FCC PART 90 TYPE APPROVAL

EMI MEASUREMENT AND TEST REPORT

For

Shenzhen HYT Science & Technology Co., Ltd

HYT Tower, Shenzhen Hi-Tech Industrial Park North, Beihuan Rd., Nanshan District, Shenzhen, P.R.C.

FCC ID: R74TM-800U

January 17, 2006

This Report Concerns: ☒ Original Report	**Equipment Type:** Mobile Radio
Test Engineer:	Jandy Su Louise Lu
Report No.:	RSZ05120202
Test Date:	December 19, 2005-January 16, 2006
Reviewed By:	Chris Zeng
Prepared By:	Bay Area Compliance Lab Corp. (ShenZhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China Tel: +86-755-33320018 Fax: +86-755-33320008

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Shenzhen HYT Science & Technology Co., Ltd*'s product, model number: TM-800U or the "EUT" as referred to in this report is a Mobile Radio. The EUT is measured approximately 17.0 cm L x 16.0cmW x 4.5cmH, rated input voltage: DC 13.6 V.

** The test data gathered are from production sample, serial number: 05O31G0011, provided by the manufacturer, we received the EUT on 2005-12-2.*

Objective

This Type approval report is prepared on behalf of *Shenzhen HYT Science & 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

External I/O Cable

Cable Description	Length (M)	From/Port	To
Unshielded Detachable DC Power Cable	1.80	EUT	DC Power
Unshielded Detachable Coxial Cable	0.30	EUT	Load

SYSTEM TEST CONFIGURATION

Description of Test Configuration

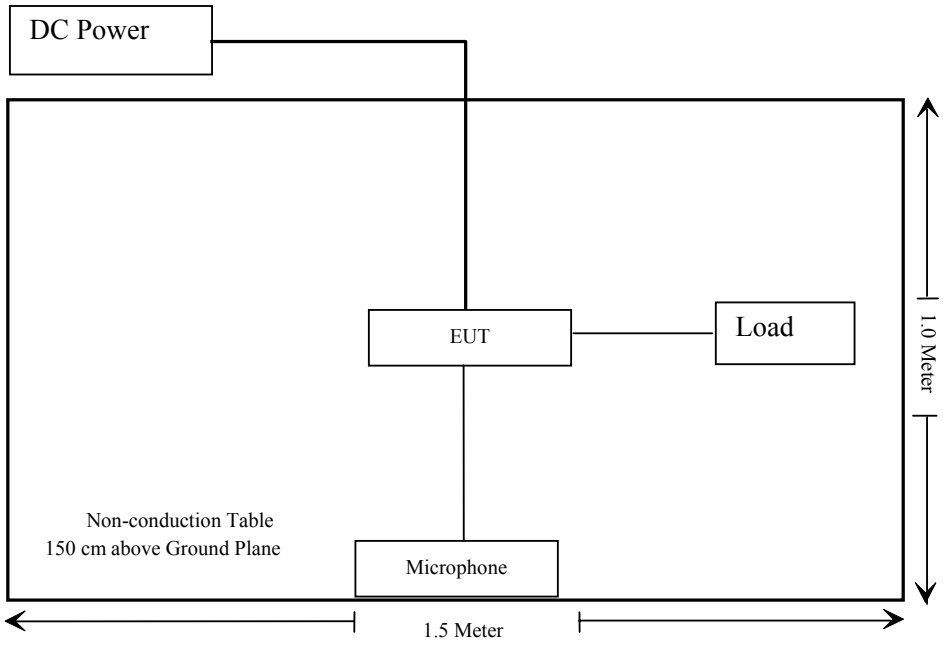
The system was configured for testing in a typical fashion (as normally used by a typical user).

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
§1.1310, §2.1091	RF Exposure	Compliant
§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

* Within the measurement uncertainty

§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 §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposures				
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

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where: S = power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal: 46.51 (dBm)
Maximum peak output power at antenna input terminal: 44.77 (W)
Prediction distance: 82 (cm)
Predication frequency: 481.375 (MHz)
Antenna Gain (typical): 3 (dBi)
Power density at predication frequency at 82cm: 1.590 (mW/cm^2)
MPE limit for uncontrolled exposure at prediction frequency: 1.605 (mW/cm^2)

Test Result: Pass

§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	Spectrum Analyzer	FSEM30	849720/019	2005-12-21	2006-12-21

*** Statement of Tractability:** Bay Area Compliance Lab 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
100kHz	300kHz

Test Data

Environmental Conditions

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

The testing was performed by Jandy Su on 2005-12-19.

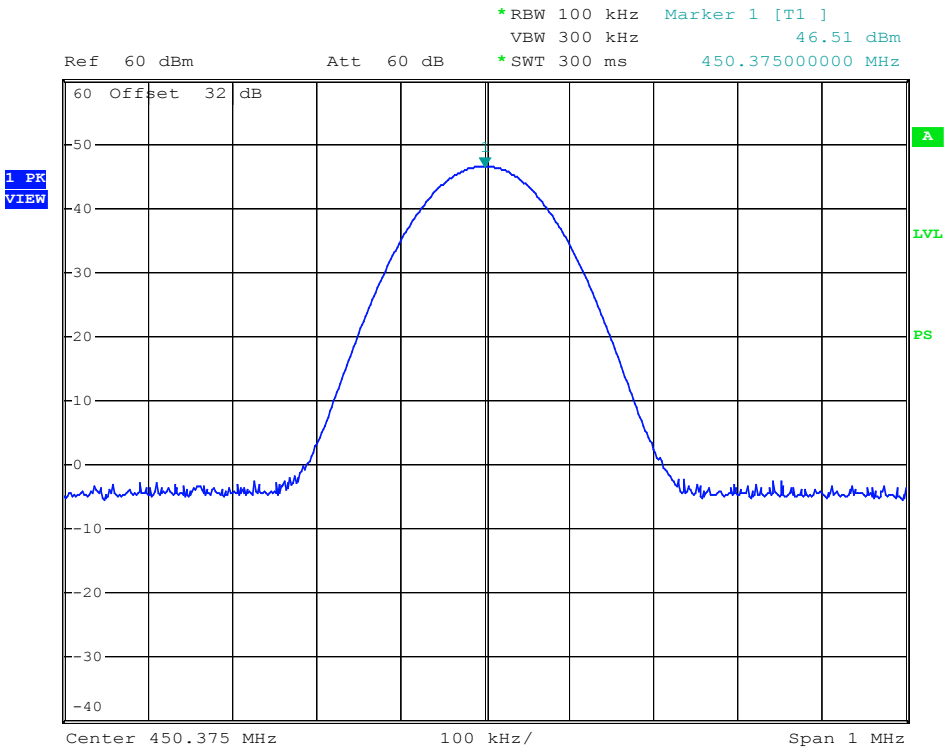
Test Result: Pass

Test Mode: Transmitting

Frequency Spacing (kHz)	Frequency (MHz)	Output Power in dBm	Output Power in W
Narrowband 12.5	450.375	46.51	44.77
	481.375	46.42	43.85
	511.795	46.49	44.57
Wideband 25.0	450.375	46.50	44.68
	481.375	46.51	44.77
	511.795	46.49	44.57

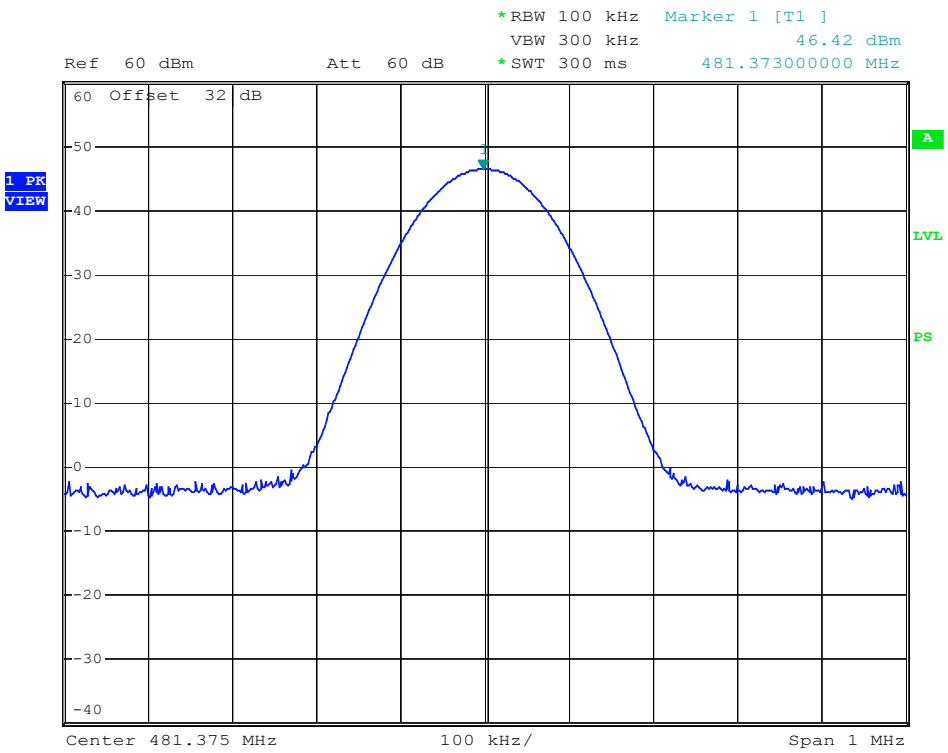
Note: The power output may depend on the intended use of the EUT. For all tests, the EUT was set to maximum conditions.

Narrowband 12.5 kHz:



HYT Mobile Radio TM-800U Conducted Power Narrow Low Channel

Date: 27.DEC.2005 10:00:43



HYT Mobile Radio TM-800U Conducted Power Narrow Mid Channel

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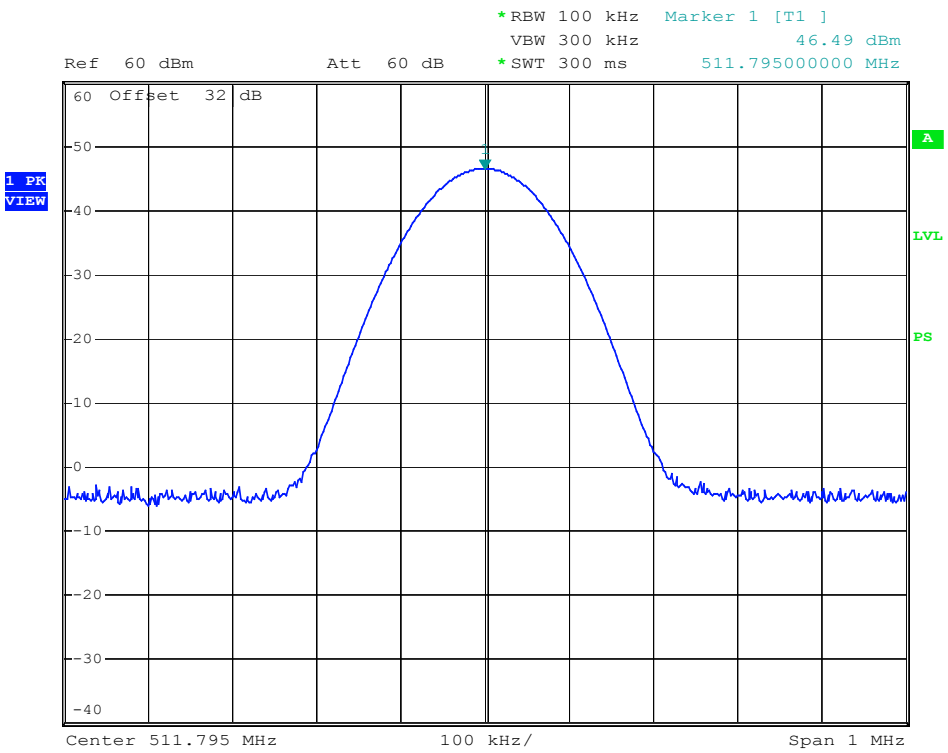
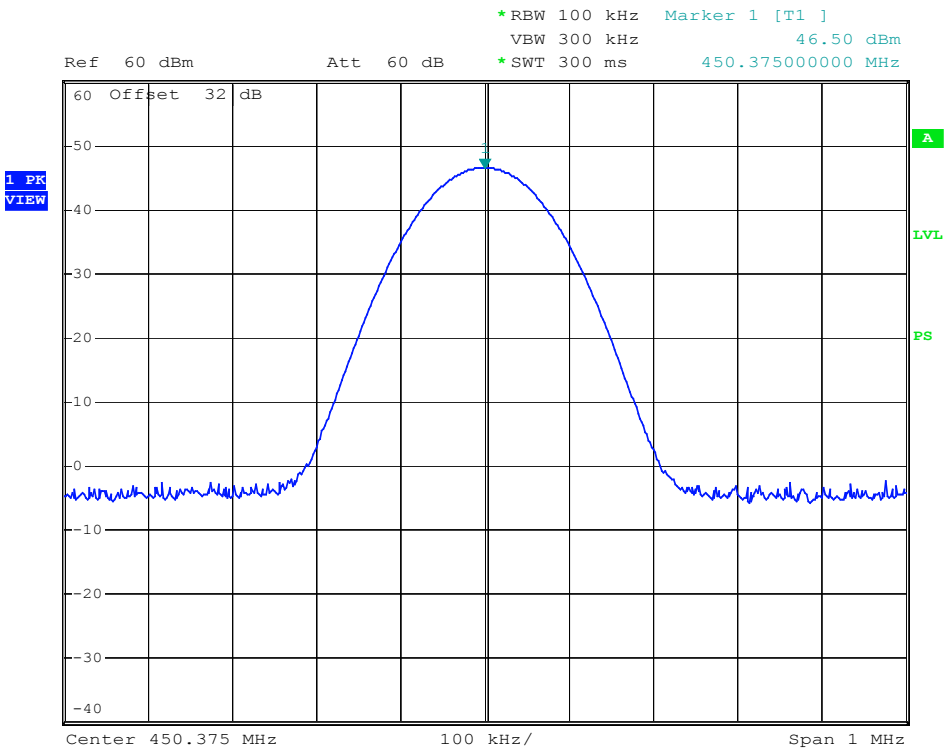


HYT Mobile Radio TM-800U Conducted Power Narrow High Channel

Date: 27.DEC.2005 10:07:13

Wideband 25.0 kHz:



HYT Mobile Radio TM-800U Conducted Power Wide Low Channel

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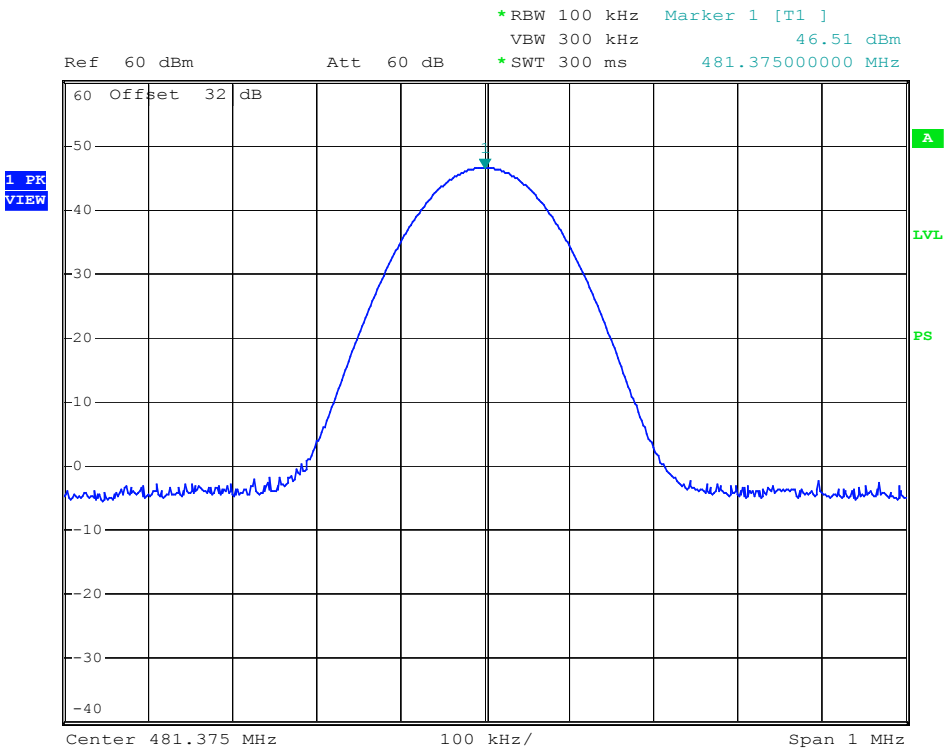

HYT Mobile Radio TM-800U Conducted Power Wide Mid Channel

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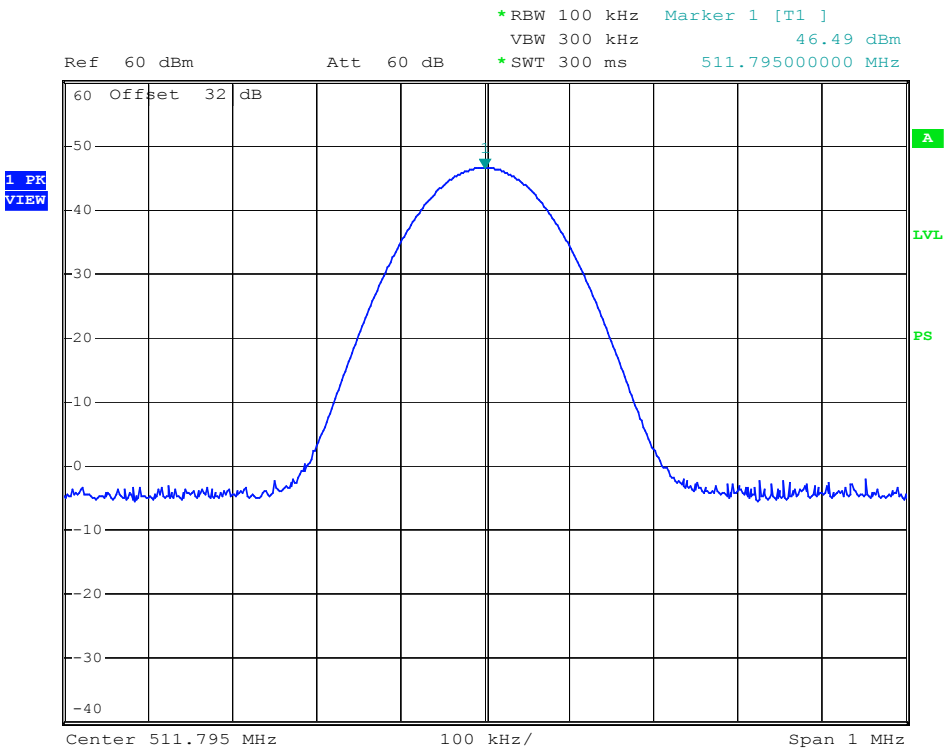


HYT Mobile Radio TM-800U Conducted Power Wide High Channel

Date: 27.DEC.2005 10:18:11

§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	2005-2-28	2006-2-28
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

Test Method: TIA/EIA-603 2.2.3

Test Data

Environmental Conditions

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

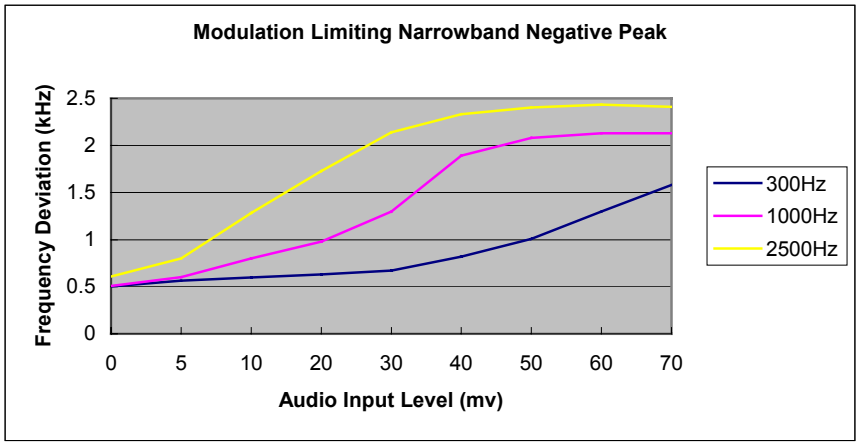
The testing was performed by Jandy Su on 2005-12-21.

