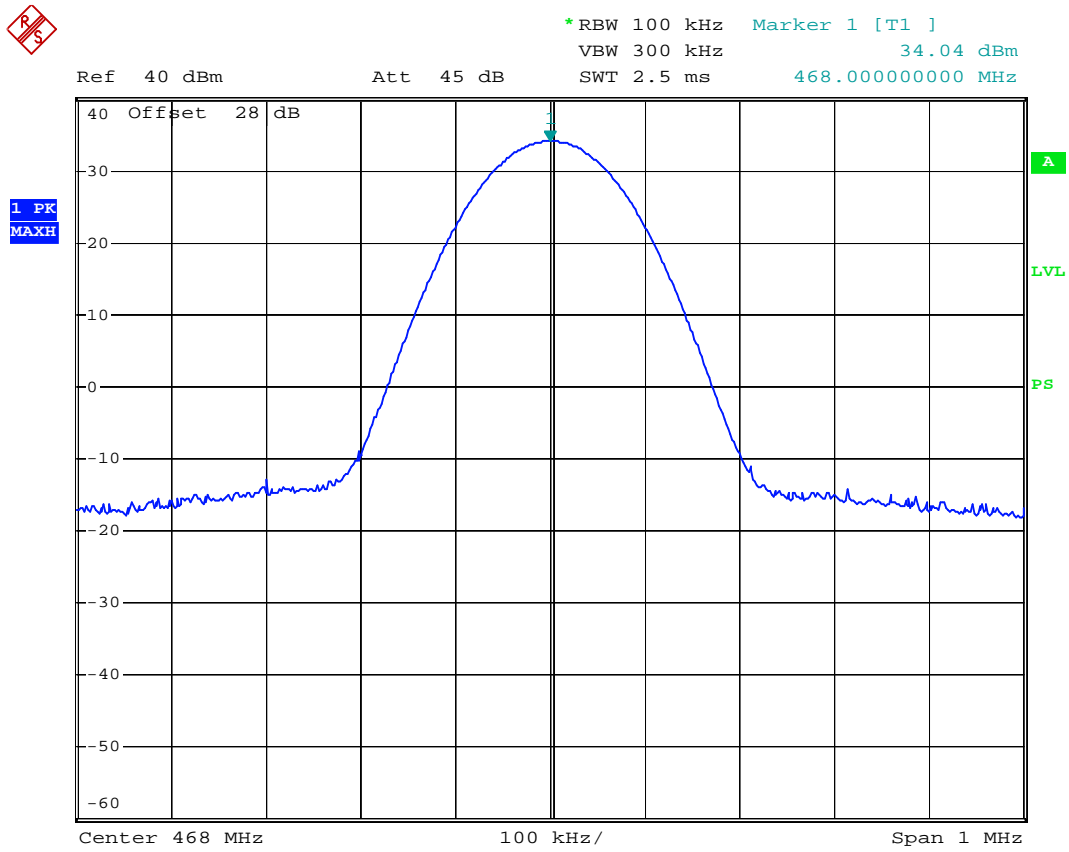
Middle Channel



M/N:FC401-2 Conducted output power middle channel

Date: 27.DEC.2006 16:44:44

High Channel



M/N:FC401-2 Conducted output power high channel

Date: 27.DEC.2006 16:46:00

§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	2007-05-17	2008-05-17

* **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:	100.5kPa

The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

Indicated		Table	Test Antenna		Substituted			Antenna Gain Correction	Cable Loss (dB)	Absolute Level	
Frequency (MHz)	Reading (dBuV)	Angle Degree	Height (m)	Polar H/V	Frequency (MHz)	Level (dBm)	Polar H/V			(dBm)	(Watt)
Low channel											
453.325	108.02	40	1.0	V	453.325	38.8	V	0	3.76	35.04	3.191
453.325	93.63	162	2.0	H	453.325	22.4	H	0	3.76	18.64	0.073
Middle channel											
460	108.61	189	1.3	V	460	39.5	V	0	3.85	35.65	3.6728
460	92.56	48	1.0	H	460	21.4	H	0	3.85	17.55	0.0569
High channel											
468	108.3	65	1.6	V	468	39.7	V	0	3.88	35.82	3.819
468	92.01	218	1.1	H	468	22.0	H	0	3.88	18.12	0.06486

