Lab Code: 200167-0

FCC PART 22, 74, 80, 90

TEST AND MEASUREMENT REPORT

For

Datron World Communications Inc.

3030 Enterprise Court, Vista, CA 92083, USA

FCC ID: B3TG2P150
Model: G2P-150-300

Report Type:	**Product Type:**
Original Report	VHF Two Way Handheld Radio

Test Engineer:	Kevin Li
Report Number:	R1011233-90
Report Date:	2010-12-16
Reviewed By:	Victor Zhang RF Lead
Prepared By: (84)	Bay Area Compliance Laboratories Corp. 1274 Anvilwood Avenue, Sunnyvale, CA 94085, U.S.A. Tel: (408) 732-9162 Fax: (408) 732 9164 www.baclcorp.com

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1011233-90	Original Report	2010-12-16

1. General Information

1.1 Product Description for Equipment under Test (EUT)

The report has been prepared on behalf of *Datron World Communications Inc* and their product *FCC ID: B3TG2P150*, model: *G2P-150-300* or the EUT as referred to in the rest of this report. The EUT is a VHF two way hand held Radio which operates at 136~174 MHz Band

1.2 Mechanical Description

The EUT measures approximately 180mm (L) x 63 mm (W) x 45 mm (H) and weighs 529 g.

The test data gathered are from production sample, serial number: R1011233-1 provided by BACL.

1.3 Objective

This Type approval report is prepared on behalf of *Datron World Communications Inc* in accordance with Part 22, 74, 80 and Part 90 of the Federal Communication Commissions rules.

1.4 Related Submittal(s)/Grant(s)

None

1.5 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 22 – Public Mobile Services
Part 74 – Experimental Radio, Auxillary, Special Broadcast and other Program Distributional Services
Part 80 – Station in the Maritime Services
Part 90 – Private Land Mobile Radio Service

Applicable Standards:TIA-603-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 by Bay Area Compliance Laboratories Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the values ranging from ± 2.0 dB for Conducted Emissions tests and ± 4.0 dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL Corp.

Detailed instrumentation measurement uncertainties can be found in BACL Corp. report QAP-018.

1.7 Test Facility

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test sites at BACL have been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. 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, Industry Canada, and Voluntary Control Council for Interference has the reports on file and is listed under FCC registration number: 90464, IC registration number: 3062A, and VCCI Registration Number: C-2463 and R-2698. The test site has been approved by the FCC, IC, and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm.

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to TIA/EIA-603-C.

The EUT was tested in the normal (native) operating mode to represent *worst*-case results during the final qualification test.

2.2 EUT Exercise Software

Software was provided by the Client.

2.3 Equipment Modifications

No modifications were made to the EUT.

2.4 Local Support Equipment

Manufacturer	Description	Model No.	Serial No.
Dell	Laptop	Inspiron 300m	-

2.5 Internal Configuration

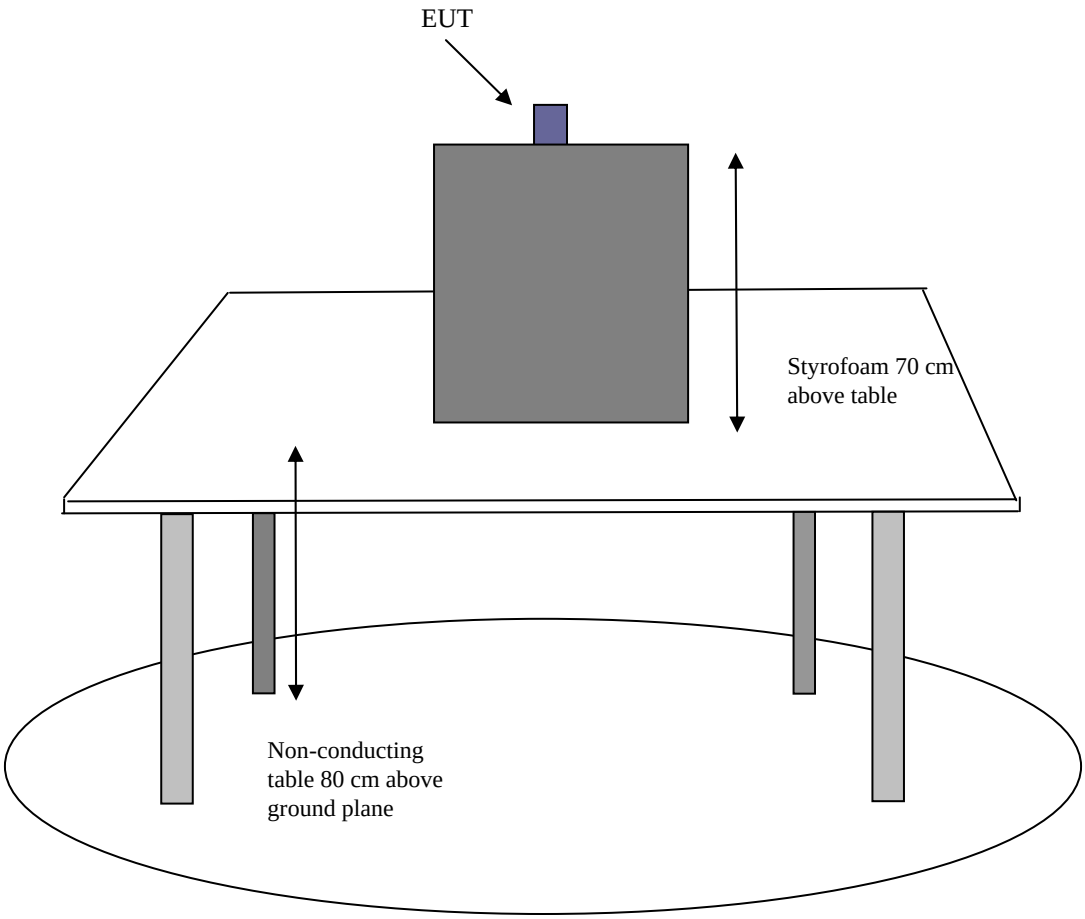
Manufacturer	Description	Model No.	Serial No.
Datron World Communications Inc	Control Board	94V-0	176057
Datron World Communications Inc	PCB Board	XR25 VER A	-

2.6 Interface Ports and Cabling

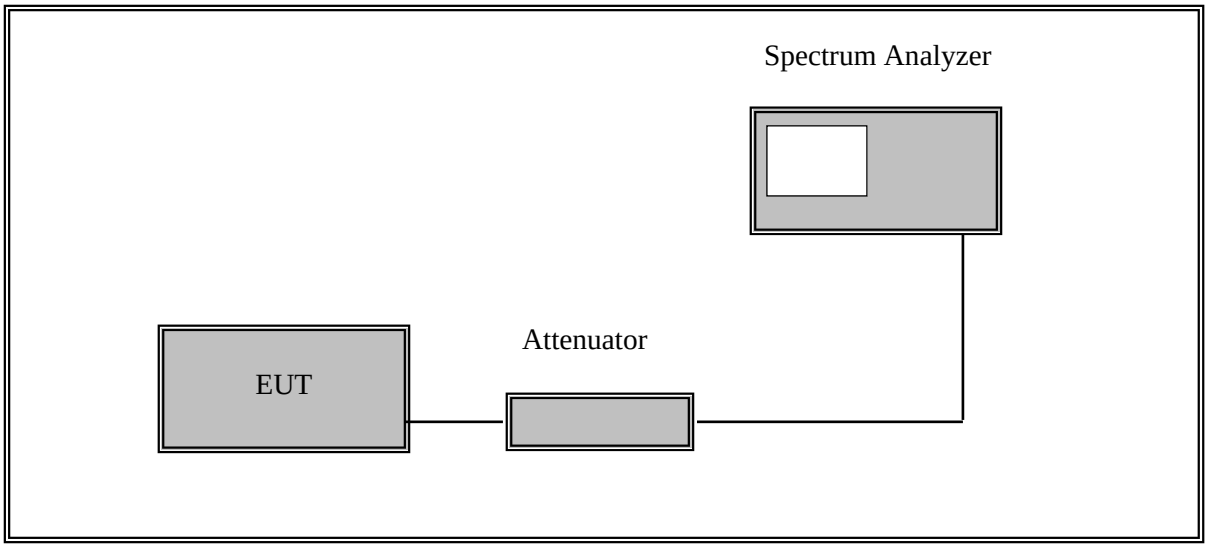
N/A

2.7 Test Setup Block Diagram

Radiated Test



Conducted Test



3 Summary of Test Results

FCC and IC Rules	Description of Test	Result
§1.1310, §2.1093	RF Exposure	N/A*
§2.1046	RF Output Power	Compliant
§2.1047	Modulation Characteristics, Audio Frequency Response and Audio Filter Response	Compliant
§2.1049	Occupied Bandwidth and Emission Mask	Compliant
§2.1051	Spurious Emissions at Antenna Terminals	Compliant
§2.1055	Frequency Stability	Compliant
§2.1053	Field strength of Spurious Radiation	Compliant
§ 90.214	Transient Frequency Behavior	Compliant

Note: N/A*, please refer to the PBA process with associated KDB number that allows omitting SAR report.

4 FCC §2.1093 - RF Exposure Information

4.1 Applicable Standards

FCC §2.1093

4.2 Result

Please refer to the PBA process with associated KDB number that allows omitting SAR report.

5 FCC §2.1046 – RF Output Power

5.1 Applicable Standard

FCC Part 2.1046.

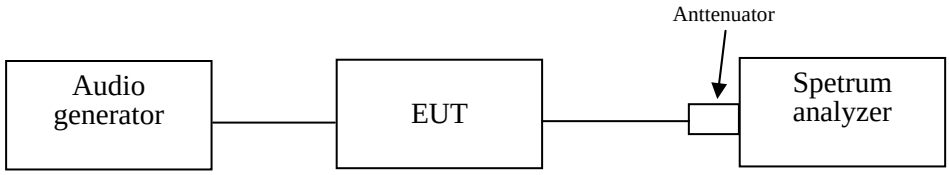
5.2 Test Procedure

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

Spectrum Analyzer Setting:

RBW	Video BW
100 kHz	300 kHz

5.3 Test Setup Block Diagram



5.4 Test Environmental Conditions

Temperature:	25 °C
Relative Humidity:	43 %
ATM Pressure:	101.6 kPa

The testing was performed by Kevin Li on 2010-12-05 in RF site.

5.5 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
HP	Test Set, RF Communications	8920A	3438A05338	2010-05-18
Agilent	Spectrum Analyzer	E4446A	US44300386	2010-08-18

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

5.6 Test Result

Test Mode: Transmitting

High Power (5.0 Watts)

Frequency Spacing (kHz)	Frequency (MHz)	Output Power (dBm)	Output Power (Watt)
25 kHz	136.00	37.37	5.46
25 kHz	150.00	37.45	5.56
25 kHz	174.00	37.44	5.55
12.5 kHz	136.00	37.33	5.41
12.5 kHz	150.00	37.44	5.55
12.5 kHz	174.00	37.44	5.55

Low Power (0.1 Watt)

Frequency Spacing (kHz)	Frequency (MHz)	Output Power (dBm)	Output Power (Watt)
25 kHz	136.00	20.01	0.1
25 kHz	150.00	20.09	0.1
25 kHz	174.00	20.05	0.1
12.5 kHz	136.00	20.05	0.1
12.5 kHz	150.00	20.14	0.1
12.5 kHz	174.00	19.96	0.1

6 FCC §2.1047 – Modulation Characteristic

6.1 Applicable Standard

FCC §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.

6.2 Test Procedure

Test Method: TIA/EIA-603-C 2.2.3

6.3 Test Environmental Conditions

Temperature:	22~26 °C
Relative Humidity:	41~42 %
ATM Pressure:	101.6~102.5 kPa

The testing was performed by Kevin Li on 2010-12-9 in RF Site.

6.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Spectrum Analyzer	E4446A	US44300386	2010-08-18
Agilent	Function Arbitrary Waveform Generator	33220A	MY43004878	2010-07-29
HP	RF Communication test set	8920A	3438A05338	2010-05-18

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

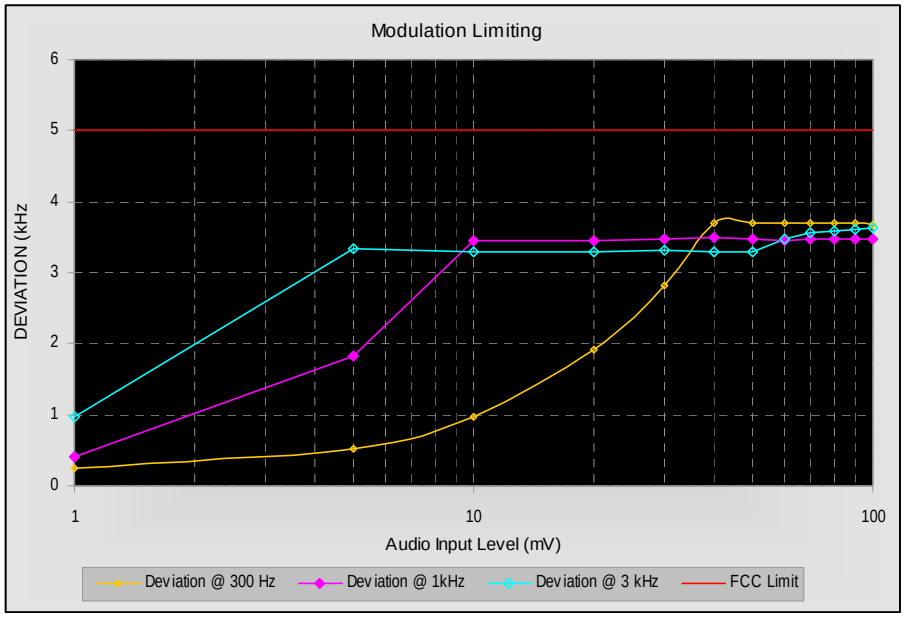
6.5 Test Result

Please refer to the hereinafter plots.