Test Result: Pass

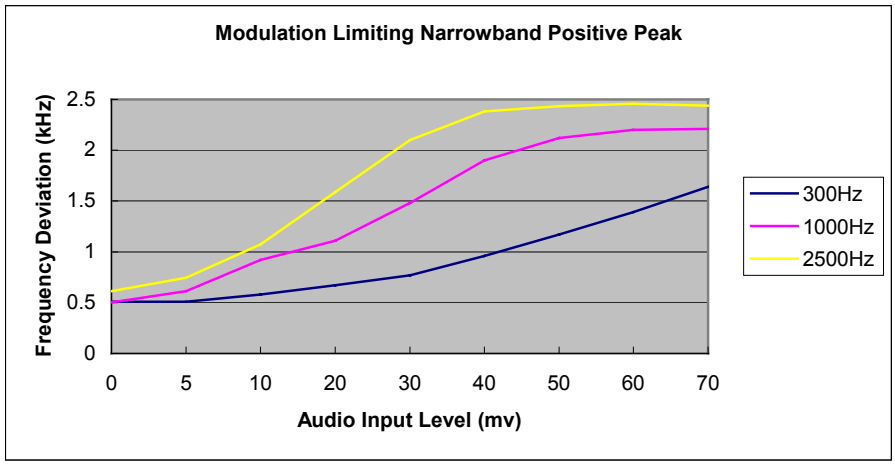
Test Mode: Transmitting

Narrowband 12.5 kHz:

Modulation Limiting Negative Peak			
Audio Input Level (mv)	Frequency Deviation @300Hz (kHz)	Frequency Deviation @1000Hz (kHz)	Frequency Deviation @2500Hz (kHz)
0	0.503	0.509	0.61
5	0.567	0.603	0.8
10	0.6	0.8	1.283
20	0.63	0.98	1.73
30	0.67	1.3	2.139
40	0.82	1.89	2.332
50	1.01	2.08	2.403
60	1.3	2.13	2.435
70	1.58	2.13	2.411

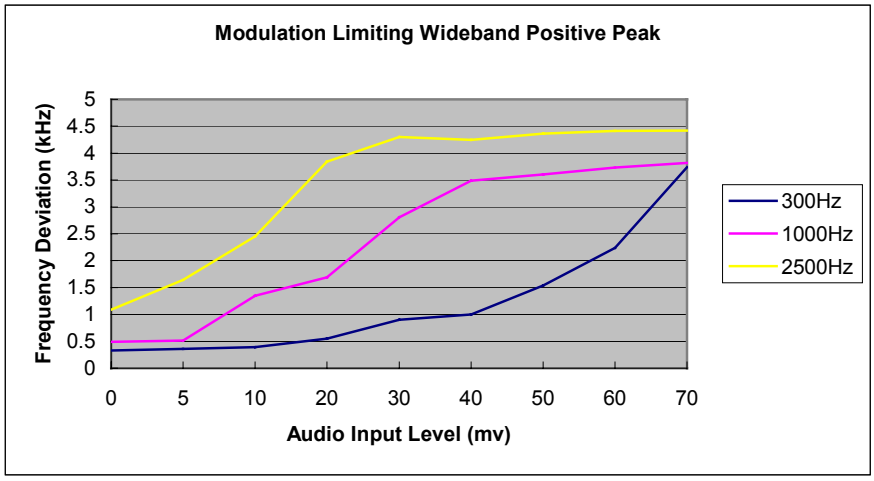


Modulation Limiting Positive Peak			
Audio Input Level (mv)	Frequency Deviation @300Hz (kHz)	Frequency Deviation @1000Hz (kHz)	Frequency Deviation @2500Hz (kHz)
0	0.51	0.502	0.613
5	0.508	0.613	0.743
10	0.58	0.92	1.073
20	0.67	1.11	1.587
30	0.77	1.48	2.1
40	0.96	1.9	2.38
50	1.17	2.12	2.434
60	1.39	2.2	2.458
70	1.64	2.21	2.44

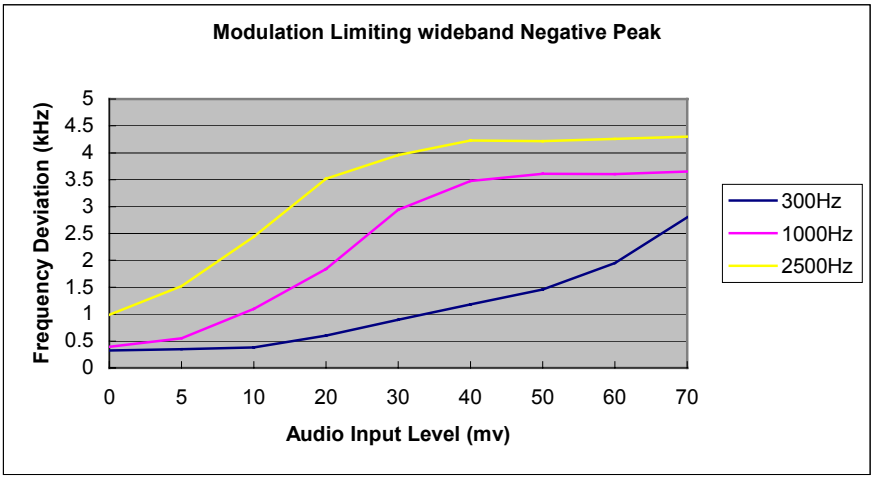


Wideband 25.0 kHz:

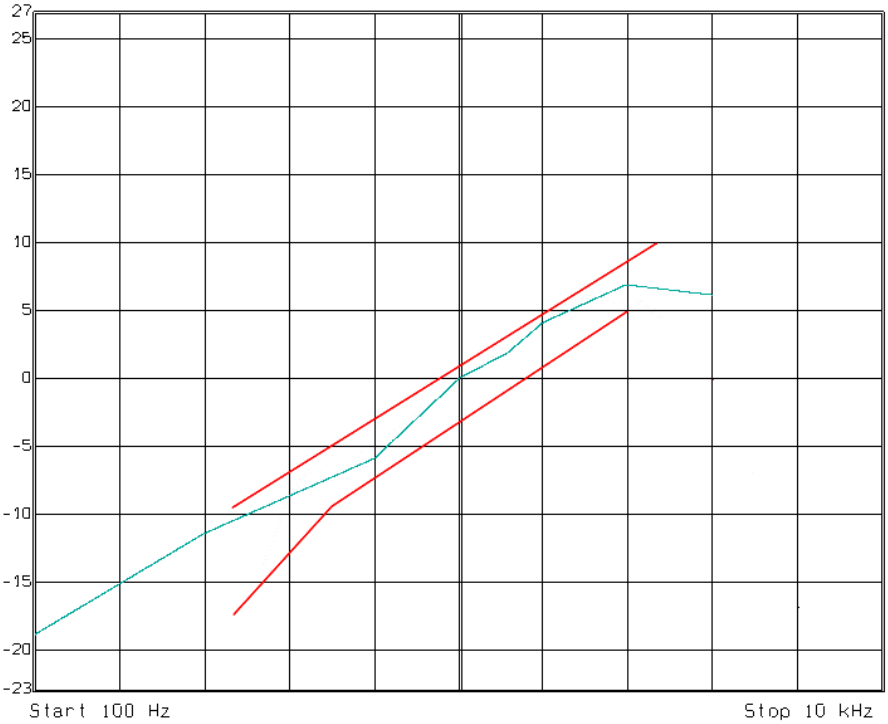
Modulation Limiting Positive Peak			
Audio Input Level (mv)	Frequency Deviation @300Hz (kHz)	Frequency Deviation @1000Hz (kHz)	Frequency Deviation @2500Hz (kHz)
0	0.331	0.493	1.089
5	0.356	0.516	1.642
10	0.395	1.346	2.456
20	0.547	1.687	3.843
30	0.903	2.806	4.3
40	1.003	3.487	4.25
50	1.54	3.603	4.361
60	2.237	3.734	4.416
70	3.74	3.821	4.42



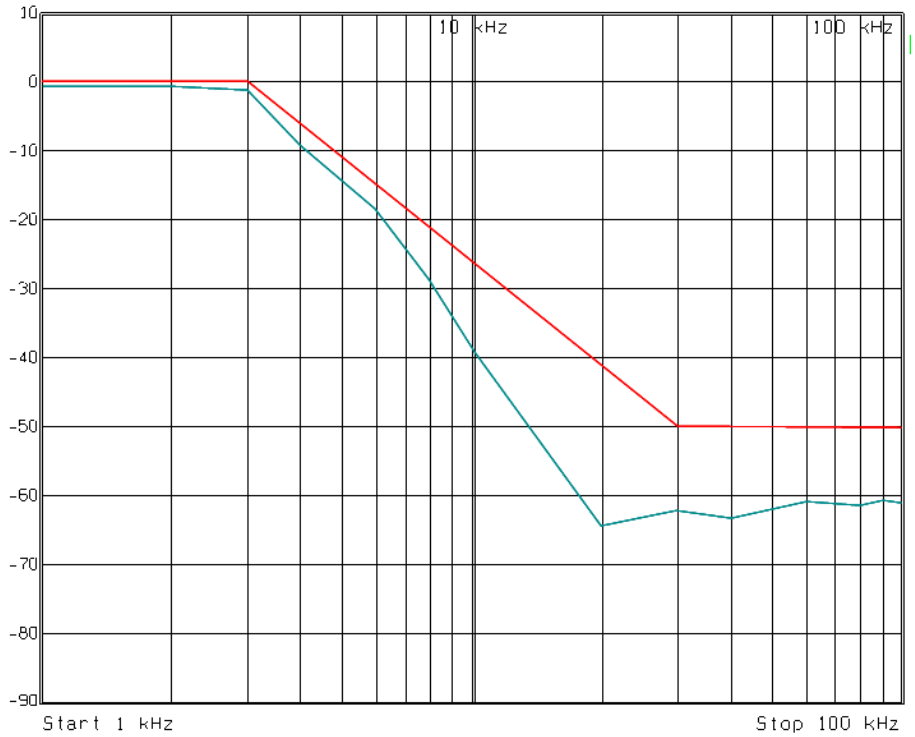
Modulation Limiting Negative Peak			
Audio Input Level (mv)	Frequency Deviation @300Hz (kHz)	Frequency Deviation @1000Hz (kHz)	Frequency Deviation @2500Hz (kHz)
0	0.322	0.395	0.989
5	0.349	0.55	1.521
10	0.382	1.1	2.444
20	0.6	1.84	3.52
30	0.899	2.94	3.96
40	1.18	3.48	4.23
50	1.46	3.612	4.216
60	1.951	3.603	4.26
70	2.8	3.65	4.3



Audio Frequency Response



Audio Low Pass Filter Response



§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) 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 –2.88kHz) 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+10logP=50+10log(3.96)=55.56dB

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+10logP=43+10log(3.93)=48.94dB

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	2005-2-28	2006-2-28
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 Jandy Su on 2005-12-29.

Test Result: Pass.

Test Mode: Transmitting

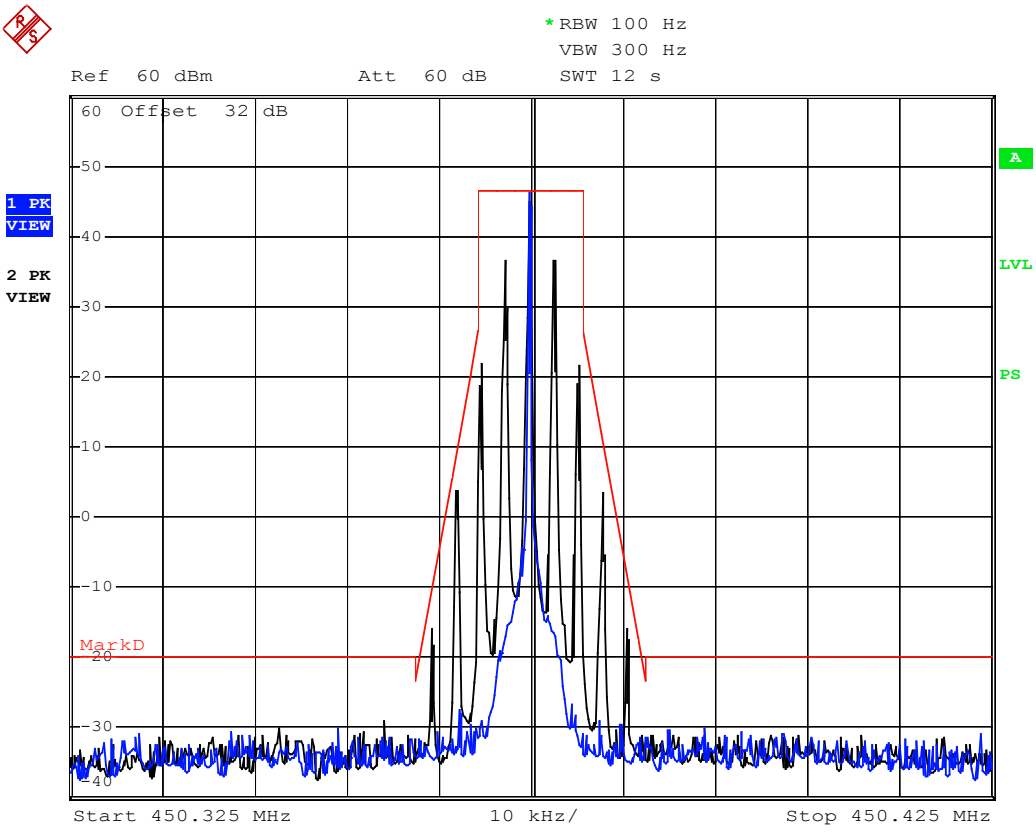
Please refer to the hereinafter plots.

Emission Designator:

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

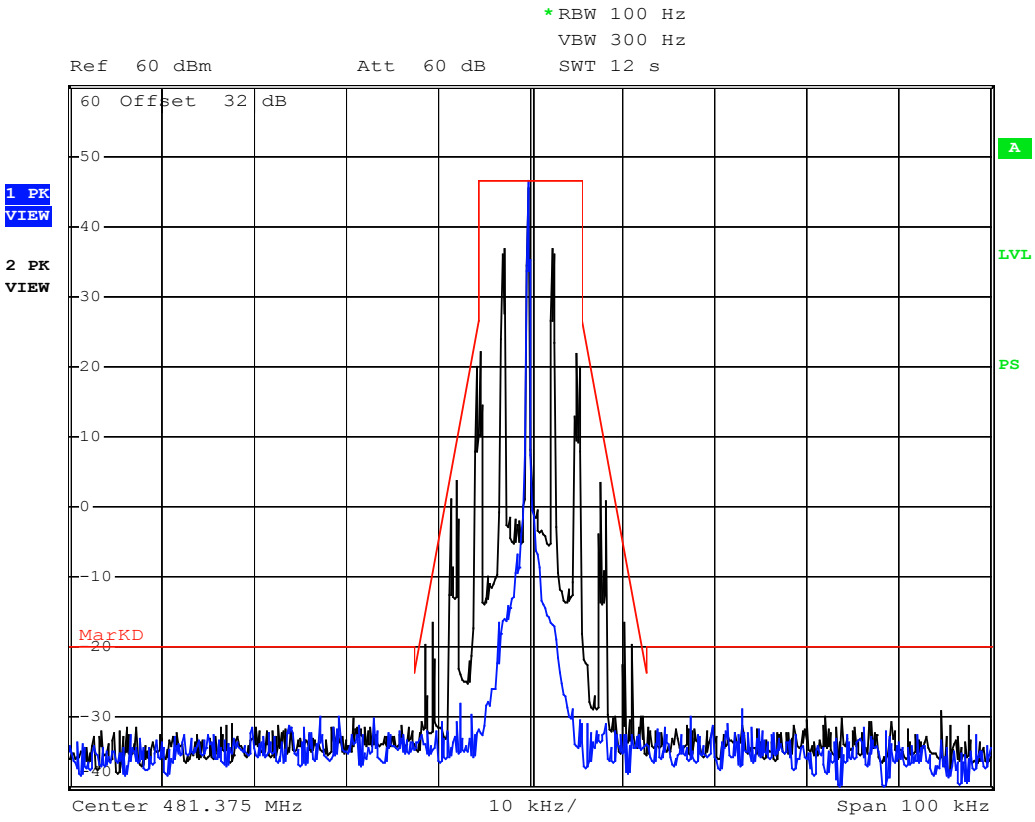
For 25 KHz Channel Spacing: 2M+2D = 2x3+2x5 = 16K0F3E

Narrowband 12.5 kHz:



