FCC TEST REPORT

(Part 90 Subpart Z)

REPORT NO.: RF981009L01D

MODEL NO.: 3630APC

FCC ID: ABZ89FT7632

RECEIVED: May 18, 2011

TESTED: May 26 ~ May 30, 2011

ISSUED: Jun. 02, 2011

APPLICANT: Motorola Inc.

ADDRESS: 1475 W SHURE DRIVE, ARLINGTON HEIGHTS, ILLINOIS 60004, UNITED STATES

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Jun. 02, 2011

1 CERTIFICATION

PRODUCT: 3630APC Outdoor Connectorized Access Point
MODEL: 3630APC
BRAND: Motorola
APPLICANT: Motorola Inc.
TESTED: May 26 ~ May 30, 2011
TEST SAMPLE: ENGINEERING SAMPLE
TEST STANDARDS: **FCC Part 90, Subpart Z**

The above equipment (Model No.: 3630APC) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia / Specialist , **DATE:** Jun. 02, 2011

APPROVED BY : Gary Chang / Assistant Manager , **DATE:** Jun. 02, 2011

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

STANDARD SECTION FCC Part 2& Part 90	TEST TYPE AND LIMIT	RESULT	REMARK
2.1046 90.1321	Maximum Peak Output Power Limit: max. 25Watt / 25MHz EIRP.	PASS	Meet the requirement of limit.
2.1055 90.213	Frequency Stability Stay with the authorized bands of operation	PASS	Meet the requirement of limit.
2.1049 90.1323	Emission Bandwidth	PASS	Meet the requirement of limit.
90.210	Emission masks	PASS	Meet the requirement of limit.
2.1051 90.1323	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 90.1323	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -16.7dB at 1338.00MHz.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	3630APC Outdoor Connectorized Access Point	
MODEL NO.	3630APC	
FCC ID	ABZ89FT7632	
POWER SUPPLY	56Vdc from PoE	
MODULATION TYPE	QPSK, 16QAM, 64QAM	
CODING RATE	**UL**	QPSK: 1/2, 3/4
		16QAM: 1/2, 3/4
		64QAM: 1/2, 2/3, 3/4, 5/6
	DL	QPSK: 1/2, 3/4
		16QAM: 1/2, 3/4
		64QAM: 1/2, 2/3, 3/4, 5/6
MODULATION TECHNOLOGY	OFDMA	
DUPLEX METHOD	TDD	
OPERATING FREQUENCY	3651.75MHz ~ 3698.25MHz	
CHANNEL BANDWIDTH	3.5MHz, 5.0MHz, 7.0MHz, 10.0MHz	
MAX. E.I.R.P. POWER (RMS)	34.82dBm (3.5MHz) 36.20dBm (5.0MHz) 37.79dBm (7.0MHz) 39.39dBm (10.0MHz)	
ANTENNA TYPE	Sector Antenna with 16.5dBi gain (Optional accessory)	
OPERATION TEMPERATURE RANGE	-40°C ~ 70°C	
DATA CABLE	1.7m shielded RJ45 cable without core	
I/O PORTS	RJ45	
ACCESSORY DEVICES	POE (Optional accessory)	

NOTE:

1. This report is a supplementary report of RF981009L01. The differences compared with original report are extending frequency range from 3650~3675 to 3650~3700MHz by software and removing core of antenna cable. Therefore, we re-tested all the test items and presented in the test report.
2. For the EUT with modulation type and coding rate. After pre-testing in test items of output power and spurious emissions, QPSK1/2 was found to be worst case and was selected for the final test configuration.
3. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

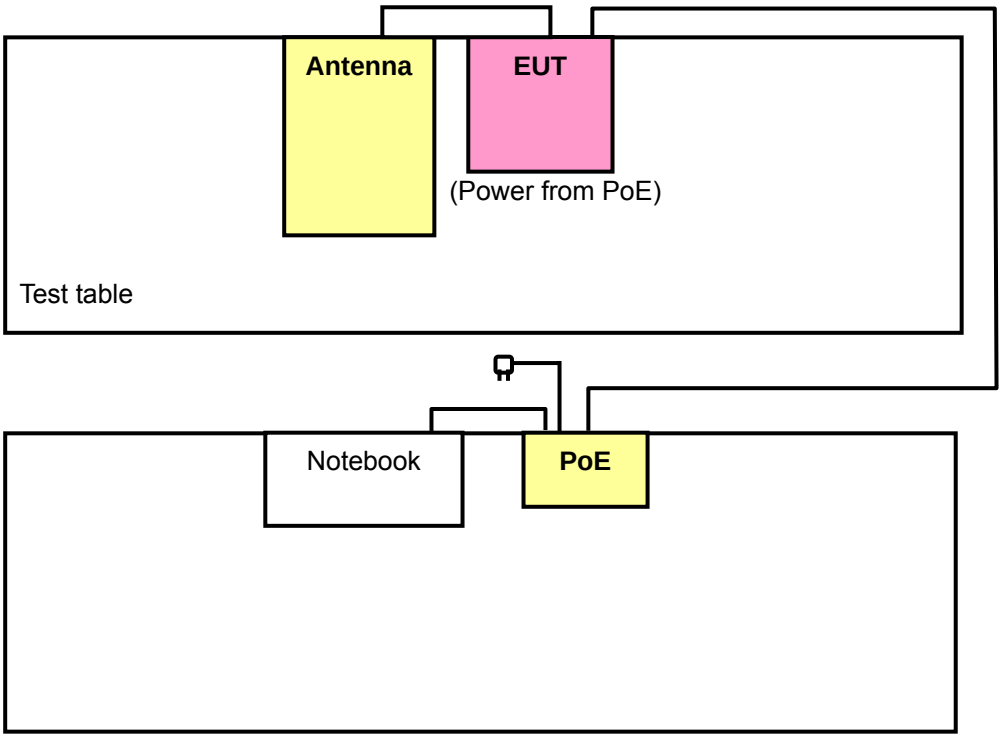
3.2 DESCRIPTION OF TEST MODES

Three channels had been tested for each channel bandwidth.

CHANNEL BANDWIDTH: 3.5 MHz	CHANNEL BANDWIDTH: 5 MHz
Low channel (L): 3651.75MHz	**Low channel (L)**: 3652.50MHz
Middle channel (M): 3675.00MHz	**Middle channel (M)**: 3675.00MHz
High channel (H): 3698.25MHz	**High channel (H)**: 3697.50MHz

CHANNEL BANDWIDTH: 7 MHz	CHANNEL BANDWIDTH: 10 MHz
Low channel (L): 3653.50MHz	**Low channel (L)**: 3655.00MHz
Middle channel (M): 3675.00MHz	**Middle channel (M)**: 3675.00MHz
High channel (H): 3696.50MHz	**High channel (H)**: 3695.00MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO							DESCRIPTION
	OP	FS	EB	EM	CSE	RE<1G	RE≥1G	
-	√	√	√	√	√	√	√	-

Where **OP:** Output power **FS:** Frequency stability
EB: Emission bandwidth **EM:** Emission masks
CSE: Conducted spurious emissions **RE<1G:** Radiated emission below 1GHz
RE≥1G: Radiated emission above 1GHz

OUTPUT POWER MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	3.5MHz	QPSK	1/2
L, M, H	OFDMA	5.0MHz	QPSK	1/2
L, M, H	OFDMA	7.0MHz	QPSK	1/2
L, M, H	OFDMA	10.0MHz	QPSK	1/2

FREQUENCY STABILITY MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L	OFDMA	3.5MHz	QPSK	1/2
L	OFDMA	5.0MHz	QPSK	1/2
L	OFDMA	7.0MHz	QPSK	1/2
L	OFDMA	10.0MHz	QPSK	1/2

EMISSION BANDWIDTH MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	3.5MHz	QPSK	1/2
L, M, H	OFDMA	5.0MHz	QPSK	1/2
L, M, H	OFDMA	7.0MHz	QPSK	1/2
L, M, H	OFDMA	10.0MHz	QPSK	1/2

EMISSION MASKS MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	3.5MHz	QPSK	1/2
L, M, H	OFDMA	5.0MHz	QPSK	1/2
L, M, H	OFDMA	7.0MHz	QPSK	1/2
L, M, H	OFDMA	10.0MHz	QPSK	1/2

CONDUCTED SPURIOUS EMISSIONS MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate, and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	3.5MHz	QPSK	1/2
L, M, H	OFDMA	5.0MHz	QPSK	1/2
L, M, H	OFDMA	7.0MHz	QPSK	1/2
L, M, H	OFDMA	10.0MHz	QPSK	1/2

RADIATED EMISSION MEASUREMENT (BELOW 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
M	OFDMA	3.5MHz	QPSK	1/2
L	OFDMA	5.0MHz	QPSK	1/2
L	OFDMA	7.0MHz	QPSK	1/2
L	OFDMA	10.0MHz	QPSK	1/2

RADIATED EMISSION MEASUREMENT (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, coding rate and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

TESTED CHANNEL	MODULATION TECHNOLOGY	CHANNEL BANDWIDTH	MODULATION TYPE	CODING RATE
L, M, H	OFDMA	3.5MHz	QPSK	1/2
L, M, H	OFDMA	5.0MHz	QPSK	1/2
L, M, H	OFDMA	7.0MHz	QPSK	1/2
L, M, H	OFDMA	10.0MHz	QPSK	1/2

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
OP	25deg. C, 65%RH, 1008 hPa	120Vac, 60Hz	Brad Wu
FS	22deg. C, 63%RH, 1008 hPa	120Vac, 60Hz	Dean Wang
EB	22deg. C, 63%RH, 1008 hPa	120Vac, 60Hz	Dean Wang
EM	22deg. C, 63%RH, 1008 hPa	120Vac, 60Hz	Dean Wang
CSE	22deg. C, 63%RH, 1008 hPa	120Vac, 60Hz	Dean Wang
RE < 1G	25deg. C, 65%RH, 1008 hPa	120Vac, 60Hz	Brad Wu
RE ≥ 1G	25deg. C, 65%RH, 1008 hPa	120Vac, 60Hz	Brad Wu

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 90

ANSI/TIA/EIA-603-C-2004

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	D600	CN-0G5152-48643-49C-8226	FCC DoC Approved
2	POE	MOTOROLA	PSI45W-560 (MOT)	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	10m non-shielded RJ45 UTP cable.

NOTE:
1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 ~ 2 acted as a communication partners to transfer data.
3. Item 2 was supplied from client.

4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER AND POWER DENSITY MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER AND POWER DENSITY

PER FCC PART 90.1321

BASE AND FIXED STATIONS

Base and fixed stations are limited to 25 Watts/25 MHz equivalent isotropical radiated power (EIRP). In any event, the peak EIRP power density shall not exceed 1 Watt in any one-megahertz slice of spectrum.

MOBILE AND PORTABLE STATIONS

Mobile and portable stations are limited to 1 Watt/25 MHz EIRP. In any event, the peak EIRP density shall not exceed 40 milliWatts in any one-megahertz slice of spectrum.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 22, 2011	Feb. 21, 2012
RF cable	SUCOFLEX 104	257029	Aug. 27, 2010	Aug. 26, 2011
DC-6GHz 20dB 50W Fixed attenuator Woken	MDC9331N-20	0724	Dec. 13, 2010	Dec. 12, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1.3 TEST PROCEDURES

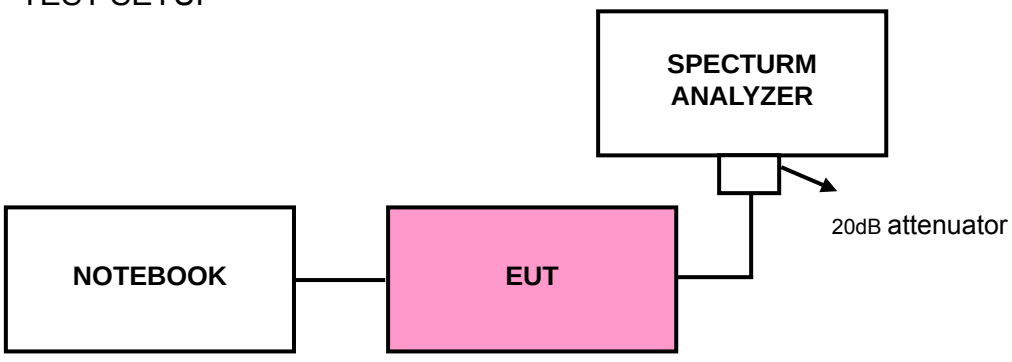
OUTPUT POWER

1. 1. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. 2. Time the analyzer to the nominal center frequency of the emission bandwidth (EBW).
3. 3. Set the span to twice the nominal EBW (span = 2 x EBW).
4. 4. Set the resolution bandwidth (RBW) to approximately 1% of EBW.
5. 5. Set the video bandwidth (VBW) to ≧ 3 x RBW
6. 6. Select the average power (RMS) display detector.
7. 7. Set the number of measurement points to ≧1001.
8. 8. Use auto-coupled sweep time.
9. 9. Perform measurement over an interval of time when the transmission is continuous and at its maximum power level.
10. 10. Utilize trace averaging over 100 traces in the power averaging mode.
11. 11. Use the Band/Channel Power function to determine the integrated power over the full EBW.
12. 12 Record the band power level.
13. 13. Adjust the recorded level by applying appropriate correction factors for the measurement set-up.
14. 14 Determine the EIRP by adding the effective antenna gain to the adjusted power level.

POWER DENSITY

1. Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
3. Set the span to twice the nominal EBW (span = 2 x EBW).
4. Set the resolution bandwidth (RBW) to 1MHZ.
5. Set the video bandwidth (VBW) to ≧3 x RBW.
6. Select the average power (RMS) display detector.
7. Set the number of measurement points to ≧ 1001.
8. Use auto-coupled sweep time.
9. Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

4.1.4 TEST SETUP



4.1.5 EUT OPERATING CONDITIONS

a. Placed the EUT on the testing table.

b. Prepared one notebook system outside of testing area to act as a communication partners.

c. The communication partner connected with EUT via an RJ45 UTP cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

4.1.6 TEST RESULTS

CHANNEL BANDWIDTH: 3.5MHz

EIRP POWER							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER (dBm)		ANTENNA GAIN (dBi)	TOTAL EIRP (dBm)	TOTAL EIRP (W)	Limit (W)
		ANT. 0	ANT. 1				
Low	3651.75	15.185	15.333	16.50	34.77	2.9991	3.50
Middle	3675.00	15.278	15.340	16.50	34.82	3.0335	3.50
High	3698.25	15.128	15.165	16.50	34.66	2.9220	3.50

NOTE: EIRP = Conducted power + Antenna Gain

CHANNEL BANDWIDTH: 5.0MHz

EIRP POWER							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER (dBm)		ANTENNA GAIN (dBi)	TOTAL EIRP (dBm)	TOTAL EIRP (W)	Limit (W)
		ANT. 0	ANT. 1				
Low	3652.50	16.559	16.649	16.50	36.11	4.0875	5.00
Middle	3675.00	16.557	16.775	16.50	36.18	4.1473	5.00
High	3697.50	16.700	16.686	16.50	36.20	4.1719	5.00

NOTE: EIRP = Conducted power + Antenna Gain

CHANNEL BANDWIDTH: 7.0MHz

EIRP POWER							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER (dBm)		ANTENNA GAIN (dBi)	TOTAL EIRP (dBm)	TOTAL EIRP (W)	Limit (W)
		ANT. 0	ANT. 1				
Low	3653.50	18.245	18.306	16.50	37.79	6.0061	7.00
Middle	3675.00	18.259	18.116	16.50	37.70	5.8863	7.00
High	3696.50	18.205	18.285	16.50	37.76	5.9641	7.00

NOTE: EIRP = Conducted power + Antenna Gain

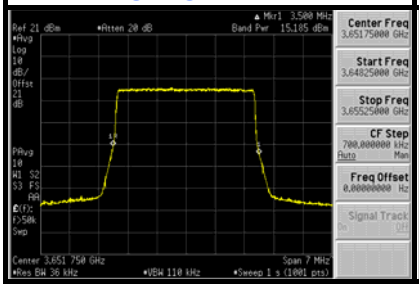
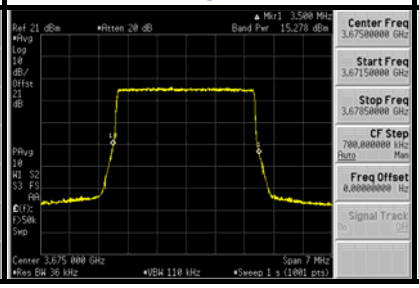
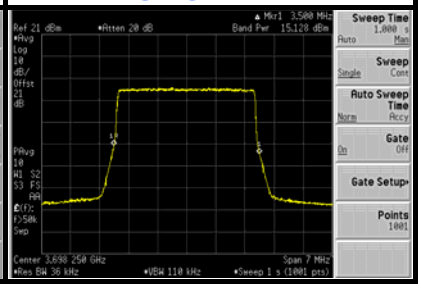
CHANNEL BANDWIDTH: 10.0MHz

EIRP POWER							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER (dBm)		ANTENNA GAIN (dBi)	TOTAL EIRP (dBm)	TOTAL EIRP (W)	Limit (W)
		ANT. 0	ANT. 1				
Low	3655.00	19.600	19.833	16.50	39.23	8.3721	10.00
Middle	3675.00	19.771	19.788	16.50	39.29	8.4914	10.00
High	3695.00	19.872	19.886	16.50	39.39	8.6882	10.00

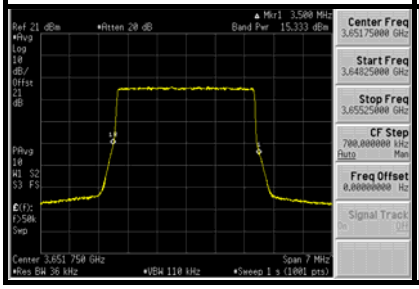
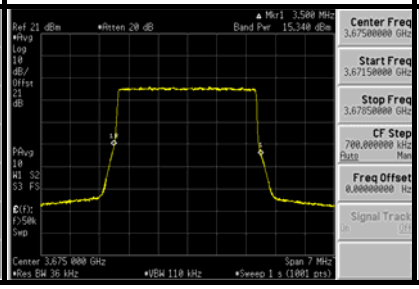
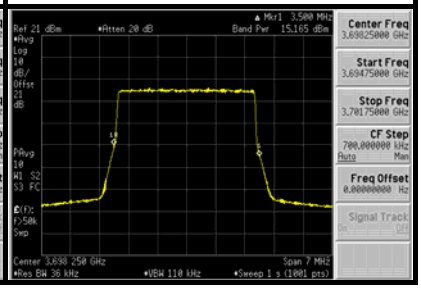
NOTE: EIRP = Conducted power + Antenna Gain

CHANNEL BANDWIDTH: 3.5MHz:

CONDUCTED POWER: (ANTENNA 0)

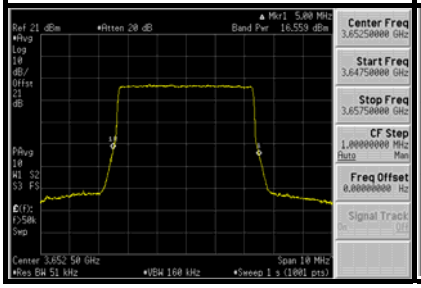
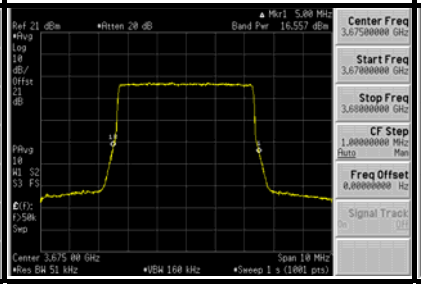
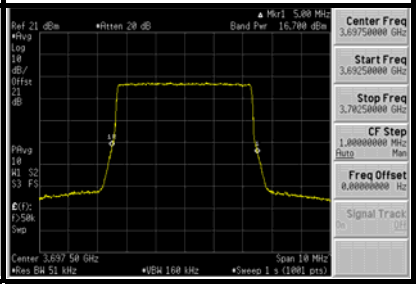
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CONDUCTED POWER: (ANTENNA 1)

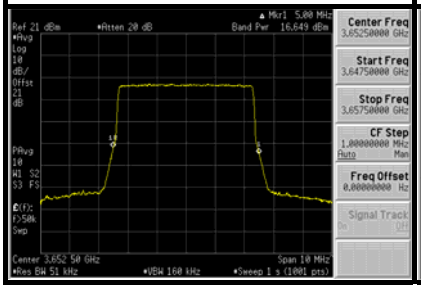
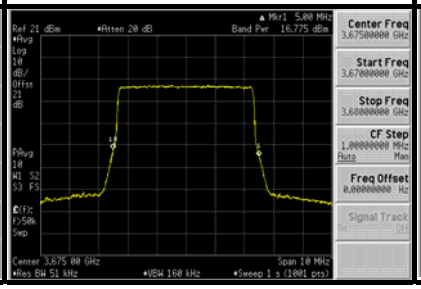
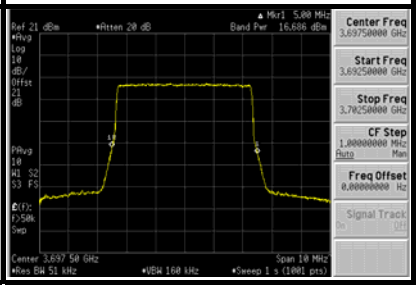
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 5.0MHz:

CONDUCTED POWER: (ANTENNA 0)

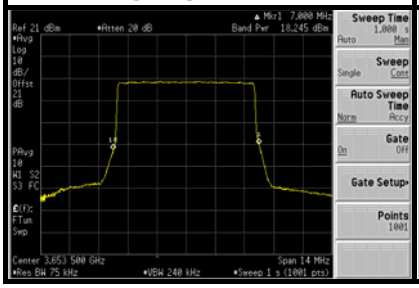
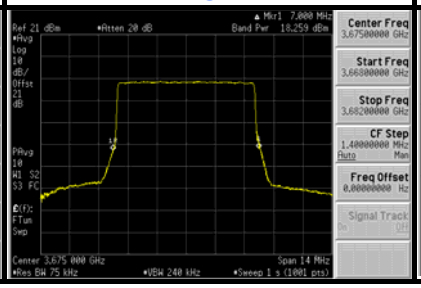
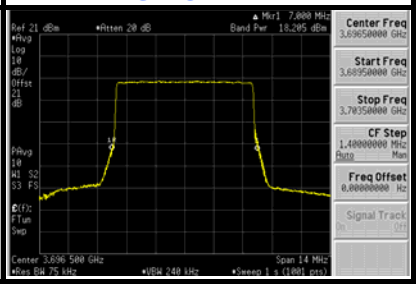
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CONDUCTED POWER: (ANTENNA 1)

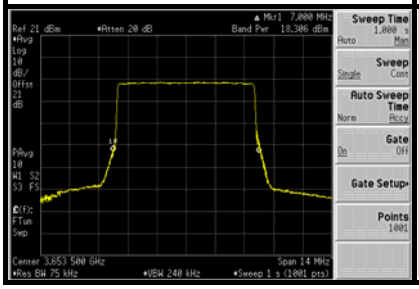
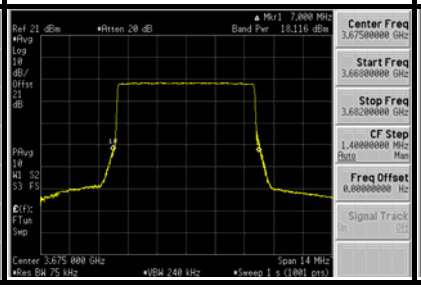
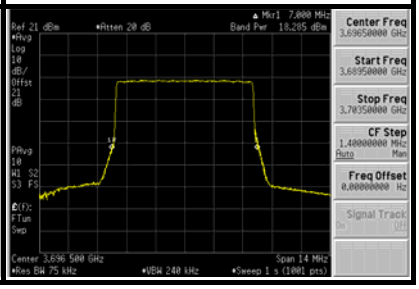
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 7.0MHz:

CONDUCTED POWER: (ANTENNA 0)

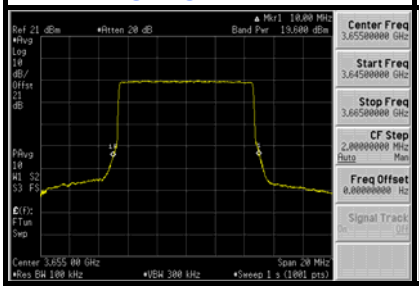
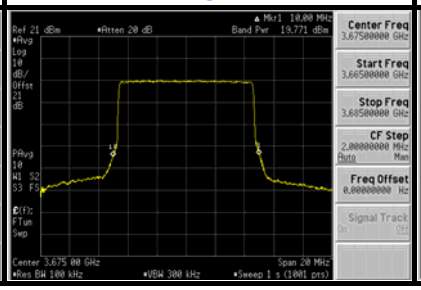
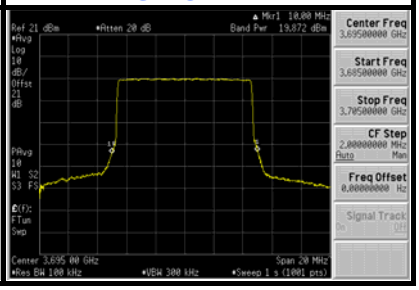
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CONDUCTED POWER: (ANTENNA 1)

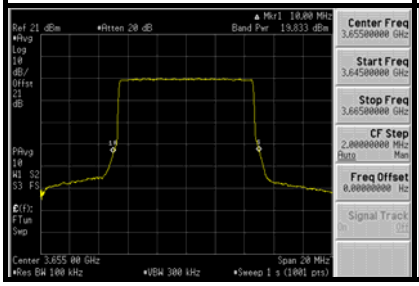
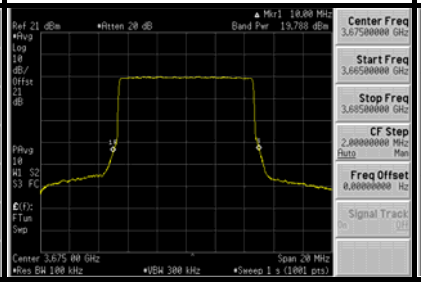
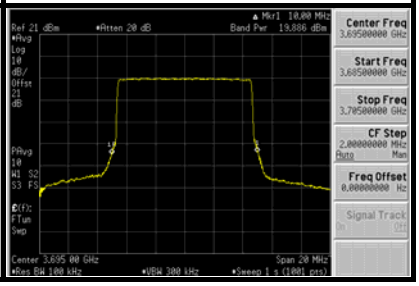
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 10.0MHz:

CONDUCTED POWER: (ANTENNA 0)

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CONDUCTED POWER: (ANTENNA 1)

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 3.5MHz

EIRP PEAK DENSITY							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER DENSITY (dBm/MHz)		ANTENNA GAIN (dBi)	TOTAL EIRP PEAK DENSITY (dBm/MHz)	TOTAL EIRP PEAK DENSITY (W/MHz)	Limit (W/MHz)
		ANT. 0	ANT. 1				
Low	3651.75	10.028	10.298	16.50	29.68	0.9280	1.00
Middle	3660.00	10.267	10.409	16.50	29.85	0.9658	1.00
High	3673.25	10.148	10.433	16.50	29.80	0.9557	1.00

NOTE: EIRP density = Conducted power density + Antenna Gain

CHANNEL BANDWIDTH: 5.0MHz

EIRP PEAK DENSITY							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER DENSITY (dBm/MHz)		ANTENNA GAIN (dBi)	TOTAL EIRP PEAK DENSITY (dBm/MHz)	TOTAL EIRP PEAK DENSITY (W/MHz)	Limit (W/MHz)
		ANT. 0	ANT. 1				
Low	3652.50	10.442	10.482	16.50	29.97	0.9937	1.00
Middle	3660.00	10.449	10.471	16.50	29.97	0.9932	1.00
High	3672.50	10.401	10.454	16.50	29.94	09858	1.00

NOTE: EIRP density = Conducted power density + Antenna Gain

CHANNEL BANDWIDTH: 7.0MHz

EIRP PEAK DENSITY							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER DENSITY (dBm/MHz)		ANTENNA GAIN (dBi)	TOTAL EIRP PEAK DENSITY (dBm/MHz)	TOTAL EIRP PEAK DENSITY (W/MHz)	Limit (W/MHz)
		ANT. 0	ANT. 1				
Low	3653.50	10.270	10.455	16.50	29.87	0.9714	1.00
Middle	3660.00	10.391	10.324	16.50	29.87	0.9700	1.00
High	3671.50	10.336	10.419	16.50	29.89	0.9745	1.00

NOTE: EIRP density = Conducted power density + Antenna Gain

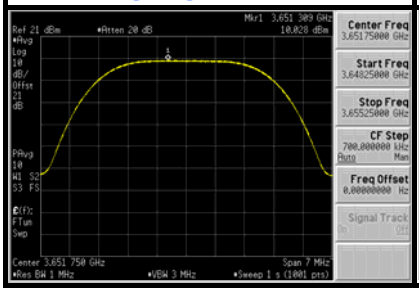
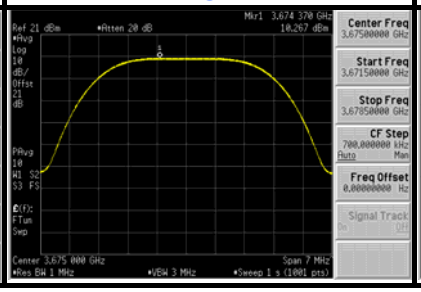
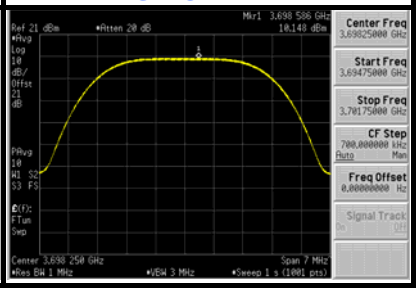
CHANNEL BANDWIDTH: 10.0MHz

EIRP PEAK DENSITY							
CHAN.	FREQUENCY (MHz)	CONDUCTED POWER DENSITY (dBm/MHz)		ANTENNA GAIN (dBi)	TOTAL EIRP PEAK DENSITY (dBm/MHz)	TOTAL EIRP PEAK DENSITY (W/MHz)	Limit (W/MHz)
		ANT. 0	ANT. 1				
Low	3655.00	10.217	10.471	16.50	29.86	0.9674	1.00
Middle	3660.00	10.212	10.449	16.50	29.84	0.9644	1.00
High	3670.00	10.293	10.406	16.50	29.86	0.9683	1.00

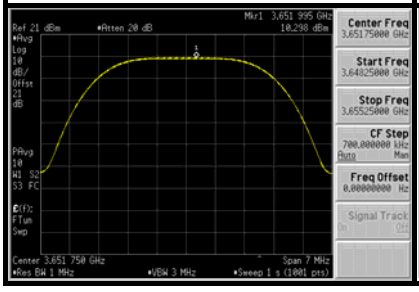
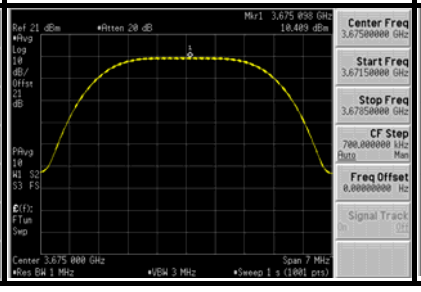
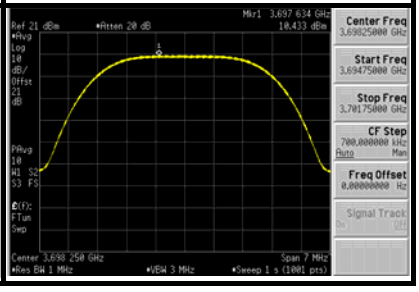
NOTE: EIRP density = Conducted power density + Antenna Gain

CHANNEL BANDWIDTH: 3.5MHz:

PEAK DENSITY: (ANTENNA 0)

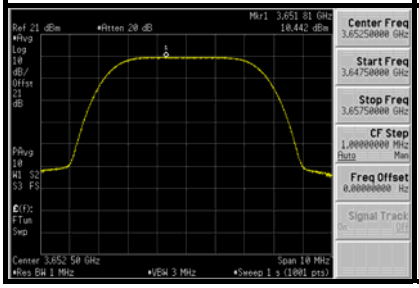
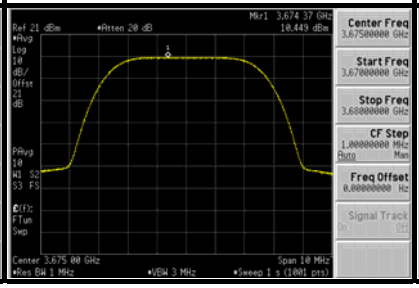
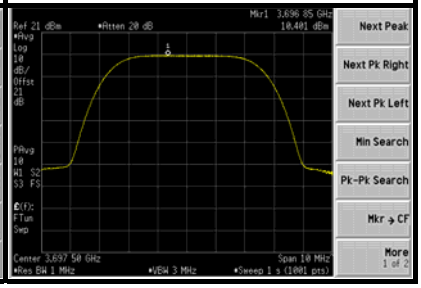
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

PEAK DENSITY: (ANTENNA 1)

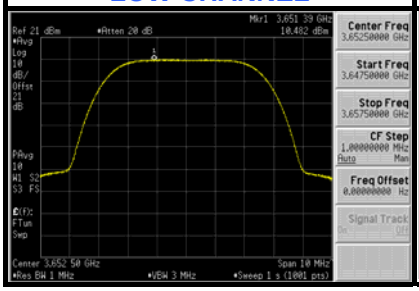
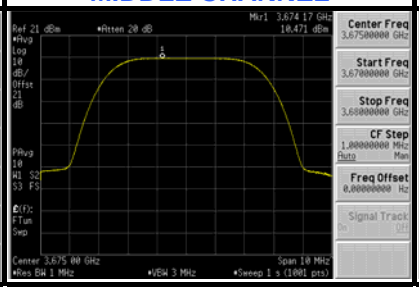
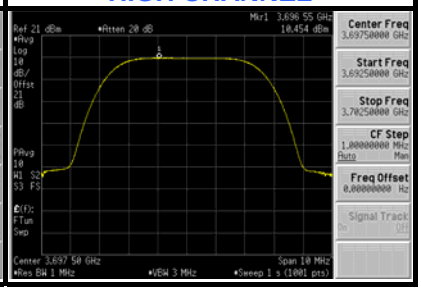
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 5.0MHz:

PEAK DENSITY: (ANTENNA 0)

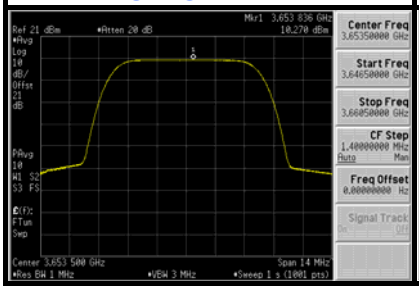
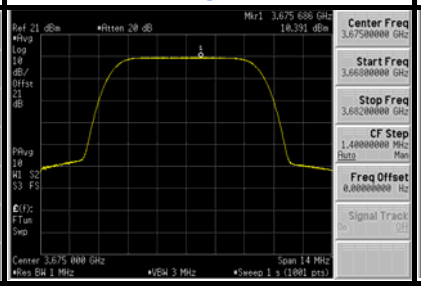
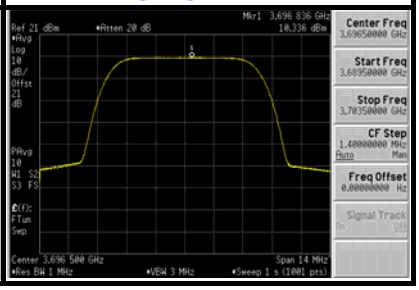
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

PEAK DENSITY: (ANTENNA 1)

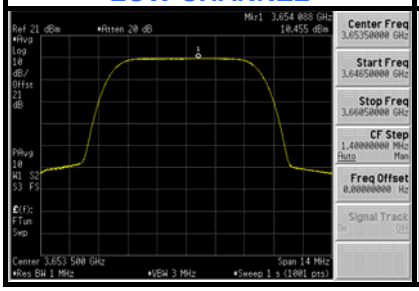
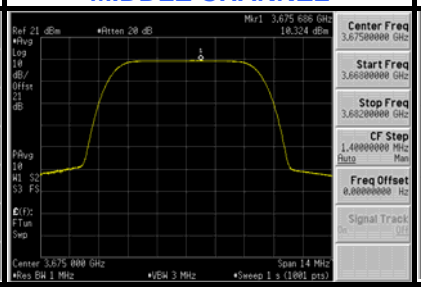
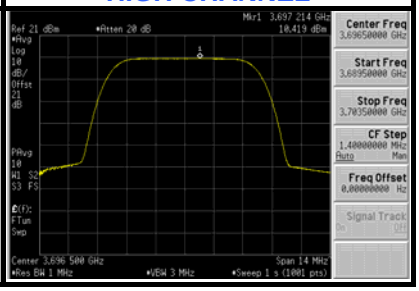
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 7.0MHz:

PEAK DENSITY: (ANTENNA 0)

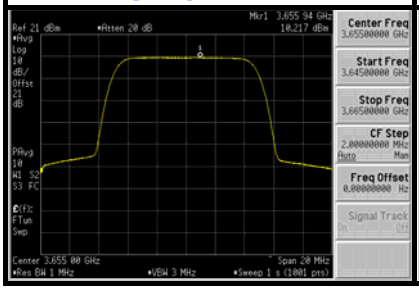
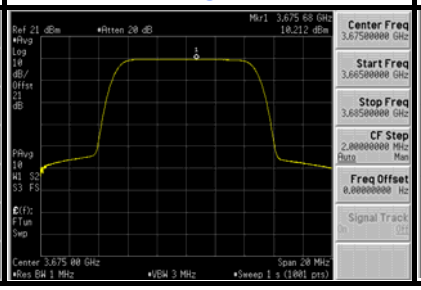
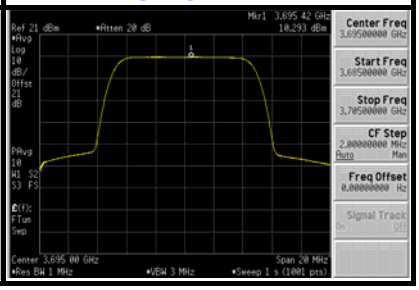
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

PEAK DENSITY: (ANTENNA 1)

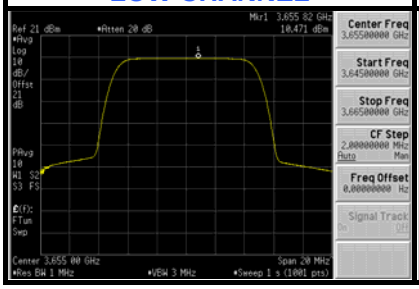
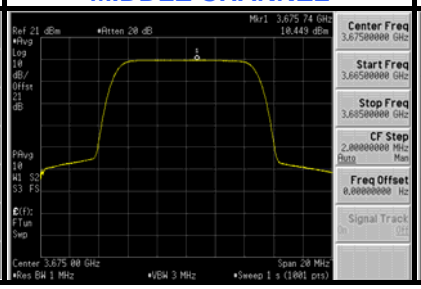
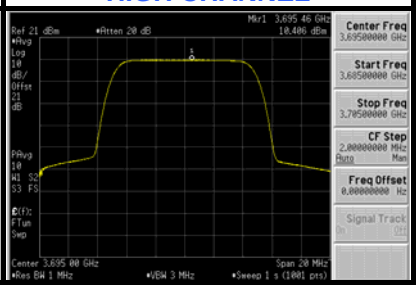
LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

CHANNEL BANDWIDTH: 10.0MHz:

PEAK DENSITY: (ANTENNA 0)

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

PEAK DENSITY: (ANTENNA 1)

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -40°C ~ 70°C.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 22, 2011	Feb. 21, 2012
RF cable	SUCOFLEX 104	257029	Aug. 27, 2010	Aug. 26, 2011
WIT Standard Temperature & Humidity Chamber	TH-4S-C	W981030	Jun. 28, 2010	Jun. 27, 2011

NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.2.3 TEST PROCEDURE

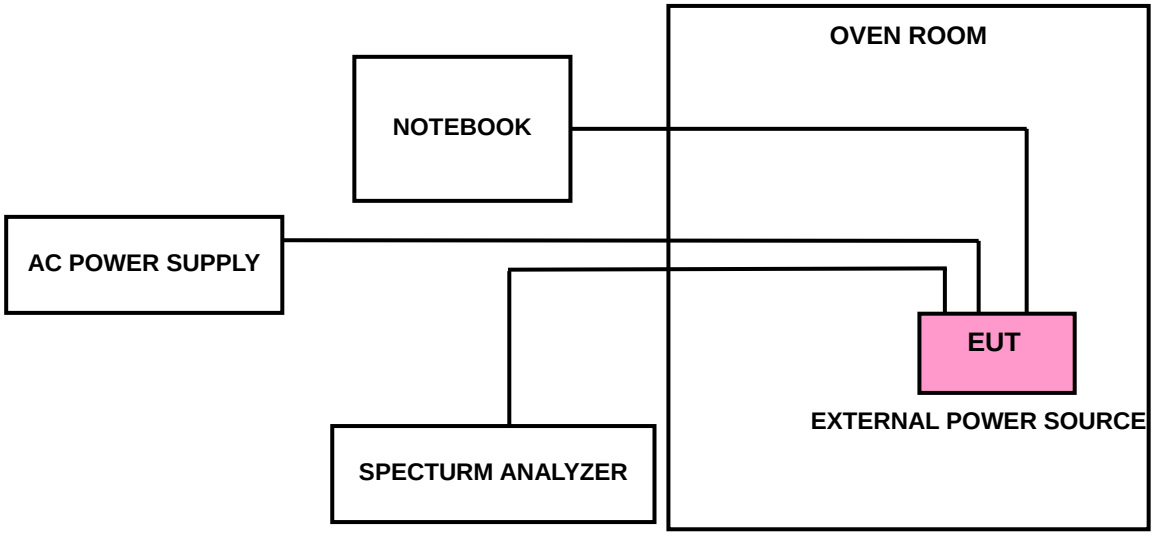
a. Power must be removed when changing from one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the AC input power. The various Volts from the minimum 47.6 Volts to 61.8 Volts. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing.

d. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

4.2.4 TEST SETUP



4.2.5 EUT OPERATING CONDITIONS

The EUT connected to the notebook. Use software to control the EUT channel and transmit a single tone.