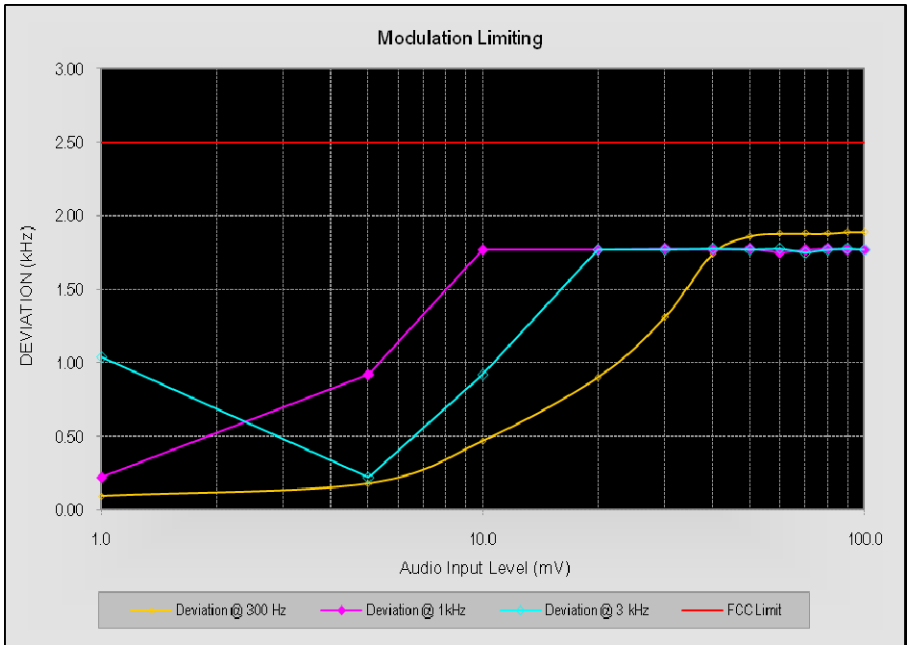
Modulation Limit

High Power

Channel Spacing 25 kHz

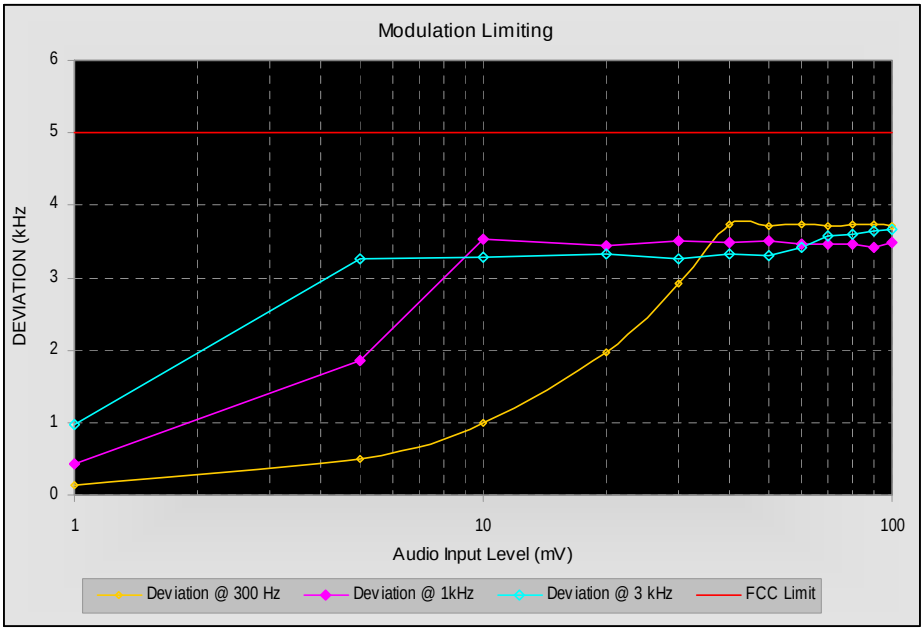


Channel Spacing 12.5 kHz

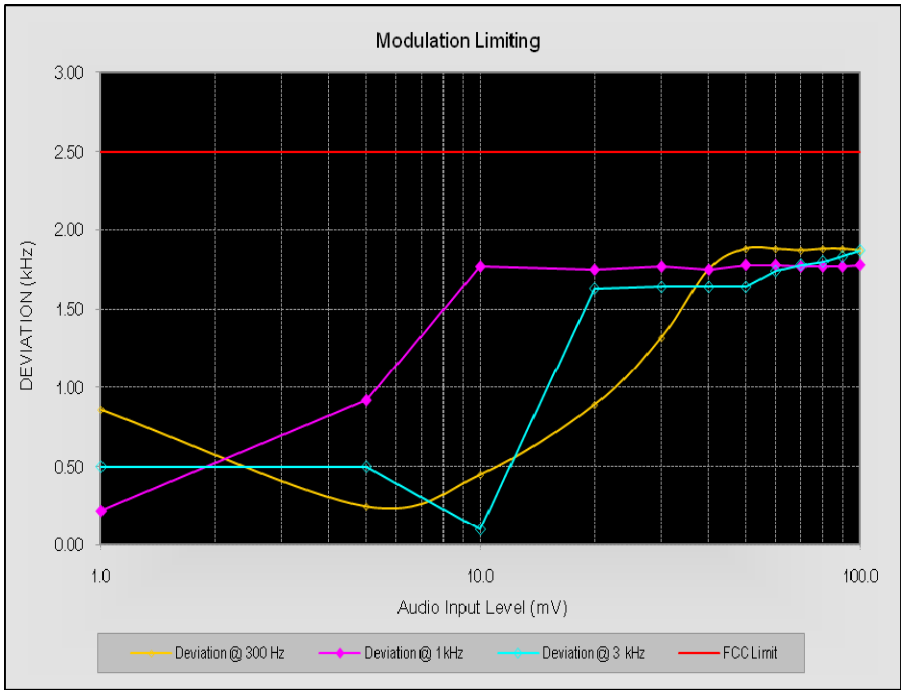


Low Power

Channel Spacing 25 kHz



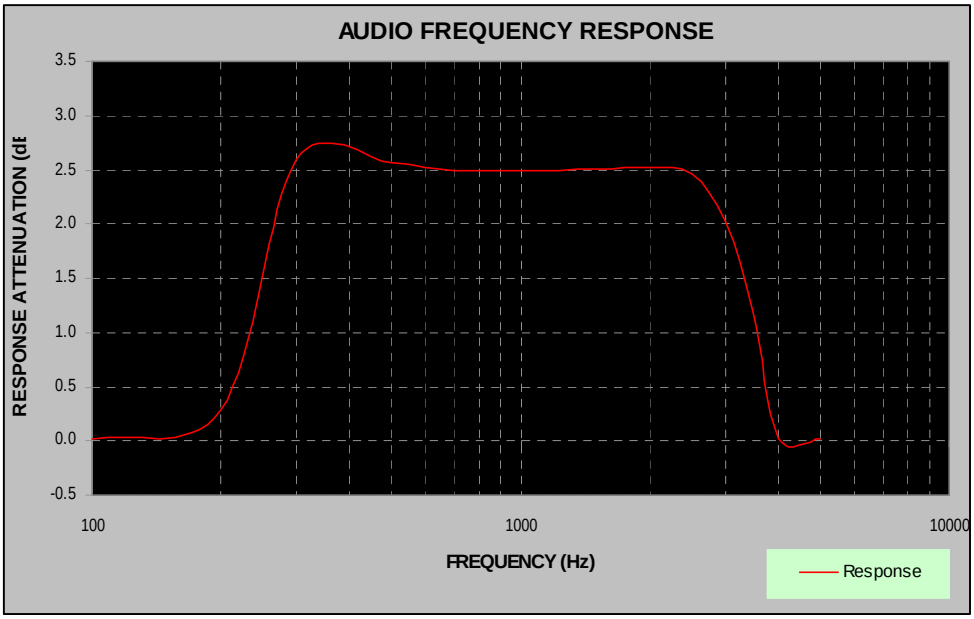
Channel Spacing 12.5 kHz



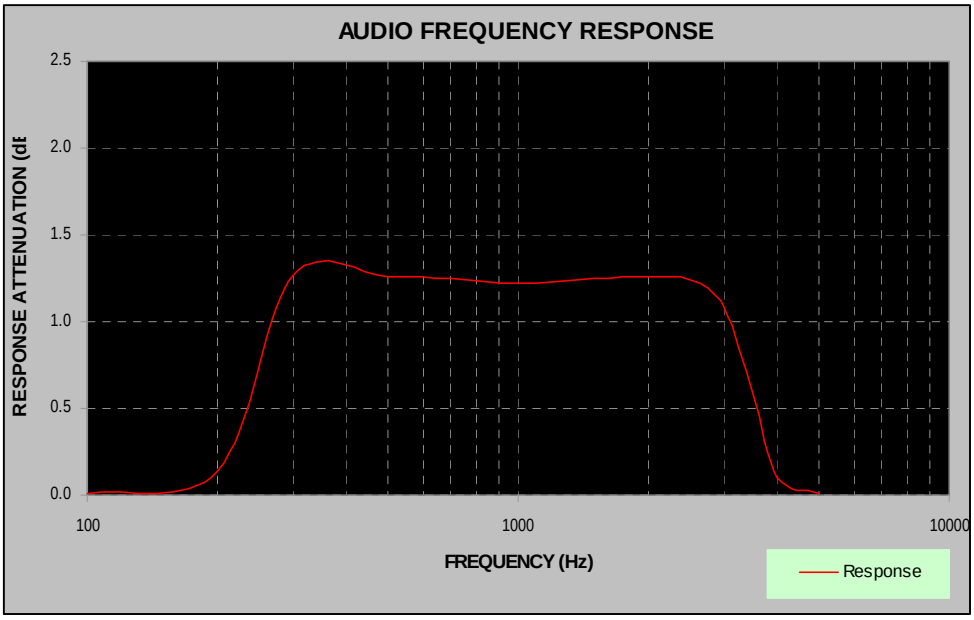
Audio Frequency Response

High Power

Channel Spacing 25 kHz

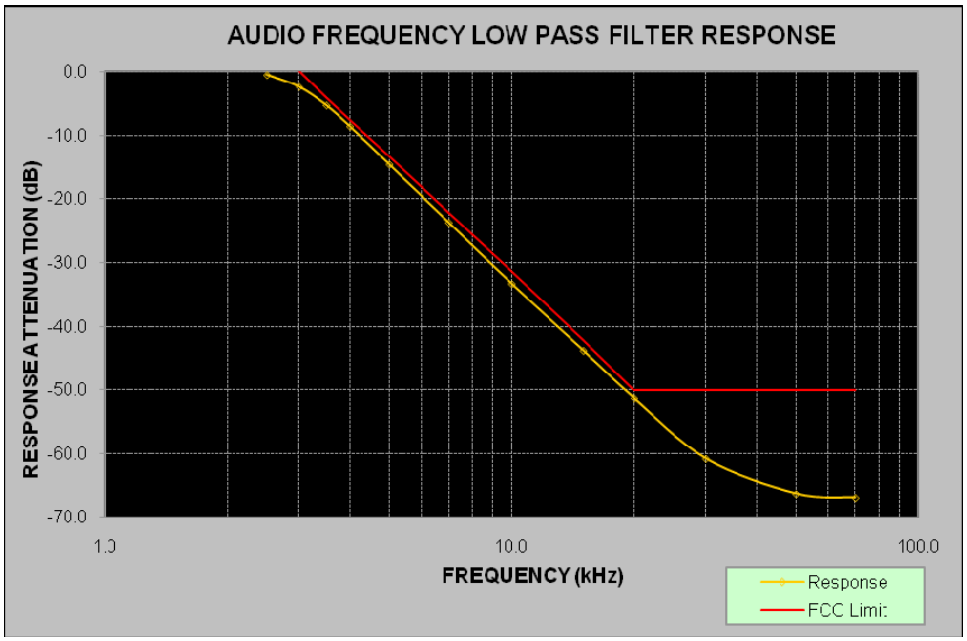


Channel Spacing 12.5 kHz

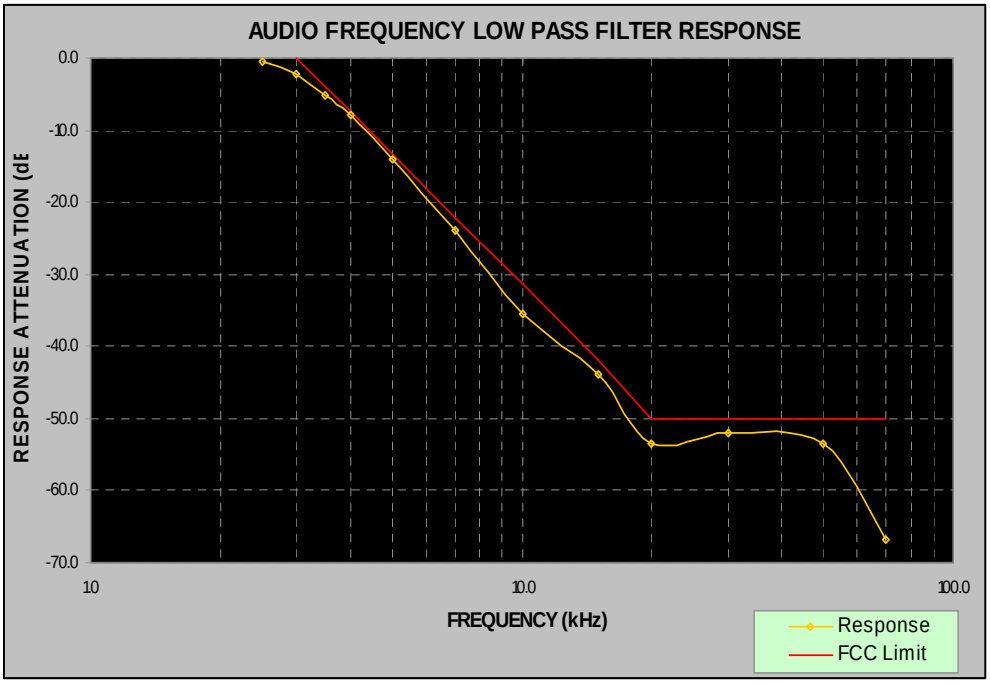


Audio Filter Response

Channel Spacing 25 kHz



Channel Spacing 12.5 kHz



7 FCC §2.1049 – Occupied Bandwidth & Emission Mask

7.1 Applicable Standard

FCC §90.209

Operations using equipment using a 25 kHz bandwidth will be authorized a 20 kHz bandwidth. Operations using equipment designed to operate with a 12.5 kHz channel bandwidth will be authorized an 11.25 kHz bandwidth.

FCC §2.1049, §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) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.

2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.

3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + log (P) dB.

The resolution bandwidth was 100Hz 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.

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 (P) or 70 dB, whichever is the lesser attenuation.

7.2 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 100 Hz and the spectrum was recorded in the frequency band ±50 KHz from the carrier frequency.

7.3 Test Environmental Conditions

Temperature:	25 °C
Relative Humidity:	43 %
ATM Pressure:	101.6 kPa

The testing was performed by Kevin Li on 2010-12-09in RF site.