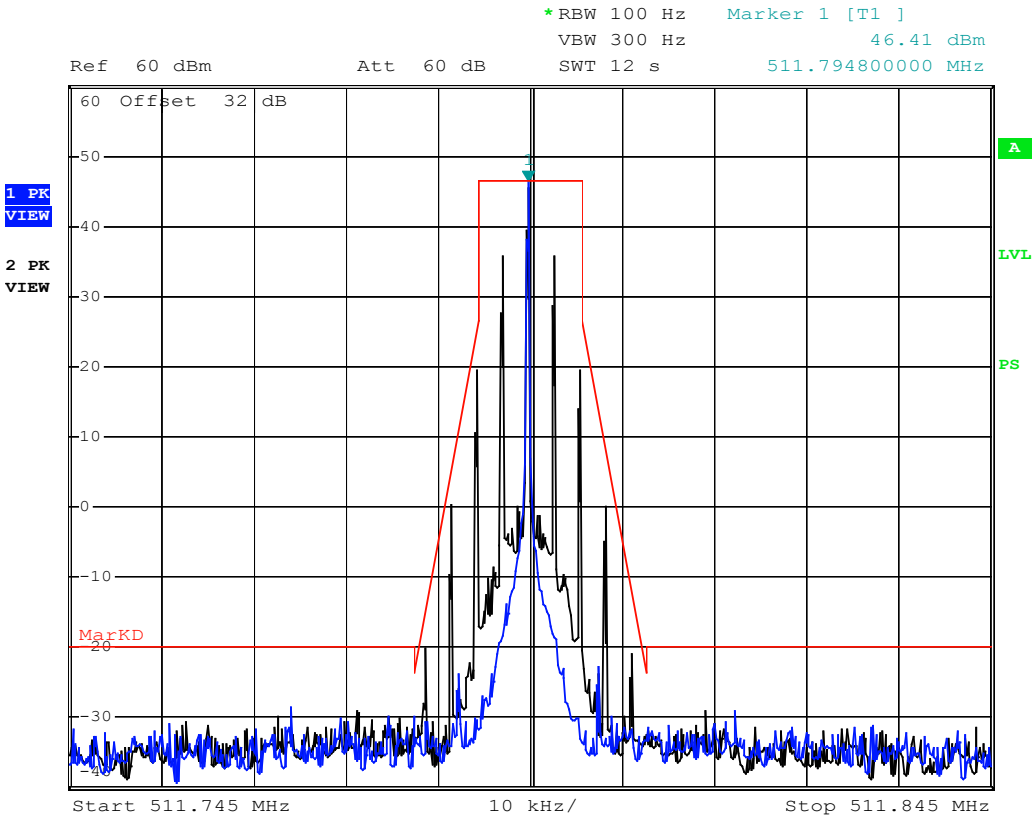
Occupied Bandwidth Narrow Low Channel

Date: 29.DEC.2005 11:27:32



Occupied Bandwidth Narrow Mid Channel

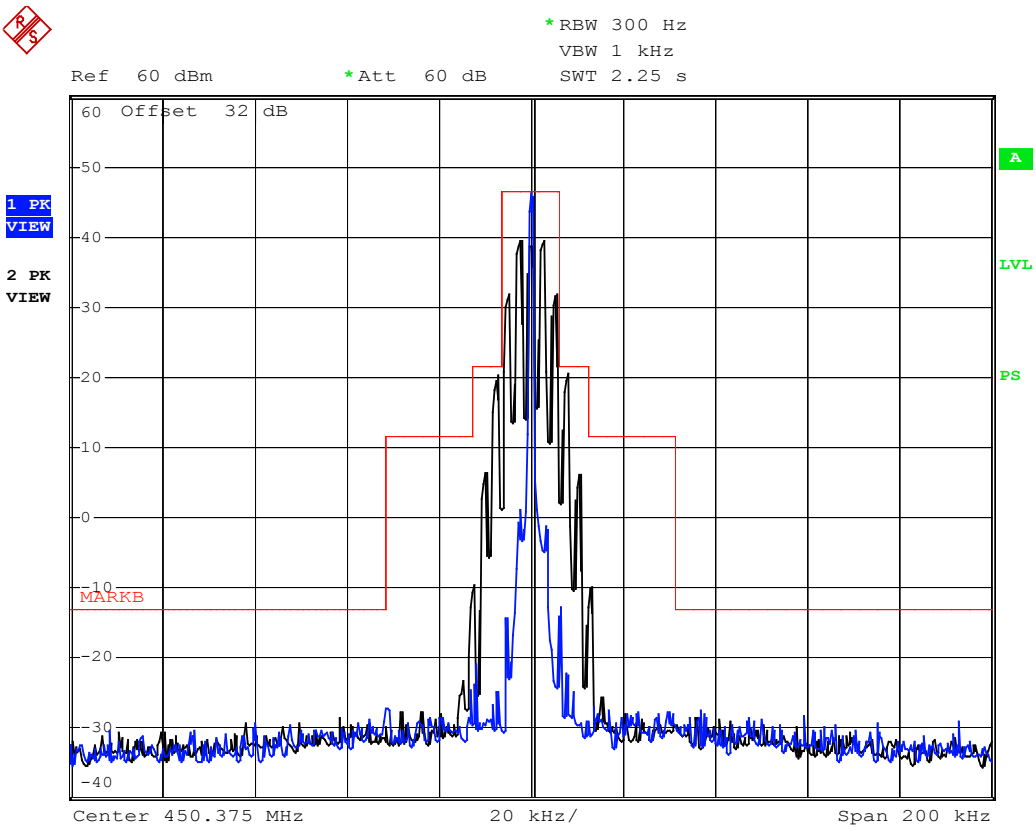
Date: 28.DEC.2005 13:50:27



Occupied Bandwidth Narrow High Channel

Date: 28.DEC.2005 14:21:10

Wideband 25.0 kHz:



Occupied Bandwidth Wide Low Channel

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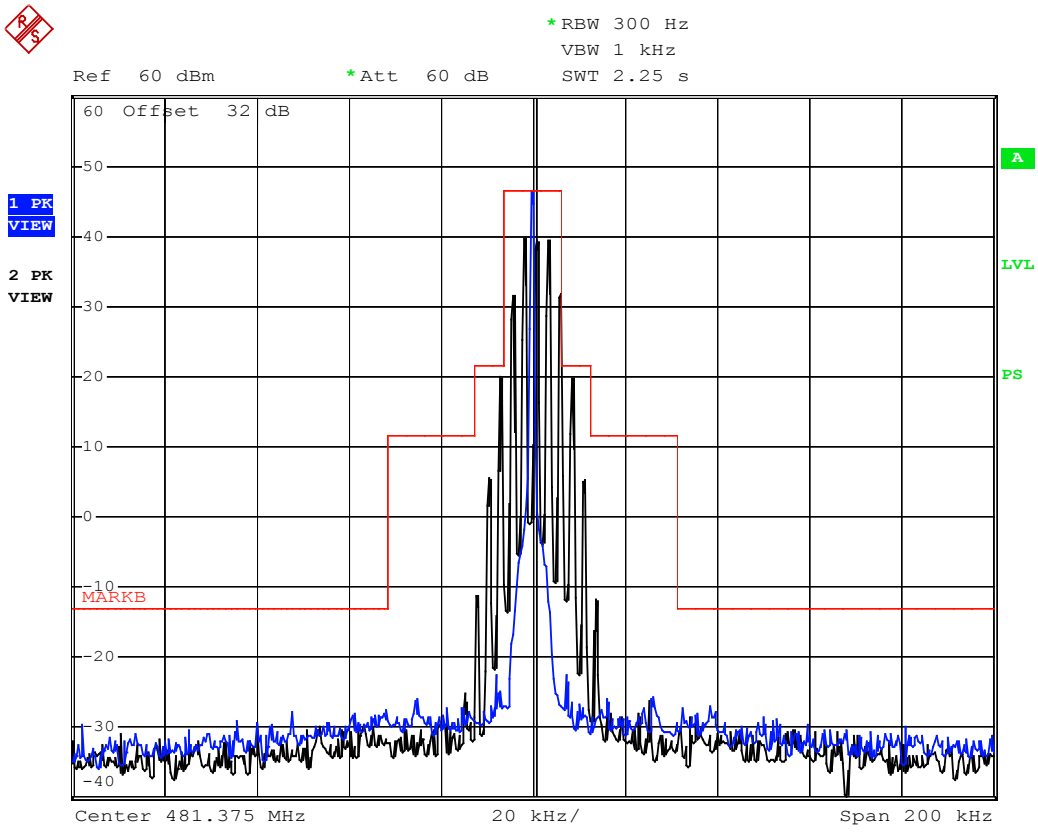
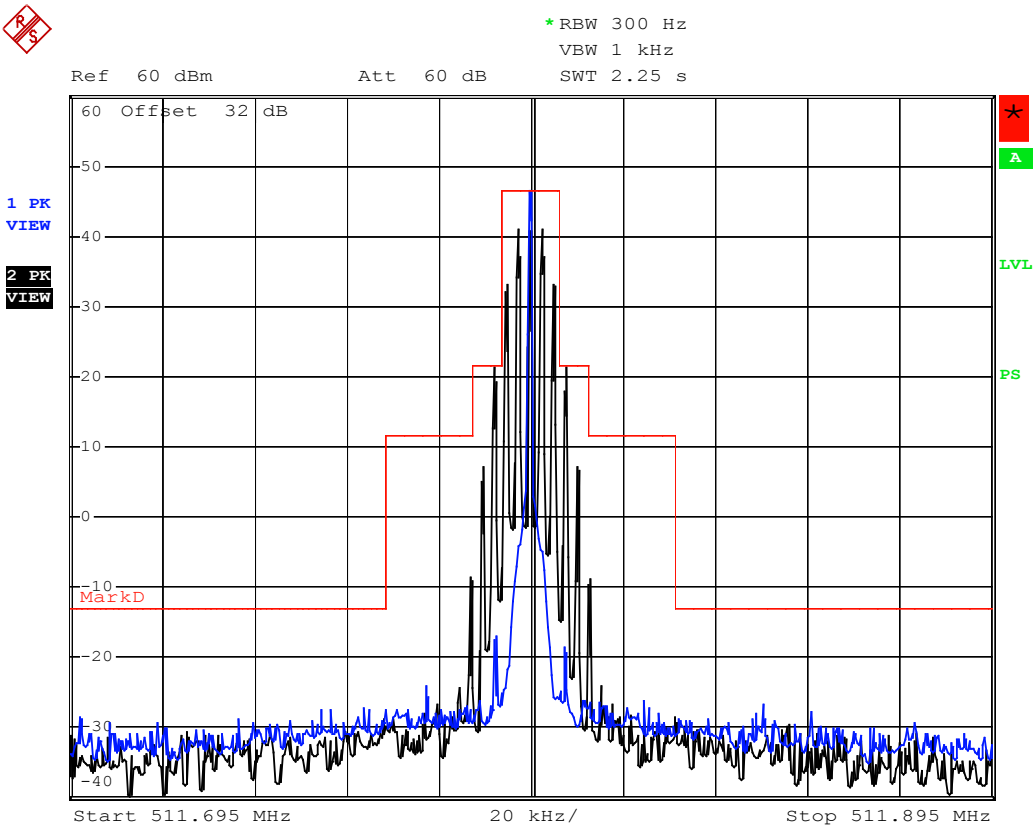


Occupied Bandwidth Wide Mid Channel

Date: 29.DEC.2005 14:07:41



Occupied Bandwidth Wide High Channel

Date: 29.DEC.2005 18:18:55

§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+10logP=50+10log(3.96)=55.56dB

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

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

43+10logP=43+10log(3.93)=48.94dB

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

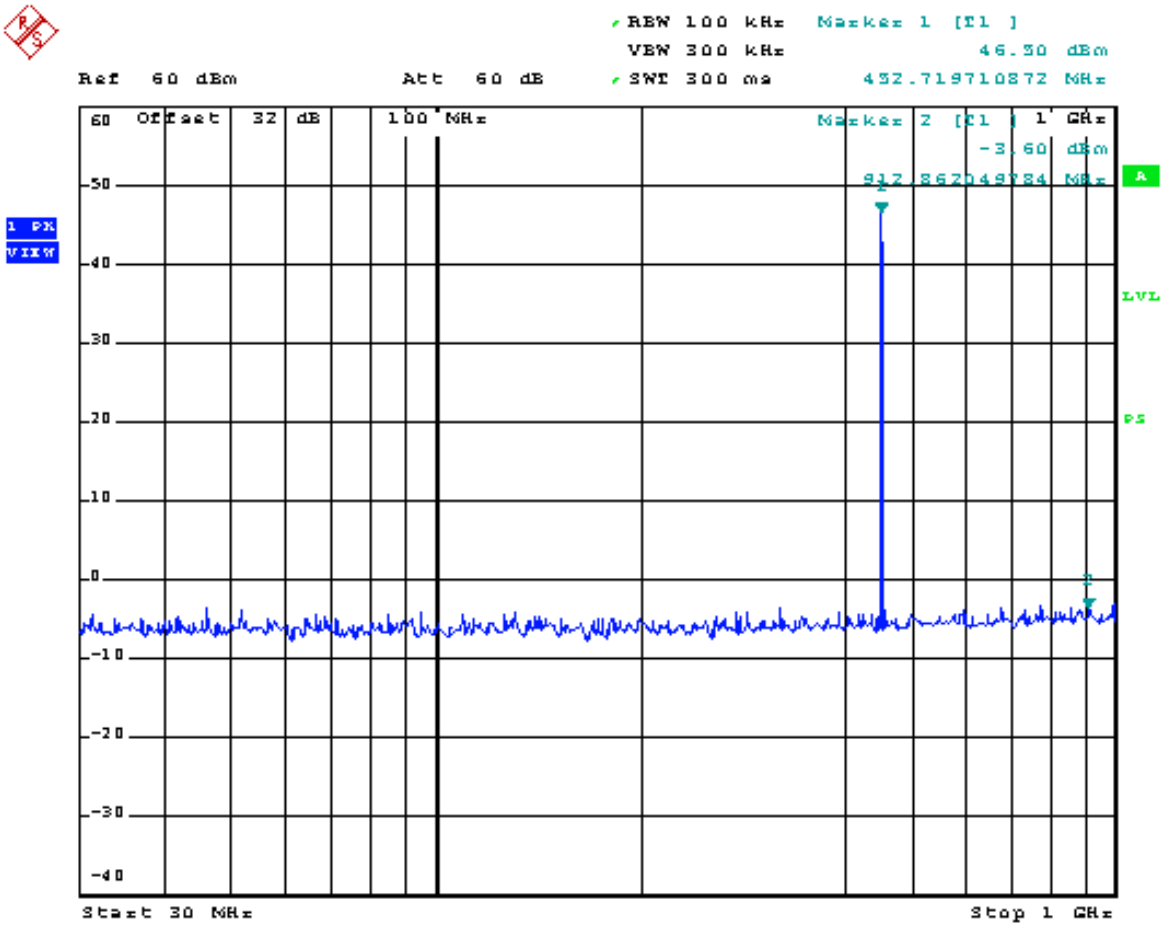
The testing was performed by Jandy Su on 2006-1-16.

Test Result: Pass

Test Mode: Transmitting

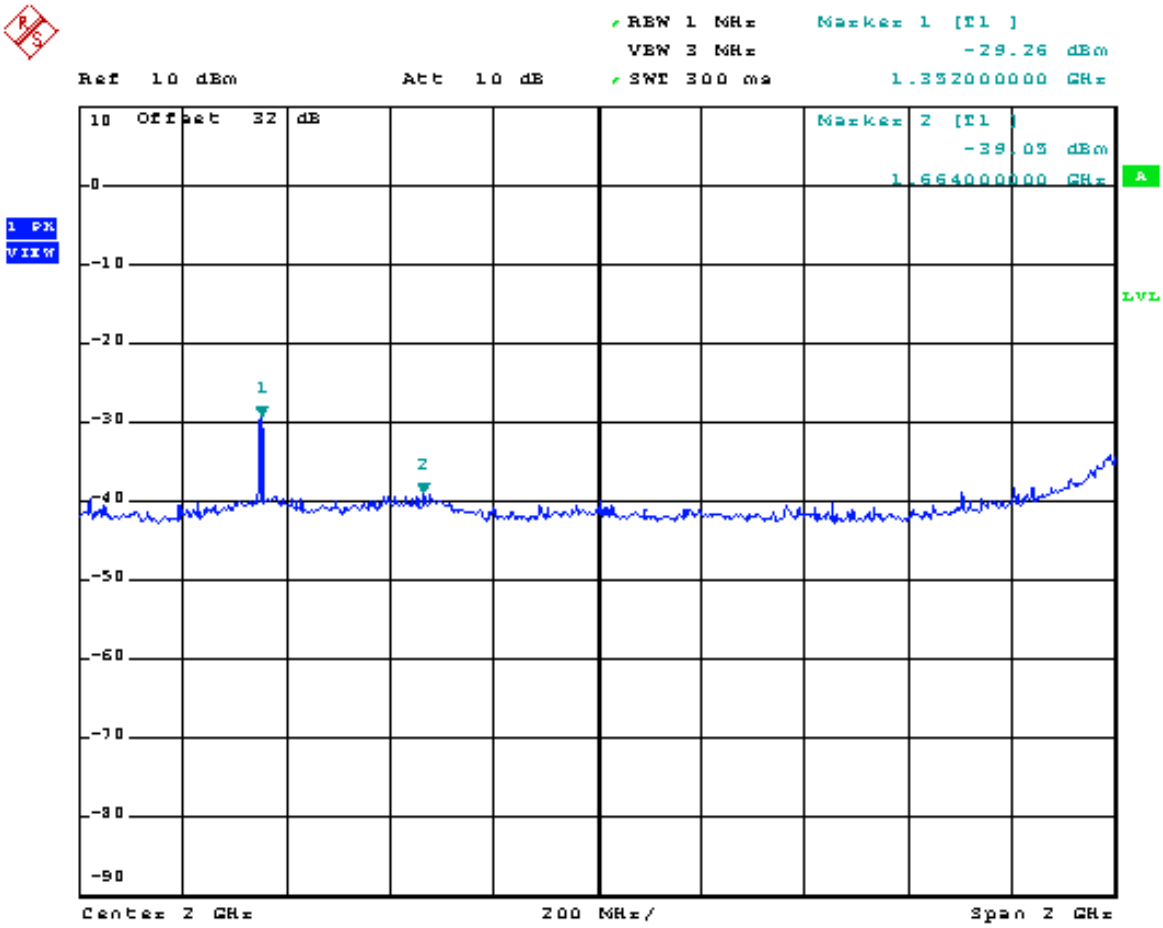
Narrowband 12.5 kHz:

Low Channel:



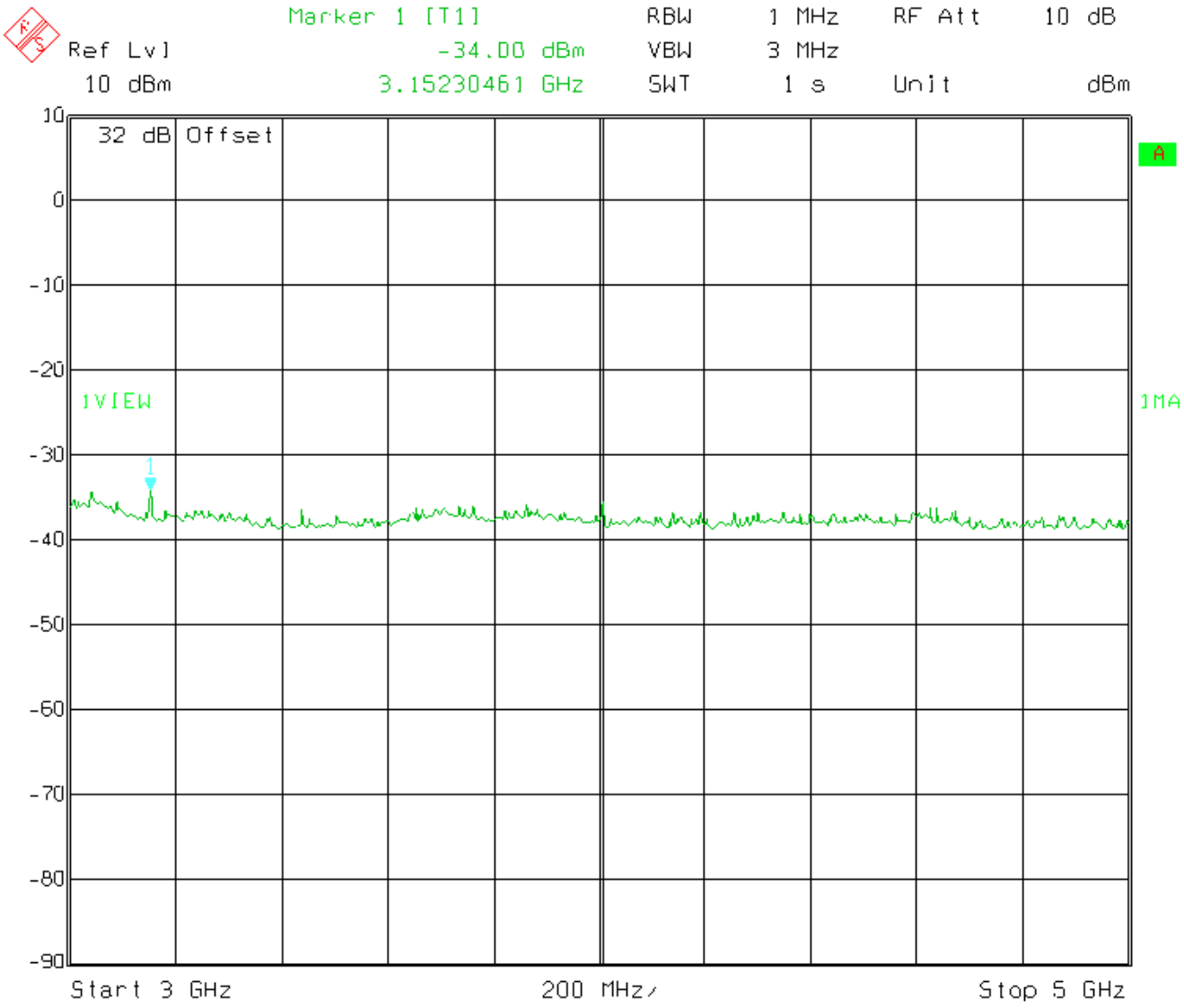
Spurious Emission at antenna terminals

Date: 16.JAN.2006 10:27:56

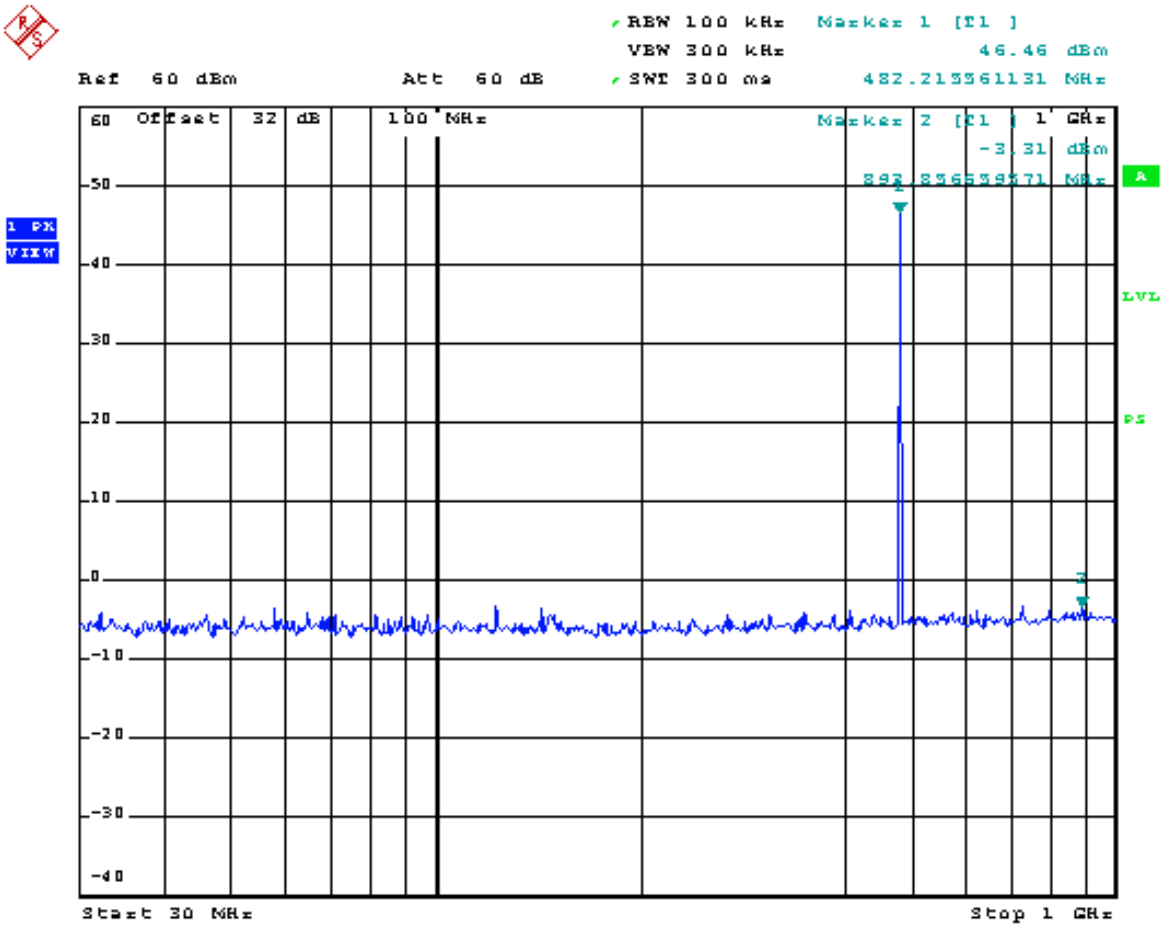


Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:10:41

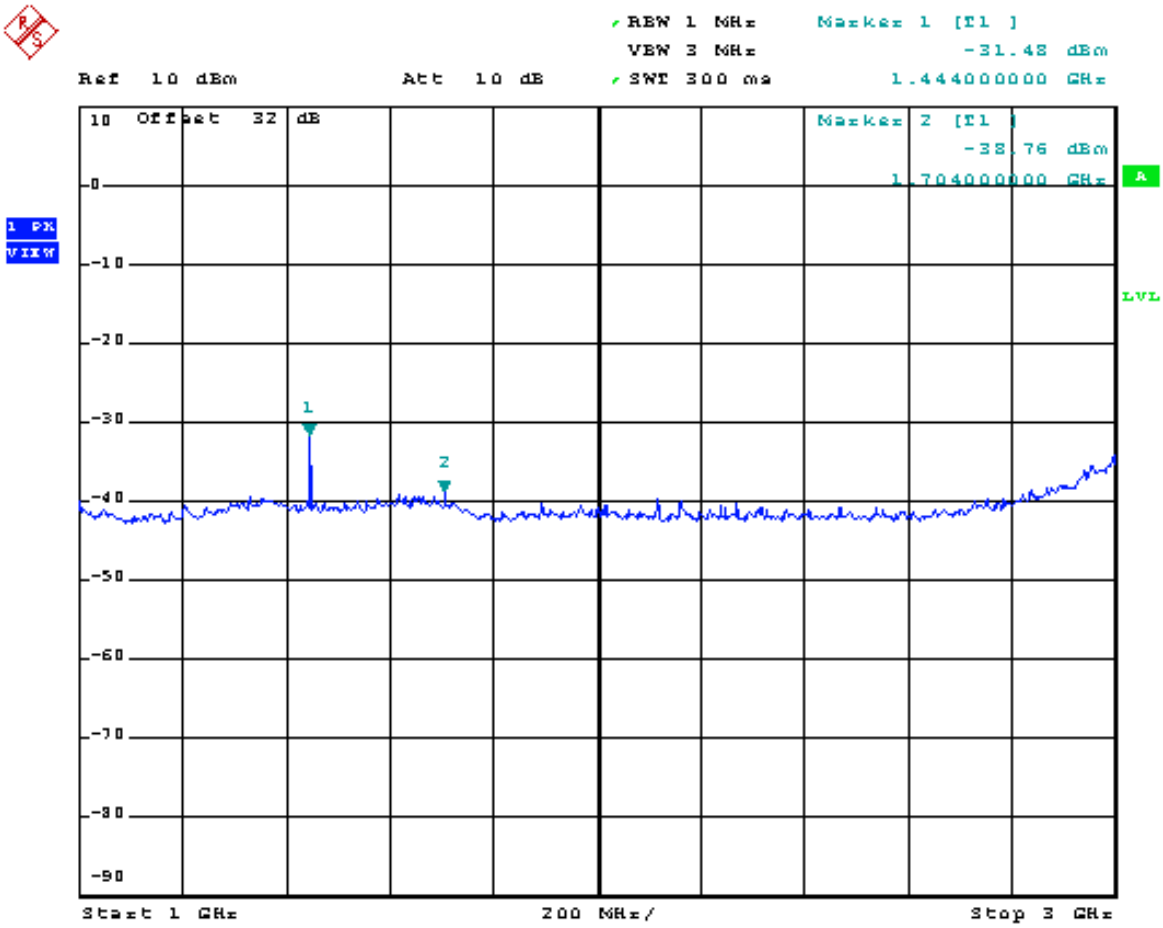

Marker 1 [T1]
-34.00 dBm
3.15230461 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
1VIEW
1MA
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 3 GHz
200 MHz/
Stop 5 GHz

Middle Channel:



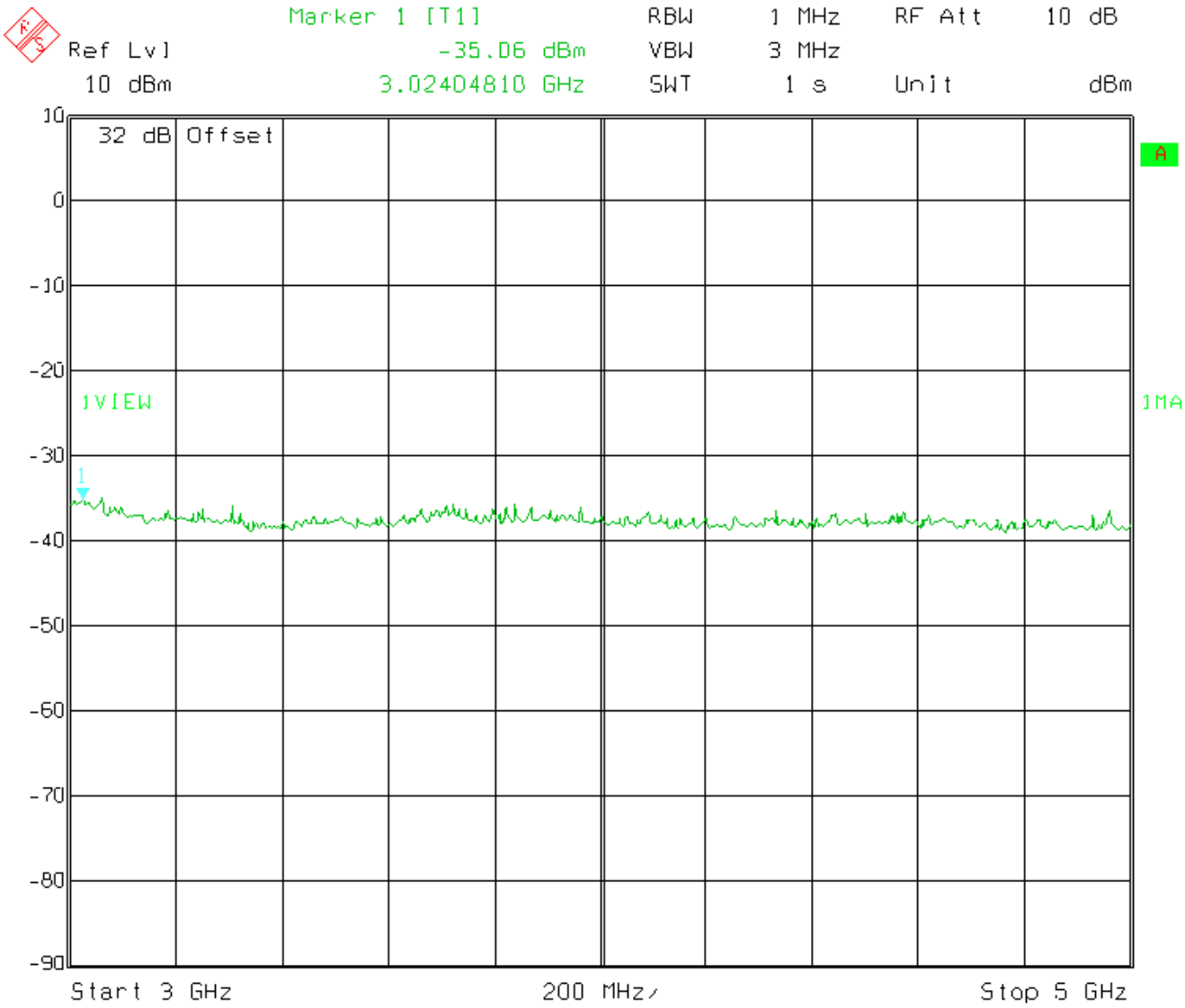
Spurious Emission at antenna terminals

Date: 16.JAN.2006 10:29:38

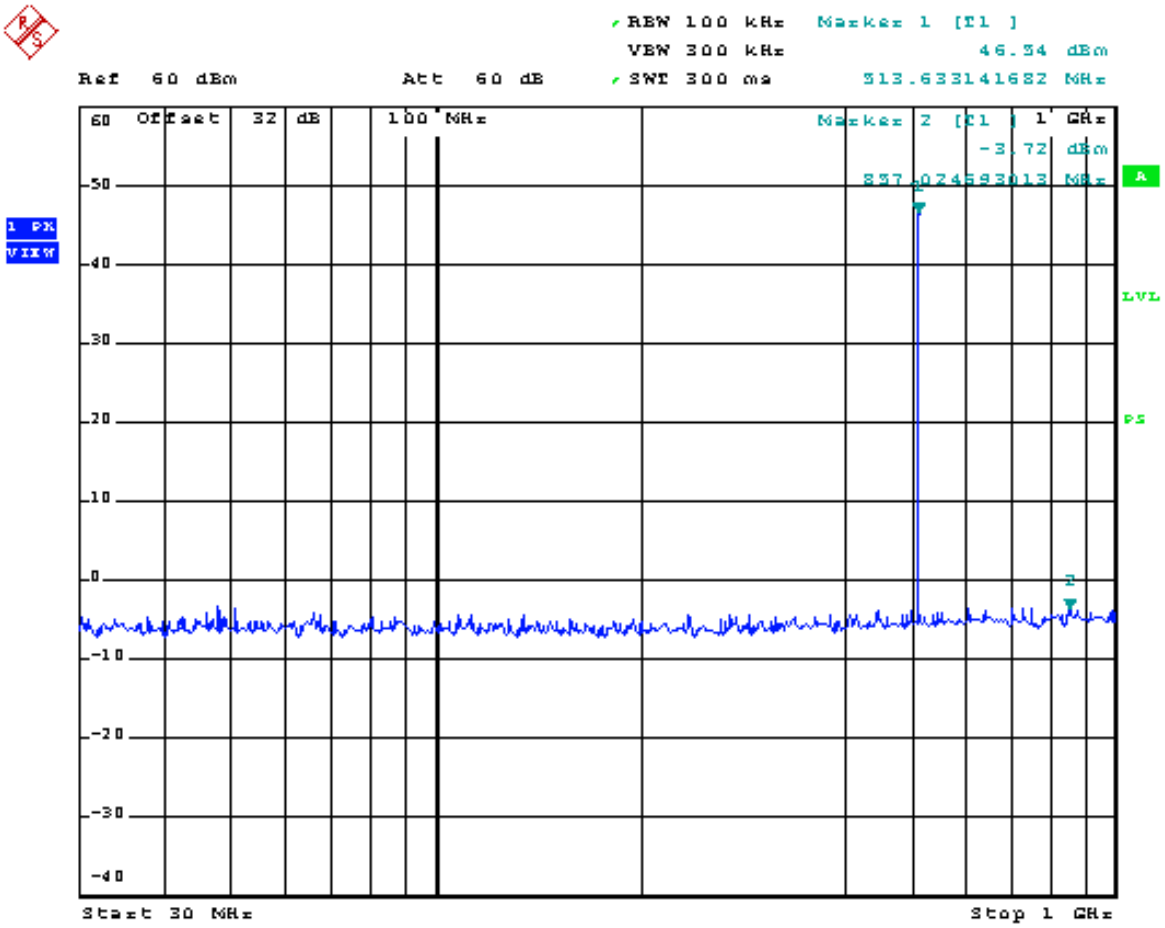


Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:09:09

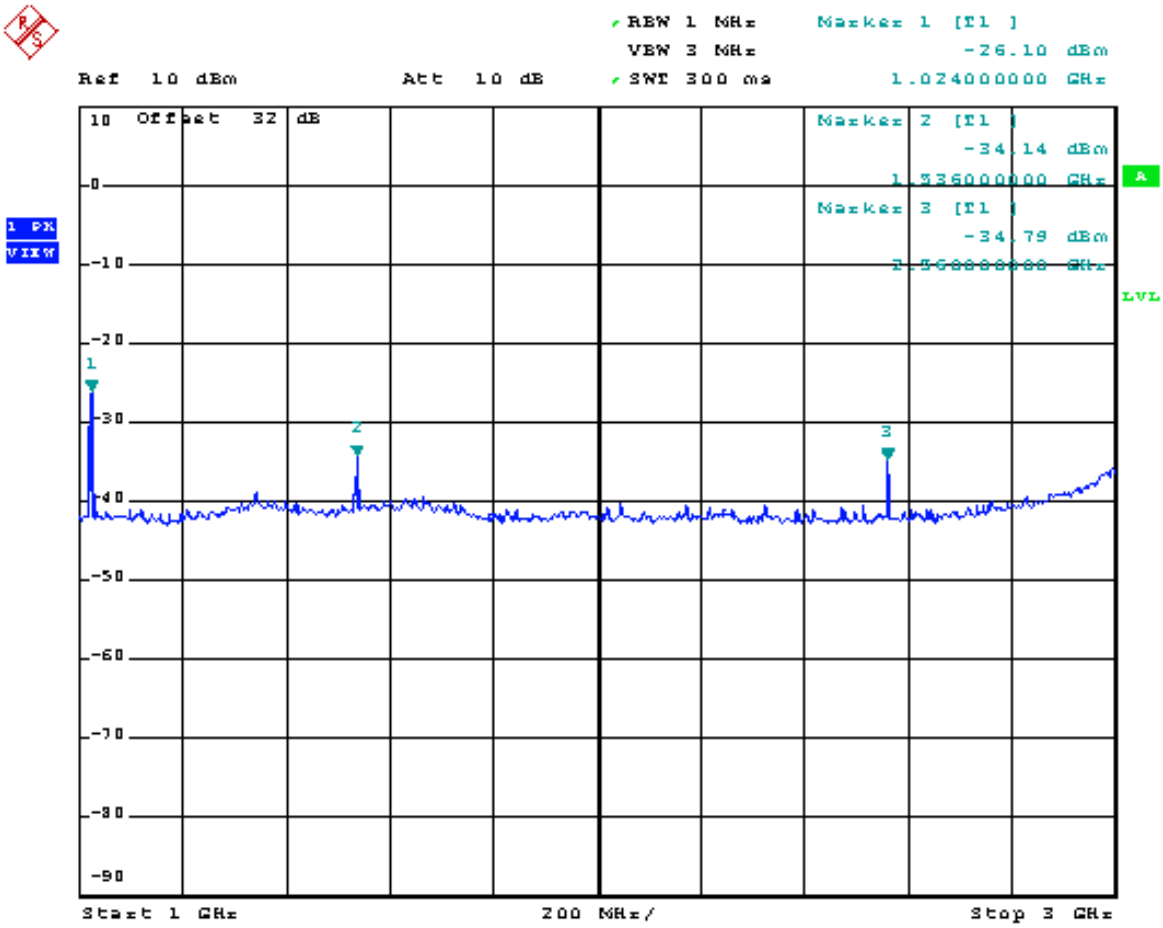

Marker 1 [T1]
-35.06 dBm
3.02404810 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
1VIEW
1MA
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 3 GHz
200 MHz/
Stop 5 GHz