4.2.6 TEST RESULTS

CHANNEL BANDWIDTH: 3.5MHz

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
47.6	3651.757549	2.067
56.0	3651.757565	2.072
61.8	3651.757514	2.058

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (°C)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
70	3651.757389	2.023
60	3651.757208	1.974
50	3651.756550	1.794
40	3651.757996	2.190
30	3651.757362	2.016
20	3651.757565	2.072
10	3651.758088	2.215
0	3651.757465	2.044
-10	3651.756702	1.835
-20	3651.757607	2.083
-30	3651.756523	1.786
-40	3651.756661	1.824

CHANNEL BANDWIDTH: 5.0MHz

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
47.6	3697.507564	2.046
56.0	3697.507485	2.024
61.8	3697.508230	2.226

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (℃)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
70	3697.507886	2.133
60	3697.507764	2.100
50	3697.506512	1.761
40	3697.508456	2.287
30	3697.506877	1.860
20	3697.507485	2.024
10	3697.508035	2.173
0	3697.508139	2.201
-10	3697.506427	1.738
-20	3697.507445	2.014
-30	3697.506896	1.865
-40	3697.506793	1.837

CHANNEL BANDWIDTH: 7.0MHz

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
47.6	3653.507181	1.966
56.0	3653.507735	2.117
61.8	3653.507325	2.005

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (℃)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
70	3653.507547	2.066
60	3653.507682	2.103
50	3653.506310	1.727
40	3653.508166	2.235
30	3653.507293	1.996
20	3653.507735	2.117
10	3653.508316	2.276
0	3653.507993	2.188
-10	3653.506734	1.843
-20	3653.507757	2.123
-30	3653.506583	1.802
-40	3653.506630	1.815

CHANNEL BANDWIDTH: 10.0MHz

AFC FREQUENCY ERROR VS. VOLTAGE		
VOLTAGE (Volts)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
47.6	3695.007768	2.102
56.0	3695.007809	2.113
61.8	3695.007431	2.011

AFC FREQUENCY ERROR VS. TEMP.		
TEMP. (℃)	**FREQUENCY (MHz)**	**FREQUENCY ERROR (ppm)**
70	3695.007961	2.155
60	3695.007256	1.964
50	3695.006583	1.782
40	3695.008219	2.224
30	3695.007069	1.913
20	3695.007809	2.113
10	3695.007637	2.067
0	3695.007785	2.107
-10	3695.006873	1.860
-20	3695.007827	2.118
-30	3695.006519	1.764
-40	3695.006233	1.687

4.3 EMISSION BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF EMISSION BANDWIDTH MEASUREMENT

According to FCC 90.1323 specified that emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 22, 2011	Feb. 21, 2012
RF cable	SUCOFLEX 104	257029	Aug. 27, 2010	Aug. 26, 2011
DC-6GHz 20dB 50W Fixed attenuator Woken	MDC9331N-20	0724	Dec. 12, 2010	Dec. 11, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 36kHz (3.5MHz bandwidth), 51kHz (5MHz bandwidth), 75kHz (7MHz bandwidth), 100kHz (10MHz bandwidth), VBW = 110kHz (3.5MHz bandwidth), 160kHz (5MHz bandwidth), 240kHz (7MHz bandwidth), 300kHz (10MHz bandwidth). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

4.3.4 TEST SETUP

Same as 4.1.4

4.3.5 EUT OPERATING CONDITIONS

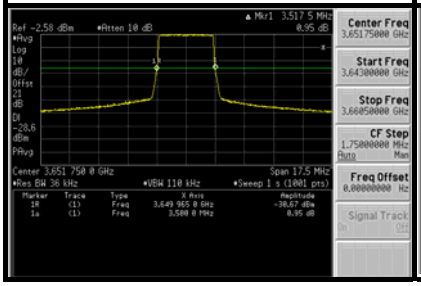
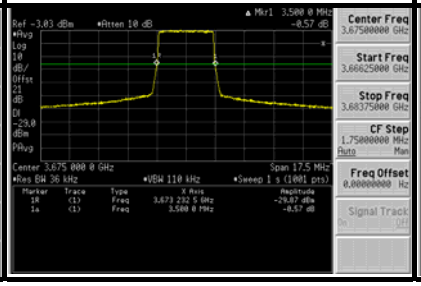
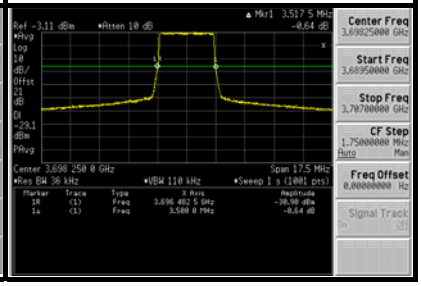
Same as 4.1.5

4.3.6 TEST RESULTS

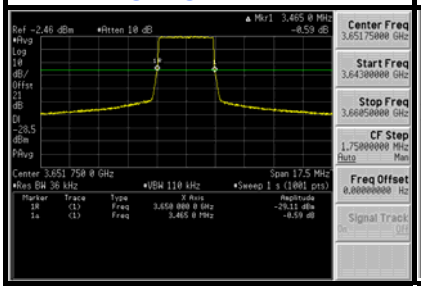
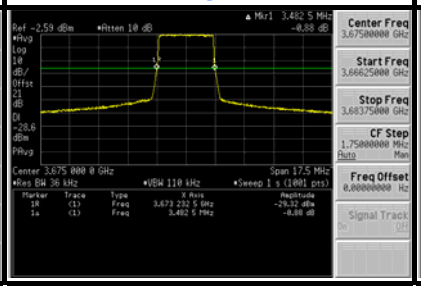
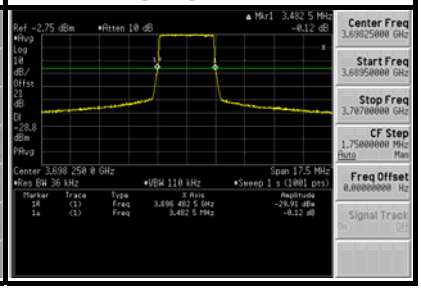
CHANNEL BANDWIDTH: 3.5MHz

CHANNEL	-26dBc BANDWIDTH (MHz)	
	ANTENNA 0	ANTENNA 1
Low	3.5175	3.4650
Middle	3.5000	3.4825
High	3.5000	3.4825

ANTENNA 0:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

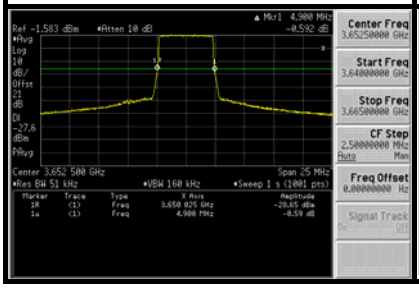
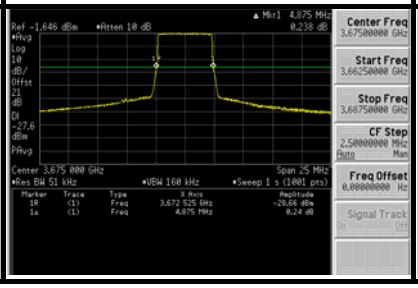
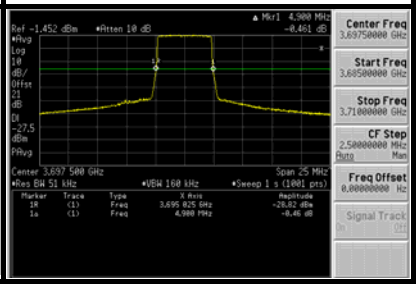
ANTENNA 1:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

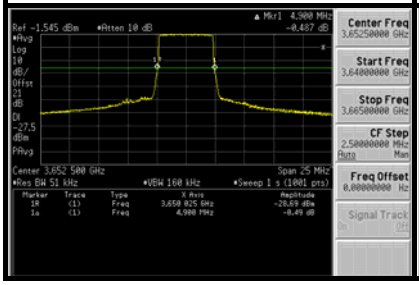
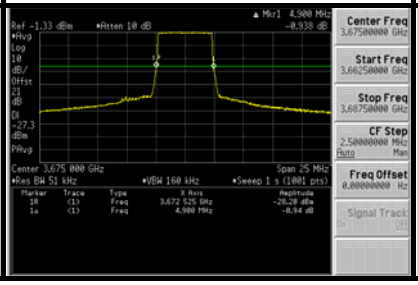
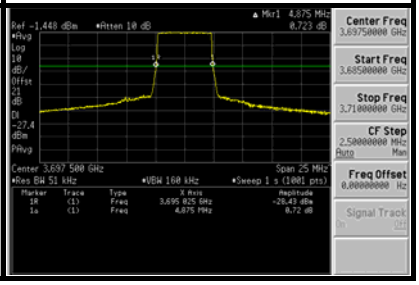
CHANNEL BANDWIDTH: 5.0MHz

CHANNEL	-26dBc BANDWIDTH (MHz)	
	ANTENNA 0	ANTENNA 1
Low	4.900	4.900
Middle	4.875	4.900
High	4.900	4.875

ANTENNA 0:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

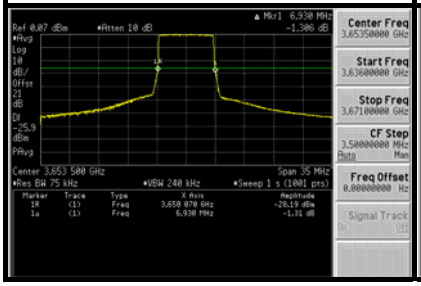
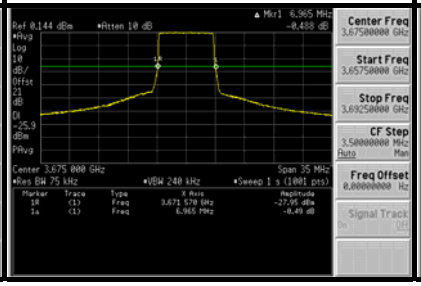
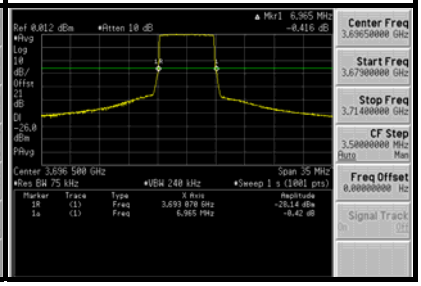
ANTENNA 1:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

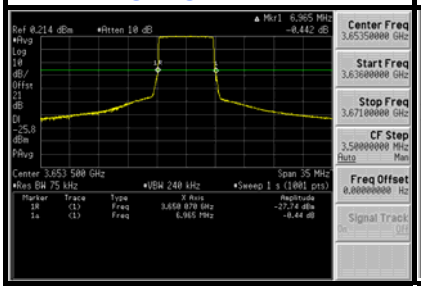
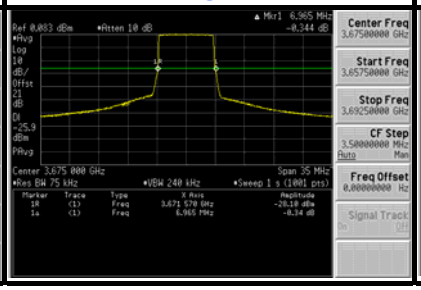
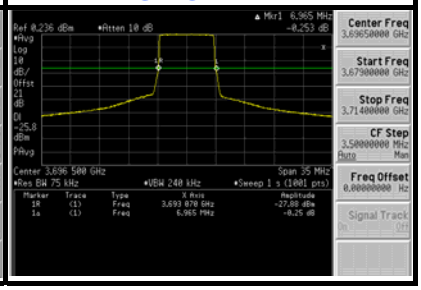
CHANNEL BANDWIDTH: 7.0MHz

CHANNEL	-26dBc BANDWIDTH (MHz)	
	ANTENNA 0	ANTENNA 1
Low	6.930	6.965
Middle	6.965	6.965
High	6.965	6.965

ANTENNA 0:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

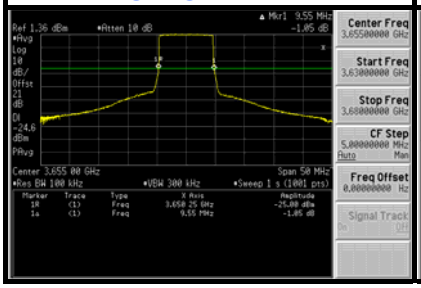
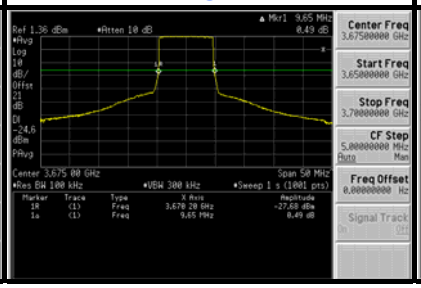
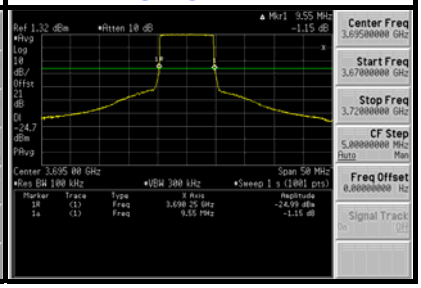
ANTENNA 1:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

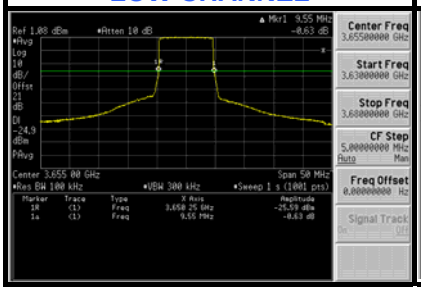
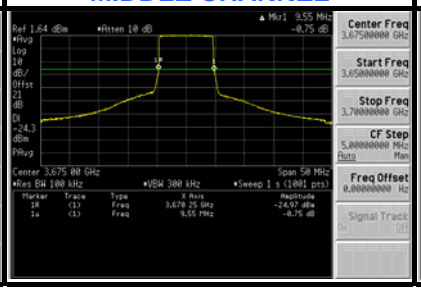
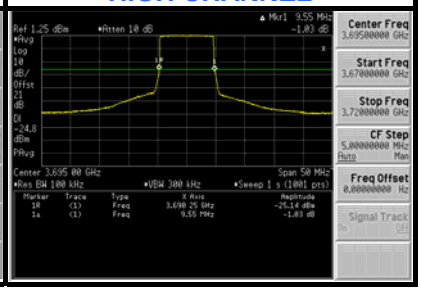
CHANNEL BANDWIDTH: 10.0MHz

CHANNEL	-26dBc BANDWIDTH (MHz)	
	ANTENNA 0	ANTENNA 1
Low	9.55	9.55
Middle	9.65	9.55
High	9.55	9.55

ANTENNA 0:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

ANTENNA 1:

LOW CHANNEL	MIDDLE CHANNEL	HIGH CHANNEL
		

4.4 EMISSION MASKS

4.4.1 LIMITS OF EMISSION MASKS

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 bymore than 50 percent, but not more than 100 percent of theauthorized bandwidth: At least 25 dB.

(2) On any frequency removed from the assigned frequency bymore 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 bymore than 250 percent of the authorized bandwidth: At least 43 + 10log (P) dB.

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 22, 2011	Feb. 21, 2012
RF cable	SUCOFLEX 104	257029	Aug. 27, 2010	Aug. 26, 2011
DC-6GHz 20dB 50W Fixed attenuator Woken	MDC9331N-20	0724	Dec. 12, 2010	Dec. 11, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST SETUP

Same as 4.1.4

4.4.4 TEST PROCEDURES

a. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 36kHz (3.5MHz bandwidth), 51kHz (5MHz bandwidth), 75kHz (7MHz bandwidth), 100kHz (10MHz bandwidth), VBW = 110kHz (3.5MHz bandwidth), 160kHz (5MHz bandwidth), 240kHz (7MHz bandwidth), 300kHz (10MHz bandwidth).

b. Build emission mask limits into spectrum analyzer.

c. EUT transmit signal to spectrum and record the test plot.