§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
HP	Modulation Analyzer	8901B	3438A05208	2007-03-01	2008-03-01
NANYAN	Audio Generator	NY2201	019829	2006-12-23	2007-12-23

* **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

Test Method: TIA/EIA-603 2.2.3

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.5 kPa

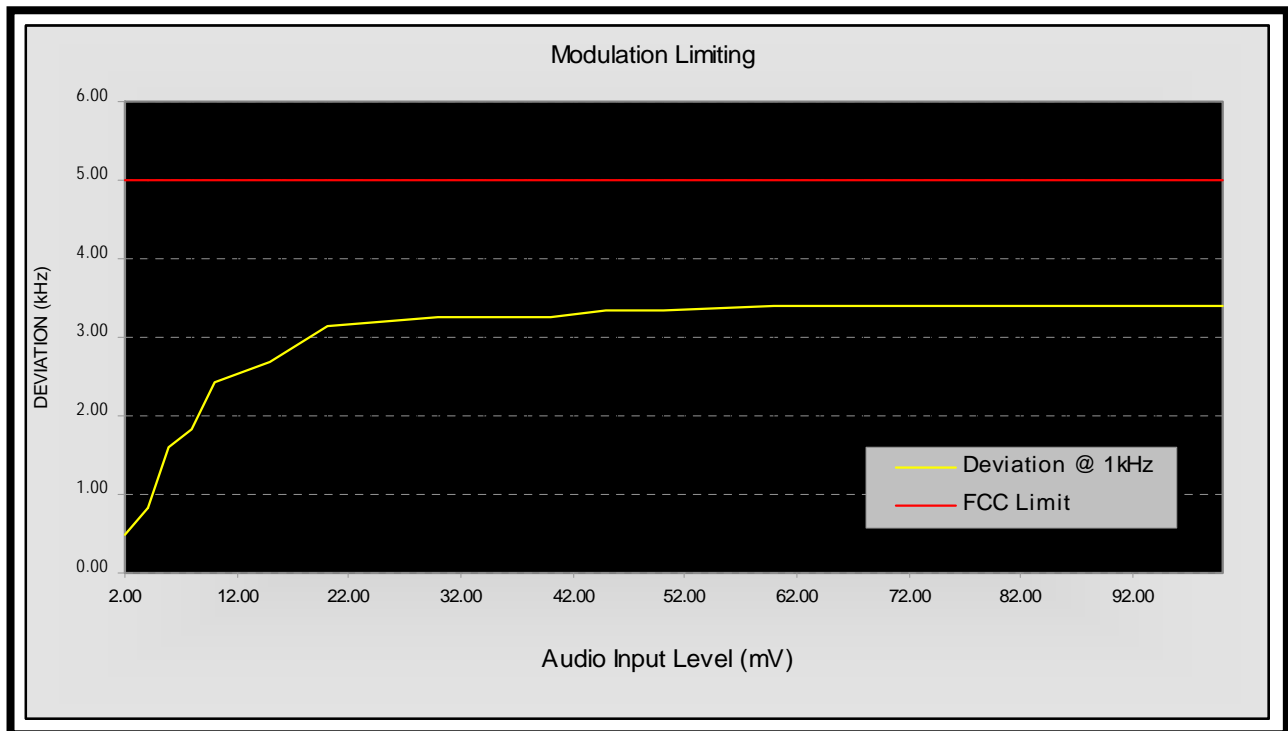
The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

Result: Pass

AUDIO INPUT LEVEL [mV]	DEVIATION (@ 1kHz) [kHz]	FCC Limit [kHz]
2.00	0.48	5.00
4.00	0.82	5.00
6.00	1.60	5.00
8.00	1.82	5.00
10.00	2.43	5.00
15.00	2.70	5.00
20.00	3.15	5.00
25.00	3.20	5.00
30.00	3.25	5.00
35.00	3.25	5.00
40.00	3.26	5.00
45.00	3.35	5.00
50.00	3.35	5.00
60.00	3.40	5.00
70.00	3.40	5.00
80.00	3.40	5.00
90.00	3.40	5.00
100.00	3.40	5.00

NOTE: The modulation signal is a fixed or constant single tone frequency of 1 kHz only.