High Channel:



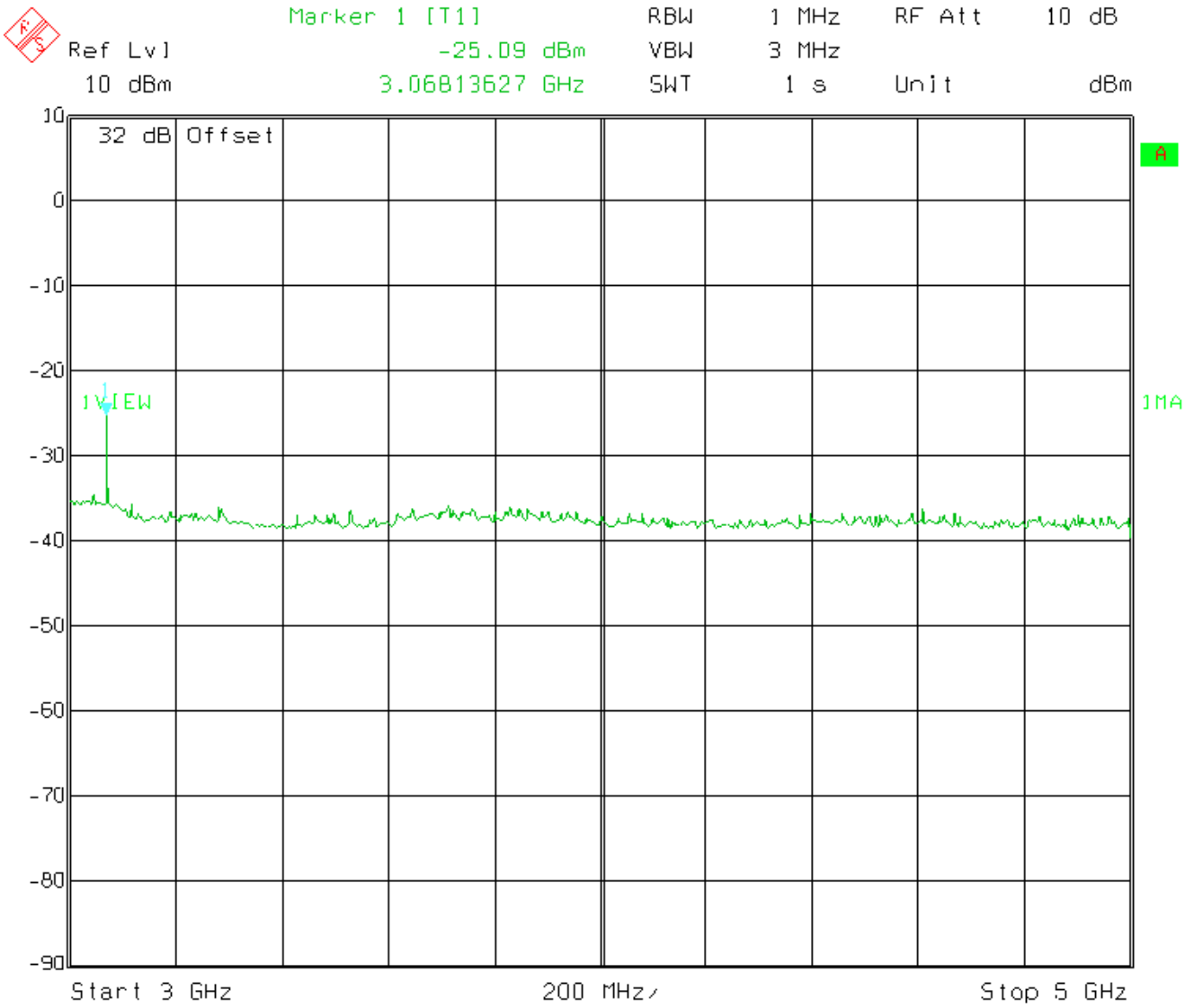
Spurious Emission at antenna terminals

Date: 16.JAN.2006 10:31:02



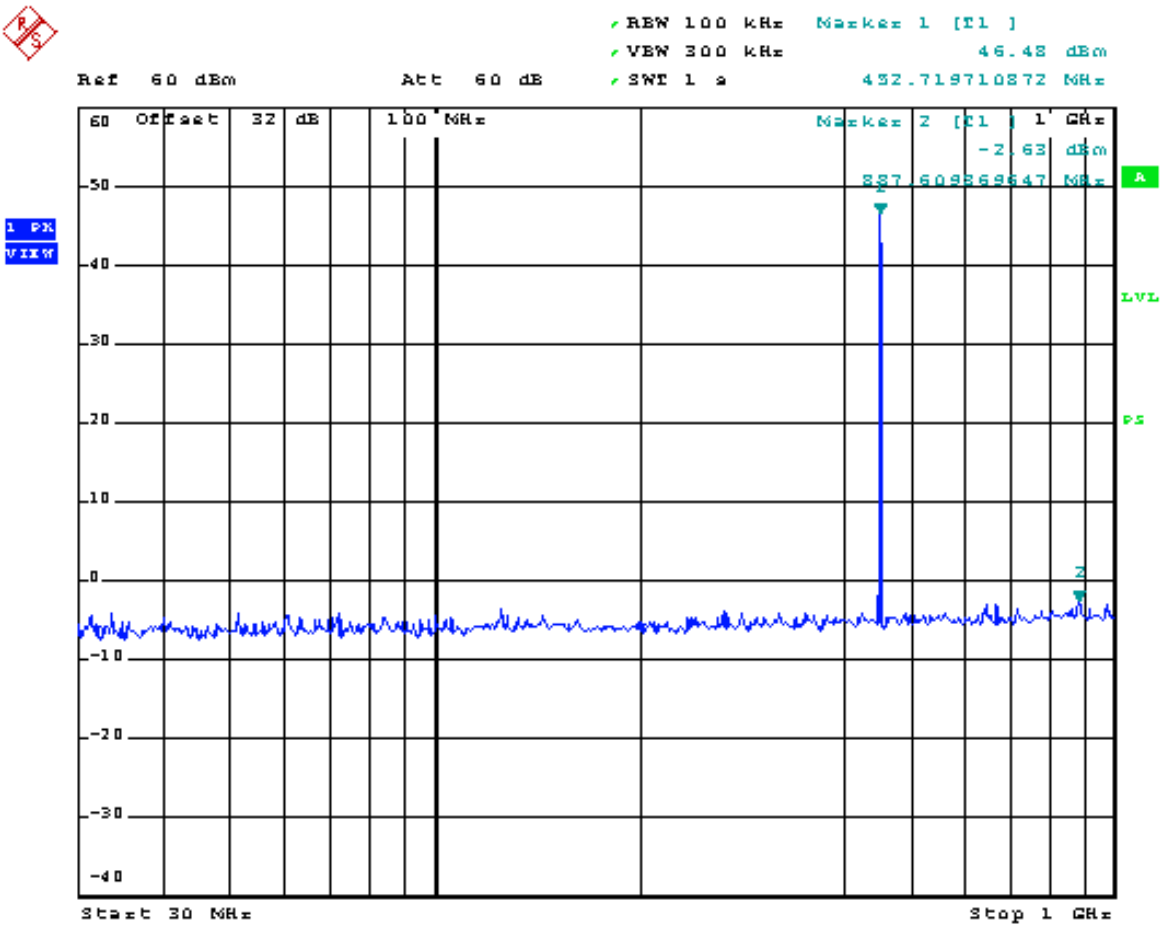
Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:07:27


Marker 1 [T1]
-25.09 dBm
3.06813627 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
1VIEW
A
1MA
Start 3 GHz
200 MHz/
Stop 5 GHz

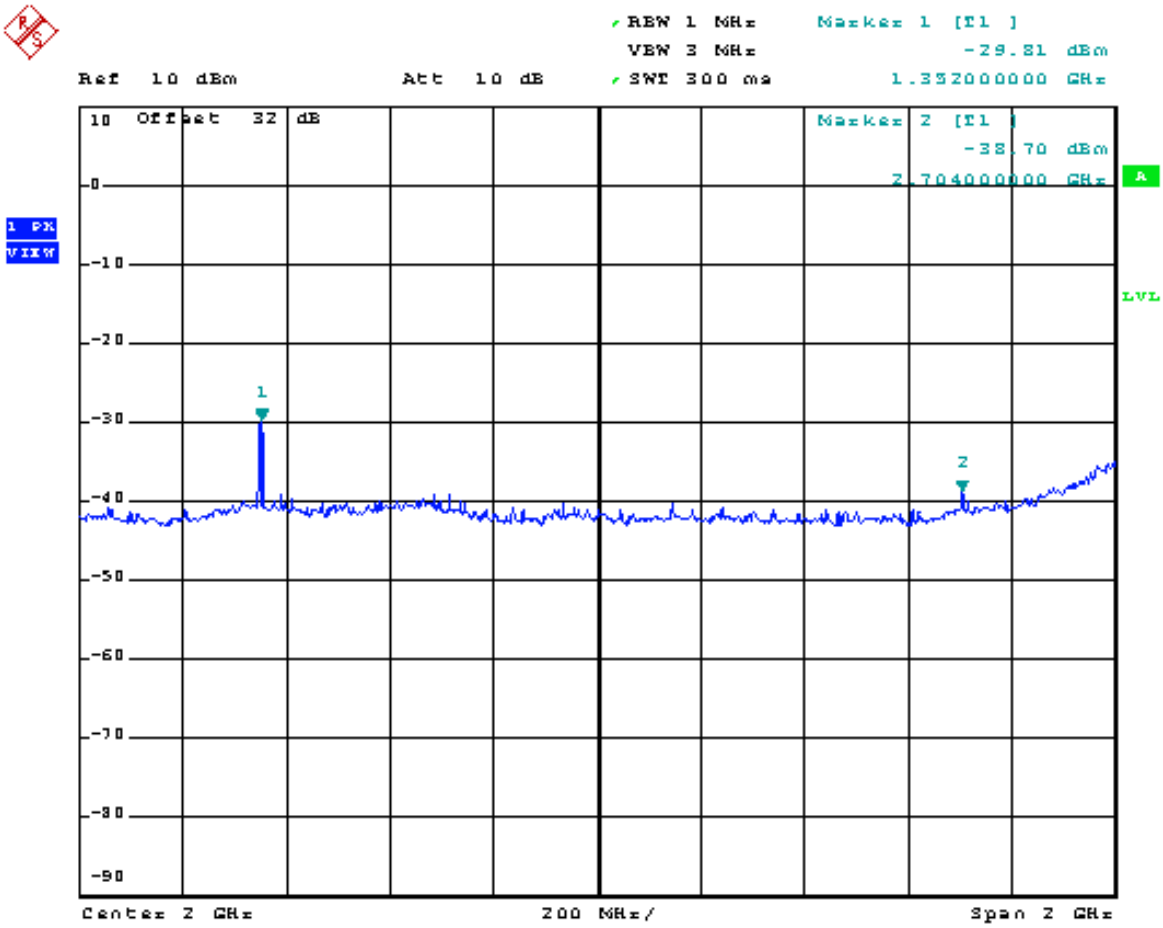
Wideband 25.0 kHz:

Low Channel:



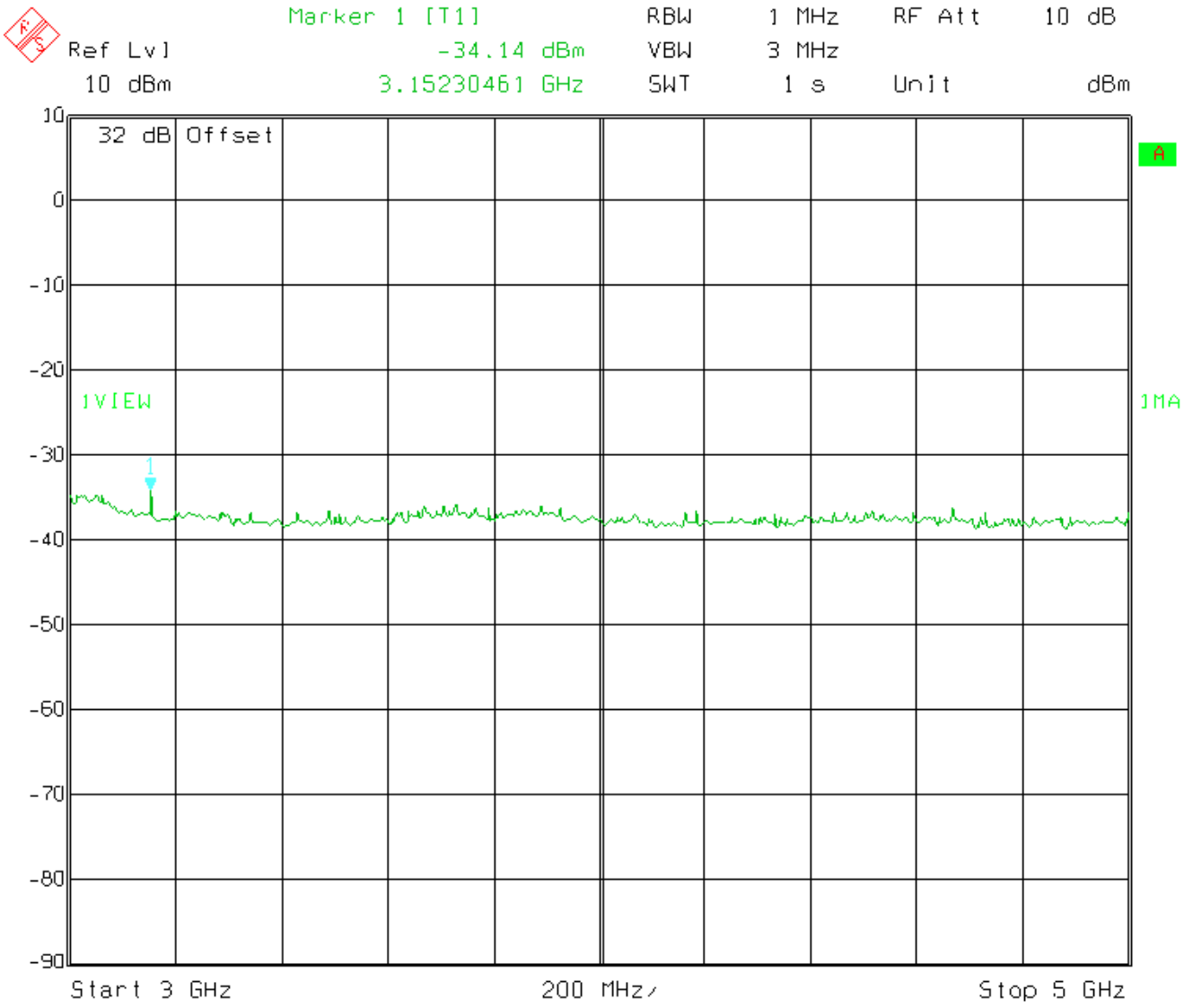
Spurious Emission at antenna terminals Wideband Low Channel