7.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Spectrum Analyzer	E4446A	US44300386	2010-08-18
HP	RF Communication test set	8920A	3438A05338	2010-05-18

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

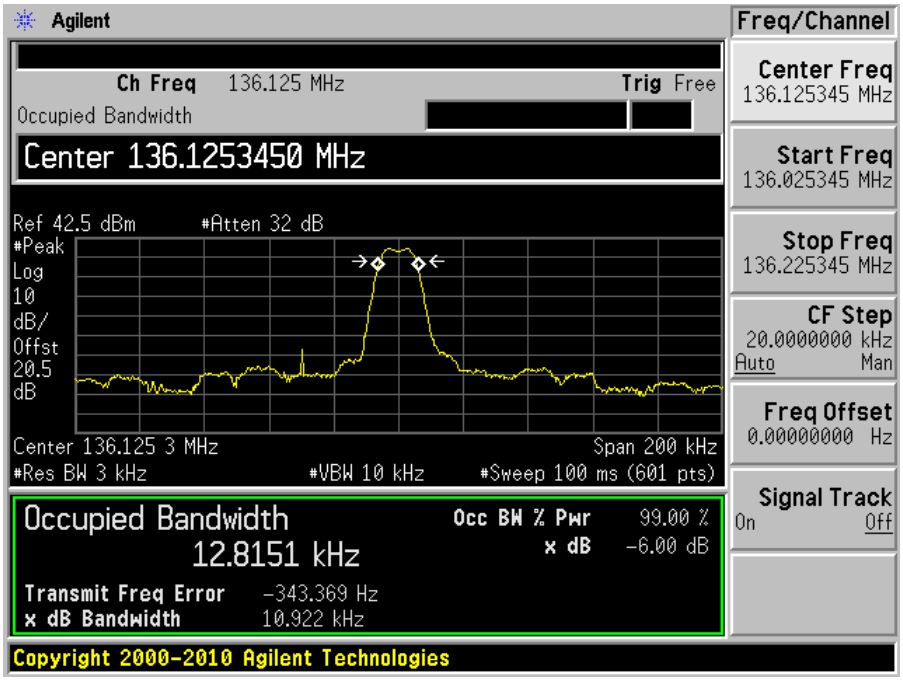
7.5 Test Results

Please refer to the following plots.

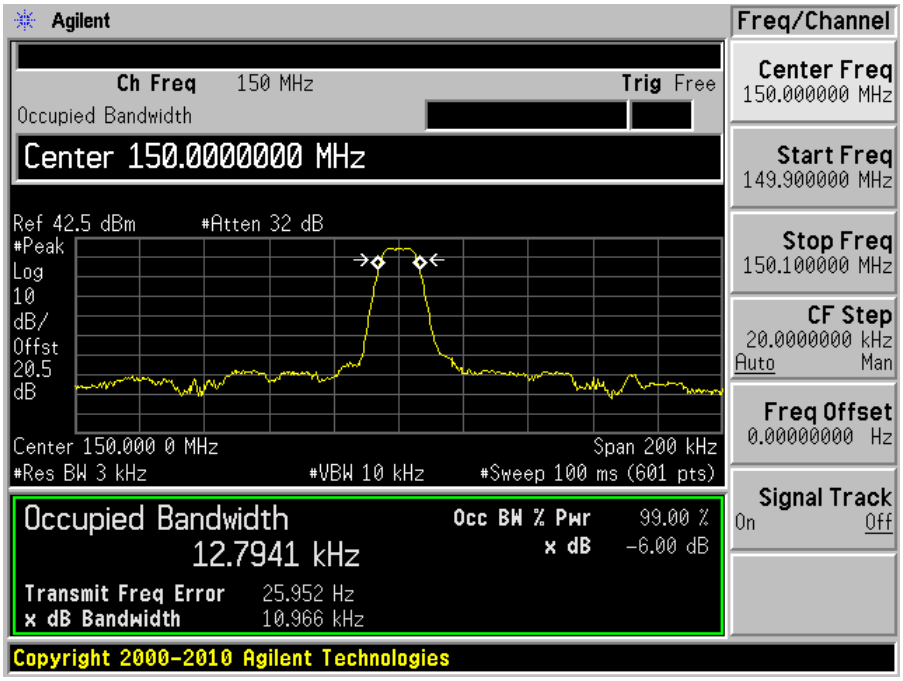
Occupied Bandwidth

High Power Audio (25 kHz)

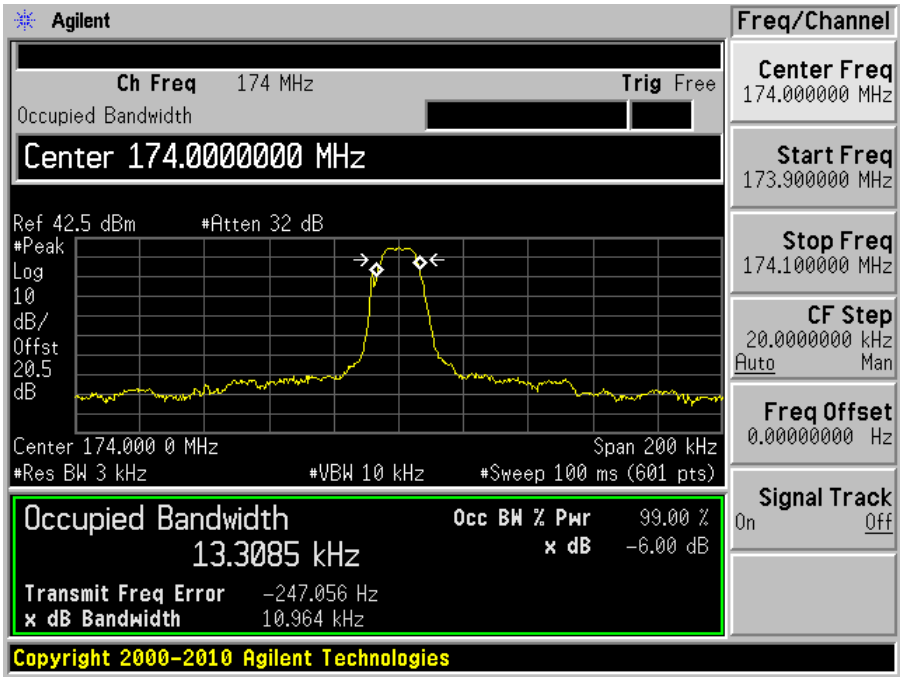
Low Channel – 136 MHz



Middle Channel – 150 MHz

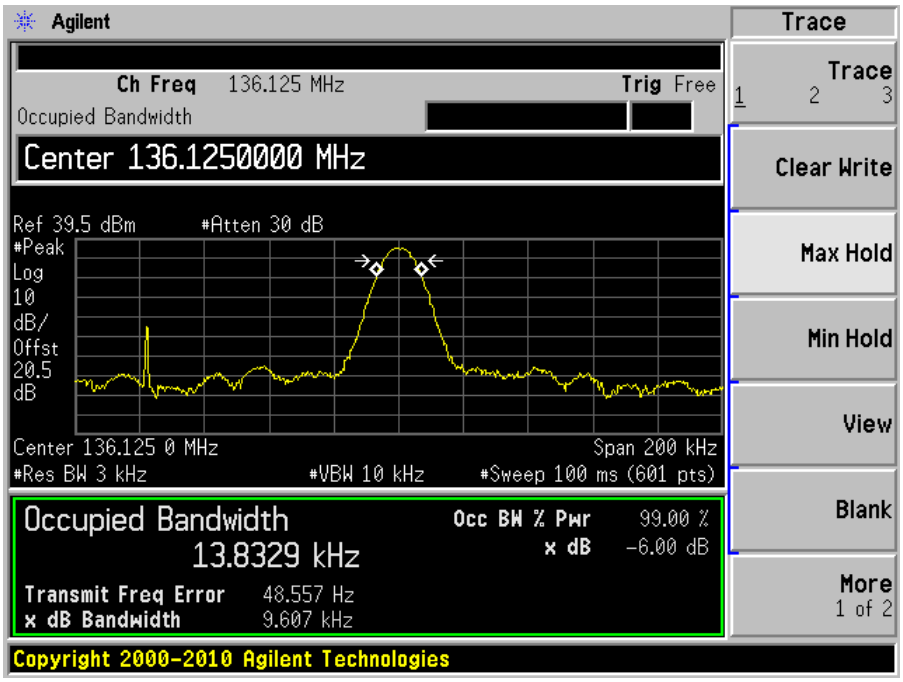


High Channel – 174 MHz

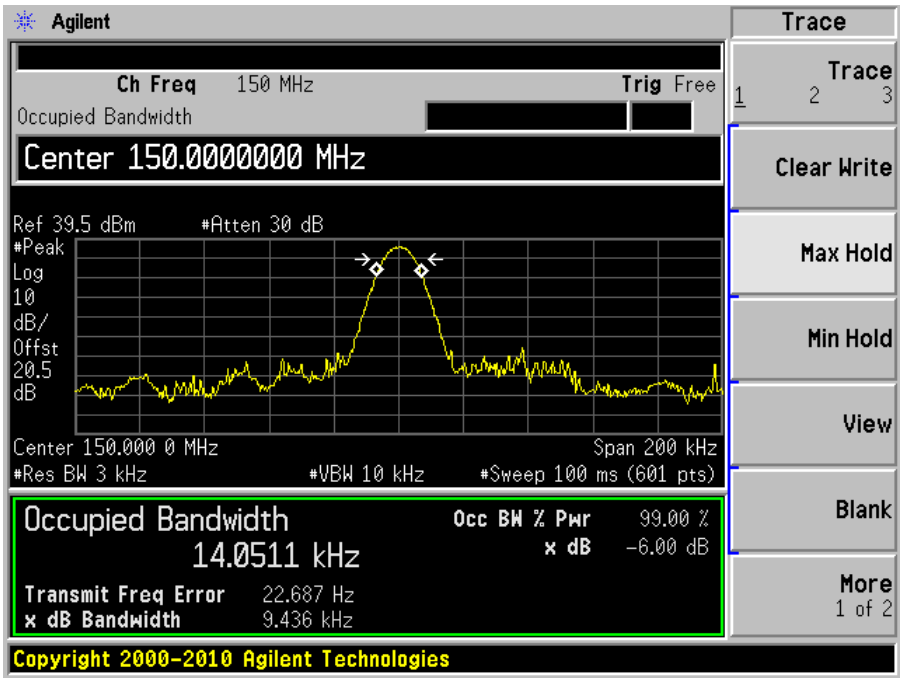


High Power Data (25 kHz)

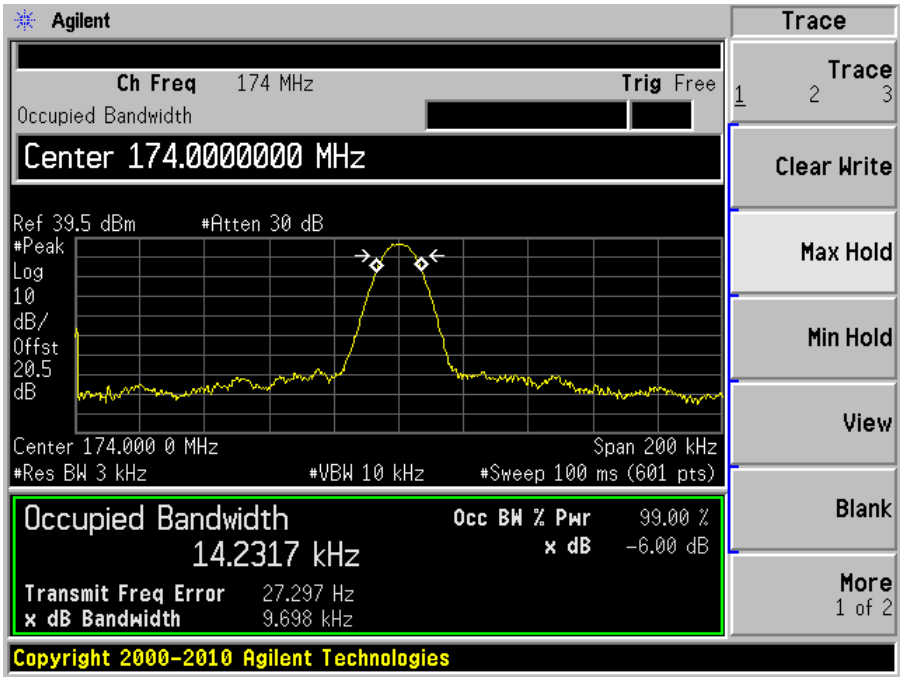
Low Channel – 136 MHz



Middle Channel – 150 MHz

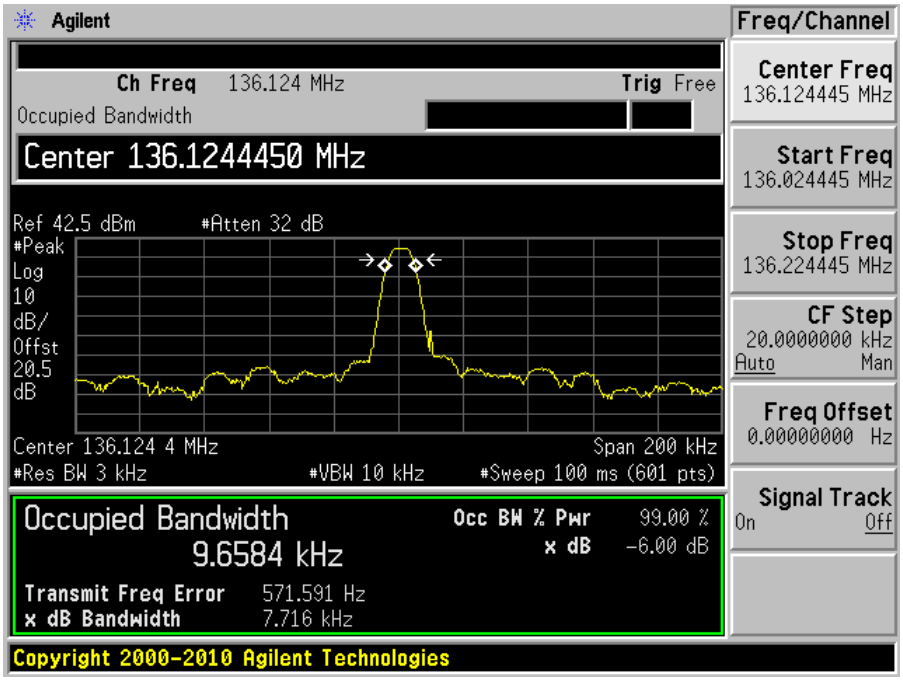


High Channel – 174 MHz

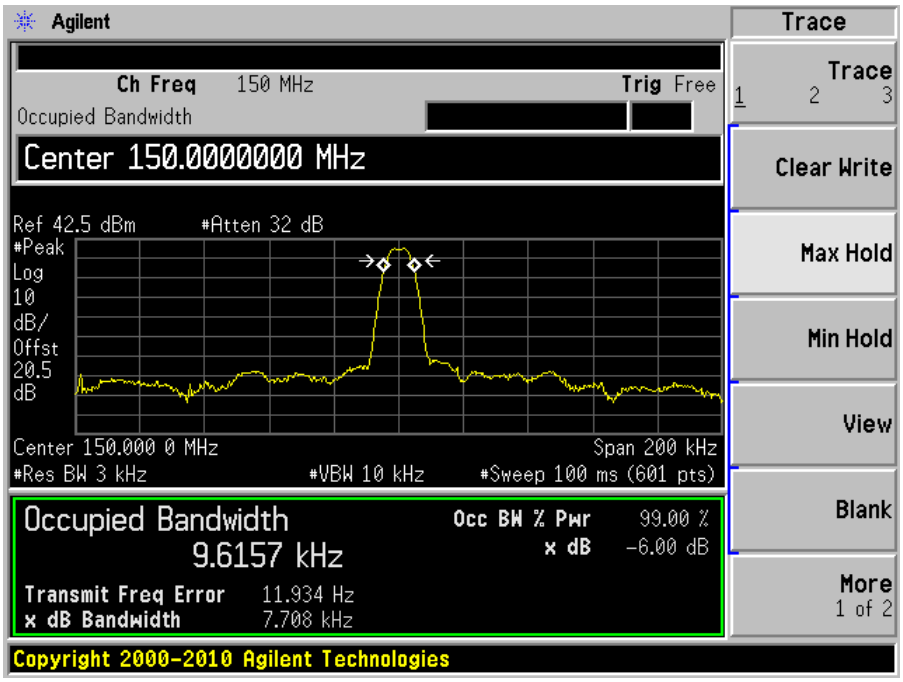


High Power Audio (12.5 kHz)

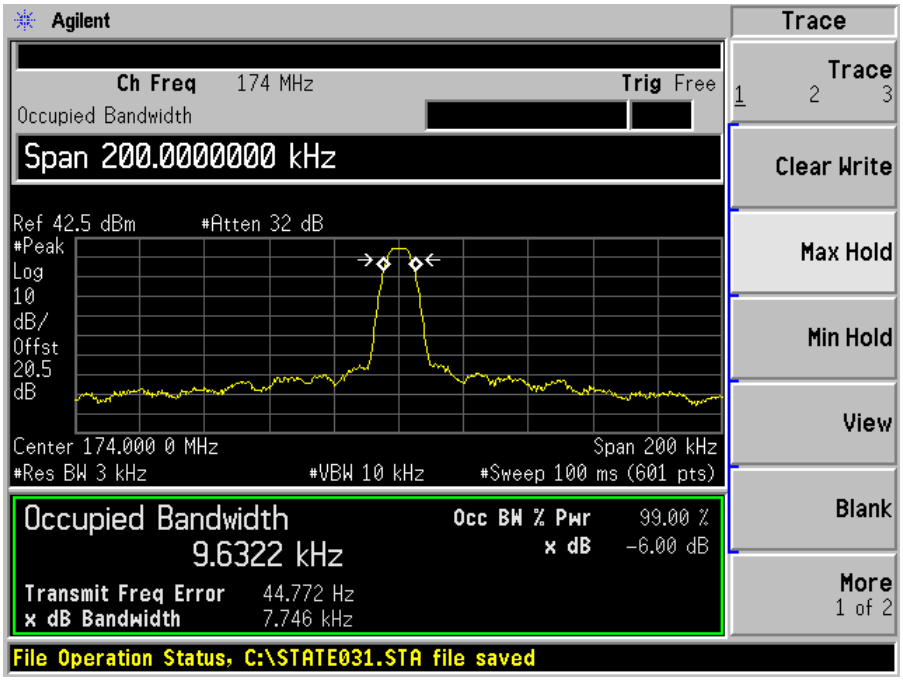
Low Channel – 136 MHz



Middle Channel – 150 MHz

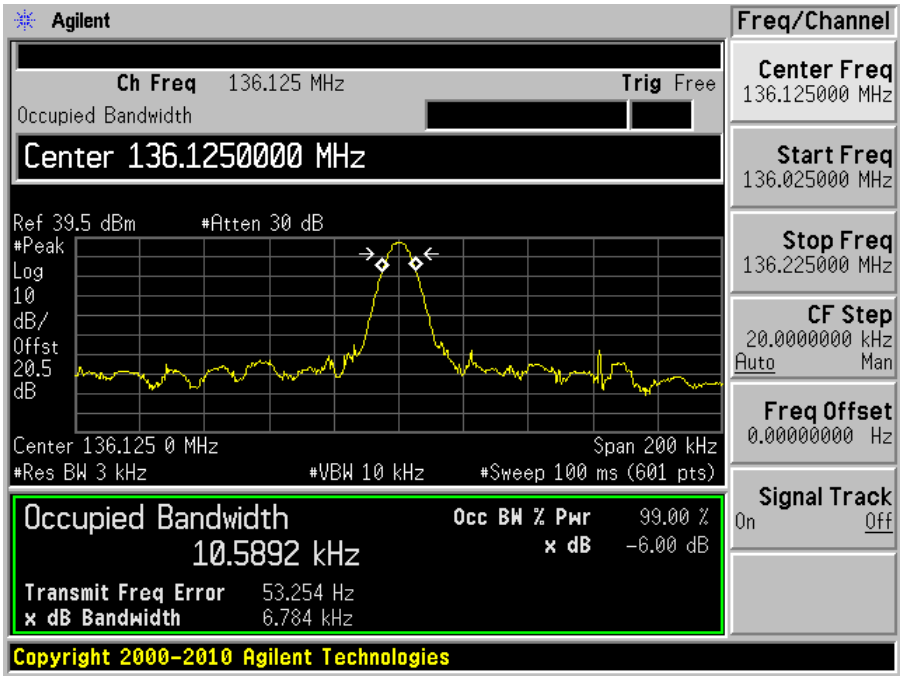


High Channel – 174 MHz

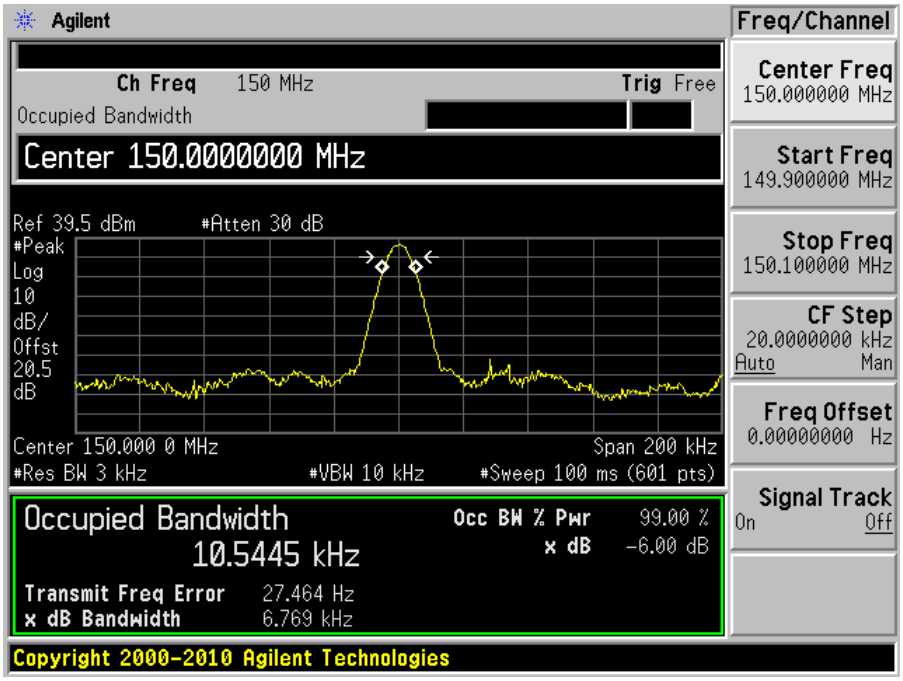


High Power Data (12.5 kHz)

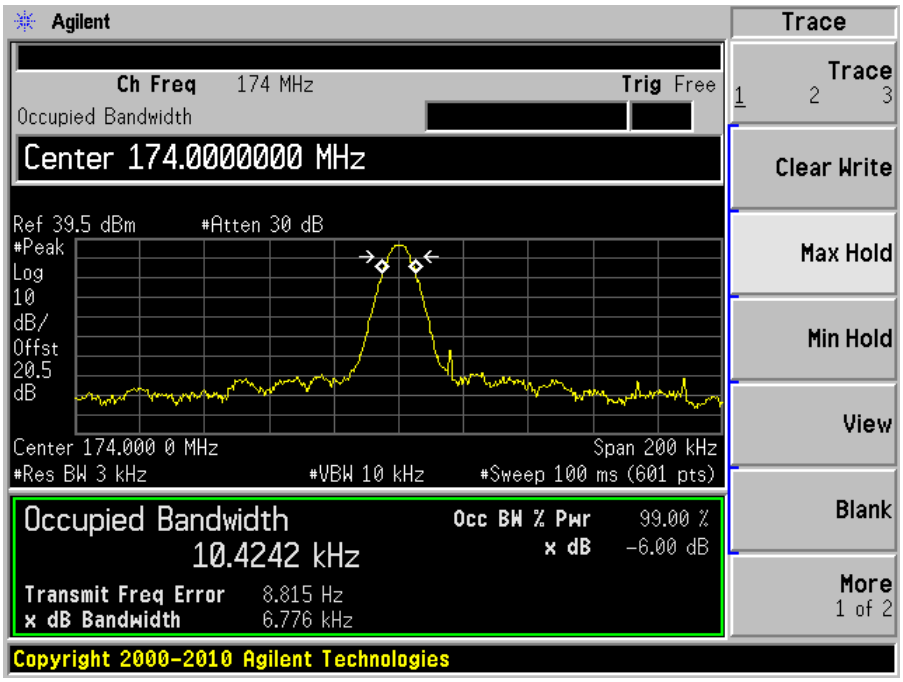
Low Channel – 136 MHz



Middle Channel – 150 MHz

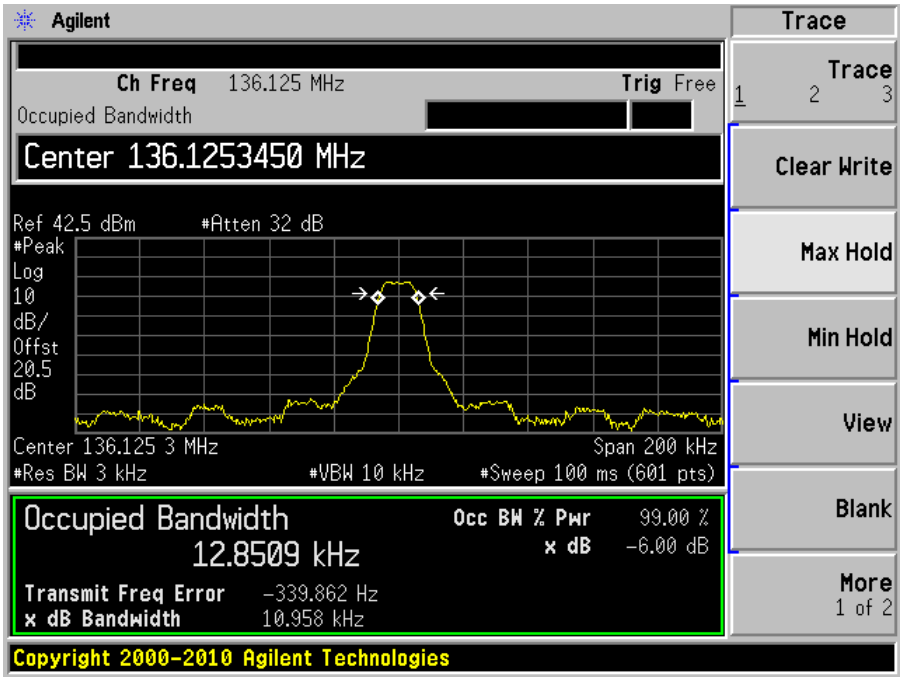


High Channel – 174 MHz

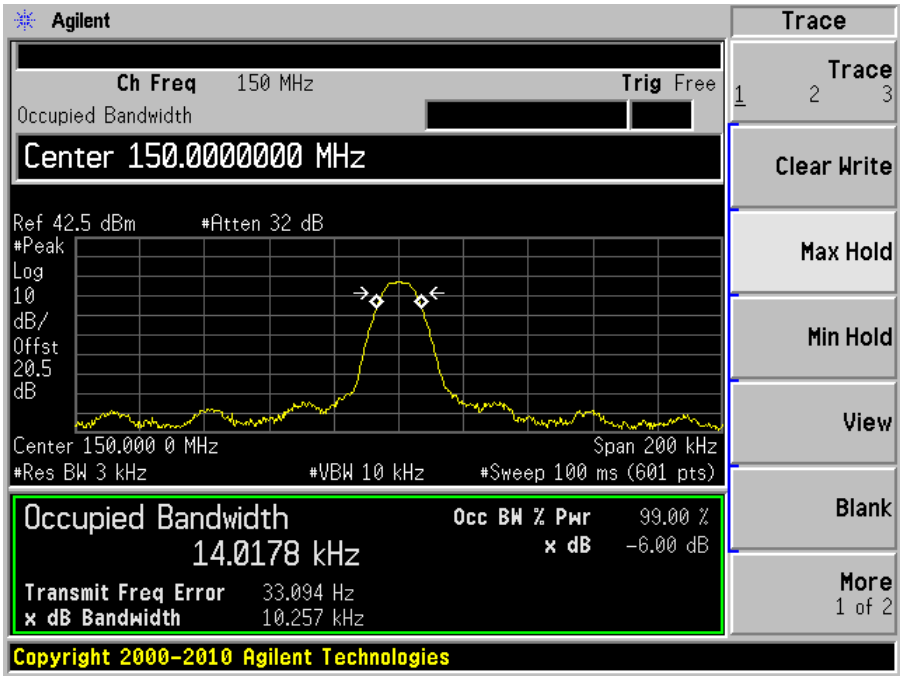


Low Power Audio (25 kHz)

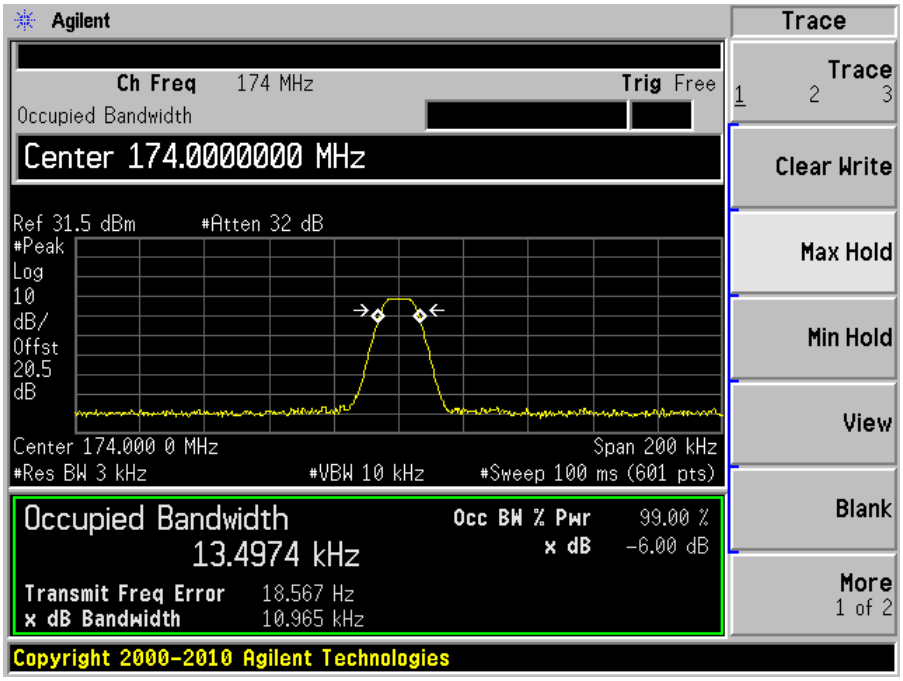
Low Channel – 136 MHz



Middle Channel – 150 MHz

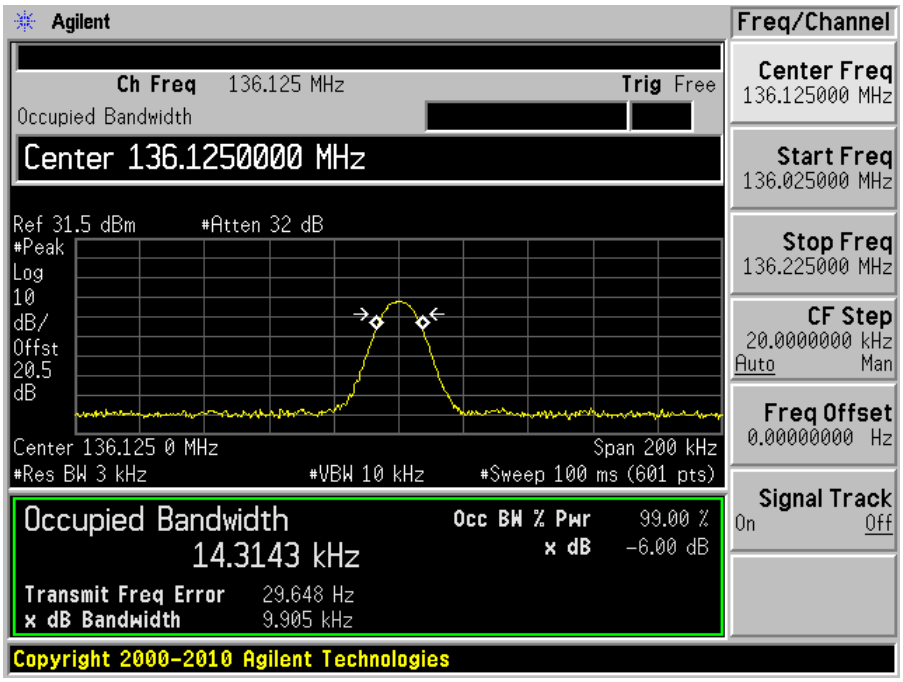


High Channel – 174 MHz

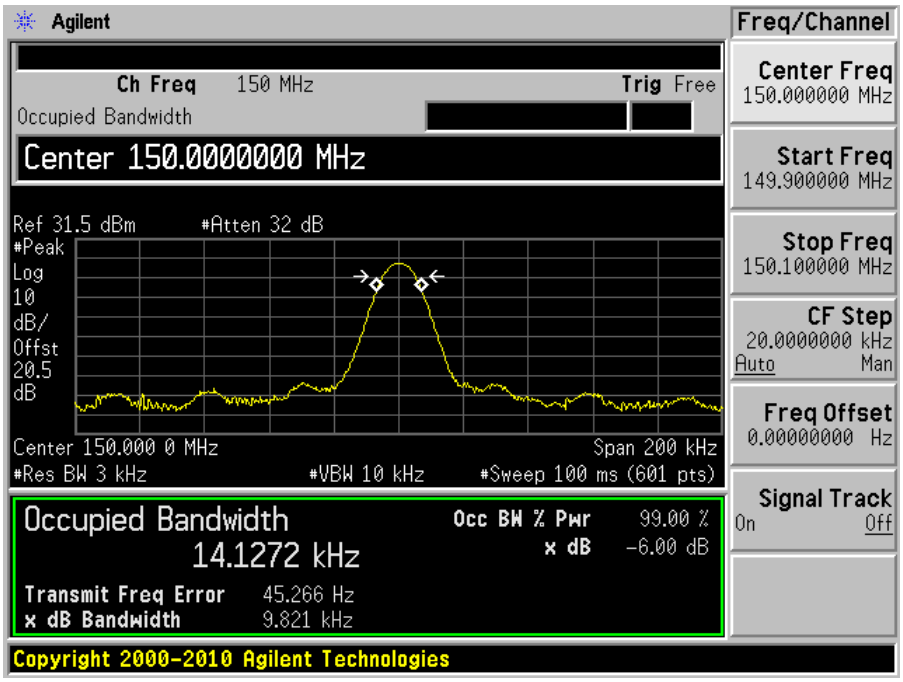


Low Power Data (25 kHz)

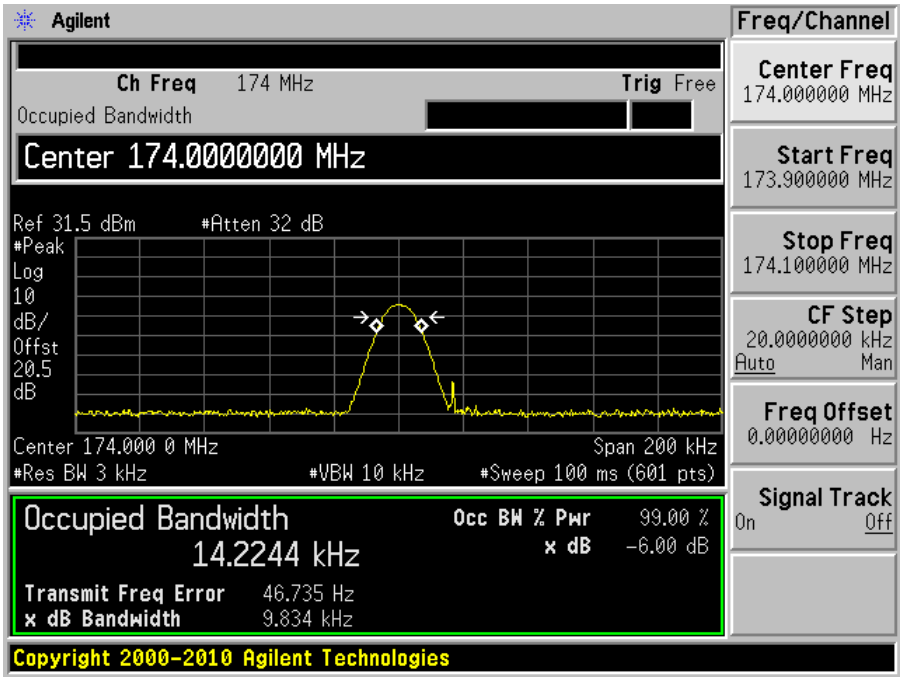
Low Channel – 136 MHz



Middle Channel – 150 MHz

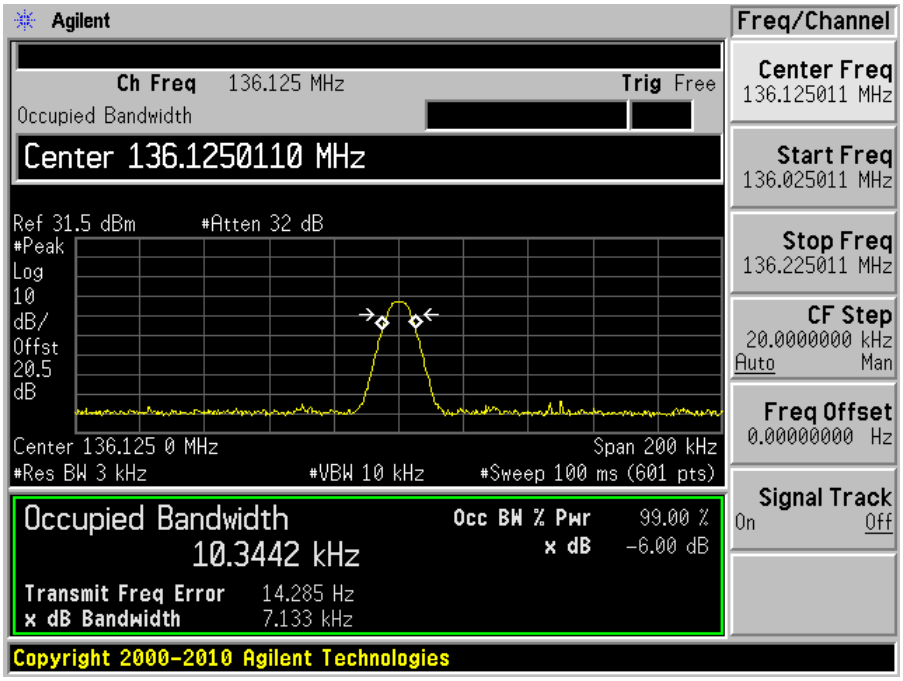


High Channel – 174 MHz

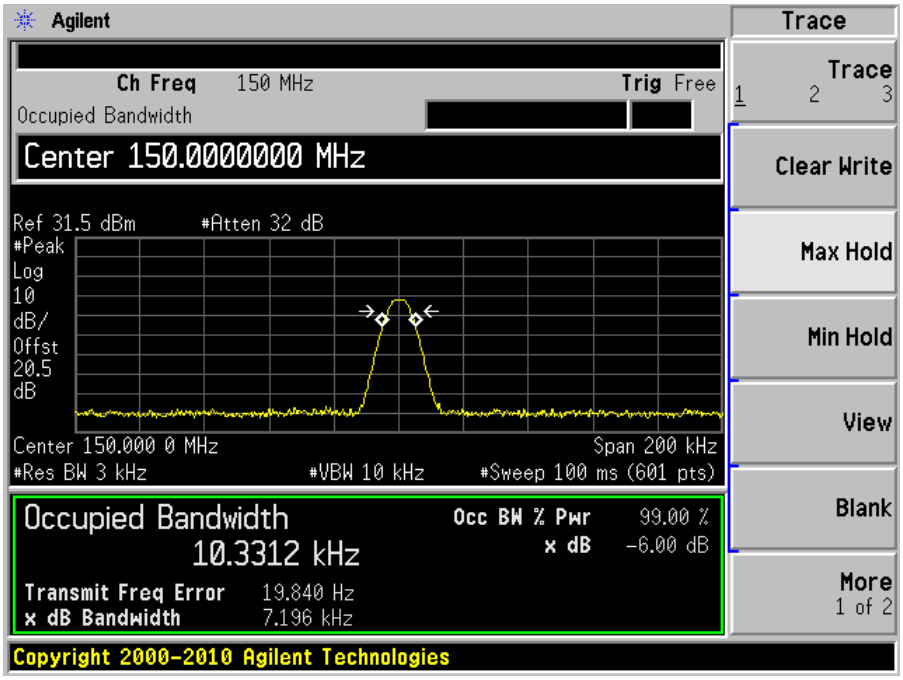


Low Power Audio (12.5 kHz)

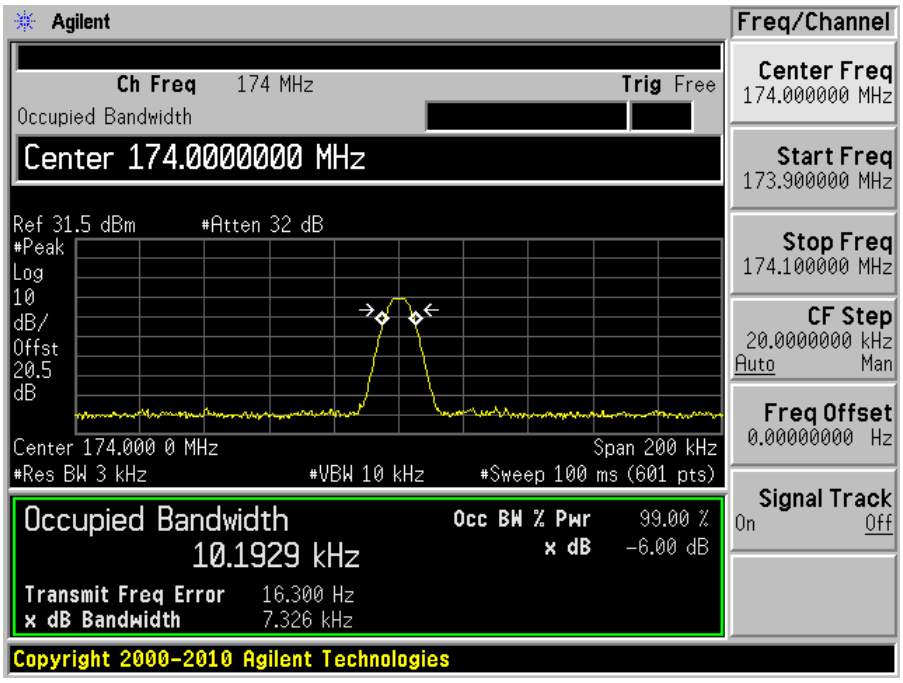
Low Channel – 136 MHz



Middle Channel – 150 MHz

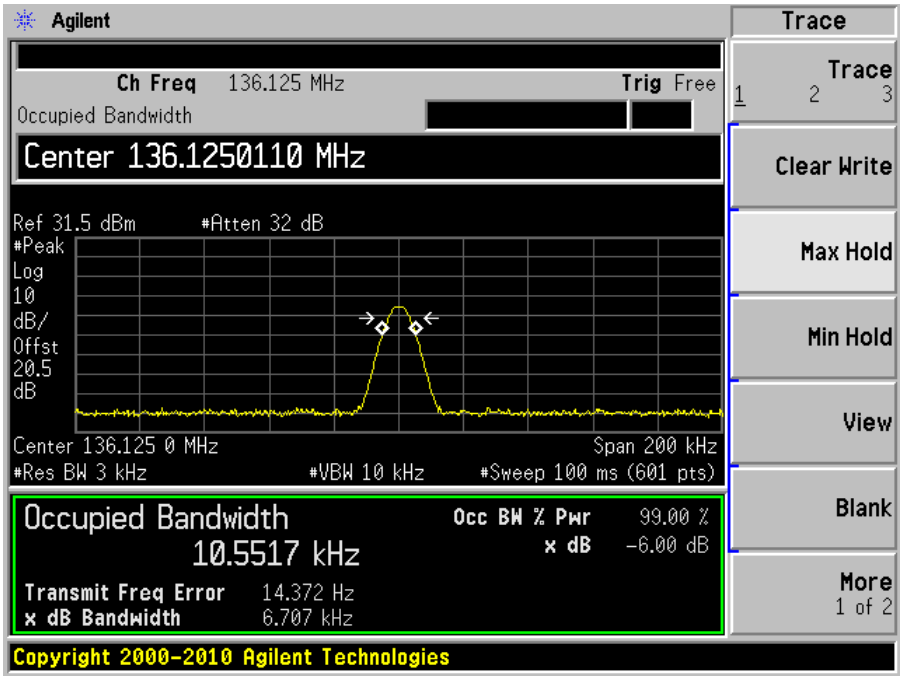


High Channel – 174 MHz

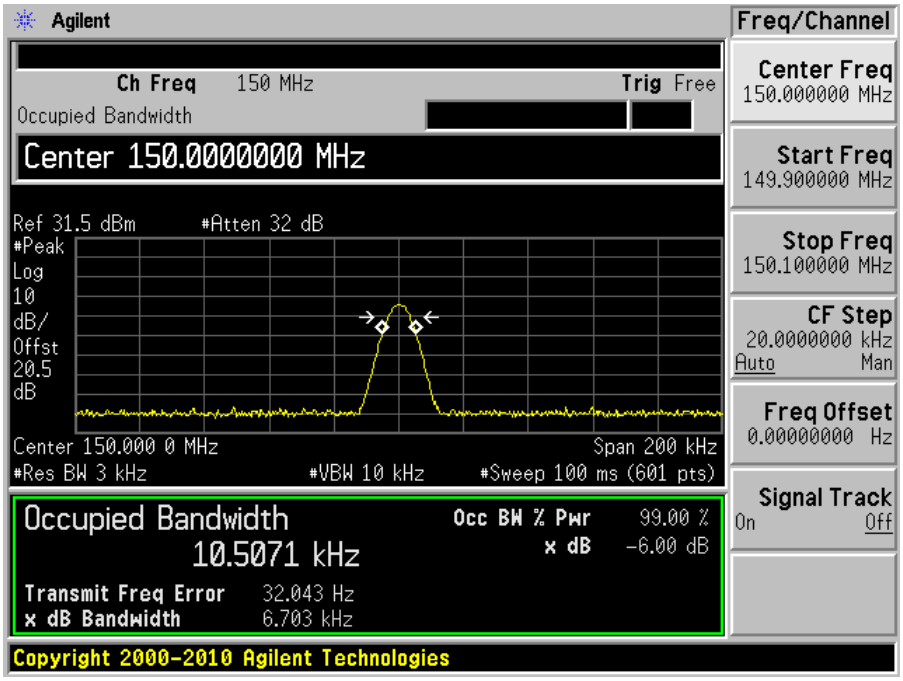


Low Power Data (12.5 kHz)

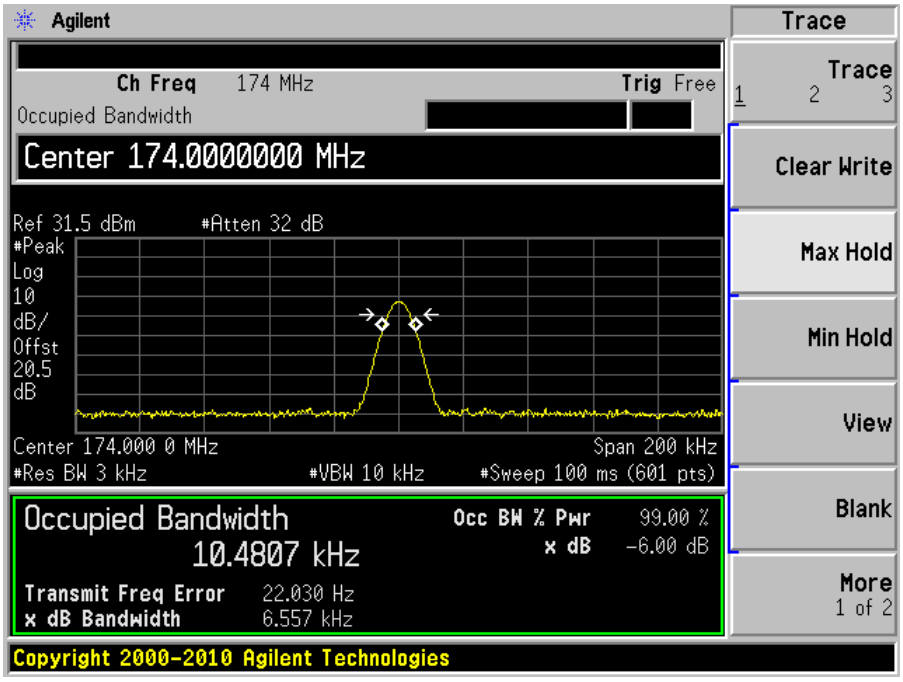
Low Channel – 136 MHz



Middle Channel – 150 MHz

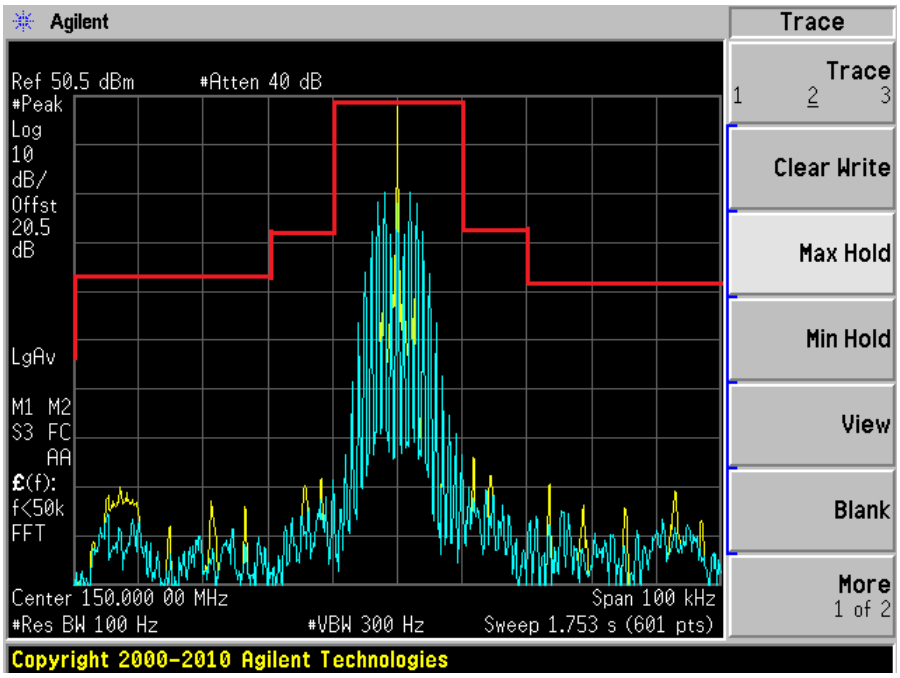


High Channel – 174 MHz

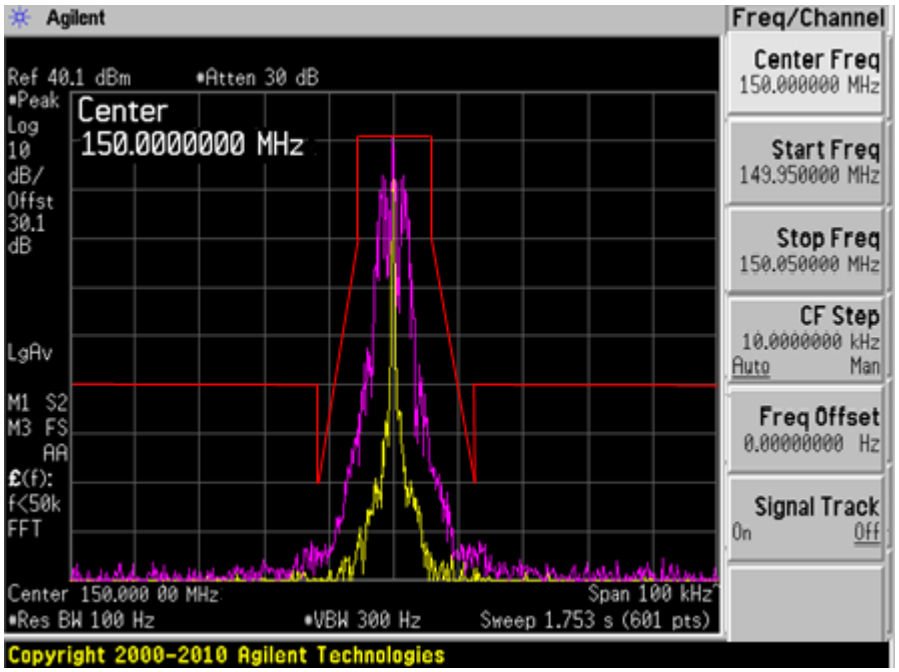


Emission Mask

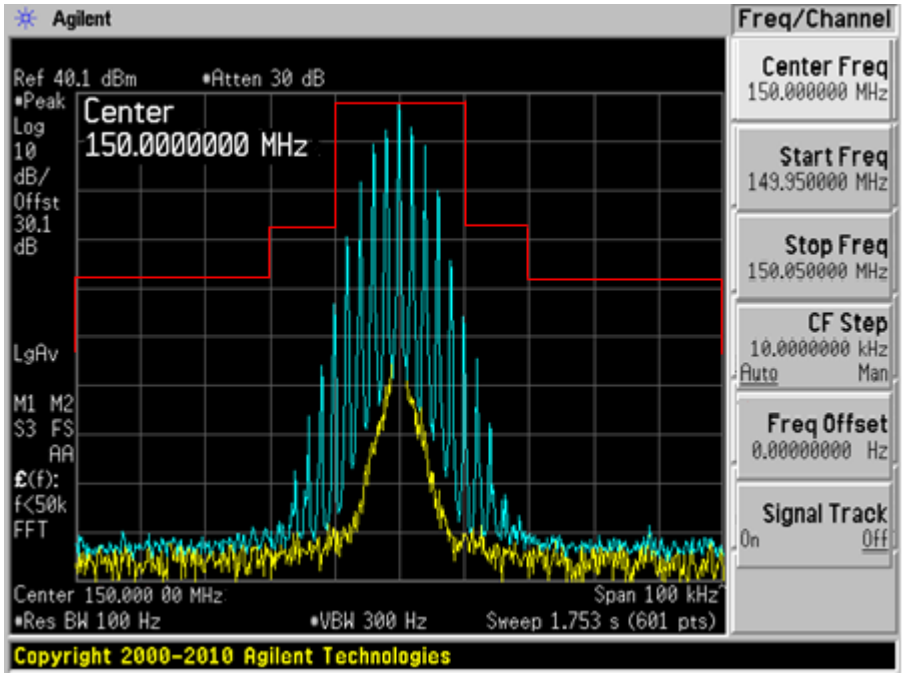
High Power: Audio; 25 kHz Channel Spacing



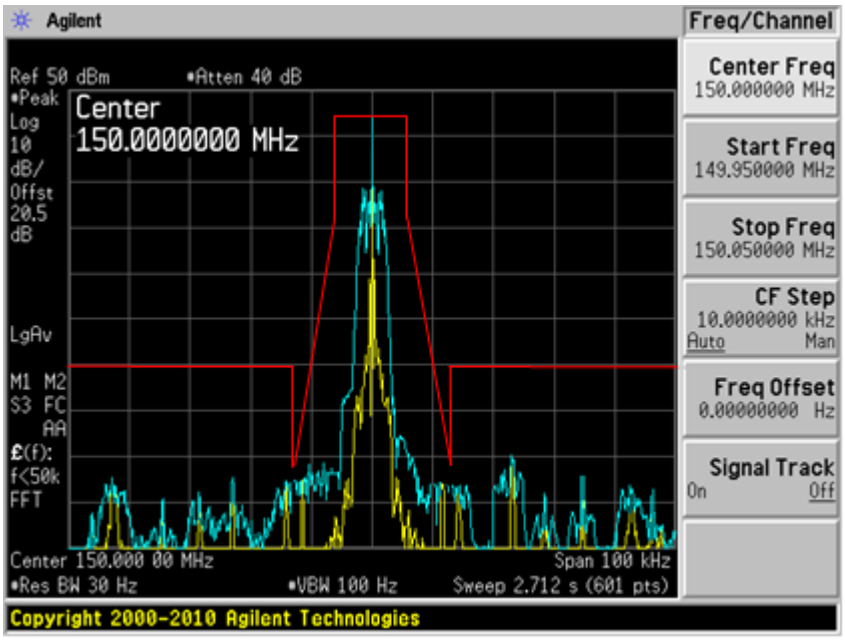
High Power: Audio; 12.5 kHz Channel Spacing



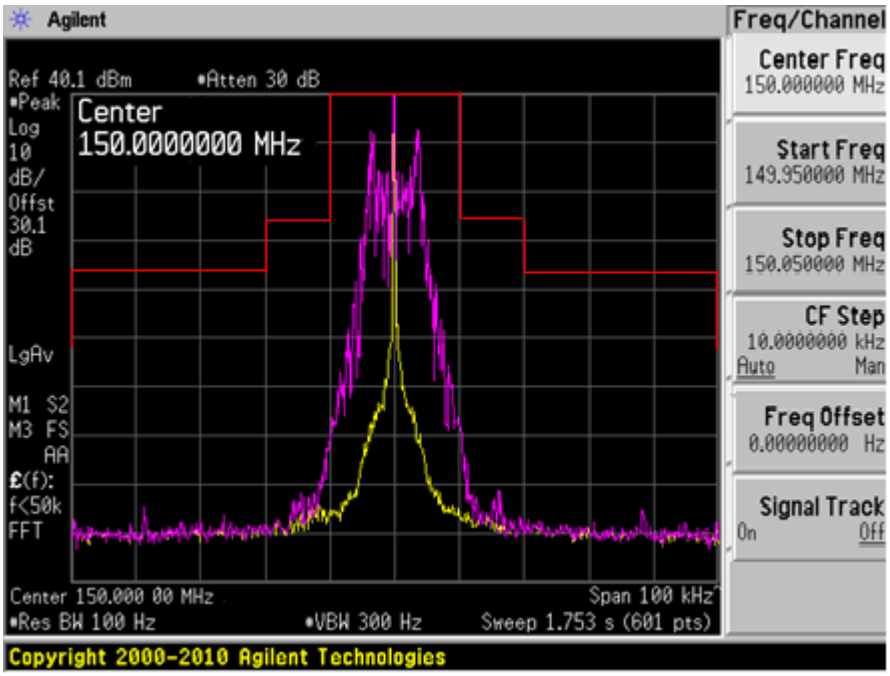
High Power: Data; 25 kHz Channel Spacing



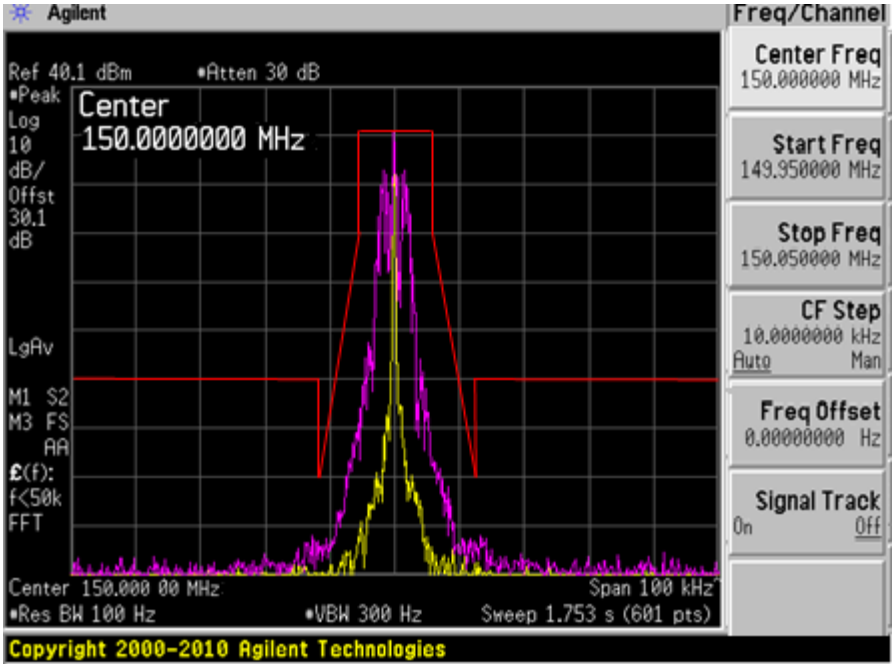
High Power: Data; 12.5 kHz Channel Spacing



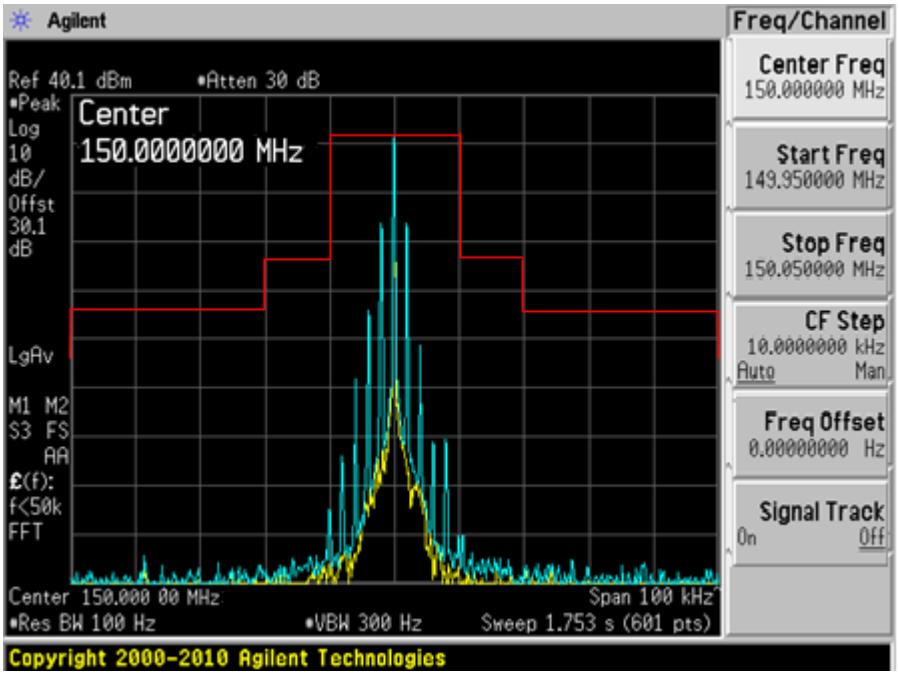
Low Power: Audio; 25 kHz Channel Spacing



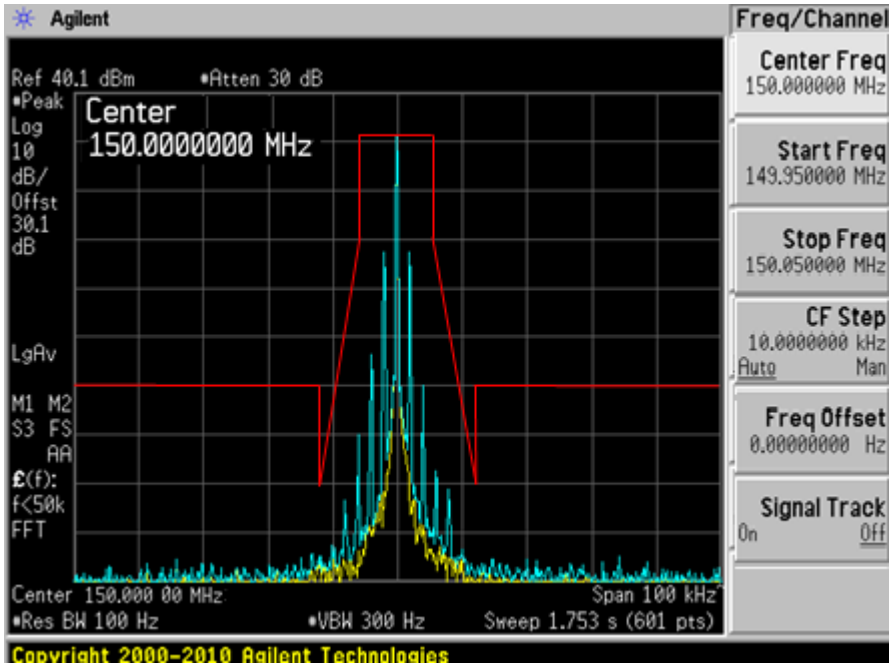
Low Power: Audio; 12.5 kHz Channel Spacing



Low Power: Data; 25 kHz Channel Spacing



Low Power: Data; 12.5 kHz Channel Spacing



8 FCC §2.1051 - Spurious Emissions at Antenna Terminals

8.1 Applicable Standard

FCC §2.1051.

FCC §90.210 (12.5 kHz bandwidth only)

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

50+10logP or 70 dB

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

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

43+10log (P)

8.2 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.

8.3 Test Environmental Conditions

Temperature:	25 °C
Relative Humidity:	43 %
ATM Pressure:	101.6 kPa

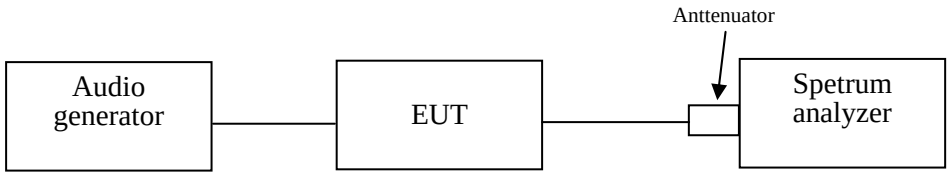
The testing was performed by Kevin Li on 2010-12-08 in RF Site

8.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Spectrum Analyzer	E4440A	US45303156	2010-08-09

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

8.5 Test Setup Block Diagram

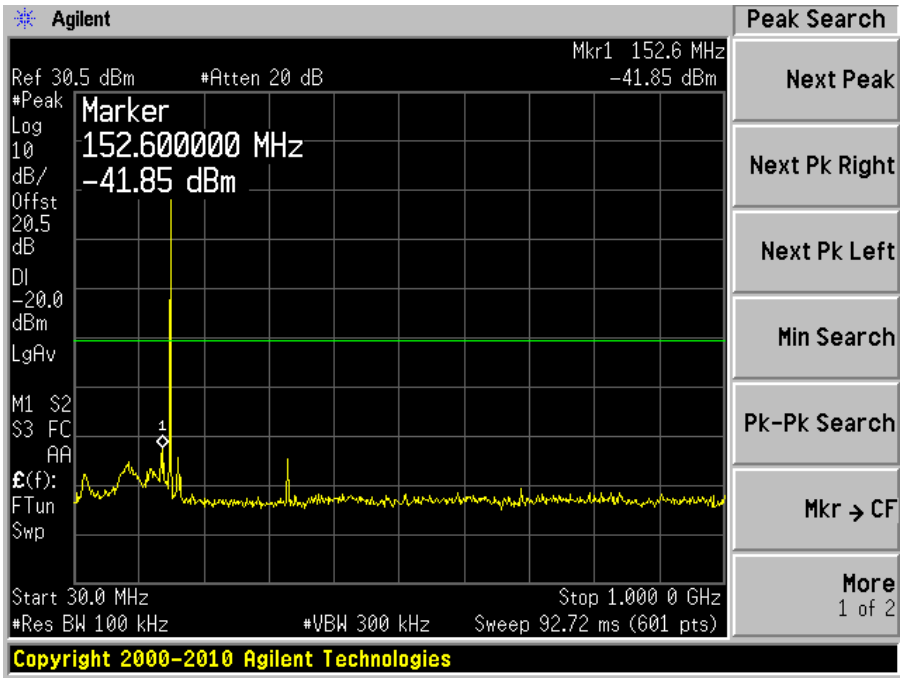


8.6 Test Results

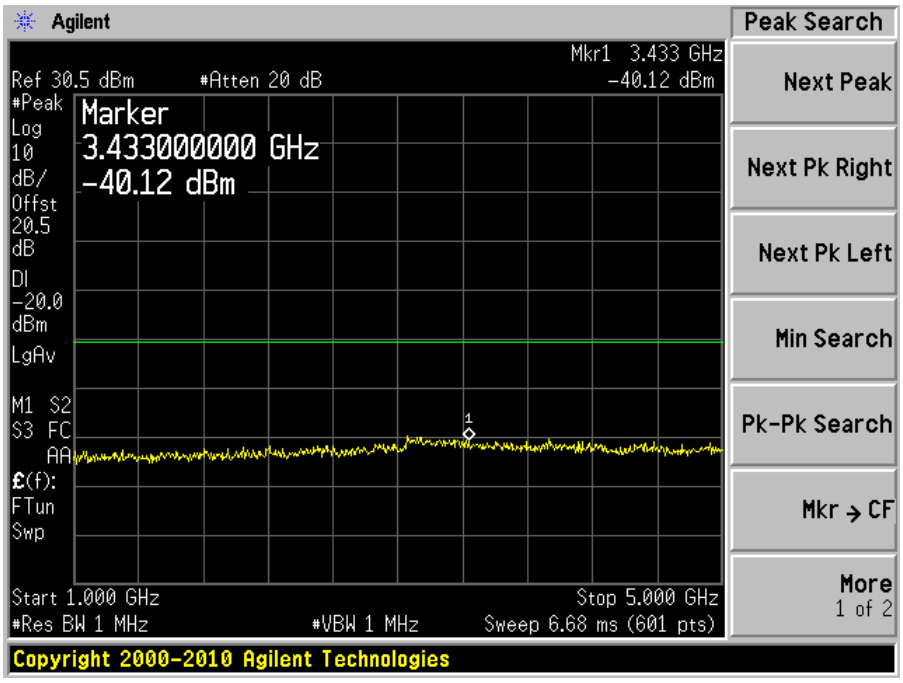
Please refer to the hereinafter plots.

Worst case: Middle channel High Power (12.5 kHz)

30 MHz to 1 GHz

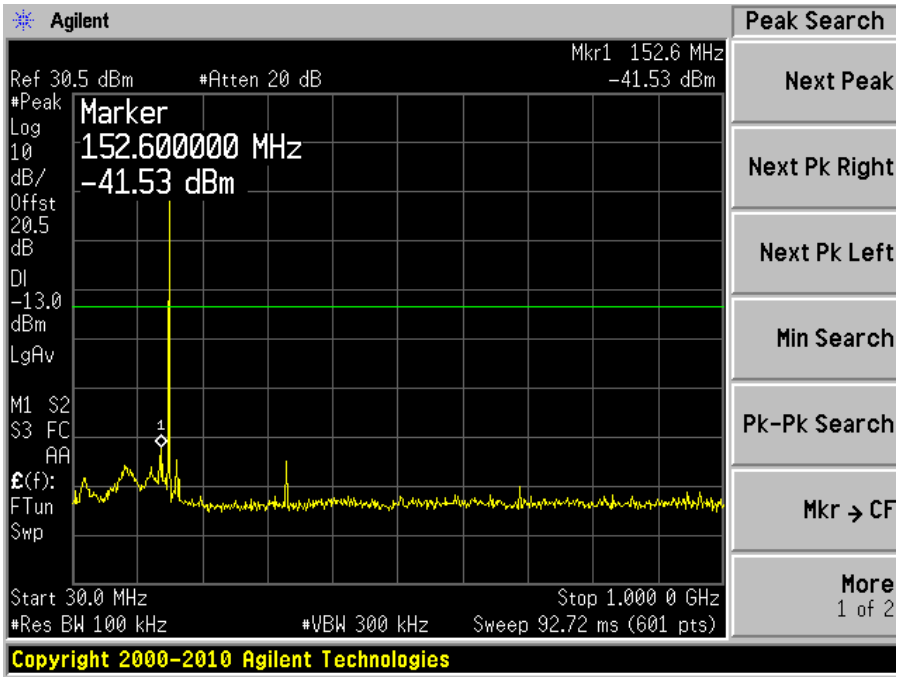


1 GHz to 5 GHz

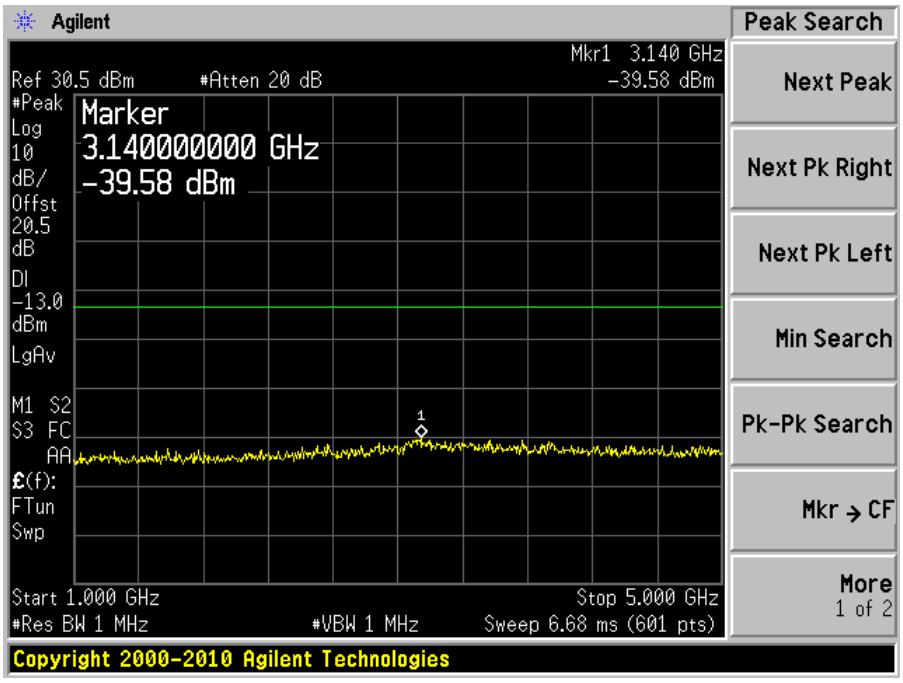


Worst case: Middle channel High Power (25 kHz)

30 MHz to 1 GHz



1 GHz to 5 GHz


Agilent
Peak Search
Mkr1 3.140 GHz
Ref 30.5 dBm
#Atten 20 dB
-39.58 dBm
#Peak
Log
10
dB/
Offst
20.5
dB
Dl
-13.0
dBm
LgAv
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Marker
3.140000000 GHz
-39.58 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 5.000 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 6.68 ms (601 pts)
Copyright 2000-2010 Agilent Technologies

9 FCC §2.1055 - Frequency Stability

9.1 Applicable Standard

FCC §2.1055 (d)

§90.213

In the 150–174 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth or designed to operate on a frequency specifically designated for itinerant use or designed for low-power operation of two watts or less, must have a frequency stability of 5.0 ppm.

9.2 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 the 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 110% 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.

9.3 Test Environmental Conditions

Temperature:	26 °C
Relative Humidity:	43 %
ATM Pressure:	101.7 kPa

The testing was performed by Kevin Li on 2010-12-11 in RF site.