4.4.5 EUT OPERATING CONDITION

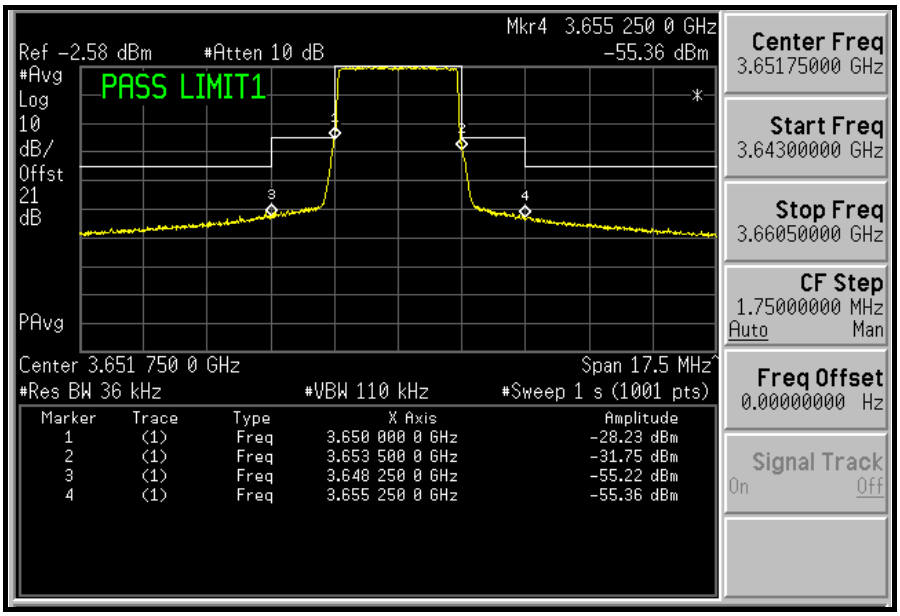
Same as 4.1.5

4.4.6 TEST RESULTS

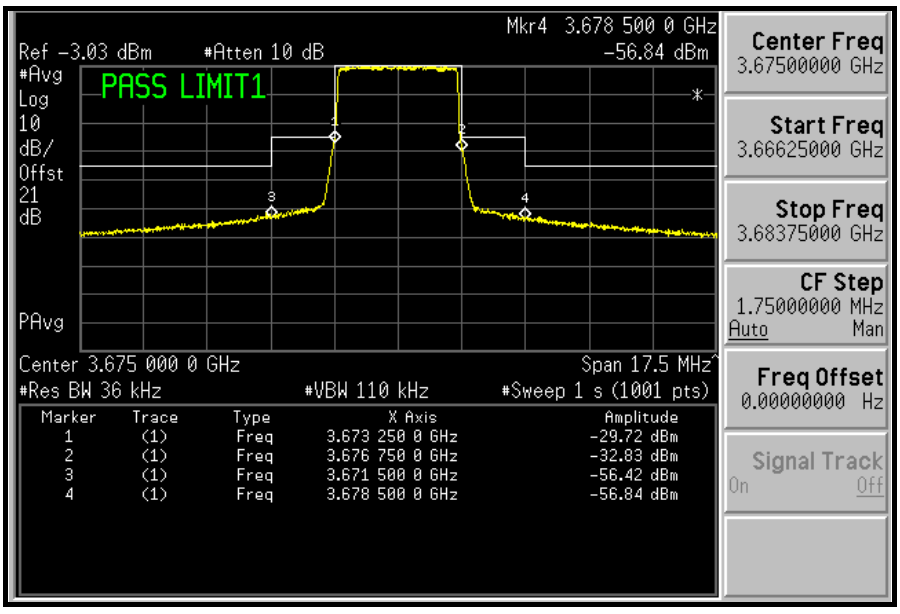
CHANNEL BANDWIDTH: 3.5MHz

ANTENNA 0

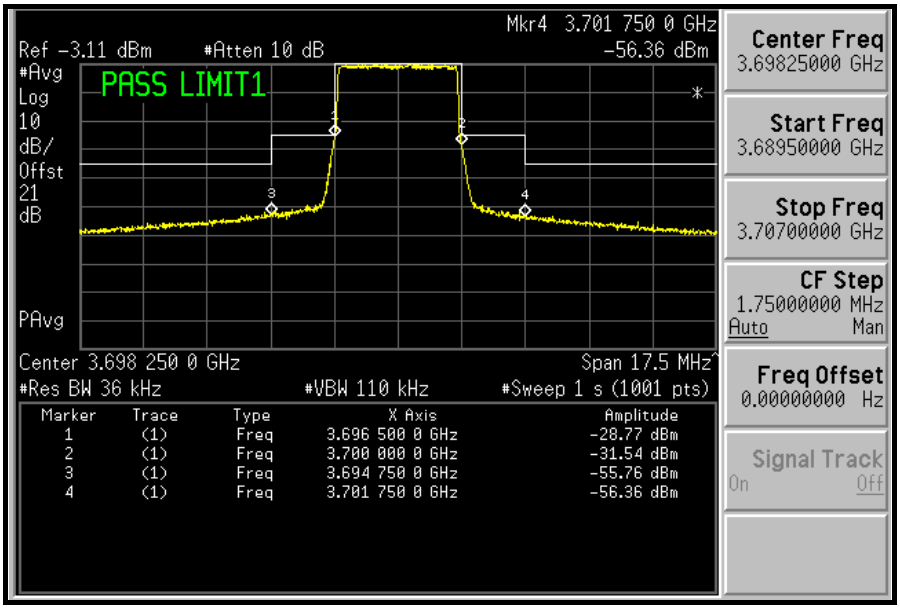
LOW CHANNEL



MIDDLE CHANNEL

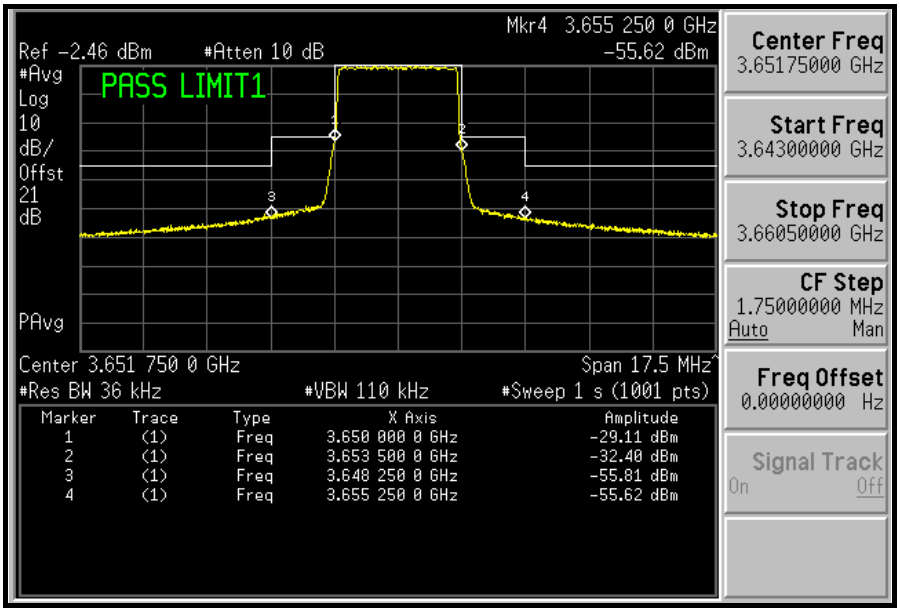


HIGH CHANNEL

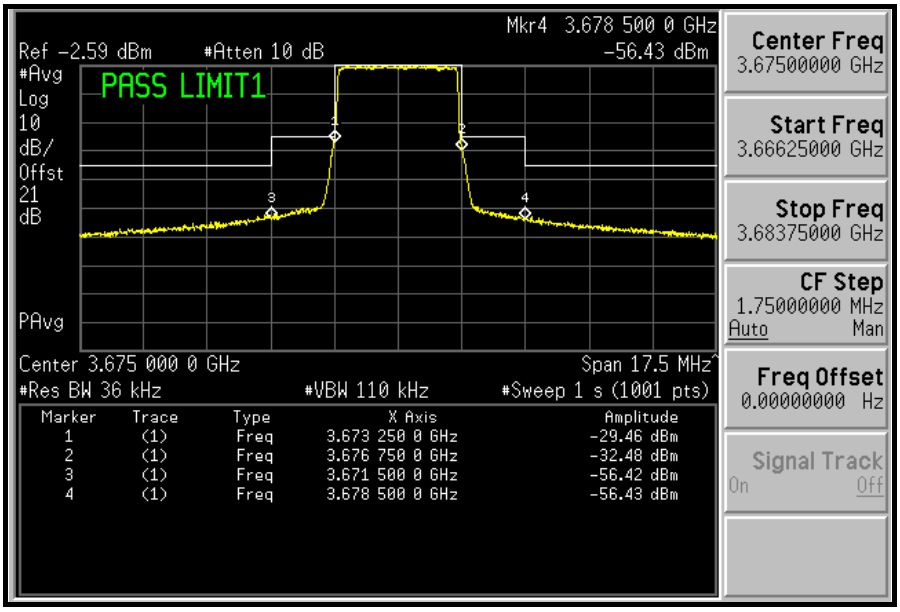


ANTENNA 1

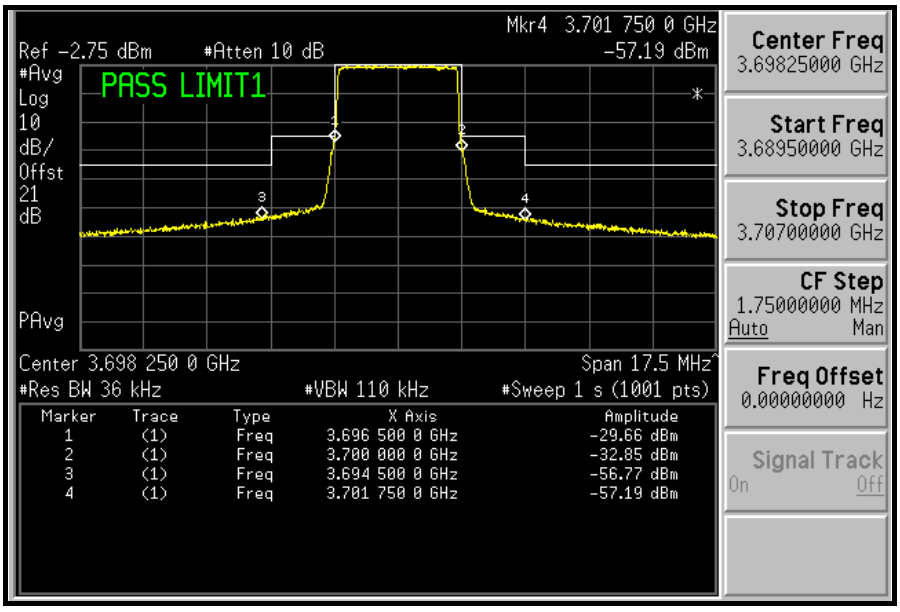
LOW CHANNEL



MIDDLE CHANNEL



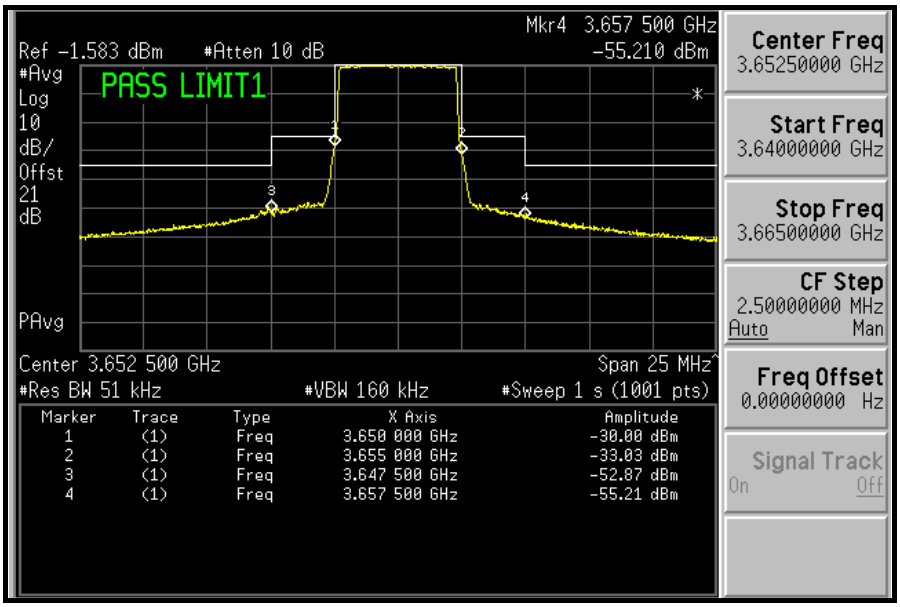
HIGH CHANNEL



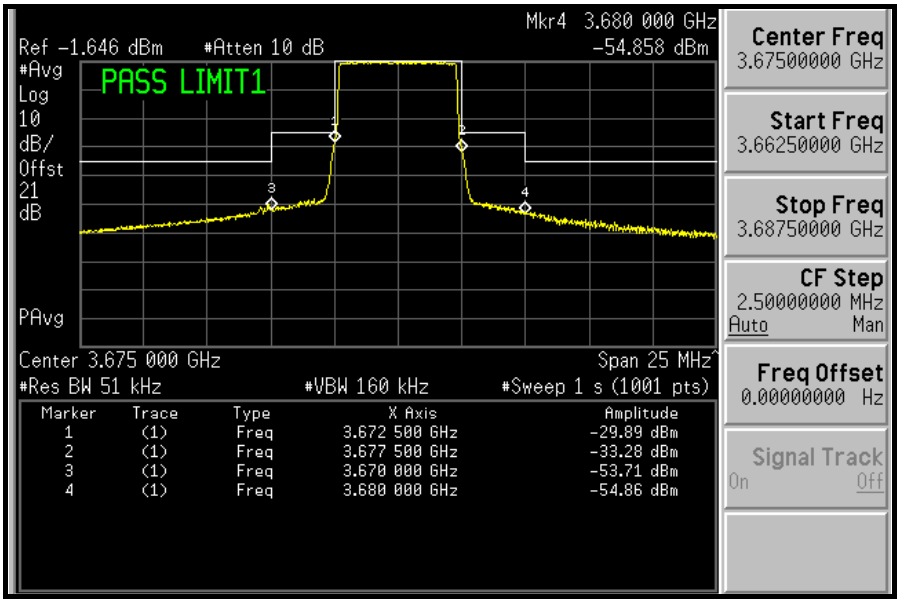
CHANNEL BANDWIDTH: 5MHz

ANTENNA 0

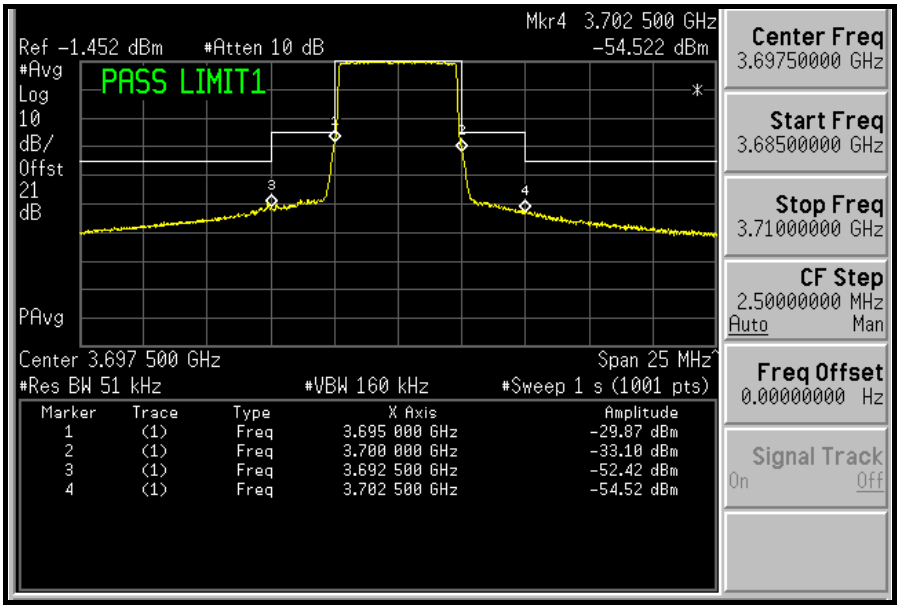
LOW CHANNEL



MIDDLE CHANNEL

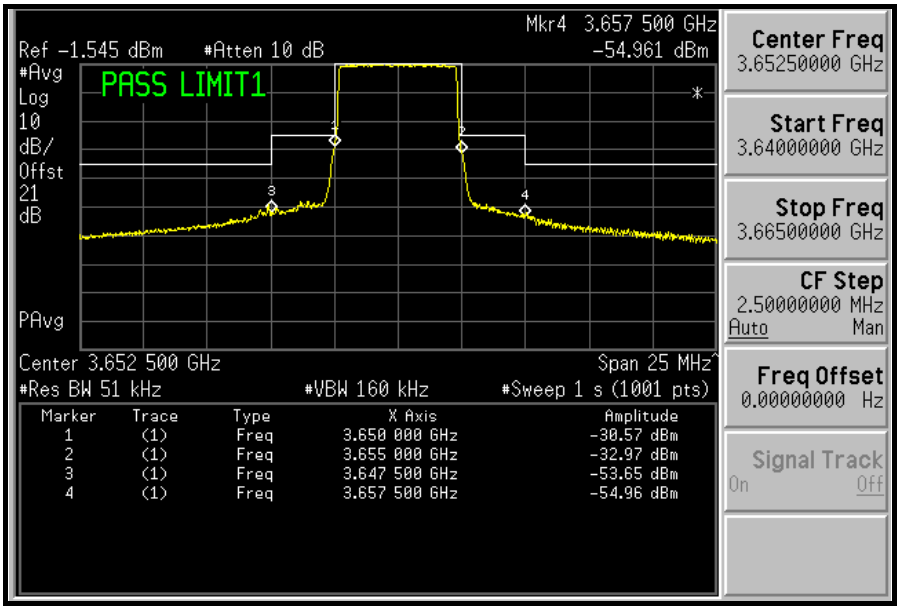


HIGH CHANNEL

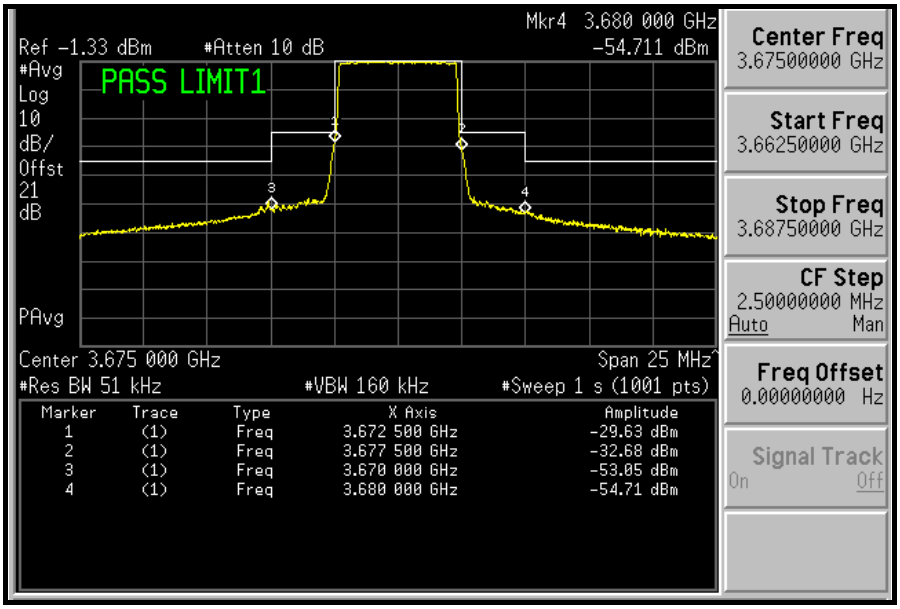


ANTENNA 1

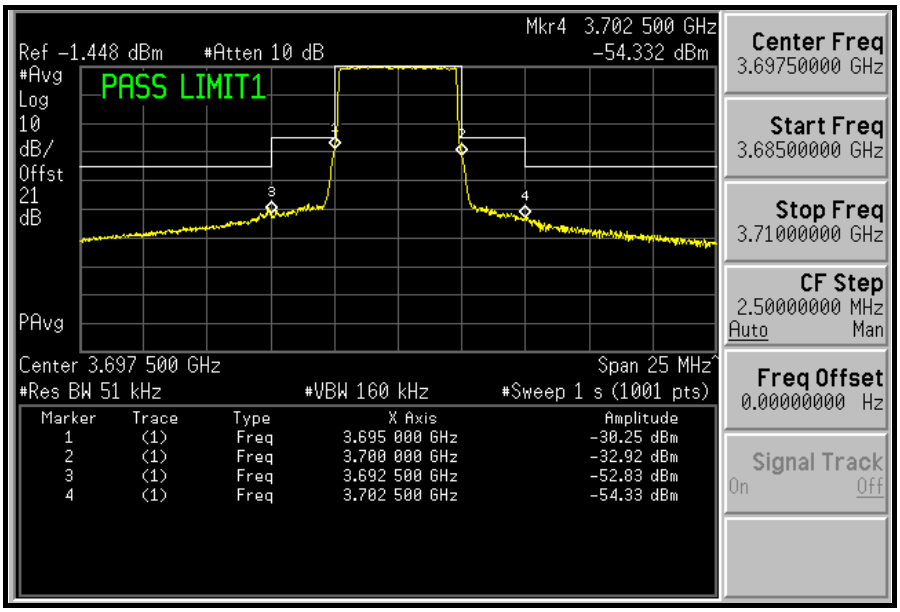
LOW CHANNEL



MIDDLE CHANNEL



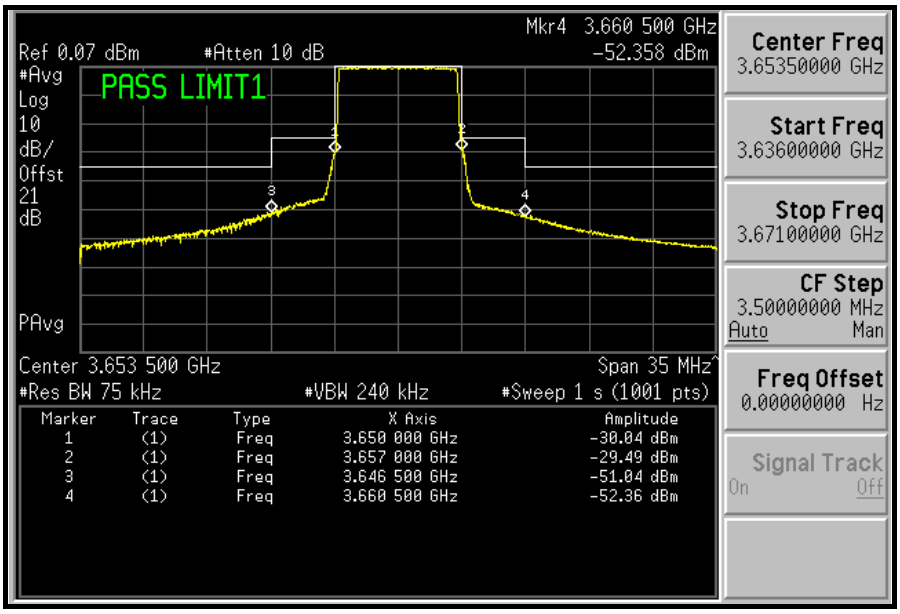
HIGH CHANNEL



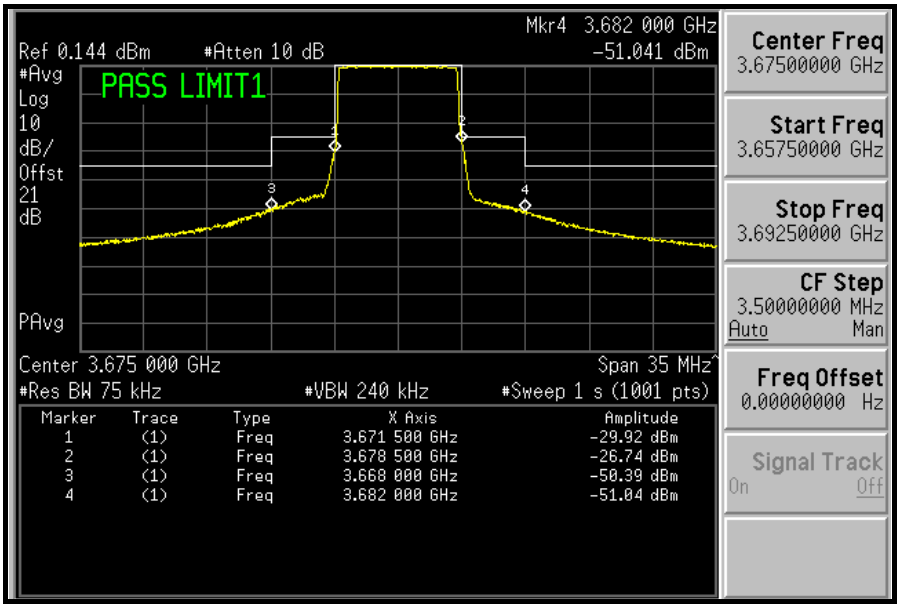
CHANNEL BANDWIDTH: 7MHz

ANTENNA 0

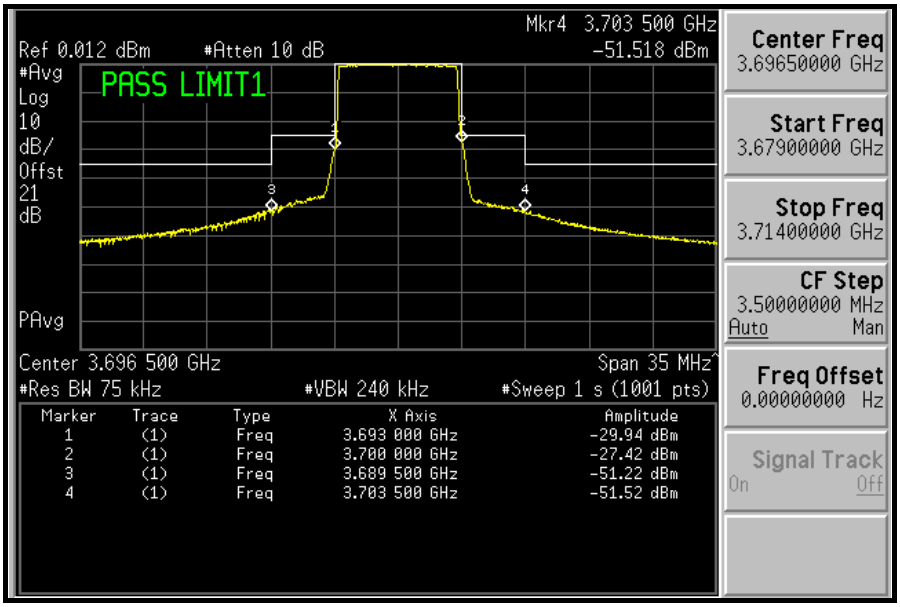
LOW CHANNEL



MIDDLE CHANNEL

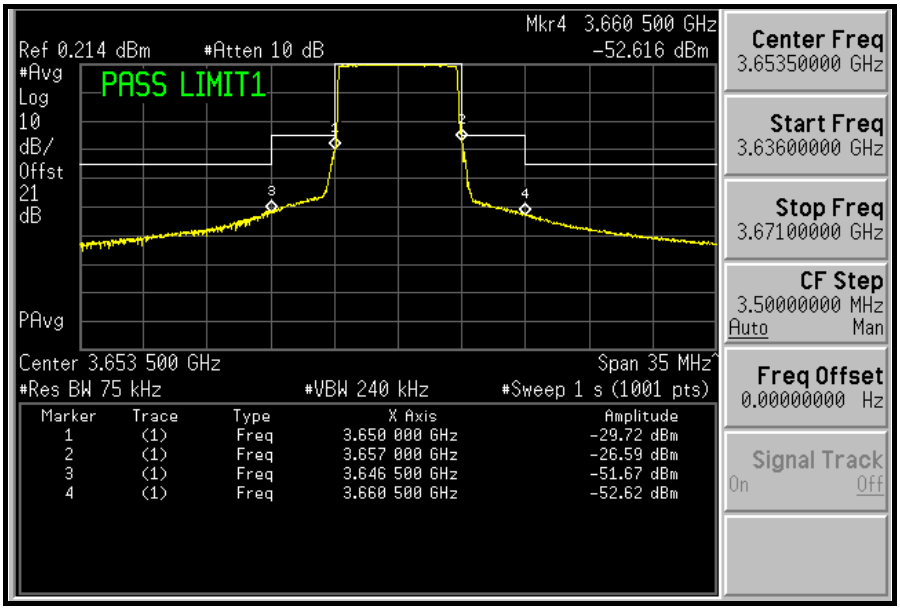


HIGH CHANNEL

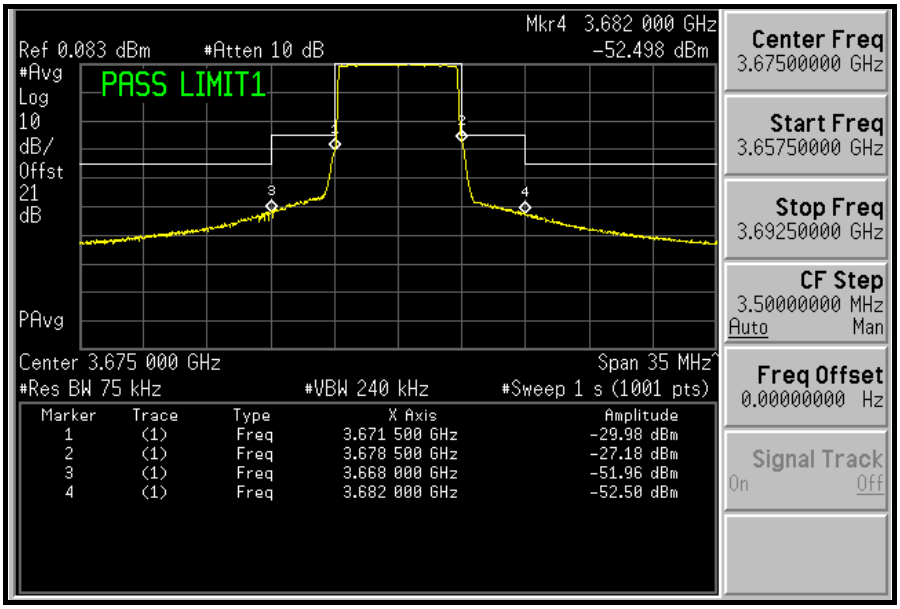


ANTENNA 1

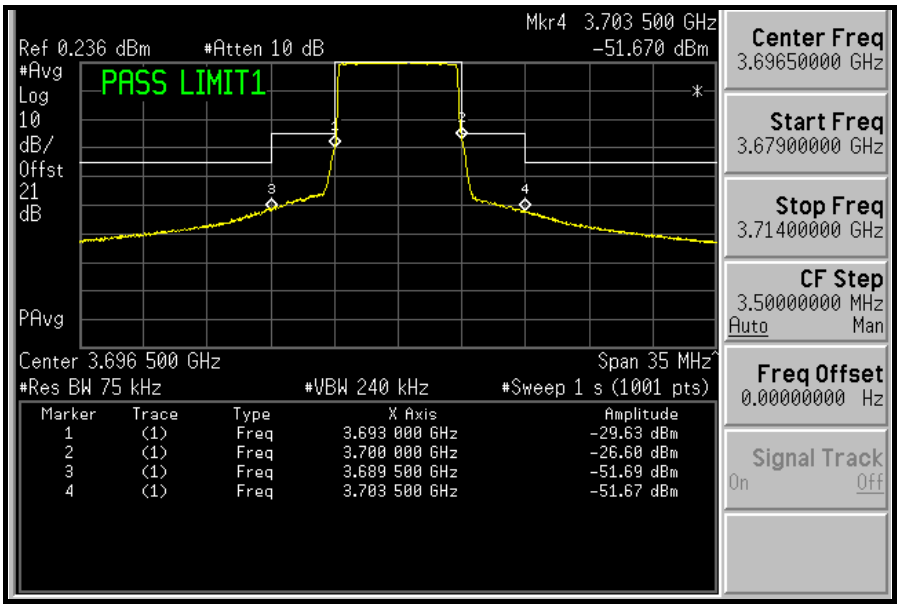
LOW CHANNEL



MIDDLE CHANNEL



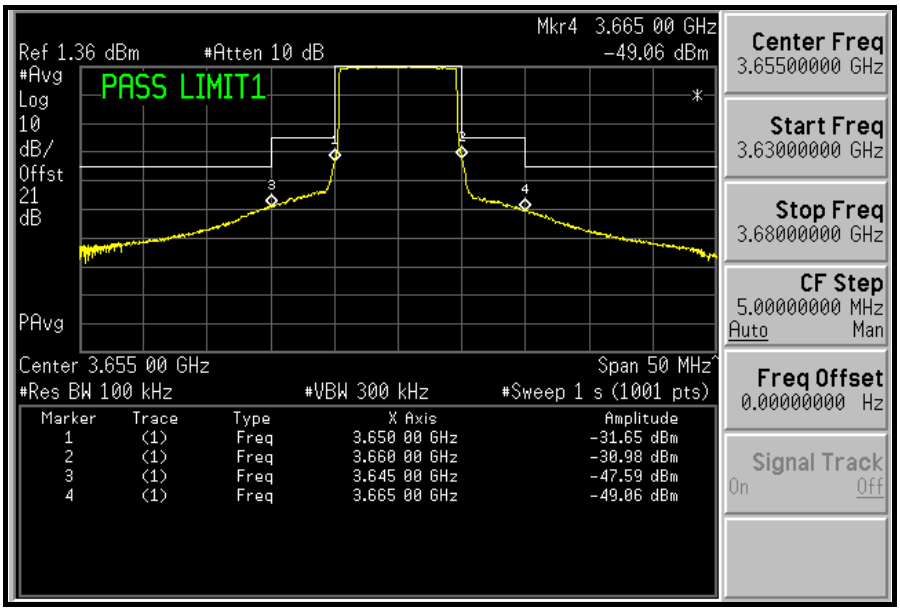
HIGH CHANNEL



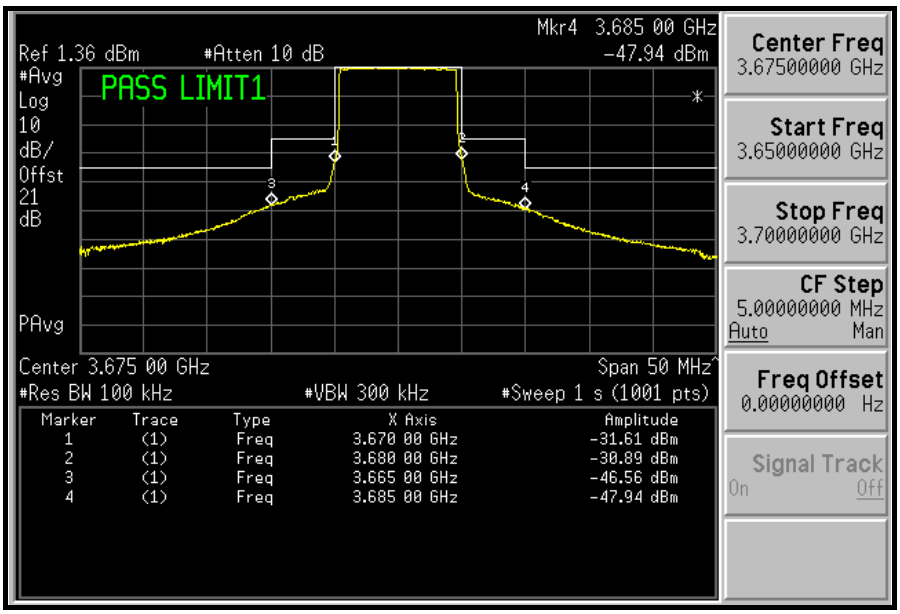
CHANNEL BANDWIDTH: 10MHz

ANTENNA 0

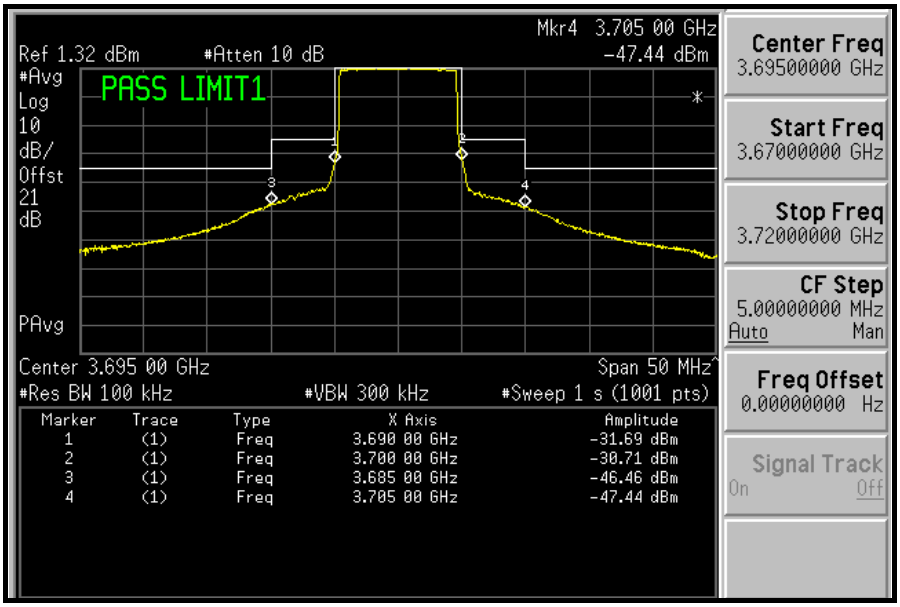
LOW CHANNEL



MIDDLE CHANNEL

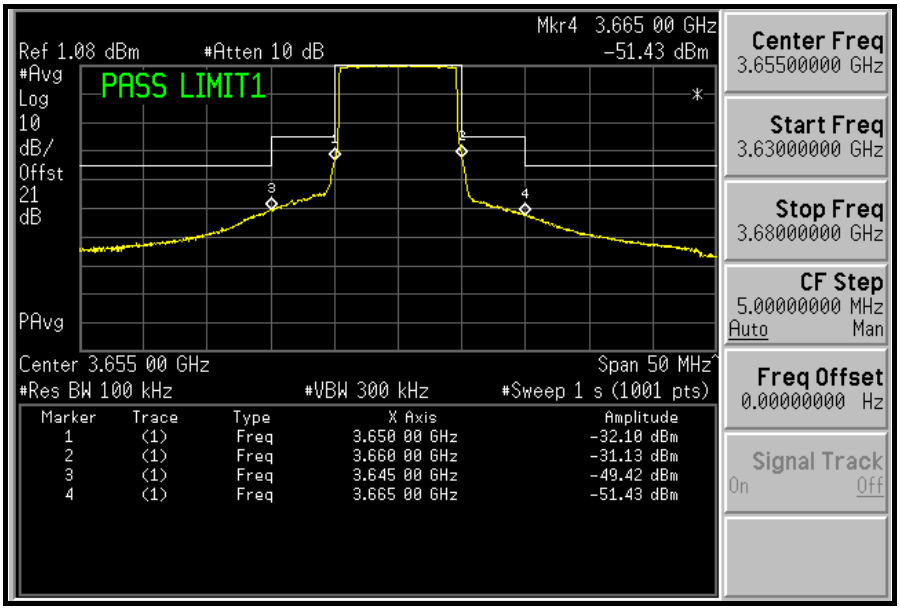


HIGH CHANNEL

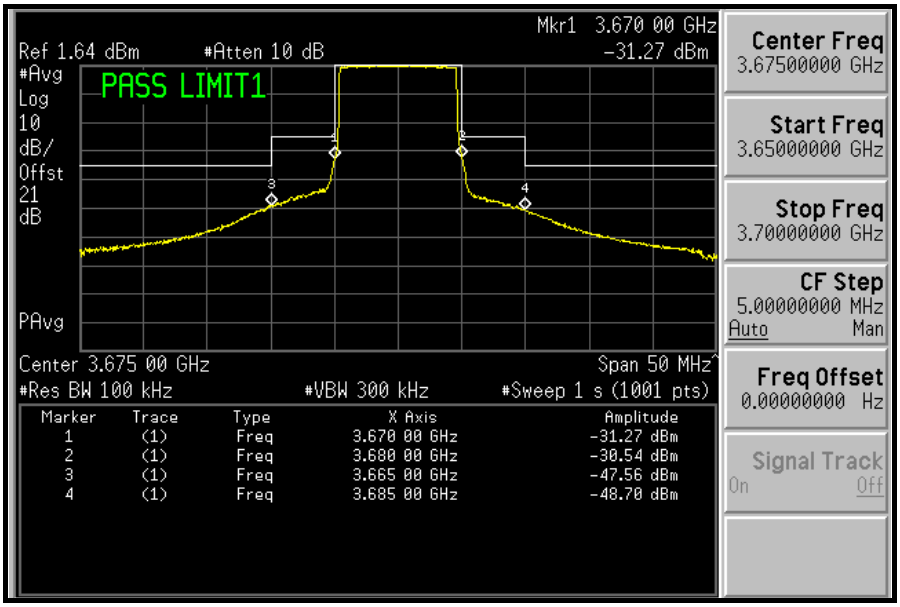


ANTENNA 1

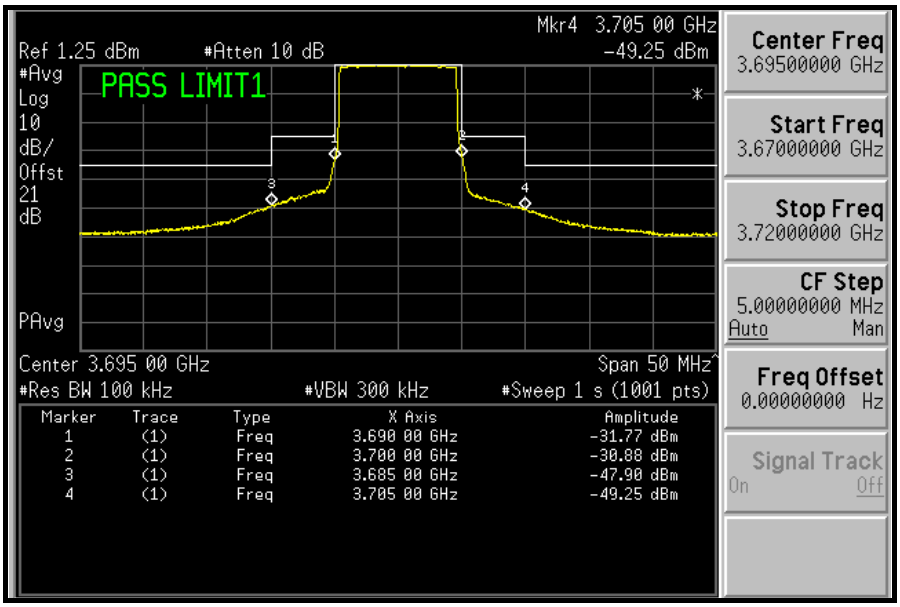
LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



4.5 CONDUCTED SPURIOUS EMISSIONS

4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

According to FCC 90.1323 specified that the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in Watts, by at least 43 + 10 log (P) dB. The limit of emission equal to –13dBm Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY44360128	Feb. 22, 2011	Feb. 21, 2012
RF cable	SUCOFLEX 104	257029	Aug. 27, 2010	Aug. 26, 2011
DC-6GHz 20dB 50W Fixed attenuator Woken	MDC9331N-20	0724	Dec. 12, 2010	Dec. 11, 2011
Wainwright Instruments High Pass Filter	WHKX4.5/18G -10SS	NA	NA	NA

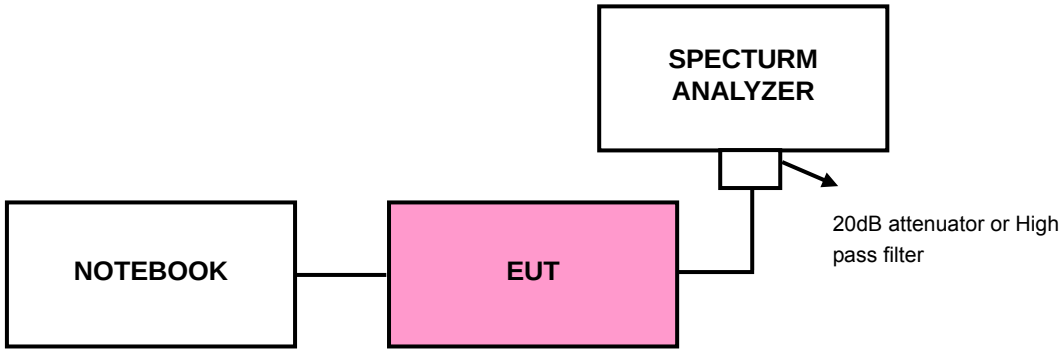
NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

a. All measurements were done at 3 channels: low, middle and high operational frequency range.

b. When the spectrum scanned from 30MHz to 40GHz, it shall be connected to the 20dB pad attenuated the carried frequency. The spectrum set RBW = 1MHz, VBW= 3MHz.

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

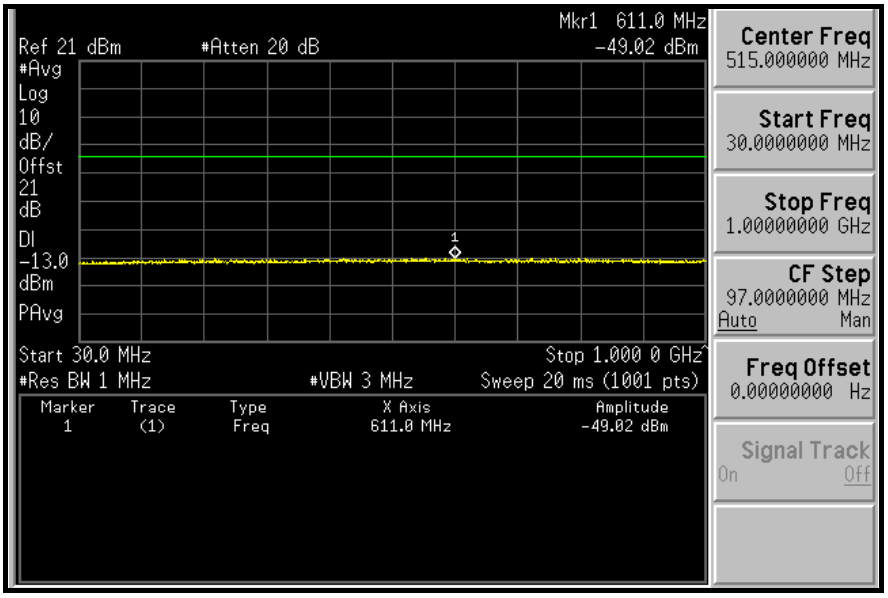
Same as 4.1.5

4.5.6 TEST RESULTS

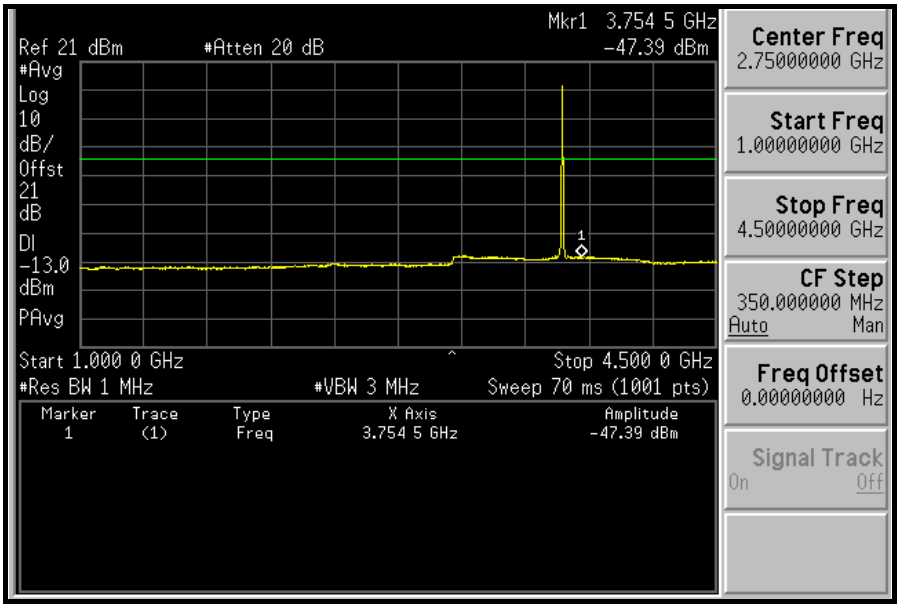
CHANNEL BANDWIDTH: 3.5MHz

ANTENNA 0

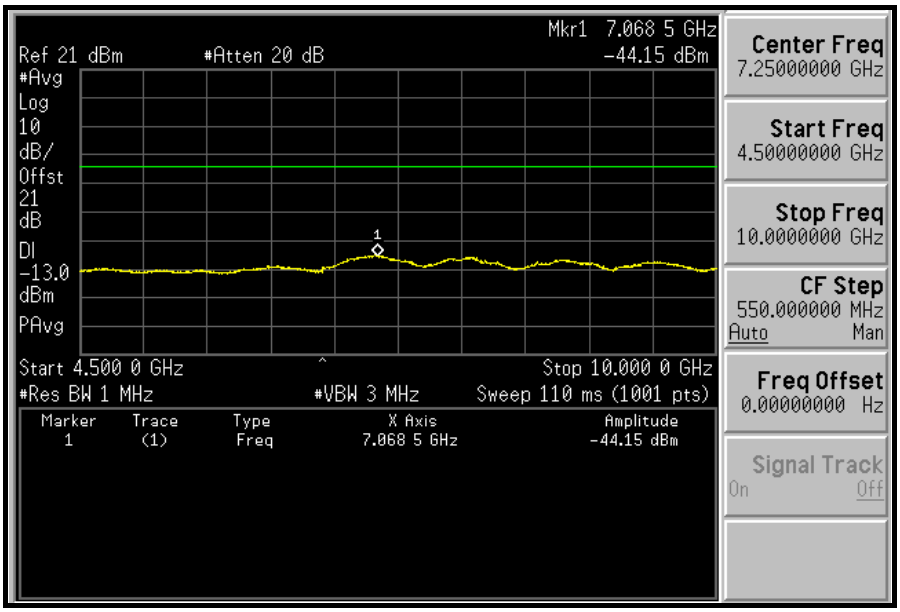
LOW CHANNEL: 30MHz ~ 1GHz:



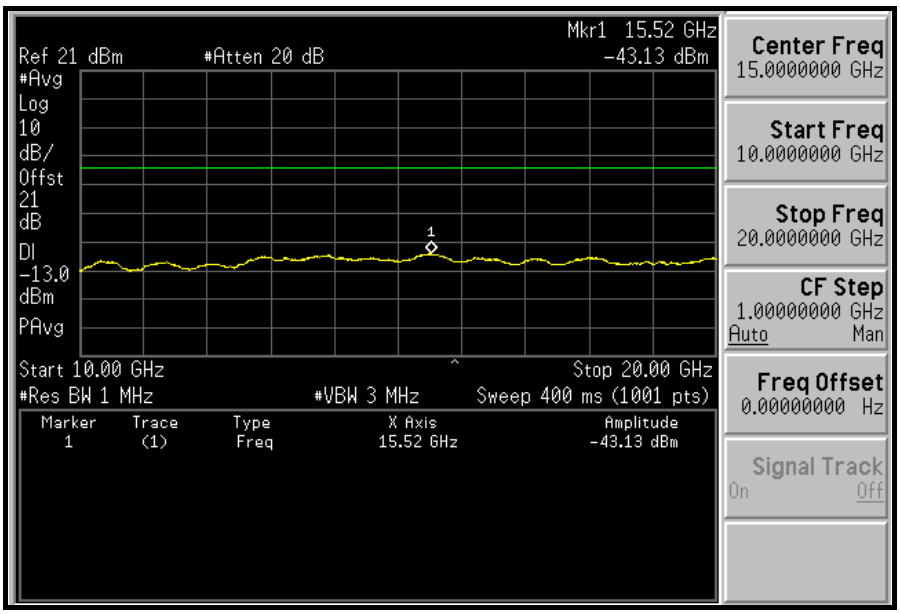
1GHz ~ 4.5GHz:



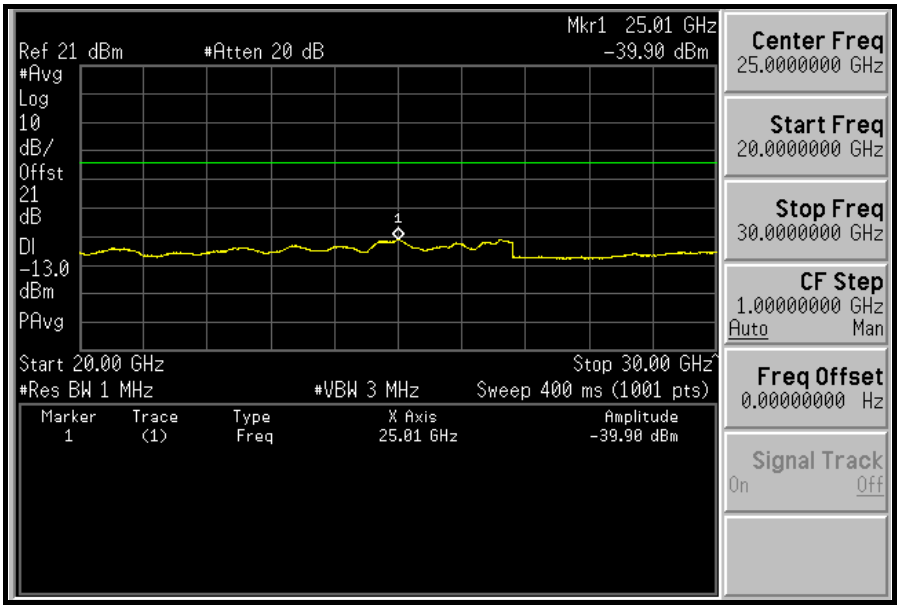
4.5GHz ~ 10GHz:



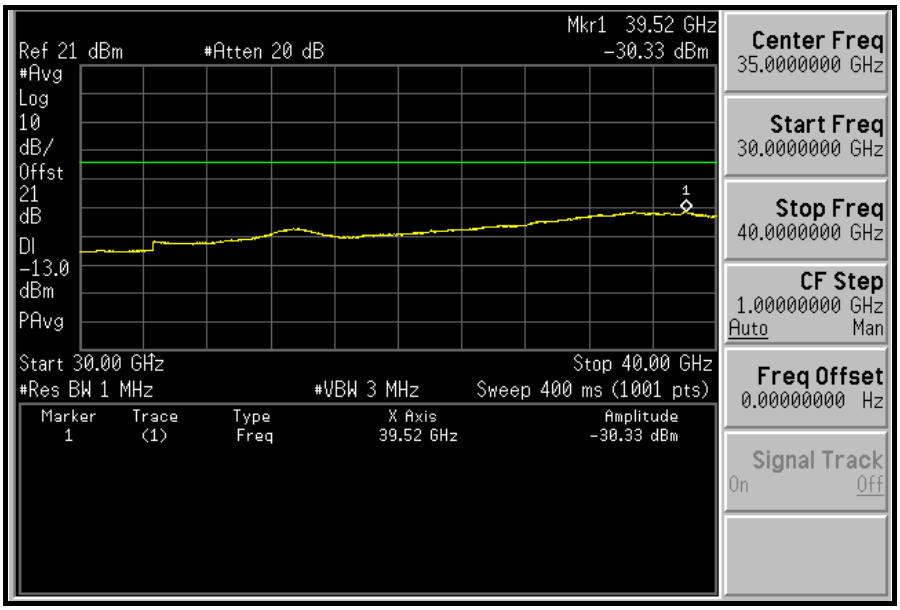
10GHz ~ 20GHz:



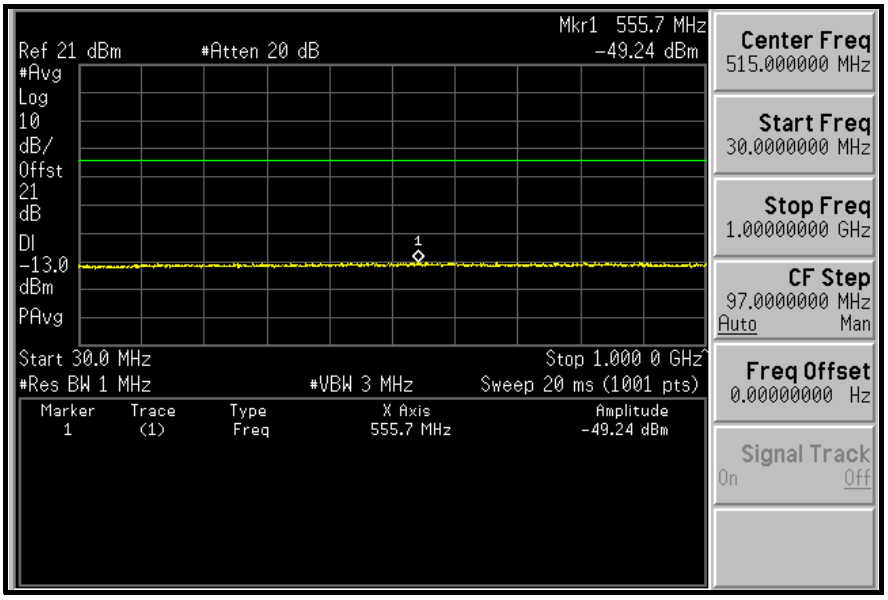
20GHz ~ 30GHz:



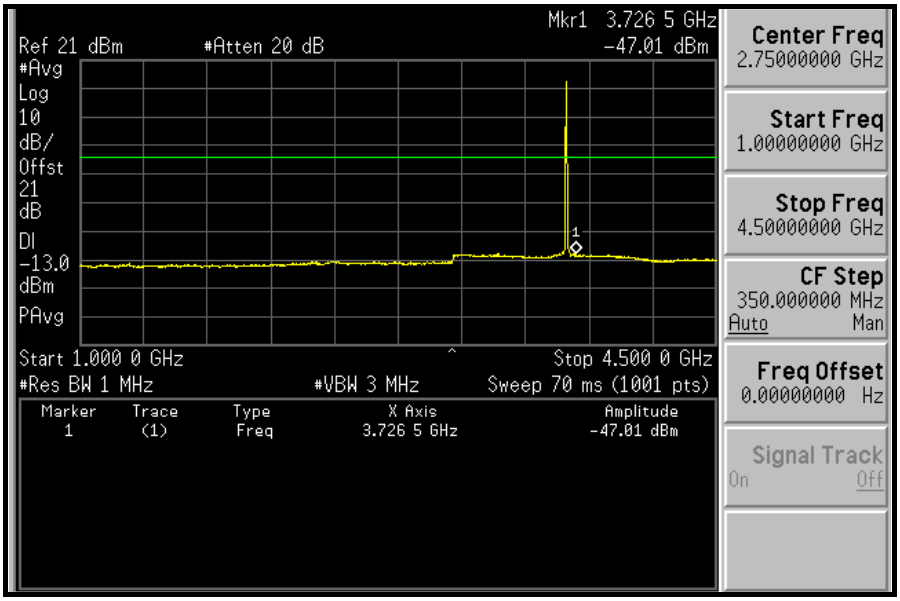
30GHz ~ 40GHz:



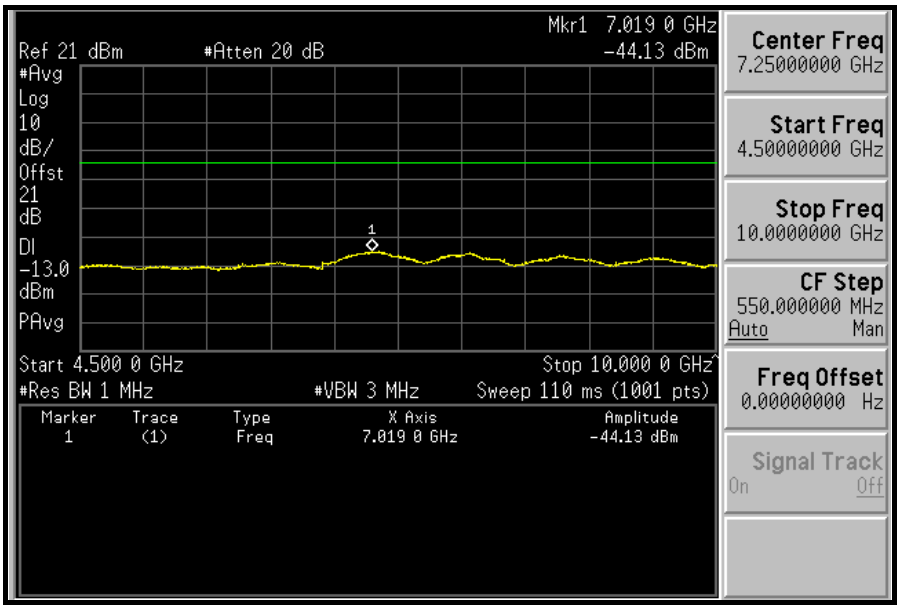
MIDDLE CHANNEL: 30MHz ~ 1GHz:



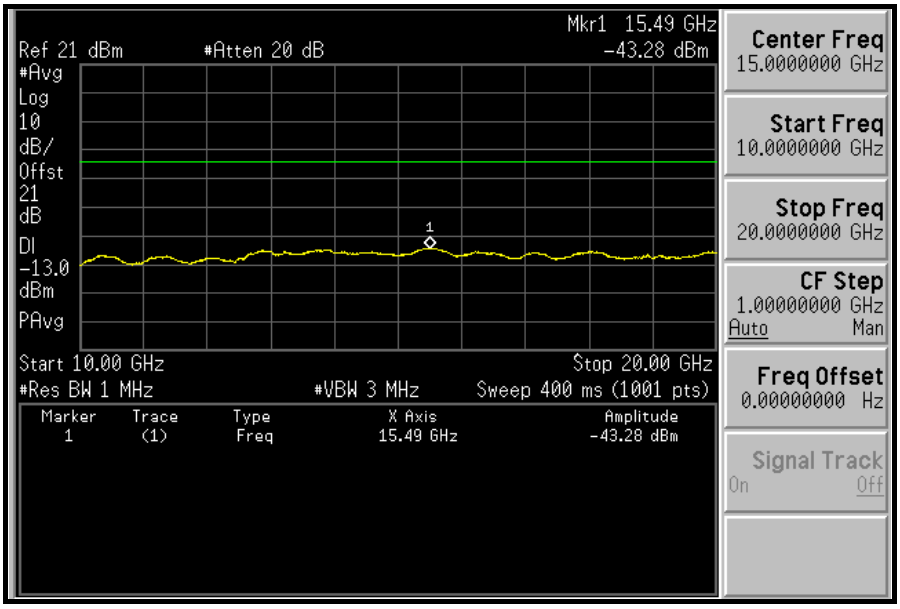
1GHz ~ 4.5GHz:



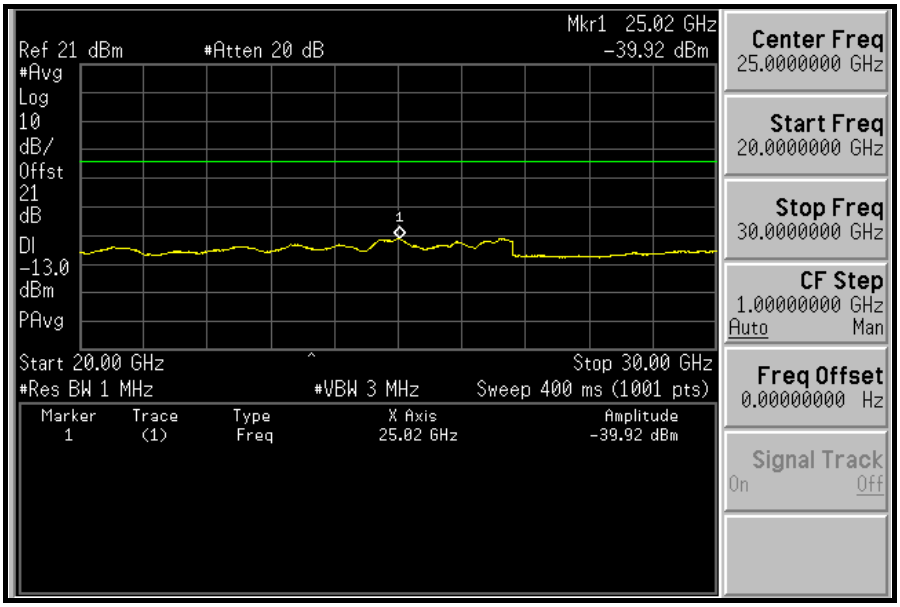
4.5GHz ~ 10GHz:



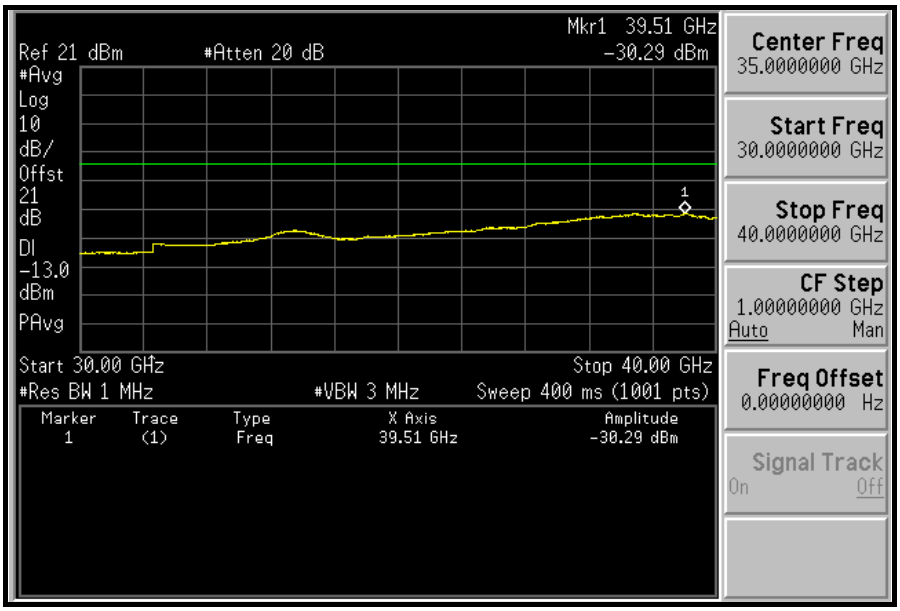
10GHz ~ 20GHz:



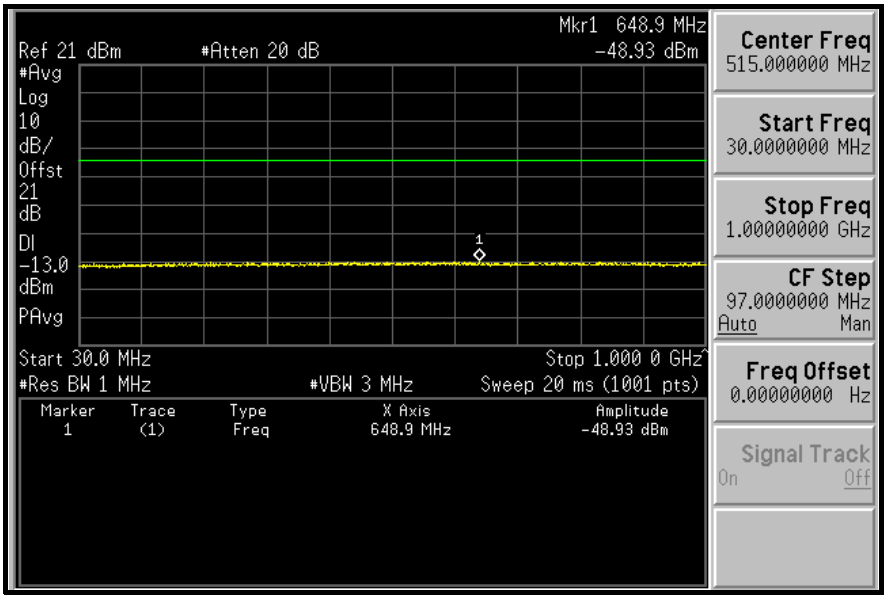
20GHz ~ 30GHz:



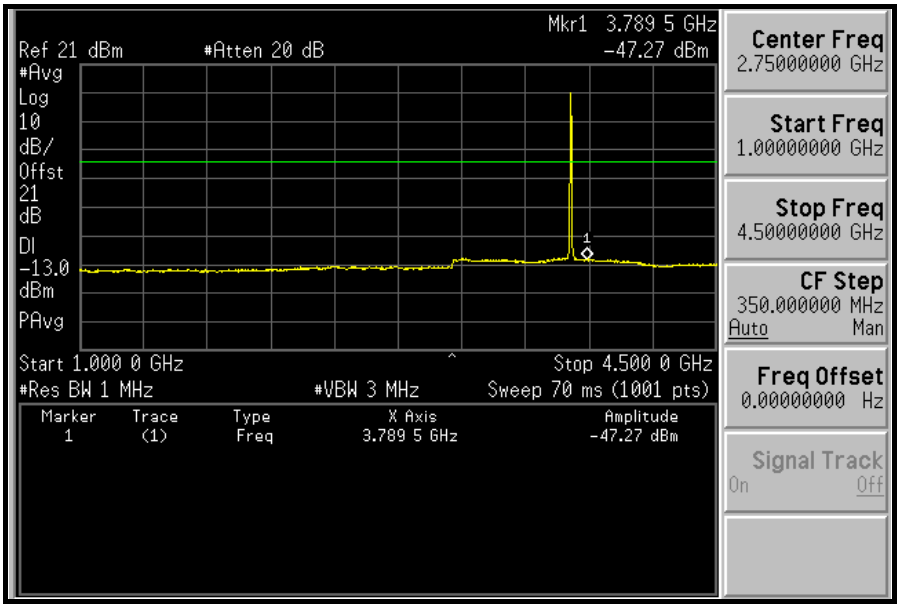
30GHz ~ 40GHz:



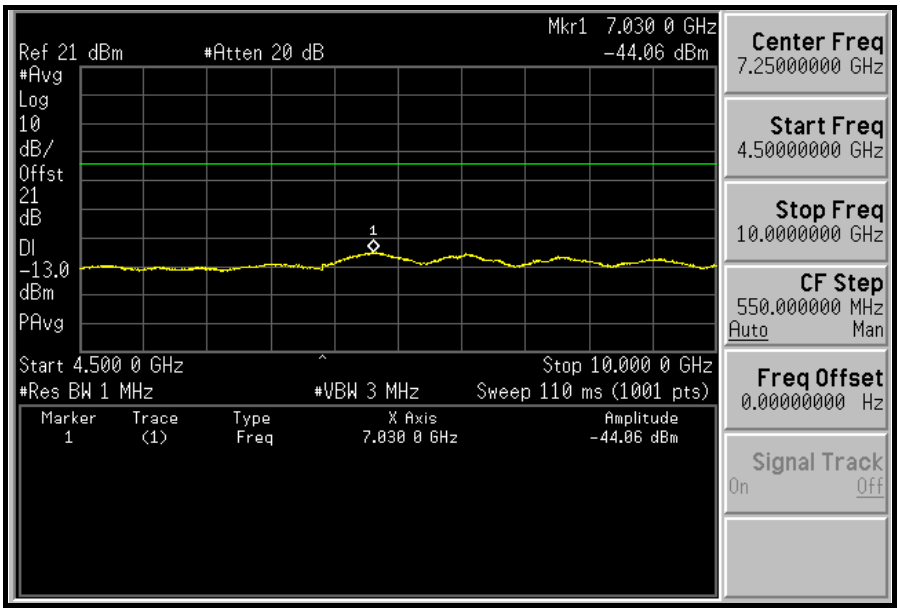
HIGH CHANNEL: 30MHz ~ 1GHz:



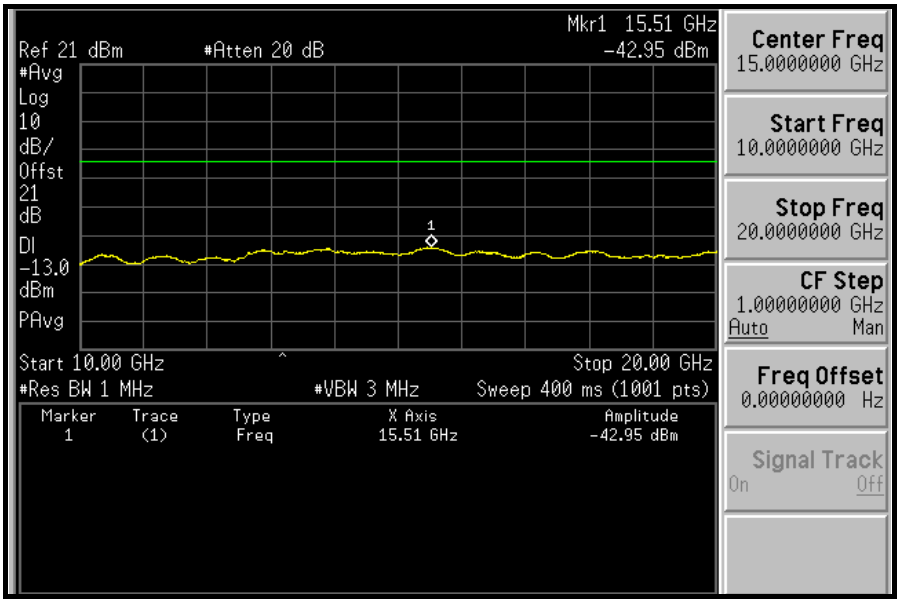
1GHz ~ 4.5GHz:



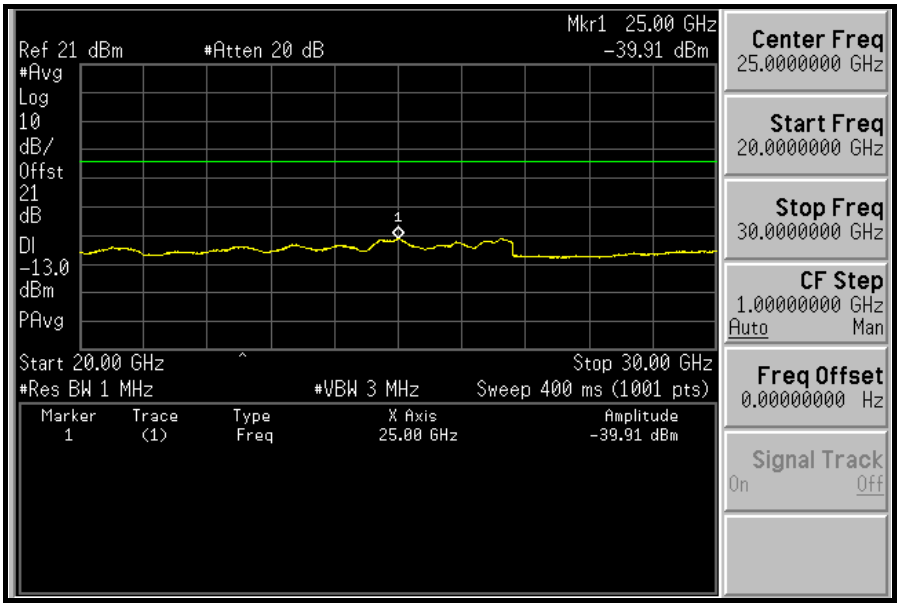
4.5GHz ~ 10GHz:



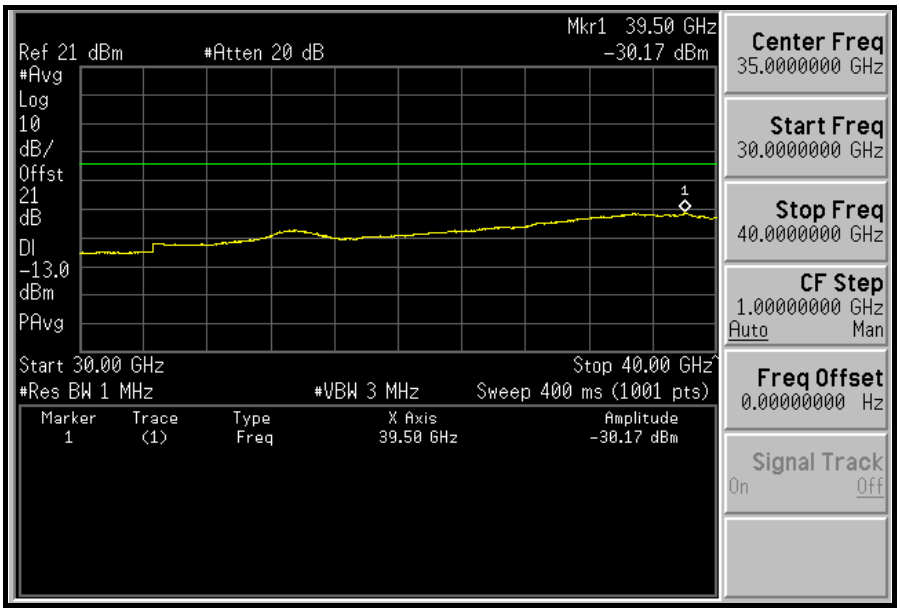
10GHz ~ 20GHz:



20GHz ~ 30GHz:

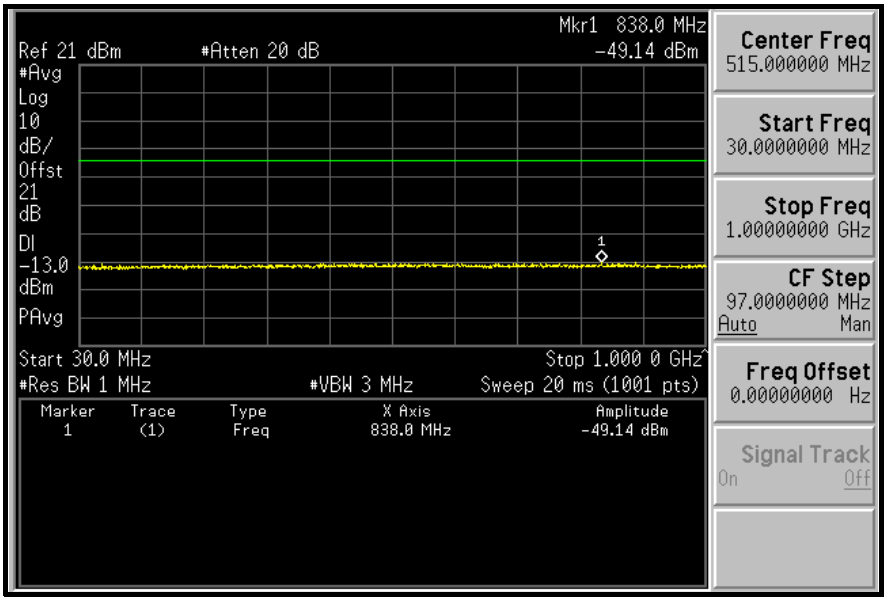


30GHz ~ 40GHz:

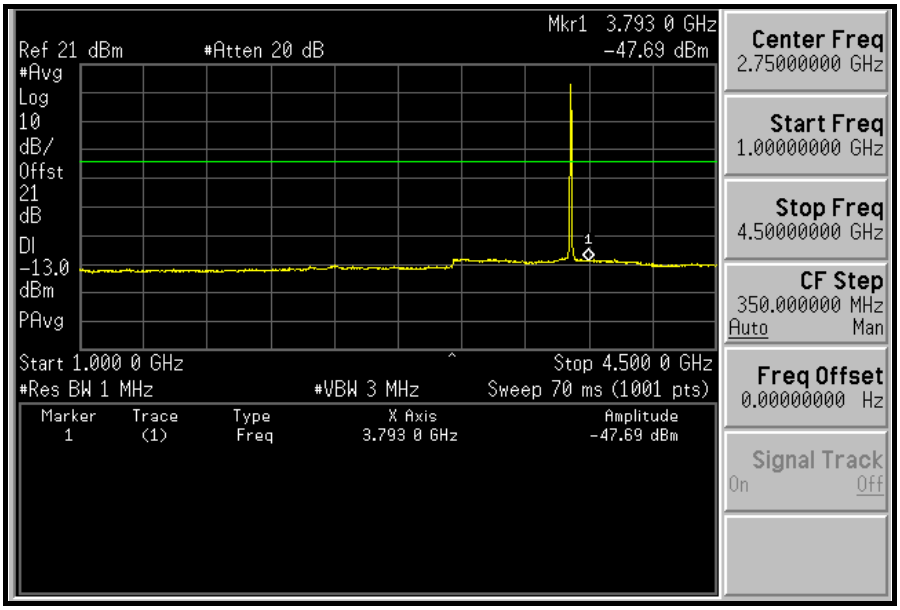


ANTENNA 1

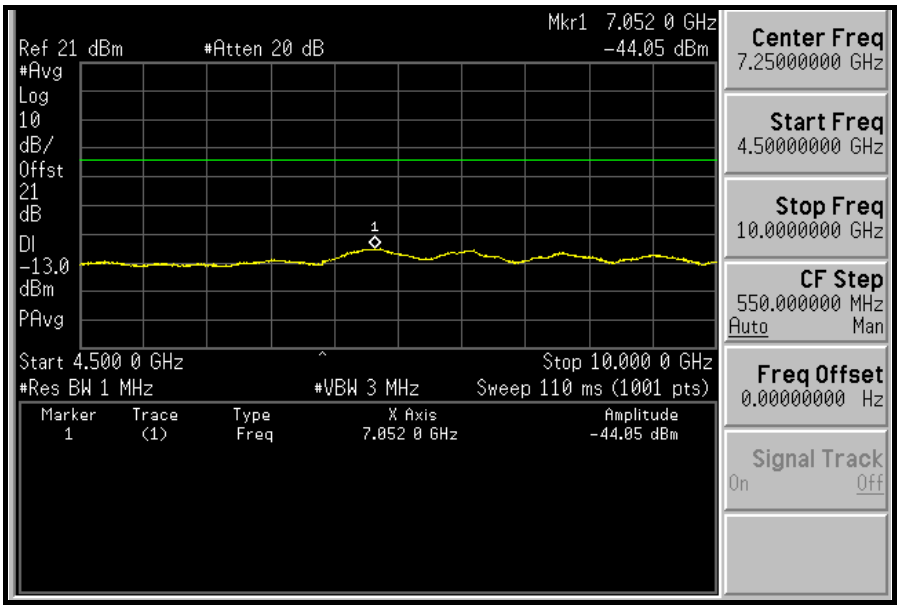
LOW CHANNEL: 30MHz ~ 1GHz:



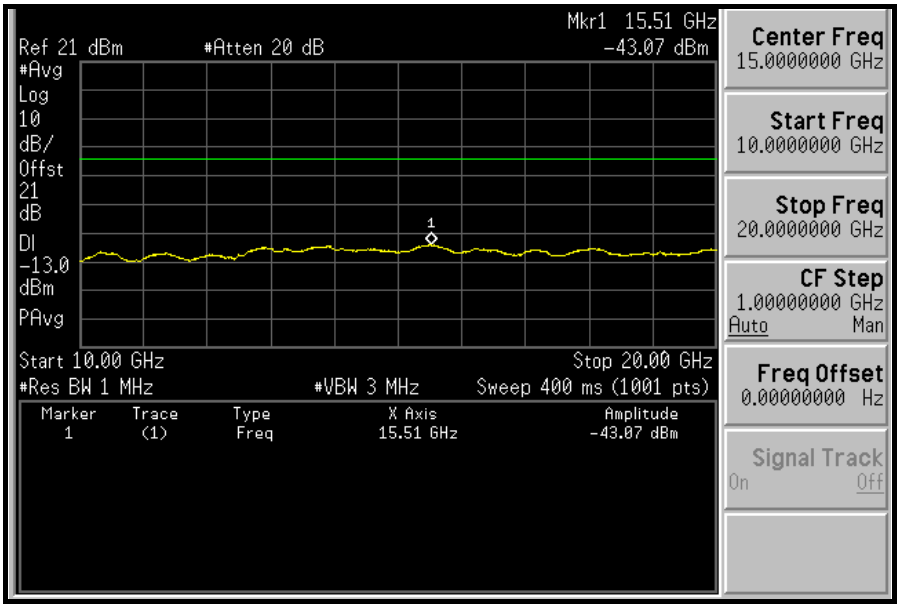
1GHz ~ 4.5GHz:



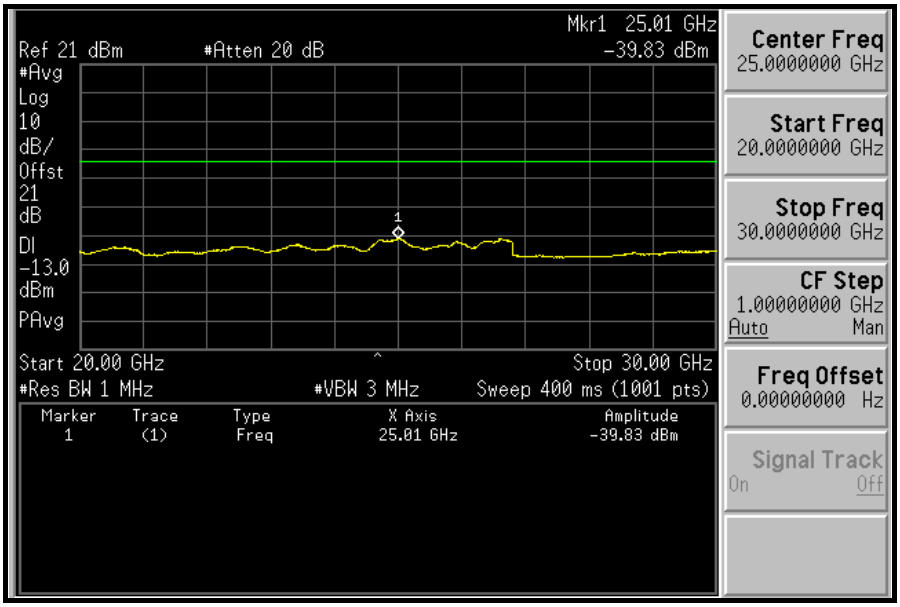
4.5GHz ~ 10GHz:



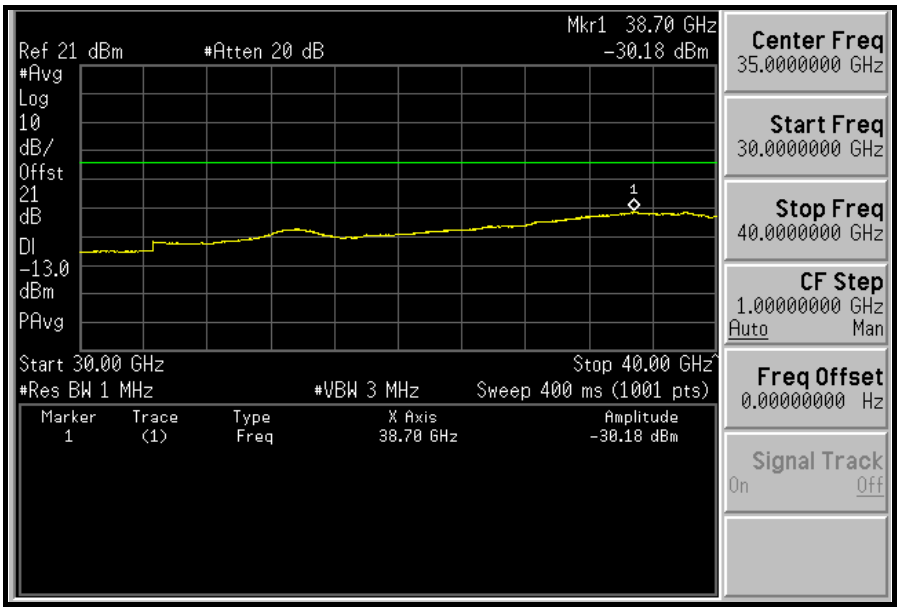
10GHz ~ 20GHz:



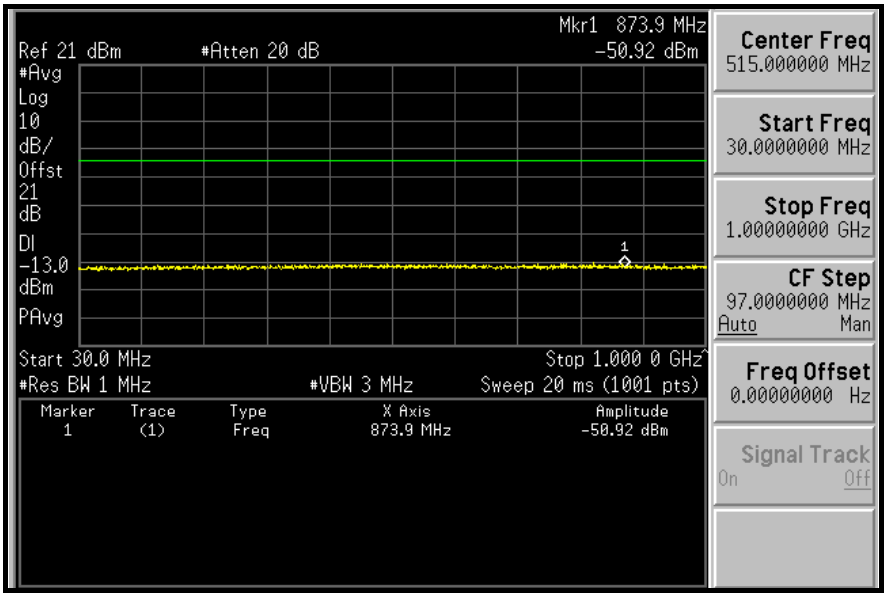
20GHz ~ 30GHz:



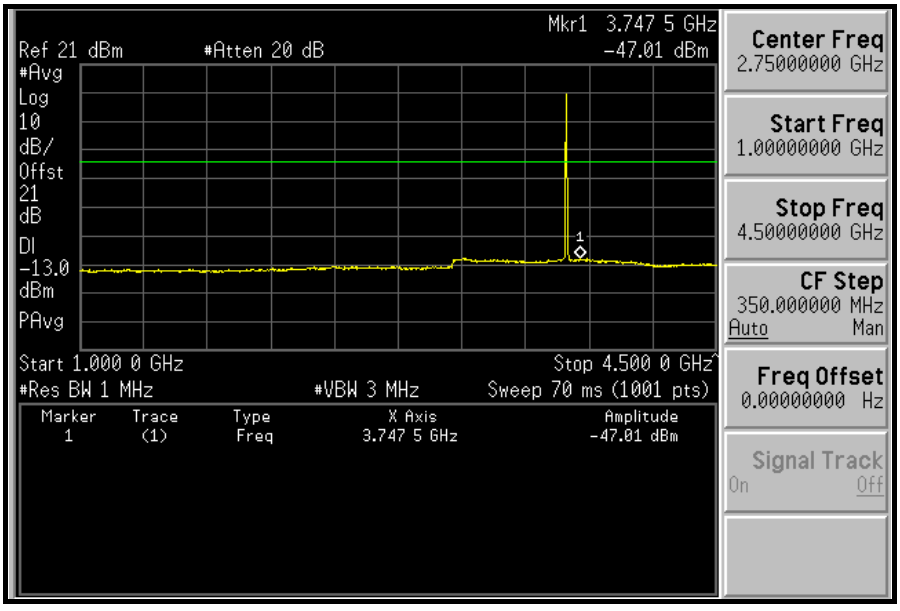
30GHz ~ 40GHz:



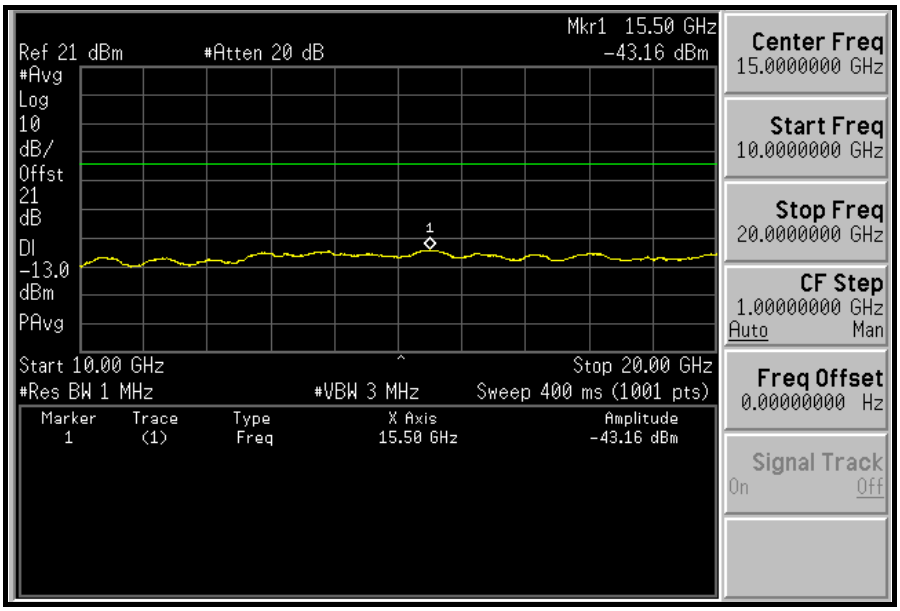
MIDDLE CHANNEL: 30MHz ~ 1GHz:



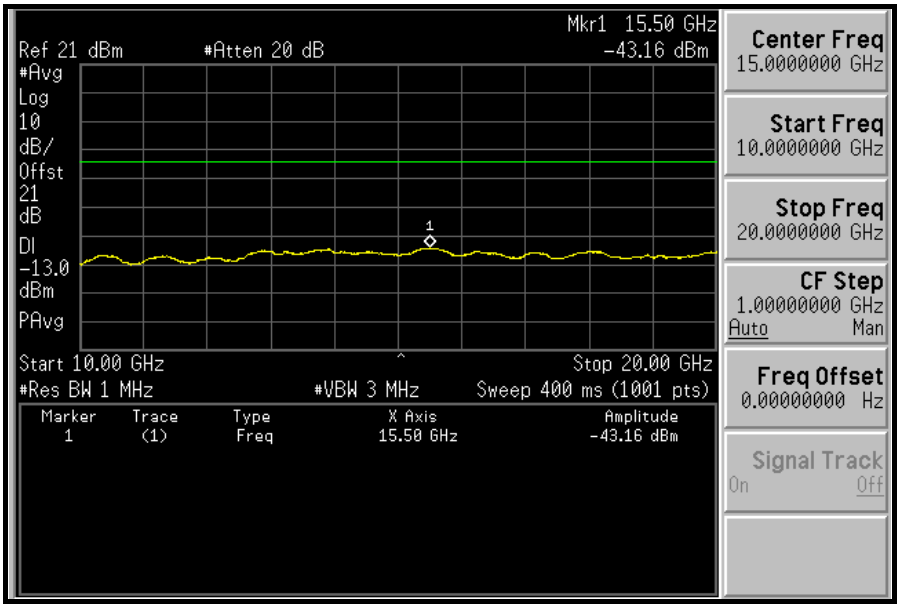
1GHz ~ 4.5GHz:



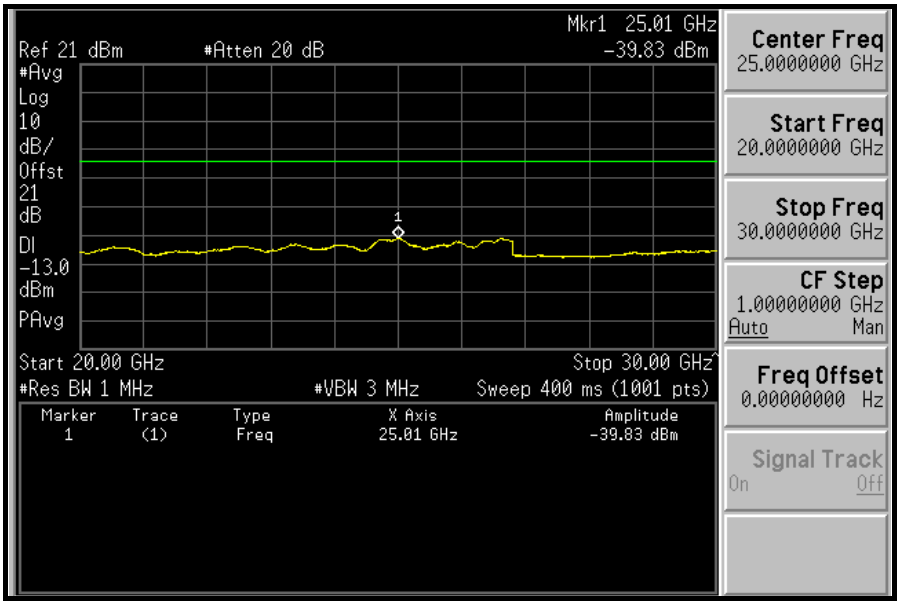
4.5GHz ~ 10GHz:



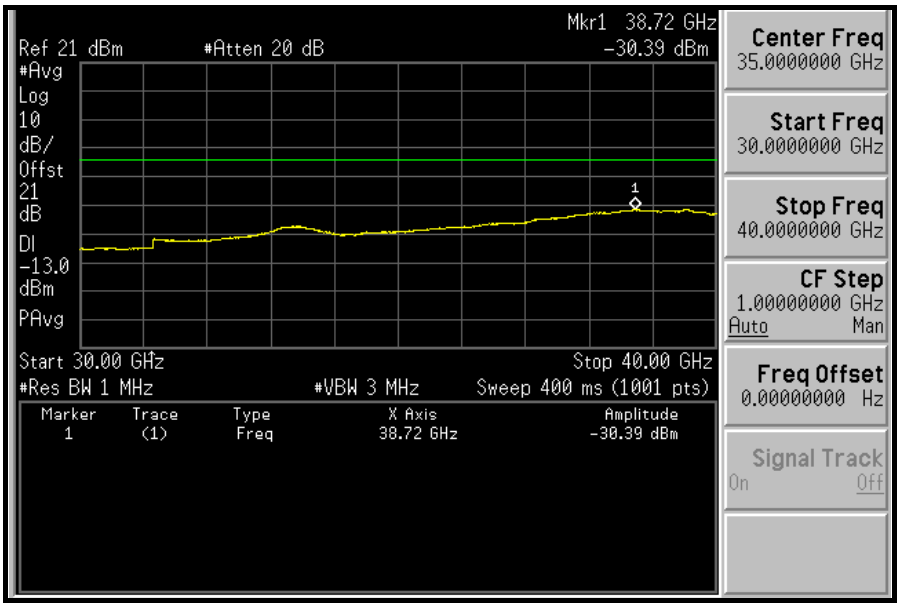
10GHz ~ 20GHz:



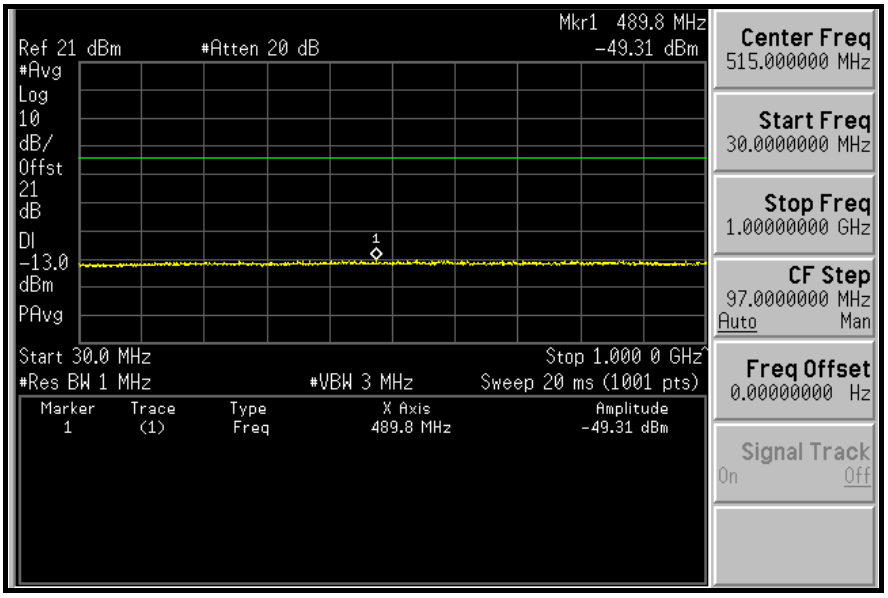
20GHz ~ 30GHz:



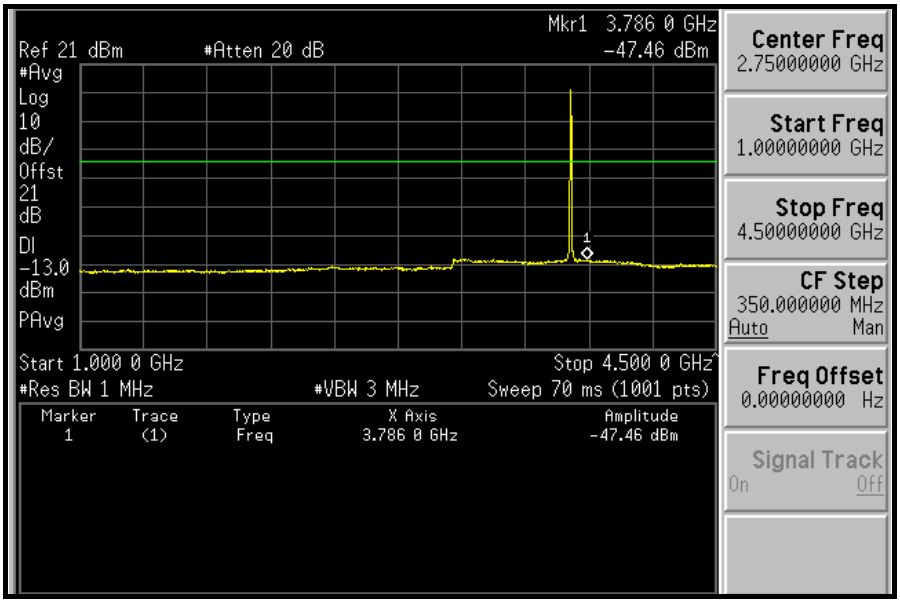
30GHz ~ 40GHz:



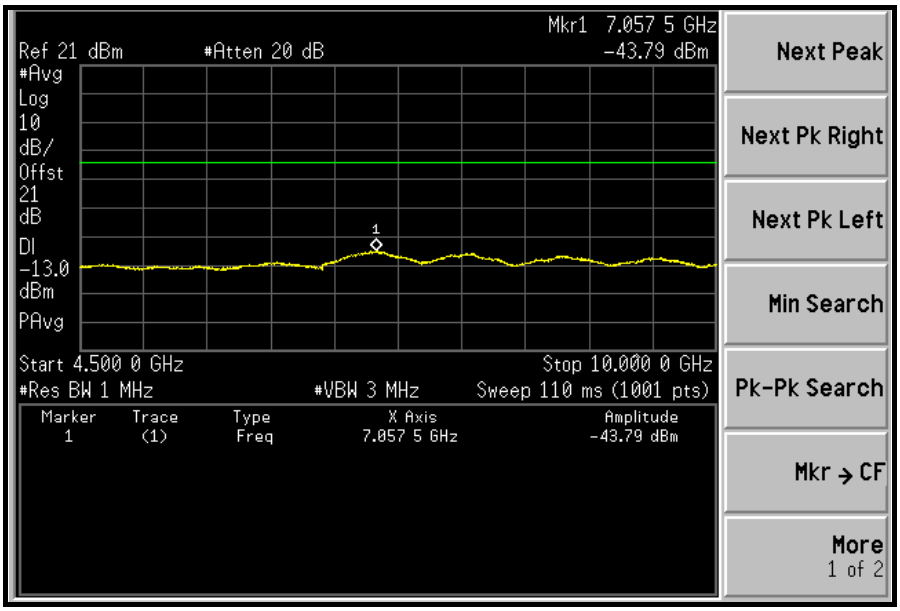
HIGH CHANNEL: 30MHz ~ 1GHz:



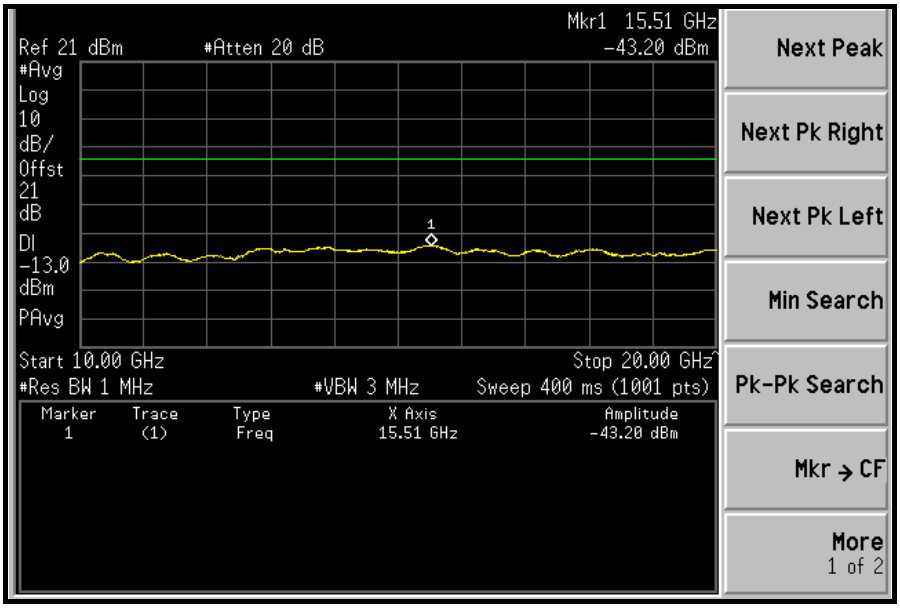
1GHz ~ 4.5GHz:



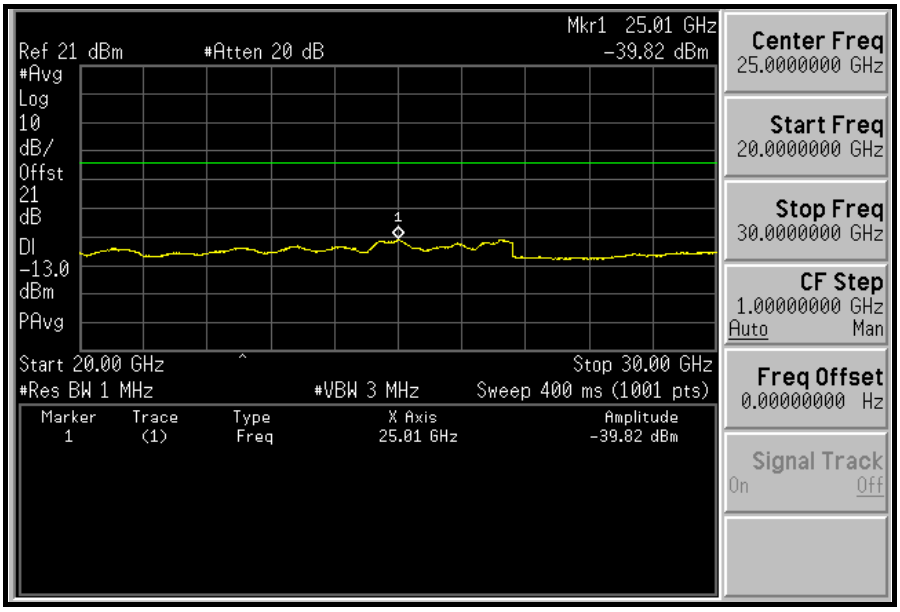
4.5GHz ~ 10GHz:



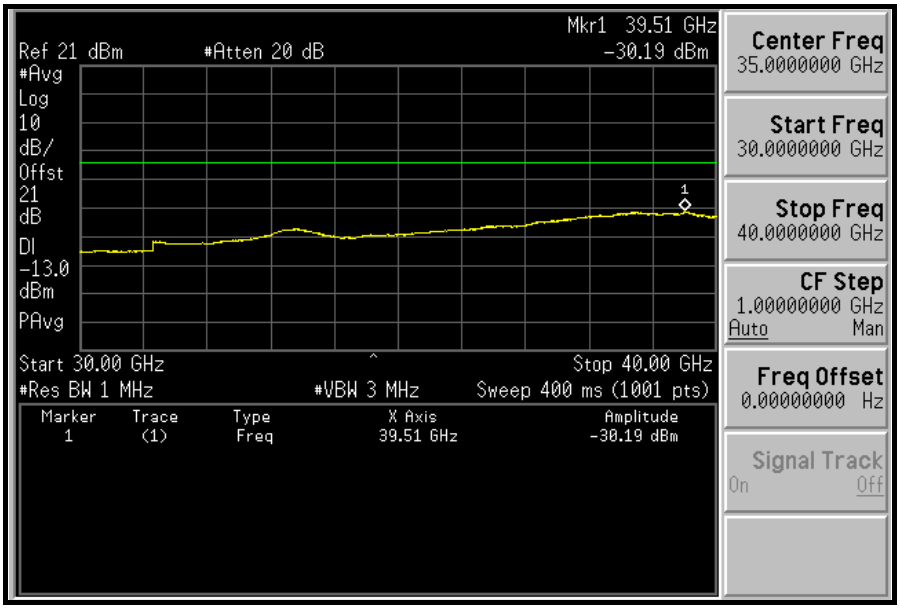
10GHz ~ 20GHz:



20GHz ~ 30GHz:



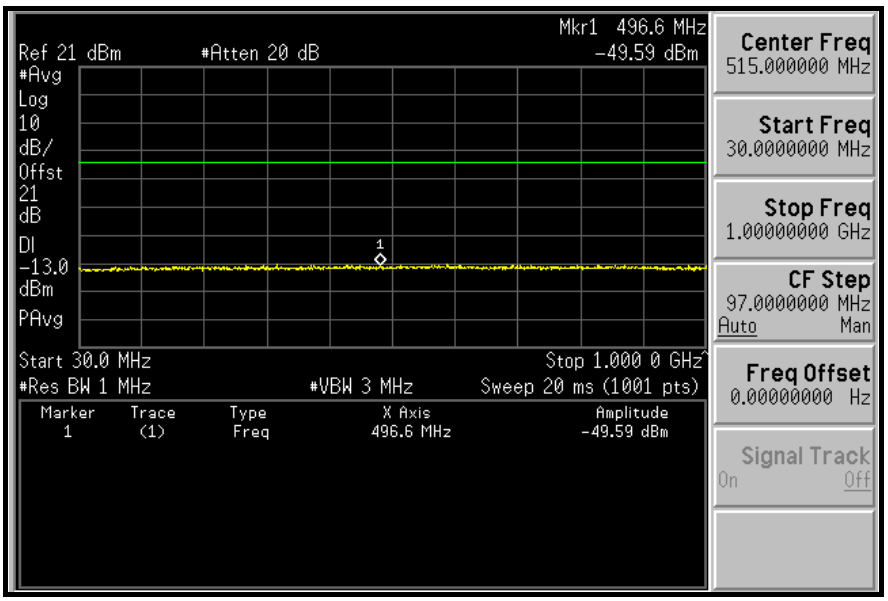
30GHz ~ 40GHz:



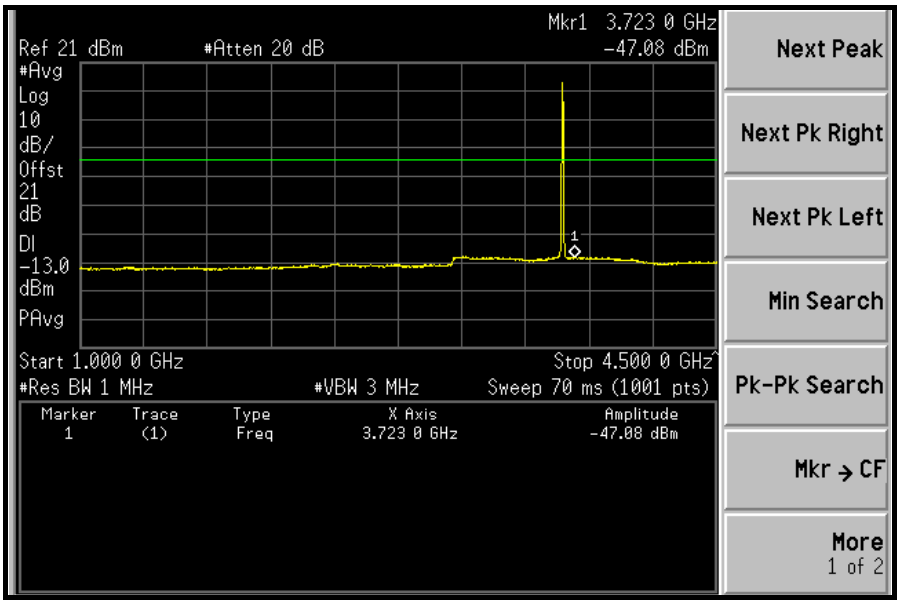
CHANNEL BANDWIDTH: 5MHz

ANTENNA 0

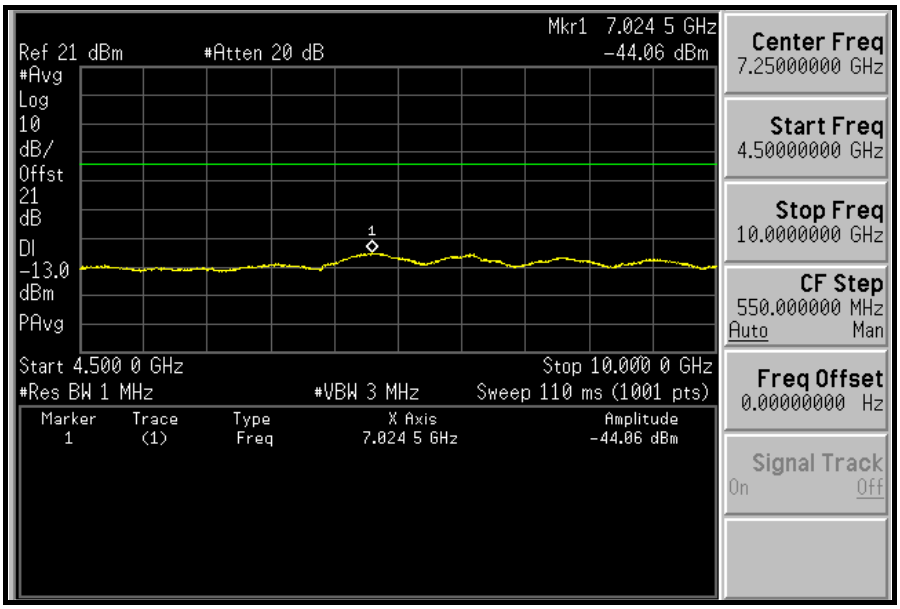
LOW CHANNEL: 30MHz ~ 1GHz:



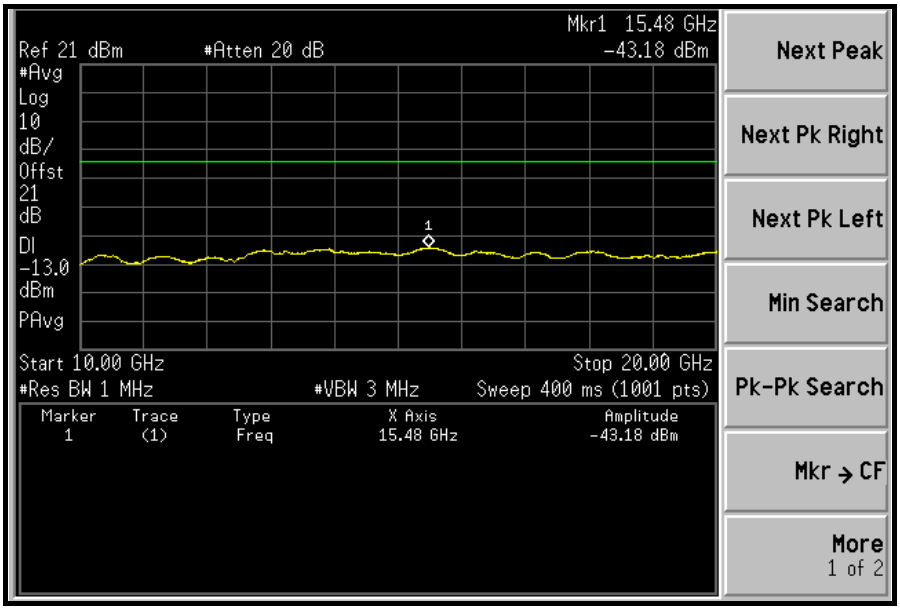
1GHz ~ 4.5GHz:



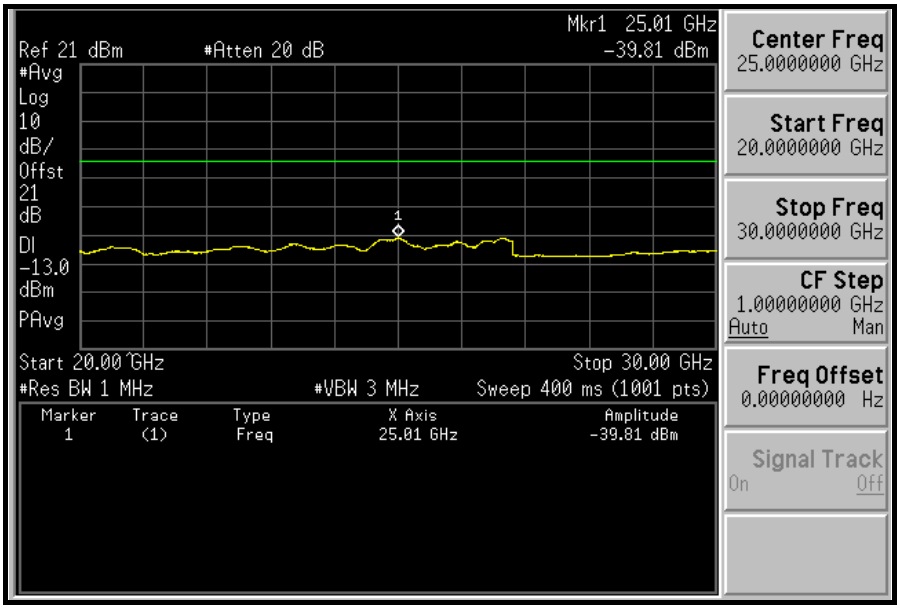
4.5GHz ~ 10GHz:



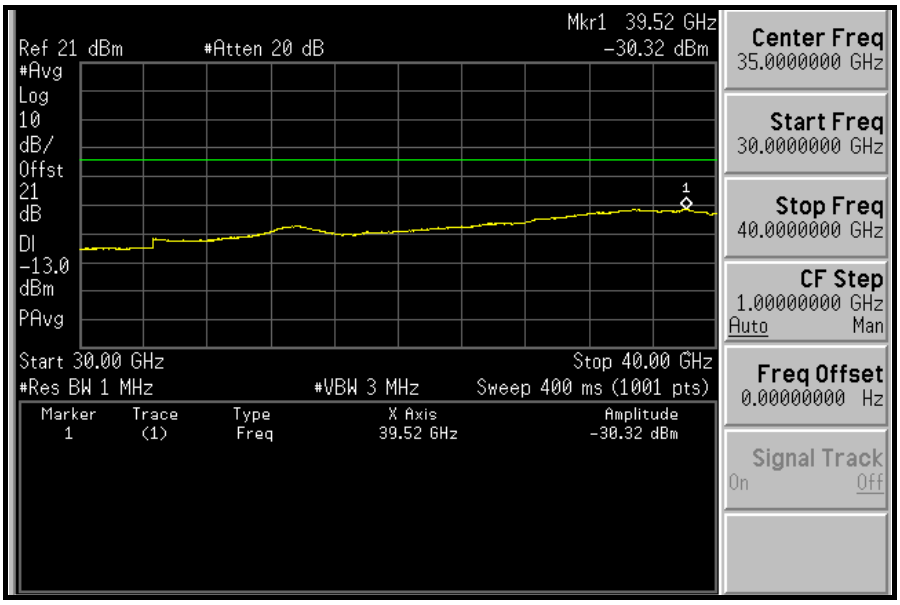
10GHz ~ 20GHz:



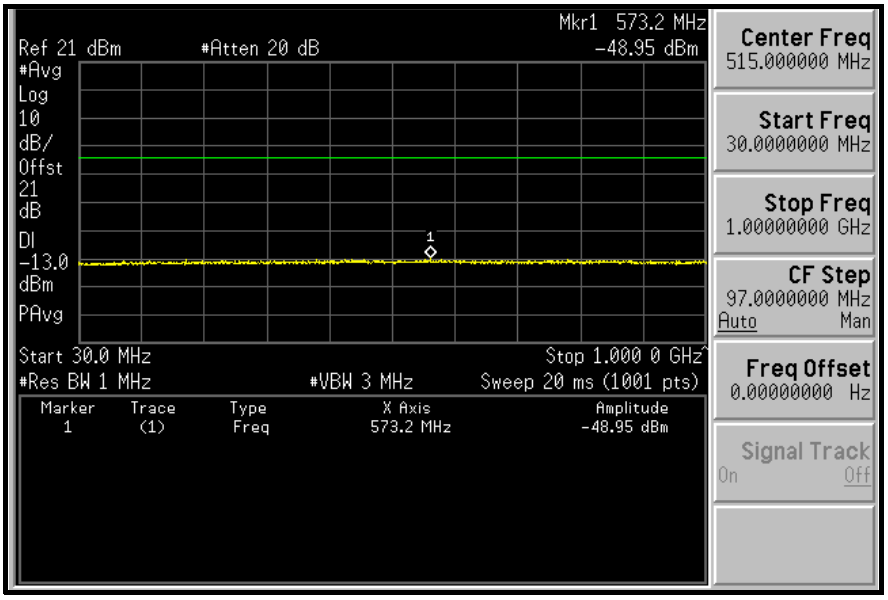
20GHz ~ 30GHz:



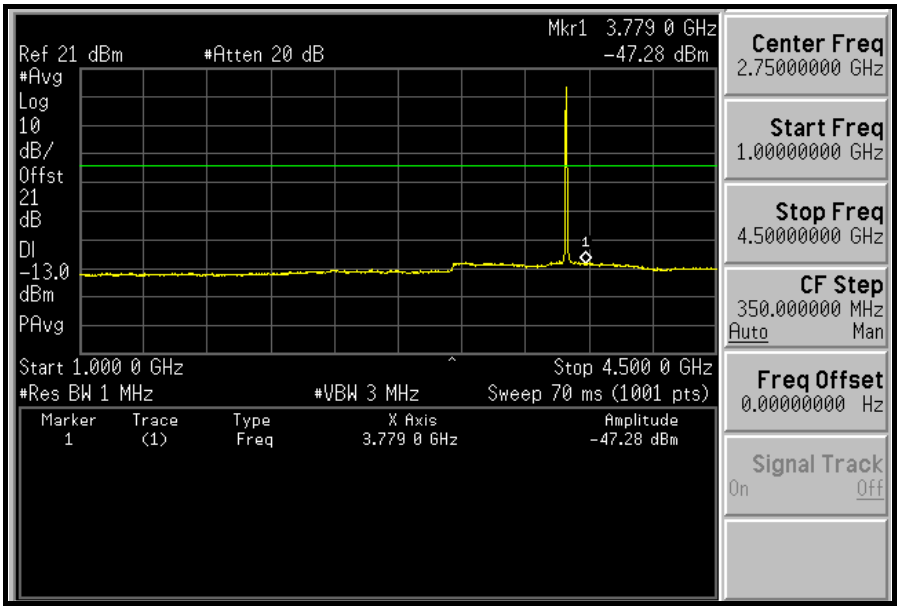
30GHz ~ 40GHz:



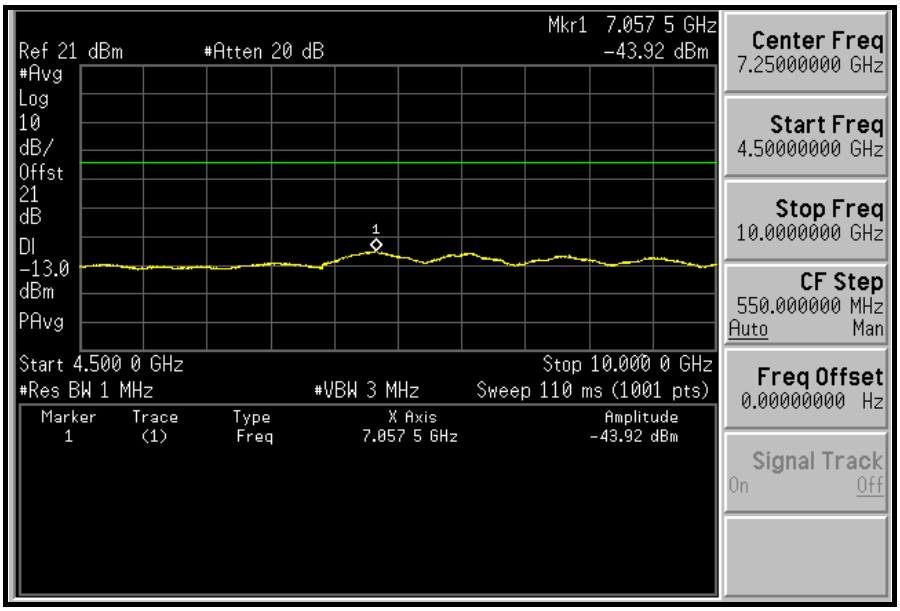
MIDDLE CHANNEL: 30MHz ~ 1GHz:



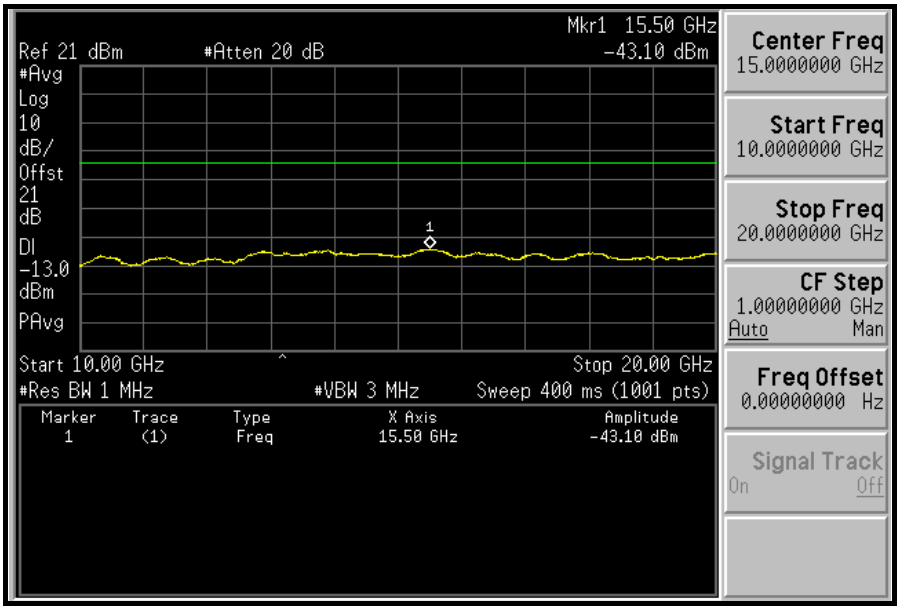
1GHz ~ 4.5GHz:



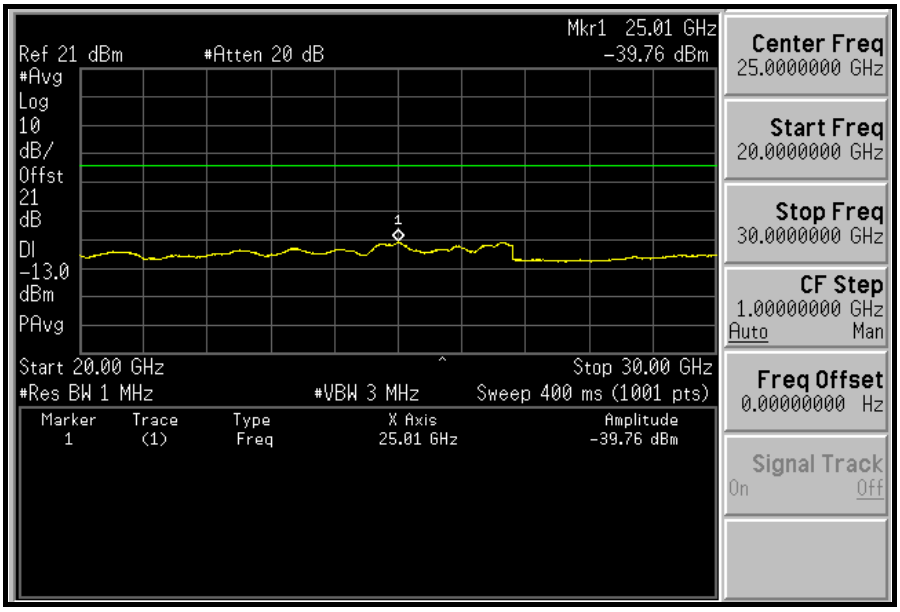
4.5GHz ~ 10GHz:



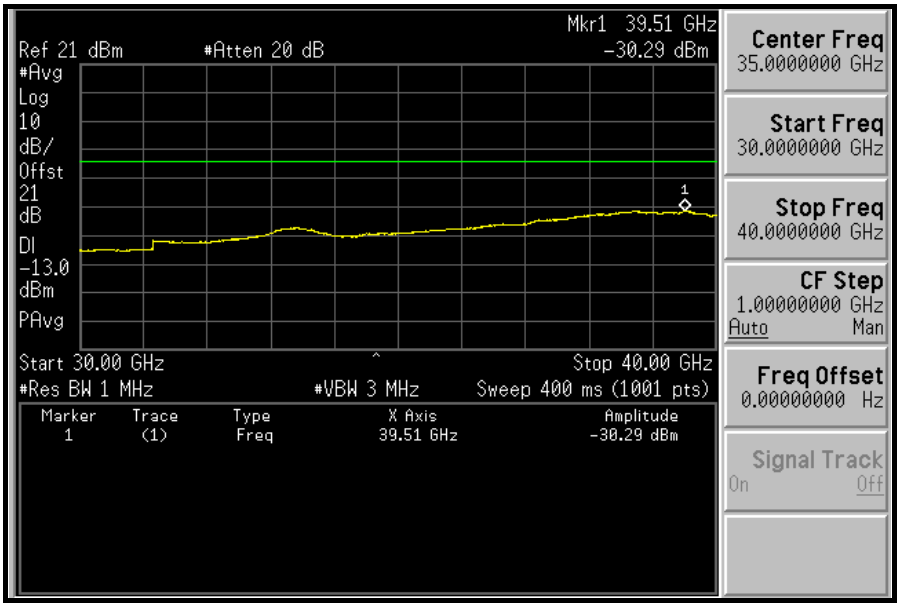
10GHz ~ 20GHz:



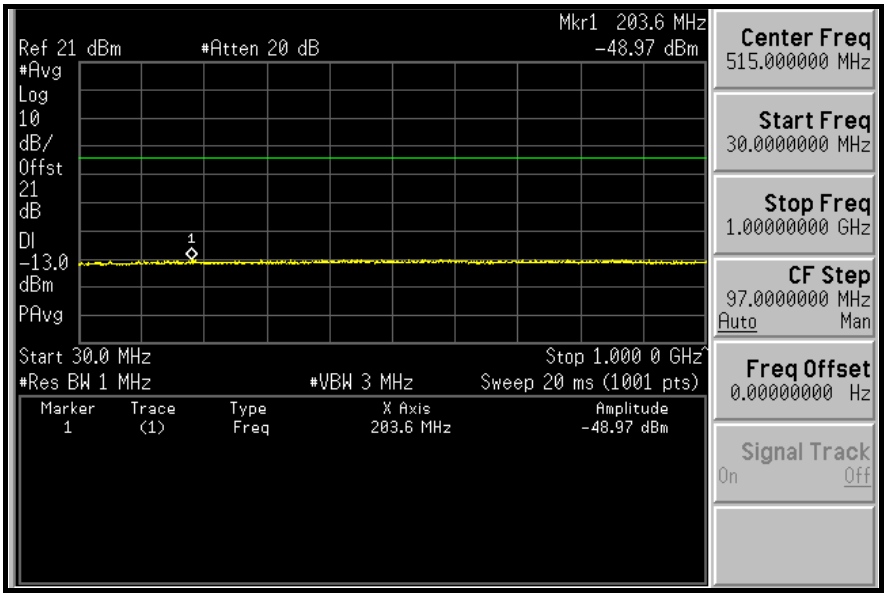
20GHz ~ 30GHz:



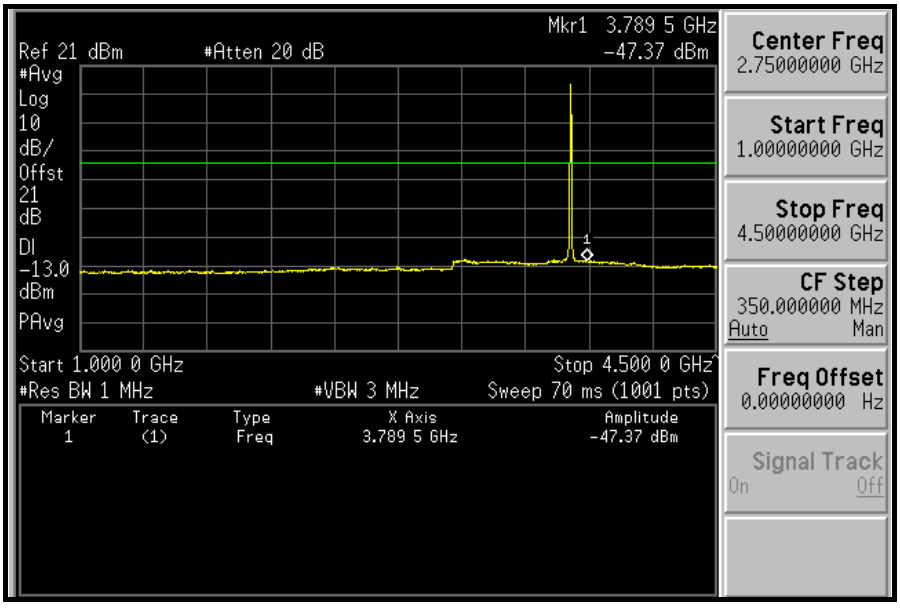
30GHz ~ 40GHz:



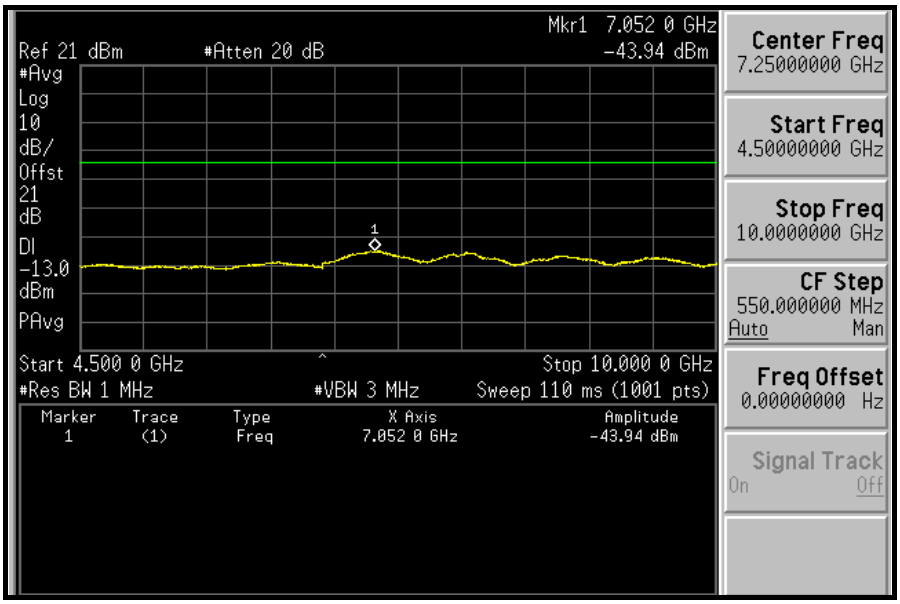
HIGH CHANNEL: 30MHz ~ 1GHz:



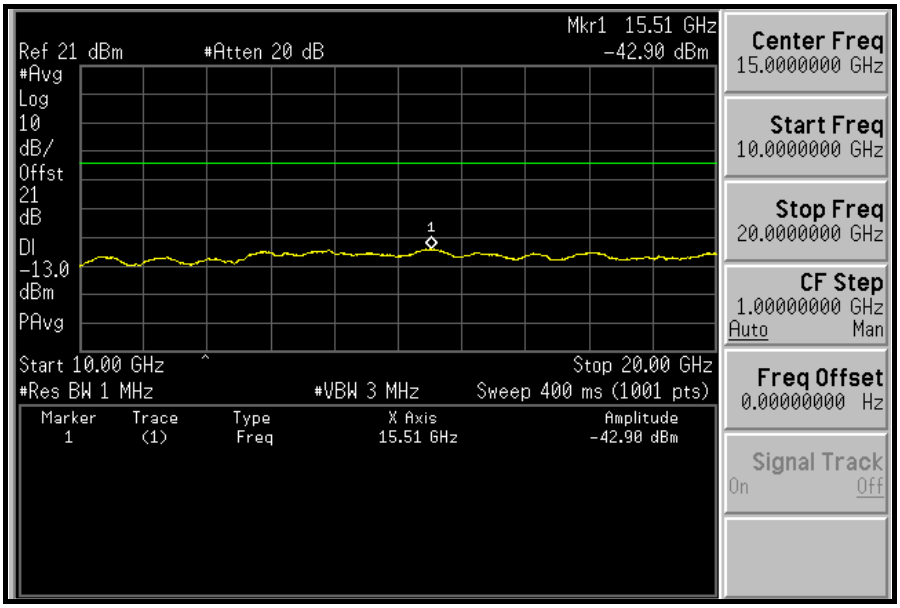
1GHz ~ 4.5GHz:



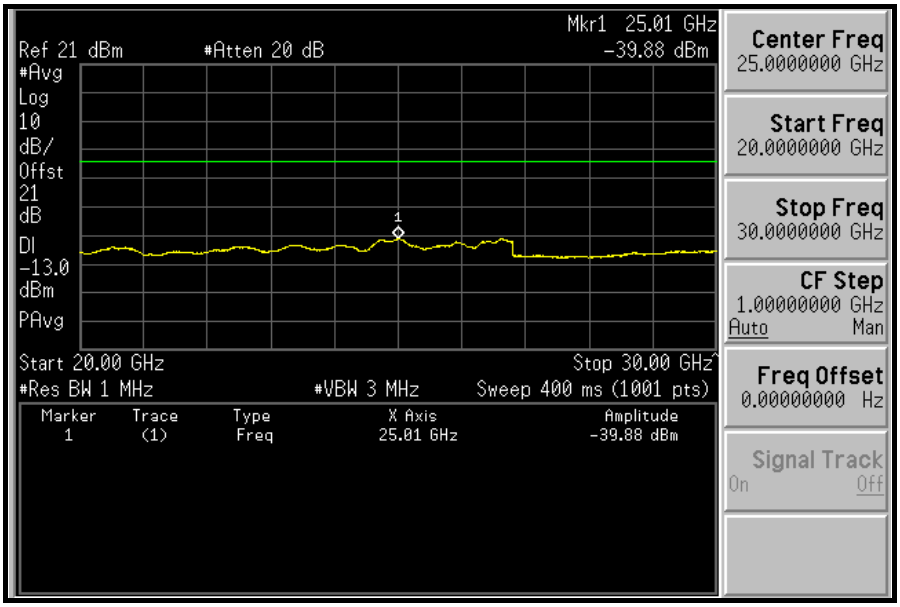
4.5GHz ~ 10GHz:



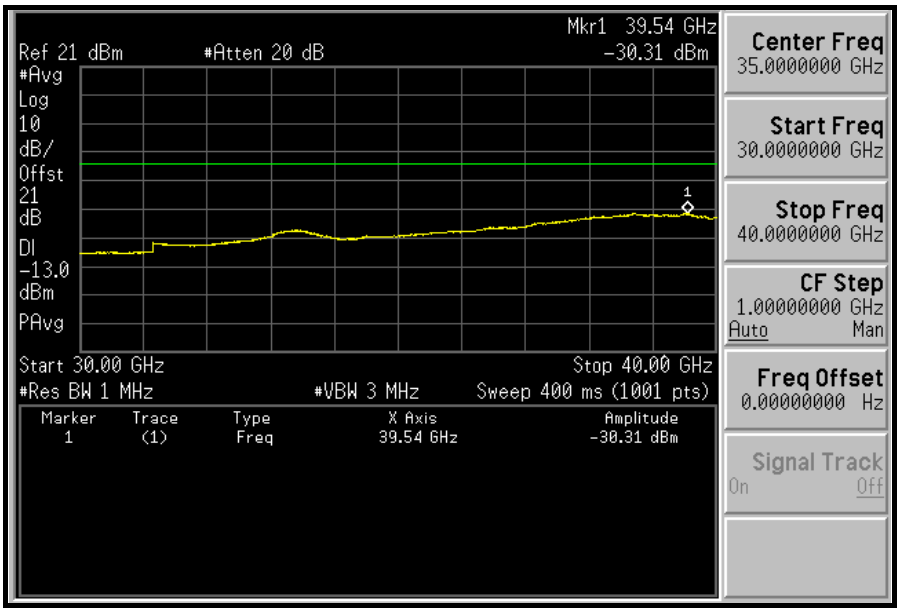
10GHz ~ 20GHz:



20GHz ~ 30GHz:

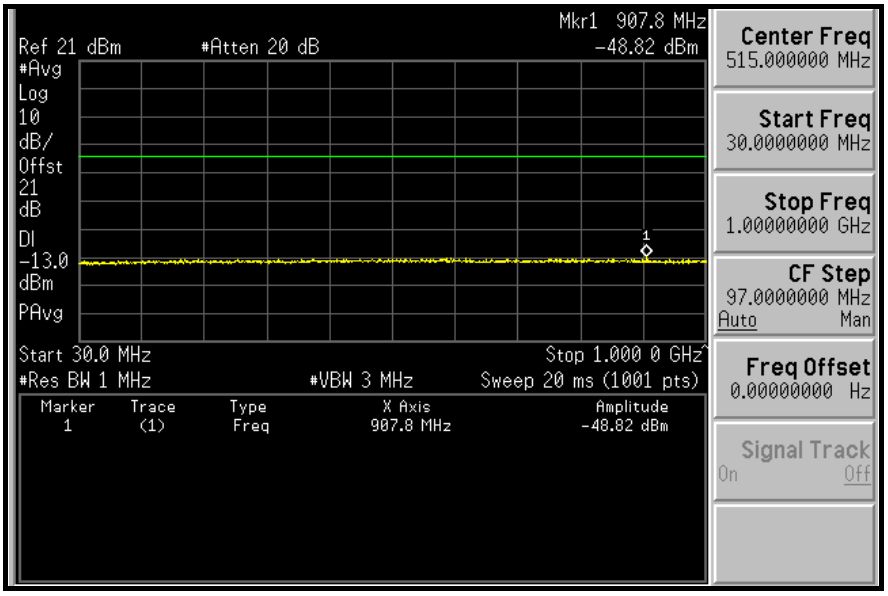


30GHz ~ 40GHz:

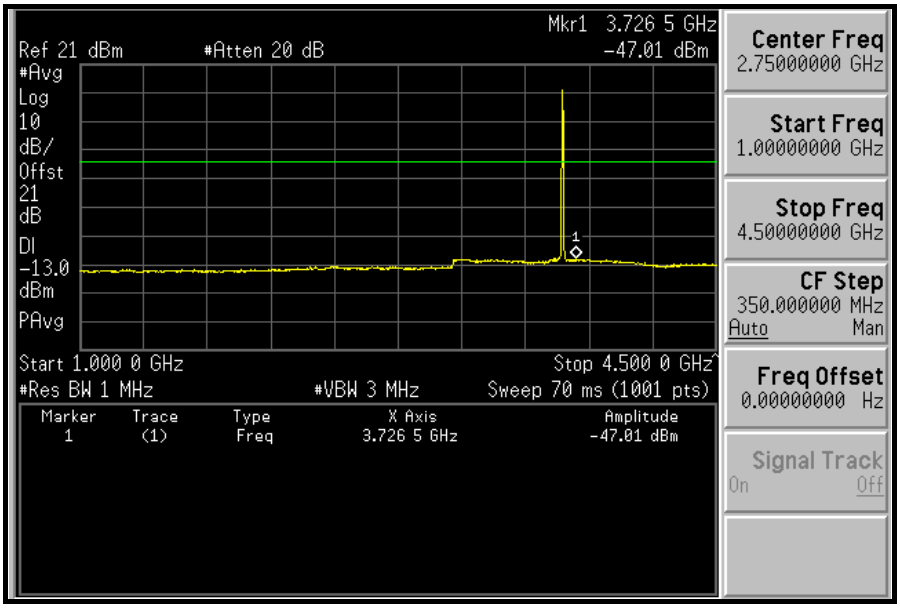


ANTENNA 1

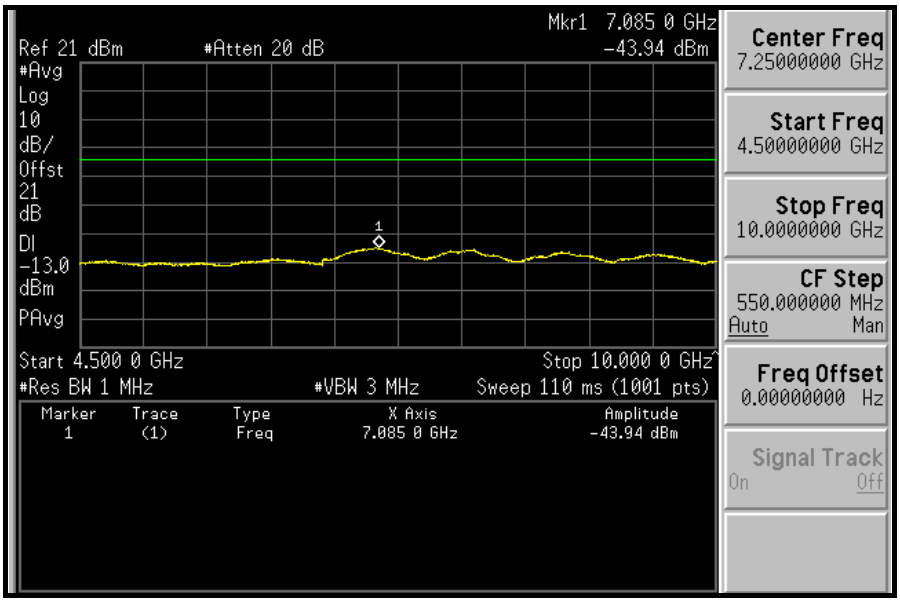
LOW CHANNEL: 30MHz ~ 1GHz:



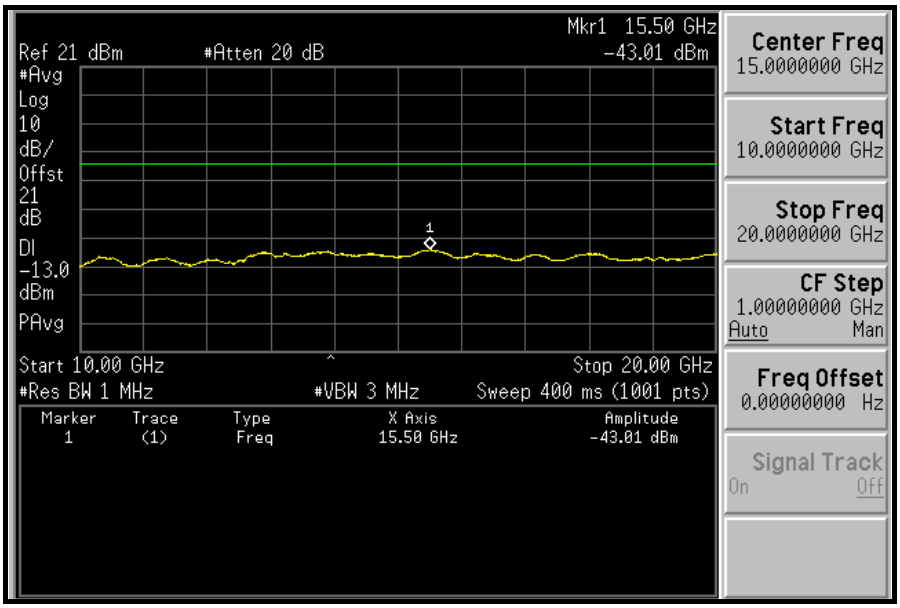
1GHz ~ 4.5GHz:



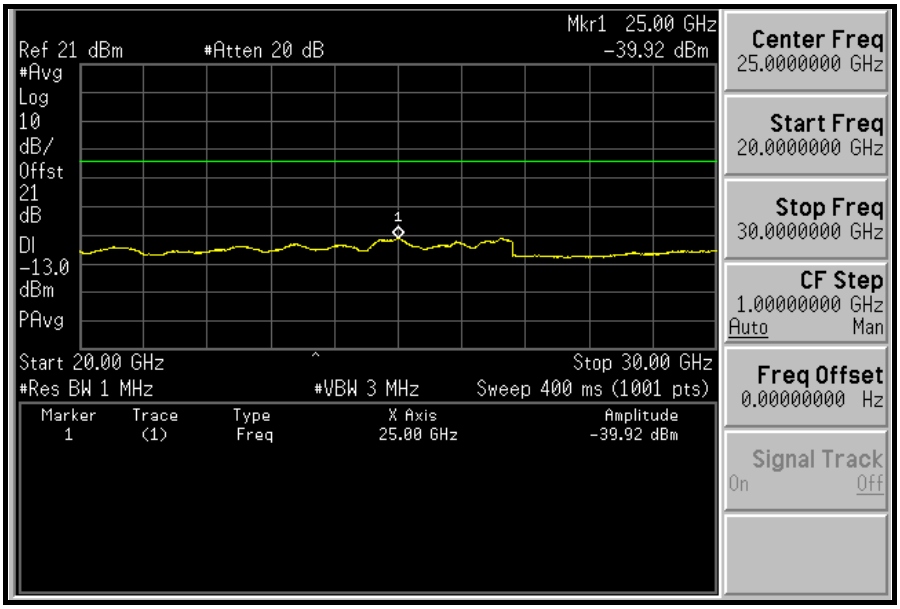
4.5GHz ~ 10GHz:



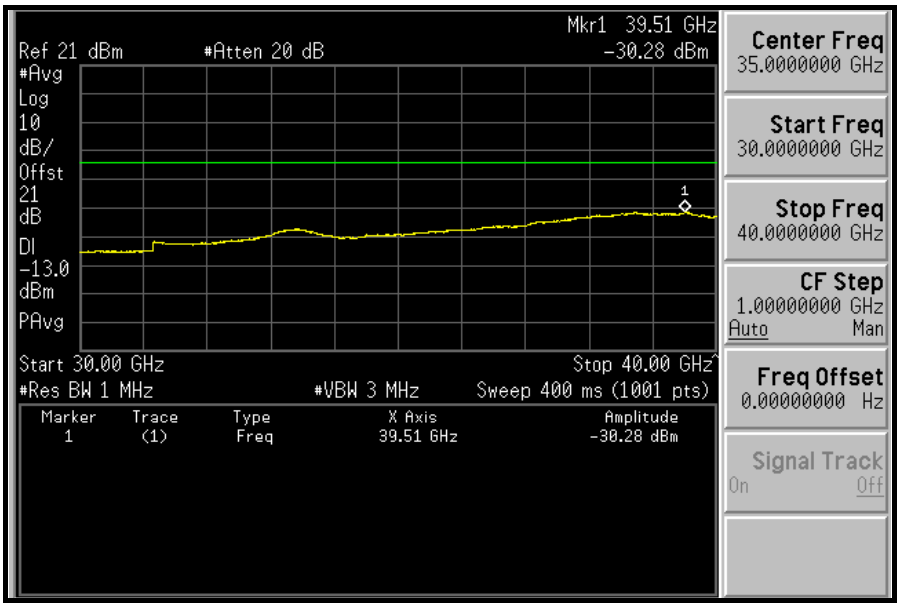
10GHz ~ 20GHz:



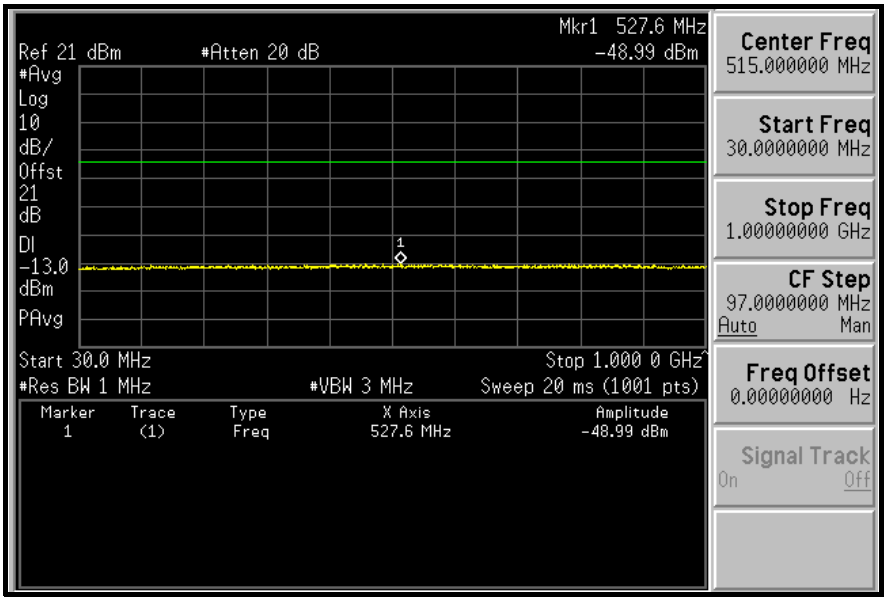
20GHz ~ 30GHz:



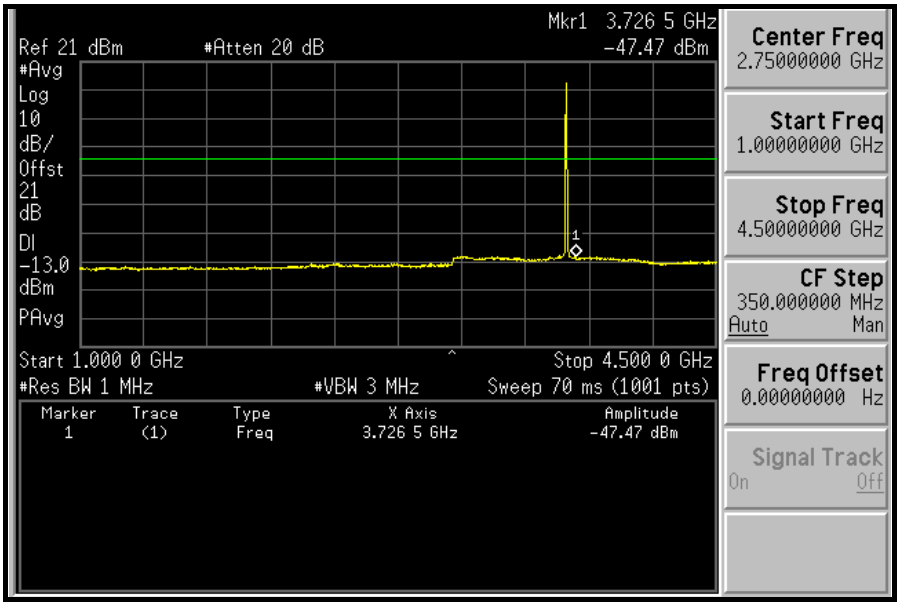
30GHz ~ 40GHz:



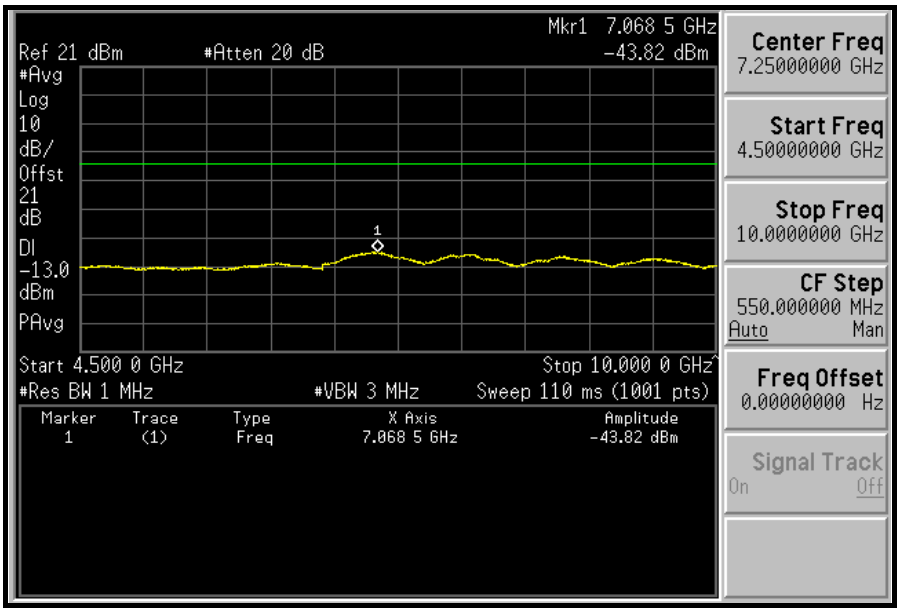
MIDDLE CHANNEL: 30MHz ~ 1GHz:



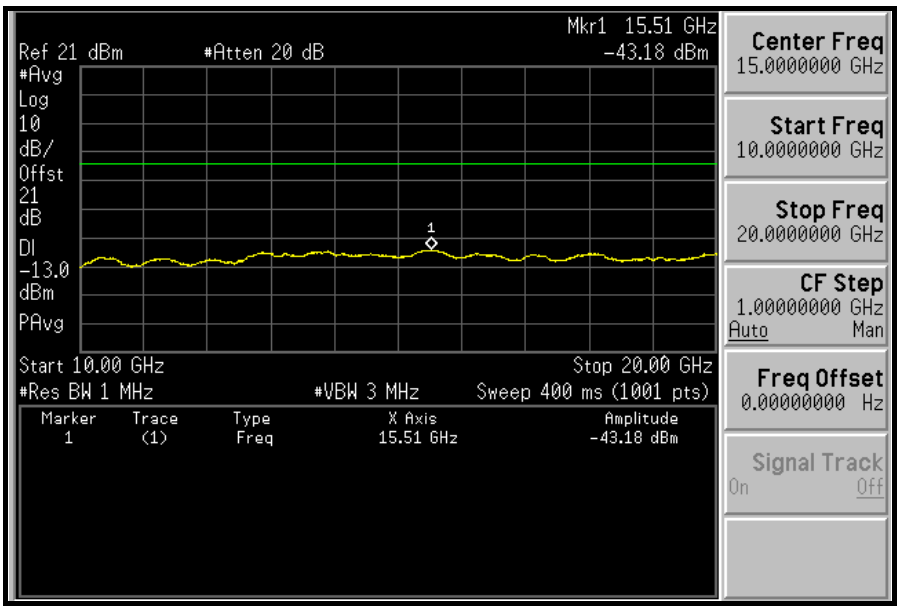
1GHz ~ 4.5GHz:



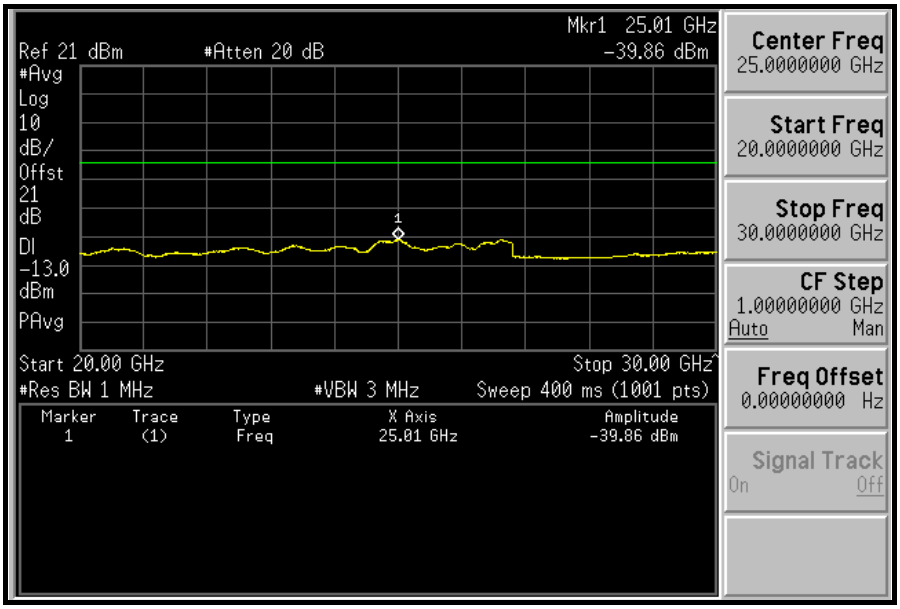
4.5GHz ~ 10GHz:



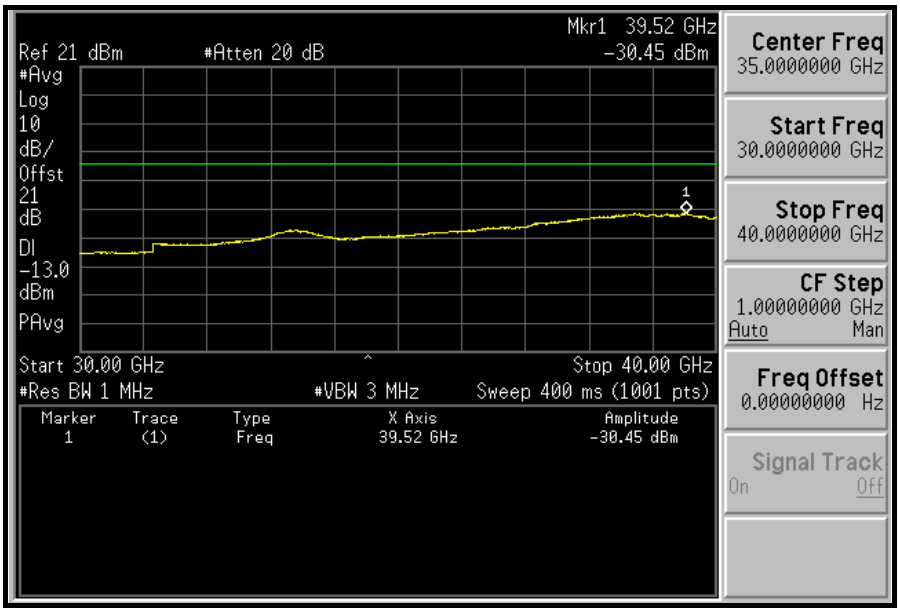
10GHz ~ 20GHz:



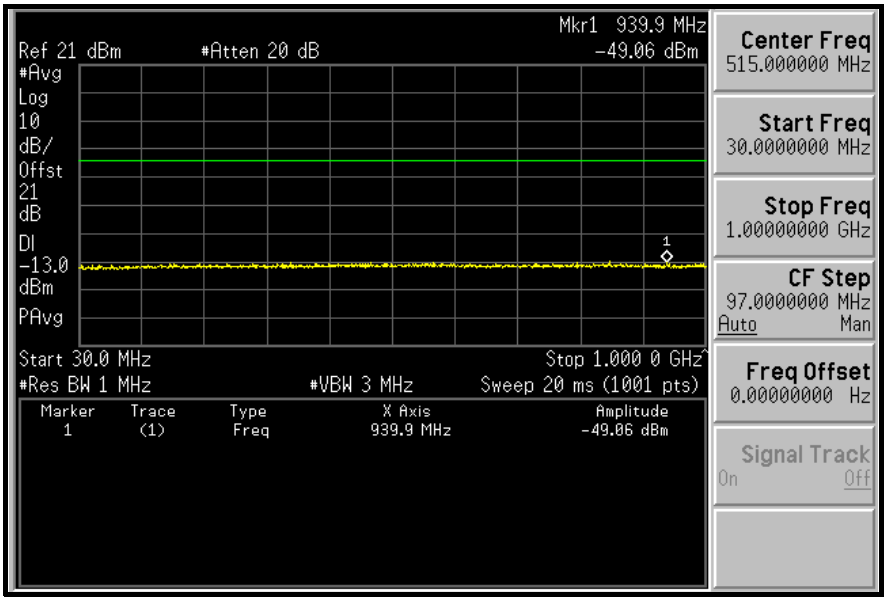
20GHz ~ 30GHz:



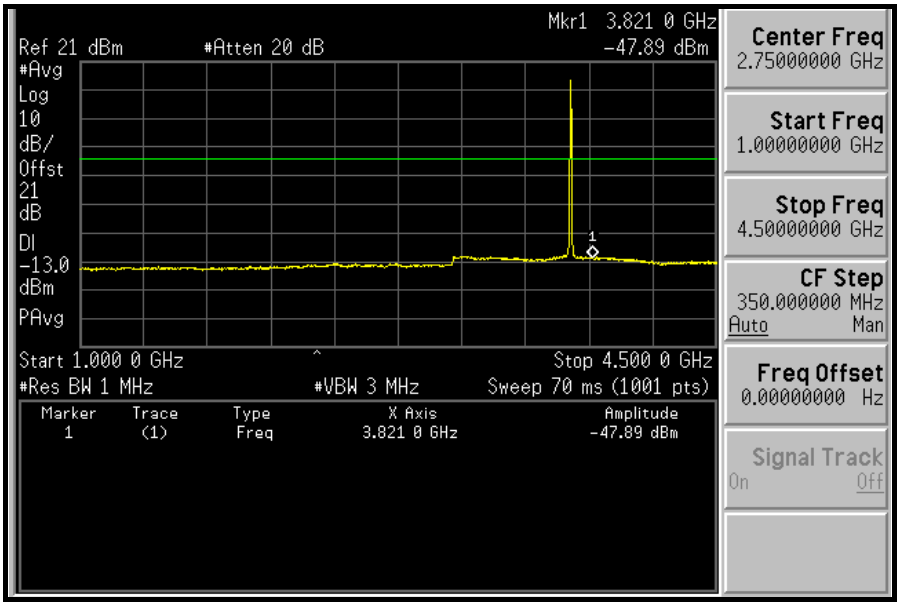
30GHz ~ 40GHz:



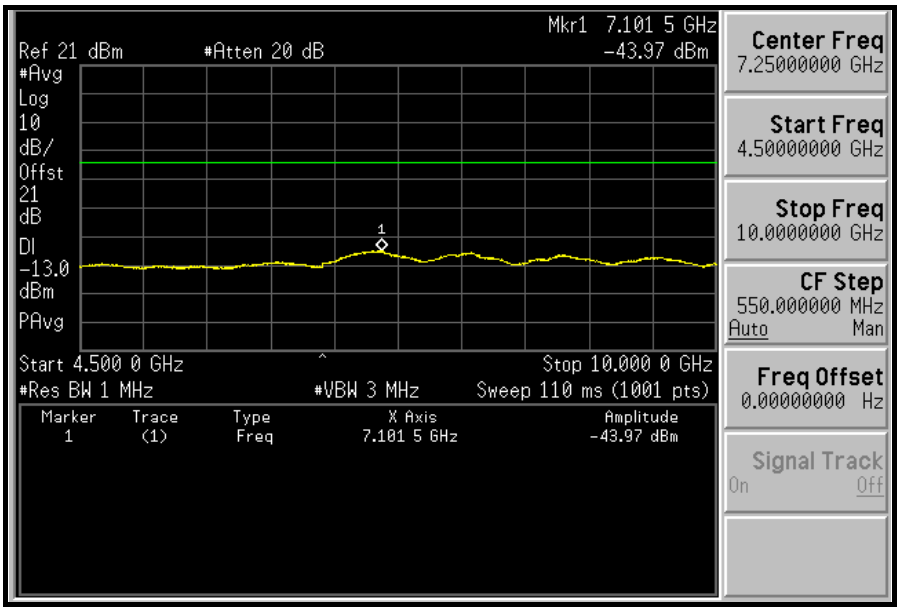
HIGH CHANNEL: 30MHz ~ 1GHz:



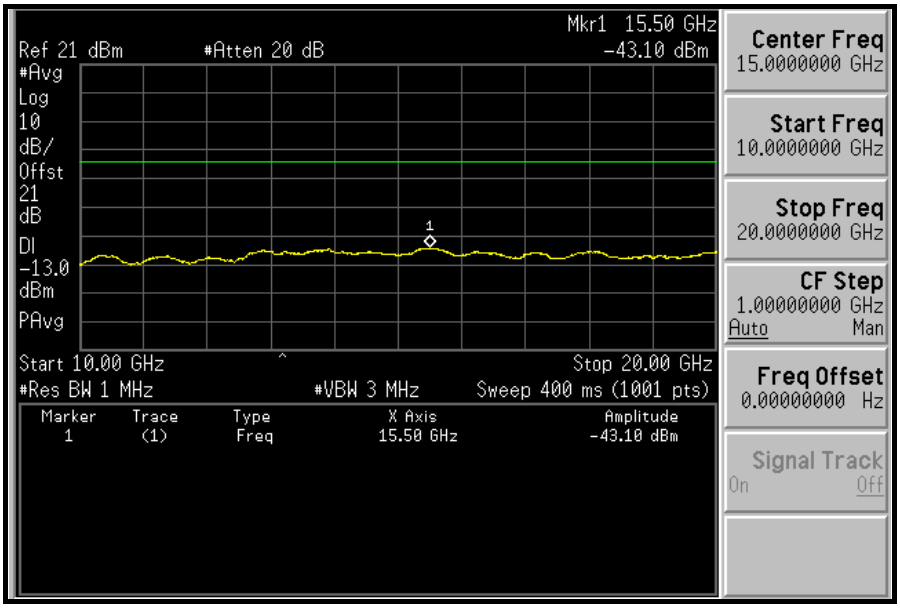
1GHz ~ 4.5GHz:



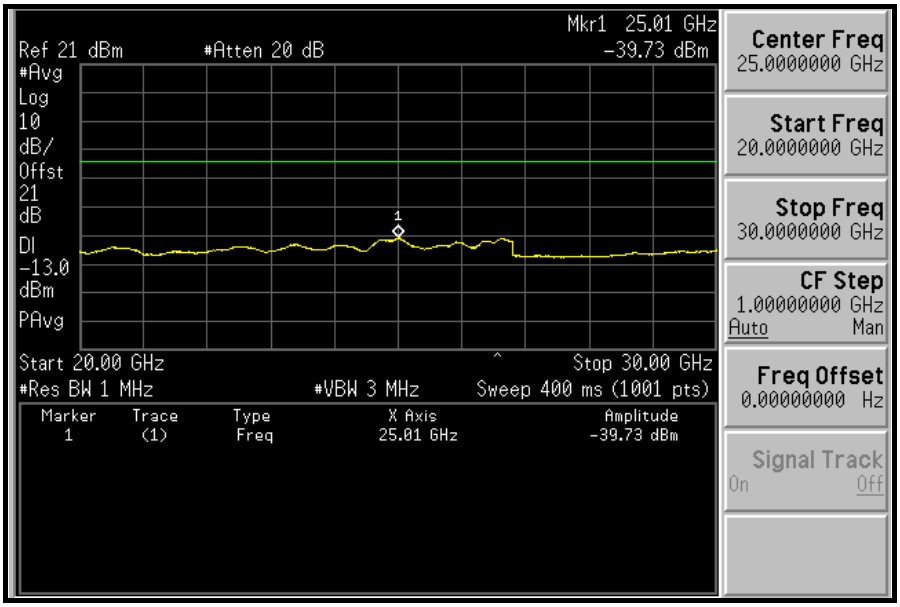
4.5GHz ~ 10GHz:



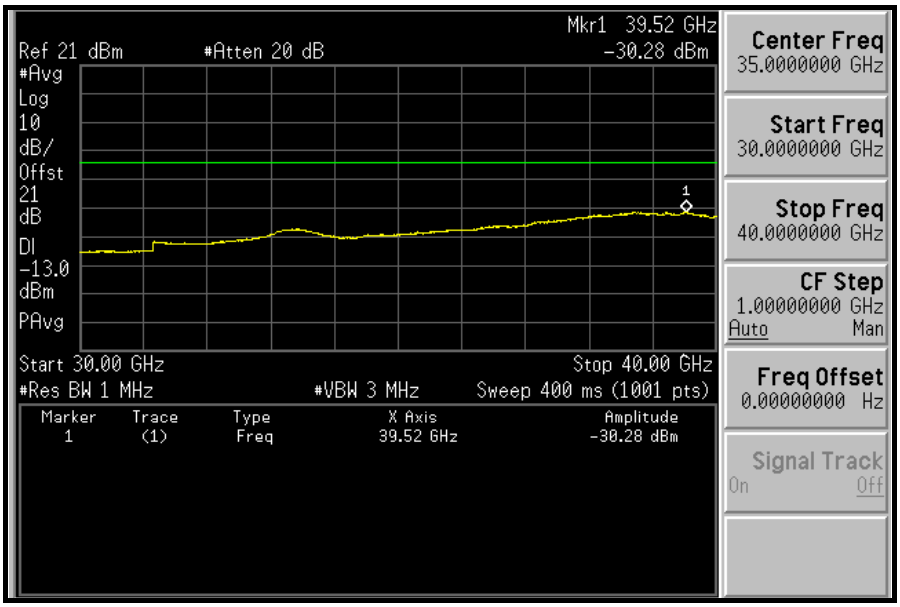
10GHz ~ 20GHz:



20GHz ~ 30GHz:



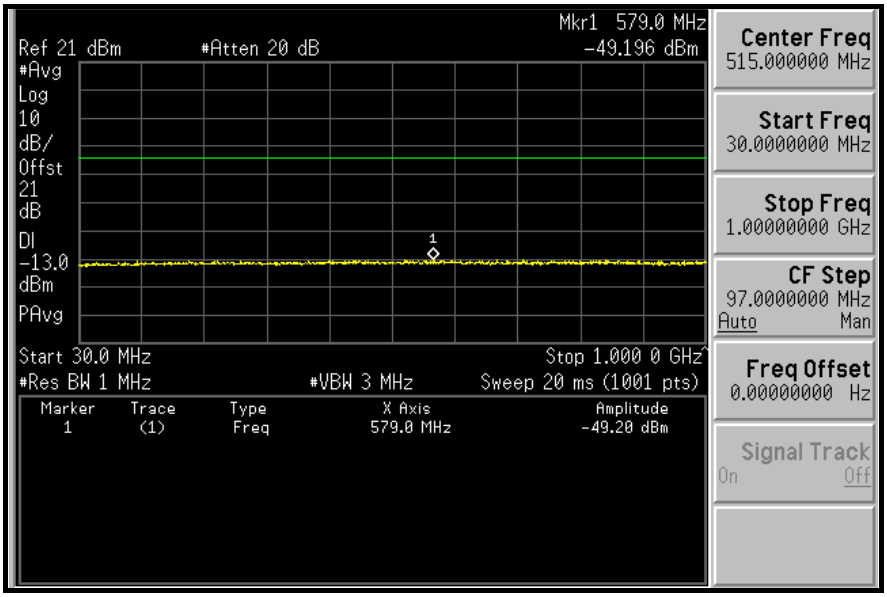
30GHz ~ 40GHz:



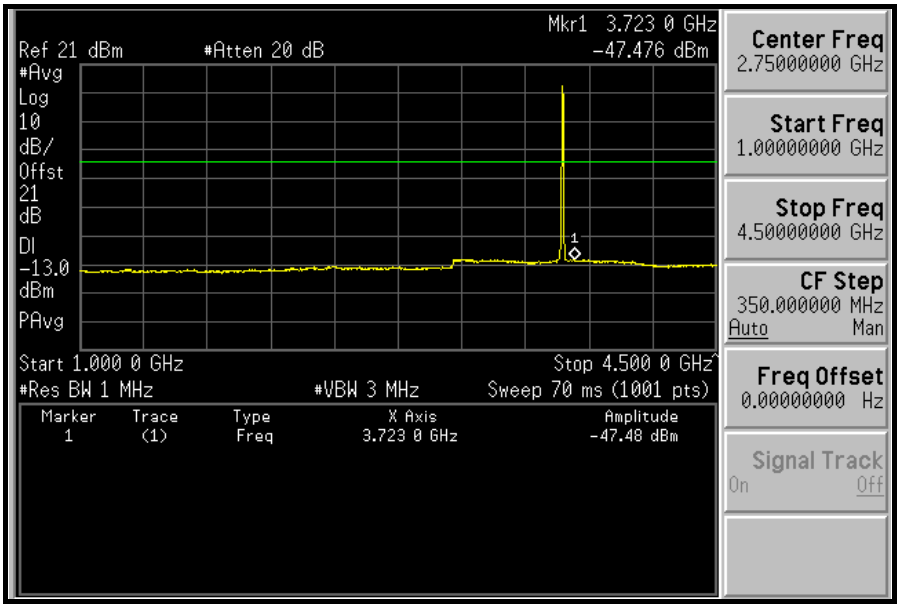
CHANNEL BANDWIDTH: 7MHz

ANTENNA 0

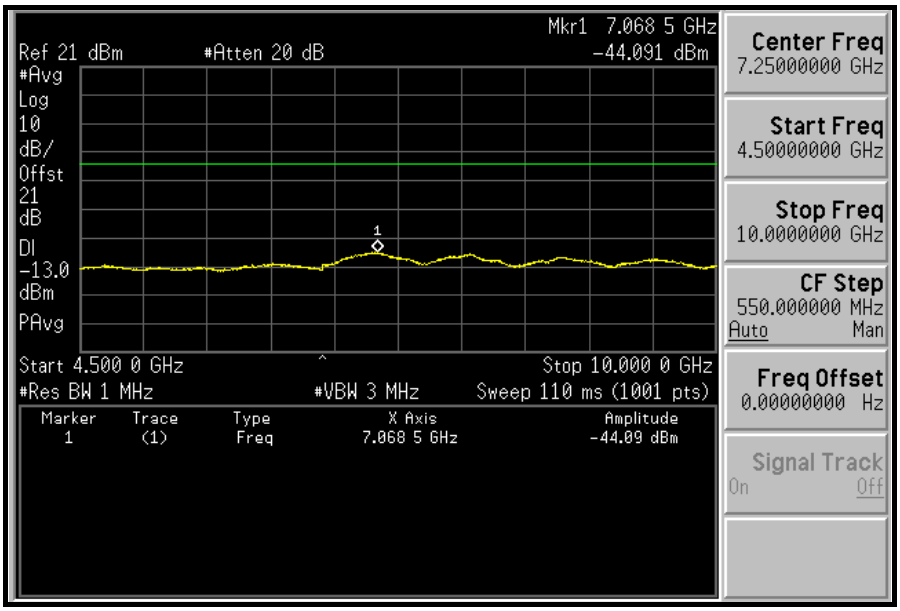
LOW CHANNEL: 30MHz ~ 1GHz:



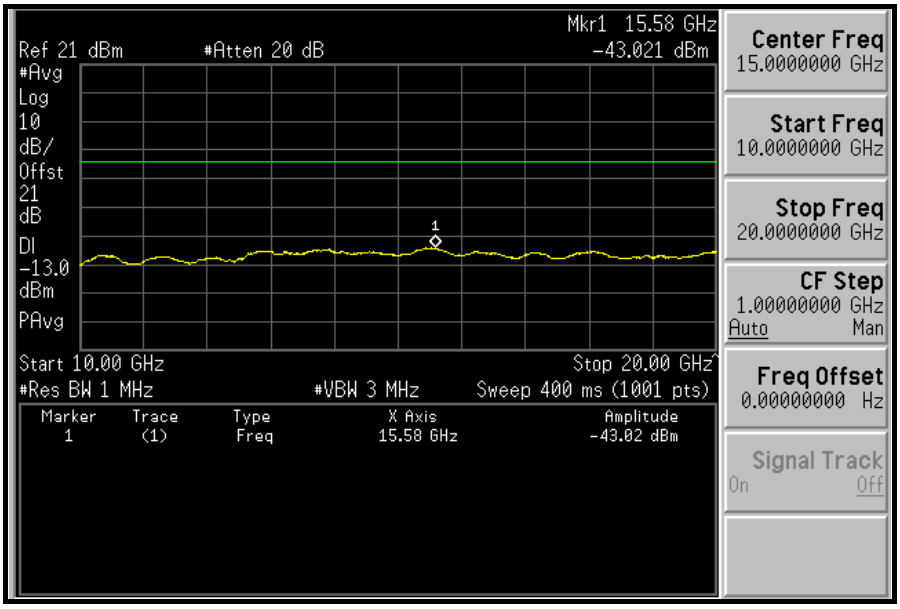
1GHz ~ 4.5GHz:



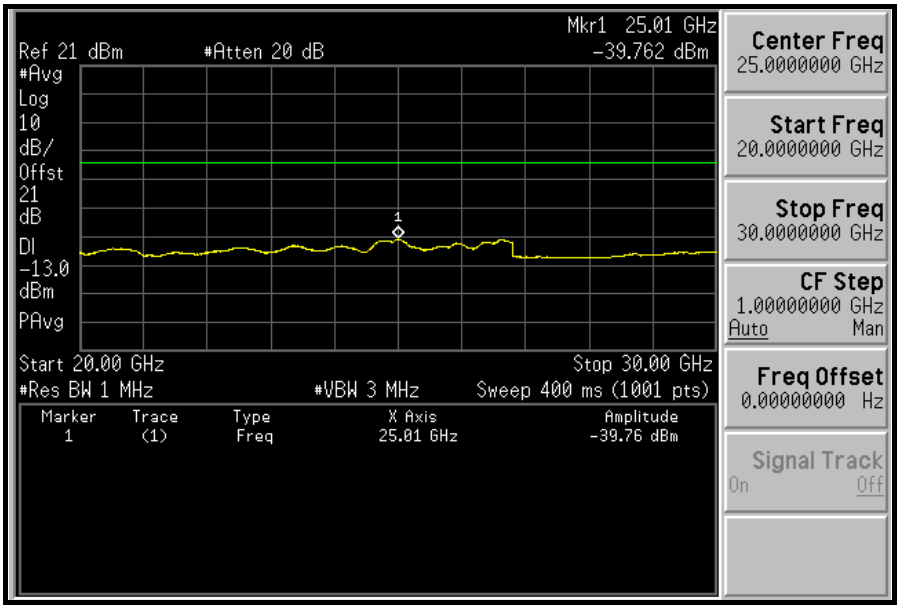
4.5GHz ~ 10GHz:



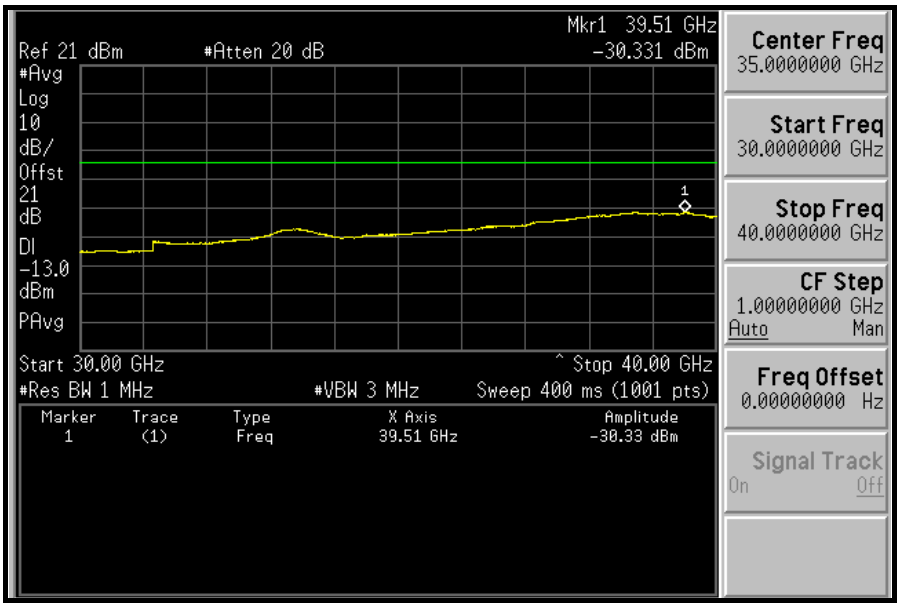
10GHz ~ 20GHz:



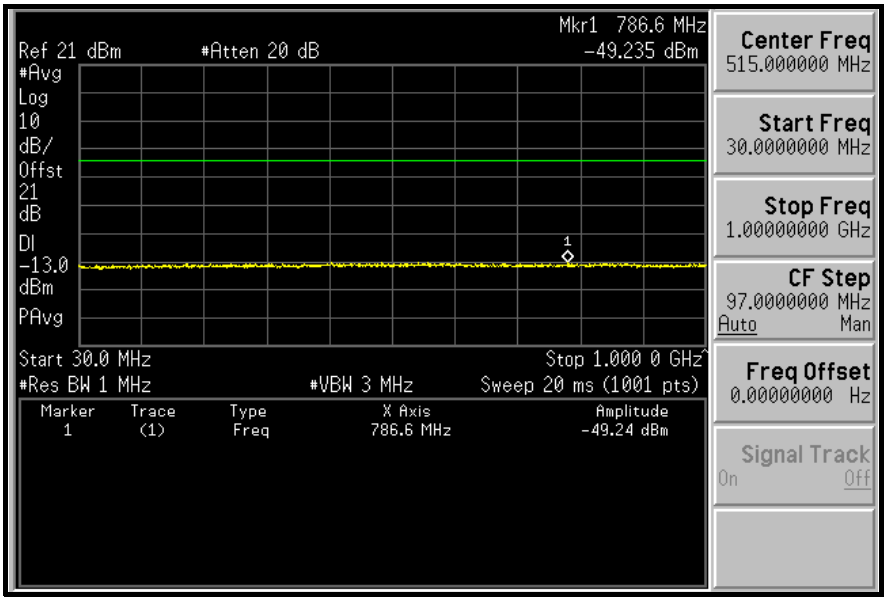
20GHz ~ 30GHz:



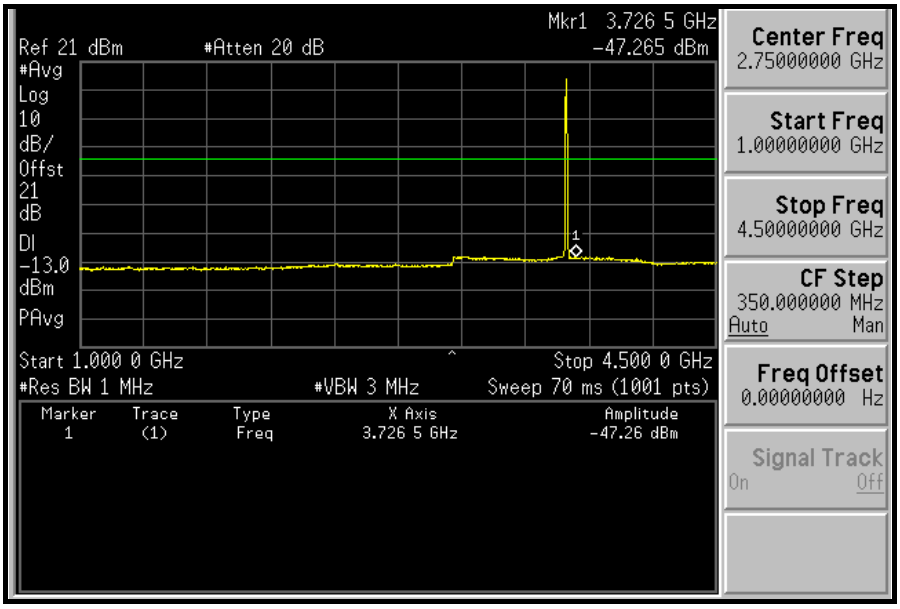
30GHz ~ 40GHz:



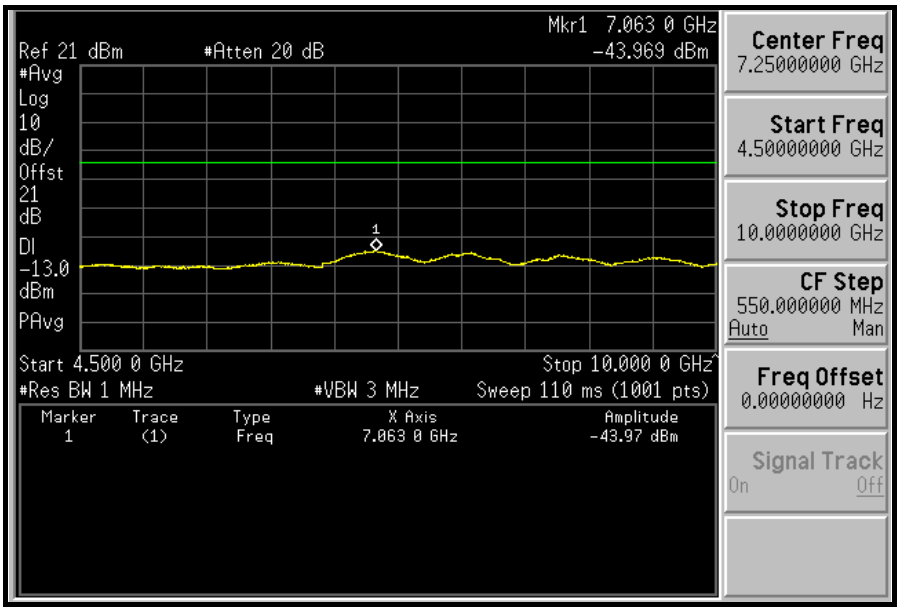
MIDDLE CHANNEL: 30MHz ~ 1GHz:



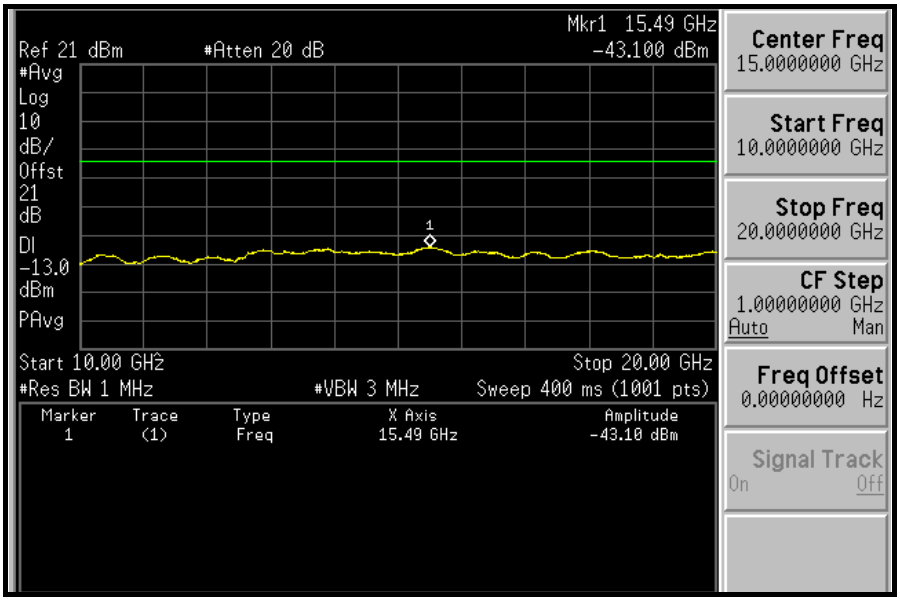
1GHz ~ 4.5GHz:



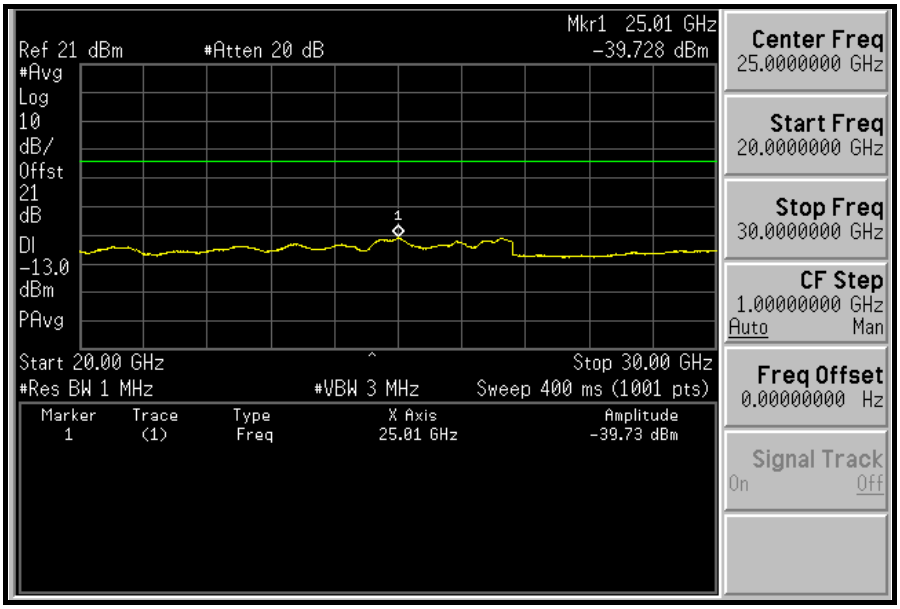
4.5GHz ~ 10GHz:



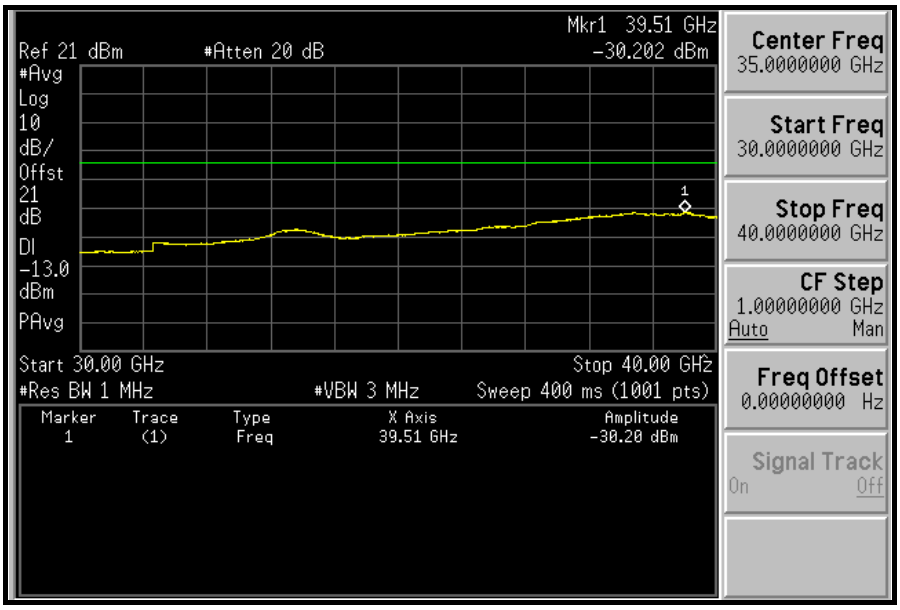
10GHz ~ 20GHz:



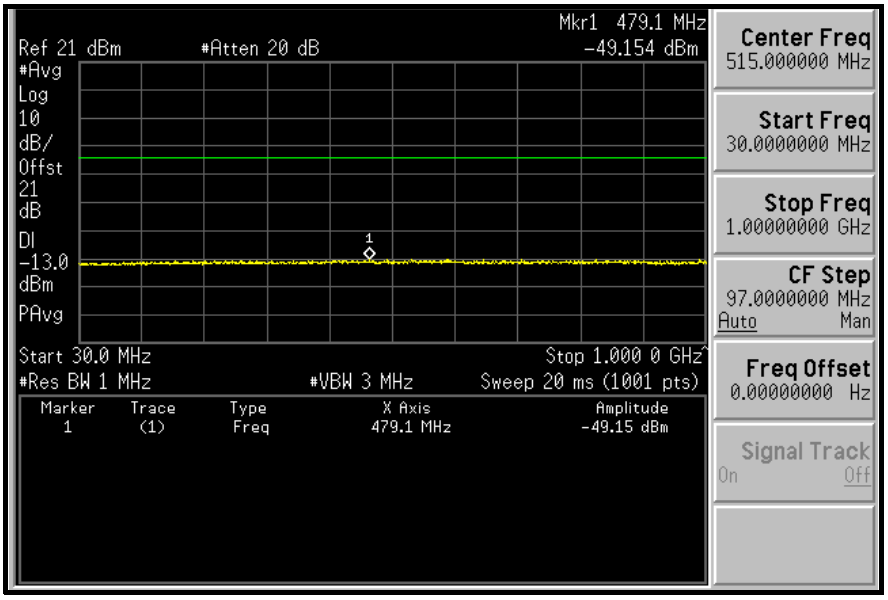
20GHz ~ 30GHz:



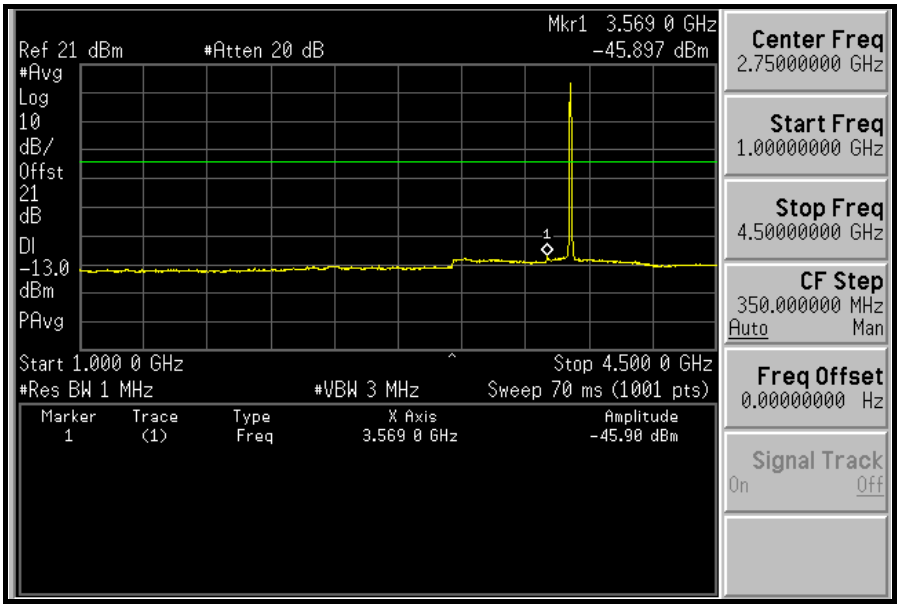
30GHz ~ 40GHz:



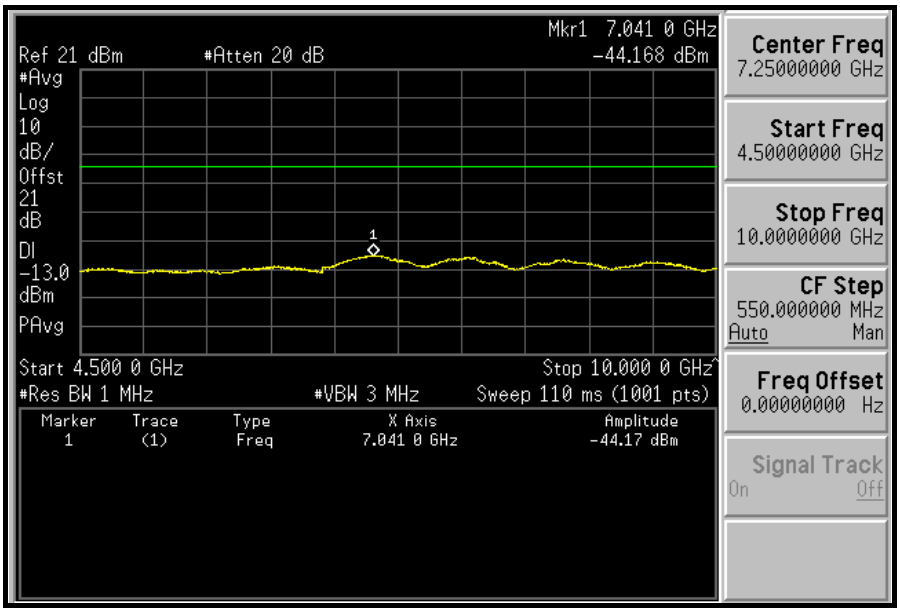
HIGH CHANNEL: 30MHz ~ 1GHz:



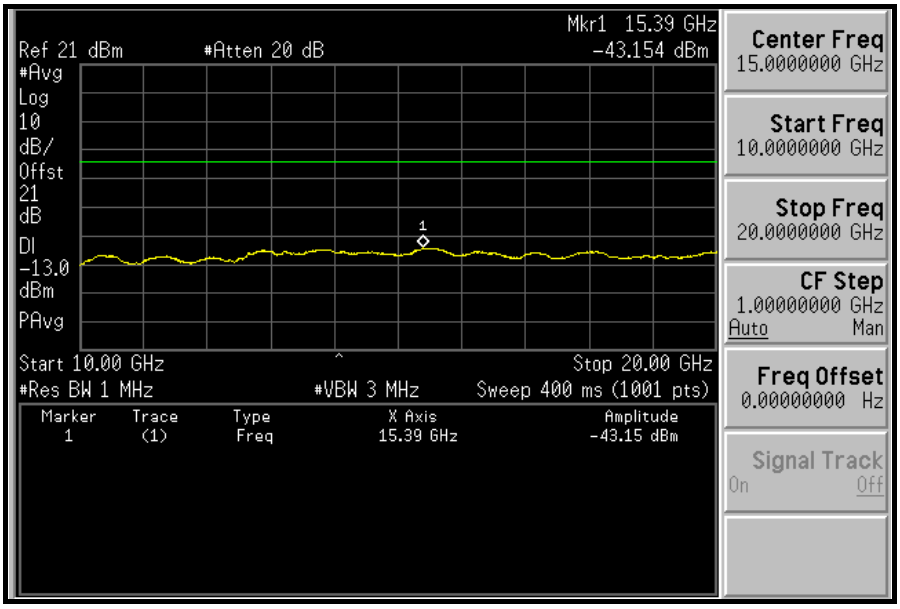
1GHz ~ 4.5GHz:



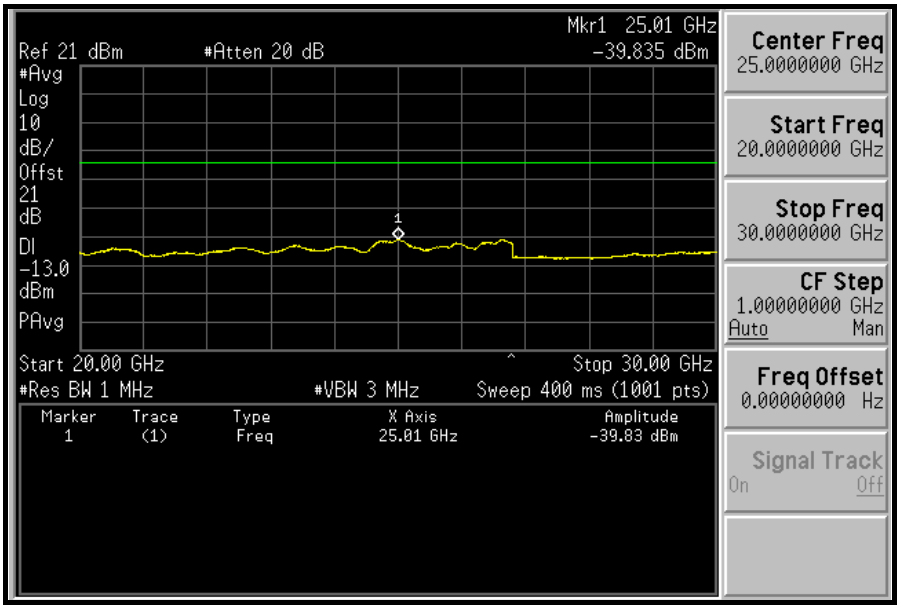
4.5GHz ~ 10GHz:



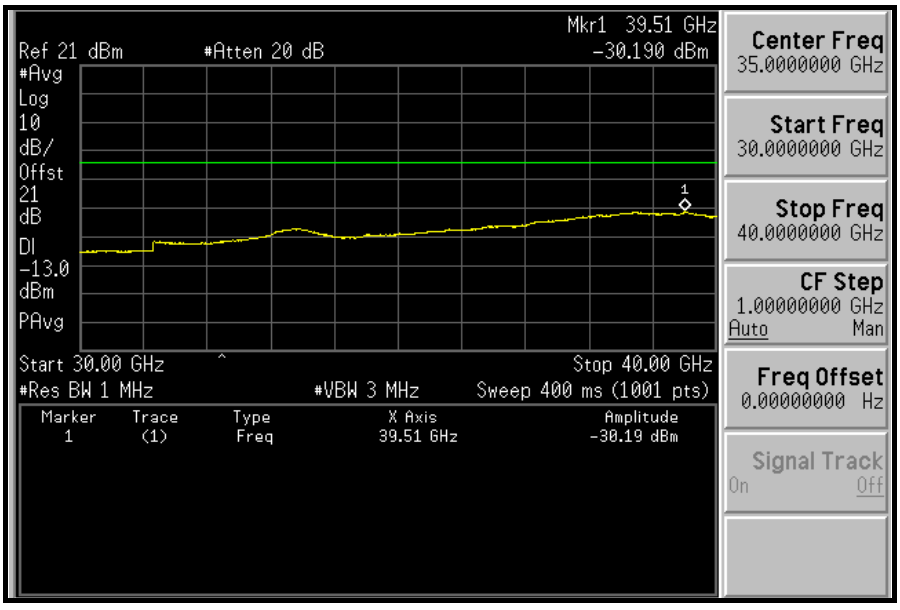
10GHz ~ 20GHz:



20GHz ~ 30GHz:

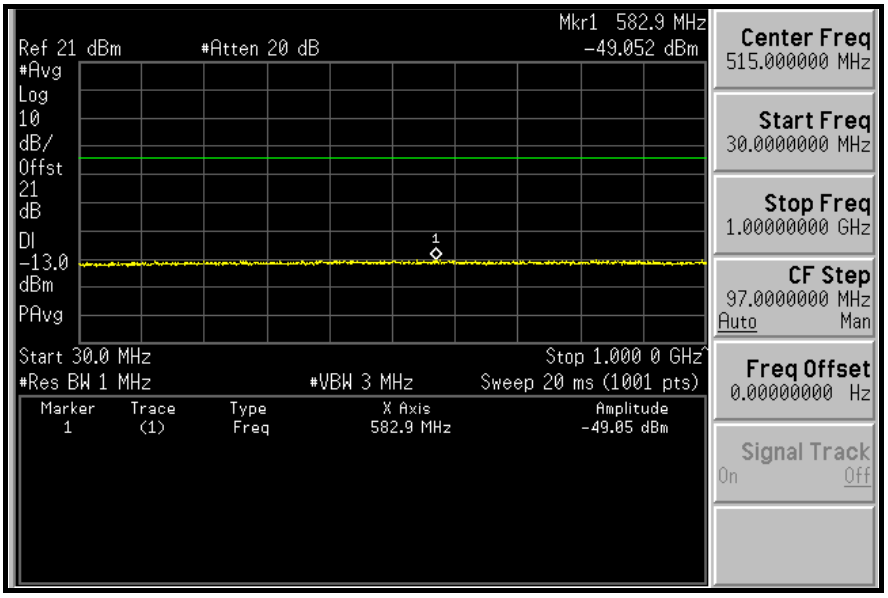


30GHz ~ 40GHz:

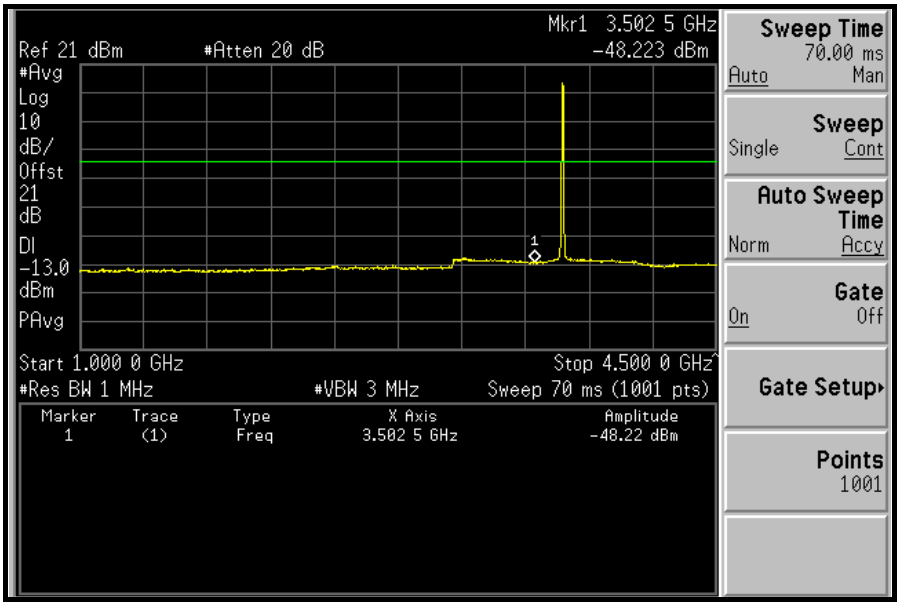


ANTENNA 1

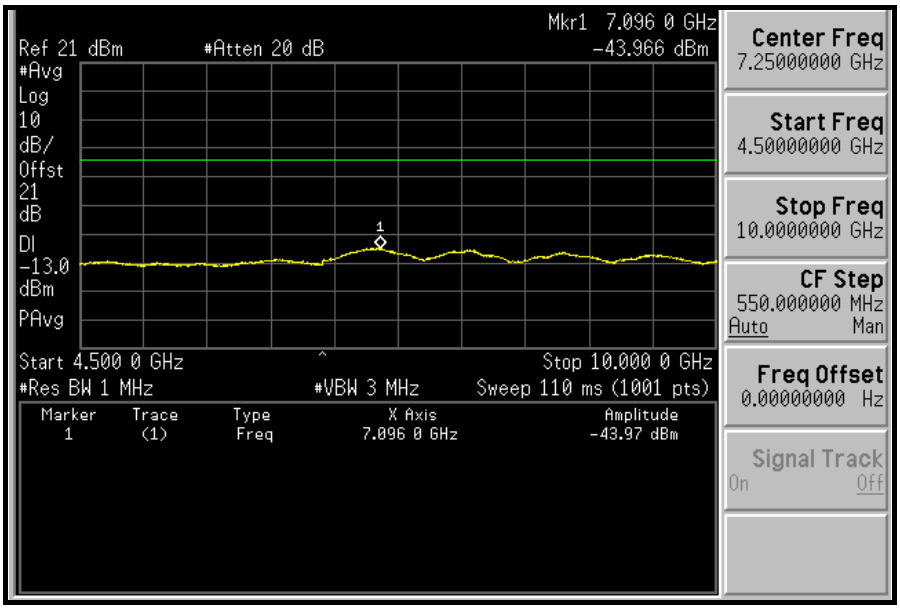
LOW CHANNEL: 30MHz ~ 1GHz:



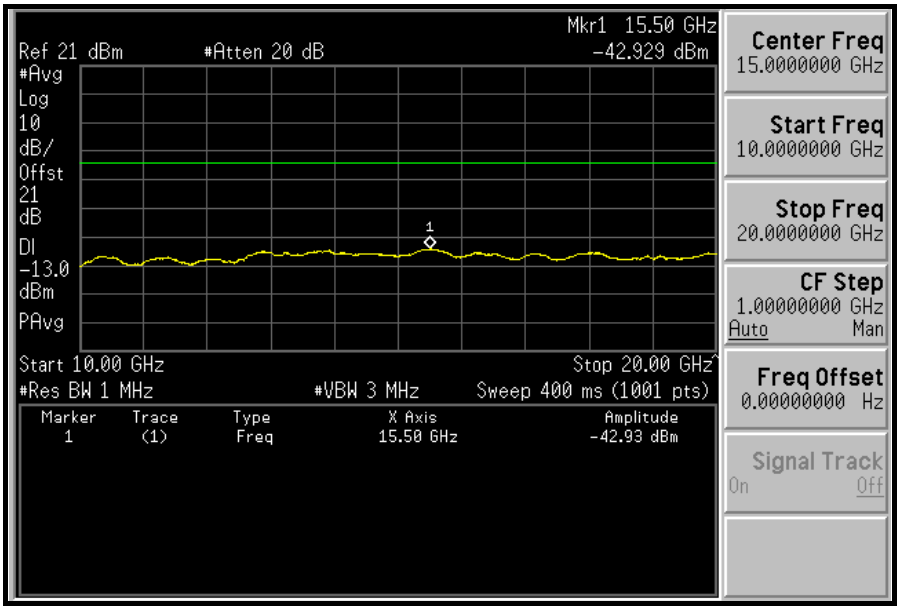
1GHz ~ 4.5GHz:



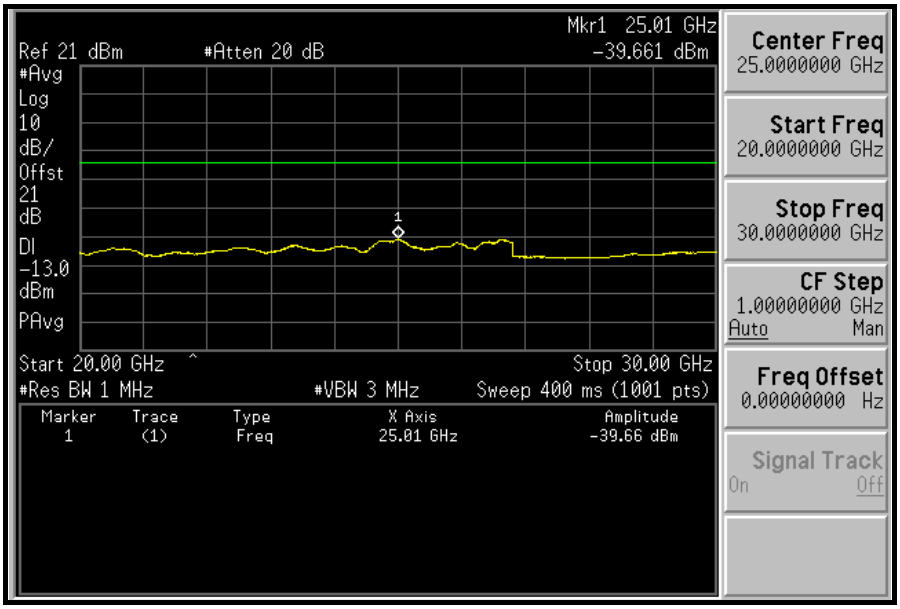
4.5GHz ~ 10GHz:



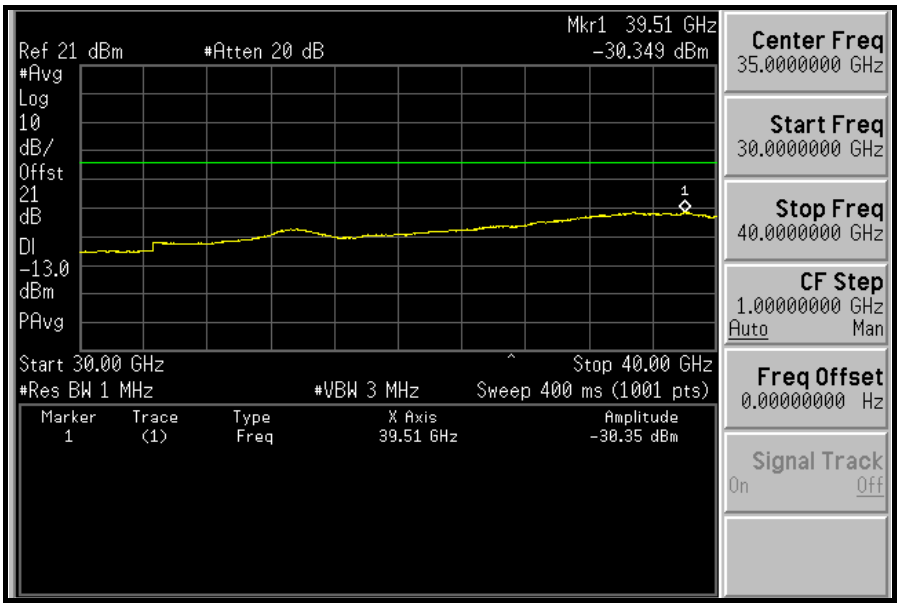
10GHz ~ 20GHz:



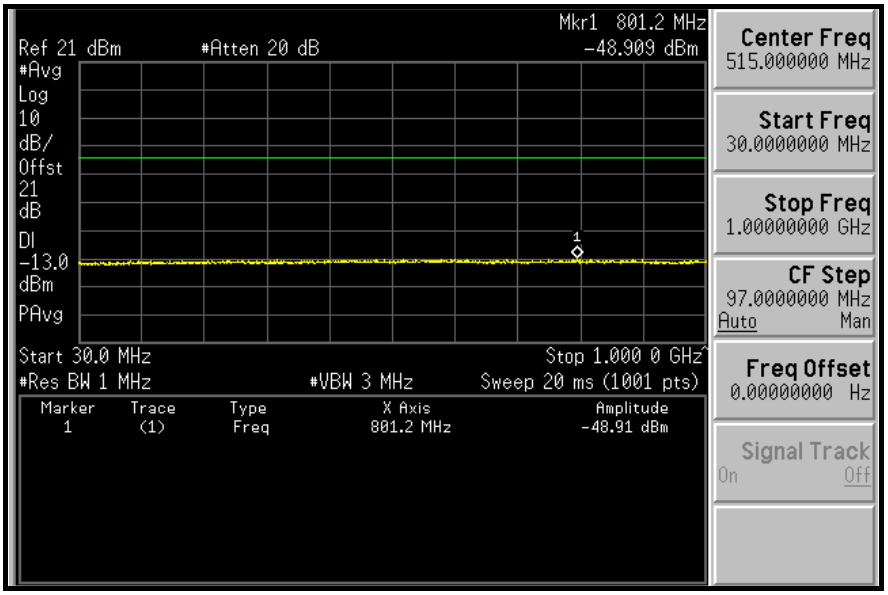
20GHz ~ 30GHz:



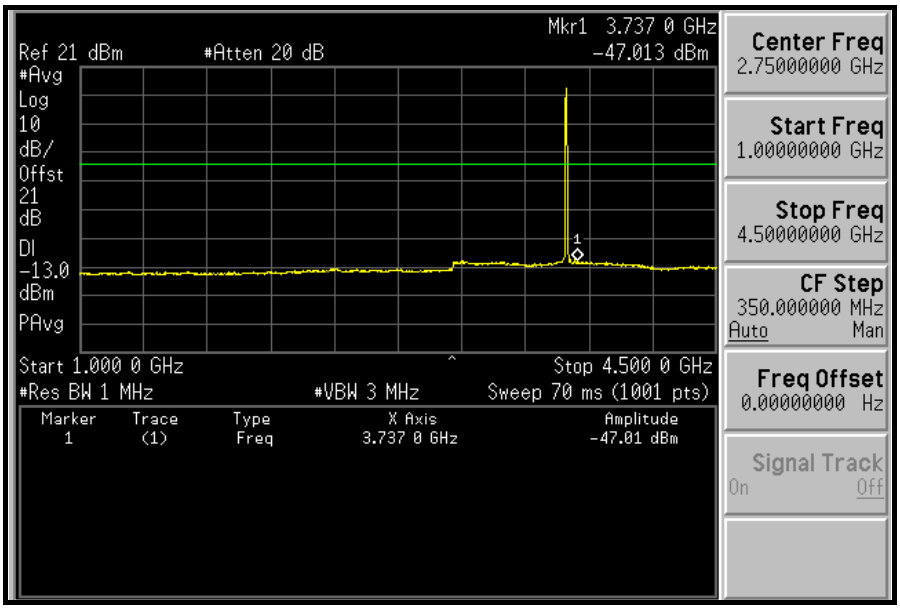
30GHz ~ 40GHz:



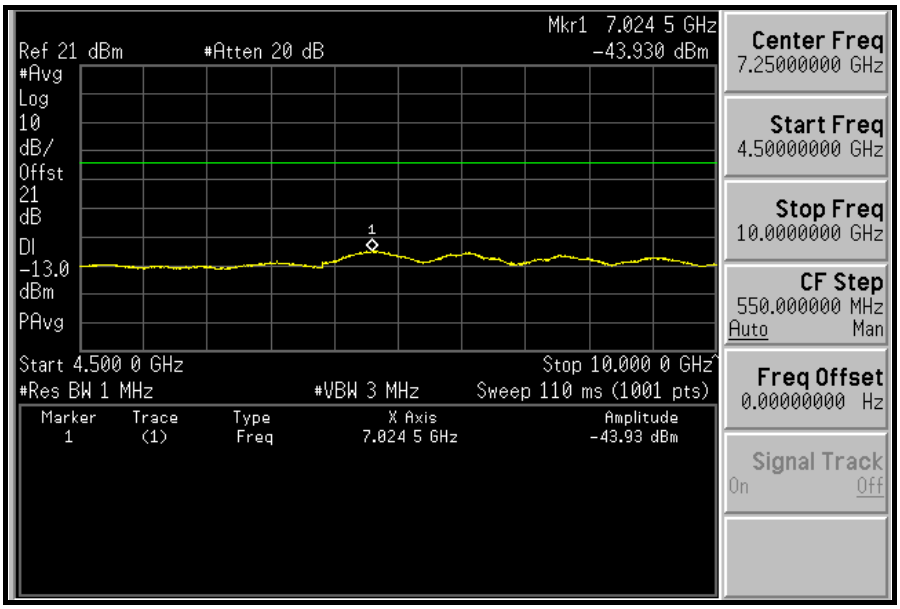
MIDDLE CHANNEL: 30MHz ~ 1GHz:



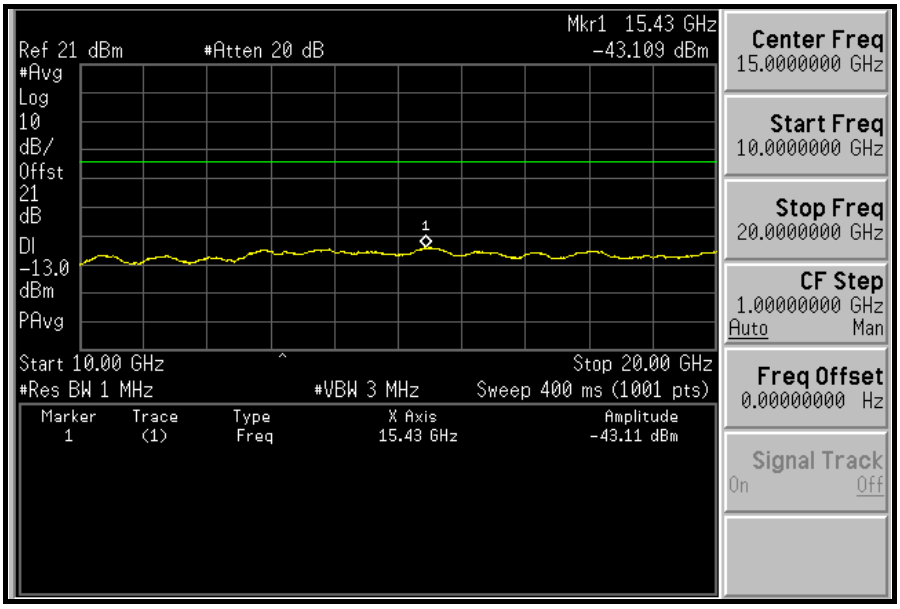
1GHz ~ 4.5GHz:



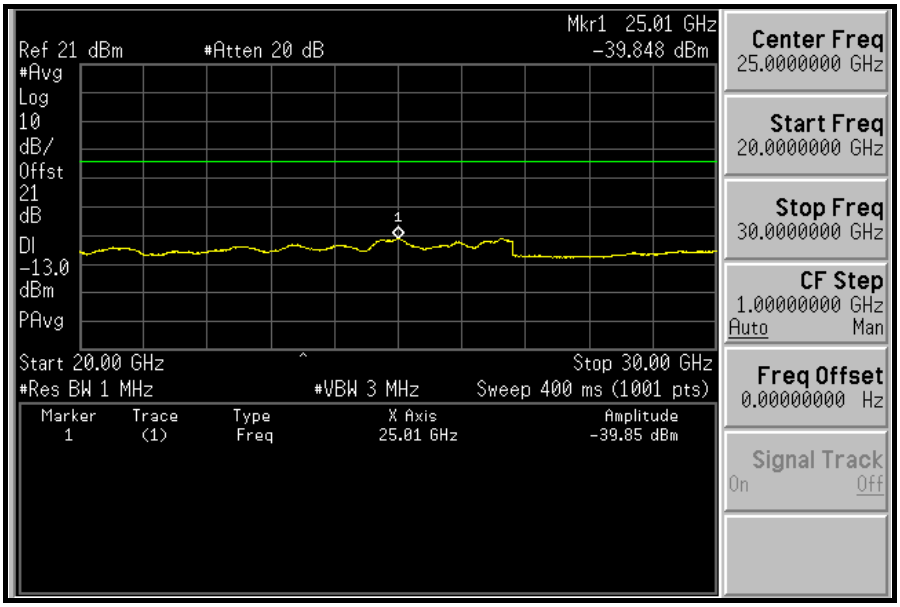
4.5GHz ~ 10GHz:



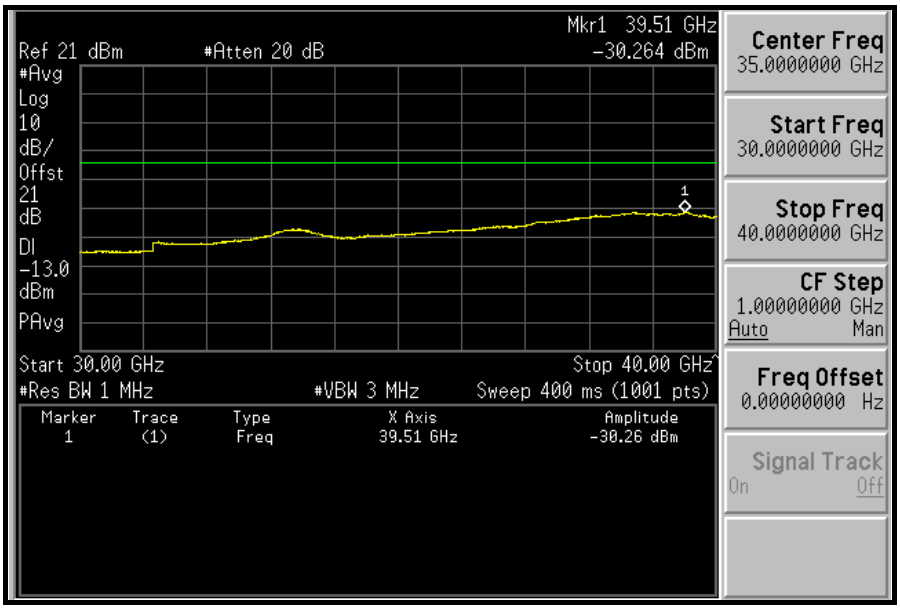
10GHz ~ 20GHz:



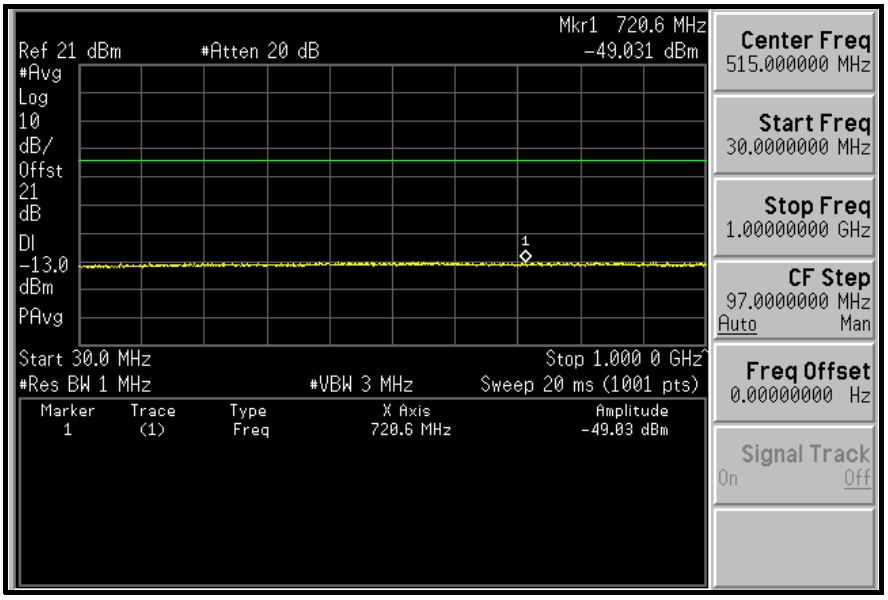
20GHz ~ 30GHz:



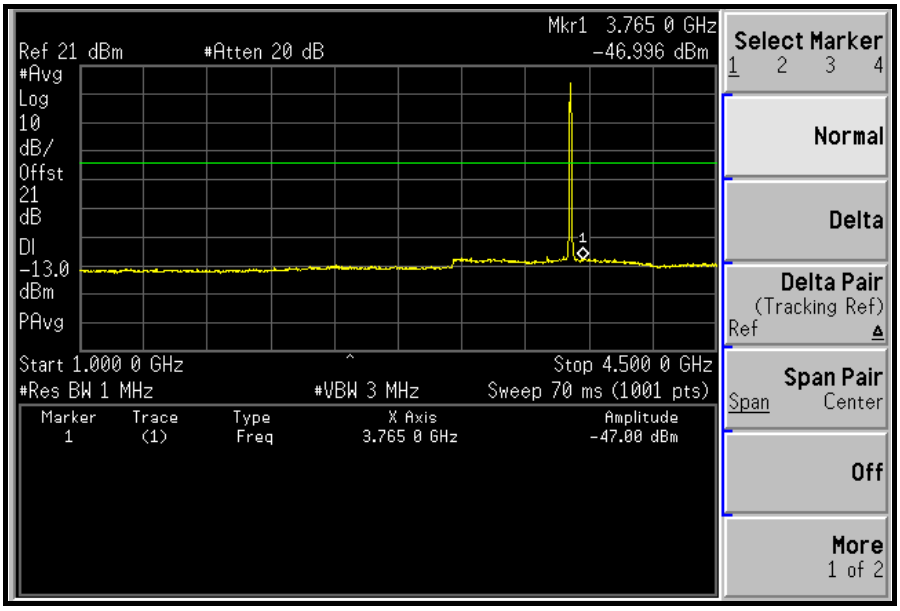
30GHz ~ 40GHz:



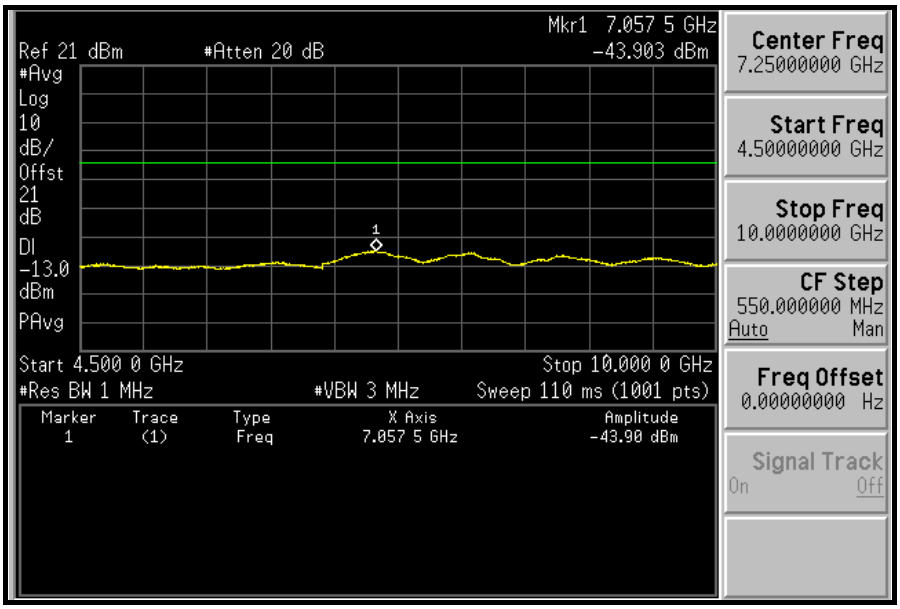
HIGH CHANNEL: 30MHz ~ 1GHz:



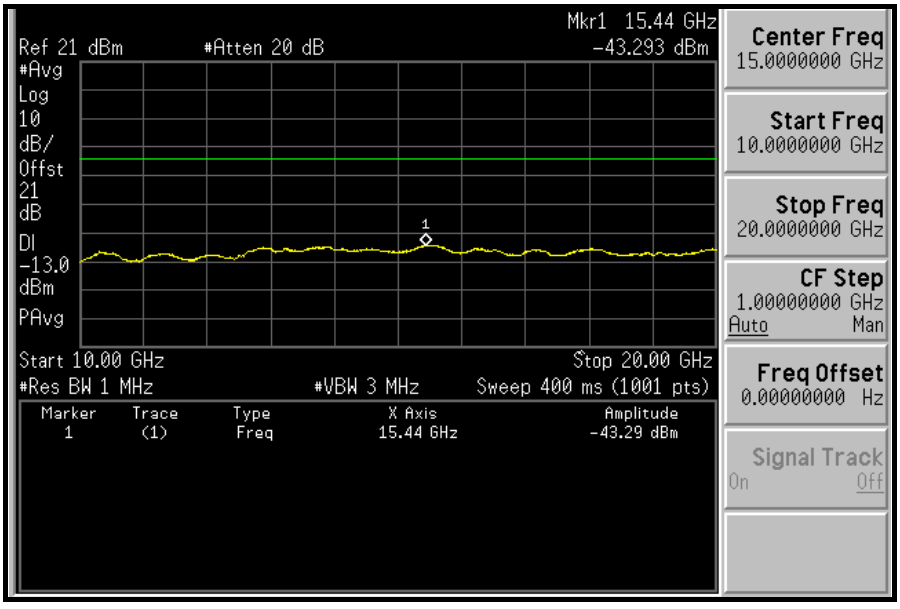
1GHz ~ 4.5GHz:



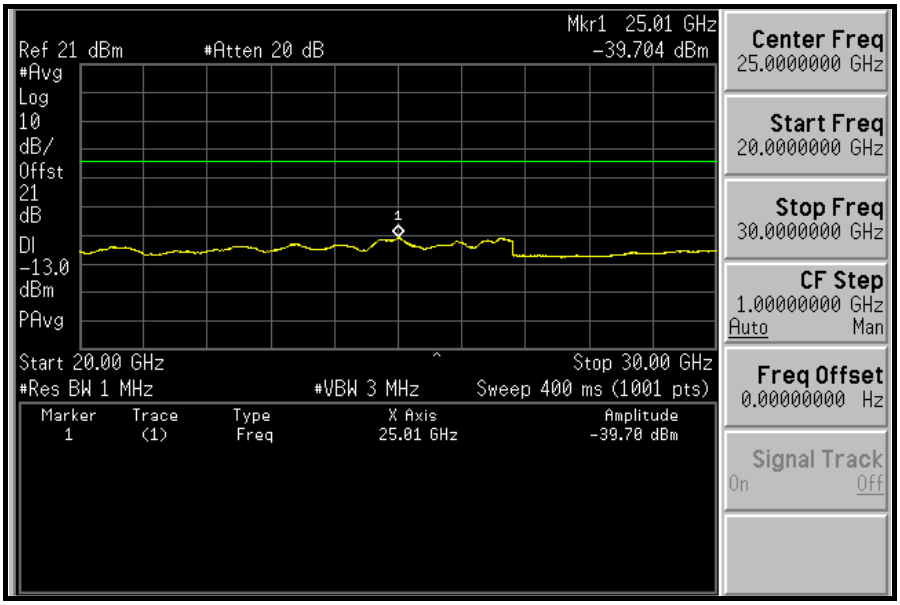
4.5GHz ~ 10GHz:



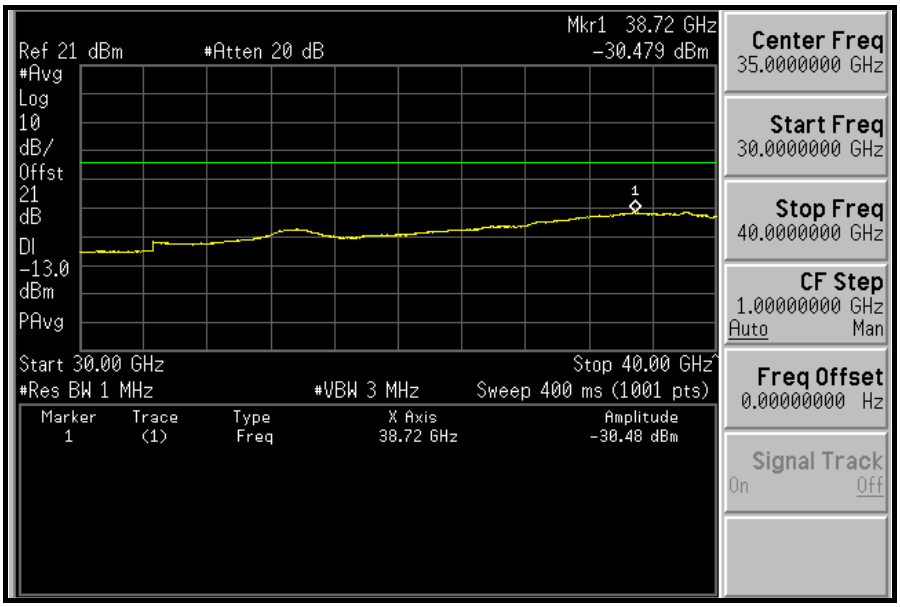
10GHz ~ 20GHz:



20GHz ~ 30GHz:



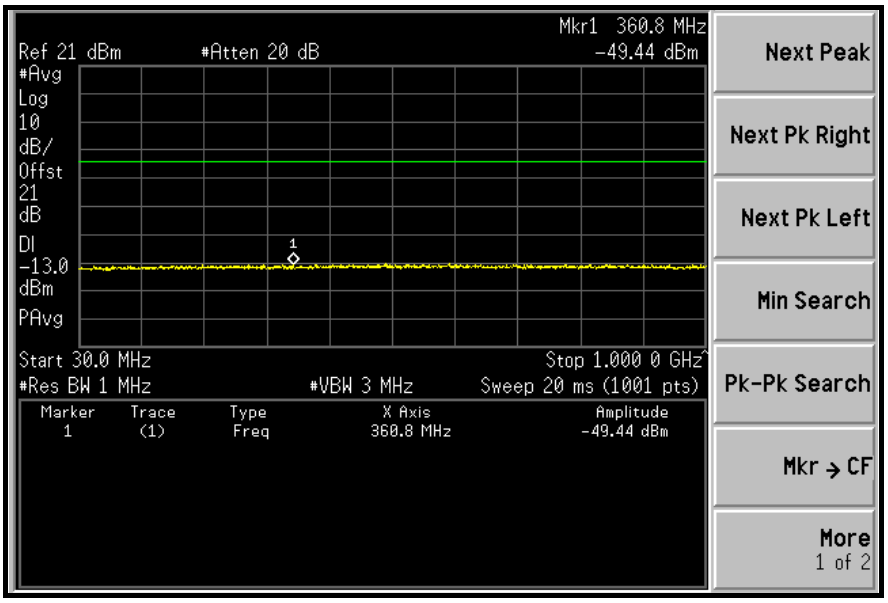
30GHz ~ 40GHz:



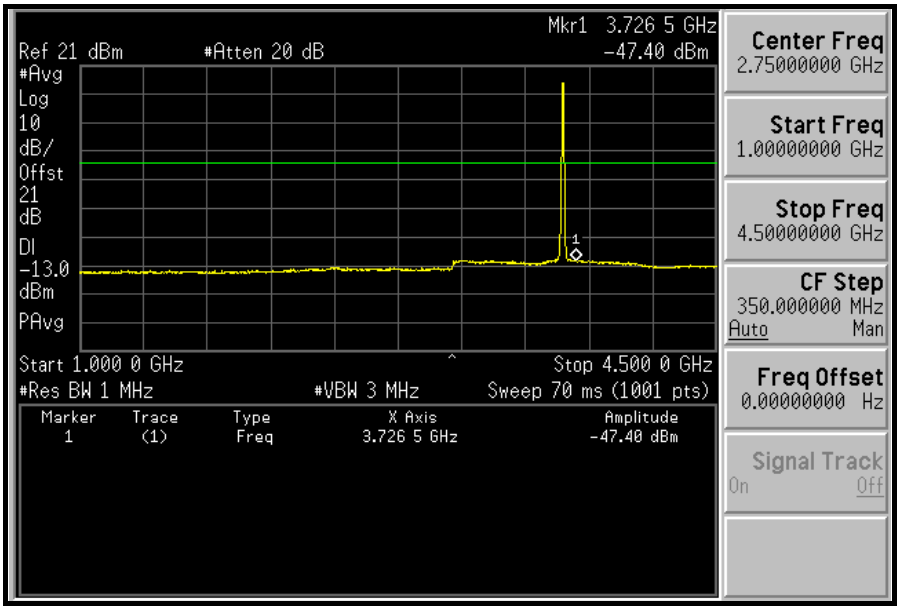
CHANNEL BANDWIDTH: 10MHz

ANTENNA 0

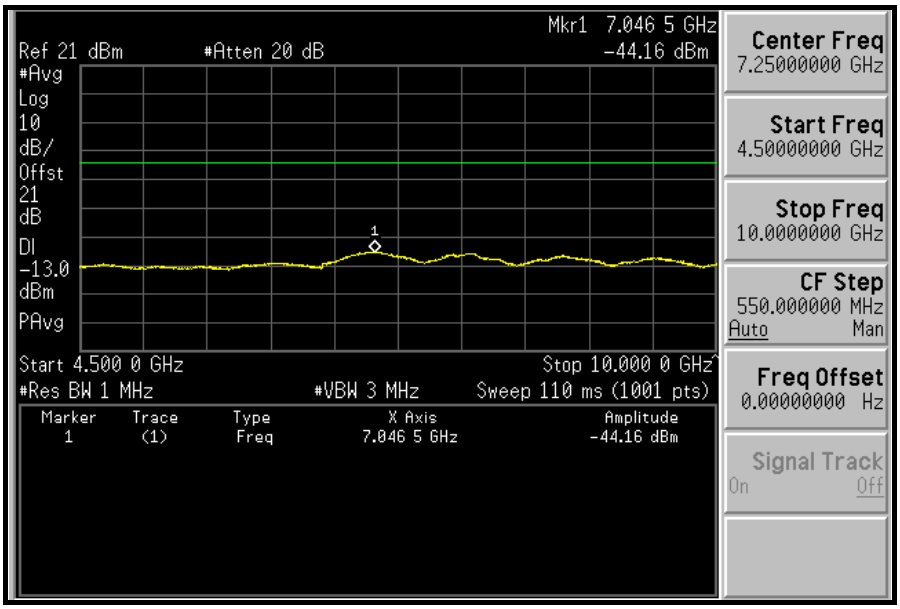
LOW CHANNEL: 30MHz ~ 1GHz:



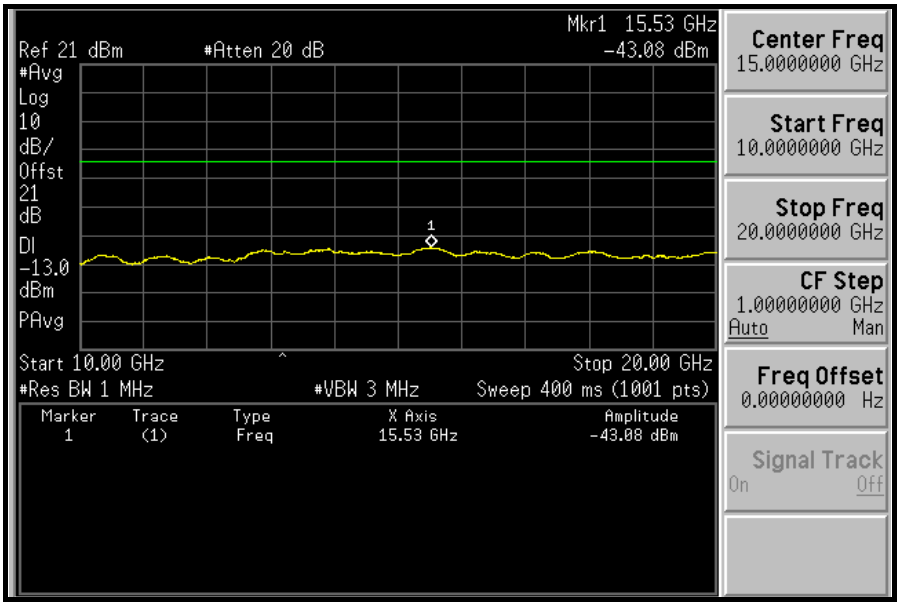
1GHz ~ 4.5GHz:



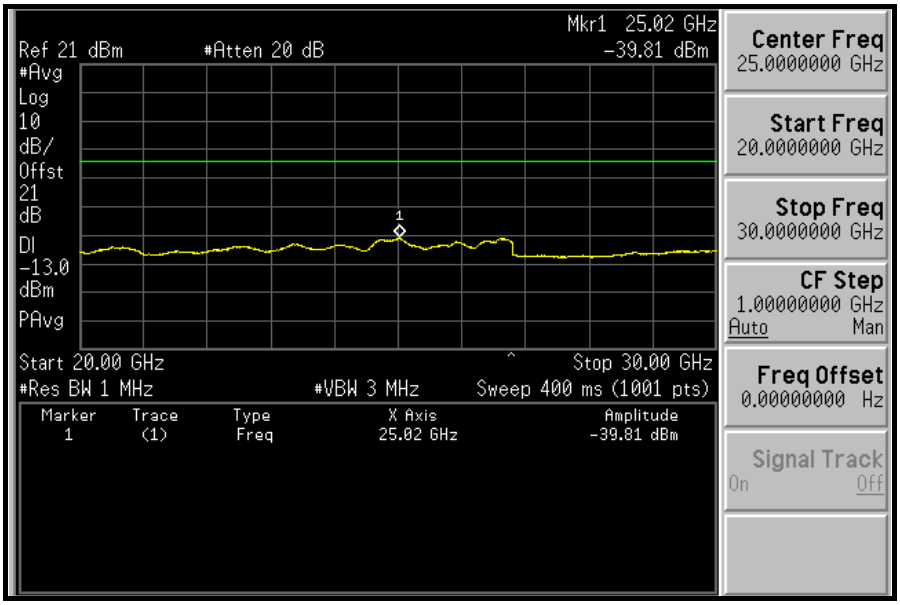
4.5GHz ~ 10GHz:



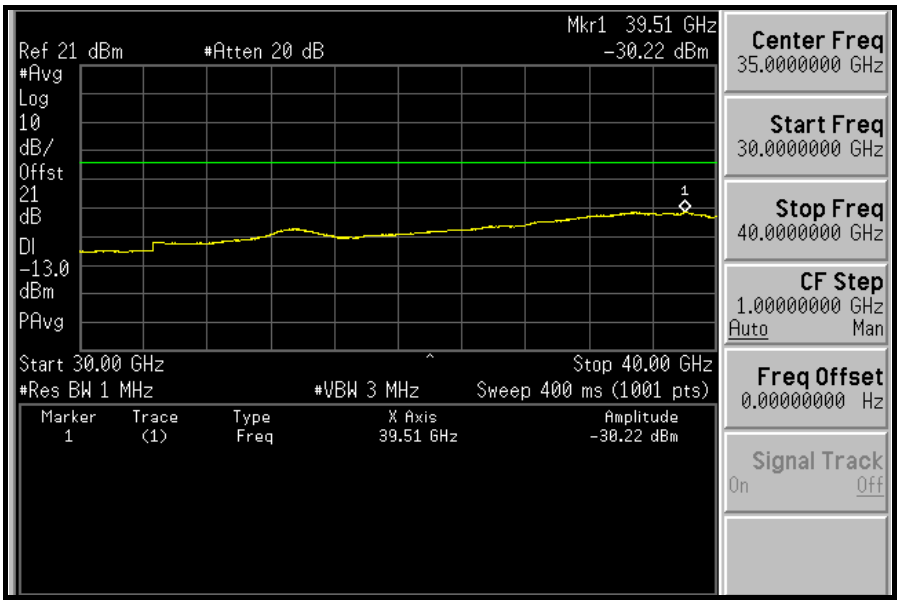
10GHz ~ 20GHz:



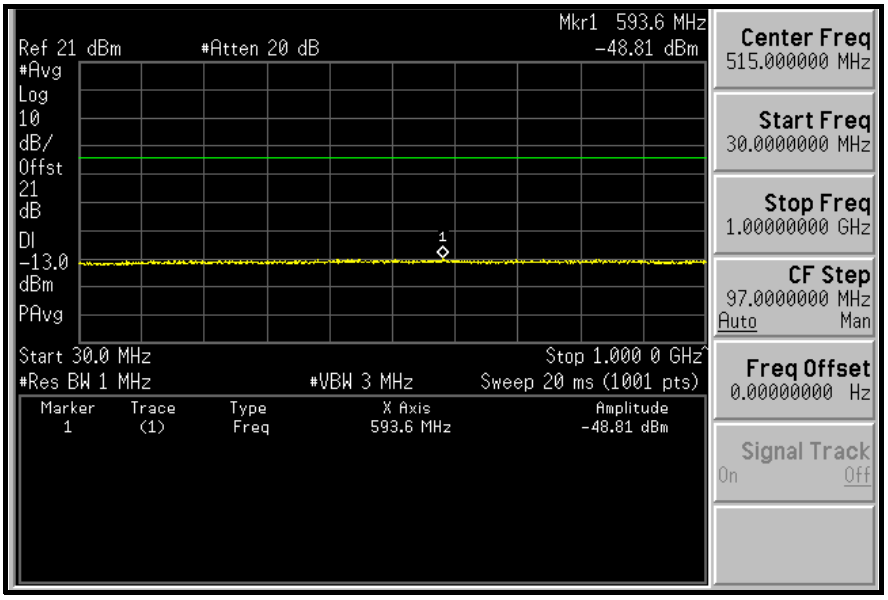
20GHz ~ 30GHz:



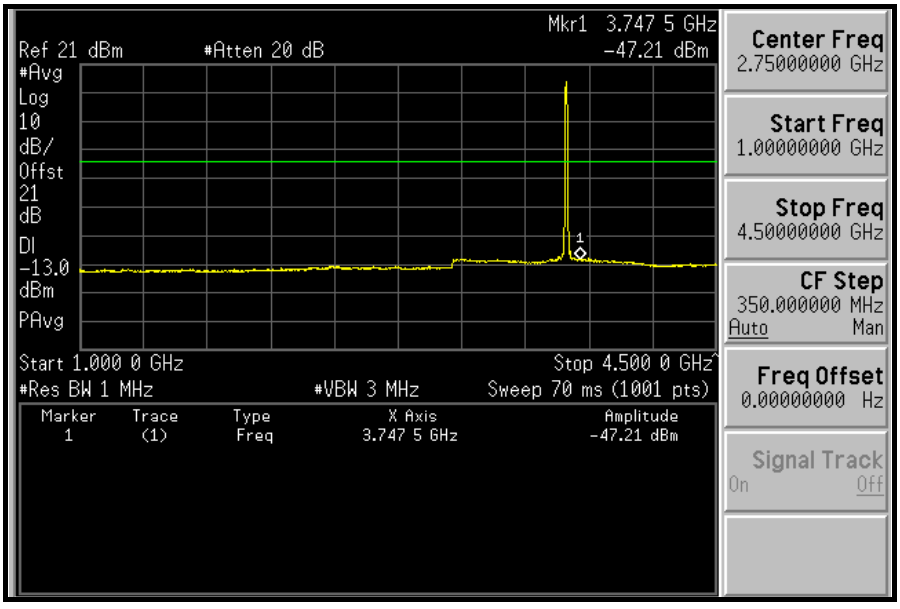
30GHz ~ 40GHz:



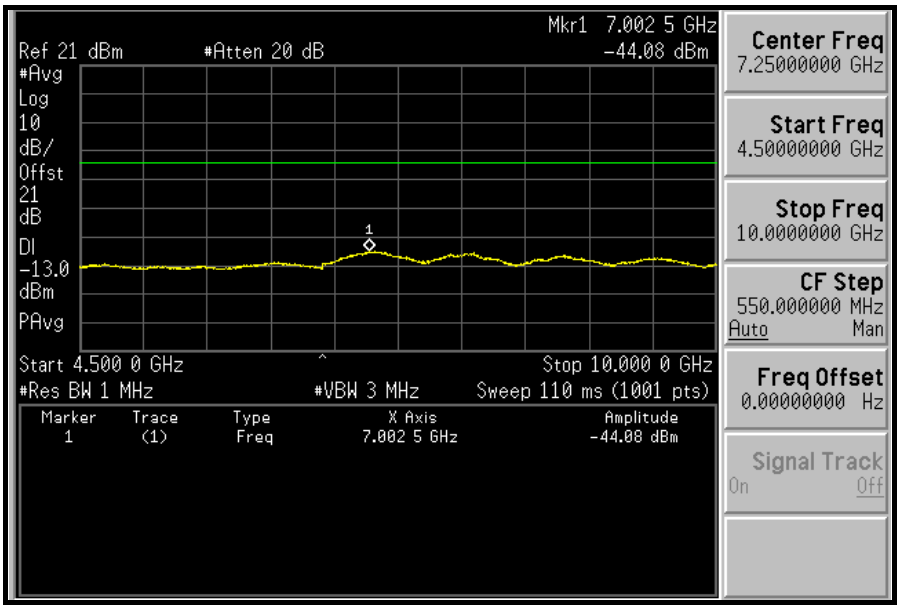
MIDDLE CHANNEL: 30MHz ~ 1GHz:



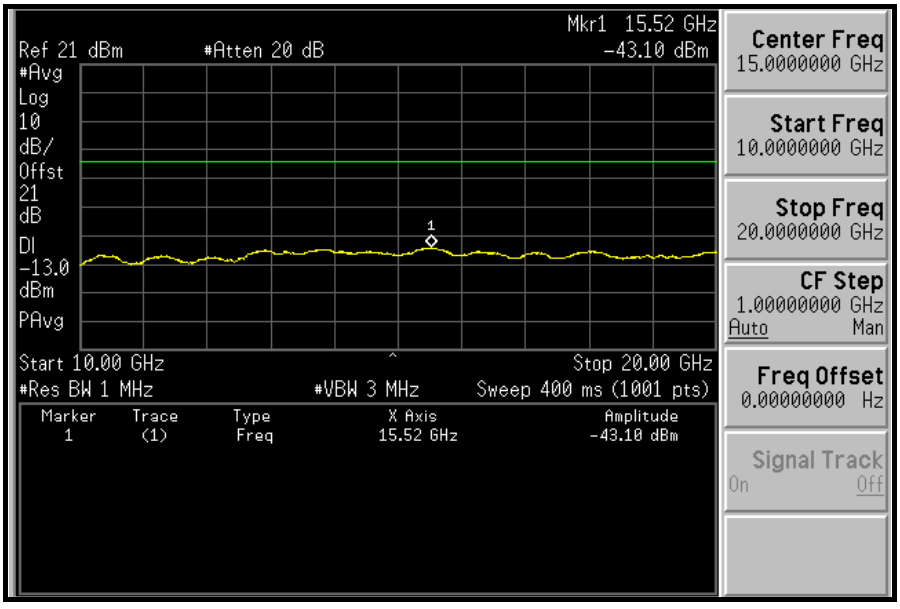
1GHz ~ 4.5GHz:



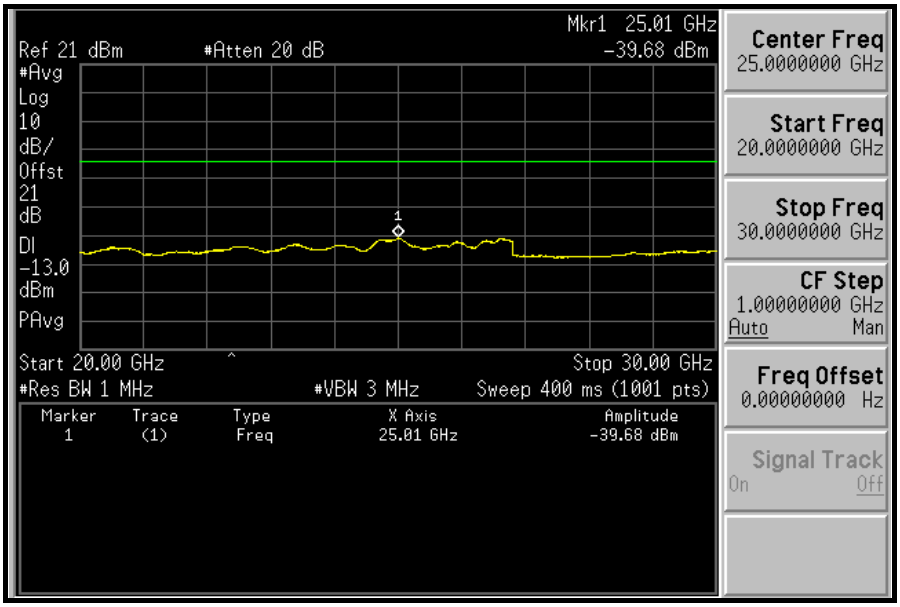
4.5GHz ~ 10GHz:



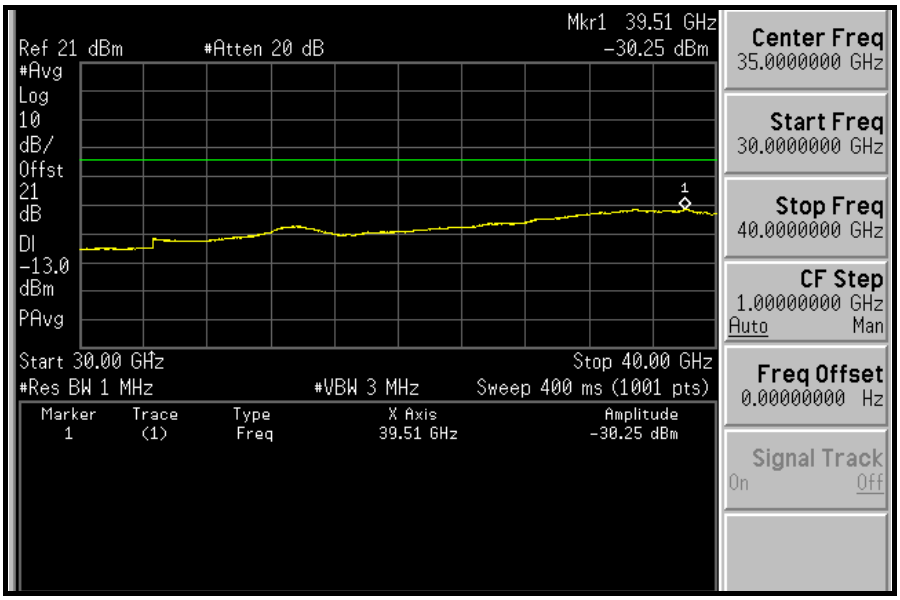
10GHz ~ 20GHz:



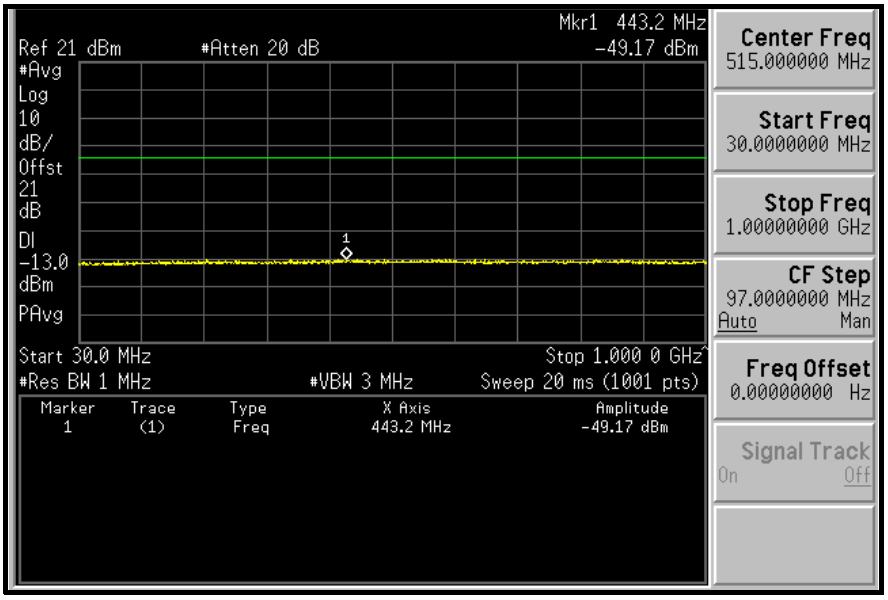
20GHz ~ 30GHz:



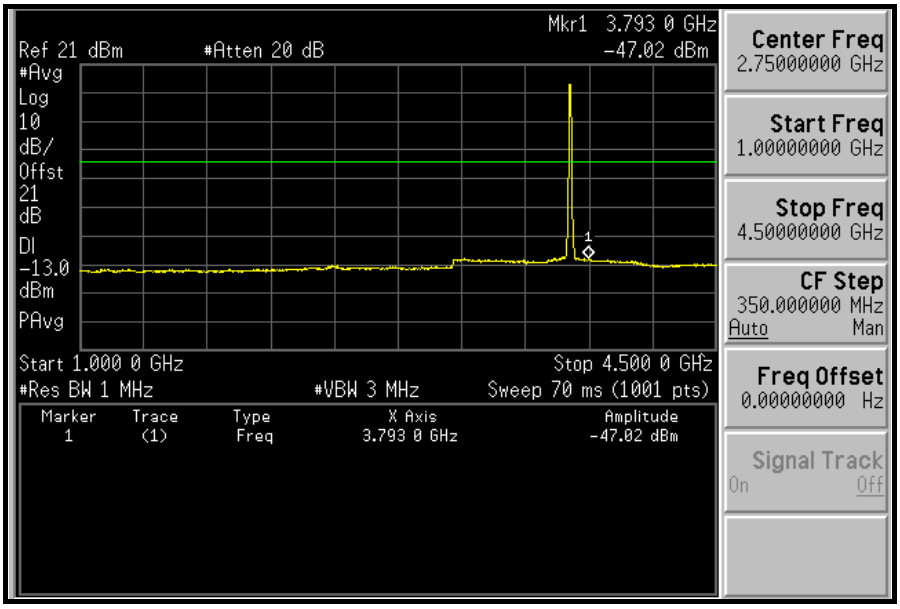
30GHz ~ 40GHz:



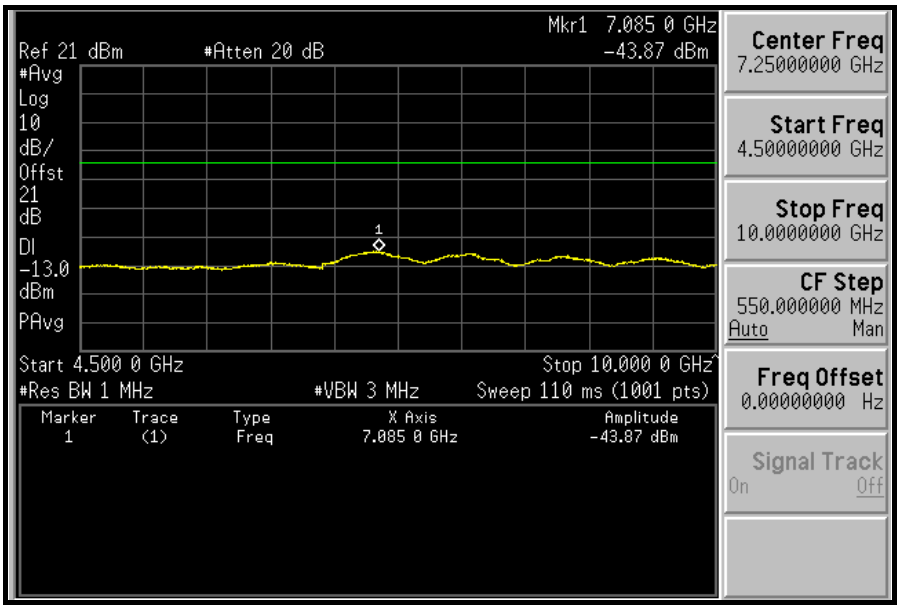
HIGH CHANNEL: 30MHz ~ 1GHz:



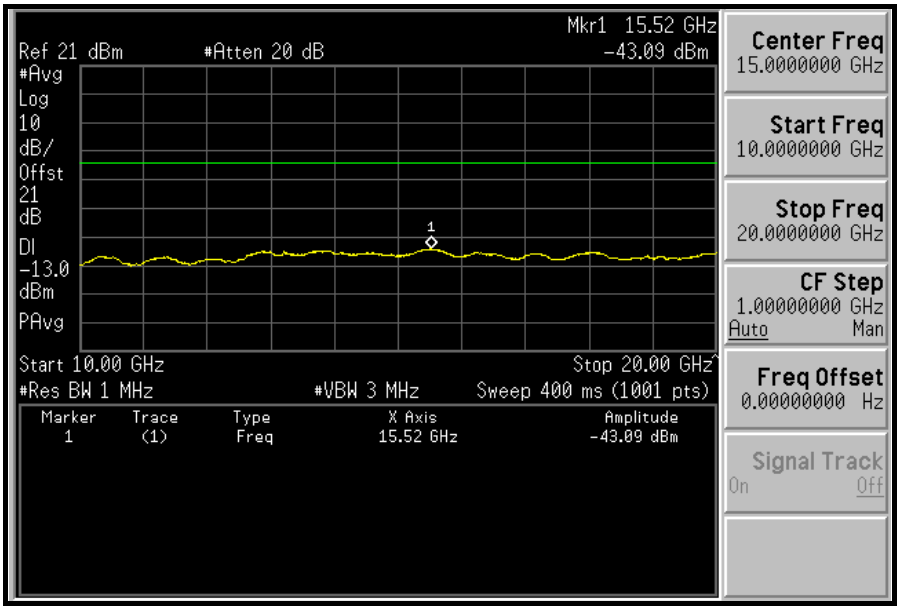
1GHz ~ 4.5GHz:



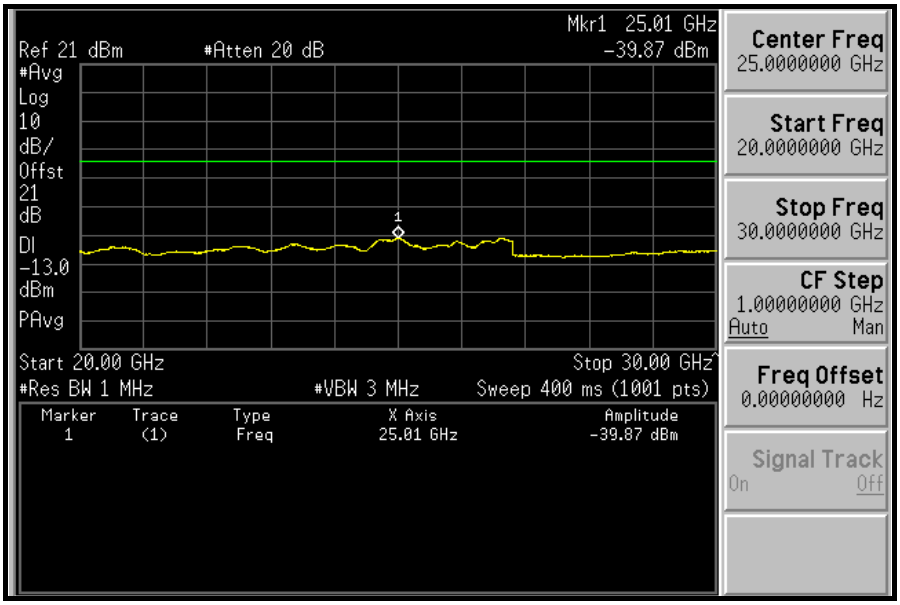
4.5GHz ~ 10GHz:



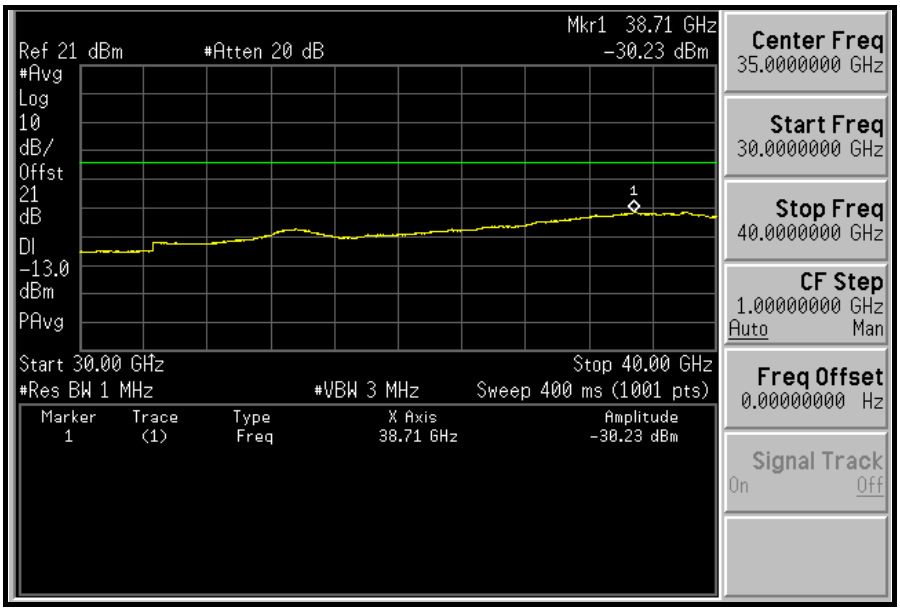
10GHz ~ 20GHz:



20GHz ~ 30GHz:

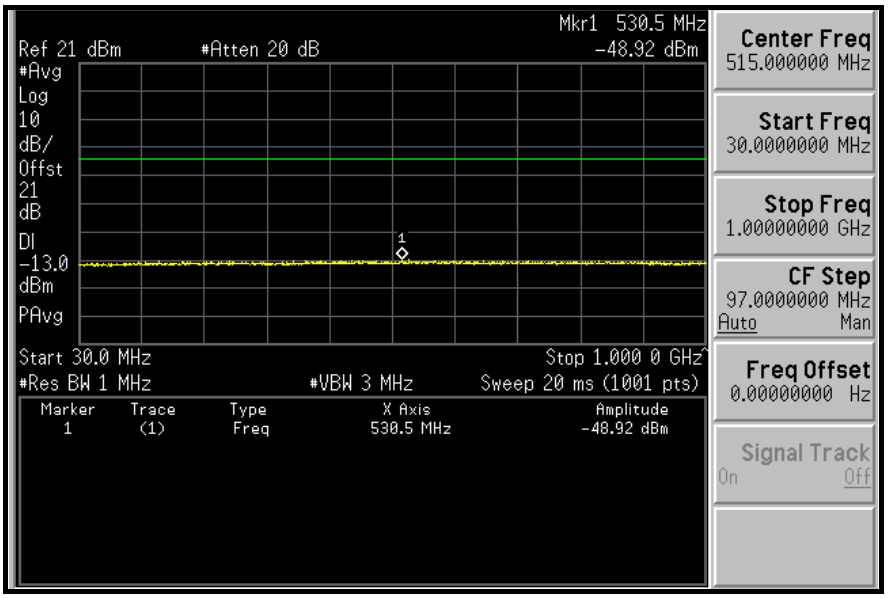


30GHz ~ 40GHz:

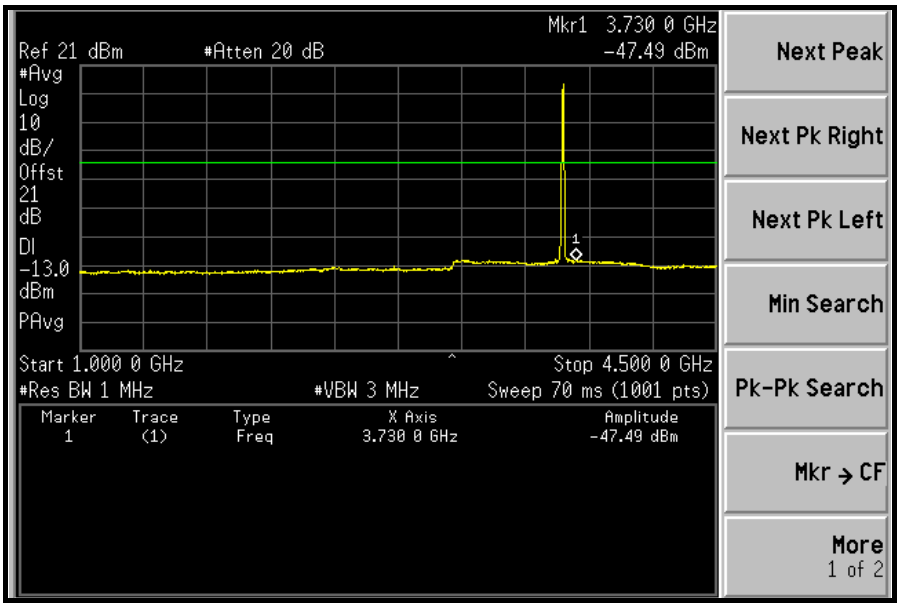


ANTENNA 1

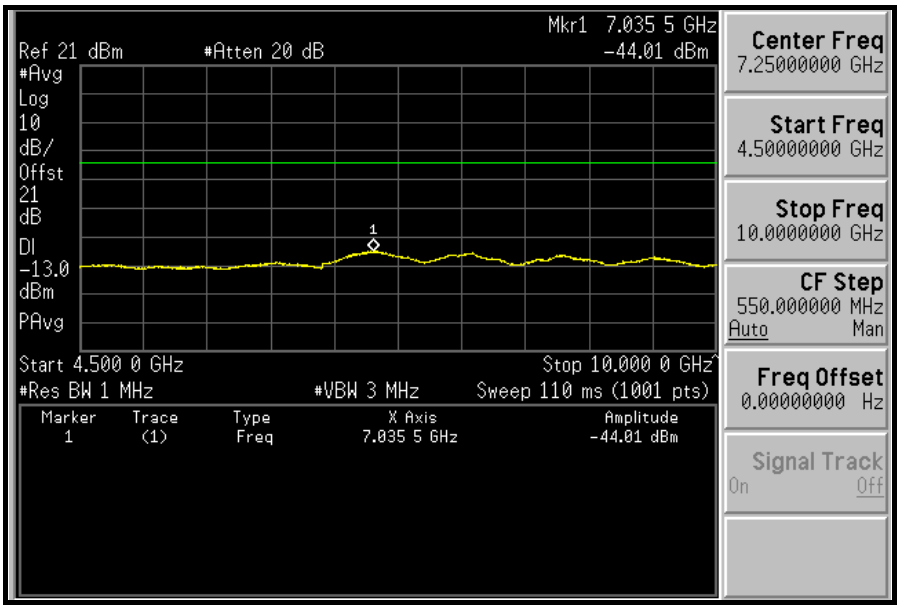
LOW CHANNEL: 30MHz ~ 1GHz:



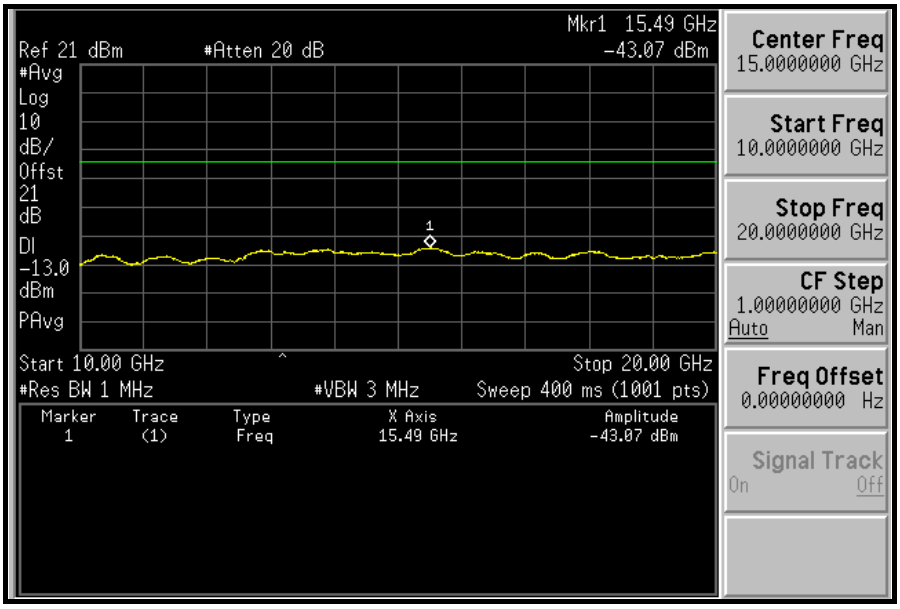
1GHz ~ 4.5GHz:



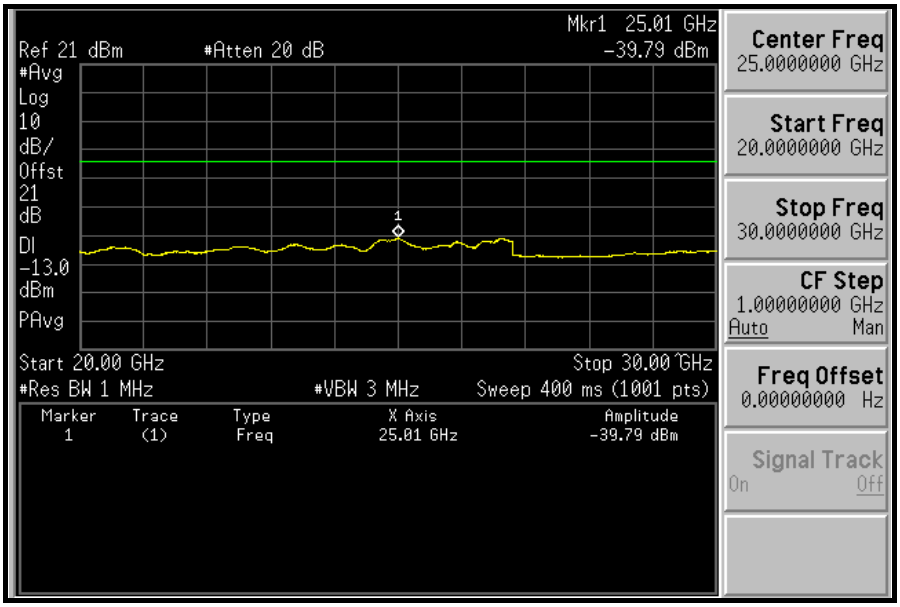
4.5GHz ~ 10GHz:



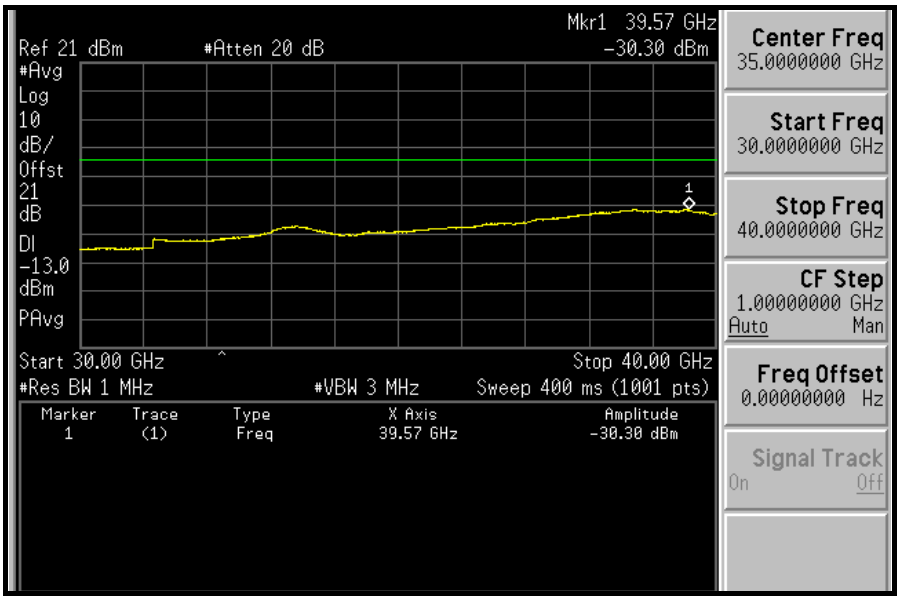
10GHz ~ 20GHz:



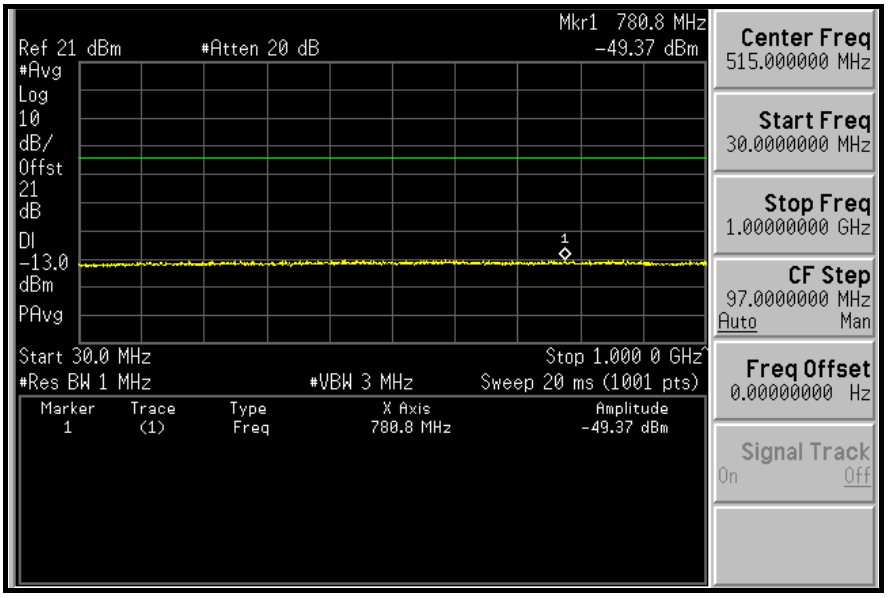
20GHz ~ 30GHz:



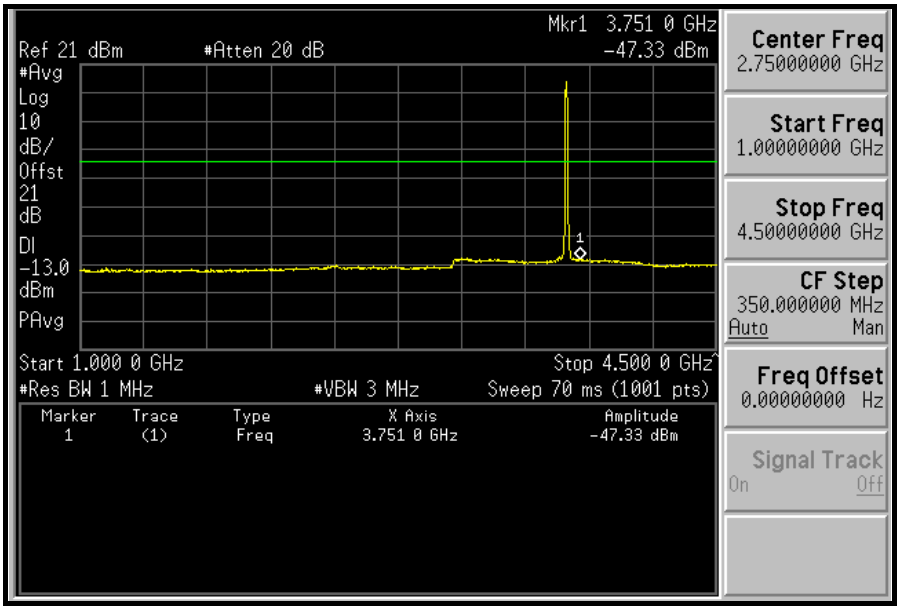
30GHz ~ 40GHz:



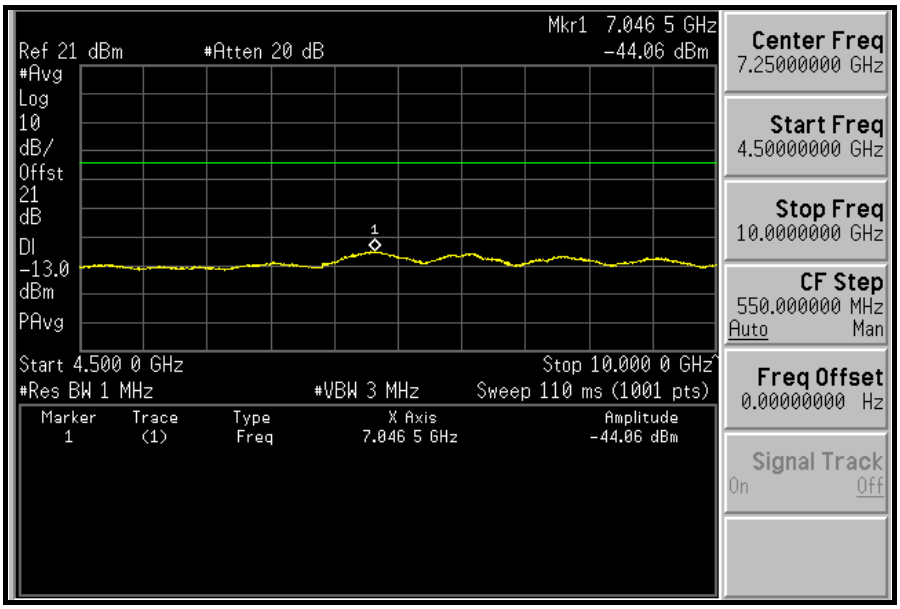
MIDDLE CHANNEL: 30MHz ~ 1GHz:



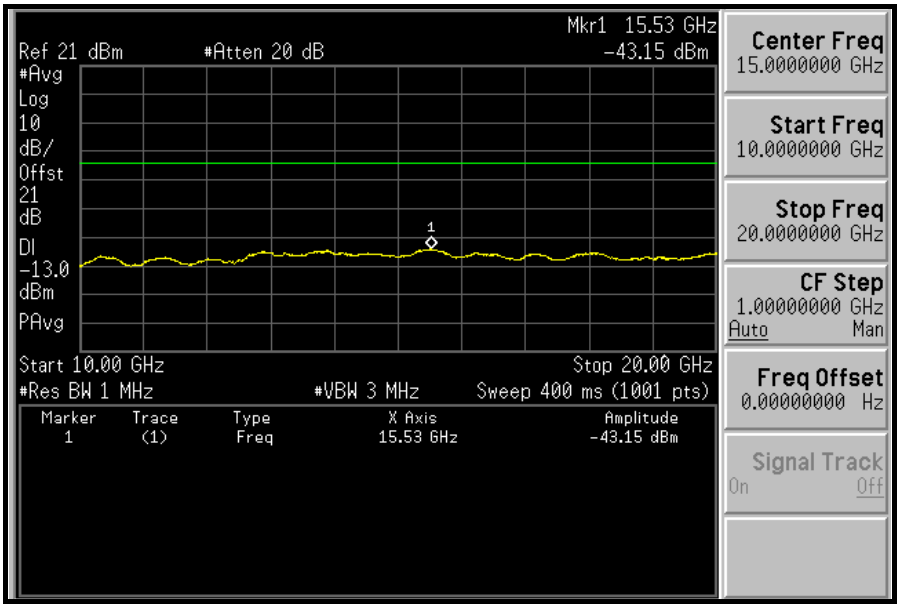
1GHz ~ 4.5GHz:



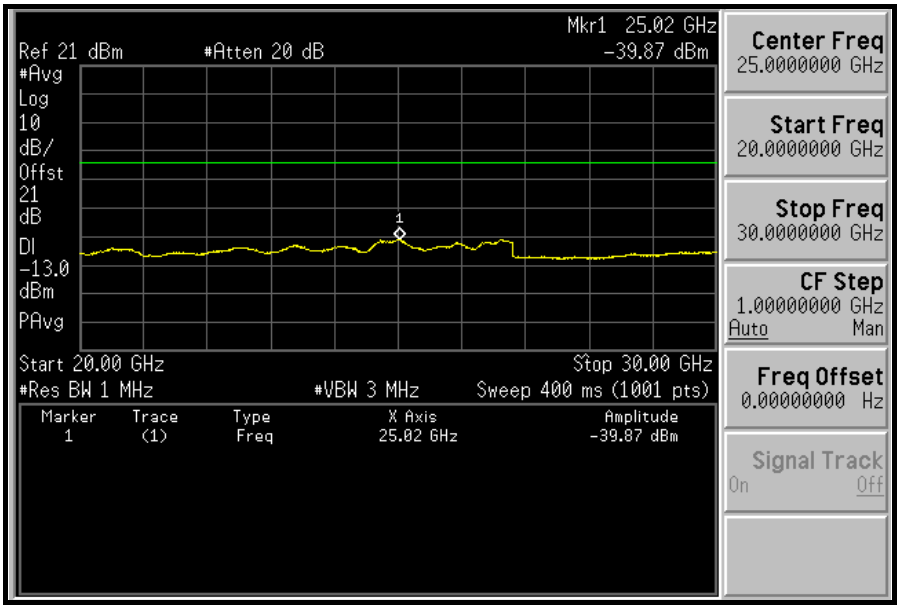
4.5GHz ~ 10GHz:



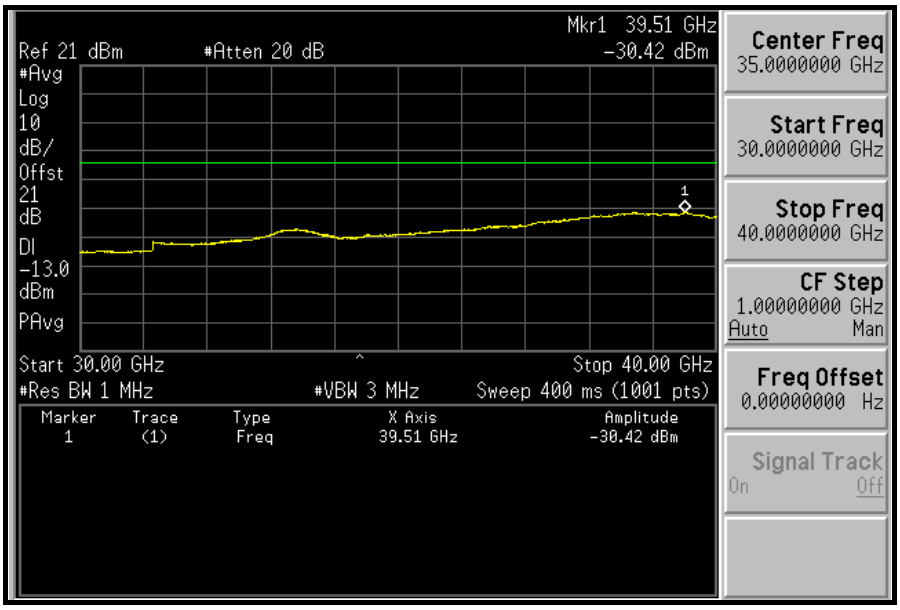
10GHz ~ 20GHz:



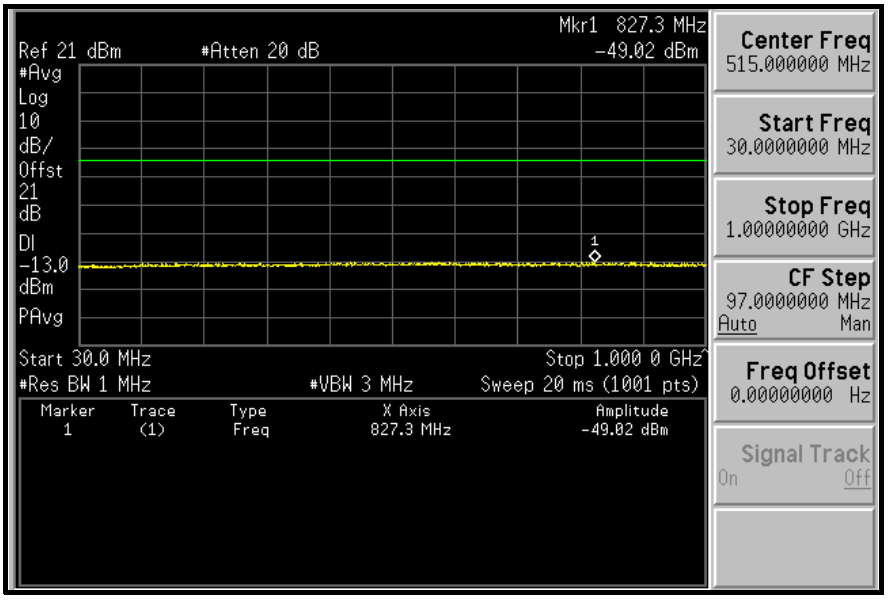
20GHz ~ 30GHz:



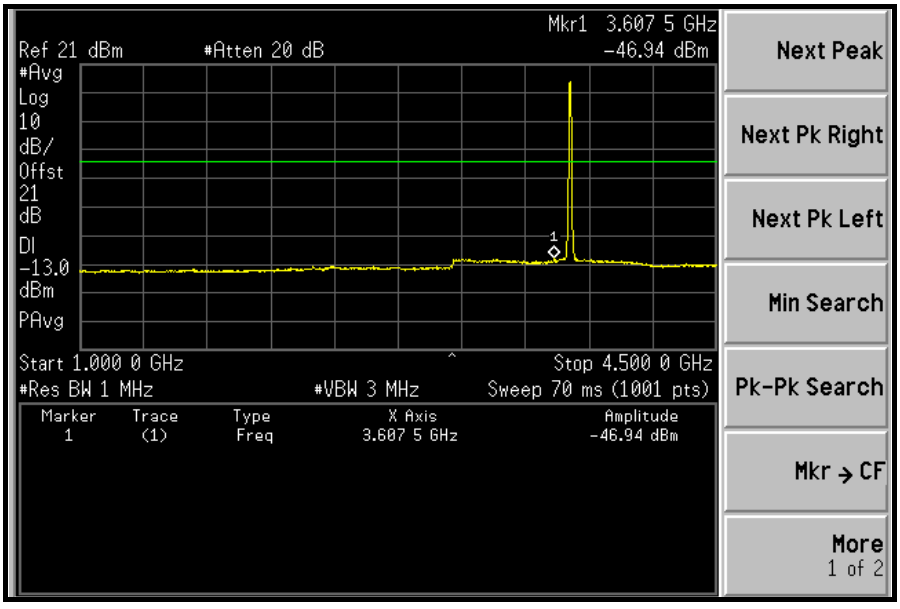
30GHz ~ 40GHz:



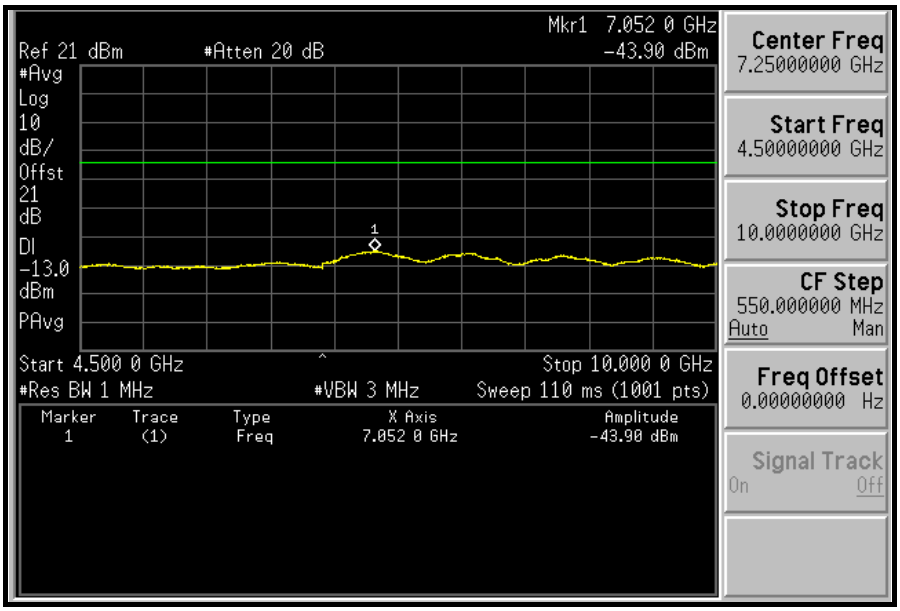
HIGH CHANNEL: 30MHz ~ 1GHz:



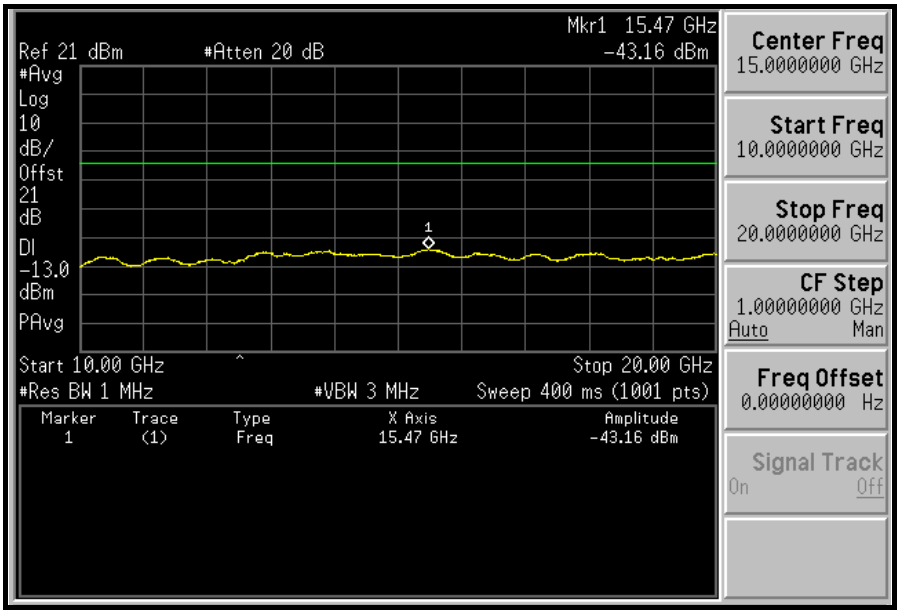
1GHz ~ 4.5GHz:



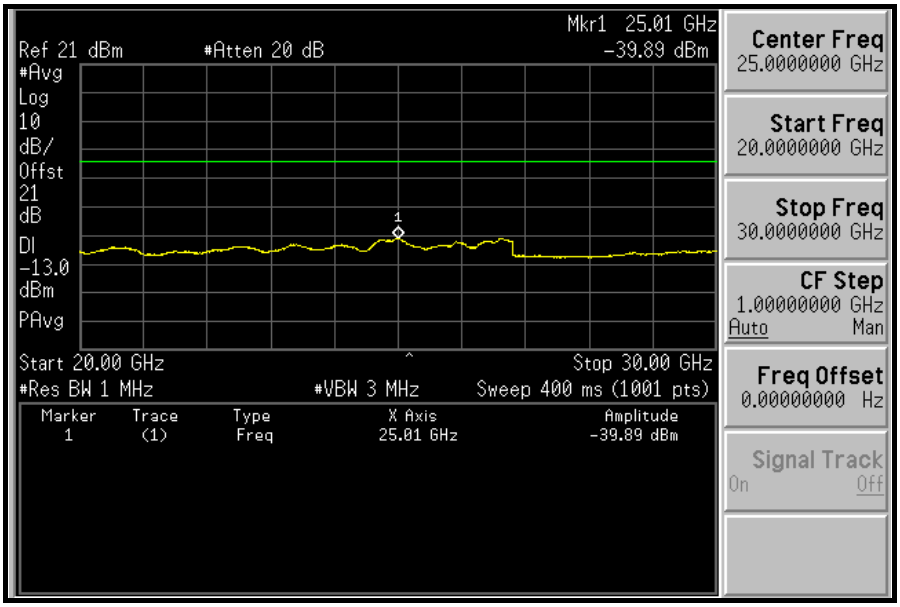
4.5GHz ~ 10GHz:



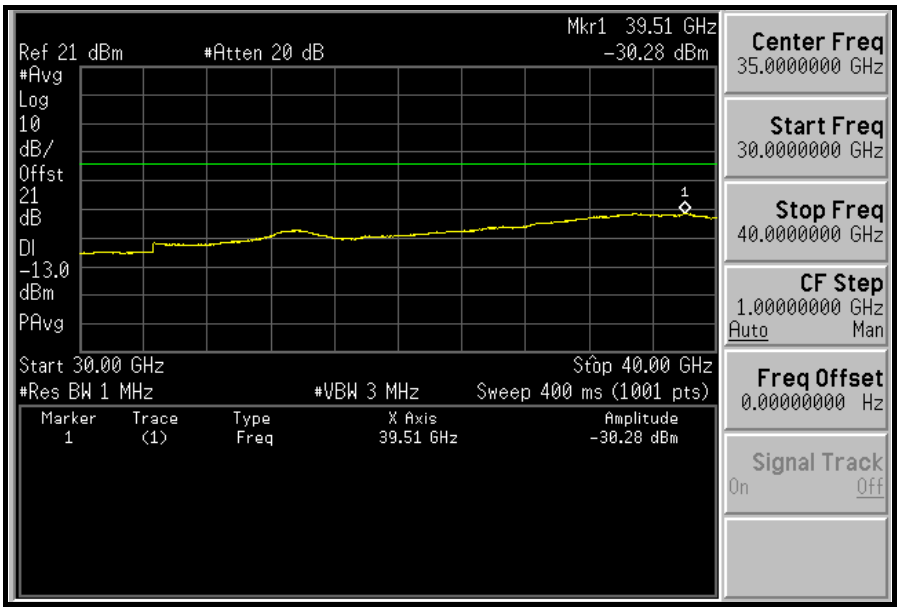
10GHz ~ 20GHz:



20GHz ~ 30GHz:



30GHz ~ 40GHz:



4.6 RADIATED EMISSION MEASUREMENT (BELOW 1GHz)

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC 90.1323 specified that the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in Watts, by at least43 + 10 log (P) dB. The limit of emission equal to –13dBm Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Jul. 22, 2010	Jul. 21, 2011
Spectrum Analyzer Agilent	E4446A	MY48250266	Aug. 11, 2010	Aug. 10, 2011
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 13, 2011	Apr. 12, 2012
HORN Antenna SCHWARZBECK	9120D	9120D-405	Feb. 08, 2011	Feb. 07, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8447D	2944A10633	Nov. 02, 2010	Nov. 01, 2011
Preamplifier Agilent	8449B	3008A01964	Nov. 02, 2010	Nov. 01, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295014/4	Sep 03, 2010	Sep 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	Sep 03, 2010	Sep 02, 2011
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 3.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC 7450F-3.

4.6.3 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The " Read Value " is the spectrum reading the maximum power value.

b. The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable . Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to " Read Value " of step a. Record the power level of S.G

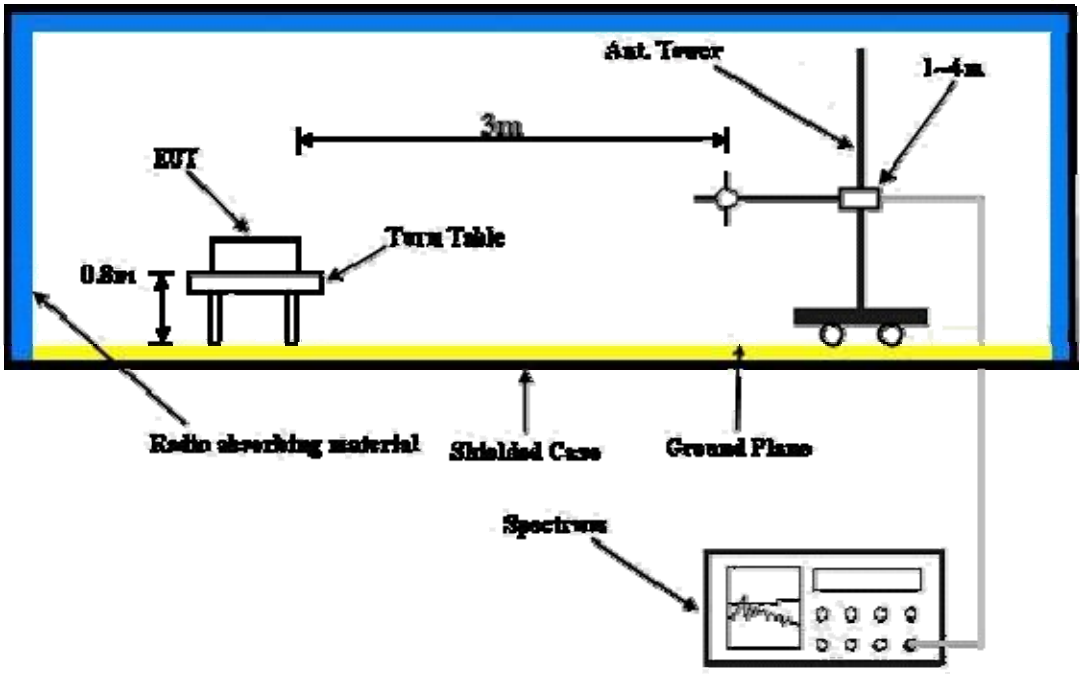
EIRP = Output power level of S.G － TX cable loss + Antenna gain of Substitution antenna

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.6.6 EUT OPERATING CONDITIONS

Same as 4.1.5.

4.6.7 TEST RESULTS

MODE	Middle channel	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
CHANNEL BANDWIDTH	3.5MHz	TESTED BY	Mark Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	166.07	63.0	-13.0	-24.0	-7.7	-31.7
2	245.77	51.6	-13.0	-35.4	-7.7	-43.1
3	307.98	50.7	-13.0	-36.1	-7.8	-43.9
4	455.71	37.6	-13.0	-48.6	-7.8	-56.4
5	681.20	44.0	-13.0	-42.4	-7.8	-50.2
6	863.93	48.5	-13.0	-38.1	-7.9	-46.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	131.08	62.0	-13.0	-25.0	-7.7	-32.7
2	154.41	64.0	-13.0	-23.0	-7.7	-30.7
3	245.77	49.8	-13.0	-37.3	-7.7	-45.0
4	313.81	46.0	-13.0	-40.5	-7.8	-48.3
5	572.34	46.1	-13.0	-40.5	-7.8	-48.3
6	863.93	41.7	-13.0	-44.6	-7.9	-52.5

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
CHANNEL BANDWIDTH	5MHz	TESTED BY	Mark Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	166.07	62.8	-13.0	-24.4	-7.7	-32.1
2	245.77	51.3	-13.0	-35.8	-7.7	-43.5
3	313.81	50.8	-13.0	-36.5	-7.8	-44.3
4	572.34	40.2	-13.0	-46.4	-7.8	-54.2
5	683.15	44.9	-13.0	-42.0	-7.8	-49.8
6	865.87	49.0	-13.0	-37.4	-7.9	-45.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	53.33	52.2	-13.0	-34.9	-7.7	-42.6
2	133.03	62.3	-13.0	-24.5	-7.7	-32.2
3	152.46	63.6	-13.0	-23.0	-7.7	-30.7
4	245.77	49.2	-13.0	-37.6	-7.7	-45.3
5	313.81	45.4	-13.0	-41.0	-7.8	-48.8
6	570.4	46.0	-13.0	-40.8	-7.8	-48.6

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
CHANNEL BANDWIDTH	7MHz	TESTED BY	Mark Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	51.38	45.5	-13.0	-40.7	-7.7	-48.4
2	166.07	63.3	-13.0	-23.5	-7.7	-31.2
3	245.77	52.4	-13.0	-34.6	-7.7	-42.3
4	313.81	50.7	-13.0	-36.2	-7.8	-44.0
5	453.77	37.1	-13.0	-49.4	-7.8	-57.2
6	683.15	43.7	-13.0	-43.3	-7.8	-51.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	53.33	51.1	-13.0	-35.4	-7.7	-43.1
2	133.03	61.9	-13.0	-24.6	-7.7	-32.3
3	154.41	63.7	-13.0	-22.5	-7.7	-30.2
4	245.77	51.0	-13.0	-36.3	-7.7	-44.0
5	313.81	45.4	-13.0	-41.4	-7.8	-49.2
6	572.34	47.5	-13.0	-39.5	-7.8	-47.3

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
CHANNEL BANDWIDTH	10MHz	TESTED BY	Mark Liao

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	164.13	62.5	-13.0	-24.3	-7.7	-32.0
2	245.77	51.0	-13.0	-35.9	-7.7	-43.6
3	309.92	51.4	-13.0	-35.3	-7.8	-43.1
4	572.34	40.3	-13.0	-46.3	-7.8	-54.1
5	683.15	45.0	-13.0	-41.6	-7.8	-49.4
6	910.58	46.6	-13.0	-40.1	-7.9	-48.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	154.41	63.5	-13.0	-23.6	-7.7	-31.3
2	247.72	47.6	-13.0	-39.1	-7.7	-46.8
3	313.81	45.5	-13.0	-41.3	-7.8	-49.1
4	364.35	42.0	-13.0	-44.6	-7.8	-52.4
5	572.34	47.3	-13.0	-39.3	-7.8	-47.1
6	908.64	44.0	-13.0	-42.2	-7.9	-50.1

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

4.7 RADIATED EMISSION MEASUREMENT (ABOVE 1GHz)

4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC 90.1323 specified that the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in Watts, by at least 43 + 10 log (P) dB. The limit of emission equal to –13dBm Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

4.7.2 TEST INSTRUMENTS

Same as 4.6.2.

4.7.3 TEST PROCEDURES

Same as 4.6.3.

4.7.4 DEVIATION FROM TEST STANDARD

No deviation

4.7.5 TEST SETUP

Same as 4.6.5.

4.7.6 EUT OPERATING CONDITIONS

Same as 4.1.5

4.7.7 TEST RESULTS

MODE	Low channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	CHANNEL BANDWIDTH	3.5MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1338.00	62.8	-13.0	-37.7	5.8	-31.9
2	7303.50	50.9	-13.0	-53.1	9.5	-43.6
3	10955.25	56.1	-13.0	-46.1	7.8	-38.3
4	14607.00	60.0	-13.0	-41.7	7.4	-34.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1338.00	62.1	-13.0	-38.4	5.8	-32.6
2	7303.50	50.5	-13.0	-53.5	9.5	-44.0
3	10955.25	55.4	-13.0	-46.8	7.8	-39.0
4	14607.00	59.1	-13.0	-42.6	7.4	-35.2

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Middle channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	3.5MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	62.7	-13.0	-37.8	5.8	-32.0
2	7350.00	45.7	-13.0	-58.3	9.7	-48.6
3	11025.00	50.8	-13.0	-51.2	7.8	-43.4
4	14700.00	53.3	-13.0	-48.4	7.6	-40.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	62.0	-13.0	-38.5	5.8	-32.7
2	7350.00	42.2	-13.0	-61.8	9.7	-52.1
3	11025.00	48.1	-13.0	-53.9	7.8	-46.1
4	14700.00	51.8	-13.0	-49.9	7.6	-42.3

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	High channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	3.5MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	61.4	-13.0	-39.2	5.9	-33.3
2	7396.50	46.4	-13.0	-57.7	9.7	-48.0
3	11094.75	51.2	-13.0	-50.9	7.8	-43.1
4	14793.00	54.8	-13.0	-47.1	7.7	-39.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	60.1	-13.0	-40.5	5.9	-34.6
2	7396.50	44.3	-13.0	-59.8	9.7	-50.1
3	11094.75	49.8	-13.0	-52.3	7.8	-44.5
4	14793.00	53.4	-13.0	-48.5	7.7	-40.8

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	5.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1338.00	63.5	-13.0	-37.0	5.8	-31.2
2	7305.00	50.8	-13.0	-53.2	9.5	-43.7
3	10957.50	51.9	-13.0	-50.3	7.8	-42.5
4	14610.00	54.9	-13.0	-46.8	7.4	-39.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1338.00	62.4	-13.0	-38.1	5.8	-32.3
2	7305.00	49.9	-13.0	-54.1	9.5	-44.6
3	10957.50	50.6	-13.0	-51.6	7.8	-43.8
4	14610.00	53.5	-13.0	-48.2	7.4	-40.8

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Middle channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	5.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	62.2	-13.0	-38.3	5.8	-32.5
2	7350.00	44.2	-13.0	-59.8	9.7	-50.1
3	11025.00	51.4	-13.0	-50.6	7.8	-42.8
4	14700.00	54.2	-13.0	-47.5	7.6	-39.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	61.2	-13.0	-39.3	5.8	-33.5
2	7350.00	41.1	-13.0	-62.9	9.7	-53.2
3	11025.00	47.5	-13.0	-54.5	7.8	-46.7
4	14700.00	50.9	-13.0	-50.8	7.6	-43.2

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	High channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	CHANNEL BANDWIDTH	5.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1384.00	60.4	-13.0	-40.2	5.9	-34.3
2	7395.00	43.4	-13.0	-60.7	9.7	-51.0
3	11092.50	50.2	-13.0	-51.9	7.8	-44.1
4	14790.00	53.6	-13.0	-48.3	7.7	-40.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1384.00	59.8	-13.0	-40.8	5.9	-34.9
2	7395.00	42.2	-13.0	-61.9	9.7	-52.2
3	11092.50	49.5	-13.0	-52.6	7.8	-44.8
4	14790.00	51.9	-13.0	-50.0	7.7	-42.3

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	CHANNEL BANDWIDTH	7.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1338.00	64.2	-13.0	-36.3	5.8	-30.5
2	7307.00	49.2	-13.0	-54.8	9.5	-45.3
3	10960.50	50.4	-13.0	-51.8	7.8	-44.0
4	14614.00	53.6	-13.0	-48.1	7.4	-40.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1338.00	62.2	-13.0	-38.3	5.8	-32.5
2	7307.00	48.3	-13.0	-55.7	9.5	-46.2
3	10960.50	48.8	-13.0	-53.4	7.8	-45.6
4	14614.00	52.8	-13.0	-48.9	7.4	-41.5

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Middle channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	7.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	63.3	-13.0	-37.2	5.8	-31.4
2	7350.00	44.8	-13.0	-59.2	9.7	-49.5
3	11025.00	50.9	-13.0	-51.1	7.8	-43.3
4	14700.00	52.8	-13.0	-48.9	7.6	-41.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1361.00	61.6	-13.0	-38.9	5.8	-33.1
2	7350.00	40.3	-13.0	-63.7	9.7	-54.0
3	11025.00	46.8	-13.0	-55.2	7.8	-47.4
4	14700.00	49.6	-13.0	-52.1	7.6	-44.5

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	High channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	7.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	60.7	-13.0	-39.9	5.9	-34.0
2	7393.00	45.4	-13.0	-58.7	9.7	-49.0
3	11089.50	49.1	-13.0	-53.0	7.8	-45.2
4	14786.00	51.5	-13.0	-50.4	7.7	-42.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	59.8	-13.0	-40.8	5.9	-34.9
2	7393.00	44.6	-13.0	-59.5	9.7	-49.8
3	11089.50	48.2	-13.0	-53.9	7.8	-46.1
4	14786.00	50.4	-13.0	-51.5	7.7	-43.8

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Low channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	10.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	**1338.00**	**65.0**	**-13.0**	**-35.5**	**5.8**	**-29.7**
2	7310.00	45.3	-13.0	-58.7	9.5	-49.2
3	10965.00	47.5	-13.0	-54.7	7.8	-46.9
4	14620.00	51.4	-13.0	-50.3	7.4	-42.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1338.00	64.5	-13.0	-36.0	5.8	-30.2
2	7310.00	44.1	-13.0	-59.9	9.5	-50.4
3	10965.00	46.3	-13.0	-55.9	7.8	-48.1
4	14620.00	50.1	-13.0	-51.6	7.4	-44.2

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	Middle channel	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	CHANNEL BANDWIDTH	10.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1361.00	62.9	-13.0	-37.6	5.8	-31.8
2	7350.00	44.2	-13.0	-59.8	9.7	-50.1
3	11025.00	50.1	-13.0	-51.9	7.8	-44.1
4	14700.00	51.3	-13.0	-50.4	7.6	-42.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBm)	S.G POWER VALUE (dBm)	CORRECTION FACTOR (dB)	POWER VALUE (dBm)
1	1361.00	62.1	-13.0	-38.4	5.8	-32.6
2	7350.00	42.5	-13.0	-61.5	9.7	-51.8
3	11025.00	48.3	-13.0	-53.7	7.8	-45.9
4	14700.00	50.1	-13.0	-51.6	7.6	-44.0

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	High channel	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	23deg°C, 70%RH 991hPa
TESTED BY	Mark Liao	**CHANNEL BANDWIDTH**	10.0MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	64.6	-13.0	-36.0	5.9	-30.1
2	7390.00	44.6	-13.0	-59.5	9.7	-49.8
3	11085.00	50.5	-13.0	-51.6	7.8	-43.8
4	14780.00	51.9	-13.0	-50.0	7.7	-42.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3m						
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBm)**	**S.G POWER VALUE (dBm)**	**CORRECTION FACTOR (dB)**	**POWER VALUE (dBm)**
1	1384.00	63.8	-13.0	-36.8	5.9	-30.9
2	7390.00	42.5	-13.0	-61.6	9.7	-51.9
3	11085.00	49.2	-13.0	-52.9	7.8	-45.1
4	14780.00	50.3	-13.0	-51.6	7.7	-43.9

NOTE: Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
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Hwa Ya EMC/RF/Safety/Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

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