Date: 16.JAN.2006 09:59:44

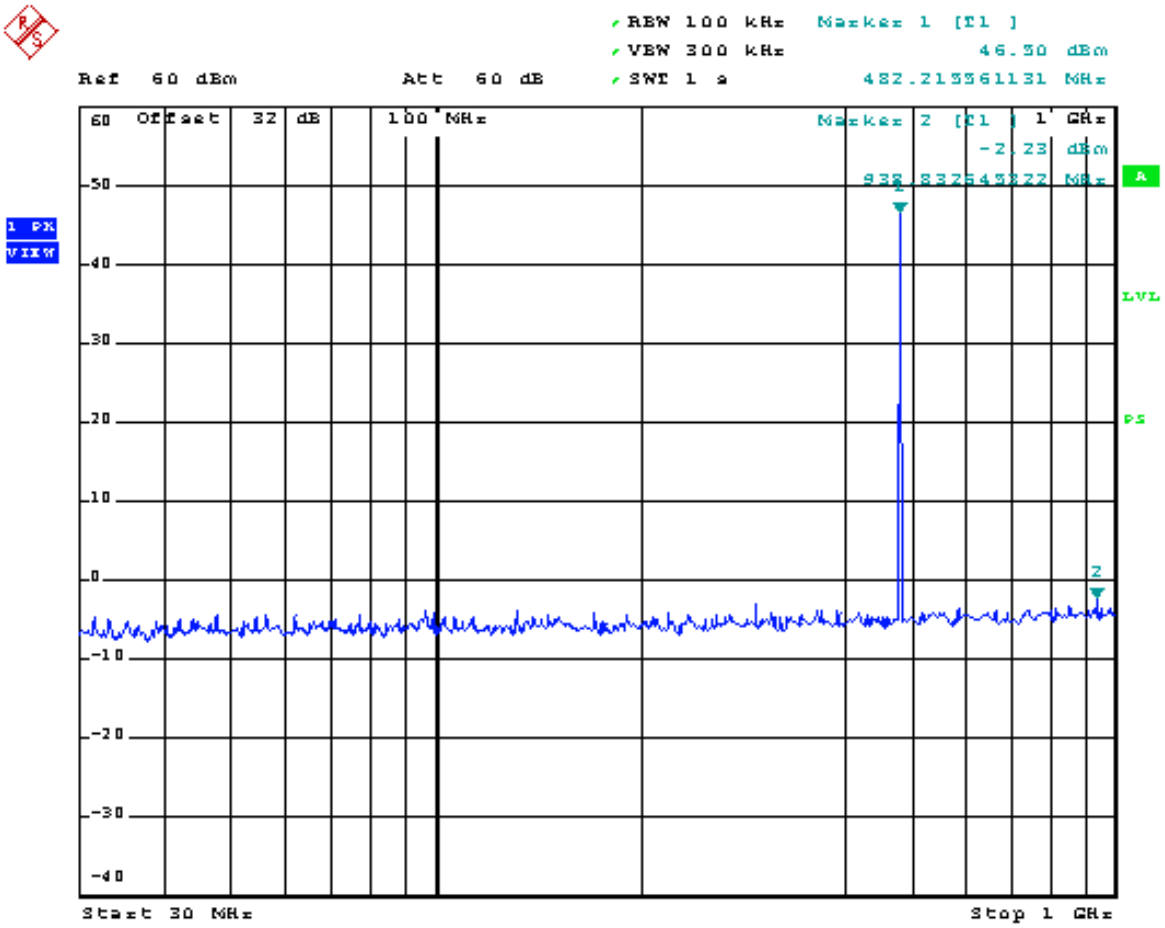


Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:12:07

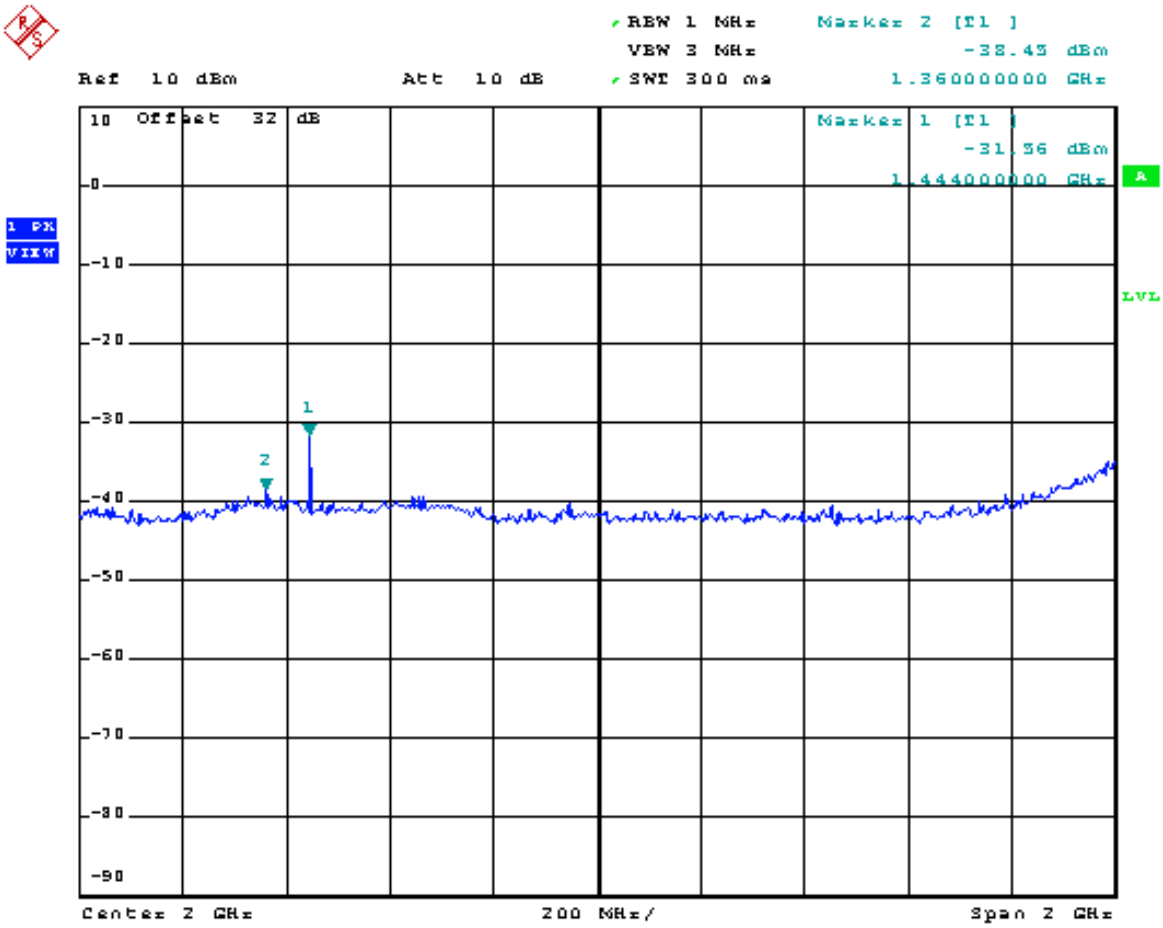

Marker 1 [T1]
-34.14 dBm
3.15230461 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
1VIEW
1MA
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 3 GHz
200 MHz/
Stop 5 GHz

Middle Channel:



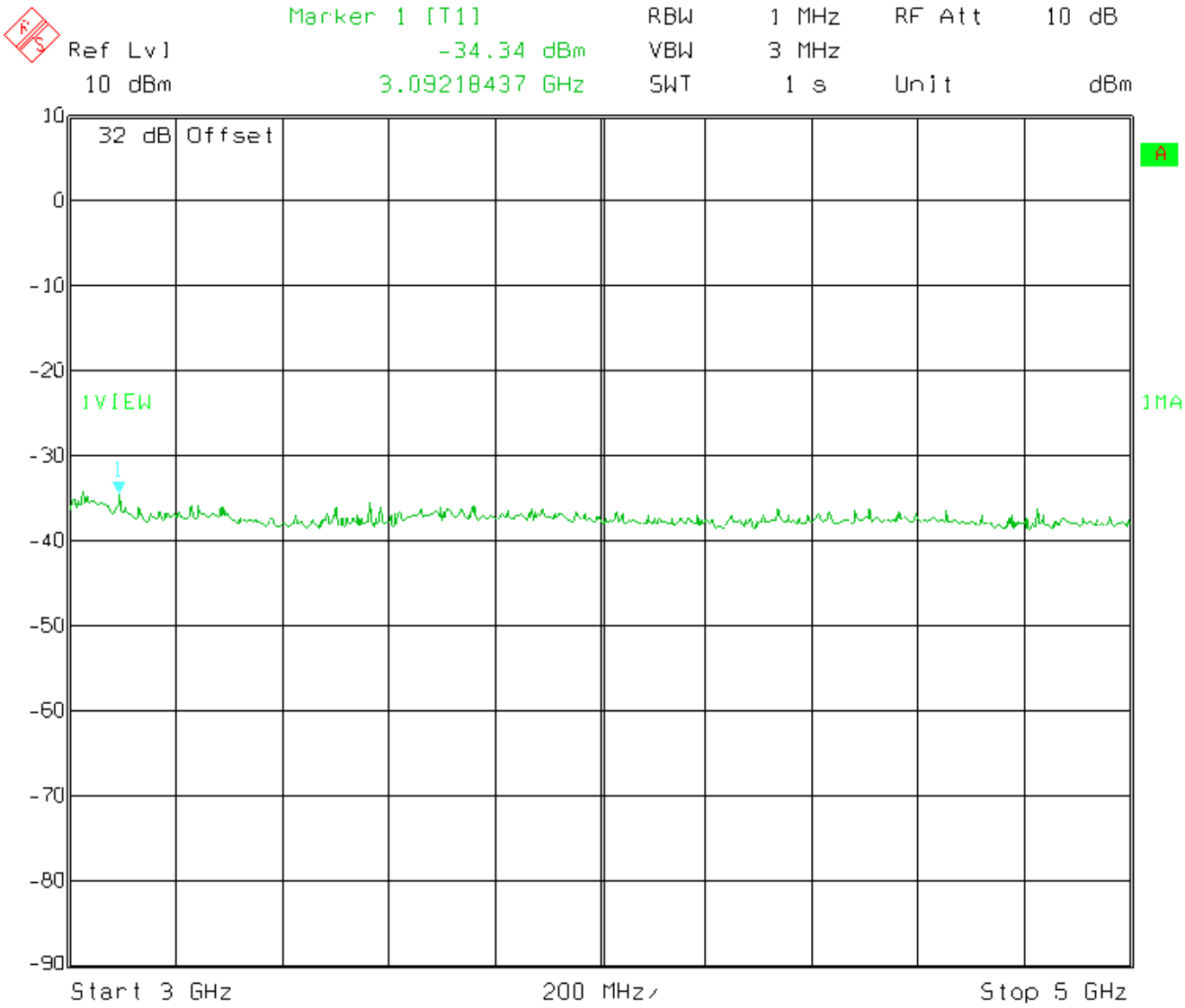
Spurious Emission at antenna terminals Wideband Mid Channel

Date: 16.JAN.2006 10:01:18

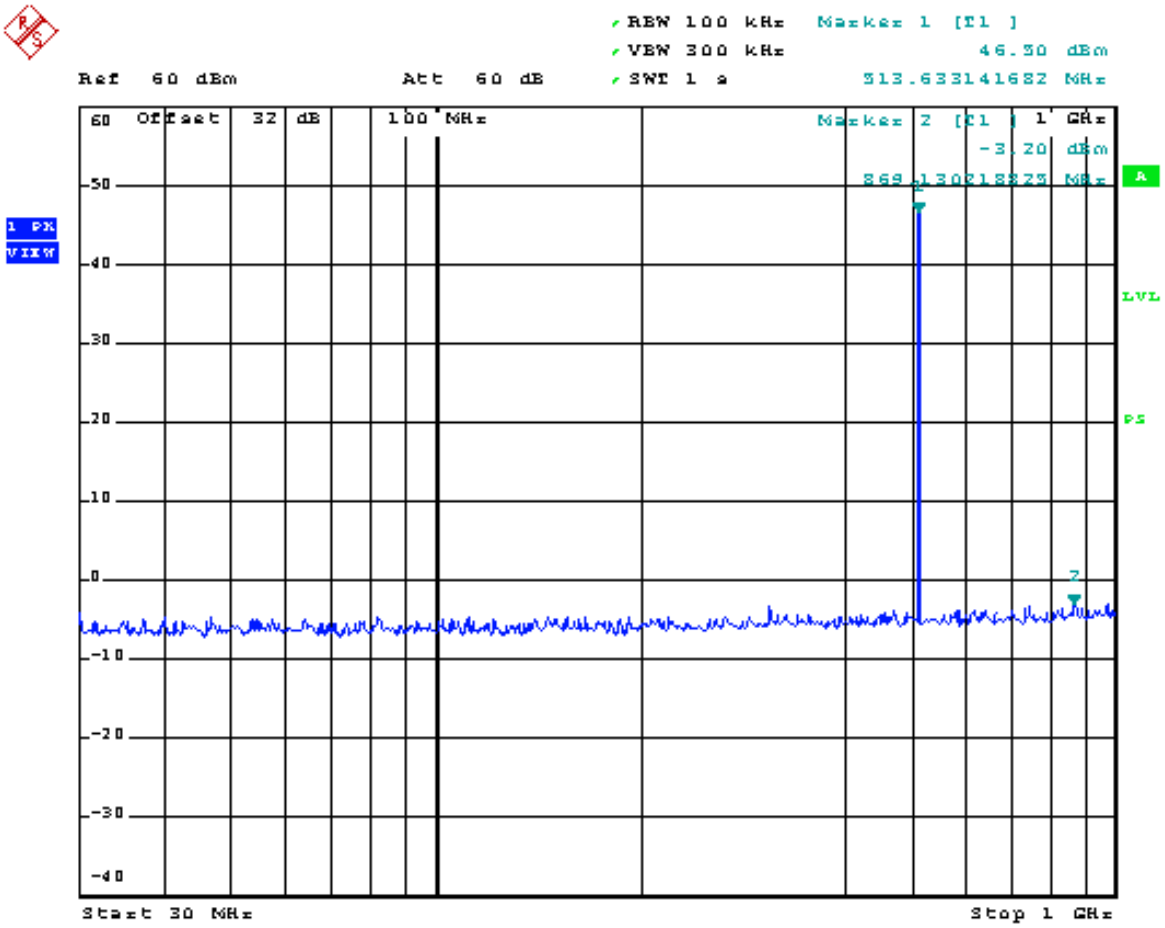


Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:13:01

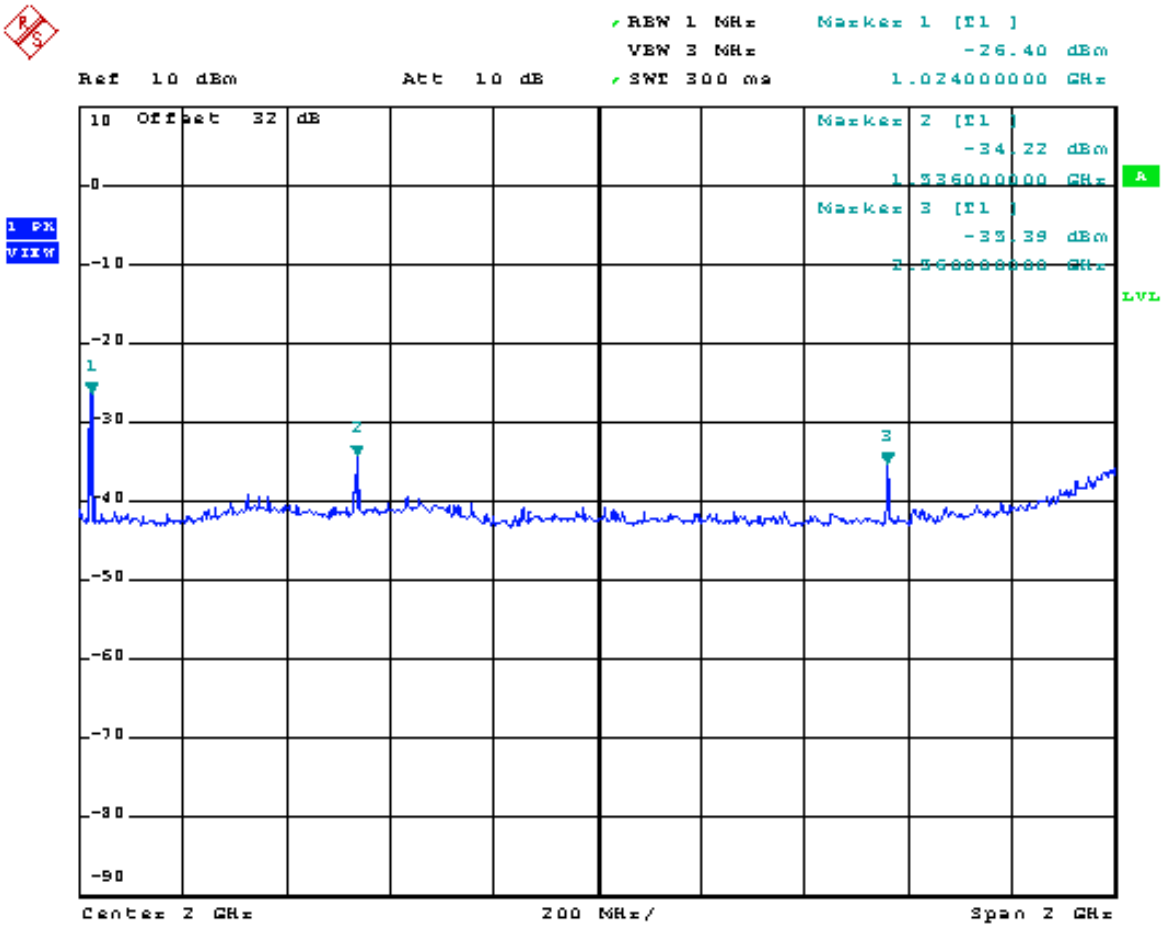

Marker 1 [T1]
-34.34 dBm
3.09218437 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
1VIEW
1MA
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 3 GHz
200 MHz/
Stop 5 GHz

High Channel:



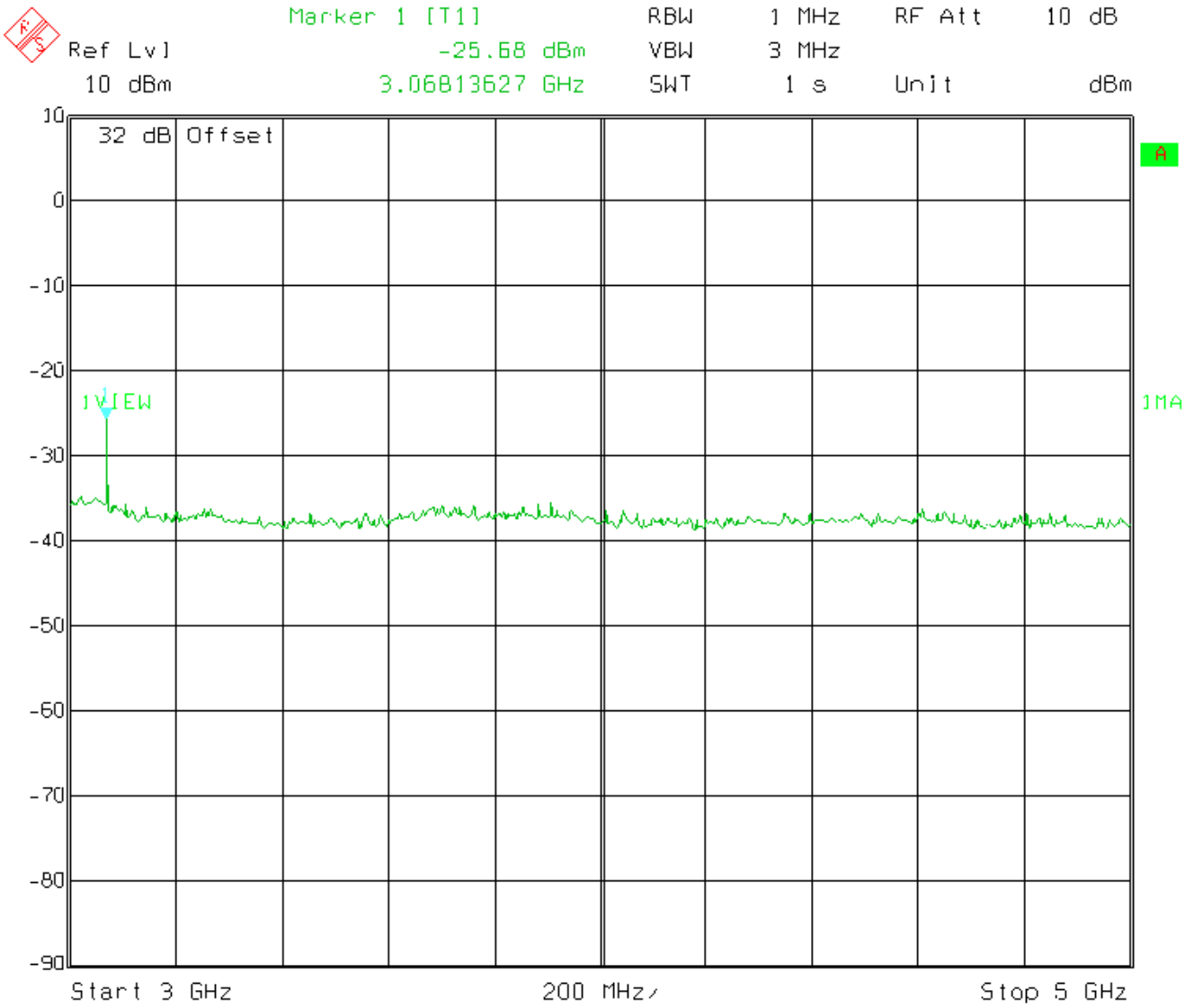
Spurious Emission at antenna terminals Wideband High Channel