9.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Spectrum Analyzer	E4446A	US44300386	2010-08-18
ESPEC	Oven, Temperature	ESL-4CA	18010	N/A

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

9.5 Test Result

High Power Band 12.5 kHz

Test Condition		Reference Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (PPM)	Limit (PPM)
Voltage (Vdc)	Temperature (^{o}C)				
Frequency vs. Temperature					
12	50	150.00	150.0006	4.0000	± 5
12	40	150.00	149.9992	-5.33333	± 5
12	30	150.00	149.9996	-2.66667	±5
12	20	150.00	150.0007	4.666667	± 5
12	10	150.00	150.0000	0	± 5
12	0	150.00	149.9993	-4.66667	± 5
12	-10	150.00	150.0007	4.666667	± 5
12	-20	150.00	149.9995	-3.33333	± 5
Frequency vs. Voltage					
13.8	20	150.00	150.0006	4.0000	± 5
9	20	150.00	150.0007	4.666667	± 5

High Power Band 25 kHz

Test Condition		Reference Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (PPM)	Limit (PPM)
Voltage (Vdc)	Temperature (^{o}C)				
Frequency vs. Temperature					
12	50	150.00	150	0	± 5
12	40	150.00	150.0007	4.666667	± 5
12	30	150.00	149.9993	-4.66667	±5
12	20	150.00	150.0000	0	± 5
12	10	150.00	150.0007	4.666667	± 5
12	0	150.00	150.0000	0	± 5
12	-10	150.00	150.0000	0	± 5
12	-20	150.00	150.0000	0	± 5
Frequency vs. Voltage					
13.8	20	150.00	149.9993	-4.66667	± 5
9	20	150.00	150.0000	0	± 5

10 FCC §2.1053 – Field Strength of Spurious Radiation

10.1 Applicable Standard

FCC §2.1053 (a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of §2.1049, as appropriate. And §90.210(b),(d): Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating in the frequency bands governed under this part.

10.2 Test Procedure

The transmitter was placed on a Styrofoam with wooden turntable, and it was normal transmitting with 50ohm termination 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 tenth 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 (TXpwr in Watts/0.001) – the absolute level

10.3 Test Environmental Conditions

Temperature:	26 °C
Relative Humidity:	43 %
ATM Pressure:	101.7 kPa

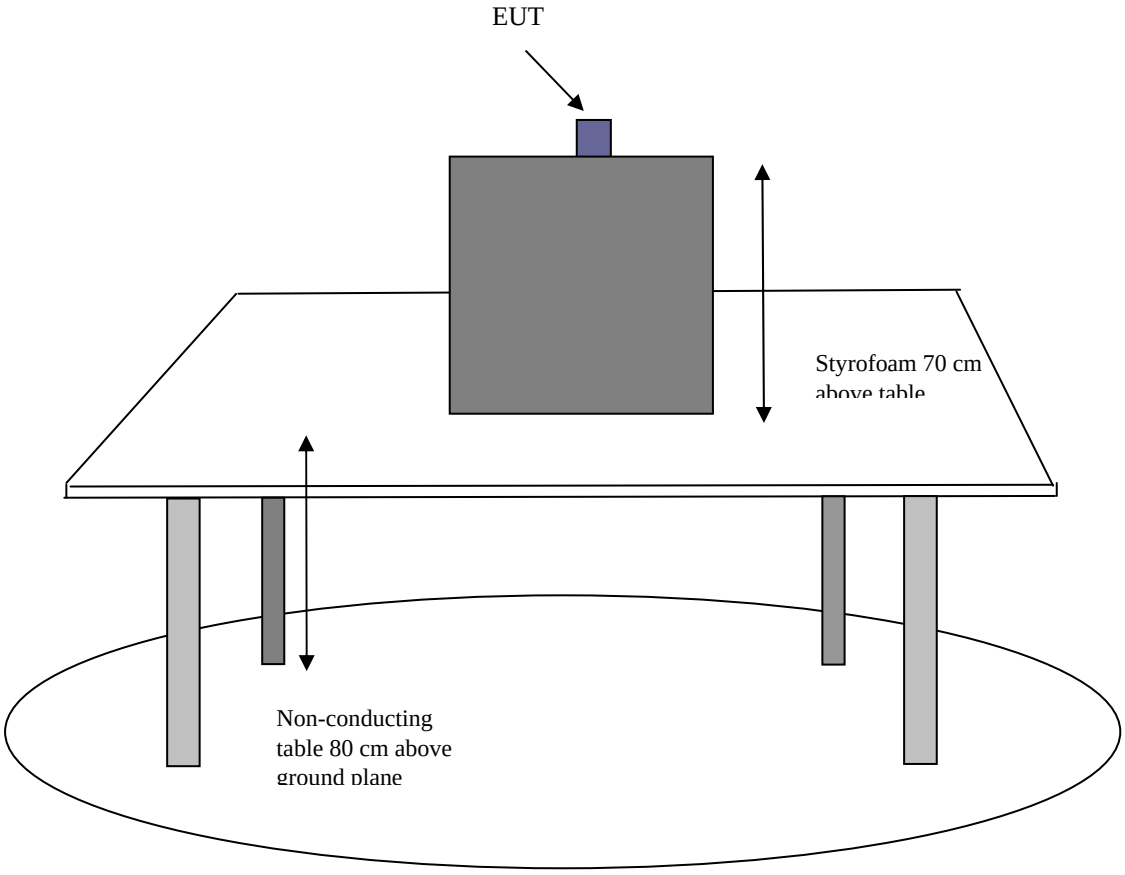
The testing was performed by Kevin Li on 2010-12-07 in 5 meter chamber 3.

10.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.5950K03	100337	2010-03-24
Agilent	Spectrum Analyzer	E4440A	US45303156	2010-08-09
Sunol Science Corp	System Controller	SC99V	122303-1	N/R
Sunol Science Corp	Combination Antenna	JB3	A0020106-2	2010-08-06
Hewlett Packard	Pre amplifier	8447D	2944A06639	2010-06-18
A.R.A Inc	Horn antenna	DRG-1181A	1132	2010-11-29
Mini-Circuits	Pre Amplifier	ZVA-183-S	570400946	2010-05-10

Statement of Traceability: BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

10.5 Test Setup Block Diagram



10.6 Test Result

Test Mode: Transmission Using substitution method

Indicated		Turntable Azimuth degrees	Test Antenna		Substituted					Limit (dBm)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)		Height (cm)	Polar (H/V)	Freq. (MHz)	Level (dBm)	Antenna Cord. (dBi)	Cable Loss (dB)	Absolute Level (dBm)		
300	68.91	348	136	H	300	-68.79	0	0.66	-69.45	-13	-56.45
300	69.85	15	187	V	300	-72.21	0	0.66	-72.87	-13	-59.87

11 FCC §90.214 - Transient Frequency Behavior

11.1 Applicable Standard

FCC §90.214: Transmitters designed to operate in the 150–174 MHz and 421–512 MHz frequency bands must maintain transient frequencies within the maximum frequency difference limits during the time intervals indicated:

Time intervals[1,2]	Maximum frequency difference[3]	All equipment
		138 to 174 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels		
t_1[4]	±25.0 kHz	5.0 ms
t_2	±12.5 kHz	20.0 ms
t_3[4]	±25.0 kHz	5.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels		
t_1[4]	±12.5 kHz	5.0 ms
t_2	±6.25 kHz	20.0 ms
t_3[4]	±12.5 kHz	5.0 ms

11.2 Test Procedure

TIA/EIA-603-C 2.2.19

11.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
HP	Modulation Analyzer	8901A	2026A00847	2010-08-17
Tektronix	Digital Phosphor Oscilloscope	TDS7104	B020557	2010-06-11
HP	Generator, Signal	83650B	3614A00276	2010-06-21
BK Precision	Power Supply, DC	1621A	D185052265	N/R
Agilent	Spectrum Analyzer	E4440A	US45303156	2010-08-09
HP	Test Set, RF Communications	8920A	3438A05338	2010-05-18

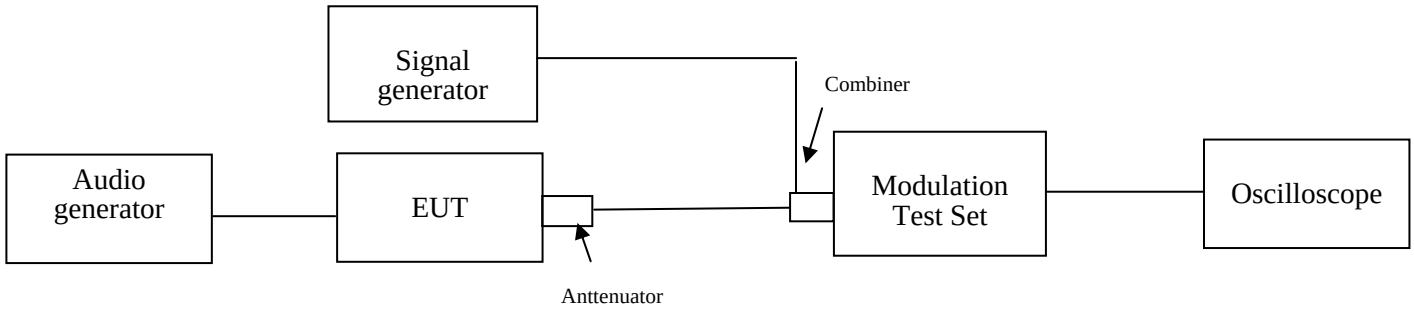
Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST

11.4 Test Environmental Conditions

Temperature:	22 °C
Relative Humidity:	47 %
ATM Pressure:	102.5 kPa

The testing was performed by Kevin Li on 2010-12-10 in RF site.

11.5 Test Setup Block Diagram

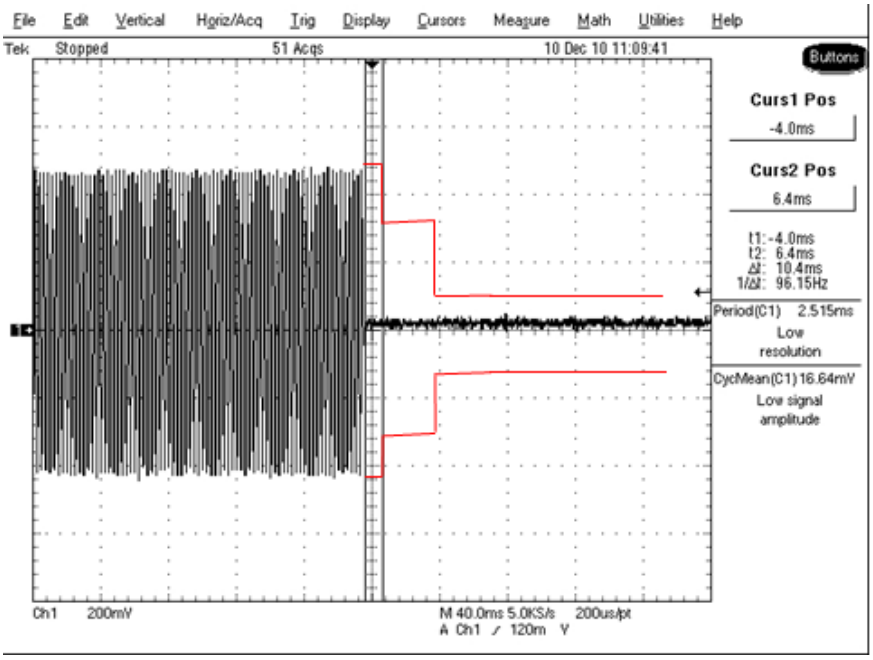


11.6 Test Results

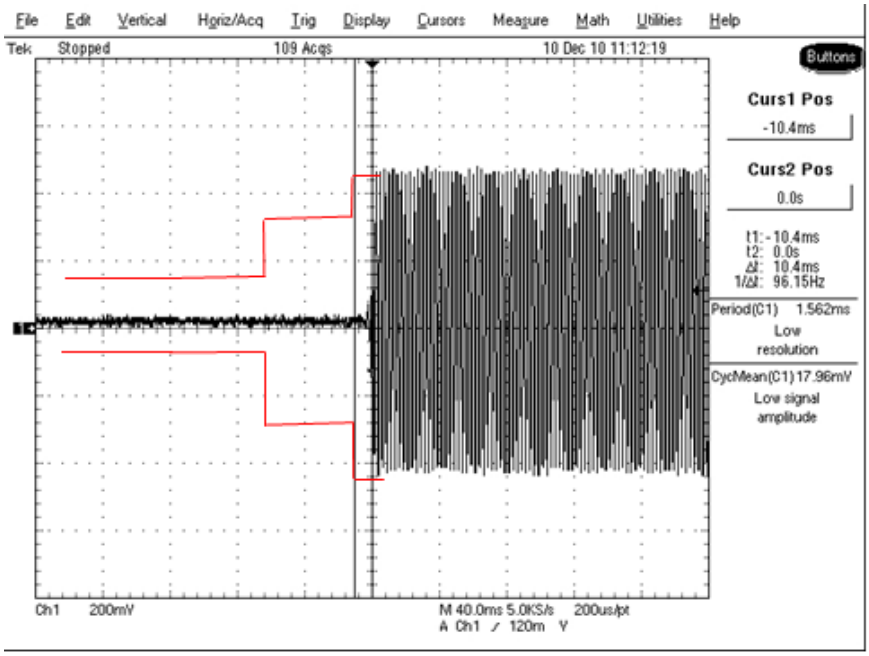
Please refer to the following plots.

25 kHz Channel Spacing:

Powering Down

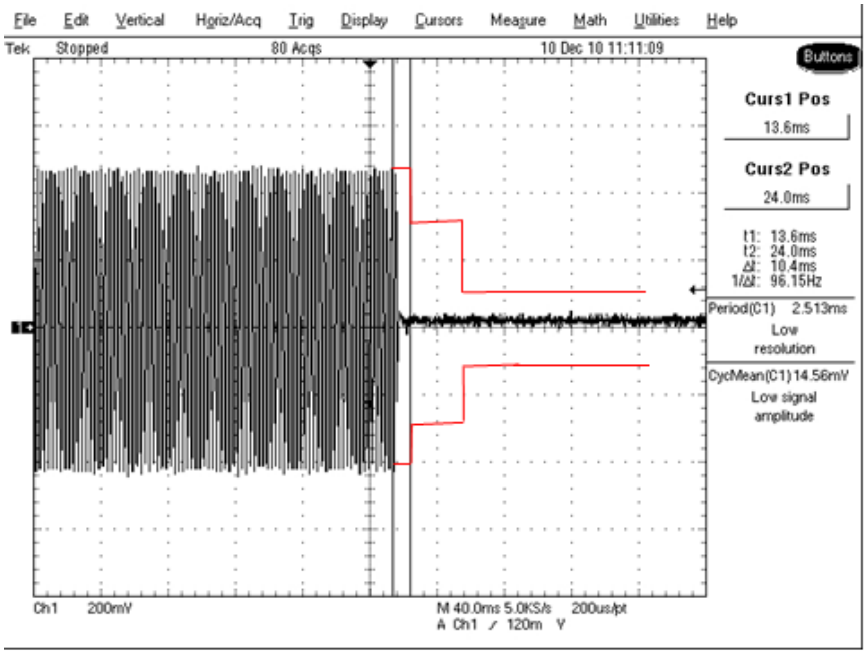


Powering Up



12.5 kHz Channel Spacing

Powering Up



Powering Down