§2.1049, §90.209 and §90.210 – OCCUPIED BANDWIDTH

Applicable Standard

§2.1049, §90.209 and §90.210

Emission Mask B. For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

- 1) For any frequency removed from the center of the assigned channel by more than 50 percent up to and including 100 percent of the authorized bandwidth, at least 25 dB.
- 2) On any frequency removed from the center of the assigned channel by more than 100 percent up to and including 250 percent, at least 35 dB.
- 3) On any frequency removed from the center of the assigned channel by more than 250 percent at least:
43+10log (P) dB.

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	2006-03-01	2007-03-01
NANYAN	Audio Generator	NY2201	019829	2006-12-23	2007-12-23

* **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 ± 50 KHz from the carrier frequency.

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	100.5 kPa

The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

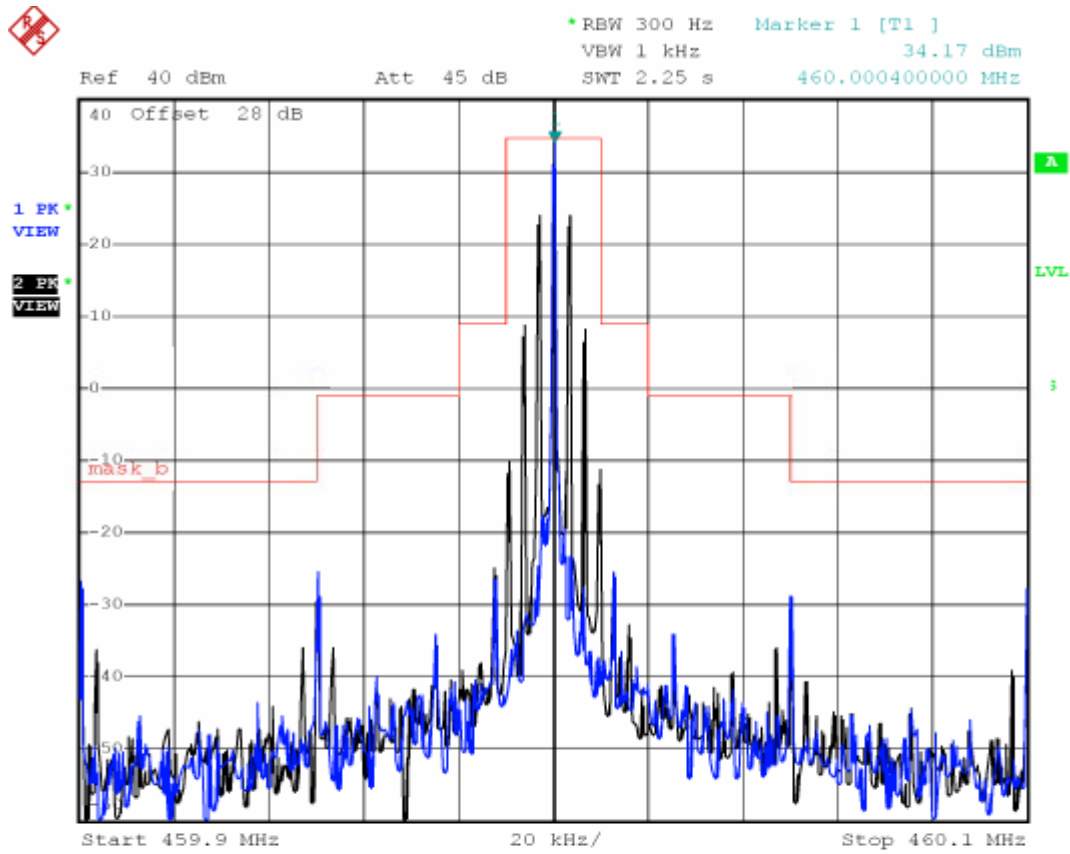
Please refer to the hereinafter plots.

Emission Designator:

For 25.0 kHz Channel Spacing: $2M+2D = 2x3+2x5.0 = 16K0F3E$

Result: Pass, please refer to the following plot.

Emission Mask



M/N:FC401-2 Emission mask

Date: 27.DEC.2006 17:09:03

§2.1051 and §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

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

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

$$43+10\log P=43+10\log (2.612) =47.1697\text{dB}$$

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

* **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 Control Unit 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 10th harmonic.

Test Data

Environmental Conditions

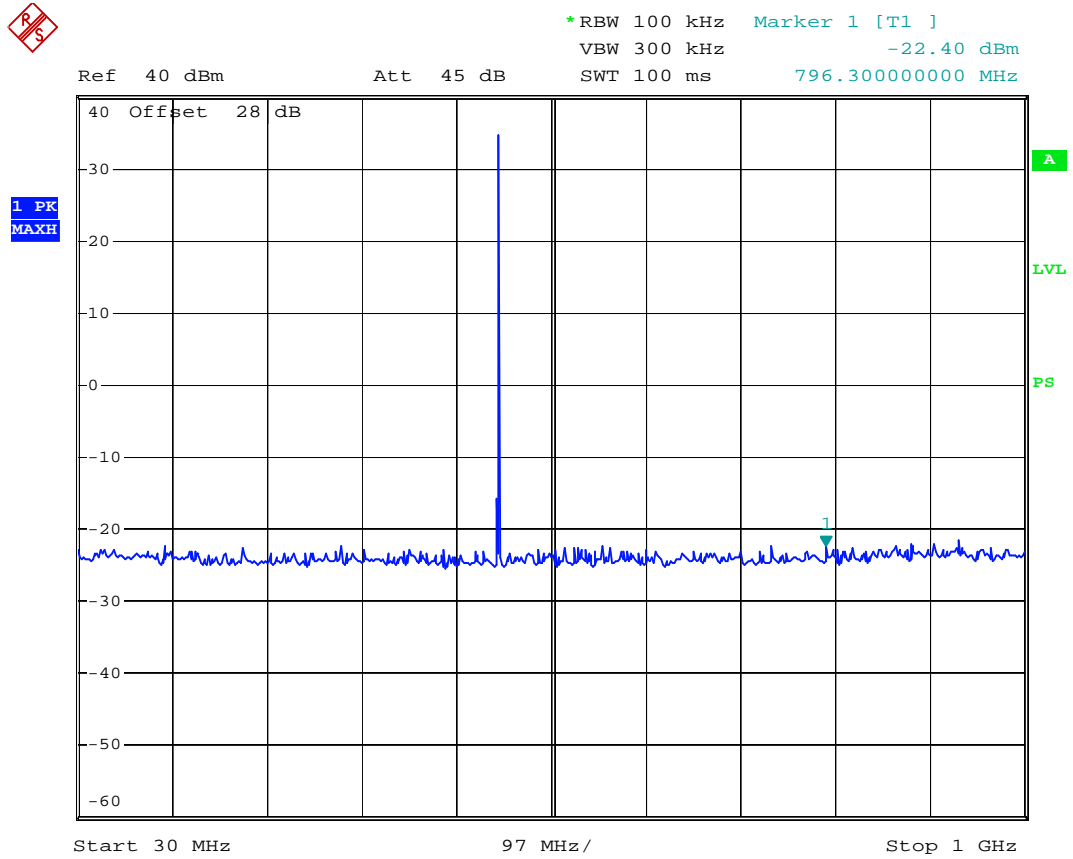
Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	100.5kPa

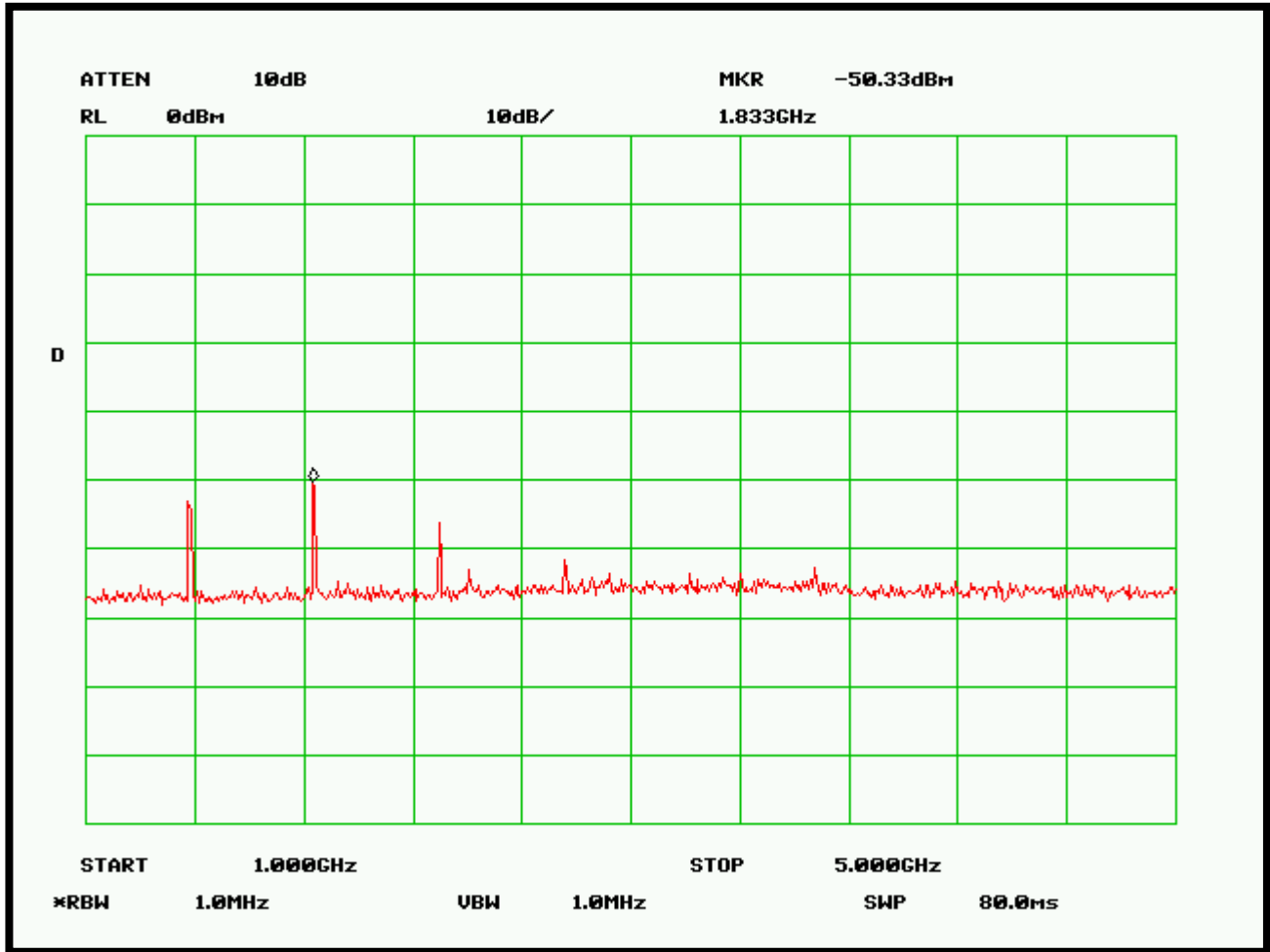
The testing was performed by Deny Xiong on 2006-12-28.

Test Mode: Transmitting

Result: Pass.

Plot of Spurious Emission at antenna port of Middle Channel





§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	2007-05-17	2008-05-17

* **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 = 10g (TXpwr in Watts/0.001)-the absolute level

Spurious attenuation limit in dB = 43 + 10 Log₁₀ (power out in Watts)

Test Results Summary

According to the recorded data in the following table, the EUT complied with the FCC Part 90, with the worst margin of 11.34 dB at 920 MHz: Transmitting in Middle Channel.

Test Data**Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	100.5 kPa

The testing was performed by Deny Xion on 2006-12-21.

Test Mode: Transmitting

Indicated Reading		Table Angle (Degree)	Test Antenna		ERP (Substitution Method) (dBm)	Transmission Power (dBm)	Attenuation (dBc)	Limit (dBc)	Margin (dB)
Frequency (MHz)	Level (dBuV)		Height (m)	Polarity (H/V)					
Transmitting in Middle Channel (460.00 MHz)									
920	47.36	126	1.4	V	-24.34	35.65	59.99	48.65	-11.34
920	43.85	268	1.6	H	-25.24	35.65	60.89	48.65	-12.34
1380	63.50	156	1.5	H	-35.73	35.65	71.38	48.65	-22.73
1840	64.17	148	1.4	H	-35.73	35.65	71.38	48.65	-22.73
1380	68.50	158	1.5	V	-35.93	35.65	71.58	48.65	-22.93
1840	64.50	246	1.5	V	-36.93	35.65	72.58	48.65	-23.93
2300	55.83	186	1.5	V	-45.52	35.65	81.17	48.65	-32.52
2300	52.50	246	1.5	H	-51.52	35.65	87.17	48.65	-38.52
3200	43.80	268	1.2	V	-52.47	35.65	88.12	48.65	-39.47
3200	44.20	36	1.5	H	-53.47	35.65	89.12	48.65	-40.35
2760	46.17	24	1.3	H	-54.31	35.65	89.96	48.65	-41.31
2760	46.50	155	1.5	V	-54.41	35.65	90.06	48.65	-41.41

NOTES:

Limit (dBc) = 43 + 10 log (P) dB = 43 + 10 log (3.673) = 48.65 dBc

Attenuation (dBc) = Transmission Power - ERP

Margin (dB) = Limit - Attenuation

§2.1055 (d) and §90.213- FREQUENCY STABILITY

Applicable Standard

§2.1055 (d)

§90.213

For output power > 2 watts, the limit is 5.0 ppm.

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	2007-03-01	2008-03-01

* **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:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	100.5 kPa

The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

Result: Pass

Frequency Stability versus Temperature:

Reference Frequency: 460.0 MHz, Limit: ± 5 ppm			
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measure with Time Elapsed	
		MCF (MHz)	Error (ppm)
55	12.0	460.000008	0.0174
50	12.0	460.000008	0.0174
40	12.0	460.000006	0.0130
30	12.0	460.000006	0.0130
20	12.0	460.000003	0.0065
10	12.0	460.000003	0.0065
0	12.0	460.000002	0.0043
-10	12.0	460.000002	0.0043
-20	12.0	460.000002	0.0043
-30	12.0	460.000003	0.0065

Frequency Stability versus Input Voltage:

Reference Frequency: 460.00 MHz, Limit: ± 5 ppm		
Power Supplied (Vdc)	Frequency Measure with Time Elapsed	
	Frequency (MHz)	Error (ppm)
10.8	460.000006	0.0130
13.8	460.000002	0.0043

§90.214 - TRANSIENT FREQUENCY BEHAVIOR

Applicable Standard

From §90.214

Time intervals ^{1,2}	Maximum frequency difference ³	All equipment	
		150 to 174 MHz	421 to 512 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t_1^4	±25.0 kHz	5.0 ms	10.0 ms
t_2	±12.5 kHz	20.0 ms	25.0 ms
t_3^4	±25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t_1^4	±12.5 kHz	5.0 ms	10.0 ms
t_2	±6.25 kHz	20.0 ms	25.0 ms
t_3^4	±12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t_1^4	±6.25 kHz	5.0 ms	10.0 ms
t_2	±3.125 kHz	20.0 ms	25.0 ms
t_3^4	±6.25 kHz	5.0 ms	10.0 ms

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

* **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:	100.5 kPa

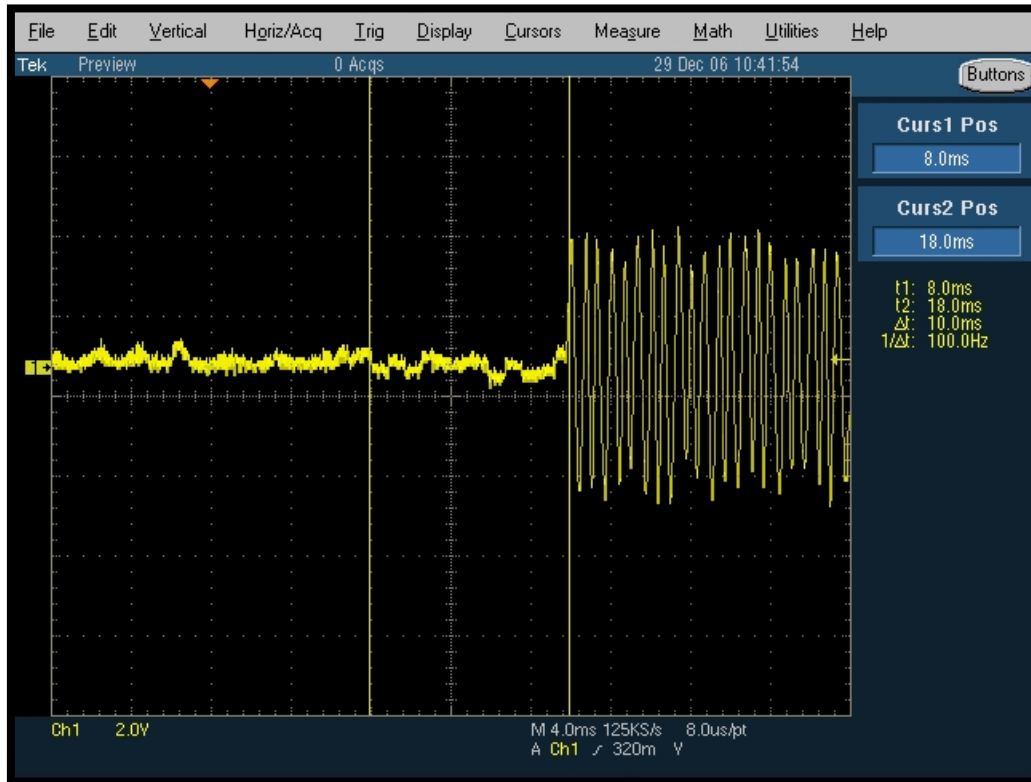
The testing was performed by Deny Xiong on 2006-12-27.

Test Mode: Transmitting

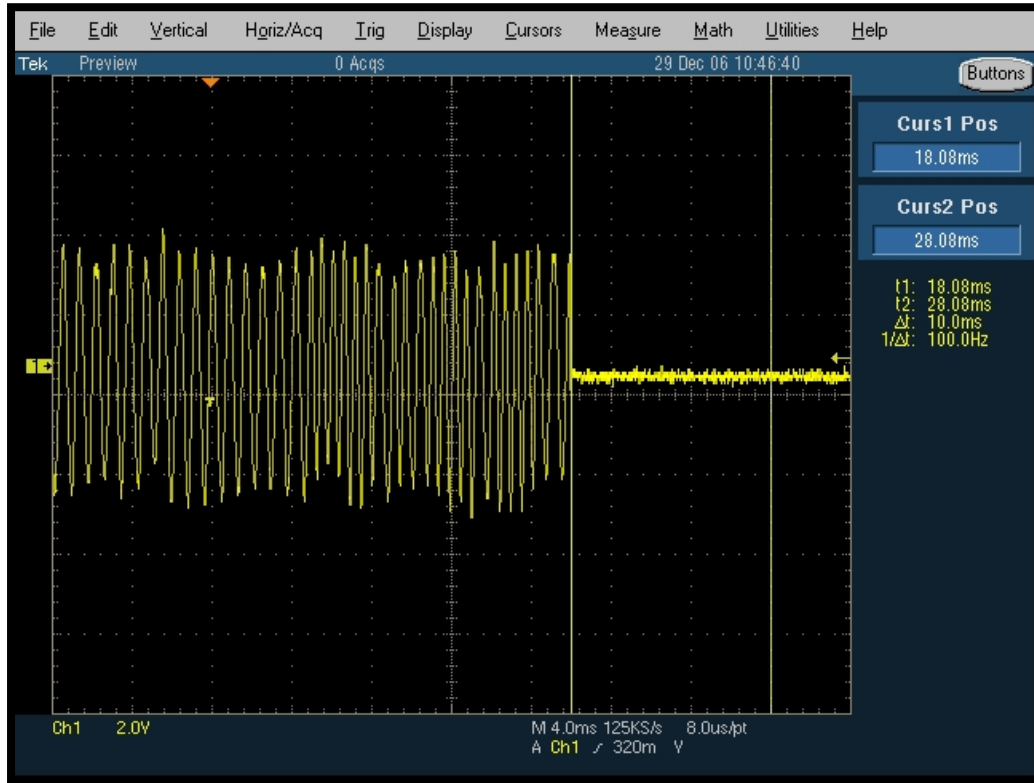
Operation Frequency (MHz)	Channel Separation (kHz)	Transient Period (ms)	Transient Frequency	Result
460	25	<10	+/-25.0 kHz	Pass
		<25	+/-12.5 kHz	
		<10	+/-25.0kHz	

Result: Pass. Please refer to the following plots.

Turn on



Turn off



END OF REPORT