Date: 16.JAN.2006 10:02:26



Spurious Emission At Antenna Terminals

Date: 16.JAN.2006 13:14:06


Marker 1 [T1]
-25.68 dBm
3.06813627 GHz
RBW 1 MHz
VBW 3 MHz
SWT 1 s
RF Att 10 dB
Unit dBm
Ref Lvl
10 dBm
32 dB Offset
1VIEW
1MA
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Start 3 GHz
200 MHz/
Stop 5 GHz

§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
SUNOL SCIENCES	Horn Antenna	DRH-118	A052604	2005-7-20	2006-7-20
SUNOL SCIENCES	Broadband Antenna	JB1	A040904-1	2005-4-28	2006-4-28
SUNOL SCIENCES	Broadband Antenna	JB1	A040904-2	2005-4-28	2006-4-28
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2005-12-21	2006-12-21
HP	Signal Generator	HP8657A	2849U00982	2005-2-28	2006-2-28
Giga-tronics	Signal Generator	1026	270801	2005-2-28	2006-2-28
A.H. System	Horn Antenna	SAS-200/571	135	2005-4-28	2006-4-28

*** 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

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 =43+10 Log_{10} (power out in Watts)

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

Test Results Summary

For Narrowband 12.5 kHz:
-1.33 dB at 1801.500 MHz, Low Channel
-3.32 dB at 962.750 MHz, Middle Channel
-1.79 dB at 1023.590 MHz, High Channel

For Wideband 25.0 kHz:
-6.22 dB at 2251.875 MHz, Low Channel
-11.43 dB at 1444.125 MHz, Middle Channel
-6.29 dB at 1023.590 MHz, High Channel

Test Data

Environmental Conditions

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

The testing was performed by Louise Lu on 2005-12-21.

Test Mode: Transmitting

For Narrowband 12.5 kHz:

Indicated		Table	Test Antenna		Substituted			Antenna	Cable	Absolute		
Frequency MHz	Meter Reading dBuV/m	Angle Degree	Height Meter	Polar H/V	Frequency MHz	Level dBm	Polar H/V	Gain Correction	Loss dB	Level dBm	Limit dBm	Margin dB
Low Channel												
1801.500	47.82	80	1.0	V	1801.500	-28.5	V	7.6	0.43	-21.33	-20	-1.33*
1351.125	48.68	45	1.7	V	1351.125	-31.3	V	7.2	0.33	-24.43	-20	-4.43
2251.875	43.84	0	1.2	V	2251.875	-32.5	V	8	0.32	-24.82	-20	-4.82
900.750	47.80	180	1.6	V	900.750	-25.5	V	6.3	7.62	-26.82	-20	-6.82
1351.125	46.44	180	1.6	H	1351.125	-35.1	H	7.2	0.33	-28.23	-20	-8.23
1801.500	43.49	45	1.5	H	1801.500	-37.2	H	7.6	0.43	-30.03	-20	-10.03
900.750	47.00	80	1.0	H	900.750	-28.8	H	6.3	7.62	-30.12	-20	-10.12
2251.875	41.53	180	1.6	H	2251.875	-37.9	H	8	0.32	-30.22	-20	-10.22
Middle Channel												
962.750	52.78	180	1.6	H	962.750	-22.0	H	6.6	7.92	-23.32	-20	-3.32*
1444.125	48.40	180	1.6	V	1444.125	-32.5	V	7.2	0.33	-25.63	-20	-5.63
1444.125	48.18	180	1.6	H	1444.125	-32.8	H	7.2	0.33	-25.93	-20	-5.93
962.750	47.80	180	1.6	V	962.750	-25.0	V	6.6	7.92	-26.32	-20	-6.32
2406.875	42.72	80	1.0	H	2406.875	-38.0	H	8.2	0.33	-30.13	-20	-10.13
1925.500	43.69	45	1.7	V	1925.500	-40.2	V	7.8	0.37	-32.77	-20	-12.77
2406.875	43.24	80	1.0	V	2406.875	-43.5	V	8.2	0.33	-35.63	-20	-15.63
1925.500	40.01	45	1.7	H	1925.500	-44.0	H	7.8	0.37	-36.57	-20	-16.57
High Channel												
1023.590	51.34	180	1.6	H	1023.590	-28.4	H	6.8	0.19	-21.79	-20	-1.79*
2558.975	47.26	80	1.0	V	2558.975	-30.3	V	8.4	0.38	-22.28	-20	-2.28*
2558.975	46.59	80	1.0	H	2558.975	-31.5	H	8.4	0.38	-23.48	-20	-3.48*
1535.385	49.62	180	1.6	V	1535.385	-32.8	V	7.4	0.39	-25.79	-20	-5.79
1023.590	46.77	180	1.6	V	1023.590	-35.5	V	6.8	0.19	-28.89	-20	-8.89
1535.385	45.57	180	1.6	H	1535.385	-36.4	H	7.4	0.39	-29.39	-20	-9.39
2047.180	44.99	45	1.7	V	2047.180	-37.7	V	7.8	0.37	-30.27	-20	-10.27
2047.180	39.34	45	1.7	H	2047.180	-41.6	H	7.8	0.37	-34.17	-20	-14.17

For Wideband 25.0 kHz:

Indicated		Table	Test Antenna		Substituted			Antenna	Cable	Absolute		
Frequency MHz	Meter Reading dBuV/m	Angle Degree	Height Meter	Polar H/V	Frequency MHz	Level dBm	Polar H/V	Gain Correction	Loss dB	Level dBm	Limit dBm	Margin dB
Low Channel												
2251.875	48.42	0	1.2	V	2251.875	-26.9	V	8	0.32	-19.22	-13	-6.22
1801.500	48.10	80	1.0	V	1801.500	-29.2	V	7.6	0.43	-22.03	-13	-9.03
900.750	51.87	180	1.6	V	900.750	-21.2	V	6.3	7.62	-22.52	-13	-9.52
1351.125	48.75	45	1.7	V	1351.125	-31.2	V	7.2	0.33	-24.33	-13	-11.33
900.750	50.35	80	1.0	H	900.750	-25.5	H	6.3	7.62	-26.82	-13	-13.82
1351.125	46.19	180	1.6	H	1351.125	-35.2	H	7.2	0.33	-28.33	-13	-15.33
1801.500	45.16	45	1.5	H	1801.500	-35.6	H	7.6	0.43	-28.43	-13	-15.43
2251.875	42.36	180	1.6	H	2251.875	-37	H	8	0.32	-29.32	-13	-16.32
Middle Channel												
1444.125	49.38	180	1.6	V	1444.125	-31.3	V	7.2	0.33	-24.43	-13	-11.43
2406.875	43.11	80	1.0	V	2406.875	-32.9	V	8.2	0.33	-25.03	-13	-12.03
1444.125	48.82	180	1.6	H	1444.125	-32.3	H	7.2	0.33	-25.43	-13	-12.43
962.750	46.89	180	1.6	V	962.750	-26.2	V	6.6	7.92	-27.52	-13	-14.52
962.750	48.56	180	1.6	H	962.750	-26.8	H	6.6	7.92	-28.12	-13	-15.12
2406.875	41.64	80	1.0	H	2406.875	-39.0	H	8.2	0.33	-31.13	-13	-18.13
1925.50	44.96	45	1.7	V	1925.500	-38.9	V	7.8	0.37	-31.47	-13	-18.47
1925.50	40.50	45	1.7	H	1925.500	-42.5	H	7.8	0.37	-35.07	-13	-22.07
High Channel												
1023.590	51.89	180	1.6	H	1023.590	-25.9	H	6.8	0.19	-19.29	-13	-6.29
2558.975	48.40	80	1.0	H	2558.975	-29.0	H	8.4	0.38	-20.98	-13	-7.98
2558.975	47.93	80	1.0	V	2558.975	-29.6	V	8.4	0.38	-21.58	-13	-8.58
1023.590	47.09	180	1.6	V	1023.590	-33.2	V	6.8	0.19	-26.59	-13	-13.59
1535.385	46.67	180	1.6	V	1535.385	-35.8	V	7.4	0.39	-28.79	-13	-15.79
1535.385	45.20	180	1.6	H	1535.385	-36.8	H	7.4	0.39	-29.79	-13	-16.79
2047.180	44.00	45	1.7	V	2047.180	-38.6	V	7.8	0.37	-31.17	-13	-18.17
2047.180	39.60	45	1.7	H	2047.180	-41.3	H	7.8	0.37	-33.87	-13	-20.87

* Within the measurement uncertainty

§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	2005-1-26	2006-1-26

*** 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 Jandy Su on 2005-12-21.

Test Result: Pass

Test Mode: Transmitting

Narrowband 12.5 kHz:

Narrow Reference Frequency: 450.375 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	450.374496	-1.119
	13.5	450.374490	-1.132
	15.64	450.374490	-1.132
40	11.56	450.374492	-1.128
	13.5	450.374489	-1.135
	15.64	450.374488	-1.137
30	11.56	450.374484	-1.146
	13.5	450.374489	-1.135
	15.64	450.374486	-1.141
20	11.56	450.374488	-1.137
	13.5	450.374490	-1.132
	15.64	450.374488	-1.137
10	11.56	450.374494	-1.124
	13.5	450.374496	-1.119
	15.64	450.374499	-1.112
0	11.56	450.374013	-2.192
	13.5	450.375019	0.042
	15.64	450.375020	0.044
-10	11.56	450.375044	0.098
	13.5	450.375049	0.109
	15.64	450.375068	0.151
-20	11.56	450.375058	0.129
	13.5	450.375064	0.142
	15.64	450.375060	0.133
-30	11.56	450.375068	0.151
	13.5	450.375070	0.155
	15.64	450.375086	0.191

Narrow Reference Frequency: 481.375 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	481.374854	-0.303
	13.5	481.374868	-0.274
	15.64	481.374878	-0.253
40	11.56	481.374858	-0.295
	13.5	481.374868	-0.274
	15.64	481.374880	-0.249
30	11.56	481.374863	-0.285
	13.5	481.374870	-0.270
	15.64	481.374883	-0.243
20	11.56	481.374870	-0.270
	13.5	481.374889	-0.231
	15.64	481.374894	-0.220
10	11.56	481.374888	-0.233
	13.5	481.374896	-0.216
	15.64	481.374906	-0.195
0	11.56	481.375071	0.147
	13.5	481.375088	0.183
	15.64	481.375087	0.181
-10	11.56	481.375086	0.179
	13.5	481.375090	0.187
	15.64	481.375088	0.183
-20	11.56	481.375088	0.183
	13.5	481.375086	0.179
	15.64	481.375081	0.168
-30	11.56	481.375082	0.170
	13.5	481.375090	0.187
	15.64	481.375088	0.183

Narrow Reference Frequency: 511.795 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	511.794930	-0.137
	13.5	511.794944	-0.109
	15.64	511.794952	-0.094
40	11.56	511.794950	-0.098
	13.5	511.794958	-0.082
	15.64	511.794953	-0.092
30	11.56	511.794988	-0.023
	13.5	511.794986	-0.027
	15.64	511.794990	-0.020
20	11.56	511.795012	0.023
	13.5	511.795020	0.039
	15.64	511.795016	0.031
10	11.56	511.795039	0.076
	13.5	511.795052	0.102
	15.64	511.795058	0.113
0	11.56	511.795058	0.113
	13.5	511.795072	0.141
	15.64	511.795080	0.156
-10	11.56	511.795073	0.143
	13.5	511.795081	0.158
	15.64	511.795088	0.172
-20	11.56	511.795078	0.152
	13.5	511.795097	0.190
	15.64	511.795085	0.166
-30	11.56	511.795080	0.156
	13.5	511.795100	0.195
	15.64	511.795088	0.172

Wideband 25.0 kHz:

Wideband Reference Frequency: 450.375 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	450.374850	-0.333
	13.5	450.374864	-0.302
	15.64	450.374860	-0.311
40	11.56	450.374849	-0.335
	13.5	450.374862	-0.306
	15.64	450.374860	-0.311
30	11.56	450.374867	-0.295
	13.5	450.374880	-0.266
	15.64	450.374903	-0.215
20	11.56	450.374901	-0.220
	13.5	450.374888	-0.249
	15.64	450.374904	-0.213
10	11.56	450.374966	-0.075
	13.5	450.375006	0.013
	15.64	450.376010	2.243
0	11.56	450.375008	0.018
	13.5	450.375006	0.013
	15.64	450.375010	0.022
-10	11.56	450.375019	0.042
	13.5	450.375010	0.022
	15.64	450.375072	0.160
-20	11.56	450.375035	0.078
	13.5	450.375054	0.120
	15.64	450.375078	0.173
-30	11.56	450.375044	0.098
	13.5	450.375046	0.102
	15.64	450.375065	0.144

Wideband Reference Frequency: 481.375 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	481.374848	-0.316
	13.5	481.374868	-0.274
	15.64	481.374872	-0.266
40	11.56	481.374866	-0.278
	13.5	481.374870	-0.270
	15.64	481.374870	-0.270
30	11.56	481.374888	-0.233
	13.5	481.374880	-0.249
	15.64	481.374896	-0.216
20	11.56	481.374900	-0.208
	13.5	481.374902	-0.204
	15.64	481.374899	-0.210
10	11.56	481.374924	-0.158
	13.5	481.374918	-0.170
	15.64	481.374922	-0.162
0	11.56	481.374989	-0.023
	13.5	481.375008	0.017
	15.64	481.375036	0.075
-10	11.56	481.375002	0.004
	13.5	481.375047	0.098
	15.64	481.375054	0.112
-20	11.56	481.375074	0.154
	13.5	481.375072	0.150
	15.64	481.375082	0.170
-30	11.56	481.375068	0.141
	13.5	481.375082	0.170
	15.64	481.375072	0.150

Wideband Reference Frequency: 511.795 MHz, Limit: 5.0 PPM			
Environment Temperature (°C)	Power Supplied (V_{dc})	MCF (MHz)	PPM Error
50	11.56	511.794488	-1.000
	13.5	511.794490	-0.996
	15.64	511.794483	-1.010
40	11.56	511.794490	-0.996
	13.5	511.794488	-1.000
	15.64	511.794492	-0.993
30	11.56	511.794492	-0.993
	13.5	511.794496	-0.985
	15.64	511.794492	-0.993
20	11.56	511.794490	-0.996
	13.5	511.794496	-0.985
	15.64	511.794498	-0.981
10	11.56	511.795493	0.963
	13.5	511.795490	0.957
	15.64	511.795020	0.039
0	11.56	511.795032	0.063
	13.5	511.795050	0.098
	15.64	511.795040	0.078
-10	11.56	511.795042	0.082
	13.5	511.795047	0.092
	15.64	511.795064	0.125
-20	11.56	511.795084	0.164
	13.5	511.795094	0.184
	15.64	511.795090	0.176
-30	11.56	511.795100	0.195
	13.5	511.795098	0.191
	15.64	511.795102	0.199

§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	2005-1-24	2006-1-24
HP	Modulation Analyzer	8901B	3438A05208	2005-2-28	2006-2-28
HP	Signal Generator	HP8657A	2849U00982	2005-2-28	2006-2-28

*** 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

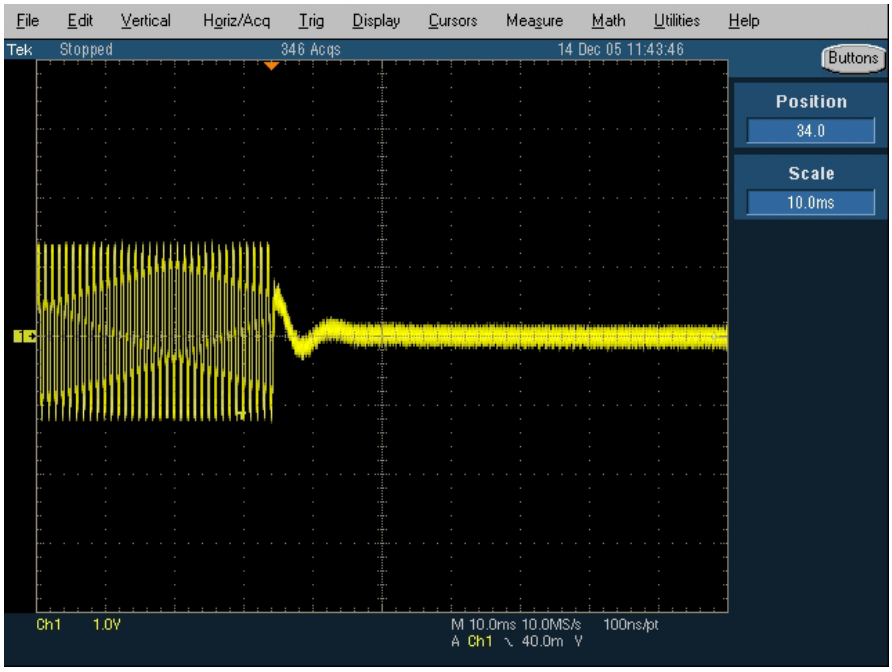
The testing was performed by Jandy Su on 2005-12-21.

