

FCC PART 90 TYPE APPROVAL EMI MEASUREMENT AND TEST REPORT

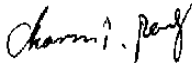
For

Shenzhen Microlab Technology Co. Ltd.

Huachang Industrial Area, Dalang Longhua Country, Baoan District, Shenzhen, China

FCC ID: SCUMICROLABT9753

April 19, 2006

This Report Concerns: ☒ Original Report	Equipment Type: Walkie talkie
Test Engineer: Charmi Peng 	
Report No.: RSZ06021001	
Test Date: March 20-April 19, 2006	
Reviewed By: Chris Zeng 	
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Note: The test report is specially limited to the above company and this particular sample only.
It may not be duplicated without prior written consent of Bay Area Compliance Lab Corp.
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approval, or endorsement by NVLAP, NIST or any agency of the US Government.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
TEST FACILITY	4
SYSTEM TEST CONFIGURATION	5
DESCRIPTION OF TEST CONFIGURATION	5
EQUIPMENT MODIFICATIONS	5
CONFIGURATION OF TEST SETUP	6
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS	7
§2.1046, and §90.205 - CONDUCTED OUTPUT POWER	8
APPLICABLE STANDARD	8
TEST EQUIPMENT LIST AND DETAILS.....	8
TEST PROCEDURE	8
TEST DATA	8
§2.1047, and §90.207 - MODULATION CHARACTERISTIC	11
APPLICABLE STANDARD	11
TEST EQUIPMENT LIST AND DETAILS.....	11
TEST PROCEDURE	11
TEST DATA	11
§2.1049, and § 90.209 – OCCUPIED BANDWIDTH	15
APPLICABLE STANDARD	15
TEST EQUIPMENT LIST AND DETAILS.....	15
TEST PROCEDURE	16
TEST DATA	16
§2.1051 and §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	19
APPLICABLE STANDARD	19
TEST EQUIPMENT LIST AND DETAILS.....	19
TEST PROCEDURE	19
TEST DATA	19
§2.1053 and §90.210 - RADIATED SPURIOUS EMISSION	24
APPLICABLE STANDARD	24
TEST EQUIPMENT LIST AND DETAILS.....	24
TEST PROCEDURE	24
TEST RESULTS SUMMARY	24
TEST DATA	25
§2.1055 (d) and §90.213- FREQUENCY STABILITY	27
APPLICABLE STANDARD	27
TEST EQUIPMENT LIST AND DETAILS.....	27
TEST PROCEDURE	27
TEST DATA	27
§90.214 - TRANSIENT FREQUENCY BEHAVIOR.....	32
APPLICABLE STANDARD	32
TEST EQUIPMENT LIST AND DETAILS.....	32
TEST PROCEDURE	32
TEST DATA	33

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Shenzhen Microlab Technology Co. Ltd.*'s product, model number: T9753, Version: 01 or the "EUT" as referred to in this report is a Walkie talkie. The EUT is measured approximately 3.0 cmL x 6.0 cmW x 24.0 cmH, rated input voltage: DC 7.4 V Battery, with detachable Antenna 13.4cm.

** The test data gathered are from production sample, serial number: 70530271, provided by the manufacturer, we received the EUT on 2006-2-10.*

Objective

This Type approval report is prepared on behalf of *Shenzhen Microlab Technology 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 EIA 137-A, TIA EIA 98-C, TIA603-C and ANSI 63.4-2003, American National Standard for Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Lab 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 Lab 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 518038, P.R.China.

Test site at Bay Area Compliance Lab 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 and Industrial Canada registration test site No.: 5500A. 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 Lab 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 <http://ts.nist.gov/ts/htdocs/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).

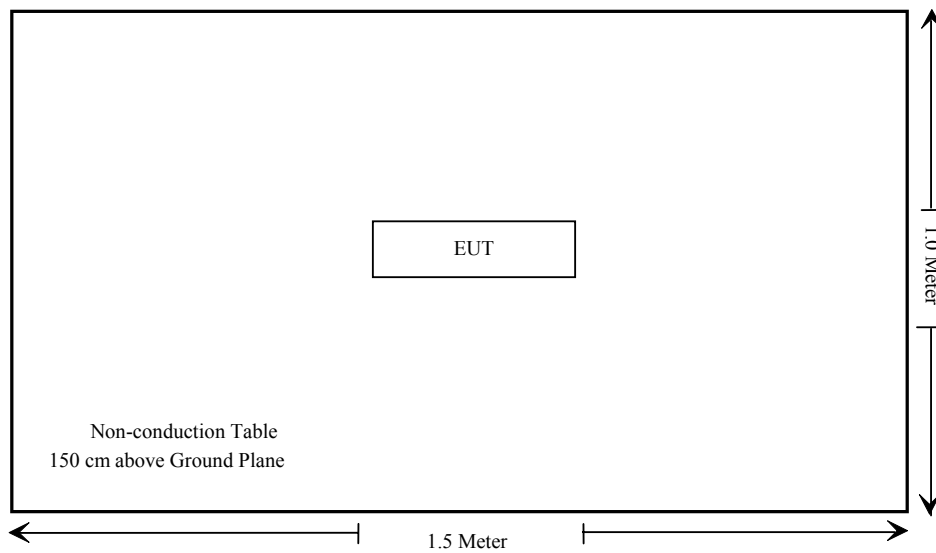
Equipment Modifications

Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§2.1046, §90.205	Conducted Output Power	Compliant
§2.1047 §90.207	Modulation Characteristic	Compliant
§2.1049, §90.209	Occupied Bandwidth	Compliant
§2.1051, §90.210	Spurious Emissions AT Antenna Terminals	Compliant
§2.1053 §90.210	Spurious Radiated Emissions	Compliant
§ 2.1055 § 90.213	Frequency stability	Compliant
§ 90.214	Transient Frequency Behavior	Compliant

§2.1046, and §90.205 - CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §2.1046, and §90.205, maximum ERP is dependent upon the station's antenna HAAT and required service area.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde&Schwarz	EMI Test Receiver	ESCI	100035	2005-8-17	2006-8-17

* **Statement of Traceability:** Bay Area Compliance Lab 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.

Spectrum Analyzer Setting:

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

Test Data

Environmental Conditions

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

The testing was performed by Charmi Peng on 2006-4-18, 2006-4-19.

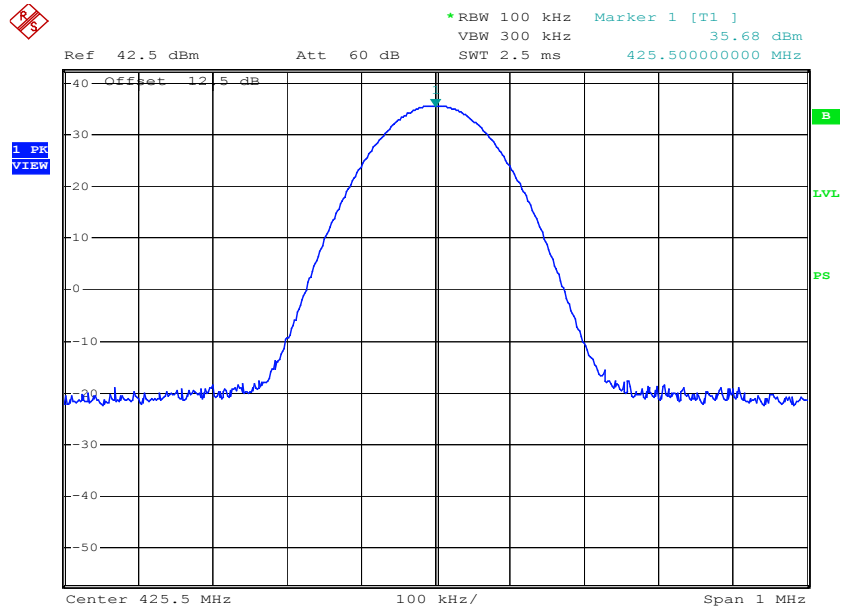
Test Result: Pass

Test Mode: Transmitting

Frequency Spacing (kHz)	Frequency (MHz)	Output Power in dBm	Output Power in W
12.5	425.5	35.68	3.698
	460	33.07	2.027
25.0	425.5	35.66	3.681
	460	33.19	2.084

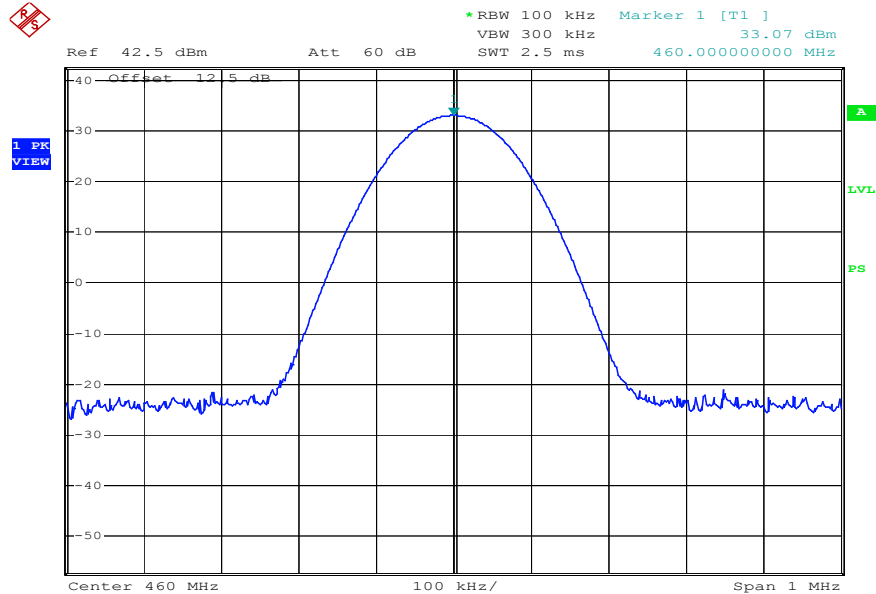
Note: The power output may depend on the intended use of the EUT. For all tests, the EUT was set to maximum conditions.

For Narrowband



Microlab Walkie-Talkie M/N:T9753 Output power Narrow Low channel

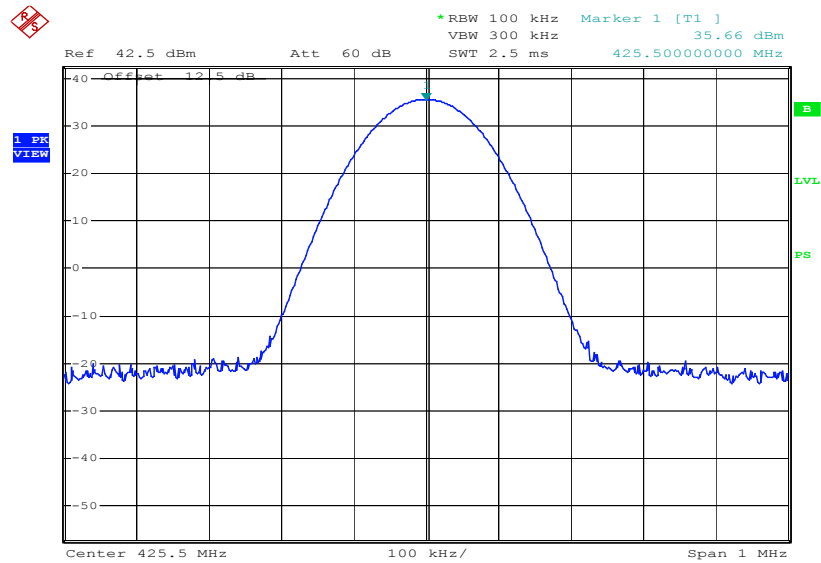
Date: 19.APR.2006 11:47:31



Microlab Walkie-Talkie M/N:T9753 Conducted output power Narrow High channel

Date: 18.APR.2006 08:13:11

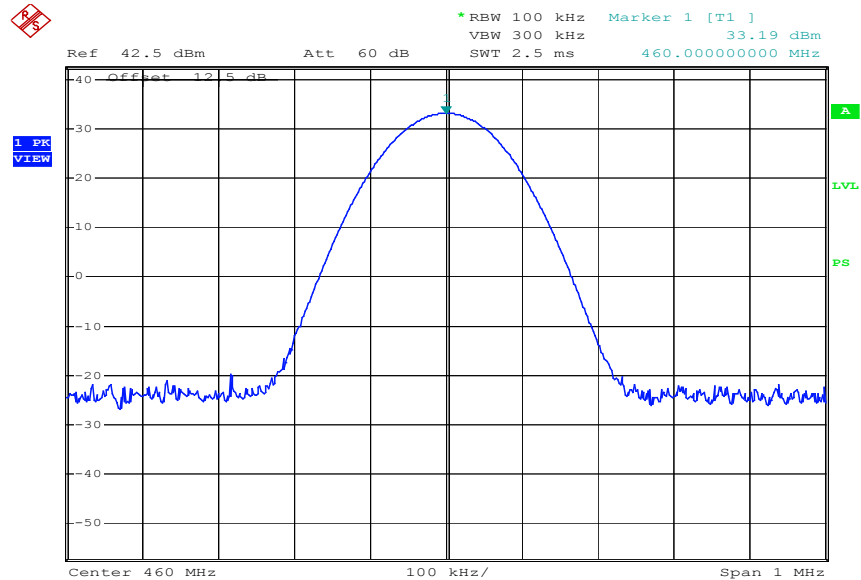
For Wideband



Microlab Walkie-Talkie M/N:T9753 Output power Wide Low chann

el

Date: 19.APR.2006 11:48:11



Microlab Walkie-Talkie M/N:T9753 Conducted output power Wide

High channel

Date: 18.APR.2006 08:13:44

§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
Rohde&Schwarz	Spectrum Analyzer	FSEM30	849720/019	2005-12-21	2006-12-21
HP	Modulation Analyzer	8901B	3438A05208	2006-3-1	2007-3-1
NANYAN	Audio Generator	NY2201	019829	2006-3-1	2007-3-1

* **Statement of Traceability:** Bay Area Compliance Lab 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:	1005mbar

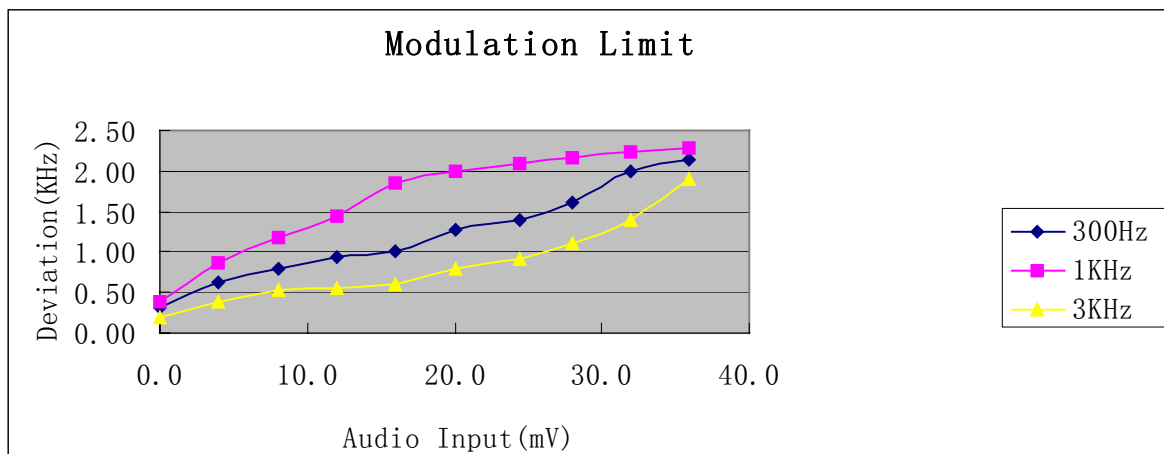
The testing was performed by Charmi Peng on 2006-3-20.

Test Result: Pass

Test Mode: Transmitting

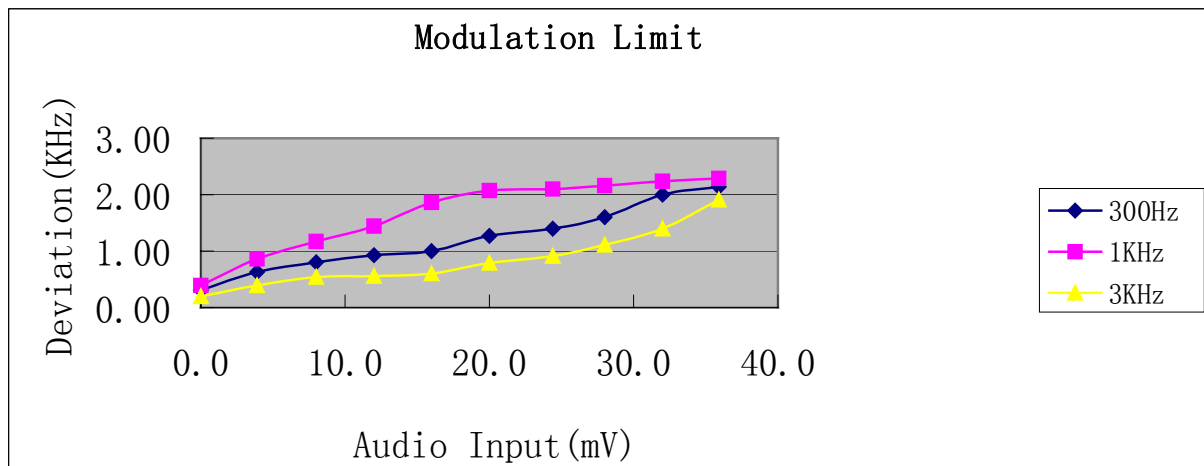
For Narrowband:

Audio Input (mV)	300Hz Deviation (kHz)	1kHz Deviation (kHz)	3kHz Deviation (kHz)
0.0	0.31	0.39	0.20
4.0	0.63	0.86	0.39
8.0	0.80	1.17	0.54
12.0	0.93	1.44	0.56
16.0	1.00	1.86	0.60
20.0	1.27	2.00	0.79
24.0	1.40	2.10	0.91
28.0	1.60	2.16	1.11
32.0	2.00	2.24	1.40
36.0	2.16	2.25	1.95

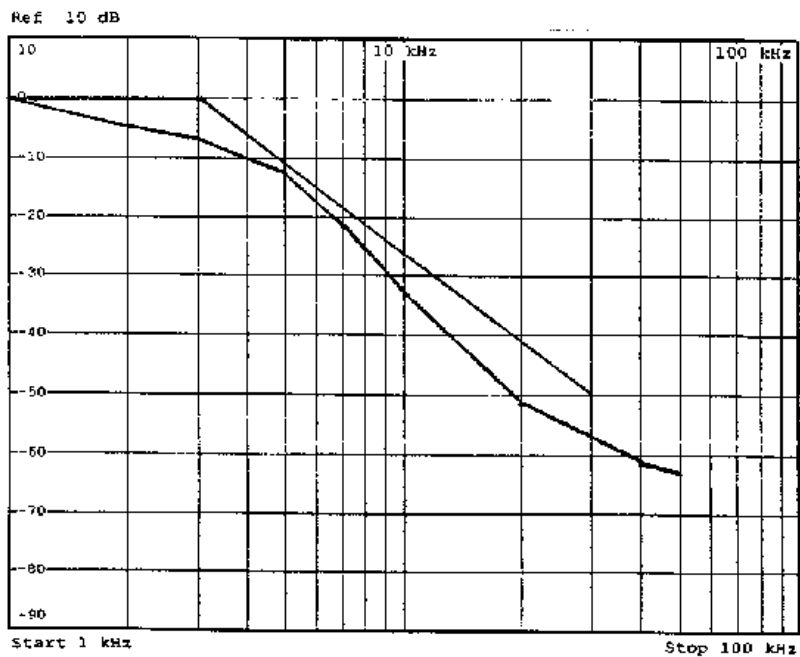
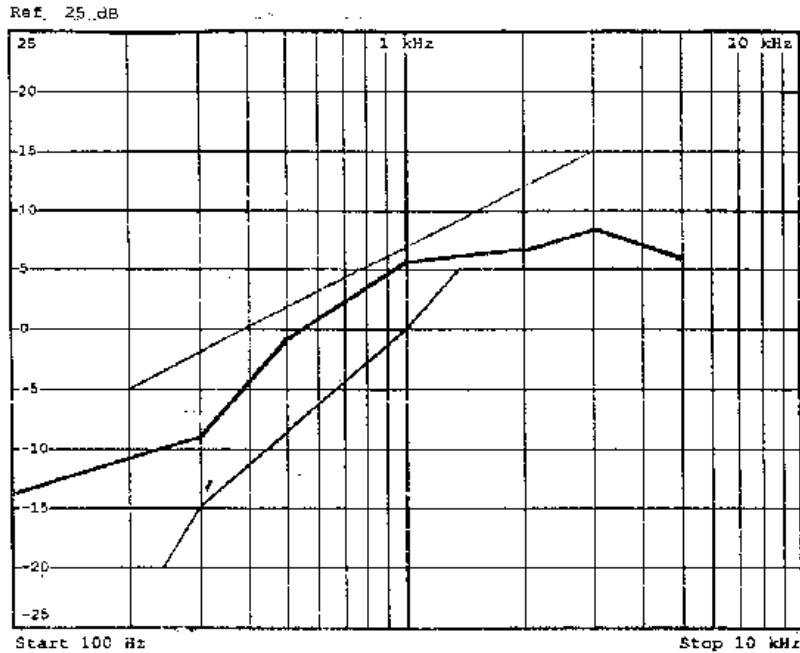


For Wideband:

Audio Input (mV)	300Hz Deviation (kHz)	1kHz Deviation (kHz)	3kHz Deviation (kHz)
0	0.31	0.40	0.42
4	0.52	0.73	0.44
8	0.64	1.12	0.68
12	0.72	1.54	0.72
16	0.99	1.88	0.78
20	0.99	1.95	0.81
24	1.07	1.99	0.84
28	1.44	2.15	1.18
32	1.99	2.16	1.19
36	2.00	2.26	1.20



Audio Low Pass Filter Characteristic



§2.1049, and § 90.209 – OCCUPIED BANDWIDTH

Applicable Standard

§2.1049, §90.209 and §90.210

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

- 1) For any frequency removed from the center of the authorized bandwidth f_0 to 5.625kHz removed from f_0 , 0dB.
- 2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.626kHz but no more than 12.5kHz, at least 7.27 ($f_d - 2.88$ kHz) dB.
- 3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5kHz at least:

$$50 + 10 \log P = 50 + 10 \log(3.698) = 55.68 \text{ dB}$$

$$50 + 10 \log P = 50 + 10 \log(2.027) = 53.07 \text{ dB}$$

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:

$$43 + 10 \log P = 43 + 10 \log(3.681) = 48.66 \text{ dB}$$

$$43 + 10 \log P = 43 + 10 \log(2.084) = 46.19 \text{ dB}$$

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	2005-8-17	2006-8-17
HP	Modulation Analyzer	8901B	3438A05208	2006-3-1	2007-3-1
NANYAN	Audio Generator	NY2201	019829	2005-12-23	2006-12-23

* **Statement of Traceability:** Bay Area Compliance Lab 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:	1005mbar

The testing was performed by Charmi Peng on 2006-4-18.

Test Result: Pass.

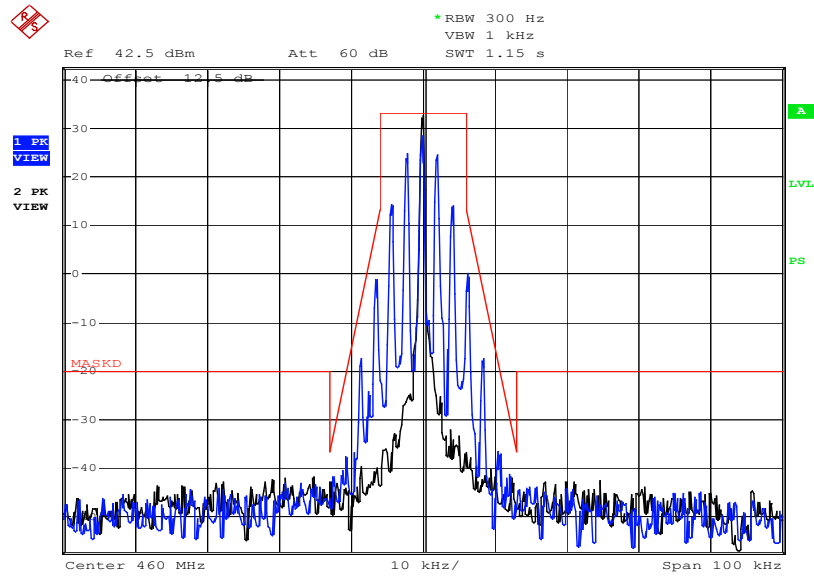
Test Mode: Transmitting

Please refer to the hereinafter plots.

Emission Designator:

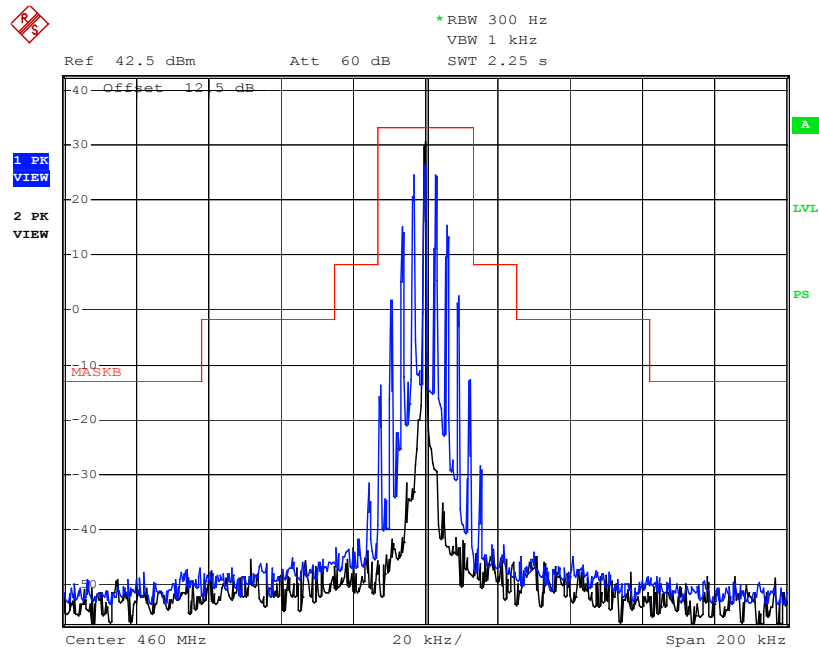
For 12.5KHz Channel Spacing: $2M+2D = 2x3+2x2.5 = 11K0F3E$

For 25 KHz Channel Spacing: $2M+2D = 2x3+2x5 = 16K0F3E$

Emission Mask D-For Narrowband:

Microlab Walkie-Talkie M/N:T9753 Emission mask For Narrowband

Date: 18.APR.2006 08:55:42

Emission Mask B-For Wideband:

Microlab Walkie-Talkie M/N:T9753 Emission mask For Wideband

Date: 18.APR.2006 09:09:35

§2.1051 and §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

§90.210 (12.5kHz bandwidth only)

On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5kHz at least:

$$50+10\log P=50+10\log(3.698)=55.68\text{dB}$$

$$50+10\log P=50+10\log(2.027)=53.07\text{dB}$$

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

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

$$43+10\log P=43+10\log(3.681)=48.66\text{dB}$$

$$43+10\log P=43+10\log(2.084)=46.19\text{dB}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde&Schwarz	EMI Test Receiver	ESCI	100035	2005-8-17	2006-8-17

* **Statement of Traceability:** Bay Area Compliance Lab 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 transceiver 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:	1005mbar

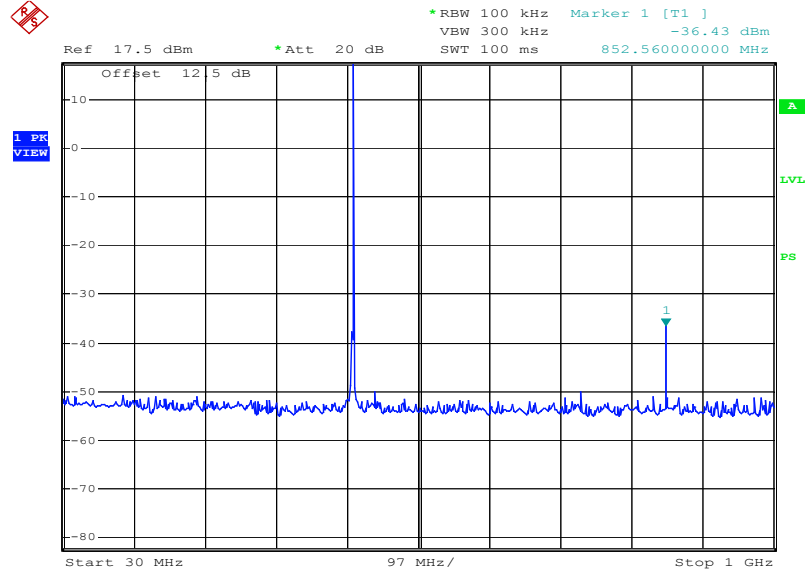
The testing was performed by Charmi Peng on 2006-3-20, 2006-4-18.

Test Result: Pass

Test Mode: Transmitting

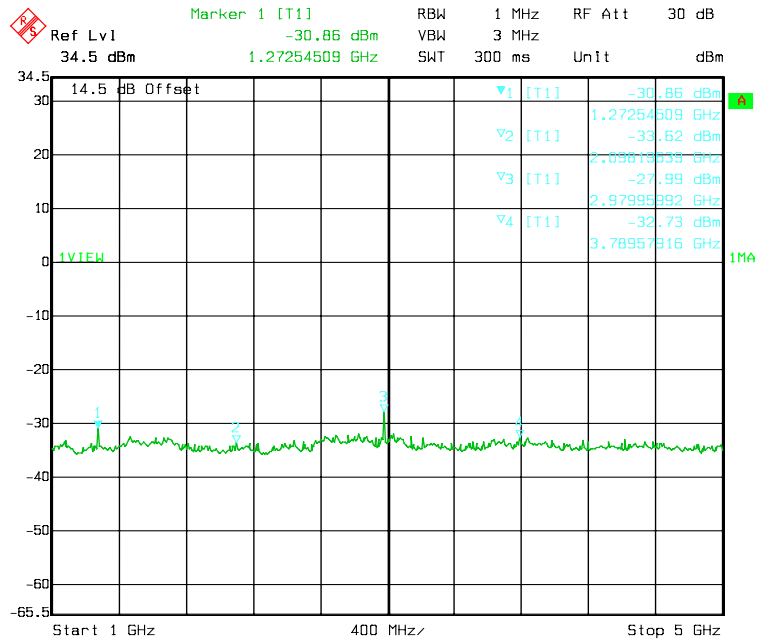
For Narrowband:

Low Channel (30M-1G)



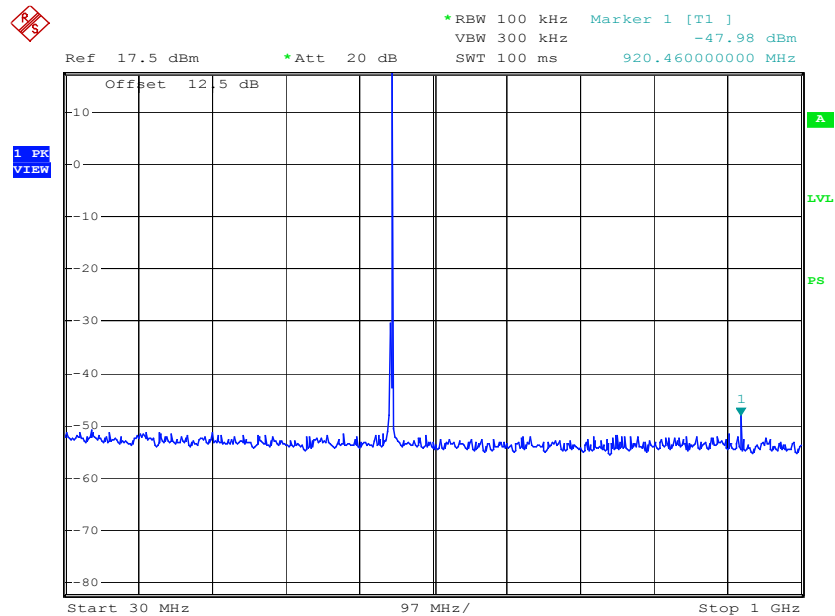
Microlab Walkie-Talkie M/N:T9753 Emission mask For Narrowband Low Channel
Date: 18.APR.2006 09:18:11

(1G-5G)



Date: 20.MAR.2006 11:32:22

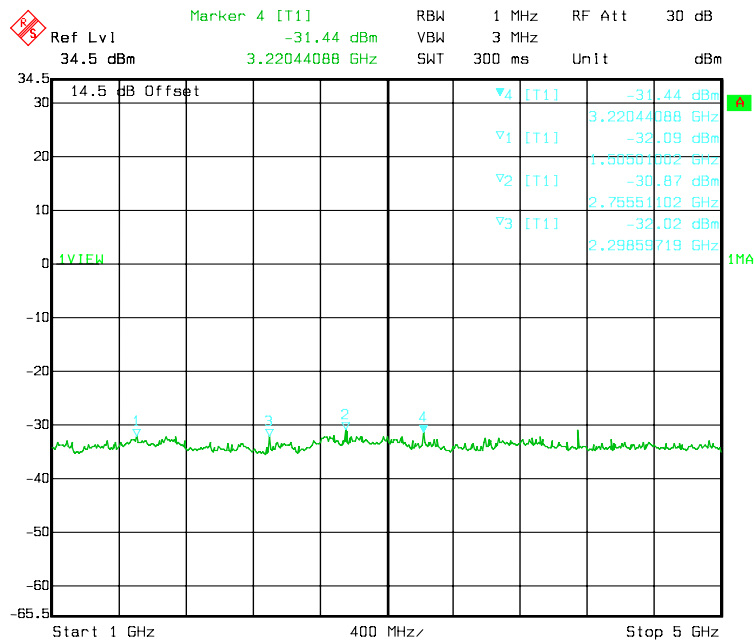
High Channel (30M-1G)



Microlab Walkie-Talkie M/N:T9753 Emission mask For Narrowband High channel

Date: 18.APR.2006 09:17:28

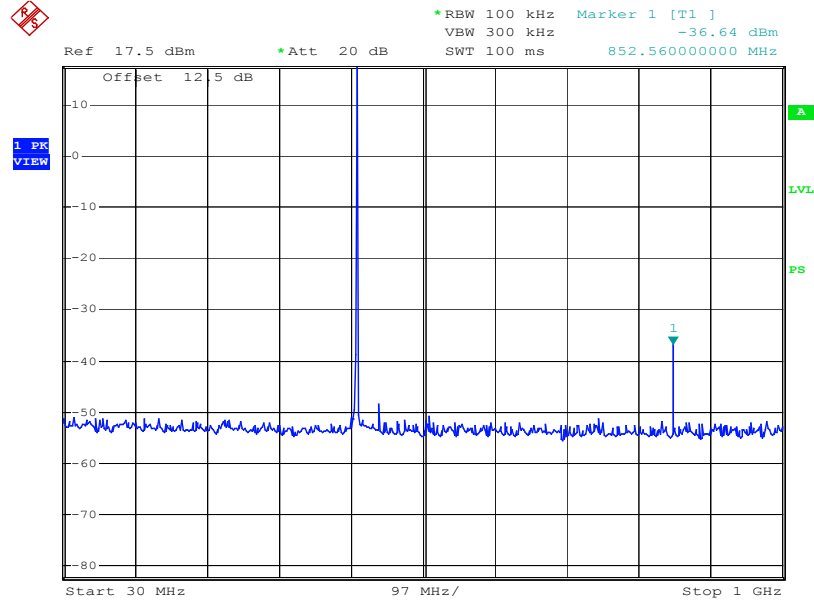
(1G-5G)



Date: 20.MAR.2006 11:30:37

For Wideband:

Low Channel (30M-1G)

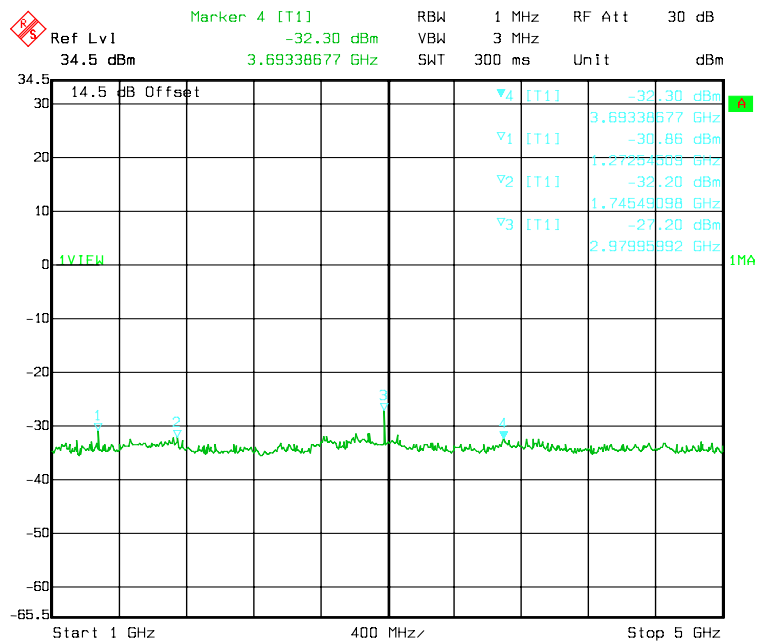


Microlab Walkie-Talkie M/N:T9753 Emission mask For Wideband

Low channel

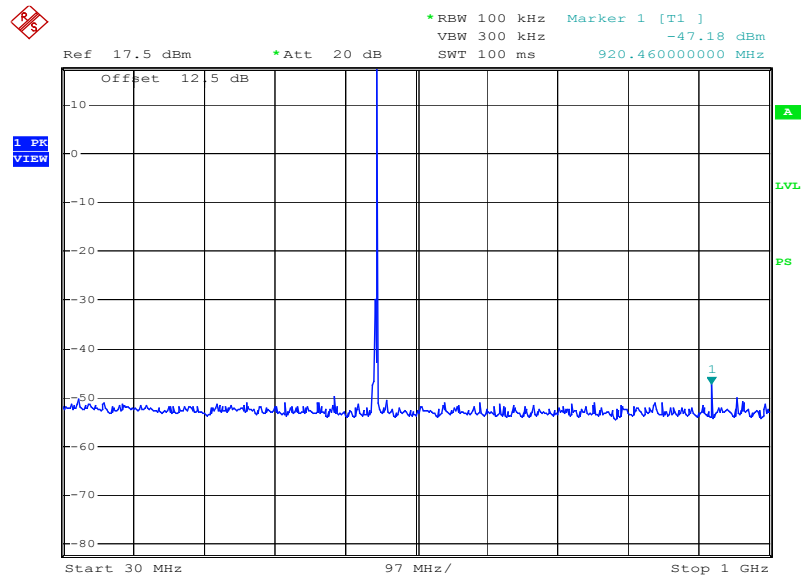
Date: 18.APR.2006 09:18:45

(1G-5G)



Date: 20.MAR.2006 11:39:57

High Channel (30M-1G)

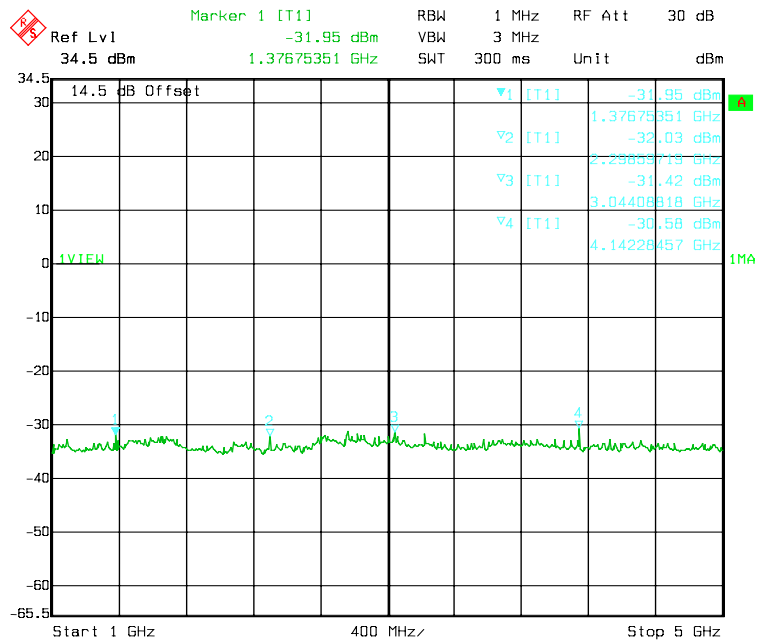


Microlab Walkie-Talkie M/N:T9753 Emission mask For Wideband

High channel

Date: 18.APR.2006 09:16:58

(1G-5G)



Date: 20.MAR.2006 11:34:41

§2.1053 and §90.210 - RADIATED SPURIOUS EMISSION

Applicable Standard

§2.1053 and §90.210

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Signal Generator	HP8657A	2849U00982	2006-2-28	2007-2-28
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2005-11-10	2006-11-10
Electro-mechanics	Antenna	3146	9603-4421	2005-12-30	2006-12-30
COM POWER	Dipole Antenna	AD-100	041000	N/A	N/A

* **Statement of Traceability:** Bay Area Compliance Lab 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 = $10 \lg(\text{TXpwr in Watts}/0.001)$ - the absolute level

Spurious attenuation limit in dB = $43 + 10 \lg(\text{power out in Watts})$

Spurious attenuation limit in dB = $50 + 10 \lg(\text{power out in Watts})$ for EUT with a 12.5KHz channel bandwidth.

Test Results Summary

For Narrowband:

-7.35 dB at 851.00 MHz, low channel

-7.91 dB at 325.10 MHz, High channel

For 25.0 Wideband:

-14.35 dB at 851.00 MHz, low channel

-19.71 dB at 2762.92 MHz, High channel

Test Data**Environmental Conditions**

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

The testing was performed by Charmi Peng on 2006-3-20.

Test Mode: Transmitting

Indicated		Table	Test Antenna		Substituted			Antenna	Cable	Absolute		
Frequency	Meter	Angle	Height	Polar	Frequency	Level	Polar	Gain	Loss	Level	Limit	Margin
MHz	Reading	Degree	Meter	H/V	MHz	dBm	H/V	Correction	dB	dBm	dBm	dB
Low Channel For Narrowband												
851.00	45.57	45	1.7	V	870	-20.1	V	0	7.25	-27.35	-20	-7.35
1277.01	41.96	180	1.6	V	1277.01	-37.2	V	6.2	0.33	-31.33	-20	-11.33
1277.01	41.17	270	1.5	H	1277.01	-37.6	H	6.2	0.33	-31.73	-20	-11.73
2128.33	36.44	0	1.2	H	2128.33	-40.8	H	7.0	0.32	-34.12	-20	-14.12
851.00	35.86	60	1.5	H	870	-27.2	H	0	7.25	-34.45	-20	-14.45
2128.33	35.69	45	1.5	V	2128.33	-44.2	V	7.0	0.32	-37.52	-20	-17.52
2555.12	32.78	180	1.6	H	2555.12	-46.2	H	7.0	0.38	-39.58	-20	-19.58
2555.12	33.07	80	1.0	V	2555.12	-46.2	V	7.0	0.38	-39.58	-20	-19.58
1704.10	33.53	270	1.6	H	1704.1	-47.3	H	6.1	0.37	-41.57	-20	-21.57
1704.1	34.76	60	1.2	V	1704.1	-47.5	V	6.1	0.37	-41.77	-20	-21.77
High Channel For Narrowband												
2762.92	41.50	80	1.0	V	2762.92	-34.8	V	7.4	0.51	-27.91	-20	-7.91
1381.62	41.98	45	1.7	V	1381.62	-38.6	V	6.5	0.33	-32.43	-20	-12.43
2762.92	36.51	180	1.6	H	2762.92	-40.1	H	7.4	0.51	-33.21	-20	-13.21
920.00	37.24	60	1.2	V	939.975	-25.6	V	0	7.62	-33.22	-20	-13.22
1381.62	40.56	45	1.5	H	1381.62	-40.1	H	6.5	0.33	-33.93	-20	-13.93
2302.93	35.07	180	1.6	H	2302.93	-42.3	H	7.5	0.32	-35.12	-20	-15.12
2302.93	35.31	60	1.5	V	2302.93	-42.5	V	7.5	0.32	-35.32	-20	-15.32
1842.95	35.18	0	1.2	V	1842.95	-42.2	V	6.1	0.43	-36.53	-20	-16.53
1842.95	33.81	270	1.6	H	1842.95	-46.2	H	6.1	0.43	-40.53	-20	-20.53
920.00	28.03	270	1.5	H	939.975	-43	H	0	7.62	-50.62	-20	-30.62

Indicated		Table	Test Antenna			Substituted			Antenna	Cable	Absolute		
Frequency	Meter					Frequency	Level	Polar	Gain	Loss	Level	Limit	Margin
MHz	Reading	Angle	Height	Polar		MHz	dBm	H/V	Correction	dB	dBm	dBm	dB
Low Channel For Wideband													
851.00	45.57	45	1.7	V		870.00	-20.1	V	0	7.25	-27.35	-13	-14.35
1277.01	41.96	45	1.7	V		1305.01	-37.2	V	6.2	0.33	-31.33	-13	-18.33
1277.01	41.17	45	1.5	H		1305.01	-37.6	H	6.2	0.33	-31.73	-13	-18.73
2128.33	36.44	180	1.6	H		2175.33	-40.8	H	7.0	0.32	-34.12	-13	-21.12
851.00	35.86	60	1.5	H		870.00	-27.2	H	0	7.25	-34.45	-13	-21.45
2128.33	35.69	60	1.5	V		2175.33	-44.2	V	7.0	0.32	-37.52	-13	-24.52
2555.12	32.78	180	1.6	H		2610.12	-46.2	H	7.0	0.38	-39.58	-13	-26.58
2555.12	33.07	80	1.0	V		2610.12	-46.2	V	7.0	0.38	-39.58	-13	-26.58
1704.10	33.53	270	1.6	H		1740.10	-47.3	H	6.1	0.37	-41.57	-13	-28.57
1704.10	34.76	0	1.2	V		1740.10	-47.5	V	6.1	0.37	-41.77	-13	-28.77
High Channel For Wideband													
2762.92	37.24	80	1.0	V		2762.92	-39.6	V	7.4	0.51	-32.71	-13	-19.71
2762.92	36.74	180	1.6	H		2762.92	-39.7	H	7.4	0.51	-32.81	-13	-19.81
1381.62	41.67	180	1.6	V		1381.62	-39.2	V	6.5	0.33	-33.03	-13	-20.03
920.00	37.24	60	1.2	V		939.975	-25.6	V	0	7.62	-33.22	-13	-20.22
1381.62	40.91	270	1.5	H		1381.62	-39.9	H	6.5	0.33	-33.73	-13	-20.73
2302.93	34.96	0	1.2	H		2302.93	-43.2	H	7.5	0.32	-36.02	-13	-23.02
1842.95	35.73	60	1.2	V		1842.95	-41.7	V	6.1	0.43	-36.03	-13	-23.03
2302.93	33.84	45	1.5	V		2302.93	-45.2	V	7.5	0.32	-38.02	-13	-25.02
1842.95	33.94	270	1.6	H		1842.95	-45.8	H	6.1	0.43	-40.13	-13	-27.13
920.00	28.03	270	1.5	H		939.975	-43	H	0	7.62	-50.62	-13	-37.62

§2.1055 (d) and §90.213- FREQUENCY STABILITY**Applicable Standard**

§2.1055 (d)

§90.213

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
NANYAN	Audio Generator	NY2201	019829	2005-12-23	2006-12-23
Hewlett-Packard	Frequency Counter	5342A	2317A08289	2006-3-1	2007-3-1

* **Statement of Traceability:** Bay Area Compliance Lab 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 Spectrum Analyzer.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

Test Data**Environmental Conditions**

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

The testing was performed by Charmi Peng on 2006-3-20.

Test Result: Pass

Test Mode: Transmitting

For Wideband

Wideband Reference Frequency: 425.5 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V _{dc})	MCF (MHz)	PPM Error
50	6.66	425.499958	0.099
	7.4	425.499975	0.059
	8.14	425.499981	0.045
40	6.66	425.499969	0.073
	7.4	425.499986	0.033
	8.14	425.499992	0.019
30	6.66	425.500005	0.012
	7.4	425.500015	0.035
	8.14	425.500019	0.045
20	6.66	425.500018	0.042
	7.4	425.500025	0.059
	8.14	425.500029	0.068
10	6.66	425.500022	0.052
	7.4	425.500029	0.068
	8.14	425.500033	0.078
0	6.66	425.500025	0.059
	7.4	425.500029	0.068
	8.14	425.500034	0.080
-10	6.66	425.500018	0.042
	7.4	425.500024	0.056
	8.14	425.500028	0.066
-20	6.66	425.500025	0.059
	7.4	425.500032	0.075
	8.14	425.500036	0.085
-30	6.66	425.500028	0.066
	7.4	425.500035	0.082
	8.14	425.500038	0.089

Wideband Reference Frequency: 460 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V _{dc})	MCF (MHz)	PPM Error
50	6.66	459.999968	0.070
	7.4	459.999974	0.057
	8.14	459.999976	0.052
40	6.66	459.999976	0.052
	7.4	459.999982	0.039
	8.14	459.999987	0.028
30	6.66	460.000010	0.022
	7.4	460.000019	0.041
	8.14	460.000022	0.048
20	6.66	460.000021	0.046
	7.4	460.000025	0.054
	8.14	460.000031	0.067
10	6.66	460.000028	0.061
	7.4	460.000033	0.072
	8.14	460.000041	0.089
0	6.66	460.000036	0.078
	7.4	460.000042	0.091
	8.14	460.000047	0.102
-10	6.66	460.000038	0.083
	7.4	460.000047	0.102
	8.14	460.000050	0.109
-20	6.66	460.000047	0.102
	7.4	460.000052	0.113
	8.14	460.000055	0.120
-30	6.66	460.000048	0.104
	7.4	460.000056	0.122
	8.14	460.000061	0.133

For Narrowband

Narrow Reference Frequency: 425.5 MHz, Limit: 2.5 PPM			
Environment Temperature (°C)	Power Supplied (V _{dc})	MCF (MHz)	PPM Error
50	6.66	425.499962	0.089
	7.4	425.499971	0.068
	8.14	425.499973	0.063
40	6.66	425.499985	0.035
	7.4	425.499994	0.014
	8.14	425.499996	0.009
30	6.66	425.499998	0.005
	7.4	425.500001	0.002
	8.14	425.500004	0.009
20	6.66	425.499999	0.002
	7.4	425.500000	0.000
	8.14	425.500002	0.005
10	6.66	425.500016	0.038
	7.4	425.500022	0.052
	8.14	425.500029	0.068
0	6.66	425.500027	0.063
	7.4	425.500030	0.071
	8.14	425.500033	0.078
-10	6.66	425.500024	0.056
	7.4	425.500034	0.080
	8.14	425.500035	0.082
-20	6.66	425.500040	0.094
	7.4	425.500046	0.108
	8.14	425.500051	0.120
-30	6.66	425.500048	0.113
	7.4	425.500062	0.146
	8.14	425.500064	0.150

Narrow Reference Frequency: 460 MHz, Limit: 2.5 PPM			
Environment Temperature (°C)	Power Supplied (V _{dc})	MCF (MHz)	PPM Error
50	6.66	459.999962	0.083
	7.4	459.999968	0.070
	8.14	459.999971	0.063
40	6.66	459.999985	0.033
	7.4	459.999992	0.017
	8.14	459.999996	0.009
30	6.66	459.999998	0.004
	7.4	460.000007	0.015
	8.14	460.000008	0.017
20	6.66	460.000011	0.024
	7.4	460.000030	0.065
	8.14	460.000036	0.078
10	6.66	460.000009	0.020
	7.4	460.000026	0.057
	8.14	460.000025	0.054
0	6.66	460.000002	0.004
	7.4	460.000008	0.017
	8.14	460.000010	0.022
-10	6.66	460.000012	0.026
	7.4	460.000017	0.037
	8.14	460.000022	0.048
-20	6.66	460.000020	0.043
	7.4	460.000023	0.050
	8.14	460.000027	0.059
-30	6.66	460.000028	0.061
	7.4	460.000031	0.067
	8.14	460.000035	0.076

§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	2006-3-1	2007-3-1
HP	Modulation Analyzer	8901B	3438A05208	2006-3-1	2007-3-1
HP	Signal Generator	HP8657A	2849U00982	2006-2-28	2007-2-28

* **Statement of Traceability:** Bay Area Compliance Lab 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 Charmi Peng on 2006-3-20.

Test Result: Pass

Test Mode: Transmitting

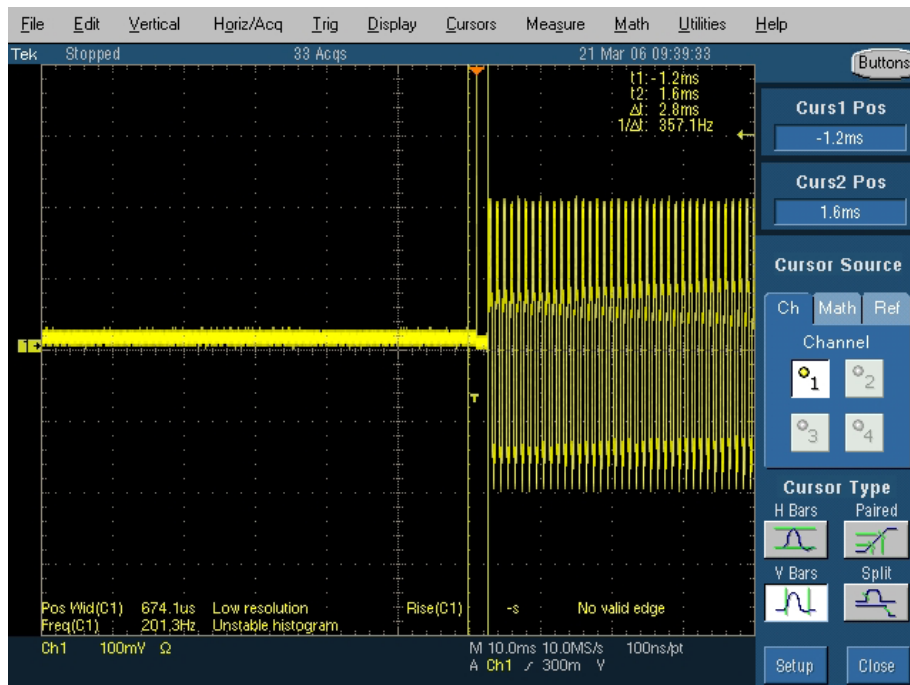
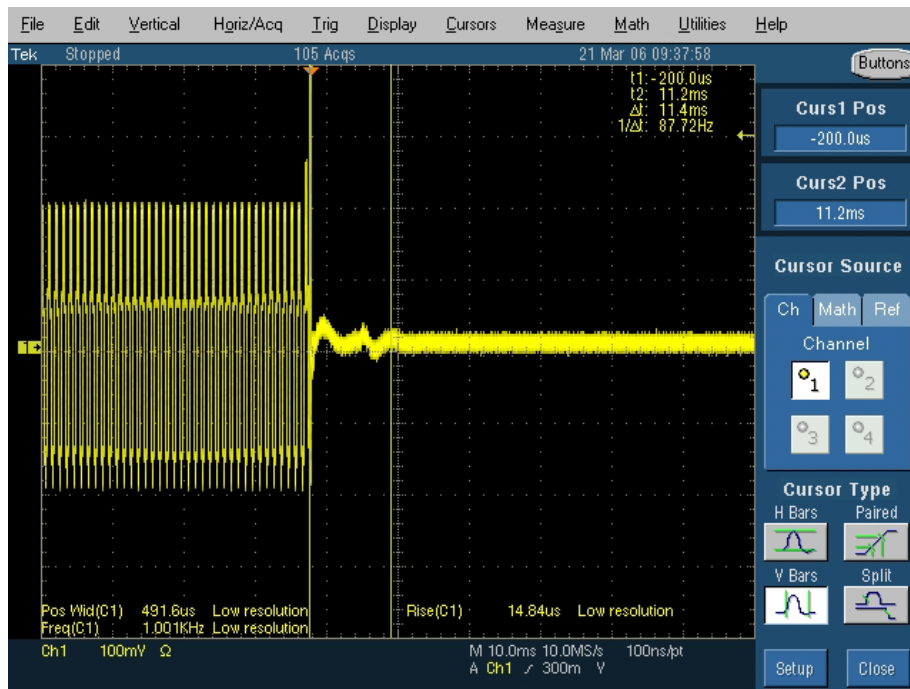
For Narrowband

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

For Wideband

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

For Narrowband



For Wideband