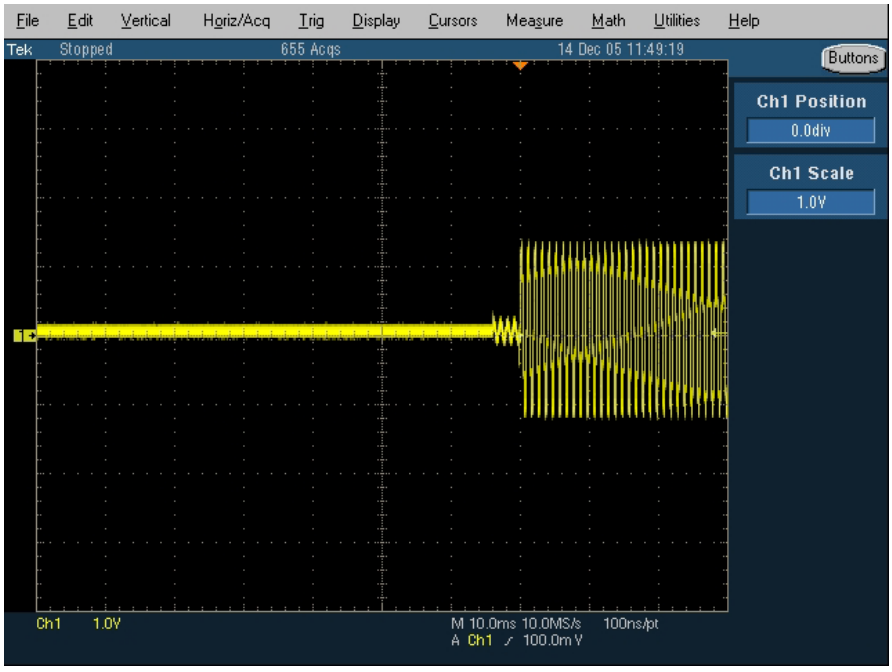
Test Result: Pass

Test Mode: Transmitting

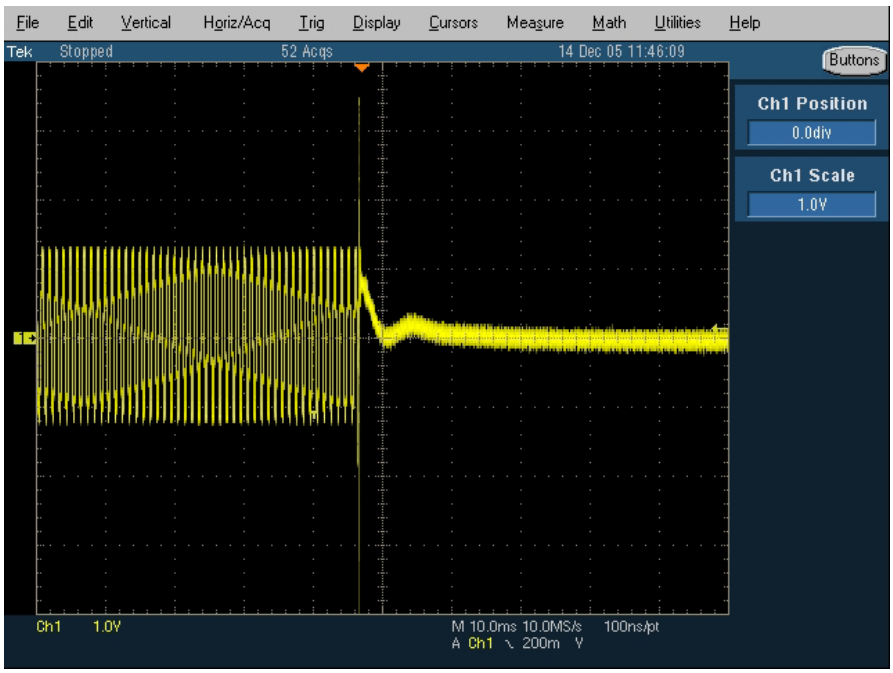
Operation Frequency	Channel Separation	Transient Period	Transient Frequency	Result
450.375MHz	Narrowband 12.5 kHz	T_1=10 ms	<+/-12.5 kHz	Pass
		T_2=25 ms	<+/-6.25 kHz	
		T_3=10 ms	<+/-12.5 kHz	
	Wideband 25 kHz	T_1=10 ms	<+/-25 kHz	Pass
		T_2=25 ms	<+/-12.5 kHz	
		T_3=10 ms	<+/-25 kHz	

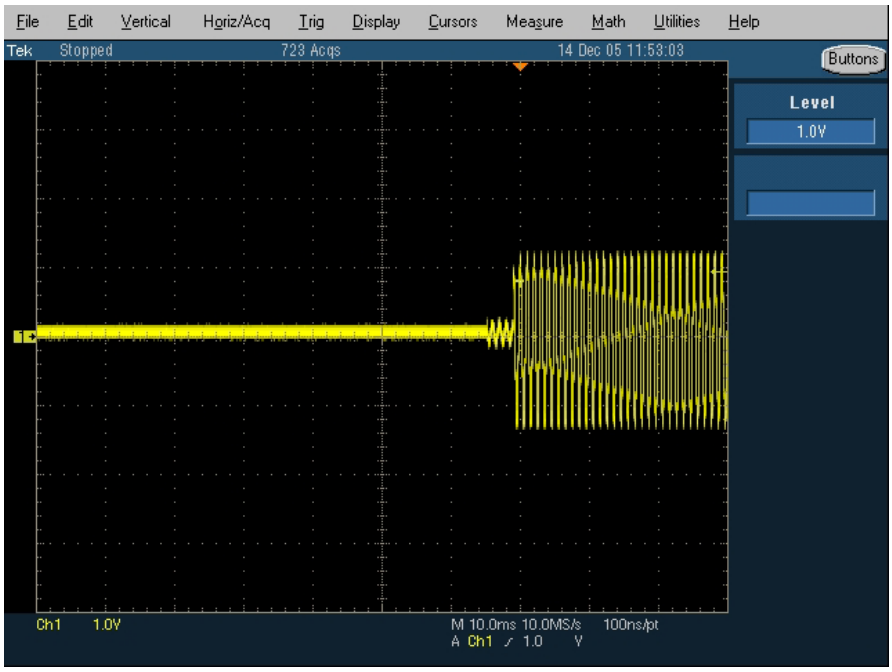
Narrowband 12.5 kHz:





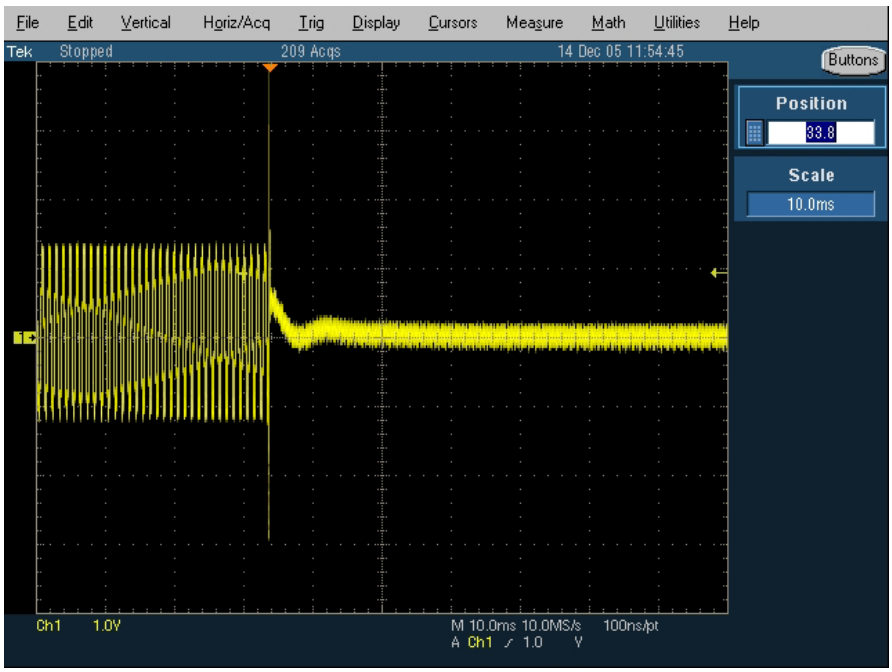
Wideband 25.0 kHz:

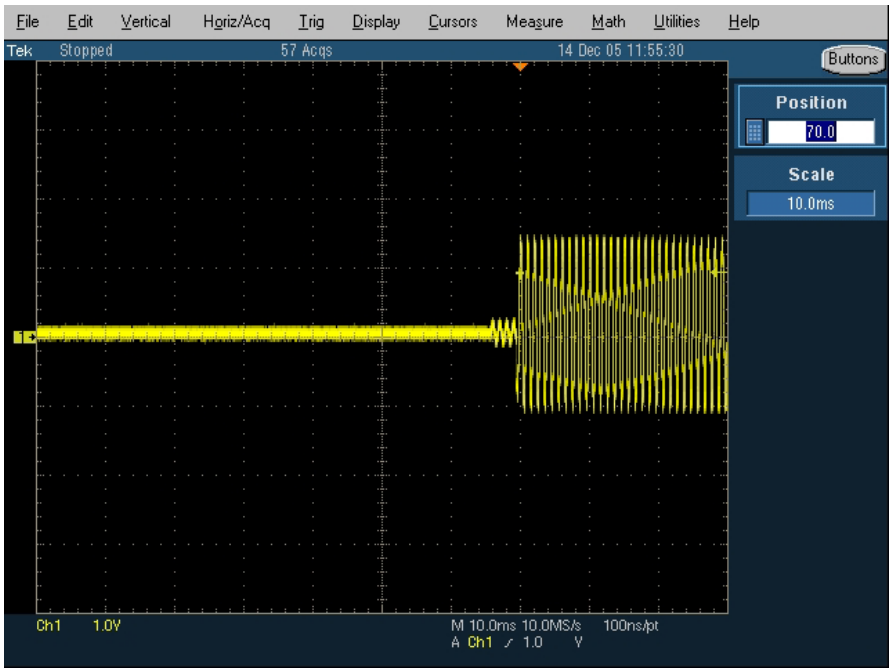




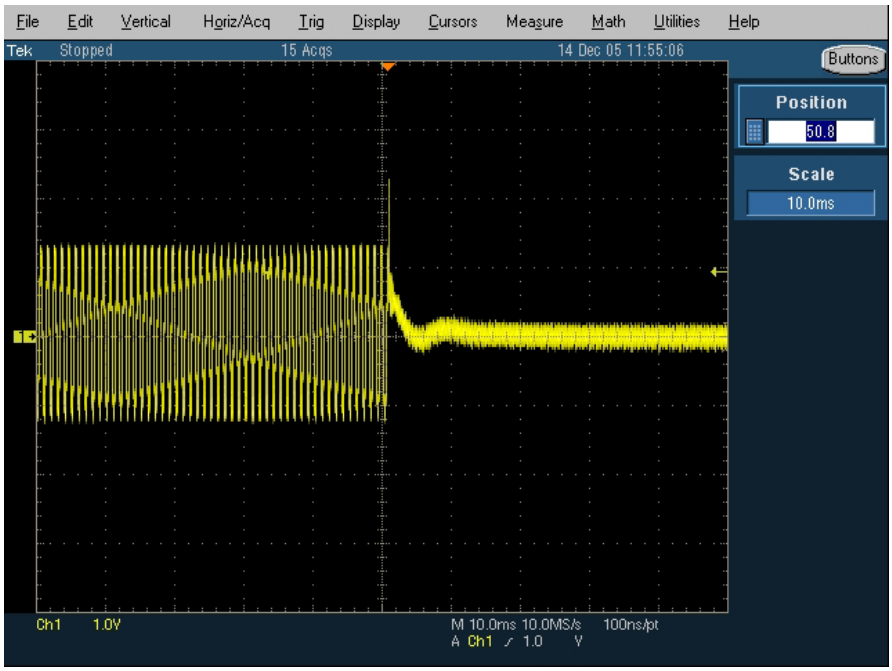
Operation Frequency	Channel Separation	Transient Period	Transient Frequency	Result
481.375 MHz	Narrowband 12.5 kHz	T_1=10 ms	<+/-12.5 kHz	Pass
		T_2=25 ms	<+/-6.25 kHz	
		T_3=10 ms	<+/-12.5 kHz	
	Wideband 25 kHz	T_1=10 ms	<+/-25 kHz	Pass
		T_2=25 ms	<+/-12.5 kHz	
		T_3=10 ms	<+/-25 kHz	

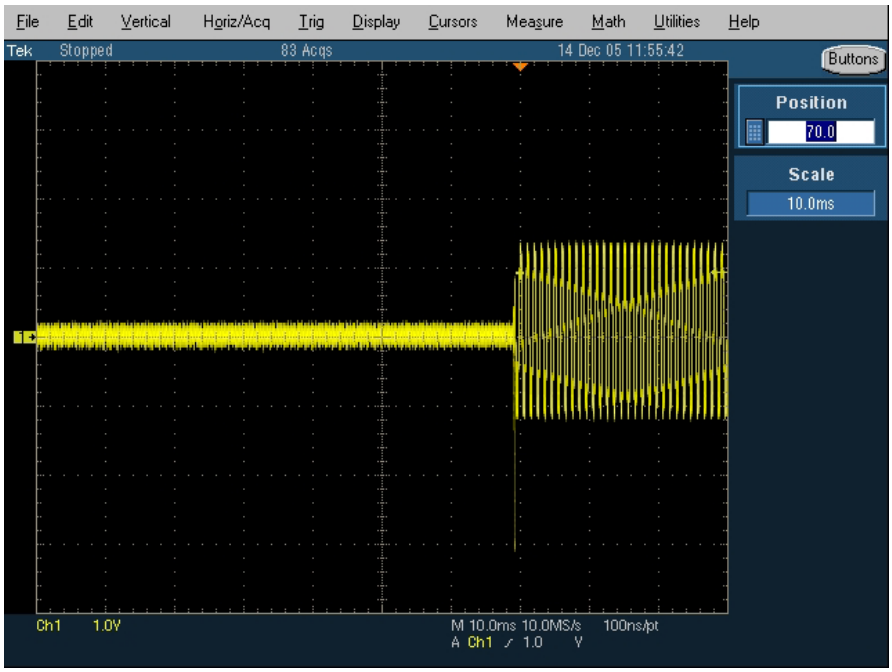
Narrowband 12.5 kHz:





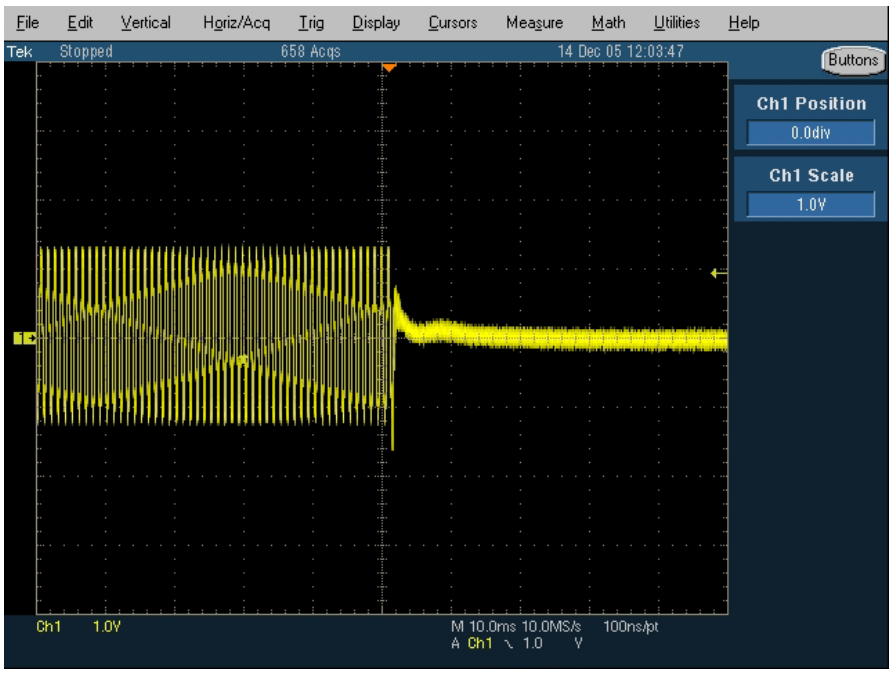
Wideband 25.0 kHz:

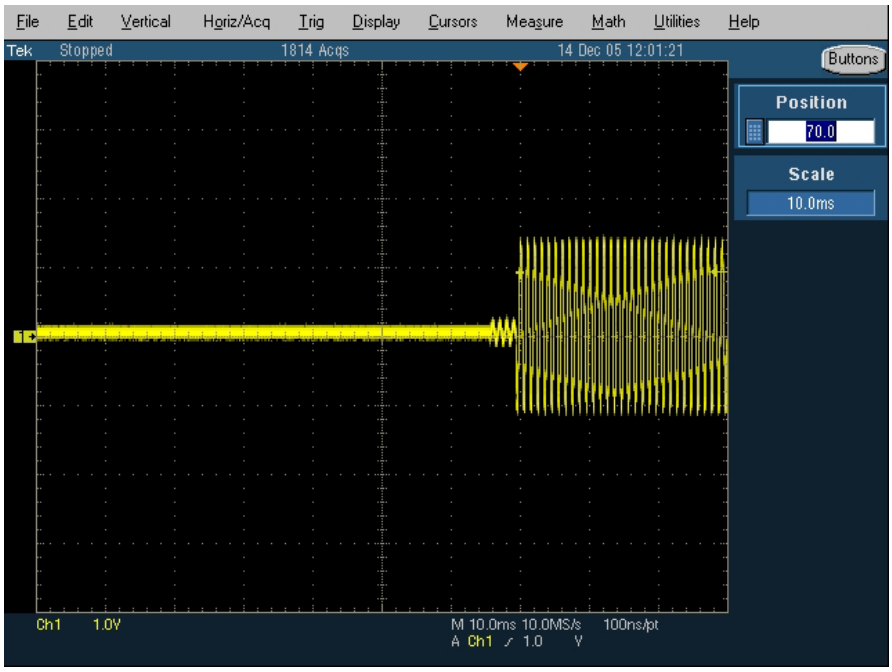




Operation Frequency	Channel Separation	Transient Period	Transient Frequency	Result
511.795 MHz	Narrowband 12.5 kHz	T_1=10 ms	<+/-12.5 kHz	Pass
		T_2=25 ms	<+/-6.25 kHz	
		T_3=10 ms	<+/-12.5 kHz	
	Wideband 25 kHz	T_1=10 ms	<+/-25 kHz	Pass
		T_2=25 ms	<+/-12.5 kHz	
		T_3=10 ms	<+/-25 kHz	

Narrowband 12.5 kHz:





Wideband 25.0 kHz: